

Friday, January 22, 2010

Page 1 of 4
REQUEST NUMBER: 10-1393

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number: 10-1393
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/22/2010

TURNAROUND/REPORT DUE: 2/21/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA:901.1		1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	

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PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA:901.1						
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
EPA:906.0						
		1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
HASL-300:AM-241						
		1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	

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PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
HASL-300:AM-241						
1		1	RE15-10-7906	R	1/19/2010	
1		1	RE15-10-7907	R	1/19/2010	
1		1	RE15-10-7908	R	1/19/2010	
1		1	RE15-10-7909	R	1/19/2010	
1		1	RE15-10-7910	R	1/19/2010	
1		1	RE15-10-7911	R	1/19/2010	
1		1	RE15-10-7912	R	1/19/2010	
1		1	RE15-10-7913	R	1/19/2010	
1		1	RE15-10-7869	R	1/19/2010	
1		1	RE15-10-7870	R	1/19/2010	
1		1	RE15-10-7871	R	1/19/2010	
1		1	RE15-10-7872	R	1/19/2010	
1		1	RE15-10-7873	R	1/19/2010	
1		1	RE15-10-7874	R	1/19/2010	
1		1	RE15-10-7905	R	1/19/2010	
1		1	RE15-10-7906	R	1/19/2010	
1		1	RE15-10-7907	R	1/19/2010	
1		1	RE15-10-7908	R	1/19/2010	
1		1	RE15-10-7909	R	1/19/2010	
1		1	RE15-10-7910	R	1/19/2010	
1		1	RE15-10-7911	R	1/19/2010	
1		1	RE15-10-7912	R	1/19/2010	
1		1	RE15-10-7913	R	1/19/2010	
1		1	RE15-10-7869	R	1/19/2010	
1		1	RE15-10-7870	R	1/19/2010	
1		1	RE15-10-7871	R	1/19/2010	
1		1	RE15-10-7872	R	1/19/2010	
1		1	RE15-10-7873	R	1/19/2010	
HASL-300:ISOPU						
1		1	RE15-10-7870	R	1/19/2010	
1		1	RE15-10-7871	R	1/19/2010	
1		1	RE15-10-7872	R	1/19/2010	
1		1	RE15-10-7873	R	1/19/2010	
1		1	RE15-10-7874	R	1/19/2010	
1		1	RE15-10-7905	R	1/19/2010	
1		1	RE15-10-7906	R	1/19/2010	
1		1	RE15-10-7907	R	1/19/2010	
1		1	RE15-10-7908	R	1/19/2010	
1		1	RE15-10-7909	R	1/19/2010	
1		1	RE15-10-7910	R	1/19/2010	
1		1	RE15-10-7911	R	1/19/2010	
1		1	RE15-10-7912	R	1/19/2010	
1		1	RE15-10-7913	R	1/19/2010	
1		1	RE15-10-7869	R	1/19/2010	
1		1	RE15-10-7870	R	1/19/2010	
1		1	RE15-10-7871	R	1/19/2010	
1		1	RE15-10-7872	R	1/19/2010	
1		1	RE15-10-7873	R	1/19/2010	
HASL-300:ISOU						
1		1	RE15-10-7869	R	1/19/2010	
1		1	RE15-10-7870	R	1/19/2010	
1		1	RE15-10-7871	R	1/19/2010	
1		1	RE15-10-7872	R	1/19/2010	
1		1	RE15-10-7873	R	1/19/2010	

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REQUEST NUMBER: 10-1393

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	

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LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1393C

LOS ALAMOS

REQUEST NUMBER: 10-1393

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7869	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7869	1	POLY	H3	Ice	R
RE15-10-7874	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7874	1	POLY	H3	Ice	R
RE15-10-7871	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7871	1	POLY	H3	Ice	R
RE15-10-7872	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7872	1	POLY	H3	Ice	R
RE15-10-7870	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7870	1	POLY	H3	Ice	R
RE15-10-7873	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7873	1	POLY	H3	Ice	R
RE15-10-7911	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7911	1	POLY	H3	Ice	R
RE15-10-7908	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7908	1	POLY	H3	Ice	R
RE15-10-7912	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7912	1	POLY	H3	Ice	R
RE15-10-7906	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7906	1	POLY	H3	Ice	R
RE15-10-7905	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7905	1	POLY	H3	Ice	R
RE15-10-7907	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7907	1	POLY	H3	Ice	R
RE15-10-7913	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7913	1	POLY	H3	Ice	R
RE15-10-7909	1	POLY	AM241+GS+ISOPU+ISO U	None	R

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LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1393C

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
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RE15-10-7909	1	POLY	H3	Ice	R
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RE15-10-7910	1	POLY	AM241+GS+ISOPU+ISO U	None	R
--------------	---	------	-------------------------	------	---

RE15-10-7910	1	POLY	H3	Ice	R
--------------	---	------	----	-----	---

Relinquished By:

Date

Time

Received By:

Date

Time

 1/22/10 3:00

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7869

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:	OBT3		A114
TIME COLLECTED (HH:MM)		1042		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610704	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	0.5		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+CN	1 GAL POLY 1L RS 01-11-10	Ice	Y	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Dark brown silty sand, some clay, wood

FR RE15-10-8074

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-58, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha \leq 16 dpm
Beta/Gamma \leq 3000 dpmPID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY (Printed Name) MARIN (Signature) Jan R. Marin	Date/Time 1/20/10 0942	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	Date/Time 1/20/10 942
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7870

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		173m 1056 1111		SUB-MEDIA:		TUFF 1	
PRS ID:	15-008(b)	1/11/10 OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610704	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	1.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	2.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+ClO4+C N	1 GAL POLY 12 RS 01-11-10	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray Tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-58 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \pm 27 dpm
Beta/Gamma \pm 2250 dpm

PID Ambient 0.0
Reading 6.0 ppm

COLLECTED BY (PRINT)

ThmFarland

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY (Printed Name) MARIN (Signature) <i>John R. Marin</i>	Date/Time 1/20/10 9:42	RECEIVED BY (Printed Name) <i>John R. Marin</i> (Signature) <i>John R. Marin</i>	Date/Time 1/20/10 10:00
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7871

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		1300		SUB-MEDIA:		TUFF 1	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610705	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	0.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	0.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1L RS 01-11-10	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown sandy silt

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-75, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha = 27 dpm
Beta/Gamma = 3210 dpm

PID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm

COLLECTED BY (PRINT)

JLMcFarlane

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) MARY (Signature) Jan R. Martin	Date/Time 1/20/10 9:42	RECEIVED BY (Printed Name) Sherri Shewood (Signature) Sherri Shewood	Date/Time 1/20/10 9:42
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7872

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		7:15 AM 01/20 1320		SUB-MEDIA:		TUFF 1	
PRS ID: 15-008(b)		OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID: 15-610705		↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE: GENERIC		↓		FIELD PREP: NA		↓	
TOP DEPTH: 0		2.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH: 0		3.0		SCREEN/PORT DESC:		NA	
FIELD MATRIX: R		R		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	1 L POLY LL RS 01-11-10	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: greyish brown tuff

SAMPLE COMMENTS: NA

LOCATION DESC: 86-75 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 27 dpm
Beta/Gamma ≤ 238 dpm

PID Ambient Reading $\frac{0.6}{0.0}$ ppm

COLLECTED BY (PRINT)

R. Saunders

REVIEWED BY (PRINT)

T. L. McFarland

RELINQUISHED BY (Printed Name) MARIN (Signature) Jan R. Marin	Date/Time 1/20/10 09:42	RECEIVED BY (Printed Name) Sherrin Sherwood (Signature) Sherrin Sherwood	Date/Time 1/20/10 9:42
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7873

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:	QBT3		Alh
TIME COLLECTED (HH:MM)		1538		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-008(b)			SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610706			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		
TOP DEPTH:	0		0.0	SAMPLE USAGE:	INV		
BOTTOM DEPTH:	0		0.5	SCREEN/PORT DESC:			NA
FIELD MATRIX:	R		S	EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown silty sand, some rocks

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-45, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha \leq 33 dpm
Beta/Gamma \leq 3520 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT)

T. McFarland

REVIEWED BY (PRINT)

R. Saunders

RELINQUISHED BY (Printed Name) MARIN (Signature) J. H. Marin	Date/Time 1/20/10 09:42	RECEIVED BY (Printed Name) (Signature) [Signature]	Date/Time 1/20/10 1010
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7874

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		QBT3	
TIME COLLECTED(HH:MM)		1515 1550		SUB-MEDIA:		TUFF 1	
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610706	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	2.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	3.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 EA 8 IN RESEALABLE POLY BAG	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-45 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 33 dpm
Beta/Gamma ≤ 2680 dpmPID $\frac{\text{Ambient}}{\text{Reading}} \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT)

Th. McFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) MARIN (Signature) <i>John R. Marin</i>	Date/Time 1/20/10 09:42	RECEIVED BY (Printed Name) <i>John W. Waley</i> (Signature) <i>John W. Waley</i>	Date/Time 1/20/10 1010
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7905

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/19/2010	MEDIA:		QBT3
TIME COLLECTED(HH:MM)		0859	SUB-MEDIA:		TUFF 1
PRS ID:	15-008(b)	ok	SAMPLE TECH CODE:		HA
LOCATION ID:	15-610722	↓	FIELD QC TYPE:		NA
LOCATION TYPE:	GENERIC	↓	FIELD PREP:		NA
TOP DEPTH:	0	0.0	SAMPLE USAGE:		INV
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	S	EXCAVATED: YES/NO/NA		
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA	WATER FLOWING: YES/NO/NA		NO
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA	BOREHOLE DIRECTION: NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	1 L POLY IL RS 01-11-10	Ice	Y	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown sandy, silt, rocks

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-73, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha $\frac{16}{16}$ dpm
Beta/Gamma $\frac{384}{384}$ dpmPID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT)

JL McFarlane

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) MARIN	01/20/10	(Printed Name) Jay Williams	1/20/10
(Signature) Jan R. Marin	09:42	(Signature)	10/10
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7906

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		0923		SUB-MEDIA:		TUFF 1	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610722	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	3.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	3.8		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NO/NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brownish gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-73, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 28 dpm
Beta/Gamma = 2590 dpm

PID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm

COLLECTED BY (PRINT)

TLMcFarlane

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) MARIN	1/20/10	(Printed Name) Jay Williams	1/20/10
(Signature) [Signature]	09:42	(Signature) [Signature]	10:40
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7907

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		0945		SUB-MEDIA:		TUFF 1	
PRS ID: 15-008(b)		OK		SAMPLE TECH CODE: HA		NA	
LOCATION ID: 15-610723		↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE: GENERIC		↓		FIELD PREP: NA		↓	
TOP DEPTH: 0		0.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH: 0		0.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX: R		S		EXCAVATED: YES/NO/NA		NO	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NO	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1 Liter RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown silty sand, some clay, rocks

FD RE15-10-8053

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-72, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha = 44 dpm
Beta/Gamma = 37.0 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0} \text{ ppm}$

COLLECTED BY (PRINT)

REVIEWED BY (PRINT) Nicholas Gallegos

RELINQUISHED BY (Printed Name) MARIN (Signature) <i>Jim R. Marin</i>	Date/Time 1/20/10 09:43	RECEIVED BY (Printed Name) <i>Jay Williams</i> (Signature) <i>Jay Williams</i>	Date/Time 1/20/10 10/10
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7908

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		0958		SUB-MEDIA:		TUFF 1	
PRS ID: 15-008(b)		OK		SAMPLE TECH CODE:		HA	
LOCATION ID: 15-610723		↓		FIELD QC TYPE:		NA	
LOCATION TYPE: GENERIC		↓		FIELD PREP:		NA	
TOP DEPTH: 0		11/19/10 2.9		SAMPLE USAGE:		INV	
BOTTOM DEPTH: 0		3.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX: R		R		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NO/NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 LITER POLY 1 Liter RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-72, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 16 dpm
Beta/Gamma \leq 6710 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0} \text{ ppm}$

COLLECTED BY (PRINT)

T. L. McFarlane

REVIEWED BY (PRINT)

Nickolas Gallagos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
Printed Name) MARIN	1/20/10	(Printed Name) Sherrif Shewood	1/20/10
Signature) J. R. Marin	09:43	(Signature) Sherrif Shewood	943
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
Printed Name)		(Printed Name)	
Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7909

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1020		SUB-MEDIA:		TUFF 1	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610724	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	0.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	0.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+ClO4+C N	TOTAL POLY 1 Liter RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Dark brown wet silty sand, wood

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-71, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha = 38 dpm
Beta/Gamma = 5730 dpm

PID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) JLMcFarlane

RELINQUISHED BY (Printed Name) MARIN (Signature) <i>John Marin</i>	Date/Time 1/20/10 09:43	RECEIVED BY (Printed Name) Sherrill Sherwood (Signature) <i>Sherrill Sherwood</i>	Date/Time 1/20/10 942
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7910

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		1030		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610724	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	3.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	3.6		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA	NO		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA	NO			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1 Liter RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Dark gray Tuff

SAMPLE COMMENTS:

NA

LOCATION DESC: 8 b-71, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 27 dpm
Beta/Gamma \leq 3730 dpm

PID $\frac{\text{Ambient Reading}}{0.0}$ ppm

COLLECTED BY (PRINT)

J L McFarland

REVIEWED BY (PRINT)

Nicolás Gallegos

RELINQUISHED BY (Printed Name) MARIN (Signature) J. R. Marin	Date/Time 1/20/10 9:43	RECEIVED BY (Printed Name) Sherrill Sherwood (Signature) Sherrill Sherwood	Date/Time 1/20/10 9:43
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7911

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA: OBT3		A. H.	
TIME COLLECTED (HH:MM)		1120		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610725	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	0.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	0.3		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	6		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 LITER POLY 16 Ltr RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown sand, some rocks, sticks

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-59 mesa tops

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha ≤ 55 dpm
Beta/Gamma ≤ 8130 dpm

Amplifier 0.0
Reading 0.0 ppm

COLLECTED BY (PRINT)

T. McFarlane

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY (Printed Name) MARIN (Signature) <i>[Signature]</i>	Date/Time 1/20/10 9:43	RECEIVED BY (Printed Name) <i>[Signature]</i> (Signature) <i>[Signature]</i>	Date/Time 1/20/10 1010
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7912

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA: QBT3		ok	
TIME COLLECTED (HH:MM)		1130		SUB-MEDIA: TUFF 1		↓	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610725	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	✓		FIELD PREP: NA		↓	
TOP DEPTH:	0	3.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	4.0		SCREEN/PORT DESC: NA		↓	
FIELD MATRIX:	R	R		EXCAVATED: YES (NO) NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES (NO) NA			
BOREHOLE: YES (NO) NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	1 LITER POLY 1 Liter RS 01-11-10	Ice	Y	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray tuff and orange clay

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-59

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 16 dpm
Beta/Gamma = 4810 dpm

PID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm

COLLECTED BY (PRINT)

TLM c Farlane

REVIEWED BY (PRINT)

Nicholas Gallagos

RELINQUISHED BY (Printed Name) M. P. RIN (Signature) [Signature]	Date/Time 1/20/10 9:43	RECEIVED BY (Printed Name) [Signature] (Signature) [Signature]	Date/Time 1/20/10 10:10
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7913

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/19/2010		MEDIA: QBT3		Allh	
TIME COLLECTED (HH:MM)		1142		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610726	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	0.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	0.3		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1 Liter RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Orange clay, wood

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-60, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 27 dpmBeta/Gamma \leq 2030 dpm

HE negative

PID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm


COLLECTED BY (PRINT)

TLM Farlane

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY (Printed Name) MARIN (Signature) J. R. Marin	Date/Time 1/20/10 9:44	RECEIVED BY (Printed Name) Sherri Shewood (Signature) Sherri Shewood	Date/Time 1/20/10 9:44
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

DATA VALIDATION COVER SHEET	
5119-1 <p style="text-align: center;">Data Validation Cover Sheet</p>	Records Use only 

Section I.		
REQUEST NUMBER: <u>10-1393</u>	VALIDATION DATE: <u>03/03/10</u>	LAB CODE: <u>GEL</u>
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>		
VALIDATOR: <u>John A. Bailey</u> ORGANIZATION: <u>Analytical Quality Associates, Inc.</u>		
ANALYTICAL SUITE (CHECK ALL THAT APPLY):		
<input type="checkbox"/> TPH-GRO	<input type="checkbox"/> HIGH EXPLOSIVES	<input type="checkbox"/> DIOXIN FURANS
<input type="checkbox"/> TPH-DRO	<input type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS
<input type="checkbox"/> GENERAL CHEMISTRY	<input checked="" type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES
		<input type="checkbox"/> LCMSMS PERCHLORATES
		<input type="checkbox"/> ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
<input type="checkbox"/> OTHER (DESCRIBE): _____		

Section II. Completeness Check							
YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. CHAIN-OF-CUSTODY FORM(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. CASE NARRATIVE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. QUANTITATION REPORTS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. SAMPLE CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. TICS FORMS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. STANDARD CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. TICS MASS SPECTRA


Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec results that were rejected by the laboratory due to high counting uncertainty, interference, or low abundance were qualified R,R5a.
2. The DUP RERs were >1.0 for U-233/234 and U-238. All associated sample results were detects and, thus, were qualified J,R10.
3. An MS was not analyzed for tritium. However, an LCS was analyzed and met acceptance criteria and, thus, no sample results were qualified.
4. It should be noted that the parent samples for the QC analyses for Am-241, Isotopic U, and Isotopic Pu were LANL samples from other RNs. No sample data were qualified as a result.


Reviewed by: ETMLevel: 1Date: 3/4/10

VALIDATOR'S SIGNATURE: _____



DATE: 03/03/10

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. The tracer is < the Lower Acceptance Level (LAL) but $\geq 10\%R$. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only 

Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7869
Sample ID: 245395001
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 24.7%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0107	0.0213	+/-0.00782	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00711	0.0196	+/-0.00293	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.0201	0.0224	+/-0.00499	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		7.18	J,R10	0.173	+/-0.567	0.100	pCi/g	JXD2	02/08/10	1204	944996	3
Uranium-235/236		0.933		0.108	+/-0.106	0.100	pCi/g					
Uranium-238		43.7	J,R10	0.100	+/-3.26	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0635		0.334	+/-0.107	0.200	pCi/g	MXR1	02/02/10	0710	944966	4
Bismuth-211	UI	3.83	R,R5a	0.286	+/-0.301		pCi/g					
Bismuth-214		1.01		0.107	+/-0.0879	0.200	pCi/g					
Cadmium-109	UI	4.86	R,R5a	1.53	+/-0.714		pCi/g					
Cerium-139	U	0.0223		0.0495	+/-0.0154	0.050	pCi/g					
Cesium-134	UI	0.127	R,R5a	0.0894	+/-0.0308	0.100	pCi/g					
Cesium-137	U	0.00459		0.0596	+/-0.0178	0.100	pCi/g					
Cobalt-60	U	-0.0111		0.0512	+/-0.0165	0.100	pCi/g					
Europium-152	U	-0.0273		0.145	+/-0.0419	0.200	pCi/g					
Lanthanum-140	U	-0.037		0.0994	+/-0.0327		pCi/g					
Lead-212		1.69		0.0883	+/-0.113	0.100	pCi/g					
Lead-214		1.33		0.0998	+/-0.110	0.100	pCi/g					
Mercury-203	U	0.0604		0.0605	+/-0.0264	0.100	pCi/g					
Potassium-40		28.3		0.424	+/-1.47	1.00	pCi/g					
Radium-223	U	-0.602		1.02	+/-0.375		pCi/g					
Radium-224	UI	3.92	R,R5a	1.01	+/-0.503		pCi/g					
Radium-226		1.01		0.107	+/-0.0879		pCi/g					
Radium-228		1.68		0.192	+/-0.171	0.500	pCi/g					
Ruthenium-106	U	0.0265		0.454	+/-0.135	0.800	pCi/g					
Sodium-22	U	-0.0228		0.0599	+/-0.0194	0.080	pCi/g					
Strontium-85	U	0.0212		0.0564	+/-0.018		pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7869
245395001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thallium-208		0.578	0.0494	+/-0.047	0.080	pCi/g						
Thorium-227	U	0.303	0.626	+/-0.202		pCi/g						
Thorium-231	U	-0.602	1.02	+/-0.375		pCi/g						
Thorium-234		39.6	2.53	+/-3.79	2.00	pCi/g						
Tin-113	U	0.00794	0.0711	+/-0.0202	0.100	pCi/g						
Uranium-235		0.820	0.337	+/-0.176	0.500	pCi/g						
Yttrium-88	U	0.00634	0.0451	+/-0.0131	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		8070	462	+/-660	250	pCi/L		KXK2	02/08/10	1352	948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4,5,2,3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	79.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	79.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	61.4	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7874
Sample ID: 245395002
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 4.12%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Alpha Spec Analysis											
<i>AM241 "Dry Weight Corrected"</i>											
Americium-241	U	-0.00182	0.0264	+/-0.00557	0.050	pCi/g		JXD2	02/08/10	1021 944985	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.0106	0.0195	+/-0.00359	0.050	pCi/g		JXD2	02/05/10	1817 944994	2
Plutonium-239/240	U	0.0106	0.0223	+/-0.00358	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		1.76	J,R10	0.125	+/-0.151	0.100	pCi/g	JXD2	02/08/10	1204 944996	3
Uranium-235/236		0.150		0.0776	+/-0.031	0.100	pCi/g				
Uranium-238		7.18	J,R10	0.0725	+/-0.539	0.100	pCi/g				
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	0.109		0.314	+/-0.0947	0.200	pCi/g	MXR1	02/02/10	0720 944966	4
Bismuth-211	UI	3.53	R,R5a	0.260	+/-0.194		pCi/g				
Bismuth-214		1.04		0.0889	+/-0.0742	0.200	pCi/g				
Cadmium-109	UI	2.89	R,R5a	1.62	+/-0.524		pCi/g				
Cerium-139	U	0.00647		0.0425	+/-0.0118	0.050	pCi/g				
Cesium-134	UI	0.097	R,R5a	0.0731	+/-0.029	0.100	pCi/g				
Cesium-137	U	0.049		0.0567	+/-0.0154	0.100	pCi/g				
Cobalt-60	U	0.00409		0.0512	+/-0.0154	0.100	pCi/g				
Europium-152	U	0.0203		0.124	+/-0.0452	0.200	pCi/g				
Lanthanum-140	U	-0.0202		0.0898	+/-0.0281		pCi/g				
Lead-212		1.45		0.0761	+/-0.0677	0.100	pCi/g				
Lead-214		1.23		0.092	+/-0.0747	0.100	pCi/g				
Mercury-203	U	0.00679		0.0563	+/-0.0164	0.100	pCi/g				
Potassium-40		34.7		0.355	+/-1.50	1.00	pCi/g				
Radium-223	U	-0.692		0.849	+/-0.276		pCi/g				
Radium-224	UI	4.07	R,R5a	0.864	+/-0.460		pCi/g				
Radium-226		1.04		0.0889	+/-0.0742		pCi/g				
Radium-228		1.58		0.143	+/-0.144	0.500	pCi/g				
Ruthenium-106	U	0.0545		0.391	+/-0.117	0.800	pCi/g				
Sodium-22	U	-0.0219		0.055	+/-0.0174	0.080	pCi/g				
Strontium-85	UI	0.0872	R,R5a	0.0554	+/-0.0163		pCi/g				
Thallium-208		0.471		0.0438	+/-0.0383	0.080	pCi/g				

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7874
Sample ID: 245395002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	-0.252	0.481	+/-0.147		pCi/g					
Thorium-231	U	-0.692	0.849	+/-0.276		pCi/g					
Thorium-234		8.63	2.31	+/-1.30	2.00	pCi/g					
Tin-113	U	0.0143	0.0554	+/-0.0156	0.100	pCi/g					
Uranium-235	U	0.190	0.303	+/-0.106	0.500	pCi/g					
Yttrium-88	U	-0.0153	0.0321	+/-0.0111	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		31500	462	+/-2280	250	pCi/L		KXK2	02/08/10	1408 948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	68.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	81.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.2	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7871
Sample ID: 245395003
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 10.9%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Alpha Spec Analysis											
<i>AM241 "Dry Weight Corrected"</i>											
Americium-241		0.0314	0.0226	+/-0.00955	0.050	pCi/g		JXD2	02/08/10 1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.00266	0.022	+/-0.00189	0.050	pCi/g		JXD2	02/08/10 2042	944994	2
Plutonium-239/240	U	0.0173	0.0252	+/-0.00488	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		6.10	J,R10	0.171	+/-0.486	0.100	pCi/g	JXD2	02/08/10 1204	944996	4
Uranium-235/236		0.799		0.106	+/-0.0946	0.100	pCi/g				
Uranium-238		42.1	J,R10	0.0994	+/-3.14	0.100	pCi/g				
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	0.357		0.383	+/-0.114	0.200	pCi/g	MXR1	02/02/10 0721	944966	5
Bismuth-211	UI	2.55	R,R5a	0.301	+/-0.216		pCi/g				
Bismuth-214		0.683		0.0996	+/-0.0688	0.200	pCi/g				
Cadmium-109	U	0.228		2.17	+/-0.940		pCi/g				
Cerium-139	U	-0.0165		0.0542	+/-0.0157	0.050	pCi/g				
Cesium-134	U	0.0712		0.0798	+/-0.0303	0.100	pCi/g				
Cesium-137		0.0645		0.0534	+/-0.0228	0.100	pCi/g				
Cobalt-60	U	-0.00374		0.047	+/-0.0142	0.100	pCi/g				
Europium-152	U	-0.00775		0.155	+/-0.0751	0.200	pCi/g				
Lanthanum-140	U	0.0253		0.0964	+/-0.0309		pCi/g				
Lead-212		1.11		0.0908	+/-0.0595	0.100	pCi/g				
Lead-214		0.885		0.105	+/-0.0786	0.100	pCi/g				
Mercury-203	U	0.00913		0.0661	+/-0.0182	0.100	pCi/g				
Potassium-40		24.5		0.397	+/-1.14	1.00	pCi/g				
Radium-223	U	-0.525		1.01	+/-0.296		pCi/g				
Radium-224	UI	2.70	R,R5a	1.03	+/-0.538		pCi/g				
Radium-226		0.683		0.0996	+/-0.0688		pCi/g				
Radium-228		0.985		0.186	+/-0.140	0.500	pCi/g				
Ruthenium-106	U	-0.102		0.451	+/-0.136	0.800	pCi/g				
Sodium-22	U	-0.0286		0.058	+/-0.0185	0.080	pCi/g				
Strontium-85	UI	0.0772	R,R5a	0.0631	+/-0.0164		pCi/g				
Thallium-208		0.411		0.0498	+/-0.0353	0.080	pCi/g				

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7871
Sample ID: 245395003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thorium-227	U	0.285	0.660	+/-0.188		pCi/g						
Thorium-231	U	-0.525	1.01	+/-0.296		pCi/g						
Thorium-234		44.0	2.94	+/-4.23	2.00	pCi/g						
Tin-113	U	-0.01	0.0706	+/-0.0203	0.100	pCi/g						
Uranium-235		0.550	0.393	+/-0.139	0.500	pCi/g						
Yttrium-88	U	0.00809	0.0417	+/-0.0119	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		27100	461	+/-1980	250	pCi/L		KXK2	02/08/10	1425	948398	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	70.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	64.6	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound

< Result is less than value reported

> Result is greater than value reported

A The TIC is a suspected aldol-condensation product

B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.

BD Results are either below the MDC or tracer recovery is low

C Analyte has been confirmed by GC/MS analysis

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7872
Sample ID: 245395004
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 11.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00276	0.026	+/-0.00206	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0152	0.0193	+/-0.00427	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.00117	0.022	+/-0.00202	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.43	J,R10	0.122	+/-0.126	0.100	pCi/g	JXD2	02/08/10	1204	944996	3
Uranium-235/236		0.117		0.076	+/-0.0253	0.100	pCi/g					
Uranium-238		5.04	J,R10	0.071	+/-0.385	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.122		0.198	+/-0.0605	0.200	pCi/g	MXR1	02/02/10	0823	944966	4
Bismuth-211	UI	3.62	R,R5a	0.303	+/-0.271		pCi/g					
Bismuth-214		1.13		0.105	+/-0.0958	0.200	pCi/g					
Cadmium-109	U	1.43		1.50	+/-0.482		pCi/g					
Cerium-139	U	-0.015		0.046	+/-0.0142	0.050	pCi/g					
Cesium-134	UI	0.111	R,R5a	0.0856	+/-0.0265	0.100	pCi/g					
Cesium-137	U	-0.0176		0.0566	+/-0.0171	0.100	pCi/g					
Cobalt-60	U	0.00592		0.0651	+/-0.0198	0.100	pCi/g					
Europium-152	U	-0.0787		0.135	+/-0.0421	0.200	pCi/g					
Lanthanum-140	U	0.0301		0.0946	+/-0.029		pCi/g					
Lead-212		1.66		0.0811	+/-0.103	0.100	pCi/g					
Lead-214		1.26		0.103	+/-0.0999	0.100	pCi/g					
Mercury-203	U	0.0135		0.0658	+/-0.0187	0.100	pCi/g					
Potassium-40		37.6		0.437	+/-1.88	1.00	pCi/g					
Radium-223	U	-0.00291		0.926	+/-0.308		pCi/g					
Radium-224	UI	4.14	R,R5a	0.923	+/-0.680		pCi/g					
Radium-226		1.13		0.105	+/-0.0958		pCi/g					
Radium-228		1.63		0.193	+/-0.178	0.500	pCi/g					
Ruthenium-106	U	0.0679		0.472	+/-0.142	0.800	pCi/g					
Sodium-22	U	-0.00276		0.067	+/-0.0208	0.080	pCi/g					
Strontium-85	UI	0.085	R,R5a	0.0662	+/-0.0179		pCi/g					
Thallium-208		0.560		0.0503	+/-0.0463	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7872
245395004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	-0.0809	0.544	+/-0.158		pCi/g						
Thorium-231	U	-0.00291	0.926	+/-0.308		pCi/g						
Thorium-234		6.17	1.68	+/-1.01	2.00	pCi/g						
Tin-113	U	0.0217	0.0704	+/-0.0202	0.100	pCi/g						
Uranium-235	U	0.289	0.336	+/-0.115	0.500	pCi/g						
Yttrium-88	U	0.0253	0.0532	+/-0.0139	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		8610	462	+/-697	250	pCi/L		KXK2	02/08/10	1441	948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.3	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	83.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	86.7	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

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- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7870
Sample ID: 245395005
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 13.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Alpha Spec Analysis											
<i>AM241 "Dry Weight Corrected"</i>											
Americium-241	U	0.00249	0.0244	+/-0.004	0.050	pCi/g		JXD2	02/08/10	1021 944985	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.0078	0.0184	+/-0.00461	0.050	pCi/g		JXD2	02/05/10	1817 944994	2
Plutonium-239/240	U	0.0111	0.0211	+/-0.00357	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		1.11	J,R10	0.119	+/-0.103	0.100	pCi/g	JXD2	02/08/10	1204 944996	3
Uranium-235/236		0.0952		0.0741	+/-0.0223	0.100	pCi/g				
Uranium-238		3.80	J,R10	0.0692	+/-0.295	0.100	pCi/g				
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	-0.00153		0.0808	+/-0.0245	0.200	pCi/g	MXR1	02/02/10	0824 944966	4
Bismuth-211	UI	3.78	R,R5a	0.309	+/-0.286		pCi/g				
Bismuth-214		1.21		0.119	+/-0.115	0.200	pCi/g				
Cadmium-109	UI	2.83	R,R5a	0.817	+/-0.327		pCi/g				
Cerium-139	U	-0.00804		0.0395	+/-0.0112	0.050	pCi/g				
Cesium-134	UI	0.131	R,R5a	0.120	+/-0.0563	0.100	pCi/g				
Cesium-137	U	-0.0107		0.0693	+/-0.0214	0.100	pCi/g				
Cobalt-60	U	0.020		0.0799	+/-0.0223	0.100	pCi/g				
Europium-152	U	0.0193		0.165	+/-0.0488	0.200	pCi/g				
Lanthanum-140	U	-0.0994		0.165	+/-0.0584		pCi/g				
Lead-212		1.71		0.0795	+/-0.100	0.100	pCi/g				
Lead-214		1.32		0.108	+/-0.105	0.100	pCi/g				
Mercury-203	U	0.0224		0.0572	+/-0.0178	0.100	pCi/g				
Potassium-40		34.7		0.746	+/-1.88	1.00	pCi/g				
Radium-223	U	-0.252		0.990	+/-0.345		pCi/g				
Radium-224	UI	4.80	R,R5a	0.907	+/-0.736		pCi/g				
Radium-226		1.21		0.119	+/-0.115		pCi/g				
Radium-228		2.01		0.216	+/-0.197	0.500	pCi/g				
Ruthenium-106	U	0.184		0.642	+/-0.184	0.800	pCi/g				
Sodium-22	U	0.00553		0.0925	+/-0.0282	0.080	pCi/g				
Strontium-85	U	0.021		0.0571	+/-0.0177		pCi/g				
Thallium-208		0.550		0.0591	+/-0.0542	0.080	pCi/g				

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7870
Sample ID: 245395005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	0.0115	0.586	+/-0.170		pCi/g					
Thorium-231	U	-0.252	0.990	+/-0.345		pCi/g					
Thorium-234		3.08	0.750	+/-0.560	2.00	pCi/g					
Tin-113	U	-0.0237	0.0706	+/-0.0226	0.100	pCi/g					
Uranium-235	U	0.0585	0.280	+/-0.0839	0.500	pCi/g					
Yttrium-88	U	0.0187	0.0749	+/-0.0208	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		7540	461	+/-623	250	pCi/L		KXK2	02/08/10	1457 948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.9	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

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- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7873
Sample ID: 245395006
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 12.6%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00412	0.0253	+/-0.00441	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00142	0.0234	+/-0.00142	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240	U	0.0156	0.0268	+/-0.00518	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		5.39	J,R10	0.801	+/-0.642	0.100	pCi/g	AXD2	02/19/10	0756	954840	4
Uranium-235/236		1.11		0.521	+/-0.245	0.100	pCi/g					
Uranium-238		36.8	J,R10	0.552	+/-3.34	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.271		0.476	+/-0.144	0.200	pCi/g	MXR1	02/02/10	0824	944966	9
Bismuth-211	UI	3.09	R,R5a	0.361	+/-0.228		pCi/g					
Bismuth-214		1.05		0.124	+/-0.0838	0.200	pCi/g					
Cadmium-109	UI	2.91	R,R5a	1.94	+/-0.602		pCi/g					
Cerium-139	U	-0.0293		0.0561	+/-0.0167	0.050	pCi/g					
Cesium-134	U	0.0578		0.0958	+/-0.0276	0.100	pCi/g					
Cesium-137		0.118		0.070	+/-0.0461	0.100	pCi/g					
Cobalt-60	U	-0.019		0.0595	+/-0.0193	0.100	pCi/g					
Europium-152	U	-0.103		0.166	+/-0.0583	0.200	pCi/g					
Lanthanum-140	U	-0.00147		0.143	+/-0.0427		pCi/g					
Lead-212		1.42		0.106	+/-0.0734	0.100	pCi/g					
Lead-214		1.08		0.118	+/-0.0842	0.100	pCi/g					
Mercury-203	U	0.0266		0.0753	+/-0.0236	0.100	pCi/g					
Potassium-40		27.1		0.550	+/-1.34	1.00	pCi/g					
Radium-223	U	0.0279		1.15	+/-0.375		pCi/g					
Radium-224	UI	3.62	R,R5a	1.20	+/-0.572		pCi/g					
Radium-226		1.05		0.124	+/-0.0838		pCi/g					
Radium-228		1.45		0.200	+/-0.156	0.500	pCi/g					
Ruthenium-106	U	0.00399		0.594	+/-0.177	0.800	pCi/g					
Sodium-22	U	-0.0427		0.0726	+/-0.0242	0.080	pCi/g					
Strontium-85	U	0.047		0.0708	+/-0.0222		pCi/g					
Thallium-208		0.455		0.0632	+/-0.0459	0.080	pCi/g					

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Report Date: February 19, 2010

Client Sample ID: RE15-10-7873
Sample ID: 245395006
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	0.216	0.741	+/-0.216		pCi/g					
Thorium-231	U	0.0279	1.15	+/-0.375		pCi/g					
Thorium-234		33.7	3.61	+/-3.54	2.00	pCi/g					
Tin-113	U	-0.0289	0.0763	+/-0.0228	0.100	pCi/g					
Uranium-235		0.634	0.416	+/-0.177	0.500	pCi/g					
Yttrium-88	U	-0.00653	0.0436	+/-0.0139	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		19800	462	+/-1470	250	pCi/L		KXX2	02/08/10	1513 948398	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE EML HASL-300, U-02-RC Modified
9	DOE HASL 300, 4.5.2.3/Ga-01-R
10	GL-RAD-A-002
11	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	67.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported

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 Contact: Ms. Joylene Valdez
 Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7911
 Sample ID: 245395007
 Matrix: R
 Collect Date: 19-JAN-10
 Receive Date: 23-JAN-10
 Collector: Client
 Moisture: 12%

Project: LANL01004
 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241		0.0611	0.0243	+/-0.0101	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00603	0.0199	+/-0.00321	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240		0.268	0.0228	+/-0.0225	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		35.2	J,R10	0.998	+/-3.43	0.100	pCi/g	AXD2	02/19/10	0756	954840	3
Uranium-235/236		4.89		0.649	+/-0.690	0.100	pCi/g					
Uranium-238		245	J,R10	0.688	+/-22.3	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	UI	0.929	R,R5a	0.752	+/-0.210	0.200	pCi/g	MXR1	02/02/10	0913	944966	8
Bismuth-211	UI	1.75	R,R5a	0.374	+/-0.223		pCi/g					
Bismuth-214		0.526		0.125	+/-0.0909	0.200	pCi/g					
Cadmium-109	U	0.506		3.41	+/-1.10		pCi/g					
Cerium-139	U	-0.0228		0.0702	+/-0.0226	0.050	pCi/g					
Cesium-134	U	0.0322		0.0889	+/-0.0252	0.100	pCi/g					
Cesium-137	U	0.0469		0.0795	+/-0.0217	0.100	pCi/g					
Cobalt-60	U	0.0148		0.0573	+/-0.0163	0.100	pCi/g					
Europium-152	U	0.0209		0.185	+/-0.0586	0.200	pCi/g					
Lanthanum-140	U	-0.00169		0.104	+/-0.0308		pCi/g					
Lead-212	UI	0.669	R,R5a	0.183	+/-0.0671	0.100	pCi/g					
Lead-214	UI	0.610	R,R5a	0.202	+/-0.0791	0.100	pCi/g					
Mercury-203	U	-0.0292		0.0763	+/-0.0216	0.100	pCi/g					
Potassium-40		17.8		0.399	+/-1.04	1.00	pCi/g					
Radium-223	U	-0.194		1.25	+/-0.354		pCi/g					
Radium-224	UI	2.12	R,R5a	1.48	+/-0.432		pCi/g					
Radium-226		0.526		0.125	+/-0.0909		pCi/g					
Radium-228		0.653		0.192	+/-0.111	0.500	pCi/g					
Ruthenium-106	U	0.0959		0.585	+/-0.164	0.800	pCi/g					
Sodium-22	U	-0.0199		0.0603	+/-0.019	0.080	pCi/g					
Strontium-85	U	0.0202		0.0694	+/-0.0227		pCi/g					
Thallium-208		0.243		0.0649	+/-0.0433	0.080	pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7911
245395007

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	UI	1.13	R,R5a	0.901	+/-0.279	pCi/g						
Thorium-231	U	-0.194		1.25	+/-0.354	pCi/g						
Thorium-234		175		5.23	+/-15.9	pCi/g	2.00					
Tin-113	U	-0.00956		0.0812	+/-0.0234	pCi/g	0.100					
Uranium-235		3.07		0.529	+/-0.363	pCi/g	0.500					
Yttrium-88	U	-0.0612		0.0378	+/-0.0171	pCi/g	0.100					
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		1.97E+05		537	+/-13900	pCi/L		KXK2	02/08/10	1530	948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4,5,2,3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	74.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	61.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

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- A The TIC is a suspected aldol-condensation product

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7908
Sample ID: 245395008
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 8.11%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00759	0.0228	+/-0.00375	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0133	0.020	+/-0.00443	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.0097	0.0229	+/-0.00346	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		18.4	J,R10	1.01	+/-1.86	0.100	pCi/g	AXD2	02/19/10	0756	954840	3
Uranium-235/236		3.25		0.660	+/-0.524	0.100	pCi/g					
Uranium-238		188	J,R10	0.700	+/-16.8	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.611		0.818	+/-0.249	0.200	pCi/g	MXR1	02/02/10	0914	944966	8
Bismuth-211	UI	3.33	R,R5a	0.373	+/-0.274		pCi/g					
Bismuth-214		1.07		0.117	+/-0.0925	0.200	pCi/g					
Cadmium-109	U	2.28		3.43	+/-1.03		pCi/g					
Cerium-139	U	-0.00759		0.0679	+/-0.0228	0.050	pCi/g					
Cesium-134	U	0.0466		0.0949	+/-0.0269	0.100	pCi/g					
Cesium-137	U	0.0376		0.0806	+/-0.0226	0.100	pCi/g					
Cobalt-60	U	0.019		0.0663	+/-0.0189	0.100	pCi/g					
Europium-152	U	-0.132		0.164	+/-0.0558	0.200	pCi/g					
Lanthanum-140	U	-0.0597		0.102	+/-0.0363		pCi/g					
Lead-212		1.46		0.109	+/-0.0783	0.100	pCi/g					
Lead-214		1.16		0.130	+/-0.100	0.100	pCi/g					
Mercury-203	U	-0.0166		0.0775	+/-0.0225	0.100	pCi/g					
Potassium-40		34.5		0.496	+/-1.74	1.00	pCi/g					
Radium-223	U	-1.16		1.18	+/-0.380		pCi/g					
Radium-224	UI	4.42	R,R5a	1.25	+/-0.593		pCi/g					
Radium-226		1.07		0.117	+/-0.0925		pCi/g					
Radium-228		1.25		0.220	+/-0.167	0.500	pCi/g					
Ruthenium-106	U	-0.09		0.560	+/-0.165	0.800	pCi/g					
Sodium-22	U	0.0249		0.0804	+/-0.0229	0.080	pCi/g					
Strontium-85	U	0.022		0.0669	+/-0.0223		pCi/g					
Thallium-208		0.485		0.0671	+/-0.0483	0.080	pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7908
245395008

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	0.874	0.877	+/-0.274		pCi/g						
Thorium-231	U	-1.16	1.18	+/-0.380		pCi/g						
Thorium-234		120	5.69	+/-12.4	2.00	pCi/g						
Tin-113	U	-0.00409	0.0812	+/-0.024	0.100	pCi/g						
Uranium-235		1.93	0.494	+/-0.287	0.500	pCi/g						
Yttrium-88	U	-0.00438	0.0417	+/-0.0134	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		1.08E+05	460	+/-7590	250	pCi/L		KXK2	02/08/10	1540	948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4.5.2.3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	77.9	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	79.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.6	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7912
Sample ID: 245395009
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 13.5%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0067	0.0241	+/-0.00421	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00733	0.0202	+/-0.00302	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.022	0.0231	+/-0.00558	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		9.61	J,R10	0.867	+/-1.03	0.100	pCi/g	AXD2	02/19/10	0756	954840	3
Uranium-235/236		1.23		0.564	+/-0.272	0.100	pCi/g					
Uranium-238		80.0	J,R10	0.598	+/-7.01	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.140		0.471	+/-0.143	0.200	pCi/g	MXR1	02/02/10	0914	944966	8
Bismuth-211	UI	3.08	R,R5a	0.348	+/-0.237		pCi/g					
Bismuth-214		0.905		0.109	+/-0.102	0.200	pCi/g					
Cadmium-109	U	-0.584		2.45	+/-0.782		pCi/g					
Cerium-139	U	0.0168		0.0573	+/-0.0187	0.050	pCi/g					
Cesium-134	U	0.0861		0.0926	+/-0.0334	0.100	pCi/g					
Cesium-137	U	0.0141		0.0727	+/-0.0212	0.100	pCi/g					
Cobalt-60	U	0.0123		0.0655	+/-0.0192	0.100	pCi/g					
Europium-152	U	-0.0642		0.161	+/-0.0533	0.200	pCi/g					
Lanthanum-140	U	-0.0362		0.104	+/-0.034		pCi/g					
Lead-212		1.22		0.0952	+/-0.0647	0.100	pCi/g					
Lead-214		1.07		0.112	+/-0.0871	0.100	pCi/g					
Mercury-203	U	0.0102		0.0689	+/-0.0196	0.100	pCi/g					
Potassium-40		29.5		0.424	+/-1.36	1.00	pCi/g					
Radium-223	U	-0.718		1.09	+/-0.342		pCi/g					
Radium-224	UI	3.31	R,R5a	1.08	+/-0.510		pCi/g					
Radium-226		0.905		0.109	+/-0.102		pCi/g					
Radium-228		1.52		0.207	+/-0.158	0.500	pCi/g					
Ruthenium-106	U	-0.155		0.526	+/-0.160	0.800	pCi/g					
Sodium-22	U	0.0291		0.0722	+/-0.0204	0.080	pCi/g					
Strontium-85	U	0.0468		0.0663	+/-0.0187		pCi/g					
Thallium-208		0.384		0.0588	+/-0.0372	0.080	pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7912
245395009

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Thorium-227	U	0.141	0.701	+/-0.224		pCi/g					
Thorium-231	U	-0.718	1.09	+/-0.342		pCi/g					
Thorium-234		69.6	3.52	+/-6.33	2.00	pCi/g					
Tin-113	U	-0.0206	0.0729	+/-0.0223	0.100	pCi/g					
Uranium-235		0.995	0.408	+/-0.189	0.500	pCi/g					
Yttrium-88	U	0.0145	0.057	+/-0.0159	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		81400	462	+/-5760	250	pCi/L		KXK2	02/08/10 1557	948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4.5.2.3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.2	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.0	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

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- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7906
Sample ID: 245395010
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 9.98%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00921	0.0234	+/-0.00454	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0167	0.0184	+/-0.00468	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.00781	0.0211	+/-0.00372	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.08	J,R10	0.120	+/-0.100	0.100	pCi/g	JXD2	02/08/10	1204	944996	3
Uranium-235/236		0.114		0.0742	+/-0.0247	0.100	pCi/g					
Uranium-238		3.35	J,R10	0.0693	+/-0.263	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0784		0.117	+/-0.0347	0.200	pCi/g	MXR1	02/02/10	0915	944966	4
Bismuth-211	UI	3.41	R,R5a	0.387	+/-0.285		pCi/g					
Bismuth-214		1.28		0.142	+/-0.118	0.200	pCi/g					
Cadmium-109	UI	3.55	R,R5a	1.07	+/-0.467		pCi/g					
Cerium-139	U	-0.0265		0.0514	+/-0.016	0.050	pCi/g					
Cesium-134	U	0.0387		0.105	+/-0.0298	0.100	pCi/g					
Cesium-137	U	0.00333		0.0826	+/-0.0248	0.100	pCi/g					
Cobalt-60	U	-0.0305		0.0908	+/-0.0286	0.100	pCi/g					
Europium-152	U	0.0449		0.195	+/-0.0648	0.200	pCi/g					
Lanthanum-140	U	-0.0257		0.116	+/-0.0409		pCi/g					
Lead-212		1.70		0.104	+/-0.0994	0.100	pCi/g					
Lead-214		1.19		0.135	+/-0.104	0.100	pCi/g					
Mercury-203	U	0.00539		0.0735	+/-0.0243	0.100	pCi/g					
Potassium-40		36.1		0.589	+/-1.50	1.00	pCi/g					
Radium-223	U	0.0321		1.25	+/-0.422		pCi/g					
Radium-224	UI	4.36	R,R5a	1.18	+/-0.664		pCi/g					
Radium-226		1.28		0.142	+/-0.118		pCi/g					
Radium-228		1.76		0.318	+/-0.219	0.500	pCi/g					
Ruthenium-106	U	-0.315		0.666	+/-0.211	0.800	pCi/g					
Sodium-22	U	0.0335		0.107	+/-0.0309	0.080	pCi/g					
Strontium-85	U	0.0566		0.085	+/-0.0268		pCi/g					
Thallium-208		0.491		0.0775	+/-0.0558	0.080	pCi/g					

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Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7906
245395010

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thorium-227	U	0.0276	0.689	+/-0.199		pCi/g						
Thorium-231	U	0.0321	1.25	+/-0.422		pCi/g						
Thorium-234		3.95	1.15	+/-0.700	2.00	pCi/g						
Tin-113	U	-0.0338	0.0893	+/-0.028	0.100	pCi/g						
Uranium-235	U	0.0243	0.397	+/-0.118	0.500	pCi/g						
Yttrium-88	U	0.036	0.0759	+/-0.0209	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		4900	462	+/-442	250	pCi/L		KXK2	02/08/10	1613	948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	77.9	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	82.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.6	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7905
Sample ID: 245395011
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 21.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00947	0.024	+/-0.00579	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00	0.0215	+/-0.0013	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240	U	0.0195	0.0246	+/-0.00576	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		2.60	J,R10	0.140	+/-0.216	0.100	pCi/g	JXD2	02/08/10	1204	944996	4
Uranium-235/236		0.391		0.0869	+/-0.0545	0.100	pCi/g					
Uranium-238		16.9	J,R10	0.0812	+/-1.25	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0397		0.256	+/-0.0816	0.200	pCi/g	MXR1	02/02/10	0918	944966	5
Bismuth-211	UI	2.87	R,R5a	0.266	+/-0.233		pCi/g					
Bismuth-214		0.918		0.093	+/-0.0875	0.200	pCi/g					
Cadmium-109	UI	2.19	R,R5a	1.48	+/-0.468		pCi/g					
Cerium-139	U	-0.0102		0.0419	+/-0.0122	0.050	pCi/g					
Cesium-134	U	0.0541		0.0778	+/-0.0304	0.100	pCi/g					
Cesium-137		0.221		0.0514	+/-0.0276	0.100	pCi/g					
Cobalt-60	U	0.00269		0.0541	+/-0.0164	0.100	pCi/g					
Europium-152	U	0.0165		0.140	+/-0.0406	0.200	pCi/g					
Lanthanum-140	U	0.000832		0.110	+/-0.0329		pCi/g					
Lead-212		1.22		0.0748	+/-0.0851	0.100	pCi/g					
Lead-214		0.998		0.0997	+/-0.085	0.100	pCi/g					
Mercury-203	U	0.0344		0.0479	+/-0.0221	0.100	pCi/g					
Potassium-40		26.6		0.443	+/-1.41	1.00	pCi/g					
Radium-223	U	0.125		0.882	+/-0.296		pCi/g					
Radium-224	UI	2.67	R,R5a	0.851	+/-0.478		pCi/g					
Radium-226		0.918		0.093	+/-0.0875		pCi/g					
Radium-228		1.08		0.192	+/-0.135	0.500	pCi/g					
Ruthenium-106	U	-0.0651		0.430	+/-0.132	0.800	pCi/g					
Sodium-22	U	-0.00409		0.0588	+/-0.0181	0.080	pCi/g					
Strontium-85	UI	0.0632	R,R5a	0.0576	+/-0.0167		pCi/g					
Thallium-208		0.313		0.0462	+/-0.0334	0.080	pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7905
245395011

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	-0.0912	0.543	+/-0.164		pCi/g					
Thorium-231	U	0.125	0.882	+/-0.296		pCi/g					
Thorium-234		15.6	2.03	+/-1.77	2.00	pCi/g					
Tin-113	U	0.0186	0.0646	+/-0.018	0.100	pCi/g					
Uranium-235		0.540	0.290	+/-0.140	0.500	pCi/g					
Yttrium-88	U	0.0089	0.0477	+/-0.0137	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		11300	461	+/-880	250	pCi/L		KXK2	02/08/10	1629 948398	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.9	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	71.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	80.3	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7907
Sample ID: 245395012
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 19.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0169	0.0289	+/-0.0108	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0072	0.0238	+/-0.00324	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240		0.0921	0.0272	+/-0.0125	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		18.1	J,R10	0.808	+/-1.75	0.100	pCi/g	AXD2	02/19/10	0756	954840	3
Uranium-235/236		1.91		0.526	+/-0.340	0.100	pCi/g					
Uranium-238		108	J,R10	0.557	+/-9.41	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0841		0.230	+/-0.0688	0.200	pCi/g	MXR1	02/02/10	0918	944966	8
Bismuth-211	UI	3.47	R,R5a	0.382	+/-0.302		pCi/g					
Bismuth-214		1.06		0.153	+/-0.109	0.200	pCi/g					
Cadmium-109	U	1.41		2.34	+/-0.722		pCi/g					
Cerium-139	U	-0.0123		0.0649	+/-0.0214	0.050	pCi/g					
Cesium-134	U	0.104		0.130	+/-0.0351	0.100	pCi/g					
Cesium-137	U	-0.0195		0.0843	+/-0.0265	0.100	pCi/g					
Cobalt-60	U	0.0149		0.0797	+/-0.0228	0.100	pCi/g					
Europium-152	U	-0.0179		0.189	+/-0.0547	0.200	pCi/g					
Lanthanum-140	U	-0.0545		0.138	+/-0.0465		pCi/g					
Lead-212		1.42		0.110	+/-0.0919	0.100	pCi/g					
Lead-214		1.21		0.133	+/-0.110	0.100	pCi/g					
Mercury-203	U	0.0206		0.0773	+/-0.024	0.100	pCi/g					
Potassium-40		26.0		0.526	+/-1.49	1.00	pCi/g					
Radium-223	U	-0.675		1.31	+/-0.396		pCi/g					
Radium-224	UI	1.57	R,R5a	1.25	+/-0.530		pCi/g					
Radium-226		1.06		0.153	+/-0.109		pCi/g					
Radium-228		1.71		0.250	+/-0.203	0.500	pCi/g					
Ruthenium-106	U	-0.0345		0.712	+/-0.217	0.800	pCi/g					
Sodium-22	U	-0.0281		0.0782	+/-0.026	0.080	pCi/g					
Strontium-85	U	0.0311		0.0826	+/-0.0267		pCi/g					
Thallium-208		0.455		0.0857	+/-0.0582	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7907
245395012

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	0.075	0.822	+/-0.276		pCi/g						
Thorium-231	U	-0.675	1.31	+/-0.396		pCi/g						
Thorium-234		87.0	2.01	+/-8.25	2.00	pCi/g						
Tin-113	U	-0.0315	0.0829	+/-0.0251	0.100	pCi/g						
Uranium-235		1.66	0.468	+/-0.274	0.500	pCi/g						
Yttrium-88	U	0.019	0.069	+/-0.0191	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		75000	461	+/-5310	250	pCi/L		KXK2	02/08/10	1646	948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4.5.2.3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	66.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	66.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.0	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7913
Sample ID: 245395013
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 21.3%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0021	0.0332	+/-0.00808	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0141	0.0212	+/-0.00431	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.00128	0.0242	+/-0.00287	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.18	J,R10	0.154	+/-0.115	0.100	pCi/g	JXD2	02/08/10	1204	944996	3
Uranium-235/236	U	0.0858		0.0953	+/-0.0238	0.100	pCi/g					
Uranium-238		2.50	J,R10	0.0891	+/-0.214	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0561		0.277	+/-0.0843	0.200	pCi/g	MXR1	02/02/10	0926	944966	4
Bismuth-211	UI	3.45	R,R5a	0.235	+/-0.194		pCi/g					
Bismuth-214		0.966		0.0803	+/-0.0704	0.200	pCi/g					
Cadmium-109	UI	3.57	R,R5a	1.11	+/-0.458		pCi/g					
Cerium-139	U	-0.0117		0.039	+/-0.0111	0.050	pCi/g					
Cesium-134	UI	0.116	R,R5a	0.0741	+/-0.0254	0.100	pCi/g					
Cesium-137	U	-0.0069		0.0417	+/-0.0144	0.100	pCi/g					
Cobalt-60	U	-0.00664		0.0437	+/-0.0136	0.100	pCi/g					
Europium-152	U	0.00795		0.126	+/-0.0464	0.200	pCi/g					
Lanthanum-140	U	-0.0547		0.0824	+/-0.028		pCi/g					
Lead-212		1.67		0.0697	+/-0.0741	0.100	pCi/g					
Lead-214		1.20		0.082	+/-0.0743	0.100	pCi/g					
Mercury-203	U	0.0372		0.0551	+/-0.0155	0.100	pCi/g					
Potassium-40		22.6		0.364	+/-1.04	1.00	pCi/g					
Radium-223	U	0.302		0.826	+/-0.273		pCi/g					
Radium-224	UI	3.92	R,R5a	0.792	+/-0.587		pCi/g					
Radium-226		0.966		0.0803	+/-0.0704		pCi/g					
Radium-228		1.58		0.160	+/-0.149	0.500	pCi/g					
Ruthenium-106	U	-0.0308		0.366	+/-0.112	0.800	pCi/g					
Sodium-22	U	-0.0245		0.0473	+/-0.0153	0.080	pCi/g					
Strontium-85	UI	0.0759	R,R5a	0.051	+/-0.0149		pCi/g					
Thallium-208		0.452		0.0463	+/-0.0336	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7913
245395013

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	-0.0068	0.501	+/-0.146		pCi/g					
Thorium-231	U	0.302	0.826	+/-0.273		pCi/g					
Thorium-234		3.09	2.21	+/-0.871	2.00	pCi/g					
Tin-113	U	-0.0192	0.0527	+/-0.0157	0.100	pCi/g					
Uranium-235	U	0.173	0.313	+/-0.0909	0.500	pCi/g					
Yttrium-88	U	-0.00128	0.0394	+/-0.0121	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		3420	461	+/-342	250	pCi/L		KXK2	02/08/10	1702 948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	59.0	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	72.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7909
Sample ID: 245395014
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 15.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Alpha Spec Analysis											
<i>AM241 "Dry Weight Corrected"</i>											
Americium-241	U	0.00963	0.0278	+/-0.00835	0.050	pCi/g	JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.00258	0.0213	+/-0.00183	0.050	pCi/g	JXD2	02/08/10	2042	944994	2
Plutonium-239/240		0.0426	0.0244	+/-0.00818	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		15.2	J,R10	0.893	+/-1.53	0.100	pCi/g	AXD2	02/19/10	0756	954840 4
Uranium-235/236		2.16		0.580	+/-0.382	0.100	pCi/g				
Uranium-238		112	J,R10	0.615	+/-9.85	0.100	pCi/g				
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	0.459		0.486	+/-0.146	0.200	pCi/g	MXR1	02/02/10	0927	944966 9
Bismuth-211	UI	2.33	R,R5a	0.328	+/-0.189		pCi/g				
Bismuth-214		0.853		0.103	+/-0.0726	0.200	pCi/g				
Cadmium-109	U	0.924		2.74	+/-1.18		pCi/g				
Cerium-139	U	0.0311		0.0635	+/-0.0201	0.050	pCi/g				
Cesium-134	UI	0.104	R,R5a	0.0899	+/-0.0257	0.100	pCi/g				
Cesium-137	UI	0.0602	R,R5a	0.0555	+/-0.0365	0.100	pCi/g				
Cobalt-60	U	-0.0119		0.0494	+/-0.0154	0.100	pCi/g				
Europium-152	U	-0.0187		0.162	+/-0.0606	0.200	pCi/g				
Lanthanum-140	U	-0.0252		0.0981	+/-0.0315		pCi/g				
Lead-212		1.14		0.0972	+/-0.0623	0.100	pCi/g				
Lead-214		0.812		0.109	+/-0.0692	0.100	pCi/g				
Mercury-203	U	-0.0154		0.0663	+/-0.0187	0.100	pCi/g				
Potassium-40		21.0		0.447	+/-1.01	1.00	pCi/g				
Radium-223	U	-0.708		0.961	+/-0.338		pCi/g				
Radium-224	UI	2.56	R,R5a	1.11	+/-0.549		pCi/g				
Radium-226		0.853		0.103	+/-0.0726		pCi/g				
Radium-228		1.22		0.182	+/-0.137	0.500	pCi/g				
Ruthenium-106	U	0.148		0.524	+/-0.149	0.800	pCi/g				
Sodium-22	U	0.00624		0.0599	+/-0.0174	0.080	pCi/g				
Strontium-85	UI	0.0722	R,R5a	0.0633	+/-0.0185		pCi/g				
Thallium-208		0.336		0.0574	+/-0.0358	0.080	pCi/g				

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Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7909
245395014

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	0.270	0.731	+/-0.239		pCi/g					
Thorium-231	U	-0.708	0.961	+/-0.338		pCi/g					
Thorium-234		73.3	3.74	+/-6.77	2.00	pCi/g					
Tin-113	U	-0.0298	0.0708	+/-0.0208	0.100	pCi/g					
Uranium-235		1.12	0.456	+/-0.212	0.500	pCi/g					
Yttrium-88	U	-0.0125	0.0399	+/-0.0134	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		1.06E+05	461	+/-7490	250	pCi/L		KXK2	02/08/10	1718 948398	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE EML HASL-300, U-02-RC Modified
9	DOE HASL 300, 4.5.2.3/Ga-01-R
10	GL-RAD-A-002
11	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	70.3	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	73.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.1	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
 Address : PO Box 1663
 TA-03, SM271, Drop Pt. 02U, Rm
 Los Alamos, New Mexico 87545
 Contact: Ms. Joylene Valdez
 Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7910
 Sample ID: 245395015
 Matrix: R
 Collect Date: 19-JAN-10
 Receive Date: 23-JAN-10
 Collector: Client
 Moisture: 9.89%

Project: LANL01004
 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00497	0.0289	+/-0.00814	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	-0.00134	0.0221	+/-0.00232	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240	U	0.0241	0.0253	+/-0.00612	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		4.55	J,R10	0.131	+/-0.354	0.100	pCi/g	JXD2	02/08/10	1156	944996	4
Uranium-235/236		0.741		0.0812	+/-0.0827	0.100	pCi/g					
Uranium-238		32.6	J,R10	0.0759	+/-2.37	0.100	pCi/g					
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.224		0.391	+/-0.119	0.200	pCi/g	MXR1	02/02/10	0947	944966	5
Bismuth-211	UI	3.40	R,R5a	0.327	+/-0.288		pCi/g					
Bismuth-214		1.04		0.114	+/-0.0997	0.200	pCi/g					
Cadmium-109	UI	3.71	R,R5a	1.94	+/-0.599		pCi/g					
Cerium-139	U	0.0352		0.0617	+/-0.0166	0.050	pCi/g					
Cesium-134	UI	0.111	R,R5a	0.0934	+/-0.0304	0.100	pCi/g					
Cesium-137	U	0.0388		0.0753	+/-0.0207	0.100	pCi/g					
Cobalt-60	U	-0.0316		0.0504	+/-0.0172	0.100	pCi/g					
Europium-152	U	0.0703		0.169	+/-0.0535	0.200	pCi/g					
Lanthanum-140	U	-0.0401		0.140	+/-0.0476		pCi/g					
Lead-212		1.47		0.101	+/-0.0918	0.100	pCi/g					
Lead-214		1.18		0.114	+/-0.105	0.100	pCi/g					
Mercury-203	U	0.032		0.0776	+/-0.0216	0.100	pCi/g					
Potassium-40		33.0		0.490	+/-1.74	1.00	pCi/g					
Radium-223	U	0.665		1.26	+/-0.354		pCi/g					
Radium-224	UI	4.77	R,R5a	1.15	+/-0.702		pCi/g					
Radium-226		1.04		0.114	+/-0.0997		pCi/g					
Radium-228		1.43		0.230	+/-0.163	0.500	pCi/g					
Ruthenium-106	U	-0.256		0.508	+/-0.157	0.800	pCi/g					
Sodium-22	U	0.0305		0.0788	+/-0.0241	0.080	pCi/g					
Strontium-85	UI	0.079	R,R5a	0.076	+/-0.0232		pCi/g					
Thallium-208		0.408		0.0635	+/-0.0466	0.080	pCi/g					

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7910
245395015

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Thorium-227	U	-0.137	0.731	+/-0.212		pCi/g					
Thorium-231	U	0.665	1.26	+/-0.354		pCi/g					
Thorium-234		32.3	2.99	+/-3.35	2.00	pCi/g					
Tin-113	U	-0.0132	0.0768	+/-0.023	0.100	pCi/g					
Uranium-235	U	0.359	0.402	+/-0.162	0.500	pCi/g					
Yttrium-88	U	0.0219	0.0547	+/-0.0144	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		1.20E+05	462	+/-8460	250	pCi/L		KXX2	02/08/10 1735	948398	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4,5,2.3/Ga-01-R
6	GL-RAD-A-002
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	65.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	72.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound

< Result is less than value reported

> Result is greater than value reported

A The TIC is a suspected aldol-condensation product

B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.

BD Results are either below the MDC or tracer recovery is low

C Analyte has been confirmed by GC/MS analysis

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1393C

LOS ALAMOS

REQUEST NUMBER: 10-1393

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

246395%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7869	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7869	1	POLY	H3	Ice	R
RE15-10-7874	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7874	1	POLY	H3	Ice	R
RE15-10-7871	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7871	1	POLY	H3	Ice	R
RE15-10-7872	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7872	1	POLY	H3	Ice	R
RE15-10-7870	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7870	1	POLY	H3	Ice	R
RE15-10-7873	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7873	1	POLY	H3	Ice	R
RE15-10-7911	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7911	1	POLY	H3	Ice	R
RE15-10-7908	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7908	1	POLY	H3	Ice	R
RE15-10-7912	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7912	1	POLY	H3	Ice	R
RE15-10-7906	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7906	1	POLY	H3	Ice	R
RE15-10-7905	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7905	1	POLY	H3	Ice	R
RE15-10-7907	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7907	1	POLY	H3	Ice	R
RE15-10-7913	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7913	1	POLY	H3	Ice	R
RE15-10-7909	1	POLY	AM241+GS+ISOPU+ISO U	None	R

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1393C

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7909	1	POLY	H3	Ice	R
RE15-10-7910	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7910	1	POLY	H3	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Friday, January 22, 2010

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/22/2010

TURNAROUND/REPORT DUE: 2/21/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature: 

Page 1 of 4

REQUEST NUMBER: 10-1393

These Samples are on:

LANL Request Number: 10-1393

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-901.1	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7807	R	1/19/2010	

Friday, January 22, 2010

REQUEST NUMBER: 10-1393

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-901.1	1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	EPA-906.0	1	RE15-10-7868	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7805	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	HASL-300.AM-241	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	

Friday, January 22, 2010

REQUEST NUMBER: 10-1393

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	HASL-300:ISOPU	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	HASL-300:ISOU	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	

Friday, January 22, 2010

REQUEST NUMBER: 10-1393

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7806	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	

Final Page of REQUEST NUMBER 10-1393



January 27, 2010

www.gel.com

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 245395
SDG: 10-1393

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 23, 2010, and analyzed for Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 10-1393
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 245395
SDG: 10-1393

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Case Narrative

**Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 245395
SDG # : 10-1393**

January 27, 2010

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on January 23, 2010 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The original chain of custody was received on 1/26/10. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. The containers for radiochemistry were received at 12,13,15C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

<u>Laboratory ID</u>	<u>Client ID</u>
245395001	RE15-10-7869
245395002	RE15-10-7874
245395003	RE15-10-7871
245395004	RE15-10-7872
245395005	RE15-10-7870
245395006	RE15-10-7873
245395007	RE15-10-7911
245395008	RE15-10-7908
245395009	RE15-10-7912
245395010	RE15-10-7906
245395011	RE15-10-7905
245395012	RE15-10-7907
245395013	RE15-10-7913
245395014	RE15-10-7909
245395015	RE15-10-7910

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

A handwritten signature in black ink, appearing to read "for Valerie Davis".

Valerie Davis

Project Manager

List of current GEL Certifications as of 27 January 2010

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLJA	42D0904046
California - NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida - NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois - NELAP	200029
Indiana	C-SC-01
Kansas - NELAP	E-10332
Kentucky	90129
Louisiana - NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey - NELAP	SC002
New Mexico	FL NELAP E87156
New York - NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania - NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas - NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah - NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1393C

LOS ALAMOS

REQUEST NUMBER: 10-1393

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245395%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7869	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7869	1	POLY	H3	Ice	R
RE15-10-7874	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7874	1	POLY	H3	Ice	R
RE15-10-7871	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7871	1	POLY	H3	Ice	R
RE15-10-7872	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7872	1	POLY	H3	Ice	R
RE15-10-7870	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7870	1	POLY	H3	Ice	R
RE15-10-7873	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7873	1	POLY	H3	Ice	R
RE15-10-7911	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7911	1	POLY	H3	Ice	R
RE15-10-7908	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7908	1	POLY	H3	Ice	R
RE15-10-7912	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7912	1	POLY	H3	Ice	R
RE15-10-7906	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7906	1	POLY	H3	Ice	R
RE15-10-7905	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7905	1	POLY	H3	Ice	R
RE15-10-7907	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7907	1	POLY	H3	Ice	R
RE15-10-7913	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7913	1	POLY	H3	Ice	R
RE15-10-7909	1	POLY	AM241+GS+ISOPU+ISO U	None	R

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1393C

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7909	1	POLY	H3	Ice	R
RE15-10-7910	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7910	1	POLY	H3	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Friday, January 22, 2010

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407


Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/22/2010
TURNAROUND/REPORT DUE: 2/21/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANLER SMO CONTACT:

Signature:



Page 1 of 4
REQUEST NUMBER: 10-1393

These Samples are on:
LANL Request Number: 10-1393
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	

Friday, January 22, 2010

Page 2 of 4

REQUEST NUMBER: 10-1393

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	EPA:906.0	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	HASL-300:AM-241	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	HASL-300:ISOPU	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	
		1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	
	HASL-300:ISOU	1	RE15-10-7869	R	1/19/2010	
		1	RE15-10-7870	R	1/19/2010	
		1	RE15-10-7871	R	1/19/2010	
		1	RE15-10-7872	R	1/19/2010	
		1	RE15-10-7873	R	1/19/2010	

Friday, January 22, 2010

Page 4 of 4

REQUEST NUMBER: 10-1393

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	RE15-10-7874	R	1/19/2010	
		1	RE15-10-7905	R	1/19/2010	
		1	RE15-10-7906	R	1/19/2010	
		1	RE15-10-7907	R	1/19/2010	
		1	RE15-10-7908	R	1/19/2010	
		1	RE15-10-7909	R	1/19/2010	
		1	RE15-10-7910	R	1/19/2010	
		1	RE15-10-7911	R	1/19/2010	
		1	RE15-10-7912	R	1/19/2010	
		1	RE15-10-7913	R	1/19/2010	

Final Page of REQUEST NUMBER 10-1393



Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL		SDG/ARCOC/Work Order: 10-1393	
Received By: Patricia Dover-Dent		Date Received: January 23, 2009	
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 60 CPM
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within $0 \leq 6$ deg. C?	X			Preservation Method: ice bags blue ice dry ice none other (describe) 1-4 12,13,15C
3 Chain of custody documents included with shipment?			X	Original COC was received 01/26/10
4 Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7 Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	X			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?			X	Sample ID's affected: time written on containers, not on COC
11 Number of containers received match number indicated on COC?	X			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#S

7209 7849 6695 1C	7209 7849 6560 4C
7209 7849 6776 1C	7209 7849 6559 4C
7209 7849 6526 2C	7209 7849 6684 4C
7209 7849 6700 2C	7209 7849 6732 12C
7209 7849 6710 2C	7209 7849 6504 13C
7209 7849 6548 2C	7209 7849 6743 13C
7209 7849 6537 3C	7209 7849 6765 13C
7209 7849 6570 3C	7209 7849 6754 15C
7209 7849 6515 4C	

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGO BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN10
ACTMGT: 55.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR2A0515BYD0

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGO BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN10
ACTMGT: 55.0 LB MAN
CAD: 0014176/CAFE2449

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CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR2A0515BYD0

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2 of 2

SATURDAY ### A1
PRIORITY OVERNIGHT

PSN 7209 7849 6695

str# 7209 7849 6684 (0201)

X0 CHSA

29407
SC-US
CHS



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGO BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

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4 of 4

SATURDAY ### A1
PRIORITY OVERNIGHT

PSN 7209 7849 6526

str# 7209 7849 6490 (0201)

X0 CHSA

29407
SC-US
CHS



1 of 2

SATURDAY ### A1
PRIORITY OVERNIGHT

PSN 7209 7849 6776

str# 7209 7849 6776 (0201)

X0 CHSA

29407
SC-US
CHS



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 83
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN10
ACTGNT: 57.0 LB MAN
CAD: 8014176/CAFE2449
BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR2A0515BYDO

JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 83
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN10
ACTGNT: 58.0 LB MAN
CAD: 8014176/CAFE2449
BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

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2 of 2

TRK# 7209 7849 6710

Matr# 7209 7849 6700 (0201)

SATURDAY ###
PRIORITY OVERNIGHT

2940

X0 CHSA



LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 83
CAD: 8014176/CAFE2449

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1 of 3

TRK# 7209 7849 6537

Matr# 7209 7849 6537

SATURDAY ###
PRIORITY OVERNIGHT

2940

X0 CHSA



2 of 3

TRK# 7209 7849 6548

Matr# 7209 7849 6537 (0201)

SATURDAY ###
PRIORITY OVERNIGHT

29407

SC-US
CHS

X0 CHSA



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN10
ACTGNT: 58.0 LB MAN
CAD: 8014176/CAFE2449

BILL SENDER

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR3A0352VA00

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2 of 2

TRK# 7209 7849 6570

Matr# 7209 7849 6560 (0201)

SATURDAY ###
PRIORITY OVERNIGHT

29407

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CHS

X0 CHSA



LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83

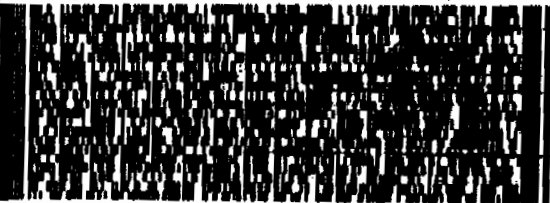
SHIP DATE: 06/19/87

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR2A0515BYDO



3 of 4
NPS# 0263 7209 7849 6515
Matr# 7209 7849 6490 0201

SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



ORIGIN ID: SAFA (506) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83

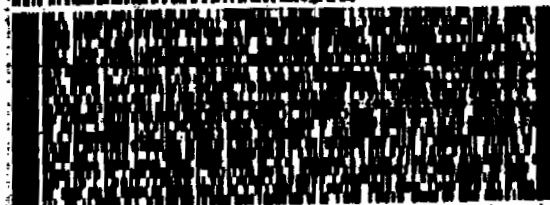
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN10
ACTWT: 48.10 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR2A0515BYDO



3 of 3
NPS# 0263 7209 7849 6559
Matr# 7209 7849 6537 0201

SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS

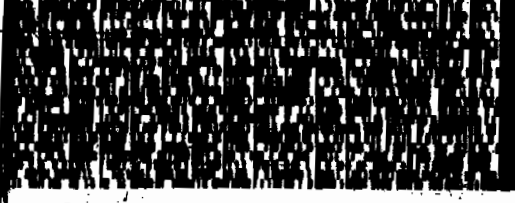


LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR3A0352VA00



1 of 2
NPS# 0263 7209 7849 6560
Matr# 7209 7849 6490 0201

SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



ORIGIN ID: SAFA (506) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN10
ACTWT: 53.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR2A0515BYDO



1 of 2
NPS# 0263 7209 7849 6684
Matr# 7209 7849 6537 0201

SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83
LOS ALAMOS NM 87545
UNITED STATES US

SHIP DATE: 22JAN18
ACTMGT: 68-8 LB NPN
CRD: 0014176/CAFE2449

BILL SENDER

LOS ALAMOS NM 87545
TAGS BLDG 1237 DPU 83

CRD: 0014176/CAFE2449

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° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR2A05158YD0

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° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR2A05158YD0

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7209 7849 6732

SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



From 133998 22JAN18 SAVA

ORIGIN ID: SAVA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83
LOS ALAMOS NM 87545
UNITED STATES US

SHIP DATE: 22JAN18
ACTMGT: 68-8 LB NPN
CRD: 0014176/CAFE2449

BILL SENDER

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR2A05158YD0

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SATURDAY ### A1
PRIORITY OVERNIGHT

7209 7849 6743

7209 7849 6732

29407
SC-US
CHS

X0 CHSA

ORIGIN ID: SAVA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83
LOS ALAMOS NM 87545
UNITED STATES US

SHIP DATE: 22JAN18
ACTMGT: 68-8 LB NPN
CRD: 0014176/CAFE2449

BILL SENDER

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR2A05158YD0

13°

7209 7849 6765

7209 7849 6754

0 CHSA

SATURDAY ### A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

ORIGIN ID: SFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS INST. 100
TABB BLDG 1237 DPU-83
LOS ALAMOS, NM 87545
UNITED STATES, US

SHIP DATE: 22JAN10
ACTWT: 22.8 LB MAN
CNO: 00141707CAFE2449

BILL SENDER

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 566-9171
REF: 6B010AMR2A0515BYD0

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1 of 2
TRACK 7209 7849 6754
NN MASTER NN

*** SATURDAY *** A1 2
PRIORITY OVERNIGHT

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Page 1 of 1
1/18/04 NHT 03 04-09 11

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier Explanation

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

< Result is less than value reported

> Result is greater than value reported

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL

A The TIC is a suspected aldol-condensation product

B Target analyte was detected in the associated blank

B Metals-Either presence of analyte detected in the associated blank, or
MDL/IDL < sample value < PQL

BD Results are either below the MDC or tracer recovery is low

C Analyte has been confirmed by GC/MS analysis

D Results are reported from a diluted aliquot of the sample

d 5-day BOD-The 2:1 depletion requirement was not met for this sample

E Organics-Concentration of the target analyte exceeds the instrument calibration range

E Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria

H Analytical holding time was exceeded

h Preparation or preservation holding time was exceeded

J Value is estimated

N Metals-The Matrix spike sample recovery is not within specified control limits

N Organics-Presumptive evidence based on mass spectral library search to make a tentative
identification of the analyte (TIC). Quantitation is based on nearest internal standard
response factor

N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration
by 4X or more

ND Analyte concentration is not detected above the reporting limit

UI Gamma Spectroscopy-Uncertain identification

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y QC Samples were not spiked with this compound

Z Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1393**

Method/Analysis Information

Product: AM241
Analytical Method: DOE EML HASL-300, Am-05-RC Modified
Prep Method: Dry Soil Prep
Analytical Batch Number: 944985
Prep Batch Number: 944895

Sample ID	Client ID
245395001	RE15-10-7869
245395002	RE15-10-7874
245395003	RE15-10-7871
245395004	RE15-10-7872
245395005	RE15-10-7870
245395006	RE15-10-7873
245395007	RE15-10-7911
245395008	RE15-10-7908
245395009	RE15-10-7912
245395010	RE15-10-7906
245395011	RE15-10-7905
245395012	RE15-10-7907
245395013	RE15-10-7913
245395014	RE15-10-7909
245395015	RE15-10-7910
1202023804	Method Blank (MB)
1202023805	245371001(RE16-10-957) Sample Duplicate (DUP)
1202023806	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:**Blank Information**

Aliquot for sample 1202023804 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245371001 (RE16-10-957). The QC was from LANL work order 245371.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	ISOPU
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep

Analytical Batch Number: 944994

Prep Batch Number: 944895

Sample ID	Client ID
245395001	RE15-10-7869
245395002	RE15-10-7874
245395003	RE15-10-7871
245395004	RE15-10-7872
245395005	RE15-10-7870
245395006	RE15-10-7873
245395007	RE15-10-7911
245395008	RE15-10-7908
245395009	RE15-10-7912
245395010	RE15-10-7906
245395011	RE15-10-7905
245395012	RE15-10-7907
245395013	RE15-10-7913
245395014	RE15-10-7909
245395015	RE15-10-7910
1202023807	Method Blank (MB)
1202023808	245371001(RE16-10-957) Sample Duplicate (DUP)
1202023809	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202023807 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245371001 (RE16-10-957). The QC was from LANL work order 245371.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

Samples 245395003 (RE15-10-7871), 245395006 (RE15-10-7873), 245395011 (RE15-10-7905), 245395014 (RE15-10-7909) and 245395015 (RE15-10-7910) were given additional clean-up steps and recounted in order to remove suspected interferences.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	ISOU
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	944996
Prep Batch Number:	944895

Sample ID	Client ID
245395001	RE15-10-7869
245395002	RE15-10-7874
245395003	RE15-10-7871
245395004	RE15-10-7872
245395005	RE15-10-7870

245395010	RE15-10-7906
245395011	RE15-10-7905
245395013	RE15-10-7913
245395015	RE15-10-7910
1202023820	Method Blank (MB)
1202023821	245371001(RE16-10-957) Sample Duplicate (DUP)
1202023822	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202023820 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245371001 (RE16-10-957). The QC was from LANL work order 245371.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The U-235/236 and U-238 blank, 1202023820 (MB), result is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation

Data exception reports are generated to document any procedural anomalies that may deviate from referenced

SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The U-238 blank, 1202023820 (MB), result is greater than the decision level but less than the MDC.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	ISOU
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	954840
Prep Batch Number:	944895

Sample ID	Client ID
245395006	RE15-10-7873
245395007	RE15-10-7911
245395008	RE15-10-7908
245395009	RE15-10-7912
245395012	RE15-10-7907
245395014	RE15-10-7909
1202047013	Method Blank (MB)
1202047014	245395008(RE15-10-7908) Sample Duplicate (DUP)
1202047015	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202047013 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245395008 (RE15-10-7908). The QC was from LANL work order 245395.

QC Information

Refer to Data Exception Report (DER).

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

Samples were repped due to high relative percent difference/relative error ratio. Samples were repped with smaller aliquots to reduce tailing from high levels of U-233/234 and U-238 present in the samples.

Miscellaneous Information:

Data Exception (DER) Documentation

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG:
DER 793390 was generated due to Failed RPD for DUP and Other. 1. The Quality Control Sample 245395008 and Duplicate Sample 1202047014 do not meet the relative error ratio requirements for U-233/234 and U-238. 2. Samples 245395007, 245395008, and 245395014 do not have 400 tracer counts. 1. Significant reduction in aliquot size due to elevated activity is suspected to be contributing to duplication issues. Samples were prepped three times, twice with similar results. The results for the original analysis were not as comparable due to significant tailing outside of the regions of interest. Project Manager and Group Leader notified. Reporting results. 2. Count times were shortened to reduce tailing from high levels of U-233/234 and U-238 activity. Client tracer yield requirements and detection limits were met. Reporting results.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: GAMMA SPEC
Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R
Prep Method: Dry Soil Prep
Analytical Batch Number: 944966
Prep Batch Number: 944895

Sample ID	Client ID
245395001	RE15-10-7869
245395002	RE15-10-7874
245395003	RE15-10-7871
245395004	RE15-10-7872
245395005	RE15-10-7870
245395006	RE15-10-7873
245395007	RE15-10-7911
245395008	RE15-10-7908
245395009	RE15-10-7912
245395010	RE15-10-7906
245395011	RE15-10-7905
245395012	RE15-10-7907
245395013	RE15-10-7913
245395014	RE15-10-7909
245395015	RE15-10-7910
1202023719	Method Blank (MB)
1202023720	245395011(RE15-10-7905) Sample Duplicate (DUP)
1202023721	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. The initial Calibrations were performed in February 2009, March 2009, April 2009, May 2009, June 2009, July 2009, August 2009, October 2009, November 2009 and January 2010.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:**Blank Information**

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 245395011 (RE15-10-7905). The QC was from LANL work order 245395.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank 1202023719 (MB) result for Pb-214 is greater than 1.65 times the CSU but less than the MDC.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Additional Comments

Additional comments were not required for this sample set.

Blank Decision Level

The blank 1202023719 (MB) result for Pb-214 is greater than the decision level but less than the MDC.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to high counting uncertainty.	Cesium-137	245395014	RE15-10-7909
UI	Data rejected due to interference.	Bismuth-211	245395001	RE15-10-7869
			245395002	RE15-10-7874
			245395003	RE15-10-7871
			245395004	RE15-10-7872
			245395005	RE15-10-7870
			245395006	RE15-10-7873
			245395007	RE15-10-7911

	245395008	RE15-10-7908
	245395009	RE15-10-7912
	245395010	RE15-10-7906
	245395011	RE15-10-7905
	245395012	RE15-10-7907
	245395013	RE15-10-7913
	245395014	RE15-10-7909
	245395015	RE15-10-7910
	1202023720	RE15-10-7905(245395011DUP)
Cadmium-109	245395001	RE15-10-7869
	245395002	RE15-10-7874
	245395005	RE15-10-7870
	245395006	RE15-10-7873
	245395010	RE15-10-7906
	245395011	RE15-10-7905
	245395013	RE15-10-7913
	245395015	RE15-10-7910
	1202023720	RE15-10-7905(245395011DUP)
Radium-224	245395001	RE15-10-7869
	245395002	RE15-10-7874
	245395003	RE15-10-7871
	245395004	RE15-10-7872
	245395005	RE15-10-7870
	245395006	RE15-10-7873
	245395008	RE15-10-7908
	245395009	RE15-10-7912
	245395010	RE15-10-7906
	245395011	RE15-10-7905
	245395012	RE15-10-7907
	245395013	RE15-10-7913
	245395014	RE15-10-7909
	245395015	RE15-10-7910

UI	Data rejected due to low abundance.	Americium-241	1202023720	RE15-10-7905(245395011DUP)
			245395007	RE15-10-7911
			245395001	RE15-10-7869
		Cesium-134	245395002	RE15-10-7874
			245395004	RE15-10-7872
			245395005	RE15-10-7870
			245395013	RE15-10-7913
			245395014	RE15-10-7909
			245395015	RE15-10-7910
			1202023720	RE15-10-7905(245395011DUP)
		Lead-212	245395007	RE15-10-7911
		Lead-214	245395007	RE15-10-7911
		Radium-224	245395007	RE15-10-7911
		Strontium-85	245395002	RE15-10-7874
			245395003	RE15-10-7871
			245395004	RE15-10-7872
			245395011	RE15-10-7905
			245395013	RE15-10-7913
			245395014	RE15-10-7909
			245395015	RE15-10-7910
		Thorium-227	245395007	RE15-10-7911

Method/Analysis Information

Product: H3
Analytical Method: GL-RAD-A-002
Analytical Batch Number: 948398

Sample ID	Client ID
245395001	RE15-10-7869
245395002	RE15-10-7874
245395003	RE15-10-7871

245395004	RE15-10-7872
245395005	RE15-10-7870
245395006	RE15-10-7873
245395007	RE15-10-7911
245395008	RE15-10-7908
245395009	RE15-10-7912
245395010	RE15-10-7906
245395011	RE15-10-7905
245395012	RE15-10-7907
245395013	RE15-10-7913
245395014	RE15-10-7909
245395015	RE15-10-7910
1202031673	Method Blank (MB)
1202031674	245395001(RE15-10-7869) Sample Duplicate (DUP)
1202031675	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. The initial Calibrations were performed in August 2009 and September 2009.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volumes in this batch.

Designated QC

The following sample was used for QC: 245395001 (RE15-10-7869). The QC was from LANL work order 245395.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

Samples were recounted due to a detector lock out condition. Recount is being reported.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Additional Comments

The blank, 1202031673 (MB), did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots. All other samples met the detection limits.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: _____

Paul Welch 2/19/10

DATA EXCEPTION REPORT

Mo. Day Yr.
19-FEB-10

Division:
Radiochemistry

Quality Criteria:
Specifications

Type:
Process

Instrument Type:
ALPHA SPECTROMETER

Test / Method:
DOE EML HASL-300, U-02-RC
Modified

Matrix Type:
Solid

Client Code:
LANL

Batch ID:
954840

Sample Numbers:
See Below

Potentially affected work order(s)(SDG): 245395(10-1393)

Application Issues:

Failed RPD for DUP

Other

**Specification and Requirements
Exception Description:**

1. The Quality Control Sample 245395008 and Duplicate Sample 1202047014 do not meet the relative error ratio requirements for U-233/234 and U-238.
2. Samples 245395007, 245395008, and 245395014 do not have 400 tracer counts.

DER Disposition:

1. Significant reduction in aliquot size due to elevated activity is suspected to be contributing to duplication issues. Samples were prepped three times, twice with similar results. The results for the original analysis were not as comparable due to significant tailing outside of the regions of interest. Project Manager and Group Leader notified. Reporting results.
2. Count times were shortened to reduce tailing from high levels of U-233/234 and U-238 activity. Client tracer yield requirements and detection limits were met. Reporting results.

Originator's Name:

Jessica Downey 19-FEB-10

Data Validator/Group Leader:

Scott Moreland 19-FEB-10

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1393 GEL Work Order: 245395

The Qualifiers in this report are defined as follows:

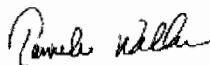
- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7869
Sample ID: 245395001
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 24.7%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0107	0.0213	+/-0.00782	0.050	pCi/g	JXD2	02/08/10	1021	944985	1	
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00711	0.0196	+/-0.00293	0.050	pCi/g	JXD2	02/05/10	1817	944994	2	
Plutonium-239/240	U	0.0201	0.0224	+/-0.00499	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		7.18	0.173	+/-0.567	0.100	pCi/g	JXD2	02/08/10	1204	944996	3	
Uranium-235/236		0.933	0.108	+/-0.106	0.100	pCi/g						
Uranium-238		43.7	0.100	+/-3.26	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0635	0.334	+/-0.107	0.200	pCi/g	MXR1	02/02/10	0710	944966	4	
Bismuth-211	UI	3.83	0.286	+/-0.301		pCi/g						
Bismuth-214		1.01	0.107	+/-0.0879	0.200	pCi/g						
Cadmium-109	UI	4.86	1.53	+/-0.714		pCi/g						
Cerium-139	U	0.0223	0.0495	+/-0.0154	0.050	pCi/g						
Cesium-134	UI	0.127	0.0894	+/-0.0308	0.100	pCi/g						
Cesium-137	U	0.00459	0.0596	+/-0.0178	0.100	pCi/g						
Cobalt-60	U	-0.0111	0.0512	+/-0.0165	0.100	pCi/g						
Europium-152	U	-0.0273	0.145	+/-0.0419	0.200	pCi/g						
Lanthanum-140	U	-0.037	0.0994	+/-0.0327		pCi/g						
Lead-212		1.69	0.0883	+/-0.113	0.100	pCi/g						
Lead-214		1.33	0.0998	+/-0.110	0.100	pCi/g						
Mercury-203	U	0.0604	0.0605	+/-0.0264	0.100	pCi/g						
Potassium-40		28.3	0.424	+/-1.47	1.00	pCi/g						
Radium-223	U	-0.602	1.02	+/-0.375		pCi/g						
Radium-224	UI	3.92	1.01	+/-0.503		pCi/g						
Radium-226		1.01	0.107	+/-0.0879		pCi/g						
Radium-228		1.68	0.192	+/-0.171	0.500	pCi/g						
Ruthenium-106	U	0.0265	0.454	+/-0.135	0.800	pCi/g						
Sodium-22	U	-0.0228	0.0599	+/-0.0194	0.080	pCi/g						
Strontium-85	U	0.0212	0.0564	+/-0.018		pCi/g						

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7869
245395001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

GAMMA SPEC "Dry Weight Corrected"

Thallium-208		0.578	0.0494	+/-0.047	0.080	pCi/g						
Thorium-227	U	0.303	0.626	+/-0.202		pCi/g						
Thorium-231	U	-0.602	1.02	+/-0.375		pCi/g						
Thorium-234		39.6	2.53	+/-3.79	2.00	pCi/g						
Tin-113	U	0.00794	0.0711	+/-0.0202	0.100	pCi/g						
Uranium-235		0.820	0.337	+/-0.176	0.500	pCi/g						
Yttrium-88	U	0.00634	0.0451	+/-0.0131	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		8070	462	+/-660	250	pCi/L		KXK2	02/08/10	1352	948398	5
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The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	79.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	79.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	61.4	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7869
245395001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7874
Sample ID: 245395002
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 4.12%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	-0.00182	0.0264	+/-0.00557	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0106	0.0195	+/-0.00359	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.0106	0.0223	+/-0.00358	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.76	0.125	+/-0.151	0.100	pCi/g		JXD2	02/08/10	1204	944996	3
Uranium-235/236		0.150	0.0776	+/-0.031	0.100	pCi/g						
Uranium-238		7.18	0.0725	+/-0.539	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.109	0.314	+/-0.0947	0.200	pCi/g		MXR1	02/02/10	0720	944966	4
Bismuth-211	UI	3.53	0.260	+/-0.194		pCi/g						
Bismuth-214		1.04	0.0889	+/-0.0742	0.200	pCi/g						
Cadmium-109	UI	2.89	1.62	+/-0.524		pCi/g						
Cerium-139	U	0.00647	0.0425	+/-0.0118	0.050	pCi/g						
Cesium-134	UI	0.097	0.0731	+/-0.029	0.100	pCi/g						
Cesium-137	U	0.049	0.0567	+/-0.0154	0.100	pCi/g						
Cobalt-60	U	0.00409	0.0512	+/-0.0154	0.100	pCi/g						
Europium-152	U	0.0203	0.124	+/-0.0452	0.200	pCi/g						
Lanthanum-140	U	-0.0202	0.0898	+/-0.0281		pCi/g						
Lead-212		1.45	0.0761	+/-0.0677	0.100	pCi/g						
Lead-214		1.23	0.092	+/-0.0747	0.100	pCi/g						
Mercury-203	U	0.00679	0.0563	+/-0.0164	0.100	pCi/g						
Potassium-40		34.7	0.355	+/-1.50	1.00	pCi/g						
Radium-223	U	-0.692	0.849	+/-0.276		pCi/g						
Radium-224	UI	4.07	0.864	+/-0.460		pCi/g						
Radium-226		1.04	0.0889	+/-0.0742		pCi/g						
Radium-228		1.58	0.143	+/-0.144	0.500	pCi/g						
Ruthenium-106	U	0.0545	0.391	+/-0.117	0.800	pCi/g						
Sodium-22	U	-0.0219	0.055	+/-0.0174	0.080	pCi/g						
Strontium-85	UI	0.0872	0.0554	+/-0.0163		pCi/g						
Thallium-208		0.471	0.0438	+/-0.0383	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7874
Sample ID: 245395002
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	-0.252	0.481	+/-0.147		pCi/g						
Thorium-231	U	-0.692	0.849	+/-0.276		pCi/g						
Thorium-234		8.63	2.31	+/-1.30	2.00	pCi/g						
Tin-113	U	0.0143	0.0554	+/-0.0156	0.100	pCi/g						
Uranium-235	U	0.190	0.303	+/-0.106	0.500	pCi/g						
Yttrium-88	U	-0.0153	0.0321	+/-0.0111	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		31500	462	+/-2280	250	pCi/L		KXK2	02/08/10	1408	948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	68.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	81.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.2	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7874
Sample ID: 245395002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------------	------

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7871
Sample ID: 245395003
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 10.9%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241		0.0314	0.0226	+/-0.00955	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00266	0.022	+/-0.00189	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240	U	0.0173	0.0252	+/-0.00488	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		6.10	0.171	+/-0.486	0.100	pCi/g		JXD2	02/08/10	1204	944996	4
Uranium-235/236		0.799	0.106	+/-0.0946	0.100	pCi/g						
Uranium-238		42.1	0.0994	+/-3.14	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.357	0.383	+/-0.114	0.200	pCi/g		MXR1	02/02/10	0721	944966	5
Bismuth-211	UI	2.55	0.301	+/-0.216		pCi/g						
Bismuth-214		0.683	0.0996	+/-0.0688	0.200	pCi/g						
Cadmium-109	U	0.228	2.17	+/-0.940		pCi/g						
Cerium-139	U	-0.0165	0.0542	+/-0.0157	0.050	pCi/g						
Cesium-134	U	0.0712	0.0798	+/-0.0303	0.100	pCi/g						
Cesium-137		0.0645	0.0534	+/-0.0228	0.100	pCi/g						
Cobalt-60	U	-0.00374	0.047	+/-0.0142	0.100	pCi/g						
Europium-152	U	-0.00775	0.155	+/-0.0751	0.200	pCi/g						
Lanthanum-140	U	0.0253	0.0964	+/-0.0309		pCi/g						
Lead-212		1.11	0.0908	+/-0.0595	0.100	pCi/g						
Lead-214		0.885	0.105	+/-0.0786	0.100	pCi/g						
Mercury-203	U	0.00913	0.0661	+/-0.0182	0.100	pCi/g						
Potassium-40		24.5	0.397	+/-1.14	1.00	pCi/g						
Radium-223	U	-0.525	1.01	+/-0.296		pCi/g						
Radium-224	UI	2.70	1.03	+/-0.538		pCi/g						
Radium-226		0.683	0.0996	+/-0.0688		pCi/g						
Radium-228		0.985	0.186	+/-0.140	0.500	pCi/g						
Ruthenium-106	U	-0.102	0.451	+/-0.136	0.800	pCi/g						
Sodium-22	U	-0.0286	0.058	+/-0.0185	0.080	pCi/g						
Strontium-85	UI	0.0772	0.0631	+/-0.0164		pCi/g						
Thallium-208		0.411	0.0498	+/-0.0353	0.080	pCi/g						

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Report Date: February 19, 2010

Client Sample ID: RE15-10-7871
Sample ID: 245395003
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	0.285	0.660	+/-0.188		pCi/g						
Thorium-231	U	-0.525	1.01	+/-0.296		pCi/g						
Thorium-234		44.0	2.94	+/-4.23	2.00	pCi/g						
Tin-113	U	-0.01	0.0706	+/-0.0203	0.100	pCi/g						
Uranium-235		0.550	0.393	+/-0.139	0.500	pCi/g						
Yttrium-88	U	0.00809	0.0417	+/-0.0119	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		27100	461	+/-1980	250	pCi/L		KXK2	02/08/10	1425	948398	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	70.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	64.6	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7871 Project: LANL01004
Sample ID: 245395003 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------	-------	------

D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7872
Sample ID: 245395004
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 11.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00276	0.026	+/-0.00206	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0152	0.0193	+/-0.00427	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.00117	0.022	+/-0.00202	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.43	0.122	+/-0.126	0.100	pCi/g		JXD2	02/08/10	1204	944996	3
Uranium-235/236		0.117	0.076	+/-0.0253	0.100	pCi/g						
Uranium-238		5.04	0.071	+/-0.385	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.122	0.198	+/-0.0605	0.200	pCi/g		MXR1	02/02/10	0823	944966	4
Bismuth-211	UI	3.62	0.303	+/-0.271		pCi/g						
Bismuth-214		1.13	0.105	+/-0.0958	0.200	pCi/g						
Cadmium-109	U	1.43	1.50	+/-0.482		pCi/g						
Cerium-139	U	-0.015	0.046	+/-0.0142	0.050	pCi/g						
Cesium-134	UI	0.111	0.0856	+/-0.0265	0.100	pCi/g						
Cesium-137	U	-0.0176	0.0566	+/-0.0171	0.100	pCi/g						
Cobalt-60	U	0.00592	0.0651	+/-0.0198	0.100	pCi/g						
Europium-152	U	-0.0787	0.135	+/-0.0421	0.200	pCi/g						
Lanthanum-140	U	0.0301	0.0946	+/-0.029		pCi/g						
Lead-212		1.66	0.0811	+/-0.103	0.100	pCi/g						
Lead-214		1.26	0.103	+/-0.0999	0.100	pCi/g						
Mercury-203	U	0.0135	0.0658	+/-0.0187	0.100	pCi/g						
Potassium-40		37.6	0.437	+/-1.88	1.00	pCi/g						
Radium-223	U	-0.00291	0.926	+/-0.308		pCi/g						
Radium-224	UI	4.14	0.923	+/-0.680		pCi/g						
Radium-226		1.13	0.105	+/-0.0958		pCi/g						
Radium-228		1.63	0.193	+/-0.178	0.500	pCi/g						
Ruthenium-106	U	0.0679	0.472	+/-0.142	0.800	pCi/g						
Sodium-22	U	-0.00276	0.067	+/-0.0208	0.080	pCi/g						
Strontium-85	UI	0.085	0.0662	+/-0.0179		pCi/g						
Thallium-208		0.560	0.0503	+/-0.0463	0.080	pCi/g						

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Report Date: February 19, 2010

Client Sample ID: RE15-10-7872
Sample ID: 245395004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	-0.0809	0.544	+/-0.158		pCi/g						
Thorium-231	U	-0.00291	0.926	+/-0.308		pCi/g						
Thorium-234		6.17	1.68	+/-1.01	2.00	pCi/g						
Tin-113	U	0.0217	0.0704	+/-0.0202	0.100	pCi/g						
Uranium-235	U	0.289	0.336	+/-0.115	0.500	pCi/g						
Yttrium-88	U	0.0253	0.0532	+/-0.0139	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		8610	462	+/-697	250	pCi/L		KXK2	02/08/10	1441	948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.3	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	83.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	86.7	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7872 Project: LANL01004
Sample ID: 245395004 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------------	------

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7870
Sample ID: 245395005
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 13.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Alpha Spec Analysis											
<i>AM241 "Dry Weight Corrected"</i>											
Americium-241	U	0.00249	0.0244	+/-0.004	0.050	pCi/g		JXD2	02/08/10	1021 944985	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.0078	0.0184	+/-0.00461	0.050	pCi/g		JXD2	02/05/10	1817 944994	2
Plutonium-239/240	U	0.0111	0.0211	+/-0.00357	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		1.11	0.119	+/-0.103	0.100	pCi/g		JXD2	02/08/10	1204 944996	3
Uranium-235/236		0.0952	0.0741	+/-0.0223	0.100	pCi/g					
Uranium-238		3.80	0.0692	+/-0.295	0.100	pCi/g					
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	-0.00153	0.0808	+/-0.0245	0.200	pCi/g		MXR1	02/02/10	0824 944966	4
Bismuth-211	UI	3.78	0.309	+/-0.286		pCi/g					
Bismuth-214		1.21	0.119	+/-0.115	0.200	pCi/g					
Cadmium-109	UI	2.83	0.817	+/-0.327		pCi/g					
Cerium-139	U	-0.00804	0.0395	+/-0.0112	0.050	pCi/g					
Cesium-134	UI	0.131	0.120	+/-0.0563	0.100	pCi/g					
Cesium-137	U	-0.0107	0.0693	+/-0.0214	0.100	pCi/g					
Cobalt-60	U	0.020	0.0799	+/-0.0223	0.100	pCi/g					
Europium-152	U	0.0193	0.165	+/-0.0488	0.200	pCi/g					
Lanthanum-140	U	-0.0994	0.165	+/-0.0584		pCi/g					
Lead-212		1.71	0.0795	+/-0.100	0.100	pCi/g					
Lead-214		1.32	0.108	+/-0.105	0.100	pCi/g					
Mercury-203	U	0.0224	0.0572	+/-0.0178	0.100	pCi/g					
Potassium-40		34.7	0.746	+/-1.88	1.00	pCi/g					
Radium-223	U	-0.252	0.990	+/-0.345		pCi/g					
Radium-224	UI	4.80	0.907	+/-0.736		pCi/g					
Radium-226		1.21	0.119	+/-0.115		pCi/g					
Radium-228		2.01	0.216	+/-0.197	0.500	pCi/g					
Ruthenium-106	U	0.184	0.642	+/-0.184	0.800	pCi/g					
Sodium-22	U	0.00553	0.0925	+/-0.0282	0.080	pCi/g					
Strontium-85	U	0.021	0.0571	+/-0.0177		pCi/g					
Thallium-208		0.550	0.0591	+/-0.0542	0.080	pCi/g					

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Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7870
245395005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thorium-227	U	0.0115	0.586	+/-0.170		pCi/g						
Thorium-231	U	-0.252	0.990	+/-0.345		pCi/g						
Thorium-234		3.08	0.750	+/-0.560	2.00	pCi/g						
Tin-113	U	-0.0237	0.0706	+/-0.0226	0.100	pCi/g						
Uranium-235	U	0.0585	0.280	+/-0.0839	0.500	pCi/g						
Yttrium-88	U	0.0187	0.0749	+/-0.0208	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		7540	461	+/-623	250	pCi/L		KXK2	02/08/10	1457	948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.9	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7870
Sample ID: 245395005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------------	------

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7873
Sample ID: 245395006
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 12.6%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00412	0.0253	+/-0.00441	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00142	0.0234	+/-0.00142	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240	U	0.0156	0.0268	+/-0.00518	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		5.39	0.801	+/-0.642	0.100	pCi/g		AXD2	02/19/10	0756	954840	4
Uranium-235/236		1.11	0.521	+/-0.245	0.100	pCi/g						
Uranium-238		36.8	0.552	+/-3.34	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.271	0.476	+/-0.144	0.200	pCi/g		MXR1	02/02/10	0824	944966	9
Bismuth-211	UI	3.09	0.361	+/-0.228		pCi/g						
Bismuth-214		1.05	0.124	+/-0.0838	0.200	pCi/g						
Cadmium-109	UI	2.91	1.94	+/-0.602		pCi/g						
Cerium-139	U	-0.0293	0.0561	+/-0.0167	0.050	pCi/g						
Cesium-134	U	0.0578	0.0958	+/-0.0276	0.100	pCi/g						
Cesium-137		0.118	0.070	+/-0.0461	0.100	pCi/g						
Cobalt-60	U	-0.019	0.0595	+/-0.0193	0.100	pCi/g						
Europium-152	U	-0.103	0.166	+/-0.0583	0.200	pCi/g						
Lanthanum-140	U	-0.00147	0.143	+/-0.0427		pCi/g						
Lead-212		1.42	0.106	+/-0.0734	0.100	pCi/g						
Lead-214		1.08	0.118	+/-0.0842	0.100	pCi/g						
Mercury-203	U	0.0266	0.0753	+/-0.0236	0.100	pCi/g						
Potassium-40		27.1	0.550	+/-1.34	1.00	pCi/g						
Radium-223	U	0.0279	1.15	+/-0.375		pCi/g						
Radium-224	UI	3.62	1.20	+/-0.572		pCi/g						
Radium-226		1.05	0.124	+/-0.0838		pCi/g						
Radium-228		1.45	0.200	+/-0.156	0.500	pCi/g						
Ruthenium-106	U	0.00399	0.594	+/-0.177	0.800	pCi/g						
Sodium-22	U	-0.0427	0.0726	+/-0.0242	0.080	pCi/g						
Strontium-85	U	0.047	0.0708	+/-0.0222		pCi/g						
Thallium-208		0.455	0.0632	+/-0.0459	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7873
Sample ID: 245395006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Thorium-227	U	0.216	0.741	+/-0.216		pCi/g					
Thorium-231	U	0.0279	1.15	+/-0.375		pCi/g					
Thorium-234		33.7	3.61	+/-3.54	2.00	pCi/g					
Tin-113	U	-0.0289	0.0763	+/-0.0228	0.100	pCi/g					
Uranium-235		0.634	0.416	+/-0.177	0.500	pCi/g					
Yttrium-88	U	-0.00653	0.0436	+/-0.0139	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		19800	462	+/-1470	250	pCi/L		KXK2	02/08/10	1513 948398	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE EML HASL-300, U-02-RC Modified
9	DOE HASL 300, 4.5.2.3/Ga-01-R
10	GL-RAD-A-002
11	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	67.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7873 Project: LANL01004
Sample ID: 245395006 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------	-------	------

A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7911
Sample ID: 245395007
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 12%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241		0.0611	0.0243	+/-0.0101	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00603	0.0199	+/-0.00321	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240		0.268	0.0228	+/-0.0225	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		35.2	0.998	+/-3.43	0.100	pCi/g		AXD2	02/19/10	0756	954840	3
Uranium-235/236		4.89	0.649	+/-0.690	0.100	pCi/g						
Uranium-238		245	0.688	+/-22.3	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	UI	0.929	0.752	+/-0.210	0.200	pCi/g		MXR1	02/02/10	0913	944966	8
Bismuth-211	UI	1.75	0.374	+/-0.223		pCi/g						
Bismuth-214		0.526	0.125	+/-0.0909	0.200	pCi/g						
Cadmium-109	U	0.506	3.41	+/-1.10		pCi/g						
Cerium-139	U	-0.0228	0.0702	+/-0.0226	0.050	pCi/g						
Cesium-134	U	0.0322	0.0889	+/-0.0252	0.100	pCi/g						
Cesium-137	U	0.0469	0.0795	+/-0.0217	0.100	pCi/g						
Cobalt-60	U	0.0148	0.0573	+/-0.0163	0.100	pCi/g						
Europium-152	U	0.0209	0.185	+/-0.0586	0.200	pCi/g						
Lanthanum-140	U	-0.00169	0.104	+/-0.0308		pCi/g						
Lead-212	UI	0.669	0.183	+/-0.0671	0.100	pCi/g						
Lead-214	UI	0.610	0.202	+/-0.0791	0.100	pCi/g						
Mercury-203	U	-0.0292	0.0763	+/-0.0216	0.100	pCi/g						
Potassium-40		17.8	0.399	+/-1.04	1.00	pCi/g						
Radium-223	U	-0.194	1.25	+/-0.354		pCi/g						
Radium-224	UI	2.12	1.48	+/-0.432		pCi/g						
Radium-226		0.526	0.125	+/-0.0909		pCi/g						
Radium-228		0.653	0.192	+/-0.111	0.500	pCi/g						
Ruthenium-106	U	0.0959	0.585	+/-0.164	0.800	pCi/g						
Sodium-22	U	-0.0199	0.0603	+/-0.019	0.080	pCi/g						
Strontium-85	U	0.0202	0.0694	+/-0.0227		pCi/g						
Thallium-208		0.243	0.0649	+/-0.0433	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7911
Sample ID: 245395007

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	UI	1.13	0.901	+/-0.279		pCi/g						
Thorium-231	U	-0.194	1.25	+/-0.354		pCi/g						
Thorium-234		175	5.23	+/-15.9	2.00	pCi/g						
Tin-113	U	-0.00956	0.0812	+/-0.0234	0.100	pCi/g						
Uranium-235		3.07	0.529	+/-0.363	0.500	pCi/g						
Yttrium-88	U	-0.0612	0.0378	+/-0.0171	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		1.97E+05	537	+/-13900	250	pCi/L		KXK2	02/08/10	1530	948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4.5.2.3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	74.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	61.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7911 Project: LANL01004
Sample ID: 245395007 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7908
Sample ID: 245395008
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 8.11%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00759	0.0228	+/-0.00375	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0133	0.020	+/-0.00443	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.0097	0.0229	+/-0.00346	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		18.4	1.01	+/-1.86	0.100	pCi/g		AXD2	02/19/10	0756	954840	3
Uranium-235/236		3.25	0.660	+/-0.524	0.100	pCi/g						
Uranium-238		188	0.700	+/-16.8	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.611	0.818	+/-0.249	0.200	pCi/g		MXR1	02/02/10	0914	944966	8
Bismuth-211	UI	3.33	0.373	+/-0.274		pCi/g						
Bismuth-214		1.07	0.117	+/-0.0925	0.200	pCi/g						
Cadmium-109	U	2.28	3.43	+/-1.03		pCi/g						
Cerium-139	U	-0.00759	0.0679	+/-0.0228	0.050	pCi/g						
Cesium-134	U	0.0466	0.0949	+/-0.0269	0.100	pCi/g						
Cesium-137	U	0.0376	0.0806	+/-0.0226	0.100	pCi/g						
Cobalt-60	U	0.019	0.0663	+/-0.0189	0.100	pCi/g						
Europium-152	U	-0.132	0.164	+/-0.0558	0.200	pCi/g						
Lanthanum-140	U	-0.0597	0.102	+/-0.0363		pCi/g						
Lead-212		1.46	0.109	+/-0.0783	0.100	pCi/g						
Lead-214		1.16	0.130	+/-0.100	0.100	pCi/g						
Mercury-203	U	-0.0166	0.0775	+/-0.0225	0.100	pCi/g						
Potassium-40		34.5	0.496	+/-1.74	1.00	pCi/g						
Radium-223	U	-1.16	1.18	+/-0.380		pCi/g						
Radium-224	UI	4.42	1.25	+/-0.593		pCi/g						
Radium-226		1.07	0.117	+/-0.0925		pCi/g						
Radium-228		1.25	0.220	+/-0.167	0.500	pCi/g						
Ruthenium-106	U	-0.09	0.560	+/-0.165	0.800	pCi/g						
Sodium-22	U	0.0249	0.0804	+/-0.0229	0.080	pCi/g						
Strontium-85	U	0.022	0.0669	+/-0.0223		pCi/g						
Thallium-208		0.485	0.0671	+/-0.0483	0.080	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7908
245395008

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	0.874	0.877	+/-0.274		pCi/g					
Thorium-231	U	-1.16	1.18	+/-0.380		pCi/g					
Thorium-234		120	5.69	+/-12.4	2.00	pCi/g					
Tin-113	U	-0.00409	0.0812	+/-0.024	0.100	pCi/g					
Uranium-235		1.93	0.494	+/-0.287	0.500	pCi/g					
Yttrium-88	U	-0.00438	0.0417	+/-0.0134	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		1.08E+05	460	+/-7590	250	pCi/L		KXK2	02/08/10	1540 948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4.5.2.3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	77.9	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	79.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.6	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7908
Sample ID: 245395008

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7912
Sample ID: 245395009
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 13.5%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0067	0.0241	+/-0.00421	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00733	0.0202	+/-0.00302	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.022	0.0231	+/-0.00558	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		9.61	0.867	+/-1.03	0.100	pCi/g		AXD2	02/19/10	0756	954840	3
Uranium-235/236		1.23	0.564	+/-0.272	0.100	pCi/g						
Uranium-238		80.0	0.598	+/-7.01	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.140	0.471	+/-0.143	0.200	pCi/g		MXR1	02/02/10	0914	944966	8
Bismuth-211	UI	3.08	0.348	+/-0.237		pCi/g						
Bismuth-214		0.905	0.109	+/-0.102	0.200	pCi/g						
Cadmium-109	U	-0.584	2.45	+/-0.782		pCi/g						
Cerium-139	U	0.0168	0.0573	+/-0.0187	0.050	pCi/g						
Cesium-134	U	0.0861	0.0926	+/-0.0334	0.100	pCi/g						
Cesium-137	U	0.0141	0.0727	+/-0.0212	0.100	pCi/g						
Cobalt-60	U	0.0123	0.0655	+/-0.0192	0.100	pCi/g						
Europium-152	U	-0.0642	0.161	+/-0.0533	0.200	pCi/g						
Lanthanum-140	U	-0.0362	0.104	+/-0.034		pCi/g						
Lead-212		1.22	0.0952	+/-0.0647	0.100	pCi/g						
Lead-214		1.07	0.112	+/-0.0871	0.100	pCi/g						
Mercury-203	U	0.0102	0.0689	+/-0.0196	0.100	pCi/g						
Potassium-40		29.5	0.424	+/-1.36	1.00	pCi/g						
Radium-223	U	-0.718	1.09	+/-0.342		pCi/g						
Radium-224	UI	3.31	1.08	+/-0.510		pCi/g						
Radium-226		0.905	0.109	+/-0.102		pCi/g						
Radium-228		1.52	0.207	+/-0.158	0.500	pCi/g						
Ruthenium-106	U	-0.155	0.526	+/-0.160	0.800	pCi/g						
Sodium-22	U	0.0291	0.0722	+/-0.0204	0.080	pCi/g						
Strontium-85	U	0.0468	0.0663	+/-0.0187		pCi/g						
Thallium-208		0.384	0.0588	+/-0.0372	0.080	pCi/g						

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Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7912
Sample ID: 245395009

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	0.141	0.701	+/-0.224		pCi/g						
Thorium-231	U	-0.718	1.09	+/-0.342		pCi/g						
Thorium-234		69.6	3.52	+/-6.33	2.00	pCi/g						
Tin-113	U	-0.0206	0.0729	+/-0.0223	0.100	pCi/g						
Uranium-235		0.995	0.408	+/-0.189	0.500	pCi/g						
Yttrium-88	U	0.0145	0.057	+/-0.0159	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		81400	462	+/-5760	250	pCi/L		KXK2	02/08/10	1557	948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4.5.2.3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.2	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.0	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7912 Project: LANL01004
Sample ID: 245395009 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.

BD Results are either below the MDC or tracer recovery is low

C Analyte has been confirmed by GC/MS analysis

D Results are reported from a diluted aliquot of the sample

F Estimated Value

H Analytical holding time was exceeded

J Value is estimated

M M if above MDC and less than LLD

M Matrix Related Failure

N/A RPD or %Recovery limits do not apply.

ND Analyte concentration is not detected above the detection limit

NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

UI Gamma Spectroscopy--Uncertain identification

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y QC Samples were not spiked with this compound

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7906
Sample ID: 245395010
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 9.98%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00921	0.0234	+/-0.00454	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0167	0.0184	+/-0.00468	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.00781	0.0211	+/-0.00372	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.08	0.120	+/-0.100	0.100	pCi/g		JXD2	02/08/10	1204	944996	3
Uranium-235/236		0.114	0.0742	+/-0.0247	0.100	pCi/g						
Uranium-238		3.35	0.0693	+/-0.263	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0784	0.117	+/-0.0347	0.200	pCi/g		MXR1	02/02/10	0915	944966	4
Bismuth-211	UI	3.41	0.387	+/-0.285		pCi/g						
Bismuth-214		1.28	0.142	+/-0.118	0.200	pCi/g						
Cadmium-109	UI	3.55	1.07	+/-0.467		pCi/g						
Cerium-139	U	-0.0265	0.0514	+/-0.016	0.050	pCi/g						
Cesium-134	U	0.0387	0.105	+/-0.0298	0.100	pCi/g						
Cesium-137	U	0.00333	0.0826	+/-0.0248	0.100	pCi/g						
Cobalt-60	U	-0.0305	0.0908	+/-0.0286	0.100	pCi/g						
Europium-152	U	0.0449	0.195	+/-0.0648	0.200	pCi/g						
Lanthanum-140	U	-0.0257	0.116	+/-0.0409		pCi/g						
Lead-212		1.70	0.104	+/-0.0994	0.100	pCi/g						
Lead-214		1.19	0.135	+/-0.104	0.100	pCi/g						
Mercury-203	U	0.00539	0.0735	+/-0.0243	0.100	pCi/g						
Potassium-40		36.1	0.589	+/-1.50	1.00	pCi/g						
Radium-223	U	0.0321	1.25	+/-0.422		pCi/g						
Radium-224	UI	4.36	1.18	+/-0.664		pCi/g						
Radium-226		1.28	0.142	+/-0.118		pCi/g						
Radium-228		1.76	0.318	+/-0.219	0.500	pCi/g						
Ruthenium-106	U	-0.315	0.666	+/-0.211	0.800	pCi/g						
Sodium-22	U	0.0335	0.107	+/-0.0309	0.080	pCi/g						
Strontium-85	U	0.0566	0.085	+/-0.0268		pCi/g						
Thallium-208		0.491	0.0775	+/-0.0558	0.080	pCi/g						

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Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7906
Sample ID: 245395010
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	0.0276	0.689	+/-0.199		pCi/g					
Thorium-231	U	0.0321	1.25	+/-0.422		pCi/g					
Thorium-234		3.95	1.15	+/-0.700	2.00	pCi/g					
Tin-113	U	-0.0338	0.0893	+/-0.028	0.100	pCi/g					
Uranium-235	U	0.0243	0.397	+/-0.118	0.500	pCi/g					
Yttrium-88	U	0.036	0.0759	+/-0.0209	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		4900	462	+/-442	250	pCi/L		KXK2	02/08/10	1613 948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	77.9	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	82.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.6	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Report Date: February 19, 2010

Client Sample ID: RE15-10-7906
Sample ID: 245395010
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------	-------	------

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7905
Sample ID: 245395011
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 21.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00947	0.024	+/-0.00579	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00	0.0215	+/-0.0013	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240	U	0.0195	0.0246	+/-0.00576	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		2.60	0.140	+/-0.216	0.100	pCi/g		JXD2	02/08/10	1204	944996	4
Uranium-235/236		0.391	0.0869	+/-0.0545	0.100	pCi/g						
Uranium-238		16.9	0.0812	+/-1.25	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0397	0.256	+/-0.0816	0.200	pCi/g		MXR1	02/02/10	0918	944966	5
Bismuth-211	UI	2.87	0.266	+/-0.233		pCi/g						
Bismuth-214		0.918	0.093	+/-0.0875	0.200	pCi/g						
Cadmium-109	UI	2.19	1.48	+/-0.468		pCi/g						
Cerium-139	U	-0.0102	0.0419	+/-0.0122	0.050	pCi/g						
Cesium-134	U	0.0541	0.0778	+/-0.0304	0.100	pCi/g						
Cesium-137		0.221	0.0514	+/-0.0276	0.100	pCi/g						
Cobalt-60	U	0.00269	0.0541	+/-0.0164	0.100	pCi/g						
Europium-152	U	0.0165	0.140	+/-0.0406	0.200	pCi/g						
Lanthanum-140	U	0.000832	0.110	+/-0.0329		pCi/g						
Lead-212		1.22	0.0748	+/-0.0851	0.100	pCi/g						
Lead-214		0.998	0.0997	+/-0.085	0.100	pCi/g						
Mercury-203	U	0.0344	0.0479	+/-0.0221	0.100	pCi/g						
Potassium-40		26.6	0.443	+/-1.41	1.00	pCi/g						
Radium-223	U	0.125	0.882	+/-0.296		pCi/g						
Radium-224	UI	2.67	0.851	+/-0.478		pCi/g						
Radium-226		0.918	0.093	+/-0.0875		pCi/g						
Radium-228		1.08	0.192	+/-0.135	0.500	pCi/g						
Ruthenium-106	U	-0.0651	0.430	+/-0.132	0.800	pCi/g						
Sodium-22	U	-0.00409	0.0588	+/-0.0181	0.080	pCi/g						
Strontium-85	UI	0.0632	0.0576	+/-0.0167		pCi/g						
Thallium-208		0.313	0.0462	+/-0.0334	0.080	pCi/g						

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7905
Sample ID: 245395011

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	-0.0912	0.543	+/-0.164		pCi/g						
Thorium-231	U	0.125	0.882	+/-0.296		pCi/g						
Thorium-234		15.6	2.03	+/-1.77	2.00	pCi/g						
Tin-113	U	0.0186	0.0646	+/-0.018	0.100	pCi/g						
Uranium-235		0.540	0.290	+/-0.140	0.500	pCi/g						
Yttrium-88	U	0.0089	0.0477	+/-0.0137	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		11300	461	+/-880	250	pCi/L		KXK2	02/08/10	1629	948398	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.9	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	71.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	80.3	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7905
245395011

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------------	------

D Results are reported from a diluted aliquot of the sample

F Estimated Value

H Analytical holding time was exceeded

J Value is estimated

M M if above MDC and less than LLD

M Matrix Related Failure

N/A RPD or %Recovery limits do not apply.

ND Analyte concentration is not detected above the detection limit

NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

UI Gamma Spectroscopy--Uncertain identification

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y QC Samples were not spiked with this compound

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7907
Sample ID: 245395012
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 19.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0169	0.0289	+/-0.0108	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0072	0.0238	+/-0.00324	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240		0.0921	0.0272	+/-0.0125	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		18.1	0.808	+/-1.75	0.100	pCi/g		AXD2	02/19/10	0756	954840	3
Uranium-235/236		1.91	0.526	+/-0.340	0.100	pCi/g						
Uranium-238		108	0.557	+/-9.41	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0841	0.230	+/-0.0688	0.200	pCi/g		MXR1	02/02/10	0918	944966	8
Bismuth-211	UI	3.47	0.382	+/-0.302		pCi/g						
Bismuth-214		1.06	0.153	+/-0.109	0.200	pCi/g						
Cadmium-109	U	1.41	2.34	+/-0.722		pCi/g						
Cerium-139	U	-0.0123	0.0649	+/-0.0214	0.050	pCi/g						
Cesium-134	U	0.104	0.130	+/-0.0351	0.100	pCi/g						
Cesium-137	U	-0.0195	0.0843	+/-0.0265	0.100	pCi/g						
Cobalt-60	U	0.0149	0.0797	+/-0.0228	0.100	pCi/g						
Europium-152	U	-0.0179	0.189	+/-0.0547	0.200	pCi/g						
Lanthanum-140	U	-0.0545	0.138	+/-0.0465		pCi/g						
Lead-212		1.42	0.110	+/-0.0919	0.100	pCi/g						
Lead-214		1.21	0.133	+/-0.110	0.100	pCi/g						
Mercury-203	U	0.0206	0.0773	+/-0.024	0.100	pCi/g						
Potassium-40		26.0	0.526	+/-1.49	1.00	pCi/g						
Radium-223	U	-0.675	1.31	+/-0.396		pCi/g						
Radium-224	UI	1.57	1.25	+/-0.530		pCi/g						
Radium-226		1.06	0.153	+/-0.109		pCi/g						
Radium-228		1.71	0.250	+/-0.203	0.500	pCi/g						
Ruthenium-106	U	-0.0345	0.712	+/-0.217	0.800	pCi/g						
Sodium-22	U	-0.0281	0.0782	+/-0.026	0.080	pCi/g						
Strontium-85	U	0.0311	0.0826	+/-0.0267		pCi/g						
Thallium-208		0.455	0.0857	+/-0.0582	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7907
245395012

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	0.075	0.822	+/-0.276		pCi/g						
Thorium-231	U	-0.675	1.31	+/-0.396		pCi/g						
Thorium-234		87.0	2.01	+/-8.25	2.00	pCi/g						
Tin-113	U	-0.0315	0.0829	+/-0.0251	0.100	pCi/g						
Uranium-235		1.66	0.468	+/-0.274	0.500	pCi/g						
Yttrium-88	U	0.019	0.069	+/-0.0191	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		75000	461	+/-5310	250	pCi/L		KXK2	02/08/10	1646	948398	9

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE HASL 300, 4.5.2.3/Ga-01-R
9	GL-RAD-A-002
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	66.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	66.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.0	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7907 Project: LANL01004
Sample ID: 245395012 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------	-------	------

B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7913
Sample ID: 245395013
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 21.3%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0021	0.0332	+/-0.00808	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0141	0.0212	+/-0.00431	0.050	pCi/g		JXD2	02/05/10	1817	944994	2
Plutonium-239/240	U	0.00128	0.0242	+/-0.00287	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.18	0.154	+/-0.115	0.100	pCi/g		JXD2	02/08/10	1204	944996	3
Uranium-235/236	U	0.0858	0.0953	+/-0.0238	0.100	pCi/g						
Uranium-238		2.50	0.0891	+/-0.214	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0561	0.277	+/-0.0843	0.200	pCi/g		MXR1	02/02/10	0926	944966	4
Bismuth-211	UI	3.45	0.235	+/-0.194		pCi/g						
Bismuth-214		0.966	0.0803	+/-0.0704	0.200	pCi/g						
Cadmium-109	UI	3.57	1.11	+/-0.458		pCi/g						
Cerium-139	U	-0.0117	0.039	+/-0.0111	0.050	pCi/g						
Cesium-134	UI	0.116	0.0741	+/-0.0254	0.100	pCi/g						
Cesium-137	U	-0.0069	0.0417	+/-0.0144	0.100	pCi/g						
Cobalt-60	U	-0.00664	0.0437	+/-0.0136	0.100	pCi/g						
Europium-152	U	0.00795	0.126	+/-0.0464	0.200	pCi/g						
Lanthanum-140	U	-0.0547	0.0824	+/-0.028		pCi/g						
Lead-212		1.67	0.0697	+/-0.0741	0.100	pCi/g						
Lead-214		1.20	0.082	+/-0.0743	0.100	pCi/g						
Mercury-203	U	0.0372	0.0551	+/-0.0155	0.100	pCi/g						
Potassium-40		22.6	0.364	+/-1.04	1.00	pCi/g						
Radium-223	U	0.302	0.826	+/-0.273		pCi/g						
Radium-224	UI	3.92	0.792	+/-0.587		pCi/g						
Radium-226		0.966	0.0803	+/-0.0704		pCi/g						
Radium-228		1.58	0.160	+/-0.149	0.500	pCi/g						
Ruthenium-106	U	-0.0308	0.366	+/-0.112	0.800	pCi/g						
Sodium-22	U	-0.0245	0.0473	+/-0.0153	0.080	pCi/g						
Strontium-85	UI	0.0759	0.051	+/-0.0149		pCi/g						
Thallium-208		0.452	0.0463	+/-0.0336	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7913
Sample ID: 245395013

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	-0.0068	0.501	+/-0.146		pCi/g					
Thorium-231	U	0.302	0.826	+/-0.273		pCi/g					
Thorium-234		3.09	2.21	+/-0.871	2.00	pCi/g					
Tin-113	U	-0.0192	0.0527	+/-0.0157	0.100	pCi/g					
Uranium-235	U	0.173	0.313	+/-0.0909	0.500	pCi/g					
Yttrium-88	U	-0.00128	0.0394	+/-0.0121	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		3420	461	+/-342	250	pCi/L		KXK2	02/08/10	1702 948398	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE HASL 300, 4.5.2.3/Ga-01-R
5	GL-RAD-A-002
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	59.0	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	72.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7913
Sample ID: 245395013

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------	-------	------

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7909
Sample ID: 245395014
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 15.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00963	0.0278	+/-0.00835	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00258	0.0213	+/-0.00183	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240		0.0426	0.0244	+/-0.00818	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		15.2	0.893	+/-1.53	0.100	pCi/g		AXD2	02/19/10	0756	954840	4
Uranium-235/236		2.16	0.580	+/-0.382	0.100	pCi/g						
Uranium-238		112	0.615	+/-9.85	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.459	0.486	+/-0.146	0.200	pCi/g		MXR1	02/02/10	0927	944966	9
Bismuth-211	UI	2.33	0.328	+/-0.189		pCi/g						
Bismuth-214		0.853	0.103	+/-0.0726	0.200	pCi/g						
Cadmium-109	U	0.924	2.74	+/-1.18		pCi/g						
Cerium-139	U	0.0311	0.0635	+/-0.0201	0.050	pCi/g						
Cesium-134	UI	0.104	0.0899	+/-0.0257	0.100	pCi/g						
Cesium-137	UI	0.0602	0.0555	+/-0.0365	0.100	pCi/g						
Cobalt-60	U	-0.0119	0.0494	+/-0.0154	0.100	pCi/g						
Europium-152	U	-0.0187	0.162	+/-0.0606	0.200	pCi/g						
Lanthanum-140	U	-0.0252	0.0981	+/-0.0315		pCi/g						
Lead-212		1.14	0.0972	+/-0.0623	0.100	pCi/g						
Lead-214		0.812	0.109	+/-0.0692	0.100	pCi/g						
Mercury-203	U	-0.0154	0.0663	+/-0.0187	0.100	pCi/g						
Potassium-40		21.0	0.447	+/-1.01	1.00	pCi/g						
Radium-223	U	-0.708	0.961	+/-0.338		pCi/g						
Radium-224	UI	2.56	1.11	+/-0.549		pCi/g						
Radium-226		0.853	0.103	+/-0.0726		pCi/g						
Radium-228		1.22	0.182	+/-0.137	0.500	pCi/g						
Ruthenium-106	U	0.148	0.524	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.00624	0.0599	+/-0.0174	0.080	pCi/g						
Strontium-85	UI	0.0722	0.0633	+/-0.0185		pCi/g						
Thallium-208		0.336	0.0574	+/-0.0358	0.080	pCi/g						

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7909
Sample ID: 245395014

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Thorium-227	U	0.270	0.731	+/-0.239		pCi/g						
Thorium-231	U	-0.708	0.961	+/-0.338		pCi/g						
Thorium-234		73.3	3.74	+/-6.77	2.00	pCi/g						
Tin-113	U	-0.0298	0.0708	+/-0.0208	0.100	pCi/g						
Uranium-235		1.12	0.456	+/-0.212	0.500	pCi/g						
Yttrium-88	U	-0.0125	0.0399	+/-0.0134	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		1.06E+05	461	+/-7490	250	pCi/L		KXK2	02/08/10	1718	948398	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE EML HASL-300, U-02-RC Modified
8	DOE EML HASL-300, U-02-RC Modified
9	DOE HASL 300, 4.5.2.3/Ga-01-R
10	GL-RAD-A-002
11	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	70.3	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	73.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.1	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported

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Report Date: February 19, 2010

Client Sample ID: RE15-10-7909
Sample ID: 245395014

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------------	------

A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7910
Sample ID: 245395015
Matrix: R
Collect Date: 19-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 9.89%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00497	0.0289	+/-0.00814	0.050	pCi/g		JXD2	02/08/10	1021	944985	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	-0.00134	0.0221	+/-0.00232	0.050	pCi/g		JXD2	02/08/10	2042	944994	2
Plutonium-239/240	U	0.0241	0.0253	+/-0.00612	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		4.55	0.131	+/-0.354	0.100	pCi/g		JXD2	02/08/10	1156	944996	4
Uranium-235/236		0.741	0.0812	+/-0.0827	0.100	pCi/g						
Uranium-238		32.6	0.0759	+/-2.37	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.224	0.391	+/-0.119	0.200	pCi/g		MXR1	02/02/10	0947	944966	5
Bismuth-211	UI	3.40	0.327	+/-0.288		pCi/g						
Bismuth-214		1.04	0.114	+/-0.0997	0.200	pCi/g						
Cadmium-109	UI	3.71	1.94	+/-0.599		pCi/g						
Cerium-139	U	0.0352	0.0617	+/-0.0166	0.050	pCi/g						
Cesium-134	UI	0.111	0.0934	+/-0.0304	0.100	pCi/g						
Cesium-137	U	0.0388	0.0753	+/-0.0207	0.100	pCi/g						
Cobalt-60	U	-0.0316	0.0504	+/-0.0172	0.100	pCi/g						
Europium-152	U	0.0703	0.169	+/-0.0535	0.200	pCi/g						
Lanthanum-140	U	-0.0401	0.140	+/-0.0476		pCi/g						
Lead-212		1.47	0.101	+/-0.0918	0.100	pCi/g						
Lead-214		1.18	0.114	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.032	0.0776	+/-0.0216	0.100	pCi/g						
Potassium-40		33.0	0.490	+/-1.74	1.00	pCi/g						
Radium-223	U	0.665	1.26	+/-0.354		pCi/g						
Radium-224	UI	4.77	1.15	+/-0.702		pCi/g						
Radium-226		1.04	0.114	+/-0.0997		pCi/g						
Radium-228		1.43	0.230	+/-0.163	0.500	pCi/g						
Ruthenium-106	U	-0.256	0.508	+/-0.157	0.800	pCi/g						
Sodium-22	U	0.0305	0.0788	+/-0.0241	0.080	pCi/g						
Strontium-85	UI	0.079	0.076	+/-0.0232		pCi/g						
Thallium-208		0.408	0.0635	+/-0.0466	0.080	pCi/g						

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID: RE15-10-7910
Sample ID: 245395015

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Thorium-227	U	-0.137	0.731	+/-0.212		pCi/g					
Thorium-231	U	0.665	1.26	+/-0.354		pCi/g					
Thorium-234		32.3	2.99	+/-3.35	2.00	pCi/g					
Tin-113	U	-0.0132	0.0768	+/-0.023	0.100	pCi/g					
Uranium-235	U	0.359	0.402	+/-0.162	0.500	pCi/g					
Yttrium-88	U	0.0219	0.0547	+/-0.0144	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		1.20E+05	462	+/-8460	250	pCi/L		KXX2	02/08/10	1735 948398	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R
6	GL-RAD-A-002
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	65.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	72.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.8	(50%-105%)

Notes:

TPU is calculated at the 67% confidence level (1-sigma).

The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 19, 2010

Client Sample ID:
Sample ID:

RE15-10-7910
245395015

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

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QC Summary

Report Date: February 19, 2010

Page 1 of 7

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez
Workorder: 245395

Parmname	NOM	Sample	Qual	QC	Units	RER	REC %	Range	Anlst	Date Time
Rad Alpha Spec										
Batch	944985									
QC1202023805	245371001	DUP								
Americium-241	U	-0.000424	U	0.00737	pCi/g	0.529		(0-1)	JXD2	02/08/1010:21
	TPU:	+/-0.00334		+/-0.00403						
	Yield:	75.9		73.9						
QC1202023806	LCS									
Americium-241	33.2			31.4	pCi/g		94.6	(75%-125%)		
	TPU:			+/-2.20						
	Yield:			86.4						
QC1202023804	MB									
Americium-241	U	-0.000167			pCi/g					
	TPU:	+/-0.00419								
	Yield:	71.8								
Batch	944994									
QC1202023808	245371001	DUP								
Plutonium-238	U	0.00338	U	-0.0124	pCi/g	0.946		(0-1)	JXD2	02/05/1018:18
	TPU:	+/-0.00253		+/-0.00583						
	Yield:	83.0		73.7						
Plutonium-239/240	U	0.00451	U	-0.00124	pCi/g	0.379		(0-1)		
	TPU:	+/-0.00277		+/-0.00481						
	Yield:	83.0		73.7						
QC1202023809	LCS									
Plutonium-238				6.75	pCi/g			(75%-125%)		02/05/1018:18
	TPU:			+/-0.546						
	Yield:			63.7						
Plutonium-239/240	41.8			38.3	pCi/g		91.6	(75%-125%)		
	TPU:			+/-2.53						
	Yield:			63.7						
QC1202023807	MB									
Plutonium-238	U	-0.00728			pCi/g					02/05/1018:18
	TPU:	+/-0.00357								
	Yield:	78.6								
Plutonium-239/240	U	0.00146			pCi/g					
	TPU:	+/-0.00146								
	Yield:	78.6								
Batch	944996									
QC1202023821	245371001	DUP								
Uranium-233/234		0.662		0.773	pCi/g	0.356		(0-1)	JXD2	02/08/1012:05
	TPU:	+/-0.0715		+/-0.0845						
	Yield:	81.2		72.5						
Uranium-235/236	U	0.0365	U	0.0426	pCi/g	0.0885		(0-1)		
	TPU:	+/-0.0159		+/-0.0185						
	Yield:	81.2		72.5						
Uranium-238		0.772		0.758	pCi/g	0.0431		(0-1)		
	TPU:	+/-0.0794		+/-0.0833						

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QC Summary

Workorder: 245395

Page 2 of 7

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	944996										
QC1202023822 Uranium-233/234	LCS	Yield:	81.2	72.5							
				5.92	pCi/g			(75%-125%)		02/08/10	12:05
		TPU:		+/-0.572							
		Yield:		88.5							
Uranium-235/236			U	0.218	pCi/g			(75%-125%)			
		TPU:		+/-0.0821							
		Yield:		88.5							
Uranium-238	5.75			5.47	pCi/g		95.1	(75%-125%)			
		TPU:		+/-0.536							
		Yield:		88.5							
QC1202023820 Uranium-233/234	MB		U	0.00718	pCi/g					02/08/10	11:56
		TPU:		+/-0.00456							
		Yield:		92.1							
			U	0.00571	pCi/g						
Uranium-235/236		TPU:		+/-0.00332							
		Yield:		92.1							
			U	0.0139	pCi/g						
		TPU:		+/-0.0052							
Uranium-238		Yield:		92.1							
Batch	954840										
QC1202047014 Uranium-233/234	245395008	DUP		18.4	8.58	pCi/g	1.78		(0-1)	AXD2	02/19/10
Uranium-235/236		TPU:		+/-1.86	+/-0.890						
		Yield:		87.6	102						
				3.25	1.89	pCi/g	0.811		(0-1)		
		TPU:		+/-0.524	+/-0.316						
Uranium-238		Yield:		87.6	102						
				188	94.0	pCi/g	1.89		(0-1)		
		TPU:		+/-16.8	+/-8.07						
		Yield:		87.6	102						
QC1202047015 Uranium-233/234	LCS			4.64	pCi/g			(75%-125%)		02/19/10	07:56
		TPU:		+/-0.606							
		Yield:		99.6							
			U	0.112	pCi/g			(75%-125%)			
Uranium-235/236		TPU:		+/-0.0796							
		Yield:		99.6							
				5.45	pCi/g		94.8	(75%-125%)			
		TPU:		+/-0.682							
Uranium-238	5.75	Yield:		99.6							
QC1202047013 Uranium-233/234	MB		U	0.00706	pCi/g					02/19/10	07:56
		TPU:		+/-0.00857							
		Yield:		94.2							
			U	-0.00465	pCi/g						
Uranium-235/236		TPU:		+/-0.00693							
		Yield:		94.2							
			U	0.00795	pCi/g						

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QC Summary

Workorder: 245395

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Parmname		NOM	Sample Qual		QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec												
Batch	954840											
		TPU:			+/-0.00723							
		Yield:			94.2							
Rad Gamma Spec												
Batch	944966											
QC1202023720 245395011 DUP												
Americium-241		U	0.0397	U	0.289	pCi/g	0.600		(0-1)	MXR1	02/02/1009:49	
		TPU:	+/-0.0816		+/-0.127							
Bismuth-211		UI	2.87	UI	2.89	pCi/g	0.0255		(0-1)			
		TPU:	+/-0.233		+/-0.257							
Bismuth-214			0.918		0.830	pCi/g	0.243		(0-1)			
		TPU:	+/-0.0875		+/-0.0933							
Cadmium-109		UI	2.19	UI	2.87	pCi/g	0.303		(0-1)			
		TPU:	+/-0.468		+/-0.662							
Cerium-139		U	-0.0102	U	-0.0332	pCi/g	0.390		(0-1)			
		TPU:	+/-0.0122		+/-0.0173							
Cesium-134		U	0.0541	UI	0.102	pCi/g	0.356		(0-1)			
		TPU:	+/-0.0304		+/-0.0365							
Cesium-137			0.221		0.209	pCi/g	0.0989		(0-1)			
		TPU:	+/-0.0276		+/-0.030							
Cobalt-60		U	0.00269	U	-0.0137	pCi/g	0.236		(0-1)			
		TPU:	+/-0.0164		+/-0.0183							
Europium-152		U	0.0165	U	0.0174	pCi/g	0.00405		(0-1)			
		TPU:	+/-0.0406		+/-0.0731							
Lanthanum-140		U	0.000832	U	-0.0203	pCi/g	0.144		(0-1)			
		TPU:	+/-0.0329		+/-0.0405							
Lead-212			1.22		1.13	pCi/g	0.300		(0-1)			
		TPU:	+/-0.0851		+/-0.0648							
Lead-214			0.998		1.01	pCi/g	0.0253		(0-1)			
		TPU:	+/-0.085		+/-0.0931							
Mercury-203		U	0.0344	U	-0.0266	pCi/g	0.694		(0-1)			
		TPU:	+/-0.0221		+/-0.0219							
Potassium-40			26.6		26.2	pCi/g	0.0672		(0-1)			
		TPU:	+/-1.41		+/-1.20							
Radium-223		U	0.125	U	-0.0533	pCi/g	0.127		(0-1)			
		TPU:	+/-0.296		+/-0.407							
Radium-224		UI	2.67	UI	3.13	pCi/g	0.241		(0-1)			
		TPU:	+/-0.478		+/-0.468							
Radium-226			0.918		0.830	pCi/g	0.243		(0-1)			
		TPU:	+/-0.0875		+/-0.0933							
Radium-228			1.08		1.01	pCi/g	0.120		(0-1)			
		TPU:	+/-0.135		+/-0.165							
Ruthenium-106		U	-0.0651	U	0.0886	pCi/g	0.254		(0-1)			
		TPU:	+/-0.132		+/-0.171							
Sodium-22		U	-0.00409	U	-0.0602	pCi/g	0.689		(0-1)			
		TPU:	+/-0.0181		+/-0.0227							
Strontium-85		UI	0.0632	U	0.0576	pCi/g	0.0765		(0-1)			
		TPU:	+/-0.0167		+/-0.020							
Thallium-208			0.313		0.309	pCi/g	0.0322		(0-1)			
		TPU:	+/-0.0334		+/-0.0365							
Thorium-227		U	-0.0912	U	0.298	pCi/g	0.503		(0-1)			

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QC Summary

Workorder: 245395

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	944966										
		TPU:		+/-0.164		+/-0.223					
Thorium-231		U		0.125	U	-0.0533	pCi/g	0.127		(0-1)	
		TPU:		+/-0.296		+/-0.407					
Thorium-234				15.6		20.0	pCi/g	0.521		(0-1)	
		TPU:		+/-1.77		+/-2.46					
Tin-113		U		0.0186	U	-0.0111	pCi/g	0.358		(0-1)	
		TPU:		+/-0.018		+/-0.0236					
Uranium-235				0.540		0.504	pCi/g	0.0627		(0-1)	
		TPU:		+/-0.140		+/-0.145					
Yttrium-88		U		0.0089	U	0.00666	pCi/g	0.0386		(0-1)	
		TPU:		+/-0.0137		+/-0.0154					
QC1202023721	LCS										
Americium-241	15.9					13.3	pCi/g	83.7	(75%-125%)		02/02/1009:50
		TPU:				+/-0.580					
Bismuth-211						2.08	pCi/g				
		TPU:				+/-0.302					
Bismuth-214						0.655	pCi/g				
		TPU:				+/-0.107					
Cadmium-109						30.0	pCi/g				
		TPU:				+/-1.69					
Cerium-139			U			-0.00631	pCi/g				
		TPU:				+/-0.0221					
Cesium-134			U			0.187	pCi/g				
		TPU:				+/-0.0509					
Cesium-137	5.56					5.85	pCi/g	105	(75%-125%)		
		TPU:				+/-0.294					
Cobalt-60	6.43					6.31	pCi/g	98.2	(75%-125%)		
		TPU:				+/-0.305					
Europium-152			U			0.0198	pCi/g				
		TPU:				+/-0.0916					
Lanthanum-140			U			-0.0108	pCi/g				
		TPU:				+/-0.0399					
Lead-212						1.16	pCi/g				
		TPU:				+/-0.0926					
Lead-214						0.724	pCi/g				
		TPU:				+/-0.107					
Mercury-203			U			0.0304	pCi/g				
		TPU:				+/-0.0303					
Potassium-40			U			0.878	pCi/g				
		TPU:				+/-0.275					
Radium-223			U			-0.249	pCi/g				
		TPU:				+/-0.605					
Radium-224						2.22	pCi/g				
		TPU:				+/-0.834					
Radium-226						0.655	pCi/g				
		TPU:				+/-0.107					
Radium-228						0.565	pCi/g				
		TPU:				+/-0.234					
Ruthenium-106			U			0.189	pCi/g				
		TPU:				+/-0.300					
Sodium-22			U			-0.0114	pCi/g				

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QC Summary

Workorder: 245395

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Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch 944966									
	TPU:		+/-0.0265						
Strontium-85		U	0.00719	pCi/g					
	TPU:		+/-0.0361						
Thallium-208			0.420	pCi/g					
	TPU:		+/-0.0633						
Thorium-227		U	0.143	pCi/g					
	TPU:		+/-0.322						
Thorium-231		U	-0.249	pCi/g					
	TPU:		+/-0.605						
Thorium-234		U	0.108	pCi/g					
	TPU:		+/-0.766						
Tin-113		U	-0.00854	pCi/g					
	TPU:		+/-0.0425						
Uranium-235		U	-0.129	pCi/g					
	TPU:		+/-0.152						
Yttrium-88		U	0.0164	pCi/g					
	TPU:		+/-0.0187						
QC1202023719 MB									
Americium-241		U	-0.0839	pCi/g					02/02/1009:48
	TPU:		+/-0.0366						
Bismuth-211		U	0.0273	pCi/g					
	TPU:		+/-0.042						
Bismuth-214		U	0.0114	pCi/g					
	TPU:		+/-0.0164						
Cadmium-109		U	-0.0238	pCi/g					
	TPU:		+/-0.112						
Cerium-139		U	-0.00161	pCi/g					
	TPU:		+/-0.00505						
Cesium-134		U	0.00884	pCi/g					
	TPU:		+/-0.00751						
Cesium-137		U	-0.00483	pCi/g					
	TPU:		+/-0.0084						
Cobalt-60		U	-0.00249	pCi/g					
	TPU:		+/-0.00778						
Europium-152		U	0.00866	pCi/g					
	TPU:		+/-0.0169						
Lanthanum-140		U	0.00313	pCi/g					
	TPU:		+/-0.0117						
Lead-212		U	-0.0227	pCi/g					
	TPU:		+/-0.0123						
Lead-214		U	0.0298	pCi/g					
	TPU:		+/-0.0147						
Mercury-203		U	-0.00172	pCi/g					
	TPU:		+/-0.00678						
Potassium-40		U	0.021	pCi/g					
	TPU:		+/-0.0764						
Radium-223		U	0.0643	pCi/g					
	TPU:		+/-0.132						
Radium-224		U	-0.347	pCi/g					
	TPU:		+/-0.148						
Radium-226		U	0.0114	pCi/g					

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QC Summary

Workorder: 245395

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	944966										
Radium-228	TPU:			+/-0.0164							
			U	-0.00766	pCi/g						
Ruthenium-106	TPU:			+/-0.029							
			U	-0.0128	pCi/g						
Sodium-22	TPU:			+/-0.0573							
			U	0.00652	pCi/g						
Strontium-85	TPU:			+/-0.0084							
			U	-0.0539	pCi/g						
Thallium-208	TPU:			+/-0.0108							
			U	-0.0123	pCi/g						
Thorium-227	TPU:			+/-0.00738							
			U	0.0875	pCi/g						
Thorium-231	TPU:			+/-0.0647							
			U	0.0643	pCi/g						
Thorium-234	TPU:			+/-0.132							
			U	0.010	pCi/g						
Tin-113	TPU:			+/-0.312							
			U	0.00405	pCi/g						
Uranium-235	TPU:			+/-0.00737							
			U	-0.00235	pCi/g						
Yttrium-88	TPU:			+/-0.0376							
			U	-0.000456	pCi/g						
	TPU:			+/-0.00837							

Rad Liquid Scintillation

Batch 948398

QC1202031674	245395001	DUP									
Tritium			8070	8300	pCi/L	0.0878		(0-1)	KXK2	02/08/1018:07	
			TPU:	+/-660	+/-676						
QC1202031675	LCS										
Tritium		5570		6210	pCi/L		112	(75%-125%)		02/08/1018:23	
			TPU:	+/-532							
QC1202031673	MB										
Tritium			U	76.1	pCi/L					02/08/1017:51	
			TPU:	+/-132							

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value

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QC Summary

Workorder: 245395

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Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
H	Analytical holding time was exceeded									
J	Value is estimated									
M	M if above MDC and less than LLD									
M	Matrix Related Failure									
N/A	RPD or %Recovery limits do not apply.									
ND	Analyte concentration is not detected above the detection limit									
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
R	Sample results are rejected									
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.									
UI	Gamma Spectroscopy--Uncertain identification									
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y	QC Samples were not spiked with this compound									
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
h	Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

** Indicates analyte is a surrogate compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev10

Batch: Q41985 Product: Am Date: 2/9/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10" MDA/ MDC, error is 150% or less of sample activity. If greater 10" MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5" MDA/ MDC, then RPD is 100% or less. If greater 5" MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.	✓		
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line outs Initialed and dated.	✓		
No transcription errors are apparent.			
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Htl notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (if REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

L. Denise Green 2/9/10

Secondary Review Performed By:

E. [Signature] 2/9/10

2/13
LANL

Am/Cm Que Sheet

25-JAN-10

Batch #: 944985 Analyst: JXD2 First Client Due Date: 13-FEB-10 Internal Due Date: 03-FEB-10 Comments:
 Tracer Code: 445-2-55 Expiration Date: 05/01/10 Vol: 0.1
 LCS Isotope(s): Am241/Cm244 LCS Code(s): Expiration Date: + Vol(s): +
 Spike Isotope(s): Am241/Cm244 Spike Code(s): Expiration Date: + Vol(s): +
 Prep Date: 02/04/10 Initials: gmd Pipet ID: 291058 Balance ID: SD40232 Witness: WATD 2/4/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry	Allquot (g/l/n)	Am/Cm Det #
245371001-1	RE16-10-957	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	1	1	Wet	1.252	31
245371002-1	RE16-10-979	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	2	2	Wet	1.250	32
245393010-1	RE15-10-8053	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	3	3	Wet	1.251	35
245393011-1	RE15-10-8054	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	4	4	Wet	1.256	36
245395001-1	RE15-10-7869	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	5	5	Wet	1.255	37
245395002-1	RE15-10-7874	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	6	6	Wet	1.254	38
245395003-1	RE15-10-7871	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	7	7	Wet	1.253	39
245395004-1	RE15-10-7872	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	8	8	Wet	1.254	40
245395005-1	RE15-10-7870	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	9	9	Wet	1.258	41
245395006-1	RE15-10-7873	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	10	10	Wet	1.250	42
245395007-1	RE15-10-7911	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	11	11	Wet	1.254	47
245395008-1	RE15-10-7908	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	12	12	Wet	1.256	44
245395009-1	RE15-10-7912	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	13	13	Wet	1.254	45
245395010-1	RE15-10-7906	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	14	14	Wet	1.255	46
245395011-1	RE15-10-7905	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	15	15	Wet	1.257	47
245395012-1	RE15-10-7907	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	16	16	Wet	1.252	48
245395013-1	RE15-10-7913	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	17	17	Wet	1.258	65
245395014-1	RE15-10-7909	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	18	18	Wet	1.257	66
245395015-1	RE15-10-7910	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	19	19	Wet	1.254	67
1202023804-1	MB for batch 944985	MB	.05 pCi/g		SOIL	QC ACCOUNT		20	20	Wet	1	68
1202023805-1	RE16-10-957(245371001)DUP	DUP	.05 pCi/g		SOIL	QC ACCOUNT	15-JAN-10	21	21	Wet	1.251	69
1202023806-1	LCS for batch 944985	LCS	.05 pCi/g		SOIL	QC ACCOUNT		22	22	Wet	0.106	70

* SEM 0244-B exp 04/30/20 0.1063

Choose SOP Used: GL-RAD-A-011
GL-RAD-A-036Solid Sample Dissolution by: LEACH or DIGESTION

Circle One

Data Reviewed By: WATD 2/4/10

Blank Correction Report

Batch ID 944985

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202023805	DUP	Americium-241	1.25 g	0.00737	0.00403	0.0261	-.0001336	pCi/g	NO
1202023806	LCS	Americium-241	0.106 g	31.4	2.20	0.239	-.00157547	pCi/g	NO
1202023804	MB	Americium-241	1.00 g	-0.000167	0.00419	0.036	-.000167	pCi/g	NO
245371001	RE16-10-957	Americium-241	1.25 g	-0.000424	0.00334	0.0238	-.0001336	pCi/g	NO
245371002	RE16-10-979	Americium-241	1.25 g	0.00612	0.00387	0.027	-.0001336	pCi/g	NO
245393010	RE15-10-8053	Americium-241	1.25 g	0.00299	0.00389	0.0273	-.0001336	pCi/g	NO
245393011	RE15-10-8054	Americium-241	1.26 g	-0.00334	0.00305	0.0259	-.00013254	pCi/g	YES
245395001	RE15-10-7869	Americium-241	1.26 g	0.0107	0.00782	0.0213	-.00013254	pCi/g	NO
245395002	RE15-10-7874	Americium-241	1.25 g	-0.00182	0.00557	0.0264	-.0001336	pCi/g	YES
245395003	RE15-10-7871	Americium-241	1.25 g	0.0314	0.00955	0.0226	-.0001336	pCi/g	NO
245395004	RE15-10-7872	Americium-241	1.25 g	0.00276	0.00206	0.026	-.0001336	pCi/g	NO
245395005	RE15-10-7870	Americium-241	1.26 g	0.00249	0.004	0.0244	-.00013254	pCi/g	NO
245395006	RE15-10-7873	Americium-241	1.25 g	0.00412	0.00441	0.0253	-.0001336	pCi/g	NO
245395007	RE15-10-7911	Americium-241	1.25 g	0.0611	0.0101	0.0243	-.0001336	pCi/g	NO
245395008	RE15-10-7908	Americium-241	1.26 g	0.00759	0.00375	0.0228	-.00013254	pCi/g	NO
245395009	RE15-10-7912	Americium-241	1.25 g	0.0067	0.00421	0.0241	-.0001336	pCi/g	NO
245395010	RE15-10-7906	Americium-241	1.26 g	0.00921	0.00454	0.0234	-.00013254	pCi/g	NO
245395011	RE15-10-7905	Americium-241	1.26 g	0.00947	0.00579	0.024	-.00013254	pCi/g	NO
245395012	RE15-10-7907	Americium-241	1.25 g	0.0169	0.0108	0.0289	-.0001336	pCi/g	NO
245395013	RE15-10-7913	Americium-241	1.26 g	0.0021	0.00808	0.0332	-.00013254	pCi/g	NO
245395014	RE15-10-7909	Americium-241	1.26 g	0.00963	0.00835	0.0278	-.00013254	pCi/g	NO
245395015	RE15-10-7910	Americium-241	1.25 g	0.00497	0.00814	0.0289	-.0001336	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245371001_AM SAMPLE QTY : 1.252 G SAMPLE DATE : 15-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 75.942				CHAMBER : 031 DETECTOR S/N : 79988 AVERAGE %EFFICIENCY : 33.8909 COUNT DATE : 8-FEB-2010 10:21:09 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_AM BKG FILE : B031.CNF;1107 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W031.CNF;345 CAL DATE : 3-FEB-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.2149E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3158E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3158E+01 pCi/G					
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5507.854	156.680	4.000	-0.303	3.000	3.0704	99.94000	-4.24E-04	3.34E-03	9.99E-03	2.38E-02	3.34E-03
AM243	5270.000	5277.010	55.876	754.000	749.000	5.000	2.2361	99.78000	1.05E+00	7.52E-02	7.29E-03	1.84E-02	3.86E-02
CM-242	6102.000	6099.946	141.991	6.000	5.000	1.000	4.3186	100.00000	7.77E-03	4.14E-03	1.40E-02	3.19E-02	4.11E-03
CM-3/4	5795.020	5802.236	105.116	14.000	9.000	5.000	5.2338	100.00000	1.26E-02	6.16E-03	1.70E-02	3.78E-02	6.11E-03
CM-5/6	5386.000	5377.883	7.191	7.000	7.000	0.000	19.8463	86.09000	1.14E-02	4.35E-03	7.50E-02	1.54E-01	4.30E-03
CM-247	4946.000	4906.142	161.576	7.000	2.000	5.000	15.3366	79.30000	3.53E-03	6.11E-03	6.29E-02	1.31E-01	6.11E-03
CM-248	5078.600	5048.526	0.000	14.000	11.000	3.000	22.1555	91.00000	1.69E-02	6.42E-03	7.92E-02	1.63E-01	6.33E-03

NOTES:

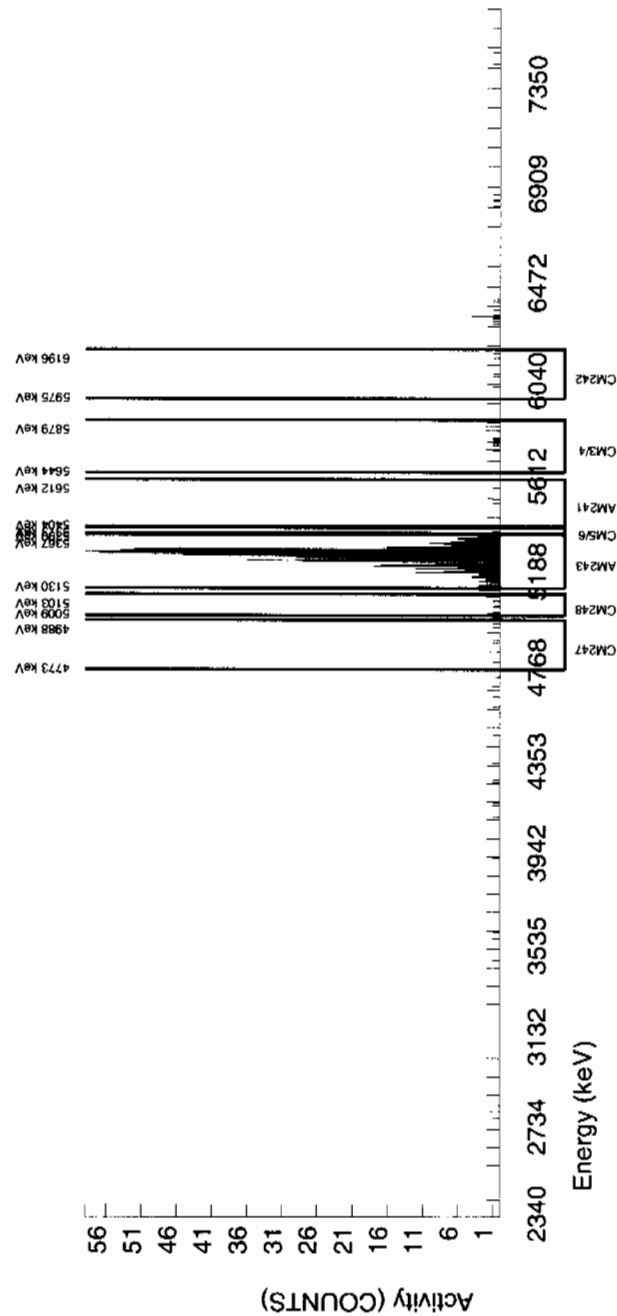
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985
 SAMPLE ID : S0245395001_AM
 SAMPLE QTY : 1.255 G
 SAMPLE DATE : 19-JAN-2010 00:00:00
 ANALYST : JXD2
 % YIELD : 79.691

CHAMBER : 037
 DETECTOR SIN : 45-149BB5
 AVERAGE %EFFICIENCY : 35.9189
 COUNT DATE : 8-FEB-2010 10:21:09
 ELAPSED LIVE TIME(SEC) : 59999.99

LIB FILE : ENV_ALPHA_AM
 BKG FILE : B037.CNF;1114
 BKG DATE : 7-FEB-2010
 BKG LIVE TIME(SEC) : 59999.99
 EFF FILE : W037.CNF;307
 CAL DATE : 3-FEB-2010

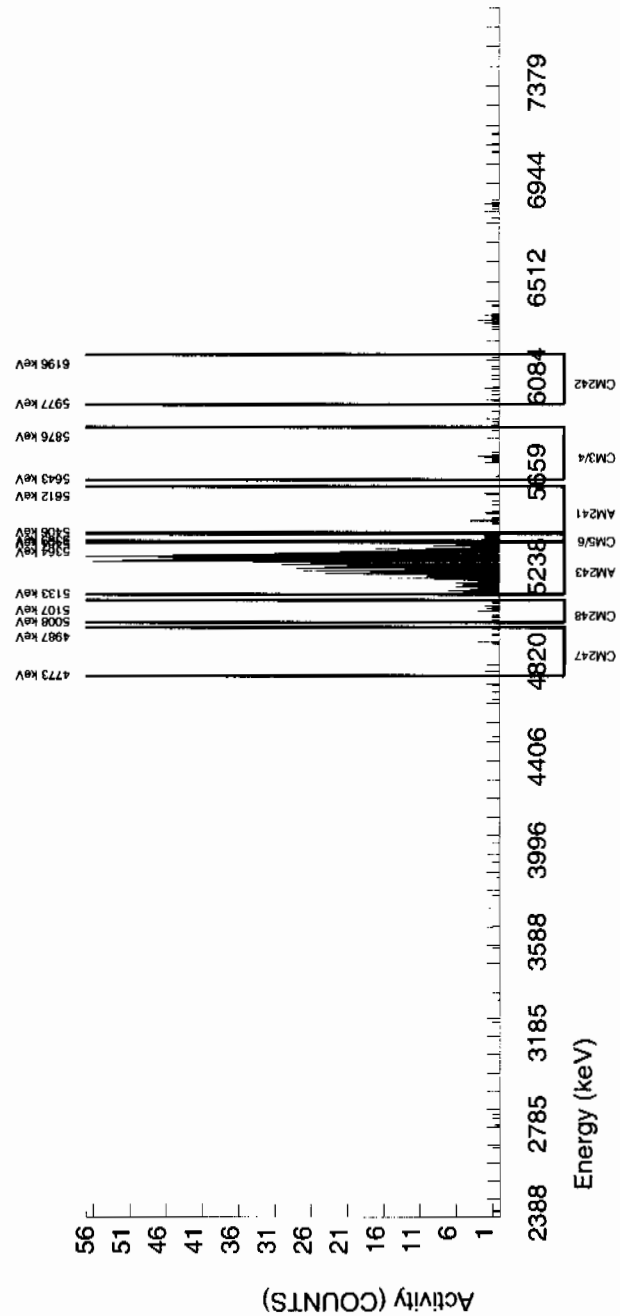
TRACER		MS/MSD		LCS/LCSD	
ID	: 445-96-2-SS	ID	: 0244-B	ID	: 0244-B
NUCLIDE	: AM243	NUCLIDE	: AM-241	NUCLIDE	: AM-241
NOMINAL	: 2.9166E+00 dpm	NOMINAL	: 3.3157E+01 pCi/G	NOMINAL	: 3.3157E+01 pCi/G
RESULTS	: 2.3242E+00 dpm				

NUCLIDE ACTIVITY SUMMARY									
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G
AM-241	5479.150	5488.750	15.827	25.000	8.550	15.000	3.0704	99.94000	1.07E-02
AM243	5270.000	5276.687	51.510	837.000	7.000	4.000	2.0000	99.78000	1.05E+00
CM-242	6102.000	6081.951	7.245	11.000	1.000	15.000	5.2338	100.0000	9.59E-03
CM-3/4	5795.020	5752.411	34.223	16.000	13.000	2.000	19.8463	86.09000	1.26E-03
CM-5/6	5386.000	5379.336	0.000	15.000	11.000	3.000	15.3366	79.30000	1.89E-02
CM-247	4946.000	4890.479	126.973	14.000	13.000	2.000	22.1555	91.00000	1.74E-02
CM-248	5078.600	5062.763	24.665	15.000	13.000	2.000	22.1555	91.00000	1.79E-02

	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	7.82E-03	8.96E-03	2.13E-02	7.79E-03
AM243	7.29E-02	5.85E-03	1.51E-02	3.64E-02
CM-242	5.34E-03	1.26E-02	2.86E-02	5.31E-03
CM-3/4	7.00E-03	1.53E-02	3.39E-02	7.00E-03
CM-5/6	6.11E-03	6.72E-02	1.38E-01	6.01E-03
CM-247	6.60E-03	5.64E-02	1.17E-01	6.52E-03
CM-248	5.78E-03	7.10E-02	1.46E-01	5.68E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of AM243 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245395002_AM SAMPLE QTY : 1.254 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 68.747				CHAMBER : 038 DETECTOR S/N : 72532 AVERAGE %EFFICIENCY : 33.6391 COUNT DATE : 8-FEB-2010 10:21:09 ELAPSED LIVE TIME(SEC) : 59999.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B038.CNF:1111 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W038.CNF:321 CAL DATE : 3-FEB-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.0051E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G					
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5484.721	4.934	7.000	-1.171	7.000	3.0704	99.94000	-1.82E-03	5.57E-03	1.11E-02	2.64E-02	5.57E-03
AM243	5270.000	5273.536	39.477	676.000	673.000	3.000	1.7321	99.78000	1.05E+00	7.72E-02	6.27E-03	1.68E-02	4.06E-02
CM-242	6102.000	6031.877	4.934	6.000	3.000	3.000	4.3186	100.00000	5.09E-03	5.10E-03	1.56E-02	3.54E-02	5.09E-03
CM-3/4	5795.020	5802.399	7.247	8.000	-1.000	9.000	5.2338	100.00000	-1.56E-03	6.42E-03	1.89E-02	4.20E-02	6.42E-03
CM-5/6	5386.000	5379.879	0.000	5.000	3.000	2.000	19.8463	86.09000	5.41E-03	4.79E-03	8.33E-02	1.71E-01	4.77E-03
CM-247	4946.000	4893.342	4.934	9.000	8.000	1.000	15.3366	79.30000	1.57E-02	6.27E-03	6.99E-02	1.45E-01	6.19E-03
CM-248	5078.600	5068.140	0.000	13.000	13.000	0.000	22.1555	91.00000	2.22E-02	6.31E-03	8.80E-02	1.81E-01	6.15E-03

NOTES:

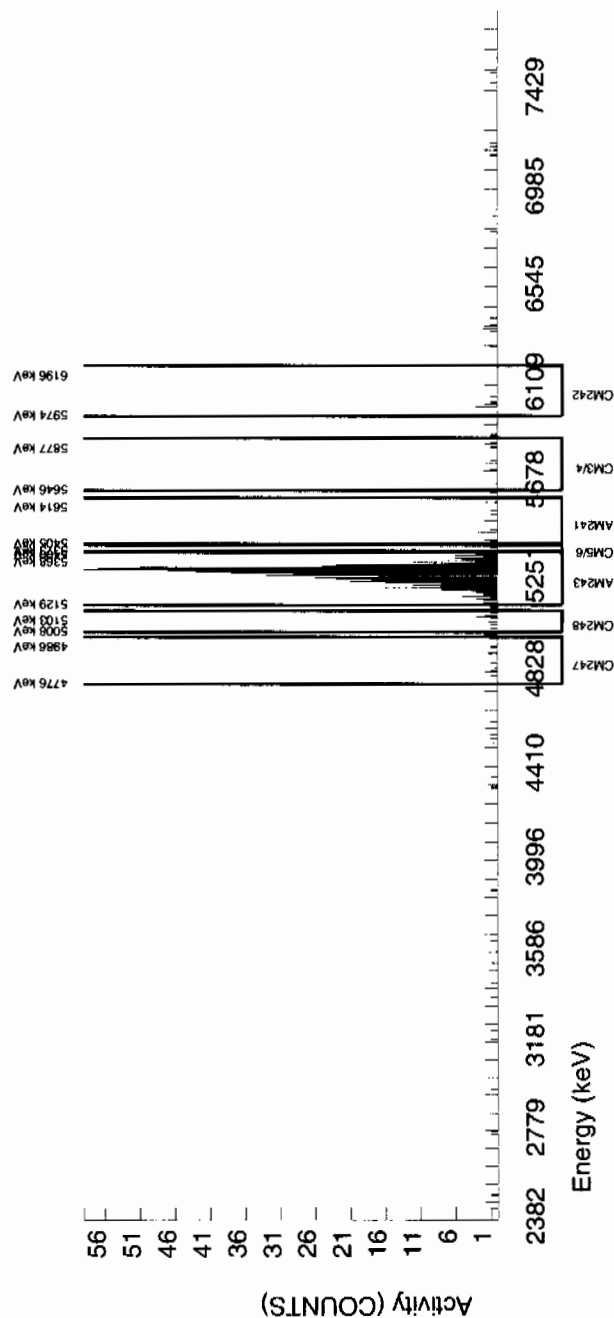
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985	CHAMBER : 039	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0245395003_AM	DETECTOR S/N : 45-149BB2	BKG FILE : B039.CNF;1111
SAMPLE QTY : 1.253 G	AVERAGE %EFFICIENCY : 35.7920	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 10:21:09	BKG LIVE TIME(SEC) : 59999.99
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W039.CNF;298
% YIELD : 75.653		CAL DATE : 3-FEB-2010

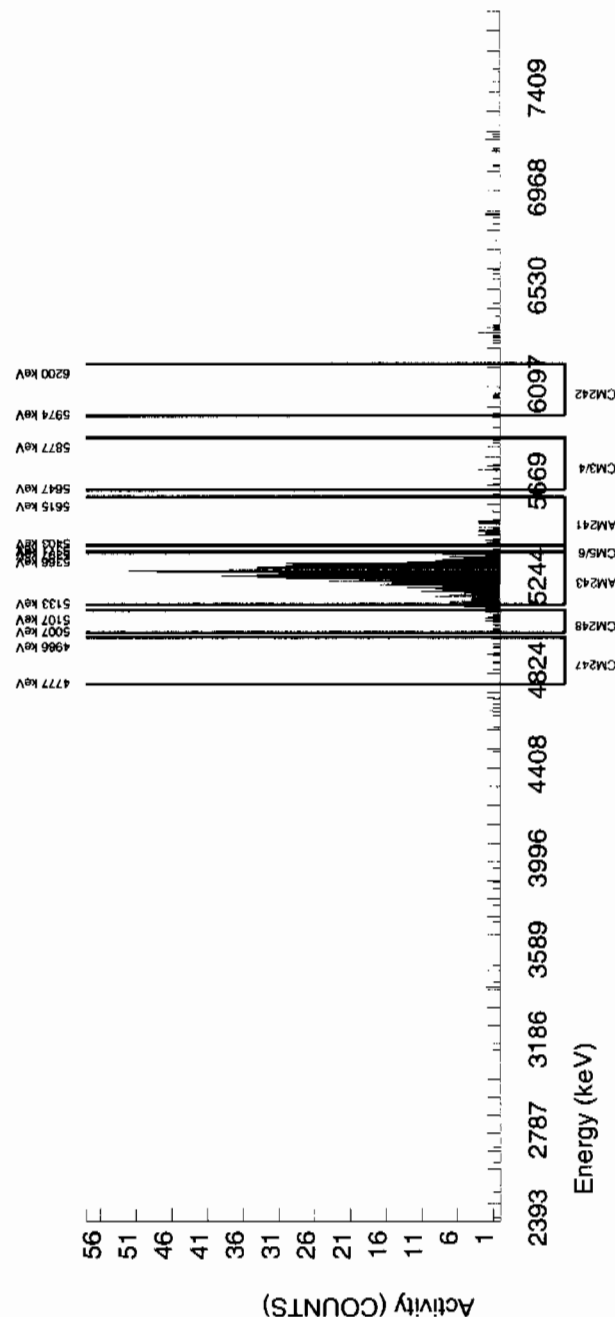
TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3157E+01 pCi/G	NOMINAL : 3.3157E+01 pCi/G
RESULTS : 2.2065E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5479.534	120.905	38.000	23.629	13.000	3.0704	99.94000	3.14E-02	9.55E-03	9.49E-03	2.26E-02	9.36E-03
AM243	5270.000	5271.373	64.508	795.000	788.000	7.000	2.6458	99.78000	1.05E+00	7.42E-02	8.19E-03	2.00E-02	3.77E-02
CM-242	6102.000	6040.590	6.079	11.000	7.000	4.000	4.3186	100.0000	1.02E-02	5.65E-03	1.33E-02	3.03E-02	5.62E-03
CM-3/4	5795.020	5769.130	57.464	18.000	2.000	16.000	5.2338	100.0000	2.66E-03	7.76E-03	1.62E-02	3.59E-02	7.76E-03
CM-5/6	5386.000	5375.049	0.000	13.000	11.000	2.000	19.8463	86.09000	1.70E-02	6.06E-03	7.12E-02	1.47E-01	5.97E-03
CM-247	4946.000	4925.374	0.000	10.000	8.000	2.000	15.3366	79.30000	1.34E-02	5.86E-03	5.97E-02	1.24E-01	5.80E-03
CM-248	5078.600	5069.535	0.000	23.000	23.000	0.000	22.1555	91.00000	3.36E-02	7.29E-03	7.52E-02	1.54E-01	7.00E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of AM243 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
AM-241



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985	CHAMBER : 040	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0245395004_AM	DETECTOR S/N : 78773	BKG FILE : B040.CNF-1114
SAMPLE QTY : 1.254 G	AVERAGE %EFFICIENCY : 32.1221	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 10:21:09	BKG LIVE TIME(SEC) : 59999.99
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W040.CNF-317
% YIELD : 73.278		CAL DATE : 3-FEB-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3157E+01 pCi/G	NOMINAL : 3.3157E+01 pCi/G
RESULTS : 2.1372E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5503.989	68.447	3.000	1.808	0.000	3.0704	99.94000	2.76E-03	2.06E-03	1.09E-02	2.60E-02	2.05E-03
AM243	5270.000	5269.542	41.377	685.000	685.000	0.000	0.0000	99.78000	1.05E+00	7.67E-02	0.00E+00	4.14E-03	4.00E-02
CM-242	6102.000	6012.845	0.000	5.000	4.000	1.000	4.3186	100.0000	6.67E-03	4.10E-03	1.53E-02	3.48E-02	4.08E-03
CM-3/4	5795.020	5757.652	0.000	9.000	0.000	9.000	5.2338	100.0000	0.00E+00	6.49E-03	1.86E-02	4.13E-02	6.49E-03
CM-5/6	5386.000	5378.612	4.889	1.000	1.000	0.000	19.8463	86.09000	1.77E-03	1.78E-03	8.18E-02	1.68E-01	1.77E-03
CM-247	4946.000	4900.625	0.000	9.000	8.000	1.000	15.3366	79.30000	1.54E-02	6.16E-03	6.87E-02	1.43E-01	6.09E-03
CM-248	5078.600	5070.560	0.000	11.000	10.000	1.000	22.1555	91.00000	1.68E-02	5.90E-03	8.64E-02	1.77E-01	5.81E-03

NOTES:

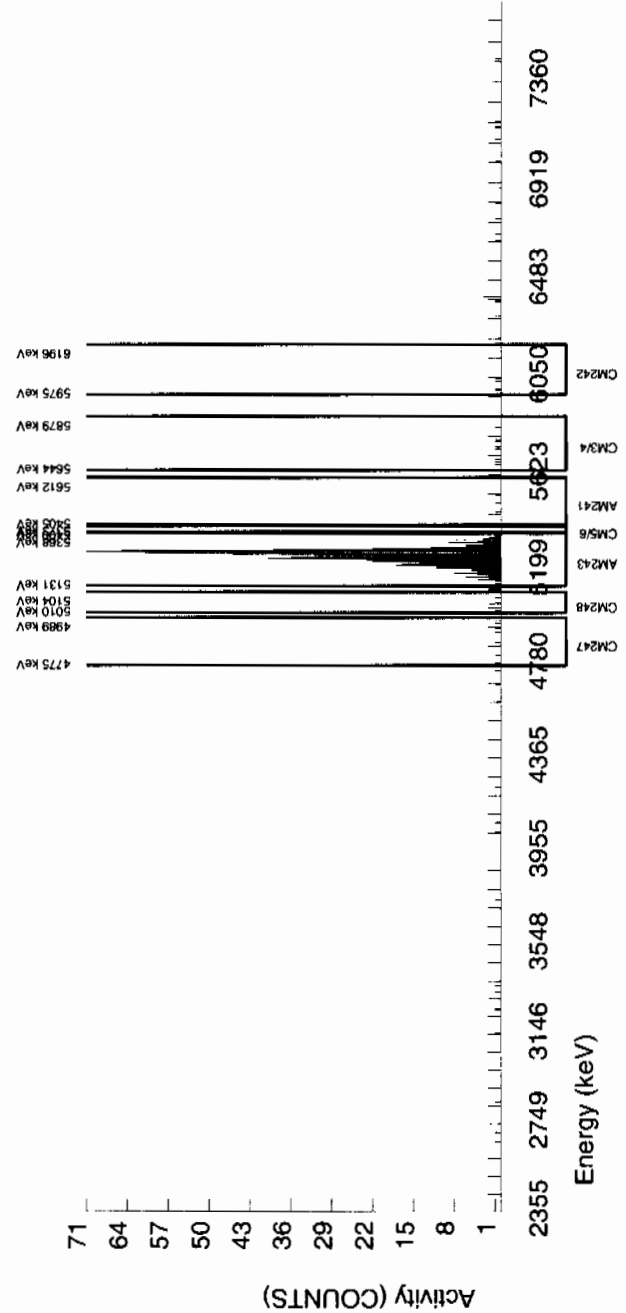
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245395005_AM SAMPLE QTY : 1.258 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 75.373		CHAMBER : 041 DETECTOR S/N : 78205 AVERAGE %EFFICIENCY : 33.0982 COUNT DATE : 8-FEB-2010 10:21:09 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_AM BKG FILE : B041.CNF;1107 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W041.CNF;321 CAL DATE : 3-FEB-2010
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.1983E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
AM-241	5479.150	5535.736	142.931
AM243	5270.000	5272.279	39.889
CM-242	6102.000	6081.575	4.950
CM-3/4	5795.020	5811.984	68.062
CM-5/6	5386.000	5378.991	0.000
CM-247	4946.000	4911.034	143.549
CM-248	5078.600	5076.336	44.467
	GROSS AREA	NET AREA	BKG AREA
	6.000	1.737	3.000
	732.000	726.000	6.000
	8.000	6.000	2.000
	10.000	-3.000	13.000
	5.000	5.000	0.000
	8.000	7.000	1.000
	11.000	10.000	1.000
			BKG Sg
			3.0704
			2.4495
			4.3186
			5.2338
			19.8463
			15.3366
			22.1555
		%ABUN	ACTIVITY pCi/G
		99.94000	2.49E-03
		99.78000	1.04E+00
		100.0000	9.41E-03
		100.0000	-4.32E-03
		86.09000	8.34E-03
		79.30000	1.27E-02
		91.00000	1.58E-02
			TPU 1-SIGMA
			4.00E-03
			7.55E-02
			4.99E-03
			6.90E-03
			3.76E-03
			5.49E-03
			5.55E-03
			DLC pCi/G
			1.03E-02
			8.20E-03
			1.44E-02
			1.75E-02
			7.70E-02
			6.46E-02
			8.13E-02
			MDC pCi/G
			2.44E-02
			2.03E-02
			3.27E-02
			3.88E-02
			1.58E-01
			1.34E-01
			1.67E-01
			UNC pCi/G
			4.00E-03
			3.91E-02
			4.96E-03
			6.90E-03
			3.73E-03
			5.43E-03
			5.46E-03

NOTES:

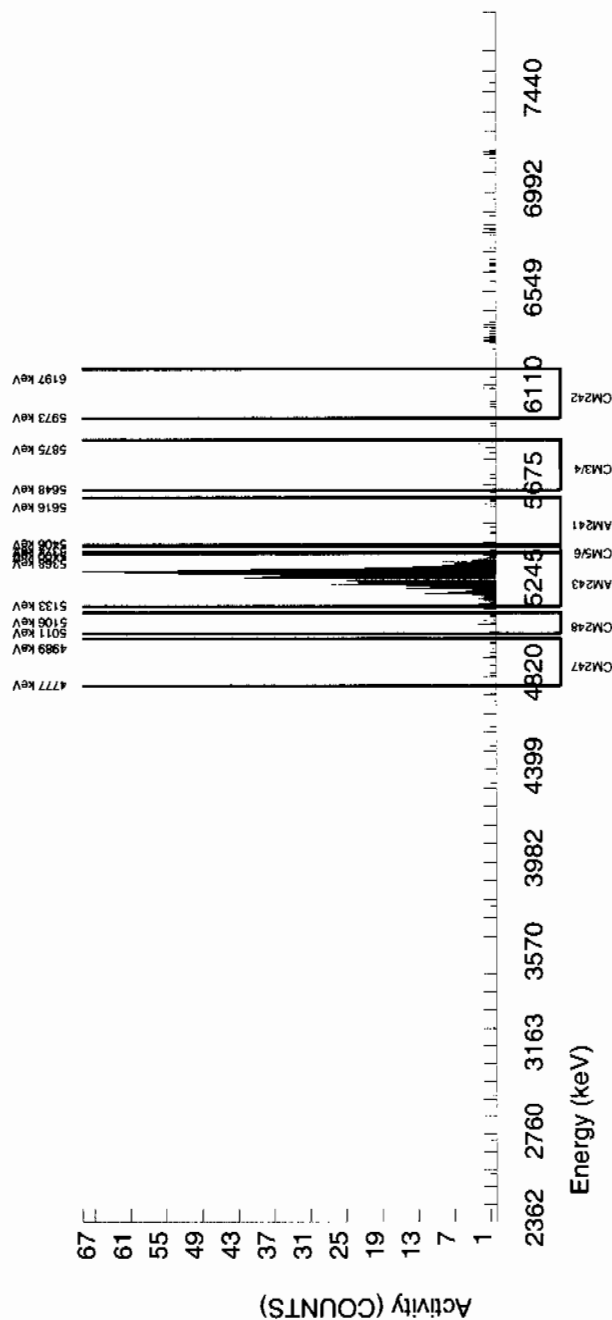
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	:	944985
SAMPLE ID	:	S02453
SAMPLE QTY	:	1.25
SAMPLE DATE	:	19-JAN-2019
ANALYST	:	JXD2
% YIELD	:	73.052

CHAMBER : 042
DETECTOR S/N : 78793
AVERAGE %EFFICIENCY : 33.2094
COUNT DATE : 8-FEB-2010 10:21:09
ELAPSED LIVE TIME(SEC) : 59999.99

LIB FILE : ENV_ALPHA_AM
BKG FILE : B042.CNF;1106
BKG DATE : 7-FEB-2010
BKG LIVE TIME(SEC) : 59999.99
EFF FILE : W042.CNF;294
CAL DATE : 3-FEB-2010

TRACER	:	445-96-2-SS
ID	:	AM243
NUCLIDE	:	2.9166E+00 dpm
NOMINAL	:	2.1306E+00 dpm
RESULTS	:	

MS/MSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3157E+01 pCi/G

LCS/LCSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3157E+01 pCi/G

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5479.248	112.493	7.000	2.771	3.000	3.0704	99.94000	4.12E-03	4.41E-03	1.06E-02	2.53E-02	4.40E-03
AM243	5270.000	5271.854	35.172	709.000	706.000	3.000	1.7321	99.78000	1.05E+00	7.64E-02	6.00E-03	1.60E-02	3.97E-02
CM-242	6102.000	6089.347	87.427	8.000	5.000	3.000	4.3186	100.0000	8.11E-03	5.41E-03	1.49E-02	3.39E-02	5.38E-03
CM-3/4	5795.020	5787.943	117.282	13.000	7.000	6.000	5.2338	100.0000	1.04E-02	6.52E-03	1.81E-02	4.02E-02	6.49E-03
CM-5/6	5386.000	5378.238	0.000	4.000	3.000	1.000	19.463	86.09000	5.18E-03	3.87E-03	7.97E-02	1.64E-01	3.86E-03
CM-247	4946.000	4913.757	185.858	3.000	1.000	2.000	15.3366	79.30000	1.87E-03	4.19E-03	6.68E-02	1.39E-01	4.19E-03
CM-248	5078.600	5077.411	51.356	8.000	8.000	0.000	22.1555	91.00000	1.31E-02	4.69E-03	8.41E-02	1.73E-01	4.62E-03

NOTES:

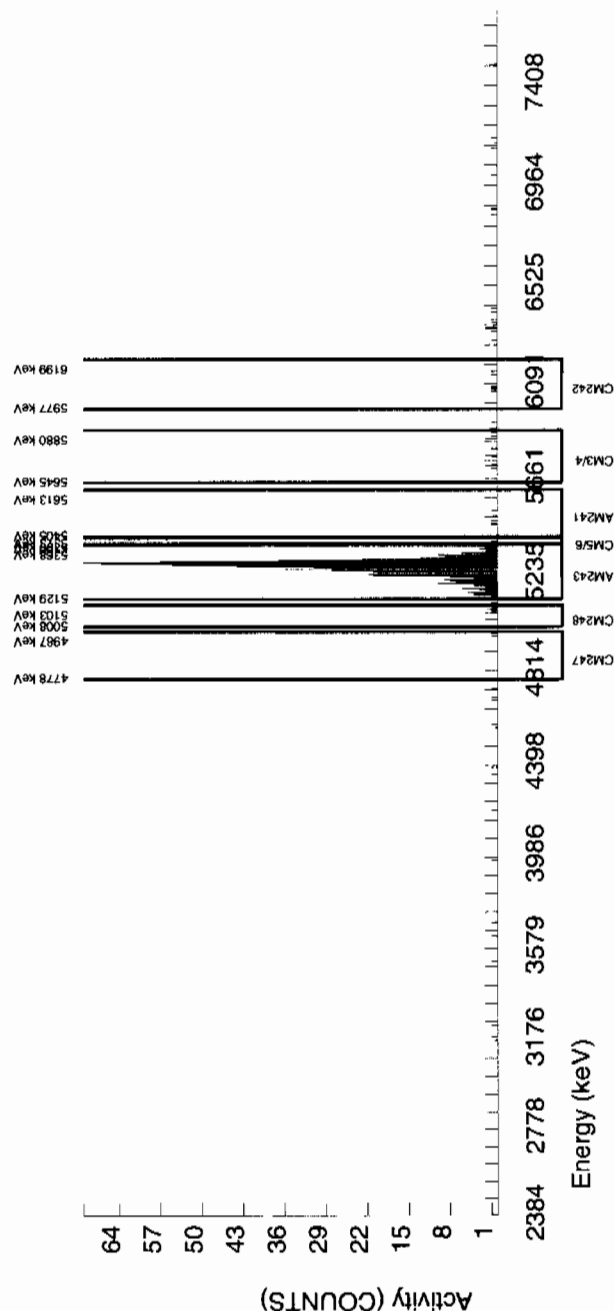
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sq of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245395007_AM SAMPLE QTY : 1.254 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 74.756				CHAMBER : 043 DETECTOR S/N : 76543 AVERAGE %EFFICIENCY : 33.6471 COUNT DATE : 8-FEB-2010 10:21:10 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_AM BKG FILE : B043.CNF;1104 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W043.CNF;286 CAL DATE : 3-FEB-2010					
TRACER		MS/MSD		LCS/LCSD									
ID : 445-96-2-SS		ID : 0244-B		ID : 0244-B									
NUCLIDE : AM243		NUCLIDE : AM-241		NUCLIDE : AM-241									
NOMINAL : 2.9166E+00 dpm		NOMINAL : 3.3157E+01 pCi/G		NOMINAL : 3.3157E+01 pCi/G									
RESULTS : 2.1803E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5503.979	7.190	44.000	42.726	0.000	3.0704	99.94000	6.11E-02	1.01E-02	1.02E-02	2.43E-02	9.34E-03
AM243	5270.000	5272.975	43.016	734.000	732.000	2.000	1.4142	99.78000	1.05E+00	7.54E-02	4.71E-03	1.33E-02	3.88E-02
CM-242	6102.000	6099.430	9.277	9.000	9.000	0.000	4.3186	100.0000	1.40E-02	4.76E-03	1.43E-02	3.26E-02	4.68E-03
CM-3/4	5795.020	5786.577	0.000	7.000	3.000	4.000	5.2338	100.0000	4.29E-03	4.75E-03	1.74E-02	3.86E-02	4.75E-03
CM-5/6	5386.000	5377.457	0.000	6.000	5.000	1.000	19.8463	86.09000	8.29E-03	4.42E-03	7.66E-02	1.58E-01	4.39E-03
CM-247	4946.000	4872.957	158.333	8.000	8.000	0.000	15.3366	79.30000	1.44E-02	5.17E-03	6.43E-02	1.33E-01	5.09E-03
CM-248	5078.600	5056.309	39.480	12.000	11.000	1.000	22.1555	91.00000	1.73E-02	5.76E-03	8.09E-02	1.66E-01	5.66E-03

NOTES:

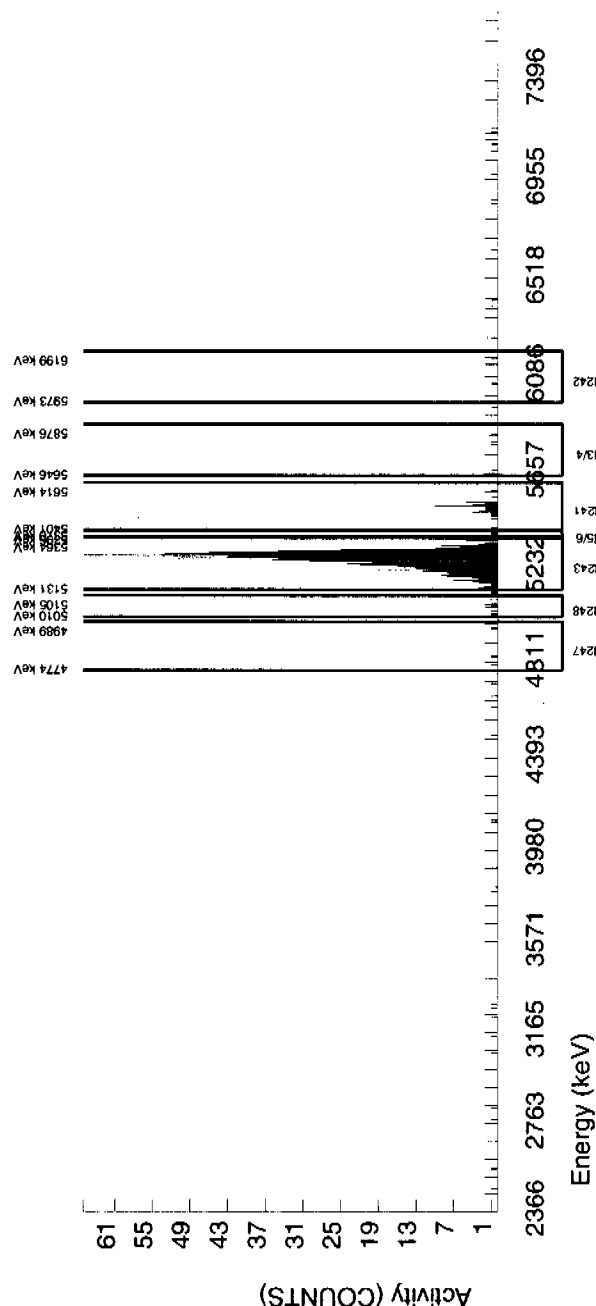
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985	CHAMBER : 044	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0245395008_AM	DETECTOR S/N : 79459	BKG FILE : B044.CNF;1114
SAMPLE QTY : 1.256 G	AVERAGE %EFFICIENCY : 34.2824	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 10:21:10	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W044.CNF;307
% YIELD : 77.882		CAL DATE : 3-FEB-2010

TRACER ID : 445-96-2-SS	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3157E+01 pCi/G	NOMINAL : 3.3157E+01 pCi/G
RESULTS : 2.2715E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5476.072	7.230	8.000	5.648	1.000	3.0704	99.94000	7.59E-03	3.75E-03	9.60E-03	2.28E-02	3.72E-03
AM243	5270.000	5270.946	32.003	779.000	777.000	2.000	1.4142	99.78000	1.05E+00	7.41E-02	4.43E-03	1.25E-02	3.76E-02
CM-242	6102.000	6081.954	113.225	4.000	2.000	2.000	4.3186	100.0000	2.93E-03	3.60E-03	1.35E-02	3.06E-02	3.59E-03
CM-3/4	5795.020	5795.222	9.230	7.000	-1.000	8.000	5.2338	100.0000	-1.35E-03	5.21E-03	1.64E-02	3.64E-02	5.21E-03
CM-5/6	5386.000	5386.619	0.000	0.000	0.000	0.000	19.8463	86.09000	0.00E+00	1.56E-03	7.20E-02	1.48E-01	1.56E-03
CM-247	4946.000	4918.119	157.531	6.000	5.000	1.000	15.3366	79.30000	8.47E-03	4.51E-03	6.04E-02	1.25E-01	4.48E-03
CM-248	5078.600	5055.452	0.000	6.000	6.000	0.000	22.1555	91.00000	8.86E-03	3.66E-03	7.61E-02	1.56E-01	3.62E-03

NOTES:

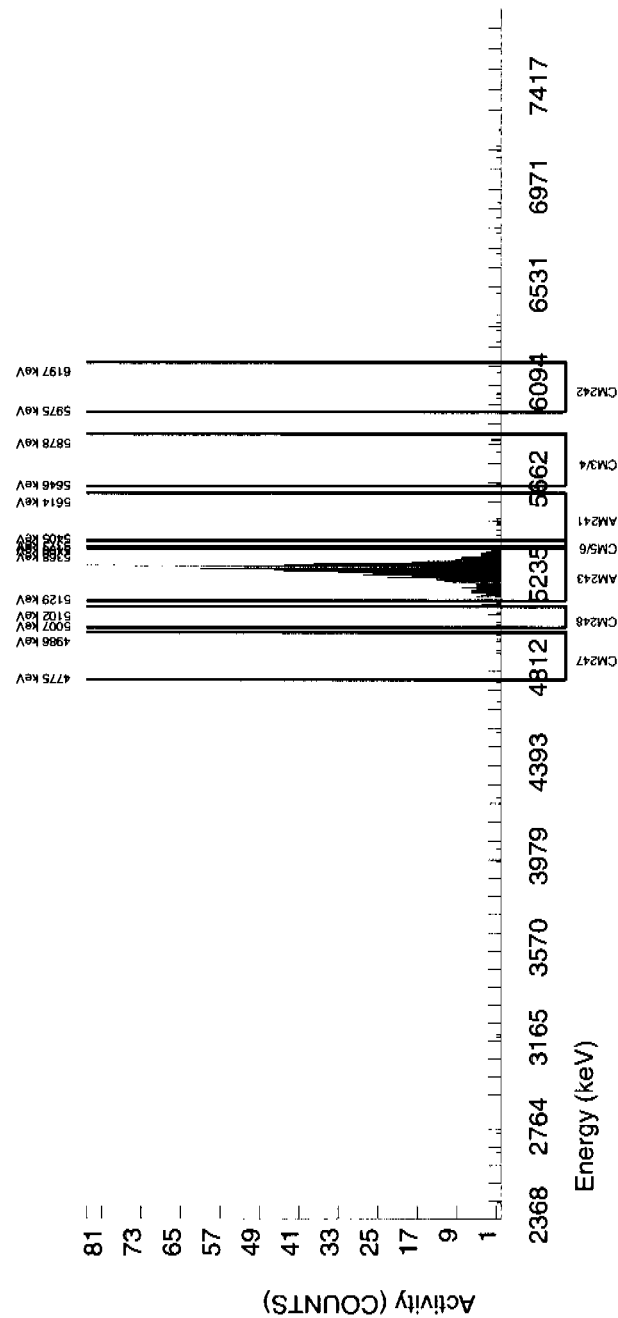
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985
SAMPLE ID : S0245395009_AM
SAMPLE QTY : 1.254 G
SAMPLE DATE : 19-JAN-2010 00:00:00
ANALYST : JXD2
% YIELD : 75.246

CHAMBER : 045
DETECTOR S/N : 78783
AVERAGE %EFFICIENCY : 33.6564
COUNT DATE : 8-FEB-2010 10:21:10
ELAPSED LIVE TIME(SEC) : 60000.00

LIB FILE : ENV_ALPHA_AM
BKG FILE : B045.CNF;1103
BKG DATE : 7-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W045.CNF;298
CAL DATE : 3-FEB-2010

TRACER
ID : 445-96-2-SS
NUCLIDE : AM243
NOMINAL : 2.9166E+00 dpm
RESULTS : 2.1946E+00 dpm

MS/MSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3157E+01 pCi/G

LCS/LCSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3157E+01 pCi/G

NUCLIDE ACTIVITY SUMMARY

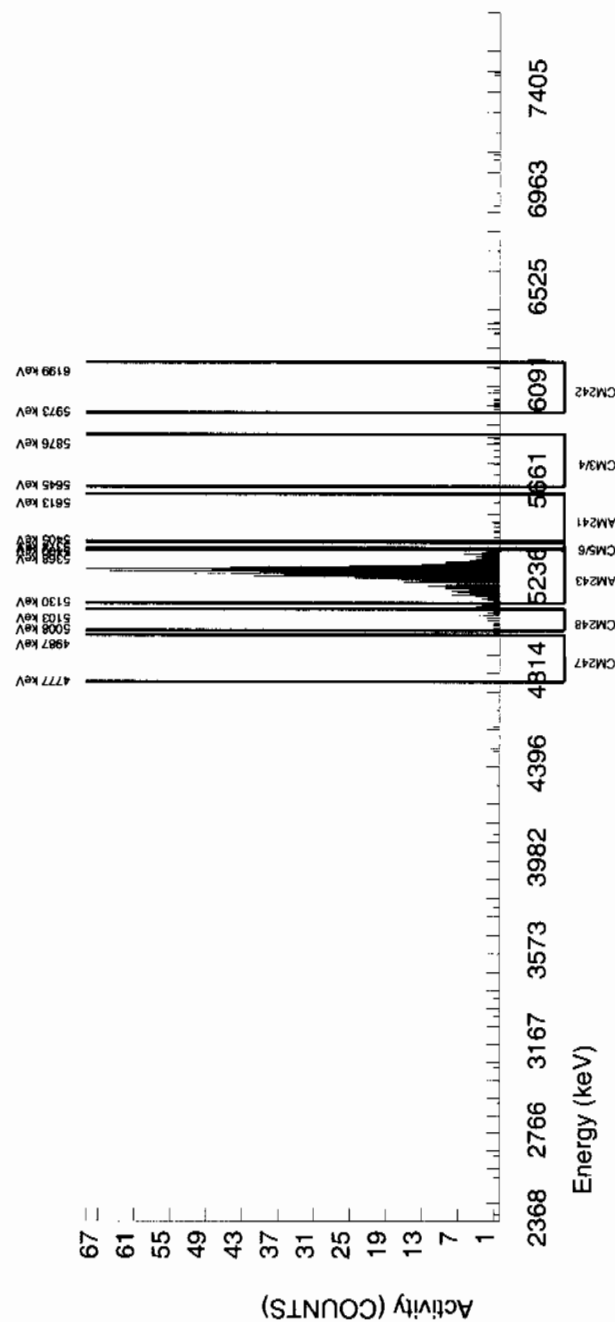
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5494.586	4.942	8.000	4.717	2.000	3.0704	99.94000	6.70E-03	4.21E-03	1.01E-02	2.41E-02	4.19E-03
AM-243	5270.000	5266.126	44.681	738.000	737.000	1.000	1.0000	99.78000	1.05E+00	7.52E-02	3.31E-03	1.05E-02	3.86E-02
CM-242	6102.000	6051.084	7.258	11.000	10.000	1.000	4.3186	100.0000	1.55E-02	5.45E-03	1.43E-02	3.23E-02	5.37E-03
CM-3/4	5795.020	5815.173	29.548	10.000	0.000	10.000	5.2338	100.0000	0.00E+00	6.36E-03	1.73E-02	3.84E-02	6.36E-03
CM-5/6	5386.000	5386.813	0.000	2.000	0.000	0.000	19.8463	86.09000	3.30E-03	2.34E-03	7.61E-02	1.57E-01	2.33E-03
CM-247	4946.000	4903.078	0.000	2.000	0.000	2.000	15.3366	79.30000	0.00E+00	3.58E-03	6.38E-02	1.32E-01	3.58E-03
CM-248	5078.600	5068.234	5.740	17.000	17.000	0.000	22.1555	91.00000	2.65E-02	6.63E-03	8.03E-02	1.65E-01	6.43E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985	CHAMBER : 046	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0245395010_AM	DETECTOR S/N : 76544	BKG FILE : B046.CNF:1114
SAMPLE QTY : 1.255 G	AVERAGE %EFFICIENCY : 33.4175	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 10:21:10	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W046.CNF:289
% YIELD : 77.944		CAL DATE : 3-FEB-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3157E+01 pCi/G	NOMINAL : 3.3157E+01 pCi/G
RESULTS : 2.2733E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5478.357	6.066	10.000	6.681	2.000	3.0704	99.94000	9.21E-03	4.54E-03	9.85E-03	2.34E-02	4.51E-03
AM243	5270.000	5270.380	57.921	760.000	758.000	2.000	1.4142	99.78000	1.05E+00	7.46E-02	4.54E-03	1.28E-02	3.81E-02
CM-242	6102.000	6077.599	156.594	8.000	3.000	5.000	4.3186	100.00000	4.52E-03	5.43E-03	1.38E-02	3.14E-02	5.43E-03
CM-3/4	5795.020	5803.412	127.232	7.000	0.000	7.000	5.2338	100.00000	0.00E+00	5.17E-03	1.68E-02	3.73E-02	5.17E-03
CM-5/6	5386.000	5372.962	0.000	4.000	4.000	0.000	19.8463	86.09000	6.40E-03	3.23E-03	7.39E-02	1.52E-01	3.20E-03
CM-247	4946.000	4855.311	117.445	4.000	2.000	2.000	15.3366	79.30000	3.48E-03	4.26E-03	6.20E-02	1.29E-01	4.26E-03
CM-248	5078.600	5056.133	52.555	15.000	15.000	0.000	22.1555	91.00000	2.27E-02	6.03E-03	7.80E-02	1.60E-01	5.86E-03

NOTES:

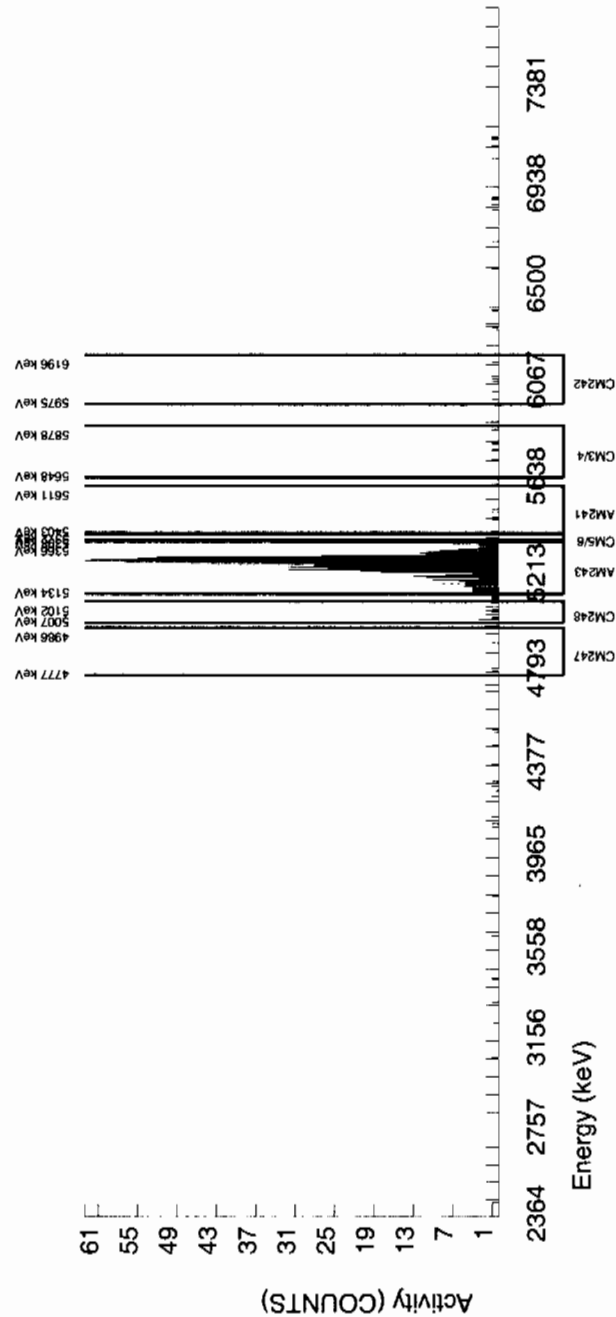
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245395011_AM SAMPLE QTY : 1.257 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 73.921		CHAMBER : 047 DETECTOR S/N : 46-089B1 AVERAGE %EFFICIENCY : 34.3991 COUNT DATE : 8-FEB-2010 10:21:10 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_AM BKG FILE : B047.CNF:1109 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W047.CNF:303 CAL DATE : 3-FEB-2010
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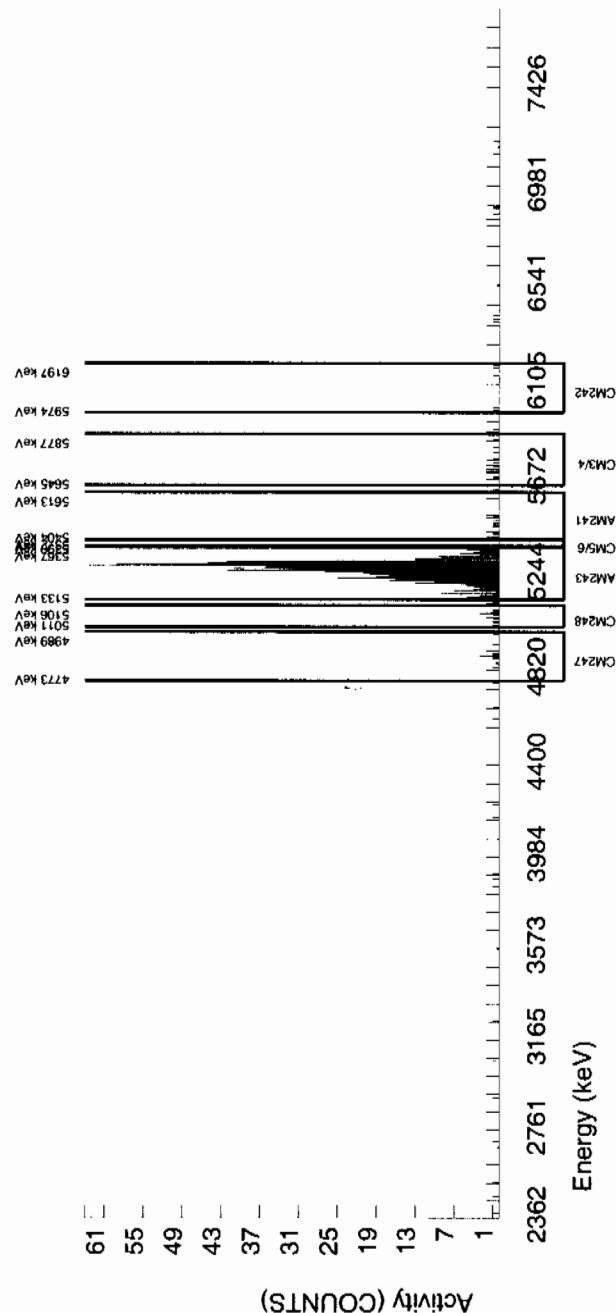
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.1560E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5468.908	76.851	13.000	6.712	5.000	3.0704	99.94000	9.47E-03	5.79E-03	1.01E-02	2.40E-02	5.77E-03
AM243	5270.000	5271.996	45.931	742.000	740.000	2.000	1.4142	99.78000	1.05E+00	7.50E-02	4.65E-03	1.31E-02	3.85E-02
CM-242	6102.000	6057.062	7.297	8.000	6.000	2.000	4.3186	100.00000	9.24E-03	4.90E-03	1.42E-02	3.21E-02	4.87E-03
CM-3/4	5795.020	5745.894	181.026	27.000	20.000	7.000	5.2338	100.00000	2.82E-02	8.42E-03	1.72E-02	3.81E-02	8.24E-03
CM-5/6	5386.000	5374.925	0.000	2.000	1.000	1.000	19.8463	86.09000	1.64E-03	2.84E-03	7.56E-02	1.56E-01	2.84E-03
CM-247	4946.000	4890.621	7.452	12.000	8.000	4.000	15.3366	79.30000	1.42E-02	7.16E-03	6.34E-02	1.32E-01	7.11E-03
CM-248	5078.600	5065.419	24.634	17.000	16.000	1.000	22.1555	91.00000	2.48E-02	6.75E-03	7.98E-02	1.64E-01	6.57E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of AM243 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245395012_AM SAMPLE QTY : 1.252 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 66.051				CHAMBER : 048 DETECTOR S/N : 42483 AVERAGE %EFFICIENCY : 32.0990 COUNT DATE : 8-FEB-2010 10:21:10 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_AM BKG FILE : B048.CNF;1110 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W048.CNF;316 CAL DATE : 3-FEB-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 1.9264E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G					
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5470.924	19.735	26.000	9.926	15.000	3.0704	99.94000	1.69E-02	1.08E-02	1.21E-02	2.89E-02	1.07E-02
AM243	5270.000	5269.374	56.630	622.000	617.000	5.000	2.2361	99.78000	1.05E+00	7.94E-02	8.85E-03	2.23E-02	4.26E-02
CM-242	6102.000	6055.372	187.487	5.000	2.000	3.000	4.3186	100.0000	3.71E-03	5.25E-03	1.70E-02	3.87E-02	5.24E-03
CM-3/4	5795.020	5768.779	146.783	21.000	1.000	20.000	5.2338	100.0000	1.70E-03	1.09E-02	2.07E-02	4.59E-02	1.09E-02
CM-5/6	5386.000	5380.583	0.000	5.000	5.000	0.000	19.8463	86.09000	9.86E-03	4.45E-03	9.10E-02	1.87E-01	4.41E-03
CM-247	4946.000	4889.392	0.000	5.000	4.000	1.000	15.3366	79.30000	8.56E-03	5.27E-03	7.63E-02	1.58E-01	5.24E-03
CM-248	5078.600	5076.979	6.116	7.000	5.000	2.000	22.1555	91.00000	9.32E-03	5.63E-03	9.61E-02	1.97E-01	5.59E-03

NOTES:

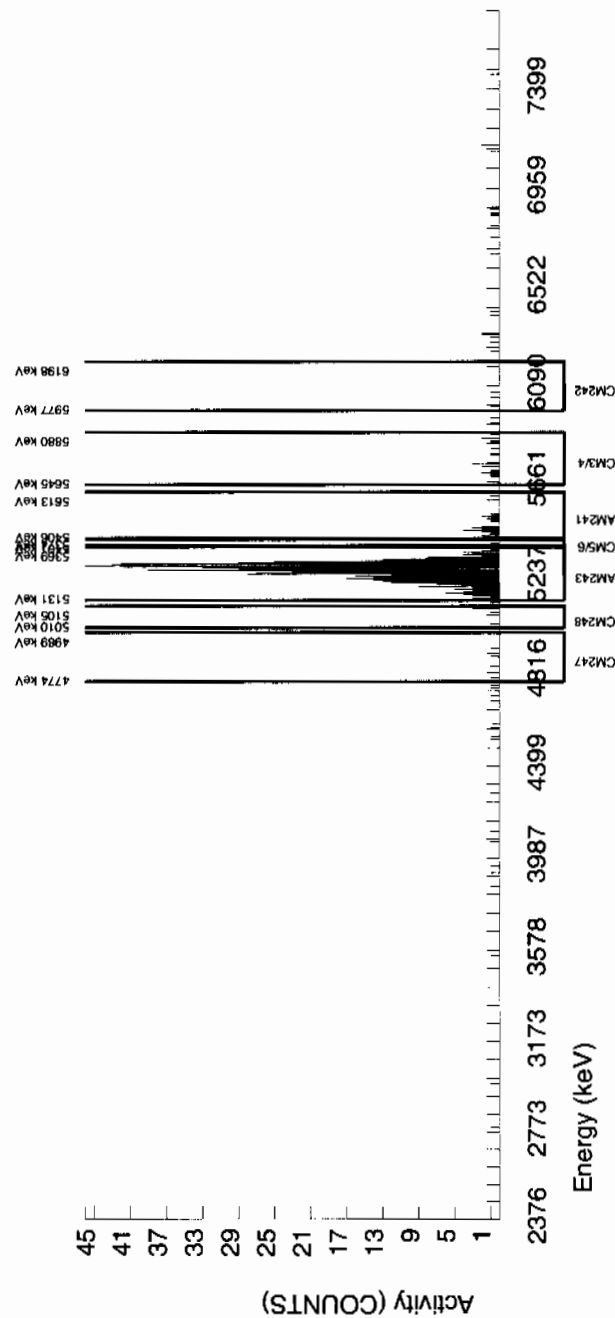
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245395013_AM SAMPLE QTY : 1.258 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 58.959		CHAMBER : 065 DETECTOR S/N : 68551 AVERAGE %EFFICIENCY : 31.0643 COUNT DATE : 8-FEB-2010 10:21:11 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_AM BKG FILE : B065.CNF.1942 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W065.CNF.305 CAL DATE : 11-JAN-2010
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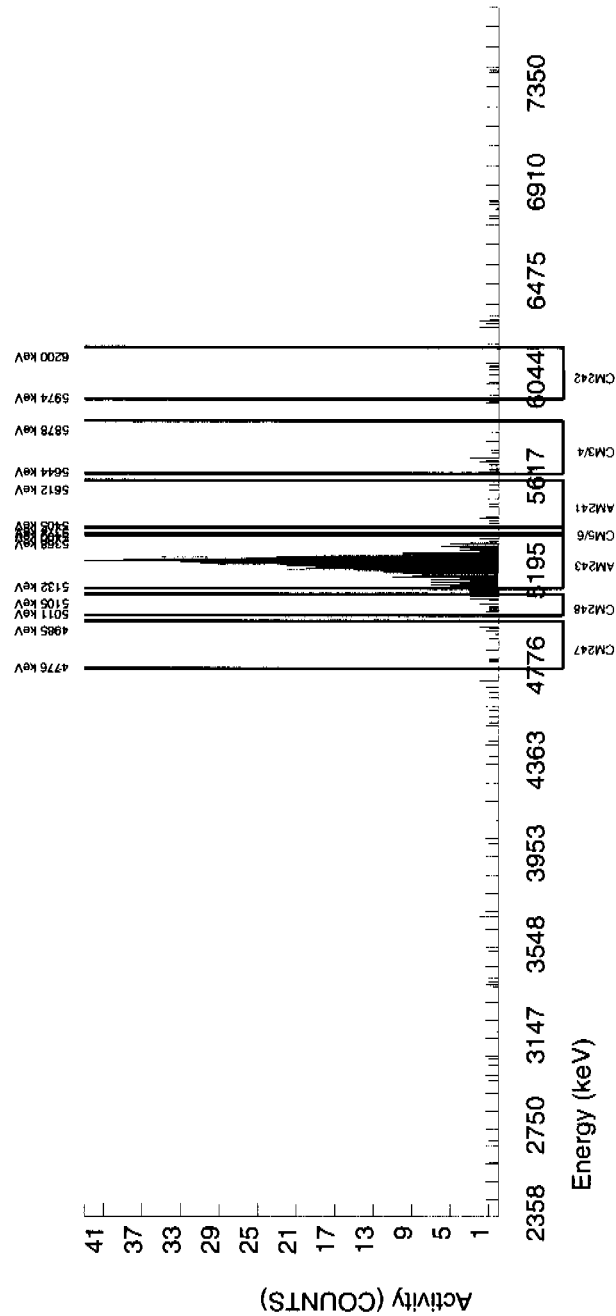
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 1.7196E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5496.219	4.877	10.000	1.072	8.000	3.0704	99.94000	2.10E-03	8.08E-03	1.40E-02	3.32E-02	8.08E-03
AM243	5270.000	5244.586	56.096	538.000	533.000	5.000	2.2361	99.78000	1.04E+00	8.26E-02	1.02E-02	2.57E-02	4.57E-02
CM-242	6102.000	6070.614	121.924	8.000	6.000	2.000	4.3186	100.0000	1.28E-02	6.81E-03	1.96E-02	4.46E-02	6.75E-03
CM-3/4	5795.020	5704.187	57.304	15.000	4.000	11.000	5.2338	100.0000	7.84E-02	1.00E-02	2.38E-02	5.29E-02	9.99E-03
CM-5/6	5386.000	5386.815	0.000	1.000	-2.000	3.000	19.8463	86.09000	-4.54E-03	4.54E-03	1.05E-01	2.16E-01	4.54E-03
CM-247	4946.000	4894.670	7.163	10.000	8.000	2.000	15.3366	79.30000	1.97E-02	8.64E-03	8.80E-02	1.83E-01	8.54E-03
CM-248	5078.600	5072.312	34.078	16.000	14.000	2.000	22.1555	91.00000	3.01E-02	9.33E-03	1.11E-01	2.27E-01	9.11E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of AM243 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	: 944985
SAMPLE ID	: S024533
SAMPLE QTY	: 1.29
SAMPLE DATE	: 19-JAN-
ANALYST	: JXD2
% YIELD	: 70.348

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CHAMBER : 066
DETECTOR S/N : 46-089C1
AVERAGE %EFFICIENCY : 31.1641
COUNT DATE : 8-FEB-2010 10:21:11
ELAPSED LIVE TIME(SEC) : 60000.00
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LIB FILE : ENV_ALPHA_AM
BKG FILE : B066.CNF;1103
BKG DATE : 7-FEB-2010
BKG LIVE TIME(SEC) : 59999.99
EFF FILE : W066.CNF;306
CAL DATE : 11-JAN-2010

TRACER	:	445-96-2-SS
ID	:	AM243
NUCLIDE	:	2.9166E+00
NOMINAL	:	2.0518E+00
RESULTS	:	

MS/MSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3157E+01 pCi/G

LCS/LCSD	ID : 0244-B
	NUCLIDE : AM-241
	NOMINAL : 3.3157E+01 pci/G

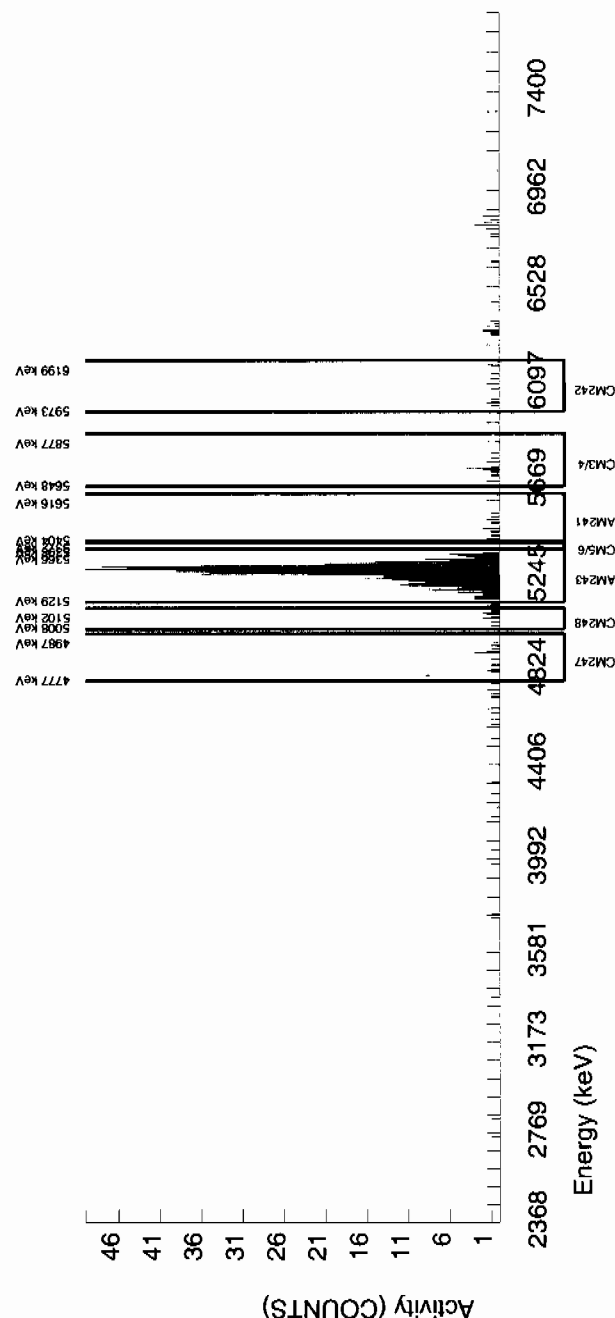
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5488.983	19.967	17.000	5.890	10.000	3.0704	99.94000	9.63E-03	8.35E-03	1.17E-02	2.78E-02	8.32E-03
AM243	5270.000	5269.161	47.718	641.000	638.000	3.000	1.7321	99.78000	1.05E+00	7.82E-02	6.60E-03	1.76E-02	4.16E-02
CM-242	6102.000	6083.732	164.729	7.000	6.000	1.000	4.3186	100.0000	1.07E-02	5.10E-03	1.64E-02	3.73E-02	5.05E-03
CM-3/4	5795.020	5727.711	6.656	15.000	2.000	13.000	5.2338	100.0000	3.28E-03	8.67E-03	1.99E-02	4.42E-02	8.67E-03
CM-5/6	5386.000	5373.049	0.000	4.000	1.000	3.000	19.8463	86.09000	1.90E-03	5.02E-03	8.77E-02	1.80E-01	5.02E-03
CM-247	4946.000	4906.955	0.000	14.000	9.000	5.000	15.3366	79.30000	1.86E-02	9.06E-03	7.35E-02	1.53E-01	8.98E-03
CM-248	5078.600	5065.065	0.000	14.000	13.000	1.000	22.1555	91.00000	2.34E-02	7.11E-03	9.26E-02	1.90E-01	6.96E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 5-JAN-2010)

* Sq of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
AM-241



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S0245395015_AM SAMPLE QTY : 1.254 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 65.076	CHAMBER : 067 DETECTOR S/N : 46-089B4 AVERAGE %EFFICIENCY : 32.5269 COUNT DATE : 8-FEB-2010 10:21:11 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_AM BKG FILE : B067.CNF:1101 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W067.CNF:287 CAL DATE : 11-JAN-2010
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TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 1.8980E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5464.171	23.705	14.000	2.928	10.000	3.0704	99.94000	4.97E-03	8.14E-03	1.21E-02	2.89E-02	8.13E-03
AM-243	5270.000	5283.630	67.943	618.000	616.000	2.000	1.4142	99.78000	1.05E+00	7.91E-02	5.60E-03	1.58E-02	4.23E-02
CM-242	6102.000	6060.241	4.990	5.000	4.000	1.000	4.3186	100.0000	7.42E-03	4.57E-03	1.70E-02	3.87E-02	4.54E-03
CM-3/4	5795.020	5751.811	164.686	8.000	4.000	4.000	5.2338	100.0000	6.80E-03	5.91E-03	2.07E-02	4.59E-02	5.89E-03
CM-5/6	5386.000	5379.302	0.000	12.000	12.000	0.000	19.8463	86.09000	2.37E-02	6.99E-03	9.10E-02	1.87E-01	6.83E-03
CM-247	4946.000	4867.691	112.286	9.000	7.000	2.000	15.3366	79.30000	1.50E-02	7.16E-03	7.64E-02	1.59E-01	7.10E-03
CM-248	5078.600	5065.148	44.914	13.000	13.000	0.000	22.1555	91.00000	2.42E-02	6.90E-03	9.61E-02	1.97E-01	6.72E-03

NOTES:

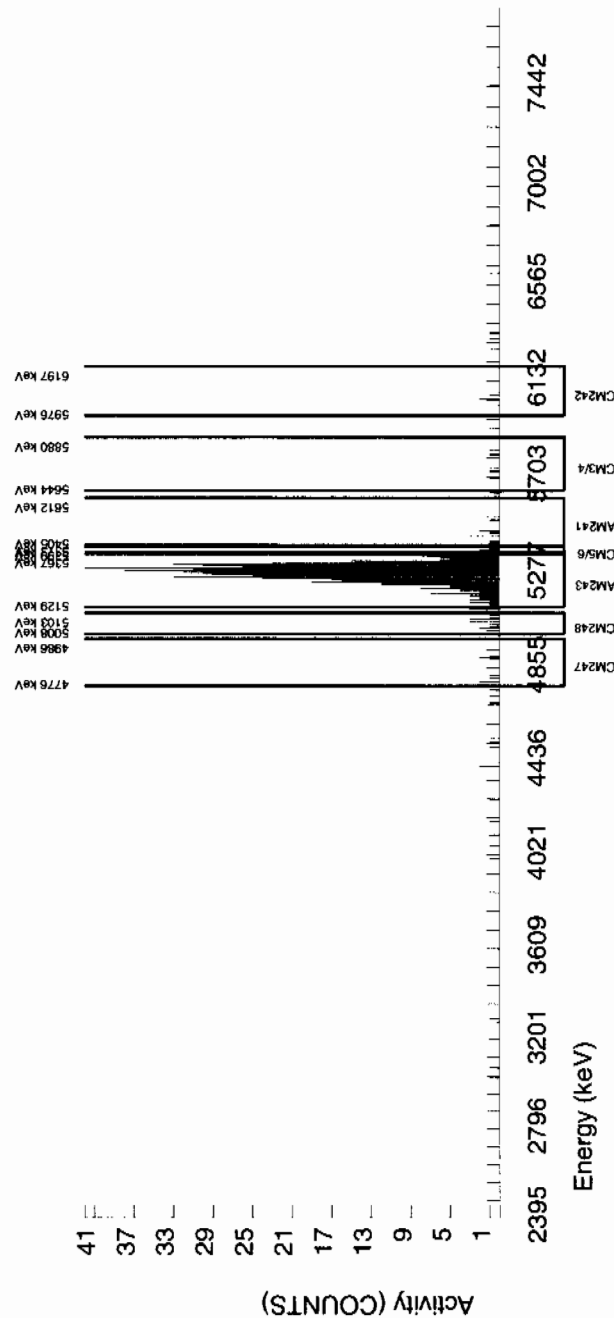
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	: 944985
SAMPLE ID	: S12020
SAMPLE QTY	: 1.00
SAMPLE DATE	: 4-FEB-2
ANALYST	: JXD2
% YIELD	: 71.814

CHAMBER : 068
DETECTOR S/N : 78794
AVERAGE %EFFICIENCY : 29.6665
COUNT DATE : 8-FEB-2
ELAPSED LIVE TIME(SEC) : 60000.0

LIB FILE	ENV_ALPHA_AM
BKG FILE	B068.CNF:1094
BKG DATE	7-FEB-2010
BKG LIVE TIME(SEC)	59999.99
EFF FILE	W068.CNF:278
CAL DATE	11-JAN-2010

TRACER	:	445-96-2-SS
ID	:	AM243
NUCLIDE	:	2.9166E+00 dpm
NOMINAL	:	2.0945E+00 dpm
RESULTS	:	

MS/MSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3155E+01 pCi/G

LCS/LCSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3155E

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
AM-241	5479.150	5505.338	84.618	3.000	-0.079	2.000	3.0704	99.94000	-1.67E-04	4.19E-03	1.51E-02	3.60E-02	4.19E-03
AM243	5270.000	5273.006	31.251	624.000	620.000	4.000	2.0000	99.78000	1.31E+00	9.92E-02	9.86E-03	2.55E-02	5.31E-02
CM-242	6102.000	6012.500	49.776	4.000	2.000	2.000	4.3186	100.0000	4.32E-03	5.29E-03	2.12E-02	4.82E-02	5.29E-03
CM-3/4	5795.020	5753.261	7.311	5.000	1.000	4.000	5.2338	100.0000	2.12E-03	6.35E-03	2.57E-02	5.72E-02	6.35E-03
CM-5/6	5386.000	5385.070	0.000	0.000	0.000	0.000	19.8463	86.09000	0.00E+00	2.46E-03	1.13E-01	2.33E-01	2.46E-03
CM-247	4946.000	4887.559	7.311	10.000	8.000	2.000	15.3366	79.30000	2.13E-02	9.34E-03	9.51E-02	1.97E-01	9.24E-03
CM-248	5078.600	5061.235	0.000	8.000	8.000	0.000	22.1555	91.00000	1.86E-02	6.68E-03	1.20E-01	2.46E-01	6.57E-03

NOTES:

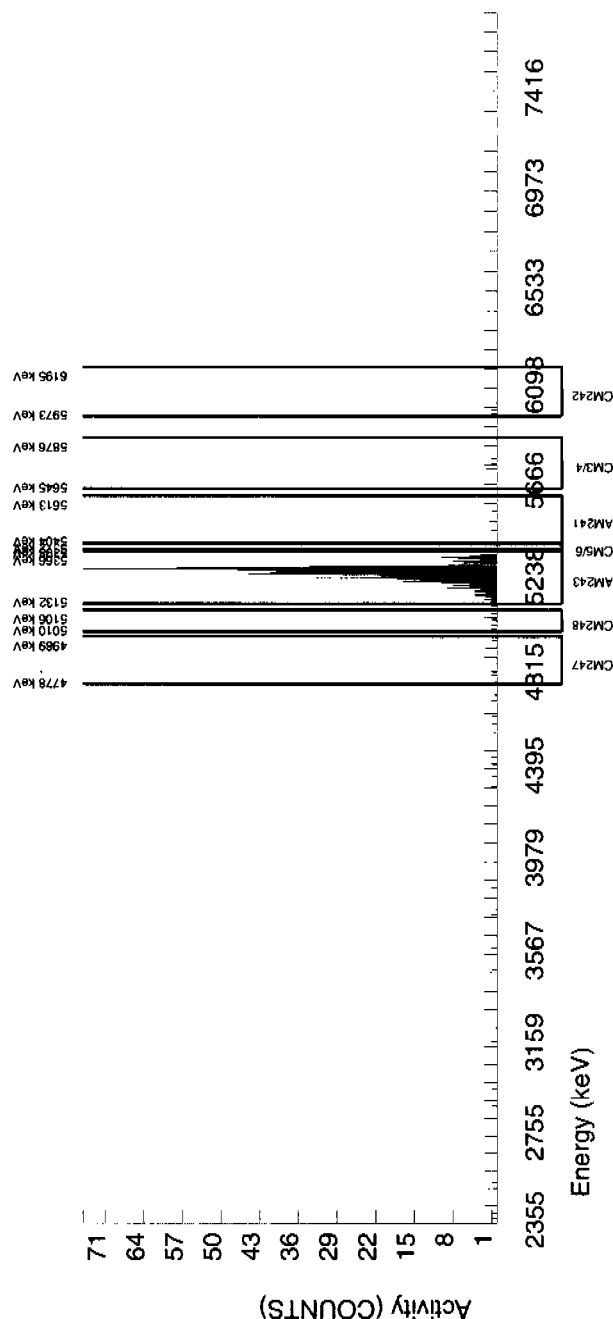
* Sq calculated via blank population.

Sg updated 5-JAN-2010)

* Sq of AM243 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985				CHAMBER : 069				LIB FILE : ENV_ALPHA_AM					
SAMPLE ID : S1202023805_AM				DETECTOR S/N : 78795				BKG FILE : B069.CNF;1096					
SAMPLE QTY : 1.251 G				AVERAGE %EFFICIENCY : 31.8131				BKG DATE : 7-FEB-2010					
SAMPLE DATE : 15-JAN-2010 00:00:00				COUNT DATE : 8-FEB-2010 10:21:11				BKG LIVE TIME(SEC) : 59999.99					
ANALYST : JXD2				ELAPSED LIVE TIME(SEC) : 60000.00				EFF FILE : W069.CNF;285					
% YIELD : 73.881								CAL DATE : 11-JAN-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 445-96-2-SS				ID : 0244-B				ID : 0244-B					
NUCLIDE : AM243				NUCLIDE : AM-241				NUCLIDE : AM-241					
NOMINAL : 2.9166E+00 dpm				NOMINAL : 3.3158E+01 pCi/G				NOMINAL : 3.3158E+01 pCi/G					
RESULTS : 2.1548E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5520.913	4.929	7.000	4.810	1.000	3.0704	99.94000	7.37E-03	4.03E-03	1.09E-02	2.61E-02	4.00E-03
AM243	5270.000	5268.920	36.713	685.000	684.000	1.000	1.0000	99.78000	1.05E+00	7.69E-02	3.57E-03	1.13E-02	4.02E-02
CM-242	6102.000	6057.411	4.929	5.000	5.000	0.000	4.3186	100.0000	8.51E-03	3.84E-03	1.54E-02	3.49E-02	3.81E-03
CM-3/4	5795.020	5741.873	157.727	6.000	3.000	3.000	5.2338	100.0000	4.61E-03	4.62E-03	1.87E-02	4.15E-02	4.61E-03
CM-5/6	5386.000	5385.153	0.000	1.000	1.000	0.000	19.8463	86.09000	1.78E-03	1.78E-03	8.22E-02	1.69E-01	1.78E-03
CM-247	4946.000	4882.744	0.000	7.000	5.000	2.000	15.3366	79.30000	9.66E-03	5.83E-03	6.89E-02	1.43E-01	5.80E-03
CM-248	5078.600	5057.971	4.929	7.000	6.000	1.000	22.1555	91.00000	1.01E-02	4.80E-03	8.68E-02	1.78E-01	4.76E-03

NOTES:

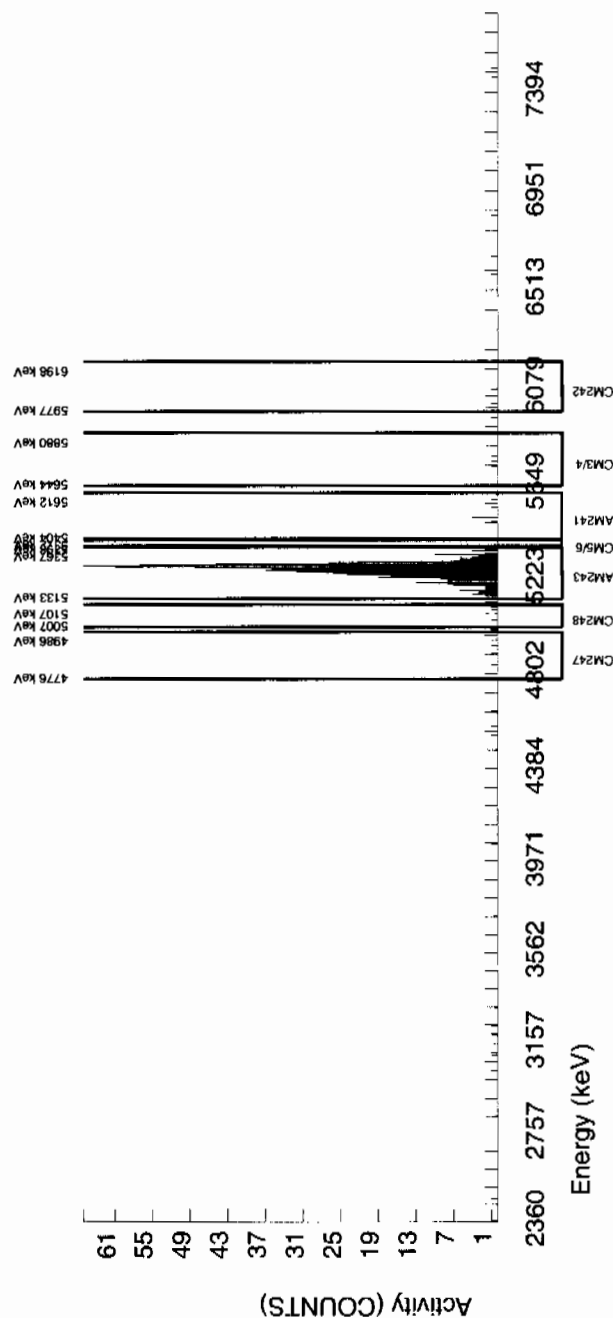
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944985 SAMPLE ID : S1202023806_AM SAMPLE QTY : 0.106 G SAMPLE DATE : 4-FEB-2010 00:00:00. ANALYST : JXD2 % YIELD : 86.419				CHAMBER : 070 DETECTOR S/N : 46-089B2 AVERAGE %EFFICIENCY : 34.9911 COUNT DATE : 8-FEB-2010 10:21:11 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_AM BKG FILE : B070.CNF;1106 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W070.CNF;290 CAL DATE : 11-JAN-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.5205E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G					
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5496.127	55.437	2239.000	2229.469	8.000	3.0704	99.94000	3.14E+01	2.20E+00	1.00E-01	2.39E-01	6.66E-01
AM243	5270.000	5275.726	61.658	882.000	880.000	2.000	1.4142	99.78000	1.24E+01	9.30E-01	4.63E-02	1.31E-01	4.19E-01
CM-242	6102.000	6046.397	7.266	7.000	3.000	4.000	4.3186	100.00000	4.30E-02	4.77E-02	1.41E-01	3.20E-01	4.76E-02
CM-3/4	5795.020	5743.858	4.947	7.000	-3.000	10.000	5.2338	100.00000	-4.22E-02	5.80E-02	1.71E-01	3.80E-01	5.80E-02
CM-5/6	5386.000	5388.115	0.000	73.000	71.000	2.000	19.8463	86.09000	1.16E+00	1.61E-01	7.54E-01	1.55E+00	1.41E-01
CM-247	4946.000	4910.198	192.933	16.000	8.000	8.000	15.3366	79.30000	1.42E-01	8.73E-02	6.32E-01	1.31E+00	8.68E-02
CM-248	5078.600	5075.236	6.596	14.000	13.000	1.000	22.1555	91.00000	2.01E-01	6.13E-02	7.96E-01	1.63E+00	5.98E-02

NOTES:

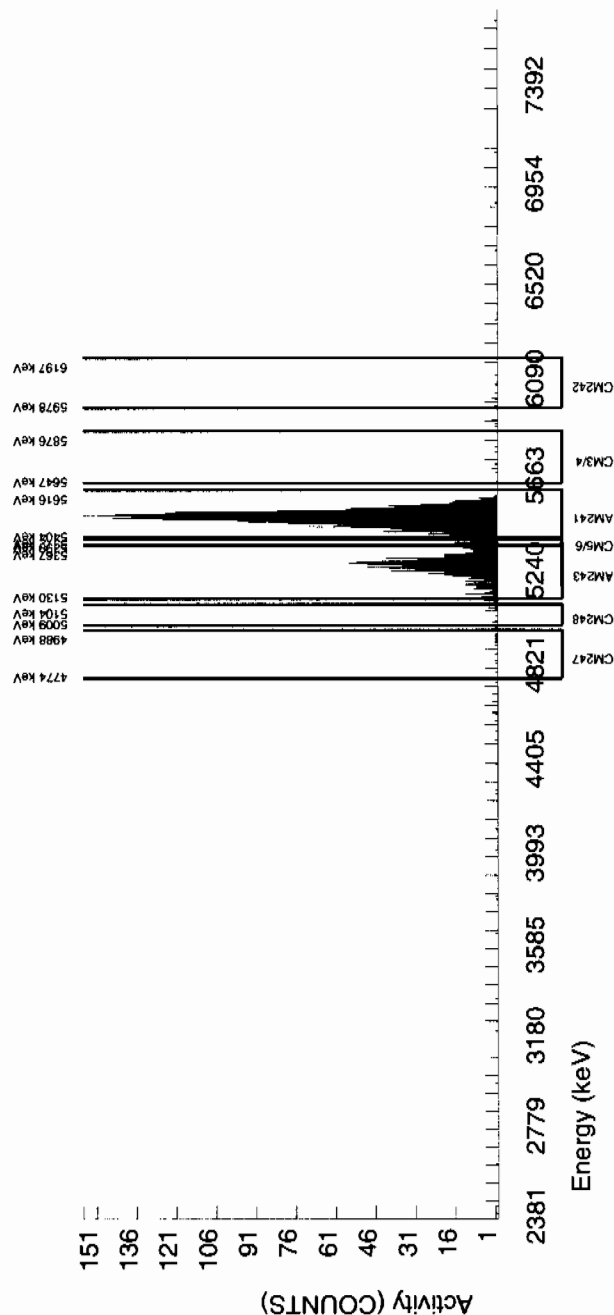
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

AM-241



Radiochemistry Batch Checklist, Rev10

Batch#

944994

Product:

R

Date:

2/9/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10" MDA/ MDC, error is 150% or less of sample activity. If greater 10" MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument big check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5" MDA/ MDC, then RPD is 100% or less. If greater 5" MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line outs initialed and dated.	✓		
No transcription errors are apparent.			N/A
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly labeled.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hll notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMF, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

D. Green 2/9/10

Secondary Review Performed By:

E. [signature] 2/9/10

2/13
LANL

Plutonium Que Sheet

25-JAN-10

Batch #: 944994 Analyst: JXD2 First Client Due Date: 13-FEB-10 Internal Due Date: 03-FEB-10
 Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 135-A Expiration Date: 01/01/14 Vol: 0.1
 LCS Isotope(s): Pu-239/Pu-238 LCS Code: Expiration Date: Vol:
 Spike Isotope(s): Pu-239/Pu-238 Spike Code: Expiration Date: Vol:
 Prep Date: 02/04/10 Initials: gmo Pipet ID: 2521013 Balance ID: 50410272

Witness: DATE 2/4/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry	Aliquot	Pu	Det #
245371001-1	RE16-10-957	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	1	1	1.252		210	
245371002-1	RE16-10-979	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	2	2	1.250		211	
245393010-1	RE15-10-8053	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	3	3	1.251		212	235
245393011-1	RE15-10-8054	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	4	4	1.256		213	
245395001-1	RE15-10-7869	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	5	5	1.255		214	
245395002-1	RE15-10-7874	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	6	6	1.254		215	
245395003-1	RE15-10-7871	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	7	7	1.253		216	234
245395004-1	RE15-10-7872	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	8	8	1.254		217	
245395005-1	RE15-10-7870	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	9	9	1.258		218	
245395006-1	RE15-10-7873	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	10	10	1.250		219	235
245395007-1	RE15-10-7911	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	11	11	1.254		220	
245395008-1	RE15-10-7908	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	12	12	1.256		229	
245395009-1	RE15-10-7912	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	13	13	1.254		230	
245395010-1	RE15-10-7906	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	14	14	1.255		231	
245395011-1	RE15-10-7905	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	15	15	1.257		232	232
245395012-1	RE15-10-7907	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	16	16	1.252		233	
245395013-1	RE15-10-7913	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	17	17	1.258		234	
245395014-1	RE15-10-7909	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	18	18	1.257		235	234
245395015-1	RE15-10-7910	SAMPLE	.05 pCi/g		SOIL	LANL010	19-JAN-10	19	19	1.254		236	230
1202023807-1	MB for batch 944994	MB	.05 pCi/g		SOIL	QC ACCOUNT		20	20	1		237	
1202023808-1	RE16-10-957(245371001DUP)	DUP	.05 pCi/g		SOIL	QC ACCOUNT	15-JAN-10	21	21	1.251		238	
1202023809-1	LCS for batch 944994	LCS	.05 pCi/g		SOIL	QC ACCOUNT		22	22	0.106		239	

* SEM 0244-B exp 04/10/20 0.106g

Solid Sample Dissolution by LEACH or DIGESTION
 Circle One

Choose SOP Used: GL-RAD-A-011 GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: DATE 2/4/10

Blank Correction Report

Batch ID 944994

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202023808	DUP	Plutonium-238	1.25 g	-0.0124	0.00583	0.0205	-0.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	-0.00124	0.00481	0.0235	.001168	pCi/g	YES
1202023809	LCS	Plutonium-238	0.106 g	6.75	0.546	0.292	-0.06867925	pCi/g	NO
		Plutonium-239/240	0.106 g	38.3	2.53	0.334	.013773585	pCi/g	NO
1202023807	MB	Plutonium-238	1.00 g	-0.00728	0.00357	0.0241	-.00728	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00146	0.00146	0.0275	.00146	pCi/g	YES
245371001	RE16-10-957	Plutonium-238	1.25 g	0.00338	0.00253	0.0186	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00451	0.00277	0.0213	.001168	pCi/g	YES
245371002	RE16-10-979	Plutonium-238	1.25 g	0.00	0.00388	0.0185	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	-0.00896	0.00419	0.0212	.001168	pCi/g	YES
245393010	RE15-10-8053	Plutonium-238	1.25 g	0.00	0.00185	0.0216	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0274	0.00642	0.0247	.001168	pCi/g	NO
245393011	RE15-10-8054	Plutonium-238	1.26 g	0.0172	0.00468	0.0203	-.00577778	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00369	0.00214	0.0232	.001158730	pCi/g	YES
245395001	RE15-10-7869	Plutonium-238	1.26 g	0.00711	0.00293	0.0196	-.00577778	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0201	0.00499	0.0224	.001158730	pCi/g	NO
245395002	RE15-10-7874	Plutonium-238	1.25 g	0.0106	0.00359	0.0195	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0106	0.00358	0.0223	.001168	pCi/g	NO
245395003	RE15-10-7871	Plutonium-238	1.25 g	0.00266	0.00189	0.022	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0173	0.00488	0.0252	.001168	pCi/g	NO
245395004	RE15-10-7872	Plutonium-238	1.25 g	0.0152	0.00427	0.0193	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00117	0.00202	0.022	.001168	pCi/g	YES
245395005	RE15-10-7870	Plutonium-238	1.26 g	0.0078	0.00461	0.0184	-.00577778	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0111	0.00357	0.0211	.001158730	pCi/g	NO
245395006	RE15-10-7873	Plutonium-238	1.25 g	0.00142	0.00142	0.0234	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0156	0.00518	0.0268	.001168	pCi/g	NO
245395007	RE15-10-7911	Plutonium-238	1.25 g	0.00603	0.00321	0.0199	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.268	0.0225	0.0228	.001168	pCi/g	NO
245395008	RE15-10-7908	Plutonium-238	1.26 g	0.0133	0.00443	0.020	-.00577778	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0097	0.00346	0.0229	.001158730	pCi/g	NO
245395009	RE15-10-7912	Plutonium-238	1.25 g	0.00733	0.00302	0.0202	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.022	0.00558	0.0231	.001168	pCi/g	NO
245395010	RE15-10-7906	Plutonium-238	1.26 g	0.0167	0.00468	0.0184	-.00577778	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00781	0.00372	0.0211	.001158730	pCi/g	NO
245395011	RE15-10-7905	Plutonium-238	1.26 g	0.00	0.0013	0.0215	-.00577778	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0195	0.00576	0.0246	.001158730	pCi/g	NO
245395012	RE15-10-7907	Plutonium-238	1.25 g	0.0072	0.00324	0.0238	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0921	0.0125	0.0272	.001168	pCi/g	NO
245395013	RE15-10-7913	Plutonium-238	1.26 g	0.0141	0.00431	0.0212	-.00577778	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
245395013	RE15-10-7913	Plutonium-239/240	1.26 g	0.00128	0.00287	0.0242	.001158730	pCi/g	YES
245395014	RE15-10-7909	Plutonium-238	1.26 g	0.00258	0.00183	0.0213	-.00577778	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0426	0.00818	0.0244	.001158730	pCi/g	NO
245395015	RE15-10-7910	Plutonium-238	1.25 g	-0.00134	0.00232	0.0221	-.005824	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0241	0.00612	0.0253	.001168	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

```
LIB FILE : ENV_ALPHA_PU
BKG FILE : B210.CNF:76
BKG DATE : 31-JAN-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W210.CNF:29
CAL DATE : 29-JAN-2010
```

CHAMBER : 210
DETECTOR S/N : 79189
AVERAGE %EFFICIENCY : 38.5227
COUNT DATE : 5-FEB-2010 18:17:16
ELAPSED LIVE TIME(SEC) : 60000.00

BATCH NUMBER	: 944994
SAMPLE ID	: S0245371001_PU
SAMPLE QTY	: 1.252 G
SAMPLE DATE	: 15-JAN-2010 00:00:00
ANALYST	: JXD2
% YIELD	: 83.003

LCS/LCSD
ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 pCi/G

MS/MSD
ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 pCi/G

TRACER	:	1375-A
ID	:	PU242
NUCLIDE	:	3.3808E+00 dpm
NOMINAL	:	2.8061E+00 dpm
RESULTS	:	

NUCLIDE ACTIVITY SUMMARY

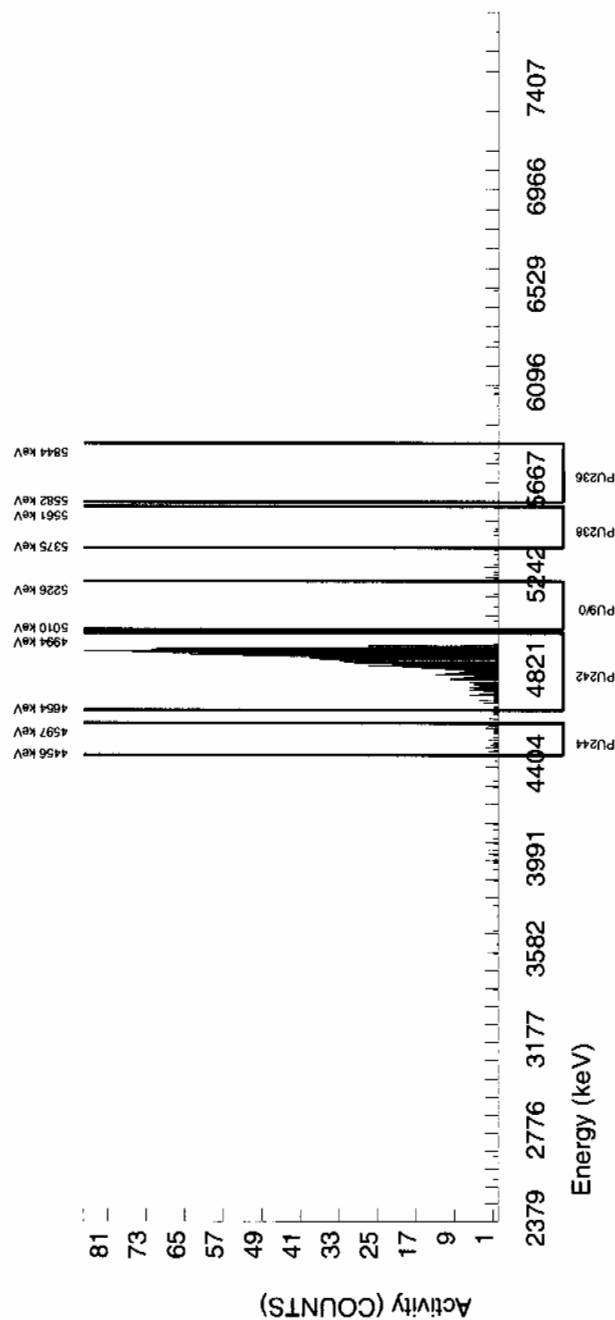
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLG pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5792.699	29.630	2.000	1.000	1.000	2.1286	100.0000	1.14E-03	1.98E-03	5.57E-03	1.42E-02	1.98E-03
PU-238	5499.000	5432.913	0.000	4.000	3.000	1.000	2.9680	99.900000	3.38E-03	2.53E-03	7.78E-03	1.86E-02	2.52E-03
PU-90	5155.000	5115.478	0.000	5.000	4.000	1.000	3.4797	99.900000	4.51E-03	2.77E-03	9.12E-03	2.13E-02	2.76E-03
PU242	4890.000	4883.939	42.265	1081.000	1081.000	0.000	0.0000	100.0000	1.22E+00	7.11E-02	0.00E+00	3.05E-03	3.70E-02
PU-244	4589.000	4536.721	7.253	24.000	24.000	0.000	5.2050	99.900000	2.70E-02	5.68E-03	1.36E-02	3.03E-02	5.52E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

<p>BATCH NUMBER : 944994 SAMPLE ID : S0245395001_PU SAMPLE QTY : 1.255 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 78.953</p>	<p>CHAMBER : 214 DETECTOR S/N : 79193 AVERAGE %EFFICIENCY : 38.4008 COUNT DATE : 5-FEB-2010 18:17:27 ELAPSED LIVE TIME(SEC) : 60000.00</p>	<p>LIB FILE : ENV_ALPHA_PU BKG FILE : B214.CNF:76 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W214.CNF:28 CAL DATE : 29-JAN-2010</p>
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<p>TRACER ID : 1375-A NUCLIDE : PU242 NOMINAL : 3.3808E+00 dpm RESULTS : 2.6692E+00 dpm</p>	<p>MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G</p>	<p>LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G</p>
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NUCLIDE ACTIVITY SUMMARY

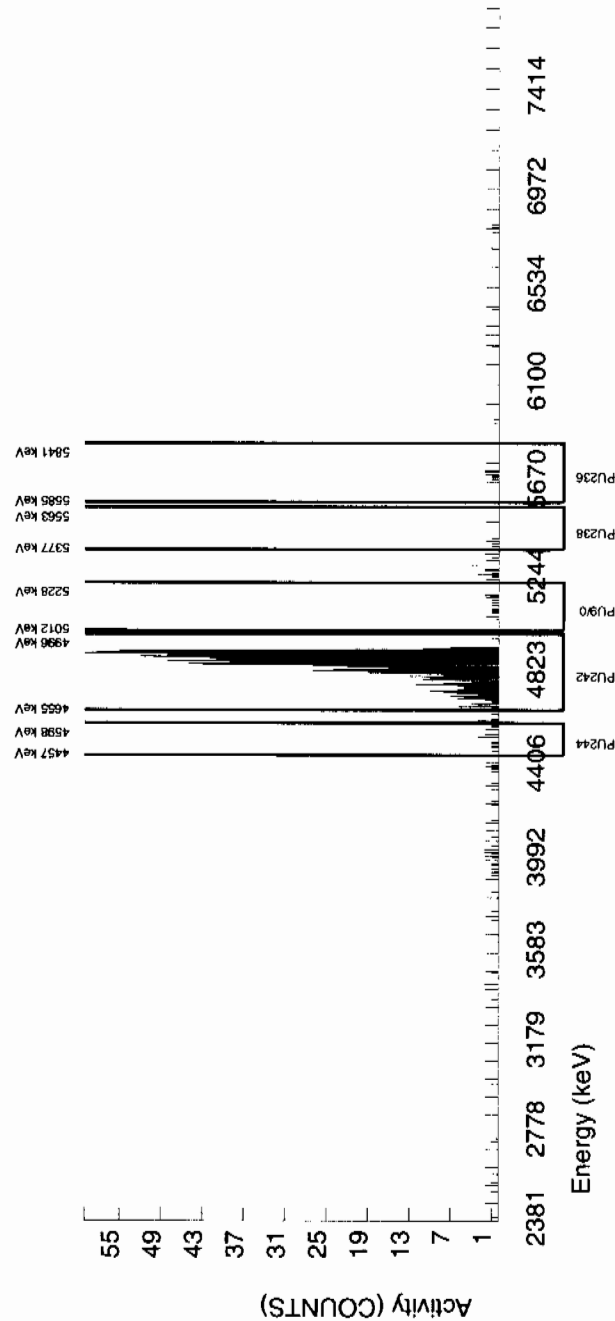
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5701.080	22.032	11.000	11.000	0.000	2.1286	100.0000	1.32E-02	4.03E-03	5.86E-03	1.49E-02	3.97E-03
PU-238	5499.000	5405.234	4.930	6.000	6.000	0.000	2.9680	99.900000	7.11E-03	2.93E-03	8.18E-03	1.96E-02	2.90E-03
PU-9/0	5155.000	5138.585	9.757	17.000	17.000	0.000	3.4797	99.900000	2.01E-02	4.99E-03	9.59E-03	2.24E-02	4.89E-03
PU242	4890.000	4866.562	66.590	1026.000	1025.000	1.000	1.0000	100.0000	1.21E+00	7.20E-02	2.75E-03	8.72E-03	3.79E-02
PU-244	4589.000	4530.666	91.207	15.000	15.000	0.000	5.2050	99.900000	1.78E-02	4.68E-03	1.43E-02	3.19E-02	4.59E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



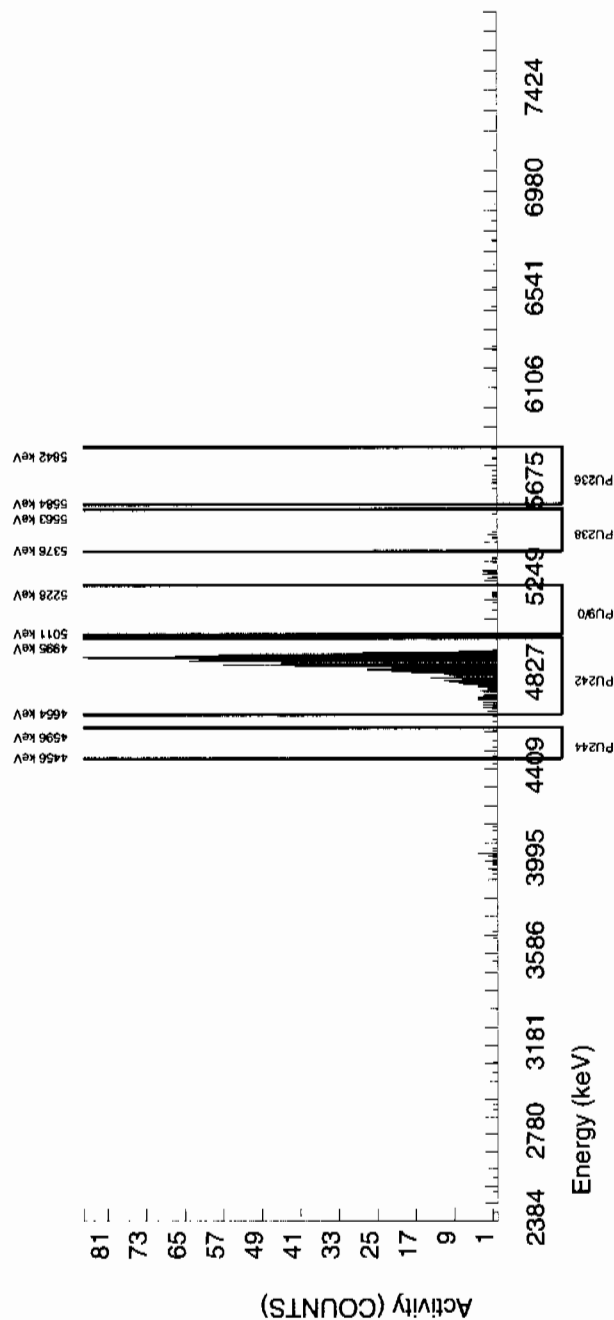
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994				CHAMBER : 215				LIB FILE : ENV_ALPHA_PU					
SAMPLE ID : S0245395002_PU				DETECTOR S/N : 79468				BKG FILE : B215.CNF:76					
SAMPLE QTY : 1.254 G				AVERAGE %EFFICIENCY : 37.5541				BKG DATE : 31-JAN-2010					
SAMPLE DATE : 19-JAN-2010 00:00:00				COUNT DATE : 5-FEB-2010 18:17:29				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : JXD2				ELAPSED LIVE TIME(SEC) : 60000.00				EFF FILE : W215.CNF:33					
% YIELD : 81.048								CAL DATE : 29-JAN-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1375-A				ID : 0244-B				ID : 0244-B					
NUCLIDE : PU242				NUCLIDE : PU-9/0				NUCLIDE : PU-9/0					
NOMINAL : 3.3808E+00 dpm				NOMINAL : 4.1778E+01 pCi/G				NOMINAL : 4.1778E+01 pCi/G					
RESULTS : 2.7400E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5730.987	7.236	10.000	10.000	0.000	2.1286	100.0000	1.19E-02	3.82E-03	5.84E-03	1.49E-02	3.78E-03
PU-238	5499.000	5443.699	4.927	9.000	9.000	0.000	2.9680	99.90000	1.06E-02	3.59E-03	8.16E-03	1.95E-02	3.55E-03
PU-9/0	5155.000	5172.819	4.927	9.000	9.000	0.000	3.4797	99.90000	1.06E-02	3.58E-03	9.56E-03	2.23E-02	3.54E-03
PU242	4890.000	4884.681	51.269	1029.000	1029.000	0.000	0.0000	100.0000	1.21E+00	7.19E-02	0.00E+00	3.20E-03	3.79E-02
PU-244	4589.000	4531.056	7.236	8.000	8.000	0.000	5.2050	99.90000	9.45E-03	3.38E-03	1.43E-02	3.18E-02	3.34E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994 SAMPLE ID : S0245395003_PU SAMPLE QTY : 1.253 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 70.419	CHAMBER : 234 DETECTOR S/N : 79427 AVERAGE %EFFICIENCY : 38.3923 COUNT DATE : 8-FEB-2010 20:42:18 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B234.CNF;78 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W234.CNF;28 CAL DATE : 29-JAN-2010
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TRACER ID : 1375-A NUCLIDE : PU242 NOMINAL : 3.3808E+00 dpm RESULTS : 2.3807E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

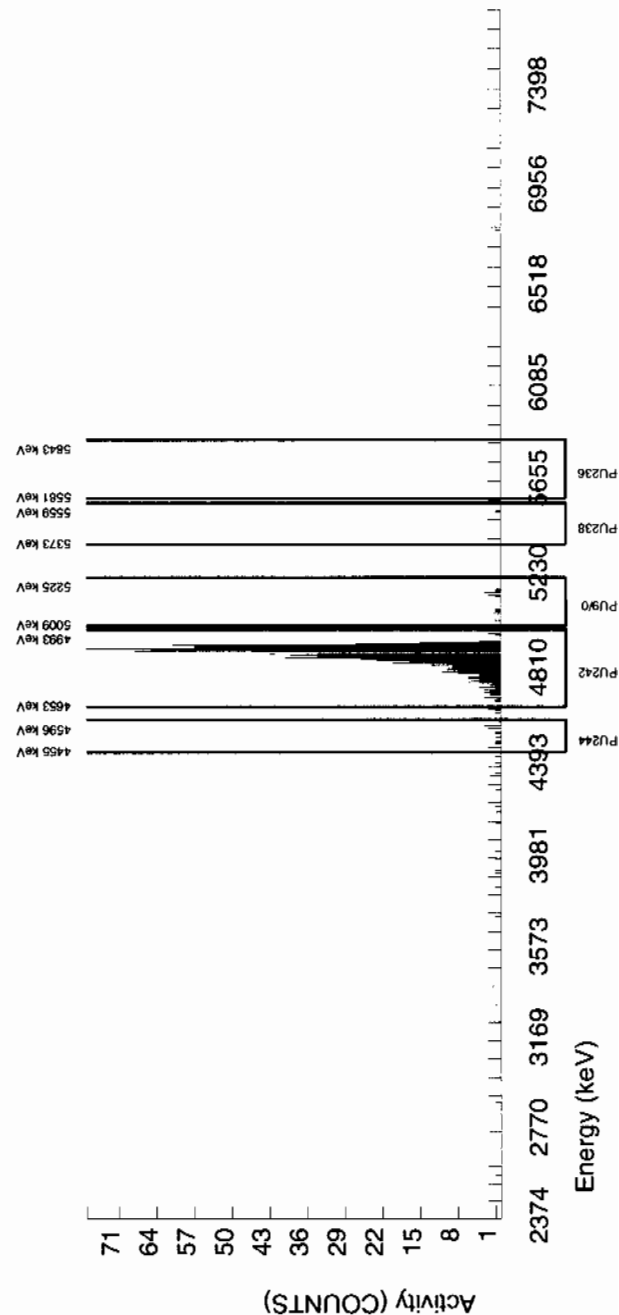
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5711.502	0.000	0.000	-1.000	1.000	2.1286	100.0000	-1.35E-03	1.91E-03	6.58E-03	1.68E-02	1.91E-03
PU-238	5499.000	5527.480	14.742	2.000	2.000	0.000	2.9680	99.900000	2.66E-03	1.89E-03	9.19E-03	2.20E-02	1.88E-03
PU-9/0	5155.000	5133.801	15.879	13.000	13.000	0.000	3.4797	99.900000	1.73E-02	4.88E-03	1.08E-02	2.52E-02	4.80E-03
PU242	4890.000	4882.796	57.772	915.000	914.000	1.000	1.0000	100.0000	1.22E+00	7.45E-02	3.09E-03	9.79E-03	4.02E-02
PU-244	4589.000	4538.537	4.914	14.000	14.000	0.000	5.2050	99.900000	1.86E-02	5.07E-03	1.61E-02	3.58E-02	4.98E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



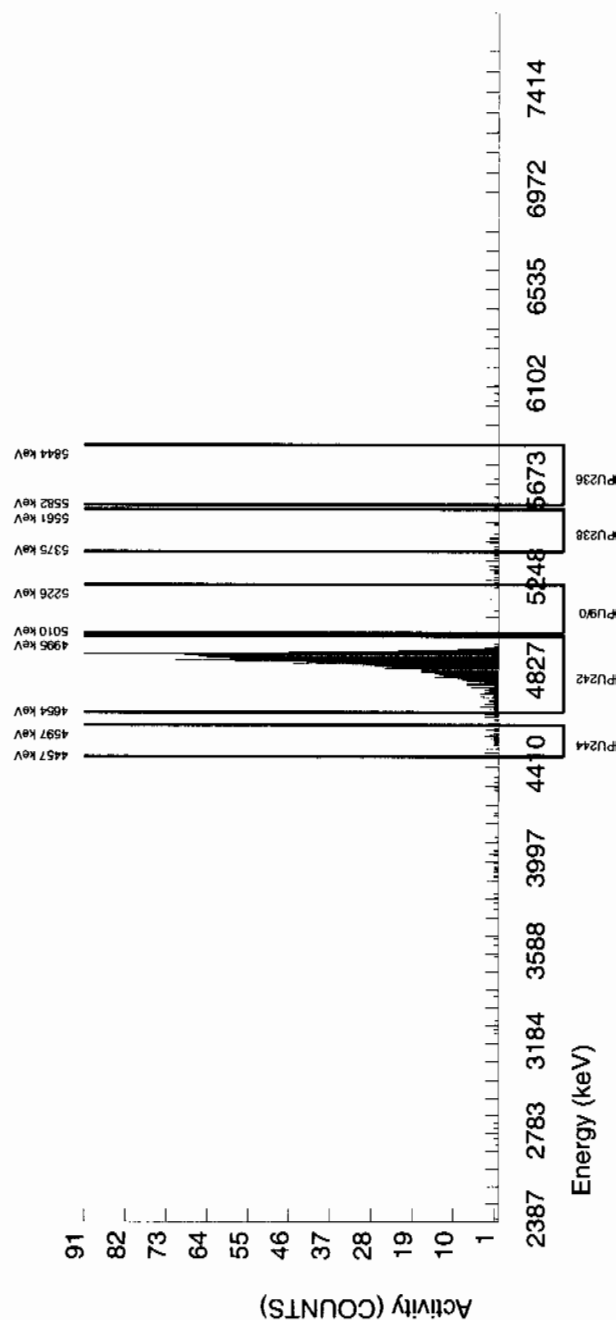
ALPHA SPECTROSCOPY REPORT

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER :	944994
SAMPLE ID :	S02453
SAMPLE QTY :	129
SAMPLE DATE :	19-JAN-2019
ANALYST :	JXD2
% YIELD :	85.767

ATCH NUMBER : 944994
SAMPLE ID : S0245395005_PU
SAMPLE QTY : 1.258 G
SAMPLE DATE : 19-JAN-2010 00:00:00
ANALYST : JXD2
% YIELD : 85.767

CHAMBER	:	218
DETECTOR S/N	:	7941
AVERAGE %EFFICIENCY	:	37.5
COUNT DATE	:	5-FE
RELAPSED LIVE TIME(SEC)	:	600

```
CHAMBER : 218
DETECTOR S/N : 79411
AVERAGE %EFFICIENCY : 37.5225
COUNT DATE : 5-FEB-2010 18:17:37
ELAPSED LIVE TIME(SEC) : 60000.00
```

LIB FILE	:	ENV_ALPHA_PU
BKG FILE	:	B218.CNF:76
BKG DATE	:	31-JAN-2010
BKG LIVE TIME(SEC)	:	60000.00
EFF FILE	:	W218.CNF:28
CAL DATE	:	29-JAN-2010

TRACER	:	1375-A
ID	:	PU242
NUCLIDE	:	3.3808E+00 dpm
NOMINAL	:	2.8996E+00 dpm
RESULTS	:	

MS/MSD ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E

LCS/LCSD ID	NUCLIDE	NOMINAL
1	137Cs	1000
2	137Cs	1000
3	137Cs	1000
4	137Cs	1000
5	137Cs	1000
6	137Cs	1000
7	137Cs	1000
8	137Cs	1000
9	137Cs	1000
10	137Cs	1000
11	137Cs	1000
12	137Cs	1000
13	137Cs	1000
14	137Cs	1000
15	137Cs	1000
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17	137Cs	1000
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93	137Cs	1000
94	137Cs	1000
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97	137Cs	1000
98	137Cs	1000
99	137Cs	1000
100	137Cs	1000

NUCLIDE ACTIVITY SUMMARY

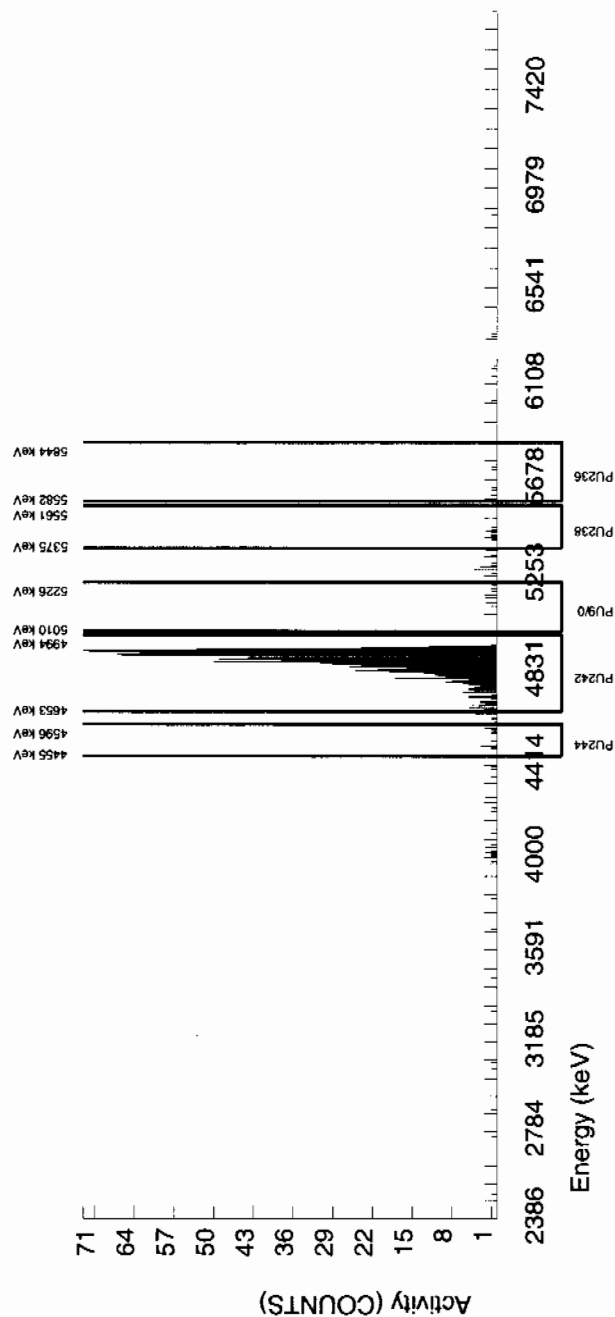
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
PU-236	5749.000	5691.695	133.486	8.000	8.000	0.000	2.1286	100.0000	9.01E-03	3.22E-03	5.51E-03	1.40E-02	3.19E-03
PU-238	5499.000	5436.307	34.607	12.000	7.000	5.000	2.9680	99.900000	7.80E-03	4.61E-03	7.69E-03	1.84E-02	4.59E-03
PU-9/0	5155.000	5179.354	0.000	10.000	10.000	0.000	3.4797	99.900000	1.11E-02	3.57E-03	9.02E-03	2.11E-02	3.52E-03
PU242	4890.000	4880.357	60.246	1089.000	1088.000	1.000	1.0000	100.0000	1.21E+00	7.06E-02	2.59E-03	8.19E-03	3.67E-02
PU-244	4589.000	4531.356	77.867	12.000	11.000	1.000	5.2050	99.900000	1.23E-02	4.06E-03	1.35E-02	3.00E-02	4.02E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994 SAMPLE ID : S0245395006_PU SAMPLE QTY : 1.250 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 67.507	CHAMBER : 235 DETECTOR S/N : 79428 AVERAGE %EFFICIENCY : 37.6823 COUNT DATE : 8-FEB-2010 20:42:20 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B235.CNF;78 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W235.CNF;28 CAL DATE : 29-JAN-2010
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TRACER ID : 1375-A NUCLIDE : PU242 NOMINAL : 3.3808E+00 dpm RESULTS : 2.2822E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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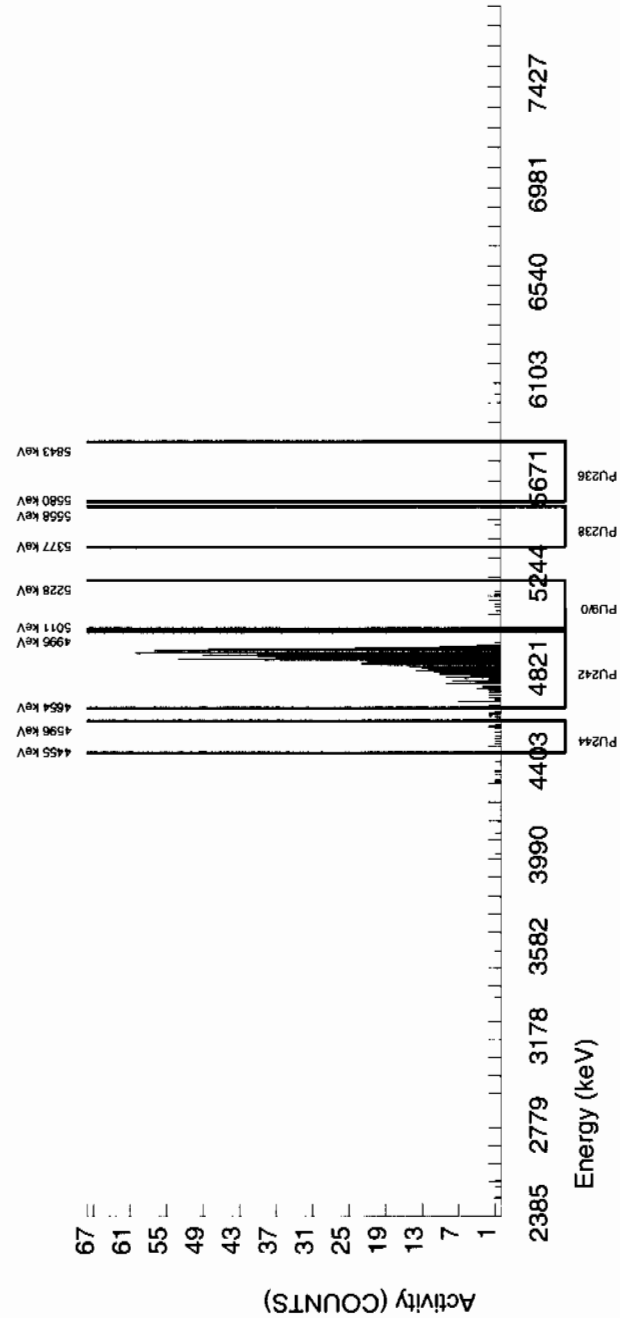
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5711.262	0.000	0.000	-1.000	1.000	2.1286	100.0000	-1.44E-03	2.03E-03	7.02E-03	1.79E-02	2.03E-03
PU-238	5499.000	5483.478	4.897	1.000	1.000	0.000	2.9680	99.900000	1.42E-03	1.42E-03	9.79E-03	2.34E-02	1.42E-03
PU-9/0	5155.000	5138.120	26.935	12.000	11.000	1.000	3.4797	99.900000	1.56E-02	5.18E-03	1.15E-02	2.68E-02	5.11E-03
PU242	4890.000	4875.979	53.256	863.000	860.000	3.000	1.7321	100.0000	1.22E+00	7.81E-02	5.71E-03	1.53E-02	4.17E-02
PU-244	4589.000	4531.768	90.601	12.000	12.000	0.000	5.2050	99.900000	1.70E-02	5.00E-03	1.72E-02	3.82E-02	4.91E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).

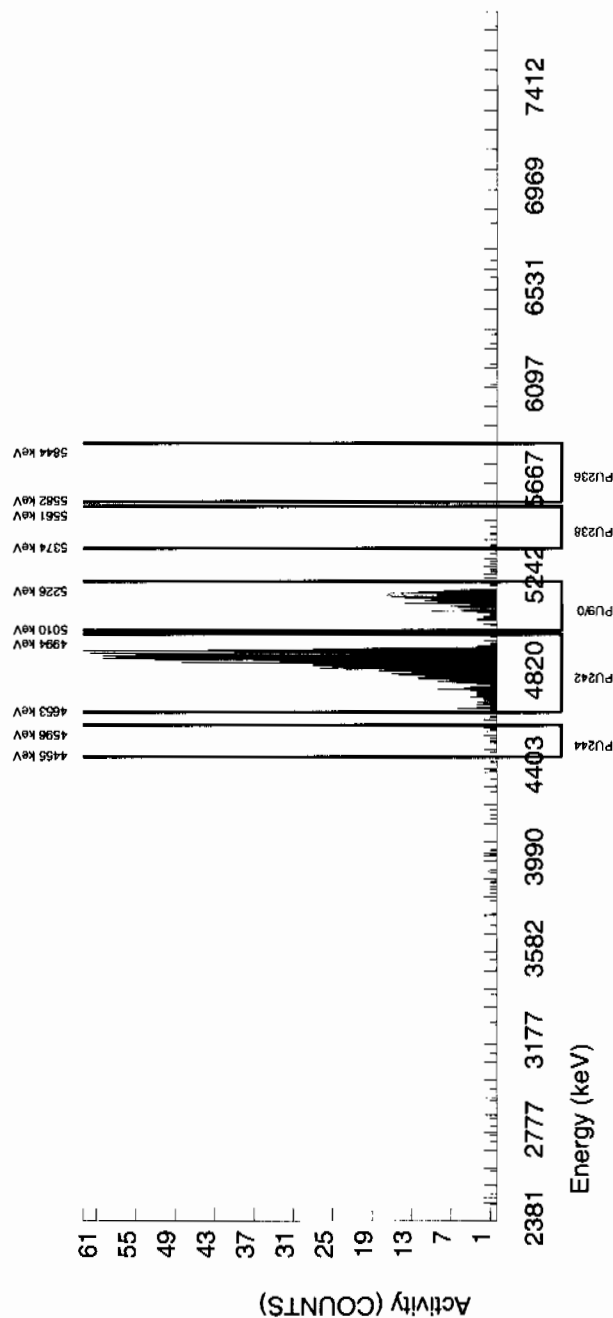


BATCH NUMBER : 944994				CHAMBER : 220				LIB FILE : ENV_ALPHA_PU					
SAMPLE ID : S0245395007_PU				DETECTOR S/N : 79413				BKG FILE : B220.CNF;76					
SAMPLE QTY : 1.254 G				AVERAGE %EFFICIENCY : 37.8868				BKG DATE : 31-JAN-2010					
SAMPLE DATE : 19-JAN-2010 00:00:00				COUNT DATE : 5-FEB-2010 18:17:43				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : JXD2				ELAPSED LIVE TIME(SEC) : 60000.00				EFF FILE : W220.CNF;30					
% YIELD : 78.697								CAL DATE : 29-JAN-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1375-A				ID : 0244-B				ID : 0244-B					
NUCLIDE : PU242				NUCLIDE : PU-9/0				NUCLIDE : PU-9/0					
NOMINAL : 3.3808E+00 dpm				NOMINAL : 4.1778E+01 pCi/G				NOMINAL : 4.1778E+01 pCi/G					
RESULTS : 2.6606E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5640.600	0.000	3.000	2.000	1.000	2.1286	100.0000	2.44E-03	2.44E-03	5.97E-03	1.52E-02	2.44E-03
PU-238	5499.000	5421.221	0.000	6.000	5.000	1.000	2.9680	99.900000	6.03E-03	3.21E-03	8.33E-03	1.99E-02	3.19E-03
PU-9/0	5155.000	5147.519	53.562	222.000	222.000	0.000	3.4797	99.900000	2.68E-01	2.25E-02	9.76E-03	2.28E-02	1.80E-02
PU242	4890.000	4874.058	62.044	1008.000	1008.000	0.000	0.0000	100.0000	1.21E+00	7.23E-02	0.00E+00	3.26E-03	3.83E-02
PU-244	4589.000	4554.896	41.843	12.000	12.000	0.000	5.2050	99.900000	1.45E-02	4.24E-03	1.46E-02	3.25E-02	4.18E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

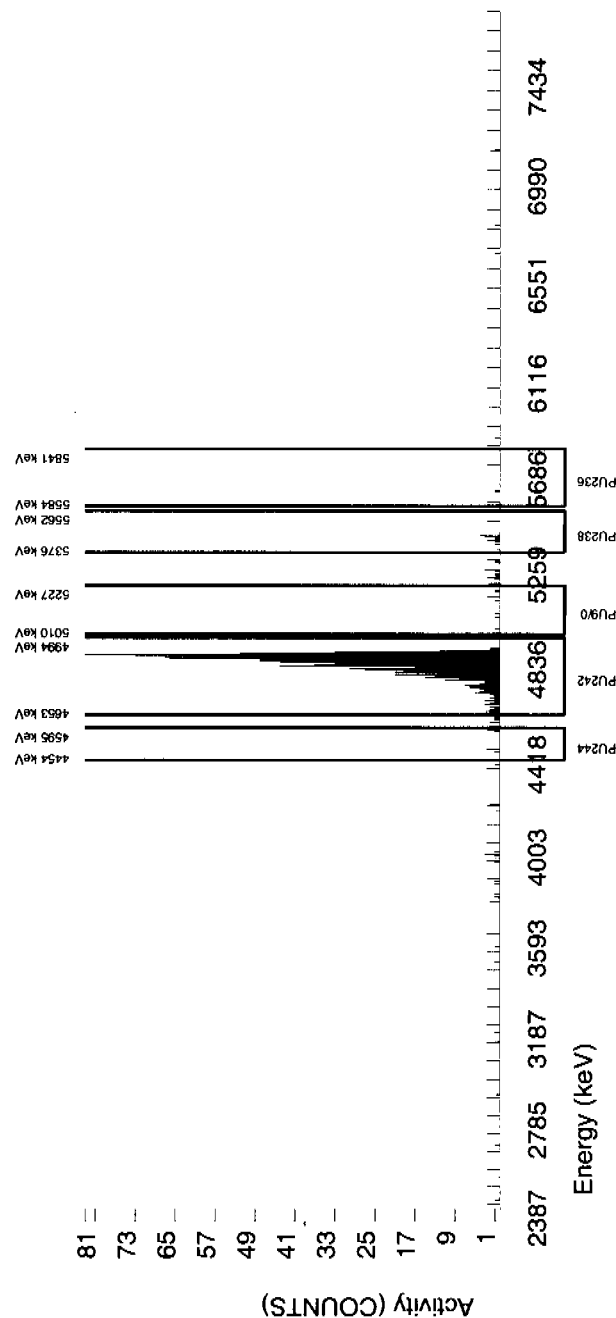
BATCH NUMBER : 944994 SAMPLE ID : S0245395008_PU SAMPLE QTY : 1.256 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 79.484		CHAMBER : 229 DETECTOR S/N : 79422 AVERAGE %EFFICIENCY : 37.2509 COUNT DATE : 5-FEB-2010 18:17:46 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B229.CNF:76 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W229.CNF:28 CAL DATE : 29-JAN-2010
TRACER ID : 1375-A NUCLIDE : PU242 NOMINAL : 3.3808E+00 dpm RESULTS : 2.6872E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
PU-236	5749.000	5649.376	93.993
PU-238	5499.000	5441.902	9.476
PU-9/0	5155.000	5154.790	0.000
PU242	4890.000	4881.419	57.310
PU-244	4589.000	4511.584	0.000
	GROSS AREA	NET AREA	BKG AREA
	4.000	3.000	1.000
	12.000	11.000	1.000
	8.000	8.000	0.000
	1002.000	1001.000	1.000
	3.000	3.000	0.000
	%ABUN	BKG Sg	ACTIVITY pCi/G
	100.0000	2.1286	3.68E-03
	99.90000	2.9680	1.33E-02
	99.90000	3.4797	9.70E-03
	100.0000	1.0000	1.21E+00
	99.90000	5.2050	3.64E-03
	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G
	2.75E-03	6.00E-03	1.53E-02
	4.43E-03	8.37E-03	2.00E-02
	3.46E-03	9.82E-03	2.29E-02
	7.24E-02	2.82E-03	8.92E-03
	2.11E-03	1.47E-02	3.26E-02
			UNC pCi/G
			2.74E-03
			4.37E-03
			3.43E-03
			3.84E-02
			2.10E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994 SAMPLE ID : S0245395009_PU SAMPLE QTY : 1.254 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 78.458	CHAMBER : 230 DETECTOR S/N : 79423 AVERAGE %EFFICIENCY : 37.5123 COUNT DATE : 5-FEB-2010 18:17:48 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B230.CNF.76 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W230.CNF.28 CAL DATE : 29-JAN-2010
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TRACER ID : 1375-A NUCLIDE : PU242 NOMINAL : 3.3808E+00 dpm RESULTS : 2.6525E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

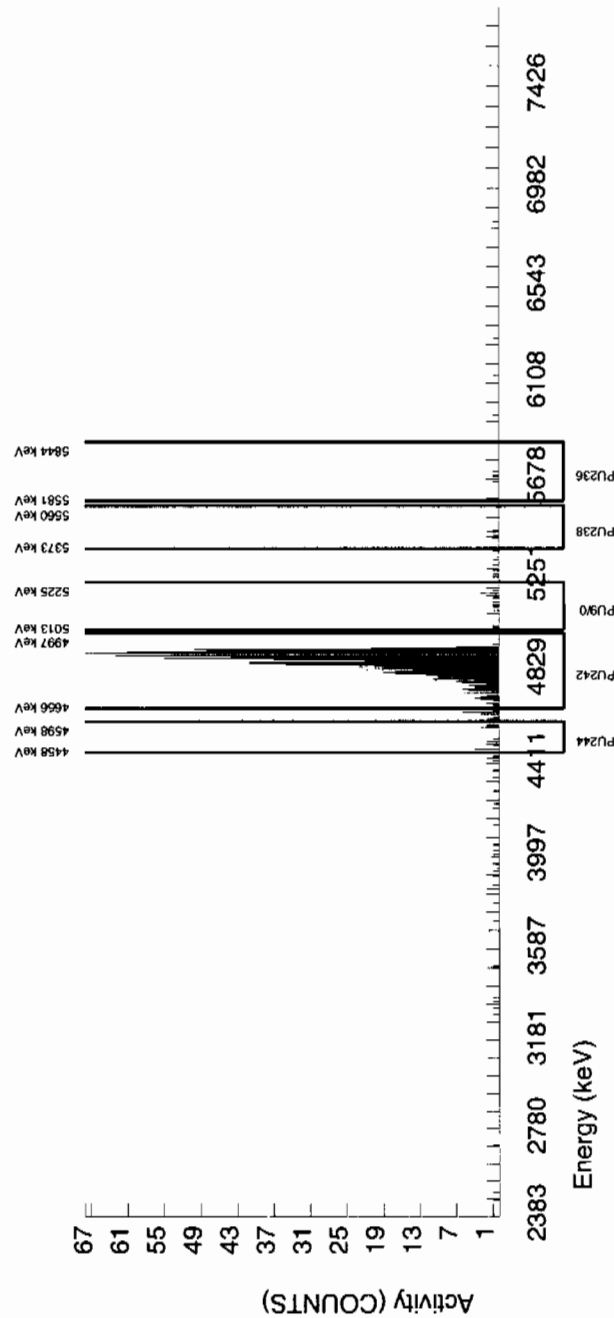
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5692.777	44.452	5.000	5.000	0.000	2.1286	100.0000	6.18E-03	2.78E-03	6.04E-03	1.54E-02	2.76E-03
PU-238	5499.000	5444.459	9.878	6.000	6.000	0.000	2.9680	99.900000	7.33E-03	3.02E-03	8.44E-03	2.02E-02	2.99E-03
PU-9/0	5155.000	5148.925	33.247	19.000	18.000	1.000	3.4797	99.900000	2.20E-02	5.58E-03	9.89E-03	2.31E-02	5.46E-03
PU242	4890.000	4871.548	67.253	995.000	995.000	0.000	0.0000	100.0000	1.21E+00	7.26E-02	0.00E+00	3.31E-03	3.85E-02
PU-244	4589.000	4527.528	93.844	17.000	17.000	0.000	5.2050	99.900000	2.08E-02	5.15E-03	1.48E-02	3.29E-02	5.04E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



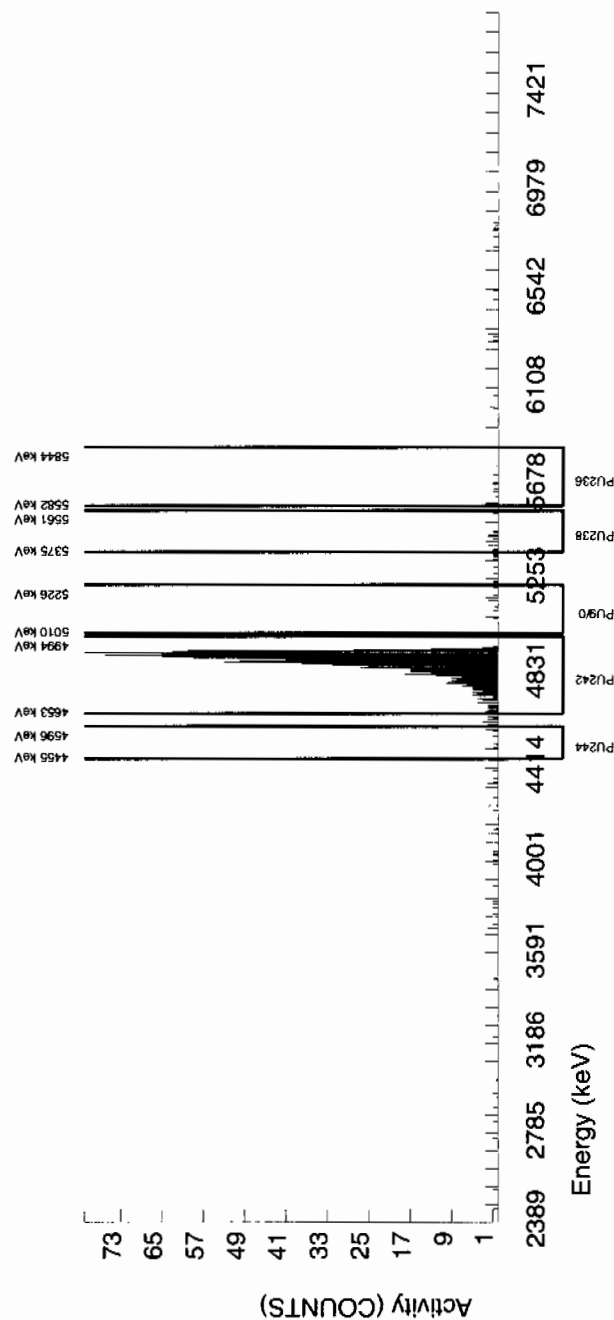
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LIB FILE : ENV_ALPHA_PU
BKG FILE : B231.CNF;76
BKG DATE : 31-JAN-2010
TIME(SEC) : 60000.00
EFF FILE : W231.CNF;28
CAL DATE : 29-JAN-2010
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ID : 0244-B
NUCLIDE : PU-9/f0
NOMINAL : 4.1778E+01 pCi/G

NUCLIDE ACTIVITY SUMMARY

NOTES:

* Sg of PU242 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

<p>BATCH NUMBER : 944994 SAMPLE ID : S0245395011_PU SAMPLE QTY : 1.257 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 71.243</p>		<p>CHAMBER : 236 DETECTOR S/N : 79429 AVERAGE %EFFICIENCY : 38.6953 COUNT DATE : 8-FEB-2010 20:42:24 ELAPSED LIVE TIME(SEC) : 60000.00</p>		<p>LIB FILE : ENV_ALPHA_PU BKG FILE : B236.CNF;78 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W236.CNF;28 CAL DATE : 29-JAN-2010</p>	
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<p>TRACER ID : 1375-A NUCLIDE : PU242 NOMINAL : 3.3808E+00 dpm RESULTS : 2.4086E+00 dpm</p>		<p>MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G</p>		<p>LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G</p>	
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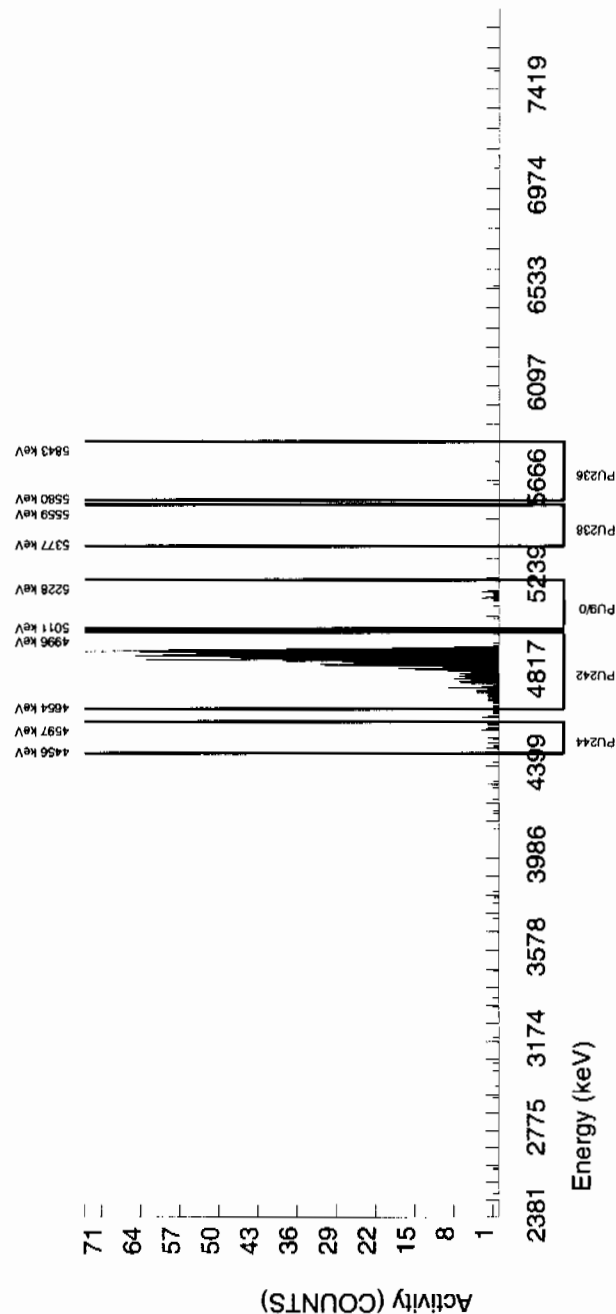
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5654.944	4.900	1.000	1.000	0.000	2.1286	100.0000	1.32E-03	1.32E-03	6.44E-03	1.64E-02	1.32E-03
PU-238	5499.000	5467.705	0.000	0.000	0.000	0.000	2.9680	99.900000	0.00E+00	1.30E-03	8.98E-03	2.15E-02	1.30E-03
PU-9/0	5155.000	5156.257	34.302	17.000	15.000	2.000	3.4797	99.900000	1.95E-02	5.76E-03	1.05E-02	2.46E-02	5.67E-03
PU242	4890.000	4876.933	49.704	932.000	932.000	0.000	0.0000	100.0000	1.21E+00	7.38E-02	0.00E+00	3.52E-03	3.97E-02
PU-244	4589.000	4544.794	105.356	17.000	16.000	1.000	5.2050	99.900000	2.08E-02	5.62E-03	1.58E-02	3.50E-02	5.52E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994	CHAMBER : 233	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0245395012_PU	DETECTOR S/N : 79426	BKG FILE : B233.CNF:76
SAMPLE QTY : 1.252 G	AVERAGE %EFFICIENCY : 37.7051	BKG DATE : 31-JAN-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 5-FEB-2010 18:17:55	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W233.CNF:28
% YIELD : 66.368		CAL DATE : 29-JAN-2010

TRACER ID : 1375-A	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.3808E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 2.2437E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

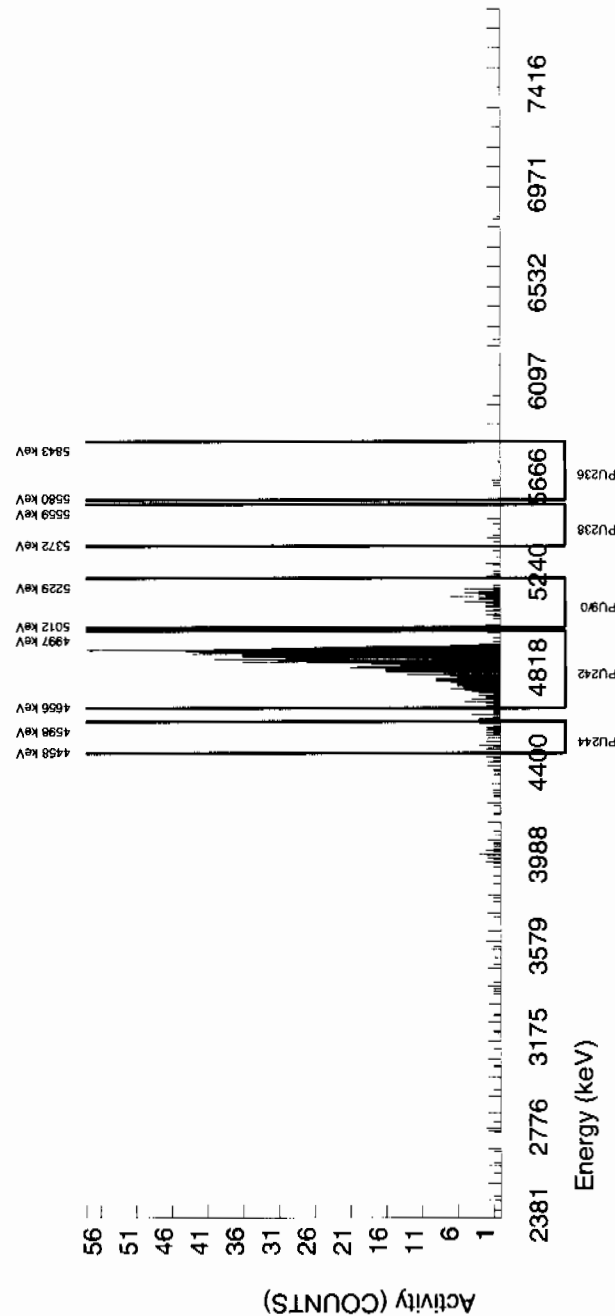
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5667.650	44.183	3.000	2.000	1.000	2.1286	100.0000	2.91E-03	2.91E-03	7.12E-03	1.81E-02	2.91E-03
PU-238	5499.000	5427.677	98.183	5.000	5.000	0.000	2.9680	99.900000	7.20E-03	3.24E-03	9.94E-03	2.38E-02	3.22E-03
PU-9/0	5155.000	5131.182	58.296	64.000	64.000	0.000	3.4797	99.900000	9.21E-02	1.25E-02	1.17E-02	2.72E-02	1.15E-02
PU242	4890.000	4865.125	63.832	846.000	846.000	0.000	0.0000	100.0000	1.22E+00	7.63E-02	0.00E+00	3.90E-03	4.18E-02
PU-244	4589.000	4540.296	0.000	29.000	29.000	0.000	5.2050	99.900000	4.17E-02	8.05E-03	1.74E-02	3.88E-02	7.75E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994	CHAMBER : 234	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0245395013_PU	DETECTOR S/N : 79427	BKG FILE : B234.CNF;76
SAMPLE QTY : 1.258 G	AVERAGE %EFFICIENCY : 38.3923	BKG DATE : 31-JAN-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 5-FEB-2010 18:17:57	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W234.CNF;28
% YIELD : 72.884		CAL DATE : 29-JAN-2010

TRACER ID : 1375-A	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.3808E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 2.4640E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

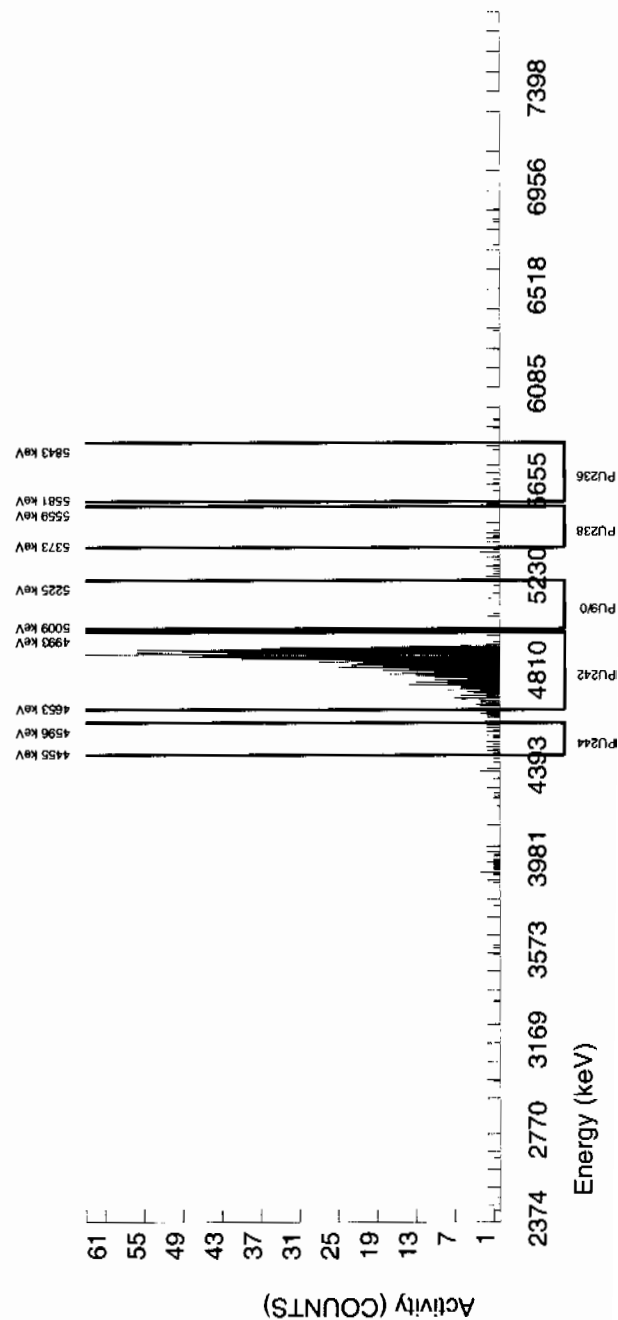
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5706.157	4.914	6.000	6.000	0.000	2.1286	100.0000	7.77E-03	3.20E-03	6.34E-03	1.61E-02	3.17E-03
PU-238	5499.000	5455.927	0.000	11.000	11.000	0.000	2.9680	99.900000	1.41E-02	4.31E-03	8.84E-03	2.12E-02	4.25E-03
PU-9/0	5155.000	5154.764	122.854	3.000	1.000	2.000	3.4797	99.900000	1.28E-03	2.86E-03	1.04E-02	2.42E-02	2.86E-03
PU242	4890.000	4864.075	51.966	946.000	946.000	0.000	0.0000	100.0000	1.21E+00	7.35E-02	0.00E+00	3.47E-03	3.94E-02
PU-244	4589.000	4527.103	90.850	25.000	25.000	0.000	5.2050	99.900000	3.20E-02	6.61E-03	1.55E-02	3.45E-02	6.40E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994	CHAMBER : 239	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0245395014_PU	DETECTOR S/N : 79432	BKG FILE : B239.CNF;78
SAMPLE QTY : 1.257 G	AVERAGE %EFFICIENCY : 37.8194	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 20:42:26	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W239.CNF;28
% YIELD : 73.441		CAL DATE : 29-JAN-2010

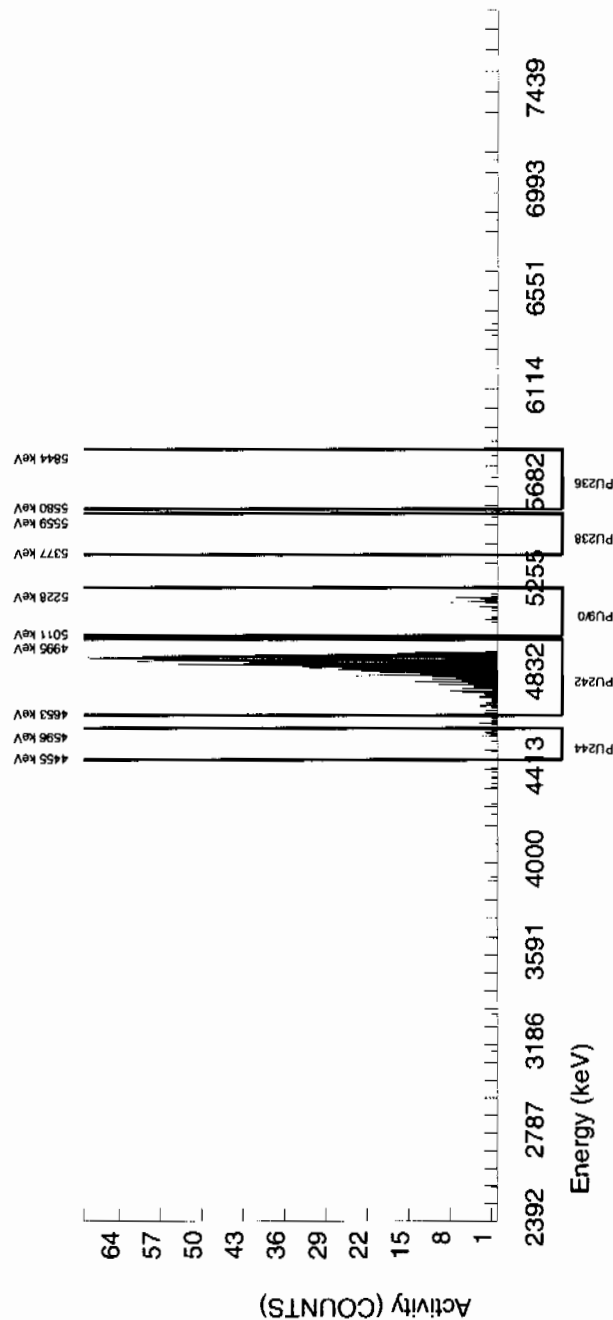
TRACER ID : 1375-A	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.3808E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 2.4829E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5773.542	93.248	2.000	1.000	1.000	2.1286	100.0000	1.31E-03	2.27E-03	6.39E-03	1.63E-02	2.27E-03
PU-238	5499.000	5462.382	0.000	2.000	2.000	0.000	2.9680	99.900000	2.58E-03	1.83E-03	8.92E-03	2.13E-02	1.83E-03
PU-9/0	5155.000	5164.272	25.357	35.000	33.000	2.000	3.4797	99.900000	4.26E-02	8.18E-03	1.05E-02	2.44E-02	7.86E-03
PU242	4890.000	4880.667	49.636	941.000	939.000	2.000	1.4142	100.0000	1.21E+00	7.57E-02	4.24E-03	1.20E-02	3.96E-02
PU-244	4589.000	4560.386	13.445	9.000	9.000	0.000	5.2050	99.900000	1.16E-02	3.92E-03	1.56E-02	3.48E-02	3.87E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	944994
SAMPLE ID	S0245395015_PU
SAMPLE QTY	1.254 G
SAMPLE DATE	19-JAN-2010 00:00
ANALYST	JXD2
% YIELD	72.821

CHAMBER : 240
DETECTOR S/N : 79433
AVERAGE %EFFICIENCY : 36.8412
COUNT DATE : 8-FEB-2010 20:42:28
LAPSED LIVE TIME(SEC) : 60000.00

LIB FILE	:	ENV_ALPHA_PU
BKG FILE	:	B240.CNF;78
BKG DATE	:	7-FEB-2010
BKG LIVE TIME(SEC)	:	60000.00
EFF FILE	:	W240.CNF;28
CAL DATE	:	29-JAN-2010

TRACER ID : 1375-A
NUCLIDE : PU242
NOMINAL : 3.3808E+00 dpm
RESULTS : 2.4619E+00 dpm

MS/MSD
ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 pCi/G

LCS/LCSD
ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 pCi/G

NUCLEIDE ACTIVITY SUMMARY

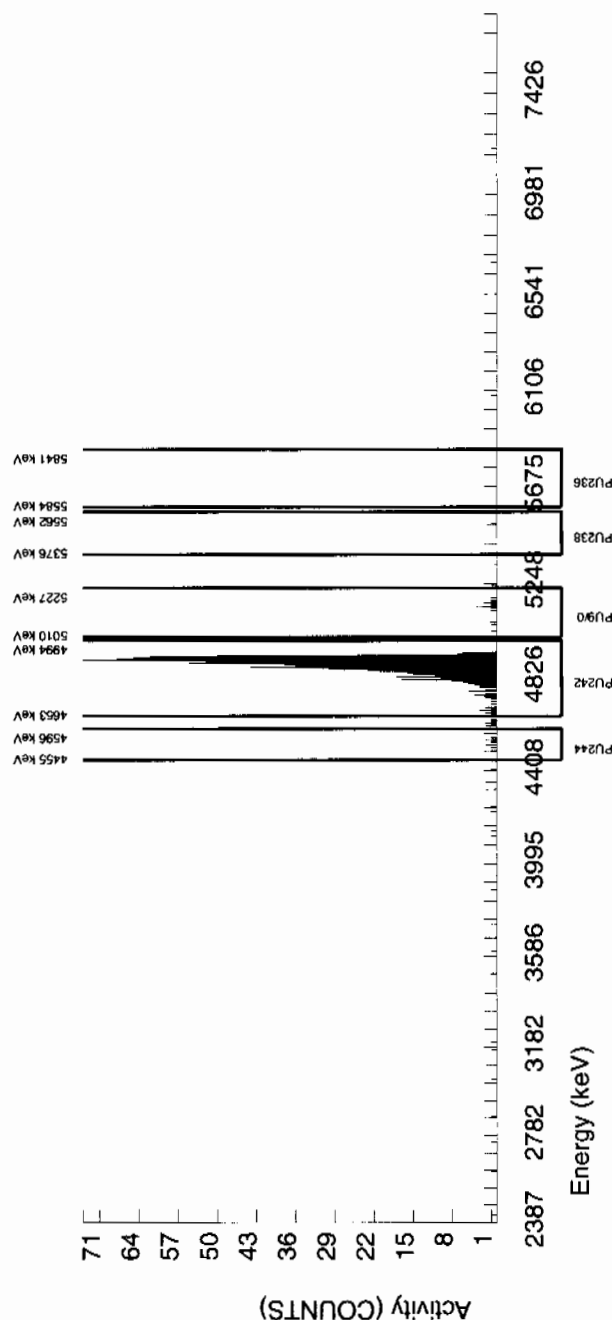
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5712.306	0.000	0.000	0.000	0.000	2.1286	100.0000	0.00E+00	1.36E-03	6.63E-03	1.69E-02	1.36E-03
PU-238	5499.000	5519.617	4.914	1.000	-1.000	2.000	2.9680	99.90000	-1.34E-03	2.32E-03	9.25E-03	2.21E-02	2.32E-03
PU-9/0	5155.000	5135.833	6.552	19.000	18.000	1.000	3.4797	99.90000	2.41E-02	6.12E-03	1.08E-02	2.53E-02	5.99E-03
PU242	4890.000	4884.220	54.453	908.000	907.000	1.000	1.0000	100.0000	1.21E+00	7.47E-02	3.11E-03	9.86E-03	4.04E-02
PU-244	4589.000	4527.579	29.483	12.000	11.000	1.000	5.2050	99.900000	1.47E-02	4.89E-03	1.62E-02	3.61E-02	4.83E-03

NOTES:

* Sq calculated via blank population.

Sg calculated via DialK P
(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994		CHAMBER : 237		LIB FILE : ENV_ALPHA_PU	
SAMPLE ID : S1202023807_PU		DETECTOR S/N : 79430		BKG FILE : B237.CNF:76	
SAMPLE QTY : 1.000 G		AVERAGE %EFFICIENCY : 39.3990		BKG DATE : 31-JAN-2010	
SAMPLE DATE : 4-FEB-2010 00:00:00.		COUNT DATE : 5-FEB-2010 18:18:05		BKG LIVE TIME(SEC) : 60000.00	
ANALYST : JXD2		ELAPSED LIVE TIME(SEC) : 60000.00		EFF FILE : W237.CNF:28	
% YIELD : 78.604				CAL DATE : 29-JAN-2010	

TRACER	MS/MSD	LCS/LCSD
ID : 1375-A	ID : 0244-B	ID : 0244-B
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.3808E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 2.6574E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

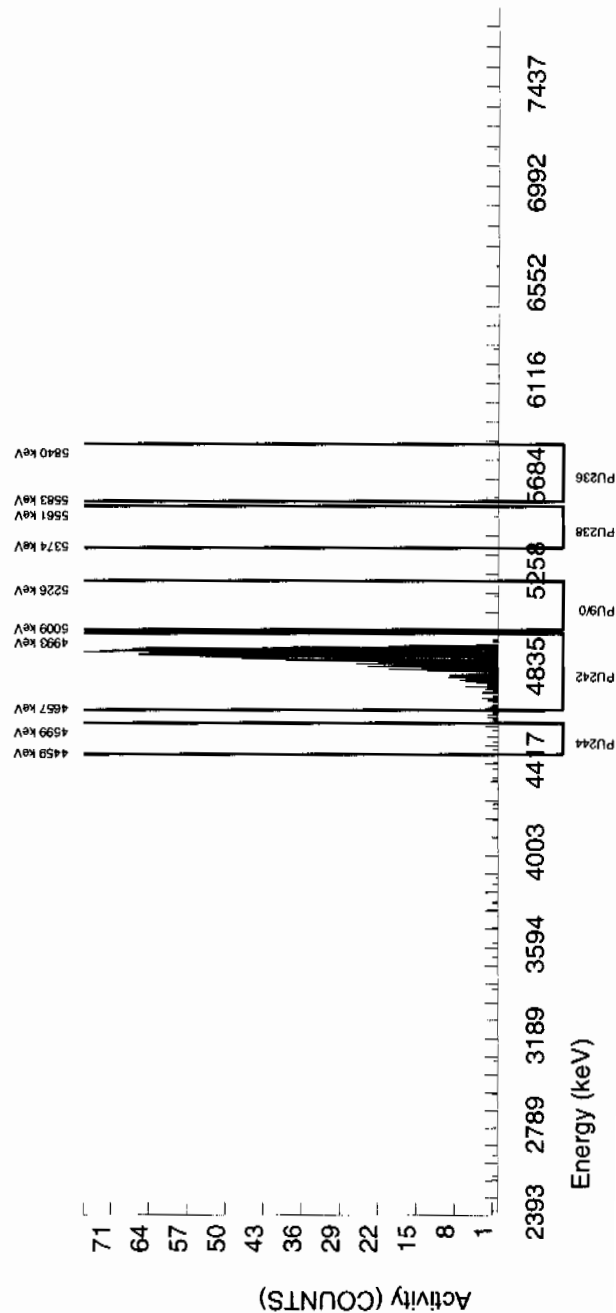
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5711.295	0.000	0.000	0.000	0.000	2.1286	100.0000	0.00E+00	1.46E-03	7.20E-03	1.83E-02	1.46E-03
PU-238	5499.000	5467.771	0.000	0.000	-5.000	5.000	2.9680	99.900000	-7.28E-03	3.57E-03	1.01E-02	2.41E-02	3.57E-03
PU-9/0	5155.000	5162.077	4.920	1.000	1.000	0.000	3.4797	99.900000	1.46E-03	1.46E-03	1.18E-02	2.75E-02	1.46E-03
PU242	4890.000	4889.881	59.401	1048.000	1047.000	1.000	1.0000	100.0000	1.52E+00	9.24E-02	3.38E-03	1.07E-02	4.71E-02
PU-244	4589.000	4525.123	39.358	9.000	8.000	1.000	5.2050	99.900000	1.16E-02	4.64E-03	1.76E-02	3.92E-02	4.60E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944994 SAMPLE ID : S1202023808_PU SAMPLE QTY : 1.251 G SAMPLE DATE : 15-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 73.745	CHAMBER : 238 DETECTOR S/N : 79431 AVERAGE %EFFICIENCY : 39.3479 COUNT DATE : 5-FEB-2010 18:18:07 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B238.CNF.76 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W238.CNF.30 CAL DATE : 29-JAN-2010
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TRACER ID : 1375-A NUCLIDE : PU242 NOMINAL : 3.3808E+00 dpm RESULTS : 2.4931E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

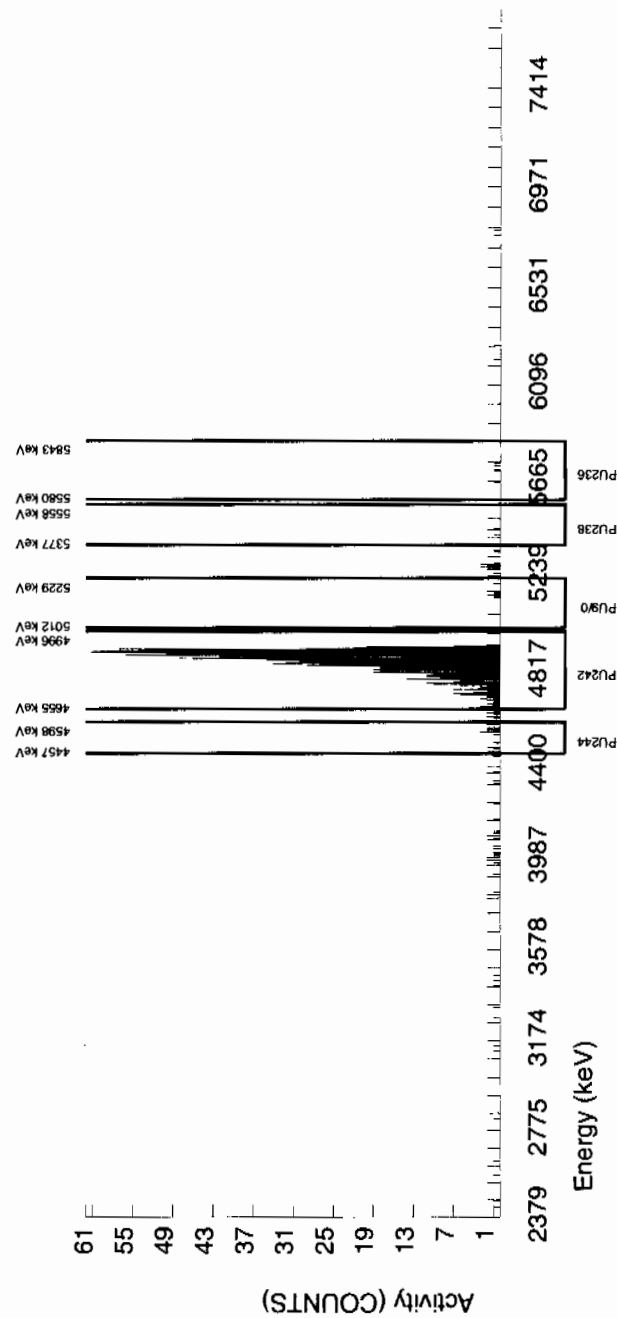
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5715.833	78.618	5.000	3.000	2.000	2.1286	100.0000	3.78E-03	3.34E-03	6.14E-03	1.57E-02	3.33E-03
PU-238	5499.000	5425.170	71.247	6.000	-10.000	16.000	2.9680	99.900000	-1.24E-02	5.83E-03	8.58E-03	2.05E-02	5.83E-03
PU-9/0	5155.000	5171.908	7.217	7.000	-1.000	8.000	3.4797	99.900000	-1.24E-03	4.81E-03	1.01E-02	2.35E-02	4.81E-03
PU242	4890.000	4866.311	65.122	982.000	981.000	1.000	1.0000	100.0000	1.22E+00	7.31E-02	2.89E-03	9.14E-03	3.89E-02
PU-244	4589.000	4541.855	116.606	18.000	17.000	1.000	5.2050	99.900000	2.11E-02	5.52E-03	1.50E-02	3.34E-02	5.41E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

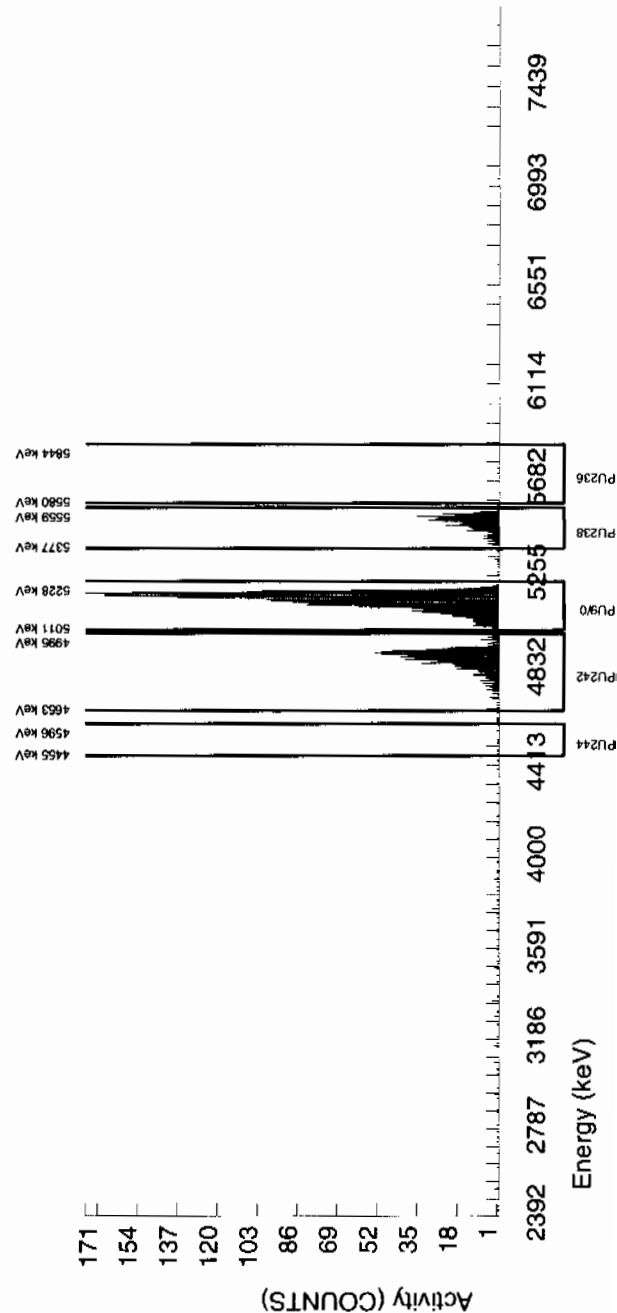
BATCH NUMBER : 944994				CHAMBER : 239				LIB FILE : ENV_ALPHA_PU					
SAMPLE ID : S1202023809_PU				DETECTOR S/N : 79432				BKG FILE : B239.CNF;76					
SAMPLE QTY : 0.106 G				AVERAGE %EFFICIENCY : 37.8194				BKG DATE : 31-JAN-2010					
SAMPLE DATE : 4-FEB-2010 00:00:00.				COUNT DATE : 5-FEB-2010 18:18:10				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : JXD2				ELAPSED LIVE TIME(SEC) : 60000.00				EFF FILE : W239.CNF;28					
% YIELD : 63.664								CAL DATE : 29-JAN-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1375-A				ID : 0244-B				ID : 0244-B					
NUCLIDE : PU242				NUCLIDE : PU-9/0				NUCLIDE : PU-9/0					
NOMINAL : 3.3808E+00 dpm				NOMINAL : 4.1778E+01 pCi/G				NOMINAL : 4.1778E+01 pCi/G					
RESULTS : 2.1523E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5730.478	24.539	2.000	1.000	1.000	2.1286	100.0000	1.77E-02	3.06E-02	8.74E-02	2.23E-01	3.06E-02
PU-238	5499.000	5496.110	54.125	382.000	382.000	0.000	2.9680	99.900000	6.75E+00	5.46E-01	1.22E-01	2.92E-01	3.45E-01
PU-9/0	5155.000	5149.468	50.540	2166.000	2166.000	0.000	3.4797	99.900000	3.83E+01	2.53E+00	1.43E-01	3.34E-01	8.22E-01
PU242	4890.000	4885.271	58.904	815.000	814.000	1.000	1.0000	100.0000	1.44E+01	1.03E+00	4.11E-02	1.30E-01	5.04E-01
PU-244	4589.000	4513.583	98.156	8.000	7.000	1.000	5.2050	99.900000	1.24E-01	5.36E-02	2.14E-01	4.76E-01	5.30E-02

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



Radiochemistry Batch Checklist, Rev10

Batch#

944996

Product:

U

Date:

2/8/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDU/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line outs initialed and dated.	✓		
No transcription errors are apparent.			N/A
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
HII notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMF, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

Debbie Green 2/9/10

Secondary Review Performed By:

Z-H 2/9/10

2/13
LANR

PV

Uranium Que Sheet

25-JAN-10

Batch #: 944996 Analyst: JXD2 First Client Due Date: 13-FEB-10 Internal Due Date: 03-FEB-10
Tracer Isotope: U-232 Tracer Code: 1283-H Expiration Date: 12/07/10 Vol: 0.1
LCS Isotope: U-238 LCS Code: — Expiration Date: — Vol: —
Spike Isotope: U-238 Spike Code: — Expiration Date: — Vol: —
Prep Date: 02/04/10 Initials: JXD Pipet ID: 292058 Balance ID: 50410272
Witness: DATE 2/4/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet (g)	Aliquot (g)	U Det #
245371001-1	RE16-10-957	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	1	1	0.507	0.507	115
245371002-1	RE16-10-979	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	2	2	0.506	0.506	117
245393010-1	RE15-10-8053	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	3	3	0.501	0.501	118
245393011-1	RE15-10-8054	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	4	4	0.511	0.511	119
245395001-1	RE15-10-7869	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	5	5	0.505	0.505	120
245395002-1	RE15-10-7874	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	6	6	0.500	0.500	121
245395003-1	RE15-10-7871	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	7	7	0.505	0.505	122
245395004-1	RE15-10-7872	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	8	8	0.506	0.506	123
245395005-1	RE15-10-7870	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	9	9	0.504	0.504	124
245395006-1	RE15-10-7873	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	10	10	0.507	0.507	125
245395007-1	RE15-10-7811	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	11	11	0.504	0.504	126
245395008-1	RE15-10-7908	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	12	12	0.505	0.505	127
245395009-1	RE15-10-7912	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	13	13	0.501	0.501	128
245395010-1	RE15-10-7906	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	14	14	0.505	0.505	129
245395011-1	RE15-10-7905	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	15	15	0.502	0.502	130
245395012-1	RE15-10-7907	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	16	16	0.508	0.508	131
245395013-1	RE15-10-7913	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	17	17	0.508	0.508	132
245395014-1	RE15-10-7909	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	18	18	0.507	0.507	133
245395015-1	RE15-10-7910	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	19	19	0.503	0.503	7
1202023820-1	MB for batch 944996	MB		.1 pCi/g	SOIL	QC ACCOUNT		20	20	1	1	8
1202023821-1	RE16-10-957(245371001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	15-JAN-10	21	21	0.506	0.506	139
1202023822-1	LCS for batch 944996	LCS		.1 pCi/g	SOIL	QC ACCOUNT		22	22	0.502	0.502	140

* SAM 0244-A exp 10/31/20 0.102g

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION

Data Reviewed By: 2/19/10

Blank Correction Report

Batch ID 944996

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202023821	DUP	Uranium-233/234	0.506 g	0.773	0.0845	0.152	.014189723	pCi/g	NO
		Uranium-235/236	0.506 g	0.0426	0.0185	0.0947	.011284585	pCi/g	YES
		Uranium-238	0.506 g	0.758	0.0833	0.0884	.027470356	pCi/g	NO
1202023822	LCS	Uranium-233/234	0.102 g	5.92	0.572	0.607	.070392157	pCi/g	NO
		Uranium-235/236	0.102 g	0.218	0.0821	0.377	.055880392	pCi/g	YES
		Uranium-238	0.102 g	5.47	0.536	0.352	.136274510	pCi/g	NO
1202023820	MB	Uranium-233/234	1.00 g	0.00718	0.00456	0.0477	.00718	pCi/g	YES
		Uranium-235/236	1.00 g	0.00571	0.00332	0.0296	.00571	pCi/g	YES
		Uranium-238	1.00 g	0.0139	0.0052	0.0277	.0139	pCi/g	YES
245371001	RE16-10-957	Uranium-233/234	0.507 g	0.662	0.0715	0.131	.014161736	pCi/g	NO
		Uranium-235/236	0.507 g	0.0365	0.0159	0.0811	.011262327	pCi/g	YES
		Uranium-238	0.507 g	0.772	0.0794	0.0758	.027416174	pCi/g	NO
245371002	RE16-10-979	Uranium-233/234	0.506 g	1.06	0.103	0.136	.014189723	pCi/g	NO
		Uranium-235/236	0.506 g	0.0652	0.0194	0.0846	.011284585	pCi/g	NO
		Uranium-238	0.506 g	1.08	0.104	0.079	.027470356	pCi/g	NO
245393010	RE15-10-8053	Uranium-233/234	0.501 g	9.90	0.799	0.216	.014331337	pCi/g	NO
		Uranium-235/236	0.501 g	1.47	0.159	0.134	.011397206	pCi/g	NO
		Uranium-238	0.501 g	68.8	5.29	0.126	.027744511	pCi/g	NO
245393011	RE15-10-8054	Uranium-233/234	0.511 g	0.866	0.0864	0.128	.014050881	pCi/g	NO
		Uranium-235/236	0.511 g	0.041	0.0148	0.0797	.011174168	pCi/g	YES
		Uranium-238	0.511 g	1.03	0.0989	0.0745	.027201566	pCi/g	NO
245395001	RE15-10-7869	Uranium-233/234	0.505 g	7.18	0.567	0.173	.014217822	pCi/g	NO
		Uranium-235/236	0.505 g	0.933	0.106	0.108	.011306931	pCi/g	NO
		Uranium-238	0.505 g	43.7	3.26	0.100	.027524752	pCi/g	NO
245395002	RE15-10-7874	Uranium-233/234	0.500 g	1.76	0.151	0.125	.01436	pCi/g	NO
		Uranium-235/236	0.500 g	0.150	0.031	0.0776	.01142	pCi/g	NO
		Uranium-238	0.500 g	7.18	0.539	0.0725	.0278	pCi/g	NO
245395003	RE15-10-7871	Uranium-233/234	0.505 g	6.10	0.486	0.171	.014217822	pCi/g	NO
		Uranium-235/236	0.505 g	0.799	0.0946	0.106	.011306931	pCi/g	NO
		Uranium-238	0.505 g	42.1	3.14	0.0994	.027524752	pCi/g	NO
245395004	RE15-10-7872	Uranium-233/234	0.506 g	1.43	0.126	0.122	.014189723	pCi/g	NO
		Uranium-235/236	0.506 g	0.117	0.0253	0.076	.011284585	pCi/g	NO
		Uranium-238	0.506 g	5.04	0.385	0.071	.027470356	pCi/g	NO
245395005	RE15-10-7870	Uranium-233/234	0.504 g	1.11	0.103	0.119	.014246032	pCi/g	NO
		Uranium-235/236	0.504 g	0.0952	0.0223	0.0741	.011329365	pCi/g	NO
		Uranium-238	0.504 g	3.80	0.295	0.0692	.027579365	pCi/g	NO
245395010	RE15-10-7906	Uranium-233/234	0.505 g	1.08	0.100	0.120	.014217822	pCi/g	NO
		Uranium-235/236	0.505 g	0.114	0.0247	0.0742	.011306931	pCi/g	NO
		Uranium-238	0.505 g	3.35	0.263	0.0693	.027524752	pCi/g	NO
245395011	RE15-10-7905	Uranium-233/234	0.502 g	2.60	0.216	0.140	.014302789	pCi/g	NO
		Uranium-235/236	0.502 g	0.391	0.0545	0.0869	.011374502	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
245395011	RE15-10-7905	Uranium-238	0.502 g	16.9	1.25	0.0812	.027689243	pCi/g	NO
245395013	RE15-10-7913	Uranium-233/234	0.508 g	1.18	0.115	0.154	.014133858	pCi/g	NO
		Uranium-235/236	0.508 g	0.0858	0.0238	0.0953	.011240157	pCi/g	NO
		Uranium-238	0.508 g	2.50	0.214	0.0891	.027362205	pCi/g	NO
245395015	RE15-10-7910	Uranium-233/234	0.503 g	4.55	0.354	0.131	.014274354	pCi/g	NO
		Uranium-235/236	0.503 g	0.741	0.0827	0.0812	.011351889	pCi/g	NO
		Uranium-238	0.503 g	32.6	2.37	0.0759	.027634195	pCi/g	NO

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996 SAMPLE ID : S0245371001_UU SAMPLE QTY : 0.507 G SAMPLE DATE : 15-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 81.164		CHAMBER : 115 DETECTOR S/N : 79995 AVERAGE %EFFICIENCY : 25.9560 COUNT DATE : 8-FEB-2010 12:04:14 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B115.CNF;452 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W115.CNF;147 CAL DATE : 18-JAN-2010
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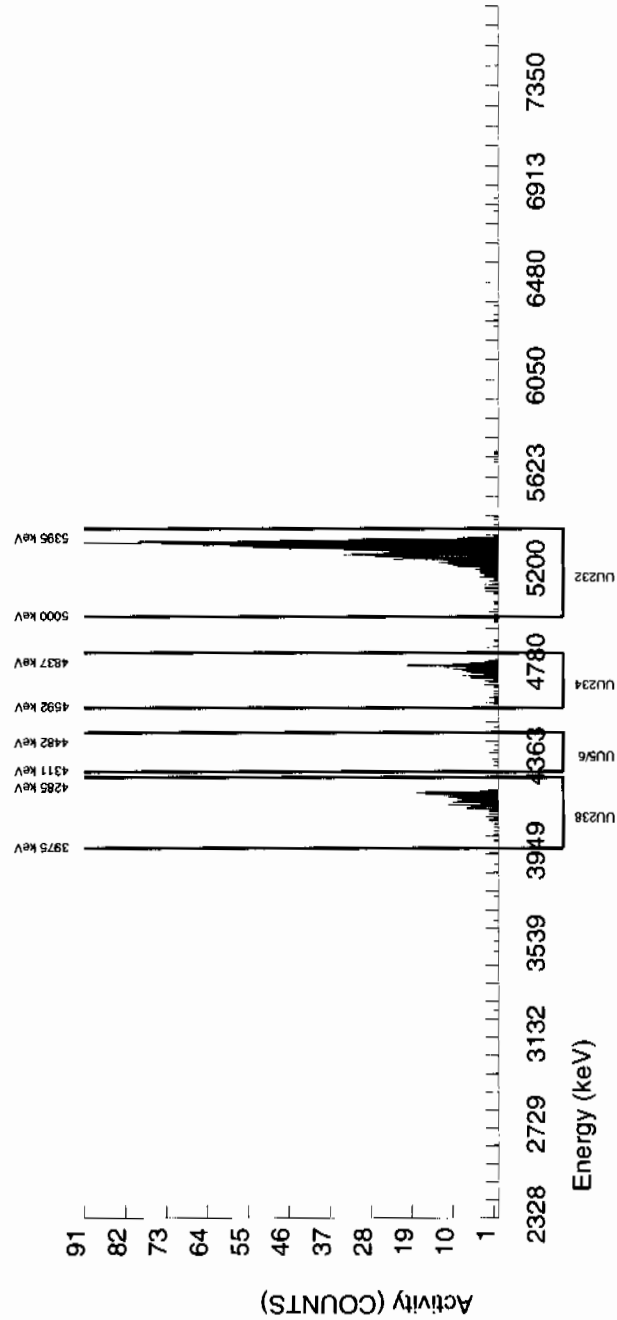
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5078E+00 dpm RESULTS : 3.6587E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5302.110	35.874	953.000	949.000	4.000	2.0000	100.0000	4.00E+00	3.15E-01	1.96E-02	5.07E-02	1.31E-01
U-3/4	4763.020	4760.403	16.193	160.000	157.040	2.000	6.0782	100.0000	6.62E-01	7.15E-02	5.96E-02	1.31E-01	5.35E-02
U-235	4391.000	4399.089	4.982	8.000	7.000	1.000	2.7628	80.90000	3.65E-02	1.59E-02	3.35E-02	8.11E-02	1.56E-02
U-238	4184.730	4187.144	59.706	183.000	183.000	0.000	3.2810	100.0000	7.72E-01	7.94E-02	3.22E-02	7.58E-02	5.71E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996	CHAMBER : 120	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0245395001_UU	DETECTOR S/N : 74430	BKG FILE : B120.CNF;462
SAMPLE QTY : 0.505 G	AVERAGE %EFFICIENCY : 25.9820	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 12:04:26	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W120.CNF;126
% YIELD : 61.431		CAL DATE : 18-JAN-2010
TRACER ID : 1283-H	MS/MSD ID : 0244-A	LCS/LCSD ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5073E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 2.7689E+00 dpm		
NUCLIDE ACTIVITY SUMMARY		
NUCLIDE	GROSS AREA	NET AREA
U232	5302.100	5286.259
U-3/4	4763.020	4747.826
U-235	4391.000	4402.363
U-238	4184.730	4174.697
PEAK FWHM	69.461	66.075
PEAK ENERGY	5286.259	4747.826
PEAK ENERGY	4763.020	4391.000
PEAK ENERGY	4391.000	4184.730
PEAK ENERGY	4184.730	4174.697
NET AREA	719.000	720.000
BKG AREA	1.000	1.000
BKG Sg	1.000	1.000
%ABUN	100.0000	100.0000
ACTIVITY pCi/G	4.02E+00	4.02E+00
TPU 1-SIGMA	3.33E-01	3.33E-01
DLC pCi/G	1.30E-02	1.30E-02
MDC pCi/G	7.90E-01	7.90E-01
UNC pCi/G	1.06E-01	1.06E-01
	4.27E+00	4.27E+00
	4.37E+01	4.37E+01
	9.33E-01	9.33E-01
	7.18E+00	7.18E+00
	4.02E+00	4.02E+00
	3.33E-01	3.33E-01
	1.30E-02	1.30E-02
	7.90E-01	7.90E-01
	1.06E-01	1.06E-01
	4.27E-02	4.27E-02
	1.00E-01	1.00E-01
	8.03E-02	8.03E-02
	2.00E-01	2.00E-01
	4.11E-02	4.11E-02
	1.50E-01	1.50E-01

NOTES:

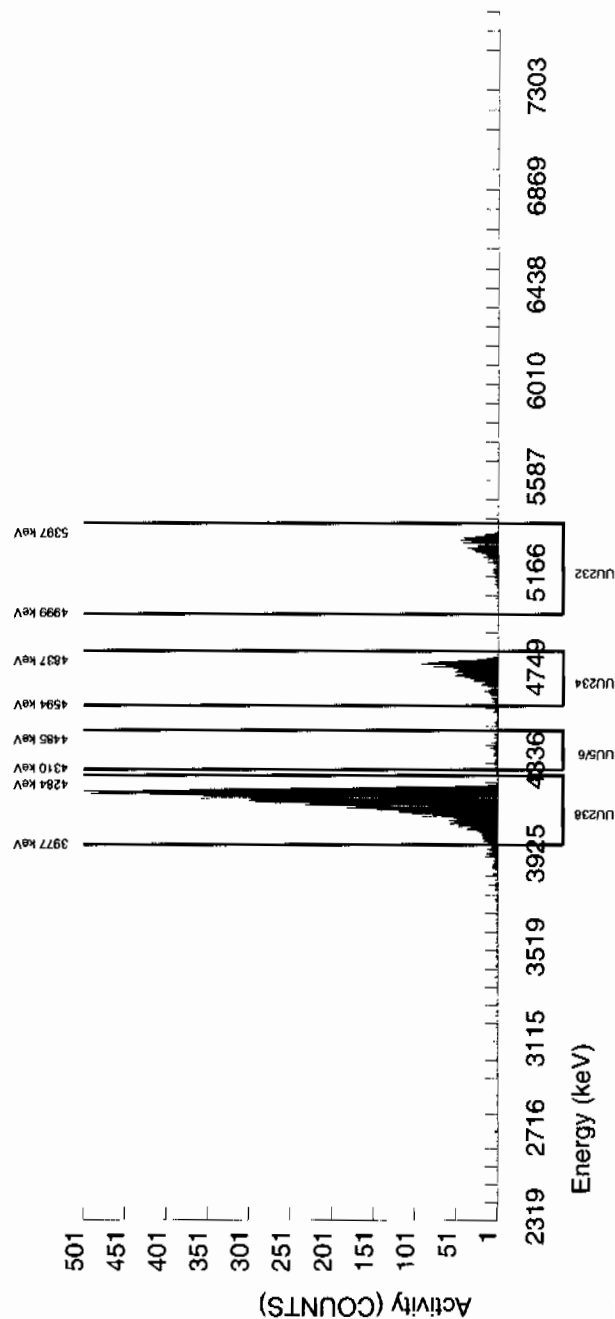
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to

U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996	CHAMBER : 121	LIB FILE : ENV ALPHA_UU
SAMPLE ID : S0245395002_UU	DETECTOR S/N : 75545	BKG FILE : B121.CNF;444
SAMPLE QTY : 0.500 G	AVERAGE %EFFICIENCY : 24.4776	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 12:04:29	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W121.CNF;117
% YIELD : 91.235		CAL DATE : 18-JAN-2010

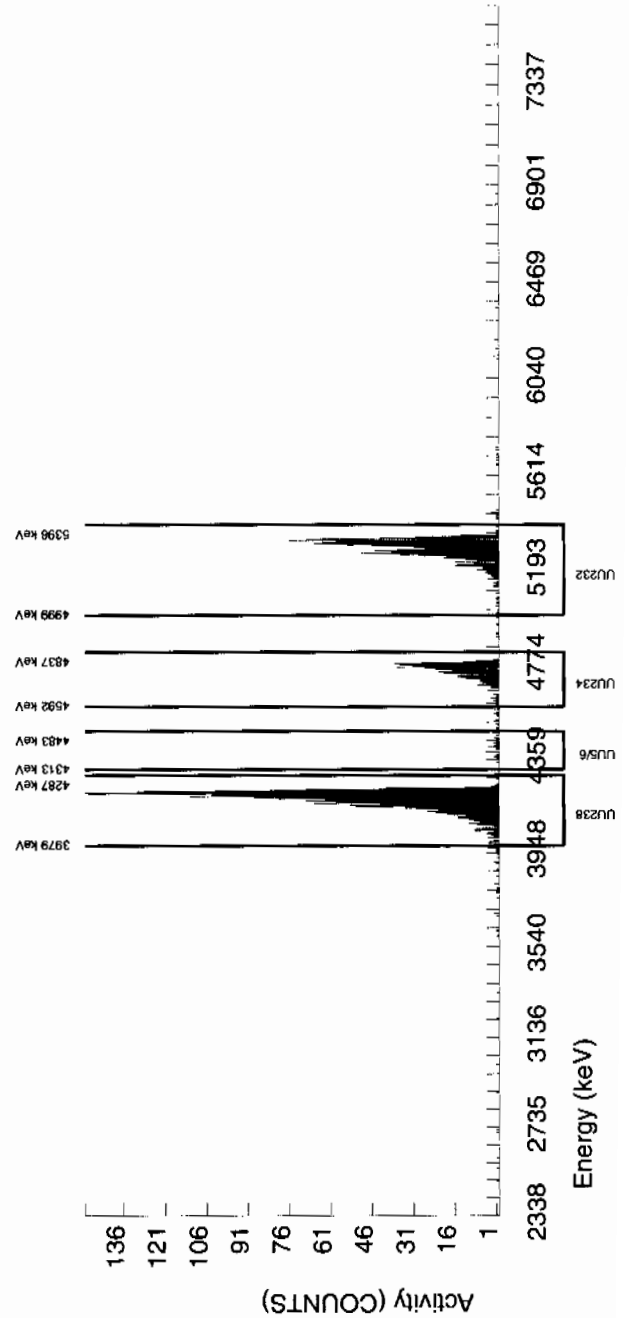
TRACER	MS/MSD	LCS/LCSD
ID : 1283-H	ID : 0244-A	ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5073E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 4.1122E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5295.296	70.310	1011.000	1006.000	5.000	2.2361	100.0000	4.06E+00	3.16E-01	2.10E-02	5.29E-02	1.29E-01
U-3/4	4763.020	4755.306	47.898	438.000	436.982	0.000	6.0782	100.0000	1.76E+00	1.51E-01	5.70E-02	1.25E-01	8.43E-02
U-235	4391.000	4410.073	24.718	32.000	30.000	2.000	2.7628	80.90000	1.50E-01	3.10E-02	3.20E-02	7.76E-02	2.91E-02
U-238	4184.730	4182.369	39.808	1782.000	1781.000	1.000	3.2810	100.0000	7.18E+00	5.39E-01	3.08E-02	7.25E-02	1.70E-01

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	944996	CHAMBER	122	LIB FILE	ENV_ALPHA_UU
SAMPLE ID	S0245395003_UU	DETECTOR S/N	75546	BKG FILE	B122.CNF;446
SAMPLE QTY	0.505 G	AVERAGE %EFFICIENCY	24.9662	BKG DATE	7-FEB-2010
SAMPLE DATE	19-JAN-2010 00:00:00	COUNT DATE	8-FEB-2010 12:04:32	BKG LIVE TIME(SEC)	60000.00
ANALYST	JXD2	ELAPSED LIVE TIME(SEC)	60000.00	EFF FILE	W122.CNF;120
% YIELD	64.642			CAL DATE	18-JAN-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1283-H	ID : 0244-A	ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5073E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G

NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5289.026	73.893	730.000	727.000	3.000	1.7321	100.0000	4.02E+00	3.32E-01	2.23E-02	5.95E-02	1.50E-01
U-3/4	4763.020	4748.799	46.743	1104.000	1103.264	0.000	6.0782	100.0000	6.10E+00	4.86E-01	7.82E-02	1.71E-01	1.84E-01
U-235	4391.000	4411.953	0.000	117.000	117.000	0.000	2.7828	80.900000	7.99E-01	9.46E-02	4.39E-02	1.06E-01	7.39E-02
U-238	4184.730	4178.526	66.800	7619.000	7619.000	0.000	3.2810	100.0000	4.21E+01	3.14E+00	4.22E-02	9.94E-02	4.82E-01

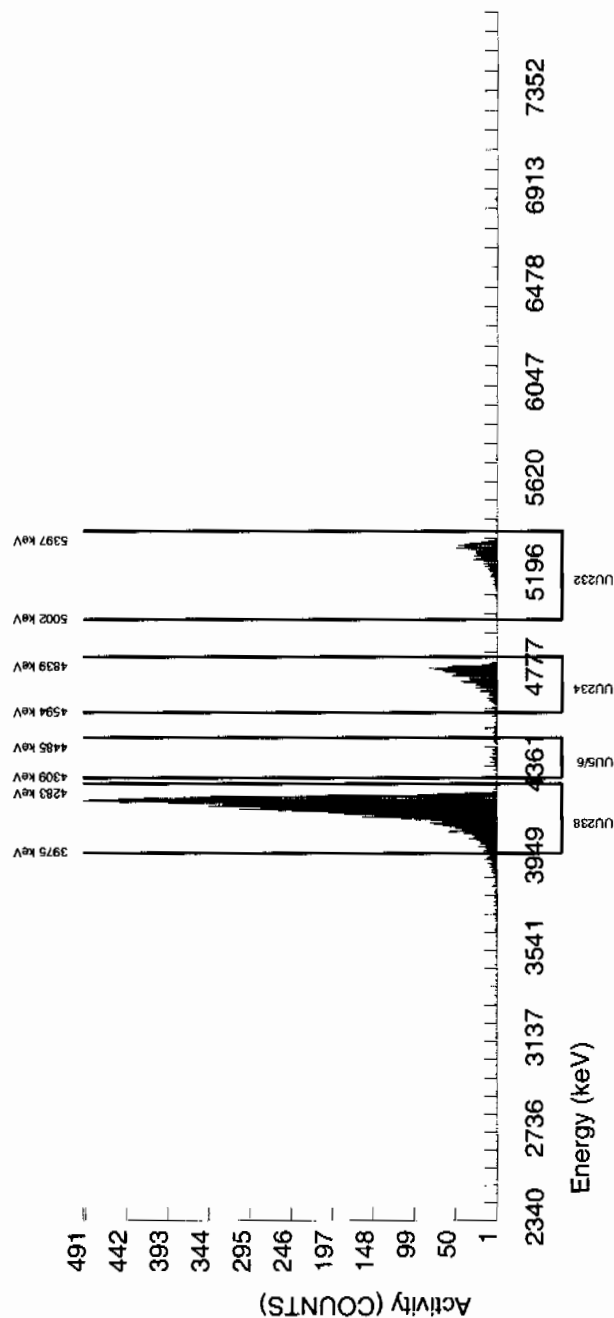
NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to
due to tracer impurity:



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

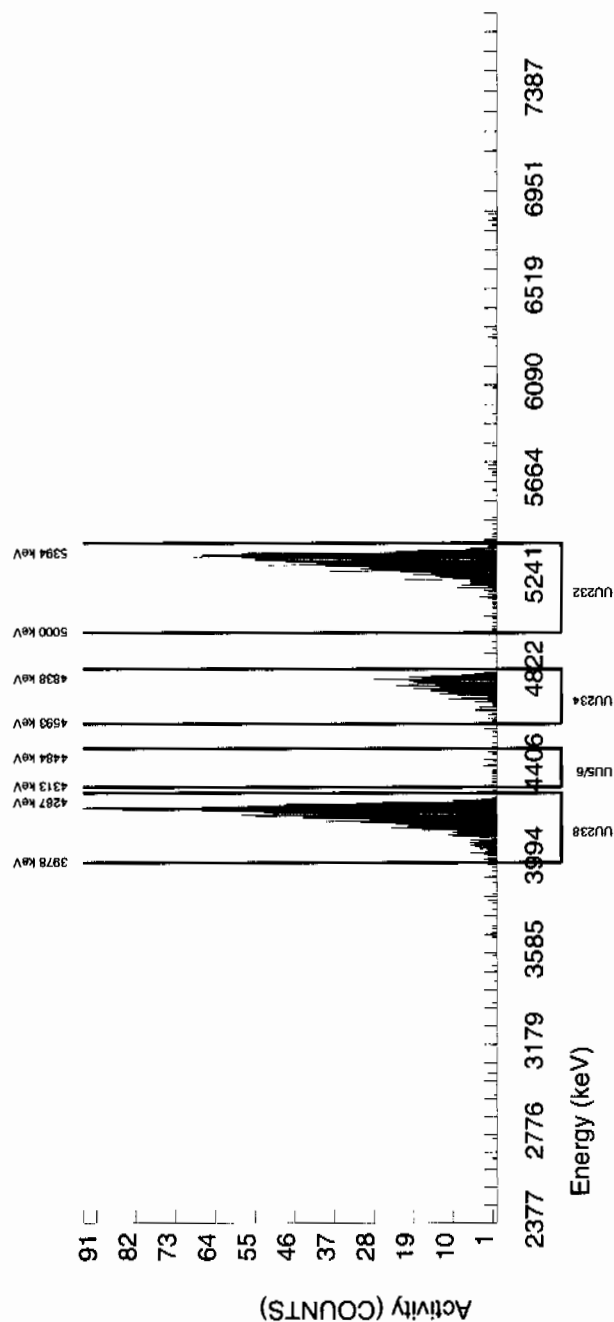
BATCH NUMBER : 944996 SAMPLE ID : S0245395004_UU SAMPLE QTY : 0.506 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 86.670		CHAMBER : 123 DETECTOR S/N : 45-142V3 AVERAGE %EFFICIENCY : 25.9975 COUNT DATE : 8-FEB-2010 12:04:34 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B123.CNF:444 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W123.CNF:116 CAL DATE : 18-JAN-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5073E+00 dpm RESULTS : 3.9065E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5308.124	78.738
U-3/4	4763.020	4761.815	66.496
U-235	4391.000	4403.383	92.709
U-238	4184.730	4189.081	53.189
	GROSS AREA	NET AREA	BKG AREA
	1020.000	1015.000	5.000
	362.000	360.973	0.000
	24.000	24.000	0.000
	1277.000	1276.000	1.000
	%ABUN	BKG Sg	ACTIVITY pCi/G
	100.0000	2.2361	4.01E+00
	100.0000	6.0782	1.43E+00
	80.90000	2.7628	1.17E-01
	100.0000	3.2810	5.04E+00
	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G
	3.12E-01	2.06E-02	5.18E-02
	1.26E-01	5.59E-02	1.22E-01
	2.53E-02	3.14E-02	7.60E-02
	3.85E-01	3.02E-02	7.10E-02
	UNC pCi/G		
	1.27E-01		
	7.51E-02		
	2.39E-02		
	1.41E-01		

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area
due to tracer impurity:
U-3/4

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

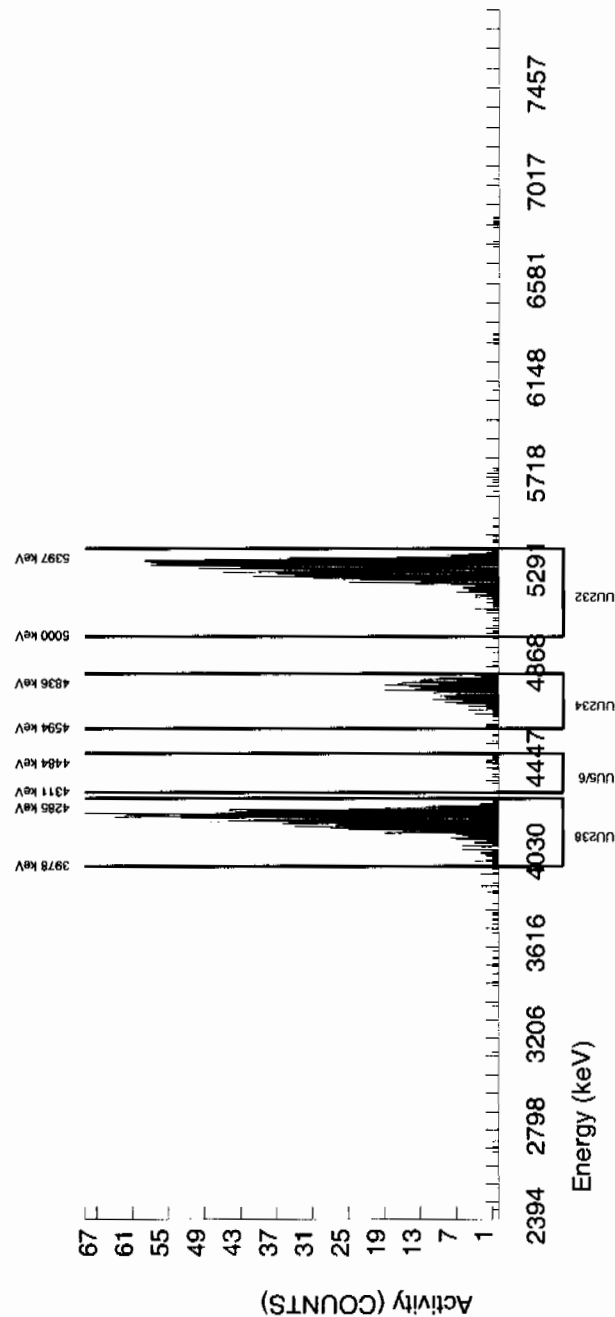
BATCH NUMBER : 944996				CHAMBER : 124				LIB FILE : ENV_ALPHA_UU					
SAMPLE ID : S0245395005_UU				DETECTOR S/N : 45-142V2				BKG FILE : B124.CNF:440					
SAMPLE QTY : 0.504 G				AVERAGE %EFFICIENCY : 25.8260				BKG DATE : 7-FEB-2010					
SAMPLE DATE : 19-JAN-2010 00:00:00				COUNT DATE : 8-FEB-2010 12:04:37				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : JXD2				ELAPSED LIVE TIME(SEC) : 60000.00				EFF FILE : W124.CNF:112					
% YIELD : 89.910								CAL DATE : 18-JAN-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1283-H				ID : 0244-A				ID : 0244-A					
NUCLIDE : U232				NUCLIDE : U-238				NUCLIDE : U-238					
NOMINAL : 4.5073E+00 dpm				NOMINAL : 5.7500E+00 pCi/G				NOMINAL : 5.7500E+00 pCi/G					
RESULTS : 4.0525E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5304.276	88.521	1051.000	1046.000	5.000	2.2361	100.0000	4.03E+00	3.12E-01	2.00E-02	5.05E-02	1.25E-01
U-3/4	4763.020	4759.614	92.332	291.000	288.942	1.000	6.0782	100.0000	1.11E+00	1.03E-01	5.44E-02	1.19E-01	6.57E-02
U-235	4391.000	4428.671	0.000	20.000	20.000	0.000	2.7628	80.90000	9.52E-02	2.23E-02	3.06E-02	7.41E-02	2.13E-02
U-238	4184.730	4188.896	63.358	987.000	987.000	0.000	3.2810	100.0000	3.80E+00	2.95E-01	2.94E-02	6.92E-02	1.21E-01

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

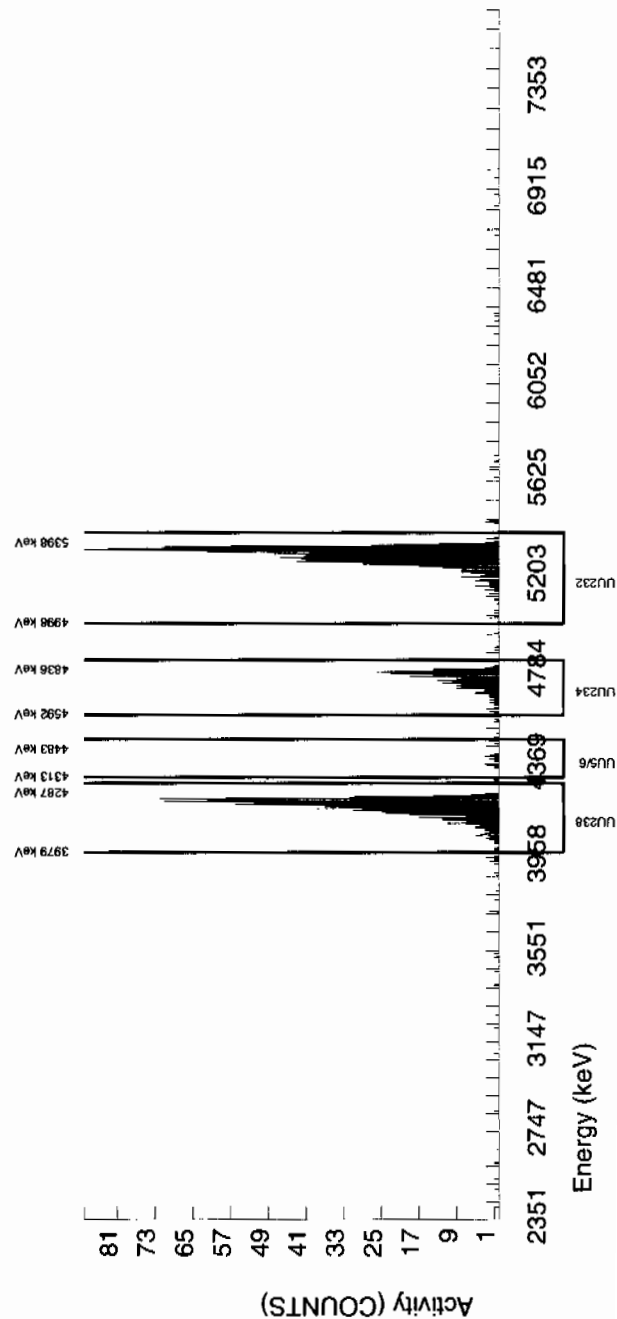
BATCH NUMBER : 944996 SAMPLE ID : S0245395010_UU SAMPLE QTY : 0.505 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 87.558		CHAMBER : 129 DETECTOR S/N : 76227 AVERAGE %EFFICIENCY : 26.4183 COUNT DATE : 8-FEB-2010 12:04:48 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B129.CNF:448 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W129.CNF:128 CAL DATE : 18-JAN-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5073E+00 dpm RESULTS : 3.9465E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/g	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/g	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5299.825	54.906
U-3/4	4763.020	4752.934	32.037
U-235	4391.000	4406.084	98.512
U-238	4184.730	4184.686	49.825
	GROSS AREA	NET AREA	BKG AREA
	1045.000	1042.000	3.000
	283.000	279.946	2.000
	24.000	24.000	0.000
	868.000	868.000	0.000
	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA
	100.0000	4.02E+00	3.11E-01
	100.0000	1.08E+00	1.00E-01
	80.90000	1.14E-01	2.47E-02
	100.0000	3.35E+00	2.63E-01
	BKG Sg	BKG Sg	DLC pCi/g
	1.7321	1.7321	1.55E-02
	6.0782	6.0782	5.45E-02
	2.7628	2.7628	3.06E-02
	3.2810	3.2810	2.94E-02
	MDC pCi/g	UNC pCi/g	
	4.15E-02	1.25E-01	
	1.20E-01	6.50E-02	
	7.42E-02	2.34E-02	
	6.93E-02	1.14E-01	

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area
due to tracer impurity:
U-3/4

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER :	944996
SAMPLE ID :	S0245395011_UU
SAMPLE QTY :	0.502 G
SAMPLE DATE :	19-JAN-2010 00:00:00
ANALYST :	JXD2
% YIELD :	80.315

CHAMBER	:	130
DETECTOR S/N	:	76228
AVERAGE %EFFICIENCY	:	24.7378
COUNT DATE	:	8-FEB-2010 12:04:51
ELAPSED LIVE TIME(SEC)	:	60000.00

LIB FILE	ENV_ALPHA_UU
BKG FILE	B130.CNF:448
BKG DATE	7-FEB-2010
BKG LIVE TIME(SEC)	60000.00
EFF FILE	W130.CNF:130
CAL DATE	18-JAN-2010

TRACER	ID	: 1283-H
	NUCLIDE	: U232
	NOMINAL	: 4.5073E+00 dpm
	RESULTS	: 3.6200E+00 dpm

MS/MSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/G

LCS/LCSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/G

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
U232	5302.100	5295.869	67.928	897.000	895.000	2.000	1.4142	100.0000	4.04E+00	3.21E-01	1.49E-02	4.20E-02	1.35E-01
U-3/4	4763.020	4751.437	37.816	577.000	575.094	1.000	6.0782	100.0000	2.60E+00	2.16E-01	6.39E-02	1.40E-01	1.08E-01
U-235	4391.000	4403.224	48.624	70.000	70.000	0.000	2.7628	80.90000	3.91E-01	5.45E-02	3.59E-02	8.69E-02	4.67E-02
U-238	4184.730	4180.042	59.942	3745.000	3745.000	0.000	3.2810	100.0000	1.69E+01	1.25E+00	3.45E-02	8.12E-02	2.76E-01

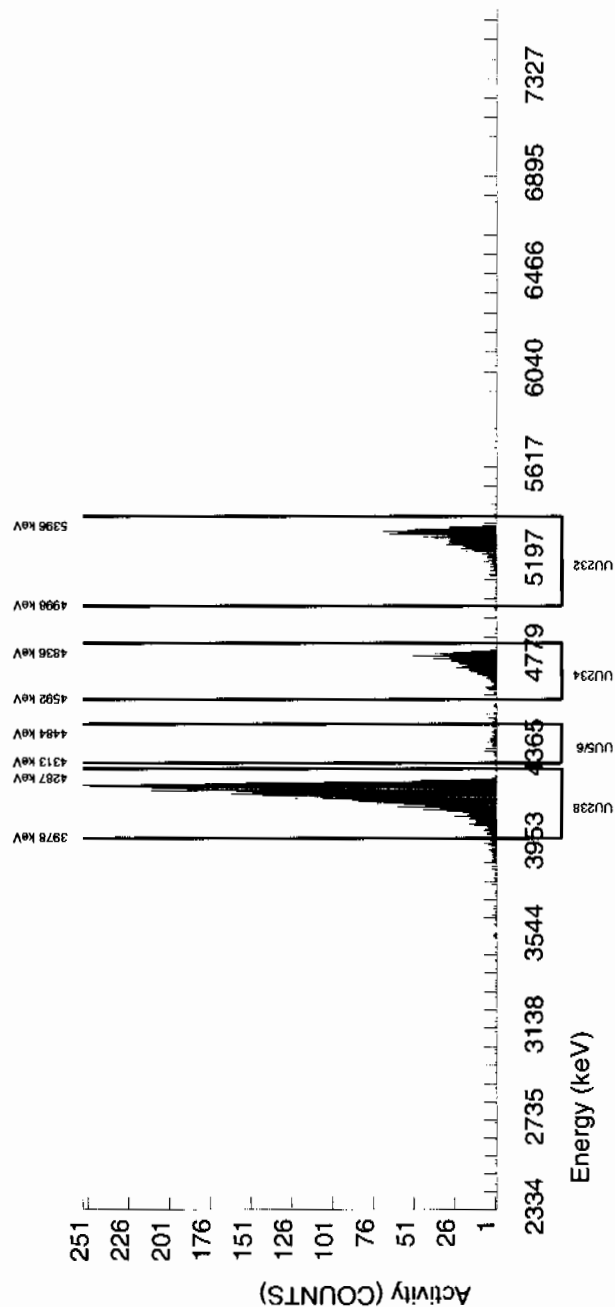
NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996	CHAMBER : 132	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0245395013_UU	DETECTOR S/N : 67579	BKG FILE : B132.CNF;440
SAMPLE QTY : 0.508 G	AVERAGE %EFFICIENCY : 24.9091	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 12:04:56	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W132.CNF;130
% YIELD : 71.831		CAL DATE : 18-JAN-2010

TRACER ID : 1283-H	MS/MSD ID : 0244-A	LCS/LCSD ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5073E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 3.2376E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

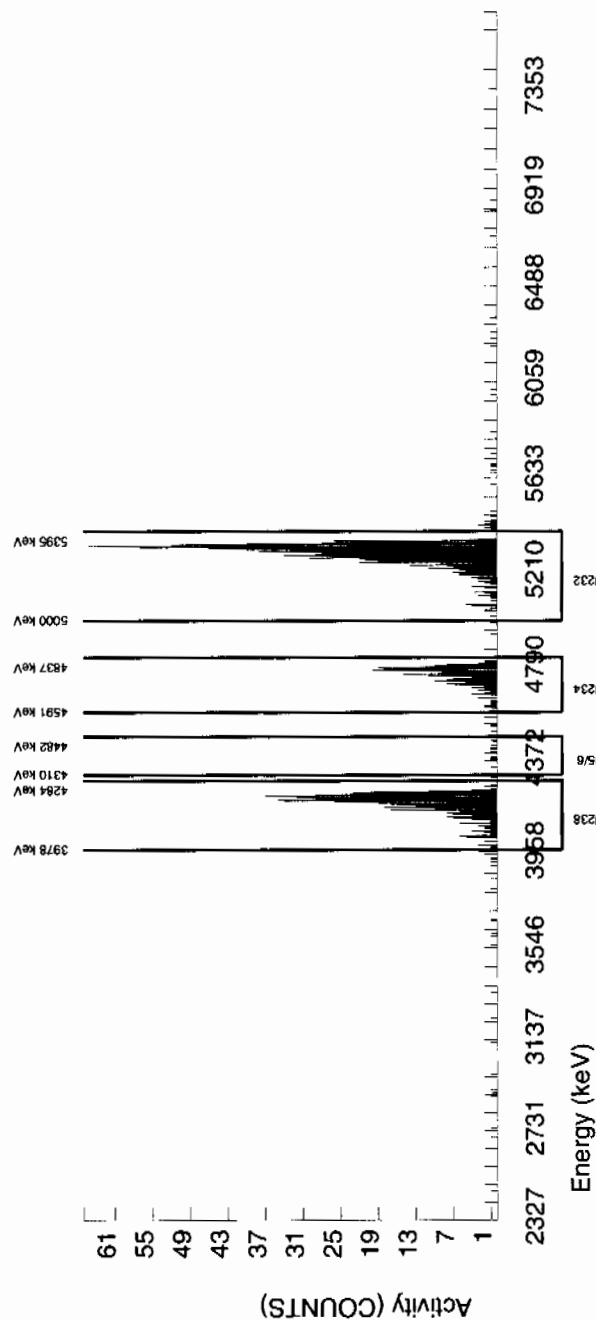
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5296.752	53.739	806.000	806.000	0.000	0.0000	100.0000	4.00E+00	3.23E-01	0.00E+00	1.34E-02	1.41E-01
U-3/4	4763.020	4757.911	45.174	238.000	237.184	0.000	6.0782	100.0000	1.18E+00	1.15E-01	7.01E-02	1.54E-01	7.63E-02
U-235	4391.000	4403.577	35.176	14.000	14.000	0.000	2.7628	80.90000	8.58E-02	2.38E-02	3.94E-02	9.53E-02	2.29E-02
U-238	4184.730	4182.045	48.240	505.000	505.000	0.000	3.2810	100.0000	2.50E+00	2.14E-01	3.78E-02	8.91E-02	1.11E-01

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996	CHAMBER : 007	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0245395015_UU	DETECTOR S/N : 67607	BKG FILE : B007.CNF:1111
SAMPLE QTY : 0.503 G	AVERAGE %EFFICIENCY : 29.5407	BKG DATE : 7-FEB-2010
SAMPLE DATE : 19-JAN-2010 00:00:00	COUNT DATE : 8-FEB-2010 11:56:00	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W007.CNF:312
% YIELD : 71.841		CAL DATE : 3-FEB-2010

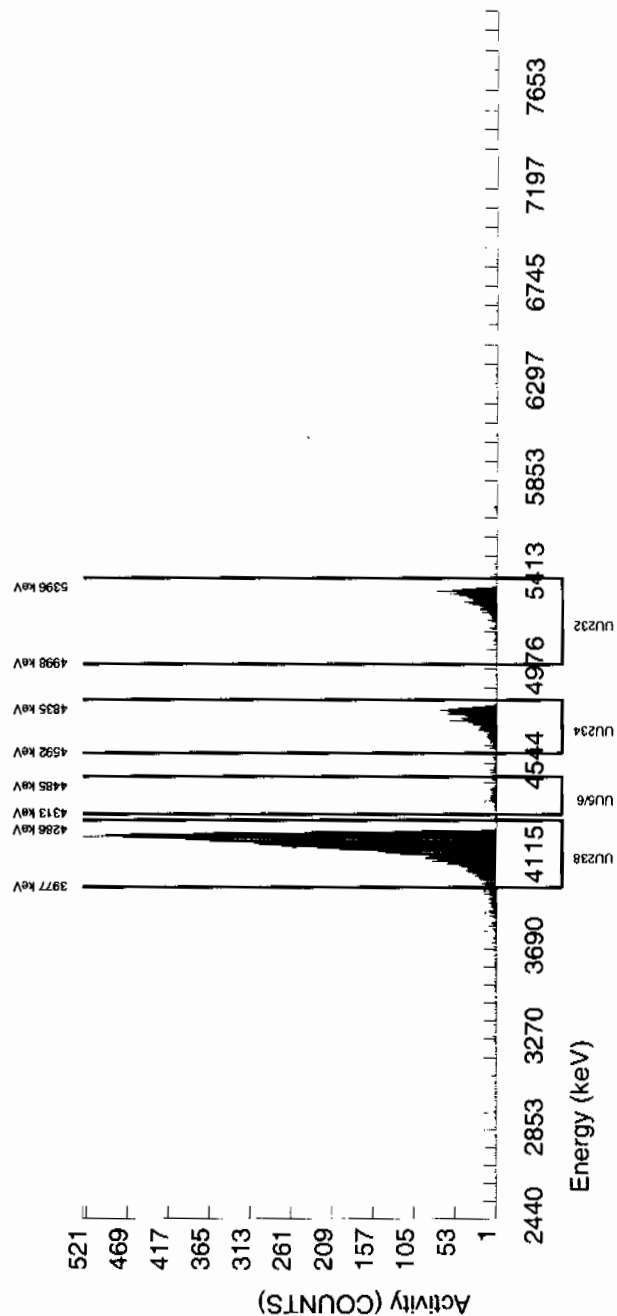
TRACER ID : 1283-H	MS/MSD ID : 0244-A	LCS/LCSD ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5073E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 3.2381E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5292.442	60.884	969.000	956.000	13.000	3.6056	100.0000	4.04E+00	3.18E-01	3.54E-02	8.22E-02	1.32E-01
U-3/4	4763.020	4747.516	66.214	1079.000	1078.033	0.000	6.0782	100.0000	4.55E+00	3.54E-01	5.97E-02	1.31E-01	1.39E-01
U-235	4391.000	4407.186	0.000	145.000	142.000	3.000	2.7628	80.90000	7.41E-01	8.27E-02	3.35E-02	8.12E-02	6.35E-02
U-238	4184.730	4178.347	64.719	7729.000	7726.000	3.000	3.2810	100.0000	3.26E+01	2.37E+00	3.22E-02	7.59E-02	3.71E-01

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996	CHAMBER : 008	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S1202023820_UU	DETECTOR S/N : 78788	BKG FILE : B008.CNF:1113
SAMPLE QTY : 1.000 G	AVERAGE %EFFICIENCY : 31.7753	BKG DATE : 7-FEB-2010
SAMPLE DATE : 4-FEB-2010 00:00:00.	COUNT DATE : 8-FEB-2010 11:56:00	BKG LIVE TIME(SEC) : 60000.00
ANALYST : JXD2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W008.CNF:343
% YIELD : 92.079		CAL DATE : 3-FEB-2010

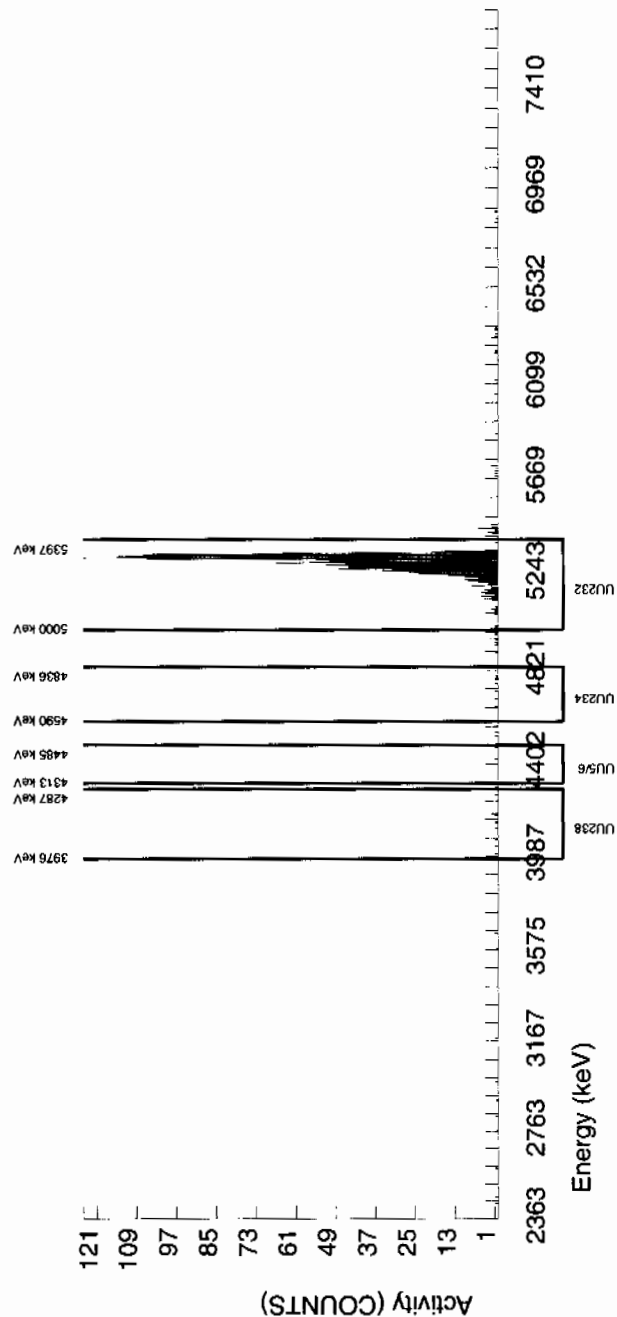
TRACER	MS/MSD	LCS/LCSD
ID : 1283-H	ID : 0244-A	ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5053E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 4.1484E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5300.233	41.152	1321.000	1318.000	3.000	1.7321	100.0000	2.03E+00	1.51E-01	6.20E-03	1.66E-02	5.60E-02
U-3/4	4763.020	4749.725	134.555	8.000	4.666	2.000	6.0782	100.0000	7.18E-03	4.56E-03	2.18E-02	4.77E-02	4.53E-03
U-235	4391.000	4436.636	79.736	3.000	3.000	0.000	2.7628	80.90000	5.71E-03	3.32E-03	1.22E-02	2.96E-02	3.30E-03
U-238	4184.730	4131.631	4.984	10.000	9.000	1.000	3.2810	100.0000	1.39E-02	5.20E-03	1.18E-02	2.77E-02	5.11E-03

NOTES:

- * Sg calculated via blank population.
 (Sg updated 5-JAN-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
 U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996 SAMPLE ID : S1202023821_UU SAMPLE QTY : 0.506 G SAMPLE DATE : 15-JAN-2010 00:00:00 ANALYST : JXD2 % YIELD : 72.463		CHAMBER : 139 DETECTOR S/N : 76231 AVERAGE %EFFICIENCY : 24.9676 COUNT DATE : 8-FEB-2010 12:05:00 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B139.CNF;394 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W139.CNF;102 CAL DATE : 18-JAN-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5078E+00 dpm RESULTS : 3.2665E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5296.817	49.641
U-3/4	4763.020	4748.512	27.146
U-235	4391.000	4373.441	7.263
U-238	4184.730	4184.684	48.269
	GROSS AREA	NET AREA	BKG AREA
	818.000	815.000	3.000
	159.000	157.175	1.000
	8.000	7.000	1.000
	155.000	154.000	1.000
	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA
	100.0000	4.01E+00	3.29E-01
	100.0000	7.73E-01	8.45E-02
	80.90000	4.26E-02	1.85E-02
	100.0000	7.58E-01	8.33E-02
			DLC pCi/G
			1.98E-02
			6.96E-02
			3.91E-02
			3.76E-02
			MDC pCi/G
			5.30E-02
			1.52E-01
			9.47E-02
			8.84E-02
			UNC pCi/G
			1.41E-01
			6.21E-02
			1.82E-02
			6.15E-02

NOTES:

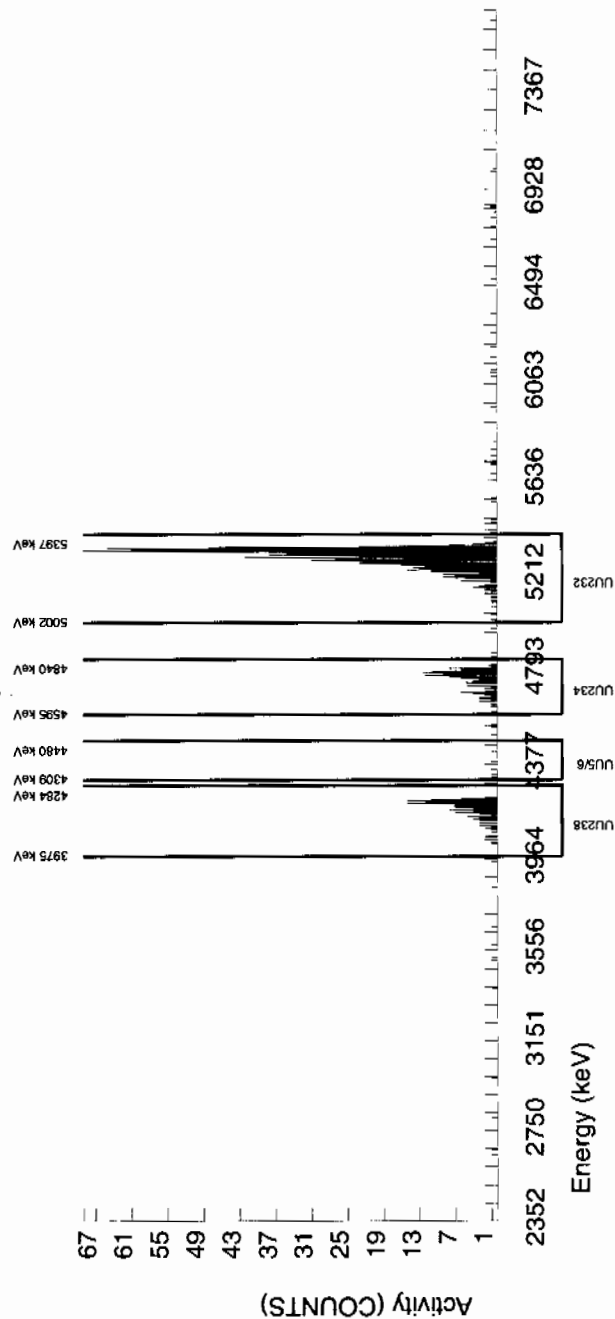
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944996 SAMPLE ID : S1202023822_UU SAMPLE QTY : 0.102 G SAMPLE DATE : 4-FEB-2010 00:00:00. ANALYST : JXD2 % YIELD : 88.481	CHAMBER : 140 DETECTOR S/N : 78771 AVERAGE %EFFICIENCY : 25.4652 COUNT DATE : 8-FEB-2010 12:05:12 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B140.CNF:394 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W140.CNF:107 CAL DATE : 18-JAN-2010
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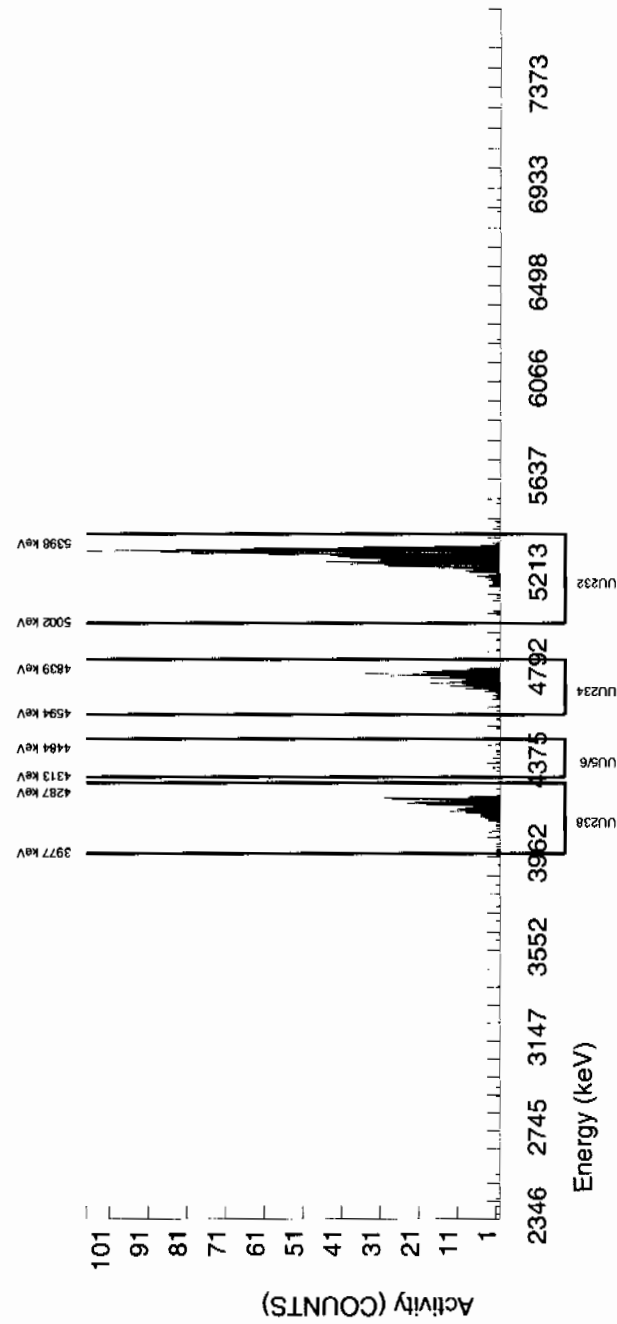
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5053E+00 dpm RESULTS : 3.9864E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5302.629	29.455	1016.000	1015.000	1.000	1.0000	100.0000	1.99E+01	1.66E+00	4.56E-02	1.44E-01	6.25E-01
U-3/4	4763.020	4758.880	52.285	303.000	301.973	0.000	6.0782	100.0000	5.92E+00	5.72E-01	2.77E-01	6.07E-01	3.41E-01
U-235	4391.000	4401.227	44.600	10.000	9.000	1.000	2.7628	80.90000	2.18E-01	8.21E-02	1.56E-01	3.77E-01	8.04E-02
U-238	4184.730	4188.436	34.099	280.000	279.000	1.000	3.2810	100.0000	5.47E+00	5.36E-01	1.50E-01	3.52E-01	3.29E-01

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



Radiochemistry Batch Checklist, Rev10

 Batch# 954840 Product: U Date: 2/19/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required)	/		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	/		
Instrument source check is within limits.	/		
Instrument bkg check is within limits.	/		
Method RDL/ LLD has been met.	/		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.		/	DER# 793390
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	/		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	/		
Sample was run within hold time.	/		
Sample was correctly preserved if required.	/		NA
Smears Taken for Radioactive batches.	/		
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	/		
No blank spaces on data forms.	/		
All line outs initialed and dated.	/		
No transcription errors are apparent.	/		NA
Aux data is correct.	/		
Client Special requirements page has been checked.	/		
Raw Data and/ or spectrum are included and properly stated.	/		
QC data entered into QC database and batch is in REVW	/		
Hit notification complete (if necessary)	/		NA
Batch entered into Case Narrative.	/		
Batch Data Exception Reports (DER) completed, if applicable.	/		DER# 793390
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.	/		DER# 793390
Aliquot Correction completed if required.	/		NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	/		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: Paul M. ShaleSecondary Review Performed By: John C. M. Shale

PV

Uranium Que Sheet

18-FEB-10

Batch #: 954840 Analyst: AXD2 First Client Due Date: 20-FEB-10 Internal Due Date: 14-FEB-10
Tracer Isotope: U-232 U-236 Tracer Code: 1283-H Expiration Date: 12/9/10 Vol: 0.1
LCS Isotope: U-238 LCS Code: 1 Expiration Date: 1/1/10 Vol: 1
Spike Isotope: U-238 Spike Code: 1 Expiration Date: 1/1/10 Vol: 1
Prep Date: 2/18/10 Initials: AWO Pipet ID: 2971058 Balance ID: 16750207

Witness: AWO 2/18/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/1/1)	U Det #
245395006-5	RE15-10-7873	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	1	1	0.129	141
245395007-5	RE15-10-7911	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	2	2	0.199	142
245395008-5	RE15-10-7908	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	3	3	0.117	143
245395009-5	RE15-10-7912	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	4	4	0.122	144
245395012-5	RE15-10-7907	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	5	5	0.132	145
245395014-5	RE15-10-7909	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JAN-10	6	6	0.136	146
1202047013-1	MB for batch 954840	MB		UCF pCi/g to pCi	SOIL	QC ACCOUNT		7	7	0.138	147
1202047014-5	RE15-10-7908(245395008DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	19-JAN-10	8	8	0.146	139
1202047015-1	LCS for batch 954840	LCS		UCF pCi/g to pCi	SOIL	QC ACCOUNT		9	9	0.102	140

* SEM 0244-A exp. 10/31/20

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH INDIGESTION
Circle One

Data Reviewed By: AWO 2/19/10

Blank Correction Report

Batch ID 954840

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202047014	DUP	Uranium-233/234	0.146 g	8.58	0.890	0.684	.048356164	pCi/g	NO
		Uranium-235/236	0.146 g	1.89	0.316	0.445	-.03184932	pCi/g	NO
		Uranium-238	0.146 g	94.0	8.07	0.472	.054452055	pCi/g	NO
1202047015	LCS	Uranium-233/234	0.102 g	4.64	0.806	0.969	.069215686	pCi/g	NO
		Uranium-235/236	0.102 g	0.112	0.0796	0.630	-.04558824	pCi/g	NO
		Uranium-238	0.102 g	5.45	0.882	0.688	.077941176	pCi/g	NO
1202047013	MB	Uranium-233/234	1.00 g	0.00706	0.00857	0.105	.00706	pCi/g	YES
		Uranium-235/236	1.00 g	-0.00465	0.00693	0.0686	-.00465	pCi/g	NO
		Uranium-238	1.00 g	0.00795	0.00723	0.0727	.00795	pCi/g	YES
245395006	RE15-10-7873	Uranium-233/234	0.129 g	5.39	0.642	0.801	.054728682	pCi/g	NO
		Uranium-235/236	0.129 g	1.11	0.245	0.521	-.03604651	pCi/g	NO
		Uranium-238	0.129 g	36.8	3.34	0.552	.061627907	pCi/g	NO
245395007	RE15-10-7911	Uranium-233/234	0.159 g	35.2	3.43	0.998	.044402516	pCi/g	NO
		Uranium-235/236	0.159 g	4.89	0.690	0.649	-.02924528	pCi/g	NO
		Uranium-238	0.159 g	245	22.3	0.688	.05	pCi/g	NO
245395008	RE15-10-7908	Uranium-233/234	0.117 g	18.4	1.86	1.01	.060341880	pCi/g	NO
		Uranium-235/236	0.117 g	3.25	0.524	0.660	-.03974359	pCi/g	NO
		Uranium-238	0.117 g	188	16.8	0.700	.067948718	pCi/g	NO
245395009	RE15-10-7912	Uranium-233/234	0.122 g	9.61	1.03	0.867	.057868852	pCi/g	NO
		Uranium-235/236	0.122 g	1.23	0.272	0.564	-.03811475	pCi/g	NO
		Uranium-238	0.122 g	80.0	7.01	0.598	.065163934	pCi/g	NO
245395012	RE15-10-7907	Uranium-233/234	0.132 g	18.1	1.75	0.808	.053484848	pCi/g	NO
		Uranium-235/236	0.132 g	1.91	0.340	0.526	-.03522727	pCi/g	NO
		Uranium-238	0.132 g	108	9.41	0.557	.060227273	pCi/g	NO
245395014	RE15-10-7909	Uranium-233/234	0.136 g	15.2	1.53	0.893	.051911765	pCi/g	NO
		Uranium-235/236	0.136 g	2.16	0.382	0.580	-.03419118	pCi/g	NO
		Uranium-238	0.136 g	112	9.85	0.615	.058455882	pCi/g	NO

2/19/10

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 954840		CHAMBER : 141		LIB FILE : ENV_ALPHA_UU	
SAMPLE ID : S0245395006_UU		DETECTOR S/N : 76232		BKG FILE : B141.CNF:400	
SAMPLE QTY : 0.129 G		AVERAGE %EFFICIENCY : 25.8088		BKG DATE : 14-FEB-2010	
SAMPLE DATE : 19-JAN-2010 00:00:00		COUNT DATE : 19-FEB-2010 07:56:20		BKG LIVE TIME(SEC) : 60000.00	
ANALYST : AXD2		ELAPSED LIVE TIME(SEC) : 22924.14		EFF FILE : W141.CNF:107	
% YIELD : 94.772				CAL DATE : 19-FEB-2010	

TRACER ID : 1283-H		MS/MSD ID : 0244-A		LCS/LCSD ID : 0244-A	
NUCLIDE : U232		NUCLIDE : U-238		NUCLIDE : U-238	
NOMINAL : 4.5073E+00 dpm		NOMINAL : 5.7500E+00 pCi/G		NOMINAL : 5.7500E+00 pCi/G	
RESULTS : 4.2717E+00 dpm					

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5303.713	65.584	422.000	420.854	1.146	1.0706	100.0000	1.57E+01	1.54E+00	7.74E-02	2.56E-01	7.69E-01
U-3/4	4763.020	4767.024	53.132	145.000	144.192	0.382	4.8416	100.0000	5.39E+00	6.42E-01	3.50E-01	8.01E-01	4.50E-01
U-235	4391.000	4411.652	4.939	24.000	24.000	0.000	2.2152	80.900000	1.11E+00	2.45E-01	1.98E-01	5.21E-01	2.26E-01
U-238	4184.730	4192.134	51.163	985.000	984.236	0.764	3.1208	100.0000	3.68E+01	3.34E+00	2.26E-01	5.52E-01	1.17E+00

NOTES:

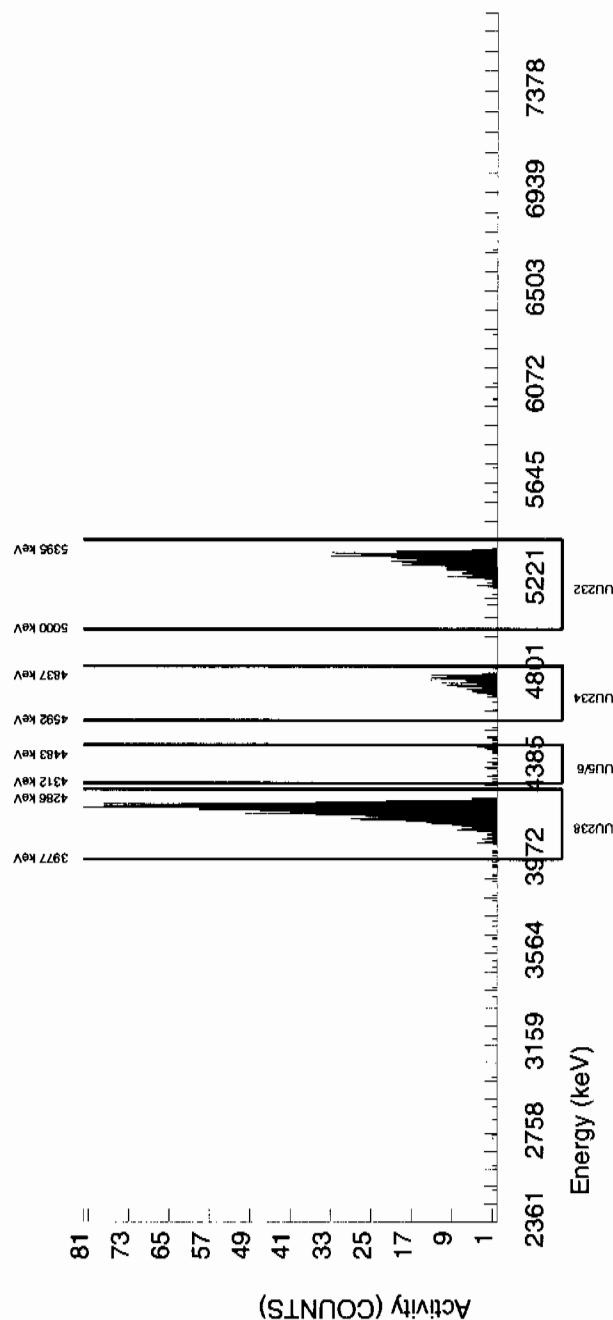
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 954840 SAMPLE ID : S0245395007_UU SAMPLE QTY : 0.159 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : AXD2 % YIELD : 61.799	CHAMBER : 142 DETECTOR S/N : 64261 AVERAGE %EFFICIENCY : 25.7599 COUNT DATE : 19-FEB-2010 07:56:23 ELAPSED LIVE TIME(SEC) : 22926.96	LIB FILE : ENV_ALPHA_UU BKG FILE : B142.CNF:394 BKG DATE : 14-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W142.CNF:111 CAL DATE : 19-FEB-2010
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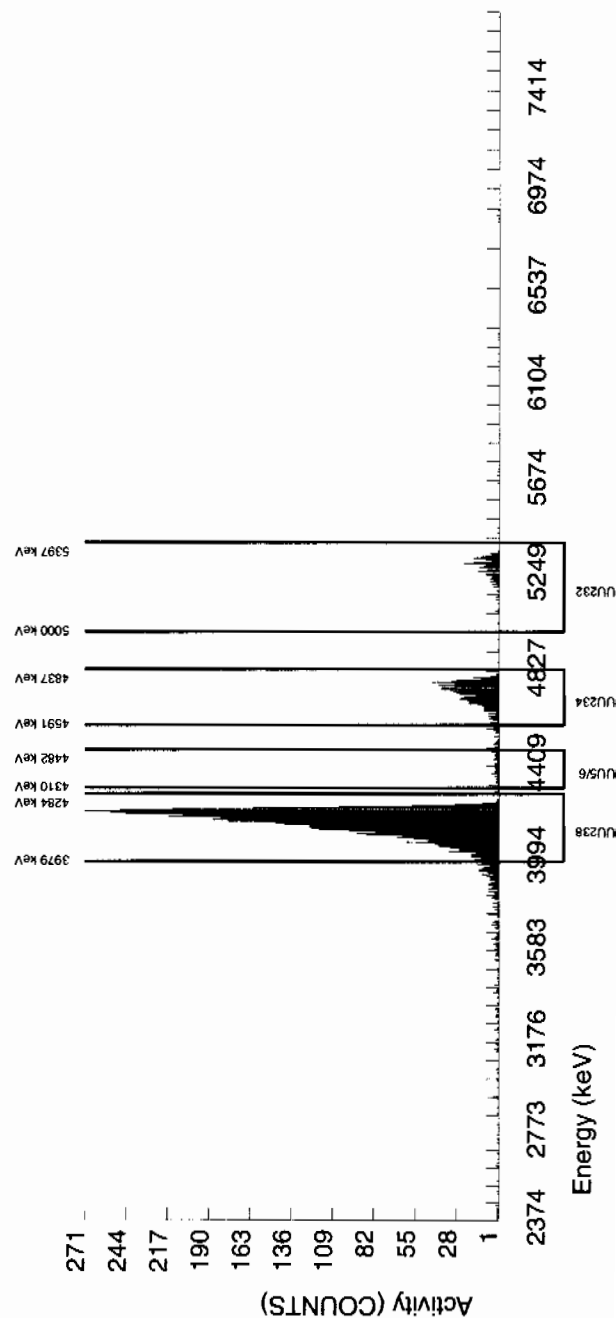
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5073E+00 dpm RESULTS : 2.7855E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5282.192	72.377	277.000	273.943	3.057	1.7484	100.0000	1.28E+01	1.39E+00	1.57E-01	4.41E-01	7.77E-01
U-3/4	4763.020	4735.032	85.364	756.000	755.723	0.000	4.8416	100.0000	3.52E+01	3.43E+00	4.36E-01	9.98E-01	1.28E+00
U-235	4391.000	4407.673	107.807	85.000	85.000	0.000	2.2152	80.90000	4.89E+00	6.90E-01	2.47E-01	6.49E-01	5.31E-01
U-238	4184.730	4160.015	78.171	5254.000	5253.618	0.382	3.1208	100.0000	2.45E+02	2.23E+01	2.81E-01	6.88E-01	3.38E+00

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 954840
SAMPLE ID : S0245395008_UU
SAMPLE QTY : 0.117 G
SAMPLE DATE : 19-JAN-2010 00:00:00
ANALYST : AXD2
% YIELD : 87.619

CHAMBER : 143
DETECTOR S/N : 65882
AVERAGE %EFFICIENCY : 24.2868
COUNT DATE : 19-FEB-2010 07:56:25
ELAPSED LIVE TIME(SEC) : 22930.04

LIB FILE : ENV_ALPHA_UU
BKG FILE : B143.CNF:396
BKG DATE : 14-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W143.CNF:114
CAL DATE : 19-FEB-2010

TRACER
ID : 1283-H
NUCLIDE : U232
NOMINAL : 4.5073E+00 dpm
RESULTS : 3.9492E+00 dpm

MS/MSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/G

LCS/LCSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/G

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5280.281	91.376	367.000	366.236	0.764	0.8743	100.0000	1.74E+01	1.78E+00	8.00E-02	2.88E-01	9.08E-01
U-3/4	4763.020	4734.038	63.067	388.000	387.629	0.000	4.8416	100.0000	1.84E+01	1.86E+00	4.43E-01	1.01E+00	9.32E-01
U-235	4391.000	4400.993	130.008	56.000	55.618	0.382	2.2152	80.90000	3.25E+00	5.24E-01	2.51E-01	6.60E-01	4.38E-01
U-238	4184.730	4162.522	73.191	3970.000	3970.000	0.000	3.1208	100.0000	1.88E+02	1.68E+01	2.86E-01	7.00E-01	2.98E+00

NOTES:

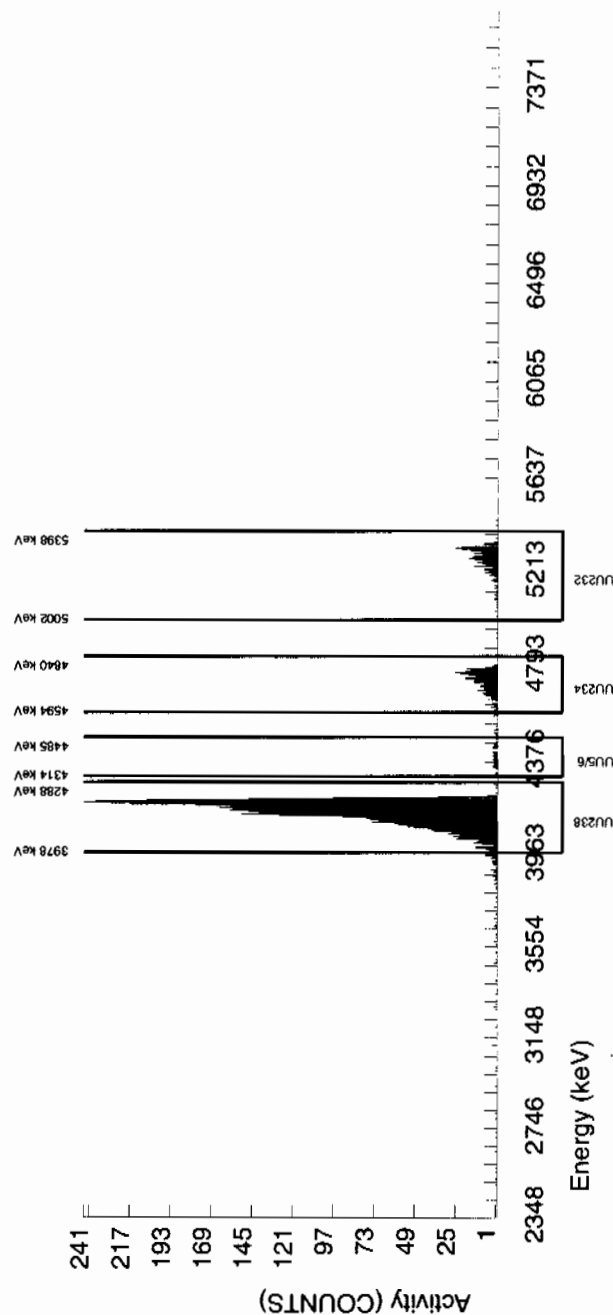
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area
due to tracer impurity:

U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

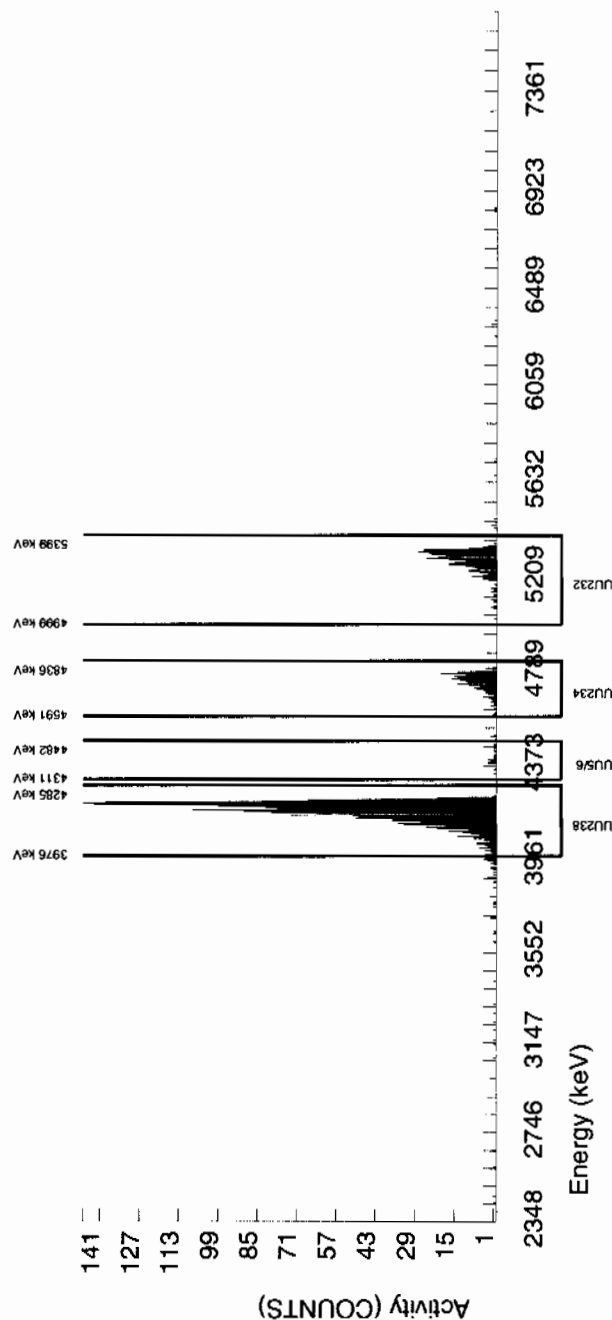
BATCH NUMBER : 954840				CHAMBER : 144				LIB FILE : ENV_ALPHA_UU					
SAMPLE ID : S0245395009_UU				DETECTOR S/N : 75551				BKG FILE : B144.CNF;395					
SAMPLE QTY : 0.122 G				AVERAGE %EFFICIENCY : 25.1386				BKG DATE : 14-FEB-2010					
SAMPLE DATE : 19-JAN-2010 00:00:00				COUNT DATE : 19-FEB-2010 07:56:28				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : AXD2				ELAPSED LIVE TIME(SEC) : 22933.29				EFF FILE : W144.CNF;108					
% YIELD : 95.004								CAL DATE : 19-FEB-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1283-H				ID : 0244-A				ID : 0244-A					
NUCLIDE : U232				NUCLIDE : U-238				NUCLIDE : U-238					
NOMINAL : 4.5073E+00 dpm				NOMINAL : 5.7500E+00 pCi/G				NOMINAL : 5.7500E+00 pCi/G					
RESULTS : 4.2821E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5286.746	70.475	413.000	411.089	1.911	1.3824	100.0000	1.66E+01	1.63E+00	1.08E-01	3.26E-01	8.23E-01
U-3/4	4763.020	4750.153	54.073	238.000	237.584	0.000	4.8416	100.0000	9.61E+00	1.03E+00	3.79E-01	8.67E-01	6.23E-01
U-235	4391.000	4408.329	20.260	25.000	24.618	0.382	2.2152	80.90000	1.23E+00	2.72E-01	2.14E-01	5.64E-01	2.51E-01
U-238	4184.730	4175.414	54.387	1977.000	1977.000	0.000	3.1208	100.0000	8.00E+01	7.01E+00	2.44E-01	5.98E-01	1.80E+00

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 954840 SAMPLE ID : S0245395012_UU SAMPLE QTY : 0.132 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : AXD2 % YIELD : 94.993		CHAMBER : 145 DETECTOR S/N : 72526 AVERAGE %EFFICIENCY : 24.9308 COUNT DATE : 19-FEB-2010 07:56:29 ELAPSED LIVE TIME(SEC) : 22936.58	LIB FILE : ENV_ALPHA_UU BKG FILE : B145.CNF;393 BKG DATE : 14-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W145.CNF;113 CAL DATE : 19-FEB-2010
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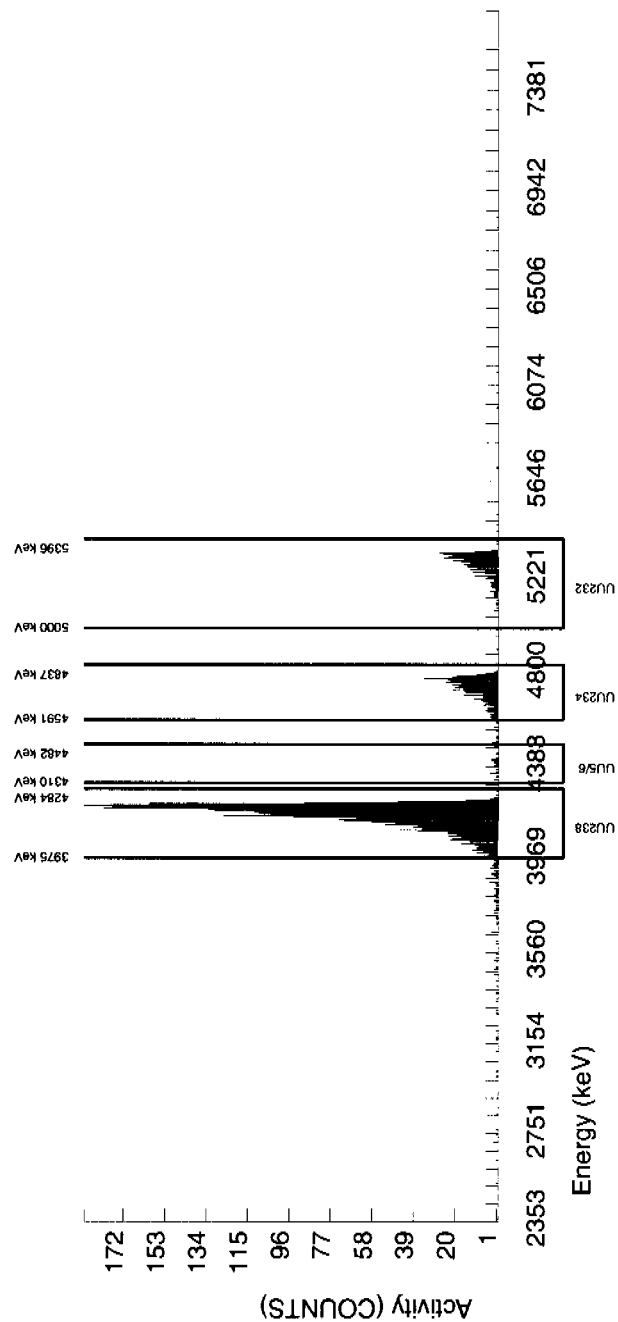
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5073E+00 dpm RESULTS : 4.2816E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5285.144	70.087	410.000	407.706	2.294	1.5145	100.0000	1.54E+01	1.52E+00	1.10E-01	3.23E-01	7.65E-01
U-3/4	4763.020	4737.516	59.745	481.000	480.205	0.382	4.8416	100.0000	1.81E+01	1.75E+00	3.53E-01	8.08E-01	8.26E-01
U-235	4391.000	4397.692	70.226	41.000	41.000	0.000	2.2152	80.900000	1.91E+00	3.40E-01	2.00E-01	5.25E-01	2.98E-01
U-238	4184.730	4168.314	63.892	2854.000	2853.618	0.382	3.1208	100.0000	1.08E+02	9.41E+00	2.28E-01	5.57E-01	2.01E+00

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

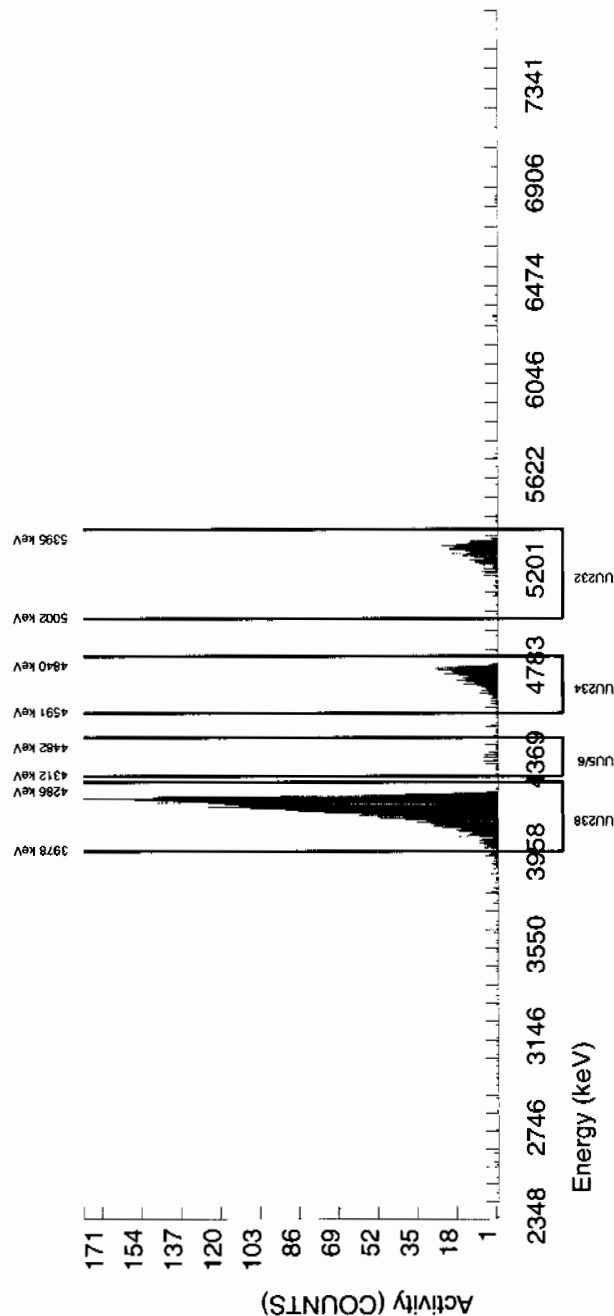


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 954840 SAMPLE ID : S0245395014_UU SAMPLE QTY : 0.136 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : AXD2 % YIELD : 84.109				CHAMBER : 146 DETECTOR S/N : 72527 AVERAGE %EFFICIENCY : 24.7373 COUNT DATE : 19-FEB-2010 07:56:32 ELAPSED LIVE TIME(SEC) : 22939.51				LIB FILE : ENV_ALPHA_UU BKG FILE : B146.CNF:398 BKG DATE : 14-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W146.CNF:115 CAL DATE : 19-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5073E+00 dpm RESULTS : 3.7910E+00 dpm		MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G		LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G									
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5287.065	63.434	359.000	358.235	0.765	0.8744	100.0000	1.49E+01	1.51E+00	7.04E-02	2.54E-01	7.90E-01
U-3/4	4763.020	4749.771	77.867	366.000	364.490	1.147	4.8416	100.0000	1.52E+01	1.53E+00	3.90E-01	8.93E-01	7.97E-01
U-235	4391.000	4402.572	43.210	42.000	42.000	0.000	2.2152	80.90000	2.16E+00	3.82E-01	2.21E-01	5.80E-01	3.34E-01
U-238	4184.730	4173.017	66.677	2685.000	2685.000	0.000	3.1208	100.0000	1.12E+02	9.85E+00	2.51E-01	6.15E-01	2.16E+00

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

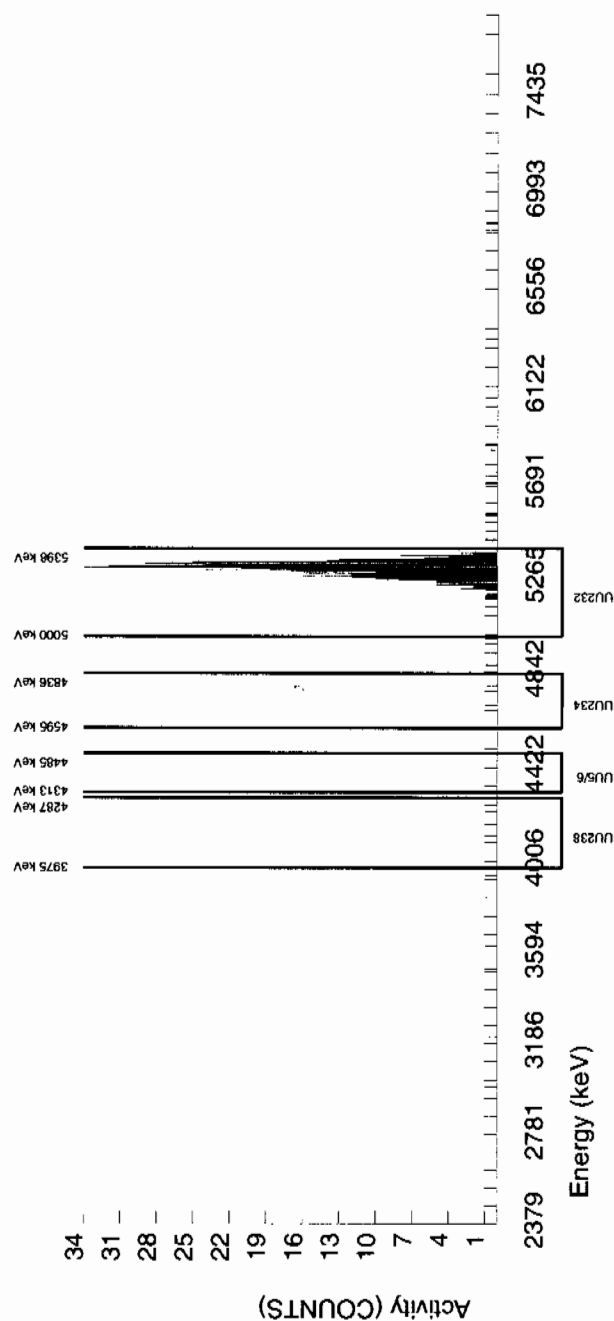
NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 954840 SAMPLE ID : S1202047014_UU SAMPLE QTY : 0.146 G SAMPLE DATE : 19-JAN-2010 00:00:00 ANALYST : AXD2 % YIELD : 101.818		CHAMBER : 139 DETECTOR S/N : 76231 AVERAGE %EFFICIENCY : 24.8328 COUNT DATE : 19-FEB-2010 07:56:15 ELAPSED LIVE TIME(SEC) : 22946.59	LIB FILE : ENV_ALPHA_UU BKG FILE : B139.CNF:396 BKG DATE : 14-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W139.CNF:104 CAL DATE : 19-FEB-2010
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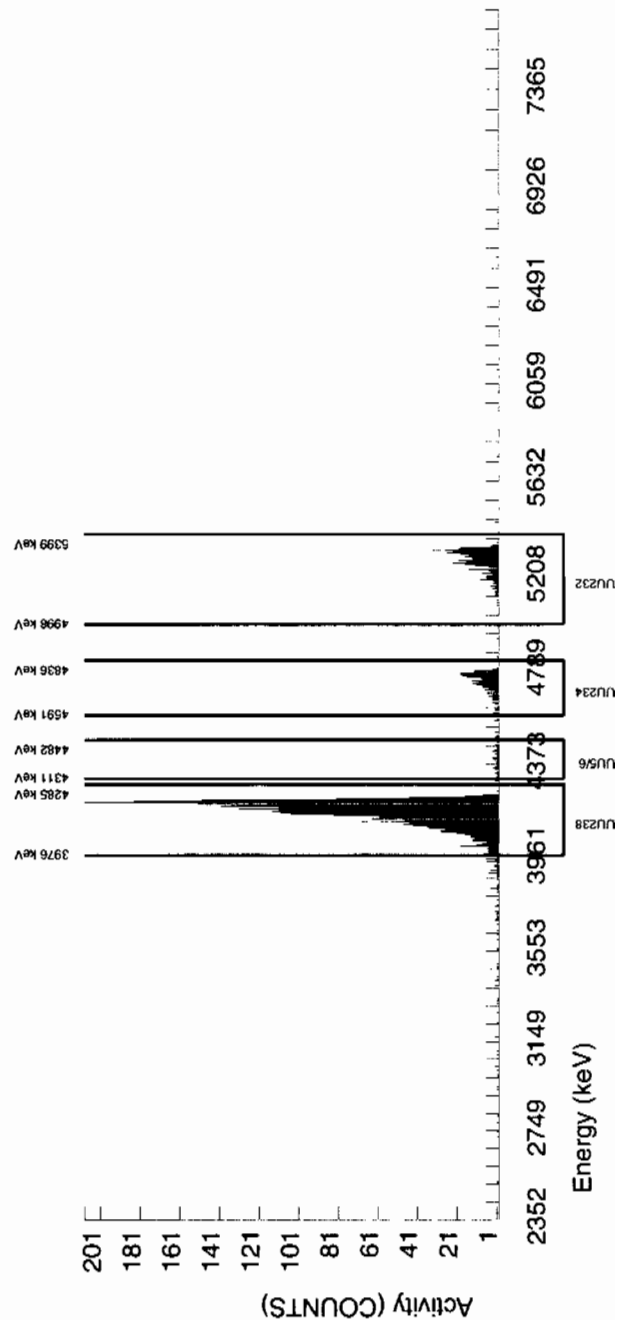
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5073E+00 dpm RESULTS : 4.5892E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5284.233	69.635	437.000	435.470	1.530	1.2368	100.0000	1.39E+01	1.34E+00	7.63E-02	2.39E-01	6.68E-01
U-3/4	4763.020	4743.472	61.399	270.000	268.794	0.765	4.8416	100.0000	8.58E+00	8.90E-01	2.99E-01	6.84E-01	5.24E-01
U-235	4391.000	4398.024	0.000	48.000	48.000	0.000	2.2152	80.90000	1.89E+00	3.16E-01	1.69E-01	4.45E-01	2.73E-01
U-238	4184.730	4168.244	62.272	2948.000	2947.618	0.382	3.1208	100.0000	9.40E+01	8.07E+00	1.93E-01	4.72E-01	1.73E+00

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 954840 SAMPLE ID : S1202047015_UU SAMPLE QTY : 0.102 G SAMPLE DATE : 18-FEB-2010 00:00:00 ANALYST : AXD2 % YIELD : 99.568	CHAMBER : 140 DETECTOR S/N : 78771 AVERAGE %EFFICIENCY : 25.6501 COUNT DATE : 19-FEB-2010 07:56:18 ELAPSED LIVE TIME(SEC) : 22950.70	LIB FILE : ENV_ALPHA_UU BKG FILE : B140.CNF:396 BKG DATE : 14-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W140.CNF:109 CAL DATE : 19-FEB-2010
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TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5036E+00 dpm RESULTS : 4.4841E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

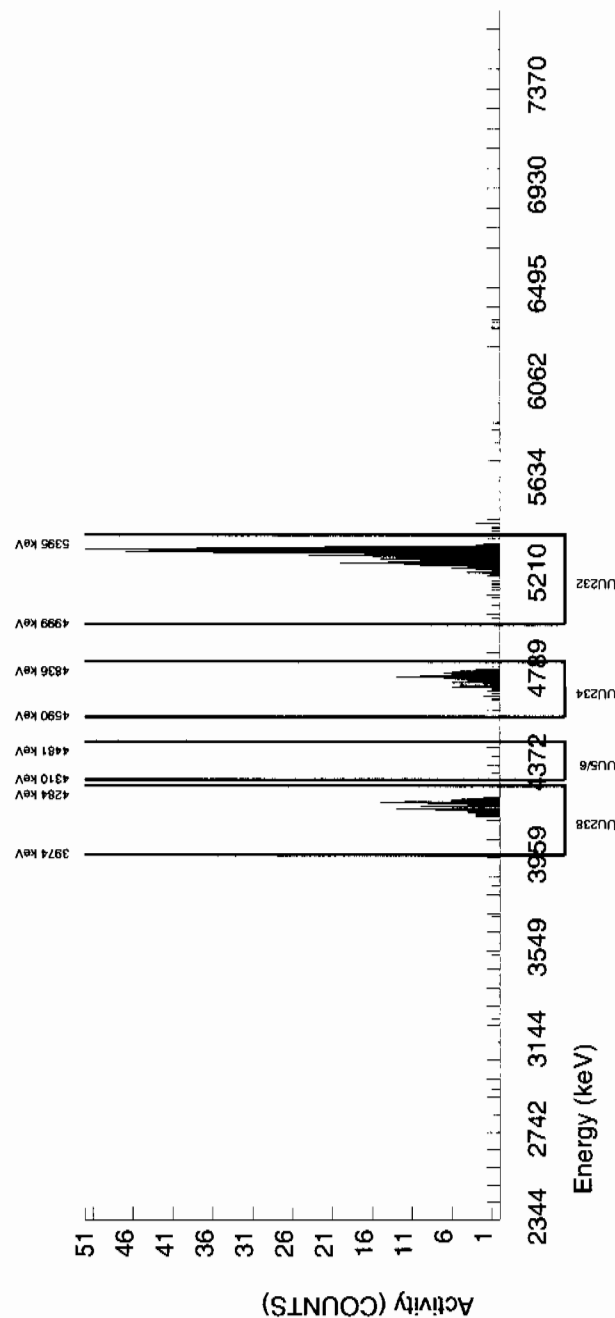
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5308.348	26.075	443.000	439.940	3.060	1.7493	100.0000	1.99E+01	1.95E+00	1.53E-01	4.28E-01	9.53E-01
U-3/4	4763.020	4762.605	24.146	103.000	102.555	0.000	4.8416	100.0000	4.64E+00	6.06E-01	4.23E-01	9.69E-01	4.58E-01
U-235	4391.000	4382.378	74.295	2.000	2.000	0.000	2.2152	80.900000	1.12E-01	7.96E-02	2.39E-01	6.30E-01	7.90E-02
U-238	4184.730	4195.879	43.829	121.000	120.617	0.383	3.1208	100.0000	5.45E+00	6.82E-01	2.73E-01	6.68E-01	4.98E-01

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area
due to tracer impurity:
U-3/4

Radiochemistry Batch Checklist, Rev10

Batch#

944966

Product:

XS

Date:

2/3/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity; If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.			NA
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125%, or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line outs initialed and dated.	✓		
No transcription errors are apparent.			
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMF. results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

[Signature] 2/3/10

Secondary Review Performed By:

[Signature] 2/4/10

Gamma Spec Que Sheet

01/26/2010

Batch #: 944966 Analyst: MXR1 First Client Due Date: 02/13/2010 Internal Due Date: 02/03/2010

Gamma Spike Isotope: Mixed Gamma Spike Code: N/A Expiration Date: N/A Vol: N/A Nominal Concentration: N/A

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 12/2/10 Vol: 1.0 mL Nominal Concentration: 1.591E-13 5.564E-16 6.42

Initials: MS Prep Date: 1/26/10 Library: SUD Witness: N/A

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date	Geometry	Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
245371001-1	RE16-10-957	SAMPLE	LANL010	SOIL	15-JAN-10 12:00:00	RF	CAVA	126.74	2	1/26/10
245371002-1	RE16-10-979	SAMPLE	LANL010	SOIL	15-JAN-10 12:00:00	RF		126.52	10	
245393010-1	RE15-10-8053	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		141.98	12	
245393011-1	RE15-10-8054	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		152.71	13	
245395001-1	RE15-10-7869	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		144.70	16	
245395002-1	RE15-10-7874	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		145.27	18	
245395003-1	RE15-10-7871	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		170.47	19	
245395004-1	RE15-10-7872	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		139.17	20	
245395005-1	RE15-10-7870	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		141.12	21	
245395006-1	RE15-10-7873	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		152.52	23	
245395007-1	RE15-10-7911	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		181.03	2	
245395008-1	RE15-10-7908	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		146.43	10	
245395009-1	RE15-10-7912	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		137.08	12	
245395010-1	RE15-10-7906	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		137.08	13	
245395011-1	RE15-10-7905	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		147.64	16	
245395012-1	RE15-10-7907	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		145.52	17	
245395013-1	RE15-10-7913	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		145.34	18	
245395014-1	RE15-10-7909	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		169.81	19	
245395015-1	RE15-10-7910	SAMPLE	LANL010	SOIL	19-JAN-10 12:00:00	RF		157.39	1	
1202023719-1	MB	MB	QC ACCOUNT	SOIL	1/26/10	RF		181.03	4	
1202023720-1	DUP RE15-10-7905(245395011)	DUP	QC ACCOUNT	SOIL	1/26/10	RF		147.58	6	
1202023721-1	LCS	LCS	QC ACCOUNT	SOIL	1/26/10	RF		155.44	7	

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: *[Signature]* 2/15/10 Page 1 of 1

✓ no history
✓ data/res

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
944966	245371001	SAMPLE	02-FEB-10		Americium-241	-0.03438	0.2954	0.200
					Sodium-22	-0.01398	0.08779	0.080
					Thorium-234	1.363	2.326	2.00
944966	245371002	SAMPLE	02-FEB-10		Americium-241	0.00853	0.3809	0.200
					Thorium-234	-0.6454	2.885	2.00
944966	245393010	SAMPLE	02-FEB-10		Americium-241	-0.0357	0.4264	0.200
					Cerium-139	0.03425	0.05488	0.050
944966	245393011	SAMPLE	02-FEB-10		Cerium-139	-0.00144	0.05149	0.050
					Sodium-22	-0.04255	0.0837	0.080
944966	245395001	SAMPLE	02-FEB-10		Americium-241	0.06347	0.3341	0.200
944966	245395002	SAMPLE	02-FEB-10		Americium-241	0.1088	0.314	0.200
944966	245395003	SAMPLE	02-FEB-10		Americium-241	0.3565	0.3827	0.200
					Cerium-139	-0.01654	0.05419	0.050
944966	245395004	SAMPLE	02-FEB-10					
944966	245395005	SAMPLE	02-FEB-10		Sodium-22	0.00553	0.09252	0.080
944966	245395006	SAMPLE	02-FEB-10		Americium-241	0.271	0.4757	0.200
					Cerium-139	-0.02834	0.05613	0.050
944966	245395007	SAMPLE	02-FEB-10		Cerium-139	-0.02284	0.07017	0.050
944966	245395008	SAMPLE	02-FEB-10		Americium-241	0.6105	0.8184	0.200
					Cerium-139	-0.00759	0.06787	0.050
					Sodium-22	0.02488	0.08042	0.080
944966	245395009	SAMPLE	02-FEB-10		Americium-241	0.14	0.4706	0.200
					Cerium-139	0.01684	0.05731	0.050
944966	245395010	SAMPLE	02-FEB-10		Cerium-139	-0.02653	0.05139	0.050
					Cesium-134	0.03865	0.1053	0.100
					Sodium-22	0.03354	0.1073	0.080
944966	245395011	SAMPLE	02-FEB-10		Americium-241	0.03966	0.2564	0.200
944966	245395012	SAMPLE	02-FEB-10		Americium-241	0.08414	0.2303	0.200
					Cerium-139	-0.01234	0.06485	0.050
					Cesium-134	0.104	0.13	0.100
944966	245395013	SAMPLE	02-FEB-10		Americium-241	0.05611	0.2773	0.200
944966	245395014	SAMPLE	02-FEB-10		Americium-241	0.459	0.4858	0.200
					Cerium-139	0.03114	0.06353	0.050
944966	245395015	SAMPLE	02-FEB-10		Americium-241	0.2243	0.3913	0.200
					Cerium-139	0.03518	0.06165	0.050
944966	1202023719	MB	02-FEB-10					
944966	1202023720	DUP	02-FEB-10		Americium-241	0.2894	0.4168	0.200
					Cerium-139	-0.03316	0.05711	0.050
944966	1202023721	LCS	02-FEB-10		Cerium-139	-0.00631	0.07429	0.050
					Cesium-134	0.1872	0.1884	0.100
					Europium-152	0.0198	0.3058	0.200
					Mercury-203	0.03042	0.1086	0.100

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
944966	1202023721	LCS	02-FEB-10		Potassium-40	0.8777	1.125	1.00
					Ruthenium-106	0.1891	1.054	0.800
					Sodium-22	-0.01137	0.08583	0.080
					Thorium-234	0.1083	2.522	2.00
					Tin-113	-0.00854	0.1425	0.100
					Uranium-235	-0.1286	0.5077	0.500

Gamma Review Report based on Result > MDA for Batch:944966

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project	Quals	Zero?	queue
245371001	15-JAN-10 12:00	02-FEB-10 06:51	17.8	SAMPLE	LOAD	1	LANL	LANL01004	GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	1.498	0.179	pCi/g	0.2584	N	910.6	3	1.494	IDENTIFIED	10.2	
Americium-243	0.2992	0.03918	pCi/g	0.0935	N	74.56	1	1.034	IDENTIFIED	12.34	
Annihilation Rad.	0.1247	0.03497	pCi/g	0.05034	N	510.6	1	1.725	IDENTIFIED	27.6	
Bismuth-211	2.952	0.2809	pCi/g	0.3556	Y	351.6	4	1.235	IDENTIFIED	7.573	✓
Bismuth-214	0.9452	0.107	pCi/g	0.1144	0.200	609.2	4	1.49	IDENTIFIED	10.02	
Cadmium-109	2.561	0.5957	pCi/g	1.276	Y	86.85	3	1.313	IDENTIFIED	22.73	✓
Cerium-143	2642	458.7	pCi/g	0	N	0	7	0	SHORT_HLIF	0	
Gross Gamma	8.853	1.552	pCi/g	2.443	N	0					
Iodine-133	HE	38620	29550	pCi/g	0	N	0	7	0	SHORT_HLIF	0
Iodine-135	-	8.29E+17	0	pCi/g	0	N	0	7	0	SHORT_HLIF	0
Lead-212	✓	1.503	0.1107	pCi/g	0.09769	0.100	238.3	4	1.063	IDENTIFIED	3.831
Lead-214	✓	1.027	0.1013	pCi/g	0.124	0.100	351.6	4	1.235	IDENTIFIED	7.573
Lutetium-177	HE	3.439	0.9307	pCi/g	2.718	N	0	7	0	FAIL_ABUND	0
Neptunium-237	HE	0.7362	0.1873	pCi/g	0.374	N	86.85	3	1.313	IDENTIFIED	22.73
Niobium-97	HE	1.02E+05	7.40E+05	pCi/g	0	N	0	7	0	SHORT_HLIF	0
Polonium-212	NR	1.503	0.1107	pCi/g	0.09769	N	238.3	4	1.063	IDENTIFIED	3.831
Polonium-214	NR	1.027	0.1013	pCi/g	0.124	N	351.6	4	1.235	IDENTIFIED	7.573
Polonium-216	NR	1.503	0.1107	pCi/g	0.09769	N	238.3	4	1.063	IDENTIFIED	3.831
Polonium-218	NR	1.027	0.1013	pCi/g	0.124	N	351.6	4	1.235	IDENTIFIED	7.573
Potassium-40	✓	38.74	2.167	pCi/g	0.5606	1.00	1460	1	2.291	IDENTIFIED	2.947
Radium-224	✓	3.716	0.7977	pCi/g	1.112	Y	241.3	1	1.861	IDENTIFIED	20.64
Radium-226	✓	0.9452	0.107	pCi/g	0.1144	Y	609.2	4	1.49	IDENTIFIED	10.02
Radium-228	✓	1.498	0.179	pCi/g	0.2584	0.500	910.6	3	1.494	IDENTIFIED	10.2
Thallium-208	✓	0.4196	0.05056	pCi/g	0.06233	0.080	582.9	1	1.765	IDENTIFIED	10.96
Thorium-228	NR	1.529	0.1126	pCi/g	0.09944	N	238.3	4	1.063	IDENTIFIED	3.831
Thorium-230	NR	0.9452	0.107	pCi/g	0.1144	N	609.2	4	1.49	IDENTIFIED	10.02
Thorium-232	NR	1.498	0.179	pCi/g	0.2584	N	910.6	3	1.494	IDENTIFIED	10.2
Tin-126	✓	0.2507	0.05832	pCi/g	0.1256	N	86.85	3	1.313	IDENTIFIED	22.73
Titanium-44	HE	0.07681	0.0194	pCi/g	0.06589	N	0	7	0	NOT_IDENTI	0
Total Uranium	-	4.0283	3.02E-06	ug/g	3.4638	N	0				
Uranium-234	NR	0.9452	0.107	pCi/g	0.1144	N	609.2	4	1.49	IDENTIFIED	10.02
Zirconium-97	HE	3.05E+07	1.54E+07	pCi/g	0	N	0	7	0	SHORT_HLIF	0

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245371002	15-JAN-10 12:00	02-FEB-10 07:08	17.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.315	0.1601	pCi/g	0.2047	N	910.6	3	1.572 IDENTIFIED	10.49	
Americium-243	0.3207	0.04403	pCi/g	0.09362	N	74.45	1	1.182 IDENTIFIED	12.59	
Annihilation Rad. HE	0.115	0.04085	pCi/g	0.04061	N	510.6	1	2.312 IDENTIFIED	35.37	
Bismuth-211	2.543	0.2108	pCi/g	0.3025	Y	351.6	4	1.41 IDENTIFIED	7.447	
Bismuth-212	0.8637	0.2715	pCi/g	0.6587	N	0	6	0 FAIL_ABUND	0	
Bismuth-214	0.9047	0.07872	pCi/g	0.09886	0.200	608.9	4	1.708 IDENTIFIED	7.824	
Cadmium-109	3.333	0.4977	pCi/g	1.288	Y	86.87	3	1.35 IDENTIFIED	13.83	
Cerium-143	2218	379.5	pCi/g	0	N	0	6	0 SHORT_HLIF	0	
Gross Gamma	8.558	1.313	pCi/g	2.272	N	0				
Lead-212	1.371	0.07316	pCi/g	0.09146	0.100	238.3	4	1.146 IDENTIFIED	3.754	
Lead-214	0.8845	0.07688	pCi/g	0.1054	0.100	351.6	4	1.41 IDENTIFIED	7.447	
Neptunium-237	0.9583	0.1739	pCi/g	0.4187	N	86.87	3	1.35 IDENTIFIED	13.83	
Niobium-95m	0.2294	0.0665	pCi/g	0.2215	N	0	6	0 NOT_IDENTI	0	
Polonium-212	1.371	0.07316	pCi/g	0.09146	N	238.3	4	1.146 IDENTIFIED	3.754	
Polonium-214	0.8845	0.07688	pCi/g	0.1054	N	351.6	4	1.41 IDENTIFIED	7.447	

Polonium-216	NR	1.371	0.07316	pCi/g	0.09146	N	238.3	4	1.146	IDENTIFIED	3.754	<input type="checkbox"/>
Polonium-218	NR	0.8845	0.07688	pCi/g	0.1054	N	351.6	4	1.41	IDENTIFIED	7.447	<input type="checkbox"/>
Potassium-40	✓	38.56	1.978	pCi/g	0.5589	1.00	1460	1	2.103	IDENTIFIED	2.787	<input type="checkbox"/>
Radium-224	INT	3.383	0.5965	pCi/g	1.04	Y	241.4	1	1.711	IDENTIFIED	17.36	<input checked="" type="checkbox"/> NF
Radium-226	✓	0.9047	0.07872	pCi/g	0.09886	Y	608.9	4	1.708	IDENTIFIED	7.824	<input type="checkbox"/>
Radium-228	✓	1.315	0.1601	pCi/g	0.2047	0.500	910.6	3	1.572	IDENTIFIED	10.49	<input type="checkbox"/>
Sodium-24	HE	2.75E+06	6.94E+06	pCi/g	0	N	0	6	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.4218	0.03504	pCi/g	0.06113	0.080	582.9	1	1.432	IDENTIFIED	7.597	<input type="checkbox"/>
Thorium-228	NR	1.396	0.07447	pCi/g	0.09309	N	238.3	4	1.146	IDENTIFIED	3.754	<input type="checkbox"/>
Thorium-230	NR	0.9047	0.07872	pCi/g	0.09886	N	608.9	4	1.708	IDENTIFIED	7.824	<input type="checkbox"/>
Thorium-232	NR	1.315	0.1601	pCi/g	0.2047	N	910.6	3	1.572	IDENTIFIED	10.49	<input type="checkbox"/>
Tin-126	INT	0.3263	0.04872	pCi/g	0.127	N	86.87	3	1.35	IDENTIFIED	13.83	<input type="checkbox"/>
Titanium-44	LA	0.1183	0.0215	pCi/g	0.07181	N	0	6	0	NOT_IDENTI	0	<input type="checkbox"/>
Uranium-234	NR	0.9047	0.07872	pCi/g	0.09886	N	608.9	4	1.708	IDENTIFIED	7.824	<input type="checkbox"/>
Zirconium-97	—	4.69E+07	1.37E+07	pCi/g	0	N	0	6	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245393010	19-JAN-10 12:00	02-FEB-10 07:09	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-227	HE	1.374	0.4019	pCi/g	0.6981	N	0	13 0	FAIL_ABUND 0	<input type="checkbox"/>
Actinium-228	NR	1.548	0.161	pCi/g	0.2131	N	911.1	3 1.643	IDENTIFIED 8.829	<input type="checkbox"/>
Americium-243	WT	0.3395	0.05802	pCi/g	0.1433	N	74.76	1 1.104	IDENTIFIED 16.75	<input type="checkbox"/>
Annihilation Rad.	HE	0.07001	0.03685	pCi/g	0.05062	N	510.7	1 2.249	IDENTIFIED 52.55	<input type="checkbox"/>
Bismuth-211	INT	3.186	0.2106	pCi/g	0.3307	Y	351.7	4 1.369	IDENTIFIED 5.814	<input checked="" type="checkbox"/> NF
Bismuth-212	LA	1.17	0.2472	pCi/g	0.6741	N	0	13 0	FAIL_ABUND 0	<input type="checkbox"/>
Bismuth-214	✓	1.006	0.07926	pCi/g	0.1132	0.200	609.1	4 1.579	IDENTIFIED 6.72	<input type="checkbox"/>
Cadmium-109	INT	3.904	0.616	pCi/g	1.869	Y	87.22	3 1.163	IDENTIFIED 15.31	<input checked="" type="checkbox"/> NF
Cerium-143	—	229.5	47.3	pCi/g	0	N	0	13 0	SHORT_HLIF 0	<input type="checkbox"/>
Gadolinium-153	LA	0.7111	0.0766	pCi/g	0.2146	N	0	13 0	FAIL_ABUND 0	<input type="checkbox"/>
Gold-195	LA	2.068	0.2228	pCi/g	0.6407	N	0	13 0	FAIL_ABUND 0	<input type="checkbox"/>
Gross Gamma	—	16.1	1.804	pCi/g	5.427	N	0			<input type="checkbox"/>
Iodine-133	HE	1219	1075	pCi/g	0	N	0	13 0	SHORT_HLIF 0	<input type="checkbox"/>
Lead-212	✓	1.346	0.06936	pCi/g	0.09304	0.100	238.5	4 1.011	IDENTIFIED 3.736	<input type="checkbox"/>
Lead-214	✓	1.108	0.07876	pCi/g	0.1088	0.100	351.7	4 1.369	IDENTIFIED 5.814	<input type="checkbox"/>
Neptunium-237	WT	1.129	0.2128	pCi/g	0.5964	N	87.22	3 1.163	IDENTIFIED 15.31	<input type="checkbox"/>
Niobium-95	NR	0.2674	0.0458	pCi/g	0.0612	N	766.3	1 1.135	IDENTIFIED 16.73	<input type="checkbox"/>
Niobium-97	HE	6191	13770	pCi/g	0	N	0	13 0	SHORT_HLIF 0	<input type="checkbox"/>
Polonium-212	NR	1.346	0.06936	pCi/g	0.09304	N	238.5	4 1.011	IDENTIFIED 3.736	<input type="checkbox"/>
Polonium-214	NR	1.108	0.07876	pCi/g	0.1088	N	351.7	4 1.369	IDENTIFIED 5.814	<input type="checkbox"/>
Polonium-216	NR	1.346	0.06936	pCi/g	0.09304	N	238.5	4 1.011	IDENTIFIED 3.736	<input type="checkbox"/>
Polonium-218	NR	1.108	0.07876	pCi/g	0.1088	N	351.7	4 1.369	IDENTIFIED 5.814	<input type="checkbox"/>
Potassium-40	✓	26.95	1.24	pCi/g	0.4041	1.00	1461	1 2.041	IDENTIFIED 2.906	<input type="checkbox"/>
Protactinium-234m	NR	73.55	6.721	pCi/g	7.009	N	1001	1 1.814	IDENTIFIED 7.939	<input type="checkbox"/>
Radium-224	INT	4.154	0.7241	pCi/g	1.059	Y	241.3	1 1.922	IDENTIFIED 17.21	<input checked="" type="checkbox"/> NF
Radium-226	✓	1.006	0.07926	pCi/g	0.1132	Y	609.1	4 1.579	IDENTIFIED 6.72	<input type="checkbox"/>
Radium-228	✓	1.548	0.161	pCi/g	0.2131	0.500	911.1	3 1.643	IDENTIFIED 8.829	<input type="checkbox"/>
Rhenium-183	HE	0.3128	0.06595	pCi/g	0.2339	N	0	13 0	FAIL_ABUND 0	<input type="checkbox"/>
Tellurium-125m	HE	25.75	6.589	pCi/g	21.81	N	0	13 0	NOT_IDENTI 0	<input type="checkbox"/>
Thallium-200	HE	15.15	101.6	pCi/g	0	N	0	13 0	SHORT_HLIF 0	<input type="checkbox"/>
Thallium-208	✓	0.5208	0.04604	pCi/g	0.05911	0.080	583	1 1.501	IDENTIFIED 8.085	<input type="checkbox"/>
Thorium-227	WT	1.374	0.4072	pCi/g	0.6981	Y	0	13 0	FAIL_ABUND 0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thorium-228	NR	1.364	0.07032	pCi/g	0.09433	N	238.5	4 1.011	IDENTIFIED 3.736	<input type="checkbox"/>
Thorium-230	NR	1.006	0.07926	pCi/g	0.1132	N	609.1	4 1.579	IDENTIFIED 6.72	<input type="checkbox"/>
Thorium-232	NR	1.548	0.161	pCi/g	0.2131	N	911.1	3 1.643	IDENTIFIED 8.829	<input type="checkbox"/>
Thorium-234	✓	61.21	5.591	pCi/g	3.261	2.00	63.11	2 0.9414	IDENTIFIED 3.313	<input type="checkbox"/>
Tin-126	INT	0.3845	0.06066	pCi/g	0.1849	N	87.22	3 1.163	IDENTIFIED 15.31	<input type="checkbox"/>
Titanium-44	LA	0.3352	0.03537	pCi/g	0.1011	N	0	13 0	FAIL_ABUND 0	<input type="checkbox"/>
Total Uranium		182.58	1.66E-05	ug/g	4.8537	N	0			<input type="checkbox"/>

Uranium-231	NR	4.925	1.231	pCi/g	1.815	N	94.54	1	1.165	IDENTIFIED	24.73	<input type="checkbox"/>
Uranium-234	NR	1.006	0.07926	pCi/g	0.1132	N	609.1	4	1.579	IDENTIFIED	6.72	<input type="checkbox"/>
Uranium-235	✓	1.064	0.2119	pCi/g	0.3802	0.500	143.8	1	1.008	IDENTIFIED	18.2	<input type="checkbox"/>
Uranium-238	NR	61.21	5.591	pCi/g	3.261	N	63.11	2	0.9414	IDENTIFIED	3.313	<input type="checkbox"/>
Zirconium-97		7.52E+05	2.85E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
245393011	19-JAN-10 12:00	02-FEB-10 07:09	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment	
Actinium-228	NR	2.058	0.1987	pCi/g	0.2686	N	910.8	3	1.76	IDENTIFIED 8.142	<input type="checkbox"/>
Americium-243	INT	0.3981	0.0316	pCi/g	0.06247	N	74.64	1	1.219	IDENTIFIED 6.661	<input type="checkbox"/>
Annihilation Rad.	HE	0.09711	0.03458	pCi/g	0.0583	N	510.7	1	1.955	IDENTIFIED 35.44	<input type="checkbox"/>
Bismuth-210	HE	1.096	0.436	pCi/g	0.7896	N	46.32	3	1.087	IDENTIFIED 39.56	<input type="checkbox"/>
Bismuth-211	WT	3.343	0.2625	pCi/g	0.3762	Y	351.8	4	1.338	IDENTIFIED 6.959	<input checked="" type="checkbox"/>
Bismuth-212	HE	1.301	0.2908	pCi/g	0.7906	N	0	10	0	FAIL_ABUND 0	<input type="checkbox"/>
Bismuth-214	✓	1.237	0.1035	pCi/g	0.1369	0.200	609	4	1.794	IDENTIFIED 6.94	<input type="checkbox"/>
Cadmium-109	INT	2.861	0.4373	pCi/g	1.226	Y	86.89	3	1.11	IDENTIFIED 14.76	<input checked="" type="checkbox"/>
Cerium-141	HE	0.1305	0.06577	pCi/g	0.1034	N	144.6	2	1.453	IDENTIFIED 50.13	<input type="checkbox"/>
Cerium-143	—	319.2	56.07	pCi/g	0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>
Cesium-134	LA	0.1144	0.02932	pCi/g	0.1104	0.100	0	10	0	NOT_IDENTI 0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Gross Gamma	—	9.189	1.62	pCi/g	3.554	N	0				<input type="checkbox"/>
Iodine-133	HE	1320	1237	pCi/g	0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>
Iodine-135	HE	7.25E+12	1.30E+14	pCi/g	0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>
Lead-210	HE	1.096	0.436	pCi/g	0.7896	N	46.32	3	1.087	IDENTIFIED 39.56	<input type="checkbox"/>
Lead-212	✓	1.83	0.1013	pCi/g	0.09742	0.100	238.4	4	1.382	IDENTIFIED 3.168	<input type="checkbox"/>
Lead-214	✓	1.163	0.09623	pCi/g	0.1312	0.100	351.8	4	1.338	IDENTIFIED 6.959	<input type="checkbox"/>
Lutetium-177	HE	3.026	0.7574	pCi/g	1.816	N	0	10	0	FAIL_ABUND 0	<input type="checkbox"/>
Neptunium-237	INT	0.8273	0.1526	pCi/g	0.2794	N	86.89	3	1.11	IDENTIFIED 14.76	<input type="checkbox"/>
Niobium-97	HE	19040	15490	pCi/g	0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>
Polonium-210	HE	1.096	0.4354	pCi/g	0.7896	N	46.32	3	1.087	IDENTIFIED 39.56	<input type="checkbox"/>
Polonium-212	NR	1.83	0.1013	pCi/g	0.09742	N	238.4	4	1.382	IDENTIFIED 3.168	<input type="checkbox"/>
Polonium-214	NR	1.163	0.09623	pCi/g	0.1312	N	351.8	4	1.338	IDENTIFIED 6.959	<input type="checkbox"/>
Polonium-216	NR	1.83	0.1013	pCi/g	0.09742	N	238.4	4	1.382	IDENTIFIED 3.168	<input type="checkbox"/>
Polonium-218	NR	1.163	0.09623	pCi/g	0.1312	N	351.8	4	1.338	IDENTIFIED 6.959	<input type="checkbox"/>
Potassium-40	✓	30.09	1.283	pCi/g	0.6667	1.00	1460	1	2.449	IDENTIFIED 2.971	<input type="checkbox"/>
Radium-224	INT	3.977	0.6901	pCi/g	1.109	Y	241.3	1	1.801	IDENTIFIED 16.9	<input checked="" type="checkbox"/>
Radium-226	✓	1.237	0.1035	pCi/g	0.1369	Y	609	4	1.794	IDENTIFIED 6.94	<input type="checkbox"/>
Radium-228	✓	2.058	0.1987	pCi/g	0.2686	0.500	910.8	3	1.76	IDENTIFIED 8.142	<input type="checkbox"/>
Thallium-200	HE	88.62	105.4	pCi/g	0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>
Thallium-208	✓	0.5319	0.05001	pCi/g	0.07195	0.080	583.1	1	1.746	IDENTIFIED 8.443	<input type="checkbox"/>
Thorium-228	NR	1.855	0.1028	pCi/g	0.09877	N	238.4	4	1.382	IDENTIFIED 3.168	<input type="checkbox"/>
Thorium-230	NR	1.237	0.1035	pCi/g	0.1369	N	609	4	1.794	IDENTIFIED 6.94	<input type="checkbox"/>
Thorium-232	NR	2.058	0.1987	pCi/g	0.2686	N	910.8	3	1.76	IDENTIFIED 8.142	<input type="checkbox"/>
Thorium-234	✓	1.449	0.5242	pCi/g	1.016	2.00	63.1	2	1.295	IDENTIFIED 35.01	<input type="checkbox"/>
Tin-126	INT	0.2817	0.04306	pCi/g	0.1278	N	86.89	3	1.11	IDENTIFIED 14.76	<input type="checkbox"/>
Titanium-44	LA	0.384	0.02559	pCi/g	0.05573	N	0	10	0	FAIL_ABUND 0	<input type="checkbox"/>
Total Uranium	—	4.5166	1.56E-06	ug/g	1.5139	N	0				<input type="checkbox"/>
Uranium-234	NR	1.237	0.1035	pCi/g	0.1369	N	609	4	1.794	IDENTIFIED 6.94	<input type="checkbox"/>
Uranium-235	↑ UNE	0.4477	0.2282	pCi/g	0.3526	0.500	144.6	2	1.453	IDENTIFIED 50.13	<input checked="" type="checkbox"/>
Uranium-238	HE	1.449	0.5242	pCi/g	1.016	N	63.1	2	1.295	IDENTIFIED 35.01	<input type="checkbox"/>
Zirconium-97	—	1.09E+06	3.32E+05	pCi/g	0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395001	19-JAN-10 12:00	02-FEB-10 07:10	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.684	0.1709	pCi/g	0.1915	N	911.5	3	1.447	IDENTIFIED 8.233
Americium-243	INT	0.2857	0.03818	pCi/g	0.1108	N	74.98	1	0.9162	IDENTIFIED 12.7

Annihilation Rad.	INT	0.1592	0.03122	pCi/g	0.04289	N	510.9	1	1.595	IDENTIFIED	19.02	<input type="checkbox"/>	
Bismuth-211	HE	3.834	0.3013	pCi/g	0.2862	Y	351.9	4	1.058	IDENTIFIED	5.657	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	0.9841	0.2025	pCi/g	0.6205	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	INT	1.01	0.08793	pCi/g	0.1069	0.200	609.4	4	1.213	IDENTIFIED	6.916	<input type="checkbox"/>	
Cadmium-109	INT	4.862	0.7141	pCi/g	1.529	Y	87.23	3	1.337	IDENTIFIED	13.89	<input checked="" type="checkbox"/>	UF
Cerium-143	INT	198.1	43.6	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1266	0.03075	pCi/g	0.08936	0.100	0	12	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gadolinium-153	LA	0.4647	0.07014	pCi/g	0.1708	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gold-195	LA	1.351	0.204	pCi/g	0.5219	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gross Gamma	INT	14.24	1.721	pCi/g	5.197	N	0					<input type="checkbox"/>	
Iodine-135	HE	1.21E+14	9.92E+13	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	HE	1.694	0.1133	pCi/g	0.08834	0.100	238.6	4	0.9762	IDENTIFIED	3.106	<input type="checkbox"/>	
Lead-214	HE	1.334	0.1104	pCi/g	0.09975	0.100	351.9	4	1.058	IDENTIFIED	5.657	<input type="checkbox"/>	
Lutetium-177	HE	2.719	0.7231	pCi/g	1.582	N	209.3	1	1.016	IDENTIFIED	26.1	<input type="checkbox"/>	
Neptunium-237	INT	1.406	0.2524	pCi/g	0.4491	N	87.23	3	1.337	IDENTIFIED	13.89	<input type="checkbox"/>	
Niobium-95	NR	0.2188	0.03369	pCi/g	0.06044	N	767.1	1	1.198	IDENTIFIED	14.69	<input type="checkbox"/>	
Polonium-212	NR	1.694	0.1133	pCi/g	0.08834	N	238.6	4	0.9762	IDENTIFIED	3.106	<input type="checkbox"/>	
Polonium-214	NR	1.334	0.1104	pCi/g	0.09975	N	351.9	4	1.058	IDENTIFIED	5.657	<input type="checkbox"/>	
Polonium-216	NR	1.694	0.1133	pCi/g	0.08834	N	238.6	4	0.9762	IDENTIFIED	3.106	<input type="checkbox"/>	
Polonium-218	NR	1.334	0.1104	pCi/g	0.09975	N	351.9	4	1.058	IDENTIFIED	5.657	<input type="checkbox"/>	
Potassium-40	HE	28.3	1.473	pCi/g	0.4239	1.00	1461	1	1.847	IDENTIFIED	2.79	<input type="checkbox"/>	
Protactinium-234m	NR	46.83	5.329	pCi/g	6.354	N	1001	1	1.643	IDENTIFIED	10.12	<input type="checkbox"/>	
Radium-224	INT	3.918	0.5026	pCi/g	1.005	Y	241.6	1	1.586	IDENTIFIED	11.58	<input checked="" type="checkbox"/>	UI
Radium-226	HE	1.01	0.08793	pCi/g	0.1069	Y	609.4	4	1.213	IDENTIFIED	6.916	<input type="checkbox"/>	
Radium-228	HE	1.684	0.1709	pCi/g	0.1915	0.500	911.5	3	1.447	IDENTIFIED	8.233	<input type="checkbox"/>	
Rhenium-183	HE	0.2636	0.08357	pCi/g	0.1964	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Sodium-24	HE	1.12E+05	67210	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Technetium-99m	HE	8.67E+13	5.16E+14	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	HE	0.5777	0.04699	pCi/g	0.04935	0.080	583.2	1	1.444	IDENTIFIED	6.449	<input type="checkbox"/>	
Thorium-228	NR	1.718	0.1148	pCi/g	0.08957	N	238.6	4	0.9762	IDENTIFIED	3.106	<input type="checkbox"/>	
Thorium-230	NR	1.01	0.08793	pCi/g	0.1069	N	609.4	4	1.213	IDENTIFIED	6.916	<input type="checkbox"/>	
Thorium-232	NR	1.684	0.1709	pCi/g	0.1915	N	911.5	3	1.447	IDENTIFIED	8.233	<input type="checkbox"/>	
Thorium-234	HE	39.56	3.794	pCi/g	2.526	2.00	63.34	2	0.8958	IDENTIFIED	3.991	<input type="checkbox"/>	
Tin-126	INT	0.4788	0.07033	pCi/g	0.1512	N	87.23	3	1.337	IDENTIFIED	13.89	<input type="checkbox"/>	
Titanium-44	LA	0.345	0.03162	pCi/g	0.08348	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	INT	118.07	1.13E-05	ug/g	3.7603	N	0					<input type="checkbox"/>	
Tungsten-181	HE	0.7357	0.2148	pCi/g	0.6994	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>	
Uranium-231	HE	2.55	0.9365	pCi/g	1.668	N	94.61	1	1.174	IDENTIFIED	36.45	<input type="checkbox"/>	
Uranium-234	NR	1.01	0.08793	pCi/g	0.1069	N	609.4	4	1.213	IDENTIFIED	6.916	<input type="checkbox"/>	
Uranium-235	HE	0.8198	0.1758	pCi/g	0.3373	0.500	143.7	1	0.9587	IDENTIFIED	19.59	<input type="checkbox"/>	
Uranium-238	NR	39.56	3.794	pCi/g	2.526	N	63.34	2	0.8958	IDENTIFIED	3.991	<input type="checkbox"/>	
Zirconium-97	HE	3.79E+05	2.29E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
245395002	19-JAN-10 12:00	02-FEB-10 07:20	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment	
Actinium-228	NR	1.582	0.1437	pCi/g	0.1432	N	911	3	1.917	IDENTIFIED 6.215	<input type="checkbox"/>
Americium-243	INT	0.3302	0.037	pCi/g	0.09705	N	74.96	1	0.9339	IDENTIFIED 10.4	<input type="checkbox"/>
Annihilation Rad.	INT	0.1051	0.02755	pCi/g	0.03536	N	510.7	1	1.704	IDENTIFIED 26	<input type="checkbox"/>
Bismuth-211	INT	3.525	0.1941	pCi/g	0.26	Y	351.9	4	1.327	IDENTIFIED 4.474	<input checked="" type="checkbox"/> UF
Bismuth-212	LA	1.141	0.2601	pCi/g	0.5137	N	0	15	0	FAIL_ABUND 0	<input type="checkbox"/>
Bismuth-214	✓	1.044	0.07422	pCi/g	0.08891	0.200	609.3	4	1.441	IDENTIFIED 5.529	<input type="checkbox"/>
Cadmium-109	INT	2.888	0.5237	pCi/g	1.62	Y	87.13	3	1.237	IDENTIFIED 17.55	<input checked="" type="checkbox"/> UF
Cerium-143	INT	339.8	50.78	pCi/g	0	N	0	15	0	SHORT_HLIF 0	<input type="checkbox"/>
Cesium-134	LA	0.09697	0.02899	pCi/g	0.0731	0.100	0	15	0	FAIL_ABUND 0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Gold-195	HE	0.7306	0.1585	pCi/g	0.416	N	0	15	0	FAIL_ABUND 0	<input type="checkbox"/>
Gross Gamma	INT	10.03	1.172	pCi/g	2.023	N	0				<input type="checkbox"/>
Iodine-133	HE	1121	825.2	pCi/g	0	N	0	15	0	SHORT_HLIF 0	<input type="checkbox"/>

Iodine-135	HE	2.90E+13	8.77E+13	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	HE	17.24	3.217	pCi/g	10.96	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.451	0.06767	pCi/g	0.07605	0.100	238.7	4	1.209	IDENTIFIED	2.999	<input type="checkbox"/>
Lead-214	✓	1.226	0.07471	pCi/g	0.09199	0.100	351.9	4	1.327	IDENTIFIED	4.474	<input type="checkbox"/>
Lutetium-177	✓	2.611	0.5544	pCi/g	1.48	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	✓	0.8351	0.1743	pCi/g	0.4139	N	87.13	3	1.237	IDENTIFIED	17.55	<input type="checkbox"/>
Niobium-95	HE	0.0727	0.01898	pCi/g	0.06893	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Polonium-212	NR	1.451	0.06767	pCi/g	0.07605	N	238.7	4	1.209	IDENTIFIED	2.999	<input type="checkbox"/>
Polonium-214	NR	1.226	0.07471	pCi/g	0.09199	N	351.9	4	1.327	IDENTIFIED	4.474	<input type="checkbox"/>
Polonium-216	NR	1.451	0.06767	pCi/g	0.07605	N	238.7	4	1.209	IDENTIFIED	2.999	<input type="checkbox"/>
Polonium-218	NR	1.226	0.07471	pCi/g	0.09199	N	351.9	4	1.327	IDENTIFIED	4.474	<input type="checkbox"/>
Potassium-40	✓	34.68	1.503	pCi/g	0.355	1.00	1460	1	2.348	IDENTIFIED	2.091	<input type="checkbox"/>
Protactinium-234m	✓	22.23	3.404	pCi/g	8.919	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Radium-224	✓	4.071	0.4598	pCi/g	0.8642	Y	241.7	1	1.619	IDENTIFIED	10.94	<input checked="" type="checkbox"/> UI
Radium-226	✓	1.044	0.07422	pCi/g	0.08891	Y	609.3	4	1.441	IDENTIFIED	5.529	<input type="checkbox"/>
Radium-228	✓	1.582	0.1437	pCi/g	0.1432	0.500	911	3	1.917	IDENTIFIED	6.215	<input type="checkbox"/>
Strontium-85	✓	0.08718	0.01627	pCi/g	0.05542	Y	0	15	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Technetium-99m	HE	1.51E+14	5.10E+14	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-200	HE	46.63	71.84	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.4713	0.03831	pCi/g	0.04384	0.080	583.1	1	1.626	IDENTIFIED	7.12	<input type="checkbox"/>
Thorium-228	NR	1.471	0.06861	pCi/g	0.07711	N	238.7	4	1.209	IDENTIFIED	2.999	<input type="checkbox"/>
Thorium-230	NR	1.044	0.07422	pCi/g	0.08891	N	609.3	4	1.441	IDENTIFIED	5.529	<input type="checkbox"/>
Thorium-232	NR	1.582	0.1437	pCi/g	0.1432	N	911	3	1.917	IDENTIFIED	6.215	<input type="checkbox"/>
Thorium-234	✓	8.632	1.296	pCi/g	2.309	2.00	63.44	2	1.11	IDENTIFIED	12.16	<input type="checkbox"/>
Tin-126	✓	0.2844	0.05158	pCi/g	0.1489	N	87.13	3	1.237	IDENTIFIED	17.55	<input type="checkbox"/>
Titanium-44	✓	0.3162	0.02654	pCi/g	0.07909	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium	—	25.769	3.86E-06	ug/g	3.4379	N	0					<input type="checkbox"/>
Uranium-234	NR	1.044	0.07422	pCi/g	0.08891	N	609.3	4	1.441	IDENTIFIED	5.529	<input type="checkbox"/>
Uranium-238	NR	8.632	1.296	pCi/g	2.309	N	63.44	2	1.11	IDENTIFIED	12.16	<input type="checkbox"/>
Zirconium-97	—	7.94E+05	2.13E+05	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395003	19-JAN-10 12:00	02-FEB-10 07:21	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	0.9847	0.1396	pCi/g	0.1855	N	911.5	3	1.411	IDENTIFIED	13
Americium-243	0.3099	0.05165	pCi/g	0.1302	N	74.67	1	1.47	IDENTIFIED	16.19
Annihilation Rad.	0.09107	0.03467	pCi/g	0.04091	N	511.3	1	2.013	IDENTIFIED	37.96
Barium-137m	0.06103	0.02156	pCi/g	0.05051	N	661.6	2	1.479	IDENTIFIED	35.21
Bismuth-211	2.545	0.2159	pCi/g	0.3011	Y	351.8	4	1.49	IDENTIFIED	7.86
Bismuth-212	0.6556	0.2092	pCi/g	0.5435	N	0	13	0	FAIL_ABUND	0
Bismuth-214	0.6828	0.06879	pCi/g	0.09959	0.200	609.4	4	1.382	IDENTIFIED	9.276
Cerium-143	265	48.44	pCi/g	0	N	0	13	0	SHORT_HLIF	0
Cesium-137	0.06451	0.02279	pCi/g	0.0534	0.100	661.6	2	1.479	IDENTIFIED	35.21
Gadolinium-153	0.6126	0.07786	pCi/g	0.2169	N	0	13	0	FAIL_ABUND	0
Gold-195	1.782	0.2264	pCi/g	0.6104	N	0	13	0	FAIL_ABUND	0
Gross Gamma	12.05	1.571	pCi/g	5.283	N	0				
Krypton-85	15.26	3.234	pCi/g	12.47	N	0	13	0	NOT_IDENTI	0
Lead-212	1.112	0.05953	pCi/g	0.0908	0.100	238.5	4	1.323	IDENTIFIED	3.954
Lead-214	0.8852	0.07856	pCi/g	0.1049	0.100	351.8	4	1.49	IDENTIFIED	7.86
Lutetium-177	2.078	0.608	pCi/g	1.533	N	209.3	1	1.609	IDENTIFIED	29.13
Niobium-95	0.1459	0.02525	pCi/g	0.09541	N	0	13	0	NOT_IDENTI	0
Niobium-95m	0.2856	0.06757	pCi/g	0.2223	N	0	13	0	NOT_IDENTI	0
Polonium-212	1.112	0.05953	pCi/g	0.0908	N	238.5	4	1.323	IDENTIFIED	3.954
Polonium-214	0.8852	0.07856	pCi/g	0.1049	N	351.8	4	1.49	IDENTIFIED	7.86
Polonium-216	1.112	0.05953	pCi/g	0.0908	N	238.5	4	1.323	IDENTIFIED	3.954
Polonium-218	0.8852	0.07856	pCi/g	0.1049	N	351.8	4	1.49	IDENTIFIED	7.86
Potassium-40	24.47	1.142	pCi/g	0.3966	1.00	1461	1	2.019	IDENTIFIED	2.812
Protactinium-234m	58.88	5.008	pCi/g	6.584	N	1001	1	1.788	IDENTIFIED	7.12

Radium-224	✓	2.704	0.5382	pCi/g	1.032	Y	241.5	1	1.798	IDENTIFIED	19.7	✓	UI
Radium-226	✓	0.6828	0.06879	pCi/g	0.09959	Y	609.4	4	1.382	IDENTIFIED	9.276		
Radium-228	✓	0.9847	0.1396	pCi/g	0.1855	0.500	911.5	3	1.411	IDENTIFIED	13		
Sodium-24	HE	12410	63370	pCi/g	0	N	0	13	0	SHORT_HLIF	0		
Strontium-85	✓	0.07716	0.01635	pCi/g	0.06306	Y	0	13	0	NOT_IDENTI	0	✓	UI Data rejected due to low abundance.
Thallium-200	—	206.9	89.49	pCi/g	0	N	0	13	0	SHORT_HLIF	0		
Thallium-208	✓	0.411	0.03527	pCi/g	0.04982	0.080	583	1	1.447	IDENTIFIED	7.877		
Thorium-228	NR	1.127	0.06036	pCi/g	0.09206	N	238.5	4	1.323	IDENTIFIED	3.954		
Thorium-230	NR	0.6828	0.06879	pCi/g	0.09959	N	609.4	4	1.382	IDENTIFIED	9.276		
Thorium-232	NR	0.9847	0.1396	pCi/g	0.1855	N	911.5	3	1.411	IDENTIFIED	13		
Thorium-234	✓	43.97	4.228	pCi/g	2.942	2.00	63.23	2	1.287	IDENTIFIED	3.991		
Titanium-44	LA	0.247	0.03169	pCi/g	0.09549	N	0	13	0	FAIL_ABUND	0		
Total Uranium	—	131.05	1.26E-05	ug/g	4.3795	N	0						
Tungsten-181	LA	6.142	0.3813	pCi/g	1.185	N	0	13	0	NOT_IDENTI	0		
Uranium-234	NR	0.6828	0.06879	pCi/g	0.09959	N	609.4	4	1.382	IDENTIFIED	9.276		
Uranium-235	✓	0.5498	0.1385	pCi/g	0.3934	0.500	143.7	1	1.243	IDENTIFIED	23.85		
Uranium-238	NR	43.97	4.228	pCi/g	2.942	N	63.23	2	1.287	IDENTIFIED	3.991		
Zirconium-97	—	8.91E+05	2.33E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project	Quals	Zero?	queue	
245395004	19-JAN-10 12:00	02-FEB-10 08:23	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL		N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment	
Actinium-228	NR	1.629	0.1783	pCi/g	0.1929	N	911.7	3	1.714	IDENTIFIED	9.073	
Americium-243	WT	0.4745	0.04003	pCi/g	0.07923	N	74.92	1	1.312	IDENTIFIED	7.41	
Annihilation Rad.	-	0.1891	0.03554	pCi/g	0.04122	N	511.1	1	1.989	IDENTIFIED	18.21	
Bismuth-211	WT	3.62	0.2711	pCi/g	0.3034	Y	352	4	1.348	IDENTIFIED	5.763	✓
Bismuth-212	NR	1.154	0.2899	pCi/g	0.4704	N	727.5	1	1.413	IDENTIFIED	24.47	
Bismuth-214	✓	1.134	0.09575	pCi/g	0.1047	0.200	609.6	4	1.322	IDENTIFIED	6.355	
Cerium-143	-	217.2	45.54	pCi/g	0	N	0	9	0	SHORT_HLIF	0	
Cesium-134	LA	0.1109	0.02651	pCi/g	0.08561	0.100	0	9	0	FAIL_ABUND	0	✓ UI Data rejected due to low abundance.
Gross Gamma	-	11.04	1.472	pCi/g	3.972	N	0					
Iodine-123	HE	1.45E+05	5.37E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	
Krypton-85	HE	16.8	3.532	pCi/g	13.09	N	0	9	0	NOT_IDENTI	0	
Lead-212	✓	1.656	0.1027	pCi/g	0.08109	0.100	238.7	4	1.142	IDENTIFIED	3.195	
Lead-214	✓	1.259	0.09987	pCi/g	0.1028	0.100	352	4	1.348	IDENTIFIED	5.763	
Lutetium-177	HE	3.064	0.7193	pCi/g	1.71	N	0	9	0	FAIL_ABUND	0	
Neptunium-237	HE	0.4128	0.1458	pCi/g	0.3502	N	87.11	1	1.18	IDENTIFIED	33.45	
Polonium-212	NR	1.656	0.1027	pCi/g	0.08109	N	238.7	4	1.142	IDENTIFIED	3.195	
Polonium-214	NR	1.259	0.09987	pCi/g	0.1028	N	352	4	1.348	IDENTIFIED	5.763	
Polonium-216	NR	1.656	0.1027	pCi/g	0.08109	N	238.7	4	1.142	IDENTIFIED	3.195	
Polonium-218	NR	1.259	0.09987	pCi/g	0.1028	N	352	4	1.348	IDENTIFIED	5.763	
Potassium-40	✓	37.55	1.875	pCi/g	0.4371	1.00	1461	1	1.818	IDENTIFIED	2.433	
Radium-224	WT	4.135	0.6801	pCi/g	0.9225	Y	241.6	1	1.806	IDENTIFIED	15.72	✓
Radium-226	✓	1.134	0.09575	pCi/g	0.1047	Y	609.6	4	1.322	IDENTIFIED	6.355	
Radium-228	✓	1.629	0.1783	pCi/g	0.1929	0.500	911.7	3	1.714	IDENTIFIED	9.073	
Strontium-85	WT	0.08498	0.01787	pCi/g	0.06624	Y	0	9	0	NOT_IDENTI	0	✓ UI Data rejected due to low abundance.
Thallium-200	HE	84.16	86.54	pCi/g	0	N	0	9	0	SHORT_HLIF	0	
Thallium-208	✓	0.5596	0.04627	pCi/g	0.05034	0.080	583.6	1	1.35	IDENTIFIED	6.477	
Thorium-228	NR	1.679	0.1042	pCi/g	0.08222	N	238.7	4	1.142	IDENTIFIED	3.195	
Thorium-230	NR	1.134	0.09574	pCi/g	0.1047	N	609.6	4	1.322	IDENTIFIED	6.355	
Thorium-232	NR	1.629	0.1783	pCi/g	0.1929	N	911.7	3	1.714	IDENTIFIED	9.073	
Thorium-234	✓	6.172	1.01	pCi/g	1.678	2.00	63.23	2	1.144	IDENTIFIED	13.87	
Titanium-44	WA	0.3806	0.02621	pCi/g	0.07527	N	0	9	0	FAIL_ABUND	0	
Total Uranium	-	18.497	3.01E-06	ug/g	2.499	N	0					
Uranium-234	NR	1.134	0.09574	pCi/g	0.1047	N	609.6	4	1.322	IDENTIFIED	6.355	
Uranium-238	NR	6.172	1.01	pCi/g	1.678	N	63.23	2	1.144	IDENTIFIED	13.87	
Zirconium-97	-	8.71E+05	2.46E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395005	19-JAN-10 12:00	02-FEB-10 08:24	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	2.006	0.197	pCi/g	0.2161	N	910.9	3 1.469 IDENTIFIED	8.014	<input type="checkbox"/>
Americium-243	WT	0.2819	0.02133	pCi/g	0.04486	N	74.96	1 0.7464 IDENTIFIED	6.264	<input type="checkbox"/>
Annihilation Rad.	—	0.1188	0.03175	pCi/g	0.04619	N	510.5	1 1.075 IDENTIFIED	26.29	<input type="checkbox"/>
Bismuth-210	HE	1.082	0.3519	pCi/g	0.6482	N	46.32	3 0.6183 IDENTIFIED	32.18	<input type="checkbox"/>
Bismuth-211	INT	3.784	0.2864	pCi/g	0.3089	Y	351.8	4 1.018 IDENTIFIED	6.08	<input checked="" type="checkbox"/> UI
Bismuth-214	✓	1.207	0.1151	pCi/g	0.1189	0.200	609.1	4 1.086 IDENTIFIED	7.49	<input type="checkbox"/>
Cadmium-109	INT	2.826	0.3274	pCi/g	0.8166	Y	87.25	3 0.9091 IDENTIFIED	10.6	<input checked="" type="checkbox"/> UI
Cerium-143	—	136.2	39.94	pCi/g	0	N	0	7 0 SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134	LA	0.1306	0.05631	pCi/g	0.1204	0.100	0	7 0 FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Gross Gamma	—	10.02	1.304	pCi/g	3.518	N	0			<input type="checkbox"/>
Lead-210	HE	1.082	0.3519	pCi/g	0.6482	N	46.32	3 0.6183 IDENTIFIED	32.18	<input type="checkbox"/>
Lead-212	✓	1.707	0.1003	pCi/g	0.07951	0.100	238.5	4 0.8673 IDENTIFIED	3.135	<input type="checkbox"/>
Lead-214	✓	1.316	0.1054	pCi/g	0.1078	0.100	351.8	4 1.018 IDENTIFIED	6.08	<input type="checkbox"/>
Lutetium-177	LA	3.165	0.6219	pCi/g	1.69	N	0	7 0 FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	INT	0.8172	0.1268	pCi/g	0.2348	N	87.25	3 0.9091 IDENTIFIED	10.6	<input type="checkbox"/>
Niobium-97	HE	24050	17330	pCi/g	0	N	0	7 0 SHORT_HLIF	0	<input type="checkbox"/>
Polonium-210	HE	1.082	0.3513	pCi/g	0.6482	N	46.32	3 0.6183 IDENTIFIED	32.18	<input type="checkbox"/>
Polonium-212	NR	1.707	0.1003	pCi/g	0.07951	N	238.5	4 0.8673 IDENTIFIED	3.135	<input type="checkbox"/>
Polonium-214	NR	1.316	0.1054	pCi/g	0.1078	N	351.8	4 1.018 IDENTIFIED	6.08	<input type="checkbox"/>
Polonium-216	NR	1.707	0.1003	pCi/g	0.07951	N	238.5	4 0.8673 IDENTIFIED	3.135	<input type="checkbox"/>
Polonium-218	NR	1.316	0.1054	pCi/g	0.1078	N	351.8	4 1.018 IDENTIFIED	6.08	<input type="checkbox"/>
Potassium-40	✓	34.74	1.876	pCi/g	0.7464	1.00	1460	1 2.12 IDENTIFIED	3.307	<input type="checkbox"/>
Radium-224	INT	4.798	0.7355	pCi/g	0.9072	Y	241.6	1 1.847 IDENTIFIED	14.67	<input checked="" type="checkbox"/> UI
Radium-226	✓	1.207	0.1151	pCi/g	0.1189	Y	609.1	4 1.086 IDENTIFIED	7.49	<input type="checkbox"/>
Radium-228	✓	2.006	0.197	pCi/g	0.2161	0.500	910.9	3 1.469 IDENTIFIED	8.014	<input type="checkbox"/>
Sodium-24	HE	19300	1.11E+05	pCi/g	0	N	0	7 0 SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.5502	0.05423	pCi/g	0.05908	0.080	583	1 1.418 IDENTIFIED	8.215	<input type="checkbox"/>
Thorium-228	NR	1.731	0.1017	pCi/g	0.08061	N	238.5	4 0.8673 IDENTIFIED	3.135	<input type="checkbox"/>
Thorium-230	NR	1.207	0.1151	pCi/g	0.1189	N	609.1	4 1.086 IDENTIFIED	7.49	<input type="checkbox"/>
Thorium-232	NR	2.006	0.197	pCi/g	0.2161	N	910.9	3 1.469 IDENTIFIED	8.014	<input type="checkbox"/>
Thorium-234	✓	3.082	0.56	pCi/g	0.7504	2.00	63.33	2 0.8837 IDENTIFIED	15.88	<input type="checkbox"/>
Tin-126	INT	0.2783	0.03224	pCi/g	0.08028	N	87.25	3 0.9091 IDENTIFIED	10.6	<input type="checkbox"/>
Titanium-44	LA	0.3747	0.02203	pCi/g	0.03983	N	0	7 0 FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium	—	9.1952	1.67E-06	ug/g	1.1188	N	0			<input type="checkbox"/>
Uranium-234	NR	1.207	0.1151	pCi/g	0.1189	N	609.1	4 1.086 IDENTIFIED	7.49	<input type="checkbox"/>
Uranium-238	NR	3.082	0.56	pCi/g	0.7504	N	63.33	2 0.8837 IDENTIFIED	15.88	<input type="checkbox"/>
Zirconium-97	—	6.72E+05	2.71E+05	pCi/g	0	N	0	7 0 SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395006	19-JAN-10 12:00	02-FEB-10 08:24	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.454	0.1561	pCi/g	0.1998	N	910.7	3 1.277 IDENTIFIED	9.057	<input type="checkbox"/>
Americium-243	INT	0.3953	0.05268	pCi/g	0.1458	N	74.65	1 1.225 IDENTIFIED	12.57	<input type="checkbox"/>
Annihilation Rad.	HE	0.121	0.03575	pCi/g	0.05454	N	510.3	1 2.415 IDENTIFIED	29.39	<input type="checkbox"/>
Barium-137m	HE	0.1112	0.04357	pCi/g	0.06619	N	662.7	2 1.537 IDENTIFIED	39.1	<input checked="" type="checkbox"/> UI
Bismuth-211	INT	3.094	0.2281	pCi/g	0.3614	Y	351.6	4 1.354 IDENTIFIED	6.613	<input type="checkbox"/>
Bismuth-212	HE	0.9587	0.2867	pCi/g	0.6803	N	0	12 0 FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	1.048	0.08383	pCi/g	0.1237	0.200	608.6	4 1.663 IDENTIFIED	7.063	<input type="checkbox"/>
Cadmium-109	INT	2.908	0.6023	pCi/g	1.936	Y	87.13	3 1.408 IDENTIFIED	20.14	<input checked="" type="checkbox"/> UI
Cerium-143	—	531.6	75.28	pCi/g	0	N	0	12 0 SHORT_HLIF	0	<input type="checkbox"/>
Cesium-137	✓	0.1175	0.04606	pCi/g	0.06997	0.100	662.7	2 1.537 IDENTIFIED	39.1	<input type="checkbox"/>
Gadolinium-153	LA	0.3918	0.0703	pCi/g	0.2224	N	0	12 0 FAIL_ABUND	0	<input type="checkbox"/>
Gold-195	LA	1.139	0.2045	pCi/g	0.6251	N	0	12 0 FAIL_ABUND	0	<input type="checkbox"/>
Gross Gamma	—	12.38	1.737	pCi/g	4.555	N	0			<input type="checkbox"/>

Iodine-133	HE	1043	1205	pCi/g 0	N	0	12	0	SHORT_HLIF 0	<input type="checkbox"/>
Iodine-135	HE	1.35E+13	1.36E+14	pCi/g 0	N	0	12	0	SHORT_HLIF 0	<input type="checkbox"/>
Lead-212	✓	1.422	0.07336	pCi/g 0.1056	0.100	238.3	4	1.126	IDENTIFIED 3.703	<input type="checkbox"/>
Lead-214	✓	1.076	0.08417	pCi/g 0.1181	0.100	351.6	4	1.354	IDENTIFIED 6.613	<input type="checkbox"/>
Lutetium-177	HE	2.875	0.6918	pCi/g 1.79	N	208.9	1	1.577	IDENTIFIED 23.91	<input type="checkbox"/>
Neptunium-237	HE	0.8408	0.1946	pCi/g 0.6126	N	87.13	3	1.408	IDENTIFIED 20.14	<input type="checkbox"/>
Niobium-95	NR	0.1939	0.04389	pCi/g 0.07834	N	766	1	1.193	IDENTIFIED 22.38	<input type="checkbox"/>
Niobium-95m	✓	0.5802	0.08684	pCi/g 0.2896	N	0	12	0	NOT_IDENTI 0	<input type="checkbox"/>
Polonium-212	NR	1.422	0.07336	pCi/g 0.1056	N	238.3	4	1.126	IDENTIFIED 3.703	<input type="checkbox"/>
Polonium-214	NR	1.076	0.08417	pCi/g 0.1181	N	351.6	4	1.354	IDENTIFIED 6.613	<input type="checkbox"/>
Polonium-216	NR	1.422	0.07336	pCi/g 0.1056	N	238.3	4	1.126	IDENTIFIED 3.703	<input type="checkbox"/>
Polonium-218	NR	1.076	0.08417	pCi/g 0.1181	N	351.6	4	1.354	IDENTIFIED 6.613	<input type="checkbox"/>
Potassium-40	✓	27.05	1.34	pCi/g 0.5504	1.00	1460	1	2.442	IDENTIFIED 3.248	<input type="checkbox"/>
Protactinium-234m	NR	47.94	5.279	pCi/g 7.84	N	1000	1	1.652	IDENTIFIED 9.923	<input type="checkbox"/>
Radium-224	✓	3.619	0.5723	pCi/g 1.201	Y	241.3	1	1.644	IDENTIFIED 15.56	<input checked="" type="checkbox"/>
Radium-226	✓	1.048	0.08383	pCi/g 0.1237	Y	608.6	4	1.663	IDENTIFIED 7.063	<input type="checkbox"/>
Radium-228	✓	1.454	0.1561	pCi/g 0.1998	0.500	910.7	3	1.277	IDENTIFIED 9.057	<input type="checkbox"/>
Technetium-99m	HE	1.06E+15	7.67E+14	pCi/g 0	N	0	12	0	SHORT_HLIF 0	<input type="checkbox"/>
Thallium-208	✓	0.4552	0.04587	pCi/g 0.06323	0.080	582.6	1	1.498	IDENTIFIED 9.539	<input type="checkbox"/>
Thorium-228	NR	1.441	0.07438	pCi/g 0.107	N	238.3	4	1.126	IDENTIFIED 3.703	<input type="checkbox"/>
Thorium-230	NR	1.048	0.08383	pCi/g 0.1237	N	608.6	4	1.663	IDENTIFIED 7.063	<input type="checkbox"/>
Thorium-232	NR	1.454	0.1561	pCi/g 0.1998	N	910.7	3	1.277	IDENTIFIED 9.057	<input type="checkbox"/>
Thorium-234	✓	33.69	3.538	pCi/g 3.607	2.00	63.05	2	0.9986	IDENTIFIED 5.393	<input type="checkbox"/>
Tin-126	HE	0.2863	0.05931	pCi/g 0.1918	N	87.13	3	1.408	IDENTIFIED 20.14	<input type="checkbox"/>
Titanium-44	LA	0.3374	0.03307	pCi/g 0.1067	N	0	12	0	FAIL_ABUND 0	<input type="checkbox"/>
Total Uranium	—	100.54	1.05E-05	ug/g 5.3702	N					<input type="checkbox"/>
Tungsten-181	LA	2.202	0.349	pCi/g 1.178	N	0	12	0	NOT_IDENTI 0	<input type="checkbox"/>
Uranium-231	HE	3.403	0.9548	pCi/g 2.372	N	0	12	0	FAIL_ABUND 0	<input type="checkbox"/>
Uranium-234	NR	1.048	0.08383	pCi/g 0.1237	N	608.6	4	1.663	IDENTIFIED 7.063	<input type="checkbox"/>
Uranium-235	✓	0.6343	0.1768	pCi/g 0.416	0.500	143.4	1	1.196	IDENTIFIED 26.68	<input type="checkbox"/>
Uranium-238	NR	33.69	3.538	pCi/g 3.607	N	63.05	2	0.9986	IDENTIFIED 5.393	<input type="checkbox"/>
Zirconium-97	—	1.65E+06	3.14E+05	pCi/g 0	N	0	12	0	SHORT_HLIF 0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
245395007	19-JAN-10 12:00	02-FEB-10 09:13	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment		
Actinium-227	HE	1.127	0.2739	pCi/g	0.9014	N	0	23	0	NOT_IDENTI 0	<input type="checkbox"/>	
Actinium-228	NR	0.653	0.1113	pCi/g	0.1924	N	910.9	3	2.044	IDENTIFIED 15.87	<input type="checkbox"/>	
Americium-241	LA	0.9287	0.2104	pCi/g	0.7516	0.200	0	23	0	NOT_IDENTI 0	<input checked="" type="checkbox"/> UI	Data rejected due to low abundance.
Bismuth-211	INT	1.754	0.2227	pCi/g	0.3735	Y	351.7	1	1.124	IDENTIFIED 11.32	<input checked="" type="checkbox"/> UE	
Bismuth-214	✓	0.5255	0.0909	pCi/g	0.1254	0.200	608.8	4	1.787	IDENTIFIED 16.47	<input type="checkbox"/>	
Cerium-141	LA	0.3185	0.04972	pCi/g	0.1679	N	0	23	0	NOT_IDENTI 0	<input type="checkbox"/>	
Cerium-143	—	269.6	54.52	pCi/g	0	N	0	23	0	SHORT_HLIF 0	<input type="checkbox"/>	
Gadolinium-153	LA	2.461	0.153	pCi/g	0.3562	N	0	23	0	FAIL_ABUND 0	<input type="checkbox"/>	
Gold-195	LA	7.157	0.4451	pCi/g	1.026	N	0	23	0	FAIL_ABUND 0	<input type="checkbox"/>	
Gross Gamma	—	27.82	2.345	pCi/g	5.897	N	0				<input type="checkbox"/>	
Iodine-123	HE	4.05E+05	9.46E+05	pCi/g	0	N	0	23	0	SHORT_HLIF 0	<input type="checkbox"/>	
Iodine-135	HE	7.26E+13	9.83E+13	pCi/g	0	N	0	23	0	SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212	LA	0.6688	0.06707	pCi/g	0.1833	0.100	0	23	0	FAIL_ABUND 0	<input checked="" type="checkbox"/> UI	Data rejected due to low abundance.
Lead-214	LA	0.61	0.0791	pCi/g	0.202	0.100	0	23	0	FAIL_ABUND 0	<input checked="" type="checkbox"/> UI	Data rejected due to low abundance.
Lutetium-177	HE	2.416	0.6516	pCi/g	2	N	209.4	1	1.246	IDENTIFIED 26.39	<input type="checkbox"/>	
Niobium-95	NR	0.8765	0.07	pCi/g	0.07869	N	766	1	1.525	IDENTIFIED 6.47	<input type="checkbox"/>	
Polonium-212	NR	0.6688	0.06707	pCi/g	0.1833	N	0	23	0	FAIL_ABUND 0	<input type="checkbox"/>	
Polonium-214	NR	0.61	0.0791	pCi/g	0.202	N	0	23	0	FAIL_ABUND 0	<input type="checkbox"/>	
Polonium-216	NR	0.6688	0.06707	pCi/g	0.1833	N	0	23	0	FAIL_ABUND 0	<input type="checkbox"/>	
Polonium-218	NR	0.61	0.0791	pCi/g	0.202	N	0	23	0	FAIL_ABUND 0	<input type="checkbox"/>	
Potassium-40	✓	17.79	1.044	pCi/g	0.399	1.00	1460	1	2.284	IDENTIFIED 3.439	<input type="checkbox"/>	
Protactinium-234m	NR	259.2	16.07	pCi/g	7.417	N	1001	1	1.87	IDENTIFIED 2.973	<input type="checkbox"/>	

Titanium-44	LA	0.3572	0.05472	pCi/g	0.1395	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium	—	358.79	3.70E-05	ug/g	8.4748	N			0			<input type="checkbox"/>
Uranium-231	LA	8.466	1.139	pCi/g	3.058	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234	NR	1.066	0.09247	pCi/g	0.1171	N	608.8	4	1.451	IDENTIFIED	7.798	<input type="checkbox"/>
Uranium-235	✓	1.931	0.287	pCi/g	0.4937	0.500	143.5	1	1.019	IDENTIFIED	12.41	<input type="checkbox"/>
Uranium-238	NR	120.3	12.44	pCi/g	5.693	N	62.96	2	0.9247	IDENTIFIED	3.088	<input type="checkbox"/>
Zirconium-97	—	1.19E+06	3.41E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395009	19-JAN-10 12:00	02-FEB-10 09:14	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.521	0.1576	pCi/g	0.2071	N	910.9	3	1.958	IDENTIFIED	8.787	<input type="checkbox"/>	
Americium-243	NR	0.2544	0.04756	pCi/g	0.1515	N	74.67	1	0.8636	IDENTIFIED	18.39	<input type="checkbox"/>	
Annihilation Rad.	—	0.1466	0.03943	pCi/g	0.04789	N	510.9	1	2.195	IDENTIFIED	26.72	<input type="checkbox"/>	
Bismuth-211	INT	3.082	0.2372	pCi/g	0.3477	Y	351.7	4	1.332	IDENTIFIED	7.026	<input checked="" type="checkbox"/>	✓
Bismuth-212	HE	0.7541	0.2474	pCi/g	0.4584	N	727.2	1	1.882	IDENTIFIED	32.52	<input type="checkbox"/>	
Bismuth-214	✓	0.9046	0.102	pCi/g	0.1085	0.200	608.9	4	1.615	IDENTIFIED	10.49	<input type="checkbox"/>	
Cerium-141	HE	0.1449	0.03878	pCi/g	0.127	N	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>	
Cerium-143	—	309.5	54.22	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Gadolinium-153	LA	0.6842	0.08261	pCi/g	0.2307	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gold-195	LA	1.99	0.2403	pCi/g	0.6717	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gross Gamma	—	16.49	1.785	pCi/g	5.9	N						<input type="checkbox"/>	
Iodine-123	HE	1.24E+06	7.17E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	HE	7.38E+13	1.20E+14	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.221	0.06467	pCi/g	0.0952	0.100	238.4	4	1.05	IDENTIFIED	3.929	<input type="checkbox"/>	
Lead-214	✓	1.072	0.08712	pCi/g	0.1122	0.100	351.7	4	1.332	IDENTIFIED	7.026	<input type="checkbox"/>	
Lutetium-177	HE	2.376	0.6927	pCi/g	1.521	N	209.3	1	1.182	IDENTIFIED	29.03	<input type="checkbox"/>	
Niobium-95	NR	0.4194	0.0433	pCi/g	0.07654	N	766.3	1	1.396	IDENTIFIED	9.655	<input type="checkbox"/>	
Polonium-212	NR	1.221	0.06467	pCi/g	0.0952	N	238.4	4	1.05	IDENTIFIED	3.929	<input type="checkbox"/>	
Polonium-214	NR	1.072	0.08712	pCi/g	0.1122	N	351.7	4	1.332	IDENTIFIED	7.026	<input type="checkbox"/>	
Polonium-216	NR	1.221	0.06467	pCi/g	0.0952	N	238.4	4	1.05	IDENTIFIED	3.929	<input type="checkbox"/>	
Polonium-218	NR	1.072	0.08712	pCi/g	0.1122	N	351.7	4	1.332	IDENTIFIED	7.026	<input type="checkbox"/>	
Potassium-40	✓	29.5	1.357	pCi/g	0.4238	1.00	1460	1	1.987	IDENTIFIED	2.909	<input type="checkbox"/>	
Protactinium-234m	NR	84.74	6.765	pCi/g	5.475	N	1001	1	1.71	IDENTIFIED	6.577	<input type="checkbox"/>	
Radium-224	INT	3.31	0.5097	pCi/g	1.083	Y	241.4	1	1.576	IDENTIFIED	15.15	<input checked="" type="checkbox"/>	✓
Radium-226	✓	0.9046	0.102	pCi/g	0.1085	Y	608.9	4	1.615	IDENTIFIED	10.49	<input type="checkbox"/>	
Radium-228	✓	1.521	0.1576	pCi/g	0.2071	0.500	910.9	3	1.958	IDENTIFIED	8.787	<input type="checkbox"/>	
Rhenium-183	HE	0.2963	0.09207	pCi/g	0.2316	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Thallium-208	✓	0.3835	0.03721	pCi/g	0.05876	0.080	582.9	1	1.218	IDENTIFIED	9.019	<input type="checkbox"/>	
Thorium-228	NR	1.238	0.06557	pCi/g	0.09653	N	238.4	4	1.05	IDENTIFIED	3.929	<input type="checkbox"/>	
Thorium-230	NR	0.9046	0.102	pCi/g	0.1085	N	608.9	4	1.615	IDENTIFIED	10.49	<input type="checkbox"/>	
Thorium-232	NR	1.521	0.1576	pCi/g	0.2071	N	910.9	3	1.958	IDENTIFIED	8.787	<input type="checkbox"/>	
Thorium-234	✓	69.62	6.327	pCi/g	3.518	2.00	63.16	2	0.852	IDENTIFIED	3.184	<input type="checkbox"/>	
Titanium-44	LA	0.2448	0.03189	pCi/g	0.1049	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	—	207.57	1.88E-05	ug/g	5.2372	N						<input type="checkbox"/>	
Uranium-231	HE	4.308	1.371	pCi/g	1.935	N	94.65	1	1.204	IDENTIFIED	31.63	<input type="checkbox"/>	
Uranium-234	NR	0.9046	0.102	pCi/g	0.1085	N	608.9	4	1.615	IDENTIFIED	10.49	<input type="checkbox"/>	
Uranium-235	✓	0.9946	0.1887	pCi/g	0.4079	0.500	143.7	1	0.8172	IDENTIFIED	17.15	<input type="checkbox"/>	
Uranium-238	NR	69.62	6.327	pCi/g	3.518	N	63.16	2	0.852	IDENTIFIED	3.184	<input type="checkbox"/>	
Zirconium-97	—	7.85E+05	3.19E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395010	19-JAN-10 12:00	02-FEB-10 09:15	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.764	0.219	pCi/g	0.3175	N	910.9	3	1.732	IDENTIFIED	11.28	<input type="checkbox"/>	
Americium-243	INT	0.3303	0.03267	pCi/g	0.06659	N	74.73	1	1.108	IDENTIFIED	8.899	<input type="checkbox"/>	
Annihilation Rad.	—	0.144	0.03771	pCi/g	0.06095	N	510.9	1	1.927	IDENTIFIED	25.96	<input type="checkbox"/>	

Lead-212	✓	1.224	0.08511	pCi/g	0.07476	0.100	238.6	4	0.9696	IDENTIFIED	3.647	<input type="checkbox"/>
Lead-214	✓	0.998	0.08504	pCi/g	0.09974	0.100	351.9	4	1.129	IDENTIFIED	6.003	<input type="checkbox"/>
Neptunium-237	HE	0.6327	0.1503	pCi/g	0.4064	N	87.18	3	1.048	IDENTIFIED	20.86	<input type="checkbox"/>
Niobium-95	HE	0.1019	0.02306	pCi/g	0.07866	N	0	14	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-97	HE	15270	14150	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212	NR	1.224	0.08511	pCi/g	0.07476	N	238.6	4	0.9696	IDENTIFIED	3.647	<input type="checkbox"/>
Polonium-214	NR	0.998	0.08504	pCi/g	0.09974	N	351.9	4	1.129	IDENTIFIED	6.003	<input type="checkbox"/>
Polonium-216	NR	1.224	0.08511	pCi/g	0.07476	N	238.6	4	0.9696	IDENTIFIED	3.647	<input type="checkbox"/>
Polonium-218	NR	0.998	0.08504	pCi/g	0.09974	N	351.9	4	1.129	IDENTIFIED	6.003	<input type="checkbox"/>
Potassium-40	✓	26.59	1.409	pCi/g	0.4432	1.00	1461	1	1.879	IDENTIFIED	2.961	<input type="checkbox"/>
Protactinium-234m	NR	20.85	3.496	pCi/g	6.349	N	1001	1	1.005	IDENTIFIED	15.94	<input type="checkbox"/>
Radium-224	INT	2.673	0.478	pCi/g	0.8507	Y	241.7	1	1.675	IDENTIFIED	17.01	<input checked="" type="checkbox"/> UI
Radium-226	✓	0.9181	0.0875	pCi/g	0.09301	Y	609.5	4	1.385	IDENTIFIED	7.93	<input type="checkbox"/>
Radium-228	✓	1.083	0.1354	pCi/g	0.1922	0.500	911.3	3	1.244	IDENTIFIED	11	<input type="checkbox"/>
Sodium-24	HE	50850	75460	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>
Strontium-85	LA	0.0632	0.01674	pCi/g	0.05759	Y	0	14	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thallium-200	HE	4.431	81.33	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.313	0.0334	pCi/g	0.04624	0.080	583.2	1	1.338	IDENTIFIED	9.451	<input type="checkbox"/>
Thorium-228	NR	1.241	0.0863	pCi/g	0.0758	N	238.6	4	0.9696	IDENTIFIED	3.647	<input type="checkbox"/>
Thorium-230	NR	0.9181	0.0875	pCi/g	0.09301	N	609.5	4	1.385	IDENTIFIED	7.93	<input type="checkbox"/>
Thorium-232	NR	1.083	0.1354	pCi/g	0.1922	N	911.3	3	1.244	IDENTIFIED	11	<input type="checkbox"/>
Thorium-234	✓	15.62	1.765	pCi/g	2.03	2.00	63.26	2	0.7911	IDENTIFIED	7.184	<input type="checkbox"/>
Tin-126	HE	0.2155	0.04612	pCi/g	0.1455	N	87.18	3	1.048	IDENTIFIED	20.86	<input type="checkbox"/>
Titanium-44	LA	0.2352	0.02197	pCi/g	0.06367	N	0	14	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		46.729	5.25E-06	ug/g	3.0229	N						<input type="checkbox"/>
Uranium-234	NR	0.9181	0.0875	pCi/g	0.09301	N	609.5	4	1.385	IDENTIFIED	7.93	<input type="checkbox"/>
Uranium-235	✓	0.5402	0.1404	pCi/g	0.2897	0.500	143.6	1	1.457	IDENTIFIED	24.48	<input type="checkbox"/>
Uranium-238	NR	15.62	1.765	pCi/g	2.03	N	63.26	2	0.7911	IDENTIFIED	7.184	<input type="checkbox"/>
Zirconium-97	—	4.51E+05	2.17E+05	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395012	19-JAN-10 12:00	02-FEB-10 09:18	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.714	0.2026	pCi/g	0.2503	N	910.5	3	1.517	IDENTIFIED 10.38 <input type="checkbox"/>
Americium-243	INT	0.4124	0.04613	pCi/g	0.1166	N	74.86	1	0.947	IDENTIFIED 10.07 <input type="checkbox"/>
Annihilation Rad.	—	0.184	0.04361	pCi/g	0.06657	N	510.9	1	0.7932	IDENTIFIED 23.28 <input type="checkbox"/>
Bismuth-211	INT	3.472	0.3015	pCi/g	0.3815	Y	351.8	4	1.161	IDENTIFIED 7.324 <input checked="" type="checkbox"/> UI
Bismuth-212	HE	1.113	0.3244	pCi/g	0.6379	N	726.4	1	1.579	IDENTIFIED 28.72 <input type="checkbox"/>
Bismuth-214	✓	1.062	0.1089	pCi/g	0.1529	0.200	609	4	1.416	IDENTIFIED 8.909 <input type="checkbox"/>
Cerium-141	HE	0.1902	0.04593	pCi/g	0.1517	N	0	11	0	NOT_IDENTI 0 <input type="checkbox"/>
Cerium-143	—	243.9	53.72	pCi/g	0	N	0	11	0	SHORT_HLIF 0 <input type="checkbox"/>
Gadolinium-153	LA	1.116	0.1022	pCi/g	0.2522	N	0	11	0	FAIL_ABUND 0 <input type="checkbox"/>
Gold-195	LA	3.245	0.2972	pCi/g	0.7662	N	0	11	0	FAIL_ABUND 0 <input type="checkbox"/>
Gross Gamma	—	19.95	1.821	pCi/g	8.706	N	0			<input type="checkbox"/>
Iodine-135	HE	2.96E+13	1.48E+14	pCi/g	0	N	0	11	0	SHORT_HLIF 0 <input type="checkbox"/>
Lead-212	✓	1.417	0.09192	pCi/g	0.1097	0.100	238.5	4	0.9697	IDENTIFIED 4.081 <input type="checkbox"/>
Lead-214	✓	1.208	0.1095	pCi/g	0.133	0.100	351.8	4	1.161	IDENTIFIED 7.324 <input type="checkbox"/>
Lutetium-177	HE	2.993	0.729	pCi/g	1.75	N	209.4	1	1.019	IDENTIFIED 23.96 <input type="checkbox"/>
Niobium-95	NR	0.4019	0.06116	pCi/g	0.09312	N	765.7	1	1.341	IDENTIFIED 14.58 <input type="checkbox"/>
Polonium-212	NR	1.417	0.09192	pCi/g	0.1097	N	238.5	4	0.9697	IDENTIFIED 4.081 <input type="checkbox"/>
Polonium-214	NR	1.208	0.1095	pCi/g	0.133	N	351.8	4	1.161	IDENTIFIED 7.324 <input type="checkbox"/>
Polonium-216	NR	1.417	0.09192	pCi/g	0.1097	N	238.5	4	0.9697	IDENTIFIED 4.081 <input type="checkbox"/>
Polonium-218	NR	1.208	0.1095	pCi/g	0.133	N	351.8	4	1.161	IDENTIFIED 7.324 <input type="checkbox"/>
Potassium-40	✓	26.03	1.486	pCi/g	0.526	1.00	1460	1	1.755	IDENTIFIED 3.591 <input type="checkbox"/>
Protactinium-234m	NR	121	9.198	pCi/g	9.193	N	1000	1	1.681	IDENTIFIED 5.712 <input type="checkbox"/>
Radium-224	INT	1.565	0.5303	pCi/g	1.249	Y	240.9	1	1.115	IDENTIFIED 33.57 <input checked="" type="checkbox"/> UI
Radium-226	✓	1.062	0.1089	pCi/g	0.1529	Y	609	4	1.416	IDENTIFIED 8.909 <input type="checkbox"/>
Radium-228	✓	1.714	0.2026	pCi/g	0.2503	0.500	910.5	3	1.517	IDENTIFIED 10.38 <input type="checkbox"/>

Rhenium-183	HE	0.4589	0.09658	pCi/g	0.2696	N	0	11	0	FAIL_ABUND	0	<input type="checkbox"/>
Sodium-24	HE	38060	1.17E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-200	HE	79.18	122.3	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.4553	0.05822	pCi/g	0.08566	0.080	582.6	1	1.128	IDENTIFIED	11.88	<input type="checkbox"/>
Thorium-228	NR	1.437	0.0932	pCi/g	0.1112	N	238.5	4	0.9697	IDENTIFIED	4.081	<input type="checkbox"/>
Thorium-230	NR	1.062	0.1089	pCi/g	0.1529	N	609	4	1.416	IDENTIFIED	8.909	<input type="checkbox"/>
Thorium-232	NR	1.714	0.2026	pCi/g	0.2503	N	910.5	3	1.517	IDENTIFIED	10.38	<input type="checkbox"/>
Thorium-234	✓	86.98	8.248	pCi/g	2.006	2.00	63.27	2	0.9124	IDENTIFIED	1.683	<input type="checkbox"/>
Titanium-44	LA	0.3188	0.03252	pCi/g	0.08854	N	0	11	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium	-	259.53	2.45E-05	ug/g	2.9872	N	0					<input type="checkbox"/>
Tungsten-181	LA	1.09	0.1856	pCi/g	0.6232	N	0	11	0	NOT_IDENTI	0	<input type="checkbox"/>
Uranium-231	NR	9.431	1.646	pCi/g	1.801	N	94.7	1	1.24	IDENTIFIED	16.71	<input type="checkbox"/>
Uranium-234	NR	1.062	0.1089	pCi/g	0.1529	N	609	4	1.416	IDENTIFIED	8.909	<input type="checkbox"/>
Uranium-235	✓	1.66	0.2737	pCi/g	0.468	0.500	143.8	1	1.046	IDENTIFIED	13.71	<input type="checkbox"/>
Uranium-238	NR	86.98	8.248	pCi/g	2.006	N	63.27	2	0.9124	IDENTIFIED	1.683	<input type="checkbox"/>
Zirconium-97		1.07E+06	4.05E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395013	19-JAN-10 12:00	02-FEB-10 09:26	13.9	SAMPLE	LOAD	1	LANL	LANL01004IGEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.58	0.1493	pCi/g	0.1604	N	910.8	3	1.875	IDENTIFIED 6.737 <input type="checkbox"/>
Americium-243	INT	0.4033	0.04201	pCi/g	0.0859	N	74.98	1	1.303	IDENTIFIED 9.542 <input type="checkbox"/>
Annihilation Rad.	-	0.09611	0.02379	pCi/g	0.03592	N	510.7	1	2.092	IDENTIFIED 24.53 <input type="checkbox"/>
Bismuth-211	INT	3.446	0.1938	pCi/g	0.2353	Y	351.9	4	1.36	IDENTIFIED 4.619 <input checked="" type="checkbox"/>
Bismuth-212	LA	1.345	0.1842	pCi/g	0.515	N	0	16	0	FAIL_ABUND 0 <input type="checkbox"/>
Bismuth-214	✓	0.9658	0.07037	pCi/g	0.08032	0.200	609	4	1.551	IDENTIFIED 5.757 <input type="checkbox"/>
Cadmium-109	INT	3.573	0.4583	pCi/g	1.108	Y	87.46	3	1.147	IDENTIFIED 11.97 <input checked="" type="checkbox"/>
Cerium-143	-	342.3	50.69	pCi/g	0	N	0	16	0	SHORT_HLIF 0 <input type="checkbox"/>
Cesium-134	LA	0.1157	0.02537	pCi/g	0.07406	0.100	0	16	0	FAIL_ABUND 0 <input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-135	HE	0.2877	0.06638	pCi/g	0.2214	N	0	16	0	NOT_IDENTI 0 <input type="checkbox"/>
Gold-195	HE	0.3919	0.1007	pCi/g	0.3561	N	0	16	0	FAIL_ABUND 0 <input type="checkbox"/>
Gross Gamma	-	8.886	1.112	pCi/g	2.434	N	0			<input type="checkbox"/>
Iodine-123	-	1.31E+06	4.65E+05	pCi/g	0	N	0	16	0	SHORT_HLIF 0 <input type="checkbox"/>
Iodine-126	HE	0.3063	0.1284	pCi/g	0.2139	N	0	16	0	FAIL_ABUND 0 <input type="checkbox"/>
Iodine-133	HE	164.6	787.8	pCi/g	0	N	0	16	0	SHORT_HLIF 0 <input type="checkbox"/>
Iodine-135	HE	6.41E+13	8.98E+13	pCi/g	0	N	0	16	0	SHORT_HLIF 0 <input type="checkbox"/>
Krypton-85	HE	15	2.938	pCi/g	10.08	N	0	16	0	NOT_IDENTI 0 <input type="checkbox"/>
Lead-212	✓	1.673	0.07407	pCi/g	0.06968	0.100	238.7	4	1.214	IDENTIFIED 2.615 <input type="checkbox"/>
Lead-214	✓	1.199	0.07433	pCi/g	0.08199	0.100	351.9	4	1.36	IDENTIFIED 4.619 <input type="checkbox"/>
Lutetium-177	HE	2.117	0.4958	pCi/g	1.549	N	0	16	0	FAIL_ABUND 0 <input type="checkbox"/>
Neptunium-237	INT	1.033	0.1701	pCi/g	0.3277	N	87.46	3	1.147	IDENTIFIED 11.97 <input type="checkbox"/>
Niobium-95	HE	0.07038	0.01828	pCi/g	0.06057	N	0	16	0	NOT_IDENTI 0 <input type="checkbox"/>
Niobium-97	HE	8661	10610	pCi/g	0	N	0	16	0	SHORT_HLIF 0 <input type="checkbox"/>
Polonium-212	NR	1.673	0.07407	pCi/g	0.06968	N	238.7	4	1.214	IDENTIFIED 2.615 <input type="checkbox"/>
Polonium-214	NR	1.199	0.07433	pCi/g	0.08199	N	351.9	4	1.36	IDENTIFIED 4.619 <input type="checkbox"/>
Polonium-216	NR	1.673	0.07407	pCi/g	0.06968	N	238.7	4	1.214	IDENTIFIED 2.615 <input type="checkbox"/>
Polonium-218	NR	1.199	0.07433	pCi/g	0.08199	N	351.9	4	1.36	IDENTIFIED 4.619 <input type="checkbox"/>
Potassium-40	✓	22.58	1.036	pCi/g	0.364	1.00	1460	1	2.321	IDENTIFIED 2.581 <input type="checkbox"/>
Radium-224	INT	3.917	0.5873	pCi/g	0.7919	Y	241.6	1	1.944	IDENTIFIED 14.73 <input checked="" type="checkbox"/>
Radium-226	✓	0.9658	0.07037	pCi/g	0.08032	Y	609	4	1.551	IDENTIFIED 5.757 <input type="checkbox"/>
Radium-228	✓	1.58	0.1493	pCi/g	0.1604	0.500	910.8	3	1.875	IDENTIFIED 6.737 <input type="checkbox"/>
Strontium-85	LA	0.07591	0.01487	pCi/g	0.05103	Y	0	16	0	NOT_IDENTI 0 <input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thallium-208	✓	0.4523	0.03363	pCi/g	0.04626	0.080	583	1	1.544	IDENTIFIED 6.319 <input type="checkbox"/>
Thorium-228	NR	1.697	0.07511	pCi/g	0.07066	N	238.7	4	1.214	IDENTIFIED 2.615 <input type="checkbox"/>
Thorium-230	NR	0.9658	0.07037	pCi/g	0.08032	N	609	4	1.551	IDENTIFIED 5.757 <input type="checkbox"/>
Thorium-232	NR	1.58	0.1493	pCi/g	0.1604	N	910.8	3	1.875	IDENTIFIED 6.737 <input type="checkbox"/>
Thorium-234	✓	3.085	0.8714	pCi/g	2.214	2.00	63.54	2	0.9132	IDENTIFIED 26.83 <input type="checkbox"/>
Tin-126	INT	0.3519	0.04513	pCi/g	0.1098	N	87.46	3	1.147	IDENTIFIED 11.97 <input type="checkbox"/>

Titanium-44	LA	0.3661	0.02684	pCi/g	0.07824	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium	—	9.2591	2.59E-06	ug/g	3.2963	N		0				<input type="checkbox"/>
Uranium-234	NR	0.9658	0.07037	pCi/g	0.08032	N	609	4	1.551	IDENTIFIED	5.757	<input type="checkbox"/>
Uranium-238	HE	3.085	0.8714	pCi/g	2.214	N	63.54	2	0.9132	IDENTIFIED	26.83	<input type="checkbox"/>
Zirconium-97	—	1.09E+06	2.40E+05	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project	Quals	Zero?	queue
245395014	19-JAN-10 12:00	02-FEB-10 09:27	13.9	SAMPLE	LOAD	1	LANL	LANL01004	GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.219	0.1365	pCi/g	0.182	N	911.6	3	1.612	IDENTIFIED	9.669		<input type="checkbox"/>	
Americium-243	WT	0.3307	0.06947	pCi/g	0.1635	N	74.86	1	1.617	IDENTIFIED	20.63		<input type="checkbox"/>	
Annihilation Rad.	—	0.115	0.03076	pCi/g	0.04654	N	510.6	1	2.125	IDENTIFIED	26.57		<input type="checkbox"/>	
Antimony-122	HE	2.854	0.7566	pCi/g	2.611	N	0	19	0	NOT_IDENTI	0		<input type="checkbox"/>	
Barium-137m	HE	0.05697	0.03452	pCi/g	0.05254	N	661.9	2	1.445	IDENTIFIED	60.52		<input type="checkbox"/>	
Bismuth-211	WT	2.334	0.1893	pCi/g	0.3277	Y	351.8	4	1.171	IDENTIFIED	7.455		<input checked="" type="checkbox"/>	
Bismuth-212	LA	1.072	0.214	pCi/g	0.5846	N	0	19	0	FAIL_ABUND	0		<input type="checkbox"/>	
Bismuth-214	✓	0.8533	0.07258	pCi/g	0.1026	0.200	609.4	4	1.622	IDENTIFIED	7.542		<input type="checkbox"/>	
Cerium-141	LA	0.2792	0.04537	pCi/g	0.152	N	0	19	0	NOT_IDENTI	0		<input type="checkbox"/>	
Cerium-143	—	334.4	55.82	pCi/g	0	N	0	19	0	SHORT_HLIF	0		<input type="checkbox"/>	
Cesium-134	LA	0.1038	0.02567	pCi/g	0.08986	0.100	0	19	0	FAIL_ABUND	0		<input checked="" type="checkbox"/> UI	Data rejected due to low abundance.
Cesium-137	TUNE	0.06023	0.03649	pCi/g	0.05554	0.100	661.9	2	1.445	IDENTIFIED	60.52		<input checked="" type="checkbox"/> UI	Data rejected due to high counting unc
Gadolinium-153	LA	0.9561	0.08752	pCi/g	0.2652	N	0	19	0	FAIL_ABUND	0		<input type="checkbox"/>	
Gold-195	LA	2.781	0.2546	pCi/g	0.7457	N	0	19	0	FAIL_ABUND	0		<input type="checkbox"/>	
Gross Gamma	—	16.55	1.688	pCi/g	6.739	N	0						<input type="checkbox"/>	
Iodine-123	HE	4.63E+05	8.30E+05	pCi/g	0	N	0	19	0	SHORT_HLIF	0		<input type="checkbox"/>	
Krypton-85	HE	14.25	3.651	pCi/g	12.51	N	0	19	0	NOT_IDENTI	0		<input type="checkbox"/>	
Lead-212	✓	1.143	0.06229	pCi/g	0.09715	0.100	238.6	4	1.385	IDENTIFIED	4.083		<input type="checkbox"/>	
Lead-214	✓	0.8121	0.06918	pCi/g	0.1093	0.100	351.8	4	1.171	IDENTIFIED	7.455		<input type="checkbox"/>	
Niobium-95	NR	0.4629	0.04783	pCi/g	0.06611	N	766.5	1	1.841	IDENTIFIED	9.71		<input type="checkbox"/>	
Niobium-95m	HE	0.3084	0.07366	pCi/g	0.2402	N	0	19	0	NOT_IDENTI	0		<input type="checkbox"/>	
Polonium-212	NR	1.143	0.06229	pCi/g	0.09715	N	238.6	4	1.385	IDENTIFIED	4.083		<input type="checkbox"/>	
Polonium-214	NR	0.8121	0.06918	pCi/g	0.1093	N	351.8	4	1.171	IDENTIFIED	7.455		<input type="checkbox"/>	
Polonium-216	NR	1.143	0.06229	pCi/g	0.09715	N	238.6	4	1.385	IDENTIFIED	4.083		<input type="checkbox"/>	
Polonium-218	NR	0.8121	0.06918	pCi/g	0.1093	N	351.8	4	1.171	IDENTIFIED	7.455		<input type="checkbox"/>	
Potassium-40	✓	20.96	1.01	pCi/g	0.447	1.00	1461	1	1.924	IDENTIFIED	3.057		<input type="checkbox"/>	
Protactinium-234m	WT	107.5	7.413	pCi/g	6.48	N	1001	1	1.7	IDENTIFIED	5.085		<input type="checkbox"/>	
Radium-224	WT	2.562	0.5486	pCi/g	1.105	Y	241.4	1	1.684	IDENTIFIED	21.23		<input checked="" type="checkbox"/> UI	
Radium-226	✓	0.8533	0.07258	pCi/g	0.1026	Y	609.4	4	1.622	IDENTIFIED	7.542		<input type="checkbox"/>	
Radium-228	✓	1.219	0.1365	pCi/g	0.182	0.500	911.6	3	1.612	IDENTIFIED	9.669		<input type="checkbox"/>	
Rhenium-183	HE	0.3526	0.09176	pCi/g	0.2534	N	0	19	0	FAIL_ABUND	0		<input type="checkbox"/>	
Strontium-85	LA	0.07215	0.01848	pCi/g	0.06334	Y	0	19	0	NOT_IDENTI	0		<input checked="" type="checkbox"/> UI	Data rejected due to low abundance.
Technetium-99m	HE	7.38E+14	9.31E+14	pCi/g	0	N	0	19	0	SHORT_HLIF	0		<input type="checkbox"/>	
Tellurium-125m	HE	26.88	7.843	pCi/g	25.55	N	0	19	0	NOT_IDENTI	0		<input type="checkbox"/>	
Thallium-200	HE	27.83	103.2	pCi/g	0	N	0	19	0	SHORT_HLIF	0		<input type="checkbox"/>	
Thallium-208	✓	0.3361	0.03579	pCi/g	0.05743	0.080	583.3	1	1.498	IDENTIFIED	10.09		<input type="checkbox"/>	
Thorium-228	NR	1.159	0.06316	pCi/g	0.0985	N	238.6	4	1.385	IDENTIFIED	4.083		<input type="checkbox"/>	
Thorium-230	NR	0.8533	0.07258	pCi/g	0.1026	N	609.4	4	1.622	IDENTIFIED	7.542		<input type="checkbox"/>	
Thorium-232	NR	1.219	0.1365	pCi/g	0.182	N	911.6	3	1.612	IDENTIFIED	9.669		<input type="checkbox"/>	
Thorium-234	✓	73.29	6.774	pCi/g	3.737	2.00	63.32	2	1.241	IDENTIFIED	2.982		<input type="checkbox"/>	
Titanium-44	LA	0.2215	0.04126	pCi/g	0.112	N	0	19	0	FAIL_ABUND	0		<input type="checkbox"/>	
Total Uranium	—	218.56	2.02E-05	ug/g	5.5629	N	0						<input type="checkbox"/>	
Tungsten-181	LA	11.38	0.5786	pCi/g	1.548	N	0	19	0	NOT_IDENTI	0		<input type="checkbox"/>	
Uranium-231	LA	9.085	1.113	pCi/g	2.843	N	0	19	0	FAIL_ABUND	0		<input type="checkbox"/>	
Uranium-234	NR	0.8533	0.07258	pCi/g	0.1026	N	609.4	4	1.622	IDENTIFIED	7.542		<input type="checkbox"/>	
Uranium-235	✓	1.119	0.2115	pCi/g	0.4561	0.500	143.5	1	1.353	IDENTIFIED	17.09		<input type="checkbox"/>	
Uranium-238	NR	73.29	6.774	pCi/g	3.737	N	63.32	2	1.241	IDENTIFIED	2.982		<input type="checkbox"/>	
Zirconium-97	—	8.77E+05	2.95E+05	pCi/g	0	N	0	19	0	SHORT_HLIF	0		<input type="checkbox"/>	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
245395015	19-JAN-10 12:00	02-FEB-10 09:47	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.43	0.1629	pCi/g	0.2302	N	911.4 3	1.548 IDENTIFIED	9.812	<input type="checkbox"/>
Americium-243	INT	0.3258	0.05355	pCi/g	0.1267	N	74.92 1	1.296 IDENTIFIED	15.9	<input type="checkbox"/>
Annihilation Rad.	HE	0.08722	0.0363	pCi/g	0.0532	N	511 1	2.156 IDENTIFIED	41.41	<input type="checkbox"/>
Bismuth-211	INT	3.403	0.2875	pCi/g	0.3274	Y	352.2 4	1.141 IDENTIFIED	7.126	<input checked="" type="checkbox"/> UI
Bismuth-212	NR	0.8904	0.1621	pCi/g	0.4665	N	727.1 1	1.262 IDENTIFIED	17.52	<input type="checkbox"/>
Bismuth-214	✓	1.035	0.0997	pCi/g	0.1135	0.200	609.5 4	1.474 IDENTIFIED	8.271	<input type="checkbox"/> UI
Cadmium-109	INT	3.711	0.5989	pCi/g	1.941	Y	87.26 3	1.305 IDENTIFIED	15.44	<input checked="" type="checkbox"/>
Cerium-143	—	219.9	50.13	pCi/g	0	N	0 13 0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134	LA	0.1113	0.03043	pCi/g	0.0934	0.100	0 13 0	FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Gadolinium-153	LA	0.3925	0.06768	pCi/g	0.1989	N	0 13 0	FAIL_ABUND	0	<input type="checkbox"/>
Gold-195	LA	1.142	0.1968	pCi/g	0.577	N	0 13 0	FAIL_ABUND	0	<input type="checkbox"/>
Gross Gamma	—	12.68	1.721	pCi/g	5.147	N	0			<input type="checkbox"/>
Iodine-123	HE	1.83E+05	6.52E+05	pCi/g	0	N	0 13 0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	HE	15.61	4.574	pCi/g	15.02	N	0 13 0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.469	0.09175	pCi/g	0.1006	0.100	239 4	1.203 IDENTIFIED	3.658	<input type="checkbox"/>
Lead-214	✓	1.184	0.1047	pCi/g	0.1141	0.100	352.2 4	1.141 IDENTIFIED	7.126	<input type="checkbox"/>
Neptunium-237	INT	1.073	0.2055	pCi/g	0.5994	N	87.26 3	1.305 IDENTIFIED	15.44	<input type="checkbox"/>
Niobium-95	HE	0.1482	0.0316	pCi/g	0.1083	N	0 13 0	NOT_IDENTI	0	<input type="checkbox"/>
Polonium-212	NR	1.469	0.09175	pCi/g	0.1006	N	239 4	1.203 IDENTIFIED	3.658	<input type="checkbox"/>
Polonium-214	NR	1.184	0.1047	pCi/g	0.1141	N	352.2 4	1.141 IDENTIFIED	7.126	<input type="checkbox"/>
Polonium-216	NR	1.469	0.09175	pCi/g	0.1006	N	239 4	1.203 IDENTIFIED	3.658	<input type="checkbox"/>
Polonium-218	NR	1.184	0.1047	pCi/g	0.1141	N	352.2 4	1.141 IDENTIFIED	7.126	<input type="checkbox"/>
Potassium-40	✓	33.01	1.736	pCi/g	0.4903	1.00	1461 1	2.085 IDENTIFIED	2.808	<input type="checkbox"/>
Protactinium-234m	NR	52.75	5.365	pCi/g	7.24	N	1001 1	1.79 IDENTIFIED	8.8	<input type="checkbox"/>
Radium-224	INT	4.766	0.7015	pCi/g	1.145	Y	242.1 1	1.894 IDENTIFIED	14	<input checked="" type="checkbox"/> UI
Radium-226	✓	1.035	0.0997	pCi/g	0.1135	Y	609.5 4	1.474 IDENTIFIED	8.271	<input type="checkbox"/>
Radium-228	✓	1.43	0.1629	pCi/g	0.2302	0.500	911.4 3	1.548 IDENTIFIED	9.812	<input type="checkbox"/>
Strontium-85	LA	0.07903	0.02315	pCi/g	0.07602	Y	0 13 0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thallium-200	HE	75.27	103.8	pCi/g	0	N	0 13 0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.4076	0.04658	pCi/g	0.06352	0.080	583.6 1	1.415 IDENTIFIED	10.49	<input type="checkbox"/>
Thorium-228	NR	1.489	0.09304	pCi/g	0.102	N	239 4	1.203 IDENTIFIED	3.658	<input type="checkbox"/>
Thorium-230	NR	1.035	0.0997	pCi/g	0.1135	N	609.5 4	1.474 IDENTIFIED	8.271	<input type="checkbox"/>
Thorium-232	NR	1.43	0.1629	pCi/g	0.2302	N	911.4 3	1.548 IDENTIFIED	9.812	<input type="checkbox"/>
Thorium-234	✓	32.28	3.351	pCi/g	2.994	2.00	63.22 2	1.132 IDENTIFIED	5.526	<input type="checkbox"/>
Tin-126	INT	0.3654	0.05898	pCi/g	0.1921	N	87.26 3	1.305 IDENTIFIED	15.44	<input type="checkbox"/>
Titanium-44	LA	0.2971	0.0332	pCi/g	0.09704	N	0 13 0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium	—	96.202	9.97E-06	ug/g	4.4576	N	0			<input type="checkbox"/>
Tungsten-181	LA	2.157	0.2983	pCi/g	1.018	N	0 13 0	NOT_IDENTI	0	<input type="checkbox"/>
Uranium-231	HE	2.913	0.7948	pCi/g	2.117	N	0 13 0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234	NR	1.035	0.0997	pCi/g	0.1135	N	609.5 4	1.474 IDENTIFIED	8.271	<input type="checkbox"/>
Uranium-238	NR	32.28	3.351	pCi/g	2.994	N	63.22 2	1.132 IDENTIFIED	5.526	<input type="checkbox"/>
Zirconium-97	HE	3.80E+05	3.36E+05	pCi/g	0	N	0 13 0	SHORT_HLIF	0	<input type="checkbox"/>
*** = Number of isotopes identified with a keyline at this energy.										
Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202023719		02-FEB-10 09:48	0	MB	LOAD	1		GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Iodine-123 HE	62.11	57.1	pCi/g	0	N	0 3 0		SHORT_HLIF	0	<input type="checkbox"/>
Iodine-135	—	1.11E+07	3.44E+06	pCi/g	0	N	0 3 0	SHORT_HLIF	0	<input type="checkbox"/>
Sodium-24 HE	8.754	23.03	pCi/g	0	N	0 3 0		SHORT_HLIF	0	<input type="checkbox"/>
*** = Number of isotopes identified with a keyline at this energy.										
Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202023720	19-JAN-10 12:00	02-FEB-10 09:49	13.9	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment	
Actinium-228	NR	1.011	0.1647	pCi/g	0.2084	N	910.9	3	1.39	IDENTIFIED	15.48	<input type="checkbox"/>
Americium-243	INT	0.3135	0.05155	pCi/g	0.1295	N	74.64	1	1.348	IDENTIFIED	15.81	<input type="checkbox"/>
Annihilation Rad.	HE	0.1018	0.03885	pCi/g	0.04548	N	510.4	1	2.445	IDENTIFIED	38.04	<input type="checkbox"/>
Barium-137m	NR	0.198	0.02838	pCi/g	0.07417	N	661	2	1.495	IDENTIFIED	14.12	<input type="checkbox"/>
Bismuth-211	INT	2.894	0.2568	pCi/g	0.3535	Y	351.6	4	1.186	IDENTIFIED	8.266	<input checked="" type="checkbox"/>
Bismuth-212	HE	1.003	0.3136	pCi/g	0.6573	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	0.8301	0.09329	pCi/g	0.1226	0.200	609	4	1.508	IDENTIFIED	10.61	<input type="checkbox"/>
Cadmium-109	INT	2.873	0.6624	pCi/g	1.791	Y	86.97	3	1.408	IDENTIFIED	22.53	<input checked="" type="checkbox"/>
Cerium-143		528.2	75.91	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134	LA	0.1017	0.03652	pCi/g	0.09596	0.100	0	15	0	FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-137	✓	0.2093	0.03	pCi/g	0.07841	0.100	661	2	1.495	IDENTIFIED	14.12	<input type="checkbox"/>
Gadolinium-153	LA	0.4121	0.07078	pCi/g	0.1928	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Gold-195	LA	1.199	0.2059	pCi/g	0.5597	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Gross Gamma		9.246	1.474	pCi/g	4.179	N	0					<input type="checkbox"/>
Iodine-123	HE	29220	7.04E+05	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Iodine-133	HE	1621	1207	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Lead-212	LA	1.134	0.06478	pCi/g	0.1065	0.100	238.4	4	1.067	IDENTIFIED	4.366	<input type="checkbox"/>
Lead-214	LA	1.007	0.09312	pCi/g	0.1232	0.100	351.6	4	1.186	IDENTIFIED	8.266	<input type="checkbox"/>
Neptunium-237	HE	0.8308	0.2098	pCi/g	0.5275	N	86.97	3	1.408	IDENTIFIED	22.53	<input type="checkbox"/>
Niobium-95m	HE	0.3578	0.08532	pCi/g	0.2755	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-97	HE	12790	18290	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212	NR	1.134	0.06478	pCi/g	0.1065	N	238.4	4	1.067	IDENTIFIED	4.366	<input type="checkbox"/>
Polonium-214	NR	1.007	0.09312	pCi/g	0.1232	N	351.6	4	1.186	IDENTIFIED	8.266	<input type="checkbox"/>
Polonium-216	NR	1.134	0.06478	pCi/g	0.1065	N	238.4	4	1.067	IDENTIFIED	4.366	<input type="checkbox"/>
Polonium-218	NR	1.007	0.09312	pCi/g	0.1232	N	351.6	4	1.186	IDENTIFIED	8.266	<input type="checkbox"/>
Potassium-40	✓	26.24	1.197	pCi/g	0.4565	1.00	1460	1	2.217	IDENTIFIED	3.142	<input type="checkbox"/>
Protactinium-234m	HE	20.97	4.578	pCi/g	13.24	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Radium-224	INT	3.129	0.4676	pCi/g	1.211	Y	241.3	1	1.682	IDENTIFIED	14.65	<input checked="" type="checkbox"/>
Radium-226	✓	0.8301	0.09329	pCi/g	0.1226	Y	609	4	1.508	IDENTIFIED	10.61	<input type="checkbox"/>
Radium-228	✓	1.011	0.1647	pCi/g	0.2084	0.500	910.9	3	1.39	IDENTIFIED	15.48	<input type="checkbox"/>
Technetium-99m	HE	1.22E+14	8.57E+14	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.3085	0.03651	pCi/g	0.06311	0.080	582.8	1	1.37	IDENTIFIED	11.4	<input type="checkbox"/>
Thorium-228	NR	1.15	0.06569	pCi/g	0.1079	N	238.4	4	1.067	IDENTIFIED	4.366	<input type="checkbox"/>
Thorium-230	NR	0.8301	0.09329	pCi/g	0.1226	N	609	4	1.508	IDENTIFIED	10.61	<input type="checkbox"/>
Thorium-232	NR	1.011	0.1647	pCi/g	0.2084	N	910.9	3	1.39	IDENTIFIED	15.48	<input type="checkbox"/>
Thorium-234	✓	20.02	2.46	pCi/g	3.2	2.00	62.92	2	1.021	IDENTIFIED	8.264	<input type="checkbox"/>
Tin-126	HE	0.2829	0.06522	pCi/g	0.1773	N	86.97	3	1.408	IDENTIFIED	22.53	<input type="checkbox"/>
Titanium-44	HE	0.1572	0.0386	pCi/g	0.09628	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Total Uranium		59.795	7.32E-06	ug/g	4.763	N	0					<input type="checkbox"/>
Tungsten-181	HE	1.334	0.2955	pCi/g	0.9874	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Uranium-231	HE	3.132	0.7778	pCi/g	1.993	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234	NR	0.8301	0.09329	pCi/g	0.1226	N	609	4	1.508	IDENTIFIED	10.61	<input type="checkbox"/>
Uranium-235	✓	0.5044	0.1453	pCi/g	0.398	0.500	143.4	1	1.005	IDENTIFIED	27.64	<input type="checkbox"/>
Uranium-238	NR	20.02	2.46	pCi/g	3.2	N	62.92	2	1.021	IDENTIFIED	8.264	<input type="checkbox"/>
Zirconium-97		1.67E+06	3.33E+05	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue			
1202023721		02-FEB-10 09:50	0	LCS	LOAD	1		GEL	N	RGSP			
Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment	
Actinium-228	HE	0.5652	0.2342	pCi/g	0.5052	N	911.6	3	1.245	IDENTIFIED	41.02	<input type="checkbox"/>	
Americium-241	✓	13.32	0.5804	pCi/g	0.4	0.200	59.55	1	0.97	IDENTIFIED	1.809	<input type="checkbox"/>	
Americium-243		0.2301	0.04782	pCi/g	0.1174	N	74.63	1	1.339	IDENTIFIED	20.39	<input type="checkbox"/>	
Barium-137m		5.537	0.2776	pCi/g	0.1241	N	661.6	2	1.524	IDENTIFIED	2.358	<input type="checkbox"/>	
Bismuth-211		2.082	0.3023	pCi/g	0.6243	Y	352	4	1.223	IDENTIFIED	13.81	<input type="checkbox"/>	
Bismuth-214		0.6546	0.1071	pCi/g	0.3355	0.200	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>	
Cadmium-109		29.96	1.686	pCi/g	1.891	Y	88.03	2	1.07	IDENTIFIED	3.08	<input type="checkbox"/>	
Cesium-137	✓	5.853	0.2939	pCi/g	0.1312	0.100	661.6	2	1.524	IDENTIFIED	2.358	<input type="checkbox"/>	

Cobalt-57		0.2025	0.03277	pCi/g	0.06138	N	122.2	1	0.9895	IDENTIFIED	15.6	<input type="checkbox"/>
Cobalt-60	✓	6.31	0.3053	pCi/g	0.08336	0.100	1332	1	1.898	IDENTIFIED	2.575	<input type="checkbox"/>
Gross Gamma		26.7	3.197	pCi/g	4.26	N	0					<input type="checkbox"/>
Iodine-123	HE	318.4	236.7	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>
Lead-212		1.163	0.09255	pCi/g	0.1619	0.100	238.7	4	1.17	IDENTIFIED	6.357	<input type="checkbox"/>
Lead-214		0.7242	0.1068	pCi/g	0.2198	0.100	352	4	1.223	IDENTIFIED	13.81	<input type="checkbox"/>
Neptunium-237		3.943	0.5097	pCi/g	0.9779	N	0	10	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-97		252.2	60.34	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212		1.163	0.09255	pCi/g	0.1619	N	238.7	4	1.17	IDENTIFIED	6.357	<input type="checkbox"/>
Polonium-214		0.7242	0.1068	pCi/g	0.2198	N	352	4	1.223	IDENTIFIED	13.81	<input type="checkbox"/>
Polonium-216		1.163	0.09255	pCi/g	0.1619	N	238.7	4	1.17	IDENTIFIED	6.357	<input type="checkbox"/>
Polonium-218		0.7242	0.1068	pCi/g	0.2198	N	352	4	1.223	IDENTIFIED	13.81	<input type="checkbox"/>
Radium-224		2.222	0.8335	pCi/g	1.843	Y	241.5	1	1.512	IDENTIFIED	37.28	<input type="checkbox"/>
Radium-226		0.6546	0.1071	pCi/g	0.3355	Y	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>
Radium-228		0.5652	0.2342	pCi/g	0.5052	0.500	911.6	3	1.245	IDENTIFIED	41.02	<input type="checkbox"/>
Sodium-24	HE	42.23	73.52	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208		0.4199	0.06334	pCi/g	0.1133	0.080	583.4	1	1.489	IDENTIFIED	14.31	<input type="checkbox"/>
Thorium-228		1.172	0.09323	pCi/g	0.1631	N	238.7	4	1.17	IDENTIFIED	6.357	<input type="checkbox"/>
Thorium-230		0.6545	0.1071	pCi/g	0.3355	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>
Thorium-232	HE	0.5652	0.2342	pCi/g	0.5052	N	911.6	3	1.245	IDENTIFIED	41.02	<input type="checkbox"/>
Tin-126		2.979	0.1676	pCi/g	0.1884	N	88.03	2	1.07	IDENTIFIED	3.08	<input type="checkbox"/>
Titanium-44		0.2411	0.03046	pCi/g	0.09096	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234		0.6545	0.1071	pCi/g	0.3355	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>
Zirconium-97	HE	592.9	895.4	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 944966

Report run on: February 3, 2010 3:04 PM

Samp Id	Parmname	Cofa	Edd	Qual Comments	Auto	Result	MDA	Uncert	SQL
245371001-1 02-FEB-2010 06:51	Bismuth-211	UI	UI	Data rejected due to interference.		2.952			
	Cadmium-109	UI	UI	Data rejected due to interference.		2.561			
	Radium-224	UI	UI	Data rejected due to interference.		3.716			
245371002-1 02-FEB-2010 07:08	Bismuth-211	UI	UI	Data rejected due to interference.		2.543			
	Cadmium-109	UI	UI	Data rejected due to interference.		3.333			
	Radium-224	UI	UI	Data rejected due to interference.		3.383			
245393010-1 02-FEB-2010 07:09	Bismuth-211	UI	UI	Data rejected due to interference.		3.186			
	Cadmium-109	UI	UI	Data rejected due to interference.		3.804			
	Radium-224	UI	UI	Data rejected due to interference.		4.154			
	Thorium-227	UI	UI	Data rejected due to low abundance.		1.374			
245393011-1 02-FEB-2010 07:09	Bismuth-211	UI	UI	Data rejected due to interference.		3.343			
	Cadmium-109	UI	UI	Data rejected due to interference.		2.861			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.1144		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		3.977			
	Uranium-235	UI	UI	Data rejected due to high counting uncertainty.		.4477		.5	.5
245395001-1 02-FEB-2010 07:10	Bismuth-211	UI	UI	Data rejected due to interference.		3.834			
	Cadmium-109	UI	UI	Data rejected due to interference.		4.862			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.1266		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		3.918			

GEL QUALS

Batch ID: 944966

Report run on: February 3, 2010 3:04 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
245395002-1 02-FEB-2010 07:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.525			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.888			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09697		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.071			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08718			
245395003-1 02-FEB-2010 07:21	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.545			
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.704			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07716			
245395004-1 02-FEB-2010 08:23	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.62			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1109		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.135			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08498			
245395005-1 02-FEB-2010 08:24	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.784			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.826			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1306		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.798			
245395006-1 02-FEB-2010 08:24	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.094			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.908			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.619			

GEL QUALS

Batch ID: 944966

Report run on: February 3, 2010 3:04 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
245395007-1 02-FEB-2010 09:13	Americium-241	UI	UI	UI	Data rejected due to low abundance.		.9287		.2	.2
	Bismuth-211	UI	UI	UI	Data rejected due to interference.		1.754			
	Lead-212	UI	UI	UI	Data rejected due to low abundance.		.6688		.1	.1
	Lead-214	UI	UI	UI	Data rejected due to low abundance.		.61		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to low abundance.		2.117			
	Thorium-227	UI	UI	UI	Data rejected due to low abundance.		1.127			
245395008-1 02-FEB-2010 09:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.333			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.423			
245395009-1 02-FEB-2010 09:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.082			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.31			
245395010-1 02-FEB-2010 09:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.414			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.548			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.358			
245395011-1 02-FEB-2010 09:18	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.869			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.188			
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.673			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0632			
245395012-1 02-FEB-2010 09:18	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.472			
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.565			

GEL QUALS

Batch ID: 944966

Report run on: February 3, 2010 3:04 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
245395013-1 02-FEB-2010 09:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.446			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.573			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1157		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.917			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07591			
245395014-1 02-FEB-2010 09:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.334			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1038		.1	.1
	Cesium-137	UI	UI	UI	Data rejected due to high counting uncertainty.		.06023		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.562			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07215			
245395015-1 02-FEB-2010 09:47	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.403			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.711			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1113		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.766			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07903			
120203720-1 DUP 02-FEB-2010 09:49	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.894			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.873			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1017		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.129			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parname	Result	Uncertainty	Units	DL	RDL
944966	245395015	SAMPLE	02-FEB-10	Thallium-208	0.4076	0.04658	pCi/g	0.03178	0.080
				Thorium-231	0.6646	0.3544	pCi/g	0.6315	Y
				Thorium-234	32.28	3.351	pCi/g	1.498	2.00
				Uranium-235	0.3587	0.1619	pCi/g	0.2012	0.500
				Uranium-238	32.28	3.351	pCi/g	1.498	N
				Zirconium-97	3.80E+05	3.36E+05	pCi/g	0	N
944966	1202023719	MB	02-FEB-10	Iodine-123	62.11	57.1	pCi/g	0	N
				Iodine-135	1.11E+07	3.44E+06	pCi/g	0	N
				Lead-214	0.02981	0.0147	pCi/g	0.02728	0.100
				Radon-220	11.08	4.071	pCi/g	8.552	N
				Sodium-24	8.754	23.03	pCi/g	0	N
944966	1202023720	DUP	02-FEB-10	Americium-241	0.2894	0.1265	pCi/g	0.2085	0.200
				Bismuth-211	2.894	0.2568	pCi/g	0.1768	Y
				Bismuth-214	0.8301	0.09329	pCi/g	0.06136	0.200
				Cadmium-109	2.673	0.6624	pCi/g	0.896	Y
				Cadmium-115	8.3	3.742	pCi/g	6.832	N
				Cerium-143	528.2	75.91	pCi/g	0	N
				Cesium-134	0.1017	0.03652	pCi/g	0.04801	0.100
				Cesium-137	0.2093	0.03	pCi/g	0.03923	0.100
				Gross Gamma	9.246	1.474	pCi/g	2.042	N
				Iodine-123	29220	7.04E+05	pCi/g	0	N
				Iodine-133	1621	1207	pCi/g	0	N
				Krypton-85	11.37	3.946	pCi/g	6.585	N
				Lead-212	1.134	0.06478	pCi/g	0.05326	0.100
				Lead-214	1.007	0.09312	pCi/g	0.06164	0.100
				Niobium-97	12790	18290	pCi/g	0	N
				Potassium-40	26.24	1.197	pCi/g	0.2284	1.00
				Protactinium-234m	20.97	4.576	pCi/g	6.624	N
				Radium-224	3.129	0.4676	pCi/g	0.6061	Y
				Radium-226	0.8301	0.09329	pCi/g	0.06136	Y
				Radium-228	1.011	0.1647	pCi/g	0.1043	0.500
				Strontium-85	0.05758	0.01998	pCi/g	0.03333	Y
				Technetium-99m	1.22E+14	8.57E+14	pCi/g	0	N
				Thallium-208	0.3085	0.03651	pCi/g	0.03157	0.080
				Thorium-234	20.02	2.46	pCi/g	1.601	2.00
				Uranium-235	0.5044	0.1453	pCi/g	0.1981	0.500
				Uranium-238	20.02	2.46	pCi/g	1.601	N

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2/4/10

VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 09:12:15.63

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395001.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:10:18.
Sample ID          : G245395001 Sample quantity : 1.44700E+02 GRAM
Detector name      : GAM16 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.69 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.34*	2051	1283	0.90	126.88	122	10	2.85E-01	4.0	
2	4	74.98*	373	850	0.92	150.15	146	12	5.17E-02	12.7	3.82E+00
3	4	77.15*	696	974	0.99	154.48	146	12	9.67E-02	8.1	
4	5	84.07*	261	1115	1.39	168.33	163	30	3.63E-02	22.4	1.51E+00
5	5	87.23*	427	1072	1.34	174.66	163	30	5.93E-02	13.9	
6	5	89.95	394	1039	1.35	180.10	163	30	5.47E-02	15.1	
7	5	92.60*	5069	707	1.04	185.38	163	30	7.04E-01	1.7	
8	5	94.61	187	730	1.17	189.42	163	30	2.60E-02	36.4	
9	0	98.78*	369	741	0.92	197.75	194	9	5.13E-02	14.4	
10	0	112.86	200	690	0.75	225.92	223	7	2.78E-02	23.3	
11	0	143.74*	230	534	0.96	287.67	283	9	3.20E-02	19.6	
12	0	163.57*	137	512	1.03	327.33	323	9	1.90E-02	31.4	
13	0	185.78*	1115	599	1.08	371.75	366	12	1.55E-01	5.4	
14	0	209.28	158	433	1.02	418.75	415	10	2.19E-02	26.1	
15	5	238.63*	1522	258	0.98	477.45	472	16	2.11E-01	3.1	2.13E+00
16	5	241.55	309	292	1.59	483.30	472	16	4.29E-02	11.6	
17	0	258.12	150	366	1.70	516.43	510	13	2.08E-02	27.6	
18	0	269.95	124	281	1.16	540.09	535	10	1.72E-02	26.8	
19	0	277.70	69	248	1.50	555.60	551	9	9.54E-03	43.3	
20	0	295.20	425	238	1.09	590.59	586	10	5.90E-02	8.4	
21	0	300.15	92	241	1.12	600.50	597	10	1.27E-02	33.4	
22	0	328.65	51	225	0.87	657.49	653	9	7.02E-03	55.9	
23	0	338.32*	338	171	1.10	676.83	672	9	4.69E-02	9.0	
24	0	351.87*	754	259	1.06	703.92	698	12	1.05E-01	5.7	
25	0	409.93	86	134	0.95	820.04	816	10	1.19E-02	27.5	
26	0	463.28	81	147	0.90	926.73	922	10	1.13E-02	30.3	
27	0	510.91*	182	160	1.60	1021.98	1015	16	2.53E-02	19.0	
28	0	583.19*	500	112	1.44	1166.52	1159	14	6.95E-02	6.4	
29	0	609.41*	464	135	1.21	1218.96	1213	12	6.45E-02	6.9	
30	0	727.39*	99	78	1.55	1454.86	1451	10	1.38E-02	19.9	
31	0	756.26	38	92	0.95	1512.59	1508	11	5.22E-03	52.4	
32	0	767.08	154	86	1.20	1534.23	1529	12	2.14E-02	14.7	
33	0	795.72	76	64	1.68	1591.50	1586	11	1.06E-02	23.8	
34	0	860.53*	65	61	1.59	1721.09	1716	11	9.01E-03	26.9	
35	0	911.46*	328	86	1.45	1822.92	1815	14	4.55E-02	8.2	
36	4	964.78	82	41	2.21	1929.53	1925	19	1.14E-02	17.8	1.23E+00
37	4	969.14*	217	45	1.60	1938.25	1925	19	3.01E-02	9.0	
38	0	1001.26*	254	81	1.64	2002.47	1996	15	3.53E-02	10.1	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1120.70*	100	64	1.58	2241.28	2237	13	1.38E-02	19.6	
40	0	1378.46*	29	30	1.12	2756.60	2751	12	4.08E-03	43.3	
41	0	1461.09*	1406	19	1.85	2921.78	2912	19	1.95E-01	2.8	
42	0	1510.55	18	14	0.73	3020.65	3016	11	2.46E-03	47.2	
43	0	1631.70	11	21	1.34	3262.82	3255	12	1.53E-03	88.2	
44	0	1730.76	22	20	1.72	3460.84	3451	16	3.09E-03	49.6	
45	0	1764.84*	84	18	2.27	3528.96	3523	12	1.17E-02	15.4	

Flag: "*" = Peak area was modified by background subtraction

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395001.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:10:18
 Sample ID : G245395001 Sample quantity : 144.70 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA16 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.69 0.0%
 Peak Width (FWHM): 3.00 Confidence level : 5.00 %
 Energy tolerance : 1.50 keV Half life ratio : 8.00
 Errors propagated: Yes Systematic Error : 0.00 %
 Efficiency type : Empirical Efficiencies at : Peak Energy
 Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.830E+01	2.946E+00	4.217E-01	3.706E-02	67.108
NB-95	+	765.79	*	2.188E-01	6.738E-02	5.924E-02	5.476E-03	3.693
CD-109	+	88.03	*	4.862E+00	1.428E+00	1.429E+00	1.377E-01	3.401
SN-126	+	64.28		1.566E+01	2.596E+00	8.917E-01	1.299E-01	17.561
	+	86.94		1.990E+00	9.951E-01	5.916E-01	2.458E-01	3.364
	+	87.57	*	4.788E-01	1.407E-01	1.414E-01	1.356E-02	3.386
LU-177	+	112.95		4.732E+00	2.239E+00	2.572E+00	2.153E-01	1.840
	+	208.36	*	2.719E+00	1.446E+00	1.507E+00	1.529E-01	1.805
HG-203		70.83		3.047E-01	1.179E+00	1.839E+00	2.427E-01	0.166
		72.87		1.428E-01	6.936E-01	1.078E+00	1.390E-01	0.132
	+	82.60		3.894E+00	1.830E+00	1.919E+00	2.688E-01	2.029
	+	279.20	*	6.041E-02	5.279E-02	5.797E-02	7.065E-03	1.042
TL-208	+	277.35		5.590E-01	4.908E-01	5.097E-01	7.576E-02	1.097
	+	510.84		7.372E-01	2.956E-01	1.928E-01	2.438E-02	3.824
	+	583.14	*	5.777E-01	9.398E-02	4.807E-02	4.764E-03	12.020
	+	860.37		7.040E-01	3.851E-01	4.091E-01	4.096E-02	1.721
BI-211		72.87		7.321E-01	3.556E+00	5.529E+00	4.494E-01	0.132
	+	351.07	*	3.834E+00	6.027E-01	2.756E-01	3.013E-02	13.912
PB-212	+	74.81		1.763E+00	4.990E-01	6.351E-01	7.934E-02	2.775
	+	77.11		1.870E+00	3.427E-01	3.603E-01	3.060E-02	5.189
	+	87.30		2.214E+00	6.872E-01	6.557E-01	9.070E-02	3.377
	+	238.63	*	1.694E+00	2.265E-01	8.437E-02	9.990E-03	20.082
	+	300.09		1.575E+00	1.072E+00	1.089E+00	1.427E-01	1.446
PO-212	+	74.81		1.763E+00	4.990E-01	6.351E-01	7.934E-02	2.775
	+	77.11		1.870E+00	3.427E-01	3.603E-01	3.060E-02	5.189
	+	87.30		2.214E+00	6.872E-01	6.557E-01	9.070E-02	3.377
		115.19		1.696E-02	3.849E+00	5.810E+00	4.848E-01	0.003
	+	238.63	*	1.694E+00	2.265E-01	8.437E-02	9.990E-03	20.082
	+	300.09		1.575E+00	1.072E+00	1.089E+00	1.427E-01	1.446
BI-214	+	609.31	*	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
	+	1120.29		1.130E+00	4.585E-01	3.746E-01	4.021E-02	3.016
	+	1764.49		1.314E+00	4.193E-01	2.872E-01	2.377E-02	4.574
PB-214	+	74.81		3.037E+00	8.423E-01	1.094E+00	1.217E-01	2.775
	+	77.11		3.205E+00	6.362E-01	6.177E-01	7.048E-02	5.189

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	87.30		3.793E+00	1.152E+00	1.123E+00	1.379E-01	3.377
	+	241.98		2.066E+00	5.427E-01	5.082E-01	6.296E-02	4.066
	+	295.21		1.280E+00	2.739E-01	1.854E-01	2.474E-02	6.905
	+	351.92	*	1.334E+00	2.209E-01	9.608E-02	1.162E-02	13.882
	+	74.81		3.037E+00	8.423E-01	1.094E+00	1.217E-01	2.775
	+	77.11		3.205E+00	6.362E-01	6.177E-01	7.048E-02	5.189
	+	87.30		3.793E+00	1.152E+00	1.123E+00	1.379E-01	3.377
PO-216	+	241.98		2.066E+00	5.427E-01	5.082E-01	6.296E-02	4.066
	+	295.21		1.280E+00	2.739E-01	1.854E-01	2.474E-02	6.905
	+	351.92	*	1.334E+00	2.209E-01	9.608E-02	1.162E-02	13.882
	+	74.81		1.763E+00	4.990E-01	6.351E-01	7.934E-02	2.775
	+	77.11		1.870E+00	3.427E-01	3.603E-01	3.060E-02	5.189
	+	87.30		2.214E+00	6.872E-01	6.557E-01	9.070E-02	3.377
	+	238.63	*	1.694E+00	2.265E-01	8.437E-02	9.990E-03	20.082
PO-218	+	300.09		1.575E+00	1.072E+00	1.089E+00	1.427E-01	1.446
	+	74.81		3.037E+00	8.423E-01	1.094E+00	1.217E-01	2.775
	+	77.11		3.205E+00	6.362E-01	6.177E-01	7.048E-02	5.189
	+	87.30		3.793E+00	1.152E+00	1.123E+00	1.379E-01	3.377
	+	241.98		2.066E+00	5.427E-01	5.082E-01	6.296E-02	4.066
	+	295.21		1.280E+00	2.739E-01	1.854E-01	2.474E-02	6.905
	+	351.92	*	1.334E+00	2.209E-01	9.608E-02	1.162E-02	13.882
RA-224	+	240.98	*	3.918E+00	1.005E+00	9.603E-01	1.058E-01	4.080
RA-226	+	609.31	*	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
AC-228	+	1120.29		1.130E+00	4.585E-01	3.746E-01	4.021E-02	3.016
	+	1764.49		1.314E+00	4.193E-01	2.872E-01	2.377E-02	4.574
	+	338.32		1.894E+00	8.621E-01	3.220E-01	1.346E-01	5.880
	+	911.07	*	1.684E+00	3.418E-01	1.884E-01	2.238E-02	8.937
	+	969.11		1.961E+00	5.818E-01	3.226E-01	7.608E-02	6.078
	+	338.32		1.894E+00	8.621E-01	3.220E-01	1.346E-01	5.880
	+	911.07	*	1.684E+00	3.418E-01	1.884E-01	2.238E-02	8.937
TH-228	+	969.11		1.961E+00	5.818E-01	3.226E-01	7.608E-02	6.078
	+	74.81		1.787E+00	4.780E-01	6.439E-01	5.387E-02	2.775
	+	77.11		1.895E+00	3.474E-01	3.653E-01	3.103E-02	5.189
	+	87.30		2.245E+00	6.596E-01	6.648E-01	6.353E-02	3.377
	+	238.63	*	1.718E+00	2.297E-01	8.554E-02	1.013E-02	20.082
	+	300.09		1.596E+00	1.432E+00	1.104E+00	6.603E-01	1.446
	+	85.43		6.819E-01	3.121E-01	3.244E-01	3.030E-02	2.102
TH-229	+	88.47		6.537E-01	1.920E-01	1.914E-01	1.835E-02	3.415
	+	100.00		1.127E+00	3.403E-01	2.852E-01	2.496E-02	3.953
	+	193.63	*	-8.171E-02	4.635E-01	7.519E-01	7.337E-02	-0.109
	+	210.97		7.793E-01	7.505E-01	1.148E+00	1.173E-01	0.679
	+	609.31	*	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
	+	1120.29		1.130E+00	4.584E-01	3.746E-01	4.021E-02	3.016
	+	1764.49		1.314E+00	4.193E-01	2.872E-01	2.377E-02	4.574
U-231	+	84.21		1.578E+01	7.221E+00	7.616E+00	7.011E-01	2.072
	+	92.29		1.133E+02	1.109E+01	2.852E+00	2.634E-01	39.725
	+	95.87	*	2.550E+00	1.873E+00	1.563E+00	1.403E-01	1.631
	+	108.00		-1.787E+00	1.791E+00	2.922E+00	2.475E-01	-0.612
TH-232	+	338.32		1.894E+00	3.993E-01	3.220E-01	3.515E-02	5.880

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	911.07	*	1.684E+00	3.418E-01	1.884E-01	2.238E-02	8.937
	+	969.11		1.961E+00	5.818E-01	3.226E-01	7.608E-02	6.078
PA-234M	+	766.42		5.874E+01	3.449E+01	1.728E+01	8.784E+00	3.400
	+	1001.03	*	4.683E+01	1.066E+01	6.266E+00	6.523E-01	7.474
TH-234	+	63.29	*	3.956E+01	7.589E+00	2.346E+00	4.092E-01	16.863
	+	92.38		3.691E+01	6.890E+00	9.285E-01	1.707E-01	39.750
U-234	+	609.31	*	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
	+	1120.29		1.130E+00	4.584E-01	3.746E-01	4.021E-02	3.016
	+	1764.49		1.314E+00	4.193E-01	2.872E-01	2.377E-02	4.574
U-235	+	98.95		5.882E+00	2.548E+00	1.896E+00	5.896E-01	3.102
	+	93.35		4.437E+01	1.260E+01	1.109E+00	3.126E-01	40.016
		105.00		5.085E-01	1.065E+00	1.803E+00	5.378E-01	0.282
	+	143.76	*	8.198E-01	3.517E-01	3.187E-01	5.570E-02	2.572
	+	163.35		1.144E+00	7.512E-01	7.519E-01	1.448E-01	1.522
	+	185.71		8.717E-01	1.258E-01	6.483E-02	6.193E-03	13.447
		205.31		6.126E-02	5.734E-01	8.296E-01	1.641E-01	0.074
NP-237	+	86.50	*	1.406E+00	5.048E-01	4.198E-01	9.530E-02	3.349
	+	95.87		2.797E+00	2.153E+00	1.714E+00	4.245E-01	1.631
U-238	+	63.29	*	3.956E+01	7.589E+00	2.346E+00	4.092E-01	16.863
	+	92.38		3.691E+01	3.613E+00	9.285E-01	8.568E-02	39.750
AM-243	+	74.67	*	2.857E-01	7.637E-02	1.033E-01	8.550E-03	2.767
	+	86.72		5.272E+01	1.549E+01	1.571E+01	1.490E+00	3.357
		117.66		-1.816E-01	3.640E+00	6.098E+00	5.074E-01	-0.030
		142.18		1.642E+01	1.910E+01	2.946E+01	2.512E+00	0.557
ANH-511	+	511.00	*	1.592E-01	6.245E-02	4.165E-02	3.962E-03	3.823

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.950E-01	2.853E-01	4.921E-01	4.978E-02	0.396
NA-22		1274.54	*	-2.284E-02	3.885E-02	5.937E-02	4.940E-03	-0.385
NA-24		1368.53	*	1.122E-01	3.885E-02	Half-Life too short		
AL-26		1129.67		6.174E-01	1.580E+00	2.612E+00	2.190E-01	0.236
		1808.65	*	1.222E-02	2.771E-02	4.906E-02	4.012E-03	0.249
TI-44		67.85		-4.258E-02	5.605E-02	7.725E-02	5.983E-03	-0.551
	+	78.38	*	3.450E-01	6.323E-02	7.788E-02	6.706E-03	4.430
SC-46		889.25	*	-2.358E-02	3.414E-02	5.342E-02	5.050E-03	-0.441
	+	1120.51		1.913E-01	7.659E-02	1.099E-01	9.288E-03	1.740
V-48		944.10		-2.381E-01	7.481E-01	1.200E+00	1.121E-01	-0.199
		983.50	*	4.680E-02	5.263E-02	9.454E-02	8.702E-03	0.495
		1312.09		6.739E-03	6.348E-02	1.040E-01	8.730E-03	0.065
CR-51		320.08	*	1.204E-02	3.390E-01	5.376E-01	6.286E-02	0.022
MN-52		744.21		4.996E-02	1.933E-01	3.162E-01	2.903E-02	0.158
		848.13		6.225E-01	4.931E+00	8.355E+00	7.863E-01	0.075
		935.52		2.673E-01	1.995E-01	3.642E-01	3.412E-02	0.734
		1246.25		1.692E+00	5.455E+00	9.119E+00	7.516E-01	0.186
		1333.61		1.202E-01	3.464E+00	5.621E+00	4.742E-01	0.021
		1434.06	*	7.469E-02	1.851E-01	3.132E-01	2.672E-02	0.238

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-54		834.83	*	-1.498E-02	3.075E-02	4.950E-02	4.649E-03	-0.303
CO-56		846.75	*	1.089E-02	3.285E-02	5.659E-02	5.325E-03	0.192
		977.42		-3.310E-01	2.289E+00	3.739E+00	3.451E-01	-0.089
		1037.82		4.707E-02	2.464E-01	4.144E-01	3.895E-02	0.114
		1175.09		-1.088E+00	1.997E+00	3.092E+00	2.488E-01	-0.352
		1238.25		1.333E-01	8.562E-02	1.539E-01	1.305E-02	0.866
		1360.21		2.875E-01	8.333E-01	1.402E+00	1.188E-01	0.205
		1771.40		-6.562E-01	2.685E-01	2.481E-01	2.050E-02	-2.644
CO-57		122.06	*	3.192E-03	2.420E-02	4.072E-02	3.384E-03	0.078
		136.48		-3.199E-02	1.968E-01	3.260E-01	2.963E-02	-0.098
CO-58		810.76	*	-1.881E-02	3.393E-02	5.444E-02	5.100E-03	-0.346
FE-59	+	142.65		1.036E+01	4.155E+00	4.899E+00	4.182E-01	2.115
		192.34		-3.683E-01	8.435E-01	1.351E+00	1.913E-01	-0.273
		1099.22	*	-3.241E-02	7.386E-02	1.157E-01	1.076E-02	-0.280
		1291.56		-6.413E-02	1.150E-01	1.750E-01	1.671E-02	-0.366
CO-60		1173.22		1.684E-02	3.990E-02	6.761E-02	5.436E-03	0.249
		1332.49	*	-1.110E-02	3.296E-02	5.083E-02	4.287E-03	-0.218
ZN-65		1115.52	*	-5.048E-02	9.603E-02	1.271E-01	1.080E-02	-0.397
GE-68		1077.35	*	-2.637E-01	1.082E+00	1.737E+00	1.517E-01	-0.152
AS-73		53.44	*	4.416E-01	1.003E+00	1.595E+00	1.217E-01	0.277
AS-74		595.88	*	5.425E-02	7.688E-02	1.317E-01	1.222E-02	0.412
		634.78		-2.345E-02	3.018E-01	4.866E-01	4.411E-02	-0.048
SE-75		66.05		-1.737E+00	5.415E+00	7.615E+00	7.326E-01	-0.228
		96.73		-9.740E-01	1.147E+00	1.316E+00	1.819E-01	-0.740
		121.11		-1.042E-02	1.279E-01	2.138E-01	2.347E-02	-0.049
		136.00		4.757E-03	3.651E-02	6.110E-02	5.185E-03	0.078
		198.60		7.018E-01	1.622E+00	2.691E+00	2.885E-01	0.261
		264.65	*	2.636E-02	4.550E-02	6.738E-02	7.863E-03	0.391
		279.53		1.855E-02	1.075E-01	1.547E-01	1.894E-02	0.120
		303.91		8.635E-02	2.074E+00	2.937E+00	4.082E-01	0.029
		400.65		1.702E-01	2.213E-01	3.857E-01	4.490E-02	0.441
BR-77	+	87.88		7.165E+02	2.105E+02	2.571E+02	2.474E+01	2.787
		200.40		-1.370E+02	1.042E+02	1.590E+02	1.580E+01	-0.862
	+	239.00		1.853E+02	2.333E+01	2.441E+01	2.677E+00	7.591
		249.79		4.821E+00	4.070E+01	6.590E+01	7.415E+00	0.073
		281.68		3.489E+01	5.957E+01	8.817E+01	1.056E+01	0.396
		297.23		8.380E+01	4.406E+01	5.806E+01	6.829E+00	1.444
		303.76		4.855E+00	1.212E+02	1.716E+02	2.000E+01	0.028
		439.47		1.815E+01	8.319E+01	1.405E+02	1.326E+01	0.129
		484.57		-4.175E+01	1.398E+02	2.266E+02	2.156E+01	-0.184
		520.65	*	6.281E-01	6.761E+00	1.120E+01	1.064E+00	0.056
		574.64		-2.045E+01	1.153E+02	1.858E+02	1.741E+01	-0.110
		578.91		4.179E+01	5.358E+01	8.298E+01	7.762E+00	0.504
		585.48		7.366E+02	1.512E+02	2.681E+02	2.501E+01	2.747
	+	755.35		1.538E+02	1.618E+02	2.057E+02	1.896E+01	0.748
		817.79		5.243E+01	7.709E+01	1.365E+02	1.278E+01	0.384
SR-82		698.33		-2.762E+00	3.042E+01	4.863E+01	4.388E+00	-0.057
		776.49	*	-1.904E-01	3.422E-01	5.181E-01	4.804E-02	-0.367
		1395.20		-1.744E-01	8.404E+00	1.347E+01	1.146E+00	-0.013

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-83	520.41	*		-1.776E-04	6.453E-02	1.063E-01	1.010E-02	-0.002
	529.64			-4.628E-02	9.060E-02	1.431E-01	1.358E-02	-0.323
	552.65			4.426E-02	1.644E-01	2.750E-01	2.597E-02	0.161
RB-84	881.50	*		4.937E-02	6.540E-02	1.153E-01	1.090E-02	0.428
KR-85	513.99	*		4.197E+00	7.129E+00	1.083E+01	1.030E+00	0.388
SR-85	513.99	*		2.122E-02	3.605E-02	5.477E-02	5.208E-03	0.388
RB-86	1076.63	*		-1.886E-01	6.403E-01	1.022E+00	8.931E-02	-0.185
Y-88	898.02			1.633E-02	3.512E-02	6.093E-02	5.786E-03	0.268
	1836.01	*		6.340E-03	2.615E-02	4.514E-02	3.664E-03	0.140
ZR-88	392.90	*		5.053E-03	2.719E-02	4.611E-02	4.265E-03	0.110
Y-91	1204.90	*		2.804E+00	1.715E+01	2.834E+01	2.304E+00	0.099
NB-94	702.63	*		-8.755E-03	3.271E-02	5.155E-02	4.661E-03	-0.170
	871.10			-1.294E-02	2.761E-02	4.412E-02	4.164E-03	-0.293
NB-95M	235.69	*		3.504E-02	1.267E-01	1.852E-01	2.202E-02	0.189
ZR-95	724.18			-1.136E-02	9.452E-02	1.305E-01	1.282E-02	-0.087
	756.15	*		9.529E-02	1.003E-01	1.260E-01	1.265E-02	0.756
NB-97	657.90	*		-6.922E-03	1.003E-01	Half-Life too short		
	1024.50			-2.128E-01	1.003E-01	Half-Life too short		
ZR-97	254.15			-8.796E-01	1.003E-01	Half-Life too short		
	355.39			-3.989E-01	1.003E-01	Half-Life too short		
	507.63	*		3.794E-01	1.003E-01	Half-Life too short		
	602.52			1.259E-01	1.003E-01	Half-Life too short		
	1021.30			-4.967E-01	1.003E-01	Half-Life too short		
	1147.95			2.715E-01	1.003E-01	Half-Life too short		
	1362.66			-1.118E+00	1.003E-01	Half-Life too short		
	1750.46			1.011E+00	1.003E-01	Half-Life too short		
MO-99	140.51			1.635E+00	1.944E+01	2.899E+01	8.018E+00	0.056
	181.06			1.235E+01	1.260E+01	1.911E+01	3.571E+00	0.646
	366.43			1.096E+01	5.259E+01	8.970E+01	9.073E+00	0.122
	739.58	*		-7.591E+00	8.451E+00	1.240E+01	1.922E+00	-0.612
	778.00			-2.074E+01	2.448E+01	3.611E+01	3.350E+00	-0.574
TC-99M	140.51	*		8.674E+07	2.448E+01	Half-Life too short		
RH-101	127.23			-2.657E-02	3.249E-02	5.278E-02	4.395E-03	-0.503
	198.01	*		3.879E-03	3.017E-02	4.950E-02	4.887E-03	0.078
	325.23			-1.626E-01	2.459E-01	3.265E-01	3.665E-02	-0.498
RH-102	418.52			-2.738E-01	2.529E-01	3.924E-01	3.675E-02	-0.698
	475.06	*		4.349E-03	2.549E-02	4.273E-02	4.061E-03	0.102
	631.29			4.248E-02	5.065E-02	8.717E-02	7.921E-03	0.487
	697.49			-1.396E-02	7.110E-02	1.127E-01	1.016E-02	-0.124
	766.84	*		5.578E-01	1.718E-01	2.449E-01	2.264E-02	2.278
	1046.59			1.313E-02	1.041E-01	1.736E-01	1.547E-02	0.076
	1112.84			-1.363E-02	2.140E-01	3.491E-01	2.968E-02	-0.039
RU-103	497.08	*		1.112E-02	3.488E-02	5.882E-02	8.661E-03	0.189
	610.33			1.066E+01	2.336E+00	2.539E+00	4.315E-01	4.198
RH-106	511.85	*		7.934E-01	3.111E-01	3.868E-01	3.678E-02	2.051
	621.84	*		2.654E-02	2.706E-01	4.433E-01	6.074E-02	0.060
	1050.47			4.354E-01	2.088E+00	3.506E+00	3.117E-01	0.124
RU-106	511.85	*		7.934E-01	3.111E-01	3.868E-01	3.678E-02	2.051
	621.84	*		2.654E-02	2.706E-01	4.433E-01	4.054E-02	0.060

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-108M	1050.47			4.354E-01	2.088E+00	3.506E+00	3.117E-01	0.124
	433.93	*		-1.422E-02	2.818E-02	4.542E-02	4.422E-03	-0.313
	614.37			1.305E-03	3.987E-02	5.693E-02	5.412E-03	0.023
AG-110M	722.95			-3.474E-02	4.584E-02	5.852E-02	5.520E-03	-0.594
	657.75	*		-1.010E-02	3.138E-02	4.942E-02	4.523E-03	-0.204
	677.61			-8.179E-03	2.976E-01	4.794E-01	4.399E-02	-0.017
	706.67			-2.342E-02	1.993E-01	3.176E-01	2.948E-02	-0.074
	763.93			1.502E-01	1.873E-01	2.820E-01	2.669E-02	0.533
	884.67			-6.087E-03	4.660E-02	7.706E-02	7.478E-03	-0.079
IN-111	937.48			-2.275E-02	9.990E-02	1.629E-01	1.572E-02	-0.140
	1384.27			8.856E-02	1.377E-01	2.173E-01	1.900E-02	0.408
	171.28			-3.113E-01	6.602E-01	1.065E+00	9.791E-02	-0.292
IN-113M	245.39	*		2.953E-01	7.451E-01	1.098E+00	1.222E-01	0.269
	391.69	*		7.943E-03	4.043E-02	6.860E-02	6.511E-03	0.116
SN-113	391.69	*		7.943E-03	4.043E-02	6.860E-02	6.511E-03	0.116
IN-114M	190.27	*		-2.075E-02	1.769E-01	2.569E-01	2.484E-02	-0.081
CD-115	260.90			-1.548E+01	9.049E+01	1.277E+02	1.474E+01	-0.121
SN-117M	492.35			-1.473E+01	2.157E+01	3.390E+01	3.226E+00	-0.435
	527.90	*		7.562E-01	6.290E+00	1.044E+01	9.907E-01	0.072
	156.02			-4.467E-01	1.983E+00	3.253E+00	2.870E-01	-0.137
SB-122	158.56	*		-2.092E-02	4.966E-02	7.680E-02	6.821E-03	-0.272
	563.90	*		8.417E-01	1.405E+00	2.360E+00	2.220E-01	0.357
I-123	692.80			4.060E+01	3.019E+01	5.305E+01	4.776E+00	0.765
	159.00	*		-3.988E-01	3.019E+01	Half-Life	too short	
	528.96			-2.132E+01	3.019E+01	Half-Life	too short	
TE-123M	159.00	*		-1.039E-02	2.959E-02	4.299E-02	3.845E-03	-0.242
I-124	602.71	*		-5.658E-02	5.283E-01	7.881E-01	7.289E-02	-0.072
	722.78			-3.144E+00	3.905E+00	4.962E+00	4.521E-01	-0.634
	1325.50			1.126E+01	2.355E+01	4.027E+01	3.392E+00	0.280
+ SB-124	1376.25			6.682E+01	2.558E+01	4.862E+01	4.126E+00	1.374
	1509.49			1.330E+01	1.262E+01	2.012E+01	1.721E+00	0.661
	1691.02			-6.048E-01	2.404E+00	3.785E+00	3.183E-01	-0.160
SB-124	602.71			-4.030E-03	3.763E-02	5.614E-02	5.193E-03	-0.072
	645.85			5.088E-02	4.201E-01	6.877E-01	6.524E-02	0.074
	709.31			-1.355E-01	2.540E+00	4.067E+00	3.686E-01	-0.033
	713.82			-4.145E-01	1.521E+00	2.389E+00	2.955E-01	-0.174
	722.78			-3.246E-01	4.033E-01	5.123E-01	4.759E-02	-0.634
	968.20	+		1.988E+01	4.026E+00	6.987E+00	6.472E-01	2.846
+ SB-125	1045.16			3.120E+00	2.194E+00	4.034E+00	3.598E-01	0.773
	1325.50			1.242E+00	2.597E+00	4.442E+00	3.740E-01	0.280
	1368.21			1.131E+00	1.356E+00	2.434E+00	3.259E-01	0.465
	1436.60			3.909E+00	3.247E+00	6.182E+00	5.276E-01	0.632
	1691.02	*		-1.473E-02	5.856E-02	9.219E-02	8.074E-03	-0.160
	427.89	*		-3.572E-02	7.887E-02	1.278E-01	1.221E-02	-0.280
+ SB-125	463.38			6.420E-01	3.939E-01	5.171E-01	5.226E-02	1.242
	600.56			9.311E-02	1.650E-01	2.790E-01	2.749E-02	0.334
	635.90			-1.082E-01	2.416E-01	3.770E-01	3.665E-02	-0.287
TE-125M	109.28	*		3.235E+00	1.099E+01	1.681E+01	1.711E+00	0.192
I-126	388.63			-3.910E-02	1.707E-01	2.831E-01	2.649E-02	-0.138

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-126		666.33	*	2.146E-02	1.552E-01	2.535E-01	2.255E-02	0.085
		753.82		1.085E+00	1.614E+00	2.407E+00	2.217E-01	0.451
		223.80		-4.364E-02	3.574E+00	5.787E+00	6.113E-01	-0.008
	+	278.60		3.433E+00	2.999E+00	3.617E+00	4.339E-01	0.949
	+	296.50		1.184E+01	2.423E+00	2.874E+00	3.383E-01	4.120
		414.70		5.589E-02	6.815E-02	1.069E-01	9.996E-03	0.523
		415.30		6.450E+00	5.631E+00	9.029E+00	8.446E-01	0.714
		555.20		-2.242E+00	3.304E+00	5.127E+00	4.836E-01	-0.437
		573.80		-6.737E-01	8.184E-01	1.245E+00	1.167E-01	-0.541
		593.00		-1.262E-01	6.998E-01	1.124E+00	1.044E-01	-0.112
		656.30		-4.544E-01	2.687E+00	4.285E+00	3.821E-01	-0.106
		666.33		8.941E-03	6.466E-02	1.056E-01	9.394E-03	0.085
		675.00		-1.002E-01	1.760E+00	2.829E+00	2.527E-01	-0.035
		695.00		-5.929E-02	7.155E-02	1.076E-01	9.696E-03	-0.551
		697.00		-1.619E-01	2.386E-01	3.630E-01	3.274E-02	-0.446
		720.50	*	-4.904E-02	1.301E-01	2.025E-01	1.843E-02	-0.242
		856.80		-2.592E-02	4.338E-01	6.280E-01	5.917E-02	-0.041
		989.30		7.537E-02	9.708E-01	1.620E+00	1.488E-01	0.047
		1034.80		-3.746E+00	7.132E+00	1.115E+01	1.001E+00	-0.336
		1213.00		-1.409E+00	3.997E+00	6.305E+00	5.141E-01	-0.223
SB-127		61.10		3.146E+01	6.164E+01	8.983E+01	8.722E+00	0.350
		252.40		1.838E+00	3.564E+00	5.160E+00	2.197E+00	0.356
		290.80		4.329E+00	1.652E+01	2.386E+01	3.223E+00	0.181
		411.60		-9.856E-01	9.627E+00	1.407E+01	2.233E+00	-0.070
		444.90		2.296E+00	6.993E+00	1.187E+01	1.518E+00	0.193
		473.00		-1.532E+00	1.209E+00	1.804E+00	2.374E-01	-0.849
		543.00		1.724E+00	1.127E+01	1.871E+01	2.737E+00	0.092
		603.60		-4.119E+00	9.628E+00	1.312E+01	1.655E+00	-0.314
		685.20	*	-2.356E-01	9.893E-01	1.563E+00	1.765E-01	-0.151
		698.50		9.370E-02	1.110E+01	1.788E+01	2.821E+00	0.005
		722.20		-2.104E+01	2.637E+01	3.350E+01	3.743E+00	-0.628
		783.80		-2.947E-01	2.932E+00	4.640E+00	5.828E-01	-0.064
		57.60		7.386E-01	7.518E+00	1.178E+01	8.518E-01	0.063
	+	145.22		2.642E+00	1.060E+00	1.146E+00	9.839E-02	2.306
XE-127		172.10		-7.227E-02	1.074E-01	1.716E-01	1.581E-02	-0.421
		202.84	*	-1.454E-02	4.385E-02	7.048E-02	7.049E-03	-0.206
		374.96		-7.407E-02	1.695E-01	2.782E-01	2.737E-02	-0.266
		80.18		1.071E+00	6.063E+00	7.527E+00	6.646E-01	0.142
I-131		284.30		1.515E-02	1.184E+00	1.890E+00	2.319E-01	0.008
		364.48	*	9.390E-02	8.636E-02	1.536E-01	1.623E-02	0.611
		636.97		-9.306E-01	1.205E+00	1.819E+00	1.729E-01	-0.511
TE-132		722.89		-5.864E+00	6.981E+00	8.825E+00	8.079E-01	-0.665
		49.72		-1.501E+01	1.710E+01	2.591E+01	2.613E+00	-0.579
	+	111.76		7.444E+01	3.550E+01	4.888E+01	5.050E+00	1.523
		116.30		1.796E+01	2.188E+01	3.407E+01	3.503E+00	0.527
BA-133		228.16	*	3.238E-01	4.744E-01	7.870E-01	1.316E-01	0.411
		53.15		1.581E+00	4.379E+00	6.947E+00	5.323E-01	0.228
		79.62		5.614E-01	1.922E+00	2.398E+00	3.666E-01	0.234
		81.00		-7.830E-02	1.293E-01	1.775E-01	2.842E-02	-0.441

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-133	+	276.40		5.522E-01	4.866E-01	5.852E-01	9.740E-02	0.944
		302.84		5.456E-02	1.436E-01	2.085E-01	3.219E-02	0.262
		356.01	*	-3.136E-02	4.493E-02	6.328E-02	9.145E-03	-0.496
		383.85		2.244E-01	2.737E-01	4.775E-01	6.323E-02	0.470
	+	510.53		5.645E-01	2.737E-01	Half-Life	too short	
		529.87	*	-1.323E-03	2.737E-01	Half-Life	too short	
		706.58		-1.442E-02	2.737E-01	Half-Life	too short	
		856.28		-6.060E-02	2.737E-01	Half-Life	too short	
		875.33		-1.366E-02	2.737E-01	Half-Life	too short	
		1236.41		2.776E-01	2.737E-01	Half-Life	too short	
CS-134		1298.22		1.246E-02	2.737E-01	Half-Life	too short	
		475.35		9.815E-01	1.671E+00	2.872E+00	2.730E-01	0.342
		563.23		2.619E-01	3.454E-01	5.855E-01	5.553E-02	0.447
		569.32		1.638E-01	1.765E-01	3.065E-01	2.910E-02	0.535
		604.70		-1.916E-02	3.496E-02	4.699E-02	4.350E-03	-0.408
	+	795.84	*	1.266E-01	6.149E-02	8.765E-02	8.218E-03	1.444
		801.93		-7.511E-02	3.992E-01	6.061E-01	5.682E-02	-0.124
		1038.57		1.640E-01	3.252E+00	5.392E+00	4.827E-01	0.030
		1167.94		-9.842E-01	2.291E+00	3.594E+00	2.905E-01	-0.274
		1365.15		1.650E-02	1.058E+00	1.708E+00	1.516E-01	0.010
CS-135		268.24	*	4.187E-02	1.634E-01	2.368E-01	3.020E-02	0.177
I-135		288.45		-1.071E+08	1.634E-01	Half-Life	too short	
		417.63		-8.358E+08	1.634E-01	Half-Life	too short	
		546.56		-3.956E+08	1.634E-01	Half-Life	too short	
		836.80		-3.655E+08	1.634E-01	Half-Life	too short	
		1038.76		-7.971E+06	1.634E-01	Half-Life	too short	
		1124.00		1.028E+08	1.634E-01	Half-Life	too short	
		1131.51		-3.771E+07	1.634E-01	Half-Life	too short	
		1260.41	*	1.205E+08	1.634E-01	Half-Life	too short	
		1457.56		8.210E+09	1.634E-01	Half-Life	too short	
		1678.03		-2.207E+07	1.634E-01	Half-Life	too short	
		1706.46		-1.575E+08	1.634E-01	Half-Life	too short	
		1791.20		1.151E+08	1.634E-01	Half-Life	too short	
CS-136		66.91		-4.706E-01	8.477E-01	1.176E+00	1.756E-01	-0.400
	+	86.29		5.829E+00	1.800E+00	2.064E+00	2.769E-01	2.824
		153.22		6.557E-01	5.915E-01	1.011E+00	9.864E-02	0.648
	+	163.89		2.419E+00	1.537E+00	1.794E+00	1.796E-01	1.348
		176.55		1.721E-01	3.253E-01	5.446E-01	5.328E-02	0.316
		273.65		-1.258E-01	5.500E-01	5.983E-01	7.352E-02	-0.210
		340.57		1.971E-01	1.132E-01	1.858E-01	2.054E-02	1.061
		818.51		2.445E-02	5.828E-02	1.013E-01	9.494E-03	0.241
		1048.07	*	-1.181E-01	9.886E-02	1.446E-01	1.339E-02	-0.817
		1235.34		-4.317E-02	5.227E-01	8.443E-01	9.758E-02	-0.051
BA-137M		661.65	*	4.345E-03	3.374E-02	5.509E-02	4.889E-03	0.079
CS-137		661.65	*	4.593E-03	3.567E-02	5.823E-02	5.177E-03	0.079
CE-139		165.85	*	2.230E-02	3.070E-02	4.686E-02	4.250E-03	0.476
BA-140	+	162.64		1.700E+00	1.079E+00	1.229E+00	1.164E-01	1.383
		304.84		-1.762E-01	1.235E+00	1.716E+00	4.992E-01	-0.103
		423.70		-1.775E-02	1.538E+00	2.567E+00	8.377E-01	-0.007

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LA-140	+	537.32	*	-3.611E-03	2.105E-01	3.454E-01	1.153E-01	-0.010
		328.77		3.265E-01	3.670E-01	4.558E-01	5.253E-02	0.716
		432.53		9.347E-01	1.618E+00	2.795E+00	2.739E-01	0.334
		487.03		9.493E-02	1.184E-01	2.052E-01	2.052E-02	0.463
		751.79		-7.038E-01	1.734E+00	2.298E+00	2.315E-01	-0.306
		815.85		5.489E-02	2.543E-01	4.352E-01	4.474E-02	0.126
		867.82		1.136E-01	1.111E+00	1.829E+00	1.803E-01	0.062
		919.63		-1.745E-01	2.292E+00	3.793E+00	4.285E-01	-0.046
		925.24		6.353E-01	9.458E-01	1.661E+00	1.643E-01	0.383
		1596.49	*	-3.702E-02	6.535E-02	9.905E-02	8.436E-03	-0.374
CE-141		145.44	*	4.393E-02	6.382E-02	9.782E-02	8.557E-03	0.449
CE-143	+	57.37		5.213E-04	6.382E-02	Half-Life	too short	
		231.56		-2.937E-04	6.382E-02	Half-Life	too short	
		293.26	*	1.981E-04	6.382E-02	Half-Life	too short	
		350.59		1.564E-02	6.382E-02	Half-Life	too short	
		490.36		-2.306E-04	6.382E-02	Half-Life	too short	
		664.57		3.236E-04	6.382E-02	Half-Life	too short	
		721.93		-8.164E-04	6.382E-02	Half-Life	too short	
CE-144	+	80.11		6.791E-01	3.120E+00	3.881E+00	3.407E-01	0.175
		133.54	*	-1.088E-01	2.009E-01	3.277E-01	5.061E-02	-0.332
PM-144	+	476.78		3.221E-02	6.099E-02	1.043E-01	1.068E-02	0.309
		618.01		1.289E-02	2.808E-02	4.724E-02	4.436E-03	0.273
		696.49	*	-2.616E-02	3.286E-02	4.944E-02	4.459E-03	-0.529
PR-144	+	778.57		-1.402E+00	2.210E+00	3.323E+00	3.083E-01	-0.422
		696.49	*	-1.771E+00	2.225E+00	3.348E+00	3.019E-01	-0.529
		1489.15		-6.579E+00	9.264E+00	1.372E+01	1.173E+00	-0.480
PM-146	+	453.90	*	4.918E-02	4.080E-02	7.197E-02	8.219E-03	0.683
		633.02		6.032E-01	1.313E+00	2.174E+00	8.147E-01	0.277
		735.90		-9.217E-02	1.451E-01	2.161E-01	6.218E-02	-0.426
		747.13		-7.368E-02	8.543E-02	1.251E-01	1.800E-02	-0.589
ND-147	+	91.11		1.359E+00	4.322E-01	8.368E-01	8.364E-02	1.624
		319.41		-3.361E+00	2.895E+00	4.209E+00	4.780E-01	-0.798
		439.89		1.479E+00	4.496E+00	7.648E+00	7.219E-01	0.193
		531.02	*	-2.591E-01	4.519E-01	7.083E-01	1.095E-01	-0.366
PM-149		285.90	*	-5.506E+00	5.288E+01	8.380E+01	1.474E+01	-0.066
EU-152	+	121.78		2.203E-02	7.027E-02	1.189E-01	1.148E-02	0.185
		244.69		3.945E-02	3.221E-01	4.663E-01	5.184E-02	0.085
		344.27	*	-2.725E-02	8.385E-02	1.395E-01	1.559E-02	-0.195
		443.98		5.429E-01	8.475E-01	1.465E+00	1.384E-01	0.371
		778.89		-1.247E-01	2.583E-01	3.946E-01	3.661E-02	-0.316
		867.32		1.209E-01	7.381E-01	1.187E+00	1.120E-01	0.102
		964.01		8.576E-01	3.149E-01	5.431E-01	5.039E-02	1.579
		1085.78		-3.489E-01	3.399E-01	4.968E-01	4.313E-02	-0.702
GD-153	+	1112.02		3.321E-02	2.944E-01	4.878E-01	4.150E-02	0.068
		1407.95		2.505E-01	1.709E-01	3.206E-01	2.730E-02	0.781
		69.67		5.860E-01	1.704E+00	2.947E+00	2.322E-01	0.199
		83.37		5.322E+01	2.435E+01	2.991E+01	2.726E+00	1.779
		97.43	*	4.647E-01	1.403E-01	1.600E-01	1.422E-02	2.903
		103.18		-1.459E-01	1.153E-01	1.647E-01	1.420E-02	-0.886

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154		123.07	1.087E-02	5.058E-02	8.526E-02	9.487E-03	0.127
		247.94	-1.893E-01	3.277E-01	5.100E-01	6.898E-02	-0.371
		591.81	-3.325E-01	4.940E-01	7.552E-01	9.200E-02	-0.440
		723.30	-1.065E-01	1.867E-01	2.439E-01	2.433E-02	-0.437
	+	756.87	1.051E+00	1.109E+00	1.376E+00	1.708E-01	0.764
		873.19	7.979E-03	2.426E-01	4.071E-01	5.225E-02	0.020
		996.32	5.715E-02	3.207E-01	4.727E-01	8.522E-02	0.121
		1004.76	1.960E-01	2.116E-01	3.375E-01	4.053E-02	0.581
		1274.45	-5.336E-02	1.073E-01	1.656E-01	1.834E-02	-0.322
	*	48.70	-3.096E-01	2.791E+00	4.374E+00	3.593E-01	-0.071
EU-155		60.01	1.230E+00	6.866E+00	9.907E+00	7.076E-01	0.124
	+	86.54	5.763E-01	1.695E-01	2.068E-01	1.975E-02	2.787
	*	105.31	2.732E-02	1.081E-01	1.836E-01	1.588E-02	0.149
TB-160	+	86.79	1.521E+00	4.468E-01	5.504E-01	5.226E-02	2.764
		197.04	2.304E-01	5.108E-01	8.486E-01	8.356E-02	0.272
		215.65	4.595E-01	6.841E-01	1.141E+00	1.180E-01	0.403
		298.57	1.701E-01	1.317E-01	1.665E-01	1.955E-02	1.021
		879.36	1.120E-01	1.282E-01	2.283E-01	2.156E-02	0.491
		962.29	7.908E-01	4.770E-01	8.239E-01	7.648E-02	0.960
	+	966.15	5.816E-01	2.136E-01	4.125E-01	3.824E-02	1.410
		1177.93	5.251E-02	3.114E-01	5.164E-01	4.159E-02	0.102
		1271.85	7.102E-03	6.105E-01	9.914E-01	8.233E-02	0.007
		80.57	-1.337E-01	4.069E-01	4.926E-01	4.346E-02	-0.271
HO-166M	+	184.41	6.538E-01	9.432E-02	8.974E-02	8.543E-03	7.286
		280.46	-2.920E-03	8.428E-02	1.194E-01	1.432E-02	-0.024
	+	410.95	5.653E-01	3.159E-01	3.959E-01	3.696E-02	1.428
	*	711.68	-3.463E-03	5.630E-02	9.005E-02	8.170E-03	-0.038
		752.31	-1.105E-01	2.987E-01	3.979E-01	3.662E-02	-0.278
		810.29	-1.627E-02	5.139E-02	8.422E-02	7.873E-03	-0.193
		51.35	4.008E-01	3.641E+01	5.719E+01	4.506E+00	0.007
		52.39	4.730E+00	1.914E+01	3.027E+01	2.347E+00	0.156
TM-171		59.40	1.840E+01	3.643E+01	5.321E+01	3.779E+00	0.346
	*	66.72	-1.569E+01	3.271E+01	4.567E+01	3.499E+00	-0.344
	+	88.36	1.136E+00	3.336E-01	3.990E-01	3.831E-02	2.846
LU-176		201.83	-8.584E-03	2.652E-02	4.264E-02	4.253E-03	-0.201
	*	306.84	-1.255E-02	2.327E-02	3.529E-02	4.093E-03	-0.356
		401.10	2.022E+00	5.894E+00	1.007E+01	9.355E-01	0.201
LU-177M		52.97	6.111E-01	1.970E+00	3.121E+00	2.398E-01	0.196
		54.07	1.470E-02	1.049E+00	1.645E+00	1.243E-01	0.009
		61.30	1.204E+00	2.009E+00	2.937E+00	2.130E-01	0.410
		121.62	6.994E-02	3.588E-01	6.050E-01	5.021E-02	0.116
		147.16	1.903E-01	6.510E-01	9.816E-01	8.465E-02	0.194
		171.86	-3.389E-01	4.398E-01	6.993E-01	6.439E-02	-0.485
		218.09	-7.480E-01	7.947E-01	1.229E+00	1.279E-01	-0.609
	+	268.79	2.097E+00	1.152E+00	1.299E+00	1.525E-01	1.614
		319.02	-1.923E-01	2.417E-01	3.622E-01	4.115E-02	-0.531
		367.43	-2.621E-01	7.938E-01	1.314E+00	1.324E-01	-0.200
HF-181	*	413.65	9.355E-02	1.683E-01	2.592E-01	2.423E-02	0.361
		56.28	-4.928E-01	1.169E+00	1.802E+00	1.323E-01	-0.274

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
W-181		57.53	6.018E-02	6.351E-01	9.952E-01	7.200E-02	0.060
		65.20	1.867E+00	1.090E+00	1.649E+00	1.246E-01	1.132
		133.02	-2.076E-03	6.303E-02	1.050E-01	8.807E-03	-0.020
		136.25	-5.800E-02	4.237E-01	7.025E-01	5.922E-02	-0.083
		345.85	1.086E-01	1.684E-01	2.756E-01	2.954E-02	0.394
		482.03 *	-3.864E-02	3.561E-02	5.402E-02	5.138E-03	-0.715
		56.28	-1.950E-01	4.639E-01	7.153E-01	5.250E-02	-0.273
		57.53	2.388E-02	2.523E-01	3.954E-01	2.860E-02	0.060
		65.20 *	7.357E-01	4.295E-01	6.500E-01	4.909E-02	1.132
		67.75	-1.031E-01	1.327E-01	1.828E-01	1.414E-02	-0.564
TA-182	+	100.10	1.078E+00	3.254E-01	3.147E-01	2.753E-02	3.425
		152.43	2.654E-01	3.183E-01	5.411E-01	4.728E-02	0.490
		222.10	1.159E-01	3.192E-01	5.255E-01	5.526E-02	0.220
	+	1001.68	2.046E+01	4.544E+00	6.649E+00	6.071E-01	3.077
	+	1121.28	5.298E-01	2.122E-01	3.123E-01	2.636E-02	1.697
		1189.05	2.980E-02	3.099E-01	5.095E-01	4.120E-02	0.058
		1221.42 *	4.107E-02	1.915E-01	3.170E-01	2.592E-02	0.130
		1230.97	-1.617E-01	4.100E-01	6.425E-01	5.271E-02	-0.252
		57.98	-1.312E-01	2.534E-01	3.891E-01	2.802E-02	-0.337
		59.32	6.579E-02	1.481E-01	2.159E-01	1.534E-02	0.305
RE-183		67.20	-2.169E-01	2.364E-01	3.235E-01	2.490E-02	-0.671
	+	162.32 *	2.636E-01	1.671E-01	1.860E-01	1.670E-02	1.417
	+	208.81	2.765E+00	1.470E+00	1.686E+00	1.713E-01	1.640
		291.72	3.508E-01	8.909E-01	1.299E+00	1.539E-01	0.270
		57.98	-4.873E-01	9.409E-01	1.445E+00	1.040E-01	-0.337
		59.32	2.441E-01	5.495E-01	8.010E-01	5.692E-02	0.305
		67.20	-8.053E-01	8.777E-01	1.201E+00	9.242E-02	-0.671
		161.27	1.826E-01	3.678E-01	5.566E-01	4.981E-02	0.328
		216.55	2.415E-01	2.410E-01	4.064E-01	4.213E-02	0.594
		252.85 *	9.133E-03	2.364E-01	3.394E-01	3.846E-02	0.027
RE-184		318.01	-2.116E-01	4.075E-01	6.229E-01	7.090E-02	-0.340
		792.07	2.446E-01	9.675E-01	1.460E+00	1.359E-01	0.168
		903.28	-4.135E-01	8.577E-01	1.278E+00	1.208E-01	-0.324
		920.93	-2.820E-01	4.099E-01	6.404E-01	6.024E-02	-0.440
		59.72	1.340E-01	4.015E-01	5.827E-01	4.147E-02	0.230
		61.14	1.163E-01	2.201E-01	3.210E-01	2.325E-02	0.362
		69.30	1.506E-01	3.002E-01	5.209E-01	4.090E-02	0.289
		592.07	-1.301E+00	1.998E+00	3.066E+00	2.852E-01	-0.424
		646.12 *	7.731E-03	3.518E-02	5.807E-02	5.220E-03	0.133
		717.42	2.620E-01	8.682E-01	1.427E+00	1.298E-01	0.184
OS-185		874.81	-1.392E-01	4.818E-01	7.844E-01	7.406E-02	-0.177
		880.27	3.691E-01	7.222E-01	1.254E+00	1.185E-01	0.294
		155.03 *	1.403E-01	1.606E-01	2.732E-01	2.403E-02	0.514
		477.96	2.350E+00	2.732E+00	4.759E+00	4.525E-01	0.494
		633.10	1.295E+00	2.576E+00	4.336E+00	3.935E-01	0.299
	+	63.58	1.569E+03	1.710E+02	1.816E+02	1.349E+01	8.643
		227.08	3.806E+00	1.196E+01	1.963E+01	2.090E+00	0.194
		290.67 *	1.575E+00	7.141E+00	1.028E+01	1.220E+00	0.153
	+	295.96	9.641E-01	1.975E-01	2.528E-01	2.990E-02	3.814

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		308.46		-1.356E-02	8.525E-02	1.339E-01	1.554E-02	-0.101
		316.51	*	-8.544E-03	3.054E-02	4.749E-02	5.427E-03	-0.180
		468.07		5.068E-02	6.302E-02	9.830E-02	9.891E-03	0.516
		604.41		-2.237E-01	4.698E-01	6.360E-01	8.546E-02	-0.352
		612.46		5.712E-01	7.187E-01	1.098E+00	1.143E-01	0.520
		65.12		4.690E-01	2.041E-01	3.131E-01	2.363E-02	1.498
		66.83		-4.893E-02	1.078E-01	1.506E-01	1.155E-02	-0.325
	+	75.70		9.201E-01	2.459E-01	4.269E-01	3.572E-02	2.155
	+	98.88	*	1.351E+00	4.080E-01	4.892E-01	4.307E-02	2.763
		129.76		3.849E+00	2.894E+00	4.997E+00	4.172E-01	0.770
TL-200		367.94	*	-8.203E-05	2.894E+00	Half-Life	too short	
		579.30		9.079E-04	2.894E+00	Half-Life	too short	
		828.27		7.835E-04	2.894E+00	Half-Life	too short	
		1205.75		3.607E-04	2.894E+00	Half-Life	too short	
TL-201		68.90		1.356E+00	3.579E+00	6.198E+00	4.848E-01	0.219
		70.82		6.052E-01	2.291E+00	3.575E+00	2.848E-01	0.169
		80.30		5.811E-01	5.474E+00	6.772E+00	5.958E-01	0.086
		135.34		6.308E+00	1.784E+01	3.008E+01	2.532E+00	0.210
TL-202		167.43	*	-2.751E-02	5.274E+00	7.775E+00	7.078E-01	-0.004
		68.90		1.528E-01	4.033E-01	6.983E-01	5.462E-02	0.219
		70.82		6.801E-02	2.575E-01	4.017E-01	3.200E-02	0.169
		80.30		6.532E-02	6.153E-01	7.612E-01	6.697E-02	0.086
BI-207		439.56	*	1.670E-02	5.476E-02	9.299E-02	8.776E-03	0.180
		72.80		4.310E-02	2.076E-01	3.229E-01	2.623E-02	0.133
	+	74.97		5.129E-01	1.371E-01	2.257E-01	1.874E-02	2.272
	+	84.90		6.908E-01	3.161E-01	3.739E-01	3.470E-02	1.848
TL-207		569.67		1.536E-02	2.790E-02	4.734E-02	4.445E-03	0.325
		1063.62	*	6.214E-03	4.695E-02	7.826E-02	6.899E-03	0.079
		1770.23		-1.829E-01	4.322E-01	5.338E-01	4.412E-02	-0.343
		81.07		-1.728E-01	2.844E-01	3.917E-01	3.476E-02	-0.441
	+	83.78		4.555E-01	2.085E-01	2.550E-01	2.336E-02	1.786
	+	94.90		6.493E-01	4.769E-01	4.472E-01	4.043E-02	1.452
		122.32		4.489E-01	1.676E+00	2.832E+00	2.536E-01	0.159
	+	144.24		2.657E+00	1.072E+00	1.285E+00	1.232E-01	2.068
		154.21		1.408E-02	3.868E-01	6.410E-01	6.168E-02	0.022
	+	269.46		4.937E-01	2.713E-01	3.245E-01	3.859E-02	1.521
PO-209		323.87	*	-6.020E-01	7.507E-01	9.761E-01	1.867E-01	-0.617
	+	338.28		7.907E+00	1.807E+00	2.381E+00	3.337E-01	3.321
		445.03		5.732E-01	2.058E+00	3.483E+00	4.422E-01	0.165
		260.50		4.157E+00	1.002E+01	1.471E+01	1.696E+00	0.283
		262.80		-4.547E-01	2.817E+01	4.018E+01	4.658E+00	-0.011
		896.60	*	2.472E+00	6.372E+00	1.099E+01	1.039E+00	0.225
BI-210		46.50	*	-2.091E+00	4.087E+00	6.275E+00	5.852E-01	-0.333
PB-210		46.50	*	-2.091E+00	4.087E+00	6.275E+00	5.852E-01	-0.333
PO-210		46.50	*	-2.091E+00	4.086E+00	6.275E+00	5.301E-01	-0.333
PB-211		404.84	*	-1.895E-01	9.245E-01	1.331E+00	8.351E-01	-0.142
		427.08		-7.908E-01	1.819E+00	2.840E+00	1.768E+00	-0.278
		831.96		-4.986E-01	1.096E+00	1.697E+00	1.065E+00	-0.294
BI-212	+	727.18	*	9.841E-01	4.051E-01	6.074E-01	6.346E-02	1.620

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-215		785.46		1.321E+00	1.671E+00	2.960E+00	2.751E-01	0.446
		1620.62		7.368E-01	1.000E+00	1.847E+00	1.569E-01	0.399
		81.07		-1.728E-01	2.844E-01	3.917E-01	3.476E-02	-0.441
	+	83.78		4.555E-01	2.085E-01	2.550E-01	2.336E-02	1.786
	+	94.90		6.493E-01	4.769E-01	4.472E-01	4.043E-02	1.452
		122.32		4.489E-01	1.676E+00	2.832E+00	2.536E-01	0.159
	+	144.24		2.657E+00	1.072E+00	1.285E+00	1.232E-01	2.068
		154.21		1.408E-02	3.868E-01	6.410E-01	6.168E-02	0.022
	+	269.46		4.937E-01	2.713E-01	3.245E-01	3.859E-02	1.521
		323.87	*	-6.020E-01	7.507E-01	9.761E-01	1.867E-01	-0.617
RN-219	+	338.28		7.907E+00	1.807E+00	2.381E+00	3.337E-01	3.321
		445.03		5.732E-01	2.058E+00	3.483E+00	4.422E-01	0.165
	+	271.23		6.334E-01	3.498E-01	4.148E-01	5.431E-02	1.527
RN-220		401.81	*	7.066E-02	3.550E-01	6.017E-01	9.280E-02	0.117
RA-223		549.76	*	4.428E+00	2.248E+01	3.741E+01	3.534E+00	0.118
		81.07		-1.728E-01	2.844E-01	3.917E-01	3.476E-02	-0.441
	+	83.78		4.555E-01	2.085E-01	2.550E-01	2.336E-02	1.786
	+	94.90		6.493E-01	4.769E-01	4.472E-01	4.043E-02	1.452
		122.32		4.489E-01	1.676E+00	2.832E+00	2.536E-01	0.159
	+	144.24		2.657E+00	1.072E+00	1.285E+00	1.232E-01	2.068
		154.21		1.408E-02	3.868E-01	6.410E-01	6.168E-02	0.022
	+	269.46		4.937E-01	2.713E-01	3.245E-01	3.859E-02	1.521
		323.87	*	-6.020E-01	7.507E-01	9.761E-01	1.867E-01	-0.617
	+	338.28		7.907E+00	1.807E+00	2.381E+00	3.337E-01	3.321
		445.03		5.732E-01	2.058E+00	3.483E+00	4.422E-01	0.165
AC-227		79.80		7.035E-01	2.440E+00	3.041E+00	6.554E-01	0.231
		236.00		7.969E-02	2.380E-01	3.488E-01	4.861E-02	0.228
		256.20	*	3.030E-01	4.019E-01	5.990E-01	1.023E-01	0.506
		286.10		-6.953E-02	1.334E+00	2.121E+00	3.301E-01	-0.033
	+	299.80		2.918E+00	2.029E+00	2.383E+00	4.577E-01	1.225
		304.40		-8.673E-02	1.902E+00	2.665E+00	5.338E-01	-0.033
TH-227		334.20		-4.241E-01	2.203E+00	3.030E+00	6.238E-01	-0.140
		79.80		7.035E-01	2.440E+00	3.041E+00	6.637E-01	0.231
	+	94.00		5.194E+00	3.954E+00	6.983E+00	1.535E+00	0.744
		236.00		7.969E-02	2.380E-01	3.488E-01	4.507E-02	0.228
		256.20	*	3.030E-01	4.029E-01	5.990E-01	1.171E-01	0.506
		286.10		-6.953E-02	1.336E+00	2.121E+00	2.136E+00	-0.033
PA-231	+	299.80		2.918E+00	2.029E+00	2.383E+00	4.577E-01	1.225
		304.40		-8.673E-02	1.902E+00	2.665E+00	5.338E-01	-0.033
		334.20		-4.241E-01	2.203E+00	3.030E+00	6.238E-01	-0.140
		283.67	*	1.667E-01	1.363E+00	2.189E+00	3.787E-01	0.076
TH-231	+	301.29		1.167E+00	7.983E-01	9.396E-01	1.369E-01	1.242
		81.07		-1.728E-01	2.844E-01	3.917E-01	3.476E-02	-0.441
	+	83.78		4.555E-01	2.085E-01	2.550E-01	2.336E-02	1.786
	+	94.90		6.493E-01	4.769E-01	4.472E-01	4.043E-02	1.452
		122.32		4.489E-01	1.676E+00	2.832E+00	2.536E-01	0.159
	+	144.24		2.657E+00	1.072E+00	1.285E+00	1.232E-01	2.068
		154.21		1.408E-02	3.868E-01	6.410E-01	6.168E-02	0.022
	+	269.46		4.937E-01	2.713E-01	3.245E-01	3.859E-02	1.521

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		323.87	*	-6.020E-01	7.507E-01	9.761E-01	1.867E-01	-0.617
	+	338.28		7.907E+00	1.807E+00	2.381E+00	3.337E-01	3.321
		445.03		5.732E-01	2.058E+00	3.483E+00	4.422E-01	0.165
	+	75.28		1.497E+01	4.429E+00	6.668E+00	1.013E+00	2.245
	+	86.59		9.373E+00	3.640E+00	3.369E+00	9.133E-01	2.782
	+	300.12		8.135E-01	5.606E-01	6.672E-01	1.125E-01	1.219
		311.98	*	1.389E-02	5.632E-02	9.065E-02	1.060E-02	0.153
		340.50		1.182E+00	6.543E-01	9.906E-01	2.450E-01	1.194
		398.62		-4.191E-01	1.876E+00	3.102E+00	8.328E-01	-0.135
		415.76		1.403E+00	1.545E+00	2.511E+00	5.488E-01	0.559
PA-234	+	63.00		4.611E+01	7.780E+00	5.516E+00	8.192E-01	8.360
	+	94.67		4.632E-01	3.427E-01	3.590E-01	4.562E-02	1.290
	+	98.44		5.503E-01	3.458E-01	1.983E-01	1.107E-01	2.775
	+	99.86		2.853E+00	8.612E-01	8.884E-01	7.780E-02	3.211
		111.00		2.217E-01	2.369E-01	3.678E-01	4.390E-02	0.603
		131.20		-5.548E-02	1.086E-01	1.781E-01	1.490E-02	-0.311
		152.70		4.504E-01	3.157E-01	5.330E-01	9.119E-02	0.845
	+	186.00		2.354E+01	7.835E+00	3.735E+00	1.176E+00	6.302
		226.40		1.832E-01	3.792E-01	6.256E-01	9.131E-02	0.293
		227.20		1.140E-01	4.087E-01	6.696E-01	7.133E-02	0.170
		248.90		-5.750E-01	7.568E-01	1.150E+00	2.707E-01	-0.500
	+	293.70		6.144E+00	1.559E+00	1.434E+00	2.738E-01	4.286
		369.80		-6.756E-02	7.582E-01	1.272E+00	2.844E-01	-0.053
		568.70		9.217E-01	8.977E-01	1.567E+00	1.472E-01	0.588
		569.50		2.176E-01	2.437E-01	4.225E-01	3.967E-02	0.515
		574.00		-9.648E-01	1.270E+00	1.946E+00	1.824E-01	-0.496
		699.00		2.351E-01	6.654E-01	1.098E+00	2.116E-01	0.214
		706.10		-3.624E-01	1.011E+00	1.560E+00	6.971E-01	-0.232
		733.00		2.134E-01	4.166E-01	6.120E-01	1.371E-01	0.349
		742.81		1.620E+00	1.711E+00	2.319E+00	1.560E+00	0.699
	+	796.30		2.463E+00	1.353E+00	1.660E+00	4.528E-01	1.484
		805.60		-4.548E-02	9.066E-01	1.520E+00	4.691E-01	-0.030
		819.60		-4.579E-02	1.071E+00	1.795E+00	6.856E-01	-0.026
		826.30		7.600E-01	7.991E-01	1.313E+00	5.894E-01	0.579
		831.60		-1.499E-01	5.480E-01	8.972E-01	2.698E-01	-0.167
		876.40		-5.749E-01	9.464E-01	1.152E+00	1.185E+00	-0.499
		880.51		1.922E-01	2.584E-01	4.565E-01	4.312E-02	0.421
		883.24		9.017E-02	2.775E-01	4.645E-01	3.128E-01	0.194
		899.00		-7.906E-03	6.991E-01	1.166E+00	5.117E-01	-0.007
		925.00		2.404E-01	1.075E+00	1.824E+00	1.714E-01	0.132
		926.50		7.323E-02	1.585E-01	2.724E-01	6.959E-02	0.269
		946.00	*	1.488E-01	2.767E-01	4.782E-01	9.135E-02	0.311
		949.00		1.763E-01	4.087E-01	7.032E-01	6.558E-02	0.251
		980.50		-3.157E-01	5.721E-01	8.918E-01	8.219E-02	-0.354
NP-236		1394.10		1.705E-01	9.096E-01	1.496E+00	9.733E-01	0.114
	+	94.67		3.513E-01	2.581E-01	2.729E-01	2.472E-02	1.287
	+	98.44		4.160E-01	1.256E-01	1.499E-01	1.324E-02	2.775
		111.00		1.677E-01	1.786E-01	2.782E-01	2.338E-02	0.603
		160.31	*	3.225E-02	8.155E-02	1.229E-01	1.097E-02	0.262

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		9.509E-01	2.871E-01	3.235E-01	2.838E-02	2.940
		117.00	*	2.128E-01	1.996E-01	3.139E-01	2.613E-02	0.678
	+	209.75		2.210E+00	1.175E+00	1.354E+00	1.379E-01	1.632
		228.18		1.409E-01	2.046E-01	3.408E-01	3.640E-02	0.413
	+	277.60		2.696E-01	2.355E-01	2.903E-01	3.474E-02	0.929
AM-241		334.30		-2.590E-01	1.247E+00	1.713E+00	1.887E-01	-0.151
		59.54	*	6.347E-02	2.138E-01	3.099E-01	2.432E-02	0.205
CM-243	+	99.55		9.784E-01	2.954E-01	3.328E-01	2.920E-02	2.940
		103.76	*	-3.483E-02	9.863E-02	1.571E-01	1.350E-02	-0.222
		117.00		2.190E-01	2.053E-01	3.229E-01	2.688E-02	0.678
	+	209.75		2.178E+00	1.158E+00	1.335E+00	1.359E-01	1.632
		228.18		1.424E-01	2.068E-01	3.444E-01	3.677E-02	0.413
AM-246	+	277.60		2.717E-01	2.374E-01	2.926E-01	3.502E-02	0.929
		798.80		-5.802E-02	1.392E-01	1.945E-01	1.813E-02	-0.298
		1036.00		-1.285E-01	2.529E-01	3.957E-01	3.548E-02	-0.325
		1062.04		-5.786E-02	2.025E-01	3.244E-01	2.863E-02	-0.178
		1078.86	*	2.240E-02	1.257E-01	2.101E-01	1.833E-02	0.107
CM-247	+	278.00		1.118E+00	9.766E-01	1.197E+00	1.435E-01	0.934
		287.40		-3.361E-01	1.076E+00	1.682E+00	2.002E-01	-0.200
		402.60	*	-8.969E-03	3.255E-02	5.369E-02	4.992E-03	-0.167
CF-249		252.85		3.445E-02	8.917E-01	1.280E+00	1.451E-01	0.027
		333.44		-3.607E-03	1.825E-01	2.316E-01	2.556E-02	-0.016
		387.95	*	-2.082E-02	3.608E-02	5.860E-02	5.498E-03	-0.355
CF-251		176.60	*	6.315E-02	1.202E-01	2.012E-01	1.876E-02	0.314
		227.00		1.464E-01	3.630E-01	5.976E-01	6.363E-02	0.245
		285.00		-3.741E-01	1.555E+00	2.445E+00	2.918E-01	-0.153

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395001
* Acquisition date   : 2-FEB-2010 07:10:18 Detector SN#      :
* Detector ID        : GAM16 Sensitivity      : 5.000
* Geometry           : CAN Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000
* Elapsed real time  : 0 02:00:02.69 Half life ratio : 8.000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395001 Analyst initials: MXR1
* Batch Number       : 944966 Sample Quantity : 1.4470E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16 MS Isotope      :
* MSD DPM             : 0.000 MSD Isotope      :
* LCS DPM             : 0.000 LCS Isotope      :
* LCSD DPM           : 0.000 LCSD Isotope     :
*****
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.830E+01	2.887E+00	4.239E-01	0.000E+00
NB-95	2.188E-01	6.603E-02	6.044E-02	0.000E+00
CD-109	4.862E+00	1.400E+00	1.529E+00	0.000E+00
SN-126	4.788E-01	1.378E-01	1.512E-01	0.000E+00
LU-177	2.719E+00	1.417E+00	1.582E+00	0.000E+00
HG-203	6.041E-02	5.173E-02	6.049E-02	0.000E+00
TL-208	5.777E-01	9.210E-02	4.935E-02	0.000E+00
BI-211	3.834E+00	5.906E-01	2.862E-01	0.000E+00
PB-212	1.694E+00	2.220E-01	8.834E-02	0.000E+00
PO-212	1.694E+00	2.220E-01	8.834E-02	0.000E+00
BI-214	1.010E+00	1.723E-01	1.069E-01	0.000E+00
PB-214	1.334E+00	2.165E-01	9.975E-02	0.000E+00
PO-214	1.334E+00	2.165E-01	9.975E-02	0.000E+00
PO-216	1.694E+00	2.220E-01	8.834E-02	0.000E+00
PO-218	1.334E+00	2.165E-01	9.975E-02	0.000E+00
RA-224	3.918E+00	9.852E-01	1.005E+00	0.000E+00
RA-226	1.010E+00	1.723E-01	1.069E-01	0.000E+00
AC-228	1.684E+00	3.350E-01	1.915E-01	0.000E+00
RA-228	1.684E+00	3.350E-01	1.915E-01	0.000E+00
TH-228	1.718E+00	2.251E-01	8.957E-02	0.000E+00
TH-229	-8.171E-02	4.542E-01	7.908E-01	0.000E+00
TH-230	1.010E+00	1.723E-01	1.069E-01	0.000E+00
U-231	2.550E+00	1.835E+00	1.668E+00	0.000E+00
TH-232	1.684E+00	3.350E-01	1.915E-01	0.000E+00
PA-234M	4.683E+01	1.045E+01	6.354E+00	0.000E+00
TH-234	3.956E+01	7.437E+00	2.526E+00	0.000E+00
U-234	1.010E+00	1.723E-01	1.069E-01	0.000E+00
U-235	8.198E-01	3.446E-01	3.373E-01	0.000E+00
NP-237	1.406E+00	4.947E-01	4.491E-01	0.000E+00
U-238	3.956E+01	7.437E+00	2.526E+00	0.000E+00
AM-243	2.857E-01	7.484E-02	1.108E-01	0.000E+00
ANH-511	1.592E-01	6.120E-02	4.289E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	1.950E-01	2.796E-01	5.074E-01	0.000E+00	NOT IDENT.
NA-22	-2.284E-02	3.807E-02	5.987E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.317E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.222E-02	2.716E-02	4.907E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.197E-02	8.348E-02	0.000E+00	FAIL ABUN
SC-46	-2.358E-02	3.346E-02	5.432E-02	0.000E+00	FAIL ABUN
V-48	4.680E-02	5.157E-02	9.591E-02	0.000E+00	NOT IDENT.
CR-51	1.204E-02	3.322E-01	5.594E-01	0.000E+00	NOT IDENT.
MN-52	7.469E-02	1.814E-01	3.149E-01	0.000E+00	NOT IDENT.
MN-54	-1.498E-02	3.014E-02	5.040E-02	0.000E+00	NOT IDENT.
CO-56	1.089E-02	3.220E-02	5.761E-02	0.000E+00	NOT IDENT.
CO-57	3.192E-03	2.372E-02	4.325E-02	0.000E+00	NOT IDENT.
CO-58	-1.881E-02	3.325E-02	5.547E-02	0.000E+00	NOT IDENT.
FE-59	-3.241E-02	7.238E-02	1.171E-01	0.000E+00	FAIL ABUN
CO-60	-1.110E-02	3.230E-02	5.120E-02	0.000E+00	NOT IDENT.
ZN-65	-5.048E-02	9.411E-02	1.286E-01	0.000E+00	NOT IDENT.
GE-68	-2.637E-01	1.060E+00	1.759E+00	0.000E+00	NOT IDENT.
AS-73	4.416E-01	9.830E-01	1.723E+00	0.000E+00	NOT IDENT.
AS-74	5.425E-02	7.534E-02	1.351E-01	0.000E+00	NOT IDENT.
SE-75	2.636E-02	4.459E-02	7.039E-02	0.000E+00	NOT IDENT.
BR-77	6.281E-01	6.625E+00	1.153E+01	0.000E+00	FAIL ABUN
SR-82	-1.904E-01	3.354E-01	5.285E-01	0.000E+00	NOT IDENT.
RB-83	-1.776E-04	6.324E-02	1.094E-01	0.000E+00	NOT IDENT.
RB-84	4.937E-02	6.409E-02	1.173E-01	0.000E+00	NOT IDENT.
KR-85	4.197E+00	6.986E+00	1.115E+01	0.000E+00	NOT IDENT.
SR-85	2.122E-02	3.533E-02	5.639E-02	0.000E+00	NOT IDENT.
RB-86	-1.886E-01	6.275E-01	1.035E+00	0.000E+00	NOT IDENT.
Y-88	6.340E-03	2.563E-02	4.513E-02	0.000E+00	NOT IDENT.
ZR-88	5.053E-03	2.664E-02	4.776E-02	0.000E+00	NOT IDENT.
Y-91	2.804E+00	1.681E+01	2.861E+01	0.000E+00	NOT IDENT.
NB-94	-8.755E-03	3.206E-02	5.271E-02	0.000E+00	NOT IDENT.
NB-95M	3.504E-02	1.242E-01	1.940E-01	0.000E+00	NOT IDENT.
ZR-95	9.529E-02	9.829E-02	1.286E-01	0.000E+00	FAIL ABUN
NB-97	0.000E+00	2.342E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.495E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.591E+00	8.282E+00	1.266E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.011E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.879E-03	2.956E-02	5.204E-02	0.000E+00	NOT IDENT.
RH-102	4.349E-03	2.498E-02	4.407E-02	0.000E+00	FAIL ABUN
RU-103	1.112E-02	3.418E-02	6.061E-02	0.000E+00	FAIL ABUN
RH-106	2.654E-02	2.652E-01	4.544E-01	0.000E+00	FAIL ABUN
RU-106	2.654E-02	2.652E-01	4.544E-01	0.000E+00	FAIL ABUN
AG-108M	-1.422E-02	2.762E-02	4.694E-02	0.000E+00	NOT IDENT.
AG-110M	-1.010E-02	3.075E-02	5.060E-02	0.000E+00	NOT IDENT.
IN-111	2.953E-01	7.302E-01	1.149E+00	0.000E+00	NOT IDENT.
IN-113M	7.943E-03	3.962E-02	7.105E-02	0.000E+00	NOT IDENT.
SN-113	7.943E-03	3.962E-02	7.105E-02	0.000E+00	NOT IDENT.
IN-114M	-2.075E-02	1.733E-01	2.703E-01	0.000E+00	NOT IDENT.
CD-115	7.562E-01	6.164E+00	1.074E+01	0.000E+00	NOT IDENT.
SN-117M	-2.092E-02	4.866E-02	8.113E-02	0.000E+00	NOT IDENT.
SB-122	8.417E-01	1.377E+00	2.424E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.114E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.039E-02	2.900E-02	4.541E-02	0.000E+00	NOT IDENT.
I-124	-5.658E-02	5.177E-01	8.085E-01	0.000E+00	FAIL ABUN
SB-124	-1.473E-02	5.739E-02	9.235E-02	0.000E+00	FAIL ABUN
SB-125	-3.572E-02	7.729E-02	1.321E-01	0.000E+00	FAIL ABUN
TE-125M	3.235E+00	1.077E+01	1.790E+01	0.000E+00	NOT IDENT.
I-126	2.146E-02	1.521E-01	2.595E-01	0.000E+00	NOT IDENT.
SB-126	-4.904E-02	1.275E-01	2.069E-01	0.000E+00	FAIL ABUN
SB-127	-2.356E-01	9.695E-01	1.599E+00	0.000E+00	NOT IDENT.
XE-127	-1.454E-02	4.298E-02	7.406E-02	0.000E+00	FAIL ABUN
I-131	9.390E-02	8.463E-02	1.593E-01	0.000E+00	NOT IDENT.
TE-132	3.238E-01	4.649E-01	8.248E-01	0.000E+00	FAIL ABUN
BA-133	-3.136E-02	4.404E-02	6.569E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	1.818E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.026E-02	8.936E-02	0.000E+00	FAIL ABUN
CS-135	4.187E-02	1.601E-01	2.474E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.944E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.181E-01	9.688E-02	1.465E-01	0.000E+00	FAIL ABUN
BA-137M	4.345E-03	3.306E-02	5.640E-02	0.000E+00	NOT IDENT.
CS-137	4.593E-03	3.495E-02	5.962E-02	0.000E+00	NOT IDENT.
CE-139	2.230E-02	3.009E-02	4.945E-02	0.000E+00	NOT IDENT.
BA-140	-3.611E-03	2.063E-01	3.553E-01	0.000E+00	FAIL ABUN

LA-140	-3.702E-02	6.404E-02	9.936E-02	0.000E+00	FAIL ABUN
CE-141	4.393E-02	6.254E-02	1.035E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.546E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.088E-01	1.968E-01	3.474E-01	0.000E+00	NOT IDENT.
PM-144	-2.616E-02	3.220E-02	5.055E-02	0.000E+00	NOT IDENT.
PR-144	-1.771E+00	2.180E+00	3.423E+00	0.000E+00	NOT IDENT.
PM-146	4.918E-02	3.998E-02	7.430E-02	0.000E+00	NOT IDENT.
ND-147	-2.591E-01	4.429E-01	7.287E-01	0.000E+00	FAIL ABUN
PM-149	-5.506E+00	5.182E+01	8.740E+01	0.000E+00	NOT IDENT.
EU-152	-2.725E-02	8.217E-02	1.449E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	1.375E-01	1.708E-01	0.000E+00	FAIL ABUN
EU-154	-5.336E-02	1.052E-01	1.670E-01	0.000E+00	FAIL ABUN
EU-155	2.732E-02	1.059E-01	1.956E-01	0.000E+00	FAIL ABUN
TB-160	1.120E-01	1.257E-01	2.322E-01	0.000E+00	FAIL ABUN
HO-166M	-3.463E-03	5.517E-02	9.204E-02	0.000E+00	FAIL ABUN
TM-171	-1.569E+01	3.206E+01	4.912E+01	0.000E+00	NOT IDENT.
LU-176	-1.255E-02	2.281E-02	3.675E-02	0.000E+00	FAIL ABUN
LU-177M	9.355E-02	1.650E-01	2.682E-01	0.000E+00	FAIL ABUN
HF-181	-3.864E-02	3.490E-02	5.570E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	4.209E-01	6.994E-01	0.000E+00	NOT IDENT.
TA-182	4.107E-02	1.877E-01	3.200E-01	0.000E+00	FAIL ABUN
RE-183	0.000E+00	1.638E-01	1.964E-01	0.000E+00	FAIL ABUN
RE-184	9.133E-03	2.316E-01	3.549E-01	0.000E+00	NOT IDENT.
OS-185	7.731E-03	3.447E-02	5.948E-02	0.000E+00	NOT IDENT.
RE-188	1.403E-01	1.574E-01	2.887E-01	0.000E+00	NOT IDENT.
W-188	1.575E+00	6.998E+00	1.072E+01	0.000E+00	FAIL ABUN
IR-192	-8.544E-03	2.993E-02	4.942E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	3.998E-01	5.219E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.679E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.751E-02	5.168E+00	8.203E+00	0.000E+00	NOT IDENT.
TL-202	1.670E-02	5.366E-02	9.607E-02	0.000E+00	NOT IDENT.
BI-207	6.214E-03	4.602E-02	7.925E-02	0.000E+00	FAIL ABUN
TL-207	-6.020E-01	7.357E-01	1.015E+00	0.000E+00	FAIL ABUN
PO-209	2.472E+00	6.245E+00	1.117E+01	0.000E+00	NOT IDENT.
BI-210	-2.091E+00	4.005E+00	6.799E+00	0.000E+00	NOT IDENT.
PB-210	-2.091E+00	4.005E+00	6.799E+00	0.000E+00	NOT IDENT.
PO-210	-2.091E+00	4.004E+00	6.799E+00	0.000E+00	NOT IDENT.
PB-211	-1.895E-01	9.060E-01	1.377E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.970E-01	6.205E-01	0.000E+00	FAIL ABUN
PO-215	-6.020E-01	7.357E-01	1.015E+00	0.000E+00	FAIL ABUN
RN-219	7.066E-02	3.479E-01	6.229E-01	0.000E+00	FAIL ABUN
RN-220	4.428E+00	2.203E+01	3.846E+01	0.000E+00	NOT IDENT.
RA-223	-6.020E-01	7.357E-01	1.015E+00	0.000E+00	FAIL ABUN
AC-227	3.030E-01	3.939E-01	6.263E-01	0.000E+00	FAIL ABUN
TH-227	3.030E-01	3.949E-01	6.263E-01	0.000E+00	FAIL ABUN
PA-231	1.667E-01	1.335E+00	2.284E+00	0.000E+00	FAIL ABUN
TH-231	-6.020E-01	7.357E-01	1.015E+00	0.000E+00	FAIL ABUN
PA-233	1.389E-02	5.519E-02	9.436E-02	0.000E+00	FAIL ABUN
PA-234	1.488E-01	2.712E-01	4.856E-01	0.000E+00	FAIL ABUN
NP-236	3.225E-02	7.992E-02	1.298E-01	0.000E+00	FAIL ABUN
NP-239	2.128E-01	1.956E-01	3.337E-01	0.000E+00	FAIL ABUN
AM-241	6.347E-02	2.095E-01	3.341E-01	0.000E+00	NOT IDENT.
CM-243	-3.483E-02	9.666E-02	1.674E-01	0.000E+00	FAIL ABUN
AM-246	2.240E-02	1.231E-01	2.127E-01	0.000E+00	NOT IDENT.
CM-247	-8.969E-03	3.190E-02	5.557E-02	0.000E+00	FAIL ABUN
CF-249	-2.082E-02	3.536E-02	6.071E-02	0.000E+00	NOT IDENT.
CF-251	6.315E-02	1.178E-01	2.121E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395001.CNF;1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:10:18.
Sample ID        : G245395001 Sample quantity : 1.44700E+02 GRAM
Detector name    : GAM16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.69 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity : 5.00000
Batch ID        : 944966 Detector SN# :
Matrix Spike ID  : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1406	10.67*	1.208E+00	2.830E+01	2.830E+01	10.41
NB-95	765.79	154	99.81*	2.122E+00	1.883E-01	2.188E-01	30.80
CD-109	88.03	427	3.72*	6.258E+00	4.762E+00	4.862E+00	29.38
SN-126	64.28	2051	9.60	3.539E+00	1.566E+01	1.566E+01	16.58
	86.94	427	8.90	6.258E+00	1.990E+00	1.990E+00	49.99
	87.57	427	37.00*	6.258E+00	4.788E-01	4.788E-01	29.38
LU-177	112.95	200	6.40	7.150E+00	1.133E+00	4.732E+00	47.31
	208.36	158	11.00*	5.708E+00	6.509E-01	2.719E+00	53.18
HG-203	70.83	-----	4.75	4.611E+00	-----	Line Not Found	-----
	72.87	-----	8.00	4.872E+00	-----	Line Not Found	-----
	82.60	261	3.55	6.019E+00	3.169E+00	3.894E+00	47.00
	279.20	69	77.30*	4.690E+00	4.917E-02	6.041E-02	87.38
TL-208	277.35	69	6.80	4.690E+00	5.590E-01	5.590E-01	87.80
	510.84	182	21.60	2.964E+00	7.372E-01	7.372E-01	40.09
	583.14	500	84.20*	2.668E+00	5.777E-01	5.777E-01	16.27
	860.37	65	12.46	1.919E+00	7.040E-01	7.040E-01	54.71
BI-211	72.87	-----	1.27	4.872E+00	-----	Line Not Found	-----
	351.07	754	12.94*	3.940E+00	3.834E+00	3.834E+00	15.72
PB-212	74.81	373	10.70	5.125E+00	1.763E+00	1.763E+00	28.31
	77.11	696	18.00	5.367E+00	1.870E+00	1.870E+00	18.33
	87.30	427	8.00	6.258E+00	2.214E+00	2.214E+00	31.03
	238.63	1522	44.60*	5.224E+00	1.694E+00	1.694E+00	13.37
	300.09	92	3.41	4.432E+00	1.575E+00	1.575E+00	68.10
PO-212	74.81	373	10.70	5.125E+00	1.763E+00	1.763E+00	28.31
	77.11	696	18.00	5.367E+00	1.870E+00	1.870E+00	18.33
	87.30	427	8.00	6.258E+00	2.214E+00	2.214E+00	31.03
	115.19	-----	0.60	7.166E+00	-----	Line Not Found	-----
	238.63	1522	44.60*	5.224E+00	1.694E+00	1.694E+00	13.37
	300.09	92	3.41	4.432E+00	1.575E+00	1.575E+00	68.10
BI-214	609.31	464	46.30*	2.574E+00	1.010E+00	1.010E+00	17.41
	1120.29	100	15.10	1.516E+00	1.130E+00	1.130E+00	40.59
	1764.49	84	15.80	1.056E+00	1.314E+00	1.314E+00	31.92

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	373	6.21	5.125E+00	3.037E+00	3.037E+00	27.73
	77.11	696	10.50	5.367E+00	3.205E+00	3.205E+00	19.85
	87.30	427	4.67	6.258E+00	3.793E+00	3.793E+00	30.37
	241.98	309	7.49	5.180E+00	2.066E+00	2.066E+00	26.26
	295.21	425	19.20	4.486E+00	1.280E+00	1.280E+00	21.40
PO-214	351.92	754	37.20*	3.940E+00	1.334E+00	1.334E+00	16.56
	74.81	373	6.21	5.125E+00	3.037E+00	3.037E+00	27.73
	77.11	696	10.50	5.367E+00	3.205E+00	3.205E+00	19.85
	87.30	427	4.67	6.258E+00	3.793E+00	3.793E+00	30.37
	241.98	309	7.49	5.180E+00	2.066E+00	2.066E+00	26.26
PO-216	295.21	425	19.20	4.486E+00	1.280E+00	1.280E+00	21.40
	351.92	754	37.20*	3.940E+00	1.334E+00	1.334E+00	16.56
	74.81	373	10.70	5.125E+00	1.763E+00	1.763E+00	28.31
	77.11	696	18.00	5.367E+00	1.870E+00	1.870E+00	18.33
	87.30	427	8.00	6.258E+00	2.214E+00	2.214E+00	31.03
PO-218	238.63	1522	44.60*	5.224E+00	1.694E+00	1.694E+00	13.37
	300.09	92	3.41	4.432E+00	1.575E+00	1.575E+00	68.10
	74.81	373	6.21	5.125E+00	3.037E+00	3.037E+00	27.73
	77.11	696	10.50	5.367E+00	3.205E+00	3.205E+00	19.85
	87.30	427	4.67	6.258E+00	3.793E+00	3.793E+00	30.37
RA-224	241.98	309	7.49	5.180E+00	2.066E+00	2.066E+00	26.26
	295.21	425	19.20	4.486E+00	1.280E+00	1.280E+00	21.40
	351.92	754	37.20*	3.940E+00	1.334E+00	1.334E+00	16.56
	240.98	309	3.95*	5.180E+00	3.918E+00	3.918E+00	25.66
	609.31	464	46.30*	2.574E+00	1.010E+00	1.010E+00	17.41
RA-226	1120.29	100	15.10	1.516E+00	1.130E+00	1.130E+00	40.59
	1764.49	84	15.80	1.056E+00	1.314E+00	1.314E+00	31.92
	338.32	338	11.40	4.057E+00	1.894E+00	1.894E+00	45.53
	911.07	328	27.70*	1.824E+00	1.684E+00	1.684E+00	20.30
	969.11	217	16.60	1.727E+00	1.961E+00	1.961E+00	29.67
RA-228	338.32	338	11.40	4.057E+00	1.894E+00	1.894E+00	45.53
	911.07	328	27.70*	1.824E+00	1.684E+00	1.684E+00	20.30
	969.11	217	16.60	1.727E+00	1.961E+00	1.961E+00	29.67
	74.81	373	10.70	5.125E+00	1.763E+00	1.787E+00	26.75
	77.11	696	18.00	5.367E+00	1.870E+00	1.895E+00	18.33
TH-228	87.30	427	8.00	6.258E+00	2.214E+00	2.245E+00	29.38
	238.63	1522	44.60*	5.224E+00	1.694E+00	1.718E+00	13.37
	300.09	92	3.41	4.432E+00	1.575E+00	1.596E+00	89.68
	85.43	261	16.50	6.019E+00	6.819E-01	6.819E-01	45.76
	88.47	427	27.10	6.258E+00	6.537E-01	6.537E-01	29.38
TH-229	100.00	369	12.40	6.857E+00	1.127E+00	1.127E+00	30.19
	193.63	-----	4.59*	5.996E+00	-----	Line Not Found	-----
	210.97	-----	3.26	5.679E+00	-----	Line Not Found	-----
	609.31	464	46.30*	2.574E+00	1.010E+00	1.010E+00	17.41
	1120.29	100	15.10	1.516E+00	1.130E+00	1.130E+00	40.59
TH-230	1764.49	84	15.80	1.056E+00	1.314E+00	1.314E+00	31.92
	84.21	261	7.00	6.019E+00	1.607E+00	1.578E+01	45.76
	92.29	5069	17.30	6.585E+00	1.154E+01	1.133E+02	9.79
	95.87	187	28.00*	6.686E+00	2.597E-01	2.550E+00	73.46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	108.00	-----	13.10	7.091E+00	-----	Line Not Found	-----
TH-232	338.32	338	11.40	4.057E+00	1.894E+00	1.894E+00	21.09
	911.07	328	27.70*	1.824E+00	1.684E+00	1.684E+00	20.30
	969.11	217	16.60	1.727E+00	1.961E+00	1.961E+00	29.67
PA-234M	766.42	154	0.32	2.122E+00	5.874E+01	5.874E+01	58.73
	1001.03	254	0.84*	1.677E+00	4.683E+01	4.683E+01	22.76
TH-234	63.29	2051	3.80*	3.539E+00	3.956E+01	3.956E+01	19.18
	92.38	5069	5.41	6.585E+00	3.691E+01	3.691E+01	18.67
U-234	609.31	464	46.30*	2.574E+00	1.010E+00	1.010E+00	17.41
	1120.29	100	15.10	1.516E+00	1.130E+00	1.130E+00	40.59
	1764.49	84	15.80	1.056E+00	1.314E+00	1.314E+00	31.92
U-235	89.95	394	2.70	6.435E+00	5.882E+00	5.882E+00	43.32
	93.35	5069	4.50	6.585E+00	4.437E+01	4.437E+01	28.41
	105.00	-----	2.10	7.034E+00	-----	Line Not Found	-----
	143.76	230	10.50*	6.943E+00	8.198E-01	8.198E-01	42.90
	163.35	137	4.70	6.583E+00	1.144E+00	1.144E+00	65.64
	185.71	1115	54.00	6.147E+00	8.717E-01	8.717E-01	14.43
	205.31	-----	4.70	5.780E+00	-----	Line Not Found	-----
NP-237	86.50	427	12.60*	6.258E+00	1.406E+00	1.406E+00	35.90
	95.87	187	2.60	6.686E+00	2.797E+00	2.797E+00	77.00
U-238	63.29	2051	3.80*	3.539E+00	3.956E+01	3.956E+01	19.18
	92.38	5069	5.41	6.585E+00	3.691E+01	3.691E+01	9.79
AM-243	74.67	373	66.00*	5.125E+00	2.857E-01	2.857E-01	26.73
	86.72	427	0.34	6.258E+00	5.272E+01	5.272E+01	29.38
	117.66	-----	0.55	7.175E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.968E+00	-----	Line Not Found	-----
ANH-511	511.00	182	100.00*	2.964E+00	1.592E-01	1.592E-01	39.22

Flag: "*" = Keyline

Total number of lines in spectrum 45
Number of unidentified lines 4
Number of lines tentatively identified by NID 41 91.11%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.830E+01	2.830E+01	0.295E+01	10.41	
NB-95	64.02D	1.16	1.883E-01	2.188E-01	0.674E-01	30.80	
CD-109	464.00D	1.02	4.762E+00	4.862E+00	1.428E+00	29.38	
SN-126	1.00E+05Y	1.00	4.788E-01	4.788E-01	1.407E-01	29.38	
LU-177	6.71D	4.18	6.509E-01	2.719E+00	1.446E+00	53.18	
HG-203	46.60D	1.23	4.917E-02	6.041E-02	5.279E-02	87.38	
TL-208	1.41E+10Y	1.00	5.777E-01	5.777E-01	0.940E-01	16.27	
BI-211	7.04E+08Y	1.00	3.834E+00	3.834E+00	0.603E+00	15.72	
PB-212	1.41E+10Y	1.00	1.694E+00	1.694E+00	0.227E+00	13.37	
PO-212	1.41E+10Y	1.00	1.694E+00	1.694E+00	0.227E+00	13.37	
BI-214	1600.00Y	1.00	1.010E+00	1.010E+00	0.176E+00	17.41	
PB-214	1600.00Y	1.00	1.334E+00	1.334E+00	0.221E+00	16.56	
PO-214	1600.00Y	1.00	1.334E+00	1.334E+00	0.221E+00	16.56	
PO-216	1.41E+10Y	1.00	1.694E+00	1.694E+00	0.227E+00	13.37	
PO-218	1600.00Y	1.00	1.334E+00	1.334E+00	0.221E+00	16.56	
RA-224	1.41E+10Y	1.00	3.918E+00	3.918E+00	1.005E+00	25.66	
RA-226	1600.00Y	1.00	1.010E+00	1.010E+00	0.176E+00	17.41	
AC-228	1.41E+10Y	1.00	1.684E+00	1.684E+00	0.342E+00	20.30	
RA-228	1.41E+10Y	1.00	1.684E+00	1.684E+00	0.342E+00	20.30	
TH-228	1.91Y	1.01	1.694E+00	1.718E+00	0.230E+00	13.37	
TH-229	7340.00Y	1.00	6.537E-01	6.537E-01	1.920E-01	29.38	K
TH-230	4.47E+09Y	1.00	1.010E+00	1.010E+00	0.176E+00	17.41	
U-231	4.20D	9.82	2.597E-01	2.550E+00	1.873E+00	73.46	
TH-232	1.41E+10Y	1.00	1.684E+00	1.684E+00	0.342E+00	20.30	
PA-234M	4.47E+09Y	1.00	4.683E+01	4.683E+01	1.066E+01	22.76	
TH-234	4.47E+09Y	1.00	3.956E+01	3.956E+01	0.759E+01	19.18	
U-234	4.47E+09Y	1.00	1.010E+00	1.010E+00	0.176E+00	17.41	
U-235	7.04E+08Y	1.00	8.198E-01	8.198E-01	3.517E-01	42.90	
NP-237	2.14E+06Y	1.00	1.406E+00	1.406E+00	0.505E+00	35.90	
U-238	4.47E+09Y	1.00	3.956E+01	3.956E+01	0.759E+01	19.18	
AM-243	7380.00Y	1.00	2.857E-01	2.857E-01	0.764E-01	26.73	
ANH-511	1.00E+09Y	1.00	1.592E-01	1.592E-01	0.624E-01	39.22	
Total Activity :			1.922E+02	1.967E+02			

Grand Total Activity : 1.922E+02 1.967E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	258.12	150	366	1.70	516.43	510	13	2.08E-02	55.2	4.94E+00	
0	269.95	124	281	1.16	540.09	535	10	1.72E-02	53.7	4.79E+00	T
0	328.65	51	225	0.87	657.49	653	9	7.02E-03	****	4.15E+00	T
0	409.93	86	134	0.95	820.04	816	10	1.19E-02	55.1	3.51E+00	T
0	463.28	81	147	0.90	926.73	922	10	1.13E-02	60.5	3.20E+00	T
0	727.39	99	78	1.55	1454.86	1451	10	1.38E-02	39.8	2.22E+00	T
0	756.26	38	92	0.95	1512.59	1508	11	5.22E-03	****	2.15E+00	T
0	795.72	76	64	1.68	1591.50	1586	11	1.06E-02	47.7	2.06E+00	T
4	964.78	82	41	2.21	1929.53	1925	19	1.14E-02	35.5	1.73E+00	T
0	1378.46	29	30	1.12	2756.60	2751	12	4.08E-03	86.6	1.27E+00	
0	1510.55	18	14	0.73	3020.65	3016	11	2.46E-03	94.5	1.18E+00	T
0	1631.70	11	21	1.34	3262.82	3255	12	1.53E-03	****	1.11E+00	
0	1730.76	22	20	1.72	3460.84	3451	16	3.09E-03	99.3	1.07E+00	

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395001.CNF;1
* Acquisition date   : 2-FEB-2010 07:10:18. Detector SN#      :
* Detector ID        : GAM16 Sensitivity      : 5.00000
* Geometry           : CAN Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:02.69 Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395001 Analyst initials: MXRl
* Batch Number       : 944966 Sample Quantity : 1.44700E+02 GRAM
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16.1MS Isotope      :
* MSD ID              : MSD Isotope      :
* LCS ID              : 1032-A LCS Isotope :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.830E+01	2.946E+00	4.217E-01	3.706E-02	67.108
NB-95	2.188E-01	6.738E-02	5.924E-02	5.476E-03	3.693
CD-109	4.862E+00	1.428E+00	1.429E+00	1.377E-01	3.401
SN-126	4.788E-01	1.407E-01	1.414E-01	1.356E-02	3.386
LU-177	2.719E+00	1.446E+00	1.507E+00	1.529E-01	1.805
HG-203	6.041E-02	5.279E-02	5.797E-02	7.065E-03	1.042
TL-208	5.777E-01	9.398E-02	4.807E-02	4.764E-03	12.020
BI-211	3.834E+00	6.027E-01	2.756E-01	3.013E-02	13.912
PB-212	1.694E+00	2.265E-01	8.437E-02	9.990E-03	20.082
PO-212	1.694E+00	2.265E-01	8.437E-02	9.990E-03	20.082
BI-214	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
PB-214	1.334E+00	2.209E-01	9.608E-02	1.162E-02	13.882
PO-214	1.334E+00	2.209E-01	9.608E-02	1.162E-02	13.882
PO-216	1.694E+00	2.265E-01	8.437E-02	9.990E-03	20.082
PO-218	1.334E+00	2.209E-01	9.608E-02	1.162E-02	13.882
RA-224	3.918E+00	1.005E+00	9.603E-01	1.058E-01	4.080
RA-226	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
AC-228	1.684E+00	3.418E-01	1.884E-01	2.238E-02	8.937

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.684E+00	3.418E-01	1.884E-01	2.238E-02	8.937
TH-228	1.718E+00	2.297E-01	8.554E-02	1.013E-02	20.082
TH-229	6.537E-01	1.920E-01	7.519E-01	7.337E-02	0.869
TH-230	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
U-231	2.550E+00	1.873E+00	1.563E+00	1.403E-01	1.631
TH-232	1.684E+00	3.418E-01	1.884E-01	2.238E-02	8.937
PA-234M	4.683E+01	1.066E+01	6.266E+00	6.523E-01	7.474
TH-234	3.956E+01	7.589E+00	2.346E+00	4.092E-01	16.863
U-234	1.010E+00	1.759E-01	1.043E-01	1.102E-02	9.688
U-235	8.198E-01	3.517E-01	3.187E-01	5.570E-02	2.572
NP-237	1.406E+00	5.048E-01	4.198E-01	9.530E-02	3.349
U-238	3.956E+01	7.589E+00	2.346E+00	4.092E-01	16.863
AM-243	2.857E-01	7.637E-02	1.033E-01	8.550E-03	2.767
ANH-511	1.592E-01	6.245E-02	4.165E-02	3.962E-03	3.823

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.950E-01		2.853E-01	4.921E-01	4.978E-02	0.396
NA-22	-2.284E-02		3.885E-02	5.937E-02	4.940E-03	-0.385
NA-24	1.122E-01		6.721E-02	Half-Life too short		
AL-26	1.222E-02		2.771E-02	4.906E-02	4.012E-03	0.249
TI-44	3.450E-01	+	6.323E-02	7.788E-02	6.706E-03	4.430
SC-46	-2.358E-02		3.414E-02	5.342E-02	5.050E-03	-0.441
V-48	4.680E-02		5.263E-02	9.454E-02	8.702E-03	0.495
CR-51	1.204E-02		3.390E-01	5.376E-01	6.286E-02	0.022
MN-52	7.469E-02		1.851E-01	3.132E-01	2.672E-02	0.238
MN-54	-1.498E-02		3.075E-02	4.950E-02	4.649E-03	-0.303
CO-56	1.089E-02		3.285E-02	5.659E-02	5.325E-03	0.192
CO-57	3.192E-03		2.420E-02	4.072E-02	3.384E-03	0.078
CO-58	-1.881E-02		3.393E-02	5.444E-02	5.100E-03	-0.346
FE-59	-3.241E-02		7.386E-02	1.157E-01	1.076E-02	-0.280
CO-60	-1.110E-02		3.296E-02	5.083E-02	4.287E-03	-0.218
ZN-65	-5.048E-02		9.603E-02	1.271E-01	1.080E-02	-0.397
GE-68	-2.637E-01		1.082E+00	1.737E+00	1.517E-01	-0.152
AS-73	4.416E-01		1.003E+00	1.595E+00	1.217E-01	0.277
AS-74	5.425E-02		7.688E-02	1.317E-01	1.222E-02	0.412
SE-75	2.636E-02		4.550E-02	6.738E-02	7.863E-03	0.391
BR-77	6.281E-01		6.761E+00	1.120E+01	1.064E+00	0.056
SR-82	-1.904E-01		3.422E-01	5.181E-01	4.804E-02	-0.367
RB-83	-1.776E-04		6.453E-02	1.063E-01	1.010E-02	-0.002
RB-84	4.937E-02		6.540E-02	1.153E-01	1.090E-02	0.428
KR-85	4.197E+00		7.129E+00	1.083E+01	1.030E+00	0.388
SR-85	2.122E-02		3.605E-02	5.477E-02	5.208E-03	0.388
RB-86	-1.886E-01		6.403E-01	1.022E+00	8.931E-02	-0.185
Y-88	6.340E-03		2.615E-02	4.514E-02	3.664E-03	0.140
ZR-88	5.053E-03		2.719E-02	4.611E-02	4.265E-03	0.110

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91	2.804E+00		1.715E+01	2.834E+01	2.304E+00	0.099
NB-94	-8.755E-03		3.271E-02	5.155E-02	4.661E-03	-0.170
NB-95M	3.504E-02		1.267E-01	1.852E-01	2.202E-02	0.189
ZR-95	9.529E-02	+	1.003E-01	1.260E-01	1.265E-02	0.756
NB-97	-6.922E-03		1.195E-02	Half-Life	too short	
ZR-97	3.794E-01		2.293E-01	Half-Life	too short	
MO-99	-7.591E+00		8.451E+00	1.240E+01	1.922E+00	-0.612
TC-99M	8.674E+07		5.157E+08	Half-Life	too short	
RH-101	3.879E-03		3.017E-02	4.950E-02	4.887E-03	0.078
RH-102	4.349E-03		2.549E-02	4.273E-02	4.061E-03	0.102
RU-103	1.112E-02		3.488E-02	5.882E-02	8.661E-03	0.189
RH-106	2.654E-02		2.706E-01	4.433E-01	6.074E-02	0.060
RU-106	2.654E-02		2.706E-01	4.433E-01	4.054E-02	0.060
AG-108M	-1.422E-02		2.818E-02	4.542E-02	4.422E-03	-0.313
AG-110M	-1.010E-02		3.138E-02	4.942E-02	4.523E-03	-0.204
IN-111	2.953E-01		7.451E-01	1.098E+00	1.222E-01	0.269
IN-113M	7.943E-03		4.043E-02	6.860E-02	6.511E-03	0.116
SN-113	7.943E-03		4.043E-02	6.860E-02	6.511E-03	0.116
IN-114M	-2.075E-02		1.769E-01	2.569E-01	2.484E-02	-0.081
CD-115	7.562E-01		6.290E+00	1.044E+01	9.907E-01	0.072
SN-117M	-2.092E-02		4.966E-02	7.680E-02	6.821E-03	-0.272
SB-122	8.417E-01		1.405E+00	2.360E+00	2.220E-01	0.357
I-123	-3.988E-01		5.681E-01	Half-Life	too short	
TE-123M	-1.039E-02		2.959E-02	4.299E-02	3.845E-03	-0.242
I-124	-5.658E-02		5.283E-01	7.881E-01	7.289E-02	-0.072
SB-124	-1.473E-02		5.856E-02	9.219E-02	8.074E-03	-0.160
SB-125	-3.572E-02		7.887E-02	1.278E-01	1.221E-02	-0.280
TE-125M	3.235E+00		1.099E+01	1.681E+01	1.711E+00	0.192
I-126	2.146E-02		1.552E-01	2.535E-01	2.255E-02	0.085
SB-126	-4.904E-02		1.301E-01	2.025E-01	1.843E-02	-0.242
SB-127	-2.356E-01		9.893E-01	1.563E+00	1.765E-01	-0.151
XE-127	-1.454E-02		4.385E-02	7.048E-02	7.049E-03	-0.206
I-131	9.390E-02		8.636E-02	1.536E-01	1.623E-02	0.611
TE-132	3.238E-01		4.744E-01	7.870E-01	1.316E-01	0.411
BA-133	-3.136E-02		4.493E-02	6.328E-02	9.145E-03	-0.496
I-133	-1.323E-03		9.274E-04	Half-Life	too short	
CS-134	1.266E-01	+	6.149E-02	8.765E-02	8.218E-03	1.444
CS-135	4.187E-02		1.634E-01	2.368E-01	3.020E-02	0.177
I-135	1.205E+08		9.919E+07	Half-Life	too short	
CS-136	-1.181E-01		9.886E-02	1.446E-01	1.339E-02	-0.817
BA-137M	4.345E-03		3.374E-02	5.509E-02	4.889E-03	0.079
CS-137	4.593E-03		3.567E-02	5.823E-02	5.177E-03	0.079
CE-139	2.230E-02		3.070E-02	4.686E-02	4.250E-03	0.476
BA-140	-3.611E-03		2.105E-01	3.454E-01	1.153E-01	-0.010
LA-140	-3.702E-02		6.535E-02	9.905E-02	8.436E-03	-0.374
CE-141	4.393E-02		6.382E-02	9.782E-02	8.557E-03	0.449
CE-143	1.981E-04		4.360E-05	Half-Life	too short	
CE-144	-1.088E-01		2.009E-01	3.277E-01	5.061E-02	-0.332

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-144	-2.616E-02		3.286E-02	4.944E-02	4.459E-03	-0.529
PR-144	-1.771E+00		2.225E+00	3.348E+00	3.019E-01	-0.529
PM-146	4.918E-02		4.080E-02	7.197E-02	8.219E-03	0.683
ND-147	-2.591E-01		4.519E-01	7.083E-01	1.095E-01	-0.366
PM-149	-5.506E+00		5.288E+01	8.380E+01	1.474E+01	-0.066
EU-152	-2.725E-02		8.385E-02	1.395E-01	1.559E-02	-0.195
GD-153	4.647E-01	+	1.403E-01	1.600E-01	1.422E-02	2.903
EU-154	-5.336E-02		1.073E-01	1.656E-01	1.834E-02	-0.322
EU-155	2.732E-02		1.081E-01	1.836E-01	1.588E-02	0.149
TB-160	1.120E-01		1.282E-01	2.283E-01	2.156E-02	0.491
HO-166M	-3.463E-03		5.630E-02	9.005E-02	8.170E-03	-0.038
TM-171	-1.569E+01		3.271E+01	4.567E+01	3.499E+00	-0.344
LU-176	-1.255E-02		2.327E-02	3.529E-02	4.093E-03	-0.356
LU-177M	9.355E-02		1.683E-01	2.592E-01	2.423E-02	0.361
HF-181	-3.864E-02		3.561E-02	5.402E-02	5.138E-03	-0.715
W-181	7.357E-01		4.295E-01	6.500E-01	4.909E-02	1.132
TA-182	4.107E-02		1.915E-01	3.170E-01	2.592E-02	0.130
RE-183	2.636E-01	+	1.671E-01	1.860E-01	1.670E-02	1.417
RE-184	9.133E-03		2.364E-01	3.394E-01	3.846E-02	0.027
OS-185	7.731E-03		3.518E-02	5.807E-02	5.220E-03	0.133
RE-188	1.403E-01		1.606E-01	2.732E-01	2.403E-02	0.514
W-188	1.575E+00		7.141E+00	1.028E+01	1.220E+00	0.153
IR-192	-8.544E-03		3.054E-02	4.749E-02	5.427E-03	-0.180
AU-195	1.351E+00	+	4.080E-01	4.892E-01	4.307E-02	2.763
TL-200	-8.203E-05		8.566E-05	Half-Life	too short	
TL-201	-2.751E-02		5.274E+00	7.775E+00	7.078E-01	-0.004
TL-202	1.670E-02		5.476E-02	9.299E-02	8.776E-03	0.180
BI-207	6.214E-03		4.695E-02	7.826E-02	6.899E-03	0.079
TL-207	-6.020E-01		7.507E-01	9.761E-01	1.867E-01	-0.617
PO-209	2.472E+00		6.372E+00	1.099E+01	1.039E+00	0.225
BI-210	-2.091E+00		4.087E+00	6.275E+00	5.852E-01	-0.333
PB-210	-2.091E+00		4.087E+00	6.275E+00	5.852E-01	-0.333
PO-210	-2.091E+00		4.086E+00	6.275E+00	5.301E-01	-0.333
PB-211	-1.895E-01		9.245E-01	1.331E+00	8.351E-01	-0.142
BI-212	9.841E-01	+	4.051E-01	6.074E-01	6.346E-02	1.620
PO-215	-6.020E-01		7.507E-01	9.761E-01	1.867E-01	-0.617
RN-219	7.066E-02		3.550E-01	6.017E-01	9.280E-02	0.117
RN-220	4.428E+00		2.248E+01	3.741E+01	3.534E+00	0.118
RA-223	-6.020E-01		7.507E-01	9.761E-01	1.867E-01	-0.617
AC-227	3.030E-01		4.019E-01	5.990E-01	1.023E-01	0.506
TH-227	3.030E-01		4.029E-01	5.990E-01	1.171E-01	0.506
PA-231	1.667E-01		1.363E+00	2.189E+00	3.787E-01	0.076
TH-231	-6.020E-01		7.507E-01	9.761E-01	1.867E-01	-0.617
PA-233	1.389E-02		5.632E-02	9.065E-02	1.060E-02	0.153
PA-234	1.488E-01		2.767E-01	4.782E-01	9.135E-02	0.311
NP-236	3.225E-02		8.155E-02	1.229E-01	1.097E-02	0.262
NP-239	2.128E-01		1.996E-01	3.139E-01	2.613E-02	0.678
AM-241	6.347E-02		2.138E-01	3.099E-01	2.432E-02	0.205

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.483E-02		9.863E-02	1.571E-01	1.350E-02	-0.222
AM-246	2.240E-02		1.257E-01	2.101E-01	1.833E-02	0.107
CM-247	-8.969E-03		3.255E-02	5.369E-02	4.992E-03	-0.167
CF-249	-2.082E-02		3.608E-02	5.860E-02	5.498E-03	-0.355
CF-251	6.315E-02		1.202E-01	2.012E-01	1.876E-02	0.314

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395001             *
* Acquisition date   : 2-FEB-2010 07:10:18 Detector SN# :                   *
* Detector ID        : GAM16 Sensitivity : 5.000                            *
* Geometry           : CAN Energy tolerance: 1.500                          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000                *
* Elapsed real time  : 0 02:00:02.69 Half life ratio : 8.000                *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID          : G245395001 Analyst initials: MXR1                   *
* Batch Number       : 944966 Sample Quantity : 1.4470E+02 GRAM             *
* Recovery           : 1.00000 Carrier Weight : 0.00000                    *
*****
*
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16 MS Isotope :                   *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                               *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.830E+01	2.887E+00	2.121E-01	1.473E+00
NB-95	2.188E-01	6.603E-02	3.024E-02	3.369E-02
CD-109	4.862E+00	1.400E+00	7.647E-01	7.141E-01
SN-126	4.788E-01	1.378E-01	7.566E-02	7.033E-02
LU-177	2.719E+00	1.417E+00	7.916E-01	7.231E-01
HG-203	6.041E-02	5.173E-02	3.026E-02	2.639E-02
TL-208	5.777E-01	9.210E-02	2.469E-02	4.699E-02
BI-211	3.834E+00	5.906E-01	1.432E-01	3.013E-01
PB-212	1.694E+00	2.220E-01	4.420E-02	1.133E-01
PO-212	1.694E+00	2.220E-01	4.420E-02	1.133E-01
BI-214	1.010E+00	1.723E-01	5.350E-02	8.793E-02
PB-214	1.334E+00	2.165E-01	4.990E-02	1.104E-01
PO-214	1.334E+00	2.165E-01	4.990E-02	1.104E-01
PO-216	1.694E+00	2.220E-01	4.420E-02	1.133E-01
PO-218	1.334E+00	2.165E-01	4.990E-02	1.104E-01
RA-224	3.918E+00	9.852E-01	5.030E-01	5.026E-01
AC-226	1.010E+00	1.723E-01	5.350E-02	8.793E-02
AC-228	1.684E+00	3.350E-01	9.580E-02	1.709E-01
RA-228	1.684E+00	3.350E-01	9.580E-02	1.709E-01
TH-228	1.718E+00	2.251E-01	4.481E-02	1.148E-01
TH-229	-8.171E-02	4.542E-01	3.957E-01	2.318E-01
TH-230	1.010E+00	1.723E-01	5.350E-02	8.793E-02
U-231	2.550E+00	1.835E+00	8.347E-01	9.365E-01
TH-232	1.684E+00	3.350E-01	9.580E-02	1.709E-01
PA-234M	4.683E+01	1.045E+01	3.179E+00	5.329E+00
TH-234	3.956E+01	7.437E+00	1.264E+00	3.794E+00
U-234	1.010E+00	1.723E-01	5.350E-02	8.793E-02
U-235	8.198E-01	3.446E-01	1.688E-01	1.758E-01
NP-237	1.406E+00	4.947E-01	2.247E-01	2.524E-01
U-238	3.956E+01	7.437E+00	1.264E+00	3.794E+00
AM-243	2.857E-01	7.484E-02	5.544E-02	3.818E-02
ANH-511	1.592E-01	6.120E-02	2.146E-02	3.122E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.950E-01	2.796E-01	2.539E-01	1.426E-01	NOT IDENT.
NA-22	-2.284E-02	3.807E-02	2.995E-02	1.942E-02	NOT IDENT.
NA-24	1.122E+05	1.317E+05	0.000E+00	6.721E+04	SHORT HLIF
AL-26	1.222E-02	2.716E-02	2.455E-02	1.386E-02	NOT IDENT.
TI-44	3.450E-01	6.197E-02	4.176E-02	3.162E-02	FAIL ABUN
SC-46	-2.358E-02	3.346E-02	2.718E-02	1.707E-02	FAIL ABUN
V-48	4.680E-02	5.157E-02	4.799E-02	2.631E-02	NOT IDENT.
CR-51	1.204E-02	3.322E-01	2.798E-01	1.695E-01	NOT IDENT.
MN-52	7.469E-02	1.814E-01	1.576E-01	9.256E-02	NOT IDENT.
MN-54	-1.498E-02	3.014E-02	2.522E-02	1.538E-02	NOT IDENT.
CO-56	1.089E-02	3.220E-02	2.882E-02	1.643E-02	NOT IDENT.
CO-57	3.192E-03	2.372E-02	2.164E-02	1.210E-02	NOT IDENT.
CO-58	-1.881E-02	3.325E-02	2.775E-02	1.696E-02	NOT IDENT.
FE-59	-3.241E-02	7.238E-02	5.858E-02	3.693E-02	FAIL ABUN
CO-60	-1.110E-02	3.230E-02	2.562E-02	1.648E-02	NOT IDENT.
ZN-65	-5.048E-02	9.411E-02	6.433E-02	4.801E-02	NOT IDENT.
GE-68	-2.637E-01	1.060E+00	8.799E-01	5.410E-01	NOT IDENT.
AS-73	4.416E-01	9.830E-01	8.620E-01	5.015E-01	NOT IDENT.
AS-74	5.425E-02	7.534E-02	6.759E-02	3.844E-02	NOT IDENT.
SE-75	2.636E-02	4.459E-02	3.522E-02	2.275E-02	NOT IDENT.
BR-77	6.281E-01	6.625E+00	5.768E+00	3.380E+00	FAIL ABUN
SR-82	-1.904E-01	3.354E-01	2.644E-01	1.711E-01	NOT IDENT.
RB-83	-1.776E-04	6.324E-02	5.471E-02	3.227E-02	NOT IDENT.
RB-84	4.937E-02	6.409E-02	5.868E-02	3.270E-02	NOT IDENT.
KR-85	4.197E+00	6.986E+00	5.579E+00	3.564E+00	NOT IDENT.
SR-85	2.122E-02	3.533E-02	2.821E-02	1.802E-02	NOT IDENT.
RB-86	-1.886E-01	6.275E-01	5.177E-01	3.201E-01	NOT IDENT.
Y-88	6.340E-03	2.563E-02	2.258E-02	1.308E-02	NOT IDENT.
ZR-88	5.053E-03	2.664E-02	2.389E-02	1.359E-02	NOT IDENT.
Y-91	2.804E+00	1.681E+01	1.432E+01	8.575E+00	NOT IDENT.
NB-94	-8.755E-03	3.206E-02	2.637E-02	1.635E-02	NOT IDENT.
NB-95M	3.504E-02	1.242E-01	9.705E-02	6.335E-02	NOT IDENT.
ZR-95	9.529E-02	9.829E-02	6.434E-02	5.015E-02	FAIL ABUN
NB-97	-6.922E+03	2.342E+04	0.000E+00	1.195E+04	SHORT HLIF
ZR-97	3.794E+05	4.495E+05	0.000E+00	2.293E+05	SHORT HLIF
MO-99	-7.591E+00	8.282E+00	6.336E+00	4.225E+00	NOT IDENT.
TC-99M	8.674E+13	1.011E+15	0.000E+00	5.157E+14	SHORT HLIF
RH-101	3.879E-03	2.956E-02	2.604E-02	1.508E-02	NOT IDENT.
RH-102	4.349E-03	2.498E-02	2.205E-02	1.275E-02	FAIL ABUN
RU-103	1.112E-02	3.418E-02	3.032E-02	1.744E-02	FAIL ABUN
RH-106	2.654E-02	2.652E-01	2.273E-01	1.353E-01	FAIL ABUN
RU-106	2.654E-02	2.652E-01	2.273E-01	1.353E-01	FAIL ABUN
AG-108M	-1.422E-02	2.762E-02	2.349E-02	1.409E-02	NOT IDENT.
AG-110M	-1.010E-02	3.075E-02	2.531E-02	1.569E-02	NOT IDENT.
IN-111	2.953E-01	7.302E-01	5.746E-01	3.726E-01	NOT IDENT.
IN-113M	7.943E-03	3.962E-02	3.555E-02	2.021E-02	NOT IDENT.
SN-113	7.943E-03	3.962E-02	3.555E-02	2.021E-02	NOT IDENT.
IN-114M	-2.075E-02	1.733E-01	1.352E-01	8.844E-02	NOT IDENT.
CD-115	7.562E-01	6.164E+00	5.373E+00	3.145E+00	NOT IDENT.
SN-117M	-2.092E-02	4.866E-02	4.059E-02	2.483E-02	NOT IDENT.
SB-122	8.417E-01	1.377E+00	1.213E+00	7.023E-01	NOT IDENT.
I-123	-3.988E+05	1.114E+06	0.000E+00	5.681E+05	SHORT HLIF
TE-123M	-1.039E-02	2.900E-02	2.272E-02	1.480E-02	NOT IDENT.
I-124	-5.658E-02	5.177E-01	4.045E-01	2.641E-01	FAIL ABUN
SB-124	-1.473E-02	5.739E-02	4.620E-02	2.928E-02	FAIL ABUN
SB-125	-3.572E-02	7.729E-02	6.608E-02	3.944E-02	FAIL ABUN
TE-125M	3.235E+00	1.077E+01	8.956E+00	5.497E+00	NOT IDENT.
I-126	2.146E-02	1.521E-01	1.298E-01	7.760E-02	NOT IDENT.
SB-126	-4.904E-02	1.275E-01	1.035E-01	6.503E-02	FAIL ABUN
SB-127	-2.356E-01	9.695E-01	8.001E-01	4.947E-01	NOT IDENT.
XE-127	-1.454E-02	4.298E-02	3.705E-02	2.193E-02	FAIL ABUN
I-131	9.390E-02	8.463E-02	7.972E-02	4.318E-02	NOT IDENT.
TE-132	3.238E-01	4.649E-01	4.126E-01	2.372E-01	FAIL ABUN
BA-133	-3.136E-02	4.404E-02	3.286E-02	2.247E-02	FAIL ABUN
I-133	-1.323E+03	1.818E+03	0.000E+00	9.274E+02	SHORT HLIF
CS-134	1.266E-01	6.026E-02	4.470E-02	3.075E-02	FAIL ABUN
CS-135	4.187E-02	1.601E-01	1.238E-01	8.170E-02	NOT IDENT.
I-135	1.205E+14	1.944E+14	0.000E+00	9.919E+13	SHORT HLIF
CS-136	-1.181E-01	9.688E-02	7.330E-02	4.943E-02	FAIL ABUN
BA-137M	4.345E-03	3.306E-02	2.821E-02	1.687E-02	NOT IDENT.
CS-137	4.593E-03	3.495E-02	2.983E-02	1.783E-02	NOT IDENT.
CE-139	2.230E-02	3.009E-02	2.474E-02	1.535E-02	NOT IDENT.
BA-140	-3.611E-03	2.063E-01	1.777E-01	1.053E-01	FAIL ABUN

LA-140	-3.702E-02	6.404E-02	4.971E-02	3.268E-02	FAIL ABUN
CE-141	4.393E-02	6.254E-02	5.179E-02	3.191E-02	NOT IDENT.
CE-143	1.981E+02	8.546E+01	0.000E+00	4.360E+01	SHORT HLIF
CE-144	-1.088E-01	1.968E-01	1.738E-01	1.004E-01	NOT IDENT.
PM-144	-2.616E-02	3.220E-02	2.529E-02	1.643E-02	NOT IDENT.
PR-144	-1.771E+00	2.180E+00	1.713E+00	1.112E+00	NOT IDENT.
PM-146	4.918E-02	3.998E-02	3.717E-02	2.040E-02	NOT IDENT.
ND-147	-2.591E-01	4.429E-01	3.646E-01	2.260E-01	FAIL ABUN
PM-149	-5.506E+00	5.182E+01	4.373E+01	2.644E+01	NOT IDENT.
EU-152	-2.725E-02	8.217E-02	7.248E-02	4.192E-02	FAIL ABUN
GD-153	4.647E-01	1.375E-01	8.545E-02	7.014E-02	FAIL ABUN
EU-154	-5.336E-02	1.052E-01	8.354E-02	5.365E-02	FAIL ABUN
EU-155	2.732E-02	1.059E-01	9.786E-02	5.403E-02	FAIL ABUN
TB-160	1.120E-01	1.257E-01	1.162E-01	6.411E-02	FAIL ABUN
HO-166M	-3.463E-03	5.517E-02	4.605E-02	2.815E-02	FAIL ABUN
TM-171	-1.569E+01	3.206E+01	2.457E+01	1.636E+01	NOT IDENT.
LU-176	-1.255E-02	2.281E-02	1.838E-02	1.164E-02	FAIL ABUN
LU-177M	9.355E-02	1.650E-01	1.342E-01	8.416E-02	FAIL ABUN
HF-181	-3.864E-02	3.490E-02	2.786E-02	1.780E-02	NOT IDENT.
W-181	7.357E-01	4.209E-01	3.499E-01	2.148E-01	NOT IDENT.
TA-182	4.107E-02	1.877E-01	1.601E-01	9.576E-02	FAIL ABUN
RE-183	2.636E-01	1.638E-01	9.825E-02	8.357E-02	FAIL ABUN
RE-184	9.133E-03	2.316E-01	1.776E-01	1.182E-01	NOT IDENT.
OS-185	7.731E-03	3.447E-02	2.976E-02	1.759E-02	NOT IDENT.
RE-188	1.403E-01	1.574E-01	1.444E-01	8.031E-02	NOT IDENT.
W-188	1.575E+00	6.998E+00	5.364E+00	3.571E+00	FAIL ABUN
IR-192	-8.544E-03	2.993E-02	2.472E-02	1.527E-02	FAIL ABUN
AU-195	1.351E+00	3.998E-01	2.611E-01	2.040E-01	FAIL ABUN
TL-200	-8.203E+01	1.679E+02	0.000E+00	8.566E+01	SHORT HLIF
TL-201	-2.751E-02	5.168E+00	4.104E+00	2.637E+00	NOT IDENT.
TL-202	1.670E-02	5.366E-02	4.807E-02	2.738E-02	NOT IDENT.
BI-207	6.214E-03	4.602E-02	3.965E-02	2.348E-02	FAIL ABUN
TL-207	-6.020E-01	7.357E-01	5.079E-01	3.753E-01	FAIL ABUN
PO-209	2.472E+00	6.245E+00	5.590E+00	3.186E+00	NOT IDENT.
BI-210	-2.091E+00	4.005E+00	3.402E+00	2.043E+00	NOT IDENT.
PB-210	-2.091E+00	4.005E+00	3.402E+00	2.043E+00	NOT IDENT.
PO-210	-2.091E+00	4.004E+00	3.402E+00	2.043E+00	NOT IDENT.
PB-211	-1.895E-01	9.060E-01	6.890E-01	4.622E-01	NOT IDENT.
BI-212	9.841E-01	3.970E-01	3.104E-01	2.025E-01	FAIL ABUN
PO-215	-6.020E-01	7.357E-01	5.079E-01	3.753E-01	FAIL ABUN
RN-219	7.066E-02	3.479E-01	3.116E-01	1.775E-01	FAIL ABUN
RN-220	4.428E+00	2.203E+01	1.924E+01	1.124E+01	NOT IDENT.
RA-223	-6.020E-01	7.357E-01	5.079E-01	3.753E-01	FAIL ABUN
AC-227	3.030E-01	3.939E-01	3.133E-01	2.010E-01	FAIL ABUN
TH-227	3.030E-01	3.949E-01	3.133E-01	2.015E-01	FAIL ABUN
PA-231	1.667E-01	1.335E+00	1.143E+00	6.813E-01	FAIL ABUN
TH-231	-6.020E-01	7.357E-01	5.079E-01	3.753E-01	FAIL ABUN
PA-233	1.389E-02	5.519E-02	4.721E-02	2.816E-02	FAIL ABUN
PA-234	1.488E-01	2.712E-01	2.429E-01	1.384E-01	FAIL ABUN
NP-236	3.225E-02	7.992E-02	6.495E-02	4.078E-02	FAIL ABUN
NP-239	2.128E-01	1.956E-01	1.669E-01	9.979E-02	FAIL ABUN
AM-241	6.347E-02	2.095E-01	1.671E-01	1.069E-01	NOT IDENT.
CM-243	-3.483E-02	9.666E-02	8.374E-02	4.932E-02	FAIL ABUN
AM-246	2.240E-02	1.231E-01	1.064E-01	6.283E-02	NOT IDENT.
CM-247	-8.969E-03	3.190E-02	2.780E-02	1.628E-02	FAIL ABUN
CF-249	-2.082E-02	3.536E-02	3.038E-02	1.804E-02	NOT IDENT.
CF-251	6.315E-02	1.178E-01	1.061E-01	6.011E-02	NOT IDENT.

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*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD      *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
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46.50	460.7866
46.50	460.7866
46.50	460.7866
48.70	473.4238
49.72	512.8912
51.35	514.2097
52.39	536.1306
52.97	544.2314
53.15	544.5163
53.44	544.9735
54.07	578.4316
56.28	649.8207
56.28	649.8248
57.37	0.0000
57.53	664.2242
57.53	664.2274
57.60	664.3526
57.98	713.6776
57.98	713.6776
59.32	691.4702
59.32	691.4702
59.40	689.9920
59.54	711.4164
59.72	711.7598
60.01	733.5045
61.10	734.0007
61.14	734.0771
61.30	734.3866
63.00	680.1589
63.29	680.6707
63.29	680.6707
63.58	681.1802
64.28	682.4036
65.12	550.0670
65.20	550.1763
65.20	550.1763
66.05	574.5387
66.72	607.0140
66.83	607.1816
66.91	617.2603
67.20	667.5178
67.20	667.5178
67.75	675.0766
67.85	675.2459
68.90	660.3142
68.90	660.3142
69.30	672.6423
69.67	698.3080
70.82	717.4137
70.82	717.4137
70.83	717.4312
72.80	786.4406
72.87	786.5688
72.87	786.5688
74.67	826.6500
74.81	826.9136
74.81	826.9136
74.81	826.9136
74.81	826.9136
74.81	826.9136
74.81	826.9136
74.97	827.2220
75.28	827.8140
75.70	828.6099
77.11	831.2761
77.11	831.2761

77.11	831.2761
77.11	831.2761
77.11	831.2761
77.11	831.2761
77.11	831.2761
78.38	792.7431
79.62	776.9877
79.80	777.2975
79.80	777.2975
80.11	772.6949
80.18	772.8144
80.30	773.0165
80.30	773.0165
80.57	814.5908
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81.07	833.4932
81.07	833.4932
81.07	833.4932
82.60	734.3187
83.37	735.5342
83.78	736.1854
83.78	736.1854
83.78	736.1854
83.78	736.1854
84.21	736.8627
84.90	737.9436
85.43	738.7728
86.29	740.1141
86.50	740.4398
86.54	740.5005
86.59	740.5787
86.72	740.7783
86.79	740.8825
86.94	741.1213
87.30	741.6769
87.30	741.6769
87.30	741.6769
87.30	741.6769
87.30	741.6769
87.30	741.6769
87.57	742.0937
87.88	742.5712
88.03	742.8013
88.36	743.3092
88.47	743.4785
89.95	745.7359
91.11	747.4941
92.29	749.2739
92.38	749.4085
92.38	749.4085
93.35	750.8585
94.00	751.8309
94.67	752.8163
94.67	752.8250
94.90	508.2861
94.90	508.2861
94.90	508.2861
94.90	508.2861
95.87	620.6520
95.87	620.6520
96.73	621.6982
97.43	622.5373
98.44	451.8146
98.44	451.8172
98.88	452.1974
99.55	452.7755
99.55	452.7755
99.86	408.9416
100.00	409.0490
100.10	409.1307
103.18	498.9049
103.76	460.9412
105.00	458.7556
105.31	471.6181
108.00	590.5955
109.28	543.9087

111.00	586.4865
111.00	586.4865
111.76	588.6364
112.95	545.6117
115.19	431.4074
116.30	377.1681
117.00	363.8379
117.00	363.8379
117.66	406.5560
121.11	388.5611
121.62	388.8901
121.78	384.3617
122.06	391.9540
122.32	386.5598
122.32	386.5598
122.32	386.5598
122.32	386.5598
123.07	406.5281
127.23	494.3150
129.76	433.4493
131.20	489.9162
133.02	423.4131
133.54	435.0763
135.34	379.5027
136.00	374.2061
136.25	388.5624
136.48	388.7001
140.51	366.2734
140.51	0.0000
142.18	397.3041
142.65	370.3120
143.76	370.9183
144.24	369.7395
144.24	369.7395
144.24	369.7395
144.24	369.7395
145.22	365.9505
145.44	366.0668
147.16	343.8645
152.43	358.1106
152.70	335.9161
153.22	356.5654
154.21	399.8662
154.21	399.8662
154.21	399.8662
154.21	399.8662
155.03	350.6506
156.02	369.6661
158.56	352.3682
159.00	0.0000
159.00	361.3913
160.31	326.7197
161.27	334.5146
162.32	361.5522
162.64	372.0399
163.35	372.3975
163.89	372.6667
165.85	320.2657
167.43	322.4206
171.28	321.5576
171.86	333.7561
172.10	333.8584
176.55	321.7347
176.60	321.7576
181.06	294.8387
184.41	317.8266
185.71	318.3313
186.00	318.4463
190.27	292.0637
192.34	307.6077
193.63	302.9616
197.04	298.0152
198.01	302.4697
198.60	289.2924
200.40	339.4185
201.83	312.0796
202.84	334.1682
205.31	336.1487

208.36	354.4866
208.81	280.1919
209.75	280.4874
209.75	280.4874
210.97	255.2894
215.65	263.4346
216.55	243.7341
218.09	300.9715
222.10	262.1150
223.80	282.7097
226.40	261.1948
227.00	265.6097
227.08	268.8202
227.20	268.8537
228.16	234.0230
228.18	234.0275
228.18	234.0275
231.56	0.0000
235.69	287.8569
236.00	287.9498
236.00	287.9498
238.63	265.6059
238.63	265.6059
238.63	265.6059
238.63	265.6059
239.00	265.7039
240.98	266.2391
241.98	266.5079
241.98	266.5079
241.98	266.5079
244.69	214.2180
245.39	199.7530
247.94	224.6796
248.90	229.2380
249.79	206.6045
252.40	197.8676
252.85	209.4063
252.85	209.4063
254.15	0.0000
256.20	205.1630
256.20	205.1630
260.50	204.3646
260.90	215.9813
262.80	214.7214
264.65	196.8940
268.24	215.8203
268.79	189.3552
269.46	188.3655
269.46	188.3655
269.46	188.3655
269.46	188.3655
271.23	199.7717
273.65	220.2404
276.40	197.3785
277.35	181.9225
277.60	181.9656
277.60	181.9656
278.00	180.9152
278.60	187.7183
279.20	199.5560
279.53	186.1980
280.46	184.6750
281.68	163.0274
283.67	175.1064
284.30	175.2048
285.00	179.8079
285.90	170.9567
286.10	168.7347
286.10	168.7347
287.40	174.5611
288.45	0.0000
290.67	171.1125
290.80	171.1310
291.72	164.4868
293.26	0.0000
293.70	183.4563
295.21	175.1924
295.21	175.1924

295.21	175.1924
295.96	170.2026
296.50	143.0369
297.23	143.1266
298.57	143.2906
299.80	150.2725
299.80	150.2725
300.09	186.1795
300.09	186.1795
300.09	186.1795
300.09	186.1795
300.12	186.1862
301.29	186.3724
302.84	166.0734
303.76	167.9171
303.91	167.9380
304.40	164.5781
304.40	164.5781
304.84	173.2146
306.84	175.2253
308.46	163.9967
311.98	147.2266
316.51	159.3239
318.01	168.7679
319.02	182.7904
319.41	190.9491
320.08	170.2110
323.87	210.8084
323.87	210.8084
323.87	210.8084
323.87	210.8084
325.23	205.8086
328.77	173.7424
333.44	149.8125
334.20	147.5588
334.20	147.5588
334.30	147.5717
338.28	152.4388
338.28	152.4388
338.28	152.4388
338.28	152.4388
338.32	152.4441
338.32	152.4441
338.32	152.4441
340.50	139.8157
340.57	139.8230
344.27	161.1162
345.85	133.5415
350.59	0.0000
351.07	136.1512
351.92	136.2399
351.92	136.2399
351.92	136.2399
355.39	0.0000
356.01	178.6423
364.48	110.5604
366.43	135.0243
367.43	148.6349
367.94	0.0000
369.80	147.0895
374.96	148.5474
383.85	133.0878
387.95	157.2450
388.63	149.0867
391.69	145.7411
391.69	145.7411
392.90	138.5257
398.62	144.6026
400.65	119.9013
401.10	131.0103
401.81	127.3809
402.60	141.3037
404.84	136.1537
410.95	130.7754
411.60	138.2648
413.65	114.6353
414.70	111.7365
415.30	104.3284

415.76	106.8456
417.63	0.0000
418.52	143.7593
423.70	121.7719
427.08	122.0416
427.89	123.0464
432.53	100.8072
433.93	121.6422
439.47	107.8822
439.56	105.9946
439.89	102.2305
443.98	107.2428
444.90	117.7504
445.03	117.7618
445.03	117.7618
445.03	117.7618
453.90	107.9135
463.38	115.2722
468.07	89.3987
473.00	133.3401
475.06	104.4833
475.35	98.6958
476.78	106.5273
477.59	102.7037
477.96	98.8499
482.03	114.6330
484.57	113.8329
487.03	102.3067
490.36	0.0000
492.35	116.3108
497.08	97.0302
507.63	0.0000
510.53	0.0000
510.84	104.7141
511.00	104.7238
511.85	104.7732
511.85	104.7732
513.99	110.8379
513.99	110.8379
520.41	112.2310
520.65	112.2482
527.90	92.7531
528.96	0.0000
529.64	99.8322
529.87	0.0000
531.02	100.9075
537.32	93.2356
543.00	87.4885
546.56	0.0000
549.76	85.7912
552.65	79.8583
555.20	103.2482
563.23	90.4721
563.90	91.5189
568.70	83.5941
569.32	84.6414
569.50	84.6490
569.67	92.8162
573.80	96.0826
574.00	96.0912
574.64	80.7841
578.91	70.5091
579.30	0.0000
583.14	80.1114
585.48	59.2295
591.81	79.4344
592.07	79.4438
593.00	76.3848
595.88	80.6303
600.56	96.3632
602.52	0.0000
602.71	105.1092
602.71	105.1092
603.60	112.9039
604.41	112.9504
604.70	112.9670
609.31	106.1462

609.31	106.1462
609.31	106.1462
609.31	106.1462
610.33	103.2839
612.46	93.3871
614.37	96.8130
618.01	79.4280
621.84	76.4352
621.84	76.4352
631.29	77.8369
633.02	84.2188
633.10	83.1684
634.78	83.2359
635.90	87.4960
636.97	87.5416
645.85	72.0217
646.12	67.7949
656.30	79.8248
657.75	89.4653
657.90	0.0000
661.65	93.8948
661.65	93.8948
664.57	0.0000
666.33	88.7498
666.33	88.7498
675.00	91.2489
677.61	93.5075
685.20	86.2793
692.80	77.9150
695.00	113.7383
696.49	106.2245
696.49	106.2245
697.00	105.1642
697.49	93.2594
698.33	92.2087
698.50	91.1316
699.00	86.8115
702.63	103.2539
706.10	99.0564
706.58	0.0000
706.67	95.8149
709.31	87.2046
711.68	85.1125
713.82	89.5599
717.42	87.5122
720.50	97.4877
721.93	0.0000
722.20	106.9853
722.78	107.0121
722.78	107.0121
722.89	107.0181
722.95	103.5122
723.30	96.5078
724.18	86.0132
727.18	93.1537
733.00	81.0525
735.90	91.5158
739.58	102.7007
742.81	68.5618
744.21	78.5598
747.13	87.5177
751.79	85.2469
752.31	85.2656
753.82	87.0970
755.35	78.2590
756.15	83.4000
756.87	83.4251
763.93	87.4607
765.79	80.3826
766.42	94.6987
766.84	100.5222
776.49	82.9767
778.00	97.6148
778.57	88.6580
778.89	88.6701
783.80	97.8431
785.46	80.1282
792.07	72.2148

795.84	75.0364
796.30	66.3097
798.80	78.4422
801.93	75.0873
805.60	77.1412
810.29	71.8291
810.76	75.4802
815.85	60.1396
817.79	54.7134
818.51	56.5523
819.60	65.7018
826.30	54.8936
828.27	0.0000
831.60	74.2586
831.96	76.1022
834.83	72.5137
836.80	0.0000
846.75	58.0904
848.13	61.8114
856.28	0.0000
856.80	67.8745
860.37	65.8033
867.32	56.9135
867.82	56.7948
871.10	57.6906
873.19	53.0785
874.81	58.7010
875.33	0.0000
876.40	71.7871
879.36	58.7995
880.27	64.4213
880.51	58.8241
881.50	64.4500
883.24	67.2943
884.67	72.9403
889.25	69.3154
896.60	54.4727
898.02	53.5614
899.00	56.4009
903.28	60.0178
911.07	62.3084
911.07	62.3084
911.07	62.3084
919.63	61.5516
920.93	72.0015
925.00	61.6675
925.24	54.0818
926.50	56.9546
935.52	52.3722
937.48	67.6545
944.10	58.2598
946.00	58.2970
949.00	60.2714
962.29	38.4414
964.01	60.9011
966.15	58.7006
968.20	58.7408
969.11	58.7602
969.11	58.7602
969.11	58.7602
977.42	47.3324
980.50	50.2823
983.50	36.7819
989.30	49.4610
996.32	42.1230
1001.03	53.5471
1001.68	53.5592
1004.76	47.1144
1021.30	0.0000
1024.50	0.0000
1034.80	59.0596
1036.00	56.1289
1037.82	44.3364
1038.57	50.2604
1038.76	0.0000
1045.16	42.4667
1046.59	58.2942
1048.07	83.0320

1050.47	57.3770
1050.47	57.3770
1062.04	59.5723
1063.62	56.6215
1076.63	54.8550
1077.35	56.8636
1078.86	53.8945
1085.78	62.0121
1099.22	54.2320
1112.02	64.5250
1112.84	70.5947
1115.52	75.6958
1120.29	50.5371
1120.29	50.5371
1120.29	50.5371
1120.29	50.5371
1120.51	64.0168
1121.28	65.7173
1124.00	0.0000
1129.67	57.4359
1131.51	0.0000
1147.95	0.0000
1167.94	69.7000
1173.22	56.4609
1175.09	68.8189
1177.93	57.5668
1189.05	80.4375
1204.90	68.3687
1205.75	0.0000
1213.00	74.7562
1221.42	79.0949
1230.97	70.9551
1235.34	87.7570
1236.41	0.0000
1238.25	67.9612
1246.25	55.5387
1260.41	0.0000
1271.85	46.4277
1274.45	49.6300
1274.54	51.7419
1291.56	57.2827
1298.22	0.0000
1312.09	35.1962
1325.50	29.9688
1325.50	29.9688
1332.49	35.3832
1333.61	30.0316
1360.21	24.8373
1362.66	0.0000
1365.15	29.1938
1368.21	18.3954
1368.53	0.0000
1376.25	16.2642
1384.27	18.1079
1394.10	20.6940
1395.20	23.9680
1407.95	21.8584
1434.06	26.3988
1436.60	19.2611
1457.56	0.0000
1460.81	20.2965
1489.15	24.1486
1509.49	9.5989
1596.49	24.7495
1620.62	13.3979
1678.03	0.0000
1691.02	14.5740
1691.02	14.5740
1706.46	0.0000
1750.46	0.0000
1764.49	15.7845
1764.49	15.7845
1764.49	15.7845
1764.49	15.7845
1770.23	15.2384
1771.40	45.4441
1791.20	0.0000
1808.65	12.9397

1836.01

10.0077

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395001

Total Uranium Activity	1.1807E+02	ug/g
Total Uranium Counting Unc.	2.2126E+01	ug/g
Total Uranium Tpu	1.1289E-05	ug/g
Total Uranium Mda	3.7603E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 944966                          SAMPLE ID   : G245395001
*  ANALYST       : MXR1                             DETECTOR    : GAM16
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 07:10:18.40          SAMPLE ALQT  : 144.700 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.424E+01
GROSS GAMMA ERROR (pCi/GRAM )   : 1.721E+00
GROSS GAMMA MDA (pCi/GRAM )     : 5.197E+00
GROSS GAMMA DLC (pCi/GRAM )     : 2.541E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 09:21:02.12

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395002.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:20:31.
Sample ID          : G245395002      Sample quantity   : 1.45270E+02 GRAM
Detector name      : GAM18           Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00 Elapsed real time: 0 02:00:01.98 0.0%
Energy tolerance    : 1.50000 keV    Analyst Initials : MXR1
Abundance limit     : 75.00000       Sensitivity      : 5.00000
Batch ID           : 944966          Detector SN#     :
Matrix Spike ID    :                 LCS ID           : 1032-A
*****
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.44*	394	603	1.11	126.01	122	8	5.48E-02	12.2	
2	3	74.96	416	571	0.93	149.05	142	16	5.78E-02	10.4	1.94E+00
3	3	77.26*	627	553	0.97	153.63	142	16	8.71E-02	7.2	
4	0	87.13	262	679	1.24	173.37	171	7	3.64E-02	17.5	
5	0	93.01*	1303	1217	1.18	185.12	180	11	1.81E-01	6.0	
6	0	98.97	216	585	1.06	197.04	193	9	3.00E-02	21.4	
7	0	143.53	63	422	1.14	286.14	284	7	8.82E-03	55.3	
8	0	185.98*	523	491	1.40	370.99	366	11	7.27E-02	9.6	
9	0	209.36	193	414	1.67	417.73	413	10	2.68E-02	21.1	
10	3	238.72*	1701	306	1.21	476.44	472	17	2.36E-01	3.0	9.84E-01
11	3	241.69*	420	365	1.62	482.38	472	17	5.83E-02	10.9	
12	0	270.48	112	338	1.15	539.94	535	10	1.55E-02	32.4	
13	0	295.27*	522	363	1.15	589.50	582	12	7.24E-02	8.6	
14	0	300.47	143	272	1.54	599.89	595	10	1.98E-02	23.4	
15	0	338.28*	281	440	1.31	675.49	667	16	3.90E-02	17.9	
16	0	351.88*	962	216	1.33	702.70	696	11	1.34E-01	4.5	
17	0	463.51	93	210	1.09	925.88	921	12	1.29E-02	33.0	
18	0	510.70*	175	277	1.70	1020.24	1012	18	2.44E-02	26.0	
19	0	583.12*	604	215	1.63	1165.03	1156	18	8.39E-02	7.1	
20	0	609.27*	713	187	1.44	1217.33	1212	13	9.91E-02	5.5	
21	0	727.62	174	202	2.14	1453.96	1443	22	2.41E-02	22.3	
22	0	795.50	89	128	2.16	1589.69	1584	14	1.23E-02	29.5	
23	0	838.70	139	143	6.16	1676.07	1665	24	1.93E-02	24.3	
24	0	860.54*	45	115	1.53	1719.75	1715	11	6.21E-03	50.3	
25	0	910.97*	471	84	1.92	1820.58	1812	15	6.55E-02	6.2	
26	0	968.82*	265	91	1.66	1936.27	1931	13	3.68E-02	9.9	
27	0	1000.80*	186	91	1.91	2000.21	1992	18	2.58E-02	14.3	
28	0	1119.90*	188	146	1.10	2238.36	2227	18	2.62E-02	16.8	
29	0	1377.69	69	47	1.45	2753.89	2746	16	9.65E-03	25.3	
30	0	1460.36*	2711	82	2.35	2919.20	2908	20	3.77E-01	2.1	
31	0	1763.82*	151	23	1.80	3526.09	3516	18	2.10E-02	11.4	

Flag: "*" = Peak area was modified by background subtraction


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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395002.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:20:31
Sample ID         : G245395002 Sample quantity : 145.27 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA18 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00 Elapsed real time: 0 02:00:01.98 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type   : Empirical Efficiencies at : Peak Energy
Abundance limit   : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.468E+01	3.005E+00	3.531E-01	2.679E-02	98.215
CD-109	+	88.03	*	2.888E+00	1.047E+00	1.514E+00	1.399E-01	1.908
SN-126	+	64.28		3.417E+00	9.718E-01	8.170E-01	1.208E-01	4.183
	+	86.94		1.182E+00	6.424E-01	5.560E-01	2.306E-01	2.126
	+	87.57	*	2.844E-01	1.032E-01	1.391E-01	1.282E-02	2.044
TL-208		277.35		3.327E-01	3.046E-01	5.150E-01	5.408E-02	0.646
	+	510.84		4.866E-01	2.583E-01	1.589E-01	1.689E-02	3.063
	+	583.14	*	4.713E-01	7.661E-02	4.268E-02	3.346E-03	11.042
	+	860.37		3.181E-01	3.221E-01	3.425E-01	3.832E-02	0.929
BI-211		72.87		3.834E+00	3.119E+00	5.309E+00	4.384E-01	0.722
	+	351.07	*	3.525E+00	3.882E-01	2.503E-01	1.606E-02	14.085
PB-212	+	74.81		2.036E+00	4.946E-01	5.552E-01	6.959E-02	3.668
	+	77.11		1.713E+00	2.876E-01	3.106E-01	2.633E-02	5.517
	+	87.30		1.315E+00	4.949E-01	6.459E-01	8.772E-02	2.037
	+	238.63	*	1.451E+00	1.353E-01	7.259E-02	5.186E-03	19.988
	+	300.09		1.807E+00	8.592E-01	9.180E-01	7.537E-02	1.969
PO-212	+	74.81		2.036E+00	4.946E-01	5.552E-01	6.959E-02	3.668
	+	77.11		1.713E+00	2.876E-01	3.106E-01	2.633E-02	5.517
	+	87.30		1.315E+00	4.949E-01	6.459E-01	8.772E-02	2.037
	+	115.19		-3.598E+00	3.407E+00	5.276E+00	3.324E-01	-0.682
	+	238.63	*	1.451E+00	1.353E-01	7.259E-02	5.186E-03	19.988
	+	300.09		1.807E+00	8.592E-01	9.180E-01	7.537E-02	1.969
BI-214	+	609.31	*	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049
	+	1120.29		1.381E+00	4.817E-01	3.638E-01	3.483E-02	3.796
	+	1764.49		1.461E+00	3.458E-01	2.237E-01	1.360E-02	6.530
PB-214	+	74.81		3.509E+00	8.284E-01	9.566E-01	1.068E-01	3.668
	+	77.11		2.937E+00	5.415E-01	5.325E-01	6.068E-02	5.517
	+	87.30		2.253E+00	8.356E-01	1.106E+00	1.327E-01	2.037
	+	241.98		2.147E+00	4.997E-01	4.363E-01	3.450E-02	4.921
	+	295.21		1.162E+00	2.232E-01	1.757E-01	1.490E-02	6.617
	+	351.92	*	1.226E+00	1.494E-01	8.856E-02	7.326E-03	13.847
PO-214	+	74.81		3.509E+00	8.284E-01	9.566E-01	1.068E-01	3.668
	+	77.11		2.937E+00	5.415E-01	5.325E-01	6.068E-02	5.517
	+	87.30		2.253E+00	8.356E-01	1.106E+00	1.327E-01	2.037

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	241.98		2.147E+00	4.997E-01	4.363E-01	3.450E-02	4.921
	+	295.21		1.162E+00	2.232E-01	1.757E-01	1.490E-02	6.617
	+	351.92	*	1.226E+00	1.494E-01	8.856E-02	7.326E-03	13.847
	+	74.81		2.036E+00	4.946E-01	5.552E-01	6.959E-02	3.668
	+	77.11		1.713E+00	2.876E-01	3.106E-01	2.633E-02	5.517
	+	87.30		1.315E+00	4.949E-01	6.459E-01	8.772E-02	2.037
PO-218	+	238.63	*	1.451E+00	1.353E-01	7.259E-02	5.186E-03	19.988
	+	300.09		1.807E+00	8.592E-01	9.180E-01	7.537E-02	1.969
	+	74.81		3.509E+00	8.284E-01	9.566E-01	1.068E-01	3.668
	+	77.11		2.937E+00	5.415E-01	5.325E-01	6.068E-02	5.517
	+	87.30		2.253E+00	8.356E-01	1.106E+00	1.327E-01	2.037
	+	241.98		2.147E+00	4.997E-01	4.363E-01	3.450E-02	4.921
RA-224	+	295.21		1.162E+00	2.232E-01	1.757E-01	1.490E-02	6.617
	+	351.92	*	1.226E+00	1.494E-01	8.856E-02	7.326E-03	13.847
	+	240.98	*	4.071E+00	9.195E-01	8.251E-01	4.596E-02	4.935
RA-226	+	609.31	*	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049
	+	1120.29		1.381E+00	4.817E-01	3.638E-01	3.483E-02	3.796
	+	1764.49		1.461E+00	3.458E-01	2.237E-01	1.360E-02	6.530
AC-228	+	338.32		1.142E+00	6.196E-01	2.854E-01	1.163E-01	4.001
	+	911.07	*	1.582E+00	2.874E-01	1.409E-01	1.866E-02	11.230
	+	969.11		1.564E+00	4.869E-01	3.477E-01	8.326E-02	4.498
RA-228	+	338.32		1.142E+00	6.196E-01	2.854E-01	1.163E-01	4.001
	+	911.07	*	1.582E+00	2.874E-01	1.409E-01	1.866E-02	11.230
	+	969.11		1.564E+00	4.869E-01	3.477E-01	8.326E-02	4.498
TH-228	+	74.81		2.065E+00	4.634E-01	5.629E-01	4.743E-02	3.668
	+	77.11		1.737E+00	2.916E-01	3.149E-01	2.669E-02	5.517
	+	87.30		1.334E+00	4.837E-01	6.548E-01	6.019E-02	2.037
TH-230	+	238.63	*	1.471E+00	1.372E-01	7.359E-02	5.258E-03	19.988
	+	300.09		1.832E+00	1.379E+00	9.307E-01	5.485E-01	1.969
	+	609.31	*	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049
	+	1120.29		1.381E+00	4.817E-01	3.637E-01	3.483E-02	3.796
	+	1764.49		1.461E+00	3.458E-01	2.237E-01	1.360E-02	6.530
	+	338.32		1.142E+00	4.143E-01	2.854E-01	1.651E-02	4.001
TH-232	+	911.07	*	1.582E+00	2.874E-01	1.409E-01	1.866E-02	11.230
	+	969.11		1.564E+00	4.869E-01	3.477E-01	8.326E-02	4.498
	+	63.29	*	8.632E+00	2.593E+00	2.143E+00	3.778E-01	4.028
TH-234	+	92.38		8.939E+00	1.936E+00	8.394E-01	1.513E-01	10.649
	+	609.31	*	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049
	+	1120.29		1.381E+00	4.817E-01	3.637E-01	3.483E-02	3.796
U-234	+	1764.49		1.461E+00	3.458E-01	2.237E-01	1.360E-02	6.530
	+	89.95		-2.411E+00	1.844E+00	1.796E+00	5.556E-01	-1.343
	+	93.35		1.075E+01	3.273E+00	9.991E-01	2.792E-01	10.757
U-235	+	105.00		9.329E-01	1.012E+00	1.630E+00	4.796E-01	0.572
	+	143.76	*	1.899E-01	2.123E-01	2.860E-01	4.631E-02	0.664
	+	163.35		2.516E-01	3.756E-01	6.443E-01	1.148E-01	0.390
	+	185.71		3.274E-01	6.500E-02	5.675E-02	3.019E-03	5.769
	+	205.31		1.911E-01	4.558E-01	6.751E-01	1.206E-01	0.283
	+	86.50	*	8.351E-01	3.485E-01	3.866E-01	8.723E-02	2.160
NP-237	+	95.87		9.424E-01	1.250E+00	1.483E+00	3.624E-01	0.635

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-238	+	63.29	*	8.632E+00	2.593E+00	2.143E+00	3.778E-01	4.028
	+	92.38		8.939E+00	1.315E+00	8.394E-01	7.135E-02	10.649
AM-243	+	74.67	*	3.302E-01	7.401E-02	9.036E-02	7.541E-03	3.654
	+	86.72		3.132E+01	1.136E+01	1.478E+01	1.351E+00	2.120
		117.66		-3.585E+00	3.379E+00	5.204E+00	3.201E-01	-0.689
	+	142.18		1.595E+01	1.767E+01	2.471E+01	1.361E+00	0.646
ANH-511	+	511.00	*	1.051E-01	5.510E-02	3.432E-02	2.267E-03	3.062

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.498E-02	2.420E-01	4.005E-01	2.902E-02	0.037
NA-22		1274.54	*	-2.192E-02	3.487E-02	5.456E-02	3.713E-03	-0.402
NA-24		1368.53	*	-2.820E-02	3.487E-02	Half-Life too short		
AL-26		1129.67		-3.467E-02	1.378E+00	2.243E+00	1.498E-01	-0.015
		1808.65	*	-7.983E-04	1.852E-02	3.016E-02	1.761E-03	-0.026
TI-44		67.85		-6.062E-02	4.927E-02	7.397E-02	5.949E-03	-0.820
	+	78.38	*	3.162E-01	5.307E-02	7.372E-02	6.303E-03	4.289
SC-46		889.25	*	-2.456E-03	2.865E-02	4.652E-02	5.189E-03	-0.053
	+	1120.51		2.338E-01	8.008E-02	9.637E-02	6.658E-03	2.426
V-48		944.10		-4.550E-01	6.256E-01	9.562E-01	1.012E-01	-0.476
		983.50	*	8.725E-03	5.281E-02	8.650E-02	8.556E-03	0.101
		1312.09		2.336E-02	6.031E-02	1.017E-01	7.409E-03	0.230
CR-51		320.08	*	1.045E-01	2.790E-01	4.576E-01	2.946E-02	0.228
MN-52		744.21		-4.027E-02	1.426E-01	2.323E-01	2.049E-02	-0.173
		848.13		1.075E+00	5.118E+00	7.356E+00	7.695E-01	0.146
		935.52		2.605E-01	1.789E-01	3.142E-01	3.370E-02	0.829
		1246.25		2.877E+00	4.861E+00	8.299E+00	5.336E-01	0.347
		1333.61		-2.760E+00	3.483E+00	5.300E+00	4.004E-01	-0.521
		1434.06	*	5.557E-02	1.453E-01	2.453E-01	1.808E-02	0.227
MN-54		834.83	*	5.460E-03	3.429E-02	4.906E-02	5.025E-03	0.111
CO-56		846.75	*	-5.482E-03	3.555E-02	4.933E-02	5.149E-03	-0.111
		977.42		-3.942E-01	2.469E+00	3.641E+00	3.642E-01	-0.108
		1037.82		-6.401E-02	2.366E-01	3.888E-01	3.602E-02	-0.165
		1175.09		-6.306E-01	1.765E+00	2.854E+00	1.584E-01	-0.221
		1238.25		1.095E-01	7.458E-02	1.306E-01	8.703E-03	0.838
		1360.21		-1.076E+00	7.869E-01	1.108E+00	8.330E-02	-0.971
		1771.40		3.776E-03	1.584E-01	2.357E-01	1.424E-02	0.016
CO-57		122.06	*	3.093E-02	2.244E-02	3.770E-02	2.233E-03	0.820
		136.48		-3.842E-02	1.805E-01	2.851E-01	1.866E-02	-0.135
CO-58		810.76	*	7.042E-03	2.899E-02	4.854E-02	4.791E-03	0.145
FE-59	+	142.65		2.401E+00	2.659E+00	3.946E+00	2.171E-01	0.608
		192.34		5.675E-01	7.627E-01	1.264E+00	1.466E-01	0.449
		1099.22	*	-8.217E-02	7.173E-02	1.099E-01	9.043E-03	-0.748
		1291.56		-4.881E-02	1.015E-01	1.605E-01	1.349E-02	-0.304
CO-60		1173.22		-1.473E-02	3.489E-02	5.613E-02	3.102E-03	-0.262
		1332.49	*	4.089E-03	3.073E-02	5.081E-02	3.839E-03	0.080
ZN-65		1115.52	*	5.260E-02	8.723E-02	1.303E-01	9.178E-03	0.404

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68		1077.35	*	-5.800E-01	1.010E+00	1.621E+00	1.287E-01	-0.358
AS-73		53.44	*	4.449E-01	1.023E+00	1.745E+00	1.383E-01	0.255
AS-74		595.88	*	1.530E-02	6.841E-02	1.121E-01	8.057E-03	0.136
		634.78		-3.605E-02	2.603E-01	4.149E-01	3.089E-02	-0.087
SE-75		66.05		-6.966E+00	5.377E+00	7.502E+00	7.430E-01	-0.929
		96.73		3.519E-01	1.000E+00	1.173E+00	1.547E-01	0.300
		121.11		3.114E-02	1.232E-01	1.996E-01	1.863E-02	0.156
		136.00		-2.690E-03	3.364E-02	5.342E-02	3.042E-03	-0.050
		198.60		-5.616E-01	1.403E+00	2.308E+00	1.566E-01	-0.243
		264.65	*	1.648E-02	3.588E-02	5.561E-02	3.181E-03	0.296
		279.53		-3.090E-02	8.932E-02	1.433E-01	8.852E-03	-0.216
		303.91		2.734E-01	1.754E+00	2.505E+00	2.383E-01	0.109
		400.65		7.153E-02	1.901E-01	3.235E-01	2.947E-02	0.221
BR-77	+	87.88		4.265E+02	1.547E+02	2.187E+02	2.021E+01	1.950
		200.40		9.195E+00	8.700E+01	1.457E+02	7.847E+00	0.063
	+	239.00		1.590E+02	1.300E+01	2.017E+01	1.122E+00	7.882
		249.79		-1.523E+01	3.487E+01	5.616E+01	3.148E+00	-0.271
		281.68		-1.047E+01	5.094E+01	8.215E+01	4.688E+00	-0.127
		297.23		1.706E+02	5.066E+01	6.556E+01	3.764E+00	2.602
		303.76		2.543E+01	1.031E+02	1.482E+02	8.524E+00	0.172
		439.47		1.575E+00	6.870E+01	1.142E+02	6.964E+00	0.014
		484.57		7.933E+01	1.144E+02	1.956E+02	1.256E+01	0.405
		520.65	*	4.973E+00	5.365E+00	9.231E+00	6.158E-01	0.539
		574.64		6.417E+01	1.194E+02	1.826E+02	1.285E+01	0.352
		578.91		2.793E+01	5.281E+01	7.710E+01	5.451E+00	0.362
		585.48		9.494E+02	1.465E+02	2.534E+02	1.803E+01	3.746
		755.35		8.291E+01	8.773E+01	1.530E+02	1.375E+01	0.542
		817.79		-3.262E+01	6.498E+01	1.030E+02	1.027E+01	-0.317
SR-82		698.33		-6.552E+00	2.345E+01	3.850E+01	3.135E+00	-0.170
		776.49	*	-1.987E-01	2.941E-01	4.659E-01	4.339E-02	-0.427
		1395.20		-3.758E+00	7.943E+00	1.230E+01	9.163E-01	-0.306
RB-83		520.41	*	4.202E-02	5.109E-02	8.748E-02	5.834E-03	0.480
		529.64		6.156E-02	8.024E-02	1.367E-01	9.205E-03	0.450
		552.65		2.439E-02	1.383E-01	2.278E-01	1.570E-02	0.107
RB-84		881.50	*	-1.584E-02	5.002E-02	7.985E-02	8.800E-03	-0.198
KR-85		513.99	*	1.724E+01	6.433E+00	1.064E+01	7.048E-01	1.620
SR-85		513.99	*	8.718E-02	3.253E-02	5.380E-02	3.564E-03	1.620
RB-86		1076.63	*	1.180E-02	6.128E-01	1.024E+00	8.148E-02	0.012
Y-88		898.02		-1.422E-02	3.227E-02	5.101E-02	5.783E-03	-0.279
		1836.01	*	-1.533E-02	2.216E-02	3.211E-02	1.829E-03	-0.477
ZR-88		392.90	*	-9.251E-03	2.179E-02	3.573E-02	2.055E-03	-0.259
Y-91		1204.90	*	-2.044E+01	1.597E+01	2.429E+01	1.436E+00	-0.842
NB-94		702.63	*	-6.013E-03	2.458E-02	4.044E-02	3.318E-03	-0.149
		871.10		-1.925E-02	2.629E-02	4.067E-02	4.410E-03	-0.473
NB-95		765.79	*	7.270E-02	3.796E-02	6.753E-02	6.178E-03	1.076
NB-95M		235.69	*	3.761E-02	1.095E-01	1.612E-01	1.183E-02	0.233
ZR-95		724.18		9.539E-02	8.490E-02	1.315E-01	1.219E-02	0.726
		756.15	*	3.711E-02	5.394E-02	9.288E-02	9.139E-03	0.400
NB-97		657.90	*	-1.628E-02	5.394E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1024.50			-2.605E+00	5.394E-02	Half-Life	too short	
	254.15			7.273E-01	5.394E-02	Half-Life	too short	
	355.39			7.967E-01	5.394E-02	Half-Life	too short	
	507.63	*		7.943E-01	5.394E-02	Half-Life	too short	
	602.52			9.599E-01	5.394E-02	Half-Life	too short	
	1021.30			1.255E+00	5.394E-02	Half-Life	too short	
	1147.95			-5.474E-01	5.394E-02	Half-Life	too short	
	1362.66			4.285E-01	5.394E-02	Half-Life	too short	
MO-99	1750.46			2.670E-01	5.394E-02	Half-Life	too short	
	140.51			2.803E+00	1.887E+01	2.652E+01	7.132E+00	0.106
	181.06			-2.463E+00	1.086E+01	1.589E+01	2.698E+00	-0.155
	366.43			9.550E+00	4.354E+01	7.411E+01	4.281E+00	0.129
	739.58	*		2.009E+00	5.939E+00	1.007E+01	1.536E+00	0.199
TC-99M	778.00			-3.658E+00	1.931E+01	3.157E+01	2.948E+00	-0.116
	140.51	*		1.514E+08	1.931E+01	Half-Life	too short	
RH-101	127.23			-1.975E-02	2.904E-02	4.530E-02	2.617E-03	-0.436
	198.01	*		-1.036E-02	2.584E-02	4.253E-02	2.286E-03	-0.244
	325.23			-2.785E-01	1.845E-01	2.743E-01	1.585E-02	-1.015
RH-102	418.52			-5.366E-02	2.121E-01	3.442E-01	2.046E-02	-0.156
	475.06	*		1.191E-03	2.246E-02	3.717E-02	2.361E-03	0.032
	631.29			9.247E-04	4.225E-02	6.811E-02	5.055E-03	0.014
	697.49			-3.446E-02	5.530E-02	8.882E-02	7.221E-03	-0.388
	766.84			2.291E-01	9.761E-02	1.754E-01	1.608E-02	1.306
	1046.59			1.659E-02	9.008E-02	1.524E-01	1.315E-02	0.109
RU-103	1112.84			1.155E-01	2.216E-01	3.293E-01	2.337E-02	0.351
	497.08	*		-1.606E-02	2.869E-02	4.545E-02	5.902E-03	-0.353
RH-106	610.33	+		1.102E+01	2.146E+00	2.151E+00	3.449E-01	5.122
	511.85	+		5.237E-01	2.745E-01	3.327E-01	2.199E-02	1.574
RU-106	621.84	*		5.450E-02	2.332E-01	3.815E-01	4.800E-02	0.143
	1050.47			-5.495E-01	1.794E+00	2.939E+00	2.511E-01	-0.187
	511.85	+		5.237E-01	2.745E-01	3.327E-01	2.199E-02	1.574
AG-108M	621.84	*		5.450E-02	2.331E-01	3.815E-01	2.808E-02	0.143
	1050.47			-5.495E-01	1.794E+00	2.939E+00	2.511E-01	-0.187
	433.93	*		1.164E-02	2.369E-02	4.039E-02	2.639E-03	0.288
AG-110M	614.37			3.484E-03	3.390E-02	4.758E-02	3.666E-03	0.073
	722.95			-1.998E-02	3.671E-02	5.014E-02	4.434E-03	-0.398
	657.75	*		-2.186E-02	2.748E-02	4.406E-02	3.475E-03	-0.496
IN-111	677.61			1.191E-02	2.306E-01	3.873E-01	3.142E-02	0.031
	706.67			3.463E-02	1.569E-01	2.649E-01	2.255E-02	0.131
	763.93			-3.645E-02	1.459E-01	2.387E-01	2.232E-02	-0.153
	884.67			-1.161E-02	3.537E-02	5.635E-02	6.364E-03	-0.206
	937.48			-4.612E-02	9.254E-02	1.419E-01	1.553E-02	-0.325
	1384.27			2.503E-02	1.318E-01	1.879E-01	1.457E-02	0.133
IN-113M	171.28			-3.360E-01	5.685E-01	9.383E-01	4.937E-02	-0.358
	245.39	*		1.426E-01	6.655E-01	9.716E-01	5.430E-02	0.147
IN-113	391.69	*		1.425E-02	3.120E-02	5.346E-02	3.279E-03	0.267
SN-113	391.69	*		1.425E-02	3.120E-02	5.346E-02	3.279E-03	0.267
IN-114M	190.27	*		4.084E-02	1.577E-01	2.355E-01	1.257E-02	0.173
CD-115	260.90			1.236E+01	6.585E+01	1.087E+02	6.134E+00	0.114

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		492.35		7.272E+00	1.686E+01	2.845E+01	1.842E+00	0.256
		527.90	*	1.285E+00	5.513E+00	9.136E+00	6.141E-01	0.141
SN-117M		156.02		-6.080E-02	1.686E+00	2.856E+00	1.525E-01	-0.021
		158.56	*	2.578E-02	4.085E-02	7.058E-02	3.751E-03	0.365
SB-122		563.90	*	1.465E+00	1.186E+00	2.050E+00	1.429E-01	0.715
		692.80		9.963E+00	2.293E+01	3.925E+01	3.164E+00	0.254
I-123		159.00	*	-1.393E-01	2.293E+01	Half-Life too short		
		528.96		5.543E+01	2.293E+01	Half-Life too short		
TE-123M		159.00	*	-3.597E-03	2.249E-02	3.791E-02	2.045E-03	-0.095
I-124		602.71	*	2.682E-01	4.861E-01	7.076E-01	5.116E-02	0.379
		722.78		-1.921E+00	3.073E+00	4.165E+00	3.539E-01	-0.461
		1325.50		-8.503E+00	2.188E+01	3.459E+01	2.581E+00	-0.246
	+	1376.25		5.574E+01	2.847E+01	3.887E+01	2.911E+00	1.434
		1509.49		1.009E+01	1.004E+01	1.800E+01	1.290E+00	0.561
		1691.02		5.538E-01	2.206E+00	3.761E+00	2.426E-01	0.147
SB-124		602.71		1.908E-02	3.459E-02	5.035E-02	3.641E-03	0.379
		645.85		-4.340E-02	3.814E-01	6.080E-01	4.929E-02	-0.071
		709.31		5.561E-01	2.016E+00	3.416E+00	2.836E-01	0.163
		713.82		-9.533E-01	1.222E+00	1.933E+00	2.292E-01	-0.493
		722.78		-1.981E-01	3.170E-01	4.296E-01	3.732E-02	-0.461
	+	968.20		1.586E+01	3.543E+00	5.421E+00	5.513E-01	2.925
		1045.16		2.130E-01	1.917E+00	3.230E+00	2.797E-01	0.066
		1325.50		-9.367E-01	2.410E+00	3.810E+00	2.843E-01	-0.246
		1368.21		-2.531E-01	1.514E+00	2.206E+00	2.822E-01	-0.115
		1436.60		6.560E-01	2.777E+00	4.514E+00	3.323E-01	0.145
		1691.02	*	1.347E-02	5.368E-02	9.151E-02	6.313E-03	0.147
SB-125		427.89	*	1.243E-03	6.620E-02	1.103E-01	6.891E-03	0.011
	+	463.38		5.098E-01	3.387E-01	4.108E-01	2.945E-02	1.241
		600.56		5.666E-02	1.434E-01	2.369E-01	1.887E-02	0.239
		635.90		6.010E-02	2.055E-01	3.368E-01	2.778E-02	0.178
TE-125M		109.28	*	-1.662E+01	8.845E+00	1.317E+01	1.157E+00	-1.262
I-126		388.63		7.438E-02	1.381E-01	2.375E-01	1.365E-02	0.313
		666.33	*	-9.326E-02	1.321E-01	2.127E-01	1.635E-02	-0.439
		753.82		5.938E-01	1.045E+00	1.790E+00	1.604E-01	0.332
SB-126		223.80		-1.137E+00	2.967E+00	4.838E+00	2.659E-01	-0.235
		278.60		1.975E+00	1.860E+00	3.155E+00	1.798E-01	0.626
	+	296.50		1.075E+01	1.953E+00	2.662E+00	1.528E-01	4.040
		414.70		-5.463E-03	5.097E-02	8.458E-02	5.002E-03	-0.065
		415.30		1.932E+00	4.179E+00	7.133E+00	4.222E-01	0.271
		555.20		-1.510E+00	2.644E+00	4.142E+00	2.862E-01	-0.364
		573.80		4.104E-02	7.881E-01	1.209E+00	8.506E-02	0.034
		593.00		2.071E-01	6.564E-01	1.083E+00	7.760E-02	0.191
		656.30		-3.930E+00	2.438E+00	3.691E+00	2.800E-01	-1.065
		666.33		-3.885E-02	5.502E-02	8.860E-02	6.811E-03	-0.439
		675.00		-2.603E-01	1.387E+00	2.298E+00	1.794E-01	-0.113
		695.00		1.927E-02	5.200E-02	8.871E-02	7.180E-03	0.217
		697.00		-1.878E-02	1.820E-01	3.021E-01	2.454E-02	-0.062
		720.50	*	9.442E-05	1.153E-01	1.654E-01	1.400E-02	0.001
		856.80		-1.541E-01	4.130E-01	5.605E-01	5.944E-02	-0.275

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		989.30		-2.312E-01	9.271E-01	1.472E+00	1.440E-01	-0.157
		1034.80		-7.283E+00	6.661E+00	9.781E+00	8.684E-01	-0.745
		1213.00		2.182E+00	3.586E+00	6.122E+00	3.681E-01	0.356
		61.10		-4.572E+01	5.441E+01	7.835E+01	7.891E+00	-0.583
		252.40		5.241E-01	2.630E+00	4.337E+00	1.796E+00	0.121
		290.80		1.196E+00	1.496E+01	2.135E+01	1.845E+00	0.056
		411.60		1.183E+00	7.260E+00	1.221E+01	1.724E+00	0.097
		444.90		3.488E-01	5.601E+00	9.323E+00	9.870E-01	0.037
		473.00		2.171E-01	9.991E-01	1.668E+00	1.850E-01	0.130
		543.00		3.850E+00	1.014E+01	1.689E+01	2.210E+00	0.228
		603.60		9.908E-01	8.410E+00	1.183E+01	1.329E+00	0.084
		685.20	*	4.718E-02	8.183E-01	1.373E+00	1.442E-01	0.034
		698.50		-1.297E+00	8.621E+00	1.427E+01	2.182E+00	-0.091
		722.20		-7.784E+00	2.027E+01	2.808E+01	2.998E+00	-0.277
XE-127		783.80		5.051E+00	2.475E+00	4.391E+00	5.561E-01	1.150
		57.60		-4.425E-01	6.848E+00	1.145E+01	8.825E-01	-0.039
		145.22		1.253E-01	6.740E-01	9.579E-01	5.236E-02	0.131
		172.10		-4.425E-02	9.097E-02	1.507E-01	7.932E-03	-0.294
		202.84	*	-1.029E-02	3.601E-02	5.941E-02	3.207E-03	-0.173
I-131		374.96		-5.881E-02	1.372E-01	2.258E-01	1.302E-02	-0.260
		80.18		1.031E-01	4.355E+00	6.422E+00	5.593E-01	0.016
		284.30		-5.373E-01	1.091E+00	1.735E+00	1.103E-01	-0.310
		364.48	*	5.872E-03	7.419E-02	1.255E-01	8.086E-03	0.047
TE-132		636.97		-2.763E-01	1.071E+00	1.693E+00	1.354E-01	-0.163
		722.89		-3.158E+00	5.514E+00	7.511E+00	6.419E-01	-0.420
		49.72		-1.279E+01	1.917E+01	3.154E+01	3.105E+00	-0.406
		111.76		5.898E+01	2.231E+01	3.802E+01	3.377E+00	1.551
		116.30		-2.011E+01	1.925E+01	2.969E+01	2.574E+00	-0.677
BA-133		228.16	*	-1.900E-03	3.985E-01	6.587E-01	9.219E-02	-0.003
		53.15		2.410E+00	4.466E+00	7.641E+00	6.063E-01	0.315
		79.62		5.861E-01	1.379E+00	2.061E+00	3.139E-01	0.284
		81.00		-2.480E-02	1.057E-01	1.540E-01	2.454E-02	-0.161
		276.40		2.885E-01	3.131E-01	5.093E-01	6.579E-02	0.567
I-133		302.84		1.150E-01	1.237E-01	1.845E-01	2.147E-02	0.623
		356.01	*	1.692E-02	3.821E-02	5.482E-02	6.332E-03	0.309
		383.85		-2.088E-02	2.296E-01	3.794E-01	4.116E-02	-0.055
	+	510.53		3.747E-01	2.296E-01	Half-Life	too short	
		529.87	*	1.121E-03	2.296E-01	Half-Life	too short	
		706.58		2.467E-02	2.296E-01	Half-Life	too short	
		856.28		-1.193E-01	2.296E-01	Half-Life	too short	
		875.33		2.351E-02	2.296E-01	Half-Life	too short	
		1236.41		3.093E-01	2.296E-01	Half-Life	too short	
		1298.22		3.441E-02	2.296E-01	Half-Life	too short	
CS-134		475.35		-7.531E-02	1.472E+00	2.422E+00	1.539E-01	-0.031
		563.23		1.864E-01	2.922E-01	4.912E-01	3.470E-02	0.379
		569.32		-1.014E-01	1.585E-01	2.426E-01	1.734E-02	-0.418
		604.70		-1.659E-02	3.123E-02	4.161E-02	3.025E-03	-0.399
	+	795.84	*	9.697E-02	5.797E-02	7.168E-02	6.933E-03	1.353
		801.93		8.446E-03	3.317E-01	4.714E-01	4.599E-02	0.018

---- Non-Identified Nuclides ----

	Line Energy	Activity	Act error	MDA	MDA error	Act/MDA
Nuclide	Ided (keV) Key	(pCi/GRAM)		(pCi/GRAM)		
	1038.57	-9.923E-01	2.979E+00	4.874E+00	4.289E-01	-0.204
	1167.94	1.030E+00	1.910E+00	3.272E+00	1.855E-01	0.315
	1365.15	5.498E-01	9.723E-01	1.665E+00	1.324E-01	0.330
CS-135	268.24 *	1.252E-01	1.417E-01	2.124E-01	1.606E-02	0.589
I-135	288.45	1.628E+08	1.417E-01	Half-Life	too short	
	417.63	-1.433E+08	1.417E-01	Half-Life	too short	
	546.56	2.205E+08	1.417E-01	Half-Life	too short	
	836.80	8.123E+08	1.417E-01	Half-Life	too short	
	1038.76	-1.782E+07	1.417E-01	Half-Life	too short	
	1124.00	1.402E+09	1.417E-01	Half-Life	too short	
	1131.51	2.135E+07	1.417E-01	Half-Life	too short	
	1260.41 *	2.898E+07	1.417E-01	Half-Life	too short	
	1457.56	4.680E+10	1.417E-01	Half-Life	too short	
	1678.03	3.464E+07	1.417E-01	Half-Life	too short	
	1706.46	9.457E+07	1.417E-01	Half-Life	too short	
	1791.20	-1.324E+08	1.417E-01	Half-Life	too short	
CS-136	66.91	-6.378E-01	7.967E-01	1.137E+00	1.717E-01	-0.561
+	86.29	3.464E+00	1.299E+00	1.776E+00	2.341E-01	1.950
	153.22	2.516E-01	4.946E-01	8.525E-01	5.866E-02	0.295
	163.89	2.535E-01	7.912E-01	1.351E+00	9.229E-02	0.188
	176.55	1.452E-01	2.732E-01	4.676E-01	2.833E-02	0.311
	273.65	-6.905E-01	4.025E-01	5.134E-01	3.344E-02	-1.345
	340.57	2.721E-01	1.156E-01	1.820E-01	1.119E-02	1.495
	818.51	-1.840E-02	4.902E-02	7.847E-02	7.834E-03	-0.234
	1048.07 *	-8.256E-03	7.829E-02	1.300E-01	1.165E-02	-0.064
	1235.34	6.304E-01	4.724E-01	8.245E-01	8.475E-02	0.765
BA-137M	661.65 *	4.635E-02	2.917E-02	5.239E-02	3.994E-03	0.885
CS-137	661.65 *	4.900E-02	3.084E-02	5.538E-02	4.232E-03	0.885
CE-139	165.85 *	6.471E-03	2.359E-02	4.021E-02	2.111E-03	0.161
BA-140	162.64	2.249E-01	5.551E-01	9.510E-01	5.765E-02	0.236
	304.84	2.996E-01	1.010E+00	1.451E+00	3.958E-01	0.207
	423.70	-2.014E-01	1.255E+00	2.069E+00	6.584E-01	-0.097
	537.32 *	2.302E-02	1.823E-01	2.996E-01	9.801E-02	0.077
LA-140	328.77	4.128E-01	2.294E-01	3.950E-01	2.559E-02	1.045
	432.53	9.761E-01	1.401E+00	2.411E+00	1.598E-01	0.405
	487.03	1.104E-03	9.139E-02	1.506E-01	1.074E-02	0.007
	751.79	8.712E-02	1.177E+00	1.963E+00	1.928E-01	0.044
	815.85	-3.345E-02	2.202E-01	3.588E-01	3.878E-02	-0.093
	867.82	1.250E-01	1.085E+00	1.606E+00	1.792E-01	0.078
	919.63	4.205E-01	1.944E+00	3.149E+00	3.978E-01	0.134
	925.24	1.073E-01	8.141E-01	1.338E+00	1.515E-01	0.080
	1596.49 *	-2.019E-02	5.614E-02	8.946E-02	6.138E-03	-0.226
CE-141	145.44 *	1.946E-04	6.065E-02	8.543E-02	4.877E-03	0.002
CE-143	57.37	-2.712E-04	6.065E-02	Half-Life	too short	
	231.56	-3.841E-04	6.065E-02	Half-Life	too short	
	293.26 *	3.398E-04	6.065E-02	Half-Life	too short	
+	350.59	1.443E-02	6.065E-02	Half-Life	too short	
	490.36	-1.341E-03	6.065E-02	Half-Life	too short	
	664.57	6.675E-05	6.065E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error (pCi/GRAM)	MDA (pCi/GRAM)	MDA error	Act/MDA
	721.93			-2.130E-04	6.065E-02	Half-Life too short	
CE-144	80.11			9.040E-02	2.240E+00	3.305E+00	2.862E-01 0.027
	133.54	*		-1.297E-01	1.851E-01	2.861E-01	4.045E-02 -0.453
PM-144	476.78			1.194E-02	5.118E-02	8.547E-02	6.341E-03 0.140
	618.01			5.428E-03	2.514E-02	3.999E-02	3.044E-03 0.136
	696.49	*		-2.220E-03	2.529E-02	4.203E-02	3.412E-03 -0.053
	778.57			-8.702E-01	1.820E+00	2.920E+00	2.730E-01 -0.298
PR-144	696.49	*		-1.503E-01	1.713E+00	2.846E+00	2.310E-01 -0.053
	1489.15			3.125E-01	8.299E+00	1.348E+01	9.740E-01 0.023
PM-146	453.90	*		7.965E-03	3.324E-02	5.573E-02	4.958E-03 0.143
	633.02			-6.073E-01	1.098E+00	1.666E+00	6.183E-01 -0.365
	735.90			6.104E-02	1.200E-01	1.783E-01	5.104E-02 0.342
	747.13			-6.277E-02	6.510E-02	1.000E-01	1.419E-02 -0.628
ND-147	91.11			1.805E+00	4.422E-01	5.631E-01	5.296E-02 3.205
	319.41			1.374E-01	2.361E+00	3.815E+00	2.203E-01 0.036
	439.89			9.659E-02	3.788E+00	6.299E+00	3.843E-01 0.015
	531.02	*		1.224E-02	4.028E-01	6.596E-01	9.203E-02 0.019
PM-149	285.90	*		-5.184E+01	4.975E+01	7.616E+01	1.077E+01 -0.681
EU-152	121.78			5.009E-02	6.665E-02	1.097E-01	8.454E-03 0.457
	244.69			4.463E-02	2.889E-01	4.204E-01	2.348E-02 0.106
	344.27	*		2.028E-02	9.047E-02	1.195E-01	7.799E-03 0.170
	443.98			-1.979E-01	7.009E-01	1.145E+00	7.018E-02 -0.173
	778.89			-1.327E-01	2.110E-01	3.352E-01	3.134E-02 -0.396
	867.32			5.494E-02	7.299E-01	1.033E+00	1.114E-01 0.053
	964.01			4.938E-01	2.667E-01	4.226E-01	4.329E-02 1.169
	1085.78			5.456E-02	3.139E-01	5.291E-01	4.100E-02 0.103
	1112.02			1.717E-01	3.046E-01	4.548E-01	3.238E-02 0.378
	1407.95			1.259E-01	1.521E-01	2.643E-01	1.963E-02 0.476
GD-153	69.67			2.230E+00	1.779E+00	2.766E+00	2.245E-01 0.806
	83.37			1.858E+01	1.598E+01	2.418E+01	2.147E+00 0.769
	97.43	*		6.482E-02	1.098E-01	1.305E-01	1.020E-02 0.497
	103.18			-6.587E-02	1.109E-01	1.560E-01	1.125E-02 -0.422
EU-154	123.07			2.179E-02	4.709E-02	7.671E-02	7.255E-03 0.284
	247.94			-4.066E-02	3.035E-01	4.583E-01	4.318E-02 -0.089
	591.81			6.252E-02	5.001E-01	7.690E-01	8.180E-02 0.081
	723.30			7.102E-03	1.536E-01	2.211E-01	2.084E-02 0.032
	756.87			5.058E-01	5.922E-01	1.026E+00	1.258E-01 0.493
	873.19			-1.096E-01	2.282E-01	3.600E-01	5.015E-02 -0.304
	996.32			2.453E-01	3.410E-01	5.017E-01	9.175E-02 0.489
	1004.76			1.915E-01	2.006E-01	3.013E-01	3.705E-02 0.636
	1274.45	*		-1.024E-01	1.004E-01	1.518E-01	1.517E-02 -0.674
EU-155	48.70			-4.347E-01	3.232E+00	5.434E+00	4.122E-01 -0.080
	60.01			3.828E+00	5.952E+00	9.169E+00	6.997E-01 0.417
	86.54			3.424E-01	1.242E-01	1.763E-01	1.624E-02 1.942
	105.31	*		6.217E-02	9.973E-02	1.648E-01	1.179E-02 0.377
TB-160	86.79	+		9.035E-01	3.277E-01	4.661E-01	4.265E-02 1.938
	197.04			-3.226E-01	4.414E-01	7.180E-01	3.856E-02 -0.449
	215.65			-4.133E-01	6.087E-01	9.489E-01	5.180E-02 -0.436
	298.57			1.214E-01	1.444E-01	1.590E-01	9.135E-03 0.763

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		879.36	*	2.787E-02	1.053E-01	1.753E-01	1.926E-02	0.159
		962.29		7.005E-01	4.716E-01	7.340E-01	7.541E-02	0.954
		966.15		1.158E+00	2.518E-01	4.117E-01	4.202E-02	2.814
		1177.93		3.771E-01	2.808E-01	5.014E-01	2.799E-02	0.752
		1271.85		-4.954E-01	5.634E-01	8.634E-01	5.835E-02	-0.574
		80.57		9.109E-02	2.868E-01	4.274E-01	3.714E-02	0.213
		184.41		1.749E-01	3.515E-02	5.972E-02	3.173E-03	2.929
		280.46		-6.720E-02	6.980E-02	1.087E-01	6.201E-03	-0.618
		410.95		5.203E-02	1.855E-01	3.137E-01	1.847E-02	0.166
		711.68	*	-2.602E-02	4.534E-02	7.292E-02	6.078E-03	-0.357
TM-171		752.31		4.483E-02	2.066E-01	3.473E-01	3.106E-02	0.129
		810.29		-3.644E-03	4.440E-02	7.278E-02	7.166E-03	-0.050
		51.35		-2.580E+01	3.903E+01	6.418E+01	5.087E+00	-0.402
		52.39		-7.034E+00	2.001E+01	3.327E+01	2.643E+00	-0.211
LU-176		59.40		1.721E+01	3.259E+01	5.001E+01	3.797E+00	0.344
		66.72	*	-3.161E+01	3.116E+01	4.424E+01	3.537E+00	-0.714
	+	88.36		6.745E-01	2.447E-01	3.436E-01	3.155E-02	1.963
		201.83		-3.892E-05	2.269E-02	3.783E-02	2.040E-03	-0.001
LU-177		306.84	*	-4.936E-03	1.976E-02	3.040E-02	1.750E-03	-0.162
		401.10		1.158E+00	5.084E+00	8.594E+00	4.996E-01	0.135
		112.95		2.661E+00	1.399E+00	2.376E+00	1.531E-01	1.120
	+	208.36	*	2.611E+00	1.109E+00	1.408E+00	7.639E-02	1.854
LU-177M		52.97		8.600E-01	2.009E+00	3.427E+00	2.720E-01	0.251
		54.07		6.879E-01	1.049E+00	1.798E+00	1.422E-01	0.382
		61.30		-1.334E+00	1.765E+00	2.556E+00	1.975E-01	-0.522
		121.62		2.192E-01	3.385E-01	5.557E-01	3.296E-02	0.394
		147.16		-6.680E-02	6.233E-01	8.720E-01	4.745E-02	-0.077
		171.86		-2.158E-01	3.748E-01	6.189E-01	3.258E-02	-0.349
		218.09		5.520E-01	6.844E-01	1.167E+00	6.382E-02	0.473
		268.79		1.178E+00	7.376E-01	1.142E+00	6.475E-02	1.032
		319.02		2.871E-02	1.977E-01	3.208E-01	1.852E-02	0.089
		367.43		1.048E-01	6.549E-01	1.111E+00	6.418E-02	0.094
HF-181		413.65	*	-1.780E-01	1.316E-01	2.040E-01	1.205E-02	-0.873
		56.28		-5.141E-01	1.108E+00	1.830E+00	1.425E-01	-0.281
		57.53		-1.935E-01	5.831E-01	9.665E-01	7.453E-02	-0.200
		65.20		1.074E+00	1.059E+00	1.639E+00	1.300E-01	0.655
		133.02		8.036E-03	5.823E-02	9.216E-02	5.213E-03	0.087
		136.25		-1.116E-01	3.902E-01	6.146E-01	3.441E-02	-0.182
		345.85		2.196E-02	1.783E-01	2.333E-01	1.350E-02	0.094
W-181		482.03	*	-1.705E-02	3.201E-02	5.119E-02	3.276E-03	-0.333
		56.28		-2.037E-01	4.398E-01	7.262E-01	5.657E-02	-0.281
		57.53		-7.712E-02	2.316E-01	3.839E-01	2.960E-02	-0.201
		65.20	*	4.231E-01	4.174E-01	6.459E-01	5.123E-02	0.655
TA-182		67.75		-1.246E-01	1.158E-01	1.751E-01	1.407E-02	-0.711
	+	100.10		5.827E-01	2.528E-01	2.851E-01	2.143E-02	2.044
		152.43		1.962E-01	2.854E-01	4.627E-01	2.489E-02	0.424
		222.10		-2.034E-01	2.791E-01	4.495E-01	2.467E-02	-0.452
	+	1001.68		9.715E+00	2.935E+00	3.845E+00	3.671E-01	2.527
	+	1121.28		6.476E-01	2.218E-01	2.699E-01	1.859E-02	2.400

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		1189.05		-1.365E-01	2.434E-01	3.878E-01	2.218E-02	-0.352
		1221.42	*	-7.418E-02	1.590E-01	2.547E-01	1.558E-02	-0.291
		1230.97		-3.116E-01	4.165E-01	6.571E-01	4.099E-02	-0.474
		57.98		9.493E-02	2.241E-01	3.803E-01	2.922E-02	0.250
		59.32		6.646E-02	1.325E-01	2.032E-01	1.544E-02	0.327
		67.20		-2.603E-01	2.199E-01	3.096E-01	2.481E-02	-0.841
		162.32	*	4.203E-03	8.562E-02	1.451E-01	7.658E-03	0.029
	+	208.81		2.653E+00	1.127E+00	1.437E+00	7.800E-02	1.846
		291.72		-3.790E-01	8.518E-01	1.175E+00	6.733E-02	-0.323
		57.98		3.525E-01	8.320E-01	1.412E+00	1.085E-01	0.250
RE-184		59.32		2.466E-01	4.917E-01	7.539E-01	5.728E-02	0.327
		67.20		-9.662E-01	8.163E-01	1.149E+00	9.209E-02	-0.841
		161.27		-2.056E-01	2.816E-01	4.647E-01	2.458E-02	-0.443
		216.55		-3.041E-02	2.132E-01	3.519E-01	1.922E-02	-0.086
		252.85	*	1.309E-01	1.747E-01	2.956E-01	1.660E-02	0.443
		318.01		-3.544E-01	3.558E-01	5.439E-01	3.139E-02	-0.652
		792.07		-4.287E-01	9.888E-01	1.353E+00	1.293E-01	-0.317
		903.28		2.271E-01	8.960E-01	1.284E+00	1.441E-01	0.177
		920.93		-4.207E-02	3.414E-01	5.510E-01	6.038E-02	-0.076
		59.72		2.946E-01	3.515E-01	5.456E-01	4.150E-02	0.540
OS-185		61.14		-1.615E-01	1.937E-01	2.794E-01	2.156E-02	-0.578
		69.30		2.824E-01	3.170E-01	4.874E-01	3.949E-02	0.579
		592.07		5.242E-01	1.957E+00	3.135E+00	2.245E-01	0.167
		646.12	*	-6.503E-03	3.287E-02	5.210E-02	3.918E-03	-0.125
		717.42		4.358E-01	7.160E-01	1.154E+00	9.713E-02	0.378
		874.81		6.578E-03	4.433E-01	7.264E-01	7.923E-02	0.009
		880.27		-6.884E-02	5.757E-01	9.337E-01	1.027E-01	-0.074
		155.03	*	-2.231E-02	1.352E-01	2.282E-01	1.221E-02	-0.098
		477.96		6.428E-01	2.329E+00	3.897E+00	2.483E-01	0.165
		633.10		-2.032E+00	2.195E+00	3.312E+00	2.462E-01	-0.614
W-188	+	63.58		3.424E+02	8.748E+01	1.183E+02	9.298E+00	2.894
		227.08		4.464E-01	9.918E+00	1.611E+01	8.880E-01	0.028
IR-192		290.67	*	8.361E-01	6.488E+00	9.284E+00	5.318E-01	0.090
	+	295.96		8.754E-01	1.592E-01	2.193E-01	1.279E-02	3.993
		308.46		3.261E-02	7.246E-02	1.196E-01	6.969E-03	0.273
		316.51	*	-1.087E-02	2.666E-02	4.208E-02	2.441E-03	-0.258
AU-195		468.07		1.462E-02	5.434E-02	7.950E-02	5.665E-03	0.184
		604.41		-2.879E-02	4.072E-01	5.641E-01	6.855E-02	-0.051
		612.46		2.414E+00	7.424E-01	1.211E+00	1.062E-01	1.994
		65.12		2.079E-01	1.958E-01	3.056E-01	2.423E-02	0.680
		66.83		-8.398E-02	1.016E-01	1.456E-01	1.165E-02	-0.577
	+	75.70		1.063E+00	2.383E-01	4.054E-01	3.404E-02	2.623
	+	98.88	*	7.306E-01	3.170E-01	3.896E-01	2.981E-02	1.875
		129.76		3.266E+00	2.587E+00	4.304E+00	2.462E-01	0.759
TL-200		367.94	*	4.663E-05	2.587E+00	Half-Life	too short	
		579.30		1.345E-03	2.587E+00	Half-Life	too short	
		828.27		1.421E-03	2.587E+00	Half-Life	too short	
		1205.75		-1.169E-03	2.587E+00	Half-Life	too short	
TL-201		68.90		5.404E-01	3.820E+00	5.717E+00	4.622E-01	0.095

---- Non-Identified Nuclides ----

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TL-202		70.82		1.651E+00	2.207E+00	3.368E+00	2.750E-01	0.490
		80.30		7.450E-01	3.926E+00	5.826E+00	5.051E-01	0.128
		135.34		-2.283E+00	1.639E+01	2.598E+01	1.459E+00	-0.088
		167.43	*	-2.370E-01	4.136E+00	6.970E+00	3.659E-01	-0.034
		68.90		6.082E-02	4.299E-01	6.434E-01	5.201E-02	0.095
		70.82		1.852E-01	2.477E-01	3.780E-01	3.086E-02	0.490
HG-203		80.30		8.364E-02	4.408E-01	6.541E-01	5.671E-02	0.128
		439.56	*	1.036E-03	4.525E-02	7.524E-02	4.587E-03	0.014
		70.83		8.557E-01	1.138E+00	1.731E+00	2.306E-01	0.494
		72.87		7.478E-01	6.130E-01	1.036E+00	1.343E-01	0.722
BI-207		82.60		-8.100E-01	1.082E+00	1.709E+00	2.371E-01	-0.474
		279.20	*	6.793E-03	3.282E-02	5.389E-02	3.268E-03	0.126
		72.80		1.922E-01	1.811E-01	3.074E-01	2.537E-02	0.625
	+	74.97		5.926E-01	1.328E-01	2.098E-01	1.754E-02	2.825
		84.90		2.739E-01	2.028E-01	3.078E-01	2.770E-02	0.890
		569.67		-2.117E-02	2.494E-02	3.765E-02	2.638E-03	-0.562
TL-207		1063.62	*	-1.083E-03	4.244E-02	7.077E-02	5.842E-03	-0.015
		1770.23		2.394E-01	3.170E-01	5.188E-01	3.139E-02	0.462
		81.07		-5.813E-02	2.329E-01	3.395E-01	2.961E-02	-0.171
		83.78		1.314E-01	1.374E-01	2.066E-01	1.841E-02	0.636
		94.90		1.152E+00	3.091E-01	4.189E-01	3.409E-02	2.751
		122.32		2.187E+00	1.559E+00	2.619E+00	1.778E-01	0.835
	+	144.24		6.155E-01	6.822E-01	9.909E-01	6.915E-02	0.621
		154.21		-3.509E-02	3.198E-01	5.409E-01	3.599E-02	-0.065
	+	269.46		3.341E-01	2.173E-01	2.779E-01	1.651E-02	1.202
		323.87	*	-6.919E-01	5.526E-01	8.162E-01	1.347E-01	-0.848
PO-209	+	338.28		4.768E+00	1.780E+00	1.856E+00	1.953E-01	2.569
		445.03		3.714E-01	1.638E+00	2.750E+00	2.877E-01	0.135
		260.50		3.503E+00	7.299E+00	1.220E+01	6.883E-01	0.287
		262.80		-1.258E+01	2.080E+01	3.309E+01	1.870E+00	-0.380
		896.60	*	-1.909E+00	5.812E+00	9.267E+00	1.045E+00	-0.206
		46.50	*	2.574E+00	4.954E+00	8.526E+00	6.596E-01	0.302
BI-210		46.50	*	2.574E+00	4.954E+00	8.526E+00	6.596E-01	0.302
PB-210		46.50	*	2.574E+00	4.953E+00	8.526E+00	5.671E-01	0.302
PB-211		404.84	*	-9.012E-01	9.280E-01	1.153E+00	7.190E-01	-0.781
BI-212		427.08		1.774E-01	1.477E+00	2.467E+00	1.525E+00	0.072
		831.96		1.258E+00	1.264E+00	1.564E+00	9.837E-01	0.804
	+	727.18	*	1.141E+00	5.203E-01	5.027E-01	5.006E-02	2.270
		785.46		3.386E+00	1.509E+00	2.730E+00	2.581E-01	1.240
		1620.62		5.340E-01	9.518E-01	1.670E+00	1.129E-01	0.320
		81.07		-5.813E-02	2.329E-01	3.395E-01	2.961E-02	-0.171
PO-215		83.78		1.314E-01	1.374E-01	2.066E-01	1.841E-02	0.636
		94.90		1.152E+00	3.091E-01	4.189E-01	3.409E-02	2.751
		122.32		2.187E+00	1.559E+00	2.619E+00	1.778E-01	0.835
	+	144.24		6.155E-01	6.822E-01	9.909E-01	6.915E-02	0.621
		154.21		-3.509E-02	3.198E-01	5.409E-01	3.599E-02	-0.065
	+	269.46		3.341E-01	2.173E-01	2.779E-01	1.651E-02	1.202
		323.87	*	-6.919E-01	5.526E-01	8.162E-01	1.347E-01	-0.848
	+	338.28		4.768E+00	1.780E+00	1.856E+00	1.953E-01	2.569

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		3.714E-01	1.638E+00	2.750E+00	2.877E-01	0.135
		271.23		4.286E-01	2.797E-01	3.589E-01	2.878E-02	1.194
		401.81	*	4.598E-02	3.106E-01	5.231E-01	7.121E-02	0.088
RN-220		549.76	*	-1.158E+01	2.001E+01	3.144E+01	2.161E+00	-0.368
RA-223		81.07		-5.813E-02	2.329E-01	3.395E-01	2.961E-02	-0.171
		83.78		1.314E-01	1.374E-01	2.066E-01	1.841E-02	0.636
		94.90		1.152E+00	3.091E-01	4.189E-01	3.409E-02	2.751
AC-227		122.32		2.187E+00	1.559E+00	2.619E+00	1.778E-01	0.835
		144.24		6.155E-01	6.822E-01	9.909E-01	6.915E-02	0.621
		154.21		-3.509E-02	3.198E-01	5.409E-01	3.599E-02	-0.065
	+	269.46		3.341E-01	2.173E-01	2.779E-01	1.651E-02	1.202
		323.87	*	-6.919E-01	5.526E-01	8.162E-01	1.347E-01	-0.848
	+	338.28		4.768E+00	1.780E+00	1.856E+00	1.953E-01	2.569
		445.03		3.714E-01	1.638E+00	2.750E+00	2.877E-01	0.135
		79.80		1.995E-01	1.747E+00	2.586E+00	5.562E-01	0.077
		236.00		5.306E-01	2.233E-01	3.482E-01	3.592E-02	1.524
		256.20	*	-2.524E-01	2.937E-01	4.596E-01	6.383E-02	-0.549
	+	286.10		-1.142E+00	1.258E+00	1.949E+00	2.246E-01	-0.586
		299.80		3.350E+00	1.660E+00	2.130E+00	3.465E-01	1.572
304.40			3.918E-01	1.556E+00	2.235E+00	3.862E-01	0.175	
TH-227		334.20		-1.873E+00	2.207E+00	2.878E+00	5.274E-01	-0.651
		79.80		1.995E-01	1.747E+00	2.586E+00	5.633E-01	0.077
		94.00		3.454E+01	8.575E+00	4.953E+00	1.072E+00	6.975
TH-229		236.00		5.306E-01	2.216E-01	3.482E-01	3.099E-02	1.524
		256.20	*	-2.524E-01	2.947E-01	4.596E-01	7.740E-02	-0.549
		286.10		-1.142E+00	1.695E+00	1.949E+00	1.953E+00	-0.586
	+	299.80		3.350E+00	1.660E+00	2.130E+00	3.465E-01	1.572
		304.40		3.918E-01	1.556E+00	2.235E+00	3.862E-01	0.175
		334.20		-1.873E+00	2.207E+00	2.878E+00	5.274E-01	-0.651
		85.43		4.025E-01	2.023E-01	3.111E-01	2.813E-02	1.294
		88.47		3.883E-01	1.408E-01	1.975E-01	1.809E-02	1.966
	+	100.00		6.094E-01	2.644E-01	3.040E-01	2.289E-02	2.005
193.63		*	-8.674E-02	4.061E-01	6.740E-01	3.609E-02	-0.129	
PA-231			210.97		1.454E+00	6.615E-01	1.063E+00	5.778E-02
	283.67		*	3.129E-02	1.223E+00	1.991E+00	2.737E-01	0.016
	301.29			1.340E+00	6.427E-01	8.337E-01	8.691E-02	1.607
TH-231		81.07		-5.813E-02	2.329E-01	3.395E-01	2.961E-02	-0.171
		83.78		1.314E-01	1.374E-01	2.066E-01	1.841E-02	0.636
		94.90		1.152E+00	3.091E-01	4.189E-01	3.409E-02	2.751
U-231		122.32		2.187E+00	1.559E+00	2.619E+00	1.778E-01	0.835
		144.24		6.155E-01	6.822E-01	9.909E-01	6.915E-02	0.621
		154.21		-3.509E-02	3.198E-01	5.409E-01	3.599E-02	-0.065
	+	269.46		3.341E-01	2.173E-01	2.779E-01	1.651E-02	1.202
		323.87	*	-6.919E-01	5.526E-01	8.162E-01	1.347E-01	-0.848
	+	338.28		4.768E+00	1.780E+00	1.856E+00	1.953E-01	2.569
		445.03		3.714E-01	1.638E+00	2.750E+00	2.877E-01	0.135
		84.21		6.556E+00	4.650E+00	7.077E+00	6.331E-01	0.926
		92.29		2.748E+01	4.040E+00	4.487E+00	3.820E-01	6.124
	95.87	*	8.601E-01	1.124E+00	1.354E+00	1.085E-01	0.635	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		108.00		-1.880E+00	1.526E+00	2.352E+00	1.599E-01	-0.800
	+	75.28		1.729E+01	4.455E+00	6.143E+00	9.345E-01	2.815
	+	86.59		5.568E+00	2.465E+00	2.869E+00	7.743E-01	1.941
	+	300.12		9.338E-01	4.548E-01	5.924E-01	7.947E-02	1.576
		311.98	*	-1.158E-02	4.982E-02	7.947E-02	4.868E-03	-0.146
		340.50		1.588E+00	7.025E-01	9.662E-01	2.219E-01	1.644
PA-234		398.62		2.909E-01	1.539E+00	2.596E+00	6.711E-01	0.112
		415.76		9.486E-01	1.196E+00	2.048E+00	4.223E-01	0.463
	+	63.00		1.006E+01	2.879E+00	3.593E+00	5.417E-01	2.800
		94.67		1.179E+00	2.606E-01	3.279E-01	3.965E-02	3.595
	+	98.44		2.975E-01	2.087E-01	1.580E-01	8.794E-02	1.883
	+	99.86		1.542E+00	6.690E-01	7.887E-01	5.950E-02	1.955
		111.00		6.812E-02	1.808E-01	2.953E-01	3.168E-02	0.231
		131.20		4.868E-02	9.842E-02	1.579E-01	8.989E-03	0.308
		152.70		1.875E-01	2.798E-01	4.511E-01	7.063E-02	0.416
	+	186.00		8.840E+00	3.180E+00	2.385E+00	7.265E-01	3.707
		226.40		1.140E-01	3.211E-01	5.278E-01	6.026E-02	0.216
		227.20		-3.258E-02	3.401E-01	5.494E-01	3.028E-02	-0.059
		248.90		-3.497E-01	6.411E-01	1.021E+00	2.189E-01	-0.342
		293.70		4.781E+00	1.059E+00	1.327E+00	2.132E-01	3.601
		369.80		7.717E-02	6.132E-01	1.038E+00	2.161E-01	0.074
		568.70		-3.427E-01	8.227E-01	1.279E+00	8.957E-02	-0.268
		569.50		-1.879E-01	2.213E-01	3.341E-01	2.341E-02	-0.562
		574.00		1.840E-01	1.219E+00	1.883E+00	1.325E-01	0.098
		699.00		-8.635E-02	5.139E-01	8.493E-01	1.603E-01	-0.102
		706.10		2.854E-01	7.848E-01	1.319E+00	5.874E-01	0.216
		733.00		-5.247E-02	3.093E-01	4.355E-01	9.671E-02	-0.120
		742.81		5.011E-01	1.022E+00	1.656E+00	1.114E+00	0.303
	+	796.30		1.887E+00	1.227E+00	1.369E+00	3.748E-01	1.379
		805.60		-4.538E-02	7.394E-01	1.214E+00	3.763E-01	-0.037
		819.60		-3.014E-01	8.964E-01	1.428E+00	5.479E-01	-0.211
		826.30		-5.571E-01	6.589E-01	9.377E-01	4.224E-01	-0.594
		831.60		5.961E-01	5.381E-01	7.982E-01	2.421E-01	0.747
		876.40		5.200E-01	8.182E-01	1.072E+00	1.104E+00	0.485
		880.51		-6.254E-02	2.098E-01	3.356E-01	3.693E-02	-0.186
		883.24		-1.412E-01	2.319E-01	3.284E-01	2.219E-01	-0.430
		899.00		1.518E-02	6.670E-01	1.091E+00	4.833E-01	0.014
		925.00		-1.480E-02	9.079E-01	1.477E+00	1.609E-01	-0.010
		926.50		-8.346E-03	1.367E-01	2.216E-01	5.790E-02	-0.038
		946.00	*	-1.483E-02	2.161E-01	3.493E-01	6.890E-02	-0.042
		949.00		2.002E-01	3.266E-01	5.535E-01	5.813E-02	0.362
		980.50		5.177E-01	5.756E-01	9.878E-01	9.825E-02	0.524
		1394.10		-1.209E-01	8.688E-01	1.388E+00	9.016E-01	-0.087
PA-234M		766.42		2.463E+01	1.609E+01	1.861E+01	9.460E+00	1.323
NP-236	+	1001.03	*	2.223E+01	6.807E+00	8.793E+00	9.486E-01	2.528
		94.67		9.032E-01	1.814E-01	2.494E-01	2.038E-02	3.622
	+	98.44		2.249E-01	9.757E-02	1.195E-01	9.199E-03	1.883
		111.00		5.153E-02	1.367E-01	2.234E-01	1.469E-02	0.231
		160.31	*	-3.696E-02	6.333E-02	1.051E-01	5.569E-03	-0.352

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		5.140E-01	2.230E-01	2.708E-01	2.052E-02	1.898
		117.00	*	1.707E-02	1.663E-01	2.687E-01	1.663E-02	0.064
	+	209.75		2.120E+00	9.005E-01	1.140E+00	6.193E-02	1.859
		228.18		-1.925E-03	1.722E-01	2.846E-01	1.570E-02	-0.007
		277.60		1.576E-01	1.462E-01	2.481E-01	1.413E-02	0.635
AM-241		334.30		-1.043E+00	1.237E+00	1.633E+00	9.446E-02	-0.639
		59.54	*	1.088E-01	1.894E-01	2.910E-01	2.414E-02	0.374
CM-243	+	99.55		5.289E-01	2.295E-01	2.787E-01	2.112E-02	1.898
		103.76	*	2.441E-02	1.003E-01	1.466E-01	1.049E-02	0.167
		117.00		1.756E-02	1.711E-01	2.764E-01	1.711E-02	0.064
	+	209.75		2.090E+00	8.876E-01	1.124E+00	6.104E-02	1.859
		228.18		-1.945E-03	1.740E-01	2.875E-01	1.586E-02	-0.007
AM-246		277.60		1.589E-01	1.474E-01	2.501E-01	1.425E-02	0.635
		798.80		4.355E-02	1.198E-01	1.756E-01	1.697E-02	0.248
		1036.00		-2.194E-01	2.268E-01	3.527E-01	3.123E-02	-0.622
		1062.04		1.622E-01	1.851E-01	3.249E-01	2.693E-02	0.499
		1078.86	*	-6.442E-02	1.140E-01	1.830E-01	1.447E-02	-0.352
CM-247		278.00		7.361E-01	6.043E-01	1.031E+00	5.873E-02	0.714
		287.40		5.206E-01	1.020E+00	1.639E+00	9.374E-02	0.318
CF-249		402.60	*	-2.268E-03	2.837E-02	4.726E-02	2.753E-03	-0.048
		252.85		4.939E-01	6.589E-01	1.115E+00	6.263E-02	0.443
		333.44		-1.737E-01	1.677E-01	2.188E-01	1.265E-02	-0.794
CF-251		387.95	*	1.159E-02	2.866E-02	4.900E-02	2.817E-03	0.237
		176.60	*	5.611E-02	1.010E-01	1.731E-01	9.140E-03	0.324
		227.00		2.321E-02	3.019E-01	4.911E-01	2.707E-02	0.047
		285.00		-9.244E-01	1.415E+00	2.231E+00	1.275E-01	-0.414

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395002
* Acquisition date   : 2-FEB-2010 07:20:31 Detector SN#      :
* Detector ID        : GAM18                               Sensitivity      : 5.000
* Geometry           : CAN                                 Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00                      Abundance limit : 75.000
* Elapsed real time  : 0 02:00:01.98                      Half life ratio  : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395002           Analyst initials: MXR1
* Batch Number       : 944966              Sample Quantity : 1.4527E+02 GRAM
* Recovery           : 1.00000             Carrier Weight   : 0.00000
*****
*
*                               QC DATA
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 23-APR-2009 11:59:23 MS Isotope      :
* MSD DPM             : 0.000               MSD Isotope     :
* LCS DPM             : 0.000               LCS Isotope     :
* LCSD DPM            : 0.000               LCSD Isotope    :
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.468E+01	2.945E+00	3.550E-01	0.000E+00
CD-109	2.888E+00	1.027E+00	1.620E+00	0.000E+00
SN-126	2.844E-01	1.011E-01	1.489E-01	0.000E+00
TL-208	4.713E-01	7.508E-02	4.384E-02	0.000E+00
BI-211	3.525E+00	3.804E-01	2.600E-01	0.000E+00
PB-212	1.451E+00	1.326E-01	7.605E-02	0.000E+00
PO-212	1.451E+00	1.326E-01	7.605E-02	0.000E+00
BI-214	1.044E+00	1.455E-01	8.891E-02	0.000E+00
PB-214	1.226E+00	1.464E-01	9.199E-02	0.000E+00
PO-214	1.226E+00	1.464E-01	9.199E-02	0.000E+00
PO-216	1.451E+00	1.326E-01	7.605E-02	0.000E+00
PO-218	1.226E+00	1.464E-01	9.199E-02	0.000E+00
RA-224	4.071E+00	9.011E-01	8.642E-01	0.000E+00
RA-226	1.044E+00	1.455E-01	8.891E-02	0.000E+00
AC-228	1.582E+00	2.816E-01	1.432E-01	0.000E+00
RA-228	1.582E+00	2.816E-01	1.432E-01	0.000E+00
TH-228	1.471E+00	1.345E-01	7.711E-02	0.000E+00
TH-230	1.044E+00	1.455E-01	8.891E-02	0.000E+00
TH-232	1.582E+00	2.816E-01	1.432E-01	0.000E+00
TH-234	8.632E+00	2.541E+00	2.309E+00	0.000E+00
U-234	1.044E+00	1.455E-01	8.891E-02	0.000E+00
U-235	1.899E-01	2.081E-01	3.029E-01	0.000E+00
NP-237	8.351E-01	3.415E-01	4.139E-01	0.000E+00
U-238	8.632E+00	2.541E+00	2.309E+00	0.000E+00
AM-243	3.302E-01	7.253E-02	9.705E-02	0.000E+00
ANH-511	1.051E-01	5.400E-02	3.536E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	1.498E-02	2.372E-01	4.132E-01	0.000E+00 NOT IDENT.

NA-22	-2.192E-02	3.417E-02	5.503E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.521E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-7.983E-04	1.815E-02	3.017E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.201E-02	7.909E-02	0.000E+00	FAIL ABUN
SC-46	-2.456E-03	2.807E-02	4.732E-02	0.000E+00	FAIL ABUN
V-48	8.725E-03	5.175E-02	8.778E-02	0.000E+00	NOT IDENT.
CR-51	1.045E-01	2.734E-01	4.764E-01	0.000E+00	NOT IDENT.
MN-52	5.557E-02	1.424E-01	2.467E-01	0.000E+00	NOT IDENT.
MN-54	5.460E-03	3.360E-02	4.997E-02	0.000E+00	NOT IDENT.
CO-56	-5.482E-03	3.484E-02	5.023E-02	0.000E+00	NOT IDENT.
CO-57	3.093E-02	2.199E-02	4.007E-02	0.000E+00	NOT IDENT.
CO-58	7.042E-03	2.841E-02	4.947E-02	0.000E+00	NOT IDENT.
FE-59	-8.217E-02	7.030E-02	1.112E-01	0.000E+00	FAIL ABUN
CO-60	4.089E-03	3.012E-02	5.120E-02	0.000E+00	NOT IDENT.
ZN-65	5.260E-02	8.548E-02	1.318E-01	0.000E+00	NOT IDENT.
GE-68	-5.800E-01	9.895E-01	1.641E+00	0.000E+00	NOT IDENT.
AS-73	4.449E-01	1.003E+00	1.887E+00	0.000E+00	NOT IDENT.
AS-74	1.530E-02	6.704E-02	1.151E-01	0.000E+00	NOT IDENT.
SE-75	1.648E-02	3.516E-02	5.814E-02	0.000E+00	NOT IDENT.
BR-77	4.973E+00	5.258E+00	9.505E+00	0.000E+00	FAIL ABUN
SR-82	-1.987E-01	2.882E-01	4.754E-01	0.000E+00	NOT IDENT.
RB-83	4.202E-02	5.007E-02	9.008E-02	0.000E+00	NOT IDENT.
RB-84	-1.584E-02	4.902E-02	8.123E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.304E+00	1.096E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.188E-02	5.542E-02	0.000E+00	NOT IDENT.
RB-86	1.180E-02	6.005E-01	1.036E+00	0.000E+00	NOT IDENT.
Y-88	-1.533E-02	2.172E-02	3.211E-02	0.000E+00	NOT IDENT.
ZR-88	-9.251E-03	2.136E-02	3.702E-02	0.000E+00	NOT IDENT.
Y-91	-2.044E+01	1.565E+01	2.453E+01	0.000E+00	NOT IDENT.
NB-94	-6.013E-03	2.409E-02	4.136E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.721E-02	6.893E-02	0.000E+00	NOT IDENT.
NB-95M	3.761E-02	1.073E-01	1.689E-01	0.000E+00	NOT IDENT.
ZR-95	3.711E-02	5.286E-02	9.483E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.076E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.167E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.009E+00	5.820E+00	1.029E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.988E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.036E-02	2.532E-02	4.474E-02	0.000E+00	NOT IDENT.
RH-102	1.191E-03	2.201E-02	3.835E-02	0.000E+00	NOT IDENT.
RU-103	-1.606E-02	2.812E-02	4.685E-02	0.000E+00	FAIL ABUN
RH-106	5.450E-02	2.285E-01	3.913E-01	0.000E+00	FAIL ABUN
RU-106	5.450E-02	2.285E-01	3.913E-01	0.000E+00	FAIL ABUN
AG-108M	1.164E-02	2.322E-02	4.176E-02	0.000E+00	NOT IDENT.
AG-110M	-2.186E-02	2.693E-02	4.513E-02	0.000E+00	NOT IDENT.
IN-111	1.426E-01	6.521E-01	1.017E+00	0.000E+00	NOT IDENT.
IN-113M	1.425E-02	3.058E-02	5.540E-02	0.000E+00	NOT IDENT.
SN-113	1.425E-02	3.058E-02	5.540E-02	0.000E+00	NOT IDENT.
IN-114M	4.084E-02	1.546E-01	2.480E-01	0.000E+00	NOT IDENT.
CD-115	1.285E+00	5.403E+00	9.405E+00	0.000E+00	NOT IDENT.
SN-117M	2.578E-02	4.003E-02	7.460E-02	0.000E+00	NOT IDENT.
SB-122	1.465E+00	1.162E+00	2.107E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.541E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.597E-03	2.205E-02	4.006E-02	0.000E+00	NOT IDENT.
I-124	2.682E-01	4.764E-01	7.262E-01	0.000E+00	FAIL ABUN
SB-124	1.347E-02	5.261E-02	9.168E-02	0.000E+00	FAIL ABUN
SB-125	1.243E-03	6.488E-02	1.141E-01	0.000E+00	FAIL ABUN
TE-125M	-1.662E+01	8.668E+00	1.403E+01	0.000E+00	NOT IDENT.
I-126	-9.326E-02	1.294E-01	2.177E-01	0.000E+00	NOT IDENT.
SB-126	9.442E-05	1.130E-01	1.690E-01	0.000E+00	FAIL ABUN
SB-127	4.718E-02	8.020E-01	1.405E+00	0.000E+00	NOT IDENT.
XE-127	-1.029E-02	3.529E-02	6.246E-02	0.000E+00	NOT IDENT.
I-131	5.872E-03	7.270E-02	1.303E-01	0.000E+00	NOT IDENT.
TE-132	-1.900E-03	3.906E-01	6.908E-01	0.000E+00	NOT IDENT.
BA-133	1.692E-02	3.744E-02	5.693E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.617E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.681E-02	7.310E-02	0.000E+00	FAIL ABUN
CS-135	1.252E-01	1.388E-01	2.220E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.719E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.256E-03	7.672E-02	1.317E-01	0.000E+00	FAIL ABUN
BA-137M	4.635E-02	2.859E-02	5.365E-02	0.000E+00	NOT IDENT.
CS-137	4.900E-02	3.022E-02	5.672E-02	0.000E+00	NOT IDENT.
CE-139	6.471E-03	2.312E-02	4.246E-02	0.000E+00	NOT IDENT.
BA-140	2.302E-02	1.786E-01	3.083E-01	0.000E+00	NOT IDENT.
LA-140	-2.019E-02	5.502E-02	8.975E-02	0.000E+00	NOT IDENT.
CE-141	1.946E-04	5.944E-02	9.046E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.952E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.297E-01	1.814E-01	3.035E-01	0.000E+00	NOT IDENT.
PM-144	-2.220E-03	2.478E-02	4.299E-02	0.000E+00	NOT IDENT.

PR-144	-1.503E-01	1.678E+00	2.911E+00	0.000E+00	NOT IDENT.
PM-146	7.965E-03	3.258E-02	5.756E-02	0.000E+00	NOT IDENT.
ND-147	1.224E-02	3.948E-01	6.789E-01	0.000E+00	NOT IDENT.
PM-149	-5.184E+01	4.876E+01	7.948E+01	0.000E+00	NOT IDENT.
EU-152	2.028E-02	8.866E-02	1.242E-01	0.000E+00	NOT IDENT.
GD-153	6.482E-02	1.076E-01	1.394E-01	0.000E+00	NOT IDENT.
EU-154	-1.024E-01	9.843E-02	1.532E-01	0.000E+00	NOT IDENT.
EU-155	6.217E-02	9.774E-02	1.758E-01	0.000E+00	FAIL ABUN
TB-160	2.787E-02	1.032E-01	1.784E-01	0.000E+00	FAIL ABUN
HO-166M	-2.602E-02	4.443E-02	7.455E-02	0.000E+00	NOT IDENT.
TM-171	-3.161E+01	3.054E+01	4.762E+01	0.000E+00	NOT IDENT.
LU-176	-4.936E-03	1.937E-02	3.167E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.087E+00	1.480E+00	0.000E+00	FAIL ABUN
LU-177M	-1.780E-01	1.290E-01	2.111E-01	0.000E+00	NOT IDENT.
HF-181	-1.705E-02	3.137E-02	5.280E-02	0.000E+00	NOT IDENT.
W-181	4.231E-01	4.091E-01	6.956E-01	0.000E+00	NOT IDENT.
TA-182	-7.418E-02	1.558E-01	2.572E-01	0.000E+00	FAIL ABUN
RE-183	4.203E-03	8.391E-02	1.533E-01	0.000E+00	FAIL ABUN
RE-184	1.309E-01	1.712E-01	3.093E-01	0.000E+00	NOT IDENT.
OS-185	-6.503E-03	3.221E-02	5.339E-02	0.000E+00	NOT IDENT.
RE-188	-2.231E-02	1.325E-01	2.413E-01	0.000E+00	NOT IDENT.
W-188	8.361E-01	6.359E+00	9.685E+00	0.000E+00	FAIL ABUN
IR-192	-1.087E-02	2.612E-02	4.382E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	3.106E-01	4.160E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.408E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.370E-01	4.053E+00	7.359E+00	0.000E+00	NOT IDENT.
TL-202	1.036E-03	4.435E-02	7.778E-02	0.000E+00	NOT IDENT.
HG-203	6.793E-03	3.217E-02	5.627E-02	0.000E+00	NOT IDENT.
BI-207	-1.083E-03	4.159E-02	7.168E-02	0.000E+00	FAIL ABUN
TL-207	-6.919E-01	5.415E-01	8.494E-01	0.000E+00	FAIL ABUN
PO-209	-1.909E+00	5.696E+00	9.424E+00	0.000E+00	NOT IDENT.
BI-210	2.574E+00	4.855E+00	9.246E+00	0.000E+00	NOT IDENT.
PB-210	2.574E+00	4.855E+00	9.246E+00	0.000E+00	NOT IDENT.
PO-210	2.574E+00	4.854E+00	9.246E+00	0.000E+00	NOT IDENT.
PB-211	-9.012E-01	9.094E-01	1.194E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.099E-01	5.137E-01	0.000E+00	FAIL ABUN
PO-215	-6.919E-01	5.415E-01	8.494E-01	0.000E+00	FAIL ABUN
RN-219	4.598E-02	3.044E-01	5.418E-01	0.000E+00	FAIL ABUN
RN-220	-1.158E+01	1.961E+01	3.234E+01	0.000E+00	NOT IDENT.
RA-223	-6.919E-01	5.415E-01	8.494E-01	0.000E+00	FAIL ABUN
AC-227	-2.524E-01	2.878E-01	4.807E-01	0.000E+00	FAIL ABUN
TH-227	-2.524E-01	2.888E-01	4.807E-01	0.000E+00	FAIL ABUN
TH-229	-8.674E-02	3.980E-01	7.093E-01	0.000E+00	FAIL ABUN
PA-231	3.129E-02	1.199E+00	2.078E+00	0.000E+00	FAIL ABUN
TH-231	-6.919E-01	5.415E-01	8.494E-01	0.000E+00	FAIL ABUN
U-231	8.601E-01	1.101E+00	1.446E+00	0.000E+00	FAIL ABUN
PA-233	-1.158E-02	4.882E-02	8.277E-02	0.000E+00	FAIL ABUN
PA-234	-1.483E-02	2.118E-01	3.547E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	6.671E+00	8.919E+00	0.000E+00	FAIL ABUN
NP-236	-3.696E-02	6.207E-02	1.111E-01	0.000E+00	FAIL ABUN
NP-239	1.707E-02	1.630E-01	2.858E-01	0.000E+00	FAIL ABUN
AM-241	1.088E-01	1.856E-01	3.140E-01	0.000E+00	NOT IDENT.
CM-243	2.441E-02	9.825E-02	1.564E-01	0.000E+00	FAIL ABUN
AM-246	-6.442E-02	1.117E-01	1.853E-01	0.000E+00	NOT IDENT.
CM-247	-2.268E-03	2.780E-02	4.895E-02	0.000E+00	NOT IDENT.
CF-249	1.159E-02	2.809E-02	5.079E-02	0.000E+00	NOT IDENT.
CF-251	5.611E-02	9.901E-02	1.825E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395002.CNF;1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:20:31.
Sample ID        : G245395002 Sample quantity   : 1.45270E+02 GRAM
Detector name    : GAM18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.98 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity       : 5.00000
Batch ID        : 944966 Detector SN#       :
Matrix Spike ID  : LCS ID                  : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2711	10.67*	1.893E+00	3.468E+01	3.468E+01	8.67
CD-109	88.03	262	3.72*	6.430E+00	2.829E+00	2.888E+00	36.27
SN-126	64.28	394	9.60	3.106E+00	3.417E+00	3.417E+00	28.44
	86.94	262	8.90	6.430E+00	1.182E+00	1.182E+00	54.33
	87.57	262	37.00*	6.430E+00	2.844E-01	2.844E-01	36.27
TL-208	277.35	-----	6.80	6.258E+00	-----	Line Not Found	-----
	510.84	175	21.60	4.311E+00	4.866E-01	4.866E-01	53.08
	583.14	604	84.20*	3.934E+00	4.713E-01	4.713E-01	16.26
	860.37	45	12.46	2.914E+00	3.181E-01	3.181E-01	101.27
BI-211	72.87	-----	1.27	4.622E+00	-----	Line Not Found	-----
	351.07	962	12.94*	5.451E+00	3.525E+00	3.525E+00	11.01
PB-212	74.81	416	10.70	4.931E+00	2.036E+00	2.036E+00	24.29
	77.11	627	18.00	5.254E+00	1.713E+00	1.713E+00	16.78
	87.30	262	8.00	6.430E+00	1.315E+00	1.315E+00	37.62
	238.63	1701	44.60*	6.792E+00	1.451E+00	1.451E+00	9.33
	300.09	143	3.41	5.980E+00	1.807E+00	1.807E+00	47.54
PO-212	74.81	416	10.70	4.931E+00	2.036E+00	2.036E+00	24.29
	77.11	627	18.00	5.254E+00	1.713E+00	1.713E+00	16.78
	87.30	262	8.00	6.430E+00	1.315E+00	1.315E+00	37.62
	115.19	-----	0.60	8.058E+00	-----	Line Not Found	-----
	238.63	1701	44.60*	6.792E+00	1.451E+00	1.451E+00	9.33
	300.09	143	3.41	5.980E+00	1.807E+00	1.807E+00	47.54
BI-214	609.31	713	46.30*	3.812E+00	1.044E+00	1.044E+00	14.22
	1120.29	188	15.10	2.335E+00	1.381E+00	1.381E+00	34.89
	1764.49	151	15.80	1.695E+00	1.461E+00	1.461E+00	23.66
PB-214	74.81	416	6.21	4.931E+00	3.509E+00	3.509E+00	23.61
	77.11	627	10.50	5.254E+00	2.937E+00	2.937E+00	18.43
	87.30	262	4.67	6.430E+00	2.253E+00	2.253E+00	37.08
	241.98	420	7.49	6.748E+00	2.147E+00	2.147E+00	23.27
	295.21	522	19.20	6.040E+00	1.162E+00	1.162E+00	19.20
	351.92	962	37.20*	5.451E+00	1.226E+00	1.226E+00	12.19
PO-214	74.81	416	6.21	4.931E+00	3.509E+00	3.509E+00	23.61

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	627	10.50	5.254E+00	2.937E+00	2.937E+00	18.43
	87.30	262	4.67	6.430E+00	2.253E+00	2.253E+00	37.08
	241.98	420	7.49	6.748E+00	2.147E+00	2.147E+00	23.27
	295.21	522	19.20	6.040E+00	1.162E+00	1.162E+00	19.20
	351.92	962	37.20*	5.451E+00	1.226E+00	1.226E+00	12.19
PO-216	74.81	416	10.70	4.931E+00	2.036E+00	2.036E+00	24.29
	77.11	627	18.00	5.254E+00	1.713E+00	1.713E+00	16.78
	87.30	262	8.00	6.430E+00	1.315E+00	1.315E+00	37.62
	238.63	1701	44.60*	6.792E+00	1.451E+00	1.451E+00	9.33
	300.09	143	3.41	5.980E+00	1.807E+00	1.807E+00	47.54
PO-218	74.81	416	6.21	4.931E+00	3.509E+00	3.509E+00	23.61
	77.11	627	10.50	5.254E+00	2.937E+00	2.937E+00	18.43
	87.30	262	4.67	6.430E+00	2.253E+00	2.253E+00	37.08
	241.98	420	7.49	6.748E+00	2.147E+00	2.147E+00	23.27
	295.21	522	19.20	6.040E+00	1.162E+00	1.162E+00	19.20
	351.92	962	37.20*	5.451E+00	1.226E+00	1.226E+00	12.19
RA-224	240.98	420	3.95*	6.748E+00	4.071E+00	4.071E+00	22.59
RA-226	609.31	713	46.30*	3.812E+00	1.044E+00	1.044E+00	14.22
	1120.29	188	15.10	2.335E+00	1.381E+00	1.381E+00	34.89
	1764.49	151	15.80	1.695E+00	1.461E+00	1.461E+00	23.66
AC-228	338.32	281	11.40	5.581E+00	1.142E+00	1.142E+00	54.27
	911.07	471	27.70*	2.780E+00	1.582E+00	1.582E+00	18.17
	969.11	265	16.60	2.639E+00	1.564E+00	1.564E+00	31.14
RA-228	338.32	281	11.40	5.581E+00	1.142E+00	1.142E+00	54.27
	911.07	471	27.70*	2.780E+00	1.582E+00	1.582E+00	18.17
	969.11	265	16.60	2.639E+00	1.564E+00	1.564E+00	31.14
TH-228	74.81	416	10.70	4.931E+00	2.036E+00	2.065E+00	22.44
	77.11	627	18.00	5.254E+00	1.713E+00	1.737E+00	16.78
	87.30	262	8.00	6.430E+00	1.315E+00	1.334E+00	36.27
	238.63	1701	44.60*	6.792E+00	1.451E+00	1.471E+00	9.33
	300.09	143	3.41	5.980E+00	1.807E+00	1.832E+00	75.27
TH-230	609.31	713	46.30*	3.812E+00	1.044E+00	1.044E+00	14.22
	1120.29	188	15.10	2.335E+00	1.381E+00	1.381E+00	34.89
	1764.49	151	15.80	1.695E+00	1.461E+00	1.461E+00	23.66
TH-232	338.32	281	11.40	5.581E+00	1.142E+00	1.142E+00	36.29
	911.07	471	27.70*	2.780E+00	1.582E+00	1.582E+00	18.17
	969.11	265	16.60	2.639E+00	1.564E+00	1.564E+00	31.14
TH-234	63.29	394	3.80*	3.106E+00	8.632E+00	8.632E+00	30.03
	92.38	1303	5.41	6.963E+00	8.939E+00	8.939E+00	21.65
U-234	609.31	713	46.30*	3.812E+00	1.044E+00	1.044E+00	14.22
	1120.29	188	15.10	2.335E+00	1.381E+00	1.381E+00	34.89
	1764.49	151	15.80	1.695E+00	1.461E+00	1.461E+00	23.66
U-235	89.95	-----	2.70	6.701E+00	-----	Line Not Found	-----
	93.35	1303	4.50	6.963E+00	1.075E+01	1.075E+01	30.45
	105.00	-----	2.10	7.709E+00	-----	Line Not Found	-----
	143.76	63	10.50*	8.223E+00	1.899E-01	1.899E-01	111.80
	163.35	-----	4.70	8.004E+00	-----	Line Not Found	-----
	185.71	523	54.00	7.648E+00	3.274E-01	3.274E-01	19.85
	205.31	-----	4.70	7.323E+00	-----	Line Not Found	-----

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
NP-237	86.50	262	12.60*	6.430E+00	8.351E-01	8.351E-01	41.73
	95.87	-----	2.60	7.180E+00	-----	Line Not Found	-----
U-238	63.29	394	3.80*	3.106E+00	8.632E+00	8.632E+00	30.03
	92.38	1303	5.41	6.963E+00	8.939E+00	8.939E+00	14.70
AM-243	74.67	416	66.00*	4.931E+00	3.301E-01	3.302E-01	22.42
	86.72	262	0.34	6.430E+00	3.132E+01	3.132E+01	36.27
	117.66	-----	0.55	8.112E+00	-----	Line Not Found	-----
	142.18	63	0.13	8.223E+00	1.595E+01	1.595E+01	110.75
ANH-511	511.00	175	100.00*	4.311E+00	1.051E-01	1.051E-01	52.42

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G245395002

Page : 4
Acquisition date : 2-FEB-2010 07:20:31

Total number of lines in spectrum 31
Number of unidentified lines 1
Number of lines tentatively identified by NID 30 96.77%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.468E+01	3.468E+01	0.301E+01	8.67	
CD-109	464.00D	1.02	2.829E+00	2.888E+00	1.047E+00	36.27	
SN-126	1.00E+05Y	1.00	2.844E-01	2.844E-01	1.032E-01	36.27	
TL-208	1.41E+10Y	1.00	4.713E-01	4.713E-01	0.766E-01	16.26	
BI-211	7.04E+08Y	1.00	3.525E+00	3.525E+00	0.388E+00	11.01	
PB-212	1.41E+10Y	1.00	1.451E+00	1.451E+00	0.135E+00	9.33	
PO-212	1.41E+10Y	1.00	1.451E+00	1.451E+00	0.135E+00	9.33	
BI-214	1600.00Y	1.00	1.044E+00	1.044E+00	0.148E+00	14.22	
PB-214	1600.00Y	1.00	1.226E+00	1.226E+00	0.149E+00	12.19	
PO-214	1600.00Y	1.00	1.226E+00	1.226E+00	0.149E+00	12.19	
PO-216	1.41E+10Y	1.00	1.451E+00	1.451E+00	0.135E+00	9.33	
PO-218	1600.00Y	1.00	1.226E+00	1.226E+00	0.149E+00	12.19	
RA-224	1.41E+10Y	1.00	4.071E+00	4.071E+00	0.920E+00	22.59	
RA-226	1600.00Y	1.00	1.044E+00	1.044E+00	0.148E+00	14.22	
AC-228	1.41E+10Y	1.00	1.582E+00	1.582E+00	0.287E+00	18.17	
RA-228	1.41E+10Y	1.00	1.582E+00	1.582E+00	0.287E+00	18.17	
TH-228	1.91Y	1.01	1.451E+00	1.471E+00	0.137E+00	9.33	
TH-230	4.47E+09Y	1.00	1.044E+00	1.044E+00	0.148E+00	14.22	
TH-232	1.41E+10Y	1.00	1.582E+00	1.582E+00	0.287E+00	18.17	
TH-234	4.47E+09Y	1.00	8.632E+00	8.632E+00	2.593E+00	30.03	
U-234	4.47E+09Y	1.00	1.044E+00	1.044E+00	0.148E+00	14.22	
U-235	7.04E+08Y	1.00	1.899E-01	1.899E-01	2.123E-01	111.80	
NP-237	2.14E+06Y	1.00	8.351E-01	8.351E-01	3.485E-01	41.73	
U-238	4.47E+09Y	1.00	8.632E+00	8.632E+00	2.593E+00	30.03	
AM-243	7380.00Y	1.00	3.301E-01	3.302E-01	0.740E-01	22.42	
ANH-511	1.00E+09Y	1.00	1.051E-01	1.051E-01	0.551E-01	52.42	
Total Activity :			8.299E+01	8.307E+01			

Grand Total Activity : 8.299E+01 8.307E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395002

Page : 5
Acquisition date : 2-FEB-2010 07:20:31

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	98.97	216	585	1.06	197.04	193	9	3.00E-02	42.7	7.39E+00	T
0	209.36	193	414	1.67	417.73	413	10	2.68E-02	42.1	7.26E+00	T
0	270.48	112	338	1.15	539.94	535	10	1.55E-02	64.8	6.35E+00	T
0	463.51	93	210	1.09	925.88	921	12	1.29E-02	66.1	4.59E+00	T
0	727.62	174	202	2.14	1453.96	1443	22	2.41E-02	44.5	3.34E+00	T
0	795.50	89	128	2.16	1589.69	1584	14	1.23E-02	59.0	3.11E+00	T
0	838.70	139	143	6.16	1676.07	1665	24	1.93E-02	48.7	2.98E+00	
0	1000.80	186	91	1.91	2000.21	1992	18	2.58E-02	28.7	2.57E+00	T
0	1377.69	69	47	1.45	2753.89	2746	16	9.65E-03	50.5	1.98E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395002.CNF;1  *
* Acquisition date   : 2-FEB-2010 07:20:31.  Detector SN#      :             *
* Detector ID        : GAM18                      Sensitivity    : 5.00000      *
* Geometry           : CAN                      Energy tolerance: 1.50000      *
* Elapsed live time  : 0 02:00:00.00           Abundance limit : 75.00000      *
* Elapsed real time  : 0 02:00:01.98           Half life ratio : 8.00000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00  Nuclide Library : SOLID          *
* Sample ID          : G245395002             Analyst initials: MXR1          *
* Batch Number       : 944966                 Sample Quantity : 1.45270E+02 GRAM  *
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 23-APR-2009 11:59:23.2MS Isotope        :             *
* MSD ID              :                      MSD Isotope        :             *
* LCS ID              : 1032-A                LCS Isotope       :             *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.468E+01	3.005E+00	3.531E-01	2.679E-02	98.215
CD-109	2.888E+00	1.047E+00	1.514E+00	1.399E-01	1.908
SN-126	2.844E-01	1.032E-01	1.391E-01	1.282E-02	2.044
TL-208	4.713E-01	7.661E-02	4.268E-02	3.346E-03	11.042
BI-211	3.525E+00	3.882E-01	2.503E-01	1.606E-02	14.085
PB-212	1.451E+00	1.353E-01	7.259E-02	5.186E-03	19.988
PO-212	1.451E+00	1.353E-01	7.259E-02	5.186E-03	19.988
BI-214	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049
PB-214	1.226E+00	1.494E-01	8.856E-02	7.326E-03	13.847
PO-214	1.226E+00	1.494E-01	8.856E-02	7.326E-03	13.847
PO-216	1.451E+00	1.353E-01	7.259E-02	5.186E-03	19.988
PO-218	1.226E+00	1.494E-01	8.856E-02	7.326E-03	13.847
RA-224	4.071E+00	9.195E-01	8.251E-01	4.596E-02	4.935
RA-226	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049
AC-228	1.582E+00	2.874E-01	1.409E-01	1.866E-02	11.230
RA-228	1.582E+00	2.874E-01	1.409E-01	1.866E-02	11.230
TH-228	1.471E+00	1.372E-01	7.359E-02	5.258E-03	19.988
TH-230	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.582E+00	2.874E-01	1.409E-01	1.866E-02	11.230
TH-234	8.632E+00	2.593E+00	2.143E+00	3.778E-01	4.028
U-234	1.044E+00	1.484E-01	8.666E-02	7.741E-03	12.049
U-235	1.899E-01	2.123E-01	2.860E-01	4.631E-02	0.664
NP-237	8.351E-01	3.485E-01	3.866E-01	8.723E-02	2.160
U-238	8.632E+00	2.593E+00	2.143E+00	3.778E-01	4.028
AM-243	3.302E-01	7.401E-02	9.036E-02	7.541E-03	3.654
ANH-511	1.051E-01	5.510E-02	3.432E-02	2.267E-03	3.062

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.498E-02		2.420E-01	4.005E-01	2.902E-02	0.037
NA-22	-2.192E-02		3.487E-02	5.456E-02	3.713E-03	-0.402
NA-24	-2.820E-02		7.762E-02	Half-Life too short		
AL-26	-7.983E-04		1.852E-02	3.016E-02	1.761E-03	-0.026
TI-44	3.162E-01	+	5.307E-02	7.372E-02	6.303E-03	4.289
SC-46	-2.456E-03		2.865E-02	4.652E-02	5.189E-03	-0.053
V-48	8.725E-03		5.281E-02	8.650E-02	8.556E-03	0.101
CR-51	1.045E-01		2.790E-01	4.576E-01	2.946E-02	0.228
MN-52	5.557E-02		1.453E-01	2.453E-01	1.808E-02	0.227
MN-54	5.460E-03		3.429E-02	4.906E-02	5.025E-03	0.111
CO-56	-5.482E-03		3.555E-02	4.933E-02	5.149E-03	-0.111
CO-57	3.093E-02		2.244E-02	3.770E-02	2.233E-03	0.820
CO-58	7.042E-03		2.899E-02	4.854E-02	4.791E-03	0.145
FE-59	-8.217E-02		7.173E-02	1.099E-01	9.043E-03	-0.748
CO-60	4.089E-03		3.073E-02	5.081E-02	3.839E-03	0.080
ZN-65	5.260E-02		8.723E-02	1.303E-01	9.178E-03	0.404
GE-68	-5.800E-01		1.010E+00	1.621E+00	1.287E-01	-0.358
AS-73	4.449E-01		1.023E+00	1.745E+00	1.383E-01	0.255
AS-74	1.530E-02		6.841E-02	1.121E-01	8.057E-03	0.136
SE-75	1.648E-02		3.588E-02	5.561E-02	3.181E-03	0.296
BR-77	4.973E+00		5.365E+00	9.231E+00	6.158E-01	0.539
SR-82	-1.987E-01		2.941E-01	4.659E-01	4.339E-02	-0.427
RB-83	4.202E-02		5.109E-02	8.748E-02	5.834E-03	0.480
RB-84	-1.584E-02		5.002E-02	7.985E-02	8.800E-03	-0.198
KR-85	1.724E+01		6.433E+00	1.064E+01	7.048E-01	1.620
SR-85	8.718E-02		3.253E-02	5.380E-02	3.564E-03	1.620
RB-86	1.180E-02		6.128E-01	1.024E+00	8.148E-02	0.012
Y-88	-1.533E-02		2.216E-02	3.211E-02	1.829E-03	-0.477
ZR-88	-9.251E-03		2.179E-02	3.573E-02	2.055E-03	-0.259
Y-91	-2.044E+01		1.597E+01	2.429E+01	1.436E+00	-0.842
NB-94	-6.013E-02		2.458E-02	4.044E-02	3.318E-03	-0.149
NB-95	7.270E-02		3.796E-02	6.753E-02	6.178E-03	1.076
NB-95M	3.761E-02		1.095E-01	1.612E-01	1.183E-02	0.233
ZR-95	3.711E-02		5.394E-02	9.288E-02	9.139E-03	0.400
NB-97	-1.628E-02		1.059E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	7.943E-01		2.126E-01	Half-Life too short		
MO-99	2.009E+00		5.939E+00	1.007E+01	1.536E+00	0.199
TC-99M	1.514E+08		5.096E+08	Half-Life too short		
RH-101	-1.036E-02		2.584E-02	4.253E-02	2.286E-03	-0.244
RH-102	1.191E-03		2.246E-02	3.717E-02	2.361E-03	0.032
RU-103	-1.606E-02		2.869E-02	4.545E-02	5.902E-03	-0.353
RH-106	5.450E-02		2.332E-01	3.815E-01	4.800E-02	0.143
RU-106	5.450E-02		2.331E-01	3.815E-01	2.808E-02	0.143
AG-108M	1.164E-02		2.369E-02	4.039E-02	2.639E-03	0.288
AG-110M	-2.186E-02		2.748E-02	4.406E-02	3.475E-03	-0.496
IN-111	1.426E-01		6.655E-01	9.716E-01	5.430E-02	0.147
IN-113M	1.425E-02		3.120E-02	5.346E-02	3.279E-03	0.267
SN-113	1.425E-02		3.120E-02	5.346E-02	3.279E-03	0.267
IN-114M	4.084E-02		1.577E-01	2.355E-01	1.257E-02	0.173
CD-115	1.285E+00		5.513E+00	9.136E+00	6.141E-01	0.141
SN-117M	2.578E-02		4.085E-02	7.058E-02	3.751E-03	0.365
SB-122	1.465E+00		1.186E+00	2.050E+00	1.429E-01	0.715
I-123	-1.393E-01		4.357E-01	Half-Life too short		
TE-123M	-3.597E-03		2.249E-02	3.791E-02	2.045E-03	-0.095
I-124	2.682E-01		4.861E-01	7.076E-01	5.116E-02	0.379
SB-124	1.347E-02		5.368E-02	9.151E-02	6.313E-03	0.147
SB-125	1.243E-03		6.620E-02	1.103E-01	6.891E-03	0.011
TE-125M	-1.662E+01		8.845E+00	1.317E+01	1.157E+00	-1.262
I-126	-9.326E-02		1.321E-01	2.127E-01	1.635E-02	-0.439
SB-126	9.442E-05		1.153E-01	1.654E-01	1.400E-02	0.001
SB-127	4.718E-02		8.183E-01	1.373E+00	1.442E-01	0.034
XE-127	-1.029E-02		3.601E-02	5.941E-02	3.207E-03	-0.173
I-131	5.872E-03		7.419E-02	1.255E-01	8.086E-03	0.047
TE-132	-1.900E-03		3.985E-01	6.587E-01	9.219E-02	-0.003
BA-133	1.692E-02		3.821E-02	5.482E-02	6.332E-03	0.309
I-133	1.121E-03		8.252E-04	Half-Life too short		
CS-134	9.697E-02	+	5.797E-02	7.168E-02	6.933E-03	1.353
CS-135	1.252E-01		1.417E-01	2.124E-01	1.606E-02	0.589
I-135	2.898E+07		8.770E+07	Half-Life too short		
CS-136	-8.256E-03		7.829E-02	1.300E-01	1.165E-02	-0.064
BA-137M	4.635E-02		2.917E-02	5.239E-02	3.994E-03	0.885
CS-137	4.900E-02		3.084E-02	5.538E-02	4.232E-03	0.885
CE-139	6.471E-03		2.359E-02	4.021E-02	2.111E-03	0.161
BA-140	2.302E-02		1.823E-01	2.996E-01	9.801E-02	0.077
LA-140	-2.019E-02		5.614E-02	8.946E-02	6.138E-03	-0.226
CE-141	1.946E-04		6.065E-02	8.543E-02	4.877E-03	0.002
CE-143	3.398E-04		5.078E-05	Half-Life too short		
CE-144	-1.297E-01		1.851E-01	2.861E-01	4.045E-02	-0.453
PM-144	-2.220E-03		2.529E-02	4.203E-02	3.412E-03	-0.053
PR-144	-1.503E-01		1.713E+00	2.846E+00	2.310E-01	-0.053
PM-146	7.965E-03		3.324E-02	5.573E-02	4.958E-03	0.143
ND-147	1.224E-02		4.028E-01	6.596E-01	9.203E-02	0.019
PM-149	-5.184E+01		4.975E+01	7.616E+01	1.077E+01	-0.681

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	2.028E-02		9.047E-02	1.195E-01	7.799E-03	0.170
GD-153	6.482E-02		1.098E-01	1.305E-01	1.020E-02	0.497
EU-154	-1.024E-01		1.004E-01	1.518E-01	1.517E-02	-0.674
EU-155	6.217E-02		9.973E-02	1.648E-01	1.179E-02	0.377
TB-160	2.787E-02		1.053E-01	1.753E-01	1.926E-02	0.159
HO-166M	-2.602E-02		4.534E-02	7.292E-02	6.078E-03	-0.357
TM-171	-3.161E+01		3.116E+01	4.424E+01	3.537E+00	-0.714
LU-176	-4.936E-03		1.976E-02	3.040E-02	1.750E-03	-0.162
LU-177	2.611E+00	+	1.109E+00	1.408E+00	7.639E-02	1.854
LU-177M	-1.780E-01		1.316E-01	2.040E-01	1.205E-02	-0.873
HF-181	-1.705E-02		3.201E-02	5.119E-02	3.276E-03	-0.333
W-181	4.231E-01		4.174E-01	6.459E-01	5.123E-02	0.655
TA-182	-7.418E-02		1.590E-01	2.547E-01	1.558E-02	-0.291
RE-183	4.203E-03		8.562E-02	1.451E-01	7.658E-03	0.029
RE-184	1.309E-01		1.747E-01	2.956E-01	1.660E-02	0.443
OS-185	-6.503E-03		3.287E-02	5.210E-02	3.918E-03	-0.125
RE-188	-2.231E-02		1.352E-01	2.282E-01	1.221E-02	-0.098
W-188	8.361E-01		6.488E+00	9.284E+00	5.318E-01	0.090
IR-192	-1.087E-02		2.666E-02	4.208E-02	2.441E-03	-0.258
AU-195	7.306E-01	+	3.170E-01	3.896E-01	2.981E-02	1.875
TL-200	4.663E-05		7.184E-05	Half-Life too short		
TL-201	-2.370E-01		4.136E+00	6.970E+00	3.659E-01	-0.034
TL-202	1.036E-03		4.525E-02	7.524E-02	4.587E-03	0.014
HG-203	6.793E-03		3.282E-02	5.389E-02	3.268E-03	0.126
BI-207	-1.083E-03		4.244E-02	7.077E-02	5.842E-03	-0.015
TL-207	-6.919E-01		5.526E-01	8.162E-01	1.347E-01	-0.848
PO-209	-1.909E+00		5.812E+00	9.267E+00	1.045E+00	-0.206
BI-210	2.574E+00		4.954E+00	8.526E+00	6.596E-01	0.302
PB-210	2.574E+00		4.954E+00	8.526E+00	6.596E-01	0.302
PO-210	2.574E+00		4.953E+00	8.526E+00	5.671E-01	0.302
PB-211	-9.012E-01		9.280E-01	1.153E+00	7.190E-01	-0.781
BI-212	1.141E+00	+	5.203E-01	5.027E-01	5.006E-02	2.270
PO-215	-6.919E-01		5.526E-01	8.162E-01	1.347E-01	-0.848
RN-219	4.598E-02		3.106E-01	5.231E-01	7.121E-02	0.088
RN-220	-1.158E+01		2.001E+01	3.144E+01	2.161E+00	-0.368
RA-223	-6.919E-01		5.526E-01	8.162E-01	1.347E-01	-0.848
AC-227	-2.524E-01		2.937E-01	4.596E-01	6.383E-02	-0.549
TH-227	-2.524E-01		2.947E-01	4.596E-01	7.740E-02	-0.549
TH-229	-8.674E-02		4.061E-01	6.740E-01	3.609E-02	-0.129
PA-231	3.129E-02		1.223E+00	1.991E+00	2.737E-01	0.016
TH-231	-6.919E-01		5.526E-01	8.162E-01	1.347E-01	-0.848
U-231	8.601E-01		1.124E+00	1.354E+00	1.085E-01	0.635
PA-233	-1.158E-02		4.982E-02	7.947E-02	4.868E-03	-0.146
PA-234	-1.483E-02		2.161E-01	3.493E-01	6.890E-02	-0.042
PA-234M	2.223E+01	+	6.807E+00	8.793E+00	9.486E-01	2.528
NP-236	-3.696E-02		6.333E-02	1.051E-01	5.569E-03	-0.352
NP-239	1.707E-02		1.663E-01	2.687E-01	1.663E-02	0.064
AM-241	1.088E-01		1.894E-01	2.910E-01	2.414E-02	0.374

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.441E-02		1.003E-01	1.466E-01	1.049E-02	0.167
AM-246	-6.442E-02		1.140E-01	1.830E-01	1.447E-02	-0.352
CM-247	-2.268E-03		2.837E-02	4.726E-02	2.753E-03	-0.048
CF-249	1.159E-02		2.866E-02	4.900E-02	2.817E-03	0.237
CF-251	5.611E-02		1.010E-01	1.731E-01	9.140E-03	0.324

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395002            *
* Acquisition date   : 2-FEB-2010 07:20:31 Detector SN#      :              *
* Detector ID        : GAM18 Sensitivity      : 5.000           *
* Geometry           : CAN Energy tolerance: 1.500           *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000    *
* Elapsed real time  : 0 02:00:01.98 Half life ratio : 8.000    *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395002 Analyst initials: MXR1           *
* Batch Number       : 944966 Sample Quantity : 1.4527E+02 GRAM      *
* Recovery           : 1.00000 Carrier Weight : 0.00000           *
*****
*
*                                     QC DATA                                *
*
* CALIB. DATE/TIME  : 23-APR-2009 11:59:23 MS Isotope      :              *
* MSD DPM           : 0.000 MSD Isotope      :                  *
* LCS DPM           : 0.000 LCS Isotope      :                  *
* LCSD DPM          : 0.000 LCSD Isotope     :                  *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.468E+01	2.945E+00	1.776E-01	1.503E+00
CD-109	2.888E+00	1.027E+00	8.105E-01	5.237E-01
SN-126	2.844E-01	1.011E-01	7.450E-02	5.158E-02
TL-208	4.713E-01	7.508E-02	2.193E-02	3.831E-02
BI-211	3.525E+00	3.804E-01	1.301E-01	1.941E-01
PB-212	1.451E+00	1.326E-01	3.805E-02	6.767E-02
PO-212	1.451E+00	1.326E-01	3.805E-02	6.767E-02
BI-214	1.044E+00	1.455E-01	4.448E-02	7.422E-02
PB-214	1.226E+00	1.464E-01	4.602E-02	7.471E-02
PO-214	1.226E+00	1.464E-01	4.602E-02	7.471E-02
PO-216	1.451E+00	1.326E-01	3.805E-02	6.767E-02
PO-218	1.226E+00	1.464E-01	4.602E-02	7.471E-02
RA-224	4.071E+00	9.011E-01	4.324E-01	4.598E-01
RA-226	1.044E+00	1.455E-01	4.448E-02	7.422E-02
AC-228	1.582E+00	2.816E-01	7.164E-02	1.437E-01
RA-228	1.582E+00	2.816E-01	7.164E-02	1.437E-01
TH-228	1.471E+00	1.345E-01	3.858E-02	6.861E-02
TH-230	1.044E+00	1.455E-01	4.448E-02	7.422E-02
TH-232	1.582E+00	2.816E-01	7.164E-02	1.437E-01
TH-234	8.632E+00	2.541E+00	1.155E+00	1.296E+00
U-234	1.044E+00	1.455E-01	4.448E-02	7.422E-02
U-235	1.899E-01	2.081E-01	1.515E-01	1.062E-01
NP-237	8.351E-01	3.415E-01	2.071E-01	1.743E-01
U-238	8.632E+00	2.541E+00	1.155E+00	1.296E+00
AM-243	3.302E-01	7.253E-02	4.855E-02	3.700E-02
ANH-511	1.051E-01	5.400E-02	1.769E-02	2.755E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.498E-02	2.372E-01	2.067E-01	1.210E-01 NOT IDENT.

NA-22	-2.192E-02	3.417E-02	2.753E-02	1.744E-02	NOT IDENT.
NA-24	-2.820E+04	1.521E+05	0.000E+00	7.762E+04	SHORT HLIF
AL-26	-7.983E-04	1.815E-02	1.509E-02	9.260E-03	NOT IDENT.
TI-44	3.162E-01	5.201E-02	3.957E-02	2.654E-02	FAIL ABUN
SC-46	-2.456E-03	2.807E-02	2.367E-02	1.432E-02	FAIL ABUN
V-48	8.725E-03	5.175E-02	4.391E-02	2.640E-02	NOT IDENT.
CR-51	1.045E-01	2.734E-01	2.383E-01	1.395E-01	NOT IDENT.
MN-52	5.557E-02	1.424E-01	1.234E-01	7.263E-02	NOT IDENT.
MN-54	5.460E-03	3.360E-02	2.500E-02	1.714E-02	NOT IDENT.
CO-56	-5.482E-03	3.484E-02	2.513E-02	1.777E-02	NOT IDENT.
CO-57	3.093E-02	2.199E-02	2.005E-02	1.122E-02	NOT IDENT.
CO-58	7.042E-03	2.841E-02	2.475E-02	1.450E-02	NOT IDENT.
FE-59	-8.217E-02	7.030E-02	5.564E-02	3.587E-02	FAIL ABUN
CO-60	4.089E-03	3.012E-02	2.561E-02	1.537E-02	NOT IDENT.
ZN-65	5.260E-02	8.548E-02	6.596E-02	4.361E-02	NOT IDENT.
GE-68	-5.800E-01	9.895E-01	8.210E-01	5.048E-01	NOT IDENT.
AS-73	4.449E-01	1.003E+00	9.440E-01	5.117E-01	NOT IDENT.
AS-74	1.530E-02	6.704E-02	5.759E-02	3.420E-02	NOT IDENT.
SE-75	1.648E-02	3.516E-02	2.909E-02	1.794E-02	NOT IDENT.
BR-77	4.973E+00	5.258E+00	4.755E+00	2.682E+00	FAIL ABUN
SR-82	-1.987E-01	2.882E-01	2.378E-01	1.470E-01	NOT IDENT.
RB-83	4.202E-02	5.007E-02	4.507E-02	2.554E-02	NOT IDENT.
RB-84	-1.584E-02	4.902E-02	4.064E-02	2.501E-02	NOT IDENT.
KR-85	1.724E+01	6.304E+00	5.482E+00	3.217E+00	NOT IDENT.
SR-85	8.718E-02	3.188E-02	2.772E-02	1.672E-02	NOT IDENT.
RB-86	1.180E-02	6.005E-01	5.186E-01	3.064E-01	NOT IDENT.
Y-88	-1.533E-02	2.172E-02	1.606E-02	1.108E-02	NOT IDENT.
ZR-88	-9.251E-03	2.136E-02	1.852E-02	1.090E-02	NOT IDENT.
Y-91	-2.044E+01	1.565E+01	1.227E+01	7.986E+00	NOT IDENT.
NB-94	-6.013E-03	2.409E-02	2.069E-02	1.229E-02	NOT IDENT.
NB-95	7.270E-02	3.721E-02	3.449E-02	1.898E-02	NOT IDENT.
NB-95M	3.761E-02	1.073E-01	8.451E-02	5.475E-02	NOT IDENT.
ZR-95	3.711E-02	5.286E-02	4.744E-02	2.697E-02	NOT IDENT.
NB-97	-1.628E+04	2.076E+04	0.000E+00	1.059E+04	SHORT HLIF
ZR-97	7.943E+05	4.167E+05	0.000E+00	2.126E+05	SHORT HLIF
MO-99	2.009E+00	5.820E+00	5.146E+00	2.969E+00	NOT IDENT.
TC-99M	1.514E+14	9.988E+14	0.000E+00	5.096E+14	SHORT HLIF
RH-101	-1.036E-02	2.532E-02	2.238E-02	1.292E-02	NOT IDENT.
RH-102	1.191E-03	2.201E-02	1.919E-02	1.123E-02	NOT IDENT.
RU-103	-1.606E-02	2.812E-02	2.344E-02	1.435E-02	FAIL ABUN
RH-106	5.450E-02	2.285E-01	1.958E-01	1.166E-01	FAIL ABUN
RU-106	5.450E-02	2.285E-01	1.958E-01	1.166E-01	FAIL ABUN
AG-108M	1.164E-02	2.322E-02	2.089E-02	1.185E-02	NOT IDENT.
AG-110M	-2.186E-02	2.693E-02	2.258E-02	1.374E-02	NOT IDENT.
IN-111	1.426E-01	6.521E-01	5.090E-01	3.327E-01	NOT IDENT.
IN-113M	1.425E-02	3.058E-02	2.772E-02	1.560E-02	NOT IDENT.
SN-113	1.425E-02	3.058E-02	2.772E-02	1.560E-02	NOT IDENT.
IN-114M	4.084E-02	1.546E-01	1.241E-01	7.886E-02	NOT IDENT.
CD-115	1.285E+00	5.403E+00	4.705E+00	2.757E+00	NOT IDENT.
SN-117M	2.578E-02	4.003E-02	3.732E-02	2.042E-02	NOT IDENT.
SB-122	1.465E+00	1.162E+00	1.054E+00	5.928E-01	NOT IDENT.
I-123	-1.393E+05	8.541E+05	0.000E+00	4.357E+05	SHORT HLIF
TE-123M	-3.597E-03	2.205E-02	2.004E-02	1.125E-02	NOT IDENT.
I-124	2.682E-01	4.764E-01	3.633E-01	2.431E-01	FAIL ABUN
SB-124	1.347E-02	5.261E-02	4.587E-02	2.684E-02	FAIL ABUN
SB-125	1.243E-03	6.488E-02	5.707E-02	3.310E-02	FAIL ABUN
TE-125M	-1.662E+01	8.668E+00	7.018E+00	4.422E+00	NOT IDENT.
I-126	-9.326E-02	1.294E-01	1.089E-01	6.603E-02	NOT IDENT.
SB-126	9.442E-05	1.130E-01	8.457E-02	5.763E-02	FAIL ABUN
SB-127	4.718E-02	8.020E-01	7.031E-01	4.092E-01	NOT IDENT.
XE-127	-1.029E-02	3.529E-02	3.125E-02	1.801E-02	NOT IDENT.
I-131	5.872E-03	7.270E-02	6.517E-02	3.709E-02	NOT IDENT.
TE-132	-1.900E-03	3.906E-01	3.456E-01	1.993E-01	NOT IDENT.
BA-133	1.692E-02	3.744E-02	2.848E-02	1.910E-02	NOT IDENT.
I-133	1.121E+03	1.617E+03	0.000E+00	8.252E+02	SHORT HLIF
CS-134	9.697E-02	5.681E-02	3.657E-02	2.899E-02	FAIL ABUN
CS-135	1.252E-01	1.388E-01	1.111E-01	7.083E-02	NOT IDENT.
I-135	2.898E+13	1.719E+14	0.000E+00	8.770E+13	SHORT HLIF
CS-136	-8.256E-03	7.672E-02	6.591E-02	3.914E-02	FAIL ABUN
BA-137M	4.635E-02	2.859E-02	2.684E-02	1.458E-02	NOT IDENT.
CS-137	4.900E-02	3.022E-02	2.838E-02	1.542E-02	NOT IDENT.
CE-139	6.471E-03	2.312E-02	2.124E-02	1.180E-02	NOT IDENT.
BA-140	2.302E-02	1.786E-01	1.542E-01	9.114E-02	NOT IDENT.
LA-140	-2.019E-02	5.502E-02	4.490E-02	2.807E-02	NOT IDENT.
CE-141	1.946E-04	5.944E-02	4.526E-02	3.033E-02	NOT IDENT.
CE-143	3.398E+02	9.952E+01	0.000E+00	5.078E+01	SHORT HLIF
CE-144	-1.297E-01	1.814E-01	1.518E-01	9.255E-02	NOT IDENT.
PM-144	-2.220E-03	2.478E-02	2.151E-02	1.264E-02	NOT IDENT.

PR-144	-1.503E-01	1.678E+00	1.457E+00	8.563E-01	NOT IDENT.
PM-146	7.965E-03	3.258E-02	2.880E-02	1.662E-02	NOT IDENT.
ND-147	1.224E-02	3.948E-01	3.396E-01	2.014E-01	NOT IDENT.
PM-149	-5.184E+01	4.876E+01	3.976E+01	2.488E+01	NOT IDENT.
EU-152	2.028E-02	8.866E-02	6.214E-02	4.524E-02	NOT IDENT.
GD-153	6.482E-02	1.076E-01	6.972E-02	5.489E-02	NOT IDENT.
EU-154	-1.024E-01	9.843E-02	7.662E-02	5.022E-02	NOT IDENT.
EU-155	6.217E-02	9.774E-02	8.794E-02	4.987E-02	FAIL ABUN
TB-160	2.787E-02	1.032E-01	8.923E-02	5.263E-02	FAIL ABUN
HO-166M	-2.602E-02	4.443E-02	3.730E-02	2.267E-02	NOT IDENT.
TM-171	-3.161E+01	3.054E+01	2.382E+01	1.558E+01	NOT IDENT.
LU-176	-4.936E-03	1.937E-02	1.585E-02	9.881E-03	FAIL ABUN
LU-177	2.611E+00	1.087E+00	7.404E-01	5.544E-01	FAIL ABUN
LU-177M	-1.780E-01	1.290E-01	1.056E-01	6.580E-02	NOT IDENT.
HF-181	-1.705E-02	3.137E-02	2.642E-02	1.601E-02	NOT IDENT.
W-181	4.231E-01	4.091E-01	3.480E-01	2.087E-01	NOT IDENT.
TA-182	-7.418E-02	1.558E-01	1.287E-01	7.951E-02	FAIL ABUN
RE-183	4.203E-03	8.391E-02	7.668E-02	4.281E-02	FAIL ABUN
RE-184	1.309E-01	1.712E-01	1.547E-01	8.733E-02	NOT IDENT.
OS-185	-6.503E-03	3.221E-02	2.671E-02	1.643E-02	NOT IDENT.
RE-188	-2.231E-02	1.325E-01	1.207E-01	6.761E-02	NOT IDENT.
W-188	8.361E-01	6.359E+00	4.845E+00	3.244E+00	FAIL ABUN
IR-192	-1.087E-02	2.612E-02	2.192E-02	1.333E-02	FAIL ABUN
AU-195	7.306E-01	3.106E-01	2.081E-01	1.585E-01	FAIL ABUN
TL-200	4.663E+01	1.408E+02	0.000E+00	7.184E+01	SHORT HLIF
TL-201	-2.370E-01	4.053E+00	3.682E+00	2.068E+00	NOT IDENT.
TL-202	1.036E-03	4.435E-02	3.891E-02	2.263E-02	NOT IDENT.
HG-203	6.793E-03	3.217E-02	2.815E-02	1.641E-02	NOT IDENT.
BI-207	-1.083E-03	4.159E-02	3.586E-02	2.122E-02	FAIL ABUN
TL-207	-6.919E-01	5.415E-01	4.249E-01	2.763E-01	FAIL ABUN
PO-209	-1.909E+00	5.696E+00	4.715E+00	2.906E+00	NOT IDENT.
BI-210	2.574E+00	4.855E+00	4.626E+00	2.477E+00	NOT IDENT.
PB-210	2.574E+00	4.855E+00	4.626E+00	2.477E+00	NOT IDENT.
PO-210	2.574E+00	4.854E+00	4.626E+00	2.477E+00	NOT IDENT.
PB-211	-9.012E-01	9.094E-01	5.975E-01	4.640E-01	NOT IDENT.
BI-212	1.141E+00	5.099E-01	2.570E-01	2.601E-01	FAIL ABUN
PO-215	-6.919E-01	5.415E-01	4.249E-01	2.763E-01	FAIL ABUN
RN-219	4.598E-02	3.044E-01	2.711E-01	1.553E-01	FAIL ABUN
RN-220	-1.158E+01	1.961E+01	1.618E+01	1.000E+01	NOT IDENT.
RA-223	-6.919E-01	5.415E-01	4.249E-01	2.763E-01	FAIL ABUN
AC-227	-2.524E-01	2.878E-01	2.405E-01	1.469E-01	FAIL ABUN
TH-227	-2.524E-01	2.888E-01	2.405E-01	1.473E-01	FAIL ABUN
TH-229	-8.674E-02	3.980E-01	3.549E-01	2.030E-01	FAIL ABUN
PA-231	3.129E-02	1.199E+00	1.040E+00	6.116E-01	FAIL ABUN
TH-231	-6.919E-01	5.415E-01	4.249E-01	2.763E-01	FAIL ABUN
U-231	8.601E-01	1.101E+00	7.237E-01	5.619E-01	FAIL ABUN
PA-233	-1.158E-02	4.882E-02	4.141E-02	2.491E-02	FAIL ABUN
PA-234	-1.483E-02	2.118E-01	1.775E-01	1.081E-01	FAIL ABUN
PA-234M	2.223E+01	6.671E+00	4.462E+00	3.404E+00	FAIL ABUN
NP-236	-3.696E-02	6.207E-02	5.557E-02	3.167E-02	FAIL ABUN
NP-239	1.707E-02	1.630E-01	1.430E-01	8.317E-02	FAIL ABUN
AM-241	1.088E-01	1.856E-01	1.571E-01	9.468E-02	NOT IDENT.
CM-243	2.441E-02	9.825E-02	7.823E-02	5.013E-02	FAIL ABUN
AM-246	-6.442E-02	1.117E-01	9.268E-02	5.700E-02	NOT IDENT.
CM-247	-2.268E-03	2.780E-02	2.449E-02	1.418E-02	NOT IDENT.
CF-249	1.159E-02	2.809E-02	2.541E-02	1.433E-02	NOT IDENT.
CF-251	5.611E-02	9.901E-02	9.131E-02	5.052E-02	NOT IDENT.

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*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD       *
*               CHARLESTON ,SC 29417   *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
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46.50	351.7588
46.50	351.7588
46.50	351.7588
48.70	361.2139
49.72	380.6528
51.35	390.3354
52.39	399.1685
52.97	372.7793
53.15	373.0348
53.44	382.5551
54.07	380.7271
56.28	437.2455
56.28	437.2504
57.37	0.0000
57.53	442.0117
57.53	442.0141
57.60	428.2481
57.98	410.3093
57.98	410.3093
59.32	420.1765
59.32	420.1765
59.40	420.2947
59.54	420.5014
59.72	405.3898
60.01	415.5965
61.10	488.8082
61.14	488.8759
61.30	489.1454
63.00	435.4373
63.29	435.8626
63.29	435.8626
63.58	436.2867
64.28	448.6676
65.12	441.3743
65.20	441.4908
65.20	441.4908
66.05	492.7079
66.72	478.0355
66.83	465.3229
66.91	465.4419
67.20	501.7151
67.20	501.7151
67.75	510.0689
67.85	522.8751
68.90	487.1515
68.90	487.1515
69.30	470.4506
69.67	462.3340
70.82	520.5407
70.82	520.5407
70.83	520.5571
72.80	585.4748
72.87	585.6003
72.87	585.6003
74.67	588.7847
74.81	589.0312
74.81	589.0312
74.81	589.0312
74.81	589.0312
74.81	589.0312
74.81	589.0312
74.81	589.0312
74.97	589.3114
75.28	589.8564
75.70	590.5912
77.11	593.0408
77.11	593.0408

77.11	593.0408
77.11	593.0408
77.11	593.0408
77.11	593.0408
77.11	593.0408
78.38	573.9719
79.62	558.1570
79.80	570.3565
79.80	570.3565
80.11	570.8591
80.18	570.9731
80.30	562.2181
80.30	562.2181
80.57	562.6496
81.00	605.1702
81.07	605.2907
81.07	605.2907
81.07	605.2907
81.07	605.2907
82.60	641.4043
83.37	558.0341
83.78	581.2588
83.78	581.2588
83.78	581.2588
83.78	581.2588
84.21	541.2390
84.90	554.3416
85.43	546.0637
86.29	665.5938
86.50	665.9689
86.54	666.0393
86.59	666.1297
86.72	696.7189
86.79	696.8450
86.94	697.1287
87.30	768.6453
87.30	768.6453
87.30	768.6453
87.30	768.6453
87.30	768.6453
87.30	768.6453
87.57	769.1970
87.88	895.2923
88.03	895.6512
88.36	737.8792
88.47	738.0934
89.95	900.1821
91.11	832.2615
92.29	682.3116
92.38	682.4705
92.38	682.4705
93.35	684.1570
94.00	685.2859
94.67	415.2679
94.67	415.2740
94.90	415.5133
94.90	415.5133
94.90	415.5133
94.90	415.5133
95.87	463.1468
95.87	463.1468
96.73	464.1404
97.43	511.7443
98.44	432.9308
98.44	432.9308
98.88	433.3954
99.55	434.1007
99.55	434.1007
99.86	415.9064
100.00	416.0479
100.10	416.1510
103.18	487.2374
103.76	443.5477
105.00	423.6511
105.31	437.7370
108.00	493.7743
109.28	550.8285

111.00	505.7175
111.00	505.7175
111.76	423.7572
112.95	460.4593
115.19	521.2374
116.30	479.0409
117.00	398.1698
117.00	398.1698
117.66	441.2219
121.11	422.5017
121.62	403.1777
121.78	403.3121
122.06	368.3606
122.32	368.5583
122.32	368.5583
122.32	368.5583
122.32	368.5583
123.07	418.7174
127.23	481.1819
129.76	435.5950
131.20	446.9186
133.02	423.7837
133.54	464.7174
135.34	416.6565
136.00	407.0068
136.25	419.6432
136.48	414.1700
140.51	417.3347
140.51	0.0000
142.18	447.8012
142.65	463.6464
143.76	422.1496
144.24	417.9276
144.24	417.9276
144.24	417.9276
144.24	417.9276
145.22	441.6797
145.44	441.8594
147.16	413.8008
152.43	386.8234
152.70	391.6685
153.22	402.5281
154.21	422.5075
154.21	422.5075
154.21	422.5075
154.21	422.5075
155.03	414.3324
156.02	404.4899
158.56	374.4613
159.00	0.0000
159.00	398.6026
160.31	409.2305
161.27	415.2165
162.32	387.5075
162.64	380.5997
163.35	370.3667
163.89	382.2843
165.85	384.4188
167.43	390.7940
171.28	380.6088
171.86	380.9629
172.10	376.5923
176.55	365.6129
176.60	365.6405
181.06	388.3292
184.41	380.0083
185.71	380.9392
186.00	381.1062
190.27	362.5539
192.34	354.5035
193.63	386.3720
197.04	382.6556
198.01	362.5258
198.60	363.7721
200.40	360.9385
201.83	374.8893
202.84	378.2593
205.31	343.1299

208.36	368.9791
208.81	352.8059
209.75	353.2603
209.75	353.2603
210.97	302.9724
215.65	373.9680
216.55	367.1230
218.09	337.9463
222.10	378.5653
223.80	348.2738
226.40	309.4276
227.00	307.7133
227.08	307.7446
227.20	312.6782
228.16	311.1073
228.18	311.1146
228.18	311.1146
231.56	0.0000
235.69	368.2094
236.00	357.2852
236.00	357.2852
238.63	335.0602
238.63	335.0602
238.63	335.0602
238.63	335.0602
239.00	335.2124
240.98	336.0298
241.98	336.4424
241.98	336.4424
241.98	336.4424
244.69	298.8051
245.39	281.4668
247.94	286.0757
248.90	294.0998
249.79	285.3694
252.40	263.0729
252.85	244.0513
252.85	244.0513
254.15	0.0000
256.20	288.5497
256.20	288.5497
260.50	248.2742
260.90	254.4975
262.80	283.6206
264.65	246.7318
268.24	275.9326
268.79	282.6788
269.46	279.5994
269.46	279.5994
269.46	279.5994
269.46	279.5994
271.23	280.1555
273.65	373.4463
276.40	286.5014
277.35	277.9126
277.60	277.9862
277.60	277.9862
278.00	271.8826
278.60	276.2161
279.20	299.2544
279.53	315.9910
280.46	320.4777
281.68	303.1887
283.67	267.2969
284.30	290.4628
285.00	287.5465
285.90	298.2898
286.10	298.3507
286.10	298.3507
287.40	255.1884
288.45	0.0000
290.67	260.8813
290.80	260.9192
291.72	294.8724
293.26	0.0000
293.70	268.4678
295.21	287.4976
295.21	287.4976

295.21	287.4976
295.96	287.7217
296.50	287.8835
297.23	288.0994
298.57	288.5020
299.80	237.8906
299.80	237.8906
300.09	243.0616
300.09	243.0616
300.09	243.0616
300.09	243.0616
300.12	243.0686
301.29	239.9547
302.84	216.4736
303.76	220.0905
303.91	220.1220
304.40	209.9889
304.40	209.9889
304.84	216.9170
306.84	234.7132
308.46	214.2822
311.98	233.3174
316.51	236.5271
318.01	257.4290
319.02	217.6232
319.41	222.0385
320.08	216.7633
323.87	287.1870
323.87	287.1870
323.87	287.1870
323.87	287.1870
325.23	304.9896
328.77	238.2645
333.44	310.9038
334.20	286.5155
334.20	286.5155
334.30	286.5433
338.28	228.2824
338.28	228.2824
338.28	228.2824
338.28	228.2824
338.32	228.2919
338.32	228.2919
338.32	228.2919
340.50	229.8613
340.57	229.8772
344.27	199.6133
345.85	208.7863
350.59	0.0000
351.07	216.4768
351.92	223.3459
351.92	223.3459
351.92	223.3459
355.39	0.0000
356.01	197.2668
364.48	185.2032
366.43	180.0911
367.43	186.5894
367.94	0.0000
369.80	183.3436
374.96	189.6324
383.85	196.5811
387.95	176.0571
388.63	177.0797
391.69	167.3587
391.69	167.3587
392.90	188.8145
398.62	185.0540
400.65	189.0834
401.10	198.4733
401.81	196.7217
402.60	208.9746
404.84	237.3933
410.95	199.1097
411.60	197.3339
413.65	220.2434
414.70	181.8045
415.30	164.9277

415.76	155.5596
417.63	0.0000
418.52	173.8477
423.70	166.0150
427.08	162.6441
427.89	165.6016
432.53	153.7735
433.93	154.8947
439.47	153.6250
439.56	153.6348
439.89	154.6343
443.98	169.5590
444.90	160.0344
445.03	154.2656
445.03	154.2656
445.03	154.2656
445.03	154.2656
453.90	172.7482
463.38	158.3060
468.07	151.9764
473.00	161.3654
475.06	171.4533
475.35	174.4461
476.78	163.7690
477.59	168.7978
477.96	164.8921
482.03	178.2356
484.57	139.8640
487.03	143.0842
490.36	0.0000
492.35	128.6488
497.08	153.0766
507.63	0.0000
510.53	0.0000
510.84	151.4685
511.00	151.4841
511.85	151.5701
511.85	151.5701
513.99	146.7240
513.99	146.7240
520.41	134.1334
520.65	134.1560
527.90	149.0833
528.96	0.0000
529.64	141.0727
529.87	0.0000
531.02	157.5680
537.32	145.8793
543.00	147.4338
546.56	0.0000
549.76	159.4517
552.65	123.4334
555.20	138.1726
563.23	161.8267
563.90	146.2241
568.70	172.8431
569.32	168.7159
569.50	175.0198
569.67	175.0401
573.80	151.0463
574.00	149.7502
574.64	139.6719
578.91	152.8270
579.30	0.0000
583.14	138.4199
585.48	125.2091
591.81	139.3954
592.07	136.9098
593.00	136.0375
595.88	151.1731
600.56	164.3920
602.52	0.0000
602.71	156.7607
602.71	156.7607
603.60	171.0977
604.41	171.1797
604.70	187.2577
609.31	162.0043

609.31	162.0043
609.31	162.0043
609.31	162.0043
610.33	139.5564
612.46	155.8467
614.37	147.0501
618.01	137.7698
621.84	122.0985
621.84	122.0985
631.29	135.7819
633.02	145.6956
633.10	157.6627
634.78	136.0443
635.90	125.2366
636.97	139.4781
645.85	134.6814
646.12	137.9878
656.30	180.7757
657.75	171.7324
657.90	0.0000
661.65	139.8838
661.65	139.8838
664.57	0.0000
666.33	170.6749
666.33	170.6749
675.00	139.0198
677.61	134.5687
685.20	136.9661
692.80	129.0830
695.00	125.4832
696.49	139.6360
696.49	139.6360
697.00	137.7975
697.49	143.4593
698.33	136.0142
698.50	136.0260
699.00	136.0614
702.63	141.0126
706.10	131.8425
706.58	0.0000
706.67	138.4764
709.31	128.2830
711.68	142.6009
713.82	147.4814
717.42	121.2292
720.50	131.7126
721.93	0.0000
722.20	143.2148
722.78	153.0254
722.78	153.0254
722.89	153.0320
722.95	153.0352
723.30	144.9230
724.18	143.3560
727.18	126.5735
733.00	117.8011
735.90	98.3057
739.58	106.2779
742.81	102.6092
744.21	113.2322
747.13	123.9636
751.79	119.4237
752.31	122.3439
753.82	119.5397
755.35	116.7338
756.15	119.6734
756.87	114.8866
763.93	196.6397
765.79	161.9104
766.42	154.1995
766.84	152.2886
776.49	150.0554
778.00	136.5080
778.57	143.3723
778.89	146.3196
783.80	120.2548
785.46	116.4337
792.07	174.9704

795.84	111.0895
796.30	111.1125
798.80	113.0672
801.93	108.1585
805.60	113.5564
810.29	113.7951
810.76	107.8823
815.85	106.1423
817.79	105.2430
818.51	101.3027
819.60	104.3335
826.30	119.5923
828.27	0.0000
831.60	85.6219
831.96	85.6358
834.83	133.7578
836.80	0.0000
846.75	120.6616
848.13	108.6614
856.28	0.0000
856.80	136.7649
860.37	107.2098
867.32	104.3366
867.82	101.9681
871.10	116.8413
873.19	111.8597
874.81	104.8126
875.33	0.0000
876.40	86.5529
879.36	100.9336
880.27	101.9918
880.51	104.0420
881.50	101.0242
883.24	106.2026
884.67	96.0482
889.25	98.2793
896.60	113.9787
898.02	117.1288
899.00	114.0916
903.28	107.6712
911.07	81.4530
911.07	81.4530
911.07	81.4530
919.63	90.4563
920.93	101.6287
925.00	102.8329
925.24	100.7654
926.50	106.0134
935.52	99.0917
937.48	124.2222
944.10	103.6144
946.00	90.0750
949.00	84.9386
962.29	106.6083
964.01	106.6803
966.15	117.6266
968.20	193.7808
969.11	160.6372
969.11	160.6372
969.11	160.6372
977.42	104.6045
980.50	89.1594
983.50	100.9491
989.30	106.4962
996.32	97.0145
1001.03	105.8965
1001.68	105.9207
1004.76	97.3213
1021.30	0.0000
1024.50	0.0000
1034.80	120.2139
1036.00	113.3027
1037.82	107.7992
1038.57	108.7571
1038.76	0.0000
1045.16	108.0865
1046.59	106.2786
1048.07	108.1998

1050.47	112.0271
1050.47	112.0271
1062.04	101.2387
1063.62	116.3019
1076.63	115.8959
1077.35	124.4037
1078.86	120.7009
1085.78	105.8672
1099.22	131.9996
1112.02	118.5081
1112.84	126.8909
1115.52	130.3491
1120.29	113.8203
1120.29	113.8203
1120.29	113.8203
1120.29	113.8203
1120.51	113.8286
1121.28	112.1833
1124.00	0.0000
1129.67	117.7980
1131.51	0.0000
1147.95	0.0000
1167.94	103.0017
1173.22	121.6736
1175.09	126.6176
1177.93	97.4888
1189.05	133.0592
1204.90	172.0825
1205.75	0.0000
1213.00	130.1355
1221.42	147.2799
1230.97	183.4127
1235.34	146.9315
1236.41	0.0000
1238.25	134.1431
1246.25	106.5858
1260.41	0.0000
1271.85	110.4335
1274.45	117.5509
1274.54	106.5028
1291.56	107.0462
1298.22	0.0000
1312.09	76.2033
1325.50	77.5215
1325.50	77.5215
1332.49	69.5036
1333.61	85.8838
1360.21	80.3613
1362.66	0.0000
1365.15	55.7139
1368.21	65.0544
1368.53	0.0000
1376.25	59.7702
1384.27	47.1980
1394.10	52.0089
1395.20	58.2676
1407.95	58.4727
1434.06	42.0661
1436.60	42.0954
1457.56	0.0000
1460.81	35.2203
1489.15	36.2863
1509.49	40.3689
1596.49	42.2275
1620.62	35.7207
1678.03	0.0000
1691.02	26.5089
1691.02	26.5089
1706.46	0.0000
1750.46	0.0000
1764.49	24.8524
1764.49	24.8524
1764.49	24.8524
1764.49	24.8524
1770.23	14.2196
1771.40	16.0015
1791.20	0.0000
1808.65	18.1516

1836.01

25.3624

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395002

Total Uranium Activity	2.5769E+01	ug/g
Total Uranium Counting Unc.	7.5592E+00	ug/g
Total Uranium Tpu	3.8567E-06	ug/g
Total Uranium Mda	3.4379E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 944966                      SAMPLE ID   : G245395002
*  ANALYST       : MXR1                        DETECTOR    : GAM18
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00    COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 07:20:31.92    SAMPLE ALQT  : 145.270 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.003E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.172E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.023E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 9.834E-01

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 09:22:46.41

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395003.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:21:05.
Sample ID          : G245395003      Sample quantity   : 1.70470E+02 GRAM
Detector name      : GAM19           Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00   Elapsed real time: 0 02:00:01.98  0.0%
Energy tolerance    : 1.50000 keV     Analyst Initials : MXR1
Abundance limit     : 75.00000         Sensitivity       : 5.00000
Batch ID           : 944966           Detector SN#      :
Matrix Spike ID    :                  LCS ID           : 1032-A
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.23*	2743	2039	1.29	126.32	119	14	3.81E-01	4.0	
2	1	74.67	469	1548	1.47	149.19	144	15	6.52E-02	16.2	2.93E+00
3	1	77.12	580	1406	1.27	154.08	144	15	8.05E-02	12.2	
4	0	83.45*	107	1597	1.23	166.74	165	8	1.49E-02	65.2	
5	1	92.65*	6272	1229	1.41	185.12	177	25	8.71E-01	1.6	8.00E+00
6	1	98.51	553	835	1.50	196.82	177	25	7.68E-02	12.1	
7	0	112.94*	596	1499	1.43	225.66	218	16	8.27E-02	15.2	
8	0	143.68*	174	507	1.24	287.09	284	8	2.42E-02	23.9	
9	0	178.32*	47	485	1.35	356.32	349	10	6.57E-03	88.9	
10	0	185.85*	1194	623	1.32	371.37	365	14	1.66E-01	5.4	
11	1	205.53	128	295	1.57	410.71	407	17	1.78E-02	23.8	1.21E+00
12	1	209.27	136	405	1.61	418.18	407	17	1.89E-02	29.1	
13	2	238.52*	1130	270	1.32	476.63	471	18	1.57E-01	4.0	6.98E-01
14	2	241.47	241	369	1.80	482.55	471	18	3.35E-02	19.7	
15	0	295.39*	287	352	1.14	590.30	583	14	3.99E-02	15.2	
16	0	300.19	68	165	1.62	599.90	597	8	9.49E-03	34.7	
17	0	338.35	221	380	1.50	676.18	668	16	3.07E-02	20.9	
18	0	351.80*	566	292	1.49	703.06	695	15	7.87E-02	7.9	
19	0	409.53	56	154	1.02	818.46	813	10	7.77E-03	43.9	
20	0	462.80	66	142	1.60	924.96	920	11	9.20E-03	37.0	
21	0	511.35*	117	258	2.01	1022.00	1012	21	1.63E-02	38.0	
22	0	568.42*	136	179	2.49	1136.10	1130	18	1.89E-02	25.0	
23	0	583.01*	402	130	1.45	1165.27	1159	14	5.58E-02	7.9	
24	0	609.43*	354	155	1.38	1218.09	1213	13	4.91E-02	9.3	
25	0	661.65*	57	99	1.48	1322.50	1319	10	7.96E-03	35.2	
26	0	727.81	75	112	0.62	1454.80	1447	13	1.04E-02	31.6	
27	0	767.31	186	129	2.07	1533.77	1525	17	2.59E-02	15.9	
28	0	795.55	48	91	1.93	1590.24	1584	12	6.70E-03	42.4	
29	0	860.85	73	60	1.92	1720.83	1714	12	1.01E-02	24.2	
30	0	911.46*	216	112	1.41	1822.04	1814	16	3.00E-02	13.0	
31	0	966.20	24	77	0.75	1931.51	1922	11	3.31E-03	74.2	
32	0	969.37	166	50	1.76	1937.87	1933	13	2.31E-02	11.8	
33	0	1001.29*	361	68	1.79	2001.70	1995	13	5.01E-02	7.1	
34	0	1120.72	109	59	1.37	2240.59	2233	16	1.51E-02	18.5	
35	0	1461.19*	1385	24	2.02	2921.73	2914	16	1.92E-01	2.8	
36	0	1590.46	18	41	0.77	3180.41	3172	20	2.44E-03	91.6	
37	0	1631.09	10	6	1.19	3261.72	3257	8	1.36E-03	53.9	
38	0	1764.67*	97	8	1.81	3529.07	3522	15	1.34E-02	12.3	

Peak Search Report (continued)
Sample ID : G245395003

Page : 2
Acquisition date : 2-FEB-2010 07:21:05

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
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Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395003.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:21:05
Sample ID         : G245395003 Sample quantity : 170.47 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA19 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00 Elapsed real time: 0 02:00:01.98 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance  : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type   : Empirical Efficiencies at : Peak Energy
Abundance limit   : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.447E+01	2.283E+00	3.915E-01	2.916E-02	62.502
BA-137M	+	661.65	*	6.103E-02	4.312E-02	4.853E-02	2.826E-03	1.257
CS-137	+	661.65	*	6.451E-02	4.559E-02	5.130E-02	3.000E-03	1.257
LU-177	+	112.95		1.250E+01	3.893E+00	2.707E+00	1.763E-01	4.617
	+	208.36	*	2.078E+00	1.216E+00	1.420E+00	7.795E-02	1.464
TL-208		277.35		-1.661E-01	3.375E-01	5.568E-01	5.875E-02	-0.298
	+	510.84		4.216E-01	3.230E-01	1.804E-01	1.842E-02	2.338
	+	583.14	*	4.110E-01	7.053E-02	4.766E-02	3.241E-03	8.624
	+	860.37		7.025E-01	3.464E-01	3.433E-01	3.074E-02	2.046
BI-211		72.87		9.882E+00	4.560E+00	6.832E+00	5.353E-01	1.446
	+	351.07	*	2.545E+00	4.317E-01	2.834E-01	1.810E-02	8.978
PB-212	+	74.81		1.912E+00	6.617E-01	7.194E-01	8.821E-02	2.657
	+	77.11		1.338E+00	3.435E-01	4.094E-01	3.307E-02	3.269
		87.30		-2.415E-01	8.587E-01	8.770E-01	1.174E-01	-0.275
	+	238.63	*	1.112E+00	1.191E-01	8.444E-02	6.094E-03	13.171
	+	300.09		1.036E+00	7.232E-01	1.040E+00	8.591E-02	0.996
PO-212	+	74.81		1.912E+00	6.617E-01	7.194E-01	8.821E-02	2.657
	+	77.11		1.338E+00	3.435E-01	4.094E-01	3.307E-02	3.269
		87.30		-2.415E-01	8.587E-01	8.770E-01	1.174E-01	-0.275
		115.19		1.646E+01	4.779E+00	7.487E+00	4.767E-01	2.198
	+	238.63	*	1.112E+00	1.191E-01	8.444E-02	6.094E-03	13.171
	+	300.09		1.036E+00	7.232E-01	1.040E+00	8.591E-02	0.996
BI-214	+	609.31	*	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
	+	1120.29		1.093E+00	4.170E-01	3.550E-01	3.248E-02	3.078
	+	1764.49		1.307E+00	3.300E-01	2.212E-01	1.340E-02	5.910
PB-214	+	74.81		3.294E+00	1.125E+00	1.240E+00	1.346E-01	2.657
	+	77.11		2.294E+00	6.142E-01	7.018E-01	7.793E-02	3.269
		87.30		-4.136E-01	1.471E+00	1.502E+00	1.768E-01	-0.275
	+	241.98		1.426E+00	5.733E-01	5.080E-01	4.052E-02	2.806
	+	295.21		7.646E-01	2.419E-01	1.849E-01	1.578E-02	4.135
	+	351.92	*	8.852E-01	1.571E-01	9.878E-02	8.144E-03	8.960
PO-214	+	74.81		3.294E+00	1.125E+00	1.240E+00	1.346E-01	2.657
	+	77.11		2.294E+00	6.142E-01	7.018E-01	7.793E-02	3.269
		87.30		-4.136E-01	1.471E+00	1.502E+00	1.768E-01	-0.275

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	241.98		1.426E+00	5.733E-01	5.080E-01	4.052E-02	2.806
	+	295.21		7.646E-01	2.419E-01	1.849E-01	1.578E-02	4.135
	+	351.92	*	8.852E-01	1.571E-01	9.878E-02	8.144E-03	8.960
	+	74.81		1.912E+00	6.617E-01	7.194E-01	8.821E-02	2.657
	+	77.11		1.338E+00	3.435E-01	4.094E-01	3.307E-02	3.269
	+	87.30		-2.415E-01	8.587E-01	8.770E-01	1.174E-01	-0.275
PO-218	+	238.63	*	1.112E+00	1.191E-01	8.444E-02	6.094E-03	13.171
	+	300.09		1.036E+00	7.232E-01	1.040E+00	8.591E-02	0.996
	+	74.81		3.294E+00	1.125E+00	1.240E+00	1.346E-01	2.657
	+	77.11		2.294E+00	6.142E-01	7.018E-01	7.793E-02	3.269
	+	87.30		-4.136E-01	1.471E+00	1.502E+00	1.768E-01	-0.275
	+	241.98		1.426E+00	5.733E-01	5.080E-01	4.052E-02	2.806
RA-224	+	295.21		7.646E-01	2.419E-01	1.849E-01	1.578E-02	4.135
	+	351.92	*	8.852E-01	1.571E-01	9.878E-02	8.144E-03	8.960
	+	240.98	*	2.704E+00	1.076E+00	9.604E-01	5.442E-02	2.815
RA-226	+	609.31	*	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
	+	1120.29		1.093E+00	4.170E-01	3.550E-01	3.248E-02	3.078
	+	1764.49		1.307E+00	3.300E-01	2.212E-01	1.340E-02	5.910
AC-228	+	338.32		1.093E+00	6.378E-01	3.365E-01	1.372E-01	3.249
	+	911.07	*	9.847E-01	2.792E-01	1.802E-01	2.038E-02	5.465
	+	969.11		1.332E+00	4.409E-01	3.145E-01	7.290E-02	4.235
RA-228	+	338.32		1.093E+00	6.378E-01	3.365E-01	1.372E-01	3.249
	+	911.07	*	9.847E-01	2.792E-01	1.802E-01	2.038E-02	5.465
	+	969.11		1.332E+00	4.409E-01	3.145E-01	7.290E-02	4.235
TH-228	+	74.81		1.938E+00	6.463E-01	7.293E-01	5.848E-02	2.657
	+	77.11		1.357E+00	3.482E-01	4.150E-01	3.353E-02	3.269
	+	87.30		-2.448E-01	8.702E-01	8.891E-01	7.908E-02	-0.275
TH-230	+	238.63	*	1.127E+00	1.207E-01	8.561E-02	6.179E-03	13.171
	+	300.09		1.050E+00	9.557E-01	1.055E+00	6.215E-01	0.996
	+	609.31	*	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
	+	1120.29		1.093E+00	4.170E-01	3.550E-01	3.248E-02	3.078
	+	1764.49		1.307E+00	3.300E-01	2.212E-01	1.340E-02	5.910
	+	338.32		1.093E+00	4.606E-01	3.365E-01	1.945E-02	3.249
TH-232	+	911.07	*	9.847E-01	2.792E-01	1.802E-01	2.038E-02	5.465
	+	969.11		1.332E+00	4.409E-01	3.145E-01	7.290E-02	4.235
	+	766.42		6.321E+01	3.770E+01	1.804E+01	9.109E+00	3.504
PA-234M	+	1001.03	*	5.888E+01	1.002E+01	6.415E+00	5.971E-01	9.179
	+	63.29	*	4.397E+01	8.455E+00	2.629E+00	4.601E-01	16.721
	+	92.38		4.000E+01	7.290E+00	1.085E+00	1.948E-01	36.879
U-234	+	609.31	*	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
	+	1120.29		1.093E+00	4.170E-01	3.550E-01	3.248E-02	3.078
	+	1764.49		1.307E+00	3.300E-01	2.212E-01	1.340E-02	5.910
U-235	+	89.95		1.023E+01	3.788E+00	3.123E+00	9.641E-01	3.275
	+	93.35		4.809E+01	1.352E+01	1.296E+00	3.616E-01	37.117
	+	105.00		-1.136E+00	1.361E+00	2.029E+00	5.974E-01	-0.560
	+	143.76	*	5.498E-01	2.770E-01	3.602E-01	5.841E-02	1.526
	+	163.35		8.004E-01	5.178E-01	8.450E-01	1.505E-01	0.947
	+	185.71		8.273E-01	9.949E-02	6.592E-02	3.523E-03	12.550
	+	205.31		1.086E+00	5.518E-01	8.532E-01	1.525E-01	1.273

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-238	+	63.29	*	4.397E+01	8.455E+00	2.629E+00	4.601E-01	16.721
	+	92.38		4.000E+01	3.564E+00	1.085E+00	9.059E-02	36.879
AM-243	+	74.67	*	3.099E-01	1.033E-01	1.170E-01	9.276E-03	2.650
		86.72		-5.361E+00	2.055E+01	2.102E+01	1.858E+00	-0.255
		117.66		1.054E+00	4.740E+00	6.817E+00	4.235E-01	0.155
	+	142.18		4.618E+01	2.218E+01	2.929E+01	1.631E+00	1.577
ANH-511	+	511.00	*	9.107E-02	6.935E-02	3.897E-02	2.300E-03	2.337

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.745E-01	2.864E-01	4.900E-01	3.326E-02	0.356
NA-22		1274.54	*	-2.858E-02	3.700E-02	5.697E-02	3.800E-03	-0.502
NA-24		1368.53	*	1.241E-02	3.700E-02	Half-Life too short		
AL-26		1129.67		8.579E-01	1.411E+00	2.378E+00	1.467E-01	0.361
		1808.65	*	-1.240E-02	2.300E-02	3.328E-02	1.943E-03	-0.373
TI-44		67.85		-8.225E-02	7.130E-02	9.196E-02	7.020E-03	-0.894
	+	78.38	*	2.470E-01	6.338E-02	8.588E-02	7.010E-03	2.876
SC-46		889.25	*	2.513E-02	3.373E-02	5.779E-02	5.021E-03	0.435
	+	1120.51		1.851E-01	6.955E-02	9.511E-02	5.999E-03	1.946
V-48		944.10		4.892E-01	7.098E-01	1.212E+00	1.021E-01	0.404
		983.50	*	1.952E-02	5.250E-02	8.742E-02	7.029E-03	0.223
		1312.09		-3.448E-03	5.884E-02	9.694E-02	6.899E-03	-0.036
CR-51		320.08	*	-1.029E-01	3.025E-01	4.990E-01	3.229E-02	-0.206
MN-52		744.21		3.103E-01	1.943E-01	3.479E-01	2.365E-02	0.892
		848.13		2.150E+00	5.209E+00	8.697E+00	7.072E-01	0.247
		935.52		1.450E-01	1.897E-01	3.180E-01	2.704E-02	0.456
		1246.25		1.725E+00	5.062E+00	8.647E+00	5.466E-01	0.199
		1333.61		8.864E-01	3.077E+00	5.272E+00	3.885E-01	0.168
		1434.06	*	-9.443E-02	1.368E-01	2.009E-01	1.449E-02	-0.470
MN-54		834.83	*	-2.770E-03	3.213E-02	5.164E-02	4.107E-03	-0.054
CO-56		846.75	*	7.856E-03	3.430E-02	5.651E-02	4.584E-03	0.139
		977.42		-4.114E-01	2.495E+00	3.541E+00	2.869E-01	-0.116
		1037.82		-1.206E-01	2.505E-01	4.024E-01	3.201E-02	-0.300
		1175.09		-2.596E-01	1.813E+00	2.986E+00	1.643E-01	-0.087
		1238.25		1.132E-01	7.740E-02	1.405E-01	9.227E-03	0.806
		1360.21		1.424E-01	6.451E-01	1.100E+00	8.073E-02	0.129
		1771.40		1.404E-02	1.786E-01	2.559E-01	1.542E-02	0.055
CO-57		122.06	*	3.411E-03	2.842E-02	4.629E-02	2.762E-03	0.074
		136.48		5.197E-02	2.217E-01	3.624E-01	2.392E-02	0.143
CO-58		810.76	*	2.381E-04	3.172E-02	5.144E-02	3.942E-03	0.005
FE-59	+	142.65		6.950E+00	3.338E+00	4.989E+00	2.774E-01	1.393
		192.34		-1.533E-01	1.001E+00	1.394E+00	1.619E-01	-0.110
		1099.22	*	-1.789E-02	7.286E-02	1.193E-01	8.952E-03	-0.150
		1291.56		-3.876E-03	1.032E-01	1.707E-01	1.413E-02	-0.023
CO-60		1173.22		-2.138E-02	3.662E-02	5.750E-02	3.151E-03	-0.372
		1332.49	*	-3.741E-03	2.834E-02	4.619E-02	3.404E-03	-0.081
ZN-65		1115.52	*	1.087E-02	7.665E-02	1.124E-01	7.189E-03	0.097

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	1077.35	*		4.501E-01	1.033E+00	1.790E+00	1.239E-01	0.251
AS-73	53.44	*		2.967E-02	1.036E+00	1.712E+00	1.267E-01	0.017
AS-74	595.88	*		5.223E-02	7.405E-02	1.272E-01	7.534E-03	0.411
	634.78			-2.014E-01	2.729E-01	4.203E-01	2.470E-02	-0.479
SE-75	66.05			5.425E+00	6.913E+00	1.016E+01	9.755E-01	0.534
	96.73			8.426E-01	1.133E+00	1.870E+00	2.460E-01	0.451
	121.11			-1.632E-03	1.506E-01	2.444E-01	2.290E-02	-0.007
	136.00			4.419E-03	4.108E-02	6.691E-02	3.853E-03	0.066
	198.60			-7.198E-01	1.783E+00	2.825E+00	1.929E-01	-0.255
	264.65	*		-1.681E-02	3.886E-02	6.438E-02	3.744E-03	-0.261
	279.53			4.808E-02	9.679E-02	1.661E-01	1.040E-02	0.289
	303.91			2.134E-01	1.984E+00	2.923E+00	2.792E-01	0.073
	400.65			1.449E-01	2.196E-01	3.777E-01	3.391E-02	0.384
BR-77	87.88			9.329E+00	2.777E+02	2.877E+02	2.574E+01	0.032
	200.40			1.216E+02	1.247E+02	1.833E+02	9.970E+00	0.663
+	239.00			1.219E+02	1.185E+01	1.967E+01	1.113E+00	6.194
	249.79			-1.169E+01	4.252E+01	6.707E+01	3.825E+00	-0.174
	281.68			2.652E+01	5.571E+01	9.551E+01	5.535E+00	0.278
	297.23			1.532E+02	5.001E+01	6.522E+01	3.792E+00	2.349
	303.76			1.516E+01	1.163E+02	1.716E+02	9.982E+00	0.088
	439.47			-2.794E+01	8.028E+01	1.304E+02	7.490E+00	-0.214
	484.57			-7.884E+01	1.387E+02	2.215E+02	1.297E+01	-0.356
	520.65	*		-1.975E-02	6.474E+00	1.007E+01	5.956E-01	-0.002
	574.64			2.730E+01	1.451E+02	1.988E+02	1.180E+01	0.137
	578.91			2.380E+01	5.780E+01	8.107E+01	4.810E+00	0.294
	585.48			6.622E+02	1.491E+02	2.643E+02	1.567E+01	2.506
	755.35			4.335E+01	1.079E+02	1.802E+02	1.250E+01	0.241
	817.79			-5.436E+01	7.700E+01	1.167E+02	9.020E+00	-0.466
SR-82	698.33			-6.715E+00	2.807E+01	4.498E+01	2.810E+00	-0.149
	776.49	*		-3.713E-01	3.231E-01	4.735E-01	3.409E-02	-0.784
	1395.20			5.184E+00	8.004E+00	1.427E+01	1.040E+00	0.363
RB-83	520.41	*		-4.543E-03	6.498E-02	9.680E-02	5.722E-03	-0.047
	529.64			-6.582E-02	8.720E-02	1.362E-01	8.065E-03	-0.483
	552.65			-7.505E-02	1.687E-01	2.692E-01	1.598E-02	-0.279
RB-84	881.50	*		6.418E-02	5.717E-02	1.009E-01	8.659E-03	0.636
KR-85	513.99	*		1.526E+01	6.467E+00	1.188E+01	7.016E-01	1.284
SR-85	513.99	*		7.716E-02	3.270E-02	6.009E-02	3.548E-03	1.284
RB-86	1076.63	*		1.073E-01	6.463E-01	1.096E+00	7.594E-02	0.098
Y-88	898.02			-2.747E-02	3.409E-02	5.057E-02	4.476E-03	-0.543
	1836.01	*		8.094E-03	2.383E-02	4.147E-02	2.367E-03	0.195
ZR-88	392.90	*		4.790E-03	2.730E-02	4.590E-02	2.556E-03	0.104
Y-91	1204.90	*		2.922E+00	1.487E+01	2.514E+01	1.468E+00	0.116
NB-94	702.63	*		2.948E-03	2.835E-02	4.658E-02	2.933E-03	0.063
	871.10			1.305E-02	2.775E-02	4.671E-02	3.943E-03	0.279
NB-95	765.79	*		1.459E-01	5.050E-02	9.212E-02	6.510E-03	1.584
NB-95M	235.69	*		2.856E-01	1.351E-01	2.066E-01	1.530E-02	1.383
ZR-95	724.18			-3.213E-02	1.010E-01	1.377E-01	1.034E-02	-0.233
	756.15	*		-8.676E-03	6.790E-02	1.094E-01	8.755E-03	-0.079
NB-97	657.90	*		-4.812E-05	6.790E-02	Half-Life too short		

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1024.50		-1.290E+00	6.790E-02	Half-Life	too short	
	254.15		-1.510E+00	6.790E-02	Half-Life	too short	
	355.39		8.069E-01	6.790E-02	Half-Life	too short	
	507.63	*	8.913E-01	6.790E-02	Half-Life	too short	
	602.52		-1.249E+00	6.790E-02	Half-Life	too short	
	1021.30		-3.345E-01	6.790E-02	Half-Life	too short	
	1147.95		-5.586E-02	6.790E-02	Half-Life	too short	
	1362.66		-1.091E+00	6.790E-02	Half-Life	too short	
MO-99	1750.46		1.077E+00	6.790E-02	Half-Life	too short	
	140.51		-4.419E+00	2.221E+01	3.119E+01	8.392E+00	-0.142
	181.06		4.148E+00	1.859E+01	1.910E+01	3.244E+00	0.217
	366.43		3.322E+01	5.438E+01	9.348E+01	5.321E+00	0.355
	739.58	*	-4.666E+00	8.333E+00	1.299E+01	1.845E+00	-0.359
TC-99M	778.00		-3.649E+01	2.154E+01	2.968E+01	2.143E+00	-1.229
	140.51	*	-2.389E+08	2.154E+01	Half-Life	too short	
RH-101	127.23		-6.999E-03	3.573E-02	5.777E-02	3.371E-03	-0.121
	198.01	*	-1.031E-02	3.262E-02	5.185E-02	2.813E-03	-0.199
RH-102	325.23		6.161E-02	1.972E-01	3.350E-01	1.945E-02	0.184
	418.52		-1.359E-01	2.414E-01	3.882E-01	2.202E-02	-0.350
	475.06	*	1.014E-02	2.653E-02	4.485E-02	2.618E-03	0.226
	631.29		1.103E-03	4.483E-02	7.356E-02	4.327E-03	0.015
	697.49		-4.455E-02	6.926E-02	1.040E-01	6.485E-03	-0.429
RU-103	+	766.84	6.004E-01	1.952E-01	2.431E-01	1.721E-02	2.470
	+	1046.59	-3.029E-02	8.886E-02	1.443E-01	1.056E-02	-0.210
	+	1112.84	3.300E-02	1.973E-01	3.015E-01	1.936E-02	0.109
	+	497.08	1.088E-02	3.388E-02	5.708E-02	7.238E-03	0.191
	+	610.33	7.205E+00	1.740E+00	2.088E+00	3.228E-01	3.451
RH-106	+	511.85	4.538E-01	3.455E-01	3.611E-01	2.131E-02	1.257
	+	621.84	* -1.020E-01	2.717E-01	4.328E-01	5.100E-02	-0.236
RU-106	+	1050.47	1.731E-02	1.756E+00	2.944E+00	2.140E-01	0.006
	+	511.85	4.538E-01	3.455E-01	3.611E-01	2.131E-02	1.257
	+	621.84	* -1.020E-01	2.715E-01	4.328E-01	2.552E-02	-0.236
AG-108M	+	1050.47	1.731E-02	1.756E+00	2.944E+00	2.140E-01	0.006
	+	433.93	* -1.919E-02	2.930E-02	4.684E-02	2.917E-03	-0.410
	+	614.37	-1.250E-02	3.750E-02	5.141E-02	3.285E-03	-0.243
CD-109	+	722.95	-9.567E-03	4.281E-02	5.884E-02	4.107E-03	-0.163
	+	88.03	* 2.282E-01	1.880E+00	1.954E+00	1.750E-01	0.117
AG-110M	+	657.75	* -1.320E-03	3.267E-02	4.598E-02	2.853E-03	-0.029
	+	677.61	-5.199E-03	2.710E-01	4.419E-01	2.806E-02	-0.012
	+	706.67	1.125E-01	1.750E-01	2.984E-01	1.989E-02	0.377
	+	763.93	2.919E-01	1.951E-01	3.070E-01	2.253E-02	0.951
	+	884.67	1.100E-02	4.392E-02	7.237E-02	6.444E-03	0.152
	+	937.48	-8.650E-02	9.222E-02	1.343E-01	1.182E-02	-0.644
	+	1384.27	1.032E-01	1.160E-01	2.125E-01	1.612E-02	0.486
	+	171.28	-2.231E-02	8.397E-01	1.183E+00	6.208E-02	-0.019
IN-111	+	245.39	* -9.697E-02	8.290E-01	1.147E+00	6.520E-02	-0.085
IN-113M	+	391.69	* -1.002E-02	4.052E-02	6.669E-02	3.979E-03	-0.150
SN-113	+	391.69	* -1.002E-02	4.052E-02	6.669E-02	3.979E-03	-0.150
IN-114M	+	190.27	* -8.129E-02	1.912E-01	2.625E-01	1.411E-02	-0.310

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CD-115	260.90			-7.871E+01	8.471E+01	1.292E+02	7.420E+00	-0.609
	492.35			-9.533E+00	2.209E+01	3.558E+01	2.089E+00	-0.268
	527.90	*		3.032E+00	5.772E+00	9.857E+00	5.835E-01	0.308
SN-117M	156.02			-2.044E+00	2.182E+00	3.419E+00	1.833E-01	-0.598
	158.56	*		-1.747E-02	5.295E-02	8.471E-02	4.509E-03	-0.206
SB-122	563.90	*		8.068E-01	1.426E+00	2.139E+00	1.270E-01	0.377
	692.80			2.026E+01	2.729E+01	4.676E+01	2.891E+00	0.433
I-123	159.00	*		-9.615E-01	2.729E+01	Half-Life	too short	
	528.96			-3.611E+01	2.729E+01	Half-Life	too short	
TE-123M	159.00	*		-2.481E-02	2.974E-02	4.676E-02	2.526E-03	-0.530
I-124	602.71	*		-2.870E-01	4.765E-01	6.691E-01	3.960E-02	-0.429
	722.78			-5.530E-01	3.613E+00	5.004E+00	3.272E-01	-0.111
	1325.50			5.104E+00	2.324E+01	3.938E+01	2.868E+00	0.130
	1376.25			2.088E+01	1.866E+01	3.453E+01	2.525E+00	0.605
	1509.49			7.978E+00	8.348E+00	1.564E+01	1.100E+00	0.510
	1691.02			6.241E-01	2.162E+00	3.730E+00	2.385E-01	0.167
SB-124	602.71			-2.042E-02	3.390E-02	4.761E-02	2.819E-03	-0.429
	645.85			-9.914E-02	4.255E-01	6.842E-01	4.512E-02	-0.145
	709.31			-1.189E-01	2.363E+00	3.836E+00	2.446E-01	-0.031
	713.82			6.640E-01	1.389E+00	2.340E+00	2.477E-01	0.284
	722.78			-5.703E-02	3.726E-01	5.161E-01	3.500E-02	-0.111
	968.20			1.350E+01	3.379E+00	5.586E+00	4.578E-01	2.418
	1045.16			9.520E-01	1.871E+00	3.272E+00	2.400E-01	0.291
	1325.50			5.623E-01	2.560E+00	4.338E+00	3.159E-01	0.130
	1368.21			-3.669E-02	1.245E+00	2.052E+00	2.604E-01	-0.018
	1436.60			-7.096E-01	2.459E+00	3.874E+00	2.792E-01	-0.183
	1691.02	*		1.518E-02	5.260E-02	9.073E-02	6.214E-03	0.167
SB-125	427.89	*		1.687E-02	8.116E-02	1.364E-01	8.120E-03	0.124
	463.38			4.632E-01	3.443E-01	4.438E-01	3.005E-02	1.044
	600.56			-1.493E-01	1.444E-01	2.185E-01	1.489E-02	-0.683
	635.90			-1.193E-01	2.193E-01	3.435E-01	2.355E-02	-0.347
TE-125M	109.28	*		2.060E+01	1.316E+01	1.959E+01	1.731E+00	1.051
I-126	388.63			1.061E-01	1.752E-01	3.005E-01	1.677E-02	0.353
	666.33	*		2.861E-02	1.636E-01	2.354E-01	1.383E-02	0.122
	753.82			5.223E-01	1.279E+00	2.139E+00	1.479E-01	0.244
SB-126	223.80			2.081E+00	3.599E+00	5.898E+00	3.291E-01	0.353
	278.60			6.740E-01	2.044E+00	3.485E+00	2.018E-01	0.193
	296.50			7.074E+00	2.194E+00	2.547E+00	1.480E-01	2.778
	414.70			-1.217E-03	6.556E-02	9.458E-02	5.350E-03	-0.013
	415.30			-5.900E-01	5.200E+00	7.798E+00	4.413E-01	-0.076
	555.20			8.617E-01	3.085E+00	5.174E+00	3.071E-01	0.167
	573.80			4.549E-01	9.199E-01	1.372E+00	8.144E-02	0.331
	593.00			-2.126E-01	7.622E-01	1.228E+00	7.276E-02	-0.173
	656.30			-4.804E+00	3.315E+00	3.957E+00	2.309E-01	-1.214
	666.33			1.192E-02	6.817E-02	9.807E-02	5.763E-03	0.122
	675.00			1.094E+00	1.648E+00	2.814E+00	1.681E-01	0.389
	695.00			5.019E-03	6.588E-02	1.046E-01	6.495E-03	0.048
	697.00			-2.198E-01	2.261E-01	3.300E-01	2.057E-02	-0.666
	720.50	*		-5.264E-02	1.467E-01	1.990E-01	1.296E-02	-0.264

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.80		-2.661E-02	4.075E-01	5.632E-01	4.645E-02	-0.047
		989.30		-3.016E-01	9.823E-01	1.529E+00	1.220E-01	-0.197
		1034.80		1.694E+00	6.578E+00	1.127E+01	8.410E-01	0.150
		1213.00		1.370E+00	3.651E+00	6.248E+00	3.707E-01	0.219
SN-126	+	64.28		1.740E+01	2.895E+00	1.714E+00	2.503E-01	10.153
		86.94		-2.236E-01	7.794E-01	7.907E-01	3.274E-01	-0.283
		87.57	*	-2.628E-02	1.854E-01	1.906E-01	1.700E-02	-0.138
SB-127		61.10		5.102E+02	8.973E+01	1.238E+02	1.229E+01	4.121
		252.40		-3.498E+00	3.562E+00	4.938E+00	2.046E+00	-0.708
		290.80		-3.277E+00	1.663E+01	2.407E+01	2.094E+00	-0.136
		411.60		5.632E+00	9.393E+00	1.415E+01	1.984E+00	0.398
		444.90		-2.004E+00	6.404E+00	1.042E+01	1.081E+00	-0.192
		473.00		-2.561E-01	1.186E+00	1.938E+00	2.095E-01	-0.132
		543.00		3.588E-01	1.155E+01	1.907E+01	2.410E+00	0.019
		603.60		-2.893E+00	8.539E+00	1.170E+01	1.221E+00	-0.247
		685.20	*	4.279E-01	9.273E-01	1.563E+00	1.433E-01	0.274
		698.50		-2.328E+00	1.025E+01	1.643E+01	2.362E+00	-0.142
		722.20		1.254E+01	2.356E+01	3.490E+01	3.210E+00	0.359
		783.80		3.467E+00	2.789E+00	4.857E+00	5.425E-01	0.714
XE-127		57.60		1.160E+01	8.632E+00	1.292E+01	9.679E-01	0.898
		145.22		9.571E-01	8.705E-01	1.278E+00	7.051E-02	0.749
		172.10		-1.016E-02	1.340E-01	1.883E-01	9.892E-03	-0.054
		202.84	*	5.404E-02	5.159E-02	7.602E-02	4.148E-03	0.711
		374.96		6.370E-03	1.549E-01	2.591E-01	1.464E-02	0.025
I-131		80.18		1.539E+00	8.529E+00	8.919E+00	7.438E-01	0.173
		284.30		-5.287E-01	1.202E+00	1.986E+00	1.278E-01	-0.266
		364.48	*	-8.195E-02	9.130E-02	1.453E-01	9.258E-03	-0.564
		636.97		-3.116E-01	1.128E+00	1.808E+00	1.184E-01	-0.172
		722.89		-1.281E+00	6.449E+00	8.888E+00	5.867E-01	-0.144
TE-132		49.72		-1.279E+01	1.733E+01	2.812E+01	2.629E+00	-0.455
	+	111.76		1.968E+02	6.242E+01	5.549E+01	4.956E+00	3.547
		116.30		4.104E+01	2.666E+01	3.992E+01	3.480E+00	1.028
		228.16	*	-9.894E-02	4.939E-01	7.843E-01	1.100E-01	-0.126
BA-133		53.15		1.994E+00	4.481E+00	7.471E+00	5.518E-01	0.267
		79.62		1.256E+00	2.736E+00	2.891E+00	4.342E-01	0.434
		81.00		-1.059E-02	2.056E-01	2.126E-01	3.345E-02	-0.050
		276.40		-2.615E-02	3.322E-01	5.579E-01	7.229E-02	-0.047
		302.84		1.601E-01	1.330E-01	2.080E-01	2.427E-02	0.770
		356.01	*	2.582E-03	4.151E-02	6.063E-02	6.988E-03	0.043
		383.85		1.291E-01	2.631E-01	4.491E-01	4.837E-02	0.287
I-133	+	510.53		3.248E-01	2.631E-01	Half-Life	too short	
		529.87	*	-1.472E-03	2.631E-01	Half-Life	too short	
		706.58		8.138E-02	2.631E-01	Half-Life	too short	
		856.28		-1.050E-01	2.631E-01	Half-Life	too short	
		875.33		-1.144E-02	2.631E-01	Half-Life	too short	
		1236.41		2.363E-01	2.631E-01	Half-Life	too short	
		1298.22		1.447E-02	2.631E-01	Half-Life	too short	
CS-134		475.35		9.155E-01	1.726E+00	2.941E+00	1.717E-01	0.311
		563.23		1.595E-01	3.477E-01	5.169E-01	3.129E-02	0.309

----- Non-Identified Nuclides -----

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CS-135 I-135	+	569.32		7.549E-01	3.796E-01	3.992E-01	2.437E-02	1.891
		604.70		9.761E-03	3.163E-02	4.624E-02	2.751E-03	0.211
	+	795.84	*	7.118E-02	6.057E-02	7.713E-02	5.800E-03	0.923
		801.93		7.298E-02	3.838E-01	5.704E-01	4.324E-02	0.128
		1038.57		-5.409E-01	3.171E+00	5.240E+00	3.886E-01	-0.103
		1167.94		1.385E+00	1.967E+00	3.468E+00	1.930E-01	0.399
		1365.15		7.409E-01	8.518E-01	1.565E+00	1.219E-01	0.474
		268.24	*	7.608E-02	1.437E-01	2.469E-01	1.884E-02	0.308
		288.45		-3.076E+08	1.437E-01	Half-Life	too short	
		417.63		-4.154E+08	1.437E-01	Half-Life	too short	
		546.56		3.283E+08	1.437E-01	Half-Life	too short	
		836.80		2.219E+08	1.437E-01	Half-Life	too short	
		1038.76		-8.297E+07	1.437E-01	Half-Life	too short	
		1124.00		3.965E+08	1.437E-01	Half-Life	too short	
		1131.51		2.945E+07	1.437E-01	Half-Life	too short	
		1260.41	*	-5.001E+07	1.437E-01	Half-Life	too short	
		1457.56		9.002E+09	1.437E-01	Half-Life	too short	
		1678.03		2.013E+08	1.437E-01	Half-Life	too short	
		1706.46		-1.498E+08	1.437E-01	Half-Life	too short	
		1791.20		-5.603E+07	1.437E-01	Half-Life	too short	
CS-136		66.91		-1.290E+00	1.046E+00	1.433E+00	2.134E-01	-0.900
		86.29		-1.437E-01	2.277E+00	2.349E+00	3.048E-01	-0.061
		153.22		8.837E-02	6.235E-01	1.014E+00	7.001E-02	0.087
		163.89		1.720E+00	1.067E+00	1.800E+00	1.227E-01	0.956
		176.55		2.077E-01	3.872E-01	5.595E-01	3.390E-02	0.371
		273.65		-5.927E-01	3.942E-01	6.235E-01	4.111E-02	-0.951
		340.57		3.116E-01	1.291E-01	2.110E-01	1.296E-02	1.477
		818.51		-4.338E-02	5.945E-02	8.994E-02	6.968E-03	-0.482
		1048.07	*	-5.470E-02	7.806E-02	1.223E-01	9.447E-03	-0.447
		1235.34		3.458E-02	4.664E-01	7.796E-01	7.966E-02	0.044
CE-139 BA-140		165.85	*	-1.654E-02	3.139E-02	4.984E-02	2.602E-03	-0.332
		162.64		6.069E-01	7.527E-01	1.246E+00	7.538E-02	0.487
		304.84		-1.705E-01	1.145E+00	1.657E+00	4.523E-01	-0.103
		423.70		7.353E-02	1.538E+00	2.563E+00	8.140E-01	0.029
LA-140		537.32	*	2.393E-03	2.130E-01	3.512E-01	1.143E-01	0.007
		328.77		4.239E-01	2.466E-01	4.403E-01	2.860E-02	0.963
		432.53		-1.053E+00	1.709E+00	2.739E+00	1.735E-01	-0.385
		487.03		8.580E-02	1.138E-01	1.962E-01	1.299E-02	0.437
		751.79		2.311E-01	1.449E+00	2.382E+00	1.909E-01	0.097
		815.85		1.232E-02	2.469E-01	4.016E-01	3.535E-02	0.031
		867.82		3.159E-02	1.118E+00	1.704E+00	1.510E-01	0.019
		919.63		5.238E-01	2.332E+00	3.618E+00	3.857E-01	0.145
		925.24		5.251E-02	8.638E-01	1.399E+00	1.278E-01	0.038
		1596.49	*	2.529E-02	6.179E-02	9.543E-02	6.457E-03	0.265
CE-141 CE-143		145.44	*	1.076E-01	7.757E-02	1.150E-01	6.621E-03	0.936
		57.37		1.054E-03	7.757E-02	Half-Life	too short	
		231.56		2.699E-04	7.757E-02	Half-Life	too short	
		293.26	*	2.650E-04	7.757E-02	Half-Life	too short	
	+	350.59		1.042E-02	7.757E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

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	490.36			-5.416E-05	7.757E-02	Half-Life	too short	
	664.57			1.032E-03	7.757E-02	Half-Life	too short	
	721.93			4.644E-04	7.757E-02	Half-Life	too short	
CE-144	80.11			9.800E-01	4.385E+00	4.594E+00	3.807E-01	0.213
	133.54	*		-1.033E-01	2.221E-01	3.550E-01	5.029E-02	-0.291
PM-144	476.78			5.697E-02	6.029E-02	1.049E-01	7.320E-03	0.543
	618.01			2.733E-02	2.737E-02	4.684E-02	2.925E-03	0.584
	696.49	*		-1.502E-02	3.116E-02	4.740E-02	2.953E-03	-0.317
	778.57			-3.337E+00	2.006E+00	2.773E+00	2.005E-01	-1.204
PR-144	696.49	*		-1.017E+00	2.110E+00	3.210E+00	1.998E-01	-0.317
	1489.15			1.079E+00	9.235E+00	1.546E+01	1.096E+00	0.070
PM-146	453.90	*		-7.187E-03	3.916E-02	6.426E-02	5.534E-03	-0.112
	633.02			-3.356E-03	1.124E+00	1.840E+00	6.779E-01	-0.002
	735.90			9.346E-02	1.336E-01	2.244E-01	6.301E-02	0.417
	747.13			-1.840E-01	9.150E-02	1.209E-01	1.574E-02	-1.522
ND-147	91.11			1.574E+01	1.549E+00	1.129E+00	1.043E-01	13.946
	319.41			-1.014E+00	2.554E+00	4.201E+00	2.442E-01	-0.241
	439.89			-1.853E+00	4.424E+00	7.156E+00	4.112E-01	-0.259
	531.02	*		-4.881E-01	4.351E-01	6.527E-01	8.860E-02	-0.748
PM-149	285.90	*		-2.212E+01	5.368E+01	8.862E+01	1.256E+01	-0.250
EU-152	121.78			2.077E-02	8.231E-02	1.345E-01	1.042E-02	0.154
	244.69			3.451E-01	3.434E-01	5.067E-01	2.879E-02	0.681
	344.27	*		-7.746E-03	1.502E-01	1.459E-01	9.494E-03	-0.053
	443.98			2.491E-01	7.739E-01	1.309E+00	7.537E-02	0.190
	778.89			-3.533E-01	2.301E-01	3.224E-01	2.331E-02	-1.096
	867.32			-1.519E-01	7.479E-01	1.066E+00	8.944E-02	-0.142
	964.01			3.020E-01	2.764E-01	4.291E-01	3.534E-02	0.704
	1085.78			2.011E-01	3.107E-01	5.483E-01	3.731E-02	0.367
	1112.02			-1.376E-02	2.669E-01	4.117E-01	2.648E-02	-0.033
	1407.95			-1.985E-02	1.459E-01	2.370E-01	1.722E-02	-0.084
GD-153	69.67			4.826E+00	2.661E+00	3.431E+00	2.641E-01	1.407
	83.37			1.916E+01	2.503E+01	3.460E+01	2.956E+00	0.554
	97.43	*		6.126E-01	1.557E-01	1.963E-01	1.527E-02	3.120
	103.18			4.378E-02	1.394E-01	2.016E-01	1.460E-02	0.217
EU-154	123.07			5.119E-03	5.824E-02	9.475E-02	8.989E-03	0.054
	247.94			2.622E-01	3.619E-01	5.535E-01	5.246E-02	0.474
	591.81			-1.713E-01	5.453E-01	8.759E-01	8.628E-02	-0.196
	723.30			-1.344E-01	1.852E-01	2.409E-01	1.856E-02	-0.558
	756.87			-1.598E-02	7.440E-01	1.207E+00	1.309E-01	-0.013
	873.19			7.601E-02	2.350E-01	3.909E-01	4.745E-02	0.194
	996.32			1.697E-01	3.814E-01	5.546E-01	9.666E-02	0.306
	1004.76			5.244E-01	2.154E-01	3.793E-01	4.193E-02	1.383
	1274.45	*		-5.884E-02	1.020E-01	1.601E-01	1.585E-02	-0.367
EU-155	48.70			-7.578E-01	2.790E+00	4.586E+00	3.217E-01	-0.165
	60.01			1.085E+01	7.361E+00	1.101E+01	8.286E-01	0.985
	86.54			-5.019E-02	2.251E-01	2.307E-01	2.055E-02	-0.218
	105.31	*		-1.095E-01	1.410E-01	2.074E-01	1.492E-02	-0.528
TB-160	86.79			-1.630E-01	5.925E-01	6.056E-01	5.357E-02	-0.269
	197.04			3.044E-01	5.374E-01	8.818E-01	4.778E-02	0.345

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		215.65		-9.141E-02	6.981E-01	1.074E+00	5.944E-02	-0.085
		298.57		2.097E-01	1.453E-01	1.686E-01	9.805E-03	1.243
		879.36	*	-2.067E-02	1.115E-01	1.768E-01	1.512E-02	-0.117
		962.29		2.371E-01	5.037E-01	7.356E-01	6.071E-02	0.322
	+	966.15		1.495E-01	2.220E-01	3.599E-01	2.956E-02	0.415
		1177.93		9.791E-02	2.930E-01	5.013E-01	2.774E-02	0.195
		1271.85		6.422E-01	5.585E-01	1.021E+00	6.765E-02	0.629
		80.57		-8.099E-02	5.682E-01	5.852E-01	4.869E-02	-0.138
	+	184.41		6.205E-01	7.462E-02	9.333E-02	4.979E-03	6.649
		280.46		2.433E-02	7.714E-02	1.315E-01	7.616E-03	0.185
TM-171	+	410.95		3.258E-01	2.868E-01	3.782E-01	2.134E-02	0.861
		711.68	*	-3.815E-02	5.478E-02	8.463E-02	5.421E-03	-0.451
		752.31		6.154E-02	2.504E-01	4.144E-01	2.859E-02	0.149
		810.29		-2.471E-02	4.991E-02	7.734E-02	5.903E-03	-0.319
		51.35		1.972E+01	3.703E+01	6.190E+01	4.515E+00	0.318
LU-176		52.39		1.175E+01	1.951E+01	3.264E+01	2.400E+00	0.360
		59.40		6.056E+01	3.914E+01	5.869E+01	4.415E+00	1.032
		66.72	*	-4.475E+01	3.999E+01	5.572E+01	4.235E+00	-0.803
		88.36		1.358E-01	4.388E-01	4.595E-01	4.092E-02	0.295
		201.83		-1.603E-02	3.367E-02	4.611E-02	2.512E-03	-0.348
LU-177M		306.84	*	-7.228E-03	2.174E-02	3.499E-02	2.035E-03	-0.207
		401.10		2.561E+00	5.771E+00	9.831E+00	5.508E-01	0.261
		52.97		8.108E-01	2.015E+00	3.357E+00	2.477E-01	0.242
		54.07		-5.738E-01	1.089E+00	1.777E+00	1.318E-01	-0.323
		61.30		2.374E+01	2.885E+00	4.320E+00	3.250E-01	5.496
HF-181		121.62		8.928E-02	4.193E-01	6.847E-01	4.094E-02	0.130
		147.16		3.628E-01	7.681E-01	1.110E+00	6.094E-02	0.327
		171.86		-1.193E-01	5.566E-01	7.767E-01	4.080E-02	-0.154
		218.09		-3.879E-01	8.017E-01	1.260E+00	6.993E-02	-0.308
		268.79		9.568E-01	7.287E-01	1.283E+00	7.400E-02	0.746
		319.02		-1.386E-01	2.175E-01	3.534E-01	2.054E-02	-0.392
		367.43		1.009E+00	8.110E-01	1.432E+00	8.142E-02	0.705
		413.65	*	5.895E-02	1.595E-01	2.376E-01	1.343E-02	0.248
		56.28		-1.537E-01	1.292E+00	1.971E+00	1.472E-01	-0.078
		57.53		9.732E-01	7.289E-01	1.091E+00	8.170E-02	0.892
W-181		65.20		1.559E+01	1.935E+00	2.691E+00	2.036E-01	5.792
		133.02		-4.026E-03	6.967E-02	1.130E-01	6.465E-03	-0.036
		136.25		1.126E-01	4.744E-01	7.757E-01	4.394E-02	0.145
		345.85		-8.658E-03	2.156E-01	2.739E-01	1.578E-02	-0.032
		482.03	*	-2.544E-02	3.685E-02	5.837E-02	3.416E-03	-0.436
TA-182		56.28		-2.093E-01	5.169E-01	7.822E-01	5.842E-02	-0.268
		57.53		3.865E-01	2.895E-01	4.333E-01	3.245E-02	0.892
		65.20	*	6.142E+00	7.626E-01	1.060E+00	8.025E-02	5.792
		67.75		-2.208E-01	1.577E-01	2.175E-01	1.660E-02	-1.015
		100.10		1.057E+00	2.663E-01	4.107E-01	3.086E-02	2.573
		152.43		-1.155E-02	3.446E-01	5.573E-01	3.016E-02	-0.021
		222.10		8.268E-02	3.286E-01	5.321E-01	2.964E-02	0.155
	+	1001.68		2.573E+01	4.183E+00	6.799E+00	5.334E-01	3.784
	+	1121.28		5.126E-01	1.926E-01	2.632E-01	1.657E-02	1.947

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		1189.05		-1.029E-01	2.595E-01	4.187E-01	2.369E-02	-0.246
		1221.42	*	-3.552E-02	1.606E-01	2.626E-01	1.584E-02	-0.135
		1230.97		1.140E-02	3.775E-01	6.293E-01	3.865E-02	0.018
		57.98		4.259E-01	2.872E-01	4.309E-01	3.231E-02	0.988
		59.32		2.454E-01	1.591E-01	2.386E-01	1.794E-02	1.028
		67.20		-3.327E-01	2.800E-01	3.891E-01	2.963E-02	-0.855
RE-184		162.32	*	8.310E-02	1.163E-01	1.921E-01	1.012E-02	0.433
	+	208.81		2.112E+00	1.236E+00	1.585E+00	8.708E-02	1.332
		291.72		-1.116E-01	9.268E-01	1.348E+00	7.831E-02	-0.083
		57.98		1.581E+00	1.066E+00	1.600E+00	1.200E-01	0.988
		59.32		9.104E-01	5.904E-01	8.852E-01	6.658E-02	1.028
		67.20		-1.235E+00	1.039E+00	1.444E+00	1.100E-01	-0.855
OS-185		161.27		1.823E-01	3.746E-01	6.149E-01	3.249E-02	0.297
		216.55		-2.541E-02	2.414E-01	3.856E-01	2.136E-02	-0.066
		252.85	*	-2.272E-01	2.185E-01	3.313E-01	1.894E-02	-0.686
		318.01		-1.241E-01	3.763E-01	6.212E-01	3.610E-02	-0.200
		792.07		-9.542E-01	1.145E+00	1.466E+00	1.085E-01	-0.651
		903.28		5.762E-01	8.725E-01	1.369E+00	1.201E-01	0.421
RE-188		920.93		-8.503E-02	3.800E-01	5.992E-01	5.169E-02	-0.142
		59.72		6.804E-01	4.278E-01	6.419E-01	4.829E-02	1.060
		61.14		1.955E+00	3.042E-01	4.482E-01	3.372E-02	4.362
		69.30		2.397E-01	5.712E-01	6.068E-01	4.661E-02	0.395
		592.07		-9.593E-01	2.187E+00	3.482E+00	2.064E-01	-0.276
		646.12	*	-2.011E-02	3.747E-02	5.891E-02	3.450E-03	-0.341
W-188		717.42		2.563E-01	8.224E-01	1.368E+00	8.859E-02	0.187
		874.81		6.930E-02	4.414E-01	7.238E-01	6.146E-02	0.096
		880.27		2.278E-01	6.269E-01	1.045E+00	8.956E-02	0.218
		155.03	*	-8.861E-02	1.724E-01	2.743E-01	1.474E-02	-0.323
		477.96		1.357E+00	2.735E+00	4.653E+00	2.719E-01	0.292
		633.10		4.701E-02	2.247E+00	3.686E+00	2.167E-01	0.013
IR-192	+	63.58		1.744E+03	1.915E+02	1.794E+02	1.353E+01	9.721
		227.08		6.130E+00	1.175E+01	1.923E+01	1.077E+00	0.319
		290.67	*	1.155E+00	7.074E+00	1.047E+01	6.081E-01	0.110
	+	295.96		5.759E-01	1.787E-01	2.133E-01	1.259E-02	2.701
		308.46		2.334E-02	8.093E-02	1.377E-01	8.098E-03	0.170
		316.51	*	2.321E-02	2.819E-02	4.910E-02	2.868E-03	0.473
AU-195		468.07		9.075E-04	6.304E-02	9.071E-02	6.082E-03	0.010
		604.41		1.611E-01	4.153E-01	6.116E-01	6.978E-02	0.263
		612.46		1.076E+00	7.252E-01	1.151E+00	8.812E-02	0.935
		65.12		3.131E+00	3.705E-01	5.050E-01	3.821E-02	6.201
		66.83		-1.477E-01	1.317E-01	1.834E-01	1.395E-02	-0.805
	+	75.70		9.979E-01	3.326E-01	4.681E-01	3.741E-02	2.132
TL-200	+	98.88	*	1.782E+00	4.529E-01	5.527E-01	4.218E-02	3.224
		129.76		2.973E+00	3.108E+00	5.179E+00	2.996E-01	0.574
		367.94	*	2.069E-04	3.108E+00	Half-Life too short		
		579.30		6.299E-04	3.108E+00	Half-Life too short		
		828.27		5.191E-04	3.108E+00	Half-Life too short		
		1205.75		-6.175E-04	3.108E+00	Half-Life too short		
TL-201		68.90		1.800E+00	6.887E+00	7.264E+00	5.570E-01	0.248

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TL-202		70.82		4.113E+00	2.820E+00	4.202E+00	3.253E-01	0.979
		80.30		8.226E-01	7.713E+00	8.038E+00	6.672E-01	0.102
		135.34		-1.142E+01	2.026E+01	3.232E+01	1.836E+00	-0.353
		167.43	*	-7.606E+00	5.534E+00	8.513E+00	4.448E-01	-0.893
		68.90		2.026E-01	7.751E-01	8.175E-01	6.268E-02	0.248
		70.82		4.615E-01	3.165E-01	4.716E-01	3.651E-02	0.979
HG-203		80.30		9.235E-02	8.658E-01	9.023E-01	7.490E-02	0.102
		439.56	*	-1.870E-02	5.286E-02	8.585E-02	4.930E-03	-0.218
		70.83		1.455E+00	1.470E+00	2.159E+00	2.822E-01	0.674
+ BI-207		72.87		1.928E+00	9.101E-01	1.333E+00	1.693E-01	1.446
		82.60		1.402E+00	1.838E+00	2.521E+00	3.442E-01	0.556
		279.20	*	9.130E-03	3.630E-02	6.172E-02	3.795E-03	0.148
+ TL-207		72.80		5.926E-01	2.644E-01	3.966E-01	3.106E-02	1.494
		74.97		5.563E-01	1.854E-01	2.511E-01	1.996E-02	2.215
		84.90		2.487E-01	3.250E-01	4.475E-01	3.882E-02	0.556
+ PO-209		569.67		1.178E-01	5.920E-02	6.162E-02	3.657E-03	1.911
		1063.62	*	-3.331E-02	4.052E-02	6.261E-02	4.446E-03	-0.532
		1770.23		8.874E-02	3.691E-01	5.524E-01	3.332E-02	0.161
+ TL-207		81.07		-1.057E-02	4.539E-01	4.700E-01	3.929E-02	-0.022
		83.78		1.640E-01	2.143E-01	2.940E-01	2.522E-02	0.558
		94.90		6.397E+00	6.650E-01	8.281E-01	6.667E-02	7.724
+ PO-209		122.32		2.166E-01	1.976E+00	3.217E+00	2.197E-01	0.067
		144.24		1.782E+00	8.592E-01	1.289E+00	9.054E-02	1.382
		154.21		2.932E-01	3.994E-01	6.611E-01	4.412E-02	0.443
+ PO-209		269.46		2.601E-01	1.745E-01	3.086E-01	1.861E-02	0.843
		323.87	*	-5.247E-01	5.927E-01	9.432E-01	1.558E-01	-0.556
		338.28		4.565E+00	1.965E+00	2.027E+00	2.133E-01	2.252
+ PO-209		445.03		-6.441E-01	1.886E+00	3.062E+00	3.138E-01	-0.210
		260.50		4.688E-01	9.230E+00	1.476E+01	8.475E-01	0.032
		262.80		-1.478E+01	2.486E+01	3.850E+01	2.214E+00	-0.384
BI-210		896.60	*	-1.685E+00	6.145E+00	9.653E+00	8.486E-01	-0.175
		46.50	*	-4.116E-01	3.854E+00	6.332E+00	4.826E-01	-0.065
		46.50	*	-4.116E-01	3.854E+00	6.332E+00	4.826E-01	-0.065
PB-210		46.50	*	-4.116E-01	3.854E+00	6.332E+00	4.127E-01	-0.065
		404.84	*	-5.554E-01	1.003E+00	1.300E+00	8.102E-01	-0.427
		427.08		-7.274E-01	1.890E+00	2.985E+00	1.845E+00	-0.244
+ BI-212		831.96		-2.308E-01	1.070E+00	1.685E+00	1.054E+00	-0.137
		727.18	*	6.556E-01	4.183E-01	5.238E-01	4.361E-02	1.251
		785.46		9.268E-01	1.802E+00	3.019E+00	2.208E-01	0.307
+ PO-215		1620.62		5.344E-01	9.998E-01	1.764E+00	1.178E-01	0.303
		81.07		-1.057E-02	4.539E-01	4.700E-01	3.929E-02	-0.022
		83.78		1.640E-01	2.143E-01	2.940E-01	2.522E-02	0.558
+ PO-215		94.90		6.397E+00	6.650E-01	8.281E-01	6.667E-02	7.724
		122.32		2.166E-01	1.976E+00	3.217E+00	2.197E-01	0.067
		144.24		1.782E+00	8.592E-01	1.289E+00	9.054E-02	1.382
+ PO-215		154.21		2.932E-01	3.994E-01	6.611E-01	4.412E-02	0.443
		269.46		2.601E-01	1.745E-01	3.086E-01	1.861E-02	0.843
		323.87	*	-5.247E-01	5.927E-01	9.432E-01	1.558E-01	-0.556
+ PO-215		338.28		4.565E+00	1.965E+00	2.027E+00	2.133E-01	2.252

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		445.03		-6.441E-01	1.886E+00	3.062E+00	3.138E-01	-0.210
		271.23		4.264E-01	2.273E-01	4.040E-01	3.267E-02	1.055
		401.81	*	4.295E-02	3.684E-01	6.014E-01	8.134E-02	0.071
RN-220		549.76	*	-9.042E+00	2.293E+01	3.678E+01	2.182E+00	-0.246
RA-223		81.07		-1.057E-02	4.539E-01	4.700E-01	3.929E-02	-0.022
	+	83.78		1.640E-01	2.143E-01	2.940E-01	2.522E-02	0.558
		94.90		6.397E+00	6.650E-01	8.281E-01	6.667E-02	7.724
		122.32		2.166E-01	1.976E+00	3.217E+00	2.197E-01	0.067
	+	144.24		1.782E+00	8.592E-01	1.289E+00	9.054E-02	1.382
		154.21		2.932E-01	3.994E-01	6.611E-01	4.412E-02	0.443
		269.46		2.601E-01	1.745E-01	3.086E-01	1.861E-02	0.843
		323.87	*	-5.247E-01	5.927E-01	9.432E-01	1.558E-01	-0.556
	+	338.28		4.565E+00	1.965E+00	2.027E+00	2.133E-01	2.252
AC-227		445.03		-6.441E-01	1.886E+00	3.062E+00	3.138E-01	-0.210
		79.80		7.452E-01	3.456E+00	3.617E+00	7.726E-01	0.206
		236.00		1.268E+00	3.015E-01	4.580E-01	4.748E-02	2.768
		256.20	*	2.851E-01	3.748E-01	6.147E-01	8.563E-02	0.464
		286.10		-5.463E-01	1.356E+00	2.241E+00	2.591E-01	-0.244
	+	299.80		1.920E+00	1.367E+00	2.109E+00	3.435E-01	0.911
		304.40		-4.152E-01	1.819E+00	2.620E+00	4.533E-01	-0.158
		334.20		-9.409E-01	2.265E+00	3.199E+00	5.864E-01	-0.294
	+	79.80		7.452E-01	3.456E+00	3.617E+00	7.827E-01	0.206
TH-227		94.00		1.546E+02	3.385E+01	9.325E+00	2.014E+00	16.577
		236.00		1.268E+00	2.941E-01	4.580E-01	4.103E-02	2.768
		256.20	*	2.851E-01	3.758E-01	6.147E-01	1.037E-01	0.464
		286.10		-5.463E-01	1.461E+00	2.241E+00	2.245E+00	-0.244
	+	299.80		1.920E+00	1.367E+00	2.109E+00	3.435E-01	0.911
		304.40		-4.152E-01	1.819E+00	2.620E+00	4.533E-01	-0.158
TH-229		334.20		-9.409E-01	2.265E+00	3.199E+00	5.864E-01	-0.294
		85.43		1.037E-02	4.259E-01	4.419E-01	3.854E-02	0.023
		88.47		2.895E-01	2.446E-01	2.644E-01	2.350E-02	1.095
	+	100.00		1.486E+00	3.778E-01	4.349E-01	3.273E-02	3.417
		193.63	*	-4.257E-02	4.822E-01	7.700E-01	4.155E-02	-0.055
		210.97		1.223E+00	8.008E-01	1.207E+00	6.649E-02	1.013
PA-231		283.67	*	-9.171E-03	1.375E+00	2.314E+00	3.188E-01	-0.004
TH-231	+	301.29		7.681E-01	5.384E-01	8.561E-01	8.956E-02	0.897
		81.07		-1.057E-02	4.539E-01	4.700E-01	3.929E-02	-0.022
	+	83.78		1.640E-01	2.143E-01	2.940E-01	2.522E-02	0.558
		94.90		6.397E+00	6.650E-01	8.281E-01	6.667E-02	7.724
		122.32		2.166E-01	1.976E+00	3.217E+00	2.197E-01	0.067
	+	144.24		1.782E+00	8.592E-01	1.289E+00	9.054E-02	1.382
		154.21		2.932E-01	3.994E-01	6.611E-01	4.412E-02	0.443
		269.46		2.601E-01	1.745E-01	3.086E-01	1.861E-02	0.843
		323.87	*	-5.247E-01	5.927E-01	9.432E-01	1.558E-01	-0.556
	+	338.28		4.565E+00	1.965E+00	2.027E+00	2.133E-01	2.252
		445.03		-6.441E-01	1.886E+00	3.062E+00	3.138E-01	-0.210
	+	84.21		5.688E+00	7.433E+00	1.015E+01	8.742E-01	0.561
U-231	+	92.29		1.230E+02	1.096E+01	8.001E+00	6.691E-01	15.370
		95.87	*	9.620E-01	1.254E+00	2.077E+00	1.650E-01	0.463

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	108.00	1.474E+00	2.298E+00	3.353E+00	2.300E-01	0.440
		75.28	1.623E+01	5.790E+00	7.477E+00	1.121E+00	2.171
		86.59	-8.543E-01	3.666E+00	3.748E+00	1.008E+00	-0.228
	+	300.12	5.353E-01	3.779E-01	5.884E-01	7.910E-02	0.910
		311.98	-2.170E-02	5.488E-02	9.040E-02	5.582E-03	-0.240
		340.50	1.746E+00	7.793E-01	1.112E+00	2.553E-01	1.570
	*	398.62	-1.034E+00	1.854E+00	2.965E+00	7.652E-01	-0.349
		415.76	-3.051E-01	1.451E+00	2.244E+00	4.611E-01	-0.136
		63.00	5.125E+01	8.675E+00	5.411E+00	8.076E-01	9.471
		94.67	6.663E+00	8.667E-01	6.694E-01	8.054E-02	9.954
PA-234	+	98.44	7.255E-01	4.404E-01	2.287E-01	1.273E-01	3.172
		99.86	3.761E+00	9.559E-01	1.117E+00	8.421E-02	3.366
		111.00	1.202E+00	2.764E-01	4.411E-01	4.750E-02	2.725
	+	131.20	3.128E-02	1.162E-01	1.902E-01	1.095E-02	0.164
		152.70	1.102E-01	3.310E-01	5.409E-01	8.475E-02	0.204
		186.00	2.234E+01	7.220E+00	3.496E+00	1.065E+00	6.390
	+	226.40	-3.066E-02	3.849E-01	6.147E-01	7.043E-02	-0.050
		227.20	1.910E-01	4.036E-01	6.589E-01	3.689E-02	0.290
		248.90	-3.146E-01	7.783E-01	1.216E+00	2.610E-01	-0.259
	+	293.70	3.234E+00	9.238E-01	1.336E+00	2.149E-01	2.421
		369.80	7.128E-01	7.714E-01	1.322E+00	2.749E-01	0.539
		568.70	3.833E+00	1.927E+00	2.071E+00	1.229E-01	1.851
	+	569.50	1.045E+00	5.255E-01	5.505E-01	3.268E-02	1.899
		574.00	8.390E-01	1.430E+00	2.150E+00	1.276E-01	0.390
		699.00	-1.204E-01	6.129E-01	9.847E-01	1.786E-01	-0.122
	+	706.10	4.586E-01	9.199E-01	1.516E+00	6.703E-01	0.302
		733.00	4.834E-03	3.692E-01	5.198E-01	1.118E-01	0.009
		742.81	2.204E+00	1.976E+00	2.373E+00	1.590E+00	0.929
	+	796.30	1.385E+00	1.231E+00	1.496E+00	3.995E-01	0.926
		805.60	-1.560E-01	8.456E-01	1.347E+00	4.091E-01	-0.116
		819.60	1.537E-01	1.022E+00	1.674E+00	6.333E-01	0.092
	+	826.30	-2.190E-01	7.788E-01	1.223E+00	5.454E-01	-0.179
		831.60	-2.916E-01	5.697E-01	8.735E-01	2.590E-01	-0.334
		876.40	-6.473E-01	9.449E-01	9.788E-01	1.006E+00	-0.661
	+	880.51	1.610E-01	2.263E-01	3.885E-01	3.329E-02	0.415
		883.24	1.383E-01	2.669E-01	4.229E-01	2.843E-01	0.327
		899.00	-2.230E-01	6.932E-01	1.073E+00	4.693E-01	-0.208
	+	925.00	-2.740E-03	9.582E-01	1.543E+00	1.326E-01	-0.002
		926.50	2.703E-02	1.561E-01	2.353E-01	5.944E-02	0.115
		946.00	3.316E-01	2.661E-01	4.626E-01	8.635E-02	0.717
	*	949.00	3.517E-01	3.897E-01	6.740E-01	5.648E-02	0.522
		980.50	-6.154E-01	5.905E-01	8.401E-01	6.780E-02	-0.733
		1394.10	-9.588E-02	8.679E-01	1.410E+00	9.153E-01	-0.068
NP-236	+	94.67	5.089E+00	4.813E-01	5.090E-01	4.111E-02	9.999
		98.44	5.484E-01	1.394E-01	1.729E-01	1.327E-02	3.172
		111.00	9.092E-01	1.943E-01	3.337E-01	2.217E-02	2.725
NP-237	*	160.31	-6.183E-02	8.530E-02	1.347E-01	7.133E-03	-0.459
		86.50	-1.179E-01	5.500E-01	5.632E-01	1.264E-01	-0.209
		95.87	1.054E+00	1.395E+00	2.276E+00	5.554E-01	0.463

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		1.254E+00	3.186E-01	3.792E-01	2.869E-02	3.306
		117.00	*	1.805E-01	2.407E-01	3.530E-01	2.207E-02	0.511
	+	209.75		1.688E+00	9.875E-01	1.264E+00	6.948E-02	1.336
		228.18		-4.436E-02	2.134E-01	3.388E-01	1.899E-02	-0.131
		277.60		-8.711E-02	1.625E-01	2.678E-01	1.550E-02	-0.325
AM-241	+	334.30		-4.670E-01	1.283E+00	1.824E+00	1.056E-01	-0.256
		59.54	*	3.565E-01	2.280E-01	3.415E-01	2.811E-02	1.044
CM-243	+	99.55		1.290E+00	3.279E-01	3.901E-01	2.952E-02	3.306
		103.76	*	-3.435E-02	1.312E-01	1.859E-01	1.337E-02	-0.185
	+	117.00		1.857E-01	2.477E-01	3.631E-01	2.271E-02	0.511
		209.75		1.663E+00	9.734E-01	1.245E+00	6.849E-02	1.336
		228.18		-4.482E-02	2.156E-01	3.423E-01	1.918E-02	-0.131
AM-246		277.60		-8.781E-02	1.638E-01	2.699E-01	1.562E-02	-0.325
		798.80		1.306E-01	1.282E-01	2.004E-01	1.500E-02	0.652
		1036.00		9.042E-02	2.382E-01	4.121E-01	3.069E-02	0.219
		1062.04		-1.107E-01	1.844E-01	2.924E-01	2.083E-02	-0.379
		1078.86	*	-4.974E-02	1.195E-01	1.930E-01	1.332E-02	-0.258
CM-247		278.00		-3.593E-02	6.679E-01	1.123E+00	6.497E-02	-0.032
		287.40		-7.426E-01	1.155E+00	1.777E+00	1.031E-01	-0.418
	*	402.60		8.127E-03	3.388E-02	5.405E-02	3.032E-03	0.150
CF-249		252.85		-8.570E-01	8.241E-01	1.250E+00	7.144E-02	-0.686
		333.44		-4.544E-02	1.683E-01	2.409E-01	1.395E-02	-0.189
	*	387.95		4.125E-03	3.685E-02	6.177E-02	3.449E-03	0.067
CF-251		176.60	*	3.034E-02	1.271E-01	2.067E-01	1.092E-02	0.147
		227.00		1.841E-01	3.573E-01	5.844E-01	3.271E-02	0.315
		285.00		-1.538E+00	1.578E+00	2.543E+00	1.475E-01	-0.605

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395003      *
* Acquisition date   : 2-FEB-2010 07:21:05 Detector SN# :                  *
* Detector ID        : GAM19 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                       *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000            *
* Elapsed real time  : 0 02:00:01.98 Half life ratio : 8.000             *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G245395003 Analyst initials: MXR1                  *
* Batch Number      : 944966 Sample Quantity : 1.7047E+02 GRAM           *
* Recovery          : 1.00000 Carrier Weight : 0.00000                  *
*****
*
*                                     QC DATA                               *
*
* Standard Weight   : 0.00000                                              *
* CALIB. DATE/TIME : 12-MAR-2009 10:24:54 MS Isotope :                   *
* MSD DPM           : 0.000 MSD Isotope :                               *
* LCS DPM           : 0.000 LCS Isotope :                               *
* LCSD DPM          : 0.000 LCSD Isotope :                               *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.447E+01	2.238E+00	3.966E-01	0.000E+00
BA-137M	6.103E-02	4.226E-02	5.051E-02	0.000E+00
CS-137	6.451E-02	4.468E-02	5.340E-02	0.000E+00
LU-177	2.078E+00	1.192E+00	1.533E+00	0.000E+00
TL-208	4.110E-01	6.912E-02	4.982E-02	0.000E+00
BI-211	2.545E+00	4.231E-01	3.011E-01	0.000E+00
PB-212	1.112E+00	1.167E-01	9.080E-02	0.000E+00
PO-212	1.112E+00	1.167E-01	9.080E-02	0.000E+00
BI-214	6.828E-01	1.348E-01	9.959E-02	0.000E+00
PB-214	8.852E-01	1.540E-01	1.049E-01	0.000E+00
PO-214	8.852E-01	1.540E-01	1.049E-01	0.000E+00
PO-216	1.112E+00	1.167E-01	9.080E-02	0.000E+00
PO-218	8.852E-01	1.540E-01	1.049E-01	0.000E+00
RA-224	2.704E+00	1.055E+00	1.032E+00	0.000E+00
RA-226	6.828E-01	1.348E-01	9.959E-02	0.000E+00
AC-228	9.847E-01	2.737E-01	1.855E-01	0.000E+00
RA-228	9.847E-01	2.737E-01	1.855E-01	0.000E+00
TH-228	1.127E+00	1.183E-01	9.206E-02	0.000E+00
TH-230	6.828E-01	1.348E-01	9.959E-02	0.000E+00
TH-232	9.847E-01	2.737E-01	1.855E-01	0.000E+00
PA-234M	5.888E+01	9.815E+00	6.584E+00	0.000E+00
TH-234	4.397E+01	8.286E+00	2.942E+00	0.000E+00
U-234	6.828E-01	1.348E-01	9.959E-02	0.000E+00
U-235	5.498E-01	2.715E-01	3.934E-01	0.000E+00
U-238	4.397E+01	8.286E+00	2.942E+00	0.000E+00
AM-243	3.099E-01	1.012E-01	1.302E-01	0.000E+00
ANH-511	9.107E-02	6.796E-02	4.091E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	1.745E-01	2.807E-01	5.154E-01	0.000E+00	NOT IDENT.
NA-22	-2.858E-02	3.626E-02	5.800E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.242E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.240E-02	2.254E-02	3.347E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.211E-02	9.549E-02	0.000E+00	FAIL ABUN
SC-46	2.513E-02	3.306E-02	5.955E-02	0.000E+00	FAIL ABUN
V-48	1.952E-02	5.145E-02	8.979E-02	0.000E+00	NOT IDENT.
CR-51	-1.029E-01	2.965E-01	5.317E-01	0.000E+00	NOT IDENT.
MN-52	-9.443E-02	1.340E-01	2.037E-01	0.000E+00	NOT IDENT.
MN-54	-2.770E-03	3.149E-02	5.333E-02	0.000E+00	NOT IDENT.
CO-56	7.856E-03	3.362E-02	5.833E-02	0.000E+00	NOT IDENT.
CO-57	3.411E-03	2.785E-02	5.080E-02	0.000E+00	NOT IDENT.
CO-58	2.381E-04	3.109E-02	5.317E-02	0.000E+00	NOT IDENT.
FE-59	-1.789E-02	7.140E-02	1.221E-01	0.000E+00	FAIL ABUN
CO-60	-3.741E-03	2.777E-02	4.695E-02	0.000E+00	NOT IDENT.
ZN-65	1.087E-02	7.512E-02	1.150E-01	0.000E+00	NOT IDENT.
GE-68	4.501E-01	1.013E+00	1.833E+00	0.000E+00	NOT IDENT.
AS-73	2.967E-02	1.015E+00	1.925E+00	0.000E+00	NOT IDENT.
AS-74	5.223E-02	7.257E-02	1.328E-01	0.000E+00	NOT IDENT.
SE-75	-1.681E-02	3.808E-02	6.901E-02	0.000E+00	NOT IDENT.
BR-77	-1.975E-02	6.345E+00	1.057E+01	0.000E+00	FAIL ABUN
SR-82	-3.713E-01	3.166E-01	4.902E-01	0.000E+00	NOT IDENT.
RB-83	-4.543E-03	6.368E-02	1.015E-01	0.000E+00	NOT IDENT.
RB-84	6.418E-02	5.603E-02	1.040E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.338E+00	1.247E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.205E-02	6.306E-02	0.000E+00	NOT IDENT.
RB-86	1.073E-01	6.334E-01	1.122E+00	0.000E+00	NOT IDENT.
Y-88	8.094E-03	2.335E-02	4.168E-02	0.000E+00	NOT IDENT.
ZR-88	4.790E-03	2.676E-02	4.859E-02	0.000E+00	NOT IDENT.
Y-91	2.922E+00	1.457E+01	2.565E+01	0.000E+00	NOT IDENT.
NB-94	2.948E-03	2.778E-02	4.838E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.949E-02	9.541E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.324E-01	2.223E-01	0.000E+00	NOT IDENT.
ZR-95	-8.676E-03	6.654E-02	1.133E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.472E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.571E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.666E+00	8.167E+00	1.347E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.177E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.031E-02	3.196E-02	5.609E-02	0.000E+00	NOT IDENT.
RH-102	1.014E-02	2.599E-02	4.719E-02	0.000E+00	FAIL ABUN
RU-103	1.088E-02	3.321E-02	5.997E-02	0.000E+00	FAIL ABUN
RH-106	-1.020E-01	2.663E-01	4.514E-01	0.000E+00	FAIL ABUN
RU-106	-1.020E-01	2.661E-01	4.514E-01	0.000E+00	FAIL ABUN
AG-108M	-1.919E-02	2.871E-02	4.943E-02	0.000E+00	NOT IDENT.
CD-109	2.282E-01	1.842E+00	2.165E+00	0.000E+00	NOT IDENT.
AG-110M	-1.320E-03	3.201E-02	4.787E-02	0.000E+00	NOT IDENT.
IN-111	-9.697E-02	8.124E-01	1.232E+00	0.000E+00	NOT IDENT.
IN-113M	-1.002E-02	3.971E-02	7.061E-02	0.000E+00	NOT IDENT.
SN-113	-1.002E-02	3.971E-02	7.061E-02	0.000E+00	NOT IDENT.
IN-114M	-8.129E-02	1.873E-01	2.843E-01	0.000E+00	NOT IDENT.
CD-115	3.032E+00	5.657E+00	1.034E+01	0.000E+00	NOT IDENT.
SN-117M	-1.747E-02	5.189E-02	9.225E-02	0.000E+00	NOT IDENT.
SB-122	8.068E-01	1.397E+00	2.238E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.130E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.481E-02	2.915E-02	5.092E-02	0.000E+00	NOT IDENT.
I-124	-2.870E-01	4.669E-01	6.986E-01	0.000E+00	NOT IDENT.
SB-124	1.518E-02	5.155E-02	9.145E-02	0.000E+00	FAIL ABUN
SB-125	1.687E-02	7.954E-02	1.440E-01	0.000E+00	FAIL ABUN
TE-125M	2.060E+01	1.290E+01	2.158E+01	0.000E+00	NOT IDENT.
I-126	2.861E-02	1.604E-01	2.450E-01	0.000E+00	NOT IDENT.
SB-126	-5.264E-02	1.438E-01	2.066E-01	0.000E+00	FAIL ABUN
SN-126	-2.628E-02	1.817E-01	2.112E-01	0.000E+00	FAIL ABUN
SB-127	4.279E-01	9.087E-01	1.625E+00	0.000E+00	NOT IDENT.
XE-127	5.404E-02	5.056E-02	8.217E-02	0.000E+00	NOT IDENT.
I-131	-8.195E-02	8.947E-02	1.542E-01	0.000E+00	NOT IDENT.
TE-132	-9.894E-02	4.840E-01	8.446E-01	0.000E+00	FAIL ABUN
BA-133	2.582E-03	4.068E-02	6.439E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.732E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.118E-02	5.936E-02	7.979E-02	0.000E+00	FAIL ABUN
CS-135	7.608E-02	1.408E-01	2.645E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.602E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.470E-02	7.649E-02	1.253E-01	0.000E+00	NOT IDENT.
CE-139	-1.654E-02	3.076E-02	5.419E-02	0.000E+00	NOT IDENT.
BA-140	2.393E-03	2.087E-01	3.681E-01	0.000E+00	NOT IDENT.
LA-140	2.529E-02	6.055E-02	9.639E-02	0.000E+00	NOT IDENT.
CE-141	1.076E-01	7.601E-02	1.255E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.494E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.033E-01	2.177E-01	3.886E-01	0.000E+00	NOT IDENT.

PM-144	-1.502E-02	3.053E-02	4.925E-02	0.000E+00	NOT IDENT.
PR-144	-1.017E+00	2.068E+00	3.335E+00	0.000E+00	NOT IDENT.
PM-146	-7.187E-03	3.837E-02	6.771E-02	0.000E+00	NOT IDENT.
ND-147	-4.881E-01	4.264E-01	6.842E-01	0.000E+00	NOT IDENT.
PM-149	-2.212E+01	5.261E+01	9.476E+01	0.000E+00	NOT IDENT.
EU-152	-7.746E-03	1.472E-01	1.551E-01	0.000E+00	NOT IDENT.
GD-153	0.000E+00	1.526E-01	2.169E-01	0.000E+00	FAIL ABUN
EU-154	-5.884E-02	1.000E-01	1.630E-01	0.000E+00	NOT IDENT.
EU-155	-1.095E-01	1.381E-01	2.286E-01	0.000E+00	NOT IDENT.
TB-160	-2.067E-02	1.092E-01	1.822E-01	0.000E+00	FAIL ABUN
HO-166M	-3.815E-02	5.368E-02	8.787E-02	0.000E+00	FAIL ABUN
TM-171	-4.475E+01	3.919E+01	6.224E+01	0.000E+00	NOT IDENT.
LU-176	-7.228E-03	2.131E-02	3.733E-02	0.000E+00	NOT IDENT.
LU-177M	5.895E-02	1.563E-01	2.511E-01	0.000E+00	NOT IDENT.
HF-181	-2.544E-02	3.611E-02	6.139E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	7.474E-01	1.185E+00	0.000E+00	NOT IDENT.
TA-182	-3.552E-02	1.574E-01	2.677E-01	0.000E+00	FAIL ABUN
RE-183	8.310E-02	1.140E-01	2.090E-01	0.000E+00	FAIL ABUN
RE-184	-2.272E-01	2.141E-01	3.557E-01	0.000E+00	NOT IDENT.
OS-185	-2.011E-02	3.672E-02	6.136E-02	0.000E+00	NOT IDENT.
RE-188	-8.861E-02	1.690E-01	2.990E-01	0.000E+00	NOT IDENT.
W-188	1.155E+00	6.933E+00	1.119E+01	0.000E+00	FAIL ABUN
IR-192	2.321E-02	2.763E-02	5.233E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	4.438E-01	6.104E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.754E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.606E+00	5.424E+00	9.255E+00	0.000E+00	NOT IDENT.
TL-202	-1.870E-02	5.180E-02	9.055E-02	0.000E+00	NOT IDENT.
HG-203	9.130E-03	3.557E-02	6.605E-02	0.000E+00	FAIL ABUN
BI-207	-3.331E-02	3.971E-02	6.414E-02	0.000E+00	FAIL ABUN
TL-207	-5.247E-01	5.808E-01	1.005E+00	0.000E+00	FAIL ABUN
PO-209	-1.685E+00	6.022E+00	9.945E+00	0.000E+00	NOT IDENT.
BI-210	-4.116E-01	3.777E+00	7.147E+00	0.000E+00	NOT IDENT.
PB-210	-4.116E-01	3.777E+00	7.147E+00	0.000E+00	NOT IDENT.
PO-210	-4.116E-01	3.777E+00	7.147E+00	0.000E+00	NOT IDENT.
PB-211	-5.554E-01	9.830E-01	1.375E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.100E-01	5.435E-01	0.000E+00	FAIL ABUN
PO-215	-5.247E-01	5.808E-01	1.005E+00	0.000E+00	FAIL ABUN
RN-219	4.295E-02	3.611E-01	6.362E-01	0.000E+00	NOT IDENT.
RN-220	-9.042E+00	2.247E+01	3.851E+01	0.000E+00	NOT IDENT.
RA-223	-5.247E-01	5.808E-01	1.005E+00	0.000E+00	FAIL ABUN
AC-227	2.851E-01	3.673E-01	6.596E-01	0.000E+00	FAIL ABUN
TH-227	2.851E-01	3.683E-01	6.596E-01	0.000E+00	FAIL ABUN
TH-229	-4.257E-02	4.725E-01	8.335E-01	0.000E+00	FAIL ABUN
PA-231	-9.171E-03	1.347E+00	2.475E+00	0.000E+00	FAIL ABUN
TH-231	-5.247E-01	5.808E-01	1.005E+00	0.000E+00	FAIL ABUN
U-231	9.620E-01	1.229E+00	2.296E+00	0.000E+00	FAIL ABUN
PA-233	-2.170E-02	5.378E-02	9.641E-02	0.000E+00	FAIL ABUN
PA-234	3.316E-01	2.608E-01	4.757E-01	0.000E+00	FAIL ABUN
NP-236	-6.183E-02	8.359E-02	1.466E-01	0.000E+00	FAIL ABUN
NP-237	-1.179E-01	5.390E-01	6.245E-01	0.000E+00	NOT IDENT.
NP-239	1.805E-01	2.359E-01	3.879E-01	0.000E+00	FAIL ABUN
AM-241	3.565E-01	2.234E-01	3.827E-01	0.000E+00	NOT IDENT.
CM-243	-3.435E-02	1.286E-01	2.050E-01	0.000E+00	FAIL ABUN
AM-246	-4.974E-02	1.171E-01	1.976E-01	0.000E+00	NOT IDENT.
CM-247	8.127E-03	3.320E-02	5.717E-02	0.000E+00	NOT IDENT.
CF-249	4.125E-03	3.611E-02	6.541E-02	0.000E+00	NOT IDENT.
CF-251	3.034E-02	1.246E-01	2.244E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395003.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 07:21:05.
Sample ID          : G245395003          Sample quantity   : 1.70470E+02 GRAM
Detector name      : GAM19              Detector geometry  : CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time  : 0 02:00:01.98  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 944966             Detector SN#      :
Matrix Spike ID    :                    LCS ID             : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1385	10.67*	1.168E+00	2.447E+01	2.447E+01	9.33
BA-137M	661.65	57	89.98*	2.302E+00	6.097E-02	6.103E-02	70.67
CS-137	661.65	57	85.12*	2.302E+00	6.445E-02	6.451E-02	70.67
LU-177	112.95	596	6.40	6.856E+00	2.990E+00	1.250E+01	31.14
	208.36	136	11.00*	5.473E+00	4.971E-01	2.078E+00	58.52
TL-208	277.35	-----	6.80	4.511E+00	-----	Line Not Found	-----
	510.84	117	21.60	2.840E+00	4.216E-01	4.216E-01	76.60
	583.14	402	84.20*	2.555E+00	4.110E-01	4.110E-01	17.16
	860.37	73	12.46	1.836E+00	7.025E-01	7.025E-01	49.31
BI-211	72.87	-----	1.27	4.857E+00	-----	Line Not Found	-----
	351.07	566	12.94*	3.788E+00	2.545E+00	2.545E+00	16.97
PB-212	74.81	469	10.70	5.053E+00	1.912E+00	1.912E+00	34.62
	77.11	580	18.00	5.300E+00	1.338E+00	1.338E+00	25.66
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	238.63	1130	44.60*	5.017E+00	1.112E+00	1.112E+00	10.71
	300.09	68	3.41	4.260E+00	1.036E+00	1.036E+00	69.80
PO-212	74.81	469	10.70	5.053E+00	1.912E+00	1.912E+00	34.62
	77.11	580	18.00	5.300E+00	1.338E+00	1.338E+00	25.66
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	115.19	-----	0.60	6.866E+00	-----	Line Not Found	-----
	238.63	1130	44.60*	5.017E+00	1.112E+00	1.112E+00	10.71
	300.09	68	3.41	4.260E+00	1.036E+00	1.036E+00	69.80
BI-214	609.31	354	46.30*	2.464E+00	6.828E-01	6.828E-01	20.15
	1120.29	109	15.10	1.455E+00	1.093E+00	1.093E+00	38.16
	1764.49	97	15.80	1.030E+00	1.307E+00	1.307E+00	25.24
PB-214	74.81	469	6.21	5.053E+00	3.294E+00	3.294E+00	34.14
	77.11	580	10.50	5.300E+00	2.294E+00	2.294E+00	26.77
	87.30	-----	4.67	6.097E+00	-----	Line Not Found	-----
	241.98	241	7.49	4.975E+00	1.426E+00	1.426E+00	40.21
	295.21	287	19.20	4.310E+00	7.646E-01	7.646E-01	31.63
	351.92	566	37.20*	3.788E+00	8.851E-01	8.852E-01	17.75
PO-214	74.81	469	6.21	5.053E+00	3.294E+00	3.294E+00	34.14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	580	10.50	5.300E+00	2.294E+00	2.294E+00	26.77
	87.30	-----	4.67	6.097E+00	-----	Line Not Found	-----
	241.98	241	7.49	4.975E+00	1.426E+00	1.426E+00	40.21
	295.21	287	19.20	4.310E+00	7.646E-01	7.646E-01	31.63
	351.92	566	37.20*	3.788E+00	8.851E-01	8.852E-01	17.75
PO-216	74.81	469	10.70	5.053E+00	1.912E+00	1.912E+00	34.62
	77.11	580	18.00	5.300E+00	1.338E+00	1.338E+00	25.66
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	238.63	1130	44.60*	5.017E+00	1.112E+00	1.112E+00	10.71
	300.09	68	3.41	4.260E+00	1.036E+00	1.036E+00	69.80
PO-218	74.81	469	6.21	5.053E+00	3.294E+00	3.294E+00	34.14
	77.11	580	10.50	5.300E+00	2.294E+00	2.294E+00	26.77
	87.30	-----	4.67	6.097E+00	-----	Line Not Found	-----
	241.98	241	7.49	4.975E+00	1.426E+00	1.426E+00	40.21
	295.21	287	19.20	4.310E+00	7.646E-01	7.646E-01	31.63
	351.92	566	37.20*	3.788E+00	8.851E-01	8.852E-01	17.75
RA-224	240.98	241	3.95*	4.975E+00	2.704E+00	2.704E+00	39.81
RA-226	609.31	354	46.30*	2.464E+00	6.828E-01	6.828E-01	20.15
	1120.29	109	15.10	1.455E+00	1.093E+00	1.093E+00	38.16
	1764.49	97	15.80	1.030E+00	1.307E+00	1.307E+00	25.24
AC-228	338.32	221	11.40	3.899E+00	1.093E+00	1.093E+00	58.34
	911.07	216	27.70*	1.746E+00	9.847E-01	9.847E-01	28.36
	969.11	166	16.60	1.653E+00	1.332E+00	1.332E+00	33.11
RA-228	338.32	221	11.40	3.899E+00	1.093E+00	1.093E+00	58.34
	911.07	216	27.70*	1.746E+00	9.847E-01	9.847E-01	28.36
	969.11	166	16.60	1.653E+00	1.332E+00	1.332E+00	33.11
TH-228	74.81	469	10.70	5.053E+00	1.912E+00	1.938E+00	33.35
	77.11	580	18.00	5.300E+00	1.338E+00	1.357E+00	25.66
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	238.63	1130	44.60*	5.017E+00	1.112E+00	1.127E+00	10.71
	300.09	68	3.41	4.260E+00	1.036E+00	1.050E+00	90.98
TH-230	609.31	354	46.30*	2.464E+00	6.828E-01	6.828E-01	20.15
	1120.29	109	15.10	1.455E+00	1.093E+00	1.093E+00	38.16
	1764.49	97	15.80	1.030E+00	1.307E+00	1.307E+00	25.24
TH-232	338.32	221	11.40	3.899E+00	1.093E+00	1.093E+00	42.13
	911.07	216	27.70*	1.746E+00	9.847E-01	9.847E-01	28.36
	969.11	166	16.60	1.653E+00	1.332E+00	1.332E+00	33.11
PA-234M	766.42	186	0.32	2.029E+00	6.321E+01	6.321E+01	59.65
	1001.03	361	0.84*	1.607E+00	5.888E+01	5.888E+01	17.01
TH-234	63.29	2743	3.80*	3.615E+00	4.397E+01	4.397E+01	19.23
	92.38	6272	5.41	6.382E+00	4.000E+01	4.000E+01	18.22
U-234	609.31	354	46.30*	2.464E+00	6.828E-01	6.828E-01	20.15
	1120.29	109	15.10	1.455E+00	1.093E+00	1.093E+00	38.16
	1764.49	97	15.80	1.030E+00	1.307E+00	1.307E+00	25.24
U-235	89.95	-----	2.70	6.249E+00	-----	Line Not Found	-----
	93.35	6272	4.50	6.382E+00	4.809E+01	4.809E+01	28.12
	105.00	-----	2.10	6.763E+00	-----	Line Not Found	-----
	143.76	174	10.50*	6.637E+00	5.498E-01	5.498E-01	50.39
	163.35	-----	4.70	6.300E+00	-----	Line Not Found	-----

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	185.71	1194	54.00	5.884E+00	8.273E-01	8.273E-01	12.03
	205.31	128	4.70	5.536E+00	1.086E+00	1.086E+00	50.82
U-238	63.29	2743	3.80*	3.615E+00	4.397E+01	4.397E+01	19.23
	92.38	6272	5.41	6.382E+00	4.000E+01	4.000E+01	8.91
AM-243	74.67	469	66.00*	5.053E+00	3.099E-01	3.099E-01	33.33
	86.72	-----	0.34	6.061E+00	-----	Line Not Found	-----
	117.66	-----	0.55	6.871E+00	-----	Line Not Found	-----
	142.18	174	0.13	6.637E+00	4.618E+01	4.618E+01	48.03
ANH-511	511.00	117	100.00*	2.840E+00	9.107E-02	9.107E-02	76.15

Flag: "*" = Keyline

Total number of lines in spectrum 38
Number of unidentified lines 3
Number of lines tentatively identified by NID 35 92.11%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.447E+01	2.447E+01	0.228E+01	9.33	
BA-137M	30.17Y	1.00	6.097E-02	6.103E-02	4.312E-02	70.67	
CS-137	30.17Y	1.00	6.445E-02	6.451E-02	4.559E-02	70.67	
LU-177	6.71D	4.18	4.971E-01	2.078E+00	1.216E+00	58.52	
TL-208	1.41E+10Y	1.00	4.110E-01	4.110E-01	0.705E-01	17.16	
BI-211	7.04E+08Y	1.00	2.545E+00	2.545E+00	0.432E+00	16.97	
PB-212	1.41E+10Y	1.00	1.112E+00	1.112E+00	0.119E+00	10.71	
PO-212	1.41E+10Y	1.00	1.112E+00	1.112E+00	0.119E+00	10.71	
BI-214	1600.00Y	1.00	6.828E-01	6.828E-01	1.376E-01	20.15	
PB-214	1600.00Y	1.00	8.851E-01	8.852E-01	1.571E-01	17.75	
PO-214	1600.00Y	1.00	8.851E-01	8.852E-01	1.571E-01	17.75	
PO-216	1.41E+10Y	1.00	1.112E+00	1.112E+00	0.119E+00	10.71	
PO-218	1600.00Y	1.00	8.851E-01	8.852E-01	1.571E-01	17.75	
RA-224	1.41E+10Y	1.00	2.704E+00	2.704E+00	1.076E+00	39.81	
RA-226	1600.00Y	1.00	6.828E-01	6.828E-01	1.376E-01	20.15	
AC-228	1.41E+10Y	1.00	9.847E-01	9.847E-01	2.792E-01	28.36	
RA-228	1.41E+10Y	1.00	9.847E-01	9.847E-01	2.792E-01	28.36	
TH-228	1.91Y	1.01	1.112E+00	1.127E+00	0.121E+00	10.71	
TH-230	4.47E+09Y	1.00	6.828E-01	6.828E-01	1.376E-01	20.15	
TH-232	1.41E+10Y	1.00	9.847E-01	9.847E-01	2.792E-01	28.36	
PA-234M	4.47E+09Y	1.00	5.888E+01	5.888E+01	1.002E+01	17.01	
TH-234	4.47E+09Y	1.00	4.397E+01	4.397E+01	0.846E+01	19.23	
U-234	4.47E+09Y	1.00	6.828E-01	6.828E-01	1.376E-01	20.15	
U-235	7.04E+08Y	1.00	5.498E-01	5.498E-01	2.770E-01	50.39	
U-238	4.47E+09Y	1.00	4.397E+01	4.397E+01	0.846E+01	19.23	
AM-243	7380.00Y	1.00	3.099E-01	3.099E-01	1.033E-01	33.33	
ANH-511	1.00E+09Y	1.00	9.107E-02	9.107E-02	6.935E-02	76.15	

Total Activity : 1.913E+02 1.929E+02

Grand Total Activity : 1.913E+02 1.929E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	83.45	107	1597	1.23	166.74	165	8	1.49E-02	****	5.84E+00	T
1	98.51	553	835	1.50	196.82	177	25	7.68E-02	24.2	6.60E+00	T
0	178.32	47	485	1.35	356.32	349	10	6.57E-03	****	6.02E+00	
0	409.53	56	154	1.02	818.46	813	10	7.77E-03	87.9	3.38E+00	T
0	462.80	66	142	1.60	924.96	920	11	9.20E-03	74.0	3.07E+00	T
0	568.42	136	179	2.49	1136.10	1130	18	1.89E-02	49.9	2.61E+00	T
0	727.81	75	112	0.62	1454.80	1447	13	1.04E-02	63.3	2.12E+00	T
0	795.55	48	91	1.93	1590.24	1584	12	6.70E-03	84.8	1.97E+00	T
0	966.20	24	77	0.75	1931.51	1922	11	3.31E-03	****	1.66E+00	T
0	1590.46	18	41	0.77	3180.41	3172	20	2.44E-03	****	1.10E+00	
0	1631.09	10	6	1.19	3261.72	3257	8	1.36E-03	****	1.08E+00	

Flags: "T" = Tentatively associated

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                   *
*****
*                               DETECTOR DATA                         *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395003.CNF;1
* Acquisition date   : 2-FEB-2010 07:21:05.  Detector SN#      :
* Detector ID        : GAM19                      Sensitivity    : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:01.98           Half life ratio  : 8.00000
*****
*                               SAMPLE DATA                           *
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library : SOLID
* Sample ID          : G245395003             Analyst initials: MXR1
* Batch Number       : 944966                 Sample Quantity  : 1.70470E+02 GRAM
*****
*                               QC DATA                              *
*
* CALIB. DATE/TIME   : 12-MAR-2009 10:24:54.1MS Isotope      :
* MSD ID              :                               MSD Isotope :
* LCS ID              : 1032-A                       LCS Isotope  :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.447E+01	2.283E+00	3.915E-01	2.916E-02	62.502
BA-137M	6.103E-02	4.312E-02	4.853E-02	2.826E-03	1.257
CS-137	6.451E-02	4.559E-02	5.130E-02	3.000E-03	1.257
LU-177	2.078E+00	1.216E+00	1.420E+00	7.795E-02	1.464
TL-208	4.110E-01	7.053E-02	4.766E-02	3.241E-03	8.624
BI-211	2.545E+00	4.317E-01	2.834E-01	1.810E-02	8.978
PB-212	1.112E+00	1.191E-01	8.444E-02	6.094E-03	13.171
PO-212	1.112E+00	1.191E-01	8.444E-02	6.094E-03	13.171
BI-214	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
PB-214	8.852E-01	1.571E-01	9.878E-02	8.144E-03	8.960
PO-214	8.852E-01	1.571E-01	9.878E-02	8.144E-03	8.960
PO-216	1.112E+00	1.191E-01	8.444E-02	6.094E-03	13.171
PO-218	8.852E-01	1.571E-01	9.878E-02	8.144E-03	8.960
RA-224	2.704E+00	1.076E+00	9.604E-01	5.442E-02	2.815
RA-226	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
AC-228	9.847E-01	2.792E-01	1.802E-01	2.038E-02	5.465
RA-228	9.847E-01	2.792E-01	1.802E-01	2.038E-02	5.465
TH-228	1.127E+00	1.207E-01	8.561E-02	6.179E-03	13.171

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
TH-232	9.847E-01	2.792E-01	1.802E-01	2.038E-02	5.465
PA-234M	5.888E+01	1.002E+01	6.415E+00	5.971E-01	9.179
TH-234	4.397E+01	8.455E+00	2.629E+00	4.601E-01	16.721
U-234	6.828E-01	1.376E-01	9.543E-02	7.503E-03	7.155
U-235	5.498E-01	2.770E-01	3.602E-01	5.841E-02	1.526
U-238	4.397E+01	8.455E+00	2.629E+00	4.601E-01	16.721
AM-243	3.099E-01	1.033E-01	1.170E-01	9.276E-03	2.650
ANH-511	9.107E-02	6.935E-02	3.897E-02	2.300E-03	2.337

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.745E-01		2.864E-01	4.900E-01	3.326E-02	0.356
NA-22	-2.858E-02		3.700E-02	5.697E-02	3.800E-03	-0.502
NA-24	1.241E-02		6.337E-02	Half-Life	too short	
AL-26	-1.240E-02		2.300E-02	3.328E-02	1.943E-03	-0.373
TI-44	2.470E-01	+	6.338E-02	8.588E-02	7.010E-03	2.876
SC-46	2.513E-02		3.373E-02	5.779E-02	5.021E-03	0.435
V-48	1.952E-02		5.250E-02	8.742E-02	7.029E-03	0.223
CR-51	-1.029E-01		3.025E-01	4.990E-01	3.229E-02	-0.206
MN-52	-9.443E-02		1.368E-01	2.009E-01	1.449E-02	-0.470
MN-54	-2.770E-03		3.213E-02	5.164E-02	4.107E-03	-0.054
CO-56	7.856E-03		3.430E-02	5.651E-02	4.584E-03	0.139
CO-57	3.411E-03		2.842E-02	4.629E-02	2.762E-03	0.074
CO-58	2.381E-04		3.172E-02	5.144E-02	3.942E-03	0.005
FE-59	-1.789E-02		7.286E-02	1.193E-01	8.952E-03	-0.150
CO-60	-3.741E-03		2.834E-02	4.619E-02	3.404E-03	-0.081
ZN-65	1.087E-02		7.665E-02	1.124E-01	7.189E-03	0.097
GE-68	4.501E-01		1.033E+00	1.790E+00	1.239E-01	0.251
AS-73	2.967E-02		1.036E+00	1.712E+00	1.267E-01	0.017
AS-74	5.223E-02		7.405E-02	1.272E-01	7.534E-03	0.411
SE-75	-1.681E-02		3.886E-02	6.438E-02	3.744E-03	-0.261
BR-77	-1.975E-02		6.474E+00	1.007E+01	5.956E-01	-0.002
SR-82	-3.713E-01		3.231E-01	4.735E-01	3.409E-02	-0.784
RB-83	-4.543E-03		6.498E-02	9.680E-02	5.722E-03	-0.047
RB-84	6.418E-02		5.717E-02	1.009E-01	8.659E-03	0.636
KR-85	1.526E+01		6.467E+00	1.188E+01	7.016E-01	1.284
SR-85	7.716E-02		3.270E-02	6.009E-02	3.548E-03	1.284
RB-86	1.073E-01		6.463E-01	1.096E+00	7.594E-02	0.098
Y-88	8.094E-03		2.383E-02	4.147E-02	2.367E-03	0.195
ZR-88	4.790E-03		2.730E-02	4.590E-02	2.556E-03	0.104
Y-91	2.922E+00		1.487E+01	2.514E+01	1.468E+00	0.116
NB-94	2.948E-03		2.835E-02	4.658E-02	2.933E-03	0.063
NB-95	1.459E-01		5.050E-02	9.212E-02	6.510E-03	1.584
NB-95M	2.856E-01		1.351E-01	2.066E-01	1.530E-02	1.383
ZR-95	-8.676E-03		6.790E-02	1.094E-01	8.755E-03	-0.079

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-4.812E-05		1.261E-02	Half-Life too short		
ZR-97	8.913E-01		2.332E-01	Half-Life too short		
MO-99	-4.666E+00		8.333E+00	1.299E+01	1.845E+00	-0.359
TC-99M	-2.389E+08		6.004E+08	Half-Life too short		
RH-101	-1.031E-02		3.262E-02	5.185E-02	2.813E-03	-0.199
RH-102	1.014E-02		2.653E-02	4.485E-02	2.618E-03	0.226
RU-103	1.088E-02		3.388E-02	5.708E-02	7.238E-03	0.191
RH-106	-1.020E-01		2.717E-01	4.328E-01	5.100E-02	-0.236
RU-106	-1.020E-01		2.715E-01	4.328E-01	2.552E-02	-0.236
AG-108M	-1.919E-02		2.930E-02	4.684E-02	2.917E-03	-0.410
CD-109	2.282E-01		1.880E+00	1.954E+00	1.750E-01	0.117
AG-110M	-1.320E-03		3.267E-02	4.598E-02	2.853E-03	-0.029
IN-111	-9.697E-02		8.290E-01	1.147E+00	6.520E-02	-0.085
IN-113M	-1.002E-02		4.052E-02	6.669E-02	3.979E-03	-0.150
SN-113	-1.002E-02		4.052E-02	6.669E-02	3.979E-03	-0.150
IN-114M	-8.129E-02		1.912E-01	2.625E-01	1.411E-02	-0.310
CD-115	3.032E+00		5.772E+00	9.857E+00	5.835E-01	0.308
SN-117M	-1.747E-02		5.295E-02	8.471E-02	4.509E-03	-0.206
SB-122	8.068E-01		1.426E+00	2.139E+00	1.270E-01	0.377
I-123	-9.615E-01		5.764E-01	Half-Life too short		
TE-123M	-2.481E-02		2.974E-02	4.676E-02	2.526E-03	-0.530
I-124	-2.870E-01		4.765E-01	6.691E-01	3.960E-02	-0.429
SB-124	1.518E-02		5.260E-02	9.073E-02	6.214E-03	0.167
SB-125	1.687E-02		8.116E-02	1.364E-01	8.120E-03	0.124
TE-125M	2.060E+01		1.316E+01	1.959E+01	1.731E+00	1.051
I-126	2.861E-02		1.636E-01	2.354E-01	1.383E-02	0.122
SB-126	-5.264E-02		1.467E-01	1.990E-01	1.296E-02	-0.264
SN-126	-2.628E-02		1.854E-01	1.906E-01	1.700E-02	-0.138
SB-127	4.279E-01		9.273E-01	1.563E+00	1.433E-01	0.274
XE-127	5.404E-02		5.159E-02	7.602E-02	4.148E-03	0.711
I-131	-8.195E-02		9.130E-02	1.453E-01	9.258E-03	-0.564
TE-132	-9.894E-02		4.939E-01	7.843E-01	1.100E-01	-0.126
BA-133	2.582E-03		4.151E-02	6.063E-02	6.988E-03	0.043
I-133	-1.472E-03		8.835E-04	Half-Life too short		
CS-134	7.118E-02	+	6.057E-02	7.713E-02	5.800E-03	0.923
CS-135	7.608E-02		1.437E-01	2.469E-01	1.884E-02	0.308
I-135	-5.001E+07		8.172E+07	Half-Life too short		
CS-136	-5.470E-02		7.806E-02	1.223E-01	9.447E-03	-0.447
CE-139	-1.654E-02		3.139E-02	4.984E-02	2.602E-03	-0.332
BA-140	2.393E-03		2.130E-01	3.512E-01	1.143E-01	0.007
LA-140	2.529E-02		6.179E-02	9.543E-02	6.457E-03	0.265
CE-141	1.076E-01		7.757E-02	1.150E-01	6.621E-03	0.936
CE-143	2.650E-04		4.844E-05	Half-Life too short		
CE-144	-1.033E-01		2.221E-01	3.550E-01	5.029E-02	-0.291
PM-144	-1.502E-02		3.116E-02	4.740E-02	2.953E-03	-0.317
PR-144	-1.017E+00		2.110E+00	3.210E+00	1.998E-01	-0.317
PM-146	-7.187E-03		3.916E-02	6.426E-02	5.534E-03	-0.112
ND-147	-4.881E-01		4.351E-01	6.527E-01	8.860E-02	-0.748

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	-2.212E+01		5.368E+01	8.862E+01	1.256E+01	-0.250
EU-152	-7.746E-03		1.502E-01	1.459E-01	9.494E-03	-0.053
GD-153	6.126E-01	+	1.557E-01	1.963E-01	1.527E-02	3.120
EU-154	-5.884E-02		1.020E-01	1.601E-01	1.585E-02	-0.367
EU-155	-1.095E-01		1.410E-01	2.074E-01	1.492E-02	-0.528
TB-160	-2.067E-02		1.115E-01	1.768E-01	1.512E-02	-0.117
HO-166M	-3.815E-02		5.478E-02	8.463E-02	5.421E-03	-0.451
TM-171	-4.475E+01		3.999E+01	5.572E+01	4.235E+00	-0.803
LU-176	-7.228E-03		2.174E-02	3.499E-02	2.035E-03	-0.207
LU-177M	5.895E-02		1.595E-01	2.376E-01	1.343E-02	0.248
HF-181	-2.544E-02		3.685E-02	5.837E-02	3.416E-03	-0.436
W-181	6.142E+00		7.626E-01	1.060E+00	8.025E-02	5.792
TA-182	-3.552E-02		1.606E-01	2.626E-01	1.584E-02	-0.135
RE-183	8.310E-02		1.163E-01	1.921E-01	1.012E-02	0.433
RE-184	-2.272E-01		2.185E-01	3.313E-01	1.894E-02	-0.686
OS-185	-2.011E-02		3.747E-02	5.891E-02	3.450E-03	-0.341
RE-188	-8.861E-02		1.724E-01	2.743E-01	1.474E-02	-0.323
W-188	1.155E+00		7.074E+00	1.047E+01	6.081E-01	0.110
IR-192	2.321E-02		2.819E-02	4.910E-02	2.868E-03	0.473
AU-195	1.782E+00	+	4.529E-01	5.527E-01	4.218E-02	3.224
TL-200	2.069E-04		8.949E-05	Half-Life	too short	
TL-201	-7.606E+00		5.534E+00	8.513E+00	4.448E-01	-0.893
TL-202	-1.870E-02		5.286E-02	8.585E-02	4.930E-03	-0.218
HG-203	9.130E-03		3.630E-02	6.172E-02	3.795E-03	0.148
BI-207	-3.331E-02		4.052E-02	6.261E-02	4.446E-03	-0.532
TL-207	-5.247E-01		5.927E-01	9.432E-01	1.558E-01	-0.556
PO-209	-1.685E+00		6.145E+00	9.653E+00	8.486E-01	-0.175
BI-210	-4.116E-01		3.854E+00	6.332E+00	4.826E-01	-0.065
PB-210	-4.116E-01		3.854E+00	6.332E+00	4.826E-01	-0.065
PO-210	-4.116E-01		3.854E+00	6.332E+00	4.127E-01	-0.065
PB-211	-5.554E-01		1.003E+00	1.300E+00	8.102E-01	-0.427
BI-212	6.556E-01	+	4.183E-01	5.238E-01	4.361E-02	1.251
PO-215	-5.247E-01		5.927E-01	9.432E-01	1.558E-01	-0.556
RN-219	4.295E-02		3.684E-01	6.014E-01	8.134E-02	0.071
RN-220	-9.042E+00		2.293E+01	3.678E+01	2.182E+00	-0.246
RA-223	-5.247E-01		5.927E-01	9.432E-01	1.558E-01	-0.556
AC-227	2.851E-01		3.748E-01	6.147E-01	8.563E-02	0.464
TH-227	2.851E-01		3.758E-01	6.147E-01	1.037E-01	0.464
TH-229	-4.257E-02		4.822E-01	7.700E-01	4.155E-02	-0.055
PA-231	-9.171E-03		1.375E+00	2.314E+00	3.188E-01	-0.004
TH-231	-5.247E-01		5.927E-01	9.432E-01	1.558E-01	-0.556
U-231	9.620E-01		1.254E+00	2.077E+00	1.650E-01	0.463
PA-233	-2.170E-02		5.488E-02	9.040E-02	5.582E-03	-0.240
PA-234	3.316E-01		2.661E-01	4.626E-01	8.635E-02	0.717
NP-236	-6.183E-02		8.530E-02	1.347E-01	7.133E-03	-0.459
NP-237	-1.179E-01		5.500E-01	5.632E-01	1.264E-01	-0.209
NP-239	1.805E-01		2.407E-01	3.530E-01	2.207E-02	0.511
AM-241	3.565E-01		2.280E-01	3.415E-01	2.811E-02	1.044

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.435E-02		1.312E-01	1.859E-01	1.337E-02	-0.185
AM-246	-4.974E-02		1.195E-01	1.930E-01	1.332E-02	-0.258
CM-247	8.127E-03		3.388E-02	5.405E-02	3.032E-03	0.150
CF-249	4.125E-03		3.685E-02	6.177E-02	3.449E-03	0.067
CF-251	3.034E-02		1.271E-01	2.067E-01	1.092E-02	0.147

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*                                     *                                       *
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395003            *
* Acquisition date   : 2-FEB-2010 07:21:05 Detector SN# :                   *
* Detector ID        : GAM19 Sensitivity : 5.000                            *
* Geometry           : CAN Energy tolerance: 1.500                          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000               *
* Elapsed real time  : 0 02:00:01.98 Half life ratio : 8.000                *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395003 Analyst initials: MXR1                   *
* Batch Number       : 944966 Sample Quantity : 1.7047E+02 GRAM            *
* Recovery           : 1.00000 Carrier Weight : 0.00000                    *
*****
*                                     QC DATA                                *
*                                     *                                       *
* CALIB. DATE/TIME   : 12-MAR-2009 10:24:54 MS Isotope :                   *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.447E+01	2.238E+00	1.984E-01	1.142E+00
BA-137M	6.103E-02	4.226E-02	2.527E-02	2.156E-02
CS-137	6.451E-02	4.468E-02	2.672E-02	2.279E-02
LU-177	2.078E+00	1.192E+00	7.671E-01	6.080E-01
TL-208	4.110E-01	6.912E-02	2.492E-02	3.527E-02
BI-211	2.545E+00	4.231E-01	1.507E-01	2.159E-01
PB-212	1.112E+00	1.167E-01	4.543E-02	5.953E-02
PO-212	1.112E+00	1.167E-01	4.543E-02	5.953E-02
BI-214	6.828E-01	1.348E-01	4.983E-02	6.879E-02
PB-214	8.852E-01	1.540E-01	5.250E-02	7.856E-02
PO-214	8.852E-01	1.540E-01	5.250E-02	7.856E-02
PO-216	1.112E+00	1.167E-01	4.543E-02	5.953E-02
PO-218	8.852E-01	1.540E-01	5.250E-02	7.856E-02
RA-224	2.704E+00	1.055E+00	5.165E-01	5.382E-01
RA-226	6.828E-01	1.348E-01	4.983E-02	6.879E-02
AC-228	9.847E-01	2.737E-01	9.282E-02	1.396E-01
RA-228	9.847E-01	2.737E-01	9.282E-02	1.396E-01
TH-228	1.127E+00	1.183E-01	4.606E-02	6.036E-02
TH-230	6.828E-01	1.348E-01	4.983E-02	6.879E-02
TH-232	9.847E-01	2.737E-01	9.282E-02	1.396E-01
PA-234M	5.888E+01	9.815E+00	3.294E+00	5.008E+00
TH-234	4.397E+01	8.286E+00	1.472E+00	4.228E+00
U-234	6.828E-01	1.348E-01	4.983E-02	6.879E-02
U-235	5.498E-01	2.715E-01	1.968E-01	1.385E-01
U-238	4.397E+01	8.286E+00	1.472E+00	4.228E+00
AM-243	3.099E-01	1.012E-01	6.515E-02	5.165E-02
ANH-511	9.107E-02	6.796E-02	2.047E-02	3.467E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	1.745E-01	2.807E-01	2.579E-01	1.432E-01	NOT IDENT.
NA-22	-2.858E-02	3.626E-02	2.902E-02	1.850E-02	NOT IDENT.
NA-24	1.241E+04	1.242E+05	0.000E+00	6.337E+04	SHORT HLIF
AL-26	-1.240E-02	2.254E-02	1.674E-02	1.150E-02	NOT IDENT.
TI-44	2.470E-01	6.211E-02	4.777E-02	3.169E-02	FAIL ABUN
SC-46	2.513E-02	3.306E-02	2.979E-02	1.686E-02	FAIL ABUN
V-48	1.952E-02	5.145E-02	4.492E-02	2.625E-02	NOT IDENT.
CR-51	-1.029E-01	2.965E-01	2.660E-01	1.513E-01	NOT IDENT.
MN-52	-9.443E-02	1.340E-01	1.019E-01	6.838E-02	NOT IDENT.
MN-54	-2.770E-03	3.149E-02	2.668E-02	1.607E-02	NOT IDENT.
CO-56	7.856E-03	3.362E-02	2.918E-02	1.715E-02	NOT IDENT.
CO-57	3.411E-03	2.785E-02	2.542E-02	1.421E-02	NOT IDENT.
CO-58	2.381E-04	3.109E-02	2.660E-02	1.586E-02	NOT IDENT.
FE-59	-1.789E-02	7.140E-02	6.106E-02	3.643E-02	FAIL ABUN
CO-60	-3.741E-03	2.777E-02	2.349E-02	1.417E-02	NOT IDENT.
ZN-65	1.087E-02	7.512E-02	5.753E-02	3.833E-02	NOT IDENT.
GE-68	4.501E-01	1.013E+00	9.170E-01	5.167E-01	NOT IDENT.
AS-73	2.967E-02	1.015E+00	9.631E-01	5.178E-01	NOT IDENT.
AS-74	5.223E-02	7.257E-02	6.645E-02	3.702E-02	NOT IDENT.
SE-75	-1.681E-02	3.808E-02	3.453E-02	1.943E-02	NOT IDENT.
BR-77	-1.975E-02	6.345E+00	5.287E+00	3.237E+00	FAIL ABUN
SR-82	-3.713E-01	3.166E-01	2.452E-01	1.615E-01	NOT IDENT.
RB-83	-4.543E-03	6.368E-02	5.080E-02	3.249E-02	NOT IDENT.
RB-84	6.418E-02	5.603E-02	5.203E-02	2.859E-02	NOT IDENT.
KR-85	1.526E+01	6.338E+00	6.239E+00	3.234E+00	NOT IDENT.
SR-85	7.716E-02	3.205E-02	3.155E-02	1.635E-02	NOT IDENT.
RB-86	1.073E-01	6.334E-01	5.615E-01	3.232E-01	NOT IDENT.
Y-88	8.094E-03	2.335E-02	2.085E-02	1.191E-02	NOT IDENT.
ZR-88	4.790E-03	2.676E-02	2.431E-02	1.365E-02	NOT IDENT.
Y-91	2.922E+00	1.457E+01	1.283E+01	7.434E+00	NOT IDENT.
NB-94	2.948E-03	2.778E-02	2.420E-02	1.418E-02	NOT IDENT.
NB-95	1.459E-01	4.949E-02	4.774E-02	2.525E-02	NOT IDENT.
NB-95M	2.856E-01	1.324E-01	1.112E-01	6.757E-02	NOT IDENT.
ZR-95	-8.676E-03	6.654E-02	5.670E-02	3.395E-02	NOT IDENT.
NB-97	-4.812E+01	2.472E+04	0.000E+00	1.261E+04	SHORT HLIF
ZR-97	8.913E+05	4.571E+05	0.000E+00	2.332E+05	SHORT HLIF
MO-99	-4.666E+00	8.167E+00	6.740E+00	4.167E+00	NOT IDENT.
TC-99M	-2.389E+14	1.177E+15	0.000E+00	6.004E+14	SHORT HLIF
RH-101	-1.031E-02	3.196E-02	2.806E-02	1.631E-02	NOT IDENT.
RH-102	1.014E-02	2.599E-02	2.361E-02	1.326E-02	FAIL ABUN
RU-103	1.088E-02	3.321E-02	3.000E-02	1.694E-02	FAIL ABUN
RH-106	-1.020E-01	2.663E-01	2.258E-01	1.359E-01	FAIL ABUN
RU-106	-1.020E-01	2.661E-01	2.258E-01	1.358E-01	FAIL ABUN
AG-108M	-1.919E-02	2.871E-02	2.473E-02	1.465E-02	NOT IDENT.
CD-109	2.282E-01	1.842E+00	1.083E+00	9.398E-01	NOT IDENT.
AG-110M	-1.320E-03	3.201E-02	2.395E-02	1.633E-02	NOT IDENT.
IN-111	-9.697E-02	8.124E-01	6.164E-01	4.145E-01	NOT IDENT.
IN-113M	-1.002E-02	3.971E-02	3.532E-02	2.026E-02	NOT IDENT.
SN-113	-1.002E-02	3.971E-02	3.532E-02	2.026E-02	NOT IDENT.
IN-114M	-8.129E-02	1.873E-01	1.422E-01	9.558E-02	NOT IDENT.
CD-115	3.032E+00	5.657E+00	5.171E+00	2.886E+00	NOT IDENT.
SN-117M	-1.747E-02	5.189E-02	4.615E-02	2.647E-02	NOT IDENT.
SB-122	8.068E-01	1.397E+00	1.120E+00	7.130E-01	NOT IDENT.
I-123	-9.615E+05	1.130E+06	0.000E+00	5.764E+05	SHORT HLIF
TE-123M	-2.481E-02	2.915E-02	2.547E-02	1.487E-02	NOT IDENT.
I-124	-2.870E-01	4.669E-01	3.495E-01	2.382E-01	NOT IDENT.
SB-124	1.518E-02	5.155E-02	4.575E-02	2.630E-02	FAIL ABUN
SB-125	1.687E-02	7.954E-02	7.203E-02	4.058E-02	FAIL ABUN
TE-125M	2.060E+01	1.290E+01	1.079E+01	6.580E+00	NOT IDENT.
I-126	2.861E-02	1.604E-01	1.225E-01	8.181E-02	NOT IDENT.
SB-126	-5.264E-02	1.438E-01	1.033E-01	7.336E-02	FAIL ABUN
SN-126	-2.628E-02	1.817E-01	1.057E-01	9.268E-02	FAIL ABUN
SB-127	4.279E-01	9.087E-01	8.130E-01	4.636E-01	NOT IDENT.
XE-127	5.404E-02	5.056E-02	4.111E-02	2.580E-02	NOT IDENT.
I-131	-8.195E-02	8.947E-02	7.713E-02	4.565E-02	NOT IDENT.
TE-132	-9.894E-02	4.840E-01	4.226E-01	2.469E-01	FAIL ABUN
BA-133	2.582E-03	4.068E-02	3.221E-02	2.076E-02	NOT IDENT.
I-133	-1.472E+03	1.732E+03	0.000E+00	8.835E+02	SHORT HLIF
CS-134	7.118E-02	5.936E-02	3.992E-02	3.029E-02	FAIL ABUN
CS-135	7.608E-02	1.408E-01	1.323E-01	7.186E-02	NOT IDENT.
I-135	-5.001E+13	1.602E+14	0.000E+00	8.172E+13	SHORT HLIF
CS-136	-5.470E-02	7.649E-02	6.269E-02	3.903E-02	NOT IDENT.
CE-139	-1.654E-02	3.076E-02	2.711E-02	1.569E-02	NOT IDENT.
BA-140	2.393E-03	2.087E-01	1.841E-01	1.065E-01	NOT IDENT.
LA-140	2.529E-02	6.055E-02	4.822E-02	3.089E-02	NOT IDENT.
CE-141	1.076E-01	7.601E-02	6.280E-02	3.878E-02	NOT IDENT.
CE-143	2.650E+02	9.494E+01	0.000E+00	4.844E+01	SHORT HLIF
CE-144	-1.033E-01	2.177E-01	1.944E-01	1.111E-01	NOT IDENT.

PM-144	-1.502E-02	3.053E-02	2.464E-02	1.558E-02	NOT IDENT.
PR-144	-1.017E+00	2.068E+00	1.669E+00	1.055E+00	NOT IDENT.
PM-146	-7.187E-03	3.837E-02	3.388E-02	1.958E-02	NOT IDENT.
ND-147	-4.881E-01	4.264E-01	3.423E-01	2.175E-01	NOT IDENT.
PM-149	-2.212E+01	5.261E+01	4.741E+01	2.684E+01	NOT IDENT.
EU-152	-7.746E-03	1.472E-01	7.758E-02	7.508E-02	NOT IDENT.
GD-153	6.126E-01	1.526E-01	1.085E-01	7.786E-02	FAIL ABUN
EU-154	-5.884E-02	1.000E-01	8.155E-02	5.102E-02	NOT IDENT.
EU-155	-1.095E-01	1.381E-01	1.144E-01	7.048E-02	NOT IDENT.
TB-160	-2.067E-02	1.092E-01	9.117E-02	5.574E-02	FAIL ABUN
HO-166M	-3.815E-02	5.368E-02	4.396E-02	2.739E-02	FAIL ABUN
TM-171	-4.475E+01	3.919E+01	3.114E+01	1.999E+01	NOT IDENT.
LU-176	-7.228E-03	2.131E-02	1.868E-02	1.087E-02	NOT IDENT.
LU-177M	5.895E-02	1.563E-01	1.256E-01	7.975E-02	NOT IDENT.
HF-181	-2.544E-02	3.611E-02	3.071E-02	1.842E-02	NOT IDENT.
W-181	6.142E+00	7.474E-01	5.930E-01	3.813E-01	NOT IDENT.
TA-182	-3.552E-02	1.574E-01	1.339E-01	8.032E-02	FAIL ABUN
RE-183	8.310E-02	1.140E-01	1.046E-01	5.816E-02	FAIL ABUN
RE-184	-2.272E-01	2.141E-01	1.779E-01	1.092E-01	NOT IDENT.
OS-185	-2.011E-02	3.672E-02	3.070E-02	1.874E-02	NOT IDENT.
RE-188	-8.861E-02	1.690E-01	1.496E-01	8.622E-02	NOT IDENT.
W-188	1.155E+00	6.933E+00	5.599E+00	3.537E+00	FAIL ABUN
IR-192	2.321E-02	2.763E-02	2.618E-02	1.410E-02	FAIL ABUN
AU-195	1.782E+00	4.438E-01	3.054E-01	2.264E-01	FAIL ABUN
TL-200	2.069E+02	1.754E+02	0.000E+00	8.949E+01	SHORT HLIF
TL-201	-7.606E+00	5.424E+00	4.630E+00	2.767E+00	NOT IDENT.
TL-202	-1.870E-02	5.180E-02	4.530E-02	2.643E-02	NOT IDENT.
HG-203	9.130E-03	3.557E-02	3.304E-02	1.815E-02	FAIL ABUN
BI-207	-3.331E-02	3.971E-02	3.209E-02	2.026E-02	FAIL ABUN
TL-207	-5.247E-01	5.808E-01	5.026E-01	2.963E-01	FAIL ABUN
PO-209	-1.685E+00	6.022E+00	4.976E+00	3.073E+00	NOT IDENT.
BI-210	-4.116E-01	3.777E+00	3.575E+00	1.927E+00	NOT IDENT.
PB-210	-4.116E-01	3.777E+00	3.575E+00	1.927E+00	NOT IDENT.
PO-210	-4.116E-01	3.777E+00	3.575E+00	1.927E+00	NOT IDENT.
PB-211	-5.554E-01	9.830E-01	6.879E-01	5.015E-01	NOT IDENT.
BI-212	6.556E-01	4.100E-01	2.719E-01	2.092E-01	FAIL ABUN
PO-215	-5.247E-01	5.808E-01	5.026E-01	2.963E-01	FAIL ABUN
RN-219	4.295E-02	3.611E-01	3.183E-01	1.842E-01	NOT IDENT.
RN-220	-9.042E+00	2.247E+01	1.927E+01	1.147E+01	NOT IDENT.
RA-223	-5.247E-01	5.808E-01	5.026E-01	2.963E-01	FAIL ABUN
AC-227	2.851E-01	3.673E-01	3.300E-01	1.874E-01	FAIL ABUN
TH-227	2.851E-01	3.683E-01	3.300E-01	1.879E-01	FAIL ABUN
TH-229	-4.257E-02	4.725E-01	4.170E-01	2.411E-01	FAIL ABUN
PA-231	-9.171E-03	1.347E+00	1.238E+00	6.874E-01	FAIL ABUN
TH-231	-5.247E-01	5.808E-01	5.026E-01	2.963E-01	FAIL ABUN
U-231	9.620E-01	1.229E+00	1.149E+00	6.269E-01	FAIL ABUN
PA-233	-2.170E-02	5.378E-02	4.823E-02	2.744E-02	FAIL ABUN
PA-234	3.316E-01	2.608E-01	2.380E-01	1.331E-01	FAIL ABUN
NP-236	-6.183E-02	8.359E-02	7.334E-02	4.265E-02	FAIL ABUN
NP-237	-1.179E-01	5.390E-01	3.124E-01	2.750E-01	NOT IDENT.
NP-239	1.805E-01	2.359E-01	1.941E-01	1.204E-01	FAIL ABUN
AM-241	3.565E-01	2.234E-01	1.915E-01	1.140E-01	NOT IDENT.
CM-243	-3.435E-02	1.286E-01	1.026E-01	6.562E-02	FAIL ABUN
AM-246	-4.974E-02	1.171E-01	9.887E-02	5.977E-02	NOT IDENT.
CM-247	8.127E-03	3.320E-02	2.860E-02	1.694E-02	NOT IDENT.
CF-249	4.125E-03	3.611E-02	3.273E-02	1.842E-02	NOT IDENT.
CF-251	3.034E-02	1.246E-01	1.123E-01	6.355E-02	NOT IDENT.

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*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD       *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
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46.50	852.2852
46.50	852.2852
46.50	852.2852
48.70	919.8422
49.72	982.4208
51.35	961.8159
52.39	1004.0725
52.97	1032.1576
53.15	1032.3707
53.44	1073.8621
54.07	1137.3792
56.28	1169.0123
56.28	1199.1597
57.37	0.0000
57.53	1097.6505
57.53	1097.6537
57.60	1097.7345
57.98	1102.9144
57.98	1102.9144
59.32	1173.9320
59.32	1173.9320
59.40	1174.0320
59.54	1174.2090
59.72	1174.4338
60.01	1222.1680
61.10	1301.0398
61.14	1301.0925
61.30	1248.1438
63.00	1250.3589
63.29	1250.7335
63.29	1250.7335
63.58	1251.1068
64.28	1252.0054
65.12	1241.3689
65.20	1241.4691
65.20	1241.4691
66.05	1294.9716
66.72	1322.8718
66.83	1323.0190
66.91	1340.6190
67.20	1341.0050
67.20	1341.0050
67.75	1375.1595
67.85	1358.9862
68.90	1282.7133
68.90	1282.7133
69.30	1283.2194
69.67	1132.1952
70.82	1246.8019
70.82	1246.8019
70.83	1301.0950
72.80	1389.9280
72.87	1417.2161
72.87	1417.2161
74.67	1451.0728
74.81	1451.2662
74.81	1451.2662
74.81	1451.2662
74.81	1451.2662
74.81	1451.2662
74.81	1451.2662
74.97	1451.4818
75.28	1451.9020
75.70	1452.4713
77.11	1454.3727
77.11	1454.3727

77.11	1454.3727
77.11	1454.3727
77.11	1454.3727
77.11	1454.3727
77.11	1454.3727
78.38	1525.4064
79.62	1496.9458
79.80	1497.1899
79.80	1497.1899
80.11	1457.3516
80.18	1457.4399
80.30	1457.6002
80.30	1457.6002
80.57	1498.2286
81.00	1498.8076
81.07	1498.8984
81.07	1498.8984
81.07	1498.8984
81.07	1498.8984
82.60	1471.3590
83.37	1466.4333
83.78	1466.9653
83.78	1466.9653
83.78	1466.9653
83.78	1466.9653
84.21	1675.8087
84.90	1846.2891
85.43	1795.9047
86.29	1781.0547
86.50	1797.5713
86.54	1797.6323
86.59	1797.7136
86.72	1797.9169
86.79	1798.0184
86.94	1798.2556
87.30	1798.8112
87.30	1798.8112
87.30	1798.8112
87.30	1798.8112
87.30	1798.8112
87.30	1798.8112
87.30	1798.8112
87.57	1799.2312
87.88	1799.7054
88.03	1799.9358
88.36	1800.4438
88.47	1642.4513
89.95	1863.7841
91.11	1331.1184
92.29	1332.4326
92.38	1332.5326
92.38	1332.5326
93.35	1333.6021
94.00	1334.3167
94.67	1335.0463
94.67	1335.0513
94.90	1335.3062
94.90	1335.3062
94.90	1335.3062
94.90	1335.3062
95.87	1336.3605
95.87	1336.3605
96.73	1337.2950
97.43	1338.0496
98.44	1339.1340
98.44	1339.1390
98.88	800.0839
99.55	784.1403
99.55	784.1403
99.86	782.6958
100.00	782.7833
100.10	782.8475
103.18	769.9684
103.76	814.6642
105.00	865.4712
105.31	866.0716
108.00	822.2657
109.28	828.0089

111.00	769.0031
111.00	769.0031
111.76	769.4408
112.95	770.1200
115.19	604.6872
116.30	615.1231
117.00	628.7065
117.00	628.7065
117.66	624.0283
121.11	632.2278
121.62	628.2942
121.78	628.3656
122.06	639.9360
122.32	643.1755
122.32	643.1755
122.32	643.1755
122.32	643.1755
123.07	643.5174
127.23	691.3342
129.76	630.8136
131.20	643.9971
133.02	622.7728
133.54	634.5272
135.34	621.6379
136.00	572.5344
136.25	572.6301
136.48	579.0225
140.51	573.1814
140.51	0.0000
142.18	567.0492
142.65	545.2754
143.76	600.7814
144.24	592.5186
144.24	592.5186
144.24	592.5186
144.24	592.5186
145.22	622.2713
145.44	591.9153
147.16	548.5417
152.43	545.6858
152.70	521.3541
153.22	523.6470
154.21	494.2079
154.21	494.2079
154.21	494.2079
154.21	494.2079
155.03	543.3702
156.02	562.8536
158.56	529.6248
159.00	0.0000
159.00	567.0724
160.31	581.3868
161.27	530.4893
162.32	536.1632
162.64	535.1984
163.35	489.4693
163.89	494.9718
165.85	555.4803
167.43	580.6387
171.28	467.2709
171.86	477.7378
172.10	464.0526
176.55	430.7739
176.60	453.4024
181.06	423.2351
184.41	455.1775
185.71	418.9144
186.00	418.9823
190.27	408.0256
192.34	398.0524
193.63	392.4586
197.04	407.3333
198.01	451.1290
198.60	461.0814
200.40	394.5289
201.83	475.1865
202.84	398.5296
205.31	470.7993

208.36	400.9855
208.81	401.0776
209.75	335.0497
209.75	335.0497
210.97	340.5254
215.65	341.8357
216.55	339.9467
218.09	369.9379
222.10	351.9217
223.80	342.2791
226.40	354.8751
227.00	320.6988
227.08	320.7121
227.20	324.0476
228.16	346.3293
228.18	346.3317
228.18	346.3317
231.56	0.0000
235.69	341.1445
236.00	341.1961
236.00	341.1961
238.63	340.2882
238.63	340.2882
238.63	340.2882
238.63	340.2882
239.00	340.3466
240.98	340.6641
241.98	340.8252
241.98	340.8252
241.98	340.8252
244.69	274.7900
245.39	310.5768
247.94	263.5878
248.90	301.6963
249.79	292.8770
252.40	313.3743
252.85	308.9607
252.85	308.9607
254.15	0.0000
256.20	287.0098
256.20	287.0098
260.50	286.4431
260.90	317.9518
262.80	279.9882
264.65	281.7955
268.24	292.1616
268.79	278.7035
269.46	282.3954
269.46	282.3954
269.46	282.3954
269.46	282.3954
271.23	273.5840
273.65	361.5479
276.40	291.3958
277.35	301.4723
277.60	301.5048
277.60	301.5048
278.00	284.3517
278.60	271.7432
279.20	278.1551
279.53	263.6957
280.46	270.1461
281.68	260.3110
283.67	257.8083
284.30	267.8659
285.00	279.7529
285.90	256.2338
286.10	256.2579
286.10	256.2579
287.40	262.5345
288.45	0.0000
290.67	232.1677
290.80	247.3553
291.72	256.5601
293.26	0.0000
293.70	246.1344
295.21	223.4847
295.21	223.4847

295.21	223.4847
295.96	223.5535
296.50	182.5342
297.23	182.5903
298.57	182.6904
299.80	217.8167
299.80	217.8167
300.09	217.8428
300.09	217.8428
300.09	217.8428
300.12	217.8457
301.29	207.2816
302.84	178.4350
303.76	210.5404
303.91	210.5544
304.40	222.8051
304.40	222.8051
304.84	216.7384
306.84	218.9514
308.46	202.6877
311.98	214.9161
316.51	172.9797
318.01	203.4646
319.02	210.9137
319.41	201.7342
320.08	202.7078
323.87	244.5363
323.87	244.5363
323.87	244.5363
323.87	244.5363
325.23	223.4305
328.77	200.6243
333.44	219.2027
334.20	219.2662
334.20	219.2662
334.30	219.2749
338.28	213.4238
338.28	213.4238
338.28	213.4238
338.28	213.4238
338.32	213.4266
338.32	213.4266
338.32	213.4266
340.50	221.3428
340.57	221.3486
344.27	213.9067
345.85	200.0770
350.59	0.0000
351.07	184.6171
351.92	184.6751
351.92	184.6751
351.92	184.6751
355.39	0.0000
356.01	174.3688
364.48	199.5835
366.43	173.4714
367.43	162.2762
367.94	0.0000
369.80	164.2932
374.96	147.6666
383.85	164.1743
387.95	191.8117
388.63	180.5151
391.69	193.9542
391.69	193.9542
392.90	176.9971
398.62	181.1399
400.65	153.7438
401.10	157.5642
401.81	166.6749
402.60	162.6311
404.84	182.1605
410.95	149.2043
411.60	149.2369
413.65	130.2738
414.70	141.4454
415.30	141.7014

415.76	147.8555
417.63	0.0000
418.52	156.5848
423.70	153.0273
427.08	167.5595
427.89	152.2805
432.53	165.9402
433.93	167.9355
439.47	136.5121
439.56	136.5173
439.89	138.4541
443.98	119.3818
444.90	135.7882
445.03	135.7934
445.03	135.7934
445.03	135.7934
445.03	135.7934
453.90	155.4931
463.38	122.6991
468.07	129.3441
473.00	146.7052
475.06	140.9661
475.35	137.0895
476.78	126.4501
477.59	135.2365
477.96	135.2518
482.03	148.0850
484.57	146.2500
487.03	122.9408
490.36	0.0000
492.35	149.5243
497.08	117.4409
507.63	0.0000
510.53	0.0000
510.84	116.9365
511.00	116.9416
511.85	116.9699
511.85	116.9699
513.99	117.0440
513.99	117.0440
520.41	121.0635
520.65	118.2568
527.90	93.8148
528.96	0.0000
529.64	121.5256
529.87	0.0000
531.02	125.5272
537.32	121.7928
543.00	120.0045
546.56	0.0000
549.76	124.2065
552.65	119.3320
555.20	101.5044
563.23	104.7231
563.90	103.0785
568.70	114.8680
569.32	114.8877
569.50	114.8933
569.67	114.8989
573.80	98.3573
574.00	98.3621
574.64	104.0482
578.91	98.1579
579.30	0.0000
583.14	100.2759
585.48	118.7349
591.81	117.5941
592.07	117.6027
593.00	117.6313
595.88	97.5991
600.56	117.8684
602.52	0.0000
602.71	112.3182
602.71	112.3182
603.60	110.9050
604.41	100.8447
604.70	105.8947
609.31	113.0910

609.31	113.0910
609.31	113.0910
609.31	113.0910
610.33	113.1211
612.46	111.1602
614.37	112.9017
618.01	85.4588
621.84	106.3663
621.84	106.3663
631.29	90.3776
633.02	88.3849
633.10	88.3870
634.78	96.5540
635.90	94.5485
636.97	92.5418
645.85	100.9022
646.12	111.1023
656.30	132.8438
657.75	90.2980
657.90	0.0000
661.65	96.1848
661.65	96.1848
664.57	0.0000
666.33	95.6120
666.33	95.6120
675.00	93.4194
677.61	100.6701
685.20	88.5048
692.80	92.7905
695.00	102.1240
696.49	109.3850
696.49	109.3850
697.00	116.6223
697.49	111.4752
698.33	104.2697
698.50	104.2746
699.00	104.2869
702.63	96.1083
706.10	92.0507
706.58	0.0000
706.67	85.8572
709.31	98.3306
711.68	113.9209
713.82	87.0372
717.42	102.6666
720.50	119.3462
721.93	0.0000
722.20	93.4387
722.78	109.0247
722.78	109.0247
722.89	109.0272
722.95	109.0298
723.30	122.8835
724.18	128.1029
727.18	86.2706
733.00	88.4677
735.90	82.2788
739.58	125.0859
742.81	84.4943
744.21	83.4785
747.13	139.9214
751.79	95.1212
752.31	95.1323
753.82	97.2572
755.35	101.4735
756.15	113.0019
756.87	109.8809
763.93	113.5490
765.79	131.0730
766.42	131.0913
766.84	131.1035
776.49	104.0588
778.00	109.3498
778.57	108.3135
778.89	105.1660
783.80	93.6977
785.46	116.9023
792.07	131.8390

795.84	91.4845
796.30	103.8094
798.80	61.6146
801.93	78.5187
805.60	80.3937
810.29	81.5343
810.76	70.9536
815.85	68.9102
817.79	81.6659
818.51	83.8006
819.60	67.9047
826.30	94.5647
828.27	0.0000
831.60	95.7349
831.96	87.2331
834.83	87.2852
836.80	0.0000
846.75	76.8340
848.13	77.9225
856.28	0.0000
856.80	69.5084
860.37	58.8591
867.32	67.3643
867.82	64.3081
871.10	57.9168
873.19	55.7959
874.81	53.6670
875.33	0.0000
876.40	71.9383
879.36	64.4604
880.27	59.0995
880.51	53.7305
881.50	53.7402
883.24	65.5869
884.67	72.0593
889.25	62.4378
896.60	67.9203
898.02	74.4108
899.00	67.9542
903.28	55.5205
911.07	72.4421
911.07	72.4421
911.07	72.4421
919.63	63.6310
920.93	68.2510
925.00	60.7168
925.24	60.7195
926.50	55.3118
935.52	57.5832
937.48	76.0823
944.10	56.5906
946.00	53.3461
949.00	59.9132
962.29	74.6278
964.01	67.3696
966.15	300.5530
968.20	71.0684
969.11	71.0811
969.11	71.0811
969.11	71.0811
977.42	54.7632
980.50	67.9472
983.50	50.4405
989.30	64.7660
996.32	67.7836
1001.03	71.5095
1001.68	56.5865
1004.76	44.0371
1021.30	0.0000
1024.50	0.0000
1034.80	57.1966
1036.00	55.3638
1037.82	68.3061
1038.57	65.5456
1038.76	0.0000
1045.16	50.8352
1046.59	61.0183
1048.07	64.7335

1050.47	55.5103
1050.47	55.5103
1062.04	68.6042
1063.62	65.8431
1076.63	67.8523
1077.35	60.4244
1078.86	71.6016
1085.78	50.2756
1099.22	67.1924
1112.02	62.3535
1112.84	61.7380
1115.52	57.7567
1120.29	58.0720
1120.29	58.0720
1120.29	58.0720
1120.29	58.0720
1120.51	58.0745
1121.28	58.0821
1124.00	0.0000
1129.67	56.2891
1131.51	0.0000
1147.95	0.0000
1167.94	55.7110
1173.22	68.9930
1175.09	70.9045
1177.93	66.2089
1189.05	81.4928
1204.90	68.4053
1205.75	0.0000
1213.00	74.2041
1221.42	80.0215
1230.97	75.3772
1235.34	91.6602
1236.41	0.0000
1238.25	77.3745
1246.25	64.0857
1260.41	0.0000
1271.85	40.3372
1274.45	64.3719
1274.54	68.2179
1291.56	56.8394
1298.22	0.0000
1312.09	42.5247
1325.50	42.6125
1325.50	42.6125
1332.49	33.9319
1333.61	30.0590
1360.21	22.3926
1362.66	0.0000
1365.15	19.4865
1368.21	28.2684
1368.53	0.0000
1376.25	26.3507
1384.27	21.4960
1394.10	28.3781
1395.20	24.4670
1407.95	35.2998
1434.06	26.5759
1436.60	22.6472
1457.56	0.0000
1460.81	22.7267
1489.15	23.8105
1509.49	13.9294
1596.49	15.5353
1620.62	19.1933
1678.03	0.0000
1691.02	12.2344
1691.02	12.2344
1706.46	0.0000
1750.46	0.0000
1764.49	12.3496
1764.49	12.3496
1764.49	12.3496
1764.49	12.3496
1770.23	10.5929
1771.40	10.5942
1791.20	0.0000
1808.65	16.5566

1836.01

10.3825

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395003

Total Uranium Activity	1.3105E+02	ug/g
Total Uranium Counting Unc.	2.4651E+01	ug/g
Total Uranium Tpu	1.2577E-05	ug/g
Total Uranium Mda	4.3795E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417              *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 944966                      SAMPLE ID : G245395003
*  ANALYST       : MXR1                        DETECTOR  : GAM19
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00    COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 07:21:05.23    SAMPLE ALQT: 170.470 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.205E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.571E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 5.283E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.599E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 10:24:38.77

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395004.CNF;1
Sample date   : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:23:35.
Sample ID     : G245395004 Sample quantity : 1.39170E+02 GRAM
Detector name : GAM20 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:33.47 0.5%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 944966 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.23*	402	747	1.14	126.44	121	10	5.59E-02	13.9	
2	4	74.92	703	633	1.31	149.78	144	15	9.76E-02	7.4	4.97E+00
3	4	77.26*	862	479	1.01	154.45	144	15	1.20E-01	5.5	
4	0	84.20*	79	486	1.37	168.32	166	6	1.10E-02	46.1	
5	0	87.11*	134	673	1.18	174.14	172	7	1.86E-02	33.5	
6	0	92.91*	796	629	1.24	185.71	182	9	1.11E-01	7.0	
7	0	129.08	57	296	0.68	257.94	255	6	7.90E-03	49.6	
8	0	143.71*	79	300	1.05	287.17	284	7	1.10E-02	38.9	
9	0	185.80*	348	419	1.22	371.22	366	12	4.83E-02	13.3	
10	0	209.43	170	363	1.07	418.43	413	11	2.37E-02	23.0	
11	6	238.68*	1437	215	1.14	476.84	470	19	2.00E-01	3.2	1.97E+00
12	6	241.58	315	303	1.81	482.64	470	19	4.38E-02	15.7	
13	0	269.96	147	237	1.12	539.34	533	12	2.05E-02	22.5	
14	0	295.36	414	240	1.31	590.08	586	11	5.75E-02	8.8	
15	0	300.52	120	185	1.54	600.37	596	11	1.67E-02	23.9	
16	0	327.66	104	225	1.49	654.60	648	14	1.44E-02	32.1	
17	0	338.26	282	135	1.13	675.78	672	8	3.92E-02	9.3	
18	0	352.03*	689	217	1.35	703.30	698	12	9.57E-02	5.8	
19	0	463.18	118	85	1.36	925.39	920	12	1.64E-02	18.0	
20	0	511.10*	210	175	1.99	1021.16	1013	19	2.91E-02	18.2	
21	0	583.55*	471	93	1.35	1165.97	1159	14	6.54E-02	6.5	
22	0	609.62*	506	121	1.32	1218.08	1211	13	7.03E-02	6.4	
23	0	727.54	114	132	1.41	1453.82	1446	16	1.58E-02	24.5	
24	0	769.17	59	131	1.46	1537.04	1529	17	8.23E-03	45.6	
25	0	795.41	65	48	1.26	1589.51	1585	10	9.05E-03	23.4	
26	0	860.62*	59	63	1.28	1719.91	1713	14	8.22E-03	31.7	
27	0	911.65*	311	87	1.71	1821.98	1812	18	4.32E-02	9.1	
28	1	965.11	86	83	1.84	1928.90	1921	23	1.20E-02	21.1	2.69E+00
29	1	969.33*	190	64	1.63	1937.33	1921	23	2.64E-02	10.9	
30	0	1120.67	132	53	1.24	2240.10	2235	11	1.83E-02	13.7	
31	0	1239.02	33	51	1.69	2476.93	2473	8	4.58E-03	42.0	
32	0	1377.57	42	23	0.79	2754.25	2746	13	5.84E-03	28.1	
33	0	1461.32*	1861	31	1.82	2921.90	2915	17	2.58E-01	2.4	
34	0	1589.96	55	4	5.35	3179.50	3172	18	7.69E-03	16.1	
35	0	1621.24	22	16	0.76	3242.13	3234	16	3.03E-03	46.2	
36	0	1729.92	42	0	1.86	3459.81	3453	14	5.83E-03	15.4	
37	0	1764.88	94	6	2.31	3529.85	3524	12	1.31E-02	11.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 2-FEB-2010 10:24:42

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395004.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:23:35
 Sample ID : G245395004 Sample quantity : 139.17 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA20 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:33.47 0.5%
 Peak Width (FWHM): 3.00 Confidence level : 5.00 %
 Energy tolerance : 1.50 keV Half life ratio : 8.00
 Errors propagated: Yes Systematic Error : 0.00 %
 Efficiency type : Empirical Efficiencies at : Peak Energy
 Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.755E+01	3.750E+00	4.356E-01	3.798E-02	86.216
CD-109	+	88.03	*	1.427E+00	9.644E-01	1.413E+00	1.337E-01	1.010
SN-126	+	64.28		2.443E+00	7.640E-01	6.011E-01	8.703E-02	4.065
	+	86.94		5.844E-01	4.602E-01	4.658E-01	1.933E-01	1.255
	+	87.57	*	1.406E-01	9.497E-02	1.340E-01	1.261E-02	1.049
TL-208		277.35		5.706E-01	3.528E-01	6.172E-01	8.206E-02	0.925
	+	510.84		8.753E-01	3.371E-01	1.861E-01	2.326E-02	4.704
	+	583.14	*	5.596E-01	9.255E-02	4.922E-02	5.061E-03	11.368
	+	860.37		6.556E-01	4.220E-01	3.833E-01	4.063E-02	1.710
BI-211		72.87		1.394E+00	2.869E+00	4.267E+00	3.369E-01	0.327
	+	351.07	*	3.620E+00	5.422E-01	2.937E-01	2.814E-02	12.326
BI-212	+	727.18	*	1.154E+00	5.799E-01	4.621E-01	5.244E-02	2.498
		785.46		1.885E+00	1.606E+00	2.888E+00	2.933E-01	0.653
	+	1620.62		1.844E+00	1.712E+00	1.544E+00	1.300E-01	1.195
PB-212	+	74.81		2.927E+00	5.646E-01	4.582E-01	5.656E-02	6.387
	+	77.11		2.062E+00	2.840E-01	2.637E-01	2.181E-02	7.821
	+	87.30		6.501E-01	4.440E-01	6.165E-01	8.449E-02	1.055
	+	238.63	*	1.656E+00	2.055E-01	7.791E-02	8.285E-03	21.260
	+	300.09		2.138E+00	1.050E+00	9.510E-01	1.087E-01	2.248
PO-212	+	74.81		2.927E+00	5.646E-01	4.582E-01	5.656E-02	6.387
	+	77.11		2.062E+00	2.840E-01	2.637E-01	2.181E-02	7.821
	+	87.30		6.501E-01	4.440E-01	6.165E-01	8.449E-02	1.055
		115.19		-2.188E+00	3.413E+00	5.350E+00	4.494E-01	-0.409
	+	238.63	*	1.656E+00	2.055E-01	7.791E-02	8.285E-03	21.260
	+	300.09		2.138E+00	1.050E+00	9.510E-01	1.087E-01	2.248
BI-214	+	609.31	*	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
	+	1120.29		1.513E+00	4.470E-01	4.872E-01	5.271E-02	3.106
	+	1764.49		1.464E+00	3.580E-01	1.760E-01	1.446E-02	8.317
PB-214	+	74.81		5.043E+00	9.293E-01	7.896E-01	8.644E-02	6.387
	+	77.11		3.536E+00	5.565E-01	4.520E-01	5.083E-02	7.822
	+	87.30		1.114E+00	7.573E-01	1.056E+00	1.282E-01	1.055
	+	241.98		2.181E+00	7.277E-01	4.690E-01	5.245E-02	4.650
	+	295.21		1.290E+00	2.717E-01	1.874E-01	2.187E-02	6.882
	+	351.92	*	1.259E+00	1.997E-01	9.948E-02	1.084E-02	12.659

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		5.043E+00	9.293E-01	7.896E-01	8.644E-02	6.387
	+	77.11		3.536E+00	5.565E-01	4.520E-01	5.083E-02	7.822
	+	87.30		1.114E+00	7.573E-01	1.056E+00	1.282E-01	1.055
	+	241.98		2.181E+00	7.277E-01	4.690E-01	5.245E-02	4.650
	+	295.21		1.290E+00	2.717E-01	1.874E-01	2.187E-02	6.882
PO-216	+	351.92	*	1.259E+00	1.997E-01	9.948E-02	1.084E-02	12.659
	+	74.81		2.927E+00	5.646E-01	4.582E-01	5.656E-02	6.387
	+	77.11		2.062E+00	2.840E-01	2.637E-01	2.181E-02	7.821
	+	87.30		6.501E-01	4.440E-01	6.165E-01	8.449E-02	1.055
	+	238.63	*	1.656E+00	2.055E-01	7.791E-02	8.285E-03	21.260
PO-218	+	300.09		2.138E+00	1.050E+00	9.510E-01	1.087E-01	2.248
	+	74.81		5.043E+00	9.293E-01	7.896E-01	8.644E-02	6.387
	+	77.11		3.536E+00	5.565E-01	4.520E-01	5.083E-02	7.822
	+	87.30		1.114E+00	7.573E-01	1.056E+00	1.282E-01	1.055
	+	241.98		2.181E+00	7.277E-01	4.690E-01	5.245E-02	4.650
RA-224	+	295.21		1.290E+00	2.717E-01	1.874E-01	2.187E-02	6.882
	+	351.92	*	1.259E+00	1.997E-01	9.948E-02	1.084E-02	12.659
	+	240.98	*	4.135E+00	1.360E+00	8.864E-01	8.568E-02	4.665
	+	609.31	*	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
	+	1120.29		1.513E+00	4.470E-01	4.872E-01	5.271E-02	3.106
AC-228	+	1764.49		1.464E+00	3.580E-01	1.760E-01	1.446E-02	8.317
	+	338.32		1.634E+00	7.418E-01	3.380E-01	1.400E-01	4.836
	+	911.07	*	1.629E+00	3.566E-01	1.903E-01	2.331E-02	8.560
	+	969.11		1.750E+00	5.628E-01	3.404E-01	8.077E-02	5.141
	+	338.32		1.634E+00	7.418E-01	3.380E-01	1.400E-01	4.836
RA-228	+	911.07	*	1.629E+00	3.566E-01	1.903E-01	2.331E-02	8.560
	+	969.11		1.750E+00	5.628E-01	3.404E-01	8.077E-02	5.141
	+	74.81		2.967E+00	5.018E-01	4.646E-01	3.781E-02	6.387
	+	77.11		2.091E+00	2.880E-01	2.674E-01	2.211E-02	7.821
	+	87.30		6.592E-01	4.453E-01	6.251E-01	5.859E-02	1.055
TH-228	+	238.63	*	1.679E+00	2.083E-01	7.899E-02	8.400E-03	21.260
	+	300.09		2.168E+00	1.653E+00	9.642E-01	5.734E-01	2.248
	+	609.31	*	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
	+	1120.29		1.513E+00	4.470E-01	4.872E-01	5.271E-02	3.106
	+	1764.49		1.464E+00	3.580E-01	1.760E-01	1.446E-02	8.317
TH-232	+	338.32		1.634E+00	3.395E-01	3.380E-01	3.167E-02	4.836
	+	911.07	*	1.629E+00	3.566E-01	1.903E-01	2.331E-02	8.560
	+	969.11		1.750E+00	5.628E-01	3.404E-01	8.077E-02	5.141
	+	63.29	*	6.172E+00	2.020E+00	1.572E+00	2.732E-01	3.926
	+	92.38		5.535E+00	1.273E+00	9.311E-01	1.707E-01	5.945
U-234	+	609.31	*	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
	+	1120.29		1.513E+00	4.470E-01	4.872E-01	5.271E-02	3.106
	+	1764.49		1.464E+00	3.580E-01	1.760E-01	1.446E-02	8.317
	+	89.95		-5.719E-01	1.523E+00	1.688E+00	5.243E-01	-0.339
	+	93.35		6.654E+00	2.091E+00	9.491E-01	2.674E-01	7.011
U-235	+	105.00		6.310E-01	1.036E+00	1.676E+00	5.000E-01	0.377
	+	143.76	*	2.886E-01	2.301E-01	3.195E-01	5.568E-02	0.903
	+	163.35		3.483E-01	4.514E-01	7.249E-01	1.386E-01	0.480
	+	185.71		2.810E-01	7.900E-02	6.245E-02	5.620E-03	4.500

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	205.31			1.625E-02	5.083E-01	7.567E-01	1.466E-01	0.021
NP-237	+	86.50	*	4.128E-01	2.916E-01	3.300E-01	7.465E-02	1.251
	95.87			-5.264E-01	9.551E-01	1.331E+00	3.294E-01	-0.396
U-238	+	63.29	*	6.172E+00	2.020E+00	1.572E+00	2.732E-01	3.926
	92.38			5.535E+00	9.202E-01	9.311E-01	8.511E-02	5.945
AM-243	+	74.67	*	4.745E-01	8.007E-02	7.445E-02	5.992E-03	6.373
	86.72			1.548E+01	1.046E+01	1.236E+01	1.149E+00	1.253
	117.66			-2.708E-01	3.514E+00	5.636E+00	4.718E-01	-0.048
	142.18			1.174E+01	1.837E+01	2.697E+01	2.276E+00	0.435
ANH-511	+	511.00	*	1.891E-01	7.108E-02	4.020E-02	3.746E-03	4.703

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.780E-01	2.728E-01	4.191E-01	4.074E-02	-0.425
NA-22		1274.54	*	-2.761E-03	4.156E-02	6.652E-02	5.510E-03	-0.042
NA-24		1368.53	*	-8.260E-02	4.156E-02	Half-Life too short		
AL-26		1129.67		-1.216E+00	1.708E+00	2.598E+00	2.200E-01	-0.468
		1808.65	*	1.230E-02	2.389E-02	4.327E-02	3.515E-03	0.284
TI-44		67.85		-4.522E-02	3.860E-02	5.753E-02	4.328E-03	-0.786
	+	78.38	*	3.806E-01	5.241E-02	7.079E-02	5.941E-03	5.376
SC-46		889.25	*	-2.521E-02	3.499E-02	5.381E-02	5.364E-03	-0.469
	+	1120.51		2.563E-01	7.380E-02	1.217E-01	1.041E-02	2.106
V-48		944.10		4.036E-01	8.358E-01	1.429E+00	1.394E-01	0.282
		983.50	*	4.232E-02	5.725E-02	1.004E-01	9.598E-03	0.421
		1312.09		-2.394E-02	7.269E-02	1.125E-01	9.385E-03	-0.213
CR-51		320.08	*	5.961E-02	3.090E-01	5.177E-01	5.190E-02	0.115
MN-52		744.21		-3.781E-02	1.866E-01	3.068E-01	3.117E-02	-0.123
		848.13		-5.073E-01	5.226E+00	8.590E+00	8.655E-01	-0.059
		935.52		2.646E-01	2.131E-01	3.826E-01	3.748E-02	0.692
		1246.25		-3.988E+00	6.343E+00	9.659E+00	7.936E-01	-0.413
		1333.61		6.712E-01	4.412E+00	7.203E+00	6.034E-01	0.093
		1434.06	*	6.199E-02	1.623E-01	2.852E-01	2.414E-02	0.217
MN-54		834.83	*	-1.697E-02	3.324E-02	5.275E-02	5.328E-03	-0.322
CO-56		846.75	*	3.402E-02	3.484E-02	6.212E-02	6.261E-03	0.548
		977.42		2.081E-01	2.630E+00	4.238E+00	4.065E-01	0.049
		1037.82		-5.687E-02	2.756E-01	4.416E-01	4.260E-02	-0.129
		1175.09		1.366E-01	2.324E+00	3.785E+00	3.045E-01	0.036
	+	1238.25		1.048E-01	8.860E-02	1.555E-01	1.316E-02	0.674
		1360.21		8.033E-02	7.905E-01	1.344E+00	1.130E-01	0.060
		1771.40		-4.809E-01	2.198E-01	1.846E-01	1.514E-02	-2.605
CO-57		122.06	*	-9.342E-03	2.308E-02	3.642E-02	3.040E-03	-0.257
		136.48		7.046E-02	1.878E-01	3.051E-01	2.762E-02	0.231
CO-58		810.76	*	-3.563E-02	3.467E-02	5.211E-02	5.291E-03	-0.684
FE-59	+	142.65		3.651E+00	2.856E+00	4.152E+00	3.507E-01	0.879
		192.34		2.341E-01	8.031E-01	1.334E+00	1.831E-01	0.176
		1099.22	*	-3.022E-02	8.990E-02	1.420E-01	1.340E-02	-0.213
		1291.56		-2.942E-02	1.128E-01	1.764E-01	1.677E-02	-0.167

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60	1173.22			-2.829E-02	4.621E-02	7.093E-02	5.703E-03	-0.399
	1332.49	*		5.922E-03	3.965E-02	6.472E-02	5.422E-03	0.091
ZN-65	1115.52	*		2.244E-02	9.167E-02	1.330E-01	1.145E-02	0.169
GE-68	1077.35	*		4.199E-01	1.265E+00	2.120E+00	1.892E-01	0.198
AS-73	53.44	*		6.203E-02	5.485E-01	9.006E-01	6.685E-02	0.069
AS-74	595.88	*		-2.656E-02	7.211E-02	1.115E-01	1.091E-02	-0.238
	634.78			1.243E-01	2.971E-01	5.156E-01	5.129E-02	0.241
SE-75	66.05			-3.517E+00	4.053E+00	5.712E+00	5.404E-01	-0.616
	96.73			-2.550E-01	7.562E-01	1.072E+00	1.480E-01	-0.238
	121.11			-4.800E-02	1.224E-01	1.932E-01	2.127E-02	-0.248
	136.00			-1.410E-02	3.568E-02	5.607E-02	4.738E-03	-0.252
	198.60			6.389E-01	1.502E+00	2.529E+00	2.545E-01	0.253
	264.65	*		2.113E-02	4.248E-02	6.464E-02	6.400E-03	0.327
	279.53			-4.327E-02	1.012E-01	1.652E-01	1.691E-02	-0.262
	303.91			-1.351E-01	1.834E+00	2.663E+00	3.295E-01	-0.051
	400.65			1.011E-01	2.230E-01	3.754E-01	4.120E-02	0.269
BR-77	87.88	+		2.135E+02	1.443E+02	2.062E+02	1.947E+01	1.036
	200.40			-8.343E+01	9.397E+01	1.526E+02	1.403E+01	-0.547
	239.00	+		1.838E+02	2.126E+01	2.488E+01	2.400E+00	7.389
	249.79			1.461E+00	3.815E+01	6.408E+01	6.246E+00	0.023
	281.68			-3.749E+01	5.690E+01	9.162E+01	9.111E+00	-0.409
	297.23			1.939E+02	5.413E+01	7.508E+01	7.387E+00	2.583
	303.76			-4.459E+00	1.090E+02	1.587E+02	1.552E+01	-0.028
	439.47			5.621E+01	8.638E+01	1.469E+02	1.291E+01	0.383
	484.57			-1.296E+02	1.449E+02	2.183E+02	1.994E+01	-0.594
	520.65	*		4.546E+00	6.831E+00	1.154E+01	1.082E+00	0.394
	574.64			-2.701E+01	1.411E+02	2.231E+02	2.161E+01	-0.121
	578.91			-5.538E+01	6.459E+01	8.146E+01	7.908E+00	-0.680
	585.48			9.837E+02	1.842E+02	3.134E+02	3.053E+01	3.139
	755.35			6.098E+01	1.035E+02	1.802E+02	1.831E+01	0.338
	817.79			3.266E+01	8.064E+01	1.385E+02	1.403E+01	0.236
SR-82	698.33			-3.884E+01	3.493E+01	4.682E+01	4.734E+00	-0.830
	776.49	*		-1.544E-01	3.656E-01	5.017E-01	5.098E-02	-0.308
	1395.20			8.701E-01	9.011E+00	1.528E+01	1.289E+00	0.057
RB-83	520.41	*		4.951E-02	6.678E-02	1.099E-01	1.031E-02	0.450
	529.64			-1.729E-02	9.812E-02	1.561E-01	1.473E-02	-0.111
	552.65			9.051E-02	1.617E-01	2.723E-01	2.606E-02	0.332
RB-84	881.50	*		-1.458E-02	6.222E-02	1.007E-01	1.006E-02	-0.145
KR-85	513.99	*		1.680E+01	7.063E+00	1.277E+01	1.192E+00	1.315
SR-85	513.99	*		8.498E-02	3.574E-02	6.461E-02	6.033E-03	1.315
RB-86	1076.63	*		4.095E-01	7.752E-01	1.319E+00	1.177E-01	0.311
Y-88	898.02			-6.375E-03	4.031E-02	6.569E-02	6.554E-03	-0.097
	1836.01	*		2.527E-02	2.784E-02	5.325E-02	4.296E-03	0.475
ZR-88	392.90	*		1.905E-02	2.841E-02	4.838E-02	4.046E-03	0.394
Y-91	1204.90	*		7.921E+00	1.860E+01	3.112E+01	2.527E+00	0.255
NB-94	702.63	*		2.347E-02	3.100E-02	5.449E-02	5.513E-03	0.431
	871.10			-1.606E-03	3.082E-02	5.076E-02	5.087E-03	-0.032
NB-95	765.79	*		2.965E-02	3.853E-02	6.060E-02	6.158E-03	0.489
NB-95M	235.69	*		1.139E-01	1.186E-01	1.845E-01	1.982E-02	0.618

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	724.18			8.481E-02	9.467E-02	1.495E-01	1.613E-02	0.567
	756.15	*		-2.234E-03	6.342E-02	1.056E-01	1.152E-02	-0.021
NB-97	657.90	*		-1.681E-02	6.342E-02	Half-Life	too short	
	1024.50			-9.516E-02	6.342E-02	Half-Life	too short	
ZR-97	254.15			-9.900E-01	6.342E-02	Half-Life	too short	
	355.39			1.980E-01	6.342E-02	Half-Life	too short	
	507.63	*		8.706E-01	6.342E-02	Half-Life	too short	
	602.52			4.241E-01	6.342E-02	Half-Life	too short	
	1021.30			-1.377E+00	6.342E-02	Half-Life	too short	
	1147.95			4.495E-01	6.342E-02	Half-Life	too short	
	1362.66			1.626E+00	6.342E-02	Half-Life	too short	
	1750.46			-5.543E-01	6.342E-02	Half-Life	too short	
MO-99	140.51			-6.263E+00	1.977E+01	2.733E+01	7.553E+00	-0.229
	181.06			-8.780E-01	1.308E+01	1.828E+01	3.371E+00	-0.048
	366.43			3.960E+01	5.011E+01	8.656E+01	7.696E+00	0.458
	739.58	*		1.964E+00	7.399E+00	1.261E+01	2.032E+00	0.156
	778.00			6.330E+00	2.213E+01	3.681E+01	3.740E+00	0.172
TC-99M	140.51	*		-3.778E+08	2.213E+01	Half-Life	too short	
RH-101	127.23			3.406E-03	3.262E-02	4.684E-02	3.907E-03	0.073
	198.01	*		1.182E-02	2.777E-02	4.680E-02	4.290E-03	0.252
	325.23			3.533E-02	2.031E-01	2.998E-01	2.862E-02	0.118
RH-102	418.52			7.740E-02	2.502E-01	4.173E-01	3.590E-02	0.185
	475.06	*		-2.251E-02	2.482E-02	3.722E-02	3.375E-03	-0.605
	631.29			-1.056E-02	4.993E-02	7.816E-02	7.764E-03	-0.135
	697.49			-1.096E-01	8.129E-02	1.058E-01	1.069E-02	-1.036
	766.84			2.294E-01	1.075E-01	1.854E-01	1.885E-02	1.237
	1046.59			-2.708E-02	1.029E-01	1.638E-01	1.499E-02	-0.165
	1112.84			-1.906E-01	2.219E-01	3.201E-01	2.760E-02	-0.595
RU-103	497.08	*		5.049E-03	3.633E-02	5.940E-02	8.635E-03	0.085
+	610.33			1.197E+01	2.575E+00	2.656E+00	4.609E-01	4.506
RH-106	511.85	+		9.421E-01	3.542E-01	4.208E-01	3.923E-02	2.239
	621.84	*		6.793E-02	2.837E-01	4.622E-01	6.571E-02	0.147
	1050.47			8.326E-01	2.227E+00	3.757E+00	3.429E-01	0.222
RU-106	511.85	+		9.421E-01	3.542E-01	4.208E-01	3.923E-02	2.239
	621.84	*		6.793E-02	2.837E-01	4.622E-01	4.575E-02	0.147
	1050.47			8.326E-01	2.227E+00	3.757E+00	3.429E-01	0.222
AG-108M	433.93	*		-1.591E-02	2.801E-02	4.373E-02	3.969E-03	-0.364
	614.37			-8.409E-03	3.962E-02	5.381E-02	5.470E-03	-0.156
	722.95			2.662E-02	4.157E-02	6.446E-02	6.724E-03	0.413
AG-110M	657.75	*		-2.200E-02	3.131E-02	4.988E-02	5.110E-03	-0.441
	677.61			1.291E-02	2.786E-01	4.696E-01	4.828E-02	0.028
	706.67			-2.047E-01	1.928E-01	2.960E-01	3.057E-02	-0.692
	763.93			-7.828E-02	1.512E-01	2.048E-01	2.124E-02	-0.382
	884.67			1.221E-02	4.258E-02	7.221E-02	7.382E-03	0.169
	937.48			-7.661E-02	1.092E-01	1.686E-01	1.697E-02	-0.454
	1384.27			2.181E-02	1.340E-01	2.140E-01	1.857E-02	0.102
IN-111	171.28			-1.449E-01	6.785E-01	1.064E+00	9.366E-02	-0.136
	245.39	*		-1.980E-01	7.050E-01	1.021E+00	9.916E-02	-0.194
IN-113M	391.69	*		2.172E-02	4.033E-02	6.825E-02	5.887E-03	0.318

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113	391.69	*		2.172E-02	4.033E-02	6.825E-02	5.887E-03	0.318
IN-114M	190.27	*		2.883E-02	1.684E-01	2.547E-01	2.308E-02	0.113
CD-115	260.90			-3.244E+01	7.670E+01	1.256E+02	1.235E+01	-0.258
	492.35			-1.405E+01	2.143E+01	3.284E+01	3.019E+00	-0.428
	527.90	*		2.834E+00	6.816E+00	1.133E+01	1.068E+00	0.250
SN-117M	156.02			-2.002E+00	2.021E+00	3.064E+00	2.634E-01	-0.653
	158.56	*		1.097E-02	4.750E-02	7.629E-02	6.584E-03	0.144
SB-122	563.90	*		5.958E-01	1.374E+00	2.279E+00	2.195E-01	0.261
	692.80			1.464E+01	2.692E+01	4.692E+01	4.739E+00	0.312
I-123	159.00	*		1.451E-01	2.692E+01	Half-Life	too short	
	528.96			-4.015E+00	2.692E+01	Half-Life	too short	
TE-123M	159.00	*		3.543E-03	2.624E-02	4.197E-02	3.646E-03	0.084
I-124	602.71	*		-3.758E-02	5.508E-01	7.624E-01	7.485E-02	-0.049
	722.78			2.003E+00	3.500E+00	5.396E+00	5.473E-01	0.371
	1325.50			-1.219E+00	2.646E+01	4.229E+01	3.538E+00	-0.029
+	1376.25			5.338E+01	3.029E+01	4.621E+01	3.892E+00	1.155
	1509.49			5.719E+00	1.053E+01	1.879E+01	1.593E+00	0.304
	1691.02			-1.287E+00	2.207E+00	3.164E+00	2.638E-01	-0.407
SB-124	602.71			-2.656E-03	3.893E-02	5.388E-02	5.291E-03	-0.049
	645.85			-4.401E-01	4.157E-01	6.365E-01	6.642E-02	-0.691
	709.31			1.874E+00	2.405E+00	4.245E+00	4.299E-01	0.441
	713.82			-1.206E+00	1.444E+00	2.248E+00	2.959E-01	-0.537
	722.78			2.052E-01	3.585E-01	5.528E-01	5.695E-02	0.371
+	968.20			1.775E+01	4.216E+00	6.926E+00	6.677E-01	2.563
	1045.16			-7.348E-01	2.248E+00	3.559E+00	3.262E-01	-0.206
	1325.50			-1.334E-01	2.895E+00	4.627E+00	3.871E-01	-0.029
	1368.21			-1.026E+00	1.558E+00	2.253E+00	3.007E-01	-0.456
	1436.60			-1.638E+00	3.103E+00	4.810E+00	4.071E-01	-0.341
	1691.02	*		-3.109E-02	5.333E-02	7.646E-02	6.645E-03	-0.407
SB-125	427.89	*		2.819E-02	8.130E-02	1.358E-01	1.202E-02	0.208
+	463.38			9.647E-01	3.599E-01	4.991E-01	4.805E-02	1.933
	600.56			-5.637E-02	1.540E-01	2.386E-01	2.474E-02	-0.236
	635.90			3.644E-03	2.377E-01	4.014E-01	4.238E-02	0.009
TE-125M	109.28	*		-1.112E+00	8.702E+00	1.397E+01	1.428E+00	-0.080
I-126	388.63			4.788E-02	1.694E-01	2.828E-01	2.382E-02	0.169
	666.33	*		3.137E-02	1.518E-01	2.589E-01	2.601E-02	0.121
	753.82			3.091E-01	1.248E+00	2.123E+00	2.157E-01	0.146
SB-126	223.80			2.051E+00	3.284E+00	5.668E+00	5.376E-01	0.362
	278.60			2.724E+00	2.150E+00	3.761E+00	3.744E-01	0.724
+	296.50			1.196E+01	2.406E+00	3.185E+00	3.136E-01	3.755
	414.70			1.294E-02	6.315E-02	1.046E-01	8.964E-03	0.124
	415.30			-9.133E-01	5.228E+00	8.450E+00	7.245E-01	-0.108
	555.20			-2.607E-01	2.944E+00	4.695E+00	4.500E-01	-0.056
	573.80			-7.910E-02	9.227E-01	1.471E+00	1.424E-01	-0.054
	593.00			2.912E-01	7.312E-01	1.211E+00	1.184E-01	0.240
	656.30			5.903E-01	2.714E+00	4.640E+00	4.649E-01	0.127
	666.33			1.307E-02	6.324E-02	1.079E-01	1.084E-02	0.121
	675.00			7.414E-01	1.711E+00	2.959E+00	2.979E-01	0.251
	695.00			1.814E-02	6.140E-02	1.052E-01	1.064E-02	0.172

----- Non-Identified Nuclides -----

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SB-127		697.00		-4.038E-01	2.642E-01	3.350E-01	3.386E-02	-1.205
		720.50	*	8.570E-03	1.368E-01	2.006E-01	2.034E-02	0.043
		856.80		-2.903E-02	3.930E-01	5.589E-01	5.621E-02	-0.052
		989.30		-4.787E-01	1.082E+00	1.698E+00	1.618E-01	-0.282
		1034.80		4.482E+00	7.377E+00	1.274E+01	1.177E+00	0.352
		1213.00		-3.415E-01	4.449E+00	7.151E+00	5.821E-01	-0.048
		61.10		2.485E+01	3.753E+01	5.661E+01	5.466E+00	0.439
		252.40		2.527E+00	3.079E+00	5.047E+00	2.129E+00	0.501
		290.80		1.118E+01	1.589E+01	2.441E+01	2.887E+00	0.458
		411.60		4.490E-01	8.742E+00	1.435E+01	2.213E+00	0.031
		444.90		-1.584E+00	6.539E+00	1.045E+01	1.292E+00	-0.152
		473.00		8.155E-01	1.114E+00	1.901E+00	2.443E-01	0.429
		543.00		-1.034E+01	1.188E+01	1.759E+01	2.581E+00	-0.588
		603.60		1.806E-01	9.563E+00	1.336E+01	1.745E+00	0.014
		685.20	*	4.376E-01	9.558E-01	1.657E+00	2.022E-01	0.264
XE-127		698.50		-1.398E+01	1.297E+01	1.727E+01	2.838E+00	-0.810
		722.20		1.361E+00	2.341E+01	3.431E+01	4.132E+00	0.040
		783.80		1.533E+00	2.657E+00	4.602E+00	6.088E-01	0.333
		57.60		-3.037E+00	4.420E+00	6.742E+00	4.818E-01	-0.450
		145.22		9.432E-01	7.079E-01	1.074E+00	9.099E-02	0.878
I-131		172.10		-1.707E-02	1.072E-01	1.685E-01	1.485E-02	-0.101
		202.84	*	-1.664E-02	4.019E-02	6.452E-02	5.955E-03	-0.258
		374.96		-1.271E-01	1.749E-01	2.661E-01	2.320E-02	-0.478
		80.18		1.154E-02	4.162E+00	5.525E+00	4.763E-01	0.002
		284.30		3.385E-01	1.152E+00	1.949E+00	2.010E-01	0.174
TE-132		364.48	*	-2.246E-02	8.365E-02	1.352E-01	1.267E-02	-0.166
		636.97		-8.378E-01	1.213E+00	1.935E+00	2.006E-01	-0.433
		722.89		3.861E+00	6.264E+00	9.695E+00	9.871E-01	0.398
		49.72		-5.778E+00	8.631E+00	1.387E+01	1.374E+00	-0.417
		111.76		1.499E+01	2.158E+01	3.559E+01	3.698E+00	0.421
BA-133		116.30		-7.381E+00	1.977E+01	3.133E+01	3.239E+00	-0.236
		228.16	*	-1.245E-01	4.462E-01	7.409E-01	1.187E-01	-0.168
		53.15		1.520E-01	2.361E+00	3.870E+00	2.883E-01	0.039
		79.62		1.096E-01	1.207E+00	1.764E+00	2.675E-01	0.062
		81.00		8.661E-02	1.103E-01	1.324E-01	2.105E-02	0.654
I-133		276.40		5.249E-01	3.532E-01	5.974E-01	9.124E-02	0.879
		302.84		7.713E-02	1.291E-01	1.970E-01	2.773E-02	0.392
		356.01	*	2.212E-02	4.347E-02	6.536E-02	8.830E-03	0.339
		383.85		-4.638E-02	2.523E-01	4.092E-01	5.132E-02	-0.113
	+	510.53		6.982E-01	2.523E-01	Half-Life	too short	
		529.87	*	-2.970E-04	2.523E-01	Half-Life	too short	
		706.58		-1.436E-01	2.523E-01	Half-Life	too short	
		856.28		-8.589E-02	2.523E-01	Half-Life	too short	
		875.33		-8.085E-03	2.523E-01	Half-Life	too short	
		1236.41		2.075E-02	2.523E-01	Half-Life	too short	
CS-134		1298.22		2.271E-02	2.523E-01	Half-Life	too short	
		475.35		-1.571E+00	1.624E+00	2.422E+00	2.197E-01	-0.649
		563.23		2.613E-01	3.168E-01	5.405E-01	5.244E-02	0.483
		569.32		9.984E-02	1.822E-01	3.043E-01	2.972E-02	0.328

---- Non-Identified Nuclides ----

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		604.70		2.196E-02	3.340E-02	4.985E-02	4.908E-03	0.441
	+	795.84	*	1.109E-01	5.302E-02	8.425E-02	8.597E-03	1.316
		801.93		-2.636E-01	4.009E-01	5.932E-01	6.042E-02	-0.444
		1038.57		1.032E+00	3.409E+00	5.737E+00	5.285E-01	0.180
		1167.94		1.723E+00	2.577E+00	4.399E+00	3.560E-01	0.392
		1365.15		2.142E-01	1.050E+00	1.805E+00	1.591E-01	0.119
CS-135		268.24	*	1.494E-01	1.566E-01	2.434E-01	2.697E-02	0.614
I-135		288.45		-1.385E+08	1.566E-01	Half-Life	too short	
		417.63		-2.321E+08	1.566E-01	Half-Life	too short	
		546.56		3.835E+08	1.566E-01	Half-Life	too short	
		836.80		-3.264E+08	1.566E-01	Half-Life	too short	
		1038.76		2.441E+08	1.566E-01	Half-Life	too short	
		1124.00		1.885E+09	1.566E-01	Half-Life	too short	
		1131.51		1.140E+08	1.566E-01	Half-Life	too short	
		1260.41	*	-3.682E+07	1.566E-01	Half-Life	too short	
		1457.56		8.765E+09	1.566E-01	Half-Life	too short	
		1678.03		2.837E+08	1.566E-01	Half-Life	too short	
		1706.46		-4.928E+07	1.566E-01	Half-Life	too short	
		1791.20		2.485E+08	1.566E-01	Half-Life	too short	
CS-136		66.91		-3.771E-01	6.230E-01	8.878E-01	1.316E-01	-0.425
	+	86.29		1.716E+00	1.171E+00	1.610E+00	2.139E-01	1.066
		153.22		5.085E-01	5.709E-01	9.404E-01	9.012E-02	0.541
		163.89		3.737E-01	9.591E-01	1.530E+00	1.488E-01	0.244
		176.55		1.051E-01	3.227E-01	5.182E-01	4.849E-02	0.203
		273.65		-4.579E-01	4.272E-01	5.780E-01	6.023E-02	-0.792
		340.57		2.476E-01	1.196E-01	1.955E-01	1.871E-02	1.266
		818.51		2.246E-02	6.021E-02	1.032E-01	1.045E-02	0.218
		1048.07	*	2.159E-03	9.466E-02	1.550E-01	1.471E-02	0.014
		1235.34		-2.321E-01	6.553E-01	8.763E-01	1.011E-01	-0.265
BA-137M		661.65	*	-1.662E-02	3.239E-02	5.245E-02	5.264E-03	-0.317
CS-137		661.65	*	-1.757E-02	3.424E-02	5.545E-02	5.572E-03	-0.317
CE-139		165.85	*	-1.503E-02	2.836E-02	4.389E-02	3.832E-03	-0.342
BA-140		162.64		3.839E-01	6.675E-01	1.073E+00	9.853E-02	0.358
		304.84		-1.753E-01	1.071E+00	1.541E+00	4.378E-01	-0.114
		423.70		-1.111E+00	1.605E+00	2.429E+00	7.875E-01	-0.457
		537.32	*	-5.482E-02	2.223E-01	3.501E-01	1.168E-01	-0.157
LA-140	+	328.77		6.945E-01	4.508E-01	4.630E-01	4.604E-02	1.500
		432.53		5.679E-01	1.588E+00	2.657E+00	2.429E-01	0.214
		487.03		3.059E-02	1.119E-01	1.850E-01	1.787E-02	0.165
		751.79		-6.625E-01	1.478E+00	2.381E+00	2.608E-01	-0.278
		815.85		1.649E-02	2.627E-01	4.389E-01	4.822E-02	0.038
		867.82		-6.940E-01	1.271E+00	1.784E+00	1.860E-01	-0.389
		919.63		-3.922E-01	2.395E+00	3.654E+00	4.266E-01	-0.107
		925.24		4.146E-01	9.560E-01	1.635E+00	1.687E-01	0.254
		1596.49	*	3.014E-02	5.795E-02	9.440E-02	7.969E-03	0.319
CE-141		145.44	*	8.831E-02	6.291E-02	9.557E-02	8.251E-03	0.924
CE-143		57.37		-3.997E-04	6.291E-02	Half-Life	too short	
		231.56		-2.070E-04	6.291E-02	Half-Life	too short	
		293.26	*	2.172E-04	6.291E-02	Half-Life	too short	

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	+	350.59		1.515E-02	6.291E-02	Half-Life	too short	
		490.36		-1.766E-03	6.291E-02	Half-Life	too short	
		664.57		4.567E-04	6.291E-02	Half-Life	too short	
		721.93		8.224E-05	6.291E-02	Half-Life	too short	
CE-144		80.11		-5.043E-02	2.129E+00	2.822E+00	2.417E-01	-0.018
		133.54	*	-4.063E-02	1.845E-01	2.925E-01	4.513E-02	-0.139
PM-144		476.78		-5.184E-02	5.930E-02	8.938E-02	8.803E-03	-0.580
		618.01		-1.383E-02	2.944E-02	4.511E-02	4.552E-03	-0.307
		696.49	*	-6.036E-02	3.666E-02	4.598E-02	4.649E-03	-1.313
		778.57		5.763E-02	2.019E+00	3.373E+00	3.427E-01	0.017
PR-144		696.49	*	-4.087E+00	2.483E+00	3.114E+00	3.147E-01	-1.313
		1489.15		7.099E+00	8.939E+00	1.666E+01	1.412E+00	0.426
PM-146		453.90	*	1.776E-02	3.856E-02	6.470E-02	7.086E-03	0.275
		633.02		6.784E-01	1.277E+00	2.089E+00	7.875E-01	0.325
		735.90		-8.271E-02	1.402E-01	2.134E-01	6.211E-02	-0.388
		747.13		1.149E-02	8.263E-02	1.395E-01	2.097E-02	0.082
ND-147		91.11		1.296E+00	3.705E-01	4.760E-01	4.709E-02	2.723
		319.41		-1.420E+00	2.681E+00	4.304E+00	4.141E-01	-0.330
		439.89		8.230E-01	4.816E+00	7.942E+00	6.981E-01	0.104
		531.02	*	-9.891E-02	4.937E-01	7.836E-01	1.210E-01	-0.126
PM-149		285.90	*	-4.870E+01	5.495E+01	8.637E+01	1.407E+01	-0.564
EU-152		121.78		-3.438E-02	6.691E-02	1.050E-01	1.017E-02	-0.327
		244.69		-6.040E-02	3.049E-01	4.448E-01	4.315E-02	-0.136
		344.27	*	-7.869E-02	8.412E-02	1.304E-01	1.272E-02	-0.603
		443.98		1.866E-01	8.087E-01	1.340E+00	1.182E-01	0.139
		778.89		2.187E-02	2.334E-01	3.918E-01	3.980E-02	0.056
		867.32		-2.821E-01	8.521E-01	1.170E+00	1.173E-01	-0.241
	+	964.01		9.146E-01	3.964E-01	5.396E-01	5.213E-02	1.695
		1085.78		-1.391E-02	4.029E-01	6.548E-01	5.798E-02	-0.021
		1112.02		-2.470E-01	2.984E-01	4.465E-01	3.853E-02	-0.553
		1407.95		6.410E-03	1.516E-01	2.552E-01	2.156E-02	0.025
GD-153		69.67		8.540E-01	1.438E+00	2.154E+00	1.648E-01	0.396
	+	83.37		1.487E+01	1.379E+01	2.130E+01	1.898E+00	0.698
		97.43	*	4.672E-02	7.830E-02	1.162E-01	1.030E-02	0.402
		103.18		-8.688E-02	9.832E-02	1.532E-01	1.325E-02	-0.567
EU-154		123.07		-5.248E-02	4.824E-02	7.332E-02	8.177E-03	-0.716
		247.94		-1.867E-01	3.158E-01	4.945E-01	6.098E-02	-0.378
		591.81		1.321E-02	5.414E-01	8.733E-01	1.095E-01	0.015
		723.30		1.460E-01	1.749E-01	2.756E-01	3.011E-02	0.530
		756.87		3.252E-01	6.952E-01	1.200E+00	1.575E-01	0.271
		873.19		1.872E-01	2.801E-01	4.873E-01	6.463E-02	0.384
		996.32		-2.530E-01	3.582E-01	5.454E-01	9.926E-02	-0.464
		1004.76		-3.424E-01	2.181E-01	3.003E-01	3.680E-02	-1.140
		1274.45	*	7.564E-04	1.158E-01	1.867E-01	2.063E-02	0.004
EU-155		48.70		-6.102E-01	1.372E+00	2.229E+00	1.784E-01	-0.274
		60.01		4.815E+00	3.929E+00	6.069E+00	4.306E-01	0.793
	+	86.54		1.692E-01	1.143E-01	1.609E-01	1.506E-02	1.052
		105.31	*	6.428E-02	1.045E-01	1.715E-01	1.491E-02	0.375
TB-160	+	86.79		4.468E-01	3.018E-01	4.297E-01	4.001E-02	1.040

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		197.04		1.122E-02	4.592E-01	7.784E-01	7.124E-02	0.014
		215.65		1.246E+00	6.904E-01	1.198E+00	1.125E-01	1.040
		298.57		1.970E-01	1.429E-01	1.762E-01	1.732E-02	1.118
		879.36	*	4.720E-02	1.228E-01	2.098E-01	2.098E-02	0.225
		962.29		6.130E-02	5.442E-01	7.849E-01	7.590E-02	0.078
	+	966.15		6.206E-01	2.689E-01	4.110E-01	3.967E-02	1.510
		1177.93		1.836E-01	3.901E-01	6.545E-01	5.271E-02	0.281
		1271.85		6.879E-01	6.193E-01	1.109E+00	9.174E-02	0.620
		80.57		-3.995E-02	3.213E-01	3.657E-01	3.150E-02	-0.109
	+	184.41		2.108E-01	5.925E-02	6.520E-02	5.856E-03	3.233
		280.46		-8.464E-02	7.948E-02	1.250E-01	1.244E-02	-0.677
		410.95		1.573E-01	2.226E-01	3.793E-01	3.237E-02	0.415
		711.68	*	2.300E-02	5.388E-02	9.302E-02	9.422E-03	0.247
		752.31		-2.706E-01	2.568E-01	3.911E-01	3.974E-02	-0.692
TM-171		810.29		-5.215E-02	5.263E-02	7.939E-02	8.048E-03	-0.657
		51.35		-2.639E+00	1.862E+01	3.059E+01	2.337E+00	-0.086
		52.39		-8.545E-02	1.030E+01	1.684E+01	1.267E+00	-0.005
		59.40		2.082E+01	2.077E+01	3.186E+01	2.254E+00	0.654
LU-176		66.72	*	-7.596E+00	2.382E+01	3.451E+01	2.571E+00	-0.220
	+	88.36		3.334E-01	2.252E-01	3.265E-01	3.078E-02	1.021
		201.83		-1.419E-02	2.382E-02	3.923E-02	3.615E-03	-0.362
		306.84	*	-1.202E-02	2.238E-02	3.308E-02	3.227E-03	-0.363
LU-177		401.10		4.051E-01	5.986E+00	9.849E+00	8.315E-01	0.041
		112.95		1.606E+00	1.364E+00	2.283E+00	1.924E-01	0.704
LU-177M	+	208.36	*	3.064E+00	1.439E+00	1.639E+00	1.524E-01	1.870
		52.97		7.538E-02	1.061E+00	1.739E+00	1.299E-01	0.043
HF-181		54.07		5.317E-01	5.729E-01	9.649E-01	7.111E-02	0.551
		61.30		1.121E+00	1.226E+00	1.867E+00	1.336E-01	0.600
		121.62		-1.454E-01	3.393E-01	5.348E-01	4.460E-02	-0.272
		147.16		5.273E-01	6.614E-01	9.785E-01	8.310E-02	0.539
		171.86		-4.846E-02	4.408E-01	6.947E-01	6.119E-02	-0.070
		218.09		-6.440E-01	7.703E-01	1.251E+00	1.178E-01	-0.515
	+	268.79		2.579E+00	1.186E+00	1.329E+00	1.315E-01	1.940
		319.02		3.890E-02	2.240E-01	3.749E-01	3.608E-02	0.104
		367.43		2.146E-01	7.683E-01	1.287E+00	1.141E-01	0.167
		413.65	*	-3.570E-02	1.604E-01	2.586E-01	2.214E-02	-0.138
		56.28		-2.068E-01	6.430E-01	1.047E+00	7.554E-02	-0.198
		57.53		-2.858E-01	3.721E-01	5.655E-01	4.043E-02	-0.505
		65.20		6.570E-01	8.025E-01	1.217E+00	8.953E-02	0.540
		133.02		-2.446E-02	6.567E-02	9.153E-02	7.659E-03	-0.267
W-181		136.25		8.617E-02	4.014E-01	6.481E-01	5.437E-02	0.133
		345.85		-4.889E-02	1.736E-01	2.598E-01	2.404E-02	-0.188
		482.03	*	2.815E-02	3.657E-02	6.252E-02	5.700E-03	0.450
		56.28		-8.211E-02	2.551E-01	4.155E-01	2.997E-02	-0.198
TA-182		57.53		-1.138E-01	1.477E-01	2.245E-01	1.605E-02	-0.507
		65.20	*	2.588E-01	3.161E-01	4.793E-01	3.527E-02	0.540
		67.75		-1.440E-01	9.948E-02	1.364E-01	1.025E-02	-1.056
		100.10		-7.814E-03	1.593E-01	2.573E-01	2.253E-02	-0.030
		152.43		1.164E-01	3.072E-01	4.970E-01	4.251E-02	0.234

---- Non-Identified Nuclides ----

	Line Nuclide	Energy Ided (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10	2.683E-01	3.042E-01	5.293E-01	5.010E-02	0.507
		1001.68	2.679E+00	1.977E+00	3.590E+00	3.394E-01	0.746
	+	1121.28	7.099E-01	2.044E-01	3.390E-01	2.897E-02	2.094
		1189.05	-2.789E-01	3.047E-01	4.522E-01	3.654E-02	-0.617
		1221.42	* -2.751E-02	1.968E-01	3.145E-01	2.566E-02	-0.087
		1230.97	4.180E-01	4.843E-01	8.319E-01	6.807E-02	0.502
RE-183		57.98	-4.842E-02	1.568E-01	2.276E-01	1.622E-02	-0.213
		59.32	8.420E-02	8.439E-02	1.294E-01	9.162E-03	0.651
		67.20	-1.240E-01	1.677E-01	2.381E-01	1.781E-02	-0.521
		162.32	* 5.476E-02	1.021E-01	1.658E-01	1.439E-02	0.330
	+	208.81	3.100E+00	1.456E+00	1.666E+00	1.550E-01	1.861
		291.72	-3.654E-01	9.265E-01	1.317E+00	1.302E-01	-0.277
RE-184		57.98	-1.797E-01	5.820E-01	8.448E-01	6.022E-02	-0.213
		59.32	3.123E-01	3.130E-01	4.801E-01	3.398E-02	0.651
		67.20	-4.603E-01	6.224E-01	8.835E-01	6.610E-02	-0.521
		161.27	-3.237E-01	3.409E-01	5.170E-01	4.480E-02	-0.626
		216.55	1.371E-01	2.407E-01	4.145E-01	3.897E-02	0.331
		252.85	* 5.560E-02	1.932E-01	3.283E-01	3.208E-02	0.169
		318.01	-4.165E-02	3.986E-01	6.569E-01	6.330E-02	-0.063
		792.07	4.170E-01	8.641E-01	1.326E+00	1.346E-01	0.315
		903.28	-2.067E-01	1.099E+00	1.536E+00	1.524E-01	-0.135
		920.93	-3.652E-02	4.089E-01	6.686E-01	6.590E-02	-0.055
OS-185		59.72	2.326E-01	2.276E-01	3.494E-01	2.475E-02	0.666
		61.14	9.288E-02	1.329E-01	2.009E-01	1.436E-02	0.462
		69.30	9.651E-02	2.542E-01	3.778E-01	2.880E-02	0.255
		592.07	6.690E-01	2.162E+00	3.570E+00	3.488E-01	0.187
		646.12	* -3.168E-02	3.488E-02	5.420E-02	5.413E-03	-0.585
		717.42	1.854E-01	7.611E-01	1.298E+00	1.316E-01	0.143
		874.81	-1.010E-01	5.426E-01	8.830E-01	8.840E-02	-0.114
		880.27	1.970E-01	6.860E-01	1.163E+00	1.162E-01	0.169
RE-188		155.03	* 5.055E-02	1.568E-01	2.530E-01	2.172E-02	0.200
		477.96	-1.074E+00	2.593E+00	4.067E+00	3.696E-01	-0.264
		633.10	1.060E+00	2.514E+00	4.152E+00	4.127E-01	0.255
W-188	+	63.58	2.450E+02	7.022E+01	8.294E+01	6.028E+00	2.954
		227.08	-1.269E+01	1.104E+01	1.754E+01	1.670E+00	-0.724
		290.67	* 5.424E+00	6.854E+00	1.059E+01	1.047E+00	0.512
IR-192	+	295.96	9.717E-01	1.957E-01	2.645E-01	2.619E-02	3.674
		308.46	1.693E-02	7.821E-02	1.315E-01	1.285E-02	0.129
		316.51	* 8.731E-03	3.044E-02	5.125E-02	4.956E-03	0.170
		468.07	1.989E-02	6.454E-02	9.455E-02	9.084E-03	0.210
		604.41	8.957E-02	4.643E-01	6.608E-01	9.150E-02	0.136
		612.46	1.991E+00	7.725E-01	1.295E+00	1.424E-01	1.537
AU-195		65.12	1.760E-01	1.485E-01	2.278E-01	1.675E-02	0.772
		66.83	-4.534E-02	7.945E-02	1.138E-01	8.483E-03	-0.399
	+	75.70	1.528E+00	2.579E-01	3.901E-01	3.175E-02	3.917
		98.88	* 1.856E-01	2.022E-01	3.360E-01	2.959E-02	0.552
	+	129.76	2.738E+00	2.727E+00	4.399E+00	3.674E-01	0.622
TL-200		367.94	* 8.416E-05	2.727E+00	Half-Life too short		
		579.30	-1.207E-03	2.727E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	828.27			-2.797E-04	2.727E+00	Half-Life	too short	
	1205.75			8.721E-04	2.727E+00	Half-Life	too short	
TL-201	68.90			-3.297E-01	2.922E+00	4.543E+00	3.451E-01	-0.073
	70.82			4.434E-01	1.786E+00	2.638E+00	2.041E-01	0.168
	80.30			-7.521E-01	4.443E+00	5.042E+00	4.329E-01	-0.149
	135.34			-4.160E+00	1.733E+01	2.743E+01	2.300E+00	-0.152
	167.43	*		8.905E-01	4.880E+00	7.804E+00	6.828E-01	0.114
TL-202	68.90			-3.683E-02	3.264E-01	5.075E-01	3.854E-02	-0.073
	70.82			4.939E-02	1.989E-01	2.939E-01	2.273E-02	0.168
	80.30			-8.381E-02	4.951E-01	5.618E-01	4.824E-02	-0.149
	439.56	*		3.491E-02	5.619E-02	9.541E-02	8.382E-03	0.366
HG-203	70.83			2.334E-01	9.096E-01	1.344E+00	1.755E-01	0.174
	72.87			2.722E-01	5.607E-01	8.328E-01	1.061E-01	0.327
	82.60			5.270E-01	1.034E+00	1.531E+00	2.125E-01	0.344
	279.20	*		1.354E-02	3.742E-02	6.341E-02	6.449E-03	0.214
BI-207	72.80			1.519E-01	1.620E-01	2.447E-01	1.931E-02	0.621
	+	74.97		8.516E-01	1.437E-01	1.946E-01	1.571E-02	4.377
	+	84.90		1.930E-01	1.789E-01	2.786E-01	2.532E-02	0.693
	569.67			2.516E-02	2.820E-02	4.818E-02	4.655E-03	0.522
	1063.62	*		4.633E-02	4.846E-02	8.565E-02	7.734E-03	0.541
	1770.23			-1.621E-01	3.093E-01	3.343E-01	2.742E-02	-0.485
TL-207	81.07			1.854E-01	2.420E-01	2.917E-01	2.528E-02	0.636
	+	83.78		1.273E-01	1.180E-01	1.825E-01	1.635E-02	0.697
	94.90			6.287E-01	2.352E-01	3.699E-01	3.327E-02	1.700
	122.32			-1.077E+00	1.624E+00	2.532E+00	2.276E-01	-0.425
	+	144.24		9.354E-01	7.329E-01	1.074E+00	1.020E-01	0.871
	154.21			3.677E-01	3.658E-01	6.048E-01	5.709E-02	0.608
	+	269.46		6.071E-01	2.794E-01	3.210E-01	3.228E-02	1.891
	323.87	*		-2.912E-03	6.151E-01	8.948E-01	1.627E-01	-0.003
	+	338.28		6.825E+00	1.540E+00	2.293E+00	2.946E-01	2.976
	445.03			-6.253E-01	1.903E+00	3.020E+00	3.696E-01	-0.207
PO-209	260.50			-5.097E+00	8.423E+00	1.365E+01	1.343E+00	-0.373
	262.80			1.088E+01	2.400E+01	3.974E+01	3.915E+00	0.274
	896.60	*		2.232E+00	7.147E+00	1.210E+01	1.204E+00	0.184
BI-210	46.50	*		-4.235E-01	1.925E+00	3.140E+00	2.912E-01	-0.135
PB-210	46.50	*		-4.235E-01	1.925E+00	3.140E+00	2.912E-01	-0.135
PO-210	46.50	*		-4.235E-01	1.925E+00	3.140E+00	2.634E-01	-0.135
PB-211	404.84	*		3.106E-01	8.413E-01	1.373E+00	8.599E-01	0.226
	427.08			8.199E-01	1.895E+00	3.070E+00	1.908E+00	0.267
	831.96			1.473E-01	1.043E+00	1.744E+00	1.097E+00	0.084
PO-215	81.07			1.854E-01	2.420E-01	2.917E-01	2.528E-02	0.636
	+	83.78		1.273E-01	1.180E-01	1.825E-01	1.635E-02	0.697
	94.90			6.287E-01	2.352E-01	3.699E-01	3.327E-02	1.700
	122.32			-1.077E+00	1.624E+00	2.532E+00	2.276E-01	-0.425
	+	144.24		9.354E-01	7.329E-01	1.074E+00	1.020E-01	0.871
	154.21			3.677E-01	3.658E-01	6.048E-01	5.709E-02	0.608
	+	269.46		6.071E-01	2.794E-01	3.210E-01	3.228E-02	1.891
	323.87	*		-2.912E-03	6.151E-01	8.948E-01	1.627E-01	-0.003
	+	338.28		6.825E+00	1.540E+00	2.293E+00	2.946E-01	2.976

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		-6.253E-01	1.903E+00	3.020E+00	3.696E-01	-0.207
		271.23		7.789E-01	3.610E-01	4.004E-01	4.569E-02	1.946
		401.81	*	1.582E-01	3.707E-01	6.222E-01	9.288E-02	0.254
RN-220		549.76	*	4.575E+00	2.300E+01	3.761E+01	3.593E+00	0.122
RA-223	+	81.07		1.854E-01	2.420E-01	2.917E-01	2.528E-02	0.636
		83.78		1.273E-01	1.180E-01	1.825E-01	1.635E-02	0.697
		94.90		6.287E-01	2.352E-01	3.699E-01	3.327E-02	1.700
AC-227	+	122.32		-1.077E+00	1.624E+00	2.532E+00	2.276E-01	-0.425
		144.24		9.354E-01	7.329E-01	1.074E+00	1.020E-01	0.871
		154.21		3.677E-01	3.658E-01	6.048E-01	5.709E-02	0.608
	+	269.46		6.071E-01	2.794E-01	3.210E-01	3.228E-02	1.891
		323.87	*	-2.912E-03	6.151E-01	8.948E-01	1.627E-01	-0.003
	+	338.28		6.825E+00	1.540E+00	2.293E+00	2.946E-01	2.976
		445.03		-6.253E-01	1.903E+00	3.020E+00	3.696E-01	-0.207
		79.80		-1.109E-01	1.650E+00	2.182E+00	4.686E-01	-0.051
		236.00		3.677E-01	2.397E-01	3.770E-01	4.888E-02	0.975
		256.20	*	-8.085E-02	3.168E-01	5.232E-01	8.392E-02	-0.155
	+	286.10		-7.913E-01	1.339E+00	2.155E+00	3.035E-01	-0.367
		299.80		3.962E+00	2.023E+00	2.379E+00	4.309E-01	1.665
TH-227		304.40		5.104E-01	1.608E+00	2.407E+00	4.575E-01	0.212
		334.20		1.391E+00	2.590E+00	3.344E+00	6.615E-01	0.416
		79.80		-1.109E-01	1.650E+00	2.182E+00	4.746E-01	-0.051
	+	94.00		2.139E+01	5.563E+00	4.213E+00	9.247E-01	5.077
		236.00		3.677E-01	2.390E-01	3.770E-01	4.475E-02	0.975
		256.20	*	-8.085E-02	3.168E-01	5.232E-01	9.760E-02	-0.155
	+	286.10		-7.913E-01	1.554E+00	2.155E+00	2.165E+00	-0.367
		299.80		3.962E+00	2.023E+00	2.379E+00	4.309E-01	1.665
		304.40		5.104E-01	1.608E+00	2.407E+00	4.575E-01	0.212
	+	334.20		1.391E+00	2.590E+00	3.344E+00	6.615E-01	0.416
		85.43		1.906E-01	1.766E-01	2.783E-01	2.547E-02	0.685
		88.47		1.919E-01	1.297E-01	1.883E-01	1.774E-02	1.019
TH-229		100.00		1.456E-02	1.674E-01	2.718E-01	2.381E-02	0.054
		193.63	*	-1.129E-01	4.261E-01	7.142E-01	6.504E-02	-0.158
		210.97		1.194E+00	7.630E-01	1.219E+00	1.138E-01	0.979
	+	283.67	*	7.803E-01	1.318E+00	2.254E+00	3.598E-01	0.346
PA-231		301.29		1.585E+00	7.847E-01	9.424E-01	1.235E-01	1.682
TH-231	+	81.07		1.854E-01	2.420E-01	2.917E-01	2.528E-02	0.636
		83.78		1.273E-01	1.180E-01	1.825E-01	1.635E-02	0.697
		94.90		6.287E-01	2.352E-01	3.699E-01	3.327E-02	1.700
	+	122.32		-1.077E+00	1.624E+00	2.532E+00	2.276E-01	-0.425
		144.24		9.354E-01	7.329E-01	1.074E+00	1.020E-01	0.871
		154.21		3.677E-01	3.658E-01	6.048E-01	5.709E-02	0.608
	+	269.46		6.071E-01	2.794E-01	3.210E-01	3.228E-02	1.891
		323.87	*	-2.912E-03	6.151E-01	8.948E-01	1.627E-01	-0.003
	+	338.28		6.825E+00	1.540E+00	2.293E+00	2.946E-01	2.976
		445.03		-6.253E-01	1.903E+00	3.020E+00	3.696E-01	-0.207
U-231	+	84.21		4.447E+00	4.122E+00	6.409E+00	5.774E-01	0.694
		92.29		1.714E+01	2.849E+00	3.682E+00	3.368E-01	4.654
	+	95.87	*	-4.839E-01	8.709E-01	1.223E+00	1.094E-01	-0.396

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		108.00		-1.537E+00	1.606E+00	2.491E+00	2.123E-01	-0.617
	+	75.28		2.485E+01	5.249E+00	5.816E+00	8.761E-01	4.273
	+	86.59		2.752E+00	1.986E+00	2.625E+00	7.097E-01	1.049
	+	300.12		1.105E+00	5.548E-01	6.655E-01	1.038E-01	1.660
		311.98	*	-1.063E-02	5.597E-02	9.188E-02	9.116E-03	-0.116
		340.50		1.537E+00	7.223E-01	1.053E+00	2.538E-01	1.460
PA-234		398.62		1.863E-01	1.818E+00	2.999E+00	7.966E-01	0.062
		415.76		-4.099E-01	1.504E+00	2.411E+00	5.192E-01	-0.170
	+	63.00		7.195E+00	2.261E+00	2.503E+00	3.699E-01	2.874
		94.67		8.066E-01	1.997E-01	2.949E-01	3.737E-02	2.735
		98.44		9.508E-02	9.799E-02	1.384E-01	7.728E-02	0.687
		99.86		1.462E-01	4.243E-01	6.952E-01	6.094E-02	0.210
		111.00		-9.940E-02	1.779E-01	2.801E-01	3.354E-02	-0.355
		131.20		2.436E-03	1.069E-01	1.526E-01	1.276E-02	0.016
		152.70		1.790E-01	3.005E-01	4.883E-01	8.308E-02	0.367
	+	186.00		7.588E+00	3.119E+00	2.587E+00	8.102E-01	2.933
		226.40		-2.842E-01	3.458E-01	5.573E-01	7.692E-02	-0.510
		227.20		-4.001E-01	3.769E-01	6.016E-01	5.729E-02	-0.665
		248.90		-3.559E-02	6.871E-01	1.149E+00	2.628E-01	-0.031
		293.70		4.082E+00	1.090E+00	1.479E+00	2.656E-01	2.759
		369.80		-6.573E-02	7.579E-01	1.240E+00	2.711E-01	-0.053
		568.70		3.515E-01	9.179E-01	1.516E+00	1.464E-01	0.232
		569.50		1.608E-01	2.541E-01	4.267E-01	4.122E-02	0.377
		574.00		-4.278E-02	1.428E+00	2.286E+00	2.214E-01	-0.019
		699.00		-7.361E-01	7.752E-01	1.045E+00	2.070E-01	-0.704
		706.10		-6.234E-01	9.963E-01	1.527E+00	6.858E-01	-0.408
		733.00		3.041E-01	3.751E-01	5.851E-01	1.336E-01	0.520
		742.81		1.197E-01	1.212E+00	2.037E+00	1.374E+00	0.059
	+	796.30		2.157E+00	1.170E+00	1.642E+00	4.529E-01	1.314
		805.60		3.907E-01	9.134E-01	1.557E+00	4.844E-01	0.251
		819.60		-5.700E-02	1.088E+00	1.798E+00	6.905E-01	-0.032
		826.30		3.031E-01	7.050E-01	1.193E+00	5.374E-01	0.254
		831.60		-1.376E-02	5.417E-01	8.970E-01	2.719E-01	-0.015
		876.40		1.923E-02	7.796E-01	1.292E+00	1.330E+00	0.015
		880.51		1.483E-02	2.532E-01	4.208E-01	4.206E-02	0.035
		883.24		1.254E-02	2.527E-01	4.194E-01	2.827E-01	0.030
		899.00		-5.586E-02	8.097E-01	1.329E+00	5.845E-01	-0.042
		925.00		6.260E-01	1.080E+00	1.867E+00	1.837E-01	0.335
		926.50		2.707E-02	1.571E-01	2.627E-01	6.755E-02	0.103
		946.00	*	5.914E-02	3.058E-01	5.107E-01	9.860E-02	0.116
		949.00		-1.055E-01	4.707E-01	7.606E-01	7.404E-02	-0.139
		980.50		-1.618E-01	6.473E-01	1.037E+00	9.925E-02	-0.156
		1394.10		3.449E-01	9.863E-01	1.682E+00	1.095E+00	0.205
PA-234M		766.42		1.697E+01	1.372E+01	1.804E+01	9.204E+00	0.941
NP-236		1001.03	*	6.013E+00	4.582E+00	8.274E+00	8.850E-01	0.727
		94.67		6.173E-01	1.416E-01	2.241E-01	2.019E-02	2.754
		98.44		7.190E-02	6.259E-02	1.047E-01	9.235E-03	0.687
		111.00		-7.519E-02	1.344E-01	2.118E-01	1.793E-02	-0.355
		160.31	*	-2.379E-02	7.523E-02	1.178E-01	1.020E-02	-0.202

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		9.498E-02	1.422E-01	2.344E-01	2.058E-02	0.405
		117.00	*	-3.453E-02	1.761E-01	2.811E-01	2.355E-02	-0.123
	+	209.75		2.477E+00	1.163E+00	1.328E+00	1.237E-01	1.865
		228.18		-8.280E-02	1.924E-01	3.173E-01	3.025E-02	-0.261
		277.60		2.616E-01	1.694E-01	2.986E-01	2.971E-02	0.876
AM-241		334.30		7.558E-01	1.459E+00	1.889E+00	1.781E-01	0.400
		59.54	*	1.222E-01	1.210E-01	1.855E-01	1.452E-02	0.659
CM-243		99.55		9.772E-02	1.463E-01	2.412E-01	2.117E-02	0.405
		103.76	*	6.273E-02	8.925E-02	1.471E-01	1.270E-02	0.426
		117.00		-3.552E-02	1.811E-01	2.891E-01	2.422E-02	-0.123
	+	209.75		2.441E+00	1.146E+00	1.309E+00	1.219E-01	1.865
		228.18		-8.366E-02	1.944E-01	3.206E-01	3.057E-02	-0.261
AM-246		277.60		2.637E-01	1.708E-01	3.010E-01	2.995E-02	0.876
		798.80		-7.682E-02	1.430E-01	1.931E-01	1.959E-02	-0.398
		1036.00		-1.666E-01	2.834E-01	4.370E-01	4.033E-02	-0.381
		1062.04		-2.684E-02	2.176E-01	3.512E-01	3.175E-02	-0.076
		1078.86	*	7.711E-02	1.475E-01	2.507E-01	2.234E-02	0.308
CM-247		278.00		1.098E+00	7.072E-01	1.246E+00	1.240E-01	0.881
		287.40		2.259E-01	1.072E+00	1.805E+00	1.789E-01	0.125
		402.60	*	-2.529E-03	3.332E-02	5.432E-02	4.594E-03	-0.047
CF-249		252.85		2.097E-01	7.289E-01	1.238E+00	1.210E-01	0.169
		333.44		1.597E-01	2.154E-01	2.500E-01	2.360E-02	0.639
		387.95	*	9.312E-03	3.536E-02	5.898E-02	4.977E-03	0.158
CF-251		176.60	*	4.044E-02	1.190E-01	1.913E-01	1.697E-02	0.211
		227.00		-3.909E-01	3.354E-01	5.322E-01	5.067E-02	-0.735
		285.00		-9.229E-01	1.547E+00	2.494E+00	2.475E-01	-0.370

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395004      *
* Acquisition date   : 2-FEB-2010 08:23:35 Detector SN#                   *
* Detector ID       : GAM20 Sensitivity : 5.000                          *
* Geometry          : CAN Energy tolerance: 1.500                        *
* Elapsed live time : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time : 0 02:00:33.47 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 19-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID        : G245395004 Analyst initials: MXR1                  *
* Batch Number     : 944966 Sample Quantity : 1.3917E+02 GRAM           *
* Recovery         : 1.00000 Carrier Weight : 0.00000                   *
*****
*
*                                     QC DATA                               *
*
* Standard Weight   : 0.00000                                             *
* CALIB. DATE/TIME : 26-AUG-2009 06:32:11 MS Isotope :                   *
* MSD DPM           : 0.000 MSD Isotope :                               *
* LCS DPM           : 0.000 LCS Isotope :                               *
* LCSD DPM          : 0.000 LCSD Isotope :                               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.755E+01	3.675E+00	4.371E-01	0.000E+00
CD-109	1.427E+00	9.451E-01	1.499E+00	0.000E+00
SN-126	1.406E-01	9.307E-02	1.422E-01	0.000E+00
TL-208	5.596E-01	9.070E-02	5.034E-02	0.000E+00
BI-211	3.620E+00	5.314E-01	3.034E-01	0.000E+00
BI-212	1.154E+00	5.683E-01	4.704E-01	0.000E+00
PB-212	1.656E+00	2.014E-01	8.109E-02	0.000E+00
PO-212	1.656E+00	2.014E-01	8.109E-02	0.000E+00
BI-214	1.134E+00	1.877E-01	1.047E-01	0.000E+00
PB-214	1.259E+00	1.957E-01	1.028E-01	0.000E+00
PO-214	1.259E+00	1.957E-01	1.028E-01	0.000E+00
PO-216	1.656E+00	2.014E-01	8.109E-02	0.000E+00
PO-218	1.259E+00	1.957E-01	1.028E-01	0.000E+00
RA-224	4.135E+00	1.333E+00	9.225E-01	0.000E+00
RA-226	1.134E+00	1.877E-01	1.047E-01	0.000E+00
AC-228	1.629E+00	3.495E-01	1.929E-01	0.000E+00
RA-228	1.629E+00	3.495E-01	1.929E-01	0.000E+00
TH-228	1.679E+00	2.042E-01	8.222E-02	0.000E+00
TH-230	1.134E+00	1.877E-01	1.047E-01	0.000E+00
TH-232	1.629E+00	3.495E-01	1.929E-01	0.000E+00
TH-234	6.172E+00	1.980E+00	1.678E+00	0.000E+00
U-234	1.134E+00	1.877E-01	1.047E-01	0.000E+00
U-235	2.886E-01	2.255E-01	3.358E-01	0.000E+00
NP-237	4.128E-01	2.858E-01	3.502E-01	0.000E+00
U-238	6.172E+00	1.980E+00	1.678E+00	0.000E+00
AM-243	4.745E-01	7.847E-02	7.923E-02	0.000E+00
ANH-511	1.891E-01	6.966E-02	4.122E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	-1.780E-01	2.673E-01	4.303E-01	0.000E+00	NOT IDENT.
NA-22	-2.761E-03	4.073E-02	6.695E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.659E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.230E-02	2.342E-02	4.323E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.136E-02	7.527E-02	0.000E+00	FAIL ABUN
SC-46	-2.521E-02	3.429E-02	5.456E-02	0.000E+00	FAIL ABUN
V-48	4.232E-02	5.610E-02	1.016E-01	0.000E+00	NOT IDENT.
CR-51	5.961E-02	3.029E-01	5.358E-01	0.000E+00	NOT IDENT.
MN-52	6.199E-02	1.591E-01	2.863E-01	0.000E+00	NOT IDENT.
MN-54	-1.697E-02	3.257E-02	5.355E-02	0.000E+00	NOT IDENT.
CO-56	3.402E-02	3.414E-02	6.304E-02	0.000E+00	FAIL ABUN
CO-57	-9.342E-03	2.261E-02	3.840E-02	0.000E+00	NOT IDENT.
CO-58	-3.563E-02	3.398E-02	5.293E-02	0.000E+00	NOT IDENT.
FE-59	-3.022E-02	8.810E-02	1.434E-01	0.000E+00	FAIL ABUN
CO-60	5.922E-03	3.885E-02	6.508E-02	0.000E+00	NOT IDENT.
ZN-65	2.244E-02	8.984E-02	1.342E-01	0.000E+00	NOT IDENT.
GE-68	4.199E-01	1.240E+00	2.141E+00	0.000E+00	NOT IDENT.
AS-73	6.203E-02	5.375E-01	9.643E-01	0.000E+00	NOT IDENT.
AS-74	-2.656E-02	7.067E-02	1.140E-01	0.000E+00	NOT IDENT.
SE-75	2.113E-02	4.164E-02	6.715E-02	0.000E+00	NOT IDENT.
BR-77	4.546E+00	6.695E+00	1.182E+01	0.000E+00	FAIL ABUN
SR-82	-1.544E-01	3.583E-01	5.101E-01	0.000E+00	NOT IDENT.
RB-83	4.951E-02	6.544E-02	1.127E-01	0.000E+00	NOT IDENT.
RB-84	-1.458E-02	6.098E-02	1.021E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.922E+00	1.309E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.502E-02	6.624E-02	0.000E+00	NOT IDENT.
RB-86	4.095E-01	7.597E-01	1.332E+00	0.000E+00	NOT IDENT.
Y-88	2.527E-02	2.728E-02	5.318E-02	0.000E+00	NOT IDENT.
ZR-88	1.905E-02	2.785E-02	4.987E-02	0.000E+00	NOT IDENT.
Y-91	7.921E+00	1.822E+01	3.135E+01	0.000E+00	NOT IDENT.
NB-94	2.347E-02	3.038E-02	5.551E-02	0.000E+00	NOT IDENT.
NB-95	2.965E-02	3.776E-02	6.163E-02	0.000E+00	NOT IDENT.
NB-95M	1.139E-01	1.162E-01	1.920E-01	0.000E+00	NOT IDENT.
ZR-95	-2.234E-03	6.215E-02	1.074E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.473E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.815E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.964E+00	7.251E+00	1.284E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.169E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.182E-02	2.722E-02	4.889E-02	0.000E+00	NOT IDENT.
RH-102	-2.251E-02	2.432E-02	3.822E-02	0.000E+00	NOT IDENT.
RU-103	5.049E-03	3.560E-02	6.093E-02	0.000E+00	FAIL ABUN
RH-106	6.793E-02	2.781E-01	4.720E-01	0.000E+00	FAIL ABUN
RU-106	6.793E-02	2.780E-01	4.720E-01	0.000E+00	FAIL ABUN
AG-108M	-1.591E-02	2.745E-02	4.499E-02	0.000E+00	NOT IDENT.
AG-110M	-2.200E-02	3.068E-02	5.089E-02	0.000E+00	NOT IDENT.
IN-111	-1.980E-01	6.909E-01	1.063E+00	0.000E+00	NOT IDENT.
IN-113M	2.172E-02	3.952E-02	7.035E-02	0.000E+00	NOT IDENT.
SN-113	2.172E-02	3.952E-02	7.035E-02	0.000E+00	NOT IDENT.
IN-114M	2.883E-02	1.650E-01	2.662E-01	0.000E+00	NOT IDENT.
CD-115	2.834E+00	6.680E+00	1.161E+01	0.000E+00	NOT IDENT.
SN-117M	1.097E-02	4.655E-02	8.003E-02	0.000E+00	NOT IDENT.
SB-122	5.958E-01	1.347E+00	2.332E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.053E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	3.543E-03	2.572E-02	4.403E-02	0.000E+00	NOT IDENT.
I-124	-3.758E-02	5.398E-01	7.791E-01	0.000E+00	FAIL ABUN
SB-124	-3.109E-02	5.226E-02	7.649E-02	0.000E+00	FAIL ABUN
SB-125	2.819E-02	7.967E-02	1.397E-01	0.000E+00	FAIL ABUN
TE-125M	-1.112E+00	8.528E+00	1.476E+01	0.000E+00	NOT IDENT.
I-126	3.137E-02	1.487E-01	2.640E-01	0.000E+00	NOT IDENT.
SB-126	8.570E-03	1.341E-01	2.043E-01	0.000E+00	FAIL ABUN
SB-127	4.376E-01	9.367E-01	1.688E+00	0.000E+00	NOT IDENT.
XE-127	-1.664E-02	3.938E-02	6.737E-02	0.000E+00	NOT IDENT.
I-131	-2.246E-02	8.198E-02	1.395E-01	0.000E+00	NOT IDENT.
TE-132	-1.245E-01	4.372E-01	7.718E-01	0.000E+00	NOT IDENT.
BA-133	2.212E-02	4.260E-02	6.750E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.024E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.196E-02	8.561E-02	0.000E+00	FAIL ABUN
CS-135	1.494E-01	1.535E-01	2.528E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.361E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.159E-03	9.277E-02	1.566E-01	0.000E+00	FAIL ABUN
BA-137M	-1.662E-02	3.174E-02	5.350E-02	0.000E+00	NOT IDENT.
CS-137	-1.757E-02	3.355E-02	5.656E-02	0.000E+00	NOT IDENT.
CE-139	-1.503E-02	2.780E-02	4.601E-02	0.000E+00	NOT IDENT.
BA-140	-5.482E-02	2.179E-01	3.586E-01	0.000E+00	NOT IDENT.
LA-140	3.014E-02	5.679E-02	9.455E-02	0.000E+00	FAIL ABUN
CE-141	8.831E-02	6.165E-02	1.004E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.925E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-4.063E-02	1.808E-01	3.078E-01	0.000E+00	NOT IDENT.

PM-144	-6.036E-02	3.593E-02	4.685E-02	0.000E+00	NOT IDENT.
PR-144	-4.087E+00	2.433E+00	3.173E+00	0.000E+00	NOT IDENT.
PM-146	1.776E-02	3.779E-02	6.650E-02	0.000E+00	NOT IDENT.
ND-147	-9.891E-02	4.838E-01	8.029E-01	0.000E+00	NOT IDENT.
PM-149	-4.870E+01	5.385E+01	8.958E+01	0.000E+00	NOT IDENT.
EU-152	-7.869E-02	8.244E-02	1.348E-01	0.000E+00	FAIL ABUN
GD-153	4.672E-02	7.674E-02	1.230E-01	0.000E+00	FAIL ABUN
EU-154	7.564E-04	1.135E-01	1.879E-01	0.000E+00	NOT IDENT.
EU-155	6.428E-02	1.024E-01	1.814E-01	0.000E+00	FAIL ABUN
TB-160	4.720E-02	1.204E-01	2.128E-01	0.000E+00	FAIL ABUN
HO-166M	2.300E-02	5.280E-02	9.474E-02	0.000E+00	FAIL ABUN
TM-171	-7.596E+00	2.335E+01	3.680E+01	0.000E+00	NOT IDENT.
LU-176	-1.202E-02	2.193E-02	3.426E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.410E+00	1.710E+00	0.000E+00	FAIL ABUN
LU-177M	-3.570E-02	1.572E-01	2.663E-01	0.000E+00	FAIL ABUN
HF-181	2.815E-02	3.584E-02	6.418E-02	0.000E+00	NOT IDENT.
W-181	2.588E-01	3.098E-01	5.113E-01	0.000E+00	NOT IDENT.
TA-182	-2.751E-02	1.929E-01	3.168E-01	0.000E+00	FAIL ABUN
RE-183	5.476E-02	1.001E-01	1.739E-01	0.000E+00	FAIL ABUN
RE-184	5.560E-02	1.894E-01	3.413E-01	0.000E+00	NOT IDENT.
OS-185	-3.168E-02	3.419E-02	5.531E-02	0.000E+00	NOT IDENT.
RE-188	5.055E-02	1.537E-01	2.656E-01	0.000E+00	NOT IDENT.
W-188	5.424E+00	6.717E+00	1.098E+01	0.000E+00	FAIL ABUN
IR-192	8.731E-03	2.983E-02	5.305E-02	0.000E+00	FAIL ABUN
AU-195	1.856E-01	1.982E-01	3.557E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.696E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	8.905E-01	4.782E+00	8.179E+00	0.000E+00	NOT IDENT.
TL-202	3.491E-02	5.506E-02	9.813E-02	0.000E+00	NOT IDENT.
HG-203	1.354E-02	3.667E-02	6.580E-02	0.000E+00	NOT IDENT.
BI-207	4.633E-02	4.749E-02	8.652E-02	0.000E+00	FAIL ABUN
TL-207	-2.912E-03	6.028E-01	9.258E-01	0.000E+00	FAIL ABUN
PO-209	2.232E+00	7.004E+00	1.227E+01	0.000E+00	NOT IDENT.
BI-210	-4.235E-01	1.886E+00	3.371E+00	0.000E+00	NOT IDENT.
PB-210	-4.235E-01	1.886E+00	3.371E+00	0.000E+00	NOT IDENT.
PO-210	-4.235E-01	1.886E+00	3.371E+00	0.000E+00	NOT IDENT.
PB-211	3.106E-01	8.245E-01	1.414E+00	0.000E+00	NOT IDENT.
PO-215	-2.912E-03	6.028E-01	9.258E-01	0.000E+00	FAIL ABUN
RN-219	1.582E-01	3.633E-01	6.410E-01	0.000E+00	FAIL ABUN
RN-220	4.575E+00	2.254E+01	3.850E+01	0.000E+00	NOT IDENT.
RA-223	-2.912E-03	6.028E-01	9.258E-01	0.000E+00	FAIL ABUN
AC-227	-8.085E-02	3.104E-01	5.438E-01	0.000E+00	FAIL ABUN
TH-227	-8.085E-02	3.105E-01	5.438E-01	0.000E+00	FAIL ABUN
TH-229	-1.129E-01	4.176E-01	7.464E-01	0.000E+00	FAIL ABUN
PA-231	7.803E-01	1.291E+00	2.338E+00	0.000E+00	FAIL ABUN
TH-231	-2.912E-03	6.028E-01	9.258E-01	0.000E+00	FAIL ABUN
U-231	-4.839E-01	8.535E-01	1.296E+00	0.000E+00	FAIL ABUN
PA-233	-1.063E-02	5.485E-02	9.514E-02	0.000E+00	FAIL ABUN
PA-234	5.914E-02	2.997E-01	5.171E-01	0.000E+00	FAIL ABUN
PA-234M	6.013E+00	4.490E+00	8.368E+00	0.000E+00	NOT IDENT.
NP-236	-2.379E-02	7.372E-02	1.236E-01	0.000E+00	NOT IDENT.
NP-239	-3.453E-02	1.726E-01	2.966E-01	0.000E+00	FAIL ABUN
AM-241	1.222E-01	1.186E-01	1.983E-01	0.000E+00	NOT IDENT.
CM-243	6.273E-02	8.746E-02	1.556E-01	0.000E+00	FAIL ABUN
AM-246	7.711E-02	1.445E-01	2.532E-01	0.000E+00	NOT IDENT.
CM-247	-2.529E-03	3.266E-02	5.596E-02	0.000E+00	NOT IDENT.
CF-249	9.312E-03	3.466E-02	6.081E-02	0.000E+00	NOT IDENT.
CF-251	4.044E-02	1.167E-01	2.002E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395004.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:23:35.
Sample ID          : G245395004 Sample quantity : 1.39170E+02 GRAM
Detector name      : GAM20 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:33.47 0.5%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1861	10.67*	1.253E+00	3.755E+01	3.755E+01	9.99
CD-109	88.03	134	3.72*	6.930E+00	1.398E+00	1.427E+00	67.56
SN-126	64.28	402	9.60	4.627E+00	2.443E+00	2.443E+00	31.27
	86.94	134	8.90	6.930E+00	5.844E-01	5.844E-01	78.74
	87.57	134	37.00*	6.930E+00	1.406E-01	1.406E-01	67.56
TL-208	277.35	-----	6.80	4.722E+00	-----	Line Not Found	-----
	510.84	210	21.60	2.992E+00	8.753E-01	8.753E-01	38.51
	583.14	471	84.20*	2.695E+00	5.596E-01	5.596E-01	16.54
	860.37	59	12.46	1.954E+00	6.556E-01	6.556E-01	64.36
BI-211	72.87	-----	1.27	5.845E+00	-----	Line Not Found	-----
	351.07	689	12.94*	3.968E+00	3.620E+00	3.620E+00	14.98
BI-212	727.18	114	11.80*	2.251E+00	1.154E+00	1.154E+00	50.23
	785.46	-----	1.97	2.111E+00	-----	Line Not Found	-----
	1620.62	22	2.75	1.162E+00	1.844E+00	1.844E+00	92.86
PB-212	74.81	703	10.70	6.051E+00	2.927E+00	2.927E+00	19.29
	77.11	862	18.00	6.264E+00	2.062E+00	2.062E+00	13.77
	87.30	134	8.00	6.930E+00	6.501E-01	6.501E-01	68.29
	238.63	1437	44.60*	5.248E+00	1.656E+00	1.656E+00	12.41
	300.09	120	3.41	4.456E+00	2.138E+00	2.138E+00	49.09
PO-212	74.81	703	10.70	6.051E+00	2.927E+00	2.927E+00	19.29
	77.11	862	18.00	6.264E+00	2.062E+00	2.062E+00	13.77
	87.30	134	8.00	6.930E+00	6.501E-01	6.501E-01	68.29
	115.19	-----	0.60	7.430E+00	-----	Line Not Found	-----
	238.63	1437	44.60*	5.248E+00	1.656E+00	1.656E+00	12.41
	300.09	120	3.41	4.456E+00	2.138E+00	2.138E+00	49.09
BI-214	609.31	506	46.30*	2.602E+00	1.134E+00	1.134E+00	16.89
	1120.29	132	15.10	1.557E+00	1.513E+00	1.513E+00	29.55
	1764.49	94	15.80	1.100E+00	1.464E+00	1.464E+00	24.45
PB-214	74.81	703	6.21	6.051E+00	5.043E+00	5.043E+00	18.43
	77.11	862	10.50	6.264E+00	3.536E+00	3.536E+00	15.74
	87.30	134	4.67	6.930E+00	1.114E+00	1.114E+00	68.00
	241.98	315	7.49	5.204E+00	2.181E+00	2.181E+00	33.37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	414	19.20	4.513E+00	1.290E+00	1.290E+00	21.07
	351.92	689	37.20*	3.968E+00	1.259E+00	1.259E+00	15.86
	74.81	703	6.21	6.051E+00	5.043E+00	5.043E+00	18.43
	77.11	862	10.50	6.264E+00	3.536E+00	3.536E+00	15.74
	87.30	134	4.67	6.930E+00	1.114E+00	1.114E+00	68.00
PO-216	241.98	315	7.49	5.204E+00	2.181E+00	2.181E+00	33.37
	295.21	414	19.20	4.513E+00	1.290E+00	1.290E+00	21.07
	351.92	689	37.20*	3.968E+00	1.259E+00	1.259E+00	15.86
	74.81	703	10.70	6.051E+00	2.927E+00	2.927E+00	19.29
	77.11	862	18.00	6.264E+00	2.062E+00	2.062E+00	13.77
PO-218	87.30	134	8.00	6.930E+00	6.501E-01	6.501E-01	68.29
	238.63	1437	44.60*	5.248E+00	1.656E+00	1.656E+00	12.41
	300.09	120	3.41	4.456E+00	2.138E+00	2.138E+00	49.09
	74.81	703	6.21	6.051E+00	5.043E+00	5.043E+00	18.43
	77.11	862	10.50	6.264E+00	3.536E+00	3.536E+00	15.74
RA-224	87.30	134	4.67	6.930E+00	1.114E+00	1.114E+00	68.00
	241.98	315	7.49	5.204E+00	2.181E+00	2.181E+00	33.37
	295.21	414	19.20	4.513E+00	1.290E+00	1.290E+00	21.07
	351.92	689	37.20*	3.968E+00	1.259E+00	1.259E+00	15.86
	240.98	315	3.95*	5.204E+00	4.135E+00	4.135E+00	32.89
RA-226	609.31	506	46.30*	2.602E+00	1.134E+00	1.134E+00	16.89
	1120.29	132	15.10	1.557E+00	1.513E+00	1.513E+00	29.55
	1764.49	94	15.80	1.100E+00	1.464E+00	1.464E+00	24.45
	338.32	282	11.40	4.087E+00	1.634E+00	1.634E+00	45.38
	911.07	311	27.70*	1.860E+00	1.629E+00	1.629E+00	21.89
AC-228	969.11	190	16.60	1.764E+00	1.750E+00	1.750E+00	32.16
	338.32	282	11.40	4.087E+00	1.634E+00	1.634E+00	45.38
	911.07	311	27.70*	1.860E+00	1.629E+00	1.629E+00	21.89
	969.11	190	16.60	1.764E+00	1.750E+00	1.750E+00	32.16
	74.81	703	10.70	6.051E+00	2.927E+00	2.927E+00	16.91
TH-228	77.11	862	18.00	6.264E+00	2.062E+00	2.091E+00	13.77
	87.30	134	8.00	6.930E+00	6.501E-01	6.592E-01	67.56
	238.63	1437	44.60*	5.248E+00	1.656E+00	1.679E+00	12.41
	300.09	120	3.41	4.456E+00	2.138E+00	2.168E+00	76.26
	609.31	506	46.30*	2.602E+00	1.134E+00	1.134E+00	16.89
TH-230	1120.29	132	15.10	1.557E+00	1.513E+00	1.513E+00	29.55
	1764.49	94	15.80	1.100E+00	1.464E+00	1.464E+00	24.45
	338.32	282	11.40	4.087E+00	1.634E+00	1.634E+00	20.77
	911.07	311	27.70*	1.860E+00	1.629E+00	1.629E+00	21.89
	969.11	190	16.60	1.764E+00	1.750E+00	1.750E+00	32.16
TH-232	63.29	402	3.80*	4.627E+00	6.172E+00	6.172E+00	32.73
	92.38	796	5.41	7.172E+00	5.535E+00	5.535E+00	23.00
	609.31	506	46.30*	2.602E+00	1.134E+00	1.134E+00	16.89
	1120.29	132	15.10	1.557E+00	1.513E+00	1.513E+00	29.55
	1764.49	94	15.80	1.100E+00	1.464E+00	1.464E+00	24.45
U-234	338.32	282	11.40	4.087E+00	1.634E+00	1.634E+00	20.77
	911.07	311	27.70*	1.860E+00	1.629E+00	1.629E+00	21.89
	969.11	190	16.60	1.764E+00	1.750E+00	1.750E+00	32.16
	63.29	402	3.80*	4.627E+00	6.172E+00	6.172E+00	32.73
	92.38	796	5.41	7.172E+00	5.535E+00	5.535E+00	23.00
U-235	609.31	506	46.30*	2.602E+00	1.134E+00	1.134E+00	16.89
	1120.29	132	15.10	1.557E+00	1.513E+00	1.513E+00	29.55
	1764.49	94	15.80	1.100E+00	1.464E+00	1.464E+00	24.45
	89.95	-----	2.70	7.060E+00	-----	Line Not Found	-----
	93.35	796	4.50	7.172E+00	6.654E+00	6.654E+00	31.42
U-235	105.00	-----	2.10	7.414E+00	-----	Line Not Found	-----
	143.76	79	10.50*	7.038E+00	2.886E-01	2.886E-01	79.71

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	163.35	-----	4.70	6.638E+00	-----	Line Not Found	-----
	185.71	348	54.00	6.177E+00	2.810E-01	2.810E-01	28.11
	205.31	-----	4.70	5.804E+00	-----	Line Not Found	-----
NP-237	86.50	134	12.60*	6.930E+00	4.128E-01	4.128E-01	70.64
	95.87	-----	2.60	7.260E+00	-----	Line Not Found	-----
U-238	63.29	402	3.80*	4.627E+00	6.172E+00	6.172E+00	32.73
	92.38	796	5.41	7.172E+00	5.535E+00	5.535E+00	16.62
AM-243	74.67	703	66.00*	6.051E+00	4.745E-01	4.745E-01	16.87
	86.72	134	0.34	6.930E+00	1.548E+01	1.548E+01	67.56
	117.66	-----	0.55	7.416E+00	-----	Line Not Found	-----
	142.18	-----	0.13	7.067E+00	-----	Line Not Found	-----
ANH-511	511.00	210	100.00*	2.992E+00	1.891E-01	1.891E-01	37.60

Flag: "*" = Keyline

Total number of lines in spectrum 37
Number of unidentified lines 3
Number of lines tentatively identified by NID 34 91.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.755E+01	3.755E+01	0.375E+01	9.99	
CD-109	464.00D	1.02	1.398E+00	1.427E+00	0.964E+00	67.56	
SN-126	1.00E+05Y	1.00	1.406E-01	1.406E-01	0.950E-01	67.56	
TL-208	1.41E+10Y	1.00	5.596E-01	5.596E-01	0.925E-01	16.54	
BI-211	7.04E+08Y	1.00	3.620E+00	3.620E+00	0.542E+00	14.98	
BI-212	1.41E+10Y	1.00	1.154E+00	1.154E+00	0.580E+00	50.23	
PB-212	1.41E+10Y	1.00	1.656E+00	1.656E+00	0.205E+00	12.41	
PO-212	1.41E+10Y	1.00	1.656E+00	1.656E+00	0.205E+00	12.41	
BI-214	1600.00Y	1.00	1.134E+00	1.134E+00	0.191E+00	16.89	
PB-214	1600.00Y	1.00	1.259E+00	1.259E+00	0.200E+00	15.86	
PO-214	1600.00Y	1.00	1.259E+00	1.259E+00	0.200E+00	15.86	
PO-216	1.41E+10Y	1.00	1.656E+00	1.656E+00	0.205E+00	12.41	
PO-218	1600.00Y	1.00	1.259E+00	1.259E+00	0.200E+00	15.86	
RA-224	1.41E+10Y	1.00	4.135E+00	4.135E+00	1.360E+00	32.89	
RA-226	1600.00Y	1.00	1.134E+00	1.134E+00	0.191E+00	16.89	
AC-228	1.41E+10Y	1.00	1.629E+00	1.629E+00	0.357E+00	21.89	
RA-228	1.41E+10Y	1.00	1.629E+00	1.629E+00	0.357E+00	21.89	
TH-228	1.91Y	1.01	1.656E+00	1.679E+00	0.208E+00	12.41	
TH-230	4.47E+09Y	1.00	1.134E+00	1.134E+00	0.191E+00	16.89	
TH-232	1.41E+10Y	1.00	1.629E+00	1.629E+00	0.357E+00	21.89	
TH-234	4.47E+09Y	1.00	6.172E+00	6.172E+00	2.020E+00	32.73	
U-234	4.47E+09Y	1.00	1.134E+00	1.134E+00	0.191E+00	16.89	
U-235	7.04E+08Y	1.00	2.886E-01	2.886E-01	2.301E-01	79.71	
NP-237	2.14E+06Y	1.00	4.128E-01	4.128E-01	2.916E-01	70.64	
U-238	4.47E+09Y	1.00	6.172E+00	6.172E+00	2.020E+00	32.73	
AM-243	7380.00Y	1.00	4.745E-01	4.745E-01	0.801E-01	16.87	
ANH-511	1.00E+09Y	1.00	1.891E-01	1.891E-01	0.711E-01	37.60	
Total Activity :			8.209E+01	8.215E+01			

Grand Total Activity : 8.209E+01 8.215E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395004

Page : 5
Acquisition date : 2-FEB-2010 08:23:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	84.20	79	486	1.37	168.32	166	6	1.10E-02	92.3	6.77E+00	T
0	129.08	57	296	0.68	257.94	255	6	7.90E-03	99.2	7.29E+00	T
0	209.43	170	363	1.07	418.43	413	11	2.37E-02	46.0	5.73E+00	T
0	269.96	147	237	1.12	539.34	533	12	2.05E-02	44.9	4.81E+00	T
0	327.66	104	225	1.49	654.60	648	14	1.44E-02	64.1	4.18E+00	T
0	463.18	118	85	1.36	925.39	920	12	1.64E-02	36.0	3.23E+00	T
0	769.17	59	131	1.46	1537.04	1529	17	8.23E-03	91.3	2.15E+00	
0	795.41	65	48	1.26	1589.51	1585	10	9.05E-03	46.7	2.09E+00	T
1	965.11	86	83	1.84	1928.90	1921	23	1.20E-02	42.2	1.77E+00	T
0	1239.02	33	51	1.69	2476.93	2473	8	4.58E-03	84.1	1.43E+00	T
0	1377.57	42	23	0.79	2754.25	2746	13	5.84E-03	56.1	1.31E+00	T
0	1589.96	55	4	5.35	3179.50	3172	18	7.69E-03	32.2	1.18E+00	
0	1729.92	42	0	1.86	3459.81	3453	14	5.83E-03	30.9	1.11E+00	

Flags: "T" = Tentatively associated


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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
*                               DETECTOR DATA                               *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395004.CNF;1
* Acquisition date   : 2-FEB-2010 08:23:35.  Detector SN#      :
* Detector ID        : GAM20                      Sensitivity    : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00             Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:33.47             Half life ratio : 8.00000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 19-JAN-2010 12:00:00  Nuclide Library : SOLID
* Sample ID          : G245395004             Analyst initials: MXR1
* Batch Number       : 944966                 Sample Quantity : 1.39170E+02 GRAM
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11.7MS Isotope      :
* MSD ID             :                               MSD Isotope :
* LCS ID             : 1032-A                       LCS Isotope  :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.755E+01	3.750E+00	4.356E-01	3.798E-02	86.216
CD-109	1.427E+00	9.644E-01	1.413E+00	1.337E-01	1.010
SN-126	1.406E-01	9.497E-02	1.340E-01	1.261E-02	1.049
TL-208	5.596E-01	9.255E-02	4.922E-02	5.061E-03	11.368
BI-211	3.620E+00	5.422E-01	2.937E-01	2.814E-02	12.326
BI-212	1.154E+00	5.799E-01	4.621E-01	5.244E-02	2.498
PB-212	1.656E+00	2.055E-01	7.791E-02	8.285E-03	21.260
PO-212	1.656E+00	2.055E-01	7.791E-02	8.285E-03	21.260
BI-214	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
PB-214	1.259E+00	1.997E-01	9.948E-02	1.084E-02	12.659
PO-214	1.259E+00	1.997E-01	9.948E-02	1.084E-02	12.659
PO-216	1.656E+00	2.055E-01	7.791E-02	8.285E-03	21.260
PO-218	1.259E+00	1.997E-01	9.948E-02	1.084E-02	12.659
RA-224	4.135E+00	1.360E+00	8.864E-01	8.568E-02	4.665
RA-226	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
AC-228	1.629E+00	3.566E-01	1.903E-01	2.331E-02	8.560
RA-228	1.629E+00	3.566E-01	1.903E-01	2.331E-02	8.560
TH-228	1.679E+00	2.083E-01	7.899E-02	8.400E-03	21.260

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
TH-232	1.629E+00	3.566E-01	1.903E-01	2.331E-02	8.560
TH-234	6.172E+00	2.020E+00	1.572E+00	2.732E-01	3.926
U-234	1.134E+00	1.915E-01	1.025E-01	1.140E-02	11.064
U-235	2.886E-01	2.301E-01	3.195E-01	5.568E-02	0.903
NP-237	4.128E-01	2.916E-01	3.300E-01	7.465E-02	1.251
U-238	6.172E+00	2.020E+00	1.572E+00	2.732E-01	3.926
AM-243	4.745E-01	8.007E-02	7.445E-02	5.992E-03	6.373
ANH-511	1.891E-01	7.108E-02	4.020E-02	3.746E-03	4.703

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.780E-01		2.728E-01	4.191E-01	4.074E-02	-0.425
NA-22	-2.761E-03		4.156E-02	6.652E-02	5.510E-03	-0.042
NA-24	-8.260E-02		8.466E-02	Half-Life too short		
AL-26	1.230E-02		2.389E-02	4.327E-02	3.515E-03	0.284
TI-44	3.806E-01	+	5.241E-02	7.079E-02	5.941E-03	5.376
SC-46	-2.521E-02		3.499E-02	5.381E-02	5.364E-03	-0.469
V-48	4.232E-02		5.725E-02	1.004E-01	9.598E-03	0.421
CR-51	5.961E-02		3.090E-01	5.177E-01	5.190E-02	0.115
MN-52	6.199E-02		1.623E-01	2.852E-01	2.414E-02	0.217
MN-54	-1.697E-02		3.324E-02	5.275E-02	5.328E-03	-0.322
CO-56	3.402E-02		3.484E-02	6.212E-02	6.261E-03	0.548
CO-57	-9.342E-03		2.308E-02	3.642E-02	3.040E-03	-0.257
CO-58	-3.563E-02		3.467E-02	5.211E-02	5.291E-03	-0.684
FE-59	-3.022E-02		8.990E-02	1.420E-01	1.340E-02	-0.213
CO-60	5.922E-03		3.965E-02	6.472E-02	5.422E-03	0.091
ZN-65	2.244E-02		9.167E-02	1.330E-01	1.145E-02	0.169
GE-68	4.199E-01		1.265E+00	2.120E+00	1.892E-01	0.198
AS-73	6.203E-02		5.485E-01	9.006E-01	6.685E-02	0.069
AS-74	-2.656E-02		7.211E-02	1.115E-01	1.091E-02	-0.238
SE-75	2.113E-02		4.248E-02	6.464E-02	6.400E-03	0.327
BR-77	4.546E+00		6.831E+00	1.154E+01	1.082E+00	0.394
SR-82	-1.544E-01		3.656E-01	5.017E-01	5.098E-02	-0.308
RB-83	4.951E-02		6.678E-02	1.099E-01	1.031E-02	0.450
RB-84	-1.458E-02		6.222E-02	1.007E-01	1.006E-02	-0.145
KR-85	1.680E+01		7.063E+00	1.277E+01	1.192E+00	1.315
SR-85	8.498E-02		3.574E-02	6.461E-02	6.033E-03	1.315
RB-86	4.095E-01		7.752E-01	1.319E+00	1.177E-01	0.311
Y-88	2.527E-02		2.784E-02	5.325E-02	4.296E-03	0.475
ZR-88	1.905E-02		2.841E-02	4.838E-02	4.046E-03	0.394
Y-91	7.921E+00		1.860E+01	3.112E+01	2.527E+00	0.255
NB-94	2.347E-02		3.100E-02	5.449E-02	5.513E-03	0.431
NB-95	2.965E-02		3.853E-02	6.060E-02	6.158E-03	0.489
NB-95M	1.139E-01		1.186E-01	1.845E-01	1.982E-02	0.618
ZR-95	-2.234E-03		6.342E-02	1.056E-01	1.152E-02	-0.021

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-1.681E-02		1.261E-02	Half-Life too short		
ZR-97	8.706E-01		2.457E-01	Half-Life too short		
MO-99	1.964E+00		7.399E+00	1.261E+01	2.032E+00	0.156
TC-99M	-3.778E+08		5.962E+08	Half-Life too short		
RH-101	1.182E-02		2.777E-02	4.680E-02	4.290E-03	0.252
RH-102	-2.251E-02		2.482E-02	3.722E-02	3.375E-03	-0.605
RU-103	5.049E-03		3.633E-02	5.940E-02	8.635E-03	0.085
RH-106	6.793E-02		2.837E-01	4.622E-01	6.571E-02	0.147
RU-106	6.793E-02		2.837E-01	4.622E-01	4.575E-02	0.147
AG-108M	-1.591E-02		2.801E-02	4.373E-02	3.969E-03	-0.364
AG-110M	-2.200E-02		3.131E-02	4.988E-02	5.110E-03	-0.441
IN-111	-1.980E-01		7.050E-01	1.021E+00	9.916E-02	-0.194
IN-113M	2.172E-02		4.033E-02	6.825E-02	5.887E-03	0.318
SN-113	2.172E-02		4.033E-02	6.825E-02	5.887E-03	0.318
IN-114M	2.883E-02		1.684E-01	2.547E-01	2.308E-02	0.113
CD-115	2.834E+00		6.816E+00	1.133E+01	1.068E+00	0.250
SN-117M	1.097E-02		4.750E-02	7.629E-02	6.584E-03	0.144
SB-122	5.958E-01		1.374E+00	2.279E+00	2.195E-01	0.261
I-123	1.451E-01		5.373E-01	Half-Life too short		
TE-123M	3.543E-03		2.624E-02	4.197E-02	3.646E-03	0.084
I-124	-3.758E-02		5.508E-01	7.624E-01	7.485E-02	-0.049
SB-124	-3.109E-02		5.333E-02	7.646E-02	6.645E-03	-0.407
SB-125	2.819E-02		8.130E-02	1.358E-01	1.202E-02	0.208
TE-125M	-1.112E+00		8.702E+00	1.397E+01	1.428E+00	-0.080
I-126	3.137E-02		1.518E-01	2.589E-01	2.601E-02	0.121
SB-126	8.570E-03		1.368E-01	2.006E-01	2.034E-02	0.043
SB-127	4.376E-01		9.558E-01	1.657E+00	2.022E-01	0.264
XE-127	-1.664E-02		4.019E-02	6.452E-02	5.955E-03	-0.258
I-131	-2.246E-02		8.365E-02	1.352E-01	1.267E-02	-0.166
TE-132	-1.245E-01		4.462E-01	7.409E-01	1.187E-01	-0.168
BA-133	2.212E-02		4.347E-02	6.536E-02	8.830E-03	0.339
I-133	-2.970E-04		1.032E-03	Half-Life too short		
CS-134	1.109E-01	+	5.302E-02	8.425E-02	8.597E-03	1.316
CS-135	1.494E-01		1.566E-01	2.434E-01	2.697E-02	0.614
I-135	-3.682E+07		1.204E+08	Half-Life too short		
CS-136	2.159E-03		9.466E-02	1.550E-01	1.471E-02	0.014
BA-137M	-1.662E-02		3.239E-02	5.245E-02	5.264E-03	-0.317
CS-137	-1.757E-02		3.424E-02	5.545E-02	5.572E-03	-0.317
CE-139	-1.503E-02		2.836E-02	4.389E-02	3.832E-03	-0.342
BA-140	-5.482E-02		2.223E-01	3.501E-01	1.168E-01	-0.157
LA-140	3.014E-02		5.795E-02	9.440E-02	7.969E-03	0.319
CE-141	8.831E-02		6.291E-02	9.557E-02	8.251E-03	0.924
CE-143	2.172E-04		4.554E-05	Half-Life too short		
CE-144	-4.063E-02		1.845E-01	2.925E-01	4.513E-02	-0.139
PM-144	-6.036E-02		3.666E-02	4.598E-02	4.649E-03	-1.313
PR-144	-4.087E+00		2.483E+00	3.114E+00	3.147E-01	-1.313
PM-146	1.776E-02		3.856E-02	6.470E-02	7.086E-03	0.275
ND-147	-9.891E-02		4.937E-01	7.836E-01	1.210E-01	-0.126

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	-4.870E+01		5.495E+01	8.637E+01	1.407E+01	-0.564
EU-152	-7.869E-02		8.412E-02	1.304E-01	1.272E-02	-0.603
GD-153	4.672E-02		7.830E-02	1.162E-01	1.030E-02	0.402
EU-154	7.564E-04		1.158E-01	1.867E-01	2.063E-02	0.004
EU-155	6.428E-02		1.045E-01	1.715E-01	1.491E-02	0.375
TB-160	4.720E-02		1.228E-01	2.098E-01	2.098E-02	0.225
HO-166M	2.300E-02		5.388E-02	9.302E-02	9.422E-03	0.247
TM-171	-7.596E+00		2.382E+01	3.451E+01	2.571E+00	-0.220
LU-176	-1.202E-02		2.238E-02	3.308E-02	3.227E-03	-0.363
LU-177	3.064E+00	+	1.439E+00	1.639E+00	1.524E-01	1.870
LU-177M	-3.570E-02		1.604E-01	2.586E-01	2.214E-02	-0.138
HF-181	2.815E-02		3.657E-02	6.252E-02	5.700E-03	0.450
W-181	2.588E-01		3.161E-01	4.793E-01	3.527E-02	0.540
TA-182	-2.751E-02		1.968E-01	3.145E-01	2.566E-02	-0.087
RE-183	5.476E-02		1.021E-01	1.658E-01	1.439E-02	0.330
RE-184	5.560E-02		1.932E-01	3.283E-01	3.208E-02	0.169
OS-185	-3.168E-02		3.488E-02	5.420E-02	5.413E-03	-0.585
RE-188	5.055E-02		1.568E-01	2.530E-01	2.172E-02	0.200
W-188	5.424E+00		6.854E+00	1.059E+01	1.047E+00	0.512
IR-192	8.731E-03		3.044E-02	5.125E-02	4.956E-03	0.170
AU-195	1.856E-01		2.022E-01	3.360E-01	2.959E-02	0.552
TL-200	8.416E-05		8.654E-05	Half-Life too short		
TL-201	8.905E-01		4.880E+00	7.804E+00	6.828E-01	0.114
TL-202	3.491E-02		5.619E-02	9.541E-02	8.382E-03	0.366
HG-203	1.354E-02		3.742E-02	6.341E-02	6.449E-03	0.214
BI-207	4.633E-02		4.846E-02	8.565E-02	7.734E-03	0.541
TL-207	-2.912E-03		6.151E-01	8.948E-01	1.627E-01	-0.003
PO-209	2.232E+00		7.147E+00	1.210E+01	1.204E+00	0.184
BI-210	-4.235E-01		1.925E+00	3.140E+00	2.912E-01	-0.135
PB-210	-4.235E-01		1.925E+00	3.140E+00	2.912E-01	-0.135
PO-210	-4.235E-01		1.925E+00	3.140E+00	2.634E-01	-0.135
PB-211	3.106E-01		8.413E-01	1.373E+00	8.599E-01	0.226
PO-215	-2.912E-03		6.151E-01	8.948E-01	1.627E-01	-0.003
RN-219	1.582E-01		3.707E-01	6.222E-01	9.288E-02	0.254
RN-220	4.575E+00		2.300E+01	3.761E+01	3.593E+00	0.122
RA-223	-2.912E-03		6.151E-01	8.948E-01	1.627E-01	-0.003
AC-227	-8.085E-02		3.168E-01	5.232E-01	8.392E-02	-0.155
TH-227	-8.085E-02		3.168E-01	5.232E-01	9.760E-02	-0.155
TH-229	-1.129E-01		4.261E-01	7.142E-01	6.504E-02	-0.158
PA-231	7.803E-01		1.318E+00	2.254E+00	3.598E-01	0.346
TH-231	-2.912E-03		6.151E-01	8.948E-01	1.627E-01	-0.003
U-231	-4.839E-01		8.709E-01	1.223E+00	1.094E-01	-0.396
PA-233	-1.063E-02		5.597E-02	9.188E-02	9.116E-03	-0.116
PA-234	5.914E-02		3.058E-01	5.107E-01	9.860E-02	0.116
PA-234M	6.013E+00		4.582E+00	8.274E+00	8.850E-01	0.727
NP-236	-2.379E-02		7.523E-02	1.178E-01	1.020E-02	-0.202
NP-239	-3.453E-02		1.761E-01	2.811E-01	2.355E-02	-0.123
AM-241	1.222E-01		1.210E-01	1.855E-01	1.452E-02	0.659

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.273E-02		8.925E-02	1.471E-01	1.270E-02	0.426
AM-246	7.711E-02		1.475E-01	2.507E-01	2.234E-02	0.308
CM-247	-2.529E-03		3.332E-02	5.432E-02	4.594E-03	-0.047
CF-249	9.312E-03		3.536E-02	5.898E-02	4.977E-03	0.158
CF-251	4.044E-02		1.190E-01	1.913E-01	1.697E-02	0.211

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     *
*               GEL Laboratories LLC                                     *
*               2040 Savage Road                                         *
*               Charleston, SC 29414                                     *
*                                     *
*****
*
*               DETECTOR DATA
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395004
* Acquisition date   : 2-FEB-2010 08:23:35 Detector SN#
* Detector ID        : GAM20 Sensitivity : 5.000
* Geometry           : CAN Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000
* Elapsed real time  : 0 02:00:33.47 Half life ratio : 8.000
*****
*
*               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395004 Analyst initials: MXR1
* Batch Number       : 944966 Sample Quantity : 1.3917E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*
*               QC DATA
*
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11 MS Isotope :
* MSD DPM             : 0.000 MSD Isotope :
* LCS DPM             : 0.000 LCS Isotope :
* LCSD DPM            : 0.000 LCSD Isotope :
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.755E+01	3.675E+00	2.187E-01	1.875E+00
CD-109	1.427E+00	9.451E-01	7.502E-01	4.822E-01
SN-126	1.406E-01	9.307E-02	7.115E-02	4.748E-02
TL-208	5.596E-01	9.070E-02	2.518E-02	4.627E-02
BI-211	3.620E+00	5.314E-01	1.518E-01	2.711E-01
BI-212	1.154E+00	5.683E-01	2.353E-01	2.899E-01
PB-212	1.656E+00	2.014E-01	4.057E-02	1.027E-01
PO-212	1.656E+00	2.014E-01	4.057E-02	1.027E-01
BI-214	1.134E+00	1.877E-01	5.237E-02	9.575E-02
PB-214	1.259E+00	1.957E-01	5.141E-02	9.987E-02
PO-214	1.259E+00	1.957E-01	5.141E-02	9.987E-02
PO-216	1.656E+00	2.014E-01	4.057E-02	1.027E-01
PO-218	1.259E+00	1.957E-01	5.141E-02	9.987E-02
RA-224	4.135E+00	1.333E+00	4.615E-01	6.801E-01
RA-226	1.134E+00	1.877E-01	5.237E-02	9.575E-02
AC-228	1.629E+00	3.495E-01	9.648E-02	1.783E-01
RA-228	1.629E+00	3.495E-01	9.648E-02	1.783E-01
TH-228	1.679E+00	2.042E-01	4.113E-02	1.042E-01
TH-230	1.134E+00	1.877E-01	5.237E-02	9.574E-02
TH-232	1.629E+00	3.495E-01	9.648E-02	1.783E-01
TH-234	6.172E+00	1.980E+00	8.396E-01	1.010E+00
U-234	1.134E+00	1.877E-01	5.237E-02	9.574E-02
U-235	2.886E-01	2.255E-01	1.680E-01	1.150E-01
NP-237	4.128E-01	2.858E-01	1.752E-01	1.458E-01
U-238	6.172E+00	1.980E+00	8.396E-01	1.010E+00
AM-243	4.745E-01	7.847E-02	3.964E-02	4.003E-02
ANH-511	1.891E-01	6.966E-02	2.062E-02	3.554E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-1.780E-01	2.673E-01	2.153E-01	1.364E-01	NOT IDENT.
NA-22	-2.761E-03	4.073E-02	3.349E-02	2.078E-02	NOT IDENT.
NA-24	-8.260E+04	1.659E+05	0.000E+00	8.466E+04	SHORT HLIF
AL-26	1.230E-02	2.342E-02	2.163E-02	1.195E-02	NOT IDENT.
TI-44	3.806E-01	5.136E-02	3.766E-02	2.621E-02	FAIL ABUN
SC-46	-2.521E-02	3.429E-02	2.729E-02	1.750E-02	FAIL ABUN
V-48	4.232E-02	5.610E-02	5.083E-02	2.862E-02	NOT IDENT.
CR-51	5.961E-02	3.029E-01	2.681E-01	1.545E-01	NOT IDENT.
MN-52	6.199E-02	1.591E-01	1.432E-01	8.117E-02	NOT IDENT.
MN-54	-1.697E-02	3.257E-02	2.679E-02	1.662E-02	NOT IDENT.
CO-56	3.402E-02	3.414E-02	3.154E-02	1.742E-02	FAIL ABUN
CO-57	-9.342E-03	2.261E-02	1.921E-02	1.154E-02	NOT IDENT.
CO-58	-3.563E-02	3.398E-02	2.648E-02	1.734E-02	NOT IDENT.
FE-59	-3.022E-02	8.810E-02	7.173E-02	4.495E-02	FAIL ABUN
CO-60	5.922E-03	3.885E-02	3.256E-02	1.982E-02	NOT IDENT.
ZN-65	2.244E-02	8.984E-02	6.714E-02	4.584E-02	NOT IDENT.
GE-68	4.199E-01	1.240E+00	1.071E+00	6.325E-01	NOT IDENT.
AS-73	6.203E-02	5.375E-01	4.824E-01	2.742E-01	NOT IDENT.
AS-74	-2.656E-02	7.067E-02	5.702E-02	3.605E-02	NOT IDENT.
SE-75	2.113E-02	4.164E-02	3.359E-02	2.124E-02	NOT IDENT.
BR-77	4.546E+00	6.695E+00	5.916E+00	3.416E+00	FAIL ABUN
SR-82	-1.544E-01	3.583E-01	2.552E-01	1.828E-01	NOT IDENT.
RB-83	4.951E-02	6.544E-02	5.636E-02	3.339E-02	NOT IDENT.
RB-84	-1.458E-02	6.098E-02	5.109E-02	3.111E-02	NOT IDENT.
KR-85	1.680E+01	6.922E+00	6.550E+00	3.532E+00	NOT IDENT.
SR-85	8.498E-02	3.502E-02	3.314E-02	1.787E-02	NOT IDENT.
RB-86	4.095E-01	7.597E-01	6.663E-01	3.876E-01	NOT IDENT.
Y-88	2.527E-02	2.728E-02	2.660E-02	1.392E-02	NOT IDENT.
ZR-88	1.905E-02	2.785E-02	2.495E-02	1.421E-02	NOT IDENT.
Y-91	7.921E+00	1.822E+01	1.569E+01	9.298E+00	NOT IDENT.
NB-94	2.347E-02	3.038E-02	2.777E-02	1.550E-02	NOT IDENT.
NB-95	2.965E-02	3.776E-02	3.083E-02	1.926E-02	NOT IDENT.
NB-95M	1.139E-01	1.162E-01	9.608E-02	5.930E-02	NOT IDENT.
ZR-95	-2.234E-03	6.215E-02	5.373E-02	3.171E-02	NOT IDENT.
NB-97	-1.681E+04	2.473E+04	0.000E+00	1.261E+04	SHORT HLIF
ZR-97	8.706E+05	4.815E+05	0.000E+00	2.457E+05	SHORT HLIF
MO-99	1.964E+00	7.251E+00	6.423E+00	3.699E+00	NOT IDENT.
TC-99M	-3.778E+14	1.169E+15	0.000E+00	5.962E+14	SHORT HLIF
RH-101	1.182E-02	2.722E-02	2.446E-02	1.389E-02	NOT IDENT.
RH-102	-2.251E-02	2.432E-02	1.912E-02	1.241E-02	NOT IDENT.
RU-103	5.049E-03	3.560E-02	3.049E-02	1.816E-02	FAIL ABUN
RH-106	6.793E-02	2.781E-01	2.362E-01	1.419E-01	FAIL ABUN
RU-106	6.793E-02	2.780E-01	2.362E-01	1.418E-01	FAIL ABUN
AG-108M	-1.591E-02	2.745E-02	2.251E-02	1.401E-02	NOT IDENT.
AG-110M	-2.200E-02	3.068E-02	2.546E-02	1.566E-02	NOT IDENT.
IN-111	-1.980E-01	6.909E-01	5.316E-01	3.525E-01	NOT IDENT.
IN-113M	2.172E-02	3.952E-02	3.519E-02	2.016E-02	NOT IDENT.
SN-113	2.172E-02	3.952E-02	3.519E-02	2.016E-02	NOT IDENT.
IN-114M	2.883E-02	1.650E-01	1.332E-01	8.418E-02	NOT IDENT.
CD-115	2.834E+00	6.680E+00	5.807E+00	3.408E+00	NOT IDENT.
SN-117M	1.097E-02	4.655E-02	4.004E-02	2.375E-02	NOT IDENT.
SB-122	5.958E-01	1.347E+00	1.167E+00	6.871E-01	NOT IDENT.
I-123	1.451E+05	1.053E+06	0.000E+00	5.373E+05	SHORT HLIF
TE-123M	3.543E-03	2.572E-02	2.203E-02	1.312E-02	NOT IDENT.
I-124	-3.758E-02	5.398E-01	3.898E-01	2.754E-01	FAIL ABUN
SB-124	-3.109E-02	5.226E-02	3.827E-02	2.666E-02	FAIL ABUN
SB-125	2.819E-02	7.967E-02	6.990E-02	4.065E-02	FAIL ABUN
TE-125M	-1.112E+00	8.528E+00	7.385E+00	4.351E+00	NOT IDENT.
I-126	3.137E-02	1.487E-01	1.321E-01	7.589E-02	NOT IDENT.
SB-126	8.570E-03	1.341E-01	1.022E-01	6.840E-02	FAIL ABUN
SB-127	4.376E-01	9.367E-01	8.447E-01	4.779E-01	NOT IDENT.
XE-127	-1.664E-02	3.938E-02	3.371E-02	2.009E-02	NOT IDENT.
I-131	-2.246E-02	8.198E-02	6.981E-02	4.183E-02	NOT IDENT.
TE-132	-1.245E-01	4.372E-01	3.862E-01	2.231E-01	NOT IDENT.
BA-133	2.212E-02	4.260E-02	3.377E-02	2.173E-02	NOT IDENT.
I-133	-2.970E+02	2.024E+03	0.000E+00	1.032E+03	SHORT HLIF
CS-134	1.109E-01	5.196E-02	4.283E-02	2.651E-02	FAIL ABUN
CS-135	1.494E-01	1.535E-01	1.265E-01	7.829E-02	NOT IDENT.
I-135	-3.682E+13	2.361E+14	0.000E+00	1.204E+14	SHORT HLIF
CS-136	2.159E-03	9.277E-02	7.837E-02	4.733E-02	FAIL ABUN
BA-137M	-1.662E-02	3.174E-02	2.677E-02	1.619E-02	NOT IDENT.
CS-137	-1.757E-02	3.355E-02	2.829E-02	1.712E-02	NOT IDENT.
CE-139	-1.503E-02	2.780E-02	2.302E-02	1.418E-02	NOT IDENT.
BA-140	-5.482E-02	2.179E-01	1.794E-01	1.112E-01	NOT IDENT.
LA-140	3.014E-02	5.679E-02	4.730E-02	2.898E-02	FAIL ABUN
CE-141	8.831E-02	6.165E-02	5.024E-02	3.145E-02	NOT IDENT.
CE-143	2.172E+02	8.925E+01	0.000E+00	4.554E+01	SHORT HLIF
CE-144	-4.063E-02	1.808E-01	1.540E-01	9.226E-02	NOT IDENT.

PM-144	-6.036E-02	3.593E-02	2.344E-02	1.833E-02	NOT IDENT.
PR-144	-4.087E+00	2.433E+00	1.587E+00	1.241E+00	NOT IDENT.
PM-146	1.776E-02	3.779E-02	3.327E-02	1.928E-02	NOT IDENT.
ND-147	-9.891E-02	4.838E-01	4.017E-01	2.468E-01	NOT IDENT.
PM-149	-4.870E+01	5.385E+01	4.482E+01	2.748E+01	NOT IDENT.
EU-152	-7.869E-02	8.244E-02	6.742E-02	4.206E-02	FAIL ABUN
GD-153	4.672E-02	7.674E-02	6.154E-02	3.915E-02	FAIL ABUN
EU-154	7.564E-04	1.135E-01	9.402E-02	5.790E-02	NOT IDENT.
EU-155	6.428E-02	1.024E-01	9.073E-02	5.224E-02	FAIL ABUN
TB-160	4.720E-02	1.204E-01	1.065E-01	6.141E-02	FAIL ABUN
HO-166M	2.300E-02	5.280E-02	4.740E-02	2.694E-02	FAIL ABUN
TM-171	-7.596E+00	2.335E+01	1.841E+01	1.191E+01	NOT IDENT.
LU-176	-1.202E-02	2.193E-02	1.714E-02	1.119E-02	FAIL ABUN
LU-177	3.064E+00	1.410E+00	8.556E-01	7.193E-01	FAIL ABUN
LU-177M	-3.570E-02	1.572E-01	1.332E-01	8.022E-02	FAIL ABUN
HF-181	2.815E-02	3.584E-02	3.211E-02	1.829E-02	NOT IDENT.
W-181	2.588E-01	3.098E-01	2.558E-01	1.580E-01	NOT IDENT.
TA-182	-2.751E-02	1.929E-01	1.585E-01	9.841E-02	FAIL ABUN
RE-183	5.476E-02	1.001E-01	8.700E-02	5.105E-02	FAIL ABUN
RE-184	5.560E-02	1.894E-01	1.708E-01	9.662E-02	NOT IDENT.
OS-185	-3.168E-02	3.419E-02	2.767E-02	1.744E-02	NOT IDENT.
RE-188	5.055E-02	1.537E-01	1.329E-01	7.842E-02	NOT IDENT.
W-188	5.424E+00	6.717E+00	5.495E+00	3.427E+00	FAIL ABUN
IR-192	8.731E-03	2.983E-02	2.654E-02	1.522E-02	FAIL ABUN
AU-195	1.856E-01	1.982E-01	1.779E-01	1.011E-01	FAIL ABUN
TL-200	8.416E+01	1.696E+02	0.000E+00	8.654E+01	SHORT HLIF
TL-201	8.905E-01	4.782E+00	4.092E+00	2.440E+00	NOT IDENT.
TL-202	3.491E-02	5.506E-02	4.909E-02	2.809E-02	NOT IDENT.
HG-203	1.354E-02	3.667E-02	3.292E-02	1.871E-02	NOT IDENT.
BI-207	4.633E-02	4.749E-02	4.329E-02	2.423E-02	FAIL ABUN
TL-207	-2.912E-03	6.028E-01	4.632E-01	3.076E-01	FAIL ABUN
PO-209	2.232E+00	7.004E+00	6.137E+00	3.574E+00	NOT IDENT.
BI-210	-4.235E-01	1.886E+00	1.686E+00	9.624E-01	NOT IDENT.
PB-210	-4.235E-01	1.886E+00	1.686E+00	9.624E-01	NOT IDENT.
PO-210	-4.235E-01	1.886E+00	1.686E+00	9.624E-01	NOT IDENT.
PB-211	3.106E-01	8.245E-01	7.074E-01	4.206E-01	NOT IDENT.
PO-215	-2.912E-03	6.028E-01	4.632E-01	3.076E-01	FAIL ABUN
RN-219	1.582E-01	3.633E-01	3.207E-01	1.853E-01	FAIL ABUN
RN-220	4.575E+00	2.254E+01	1.926E+01	1.150E+01	NOT IDENT.
RA-223	-2.912E-03	6.028E-01	4.632E-01	3.076E-01	FAIL ABUN
AC-227	-8.085E-02	3.104E-01	2.721E-01	1.584E-01	FAIL ABUN
TH-227	-8.085E-02	3.105E-01	2.721E-01	1.584E-01	FAIL ABUN
TH-229	-1.129E-01	4.176E-01	3.734E-01	2.131E-01	FAIL ABUN
PA-231	7.803E-01	1.291E+00	1.170E+00	6.589E-01	FAIL ABUN
TH-231	-2.912E-03	6.028E-01	4.632E-01	3.076E-01	FAIL ABUN
U-231	-4.839E-01	8.535E-01	6.483E-01	4.355E-01	FAIL ABUN
PA-233	-1.063E-02	5.485E-02	4.760E-02	2.799E-02	FAIL ABUN
PA-234	5.914E-02	2.997E-01	2.587E-01	1.529E-01	FAIL ABUN
PA-234M	6.013E+00	4.490E+00	4.187E+00	2.291E+00	NOT IDENT.
NP-236	-2.379E-02	7.372E-02	6.183E-02	3.761E-02	NOT IDENT.
NP-239	-3.453E-02	1.726E-01	1.484E-01	8.804E-02	FAIL ABUN
AM-241	1.222E-01	1.186E-01	9.920E-02	6.050E-02	NOT IDENT.
CM-243	6.273E-02	8.746E-02	7.783E-02	4.462E-02	FAIL ABUN
AM-246	7.711E-02	1.445E-01	1.267E-01	7.374E-02	NOT IDENT.
CM-247	-2.529E-03	3.266E-02	2.800E-02	1.666E-02	NOT IDENT.
CF-249	9.312E-03	3.466E-02	3.042E-02	1.768E-02	NOT IDENT.
CF-251	4.044E-02	1.167E-01	1.002E-01	5.952E-02	NOT IDENT.


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*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD       *
*               CHARLESTON ,SC 29417   *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
46.50	336.4924
46.50	336.4924
46.50	336.4924
48.70	345.8940
49.72	358.3834
51.35	353.6948
52.39	381.0240
52.97	377.5260
53.15	377.6614
53.44	384.7870
54.07	362.5471
56.28	423.6423
56.28	423.6445
57.37	0.0000
57.53	451.1152
57.53	451.1164
57.60	451.1752
57.98	443.4380
57.98	443.4380
59.32	398.1568
59.32	398.1568
59.40	398.2156
59.54	398.3202
59.72	398.4541
60.01	406.1620
61.10	465.5499
61.14	465.5830
61.30	468.7248
63.00	487.2541
63.29	487.5076
63.29	487.5076
63.58	487.7610
64.28	483.3374
65.12	493.1331
65.20	493.2027
65.20	493.2027
66.05	507.5759
66.72	485.4150
66.83	503.7144
66.91	503.7853
67.20	504.0386
67.20	504.0386
67.75	583.5381
67.85	554.4558
68.90	520.1300
68.90	520.1300
69.30	498.2389
69.67	498.5533
70.82	522.4324
70.82	522.4324
70.83	522.4403
72.80	544.0786
72.87	599.3214
72.87	599.3214
74.67	557.5303
74.81	557.6575
74.81	557.6575
74.81	557.6575
74.81	557.6575
74.81	557.6575
74.81	557.6575
74.81	557.6575
74.97	557.8014
75.28	558.0809
75.70	558.4572
77.11	559.7189
77.11	559.7189

77.11	559.7189
77.11	559.7189
77.11	559.7189
77.11	559.7189
77.11	559.7189
78.38	539.7103
79.62	526.8143
79.80	512.4965
79.80	512.4965
80.11	512.7437
80.18	512.7992
80.30	530.4742
80.30	530.4742
80.57	530.6960
81.00	450.3040
81.07	450.3527
81.07	450.3527
81.07	450.3527
81.07	450.3527
82.60	515.2303
83.37	520.5041
83.78	519.2709
83.78	519.2709
83.78	519.2709
83.78	519.2709
84.21	518.0458
84.90	521.7068
85.43	522.1222
86.29	522.7898
86.50	522.9529
86.54	522.9835
86.59	523.0217
86.72	523.1211
86.79	523.1746
86.94	523.2918
87.30	744.5974
87.30	744.5974
87.30	744.5974
87.30	744.5974
87.30	744.5974
87.30	744.5974
87.57	755.8683
87.88	820.0163
88.03	820.1957
88.36	697.0833
88.47	697.1951
89.95	698.6957
91.11	589.5225
92.29	825.2481
92.38	825.3558
92.38	825.3558
93.35	598.7822
94.00	386.1888
94.67	372.2901
94.67	372.2937
94.90	381.9204
94.90	381.9204
94.90	381.9204
94.90	381.9204
95.87	437.9778
95.87	437.9778
96.73	395.6032
97.43	365.7676
98.44	346.1014
98.44	346.1014
98.88	350.5579
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99.55	359.3829
99.86	378.6809
100.00	385.1368
100.10	385.1902
103.18	422.0361
103.76	347.5110
105.00	385.5634
105.31	388.9333
108.00	437.6004
109.28	401.7024

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111.00	416.6108
111.76	373.7968
112.95	358.1254
115.19	400.3506
116.30	371.5646
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117.00	351.2227
117.66	344.9758
121.11	327.8366
121.62	328.0350
121.78	333.5658
122.06	333.6775
122.32	349.1010
122.32	349.1010
122.32	349.1010
122.32	349.1010
123.07	360.3658
127.23	333.5053
129.76	326.1971
131.20	323.4151
133.02	329.0674
133.54	320.3889
135.34	323.2574
136.00	327.9408
136.25	299.1197
136.48	299.1963
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140.51	0.0000
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143.76	354.2624
144.24	331.4515
144.24	331.4515
144.24	331.4515
144.24	331.4515
145.22	286.3225
145.44	286.3899
147.16	293.6622
152.43	302.0644
152.70	298.7523
153.22	293.2509
154.21	285.6149
154.21	285.6149
154.21	285.6149
154.21	285.6149
155.03	305.1370
156.02	349.7271
158.56	292.5655
159.00	0.0000
159.00	298.3880
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161.27	344.7237
162.32	294.8035
162.64	288.0399
163.35	280.2332
163.89	296.4046
165.85	325.6362
167.43	288.2399
171.28	282.3915
171.86	277.9330
172.10	277.9968
176.55	278.0054
176.60	278.0200
181.06	296.6180
184.41	281.4245
185.71	275.9735
186.00	276.0456
190.27	253.3491
192.34	246.7645
193.63	259.3966
197.04	250.4340
198.01	224.9611
198.60	223.3012
200.40	266.2491
201.83	259.4655
202.84	266.2971
205.31	263.7989

208.36	255.5392
208.81	255.6352
209.75	255.8359
209.75	255.8359
210.97	244.9922
215.65	219.8422
216.55	256.3722
218.09	284.6126
222.10	225.8968
223.80	224.3943
226.40	244.8049
227.00	260.3412
227.08	260.3565
227.20	257.6610
228.16	226.0761
228.18	232.4355
228.18	232.4355
231.56	0.0000
235.69	232.3356
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236.00	251.3904
238.63	211.4392
238.63	211.4392
238.63	211.4392
238.63	211.4392
239.00	211.4992
240.98	211.8181
241.98	211.9768
241.98	211.9768
241.98	211.9768
244.69	195.6750
245.39	184.0012
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248.90	185.4042
249.79	179.9888
252.40	162.7629
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252.85	173.9178
254.15	0.0000
256.20	181.7619
256.20	181.7619
260.50	203.7219
260.90	198.1989
262.80	177.8365
264.65	171.6718
268.24	182.5860
268.79	181.5316
269.46	181.6175
269.46	181.6175
269.46	181.6175
269.46	181.6175
271.23	191.9656
273.65	228.3451
276.40	177.3900
277.35	181.6737
277.60	186.4135
277.60	186.4135
278.00	188.3484
278.60	190.3089
279.20	208.2936
279.53	224.3670
280.46	231.1137
281.68	210.5359
283.67	156.9320
284.30	162.6751
285.00	188.2994
285.90	194.0956
286.10	182.7575
286.10	182.7575
287.40	167.7524
288.45	0.0000
290.67	147.4135
290.80	147.4277
291.72	191.6209
293.26	0.0000
293.70	182.7334
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295.21	167.6721

295.21	167.6721
295.96	167.7554
296.50	167.8145
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299.80	145.2438
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300.09	133.0382
300.09	133.0382
300.09	133.0382
300.12	133.0403
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302.84	130.2123
303.76	133.3547
303.91	133.3674
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304.40	119.6089
304.84	138.0498
306.84	153.5864
308.46	135.4879
311.98	156.9785
316.51	152.5996
318.01	159.5089
319.02	147.0343
319.41	160.6149
320.08	142.2919
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323.87	136.6105
323.87	136.6105
323.87	136.6105
325.23	132.0634
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334.20	135.3913
334.20	135.3913
334.30	135.3997
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338.28	157.5828
338.28	157.5828
338.28	157.5828
338.32	157.5877
338.32	157.5877
338.32	157.5877
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340.57	131.7278
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351.92	137.1505
351.92	137.1505
351.92	137.1505
355.39	0.0000
356.01	131.3430
364.48	112.3034
366.43	97.5035
367.43	115.4778
367.94	0.0000
369.80	131.5811
374.96	135.9606
383.85	116.5363
387.95	122.8396
388.63	122.8842
391.69	124.0979
391.69	124.0979
392.90	127.2074
398.62	117.4709
400.65	114.5553
401.10	125.7369
401.81	120.7123
402.60	129.8965
404.84	116.8425
410.95	120.2741
411.60	127.4529
413.65	132.6918
414.70	119.4887
415.30	123.6125

415.76	127.7294
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423.70	123.1201
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427.89	105.9044
432.53	89.6630
433.93	109.3206
439.47	95.1445
439.56	95.1487
439.89	107.5769
443.98	93.2849
444.90	98.5123
445.03	98.5181
445.03	98.5181
445.03	98.5181
445.03	98.5181
453.90	97.9042
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468.07	93.9586
473.00	77.7815
475.06	103.1082
475.35	104.1739
476.78	109.5082
477.59	102.1759
477.96	96.9260
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484.57	115.1905
487.03	88.8719
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497.08	97.7851
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511.00	91.9819
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511.85	92.0173
513.99	92.1046
513.99	92.1046
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555.20	68.6813
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593.00	68.6450
595.88	76.4837
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602.71	90.6968
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604.41	92.5361
604.70	80.0881
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609.31	96.9484
609.31	96.9484
609.31	96.9484
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614.37	89.3262
618.01	91.6870
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621.84	75.0274
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661.65	97.3031
664.57	0.0000
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666.33	85.6304
675.00	81.3320
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695.00	73.6348
696.49	99.4597
696.49	99.4597
697.00	95.7912
697.49	94.8877
698.33	93.0724
698.50	93.0773
699.00	93.0946
702.63	81.2152
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722.78	72.8045
722.89	72.8064
722.95	72.8083
723.30	71.2686
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727.18	95.8760
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739.58	68.2379
742.81	72.0559
744.21	80.5158
747.13	74.0355
751.79	85.4147
752.31	94.8182
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756.15	77.0792
756.87	69.5755
763.93	70.6824
765.79	59.7244
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766.84	53.4556
776.49	72.5526
778.00	65.2241
778.57	70.0760
778.89	69.1361
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810.76	78.4585
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818.51	56.5902
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836.80	0.0000
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867.82	66.7751
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880.27	56.6902
880.51	60.6044
881.50	65.5115
883.24	57.7195
884.67	52.8504
889.25	68.6021
896.60	65.8043
898.02	74.6733
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911.07	61.1508
911.07	61.1508
919.63	56.8528
920.93	61.3249
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925.24	54.4683
926.50	56.4684
935.52	57.6078
937.48	81.4895
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949.00	84.7468
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968.20	63.1492
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969.11	63.1646
969.11	63.1646
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983.50	43.2835
989.30	63.5153
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1001.03	49.5575
1001.68	47.5427
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1038.76	0.0000
1045.16	62.4207
1046.59	58.3471
1048.07	60.4203

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1050.47	60.4577
1062.04	63.7195
1063.62	48.3242
1076.63	66.0219
1077.35	67.0662
1078.86	67.0916
1085.78	70.3109
1099.22	74.7000
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1120.29	83.4375
1120.29	83.4375
1120.29	83.4375
1120.51	79.2693
1121.28	76.5023
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1147.95	0.0000
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1173.22	86.6285
1175.09	81.3801
1177.93	83.5518
1189.05	86.9528
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1236.41	0.0000
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1274.54	55.1512
1291.56	51.0184
1298.22	0.0000
1312.09	49.0671
1325.50	41.5569
1325.50	41.5569
1332.49	44.9038
1333.61	46.0113
1360.21	27.5439
1362.66	0.0000
1365.15	29.4102
1368.21	36.4192
1368.53	0.0000
1376.25	30.4004
1384.27	24.6072
1394.10	24.0417
1395.20	28.6715
1407.95	28.7472
1434.06	21.4436
1436.60	29.8490
1457.56	0.0000
1460.81	21.5597
1489.15	13.1973
1509.49	20.8219
1596.49	9.8977
1620.62	15.4661
1678.03	0.0000
1691.02	13.7066
1691.02	13.7066
1706.46	0.0000
1750.46	0.0000
1764.49	5.9504
1764.49	5.9504
1764.49	5.9504
1764.49	5.9504
1770.23	8.5090
1771.40	31.7734
1791.20	0.0000
1808.65	8.9934

1836.01

8.0309

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395004

Total Uranium Activity	1.8497E+01	ug/g
Total Uranium Counting Unc.	5.8901E+00	ug/g
Total Uranium Tpu	3.0052E-06	ug/g
Total Uranium Mda	2.4990E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 944966                          SAMPLE ID   : G245395004
*  ANALYST       : MXR1                             DETECTOR    : GAM20
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 08:23:35.30          SAMPLE ALQT  : 139.170 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.104E+01
GROSS GAMMA ERROR (pCi/GRAM ) : 1.472E+00
GROSS GAMMA MDA (pCi/GRAM ) : 3.972E+00
GROSS GAMMA DLC (pCi/GRAM ) : 1.933E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 10:26:33.08

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                          *
*                               Charleston, SC 29414                     *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395005.CNF;1
Sample date    : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:24:01.
Sample ID      : G245395005 Sample quantity : 1.41120E+02 GRAM
Detector name  : GAM21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:25.57 0.4%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 944966 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.32*	121	459	0.62	92.61	89	8	1.68E-02	32.2	
2	0	63.33*	360	828	0.88	126.63	122	10	5.00E-02	15.9	
3	1	74.96*	579	305	0.75	149.86	144	17	8.04E-02	6.3	9.57E+00
4	1	77.09*	1136	363	0.75	154.12	144	17	1.58E-01	4.0	
5	6	83.97	197	330	1.21	167.88	165	14	2.73E-02	15.8	5.10E+00
6	6	87.25	315	378	0.91	174.43	165	14	4.37E-02	10.6	
7	5	90.07	195	293	0.85	180.07	178	14	2.71E-02	14.7	2.74E+00
8	5	92.75*	685	376	1.16	185.44	178	14	9.52E-02	6.1	
9	0	128.71	103	234	0.75	257.33	254	6	1.43E-02	25.6	
10	0	185.85*	197	251	0.96	371.55	368	7	2.74E-02	15.4	
11	0	208.99	154	220	0.79	417.82	413	9	2.14E-02	19.2	
12	8	238.48*	1256	126	0.87	476.77	472	17	1.74E-01	3.1	1.40E+00
13	8	241.57	309	212	1.85	482.95	472	17	4.29E-02	14.7	
14	0	269.84	104	172	1.11	539.48	534	10	1.44E-02	25.7	
15	0	277.39	55	158	1.25	554.56	550	9	7.63E-03	43.6	
16	3	295.10*	332	104	1.19	589.97	584	27	4.61E-02	7.4	2.44E+00
17	3	299.96	77	96	1.38	599.69	584	27	1.07E-02	26.5	
18	0	328.16	38	97	0.90	656.09	653	6	5.24E-03	44.6	
19	0	338.15	176	156	0.83	676.05	672	8	2.45E-02	14.4	
20	0	351.80*	552	142	1.02	703.36	698	11	7.66E-02	6.1	
21	0	463.23	92	46	1.28	926.16	921	11	1.28E-02	18.0	
22	0	510.48*	91	86	1.07	1020.65	1015	12	1.27E-02	26.3	
23	0	582.95*	310	74	1.42	1165.60	1159	13	4.30E-02	8.2	
24	0	609.10*	357	84	1.09	1217.90	1212	12	4.96E-02	7.5	
25	0	727.17*	42	87	1.13	1454.04	1449	12	5.81E-03	48.2	
26	0	796.12	48	76	0.70	1591.97	1584	16	6.71E-03	42.8	
27	0	860.74	26	72	0.88	1721.23	1716	12	3.61E-03	68.2	
28	0	910.90	237	26	1.47	1821.57	1815	15	3.29E-02	8.0	
29	0	968.76	129	29	1.38	1937.33	1932	13	1.80E-02	12.3	
30	0	1120.00	87	38	1.53	2239.94	2233	13	1.21E-02	18.2	
31	0	1460.25*	1004	18	2.12	2920.87	2911	17	1.39E-01	3.3	
32	0	1728.74	16	7	1.08	3458.34	3449	14	2.22E-03	43.1	
33	0	1764.10	46	10	0.87	3529.13	3521	12	6.44E-03	19.7	

Flag: "*" = Peak area was modified by background subtraction

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395005.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:24:01
 Sample ID : G245395005 Sample quantity : 141.12 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA21 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:25.57 0.4%
 Peak Width (FWHM): 3.00 Confidence level : 5.00 %
 Energy tolerance : 1.50 keV Half life ratio : 8.00
 Errors propagated: Yes Systematic Error : 0.00 %
 Efficiency type : Empirical Efficiencies at : Peak Energy
 Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.474E+01	3.752E+00	7.433E-01	6.346E-02	46.735
CD-109	+	88.03	*	2.826E+00	6.548E-01	7.675E-01	7.222E-02	3.682
SN-126	+	64.28		1.220E+00	4.275E-01	2.773E-01	4.109E-02	4.399
	+	86.94		1.157E+00	5.393E-01	3.129E-01	1.299E-01	3.697
	+	87.57	*	2.783E-01	6.448E-02	7.545E-02	7.072E-03	3.688
TL-208	+	277.35		5.652E-01	4.975E-01	4.886E-01	6.131E-02	1.157
	+	510.84		5.502E-01	2.975E-01	2.082E-01	2.644E-02	2.643
	+	583.14	*	5.502E-01	1.085E-01	5.770E-02	6.285E-03	9.535
	+	860.37		4.623E-01	6.318E-01	5.622E-01	5.582E-02	0.822
BI-210	+	46.50	*	1.082E+00	7.039E-01	6.018E-01	5.739E-02	1.798
PB-210	+	46.50	*	1.082E+00	7.039E-01	6.018E-01	5.739E-02	1.798
PO-210	+	46.50	*	1.082E+00	7.026E-01	6.018E-01	5.223E-02	1.798
BI-211		72.87		1.734E+00	1.399E+00	2.384E+00	1.996E-01	0.727
	+	351.07	*	3.784E+00	5.728E-01	2.985E-01	2.694E-02	12.674
PB-212	+	74.81		1.739E+00	3.093E-01	2.593E-01	3.273E-02	6.705
	+	77.11		2.030E+00	2.387E-01	1.550E-01	1.337E-02	13.102
	+	87.30		1.287E+00	3.248E-01	3.486E-01	4.773E-02	3.692
	+	238.63	*	1.707E+00	2.007E-01	7.623E-02	7.580E-03	22.399
	+	300.09		1.706E+00	9.212E-01	9.977E-01	1.065E-01	1.710
PO-212	+	74.81		1.739E+00	3.093E-01	2.593E-01	3.273E-02	6.705
	+	77.11		2.030E+00	2.387E-01	1.550E-01	1.337E-02	13.102
	+	87.30		1.287E+00	3.248E-01	3.486E-01	4.773E-02	3.692
		115.19		1.812E+00	2.619E+00	4.292E+00	4.715E-01	0.422
	+	238.63	*	1.707E+00	2.007E-01	7.623E-02	7.580E-03	22.399
	+	300.09		1.706E+00	9.212E-01	9.977E-01	1.065E-01	1.710
BI-214	+	609.31	*	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
	+	1120.29		1.648E+00	6.268E-01	5.998E-01	6.440E-02	2.747
	+	1764.49		1.304E+00	5.240E-01	3.900E-01	3.243E-02	3.344
PB-214	+	74.81		2.996E+00	5.048E-01	4.468E-01	5.032E-02	6.705
	+	77.11		3.481E+00	4.877E-01	2.657E-01	3.058E-02	13.102
	+	87.30		2.205E+00	5.384E-01	5.972E-01	7.238E-02	3.692
	+	241.98		2.531E+00	7.887E-01	4.609E-01	4.844E-02	5.491
	+	295.21		1.284E+00	2.359E-01	1.738E-01	1.894E-02	7.388
	+	351.92	*	1.316E+00	2.108E-01	1.041E-01	1.085E-02	12.638

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		2.996E+00	5.048E-01	4.468E-01	5.032E-02	6.705
	+	77.11		3.481E+00	4.877E-01	2.657E-01	3.058E-02	13.102
	+	87.30		2.205E+00	5.384E-01	5.972E-01	7.238E-02	3.692
	+	241.98		2.531E+00	7.887E-01	4.609E-01	4.844E-02	5.491
	+	295.21		1.284E+00	2.359E-01	1.738E-01	1.894E-02	7.388
PO-216	+	351.92	*	1.316E+00	2.108E-01	1.041E-01	1.085E-02	12.638
	+	74.81		1.739E+00	3.093E-01	2.593E-01	3.273E-02	6.705
	+	77.11		2.030E+00	2.387E-01	1.550E-01	1.337E-02	13.102
	+	87.30		1.287E+00	3.248E-01	3.486E-01	4.773E-02	3.692
	+	238.63	*	1.707E+00	2.007E-01	7.623E-02	7.580E-03	22.399
PO-218	+	300.09		1.706E+00	9.212E-01	9.977E-01	1.065E-01	1.710
	+	74.81		2.996E+00	5.048E-01	4.468E-01	5.032E-02	6.705
	+	77.11		3.481E+00	4.877E-01	2.657E-01	3.058E-02	13.102
	+	87.30		2.205E+00	5.384E-01	5.972E-01	7.238E-02	3.692
	+	241.98		2.531E+00	7.887E-01	4.609E-01	4.844E-02	5.491
RA-224	+	295.21		1.284E+00	2.359E-01	1.738E-01	1.894E-02	7.388
	+	351.92	*	1.316E+00	2.108E-01	1.041E-01	1.085E-02	12.638
	+	240.98	*	4.798E+00	1.471E+00	8.700E-01	7.730E-02	5.516
	+	609.31	*	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
	+	1120.29		1.648E+00	6.268E-01	5.998E-01	6.440E-02	2.747
AC-228	+	1764.49		1.304E+00	5.240E-01	3.900E-01	3.243E-02	3.344
	+	338.32		1.318E+00	6.634E-01	3.844E-01	1.587E-01	3.428
	+	911.07	*	2.006E+00	3.939E-01	2.131E-01	2.418E-02	9.415
	+	969.11		1.937E+00	6.576E-01	5.662E-01	1.324E-01	3.421
	+	338.32		1.318E+00	6.634E-01	3.844E-01	1.587E-01	3.428
RA-228	+	911.07	*	2.006E+00	3.939E-01	2.131E-01	2.418E-02	9.415
	+	969.11		1.937E+00	6.576E-01	5.662E-01	1.324E-01	3.421
	+	74.81		1.763E+00	2.675E-01	2.629E-01	2.250E-02	6.705
	+	77.11		2.059E+00	2.420E-01	1.571E-01	1.355E-02	13.102
	+	87.30		1.305E+00	3.024E-01	3.534E-01	3.305E-02	3.692
TH-228	+	238.63	*	1.731E+00	2.035E-01	7.729E-02	7.685E-03	22.399
	+	300.09		1.730E+00	1.375E+00	1.012E+00	6.001E-01	1.710
	+	609.31	*	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
	+	1120.29		1.648E+00	6.268E-01	5.998E-01	6.440E-02	2.747
	+	1764.49		1.304E+00	5.240E-01	3.900E-01	3.242E-02	3.344
TH-232	+	338.32		1.318E+00	3.966E-01	3.844E-01	3.351E-02	3.428
	+	911.07	*	2.006E+00	3.939E-01	2.131E-01	2.418E-02	9.415
	+	969.11		1.937E+00	6.576E-01	5.662E-01	1.324E-01	3.421
	+	63.29	*	3.082E+00	1.120E+00	7.009E-01	1.238E-01	4.397
	+	92.38		4.199E+00	9.354E-01	4.447E-01	8.261E-02	9.444
U-234	+	609.31	*	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
	+	1120.29		1.648E+00	6.268E-01	5.998E-01	6.440E-02	2.747
	+	1764.49		1.304E+00	5.240E-01	3.900E-01	3.242E-02	3.344
	+	86.50	*	8.172E-01	2.535E-01	2.207E-01	4.994E-02	3.703
	+	95.87		-2.772E-01	6.250E-01	8.974E-01	2.250E-01	-0.309
U-238	+	63.29	*	3.082E+00	1.120E+00	7.009E-01	1.238E-01	4.397
	+	92.38		4.199E+00	6.553E-01	4.447E-01	4.275E-02	9.444
	+	74.67	*	2.819E-01	4.266E-02	4.203E-02	3.562E-03	6.707
	+	86.72		3.064E+01	7.100E+00	8.282E+00	7.708E-01	3.700
	+							

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		1.101E-01	2.770E+00	4.397E+00	4.907E-01	0.025
		142.18		6.645E+00	1.354E+01	2.169E+01	2.198E+00	0.306
ANH-511	+	511.00	*	1.188E-01	6.350E-02	4.498E-02	4.312E-03	2.642

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	7.996E-02	3.275E-01	5.596E-01	5.482E-02	0.143
NA-22		1274.54	*	5.532E-03	5.637E-02	9.187E-02	7.537E-03	0.060
NA-24		1368.53	*	1.930E-02	5.637E-02	Half-Life too short		
AL-26		1129.67		-1.247E+00	2.242E+00	3.429E+00	2.887E-01	-0.364
		1808.65	*	1.295E-02	3.623E-02	6.416E-02	5.310E-03	0.202
TI-44		67.85		1.010E-02	1.836E-02	3.086E-02	2.502E-03	0.327
	+	78.38	*	3.747E-01	4.405E-02	3.736E-02	3.253E-03	10.030
SC-46		889.25	*	2.277E-02	4.842E-02	8.450E-02	7.514E-03	0.269
	+	1120.51		2.792E-01	1.046E-01	1.576E-01	1.332E-02	1.772
V-48		944.10		-1.170E+00	1.023E+00	1.465E+00	1.284E-01	-0.799
		983.50	*	-4.300E-02	8.994E-02	1.413E-01	1.236E-02	-0.304
		1312.09		-1.454E-02	1.047E-01	1.667E-01	1.358E-02	-0.087
CR-51		320.08	*	-2.622E-01	3.288E-01	4.976E-01	4.626E-02	-0.527
MN-52		744.21		-7.552E-02	2.372E-01	3.675E-01	3.906E-02	-0.205
		848.13		4.575E+00	6.936E+00	1.234E+01	1.174E+00	0.371
		935.52		-1.164E-01	2.720E-01	4.318E-01	3.785E-02	-0.270
		1246.25		-8.085E-01	8.553E+00	1.366E+01	1.123E+00	-0.059
		1333.61		2.481E+00	4.532E+00	8.202E+00	6.659E-01	0.303
		1434.06	*	5.477E-02	2.102E-01	3.662E-01	3.024E-02	0.150
MN-54		834.83	*	-2.205E-02	4.448E-02	7.120E-02	6.900E-03	-0.310
CO-56		846.75	*	2.475E-02	4.576E-02	8.070E-02	7.692E-03	0.307
		977.42		1.087E+00	3.790E+00	6.452E+00	5.647E-01	0.168
		1037.82		-4.284E-02	3.628E-01	5.884E-01	5.373E-02	-0.073
		1175.09		-2.601E+00	2.893E+00	4.204E+00	3.464E-01	-0.619
		1238.25		7.036E-02	1.259E-01	2.131E-01	1.808E-02	0.330
		1360.21		1.466E+00	1.269E+00	2.421E+00	1.976E-01	0.605
		1771.40		4.037E-02	2.236E-01	3.835E-01	3.187E-02	0.105
CO-57		122.06	*	3.597E-03	1.781E-02	2.846E-02	3.269E-03	0.126
		136.48		-9.695E-02	1.657E-01	2.501E-01	2.771E-02	-0.388
CO-58		810.76	*	-1.930E-02	4.016E-02	6.397E-02	6.401E-03	-0.302
FE-59		142.65		5.940E-01	2.086E+00	3.303E+00	3.337E-01	0.180
		192.34		1.046E-01	7.294E-01	1.240E+00	1.653E-01	0.084
		1099.22	*	9.518E-02	1.186E-01	2.093E-01	1.932E-02	0.455
		1291.56		2.978E-02	1.490E-01	2.460E-01	2.311E-02	0.121
CO-60		1173.22		-3.791E-02	5.996E-02	9.054E-02	7.461E-03	-0.419
		1332.49	*	2.004E-02	4.462E-02	7.937E-02	6.442E-03	0.252
ZN-65		1115.52	*	-4.370E-02	1.389E-01	1.869E-01	1.584E-02	-0.234
GE-68		1077.35	*	2.066E-01	1.717E+00	2.848E+00	2.445E-01	0.073
AS-73		53.44	*	1.019E-01	1.733E-01	2.963E-01	2.399E-02	0.344
AS-74		595.88	*	9.169E-02	9.231E-02	1.647E-01	1.728E-02	0.557
		634.78		-9.285E-02	3.821E-01	6.033E-01	6.538E-02	-0.154

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		-8.848E-01	1.928E+00	2.882E+00	2.868E-01	-0.307
		96.73		-1.755E-01	5.201E-01	7.552E-01	1.090E-01	-0.232
		121.11		-5.951E-03	9.657E-02	1.521E-01	2.051E-02	-0.039
		136.00		7.518E-03	2.984E-02	4.737E-02	5.034E-03	0.159
		198.60		-4.994E-01	1.473E+00	2.440E+00	2.317E-01	-0.205
		264.65	*	-3.758E-03	4.138E-02	6.042E-02	5.424E-03	-0.062
		279.53		9.364E-03	9.715E-02	1.435E-01	1.324E-02	0.065
		303.91		1.058E+00	1.928E+00	2.944E+00	3.444E-01	0.359
		400.65		-5.759E-02	2.661E-01	4.138E-01	4.430E-02	-0.139
		87.88		4.228E+02	9.796E+01	1.481E+02	1.392E+01	2.854
BR-77	+	200.40		1.050E+02	9.131E+01	1.614E+02	1.383E+01	0.650
	+	239.00		1.895E+02	2.059E+01	2.634E+01	2.338E+00	7.194
		249.79		-1.196E+01	3.958E+01	6.423E+01	5.728E+00	-0.186
		281.68		-1.062E+00	5.769E+01	8.424E+01	7.515E+00	-0.013
		297.23		5.717E+01	3.282E+01	5.866E+01	5.235E+00	0.975
		303.76		2.786E+01	1.054E+02	1.747E+02	1.557E+01	0.159
		439.47		2.903E+01	9.773E+01	1.687E+02	1.459E+01	0.172
		484.57		-5.672E+01	1.630E+02	2.650E+02	2.454E+01	-0.214
		520.65	*	-1.065E+00	7.591E+00	1.248E+01	1.210E+00	-0.085
		574.64		-2.068E+00	1.669E+02	2.749E+02	2.829E+01	-0.008
SR-82		578.91		-2.285E+01	7.494E+01	1.042E+02	1.076E+01	-0.219
		585.48		2.897E+02	1.389E+02	2.439E+02	2.536E+01	1.188
		755.35		9.902E+01	1.360E+02	2.342E+02	2.469E+01	0.423
		817.79		-1.109E+01	9.550E+01	1.587E+02	1.572E+01	-0.070
		698.33		-2.806E+00	4.193E+01	6.742E+01	7.357E+00	-0.042
		776.49	*	-1.016E-01	4.477E-01	6.984E-01	7.230E-02	-0.145
		1395.20		-4.942E+00	1.209E+01	1.882E+01	1.545E+00	-0.263
		520.41	*	-9.229E-04	7.160E-02	1.190E-01	1.154E-02	-0.008
		529.64		-8.690E-02	1.098E-01	1.687E-01	1.654E-02	-0.515
		552.65		-2.536E-02	2.103E-01	3.442E-01	3.463E-02	-0.074
RB-84		881.50	*	-1.801E-02	7.422E-02	1.206E-01	1.087E-02	-0.149
KR-85		513.99	*	4.148E+00	6.985E+00	1.099E+01	1.058E+00	0.377
SR-85		513.99	*	2.099E-02	3.534E-02	5.562E-02	5.352E-03	0.377
RB-86		1076.63	*	4.060E-01	1.038E+00	1.767E+00	1.517E-01	0.230
Y-88		898.02		7.852E-04	4.695E-02	7.849E-02	6.899E-03	0.010
		1836.01	*	1.874E-02	4.165E-02	7.496E-02	6.189E-03	0.250
ZR-88		392.90	*	-9.772E-03	3.206E-02	4.960E-02	3.951E-03	-0.197
Y-91		1204.90	*	7.977E+00	2.497E+01	4.174E+01	3.439E+00	0.191
NB-94		702.63	*	-6.301E-03	4.319E-02	6.890E-02	7.503E-03	-0.091
		871.10		1.475E-02	4.062E-02	7.042E-02	6.464E-03	0.209
NB-95		765.79	*	-6.527E-03	4.742E-02	7.486E-02	7.823E-03	-0.087
NB-95M		235.69	*	-1.851E-02	1.110E-01	1.633E-01	1.645E-02	-0.113
ZR-95		724.18		1.531E-01	1.242E-01	2.009E-01	2.285E-02	0.762
		756.15	*	7.090E-02	8.431E-02	1.464E-01	1.648E-02	0.484
NB-97		657.90	*	2.405E-02	8.431E-02	Half-Life	too short	
		1024.50		2.731E+00	8.431E-02	Half-Life	too short	
ZR-97		254.15		9.539E-01	8.431E-02	Half-Life	too short	
		355.39		-1.650E-01	8.431E-02	Half-Life	too short	
		507.63	*	6.720E-01	8.431E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	602.52			1.712E+00	8.431E-02	Half-Life	too short	
	1021.30			1.652E+00	8.431E-02	Half-Life	too short	
	1147.95			1.663E+00	8.431E-02	Half-Life	too short	
	1362.66			3.833E+00	8.431E-02	Half-Life	too short	
	1750.46			-1.949E+00	8.431E-02	Half-Life	too short	
MO-99	140.51			-8.710E+00	1.506E+01	2.241E+01	6.330E+00	-0.389
	181.06			-6.847E+00	1.016E+01	1.575E+01	2.858E+00	-0.435
	366.43			4.107E+01	5.757E+01	9.738E+01	8.166E+00	0.422
	739.58	*		-4.835E+00	9.294E+00	1.396E+01	2.294E+00	-0.346
	778.00			1.556E+01	2.917E+01	4.933E+01	5.100E+00	0.315
TC-99M	140.51	*		-5.257E+08	2.917E+01	Half-Life	too short	
RH-101	127.23	+		5.789E-02	3.027E-02	3.892E-02	4.344E-03	1.488
	198.01	*		-1.834E-03	2.653E-02	4.455E-02	3.805E-03	-0.041
	325.23			-1.234E-01	2.445E-01	3.351E-01	2.956E-02	-0.368
RH-102	418.52			-2.366E-01	2.837E-01	4.508E-01	3.764E-02	-0.525
	475.06	*		-1.261E-03	2.891E-02	4.833E-02	4.415E-03	-0.026
	631.29			4.673E-03	6.517E-02	1.072E-01	1.158E-02	0.044
	697.49			4.884E-02	9.434E-02	1.596E-01	1.742E-02	0.306
	766.84			-3.395E-02	1.285E-01	2.002E-01	2.090E-02	-0.170
	1046.59			-1.647E-03	1.423E-01	2.335E-01	2.021E-02	-0.007
	1112.84			1.684E-02	3.457E-01	4.917E-01	4.168E-02	0.034
RU-103	497.08	*		3.314E-02	4.220E-02	7.440E-02	1.091E-02	0.445
	610.33	+		1.275E+01	2.965E+00	3.314E+00	5.902E-01	3.845
RH-106	511.85	+		5.922E-01	3.164E-01	4.335E-01	4.160E-02	1.366
	621.84	*		1.843E-01	3.680E-01	6.278E-01	9.296E-02	0.294
	1050.47			-1.775E+00	2.986E+00	4.576E+00	3.957E-01	-0.388
RU-106	511.85	+		5.922E-01	3.164E-01	4.335E-01	4.160E-02	1.366
	621.84	*		1.843E-01	3.675E-01	6.278E-01	6.736E-02	0.294
	1050.47			-1.775E+00	2.986E+00	4.576E+00	3.957E-01	-0.388
AG-108M	433.93	*		8.936E-03	3.364E-02	5.794E-02	5.167E-03	0.154
	614.37			6.052E-03	4.187E-02	6.138E-02	6.715E-03	0.099
	722.95			5.480E-02	5.262E-02	8.436E-02	9.320E-03	0.650
AG-110M	657.75	*		3.274E-02	4.269E-02	7.392E-02	8.292E-03	0.443
	677.61			5.758E-01	3.613E-01	6.642E-01	7.431E-02	0.867
	706.67			-8.806E-03	2.630E-01	4.237E-01	4.685E-02	-0.021
	763.93			-8.256E-02	1.923E-01	2.936E-01	3.133E-02	-0.281
	884.67			3.305E-03	6.049E-02	1.016E-01	9.384E-03	0.033
	937.48			-1.512E-01	1.366E-01	1.983E-01	1.799E-02	-0.763
	1384.27			6.257E-02	1.731E-01	3.056E-01	2.582E-02	0.205
IN-111	171.28			-9.206E-02	5.557E-01	9.389E-01	7.698E-02	-0.098
	245.39	*		-2.958E-01	6.938E-01	9.911E-01	8.824E-02	-0.298
IN-113M	391.69	*		-2.374E-02	4.513E-02	6.834E-02	5.628E-03	-0.347
SN-113	391.69	*		-2.374E-02	4.513E-02	6.834E-02	5.628E-03	-0.347
IN-114M	190.27	*		-4.829E-02	1.414E-01	2.349E-01	1.985E-02	-0.206
CD-115	260.90			-5.586E+01	7.641E+01	1.197E+02	1.070E+01	-0.467
	492.35			1.624E-01	2.420E+01	4.020E+01	3.761E+00	0.004
	527.90	*		-7.905E+00	7.762E+00	1.164E+01	1.139E+00	-0.679
SN-117M	156.02			-9.258E-01	1.636E+00	2.733E+00	2.467E-01	-0.339
	158.56	*		-5.658E-03	3.830E-02	6.516E-02	5.735E-03	-0.087

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122	563.90	*		-4.926E-01	1.650E+00	2.652E+00	2.700E-01	-0.186
	692.80			-3.113E+01	3.751E+01	5.537E+01	6.056E+00	-0.562
I-123	159.00	*		-2.446E-01	3.751E+01	Half-Life too short		
	528.96			-9.353E+01	3.751E+01	Half-Life too short		
TE-123M	159.00	*		-5.970E-03	2.101E-02	3.550E-02	3.129E-03	-0.168
I-124	602.71	*		4.753E-01	5.516E-01	9.225E-01	9.741E-02	0.515
	722.78			3.986E+00	4.389E+00	6.950E+00	7.489E-01	0.574
	1325.50			2.380E+01	3.653E+01	6.588E+01	5.355E+00	0.361
	1376.25			4.042E+01	2.936E+01	5.735E+01	4.694E+00	0.705
	1509.49			2.183E-01	1.361E+01	2.261E+01	1.882E+00	0.010
	1691.02			-1.188E+00	3.345E+00	4.948E+00	4.133E-01	-0.240
SB-124	602.71			3.359E-02	3.898E-02	6.519E-02	6.884E-03	0.515
	645.85			-1.345E-01	5.864E-01	9.346E-01	1.060E-01	-0.144
	709.31			-7.265E-01	3.273E+00	5.167E+00	5.609E-01	-0.141
	713.82			-6.337E-01	1.989E+00	3.106E+00	4.258E-01	-0.204
	722.78			4.083E-01	4.497E-01	7.119E-01	7.779E-02	0.574
	+ 968.20			1.965E+01	5.133E+00	8.484E+00	7.431E-01	2.317
	1045.16			1.482E+00	2.925E+00	5.077E+00	4.396E-01	0.292
	1325.50			2.604E+00	3.997E+00	7.208E+00	5.859E-01	0.361
	1368.21			4.226E-02	2.137E+00	3.584E+00	4.729E-01	0.012
	1436.60			-2.408E+00	3.888E+00	5.682E+00	4.694E-01	-0.424
	1691.02	*		-2.872E-02	8.084E-02	1.196E-01	1.041E-02	-0.240
SB-125	427.89	*		6.304E-02	9.087E-02	1.612E-01	1.395E-02	0.391
	+ 463.38			1.061E+00	3.944E-01	5.817E-01	5.602E-02	1.824
	600.56			-3.018E-02	1.780E-01	2.872E-01	3.179E-02	-0.105
	635.90			-2.452E-01	3.168E-01	4.711E-01	5.374E-02	-0.521
TE-125M	109.28	*		2.875E+00	6.373E+00	1.037E+01	1.247E+00	0.277
I-126	388.63			-4.987E-03	1.972E-01	3.128E-01	2.505E-02	-0.016
	666.33	*		1.275E-01	1.984E-01	3.408E-01	3.759E-02	0.374
	753.82			9.484E-02	1.642E+00	2.653E+00	2.799E-01	0.036
SB-126	223.80			-6.083E-02	2.930E+00	4.884E+00	4.290E-01	-0.012
	+ 278.60			3.481E+00	3.049E+00	3.421E+00	3.051E-01	1.018
	+ 296.50			1.191E+01	2.058E+00	2.940E+00	2.624E-01	4.052
	414.70			5.591E-02	6.958E-02	1.243E-01	1.031E-02	0.450
	415.30			6.356E+00	5.802E+00	1.053E+01	8.743E-01	0.604
	555.20			-1.956E+00	4.055E+00	6.407E+00	6.463E-01	-0.305
	573.80			-1.759E-01	1.145E+00	1.864E+00	1.916E-01	-0.094
	593.00			2.288E-01	9.399E-01	1.579E+00	1.654E-01	0.145
	656.30			2.178E+00	3.796E+00	6.484E+00	7.136E-01	0.336
	666.33			5.313E-02	8.267E-02	1.420E-01	1.566E-02	0.374
	675.00			-7.496E-01	2.218E+00	3.478E+00	3.828E-01	-0.216
	695.00			4.313E-02	8.601E-02	1.456E-01	1.591E-02	0.296
	697.00			4.455E-02	3.156E-01	5.170E-01	5.645E-02	0.086
	720.50	*		-1.519E-01	1.671E-01	2.310E-01	2.492E-02	-0.658
	856.80			-1.588E-01	6.332E-01	8.922E-01	8.378E-02	-0.178
	989.30			5.243E-01	1.399E+00	2.408E+00	2.105E-01	0.218
	1034.80			-9.098E+00	1.006E+01	1.469E+01	1.275E+00	-0.619
	1213.00			3.603E+00	6.605E+00	1.120E+01	9.221E-01	0.322
SB-127	61.10			1.758E+00	1.524E+01	2.356E+01	2.400E+00	0.075

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	252.40		-1.149E+00	3.162E+00	5.051E+00	2.121E+00	-0.228
	290.80		-1.465E+01	1.763E+01	2.368E+01	2.615E+00	-0.618
	411.60		-1.156E+01	1.079E+01	1.526E+01	2.330E+00	-0.757
	444.90		-1.768E+00	7.358E+00	1.217E+01	1.495E+00	-0.145
	473.00		4.565E-01	1.293E+00	2.231E+00	2.876E-01	0.205
	543.00		-2.082E+00	1.422E+01	2.326E+01	3.481E+00	-0.090
	603.60		6.280E+00	1.010E+01	1.571E+01	2.141E+00	0.400
	685.20	*	-4.315E-01	1.136E+00	1.759E+00	2.277E-01	-0.245
	698.50		-1.031E+00	1.540E+01	2.476E+01	4.194E+00	-0.042
	722.20		1.026E+00	3.092E+01	4.373E+01	5.505E+00	0.023
	783.80		3.904E+00	3.598E+00	6.313E+00	8.411E-01	0.618
XE-127	57.60		-9.446E-01	1.595E+00	2.591E+00	2.040E-01	-0.365
	145.22		-4.242E-01	5.608E-01	8.335E-01	8.256E-02	-0.509
	172.10		2.146E-02	8.934E-02	1.538E-01	1.263E-02	0.140
	202.84	*	-1.863E-02	3.642E-02	5.960E-02	5.121E-03	-0.313
	374.96		7.661E-02	1.934E-01	3.181E-01	2.625E-02	0.241
I-131	80.18		4.492E-01	2.213E+00	3.368E+00	2.988E-01	0.133
	284.30		5.805E-01	1.163E+00	1.964E+00	1.837E-01	0.296
	364.48	*	3.498E-02	9.850E-02	1.621E-01	1.440E-02	0.216
	636.97		-2.416E-02	1.512E+00	2.442E+00	2.743E-01	-0.010
	722.89		7.863E+00	7.903E+00	1.262E+01	1.364E+00	0.623
TE-132	49.72		-3.590E-02	2.409E+00	3.754E+00	3.877E-01	-0.010
	111.76		3.757E+00	1.640E+01	2.637E+01	3.254E+00	0.142
	116.30		8.534E+00	1.560E+01	2.537E+01	3.199E+00	0.336
	228.16	*	6.908E-02	4.327E-01	7.270E-01	1.134E-01	0.095
BA-133	53.15		2.975E-01	7.472E-01	1.269E+00	1.030E-01	0.234
	79.62		-5.382E-01	7.135E-01	1.028E+00	1.574E-01	-0.524
	81.00		5.334E-03	6.099E-02	8.130E-02	1.303E-02	0.066
	+ 276.40		5.584E-01	4.933E-01	5.960E-01	8.720E-02	0.937
	302.84		3.480E-02	1.217E-01	2.018E-01	2.721E-02	0.172
	356.01	*	-4.614E-03	4.558E-02	6.427E-02	8.447E-03	-0.072
	383.85		4.426E-02	2.949E-01	4.751E-01	5.821E-02	0.093
I-133	+ 510.53		4.389E-01	2.949E-01	Half-Life	too short	
	529.87	*	-9.491E-04	2.949E-01	Half-Life	too short	
	706.58		1.007E-03	2.949E-01	Half-Life	too short	
	856.28		2.298E-02	2.949E-01	Half-Life	too short	
	875.33		-3.142E-02	2.949E-01	Half-Life	too short	
	1236.41		1.250E-01	2.949E-01	Half-Life	too short	
	1298.22		1.163E-01	2.949E-01	Half-Life	too short	
CS-134	475.35		-1.584E-01	1.909E+00	3.181E+00	2.907E-01	-0.050
	563.23		9.640E-02	3.891E-01	6.563E-01	6.722E-02	0.147
	569.32		-4.930E-02	2.185E-01	3.534E-01	3.652E-02	-0.140
	604.70		-2.037E-02	4.033E-02	5.401E-02	5.722E-03	-0.377
	+ 795.84	*	1.306E-01	1.126E-01	1.184E-01	1.209E-02	1.104
	801.93		-1.741E-01	5.177E-01	7.243E-01	7.338E-02	-0.240
	1038.57		7.790E-03	4.568E+00	7.514E+00	6.517E-01	0.001
	1167.94		3.457E+00	3.605E+00	6.365E+00	5.260E-01	0.543
	1365.15		-1.713E+00	1.691E+00	2.427E+00	2.083E-01	-0.706
CS-135	268.24	*	1.524E-01	1.499E-01	2.376E-01	2.433E-02	0.642

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-135	288.45			1.926E+08	1.499E-01	Half-Life	too short	
	417.63			-5.934E+08	1.499E-01	Half-Life	too short	
	546.56			-5.228E+08	1.499E-01	Half-Life	too short	
	836.80			2.410E+08	1.499E-01	Half-Life	too short	
	1038.76			1.403E+06	1.499E-01	Half-Life	too short	
	1124.00			4.656E+08	1.499E-01	Half-Life	too short	
	1131.51			1.337E+08	1.499E-01	Half-Life	too short	
	1260.41	*		-4.136E+07	1.499E-01	Half-Life	too short	
	1457.56			3.833E+10	1.499E-01	Half-Life	too short	
	1678.03			-3.933E+07	1.499E-01	Half-Life	too short	
	1706.46			-4.633E+08	1.499E-01	Half-Life	too short	
	1791.20			1.348E+08	1.499E-01	Half-Life	too short	
CS-136	66.91			-3.448E-03	2.973E-01	4.540E-01	6.871E-02	-0.008
	86.29	+		3.397E+00	8.511E-01	1.086E+00	1.445E-01	3.127
	153.22			2.808E-01	4.690E-01	8.238E-01	8.414E-02	0.341
	163.89			-3.873E-02	7.672E-01	1.308E+00	1.227E-01	-0.030
	176.55			-3.005E-02	2.612E-01	4.414E-01	3.879E-02	-0.068
	273.65			5.856E-02	4.839E-01	5.704E-01	5.406E-02	0.103
	340.57			4.843E-02	1.240E-01	1.843E-01	1.648E-02	0.263
	818.51			-3.257E-02	7.565E-02	1.213E-01	1.201E-02	-0.268
	1048.07	*		-3.466E-02	1.233E-01	1.959E-01	1.766E-02	-0.177
	1235.34			7.203E-01	7.998E-01	1.385E+00	1.602E-01	0.520
BA-137M	661.65	*		-1.008E-02	4.049E-02	6.420E-02	7.091E-03	-0.157
	661.65	*		-1.065E-02	4.280E-02	6.787E-02	7.504E-03	-0.157
CS-137	661.65	*		-1.065E-02	4.280E-02	6.787E-02	7.504E-03	-0.157
CE-139	165.85	*		-8.037E-03	2.242E-02	3.763E-02	3.059E-03	-0.214
BA-140	162.64			5.316E-01	5.367E-01	9.535E-01	8.528E-02	0.558
	304.84			-4.902E-01	1.196E+00	1.654E+00	4.649E-01	-0.296
LA-140	423.70			-1.415E+00	1.766E+00	2.708E+00	8.765E-01	-0.522
	537.32	*		1.748E-02	2.628E-01	4.384E-01	1.468E-01	0.040
	328.77	+		3.233E-01	2.900E-01	4.900E-01	4.542E-02	0.660
	432.53			1.172E+00	1.962E+00	3.454E+00	3.100E-01	0.339
	487.03			1.489E-01	1.254E-01	2.290E-01	2.241E-02	0.650
	751.79			-1.790E+00	1.884E+00	2.675E+00	3.032E-01	-0.669
	815.85			-2.014E-01	3.197E-01	4.992E-01	5.393E-02	-0.403
	867.82			8.607E-02	1.632E+00	2.597E+00	2.508E-01	0.033
	919.63			-6.455E-01	2.584E+00	4.036E+00	4.344E-01	-0.160
	925.24			-9.166E-02	1.138E+00	1.875E+00	1.743E-01	-0.049
	1596.49	*		-9.939E-02	1.168E-01	1.651E-01	1.380E-02	-0.602
CE-141	145.44	*		-3.893E-02	5.077E-02	7.538E-02	7.558E-03	-0.516
CE-143	57.37			-1.127E-04	5.077E-02	Half-Life	too short	
	231.56			-3.612E-04	5.077E-02	Half-Life	too short	
	293.26	*		1.362E-04	5.077E-02	Half-Life	too short	
	350.59	+		1.584E-02	5.077E-02	Half-Life	too short	
	490.36			-1.707E-03	5.077E-02	Half-Life	too short	
	664.57			2.551E-04	5.077E-02	Half-Life	too short	
	721.93			4.444E-05	5.077E-02	Half-Life	too short	
CE-144	80.11			2.148E-01	1.131E+00	1.720E+00	1.518E-01	0.125
	133.54	*		-2.257E-02	1.546E-01	2.403E-01	4.046E-02	-0.094
PM-144	476.78			1.584E-02	6.853E-02	1.170E-01	1.161E-02	0.135

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		-2.440E-02	3.354E-02	5.057E-02	5.506E-03	-0.482
		696.49	*	8.925E-03	4.153E-02	6.854E-02	7.486E-03	0.130
		778.57		9.389E-01	2.741E+00	4.546E+00	4.698E-01	0.207
PR-144		696.49	*	6.044E-01	2.812E+00	4.641E+00	5.068E-01	0.130
		1489.15		-6.985E-01	1.274E+01	2.090E+01	1.737E+00	-0.033
PM-146		453.90	*	2.341E-02	4.364E-02	7.636E-02	8.332E-03	0.307
		633.02		-2.287E-02	1.573E+00	2.566E+00	9.737E-01	-0.009
		735.90		6.518E-02	1.606E-01	2.686E-01	7.869E-02	0.243
		747.13		6.599E-02	1.048E-01	1.792E-01	2.748E-02	0.368
ND-147	+	91.11		5.504E-01	1.714E-01	2.698E-01	2.752E-02	2.040
		319.41		-1.969E+00	2.778E+00	4.239E+00	3.753E-01	-0.464
		439.89		-4.027E-01	5.374E+00	9.026E+00	7.815E-01	-0.045
		531.02	*	-9.019E-02	5.303E-01	8.668E-01	1.359E-01	-0.104
PM-149		285.90	*	-9.934E+00	5.614E+01	9.066E+01	1.424E+01	-0.110
EU-152		121.78		1.177E-02	5.234E-02	8.372E-02	1.044E-02	0.141
		244.69		-2.921E-02	2.878E-01	4.234E-01	3.769E-02	-0.069
		344.27	*	1.929E-02	9.753E-02	1.590E-01	1.458E-02	0.121
		443.98		3.187E-01	8.898E-01	1.544E+00	1.346E-01	0.206
		778.89		2.270E-02	3.268E-01	5.266E-01	5.439E-02	0.043
		867.32		-3.499E-01	1.116E+00	1.631E+00	1.506E-01	-0.215
		964.01		2.899E-01	4.143E-01	6.478E-01	5.675E-02	0.448
		1085.78		-1.637E-01	4.856E-01	7.629E-01	6.531E-02	-0.215
		1112.02		1.746E-01	4.738E-01	7.593E-01	6.439E-02	0.230
		1407.95		1.971E-01	2.107E-01	3.980E-01	3.275E-02	0.495
GD-153		69.67		1.212E-02	6.846E-01	1.127E+00	9.240E-02	0.011
	+	83.37		3.022E+01	9.917E+00	1.458E+01	1.320E+00	2.073
		97.43	*	-4.295E-02	5.678E-02	8.023E-02	7.926E-03	-0.535
		103.18		-3.484E-02	6.977E-02	1.086E-01	1.109E-02	-0.321
EU-154		123.07		-2.594E-02	3.823E-02	5.773E-02	7.860E-03	-0.449
		247.94		1.088E-02	2.994E-01	4.964E-01	5.807E-02	0.022
		591.81		-4.935E-02	6.869E-01	1.122E+00	1.468E-01	-0.044
		723.30		3.169E-01	2.214E-01	3.683E-01	4.241E-02	0.860
		756.87		5.844E-01	9.505E-01	1.615E+00	2.167E-01	0.362
		873.19		1.679E-01	3.237E-01	5.712E-01	7.209E-02	0.294
		996.32		-6.686E-02	4.690E-01	7.628E-01	1.359E-01	-0.088
		1004.76		-3.189E-01	2.634E-01	3.684E-01	4.317E-02	-0.866
		1274.45	*	-2.111E-03	1.579E-01	2.538E-01	2.789E-02	-0.008
EU-155		48.70		1.582E-01	3.550E-01	5.671E-01	4.797E-02	0.279
		60.01		-2.844E-01	1.600E+00	2.443E+00	1.908E-01	-0.116
	+	86.54		3.350E-01	7.773E-02	1.156E-01	1.084E-02	2.897
		105.31	*	1.113E-01	7.074E-02	1.207E-01	1.258E-02	0.923
TB-160	+	86.79		8.844E-01	2.049E-01	3.211E-01	2.990E-02	2.755
		197.04		-2.671E-01	4.333E-01	7.066E-01	6.027E-02	-0.378
		215.65		5.264E-02	6.039E-01	1.015E+00	8.850E-02	0.052
	+	298.57		2.453E-01	1.316E-01	1.802E-01	1.608E-02	1.361
		879.36	*	5.921E-03	1.449E-01	2.435E-01	2.204E-02	0.024
		962.29		5.382E-01	7.279E-01	1.184E+00	1.038E-01	0.454
		966.15		6.703E-01	3.267E-01	5.641E-01	4.942E-02	1.188
		1177.93		1.565E-01	4.483E-01	7.555E-01	6.226E-02	0.207

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		1271.85		-1.001E+00	1.002E+00	1.411E+00	1.156E-01	-0.709
		80.57		2.686E-02	1.661E-01	2.227E-01	1.972E-02	0.121
	+	184.41		1.337E-01	4.264E-02	5.564E-02	4.660E-03	2.402
		280.46		-8.860E-03	7.741E-02	1.120E-01	9.991E-03	-0.079
		410.95		9.190E-02	2.689E-01	4.364E-01	3.595E-02	0.211
		711.68	*	-1.705E-03	7.063E-02	1.137E-01	1.233E-02	-0.015
		752.31		-2.685E-01	3.189E-01	4.598E-01	4.858E-02	-0.584
TM-171		810.29		-3.645E-02	6.038E-02	9.456E-02	9.451E-03	-0.385
		51.35		-5.046E+00	5.396E+00	8.661E+00	7.138E-01	-0.583
		52.39		3.788E-02	2.986E+00	5.003E+00	4.086E-01	0.008
		59.40		-4.803E-01	8.364E+00	1.285E+01	1.002E+00	-0.037
		66.72	*	-6.156E+00	1.169E+01	1.741E+01	1.403E+00	-0.354
LU-176	+	88.36		6.600E-01	1.529E-01	2.044E-01	1.927E-02	3.229
		201.83		-1.132E-02	2.363E-02	3.879E-02	3.329E-03	-0.292
		306.84	*	2.850E-03	2.447E-02	3.588E-02	3.195E-03	0.079
LU-177		401.10		-2.268E+00	7.000E+00	1.078E+01	8.723E-01	-0.210
		112.95		-7.244E-01	1.057E+00	1.615E+00	1.750E-01	-0.448
LU-177M	+	208.36	*	3.165E+00	1.244E+00	1.616E+00	1.398E-01	1.959
		52.97		9.429E-02	3.306E-01	5.594E-01	4.547E-02	0.169
		54.07		8.827E-02	1.882E-01	3.202E-01	2.580E-02	0.276
		61.30		2.020E-01	4.925E-01	7.716E-01	6.056E-02	0.262
		121.62		1.960E-02	2.705E-01	4.291E-01	4.912E-02	0.046
		147.16		2.862E-01	5.163E-01	8.272E-01	8.069E-02	0.346
		171.86		1.416E-01	3.618E-01	6.271E-01	5.146E-02	0.226
		218.09		7.164E-02	7.096E-01	1.193E+00	1.042E-01	0.060
	+	268.79		2.204E+00	1.149E+00	1.359E+00	1.214E-01	1.622
		319.02		-1.347E-01	2.313E-01	3.569E-01	3.161E-02	-0.377
		367.43		4.603E-01	8.400E-01	1.404E+00	1.175E-01	0.328
		413.65	*	3.815E-02	1.885E-01	3.028E-01	2.507E-02	0.126
		56.28		-1.377E-01	2.298E-01	3.734E-01	2.964E-02	-0.369
HF-181		57.53		-8.587E-02	1.340E-01	2.171E-01	1.710E-02	-0.395
		65.20		1.498E-01	3.548E-01	5.536E-01	4.425E-02	0.271
		133.02		-1.412E-02	4.926E-02	7.596E-02	8.191E-03	-0.186
		136.25		-1.781E-01	3.575E-01	5.430E-01	5.735E-02	-0.328
		345.85		2.981E-02	1.902E-01	2.947E-01	2.548E-02	0.101
		482.03	*	-3.944E-03	4.127E-02	6.859E-02	6.328E-03	-0.058
		56.28		-5.482E-02	9.118E-02	1.481E-01	1.176E-02	-0.370
W-181		57.53		-3.417E-02	5.319E-02	8.619E-02	6.790E-03	-0.396
		65.20	*	5.900E-02	1.398E-01	2.181E-01	1.743E-02	0.271
TA-182		67.75		2.862E-02	4.650E-02	7.292E-02	5.910E-03	0.393
		100.10		-1.969E-02	1.188E-01	1.889E-01	1.894E-02	-0.104
		152.43		-1.482E-01	2.783E-01	4.176E-01	3.896E-02	-0.355
		222.10		-9.533E-02	2.765E-01	4.526E-01	3.969E-02	-0.211
		1001.68		1.632E+00	2.516E+00	4.420E+00	3.859E-01	0.369
	+	1121.28		7.732E-01	2.896E-01	4.185E-01	3.535E-02	1.848
RE-183		1189.05		-2.128E-01	4.424E-01	6.829E-01	5.627E-02	-0.312
		1221.42	*	5.874E-02	2.751E-01	4.540E-01	3.738E-02	0.129
		1230.97		5.205E-01	6.783E-01	1.170E+00	9.626E-02	0.445
		57.98		1.700E-02	5.304E-02	8.936E-02	7.022E-03	0.190

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RE-184		59.32		-2.452E-03	3.387E-02	5.202E-02	4.059E-03	-0.047
		67.20		1.012E-02	8.154E-02	1.253E-01	1.012E-02	0.081
		162.32	*	8.999E-02	8.228E-02	1.468E-01	1.242E-02	0.613
	+	208.81		3.203E+00	1.259E+00	1.633E+00	1.413E-01	1.962
		291.72		1.577E-01	8.675E-01	1.286E+00	1.148E-01	0.123
		57.98		6.310E-02	1.969E-01	3.317E-01	2.607E-02	0.190
		59.32		-9.094E-03	1.256E-01	1.929E-01	1.505E-02	-0.047
		67.20		3.756E-02	3.026E-01	4.648E-01	3.755E-02	0.081
		161.27		-1.035E-01	2.665E-01	4.476E-01	3.831E-02	-0.231
		216.55		4.129E-02	2.173E-01	3.671E-01	3.203E-02	0.112
		252.85	*	-4.855E-02	2.110E-01	3.437E-01	3.068E-02	-0.141
		318.01		1.557E-01	3.900E-01	6.506E-01	5.764E-02	0.239
		792.07		-1.036E-01	1.298E+00	1.783E+00	1.818E-01	-0.058
		903.28		8.881E-01	1.230E+00	2.099E+00	1.837E-01	0.423
OS-185		920.93		-4.606E-01	4.581E-01	6.560E-01	5.748E-02	-0.702
		59.72		2.012E-04	9.293E-02	1.432E-01	1.117E-02	0.001
		61.14		7.110E-03	5.406E-02	8.365E-02	6.561E-03	0.085
		69.30		-6.525E-03	1.205E-01	1.979E-01	1.618E-02	-0.033
		592.07		5.117E-01	2.703E+00	4.521E+00	4.729E-01	0.113
		646.12	*	-6.763E-03	4.834E-02	7.770E-02	8.490E-03	-0.087
		717.42		2.093E-01	1.050E+00	1.728E+00	1.868E-01	0.121
		874.81		-1.476E-01	6.544E-01	1.067E+00	9.735E-02	-0.138
		880.27		3.677E-02	8.337E-01	1.401E+00	1.266E-01	0.026
		155.03	*	1.360E-01	1.278E-01	2.279E-01	2.077E-02	0.597
RE-188		477.96		1.254E+00	3.092E+00	5.347E+00	4.905E-01	0.235
		633.10		7.296E-02	3.153E+00	5.161E+00	5.586E-01	0.014
	+	63.58		1.223E+02	4.004E+01	4.027E+01	3.193E+00	3.037
W-188		227.08		4.730E-01	1.026E+01	1.714E+01	1.509E+00	0.028
		290.67	*	-6.400E+00	7.557E+00	1.015E+01	9.060E-01	-0.631
IR-192	+	295.96		9.678E-01	1.675E-01	2.748E-01	2.470E-02	3.521
		308.46		4.932E-02	8.794E-02	1.482E-01	1.325E-02	0.333
		316.51	*	-1.476E-02	3.207E-02	5.014E-02	4.456E-03	-0.294
		468.07		3.460E-02	6.301E-02	9.969E-02	9.606E-03	0.347
AU-195		604.41		-6.768E-03	4.924E-01	7.069E-01	1.017E-01	-0.010
		612.46		6.336E-01	7.672E-01	1.219E+00	1.428E-01	0.520
		65.12		2.995E-02	6.484E-02	1.013E-01	8.096E-03	0.296
		66.83		-1.868E-03	3.787E-02	5.772E-02	4.654E-03	-0.032
	+	75.70		9.078E-01	1.374E-01	2.196E-01	1.875E-02	4.133
		98.88	*	1.980E-01	1.467E-01	2.486E-01	2.476E-02	0.796
	+	129.76		5.082E+00	2.657E+00	3.689E+00	4.058E-01	1.377
TL-200		367.94	*	-2.914E-05	2.657E+00	Half-Life	too short	
		579.30		-8.924E-04	2.657E+00	Half-Life	too short	
		828.27		2.264E-03	2.657E+00	Half-Life	too short	
		1205.75		1.694E-04	2.657E+00	Half-Life	too short	
TL-201		68.90		-3.295E-01	1.473E+00	2.404E+00	1.961E-01	-0.137
		70.82		5.686E-01	9.055E-01	1.417E+00	1.170E-01	0.401
		80.30		3.456E-01	2.290E+00	3.068E+00	2.712E-01	0.113
		135.34		1.391E+00	1.468E+01	2.311E+01	2.456E+00	0.060
		167.43	*	7.889E-01	3.834E+00	6.604E+00	5.378E-01	0.119

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TL-202		68.90		-3.681E-02	1.645E-01	2.685E-01	2.191E-02	-0.137
		70.82		6.333E-02	1.009E-01	1.578E-01	1.303E-02	0.401
		80.30		3.851E-02	2.552E-01	3.419E-01	3.021E-02	0.113
HG-203		439.56	*	1.362E-02	6.326E-02	1.086E-01	9.394E-03	0.125
		70.83		2.890E-01	4.619E-01	7.212E-01	9.649E-02	0.401
		72.87		3.384E-01	2.752E-01	4.654E-01	6.069E-02	0.727
BI-207	+	82.60		2.212E+00	7.637E-01	9.280E-01	1.298E-01	2.384
		279.20	*	2.242E-02	3.551E-02	5.496E-02	5.031E-03	0.408
		72.80		9.673E-02	8.136E-02	1.385E-01	1.159E-02	0.698
TL-207	+	74.97		5.059E-01	7.657E-02	1.295E-01	1.100E-02	3.905
	+	84.90		3.922E-01	1.287E-01	1.842E-01	1.689E-02	2.129
		569.67		-1.440E-02	3.407E-02	5.406E-02	5.535E-03	-0.266
PO-209		1063.62	*	-1.660E-02	7.077E-02	1.132E-01	9.760E-03	-0.147
		1770.23		-1.485E+00	7.749E-01	6.969E-01	5.791E-02	-2.130
		81.07		1.387E-02	1.348E-01	1.799E-01	1.599E-02	0.077
PB-211	+	83.78		2.586E-01	8.487E-02	1.313E-01	1.193E-02	1.970
		94.90		7.301E-02	1.454E-01	2.222E-01	2.165E-02	0.329
		122.32		5.680E-01	1.223E+00	1.981E+00	2.368E-01	0.287
BI-212		144.24		4.557E-01	5.317E-01	8.651E-01	9.408E-02	0.527
		154.21		3.817E-01	3.065E-01	5.487E-01	5.482E-02	0.696
	+	269.46		5.189E-01	2.706E-01	3.330E-01	3.033E-02	1.558
RN-219	+	323.87	*	-2.518E-01	6.895E-01	9.554E-01	1.701E-01	-0.264
	+	338.28		5.503E+00	1.725E+00	2.545E+00	3.151E-01	2.162
		445.03		-6.682E-01	2.140E+00	3.517E+00	4.279E-01	-0.190
RA-223		260.50		-2.869E+00	8.363E+00	1.348E+01	1.204E+00	-0.213
		262.80		1.031E+01	2.251E+01	3.812E+01	3.407E+00	0.270
		896.60	*	-1.964E+00	8.371E+00	1.360E+01	1.193E+00	-0.144
RN-220		404.84	*	3.111E-01	9.389E-01	1.497E+00	9.372E-01	0.208
		427.08		3.815E-01	1.997E+00	3.406E+00	2.116E+00	0.112
		831.96		-1.278E+00	1.691E+00	2.299E+00	1.445E+00	-0.556
RA-223	+	727.18	*	6.647E-01	6.462E-01	7.605E-01	9.042E-02	0.874
		785.46		1.374E-02	2.234E+00	3.572E+00	3.666E-01	0.004
		1620.62		8.007E-01	1.439E+00	2.621E+00	2.192E-01	0.306
RN-220		81.07		1.387E-02	1.348E-01	1.799E-01	1.599E-02	0.077
	+	83.78		2.586E-01	8.487E-02	1.313E-01	1.193E-02	1.970
		94.90		7.301E-02	1.454E-01	2.222E-01	2.165E-02	0.329
RN-219		122.32		5.680E-01	1.223E+00	1.981E+00	2.368E-01	0.287
		144.24		4.557E-01	5.317E-01	8.651E-01	9.408E-02	0.527
		154.21		3.817E-01	3.065E-01	5.487E-01	5.482E-02	0.696
RN-219	+	269.46		5.189E-01	2.706E-01	3.330E-01	3.033E-02	1.558
	+	323.87	*	-2.518E-01	6.895E-01	9.554E-01	1.701E-01	-0.264
	+	338.28		5.503E+00	1.725E+00	2.545E+00	3.151E-01	2.162
RN-219		445.03		-6.682E-01	2.140E+00	3.517E+00	4.279E-01	-0.190
	+	271.23		6.658E-01	3.491E-01	3.891E-01	4.115E-02	1.711
		401.81	*	-1.314E-01	4.125E-01	6.341E-01	9.344E-02	-0.207
RN-220		549.76	*	-6.738E+00	2.822E+01	4.570E+01	4.584E+00	-0.147
		81.07		1.387E-02	1.348E-01	1.799E-01	1.599E-02	0.077
	+	83.78		2.586E-01	8.487E-02	1.313E-01	1.193E-02	1.970
RA-223		94.90		7.301E-02	1.454E-01	2.222E-01	2.165E-02	0.329

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		5.680E-01	1.223E+00	1.981E+00	2.368E-01	0.287
		144.24		4.557E-01	5.317E-01	8.651E-01	9.408E-02	0.527
		154.21		3.817E-01	3.065E-01	5.487E-01	5.482E-02	0.696
	+	269.46		5.189E-01	2.706E-01	3.330E-01	3.033E-02	1.558
		323.87	*	-2.518E-01	6.895E-01	9.554E-01	1.701E-01	-0.264
	+	338.28		5.503E+00	1.725E+00	2.545E+00	3.151E-01	2.162
		445.03		-6.682E-01	2.140E+00	3.517E+00	4.279E-01	-0.190
		79.80		1.091E-01	8.714E-01	1.321E+00	2.851E-01	0.083
		236.00		3.459E-02	2.087E-01	3.144E-01	3.903E-02	0.110
		256.20	*	1.148E-02	3.401E-01	5.623E-01	8.730E-02	0.020
		286.10		-1.755E-01	1.404E+00	2.276E+00	3.051E-01	-0.077
	+	299.80		3.162E+00	1.764E+00	2.470E+00	4.356E-01	1.280
TH-227		304.40		3.689E-03	1.767E+00	2.563E+00	4.761E-01	0.001
		334.20		-8.338E-01	2.408E+00	3.330E+00	6.484E-01	-0.250
		79.80		1.091E-01	8.714E-01	1.321E+00	2.888E-01	0.083
	+	94.00		1.623E+01	4.116E+00	2.497E+00	5.550E-01	6.498
		236.00		3.459E-02	2.087E-01	3.144E-01	3.542E-02	0.110
		256.20	*	1.148E-02	3.401E-01	5.623E-01	1.024E-01	0.020
		286.10		-1.755E-01	1.415E+00	2.276E+00	2.285E+00	-0.077
	+	299.80		3.162E+00	1.764E+00	2.470E+00	4.356E-01	1.280
		304.40		3.689E-03	1.767E+00	2.563E+00	4.761E-01	0.001
		334.20		-8.338E-01	2.408E+00	3.330E+00	6.484E-01	-0.250
	+	85.43		3.871E-01	1.271E-01	1.673E-01	1.541E-02	2.314
	+	88.47		3.799E-01	8.803E-02	1.144E-01	1.078E-02	3.322
TH-229		100.00		-6.908E-03	1.247E-01	1.994E-01	1.999E-02	-0.035
		193.63	*	-6.013E-02	4.070E-01	6.818E-01	5.789E-02	-0.088
		210.97		2.462E-01	6.389E-01	9.878E-01	8.569E-02	0.249
	+	283.67	*	-3.338E-01	1.344E+00	2.159E+00	3.315E-01	-0.155
	+	301.29		1.265E+00	6.877E-01	9.434E-01	1.175E-01	1.341
	TH-231	81.07		1.387E-02	1.348E-01	1.799E-01	1.599E-02	0.077
	+	83.78		2.586E-01	8.487E-02	1.313E-01	1.193E-02	1.970
		94.90		7.301E-02	1.454E-01	2.222E-01	2.165E-02	0.329
		122.32		5.680E-01	1.223E+00	1.981E+00	2.368E-01	0.287
		144.24		4.557E-01	5.317E-01	8.651E-01	9.408E-02	0.527
		154.21		3.817E-01	3.065E-01	5.487E-01	5.482E-02	0.696
	+	269.46		5.189E-01	2.706E-01	3.330E-01	3.033E-02	1.558
U-231		323.87	*	-2.518E-01	6.895E-01	9.554E-01	1.701E-01	-0.264
	+	338.28		5.503E+00	1.725E+00	2.545E+00	3.151E-01	2.162
		445.03		-6.682E-01	2.140E+00	3.517E+00	4.279E-01	-0.190
	+	84.21		9.035E+00	2.965E+00	4.487E+00	4.091E-01	2.013
	+	92.29		1.300E+01	2.029E+00	2.567E+00	2.467E-01	5.065
		95.87	*	-2.549E-01	5.716E-01	8.251E-01	8.081E-02	-0.309
		108.00		-9.484E-01	1.148E+00	1.744E+00	1.832E-01	-0.544
	+	75.28		1.476E+01	2.917E+00	3.794E+00	5.800E-01	3.891
	+	86.59		5.448E+00	1.873E+00	1.907E+00	5.156E-01	2.857
	+	300.12		8.815E-01	4.850E-01	6.985E-01	1.051E-01	1.262
		311.98	*	-6.752E-03	5.919E-02	9.520E-02	8.688E-03	-0.071
		340.50		2.566E-01	6.459E-01	9.565E-01	2.283E-01	0.268
		398.62		1.928E+00	2.264E+00	3.742E+00	9.898E-01	0.515

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		1.490E+00	1.657E+00	2.932E+00	6.284E-01	0.508
		63.00		3.592E+00	1.264E+00	1.189E+00	1.797E-01	3.022
		94.67		9.720E-02	1.087E-01	1.685E-01	2.225E-02	0.577
		98.44		3.863E-02	6.370E-02	9.918E-02	5.555E-02	0.390
		99.86		3.595E-02	3.169E-01	5.111E-01	5.118E-02	0.070
		111.00		2.887E-02	1.319E-01	2.121E-01	2.896E-02	0.136
		131.20		3.300E-02	8.507E-02	1.261E-01	1.375E-02	0.262
		152.70		8.016E-02	2.654E-01	4.180E-01	7.276E-02	0.192
		186.00		4.812E+00	2.107E+00	2.268E+00	7.065E-01	2.122
		226.40		-7.596E-02	3.210E-01	5.276E-01	7.028E-02	-0.144
		227.20		1.613E-02	3.510E-01	5.864E-01	5.165E-02	0.028
		248.90		2.261E-01	6.837E-01	1.151E+00	2.593E-01	0.196
		293.70		6.165E+00	1.410E+00	1.483E+00	2.589E-01	4.156
		369.80		-5.124E-01	7.996E-01	1.190E+00	2.579E-01	-0.430
		568.70		-4.564E-01	1.073E+00	1.701E+00	1.740E-01	-0.268
		569.50		-1.052E-01	3.042E-01	4.864E-01	4.979E-02	-0.216
		574.00		-3.755E-01	1.769E+00	2.865E+00	2.946E-01	-0.131
		699.00		1.299E-01	8.851E-01	1.450E+00	2.932E-01	0.090
		706.10		3.943E-01	1.335E+00	2.196E+00	9.898E-01	0.180
		733.00		-1.373E-01	4.933E-01	6.619E-01	1.528E-01	-0.208
		742.81		-1.088E-01	1.534E+00	2.443E+00	1.649E+00	-0.045
		796.30		2.542E+00	2.286E+00	2.240E+00	6.177E-01	1.135
		805.60		8.926E-01	1.102E+00	1.947E+00	6.053E-01	0.458
		819.60		6.581E-02	1.310E+00	2.216E+00	8.495E-01	0.030
		826.30		1.111E-01	1.019E+00	1.729E+00	7.778E-01	0.064
		831.60		-4.892E-01	7.752E-01	1.201E+00	3.626E-01	-0.407
		876.40		-6.642E-01	1.122E+00	1.354E+00	1.392E+00	-0.491
		880.51		3.115E-02	3.065E-01	5.182E-01	4.680E-02	0.060
		883.24		-2.210E-01	3.781E-01	5.421E-01	3.646E-01	-0.408
		899.00		1.495E-02	1.001E+00	1.672E+00	7.313E-01	0.009
		925.00		-2.678E-02	1.257E+00	2.086E+00	1.828E-01	-0.013
		926.50		-6.021E-02	1.970E-01	3.150E-01	7.978E-02	-0.191
		946.00	*	-1.905E-01	3.402E-01	5.240E-01	9.868E-02	-0.364
		949.00		2.130E-01	5.311E-01	9.183E-01	8.050E-02	0.232
		980.50		1.863E-01	9.672E-01	1.631E+00	1.427E-01	0.114
		1394.10		-6.277E-01	1.365E+00	1.995E+00	1.298E+00	-0.315
PA-234M	+	766.42		-8.751E-01	1.283E+01	2.040E+01	1.042E+01	-0.043
		1001.03	*	4.201E+00	5.682E+00	1.006E+01	1.012E+00	0.417
U-235	+	89.95		2.375E+00	1.017E+00	1.193E+00	3.712E-01	1.990
		93.35		5.048E+00	1.560E+00	9.966E-01	2.827E-01	5.066
		105.00		1.157E+00	7.677E-01	1.186E+00	3.602E-01	0.976
		143.76	*	5.849E-02	1.678E-01	2.660E-01	4.851E-02	0.220
		163.35		7.437E-02	3.559E-01	6.135E-01	1.164E-01	0.121
NP-236	+	185.71		1.782E-01	5.685E-02	8.507E-02	7.140E-03	2.095
		205.31		1.938E-02	4.509E-01	6.826E-01	1.302E-01	0.028
		94.67		7.529E-02	8.228E-02	1.280E-01	1.246E-02	0.588
		98.44		2.916E-02	4.538E-02	7.497E-02	7.448E-03	0.389
		111.00		2.183E-02	9.975E-02	1.605E-01	1.717E-02	0.136
		160.31	*	-1.496E-02	5.896E-02	9.972E-02	8.621E-03	-0.150

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		7.585E-02	1.046E-01	1.731E-01	1.731E-02	0.438
		117.00	*	-5.367E-03	1.424E-01	2.253E-01	2.504E-02	-0.024
	+	209.75		2.559E+00	1.005E+00	1.265E+00	1.096E-01	2.022
		228.18		2.893E-02	1.852E-01	3.112E-01	2.743E-02	0.093
	+	277.60		2.726E-01	2.387E-01	2.931E-01	2.614E-02	0.930
AM-241		334.30		-4.144E-01	1.366E+00	1.901E+00	1.664E-01	-0.218
		59.54	*	-1.534E-03	4.899E-02	7.537E-02	6.393E-03	-0.020
		99.55		7.805E-02	1.076E-01	1.782E-01	1.781E-02	0.438
		103.76	*	-8.267E-02	6.636E-02	9.837E-02	1.008E-02	-0.840
		117.00		-5.521E-03	1.465E-01	2.317E-01	2.576E-02	-0.024
CM-243	+	209.75		2.522E+00	9.911E-01	1.247E+00	1.081E-01	2.022
		228.18		2.923E-02	1.871E-01	3.144E-01	2.772E-02	0.093
	+	277.60		2.748E-01	2.407E-01	2.954E-01	2.635E-02	0.930
		798.80		1.201E-01	1.933E-01	2.928E-01	2.965E-02	0.410
		1036.00		-1.766E-02	3.616E-01	5.915E-01	5.133E-02	-0.030
AM-246		1062.04		1.840E-01	3.028E-01	5.272E-01	4.546E-02	0.349
		1078.86	*	-1.182E-01	1.972E-01	3.021E-01	2.592E-02	-0.391
	+	278.00		1.130E+00	9.901E-01	1.194E+00	1.065E-01	0.946
		287.40		5.241E-01	1.135E+00	1.907E+00	1.703E-01	0.275
		402.60	*	-3.193E-02	3.714E-02	5.407E-02	4.387E-03	-0.591
CF-249		252.85		-1.831E-01	7.957E-01	1.297E+00	1.157E-01	-0.141
		333.44		-2.523E-01	1.896E-01	2.342E-01	2.051E-02	-1.077
		387.95	*	1.166E-03	4.110E-02	6.549E-02	5.253E-03	0.018
CF-251		176.60	*	-1.028E-02	9.634E-02	1.629E-01	1.347E-02	-0.063
		227.00		1.440E-02	3.117E-01	5.208E-01	4.586E-02	0.028
		285.00		-4.098E-01	1.591E+00	2.556E+00	2.281E-01	-0.160

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395005      *
* Acquisition date   : 2-FEB-2010 08:24:01 Detector SN#                   *
* Detector ID        : GAM21 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 02:00:25.57 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G245395005 Analyst initials: MXR1                   *
* Batch Number      : 944966 Sample Quantity : 1.4112E+02 GRAM            *
* Recovery          : 1.00000 Carrier Weight : 0.00000                    *
*****
*
*                                     QC DATA                               *
*
* Standard Weight   : 0.00000                                              *
* CALIB. DATE/TIME : 28-JUL-2009 10:09:51 MS Isotope :                    *
* MSD DPM           : 0.000 MSD Isotope :                                *
* LCS DPM           : 0.000 LCS Isotope :                                *
* LCSD DPM          : 0.000 LCSD Isotope :                                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.474E+01	3.677E+00	7.464E-01	0.000E+00
CD-109	2.826E+00	6.417E-01	8.166E-01	0.000E+00
SN-126	2.783E-01	6.319E-02	8.028E-02	0.000E+00
TL-208	5.502E-01	1.063E-01	5.908E-02	0.000E+00
BI-210	1.082E+00	6.898E-01	6.482E-01	0.000E+00
PB-210	1.082E+00	6.898E-01	6.482E-01	0.000E+00
PO-210	1.082E+00	6.885E-01	6.482E-01	0.000E+00
BI-211	3.784E+00	5.613E-01	3.089E-01	0.000E+00
PB-212	1.707E+00	1.967E-01	7.951E-02	0.000E+00
PO-212	1.707E+00	1.967E-01	7.951E-02	0.000E+00
BI-214	1.207E+00	2.257E-01	1.189E-01	0.000E+00
PB-214	1.316E+00	2.065E-01	1.078E-01	0.000E+00
PO-214	1.316E+00	2.065E-01	1.078E-01	0.000E+00
PO-216	1.707E+00	1.967E-01	7.951E-02	0.000E+00
PO-218	1.316E+00	2.065E-01	1.078E-01	0.000E+00
RA-224	4.798E+00	1.442E+00	9.072E-01	0.000E+00
RA-226	1.207E+00	2.257E-01	1.189E-01	0.000E+00
AC-228	2.006E+00	3.861E-01	2.161E-01	0.000E+00
RA-228	2.006E+00	3.861E-01	2.161E-01	0.000E+00
TH-228	1.731E+00	1.994E-01	8.061E-02	0.000E+00
TH-230	1.207E+00	2.257E-01	1.189E-01	0.000E+00
TH-232	2.006E+00	3.861E-01	2.161E-01	0.000E+00
TH-234	3.082E+00	1.098E+00	7.504E-01	0.000E+00
U-234	1.207E+00	2.257E-01	1.189E-01	0.000E+00
NP-237	8.172E-01	2.485E-01	2.348E-01	0.000E+00
U-238	3.082E+00	1.098E+00	7.504E-01	0.000E+00
AM-243	2.819E-01	4.181E-02	4.486E-02	0.000E+00
ANH-511	1.188E-01	6.223E-02	4.619E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	7.996E-02	3.210E-01	5.754E-01	0.000E+00	NOT IDENT.
NA-22	5.532E-03	5.524E-02	9.252E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.175E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.295E-02	3.550E-02	6.412E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.317E-02	3.983E-02	0.000E+00	FAIL ABUN
SC-46	2.277E-02	4.745E-02	8.576E-02	0.000E+00	FAIL ABUN
V-48	-4.300E-02	8.814E-02	1.431E-01	0.000E+00	NOT IDENT.
CR-51	-2.622E-01	3.222E-01	5.160E-01	0.000E+00	NOT IDENT.
MN-52	5.477E-02	2.060E-01	3.679E-01	0.000E+00	NOT IDENT.
MN-54	-2.205E-02	4.359E-02	7.236E-02	0.000E+00	NOT IDENT.
CO-56	2.475E-02	4.484E-02	8.199E-02	0.000E+00	NOT IDENT.
CO-57	3.597E-03	1.746E-02	3.008E-02	0.000E+00	NOT IDENT.
CO-58	-1.930E-02	3.936E-02	6.505E-02	0.000E+00	NOT IDENT.
FE-59	9.518E-02	1.162E-01	2.115E-01	0.000E+00	NOT IDENT.
CO-60	2.004E-02	4.372E-02	7.985E-02	0.000E+00	NOT IDENT.
ZN-65	-4.370E-02	1.361E-01	1.887E-01	0.000E+00	NOT IDENT.
GE-68	2.066E-01	1.683E+00	2.879E+00	0.000E+00	NOT IDENT.
AS-73	1.019E-01	1.698E-01	3.183E-01	0.000E+00	NOT IDENT.
AS-74	9.169E-02	9.046E-02	1.685E-01	0.000E+00	NOT IDENT.
SE-75	-3.758E-03	4.055E-02	6.289E-02	0.000E+00	NOT IDENT.
BR-77	-1.065E+00	7.440E+00	1.281E+01	0.000E+00	FAIL ABUN
SR-82	-1.016E-01	4.387E-01	7.109E-01	0.000E+00	NOT IDENT.
RB-83	-9.229E-04	7.017E-02	1.222E-01	0.000E+00	NOT IDENT.
RB-84	-1.801E-02	7.273E-02	1.224E-01	0.000E+00	NOT IDENT.
KR-85	4.148E+00	6.846E+00	1.129E+01	0.000E+00	NOT IDENT.
SR-85	2.099E-02	3.464E-02	5.711E-02	0.000E+00	NOT IDENT.
RB-86	4.060E-01	1.017E+00	1.786E+00	0.000E+00	NOT IDENT.
Y-88	1.874E-02	4.081E-02	7.489E-02	0.000E+00	NOT IDENT.
ZR-88	-9.772E-03	3.142E-02	5.121E-02	0.000E+00	NOT IDENT.
Y-91	7.977E+00	2.448E+01	4.209E+01	0.000E+00	NOT IDENT.
NB-94	-6.301E-03	4.233E-02	7.028E-02	0.000E+00	NOT IDENT.
NB-95	-6.527E-03	4.647E-02	7.622E-02	0.000E+00	NOT IDENT.
NB-95M	-1.851E-02	1.088E-01	1.704E-01	0.000E+00	NOT IDENT.
ZR-95	7.090E-02	8.262E-02	1.491E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.397E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.312E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.835E+00	9.108E+00	1.423E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.903E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.834E-03	2.600E-02	4.664E-02	0.000E+00	FAIL ABUN
RH-102	-1.261E-03	2.833E-02	4.970E-02	0.000E+00	NOT IDENT.
RU-103	3.314E-02	4.135E-02	7.645E-02	0.000E+00	FAIL ABUN
RH-106	1.843E-01	3.606E-01	6.421E-01	0.000E+00	FAIL ABUN
RU-106	1.843E-01	3.601E-01	6.421E-01	0.000E+00	FAIL ABUN
AG-108M	8.936E-03	3.297E-02	5.970E-02	0.000E+00	NOT IDENT.
AG-110M	3.274E-02	4.184E-02	7.551E-02	0.000E+00	NOT IDENT.
IN-111	-2.958E-01	6.799E-01	1.033E+00	0.000E+00	NOT IDENT.
IN-113M	-2.374E-02	4.422E-02	7.057E-02	0.000E+00	NOT IDENT.
SN-113	-2.374E-02	4.422E-02	7.057E-02	0.000E+00	NOT IDENT.
IN-114M	-4.829E-02	1.386E-01	2.461E-01	0.000E+00	NOT IDENT.
CD-115	-7.905E+00	7.607E+00	1.194E+01	0.000E+00	NOT IDENT.
SN-117M	-5.658E-03	3.753E-02	6.852E-02	0.000E+00	NOT IDENT.
SB-122	-4.926E-01	1.617E+00	2.718E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.433E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-5.970E-03	2.059E-02	3.733E-02	0.000E+00	NOT IDENT.
I-124	4.753E-01	5.405E-01	9.440E-01	0.000E+00	NOT IDENT.
SB-124	-2.872E-02	7.922E-02	1.197E-01	0.000E+00	FAIL ABUN
SB-125	6.304E-02	8.905E-02	1.661E-01	0.000E+00	FAIL ABUN
TE-125M	2.875E+00	6.246E+00	1.099E+01	0.000E+00	NOT IDENT.
I-126	1.275E-01	1.944E-01	3.480E-01	0.000E+00	NOT IDENT.
SB-126	-1.519E-01	1.638E-01	2.355E-01	0.000E+00	FAIL ABUN
SB-127	-4.315E-01	1.114E+00	1.795E+00	0.000E+00	NOT IDENT.
XE-127	-1.863E-02	3.570E-02	6.237E-02	0.000E+00	NOT IDENT.
I-131	3.498E-02	9.653E-02	1.676E-01	0.000E+00	NOT IDENT.
TE-132	6.908E-02	4.240E-01	7.590E-01	0.000E+00	NOT IDENT.
BA-133	-4.614E-03	4.467E-02	6.650E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.193E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	1.104E-01	1.204E-01	0.000E+00	FAIL ABUN
CS-135	1.524E-01	1.469E-01	2.472E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.249E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.466E-02	1.208E-01	1.981E-01	0.000E+00	FAIL ABUN
BA-137M	-1.008E-02	3.968E-02	6.557E-02	0.000E+00	NOT IDENT.
CS-137	-1.065E-02	4.194E-02	6.932E-02	0.000E+00	NOT IDENT.
CE-139	-8.037E-03	2.197E-02	3.954E-02	0.000E+00	NOT IDENT.
BA-140	1.748E-02	2.575E-01	4.497E-01	0.000E+00	NOT IDENT.
LA-140	-9.939E-02	1.145E-01	1.654E-01	0.000E+00	FAIL ABUN
CE-141	-3.893E-02	4.975E-02	7.941E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.829E+01	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-2.257E-02	1.515E-01	2.535E-01	0.000E+00	NOT IDENT.
PM-144	8.925E-03	4.070E-02	6.992E-02	0.000E+00	NOT IDENT.
PR-144	6.044E-01	2.756E+00	4.735E+00	0.000E+00	NOT IDENT.
PM-146	2.341E-02	4.277E-02	7.860E-02	0.000E+00	NOT IDENT.
ND-147	-9.019E-02	5.197E-01	8.894E-01	0.000E+00	FAIL ABUN
PM-149	-9.934E+00	5.502E+01	9.422E+01	0.000E+00	NOT IDENT.
EU-152	1.929E-02	9.558E-02	1.646E-01	0.000E+00	NOT IDENT.
GD-153	-4.295E-02	5.565E-02	8.519E-02	0.000E+00	FAIL ABUN
EU-154	-2.111E-03	1.548E-01	2.556E-01	0.000E+00	NOT IDENT.
EU-155	1.113E-01	6.932E-02	1.279E-01	0.000E+00	FAIL ABUN
TB-160	5.921E-03	1.420E-01	2.472E-01	0.000E+00	FAIL ABUN
HO-166M	-1.705E-03	6.921E-02	1.160E-01	0.000E+00	FAIL ABUN
TM-171	-6.156E+00	1.146E+01	1.862E+01	0.000E+00	NOT IDENT.
LU-176	2.850E-03	2.398E-02	3.723E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.219E+00	1.690E+00	0.000E+00	FAIL ABUN
LU-177M	3.815E-02	1.848E-01	3.123E-01	0.000E+00	FAIL ABUN
HF-181	-3.944E-03	4.044E-02	7.052E-02	0.000E+00	NOT IDENT.
W-181	5.900E-02	1.370E-01	2.334E-01	0.000E+00	NOT IDENT.
TA-182	5.874E-02	2.696E-01	4.577E-01	0.000E+00	FAIL ABUN
RE-183	8.999E-02	8.063E-02	1.543E-01	0.000E+00	FAIL ABUN
RE-184	-4.855E-02	2.067E-01	3.581E-01	0.000E+00	NOT IDENT.
OS-185	-6.763E-03	4.737E-02	7.940E-02	0.000E+00	NOT IDENT.
RE-188	1.360E-01	1.252E-01	2.398E-01	0.000E+00	NOT IDENT.
W-188	-6.400E+00	7.406E+00	1.054E+01	0.000E+00	FAIL ABUN
IR-192	-1.476E-02	3.143E-02	5.200E-02	0.000E+00	FAIL ABUN
AU-195	1.980E-01	1.438E-01	2.639E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.873E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	7.889E-01	3.757E+00	6.937E+00	0.000E+00	NOT IDENT.
TL-202	1.362E-02	6.199E-02	1.118E-01	0.000E+00	NOT IDENT.
HG-203	2.242E-02	3.480E-02	5.715E-02	0.000E+00	FAIL ABUN
BI-207	-1.660E-02	6.936E-02	1.145E-01	0.000E+00	FAIL ABUN
TL-207	-2.518E-01	6.757E-01	9.903E-01	0.000E+00	FAIL ABUN
PO-209	-1.964E+00	8.203E+00	1.380E+01	0.000E+00	NOT IDENT.
PB-211	3.111E-01	9.201E-01	1.545E+00	0.000E+00	NOT IDENT.
BI-212	6.647E-01	6.333E-01	7.751E-01	0.000E+00	FAIL ABUN
PO-215	-2.518E-01	6.757E-01	9.903E-01	0.000E+00	FAIL ABUN
RN-219	-1.314E-01	4.042E-01	6.545E-01	0.000E+00	FAIL ABUN
RN-220	-6.738E+00	2.765E+01	4.686E+01	0.000E+00	NOT IDENT.
RA-223	-2.518E-01	6.757E-01	9.903E-01	0.000E+00	FAIL ABUN
AC-227	1.148E-02	3.333E-01	5.857E-01	0.000E+00	FAIL ABUN
TH-227	1.148E-02	3.333E-01	5.857E-01	0.000E+00	FAIL ABUN
TH-229	-6.013E-02	3.988E-01	7.142E-01	0.000E+00	FAIL ABUN
PA-231	-3.338E-01	1.317E+00	2.244E+00	0.000E+00	FAIL ABUN
TH-231	-2.518E-01	6.757E-01	9.903E-01	0.000E+00	FAIL ABUN
U-231	-2.549E-01	5.602E-01	8.763E-01	0.000E+00	FAIL ABUN
PA-233	-6.752E-03	5.800E-02	9.876E-02	0.000E+00	FAIL ABUN
PA-234	-1.905E-01	3.334E-01	5.311E-01	0.000E+00	FAIL ABUN
PA-234M	4.201E+00	5.568E+00	1.019E+01	0.000E+00	NOT IDENT.
U-235	5.849E-02	1.644E-01	2.803E-01	0.000E+00	FAIL ABUN
NP-236	-1.496E-02	5.778E-02	1.048E-01	0.000E+00	NOT IDENT.
NP-239	-5.367E-03	1.396E-01	2.383E-01	0.000E+00	FAIL ABUN
AM-241	-1.534E-03	4.801E-02	8.079E-02	0.000E+00	NOT IDENT.
CM-243	-8.267E-02	6.504E-02	1.043E-01	0.000E+00	FAIL ABUN
AM-246	-1.182E-01	1.932E-01	3.054E-01	0.000E+00	NOT IDENT.
CM-247	-3.193E-02	3.640E-02	5.579E-02	0.000E+00	FAIL ABUN
CF-249	1.166E-03	4.028E-02	6.763E-02	0.000E+00	NOT IDENT.
CF-251	-1.028E-02	9.441E-02	1.709E-01	0.000E+00	NOT IDENT.

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*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395005.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:24:01.
Sample ID          : G245395005          Sample quantity   : 1.41120E+02 GRAM
Detector name      : GAM21              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:25.57 0.4%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity        : 5.00000
Batch ID           : 944966             Detector SN#       :
Matrix Spike ID    :                   LCS ID              : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1004	10.67*	7.205E-01	3.474E+01	3.474E+01	10.80
CD-109	88.03	315	3.72*	8.136E+00	2.768E+00	2.826E+00	23.17
SN-126	64.28	360	9.60	8.182E+00	1.220E+00	1.220E+00	35.04
	86.94	315	8.90	8.136E+00	1.157E+00	1.157E+00	46.62
	87.57	315	37.00*	8.136E+00	2.783E-01	2.783E-01	23.17
TL-208	277.35	55	6.80	3.801E+00	5.652E-01	5.652E-01	88.03
	510.84	91	21.60	2.039E+00	5.502E-01	5.502E-01	54.08
	583.14	310	84.20*	1.778E+00	5.502E-01	5.502E-01	19.71
	860.37	26	12.46	1.201E+00	4.623E-01	4.623E-01	136.67
BI-210	46.50	121	4.05*	7.332E+00	1.081E+00	1.082E+00	65.06
PB-210	46.50	121	4.05*	7.332E+00	1.081E+00	1.082E+00	65.06
PO-210	46.50	121	4.05*	7.332E+00	1.081E+00	1.082E+00	64.94
BI-211	72.87	-----	1.27	8.278E+00	-----	Line Not Found	-----
	351.07	552	12.94*	2.997E+00	3.784E+00	3.784E+00	15.14
PB-212	74.81	579	10.70	8.275E+00	1.739E+00	1.739E+00	17.79
	77.11	1136	18.00	8.264E+00	2.030E+00	2.030E+00	11.76
	87.30	315	8.00	8.136E+00	1.287E+00	1.287E+00	25.24
	238.63	1256	44.60*	4.387E+00	1.707E+00	1.707E+00	11.75
	300.09	77	3.41	3.520E+00	1.706E+00	1.706E+00	53.99
PO-212	74.81	579	10.70	8.275E+00	1.739E+00	1.739E+00	17.79
	77.11	1136	18.00	8.264E+00	2.030E+00	2.030E+00	11.76
	87.30	315	8.00	8.136E+00	1.287E+00	1.287E+00	25.24
	115.19	-----	0.60	7.423E+00	-----	Line Not Found	-----
	238.63	1256	44.60*	4.387E+00	1.707E+00	1.707E+00	11.75
	300.09	77	3.41	3.520E+00	1.706E+00	1.706E+00	53.99
BI-214	609.31	357	46.30*	1.700E+00	1.207E+00	1.207E+00	19.08
	1120.29	87	15.10	9.297E-01	1.648E+00	1.648E+00	38.03
	1764.49	46	15.80	5.984E-01	1.304E+00	1.304E+00	40.18
PB-214	74.81	579	6.21	8.275E+00	2.996E+00	2.996E+00	16.85
	77.11	1136	10.50	8.264E+00	3.481E+00	3.481E+00	14.01
	87.30	315	4.67	8.136E+00	2.205E+00	2.205E+00	24.42
	241.98	309	7.49	4.335E+00	2.531E+00	2.531E+00	31.17

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	332	19.20	3.577E+00	1.284E+00	1.284E+00	18.37
	351.92	552	37.20*	2.997E+00	1.316E+00	1.316E+00	16.01
	74.81	579	6.21	8.275E+00	2.996E+00	2.996E+00	16.85
	77.11	1136	10.50	8.264E+00	3.481E+00	3.481E+00	14.01
	87.30	315	4.67	8.136E+00	2.205E+00	2.205E+00	24.42
	241.98	309	7.49	4.335E+00	2.531E+00	2.531E+00	31.17
PO-216	295.21	332	19.20	3.577E+00	1.284E+00	1.284E+00	18.37
	351.92	552	37.20*	2.997E+00	1.316E+00	1.316E+00	16.01
	74.81	579	10.70	8.275E+00	1.739E+00	1.739E+00	17.79
	77.11	1136	18.00	8.264E+00	2.030E+00	2.030E+00	11.76
	87.30	315	8.00	8.136E+00	1.287E+00	1.287E+00	25.24
	238.63	1256	44.60*	4.387E+00	1.707E+00	1.707E+00	11.75
PO-218	300.09	77	3.41	3.520E+00	1.706E+00	1.706E+00	53.99
	74.81	579	6.21	8.275E+00	2.996E+00	2.996E+00	16.85
	77.11	1136	10.50	8.264E+00	3.481E+00	3.481E+00	14.01
	87.30	315	4.67	8.136E+00	2.205E+00	2.205E+00	24.42
	241.98	309	7.49	4.335E+00	2.531E+00	2.531E+00	31.17
	295.21	332	19.20	3.577E+00	1.284E+00	1.284E+00	18.37
RA-224	351.92	552	37.20*	2.997E+00	1.316E+00	1.316E+00	16.01
RA-226	240.98	309	3.95*	4.335E+00	4.798E+00	4.798E+00	30.66
	609.31	357	46.30*	1.700E+00	1.207E+00	1.207E+00	19.08
	1120.29	87	15.10	9.297E-01	1.648E+00	1.648E+00	38.03
AC-228	1764.49	46	15.80	5.984E-01	1.304E+00	1.304E+00	40.18
	338.32	176	11.40	3.120E+00	1.318E+00	1.318E+00	50.34
	911.07	237	27.70*	1.136E+00	2.006E+00	2.006E+00	19.64
RA-228	969.11	129	16.60	1.070E+00	1.937E+00	1.937E+00	33.95
	338.32	176	11.40	3.120E+00	1.318E+00	1.318E+00	50.34
	911.07	237	27.70*	1.136E+00	2.006E+00	2.006E+00	19.64
TH-228	969.11	129	16.60	1.070E+00	1.937E+00	1.937E+00	33.95
	74.81	579	10.70	8.275E+00	1.739E+00	1.763E+00	15.18
	77.11	1136	18.00	8.264E+00	2.030E+00	2.059E+00	11.76
	87.30	315	8.00	8.136E+00	1.287E+00	1.305E+00	23.17
	238.63	1256	44.60*	4.387E+00	1.707E+00	1.731E+00	11.75
TH-230	300.09	77	3.41	3.520E+00	1.706E+00	1.730E+00	79.50
	609.31	357	46.30*	1.700E+00	1.207E+00	1.207E+00	19.08
	1120.29	87	15.10	9.297E-01	1.648E+00	1.648E+00	38.03
TH-232	1764.49	46	15.80	5.984E-01	1.304E+00	1.304E+00	40.18
	338.32	176	11.40	3.120E+00	1.318E+00	1.318E+00	30.09
	911.07	237	27.70*	1.136E+00	2.006E+00	2.006E+00	19.64
TH-234	969.11	129	16.60	1.070E+00	1.937E+00	1.937E+00	33.95
	63.29	360	3.80*	8.182E+00	3.082E+00	3.082E+00	36.34
	92.38	685	5.41	8.025E+00	4.199E+00	4.199E+00	22.28
U-234	609.31	357	46.30*	1.700E+00	1.207E+00	1.207E+00	19.08
	1120.29	87	15.10	9.297E-01	1.648E+00	1.648E+00	38.03
	1764.49	46	15.80	5.984E-01	1.304E+00	1.304E+00	40.18
NP-237	86.50	315	12.60*	8.136E+00	8.172E-01	8.172E-01	31.03
	95.87	-----	2.60	7.953E+00	-----	Line Not Found	-----
U-238	63.29	360	3.80*	8.182E+00	3.082E+00	3.082E+00	36.34
	92.38	685	5.41	8.025E+00	4.199E+00	4.199E+00	15.61

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	579	66.00*	8.275E+00	2.819E-01	2.819E-01	15.13
	86.72	315	0.34	8.136E+00	3.064E+01	3.064E+01	23.17
	117.66	-----	0.55	7.349E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.613E+00	-----	Line Not Found	-----
ANH-511	511.00	91	100.00*	2.039E+00	1.188E-01	1.188E-01	53.44

Flag: "*" = Keyline

Total number of lines in spectrum 33
Number of unidentified lines 1
Number of lines tentatively identified by NID 32 96.97%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.474E+01	3.474E+01	0.375E+01	10.80	
CD-109	464.00D	1.02	2.768E+00	2.826E+00	0.655E+00	23.17	
SN-126	1.00E+05Y	1.00	2.783E-01	2.783E-01	0.645E-01	23.17	
TL-208	1.41E+10Y	1.00	5.502E-01	5.502E-01	1.085E-01	19.71	
BI-210	22.26Y	1.00	1.081E+00	1.082E+00	0.704E+00	65.06	
PB-210	22.26Y	1.00	1.081E+00	1.082E+00	0.704E+00	65.06	
PO-210	22.26Y	1.00	1.081E+00	1.082E+00	0.703E+00	64.94	
BI-211	7.04E+08Y	1.00	3.784E+00	3.784E+00	0.573E+00	15.14	
PB-212	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.201E+00	11.75	
PO-212	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.201E+00	11.75	
BI-214	1600.00Y	1.00	1.207E+00	1.207E+00	0.230E+00	19.08	
PB-214	1600.00Y	1.00	1.316E+00	1.316E+00	0.211E+00	16.01	
PO-214	1600.00Y	1.00	1.316E+00	1.316E+00	0.211E+00	16.01	
PO-216	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.201E+00	11.75	
PO-218	1600.00Y	1.00	1.316E+00	1.316E+00	0.211E+00	16.01	
RA-224	1.41E+10Y	1.00	4.798E+00	4.798E+00	1.471E+00	30.66	
RA-226	1600.00Y	1.00	1.207E+00	1.207E+00	0.230E+00	19.08	
AC-228	1.41E+10Y	1.00	2.006E+00	2.006E+00	0.394E+00	19.64	
RA-228	1.41E+10Y	1.00	2.006E+00	2.006E+00	0.394E+00	19.64	
TH-228	1.91Y	1.01	1.707E+00	1.731E+00	0.203E+00	11.75	
TH-230	4.47E+09Y	1.00	1.207E+00	1.207E+00	0.230E+00	19.08	
TH-232	1.41E+10Y	1.00	2.006E+00	2.006E+00	0.394E+00	19.64	
TH-234	4.47E+09Y	1.00	3.082E+00	3.082E+00	1.120E+00	36.34	
U-234	4.47E+09Y	1.00	1.207E+00	1.207E+00	0.230E+00	19.08	
NP-237	2.14E+06Y	1.00	8.172E-01	8.172E-01	2.535E-01	31.03	
U-238	4.47E+09Y	1.00	3.082E+00	3.082E+00	1.120E+00	36.34	
AM-243	7380.00Y	1.00	2.819E-01	2.819E-01	0.427E-01	15.13	
ANH-511	1.00E+09Y	1.00	1.188E-01	1.188E-01	0.635E-01	53.44	

Total Activity : 7.916E+01 7.925E+01

Grand Total Activity : 7.916E+01 7.925E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

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It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	83.97	197	330	1.21	167.88	165	14	2.73E-02	31.5	8.19E+00	T
5	90.07	195	293	0.85	180.07	178	14	2.71E-02	29.4	8.08E+00	T
0	128.71	103	234	0.75	257.33	254	6	1.43E-02	51.1	7.02E+00	T
0	185.85	197	251	0.96	371.55	368	7	2.74E-02	30.8	5.45E+00	T
0	208.99	154	220	0.79	417.82	413	9	2.14E-02	38.3	4.94E+00	T
0	269.84	104	172	1.11	539.48	534	10	1.44E-02	51.4	3.90E+00	T
0	328.16	38	97	0.90	656.09	653	6	5.24E-03	89.2	3.22E+00	T
0	463.23	92	46	1.28	926.16	921	11	1.28E-02	35.9	2.26E+00	T
0	727.17	42	87	1.13	1454.04	1449	12	5.81E-03	96.5	1.42E+00	T
0	796.12	48	76	0.70	1591.97	1584	16	6.71E-03	85.6	1.30E+00	T
0	1728.74	16	7	1.08	3458.34	3449	14	2.22E-03	86.2	6.11E-01	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395005.CNF;1
* Acquisition date   : 2-FEB-2010 08:24:01.  Detector SN#      :
* Detector ID        : GAM21                Sensitivity        : 5.00000
* Geometry           : CAN                  Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00        Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:25.57        Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00  Nuclide Library : SOLID
* Sample ID          : G245395005          Analyst initials: MXR1
* Batch Number       : 944966              Sample Quantity : 1.41120E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 28-JUL-2009 10:09:51.9MS Isotope      :
* MSD ID              :                      MSD Isotope      :
* LCS ID              : 1032-A              LCS Isotope      :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.474E+01	3.752E+00	7.433E-01	6.346E-02	46.735
CD-109	2.826E+00	6.548E-01	7.675E-01	7.222E-02	3.682
SN-126	2.783E-01	6.448E-02	7.545E-02	7.072E-03	3.688
TL-208	5.502E-01	1.085E-01	5.770E-02	6.285E-03	9.535
BI-210	1.082E+00	7.039E-01	6.018E-01	5.739E-02	1.798
PB-210	1.082E+00	7.039E-01	6.018E-01	5.739E-02	1.798
PO-210	1.082E+00	7.026E-01	6.018E-01	5.223E-02	1.798
BI-211	3.784E+00	5.728E-01	2.985E-01	2.694E-02	12.674
PB-212	1.707E+00	2.007E-01	7.623E-02	7.580E-03	22.399
PO-212	1.707E+00	2.007E-01	7.623E-02	7.580E-03	22.399
BI-214	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
PB-214	1.316E+00	2.108E-01	1.041E-01	1.085E-02	12.638
PO-214	1.316E+00	2.108E-01	1.041E-01	1.085E-02	12.638
PO-216	1.707E+00	2.007E-01	7.623E-02	7.580E-03	22.399
PO-218	1.316E+00	2.108E-01	1.041E-01	1.085E-02	12.638
RA-224	4.798E+00	1.471E+00	8.700E-01	7.730E-02	5.516
RA-226	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
AC-228	2.006E+00	3.939E-01	2.131E-01	2.418E-02	9.415

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	2.006E+00	3.939E-01	2.131E-01	2.418E-02	9.415
TH-228	1.731E+00	2.035E-01	7.729E-02	7.685E-03	22.399
TH-230	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
TH-232	2.006E+00	3.939E-01	2.131E-01	2.418E-02	9.415
TH-234	3.082E+00	1.120E+00	7.009E-01	1.238E-01	4.397
U-234	1.207E+00	2.303E-01	1.162E-01	1.373E-02	10.387
NP-237	8.172E-01	2.535E-01	2.207E-01	4.994E-02	3.703
U-238	3.082E+00	1.120E+00	7.009E-01	1.238E-01	4.397
AM-243	2.819E-01	4.266E-02	4.203E-02	3.562E-03	6.707
ANH-511	1.188E-01	6.350E-02	4.498E-02	4.312E-03	2.642

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.996E-02		3.275E-01	5.596E-01	5.482E-02	0.143
NA-22	5.532E-03		5.637E-02	9.187E-02	7.537E-03	0.060
NA-24	1.930E-02		1.110E-01	Half-Life	too short	
AL-26	1.295E-02		3.623E-02	6.416E-02	5.310E-03	0.202
TI-44	3.747E-01	+	4.405E-02	3.736E-02	3.253E-03	10.030
SC-46	2.277E-02		4.842E-02	8.450E-02	7.514E-03	0.269
V-48	-4.300E-02		8.994E-02	1.413E-01	1.236E-02	-0.304
CR-51	-2.622E-01		3.288E-01	4.976E-01	4.626E-02	-0.527
MN-52	5.477E-02		2.102E-01	3.662E-01	3.024E-02	0.150
MN-54	-2.205E-02		4.448E-02	7.120E-02	6.900E-03	-0.310
CO-56	2.475E-02		4.576E-02	8.070E-02	7.692E-03	0.307
CO-57	3.597E-03		1.781E-02	2.846E-02	3.269E-03	0.126
CO-58	-1.930E-02		4.016E-02	6.397E-02	6.401E-03	-0.302
FE-59	9.518E-02		1.186E-01	2.093E-01	1.932E-02	0.455
CO-60	2.004E-02		4.462E-02	7.937E-02	6.442E-03	0.252
ZN-65	-4.370E-02		1.389E-01	1.869E-01	1.584E-02	-0.234
GE-68	2.066E-01		1.717E+00	2.848E+00	2.445E-01	0.073
AS-73	1.019E-01		1.733E-01	2.963E-01	2.399E-02	0.344
AS-74	9.169E-02		9.231E-02	1.647E-01	1.728E-02	0.557
SE-75	-3.758E-03		4.138E-02	6.042E-02	5.424E-03	-0.062
BR-77	-1.065E+00		7.591E+00	1.248E+01	1.210E+00	-0.085
SR-82	-1.016E-01		4.477E-01	6.984E-01	7.230E-02	-0.145
RB-83	-9.229E-04		7.160E-02	1.190E-01	1.154E-02	-0.008
RB-84	-1.801E-02		7.422E-02	1.206E-01	1.087E-02	-0.149
KR-85	4.148E+00		6.985E+00	1.099E+01	1.058E+00	0.377
SR-85	2.099E-02		3.534E-02	5.562E-02	5.352E-03	0.377
RB-86	4.060E-01		1.038E+00	1.767E+00	1.517E-01	0.230
Y-88	1.874E-02		4.165E-02	7.496E-02	6.189E-03	0.250
ZR-88	-9.772E-03		3.206E-02	4.960E-02	3.951E-03	-0.197
Y-91	7.977E+00		2.497E+01	4.174E+01	3.439E+00	0.191
NB-94	-6.301E-03		4.319E-02	6.890E-02	7.503E-03	-0.091
NB-95	-6.527E-03		4.742E-02	7.486E-02	7.823E-03	-0.087
NB-95M	-1.851E-02		1.110E-01	1.633E-01	1.645E-02	-0.113

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	7.090E-02		8.431E-02	1.464E-01	1.648E-02	0.484
NB-97	2.405E-02		1.733E-02	Half-Life	too short	
ZR-97	6.720E-01		2.710E-01	Half-Life	too short	
MO-99	-4.835E+00		9.294E+00	1.396E+01	2.294E+00	-0.346
TC-99M	-5.257E+08		4.542E+08	Half-Life	too short	
RH-101	-1.834E-03		2.653E-02	4.455E-02	3.805E-03	-0.041
RH-102	-1.261E-03		2.891E-02	4.833E-02	4.415E-03	-0.026
RU-103	3.314E-02		4.220E-02	7.440E-02	1.091E-02	0.445
RH-106	1.843E-01		3.680E-01	6.278E-01	9.296E-02	0.294
RU-106	1.843E-01		3.675E-01	6.278E-01	6.736E-02	0.294
AG-108M	8.936E-03		3.364E-02	5.794E-02	5.167E-03	0.154
AG-110M	3.274E-02		4.269E-02	7.392E-02	8.292E-03	0.443
IN-111	-2.958E-01		6.938E-01	9.911E-01	8.824E-02	-0.298
IN-113M	-2.374E-02		4.513E-02	6.834E-02	5.628E-03	-0.347
SN-113	-2.374E-02		4.513E-02	6.834E-02	5.628E-03	-0.347
IN-114M	-4.829E-02		1.414E-01	2.349E-01	1.985E-02	-0.206
CD-115	-7.905E+00		7.762E+00	1.164E+01	1.139E+00	-0.679
SN-117M	-5.658E-03		3.830E-02	6.516E-02	5.735E-03	-0.087
SB-122	-4.926E-01		1.650E+00	2.652E+00	2.700E-01	-0.186
I-123	-2.446E-01		4.302E-01	Half-Life	too short	
TE-123M	-5.970E-03		2.101E-02	3.550E-02	3.129E-03	-0.168
I-124	4.753E-01		5.516E-01	9.225E-01	9.741E-02	0.515
SB-124	-2.872E-02		8.084E-02	1.196E-01	1.041E-02	-0.240
SB-125	6.304E-02		9.087E-02	1.612E-01	1.395E-02	0.391
TE-125M	2.875E+00		6.373E+00	1.037E+01	1.247E+00	0.277
I-126	1.275E-01		1.984E-01	3.408E-01	3.759E-02	0.374
SB-126	-1.519E-01		1.671E-01	2.310E-01	2.492E-02	-0.658
SB-127	-4.315E-01		1.136E+00	1.759E+00	2.277E-01	-0.245
XE-127	-1.863E-02		3.642E-02	5.960E-02	5.121E-03	-0.313
I-131	3.498E-02		9.850E-02	1.621E-01	1.440E-02	0.216
TE-132	6.908E-02		4.327E-01	7.270E-01	1.134E-01	0.095
BA-133	-4.614E-03		4.558E-02	6.427E-02	8.447E-03	-0.072
I-133	-9.491E-04		1.119E-03	Half-Life	too short	
CS-134	1.306E-01	+	1.126E-01	1.184E-01	1.209E-02	1.104
CS-135	1.524E-01		1.499E-01	2.376E-01	2.433E-02	0.642
I-135	-4.136E+07		1.658E+08	Half-Life	too short	
CS-136	-3.466E-02		1.233E-01	1.959E-01	1.766E-02	-0.177
BA-137M	-1.008E-02		4.049E-02	6.420E-02	7.091E-03	-0.157
CS-137	-1.065E-02		4.280E-02	6.787E-02	7.504E-03	-0.157
CE-139	-8.037E-03		2.242E-02	3.763E-02	3.059E-03	-0.214
BA-140	1.748E-02		2.628E-01	4.384E-01	1.468E-01	0.040
LA-140	-9.939E-02		1.168E-01	1.651E-01	1.380E-02	-0.602
CE-141	-3.893E-02		5.077E-02	7.538E-02	7.558E-03	-0.516
CE-143	1.362E-04		3.994E-05	Half-Life	too short	
CE-144	-2.257E-02		1.546E-01	2.403E-01	4.046E-02	-0.094
PM-144	8.925E-03		4.153E-02	6.854E-02	7.486E-03	0.130
PR-144	6.044E-01		2.812E+00	4.641E+00	5.068E-01	0.130
PM-146	2.341E-02		4.364E-02	7.636E-02	8.332E-03	0.307

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-9.019E-02		5.303E-01	8.668E-01	1.359E-01	-0.104
PM-149	-9.934E+00		5.614E+01	9.066E+01	1.424E+01	-0.110
EU-152	1.929E-02		9.753E-02	1.590E-01	1.458E-02	0.121
GD-153	-4.295E-02		5.678E-02	8.023E-02	7.926E-03	-0.535
EU-154	-2.111E-03		1.579E-01	2.538E-01	2.789E-02	-0.008
EU-155	1.113E-01		7.074E-02	1.207E-01	1.258E-02	0.923
TB-160	5.921E-03		1.449E-01	2.435E-01	2.204E-02	0.024
HO-166M	-1.705E-03		7.063E-02	1.137E-01	1.233E-02	-0.015
TM-171	-6.156E+00		1.169E+01	1.741E+01	1.403E+00	-0.354
LU-176	2.850E-03		2.447E-02	3.588E-02	3.195E-03	0.079
LU-177	3.165E+00	+	1.244E+00	1.616E+00	1.398E-01	1.959
LU-177M	3.815E-02		1.885E-01	3.028E-01	2.507E-02	0.126
HF-181	-3.944E-03		4.127E-02	6.859E-02	6.328E-03	-0.058
W-181	5.900E-02		1.398E-01	2.181E-01	1.743E-02	0.271
TA-182	5.874E-02		2.751E-01	4.540E-01	3.738E-02	0.129
RE-183	8.999E-02		8.228E-02	1.468E-01	1.242E-02	0.613
RE-184	-4.855E-02		2.110E-01	3.437E-01	3.068E-02	-0.141
OS-185	-6.763E-03		4.834E-02	7.770E-02	8.490E-03	-0.087
RE-188	1.360E-01		1.278E-01	2.279E-01	2.077E-02	0.597
W-188	-6.400E+00		7.557E+00	1.015E+01	9.060E-01	-0.631
IR-192	-1.476E-02		3.207E-02	5.014E-02	4.456E-03	-0.294
AU-195	1.980E-01		1.467E-01	2.486E-01	2.476E-02	0.796
TL-200	-2.914E-05		9.556E-05	Half-Life too short		
TL-201	7.889E-01		3.834E+00	6.604E+00	5.378E-01	0.119
TL-202	1.362E-02		6.326E-02	1.086E-01	9.394E-03	0.125
HG-203	2.242E-02		3.551E-02	5.496E-02	5.031E-03	0.408
BI-207	-1.660E-02		7.077E-02	1.132E-01	9.760E-03	-0.147
TL-207	-2.518E-01		6.895E-01	9.554E-01	1.701E-01	-0.264
PO-209	-1.964E+00		8.371E+00	1.360E+01	1.193E+00	-0.144
PB-211	3.111E-01		9.389E-01	1.497E+00	9.372E-01	0.208
BI-212	6.647E-01	+	6.462E-01	7.605E-01	9.042E-02	0.874
PO-215	-2.518E-01		6.895E-01	9.554E-01	1.701E-01	-0.264
RN-219	-1.314E-01		4.125E-01	6.341E-01	9.344E-02	-0.207
RN-220	-6.738E+00		2.822E+01	4.570E+01	4.584E+00	-0.147
RA-223	-2.518E-01		6.895E-01	9.554E-01	1.701E-01	-0.264
AC-227	1.148E-02		3.401E-01	5.623E-01	8.730E-02	0.020
TH-227	1.148E-02		3.401E-01	5.623E-01	1.024E-01	0.020
TH-229	-6.013E-02		4.070E-01	6.818E-01	5.789E-02	-0.088
PA-231	-3.338E-01		1.344E+00	2.159E+00	3.315E-01	-0.155
TH-231	-2.518E-01		6.895E-01	9.554E-01	1.701E-01	-0.264
U-231	-2.549E-01		5.716E-01	8.251E-01	8.081E-02	-0.309
PA-233	-6.752E-03		5.919E-02	9.520E-02	8.688E-03	-0.071
PA-234	-1.905E-01		3.402E-01	5.240E-01	9.868E-02	-0.364
PA-234M	4.201E+00		5.682E+00	1.006E+01	1.012E+00	0.417
U-235	5.849E-02		1.678E-01	2.660E-01	4.851E-02	0.220
NP-236	-1.496E-02		5.896E-02	9.972E-02	8.621E-03	-0.150
NP-239	-5.367E-03		1.424E-01	2.253E-01	2.504E-02	-0.024
AM-241	-1.534E-03		4.899E-02	7.537E-02	6.393E-03	-0.020

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-8.267E-02		6.636E-02	9.837E-02	1.008E-02	-0.840
AM-246	-1.182E-01		1.972E-01	3.021E-01	2.592E-02	-0.391
CM-247	-3.193E-02		3.714E-02	5.407E-02	4.387E-03	-0.591
CF-249	1.166E-03		4.110E-02	6.549E-02	5.253E-03	0.018
CF-251	-1.028E-02		9.634E-02	1.629E-01	1.347E-02	-0.063

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395005          *
* Acquisition date   : 2-FEB-2010 08:24:01 Detector SN# :                  *
* Detector ID        : GAM21 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                       *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000            *
* Elapsed real time  : 0 02:00:25.57 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395005 Analyst initials: MXR1                 *
* Batch Number       : 944966 Sample Quantity : 1.4112E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                 *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 28-JUL-2009 10:09:51 MS Isotope :                  *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.474E+01	3.677E+00	3.734E-01	1.876E+00
CD-109	2.826E+00	6.417E-01	4.085E-01	3.274E-01
SN-126	2.783E-01	6.319E-02	4.016E-02	3.224E-02
TL-208	5.502E-01	1.063E-01	2.956E-02	5.423E-02
BI-210	1.082E+00	6.898E-01	3.243E-01	3.519E-01
PB-210	1.082E+00	6.898E-01	3.243E-01	3.519E-01
PO-210	1.082E+00	6.885E-01	3.243E-01	3.513E-01
BI-211	3.784E+00	5.613E-01	1.546E-01	2.864E-01
PB-212	1.707E+00	1.967E-01	3.978E-02	1.003E-01
PO-212	1.707E+00	1.967E-01	3.978E-02	1.003E-01
BI-214	1.207E+00	2.257E-01	5.948E-02	1.151E-01
PB-214	1.316E+00	2.065E-01	5.392E-02	1.054E-01
PO-214	1.316E+00	2.065E-01	5.392E-02	1.054E-01
PO-216	1.707E+00	1.967E-01	3.978E-02	1.003E-01
PO-218	1.316E+00	2.065E-01	5.392E-02	1.054E-01
RA-224	4.798E+00	1.442E+00	4.539E-01	7.355E-01
RA-226	1.207E+00	2.257E-01	5.948E-02	1.151E-01
AC-228	2.006E+00	3.861E-01	1.081E-01	1.970E-01
RA-228	2.006E+00	3.861E-01	1.081E-01	1.970E-01
TH-228	1.731E+00	1.994E-01	4.033E-02	1.017E-01
TH-230	1.207E+00	2.257E-01	5.947E-02	1.151E-01
TH-232	2.006E+00	3.861E-01	1.081E-01	1.970E-01
TH-234	3.082E+00	1.098E+00	3.754E-01	5.600E-01
U-234	1.207E+00	2.257E-01	5.947E-02	1.151E-01
NP-237	8.172E-01	2.485E-01	1.175E-01	1.268E-01
U-238	3.082E+00	1.098E+00	3.754E-01	5.600E-01
AM-243	2.819E-01	4.181E-02	2.244E-02	2.133E-02
ANH-511	1.188E-01	6.223E-02	2.311E-02	3.175E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	7.996E-02	3.210E-01	2.879E-01	1.638E-01	NOT IDENT.
NA-22	5.532E-03	5.524E-02	4.629E-02	2.819E-02	NOT IDENT.
NA-24	1.930E+04	2.175E+05	0.000E+00	1.110E+05	SHORT HLIF
AL-26	1.295E-02	3.550E-02	3.208E-02	1.811E-02	NOT IDENT.
TI-44	3.747E-01	4.317E-02	1.993E-02	2.203E-02	FAIL ABUN
SC-46	2.277E-02	4.745E-02	4.291E-02	2.421E-02	FAIL ABUN
V-48	-4.300E-02	8.814E-02	7.159E-02	4.497E-02	NOT IDENT.
CR-51	-2.622E-01	3.222E-01	2.581E-01	1.644E-01	NOT IDENT.
MN-52	5.477E-02	2.060E-01	1.840E-01	1.051E-01	NOT IDENT.
MN-54	-2.205E-02	4.359E-02	3.620E-02	2.224E-02	NOT IDENT.
CO-56	2.475E-02	4.484E-02	4.102E-02	2.288E-02	NOT IDENT.
CO-57	3.597E-03	1.746E-02	1.505E-02	8.907E-03	NOT IDENT.
CO-58	-1.930E-02	3.936E-02	3.254E-02	2.008E-02	NOT IDENT.
FE-59	9.518E-02	1.162E-01	1.058E-01	5.930E-02	NOT IDENT.
CO-60	2.004E-02	4.372E-02	3.995E-02	2.231E-02	NOT IDENT.
ZN-65	-4.370E-02	1.361E-01	9.443E-02	6.944E-02	NOT IDENT.
GE-68	2.066E-01	1.683E+00	1.440E+00	8.586E-01	NOT IDENT.
AS-73	1.019E-01	1.698E-01	1.592E-01	8.665E-02	NOT IDENT.
AS-74	9.169E-02	9.046E-02	8.432E-02	4.615E-02	NOT IDENT.
SE-75	-3.758E-03	4.055E-02	3.146E-02	2.069E-02	NOT IDENT.
BR-77	-1.065E+00	7.440E+00	6.407E+00	3.796E+00	FAIL ABUN
SR-82	-1.016E-01	4.387E-01	3.557E-01	2.238E-01	NOT IDENT.
RB-83	-9.229E-04	7.017E-02	6.111E-02	3.580E-02	NOT IDENT.
RB-84	-1.801E-02	7.273E-02	6.124E-02	3.711E-02	NOT IDENT.
KR-85	4.148E+00	6.846E+00	5.647E+00	3.493E+00	NOT IDENT.
SR-85	2.099E-02	3.464E-02	2.857E-02	1.767E-02	NOT IDENT.
RB-86	4.060E-01	1.017E+00	8.937E-01	5.191E-01	NOT IDENT.
Y-88	1.874E-02	4.081E-02	3.747E-02	2.082E-02	NOT IDENT.
ZR-88	-9.772E-03	3.142E-02	2.562E-02	1.603E-02	NOT IDENT.
Y-91	7.977E+00	2.448E+01	2.106E+01	1.249E+01	NOT IDENT.
NB-94	-6.301E-03	4.233E-02	3.516E-02	2.160E-02	NOT IDENT.
NB-95	-6.527E-03	4.647E-02	3.813E-02	2.371E-02	NOT IDENT.
NB-95M	-1.851E-02	1.088E-01	8.523E-02	5.550E-02	NOT IDENT.
ZR-95	7.090E-02	8.262E-02	7.458E-02	4.215E-02	NOT IDENT.
NB-97	2.405E+04	3.397E+04	0.000E+00	1.733E+04	SHORT HLIF
ZR-97	6.720E+05	5.312E+05	0.000E+00	2.710E+05	SHORT HLIF
MO-99	-4.835E+00	9.108E+00	7.117E+00	4.647E+00	NOT IDENT.
TC-99M	-5.257E+14	8.903E+14	0.000E+00	4.542E+14	SHORT HLIF
RH-101	-1.834E-03	2.600E-02	2.333E-02	1.327E-02	FAIL ABUN
RH-102	-1.261E-03	2.833E-02	2.487E-02	1.446E-02	NOT IDENT.
RU-103	3.314E-02	4.135E-02	3.825E-02	2.110E-02	FAIL ABUN
RH-106	1.843E-01	3.606E-01	3.212E-01	1.840E-01	FAIL ABUN
RU-106	1.843E-01	3.601E-01	3.212E-01	1.837E-01	FAIL ABUN
AG-108M	8.936E-03	3.297E-02	2.987E-02	1.682E-02	NOT IDENT.
AG-110M	3.274E-02	4.184E-02	3.778E-02	2.135E-02	NOT IDENT.
IN-111	-2.958E-01	6.799E-01	5.169E-01	3.469E-01	NOT IDENT.
IN-113M	-2.374E-02	4.422E-02	3.530E-02	2.256E-02	NOT IDENT.
SN-113	-2.374E-02	4.422E-02	3.530E-02	2.256E-02	NOT IDENT.
IN-114M	-4.829E-02	1.386E-01	1.231E-01	7.070E-02	NOT IDENT.
CD-115	-7.905E+00	7.607E+00	5.975E+00	3.881E+00	NOT IDENT.
SN-117M	-5.658E-03	3.753E-02	3.428E-02	1.915E-02	NOT IDENT.
SB-122	-4.926E-01	1.617E+00	1.360E+00	8.248E-01	NOT IDENT.
I-123	-2.446E+05	8.433E+05	0.000E+00	4.302E+05	SHORT HLIF
TE-123M	-5.970E-03	2.059E-02	1.868E-02	1.050E-02	NOT IDENT.
I-124	4.753E-01	5.405E-01	4.723E-01	2.758E-01	NOT IDENT.
SB-124	-2.872E-02	7.922E-02	5.987E-02	4.042E-02	FAIL ABUN
SB-125	6.304E-02	8.905E-02	8.311E-02	4.544E-02	FAIL ABUN
TE-125M	2.875E+00	6.246E+00	5.498E+00	3.187E+00	NOT IDENT.
I-126	1.275E-01	1.944E-01	1.741E-01	9.920E-02	NOT IDENT.
SB-126	-1.519E-01	1.638E-01	1.178E-01	8.355E-02	FAIL ABUN
SB-127	-4.315E-01	1.114E+00	8.981E-01	5.681E-01	NOT IDENT.
XE-127	-1.863E-02	3.570E-02	3.120E-02	1.821E-02	NOT IDENT.
I-131	3.498E-02	9.653E-02	8.386E-02	4.925E-02	NOT IDENT.
TE-132	6.908E-02	4.240E-01	3.797E-01	2.163E-01	NOT IDENT.
BA-133	-4.614E-03	4.467E-02	3.327E-02	2.279E-02	FAIL ABUN
I-133	-9.491E+02	2.193E+03	0.000E+00	1.119E+03	SHORT HLIF
CS-134	1.306E-01	1.104E-01	6.026E-02	5.631E-02	FAIL ABUN
CS-135	1.524E-01	1.469E-01	1.237E-01	7.497E-02	NOT IDENT.
I-135	-4.136E+13	3.249E+14	0.000E+00	1.658E+14	SHORT HLIF
CS-136	-3.466E-02	1.208E-01	9.912E-02	6.163E-02	FAIL ABUN
BA-137M	-1.008E-02	3.968E-02	3.281E-02	2.024E-02	NOT IDENT.
CS-137	-1.065E-02	4.194E-02	3.468E-02	2.140E-02	NOT IDENT.
CE-139	-8.037E-03	2.197E-02	1.978E-02	1.121E-02	NOT IDENT.
BA-140	1.748E-02	2.575E-01	2.250E-01	1.314E-01	NOT IDENT.
LA-140	-9.939E-02	1.145E-01	8.276E-02	5.842E-02	FAIL ABUN
CE-141	-3.893E-02	4.975E-02	3.973E-02	2.538E-02	NOT IDENT.
CE-143	1.362E+02	7.829E+01	0.000E+00	3.994E+01	SHORT HLIF

CE-144	-2.257E-02	1.515E-01	1.268E-01	7.729E-02	NOT IDENT.
PM-144	8.925E-03	4.070E-02	3.498E-02	2.077E-02	NOT IDENT.
PR-144	6.044E-01	2.756E+00	2.369E+00	1.406E+00	NOT IDENT.
PM-146	2.341E-02	4.277E-02	3.933E-02	2.182E-02	NOT IDENT.
ND-147	-9.019E-02	5.197E-01	4.449E-01	2.651E-01	FAIL ABUN
PM-149	-9.934E+00	5.502E+01	4.714E+01	2.807E+01	NOT IDENT.
EU-152	1.929E-02	9.558E-02	8.236E-02	4.876E-02	NOT IDENT.
GD-153	-4.295E-02	5.565E-02	4.262E-02	2.839E-02	FAIL ABUN
EU-154	-2.111E-03	1.548E-01	1.279E-01	7.896E-02	NOT IDENT.
EU-155	1.113E-01	6.932E-02	6.400E-02	3.537E-02	FAIL ABUN
TB-160	5.921E-03	1.420E-01	1.237E-01	7.247E-02	FAIL ABUN
HO-166M	-1.705E-03	6.921E-02	5.803E-02	3.531E-02	FAIL ABUN
TM-171	-6.156E+00	1.146E+01	9.316E+00	5.847E+00	NOT IDENT.
LU-176	2.850E-03	2.398E-02	1.863E-02	1.224E-02	FAIL ABUN
LU-177	3.165E+00	1.219E+00	8.455E-01	6.219E-01	FAIL ABUN
LU-177M	3.815E-02	1.848E-01	1.562E-01	9.427E-02	FAIL ABUN
HF-181	-3.944E-03	4.044E-02	3.528E-02	2.063E-02	NOT IDENT.
W-181	5.900E-02	1.370E-01	1.167E-01	6.989E-02	NOT IDENT.
TA-182	5.874E-02	2.696E-01	2.290E-01	1.376E-01	FAIL ABUN
RE-183	8.999E-02	8.063E-02	7.720E-02	4.114E-02	FAIL ABUN
RE-184	-4.855E-02	2.067E-01	1.792E-01	1.055E-01	NOT IDENT.
OS-185	-6.763E-03	4.737E-02	3.972E-02	2.417E-02	NOT IDENT.
RE-188	1.360E-01	1.252E-01	1.200E-01	6.388E-02	NOT IDENT.
W-188	-6.400E+00	7.406E+00	5.274E+00	3.779E+00	FAIL ABUN
IR-192	-1.476E-02	3.143E-02	2.602E-02	1.604E-02	FAIL ABUN
AU-195	1.980E-01	1.438E-01	1.320E-01	7.336E-02	FAIL ABUN
TL-200	-2.914E+01	1.873E+02	0.000E+00	9.556E+01	SHORT HLIF
TL-201	7.889E-01	3.757E+00	3.471E+00	1.917E+00	NOT IDENT.
TL-202	1.362E-02	6.199E-02	5.595E-02	3.163E-02	NOT IDENT.
HG-203	2.242E-02	3.480E-02	2.859E-02	1.775E-02	FAIL ABUN
BI-207	-1.660E-02	6.936E-02	5.728E-02	3.539E-02	FAIL ABUN
TL-207	-2.518E-01	6.757E-01	4.955E-01	3.448E-01	FAIL ABUN
PO-209	-1.964E+00	8.203E+00	6.905E+00	4.185E+00	NOT IDENT.
PB-211	3.111E-01	9.201E-01	7.729E-01	4.694E-01	NOT IDENT.
BI-212	6.647E-01	6.333E-01	3.878E-01	3.231E-01	FAIL ABUN
PO-215	-2.518E-01	6.757E-01	4.955E-01	3.448E-01	FAIL ABUN
RN-219	-1.314E-01	4.042E-01	3.274E-01	2.062E-01	FAIL ABUN
RN-220	-6.738E+00	2.765E+01	2.344E+01	1.411E+01	NOT IDENT.
RA-223	-2.518E-01	6.757E-01	4.955E-01	3.448E-01	FAIL ABUN
AC-227	1.148E-02	3.333E-01	2.930E-01	1.701E-01	FAIL ABUN
TH-227	1.148E-02	3.333E-01	2.930E-01	1.701E-01	FAIL ABUN
TH-229	-6.013E-02	3.988E-01	3.573E-01	2.035E-01	FAIL ABUN
PA-231	-3.338E-01	1.317E+00	1.123E+00	6.718E-01	FAIL ABUN
TH-231	-2.518E-01	6.757E-01	4.955E-01	3.448E-01	FAIL ABUN
U-231	-2.549E-01	5.602E-01	4.384E-01	2.858E-01	FAIL ABUN
PA-233	-6.752E-03	5.800E-02	4.941E-02	2.959E-02	FAIL ABUN
PA-234	-1.905E-01	3.334E-01	2.657E-01	1.701E-01	FAIL ABUN
PA-234M	4.201E+00	5.568E+00	5.097E+00	2.841E+00	NOT IDENT.
U-235	5.849E-02	1.644E-01	1.402E-01	8.389E-02	FAIL ABUN
NP-236	-1.496E-02	5.778E-02	5.245E-02	2.948E-02	NOT IDENT.
NP-239	-5.367E-03	1.396E-01	1.192E-01	7.122E-02	FAIL ABUN
AM-241	-1.534E-03	4.801E-02	4.042E-02	2.450E-02	NOT IDENT.
CM-243	-8.267E-02	6.504E-02	5.219E-02	3.318E-02	FAIL ABUN
AM-246	-1.182E-01	1.932E-01	1.528E-01	9.858E-02	NOT IDENT.
CM-247	-3.193E-02	3.640E-02	2.791E-02	1.857E-02	FAIL ABUN
CF-249	1.166E-03	4.028E-02	3.384E-02	2.055E-02	NOT IDENT.
CF-251	-1.028E-02	9.441E-02	8.551E-02	4.817E-02	NOT IDENT.

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*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD       *
*               CHARLESTON ,SC 29417   *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
46.50	209.1853
46.50	209.1853
46.50	209.1853
48.70	228.5235
49.72	247.9917
51.35	279.7951
52.39	258.8964
52.97	273.5524
53.15	273.7801
53.44	265.7546
54.07	274.9398
56.28	299.4029
56.28	299.4065
57.37	0.0000
57.53	313.3995
57.53	313.4033
57.60	313.4952
57.98	283.5629
57.98	283.5629
59.32	313.9100
59.32	313.9100
59.40	314.0164
59.54	314.2040
59.72	314.4430
60.01	321.2274
61.10	318.8411
61.14	318.8941
61.30	307.5255
63.00	310.0048
63.29	310.3704
63.29	310.3704
63.58	310.7343
64.28	311.6111
65.12	317.5557
65.20	317.6570
65.20	317.6570
66.05	351.5128
66.72	356.3767
66.83	331.5370
66.91	331.6395
67.20	332.0112
67.20	332.0112
67.75	323.4741
67.85	328.8845
68.90	358.0554
68.90	358.0554
69.30	344.6537
69.67	345.1368
70.82	312.5618
70.82	312.5618
70.83	312.5737
72.80	342.0959
72.87	342.1812
72.87	342.1812
74.67	344.4107
74.81	344.5840
74.81	344.5840
74.81	344.5840
74.81	344.5840
74.81	344.5840
74.81	344.5840
74.81	344.5840
74.97	344.7805
75.28	345.1607
75.70	345.6728
77.11	347.3876
77.11	347.3876

77.11	347.3876
77.11	347.3876
77.11	347.3876
77.11	347.3876
77.11	347.3876
78.38	348.9213
79.62	345.9242
79.80	303.3862
79.80	303.3862
80.11	303.7063
80.18	303.7779
80.30	304.5916
80.30	304.5916
80.57	304.8698
81.00	311.5402
81.07	311.6135
81.07	311.6135
81.07	311.6135
81.07	311.6135
82.60	332.6949
83.37	332.1381
83.78	332.5884
83.78	332.5884
83.78	332.5884
83.78	332.5884
84.21	333.0557
84.90	333.8038
85.43	334.3752
86.29	335.2976
86.50	335.5228
86.54	335.5663
86.59	335.6196
86.72	335.7576
86.79	335.8303
86.94	335.9949
87.30	336.3774
87.30	336.3774
87.30	336.3774
87.30	336.3774
87.30	336.3774
87.30	336.3774
87.57	336.6655
87.88	336.9948
88.03	337.1546
88.36	246.7460
88.47	246.8310
89.95	300.7003
91.11	243.1385
92.29	244.0136
92.38	244.0810
92.38	244.0810
93.35	244.7952
94.00	245.2743
94.67	245.7602
94.67	245.7637
94.90	232.9115
94.90	232.9115
94.90	232.9115
94.90	232.9115
95.87	246.6387
95.87	246.6387
96.73	248.7175
97.43	276.9152
98.44	229.1231
98.44	229.1239
98.88	207.4614
99.55	228.7552
99.55	228.7552
99.86	247.6713
100.00	248.8704
100.10	248.9445
103.18	233.3292
103.76	255.9634
105.00	170.8538
105.31	173.2338
108.00	238.6714
109.28	213.5060

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111.00	223.5564
111.76	228.5495
112.95	253.2086
115.19	209.9295
116.30	210.5229
117.00	223.5710
117.00	223.5710
117.66	207.7803
121.11	190.9363
121.62	191.1740
121.78	183.0854
122.06	179.7097
122.32	170.4811
122.32	170.4811
122.32	170.4811
122.32	170.4811
123.07	211.7352
127.23	223.6922
129.76	201.2487
131.20	190.7886
133.02	209.5428
133.54	200.2007
135.34	199.8099
136.00	191.6656
136.25	221.9253
136.48	222.0404
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140.51	0.0000
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142.65	201.8138
143.76	204.7467
144.24	184.0919
144.24	184.0919
144.24	184.0919
144.24	184.0919
145.22	238.5896
145.44	238.6991
147.16	191.4062
152.43	220.9637
152.70	197.3529
153.22	202.5618
154.21	190.4384
154.21	190.4384
154.21	190.4384
154.21	190.4384
155.03	184.0607
156.02	226.3403
158.56	195.4692
159.00	0.0000
159.00	197.3232
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161.27	202.4367
162.32	172.2931
162.64	177.4961
163.35	188.7939
163.89	200.0574
165.85	197.3900
167.43	170.5561
171.28	181.2827
171.86	169.3786
172.10	177.2333
176.55	178.6785
176.60	178.6952
181.06	202.4414
184.41	202.8413
185.71	203.7418
186.00	195.4250
190.27	189.2719
192.34	172.0156
193.63	183.1630
197.04	184.2047
198.01	184.4994
198.60	198.2549
200.40	155.2592
201.83	194.7517
202.84	181.3964
205.31	167.4726

208.36	160.9276
208.81	161.0415
209.75	158.9761
209.75	158.9761
210.97	148.1993
215.65	160.9011
216.55	159.2584
218.09	164.3000
222.10	154.9644
223.80	138.4091
226.40	146.5029
227.00	146.6322
227.08	146.6496
227.20	146.6748
228.16	145.9337
228.18	145.9384
228.18	145.9384
231.56	0.0000
235.69	165.2476
236.00	161.0085
236.00	161.0085
238.63	145.2552
238.63	145.2552
238.63	145.2552
238.63	145.2552
239.00	145.3304
240.98	145.7344
241.98	145.9372
241.98	145.9372
241.98	145.9372
244.69	123.6881
245.39	129.6337
247.94	123.7534
248.90	119.0364
249.79	137.7412
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252.85	149.1008
252.85	149.1008
254.15	0.0000
256.20	136.9582
256.20	136.9582
260.50	131.7905
260.90	136.8180
262.80	109.3264
264.65	118.0564
268.24	109.5936
268.79	123.1927
269.46	123.2978
269.46	123.2978
269.46	123.2978
269.46	123.2978
271.23	116.0381
273.65	111.8582
276.40	104.1546
277.35	104.2762
277.60	104.3097
277.60	104.3097
278.00	94.2280
278.60	97.3398
279.20	91.3239
279.53	100.4965
280.46	103.6622
281.68	103.8158
283.67	115.2921
284.30	101.0847
285.00	122.6318
285.90	121.7431
286.10	121.7721
286.10	121.7721
287.40	113.7642
288.45	0.0000
290.67	137.3622
290.80	137.3813
291.72	101.9910
293.26	0.0000
293.70	92.9370
295.21	93.1018
295.21	93.1018

295.21	93.1018
295.96	93.1842
296.50	93.2428
297.23	93.3234
298.57	93.4698
299.80	93.6035
299.80	93.6035
300.09	93.6346
300.09	93.6346
300.09	93.6346
300.09	93.6346
300.12	93.6383
301.29	93.7646
302.84	93.9331
303.76	94.0320
303.91	84.6436
304.40	94.1016
304.40	94.1016
304.84	109.8407
306.84	95.9361
308.46	97.6886
311.98	104.4060
316.51	110.2334
318.01	83.8748
319.02	102.0371
319.41	105.2701
320.08	107.4769
323.87	107.3885
323.87	107.3885
323.87	107.3885
323.87	107.3885
325.23	123.5976
328.77	98.2910
333.44	132.7870
334.20	106.9640
334.20	106.9640
334.30	106.9761
338.28	122.0741
338.28	122.0741
338.28	122.0741
338.28	122.0741
338.32	122.0787
338.32	122.0787
338.32	122.0787
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340.57	102.7884
344.27	102.6366
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350.59	0.0000
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351.92	88.0371
351.92	88.0371
355.39	0.0000
356.01	87.8476
364.48	76.8894
366.43	69.2202
367.43	70.4059
367.94	0.0000
369.80	84.0103
374.96	82.1785
383.85	79.4692
387.95	88.8910
388.63	90.0885
391.69	92.6312
391.69	92.6312
392.90	95.0248
398.62	78.2598
400.65	91.0882
401.10	92.2786
401.81	84.2577
402.60	91.2489
404.84	74.0716
410.95	91.9320
411.60	109.4506
413.65	86.3198
414.70	74.4321
415.30	70.0903

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417.63	0.0000
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423.70	86.4917
427.08	72.5808
427.89	69.0879
432.53	72.9186
433.93	78.3468
439.47	70.6631
439.56	70.6680
439.89	76.9520
443.98	60.1549
444.90	69.1856
445.03	69.1938
445.03	69.1938
445.03	69.1938
445.03	69.1938
453.90	66.0783
463.38	62.0245
468.07	45.4102
473.00	58.8223
475.06	66.2816
475.35	68.1386
476.78	66.3706
477.59	68.2571
477.96	63.6631
482.03	64.7897
484.57	72.3359
487.03	46.4569
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492.35	56.9073
497.08	58.9827
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511.00	54.8662
511.85	51.4927
511.85	51.4927
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513.99	47.0222
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529.64	69.9903
529.87	0.0000
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537.32	63.6233
543.00	63.8771
546.56	0.0000
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552.65	61.3812
555.20	67.3428
563.23	59.8607
563.90	68.7225
568.70	65.9899
569.32	67.9872
569.50	69.9665
569.67	69.9751
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574.00	75.1187
574.64	69.2181
578.91	68.2226
579.30	0.0000
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592.07	54.0066
593.00	54.0396
595.88	44.1141
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602.71	38.9357
603.60	43.5256
604.41	49.9996
604.70	64.5273
609.31	54.6031

609.31	54.6031
609.31	54.6031
609.31	54.6031
610.33	63.1370
612.46	42.1472
614.37	43.8209
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621.84	54.0109
631.29	60.4746
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634.78	54.4411
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661.65	58.4490
664.57	0.0000
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666.33	52.3285
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692.80	66.9375
695.00	53.1906
696.49	58.5583
696.49	58.5583
697.00	64.9651
697.49	57.5266
698.33	69.2767
698.50	69.2827
699.00	62.9054
702.63	70.5117
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713.82	61.2722
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722.78	39.7502
722.78	39.7502
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722.95	39.7547
723.30	36.3040
724.18	44.9693
727.18	55.2194
733.00	50.3960
735.90	36.9852
739.58	46.8672
742.81	44.7637
744.21	50.2592
747.13	39.3937
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752.31	54.8615
753.82	49.4138
755.35	41.7608
756.15	41.7782
756.87	46.1932
763.93	56.2964
765.79	51.9312
766.42	51.9470
766.84	59.6970
776.49	52.2152
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778.89	50.0537
783.80	42.3719
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792.07	46.5791

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805.60	32.4633
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817.79	36.2842
818.51	42.6488
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826.30	49.1854
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831.60	58.4422
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836.80	0.0000
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867.82	42.9540
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873.19	30.7240
874.81	40.0637
875.33	0.0000
876.40	40.0920
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880.51	34.5628
881.50	37.3818
883.24	49.5698
884.67	43.9868
889.25	41.2640
896.60	39.5175
898.02	38.6007
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903.28	35.3879
911.07	29.3546
911.07	29.3546
911.07	29.3546
919.63	28.5146
920.93	37.0900
925.00	32.3921
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926.50	38.1328
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969.11	66.0062
969.11	66.0062
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1038.76	0.0000
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1048.07	41.0781

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1050.47	49.1388
1062.04	39.2837
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1078.86	54.7409
1085.78	40.6543
1099.22	37.7949
1112.02	50.0330
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1115.52	54.8073
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1120.29	46.3228
1120.29	46.3228
1120.29	46.3228
1120.51	46.3271
1121.28	51.4893
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1173.22	54.5492
1175.09	54.5848
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1236.41	0.0000
1238.25	61.1331
1246.25	50.5411
1260.41	0.0000
1271.85	52.0523
1274.45	35.8166
1274.54	34.7313
1291.56	28.3740
1298.22	0.0000
1312.09	32.9531
1325.50	24.8192
1325.50	24.8192
1332.49	19.3466
1333.61	15.6663
1360.21	16.7249
1362.66	0.0000
1365.15	35.3606
1368.21	22.3535
1368.53	0.0000
1376.25	14.0051
1384.27	14.9753
1394.10	19.7123
1395.20	20.6581
1407.95	13.1956
1434.06	12.3472
1436.60	17.1094
1457.56	0.0000
1460.81	21.3308
1489.15	12.5435
1509.49	13.5853
1596.49	26.8231
1620.62	8.9978
1678.03	0.0000
1691.02	9.1604
1691.02	9.1604
1706.46	0.0000
1750.46	0.0000
1764.49	8.8825
1764.49	8.8825
1764.49	8.8825
1764.49	8.8825
1770.23	28.0184
1771.40	5.1900
1791.20	0.0000
1808.65	6.2834

1836.01

6.3235

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395005

Total Uranium Activity	9.1952E+00	ug/g
Total Uranium Counting Unc.	3.2664E+00	ug/g
Total Uranium Tpu	1.6665E-06	ug/g
Total Uranium Mda	1.1188E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 944966          SAMPLE ID   : G245395005
*  ANALYST       : MXR1            DETECTOR    : GAM21
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE: 2-FEB-2010 08:24:01.40  SAMPLE ALQT: 141.120 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.002E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.304E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 3.518E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.702E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 10:25:38.21

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                   *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395006.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:24:26.
Sample ID          : G245395006 Sample quantity : 1.52520E+02 GRAM
Detector name      : GAM23 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.31 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.05*	1330	1066	1.00	126.09	121	10	1.85E-01	5.4	
2	2	74.65*	428	895	1.22	149.31	146	11	5.94E-02	12.6	2.52E+00
3	2	76.90	573	748	1.02	153.79	146	11	7.96E-02	8.7	
4	0	83.98*	106	949	1.54	167.97	164	7	1.47E-02	49.5	
5	1	87.13	225	796	1.41	174.26	171	22	3.12E-02	20.1	1.02E+01
6	1	92.41*	4300	799	1.22	184.83	171	22	5.97E-01	1.9	
7	0	98.30*	281	694	1.14	196.60	193	8	3.90E-02	17.5	
8	0	112.40	232	1027	0.95	224.80	219	12	3.22E-02	28.4	
9	0	127.77	50	596	0.70	255.55	254	8	6.88E-03	86.1	
10	0	143.44*	168	550	1.20	286.89	283	9	2.33E-02	26.7	
11	0	185.63*	852	612	0.97	371.26	365	12	1.18E-01	6.8	
12	1	204.86	108	311	1.57	409.71	406	17	1.49E-02	28.2	1.89E+00
13	1	208.92	156	381	1.58	417.85	406	17	2.16E-02	23.9	
14	3	238.32*	1195	256	1.13	476.64	468	20	1.66E-01	3.7	9.25E-01
15	3	241.32	267	361	1.64	482.63	468	20	3.71E-02	15.6	
16	0	270.08	137	248	1.85	540.15	535	11	1.90E-02	24.0	
17	0	277.18	68	257	1.08	554.37	549	10	9.41E-03	46.4	
18	0	294.87	402	292	1.21	589.73	583	13	5.59E-02	10.1	
19	0	299.95	110	216	1.21	599.90	596	10	1.52E-02	26.8	
20	0	327.68	89	277	1.64	655.36	648	14	1.24E-02	40.9	
21	0	337.84	267	235	1.30	675.68	670	12	3.71E-02	13.0	
22	0	351.56	560	213	1.35	703.12	698	11	7.78E-02	6.6	
23	0	462.69	60	161	2.03	925.39	918	13	8.35E-03	45.5	
24	0	510.33*	125	203	2.41	1020.65	1013	18	1.74E-02	29.4	
25	0	582.57*	355	168	1.50	1165.15	1157	14	4.93E-02	9.5	
26	0	608.59*	432	106	1.66	1217.19	1209	14	6.01E-02	7.1	
27	0	662.73	83	174	1.54	1325.46	1316	18	1.15E-02	39.1	
28	0	726.65	86	118	1.64	1453.30	1446	15	1.20E-02	29.6	
29	0	766.03	121	136	1.19	1532.06	1525	14	1.68E-02	22.4	
30	0	794.41	31	61	1.32	1588.82	1585	8	4.29E-03	47.6	
31	0	910.67	250	61	1.28	1821.34	1815	13	3.47E-02	9.1	
32	0	933.42	43	53	1.52	1866.85	1860	14	5.99E-03	38.8	
33	0	968.51*	126	70	2.06	1937.01	1931	13	1.74E-02	16.8	
34	0	1000.48	229	61	1.65	2000.97	1995	15	3.18E-02	9.9	
35	0	1119.33	84	78	2.01	2238.67	2231	17	1.17E-02	26.2	
36	0	1459.96	1170	48	2.44	2919.92	2909	19	1.62E-01	3.2	
37	0	1763.82*	64	8	3.63	3527.65	3520	16	8.90E-03	16.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 2-FEB-2010 10:25:41

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395006.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:24:26
Sample ID        : G245395006 Sample quantity : 152.52 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.31 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type   : Empirical Efficiencies at : Peak Energy
Abundance limit   : 75.00 WTM error limit : 3.00
    
```

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.705E+01	2.680E+00	5.462E-01	4.086E-02	49.531
NB-95	+	765.79	*	1.939E-01	8.778E-02	7.642E-02	5.135E-03	2.537
CD-109	+	88.03	*	2.908E+00	1.205E+00	1.790E+00	1.748E-01	1.624
SN-126	+	64.28		1.334E+01	2.488E+00	1.251E+00	1.905E-01	10.658
	+	86.94		1.190E+00	6.892E-01	7.969E-01	3.314E-01	1.494
	+	87.57	*	2.863E-01	1.186E-01	1.773E-01	1.726E-02	1.615
BA-137M	+	661.65	*	1.112E-01	8.714E-02	6.433E-02	3.286E-03	1.728
CS-137	+	661.65	*	1.175E-01	9.211E-02	6.800E-02	3.493E-03	1.728
LU-177	+	112.95		5.991E+00	3.422E+00	3.032E+00	1.988E-01	1.976
	+	208.36	*	2.875E+00	1.384E+00	1.690E+00	9.143E-02	1.701
TL-208	+	277.35		5.921E-01	5.528E-01	6.360E-01	6.720E-02	0.931
	+	510.84		5.603E-01	3.343E-01	2.437E-01	2.475E-02	2.299
	+	583.14	*	4.552E-01	9.174E-02	6.125E-02	3.976E-03	7.431
		860.37		5.774E-01	3.219E-01	5.962E-01	5.389E-02	0.969
BI-211		72.87		1.598E+01	5.378E+00	8.260E+00	7.286E-01	1.934
	+	351.07	*	3.094E+00	4.562E-01	3.456E-01	2.252E-02	8.953
PB-212	+	74.81		2.438E+00	6.887E-01	8.254E-01	1.065E-01	2.954
	+	77.11		1.829E+00	3.584E-01	4.606E-01	4.145E-02	3.969
	+	87.30		1.324E+00	5.644E-01	8.232E-01	1.147E-01	1.609
	+	238.63	*	1.422E+00	1.467E-01	9.998E-02	7.188E-03	14.218
	+	300.09		2.032E+00	1.101E+00	1.270E+00	1.055E-01	1.600
PO-212	+	74.81		2.438E+00	6.887E-01	8.254E-01	1.065E-01	2.954
	+	77.11		1.829E+00	3.584E-01	4.606E-01	4.145E-02	3.969
	+	87.30		1.324E+00	5.644E-01	8.232E-01	1.147E-01	1.609
		115.19		7.528E+00	5.087E+00	7.752E+00	4.945E-01	0.971
	+	238.63	*	1.422E+00	1.467E-01	9.998E-02	7.188E-03	14.218
	+	300.09		2.032E+00	1.101E+00	1.270E+00	1.055E-01	1.600
BI-214	+	609.31	*	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735
	+	1120.29		1.090E+00	5.805E-01	4.826E-01	4.484E-02	2.258
	+	1764.49		1.142E+00	3.846E-01	2.643E-01	1.643E-02	4.320
PB-214	+	74.81		4.201E+00	1.162E+00	1.422E+00	1.646E-01	2.954
	+	77.11		3.135E+00	6.592E-01	7.897E-01	9.310E-02	3.970
	+	87.30		2.269E+00	9.560E-01	1.410E+00	1.748E-01	1.609
	+	241.98		1.909E+00	6.131E-01	5.555E-01	4.418E-02	3.436

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	295.21		1.306E+00	2.861E-01	2.193E-01	1.880E-02	5.954
	+	351.92	*	1.076E+00	1.683E-01	1.130E-01	9.430E-03	9.528
	+	74.81		4.201E+00	1.162E+00	1.422E+00	1.646E-01	2.954
	+	77.11		3.135E+00	6.592E-01	7.897E-01	9.310E-02	3.970
	+	87.30		2.269E+00	9.560E-01	1.410E+00	1.748E-01	1.609
PO-216	+	241.98		1.909E+00	6.131E-01	5.555E-01	4.418E-02	3.436
	+	295.21		1.306E+00	2.861E-01	2.193E-01	1.880E-02	5.954
	+	351.92	*	1.076E+00	1.683E-01	1.130E-01	9.430E-03	9.528
	+	74.81		2.438E+00	6.887E-01	8.254E-01	1.065E-01	2.954
	+	77.11		1.829E+00	3.584E-01	4.606E-01	4.145E-02	3.969
PO-218	+	87.30		1.324E+00	5.644E-01	8.232E-01	1.147E-01	1.609
	+	238.63	*	1.422E+00	1.467E-01	9.998E-02	7.188E-03	14.218
	+	300.09		2.032E+00	1.101E+00	1.270E+00	1.055E-01	1.600
	+	74.81		4.201E+00	1.162E+00	1.422E+00	1.646E-01	2.954
	+	77.11		3.135E+00	6.592E-01	7.897E-01	9.310E-02	3.970
RA-224	+	87.30		2.269E+00	9.560E-01	1.410E+00	1.748E-01	1.609
	+	241.98		1.909E+00	6.131E-01	5.555E-01	4.418E-02	3.436
	+	295.21		1.306E+00	2.861E-01	2.193E-01	1.880E-02	5.954
	+	351.92	*	1.076E+00	1.683E-01	1.130E-01	9.430E-03	9.528
	+	240.98	*	3.619E+00	1.145E+00	1.138E+00	6.411E-02	3.181
RA-226	+	609.31	*	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735
	+	1120.29		1.090E+00	5.805E-01	4.826E-01	4.484E-02	2.258
	+	1764.49		1.142E+00	3.846E-01	2.643E-01	1.643E-02	4.320
	+	338.32		1.625E+00	7.857E-01	3.882E-01	1.583E-01	4.187
	+	911.07	*	1.454E+00	3.123E-01	1.958E-01	2.259E-02	7.426
AC-228	+	969.11		1.293E+00	5.292E-01	3.376E-01	7.860E-02	3.829
	+	338.32		1.625E+00	7.857E-01	3.882E-01	1.583E-01	4.187
	+	911.07	*	1.454E+00	3.123E-01	1.958E-01	2.259E-02	7.426
	+	969.11		1.293E+00	5.292E-01	3.376E-01	7.860E-02	3.829
	+	74.81		2.472E+00	6.595E-01	8.369E-01	7.501E-02	2.954
TH-228	+	77.11		1.854E+00	3.634E-01	4.670E-01	4.202E-02	3.969
	+	87.30		1.343E+00	5.563E-01	8.346E-01	8.102E-02	1.609
	+	238.63	*	1.441E+00	1.488E-01	1.014E-01	7.288E-03	14.218
	+	300.09		2.060E+00	1.641E+00	1.288E+00	7.590E-01	1.600
	+	609.31	*	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735
TH-230	+	1120.29		1.090E+00	5.805E-01	4.826E-01	4.484E-02	2.258
	+	1764.49		1.142E+00	3.846E-01	2.643E-01	1.643E-02	4.320
	+	338.32		1.625E+00	4.327E-01	3.882E-01	2.293E-02	4.187
	+	911.07	*	1.454E+00	3.123E-01	1.958E-01	2.259E-02	7.426
	+	969.11		1.293E+00	5.292E-01	3.376E-01	7.860E-02	3.829
PA-234M	+	766.42		5.203E+01	3.509E+01	2.052E+01	1.036E+01	2.535
	+	1001.03	*	4.794E+01	1.056E+01	7.702E+00	7.349E-01	6.224
	+	63.29	*	3.369E+01	7.076E+00	3.311E+00	5.966E-01	10.178
	+	92.38		3.511E+01	6.538E+00	1.147E+00	2.092E-01	30.608
	+	609.31	*	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735
U-234	+	1120.29		1.090E+00	5.805E-01	4.826E-01	4.484E-02	2.258
	+	1764.49		1.142E+00	3.846E-01	2.643E-01	1.643E-02	4.320
	+	89.95		1.611E+01	5.582E+00	3.381E+00	1.051E+00	4.766
	+	93.35		4.221E+01	1.198E+01	1.366E+00	3.836E-01	30.896

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		105.00		6.161E-01	1.391E+00	2.307E+00	6.801E-01	0.267
	+	143.76	*	6.343E-01	3.537E-01	3.892E-01	6.295E-02	1.630
		163.35		6.816E-01	5.471E-01	9.065E-01	1.612E-01	0.752
	+	185.71		7.074E-01	1.037E-01	7.896E-02	4.135E-03	8.958
	+	205.31		1.092E+00	6.453E-01	9.315E-01	1.663E-01	1.173
NP-237	+	86.50	*	8.408E-01	3.892E-01	5.663E-01	1.290E-01	1.485
		95.87		3.701E+00	2.246E+00	2.391E+00	5.871E-01	1.548
U-238	+	63.29	*	3.369E+01	7.076E+00	3.311E+00	5.966E-01	10.178
	+	92.38		3.511E+01	3.404E+00	1.147E+00	1.025E-01	30.608
AM-243	+	74.67	*	3.953E-01	1.054E-01	1.343E-01	1.194E-02	2.942
	+	86.72		3.153E+01	1.306E+01	2.117E+01	2.044E+00	1.489
		117.66		-3.116E+00	5.402E+00	7.610E+00	4.712E-01	-0.409
	+	142.18		5.328E+01	2.858E+01	3.501E+01	1.906E+00	1.522
ANH-511	+	511.00	*	1.210E-01	7.149E-02	5.265E-02	3.058E-03	2.299

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.239E-02	3.458E-01	5.784E-01	3.931E-02	0.160
NA-22		1274.54	*	-4.265E-02	4.837E-02	7.174E-02	4.818E-03	-0.594
NA-24		1368.53	*	-1.892E-01	4.837E-02	Half-Life too short		
AL-26		1129.67		5.413E-02	1.917E+00	3.086E+00	1.966E-01	0.018
		1808.65	*	-3.577E-02	2.704E-02	2.992E-02	1.798E-03	-1.196
TI-44		67.85		-8.307E-02	7.965E-02	1.128E-01	9.822E-03	-0.736
	+	78.38	*	3.374E-01	6.613E-02	9.844E-02	8.923E-03	3.428
SC-46		889.25	*	2.608E-02	3.822E-02	6.727E-02	6.010E-03	0.388
	+	1120.51		1.846E-01	9.757E-02	1.171E-01	7.630E-03	1.576
V-48		944.10		2.760E-01	9.324E-01	1.584E+00	1.380E-01	0.174
		983.50	*	-1.798E-02	6.557E-02	1.058E-01	8.798E-03	-0.170
		1312.09		-5.508E-02	7.714E-02	1.146E-01	8.152E-03	-0.481
CR-51		320.08	*	1.474E-01	3.957E-01	6.184E-01	4.055E-02	0.238
MN-52		744.21		3.077E-01	2.385E-01	4.182E-01	2.663E-02	0.736
		848.13		-4.795E-01	6.207E+00	1.031E+01	8.411E-01	-0.047
		935.52		1.222E-01	2.580E-01	3.899E-01	3.428E-02	0.313
		1246.25		-6.284E+00	6.566E+00	9.728E+00	6.226E-01	-0.646
		1333.61		-3.810E+00	4.130E+00	5.845E+00	4.290E-01	-0.652
		1434.06	*	-1.023E-01	1.651E-01	2.356E-01	1.705E-02	-0.434
MN-54		834.83	*	-2.255E-03	4.064E-02	6.769E-02	5.360E-03	-0.033
CO-56		846.75	*	2.950E-03	4.103E-02	6.894E-02	5.608E-03	0.043
		977.42		1.765E+00	2.973E+00	5.085E+00	4.263E-01	0.347
		1037.82		-9.316E-02	3.473E-01	5.603E-01	4.593E-02	-0.166
		1175.09		-5.233E-01	2.326E+00	3.734E+00	2.114E-01	-0.140
		1238.25		9.865E-02	1.042E-01	1.809E-01	1.203E-02	0.545
		1360.21		3.301E-01	1.044E+00	1.759E+00	1.288E-01	0.188
		1771.40		-5.209E-01	2.729E-01	2.959E-01	1.830E-02	-1.761
CO-57		122.06	*	-3.004E-03	3.059E-02	5.016E-02	2.957E-03	-0.060
		136.48		-8.234E-02	2.474E-01	4.010E-01	2.608E-02	-0.205
CO-58		810.76	*	-3.708E-02	3.811E-02	5.838E-02	4.386E-03	-0.635

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59	+	142.65		8.023E+00	4.303E+00	5.808E+00	3.158E-01	1.381
		192.34		7.736E-01	1.075E+00	1.723E+00	1.994E-01	0.449
		1099.22	*	-3.766E-02	9.044E-02	1.428E-01	1.100E-02	-0.264
		1291.56		4.811E-02	1.350E-01	2.273E-01	1.887E-02	0.212
CO-60		1173.22		3.962E-03	4.762E-02	7.858E-02	4.433E-03	0.050
		1332.49	*	-1.902E-02	3.864E-02	5.887E-02	4.321E-03	-0.323
		1115.52	*	5.866E-02	1.134E-01	1.696E-01	1.120E-02	0.346
		1077.35	*	-3.208E-01	1.337E+00	2.155E+00	1.542E-01	-0.149
ZN-65		53.44	*	1.740E-01	1.435E+00	2.418E+00	2.135E-01	0.072
GE-68		595.88	*	3.092E-02	9.097E-02	1.517E-01	8.365E-03	0.204
AS-73		634.78		-2.926E-01	3.657E-01	5.482E-01	2.902E-02	-0.534
AS-74		66.05		-8.189E+00	8.152E+00	1.153E+01	1.210E+00	-0.710
SE-75		96.73		3.636E+00	1.765E+00	2.006E+00	2.690E-01	1.812
		121.11		6.592E-02	1.641E-01	2.730E-01	2.547E-02	0.241
		136.00		-9.458E-03	4.636E-02	7.549E-02	4.262E-03	-0.125
		198.60		-1.165E+00	2.072E+00	3.212E+00	2.168E-01	-0.363
		264.65	*	1.236E-02	5.336E-02	7.552E-02	4.396E-03	0.164
		279.53		2.695E-03	1.270E-01	1.869E-01	1.176E-02	0.014
		303.91		1.133E+00	2.420E+00	3.647E+00	3.499E-01	0.311
		400.65		-1.068E-01	2.657E-01	4.311E-01	3.923E-02	-0.248
		87.88	+	4.350E+02	1.802E+02	3.264E+02	3.185E+01	1.333
		200.40		-4.513E+01	1.510E+02	2.074E+02	1.109E+01	-0.218
		239.00	+	1.578E+02	1.467E+01	2.490E+01	1.400E+00	6.336
		249.79		9.010E+00	5.211E+01	8.414E+01	4.784E+00	0.107
		281.68		2.661E+01	7.360E+01	1.105E+02	6.442E+00	0.241
		297.23		1.891E+02	6.238E+01	8.108E+01	4.762E+00	2.333
BR-77		303.76		7.841E+01	1.440E+02	2.180E+02	1.283E+01	0.360
		439.47		7.386E+01	1.045E+02	1.797E+02	1.052E+01	0.411
		484.57		-1.407E+02	1.758E+02	2.746E+02	1.605E+01	-0.512
		520.65	*	-7.960E+00	7.708E+00	1.172E+01	6.783E-01	-0.679
		574.64		-9.794E+01	1.782E+02	2.507E+02	1.407E+01	-0.391
		578.91		5.855E+01	7.403E+01	1.120E+02	6.264E+00	0.523
		585.48		5.252E+02	1.740E+02	2.949E+02	1.641E+01	1.781
		755.35		1.159E+02	1.306E+02	2.235E+02	1.463E+01	0.518
		817.79		9.393E+01	9.127E+01	1.648E+02	1.254E+01	0.570
		698.33		-3.799E+01	3.661E+01	5.431E+01	3.068E+00	-0.699
		776.49	*	-3.119E-02	4.138E-01	6.911E-01	4.768E-02	-0.045
		1395.20		-7.867E+00	1.125E+01	1.647E+01	1.200E+00	-0.478
		520.41	*	-7.193E-02	7.319E-02	1.117E-01	6.469E-03	-0.644
		529.64		5.242E-02	1.133E-01	1.911E-01	1.102E-02	0.274
SR-82		552.65		6.634E-02	2.141E-01	3.572E-01	2.035E-02	0.186
		881.50	*	6.570E-02	6.719E-02	1.208E-01	1.061E-02	0.544
RB-83		513.99	*	9.292E+00	8.762E+00	1.351E+01	7.840E-01	0.688
RB-84		513.99	*	4.701E-02	4.433E-02	6.836E-02	3.967E-03	0.688
KR-85		1076.63	*	-8.626E-02	7.954E-01	1.297E+00	9.298E-02	-0.066
SR-85		898.02		3.567E-03	4.426E-02	7.417E-02	6.782E-03	0.048
RB-86		1836.01	*	-6.531E-03	2.782E-02	4.349E-02	2.561E-03	-0.150
Y-88		392.90	*	-2.111E-02	3.155E-02	5.045E-02	2.913E-03	-0.418
ZR-88		1204.90	*	-2.352E+00	2.094E+01	3.393E+01	2.024E+00	-0.069
Y-91								

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	702.63	*		1.490E-02	3.734E-02	6.197E-02	3.541E-03	0.240
	871.10			2.866E-02	3.565E-02	6.312E-02	5.421E-03	0.454
NB-95M	235.69	*		5.802E-01	1.737E-01	2.742E-01	2.023E-02	2.116
ZR-95	724.18			1.491E-01	1.309E-01	2.000E-01	1.414E-02	0.745
	756.15	*		4.783E-02	8.045E-02	1.349E-01	1.035E-02	0.354
NB-97	657.90	*		-1.117E-02	8.045E-02	Half-Life	too short	
	1024.50			-6.456E-01	8.045E-02	Half-Life	too short	
ZR-97	254.15			-1.525E+00	8.045E-02	Half-Life	too short	
	355.39			6.623E-01	8.045E-02	Half-Life	too short	
	507.63	*		1.654E+00	8.045E-02	Half-Life	too short	
	602.52			7.528E-01	8.045E-02	Half-Life	too short	
	1021.30			-1.577E+00	8.045E-02	Half-Life	too short	
	1147.95			-1.381E+00	8.045E-02	Half-Life	too short	
	1362.66			-3.879E-01	8.045E-02	Half-Life	too short	
	1750.46			9.619E-01	8.045E-02	Half-Life	too short	
MO-99	140.51			1.761E+01	2.544E+01	3.697E+01	9.937E+00	0.476
	181.06			1.372E+01	1.625E+01	2.377E+01	4.028E+00	0.577
	366.43			-4.149E+01	6.272E+01	1.007E+02	5.902E+00	-0.412
	739.58	*		-4.381E+00	1.002E+01	1.555E+01	2.176E+00	-0.282
	778.00			9.272E+00	2.741E+01	4.706E+01	3.259E+00	0.197
TC-99M	140.51	*		1.063E+09	2.741E+01	Half-Life	too short	
RH-101	127.23	+		2.855E-02	4.919E-02	6.681E-02	3.837E-03	0.427
	198.01	*		-3.481E-02	3.872E-02	5.926E-02	3.159E-03	-0.587
	325.23			1.770E-01	2.624E-01	3.994E-01	2.360E-02	0.443
RH-102	418.52			1.807E-03	3.140E-01	5.205E-01	3.033E-02	0.003
	475.06	*		-1.306E-02	3.189E-02	5.119E-02	2.997E-03	-0.255
	631.29			3.061E-03	5.439E-02	8.868E-02	4.714E-03	0.035
	697.49			-3.867E-02	8.311E-02	1.293E-01	7.288E-03	-0.299
	766.84	+		4.942E-01	2.237E-01	2.818E-01	1.899E-02	1.754
	1046.59			-9.364E-02	1.166E-01	1.771E-01	1.341E-02	-0.529
	1112.84			-8.258E-02	2.830E-01	3.843E-01	2.550E-02	-0.215
RU-103	497.08	*		-3.073E-02	4.394E-02	6.871E-02	8.699E-03	-0.447
	610.33			9.234E+00	1.921E+00	2.574E+00	3.934E-01	3.588
RH-106	511.85			3.181E-01	2.203E-01	4.034E-01	2.342E-02	0.789
	621.84	*		3.991E-03	3.547E-01	5.766E-01	6.650E-02	0.007
	1050.47			-9.550E-01	2.363E+00	3.750E+00	2.821E-01	-0.255
RU-106	511.85			3.181E-01	2.203E-01	4.034E-01	2.342E-02	0.789
	621.84	*		3.991E-03	3.547E-01	5.766E-01	3.098E-02	0.007
	1050.47			-9.550E-01	2.363E+00	3.750E+00	2.821E-01	-0.255
AG-108M	433.93	*		4.029E-03	3.446E-02	5.739E-02	3.639E-03	0.070
	614.37			1.621E-02	4.413E-02	6.437E-02	3.824E-03	0.252
	722.95			3.793E-02	5.539E-02	8.208E-02	5.337E-03	0.462
AG-110M	657.75	*		-2.103E-02	4.598E-02	6.116E-02	3.398E-03	-0.344
	677.61			4.055E-02	2.951E-01	4.827E-01	2.762E-02	0.084
	706.67			2.127E-02	2.376E-01	3.856E-01	2.362E-02	0.055
	763.93			6.508E-01	2.539E-01	4.212E-01	2.949E-02	1.545
	884.67			-2.289E-02	4.938E-02	7.887E-02	7.191E-03	-0.290
	937.48			-1.023E-01	1.216E-01	1.520E-01	1.381E-02	-0.673
	1384.27			5.830E-02	1.733E-01	2.923E-01	2.217E-02	0.199

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111	171.28			1.604E-01	8.360E-01	1.369E+00	7.020E-02	0.117
	245.39	*		-2.697E-01	1.000E+00	1.375E+00	7.784E-02	-0.196
IN-113M	391.69	*		-2.891E-02	4.566E-02	7.316E-02	4.507E-03	-0.395
SN-113	391.69	*		-2.891E-02	4.566E-02	7.316E-02	4.507E-03	-0.395
IN-114M	190.27	*		-1.825E-01	2.298E-01	3.116E-01	1.642E-02	-0.586
CD-115	260.90			-1.104E+02	9.820E+01	1.482E+02	8.509E+00	-0.745
	492.35			2.036E-02	2.844E+01	4.676E+01	2.730E+00	0.000
	527.90	*		1.426E+00	7.850E+00	1.302E+01	7.511E-01	0.110
SN-117M	156.02			1.183E-01	2.420E+00	3.955E+00	2.070E-01	0.030
	158.56	*		-4.396E-02	5.806E-02	9.208E-02	4.785E-03	-0.477
SB-122	563.90	*		-2.159E-01	1.624E+00	2.628E+00	1.486E-01	-0.082
	692.80			3.728E+01	3.213E+01	5.640E+01	3.139E+00	0.661
I-123	159.00	*		-1.292E+00	3.213E+01	Half-Life too short		
	528.96			4.562E+00	3.213E+01	Half-Life too short		
TE-123M	159.00	*		-3.153E-02	3.222E-02	5.067E-02	2.674E-03	-0.622
I-124	602.71	*		1.997E-01	6.171E-01	8.965E-01	4.913E-02	0.223
	722.78			2.708E+00	4.659E+00	6.843E+00	4.124E-01	0.396
	1325.50			-2.431E+00	2.870E+01	4.618E+01	3.354E+00	-0.053
	1376.25			3.518E+01	2.825E+01	5.146E+01	3.761E+00	0.684
	1509.49			8.505E+00	1.152E+01	2.067E+01	1.465E+00	0.412
	1691.02			3.164E+00	3.096E+00	5.955E+00	3.887E-01	0.531
SB-124	602.71			1.411E-02	4.361E-02	6.335E-02	3.473E-03	0.223
	645.85			3.923E-01	5.564E-01	9.320E-01	5.626E-02	0.421
	709.31			-7.419E-01	3.012E+00	4.764E+00	2.771E-01	-0.156
	713.82			-3.813E-01	1.689E+00	2.671E+00	2.741E-01	-0.143
	722.78			2.774E-01	4.773E-01	7.010E-01	4.409E-02	0.396
+	968.20			1.311E+01	4.554E+00	6.808E+00	5.772E-01	1.926
	1045.16			-6.093E-01	2.472E+00	3.984E+00	3.025E-01	-0.153
	1325.50			-2.659E-01	3.141E+00	5.053E+00	3.670E-01	-0.053
	1368.21			-1.718E+00	1.884E+00	2.669E+00	3.385E-01	-0.644
	1436.60			-1.542E+00	3.096E+00	4.550E+00	3.290E-01	-0.339
	1691.02			7.645E-02	7.484E-02	1.439E-01	1.003E-02	0.531
SB-125	427.89	*		-1.142E-02	9.437E-02	1.551E-01	9.435E-03	-0.074
+	463.38			5.227E-01	4.774E-01	5.398E-01	3.677E-02	0.968
	600.56			3.287E-02	1.987E-01	2.974E-01	1.916E-02	0.111
	635.90			7.939E-02	2.744E-01	4.553E-01	2.895E-02	0.174
TE-125M	109.28	*		6.648E+00	1.387E+01	2.044E+01	1.822E+00	0.325
I-126	388.63			6.968E-03	1.941E-01	3.235E-01	1.871E-02	0.022
	666.33	*		1.020E-01	2.060E-01	3.026E-01	1.566E-02	0.337
	753.82			9.057E-01	1.526E+00	2.565E+00	1.673E-01	0.353
SB-126	223.80			1.719E-01	4.205E+00	6.780E+00	3.744E-01	0.025
+	278.60			3.647E+00	3.390E+00	4.232E+00	2.462E-01	0.862
	296.50			1.101E+01	2.353E+00	3.300E+00	1.937E-01	3.338
	414.70			-8.443E-03	7.676E-02	1.265E-01	7.363E-03	-0.067
	415.30			8.693E-01	6.302E+00	1.053E+01	6.128E-01	0.083
	555.20			7.988E-01	3.935E+00	6.520E+00	3.709E-01	0.123
	573.80			-1.076E+00	1.187E+00	1.693E+00	9.509E-02	-0.636
	593.00			-7.604E-01	9.107E-01	1.389E+00	7.679E-02	-0.548
	656.30			-2.184E+00	4.017E+00	5.282E+00	2.719E-01	-0.414

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		666.33		4.249E-02	8.583E-02	1.261E-01	6.525E-03	0.337
		675.00		-2.614E-01	1.823E+00	2.912E+00	1.544E-01	-0.090
		695.00		4.244E-02	7.703E-02	1.294E-01	7.247E-03	0.328
		697.00		6.661E-02	2.701E-01	4.439E-01	2.499E-02	0.150
		720.50	*	5.492E-02	1.691E-01	2.431E-01	1.456E-02	0.226
		856.80		-6.193E-01	5.027E-01	7.583E-01	6.310E-02	-0.817
		989.30		1.854E-01	1.162E+00	1.952E+00	1.612E-01	0.095
		1034.80		2.011E+00	9.136E+00	1.536E+01	1.187E+00	0.131
		1213.00		-1.288E-02	4.767E+00	7.792E+00	4.714E-01	-0.002
		61.10		5.301E+02	1.078E+02	1.563E+02	1.695E+01	3.392
		252.40		5.407E-01	3.901E+00	6.277E+00	2.601E+00	0.086
		290.80		7.330E+00	1.938E+01	2.910E+01	2.545E+00	0.252
		411.60		4.101E+00	1.051E+01	1.776E+01	2.504E+00	0.231
		444.90		-1.527E+00	8.003E+00	1.307E+01	1.364E+00	-0.117
		473.00		-4.436E-01	1.436E+00	2.319E+00	2.513E-01	-0.191
		543.00		9.680E-01	1.402E+01	2.305E+01	2.895E+00	0.042
		603.60		1.787E+00	1.054E+01	1.507E+01	1.538E+00	0.119
XE-127		685.20	*	7.269E-01	1.111E+00	1.885E+00	1.654E-01	0.386
		698.50		-1.307E+01	1.347E+01	1.992E+01	2.816E+00	-0.656
		722.20		1.997E+01	2.993E+01	4.441E+01	3.932E+00	0.450
		783.80		2.443E+00	3.271E+00	5.733E+00	6.310E-01	0.426
		57.60		5.016E+00	1.125E+01	1.687E+01	1.478E+00	0.297
		145.22		1.557E+00	9.380E-01	1.431E+00	7.719E-02	1.088
		172.10		-3.010E-02	1.355E-01	2.186E-01	1.122E-02	-0.138
I-131		202.84	*	5.844E-02	5.974E-02	8.840E-02	4.746E-03	0.661
		374.96		-9.019E-02	2.036E-01	3.310E-01	1.931E-02	-0.273
		80.18		-4.736E-01	9.365E+00	9.905E+00	9.126E-01	-0.048
		284.30		4.807E-02	1.421E+00	2.399E+00	1.552E-01	0.020
TE-132		364.48	*	9.200E-02	1.029E-01	1.796E-01	1.172E-02	0.512
		636.97		6.386E-01	1.424E+00	2.390E+00	1.439E-01	0.267
		722.89		5.411E+00	8.344E+00	1.233E+01	7.512E-01	0.439
		49.72		-2.524E+01	2.760E+01	4.507E+01	4.663E+00	-0.560
BA-133	+	111.76		9.478E+01	5.444E+01	5.701E+01	5.126E+00	1.663
		116.30		9.618E+00	3.012E+01	4.408E+01	3.847E+00	0.218
		228.16	*	2.712E-02	5.993E-01	9.656E-01	1.354E-01	0.028
		53.15		-1.548E+00	6.327E+00	1.056E+01	9.315E-01	-0.147
I-133		79.62		7.702E-01	2.888E+00	3.107E+00	4.822E-01	0.248
		81.00		-1.458E-02	2.223E-01	2.348E-01	3.807E-02	-0.062
	+	276.40		5.850E-01	5.479E-01	6.978E-01	9.050E-02	0.838
		302.84		1.004E-01	1.667E-01	2.530E-01	2.960E-02	0.397
I-133		356.01	*	1.081E-02	4.749E-02	7.014E-02	8.138E-03	0.154
		383.85		-3.712E-02	3.123E-01	5.162E-01	5.612E-02	-0.072
	+	510.53		4.471E-01	3.123E-01	Half-Life	too short	
		529.87	*	1.043E-03	3.123E-01	Half-Life	too short	
		706.58		2.254E-02	3.123E-01	Half-Life	too short	
		856.28		-3.290E-01	3.123E-01	Half-Life	too short	
		875.33		-1.428E-02	3.123E-01	Half-Life	too short	
		1236.41		2.916E-01	3.123E-01	Half-Life	too short	
		1298.22		-4.908E-02	3.123E-01	Half-Life	too short	

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		-1.637E-01	2.057E+00	3.371E+00	1.973E-01	-0.049
		563.23		1.752E-01	3.783E-01	6.370E-01	3.684E-02	0.275
		569.32		2.966E-01	2.173E-01	3.843E-01	2.234E-02	0.772
		604.70		2.751E-02	4.136E-02	6.173E-02	3.398E-03	0.446
	+	795.84	*	5.784E-02	5.521E-02	9.351E-02	6.829E-03	0.619
		801.93		5.151E-03	4.416E-01	7.159E-01	5.291E-02	0.007
		1038.57		1.765E-01	4.238E+00	7.022E+00	5.390E-01	0.025
		1167.94		-1.346E-01	2.799E+00	4.569E+00	2.619E-01	-0.029
		1365.15		6.923E-01	1.237E+00	2.148E+00	1.671E-01	0.322
		1365.15	*	1.781E-01	2.012E-01	2.951E-01	2.254E-02	0.604
CS-135		268.24		-4.260E+08	2.012E-01	Half-Life	too short	
I-135		417.63		6.028E+08	2.012E-01	Half-Life	too short	
		546.56		-2.852E+07	2.012E-01	Half-Life	too short	
		836.80		5.444E+08	2.012E-01	Half-Life	too short	
		1038.76		1.663E+08	2.012E-01	Half-Life	too short	
		1124.00		-1.512E+09	2.012E-01	Half-Life	too short	
		1131.51		1.756E+08	2.012E-01	Half-Life	too short	
		1260.41	*	1.354E+07	2.012E-01	Half-Life	too short	
		1457.56		3.820E+10	2.012E-01	Half-Life	too short	
		1678.03		-2.083E+08	2.012E-01	Half-Life	too short	
		1706.46		-5.759E+08	2.012E-01	Half-Life	too short	
		1791.20		4.258E+08	2.012E-01	Half-Life	too short	
CS-136		66.91		-8.797E-01	1.234E+00	1.761E+00	2.726E-01	-0.500
	+	86.29		3.496E+00	1.486E+00	2.589E+00	3.506E-01	1.350
		153.22		1.568E-01	7.131E-01	1.172E+00	7.978E-02	0.134
		163.89		1.551E+00	1.133E+00	1.923E+00	1.292E-01	0.807
		176.55		-6.191E-02	4.032E-01	6.514E-01	3.882E-02	-0.095
		273.65		-4.423E-02	7.102E-01	6.994E-01	4.624E-02	-0.063
		340.57		2.267E-01	1.402E-01	2.238E-01	1.402E-02	1.013
		818.51		3.002E-02	7.274E-02	1.256E-01	9.583E-03	0.239
		1048.07	*	-5.201E-02	1.028E-01	1.614E-01	1.286E-02	-0.322
		1235.34		4.568E-01	6.588E-01	1.125E+00	1.155E-01	0.406
CE-139		165.85	*	-2.934E-02	3.345E-02	5.270E-02	2.687E-03	-0.557
BA-140		162.64		9.498E-01	8.054E-01	1.361E+00	8.087E-02	0.698
		304.84		-1.245E-01	1.405E+00	2.044E+00	5.582E-01	-0.061
		423.70		-3.046E-01	1.875E+00	3.073E+00	9.768E-01	-0.099
		537.32	*	-4.028E-02	2.492E-01	4.026E-01	1.309E-01	-0.100
LA-140	+	328.77		6.263E-01	5.135E-01	5.312E-01	3.503E-02	1.179
		432.53		8.733E-02	1.977E+00	3.281E+00	2.115E-01	0.027
		487.03		1.001E-01	1.433E-01	2.452E-01	1.620E-02	0.408
		751.79		-1.234E+00	1.776E+00	2.686E+00	2.060E-01	-0.459
		815.85		2.082E-01	2.969E-01	5.241E-01	4.555E-02	0.397
		867.82		4.002E-01	1.369E+00	2.337E+00	2.100E-01	0.171
		919.63		-3.240E-01	2.674E+00	4.400E+00	4.796E-01	-0.074
		925.24		3.030E-01	1.194E+00	1.888E+00	1.777E-01	0.160
		1596.49	*	-1.469E-03	8.535E-02	1.421E-01	9.746E-03	-0.010
CE-141		145.44	*	1.028E-01	8.373E-02	1.259E-01	7.099E-03	0.816
CE-143		57.37		3.100E-04	8.373E-02	Half-Life	too short	
		231.56		1.342E-04	8.373E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	293.26	*		5.316E-04	8.373E-02	Half-Life	too short	
	350.59			1.295E-02	8.373E-02	Half-Life	too short	
	490.36			3.787E-04	8.373E-02	Half-Life	too short	
	664.57			4.547E-04	8.373E-02	Half-Life	too short	
	721.93			8.911E-04	8.373E-02	Half-Life	too short	
CE-144	80.11			-5.300E-01	4.810E+00	5.071E+00	4.648E-01	-0.105
	133.54	*		-1.867E-01	2.810E-01	3.904E-01	5.513E-02	-0.478
PM-144	476.78			1.171E-02	7.349E-02	1.222E-01	8.536E-03	0.096
	618.01			-3.676E-02	3.378E-02	5.019E-02	2.895E-03	-0.733
	696.49	*		1.188E-02	3.653E-02	6.041E-02	3.398E-03	0.197
	778.57			8.657E-01	2.522E+00	4.332E+00	3.005E-01	0.200
PR-144	696.49	*		8.047E-01	2.474E+00	4.091E+00	2.299E-01	0.197
	1489.15			-6.019E-01	1.206E+01	1.929E+01	1.377E+00	-0.031
PM-146	453.90	*		3.277E-02	4.881E-02	8.158E-02	7.065E-03	0.402
	633.02			-6.319E-01	1.459E+00	2.223E+00	8.170E-01	-0.284
	735.90			7.481E-02	1.661E-01	2.746E-01	7.681E-02	0.272
	747.13			-4.606E-02	1.048E-01	1.623E-01	2.078E-02	-0.284
ND-147	91.11	+		1.631E+01	1.685E+00	1.252E+00	1.231E-01	13.026
	319.41			-8.307E-01	3.178E+00	5.121E+00	3.026E-01	-0.162
	439.89			2.544E+00	5.755E+00	9.753E+00	5.709E-01	0.261
	531.02	*		5.723E-01	5.730E-01	9.895E-01	1.336E-01	0.578
PM-149	285.90	*		1.275E+00	6.492E+01	1.095E+02	1.553E+01	0.012
EU-152	121.78			-9.515E-03	8.904E-02	1.460E-01	1.122E-02	-0.065
	244.69			-3.739E-02	4.177E-01	5.810E-01	3.286E-02	-0.064
	344.27	*		-1.030E-01	1.166E-01	1.582E-01	1.049E-02	-0.651
	443.98			-5.196E-01	1.011E+00	1.618E+00	9.469E-02	-0.321
	778.89			5.802E-02	2.886E-01	4.911E-01	3.408E-02	0.118
	867.32			5.877E-02	8.801E-01	1.476E+00	1.257E-01	0.040
	964.01			5.297E-01	3.254E-01	5.440E-01	4.635E-02	0.974
	1085.78			5.130E-02	4.369E-01	7.266E-01	5.113E-02	0.071
	1112.02			1.902E-02	3.959E-01	5.621E-01	3.736E-02	0.034
	1407.95			1.198E-01	1.777E-01	3.132E-01	2.277E-02	0.382
GD-153	69.67			8.635E-01	2.596E+00	4.059E+00	3.546E-01	0.213
	83.37	+		2.483E+01	2.468E+01	3.740E+01	3.511E+00	0.664
	97.43	+	*	3.918E-01	1.406E-01	2.062E-01	1.684E-02	1.900
	103.18			-3.057E-02	1.542E-01	2.221E-01	1.660E-02	-0.138
EU-154	123.07			-1.778E-02	6.469E-02	1.018E-01	9.605E-03	-0.175
	247.94			8.498E-02	4.252E-01	6.636E-01	6.281E-02	0.128
	591.81			-2.382E-01	6.385E-01	1.010E+00	9.716E-02	-0.236
	723.30			2.421E-01	2.290E-01	3.505E-01	2.549E-02	0.691
	756.87			2.519E-01	9.083E-01	1.489E+00	1.578E-01	0.169
	873.19			-4.920E-02	3.065E-01	5.042E-01	6.176E-02	-0.098
	996.32			5.757E-01	4.590E-01	7.341E-01	1.289E-01	0.784
	1004.76			2.105E-01	2.372E-01	3.753E-01	4.222E-02	0.561
	1274.45	*		-1.192E-01	1.355E-01	2.005E-01	1.991E-02	-0.594
EU-155	48.70			-1.359E+00	4.540E+00	7.578E+00	6.112E-01	-0.179
	60.01			1.358E+01	9.057E+00	1.393E+01	1.210E+00	0.975
	86.54	+		3.447E-01	1.429E-01	2.540E-01	2.469E-02	1.357
	105.31	*		1.703E-02	1.458E-01	2.336E-01	1.723E-02	0.073

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160	+	86.79		9.101E-01	3.770E-01	6.677E-01	6.451E-02	1.363
		197.04		-3.767E-01	6.304E-01	9.966E-01	5.305E-02	-0.378
	+	215.65		1.820E-01	7.960E-01	1.295E+00	7.076E-02	0.141
		298.57		2.921E-01	1.574E-01	2.138E-01	1.256E-02	1.366
		879.36	*	5.900E-02	1.359E-01	2.349E-01	2.054E-02	0.251
		962.29		1.487E-01	6.033E-01	8.854E-01	7.560E-02	0.168
		966.15		1.069E+00	2.912E-01	5.213E-01	4.431E-02	2.051
		1177.93		-2.740E-01	3.802E-01	5.820E-01	3.311E-02	-0.471
		1271.85		1.464E-01	7.278E-01	1.210E+00	8.077E-02	0.121
		80.57		-2.925E-02	6.142E-01	6.496E-01	5.973E-02	-0.045
HO-166M	+	184.41		5.305E-01	7.775E-02	1.052E-01	5.496E-03	5.045
		280.46		-1.533E-02	9.956E-02	1.449E-01	8.441E-03	-0.106
		410.95		2.605E-01	2.578E-01	4.497E-01	2.614E-02	0.579
		711.68	*	1.633E-02	6.301E-02	1.037E-01	6.068E-03	0.157
	+	752.31		-6.462E-02	3.054E-01	4.823E-01	3.134E-02	-0.134
		810.29		-4.534E-02	5.740E-02	8.950E-02	6.695E-03	-0.507
		51.35		-2.376E+01	5.475E+01	9.092E+01	7.903E+00	-0.261
		52.39		-1.274E+01	2.826E+01	4.690E+01	4.120E+00	-0.272
		59.40		4.215E+01	4.935E+01	7.478E+01	6.497E+00	0.564
		66.72	*	-4.971E+01	4.810E+01	6.806E+01	5.918E+00	-0.730
LU-176	+	88.36		6.791E-01	2.814E-01	5.135E-01	4.977E-02	1.323
		201.83		2.901E-02	3.661E-02	5.377E-02	2.882E-03	0.539
		306.84	*	1.516E-02	2.708E-02	4.426E-02	2.607E-03	0.342
		401.10		-4.014E-01	6.806E+00	1.126E+01	6.525E-01	-0.036
LU-177M	+	52.97		-6.448E-01	2.851E+00	4.761E+00	4.197E-01	-0.135
		54.07		1.012E+00	1.496E+00	2.553E+00	2.256E-01	0.397
		61.30		2.297E+01	3.713E+00	5.488E+00	4.767E-01	4.185
		121.62		7.324E-02	4.524E-01	7.478E-01	4.420E-02	0.098
		147.16		-2.330E-01	8.596E-01	1.216E+00	6.521E-02	-0.192
		171.86		-1.815E-01	5.544E-01	8.908E-01	4.574E-02	-0.204
		218.09		3.162E-01	8.983E-01	1.469E+00	8.051E-02	0.215
		268.79		2.487E+00	1.201E+00	1.513E+00	8.745E-02	1.643
		319.02		-1.153E-01	2.661E-01	4.247E-01	2.508E-02	-0.272
		367.43		-3.767E-01	9.057E-01	1.475E+00	8.637E-02	-0.255
HF-181	+	413.65	*	-1.072E-01	1.925E-01	3.095E-01	1.801E-02	-0.346
		56.28		-4.012E-01	1.608E+00	2.682E+00	2.361E-01	-0.150
		57.53		5.116E-01	9.483E-01	1.427E+00	1.250E-01	0.359
		65.20		5.591E+00	1.772E+00	2.746E+00	2.385E-01	2.036
		133.02		5.171E-03	8.633E-02	1.244E-01	6.986E-03	0.042
		136.25		-8.420E-02	5.291E-01	8.627E-01	4.788E-02	-0.098
		345.85		-1.009E-01	2.236E-01	3.142E-01	1.854E-02	-0.321
		482.03	*	-5.041E-02	4.634E-02	7.095E-02	4.150E-03	-0.710
		56.28		-1.580E-01	6.380E-01	1.064E+00	9.368E-02	-0.148
		57.53		2.032E-01	3.765E-01	5.666E-01	4.964E-02	0.359
W-181	+	65.20	*	2.202E+00	6.981E-01	1.082E+00	9.396E-02	2.036
		67.75		-2.233E-01	1.898E-01	2.671E-01	2.325E-02	-0.836
		100.10		5.628E-01	2.694E-01	4.157E-01	3.253E-02	1.354
		152.43		1.185E-01	3.919E-01	6.460E-01	3.414E-02	0.184
TA-182	+	222.10		-4.680E-02	3.725E-01	5.965E-01	3.287E-02	-0.078

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183	+	1001.68		2.095E+01	4.494E+00	6.994E+00	5.679E-01	2.996
		1121.28		3.747E-01	1.881E-01	3.161E-01	2.056E-02	1.185
		1189.05		-1.556E-01	3.365E-01	5.290E-01	3.070E-02	-0.294
		1221.42	*	-1.737E-01	2.138E-01	3.251E-01	1.995E-02	-0.534
		1230.97		-2.551E-01	5.788E-01	9.147E-01	5.706E-02	-0.279
		57.98		1.404E-01	3.715E-01	5.560E-01	4.862E-02	0.252
		59.32		1.669E-01	2.008E-01	3.042E-01	2.644E-02	0.549
		67.20		-8.781E-02	3.291E-01	4.796E-01	4.173E-02	-0.183
		162.32	*	1.300E-01	1.242E-01	2.092E-01	1.076E-02	0.621
	+	208.81		2.909E+00	1.400E+00	1.927E+00	1.043E-01	1.510
RE-184		291.72		4.584E-01	1.084E+00	1.631E+00	9.557E-02	0.281
		57.98		5.210E-01	1.379E+00	2.064E+00	1.805E-01	0.252
		59.32		6.189E-01	7.449E-01	1.128E+00	9.805E-02	0.549
		67.20		-3.259E-01	1.221E+00	1.780E+00	1.548E-01	-0.183
		161.27		1.250E-01	4.010E-01	6.603E-01	3.406E-02	0.189
		216.55		9.839E-02	2.840E-01	4.642E-01	2.539E-02	0.212
		252.85	*	-5.634E-02	2.615E-01	4.146E-01	2.364E-02	-0.136
		318.01		-3.701E-01	4.516E-01	7.259E-01	4.286E-02	-0.510
		792.07		5.978E-01	1.343E+00	2.022E+00	1.448E-01	0.296
		903.28		9.456E-02	1.191E+00	1.805E+00	1.636E-01	0.052
OS-185		920.93		-9.557E-02	4.703E-01	7.684E-01	6.853E-02	-0.124
		59.72		7.258E-01	5.347E-01	8.202E-01	7.123E-02	0.885
		61.14		1.955E+00	3.697E-01	5.633E-01	4.893E-02	3.470
		69.30		-3.105E-01	4.495E-01	7.122E-01	6.218E-02	-0.436
		592.07		-1.078E+00	2.587E+00	4.081E+00	2.258E-01	-0.264
		646.12	*	2.328E-02	4.783E-02	7.897E-02	4.121E-03	0.295
		717.42		-4.325E-01	9.722E-01	1.510E+00	8.974E-02	-0.286
		874.81		-8.250E-02	5.979E-01	9.855E-01	8.533E-02	-0.084
		880.27		6.538E-01	7.501E-01	1.340E+00	1.174E-01	0.488
		155.03	*	1.045E-01	1.944E-01	3.226E-01	1.693E-02	0.324
RE-188		477.96		1.457E+00	3.300E+00	5.577E+00	3.263E-01	0.261
		633.10		-1.228E+00	2.879E+00	4.448E+00	2.359E-01	-0.276
	+	63.58		1.337E+03	1.852E+02	2.097E+02	1.821E+01	6.378
W-188		227.08		3.517E+00	1.437E+01	2.334E+01	1.294E+00	0.151
		290.67	*	2.682E+00	8.300E+00	1.243E+01	7.277E-01	0.216
	+	295.96		9.838E-01	2.069E-01	2.734E-01	1.629E-02	3.599
IR-192		308.46		-2.095E-02	9.762E-02	1.623E-01	9.671E-03	-0.129
		316.51	*	2.821E-03	3.478E-02	5.857E-02	3.475E-03	0.048
		468.07		1.402E-02	7.534E-02	1.095E-01	7.374E-03	0.128
		604.41		1.560E-01	5.412E-01	7.816E-01	8.743E-02	0.200
		612.46		1.480E+00	7.794E-01	1.290E+00	9.404E-02	1.147
		65.12		1.240E+00	3.343E-01	5.173E-01	4.494E-02	2.397
AU-195		66.83		-1.536E-01	1.584E-01	2.247E-01	1.954E-02	-0.684
	+	75.70		1.273E+00	3.393E-01	5.822E-01	5.200E-02	2.186
	+	98.88	*	1.139E+00	4.089E-01	5.796E-01	4.625E-02	1.966
TL-200		129.76		6.043E+00	3.997E+00	6.077E+00	3.454E-01	0.995
		367.94	*	-6.811E-05	3.997E+00	Half-Life	too short	
		579.30		3.178E-03	3.997E+00	Half-Life	too short	
		828.27		4.497E-04	3.997E+00	Half-Life	too short	

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1205.75			-2.725E-04	3.997E+00	Half-Life	too short	
TL-201	68.90			-5.636E+00	5.774E+00	8.673E+00	7.566E-01	-0.650
	70.82			3.806E+00	3.331E+00	5.044E+00	4.420E-01	0.755
	80.30			-3.727E-01	8.525E+00	9.019E+00	8.278E-01	-0.041
	135.34			5.212E-01	2.259E+01	3.705E+01	2.063E+00	0.014
TL-202	167.43	*		-6.196E+00	5.872E+00	9.176E+00	4.683E-01	-0.675
	68.90			-6.295E-01	6.448E-01	9.687E-01	8.451E-02	-0.650
	70.82			4.240E-01	3.710E-01	5.619E-01	4.923E-02	0.755
	80.30			-4.152E-02	9.498E-01	1.005E+00	9.223E-02	-0.041
	439.56	*		4.741E-02	6.810E-02	1.170E-01	6.847E-03	0.405
HG-203	70.83			1.935E+00	1.707E+00	2.567E+00	3.516E-01	0.754
	72.87			3.118E+00	1.095E+00	1.612E+00	2.150E-01	1.934
+	82.60			1.818E+00	1.817E+00	2.763E+00	3.924E-01	0.658
	279.20	*		2.655E-02	4.712E-02	7.156E-02	4.420E-03	0.371
BI-207	72.80			8.583E-01	3.111E-01	4.776E-01	4.212E-02	1.797
+	74.97			7.095E-01	1.891E-01	3.069E-01	2.731E-02	2.311
+	84.90			3.223E-01	3.203E-01	4.849E-01	4.609E-02	0.665
	569.67			5.646E-02	3.291E-02	5.941E-02	3.347E-03	0.950
	1063.62	*		3.299E-02	5.270E-02	9.173E-02	6.740E-03	0.360
	1770.23			-3.072E-01	4.799E-01	5.370E-01	3.325E-02	-0.572
TL-207	81.07			-1.444E-02	4.907E-01	5.193E-01	4.792E-02	-0.028
+	83.78			2.125E-01	2.112E-01	3.164E-01	2.980E-02	0.672
	94.90			3.267E+00	5.877E-01	7.162E-01	6.110E-02	4.562
	122.32			1.752E-01	2.110E+00	3.478E+00	2.353E-01	0.050
+	144.24			2.056E+00	1.106E+00	1.501E+00	1.039E-01	1.370
	154.21			2.669E-01	4.613E-01	7.664E-01	5.037E-02	0.348
+	269.46			5.855E-01	2.829E-01	3.635E-01	2.197E-02	1.611
	323.87	*		2.794E-02	7.501E-01	1.097E+00	1.816E-01	0.025
+	338.28			6.787E+00	1.903E+00	2.495E+00	2.642E-01	2.721
	445.03			-3.125E-01	2.350E+00	3.851E+00	3.967E-01	-0.081
PO-209	260.50			-8.372E+00	1.068E+01	1.642E+01	9.429E-01	-0.510
	262.80			-1.861E+01	2.901E+01	4.487E+01	2.581E+00	-0.415
	896.60	*		8.707E-01	7.829E+00	1.316E+01	1.194E+00	0.066
BI-210	46.50	*		2.177E+00	6.877E+00	1.158E+01	9.014E-01	0.188
PB-210	46.50	*		2.177E+00	6.877E+00	1.158E+01	9.014E-01	0.188
PO-210	46.50	*		2.177E+00	6.876E+00	1.158E+01	7.767E-01	0.188
PB-211	404.84	*		-1.125E+00	1.221E+00	1.521E+00	9.481E-01	-0.740
	427.08			5.293E-02	2.094E+00	3.472E+00	2.146E+00	0.015
	831.96			-6.082E-01	1.303E+00	2.005E+00	1.254E+00	-0.303
BI-212	727.18	*		9.587E-01	5.733E-01	6.628E-01	5.261E-02	1.446
	785.46			1.112E+00	1.982E+00	3.444E+00	2.428E-01	0.323
	1620.62			1.141E+00	1.248E+00	2.340E+00	1.587E-01	0.488
PO-215	81.07			-1.444E-02	4.907E-01	5.193E-01	4.792E-02	-0.028
+	83.78			2.125E-01	2.112E-01	3.164E-01	2.980E-02	0.672
	94.90			3.267E+00	5.877E-01	7.162E-01	6.110E-02	4.562
	122.32			1.752E-01	2.110E+00	3.478E+00	2.353E-01	0.050
+	144.24			2.056E+00	1.106E+00	1.501E+00	1.039E-01	1.370
	154.21			2.669E-01	4.613E-01	7.664E-01	5.037E-02	0.348
+	269.46			5.855E-01	2.829E-01	3.635E-01	2.197E-02	1.611

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		323.87	*	2.794E-02	7.501E-01	1.097E+00	1.816E-01	0.025
	+	338.28		6.787E+00	1.903E+00	2.495E+00	2.642E-01	2.721
		445.03		-3.125E-01	2.350E+00	3.851E+00	3.967E-01	-0.081
	+	271.23		7.511E-01	3.652E-01	4.560E-01	3.692E-02	1.647
		401.81	*	3.617E-01	4.221E-01	7.290E-01	9.916E-02	0.496
RN-220		549.76	*	5.277E+00	2.893E+01	4.786E+01	2.731E+00	0.110
RA-223		81.07		-1.444E-02	4.907E-01	5.193E-01	4.792E-02	-0.028
	+	83.78		2.125E-01	2.112E-01	3.164E-01	2.980E-02	0.672
		94.90		3.267E+00	5.877E-01	7.162E-01	6.110E-02	4.562
		122.32		1.752E-01	2.110E+00	3.478E+00	2.353E-01	0.050
	+	144.24		2.056E+00	1.106E+00	1.501E+00	1.039E-01	1.370
		154.21		2.669E-01	4.613E-01	7.664E-01	5.037E-02	0.348
	+	269.46		5.855E-01	2.829E-01	3.635E-01	2.197E-02	1.611
		323.87	*	2.794E-02	7.501E-01	1.097E+00	1.816E-01	0.025
	+	338.28		6.787E+00	1.903E+00	2.495E+00	2.642E-01	2.721
		445.03		-3.125E-01	2.350E+00	3.851E+00	3.967E-01	-0.081
		79.80		9.809E-01	3.663E+00	3.936E+00	8.550E-01	0.249
AC-227		236.00		2.283E+00	3.935E-01	6.114E-01	6.325E-02	3.733
		256.20	*	2.155E-01	4.306E-01	7.032E-01	9.793E-02	0.306
		286.10		2.503E-01	1.601E+00	2.715E+00	3.145E-01	0.092
	+	299.80		3.766E+00	2.109E+00	2.791E+00	4.553E-01	1.349
		304.40		-4.176E-01	2.218E+00	3.204E+00	5.552E-01	-0.130
		334.20		1.619E+00	3.260E+00	3.935E+00	7.228E-01	0.411
TH-227		79.80		9.809E-01	3.663E+00	3.936E+00	8.657E-01	0.249
		94.00		1.002E+02	2.250E+01	9.291E+00	2.025E+00	10.781
		236.00		2.283E+00	3.750E-01	6.114E-01	5.461E-02	3.733
		256.20	*	2.155E-01	4.311E-01	7.032E-01	1.186E-01	0.306
		286.10		2.503E-01	1.620E+00	2.715E+00	2.720E+00	0.092
	+	299.80		3.766E+00	2.109E+00	2.791E+00	4.553E-01	1.349
		304.40		-4.176E-01	2.218E+00	3.204E+00	5.552E-01	-0.130
		334.20		1.619E+00	3.260E+00	3.935E+00	7.228E-01	0.411
TH-229	+	85.43		3.182E-01	3.162E-01	4.819E-01	4.602E-02	0.660
	+	88.47		3.909E-01	1.620E-01	2.946E-01	2.849E-02	1.327
		100.00		6.777E-01	2.851E-01	4.422E-01	3.467E-02	1.532
		193.63	*	8.700E-02	5.763E-01	9.381E-01	4.969E-02	0.093
		210.97		1.207E+00	9.666E-01	1.442E+00	7.831E-02	0.837
PA-231		283.67	*	1.438E-01	1.668E+00	2.750E+00	3.793E-01	0.052
	+	301.29		1.506E+00	8.222E-01	1.120E+00	1.176E-01	1.345
		81.07		-1.444E-02	4.907E-01	5.193E-01	4.792E-02	-0.028
	+	83.78		2.125E-01	2.112E-01	3.164E-01	2.980E-02	0.672
		94.90		3.267E+00	5.877E-01	7.162E-01	6.110E-02	4.562
		122.32		1.752E-01	2.110E+00	3.478E+00	2.353E-01	0.050
	+	144.24		2.056E+00	1.106E+00	1.501E+00	1.039E-01	1.370
		154.21		2.669E-01	4.613E-01	7.664E-01	5.037E-02	0.348
	+	269.46		5.855E-01	2.829E-01	3.635E-01	2.197E-02	1.611
		323.87	*	2.794E-02	7.501E-01	1.097E+00	1.816E-01	0.025
	+	338.28		6.787E+00	1.903E+00	2.495E+00	2.642E-01	2.721
		445.03		-3.125E-01	2.350E+00	3.851E+00	3.967E-01	-0.081
U-231	+	84.21		7.425E+00	7.380E+00	1.108E+01	1.047E+00	0.670

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	92.29		1.087E+02	1.054E+01	8.517E+00	7.623E-01	12.766
		95.87	*	3.403E+00	1.910E+00	2.198E+00	1.844E-01	1.548
		108.00		-2.673E+00	2.564E+00	3.559E+00	2.487E-01	-0.751
	+	75.28		2.070E+01	6.113E+00	9.279E+00	1.439E+00	2.231
	+	86.59		5.606E+00	2.724E+00	4.126E+00	1.121E+00	1.359
	+	300.12		1.050E+00	5.799E-01	7.808E-01	1.052E-01	1.345
		311.98	*	-3.716E-02	6.576E-02	1.073E-01	6.712E-03	-0.346
		340.50		1.388E+00	7.985E-01	1.190E+00	2.737E-01	1.166
		398.62		9.791E-01	2.176E+00	3.679E+00	9.510E-01	0.266
		415.76		-1.143E-01	1.809E+00	2.988E+00	6.154E-01	-0.038
PA-234	+	63.00		3.928E+01	7.429E+00	6.385E+00	9.921E-01	6.151
		94.67		3.516E+00	5.821E-01	5.765E-01	7.129E-02	6.099
	+	98.44		4.639E-01	3.051E-01	2.379E-01	1.325E-01	1.950
		99.86		1.931E+00	7.368E-01	1.145E+00	8.991E-02	1.687
	+	111.00		7.737E-01	4.468E-01	4.571E-01	4.944E-02	1.693
		131.20		-6.859E-02	1.484E-01	2.092E-01	1.183E-02	-0.328
		152.70		2.123E-02	3.812E-01	6.235E-01	9.742E-02	0.034
	+	186.00		1.910E+01	6.377E+00	3.799E+00	1.157E+00	5.028
		226.40		1.068E-01	4.545E-01	7.379E-01	8.435E-02	0.145
		227.20		1.246E-01	4.917E-01	7.990E-01	4.431E-02	0.156
		248.90		4.380E-01	9.285E-01	1.512E+00	3.243E-01	0.290
	+	293.70		6.267E+00	1.617E+00	1.753E+00	2.823E-01	3.575
		369.80		-3.320E-01	8.646E-01	1.406E+00	2.930E-01	-0.236
		568.70		1.022E+00	1.093E+00	1.890E+00	1.065E-01	0.541
		569.50		5.141E-01	2.930E-01	5.298E-01	2.985E-02	0.970
		574.00		-1.350E+00	1.792E+00	2.587E+00	1.453E-01	-0.522
		699.00		-6.320E-01	7.951E-01	1.192E+00	2.139E-01	-0.530
		706.10		5.742E-01	1.189E+00	1.941E+00	8.565E-01	0.296
		733.00		2.046E-01	4.701E-01	6.811E-01	1.456E-01	0.300
		742.81		2.452E+00	2.292E+00	2.855E+00	1.912E+00	0.859
		796.30		6.953E-01	1.165E+00	1.762E+00	4.695E-01	0.395
		805.60		2.238E-01	1.038E+00	1.764E+00	5.350E-01	0.127
		819.60		-4.339E-01	1.296E+00	2.094E+00	7.920E-01	-0.207
		826.30		5.456E-01	9.135E-01	1.541E+00	6.870E-01	0.354
		831.60		-4.378E-01	6.785E-01	1.058E+00	3.136E-01	-0.414
		876.40		-6.457E-01	1.075E+00	1.317E+00	1.354E+00	-0.490
		880.51		2.829E-01	2.672E-01	4.844E-01	4.247E-02	0.584
		883.24		-2.285E-01	3.253E-01	4.439E-01	2.985E-01	-0.515
		899.00		4.987E-01	9.152E-01	1.546E+00	6.772E-01	0.323
		925.00		2.809E-01	1.337E+00	2.105E+00	1.870E-01	0.133
		926.50		7.593E-02	2.094E-01	3.120E-01	7.913E-02	0.243
		946.00	*	2.281E-01	3.562E-01	5.968E-01	1.122E-01	0.382
		949.00		8.804E-02	4.798E-01	8.083E-01	7.005E-02	0.109
		980.50		-1.843E-01	7.289E-01	1.179E+00	9.845E-02	-0.156
		1394.10		-8.773E-01	1.380E+00	1.843E+00	1.197E+00	-0.476
NP-236		94.67		2.702E+00	3.742E-01	4.391E-01	3.762E-02	6.154
	+	98.44		3.507E-01	1.259E-01	1.798E-01	1.445E-02	1.950
	+	111.00		5.852E-01	3.343E-01	3.458E-01	2.324E-02	1.693
		160.31	*	-1.148E-01	9.189E-02	1.430E-01	7.395E-03	-0.803

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		8.016E-01	2.877E-01	3.953E-01	3.121E-02	2.028
		117.00	*	-7.373E-02	2.717E-01	3.881E-01	2.422E-02	-0.190
	+	209.75		2.324E+00	1.119E+00	1.547E+00	8.385E-02	1.502
		228.18		9.888E-03	2.566E-01	4.133E-01	2.295E-02	0.024
		277.60		2.856E-01	2.654E-01	3.285E-01	1.910E-02	0.869
AM-241	+	334.30		9.244E-01	1.840E+00	2.231E+00	1.318E-01	0.414
		59.54	*	2.710E-01	2.872E-01	4.359E-01	4.056E-02	0.622
	+	99.55		8.247E-01	2.960E-01	4.067E-01	3.211E-02	2.028
		103.76	*	1.333E-01	1.289E-01	2.117E-01	1.569E-02	0.630
		117.00		-7.585E-02	2.795E-01	3.992E-01	2.492E-02	-0.190
CM-243	+	209.75		2.291E+00	1.103E+00	1.525E+00	8.265E-02	1.502
		228.18		9.990E-03	2.592E-01	4.176E-01	2.319E-02	0.024
	+	277.60		2.879E-01	2.676E-01	3.312E-01	1.926E-02	0.869
		798.80		-2.793E-02	1.678E-01	2.382E-01	1.734E-02	-0.117
		1036.00		1.950E-02	3.339E-01	5.540E-01	4.270E-02	0.035
AM-246	+	1062.04		1.229E-01	2.362E-01	4.072E-01	3.000E-02	0.302
		1078.86	*	-1.772E-01	1.544E-01	2.265E-01	1.616E-02	-0.783
	+	278.00		1.184E+00	1.101E+00	1.387E+00	8.068E-02	0.854
		287.40		-2.471E-01	1.364E+00	2.152E+00	1.258E-01	-0.115
		402.60	*	3.486E-02	3.820E-02	6.511E-02	3.774E-03	0.535
CF-249		252.85		-2.125E-01	9.863E-01	1.564E+00	8.917E-02	-0.136
		333.44		9.316E-02	2.860E-01	2.926E-01	1.729E-02	0.318
		387.95	*	1.496E-02	4.112E-02	6.970E-02	4.033E-03	0.215
CF-251		176.60	*	-2.922E-02	1.484E-01	2.394E-01	1.237E-02	-0.122
		227.00		5.475E-02	4.374E-01	7.072E-01	3.921E-02	0.077
		285.00		-2.552E-01	1.861E+00	3.118E+00	1.821E-01	-0.082

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395006      *
* Acquisition date   : 2-FEB-2010 08:24:26 Detector SN#                   *
* Detector ID        : GAM23 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                       *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 02:00:02.31 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G245395006 Analyst initials: MXR1                  *
* Batch Number      : 944966 Sample Quantity : 1.5252E+02 GRAM           *
* Recovery          : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                               *
*
* Standard Weight   : 0.00000                                             *
* CALIB. DATE/TIME  : 2-JUN-2009 11:17:00 MS Isotope :                   *
* MSD DPM           : 0.000 MSD Isotope :                               *
* LCS DPM           : 0.000 LCS Isotope :                               *
* LCSD DPM          : 0.000 LCSD Isotope :                               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.705E+01	2.627E+00	5.504E-01	0.000E+00
NB-95	1.939E-01	8.602E-02	7.834E-02	0.000E+00
CD-109	2.908E+00	1.181E+00	1.936E+00	0.000E+00
SN-126	2.863E-01	1.163E-01	1.918E-01	0.000E+00
BA-137M	1.112E-01	8.539E-02	6.619E-02	0.000E+00
CS-137	1.175E-01	9.027E-02	6.997E-02	0.000E+00
LU-177	2.875E+00	1.356E+00	1.790E+00	0.000E+00
TL-208	4.552E-01	8.990E-02	6.323E-02	0.000E+00
BI-211	3.094E+00	4.471E-01	3.614E-01	0.000E+00
PB-212	1.422E+00	1.438E-01	1.056E-01	0.000E+00
PO-212	1.422E+00	1.438E-01	1.056E-01	0.000E+00
BI-214	1.048E+00	1.643E-01	1.237E-01	0.000E+00
PB-214	1.076E+00	1.650E-01	1.181E-01	0.000E+00
PO-214	1.076E+00	1.650E-01	1.181E-01	0.000E+00
PO-216	1.422E+00	1.438E-01	1.056E-01	0.000E+00
PO-218	1.076E+00	1.650E-01	1.181E-01	0.000E+00
RA-224	3.619E+00	1.122E+00	1.201E+00	0.000E+00
RA-226	1.048E+00	1.643E-01	1.237E-01	0.000E+00
AC-228	1.454E+00	3.060E-01	1.998E-01	0.000E+00
RA-228	1.454E+00	3.060E-01	1.998E-01	0.000E+00
TH-228	1.441E+00	1.458E-01	1.070E-01	0.000E+00
TH-230	1.048E+00	1.643E-01	1.237E-01	0.000E+00
TH-232	1.454E+00	3.060E-01	1.998E-01	0.000E+00
PA-234M	4.794E+01	1.035E+01	7.840E+00	0.000E+00
TH-234	3.369E+01	6.935E+00	3.607E+00	0.000E+00
U-234	1.048E+00	1.643E-01	1.237E-01	0.000E+00
U-235	6.343E-01	3.466E-01	4.160E-01	0.000E+00
NP-237	8.408E-01	3.814E-01	6.126E-01	0.000E+00
U-238	3.369E+01	6.935E+00	3.607E+00	0.000E+00
AM-243	3.953E-01	1.033E-01	1.458E-01	0.000E+00
ANH-511	1.210E-01	7.006E-02	5.454E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	9.239E-02	3.388E-01	6.001E-01	0.000E+00	NOT IDENT.
NA-22	-4.265E-02	4.740E-02	7.256E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.926E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-3.577E-02	2.650E-02	2.997E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.481E-02	1.067E-01	0.000E+00	FAIL ABUN
SC-46	2.608E-02	3.745E-02	6.868E-02	0.000E+00	FAIL ABUN
V-48	-1.798E-02	6.426E-02	1.077E-01	0.000E+00	NOT IDENT.
CR-51	1.474E-01	3.878E-01	6.482E-01	0.000E+00	NOT IDENT.
MN-52	-1.023E-01	1.618E-01	2.375E-01	0.000E+00	NOT IDENT.
MN-54	-2.255E-03	3.983E-02	6.923E-02	0.000E+00	NOT IDENT.
CO-56	2.950E-03	4.021E-02	7.048E-02	0.000E+00	NOT IDENT.
CO-57	-3.004E-03	2.998E-02	5.382E-02	0.000E+00	NOT IDENT.
CO-58	-3.708E-02	3.735E-02	5.975E-02	0.000E+00	NOT IDENT.
FE-59	-3.766E-02	8.863E-02	1.450E-01	0.000E+00	FAIL ABUN
CO-60	-1.902E-02	3.786E-02	5.946E-02	0.000E+00	NOT IDENT.
ZN-65	5.866E-02	1.111E-01	1.721E-01	0.000E+00	NOT IDENT.
GE-68	-3.208E-01	1.310E+00	2.189E+00	0.000E+00	NOT IDENT.
AS-73	1.740E-01	1.406E+00	2.645E+00	0.000E+00	NOT IDENT.
AS-74	3.092E-02	8.915E-02	1.565E-01	0.000E+00	NOT IDENT.
SE-75	1.236E-02	5.230E-02	7.953E-02	0.000E+00	NOT IDENT.
BR-77	-7.960E+00	7.553E+00	1.213E+01	0.000E+00	FAIL ABUN
SR-82	-3.119E-02	4.055E-01	7.082E-01	0.000E+00	NOT IDENT.
RB-83	-7.193E-02	7.172E-02	1.157E-01	0.000E+00	NOT IDENT.
RB-84	6.570E-02	6.585E-02	1.234E-01	0.000E+00	NOT IDENT.
KR-85	9.292E+00	8.587E+00	1.399E+01	0.000E+00	NOT IDENT.
SR-85	4.701E-02	4.345E-02	7.080E-02	0.000E+00	NOT IDENT.
RB-86	-8.626E-02	7.795E-01	1.318E+00	0.000E+00	NOT IDENT.
Y-88	-6.531E-03	2.726E-02	4.355E-02	0.000E+00	NOT IDENT.
ZR-88	-2.111E-02	3.092E-02	5.261E-02	0.000E+00	NOT IDENT.
Y-91	-2.352E+00	2.052E+01	3.437E+01	0.000E+00	NOT IDENT.
NB-94	1.490E-02	3.660E-02	6.366E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.702E-01	2.896E-01	0.000E+00	NOT IDENT.
ZR-95	4.783E-02	7.884E-02	1.384E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.655E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.155E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.381E+00	9.819E+00	1.595E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.504E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.481E-02	3.794E-02	6.285E-02	0.000E+00	FAIL ABUN
RH-102	-1.306E-02	3.125E-02	5.312E-02	0.000E+00	FAIL ABUN
RU-103	-3.073E-02	4.306E-02	7.122E-02	0.000E+00	NOT IDENT.
RH-106	3.991E-03	3.476E-01	5.942E-01	0.000E+00	NOT IDENT.
RU-106	3.991E-03	3.476E-01	5.942E-01	0.000E+00	NOT IDENT.
AG-108M	4.029E-03	3.377E-02	5.970E-02	0.000E+00	NOT IDENT.
AG-110M	-2.103E-02	4.506E-02	6.294E-02	0.000E+00	NOT IDENT.
IN-111	-2.697E-01	9.801E-01	1.451E+00	0.000E+00	NOT IDENT.
IN-113M	-2.891E-02	4.475E-02	7.630E-02	0.000E+00	NOT IDENT.
SN-113	-2.891E-02	4.475E-02	7.630E-02	0.000E+00	NOT IDENT.
IN-114M	-1.825E-01	2.252E-01	3.308E-01	0.000E+00	NOT IDENT.
CD-115	1.426E+00	7.693E+00	1.347E+01	0.000E+00	NOT IDENT.
SN-117M	-4.396E-02	5.689E-02	9.818E-02	0.000E+00	NOT IDENT.
SB-122	-2.159E-01	1.591E+00	2.715E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.294E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.153E-02	3.158E-02	5.403E-02	0.000E+00	NOT IDENT.
I-124	1.997E-01	6.047E-01	9.247E-01	0.000E+00	NOT IDENT.
SB-124	7.645E-02	7.334E-02	1.444E-01	0.000E+00	FAIL ABUN
SB-125	-1.142E-02	9.248E-02	1.614E-01	0.000E+00	FAIL ABUN
TE-125M	6.648E+00	1.359E+01	2.198E+01	0.000E+00	NOT IDENT.
I-126	1.020E-01	2.019E-01	3.113E-01	0.000E+00	NOT IDENT.
SB-126	5.492E-02	1.657E-01	2.496E-01	0.000E+00	FAIL ABUN
SB-127	7.269E-01	1.088E+00	1.938E+00	0.000E+00	NOT IDENT.
XE-127	5.844E-02	5.854E-02	9.370E-02	0.000E+00	NOT IDENT.
I-131	9.200E-02	1.009E-01	1.877E-01	0.000E+00	NOT IDENT.
TE-132	2.712E-02	5.873E-01	1.021E+00	0.000E+00	FAIL ABUN
BA-133	1.081E-02	4.654E-02	7.332E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.361E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.784E-02	5.411E-02	9.576E-02	0.000E+00	FAIL ABUN
CS-135	1.781E-01	1.972E-01	3.106E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.670E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.201E-02	1.008E-01	1.641E-01	0.000E+00	FAIL ABUN
CE-139	-2.934E-02	3.278E-02	5.613E-02	0.000E+00	NOT IDENT.
BA-140	-4.028E-02	2.442E-01	4.165E-01	0.000E+00	NOT IDENT.
LA-140	-1.469E-03	8.364E-02	1.428E-01	0.000E+00	FAIL ABUN
CE-141	1.028E-01	8.206E-02	1.345E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.475E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-1.867E-01	2.754E-01	4.180E-01	0.000E+00	NOT IDENT.
PM-144	1.188E-02	3.580E-02	6.207E-02	0.000E+00	NOT IDENT.
PR-144	8.047E-01	2.424E+00	4.203E+00	0.000E+00	NOT IDENT.
PM-146	3.277E-02	4.784E-02	8.475E-02	0.000E+00	NOT IDENT.
ND-147	5.723E-01	5.615E-01	1.024E+00	0.000E+00	FAIL ABUN
PM-149	1.275E+00	6.362E+01	1.151E+02	0.000E+00	NOT IDENT.
EU-152	-1.030E-01	1.143E-01	1.655E-01	0.000E+00	NOT IDENT.
GD-153	0.000E+00	1.378E-01	2.224E-01	0.000E+00	FAIL ABUN
EU-154	-1.192E-01	1.327E-01	2.028E-01	0.000E+00	NOT IDENT.
EU-155	1.703E-02	1.429E-01	2.515E-01	0.000E+00	FAIL ABUN
TB-160	5.900E-02	1.332E-01	2.399E-01	0.000E+00	FAIL ABUN
HO-166M	1.633E-02	6.175E-02	1.065E-01	0.000E+00	FAIL ABUN
TM-171	-4.971E+01	4.714E+01	7.407E+01	0.000E+00	NOT IDENT.
LU-176	1.516E-02	2.653E-02	4.643E-02	0.000E+00	FAIL ABUN
LU-177M	-1.072E-01	1.887E-01	3.223E-01	0.000E+00	FAIL ABUN
HF-181	-5.041E-02	4.541E-02	7.360E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	6.841E-01	1.178E+00	0.000E+00	NOT IDENT.
TA-182	-1.737E-01	2.096E-01	3.291E-01	0.000E+00	FAIL ABUN
RE-183	1.300E-01	1.218E-01	2.230E-01	0.000E+00	FAIL ABUN
RE-184	-5.634E-02	2.563E-01	4.371E-01	0.000E+00	NOT IDENT.
OS-185	2.328E-02	4.688E-02	8.130E-02	0.000E+00	NOT IDENT.
RE-188	1.045E-01	1.905E-01	3.442E-01	0.000E+00	NOT IDENT.
W-188	2.682E+00	8.134E+00	1.305E+01	0.000E+00	FAIL ABUN
IR-192	2.821E-03	3.408E-02	6.141E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	4.008E-01	6.251E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.993E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-6.196E+00	5.754E+00	9.772E+00	0.000E+00	NOT IDENT.
TL-202	4.741E-02	6.673E-02	1.217E-01	0.000E+00	NOT IDENT.
HG-203	2.655E-02	4.618E-02	7.526E-02	0.000E+00	FAIL ABUN
BI-207	3.299E-02	5.165E-02	9.322E-02	0.000E+00	FAIL ABUN
TL-207	2.794E-02	7.351E-01	1.150E+00	0.000E+00	FAIL ABUN
PO-209	8.707E-01	7.672E+00	1.343E+01	0.000E+00	NOT IDENT.
BI-210	2.177E+00	6.739E+00	1.270E+01	0.000E+00	NOT IDENT.
PB-210	2.177E+00	6.739E+00	1.270E+01	0.000E+00	NOT IDENT.
PO-210	2.177E+00	6.739E+00	1.270E+01	0.000E+00	NOT IDENT.
PB-211	-1.125E+00	1.197E+00	1.585E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.618E-01	6.803E-01	0.000E+00	FAIL ABUN
PO-215	2.794E-02	7.351E-01	1.150E+00	0.000E+00	FAIL ABUN
RN-219	3.617E-01	4.136E-01	7.597E-01	0.000E+00	FAIL ABUN
RN-220	5.277E+00	2.835E+01	4.948E+01	0.000E+00	NOT IDENT.
RA-223	2.794E-02	7.351E-01	1.150E+00	0.000E+00	FAIL ABUN
AC-227	2.155E-01	4.220E-01	7.411E-01	0.000E+00	FAIL ABUN
TH-227	2.155E-01	4.225E-01	7.411E-01	0.000E+00	FAIL ABUN
TH-229	8.700E-02	5.648E-01	9.954E-01	0.000E+00	FAIL ABUN
PA-231	1.438E-01	1.634E+00	2.891E+00	0.000E+00	FAIL ABUN
TH-231	2.794E-02	7.351E-01	1.150E+00	0.000E+00	FAIL ABUN
U-231	0.000E+00	1.871E+00	2.372E+00	0.000E+00	FAIL ABUN
PA-233	-3.716E-02	6.444E-02	1.126E-01	0.000E+00	FAIL ABUN
PA-234	2.281E-01	3.491E-01	6.083E-01	0.000E+00	FAIL ABUN
NP-236	-1.148E-01	9.006E-02	1.524E-01	0.000E+00	FAIL ABUN
NP-239	-7.373E-02	2.662E-01	4.168E-01	0.000E+00	FAIL ABUN
AM-241	2.710E-01	2.814E-01	4.757E-01	0.000E+00	NOT IDENT.
CM-243	1.333E-01	1.263E-01	2.280E-01	0.000E+00	FAIL ABUN
AM-246	-1.772E-01	1.513E-01	2.301E-01	0.000E+00	NOT IDENT.
CM-247	3.486E-02	3.743E-02	6.785E-02	0.000E+00	FAIL ABUN
CF-249	1.496E-02	4.029E-02	7.270E-02	0.000E+00	NOT IDENT.
CF-251	-2.922E-02	1.455E-01	2.546E-01	0.000E+00	NOT IDENT.

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*****
*                                     GEL Laboratories LLC                               *
*                                     2040 Savage Road                               *
*                                     Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395006.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 08:24:26.
Sample ID          : G245395006 Sample quantity : 1.52520E+02 GRAM
Detector name      : GAM23 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.31 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1170	10.67*	9.971E-01	2.705E+01	2.705E+01	9.91
NB-95	765.79	121	99.81*	1.790E+00	1.668E-01	1.939E-01	45.27
CD-109	88.03	225	3.72*	5.219E+00	2.848E+00	2.908E+00	41.43
SN-126	64.28	1330	9.60	2.556E+00	1.334E+01	1.334E+01	18.65
	86.94	225	8.90	5.219E+00	1.190E+00	1.190E+00	57.90
	87.57	225	37.00*	5.219E+00	2.863E-01	2.863E-01	41.43
BA-137M	661.65	83	89.98*	2.037E+00	1.111E-01	1.112E-01	78.38
CS-137	661.65	83	85.12*	2.037E+00	1.174E-01	1.175E-01	78.38
LU-177	112.95	232	6.40	6.258E+00	1.427E+00	5.991E+00	57.12
	208.36	156	11.00*	5.090E+00	6.845E-01	2.875E+00	48.13
TL-208	277.35	68	6.80	4.141E+00	5.921E-01	5.921E-01	93.36
	510.84	125	21.60	2.546E+00	5.603E-01	5.603E-01	59.66
	583.14	355	84.20*	2.278E+00	4.552E-01	4.552E-01	20.15
	860.37	-----	12.46	1.609E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.829E+00	-----	Line Not Found	-----
	351.07	560	12.94*	3.441E+00	3.094E+00	3.094E+00	14.74
PB-212	74.81	428	10.70	4.038E+00	2.438E+00	2.438E+00	28.25
	77.11	573	18.00	4.287E+00	1.829E+00	1.829E+00	19.60
	87.30	225	8.00	5.219E+00	1.324E+00	1.324E+00	42.62
	238.63	1195	44.60*	4.638E+00	1.422E+00	1.422E+00	10.32
	300.09	110	3.41	3.897E+00	2.032E+00	2.032E+00	54.21
PO-212	74.81	428	10.70	4.038E+00	2.438E+00	2.438E+00	28.25
	77.11	573	18.00	4.287E+00	1.829E+00	1.829E+00	19.60
	87.30	225	8.00	5.219E+00	1.324E+00	1.324E+00	42.62
	115.19	-----	0.60	6.293E+00	-----	Line Not Found	-----
	238.63	1195	44.60*	4.638E+00	1.422E+00	1.422E+00	10.32
	300.09	110	3.41	3.897E+00	2.032E+00	2.032E+00	54.21
BI-214	609.31	432	46.30*	2.194E+00	1.048E+00	1.048E+00	16.00
	1120.29	84	15.10	1.259E+00	1.090E+00	1.090E+00	53.28
	1764.49	64	15.80	8.742E-01	1.142E+00	1.142E+00	33.68
PB-214	74.81	428	6.21	4.038E+00	4.201E+00	4.201E+00	27.67
	77.11	573	10.50	4.287E+00	3.135E+00	3.135E+00	21.03

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	87.30	225	4.67	5.219E+00	2.269E+00	2.269E+00	42.14
	241.98	267	7.49	4.596E+00	1.909E+00	1.909E+00	32.12
	295.21	402	19.20	3.949E+00	1.306E+00	1.306E+00	21.91
	351.92	560	37.20*	3.441E+00	1.076E+00	1.076E+00	15.64
	74.81	428	6.21	4.038E+00	4.201E+00	4.201E+00	27.67
	77.11	573	10.50	4.287E+00	3.135E+00	3.135E+00	21.03
	87.30	225	4.67	5.219E+00	2.269E+00	2.269E+00	42.14
	241.98	267	7.49	4.596E+00	1.909E+00	1.909E+00	32.12
	295.21	402	19.20	3.949E+00	1.306E+00	1.306E+00	21.91
	351.92	560	37.20*	3.441E+00	1.076E+00	1.076E+00	15.64
PO-216	74.81	428	10.70	4.038E+00	2.438E+00	2.438E+00	28.25
	77.11	573	18.00	4.287E+00	1.829E+00	1.829E+00	19.60
	87.30	225	8.00	5.219E+00	1.324E+00	1.324E+00	42.62
	238.63	1195	44.60*	4.638E+00	1.422E+00	1.422E+00	10.32
	300.09	110	3.41	3.897E+00	2.032E+00	2.032E+00	54.21
	74.81	428	6.21	4.038E+00	4.201E+00	4.201E+00	27.67
	77.11	573	10.50	4.287E+00	3.135E+00	3.135E+00	21.03
	87.30	225	4.67	5.219E+00	2.269E+00	2.269E+00	42.14
	241.98	267	7.49	4.596E+00	1.909E+00	1.909E+00	32.12
	295.21	402	19.20	3.949E+00	1.306E+00	1.306E+00	21.91
RA-224	351.92	560	37.20*	3.441E+00	1.076E+00	1.076E+00	15.64
	240.98	267	3.95*	4.596E+00	3.619E+00	3.619E+00	31.63
	609.31	432	46.30*	2.194E+00	1.048E+00	1.048E+00	16.00
	1120.29	84	15.10	1.259E+00	1.090E+00	1.090E+00	53.28
	1764.49	64	15.80	8.742E-01	1.142E+00	1.142E+00	33.68
	338.32	267	11.40	3.551E+00	1.625E+00	1.625E+00	48.34
	911.07	250	27.70*	1.526E+00	1.454E+00	1.454E+00	21.48
	969.11	126	16.60	1.441E+00	1.293E+00	1.293E+00	40.94
	338.32	267	11.40	3.551E+00	1.625E+00	1.625E+00	48.34
	911.07	250	27.70*	1.526E+00	1.454E+00	1.454E+00	21.48
TH-228	969.11	126	16.60	1.441E+00	1.293E+00	1.293E+00	40.94
	74.81	428	10.70	4.038E+00	2.438E+00	2.472E+00	26.68
	77.11	573	18.00	4.287E+00	1.829E+00	1.854E+00	19.60
	87.30	225	8.00	5.219E+00	1.324E+00	1.343E+00	41.43
	238.63	1195	44.60*	4.638E+00	1.422E+00	1.441E+00	10.32
	300.09	110	3.41	3.897E+00	2.032E+00	2.060E+00	79.65
	609.31	432	46.30*	2.194E+00	1.048E+00	1.048E+00	16.00
	1120.29	84	15.10	1.259E+00	1.090E+00	1.090E+00	53.28
	1764.49	64	15.80	8.742E-01	1.142E+00	1.142E+00	33.68
	338.32	267	11.40	3.551E+00	1.625E+00	1.625E+00	26.62
TH-232	911.07	250	27.70*	1.526E+00	1.454E+00	1.454E+00	21.48
	969.11	126	16.60	1.441E+00	1.293E+00	1.293E+00	40.94
	766.42	121	0.32	1.790E+00	5.203E+01	5.203E+01	67.45
	1001.03	229	0.84*	1.398E+00	4.794E+01	4.794E+01	22.02
	63.29	1330	3.80*	2.556E+00	3.369E+01	3.369E+01	21.00
	92.38	4300	5.41	5.571E+00	3.511E+01	3.511E+01	18.62
	609.31	432	46.30*	2.194E+00	1.048E+00	1.048E+00	16.00
	1120.29	84	15.10	1.259E+00	1.090E+00	1.090E+00	53.28
	1764.49	64	15.80	8.742E-01	1.142E+00	1.142E+00	33.68

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-235	89.95	-----	2.70	5.418E+00	-----	Line Not Found	-----
	93.35	4300	4.50	5.571E+00	4.221E+01	4.221E+01	28.37
	105.00	-----	2.10	6.104E+00	-----	Line Not Found	-----
	143.76	168	10.50*	6.193E+00	6.343E-01	6.343E-01	55.76
	163.35	-----	4.70	5.886E+00	-----	Line Not Found	-----
	185.71	852	54.00	5.492E+00	7.074E-01	7.074E-01	14.65
NP-237	205.31	108	4.70	5.158E+00	1.092E+00	1.092E+00	59.07
	86.50	225	12.60*	5.219E+00	8.408E-01	8.408E-01	46.28
U-238	95.87	-----	2.60	5.757E+00	-----	Line Not Found	-----
	63.29	1330	3.80*	2.556E+00	3.369E+01	3.369E+01	21.00
AM-243	92.38	4300	5.41	5.571E+00	3.511E+01	3.511E+01	9.69
	74.67	428	66.00*	4.038E+00	3.953E-01	3.953E-01	26.66
	86.72	225	0.34	5.219E+00	3.153E+01	3.153E+01	41.43
	117.66	-----	0.55	6.314E+00	-----	Line Not Found	-----
ANH-511	142.18	168	0.13	6.193E+00	5.328E+01	5.328E+01	53.64
	511.00	125	100.00*	2.546E+00	1.210E-01	1.210E-01	59.07

Flag: "*" = Keyline

Total number of lines in spectrum 37
Number of unidentified lines 1
Number of lines tentatively identified by NID 36 97.30%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.705E+01	2.705E+01	0.268E+01	9.91	
NB-95	64.02D	1.16	1.668E-01	1.939E-01	0.878E-01	45.27	
CD-109	464.00D	1.02	2.848E+00	2.908E+00	1.205E+00	41.43	
SN-126	1.00E+05Y	1.00	2.863E-01	2.863E-01	1.186E-01	41.43	
BA-137M	30.17Y	1.00	1.111E-01	1.112E-01	0.871E-01	78.38	
CS-137	30.17Y	1.00	1.174E-01	1.175E-01	0.921E-01	78.38	
LU-177	6.71D	4.20	6.845E-01	2.875E+00	1.384E+00	48.13	
TL-208	1.41E+10Y	1.00	4.552E-01	4.552E-01	0.917E-01	20.15	
BI-211	7.04E+08Y	1.00	3.094E+00	3.094E+00	0.456E+00	14.74	
PB-212	1.41E+10Y	1.00	1.422E+00	1.422E+00	0.147E+00	10.32	
PO-212	1.41E+10Y	1.00	1.422E+00	1.422E+00	0.147E+00	10.32	
BI-214	1600.00Y	1.00	1.048E+00	1.048E+00	0.168E+00	16.00	
PB-214	1600.00Y	1.00	1.076E+00	1.076E+00	0.168E+00	15.64	
PO-214	1600.00Y	1.00	1.076E+00	1.076E+00	0.168E+00	15.64	
PO-216	1.41E+10Y	1.00	1.422E+00	1.422E+00	0.147E+00	10.32	
PO-218	1600.00Y	1.00	1.076E+00	1.076E+00	0.168E+00	15.64	
RA-224	1.41E+10Y	1.00	3.619E+00	3.619E+00	1.145E+00	31.63	
RA-226	1600.00Y	1.00	1.048E+00	1.048E+00	0.168E+00	16.00	
AC-228	1.41E+10Y	1.00	1.454E+00	1.454E+00	0.312E+00	21.48	
RA-228	1.41E+10Y	1.00	1.454E+00	1.454E+00	0.312E+00	21.48	
TH-228	1.91Y	1.01	1.422E+00	1.441E+00	0.149E+00	10.32	
TH-230	4.47E+09Y	1.00	1.048E+00	1.048E+00	0.168E+00	16.00	
TH-232	1.41E+10Y	1.00	1.454E+00	1.454E+00	0.312E+00	21.48	
PA-234M	4.47E+09Y	1.00	4.794E+01	4.794E+01	1.056E+01	22.02	
TH-234	4.47E+09Y	1.00	3.369E+01	3.369E+01	0.708E+01	21.00	
U-234	4.47E+09Y	1.00	1.048E+00	1.048E+00	0.168E+00	16.00	
U-235	7.04E+08Y	1.00	6.343E-01	6.343E-01	3.537E-01	55.76	
NP-237	2.14E+06Y	1.00	8.408E-01	8.408E-01	3.892E-01	46.28	
U-238	4.47E+09Y	1.00	3.369E+01	3.369E+01	0.708E+01	21.00	
AM-243	7380.00Y	1.00	3.953E-01	3.953E-01	1.054E-01	26.66	
ANH-511	1.00E+09Y	1.00	1.210E-01	1.210E-01	0.715E-01	59.07	
Total Activity :			1.732E+02	1.755E+02			

Grand Total Activity : 1.732E+02 1.755E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	83.98	106	949	1.54	167.97	164	7	1.47E-02	98.9	4.97E+00	T
0	98.30	281	694	1.14	196.60	193	8	3.90E-02	35.0	5.87E+00	T
0	127.77	50	596	0.70	255.55	254	8	6.88E-03	****	6.33E+00	T
0	270.08	137	248	1.85	540.15	535	11	1.90E-02	47.9	4.22E+00	T
0	327.68	89	277	1.64	655.36	648	14	1.24E-02	81.7	3.64E+00	T
0	462.69	60	161	2.03	925.39	918	13	8.35E-03	91.1	2.76E+00	T
0	726.65	86	118	1.64	1453.30	1446	15	1.20E-02	59.3	1.88E+00	T
0	794.41	31	61	1.32	1588.82	1585	8	4.29E-03	95.2	1.73E+00	T
0	933.42	43	53	1.52	1866.85	1860	14	5.99E-03	77.5	1.49E+00	

Flags: "T" = Tentatively associated


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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395006.CNF;1
* Acquisition date   : 2-FEB-2010 08:24:26.   Detector SN#      :
* Detector ID        : GAM23                   Sensitivity       : 5.00000
* Geometry           : CAN                     Energy tolerance  : 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit   : 75.00000
* Elapsed real time  : 0 02:00:02.31           Half life ratio   : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library   : SOLID
* Sample ID          : G245395006             Analyst initials  : MXR1
* Batch Number       : 944966                 Sample Quantity   : 1.52520E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00.62MS Isotope      :
* MSD ID             :                          MSD Isotope    :
* LCS ID             : 1032-A                   LCS Isotope        :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.705E+01	2.680E+00	5.462E-01	4.086E-02	49.531
NB-95	1.939E-01	8.778E-02	7.642E-02	5.135E-03	2.537
CD-109	2.908E+00	1.205E+00	1.790E+00	1.748E-01	1.624
SN-126	2.863E-01	1.186E-01	1.773E-01	1.726E-02	1.615
BA-137M	1.112E-01	8.714E-02	6.433E-02	3.286E-03	1.728
CS-137	1.175E-01	9.211E-02	6.800E-02	3.493E-03	1.728
LU-177	2.875E+00	1.384E+00	1.690E+00	9.143E-02	1.701
TL-208	4.552E-01	9.174E-02	6.125E-02	3.976E-03	7.431
BI-211	3.094E+00	4.562E-01	3.456E-01	2.252E-02	8.953
PB-212	1.422E+00	1.467E-01	9.998E-02	7.188E-03	14.218
PO-212	1.422E+00	1.467E-01	9.998E-02	7.188E-03	14.218
BI-214	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735
PB-214	1.076E+00	1.683E-01	1.130E-01	9.430E-03	9.528
PO-214	1.076E+00	1.683E-01	1.130E-01	9.430E-03	9.528
PO-216	1.422E+00	1.467E-01	9.998E-02	7.188E-03	14.218
PO-218	1.076E+00	1.683E-01	1.130E-01	9.430E-03	9.528
RA-224	3.619E+00	1.145E+00	1.138E+00	6.411E-02	3.181
RA-226	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.454E+00	3.123E-01	1.958E-01	2.259E-02	7.426
RA-228	1.454E+00	3.123E-01	1.958E-01	2.259E-02	7.426
TH-228	1.441E+00	1.488E-01	1.014E-01	7.288E-03	14.218
TH-230	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735
TH-232	1.454E+00	3.123E-01	1.958E-01	2.259E-02	7.426
PA-234M	4.794E+01	1.056E+01	7.702E+00	7.349E-01	6.224
TH-234	3.369E+01	7.076E+00	3.311E+00	5.966E-01	10.178
U-234	1.048E+00	1.677E-01	1.199E-01	9.017E-03	8.735
U-235	6.343E-01	3.537E-01	3.892E-01	6.295E-02	1.630
NP-237	8.408E-01	3.892E-01	5.663E-01	1.290E-01	1.485
U-238	3.369E+01	7.076E+00	3.311E+00	5.966E-01	10.178
AM-243	3.953E-01	1.054E-01	1.343E-01	1.194E-02	2.942
ANH-511	1.210E-01	7.149E-02	5.265E-02	3.058E-03	2.299

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.239E-02		3.458E-01	5.784E-01	3.931E-02	0.160
NA-22	-4.265E-02		4.837E-02	7.174E-02	4.818E-03	-0.594
NA-24	-1.892E-01		9.828E-02	Half-Life	too short	
AL-26	-3.577E-02		2.704E-02	2.992E-02	1.798E-03	-1.196
TI-44	3.374E-01	+	6.613E-02	9.844E-02	8.923E-03	3.428
SC-46	2.608E-02		3.822E-02	6.727E-02	6.010E-03	0.388
V-48	-1.798E-02		6.557E-02	1.058E-01	8.798E-03	-0.170
CR-51	1.474E-01		3.957E-01	6.184E-01	4.055E-02	0.238
MN-52	-1.023E-01		1.651E-01	2.356E-01	1.705E-02	-0.434
MN-54	-2.255E-03		4.064E-02	6.769E-02	5.360E-03	-0.033
CO-56	2.950E-03		4.103E-02	6.894E-02	5.608E-03	0.043
CO-57	-3.004E-03		3.059E-02	5.016E-02	2.957E-03	-0.060
CO-58	-3.708E-02		3.811E-02	5.838E-02	4.386E-03	-0.635
FE-59	-3.766E-02		9.044E-02	1.428E-01	1.100E-02	-0.264
CO-60	-1.902E-02		3.864E-02	5.887E-02	4.321E-03	-0.323
ZN-65	5.866E-02		1.134E-01	1.696E-01	1.120E-02	0.346
GE-68	-3.208E-01		1.337E+00	2.155E+00	1.542E-01	-0.149
AS-73	1.740E-01		1.435E+00	2.418E+00	2.135E-01	0.072
AS-74	3.092E-02		9.097E-02	1.517E-01	8.365E-03	0.204
SE-75	1.236E-02		5.336E-02	7.552E-02	4.396E-03	0.164
BR-77	-7.960E+00		7.708E+00	1.172E+01	6.783E-01	-0.679
SR-82	-3.119E-02		4.138E-01	6.911E-01	4.768E-02	-0.045
RB-83	-7.193E-02		7.319E-02	1.117E-01	6.469E-03	-0.644
RB-84	6.570E-02		6.719E-02	1.208E-01	1.061E-02	0.544
KR-85	9.292E+00		8.762E+00	1.351E+01	7.840E-01	0.688
SR-85	4.701E-02		4.433E-02	6.836E-02	3.967E-03	0.688
RB-86	-8.626E-02		7.954E-01	1.297E+00	9.298E-02	-0.066
Y-88	-6.531E-03		2.782E-02	4.349E-02	2.561E-03	-0.150
ZR-88	-2.111E-02		3.155E-02	5.045E-02	2.913E-03	-0.418
Y-91	-2.352E+00		2.094E+01	3.393E+01	2.024E+00	-0.069

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	1.490E-02		3.734E-02	6.197E-02	3.541E-03	0.240
NB-95M	5.802E-01		1.737E-01	2.742E-01	2.023E-02	2.116
ZR-95	4.783E-02		8.045E-02	1.349E-01	1.035E-02	0.354
NB-97	-1.117E-02		1.865E-02	Half-Life too short		
ZR-97	1.654E+00		3.140E-01	Half-Life too short		
MO-99	-4.381E+00		1.002E+01	1.555E+01	2.176E+00	-0.282
TC-99M	1.063E+09		7.673E+08	Half-Life too short		
RH-101	-3.481E-02		3.872E-02	5.926E-02	3.159E-03	-0.587
RH-102	-1.306E-02		3.189E-02	5.119E-02	2.997E-03	-0.255
RU-103	-3.073E-02		4.394E-02	6.871E-02	8.699E-03	-0.447
RH-106	3.991E-03		3.547E-01	5.766E-01	6.650E-02	0.007
RU-106	3.991E-03		3.547E-01	5.766E-01	3.098E-02	0.007
AG-108M	4.029E-03		3.446E-02	5.739E-02	3.639E-03	0.070
AG-110M	-2.103E-02		4.598E-02	6.116E-02	3.398E-03	-0.344
IN-111	-2.697E-01		1.000E+00	1.375E+00	7.784E-02	-0.196
IN-113M	-2.891E-02		4.566E-02	7.316E-02	4.507E-03	-0.395
SN-113	-2.891E-02		4.566E-02	7.316E-02	4.507E-03	-0.395
IN-114M	-1.825E-01		2.298E-01	3.116E-01	1.642E-02	-0.586
CD-115	1.426E+00		7.850E+00	1.302E+01	7.511E-01	0.110
SN-117M	-4.396E-02		5.806E-02	9.208E-02	4.785E-03	-0.477
SB-122	-2.159E-01		1.624E+00	2.628E+00	1.486E-01	-0.082
I-123	-1.292E+00		6.601E-01	Half-Life too short		
TE-123M	-3.153E-02		3.222E-02	5.067E-02	2.674E-03	-0.622
I-124	1.997E-01		6.171E-01	8.965E-01	4.913E-02	0.223
SB-124	7.645E-02		7.484E-02	1.439E-01	1.003E-02	0.531
SB-125	-1.142E-02		9.437E-02	1.551E-01	9.435E-03	-0.074
TE-125M	6.648E+00		1.387E+01	2.044E+01	1.822E+00	0.325
I-126	1.020E-01		2.060E-01	3.026E-01	1.566E-02	0.337
SB-126	5.492E-02		1.691E-01	2.431E-01	1.456E-02	0.226
SB-127	7.269E-01		1.111E+00	1.885E+00	1.654E-01	0.386
XE-127	5.844E-02		5.974E-02	8.840E-02	4.746E-03	0.661
I-131	9.200E-02		1.029E-01	1.796E-01	1.172E-02	0.512
TE-132	2.712E-02		5.993E-01	9.656E-01	1.354E-01	0.028
BA-133	1.081E-02		4.749E-02	7.014E-02	8.138E-03	0.154
I-133	1.043E-03		1.205E-03	Half-Life too short		
CS-134	5.784E-02	+	5.521E-02	9.351E-02	6.829E-03	0.619
CS-135	1.781E-01		2.012E-01	2.951E-01	2.254E-02	0.604
I-135	1.354E+07		1.362E+08	Half-Life too short		
CS-136	-5.201E-02		1.028E-01	1.614E-01	1.286E-02	-0.322
CE-139	-2.934E-02		3.345E-02	5.270E-02	2.687E-03	-0.557
BA-140	-4.028E-02		2.492E-01	4.026E-01	1.309E-01	-0.100
LA-140	-1.469E-03		8.535E-02	1.421E-01	9.746E-03	-0.010
CE-141	1.028E-01		8.373E-02	1.259E-01	7.099E-03	0.816
CE-143	5.316E-04		7.528E-05	Half-Life too short		
CE-144	-1.867E-01		2.810E-01	3.904E-01	5.513E-02	-0.478
PM-144	1.188E-02		3.653E-02	6.041E-02	3.398E-03	0.197
PR-144	8.047E-01		2.474E+00	4.091E+00	2.299E-01	0.197
PM-146	3.277E-02		4.881E-02	8.158E-02	7.065E-03	0.402

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	5.723E-01		5.730E-01	9.895E-01	1.336E-01	0.578
PM-149	1.275E+00		6.492E+01	1.095E+02	1.553E+01	0.012
EU-152	-1.030E-01		1.166E-01	1.582E-01	1.049E-02	-0.651
GD-153	3.918E-01	+	1.406E-01	2.062E-01	1.684E-02	1.900
EU-154	-1.192E-01		1.355E-01	2.005E-01	1.991E-02	-0.594
EU-155	1.703E-02		1.458E-01	2.336E-01	1.723E-02	0.073
TB-160	5.900E-02		1.359E-01	2.349E-01	2.054E-02	0.251
HO-166M	1.633E-02		6.301E-02	1.037E-01	6.068E-03	0.157
TM-171	-4.971E+01		4.810E+01	6.806E+01	5.918E+00	-0.730
LU-176	1.516E-02		2.708E-02	4.426E-02	2.607E-03	0.342
LU-177M	-1.072E-01		1.925E-01	3.095E-01	1.801E-02	-0.346
HF-181	-5.041E-02		4.634E-02	7.095E-02	4.150E-03	-0.710
W-181	2.202E+00		6.981E-01	1.082E+00	9.396E-02	2.036
TA-182	-1.737E-01		2.138E-01	3.251E-01	1.995E-02	-0.534
RE-183	1.300E-01		1.242E-01	2.092E-01	1.076E-02	0.621
RE-184	-5.634E-02		2.615E-01	4.146E-01	2.364E-02	-0.136
OS-185	2.328E-02		4.783E-02	7.897E-02	4.121E-03	0.295
RE-188	1.045E-01		1.944E-01	3.226E-01	1.693E-02	0.324
W-188	2.682E+00		8.300E+00	1.243E+01	7.277E-01	0.216
IR-192	2.821E-03		3.478E-02	5.857E-02	3.475E-03	0.048
AU-195	1.139E+00	+	4.089E-01	5.796E-01	4.625E-02	1.966
TL-200	-6.811E-05		1.017E-04	Half-Life too short		
TL-201	-6.196E+00		5.872E+00	9.176E+00	4.683E-01	-0.675
TL-202	4.741E-02		6.810E-02	1.170E-01	6.847E-03	0.405
HG-203	2.655E-02		4.712E-02	7.156E-02	4.420E-03	0.371
BI-207	3.299E-02		5.270E-02	9.173E-02	6.740E-03	0.360
TL-207	2.794E-02		7.501E-01	1.097E+00	1.816E-01	0.025
PO-209	8.707E-01		7.829E+00	1.316E+01	1.194E+00	0.066
BI-210	2.177E+00		6.877E+00	1.158E+01	9.014E-01	0.188
PB-210	2.177E+00		6.877E+00	1.158E+01	9.014E-01	0.188
PO-210	2.177E+00		6.876E+00	1.158E+01	7.767E-01	0.188
PB-211	-1.125E+00		1.221E+00	1.521E+00	9.481E-01	-0.740
BI-212	9.587E-01	+	5.733E-01	6.628E-01	5.261E-02	1.446
PO-215	2.794E-02		7.501E-01	1.097E+00	1.816E-01	0.025
RN-219	3.617E-01		4.221E-01	7.290E-01	9.916E-02	0.496
RN-220	5.277E+00		2.893E+01	4.786E+01	2.731E+00	0.110
RA-223	2.794E-02		7.501E-01	1.097E+00	1.816E-01	0.025
AC-227	2.155E-01		4.306E-01	7.032E-01	9.793E-02	0.306
TH-227	2.155E-01		4.311E-01	7.032E-01	1.186E-01	0.306
TH-229	8.700E-02		5.763E-01	9.381E-01	4.969E-02	0.093
PA-231	1.438E-01		1.668E+00	2.750E+00	3.793E-01	0.052
TH-231	2.794E-02		7.501E-01	1.097E+00	1.816E-01	0.025
U-231	3.403E+00		1.910E+00	2.198E+00	1.844E-01	1.548
PA-233	-3.716E-02		6.576E-02	1.073E-01	6.712E-03	-0.346
PA-234	2.281E-01		3.562E-01	5.968E-01	1.122E-01	0.382
NP-236	-1.148E-01		9.189E-02	1.430E-01	7.395E-03	-0.803
NP-239	-7.373E-02		2.717E-01	3.881E-01	2.422E-02	-0.190
AM-241	2.710E-01		2.872E-01	4.359E-01	4.056E-02	0.622

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.333E-01		1.289E-01	2.117E-01	1.569E-02	0.630
AM-246	-1.772E-01		1.544E-01	2.265E-01	1.616E-02	-0.783
CM-247	3.486E-02		3.820E-02	6.511E-02	3.774E-03	0.535
CF-249	1.496E-02		4.112E-02	6.970E-02	4.033E-03	0.215
CF-251	-2.922E-02		1.484E-01	2.394E-01	1.237E-02	-0.122

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395006          *
* Acquisition date   : 2-FEB-2010 08:24:26 Detector SN# :                  *
* Detector ID        : GAM23 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 02:00:02.31 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395006 Analyst initials: MXR1                  *
* Batch Number       : 944966 Sample Quantity : 1.5252E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00 MS Isotope :                  *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                               *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.705E+01	2.627E+00	2.753E-01	1.340E+00
NB-95	1.939E-01	8.602E-02	3.919E-02	4.389E-02
CD-109	2.908E+00	1.181E+00	9.684E-01	6.023E-01
SN-126	2.863E-01	1.163E-01	9.595E-02	5.931E-02
BA-137M	1.112E-01	8.539E-02	3.312E-02	4.357E-02
CS-137	1.175E-01	9.027E-02	3.501E-02	4.606E-02
LU-177	2.875E+00	1.356E+00	8.957E-01	6.918E-01
TL-208	4.552E-01	8.990E-02	3.163E-02	4.587E-02
BI-211	3.094E+00	4.471E-01	1.808E-01	2.281E-01
PB-212	1.422E+00	1.438E-01	5.281E-02	7.336E-02
PO-212	1.422E+00	1.438E-01	5.281E-02	7.336E-02
BI-214	1.048E+00	1.643E-01	6.188E-02	8.383E-02
PB-214	1.076E+00	1.650E-01	5.910E-02	8.417E-02
PO-214	1.076E+00	1.650E-01	5.910E-02	8.417E-02
PO-216	1.422E+00	1.438E-01	5.281E-02	7.336E-02
PO-218	1.076E+00	1.650E-01	5.910E-02	8.417E-02
RA-224	3.619E+00	1.122E+00	6.009E-01	5.723E-01
RA-226	1.048E+00	1.643E-01	6.188E-02	8.383E-02
AC-228	1.454E+00	3.060E-01	9.994E-02	1.561E-01
RA-228	1.454E+00	3.060E-01	9.994E-02	1.561E-01
TH-228	1.441E+00	1.458E-01	5.354E-02	7.438E-02
TH-230	1.048E+00	1.643E-01	6.188E-02	8.383E-02
TH-232	1.454E+00	3.060E-01	9.994E-02	1.561E-01
PA-234M	4.794E+01	1.035E+01	3.922E+00	5.279E+00
TH-234	3.369E+01	6.935E+00	1.805E+00	3.538E+00
U-234	1.048E+00	1.643E-01	6.188E-02	8.383E-02
U-235	6.343E-01	3.466E-01	2.081E-01	1.768E-01
NP-237	8.408E-01	3.814E-01	3.065E-01	1.946E-01
U-238	3.369E+01	6.935E+00	1.805E+00	3.538E+00
AM-243	3.953E-01	1.033E-01	7.295E-02	5.268E-02
ANH-511	1.210E-01	7.006E-02	2.728E-02	3.575E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	9.239E-02	3.388E-01	3.002E-01	1.729E-01 NOT IDENT.
NA-22	-4.265E-02	4.740E-02	3.630E-02	2.418E-02 NOT IDENT.
NA-24	-1.892E+05	1.926E+05	0.000E+00	9.828E+04 SHORT HLIF
AL-26	-3.577E-02	2.650E-02	1.499E-02	1.352E-02 NOT IDENT.
TI-44	3.374E-01	6.481E-02	5.340E-02	3.307E-02 FAIL ABUN
SC-46	2.608E-02	3.745E-02	3.436E-02	1.911E-02 FAIL ABUN
V-48	-1.798E-02	6.426E-02	5.388E-02	3.279E-02 NOT IDENT.
CR-51	1.474E-01	3.878E-01	3.243E-01	1.979E-01 NOT IDENT.
MN-52	-1.023E-01	1.618E-01	1.188E-01	8.253E-02 NOT IDENT.
MN-54	-2.255E-03	3.983E-02	3.464E-02	2.032E-02 NOT IDENT.
CO-56	2.950E-03	4.021E-02	3.526E-02	2.052E-02 NOT IDENT.
CO-57	-3.004E-03	2.998E-02	2.693E-02	1.530E-02 NOT IDENT.
CO-58	-3.708E-02	3.735E-02	2.989E-02	1.905E-02 NOT IDENT.
FE-59	-3.766E-02	8.863E-02	7.255E-02	4.522E-02 FAIL ABUN
CO-60	-1.902E-02	3.786E-02	2.975E-02	1.932E-02 NOT IDENT.
ZN-65	5.866E-02	1.111E-01	8.610E-02	5.668E-02 NOT IDENT.
GE-68	-3.208E-01	1.310E+00	1.095E+00	6.686E-01 NOT IDENT.
AS-73	1.740E-01	1.406E+00	1.323E+00	7.173E-01 NOT IDENT.
AS-74	3.092E-02	8.915E-02	7.829E-02	4.549E-02 NOT IDENT.
SE-75	1.236E-02	5.230E-02	3.979E-02	2.668E-02 NOT IDENT.
BR-77	-7.960E+00	7.553E+00	6.070E+00	3.854E+00 FAIL ABUN
SR-82	-3.119E-02	4.055E-01	3.543E-01	2.069E-01 NOT IDENT.
RB-83	-7.193E-02	7.172E-02	5.788E-02	3.659E-02 NOT IDENT.
RB-84	6.570E-02	6.585E-02	6.172E-02	3.360E-02 NOT IDENT.
KR-85	9.292E+00	8.587E+00	7.001E+00	4.381E+00 NOT IDENT.
SR-85	4.701E-02	4.345E-02	3.542E-02	2.217E-02 NOT IDENT.
RB-86	-8.626E-02	7.795E-01	6.593E-01	3.977E-01 NOT IDENT.
Y-88	-6.531E-03	2.726E-02	2.179E-02	1.391E-02 NOT IDENT.
ZR-88	-2.111E-02	3.092E-02	2.632E-02	1.578E-02 NOT IDENT.
Y-91	-2.352E+00	2.052E+01	1.719E+01	1.047E+01 NOT IDENT.
NB-94	1.490E-02	3.660E-02	3.185E-02	1.867E-02 NOT IDENT.
NB-95M	5.802E-01	1.702E-01	1.449E-01	8.684E-02 NOT IDENT.
ZR-95	4.783E-02	7.884E-02	6.923E-02	4.023E-02 NOT IDENT.
NB-97	-1.117E+04	3.655E+04	0.000E+00	1.865E+04 SHORT HLIF
ZR-97	1.654E+06	6.155E+05	0.000E+00	3.140E+05 SHORT HLIF
MO-99	-4.381E+00	9.819E+00	7.980E+00	5.010E+00 NOT IDENT.
TC-99M	1.063E+15	1.504E+15	0.000E+00	7.673E+14 SHORT HLIF
RH-101	-3.481E-02	3.794E-02	3.144E-02	1.936E-02 FAIL ABUN
RH-102	-1.306E-02	3.125E-02	2.658E-02	1.594E-02 FAIL ABUN
RU-103	-3.073E-02	4.306E-02	3.563E-02	2.197E-02 NOT IDENT.
RH-106	3.991E-03	3.476E-01	2.973E-01	1.773E-01 NOT IDENT.
RU-106	3.991E-03	3.476E-01	2.973E-01	1.773E-01 NOT IDENT.
AG-108M	4.029E-03	3.377E-02	2.987E-02	1.723E-02 NOT IDENT.
AG-110M	-2.103E-02	4.506E-02	3.149E-02	2.299E-02 NOT IDENT.
IN-111	-2.697E-01	9.801E-01	7.258E-01	5.000E-01 NOT IDENT.
IN-113M	-2.891E-02	4.475E-02	3.817E-02	2.283E-02 NOT IDENT.
SN-113	-2.891E-02	4.475E-02	3.817E-02	2.283E-02 NOT IDENT.
IN-114M	-1.825E-01	2.252E-01	1.655E-01	1.149E-01 NOT IDENT.
CD-115	1.426E+00	7.693E+00	6.739E+00	3.925E+00 NOT IDENT.
SN-117M	-4.396E-02	5.689E-02	4.912E-02	2.903E-02 NOT IDENT.
SB-122	-2.159E-01	1.591E+00	1.358E+00	8.119E-01 NOT IDENT.
I-123	-1.292E+06	1.294E+06	0.000E+00	6.601E+05 SHORT HLIF
TE-123M	-3.153E-02	3.158E-02	2.703E-02	1.611E-02 NOT IDENT.
I-124	1.997E-01	6.047E-01	4.626E-01	3.085E-01 NOT IDENT.
SB-124	7.645E-02	7.334E-02	7.225E-02	3.742E-02 FAIL ABUN
SB-125	-1.142E-02	9.248E-02	8.074E-02	4.719E-02 FAIL ABUN
TE-125M	6.648E+00	1.359E+01	1.100E+01	6.936E+00 NOT IDENT.
I-126	1.020E-01	2.019E-01	1.558E-01	1.030E-01 NOT IDENT.
SB-126	5.492E-02	1.657E-01	1.249E-01	8.456E-02 FAIL ABUN
SB-127	7.269E-01	1.088E+00	9.697E-01	5.553E-01 NOT IDENT.
XE-127	5.844E-02	5.854E-02	4.688E-02	2.987E-02 NOT IDENT.
I-131	9.200E-02	1.009E-01	9.389E-02	5.147E-02 NOT IDENT.
TE-132	2.712E-02	5.873E-01	5.106E-01	2.997E-01 FAIL ABUN
BA-133	1.081E-02	4.654E-02	3.668E-02	2.374E-02 FAIL ABUN
I-133	1.043E+03	2.361E+03	0.000E+00	1.205E+03 SHORT HLIF
CS-134	5.784E-02	5.411E-02	4.791E-02	2.761E-02 FAIL ABUN
CS-135	1.781E-01	1.972E-01	1.554E-01	1.006E-01 NOT IDENT.
I-135	1.354E+13	2.670E+14	0.000E+00	1.362E+14 SHORT HLIF
CS-136	-5.201E-02	1.008E-01	8.210E-02	5.141E-02 FAIL ABUN
CE-139	-2.934E-02	3.278E-02	2.808E-02	1.672E-02 NOT IDENT.
BA-140	-4.028E-02	2.442E-01	2.084E-01	1.246E-01 NOT IDENT.
LA-140	-1.469E-03	8.364E-02	7.144E-02	4.267E-02 FAIL ABUN
CE-141	1.028E-01	8.206E-02	6.729E-02	4.187E-02 NOT IDENT.
CE-143	5.316E+02	1.475E+02	0.000E+00	7.528E+01 SHORT HLIF

CE-144	-1.867E-01	2.754E-01	2.091E-01	1.405E-01	NOT IDENT.
PM-144	1.188E-02	3.580E-02	3.105E-02	1.827E-02	NOT IDENT.
PR-144	8.047E-01	2.424E+00	2.103E+00	1.237E+00	NOT IDENT.
PM-146	3.277E-02	4.784E-02	4.240E-02	2.441E-02	NOT IDENT.
ND-147	5.723E-01	5.615E-01	5.122E-01	2.865E-01	FAIL ABUN
PM-149	1.275E+00	6.362E+01	5.757E+01	3.246E+01	NOT IDENT.
EU-152	-1.030E-01	1.143E-01	8.282E-02	5.829E-02	NOT IDENT.
GD-153	3.918E-01	1.378E-01	1.113E-01	7.030E-02	FAIL ABUN
EU-154	-1.192E-01	1.327E-01	1.015E-01	6.773E-02	NOT IDENT.
EU-155	1.703E-02	1.429E-01	1.258E-01	7.291E-02	FAIL ABUN
TB-160	5.900E-02	1.332E-01	1.200E-01	6.797E-02	FAIL ABUN
HO-166M	1.633E-02	6.175E-02	5.327E-02	3.150E-02	FAIL ABUN
TM-171	-4.971E+01	4.714E+01	3.705E+01	2.405E+01	NOT IDENT.
LU-176	1.516E-02	2.653E-02	2.323E-02	1.354E-02	FAIL ABUN
LU-177M	-1.072E-01	1.887E-01	1.613E-01	9.627E-02	FAIL ABUN
HF-181	-5.041E-02	4.541E-02	3.682E-02	2.317E-02	NOT IDENT.
W-181	2.202E+00	6.841E-01	5.892E-01	3.490E-01	NOT IDENT.
TA-182	-1.737E-01	2.096E-01	1.647E-01	1.069E-01	FAIL ABUN
RE-183	1.300E-01	1.218E-01	1.116E-01	6.212E-02	FAIL ABUN
RE-184	-5.634E-02	2.563E-01	2.187E-01	1.307E-01	NOT IDENT.
OS-185	2.328E-02	4.688E-02	4.068E-02	2.392E-02	NOT IDENT.
RE-188	1.045E-01	1.905E-01	1.722E-01	9.718E-02	NOT IDENT.
W-188	2.682E+00	8.134E+00	6.531E+00	4.150E+00	FAIL ABUN
IR-192	2.821E-03	3.408E-02	3.072E-02	1.739E-02	FAIL ABUN
AU-195	1.139E+00	4.008E-01	3.127E-01	2.045E-01	FAIL ABUN
TL-200	-6.811E+01	1.993E+02	0.000E+00	1.017E+02	SHORT HLIF
TL-201	-6.196E+00	5.754E+00	4.889E+00	2.936E+00	NOT IDENT.
TL-202	4.741E-02	6.673E-02	6.088E-02	3.405E-02	NOT IDENT.
HG-203	2.655E-02	4.618E-02	3.765E-02	2.356E-02	FAIL ABUN
BI-207	3.299E-02	5.165E-02	4.664E-02	2.635E-02	FAIL ABUN
TL-207	2.794E-02	7.351E-01	5.751E-01	3.750E-01	FAIL ABUN
PO-209	8.707E-01	7.672E+00	6.719E+00	3.914E+00	NOT IDENT.
BI-210	2.177E+00	6.739E+00	6.356E+00	3.438E+00	NOT IDENT.
PB-210	2.177E+00	6.739E+00	6.356E+00	3.438E+00	NOT IDENT.
PO-210	2.177E+00	6.739E+00	6.356E+00	3.438E+00	NOT IDENT.
PB-211	-1.125E+00	1.197E+00	7.928E-01	6.105E-01	NOT IDENT.
BI-212	9.587E-01	5.618E-01	3.404E-01	2.867E-01	FAIL ABUN
PO-215	2.794E-02	7.351E-01	5.751E-01	3.750E-01	FAIL ABUN
RN-219	3.617E-01	4.136E-01	3.801E-01	2.110E-01	FAIL ABUN
RN-220	5.277E+00	2.835E+01	2.475E+01	1.446E+01	NOT IDENT.
RA-223	2.794E-02	7.351E-01	5.751E-01	3.750E-01	FAIL ABUN
AC-227	2.155E-01	4.220E-01	3.708E-01	2.153E-01	FAIL ABUN
TH-227	2.155E-01	4.225E-01	3.708E-01	2.155E-01	FAIL ABUN
TH-229	8.700E-02	5.648E-01	4.980E-01	2.882E-01	FAIL ABUN
PA-231	1.438E-01	1.634E+00	1.446E+00	8.338E-01	FAIL ABUN
TH-231	2.794E-02	7.351E-01	5.751E-01	3.750E-01	FAIL ABUN
U-231	3.403E+00	1.871E+00	1.187E+00	9.548E-01	FAIL ABUN
PA-233	-3.716E-02	6.444E-02	5.632E-02	3.288E-02	FAIL ABUN
PA-234	2.281E-01	3.491E-01	3.043E-01	1.781E-01	FAIL ABUN
NP-236	-1.148E-01	9.006E-02	7.625E-02	4.595E-02	FAIL ABUN
NP-239	-7.373E-02	2.662E-01	2.085E-01	1.358E-01	FAIL ABUN
AM-241	2.710E-01	2.814E-01	2.380E-01	1.436E-01	NOT IDENT.
CM-243	1.333E-01	1.263E-01	1.141E-01	6.445E-02	FAIL ABUN
AM-246	-1.772E-01	1.513E-01	1.151E-01	7.722E-02	NOT IDENT.
CM-247	3.486E-02	3.743E-02	3.395E-02	1.910E-02	FAIL ABUN
CF-249	1.496E-02	4.029E-02	3.637E-02	2.056E-02	NOT IDENT.
CF-251	-2.922E-02	1.455E-01	1.274E-01	7.422E-02	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON , SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
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46.50	543.8643
46.50	543.8643
46.50	543.8643
48.70	584.1188
49.72	626.9708
51.35	606.8805
52.39	640.8257
52.97	631.4050
53.15	636.1676
53.44	619.1031
54.07	626.1659
56.28	720.3320
56.28	720.3350
57.37	0.0000
57.53	684.9711
57.53	684.9725
57.60	692.4138
57.98	703.1558
57.98	703.1558
59.32	726.8171
59.32	726.8171
59.40	726.9087
59.54	727.0693
59.72	699.1907
60.01	699.5096
61.10	752.5510
61.14	779.2643
61.30	779.4585
63.00	809.7295
63.29	810.0862
63.29	810.0862
63.58	800.0353
64.28	817.2574
65.12	840.6471
65.20	840.7469
65.20	840.7469
66.05	870.1730
66.72	884.4771
66.83	884.6252
66.91	865.3018
67.20	841.7476
67.20	841.7476
67.75	938.1885
67.85	938.3264
68.90	946.7559
68.90	946.7559
69.30	928.7358
69.67	875.2884
70.82	853.6779
70.82	853.6779
70.83	853.6918
72.80	911.8351
72.87	911.9238
72.87	911.9238
74.67	979.3713
74.81	979.5612
74.81	979.5612
74.81	979.5612
74.81	979.5612
74.81	979.5612
74.81	979.5612
74.81	979.5612
74.97	979.7748
75.28	980.1942
75.70	980.7559
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77.11	974.8687

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77.11	974.8687
77.11	974.8687
77.11	974.8687
77.11	974.8687
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79.80	958.6005
79.80	958.6005
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80.30	1008.7194
80.57	1009.0792
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81.07	1017.3630
81.07	1017.3630
82.60	971.2897
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83.78	1061.4803
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83.78	1061.4803
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86.50	1039.8409
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86.72	1040.1304
86.79	1040.2173
86.94	1040.4158
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87.30	906.4552
87.30	906.4552
87.30	906.4552
87.30	906.4552
87.30	906.4552
87.57	906.7613
87.88	907.1142
88.03	907.2834
88.36	907.6544
88.47	907.7804
89.95	909.4441
91.11	910.7405
92.29	912.0477
92.38	912.1485
92.38	912.1485
93.35	913.2180
94.00	913.9310
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94.67	751.8832
94.90	752.0905
94.90	752.0905
94.90	752.0905
94.90	752.0905
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95.87	752.9578
96.73	753.7245
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98.44	629.1023
98.88	601.3792
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99.55	594.0521
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100.10	606.9127
103.18	643.4944
103.76	589.7526
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105.31	651.3149
108.00	735.1146
109.28	665.2115

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111.00	650.6653
111.76	639.1465
112.95	639.9634
115.19	542.5410
116.30	576.5284
117.00	584.8985
117.00	584.8985
117.66	585.3028
121.11	515.7654
121.62	518.0319
121.78	531.0928
122.06	531.2451
122.32	519.3990
122.32	519.3990
122.32	519.3990
122.32	519.3990
123.07	535.7894
127.23	505.9101
129.76	545.8182
131.20	590.1213
133.02	513.6329
133.54	552.6774
135.34	518.0195
136.00	524.4181
136.25	514.4182
136.48	526.6849
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142.65	572.1188
143.76	488.4724
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144.24	483.1788
144.24	483.1788
144.24	483.1788
145.22	503.2183
145.44	503.3198
147.16	509.0195
152.43	490.2577
152.70	500.6545
153.22	481.3432
154.21	472.4963
154.21	472.4963
154.21	472.4963
154.21	472.4963
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156.02	462.9388
158.56	462.9297
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161.27	435.0092
162.32	420.8837
162.64	417.8875
163.35	403.6136
163.89	397.5708
165.85	458.5361
167.43	450.8126
171.28	414.6523
171.86	444.1113
172.10	444.1988
176.55	450.0062
176.60	450.0226
181.06	410.9964
184.41	417.9946
185.71	418.4206
186.00	418.5173
190.27	424.1455
192.34	368.9838
193.63	396.5316
197.04	425.2678
198.01	435.1778
198.60	414.0261
200.40	408.6019
201.83	364.5363
202.84	375.0856
205.31	388.2071

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208.81	389.1986
209.75	337.3894
209.75	337.3894
210.97	342.8547
215.65	323.0437
216.55	315.6813
218.09	303.0371
222.10	322.3399
223.80	335.7598
226.40	334.1839
227.00	343.0340
227.08	338.6970
227.20	338.7255
228.16	340.0360
228.18	340.0408
228.18	340.0408
231.56	0.0000
235.69	343.5240
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236.00	325.4080
238.63	325.9790
238.63	325.9790
238.63	325.9790
238.63	325.9790
239.00	326.0583
240.98	326.4865
241.98	278.0815
241.98	278.0815
241.98	278.0815
244.69	303.2592
245.39	306.9256
247.94	285.2213
248.90	272.9283
249.79	283.0352
252.40	274.6501
252.85	284.6996
252.85	284.6996
254.15	0.0000
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256.20	265.3230
260.50	279.3991
260.90	288.3794
262.80	260.8506
264.65	232.1338
268.24	257.7023
268.79	252.4196
269.46	259.6866
269.46	259.6866
269.46	259.6866
269.46	259.6866
271.23	246.5231
273.65	246.8857
276.40	233.8064
277.35	244.7369
277.60	228.5752
277.60	228.5752
278.00	225.0305
278.60	226.6106
279.20	234.2000
279.53	243.2538
280.46	240.3841
281.68	230.0354
283.67	240.8431
284.30	240.3319
285.00	244.9487
285.90	236.9418
286.10	228.8273
286.10	228.8273
287.40	237.6022
288.45	0.0000
290.67	211.6064
290.80	211.6207
291.72	225.3461
293.26	0.0000
293.70	210.4654
295.21	210.6464
295.21	210.6464

295.21	210.6464
295.96	186.4819
296.50	186.5395
297.23	186.6171
298.57	186.7597
299.80	186.8923
299.80	186.8923
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300.09	217.3163
300.09	217.3163
300.09	217.3163
300.12	217.3192
301.29	229.6305
302.84	202.4359
303.76	202.5414
303.91	202.5576
304.40	220.8955
304.40	220.8955
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306.84	195.6470
308.46	207.0471
311.98	209.2885
316.51	190.4870
318.01	204.4611
319.02	195.5620
319.41	193.5553
320.08	177.8208
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323.87	184.7876
323.87	184.7876
323.87	184.7876
325.23	192.6270
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333.44	181.0939
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334.20	173.4254
334.30	173.4346
338.28	188.0755
338.28	188.0755
338.28	188.0755
338.28	188.0755
338.32	188.0780
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338.32	188.0780
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340.57	183.3283
344.27	202.3633
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350.59	0.0000
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351.92	159.4041
351.92	159.4041
355.39	0.0000
356.01	147.2078
364.48	134.9405
366.43	170.0222
367.43	160.6554
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369.80	161.7904
374.96	175.4813
383.85	161.9524
387.95	150.8175
388.63	152.7754
391.69	167.3416
391.69	167.3416
392.90	168.3945
398.62	145.8250
400.65	165.1700
401.10	150.7982
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402.60	127.8355
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413.65	179.6925
414.70	167.2136
415.30	157.5919

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427.08	134.1339
427.89	138.0721
432.53	132.5120
433.93	137.4681
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439.56	127.0594
439.89	134.8987
443.98	144.9323
444.90	132.2545
445.03	132.2628
445.03	132.2628
445.03	132.2628
445.03	132.2628
453.90	132.2240
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475.35	133.9799
476.78	133.0660
477.59	131.1250
477.96	126.1768
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511.85	136.9845
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513.99	126.0101
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592.07	102.7608
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595.88	96.6623
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602.71	93.7705
603.60	97.2754
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604.70	107.7381
609.31	113.1337

609.31	113.1337
609.31	113.1337
609.31	113.1337
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621.84	106.9830
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661.65	106.3013
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666.33	88.7207
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696.49	90.3041
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698.33	119.3982
698.50	117.2548
699.00	114.0458
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722.78	99.3585
722.89	99.3630
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723.30	92.1490
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744.21	79.6459
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911.07	52.2656
911.07	52.2656
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969.11	49.7294
969.11	49.7294
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1001.68	62.3828
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1046.59	66.0131
1048.07	63.0781

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1050.47	63.1146
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1078.86	77.4287
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1099.22	61.8335
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1120.29	64.1328
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1120.51	64.1354
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1173.22	65.8966
1175.09	67.9515
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1291.56	50.9141
1298.22	0.0000
1312.09	46.9501
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1325.50	38.7058
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1333.61	39.8153
1360.21	32.6499
1362.66	0.0000
1365.15	26.3550
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1368.53	0.0000
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1384.27	32.8013
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1395.20	38.1709
1407.95	23.3822
1434.06	21.3607
1436.60	21.3704
1457.56	0.0000
1460.81	25.7598
1489.15	23.7349
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1596.49	27.3261
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1678.03	0.0000
1691.02	10.5300
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1750.46	0.0000
1764.49	10.1708
1764.49	10.1708
1764.49	10.1708
1764.49	10.1708
1770.23	15.2699
1771.40	34.9089
1791.20	0.0000
1808.65	17.5568

1836.01

10.7744

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395006

Total Uranium Activity	1.0054E+02	ug/g
Total Uranium Counting Unc.	2.0632E+01	ug/g
Total Uranium Tpu	1.0527E-05	ug/g
Total Uranium Mda	5.3702E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 944966          SAMPLE ID   : G245395006
*  ANALYST       : MXR1           DETECTOR    : GAM23
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE: 2-FEB-2010 08:24:26.96  SAMPLE ALQT: 152.520 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.238E+01
GROSS GAMMA ERROR (pCi/GRAM ) : 1.737E+00
GROSS GAMMA MDA (pCi/GRAM ) : 4.555E+00
GROSS GAMMA DLC (pCi/GRAM ) : 2.231E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:14:19.54

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395007.CNF;1
Sample date    : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:13:37.
Sample ID      : G245395007 Sample quantity : 1.81030E+02 GRAM
Detector name  : GAM02 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:06.26 0.1%
Energy tolerance: 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 944966 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.00*	8148	4752	1.00	125.19	120	11	1.13E+00	2.0	
2	0	83.58*	634	4556	1.69	166.38	163	8	8.81E-02	18.9	
3	4	92.36*	25264	3207	1.07	183.94	180	14	3.51E+00	0.7	6.88E+00
4	4	94.46	865	2209	1.06	188.16	180	14	1.20E-01	13.9	
5	0	98.28*	2091	1908	1.08	195.80	193	8	2.90E-01	4.3	
6	1	110.83*	320	1836	0.98	220.91	218	11	4.44E-02	22.1	1.08E+01
7	1	112.48*	1310	1760	1.02	224.20	218	11	1.82E-01	5.9	
8	0	131.12	158	1213	0.83	261.50	259	7	2.19E-02	37.6	
9	0	143.63*	937	1341	1.07	286.53	283	9	1.30E-01	7.9	
10	0	163.16*	499	1081	1.19	325.61	321	9	6.93E-02	12.8	
11	0	185.50*	4545	1136	1.11	370.33	365	11	6.31E-01	2.1	
12	1	205.22*	428	553	1.24	409.77	406	19	5.94E-02	10.2	1.71E+00
13	1	209.38	149	482	1.25	418.11	406	19	2.06E-02	26.4	
14	0	238.36*	641	599	0.96	476.09	472	8	8.91E-02	7.8	
15	0	257.86	327	537	1.05	515.12	510	11	4.54E-02	14.8	
16	0	294.99	263	493	1.41	589.42	584	12	3.65E-02	18.0	
17	0	338.80	265	434	1.82	677.09	670	17	3.67E-02	19.1	
18	0	351.70*	367	327	1.12	702.91	697	12	5.09E-02	11.3	
19	0	510.88*	10	292	1.42	1021.44	1016	12	1.44E-03	361.3	
20	0	583.07*	226	257	1.36	1165.90	1158	15	3.14E-02	17.1	
21	0	608.79*	260	299	1.79	1217.38	1211	17	3.61E-02	16.5	
22	0	648.06	25	128	1.20	1295.97	1291	10	3.44E-03	87.6	
23	0	727.12	58	157	1.29	1454.18	1449	11	8.01E-03	44.1	
24	0	742.36	206	177	1.31	1484.68	1477	14	2.86E-02	15.4	
25	0	766.05	664	223	1.52	1532.09	1524	17	9.22E-02	6.5	
26	0	785.84	136	146	1.48	1571.70	1565	12	1.89E-02	19.7	
27	0	910.91*	137	62	2.04	1822.00	1816	17	1.90E-02	15.9	
28	0	945.98	43	57	0.92	1892.19	1888	9	5.97E-03	35.4	
29	0	968.69	91	50	1.89	1937.65	1931	11	1.26E-02	18.3	
30	0	1000.53*	1512	86	1.87	2001.36	1992	19	2.10E-01	3.0	
31	0	1119.78	49	29	0.84	2240.04	2236	8	6.86E-03	23.4	
32	0	1460.22*	941	14	2.28	2921.43	2913	19	1.31E-01	3.4	
33	0	1763.89*	56	15	1.75	3529.30	3522	16	7.76E-03	22.2	

Flag: "*" = Peak area was modified by background subtraction

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395007.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:13:37
 Sample ID : G245395007 Sample quantity : 181.03 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA2 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:06.26 0.1%
 Peak Width (FWHM): 3.00 Confidence level : 5.00 %
 Energy tolerance : 1.50 keV Half life ratio : 8.00
 Errors propagated: Yes Systematic Error : 0.00 %
 Efficiency type : Empirical Efficiencies at : Peak Energy
 Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	1.779E+01	2.087E+00	3.926E-01	3.732E-02	45.304
NB-95	+	765.79	*	8.765E-01	1.400E-01	7.551E-02	7.070E-03	11.607
LU-177	+	112.95		2.886E+01	4.187E+00	4.093E+00	3.457E-01	7.051
	+	208.36	*	2.416E+00	1.303E+00	1.832E+00	2.044E-01	1.319
TL-208		277.35		1.698E-01	4.017E-01	6.831E-01	1.038E-01	0.249
	+	510.84		3.923E-02	2.835E-01	2.526E-01	3.271E-02	0.155
	+	583.14	*	2.428E-01	8.663E-02	6.163E-02	6.174E-03	3.939
		860.37		2.466E-01	2.809E-01	4.842E-01	5.104E-02	0.509
BI-211		72.87		1.905E+00	6.200E+00	1.051E+01	9.049E-01	0.181
	+	351.07	*	1.754E+00	4.455E-01	3.483E-01	4.018E-02	5.035
BI-212	+	727.18	*	5.300E-01	4.703E-01	5.210E-01	5.427E-02	1.017
	+	785.46		8.012E+00	3.254E+00	3.122E+00	2.965E-01	2.566
		1620.62		2.110E-01	9.175E-01	1.589E+00	1.427E-01	0.133
BI-214	+	609.31	*	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
	+	1120.29		5.226E-01	2.514E-01	3.961E-01	4.312E-02	1.320
	+	1764.49		8.140E-01	3.685E-01	2.746E-01	2.327E-02	2.964
RA-226	+	609.31	*	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
	+	1120.29		5.226E-01	2.514E-01	3.961E-01	4.312E-02	1.320
	+	1764.49		8.140E-01	3.685E-01	2.746E-01	2.327E-02	2.964
AC-228	+	338.32		1.397E+00	7.917E-01	3.842E-01	1.612E-01	3.635
	+	911.07	*	6.530E-01	2.227E-01	1.859E-01	2.318E-02	3.513
	+	969.11		7.644E-01	3.343E-01	3.073E-01	7.322E-02	2.487
RA-228	+	338.32		1.397E+00	7.917E-01	3.842E-01	1.612E-01	3.635
	+	911.07	*	6.530E-01	2.227E-01	1.859E-01	2.318E-02	3.513
	+	969.11		7.644E-01	3.343E-01	3.073E-01	7.322E-02	2.487
TH-230	+	609.31	*	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
	+	1120.29		5.226E-01	2.514E-01	3.961E-01	4.312E-02	1.320
	+	1764.49		8.140E-01	3.685E-01	2.746E-01	2.327E-02	2.964
U-231	+	84.21		3.773E+01	1.468E+01	1.545E+01	1.486E+00	2.442
	+	92.29		5.407E+02	5.209E+01	6.090E+00	5.804E-01	88.790
	+	95.87	*	1.121E+01	3.284E+00	2.333E+00	2.148E-01	4.806
		108.00		1.061E+00	3.257E+00	4.871E+00	4.174E-01	0.218
TH-232	+	338.32		1.397E+00	5.560E-01	3.842E-01	4.417E-02	3.635
	+	911.07	*	6.530E-01	2.227E-01	1.859E-01	2.318E-02	3.513

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	969.11		7.644E-01	3.343E-01	3.073E-01	7.322E-02	2.487
PA-234M	+	766.42		2.351E+02	1.234E+02	2.027E+01	1.031E+01	11.597
	+	1001.03	*	2.592E+02	3.214E+01	7.190E+00	7.824E-01	36.044
TH-234	+	63.29	*	1.752E+02	3.169E+01	4.601E+00	8.123E-01	38.085
	+	92.38		1.737E+02	3.228E+01	1.954E+00	3.621E-01	88.862
U-234	+	609.31	*	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
	+	1120.29		5.226E-01	2.514E-01	3.961E-01	4.312E-02	1.320
	+	1764.49		8.140E-01	3.685E-01	2.746E-01	2.327E-02	2.964
U-235		89.95		9.491E+00	4.069E+00	4.387E+00	1.369E+00	2.163
	+	93.35		2.088E+02	5.919E+01	2.330E+00	6.590E-01	89.609
		105.00		6.208E-01	1.734E+00	2.880E+00	8.601E-01	0.216
	+	143.76	*	3.066E+00	7.269E-01	4.780E-01	8.488E-02	6.416
	+	163.35		3.861E+00	1.251E+00	1.040E+00	2.059E-01	3.714
	+	185.71		3.297E+00	3.779E-01	8.955E-02	9.557E-03	36.823
	+	205.31		3.812E+00	1.099E+00	1.005E+00	2.042E-01	3.792
U-238	+	63.29	*	1.752E+02	3.169E+01	4.601E+00	8.123E-01	38.085
	+	92.38		1.737E+02	1.673E+01	1.954E+00	1.861E-01	88.862
ANH-511	+	511.00	*	8.474E-03	6.124E-02	5.458E-02	5.410E-03	0.155

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.426E-02	3.758E-01	6.093E-01	6.462E-02	0.056
NA-22		1274.54	*	-1.993E-02	3.790E-02	5.905E-02	5.235E-03	-0.338
NA-24		1368.53	*	4.288E-03	3.790E-02	Half-Life too short		
AL-26		1129.67		-1.222E+00	1.308E+00	1.967E+00	1.681E-01	-0.621
		1808.65	*	1.178E-02	2.016E-02	3.747E-02	3.102E-03	0.314
TI-44		67.85		-1.131E-01	1.042E-01	1.553E-01	1.281E-02	-0.728
		78.38	*	-1.338E-02	7.117E-02	1.196E-01	1.083E-02	-0.112
SC-46		889.25	*	1.841E-03	3.929E-02	6.396E-02	6.503E-03	0.029
	+	1120.51		8.856E-02	4.220E-02	8.086E-02	6.986E-03	1.095
V-48		944.10		1.289E+00	9.968E-01	1.570E+00	1.572E-01	0.821
		983.50	*	-1.828E-02	5.866E-02	9.137E-02	8.936E-03	-0.200
		1312.09		-8.180E-03	6.521E-02	1.055E-01	9.661E-03	-0.078
CR-51		320.08	*	7.034E-02	3.808E-01	6.380E-01	7.784E-02	0.110
MN-52		744.21		1.179E+00	3.076E-01	5.276E-01	4.860E-02	2.234
		848.13		-4.254E+00	5.521E+00	8.401E+00	8.325E-01	-0.506
		935.52		1.789E-01	2.074E-01	3.570E-01	3.589E-02	0.501
		1246.25		2.809E+00	4.629E+00	8.071E+00	6.967E-01	0.348
		1333.61		4.385E+00	3.547E+00	6.573E+00	6.125E-01	0.667
		1434.06	*	1.379E-01	1.784E-01	3.175E-01	2.954E-02	0.434
MN-54		834.83	*	-2.394E-02	3.766E-02	5.853E-02	5.750E-03	-0.409
CO-56		846.75	*	-5.849E-02	3.928E-02	5.572E-02	5.516E-03	-1.050
		977.42		-8.911E-01	2.591E+00	4.028E+00	3.955E-01	-0.221
		1037.82		-9.236E-02	2.501E-01	4.045E-01	3.971E-02	-0.228
		1175.09		3.404E-01	1.744E+00	2.941E+00	2.373E-01	0.116
		1238.25		1.078E-01	7.305E-02	1.330E-01	1.173E-02	0.811
		1360.21		8.908E-02	8.505E-01	1.408E+00	1.313E-01	0.063

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	1771.40			-1.929E-01	2.277E-01	3.276E-01	2.766E-02	-0.589
	122.06	*		3.963E-02	3.836E-02	6.426E-02	5.372E-03	0.617
	136.48			-1.695E-01	2.974E-01	4.795E-01	4.527E-02	-0.354
CO-58	810.76	*		-1.507E-02	3.843E-02	6.098E-02	5.905E-03	-0.247
FE-59	142.65	+		3.881E+01	7.046E+00	8.196E+00	7.433E-01	4.735
	192.34			-8.405E-01	1.188E+00	1.851E+00	2.763E-01	-0.454
	1099.22	*		-3.688E-02	7.091E-02	1.122E-01	1.070E-02	-0.329
CO-60	1291.56			6.900E-03	9.590E-02	1.558E-01	1.576E-02	0.044
	1173.22			-4.712E-03	3.600E-02	5.894E-02	4.747E-03	-0.080
	1332.49	*		1.484E-02	3.262E-02	5.615E-02	5.232E-03	0.264
ZN-65	1115.52	*		-2.986E-02	7.985E-02	1.085E-01	9.443E-03	-0.275
GE-68	1077.35	*		5.843E-02	9.847E-01	1.653E+00	1.497E-01	0.035
AS-73	53.44	*		-2.682E-01	2.117E+00	3.606E+00	2.985E-01	-0.074
AS-74	595.88	*		3.081E-02	9.448E-02	1.610E-01	1.503E-02	0.191
	634.78			-2.057E-01	3.427E-01	5.502E-01	4.919E-02	-0.374
	66.05			-2.727E+01	1.087E+01	1.528E+01	1.532E+00	-1.785
SE-75	96.73			1.180E+01	2.511E+00	2.684E+00	3.747E-01	4.398
	121.11			-6.360E-02	2.065E-01	3.377E-01	3.721E-02	-0.188
	136.00			-1.764E-02	5.824E-02	9.006E-02	7.970E-03	-0.196
	198.60			-2.653E+00	2.237E+00	3.373E+00	3.949E-01	-0.787
	264.65	*		-1.145E-02	4.688E-02	7.826E-02	9.566E-03	-0.146
	279.53			-5.924E-02	1.161E-01	1.909E-01	2.411E-02	-0.310
	303.91			-8.042E-01	2.210E+00	3.631E+00	5.190E-01	-0.222
	400.65			1.793E-01	2.685E-01	4.521E-01	5.533E-02	0.397
	87.88			-4.496E+02	3.936E+02	4.550E+02	4.565E+01	-0.988
BR-77	200.40			4.803E+01	1.505E+02	2.309E+02	2.537E+01	0.208
	239.00	+		7.497E+01	1.466E+01	1.900E+01	2.235E+00	3.946
	249.79			6.254E+00	5.163E+01	8.763E+01	1.048E+01	0.071
	281.68			2.769E+01	6.579E+01	1.119E+02	1.386E+01	0.247
	297.23			1.504E+01	4.620E+01	6.904E+01	8.431E+00	0.218
	303.76			-5.950E+01	1.329E+02	2.177E+02	2.639E+01	-0.273
	439.47			2.234E+01	1.073E+02	1.762E+02	1.775E+01	0.127
	484.57			1.903E+01	1.738E+02	2.818E+02	2.820E+01	0.068
	520.65	*		-2.215E+00	8.146E+00	1.284E+01	1.267E+00	-0.172
	574.64			-2.182E+01	1.686E+02	2.659E+02	2.531E+01	-0.082
	578.91			-4.967E+01	7.522E+01	1.045E+02	9.916E+00	-0.475
	585.48			2.135E+02	1.492E+02	2.369E+02	2.234E+01	0.901
	755.35			1.747E+01	1.195E+02	1.985E+02	1.844E+01	0.088
	817.79			-5.025E+01	8.792E+01	1.369E+02	1.329E+01	-0.367
	698.33			2.670E+01	3.590E+01	6.173E+01	5.485E+00	0.432
SR-82	776.49	*		-4.590E-01	4.298E-01	6.560E-01	6.190E-02	-0.700
	1395.20			-3.953E+00	9.557E+00	1.478E+01	1.377E+00	-0.268
	520.41	*		-3.923E-02	7.744E-02	1.203E-01	1.187E-02	-0.326
RB-83	529.64			1.019E-02	1.221E-01	1.963E-01	1.927E-02	0.052
	552.65			-3.823E-02	2.090E-01	3.492E-01	3.381E-02	-0.109
	881.50	*		1.257E-01	7.532E-02	1.344E-01	1.360E-02	0.935
RB-84	513.99	*		3.998E+00	8.982E+00	1.297E+01	1.284E+00	0.308
KR-85	513.99	*		2.023E-02	4.546E-02	6.563E-02	6.497E-03	0.308
SR-85	513.99	*		2.023E-02	4.546E-02	6.563E-02	6.497E-03	0.308
RB-86	1076.63	*		-4.470E-02	6.060E-01	1.005E+00	9.109E-02	-0.044

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-88	898.02			8.900E-03	3.953E-02	6.522E-02	6.688E-03	0.136
	1836.01	*		-6.116E-02	3.411E-02	3.757E-02	3.065E-03	-1.628
ZR-88	392.90	*		-1.279E-02	3.185E-02	5.110E-02	5.113E-03	-0.250
Y-91	1204.90	*		-4.275E+00	1.431E+01	2.300E+01	1.910E+00	-0.186
NB-94	702.63	*		-2.608E-02	3.736E-02	5.929E-02	5.287E-03	-0.440
	871.10			-1.165E-02	3.403E-02	5.376E-02	5.405E-03	-0.217
NB-95M	235.69	*		-2.008E-03	1.470E-01	2.203E-01	2.787E-02	-0.009
ZR-95	724.18			1.656E-03	1.160E-01	1.662E-01	1.626E-02	0.010
	756.15	*		2.243E-02	7.134E-02	1.197E-01	1.210E-02	0.187
NB-97	657.90	*		-1.959E-02	7.134E-02	Half-Life	too short	
	1024.50			-1.176E+00	7.134E-02	Half-Life	too short	
ZR-97	254.15			-8.147E-01	7.134E-02	Half-Life	too short	
	355.39			5.839E-01	7.134E-02	Half-Life	too short	
	507.63	*		4.106E-01	7.134E-02	Half-Life	too short	
	602.52			4.845E-01	7.134E-02	Half-Life	too short	
	1021.30			5.308E-01	7.134E-02	Half-Life	too short	
	1147.95			-5.008E-01	7.134E-02	Half-Life	too short	
	1362.66			2.996E-01	7.134E-02	Half-Life	too short	
	1750.46			-5.762E-01	7.134E-02	Half-Life	too short	
MO-99	140.51			2.521E+01	3.083E+01	4.491E+01	1.249E+01	0.561
	181.06			1.257E+00	1.886E+01	2.706E+01	5.219E+00	0.046
	366.43			-9.285E-01	6.500E+01	1.070E+02	1.154E+01	-0.009
	739.58	*		1.733E+01	1.270E+01	1.953E+01	3.028E+00	0.887
	778.00			-1.231E+01	3.020E+01	4.530E+01	4.279E+00	-0.272
TC-99M	140.51	*		1.658E+09	3.020E+01	Half-Life	too short	
RH-101	127.23			-1.003E-02	5.169E-02	7.548E-02	6.406E-03	-0.133
	198.01	*		-8.150E-02	4.259E-02	6.187E-02	6.768E-03	-1.317
	325.23			-1.801E-01	2.362E-01	3.784E-01	4.453E-02	-0.476
RH-102	418.52			-3.144E-01	3.057E-01	4.689E-01	4.717E-02	-0.670
	475.06	*		3.939E-02	3.509E-02	5.943E-02	5.962E-03	0.663
	631.29			2.665E-03	5.285E-02	8.850E-02	7.946E-03	0.030
	697.49			4.056E-02	8.380E-02	1.423E-01	1.264E-02	0.285
+	766.84			2.233E+00	3.567E-01	4.393E-01	4.116E-02	5.083
	1046.59			3.252E-02	9.707E-02	1.669E-01	1.557E-02	0.195
	1112.84			1.483E-01	1.816E-01	3.055E-01	2.664E-02	0.486
RU-103	497.08	*		-1.606E-02	4.345E-02	6.829E-02	1.026E-02	-0.235
	610.33			5.041E+00	1.335E+00	2.008E+00	3.412E-01	2.510
RH-106	511.85	+		4.223E-02	3.052E-01	3.575E-01	3.542E-02	0.118
	621.84	*		9.591E-02	3.283E-01	5.574E-01	7.614E-02	0.172
	1050.47			2.923E-01	1.854E+00	3.145E+00	2.922E-01	0.093
RU-106	511.85	+		4.223E-02	3.052E-01	3.575E-01	3.542E-02	0.118
	621.84	*		9.591E-02	3.282E-01	5.574E-01	5.062E-02	0.172
	1050.47			2.923E-01	1.854E+00	3.145E+00	2.922E-01	0.093
AG-108M	433.93	*		-1.471E-02	3.584E-02	5.698E-02	5.907E-03	-0.258
	614.37			1.675E-02	4.532E-02	6.780E-02	6.426E-03	0.247
	722.95			1.626E-02	5.067E-02	7.445E-02	6.986E-03	0.218
CD-109	88.03	*		5.056E-01	2.195E+00	3.033E+00	3.045E-01	0.167
AG-110M	657.75	*		-2.850E-02	3.970E-02	6.337E-02	5.653E-03	-0.450
	677.61			-8.037E-02	3.172E-01	5.183E-01	4.651E-02	-0.155

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		706.67		9.870E-03	2.256E-01	3.740E-01	3.432E-02	0.026
		763.93		2.617E+00	3.971E-01	6.155E-01	5.894E-02	4.252
		884.67		1.388E-02	5.405E-02	8.929E-02	9.264E-03	0.155
		937.48		-3.952E-02	1.035E-01	1.615E-01	1.665E-02	-0.245
		1384.27		-2.082E-02	1.282E-01	2.047E-01	1.955E-02	-0.102
IN-111		171.28		-1.835E-01	1.011E+00	1.623E+00	1.682E-01	-0.113
		245.39	*	-5.759E-01	8.743E-01	1.445E+00	1.716E-01	-0.399
IN-113M		391.69	*	-9.558E-03	4.686E-02	7.602E-02	7.779E-03	-0.126
SN-113		391.69	*	-9.558E-03	4.686E-02	7.602E-02	7.779E-03	-0.126
IN-114M		190.27	*	3.298E-02	2.417E-01	3.466E-01	3.733E-02	0.095
CD-115		260.90		-4.618E+01	1.074E+02	1.562E+02	1.895E+01	-0.296
		492.35		7.536E-01	2.714E+01	4.376E+01	4.369E+00	0.017
		527.90	*	5.621E+00	8.478E+00	1.405E+01	1.381E+00	0.400
SN-117M		156.02		-1.297E+00	2.962E+00	4.750E+00	4.616E-01	-0.273
		158.56	*	6.822E-02	7.909E-02	1.172E-01	1.155E-02	0.582
SB-122		563.90	*	-9.583E-01	1.666E+00	2.722E+00	2.613E-01	-0.352
		692.80		3.362E+00	3.292E+01	5.487E+01	4.853E+00	0.061
I-123		159.00	*	4.050E-01	3.292E+01	Half-Life too short		
		528.96		7.145E+01	3.292E+01	Half-Life too short		
TE-123M		159.00	*	9.468E-03	4.422E-02	6.436E-02	6.386E-03	0.147
I-124		602.71	*	9.193E-02	6.451E-01	9.505E-01	8.815E-02	0.097
		722.78		1.518E+00	4.322E+00	6.365E+00	5.767E-01	0.238
		1325.50		-6.428E-01	2.407E+01	3.933E+01	3.643E+00	-0.016
		1376.25		8.702E+00	1.840E+01	3.186E+01	2.971E+00	0.273
		1509.49		1.110E+01	1.242E+01	2.214E+01	2.041E+00	0.501
		1691.02		-3.853E-01	2.202E+00	3.540E+00	3.101E-01	-0.109
SB-124		602.71		6.462E-03	4.535E-02	6.682E-02	6.197E-03	0.097
		645.85		1.347E-01	5.554E-01	8.214E-01	7.654E-02	0.164
		709.31		-1.688E+00	2.991E+00	4.777E+00	4.282E-01	-0.353
		713.82		2.835E+00	1.737E+00	3.083E+00	3.795E-01	0.920
		722.78		1.547E-01	4.404E-01	6.486E-01	5.992E-02	0.238
	+	968.20		7.759E+00	2.947E+00	4.709E+00	4.650E-01	1.647
		1045.16		-1.809E-01	2.104E+00	3.496E+00	3.263E-01	-0.052
		1325.50		-6.996E-02	2.620E+00	4.280E+00	3.964E-01	-0.016
		1368.21		-3.864E-02	1.428E+00	2.326E+00	3.241E-01	-0.017
		1436.60		1.091E+00	3.139E+00	5.340E+00	4.967E-01	0.204
		1691.02	*	-9.260E-03	5.293E-02	8.509E-02	7.739E-03	-0.109
SB-125		427.89	*	2.142E-02	9.780E-02	1.610E-01	1.644E-02	0.133
		463.38		1.281E-01	2.988E-01	4.938E-01	5.253E-02	0.259
		600.56		-7.217E-02	1.916E-01	3.060E-01	3.025E-02	-0.236
		635.90		-1.461E-01	2.800E-01	4.521E-01	4.341E-02	-0.323
TE-125M		109.28	*	5.190E+01	1.887E+01	2.855E+01	2.927E+00	1.818
I-126		388.63		4.969E-02	2.101E-01	3.482E-01	3.519E-02	0.143
		666.33	*	-4.259E-02	1.823E-01	2.991E-01	2.587E-02	-0.142
		753.82		-2.617E-01	1.431E+00	2.326E+00	2.158E-01	-0.113
SB-126		223.80		-6.320E+00	4.619E+00	6.866E+00	7.879E-01	-0.920
		278.60		-2.284E-01	2.477E+00	4.145E+00	5.136E-01	-0.055
		296.50		2.801E+00	1.730E+00	2.681E+00	3.277E-01	1.044
		414.70		3.356E-02	7.455E-02	1.243E-01	1.250E-02	0.270

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.30		1.130E+00	6.147E+00	1.012E+01	1.018E+00	0.112
		555.20		-7.276E-01	4.001E+00	6.683E+00	6.458E-01	-0.109
		573.80		-1.365E-01	1.072E+00	1.791E+00	1.706E-01	-0.076
		593.00		2.533E-02	9.573E-01	1.608E+00	1.506E-01	0.016
		656.30		-4.708E+00	3.536E+00	5.408E+00	4.696E-01	-0.871
		666.33		-1.775E-02	7.598E-02	1.246E-01	1.078E-02	-0.142
		675.00		-1.005E-01	1.934E+00	3.202E+00	2.790E-01	-0.031
		695.00		-7.445E-02	7.857E-02	1.225E-01	1.085E-02	-0.608
		697.00		2.693E-01	2.681E-01	4.671E-01	4.145E-02	0.577
		720.50	*	2.294E-01	1.528E-01	2.533E-01	2.291E-02	0.906
		856.80		-2.608E-01	4.219E-01	6.520E-01	6.497E-02	-0.400
		989.30		-1.816E-01	1.064E+00	1.682E+00	1.638E-01	-0.108
		1034.80		-3.229E+00	6.382E+00	1.016E+01	9.566E-01	-0.318
		1213.00		1.286E+00	3.787E+00	6.423E+00	5.375E-01	0.200
SN-126	+	64.28		6.936E+01	1.061E+01	2.995E+00	4.442E-01	23.162
		86.94		-2.392E+00	1.306E+00	1.217E+00	5.068E-01	-1.965
		87.57	*	-5.557E-01	2.300E-01	2.935E-01	2.933E-02	-1.893
SB-127		61.10		5.679E+02	1.392E+02	2.084E+02	2.098E+01	2.725
		252.40		-2.021E+00	4.551E+00	6.527E+00	2.791E+00	-0.310
		290.80		9.656E-01	2.024E+01	2.992E+01	4.162E+00	0.032
		411.60		-6.869E-01	1.024E+01	1.666E+01	2.719E+00	-0.041
		444.90		-2.726E+00	8.302E+00	1.322E+01	1.755E+00	-0.206
		473.00		6.534E-01	1.604E+00	2.639E+00	3.581E-01	0.248
		543.00		-8.958E-01	1.511E+01	2.405E+01	3.567E+00	-0.037
		603.60		3.932E+00	1.085E+01	1.624E+01	2.055E+00	0.242
		685.20	*	8.824E-01	1.181E+00	2.035E+00	2.272E-01	0.434
		698.50		6.368E+00	1.339E+01	2.269E+01	3.566E+00	0.281
		722.20		3.251E+01	2.780E+01	4.343E+01	4.845E+00	0.748
		783.80		1.034E+01	4.399E+00	7.003E+00	8.913E-01	1.476
XE-127		57.60		1.599E+01	1.545E+01	2.557E+01	1.967E+00	0.625
		145.22		4.987E+00	1.171E+00	1.776E+00	1.631E-01	2.808
		172.10		-3.333E-02	1.599E-01	2.564E-01	2.662E-02	-0.130
		202.84	*	4.628E-02	6.599E-02	9.596E-02	1.060E-02	0.482
		374.96		-7.839E-02	1.995E-01	3.185E-01	3.356E-02	-0.246
I-131		80.18		-6.844E-01	9.416E+00	1.422E+01	1.317E+00	-0.048
		284.30		-5.766E-01	1.418E+00	2.338E+00	2.962E-01	-0.247
		364.48	*	-1.223E-02	1.082E-01	1.773E-01	1.988E-02	-0.069
		636.97		1.386E-02	1.444E+00	2.411E+00	2.260E-01	0.006
		722.89		2.533E+00	7.677E+00	1.129E+01	1.028E+00	0.224
TE-132		49.72		-4.660E+00	4.320E+01	6.683E+01	7.130E+00	-0.070
	+	111.76		4.583E+02	7.205E+01	9.255E+01	9.640E+00	4.951
		116.30		-3.272E+00	3.686E+01	5.434E+01	5.626E+00	-0.060
		228.16	*	6.891E-01	6.505E-01	1.050E+00	1.818E-01	0.656
BA-133		53.15		5.285E+00	9.222E+00	1.585E+01	1.319E+00	0.333
		79.62		-4.720E+00	3.091E+00	4.426E+00	6.878E-01	-1.066
		81.00		5.054E-02	2.223E-01	3.370E-01	5.478E-02	0.150
		276.40		3.343E-01	4.016E-01	6.871E-01	1.165E-01	0.487
		302.84		-1.155E-01	1.566E-01	2.523E-01	3.987E-02	-0.458
		356.01	*	3.145E-02	4.983E-02	7.484E-02	1.116E-02	0.420

---- Non-Identified Nuclides ----

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I-133	+	383.85		1.321E-01	3.301E-01	5.509E-01	7.591E-02	0.240
		510.53		3.217E-02	3.301E-01	Half-Life	too short	
		529.87	*	-3.360E-04	3.301E-01	Half-Life	too short	
		706.58		7.319E-03	3.301E-01	Half-Life	too short	
		856.28		-3.074E-01	3.301E-01	Half-Life	too short	
		875.33		-1.539E-02	3.301E-01	Half-Life	too short	
		1236.41		3.031E-01	3.301E-01	Half-Life	too short	
CS-134		1298.22		-1.416E-03	3.301E-01	Half-Life	too short	
		475.35		2.245E+00	2.325E+00	3.912E+00	3.924E-01	0.574
		563.23		-8.506E-02	3.921E-01	6.531E-01	6.322E-02	-0.130
		569.32		1.313E-01	2.232E-01	3.823E-01	3.696E-02	0.343
		604.70		1.761E-02	3.887E-02	5.854E-02	5.430E-03	0.301
		795.84	*	3.222E-02	5.031E-02	8.547E-02	8.225E-03	0.377
		801.93		-2.303E-01	4.310E-01	6.627E-01	6.396E-02	-0.348
		1038.57		9.676E-01	3.117E+00	5.361E+00	5.033E-01	0.180
		1167.94		3.734E-01	1.965E+00	3.313E+00	2.688E-01	0.113
		1365.15		1.298E-01	1.018E+00	1.691E+00	1.638E-01	0.077
CS-135		268.24	*	1.311E-01	1.694E-01	2.910E-01	3.850E-02	0.450
I-135		288.45		-3.046E+06	1.694E-01	Half-Life	too short	
		417.63		-1.405E+09	1.694E-01	Half-Life	too short	
		546.56		1.164E+08	1.694E-01	Half-Life	too short	
		836.80		1.166E+08	1.694E-01	Half-Life	too short	
		1038.76		2.129E+08	1.694E-01	Half-Life	too short	
		1124.00		5.249E+08	1.694E-01	Half-Life	too short	
		1131.51		1.231E+08	1.694E-01	Half-Life	too short	
		1260.41	*	7.261E+07	1.694E-01	Half-Life	too short	
		1457.56		2.557E+10	1.694E-01	Half-Life	too short	
		1678.03		-1.953E+08	1.694E-01	Half-Life	too short	
		1706.46		-1.932E+08	1.694E-01	Half-Life	too short	
		1791.20		3.276E+08	1.694E-01	Half-Life	too short	
CS-136		66.91		-4.063E+00	1.736E+00	2.363E+00	3.591E-01	-1.719
		86.29		-5.380E+00	2.566E+00	3.578E+00	4.903E-01	-1.504
		153.22		9.076E-01	8.538E-01	1.414E+00	1.484E-01	0.642
		163.89	+	8.198E+00	2.287E+00	2.680E+00	2.958E-01	3.059
		176.55		-9.588E-02	4.664E-01	7.465E-01	8.129E-02	-0.128
		273.65		-6.312E-01	4.662E-01	7.353E-01	9.359E-02	-0.859
		340.57		1.278E-01	1.208E-01	2.072E-01	2.411E-02	0.616
		818.51		-3.364E-02	6.534E-02	1.022E-01	9.938E-03	-0.329
		1048.07	*	8.495E-02	8.406E-02	1.519E-01	1.466E-02	0.559
		1235.34		3.370E-01	4.903E-01	8.465E-01	9.984E-02	0.398
BA-137M		661.65	*	4.439E-02	4.106E-02	7.173E-02	6.180E-03	0.619
CS-137		661.65	*	4.693E-02	4.341E-02	7.583E-02	6.546E-03	0.619
CE-139		165.85	*	-2.284E-02	4.511E-02	6.376E-02	6.541E-03	-0.358
BA-140	+	162.64		5.761E+00	1.597E+00	1.931E+00	2.029E-01	2.984
		304.84		-8.342E-01	1.307E+00	2.089E+00	6.118E-01	-0.399
		423.70		-1.152E+00	1.949E+00	3.017E+00	9.905E-01	-0.382
LA-140		537.32	*	-4.894E-02	2.679E-01	4.227E-01	1.414E-01	-0.116
		328.77		2.225E-01	2.887E-01	4.920E-01	5.933E-02	0.452
		432.53		-4.045E-02	2.046E+00	3.325E+00	3.469E-01	-0.012

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		487.03		-9.465E-02	1.430E-01	2.212E-01	2.314E-02	-0.428
		751.79		1.012E+00	1.630E+00	2.784E+00	2.820E-01	0.364
		815.85		-1.056E-01	2.833E-01	4.489E-01	4.755E-02	-0.235
		867.82		7.710E-01	1.273E+00	2.161E+00	2.254E-01	0.357
		919.63		-3.041E+00	3.107E+00	3.794E+00	4.515E-01	-0.802
		925.24		1.894E+00	1.103E+00	1.982E+00	2.094E-01	0.956
		1596.49	*	-1.691E-03	6.152E-02	1.026E-01	9.275E-03	-0.016
CE-141		145.44	*	3.185E-01	9.945E-02	1.519E-01	1.419E-02	2.096
CE-143		57.37		6.153E-04	9.945E-02	Half-Life	too short	
		231.56		6.421E-04	9.945E-02	Half-Life	too short	
		293.26	*	2.696E-04	9.945E-02	Half-Life	too short	
	+	350.59		7.469E-03	9.945E-02	Half-Life	too short	
		490.36		6.516E-04	9.945E-02	Half-Life	too short	
		664.57		-1.120E-03	9.945E-02	Half-Life	too short	
		721.93		1.017E-03	9.945E-02	Half-Life	too short	
CE-144		80.11		-5.150E-01	4.806E+00	7.255E+00	6.682E-01	-0.071
		133.54	*	8.506E-02	3.246E-01	4.785E-01	7.469E-02	0.178
PM-144		476.78		6.362E-02	8.074E-02	1.350E-01	1.448E-02	0.471
		618.01		7.331E-03	3.467E-02	5.552E-02	5.189E-03	0.132
		696.49	*	3.118E-02	3.644E-02	6.308E-02	5.597E-03	0.494
		778.57		-4.489E-03	2.810E+00	4.183E+00	3.954E-01	-0.001
PR-144		696.49	*	2.111E+00	2.467E+00	4.272E+00	3.789E-01	0.494
		1489.15		-4.389E+00	8.883E+00	1.313E+01	1.214E+00	-0.334
PM-146		453.90	*	-9.845E-03	4.799E-02	7.689E-02	9.164E-03	-0.128
		633.02		1.215E-02	1.350E+00	2.255E+00	8.444E-01	0.005
		735.90		-1.390E-01	2.144E-01	2.850E-01	8.200E-02	-0.488
		747.13		-8.425E-03	1.056E-01	1.494E-01	2.155E-02	-0.056
ND-147	+	91.11		8.082E+01	8.305E+00	2.114E+00	2.177E-01	38.225
		319.41		-8.129E-02	3.233E+00	5.372E+00	6.380E-01	-0.015
		439.89		5.580E-01	5.805E+00	9.478E+00	9.549E-01	0.059
		531.02	*	-4.661E-01	6.208E-01	9.439E-01	1.479E-01	-0.494
PM-149		285.90	*	1.948E+00	6.557E+01	1.100E+02	1.966E+01	0.018
EU-152		121.78		9.490E-02	1.111E-01	1.856E-01	1.800E-02	0.511
		244.69		-5.076E-01	3.758E-01	6.015E-01	7.138E-02	-0.844
		344.27	*	2.089E-02	1.172E-01	1.722E-01	2.024E-02	0.121
		443.98		8.785E-02	1.002E+00	1.635E+00	1.646E-01	0.054
		778.89		3.746E-02	3.409E-01	4.889E-01	4.621E-02	0.077
		867.32		-1.840E-02	8.246E-01	1.338E+00	1.342E-01	-0.014
		964.01		2.875E-01	2.802E-01	4.340E-01	4.297E-02	0.662
		1085.78		-1.911E-01	2.899E-01	4.494E-01	4.036E-02	-0.425
		1112.02		1.033E-01	2.461E-01	4.172E-01	3.641E-02	0.248
		1407.95		-4.450E-02	1.454E-01	2.265E-01	2.110E-02	-0.197
GD-153		69.67		2.314E+00	3.348E+00	5.712E+00	4.785E-01	0.405
	+	83.37		1.255E+02	4.882E+01	5.690E+01	5.424E+00	2.205
	+	97.43	*	2.461E+00	3.061E-01	3.181E-01	2.891E-02	7.736
		103.18		-1.069E-01	1.759E-01	2.750E-01	2.407E-02	-0.389
EU-154		123.07		-2.972E-04	7.864E-02	1.294E-01	1.447E-02	-0.002
		247.94		-9.901E-02	3.979E-01	6.672E-01	9.426E-02	-0.148
		591.81		2.489E-01	6.607E-01	1.129E+00	1.382E-01	0.220

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		723.30		9.361E-03	2.148E-01	3.086E-01	3.065E-02	0.030
		756.87		-2.860E-01	8.317E-01	1.298E+00	1.620E-01	-0.220
		873.19		1.143E-01	2.834E-01	4.748E-01	6.317E-02	0.241
		996.32		8.749E-01	4.513E-01	7.148E-01	1.309E-01	1.224
		1004.76		3.111E-01	2.346E-01	3.819E-01	4.741E-02	0.814
		1274.45	*	-5.571E-02	1.060E-01	1.650E-01	1.897E-02	-0.338
		48.70		4.741E+00	7.065E+00	1.111E+01	9.832E-01	0.427
		60.01		1.690E+01	1.340E+01	2.094E+01	1.580E+00	0.807
		86.54		-5.043E-01	2.466E-01	3.520E-01	3.503E-02	-1.433
		105.31	*	-4.606E-02	1.778E-01	2.937E-01	2.575E-02	-0.157
TB-160		86.79		-1.903E+00	6.731E-01	9.297E-01	9.208E-02	-2.047
		197.04		-1.317E+00	7.176E-01	1.048E+00	1.144E-01	-1.256
		215.65		-2.475E-01	9.460E-01	1.413E+00	1.599E-01	-0.175
		298.57		4.146E-02	1.363E-01	2.035E-01	2.481E-02	0.204
		879.36	*	2.029E-02	1.490E-01	2.444E-01	2.469E-02	0.083
		962.29		4.135E-01	5.079E-01	7.715E-01	7.645E-02	0.536
		966.15		3.665E-01	2.250E-01	3.585E-01	3.544E-02	1.023
		1177.93		-3.785E-02	2.808E-01	4.594E-01	3.716E-02	-0.082
		1271.85		-1.699E-01	5.850E-01	9.337E-01	8.250E-02	-0.182
		80.57		8.200E-02	6.151E-01	9.319E-01	8.624E-02	0.088
HO-166M	+	184.41		2.473E+00	2.834E-01	1.769E-01	1.883E-02	13.977
		280.46		-1.618E-02	9.083E-02	1.514E-01	1.876E-02	-0.107
		410.95		-2.733E-03	2.514E-01	4.104E-01	4.124E-02	-0.007
		711.68	*	-3.813E-03	6.658E-02	1.097E-01	9.853E-03	-0.035
		752.31		1.096E-01	2.815E-01	4.746E-01	4.399E-02	0.231
		810.29		-1.272E-02	5.770E-02	9.278E-02	8.965E-03	-0.137
		51.35		-1.698E+01	7.937E+01	1.357E+02	1.165E+01	-0.125
		52.39		1.951E+01	4.085E+01	7.019E+01	5.920E+00	0.278
		59.40		1.700E+02	7.212E+01	1.136E+02	8.503E+00	1.496
		66.72	*	-1.474E+02	6.360E+01	9.118E+01	7.449E+00	-1.617
LU-176		88.36		9.979E-01	5.106E-01	7.140E-01	7.138E-02	1.398
		201.83		4.875E-02	4.016E-02	5.932E-02	6.537E-03	0.822
		306.84	*	2.224E-03	2.647E-02	4.430E-02	5.351E-03	0.050
		401.10		-1.361E+00	7.124E+00	1.154E+01	1.158E+00	-0.118
LU-177M		52.97		2.390E+00	4.172E+00	7.172E+00	5.987E-01	0.333
		54.07		-1.788E-01	2.169E+00	3.696E+00	3.024E-01	-0.048
		61.30		2.793E+01	4.699E+00	7.048E+00	5.429E-01	3.963
		121.62		2.238E-01	5.684E-01	9.431E-01	7.875E-02	0.237
		147.16		-2.137E-02	9.681E-01	1.406E+00	1.304E-01	-0.015
		171.86		1.391E-02	6.501E-01	1.049E+00	1.089E-01	0.013
		218.09		2.466E-01	1.031E+00	1.650E+00	1.875E-01	0.149
		268.79		1.683E+00	8.799E-01	1.532E+00	1.878E-01	1.098
		319.02		-1.133E-01	2.710E-01	4.423E-01	5.255E-02	-0.256
		367.43		5.054E-01	9.656E-01	1.626E+00	1.749E-01	0.311
HF-181		413.65	*	1.897E-01	1.819E-01	3.108E-01	3.124E-02	0.610
		56.28		-2.159E+00	2.336E+00	3.931E+00	3.092E-01	-0.549
		57.53		1.259E+00	1.304E+00	2.157E+00	1.661E-01	0.584
		65.20		4.993E-01	2.024E+00	3.110E+00	2.506E-01	0.161
		133.02		3.038E-02	1.031E-01	1.523E-01	1.322E-02	0.200

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
W-181		136.25		-3.715E-01	6.403E-01	1.032E+00	9.085E-02	-0.360
		345.85		3.151E-01	2.883E-01	3.383E-01	3.831E-02	0.932
		482.03	*	1.519E-02	4.598E-02	7.547E-02	7.558E-03	0.201
		56.28		-8.538E-01	9.263E-01	1.559E+00	1.226E-01	-0.548
		57.53		4.986E-01	5.178E-01	8.562E-01	6.594E-02	0.582
TA-182		65.20	*	1.966E-01	7.971E-01	1.225E+00	9.867E-02	0.161
		67.75		-3.290E-01	2.472E-01	3.660E-01	3.017E-02	-0.899
		100.10		8.706E-01	3.278E-01	5.057E-01	4.508E-02	1.721
		152.43		3.677E-01	4.626E-01	7.639E-01	7.282E-02	0.481
		222.10		-7.286E-03	4.056E-01	6.426E-01	7.352E-02	-0.011
RE-183	+	1001.68		1.133E+02	1.286E+01	1.358E+01	1.312E+00	8.343
	+	1121.28		2.453E-01	1.169E-01	2.280E-01	1.968E-02	1.076
		1189.05		-1.327E-01	2.667E-01	4.225E-01	3.456E-02	-0.314
		1221.42	*	-9.551E-03	1.736E-01	2.854E-01	2.408E-02	-0.033
		1230.97		-1.882E-01	4.180E-01	6.646E-01	5.656E-02	-0.283
		57.98		8.820E-01	5.399E-01	8.487E-01	6.489E-02	1.039
		59.32		6.611E-01	2.930E-01	4.615E-01	3.458E-02	1.433
		67.20		-9.596E-01	4.446E-01	6.411E-01	5.260E-02	-1.497
	+	162.32	*	8.902E-01	2.454E-01	2.948E-01	2.965E-02	3.020
	+	208.81		2.437E+00	1.315E+00	1.891E+00	2.112E-01	1.289
RE-184		291.72		4.001E-01	1.091E+00	1.638E+00	2.011E-01	0.244
		57.98		3.274E+00	2.004E+00	3.150E+00	2.408E-01	1.039
		59.32		2.451E+00	1.087E+00	1.711E+00	1.282E-01	1.433
		67.20		-3.560E+00	1.650E+00	2.379E+00	1.951E-01	-1.497
		161.27		2.952E-01	5.772E-01	8.460E-01	8.460E-02	0.349
OS-185		216.55		1.235E-01	3.198E-01	5.141E-01	5.824E-02	0.240
		252.85	*	2.232E-02	2.923E-01	4.375E-01	5.253E-02	0.051
		318.01		-7.190E-02	4.650E-01	7.685E-01	9.145E-02	-0.094
		792.07		2.163E-01	1.183E+00	1.783E+00	1.701E-01	0.121
		903.28		3.945E-01	9.687E-01	1.534E+00	1.565E-01	0.257
		920.93		-9.740E-02	4.614E-01	7.119E-01	7.206E-02	-0.137
		59.72		1.782E+00	7.872E-01	1.239E+00	9.300E-02	1.438
		61.14		2.212E+00	4.801E-01	7.414E-01	5.697E-02	2.984
		69.30		9.314E-01	5.942E-01	1.018E+00	8.505E-02	0.915
		592.07		8.460E-01	2.662E+00	4.540E+00	4.255E-01	0.186
RE-188		646.12	*	1.474E-02	4.769E-02	7.092E-02	6.247E-03	0.208
		717.42		-1.744E+00	1.004E+00	1.462E+00	1.319E-01	-1.193
		874.81		-2.127E-02	5.647E-01	9.145E-01	9.216E-02	-0.023
		880.27		7.300E-01	8.323E-01	1.430E+00	1.445E-01	0.511
		155.03	*	-1.634E-01	2.359E-01	3.755E-01	3.629E-02	-0.435
		477.96		4.845E-01	3.613E+00	5.870E+00	5.885E-01	0.083
		633.10		6.654E-02	2.700E+00	4.512E+00	4.042E-01	0.015
	+	63.58		6.957E+03	6.138E+02	3.819E+02	3.027E+01	18.216
W-188		227.08		1.652E+01	1.543E+01	2.515E+01	2.903E+00	0.657
		290.67	*	5.010E-01	8.647E+00	1.279E+01	1.572E+00	0.039
IR-192	+	295.96		5.615E-01	2.135E-01	2.302E-01	2.825E-02	2.439
		308.46		-2.583E-02	1.034E-01	1.706E-01	2.062E-02	-0.151
		316.51	*	-2.464E-02	3.571E-02	5.749E-02	6.864E-03	-0.429
		468.07		1.366E-02	7.213E-02	1.178E-01	1.246E-02	0.116

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		604.41		3.456E-01	5.120E-01	7.816E-01	1.051E-01	0.442
		612.46		8.112E-01	8.001E-01	1.247E+00	1.296E-01	0.650
		65.12		2.520E-01	3.733E-01	5.774E-01	4.649E-02	0.436
		66.83		-4.625E-01	2.092E-01	3.011E-01	2.462E-02	-1.536
		75.70		4.873E-01	3.697E-01	6.292E-01	5.554E-02	0.774
TL-200	+	98.88	*	7.157E+00	8.902E-01	9.170E-01	8.243E-02	7.805
	+	129.76		6.877E+00	5.209E+00	7.175E+00	6.147E-01	0.958
		367.94	*	1.507E-04	5.209E+00	Half-Life	too short	
		579.30		-5.641E-04	5.209E+00	Half-Life	too short	
		828.27		1.637E-03	5.209E+00	Half-Life	too short	
TL-201		1205.75		-5.116E-04	5.209E+00	Half-Life	too short	
		68.90		9.757E+00	7.270E+00	1.246E+01	1.037E+00	0.783
		70.82		-1.124E+00	4.174E+00	7.039E+00	5.954E-01	-0.160
		80.30		-2.299E+00	8.655E+00	1.303E+01	1.202E+00	-0.177
		135.34		2.337E+01	3.012E+01	4.500E+01	3.945E+00	0.519
TL-202		167.43	*	1.046E+01	7.982E+00	1.192E+01	1.226E+00	0.878
		68.90		1.083E+00	8.072E-01	1.383E+00	1.151E-01	0.783
		70.82		-1.244E-01	4.623E-01	7.795E-01	6.593E-02	-0.160
		80.30		-2.547E-01	9.587E-01	1.443E+00	1.331E-01	-0.177
		439.56	*	1.715E-03	6.985E-02	1.136E-01	1.145E-02	0.015
HG-203		70.83		-5.506E-01	2.110E+00	3.557E+00	4.803E-01	-0.155
		72.87		3.721E-01	1.211E+00	2.053E+00	2.709E-01	0.181
	+	82.60		9.191E+00	3.709E+00	4.068E+00	5.810E-01	2.259
		279.20	*	-2.923E-02	4.327E-02	7.061E-02	8.878E-03	-0.414
		72.80		-1.768E-01	3.651E-01	6.130E-01	5.273E-02	-0.288
BI-207		74.97		1.507E-01	2.089E-01	3.549E-01	3.112E-02	0.425
	+	84.90		1.628E+00	6.336E-01	7.033E-01	6.818E-02	2.315
		569.67		2.486E-02	3.477E-02	5.985E-02	5.721E-03	0.415
		1063.62	*	2.468E-02	4.308E-02	7.546E-02	6.927E-03	0.327
		1770.23		2.512E-01	4.239E-01	6.893E-01	5.825E-02	0.364
TL-207		81.07		2.790E-01	4.884E-01	7.440E-01	6.921E-02	0.375
	+	83.78		1.074E+00	4.178E-01	4.860E-01	4.653E-02	2.210
	+	94.90		2.816E+00	8.246E-01	8.406E-01	7.806E-02	3.349
		122.32		2.235E+00	2.665E+00	4.451E+00	4.008E-01	0.502
	+	144.24		9.938E+00	1.855E+00	2.129E+00	2.152E-01	4.669
PO-209		154.21		-2.922E-01	5.524E-01	8.841E-01	9.194E-02	-0.331
		269.46		4.325E-01	2.077E-01	3.615E-01	4.480E-02	1.196
		323.87	*	-1.943E-01	7.071E-01	1.160E+00	2.256E-01	-0.167
	+	338.28		5.833E+00	2.378E+00	2.037E+00	2.949E-01	2.863
		445.03		-7.767E-01	2.415E+00	3.847E+00	5.064E-01	-0.202
BI-210		260.50		9.038E-01	1.160E+01	1.732E+01	2.101E+00	0.052
		262.80		2.135E+01	3.147E+01	4.823E+01	5.867E+00	0.443
		896.60	*	1.798E+00	7.408E+00	1.223E+01	1.249E+00	0.147
		46.50	*	-8.554E+00	1.077E+01	1.635E+01	1.567E+00	-0.523
		46.50	*	-8.554E+00	1.077E+01	1.635E+01	1.567E+00	-0.523
PB-210		46.50	*	-8.554E+00	1.076E+01	1.635E+01	1.427E+00	-0.523
		404.84	*	-1.308E-01	9.668E-01	1.564E+00	9.834E-01	-0.084
		427.08		6.291E-01	2.224E+00	3.617E+00	2.255E+00	0.174
		831.96		4.742E-01	1.295E+00	2.108E+00	1.325E+00	0.225

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-212		74.81		5.234E-01	7.226E-01	1.225E+00	1.569E-01	0.427
		77.11		-3.189E-02	4.040E-01	6.804E-01	6.085E-02	-0.047
		87.30		-2.445E+00	1.084E+00	1.354E+00	1.911E-01	-1.805
	+	238.63	*	6.688E-01	1.341E-01	1.687E-01	2.123E-02	3.965
PO-212		300.09		1.579E+00	9.287E-01	1.448E+00	1.957E-01	1.090
		74.81		5.234E-01	7.226E-01	1.225E+00	1.569E-01	0.427
		77.11		-3.189E-02	4.040E-01	6.804E-01	6.085E-02	-0.047
		87.30		-2.445E+00	1.084E+00	1.354E+00	1.911E-01	-1.805
PB-214		115.19		1.022E+01	6.396E+00	9.753E+00	8.201E-01	1.048
	+	238.63	*	6.688E-01	1.341E-01	1.687E-01	2.123E-02	3.965
		300.09		1.579E+00	9.287E-01	1.448E+00	1.957E-01	1.090
		74.81		9.018E-01	1.244E+00	2.111E+00	2.421E-01	0.427
PO-214		77.11		-5.467E-02	6.926E-01	1.166E+00	1.370E-01	-0.047
		87.30		-4.188E+00	1.838E+00	2.319E+00	2.922E-01	-1.805
		241.98		8.697E-01	4.428E-01	6.924E-01	9.058E-02	1.256
	+	295.21		7.449E-01	2.870E-01	3.120E-01	4.287E-02	2.388
PO-215	+	351.92	*	6.100E-01	1.582E-01	1.884E-01	2.382E-02	3.238
		74.81		9.018E-01	1.244E+00	2.111E+00	2.421E-01	0.427
		77.11		-5.467E-02	6.926E-01	1.166E+00	1.370E-01	-0.047
		87.30		-4.188E+00	1.838E+00	2.319E+00	2.922E-01	-1.805
PO-216		241.98		8.697E-01	4.428E-01	6.924E-01	9.058E-02	1.256
	+	295.21		7.449E-01	2.870E-01	3.120E-01	4.287E-02	2.388
	+	351.92	*	6.100E-01	1.582E-01	1.884E-01	2.382E-02	3.238
		81.07		2.790E-01	4.884E-01	7.440E-01	6.921E-02	0.375
PO-218	+	83.78		1.074E+00	4.178E-01	4.860E-01	4.653E-02	2.210
	+	94.90		2.816E+00	8.246E-01	8.406E-01	7.806E-02	3.349
		122.32		2.235E+00	2.665E+00	4.451E+00	4.008E-01	0.502
	+	144.24		9.938E+00	1.855E+00	2.129E+00	2.152E-01	4.669
PO-219		154.21		-2.922E-01	5.524E-01	8.841E-01	9.194E-02	-0.331
		269.46		4.325E-01	2.077E-01	3.615E-01	4.480E-02	1.196
		323.87	*	-1.943E-01	7.071E-01	1.160E+00	2.256E-01	-0.167
	+	338.28		5.833E+00	2.378E+00	2.037E+00	2.949E-01	2.863
PO-216		445.03		-7.767E-01	2.415E+00	3.847E+00	5.064E-01	-0.202
		74.81		5.234E-01	7.226E-01	1.225E+00	1.569E-01	0.427
		77.11		-3.189E-02	4.040E-01	6.804E-01	6.085E-02	-0.047
		87.30		-2.445E+00	1.084E+00	1.354E+00	1.911E-01	-1.805
PO-218	+	238.63	*	6.688E-01	1.341E-01	1.687E-01	2.123E-02	3.965
		300.09		1.579E+00	9.287E-01	1.448E+00	1.957E-01	1.090
		74.81		9.018E-01	1.244E+00	2.111E+00	2.421E-01	0.427
		77.11		-5.467E-02	6.926E-01	1.166E+00	1.370E-01	-0.047
RN-219		87.30		-4.188E+00	1.838E+00	2.319E+00	2.922E-01	-1.805
		241.98		8.697E-01	4.428E-01	6.924E-01	9.058E-02	1.256
	+	295.21		7.449E-01	2.870E-01	3.120E-01	4.287E-02	2.388
	+	351.92	*	6.100E-01	1.582E-01	1.884E-01	2.382E-02	3.238
RN-220		271.23		5.179E-02	2.640E-01	4.468E-01	6.046E-02	0.116
		401.81	*	-1.568E-01	4.414E-01	7.084E-01	1.125E-01	-0.221
RA-223		549.76	*	9.335E+00	2.954E+01	4.799E+01	4.655E+00	0.195
RA-223		81.07		2.790E-01	4.884E-01	7.440E-01	6.921E-02	0.375
	+	83.78		1.074E+00	4.178E-01	4.860E-01	4.653E-02	2.210

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224 AC-227	+	94.90		2.816E+00	8.246E-01	8.406E-01	7.806E-02	3.349
		122.32		2.235E+00	2.665E+00	4.451E+00	4.008E-01	0.502
	+	144.24		9.938E+00	1.855E+00	2.129E+00	2.152E-01	4.669
		154.21		-2.922E-01	5.524E-01	8.841E-01	9.194E-02	-0.331
		269.46		4.325E-01	2.077E-01	3.615E-01	4.480E-02	1.196
		323.87	*	-1.943E-01	7.071E-01	1.160E+00	2.256E-01	-0.167
	+	338.28		5.833E+00	2.378E+00	2.037E+00	2.949E-01	2.863
		445.03		-7.767E-01	2.415E+00	3.847E+00	5.064E-01	-0.202
		240.98	*	2.117E+00	8.638E-01	1.360E+00	1.605E-01	1.556
		79.80		-4.643E+00	3.928E+00	5.627E+00	1.223E+00	-0.825
		236.00		4.248E-01	2.822E-01	4.383E-01	6.392E-02	0.969
		256.20	*	1.127E+00	5.478E-01	8.314E-01	1.456E-01	1.356
		286.10		-9.843E-02	1.611E+00	2.694E+00	4.278E-01	-0.037
		299.80		2.646E+00	1.746E+00	2.654E+00	5.173E-01	0.997
TH-227		304.40		-1.223E+00	2.029E+00	3.281E+00	6.662E-01	-0.373
		334.20		-2.957E-02	2.567E+00	3.738E+00	7.811E-01	-0.008
		79.80		-4.643E+00	3.931E+00	5.627E+00	1.238E+00	-0.825
	+	94.00		2.252E+01	7.988E+00	1.248E+01	2.756E+00	1.805
		236.00		4.248E-01	2.814E-01	4.383E-01	5.969E-02	0.969
		256.20	*	1.127E+00	5.582E-01	8.314E-01	1.658E-01	1.356
		286.10		-9.843E-02	1.614E+00	2.694E+00	2.714E+00	-0.037
		299.80		2.646E+00	1.746E+00	2.654E+00	5.173E-01	0.997
		304.40		-1.223E+00	2.029E+00	3.281E+00	6.662E-01	-0.373
		334.20		-2.957E-02	2.567E+00	3.738E+00	7.811E-01	-0.008
TH-228		74.81		5.307E-01	7.310E-01	1.242E+00	1.096E-01	0.427
		77.11		-3.233E-02	4.096E-01	6.899E-01	6.170E-02	-0.047
		87.30		-2.479E+00	1.071E+00	1.373E+00	1.368E-01	-1.805
	+	238.63	*	6.781E-01	1.360E-01	1.710E-01	2.152E-02	3.965
		300.09		1.601E+00	1.326E+00	1.469E+00	8.797E-01	1.090
TH-229		85.43		-2.710E-01	4.493E-01	6.690E-01	6.524E-02	-0.405
		88.47		6.178E-01	2.949E-01	4.122E-01	4.114E-02	1.499
		100.00		1.285E+00	3.582E-01	5.501E-01	4.908E-02	2.336
		193.63	*	1.071E+00	6.464E-01	1.069E+00	1.159E-01	1.002
		210.97		1.479E-01	9.835E-01	1.396E+00	1.566E-01	0.106
PA-231		283.67	*	-1.233E+00	1.647E+00	2.660E+00	4.677E-01	-0.463
		301.29		4.336E-01	6.563E-01	1.043E+00	1.559E-01	0.416
		81.07		2.790E-01	4.884E-01	7.440E-01	6.921E-02	0.375
TH-231	+	83.78		1.074E+00	4.178E-01	4.860E-01	4.653E-02	2.210
	+	94.90		2.816E+00	8.246E-01	8.406E-01	7.806E-02	3.349
		122.32		2.235E+00	2.665E+00	4.451E+00	4.008E-01	0.502
	+	144.24		9.938E+00	1.855E+00	2.129E+00	2.152E-01	4.669
		154.21		-2.922E-01	5.524E-01	8.841E-01	9.194E-02	-0.331
		269.46		4.325E-01	2.077E-01	3.615E-01	4.480E-02	1.196
		323.87	*	-1.943E-01	7.071E-01	1.160E+00	2.256E-01	-0.167
	+	338.28		5.833E+00	2.378E+00	2.037E+00	2.949E-01	2.863
		445.03		-7.767E-01	2.415E+00	3.847E+00	5.064E-01	-0.202
		75.28		2.300E+00	6.066E+00	1.026E+01	1.585E+00	0.224
		86.59		-8.106E+00	4.504E+00	5.724E+00	1.560E+00	-1.416
		300.12		8.223E-01	4.882E-01	7.492E-01	1.287E-01	1.098
PA-233								

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234		311.98	*	3.834E-02	6.981E-02	1.186E-01	1.444E-02	0.323
		340.50		6.865E-01	6.448E-01	1.076E+00	2.689E-01	0.638
		398.62		3.827E-01	2.250E+00	3.709E+00	1.006E+00	0.103
		415.76		-3.357E-01	1.739E+00	2.807E+00	6.223E-01	-0.120
	+	63.00		2.043E+02	3.189E+01	1.185E+01	1.789E+00	17.239
	+	94.67		2.009E+00	6.149E-01	6.419E-01	8.273E-02	3.129
	+	98.44		2.913E+00	1.646E+00	3.808E-01	2.127E-01	7.650
		99.86		5.023E+00	9.951E-01	1.488E+00	1.329E-01	3.375
	+	111.00		9.099E-01	4.175E-01	6.758E-01	8.106E-02	1.346
	+	131.20		2.590E-01	1.962E-01	2.657E-01	2.289E-02	0.975
		152.70		4.186E-01	4.522E-01	7.414E-01	1.300E-01	0.565
	+	186.00		8.903E+01	2.859E+01	6.632E+00	2.112E+00	13.423
		226.40		3.793E-01	4.937E-01	7.971E-01	1.216E-01	0.476
		227.20		5.555E-01	5.274E-01	8.592E-01	9.918E-02	0.646
		248.90		-2.353E-01	9.110E-01	1.525E+00	3.642E-01	-0.154
	+	293.70		3.576E+00	1.461E+00	1.446E+00	2.802E-01	2.472
		369.80		7.761E-01	9.143E-01	1.536E+00	3.484E-01	0.505
		568.70		8.621E-01	1.133E+00	1.954E+00	1.869E-01	0.441
		569.50		1.848E-01	3.094E-01	5.301E-01	5.067E-02	0.349
		574.00		-1.742E-01	1.651E+00	2.761E+00	2.630E-01	-0.063
		699.00		4.906E-01	7.760E-01	1.320E+00	2.535E-01	0.372
		706.10		4.409E-01	1.110E+00	1.850E+00	8.263E-01	0.238
		733.00		6.372E-03	5.127E-01	7.336E-01	1.643E-01	0.009
	+	742.81		9.477E+00	7.014E+00	3.801E+00	2.558E+00	2.493
		796.30		7.812E-01	9.914E-01	1.664E+00	4.555E-01	0.469
		805.60		2.638E-01	1.031E+00	1.711E+00	5.295E-01	0.154
		819.60		1.051E-01	1.143E+00	1.879E+00	7.195E-01	0.056
		826.30		-1.015E-01	8.892E-01	1.438E+00	6.469E-01	-0.071
		831.60		1.423E-01	6.557E-01	1.083E+00	3.272E-01	0.131
		876.40		-7.729E-01	1.163E+00	1.278E+00	1.316E+00	-0.605
		880.51		3.849E-01	3.038E-01	5.329E-01	5.389E-02	0.722
		883.24		3.078E-01	3.761E-01	5.438E-01	3.667E-01	0.566
		899.00		-3.492E-02	7.976E-01	1.288E+00	5.673E-01	-0.027
		925.00		2.168E+00	1.230E+00	2.215E+00	2.238E-01	0.979
		926.50		1.820E-01	1.876E-01	3.157E-01	8.150E-02	0.577
	+	946.00	*	4.899E-01	3.598E-01	5.684E-01	1.105E-01	0.862
		949.00		4.505E-01	4.310E-01	6.784E-01	6.772E-02	0.664
		980.50		-2.024E-01	6.441E-01	1.003E+00	9.834E-02	-0.202
		1394.10		4.616E-01	1.092E+00	1.802E+00	1.175E+00	0.256
NP-236	+	94.67		1.523E+00	4.461E-01	4.875E-01	4.536E-02	3.125
	+	98.44		2.202E+00	2.739E-01	2.879E-01	2.596E-02	7.650
	+	111.00		6.882E-01	3.104E-01	5.112E-01	4.339E-02	1.346
NP-237		160.31	*	-9.243E-02	1.264E-01	1.777E-01	1.768E-02	-0.520
		86.50	*	-1.241E+00	6.539E-01	8.587E-01	1.964E-01	-1.445
NP-239	+	95.87		1.213E+01	4.522E+00	3.075E+00	7.641E-01	3.944
	+	99.55		5.034E+00	6.261E-01	5.605E-01	5.015E-02	8.982
		117.00	*	-7.449E-02	3.248E-01	4.767E-01	3.997E-02	-0.156
	+	209.75		1.946E+00	1.050E+00	1.520E+00	1.701E-01	1.280
		228.18		2.906E-01	2.739E-01	4.462E-01	5.159E-02	0.651

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		277.60		8.974E-03	1.959E-01	3.294E-01	4.078E-02	0.027
		334.30		-2.849E-02	1.454E+00	2.116E+00	2.452E-01	-0.013
AM-241		59.54	*	9.287E-01	4.208E-01	6.605E-01	5.411E-02	1.406
AM-243		74.67	*	1.049E-01	1.174E-01	1.997E-01	1.746E-02	0.525
		86.72		-4.420E+01	2.249E+01	3.219E+01	3.186E+00	-1.373
		117.66		-9.067E+00	5.906E+00	9.355E+00	7.838E-01	-0.969
	+	142.18		2.576E+02	4.677E+01	5.062E+01	4.579E+00	5.089
CM-243	+	99.55		5.180E+00	6.443E-01	5.767E-01	5.160E-02	8.982
		103.76	*	7.568E-02	1.537E-01	2.574E-01	2.246E-02	0.294
		117.00		-7.663E-02	3.342E-01	4.904E-01	4.112E-02	-0.156
	+	209.75		1.918E+00	1.035E+00	1.499E+00	1.677E-01	1.280
		228.18		2.936E-01	2.767E-01	4.509E-01	5.213E-02	0.651
		277.60		9.047E-03	1.975E-01	3.321E-01	4.111E-02	0.027
AM-246		798.80		-1.632E-01	1.539E-01	2.332E-01	2.236E-02	-0.700
		1036.00		-1.043E-01	2.344E-01	3.757E-01	3.534E-02	-0.278
		1062.04		-2.981E-02	1.871E-01	3.083E-01	2.834E-02	-0.097
		1078.86	*	6.321E-02	1.075E-01	1.892E-01	1.711E-02	0.334
CM-247		278.00		4.639E-01	8.020E-01	1.370E+00	1.697E-01	0.339
		287.40		4.683E-01	1.301E+00	2.206E+00	2.719E-01	0.212
		402.60	*	-1.546E-02	3.931E-02	6.300E-02	6.320E-03	-0.245
CF-249		252.85		8.418E-02	1.102E+00	1.650E+00	1.981E-01	0.051
		333.44		-2.040E-02	1.924E-01	2.785E-01	3.231E-02	-0.073
		387.95	*	9.645E-03	4.427E-02	7.331E-02	7.425E-03	0.132
CF-251		176.60	*	-3.593E-02	1.716E-01	2.747E-01	2.878E-02	-0.131
		227.00		5.078E-01	4.691E-01	7.647E-01	8.823E-02	0.664
		285.00		-1.183E+00	1.863E+00	3.037E+00	3.751E-01	-0.390

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395007      *
* Acquisition date   : 2-FEB-2010 09:13:37 Detector SN#      :              *
* Detector ID        : GAM02 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000   *
* Elapsed real time  : 0 02:00:06.26 Half life ratio : 8.000   *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 19-JAN-2010 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G245395007 Analyst initials: MXR1          *
* Batch Number      : 944966 Sample Quantity : 1.8103E+02 GRAM      *
* Recovery          : 1.00000 Carrier Weight  : 0.00000          *
*****
*                                     QC DATA                                *
*
* Standard Weight   : 0.00000                                              *
* CALIB. DATE/TIME : 29-OCT-2009 10:28:07 MS Isotope      :          *
* MSD DPM           : 0.000 MSD Isotope      :          *
* LCS DPM           : 0.000 LCS Isotope      :          *
* LCSD DPM          : 0.000 LCSD Isotope     :          *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	1.779E+01	2.045E+00	3.990E-01	0.000E+00
NB-95	8.765E-01	1.372E-01	7.869E-02	0.000E+00
LU-177	2.416E+00	1.277E+00	2.000E+00	0.000E+00
TL-208	2.428E-01	8.490E-02	6.488E-02	0.000E+00
BI-211	1.754E+00	4.366E-01	3.735E-01	0.000E+00
BI-212	5.300E-01	4.609E-01	5.439E-01	0.000E+00
BI-214	5.255E-01	1.782E-01	1.254E-01	0.000E+00
RA-226	5.255E-01	1.782E-01	1.254E-01	0.000E+00
AC-228	6.530E-01	2.182E-01	1.924E-01	0.000E+00
RA-228	6.530E-01	2.182E-01	1.924E-01	0.000E+00
TH-230	5.255E-01	1.782E-01	1.254E-01	0.000E+00
U-231	1.121E+01	3.218E+00	2.615E+00	0.000E+00
TH-232	6.530E-01	2.182E-01	1.924E-01	0.000E+00
PA-234M	2.592E+02	3.150E+01	7.417E+00	0.000E+00
TH-234	1.752E+02	3.106E+01	5.225E+00	0.000E+00
U-234	5.255E-01	1.782E-01	1.254E-01	0.000E+00
U-235	3.066E+00	7.123E-01	5.285E-01	0.000E+00
U-238	1.752E+02	3.106E+01	5.225E+00	0.000E+00
ANH-511	8.474E-03	6.002E-02	5.773E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	3.426E-02	3.683E-01	6.461E-01	0.000E+00 NOT IDENT.
NA-22	-1.993E-02	3.714E-02	6.034E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	1.511E+05	0.000E+00	0.000E+00 SHORT HLIF
AL-26	1.178E-02	1.975E-02	3.776E-02	0.000E+00 NOT IDENT.
TI-44	-1.338E-02	6.974E-02	1.349E-01	0.000E+00 NOT IDENT.
SC-46	1.841E-03	3.850E-02	6.627E-02	0.000E+00 FAIL ABUN
V-48	-1.828E-02	5.749E-02	9.431E-02	0.000E+00 NOT IDENT.
CR-51	7.034E-02	3.732E-01	6.863E-01	0.000E+00 NOT IDENT.

MN-52	1.379E-01	1.748E-01	3.229E-01	0.000E+00	NOT IDENT.
MN-54	-2.394E-02	3.690E-02	6.079E-02	0.000E+00	NOT IDENT.
CO-56	-5.849E-02	3.849E-02	5.784E-02	0.000E+00	NOT IDENT.
CO-57	3.963E-02	3.759E-02	7.144E-02	0.000E+00	NOT IDENT.
CO-58	-1.507E-02	3.766E-02	6.340E-02	0.000E+00	NOT IDENT.
FE-59	-3.688E-02	6.950E-02	1.153E-01	0.000E+00	FAIL ABUN
CO-60	1.484E-02	3.197E-02	5.728E-02	0.000E+00	NOT IDENT.
ZN-65	-2.986E-02	7.826E-02	1.115E-01	0.000E+00	NOT IDENT.
GE-68	5.843E-02	9.650E-01	1.700E+00	0.000E+00	NOT IDENT.
AS-73	-2.682E-01	2.075E+00	4.117E+00	0.000E+00	NOT IDENT.
AS-74	3.081E-02	9.259E-02	1.693E-01	0.000E+00	NOT IDENT.
SE-75	-1.145E-02	4.595E-02	8.475E-02	0.000E+00	NOT IDENT.
BR-77	-2.215E+00	7.983E+00	1.357E+01	0.000E+00	FAIL ABUN
SR-82	-4.590E-01	4.212E-01	6.832E-01	0.000E+00	NOT IDENT.
RB-83	-3.923E-02	7.589E-02	1.272E-01	0.000E+00	NOT IDENT.
RB-84	1.257E-01	7.381E-02	1.393E-01	0.000E+00	NOT IDENT.
KR-85	3.998E+00	8.802E+00	1.371E+01	0.000E+00	NOT IDENT.
SR-85	2.023E-02	4.455E-02	6.941E-02	0.000E+00	NOT IDENT.
RB-86	-4.470E-02	5.938E-01	1.034E+00	0.000E+00	NOT IDENT.
Y-88	-6.116E-02	3.343E-02	3.784E-02	0.000E+00	NOT IDENT.
ZR-88	-1.279E-02	3.121E-02	5.457E-02	0.000E+00	NOT IDENT.
Y-91	-4.275E+00	1.403E+01	2.355E+01	0.000E+00	NOT IDENT.
NB-94	-2.608E-02	3.662E-02	6.199E-02	0.000E+00	NOT IDENT.
NB-95M	-2.008E-03	1.440E-01	2.395E-01	0.000E+00	NOT IDENT.
ZR-95	2.243E-02	6.991E-02	1.248E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.256E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.487E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.733E+01	1.245E+01	2.037E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.985E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-8.150E-02	4.173E-02	6.767E-02	0.000E+00	NOT IDENT.
RH-102	3.939E-02	3.439E-02	6.303E-02	0.000E+00	FAIL ABUN
RU-103	-1.606E-02	4.258E-02	7.231E-02	0.000E+00	NOT IDENT.
RH-106	9.591E-02	3.218E-01	5.853E-01	0.000E+00	FAIL ABUN
RU-106	9.591E-02	3.216E-01	5.853E-01	0.000E+00	FAIL ABUN
AG-108M	-1.471E-02	3.512E-02	6.063E-02	0.000E+00	NOT IDENT.
CD-109	5.056E-01	2.151E+00	3.408E+00	0.000E+00	NOT IDENT.
AG-110M	-2.850E-02	3.891E-02	6.641E-02	0.000E+00	NOT IDENT.
IN-111	-5.759E-01	8.568E-01	1.569E+00	0.000E+00	NOT IDENT.
IN-113M	-9.558E-03	4.592E-02	8.119E-02	0.000E+00	NOT IDENT.
SN-113	-9.558E-03	4.592E-02	8.119E-02	0.000E+00	NOT IDENT.
IN-114M	3.298E-02	2.369E-01	3.796E-01	0.000E+00	NOT IDENT.
CD-115	5.621E+00	8.309E+00	1.485E+01	0.000E+00	NOT IDENT.
SN-117M	6.822E-02	7.750E-02	1.292E-01	0.000E+00	NOT IDENT.
SB-122	-9.583E-01	1.633E+00	2.869E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.854E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	9.468E-03	4.334E-02	7.093E-02	0.000E+00	NOT IDENT.
I-124	9.193E-02	6.322E-01	9.994E-01	0.000E+00	NOT IDENT.
SB-124	-9.260E-03	5.187E-02	8.598E-02	0.000E+00	FAIL ABUN
SB-125	2.142E-02	9.585E-02	1.714E-01	0.000E+00	NOT IDENT.
TE-125M	0.000E+00	1.850E+01	3.186E+01	0.000E+00	NOT IDENT.
I-126	-4.259E-02	1.787E-01	3.133E-01	0.000E+00	NOT IDENT.
SB-126	2.294E-01	1.497E-01	2.646E-01	0.000E+00	NOT IDENT.
SN-126	-5.557E-01	2.254E-01	3.298E-01	0.000E+00	FAIL ABUN
SB-127	8.824E-01	1.157E+00	2.129E+00	0.000E+00	NOT IDENT.
XE-127	4.628E-02	6.467E-02	1.049E-01	0.000E+00	NOT IDENT.
I-131	-1.223E-02	1.060E-01	1.899E-01	0.000E+00	NOT IDENT.
TE-132	6.891E-01	6.375E-01	1.143E+00	0.000E+00	FAIL ABUN
BA-133	3.145E-02	4.883E-02	8.020E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.577E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.222E-02	4.930E-02	8.893E-02	0.000E+00	NOT IDENT.
CS-135	1.311E-01	1.660E-01	3.150E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.927E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.495E-02	8.238E-02	1.564E-01	0.000E+00	FAIL ABUN
BA-137M	4.439E-02	4.024E-02	7.516E-02	0.000E+00	NOT IDENT.
CS-137	4.693E-02	4.254E-02	7.945E-02	0.000E+00	NOT IDENT.
CE-139	-2.284E-02	4.421E-02	7.017E-02	0.000E+00	NOT IDENT.
BA-140	-4.894E-02	2.625E-01	4.463E-01	0.000E+00	FAIL ABUN
LA-140	-1.691E-03	6.029E-02	1.039E-01	0.000E+00	NOT IDENT.
CE-141	0.000E+00	9.746E-02	1.679E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.069E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	8.506E-02	3.181E-01	5.303E-01	0.000E+00	NOT IDENT.
PM-144	3.118E-02	3.571E-02	6.596E-02	0.000E+00	NOT IDENT.
PR-144	2.111E+00	2.418E+00	4.467E+00	0.000E+00	NOT IDENT.
PM-146	-9.845E-03	4.703E-02	8.169E-02	0.000E+00	NOT IDENT.
ND-147	-4.661E-01	6.084E-01	9.970E-01	0.000E+00	FAIL ABUN
PM-149	1.948E+00	6.425E+01	1.188E+02	0.000E+00	NOT IDENT.
EU-152	2.089E-02	1.149E-01	1.848E-01	0.000E+00	NOT IDENT.
GD-153	0.000E+00	2.999E-01	3.562E-01	0.000E+00	FAIL ABUN

EU-154	-5.571E-02	1.039E-01	1.686E-01	0.000E+00	NOT IDENT.
EU-155	-4.606E-02	1.743E-01	3.281E-01	0.000E+00	NOT IDENT.
TB-160	2.029E-02	1.461E-01	2.533E-01	0.000E+00	NOT IDENT.
HO-166M	-3.813E-03	6.525E-02	1.146E-01	0.000E+00	FAIL ABUN
TM-171	-1.474E+02	6.233E+01	1.034E+02	0.000E+00	NOT IDENT.
LU-176	2.224E-03	2.594E-02	4.772E-02	0.000E+00	NOT IDENT.
LU-177M	1.897E-01	1.783E-01	3.312E-01	0.000E+00	NOT IDENT.
HF-181	1.519E-02	4.506E-02	8.000E-02	0.000E+00	NOT IDENT.
W-181	1.966E-01	7.811E-01	1.389E+00	0.000E+00	NOT IDENT.
TA-182	-9.551E-03	1.702E-01	2.922E-01	0.000E+00	FAIL ABUN
RE-183	0.000E+00	2.404E-01	3.247E-01	0.000E+00	FAIL ABUN
RE-184	2.232E-02	2.865E-01	4.745E-01	0.000E+00	NOT IDENT.
OS-185	1.474E-02	4.674E-02	7.437E-02	0.000E+00	NOT IDENT.
RE-188	-1.634E-01	2.311E-01	4.141E-01	0.000E+00	NOT IDENT.
W-188	5.010E-01	8.474E+00	1.380E+01	0.000E+00	FAIL ABUN
IR-192	-2.464E-02	3.500E-02	6.186E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	8.724E-01	1.026E+00	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.193E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.046E+01	7.823E+00	1.311E+01	0.000E+00	NOT IDENT.
TL-202	1.715E-03	6.846E-02	1.209E-01	0.000E+00	NOT IDENT.
HG-203	-2.923E-02	4.240E-02	7.632E-02	0.000E+00	FAIL ABUN
BI-207	2.468E-02	4.222E-02	7.765E-02	0.000E+00	FAIL ABUN
TL-207	-1.943E-01	6.929E-01	1.247E+00	0.000E+00	FAIL ABUN
PO-209	1.798E+00	7.259E+00	1.267E+01	0.000E+00	NOT IDENT.
BI-210	-8.554E+00	1.055E+01	1.875E+01	0.000E+00	NOT IDENT.
PB-210	-8.554E+00	1.055E+01	1.875E+01	0.000E+00	NOT IDENT.
PO-210	-8.554E+00	1.055E+01	1.875E+01	0.000E+00	NOT IDENT.
PB-211	-1.308E-01	9.474E-01	1.668E+00	0.000E+00	NOT IDENT.
PB-212	0.000E+00	1.315E-01	1.833E-01	0.000E+00	FAIL ABUN
PO-212	0.000E+00	1.315E-01	1.833E-01	0.000E+00	FAIL ABUN
PB-214	0.000E+00	1.550E-01	2.020E-01	0.000E+00	FAIL ABUN
PO-214	0.000E+00	1.550E-01	2.020E-01	0.000E+00	FAIL ABUN
PO-215	-1.943E-01	6.929E-01	1.247E+00	0.000E+00	FAIL ABUN
PO-216	0.000E+00	1.315E-01	1.833E-01	0.000E+00	FAIL ABUN
PO-218	0.000E+00	1.550E-01	2.020E-01	0.000E+00	FAIL ABUN
RN-219	-1.568E-01	4.326E-01	7.559E-01	0.000E+00	NOT IDENT.
RN-220	9.335E+00	2.895E+01	5.063E+01	0.000E+00	NOT IDENT.
RA-223	-1.943E-01	6.929E-01	1.247E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	8.465E-01	1.478E+00	0.000E+00	NOT IDENT.
AC-227	0.000E+00	5.368E-01	9.014E-01	0.000E+00	NOT IDENT.
TH-227	0.000E+00	5.470E-01	9.014E-01	0.000E+00	FAIL ABUN
TH-228	0.000E+00	1.333E-01	1.859E-01	0.000E+00	FAIL ABUN
TH-229	1.071E+00	6.335E-01	1.170E+00	0.000E+00	NOT IDENT.
PA-231	-1.233E+00	1.614E+00	2.874E+00	0.000E+00	NOT IDENT.
TH-231	-1.943E-01	6.929E-01	1.247E+00	0.000E+00	FAIL ABUN
PA-233	3.834E-02	6.841E-02	1.277E-01	0.000E+00	NOT IDENT.
PA-234	4.899E-01	3.526E-01	5.876E-01	0.000E+00	FAIL ABUN
NP-236	-9.243E-02	1.239E-01	1.958E-01	0.000E+00	FAIL ABUN
NP-237	-1.241E+00	6.408E-01	9.654E-01	0.000E+00	FAIL ABUN
NP-239	-7.449E-02	3.183E-01	5.307E-01	0.000E+00	FAIL ABUN
AM-241	0.000E+00	4.123E-01	7.516E-01	0.000E+00	NOT IDENT.
AM-243	1.049E-01	1.151E-01	2.256E-01	0.000E+00	FAIL ABUN
CM-243	7.568E-02	1.506E-01	2.876E-01	0.000E+00	FAIL ABUN
AM-246	6.321E-02	1.053E-01	1.945E-01	0.000E+00	NOT IDENT.
CM-247	-1.546E-02	3.853E-02	6.722E-02	0.000E+00	NOT IDENT.
CF-249	9.645E-03	4.338E-02	7.833E-02	0.000E+00	NOT IDENT.
CF-251	-3.593E-02	1.682E-01	3.016E-01	0.000E+00	NOT IDENT.

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*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395007.CNF;1
Sample date   : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:13:37.
Sample ID    : G245395007 Sample quantity : 1.81030E+02 GRAM
Detector name : GAM02 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:06.26 0.1%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 944966 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	941	10.67*	1.028E+00	1.779E+01	1.779E+01	11.73
NB-95	765.79	664	99.81*	1.829E+00	7.538E-01	8.765E-01	15.97
LU-177	112.95	1310	6.40	6.197E+00	6.847E+00	2.886E+01	14.51
	208.36	149	11.00*	4.885E+00	5.732E-01	2.416E+00	53.95
TL-208	277.35	-----	6.80	3.991E+00	-----	Line Not Found	-----
	510.84	10	21.60	2.539E+00	3.923E-02	3.923E-02	722.74
	583.14	226	84.20*	2.291E+00	2.428E-01	2.428E-01	35.68
	860.37	-----	12.46	1.652E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.848E+00	-----	Line Not Found	-----
	351.07	367	12.94*	3.351E+00	1.754E+00	1.754E+00	25.40
BI-212	727.18	58	11.80*	1.913E+00	5.300E-01	5.300E-01	88.73
	785.46	136	1.97	1.789E+00	8.012E+00	8.012E+00	40.61
	1620.62	-----	2.75	9.503E-01	-----	Line Not Found	-----
BI-214	609.31	260	46.30*	2.214E+00	5.255E-01	5.255E-01	34.59
	1120.29	49	15.10	1.298E+00	5.226E-01	5.226E-01	48.11
	1764.49	56	15.80	9.005E-01	8.140E-01	8.140E-01	45.27
RA-226	609.31	260	46.30*	2.214E+00	5.255E-01	5.255E-01	34.59
	1120.29	49	15.10	1.298E+00	5.226E-01	5.226E-01	48.11
	1764.49	56	15.80	9.005E-01	8.140E-01	8.140E-01	45.27
AC-228	338.32	265	11.40	3.444E+00	1.397E+00	1.397E+00	56.68
	911.07	137	27.70*	1.569E+00	6.530E-01	6.530E-01	34.10
	969.11	91	16.60	1.484E+00	7.644E-01	7.644E-01	43.73
RA-228	338.32	265	11.40	3.444E+00	1.397E+00	1.397E+00	56.68
	911.07	137	27.70*	1.569E+00	6.530E-01	6.530E-01	34.10
	969.11	91	16.60	1.484E+00	7.644E-01	7.644E-01	43.73
TH-230	609.31	260	46.30*	2.214E+00	5.255E-01	5.255E-01	34.59
	1120.29	49	15.10	1.298E+00	5.226E-01	5.226E-01	48.11
	1764.49	56	15.80	9.005E-01	8.140E-01	8.140E-01	45.27
U-231	84.21	634	7.00	4.959E+00	3.789E+00	3.773E+01	38.91
	92.29	25264	17.30	5.576E+00	5.430E+01	5.407E+02	9.63
	95.87	865	28.00*	5.688E+00	1.126E+00	1.121E+01	29.29
	108.00	-----	13.10	6.133E+00	-----	Line Not Found	-----

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-232	338.32	265	11.40	3.444E+00	1.397E+00	1.397E+00	39.80
	911.07	137	27.70*	1.569E+00	6.530E-01	6.530E-01	34.10
	969.11	91	16.60	1.484E+00	7.644E-01	7.644E-01	43.73
PA-234M	766.42	664	0.32	1.829E+00	2.351E+02	2.351E+02	52.49
	1001.03	1512	0.84*	1.440E+00	2.592E+02	2.592E+02	12.40
TH-234	63.29	8148	3.80*	2.537E+00	1.752E+02	1.752E+02	18.09
	92.38	25264	5.41	5.576E+00	1.737E+02	1.737E+02	18.59
U-234	609.31	260	46.30*	2.214E+00	5.255E-01	5.255E-01	34.59
	1120.29	49	15.10	1.298E+00	5.226E-01	5.226E-01	48.11
	1764.49	56	15.80	9.005E-01	8.140E-01	8.140E-01	45.27
U-235	89.95	-----	2.70	5.432E+00	-----	Line Not Found	-----
	93.35	25264	4.50	5.576E+00	2.088E+02	2.088E+02	28.35
	105.00	-----	2.10	6.070E+00	-----	Line Not Found	-----
	143.76	937	10.50*	6.032E+00	3.066E+00	3.066E+00	23.70
	163.35	499	4.70	5.701E+00	3.861E+00	3.861E+00	32.39
U-238	185.71	4545	54.00	5.292E+00	3.297E+00	3.297E+00	11.46
	205.31	428	4.70	4.953E+00	3.812E+00	3.812E+00	28.83
	63.29	8148	3.80*	2.537E+00	1.752E+02	1.752E+02	18.09
ANH-511	92.38	25264	5.41	5.576E+00	1.737E+02	1.737E+02	9.63
	511.00	10	100.00*	2.539E+00	8.474E-03	8.474E-03	722.69

Flag: "*" = Keyline

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.779E+01	1.779E+01	0.209E+01	11.73	
NB-95	64.02D	1.16	7.538E-01	8.765E-01	1.400E-01	15.97	
LU-177	6.71D	4.21	5.732E-01	2.416E+00	1.303E+00	53.95	
TL-208	1.41E+10Y	1.00	2.428E-01	2.428E-01	0.866E-01	35.68	
BI-211	7.04E+08Y	1.00	1.754E+00	1.754E+00	0.445E+00	25.40	
BI-212	1.41E+10Y	1.00	5.300E-01	5.300E-01	4.703E-01	88.73	
BI-214	1600.00Y	1.00	5.255E-01	5.255E-01	1.818E-01	34.59	
RA-226	1600.00Y	1.00	5.255E-01	5.255E-01	1.818E-01	34.59	
AC-228	1.41E+10Y	1.00	6.530E-01	6.530E-01	2.227E-01	34.10	
RA-228	1.41E+10Y	1.00	6.530E-01	6.530E-01	2.227E-01	34.10	
TH-230	4.47E+09Y	1.00	5.255E-01	5.255E-01	1.818E-01	34.59	
U-231	4.20D	9.96	1.126E+00	1.121E+01	0.328E+01	29.29	
TH-232	1.41E+10Y	1.00	6.530E-01	6.530E-01	2.227E-01	34.10	
PA-234M	4.47E+09Y	1.00	2.592E+02	2.592E+02	0.321E+02	12.40	
TH-234	4.47E+09Y	1.00	1.752E+02	1.752E+02	0.317E+02	18.09	
U-234	4.47E+09Y	1.00	5.255E-01	5.255E-01	1.818E-01	34.59	
U-235	7.04E+08Y	1.00	3.066E+00	3.066E+00	0.727E+00	23.70	
U-238	4.47E+09Y	1.00	1.752E+02	1.752E+02	0.317E+02	18.09	
ANH-511	1.00E+09Y	1.00	8.474E-03	8.474E-03	61.24E-03	722.69	
Total Activity :			6.395E+02	6.516E+02			

Grand Total Activity : 6.395E+02 6.516E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395007

Page : 4
Acquisition date : 2-FEB-2010 09:13:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	98.28	2091	1908	1.08	195.80	193	8	2.90E-01	8.6	5.86E+00	T
1	110.83	320	1836	0.98	220.91	218	11	4.44E-02	44.3	6.18E+00	T
0	131.12	158	1213	0.83	261.50	259	7	2.19E-02	75.3	6.19E+00	T
0	238.36	641	599	0.96	476.09	472	8	8.91E-02	15.6	4.46E+00	T
0	257.86	327	537	1.05	515.12	510	11	4.54E-02	29.6	4.21E+00	
0	294.99	263	493	1.41	589.42	584	12	3.65E-02	36.0	3.81E+00	T
0	648.06	25	128	1.20	1295.97	1291	10	3.44E-03	****	2.11E+00	
0	742.36	206	177	1.31	1484.68	1477	14	2.86E-02	30.8	1.88E+00	T
0	945.98	43	57	0.92	1892.19	1888	9	5.97E-03	70.8	1.52E+00	T

Flags: "T" = Tentatively associated

```

*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
*                               DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395007.CNF;1
* Acquisition date   : 2-FEB-2010 09:13:37.  Detector SN#      :
* Detector ID        : GAM02                      Sensitivity    : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00             Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:06.26             Half life ratio : 8.00000
*****
*                               SAMPLE DATA                             *
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library : SOLID
* Sample ID          : G245395007             Analyst initials: MXR1
* Batch Number       : 944966                 Sample Quantity : 1.81030E+02 GRAM
*****
*                               QC DATA                                *
*
* CALIB. DATE/TIME  : 29-OCT-2009 10:28:07.3MS Isotope      :
* MSD ID             :                      MSD Isotope      :
* LCS ID             : 1032-A                 LCS Isotope     :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.779E+01	2.087E+00	3.926E-01	3.732E-02	45.304
NB-95	8.765E-01	1.400E-01	7.551E-02	7.070E-03	11.607
LU-177	2.416E+00	1.303E+00	1.832E+00	2.044E-01	1.319
TL-208	2.428E-01	8.663E-02	6.163E-02	6.174E-03	3.939
BI-211	1.754E+00	4.455E-01	3.483E-01	4.018E-02	5.035
BI-212	5.300E-01	4.703E-01	5.210E-01	5.427E-02	1.017
BI-214	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
RA-226	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
AC-228	6.530E-01	2.227E-01	1.859E-01	2.318E-02	3.513
RA-228	6.530E-01	2.227E-01	1.859E-01	2.318E-02	3.513
TH-230	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
U-231	1.121E+01	3.284E+00	2.333E+00	2.148E-01	4.806
TH-232	6.530E-01	2.227E-01	1.859E-01	2.318E-02	3.513
PA-234M	2.592E+02	3.214E+01	7.190E+00	7.824E-01	36.044
TH-234	1.752E+02	3.169E+01	4.601E+00	8.123E-01	38.085
U-234	5.255E-01	1.818E-01	1.193E-01	1.261E-02	4.404
U-235	3.066E+00	7.269E-01	4.780E-01	8.488E-02	6.416
U-238	1.752E+02	3.169E+01	4.601E+00	8.123E-01	38.085

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	8.474E-03	6.124E-02	5.458E-02	5.410E-03	0.155

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.426E-02		3.758E-01	6.093E-01	6.462E-02	0.056
NA-22	-1.993E-02		3.790E-02	5.905E-02	5.235E-03	-0.338
NA-24	4.288E-03		7.712E-02	Half-Life too short		
AL-26	1.178E-02		2.016E-02	3.747E-02	3.102E-03	0.314
TI-44	-1.338E-02		7.117E-02	1.196E-01	1.083E-02	-0.112
SC-46	1.841E-03		3.929E-02	6.396E-02	6.503E-03	0.029
V-48	-1.828E-02		5.866E-02	9.137E-02	8.936E-03	-0.200
CR-51	7.034E-02		3.808E-01	6.380E-01	7.784E-02	0.110
MN-52	1.379E-01		1.784E-01	3.175E-01	2.954E-02	0.434
MN-54	-2.394E-02		3.766E-02	5.853E-02	5.750E-03	-0.409
CO-56	-5.849E-02		3.928E-02	5.572E-02	5.516E-03	-1.050
CO-57	3.963E-02		3.836E-02	6.426E-02	5.372E-03	0.617
CO-58	-1.507E-02		3.843E-02	6.098E-02	5.905E-03	-0.247
FE-59	-3.688E-02		7.091E-02	1.122E-01	1.070E-02	-0.329
CO-60	1.484E-02		3.262E-02	5.615E-02	5.232E-03	0.264
ZN-65	-2.986E-02		7.985E-02	1.085E-01	9.443E-03	-0.275
GE-68	5.843E-02		9.847E-01	1.653E+00	1.497E-01	0.035
AS-73	-2.682E-01		2.117E+00	3.606E+00	2.985E-01	-0.074
AS-74	3.081E-02		9.448E-02	1.610E-01	1.503E-02	0.191
SE-75	-1.145E-02		4.688E-02	7.826E-02	9.566E-03	-0.146
BR-77	-2.215E+00		8.146E+00	1.284E+01	1.267E+00	-0.172
SR-82	-4.590E-01		4.298E-01	6.560E-01	6.190E-02	-0.700
RB-83	-3.923E-02		7.744E-02	1.203E-01	1.187E-02	-0.326
RB-84	1.257E-01		7.532E-02	1.344E-01	1.360E-02	0.935
KR-85	3.998E+00		8.982E+00	1.297E+01	1.284E+00	0.308
SR-85	2.023E-02		4.546E-02	6.563E-02	6.497E-03	0.308
RB-86	-4.470E-02		6.060E-01	1.005E+00	9.109E-02	-0.044
Y-88	-6.116E-02		3.411E-02	3.757E-02	3.065E-03	-1.628
ZR-88	-1.279E-02		3.185E-02	5.110E-02	5.113E-03	-0.250
Y-91	-4.275E+00		1.431E+01	2.300E+01	1.910E+00	-0.186
NB-94	-2.608E-02		3.736E-02	5.929E-02	5.287E-03	-0.440
NB-95M	-2.008E-03		1.470E-01	2.203E-01	2.787E-02	-0.009
ZR-95	2.243E-02		7.134E-02	1.197E-01	1.210E-02	0.187
NB-97	-1.959E-02		1.661E-02	Half-Life too short		
ZR-97	4.106E-01		3.310E-01	Half-Life too short		
MO-99	1.733E+01		1.270E+01	1.953E+01	3.028E+00	0.887
TC-99M	1.658E+09		1.013E+09	Half-Life too short		
RH-101	-8.150E-02		4.259E-02	6.187E-02	6.768E-03	-1.317
RH-102	3.939E-02		3.509E-02	5.943E-02	5.962E-03	0.663
RU-103	-1.606E-02		4.345E-02	6.829E-02	1.026E-02	-0.235
RH-106	9.591E-02		3.283E-01	5.574E-01	7.614E-02	0.172
RU-106	9.591E-02		3.282E-01	5.574E-01	5.062E-02	0.172

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-108M	-1.471E-02		3.584E-02	5.698E-02	5.907E-03	-0.258
CD-109	5.056E-01		2.195E+00	3.033E+00	3.045E-01	0.167
AG-110M	-2.850E-02		3.970E-02	6.337E-02	5.653E-03	-0.450
IN-111	-5.759E-01		8.743E-01	1.445E+00	1.716E-01	-0.399
IN-113M	-9.558E-03		4.686E-02	7.602E-02	7.779E-03	-0.126
SN-113	-9.558E-03		4.686E-02	7.602E-02	7.779E-03	-0.126
IN-114M	3.298E-02		2.417E-01	3.466E-01	3.733E-02	0.095
CD-115	5.621E+00		8.478E+00	1.405E+01	1.381E+00	0.400
SN-117M	6.822E-02		7.909E-02	1.172E-01	1.155E-02	0.582
SB-122	-9.583E-01		1.666E+00	2.722E+00	2.613E-01	-0.352
I-123	4.050E-01		9.458E-01	Half-Life	too short	
TE-123M	9.468E-03		4.422E-02	6.436E-02	6.386E-03	0.147
I-124	9.193E-02		6.451E-01	9.505E-01	8.815E-02	0.097
SB-124	-9.260E-03		5.293E-02	8.509E-02	7.739E-03	-0.109
SB-125	2.142E-02		9.780E-02	1.610E-01	1.644E-02	0.133
TE-125M	5.190E+01		1.887E+01	2.855E+01	2.927E+00	1.818
I-126	-4.259E-02		1.823E-01	2.991E-01	2.587E-02	-0.142
SB-126	2.294E-01		1.528E-01	2.533E-01	2.291E-02	0.906
SN-126	-5.557E-01		2.300E-01	2.935E-01	2.933E-02	-1.893
SB-127	8.824E-01		1.181E+00	2.035E+00	2.272E-01	0.434
XE-127	4.628E-02		6.599E-02	9.596E-02	1.060E-02	0.482
I-131	-1.223E-02		1.082E-01	1.773E-01	1.988E-02	-0.069
TE-132	6.891E-01		6.505E-01	1.050E+00	1.818E-01	0.656
BA-133	3.145E-02		4.983E-02	7.484E-02	1.116E-02	0.420
I-133	-3.360E-04		1.315E-03	Half-Life	too short	
CS-134	3.222E-02		5.031E-02	8.547E-02	8.225E-03	0.377
CS-135	1.311E-01		1.694E-01	2.910E-01	3.850E-02	0.450
I-135	7.261E+07		9.830E+07	Half-Life	too short	
CS-136	8.495E-02		8.406E-02	1.519E-01	1.466E-02	0.559
BA-137M	4.439E-02		4.106E-02	7.173E-02	6.180E-03	0.619
CS-137	4.693E-02		4.341E-02	7.583E-02	6.546E-03	0.619
CE-139	-2.284E-02		4.511E-02	6.376E-02	6.541E-03	-0.358
BA-140	-4.894E-02		2.679E-01	4.227E-01	1.414E-01	-0.116
LA-140	-1.691E-03		6.152E-02	1.026E-01	9.275E-03	-0.016
CE-141	3.185E-01		9.945E-02	1.519E-01	1.419E-02	2.096
CE-143	2.696E-04		5.452E-05	Half-Life	too short	
CE-144	8.506E-02		3.246E-01	4.785E-01	7.469E-02	0.178
PM-144	3.118E-02		3.644E-02	6.308E-02	5.597E-03	0.494
PR-144	2.111E+00		2.467E+00	4.272E+00	3.789E-01	0.494
PM-146	-9.845E-03		4.799E-02	7.689E-02	9.164E-03	-0.128
ND-147	-4.661E-01		6.208E-01	9.439E-01	1.479E-01	-0.494
PM-149	1.948E+00		6.557E+01	1.100E+02	1.966E+01	0.018
EU-152	2.089E-02		1.172E-01	1.722E-01	2.024E-02	0.121
GD-153	2.461E+00	+	3.061E-01	3.181E-01	2.891E-02	7.736
EU-154	-5.571E-02		1.060E-01	1.650E-01	1.897E-02	-0.338
EU-155	-4.606E-02		1.778E-01	2.937E-01	2.575E-02	-0.157
TB-160	2.029E-02		1.490E-01	2.444E-01	2.469E-02	0.083
HO-166M	-3.813E-03		6.658E-02	1.097E-01	9.853E-03	-0.035

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171	-1.474E+02		6.360E+01	9.118E+01	7.449E+00	-1.617
LU-176	2.224E-03		2.647E-02	4.430E-02	5.351E-03	0.050
LU-177M	1.897E-01		1.819E-01	3.108E-01	3.124E-02	0.610
HF-181	1.519E-02		4.598E-02	7.547E-02	7.558E-03	0.201
W-181	1.966E-01		7.971E-01	1.225E+00	9.867E-02	0.161
TA-182	-9.551E-03		1.736E-01	2.854E-01	2.408E-02	-0.033
RE-183	8.902E-01	+	2.454E-01	2.948E-01	2.965E-02	3.020
RE-184	2.232E-02		2.923E-01	4.375E-01	5.253E-02	0.051
OS-185	1.474E-02		4.769E-02	7.092E-02	6.247E-03	0.208
RE-188	-1.634E-01		2.359E-01	3.755E-01	3.629E-02	-0.435
W-188	5.010E-01		8.647E+00	1.279E+01	1.572E+00	0.039
IR-192	-2.464E-02		3.571E-02	5.749E-02	6.864E-03	-0.429
AU-195	7.157E+00	+	8.902E-01	9.170E-01	8.243E-02	7.805
TL-200	1.507E-04		1.119E-04	Half-Life too short		
TL-201	1.046E+01		7.982E+00	1.192E+01	1.226E+00	0.878
TL-202	1.715E-03		6.985E-02	1.136E-01	1.145E-02	0.015
HG-203	-2.923E-02		4.327E-02	7.061E-02	8.878E-03	-0.414
BI-207	2.468E-02		4.308E-02	7.546E-02	6.927E-03	0.327
TL-207	-1.943E-01		7.071E-01	1.160E+00	2.256E-01	-0.167
PO-209	1.798E+00		7.408E+00	1.223E+01	1.249E+00	0.147
BI-210	-8.554E+00		1.077E+01	1.635E+01	1.567E+00	-0.523
PB-210	-8.554E+00		1.077E+01	1.635E+01	1.567E+00	-0.523
PO-210	-8.554E+00		1.076E+01	1.635E+01	1.427E+00	-0.523
PB-211	-1.308E-01		9.668E-01	1.564E+00	9.834E-01	-0.084
PB-212	6.688E-01	+	1.341E-01	1.687E-01	2.123E-02	3.965
PO-212	6.688E-01	+	1.341E-01	1.687E-01	2.123E-02	3.965
PB-214	6.100E-01	+	1.582E-01	1.884E-01	2.382E-02	3.238
PO-214	6.100E-01	+	1.582E-01	1.884E-01	2.382E-02	3.238
PO-215	-1.943E-01		7.071E-01	1.160E+00	2.256E-01	-0.167
PO-216	6.688E-01	+	1.341E-01	1.687E-01	2.123E-02	3.965
PO-218	6.100E-01	+	1.582E-01	1.884E-01	2.382E-02	3.238
RN-219	-1.568E-01		4.414E-01	7.084E-01	1.125E-01	-0.221
RN-220	9.335E+00		2.954E+01	4.799E+01	4.655E+00	0.195
RA-223	-1.943E-01		7.071E-01	1.160E+00	2.256E-01	-0.167
RA-224	2.117E+00		8.638E-01	1.360E+00	1.605E-01	1.556
AC-227	1.127E+00		5.478E-01	8.314E-01	1.456E-01	1.356
TH-227	1.127E+00		5.582E-01	8.314E-01	1.658E-01	1.356
TH-228	6.781E-01	+	1.360E-01	1.710E-01	2.152E-02	3.965
TH-229	1.071E+00		6.464E-01	1.069E+00	1.159E-01	1.002
PA-231	-1.233E+00		1.647E+00	2.660E+00	4.677E-01	-0.463
TH-231	-1.943E-01		7.071E-01	1.160E+00	2.256E-01	-0.167
PA-233	3.834E-02		6.981E-02	1.186E-01	1.444E-02	0.323
PA-234	4.899E-01	+	3.598E-01	5.684E-01	1.105E-01	0.862
NP-236	-9.243E-02		1.264E-01	1.777E-01	1.768E-02	-0.520
NP-237	-1.241E+00		6.539E-01	8.587E-01	1.964E-01	-1.445
NP-239	-7.449E-02		3.248E-01	4.767E-01	3.997E-02	-0.156
AM-241	9.287E-01		4.208E-01	6.605E-01	5.411E-02	1.406
AM-243	1.049E-01		1.174E-01	1.997E-01	1.746E-02	0.525

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	7.568E-02		1.537E-01	2.574E-01	2.246E-02	0.294
AM-246	6.321E-02		1.075E-01	1.892E-01	1.711E-02	0.334
CM-247	-1.546E-02		3.931E-02	6.300E-02	6.320E-03	-0.245
CF-249	9.645E-03		4.427E-02	7.331E-02	7.425E-03	0.132
CF-251	-3.593E-02		1.716E-01	2.747E-01	2.878E-02	-0.131

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395007          *
* Acquisition date   : 2-FEB-2010 09:13:37 Detector SN# :                  *
* Detector ID        : GAM02 Sensitivity      : 5.000                      *
* Geometry           : CAN Energy tolerance: 1.500                      *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000            *
* Elapsed real time  : 0 02:00:06.26 Half life ratio : 8.000            *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395007 Analyst initials: MXR1                 *
* Batch Number       : 944966 Sample Quantity : 1.8103E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                 *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 29-OCT-2009 10:28:07 MS Isotope :                  *
* MSD DPM             : 0.000 MSD Isotope :                  *
* LCS DPM             : 0.000 LCS Isotope :                  *
* LCSD DPM            : 0.000 LCSD Isotope :                  *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	1.779E+01	2.045E+00	1.996E-01	1.044E+00
NB-95	8.765E-01	1.372E-01	3.937E-02	7.000E-02
LU-177	2.416E+00	1.277E+00	1.001E+00	6.516E-01
TL-208	2.428E-01	8.490E-02	3.246E-02	4.331E-02
BI-211	1.754E+00	4.366E-01	1.868E-01	2.227E-01
BI-212	5.300E-01	4.609E-01	2.721E-01	2.351E-01
BI-214	5.255E-01	1.782E-01	6.274E-02	9.090E-02
RA-226	5.255E-01	1.782E-01	6.274E-02	9.090E-02
AC-228	6.530E-01	2.182E-01	9.627E-02	1.113E-01
RA-228	6.530E-01	2.182E-01	9.627E-02	1.113E-01
TH-230	5.255E-01	1.782E-01	6.274E-02	9.090E-02
U-231	1.121E+01	3.218E+00	1.308E+00	1.642E+00
TH-232	6.530E-01	2.182E-01	9.627E-02	1.113E-01
PA-234M	2.592E+02	3.150E+01	3.710E+00	1.607E+01
TH-234	1.752E+02	3.106E+01	2.614E+00	1.585E+01
U-234	5.255E-01	1.782E-01	6.274E-02	9.090E-02
U-235	3.066E+00	7.123E-01	2.644E-01	3.634E-01
U-238	1.752E+02	3.106E+01	2.614E+00	1.585E+01
ANH-511	8.474E-03	6.002E-02	2.888E-02	3.062E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.426E-02	3.683E-01	3.232E-01	1.879E-01 NOT IDENT.
NA-22	-1.993E-02	3.714E-02	3.019E-02	1.895E-02 NOT IDENT.
NA-24	4.288E+03	1.511E+05	0.000E+00	7.712E+04 SHORT HLIF
AL-26	1.178E-02	1.975E-02	1.889E-02	1.008E-02 NOT IDENT.
TI-44	-1.338E-02	6.974E-02	6.748E-02	3.558E-02 NOT IDENT.
SC-46	1.841E-03	3.850E-02	3.316E-02	1.964E-02 FAIL ABUN
V-48	-1.828E-02	5.749E-02	4.718E-02	2.933E-02 NOT IDENT.
CR-51	7.034E-02	3.732E-01	3.434E-01	1.904E-01 NOT IDENT.

MN-52	1.379E-01	1.748E-01	1.616E-01	8.920E-02	NOT IDENT.
MN-54	-2.394E-02	3.690E-02	3.042E-02	1.883E-02	NOT IDENT.
CO-56	-5.849E-02	3.849E-02	2.894E-02	1.964E-02	NOT IDENT.
CO-57	3.963E-02	3.759E-02	3.574E-02	1.918E-02	NOT IDENT.
CO-58	-1.507E-02	3.766E-02	3.172E-02	1.922E-02	NOT IDENT.
FE-59	-3.688E-02	6.950E-02	5.770E-02	3.546E-02	FAIL ABUN
CO-60	1.484E-02	3.197E-02	2.866E-02	1.631E-02	NOT IDENT.
ZN-65	-2.986E-02	7.826E-02	5.578E-02	3.993E-02	NOT IDENT.
GE-68	5.843E-02	9.650E-01	8.505E-01	4.923E-01	NOT IDENT.
AS-73	-2.682E-01	2.075E+00	2.060E+00	1.059E+00	NOT IDENT.
AS-74	3.081E-02	9.259E-02	8.472E-02	4.724E-02	NOT IDENT.
SE-75	-1.145E-02	4.595E-02	4.240E-02	2.344E-02	NOT IDENT.
BR-77	-2.215E+00	7.983E+00	6.791E+00	4.073E+00	FAIL ABUN
SR-82	-4.590E-01	4.212E-01	3.418E-01	2.149E-01	NOT IDENT.
RB-83	-3.923E-02	7.589E-02	6.362E-02	3.872E-02	NOT IDENT.
RB-84	1.257E-01	7.381E-02	6.969E-02	3.766E-02	NOT IDENT.
KR-85	3.998E+00	8.802E+00	6.861E+00	4.491E+00	NOT IDENT.
SR-85	2.023E-02	4.455E-02	3.472E-02	2.273E-02	NOT IDENT.
RB-86	-4.470E-02	5.938E-01	5.171E-01	3.030E-01	NOT IDENT.
Y-88	-6.116E-02	3.343E-02	1.893E-02	1.705E-02	NOT IDENT.
ZR-88	-1.279E-02	3.121E-02	2.730E-02	1.592E-02	NOT IDENT.
Y-91	-4.275E+00	1.403E+01	1.178E+01	7.157E+00	NOT IDENT.
NB-94	-2.608E-02	3.662E-02	3.101E-02	1.868E-02	NOT IDENT.
NB-95M	-2.008E-03	1.440E-01	1.198E-01	7.348E-02	NOT IDENT.
ZR-95	2.243E-02	6.991E-02	6.243E-02	3.567E-02	NOT IDENT.
NB-97	-1.959E+04	3.256E+04	0.000E+00	1.661E+04	SHORT HLIF
ZR-97	4.106E+05	6.487E+05	0.000E+00	3.310E+05	SHORT HLIF
MO-99	1.733E+01	1.245E+01	1.019E+01	6.351E+00	NOT IDENT.
TC-99M	1.658E+15	1.985E+15	0.000E+00	1.013E+15	SHORT HLIF
RH-101	-8.150E-02	4.173E-02	3.386E-02	2.129E-02	NOT IDENT.
RH-102	3.939E-02	3.439E-02	3.154E-02	1.755E-02	FAIL ABUN
RU-103	-1.606E-02	4.258E-02	3.618E-02	2.173E-02	NOT IDENT.
RH-106	9.591E-02	3.218E-01	2.928E-01	1.642E-01	FAIL ABUN
RU-106	9.591E-02	3.216E-01	2.928E-01	1.641E-01	FAIL ABUN
AG-108M	-1.471E-02	3.512E-02	3.033E-02	1.792E-02	NOT IDENT.
CD-109	5.056E-01	2.151E+00	1.705E+00	1.097E+00	NOT IDENT.
AG-110M	-2.850E-02	3.891E-02	3.322E-02	1.985E-02	NOT IDENT.
IN-111	-5.759E-01	8.568E-01	7.848E-01	4.371E-01	NOT IDENT.
IN-113M	-9.558E-03	4.592E-02	4.062E-02	2.343E-02	NOT IDENT.
SN-113	-9.558E-03	4.592E-02	4.062E-02	2.343E-02	NOT IDENT.
IN-114M	3.298E-02	2.369E-01	1.899E-01	1.209E-01	NOT IDENT.
CD-115	5.621E+00	8.309E+00	7.427E+00	4.239E+00	NOT IDENT.
SN-117M	6.822E-02	7.750E-02	6.464E-02	3.954E-02	NOT IDENT.
SB-122	-9.583E-01	1.633E+00	1.435E+00	8.330E-01	NOT IDENT.
I-123	4.050E+05	1.854E+06	0.000E+00	9.458E+05	SHORT HLIF
TE-123M	9.468E-03	4.334E-02	3.548E-02	2.211E-02	NOT IDENT.
I-124	9.193E-02	6.322E-01	5.000E-01	3.225E-01	NOT IDENT.
SB-124	-9.260E-03	5.187E-02	4.302E-02	2.647E-02	FAIL ABUN
SB-125	2.142E-02	9.585E-02	8.575E-02	4.890E-02	NOT IDENT.
TE-125M	5.190E+01	1.850E+01	1.594E+01	9.436E+00	NOT IDENT.
I-126	-4.259E-02	1.787E-01	1.567E-01	9.117E-02	NOT IDENT.
SB-126	2.294E-01	1.497E-01	1.324E-01	7.639E-02	NOT IDENT.
SN-126	-5.557E-01	2.254E-01	1.650E-01	1.150E-01	FAIL ABUN
SB-127	8.824E-01	1.157E+00	1.065E+00	5.903E-01	NOT IDENT.
XE-127	4.628E-02	6.467E-02	5.247E-02	3.299E-02	NOT IDENT.
I-131	-1.223E-02	1.060E-01	9.499E-02	5.410E-02	NOT IDENT.
TE-132	6.891E-01	6.375E-01	5.719E-01	3.252E-01	FAIL ABUN
BA-133	3.145E-02	4.883E-02	4.012E-02	2.491E-02	NOT IDENT.
I-133	-3.360E+02	2.577E+03	0.000E+00	1.315E+03	SHORT HLIF
CS-134	3.222E-02	4.930E-02	4.449E-02	2.515E-02	NOT IDENT.
CS-135	1.311E-01	1.660E-01	1.576E-01	8.469E-02	NOT IDENT.
I-135	7.261E+13	1.927E+14	0.000E+00	9.830E+13	SHORT HLIF
CS-136	8.495E-02	8.238E-02	7.826E-02	4.203E-02	FAIL ABUN
BA-137M	4.439E-02	4.024E-02	3.760E-02	2.053E-02	NOT IDENT.
CS-137	4.693E-02	4.254E-02	3.975E-02	2.170E-02	NOT IDENT.
CE-139	-2.284E-02	4.421E-02	3.510E-02	2.256E-02	NOT IDENT.
BA-140	-4.894E-02	2.625E-01	2.233E-01	1.339E-01	FAIL ABUN
LA-140	-1.691E-03	6.029E-02	5.196E-02	3.076E-02	NOT IDENT.
CE-141	3.185E-01	9.746E-02	8.402E-02	4.972E-02	NOT IDENT.
CE-143	2.696E+02	1.069E+02	0.000E+00	5.452E+01	SHORT HLIF
CE-144	8.506E-02	3.181E-01	2.653E-01	1.623E-01	NOT IDENT.
PM-144	3.118E-02	3.571E-02	3.300E-02	1.822E-02	NOT IDENT.
PR-144	2.111E+00	2.418E+00	2.235E+00	1.234E+00	NOT IDENT.
PM-146	-9.845E-03	4.703E-02	4.087E-02	2.399E-02	NOT IDENT.
ND-147	-4.661E-01	6.084E-01	4.988E-01	3.104E-01	FAIL ABUN
PM-149	1.948E+00	6.425E+01	5.944E+01	3.278E+01	NOT IDENT.
EU-152	2.089E-02	1.149E-01	9.244E-02	5.862E-02	NOT IDENT.
GD-153	2.461E+00	2.999E-01	1.782E-01	1.530E-01	FAIL ABUN

EU-154	-5.571E-02	1.039E-01	8.437E-02	5.300E-02	NOT IDENT.
EU-155	-4.606E-02	1.743E-01	1.641E-01	8.891E-02	NOT IDENT.
TB-160	2.029E-02	1.461E-01	1.267E-01	7.452E-02	NOT IDENT.
HO-166M	-3.813E-03	6.525E-02	5.735E-02	3.329E-02	FAIL ABUN
TM-171	-1.474E+02	6.233E+01	5.172E+01	3.180E+01	NOT IDENT.
LU-176	2.224E-03	2.594E-02	2.387E-02	1.323E-02	NOT IDENT.
LU-177M	1.897E-01	1.783E-01	1.657E-01	9.095E-02	NOT IDENT.
HF-181	1.519E-02	4.506E-02	4.002E-02	2.299E-02	NOT IDENT.
W-181	1.966E-01	7.811E-01	6.951E-01	3.985E-01	NOT IDENT.
TA-182	-9.551E-03	1.702E-01	1.462E-01	8.682E-02	FAIL ABUN
RE-183	8.902E-01	2.404E-01	1.624E-01	1.227E-01	FAIL ABUN
RE-184	2.232E-02	2.865E-01	2.374E-01	1.462E-01	NOT IDENT.
OS-185	1.474E-02	4.674E-02	3.721E-02	2.385E-02	NOT IDENT.
RE-188	-1.634E-01	2.311E-01	2.072E-01	1.179E-01	NOT IDENT.
W-188	5.010E-01	8.474E+00	6.906E+00	4.323E+00	FAIL ABUN
IR-192	-2.464E-02	3.500E-02	3.095E-02	1.786E-02	FAIL ABUN
AU-195	7.157E+00	8.724E-01	5.135E-01	4.451E-01	FAIL ABUN
TL-200	1.507E+02	2.193E+02	0.000E+00	1.119E+02	SHORT HLIF
TL-201	1.046E+01	7.823E+00	6.558E+00	3.991E+00	NOT IDENT.
TL-202	1.715E-03	6.846E-02	6.046E-02	3.493E-02	NOT IDENT.
HG-203	-2.923E-02	4.240E-02	3.818E-02	2.163E-02	FAIL ABUN
BI-207	2.468E-02	4.222E-02	3.885E-02	2.154E-02	FAIL ABUN
TL-207	-1.943E-01	6.929E-01	6.240E-01	3.535E-01	FAIL ABUN
PO-209	1.798E+00	7.259E+00	6.339E+00	3.704E+00	NOT IDENT.
BI-210	-8.554E+00	1.055E+01	9.380E+00	5.383E+00	NOT IDENT.
PB-210	-8.554E+00	1.055E+01	9.380E+00	5.383E+00	NOT IDENT.
PO-210	-8.554E+00	1.055E+01	9.380E+00	5.381E+00	NOT IDENT.
PB-211	-1.308E-01	9.474E-01	8.347E-01	4.834E-01	NOT IDENT.
PB-212	6.688E-01	1.315E-01	9.170E-02	6.707E-02	FAIL ABUN
PO-212	6.688E-01	1.315E-01	9.170E-02	6.707E-02	FAIL ABUN
PB-214	6.100E-01	1.550E-01	1.010E-01	7.910E-02	FAIL ABUN
PO-214	6.100E-01	1.550E-01	1.010E-01	7.910E-02	FAIL ABUN
PO-215	-1.943E-01	6.929E-01	6.240E-01	3.535E-01	FAIL ABUN
PO-216	6.688E-01	1.315E-01	9.170E-02	6.707E-02	FAIL ABUN
PO-218	6.100E-01	1.550E-01	1.010E-01	7.910E-02	FAIL ABUN
RN-219	-1.568E-01	4.326E-01	3.782E-01	2.207E-01	NOT IDENT.
RN-220	9.335E+00	2.895E+01	2.533E+01	1.477E+01	NOT IDENT.
RA-223	-1.943E-01	6.929E-01	6.240E-01	3.535E-01	FAIL ABUN
RA-224	2.117E+00	8.465E-01	7.394E-01	4.319E-01	NOT IDENT.
AC-227	1.127E+00	5.368E-01	4.510E-01	2.739E-01	NOT IDENT.
TH-227	1.127E+00	5.470E-01	4.510E-01	2.791E-01	FAIL ABUN
TH-228	6.781E-01	1.333E-01	9.298E-02	6.800E-02	FAIL ABUN
TH-229	1.071E+00	6.335E-01	5.853E-01	3.232E-01	NOT IDENT.
PA-231	-1.233E+00	1.614E+00	1.438E+00	8.237E-01	NOT IDENT.
TH-231	-1.943E-01	6.929E-01	6.240E-01	3.535E-01	FAIL ABUN
PA-233	3.834E-02	6.841E-02	6.387E-02	3.491E-02	NOT IDENT.
PA-234	4.899E-01	3.526E-01	2.940E-01	1.799E-01	FAIL ABUN
NP-236	-9.243E-02	1.239E-01	9.794E-02	6.321E-02	FAIL ABUN
NP-237	-1.241E+00	6.408E-01	4.830E-01	3.270E-01	FAIL ABUN
NP-239	-7.449E-02	3.183E-01	2.655E-01	1.624E-01	FAIL ABUN
AM-241	9.287E-01	4.123E-01	3.760E-01	2.104E-01	NOT IDENT.
AM-243	1.049E-01	1.151E-01	1.129E-01	5.871E-02	FAIL ABUN
CM-243	7.568E-02	1.506E-01	1.439E-01	7.684E-02	FAIL ABUN
AM-246	6.321E-02	1.053E-01	9.733E-02	5.375E-02	NOT IDENT.
CM-247	-1.546E-02	3.853E-02	3.363E-02	1.966E-02	NOT IDENT.
CF-249	9.645E-03	4.338E-02	3.919E-02	2.213E-02	NOT IDENT.
CF-251	-3.593E-02	1.682E-01	1.509E-01	8.581E-02	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON ,SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
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46.50	1477.9814
46.50	1477.9814
46.50	1477.9814
48.70	1438.6454
49.72	1564.8164
51.35	1686.5164
52.39	1715.9388
52.97	1755.4290
53.15	1756.4745
53.44	1841.5634
54.07	1870.7025
56.28	2147.6550
56.28	2147.6743
57.37	0.0000
57.53	2137.7419
57.53	2137.7546
57.60	2138.2131
57.98	2100.2371
57.98	2100.2371
59.32	2190.0933
59.32	2190.0933
59.40	2190.6318
59.54	2225.0713
59.72	2226.2966
60.01	2394.7090
61.10	2508.7898
61.14	2509.0928
61.30	2510.2979
63.00	2183.6802
63.29	2185.5454
63.29	2185.5454
63.58	2187.4072
64.28	2191.8862
65.12	2082.8232
65.20	2083.3054
65.20	2083.3054
66.05	2315.6189
66.72	2360.8115
66.83	2361.5645
66.91	2412.1316
67.20	2404.8921
67.20	2404.8921
67.75	2415.2085
67.85	2407.9717
68.90	2287.0378
68.90	2287.0378
69.30	2302.8230
69.67	2444.9580
70.82	2657.6267
70.82	2657.6267
70.83	2657.7029
72.80	2898.4495
72.87	2794.5830
72.87	2794.5830
74.67	2946.8945
74.81	2962.3142
74.81	2962.3142
74.81	2962.3142
74.81	2962.3142
74.81	2962.3142
74.81	2962.3142
74.97	2963.5574
75.28	3013.5515
75.70	2921.5586
77.11	3043.1938
77.11	3043.1938

77.11	3043.1938
77.11	3043.1938
77.11	3043.1938
77.11	3043.1938
77.11	3043.1938
78.38	2950.7769
79.62	3143.4421
79.80	3103.9731
79.80	3103.9731
80.11	2935.9331
80.18	2936.4421
80.30	2978.2581
80.30	2978.2581
80.57	2917.4570
81.00	2920.5710
81.07	2867.7671
81.07	2867.7671
81.07	2867.7671
81.07	2867.7671
82.60	2991.0967
83.37	3180.8850
83.78	3184.0803
83.78	3184.0803
83.78	3184.0803
83.78	3184.0803
84.21	3187.3818
84.90	3504.4954
85.43	3510.3340
86.29	3784.6768
86.50	3786.5750
86.54	3786.9297
86.59	3787.3677
86.72	3788.5356
86.79	3980.3994
86.94	3981.8237
87.30	3975.9690
87.30	3975.9690
87.30	3975.9690
87.30	3975.9690
87.30	3975.9690
87.30	3975.9690
87.57	4046.9819
87.88	3904.4834
88.03	3647.3184
88.36	3386.7485
88.47	3387.6216
89.95	3782.2700
91.11	4063.9165
92.29	3739.3599
92.38	3740.1121
92.38	3740.1121
93.35	3748.2825
94.00	3753.7498
94.67	3759.2986
94.67	3759.3391
94.90	3761.2700
94.90	3761.2700
94.90	3761.2700
94.90	3761.2700
95.87	1533.7700
95.87	1533.7700
96.73	1536.6729
97.43	1539.0093
98.44	1371.6362
98.44	1371.6362
98.88	1372.9381
99.55	1293.6195
99.55	1293.6195
99.86	1300.1864
100.00	1300.5757
100.10	1300.8676
103.18	1408.5033
103.76	1320.9978
105.00	1411.9106
105.31	1480.1827
108.00	1619.9336
109.28	1538.2515

111.00	1591.7150
111.00	1591.7150
111.76	1594.1100
112.95	1597.8440
115.19	1249.9872
116.30	1248.2295
117.00	1193.7592
117.00	1193.7592
117.66	1273.1658
121.11	1162.3400
121.62	1110.7839
121.78	1077.3231
122.06	1077.8800
122.32	1093.3208
122.32	1093.3208
122.32	1093.3208
122.32	1093.3208
123.07	1141.6575
127.23	1097.6213
129.76	1049.6411
131.20	1125.0919
133.02	1016.1069
133.54	992.6644
135.34	939.2413
136.00	1007.8912
136.25	1022.7990
136.48	1023.2021
140.51	952.1213
140.51	0.0000
142.18	1042.8325
142.65	1043.6360
143.76	985.1420
144.24	985.9087
144.24	985.9087
144.24	985.9087
144.24	985.9087
145.22	826.0141
145.44	826.3145
147.16	875.3466
152.43	877.4859
152.70	866.3376
153.22	860.7538
154.21	945.0348
154.21	945.0348
154.21	945.0348
154.21	945.0348
155.03	943.0892
156.02	925.5860
158.56	811.8594
159.00	0.0000
159.00	874.2888
160.31	926.9056
161.27	933.0255
162.32	832.4393
162.64	832.8376
163.35	833.7217
163.89	764.0663
165.85	830.4156
167.43	731.1132
171.28	788.5397
171.86	771.9521
172.10	794.8630
176.55	772.7819
176.60	772.8326
181.06	776.5641
184.41	702.2461
185.71	703.4830
186.00	703.7630
190.27	588.9221
192.34	670.9442
193.63	564.3273
197.04	689.5920
198.01	688.2251
198.60	636.1948
200.40	606.5157
201.83	560.8044
202.84	615.4864
205.31	588.6572

208.36	590.9033
208.81	591.2379
209.75	591.9229
209.75	591.9229
210.97	505.9369
215.65	537.2822
216.55	506.5362
218.09	510.9146
222.10	477.6823
223.80	539.7682
226.40	475.4738
227.00	460.7584
227.08	460.8029
227.20	460.8636
228.16	449.7854
228.18	449.7972
228.18	449.7972
231.56	0.0000
235.69	488.2960
236.00	444.9570
236.00	444.9570
238.63	619.4375
238.63	619.4375
238.63	619.4375
238.63	619.4375
239.00	591.5222
240.98	429.0994
241.98	423.9221
241.98	423.9221
241.98	423.9221
244.69	496.0583
245.39	449.4581
247.94	402.7066
248.90	406.6879
249.79	397.2800
252.40	420.1953
252.85	393.2312
252.85	393.2312
254.15	0.0000
256.20	383.1606
256.20	383.1606
260.50	347.4201
260.90	359.1047
262.80	310.6844
264.65	354.7177
268.24	348.7676
268.79	325.3334
269.46	316.4636
269.46	316.4636
269.46	316.4636
269.46	316.4636
271.23	386.2686
273.65	423.7498
276.40	340.6670
277.35	347.4070
277.60	366.7480
277.60	366.7480
278.00	340.2947
278.60	359.7720
279.20	369.1707
279.53	360.1069
280.46	342.0463
281.68	305.6370
283.67	337.5961
284.30	319.3489
285.00	328.8013
285.90	306.9034
286.10	306.9642
286.10	306.9642
287.40	299.0224
288.45	0.0000
290.67	312.0417
290.80	312.0828
291.72	304.9175
293.26	0.0000
293.70	315.9297
295.21	348.8445
295.21	348.8445

295.21	348.8445
295.96	349.0956
296.50	370.5650
297.23	358.8574
298.57	339.8516
299.80	275.7934
299.80	275.7934
300.09	274.3704
300.09	274.3704
300.09	274.3704
300.09	274.3704
300.12	274.3749
301.29	312.7035
302.84	339.1481
303.76	314.9928
303.91	310.3317
304.40	322.7035
304.40	322.7035
304.84	322.8343
306.84	285.7177
308.46	301.2529
311.98	275.6943
316.51	277.7823
318.01	263.8677
319.02	275.5457
319.41	267.0587
320.08	263.3994
323.87	289.1893
323.87	289.1893
323.87	289.1893
323.87	289.1893
325.23	301.9984
328.77	263.5101
333.44	248.7442
334.20	241.1754
334.20	241.1754
334.30	241.1982
338.28	245.3215
338.28	245.3215
338.28	245.3215
338.28	245.3215
338.32	245.3292
338.32	245.3292
338.32	245.3292
340.50	245.7848
340.57	245.8002
344.27	249.4961
345.85	195.1782
350.59	0.0000
351.07	246.0172
351.92	246.1896
351.92	246.1896
351.92	246.1896
355.39	0.0000
356.01	207.8517
364.48	219.9912
366.43	219.3443
367.43	216.5397
367.94	0.0000
369.80	202.0212
374.96	208.8437
383.85	225.3911
387.95	235.1901
388.63	230.2631
391.69	220.6778
391.69	220.6778
392.90	217.8410
398.62	215.7298
400.65	197.7151
401.10	220.2089
401.81	225.4277
402.60	223.5179
404.84	207.5317
410.95	203.3340
411.60	210.6242
413.65	176.9813
414.70	195.6534
415.30	196.7677

415.76	203.0180
417.63	0.0000
418.52	219.9455
423.70	213.5094
427.08	189.0899
427.89	189.1982
432.53	188.7746
433.93	207.7512
439.47	186.5475
439.56	192.8482
439.89	189.7467
443.98	176.6184
444.90	188.3002
445.03	188.3165
445.03	188.3165
445.03	188.3165
445.03	188.3165
453.90	198.9841
463.38	188.5351
468.07	188.0527
473.00	207.9588
475.06	194.2845
475.35	203.9827
476.78	200.9502
477.59	211.8075
477.96	210.7831
482.03	174.6760
484.57	172.8027
487.03	192.5445
490.36	0.0000
492.35	173.6597
497.08	177.4456
507.63	0.0000
510.53	0.0000
510.84	206.4182
511.00	206.4368
511.85	196.8777
511.85	196.8777
513.99	195.3733
513.99	195.3733
520.41	184.4298
520.65	175.6240
527.90	164.1875
528.96	0.0000
529.64	182.1277
529.87	0.0000
531.02	202.2839
537.32	165.1089
543.00	171.2565
546.56	0.0000
549.76	160.6917
552.65	167.4908
555.20	170.4415
563.23	182.0925
563.90	193.9480
568.70	168.1169
569.32	171.8119
569.50	171.8303
569.67	168.2118
573.80	180.4478
574.00	180.4671
574.64	176.6550
578.91	190.4043
579.30	0.0000
583.14	152.0708
585.48	166.6357
591.81	150.0308
592.07	150.0547
593.00	167.6302
595.88	159.5900
600.56	170.5751
602.52	0.0000
602.71	160.4857
602.71	160.4857
603.60	154.3864
604.41	142.0991
604.70	151.3904
609.31	160.7430

609.31	160.7430
609.31	160.7430
609.31	160.7430
610.33	160.8317
612.46	138.0557
614.37	145.9570
618.01	138.8485
621.84	134.6836
621.84	134.6836
631.29	118.4295
633.02	120.4156
633.10	120.4219
634.78	138.4154
635.90	143.2051
636.97	135.7453
645.85	115.2120
646.12	115.2269
656.30	185.6261
657.75	180.0437
657.90	0.0000
661.65	151.7604
661.65	151.7604
664.57	0.0000
666.33	155.9404
666.33	155.9404
675.00	133.5466
677.61	133.7162
685.20	127.4528
692.80	134.7004
695.00	165.8859
696.49	129.1133
696.49	129.1133
697.00	129.1457
697.49	145.6860
698.33	140.8865
698.50	148.6707
699.00	139.9605
702.63	171.3551
706.10	131.6514
706.58	0.0000
706.67	147.2950
709.31	156.2695
711.68	145.6861
713.82	104.7247
717.42	176.4668
720.50	103.7889
721.93	0.0000
722.20	109.7174
722.78	135.9557
722.78	135.9557
722.89	135.9625
722.95	135.9659
723.30	144.1816
724.18	154.0734
727.18	148.7070
733.00	161.2797
735.90	177.9741
739.58	153.5090
742.81	105.7969
744.21	99.2456
747.13	110.9715
751.79	104.5642
752.31	110.5637
753.82	122.6006
755.35	115.6998
756.15	109.7556
756.87	126.4255
763.93	133.4961
765.79	151.3060
766.42	151.3502
766.84	151.3760
776.49	164.0983
778.00	144.8134
778.57	132.4329
778.89	131.0125
783.80	136.3414
785.46	130.3731
792.07	130.3104

795.84	120.8042
796.30	115.7506
798.80	146.3660
801.93	125.1861
805.60	103.9748
810.29	97.0294
810.76	102.1558
815.85	89.0667
817.79	92.2126
818.51	90.1893
819.60	79.9767
826.30	113.1018
828.27	0.0000
831.60	108.1967
831.96	105.1203
834.83	118.6583
836.80	0.0000
846.75	115.0866
848.13	94.4036
856.28	0.0000
856.80	98.8965
860.37	82.3579
867.32	89.9032
867.82	78.4186
871.10	92.1314
873.19	74.3940
874.81	83.8789
875.33	0.0000
876.40	102.8139
879.36	100.8328
880.27	89.3123
880.51	83.0156
881.50	79.8928
883.24	90.4680
884.67	101.0438
889.25	88.5691
896.60	83.5344
898.02	78.2908
899.00	80.4364
903.28	71.5573
911.07	70.1766
911.07	70.1766
911.07	70.1766
919.63	99.5609
920.93	86.5647
925.00	65.2012
925.24	65.2072
926.50	77.0027
935.52	68.6781
937.48	80.5408
944.10	69.9718
946.00	59.2485
949.00	48.5299
962.29	65.0215
964.01	63.2538
966.15	81.3904
968.20	100.9990
969.11	61.5600
969.11	61.5600
969.11	61.5600
977.42	67.5552
980.50	65.4478
983.50	64.4261
989.30	66.7470
996.32	58.5039
1001.03	81.3079
1001.68	81.3259
1004.76	64.4400
1021.30	0.0000
1024.50	0.0000
1034.80	55.5835
1036.00	56.5322
1037.82	60.2763
1038.57	51.9440
1038.76	0.0000
1045.16	65.0753
1046.59	57.6659
1048.07	47.4597

1050.47	54.0163
1050.47	54.0163
1062.04	58.9010
1063.62	51.4484
1076.63	55.4277
1077.35	52.6230
1078.86	42.3065
1085.78	50.8843
1099.22	59.6239
1112.02	47.6907
1112.84	43.0940
1115.52	60.3470
1120.29	64.7931
1120.29	64.7931
1120.29	64.7931
1120.29	64.7931
1120.51	63.8457
1121.28	58.8239
1124.00	0.0000
1129.67	62.1198
1131.51	0.0000
1147.95	0.0000
1167.94	54.1611
1173.22	60.0625
1175.09	54.2796
1177.93	58.2080
1189.05	76.9009
1204.90	60.6402
1205.75	0.0000
1213.00	69.6104
1221.42	79.6157
1230.97	86.7396
1235.34	78.9551
1236.41	0.0000
1238.25	57.2896
1246.25	42.5731
1260.41	0.0000
1271.85	52.8620
1274.45	59.8877
1274.54	59.8901
1291.56	38.1144
1298.22	0.0000
1312.09	45.3955
1325.50	40.5013
1325.50	40.5013
1332.49	33.4780
1333.61	25.3703
1360.21	34.7540
1362.66	0.0000
1365.15	30.7056
1368.21	31.7556
1368.53	0.0000
1376.25	25.6643
1384.27	30.8630
1394.10	30.9436
1395.20	39.2061
1407.95	28.9855
1434.06	25.0137
1436.60	26.0732
1457.56	0.0000
1460.81	19.9386
1489.15	22.1946
1509.49	28.6798
1596.49	21.3828
1620.62	15.8942
1678.03	0.0000
1691.02	13.3003
1691.02	13.3003
1706.46	0.0000
1750.46	0.0000
1764.49	16.4118
1764.49	16.4118
1764.49	16.4118
1764.49	16.4118
1770.23	11.8407
1771.40	29.0050
1791.20	0.0000
1808.65	6.8215

1836.01

33.3229

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395007

Total Uranium Activity	5.2273E+02	ug/g
Total Uranium Counting Unc.	9.2406E+01	ug/g
Total Uranium Tpu	4.7146E-05	ug/g
Total Uranium Mda	7.7778E+00	ug/g

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*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON , SC 29417                          *
*                               GROSS GAMMA REPORT                            *
*
*****
*
*  BATCH ID      : 944966                      SAMPLE ID   : G245395007          *
*  ANALYST       : MXR1                        DETECTOR    : GAM02           *
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00    COUNT TIME   : 0 02:00:00.00      *
*  ANALYSIS DATE : 2-FEB-2010 09:13:37.39    SAMPLE ALQT  : 181.030 GRAM        *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.782E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 2.345E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 5.897E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.913E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:15:16.38

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395008.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:14:06.
Sample ID          : G245395008           Sample quantity  : 1.46430E+02 GRAM
Detector name      : GAM10                Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00       Elapsed real time: 0 02:00:02.22  0.0%
Energy tolerance    : 1.50000 keV         Analyst Initials : MXR1
Abundance limit     : 75.00000            Sensitivity       : 5.00000
Batch ID           : 944966               Detector SN#      :
Matrix Spike ID    :                      LCS ID          : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.96*	3978	2927	0.92	126.09	121	11	5.53E-01	3.1	
2	2	74.55*	463	2133	1.18	149.24	143	16	6.43E-02	17.4	7.96E-01
3	2	76.92*	566	2154	1.09	153.98	143	16	7.85E-02	14.3	
4	0	83.43*	271	2829	1.87	166.99	163	8	3.76E-02	34.6	
5	0	87.00*	170	2251	1.17	174.11	172	6	2.37E-02	44.7	
6	2	92.31*	14179	2452	1.14	184.73	180	14	1.97E+00	1.0	7.33E+00
7	2	94.37	699	1464	1.23	188.84	180	14	9.71E-02	17.4	
8	0	98.28	1169	1511	1.11	196.66	193	9	1.62E-01	6.7	
9	4	110.82	312	1315	1.53	221.72	218	11	4.33E-02	20.5	2.36E+00
10	4	112.53	690	1134	0.95	225.13	218	11	9.58E-02	8.8	
11	0	143.47*	527	1057	1.02	286.96	282	10	7.32E-02	12.4	
12	0	162.94	209	634	1.28	325.88	322	7	2.91E-02	21.1	
13	0	185.41*	2380	1165	1.10	370.78	364	14	3.30E-01	3.7	
14	0	205.35	155	810	1.17	410.61	405	10	2.15E-02	35.4	
15	0	209.05	62	481	0.97	418.01	415	7	8.55E-03	60.5	
16	5	238.33*	1300	396	1.09	476.53	472	15	1.80E-01	3.8	1.14E+00
17	5	241.34	346	430	1.78	482.54	472	15	4.80E-02	13.1	
18	0	257.99	219	397	1.20	515.82	512	9	3.04E-02	17.8	
19	0	294.79*	408	374	1.20	589.35	583	11	5.67E-02	10.5	
20	0	299.78	93	294	1.32	599.33	595	9	1.30E-02	34.7	
21	0	338.04	295	298	1.26	675.81	671	11	4.10E-02	12.8	
22	0	351.62*	654	386	1.28	702.94	697	13	9.09E-02	7.4	
23	0	510.39*	96	307	1.99	1020.29	1013	17	1.34E-02	45.5	
24	0	582.79*	418	219	1.62	1165.02	1158	16	5.81E-02	9.4	
25	0	608.80*	487	184	1.45	1217.01	1209	16	6.77E-02	7.8	
26	0	726.35*	87	128	1.62	1452.04	1446	10	1.21E-02	27.2	
27	0	742.72	161	162	1.78	1484.76	1477	18	2.24E-02	20.1	
28	0	765.94	413	203	1.46	1531.19	1524	15	5.73E-02	9.0	
29	0	785.70*	106	104	2.03	1570.69	1565	11	1.48E-02	21.1	
30	0	910.74*	236	108	1.68	1820.72	1813	15	3.27E-02	11.8	
31	1	963.91	54	81	1.91	1927.04	1918	40	7.48E-03	33.4	1.03E+00
32	1	968.25	170	68	1.85	1935.71	1918	40	2.36E-02	12.0	
33	0	1000.36*	861	104	1.68	1999.94	1991	18	1.20E-01	4.4	
34	0	1119.75*	139	106	2.02	2238.71	2229	21	1.92E-02	20.5	
35	0	1377.78	41	25	1.81	2754.83	2746	17	5.73E-03	32.0	
36	0	1459.75*	1588	27	2.07	2918.82	2910	18	2.21E-01	2.6	
37	0	1728.09	24	7	2.05	3455.73	3447	14	3.27E-03	31.7	
38	0	1763.36*	88	10	2.42	3526.30	3520	13	1.22E-02	13.7	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
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Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 2-FEB-2010 11:15:20

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395008.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:14:06
Sample ID         : G245395008 Sample quantity : 146.43 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA10 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00 Elapsed real time: 0 02:00:02.22 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type   : Empirical Efficiencies at : Peak Energy
Abundance limit   : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.445E+01	3.482E+00	4.935E-01	4.250E-02	69.814
NB-95	+	765.79	*	5.989E-01	1.154E-01	7.516E-02	5.245E-03	7.969
CD-109	+	88.03	*	2.282E+00	2.057E+00	3.197E+00	3.625E-01	0.714
SN-126	+	64.28		4.762E+01	8.711E+00	1.905E+00	3.257E-01	24.995
	+	86.94		9.341E-01	9.231E-01	1.261E+00	5.295E-01	0.741
	+	87.57	*	2.247E-01	2.026E-01	3.072E-01	3.476E-02	0.732
LU-177	+	112.95		1.762E+01	3.371E+00	3.790E+00	2.790E-01	4.650
	+	208.36	*	1.085E+00	1.314E+00	1.823E+00	1.065E-01	0.595
TL-208	+	277.35		4.637E-01	4.275E-01	7.363E-01	8.031E-02	0.630
	+	510.84		3.893E-01	3.565E-01	2.395E-01	2.518E-02	1.626
	+	583.14	*	4.846E-01	9.650E-02	6.526E-02	4.385E-03	7.425
		860.37		4.238E-01	3.289E-01	5.810E-01	5.673E-02	0.729
BI-211		72.87		9.787E+00	6.917E+00	1.154E+01	1.269E+00	0.848
	+	351.07	*	3.333E+00	5.486E-01	3.590E-01	2.617E-02	9.286
BI-212	+	727.18	*	8.745E-01	4.801E-01	5.331E-01	4.265E-02	1.640
	+	785.46		6.894E+00	2.955E+00	3.273E+00	2.424E-01	2.106
		1620.62		9.789E-01	9.570E-01	1.844E+00	1.406E-01	0.531
PB-212	+	74.81		2.874E+00	1.082E+00	1.220E+00	1.756E-01	2.356
	+	77.11		1.936E+00	5.931E-01	6.759E-01	7.390E-02	2.864
	+	87.30		1.039E+00	9.427E-01	1.427E+00	2.153E-01	0.728
	+	238.63	*	1.459E+00	1.567E-01	1.043E-01	7.914E-03	13.990
	+	300.09		1.610E+00	1.126E+00	1.330E+00	1.169E-01	1.210
PO-212	+	74.81		2.874E+00	1.082E+00	1.220E+00	1.756E-01	2.356
	+	77.11		1.936E+00	5.931E-01	6.759E-01	7.390E-02	2.864
	+	87.30		1.039E+00	9.427E-01	1.427E+00	2.153E-01	0.728
		115.19		2.557E+00	6.428E+00	9.423E+00	6.742E-01	0.271
	+	238.63	*	1.459E+00	1.567E-01	1.043E-01	7.914E-03	13.990
	+	300.09		1.610E+00	1.126E+00	1.330E+00	1.169E-01	1.210
BI-214	+	609.31	*	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
	+	1120.29		1.661E+00	7.005E-01	4.413E-01	4.312E-02	3.764
	+	1764.49		1.463E+00	4.122E-01	3.127E-01	2.088E-02	4.678
PB-214	+	74.81		4.952E+00	1.842E+00	2.102E+00	2.779E-01	2.356
	+	77.11		3.318E+00	1.048E+00	1.159E+00	1.544E-01	2.864
	+	87.30		1.780E+00	1.611E+00	2.444E+00	3.343E-01	0.728

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	241.98		2.333E+00	6.395E-01	5.923E-01	4.928E-02	3.939
	+	295.21		1.234E+00	2.817E-01	2.265E-01	2.046E-02	5.449
	+	351.92	*	1.160E+00	2.002E-01	1.251E-01	1.122E-02	9.267
	+	74.81		4.952E+00	1.842E+00	2.102E+00	2.779E-01	2.356
	+	77.11		3.318E+00	1.048E+00	1.159E+00	1.544E-01	2.864
	+	87.30		1.780E+00	1.611E+00	2.444E+00	3.343E-01	0.728
PO-216	+	241.98		2.333E+00	6.395E-01	5.923E-01	4.928E-02	3.939
	+	295.21		1.234E+00	2.817E-01	2.265E-01	2.046E-02	5.449
	+	351.92	*	1.160E+00	2.002E-01	1.251E-01	1.122E-02	9.267
	+	74.81		2.874E+00	1.082E+00	1.220E+00	1.756E-01	2.356
	+	77.11		1.936E+00	5.931E-01	6.759E-01	7.390E-02	2.864
	+	87.30		1.039E+00	9.427E-01	1.427E+00	2.153E-01	0.728
PO-218	+	238.63	*	1.459E+00	1.567E-01	1.043E-01	7.914E-03	13.990
	+	300.09		1.610E+00	1.126E+00	1.330E+00	1.169E-01	1.210
	+	74.81		4.952E+00	1.842E+00	2.102E+00	2.779E-01	2.356
	+	77.11		3.318E+00	1.048E+00	1.159E+00	1.544E-01	2.864
	+	87.30		1.780E+00	1.611E+00	2.444E+00	3.343E-01	0.728
	+	241.98		2.333E+00	6.395E-01	5.923E-01	4.928E-02	3.939
RA-224	+	295.21		1.234E+00	2.817E-01	2.265E-01	2.046E-02	5.449
	+	351.92	*	1.160E+00	2.002E-01	1.251E-01	1.122E-02	9.267
	+	240.98	*	4.423E+00	1.187E+00	1.187E+00	7.286E-02	3.726
	+	609.31	*	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
	+	1120.29		1.661E+00	7.005E-01	4.413E-01	4.312E-02	3.764
	+	1764.49		1.463E+00	4.122E-01	3.127E-01	2.088E-02	4.678
AC-228	+	338.32		1.657E+00	7.989E-01	4.016E-01	1.643E-01	4.125
	+	911.07	*	1.253E+00	3.338E-01	2.159E-01	2.665E-02	5.803
	+	969.11		1.605E+00	5.401E-01	3.946E-01	9.329E-02	4.068
	+	338.32		1.657E+00	7.989E-01	4.016E-01	1.643E-01	4.125
	+	911.07	*	1.253E+00	3.338E-01	2.159E-01	2.665E-02	5.803
	+	969.11		1.605E+00	5.401E-01	3.946E-01	9.329E-02	4.068
TH-228	+	74.81		2.914E+00	1.063E+00	1.237E+00	1.361E-01	2.356
	+	77.11		1.963E+00	6.014E-01	6.853E-01	7.493E-02	2.864
	+	87.30		1.054E+00	9.500E-01	1.447E+00	1.635E-01	0.728
	+	238.63	*	1.480E+00	1.589E-01	1.058E-01	8.024E-03	13.990
	+	300.09		1.632E+00	1.487E+00	1.349E+00	7.961E-01	1.210
	+	609.31	*	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
TH-230	+	1120.29		1.661E+00	7.005E-01	4.413E-01	4.312E-02	3.764
	+	1764.49		1.463E+00	4.122E-01	3.127E-01	2.088E-02	4.678
	+	338.32		1.657E+00	4.374E-01	4.016E-01	2.692E-02	4.125
	+	911.07	*	1.253E+00	3.338E-01	2.159E-01	2.665E-02	5.803
	+	969.11		1.605E+00	5.401E-01	3.946E-01	9.329E-02	4.068
	+	766.42		1.607E+02	8.609E+01	2.018E+01	1.019E+01	7.961
PA-234M	+	1001.03	*	1.659E+02	2.256E+01	7.551E+00	7.794E-01	21.970
	+	63.29	*	1.203E+02	2.488E+01	5.274E+00	1.039E+00	22.811
	+	92.38		1.181E+02	2.248E+01	1.786E+00	3.381E-01	66.100
	+	609.31	*	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
	+	1120.29		1.661E+00	7.005E-01	4.413E-01	4.312E-02	3.764
	+	1764.49		1.463E+00	4.122E-01	3.127E-01	2.088E-02	4.678
U-235		89.95		1.156E+01	5.159E+00	4.602E+00	1.452E+00	2.511

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	93.35		6.828E+00	3.067E+00	2.123E+00	6.052E-01	3.216
		105.00		6.636E-01	1.792E+00	2.929E+00	8.708E-01	0.227
	+	143.76	*	1.931E+00	5.741E-01	4.655E-01	7.611E-02	4.149
	+	163.35		1.790E+00	8.209E-01	1.027E+00	1.837E-01	1.744
	+	185.71		1.887E+00	1.752E-01	8.902E-02	5.010E-03	21.198
	+	205.31		1.501E+00	1.097E+00	1.048E+00	1.885E-01	1.432
NP-237	+	86.50	*	6.598E-01	6.103E-01	8.624E-01	2.027E-01	0.765
		95.87		9.156E+00	3.245E+00	3.090E+00	7.722E-01	2.963
U-238	+	63.29	*	1.203E+02	2.488E+01	5.274E+00	1.039E+00	22.811
	+	92.38		1.181E+02	1.238E+01	1.786E+00	1.835E-01	66.100
AM-243	+	74.67	*	4.659E-01	1.699E-01	1.987E-01	2.176E-02	2.345
	+	86.72		2.474E+01	2.231E+01	3.352E+01	3.775E+00	0.738
		117.66		-1.110E+01	6.042E+00	9.280E+00	6.439E-01	-1.196
	+	142.18		1.622E+02	4.140E+01	3.886E+01	2.319E+00	4.175
ANH-511	+	511.00	*	8.410E-02	7.667E-02	5.175E-02	3.315E-03	1.625

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.333E-02	3.512E-01	5.641E-01	4.195E-02	-0.059
NA-22		1274.54	*	2.488E-02	4.585E-02	7.970E-02	6.173E-03	0.312
NA-24		1368.53	*	2.858E-02	4.585E-02	Half-Life too short		
AL-26		1129.67		8.124E-01	1.868E+00	3.031E+00	2.126E-01	0.268
		1808.65	*	1.911E-03	3.201E-02	5.228E-02	3.315E-03	0.037
TI-44		67.85		-1.587E-01	1.197E-01	1.704E-01	1.924E-02	-0.931
	+	78.38	*	3.572E-01	1.094E-01	1.298E-01	1.420E-02	2.752
SC-46		889.25	*	1.200E-02	4.322E-02	7.212E-02	7.137E-03	0.166
	+	1120.51		2.815E-01	1.172E-01	1.267E-01	9.097E-03	2.222
V-48		944.10		8.476E-01	9.488E-01	1.644E+00	1.593E-01	0.516
		983.50	*	1.772E-02	7.816E-02	1.220E-01	1.128E-02	0.145
		1312.09		-5.634E-02	6.936E-02	1.041E-01	8.688E-03	-0.541
CR-51		320.08	*	3.297E-01	4.014E-01	6.868E-01	4.960E-02	0.480
MN-52	+	744.21		1.216E+00	4.964E-01	4.887E-01	3.188E-02	2.489
		848.13		2.041E+00	6.078E+00	1.022E+01	9.062E-01	0.200
		935.52		2.389E-03	2.485E-01	4.050E-01	3.960E-02	0.006
		1246.25		-3.927E+00	6.956E+00	1.109E+01	8.081E-01	-0.354
		1333.61		1.997E-01	4.157E+00	6.915E+00	6.008E-01	0.029
		1434.06	*	1.052E-01	1.946E-01	3.422E-01	2.892E-02	0.307
MN-54		834.83	*	1.311E-02	4.144E-02	6.949E-02	5.936E-03	0.189
CO-56	+	846.75	*	3.268E-02	4.014E-02	6.976E-02	6.160E-03	0.469
		977.42		-3.140E+00	3.914E+00	4.947E+00	4.610E-01	-0.635
		1037.82		1.109E-01	3.036E-01	5.070E-01	4.559E-02	0.219
		1175.09		-1.378E+00	2.281E+00	3.635E+00	2.252E-01	-0.379
		1238.25		1.417E-01	1.038E-01	1.853E-01	1.382E-02	0.765
		1360.21		9.204E-01	9.494E-01	1.737E+00	1.500E-01	0.530
		1771.40		-8.741E-02	2.194E-01	3.276E-01	2.171E-02	-0.267
CO-57		122.06	*	-3.466E-02	3.830E-02	6.050E-02	3.990E-03	-0.573
		136.48		-2.135E-01	3.024E-01	4.776E-01	3.340E-02	-0.447

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-58		810.76	*	-1.946E-02	4.198E-02	6.671E-02	5.338E-03	-0.292
FE-59	+	142.65		2.444E+01	6.238E+00	7.510E+00	4.475E-01	3.255
		192.34		-6.454E-01	1.178E+00	1.826E+00	2.147E-01	-0.353
		1099.22	*	-3.704E-02	9.508E-02	1.473E-01	1.230E-02	-0.251
		1291.56		9.127E-02	1.195E-01	2.122E-01	1.963E-02	0.430
CO-60		1173.22	*	2.476E-02	4.484E-02	7.824E-02	4.825E-03	0.316
		1332.49	*	1.895E-02	3.777E-02	6.582E-02	5.720E-03	0.288
ZN-65		1115.52	*	-8.218E-03	1.109E-01	1.520E-01	1.107E-02	-0.054
GE-68		1077.35	*	-5.073E-02	1.323E+00	2.124E+00	1.683E-01	-0.024
AS-73		53.44	*	1.090E+00	2.819E+00	4.745E+00	6.279E-01	0.230
AS-74		595.88	*	4.448E-02	9.564E-02	1.648E-01	9.416E-03	0.270
		634.78		-4.188E-01	3.610E-01	5.596E-01	2.954E-02	-0.748
SE-75		66.05		-7.837E+00	1.214E+01	1.771E+01	2.281E+00	-0.443
		96.73		1.031E+01	2.417E+00	2.691E+00	3.809E-01	3.831
		121.11		-5.196E-02	2.039E-01	3.282E-01	3.215E-02	-0.158
		136.00		8.752E-04	5.632E-02	9.083E-02	5.640E-03	0.010
		198.60		-7.886E-01	2.306E+00	3.595E+00	2.547E-01	-0.219
		264.65	*	2.530E-02	4.891E-02	8.339E-02	5.319E-03	0.303
		279.53		-4.627E-02	1.210E-01	1.990E-01	1.363E-02	-0.233
		303.91		-1.778E-01	2.527E+00	3.676E+00	3.685E-01	-0.048
		400.65		1.689E-01	2.730E-01	4.593E-01	4.485E-02	0.368
BR-77	+	87.88		3.448E+02	3.109E+02	4.644E+02	5.265E+01	0.743
		200.40		-2.920E+01	1.687E+02	2.347E+02	1.354E+01	-0.124
	+	239.00		1.636E+02	1.596E+01	2.484E+01	1.521E+00	6.587
		249.79		-1.102E+00	5.190E+01	8.708E+01	5.408E+00	-0.013
		281.68		-2.597E+01	6.803E+01	1.117E+02	7.194E+00	-0.232
		297.23		4.174E+01	6.287E+01	7.079E+01	4.622E+00	0.590
		303.76		-3.323E+01	1.536E+02	2.215E+02	1.453E+01	-0.150
		439.47		-2.478E+01	1.127E+02	1.809E+02	1.216E+01	-0.137
		484.57		-3.019E+01	1.786E+02	2.853E+02	1.869E+01	-0.106
		520.65	*	-3.185E+00	8.244E+00	1.291E+01	8.192E-01	-0.247
		574.64		1.577E+01	1.667E+02	2.754E+02	1.630E+01	0.057
		578.91		2.693E+01	7.384E+01	1.115E+02	6.552E+00	0.242
		585.48		3.781E+02	1.506E+02	2.561E+02	1.489E+01	1.476
		755.35		6.036E+01	1.290E+02	2.197E+02	1.484E+01	0.275
		817.79		4.993E+01	1.049E+02	1.782E+02	1.451E+01	0.280
SR-82		698.33		-2.587E+01	3.692E+01	5.884E+01	3.301E+00	-0.440
		776.49	*	-6.472E-01	4.412E-01	6.555E-01	4.726E-02	-0.987
		1395.20		6.594E-01	1.068E+01	1.778E+01	1.522E+00	0.037
RB-83		520.41	*	-3.193E-02	7.718E-02	1.207E-01	7.658E-03	-0.265
		529.64		-3.056E-02	1.207E-01	1.905E-01	1.197E-02	-0.160
		552.65		-2.427E-02	2.283E-01	3.625E-01	2.214E-02	-0.067
RB-84		881.50	*	7.665E-02	7.693E-02	1.344E-01	1.303E-02	0.570
KR-85		513.99	*	4.349E+00	8.803E+00	1.282E+01	8.188E-01	0.339
SR-85		513.99	*	2.201E-02	4.455E-02	6.488E-02	4.144E-03	0.339
RB-86		1076.63	*	-3.010E-02	8.100E-01	1.300E+00	1.032E-01	-0.023
Y-88		898.02		2.534E-02	4.319E-02	7.370E-02	7.488E-03	0.344
		1836.01	*	-4.376E-03	2.687E-02	4.166E-02	2.556E-03	-0.105
ZR-88		392.90	*	-2.218E-02	3.370E-02	5.323E-02	3.617E-03	-0.417

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91	1204.90	*		6.054E+00	1.835E+01	3.144E+01	2.088E+00	0.193
NB-94	702.63	*		4.085E-03	3.672E-02	6.148E-02	3.500E-03	0.066
	871.10			-2.958E-02	3.725E-02	5.697E-02	5.374E-03	-0.519
NB-95M	235.69	*		2.642E-01	1.552E-01	2.451E-01	1.901E-02	1.078
ZR-95	724.18			1.544E-01	1.174E-01	1.866E-01	1.330E-02	0.827
	756.15	*		1.555E-02	7.833E-02	1.312E-01	1.031E-02	0.118
NB-97	657.90	*		-4.789E-02	7.833E-02	Half-Life	too short	
	1024.50			6.216E-01	7.833E-02	Half-Life	too short	
ZR-97	254.15			1.594E-01	7.833E-02	Half-Life	too short	
	355.39			1.155E+00	7.833E-02	Half-Life	too short	
	507.63	*		1.192E+00	7.833E-02	Half-Life	too short	
	602.52			-8.004E-01	7.833E-02	Half-Life	too short	
	1021.30			-7.112E-01	7.833E-02	Half-Life	too short	
	1147.95			-9.721E-01	7.833E-02	Half-Life	too short	
	1362.66			-5.417E-01	7.833E-02	Half-Life	too short	
	1750.46			1.402E-01	7.833E-02	Half-Life	too short	
MO-99	140.51			1.800E+01	2.961E+01	4.283E+01	1.156E+01	0.420
	181.06			-9.660E+00	1.878E+01	2.584E+01	4.410E+00	-0.374
	366.43			2.389E+01	6.713E+01	1.122E+02	7.597E+00	0.213
	739.58	*		1.755E+01	1.204E+01	1.900E+01	2.671E+00	0.924
	778.00			1.032E+00	3.048E+01	4.911E+01	3.557E+00	0.021
TC-99M	140.51	*		1.186E+09	3.048E+01	Half-Life	too short	
RH-101	127.23			-1.084E-02	4.746E-02	7.630E-02	4.877E-03	-0.142
	198.01	*		1.893E-03	4.184E-02	6.613E-02	3.799E-03	0.029
	325.23			-4.353E-01	2.536E-01	3.862E-01	2.571E-02	-1.127
RH-102	418.52			1.480E-02	3.111E-01	5.081E-01	3.440E-02	0.029
	475.06	*		-1.510E-03	3.310E-02	5.333E-02	3.518E-03	-0.028
	631.29			4.691E-02	5.735E-02	1.007E-01	5.356E-03	0.466
	697.49			4.704E-03	8.446E-02	1.410E-01	7.889E-03	0.033
+	766.84			1.526E+00	2.941E-01	4.027E-01	2.819E-02	3.789
	1046.59			1.991E-02	1.048E-01	1.724E-01	1.448E-02	0.116
	1112.84			1.476E-01	2.571E-01	3.820E-01	2.796E-02	0.386
RU-103	497.08	*		1.791E-02	4.464E-02	7.350E-02	9.536E-03	0.244
	610.33			9.481E+00	1.932E+00	2.523E+00	3.867E-01	3.758
RH-106	511.85	+		4.191E-01	3.821E-01	3.764E-01	2.409E-02	1.113
	621.84	*		-8.996E-02	3.308E-01	5.453E-01	6.304E-02	-0.165
	1050.47			-1.276E-01	2.140E+00	3.432E+00	2.863E-01	-0.037
RU-106	511.85	+		4.191E-01	3.821E-01	3.764E-01	2.409E-02	1.113
	621.84	*		-8.996E-02	3.306E-01	5.453E-01	2.962E-02	-0.165
	1050.47			-1.276E-01	2.140E+00	3.432E+00	2.863E-01	-0.037
AG-108M	433.93	*		-1.973E-02	3.505E-02	5.507E-02	3.949E-03	-0.358
	614.37			-1.540E-02	4.518E-02	6.393E-02	3.856E-03	-0.241
	722.95			2.830E-02	5.047E-02	7.631E-02	5.006E-03	0.371
AG-110M	657.75	*		-5.650E-02	4.084E-02	6.266E-02	3.395E-03	-0.902
	677.61			-8.749E-02	3.195E-01	5.232E-01	2.937E-02	-0.167
	706.67			-9.134E-02	2.212E-01	3.581E-01	2.192E-02	-0.255
	763.93			1.850E+00	3.197E-01	5.629E-01	4.075E-02	3.286
	884.67			1.678E-02	5.678E-02	9.482E-02	9.504E-03	0.177
	937.48			-1.812E-02	1.223E-01	1.968E-01	1.974E-02	-0.092

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1384.27			7.756E-03	1.686E-01	2.490E-01	2.199E-02	0.031
IN-111	171.28			-5.713E-01	9.883E-01	1.545E+00	8.498E-02	-0.370
	245.39	*		3.055E-01	9.638E-01	1.451E+00	8.957E-02	0.211
IN-113M	391.69	*		-4.093E-03	4.808E-02	7.832E-02	5.585E-03	-0.052
SN-113	391.69	*		-4.093E-03	4.808E-02	7.832E-02	5.585E-03	-0.052
IN-114M	190.27	*		6.632E-02	2.480E-01	3.533E-01	2.003E-02	0.188
CD-115	260.90			-1.062E+02	1.142E+02	1.600E+02	1.007E+01	-0.664
	492.35			-3.463E+01	2.798E+01	4.152E+01	2.704E+00	-0.834
	527.90	*		-5.711E+00	8.498E+00	1.305E+01	8.212E-01	-0.438
SN-117M	156.02			-2.000E+00	2.898E+00	4.542E+00	2.572E-01	-0.440
	158.56	*		4.276E-02	7.876E-02	1.144E-01	6.418E-03	0.374
SB-122	563.90	*		-8.420E-01	1.711E+00	2.645E+00	1.591E-01	-0.318
	692.80			6.037E+00	3.552E+01	5.972E+01	3.288E+00	0.101
I-123	159.00	*		7.137E-01	3.552E+01	Half-Life too short		
	528.96			-8.494E+01	3.552E+01	Half-Life too short		
TE-123M	159.00	*		1.668E-02	4.313E-02	6.231E-02	3.539E-03	0.268
I-124	602.71	*		-2.569E-01	6.230E-01	8.797E-01	4.963E-02	-0.292
	722.78			2.077E+00	4.277E+00	6.430E+00	3.914E-01	0.323
	1325.50			-3.553E+01	2.869E+01	4.075E+01	3.494E+00	-0.872
	1376.25			2.610E+01	2.586E+01	4.686E+01	4.033E+00	0.557
	1509.49			1.656E+01	1.389E+01	2.574E+01	2.104E+00	0.643
SB-124	1691.02			-9.261E-02	2.682E+00	4.329E+00	3.114E-01	-0.021
	602.71			-1.806E-02	4.379E-02	6.183E-02	3.490E-03	-0.292
	645.85			1.135E-02	5.497E-01	9.158E-01	5.465E-02	0.012
	709.31			-1.432E+00	2.862E+00	4.600E+00	2.678E-01	-0.311
	713.82			5.538E-01	1.750E+00	2.963E+00	3.044E-01	0.187
	722.78			2.116E-01	4.358E-01	6.552E-01	4.160E-02	0.323
+	968.20			1.629E+01	4.192E+00	6.649E+00	6.268E-01	2.450
	1045.16			4.071E-01	2.268E+00	3.727E+00	3.138E-01	0.109
	1325.50			-3.867E+00	3.122E+00	4.435E+00	3.802E-01	-0.872
	1368.21			3.933E-01	1.747E+00	2.767E+00	3.729E-01	0.142
	1436.60			7.019E-01	3.528E+00	5.964E+00	5.035E-01	0.118
SB-125	1691.02	*		-2.226E-03	6.446E-02	1.040E-01	7.905E-03	-0.021
	427.89	*		4.421E-02	1.031E-01	1.714E-01	1.193E-02	0.258
	463.38			1.232E-01	3.093E-01	5.111E-01	3.833E-02	0.241
	600.56			-6.135E-02	1.980E-01	3.081E-01	2.031E-02	-0.199
	635.90			-2.209E-01	2.860E-01	4.553E-01	2.887E-02	-0.485
TE-125M	109.28	*		4.024E+01	1.849E+01	2.790E+01	2.677E+00	1.443
I-126	388.63			9.881E-02	2.164E-01	3.618E-01	2.458E-02	0.273
	666.33	*		-8.770E-02	1.968E-01	3.203E-01	1.607E-02	-0.274
	753.82			1.094E+00	1.557E+00	2.686E+00	1.806E-01	0.407
SB-126	223.80			-5.833E+00	4.351E+00	7.012E+00	4.198E-01	-0.832
	278.60			1.264E+00	2.587E+00	4.393E+00	2.820E-01	0.288
	296.50			6.612E+00	2.343E+00	3.026E+00	1.974E-01	2.185
	414.70			2.087E-02	7.624E-02	1.260E-01	8.540E-03	0.166
	415.30			1.601E+00	6.421E+00	1.060E+01	7.182E-01	0.151
	555.20			2.730E+00	4.244E+00	7.049E+00	4.292E-01	0.387
	573.80			3.887E-01	1.088E+00	1.868E+00	1.107E-01	0.208
	593.00			-5.632E-01	9.338E-01	1.516E+00	8.705E-02	-0.371

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		656.30		-3.621E+00	3.658E+00	5.762E+00	2.884E-01	-0.628
		666.33		-3.654E-02	8.201E-02	1.335E-01	6.696E-03	-0.274
		675.00		1.219E-01	1.903E+00	3.187E+00	1.649E-01	0.038
		695.00		-3.817E-02	8.131E-02	1.315E-01	7.297E-03	-0.290
		697.00		2.036E-01	2.715E-01	4.713E-01	2.632E-02	0.432
		720.50	*	2.382E-02	1.686E-01	2.461E-01	1.487E-02	0.097
		856.80		-3.067E-01	4.785E-01	7.457E-01	6.768E-02	-0.411
		989.30		-5.999E-01	1.279E+00	1.988E+00	1.824E-01	-0.302
		1034.80		-3.010E+00	8.362E+00	1.304E+01	1.118E+00	-0.231
		1213.00		2.595E+00	4.493E+00	7.814E+00	5.287E-01	0.332
		61.10		7.873E+02	1.857E+02	2.491E+02	3.429E+01	3.161
		252.40		1.208E+00	4.125E+00	6.724E+00	2.791E+00	0.180
		290.80		-1.290E+01	2.128E+01	3.006E+01	2.764E+00	-0.429
		411.60		-8.722E+00	1.074E+01	1.666E+01	2.420E+00	-0.524
		444.90		6.360E-01	8.417E+00	1.372E+01	1.502E+00	0.046
		473.00		3.339E-01	1.531E+00	2.503E+00	2.821E-01	0.133
		543.00		1.066E+00	1.565E+01	2.515E+01	3.214E+00	0.042
		603.60		-6.652E+00	1.076E+01	1.489E+01	1.533E+00	-0.447
		685.20	*	-4.650E-01	1.166E+00	1.893E+00	1.652E-01	-0.246
		698.50		-1.336E+01	1.375E+01	2.134E+01	3.014E+00	-0.626
XE-127		722.20		6.547E+00	2.883E+01	4.240E+01	3.777E+00	0.154
		783.80		4.902E+00	4.362E+00	6.731E+00	7.566E-01	0.728
		57.60		-2.722E+00	1.896E+01	3.013E+01	3.830E+00	-0.090
		145.22		2.179E+00	1.096E+00	1.665E+00	9.817E-02	1.309
		172.10		-3.406E-02	1.555E-01	2.460E-01	1.355E-02	-0.138
I-131		202.84	*	5.818E-02	6.492E-02	1.005E-01	5.818E-03	0.579
		374.96		-2.259E-01	2.107E-01	3.258E-01	2.210E-02	-0.693
		80.18		5.921E-01	1.244E+01	1.456E+01	1.603E+00	0.041
		284.30		-9.734E-01	1.440E+00	2.332E+00	1.640E-01	-0.417
TE-132		364.48	*	-3.088E-02	1.137E-01	1.844E-01	1.354E-02	-0.167
		636.97		3.766E-01	1.443E+00	2.455E+00	1.472E-01	0.153
		722.89		4.077E+00	7.630E+00	1.151E+01	7.088E-01	0.354
		49.72		3.313E+01	5.833E+01	9.857E+01	1.384E+01	0.336
	+	111.76		2.799E+02	5.616E+01	8.702E+01	8.377E+00	3.216
BA-133		116.30		-3.550E+01	3.774E+01	5.275E+01	4.907E+00	-0.673
		228.16	*	3.069E-01	6.105E-01	1.044E+00	1.484E-01	0.294
		53.15		-2.691E-01	1.238E+01	2.071E+01	2.742E+00	-0.013
		79.62		-4.036E-01	3.891E+00	4.531E+00	7.549E-01	-0.089
		81.00		7.237E-02	2.970E-01	3.493E-01	6.037E-02	0.207
I-133		276.40		4.391E-01	4.238E-01	7.270E-01	9.629E-02	0.604
		302.84		-4.452E-02	1.751E-01	2.519E-01	3.036E-02	-0.177
		356.01	*	2.933E-02	5.051E-02	7.566E-02	9.129E-03	0.388
		383.85		1.212E-01	3.272E-01	5.455E-01	6.235E-02	0.222
	+	510.53		3.194E-01	3.272E-01	Half-Life too short		
		529.87	*	-3.175E-04	3.272E-01	Half-Life too short		
		706.58		-6.856E-02	3.272E-01	Half-Life too short		
		856.28		-2.065E-01	3.272E-01	Half-Life too short		
		875.33		2.157E-02	3.272E-01	Half-Life too short		
		1236.41		4.944E-01	3.272E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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CS-134	1298.22			6.050E-03	3.272E-01	Half-Life	too short	
	475.35			1.721E-01	2.157E+00	3.500E+00	2.309E-01	0.049
	563.23			-1.513E-01	4.082E-01	6.362E-01	3.904E-02	-0.238
	569.32			9.472E-02	2.283E-01	3.733E-01	2.290E-02	0.254
	604.70			2.948E-03	3.838E-02	5.652E-02	3.196E-03	0.052
	795.84	*		4.664E-02	5.370E-02	9.302E-02	7.171E-03	0.501
	801.93			-3.462E-01	4.320E-01	6.614E-01	5.179E-02	-0.523
	1038.57			2.612E+00	3.832E+00	6.569E+00	5.595E-01	0.398
	1167.94			5.459E-02	2.637E+00	4.424E+00	2.775E-01	0.012
	1365.15			-4.925E-01	1.170E+00	1.833E+00	1.654E-01	-0.269
CS-135	268.24	*		8.911E-03	1.770E-01	2.966E-01	2.397E-02	0.030
I-135	288.45			1.696E+09	1.770E-01	Half-Life	too short	
	417.63			2.698E+08	1.770E-01	Half-Life	too short	
	546.56			2.644E+08	1.770E-01	Half-Life	too short	
	836.80			9.539E+08	1.770E-01	Half-Life	too short	
	1038.76			5.293E+08	1.770E-01	Half-Life	too short	
	1124.00			7.951E+08	1.770E-01	Half-Life	too short	
	1131.51			3.063E+08	1.770E-01	Half-Life	too short	
	1260.41	*		-9.492E+07	1.770E-01	Half-Life	too short	
	1457.56			5.735E+10	1.770E-01	Half-Life	too short	
	1678.03			1.751E+08	1.770E-01	Half-Life	too short	
CS-136	1706.46			-6.691E+08	1.770E-01	Half-Life	too short	
	1791.20			-1.699E+08	1.770E-01	Half-Life	too short	
	66.91			-1.821E+00	1.881E+00	2.692E+00	4.610E-01	-0.676
	86.29	+		2.748E+00	2.491E+00	3.708E+00	5.463E-01	0.741
	153.22			6.330E-01	8.412E-01	1.375E+00	9.843E-02	0.460
	163.89	+		3.801E+00	1.627E+00	2.440E+00	1.711E-01	1.558
	176.55			2.180E-01	4.623E-01	7.459E-01	4.692E-02	0.292
	273.65			-8.192E-01	4.920E-01	7.673E-01	5.473E-02	-1.068
	340.57			2.697E-01	1.313E-01	2.128E-01	1.496E-02	1.267
	818.51			1.927E-03	7.836E-02	1.291E-01	1.054E-02	0.015
BA-137M	1048.07	*		-7.695E-02	9.687E-02	1.432E-01	1.253E-02	-0.537
	1235.34			1.094E+00	6.318E-01	1.146E+00	1.238E-01	0.955
	661.65	*		3.557E-02	4.275E-02	7.444E-02	3.673E-03	0.478
CS-137	661.65	*		3.760E-02	4.520E-02	7.869E-02	3.905E-03	0.478
CE-139	165.85	*		-7.592E-03	4.552E-02	6.418E-02	3.506E-03	-0.118
BA-140	162.64	+		2.671E+00	1.140E+00	1.693E+00	1.063E-01	1.578
	304.84			-7.560E-02	1.398E+00	2.147E+00	5.896E-01	-0.035
	423.70			-1.044E+00	1.990E+00	3.101E+00	9.916E-01	-0.337
	537.32	*		-5.462E-02	2.878E-01	4.548E-01	1.483E-01	-0.120
LA-140	328.77			5.891E-01	3.200E-01	5.621E-01	4.095E-02	1.048
	432.53			-2.276E+00	2.120E+00	3.226E+00	2.345E-01	-0.706
	487.03			-4.083E-02	1.442E-01	2.285E-01	1.652E-02	-0.179
	751.79			7.077E-01	1.908E+00	3.061E+00	2.398E-01	0.231
	815.85			2.346E-01	3.347E-01	5.765E-01	5.273E-02	0.407
	867.82			-3.836E-01	1.362E+00	2.179E+00	2.130E-01	-0.176
	919.63			2.194E+00	2.955E+00	5.068E+00	5.947E-01	0.433
	925.24			-6.009E-01	1.269E+00	1.992E+00	2.063E-01	-0.302
	1596.49	*		-5.973E-02	7.266E-02	1.021E-01	7.921E-03	-0.585

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CE-141		145.44	*	1.071E-01	9.670E-02	1.435E-01	8.784E-03	0.746
CE-143		57.37		-1.090E-03	9.670E-02	Half-Life	too short	
		231.56		-9.640E-04	9.670E-02	Half-Life	too short	
		293.26	*	4.296E-04	9.670E-02	Half-Life	too short	
	+	350.59		1.420E-02	9.670E-02	Half-Life	too short	
		490.36		7.288E-04	9.670E-02	Half-Life	too short	
		664.57		-6.048E-04	9.670E-02	Half-Life	too short	
		721.93		1.080E-04	9.670E-02	Half-Life	too short	
CE-144		80.11		1.293E-01	6.353E+00	7.427E+00	8.150E-01	0.017
		133.54	*	-1.543E-01	3.078E-01	4.889E-01	7.025E-02	-0.316
PM-144		476.78		-3.151E-02	7.572E-02	1.193E-01	9.081E-03	-0.264
		618.01		6.869E-03	3.307E-02	5.616E-02	3.281E-03	0.122
		696.49	*	3.541E-02	3.735E-02	6.552E-02	3.655E-03	0.540
		778.57		2.329E+00	2.807E+00	4.629E+00	3.360E-01	0.503
PR-144		696.49	*	2.398E+00	2.529E+00	4.437E+00	2.474E-01	0.540
		1489.15		-1.814E+01	1.109E+01	1.291E+01	1.066E+00	-1.405
PM-146		453.90	*	-1.898E-03	4.954E-02	8.010E-02	7.399E-03	-0.024
		633.02		-7.822E-01	1.484E+00	2.357E+00	8.663E-01	-0.332
		735.90		1.870E-02	1.996E-01	2.894E-01	8.104E-02	0.065
		747.13		-5.759E-02	1.185E-01	1.621E-01	2.089E-02	-0.355
ND-147	+	91.11		5.495E+01	6.089E+00	2.087E+00	2.326E-01	26.333
		319.41		3.280E+00	3.444E+00	5.921E+00	3.930E-01	0.554
		439.89		-1.243E+00	6.090E+00	9.780E+00	6.576E-01	-0.127
		531.02	*	2.371E-01	5.998E-01	9.830E-01	1.350E-01	0.241
PM-149		285.90	*	-6.317E+01	6.798E+01	1.079E+02	1.560E+01	-0.585
EU-152		121.78		-6.668E-02	1.118E-01	1.781E-01	1.468E-02	-0.374
		244.69		1.634E-01	3.962E-01	5.992E-01	3.696E-02	0.273
		344.27	*	-1.321E-01	1.117E-01	1.577E-01	1.162E-02	-0.838
		443.98		-3.603E-01	1.063E+00	1.691E+00	1.135E-01	-0.213
		778.89		3.440E-01	3.305E-01	5.361E-01	3.893E-02	0.642
		867.32		-2.354E-01	8.789E-01	1.409E+00	1.315E-01	-0.167
	+	964.01		5.839E-01	3.943E-01	5.767E-01	5.464E-02	1.012
		1085.78		-2.083E-01	4.067E-01	6.216E-01	4.839E-02	-0.335
		1112.02		2.946E-01	3.560E-01	5.498E-01	4.033E-02	0.536
		1407.95		1.207E-01	1.917E-01	3.374E-01	2.877E-02	0.358
GD-153		69.67		4.985E+00	4.083E+00	6.180E+00	6.893E-01	0.807
	+	83.37		6.696E+01	4.696E+01	5.656E+01	6.269E+00	1.184
	+	97.43	*	1.640E+00	2.664E-01	3.039E-01	2.830E-02	5.397
		103.18		-7.680E-02	1.964E-01	2.828E-01	2.391E-02	-0.272
EU-154		123.07		-2.542E-02	7.770E-02	1.247E-01	1.233E-02	-0.204
		247.94		-1.364E-01	4.044E-01	6.708E-01	6.565E-02	-0.203
		591.81		-4.645E-01	6.613E-01	1.065E+00	1.038E-01	-0.436
		723.30		1.604E-01	2.135E-01	3.275E-01	2.399E-02	0.490
		756.87		-2.136E-01	8.640E-01	1.406E+00	1.509E-01	-0.152
		873.19		1.400E-01	3.153E-01	5.333E-01	6.862E-02	0.263
		996.32		3.006E-01	4.572E-01	6.842E-01	1.231E-01	0.439
		1004.76		1.398E-01	2.558E-01	3.805E-01	4.532E-02	0.367
		1274.45	*	6.060E-02	1.293E-01	2.234E-01	2.379E-02	0.271
EU-155		48.70		3.681E+00	9.876E+00	1.668E+01	2.003E+00	0.221

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160		60.01		1.827E+01	1.571E+01	2.387E+01	2.940E+00	0.765
	+	86.54		2.705E-01	2.439E-01	3.651E-01	4.132E-02	0.741
		105.31	*	1.201E-01	1.817E-01	3.003E-01	2.491E-02	0.400
	+	86.79		7.144E-01	6.441E-01	9.632E-01	1.085E-01	0.742
		197.04		-5.677E-01	7.173E-01	1.100E+00	6.307E-02	-0.516
		215.65		1.372E-01	8.328E-01	1.416E+00	8.373E-02	0.097
	+	298.57		2.315E-01	1.613E-01	2.122E-01	1.387E-02	1.091
		879.36	*	-1.028E-01	1.642E-01	2.559E-01	2.467E-02	-0.402
		962.29		1.034E+00	5.909E-01	1.059E+00	1.006E-01	0.976
		966.15		1.099E+00	2.815E-01	5.199E-01	4.913E-02	2.114
HO-166M		1177.93		-2.377E-01	3.649E-01	5.789E-01	3.610E-02	-0.411
		1271.85		-1.644E-01	7.376E-01	1.203E+00	9.256E-02	-0.137
		80.57		1.834E-01	8.142E-01	9.579E-01	1.052E-01	0.191
	+	184.41		1.415E+00	1.314E-01	1.461E-01	8.204E-03	9.688
		280.46		-7.904E-02	9.407E-02	1.516E-01	9.750E-03	-0.521
		410.95		-2.305E-02	2.611E-01	4.238E-01	2.874E-02	-0.054
		711.68	*	-2.093E-02	6.470E-02	1.053E-01	6.178E-03	-0.199
		752.31		2.314E-01	3.132E-01	5.295E-01	3.544E-02	0.437
		810.29		-7.075E-02	6.481E-02	9.766E-02	7.781E-03	-0.724
	TM-171	51.35		-1.004E+02	1.142E+02	1.869E+02	2.458E+01	-0.537
LU-176		52.39		-3.317E+01	5.628E+01	9.291E+01	1.231E+01	-0.357
		59.40		9.833E+01	8.574E+01	1.304E+02	1.619E+01	0.754
		66.72	*	-4.450E+01	7.162E+01	1.046E+02	1.191E+01	-0.426
	+	88.36		5.329E-01	4.805E-01	7.180E-01	8.076E-02	0.742
		201.83		-3.970E-03	3.996E-02	5.973E-02	3.453E-03	-0.066
		306.84	*	5.873E-03	2.741E-02	4.591E-02	3.020E-03	0.128
		401.10		4.911E-01	7.239E+00	1.187E+01	8.059E-01	0.041
	LU-177M	52.97		-3.098E-01	5.572E+00	9.318E+00	1.234E+00	-0.033
		54.07		9.225E-01	2.856E+00	4.802E+00	6.334E-01	0.192
		61.30		3.992E+01	6.972E+00	8.638E+00	1.045E+00	4.621
HF-181		121.62		-1.973E-01	5.671E-01	9.106E-01	6.025E-02	-0.217
		147.16		2.594E-01	9.943E-01	1.435E+00	8.402E-02	0.181
		171.86		-1.642E-01	6.375E-01	1.007E+00	5.545E-02	-0.163
		218.09		-6.347E-01	9.595E-01	1.588E+00	9.423E-02	-0.400
		268.79		8.000E-01	8.884E-01	1.531E+00	9.724E-02	0.523
		319.02		1.437E-01	2.915E-01	4.926E-01	3.268E-02	0.292
		367.43		5.549E-01	9.707E-01	1.638E+00	1.109E-01	0.339
		413.65	*	-5.994E-02	1.899E-01	3.044E-01	2.063E-02	-0.197
		56.28		-1.542E+00	2.924E+00	4.826E+00	6.235E-01	-0.319
		57.53		-8.560E-01	1.619E+00	2.548E+00	3.242E-01	-0.336
W-181		65.20		1.133E+00	2.394E+00	3.597E+00	4.156E-01	0.315
		133.02		-1.810E-02	9.611E-02	1.544E-01	9.585E-03	-0.117
		136.25		-3.260E-01	6.529E-01	1.038E+00	6.352E-02	-0.314
		345.85		-1.740E-01	2.309E-01	3.169E-01	2.131E-02	-0.549
		482.03	*	2.133E-02	4.539E-02	7.526E-02	4.940E-03	0.283
		56.28		-6.110E-01	1.159E+00	1.914E+00	2.472E-01	-0.319
		57.53		-3.402E-01	6.428E-01	1.011E+00	1.287E-01	-0.336
		65.20	*	4.460E-01	9.427E-01	1.416E+00	1.636E-01	0.315
	TA-182	67.75		-4.026E-01	2.841E-01	4.030E-01	4.553E-02	-0.999

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		100.10		8.873E-01	3.425E-01	5.236E-01	4.653E-02	1.695
		152.43		1.644E-01	4.548E-01	7.365E-01	4.225E-02	0.223
		222.10		1.469E-01	3.903E-01	6.670E-01	3.983E-02	0.220
	+	1001.68		7.253E+01	9.172E+00	1.179E+01	1.064E+00	6.151
		1121.28		5.934E-01	1.827E-01	3.464E-01	2.483E-02	1.713
		1189.05		-2.078E-01	3.267E-01	5.199E-01	3.329E-02	-0.400
		1221.42	*	5.244E-02	2.134E-01	3.622E-01	2.498E-02	0.145
		1230.97		-7.638E-01	5.208E-01	7.721E-01	5.439E-02	-0.989
RE-183		57.98		1.806E-02	6.580E-01	9.858E-01	1.247E-01	0.018
		59.32		3.844E-01	3.491E-01	5.306E-01	6.599E-02	0.724
		67.20		-6.075E-01	5.070E-01	7.247E-01	8.223E-02	-0.838
	+	162.32	*	4.128E-01	1.757E-01	2.625E-01	1.452E-02	1.573
	+	208.81		1.094E+00	1.326E+00	1.941E+00	1.135E-01	0.564
		291.72		-8.624E-01	1.165E+00	1.635E+00	1.062E-01	-0.528
RE-184		57.98		6.703E-02	2.442E+00	3.659E+00	4.629E-01	0.018
		59.32		1.426E+00	1.295E+00	1.968E+00	2.447E-01	0.724
		67.20		-2.254E+00	1.881E+00	2.689E+00	3.051E-01	-0.838
		161.27		4.740E-01	5.539E-01	8.125E-01	4.511E-02	0.583
		216.55		-4.033E-02	2.988E-01	5.033E-01	2.980E-02	-0.080
		252.85	*	1.262E-01	2.836E-01	4.504E-01	2.808E-02	0.280
		318.01		2.042E-03	5.122E-01	8.488E-01	5.626E-02	0.002
		792.07		6.283E-01	1.286E+00	1.997E+00	1.509E-01	0.315
		903.28		1.058E-01	1.165E+00	1.662E+00	1.675E-01	0.064
		920.93		3.584E-01	5.236E-01	8.946E-01	8.873E-02	0.401
OS-185		59.72		1.060E+00	9.345E-01	1.420E+00	1.756E-01	0.746
		61.14		2.985E+00	6.446E-01	8.860E-01	1.074E-01	3.370
		69.30		9.812E-01	7.244E-01	1.098E+00	1.227E-01	0.894
		592.07		-1.578E+00	2.690E+00	4.372E+00	2.514E-01	-0.361
		646.12	*	5.220E-03	4.627E-02	7.751E-02	3.982E-03	0.067
		717.42		-1.582E-01	1.001E+00	1.646E+00	9.845E-02	-0.096
		874.81		1.321E-01	6.620E-01	1.099E+00	1.047E-01	0.120
		880.27		4.328E-01	8.864E-01	1.500E+00	1.450E-01	0.289
RE-188		155.03	*	-2.342E-01	2.339E-01	3.632E-01	2.063E-02	-0.645
		477.96		-9.460E-02	3.380E+00	5.449E+00	3.587E-01	-0.017
		633.10		-1.501E+00	2.912E+00	4.722E+00	2.502E-01	-0.318
W-188	+	63.58		4.776E+03	6.380E+02	3.923E+02	4.613E+01	12.174
		227.08		1.508E+01	1.449E+01	2.519E+01	1.516E+00	0.599
		290.67	*	-3.004E+00	8.980E+00	1.290E+01	8.378E-01	-0.233
IR-192	+	295.96		9.305E-01	2.044E-01	2.674E-01	1.766E-02	3.479
		308.46		-5.382E-03	1.035E-01	1.714E-01	1.139E-02	-0.031
		316.51	*	-1.110E-02	3.839E-02	6.284E-02	4.177E-03	-0.177
		468.07		3.723E-02	7.013E-02	1.168E-01	8.662E-03	0.319
		604.41		-9.214E-03	5.109E-01	7.465E-01	8.406E-02	-0.012
		612.46		5.646E-01	7.880E-01	1.216E+00	8.962E-02	0.464
AU-195		65.12		2.824E-01	4.403E-01	6.633E-01	7.670E-02	0.426
		66.83		-2.349E-01	2.386E-01	3.440E-01	3.915E-02	-0.683
	+	75.70		1.501E+00	5.471E-01	7.389E-01	8.082E-02	2.031
	+	98.88	*	4.771E+00	7.748E-01	8.728E-01	7.921E-02	5.466
		129.76		4.015E+00	4.200E+00	6.935E+00	4.375E-01	0.579

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Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200		367.94	*	2.779E-06	4.200E+00	Half-Life	too short	
		579.30		1.762E-03	4.200E+00	Half-Life	too short	
		828.27		-8.908E-04	4.200E+00	Half-Life	too short	
		1205.75		6.820E-05	4.200E+00	Half-Life	too short	
TL-201		68.90		6.577E+00	8.926E+00	1.345E+01	1.507E+00	0.489
		70.82		5.654E+00	5.069E+00	7.655E+00	8.486E-01	0.739
		80.30		1.122E+00	1.138E+01	1.334E+01	1.464E+00	0.084
		135.34		2.737E+01	2.766E+01	4.568E+01	2.807E+00	0.599
		167.43	*	8.624E-01	7.484E+00	1.140E+01	6.234E-01	0.076
TL-202		68.90		7.303E-01	9.911E-01	1.493E+00	1.674E-01	0.489
		70.82		6.261E-01	5.613E-01	8.476E-01	9.396E-02	0.739
		80.30		1.243E-01	1.261E+00	1.477E+00	1.622E-01	0.084
		439.56	*	-7.824E-03	7.249E-02	1.170E-01	7.867E-03	-0.067
HG-203		70.83		2.867E+00	2.578E+00	3.867E+00	5.912E-01	0.741
		72.87		1.911E+00	1.364E+00	2.254E+00	3.350E-01	0.848
	+	82.60		4.905E+00	3.480E+00	4.134E+00	6.360E-01	1.187
		279.20	*	-1.661E-02	4.506E-02	7.415E-02	5.004E-03	-0.224
BI-207		72.80		4.729E-01	4.011E-01	6.694E-01	7.363E-02	0.706
	+	74.97		8.363E-01	3.049E-01	4.051E-01	4.435E-02	2.064
	+	84.90		8.691E-01	6.095E-01	6.984E-01	7.793E-02	1.244
		569.67		1.205E-02	3.548E-02	5.777E-02	3.445E-03	0.209
		1063.62	*	-2.368E-02	5.447E-02	8.419E-02	6.854E-03	-0.281
		1770.23		-1.138E+00	6.022E-01	6.694E-01	4.441E-02	-1.699
TL-207		81.07		1.938E-01	6.553E-01	7.723E-01	8.494E-02	0.251
	+	83.78		5.731E-01	4.019E-01	4.795E-01	5.324E-02	1.195
	+	94.90		2.743E+00	9.916E-01	8.366E-01	8.168E-02	3.279
		122.32		-2.459E+00	2.643E+00	4.168E+00	3.076E-01	-0.590
	+	144.24		6.259E+00	1.620E+00	1.907E+00	1.398E-01	3.281
		154.21		4.419E-01	5.329E-01	8.728E-01	6.049E-02	0.506
		269.46		4.070E-01	2.115E-01	3.744E-01	2.470E-02	1.087
		323.87	*	-1.164E+00	7.602E-01	1.131E+00	1.904E-01	-1.030
	+	338.28		6.918E+00	1.925E+00	2.486E+00	2.748E-01	2.783
		445.03		3.249E-01	2.456E+00	4.014E+00	4.338E-01	0.081
PO-209		260.50		-7.053E+00	1.247E+01	1.786E+01	1.124E+00	-0.395
		262.80		1.302E+01	3.320E+01	4.998E+01	3.153E+00	0.261
		896.60	*	4.355E+00	7.906E+00	1.346E+01	1.357E+00	0.324
BI-210		46.50	*	-1.586E+01	1.578E+01	2.587E+01	2.538E+00	-0.613
PB-210		46.50	*	-1.586E+01	1.578E+01	2.587E+01	2.538E+00	-0.613
PO-210		46.50	*	-1.586E+01	1.577E+01	2.587E+01	2.323E+00	-0.613
PB-211		404.84	*	-4.447E-01	1.033E+00	1.586E+00	9.900E-01	-0.280
		427.08		1.366E+00	2.455E+00	3.866E+00	2.393E+00	0.353
		831.96		-3.802E-01	1.350E+00	2.140E+00	1.341E+00	-0.178
PO-215		81.07		1.938E-01	6.553E-01	7.723E-01	8.494E-02	0.251
	+	83.78		5.731E-01	4.019E-01	4.795E-01	5.324E-02	1.195
	+	94.90		2.743E+00	9.916E-01	8.366E-01	8.168E-02	3.279
		122.32		-2.459E+00	2.643E+00	4.168E+00	3.076E-01	-0.590
	+	144.24		6.259E+00	1.620E+00	1.907E+00	1.398E-01	3.281
		154.21		4.419E-01	5.329E-01	8.728E-01	6.049E-02	0.506
		269.46		4.070E-01	2.115E-01	3.744E-01	2.470E-02	1.087

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		323.87	*	-1.164E+00	7.602E-01	1.131E+00	1.904E-01	-1.030
	+	338.28		6.918E+00	1.925E+00	2.486E+00	2.748E-01	2.783
		445.03		3.249E-01	2.456E+00	4.014E+00	4.338E-01	0.081
		271.23		1.742E-01	2.762E-01	4.712E-01	4.015E-02	0.370
		401.81	*	-8.573E-02	4.417E-01	7.139E-01	1.004E-01	-0.120
RN-220		549.76	*	2.825E+00	2.993E+01	4.815E+01	2.953E+00	0.059
RA-223		81.07		1.938E-01	6.553E-01	7.723E-01	8.494E-02	0.251
	+	83.78		5.731E-01	4.019E-01	4.795E-01	5.324E-02	1.195
	+	94.90		2.743E+00	9.916E-01	8.366E-01	8.168E-02	3.279
		122.32		-2.459E+00	2.643E+00	4.168E+00	3.076E-01	-0.590
	+	144.24		6.259E+00	1.620E+00	1.907E+00	1.398E-01	3.281
AC-227		154.21		4.419E-01	5.329E-01	8.728E-01	6.049E-02	0.506
		269.46		4.070E-01	2.115E-01	3.744E-01	2.470E-02	1.087
		323.87	*	-1.164E+00	7.602E-01	1.131E+00	1.904E-01	-1.030
	+	338.28		6.918E+00	1.925E+00	2.486E+00	2.748E-01	2.783
		445.03		3.249E-01	2.456E+00	4.014E+00	4.338E-01	0.081
TH-227		79.80		-5.510E-01	4.943E+00	5.752E+00	1.297E+00	-0.096
		236.00		9.213E-01	3.160E-01	5.004E-01	5.314E-02	1.841
		256.20	*	8.744E-01	5.414E-01	8.372E-01	1.185E-01	1.044
		286.10		-1.247E+00	1.675E+00	2.697E+00	3.211E-01	-0.462
	+	299.80		2.983E+00	2.128E+00	2.769E+00	4.587E-01	1.077
TH-229		304.40		-5.363E-02	2.300E+00	3.355E+00	5.895E-01	-0.016
		334.20		-2.385E+00	2.877E+00	3.907E+00	7.281E-01	-0.610
		79.80		-5.510E-01	4.943E+00	5.752E+00	1.312E+00	-0.096
	+	94.00		2.195E+01	9.067E+00	1.247E+01	2.786E+00	1.759
		236.00		9.213E-01	3.124E-01	5.004E-01	4.628E-02	1.841
TH-229		256.20	*	8.744E-01	5.478E-01	8.372E-01	1.429E-01	1.044
		286.10		-1.247E+00	2.085E+00	2.697E+00	2.702E+00	-0.462
	+	299.80		2.983E+00	2.128E+00	2.769E+00	4.587E-01	1.077
		304.40		-5.363E-02	2.300E+00	3.355E+00	5.895E-01	-0.016
		334.20		-2.385E+00	2.877E+00	3.907E+00	7.281E-01	-0.610
PA-231		85.43		2.402E-01	5.814E-01	6.860E-01	7.673E-02	0.350
	+	88.47		3.068E-01	2.766E-01	4.137E-01	4.641E-02	0.742
		100.00		1.220E+00	3.705E-01	5.667E-01	5.045E-02	2.153
		193.63	*	2.400E-01	6.391E-01	1.025E+00	5.843E-02	0.234
		210.97		7.412E-01	9.496E-01	1.466E+00	8.600E-02	0.506
TH-231		283.67	*	-2.686E-01	1.615E+00	2.673E+00	3.761E-01	-0.100
		301.29		7.397E-01	7.019E-01	1.078E+00	1.174E-01	0.686
		81.07		1.938E-01	6.553E-01	7.723E-01	8.494E-02	0.251
	+	83.78		5.731E-01	4.019E-01	4.795E-01	5.324E-02	1.195
	+	94.90		2.743E+00	9.916E-01	8.366E-01	8.168E-02	3.279
U-231		122.32		-2.459E+00	2.643E+00	4.168E+00	3.076E-01	-0.590
	+	144.24		6.259E+00	1.620E+00	1.907E+00	1.398E-01	3.281
		154.21		4.419E-01	5.329E-01	8.728E-01	6.049E-02	0.506
		269.46		4.070E-01	2.115E-01	3.744E-01	2.470E-02	1.087
		323.87	*	-1.164E+00	7.602E-01	1.131E+00	1.904E-01	-1.030
U-231	+	338.28		6.918E+00	1.925E+00	2.486E+00	2.748E-01	2.783
		445.03		3.249E-01	2.456E+00	4.014E+00	4.338E-01	0.081
	+	84.21		2.014E+01	1.412E+01	1.671E+01	1.859E+00	1.205

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	92.29		3.676E+02	3.856E+01	1.535E+01	1.580E+00	23.957
		95.87	*	8.466E+00	2.277E+00	2.857E+00	2.738E-01	2.963
		108.00		1.552E+00	3.217E+00	4.741E+00	3.732E-01	0.327
	+	75.28		2.441E+01	9.422E+00	1.187E+01	1.989E+00	2.056
	+	86.59		4.399E+00	4.120E+00	5.938E+00	1.649E+00	0.741
	+	300.12		8.317E-01	5.883E-01	7.711E-01	1.062E-01	1.079
		311.98	*	3.991E-02	7.136E-02	1.211E-01	8.377E-03	0.330
		340.50		1.495E+00	7.606E-01	1.115E+00	2.589E-01	1.341
		398.62		2.300E+00	2.323E+00	3.858E+00	1.007E+00	0.596
		415.76		1.536E+00	1.811E+00	3.036E+00	6.340E-01	0.506
PA-234	+	63.00		1.402E+02	2.602E+01	1.211E+01	2.120E+00	11.575
	+	94.67		1.957E+00	7.286E-01	6.513E-01	8.634E-02	3.005
	+	98.44		1.942E+00	1.116E+00	3.606E-01	2.015E-01	5.386
		99.86		4.087E+00	9.859E-01	1.498E+00	1.337E-01	2.728
	+	111.00		1.032E+00	4.398E-01	6.648E-01	7.547E-02	1.552
		131.20		3.049E-02	1.593E-01	2.584E-01	1.619E-02	0.118
		152.70		2.127E-01	4.434E-01	7.185E-01	1.134E-01	0.296
	+	186.00		5.095E+01	1.600E+01	5.429E+00	1.657E+00	9.385
		226.40		2.835E-01	4.617E-01	7.922E-01	9.243E-02	0.358
		227.20		5.057E-01	4.945E-01	8.595E-01	5.173E-02	0.588
		248.90		-7.155E-01	9.377E-01	1.511E+00	3.263E-01	-0.474
	+	293.70		5.925E+00	1.575E+00	1.705E+00	2.787E-01	3.476
		369.80		-1.788E-01	9.231E-01	1.500E+00	3.167E-01	-0.119
		568.70		1.221E+00	1.138E+00	1.930E+00	1.153E-01	0.633
		569.50		1.187E-01	3.155E-01	5.148E-01	3.071E-02	0.231
		574.00		4.439E-01	1.665E+00	2.846E+00	1.686E-01	0.156
		699.00		-5.712E-01	8.097E-01	1.280E+00	2.295E-01	-0.446
		706.10		-7.359E-01	1.175E+00	1.801E+00	7.948E-01	-0.409
		733.00		5.848E-02	4.493E-01	7.313E-01	1.565E-01	0.080
	+	742.81		8.115E+00	6.343E+00	3.518E+00	2.356E+00	2.307
		796.30		6.720E-01	1.056E+00	1.784E+00	4.773E-01	0.377
		805.60		5.831E-01	1.088E+00	1.835E+00	5.588E-01	0.318
		819.60		-5.868E-01	1.400E+00	2.204E+00	8.361E-01	-0.266
		826.30		-9.776E-02	9.038E-01	1.472E+00	6.580E-01	-0.066
		831.60		-4.068E-01	7.041E-01	1.092E+00	3.255E-01	-0.372
		876.40		1.040E-01	9.593E-01	1.573E+00	1.618E+00	0.066
		880.51		1.970E-01	3.265E-01	5.562E-01	5.379E-02	0.354
		883.24		-1.508E-01	3.498E-01	5.294E-01	3.567E-01	-0.285
		899.00		5.872E-02	8.865E-01	1.455E+00	6.408E-01	0.040
		925.00		-6.519E-01	1.410E+00	2.217E+00	2.190E-01	-0.294
		926.50		-3.953E-02	2.016E-01	3.232E-01	8.316E-02	-0.122
		946.00	*	2.156E-01	3.371E-01	5.715E-01	1.101E-01	0.377
		949.00		-3.361E-01	4.939E-01	7.569E-01	7.295E-02	-0.444
		980.50		4.115E-01	9.120E-01	1.345E+00	1.248E-01	0.306
NP-236		1394.10		-4.863E-01	1.218E+00	1.845E+00	1.201E+00	-0.264
	+	94.67		1.484E+00	5.365E-01	4.965E-01	4.870E-02	2.990
	+	98.44		1.468E+00	2.384E-01	2.726E-01	2.493E-02	5.386
	+	111.00		7.804E-01	3.261E-01	5.029E-01	3.799E-02	1.552
		160.31	*	-3.784E-02	1.234E-01	1.735E-01	9.665E-03	-0.218

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		3.356E+00	5.450E-01	5.479E-01	4.915E-02	6.124
		117.00	*	-6.339E-01	3.185E-01	4.597E-01	3.216E-02	-1.379
	+	209.75		8.737E-01	1.059E+00	1.553E+00	9.097E-02	0.562
		228.18		1.299E-01	2.590E-01	4.436E-01	2.674E-02	0.293
		277.60		2.522E-01	2.052E-01	3.566E-01	2.286E-02	0.707
AM-241		334.30		-1.364E+00	1.613E+00	2.212E+00	1.480E-01	-0.617
		59.54	*	6.105E-01	4.983E-01	7.571E-01	9.724E-02	0.806
	+	99.55		3.453E+00	5.607E-01	5.638E-01	5.057E-02	6.124
		103.76	*	4.314E-02	1.591E-01	2.612E-01	2.188E-02	0.165
		117.00		-6.521E-01	3.276E-01	4.729E-01	3.308E-02	-1.379
CM-243	+	209.75		8.612E-01	1.044E+00	1.531E+00	8.967E-02	0.562
		228.18		1.313E-01	2.616E-01	4.482E-01	2.701E-02	0.293
		277.60		2.543E-01	2.069E-01	3.594E-01	2.305E-02	0.707
		798.80		-1.639E-01	1.558E-01	2.373E-01	1.829E-02	-0.691
		1036.00		-1.850E-01	2.963E-01	4.485E-01	3.837E-02	-0.412
AM-246		1062.04		-8.615E-02	2.393E-01	3.729E-01	3.045E-02	-0.231
	*	1078.86		6.033E-02	1.526E-01	2.541E-01	2.007E-02	0.237
		278.00		1.062E+00	8.471E-01	1.473E+00	9.449E-02	0.721
		287.40		1.536E+00	1.325E+00	2.303E+00	1.491E-01	0.667
	+	402.60	*	-3.276E-02	4.009E-02	6.256E-02	4.248E-03	-0.524
CF-249		252.85		4.759E-01	1.070E+00	1.699E+00	1.059E-01	0.280
		333.44		-2.062E-01	2.149E-01	2.927E-01	1.957E-02	-0.705
		387.95	*	2.733E-02	4.517E-02	7.602E-02	5.166E-03	0.360
CF-251	*	176.60		1.115E-01	1.691E-01	2.744E-01	1.522E-02	0.406
		227.00		4.498E-01	4.407E-01	7.658E-01	4.608E-02	0.587
		285.00		-2.699E+00	1.895E+00	2.959E+00	1.911E-01	-0.912

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395008      *
* Acquisition date   : 2-FEB-2010 09:14:06 Detector SN# :                  *
* Detector ID        : GAM10 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                       *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000            *
* Elapsed real time  : 0 02:00:02.22 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G245395008 Analyst initials: MXR1                  *
* Batch Number      : 944966 Sample Quantity : 1.4643E+02 GRAM           *
* Recovery          : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                               *
*
* Standard Weight   : 0.00000                                             *
* CALIB. DATE/TIME  : 16-MAR-2009 13:18:08 MS Isotope :                  *
* MSD DPM           : 0.000 MSD Isotope :                               *
* LCS DPM           : 0.000 LCS Isotope :                               *
* LCSD DPM          : 0.000 LCSD Isotope :                               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.445E+01	3.412E+00	4.963E-01	0.000E+00
NB-95	5.989E-01	1.131E-01	7.677E-02	0.000E+00
CD-109	2.282E+00	2.016E+00	3.427E+00	0.000E+00
SN-126	2.247E-01	1.985E-01	3.293E-01	0.000E+00
LU-177	1.085E+00	1.288E+00	1.918E+00	0.000E+00
TL-208	4.846E-01	9.457E-02	6.708E-02	0.000E+00
BI-211	3.333E+00	5.376E-01	3.733E-01	0.000E+00
BI-212	8.745E-01	4.705E-01	5.452E-01	0.000E+00
PB-212	1.459E+00	1.536E-01	1.094E-01	0.000E+00
PO-212	1.459E+00	1.536E-01	1.094E-01	0.000E+00
BI-214	1.066E+00	1.812E-01	1.171E-01	0.000E+00
PB-214	1.160E+00	1.962E-01	1.301E-01	0.000E+00
PO-214	1.160E+00	1.962E-01	1.301E-01	0.000E+00
PO-216	1.459E+00	1.536E-01	1.094E-01	0.000E+00
PO-218	1.160E+00	1.962E-01	1.301E-01	0.000E+00
RA-224	4.423E+00	1.163E+00	1.245E+00	0.000E+00
RA-226	1.066E+00	1.812E-01	1.171E-01	0.000E+00
AC-228	1.253E+00	3.271E-01	2.196E-01	0.000E+00
RA-228	1.253E+00	3.271E-01	2.196E-01	0.000E+00
TH-228	1.480E+00	1.557E-01	1.110E-01	0.000E+00
TH-230	1.066E+00	1.812E-01	1.171E-01	0.000E+00
TH-232	1.253E+00	3.271E-01	2.196E-01	0.000E+00
PA-234M	1.659E+02	2.211E+01	7.664E+00	0.000E+00
TH-234	1.203E+02	2.438E+01	5.693E+00	0.000E+00
U-234	1.066E+00	1.812E-01	1.171E-01	0.000E+00
U-235	1.931E+00	5.626E-01	4.937E-01	0.000E+00
NP-237	6.598E-01	5.981E-01	9.249E-01	0.000E+00
U-238	1.203E+02	2.438E+01	5.693E+00	0.000E+00
AM-243	4.659E-01	1.665E-01	2.137E-01	0.000E+00
ANH-511	8.410E-02	7.514E-02	5.335E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-3.333E-02	3.442E-01	5.825E-01	0.000E+00	NOT IDENT.
NA-22	2.488E-02	4.493E-02	8.042E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.850E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.911E-03	3.137E-02	5.230E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	1.073E-01	1.395E-01	0.000E+00	FAIL ABUN
SC-46	1.200E-02	4.236E-02	7.340E-02	0.000E+00	FAIL ABUN
V-48	1.772E-02	7.659E-02	1.238E-01	0.000E+00	NOT IDENT.
CR-51	3.297E-01	3.934E-01	7.157E-01	0.000E+00	NOT IDENT.
MN-52	1.052E-01	1.907E-01	3.444E-01	0.000E+00	FAIL ABUN
MN-54	1.311E-02	4.061E-02	7.083E-02	0.000E+00	NOT IDENT.
CO-56	3.268E-02	3.934E-02	7.108E-02	0.000E+00	NOT IDENT.
CO-57	-3.466E-02	3.754E-02	6.441E-02	0.000E+00	NOT IDENT.
CO-58	-1.946E-02	4.114E-02	6.805E-02	0.000E+00	NOT IDENT.
FE-59	-3.704E-02	9.318E-02	1.492E-01	0.000E+00	FAIL ABUN
CO-60	1.895E-02	3.702E-02	6.634E-02	0.000E+00	NOT IDENT.
ZN-65	-8.218E-03	1.087E-01	1.539E-01	0.000E+00	NOT IDENT.
GE-68	-5.073E-02	1.297E+00	2.152E+00	0.000E+00	NOT IDENT.
AS-73	1.090E+00	2.763E+00	5.141E+00	0.000E+00	NOT IDENT.
AS-74	4.448E-02	9.373E-02	1.693E-01	0.000E+00	NOT IDENT.
SE-75	2.530E-02	4.793E-02	8.728E-02	0.000E+00	NOT IDENT.
BR-77	-3.185E+00	8.079E+00	1.331E+01	0.000E+00	FAIL ABUN
SR-82	-6.472E-01	4.324E-01	6.692E-01	0.000E+00	NOT IDENT.
RB-83	-3.193E-02	7.563E-02	1.244E-01	0.000E+00	NOT IDENT.
RB-84	7.665E-02	7.539E-02	1.368E-01	0.000E+00	NOT IDENT.
KR-85	4.349E+00	8.627E+00	1.321E+01	0.000E+00	NOT IDENT.
SR-85	2.201E-02	4.366E-02	6.688E-02	0.000E+00	NOT IDENT.
RB-86	-3.010E-02	7.938E-01	1.317E+00	0.000E+00	NOT IDENT.
Y-88	-4.376E-03	2.633E-02	4.167E-02	0.000E+00	NOT IDENT.
ZR-88	-2.218E-02	3.303E-02	5.521E-02	0.000E+00	NOT IDENT.
Y-91	6.054E+00	1.799E+01	3.177E+01	0.000E+00	NOT IDENT.
NB-94	4.085E-03	3.599E-02	6.292E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.521E-01	2.572E-01	0.000E+00	NOT IDENT.
ZR-95	1.555E-02	7.676E-02	1.341E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.324E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.676E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.755E+01	1.180E+01	1.943E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.909E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.893E-03	4.101E-02	6.966E-02	0.000E+00	NOT IDENT.
RH-102	-1.510E-03	3.244E-02	5.508E-02	0.000E+00	FAIL ABUN
RU-103	1.791E-02	4.375E-02	7.583E-02	0.000E+00	NOT IDENT.
RH-106	-8.996E-02	3.242E-01	5.597E-01	0.000E+00	FAIL ABUN
RU-106	-8.996E-02	3.240E-01	5.597E-01	0.000E+00	FAIL ABUN
AG-108M	-1.973E-02	3.435E-02	5.700E-02	0.000E+00	NOT IDENT.
AG-110M	-5.650E-02	4.003E-02	6.423E-02	0.000E+00	NOT IDENT.
IN-111	3.055E-01	9.445E-01	1.521E+00	0.000E+00	NOT IDENT.
IN-113M	-4.093E-03	4.712E-02	8.124E-02	0.000E+00	NOT IDENT.
SN-113	-4.093E-03	4.712E-02	8.124E-02	0.000E+00	NOT IDENT.
IN-114M	6.632E-02	2.431E-01	3.724E-01	0.000E+00	NOT IDENT.
CD-115	-5.711E+00	8.328E+00	1.344E+01	0.000E+00	NOT IDENT.
SN-117M	4.276E-02	7.718E-02	1.211E-01	0.000E+00	NOT IDENT.
SB-122	-8.420E-01	1.677E+00	2.721E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.809E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.668E-02	4.227E-02	6.595E-02	0.000E+00	NOT IDENT.
I-124	-2.569E-01	6.106E-01	9.035E-01	0.000E+00	NOT IDENT.
SB-124	-2.226E-03	6.317E-02	1.043E-01	0.000E+00	FAIL ABUN
SB-125	4.421E-02	1.010E-01	1.774E-01	0.000E+00	NOT IDENT.
TE-125M	0.000E+00	1.812E+01	2.977E+01	0.000E+00	NOT IDENT.
I-126	-8.770E-02	1.929E-01	3.282E-01	0.000E+00	NOT IDENT.
SB-126	2.382E-02	1.652E-01	2.517E-01	0.000E+00	NOT IDENT.
SB-127	-4.650E-01	1.143E+00	1.938E+00	0.000E+00	NOT IDENT.
XE-127	5.818E-02	6.362E-02	1.058E-01	0.000E+00	NOT IDENT.
I-131	-3.088E-02	1.115E-01	1.916E-01	0.000E+00	NOT IDENT.
TE-132	3.069E-01	5.983E-01	1.096E+00	0.000E+00	FAIL ABUN
BA-133	2.933E-02	4.950E-02	7.866E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.545E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	4.664E-02	5.262E-02	9.493E-02	0.000E+00	NOT IDENT.
CS-135	8.911E-03	1.734E-01	3.103E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.651E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.695E-02	9.493E-02	1.452E-01	0.000E+00	FAIL ABUN
BA-137M	3.557E-02	4.190E-02	7.629E-02	0.000E+00	NOT IDENT.
CS-137	3.760E-02	4.429E-02	8.064E-02	0.000E+00	NOT IDENT.
CE-139	-7.592E-03	4.461E-02	6.787E-02	0.000E+00	NOT IDENT.
BA-140	-5.462E-02	2.820E-01	4.683E-01	0.000E+00	FAIL ABUN
LA-140	-5.973E-02	7.120E-02	1.024E-01	0.000E+00	NOT IDENT.
CE-141	1.071E-01	9.476E-02	1.522E-01	0.000E+00	NOT IDENT.

CE-143	0.000E+00	1.321E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.543E-01	3.016E-01	5.195E-01	0.000E+00	NOT IDENT.
PM-144	3.541E-02	3.660E-02	6.707E-02	0.000E+00	NOT IDENT.
PR-144	2.398E+00	2.479E+00	4.542E+00	0.000E+00	NOT IDENT.
PM-146	-1.898E-03	4.854E-02	8.281E-02	0.000E+00	NOT IDENT.
ND-147	2.371E-01	5.878E-01	1.013E+00	0.000E+00	FAIL ABUN
PM-149	-6.317E+01	6.662E+01	1.128E+02	0.000E+00	NOT IDENT.
EU-152	-1.321E-01	1.094E-01	1.641E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	2.611E-01	3.251E-01	0.000E+00	FAIL ABUN
EU-154	6.060E-02	1.267E-01	2.254E-01	0.000E+00	NOT IDENT.
EU-155	1.201E-01	1.781E-01	3.207E-01	0.000E+00	FAIL ABUN
TB-160	-1.028E-01	1.609E-01	2.605E-01	0.000E+00	FAIL ABUN
HO-166M	-2.093E-02	6.341E-02	1.077E-01	0.000E+00	FAIL ABUN
TM-171	-4.450E+01	7.019E+01	1.128E+02	0.000E+00	NOT IDENT.
LU-176	5.873E-03	2.686E-02	4.789E-02	0.000E+00	FAIL ABUN
LU-177M	-5.994E-02	1.861E-01	3.154E-01	0.000E+00	NOT IDENT.
HF-181	2.133E-02	4.448E-02	7.771E-02	0.000E+00	NOT IDENT.
W-181	4.460E-01	9.238E-01	1.528E+00	0.000E+00	NOT IDENT.
TA-182	5.244E-02	2.091E-01	3.659E-01	0.000E+00	FAIL ABUN
RE-183	0.000E+00	1.722E-01	2.777E-01	0.000E+00	FAIL ABUN
RE-184	1.262E-01	2.780E-01	4.718E-01	0.000E+00	NOT IDENT.
OS-185	5.220E-03	4.535E-02	7.948E-02	0.000E+00	NOT IDENT.
RE-188	-2.342E-01	2.292E-01	3.846E-01	0.000E+00	NOT IDENT.
W-188	-3.004E+00	8.800E+00	1.348E+01	0.000E+00	FAIL ABUN
IR-192	-1.110E-02	3.763E-02	6.550E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	7.593E-01	9.334E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.252E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	8.624E-01	7.334E+00	1.205E+01	0.000E+00	NOT IDENT.
TL-202	-7.824E-03	7.104E-02	1.211E-01	0.000E+00	NOT IDENT.
HG-203	-1.661E-02	4.416E-02	7.751E-02	0.000E+00	FAIL ABUN
BI-207	-2.368E-02	5.338E-02	8.533E-02	0.000E+00	FAIL ABUN
TL-207	-1.164E+00	7.450E-01	1.178E+00	0.000E+00	FAIL ABUN
PO-209	4.355E+00	7.748E+00	1.369E+01	0.000E+00	NOT IDENT.
BI-210	-1.586E+01	1.546E+01	2.811E+01	0.000E+00	NOT IDENT.
PB-210	-1.586E+01	1.546E+01	2.811E+01	0.000E+00	NOT IDENT.
PO-210	-1.586E+01	1.545E+01	2.811E+01	0.000E+00	NOT IDENT.
PB-211	-4.447E-01	1.012E+00	1.644E+00	0.000E+00	NOT IDENT.
PO-215	-1.164E+00	7.450E-01	1.178E+00	0.000E+00	FAIL ABUN
RN-219	-8.573E-02	4.329E-01	7.402E-01	0.000E+00	NOT IDENT.
RN-220	2.825E+00	2.933E+01	4.956E+01	0.000E+00	NOT IDENT.
RA-223	-1.164E+00	7.450E-01	1.178E+00	0.000E+00	FAIL ABUN
AC-227	8.744E-01	5.306E-01	8.768E-01	0.000E+00	FAIL ABUN
TH-227	8.744E-01	5.368E-01	8.768E-01	0.000E+00	FAIL ABUN
TH-229	2.400E-01	6.263E-01	1.080E+00	0.000E+00	FAIL ABUN
PA-231	-2.686E-01	1.582E+00	2.794E+00	0.000E+00	NOT IDENT.
TH-231	-1.164E+00	7.450E-01	1.178E+00	0.000E+00	FAIL ABUN
U-231	0.000E+00	2.232E+00	3.058E+00	0.000E+00	FAIL ABUN
PA-233	3.991E-02	6.994E-02	1.262E-01	0.000E+00	FAIL ABUN
PA-234	2.156E-01	3.304E-01	5.808E-01	0.000E+00	FAIL ABUN
NP-236	-3.784E-02	1.210E-01	1.836E-01	0.000E+00	FAIL ABUN
NP-239	-6.339E-01	3.121E-01	4.898E-01	0.000E+00	FAIL ABUN
AM-241	6.105E-01	4.884E-01	8.184E-01	0.000E+00	NOT IDENT.
CM-243	4.314E-02	1.559E-01	2.790E-01	0.000E+00	FAIL ABUN
AM-246	6.033E-02	1.495E-01	2.574E-01	0.000E+00	NOT IDENT.
CM-247	-3.276E-02	3.929E-02	6.485E-02	0.000E+00	NOT IDENT.
CF-249	2.733E-02	4.427E-02	7.888E-02	0.000E+00	NOT IDENT.
CF-251	1.115E-01	1.657E-01	2.898E-01	0.000E+00	NOT IDENT.

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395008.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:14:06.
Sample ID          : G245395008 Sample quantity : 1.46430E+02 GRAM
Detector name      : GAM10 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.22 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1588	10.67*	1.108E+00	3.445E+01	3.445E+01	10.11
NB-95	765.79	413	99.81*	2.059E+00	5.151E-01	5.989E-01	19.27
CD-109	88.03	170	3.72*	5.253E+00	2.235E+00	2.282E+00	90.16
SN-126	64.28	3978	9.60	2.231E+00	4.762E+01	4.762E+01	18.29
	86.94	170	8.90	5.253E+00	9.341E-01	9.341E-01	98.82
	87.57	170	37.00*	5.253E+00	2.247E-01	2.247E-01	90.16
LU-177	112.95	690	6.40	6.606E+00	4.181E+00	1.762E+01	19.13
	208.36	62	11.00*	5.575E+00	2.573E-01	1.085E+00	121.18
TL-208	277.35	-----	6.80	4.610E+00	-----	Line Not Found	-----
	510.84	96	21.60	2.931E+00	3.893E-01	3.893E-01	91.55
	583.14	418	84.20*	2.629E+00	4.846E-01	4.846E-01	19.91
	860.37	-----	12.46	1.841E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.633E+00	-----	Line Not Found	-----
	351.07	654	12.94*	3.889E+00	3.333E+00	3.333E+00	16.46
BI-212	727.18	87	11.80*	2.164E+00	8.745E-01	8.745E-01	54.91
	785.46	106	1.97	2.010E+00	6.894E+00	6.894E+00	42.87
	1620.62	-----	2.75	1.025E+00	-----	Line Not Found	-----
PB-212	74.81	463	10.70	3.857E+00	2.874E+00	2.874E+00	37.64
	77.11	566	18.00	4.161E+00	1.936E+00	1.936E+00	30.64
	87.30	170	8.00	5.253E+00	1.039E+00	1.039E+00	90.71
	238.63	1300	44.60*	5.118E+00	1.459E+00	1.459E+00	10.74
	300.09	93	3.41	4.363E+00	1.610E+00	1.610E+00	69.93
PO-212	74.81	463	10.70	3.857E+00	2.874E+00	2.874E+00	37.64
	77.11	566	18.00	4.161E+00	1.936E+00	1.936E+00	30.64
	87.30	170	8.00	5.253E+00	1.039E+00	1.039E+00	90.71
	115.19	-----	0.60	6.657E+00	-----	Line Not Found	-----
	238.63	1300	44.60*	5.118E+00	1.459E+00	1.459E+00	10.74
	300.09	93	3.41	4.363E+00	1.610E+00	1.610E+00	69.93
BI-214	609.31	487	46.30*	2.533E+00	1.066E+00	1.066E+00	17.36
	1120.29	139	15.10	1.416E+00	1.661E+00	1.661E+00	42.17
	1764.49	88	15.80	9.767E-01	1.463E+00	1.463E+00	28.18
PB-214	74.81	463	6.21	3.857E+00	4.952E+00	4.952E+00	37.20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	77.11	566	10.50	4.161E+00	3.318E+00	3.318E+00	31.57
	87.30	170	4.67	5.253E+00	1.780E+00	1.780E+00	90.49
	241.98	346	7.49	5.075E+00	2.333E+00	2.333E+00	27.41
	295.21	408	19.20	4.415E+00	1.234E+00	1.234E+00	22.82
	351.92	654	37.20*	3.889E+00	1.160E+00	1.160E+00	17.27
	74.81	463	6.21	3.857E+00	4.952E+00	4.952E+00	37.20
	77.11	566	10.50	4.161E+00	3.318E+00	3.318E+00	31.57
	87.30	170	4.67	5.253E+00	1.780E+00	1.780E+00	90.49
	241.98	346	7.49	5.075E+00	2.333E+00	2.333E+00	27.41
	295.21	408	19.20	4.415E+00	1.234E+00	1.234E+00	22.82
PO-216	351.92	654	37.20*	3.889E+00	1.160E+00	1.160E+00	17.27
	74.81	463	10.70	3.857E+00	2.874E+00	2.874E+00	37.64
	77.11	566	18.00	4.161E+00	1.936E+00	1.936E+00	30.64
	87.30	170	8.00	5.253E+00	1.039E+00	1.039E+00	90.71
	238.63	1300	44.60*	5.118E+00	1.459E+00	1.459E+00	10.74
PO-218	300.09	93	3.41	4.363E+00	1.610E+00	1.610E+00	69.93
	74.81	463	6.21	3.857E+00	4.952E+00	4.952E+00	37.20
	77.11	566	10.50	4.161E+00	3.318E+00	3.318E+00	31.57
	87.30	170	4.67	5.253E+00	1.780E+00	1.780E+00	90.49
	241.98	346	7.49	5.075E+00	2.333E+00	2.333E+00	27.41
RA-224	295.21	408	19.20	4.415E+00	1.234E+00	1.234E+00	22.82
	351.92	654	37.20*	3.889E+00	1.160E+00	1.160E+00	17.27
	240.98	346	3.95*	5.075E+00	4.423E+00	4.423E+00	26.83
	609.31	487	46.30*	2.533E+00	1.066E+00	1.066E+00	17.36
	1120.29	139	15.10	1.416E+00	1.661E+00	1.661E+00	42.17
AC-228	1764.49	88	15.80	9.767E-01	1.463E+00	1.463E+00	28.18
	338.32	295	11.40	4.002E+00	1.657E+00	1.657E+00	48.22
	911.07	236	27.70*	1.740E+00	1.253E+00	1.253E+00	26.64
	969.11	170	16.60	1.637E+00	1.605E+00	1.605E+00	33.65
	338.32	295	11.40	4.002E+00	1.657E+00	1.657E+00	48.22
RA-228	911.07	236	27.70*	1.740E+00	1.253E+00	1.253E+00	26.64
	969.11	170	16.60	1.637E+00	1.605E+00	1.605E+00	33.65
	74.81	463	10.70	3.857E+00	2.874E+00	2.914E+00	36.47
	77.11	566	18.00	4.161E+00	1.936E+00	1.963E+00	30.64
	87.30	170	8.00	5.253E+00	1.039E+00	1.054E+00	90.16
TH-228	238.63	1300	44.60*	5.118E+00	1.459E+00	1.480E+00	10.74
	300.09	93	3.41	4.363E+00	1.610E+00	1.632E+00	91.08
	609.31	487	46.30*	2.533E+00	1.066E+00	1.066E+00	17.36
	1120.29	139	15.10	1.416E+00	1.661E+00	1.661E+00	42.17
	1764.49	88	15.80	9.767E-01	1.463E+00	1.463E+00	28.18
TH-232	338.32	295	11.40	4.002E+00	1.657E+00	1.657E+00	26.40
	911.07	236	27.70*	1.740E+00	1.253E+00	1.253E+00	26.64
	969.11	170	16.60	1.637E+00	1.605E+00	1.605E+00	33.65
	766.42	413	0.32	2.059E+00	1.607E+02	1.607E+02	53.59
	1001.03	861	0.84*	1.585E+00	1.659E+02	1.659E+02	13.60
TH-234	63.29	3978	3.80*	2.231E+00	1.203E+02	1.203E+02	20.68
	92.38	14179	5.41	5.691E+00	1.181E+02	1.181E+02	19.05
	609.31	487	46.30*	2.533E+00	1.066E+00	1.066E+00	17.36
U-234	1120.29	139	15.10	1.416E+00	1.661E+00	1.661E+00	42.17

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		2-Sigma
					pCi/GRAM	pCi/GRAM	
U-235	1764.49	88	15.80	9.767E-01	1.463E+00	1.463E+00	28.18
	89.95	-----	2.70	5.508E+00	-----	Line Not Found	-----
	93.35	699	4.50	5.836E+00	6.828E+00	6.828E+00	44.92
	105.00	-----	2.10	6.385E+00	-----	Line Not Found	-----
	143.76	527	10.50*	6.662E+00	1.931E+00	1.931E+00	29.72
	163.35	209	4.70	6.381E+00	1.790E+00	1.790E+00	45.85
	185.71	2380	54.00	5.986E+00	1.887E+00	1.887E+00	9.29
NP-237	205.31	155	4.70	5.638E+00	1.501E+00	1.501E+00	73.11
	86.50	170	12.60*	5.253E+00	6.598E-01	6.598E-01	92.49
	95.87	-----	2.60	5.933E+00	-----	Line Not Found	-----
U-238	63.29	3978	3.80*	2.231E+00	1.203E+02	1.203E+02	20.68
	92.38	14179	5.41	5.691E+00	1.181E+02	1.181E+02	10.49
AM-243	74.67	463	66.00*	3.857E+00	4.659E-01	4.659E-01	36.46
	86.72	170	0.34	5.253E+00	2.474E+01	2.474E+01	90.16
	117.66	-----	0.55	6.694E+00	-----	Line Not Found	-----
ANH-511	142.18	527	0.13	6.662E+00	1.622E+02	1.622E+02	25.52
	511.00	96	100.00*	2.931E+00	8.410E-02	8.410E-02	91.17

Flag: "*" = Keyline

Total number of lines in spectrum 38
Number of unidentified lines 3
Number of lines tentatively identified by NID 35 92.11%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.445E+01	3.445E+01	0.348E+01	10.11	
NB-95	64.02D	1.16	5.151E-01	5.989E-01	1.154E-01	19.27	
CD-109	464.00D	1.02	2.235E+00	2.282E+00	2.057E+00	90.16	
SN-126	1.00E+05Y	1.00	2.247E-01	2.247E-01	2.026E-01	90.16	
LU-177	6.71D	4.21	2.573E-01	1.085E+00	1.314E+00	121.18	
TL-208	1.41E+10Y	1.00	4.846E-01	4.846E-01	0.965E-01	19.91	
BI-211	7.04E+08Y	1.00	3.333E+00	3.333E+00	0.549E+00	16.46	
BI-212	1.41E+10Y	1.00	8.745E-01	8.745E-01	4.801E-01	54.91	
PB-212	1.41E+10Y	1.00	1.459E+00	1.459E+00	0.157E+00	10.74	
PO-212	1.41E+10Y	1.00	1.459E+00	1.459E+00	0.157E+00	10.74	
BI-214	1600.00Y	1.00	1.066E+00	1.066E+00	0.185E+00	17.36	
PB-214	1600.00Y	1.00	1.160E+00	1.160E+00	0.200E+00	17.27	
PO-214	1600.00Y	1.00	1.160E+00	1.160E+00	0.200E+00	17.27	
PO-216	1.41E+10Y	1.00	1.459E+00	1.459E+00	0.157E+00	10.74	
PO-218	1600.00Y	1.00	1.160E+00	1.160E+00	0.200E+00	17.27	
RA-224	1.41E+10Y	1.00	4.423E+00	4.423E+00	1.187E+00	26.83	
RA-226	1600.00Y	1.00	1.066E+00	1.066E+00	0.185E+00	17.36	
AC-228	1.41E+10Y	1.00	1.253E+00	1.253E+00	0.334E+00	26.64	
RA-228	1.41E+10Y	1.00	1.253E+00	1.253E+00	0.334E+00	26.64	
TH-228	1.91Y	1.01	1.459E+00	1.480E+00	0.159E+00	10.74	
TH-230	4.47E+09Y	1.00	1.066E+00	1.066E+00	0.185E+00	17.36	
TH-232	1.41E+10Y	1.00	1.253E+00	1.253E+00	0.334E+00	26.64	
PA-234M	4.47E+09Y	1.00	1.659E+02	1.659E+02	0.226E+02	13.60	
TH-234	4.47E+09Y	1.00	1.203E+02	1.203E+02	0.249E+02	20.68	
U-234	4.47E+09Y	1.00	1.066E+00	1.066E+00	0.185E+00	17.36	
U-235	7.04E+08Y	1.00	1.931E+00	1.931E+00	0.574E+00	29.72	
NP-237	2.14E+06Y	1.00	6.598E-01	6.598E-01	6.103E-01	92.49	
U-238	4.47E+09Y	1.00	1.203E+02	1.203E+02	0.249E+02	20.68	
AM-243	7380.00Y	1.00	4.659E-01	4.659E-01	1.699E-01	36.46	
ANH-511	1.00E+09Y	1.00	8.410E-02	8.410E-02	7.667E-02	91.17	

Total Activity : 4.738E+02 4.748E+02

Grand Total Activity : 4.738E+02 4.748E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395008

Page : 5
Acquisition date : 2-FEB-2010 09:14:06

It	Energy	Area	Bkqnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	83.43	271	2829	1.87	166.99	163	8	3.76E-02	69.2	4.91E+00	T
0	98.28	1169	1511	1.11	196.66	193	9	1.62E-01	13.4	6.07E+00	T
4	110.82	312	1315	1.53	221.72	218	11	4.33E-02	41.1	6.57E+00	T
0	257.99	219	397	1.20	515.82	512	9	3.04E-02	35.6	4.85E+00	
0	742.72	161	162	1.78	1484.76	1477	18	2.24E-02	40.3	2.12E+00	T
1	963.91	54	81	1.91	1927.04	1918	40	7.48E-03	66.9	1.64E+00	T
0	1377.78	41	25	1.81	2754.83	2746	17	5.73E-03	64.1	1.16E+00	
0	1728.09	24	7	2.05	3455.73	3447	14	3.27E-03	63.4	9.87E-01	

Flags: "T" = Tentatively associated


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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395008.CNF;1
* Acquisition date   : 2-FEB-2010 09:14:06.   Detector SN#      :
* Detector ID        : GAM10                   Sensitivity         : 5.00000
* Geometry           : CAN                     Energy tolerance    : 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit      : 75.00000
* Elapsed real time  : 0 02:00:02.22           Half life ratio      : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library      : SOLID
* Sample ID          : G245395008             Analyst initials     : MXR1
* Batch Number       : 944966                 Sample Quantity      : 1.46430E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 16-MAR-2009 13:18:08.8MS Isotope      :
* MSD ID             :                          MSD Isotope    :
* LCS ID             : 1032-A                   LCS Isotope         :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.445E+01	3.482E+00	4.935E-01	4.250E-02	69.814
NB-95	5.989E-01	1.154E-01	7.516E-02	5.245E-03	7.969
CD-109	2.282E+00	2.057E+00	3.197E+00	3.625E-01	0.714
SN-126	2.247E-01	2.026E-01	3.072E-01	3.476E-02	0.732
LU-177	1.085E+00	1.314E+00	1.823E+00	1.065E-01	0.595
TL-208	4.846E-01	9.650E-02	6.526E-02	4.385E-03	7.425
BI-211	3.333E+00	5.486E-01	3.590E-01	2.617E-02	9.286
BI-212	8.745E-01	4.801E-01	5.331E-01	4.265E-02	1.640
PB-212	1.459E+00	1.567E-01	1.043E-01	7.914E-03	13.990
PO-212	1.459E+00	1.567E-01	1.043E-01	7.914E-03	13.990
BI-214	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
PB-214	1.160E+00	2.002E-01	1.251E-01	1.122E-02	9.267
PO-214	1.160E+00	2.002E-01	1.251E-01	1.122E-02	9.267
PO-216	1.459E+00	1.567E-01	1.043E-01	7.914E-03	13.990
PO-218	1.160E+00	2.002E-01	1.251E-01	1.122E-02	9.267
RA-224	4.423E+00	1.187E+00	1.187E+00	7.286E-02	3.726
RA-226	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
AC-228	1.253E+00	3.338E-01	2.159E-01	2.665E-02	5.803

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.253E+00	3.338E-01	2.159E-01	2.665E-02	5.803
TH-228	1.480E+00	1.589E-01	1.058E-01	8.024E-03	13.990
TH-230	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
TH-232	1.253E+00	3.338E-01	2.159E-01	2.665E-02	5.803
PA-234M	1.659E+02	2.256E+01	7.551E+00	7.794E-01	21.970
TH-234	1.203E+02	2.488E+01	5.274E+00	1.039E+00	22.811
U-234	1.066E+00	1.849E-01	1.140E-01	8.674E-03	9.348
U-235	1.931E+00	5.741E-01	4.655E-01	7.611E-02	4.149
NP-237	6.598E-01	6.103E-01	8.624E-01	2.027E-01	0.765
U-238	1.203E+02	2.488E+01	5.274E+00	1.039E+00	22.811
AM-243	4.659E-01	1.699E-01	1.987E-01	2.176E-02	2.345
ANH-511	8.410E-02	7.667E-02	5.175E-02	3.315E-03	1.625

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.333E-02		3.512E-01	5.641E-01	4.195E-02	-0.059
NA-22	2.488E-02		4.585E-02	7.970E-02	6.173E-03	0.312
NA-24	2.858E-02		9.438E-02	Half-Life too short		
AL-26	1.911E-03		3.201E-02	5.228E-02	3.315E-03	0.037
TI-44	3.572E-01	+	1.094E-01	1.298E-01	1.420E-02	2.752
SC-46	1.200E-02		4.322E-02	7.212E-02	7.137E-03	0.166
V-48	1.772E-02		7.816E-02	1.220E-01	1.128E-02	0.145
CR-51	3.297E-01		4.014E-01	6.868E-01	4.960E-02	0.480
MN-52	1.052E-01		1.946E-01	3.422E-01	2.892E-02	0.307
MN-54	1.311E-02		4.144E-02	6.949E-02	5.936E-03	0.189
CO-56	3.268E-02		4.014E-02	6.976E-02	6.160E-03	0.469
CO-57	-3.466E-02		3.830E-02	6.050E-02	3.990E-03	-0.573
CO-58	-1.946E-02		4.198E-02	6.671E-02	5.338E-03	-0.292
FE-59	-3.704E-02		9.508E-02	1.473E-01	1.230E-02	-0.251
CO-60	1.895E-02		3.777E-02	6.582E-02	5.720E-03	0.288
ZN-65	-8.218E-03		1.109E-01	1.520E-01	1.107E-02	-0.054
GE-68	-5.073E-02		1.323E+00	2.124E+00	1.683E-01	-0.024
AS-73	1.090E+00		2.819E+00	4.745E+00	6.279E-01	0.230
AS-74	4.448E-02		9.564E-02	1.648E-01	9.416E-03	0.270
SE-75	2.530E-02		4.891E-02	8.339E-02	5.319E-03	0.303
BR-77	-3.185E+00		8.244E+00	1.291E+01	8.192E-01	-0.247
SR-82	-6.472E-01		4.412E-01	6.555E-01	4.726E-02	-0.987
RB-83	-3.193E-02		7.718E-02	1.207E-01	7.658E-03	-0.265
RB-84	7.665E-02		7.693E-02	1.344E-01	1.303E-02	0.570
KR-85	4.349E+00		8.803E+00	1.282E+01	8.188E-01	0.339
SR-85	2.201E-02		4.455E-02	6.488E-02	4.144E-03	0.339
RB-86	-3.010E-02		8.100E-01	1.300E+00	1.032E-01	-0.023
Y-88	-4.376E-03		2.687E-02	4.166E-02	2.556E-03	-0.105
ZR-88	-2.218E-02		3.370E-02	5.323E-02	3.617E-03	-0.417
Y-91	6.054E+00		1.835E+01	3.144E+01	2.088E+00	0.193
NB-94	4.085E-03		3.672E-02	6.148E-02	3.500E-03	0.066

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	2.642E-01		1.552E-01	2.451E-01	1.901E-02	1.078
ZR-95	1.555E-02		7.833E-02	1.312E-01	1.031E-02	0.118
NB-97	-4.789E-02		1.696E-02	Half-Life too short		
ZR-97	1.192E+00		3.406E-01	Half-Life too short		
MO-99	1.755E+01		1.204E+01	1.900E+01	2.671E+00	0.924
TC-99M	1.186E+09		9.741E+08	Half-Life too short		
RH-101	1.893E-03		4.184E-02	6.613E-02	3.799E-03	0.029
RH-102	-1.510E-03		3.310E-02	5.333E-02	3.518E-03	-0.028
RU-103	1.791E-02		4.464E-02	7.350E-02	9.536E-03	0.244
RH-106	-8.996E-02		3.308E-01	5.453E-01	6.304E-02	-0.165
RU-106	-8.996E-02		3.306E-01	5.453E-01	2.962E-02	-0.165
AG-108M	-1.973E-02		3.505E-02	5.507E-02	3.949E-03	-0.358
AG-110M	-5.650E-02		4.084E-02	6.266E-02	3.395E-03	-0.902
IN-111	3.055E-01		9.638E-01	1.451E+00	8.957E-02	0.211
IN-113M	-4.093E-03		4.808E-02	7.832E-02	5.585E-03	-0.052
SN-113	-4.093E-03		4.808E-02	7.832E-02	5.585E-03	-0.052
IN-114M	6.632E-02		2.480E-01	3.533E-01	2.003E-02	0.188
CD-115	-5.711E+00		8.498E+00	1.305E+01	8.212E-01	-0.438
SN-117M	4.276E-02		7.876E-02	1.144E-01	6.418E-03	0.374
SB-122	-8.420E-01		1.711E+00	2.645E+00	1.591E-01	-0.318
I-123	7.137E-01		9.229E-01	Half-Life too short		
TE-123M	1.668E-02		4.313E-02	6.231E-02	3.539E-03	0.268
I-124	-2.569E-01		6.230E-01	8.797E-01	4.963E-02	-0.292
SB-124	-2.226E-03		6.446E-02	1.040E-01	7.905E-03	-0.021
SB-125	4.421E-02		1.031E-01	1.714E-01	1.193E-02	0.258
TE-125M	4.024E+01		1.849E+01	2.790E+01	2.677E+00	1.443
I-126	-8.770E-02		1.968E-01	3.203E-01	1.607E-02	-0.274
SB-126	2.382E-02		1.686E-01	2.461E-01	1.487E-02	0.097
SB-127	-4.650E-01		1.166E+00	1.893E+00	1.652E-01	-0.246
XE-127	5.818E-02		6.492E-02	1.005E-01	5.818E-03	0.579
I-131	-3.088E-02		1.137E-01	1.844E-01	1.354E-02	-0.167
TE-132	3.069E-01		6.105E-01	1.044E+00	1.484E-01	0.294
BA-133	2.933E-02		5.051E-02	7.566E-02	9.129E-03	0.388
I-133	-3.175E-04		1.299E-03	Half-Life too short		
CS-134	4.664E-02		5.370E-02	9.302E-02	7.171E-03	0.501
CS-135	8.911E-03		1.770E-01	2.966E-01	2.397E-02	0.030
I-135	-9.492E+07		1.352E+08	Half-Life too short		
CS-136	-7.695E-02		9.687E-02	1.432E-01	1.253E-02	-0.537
BA-137M	3.557E-02		4.275E-02	7.444E-02	3.673E-03	0.478
CS-137	3.760E-02		4.520E-02	7.869E-02	3.905E-03	0.478
CE-139	-7.592E-03		4.552E-02	6.418E-02	3.506E-03	-0.118
BA-140	-5.462E-02		2.878E-01	4.548E-01	1.483E-01	-0.120
LA-140	-5.973E-02		7.266E-02	1.021E-01	7.921E-03	-0.585
CE-141	1.071E-01		9.670E-02	1.435E-01	8.784E-03	0.746
CE-143	4.296E-04		6.740E-05	Half-Life too short		
CE-144	-1.543E-01		3.078E-01	4.889E-01	7.025E-02	-0.316
PM-144	3.541E-02		3.735E-02	6.552E-02	3.655E-03	0.540
PR-144	2.398E+00		2.529E+00	4.437E+00	2.474E-01	0.540

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	-1.898E-03		4.954E-02	8.010E-02	7.399E-03	-0.024
ND-147	2.371E-01		5.998E-01	9.830E-01	1.350E-01	0.241
PM-149	-6.317E+01		6.798E+01	1.079E+02	1.560E+01	-0.585
EU-152	-1.321E-01		1.117E-01	1.577E-01	1.162E-02	-0.838
GD-153	1.640E+00	+	2.664E-01	3.039E-01	2.830E-02	5.397
EU-154	6.060E-02		1.293E-01	2.234E-01	2.379E-02	0.271
EU-155	1.201E-01		1.817E-01	3.003E-01	2.491E-02	0.400
TB-160	-1.028E-01		1.642E-01	2.559E-01	2.467E-02	-0.402
HO-166M	-2.093E-02		6.470E-02	1.053E-01	6.178E-03	-0.199
TM-171	-4.450E+01		7.162E+01	1.046E+02	1.191E+01	-0.426
LU-176	5.873E-03		2.741E-02	4.591E-02	3.020E-03	0.128
LU-177M	-5.994E-02		1.899E-01	3.044E-01	2.063E-02	-0.197
HF-181	2.133E-02		4.539E-02	7.526E-02	4.940E-03	0.283
W-181	4.460E-01		9.427E-01	1.416E+00	1.636E-01	0.315
TA-182	5.244E-02		2.134E-01	3.622E-01	2.498E-02	0.145
RE-183	4.128E-01	+	1.757E-01	2.625E-01	1.452E-02	1.573
RE-184	1.262E-01		2.836E-01	4.504E-01	2.808E-02	0.280
OS-185	5.220E-03		4.627E-02	7.751E-02	3.982E-03	0.067
RE-188	-2.342E-01		2.339E-01	3.632E-01	2.063E-02	-0.645
W-188	-3.004E+00		8.980E+00	1.290E+01	8.378E-01	-0.233
IR-192	-1.110E-02		3.839E-02	6.284E-02	4.177E-03	-0.177
AU-195	4.771E+00	+	7.748E-01	8.728E-01	7.921E-02	5.466
TL-200	2.779E-06		1.149E-04	Half-Life	too short	
TL-201	8.624E-01		7.484E+00	1.140E+01	6.234E-01	0.076
TL-202	-7.824E-03		7.249E-02	1.170E-01	7.867E-03	-0.067
HG-203	-1.661E-02		4.506E-02	7.415E-02	5.004E-03	-0.224
BI-207	-2.368E-02		5.447E-02	8.419E-02	6.854E-03	-0.281
TL-207	-1.164E+00		7.602E-01	1.131E+00	1.904E-01	-1.030
PO-209	4.355E+00		7.906E+00	1.346E+01	1.357E+00	0.324
BI-210	-1.586E+01		1.578E+01	2.587E+01	2.538E+00	-0.613
PB-210	-1.586E+01		1.578E+01	2.587E+01	2.538E+00	-0.613
PO-210	-1.586E+01		1.577E+01	2.587E+01	2.323E+00	-0.613
PB-211	-4.447E-01		1.033E+00	1.586E+00	9.900E-01	-0.280
PO-215	-1.164E+00		7.602E-01	1.131E+00	1.904E-01	-1.030
RN-219	-8.573E-02		4.417E-01	7.139E-01	1.004E-01	-0.120
RN-220	2.825E+00		2.993E+01	4.815E+01	2.953E+00	0.059
RA-223	-1.164E+00		7.602E-01	1.131E+00	1.904E-01	-1.030
AC-227	8.744E-01		5.414E-01	8.372E-01	1.185E-01	1.044
TH-227	8.744E-01		5.478E-01	8.372E-01	1.429E-01	1.044
TH-229	2.400E-01		6.391E-01	1.025E+00	5.843E-02	0.234
PA-231	-2.686E-01		1.615E+00	2.673E+00	3.761E-01	-0.100
TH-231	-1.164E+00		7.602E-01	1.131E+00	1.904E-01	-1.030
U-231	8.466E+00		2.277E+00	2.857E+00	2.738E-01	2.963
PA-233	3.991E-02		7.136E-02	1.211E-01	8.377E-03	0.330
PA-234	2.156E-01		3.371E-01	5.715E-01	1.101E-01	0.377
NP-236	-3.784E-02		1.234E-01	1.735E-01	9.665E-03	-0.218
NP-239	-6.339E-01		3.185E-01	4.597E-01	3.216E-02	-1.379
AM-241	6.105E-01		4.983E-01	7.571E-01	9.724E-02	0.806

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.314E-02		1.591E-01	2.612E-01	2.188E-02	0.165
AM-246	6.033E-02		1.526E-01	2.541E-01	2.007E-02	0.237
CM-247	-3.276E-02		4.009E-02	6.256E-02	4.248E-03	-0.524
CF-249	2.733E-02		4.517E-02	7.602E-02	5.166E-03	0.360
CF-251	1.115E-01		1.691E-01	2.744E-01	1.522E-02	0.406

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395008            *
* Acquisition date   : 2-FEB-2010 09:14:06 Detector SN#      :                *
* Detector ID        : GAM10 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time: 0 02:00:00.00 Abundance limit : 75.000    *
* Elapsed real time: 0 02:00:02.22 Half life ratio : 8.000    *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395008 Analyst initials: MXR1         *
* Batch Number       : 944966 Sample Quantity : 1.4643E+02 GRAM *
* Recovery           : 1.00000 Carrier Weight : 0.00000         *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 16-MAR-2009 13:18:08 MS Isotope      :                *
* MSD DPM             : 0.000 MSD Isotope                   :                *
* LCS DPM             : 0.000 LCS Isotope                   :                *
* LCSD DPM            : 0.000 LCSD Isotope                  :                *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.445E+01	3.412E+00	2.483E-01	1.741E+00
NB-95	5.989E-01	1.131E-01	3.841E-02	5.771E-02
CD-109	2.282E+00	2.016E+00	1.715E+00	1.029E+00
SN-126	2.247E-01	1.985E-01	1.648E-01	1.013E-01
LU-177	1.085E+00	1.288E+00	9.595E-01	6.572E-01
TL-208	4.846E-01	9.457E-02	3.356E-02	4.825E-02
BI-211	3.333E+00	5.376E-01	1.868E-01	2.743E-01
BI-212	8.745E-01	4.705E-01	2.727E-01	2.401E-01
PB-212	1.459E+00	1.536E-01	5.475E-02	7.834E-02
PO-212	1.459E+00	1.536E-01	5.475E-02	7.834E-02
BI-214	1.066E+00	1.812E-01	5.856E-02	9.247E-02
PB-214	1.160E+00	1.962E-01	6.510E-02	1.001E-01
PO-214	1.160E+00	1.962E-01	6.510E-02	1.001E-01
PO-216	1.459E+00	1.536E-01	5.475E-02	7.834E-02
PO-218	1.160E+00	1.962E-01	6.510E-02	1.001E-01
RA-224	4.423E+00	1.163E+00	6.228E-01	5.934E-01
RA-226	1.066E+00	1.812E-01	5.856E-02	9.247E-02
AC-228	1.253E+00	3.271E-01	1.099E-01	1.669E-01
RA-228	1.253E+00	3.271E-01	1.099E-01	1.669E-01
TH-228	1.480E+00	1.557E-01	5.551E-02	7.944E-02
TH-230	1.066E+00	1.812E-01	5.856E-02	9.247E-02
TH-232	1.253E+00	3.271E-01	1.099E-01	1.669E-01
PA-234M	1.659E+02	2.211E+01	3.834E+00	1.128E+01
TH-234	1.203E+02	2.438E+01	2.848E+00	1.244E+01
U-234	1.066E+00	1.812E-01	5.856E-02	9.247E-02
U-235	1.931E+00	5.626E-01	2.470E-01	2.870E-01
NP-237	6.598E-01	5.981E-01	4.627E-01	3.051E-01
U-238	1.203E+02	2.438E+01	2.848E+00	1.244E+01
AM-243	4.659E-01	1.665E-01	1.069E-01	8.493E-02
ANH-511	8.410E-02	7.514E-02	2.669E-02	3.834E-02

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-3.333E-02	3.442E-01	2.914E-01	1.756E-01 NOT IDENT.
NA-22	2.488E-02	4.493E-02	4.024E-02	2.292E-02 NOT IDENT.
NA-24	2.858E+04	1.850E+05	0.000E+00	9.438E+04 SHORT HLIF
AL-26	1.911E-03	3.137E-02	2.617E-02	1.601E-02 NOT IDENT.
TI-44	3.572E-01	1.073E-01	6.978E-02	5.472E-02 FAIL ABUN
SC-46	1.200E-02	4.236E-02	3.672E-02	2.161E-02 FAIL ABUN
V-48	1.772E-02	7.659E-02	6.195E-02	3.908E-02 NOT IDENT.
CR-51	3.297E-01	3.934E-01	3.581E-01	2.007E-01 NOT IDENT.
MN-52	1.052E-01	1.907E-01	1.723E-01	9.729E-02 FAIL ABUN
MN-54	1.311E-02	4.061E-02	3.543E-02	2.072E-02 NOT IDENT.
CO-56	3.268E-02	3.934E-02	3.556E-02	2.007E-02 NOT IDENT.
CO-57	-3.466E-02	3.754E-02	3.222E-02	1.915E-02 NOT IDENT.
CO-58	-1.946E-02	4.114E-02	3.404E-02	2.099E-02 NOT IDENT.
FE-59	-3.704E-02	9.318E-02	7.465E-02	4.754E-02 FAIL ABUN
CO-60	1.895E-02	3.702E-02	3.319E-02	1.889E-02 NOT IDENT.
ZN-65	-8.218E-03	1.087E-01	7.699E-02	5.547E-02 NOT IDENT.
GE-68	-5.073E-02	1.297E+00	1.077E+00	6.617E-01 NOT IDENT.
AS-73	1.090E+00	2.763E+00	2.572E+00	1.409E+00 NOT IDENT.
AS-74	4.448E-02	9.373E-02	8.472E-02	4.782E-02 NOT IDENT.
SE-75	2.530E-02	4.793E-02	4.366E-02	2.446E-02 NOT IDENT.
BR-77	-3.185E+00	8.079E+00	6.658E+00	4.122E+00 FAIL ABUN
SR-82	-6.472E-01	4.324E-01	3.348E-01	2.206E-01 NOT IDENT.
RB-83	-3.193E-02	7.563E-02	6.222E-02	3.859E-02 NOT IDENT.
RB-84	7.665E-02	7.539E-02	6.843E-02	3.846E-02 NOT IDENT.
KR-85	4.349E+00	8.627E+00	6.611E+00	4.401E+00 NOT IDENT.
SR-85	2.201E-02	4.366E-02	3.346E-02	2.228E-02 NOT IDENT.
RB-86	-3.010E-02	7.938E-01	6.591E-01	4.050E-01 NOT IDENT.
Y-88	-4.376E-03	2.633E-02	2.085E-02	1.344E-02 NOT IDENT.
ZR-88	-2.218E-02	3.303E-02	2.762E-02	1.685E-02 NOT IDENT.
Y-91	6.054E+00	1.799E+01	1.589E+01	9.176E+00 NOT IDENT.
NB-94	4.085E-03	3.599E-02	3.148E-02	1.836E-02 NOT IDENT.
NB-95M	2.642E-01	1.521E-01	1.287E-01	7.761E-02 NOT IDENT.
ZR-95	1.555E-02	7.676E-02	6.708E-02	3.916E-02 NOT IDENT.
NB-97	-4.789E+04	3.324E+04	0.000E+00	1.696E+04 SHORT HLIF
ZR-97	1.192E+06	6.676E+05	0.000E+00	3.406E+05 SHORT HLIF
MO-99	1.755E+01	1.180E+01	9.719E+00	6.022E+00 NOT IDENT.
TC-99M	1.186E+15	1.909E+15	0.000E+00	9.741E+14 SHORT HLIF
RH-101	1.893E-03	4.101E-02	3.485E-02	2.092E-02 NOT IDENT.
RH-102	-1.510E-03	3.244E-02	2.756E-02	1.655E-02 FAIL ABUN
RU-103	1.791E-02	4.375E-02	3.794E-02	2.232E-02 NOT IDENT.
RH-106	-8.996E-02	3.242E-01	2.800E-01	1.654E-01 FAIL ABUN
RU-106	-8.996E-02	3.240E-01	2.800E-01	1.653E-01 FAIL ABUN
AG-108M	-1.973E-02	3.435E-02	2.852E-02	1.752E-02 NOT IDENT.
AG-110M	-5.650E-02	4.003E-02	3.213E-02	2.042E-02 NOT IDENT.
IN-111	3.055E-01	9.445E-01	7.608E-01	4.819E-01 NOT IDENT.
IN-113M	-4.093E-03	4.712E-02	4.065E-02	2.404E-02 NOT IDENT.
SN-113	-4.093E-03	4.712E-02	4.065E-02	2.404E-02 NOT IDENT.
IN-114M	6.632E-02	2.431E-01	1.863E-01	1.240E-01 NOT IDENT.
CD-115	-5.711E+00	8.328E+00	6.724E+00	4.249E+00 NOT IDENT.
SN-117M	4.276E-02	7.718E-02	6.061E-02	3.938E-02 NOT IDENT.
SB-122	-8.420E-01	1.677E+00	1.361E+00	8.557E-01 NOT IDENT.
I-123	7.137E+05	1.809E+06	0.000E+00	9.229E+05 SHORT HLIF
TE-123M	1.668E-02	4.227E-02	3.299E-02	2.157E-02 NOT IDENT.
I-124	-2.569E-01	6.106E-01	4.520E-01	3.115E-01 NOT IDENT.
SB-124	-2.226E-03	6.317E-02	5.217E-02	3.223E-02 FAIL ABUN
SB-125	4.421E-02	1.010E-01	8.876E-02	5.154E-02 NOT IDENT.
TE-125M	4.024E+01	1.812E+01	1.489E+01	9.247E+00 NOT IDENT.
I-126	-8.770E-02	1.929E-01	1.642E-01	9.841E-02 NOT IDENT.
SB-126	2.382E-02	1.652E-01	1.259E-01	8.429E-02 NOT IDENT.
SB-127	-4.650E-01	1.143E+00	9.696E-01	5.831E-01 NOT IDENT.
XE-127	5.818E-02	6.362E-02	5.292E-02	3.246E-02 NOT IDENT.
I-131	-3.088E-02	1.115E-01	9.585E-02	5.687E-02 NOT IDENT.
TE-132	3.069E-01	5.983E-01	5.483E-01	3.052E-01 FAIL ABUN
BA-133	2.933E-02	4.950E-02	3.935E-02	2.525E-02 NOT IDENT.
I-133	-3.175E+02	2.545E+03	0.000E+00	1.299E+03 SHORT HLIF
CS-134	4.664E-02	5.262E-02	4.749E-02	2.685E-02 NOT IDENT.
CS-135	8.911E-03	1.734E-01	1.552E-01	8.849E-02 NOT IDENT.
I-135	-9.492E+13	2.651E+14	0.000E+00	1.352E+14 SHORT HLIF
CS-136	-7.695E-02	9.493E-02	7.263E-02	4.843E-02 FAIL ABUN
BA-137M	3.557E-02	4.190E-02	3.817E-02	2.138E-02 NOT IDENT.
CS-137	3.760E-02	4.429E-02	4.035E-02	2.260E-02 NOT IDENT.
CE-139	-7.592E-03	4.461E-02	3.396E-02	2.276E-02 NOT IDENT.
BA-140	-5.462E-02	2.820E-01	2.343E-01	1.439E-01 FAIL ABUN
LA-140	-5.973E-02	7.120E-02	5.125E-02	3.633E-02 NOT IDENT.
CE-141	1.071E-01	9.476E-02	7.615E-02	4.835E-02 NOT IDENT.

CE-143	4.296E+02	1.321E+02	0.000E+00	6.740E+01	SHORT HLIF
CE-144	-1.543E-01	3.016E-01	2.599E-01	1.539E-01	NOT IDENT.
PM-144	3.541E-02	3.660E-02	3.355E-02	1.868E-02	NOT IDENT.
PR-144	2.398E+00	2.479E+00	2.272E+00	1.265E+00	NOT IDENT.
PM-146	-1.898E-03	4.854E-02	4.143E-02	2.477E-02	NOT IDENT.
ND-147	2.371E-01	5.878E-01	5.066E-01	2.999E-01	FAIL ABUN
PM-149	-6.317E+01	6.662E+01	5.642E+01	3.399E+01	NOT IDENT.
EU-152	-1.321E-01	1.094E-01	8.211E-02	5.583E-02	FAIL ABUN
GD-153	1.640E+00	2.611E-01	1.627E-01	1.332E-01	FAIL ABUN
EU-154	6.060E-02	1.267E-01	1.128E-01	6.467E-02	NOT IDENT.
EU-155	1.201E-01	1.781E-01	1.604E-01	9.086E-02	FAIL ABUN
TB-160	-1.028E-01	1.609E-01	1.303E-01	8.208E-02	FAIL ABUN
HO-166M	-2.093E-02	6.341E-02	5.388E-02	3.235E-02	FAIL ABUN
TM-171	-4.450E+01	7.019E+01	5.642E+01	3.581E+01	NOT IDENT.
LU-176	5.873E-03	2.686E-02	2.396E-02	1.370E-02	FAIL ABUN
LU-177M	-5.994E-02	1.861E-01	1.578E-01	9.496E-02	NOT IDENT.
HF-181	2.133E-02	4.448E-02	3.888E-02	2.270E-02	NOT IDENT.
W-181	4.460E-01	9.238E-01	7.644E-01	4.713E-01	NOT IDENT.
TA-182	5.244E-02	2.091E-01	1.830E-01	1.067E-01	FAIL ABUN
RE-183	4.128E-01	1.722E-01	1.389E-01	8.787E-02	FAIL ABUN
RE-184	1.262E-01	2.780E-01	2.361E-01	1.418E-01	NOT IDENT.
OS-185	5.220E-03	4.535E-02	3.976E-02	2.314E-02	NOT IDENT.
RE-188	-2.342E-01	2.292E-01	1.924E-01	1.170E-01	NOT IDENT.
W-188	-3.004E+00	8.800E+00	6.743E+00	4.490E+00	FAIL ABUN
IR-192	-1.110E-02	3.763E-02	3.277E-02	1.920E-02	FAIL ABUN
AU-195	4.771E+00	7.593E-01	4.670E-01	3.874E-01	FAIL ABUN
TL-200	2.779E+00	2.252E+02	0.000E+00	1.149E+02	SHORT HLIF
TL-201	8.624E-01	7.334E+00	6.029E+00	3.742E+00	NOT IDENT.
TL-202	-7.824E-03	7.104E-02	6.057E-02	3.624E-02	NOT IDENT.
HG-203	-1.661E-02	4.416E-02	3.878E-02	2.253E-02	FAIL ABUN
BI-207	-2.368E-02	5.338E-02	4.269E-02	2.723E-02	FAIL ABUN
TL-207	-1.164E+00	7.450E-01	5.895E-01	3.801E-01	FAIL ABUN
PO-209	4.355E+00	7.748E+00	6.850E+00	3.953E+00	NOT IDENT.
BI-210	-1.586E+01	1.546E+01	1.407E+01	7.889E+00	NOT IDENT.
PB-210	-1.586E+01	1.546E+01	1.407E+01	7.889E+00	NOT IDENT.
PO-210	-1.586E+01	1.545E+01	1.407E+01	7.883E+00	NOT IDENT.
PB-211	-4.447E-01	1.012E+00	8.222E-01	5.163E-01	NOT IDENT.
PO-215	-1.164E+00	7.450E-01	5.895E-01	3.801E-01	FAIL ABUN
RN-219	-8.573E-02	4.329E-01	3.703E-01	2.209E-01	NOT IDENT.
RN-220	2.825E+00	2.933E+01	2.480E+01	1.497E+01	NOT IDENT.
RA-223	-1.164E+00	7.450E-01	5.895E-01	3.801E-01	FAIL ABUN
AC-227	8.744E-01	5.306E-01	4.387E-01	2.707E-01	FAIL ABUN
TH-227	8.744E-01	5.368E-01	4.387E-01	2.739E-01	FAIL ABUN
TH-229	2.400E-01	6.263E-01	5.402E-01	3.196E-01	FAIL ABUN
PA-231	-2.686E-01	1.582E+00	1.398E+00	8.073E-01	NOT IDENT.
TH-231	-1.164E+00	7.450E-01	5.895E-01	3.801E-01	FAIL ABUN
U-231	8.466E+00	2.232E+00	1.530E+00	1.139E+00	FAIL ABUN
PA-233	3.991E-02	6.994E-02	6.315E-02	3.568E-02	FAIL ABUN
PA-234	2.156E-01	3.304E-01	2.906E-01	1.685E-01	FAIL ABUN
NP-236	-3.784E-02	1.210E-01	9.184E-02	6.172E-02	FAIL ABUN
NP-239	-6.339E-01	3.121E-01	2.451E-01	1.592E-01	FAIL ABUN
AM-241	6.105E-01	4.884E-01	4.095E-01	2.492E-01	NOT IDENT.
CM-243	4.314E-02	1.559E-01	1.396E-01	7.954E-02	FAIL ABUN
AM-246	6.033E-02	1.495E-01	1.288E-01	7.628E-02	NOT IDENT.
CM-247	-3.276E-02	3.929E-02	3.245E-02	2.004E-02	NOT IDENT.
CF-249	2.733E-02	4.427E-02	3.946E-02	2.259E-02	NOT IDENT.
CF-251	1.115E-01	1.657E-01	1.450E-01	8.455E-02	NOT IDENT.


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*****
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GAMMA SPECTROSCOPY BACKGROUND REPORT             *
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ENERGY	MDA COUNTS
46.50	1237.7517
46.50	1237.7517
46.50	1237.7517
48.70	1179.0133
49.72	1187.7494
51.35	1311.2771
52.39	1309.2271
52.97	1265.6317
53.15	1282.9442
53.44	1274.5812
54.07	1294.3102
56.28	1412.8986
56.28	1412.9102
57.37	0.0000
57.53	1502.1625
57.53	1502.1686
57.60	1460.6808
57.98	1447.9044
57.98	1447.9044
59.32	1448.2834
59.32	1448.2834
59.40	1448.5566
59.54	1449.0366
59.72	1470.9092
60.01	1471.9110
61.10	1565.2240
61.14	1565.3668
61.30	1565.9464
63.00	1464.9788
63.29	1465.9435
63.29	1465.9435
63.58	1466.9064
64.28	1377.5759
65.12	1428.9460
65.20	1429.1987
65.20	1429.1987
66.05	1467.8354
66.72	1503.1077
66.83	1550.9977
66.91	1551.2688
67.20	1589.7280
67.20	1589.7280
67.75	1649.3499
67.85	1649.7074
68.90	1507.3433
68.90	1507.3433
69.30	1465.2042
69.67	1515.6354
70.82	1619.5453
70.82	1619.5453
70.83	1619.5793
72.80	1807.6101
72.87	1807.8749
72.87	1807.8749
74.67	1814.5693
74.81	1815.0894
74.81	1815.0894
74.81	1815.0894
74.81	1815.0894
74.81	1815.0894
74.81	1815.0894
74.97	1815.6755
75.28	1816.8197
75.70	1818.3610
77.11	1823.5140
77.11	1823.5140

77.11	1823.5140
77.11	1823.5140
77.11	1823.5140
77.11	1823.5140
77.11	1823.5140
78.38	1915.6403
79.62	1898.6198
79.80	1911.1195
79.80	1911.1195
80.11	1912.2826
80.18	1912.5389
80.30	1912.9825
80.30	1912.9825
80.57	1913.9879
81.00	1963.0297
81.07	1963.2922
81.07	1963.2922
81.07	1963.2922
81.07	1963.2922
82.60	1917.0079
83.37	2030.0248
83.78	2113.5959
83.78	2113.5959
83.78	2113.5959
83.78	2113.5959
84.21	2243.5959
84.90	2246.5105
85.43	2248.7366
86.29	2252.3281
86.50	2253.2117
86.54	2253.3723
86.59	2253.5789
86.72	2439.9753
86.79	2440.2734
86.94	2440.9568
87.30	2556.6111
87.30	2556.6111
87.30	2556.6111
87.30	2556.6111
87.30	2556.6111
87.30	2556.6111
87.57	2557.8721
87.88	2727.5469
88.03	2728.2952
88.36	2618.7017
88.47	2619.2200
89.95	2626.2639
91.11	2631.7395
92.29	2131.6152
92.38	2131.9590
92.38	2131.9590
93.35	2135.6113
94.00	2138.0498
94.67	2140.5313
94.67	2140.5527
94.90	2141.4121
94.90	2141.4121
94.90	2141.4121
94.90	2141.4121
95.87	1048.1302
95.87	1048.1302
96.73	1049.6892
97.43	1050.9437
98.44	1009.9100
98.44	1009.9100
98.88	1010.6653
99.55	968.8831
99.55	968.8831
99.86	957.1187
100.00	957.3472
100.10	957.5138
103.18	1061.1268
103.76	993.1831
105.00	1050.8851
105.31	1039.0372
108.00	1100.5405
109.28	1093.4365

111.00	1127.6348
111.00	1127.6348
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112.95	1019.8397
115.19	952.6219
116.30	958.9548
117.00	1002.5327
117.00	1002.5327
117.66	994.0649
121.11	836.3619
121.62	845.4588
121.78	863.6506
122.06	871.4152
122.32	863.2720
122.32	863.2720
122.32	863.2720
122.32	863.2720
123.07	838.7759
127.23	870.5009
129.76	830.8072
131.20	875.4004
133.02	857.1819
133.54	876.0950
135.34	743.3959
136.00	782.9460
136.25	813.4597
136.48	816.9620
140.51	694.2846
140.51	0.0000
142.18	739.9337
142.65	744.2035
143.76	745.2943
144.24	768.1435
144.24	768.1435
144.24	768.1435
144.24	768.1435
145.22	726.4927
145.44	726.7023
147.16	706.9516
152.43	683.0384
152.70	682.1675
153.22	671.5684
154.21	646.9611
154.21	646.9611
154.21	646.9611
154.21	646.9611
155.03	747.2626
156.02	711.6049
158.56	647.1245
159.00	0.0000
159.00	650.8113
160.31	691.9667
161.27	667.6748
162.32	704.8298
162.64	695.0425
163.35	666.0000
163.89	624.4634
165.85	666.3104
167.43	631.1487
171.28	620.9096
171.86	607.7729
172.10	607.9426
176.55	592.8840
176.60	579.2856
181.06	637.0080
184.41	580.9478
185.71	581.7782
186.00	581.9639
190.27	503.3755
192.34	543.2176
193.63	505.7747
197.04	564.5231
198.01	525.5631
198.60	554.9764
200.40	564.7621
201.83	572.9595
202.84	558.1328
205.31	542.6805

208.36	497.1231
208.81	476.8927
209.75	470.2852
209.75	470.2852
210.97	442.5825
215.65	435.0604
216.55	443.4473
218.09	454.7975
222.10	418.1586
223.80	478.8069
226.40	410.9183
227.00	399.4821
227.08	397.7172
227.20	396.8666
228.16	411.6067
228.18	411.6137
228.18	411.6137
231.56	0.0000
235.69	405.4736
236.00	405.5933
236.00	405.5933
238.63	398.4098
238.63	398.4098
238.63	398.4098
238.63	398.4098
239.00	398.5438
240.98	399.2672
241.98	355.3905
241.98	355.3905
241.98	355.3905
244.69	332.9045
245.39	340.4183
247.94	357.8549
248.90	373.7344
249.79	346.5308
252.40	344.4446
252.85	340.7299
252.85	340.7299
254.15	0.0000
256.20	359.9238
256.20	359.9238
260.50	358.3089
260.90	358.4330
262.80	304.1267
264.65	312.0417
268.24	350.2510
268.79	328.0503
269.46	302.1235
269.46	302.1235
269.46	302.1235
269.46	302.1235
271.23	351.1345
273.65	422.0280
276.40	321.6986
277.35	318.1953
277.60	313.5684
277.60	313.5684
278.00	308.9747
278.60	323.2244
279.20	340.3030
279.53	335.6953
280.46	333.1282
281.68	302.3727
283.67	272.6706
284.30	291.6914
285.00	313.5803
285.90	303.4110
286.10	301.5693
286.10	301.5693
287.40	247.9397
288.45	0.0000
290.67	299.0687
290.80	311.2437
291.72	325.1483
293.26	0.0000
293.70	280.0070
295.21	259.0093
295.21	259.0093

295.21	259.0093
295.96	297.2750
296.50	297.3988
297.23	297.5702
298.57	297.8844
299.80	281.3502
299.80	281.3502
300.09	275.2954
300.09	275.2954
300.09	275.2954
300.09	275.2954
300.12	275.2998
301.29	269.4270
302.84	277.4170
303.76	277.6114
303.91	266.9090
304.40	270.0758
304.40	270.0758
304.84	272.4729
306.84	263.2802
308.46	258.7959
311.98	250.8078
316.51	271.9915
318.01	275.2030
319.02	256.9856
319.41	240.5679
320.08	239.7184
323.87	303.6497
323.87	303.6497
323.87	303.6497
323.87	303.6497
325.23	325.3870
328.77	253.9539
333.44	286.9561
334.20	274.5654
334.20	274.5654
334.30	274.5825
338.28	236.0266
338.28	236.0266
338.28	236.0266
338.28	236.0266
338.32	236.0339
338.32	236.0339
338.32	236.0339
340.50	176.5121
340.57	176.5203
344.27	244.9310
345.85	242.0396
350.59	0.0000
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351.92	230.3574
351.92	230.3574
351.92	230.3574
355.39	0.0000
356.01	187.9905
364.48	216.3164
366.43	197.5501
367.43	190.6581
367.94	0.0000
369.80	208.0455
374.96	226.9123
383.85	194.7598
387.95	206.4661
388.63	209.6085
391.69	201.8642
391.69	201.8642
392.90	219.3633
398.62	172.0323
400.65	180.4553
401.10	194.8648
401.81	195.9778
402.60	212.4991
404.84	200.4600
410.95	193.9984
411.60	215.7545
413.65	197.4205
414.70	183.0687
415.30	187.2749

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417.63	0.0000
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423.70	196.5501
427.08	178.1911
427.89	180.3650
432.53	196.5457
433.93	177.8728
439.47	188.9511
439.56	184.7629
439.89	188.9978
443.98	182.0835
444.90	163.2235
445.03	163.2377
445.03	163.2377
445.03	163.2377
445.03	163.2377
453.90	183.1262
463.38	177.7280
468.07	149.3866
473.00	169.0563
475.06	172.4628
475.35	169.2757
476.78	175.8416
477.59	165.1924
477.96	164.1547
482.03	146.2411
484.57	164.7477
487.03	166.0477
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492.35	182.7447
497.08	150.6844
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510.53	0.0000
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511.00	161.6255
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511.85	161.6955
513.99	162.7511
513.99	162.7511
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528.96	0.0000
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529.87	0.0000
531.02	147.8506
537.32	166.0309
543.00	157.6223
546.56	0.0000
549.76	147.0156
552.65	153.9150
555.20	135.1243
563.23	155.8363
563.90	158.1302
568.70	131.5179
569.32	148.4235
569.50	148.4355
569.67	148.4476
573.80	152.3475
574.00	152.3599
574.64	155.3153
578.91	144.5859
579.30	0.0000
583.14	146.6859
585.48	126.9058
591.81	147.2832
592.07	147.3029
593.00	148.2759
595.88	138.4551
600.56	147.1957
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602.71	137.0618
603.60	144.7382
604.41	132.5992
604.70	132.6169
609.31	125.5644

609.31	125.5644
609.31	125.5644
609.31	125.5644
610.33	122.2591
612.46	116.2575
614.37	131.6700
618.01	121.4587
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621.84	126.2768
631.29	107.3708
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635.90	132.6346
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645.85	128.5563
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656.30	166.5708
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661.65	145.3806
664.57	0.0000
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666.33	158.8253
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685.20	123.1477
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695.00	144.5744
696.49	113.2534
696.49	113.2534
697.00	116.1353
697.49	132.3418
698.33	150.4857
698.50	155.2599
699.00	151.4809
702.63	128.8070
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711.68	120.6598
713.82	113.0968
717.42	128.6184
720.50	118.5262
721.93	0.0000
722.20	113.7976
722.78	110.6173
722.78	110.6173
722.89	110.6229
722.95	110.6257
723.30	110.6426
724.18	113.8872
727.18	130.0825
733.00	129.8459
735.90	125.6995
739.58	112.9696
742.81	117.3133
744.21	117.3783
747.13	123.0145
751.79	111.8864
752.31	103.7995
753.82	108.0787
755.35	108.1410
756.15	113.0490
756.87	119.9040
763.93	117.2959
765.79	124.2250
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776.49	152.2300
778.00	125.5660
778.57	106.8915
778.89	99.7051
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792.07	124.1889

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796.30	113.7815
798.80	126.7625
801.93	109.0627
805.60	90.3446
810.29	113.3738
810.76	102.4518
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818.51	99.7485
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826.30	97.0260
828.27	0.0000
831.60	112.2434
831.96	106.2433
834.83	105.3486
836.80	0.0000
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848.13	80.6445
856.28	0.0000
856.80	105.1553
860.37	87.0645
867.32	87.2745
867.82	85.2592
871.10	96.5331
873.19	75.2484
874.81	91.5688
875.33	0.0000
876.40	92.6374
879.36	111.0730
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880.51	88.6886
881.50	77.5011
883.24	104.0769
884.67	90.8556
889.25	84.8622
896.60	73.7982
898.02	71.7825
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903.28	75.3332
911.07	76.2149
911.07	76.2149
911.07	76.2149
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920.93	83.6974
925.00	104.5039
925.24	104.5113
926.50	93.1663
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937.48	88.3058
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949.00	92.8068
962.29	80.6338
964.01	80.6789
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968.20	80.7861
969.11	80.8086
969.11	80.8086
969.11	80.8086
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980.50	70.2148
983.50	75.1134
989.30	81.3218
996.32	68.7975
1001.03	71.0174
1001.68	71.0305
1004.76	65.4380
1021.30	0.0000
1024.50	0.0000
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1036.00	67.4881
1037.82	56.8068
1038.57	53.6035
1038.76	0.0000
1045.16	52.6343
1046.59	50.5089
1048.07	65.5810

1050.47	54.8698
1050.47	54.8698
1062.04	72.3292
1063.62	72.3620
1076.63	71.5526
1077.35	70.4844
1078.86	66.1767
1085.78	69.5687
1099.22	75.2936
1112.02	51.1077
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1120.29	62.5692
1120.29	62.5692
1120.29	62.5692
1120.29	62.5692
1120.51	62.5748
1121.28	62.5887
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1129.67	68.4824
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1147.95	0.0000
1167.94	79.7117
1173.22	64.9756
1175.09	83.5803
1177.93	83.6462
1189.05	92.2848
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1205.75	0.0000
1213.00	74.1107
1221.42	90.2578
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1236.41	0.0000
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1260.41	0.0000
1271.85	64.7655
1274.45	58.1381
1274.54	56.2320
1291.56	43.0737
1298.22	0.0000
1312.09	46.1797
1325.50	55.9845
1325.50	55.9845
1332.49	32.8739
1333.61	36.7522
1360.21	26.2815
1362.66	0.0000
1365.15	36.0575
1368.21	29.9080
1368.53	0.0000
1376.25	35.1753
1384.27	26.8516
1394.10	37.2872
1395.20	34.3520
1407.95	33.4701
1434.06	24.7589
1436.60	26.7550
1457.56	0.0000
1460.81	23.9141
1489.15	34.0927
1509.49	25.1811
1596.49	26.6824
1620.62	8.2513
1678.03	0.0000
1691.02	13.6014
1691.02	13.6014
1706.46	0.0000
1750.46	0.0000
1764.49	16.3765
1764.49	16.3765
1764.49	16.3765
1764.49	16.3765
1770.23	43.5675
1771.40	18.0687
1791.20	0.0000
1808.65	17.1270

1836.01

10.7593

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395008

Total Uranium Activity	3.5879E+02	ug/g
Total Uranium Counting Unc.	7.2539E+01	ug/g
Total Uranium Tpu	3.7010E-05	ug/g
Total Uranium Mda	8.4748E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 944966                      SAMPLE ID   : G245395008
*  ANALYST       : MXR1                        DETECTOR    : GAM10
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00    COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 09:14:06.14    SAMPLE ALQT  : 146.430 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.462E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 2.384E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 6.564E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 3.233E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:16:19.93

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395009.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:14:48.
Sample ID          : G245395009          Sample quantity  : 1.37080E+02 GRAM
Detector name      : GAM12              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:02.29  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 944966             Detector SN#      :
Matrix Spike ID    :                    LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.16*	3081	1815	0.85	125.80	121	10	4.28E-01	3.2	
2	4	74.67*	281	1044	0.86	148.83	145	13	3.90E-02	18.4	8.40E-01
3	4	77.04*	420	1049	0.90	153.57	145	13	5.84E-02	12.6	
4	0	83.66*	202	1420	1.20	166.81	164	7	2.81E-02	31.9	
5	3	92.48*	7818	1292	1.09	184.46	181	12	1.09E+00	1.4	1.95E+00
6	3	94.65	268	819	1.20	188.81	181	12	3.73E-02	31.6	
7	0	98.30*	468	808	0.87	196.11	193	8	6.50E-02	11.6	
8	1	110.84	109	637	1.04	221.20	218	21	1.51E-02	36.6	1.83E+00
9	1	112.74*	458	656	1.10	225.01	218	21	6.36E-02	10.5	
10	0	143.70*	249	507	0.82	286.95	283	8	3.45E-02	17.1	
11	0	163.05*	138	513	0.71	325.68	322	9	1.91E-02	31.0	
12	0	185.63*	1226	627	1.09	370.85	366	11	1.70E-01	5.0	
13	0	204.78	143	426	1.08	409.19	403	10	1.98E-02	28.3	
14	0	209.29*	124	345	1.18	418.21	414	9	1.72E-02	29.0	
15	4	238.43*	998	204	1.05	476.50	469	19	1.39E-01	3.9	1.55E+00
16	4	241.41	238	271	1.58	482.47	469	19	3.30E-02	15.1	
17	0	258.11	141	253	1.38	515.88	511	10	1.96E-02	22.7	
18	0	269.76*	95	170	1.30	539.20	536	8	1.32E-02	26.4	
19	0	295.09*	355	158	1.13	589.88	586	9	4.93E-02	8.4	
20	0	338.07*	227	228	1.03	675.87	671	11	3.16E-02	14.5	
21	0	351.67*	548	231	1.33	703.09	699	12	7.61E-02	7.0	
22	0	462.37	63	102	1.61	924.57	921	9	8.73E-03	31.5	
23	0	510.92*	150	190	2.19	1021.69	1013	21	2.08E-02	26.7	
24	0	582.88*	295	102	1.22	1165.66	1160	11	4.10E-02	9.0	
25	0	608.92*	369	203	1.61	1217.76	1209	18	5.13E-02	10.5	
26	0	727.15	68	98	1.88	1454.27	1448	13	9.37E-03	32.5	
27	0	743.04	47	106	0.60	1486.05	1479	12	6.48E-03	46.8	
28	0	766.27	261	80	1.40	1532.53	1526	14	3.63E-02	9.7	
29	0	785.32	86	91	2.04	1570.63	1563	14	1.19E-02	25.9	
30	0	794.93	46	71	0.82	1589.87	1583	11	6.37E-03	38.6	
31	0	860.47	63	57	1.31	1720.96	1716	12	8.81E-03	26.9	
32	0	910.88*	263	61	1.96	1821.80	1815	16	3.65E-02	8.8	
33	2	964.26	40	67	2.20	1928.57	1924	18	5.58E-03	36.4	8.85E-01
34	2	968.68	118	41	1.54	1937.41	1924	18	1.64E-02	14.1	
35	0	1000.60*	408	67	1.71	2001.26	1994	14	5.67E-02	6.6	
36	0	1119.91	108	44	2.11	2239.88	2233	15	1.50E-02	16.6	
37	0	1460.13*	1308	23	1.99	2920.28	2911	17	1.82E-01	2.9	
38	0	1763.84*	62	9	2.02	3527.57	3521	12	8.66E-03	16.9	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1846.80	17	5	1.45	3693.42	3689	9	2.29E-03	33.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 2-FEB-2010 11:16:23

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395009.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:14:48
Sample ID         : G245395009 Sample quantity : 137.08 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA12 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00 Elapsed real time: 0 02:00:02.29 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.950E+01	2.715E+00	4.226E-01	3.013E-02	69.813
NB-95	+	765.79	*	4.194E-01	8.660E-02	7.535E-02	5.512E-03	5.565
LU-177	+	112.95		1.255E+01	2.763E+00	3.060E+00	1.955E-01	4.102
	+	208.36	*	2.376E+00	1.385E+00	1.461E+00	7.816E-02	1.626
TL-208		277.35		6.665E-01	3.734E-01	6.625E-01	6.939E-02	1.006
	+	510.84		6.789E-01	3.695E-01	2.165E-01	2.235E-02	3.136
	+	583.14	*	3.835E-01	7.442E-02	5.755E-02	4.117E-03	6.664
	+	860.37		7.770E-01	4.233E-01	4.439E-01	3.879E-02	1.750
BI-211		72.87		6.416E+00	5.120E+00	7.931E+00	5.321E-01	0.809
	+	351.07	*	3.082E+00	4.744E-01	3.372E-01	2.120E-02	9.140
BI-212	+	727.18	*	7.541E-01	4.948E-01	4.509E-01	3.904E-02	1.672
	+	785.46		6.151E+00	3.217E+00	2.826E+00	2.111E-01	2.177
		1620.62		1.851E+00	1.021E+00	2.169E+00	1.397E-01	0.853
PB-212	+	74.81		1.569E+00	6.048E-01	8.786E-01	1.016E-01	1.786
	+	77.11		1.327E+00	3.456E-01	4.986E-01	3.451E-02	2.661
		87.30		-5.797E-01	7.205E-01	1.050E+00	1.319E-01	-0.552
	+	238.63	*	1.221E+00	1.293E-01	9.167E-02	6.509E-03	13.323
		300.09		1.548E+00	8.215E-01	1.340E+00	1.094E-01	1.155
PO-212	+	74.81		1.569E+00	6.048E-01	8.786E-01	1.016E-01	1.786
	+	77.11		1.327E+00	3.456E-01	4.986E-01	3.451E-02	2.661
		87.30		-5.797E-01	7.205E-01	1.050E+00	1.319E-01	-0.552
		115.19		-1.853E+00	4.638E+00	7.525E+00	4.773E-01	-0.246
	+	238.63	*	1.221E+00	1.293E-01	9.167E-02	6.509E-03	13.323
		300.09		1.548E+00	8.215E-01	1.340E+00	1.094E-01	1.155
BI-214	+	609.31	*	9.046E-01	2.040E-01	1.063E-01	8.753E-03	8.509
	+	1120.29		1.373E+00	4.732E-01	4.564E-01	4.145E-02	3.009
	+	1764.49		1.091E+00	3.747E-01	2.993E-01	1.773E-02	3.647
PB-214	+	74.81		2.703E+00	1.031E+00	1.514E+00	1.522E-01	1.786
	+	77.11		2.274E+00	6.173E-01	8.547E-01	8.799E-02	2.661
		87.30		-9.931E-01	1.233E+00	1.799E+00	1.947E-01	-0.552
	+	241.98		1.746E+00	5.464E-01	5.521E-01	4.345E-02	3.162
	+	295.21		1.177E+00	2.215E-01	2.147E-01	1.812E-02	5.482
	+	351.92	*	1.072E+00	1.742E-01	1.088E-01	8.890E-03	9.850
PO-214	+	74.81		2.703E+00	1.031E+00	1.514E+00	1.522E-01	1.786

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		2.274E+00	6.173E-01	8.547E-01	8.799E-02	2.661
		87.30		-9.931E-01	1.233E+00	1.799E+00	1.947E-01	-0.552
	+	241.98		1.746E+00	5.464E-01	5.521E-01	4.345E-02	3.162
	+	295.21		1.177E+00	2.215E-01	2.147E-01	1.812E-02	5.482
	+	351.92	*	1.072E+00	1.742E-01	1.088E-01	8.890E-03	9.850
	+	74.81		1.569E+00	6.048E-01	8.786E-01	1.016E-01	1.786
	+	77.11		1.327E+00	3.456E-01	4.986E-01	3.451E-02	2.661
		87.30		-5.797E-01	7.205E-01	1.050E+00	1.319E-01	-0.552
PO-218	+	238.63	*	1.221E+00	1.293E-01	9.167E-02	6.509E-03	13.323
		300.09		1.548E+00	8.215E-01	1.340E+00	1.094E-01	1.155
	+	74.81		2.703E+00	1.031E+00	1.514E+00	1.522E-01	1.786
	+	77.11		2.274E+00	6.173E-01	8.547E-01	8.799E-02	2.661
		87.30		-9.931E-01	1.233E+00	1.799E+00	1.947E-01	-0.552
	+	241.98		1.746E+00	5.464E-01	5.521E-01	4.345E-02	3.162
	+	295.21		1.177E+00	2.215E-01	2.147E-01	1.812E-02	5.482
	+	351.92	*	1.072E+00	1.742E-01	1.088E-01	8.890E-03	9.850
RA-224	+	240.98	*	3.310E+00	1.019E+00	1.043E+00	5.756E-02	3.173
RA-226	+	609.31	*	9.046E-01	2.040E-01	1.063E-01	8.753E-03	8.509
AC-228	+	1120.29		1.373E+00	4.732E-01	4.564E-01	4.145E-02	3.009
	+	1764.49		1.091E+00	3.747E-01	2.993E-01	1.773E-02	3.647
	+	338.32		1.407E+00	7.042E-01	3.565E-01	1.453E-01	3.945
	+	911.07	*	1.521E+00	3.151E-01	2.046E-01	2.246E-02	7.432
	+	969.11		1.206E+00	4.386E-01	3.326E-01	7.668E-02	3.625
	+	338.32		1.407E+00	7.042E-01	3.565E-01	1.453E-01	3.945
	+	911.07	*	1.521E+00	3.151E-01	2.046E-01	2.246E-02	7.432
	+	969.11		1.206E+00	4.386E-01	3.326E-01	7.668E-02	3.625
TH-228	+	74.81		1.591E+00	5.951E-01	8.908E-01	6.141E-02	1.786
TH-230	+	77.11		1.345E+00	3.505E-01	5.055E-01	3.500E-02	2.661
		87.30		-5.878E-01	7.281E-01	1.065E+00	8.091E-02	-0.552
	+	238.63	*	1.238E+00	1.311E-01	9.295E-02	6.600E-03	13.323
		300.09		1.569E+00	1.238E+00	1.358E+00	8.005E-01	1.155
	+	609.31	*	9.046E-01	2.040E-01	1.063E-01	8.752E-03	8.509
	+	1120.29		1.373E+00	4.732E-01	4.563E-01	4.145E-02	3.009
	+	1764.49		1.091E+00	3.747E-01	2.993E-01	1.773E-02	3.647
	+	84.21		1.459E+01	9.364E+00	1.244E+01	9.168E-01	1.173
U-231	+	92.29		2.067E+02	1.607E+01	4.596E+00	3.349E-01	44.981
TH-232	+	95.87	*	4.308E+00	2.742E+00	1.833E+00	1.291E-01	2.351
		108.00		-2.161E+00	2.545E+00	3.627E+00	2.363E-01	-0.596
	+	338.32		1.407E+00	4.169E-01	3.565E-01	2.020E-02	3.945
	+	911.07	*	1.521E+00	3.151E-01	2.046E-01	2.246E-02	7.432
	+	969.11		1.206E+00	4.386E-01	3.326E-01	7.668E-02	3.625
	+	766.42		1.125E+02	6.086E+01	2.023E+01	1.022E+01	5.561
	+	1001.03	*	8.474E+01	1.353E+01	5.419E+00	4.904E-01	15.638
	+	63.29	*	6.962E+01	1.265E+01	3.307E+00	5.630E-01	21.052
TH-234	+	92.38		6.638E+01	1.175E+01	1.475E+00	2.578E-01	45.012
U-234	+	609.31	*	9.046E-01	2.040E-01	1.063E-01	8.752E-03	8.509
U-235	+	1120.29		1.373E+00	4.732E-01	4.563E-01	4.145E-02	3.009
	+	1764.49		1.091E+00	3.747E-01	2.993E-01	1.773E-02	3.647
	+	89.95		9.898E-01	2.138E+00	3.193E+00	9.758E-01	0.310

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	93.35		7.980E+01	2.217E+01	1.760E+00	4.862E-01	45.339
		105.00		1.329E+00	1.433E+00	2.338E+00	6.858E-01	0.568
	+	143.76	*	9.946E-01	3.774E-01	3.891E-01	6.320E-02	2.556
	+	163.35		1.285E+00	8.281E-01	8.305E-01	1.478E-01	1.548
	+	185.71		1.060E+00	1.192E-01	7.516E-02	3.923E-03	14.106
	+	205.31		1.503E+00	8.925E-01	8.025E-01	1.431E-01	1.873
U-238	+	63.29	*	6.962E+01	1.265E+01	3.307E+00	5.630E-01	21.052
	+	92.38		6.638E+01	5.160E+00	1.475E+00	1.074E-01	45.012
AM-243	+	74.67	*	2.544E-01	9.512E-02	1.429E-01	9.707E-03	1.780
		86.72		-8.745E+00	1.700E+01	2.506E+01	1.894E+00	-0.349
		117.66		-9.741E+00	4.845E+00	7.368E+00	4.642E-01	-1.322
		142.18		2.663E+01	2.450E+01	3.696E+01	2.092E+00	0.721
ANH-511	+	511.00	*	1.466E-01	7.887E-02	4.678E-02	2.851E-03	3.135

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.102E-01	3.234E-01	4.749E-01	3.268E-02	-0.653
NA-22		1274.54	*	2.909E-02	4.072E-02	7.180E-02	4.624E-03	0.405
NA-24		1368.53	*	-1.103E-02	4.072E-02	Half-Life too short		
AL-26		1129.67		4.130E-01	1.645E+00	2.793E+00	1.702E-01	0.148
		1808.65	*	-5.705E-03	2.702E-02	4.273E-02	2.452E-03	-0.134
TI-44		67.85		3.420E-02	7.503E-02	1.151E-01	7.491E-03	0.297
	+	78.38	*	2.448E-01	6.378E-02	9.896E-02	6.921E-03	2.474
SC-46		889.25	*	4.523E-03	3.938E-02	6.449E-02	5.345E-03	0.070
	+	1120.51		2.327E-01	7.869E-02	1.186E-01	7.367E-03	1.963
V-48		944.10		1.066E+00	9.567E-01	1.681E+00	1.350E-01	0.634
		983.50	*	-7.610E-02	6.926E-02	9.785E-02	7.539E-03	-0.778
		1312.09		4.108E-04	7.377E-02	1.210E-01	8.213E-03	0.003
CR-51		320.08	*	8.172E-02	3.635E-01	6.095E-01	3.875E-02	0.134
MN-52	+	744.21		3.916E-01	3.675E-01	4.390E-01	3.136E-02	0.892
		848.13		4.739E+00	6.231E+00	1.076E+01	8.568E-01	0.441
		935.52		1.466E-01	1.981E-01	3.431E-01	2.778E-02	0.427
		1246.25		3.283E+00	6.139E+00	1.059E+01	6.524E-01	0.310
		1333.61		2.660E+00	4.336E+00	7.582E+00	5.295E-01	0.351
		1434.06	*	2.480E-01	2.021E-01	3.792E-01	2.605E-02	0.654
MN-54		834.83	*	-9.989E-03	3.986E-02	6.360E-02	5.000E-03	-0.157
CO-56		846.75	*	-8.104E-03	4.322E-02	6.922E-02	5.507E-03	-0.117
		977.42		1.260E+00	2.941E+00	4.923E+00	3.819E-01	0.256
		1037.82		-1.046E-01	2.723E-01	4.376E-01	3.380E-02	-0.239
		1175.09		-1.069E+00	2.345E+00	3.732E+00	2.058E-01	-0.286
		1238.25		1.155E-01	9.175E-02	1.647E-01	1.060E-02	0.701
		1360.21		2.872E-01	9.496E-01	1.611E+00	1.121E-01	0.178
		1771.40		-2.416E-01	2.314E-01	2.486E-01	1.466E-02	-0.972
CO-57		122.06	*	-2.043E-02	3.176E-02	4.829E-02	3.019E-03	-0.423
		136.48		-1.665E-02	2.416E-01	3.922E-01	2.638E-02	-0.042
CO-58		810.76	*	-1.576E-02	4.037E-02	6.122E-02	4.711E-03	-0.257
FE-59	+	142.65		1.259E+01	4.374E+00	5.934E+00	3.353E-01	2.121

----- Non-Identified Nuclides -----

	Line Energy Nuclide Ided (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	192.34	4.095E-01	9.624E-01	1.561E+00	1.803E-01	0.262
	1099.22 *	7.256E-02	8.960E-02	1.592E-01	1.176E-02	0.456
	1291.56	3.538E-02	1.254E-01	2.115E-01	1.703E-02	0.167
CO-60	1173.22	6.769E-03	4.623E-02	7.749E-02	4.259E-03	0.087
	1332.49 *	1.230E-02	3.841E-02	6.522E-02	4.555E-03	0.189
ZN-65	1115.52 *	2.038E-02	9.961E-02	1.463E-01	9.205E-03	0.139
GE-68	1077.35 *	1.388E-01	1.123E+00	1.895E+00	1.278E-01	0.073
AS-73	53.44 *	-2.941E-01	1.299E+00	2.200E+00	1.421E-01	-0.134
AS-74	595.88 *	6.368E-03	8.914E-02	1.499E-01	9.541E-03	0.042
	634.78	2.557E-01	3.305E-01	5.810E-01	3.744E-02	0.440
SE-75	66.05	-7.384E+00	7.503E+00	1.101E+01	9.609E-01	-0.671
	96.73	2.865E+00	1.487E+00	1.879E+00	2.379E-01	1.525
	121.11	7.256E-02	1.790E-01	2.667E-01	2.540E-02	0.272
	136.00	-6.763E-03	4.578E-02	7.413E-02	4.377E-03	-0.091
	198.60	7.715E-01	1.988E+00	3.031E+00	2.037E-01	0.255
	264.65 *	-1.746E-02	4.419E-02	6.724E-02	3.812E-03	-0.260
	279.53	-6.696E-02	1.075E-01	1.746E-01	1.070E-02	-0.384
	303.91	-2.507E+00	2.018E+00	3.114E+00	2.949E-01	-0.805
	400.65	2.703E-01	2.605E-01	4.493E-01	4.015E-02	0.602
BR-77	87.88	-2.320E+02	2.634E+02	3.496E+02	2.673E+01	-0.663
	200.40	-7.913E+00	1.361E+02	1.916E+02	1.016E+01	-0.041
	+ 239.00	1.369E+02	1.314E+01	2.310E+01	1.272E+00	5.929
	249.79	-1.873E+01	4.580E+01	7.577E+01	4.207E+00	-0.247
	281.68	-6.826E+01	6.139E+01	9.686E+01	5.474E+00	-0.705
	297.23	1.193E+01	4.449E+01	6.626E+01	3.761E+00	0.180
	303.76	-2.092E+02	1.241E+02	1.875E+02	1.065E+01	-1.116
	439.47	6.507E+01	1.042E+02	1.756E+02	1.011E+01	0.371
	484.57	2.042E+01	1.660E+02	2.693E+02	1.611E+01	0.076
	520.65 *	1.984E+00	7.541E+00	1.189E+01	7.291E-01	0.167
	574.64	1.025E+02	1.437E+02	2.522E+02	1.591E+01	0.406
	578.91	-2.792E+01	7.076E+01	9.943E+01	6.286E+00	-0.281
	585.48	3.601E+02	1.513E+02	2.583E+02	1.638E+01	1.394
	755.35	4.111E+01	1.284E+02	2.158E+02	1.561E+01	0.190
	817.79	2.046E+01	9.461E+01	1.573E+02	1.215E+01	0.130
SR-82	698.33	-5.262E+01	3.649E+01	5.386E+01	3.650E+00	-0.977
	776.49 *	-2.007E-01	4.034E-01	6.152E-01	4.552E-02	-0.326
	1395.20	-8.839E+00	1.024E+01	1.458E+01	1.009E+00	-0.606
RB-83	520.41 *	1.058E-02	7.453E-02	1.114E-01	6.830E-03	0.095
	529.64	-6.696E-02	1.117E-01	1.701E-01	1.049E-02	-0.394
	552.65	-2.146E-01	1.926E-01	2.979E-01	1.861E-02	-0.720
RB-84	881.50 *	3.437E-02	7.735E-02	1.287E-01	1.059E-02	0.267
KR-85	513.99 *	9.254E+00	7.406E+00	1.279E+01	7.811E-01	0.723
SR-85	513.99 *	4.684E-02	3.748E-02	6.474E-02	3.954E-03	0.723
RB-86	1076.63 *	-2.804E-01	7.047E-01	1.130E+00	7.626E-02	-0.248
Y-88	898.02	-1.025E-02	4.172E-02	6.592E-02	5.537E-03	-0.156
	1836.01 *	1.452E-02	3.187E-02	5.707E-02	3.213E-03	0.254
ZR-88	392.90 *	5.555E-03	3.007E-02	4.969E-02	2.726E-03	0.112
Y-91	1204.90 *	-4.813E-01	1.808E+01	2.979E+01	1.722E+00	-0.016
NB-94	702.63 *	1.413E-02	3.598E-02	6.103E-02	4.157E-03	0.232

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	871.10			-1.452E-04	3.654E-02	5.928E-02	4.829E-03	-0.002
NB-95M	235.69	*		4.749E-02	1.350E-01	2.057E-01	1.500E-02	0.231
ZR-95	724.18			4.849E-02	1.125E-01	1.675E-01	1.321E-02	0.289
	756.15	*		-2.230E-02	7.851E-02	1.262E-01	1.042E-02	-0.177
NB-97	657.90	*		-1.994E-03	7.851E-02	Half-Life	too short	
	1024.50			1.815E+00	7.851E-02	Half-Life	too short	
ZR-97	254.15			-1.079E-01	7.851E-02	Half-Life	too short	
	355.39			4.152E-01	7.851E-02	Half-Life	too short	
	507.63	*		7.845E-01	7.851E-02	Half-Life	too short	
	602.52			-1.248E+00	7.851E-02	Half-Life	too short	
	1021.30			-1.899E+00	7.851E-02	Half-Life	too short	
	1147.95			-3.646E-01	7.851E-02	Half-Life	too short	
	1362.66			-9.796E-01	7.851E-02	Half-Life	too short	
	1750.46			6.831E-01	7.851E-02	Half-Life	too short	
MO-99	140.51			-6.730E+00	2.539E+01	3.611E+01	9.723E+00	-0.186
	181.06			-3.834E+00	1.530E+01	2.146E+01	3.636E+00	-0.179
	366.43			2.666E+01	5.847E+01	9.870E+01	5.518E+00	0.270
	739.58	*		8.686E+00	1.083E+01	1.661E+01	2.389E+00	0.523
	778.00			-1.502E+01	3.061E+01	4.086E+01	3.029E+00	-0.368
TC-99M	140.51	*		-4.437E+08	3.061E+01	Half-Life	too short	
RH-101	127.23			-4.094E-03	3.756E-02	6.114E-02	3.711E-03	-0.067
	198.01	*		2.621E-02	3.550E-02	5.750E-02	3.042E-03	0.456
	325.23			-1.829E-01	2.257E-01	3.577E-01	2.032E-02	-0.511
RH-102	418.52			2.557E-02	2.871E-01	4.696E-01	2.649E-02	0.054
	475.06	*		-6.746E-04	2.901E-02	4.664E-02	2.770E-03	-0.014
	631.29			-2.953E-03	5.640E-02	9.363E-02	6.028E-03	-0.032
	697.49			-3.063E-02	8.180E-02	1.316E-01	8.910E-03	-0.233
+	766.84			1.068E+00	2.206E-01	3.339E-01	2.445E-02	3.200
	1046.59			2.905E-02	1.092E-01	1.870E-01	1.325E-02	0.155
	1112.84			2.257E-01	2.506E-01	3.990E-01	2.518E-02	0.566
RU-103	497.08	*		3.945E-03	4.187E-02	6.764E-02	8.627E-03	0.058
+	610.33			9.559E+00	2.503E+00	2.582E+00	4.042E-01	3.702
RH-106	511.85	+		7.308E-01	3.930E-01	4.087E-01	2.492E-02	1.788
	621.84	*		-1.553E-01	3.210E-01	5.158E-01	6.219E-02	-0.301
	1050.47			-5.497E-01	2.196E+00	3.585E+00	2.525E-01	-0.153
RU-106	511.85	+		7.308E-01	3.930E-01	4.087E-01	2.492E-02	1.788
	621.84	*		-1.553E-01	3.206E-01	5.158E-01	3.312E-02	-0.301
	1050.47			-5.497E-01	2.196E+00	3.585E+00	2.525E-01	-0.153
AG-108M	433.93	*		2.276E-02	3.152E-02	5.361E-02	3.341E-03	0.425
	614.37			-1.507E-02	4.301E-02	6.016E-02	4.124E-03	-0.251
	722.95			-3.146E-02	4.982E-02	6.617E-02	4.887E-03	-0.475
CD-109	88.03	*		-5.842E-01	1.564E+00	2.314E+00	1.771E-01	-0.252
AG-110M	657.75	*		-5.566E-03	3.668E-02	6.027E-02	4.108E-03	-0.092
	677.61			8.509E-02	3.160E-01	5.338E-01	3.696E-02	0.159
	706.67			-9.176E-02	2.448E-01	3.903E-01	2.786E-02	-0.235
	763.93			9.139E-01	2.764E-01	4.733E-01	3.590E-02	1.931
	884.67			1.194E-02	5.545E-02	9.150E-02	7.816E-03	0.131
	937.48			-1.172E-01	1.069E-01	1.514E-01	1.273E-02	-0.775
	1384.27			-1.521E-01	1.560E-01	2.190E-01	1.585E-02	-0.695

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111	171.28			-5.982E-01	8.164E-01	1.270E+00	6.534E-02	-0.471
	245.39	*		-2.795E-01	8.314E-01	1.211E+00	6.703E-02	-0.231
IN-113M	391.69	*		-2.055E-02	4.465E-02	7.087E-02	4.172E-03	-0.290
SN-113	391.69	*		-2.055E-02	4.465E-02	7.087E-02	4.172E-03	-0.290
IN-114M	190.27	*		-1.655E-01	2.104E-01	2.842E-01	1.491E-02	-0.583
CD-115	260.90			7.726E+01	9.327E+01	1.455E+02	8.142E+00	0.531
	492.35			-9.874E+00	2.520E+01	3.927E+01	2.363E+00	-0.251
	527.90	*		-5.525E+00	7.551E+00	1.133E+01	6.982E-01	-0.487
SN-117M	156.02			-2.671E+00	2.367E+00	3.648E+00	1.948E-01	-0.732
	158.56	*		5.215E-02	6.121E-02	9.185E-02	4.852E-03	0.568
SB-122	563.90	*		-8.805E-01	1.537E+00	2.485E+00	1.561E-01	-0.354
	692.80			3.275E+01	3.395E+01	5.972E+01	4.020E+00	0.548
I-123	159.00	*		1.236E+00	3.395E+01	Half-Life too short		
	528.96			-3.747E+01	3.395E+01	Half-Life too short		
TE-123M	159.00	*		2.886E-02	3.350E-02	5.029E-02	2.694E-03	0.574
I-124	602.71	*		-4.347E-01	6.643E-01	9.066E-01	5.786E-02	-0.480
	722.78			-2.722E+00	4.240E+00	5.623E+00	3.921E-01	-0.484
	1325.50			2.880E+00	2.583E+01	4.289E+01	2.967E+00	0.067
	1376.25			2.659E+01	2.577E+01	4.666E+01	3.241E+00	0.570
	1509.49			2.882E+00	1.061E+01	1.795E+01	1.208E+00	0.161
	1691.02			-8.169E-01	2.459E+00	3.800E+00	2.359E-01	-0.215
SB-124	602.71			-3.056E-02	4.669E-02	6.372E-02	4.068E-03	-0.480
	645.85			1.031E-01	5.124E-01	8.644E-01	6.169E-02	0.119
	709.31			-6.707E-02	3.143E+00	5.127E+00	3.519E-01	-0.013
	713.82			-5.396E-01	1.687E+00	2.714E+00	2.951E-01	-0.199
	722.78			-2.774E-01	4.320E-01	5.730E-01	4.126E-02	-0.484
	+ 968.20			1.224E+01	3.574E+00	6.327E+00	4.958E-01	1.934
	1045.16			1.670E+00	2.219E+00	3.966E+00	2.816E-01	0.421
	1325.50			3.133E-01	2.811E+00	4.668E+00	3.228E-01	0.067
	1368.21			-5.526E-01	1.588E+00	2.463E+00	3.073E-01	-0.224
	1436.60			-6.530E-01	3.629E+00	5.749E+00	3.947E-01	-0.114
	1691.02	*		-1.963E-02	5.910E-02	9.133E-02	6.095E-03	-0.215
SB-125	427.89	*		4.169E-02	8.990E-02	1.505E-01	8.944E-03	0.277
	+ 463.38			5.542E-01	3.515E-01	5.152E-01	3.521E-02	1.076
	600.56			-5.784E-02	2.017E-01	2.996E-01	2.161E-02	-0.193
	635.90			8.532E-02	2.622E-01	4.471E-01	3.287E-02	0.191
TE-125M	109.28	*		2.193E+01	1.369E+01	2.120E+01	1.827E+00	1.035
I-126	388.63			-7.128E-02	1.968E-01	3.147E-01	1.729E-02	-0.226
	666.33	*		4.217E-02	1.779E-01	3.000E-01	1.956E-02	0.141
	753.82			1.758E-01	1.475E+00	2.445E+00	1.765E-01	0.072
SB-126	223.80			-1.720E+00	3.748E+00	6.242E+00	3.391E-01	-0.276
	278.60			2.231E+00	2.262E+00	3.945E+00	2.227E-01	0.566
	+ 296.50			1.094E+01	1.941E+00	2.932E+00	1.664E-01	3.731
	414.70			-2.291E-02	7.006E-02	1.116E-01	6.269E-03	-0.205
	415.30			-3.212E+00	5.742E+00	8.989E+00	5.054E-01	-0.357
	555.20			1.135E+00	3.687E+00	6.328E+00	3.956E-01	0.179
	573.80			3.848E-01	9.738E-01	1.676E+00	1.057E-01	0.230
	593.00			-9.582E-01	8.742E-01	1.345E+00	8.555E-02	-0.712
	656.30			-5.824E-01	3.233E+00	5.301E+00	3.433E-01	-0.110

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		666.33		1.757E-02	7.415E-02	1.250E-01	8.151E-03	0.141
		675.00		1.947E-01	1.768E+00	2.956E+00	1.948E-01	0.066
		695.00		3.899E-02	7.837E-02	1.339E-01	9.038E-03	0.291
		697.00		-7.861E-02	2.744E-01	4.446E-01	3.008E-02	-0.177
		720.50	*	7.258E-02	1.535E-01	2.307E-01	1.605E-02	0.315
		856.80		7.001E-02	5.060E-01	7.228E-01	5.807E-02	0.097
		989.30		8.348E-01	1.207E+00	2.065E+00	1.580E-01	0.404
		1034.80		1.312E+00	7.325E+00	1.247E+01	8.994E-01	0.105
		1213.00		6.062E+00	4.666E+00	8.439E+00	4.941E-01	0.718
SN-126	+	64.28		2.756E+01	4.245E+00	2.205E+00	3.096E-01	12.498
		86.94		-4.939E-02	6.355E-01	9.474E-01	3.899E-01	-0.052
		87.57	*	-1.783E-01	1.565E-01	2.264E-01	1.725E-02	-0.787
SB-127		61.10		1.492E+02	8.755E+01	1.373E+02	1.245E+01	1.087
		252.40		2.297E+00	3.779E+00	5.915E+00	2.450E+00	0.388
		290.80		1.119E+01	1.810E+01	2.768E+01	2.390E+00	0.404
		411.60		-1.505E+00	1.035E+01	1.670E+01	2.342E+00	-0.090
		444.90		-6.913E+00	8.307E+00	1.264E+01	1.316E+00	-0.547
		473.00		2.186E-01	1.412E+00	2.298E+00	2.502E-01	0.095
		543.00		-6.992E+00	1.365E+01	2.219E+01	2.839E+00	-0.315
		603.60		-4.322E+00	1.098E+01	1.537E+01	1.648E+00	-0.281
		685.20	*	9.267E-01	1.149E+00	2.005E+00	1.923E-01	0.462
		698.50		-1.974E+01	1.369E+01	1.981E+01	2.897E+00	-0.997
		722.20		-6.063E+00	2.783E+01	3.880E+01	3.700E+00	-0.156
		783.80		7.097E+00	3.464E+00	6.287E+00	7.103E-01	1.129
XE-127		57.60		-4.316E+00	9.849E+00	1.656E+01	1.046E+00	-0.261
		145.22		2.393E+00	8.827E-01	1.416E+00	7.908E-02	1.690
		172.10		-5.025E-02	1.282E-01	2.024E-01	1.042E-02	-0.248
		202.84	*	4.687E-02	5.327E-02	7.899E-02	4.200E-03	0.593
		374.96		-1.118E-01	1.945E-01	3.076E-01	1.709E-02	-0.364
I-131		80.18		-1.412E+00	9.182E+00	1.089E+01	7.793E-01	-0.130
		284.30		2.099E-01	1.337E+00	2.251E+00	1.420E-01	0.093
		364.48	*	-6.126E-02	9.751E-02	1.536E-01	9.649E-03	-0.399
		636.97		-1.612E+00	1.379E+00	2.079E+00	1.470E-01	-0.775
		722.89		-4.794E+00	7.543E+00	1.001E+01	7.040E-01	-0.479
TE-132		49.72		1.068E+01	2.233E+01	3.849E+01	3.432E+00	0.277
	+	111.76		4.768E+01	3.518E+01	6.684E+01	5.899E+00	0.713
		116.30		-3.754E+01	2.724E+01	4.247E+01	3.720E+00	-0.884
		228.16	*	1.378E-01	5.439E-01	9.297E-01	1.300E-01	0.148
BA-133		53.15		-2.997E+00	5.677E+00	9.548E+00	6.173E-01	-0.314
		79.62		-4.950E-02	2.837E+00	3.384E+00	4.874E-01	-0.015
		81.00		-2.731E-02	2.144E-01	2.542E-01	3.847E-02	-0.107
		276.40		5.718E-01	3.677E-01	6.450E-01	8.317E-02	0.886
		302.84		-1.545E-01	1.408E-01	2.192E-01	2.542E-02	-0.705
		356.01	*	-1.204E-02	4.595E-02	6.480E-02	7.434E-03	-0.186
		383.85		3.172E-01	3.235E-01	5.552E-01	5.954E-02	0.571
I-133	+	510.53		5.571E-01	3.235E-01	Half-Life too short		
		529.87	*	-1.039E-03	3.235E-01	Half-Life too short		
		706.58		-6.900E-02	3.235E-01	Half-Life too short		
		856.28		-2.839E-03	3.235E-01	Half-Life too short		

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CS-134		875.33		-1.048E-02	3.235E-01	Half-Life	too short	
		1236.41		2.395E-01	3.235E-01	Half-Life	too short	
		1298.22		-4.640E-02	3.235E-01	Half-Life	too short	
		475.35		-5.560E-01	1.901E+00	2.995E+00	1.779E-01	-0.186
		563.23		-1.741E-01	3.599E-01	5.852E-01	3.740E-02	-0.297
		569.32		7.268E-02	1.956E-01	3.363E-01	2.171E-02	0.216
		604.70		-6.581E-03	3.866E-02	5.530E-02	3.548E-03	-0.119
	+	795.84	*	8.607E-02	6.679E-02	9.126E-02	6.958E-03	0.943
		801.93		-2.545E-01	4.020E-01	6.236E-01	4.775E-02	-0.408
		1038.57		-1.233E+00	3.469E+00	5.596E+00	4.013E-01	-0.220
CS-135		1167.94		-7.426E-01	2.590E+00	4.185E+00	2.332E-01	-0.177
		1365.15		4.928E-02	1.123E+00	1.846E+00	1.373E-01	0.027
		268.24	*	1.713E-01	1.703E-01	2.624E-01	1.974E-02	0.653
	I-135	288.45		-5.325E+08	1.703E-01	Half-Life	too short	
		417.63		3.970E+08	1.703E-01	Half-Life	too short	
		546.56		6.060E+08	1.703E-01	Half-Life	too short	
		836.80		1.183E+09	1.703E-01	Half-Life	too short	
		1038.76		-2.567E+08	1.703E-01	Half-Life	too short	
		1124.00		6.991E+08	1.703E-01	Half-Life	too short	
		1131.51		2.384E+08	1.703E-01	Half-Life	too short	
CS-136		1260.41	*	7.377E+07	1.703E-01	Half-Life	too short	
		1457.56		4.604E+10	1.703E-01	Half-Life	too short	
		1678.03		-1.474E+08	1.703E-01	Half-Life	too short	
		1706.46		8.010E+08	1.703E-01	Half-Life	too short	
		1791.20		7.995E+07	1.703E-01	Half-Life	too short	
		66.91		-6.719E-01	1.172E+00	1.742E+00	2.500E-01	-0.386
		86.29		4.269E-01	1.836E+00	2.759E+00	3.350E-01	0.155
		153.22		1.029E+00	6.877E-01	1.166E+00	8.054E-02	0.882
	+	163.89		2.729E+00	1.700E+00	2.113E+00	1.427E-01	1.291
		176.55		-2.011E-01	3.861E-01	6.053E-01	3.609E-02	-0.332
BA-137M		273.65		-7.996E-01	4.820E-01	6.241E-01	4.036E-02	-1.281
		340.57		1.368E-01	1.313E-01	2.039E-01	1.230E-02	0.671
		818.51		5.633E-03	7.219E-02	1.186E-01	9.178E-03	0.047
		1048.07	*	3.631E-02	9.407E-02	1.628E-01	1.223E-02	0.223
		1235.34		5.862E-01	5.875E-01	1.033E+00	1.048E-01	0.567
		661.65	*	1.335E-02	4.010E-02	6.750E-02	4.376E-03	0.198
	CS-137	661.65	*	1.411E-02	4.239E-02	7.135E-02	4.641E-03	0.198
	CE-139	165.85	*	1.684E-02	3.741E-02	5.481E-02	2.809E-03	0.307
	BA-140	162.64		1.918E+00	1.193E+00	1.448E+00	8.672E-02	1.325
	+	304.84		-1.792E+00	1.216E+00	1.687E+00	4.599E-01	-1.062
LA-140		423.70		-1.206E+00	1.771E+00	2.672E+00	8.487E-01	-0.451
		537.32	*	-7.337E-02	2.615E-01	4.316E-01	1.407E-01	-0.170
		328.77		1.849E-01	2.831E-01	4.829E-01	3.085E-02	0.383
		432.53		9.033E-01	1.868E+00	3.129E+00	1.982E-01	0.289
		487.03		-6.675E-03	1.321E-01	2.116E-01	1.426E-02	-0.032
		751.79		-6.129E-02	1.698E+00	2.782E+00	2.305E-01	-0.022
		815.85		2.512E-01	3.176E-01	5.511E-01	4.854E-02	0.456
		867.82		-2.763E-01	1.489E+00	2.141E+00	1.842E-01	-0.129
		919.63		-2.821E+00	3.079E+00	4.187E+00	4.320E-01	-0.674

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		925.24		7.805E-01	1.231E+00	2.089E+00	1.826E-01	0.374
		1596.49	*	-3.623E-02	6.801E-02	1.038E-01	6.758E-03	-0.349
CE-141		145.44	*	1.449E-01	7.756E-02	1.212E-01	7.055E-03	1.195
CE-143		57.37		-4.963E-04	7.756E-02	Half-Life too short		
		231.56		-1.037E-03	7.756E-02	Half-Life too short		
		293.26	*	3.095E-04	7.756E-02	Half-Life too short		
	+	350.59		1.313E-02	7.756E-02	Half-Life too short		
		490.36		-7.673E-04	7.756E-02	Half-Life too short		
		664.57		1.595E-04	7.756E-02	Half-Life too short		
		721.93		-1.741E-04	7.756E-02	Half-Life too short		
CE-144		80.11		-7.151E-01	4.687E+00	5.557E+00	3.945E-01	-0.129
		133.54	*	-1.566E-01	2.439E-01	3.871E-01	5.510E-02	-0.405
PM-144		476.78		-9.043E-02	7.026E-02	1.019E-01	7.200E-03	-0.887
		618.01		9.474E-04	3.173E-02	5.171E-02	3.480E-03	0.018
		696.49	*	1.378E-02	3.763E-02	6.373E-02	4.311E-03	0.216
		778.57		-6.682E-01	2.704E+00	3.718E+00	2.759E-01	-0.180
PR-144		696.49	*	9.329E-01	2.548E+00	4.316E+00	2.918E-01	0.216
		1489.15		-5.812E+00	9.594E+00	1.367E+01	9.257E-01	-0.425
PM-146		453.90	*	6.253E-03	4.473E-02	7.298E-02	6.309E-03	0.086
		633.02		3.005E-01	1.399E+00	2.360E+00	8.714E-01	0.127
		735.90		-7.938E-02	1.839E-01	2.474E-01	6.971E-02	-0.321
		747.13		-1.364E-02	1.133E-01	1.591E-01	2.100E-02	-0.086
ND-147	+	91.11		3.089E+01	2.643E+00	1.408E+00	1.155E-01	21.937
		319.41		1.453E+00	3.041E+00	5.165E+00	2.937E-01	0.281
		439.89		3.644E+00	5.682E+00	9.576E+00	5.519E-01	0.381
		531.02	*	1.539E-01	5.729E-01	9.316E-01	1.275E-01	0.165
PM-149		285.90	*	4.006E+00	6.296E+01	1.055E+02	1.489E+01	0.038
EU-152		121.78		-3.707E-02	9.870E-02	1.420E-01	1.129E-02	-0.261
		244.69		-2.466E-01	3.499E-01	4.976E-01	2.753E-02	-0.496
		344.27	*	-6.419E-02	1.066E-01	1.561E-01	1.001E-02	-0.411
		443.98		-6.038E-01	1.004E+00	1.559E+00	9.017E-02	-0.387
		778.89		-1.062E-01	3.143E-01	4.273E-01	3.170E-02	-0.249
		867.32		-6.171E-03	9.744E-01	1.365E+00	1.108E-01	-0.005
	+	964.01		4.717E-01	3.449E-01	5.746E-01	4.523E-02	0.821
		1085.78		-4.826E-02	3.864E-01	6.365E-01	4.229E-02	-0.076
		1112.02		3.295E-01	3.429E-01	5.665E-01	3.581E-02	0.582
		1407.95		1.635E-01	1.770E-01	3.212E-01	2.219E-02	0.509
GD-153		69.67		-1.368E+00	2.583E+00	4.101E+00	2.696E-01	-0.334
	+	83.37		4.852E+01	3.114E+01	4.145E+01	3.031E+00	1.170
	+	97.43	*	6.842E-01	1.652E-01	2.185E-01	1.520E-02	3.131
		103.18		-8.933E-02	1.454E-01	2.243E-01	1.499E-02	-0.398
EU-154		123.07		-4.750E-02	6.134E-02	9.745E-02	9.416E-03	-0.487
		247.94		-7.240E-03	3.493E-01	5.883E-01	5.523E-02	-0.012
		591.81		-2.514E-01	6.089E-01	9.888E-01	1.000E-01	-0.254
		723.30		-1.240E-01	2.088E-01	2.785E-01	2.248E-02	-0.445
		756.87		-2.697E-01	8.736E-01	1.401E+00	1.545E-01	-0.192
		873.19		7.458E-02	3.236E-01	5.354E-01	6.385E-02	0.139
		996.32		3.462E-01	4.295E-01	6.762E-01	1.169E-01	0.512
		1004.76		-1.713E-01	2.370E-01	3.079E-01	3.339E-02	-0.556

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	1274.45	*		8.240E-02	1.141E-01	2.010E-01	1.959E-02	0.410
	48.70			-4.067E+00	3.555E+00	5.893E+00	3.850E-01	-0.690
	60.01			4.012E+00	9.212E+00	1.420E+01	8.921E-01	0.283
	86.54			8.108E-02	1.809E-01	2.733E-01	2.089E-02	0.297
TB-160	105.31	*		3.490E-02	1.409E-01	2.342E-01	1.578E-02	0.149
	86.79			-2.377E-01	4.905E-01	7.240E-01	5.474E-02	-0.328
	197.04			1.478E-01	6.053E-01	9.615E-01	5.081E-02	0.154
	215.65			-1.951E-01	7.786E-01	1.217E+00	6.557E-02	-0.160
	298.57			7.776E-02	1.201E-01	1.835E-01	1.042E-02	0.424
	879.36	*		-3.837E-02	1.540E-01	2.442E-01	2.005E-02	-0.157
	962.29			9.343E-01	6.045E-01	9.848E-01	7.766E-02	0.949
	966.15			9.477E-01	2.557E-01	4.900E-01	3.848E-02	1.934
HO-166M	1177.93			2.668E-02	3.589E-01	5.979E-01	3.312E-02	0.045
	1271.85			-3.506E-01	7.155E-01	1.118E+00	7.156E-02	-0.314
	80.57			2.865E-01	5.826E-01	7.090E-01	5.053E-02	0.404
	184.41			7.952E-01	8.940E-02	1.168E-01	6.088E-03	6.808
	280.46			-7.859E-02	8.366E-02	1.335E-01	7.538E-03	-0.589
	410.95			1.796E-01	2.562E-01	4.340E-01	2.429E-02	0.414
	711.68	*		-7.253E-03	6.634E-02	1.086E-01	7.478E-03	-0.067
	752.31			-5.038E-02	2.961E-01	4.802E-01	3.461E-02	-0.105
	810.29			-3.984E-02	6.085E-02	9.348E-02	7.167E-03	-0.426
	51.35			2.515E+01	4.719E+01	8.133E+01	5.300E+00	0.309
TM-171	52.39			-7.476E+00	2.466E+01	4.172E+01	2.707E+00	-0.179
	59.40			2.014E+01	4.916E+01	7.576E+01	4.751E+00	0.266
	66.72	*		-2.338E+01	4.507E+01	6.728E+01	4.354E+00	-0.347
	88.36			2.193E-01	3.921E-01	5.437E-01	4.143E-02	0.403
LU-176	201.83			-9.576E-03	3.445E-02	4.783E-02	2.541E-03	-0.200
	306.84	*		9.654E-03	2.337E-02	3.969E-02	2.256E-03	0.243
	401.10			2.438E+00	7.025E+00	1.169E+01	6.473E-01	0.209
	52.97			-1.486E+00	2.553E+00	4.289E+00	2.776E-01	-0.347
LU-177M	54.07			3.537E-01	1.338E+00	2.289E+00	1.473E-01	0.154
	61.30			1.032E+01	2.948E+00	4.742E+00	2.996E-01	2.177
	121.62			-1.440E-01	5.048E-01	7.293E-01	4.554E-02	-0.197
	147.16			2.498E-01	7.920E-01	1.162E+00	6.441E-02	0.215
	171.86			-1.969E-01	5.265E-01	8.319E-01	4.282E-02	-0.237
	218.09			5.049E-01	8.811E-01	1.430E+00	7.724E-02	0.353
	268.79			1.774E+00	9.429E-01	1.368E+00	7.689E-02	1.297
	319.02			1.367E-01	2.520E-01	4.296E-01	2.442E-02	0.318
	367.43			-5.639E-01	8.915E-01	1.406E+00	7.854E-02	-0.401
	413.65	*		-7.415E-02	1.783E-01	2.824E-01	1.585E-02	-0.263
HF-181	56.28			-3.950E-01	1.509E+00	2.548E+00	1.621E-01	-0.155
	57.53			-3.850E-01	8.312E-01	1.397E+00	8.830E-02	-0.276
	65.20			6.172E-01	1.483E+00	2.278E+00	1.463E-01	0.271
	133.02			-1.333E-02	7.608E-02	1.232E-01	7.269E-03	-0.108
	136.25			2.611E-02	5.206E-01	8.488E-01	4.932E-02	0.031
	345.85			1.300E-01	1.942E-01	3.216E-01	1.817E-02	0.404
	482.03	*		1.065E-02	4.197E-02	6.876E-02	4.106E-03	0.155
	56.28			-1.552E-01	5.984E-01	1.011E+00	6.429E-02	-0.154
W-181	57.53			-1.530E-01	3.299E-01	5.544E-01	3.504E-02	-0.276

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		65.20	*	2.430E-01	5.841E-01	8.969E-01	5.762E-02	0.271
		67.75		6.867E-02	1.775E-01	2.718E-01	1.768E-02	0.253
		100.10		3.591E-01	2.631E-01	4.077E-01	2.779E-02	0.881
		152.43		4.998E-01	3.747E-01	6.336E-01	3.434E-02	0.789
		222.10		-3.890E-01	3.396E-01	5.492E-01	2.979E-02	-0.708
	+	1001.68		3.705E+01	5.618E+00	9.055E+00	6.826E-01	4.091
	+	1121.28		6.444E-01	2.179E-01	3.165E-01	1.964E-02	2.036
		1189.05		1.321E-01	3.321E-01	5.663E-01	3.193E-02	0.233
		1221.42	*	-1.699E-01	1.946E-01	2.961E-01	1.756E-02	-0.574
		1230.97		-3.019E-01	5.206E-01	8.196E-01	4.934E-02	-0.368
RE-183		57.98		1.033E-01	3.409E-01	5.567E-01	3.512E-02	0.185
		59.32		1.524E-01	1.979E-01	3.077E-01	1.930E-02	0.495
		67.20		-7.402E-02	3.151E-01	4.743E-01	3.077E-02	-0.156
	+	162.32	*	2.963E-01	1.841E-01	2.215E-01	1.151E-02	1.338
	+	208.81		2.396E+00	1.397E+00	1.780E+00	9.527E-02	1.346
		291.72		-5.786E-01	9.995E-01	1.407E+00	7.975E-02	-0.411
		57.98		3.832E-01	1.265E+00	2.066E+00	1.303E-01	0.185
		59.32		5.650E-01	7.340E-01	1.141E+00	7.159E-02	0.495
		67.20		-2.746E-01	1.169E+00	1.760E+00	1.142E-01	-0.156
		161.27		1.108E-01	4.381E-01	6.371E-01	3.327E-02	0.174
RE-184		216.55		-1.038E-02	2.787E-01	4.398E-01	2.373E-02	-0.024
		252.85	*	5.104E-02	2.583E-01	3.882E-01	2.161E-02	0.131
		318.01		-1.386E-01	4.417E-01	7.201E-01	4.094E-02	-0.192
		792.07		7.652E-01	1.456E+00	1.764E+00	1.327E-01	0.434
		903.28		1.028E+00	1.098E+00	1.778E+00	1.480E-01	0.578
		920.93		-4.134E-01	4.901E-01	7.267E-01	5.961E-02	-0.569
		59.72		3.178E-01	5.389E-01	8.337E-01	5.232E-02	0.381
		61.14		5.559E-01	3.069E-01	4.850E-01	3.062E-02	1.146
		69.30		-1.470E-01	4.343E-01	7.259E-01	4.763E-02	-0.202
		592.07		-1.093E+00	2.482E+00	4.025E+00	2.558E-01	-0.272
OS-185		646.12	*	1.149E-02	4.403E-02	7.457E-02	4.819E-03	0.154
		717.42		-2.678E-01	9.044E-01	1.457E+00	1.009E-01	-0.184
		874.81		1.242E-01	6.140E-01	1.014E+00	8.289E-02	0.123
		880.27		1.298E-01	8.330E-01	1.369E+00	1.125E-01	0.095
		155.03	*	-4.596E-02	1.863E-01	2.981E-01	1.598E-02	-0.154
		477.96		-2.095E+00	3.089E+00	4.648E+00	2.767E-01	-0.451
		633.10		6.515E-01	2.790E+00	4.726E+00	3.044E-01	0.138
	+	63.58		2.764E+03	2.489E+02	2.563E+02	1.635E+01	10.783
		227.08		1.675E+01	1.274E+01	2.260E+01	1.232E+00	0.741
		290.67	*	2.627E+00	7.874E+00	1.183E+01	6.702E-01	0.222
IR-192	+	295.96		8.872E-01	1.577E-01	2.535E-01	1.462E-02	3.500
		308.46		4.660E-02	9.303E-02	1.585E-01	9.117E-03	0.294
		316.51	*	-2.351E-02	3.319E-02	5.288E-02	3.022E-03	-0.444
		468.07		4.429E-02	7.290E-02	1.139E-01	7.723E-03	0.389
		604.41		-2.533E-01	5.306E-01	7.356E-01	8.577E-02	-0.344
		612.46		6.007E-01	7.871E-01	1.222E+00	9.832E-02	0.491
		65.12		3.173E-01	2.774E-01	4.333E-01	2.783E-02	0.732
		66.83		-7.170E-02	1.485E-01	2.220E-01	1.437E-02	-0.323
	+	75.70		8.193E-01	3.064E-01	5.313E-01	3.638E-02	1.542

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	98.88	*	1.990E+00	4.806E-01	6.364E-01	4.376E-02	3.127
		129.76		2.885E+00	3.410E+00	5.709E+00	3.421E-01	0.505
TL-200		367.94	*	-1.175E-04	3.410E+00	Half-Life	too short	
		579.30		-4.772E-04	3.410E+00	Half-Life	too short	
		828.27		2.678E-04	3.410E+00	Half-Life	too short	
		1205.75		9.780E-05	3.410E+00	Half-Life	too short	
TL-201		68.90		-4.733E-01	5.319E+00	8.941E+00	5.853E-01	-0.053
		70.82		9.041E-01	3.389E+00	5.142E+00	3.405E-01	0.176
		80.30		-1.309E+00	8.403E+00	9.961E+00	7.082E-01	-0.131
		135.34		-1.625E+01	2.238E+01	3.548E+01	2.070E+00	-0.458
		167.43	*	3.609E+00	6.430E+00	9.477E+00	4.858E-01	0.381
TL-202		68.90		-5.255E-02	5.905E-01	9.927E-01	6.499E-02	-0.053
		70.82		1.001E-01	3.752E-01	5.694E-01	3.770E-02	0.176
		80.30		-1.450E-01	9.307E-01	1.103E+00	7.844E-02	-0.131
		439.56	*	4.395E-02	6.752E-02	1.139E-01	6.560E-03	0.386
HG-203		70.83		4.663E-01	1.713E+00	2.598E+00	3.231E-01	0.179
		72.87		1.253E+00	1.008E+00	1.549E+00	1.865E-01	0.809
	+	82.60		3.554E+00	2.312E+00	2.983E+00	3.859E-01	1.191
		279.20	*	1.022E-02	3.929E-02	6.650E-02	3.999E-03	0.154
BI-207		72.80		3.408E-01	2.982E-01	4.609E-01	3.091E-02	0.740
	+	74.97		4.566E-01	1.707E-01	2.867E-01	1.952E-02	1.593
	+	84.90		6.297E-01	4.041E-01	5.218E-01	3.872E-02	1.207
		569.67		9.560E-03	3.095E-02	5.300E-02	3.337E-03	0.180
		1063.62	*	-2.388E-02	5.460E-02	8.725E-02	6.019E-03	-0.274
		1770.23		1.557E-02	4.270E-01	6.121E-01	3.612E-02	0.025
TL-207		81.07		-6.128E-02	4.731E-01	5.610E-01	4.016E-02	-0.109
	+	83.78		4.152E-01	2.665E-01	3.532E-01	2.593E-02	1.175
	+	94.90		1.081E+00	6.884E-01	6.070E-01	4.313E-02	1.782
		122.32		-1.614E+00	2.198E+00	3.327E+00	2.355E-01	-0.485
	+	144.24		3.223E+00	1.129E+00	1.545E+00	1.094E-01	2.086
		154.21		1.688E-01	4.455E-01	7.296E-01	4.867E-02	0.231
	+	269.46		4.176E-01	2.221E-01	3.266E-01	1.924E-02	1.279
		323.87	*	-7.183E-01	6.840E-01	1.054E+00	1.736E-01	-0.682
	+	338.28		5.874E+00	1.816E+00	2.420E+00	2.531E-01	2.427
		445.03		-1.261E+00	2.345E+00	3.650E+00	3.746E-01	-0.345
PO-209		260.50		1.169E+01	1.023E+01	1.624E+01	9.084E-01	0.720
		262.80		-1.427E+01	2.850E+01	4.074E+01	2.282E+00	-0.350
		896.60	*	6.674E-01	7.455E+00	1.217E+01	1.016E+00	0.055
BI-210		46.50	*	2.983E-01	4.859E+00	8.293E+00	6.247E-01	0.036
PB-210		46.50	*	2.983E-01	4.859E+00	8.293E+00	6.247E-01	0.036
PO-210		46.50	*	2.983E-01	4.859E+00	8.293E+00	5.319E-01	0.036
PB-211		404.84	*	-9.196E-01	1.153E+00	1.541E+00	9.603E-01	-0.597
		427.08		1.243E+00	2.070E+00	3.263E+00	2.016E+00	0.381
		831.96		-8.037E-01	1.393E+00	2.006E+00	1.255E+00	-0.401
PO-215		81.07		-6.128E-02	4.731E-01	5.610E-01	4.016E-02	-0.109
	+	83.78		4.152E-01	2.665E-01	3.532E-01	2.593E-02	1.175
	+	94.90		1.081E+00	6.884E-01	6.070E-01	4.313E-02	1.782
		122.32		-1.614E+00	2.198E+00	3.327E+00	2.355E-01	-0.485
	+	144.24		3.223E+00	1.129E+00	1.545E+00	1.094E-01	2.086

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		1.688E-01	4.455E-01	7.296E-01	4.867E-02	0.231
	+	269.46		4.176E-01	2.221E-01	3.266E-01	1.924E-02	1.279
		323.87	*	-7.183E-01	6.840E-01	1.054E+00	1.736E-01	-0.682
	+	338.28		5.874E+00	1.816E+00	2.420E+00	2.531E-01	2.427
		445.03		-1.261E+00	2.345E+00	3.650E+00	3.746E-01	-0.345
RN-219	+	271.23		5.358E-01	2.863E-01	4.171E-01	3.329E-02	1.285
		401.81	*	6.516E-02	4.371E-01	7.191E-01	9.706E-02	0.091
RN-220		549.76	*	-8.692E+00	2.572E+01	4.230E+01	2.638E+00	-0.205
RA-223		81.07		-6.128E-02	4.731E-01	5.610E-01	4.016E-02	-0.109
	+	83.78		4.152E-01	2.665E-01	3.532E-01	2.593E-02	1.175
	+	94.90		1.081E+00	6.884E-01	6.070E-01	4.313E-02	1.782
		122.32		-1.614E+00	2.198E+00	3.327E+00	2.355E-01	-0.485
	+	144.24		3.223E+00	1.129E+00	1.545E+00	1.094E-01	2.086
		154.21		1.688E-01	4.455E-01	7.296E-01	4.867E-02	0.231
	+	269.46		4.176E-01	2.221E-01	3.266E-01	1.924E-02	1.279
		323.87	*	-7.183E-01	6.840E-01	1.054E+00	1.736E-01	-0.682
	+	338.28		5.874E+00	1.816E+00	2.420E+00	2.531E-01	2.427
		445.03		-1.261E+00	2.345E+00	3.650E+00	3.746E-01	-0.345
AC-227		79.80		2.489E-02	3.599E+00	4.297E+00	8.995E-01	0.006
		236.00		3.966E-01	2.687E-01	4.262E-01	4.383E-02	0.931
		256.20	*	1.414E-01	4.477E-01	6.758E-01	9.373E-02	0.209
		286.10		6.664E-01	1.547E+00	2.633E+00	3.026E-01	0.253
		299.80		2.312E+00	1.578E+00	2.469E+00	4.011E-01	0.936
		304.40		-2.397E+00	1.817E+00	2.728E+00	4.708E-01	-0.879
		334.20		-1.957E+00	2.571E+00	3.476E+00	6.359E-01	-0.563
TH-227		79.80		2.489E-02	3.599E+00	4.297E+00	9.117E-01	0.006
	+	94.00		8.652E+00	5.773E+00	1.004E+01	2.133E+00	0.862
		236.00		3.966E-01	2.679E-01	4.262E-01	3.778E-02	0.931
		256.20	*	1.414E-01	4.479E-01	6.758E-01	1.137E-01	0.209
		286.10		6.664E-01	1.683E+00	2.633E+00	2.637E+00	0.253
		299.80		2.312E+00	1.578E+00	2.469E+00	4.011E-01	0.936
		304.40		-2.397E+00	1.817E+00	2.728E+00	4.708E-01	-0.879
		334.20		-1.957E+00	2.571E+00	3.476E+00	6.359E-01	-0.563
TH-229		85.43		-3.317E-01	3.452E-01	5.024E-01	3.747E-02	-0.660
		88.47		9.866E-02	2.077E-01	3.135E-01	2.386E-02	0.315
		100.00		3.937E-01	2.802E-01	4.343E-01	2.962E-02	0.907
		193.63	*	2.147E-01	5.436E-01	8.805E-01	4.636E-02	0.244
		210.97		7.818E-01	8.672E-01	1.275E+00	6.839E-02	0.613
PA-231		283.67	*	3.974E-01	1.503E+00	2.542E+00	3.487E-01	0.156
		301.29		1.013E+00	5.710E-01	9.881E-01	1.026E-01	1.025
TH-231		81.07		-6.128E-02	4.731E-01	5.610E-01	4.016E-02	-0.109
	+	83.78		4.152E-01	2.665E-01	3.532E-01	2.593E-02	1.175
	+	94.90		1.081E+00	6.884E-01	6.070E-01	4.313E-02	1.782
		122.32		-1.614E+00	2.198E+00	3.327E+00	2.355E-01	-0.485
	+	144.24		3.223E+00	1.129E+00	1.545E+00	1.094E-01	2.086
		154.21		1.688E-01	4.455E-01	7.296E-01	4.867E-02	0.231
	+	269.46		4.176E-01	2.221E-01	3.266E-01	1.924E-02	1.279
		323.87	*	-7.183E-01	6.840E-01	1.054E+00	1.736E-01	-0.682
	+	338.28		5.874E+00	1.816E+00	2.420E+00	2.531E-01	2.427

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	445.03		-1.261E+00	2.345E+00	3.650E+00	3.746E-01	-0.345
		75.28		1.332E+01	5.262E+00	8.459E+00	1.219E+00	1.575
		86.59		-1.730E+00	3.055E+00	4.451E+00	1.179E+00	-0.389
		300.12		8.014E-01	4.330E-01	6.925E-01	9.270E-02	1.157
		311.98	*	1.796E-02	6.234E-02	1.051E-01	6.358E-03	0.171
		340.50		8.229E-01	7.091E-01	1.074E+00	2.462E-01	0.766
		398.62		-1.068E+00	2.209E+00	3.472E+00	8.957E-01	-0.308
		415.76		-9.231E-01	1.679E+00	2.616E+00	5.373E-01	-0.353
		63.00		8.115E+01	1.276E+01	7.871E+00	1.131E+00	10.310
		94.67		7.715E-01	4.959E-01	5.094E-01	5.812E-02	1.515
PA-234	+	98.44		8.101E-01	4.875E-01	2.614E-01	1.452E-01	3.100
		99.86		1.479E+00	7.304E-01	1.144E+00	7.813E-02	1.293
		111.00		3.863E-01	2.860E-01	4.821E-01	5.130E-02	0.801
		131.20		9.114E-02	1.279E-01	2.133E-01	1.269E-02	0.427
		152.70		5.963E-01	3.717E-01	6.166E-01	9.662E-02	0.967
		186.00		2.863E+01	9.171E+00	4.479E+00	1.364E+00	6.392
		226.40		6.935E-01	4.159E-01	7.353E-01	8.373E-02	0.943
		227.20		4.955E-01	4.370E-01	7.705E-01	4.199E-02	0.643
		248.90		2.156E-01	7.983E-01	1.359E+00	2.911E-01	0.159
		293.70		5.649E+00	1.313E+00	1.560E+00	2.502E-01	3.621
		369.80		1.716E-01	8.626E-01	1.431E+00	2.971E-01	0.120
		568.70		3.176E-01	9.972E-01	1.709E+00	1.076E-01	0.186
		569.50		1.253E-01	2.727E-01	4.714E-01	2.968E-02	0.266
		574.00		6.570E-01	1.503E+00	2.593E+00	1.636E-01	0.253
		699.00		-6.742E-01	7.689E-01	1.174E+00	2.151E-01	-0.574
		706.10		2.463E-01	1.170E+00	1.952E+00	8.644E-01	0.126
		733.00		6.072E-02	4.336E-01	6.282E-01	1.359E-01	0.097
		742.81		2.612E+00	3.007E+00	2.965E+00	1.988E+00	0.881
		796.30		1.675E+00	1.368E+00	1.708E+00	4.566E-01	0.980
		805.60		5.676E-01	1.018E+00	1.717E+00	5.217E-01	0.331
		819.60		-9.416E-01	1.365E+00	2.016E+00	7.628E-01	-0.467
		826.30		-3.711E-01	8.878E-01	1.369E+00	6.106E-01	-0.271
		831.60		-1.263E-01	6.563E-01	1.050E+00	3.112E-01	-0.120
		876.40		-2.835E-01	9.538E-01	1.432E+00	1.472E+00	-0.198
		880.51		5.506E-02	3.092E-01	5.090E-01	4.184E-02	0.108
		883.24		5.872E-02	3.304E-01	5.342E-01	3.589E-01	0.110
		899.00		-4.572E-01	8.927E-01	1.338E+00	5.843E-01	-0.342
		925.00		7.399E-01	1.366E+00	2.303E+00	1.882E-01	0.321
		926.50		2.548E-01	2.102E-01	3.570E-01	8.970E-02	0.714
		946.00	*	5.087E-01	3.652E-01	6.343E-01	1.173E-01	0.802
		949.00		-3.355E-01	5.229E-01	7.942E-01	6.348E-02	-0.422
		980.50		-3.669E-01	7.256E-01	1.113E+00	8.607E-02	-0.330
		1394.10		-3.416E-01	1.145E+00	1.753E+00	1.138E+00	-0.195
NP-236	+	94.67		5.851E-01	3.725E-01	3.875E-01	2.759E-02	1.510
		98.44		6.124E-01	1.479E-01	1.976E-01	1.363E-02	3.100
		111.00		2.922E-01	2.149E-01	3.647E-01	2.346E-02	0.801
NP-237	+	160.31	*	1.281E-02	9.647E-02	1.395E-01	7.316E-03	0.092
		86.50	*	1.783E-01	4.427E-01	6.658E-01	1.463E-01	0.268
	+	95.87		4.659E+00	3.154E+00	2.272E+00	5.482E-01	2.050

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		1.400E+00	3.380E-01	4.187E-01	2.865E-02	3.343
		117.00	*	-4.286E-01	2.431E-01	3.740E-01	2.360E-02	-1.146
	+	209.75		1.914E+00	1.116E+00	1.411E+00	7.557E-02	1.357
		228.18		8.957E-02	2.300E-01	3.952E-01	2.156E-02	0.227
		277.60		3.418E-01	1.753E-01	3.168E-01	1.788E-02	1.079
AM-241		334.30		-1.205E+00	1.440E+00	1.952E+00	1.107E-01	-0.618
		59.54	*	1.400E-01	2.862E-01	4.419E-01	3.140E-02	0.317
CM-243	+	99.55		1.440E+00	3.478E-01	4.308E-01	2.948E-02	3.343
		103.76	*	2.869E-02	1.267E-01	2.105E-01	1.402E-02	0.136
	+	117.00		-4.409E-01	2.501E-01	3.848E-01	2.428E-02	-1.146
		209.75		1.886E+00	1.100E+00	1.390E+00	7.449E-02	1.357
		228.18		9.050E-02	2.323E-01	3.993E-01	2.178E-02	0.227
AM-246		277.60		3.445E-01	1.767E-01	3.194E-01	1.802E-02	1.079
		798.80		-1.109E-01	1.564E-01	2.002E-01	1.517E-02	-0.554
		1036.00		5.427E-02	2.686E-01	4.582E-01	3.298E-02	0.118
	+	1062.04		-2.948E-02	2.292E-01	3.764E-01	2.604E-02	-0.078
		1078.86	*	5.911E-03	1.263E-01	2.117E-01	1.423E-02	0.028
CM-247		278.00		1.226E+00	7.394E-01	1.321E+00	7.457E-02	0.928
		287.40		1.667E-01	1.226E+00	2.060E+00	1.166E-01	0.081
	+	402.60	*	5.381E-03	3.905E-02	6.420E-02	3.560E-03	0.084
CF-249		252.85		1.925E-01	9.742E-01	1.464E+00	8.148E-02	0.131
		333.44		2.826E-02	1.881E-01	2.762E-01	1.566E-02	0.102
	+	387.95	*	-8.022E-03	4.172E-02	6.746E-02	3.708E-03	-0.119
CF-251		176.60	*	-7.658E-02	1.420E-01	2.224E-01	1.150E-02	-0.344
		227.00		5.226E-01	3.878E-01	6.884E-01	3.752E-02	0.759
		285.00		1.186E+00	1.734E+00	2.988E+00	1.691E-01	0.397

VAX/VMS Nuclide Identification Report Generated

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
*
*                               DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395009  *
* Acquisition date   : 2-FEB-2010 09:14:48 Detector SN#      :      *
* Detector ID        : GAM12                                           *
* Geometry           : CAN                                             *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000        *
* Elapsed real time  : 0 02:00:02.29 Half life ratio : 8.000         *
*****
*
*                               SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID   *
* Sample ID          : G245395009 Analyst initials: MXR1            *
* Batch Number       : 944966 Sample Quantity : 1.3708E+02 GRAM     *
* Recovery           : 1.00000 Carrier Weight : 0.00000             *
*****
*
*                               QC DATA                               *
*
* Standard Weight    : 0.00000                                         *
* CALIB. DATE/TIME   : 10-FEB-2009 09:20:24 MS Isotope      :      *
* MSD DPM             : 0.000 MSD Isotope      :      *
* LCS DPM             : 0.000 LCS Isotope      :      *
* LCSD DPM            : 0.000 LCSD Isotope     :      *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.950E+01	2.661E+00	4.238E-01	0.000E+00
NB-95	4.194E-01	8.487E-02	7.654E-02	0.000E+00
LU-177	2.376E+00	1.358E+00	1.521E+00	0.000E+00
TL-208	3.835E-01	7.293E-02	5.876E-02	0.000E+00
BI-211	3.082E+00	4.649E-01	3.477E-01	0.000E+00
BI-212	7.541E-01	4.849E-01	4.584E-01	0.000E+00
PB-212	1.221E+00	1.267E-01	9.520E-02	0.000E+00
PO-212	1.221E+00	1.267E-01	9.520E-02	0.000E+00
BI-214	9.046E-01	1.999E-01	1.085E-01	0.000E+00
PB-214	1.072E+00	1.708E-01	1.122E-01	0.000E+00
PO-214	1.072E+00	1.708E-01	1.122E-01	0.000E+00
PO-216	1.221E+00	1.267E-01	9.520E-02	0.000E+00
PO-218	1.072E+00	1.708E-01	1.122E-01	0.000E+00
RA-224	3.310E+00	9.989E-01	1.083E+00	0.000E+00
RA-226	9.046E-01	1.999E-01	1.085E-01	0.000E+00
AC-228	1.521E+00	3.088E-01	2.071E-01	0.000E+00
RA-228	1.521E+00	3.088E-01	2.071E-01	0.000E+00
TH-228	1.238E+00	1.285E-01	9.653E-02	0.000E+00
TH-230	9.046E-01	1.999E-01	1.085E-01	0.000E+00
U-231	4.308E+00	2.687E+00	1.935E+00	0.000E+00
TH-232	1.521E+00	3.088E-01	2.071E-01	0.000E+00
PA-234M	8.474E+01	1.326E+01	5.475E+00	0.000E+00
TH-234	6.962E+01	1.240E+01	3.518E+00	0.000E+00
U-234	9.046E-01	1.999E-01	1.085E-01	0.000E+00
U-235	9.946E-01	3.698E-01	4.079E-01	0.000E+00
U-238	6.962E+01	1.240E+01	3.518E+00	0.000E+00
AM-243	2.544E-01	9.322E-02	1.515E-01	0.000E+00
ANH-511	1.466E-01	7.729E-02	4.789E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	-3.102E-01	3.170E-01	4.868E-01	0.000E+00	NOT IDENT.
NA-22	2.909E-02	3.991E-02	7.220E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.729E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-5.705E-03	2.648E-02	4.267E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.250E-02	1.049E-01	0.000E+00	FAIL ABUN
SC-46	4.523E-03	3.860E-02	6.532E-02	0.000E+00	FAIL ABUN
V-48	-7.610E-02	6.787E-02	9.891E-02	0.000E+00	NOT IDENT.
CR-51	8.172E-02	3.562E-01	6.295E-01	0.000E+00	NOT IDENT.
MN-52	2.480E-01	1.981E-01	3.805E-01	0.000E+00	FAIL ABUN
MN-54	-9.989E-03	3.906E-02	6.449E-02	0.000E+00	NOT IDENT.
CO-56	-8.104E-03	4.236E-02	7.017E-02	0.000E+00	NOT IDENT.
CO-57	-2.043E-02	3.112E-02	5.077E-02	0.000E+00	NOT IDENT.
CO-58	-1.576E-02	3.956E-02	6.211E-02	0.000E+00	NOT IDENT.
FE-59	7.256E-02	8.781E-02	1.606E-01	0.000E+00	FAIL ABUN
CO-60	1.230E-02	3.764E-02	6.553E-02	0.000E+00	NOT IDENT.
ZN-65	2.038E-02	9.762E-02	1.475E-01	0.000E+00	NOT IDENT.
GE-68	1.388E-01	1.100E+00	1.912E+00	0.000E+00	NOT IDENT.
AS-73	-2.941E-01	1.273E+00	2.348E+00	0.000E+00	NOT IDENT.
AS-74	6.368E-03	8.736E-02	1.530E-01	0.000E+00	NOT IDENT.
SE-75	-1.746E-02	4.331E-02	6.970E-02	0.000E+00	NOT IDENT.
BR-77	1.984E+00	7.391E+00	1.217E+01	0.000E+00	FAIL ABUN
SR-82	-2.007E-01	3.954E-01	6.247E-01	0.000E+00	NOT IDENT.
RB-83	1.058E-02	7.303E-02	1.140E-01	0.000E+00	NOT IDENT.
RB-84	3.437E-02	7.581E-02	1.303E-01	0.000E+00	NOT IDENT.
KR-85	9.254E+00	7.257E+00	1.309E+01	0.000E+00	NOT IDENT.
SR-85	4.684E-02	3.673E-02	6.627E-02	0.000E+00	NOT IDENT.
RB-86	-2.804E-01	6.906E-01	1.140E+00	0.000E+00	NOT IDENT.
Y-88	1.452E-02	3.124E-02	5.697E-02	0.000E+00	NOT IDENT.
ZR-88	5.555E-03	2.947E-02	5.113E-02	0.000E+00	NOT IDENT.
Y-91	-4.813E-01	1.771E+01	2.999E+01	0.000E+00	NOT IDENT.
NB-94	1.413E-02	3.526E-02	6.209E-02	0.000E+00	NOT IDENT.
NB-95M	4.749E-02	1.323E-01	2.137E-01	0.000E+00	NOT IDENT.
ZR-95	-2.230E-02	7.694E-02	1.282E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.996E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.260E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	8.686E+00	1.061E+01	1.688E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.640E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.621E-02	3.479E-02	5.992E-02	0.000E+00	NOT IDENT.
RH-102	-6.746E-04	2.843E-02	4.782E-02	0.000E+00	FAIL ABUN
RU-103	3.945E-03	4.103E-02	6.928E-02	0.000E+00	FAIL ABUN
RH-106	-1.553E-01	3.146E-01	5.261E-01	0.000E+00	FAIL ABUN
RU-106	-1.553E-01	3.142E-01	5.261E-01	0.000E+00	FAIL ABUN
AG-108M	2.276E-02	3.089E-02	5.505E-02	0.000E+00	NOT IDENT.
CD-109	-5.842E-01	1.533E+00	2.447E+00	0.000E+00	NOT IDENT.
AG-110M	-5.566E-03	3.595E-02	6.140E-02	0.000E+00	NOT IDENT.
IN-111	-2.795E-01	8.148E-01	1.257E+00	0.000E+00	NOT IDENT.
IN-113M	-2.055E-02	4.376E-02	7.292E-02	0.000E+00	NOT IDENT.
SN-113	-2.055E-02	4.376E-02	7.292E-02	0.000E+00	NOT IDENT.
IN-114M	-1.655E-01	2.062E-01	2.964E-01	0.000E+00	NOT IDENT.
CD-115	-5.525E+00	7.400E+00	1.160E+01	0.000E+00	NOT IDENT.
SN-117M	5.215E-02	5.999E-02	9.612E-02	0.000E+00	NOT IDENT.
SB-122	-8.805E-01	1.507E+00	2.540E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.406E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.886E-02	3.283E-02	5.262E-02	0.000E+00	NOT IDENT.
I-124	-4.347E-01	6.510E-01	9.252E-01	0.000E+00	NOT IDENT.
SB-124	-1.963E-02	5.791E-02	9.133E-02	0.000E+00	FAIL ABUN
SB-125	4.169E-02	8.810E-02	1.545E-01	0.000E+00	FAIL ABUN
TE-125M	2.193E+01	1.342E+01	2.233E+01	0.000E+00	NOT IDENT.
I-126	4.217E-02	1.744E-01	3.056E-01	0.000E+00	NOT IDENT.
SB-126	7.258E-02	1.504E-01	2.347E-01	0.000E+00	FAIL ABUN
SN-126	-1.783E-01	1.533E-01	2.395E-01	0.000E+00	FAIL ABUN
SB-127	9.267E-01	1.126E+00	2.041E+00	0.000E+00	NOT IDENT.
XE-127	4.687E-02	5.220E-02	8.228E-02	0.000E+00	NOT IDENT.
I-131	-6.126E-02	9.556E-02	1.582E-01	0.000E+00	NOT IDENT.
TE-132	1.378E-01	5.330E-01	9.663E-01	0.000E+00	FAIL ABUN
BA-133	-1.204E-02	4.503E-02	6.679E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.393E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.607E-02	6.545E-02	9.263E-02	0.000E+00	FAIL ABUN
CS-135	1.713E-01	1.669E-01	2.720E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.353E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.631E-02	9.218E-02	1.644E-01	0.000E+00	FAIL ABUN
BA-137M	1.335E-02	3.930E-02	6.876E-02	0.000E+00	NOT IDENT.
CS-137	1.411E-02	4.154E-02	7.268E-02	0.000E+00	NOT IDENT.
CE-139	1.684E-02	3.666E-02	5.731E-02	0.000E+00	NOT IDENT.
BA-140	-7.337E-02	2.562E-01	4.414E-01	0.000E+00	FAIL ABUN
LA-140	-3.623E-02	6.665E-02	1.039E-01	0.000E+00	NOT IDENT.
CE-141	0.000E+00	7.601E-02	1.270E-01	0.000E+00	NOT IDENT.

CE-143	0.000E+00	1.063E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.566E-01	2.391E-01	4.063E-01	0.000E+00	NOT IDENT.
PM-144	1.378E-02	3.687E-02	6.485E-02	0.000E+00	NOT IDENT.
PR-144	9.329E-01	2.497E+00	4.391E+00	0.000E+00	NOT IDENT.
PM-146	6.253E-03	4.384E-02	7.488E-02	0.000E+00	NOT IDENT.
ND-147	1.539E-01	5.614E-01	9.529E-01	0.000E+00	FAIL ABUN
PM-149	4.006E+00	6.170E+01	1.092E+02	0.000E+00	NOT IDENT.
EU-152	-6.419E-02	1.045E-01	1.610E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	1.619E-01	2.307E-01	0.000E+00	FAIL ABUN
EU-154	8.240E-02	1.118E-01	2.022E-01	0.000E+00	NOT IDENT.
EU-155	3.490E-02	1.381E-01	2.469E-01	0.000E+00	NOT IDENT.
TB-160	-3.837E-02	1.509E-01	2.474E-01	0.000E+00	NOT IDENT.
HO-166M	-7.253E-03	6.501E-02	1.105E-01	0.000E+00	FAIL ABUN
TM-171	-2.338E+01	4.417E+01	7.151E+01	0.000E+00	NOT IDENT.
LU-176	9.654E-03	2.290E-02	4.102E-02	0.000E+00	NOT IDENT.
LU-177M	-7.415E-02	1.747E-01	2.903E-01	0.000E+00	FAIL ABUN
HF-181	1.065E-02	4.113E-02	7.047E-02	0.000E+00	NOT IDENT.
W-181	2.430E-01	5.724E-01	9.537E-01	0.000E+00	NOT IDENT.
TA-182	-1.699E-01	1.907E-01	2.980E-01	0.000E+00	FAIL ABUN
RE-183	0.000E+00	1.805E-01	2.316E-01	0.000E+00	FAIL ABUN
RE-184	5.104E-02	2.532E-01	4.027E-01	0.000E+00	NOT IDENT.
OS-185	1.149E-02	4.315E-02	7.599E-02	0.000E+00	NOT IDENT.
RE-188	-4.596E-02	1.826E-01	3.120E-01	0.000E+00	NOT IDENT.
W-188	2.627E+00	7.717E+00	1.224E+01	0.000E+00	FAIL ABUN
IR-192	-2.351E-02	3.253E-02	5.463E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	4.709E-01	6.717E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.028E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.609E+00	6.302E+00	9.907E+00	0.000E+00	NOT IDENT.
TL-202	4.395E-02	6.617E-02	1.169E-01	0.000E+00	NOT IDENT.
HG-203	1.022E-02	3.850E-02	6.886E-02	0.000E+00	FAIL ABUN
BI-207	-2.388E-02	5.351E-02	8.806E-02	0.000E+00	FAIL ABUN
TL-207	-7.183E-01	6.704E-01	1.088E+00	0.000E+00	FAIL ABUN
PO-209	6.674E-01	7.305E+00	1.232E+01	0.000E+00	NOT IDENT.
BI-210	2.983E-01	4.762E+00	8.872E+00	0.000E+00	NOT IDENT.
PB-210	2.983E-01	4.762E+00	8.872E+00	0.000E+00	NOT IDENT.
PO-210	2.983E-01	4.762E+00	8.872E+00	0.000E+00	NOT IDENT.
PB-211	-9.196E-01	1.130E+00	1.585E+00	0.000E+00	NOT IDENT.
PO-215	-7.183E-01	6.704E-01	1.088E+00	0.000E+00	FAIL ABUN
RN-219	6.516E-02	4.284E-01	7.396E-01	0.000E+00	FAIL ABUN
RN-220	-8.692E+00	2.520E+01	4.325E+01	0.000E+00	NOT IDENT.
RA-223	-7.183E-01	6.704E-01	1.088E+00	0.000E+00	FAIL ABUN
AC-227	1.414E-01	4.387E-01	7.009E-01	0.000E+00	NOT IDENT.
TH-227	1.414E-01	4.389E-01	7.009E-01	0.000E+00	FAIL ABUN
TH-229	2.147E-01	5.328E-01	9.179E-01	0.000E+00	NOT IDENT.
PA-231	3.974E-01	1.473E+00	2.631E+00	0.000E+00	NOT IDENT.
TH-231	-7.183E-01	6.704E-01	1.088E+00	0.000E+00	FAIL ABUN
PA-233	1.796E-02	6.110E-02	1.086E-01	0.000E+00	FAIL ABUN
PA-234	5.087E-01	3.579E-01	6.417E-01	0.000E+00	FAIL ABUN
NP-236	1.281E-02	9.454E-02	1.460E-01	0.000E+00	FAIL ABUN
NP-237	1.783E-01	4.338E-01	7.044E-01	0.000E+00	FAIL ABUN
NP-239	-4.286E-01	2.382E-01	3.936E-01	0.000E+00	FAIL ABUN
AM-241	1.400E-01	2.805E-01	4.706E-01	0.000E+00	NOT IDENT.
CM-243	2.869E-02	1.241E-01	2.220E-01	0.000E+00	FAIL ABUN
AM-246	5.911E-03	1.238E-01	2.136E-01	0.000E+00	NOT IDENT.
CM-247	5.381E-03	3.827E-02	6.602E-02	0.000E+00	NOT IDENT.
CF-249	-8.022E-03	4.089E-02	6.943E-02	0.000E+00	NOT IDENT.
CF-251	-7.658E-02	1.391E-01	2.323E-01	0.000E+00	NOT IDENT.


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*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395009.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:14:48.
Sample ID          : G245395009 Sample quantity : 1.37080E+02 GRAM
Detector name      : GAM12 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.29 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1308	10.67*	1.138E+00	2.950E+01	2.950E+01	9.20
NB-95	765.79	261	99.81*	1.985E+00	3.607E-01	4.194E-01	20.65
LU-177	112.95	458	6.40	6.577E+00	2.978E+00	1.255E+01	22.02
	208.36	124	11.00*	5.466E+00	5.637E-01	2.376E+00	58.31
TL-208	277.35	-----	6.80	4.505E+00	-----	Line Not Found	-----
	510.84	150	21.60	2.793E+00	6.789E-01	6.789E-01	54.42
	583.14	295	84.20*	2.505E+00	3.835E-01	3.835E-01	19.41
	860.37	63	12.46	1.794E+00	7.770E-01	7.770E-01	54.48
BI-211	72.87	-----	1.27	4.387E+00	-----	Line Not Found	-----
	351.07	548	12.94*	3.763E+00	3.082E+00	3.082E+00	15.39
BI-212	727.18	68	11.80*	2.077E+00	7.541E-01	7.541E-01	65.62
	785.46	86	1.97	1.944E+00	6.151E+00	6.151E+00	52.30
	1620.62	-----	2.75	1.050E+00	-----	Line Not Found	-----
PB-212	74.81	281	10.70	4.580E+00	1.569E+00	1.569E+00	38.54
	77.11	420	18.00	4.820E+00	1.327E+00	1.327E+00	26.06
	87.30	-----	8.00	5.657E+00	-----	Line Not Found	-----
	238.63	998	44.60*	5.017E+00	1.221E+00	1.221E+00	10.59
	300.09	-----	3.41	4.248E+00	-----	Line Not Found	-----
PO-212	74.81	281	10.70	4.580E+00	1.569E+00	1.569E+00	38.54
	77.11	420	18.00	4.820E+00	1.327E+00	1.327E+00	26.06
	87.30	-----	8.00	5.657E+00	-----	Line Not Found	-----
	115.19	-----	0.60	6.604E+00	-----	Line Not Found	-----
	238.63	998	44.60*	5.017E+00	1.221E+00	1.221E+00	10.59
	300.09	-----	3.41	4.248E+00	-----	Line Not Found	-----
BI-214	609.31	369	46.30*	2.415E+00	9.046E-01	9.046E-01	22.55
	1120.29	108	15.10	1.423E+00	1.373E+00	1.373E+00	34.46
	1764.49	62	15.80	9.904E-01	1.091E+00	1.091E+00	34.33
PB-214	74.81	281	6.21	4.580E+00	2.703E+00	2.703E+00	38.12
	77.11	420	10.50	4.820E+00	2.274E+00	2.274E+00	27.15
	87.30	-----	4.67	5.657E+00	-----	Line Not Found	-----
	241.98	238	7.49	4.974E+00	1.746E+00	1.746E+00	31.30
	295.21	355	19.20	4.302E+00	1.177E+00	1.177E+00	18.82

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	548	37.20*	3.763E+00	1.072E+00	1.072E+00	16.25
	74.81	281	6.21	4.580E+00	2.703E+00	2.703E+00	38.12
	77.11	420	10.50	4.820E+00	2.274E+00	2.274E+00	27.15
	87.30	-----	4.67	5.657E+00	-----	Line Not Found	-----
	241.98	238	7.49	4.974E+00	1.746E+00	1.746E+00	31.30
PO-216	295.21	355	19.20	4.302E+00	1.177E+00	1.177E+00	18.82
	351.92	548	37.20*	3.763E+00	1.072E+00	1.072E+00	16.25
	74.81	281	10.70	4.580E+00	1.569E+00	1.569E+00	38.54
	77.11	420	18.00	4.820E+00	1.327E+00	1.327E+00	26.06
	87.30	-----	8.00	5.657E+00	-----	Line Not Found	-----
PO-218	238.63	998	44.60*	5.017E+00	1.221E+00	1.221E+00	10.59
	300.09	-----	3.41	4.248E+00	-----	Line Not Found	-----
	74.81	281	6.21	4.580E+00	2.703E+00	2.703E+00	38.12
	77.11	420	10.50	4.820E+00	2.274E+00	2.274E+00	27.15
	87.30	-----	4.67	5.657E+00	-----	Line Not Found	-----
RA-224	241.98	238	7.49	4.974E+00	1.746E+00	1.746E+00	31.30
	295.21	355	19.20	4.302E+00	1.177E+00	1.177E+00	18.82
	351.92	548	37.20*	3.763E+00	1.072E+00	1.072E+00	16.25
	240.98	238	3.95*	4.974E+00	3.310E+00	3.310E+00	30.79
	609.31	369	46.30*	2.415E+00	9.046E-01	9.046E-01	22.55
RA-226	1120.29	108	15.10	1.423E+00	1.373E+00	1.373E+00	34.46
	1764.49	62	15.80	9.904E-01	1.091E+00	1.091E+00	34.33
	338.32	227	11.40	3.880E+00	1.407E+00	1.407E+00	50.07
	911.07	263	27.70*	1.707E+00	1.521E+00	1.521E+00	20.72
	969.11	118	16.60	1.617E+00	1.206E+00	1.206E+00	36.38
RA-228	338.32	227	11.40	3.880E+00	1.407E+00	1.407E+00	50.07
	911.07	263	27.70*	1.707E+00	1.521E+00	1.521E+00	20.72
	969.11	118	16.60	1.617E+00	1.206E+00	1.206E+00	36.38
	74.81	281	10.70	4.580E+00	1.569E+00	1.591E+00	37.41
	77.11	420	18.00	4.820E+00	1.327E+00	1.345E+00	26.06
TH-228	87.30	-----	8.00	5.657E+00	-----	Line Not Found	-----
	238.63	998	44.60*	5.017E+00	1.221E+00	1.238E+00	10.59
	300.09	-----	3.41	4.248E+00	-----	Line Not Found	-----
	609.31	369	46.30*	2.415E+00	9.046E-01	9.046E-01	22.55
	1120.29	108	15.10	1.423E+00	1.373E+00	1.373E+00	34.46
TH-230	1764.49	62	15.80	9.904E-01	1.091E+00	1.091E+00	34.33
	84.21	202	7.00	5.396E+00	1.465E+00	1.459E+01	64.18
	92.29	7818	17.30	5.962E+00	2.076E+01	2.067E+02	7.77
	95.87	268	28.00*	6.069E+00	4.326E-01	4.308E+00	63.66
	108.00	-----	13.10	6.500E+00	-----	Line Not Found	-----
TH-232	338.32	227	11.40	3.880E+00	1.407E+00	1.407E+00	29.64
	911.07	263	27.70*	1.707E+00	1.521E+00	1.521E+00	20.72
	969.11	118	16.60	1.617E+00	1.206E+00	1.206E+00	36.38
	766.42	261	0.32	1.985E+00	1.125E+02	1.125E+02	54.10
	1001.03	408	0.84*	1.571E+00	8.474E+01	8.474E+01	15.97
PA-234M	63.29	3081	3.80*	3.189E+00	6.962E+01	6.962E+01	18.18
	92.38	7818	5.41	5.962E+00	6.638E+01	6.638E+01	17.70
	609.31	369	46.30*	2.415E+00	9.046E-01	9.046E-01	22.55
	1120.29	108	15.10	1.423E+00	1.373E+00	1.373E+00	34.46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	62	15.80	9.904E-01	1.091E+00	1.091E+00	34.33
U-235	89.95	-----	2.70	5.822E+00	-----	Line Not Found	-----
	93.35	7818	4.50	5.962E+00	7.980E+01	7.980E+01	27.78
	105.00	-----	2.10	6.433E+00	-----	Line Not Found	-----
	143.76	249	10.50*	6.517E+00	9.946E-01	9.946E-01	37.94
	163.35	138	4.70	6.242E+00	1.285E+00	1.285E+00	64.43
	185.71	1226	54.00	5.863E+00	1.060E+00	1.060E+00	11.24
	205.31	143	4.70	5.540E+00	1.503E+00	1.503E+00	59.38
U-238	63.29	3081	3.80*	3.189E+00	6.962E+01	6.962E+01	18.18
	92.38	7818	5.41	5.962E+00	6.638E+01	6.638E+01	7.77
AM-243	74.67	281	66.00*	4.580E+00	2.544E-01	2.544E-01	37.39
	86.72	-----	0.34	5.618E+00	-----	Line Not Found	-----
	117.66	-----	0.55	6.624E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.534E+00	-----	Line Not Found	-----
ANH-511	511.00	150	100.00*	2.793E+00	1.466E-01	1.466E-01	53.78

Flag: "*" = Keyline

Total number of lines in spectrum 39
Number of unidentified lines 2
Number of lines tentatively identified by NID 37 94.87%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.950E+01	2.950E+01	0.271E+01	9.20	
NB-95	64.02D	1.16	3.607E-01	4.194E-01	0.866E-01	20.65	
LU-177	6.71D	4.22	5.637E-01	2.376E+00	1.385E+00	58.31	
TL-208	1.41E+10Y	1.00	3.835E-01	3.835E-01	0.744E-01	19.41	
BI-211	7.04E+08Y	1.00	3.082E+00	3.082E+00	0.474E+00	15.39	
BI-212	1.41E+10Y	1.00	7.541E-01	7.541E-01	4.948E-01	65.62	
PB-212	1.41E+10Y	1.00	1.221E+00	1.221E+00	0.129E+00	10.59	
PO-212	1.41E+10Y	1.00	1.221E+00	1.221E+00	0.129E+00	10.59	
BI-214	1600.00Y	1.00	9.046E-01	9.046E-01	2.040E-01	22.55	
PB-214	1600.00Y	1.00	1.072E+00	1.072E+00	0.174E+00	16.25	
PO-214	1600.00Y	1.00	1.072E+00	1.072E+00	0.174E+00	16.25	
PO-216	1.41E+10Y	1.00	1.221E+00	1.221E+00	0.129E+00	10.59	
PO-218	1600.00Y	1.00	1.072E+00	1.072E+00	0.174E+00	16.25	
RA-224	1.41E+10Y	1.00	3.310E+00	3.310E+00	1.019E+00	30.79	
RA-226	1600.00Y	1.00	9.046E-01	9.046E-01	2.040E-01	22.55	
AC-228	1.41E+10Y	1.00	1.521E+00	1.521E+00	0.315E+00	20.72	
RA-228	1.41E+10Y	1.00	1.521E+00	1.521E+00	0.315E+00	20.72	
TH-228	1.91Y	1.01	1.221E+00	1.238E+00	0.131E+00	10.59	
TH-230	4.47E+09Y	1.00	9.046E-01	9.046E-01	2.040E-01	22.55	
U-231	4.20D	9.96	4.326E-01	4.308E+00	2.742E+00	63.66	
TH-232	1.41E+10Y	1.00	1.521E+00	1.521E+00	0.315E+00	20.72	
PA-234M	4.47E+09Y	1.00	8.474E+01	8.474E+01	1.353E+01	15.97	
TH-234	4.47E+09Y	1.00	6.962E+01	6.962E+01	1.265E+01	18.18	
U-234	4.47E+09Y	1.00	9.046E-01	9.046E-01	2.040E-01	22.55	
U-235	7.04E+08Y	1.00	9.946E-01	9.946E-01	3.774E-01	37.94	
U-238	4.47E+09Y	1.00	6.962E+01	6.962E+01	1.265E+01	18.18	
AM-243	7380.00Y	1.00	2.544E-01	2.544E-01	0.951E-01	37.39	
ANH-511	1.00E+09Y	1.00	1.466E-01	1.466E-01	0.789E-01	53.78	

Total Activity : 2.800E+02 2.858E+02

Grand Total Activity : 2.800E+02 2.858E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395009

Page : 5
Acquisition date : 2-FEB-2010 09:14:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	98.30	468	808	0.87	196.11	193	8	6.50E-02	23.1	6.22E+00	T
1	110.84	109	637	1.04	221.20	218	21	1.51E-02	73.3	6.55E+00	T
0	258.11	141	253	1.38	515.88	511	10	1.96E-02	45.4	4.75E+00	
0	269.76	95	170	1.30	539.20	536	8	1.32E-02	52.8	4.60E+00	T
0	462.37	63	102	1.61	924.57	921	9	8.73E-03	63.1	3.03E+00	T
0	743.04	47	106	0.60	1486.05	1479	12	6.48E-03	93.6	2.04E+00	T
0	794.93	46	71	0.82	1589.87	1583	11	6.37E-03	77.2	1.92E+00	T
2	964.26	40	67	2.20	1928.57	1924	18	5.58E-03	72.7	1.62E+00	T
0	1846.80	17	5	1.45	3693.42	3689	9	2.29E-03	67.6	9.62E-01	

Flags: "T" = Tentatively associated

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
*                               DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395009.CNF;1
* Acquisition date   : 2-FEB-2010 09:14:48. Detector SN#      :
* Detector ID        : GAM12                                         Sensitivity      : 5.00000
* Geometry           : CAN                                           Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00                               Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:02.29                               Half life ratio  : 8.00000
*****
*                               SAMPLE DATA                             *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395009       Analyst initials: MXR1
* Batch Number       : 944966           Sample Quantity : 1.37080E+02 GRAM
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME   : 10-FEB-2009 09:20:24.5MS Isotope      :
* MSD ID             :                               MSD Isotope :
* LCS ID             : 1032-A                               LCS Isotope      :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.950E+01	2.715E+00	4.226E-01	3.013E-02	69.813
NB-95	4.194E-01	8.660E-02	7.535E-02	5.512E-03	5.565
LU-177	2.376E+00	1.385E+00	1.461E+00	7.816E-02	1.626
TL-208	3.835E-01	7.442E-02	5.755E-02	4.117E-03	6.664
BI-211	3.082E+00	4.744E-01	3.372E-01	2.120E-02	9.140
BI-212	7.541E-01	4.948E-01	4.509E-01	3.904E-02	1.672
PB-212	1.221E+00	1.293E-01	9.167E-02	6.509E-03	13.323
PO-212	1.221E+00	1.293E-01	9.167E-02	6.509E-03	13.323
BI-214	9.046E-01	2.040E-01	1.063E-01	8.753E-03	8.509
PB-214	1.072E+00	1.742E-01	1.088E-01	8.890E-03	9.850
PO-214	1.072E+00	1.742E-01	1.088E-01	8.890E-03	9.850
PO-216	1.221E+00	1.293E-01	9.167E-02	6.509E-03	13.323
PO-218	1.072E+00	1.742E-01	1.088E-01	8.890E-03	9.850
RA-224	3.310E+00	1.019E+00	1.043E+00	5.756E-02	3.173
RA-226	9.046E-01	2.040E-01	1.063E-01	8.753E-03	8.509
AC-228	1.521E+00	3.151E-01	2.046E-01	2.246E-02	7.432
RA-228	1.521E+00	3.151E-01	2.046E-01	2.246E-02	7.432
TH-228	1.238E+00	1.311E-01	9.295E-02	6.600E-03	13.323

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	9.046E-01	2.040E-01	1.063E-01	8.752E-03	8.509
U-231	4.308E+00	2.742E+00	1.833E+00	1.291E-01	2.351
TH-232	1.521E+00	3.151E-01	2.046E-01	2.246E-02	7.432
PA-234M	8.474E+01	1.353E+01	5.419E+00	4.904E-01	15.638
TH-234	6.962E+01	1.265E+01	3.307E+00	5.630E-01	21.052
U-234	9.046E-01	2.040E-01	1.063E-01	8.752E-03	8.509
U-235	9.946E-01	3.774E-01	3.891E-01	6.320E-02	2.556
U-238	6.962E+01	1.265E+01	3.307E+00	5.630E-01	21.052
AM-243	2.544E-01	9.512E-02	1.429E-01	9.707E-03	1.780
ANH-511	1.466E-01	7.887E-02	4.678E-02	2.851E-03	3.135

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.102E-01		3.234E-01	4.749E-01	3.268E-02	-0.653
NA-22	2.909E-02		4.072E-02	7.180E-02	4.624E-03	0.405
NA-24	-1.103E-02		8.821E-02	Half-Life too short		
AL-26	-5.705E-03		2.702E-02	4.273E-02	2.452E-03	-0.134
TI-44	2.448E-01	+	6.378E-02	9.896E-02	6.921E-03	2.474
SC-46	4.523E-03		3.938E-02	6.449E-02	5.345E-03	0.070
V-48	-7.610E-02		6.926E-02	9.785E-02	7.539E-03	-0.778
CR-51	8.172E-02		3.635E-01	6.095E-01	3.875E-02	0.134
MN-52	2.480E-01		2.021E-01	3.792E-01	2.605E-02	0.654
MN-54	-9.989E-03		3.986E-02	6.360E-02	5.000E-03	-0.157
CO-56	-8.104E-03		4.322E-02	6.922E-02	5.507E-03	-0.117
CO-57	-2.043E-02		3.176E-02	4.829E-02	3.019E-03	-0.423
CO-58	-1.576E-02		4.037E-02	6.122E-02	4.711E-03	-0.257
FE-59	7.256E-02		8.960E-02	1.592E-01	1.176E-02	0.456
CO-60	1.230E-02		3.841E-02	6.522E-02	4.555E-03	0.189
ZN-65	2.038E-02		9.961E-02	1.463E-01	9.205E-03	0.139
GE-68	1.388E-01		1.123E+00	1.895E+00	1.278E-01	0.073
AS-73	-2.941E-01		1.299E+00	2.200E+00	1.421E-01	-0.134
AS-74	6.368E-03		8.914E-02	1.499E-01	9.541E-03	0.042
SE-75	-1.746E-02		4.419E-02	6.724E-02	3.812E-03	-0.260
BR-77	1.984E+00		7.541E+00	1.189E+01	7.291E-01	0.167
SR-82	-2.007E-01		4.034E-01	6.152E-01	4.552E-02	-0.326
RB-83	1.058E-02		7.453E-02	1.114E-01	6.830E-03	0.095
RB-84	3.437E-02		7.735E-02	1.287E-01	1.059E-02	0.267
KR-85	9.254E+00		7.406E+00	1.279E+01	7.811E-01	0.723
SR-85	4.684E-02		3.748E-02	6.474E-02	3.954E-03	0.723
RB-86	-2.804E-01		7.047E-01	1.130E+00	7.626E-02	-0.248
Y-88	1.452E-02		3.187E-02	5.707E-02	3.213E-03	0.254
ZR-88	5.555E-03		3.007E-02	4.969E-02	2.726E-03	0.112
Y-91	-4.813E-01		1.808E+01	2.979E+01	1.722E+00	-0.016
NB-94	1.413E-02		3.598E-02	6.103E-02	4.157E-03	0.232
NB-95M	4.749E-02		1.350E-01	2.057E-01	1.500E-02	0.231
ZR-95	-2.230E-02		7.851E-02	1.262E-01	1.042E-02	-0.177

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-1.994E-03		1.528E-02	Half-Life too short		
ZR-97	7.845E-01		3.194E-01	Half-Life too short		
MO-99	8.686E+00		1.083E+01	1.661E+01	2.389E+00	0.523
TC-99M	-4.437E+08		8.370E+08	Half-Life too short		
RH-101	2.621E-02		3.550E-02	5.750E-02	3.042E-03	0.456
RH-102	-6.746E-04		2.901E-02	4.664E-02	2.770E-03	-0.014
RU-103	3.945E-03		4.187E-02	6.764E-02	8.627E-03	0.058
RH-106	-1.553E-01		3.210E-01	5.158E-01	6.219E-02	-0.301
RU-106	-1.553E-01		3.206E-01	5.158E-01	3.312E-02	-0.301
AG-108M	2.276E-02		3.152E-02	5.361E-02	3.341E-03	0.425
CD-109	-5.842E-01		1.564E+00	2.314E+00	1.771E-01	-0.252
AG-110M	-5.566E-03		3.668E-02	6.027E-02	4.108E-03	-0.092
IN-111	-2.795E-01		8.314E-01	1.211E+00	6.703E-02	-0.231
IN-113M	-2.055E-02		4.465E-02	7.087E-02	4.172E-03	-0.290
SN-113	-2.055E-02		4.465E-02	7.087E-02	4.172E-03	-0.290
IN-114M	-1.655E-01		2.104E-01	2.842E-01	1.491E-02	-0.583
CD-115	-5.525E+00		7.551E+00	1.133E+01	6.982E-01	-0.487
SN-117M	5.215E-02		6.121E-02	9.185E-02	4.852E-03	0.568
SB-122	-8.805E-01		1.537E+00	2.485E+00	1.561E-01	-0.354
I-123	1.236E+00		7.173E-01	Half-Life too short		
TE-123M	2.886E-02		3.350E-02	5.029E-02	2.694E-03	0.574
I-124	-4.347E-01		6.643E-01	9.066E-01	5.786E-02	-0.480
SB-124	-1.963E-02		5.910E-02	9.133E-02	6.095E-03	-0.215
SB-125	4.169E-02		8.990E-02	1.505E-01	8.944E-03	0.277
TE-125M	2.193E+01		1.369E+01	2.120E+01	1.827E+00	1.035
I-126	4.217E-02		1.779E-01	3.000E-01	1.956E-02	0.141
SB-126	7.258E-02		1.535E-01	2.307E-01	1.605E-02	0.315
SN-126	-1.783E-01		1.565E-01	2.264E-01	1.725E-02	-0.787
SB-127	9.267E-01		1.149E+00	2.005E+00	1.923E-01	0.462
XE-127	4.687E-02		5.327E-02	7.899E-02	4.200E-03	0.593
I-131	-6.126E-02		9.751E-02	1.536E-01	9.649E-03	-0.399
TE-132	1.378E-01		5.439E-01	9.297E-01	1.300E-01	0.148
BA-133	-1.204E-02		4.595E-02	6.480E-02	7.434E-03	-0.186
I-133	-1.039E-03		1.221E-03	Half-Life too short		
CS-134	8.607E-02	+	6.679E-02	9.126E-02	6.958E-03	0.943
CS-135	1.713E-01		1.703E-01	2.624E-01	1.974E-02	0.653
I-135	7.377E+07		1.201E+08	Half-Life too short		
CS-136	3.631E-02		9.407E-02	1.628E-01	1.223E-02	0.223
BA-137M	1.335E-02		4.010E-02	6.750E-02	4.376E-03	0.198
CS-137	1.411E-02		4.239E-02	7.135E-02	4.641E-03	0.198
CE-139	1.684E-02		3.741E-02	5.481E-02	2.809E-03	0.307
BA-140	-7.337E-02		2.615E-01	4.316E-01	1.407E-01	-0.170
LA-140	-3.623E-02		6.801E-02	1.038E-01	6.758E-03	-0.349
CE-141	1.449E-01		7.756E-02	1.212E-01	7.055E-03	1.195
CE-143	3.095E-04		5.422E-05	Half-Life too short		
CE-144	-1.566E-01		2.439E-01	3.871E-01	5.510E-02	-0.405
PM-144	1.378E-02		3.763E-02	6.373E-02	4.311E-03	0.216
PR-144	9.329E-01		2.548E+00	4.316E+00	2.918E-01	0.216

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	6.253E-03		4.473E-02	7.298E-02	6.309E-03	0.086
ND-147	1.539E-01		5.729E-01	9.316E-01	1.275E-01	0.165
PM-149	4.006E+00		6.296E+01	1.055E+02	1.489E+01	0.038
EU-152	-6.419E-02		1.066E-01	1.561E-01	1.001E-02	-0.411
GD-153	6.842E-01	+	1.652E-01	2.185E-01	1.520E-02	3.131
EU-154	8.240E-02		1.141E-01	2.010E-01	1.959E-02	0.410
EU-155	3.490E-02		1.409E-01	2.342E-01	1.578E-02	0.149
TB-160	-3.837E-02		1.540E-01	2.442E-01	2.005E-02	-0.157
HO-166M	-7.253E-03		6.634E-02	1.086E-01	7.478E-03	-0.067
TM-171	-2.338E+01		4.507E+01	6.728E+01	4.354E+00	-0.347
LU-176	9.654E-03		2.337E-02	3.969E-02	2.256E-03	0.243
LU-177M	-7.415E-02		1.783E-01	2.824E-01	1.585E-02	-0.263
HF-181	1.065E-02		4.197E-02	6.876E-02	4.106E-03	0.155
W-181	2.430E-01		5.841E-01	8.969E-01	5.762E-02	0.271
TA-182	-1.699E-01		1.946E-01	2.961E-01	1.756E-02	-0.574
RE-183	2.963E-01	+	1.841E-01	2.215E-01	1.151E-02	1.338
RE-184	5.104E-02		2.583E-01	3.882E-01	2.161E-02	0.131
OS-185	1.149E-02		4.403E-02	7.457E-02	4.819E-03	0.154
RE-188	-4.596E-02		1.863E-01	2.981E-01	1.598E-02	-0.154
W-188	2.627E+00		7.874E+00	1.183E+01	6.702E-01	0.222
IR-192	-2.351E-02		3.319E-02	5.288E-02	3.022E-03	-0.444
AU-195	1.990E+00	+	4.806E-01	6.364E-01	4.376E-02	3.127
TL-200	-1.175E-04		1.034E-04	Half-Life too short		
TL-201	3.609E+00		6.430E+00	9.477E+00	4.858E-01	0.381
TL-202	4.395E-02		6.752E-02	1.139E-01	6.560E-03	0.386
HG-203	1.022E-02		3.929E-02	6.650E-02	3.999E-03	0.154
BI-207	-2.388E-02		5.460E-02	8.725E-02	6.019E-03	-0.274
TL-207	-7.183E-01		6.840E-01	1.054E+00	1.736E-01	-0.682
PO-209	6.674E-01		7.455E+00	1.217E+01	1.016E+00	0.055
BI-210	2.983E-01		4.859E+00	8.293E+00	6.247E-01	0.036
PB-210	2.983E-01		4.859E+00	8.293E+00	6.247E-01	0.036
PO-210	2.983E-01		4.859E+00	8.293E+00	5.319E-01	0.036
PB-211	-9.196E-01		1.153E+00	1.541E+00	9.603E-01	-0.597
PO-215	-7.183E-01		6.840E-01	1.054E+00	1.736E-01	-0.682
RN-219	6.516E-02		4.371E-01	7.191E-01	9.706E-02	0.091
RN-220	-8.692E+00		2.572E+01	4.230E+01	2.638E+00	-0.205
RA-223	-7.183E-01		6.840E-01	1.054E+00	1.736E-01	-0.682
AC-227	1.414E-01		4.477E-01	6.758E-01	9.373E-02	0.209
TH-227	1.414E-01		4.479E-01	6.758E-01	1.137E-01	0.209
TH-229	2.147E-01		5.436E-01	8.805E-01	4.636E-02	0.244
PA-231	3.974E-01		1.503E+00	2.542E+00	3.487E-01	0.156
TH-231	-7.183E-01		6.840E-01	1.054E+00	1.736E-01	-0.682
PA-233	1.796E-02		6.234E-02	1.051E-01	6.358E-03	0.171
PA-234	5.087E-01		3.652E-01	6.343E-01	1.173E-01	0.802
NP-236	1.281E-02		9.647E-02	1.395E-01	7.316E-03	0.092
NP-237	1.783E-01		4.427E-01	6.658E-01	1.463E-01	0.268
NP-239	-4.286E-01		2.431E-01	3.740E-01	2.360E-02	-1.146
AM-241	1.400E-01		2.862E-01	4.419E-01	3.140E-02	0.317

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.869E-02		1.267E-01	2.105E-01	1.402E-02	0.136
AM-246	5.911E-03		1.263E-01	2.117E-01	1.423E-02	0.028
CM-247	5.381E-03		3.905E-02	6.420E-02	3.560E-03	0.084
CF-249	-8.022E-03		4.172E-02	6.746E-02	3.708E-03	-0.119
CF-251	-7.658E-02		1.420E-01	2.224E-01	1.150E-02	-0.344

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*                                     *                                       *
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395009          *
* Acquisition date   : 2-FEB-2010 09:14:48 Detector SN# :                   *
* Detector ID        : GAM12 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 02:00:02.29 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395009 Analyst initials: MXR1                 *
* Batch Number       : 944966 Sample Quantity : 1.3708E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                                *
*                                     *                                       *
* CALIB. DATE/TIME   : 10-FEB-2009 09:20:24 MS Isotope :                   *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.950E+01	2.661E+00	2.120E-01	1.357E+00
NB-95	4.194E-01	8.487E-02	3.829E-02	4.330E-02
LU-177	2.376E+00	1.358E+00	7.611E-01	6.927E-01
TL-208	3.835E-01	7.293E-02	2.940E-02	3.721E-02
BI-211	3.082E+00	4.649E-01	1.739E-01	2.372E-01
BI-212	7.541E-01	4.849E-01	2.294E-01	2.474E-01
PB-212	1.221E+00	1.267E-01	4.763E-02	6.467E-02
PO-212	1.221E+00	1.267E-01	4.763E-02	6.467E-02
BI-214	9.046E-01	1.999E-01	5.427E-02	1.020E-01
PB-214	1.072E+00	1.708E-01	5.614E-02	8.712E-02
PO-214	1.072E+00	1.708E-01	5.614E-02	8.712E-02
PO-216	1.221E+00	1.267E-01	4.763E-02	6.467E-02
PO-218	1.072E+00	1.708E-01	5.614E-02	8.712E-02
RA-224	3.310E+00	9.989E-01	5.420E-01	5.097E-01
RA-226	9.046E-01	1.999E-01	5.427E-02	1.020E-01
AC-228	1.521E+00	3.088E-01	1.036E-01	1.576E-01
RA-228	1.521E+00	3.088E-01	1.036E-01	1.576E-01
TH-228	1.238E+00	1.285E-01	4.829E-02	6.557E-02
TH-230	9.046E-01	1.999E-01	5.426E-02	1.020E-01
U-231	4.308E+00	2.687E+00	9.682E-01	1.371E+00
TH-232	1.521E+00	3.088E-01	1.036E-01	1.576E-01
PA-234M	8.474E+01	1.326E+01	2.739E+00	6.765E+00
TH-234	6.962E+01	1.240E+01	1.760E+00	6.327E+00
U-234	9.046E-01	1.999E-01	5.426E-02	1.020E-01
U-235	9.946E-01	3.698E-01	2.041E-01	1.887E-01
U-238	6.962E+01	1.240E+01	1.760E+00	6.327E+00
AM-243	2.544E-01	9.322E-02	7.582E-02	4.756E-02
ANH-511	1.466E-01	7.729E-02	2.396E-02	3.943E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-3.102E-01	3.170E-01	2.435E-01	1.617E-01	NOT IDENT.
NA-22	2.909E-02	3.991E-02	3.612E-02	2.036E-02	NOT IDENT.
NA-24	-1.103E+04	1.729E+05	0.000E+00	8.821E+04	SHORT HLIF
AL-26	-5.705E-03	2.648E-02	2.135E-02	1.351E-02	NOT IDENT.
TI-44	2.448E-01	6.250E-02	5.247E-02	3.189E-02	FAIL ABUN
SC-46	4.523E-03	3.860E-02	3.268E-02	1.969E-02	FAIL ABUN
V-48	-7.610E-02	6.787E-02	4.948E-02	3.463E-02	NOT IDENT.
CR-51	8.172E-02	3.562E-01	3.149E-01	1.817E-01	NOT IDENT.
MN-52	2.480E-01	1.981E-01	1.903E-01	1.011E-01	FAIL ABUN
MN-54	-9.989E-03	3.906E-02	3.227E-02	1.993E-02	NOT IDENT.
CO-56	-8.104E-03	4.236E-02	3.511E-02	2.161E-02	NOT IDENT.
CO-57	-2.043E-02	3.112E-02	2.540E-02	1.588E-02	NOT IDENT.
CO-58	-1.576E-02	3.956E-02	3.107E-02	2.019E-02	NOT IDENT.
FE-59	7.256E-02	8.781E-02	8.035E-02	4.480E-02	FAIL ABUN
CO-60	1.230E-02	3.764E-02	3.278E-02	1.920E-02	NOT IDENT.
ZN-65	2.038E-02	9.762E-02	7.382E-02	4.980E-02	NOT IDENT.
GE-68	1.388E-01	1.100E+00	9.565E-01	5.613E-01	NOT IDENT.
AS-73	-2.941E-01	1.273E+00	1.175E+00	6.497E-01	NOT IDENT.
AS-74	6.368E-03	8.736E-02	7.654E-02	4.457E-02	NOT IDENT.
SE-75	-1.746E-02	4.331E-02	3.487E-02	2.210E-02	NOT IDENT.
BR-77	1.984E+00	7.391E+00	6.087E+00	3.771E+00	FAIL ABUN
SR-82	-2.007E-01	3.954E-01	3.125E-01	2.017E-01	NOT IDENT.
RB-83	1.058E-02	7.303E-02	5.703E-02	3.726E-02	NOT IDENT.
RB-84	3.437E-02	7.581E-02	6.520E-02	3.868E-02	NOT IDENT.
KR-85	9.254E+00	7.257E+00	6.550E+00	3.703E+00	NOT IDENT.
SR-85	4.684E-02	3.673E-02	3.315E-02	1.874E-02	NOT IDENT.
RB-86	-2.804E-01	6.906E-01	5.703E-01	3.524E-01	NOT IDENT.
Y-88	1.452E-02	3.124E-02	2.850E-02	1.594E-02	NOT IDENT.
ZR-88	5.555E-03	2.947E-02	2.558E-02	1.504E-02	NOT IDENT.
Y-91	-4.813E-01	1.771E+01	1.500E+01	9.038E+00	NOT IDENT.
NB-94	1.413E-02	3.526E-02	3.106E-02	1.799E-02	NOT IDENT.
NB-95M	4.749E-02	1.323E-01	1.069E-01	6.750E-02	NOT IDENT.
ZR-95	-2.230E-02	7.694E-02	6.414E-02	3.925E-02	NOT IDENT.
NB-97	-1.994E+03	2.996E+04	0.000E+00	1.528E+04	SHORT HLIF
ZR-97	7.845E+05	6.260E+05	0.000E+00	3.194E+05	SHORT HLIF
MO-99	8.686E+00	1.061E+01	8.447E+00	5.414E+00	NOT IDENT.
TC-99M	-4.437E+14	1.640E+15	0.000E+00	8.370E+14	SHORT HLIF
RH-101	2.621E-02	3.479E-02	2.998E-02	1.775E-02	NOT IDENT.
RH-102	-6.746E-04	2.843E-02	2.392E-02	1.451E-02	FAIL ABUN
RU-103	3.945E-03	4.103E-02	3.466E-02	2.093E-02	FAIL ABUN
RH-106	-1.553E-01	3.146E-01	2.632E-01	1.605E-01	FAIL ABUN
RU-106	-1.553E-01	3.142E-01	2.632E-01	1.603E-01	FAIL ABUN
AG-108M	2.276E-02	3.089E-02	2.754E-02	1.576E-02	NOT IDENT.
CD-109	-5.842E-01	1.533E+00	1.224E+00	7.821E-01	NOT IDENT.
AG-110M	-5.566E-03	3.595E-02	3.072E-02	1.834E-02	NOT IDENT.
IN-111	-2.795E-01	8.148E-01	6.289E-01	4.157E-01	NOT IDENT.
IN-113M	-2.055E-02	4.376E-02	3.648E-02	2.232E-02	NOT IDENT.
SN-113	-2.055E-02	4.376E-02	3.648E-02	2.232E-02	NOT IDENT.
IN-114M	-1.655E-01	2.062E-01	1.483E-01	1.052E-01	NOT IDENT.
CD-115	-5.525E+00	7.400E+00	5.801E+00	3.775E+00	NOT IDENT.
SN-117M	5.215E-02	5.999E-02	4.809E-02	3.060E-02	NOT IDENT.
SB-122	-8.805E-01	1.507E+00	1.271E+00	7.687E-01	NOT IDENT.
I-123	1.236E+06	1.406E+06	0.000E+00	7.173E+05	SHORT HLIF
TE-123M	2.886E-02	3.283E-02	2.633E-02	1.675E-02	NOT IDENT.
I-124	-4.347E-01	6.510E-01	4.629E-01	3.321E-01	NOT IDENT.
SB-124	-1.963E-02	5.791E-02	4.569E-02	2.955E-02	FAIL ABUN
SB-125	4.169E-02	8.810E-02	7.732E-02	4.495E-02	FAIL ABUN
TE-125M	2.193E+01	1.342E+01	1.117E+01	6.847E+00	NOT IDENT.
I-126	4.217E-02	1.744E-01	1.529E-01	8.897E-02	NOT IDENT.
SB-126	7.258E-02	1.504E-01	1.174E-01	7.676E-02	FAIL ABUN
SN-126	-1.783E-01	1.533E-01	1.198E-01	7.823E-02	FAIL ABUN
SB-127	9.267E-01	1.126E+00	1.021E+00	5.744E-01	NOT IDENT.
XE-127	4.687E-02	5.220E-02	4.116E-02	2.663E-02	NOT IDENT.
I-131	-6.126E-02	9.556E-02	7.917E-02	4.875E-02	NOT IDENT.
TE-132	1.378E-01	5.330E-01	4.834E-01	2.720E-01	FAIL ABUN
BA-133	-1.204E-02	4.503E-02	3.342E-02	2.297E-02	NOT IDENT.
I-133	-1.039E+03	2.393E+03	0.000E+00	1.221E+03	SHORT HLIF
CS-134	8.607E-02	6.545E-02	4.634E-02	3.339E-02	FAIL ABUN
CS-135	1.713E-01	1.669E-01	1.361E-01	8.517E-02	NOT IDENT.
I-135	7.377E+13	2.353E+14	0.000E+00	1.201E+14	SHORT HLIF
CS-136	3.631E-02	9.218E-02	8.223E-02	4.703E-02	FAIL ABUN
BA-137M	1.335E-02	3.930E-02	3.440E-02	2.005E-02	NOT IDENT.
CS-137	1.411E-02	4.154E-02	3.636E-02	2.119E-02	NOT IDENT.
CE-139	1.684E-02	3.666E-02	2.867E-02	1.870E-02	NOT IDENT.
BA-140	-7.337E-02	2.562E-01	2.208E-01	1.307E-01	FAIL ABUN
LA-140	-3.623E-02	6.665E-02	5.197E-02	3.401E-02	NOT IDENT.
CE-141	1.449E-01	7.601E-02	6.354E-02	3.878E-02	NOT IDENT.

CE-143	3.095E+02	1.063E+02	0.000E+00	5.422E+01	SHORT HLIF
CE-144	-1.566E-01	2.391E-01	2.033E-01	1.220E-01	NOT IDENT.
PM-144	1.378E-02	3.687E-02	3.244E-02	1.881E-02	NOT IDENT.
PR-144	9.329E-01	2.497E+00	2.197E+00	1.274E+00	NOT IDENT.
PM-146	6.253E-03	4.384E-02	3.746E-02	2.237E-02	NOT IDENT.
ND-147	1.539E-01	5.614E-01	4.767E-01	2.864E-01	FAIL ABUN
PM-149	4.006E+00	6.170E+01	5.462E+01	3.148E+01	NOT IDENT.
EU-152	-6.419E-02	1.045E-01	8.056E-02	5.332E-02	FAIL ABUN
GD-153	6.842E-01	1.619E-01	1.154E-01	8.261E-02	FAIL ABUN
EU-154	8.240E-02	1.118E-01	1.011E-01	5.704E-02	NOT IDENT.
EU-155	3.490E-02	1.381E-01	1.235E-01	7.044E-02	NOT IDENT.
TB-160	-3.837E-02	1.509E-01	1.238E-01	7.698E-02	NOT IDENT.
HO-166M	-7.253E-03	6.501E-02	5.529E-02	3.317E-02	FAIL ABUN
TM-171	-2.338E+01	4.417E+01	3.578E+01	2.254E+01	NOT IDENT.
LU-176	9.654E-03	2.290E-02	2.052E-02	1.168E-02	NOT IDENT.
LU-177M	-7.415E-02	1.747E-01	1.452E-01	8.913E-02	FAIL ABUN
HF-181	1.065E-02	4.113E-02	3.525E-02	2.099E-02	NOT IDENT.
W-181	2.430E-01	5.724E-01	4.771E-01	2.920E-01	NOT IDENT.
TA-182	-1.699E-01	1.907E-01	1.491E-01	9.731E-02	FAIL ABUN
RE-183	2.963E-01	1.805E-01	1.159E-01	9.207E-02	FAIL ABUN
RE-184	5.104E-02	2.532E-01	2.015E-01	1.292E-01	NOT IDENT.
OS-185	1.149E-02	4.315E-02	3.802E-02	2.201E-02	NOT IDENT.
RE-188	-4.596E-02	1.826E-01	1.561E-01	9.315E-02	NOT IDENT.
W-188	2.627E+00	7.717E+00	6.122E+00	3.937E+00	FAIL ABUN
IR-192	-2.351E-02	3.253E-02	2.733E-02	1.660E-02	FAIL ABUN
AU-195	1.990E+00	4.709E-01	3.360E-01	2.403E-01	FAIL ABUN
TL-200	-1.175E+02	2.028E+02	0.000E+00	1.034E+02	SHORT HLIF
TL-201	3.609E+00	6.302E+00	4.956E+00	3.215E+00	NOT IDENT.
TL-202	4.395E-02	6.617E-02	5.850E-02	3.376E-02	NOT IDENT.
HG-203	1.022E-02	3.850E-02	3.445E-02	1.964E-02	FAIL ABUN
BI-207	-2.388E-02	5.351E-02	4.405E-02	2.730E-02	FAIL ABUN
TL-207	-7.183E-01	6.704E-01	5.445E-01	3.420E-01	FAIL ABUN
PO-209	6.674E-01	7.305E+00	6.166E+00	3.727E+00	NOT IDENT.
BI-210	2.983E-01	4.762E+00	4.438E+00	2.430E+00	NOT IDENT.
PB-210	2.983E-01	4.762E+00	4.438E+00	2.430E+00	NOT IDENT.
PO-210	2.983E-01	4.762E+00	4.438E+00	2.430E+00	NOT IDENT.
PB-211	-9.196E-01	1.130E+00	7.928E-01	5.763E-01	NOT IDENT.
PO-215	-7.183E-01	6.704E-01	5.445E-01	3.420E-01	FAIL ABUN
RN-219	6.516E-02	4.284E-01	3.700E-01	2.186E-01	FAIL ABUN
RN-220	-8.692E+00	2.520E+01	2.164E+01	1.286E+01	NOT IDENT.
RA-223	-7.183E-01	6.704E-01	5.445E-01	3.420E-01	FAIL ABUN
AC-227	1.414E-01	4.387E-01	3.507E-01	2.238E-01	NOT IDENT.
TH-227	1.414E-01	4.389E-01	3.507E-01	2.239E-01	FAIL ABUN
TH-229	2.147E-01	5.328E-01	4.592E-01	2.718E-01	NOT IDENT.
PA-231	3.974E-01	1.473E+00	1.316E+00	7.514E-01	NOT IDENT.
TH-231	-7.183E-01	6.704E-01	5.445E-01	3.420E-01	FAIL ABUN
PA-233	1.796E-02	6.110E-02	5.432E-02	3.117E-02	FAIL ABUN
PA-234	5.087E-01	3.579E-01	3.210E-01	1.826E-01	FAIL ABUN
NP-236	1.281E-02	9.454E-02	7.303E-02	4.823E-02	FAIL ABUN
NP-237	1.783E-01	4.338E-01	3.524E-01	2.213E-01	FAIL ABUN
NP-239	-4.286E-01	2.382E-01	1.969E-01	1.215E-01	FAIL ABUN
AM-241	1.400E-01	2.805E-01	2.354E-01	1.431E-01	NOT IDENT.
CM-243	2.869E-02	1.241E-01	1.111E-01	6.333E-02	FAIL ABUN
AM-246	5.911E-03	1.238E-01	1.068E-01	6.316E-02	NOT IDENT.
CM-247	5.381E-03	3.827E-02	3.303E-02	1.952E-02	NOT IDENT.
CF-249	-8.022E-03	4.089E-02	3.473E-02	2.086E-02	NOT IDENT.
CF-251	-7.658E-02	1.391E-01	1.162E-01	7.098E-02	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GAMMA SPECTROSCOPY BACKGROUND REPORT             *
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ENERGY	MDA COUNTS
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46.50	682.4545
46.50	682.4545
46.50	682.4545
48.70	789.9622
49.72	758.4140
51.35	795.1763
52.39	858.2861
52.97	890.1508
53.15	890.6585
53.44	878.4797
54.07	855.0490
56.28	968.4011
56.28	968.4095
57.37	0.0000
57.53	1044.0190
57.53	1044.0251
57.60	1044.2400
57.98	1015.2086
57.98	1015.2086
59.32	1037.2424
59.32	1037.2424
59.40	1077.1843
59.54	1077.6284
59.72	1078.1967
60.01	1109.6035
61.10	1134.3956
61.14	1134.5273
61.30	1135.0480
63.00	1000.1672
63.29	1000.9833
63.29	1000.9833
63.58	1001.8008
64.28	874.9399
65.12	932.1282
65.20	924.2622
65.20	924.2622
66.05	933.1642
66.72	953.7776
66.83	954.0685
66.91	966.4435
67.20	952.3218
67.20	952.3218
67.75	949.6648
67.85	949.9269
68.90	1011.9347
68.90	1011.9347
69.30	1032.9602
69.67	1070.8304
70.82	1035.2698
70.82	1035.2698
70.83	1035.2987
72.80	1063.9163
72.87	1064.1113
72.87	1064.1113
74.67	1150.3578
74.81	1150.7650
74.81	1150.7650
74.81	1150.7650
74.81	1150.7650
74.81	1150.7650
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74.81	1150.7650
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77.11	1157.3634

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77.11	1157.3634
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80.11	1207.7622
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81.07	1176.9049
81.07	1176.9049
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83.78	1261.5038
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87.57	1530.3972
87.88	1537.1576
88.03	1470.7593
88.36	1383.0327
88.47	1406.6512
89.95	1489.9252
91.11	1420.6310
92.29	1392.6714
92.38	1392.9449
92.38	1392.9449
93.35	1395.8651
94.00	1397.8168
94.67	1399.8055
94.67	1399.8203
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94.90	1400.5078
94.90	1400.5078
94.90	1400.5078
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97.43	616.0927
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98.44	582.4432
98.88	582.9742
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103.76	576.0308
105.00	549.9102
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108.00	660.5231
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111.00	574.2765
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112.95	576.4013
115.19	578.8195
116.30	580.0110
117.00	580.7565
117.00	580.7565
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121.78	466.0015
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122.32	473.1568
122.32	473.1568
122.32	473.1568
122.32	473.1568
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127.23	469.4577
129.76	468.4134
131.20	467.4973
133.02	462.7194
133.54	479.6965
135.34	461.3889
136.00	448.3665
136.25	431.9033
136.48	435.1870
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143.76	437.1676
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144.24	422.2109
144.24	422.2109
144.24	422.2109
145.22	367.4313
145.44	370.7273
147.16	381.2585
152.43	364.0712
152.70	349.2670
153.22	353.8155
154.21	393.9536
154.21	393.9536
154.21	393.9536
154.21	393.9536
155.03	392.2966
156.02	420.7867
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161.27	366.7189
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162.64	365.2787
163.35	365.6524
163.89	392.5407
165.85	370.7766
167.43	337.2332
171.28	368.6860
171.86	358.0017
172.10	358.1211
176.55	375.7902
176.60	375.8162
181.06	360.2911
184.41	371.9489
185.71	349.0862
186.00	349.2195
190.27	330.9025
192.34	290.0269
193.63	309.7189
197.04	315.5977
198.01	294.3838
198.60	293.4624
200.40	312.9312
201.83	322.0493
202.84	276.1414
205.31	268.3726

208.36	269.3652
208.81	269.5104
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209.75	255.9784
210.97	258.0831
215.65	289.1246
216.55	282.4544
218.09	257.3432
222.10	303.5789
223.80	289.2229
226.40	245.1122
227.00	249.6891
227.08	249.7129
227.20	255.9227
228.16	282.7026
228.18	276.5257
228.18	276.5257
231.56	0.0000
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236.00	289.4485
236.00	289.4485
238.63	259.1795
238.63	259.1795
238.63	259.1795
238.63	259.1795
239.00	259.2813
240.98	259.8389
241.98	260.1176
241.98	260.1176
241.98	260.1176
244.69	240.3622
245.39	226.1379
247.94	221.1527
248.90	215.9556
249.79	236.9598
252.40	206.7711
252.85	219.2081
252.85	219.2081
254.15	0.0000
256.20	238.9051
256.20	238.9051
260.50	175.5791
260.90	175.6494
262.80	203.8542
264.65	200.8059
268.24	179.8994
268.79	185.8992
269.46	197.8332
269.46	197.8332
269.46	197.8332
269.46	197.8332
271.23	183.3904
273.65	260.9149
276.40	183.0162
277.35	179.4680
277.60	170.2082
277.60	170.2082
278.00	183.3017
278.60	194.5789
279.20	205.8723
279.53	229.2324
280.46	226.6408
281.68	222.2353
283.67	189.9129
284.30	196.5802
285.00	183.5975
285.90	204.3783
286.10	195.0413
286.10	195.0413
287.40	196.2181
288.45	0.0000
290.67	182.3183
290.80	170.2863
291.72	200.5975
293.26	0.0000
293.70	182.8323
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295.21	193.8704

295.21	193.8704
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296.50	239.3569
297.23	241.0348
298.57	183.6535
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299.80	164.1067
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300.09	150.4723
300.09	150.4723
300.09	150.4723
300.12	150.4747
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302.84	208.5573
303.76	223.9808
303.91	203.9916
304.40	197.4074
304.40	197.4074
304.84	196.5323
306.84	154.8314
308.46	163.6706
311.98	162.2618
316.51	177.3684
318.01	175.6710
319.02	156.5049
319.41	161.3888
320.08	172.1197
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323.87	206.6363
323.87	206.6363
323.87	206.6363
325.23	203.9662
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334.20	183.2067
334.20	183.2067
334.30	183.2210
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338.28	153.1912
338.28	153.1912
338.28	153.1912
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338.32	153.1983
338.32	153.1983
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340.57	162.1395
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351.07	166.7106
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351.92	142.9937
351.92	142.9937
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356.01	138.6796
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366.43	119.5338
367.43	149.7844
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374.96	152.6797
383.85	141.4964
387.95	155.2076
388.63	153.2433
391.69	147.4475
391.69	147.4475
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398.62	156.4323
400.65	123.6823
401.10	143.3119
401.81	149.5755
402.60	148.6274
404.84	172.6469
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411.60	153.7474
413.65	142.5272
414.70	133.2617
415.30	132.2768

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432.53	103.3026
433.93	98.1243
439.47	116.4990
439.56	116.5057
439.89	118.6514
443.98	134.9123
444.90	140.3104
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445.03	128.6290
445.03	128.6290
445.03	128.6290
453.90	116.5560
463.38	110.1781
468.07	107.9208
473.00	114.7568
475.06	105.1509
475.35	109.5071
476.78	133.4821
477.59	114.0058
477.96	108.6029
482.03	101.2590
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511.85	105.3428
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513.99	105.4769
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574.00	94.6665
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592.07	98.3761
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602.71	125.9923
603.60	116.7145
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604.70	108.9962
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609.31	87.0944
609.31	87.0944
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621.84	97.0830
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661.65	100.9471
664.57	0.0000
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666.33	94.4303
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696.49	98.7216
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722.78	98.9282
722.89	98.9331
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733.00	76.1931
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742.81	91.4966
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756.87	99.4254
763.93	109.1321
765.79	101.8261
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778.89	79.4177
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884.67	71.9329
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896.60	58.4442
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911.07	57.6940
911.07	57.6940
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969.11	49.1001
969.11	49.1001
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1050.47	56.0913
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1063.62	62.9052
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1120.51	59.2779
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1175.09	75.8323
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1274.54	37.0226
1291.56	47.2505
1298.22	0.0000
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1325.50	31.4566
1332.49	33.5492
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1362.66	0.0000
1365.15	26.6633
1368.21	29.7647
1368.53	0.0000
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1384.27	38.1352
1394.10	29.9664
1395.20	35.1427
1407.95	22.8146
1434.06	18.7910
1436.60	28.2041
1457.56	0.0000
1460.81	16.2146
1489.15	19.0503
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1596.49	21.4029
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1678.03	0.0000
1691.02	12.3571
1691.02	12.3571
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1750.46	0.0000
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1764.49	13.5195
1764.49	13.5195
1764.49	13.5195
1770.23	10.1517
1771.40	18.9547
1791.20	0.0000
1808.65	12.6699

1836.01

10.7813

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395009

Total Uranium Activity	2.0757E+02	ug/g
Total Uranium Counting Unc.	3.6894E+01	ug/g
Total Uranium Tpu	1.8823E-05	ug/g
Total Uranium Mda	5.2372E+00	ug/g


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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON , SC 29417                          *
*                               GROSS GAMMA REPORT                            *
*
*****
*
*  BATCH ID      : 944966                      SAMPLE ID   : G245395009          *
*  ANALYST       : MXR1                        DETECTOR    : GAM12           *
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00    COUNT TIME   : 0 02:00:00.00      *
*  ANALYSIS DATE: 2-FEB-2010 09:14:48.69    SAMPLE ALQT: 137.080 GRAM        *
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.649E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.785E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 5.900E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.897E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:17:15.95

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395010.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:15:16.
Sample ID          : G245395010      Sample quantity   : 1.37080E+02 GRAM
Detector name      : GAM13           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.84 0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 944966          Detector SN#     :
Matrix Spike ID    :                 LCS ID            : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.29*	155	472	1.25	92.35	89	7	2.16E-02	26.1	
2	0	63.13*	405	884	1.25	126.03	122	9	5.62E-02	15.2	
3	2	74.73	586	733	1.11	149.23	142	17	8.14E-02	8.9	1.17E+00
4	2	76.99*	947	671	1.12	153.76	142	17	1.32E-01	6.0	
5	4	83.98*	144	667	1.38	167.73	164	28	2.00E-02	32.6	2.41E+00
6	4	87.04	342	563	1.25	173.87	164	28	4.75E-02	12.5	
7	4	89.83	224	539	1.09	179.44	164	28	3.11E-02	18.5	
8	4	92.53*	675	577	1.40	184.84	164	28	9.37E-02	8.4	
9	0	129.50	121	466	1.09	258.80	255	9	1.69E-02	33.4	
10	0	185.63*	185	407	1.18	371.10	367	10	2.57E-02	23.6	
11	0	208.90	136	318	0.96	417.63	413	9	1.89E-02	25.1	
12	3	238.52*	1307	284	1.30	476.89	471	17	1.82E-01	3.7	1.20E+00
13	3	241.49	294	309	1.66	482.83	471	17	4.08E-02	14.7	
14	0	270.11	119	346	1.52	540.09	532	14	1.65E-02	34.5	
15	0	277.14	66	237	1.23	554.16	549	10	9.10E-03	45.9	
16	0	295.05	340	214	1.41	589.98	585	10	4.72E-02	9.7	
17	0	299.97	51	234	1.12	599.82	596	8	7.03E-03	54.1	
18	0	327.91	67	267	1.17	655.72	650	11	9.32E-03	48.7	
19	0	338.46*	340	246	1.39	676.83	671	13	4.72E-02	11.2	
20	0	351.85*	564	267	1.63	703.61	698	13	7.84E-02	7.5	
21	0	462.94	94	124	1.40	925.85	920	11	1.31E-02	25.1	
22	0	510.85*	133	174	1.93	1021.71	1015	14	1.85E-02	26.0	
23	0	582.96*	341	195	1.56	1165.97	1160	14	4.73E-02	10.6	
24	0	609.31*	469	170	1.59	1218.68	1211	16	6.52E-02	7.9	
25	0	727.24	119	102	1.52	1454.64	1449	12	1.65E-02	19.3	
26	0	860.66	73	83	1.50	1721.58	1715	13	1.01E-02	28.6	
27	0	910.90*	273	123	1.73	1822.09	1813	17	3.79E-02	11.3	
28	0	969.06	157	117	2.42	1938.46	1933	17	2.18E-02	18.2	
29	0	1002.17	58	88	1.46	2004.71	1997	16	8.10E-03	38.9	
30	0	1120.32	179	90	2.30	2241.11	2230	23	2.48E-02	15.8	
31	0	1460.63	1462	36	2.26	2922.03	2913	20	2.03E-01	2.8	
32	0	1587.93*	30	17	2.02	3176.78	3169	14	4.23E-03	34.6	
33	0	1764.98*	60	36	1.92	3531.07	3520	17	8.30E-03	27.8	
34	0	1847.25	22	4	1.64	3695.70	3687	14	3.06E-03	28.1	

Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395010.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:15:16
Sample ID         : G245395010 Sample quantity : 137.08 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.84 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.605E+01	2.998E+00	5.869E-01	3.588E-02	61.427
CD-109	+	88.03	*	3.548E+00	9.338E-01	1.015E+00	8.008E-02	3.496
SN-126	+	64.28		1.561E+00	5.332E-01	4.329E-01	6.740E-02	3.607
	+	86.94		1.452E+00	7.009E-01	4.141E-01	1.707E-01	3.507
	+	87.57	*	3.494E-01	9.195E-02	9.980E-02	7.894E-03	3.501
TL-208	+	277.35		6.242E-01	5.772E-01	6.392E-01	7.487E-02	0.976
	+	510.84		6.666E-01	3.536E-01	2.755E-01	2.995E-02	2.419
	+	583.14	*	4.909E-01	1.115E-01	7.588E-02	6.281E-03	6.470
	+	860.37		9.932E-01	5.744E-01	5.613E-01	4.733E-02	1.769
BI-210	+	46.50	*	1.442E+00	7.632E-01	7.853E-01	6.401E-02	1.836
PB-210	+	46.50	*	1.442E+00	7.632E-01	7.853E-01	6.401E-02	1.836
PO-210	+	46.50	*	1.442E+00	7.610E-01	7.853E-01	5.599E-02	1.836
BI-211		72.87		4.770E+00	2.113E+00	3.684E+00	3.222E-01	1.295
	+	351.07	*	3.414E+00	5.701E-01	3.749E-01	2.733E-02	9.106
PB-212	+	74.81		2.037E+00	4.457E-01	3.873E-01	4.927E-02	5.259
	+	77.11		1.963E+00	2.889E-01	2.315E-01	1.967E-02	8.476
	+	87.30		1.616E+00	4.549E-01	4.612E-01	5.885E-02	3.503
	+	238.63	*	1.703E+00	1.987E-01	9.990E-02	9.076E-03	17.042
	+	300.09		1.022E+00	1.109E+00	1.341E+00	1.276E-01	0.762
PO-212	+	74.81		2.037E+00	4.457E-01	3.873E-01	4.927E-02	5.259
	+	77.11		1.963E+00	2.889E-01	2.315E-01	1.967E-02	8.476
	+	87.30		1.616E+00	4.549E-01	4.612E-01	5.885E-02	3.503
	+	115.19		5.105E-01	3.733E+00	6.140E+00	7.121E-01	0.083
	+	238.63	*	1.703E+00	1.987E-01	9.990E-02	9.076E-03	17.042
	+	300.09		1.022E+00	1.109E+00	1.341E+00	1.276E-01	0.762
BI-214	+	609.31	*	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
	+	1120.29		2.517E+00	8.273E-01	6.401E-01	5.726E-02	3.932
	+	1764.49		1.153E+00	6.440E-01	4.362E-01	2.478E-02	2.644
PB-214	+	74.81		3.510E+00	7.415E-01	6.674E-01	7.590E-02	5.259
	+	77.11		3.365E+00	5.576E-01	3.969E-01	4.530E-02	8.476
	+	87.30		2.768E+00	7.591E-01	7.901E-01	8.735E-02	3.503
	+	241.98		2.298E+00	7.116E-01	5.905E-01	5.716E-02	3.892
	+	295.21		1.203E+00	2.619E-01	2.192E-01	2.147E-02	5.487
	+	351.92	*	1.188E+00	2.078E-01	1.307E-01	1.170E-02	9.084

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.510E+00	7.415E-01	6.674E-01	7.590E-02	5.259
	+	77.11		3.365E+00	5.576E-01	3.969E-01	4.530E-02	8.476
	+	87.30		2.768E+00	7.591E-01	7.901E-01	8.735E-02	3.503
	+	241.98		2.298E+00	7.116E-01	5.905E-01	5.716E-02	3.892
	+	295.21		1.203E+00	2.619E-01	2.192E-01	2.147E-02	5.487
	+	351.92	*	1.188E+00	2.078E-01	1.307E-01	1.170E-02	9.084
PO-216	+	74.81		2.037E+00	4.457E-01	3.873E-01	4.927E-02	5.259
	+	77.11		1.963E+00	2.889E-01	2.315E-01	1.967E-02	8.476
	+	87.30		1.616E+00	4.549E-01	4.612E-01	5.885E-02	3.503
	+	238.63	*	1.703E+00	1.987E-01	9.990E-02	9.076E-03	17.042
	+	300.09		1.022E+00	1.109E+00	1.341E+00	1.276E-01	0.762
PO-218	+	74.81		3.510E+00	7.415E-01	6.674E-01	7.590E-02	5.259
	+	77.11		3.365E+00	5.576E-01	3.969E-01	4.530E-02	8.476
	+	87.30		2.768E+00	7.591E-01	7.901E-01	8.735E-02	3.503
	+	241.98		2.298E+00	7.116E-01	5.905E-01	5.716E-02	3.892
	+	295.21		1.203E+00	2.619E-01	2.192E-01	2.147E-02	5.487
	+	351.92	*	1.188E+00	2.078E-01	1.307E-01	1.170E-02	9.084
RA-224	+	240.98	*	4.358E+00	1.327E+00	1.137E+00	8.979E-02	3.831
RA-226	+	609.31	*	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
	+	1120.29		2.517E+00	8.273E-01	6.401E-01	5.726E-02	3.932
	+	1764.49		1.153E+00	6.440E-01	4.362E-01	2.478E-02	2.644
AC-228	+	338.32		2.260E+00	1.055E+00	4.128E-01	1.690E-01	5.475
	+	911.07	*	1.764E+00	4.380E-01	3.137E-01	3.257E-02	5.624
	+	969.11		1.785E+00	7.666E-01	6.175E-01	1.410E-01	2.891
RA-228	+	338.32		2.260E+00	1.055E+00	4.128E-01	1.690E-01	5.475
	+	911.07	*	1.764E+00	4.380E-01	3.137E-01	3.257E-02	5.624
	+	969.11		1.785E+00	7.666E-01	6.175E-01	1.410E-01	2.891
TH-228	+	74.81		2.066E+00	4.093E-01	3.927E-01	3.418E-02	5.259
	+	77.11		1.990E+00	2.929E-01	2.348E-01	1.994E-02	8.476
	+	87.30		1.638E+00	4.312E-01	4.676E-01	3.706E-02	3.503
	+	238.63	*	1.726E+00	2.015E-01	1.013E-01	9.202E-03	17.042
	+	300.09		1.036E+00	1.277E+00	1.359E+00	8.038E-01	0.762
TH-230	+	609.31	*	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
	+	1120.29		2.517E+00	8.273E-01	6.401E-01	5.726E-02	3.932
	+	1764.49		1.153E+00	6.440E-01	4.362E-01	2.477E-02	2.644
TH-232	+	338.32		2.260E+00	5.298E-01	4.128E-01	2.874E-02	5.475
	+	911.07	*	1.764E+00	4.380E-01	3.137E-01	3.257E-02	5.624
	+	969.11		1.785E+00	7.666E-01	6.175E-01	1.410E-01	2.891
TH-234	+	63.29	*	3.945E+00	1.400E+00	1.079E+00	1.980E-01	3.655
	+	92.38		4.755E+00	1.173E+00	6.927E-01	1.247E-01	6.864
U-234	+	609.31	*	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
	+	1120.29		2.517E+00	8.273E-01	6.401E-01	5.726E-02	3.932
	+	1764.49		1.153E+00	6.440E-01	4.362E-01	2.477E-02	2.644
NP-237	+	86.50	*	1.026E+00	3.431E-01	2.921E-01	6.462E-02	3.512
		95.87		-2.168E-01	9.263E-01	1.356E+00	3.355E-01	-0.160
U-238	+	63.29	*	3.945E+00	1.400E+00	1.079E+00	1.980E-01	3.655
	+	92.38		4.755E+00	8.974E-01	6.927E-01	5.847E-02	6.864
AM-243	+	74.67	*	3.303E-01	6.534E-02	6.278E-02	5.423E-03	5.261
	+	86.72		3.847E+01	1.013E+01	1.096E+01	8.722E-01	3.509

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-2.761E+00	3.949E+00	6.258E+00	7.490E-01	-0.441
		142.18		-3.362E+00	2.012E+01	3.197E+01	3.387E+00	-0.105
ANH-511	+	511.00	*	1.440E-01	7.542E-02	5.953E-02	4.155E-03	2.419

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	6.191E-02	3.747E-01	6.324E-01	4.755E-02	0.098
NA-22		1274.54	*	3.354E-02	6.177E-02	1.067E-01	6.022E-03	0.314
NA-24		1368.53	*	7.595E-02	6.177E-02	Half-Life too short		
AL-26		1129.67		-8.595E-02	2.574E+00	3.547E+00	2.102E-01	-0.024
		1808.65	*	2.592E-02	3.768E-02	6.902E-02	3.895E-03	0.376
TI-44		67.85		2.549E-02	2.876E-02	4.749E-02	4.300E-03	0.537
	+	78.38	*	3.622E-01	5.330E-02	5.679E-02	4.783E-03	6.377
SC-46		889.25	*	-3.545E-03	5.398E-02	8.896E-02	6.736E-03	-0.040
	+	1120.51		4.265E-01	1.373E-01	1.538E-01	9.250E-03	2.773
V-48		944.10		4.838E-01	1.154E+00	1.958E+00	1.430E-01	0.247
		983.50	*	7.287E-02	8.769E-02	1.529E-01	1.082E-02	0.477
		1312.09		-1.087E-01	1.044E-01	1.569E-01	8.892E-03	-0.693
CR-51		320.08	*	-2.925E-01	4.124E-01	6.477E-01	5.041E-02	-0.452
MN-52		744.21		1.064E-01	2.799E-01	4.621E-01	3.751E-02	0.230
		848.13		-1.865E+00	8.196E+00	1.342E+01	1.045E+00	-0.139
		935.52		3.851E-01	2.947E-01	5.281E-01	3.879E-02	0.729
		1246.25		3.065E+00	8.718E+00	1.486E+01	8.319E-01	0.206
		1333.61		-2.632E+00	6.468E+00	1.034E+01	5.884E-01	-0.254
		1434.06	*	-3.410E-01	2.722E-01	3.812E-01	2.191E-02	-0.894
MN-54		834.83	*	-5.100E-02	5.082E-02	7.872E-02	6.177E-03	-0.648
CO-56		846.75	*	1.557E-02	5.311E-02	9.006E-02	7.019E-03	0.173
		977.42		-3.074E+00	4.723E+00	6.146E+00	4.371E-01	-0.500
		1037.82		2.236E-01	4.105E-01	6.982E-01	5.086E-02	0.320
		1175.09		-1.271E+00	3.203E+00	5.007E+00	2.754E-01	-0.254
		1238.25		1.229E-01	1.220E-01	2.151E-01	1.283E-02	0.572
		1360.21		2.149E-01	1.387E+00	2.324E+00	1.326E-01	0.092
		1771.40		1.074E-01	3.304E-01	5.015E-01	2.846E-02	0.214
CO-57		122.06	*	-2.743E-02	2.703E-02	4.197E-02	5.309E-03	-0.654
		136.48		1.038E-01	2.197E-01	3.618E-01	4.235E-02	0.287
CO-58		810.76	*	-5.941E-02	5.348E-02	8.214E-02	6.543E-03	-0.723
FE-59		142.65		1.119E+00	3.035E+00	4.916E+00	5.184E-01	0.228
		192.34		-5.592E-01	9.365E-01	1.548E+00	2.009E-01	-0.361
		1099.22	*	-2.103E-01	1.299E-01	1.819E-01	1.300E-02	-1.156
		1291.56		7.215E-02	1.680E-01	2.881E-01	2.104E-02	0.250
CO-60		1173.22		-1.796E-02	6.396E-02	1.009E-01	5.546E-03	-0.178
		1332.49	*	-3.053E-02	5.721E-02	9.035E-02	5.139E-03	-0.338
ZN-65		1115.52	*	-6.873E-02	1.534E-01	2.024E-01	1.229E-02	-0.339
GE-68		1077.35	*	1.895E+00	1.726E+00	3.032E+00	1.938E-01	0.625
AS-73		53.44	*	1.990E-01	2.446E-01	4.146E-01	3.502E-02	0.480
AS-74		595.88	*	4.581E-02	1.125E-01	1.892E-01	1.453E-02	0.242
		634.78		-3.648E-01	4.592E-01	7.072E-01	5.636E-02	-0.516

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		-4.555E-01	2.897E+00	4.381E+00	4.772E-01	-0.104
		96.73		-5.696E-01	7.781E-01	1.108E+00	1.537E-01	-0.514
		121.11		3.897E-02	1.399E-01	2.305E-01	3.322E-02	0.169
		136.00		2.296E-02	4.083E-02	6.747E-02	7.621E-03	0.340
		198.60		5.777E-01	1.894E+00	3.142E+00	2.808E-01	0.184
		264.65	*	1.291E-02	5.104E-02	7.568E-02	5.928E-03	0.171
		279.53		6.294E-02	1.268E-01	1.900E-01	1.529E-02	0.331
		303.91		-1.547E+00	2.662E+00	3.665E+00	3.894E-01	-0.422
		400.65		2.060E-01	2.993E-01	4.989E-01	4.585E-02	0.413
BR-77	+	87.88		5.362E+02	1.411E+02	2.010E+02	1.587E+01	2.667
		200.40		-1.042E+02	1.171E+02	1.908E+02	1.512E+01	-0.546
	+	239.00		1.909E+02	2.057E+01	2.764E+01	2.183E+00	6.907
		249.79		4.156E+01	4.875E+01	8.412E+01	6.615E+00	0.494
		281.68		4.756E+01	7.613E+01	1.149E+02	8.807E+00	0.414
		297.23		1.161E+02	6.338E+01	7.860E+01	5.912E+00	1.478
		303.76		-1.001E+02	1.609E+02	2.211E+02	1.647E+01	-0.452
		439.47		2.963E+01	1.128E+02	1.926E+02	1.217E+01	0.154
		484.57		-1.410E+01	1.936E+02	3.219E+02	2.170E+01	-0.044
		520.65	*	-6.293E+00	9.010E+00	1.429E+01	1.009E+00	-0.440
		574.64		-1.196E+02	1.806E+02	2.839E+02	2.133E+01	-0.421
		578.91		6.637E+01	8.372E+01	1.276E+02	9.633E+00	0.520
		585.48		8.765E+02	2.227E+02	3.805E+02	2.892E+01	2.303
		755.35		2.535E+01	1.610E+02	2.613E+02	2.116E+01	0.097
		817.79		4.149E+01	1.270E+02	2.165E+02	1.714E+01	0.192
SR-82		698.33		-4.237E+01	4.746E+01	7.209E+01	5.885E+00	-0.588
		776.49	*	-5.653E-01	4.636E-01	7.057E-01	5.680E-02	-0.801
		1395.20		-5.913E+00	1.407E+01	2.217E+01	1.270E+00	-0.267
RB-83		520.41	*	-6.279E-02	8.454E-02	1.336E-01	9.436E-03	-0.470
		529.64		1.079E-01	1.355E-01	2.344E-01	1.674E-02	0.460
		552.65		7.642E-02	2.404E-01	4.049E-01	2.970E-02	0.189
RB-84		881.50	*	-8.929E-02	9.524E-02	1.466E-01	1.117E-02	-0.609
KR-85		513.99	*	1.119E+01	1.058E+01	1.640E+01	1.149E+00	0.682
SR-85		513.99	*	5.662E-02	5.355E-02	8.301E-02	5.815E-03	0.682
RB-86		1076.63	*	1.449E+00	1.047E+00	1.872E+00	1.198E-01	0.774
Y-88		898.02		2.407E-02	5.703E-02	9.707E-02	7.347E-03	0.248
		1836.01	*	3.603E-02	4.184E-02	7.601E-02	4.280E-03	0.474
ZR-88		392.90	*	-3.133E-02	3.837E-02	5.867E-02	3.436E-03	-0.534
Y-91		1204.90	*	4.933E+00	2.459E+01	4.164E+01	2.308E+00	0.118
NB-94		702.63	*	4.362E-02	4.674E-02	7.980E-02	6.514E-03	0.547
		871.10		5.091E-03	4.829E-02	8.069E-02	6.191E-03	0.063
NB-95		765.79	*	6.455E-02	5.859E-02	1.039E-01	8.389E-03	0.621
NB-95M		235.69	*	2.836E-01	1.513E-01	2.409E-01	2.229E-02	1.177
ZR-95		724.18		1.307E-01	1.450E-01	2.177E-01	1.944E-02	0.601
		756.15	*	-6.874E-02	1.008E-01	1.536E-01	1.385E-02	-0.448
NB-97		657.90	*	-1.619E-02	1.008E-01	Half-Life	too short	
		1024.50		-1.245E+00	1.008E-01	Half-Life	too short	
ZR-97		254.15		-1.760E+00	1.008E-01	Half-Life	too short	
		355.39		-5.266E-01	1.008E-01	Half-Life	too short	
		507.63	*	4.090E-01	1.008E-01	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	602.52			5.802E-01	1.008E-01	Half-Life	too short	
	1021.30			1.455E+00	1.008E-01	Half-Life	too short	
	1147.95			-5.977E-01	1.008E-01	Half-Life	too short	
	1362.66			1.440E-01	1.008E-01	Half-Life	too short	
	1750.46			-3.762E-01	1.008E-01	Half-Life	too short	
MO-99	140.51			4.656E+00	2.083E+01	3.387E+01	9.632E+00	0.137
	181.06			-1.396E+00	1.447E+01	2.025E+01	3.636E+00	-0.069
	366.43			2.405E+01	7.190E+01	1.184E+02	7.619E+00	0.203
	739.58	*		-3.801E+00	1.155E+01	1.810E+01	2.699E+00	-0.210
	778.00			-2.786E+01	3.147E+01	4.931E+01	3.967E+00	-0.565
TC-99M	140.51	*		3.072E+08	3.147E+01	Half-Life	too short	
RH-101	127.23			-6.195E-03	3.878E-02	5.583E-02	6.779E-03	-0.111
	198.01	*		1.519E-02	3.514E-02	5.860E-02	4.640E-03	0.259
	325.23			-1.584E-02	2.897E-01	4.124E-01	2.957E-02	-0.038
RH-102	418.52			1.901E-01	3.696E-01	5.939E-01	3.631E-02	0.320
	475.06	*		-3.498E-03	3.517E-02	5.848E-02	3.891E-03	-0.060
	631.29			-2.179E-02	6.938E-02	1.107E-01	8.793E-03	-0.197
	697.49			-5.628E-02	1.084E-01	1.693E-01	1.382E-02	-0.332
	766.84			1.230E-01	1.531E-01	2.675E-01	2.159E-02	0.460
	1046.59			4.505E-02	1.702E-01	2.827E-01	1.876E-02	0.159
	1112.84			1.818E-01	3.738E-01	5.448E-01	3.314E-02	0.334
RU-103	497.08	*		-1.821E-02	4.702E-02	7.636E-02	1.005E-02	-0.238
+	610.33			1.351E+01	3.065E+00	3.243E+00	5.276E-01	4.166
RH-106	511.85	+		7.176E-01	3.759E-01	5.052E-01	3.529E-02	1.420
	621.84	*		-3.145E-01	4.224E-01	6.525E-01	8.411E-02	-0.482
	1050.47			2.468E+00	3.492E+00	5.965E+00	3.941E-01	0.414
RU-106	511.85	+		7.176E-01	3.759E-01	5.052E-01	3.529E-02	1.420
	621.84	*		-3.145E-01	4.212E-01	6.525E-01	5.139E-02	-0.482
	1050.47			2.468E+00	3.492E+00	5.965E+00	3.941E-01	0.414
AG-108M	433.93	*		-1.317E-02	3.793E-02	6.265E-02	4.215E-03	-0.210
	614.37			2.317E-02	5.328E-02	7.853E-02	6.432E-03	0.295
	722.95			3.293E-02	5.944E-02	8.730E-02	7.423E-03	0.377
AG-110M	657.75	*		-1.034E-02	4.834E-02	7.750E-02	6.511E-03	-0.133
	677.61			-5.920E-02	4.168E-01	6.693E-01	5.635E-02	-0.088
	706.67			-2.632E-02	2.823E-01	4.530E-01	3.810E-02	-0.058
	763.93			-4.600E-02	2.308E-01	3.828E-01	3.192E-02	-0.120
	884.67			5.717E-02	6.609E-02	1.160E-01	9.176E-03	0.493
	937.48			-9.037E-02	1.495E-01	2.347E-01	1.807E-02	-0.385
	1384.27			-1.078E-01	2.202E-01	3.454E-01	2.101E-02	-0.312
IN-111	171.28			-5.636E-02	7.975E-01	1.266E+00	9.937E-02	-0.045
	245.39	*		3.998E-01	9.121E-01	1.375E+00	1.083E-01	0.291
IN-113M	391.69	*		-3.380E-02	5.595E-02	8.675E-02	5.405E-03	-0.390
SN-113	391.69	*		-3.380E-02	5.595E-02	8.675E-02	5.405E-03	-0.390
IN-114M	190.27	*		-2.682E-02	2.166E-01	3.014E-01	2.382E-02	-0.089
CD-115	260.90			-2.128E+01	9.499E+01	1.561E+02	1.219E+01	-0.136
	492.35			1.142E+01	3.013E+01	5.133E+01	3.497E+00	0.223
	527.90	*		1.371E+00	9.485E+00	1.586E+01	1.130E+00	0.086
SN-117M	156.02			1.280E+00	2.298E+00	3.765E+00	3.401E-01	0.340
	158.56	*		9.316E-03	5.535E-02	8.927E-02	7.796E-03	0.104

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122	563.90	*		4.188E-01	1.911E+00	3.192E+00	2.371E-01	0.131
	692.80			-1.365E+01	4.402E+01	6.974E+01	5.694E+00	-0.196
I-123	159.00	*		7.331E-02	4.402E+01	Half-Life	too short	
	528.96			7.944E+01	4.402E+01	Half-Life	too short	
TE-123M	159.00	*		1.711E-03	3.061E-02	4.912E-02	4.289E-03	0.035
I-124	602.71	*		1.747E-02	8.136E-01	1.156E+00	8.938E-02	0.015
	722.78			2.190E+00	5.160E+00	7.481E+00	6.095E-01	0.293
	1325.50			9.020E+00	3.744E+01	6.335E+01	3.599E+00	0.142
	1376.25			1.979E+01	3.222E+01	5.617E+01	3.212E+00	0.352
	1509.49			1.963E+01	1.550E+01	2.897E+01	1.670E+00	0.678
	1691.02			-2.005E-02	3.381E+00	5.459E+00	3.126E-01	-0.004
SB-124	602.71			1.228E-03	5.719E-02	8.125E-02	6.283E-03	0.015
	645.85			9.668E-02	6.127E-01	1.009E+00	8.677E-02	0.096
	709.31			-3.814E+00	3.566E+00	5.273E+00	4.302E-01	-0.723
	713.82			1.727E+00	2.070E+00	3.527E+00	4.130E-01	0.490
	722.78			2.231E-01	5.258E-01	7.621E-01	6.359E-02	0.293
	+ 968.20			1.812E+01	6.716E+00	8.556E+00	6.131E-01	2.118
	1045.16			-2.162E+00	3.639E+00	5.670E+00	3.769E-01	-0.381
	1325.50			9.815E-01	4.074E+00	6.894E+00	3.917E-01	0.142
	1368.21			1.231E+00	2.274E+00	3.947E+00	4.670E-01	0.312
	1436.60			-1.680E-01	4.708E+00	7.707E+00	4.429E-01	-0.022
	1691.02	*		-4.819E-04	8.124E-02	1.312E-01	8.171E-03	-0.004
SB-125	427.89	*		1.745E-02	1.111E-01	1.889E-01	1.216E-02	0.092
	+ 463.38			9.095E-01	4.613E-01	6.415E-01	4.755E-02	1.418
	600.56			2.460E-02	2.416E-01	3.880E-01	3.267E-02	0.063
	635.90			5.237E-02	3.617E-01	5.955E-01	5.196E-02	0.088
TE-125M	109.28	*		-9.196E+00	9.410E+00	1.480E+01	1.798E+00	-0.621
I-126	388.63			1.547E-02	2.430E-01	3.921E-01	2.322E-02	0.039
	666.33	*		4.162E-02	2.172E-01	3.573E-01	2.916E-02	0.116
	753.82			1.797E+00	1.910E+00	3.259E+00	2.640E-01	0.551
SB-126	223.80			-2.561E-01	3.964E+00	6.640E+00	5.264E-01	-0.039
	+ 278.60			3.852E+00	3.546E+00	4.218E+00	3.245E-01	0.913
	+ 296.50			1.118E+01	2.332E+00	3.252E+00	2.449E-01	3.437
	414.70			-8.546E-02	8.576E-02	1.283E-01	7.792E-03	-0.666
	415.30			-5.246E+00	7.202E+00	1.098E+01	6.679E-01	-0.478
	555.20			1.561E+00	4.574E+00	7.712E+00	5.673E-01	0.202
	573.80			-8.168E-01	1.215E+00	1.909E+00	1.433E-01	-0.428
	593.00			-8.439E-01	1.141E+00	1.779E+00	1.362E-01	-0.474
	656.30			1.366E+00	4.304E+00	7.140E+00	5.798E-01	0.191
	666.33			1.734E-02	9.051E-02	1.489E-01	1.215E-02	0.116
	675.00			1.667E+00	2.439E+00	4.135E+00	3.376E-01	0.403
	695.00			1.188E-01	9.842E-02	1.709E-01	1.395E-02	0.695
	697.00			-7.398E-02	3.513E-01	5.602E-01	4.574E-02	-0.132
	720.50	*		5.001E-02	2.001E-01	2.854E-01	2.326E-02	0.175
	856.80			-4.581E-01	6.967E-01	9.277E-01	7.186E-02	-0.494
	989.30			-1.148E+00	1.569E+00	2.415E+00	1.700E-01	-0.475
	1034.80			-4.708E+00	1.063E+01	1.669E+01	1.123E+00	-0.282
	1213.00			-1.064E+00	5.930E+00	9.789E+00	5.437E-01	-0.109
SB-127	61.10			2.513E+01	2.280E+01	3.597E+01	4.142E+00	0.699

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
XE-127		252.40		1.713E+00	3.749E+00	6.255E+00	2.614E+00	0.274
		290.80		-1.501E+01	2.109E+01	2.888E+01	2.887E+00	-0.520
		411.60		-2.386E+00	1.220E+01	1.929E+01	2.739E+00	-0.124
		444.90		1.666E-01	9.149E+00	1.540E+01	1.655E+00	0.011
		473.00		1.037E+00	1.546E+00	2.681E+00	3.026E-01	0.387
		543.00		2.343E+00	1.615E+01	2.694E+01	3.592E+00	0.087
		603.60		1.537E+00	1.377E+01	1.972E+01	2.284E+00	0.078
	*	685.20		7.317E-01	1.520E+00	2.538E+00	2.711E-01	0.288
		698.50		-1.700E+01	1.772E+01	2.656E+01	4.069E+00	-0.640
		722.20		2.371E+01	3.420E+01	5.083E+01	5.302E+00	0.466
		783.80		3.858E+00	3.620E+00	6.438E+00	7.521E-01	0.599
		57.60		-1.094E+00	2.216E+00	3.714E+00	3.433E-01	-0.295
I-131		145.22		-3.185E-01	7.248E-01	1.146E+00	1.176E-01	-0.278
		172.10		-1.510E-02	1.243E-01	1.967E-01	1.545E-02	-0.077
	*	202.84		2.061E-02	4.847E-02	8.069E-02	6.395E-03	0.255
		374.96		-2.182E-01	2.383E-01	3.636E-01	2.271E-02	-0.600
		80.18		-8.454E-01	4.179E+00	5.033E+00	4.212E-01	-0.168
TE-132		284.30		-9.756E-01	1.502E+00	2.396E+00	1.951E-01	-0.407
	*	364.48		6.803E-02	1.223E-01	2.038E-01	1.442E-02	0.334
		636.97		1.102E+00	1.899E+00	3.208E+00	2.725E-01	0.344
		722.89		5.247E+00	9.019E+00	1.328E+01	1.088E+00	0.395
		49.72		-1.025E+00	3.370E+00	5.145E+00	5.059E-01	-0.199
BA-133		111.76		1.402E+01	2.510E+01	4.098E+01	5.180E+00	0.342
		116.30		-7.588E+00	2.225E+01	3.590E+01	4.751E+00	-0.211
	*	228.16		2.478E-02	5.687E-01	9.553E-01	1.444E-01	0.026
		53.15		7.196E-01	1.041E+00	1.759E+00	1.477E-01	0.409
		79.62		-1.882E-01	1.305E+00	1.578E+00	2.379E-01	-0.119
I-133		81.00		-2.402E-02	1.001E-01	1.201E-01	1.885E-02	-0.200
	+	276.40		6.167E-01	5.721E-01	6.901E-01	9.609E-02	0.894
		302.84		1.600E-02	1.867E-01	2.703E-01	3.396E-02	0.059
	*	356.01		-2.815E-02	5.832E-02	7.882E-02	9.463E-03	-0.357
		383.85		3.676E-02	3.883E-01	6.283E-01	6.911E-02	0.059
CS-134	+	510.53		5.472E-01	3.883E-01	Half-Life	too short	
	*	529.87		2.756E-03	3.883E-01	Half-Life	too short	
		706.58		-1.949E-02	3.883E-01	Half-Life	too short	
		856.28		-2.366E-01	3.883E-01	Half-Life	too short	
		875.33		5.887E-02	3.883E-01	Half-Life	too short	
CS-135		1236.41		5.793E-01	3.883E-01	Half-Life	too short	
		1298.22		-1.530E-02	3.883E-01	Half-Life	too short	
		475.35		-2.042E-01	2.292E+00	3.813E+00	2.539E-01	-0.054
		563.23		7.059E-02	4.524E-01	7.530E-01	5.660E-02	0.094
		569.32		6.969E-02	2.612E-01	4.240E-01	3.225E-02	0.164
CS-135		604.70		-5.966E-03	4.961E-02	6.957E-02	5.407E-03	-0.086
	*	795.84		3.865E-02	5.960E-02	1.037E-01	8.359E-03	0.373
		801.93		-4.689E-01	5.887E-01	8.584E-01	6.889E-02	-0.546
		1038.57		3.103E+00	5.253E+00	8.958E+00	6.000E-01	0.346
		1167.94		3.574E-01	3.637E+00	5.909E+00	3.280E-01	0.060
CS-135		1365.15		1.906E-01	1.658E+00	2.769E+00	1.741E-01	0.069
	*	268.24		2.118E-01	1.751E-01	2.953E-01	2.728E-02	0.717

----- Non-Identified Nuclides -----

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I-135	288.45			1.093E+09	1.751E-01	Half-Life	too short	
	417.63			1.357E+09	1.751E-01	Half-Life	too short	
	546.56			-3.861E+07	1.751E-01	Half-Life	too short	
	836.80			5.891E+08	1.751E-01	Half-Life	too short	
	1038.76			7.937E+08	1.751E-01	Half-Life	too short	
	1124.00			2.418E+09	1.751E-01	Half-Life	too short	
	1131.51			-1.296E+08	1.751E-01	Half-Life	too short	
	1260.41	*		-1.258E+08	1.751E-01	Half-Life	too short	
	1457.56			5.111E+10	1.751E-01	Half-Life	too short	
	1678.03			-3.485E+08	1.751E-01	Half-Life	too short	
	1706.46			3.653E+08	1.751E-01	Half-Life	too short	
	1791.20			-1.349E+08	1.751E-01	Half-Life	too short	
CS-136	66.91			3.492E-01	4.630E-01	7.176E-01	1.128E-01	0.487
	86.29	+		4.273E+00	1.196E+00	1.608E+00	1.999E-01	2.657
	153.22			-5.785E-02	6.806E-01	1.089E+00	1.122E-01	-0.053
	163.89			-2.896E-01	1.112E+00	1.704E+00	1.564E-01	-0.170
	176.55			1.677E-01	3.688E-01	5.976E-01	5.025E-02	0.281
	273.65			3.958E-02	6.790E-01	7.184E-01	6.004E-02	0.055
	340.57			3.806E-01	1.630E-01	2.629E-01	1.902E-02	1.448
	818.51			-2.057E-02	9.632E-02	1.583E-01	1.254E-02	-0.130
	1048.07	*		9.016E-02	1.500E-01	2.547E-01	1.807E-02	0.354
	1235.34			1.286E+00	7.706E-01	1.391E+00	1.372E-01	0.925
BA-137M	661.65	*		3.153E-03	4.698E-02	7.668E-02	6.254E-03	0.041
CS-137	661.65	*		3.333E-03	4.966E-02	8.106E-02	6.625E-03	0.041
CE-139	165.85	*		-2.653E-02	3.204E-02	4.915E-02	3.854E-03	-0.540
BA-140	162.64			-2.634E-01	7.881E-01	1.205E+00	1.056E-01	-0.219
	304.84			-9.411E-02	1.390E+00	2.101E+00	5.817E-01	-0.045
LA-140	423.70			-2.565E-01	2.220E+00	3.516E+00	1.120E+00	-0.073
	537.32	*		-1.700E-01	3.048E-01	4.782E-01	1.569E-01	-0.355
	328.77	+		5.145E-01	5.027E-01	5.904E-01	4.543E-02	0.871
	432.53			1.091E+00	2.272E+00	3.924E+00	2.675E-01	0.278
	487.03			-1.036E-01	1.583E-01	2.538E-01	1.886E-02	-0.408
	751.79			-1.123E+00	2.361E+00	3.662E+00	3.324E-01	-0.307
	815.85			5.506E-01	4.066E-01	7.339E-01	6.601E-02	0.750
	867.82			-2.619E-01	2.069E+00	3.040E+00	2.493E-01	-0.086
	919.63			-2.099E+00	3.583E+00	5.334E+00	5.176E-01	-0.394
	925.24			1.367E-01	1.374E+00	2.284E+00	1.832E-01	0.060
CE-141	1596.49	*		-2.565E-02	8.174E-02	1.163E-01	6.700E-03	-0.221
	145.44	*		-1.755E-02	6.415E-02	1.022E-01	1.060E-02	-0.172
CE-143	57.37			-8.557E-05	6.415E-02	Half-Life	too short	
	231.56			-4.400E-04	6.415E-02	Half-Life	too short	
CE-144	293.26	*		3.488E-04	6.415E-02	Half-Life	too short	
	350.59	+		1.455E-02	6.415E-02	Half-Life	too short	
	490.36			-2.951E-04	6.415E-02	Half-Life	too short	
	664.57			-5.003E-04	6.415E-02	Half-Life	too short	
	721.93			7.939E-04	6.415E-02	Half-Life	too short	
PM-144	80.11			-3.804E-01	2.131E+00	2.571E+00	2.140E-01	-0.148
	133.54	*		1.374E-01	2.371E-01	3.517E-01	6.095E-02	0.391
PM-144	476.78			5.881E-03	7.993E-02	1.342E-01	1.031E-02	0.044

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01	6.364E-03	4.206E-02	6.763E-02	5.483E-03	0.094
		696.49 *	2.032E-02	4.715E-02	7.836E-02	6.400E-03	0.259
		778.57	-2.276E+00	2.818E+00	4.437E+00	3.570E-01	-0.513
PR-144		696.49 *	1.376E+00	3.193E+00	5.307E+00	4.333E-01	0.259
		1489.15	-6.722E+00	1.430E+01	2.193E+01	1.263E+00	-0.307
PM-146		453.90 *	4.536E-02	5.358E-02	9.367E-02	8.501E-03	0.484
		633.02	-1.817E+00	1.990E+00	2.808E+00	1.045E+00	-0.647
		735.90	2.039E-01	2.022E-01	3.358E-01	9.557E-02	0.607
		747.13	-6.388E-02	1.345E-01	2.085E-01	2.863E-02	-0.306
ND-147	+	91.11	7.306E-01	2.783E-01	5.116E-01	4.614E-02	1.428
		319.41	-1.830E+00	3.502E+00	5.563E+00	4.035E-01	-0.329
		439.89	3.835E+00	5.964E+00	1.040E+01	6.574E-01	0.369
		531.02 *	7.836E-01	6.830E-01	1.191E+00	1.686E-01	0.658
PM-149		285.90 *	1.350E+00	6.792E+01	1.121E+02	1.683E+01	0.012
EU-152		121.78	-1.577E-02	7.641E-02	1.236E-01	1.672E-02	-0.128
		244.69	4.522E-01	3.809E-01	5.972E-01	4.707E-02	0.757
		344.27 *	4.493E-02	1.295E-01	1.887E-01	1.415E-02	0.238
		443.98	-4.214E-01	1.104E+00	1.816E+00	1.155E-01	-0.232
		778.89	-3.044E-01	3.249E-01	5.056E-01	4.066E-02	-0.602
		867.32	7.851E-01	1.277E+00	1.938E+00	1.491E-01	0.405
		964.01	4.707E-01	4.377E-01	6.803E-01	4.892E-02	0.692
		1085.78	3.084E-01	5.166E-01	8.800E-01	5.562E-02	0.351
		1112.02	-4.358E-02	5.502E-01	7.563E-01	4.606E-02	-0.058
		1407.95	-4.834E-02	2.388E-01	3.849E-01	2.207E-02	-0.126
GD-153		69.67	-1.064E+00	1.168E+00	1.707E+00	1.526E-01	-0.623
	+	83.37	2.558E+01	1.679E+01	2.097E+01	1.707E+00	1.220
		97.43 *	-5.053E-02	8.298E-02	1.172E-01	1.066E-02	-0.431
		103.18	-8.222E-02	1.016E-01	1.621E-01	1.601E-02	-0.507
EU-154		123.07	-1.790E-02	5.372E-02	8.631E-02	1.258E-02	-0.207
		247.94	-4.074E-01	3.905E-01	6.159E-01	6.728E-02	-0.662
		591.81	-5.570E-01	8.175E-01	1.279E+00	1.404E-01	-0.435
		723.30	1.597E-01	2.500E-01	3.698E-01	3.366E-02	0.432
		756.87	-2.249E-01	1.097E+00	1.735E+00	2.013E-01	-0.130
		873.19	-1.675E-01	4.280E-01	6.899E-01	7.996E-02	-0.243
		996.32	4.169E-01	5.650E-01	8.531E-01	1.453E-01	0.489
		1004.76	-7.723E-02	3.253E-01	4.436E-01	4.637E-02	-0.174
		1274.45 *	9.735E-02	1.731E-01	2.991E-01	2.763E-02	0.326
EU-155		48.70	-1.396E-01	4.816E-01	7.365E-01	5.559E-02	-0.190
		60.01	6.343E-01	2.310E+00	3.570E+00	3.417E-01	0.178
	+	86.54	4.206E-01	1.108E-01	1.602E-01	1.291E-02	2.625
		105.31 *	1.240E-01	1.056E-01	1.798E-01	1.846E-02	0.689
TB-160	+	86.79	1.111E+00	2.923E-01	4.218E-01	3.355E-02	2.633
		197.04	1.417E-02	5.989E-01	9.850E-01	7.798E-02	0.014
		215.65	-1.031E-01	7.810E-01	1.308E+00	1.037E-01	-0.079
	+	298.57	1.469E-01	1.593E-01	2.138E-01	1.605E-02	0.687
		879.36 *	-6.966E-02	1.902E-01	3.069E-01	2.341E-02	-0.227
		962.29	3.707E-01	7.859E-01	1.161E+00	8.362E-02	0.319
		966.15	1.475E+00	3.545E-01	6.378E-01	4.578E-02	2.313
		1177.93	-2.736E-01	5.308E-01	8.229E-01	4.529E-02	-0.332

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		1271.85		2.373E-03	9.922E-01	1.650E+00	9.286E-02	0.001
		80.57		-8.941E-02	2.772E-01	3.312E-01	2.748E-02	-0.270
	+	184.41		1.274E-01	6.084E-02	7.627E-02	6.017E-03	1.670
		280.46		6.723E-02	9.958E-02	1.509E-01	1.159E-02	0.446
		410.95		2.427E-01	2.993E-01	5.009E-01	3.024E-02	0.485
		711.68	*	-3.160E-02	7.818E-02	1.223E-01	9.978E-03	-0.258
TM-171		752.31		-1.308E-01	3.984E-01	6.248E-01	5.063E-02	-0.209
		810.29		-8.213E-02	8.127E-02	1.259E-01	9.999E-03	-0.652
		51.35		-2.636E+00	7.304E+00	1.236E+01	9.952E-01	-0.213
		52.39		5.873E-02	4.363E+00	7.248E+00	5.977E-01	0.008
		59.40		1.399E+01	1.187E+01	1.887E+01	1.809E+00	0.741
		66.72	*	1.134E+01	1.767E+01	2.744E+01	2.504E+00	0.413
LU-176	+	88.36		8.286E-01	2.181E-01	3.074E-01	2.438E-02	2.696
		201.83		-5.080E-02	3.012E-02	4.718E-02	3.738E-03	-1.077
		306.84	*	1.177E-02	2.661E-02	4.462E-02	3.308E-03	0.264
		401.10		5.225E+00	7.858E+00	1.310E+01	7.779E-01	0.399
LU-177		112.95		1.503E-01	1.588E+00	2.557E+00	2.880E-01	0.059
	+	208.36	*	2.777E+00	1.410E+00	1.872E+00	1.484E-01	1.484
LU-177M		52.97		1.925E-01	4.648E-01	7.805E-01	6.523E-02	0.247
		54.07		2.102E-01	2.614E-01	4.427E-01	3.792E-02	0.475
		61.30		1.316E+00	7.639E-01	1.222E+00	1.159E-01	1.077
		121.62		-4.760E-02	3.907E-01	6.342E-01	7.975E-02	-0.075
		147.16		-7.344E-01	6.998E-01	1.072E+00	1.077E-01	-0.685
		171.86		-8.637E-02	5.130E-01	8.103E-01	6.362E-02	-0.107
		218.09		5.715E-01	9.011E-01	1.551E+00	1.230E-01	0.368
	+	268.79		2.357E+00	1.636E+00	1.541E+00	1.197E-01	1.529
		319.02		-2.334E-01	2.959E-01	4.629E-01	3.359E-02	-0.504
		367.43		-5.700E-01	1.080E+00	1.690E+00	1.084E-01	-0.337
		413.65	*	-3.091E-01	2.188E-01	3.179E-01	1.928E-02	-0.972
		56.28		-3.598E-01	3.128E-01	5.116E-01	4.598E-02	-0.703
HF-181		57.53		-5.745E-02	1.849E-01	3.118E-01	2.878E-02	-0.184
		65.20		-4.143E-01	5.586E-01	8.257E-01	7.616E-02	-0.502
		133.02		-3.208E-02	7.696E-02	1.087E-01	1.257E-02	-0.295
		136.25		2.957E-01	4.718E-01	7.810E-01	8.767E-02	0.379
		345.85		-1.420E-01	2.761E-01	3.480E-01	2.378E-02	-0.408
		482.03	*	4.181E-02	5.001E-02	8.738E-02	5.871E-03	0.478
W-181		56.28		-1.426E-01	1.241E-01	2.029E-01	1.824E-02	-0.703
		57.53		-2.289E-02	7.338E-02	1.237E-01	1.142E-02	-0.185
		65.20	*	-1.631E-01	2.199E-01	3.251E-01	2.999E-02	-0.502
TA-182		67.75		6.349E-02	6.804E-02	1.125E-01	1.019E-02	0.564
		100.10		1.160E-02	1.735E-01	2.794E-01	2.642E-02	0.042
		152.43		-2.693E-01	3.738E-01	5.815E-01	5.497E-02	-0.463
		222.10		-1.479E-01	3.647E-01	6.025E-01	4.777E-02	-0.245
	+	1001.68		5.887E+00	4.597E+00	5.075E+00	3.531E-01	1.160
	+	1121.28		1.181E+00	3.803E-01	4.303E-01	2.584E-02	2.745
RE-183		1189.05		-1.896E-01	4.429E-01	7.208E-01	3.979E-02	-0.263
		1221.42	*	-1.134E-01	2.845E-01	4.632E-01	2.578E-02	-0.245
		1230.97		-2.863E-01	6.878E-01	1.118E+00	6.237E-02	-0.256
		57.98		-1.174E-02	7.456E-02	1.263E-01	1.176E-02	-0.093

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184		59.32		5.804E-02	4.813E-02	7.661E-02	7.333E-03	0.758
		67.20		1.246E-01	1.258E-01	1.970E-01	1.792E-02	0.632
		162.32	*	-4.855E-02	1.229E-01	1.876E-01	1.553E-02	-0.259
	+	208.81		2.801E+00	1.422E+00	1.888E+00	1.497E-01	1.484
		291.72		-5.239E-01	1.120E+00	1.564E+00	1.185E-01	-0.335
		57.98		-4.355E-02	2.767E-01	4.688E-01	4.366E-02	-0.093
		59.32		2.152E-01	1.785E-01	2.841E-01	2.719E-02	0.758
		67.20		4.622E-01	4.666E-01	7.309E-01	6.648E-02	0.632
		161.27		1.491E-01	3.710E-01	6.036E-01	5.073E-02	0.247
		216.55		1.302E-01	2.786E-01	4.771E-01	3.784E-02	0.273
		252.85	*	1.433E-01	2.428E-01	4.145E-01	3.254E-02	0.346
		318.01		1.079E-03	5.100E-01	8.341E-01	6.065E-02	0.001
OS-185		792.07		-1.158E+00	1.227E+00	1.911E+00	1.529E-01	-0.606
		903.28		8.541E-01	1.616E+00	2.416E+00	1.812E-01	0.353
		920.93		-2.318E-01	5.763E-01	9.200E-01	6.824E-02	-0.252
		59.72		3.587E-02	1.345E-01	2.079E-01	1.994E-02	0.173
		61.14		1.015E-01	8.064E-02	1.280E-01	1.215E-02	0.793
		69.30		-1.194E-01	2.041E-01	3.027E-01	2.713E-02	-0.395
		592.07		-2.416E+00	3.294E+00	5.141E+00	3.933E-01	-0.470
		646.12	*	-4.480E-03	5.314E-02	8.601E-02	6.923E-03	-0.052
		717.42		-2.613E-01	1.186E+00	1.881E+00	1.534E-01	-0.139
		874.81		2.420E-01	8.259E-01	1.396E+00	1.069E-01	0.173
		880.27		-4.542E-01	1.037E+00	1.662E+00	1.267E-01	-0.273
		155.03	*	2.257E-01	1.830E-01	3.064E-01	2.804E-02	0.736
RE-188		477.96		-1.597E+00	3.709E+00	6.044E+00	4.038E-01	-0.264
		633.10		-3.590E+00	3.752E+00	5.617E+00	4.469E-01	-0.639
	+	63.58		1.566E+02	4.977E+01	6.338E+01	5.913E+00	2.471
W-188		227.08		-1.848E-01	1.375E+01	2.306E+01	1.827E+00	-0.008
		290.67	*	-6.155E+00	9.005E+00	1.237E+01	9.386E-01	-0.498
IR-192	+	295.96		9.066E-01	1.893E-01	2.771E-01	2.107E-02	3.272
		308.46		-1.808E-02	1.022E-01	1.659E-01	1.235E-02	-0.109
		316.51	*	2.249E-02	3.913E-02	6.582E-02	4.815E-03	0.342
AU-195		468.07		-1.127E-02	8.343E-02	1.201E-01	8.865E-03	-0.094
		604.41		-4.576E-02	6.656E-01	9.378E-01	1.168E-01	-0.049
		612.46		1.817E+00	1.097E+00	1.738E+00	1.599E-01	1.045
		65.12		-3.541E-02	1.027E-01	1.544E-01	1.425E-02	-0.229
		66.83		4.155E-02	5.857E-02	9.108E-02	8.305E-03	0.456
	+	75.70		1.064E+00	2.104E-01	3.401E-01	2.917E-02	3.128
		98.88	*	2.193E-01	2.185E-01	3.621E-01	3.365E-02	0.606
TL-200	+	129.76		6.599E+00	4.476E+00	5.338E+00	6.347E-01	1.236
		367.94	*	-1.684E-04	4.476E+00	Half-Life too short		
		579.30		2.054E-03	4.476E+00	Half-Life too short		
TL-201		828.27		3.771E-05	4.476E+00	Half-Life too short		
		1205.75		7.808E-05	4.476E+00	Half-Life too short		
		68.90		-2.783E-01	2.456E+00	3.711E+00	3.335E-01	-0.075
		70.82		-3.552E-01	1.449E+00	2.175E+00	1.929E-01	-0.163
		80.30		-8.745E-01	3.831E+00	4.606E+00	3.829E-01	-0.190
		135.34		3.714E+00	1.993E+01	3.252E+01	3.681E+00	0.114
		167.43	*	1.144E+00	5.626E+00	9.054E+00	7.096E-01	0.126

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		68.90		-3.089E-02	2.727E-01	4.119E-01	3.703E-02	-0.075
		70.82		-3.933E-02	1.605E-01	2.408E-01	2.136E-02	-0.163
		80.30		-9.685E-02	4.243E-01	5.102E-01	4.241E-02	-0.190
		439.56	*	4.593E-02	7.143E-02	1.245E-01	7.868E-03	0.369
HG-203		70.83		-1.801E-01	7.325E-01	1.099E+00	1.512E-01	-0.164
		72.87		9.315E-01	4.230E-01	7.195E-01	9.558E-02	1.295
	+	82.60		1.874E+00	1.246E+00	1.452E+00	1.957E-01	1.290
		279.20	*	5.386E-03	4.860E-02	7.101E-02	5.654E-03	0.076
BI-207		72.80		2.510E-01	1.220E-01	2.124E-01	1.859E-02	1.181
	+	74.97		5.928E-01	1.173E-01	1.689E-01	1.456E-02	3.510
	+	84.90		3.320E-01	2.179E-01	2.726E-01	2.196E-02	1.218
		569.67		1.430E-02	4.098E-02	6.687E-02	4.997E-03	0.214
		1063.62	*	3.065E-02	7.542E-02	1.264E-01	8.223E-03	0.242
		1770.23		-3.651E-02	6.833E-01	9.566E-01	5.429E-02	-0.038
TL-207		81.07		-5.554E-02	2.210E-01	2.652E-01	2.193E-02	-0.209
	+	83.78		2.189E-01	1.437E-01	1.817E-01	1.475E-02	1.205
		94.90		6.418E-01	2.277E-01	3.679E-01	3.226E-02	1.745
		122.32		-1.570E+00	1.850E+00	2.897E+00	3.785E-01	-0.542
		144.24		-1.968E-01	7.790E-01	1.232E+00	1.384E-01	-0.160
		154.21		1.765E-01	4.334E-01	7.063E-01	7.100E-02	0.250
	+	269.46		5.547E-01	3.853E-01	3.720E-01	2.960E-02	1.491
		323.87	*	3.211E-02	8.448E-01	1.211E+00	2.066E-01	0.027
	+	338.28		9.438E+00	2.363E+00	2.821E+00	3.164E-01	3.345
		445.03		2.316E-02	2.667E+00	4.487E+00	4.757E-01	0.005
PO-209		260.50		-7.131E-01	1.017E+01	1.684E+01	1.315E+00	-0.042
		262.80		-2.163E+01	3.107E+01	4.547E+01	3.547E+00	-0.476
		896.60	*	-2.622E+00	1.030E+01	1.672E+01	1.259E+00	-0.157
PB-211		404.84	*	-1.404E+00	1.431E+00	1.675E+00	1.045E+00	-0.838
		427.08		8.233E-01	2.627E+00	4.191E+00	2.592E+00	0.196
		831.96		-9.997E-02	1.601E+00	2.653E+00	1.660E+00	-0.038
BI-212	+	727.18	*	1.487E+00	5.912E-01	8.463E-01	8.124E-02	1.757
		785.46		2.284E+00	2.253E+00	4.005E+00	3.214E-01	0.570
		1620.62		4.462E-01	1.894E+00	2.962E+00	1.704E-01	0.151
PO-215		81.07		-5.554E-02	2.210E-01	2.652E-01	2.193E-02	-0.209
	+	83.78		2.189E-01	1.437E-01	1.817E-01	1.475E-02	1.205
		94.90		6.418E-01	2.277E-01	3.679E-01	3.226E-02	1.745
		122.32		-1.570E+00	1.850E+00	2.897E+00	3.785E-01	-0.542
		144.24		-1.968E-01	7.790E-01	1.232E+00	1.384E-01	-0.160
		154.21		1.765E-01	4.334E-01	7.063E-01	7.100E-02	0.250
	+	269.46		5.547E-01	3.853E-01	3.720E-01	2.960E-02	1.491
		323.87	*	3.211E-02	8.448E-01	1.211E+00	2.066E-01	0.027
	+	338.28		9.438E+00	2.363E+00	2.821E+00	3.164E-01	3.345
		445.03		2.316E-02	2.667E+00	4.487E+00	4.757E-01	0.005
RN-219	+	271.23		7.117E-01	4.958E-01	4.784E-01	4.590E-02	1.488
		401.81	*	2.080E-01	4.821E-01	7.920E-01	1.083E-01	0.263
RN-220		549.76	*	-9.469E+00	3.269E+01	5.300E+01	3.875E+00	-0.179
RA-223		81.07		-5.554E-02	2.210E-01	2.652E-01	2.193E-02	-0.209
	+	83.78		2.189E-01	1.437E-01	1.817E-01	1.475E-02	1.205
		94.90		6.418E-01	2.277E-01	3.679E-01	3.226E-02	1.745

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		-1.570E+00	1.850E+00	2.897E+00	3.785E-01	-0.542
		144.24		-1.968E-01	7.790E-01	1.232E+00	1.384E-01	-0.160
		154.21		1.765E-01	4.334E-01	7.063E-01	7.100E-02	0.250
	+	269.46		5.547E-01	3.853E-01	3.720E-01	2.960E-02	1.491
		323.87	*	3.211E-02	8.448E-01	1.211E+00	2.066E-01	0.027
	+	338.28		9.438E+00	2.363E+00	2.821E+00	3.164E-01	3.345
		445.03		2.316E-02	2.667E+00	4.487E+00	4.757E-01	0.005
		79.80		-3.148E-01	1.660E+00	2.000E+00	4.280E-01	-0.157
		236.00		9.617E-01	3.150E-01	5.001E-01	5.877E-02	1.923
		256.20	*	2.758E-02	3.981E-01	6.641E-01	9.909E-02	0.042
		286.10		1.498E-01	1.680E+00	2.783E+00	3.500E-01	0.054
	+	299.80		1.894E+00	2.073E+00	2.938E+00	4.984E-01	0.644
TH-227		304.40		-9.661E-01	2.350E+00	3.272E+00	5.861E-01	-0.295
		334.20		2.429E-01	3.105E+00	4.144E+00	7.773E-01	0.059
		79.80		-3.148E-01	1.660E+00	2.000E+00	4.335E-01	-0.157
	+	94.00		1.837E+01	5.053E+00	4.078E+00	8.886E-01	4.506
		236.00		9.617E-01	3.110E-01	5.001E-01	5.266E-02	1.923
		256.20	*	2.758E-02	3.981E-01	6.641E-01	1.176E-01	0.042
		286.10		1.498E-01	1.687E+00	2.783E+00	2.791E+00	0.054
	+	299.80		1.894E+00	2.073E+00	2.938E+00	4.984E-01	0.644
		304.40		-9.661E-01	2.350E+00	3.272E+00	5.861E-01	-0.295
		334.20		2.429E-01	3.105E+00	4.144E+00	7.773E-01	0.059
	+	85.43		3.277E-01	2.151E-01	2.765E-01	2.220E-02	1.185
	+	88.47		3.133E-01	1.188E-01	1.762E-01	1.400E-02	1.778
PA-231		100.00		1.667E-02	1.815E-01	2.925E-01	2.762E-02	0.057
		193.63	*	7.092E-02	5.050E-01	8.611E-01	6.812E-02	0.082
		210.97		8.785E-01	8.775E-01	1.370E+00	1.087E-01	0.641
		283.67	*	-5.682E-01	1.665E+00	2.697E+00	3.953E-01	-0.211
TH-231	+	301.29		7.575E-01	8.238E-01	1.196E+00	1.372E-01	0.633
		81.07		-5.554E-02	2.210E-01	2.652E-01	2.193E-02	-0.209
	+	83.78		2.189E-01	1.437E-01	1.817E-01	1.475E-02	1.205
		94.90		6.418E-01	2.277E-01	3.679E-01	3.226E-02	1.745
U-231		122.32		-1.570E+00	1.850E+00	2.897E+00	3.785E-01	-0.542
		144.24		-1.968E-01	7.790E-01	1.232E+00	1.384E-01	-0.160
		154.21		1.765E-01	4.334E-01	7.063E-01	7.100E-02	0.250
	+	269.46		5.547E-01	3.853E-01	3.720E-01	2.960E-02	1.491
		323.87	*	3.211E-02	8.448E-01	1.211E+00	2.066E-01	0.027
	+	338.28		9.438E+00	2.363E+00	2.821E+00	3.164E-01	3.345
		445.03		2.316E-02	2.667E+00	4.487E+00	4.757E-01	0.005
	+	84.21		7.694E+00	5.049E+00	6.413E+00	5.191E-01	1.200
	+	92.29		1.481E+01	2.795E+00	3.990E+00	3.363E-01	3.712
		95.87	*	-2.005E-01	8.554E-01	1.254E+00	1.116E-01	-0.160
		108.00		-1.712E+00	1.694E+00	2.667E+00	2.814E-01	-0.642
	+	75.28		1.730E+01	4.067E+00	5.202E+00	7.978E-01	3.326
PA-233	+	86.59		6.839E+00	2.501E+00	2.604E+00	6.930E-01	2.627
	+	300.12		5.280E-01	5.759E-01	8.282E-01	1.180E-01	0.637
		311.98	*	2.430E-03	7.172E-02	1.177E-01	8.986E-03	0.021
		340.50		2.197E+00	9.840E-01	1.391E+00	3.237E-01	1.580
		398.62		-1.537E+00	2.623E+00	4.015E+00	1.039E+00	-0.383

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		-6.638E-01	2.090E+00	3.185E+00	6.584E-01	-0.208
		63.00		4.598E+00	1.577E+00	1.880E+00	2.995E-01	2.446
		94.67		6.741E-01	1.842E-01	2.832E-01	3.536E-02	2.380
		98.44		8.349E-02	1.025E-01	1.458E-01	8.151E-02	0.572
		99.86		-1.013E-02	4.619E-01	7.418E-01	6.992E-02	-0.014
		111.00		2.121E-02	1.951E-01	3.213E-01	4.457E-02	0.066
		131.20		6.404E-02	1.235E-01	1.832E-01	2.152E-02	0.349
		152.70		-1.644E-01	3.606E-01	5.665E-01	9.894E-02	-0.290
		186.00		4.586E+00	2.587E+00	2.978E+00	9.238E-01	1.540
		226.40		8.995E-02	4.284E-01	7.246E-01	9.245E-02	0.124
		227.20		5.796E-02	4.678E-01	7.886E-01	6.248E-02	0.073
		248.90		-7.028E-01	8.882E-01	1.404E+00	3.107E-01	-0.501
		293.70		5.773E+00	1.483E+00	1.695E+00	2.847E-01	3.406
		369.80		-6.129E-01	1.027E+00	1.588E+00	3.334E-01	-0.386
		568.70		1.283E-01	1.371E+00	2.207E+00	1.647E-01	0.058
		569.50		1.121E-01	3.627E-01	5.905E-01	4.412E-02	0.190
		574.00		-1.113E+00	1.878E+00	2.969E+00	2.229E-01	-0.375
		699.00		-1.137E+00	1.049E+00	1.540E+00	2.907E-01	-0.738
		706.10		2.247E-01	1.421E+00	2.315E+00	1.030E+00	0.097
		733.00		-3.243E-02	5.779E-01	7.966E-01	1.753E-01	-0.041
		742.81		-1.226E-01	1.866E+00	2.982E+00	2.003E+00	-0.041
		796.30		8.882E-01	1.182E+00	2.032E+00	5.457E-01	0.437
		805.60		3.578E-01	1.369E+00	2.318E+00	7.064E-01	0.154
		819.60		-1.306E+00	1.814E+00	2.765E+00	1.047E+00	-0.472
		826.30		-3.184E-01	1.151E+00	1.867E+00	8.330E-01	-0.171
		831.60		-1.896E-01	8.395E-01	1.374E+00	4.071E-01	-0.138
		876.40		3.522E-01	1.206E+00	1.948E+00	2.001E+00	0.181
		880.51		-1.793E-01	3.774E-01	6.030E-01	4.596E-02	-0.297
		883.24		-3.786E-02	3.937E-01	6.463E-01	4.337E-01	-0.059
		899.00		-1.921E-01	1.206E+00	1.969E+00	8.566E-01	-0.098
		925.00		1.247E-03	1.533E+00	2.529E+00	1.871E-01	0.000
		926.50		5.048E-03	2.326E-01	3.843E-01	9.563E-02	0.013
		946.00	*	1.589E-01	4.177E-01	7.050E-01	1.283E-01	0.225
		949.00		2.263E-01	6.385E-01	1.050E+00	7.638E-02	0.216
		980.50		-4.574E-01	1.002E+00	1.544E+00	1.095E-01	-0.296
		1394.10		-5.666E-01	1.591E+00	2.452E+00	1.588E+00	-0.231
PA-234M		766.42		1.295E+01	1.736E+01	2.815E+01	1.426E+01	0.460
		1001.03	*	1.346E+01	1.054E+01	1.167E+01	9.999E-01	1.154
U-235	+	89.95		3.145E+00	1.514E+00	1.703E+00	5.232E-01	1.847
		93.35		5.716E+00	1.868E+00	1.515E+00	4.244E-01	3.773
		105.00		1.238E+00	1.094E+00	1.764E+00	5.348E-01	0.702
		143.76	*	2.426E-02	2.360E-01	3.784E-01	6.985E-02	0.064
NP-236	+	163.35		-4.220E-02	5.242E-01	8.105E-01	1.529E-01	-0.052
		185.71		1.698E-01	8.112E-02	1.105E-01	8.723E-03	1.537
		205.31		5.067E-01	6.164E-01	9.331E-01	1.752E-01	0.543
		94.67		5.158E-01	1.323E-01	2.152E-01	1.880E-02	2.397
		98.44		6.309E-02	6.927E-02	1.103E-01	1.018E-02	0.572
		111.00		1.605E-02	1.476E-01	2.430E-01	2.669E-02	0.066
		160.31	*	-6.220E-03	8.626E-02	1.376E-01	1.173E-02	-0.045

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		1.374E-01	1.530E-01	2.528E-01	2.372E-02	0.543
		117.00	*	-1.599E-01	2.000E-01	3.157E-01	3.747E-02	-0.506
	+	209.75		2.237E+00	1.136E+00	1.507E+00	1.195E-01	1.484
		228.18		1.975E-02	2.413E-01	4.059E-01	3.216E-02	0.049
	+	277.60		3.010E-01	2.771E-01	3.328E-01	2.563E-02	0.904
AM-241		334.30		4.280E-03	1.754E+00	2.325E+00	1.634E-01	0.002
		59.54	*	7.842E-02	6.937E-02	1.101E-01	1.120E-02	0.712
CM-243		99.55		1.413E-01	1.574E-01	2.601E-01	2.440E-02	0.543
		103.76	*	1.707E-04	9.303E-02	1.533E-01	1.526E-02	0.001
		117.00		-1.644E-01	2.058E-01	3.248E-01	3.855E-02	-0.506
	+	209.75		2.205E+00	1.119E+00	1.485E+00	1.178E-01	1.484
		228.18		1.995E-02	2.438E-01	4.102E-01	3.249E-02	0.049
AM-246	+	277.60		3.035E-01	2.793E-01	3.355E-01	2.584E-02	0.904
		798.80		7.807E-03	1.808E-01	3.031E-01	2.420E-02	0.026
		1036.00		-1.114E-01	3.975E-01	6.336E-01	4.256E-02	-0.176
		1062.04		6.485E-02	3.372E-01	5.566E-01	3.627E-02	0.117
		1078.86	*	-3.737E-02	2.032E-01	3.256E-01	2.077E-02	-0.115
CM-247	+	278.00		1.248E+00	1.149E+00	1.379E+00	1.062E-01	0.905
		287.40		1.219E+00	1.340E+00	2.300E+00	1.752E-01	0.530
		402.60	*	-1.383E-02	4.403E-02	6.922E-02	4.122E-03	-0.200
CF-249		252.85		5.404E-01	9.156E-01	1.563E+00	1.227E-01	0.346
		333.44		6.040E-02	2.539E-01	3.117E-01	2.195E-02	0.194
		387.95	*	2.537E-02	5.123E-02	8.458E-02	5.023E-03	0.300
CF-251		176.60	*	7.366E-02	1.354E-01	2.202E-01	1.733E-02	0.334
		227.00		-8.488E-03	4.177E-01	7.001E-01	5.547E-02	-0.012
		285.00		-1.298E+00	1.948E+00	3.105E+00	2.372E-01	-0.418

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     *
*               GEL Laboratories LLC   *
*               2040 Savage Road      *
*               Charleston, SC 29414  *
*                                     *
*****
*
*               DETECTOR DATA
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395010
* Acquisition date   : 2-FEB-2010 09:15:16 Detector SN#      :
* Detector ID        : GAM13          Sensitivity           : 5.000
* Geometry           : CAN            Energy tolerance      : 1.500
* Elapsed live time  : 0 02:00:00.00 Abundance limit       : 75.000
* Elapsed real time  : 0 02:00:01.84 Half life ratio       : 8.000
*****
*
*               SAMPLE DATA
*
* Sample date       : 19-JAN-2010 12:00:00 Nuclide Library  : SOLID
* Sample ID        : G245395010      Analyst initials: MXR1
* Batch Number     : 944966          Sample Quantity   : 1.3708E+02 GRAM
* Recovery         : 1.00000         Carrier Weight    : 0.00000
*****
*
*               QC DATA
*
* Standard Weight   : 0.00000
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22 MS Isotope       :
* MSD DPM           : 0.000          MSD Isotope         :
* LCS DPM           : 0.000          LCS Isotope         :
* LCSD DPM          : 0.000          LCSD Isotope        :
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.605E+01	2.938E+00	5.886E-01	0.000E+00
CD-109	3.548E+00	9.151E-01	1.073E+00	0.000E+00
SN-126	3.494E-01	9.011E-02	1.056E-01	0.000E+00
TL-208	4.909E-01	1.093E-01	7.748E-02	0.000E+00
BI-210	1.442E+00	7.479E-01	8.400E-01	0.000E+00
PB-210	1.442E+00	7.479E-01	8.400E-01	0.000E+00
PO-210	1.442E+00	7.458E-01	8.400E-01	0.000E+00
BI-211	3.414E+00	5.587E-01	3.866E-01	0.000E+00
PB-212	1.703E+00	1.947E-01	1.038E-01	0.000E+00
PO-212	1.703E+00	1.947E-01	1.038E-01	0.000E+00
BI-214	1.279E+00	2.302E-01	1.422E-01	0.000E+00
PB-214	1.188E+00	2.036E-01	1.348E-01	0.000E+00
PO-214	1.188E+00	2.036E-01	1.348E-01	0.000E+00
PO-216	1.703E+00	1.947E-01	1.038E-01	0.000E+00
PO-218	1.188E+00	2.036E-01	1.348E-01	0.000E+00
RA-224	4.358E+00	1.300E+00	1.181E+00	0.000E+00
RA-226	1.279E+00	2.302E-01	1.422E-01	0.000E+00
AC-228	1.764E+00	4.292E-01	3.175E-01	0.000E+00
RA-228	1.764E+00	4.292E-01	3.175E-01	0.000E+00
TH-228	1.726E+00	1.975E-01	1.052E-01	0.000E+00
TH-230	1.279E+00	2.302E-01	1.422E-01	0.000E+00
TH-232	1.764E+00	4.292E-01	3.175E-01	0.000E+00
TH-234	3.945E+00	1.372E+00	1.148E+00	0.000E+00
U-234	1.279E+00	2.302E-01	1.422E-01	0.000E+00
NP-237	1.026E+00	3.362E-01	3.091E-01	0.000E+00
U-238	3.945E+00	1.372E+00	1.148E+00	0.000E+00
AM-243	3.303E-01	6.403E-02	6.659E-02	0.000E+00
ANH-511	1.440E-01	7.392E-02	6.095E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	6.191E-02	3.672E-01	6.482E-01	0.000E+00	NOT IDENT.
NA-22	3.354E-02	6.054E-02	1.073E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.469E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.592E-02	3.693E-02	6.892E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.224E-02	6.019E-02	0.000E+00	FAIL ABUN
SC-46	-3.545E-03	5.290E-02	9.009E-02	0.000E+00	FAIL ABUN
V-48	7.287E-02	8.593E-02	1.546E-01	0.000E+00	NOT IDENT.
CR-51	-2.925E-01	4.042E-01	6.690E-01	0.000E+00	NOT IDENT.
MN-52	-3.410E-01	2.667E-01	3.825E-01	0.000E+00	NOT IDENT.
MN-54	-5.100E-02	4.981E-02	7.982E-02	0.000E+00	NOT IDENT.
CO-56	1.557E-02	5.205E-02	9.129E-02	0.000E+00	NOT IDENT.
CO-57	-2.743E-02	2.649E-02	4.413E-02	0.000E+00	NOT IDENT.
CO-58	-5.941E-02	5.241E-02	8.334E-02	0.000E+00	NOT IDENT.
FE-59	-2.103E-01	1.273E-01	1.835E-01	0.000E+00	NOT IDENT.
CO-60	-3.053E-02	5.607E-02	9.078E-02	0.000E+00	NOT IDENT.
ZN-65	-6.873E-02	1.503E-01	2.041E-01	0.000E+00	NOT IDENT.
GE-68	1.895E+00	1.691E+00	3.059E+00	0.000E+00	NOT IDENT.
AS-73	1.990E-01	2.397E-01	4.424E-01	0.000E+00	NOT IDENT.
AS-74	4.581E-02	1.102E-01	1.931E-01	0.000E+00	NOT IDENT.
SE-75	1.291E-02	5.002E-02	7.844E-02	0.000E+00	NOT IDENT.
BR-77	-6.293E+00	8.830E+00	1.462E+01	0.000E+00	FAIL ABUN
SR-82	-5.653E-01	4.544E-01	7.166E-01	0.000E+00	NOT IDENT.
RB-83	-6.279E-02	8.285E-02	1.368E-01	0.000E+00	NOT IDENT.
RB-84	-8.929E-02	9.333E-02	1.485E-01	0.000E+00	NOT IDENT.
KR-85	1.119E+01	1.037E+01	1.679E+01	0.000E+00	NOT IDENT.
SR-85	5.662E-02	5.248E-02	8.497E-02	0.000E+00	NOT IDENT.
RB-86	1.449E+00	1.026E+00	1.889E+00	0.000E+00	NOT IDENT.
Y-88	3.603E-02	4.100E-02	7.588E-02	0.000E+00	NOT IDENT.
ZR-88	-3.133E-02	3.761E-02	6.036E-02	0.000E+00	NOT IDENT.
Y-91	4.933E+00	2.409E+01	4.192E+01	0.000E+00	NOT IDENT.
NB-94	4.362E-02	4.580E-02	8.119E-02	0.000E+00	NOT IDENT.
NB-95	6.455E-02	5.742E-02	1.055E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.483E-01	2.503E-01	0.000E+00	NOT IDENT.
ZR-95	-6.874E-02	9.881E-02	1.560E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.980E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.652E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.801E+00	1.132E+01	1.840E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.347E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.519E-02	3.444E-02	6.107E-02	0.000E+00	NOT IDENT.
RH-102	-3.498E-03	3.446E-02	5.995E-02	0.000E+00	NOT IDENT.
RU-103	-1.821E-02	4.608E-02	7.821E-02	0.000E+00	FAIL ABUN
RH-106	-3.145E-01	4.140E-01	6.655E-01	0.000E+00	FAIL ABUN
RU-106	-3.145E-01	4.128E-01	6.655E-01	0.000E+00	FAIL ABUN
AG-108M	-1.317E-02	3.717E-02	6.434E-02	0.000E+00	NOT IDENT.
AG-110M	-1.034E-02	4.738E-02	7.895E-02	0.000E+00	NOT IDENT.
IN-111	3.998E-01	8.938E-01	1.427E+00	0.000E+00	NOT IDENT.
IN-113M	-3.380E-02	5.483E-02	8.925E-02	0.000E+00	NOT IDENT.
SN-113	-3.380E-02	5.483E-02	8.925E-02	0.000E+00	NOT IDENT.
IN-114M	-2.682E-02	2.123E-01	3.143E-01	0.000E+00	NOT IDENT.
CD-115	1.371E+00	9.296E+00	1.622E+01	0.000E+00	NOT IDENT.
SN-117M	9.316E-03	5.424E-02	9.342E-02	0.000E+00	NOT IDENT.
SB-122	4.188E-01	1.873E+00	3.261E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.285E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.711E-03	2.999E-02	5.140E-02	0.000E+00	NOT IDENT.
I-124	1.747E-02	7.974E-01	1.180E+00	0.000E+00	NOT IDENT.
SB-124	-4.819E-04	7.962E-02	1.312E-01	0.000E+00	FAIL ABUN
SB-125	1.745E-02	1.089E-01	1.941E-01	0.000E+00	FAIL ABUN
TE-125M	-9.196E+00	9.222E+00	1.559E+01	0.000E+00	NOT IDENT.
I-126	4.162E-02	2.129E-01	3.639E-01	0.000E+00	NOT IDENT.
SB-126	5.001E-02	1.961E-01	2.902E-01	0.000E+00	FAIL ABUN
SB-127	7.317E-01	1.490E+00	2.583E+00	0.000E+00	NOT IDENT.
XE-127	2.061E-02	4.750E-02	8.405E-02	0.000E+00	NOT IDENT.
I-131	6.803E-02	1.198E-01	2.100E-01	0.000E+00	NOT IDENT.
TE-132	2.478E-02	5.573E-01	9.929E-01	0.000E+00	NOT IDENT.
BA-133	-2.815E-02	5.716E-02	8.125E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.849E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.865E-02	5.841E-02	1.053E-01	0.000E+00	NOT IDENT.
CS-135	2.118E-01	1.716E-01	3.060E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.534E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	9.016E-02	1.470E-01	2.572E-01	0.000E+00	FAIL ABUN
BA-137M	3.153E-03	4.604E-02	7.811E-02	0.000E+00	NOT IDENT.
CS-137	3.333E-03	4.867E-02	8.257E-02	0.000E+00	NOT IDENT.
CE-139	-2.653E-02	3.140E-02	5.139E-02	0.000E+00	NOT IDENT.
BA-140	-1.700E-01	2.987E-01	4.891E-01	0.000E+00	NOT IDENT.
LA-140	-2.565E-02	8.011E-02	1.164E-01	0.000E+00	FAIL ABUN
CE-141	-1.755E-02	6.287E-02	1.071E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.207E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	1.374E-01	2.323E-01	3.691E-01	0.000E+00	NOT IDENT.
PM-144	2.032E-02	4.621E-02	7.974E-02	0.000E+00	NOT IDENT.
PR-144	1.376E+00	3.129E+00	5.400E+00	0.000E+00	NOT IDENT.
PM-146	4.536E-02	5.251E-02	9.610E-02	0.000E+00	NOT IDENT.
ND-147	7.836E-01	6.693E-01	1.218E+00	0.000E+00	FAIL ABUN
PM-149	1.350E+00	6.656E+01	1.160E+02	0.000E+00	NOT IDENT.
EU-152	4.493E-02	1.269E-01	1.947E-01	0.000E+00	NOT IDENT.
GD-153	-5.053E-02	8.132E-02	1.237E-01	0.000E+00	FAIL ABUN
EU-154	9.735E-02	1.696E-01	3.008E-01	0.000E+00	NOT IDENT.
EU-155	1.240E-01	1.035E-01	1.896E-01	0.000E+00	FAIL ABUN
TB-160	-6.966E-02	1.864E-01	3.109E-01	0.000E+00	FAIL ABUN
HO-166M	-3.160E-02	7.662E-02	1.244E-01	0.000E+00	FAIL ABUN
TM-171	1.134E+01	1.732E+01	2.916E+01	0.000E+00	NOT IDENT.
LU-176	1.177E-02	2.607E-02	4.613E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.382E+00	1.949E+00	0.000E+00	FAIL ABUN
LU-177M	-3.091E-01	2.144E-01	3.268E-01	0.000E+00	FAIL ABUN
HF-181	4.181E-02	4.901E-02	8.955E-02	0.000E+00	NOT IDENT.
W-181	-1.631E-01	2.155E-01	3.457E-01	0.000E+00	NOT IDENT.
TA-182	-1.134E-01	2.788E-01	4.662E-01	0.000E+00	FAIL ABUN
RE-183	-4.855E-02	1.204E-01	1.962E-01	0.000E+00	FAIL ABUN
RE-184	1.433E-01	2.379E-01	4.300E-01	0.000E+00	NOT IDENT.
OS-185	-4.480E-03	5.207E-02	8.765E-02	0.000E+00	NOT IDENT.
RE-188	2.257E-01	1.793E-01	3.208E-01	0.000E+00	NOT IDENT.
W-188	-6.155E+00	8.824E+00	1.280E+01	0.000E+00	FAIL ABUN
IR-192	2.249E-02	3.835E-02	6.800E-02	0.000E+00	FAIL ABUN
AU-195	2.193E-01	2.141E-01	3.822E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.415E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.144E+00	5.514E+00	9.465E+00	0.000E+00	NOT IDENT.
TL-202	4.593E-02	7.000E-02	1.278E-01	0.000E+00	NOT IDENT.
HG-203	5.386E-03	4.763E-02	7.353E-02	0.000E+00	FAIL ABUN
BI-207	3.065E-02	7.391E-02	1.276E-01	0.000E+00	FAIL ABUN
TL-207	3.211E-02	8.279E-01	1.251E+00	0.000E+00	FAIL ABUN
PO-209	-2.622E+00	1.009E+01	1.693E+01	0.000E+00	NOT IDENT.
PB-211	-1.404E+00	1.403E+00	1.723E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.794E-01	8.605E-01	0.000E+00	FAIL ABUN
PO-215	3.211E-02	8.279E-01	1.251E+00	0.000E+00	FAIL ABUN
RN-219	2.080E-01	4.724E-01	8.145E-01	0.000E+00	FAIL ABUN
RN-220	-9.469E+00	3.204E+01	5.418E+01	0.000E+00	NOT IDENT.
RA-223	3.211E-02	8.279E-01	1.251E+00	0.000E+00	FAIL ABUN
AC-227	2.758E-02	3.902E-01	6.888E-01	0.000E+00	FAIL ABUN
TH-227	2.758E-02	3.902E-01	6.888E-01	0.000E+00	FAIL ABUN
TH-229	7.092E-02	4.949E-01	8.978E-01	0.000E+00	FAIL ABUN
PA-231	-5.682E-01	1.631E+00	2.792E+00	0.000E+00	FAIL ABUN
TH-231	3.211E-02	8.279E-01	1.251E+00	0.000E+00	FAIL ABUN
U-231	-2.005E-01	8.383E-01	1.325E+00	0.000E+00	FAIL ABUN
PA-233	2.430E-03	7.028E-02	1.216E-01	0.000E+00	FAIL ABUN
PA-234	1.589E-01	4.094E-01	7.131E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	1.033E+01	1.179E+01	0.000E+00	FAIL ABUN
U-235	2.426E-02	2.313E-01	3.966E-01	0.000E+00	FAIL ABUN
NP-236	-6.220E-03	8.453E-02	1.440E-01	0.000E+00	NOT IDENT.
NP-239	-1.599E-01	1.960E-01	3.322E-01	0.000E+00	FAIL ABUN
AM-241	7.842E-02	6.799E-02	1.173E-01	0.000E+00	NOT IDENT.
CM-243	1.707E-04	9.117E-02	1.617E-01	0.000E+00	FAIL ABUN
AM-246	-3.737E-02	1.991E-01	3.285E-01	0.000E+00	NOT IDENT.
CM-247	-1.383E-02	4.315E-02	7.118E-02	0.000E+00	FAIL ABUN
CF-249	2.537E-02	5.021E-02	8.704E-02	0.000E+00	NOT IDENT.
CF-251	7.366E-02	1.327E-01	2.300E-01	0.000E+00	NOT IDENT.

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*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395010.CNF;1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:15:16.
Sample ID        : G245395010 Sample quantity   : 1.37080E+02 GRAM
Detector name    : GAM13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.84 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity       : 5.00000
Batch ID        : 944966 Detector SN#       :
Matrix Spike ID : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1462	10.67*	1.041E+00	3.605E+01	3.605E+01	8.32
CD-109	88.03	342	3.72*	7.249E+00	3.475E+00	3.548E+00	26.32
SN-126	64.28	405	9.60	7.391E+00	1.561E+00	1.561E+00	34.15
	86.94	342	8.90	7.249E+00	1.452E+00	1.452E+00	48.26
	87.57	342	37.00*	7.249E+00	3.494E-01	3.494E-01	26.32
TL-208	277.35	66	6.80	4.227E+00	6.242E-01	6.242E-01	92.47
	510.84	133	21.60	2.536E+00	6.666E-01	6.666E-01	53.04
	583.14	341	84.20*	2.257E+00	4.909E-01	4.909E-01	22.72
	860.37	73	12.46	1.605E+00	9.932E-01	9.932E-01	57.83
BI-210	46.50	155	4.05*	7.295E+00	1.440E+00	1.442E+00	52.92
PB-210	46.50	155	4.05*	7.295E+00	1.440E+00	1.442E+00	52.92
PO-210	46.50	155	4.05*	7.295E+00	1.440E+00	1.442E+00	52.77
BI-211	72.87	-----	1.27	7.369E+00	-----	Line Not Found	-----
	351.07	564	12.94*	3.497E+00	3.414E+00	3.414E+00	16.70
PB-212	74.81	586	10.70	7.359E+00	2.037E+00	2.037E+00	21.88
	77.11	947	18.00	7.344E+00	1.963E+00	1.963E+00	14.72
	87.30	342	8.00	7.249E+00	1.616E+00	1.616E+00	28.16
	238.63	1307	44.60*	4.715E+00	1.703E+00	1.703E+00	11.67
	300.09	51	3.41	3.978E+00	1.022E+00	1.022E+00	108.56
PO-212	74.81	586	10.70	7.359E+00	2.037E+00	2.037E+00	21.88
	77.11	947	18.00	7.344E+00	1.963E+00	1.963E+00	14.72
	87.30	342	8.00	7.249E+00	1.616E+00	1.616E+00	28.16
	115.19	-----	0.60	6.822E+00	-----	Line Not Found	-----
	238.63	1307	44.60*	4.715E+00	1.703E+00	1.703E+00	11.67
	300.09	51	3.41	3.978E+00	1.022E+00	1.022E+00	108.56
BI-214	609.31	469	46.30*	2.170E+00	1.279E+00	1.279E+00	18.37
	1120.29	179	15.10	1.287E+00	2.517E+00	2.517E+00	32.87
	1764.49	60	15.80	8.985E-01	1.153E+00	1.153E+00	55.84
PB-214	74.81	586	6.21	7.359E+00	3.510E+00	3.510E+00	21.12
	77.11	947	10.50	7.344E+00	3.364E+00	3.365E+00	16.57
	87.30	342	4.67	7.249E+00	2.768E+00	2.768E+00	27.43
	241.98	294	7.49	4.674E+00	2.298E+00	2.298E+00	30.96

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	340	19.20	4.029E+00	1.203E+00	1.203E+00	21.77
	351.92	564	37.20*	3.497E+00	1.188E+00	1.188E+00	17.49
	74.81	586	6.21	7.359E+00	3.510E+00	3.510E+00	21.12
	77.11	947	10.50	7.344E+00	3.364E+00	3.365E+00	16.57
	87.30	342	4.67	7.249E+00	2.768E+00	2.768E+00	27.43
PO-216	241.98	294	7.49	4.674E+00	2.298E+00	2.298E+00	30.96
	295.21	340	19.20	4.029E+00	1.203E+00	1.203E+00	21.77
	351.92	564	37.20*	3.497E+00	1.188E+00	1.188E+00	17.49
	74.81	586	10.70	7.359E+00	2.037E+00	2.037E+00	21.88
	77.11	947	18.00	7.344E+00	1.963E+00	1.963E+00	14.72
PO-218	87.30	342	8.00	7.249E+00	1.616E+00	1.616E+00	28.16
	238.63	1307	44.60*	4.715E+00	1.703E+00	1.703E+00	11.67
	300.09	51	3.41	3.978E+00	1.022E+00	1.022E+00	108.56
	74.81	586	6.21	7.359E+00	3.510E+00	3.510E+00	21.12
	77.11	947	10.50	7.344E+00	3.364E+00	3.365E+00	16.57
RA-224	87.30	342	4.67	7.249E+00	2.768E+00	2.768E+00	27.43
	241.98	294	7.49	4.674E+00	2.298E+00	2.298E+00	30.96
	295.21	340	19.20	4.029E+00	1.203E+00	1.203E+00	21.77
	351.92	564	37.20*	3.497E+00	1.188E+00	1.188E+00	17.49
	240.98	294	3.95*	4.674E+00	4.358E+00	4.358E+00	30.45
AC-228	609.31	469	46.30*	2.170E+00	1.279E+00	1.279E+00	18.37
	1120.29	179	15.10	1.287E+00	2.517E+00	2.517E+00	32.87
	1764.49	60	15.80	8.985E-01	1.153E+00	1.153E+00	55.84
	338.32	340	11.40	3.611E+00	2.260E+00	2.260E+00	46.67
	911.07	273	27.70*	1.529E+00	1.764E+00	1.764E+00	24.83
RA-228	969.11	157	16.60	1.452E+00	1.785E+00	1.785E+00	42.95
	338.32	340	11.40	3.611E+00	2.260E+00	2.260E+00	46.67
	911.07	273	27.70*	1.529E+00	1.764E+00	1.764E+00	24.83
	969.11	157	16.60	1.452E+00	1.785E+00	1.785E+00	42.95
	74.81	586	10.70	7.359E+00	2.037E+00	2.066E+00	19.81
TH-228	77.11	947	18.00	7.344E+00	1.963E+00	1.990E+00	14.72
	87.30	342	8.00	7.249E+00	1.616E+00	1.638E+00	26.32
	238.63	1307	44.60*	4.715E+00	1.703E+00	1.726E+00	11.67
	300.09	51	3.41	3.978E+00	1.022E+00	1.036E+00	123.25
	609.31	469	46.30*	2.170E+00	1.279E+00	1.279E+00	18.37
TH-230	1120.29	179	15.10	1.287E+00	2.517E+00	2.517E+00	32.87
	1764.49	60	15.80	8.985E-01	1.153E+00	1.153E+00	55.84
	338.32	340	11.40	3.611E+00	2.260E+00	2.260E+00	23.44
	911.07	273	27.70*	1.529E+00	1.764E+00	1.764E+00	24.83
	969.11	157	16.60	1.452E+00	1.785E+00	1.785E+00	42.95
TH-234	63.29	405	3.80*	7.391E+00	3.945E+00	3.945E+00	35.49
	92.38	675	5.41	7.181E+00	4.755E+00	4.755E+00	24.68
	609.31	469	46.30*	2.170E+00	1.279E+00	1.279E+00	18.37
	1120.29	179	15.10	1.287E+00	2.517E+00	2.517E+00	32.87
	1764.49	60	15.80	8.985E-01	1.153E+00	1.153E+00	55.84
NP-237	86.50	342	12.60*	7.249E+00	1.026E+00	1.026E+00	33.44
	95.87	-----	2.60	7.135E+00	-----	Line Not Found	-----
	63.29	405	3.80*	7.391E+00	3.945E+00	3.945E+00	35.49
	92.38	675	5.41	7.181E+00	4.755E+00	4.755E+00	18.87

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	586	66.00*	7.359E+00	3.303E-01	3.303E-01	19.78
	86.72	342	0.34	7.249E+00	3.847E+01	3.847E+01	26.32
	117.66	-----	0.55	6.778E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.323E+00	-----	Line Not Found	-----
ANH-511	511.00	133	100.00*	2.536E+00	1.440E-01	1.440E-01	52.38

Flag: "*" = Keyline

Total number of lines in spectrum 34
Number of unidentified lines 2
Number of lines tentatively identified by NID 32 94.12%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.605E+01	3.605E+01	0.300E+01	8.32	
CD-109	464.00D	1.02	3.475E+00	3.548E+00	0.934E+00	26.32	
SN-126	1.00E+05Y	1.00	3.494E-01	3.494E-01	0.919E-01	26.32	
TL-208	1.41E+10Y	1.00	4.909E-01	4.909E-01	1.115E-01	22.72	
BI-210	22.26Y	1.00	1.440E+00	1.442E+00	0.763E+00	52.92	
PB-210	22.26Y	1.00	1.440E+00	1.442E+00	0.763E+00	52.92	
PO-210	22.26Y	1.00	1.440E+00	1.442E+00	0.761E+00	52.77	
BI-211	7.04E+08Y	1.00	3.414E+00	3.414E+00	0.570E+00	16.70	
PB-212	1.41E+10Y	1.00	1.703E+00	1.703E+00	0.199E+00	11.67	
PO-212	1.41E+10Y	1.00	1.703E+00	1.703E+00	0.199E+00	11.67	
BI-214	1600.00Y	1.00	1.279E+00	1.279E+00	0.235E+00	18.37	
PB-214	1600.00Y	1.00	1.188E+00	1.188E+00	0.208E+00	17.49	
PO-214	1600.00Y	1.00	1.188E+00	1.188E+00	0.208E+00	17.49	
PO-216	1.41E+10Y	1.00	1.703E+00	1.703E+00	0.199E+00	11.67	
PO-218	1600.00Y	1.00	1.188E+00	1.188E+00	0.208E+00	17.49	
RA-224	1.41E+10Y	1.00	4.358E+00	4.358E+00	1.327E+00	30.45	
RA-226	1600.00Y	1.00	1.279E+00	1.279E+00	0.235E+00	18.37	
AC-228	1.41E+10Y	1.00	1.764E+00	1.764E+00	0.438E+00	24.83	
RA-228	1.41E+10Y	1.00	1.764E+00	1.764E+00	0.438E+00	24.83	
TH-228	1.91Y	1.01	1.703E+00	1.726E+00	0.201E+00	11.67	
TH-230	4.47E+09Y	1.00	1.279E+00	1.279E+00	0.235E+00	18.37	
TH-232	1.41E+10Y	1.00	1.764E+00	1.764E+00	0.438E+00	24.83	
TH-234	4.47E+09Y	1.00	3.945E+00	3.945E+00	1.400E+00	35.49	
U-234	4.47E+09Y	1.00	1.279E+00	1.279E+00	0.235E+00	18.37	
NP-237	2.14E+06Y	1.00	1.026E+00	1.026E+00	0.343E+00	33.44	
U-238	4.47E+09Y	1.00	3.945E+00	3.945E+00	1.400E+00	35.49	
AM-243	7380.00Y	1.00	3.303E-01	3.303E-01	0.653E-01	19.78	
ANH-511	1.00E+09Y	1.00	1.440E-01	1.440E-01	0.754E-01	52.38	

Total Activity : 8.263E+01 8.273E+01

Grand Total Activity : 8.263E+01 8.273E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	83.98	144	667	1.38	167.73	164	28	2.00E-02	65.1	7.28E+00	T
4	89.83	224	539	1.09	179.44	164	28	3.11E-02	37.1	7.22E+00	T
0	129.50	121	466	1.09	258.80	255	9	1.69E-02	66.8	6.56E+00	T
0	185.63	185	407	1.18	371.10	367	10	2.57E-02	47.1	5.53E+00	T
0	208.90	136	318	0.96	417.63	413	9	1.89E-02	50.1	5.15E+00	T
0	270.11	119	346	1.52	540.09	532	14	1.65E-02	69.0	4.31E+00	T
0	327.91	67	267	1.17	655.72	650	11	9.32E-03	97.4	3.70E+00	T
0	462.94	94	124	1.40	925.85	920	11	1.31E-02	50.2	2.77E+00	T
0	727.24	119	102	1.52	1454.64	1449	12	1.65E-02	38.6	1.86E+00	T
0	1002.17	58	88	1.46	2004.71	1997	16	8.10E-03	77.8	1.41E+00	T
0	1587.93	30	17	2.02	3176.78	3169	14	4.23E-03	69.3	9.75E-01	
0	1847.25	22	4	1.64	3695.70	3687	14	3.06E-03	56.1	8.67E-01	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395010.CNF;1  *
* Acquisition date   : 2-FEB-2010 09:15:16.  Detector SN#      :             *
* Detector ID        : GAM13                      Sensitivity    : 5.00000      *
* Geometry           : CAN                      Energy tolerance: 1.50000      *
* Elapsed live time  : 0 02:00:00.00           Abundance limit : 75.00000      *
* Elapsed real time  : 0 02:00:01.84           Half life ratio : 8.00000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00  Nuclide Library : SOLID          *
* Sample ID          : G245395010           Analyst initials: MXR1          *
* Batch Number       : 944966               Sample Quantity : 1.37080E+02 GRAM  *
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 2-FEB-2009 10:41:22.03MS Isotope         :             *
* MSD ID              :                      MSD Isotope         :             *
* LCS ID              : 1032-A              LCS Isotope         :             *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.605E+01	2.998E+00	5.869E-01	3.588E-02	61.427
CD-109	3.548E+00	9.338E-01	1.015E+00	8.008E-02	3.496
SN-126	3.494E-01	9.195E-02	9.980E-02	7.894E-03	3.501
TL-208	4.909E-01	1.115E-01	7.588E-02	6.281E-03	6.470
BI-210	1.442E+00	7.632E-01	7.853E-01	6.401E-02	1.836
PB-210	1.442E+00	7.632E-01	7.853E-01	6.401E-02	1.836
PO-210	1.442E+00	7.610E-01	7.853E-01	5.599E-02	1.836
BI-211	3.414E+00	5.701E-01	3.749E-01	2.733E-02	9.106
PB-212	1.703E+00	1.987E-01	9.990E-02	9.076E-03	17.042
PO-212	1.703E+00	1.987E-01	9.990E-02	9.076E-03	17.042
BI-214	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
PB-214	1.188E+00	2.078E-01	1.307E-01	1.170E-02	9.084
PO-214	1.188E+00	2.078E-01	1.307E-01	1.170E-02	9.084
PO-216	1.703E+00	1.987E-01	9.990E-02	9.076E-03	17.042
PO-218	1.188E+00	2.078E-01	1.307E-01	1.170E-02	9.084
RA-224	4.358E+00	1.327E+00	1.137E+00	8.979E-02	3.831
RA-226	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
AC-228	1.764E+00	4.380E-01	3.137E-01	3.257E-02	5.624

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.764E+00	4.380E-01	3.137E-01	3.257E-02	5.624
TH-228	1.726E+00	2.015E-01	1.013E-01	9.202E-03	17.042
TH-230	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
TH-232	1.764E+00	4.380E-01	3.137E-01	3.257E-02	5.624
TH-234	3.945E+00	1.400E+00	1.079E+00	1.980E-01	3.655
U-234	1.279E+00	2.349E-01	1.394E-01	1.303E-02	9.172
NP-237	1.026E+00	3.431E-01	2.921E-01	6.462E-02	3.512
U-238	3.945E+00	1.400E+00	1.079E+00	1.980E-01	3.655
AM-243	3.303E-01	6.534E-02	6.278E-02	5.423E-03	5.261
ANH-511	1.440E-01	7.542E-02	5.953E-02	4.155E-03	2.419

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	6.191E-02		3.747E-01	6.324E-01	4.755E-02	0.098
NA-22	3.354E-02		6.177E-02	1.067E-01	6.022E-03	0.314
NA-24	7.595E-02		1.260E-01	Half-Life too short		
AL-26	2.592E-02		3.768E-02	6.902E-02	3.895E-03	0.376
TI-44	3.622E-01	+	5.330E-02	5.679E-02	4.783E-03	6.377
SC-46	-3.545E-03		5.398E-02	8.896E-02	6.736E-03	-0.040
V-48	7.287E-02		8.769E-02	1.529E-01	1.082E-02	0.477
CR-51	-2.925E-01		4.124E-01	6.477E-01	5.041E-02	-0.452
MN-52	-3.410E-01		2.722E-01	3.812E-01	2.191E-02	-0.894
MN-54	-5.100E-02		5.082E-02	7.872E-02	6.177E-03	-0.648
CO-56	1.557E-02		5.311E-02	9.006E-02	7.019E-03	0.173
CO-57	-2.743E-02		2.703E-02	4.197E-02	5.309E-03	-0.654
CO-58	-5.941E-02		5.348E-02	8.214E-02	6.543E-03	-0.723
FE-59	-2.103E-01		1.299E-01	1.819E-01	1.300E-02	-1.156
CO-60	-3.053E-02		5.721E-02	9.035E-02	5.139E-03	-0.338
ZN-65	-6.873E-02		1.534E-01	2.024E-01	1.229E-02	-0.339
GE-68	1.895E+00		1.726E+00	3.032E+00	1.938E-01	0.625
AS-73	1.990E-01		2.446E-01	4.146E-01	3.502E-02	0.480
AS-74	4.581E-02		1.125E-01	1.892E-01	1.453E-02	0.242
SE-75	1.291E-02		5.104E-02	7.568E-02	5.928E-03	0.171
BR-77	-6.293E+00		9.010E+00	1.429E+01	1.009E+00	-0.440
SR-82	-5.653E-01		4.636E-01	7.057E-01	5.680E-02	-0.801
RB-83	-6.279E-02		8.454E-02	1.336E-01	9.436E-03	-0.470
RB-84	-8.929E-02		9.524E-02	1.466E-01	1.117E-02	-0.609
KR-85	1.119E+01		1.058E+01	1.640E+01	1.149E+00	0.682
SR-85	5.662E-02		5.355E-02	8.301E-02	5.815E-03	0.682
RB-86	1.449E+00		1.047E+00	1.872E+00	1.198E-01	0.774
Y-88	3.603E-02		4.184E-02	7.601E-02	4.280E-03	0.474
ZR-88	-3.133E-02		3.837E-02	5.867E-02	3.436E-03	-0.534
Y-91	4.933E+00		2.459E+01	4.164E+01	2.308E+00	0.118
NB-94	4.362E-02		4.674E-02	7.980E-02	6.514E-03	0.547
NB-95	6.455E-02		5.859E-02	1.039E-01	8.389E-03	0.621
NB-95M	2.836E-01		1.513E-01	2.409E-01	2.229E-02	1.177

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-6.874E-02		1.008E-01	1.536E-01	1.385E-02	-0.448
NB-97	-1.619E-02		2.031E-02	Half-Life too short		
ZR-97	4.090E-01		3.904E-01	Half-Life too short		
MO-99	-3.801E+00		1.155E+01	1.810E+01	2.699E+00	-0.210
TC-99M	3.072E+08		6.871E+08	Half-Life too short		
RH-101	1.519E-02		3.514E-02	5.860E-02	4.640E-03	0.259
RH-102	-3.498E-03		3.517E-02	5.848E-02	3.891E-03	-0.060
RU-103	-1.821E-02		4.702E-02	7.636E-02	1.005E-02	-0.238
RH-106	-3.145E-01		4.224E-01	6.525E-01	8.411E-02	-0.482
RU-106	-3.145E-01		4.212E-01	6.525E-01	5.139E-02	-0.482
AG-108M	-1.317E-02		3.793E-02	6.265E-02	4.215E-03	-0.210
AG-110M	-1.034E-02		4.834E-02	7.750E-02	6.511E-03	-0.133
IN-111	3.998E-01		9.121E-01	1.375E+00	1.083E-01	0.291
IN-113M	-3.380E-02		5.595E-02	8.675E-02	5.405E-03	-0.390
SN-113	-3.380E-02		5.595E-02	8.675E-02	5.405E-03	-0.390
IN-114M	-2.682E-02		2.166E-01	3.014E-01	2.382E-02	-0.089
CD-115	1.371E+00		9.485E+00	1.586E+01	1.130E+00	0.086
SN-117M	9.316E-03		5.535E-02	8.927E-02	7.796E-03	0.104
SB-122	4.188E-01		1.911E+00	3.192E+00	2.371E-01	0.131
I-123	7.331E-02		6.555E-01	Half-Life too short		
TE-123M	1.711E-03		3.061E-02	4.912E-02	4.289E-03	0.035
I-124	1.747E-02		8.136E-01	1.156E+00	8.938E-02	0.015
SB-124	-4.819E-04		8.124E-02	1.312E-01	8.171E-03	-0.004
SB-125	1.745E-02		1.111E-01	1.889E-01	1.216E-02	0.092
TE-125M	-9.196E+00		9.410E+00	1.480E+01	1.798E+00	-0.621
I-126	4.162E-02		2.172E-01	3.573E-01	2.916E-02	0.116
SB-126	5.001E-02		2.001E-01	2.854E-01	2.326E-02	0.175
SB-127	7.317E-01		1.520E+00	2.538E+00	2.711E-01	0.288
XE-127	2.061E-02		4.847E-02	8.069E-02	6.395E-03	0.255
I-131	6.803E-02		1.223E-01	2.038E-01	1.442E-02	0.334
TE-132	2.478E-02		5.687E-01	9.553E-01	1.444E-01	0.026
BA-133	-2.815E-02		5.832E-02	7.882E-02	9.463E-03	-0.357
I-133	2.756E-03		1.454E-03	Half-Life too short		
CS-134	3.865E-02		5.960E-02	1.037E-01	8.359E-03	0.373
CS-135	2.118E-01		1.751E-01	2.953E-01	2.728E-02	0.717
I-135	-1.258E+08		1.803E+08	Half-Life too short		
CS-136	9.016E-02		1.500E-01	2.547E-01	1.807E-02	0.354
BA-137M	3.153E-03		4.698E-02	7.668E-02	6.254E-03	0.041
CS-137	3.333E-03		4.966E-02	8.106E-02	6.625E-03	0.041
CE-139	-2.653E-02		3.204E-02	4.915E-02	3.854E-03	-0.540
BA-140	-1.700E-01		3.048E-01	4.782E-01	1.569E-01	-0.355
LA-140	-2.565E-02		8.174E-02	1.163E-01	6.700E-03	-0.221
CE-141	-1.755E-02		6.415E-02	1.022E-01	1.060E-02	-0.172
CE-143	3.488E-04		6.158E-05	Half-Life too short		
CE-144	1.374E-01		2.371E-01	3.517E-01	6.095E-02	0.391
PM-144	2.032E-02		4.715E-02	7.836E-02	6.400E-03	0.259
PR-144	1.376E+00		3.193E+00	5.307E+00	4.333E-01	0.259
PM-146	4.536E-02		5.358E-02	9.367E-02	8.501E-03	0.484

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	7.836E-01		6.830E-01	1.191E+00	1.686E-01	0.658
PM-149	1.350E+00		6.792E+01	1.121E+02	1.683E+01	0.012
EU-152	4.493E-02		1.295E-01	1.887E-01	1.415E-02	0.238
GD-153	-5.053E-02		8.298E-02	1.172E-01	1.066E-02	-0.431
EU-154	9.735E-02		1.731E-01	2.991E-01	2.763E-02	0.326
EU-155	1.240E-01		1.056E-01	1.798E-01	1.846E-02	0.689
TB-160	-6.966E-02		1.902E-01	3.069E-01	2.341E-02	-0.227
HO-166M	-3.160E-02		7.818E-02	1.223E-01	9.978E-03	-0.258
TM-171	1.134E+01		1.767E+01	2.744E+01	2.504E+00	0.413
LU-176	1.177E-02		2.661E-02	4.462E-02	3.308E-03	0.264
LU-177	2.777E+00	+	1.410E+00	1.872E+00	1.484E-01	1.484
LU-177M	-3.091E-01		2.188E-01	3.179E-01	1.928E-02	-0.972
HF-181	4.181E-02		5.001E-02	8.738E-02	5.871E-03	0.478
W-181	-1.631E-01		2.199E-01	3.251E-01	2.999E-02	-0.502
TA-182	-1.134E-01		2.845E-01	4.632E-01	2.578E-02	-0.245
RE-183	-4.855E-02		1.229E-01	1.876E-01	1.553E-02	-0.259
RE-184	1.433E-01		2.428E-01	4.145E-01	3.254E-02	0.346
OS-185	-4.480E-03		5.314E-02	8.601E-02	6.923E-03	-0.052
RE-188	2.257E-01		1.830E-01	3.064E-01	2.804E-02	0.736
W-188	-6.155E+00		9.005E+00	1.237E+01	9.386E-01	-0.498
IR-192	2.249E-02		3.913E-02	6.582E-02	4.815E-03	0.342
AU-195	2.193E-01		2.185E-01	3.621E-01	3.365E-02	0.606
TL-200	-1.684E-04		1.232E-04	Half-Life too short		
TL-201	1.144E+00		5.626E+00	9.054E+00	7.096E-01	0.126
TL-202	4.593E-02		7.143E-02	1.245E-01	7.868E-03	0.369
HG-203	5.386E-03		4.860E-02	7.101E-02	5.654E-03	0.076
BI-207	3.065E-02		7.542E-02	1.264E-01	8.223E-03	0.242
TL-207	3.211E-02		8.448E-01	1.211E+00	2.066E-01	0.027
PO-209	-2.622E+00		1.030E+01	1.672E+01	1.259E+00	-0.157
PB-211	-1.404E+00		1.431E+00	1.675E+00	1.045E+00	-0.838
BI-212	1.487E+00	+	5.912E-01	8.463E-01	8.124E-02	1.757
PO-215	3.211E-02		8.448E-01	1.211E+00	2.066E-01	0.027
RN-219	2.080E-01		4.821E-01	7.920E-01	1.083E-01	0.263
RN-220	-9.469E+00		3.269E+01	5.300E+01	3.875E+00	-0.179
RA-223	3.211E-02		8.448E-01	1.211E+00	2.066E-01	0.027
AC-227	2.758E-02		3.981E-01	6.641E-01	9.909E-02	0.042
TH-227	2.758E-02		3.981E-01	6.641E-01	1.176E-01	0.042
TH-229	7.092E-02		5.050E-01	8.611E-01	6.812E-02	0.082
PA-231	-5.682E-01		1.665E+00	2.697E+00	3.953E-01	-0.211
TH-231	3.211E-02		8.448E-01	1.211E+00	2.066E-01	0.027
U-231	-2.005E-01		8.554E-01	1.254E+00	1.116E-01	-0.160
PA-233	2.430E-03		7.172E-02	1.177E-01	8.986E-03	0.021
PA-234	1.589E-01		4.177E-01	7.050E-01	1.283E-01	0.225
PA-234M	1.346E+01	+	1.054E+01	1.167E+01	9.999E-01	1.154
U-235	2.426E-02		2.360E-01	3.784E-01	6.985E-02	0.064
NP-236	-6.220E-03		8.626E-02	1.376E-01	1.173E-02	-0.045
NP-239	-1.599E-01		2.000E-01	3.157E-01	3.747E-02	-0.506
AM-241	7.842E-02		6.937E-02	1.101E-01	1.120E-02	0.712

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.707E-04		9.303E-02	1.533E-01	1.526E-02	0.001
AM-246	-3.737E-02		2.032E-01	3.256E-01	2.077E-02	-0.115
CM-247	-1.383E-02		4.403E-02	6.922E-02	4.122E-03	-0.200
CF-249	2.537E-02		5.123E-02	8.458E-02	5.023E-03	0.300
CF-251	7.366E-02		1.354E-01	2.202E-01	1.733E-02	0.334

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395010          *
* Acquisition date   : 2-FEB-2010 09:15:16 Detector SN#                   *
* Detector ID        : GAM13 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 02:00:01.84 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G245395010 Analyst initials: MXR1                 *
* Batch Number       : 944966 Sample Quantity : 1.3708E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 2-FEB-2009 10:41:22 MS Isotope :                   *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                              *
*****
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.605E+01	2.938E+00	2.945E-01	1.499E+00
CD-109	3.548E+00	9.151E-01	5.370E-01	4.669E-01
SN-126	3.494E-01	9.011E-02	5.281E-02	4.597E-02
TL-208	4.909E-01	1.093E-01	3.876E-02	5.576E-02
BI-210	1.442E+00	7.479E-01	4.203E-01	3.816E-01
PB-210	1.442E+00	7.479E-01	4.203E-01	3.816E-01
PO-210	1.442E+00	7.458E-01	4.203E-01	3.805E-01
BI-211	3.414E+00	5.587E-01	1.934E-01	2.850E-01
PB-212	1.703E+00	1.947E-01	5.191E-02	9.936E-02
PO-212	1.703E+00	1.947E-01	5.191E-02	9.936E-02
BI-214	1.279E+00	2.302E-01	7.115E-02	1.175E-01
PB-214	1.188E+00	2.036E-01	6.744E-02	1.039E-01
PO-214	1.188E+00	2.036E-01	6.744E-02	1.039E-01
PO-216	1.703E+00	1.947E-01	5.191E-02	9.936E-02
PO-218	1.188E+00	2.036E-01	6.744E-02	1.039E-01
RA-224	4.358E+00	1.300E+00	5.909E-01	6.635E-01
RA-226	1.279E+00	2.302E-01	7.115E-02	1.175E-01
AC-228	1.764E+00	4.292E-01	1.589E-01	2.190E-01
RA-228	1.764E+00	4.292E-01	1.589E-01	2.190E-01
TH-228	1.726E+00	1.975E-01	5.263E-02	1.007E-01
TH-230	1.279E+00	2.302E-01	7.115E-02	1.175E-01
TH-232	1.764E+00	4.292E-01	1.589E-01	2.190E-01
U-234	3.945E+00	1.372E+00	5.744E-01	6.999E-01
U-238	1.279E+00	2.302E-01	7.115E-02	1.175E-01
NP-237	1.026E+00	3.362E-01	1.546E-01	1.715E-01
U-238	3.945E+00	1.372E+00	5.744E-01	6.999E-01
AM-243	3.303E-01	6.403E-02	3.332E-02	3.267E-02
ANH-511	1.440E-01	7.392E-02	3.049E-02	3.771E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	6.191E-02	3.672E-01	3.243E-01	1.874E-01	NOT IDENT.
NA-22	3.354E-02	6.054E-02	5.368E-02	3.089E-02	NOT IDENT.
NA-24	7.595E+04	2.469E+05	0.000E+00	1.260E+05	SHORT HLIF
AL-26	2.592E-02	3.693E-02	3.448E-02	1.884E-02	NOT IDENT.
TI-44	3.622E-01	5.224E-02	3.011E-02	2.665E-02	FAIL ABUN
SC-46	-3.545E-03	5.290E-02	4.507E-02	2.699E-02	FAIL ABUN
V-48	7.287E-02	8.593E-02	7.732E-02	4.384E-02	NOT IDENT.
CR-51	-2.925E-01	4.042E-01	3.347E-01	2.062E-01	NOT IDENT.
MN-52	-3.410E-01	2.667E-01	1.913E-01	1.361E-01	NOT IDENT.
MN-54	-5.100E-02	4.981E-02	3.994E-02	2.541E-02	NOT IDENT.
CO-56	1.557E-02	5.205E-02	4.567E-02	2.656E-02	NOT IDENT.
CO-57	-2.743E-02	2.649E-02	2.208E-02	1.351E-02	NOT IDENT.
CO-58	-5.941E-02	5.241E-02	4.170E-02	2.674E-02	NOT IDENT.
FE-59	-2.103E-01	1.273E-01	9.179E-02	6.494E-02	NOT IDENT.
CO-60	-3.053E-02	5.607E-02	4.542E-02	2.861E-02	NOT IDENT.
ZN-65	-6.873E-02	1.503E-01	1.021E-01	7.670E-02	NOT IDENT.
GE-68	1.895E+00	1.691E+00	1.530E+00	8.629E-01	NOT IDENT.
AS-73	1.990E-01	2.397E-01	2.213E-01	1.223E-01	NOT IDENT.
AS-74	4.581E-02	1.102E-01	9.660E-02	5.625E-02	NOT IDENT.
SE-75	1.291E-02	5.002E-02	3.924E-02	2.552E-02	NOT IDENT.
BR-77	-6.293E+00	8.830E+00	7.314E+00	4.505E+00	FAIL ABUN
SR-82	-5.653E-01	4.544E-01	3.585E-01	2.318E-01	NOT IDENT.
RB-83	-6.279E-02	8.285E-02	6.842E-02	4.227E-02	NOT IDENT.
RB-84	-8.929E-02	9.333E-02	7.431E-02	4.762E-02	NOT IDENT.
KR-85	1.119E+01	1.037E+01	8.399E+00	5.290E+00	NOT IDENT.
SR-85	5.662E-02	5.248E-02	4.251E-02	2.677E-02	NOT IDENT.
RB-86	1.449E+00	1.026E+00	9.451E-01	5.235E-01	NOT IDENT.
Y-88	3.603E-02	4.100E-02	3.796E-02	2.092E-02	NOT IDENT.
ZR-88	-3.133E-02	3.761E-02	3.020E-02	1.919E-02	NOT IDENT.
Y-91	4.933E+00	2.409E+01	2.097E+01	1.229E+01	NOT IDENT.
NB-94	4.362E-02	4.580E-02	4.062E-02	2.337E-02	NOT IDENT.
NB-95	6.455E-02	5.742E-02	5.279E-02	2.930E-02	NOT IDENT.
NB-95M	2.836E-01	1.483E-01	1.252E-01	7.566E-02	NOT IDENT.
ZR-95	-6.874E-02	9.881E-02	7.806E-02	5.041E-02	NOT IDENT.
NB-97	-1.619E+04	3.980E+04	0.000E+00	2.031E+04	SHORT HLIF
ZR-97	4.090E+05	7.652E+05	0.000E+00	3.904E+05	SHORT HLIF
MO-99	-3.801E+00	1.132E+01	9.206E+00	5.777E+00	NOT IDENT.
TC-99M	3.072E+14	1.347E+15	0.000E+00	6.871E+14	SHORT HLIF
RH-101	1.519E-02	3.444E-02	3.055E-02	1.757E-02	NOT IDENT.
RH-102	-3.498E-03	3.446E-02	2.999E-02	1.758E-02	NOT IDENT.
RU-103	-1.821E-02	4.608E-02	3.913E-02	2.351E-02	FAIL ABUN
RH-106	-3.145E-01	4.140E-01	3.329E-01	2.112E-01	FAIL ABUN
RU-106	-3.145E-01	4.128E-01	3.329E-01	2.106E-01	FAIL ABUN
AG-108M	-1.317E-02	3.717E-02	3.219E-02	1.896E-02	NOT IDENT.
AG-110M	-1.034E-02	4.738E-02	3.950E-02	2.417E-02	NOT IDENT.
IN-111	3.998E-01	8.938E-01	7.139E-01	4.560E-01	NOT IDENT.
IN-113M	-3.380E-02	5.483E-02	4.465E-02	2.797E-02	NOT IDENT.
SN-113	-3.380E-02	5.483E-02	4.465E-02	2.797E-02	NOT IDENT.
IN-114M	-2.682E-02	2.123E-01	1.572E-01	1.083E-01	NOT IDENT.
CD-115	1.371E+00	9.296E+00	8.116E+00	4.743E+00	NOT IDENT.
SN-117M	9.316E-03	5.424E-02	4.674E-02	2.768E-02	NOT IDENT.
SB-122	4.188E-01	1.873E+00	1.632E+00	9.555E-01	NOT IDENT.
I-123	7.331E+04	1.285E+06	0.000E+00	6.555E+05	SHORT HLIF
TE-123M	1.711E-03	2.999E-02	2.571E-02	1.530E-02	NOT IDENT.
I-124	1.747E-02	7.974E-01	5.902E-01	4.068E-01	NOT IDENT.
SB-124	-4.819E-04	7.962E-02	6.563E-02	4.062E-02	FAIL ABUN
SB-125	1.745E-02	1.089E-01	9.710E-02	5.557E-02	FAIL ABUN
TE-125M	-9.196E+00	9.222E+00	7.801E+00	4.705E+00	NOT IDENT.
I-126	4.162E-02	2.129E-01	1.821E-01	1.086E-01	NOT IDENT.
SB-126	5.001E-02	1.961E-01	1.452E-01	1.001E-01	FAIL ABUN
SB-127	7.317E-01	1.490E+00	1.292E+00	7.601E-01	NOT IDENT.
XE-127	2.061E-02	4.750E-02	4.205E-02	2.424E-02	NOT IDENT.
I-131	6.803E-02	1.198E-01	1.051E-01	6.114E-02	NOT IDENT.
TE-132	2.478E-02	5.573E-01	4.967E-01	2.843E-01	NOT IDENT.
BA-133	-2.815E-02	5.716E-02	4.065E-02	2.916E-02	FAIL ABUN
I-133	2.756E+03	2.849E+03	0.000E+00	1.454E+03	SHORT HLIF
CS-134	3.865E-02	5.841E-02	5.266E-02	2.980E-02	NOT IDENT.
CS-135	2.118E-01	1.716E-01	1.531E-01	8.756E-02	NOT IDENT.
I-135	-1.258E+14	3.534E+14	0.000E+00	1.803E+14	SHORT HLIF
CS-136	9.016E-02	1.470E-01	1.287E-01	7.499E-02	FAIL ABUN
BA-137M	3.153E-03	4.604E-02	3.908E-02	2.349E-02	NOT IDENT.
CS-137	3.333E-03	4.867E-02	4.131E-02	2.483E-02	NOT IDENT.
CE-139	-2.653E-02	3.140E-02	2.571E-02	1.602E-02	NOT IDENT.
BA-140	-1.700E-01	2.987E-01	2.447E-01	1.524E-01	NOT IDENT.
LA-140	-2.565E-02	8.011E-02	5.823E-02	4.087E-02	FAIL ABUN
CE-141	-1.755E-02	6.287E-02	5.357E-02	3.208E-02	NOT IDENT.
CE-143	3.488E+02	1.207E+02	0.000E+00	6.158E+01	SHORT HLIF

CE-144	1.374E-01	2.323E-01	1.847E-01	1.185E-01	NOT IDENT.
PM-144	2.032E-02	4.621E-02	3.990E-02	2.358E-02	NOT IDENT.
PR-144	1.376E+00	3.129E+00	2.702E+00	1.597E+00	NOT IDENT.
PM-146	4.536E-02	5.251E-02	4.808E-02	2.679E-02	NOT IDENT.
ND-147	7.836E-01	6.693E-01	6.094E-01	3.415E-01	FAIL ABUN
PM-149	1.350E+00	6.656E+01	5.805E+01	3.396E+01	NOT IDENT.
EU-152	4.493E-02	1.269E-01	9.739E-02	6.476E-02	NOT IDENT.
GD-153	-5.053E-02	8.132E-02	6.190E-02	4.149E-02	FAIL ABUN
EU-154	9.735E-02	1.696E-01	1.505E-01	8.654E-02	NOT IDENT.
EU-155	1.240E-01	1.035E-01	9.486E-02	5.282E-02	FAIL ABUN
TB-160	-6.966E-02	1.864E-01	1.555E-01	9.512E-02	FAIL ABUN
HO-166M	-3.160E-02	7.662E-02	6.225E-02	3.909E-02	FAIL ABUN
TM-171	1.134E+01	1.732E+01	1.459E+01	8.837E+00	NOT IDENT.
LU-176	1.177E-02	2.607E-02	2.308E-02	1.330E-02	FAIL ABUN
LU-177	2.777E+00	1.382E+00	9.751E-01	7.049E-01	FAIL ABUN
LU-177M	-3.091E-01	2.144E-01	1.635E-01	1.094E-01	FAIL ABUN
HF-181	4.181E-02	4.901E-02	4.480E-02	2.500E-02	NOT IDENT.
W-181	-1.631E-01	2.155E-01	1.730E-01	1.100E-01	NOT IDENT.
TA-182	-1.134E-01	2.788E-01	2.332E-01	1.422E-01	FAIL ABUN
RE-183	-4.855E-02	1.204E-01	9.818E-02	6.145E-02	FAIL ABUN
RE-184	1.433E-01	2.379E-01	2.151E-01	1.214E-01	NOT IDENT.
OS-185	-4.480E-03	5.207E-02	4.385E-02	2.657E-02	NOT IDENT.
RE-188	2.257E-01	1.793E-01	1.605E-01	9.150E-02	NOT IDENT.
W-188	-6.155E+00	8.824E+00	6.404E+00	4.502E+00	FAIL ABUN
IR-192	2.249E-02	3.835E-02	3.402E-02	1.957E-02	FAIL ABUN
AU-195	2.193E-01	2.141E-01	1.912E-01	1.093E-01	FAIL ABUN
TL-200	-1.684E+02	2.415E+02	0.000E+00	1.232E+02	SHORT HLIF
TL-201	1.144E+00	5.514E+00	4.735E+00	2.813E+00	NOT IDENT.
TL-202	4.593E-02	7.000E-02	6.396E-02	3.572E-02	NOT IDENT.
HG-203	5.386E-03	4.763E-02	3.679E-02	2.430E-02	FAIL ABUN
BI-207	3.065E-02	7.391E-02	6.384E-02	3.771E-02	FAIL ABUN
TL-207	3.211E-02	8.279E-01	6.257E-01	4.224E-01	FAIL ABUN
PO-209	-2.622E+00	1.009E+01	8.472E+00	5.149E+00	NOT IDENT.
PB-211	-1.404E+00	1.403E+00	8.618E-01	7.156E-01	NOT IDENT.
BI-212	1.487E+00	5.794E-01	4.305E-01	2.956E-01	FAIL ABUN
PO-215	3.211E-02	8.279E-01	6.257E-01	4.224E-01	FAIL ABUN
RN-219	2.080E-01	4.724E-01	4.075E-01	2.410E-01	FAIL ABUN
RN-220	-9.469E+00	3.204E+01	2.711E+01	1.635E+01	NOT IDENT.
RA-223	3.211E-02	8.279E-01	6.257E-01	4.224E-01	FAIL ABUN
AC-227	2.758E-02	3.902E-01	3.446E-01	1.991E-01	FAIL ABUN
TH-227	2.758E-02	3.902E-01	3.446E-01	1.991E-01	FAIL ABUN
TH-229	7.092E-02	4.949E-01	4.492E-01	2.525E-01	FAIL ABUN
PA-231	-5.682E-01	1.631E+00	1.397E+00	8.323E-01	FAIL ABUN
TH-231	3.211E-02	8.279E-01	6.257E-01	4.224E-01	FAIL ABUN
U-231	-2.005E-01	8.383E-01	6.628E-01	4.277E-01	FAIL ABUN
PA-233	2.430E-03	7.028E-02	6.083E-02	3.586E-02	FAIL ABUN
PA-234	1.589E-01	4.094E-01	3.568E-01	2.089E-01	FAIL ABUN
PA-234M	1.346E+01	1.033E+01	5.897E+00	5.269E+00	FAIL ABUN
U-235	2.426E-02	2.313E-01	1.984E-01	1.180E-01	FAIL ABUN
NP-236	-6.220E-03	8.453E-02	7.202E-02	4.313E-02	NOT IDENT.
NP-239	-1.599E-01	1.960E-01	1.662E-01	1.000E-01	FAIL ABUN
AM-241	7.842E-02	6.799E-02	5.867E-02	3.469E-02	NOT IDENT.
CM-243	1.707E-04	9.117E-02	8.088E-02	4.651E-02	FAIL ABUN
AM-246	-3.737E-02	1.991E-01	1.643E-01	1.016E-01	NOT IDENT.
CM-247	-1.383E-02	4.315E-02	3.561E-02	2.201E-02	FAIL ABUN
CF-249	2.537E-02	5.021E-02	4.354E-02	2.562E-02	NOT IDENT.
CF-251	7.366E-02	1.327E-01	1.151E-01	6.770E-02	NOT IDENT.

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*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD      *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
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46.50	331.4054
46.50	331.4054
46.50	331.4054
48.70	392.1360
49.72	420.2126
51.35	435.6663
52.39	434.9312
52.97	418.9301
53.15	404.7700
53.44	405.2288
54.07	397.6873
56.28	477.6433
56.28	477.6490
57.37	0.0000
57.53	484.2037
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57.60	497.3021
57.98	485.0084
57.98	485.0084
59.32	449.0920
59.32	449.0920
59.40	449.2219
59.54	449.4489
59.72	503.3445
60.01	503.8703
61.10	504.5186
61.14	504.5903
61.30	516.7090
63.00	566.0872
63.29	566.6554
63.29	566.6554
63.58	567.2236
64.28	581.8725
65.12	634.1631
65.20	634.3347
65.20	634.3347
66.05	584.0314
66.72	567.9223
66.83	568.1358
66.91	568.2846
67.20	560.7818
67.20	560.7818
67.75	577.3897
67.85	577.5831
68.90	620.5817
68.90	620.5817
69.30	647.0513
69.67	668.1185
70.82	623.0707
70.82	623.0707
70.83	623.0917
72.80	570.0603
72.87	570.1845
72.87	570.1845
74.67	573.3685
74.81	573.6136
74.81	573.6136
74.81	573.6136
74.81	573.6136
74.81	573.6136
74.81	573.6136
74.81	573.6136
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77.11	577.6255

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77.11	577.6255
77.11	577.6255
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79.80	493.8801
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80.30	486.2155
80.30	486.2155
80.57	494.9875
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81.07	484.5022
81.07	484.5022
81.07	484.5022
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86.59	439.9490
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87.57	441.1313
87.88	441.5042
88.03	441.6836
88.36	442.0801
88.47	442.2122
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91.11	445.3487
92.29	446.7364
92.38	446.8426
92.38	446.8426
93.35	447.9754
94.00	448.7307
94.67	347.2987
94.67	347.3042
94.90	347.5084
94.90	347.5084
94.90	347.5084
94.90	347.5084
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95.87	405.2201
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97.43	405.3623
98.44	349.7608
98.44	349.7608
98.88	354.4547
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99.55	353.0841
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100.10	379.1029
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103.76	376.5500
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105.31	348.1112
108.00	423.3916
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111.76	387.6973
112.95	404.9418
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116.30	388.6003
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117.00	393.2852
117.66	378.5100
121.11	335.9968
121.62	350.8083
121.78	350.9276
122.06	387.2833
122.32	374.0637
122.32	374.0637
122.32	374.0637
122.32	374.0637
123.07	351.8892
127.23	391.4976
129.76	379.8857
131.20	336.2641
133.02	364.4287
133.54	315.6350
135.34	325.7815
136.00	317.7027
136.25	317.8578
136.48	324.3820
140.51	356.9290
140.51	0.0000
142.18	361.2896
142.65	345.4675
143.76	337.5646
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144.24	360.5355
144.24	360.5355
144.24	360.5355
145.22	360.1132
145.44	340.7886
147.16	372.2637
152.43	380.2337
152.70	368.3579
153.22	355.5319
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154.21	334.1730
154.21	334.1730
154.21	334.1730
155.03	299.4341
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159.00	320.3712
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161.27	290.4682
162.32	316.6341
162.64	307.8833
163.35	294.8516
163.89	297.3586
165.85	331.9913
167.43	294.6354
171.28	296.5170
171.86	295.6667
172.10	291.2478
176.55	279.6525
176.60	276.2503
181.06	279.3595
184.41	266.9528
185.71	298.7534
186.00	298.8873
190.27	292.0920
192.34	300.0197
193.63	274.2307
197.04	289.7502
198.01	270.6986
198.60	270.0467
200.40	314.2523
201.83	345.1481
202.84	280.9984
205.31	258.9016

208.36	299.8845
208.81	300.0730
209.75	273.4799
209.75	273.4799
210.97	269.6206
215.65	289.3225
216.55	270.6082
218.09	267.5366
222.10	286.3666
223.80	271.4252
226.40	268.6796
227.00	286.3875
227.08	286.4184
227.20	280.0134
228.16	272.9879
228.18	271.1501
228.18	271.1501
231.56	0.0000
235.69	268.2026
236.00	268.3081
236.00	268.3081
238.63	272.0066
238.63	272.0066
238.63	272.0066
238.63	272.0066
239.00	272.1331
240.98	272.8114
241.98	262.8268
241.98	262.8268
241.98	262.8268
244.69	206.4499
245.39	218.6930
247.94	258.1495
248.90	248.0377
249.79	203.7622
252.40	212.0126
252.85	205.4696
252.85	205.4696
254.15	0.0000
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256.20	213.9349
260.50	216.9477
260.90	223.7704
262.80	223.3057
264.65	194.4633
268.24	204.7892
268.79	204.9214
269.46	205.0763
269.46	205.0763
269.46	205.0763
269.46	205.0763
271.23	202.1602
273.65	210.5123
276.40	207.8098
277.35	208.0304
277.60	227.1077
277.60	227.1077
278.00	216.2416
278.60	222.6585
279.20	211.8241
279.53	189.9251
280.46	182.2667
281.68	191.9504
283.67	211.8867
284.30	228.7963
285.00	226.9994
285.90	204.4984
286.10	204.5426
286.10	204.5426
287.40	184.0530
288.45	0.0000
290.67	220.8491
290.80	220.8814
291.72	211.5564
293.26	0.0000
293.70	191.2822
295.21	177.2206
295.21	177.2206

295.21	177.2206
295.96	191.7422
296.50	191.8506
297.23	192.0000
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299.80	192.5186
299.80	192.5186
300.09	203.8108
300.09	203.8108
300.09	203.8108
300.09	203.8108
300.12	203.8170
301.29	191.2135
302.84	217.2722
303.76	222.3127
303.91	217.5128
304.40	204.7286
304.40	204.7286
304.84	190.8443
306.84	170.7020
308.46	181.1031
311.98	187.8455
316.51	182.5862
318.01	192.0534
319.02	209.6326
319.41	201.5300
320.08	205.7569
323.87	189.0649
323.87	189.0649
323.87	189.0649
323.87	189.0649
325.23	202.4875
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334.20	182.6682
334.30	182.6870
338.28	178.1702
338.28	178.1702
338.28	178.1702
338.28	178.1702
338.32	178.1781
338.32	178.1781
338.32	178.1781
340.50	182.0960
340.57	182.1093
344.27	179.3896
345.85	201.4834
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351.07	178.2061
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351.92	178.3453
351.92	178.3453
355.39	0.0000
356.01	159.3135
364.48	155.8379
366.43	153.9712
367.43	179.7920
367.94	0.0000
369.80	180.1688
374.96	194.9915
383.85	189.9830
387.95	179.7537
388.63	184.2171
391.69	192.3442
391.69	192.3442
392.90	193.6343
398.62	181.3701
400.65	142.0346
401.10	142.0888
401.81	144.3766
402.60	163.2187
404.84	186.7211
410.95	152.1203
411.60	175.5296
413.65	191.3978
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415.30	171.5957

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427.89	157.5577
432.53	140.0563
433.93	149.2533
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439.56	118.1045
439.89	118.1346
443.98	144.0265
444.90	140.4780
445.03	141.4034
445.03	141.4034
445.03	141.4034
445.03	141.4034
453.90	137.7557
463.38	129.4744
468.07	123.7321
473.00	114.5498
475.06	139.9017
475.35	138.9963
476.78	132.6032
477.59	129.8764
477.96	147.6679
482.03	119.0392
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492.35	126.5116
497.08	129.7687
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511.00	140.5679
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511.85	140.6495
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513.99	153.3076
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529.87	0.0000
531.02	117.2513
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546.56	0.0000
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555.20	112.1909
563.23	124.6250
563.90	125.6636
568.70	131.0010
569.32	118.1429
569.50	118.1575
569.67	118.1691
573.80	132.4058
574.00	132.4220
574.64	129.4858
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579.30	0.0000
583.14	128.1531
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591.81	137.8763
592.07	137.8964
593.00	137.9733
595.88	118.0340
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602.52	0.0000
602.71	135.0521
602.71	135.0521
603.60	133.4347
604.41	136.8754
604.70	136.8984
609.31	120.9988

609.31	120.9988
609.31	120.9988
609.31	120.9988
610.33	121.0715
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614.37	103.6772
618.01	114.6798
621.84	132.1148
621.84	132.1148
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657.75	132.6927
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661.65	117.2691
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666.33	109.1670
666.33	109.1670
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677.61	118.2727
685.20	113.4472
692.80	130.9307
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696.49	118.3819
696.49	118.3819
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698.50	155.8700
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722.78	97.2795
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723.30	91.8979
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733.00	105.0188
735.90	82.6852
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744.21	100.5015
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752.31	125.0243
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756.87	117.6060
763.93	137.8571
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766.84	130.6867
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778.89	102.7391
783.80	81.6388
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860.37	77.7700
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884.67	76.6389
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896.60	98.4725
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911.07	108.8704
911.07	108.8704
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969.11	136.5146
969.11	136.5146
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1048.07	90.9899

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1062.04	95.6050
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1076.63	67.8988
1077.35	72.0940
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1120.29	95.4529
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1121.28	95.4858
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1147.95	0.0000
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1173.22	103.6367
1175.09	108.0200
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1274.54	78.3479
1291.56	71.0707
1298.22	0.0000
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1325.50	55.2983
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1360.21	54.8809
1362.66	0.0000
1365.15	49.0705
1368.21	42.2366
1368.53	0.0000
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1394.10	48.4856
1395.20	50.4806
1407.95	48.6753
1434.06	55.0307
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1457.56	0.0000
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1509.49	23.4837
1596.49	19.9305
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1691.02	16.0233
1691.02	16.0233
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1750.46	0.0000
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1764.49	23.6645
1764.49	23.6645
1764.49	23.6645
1770.23	22.0024
1771.40	18.6228
1791.20	0.0000
1808.65	14.4044

1836.01

11.8908

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395010

Total Uranium Activity	1.1747E+01	ug/g
Total Uranium Counting Unc.	4.0826E+00	ug/g
Total Uranium Tpu	2.0830E-06	ug/g
Total Uranium Mda	1.7114E+00	ug/g

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*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 944966                SAMPLE ID   : G245395010                *
*  ANALYST       : MXR1                  DETECTOR    : GAM13                  *
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00        *
*  ANALYSIS DATE: 2-FEB-2010 09:15:16.95  SAMPLE ALQT: 137.080 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.059E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.585E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 4.005E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.953E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:18:40.48

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395011.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:18:04.
Sample ID          : G245395011 Sample quantity : 1.47640E+02 GRAM
Detector name      : GAM16 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.14 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.26*	823	793	0.79	126.71	122	9	1.14E-01	7.2	
2	4	74.96*	264	561	0.78	150.10	147	11	3.67E-02	14.6	4.18E+00
3	4	77.18*	485	473	0.88	154.55	147	11	6.73E-02	8.3	
4	0	87.18*	196	575	1.05	174.55	172	6	2.72E-02	20.9	
5	0	92.71*	2440	834	1.12	185.61	182	10	3.39E-01	3.1	
6	0	98.61*	237	545	0.91	197.42	193	9	3.29E-02	19.1	
7	0	112.24	179	657	0.83	224.66	220	10	2.49E-02	27.7	
8	0	143.59*	155	375	1.46	287.38	283	9	2.15E-02	24.5	
9	0	185.71*	478	387	1.09	371.61	367	10	6.64E-02	9.2	
10	0	208.92	70	209	1.01	418.04	415	6	9.72E-03	34.8	
11	6	238.59*	1122	198	0.97	477.37	471	18	1.56E-01	3.6	1.88E+00
12	6	241.73	215	276	1.67	483.66	471	18	2.99E-02	17.0	
13	0	269.98	125	226	1.33	540.15	535	11	1.74E-02	24.9	
14	0	277.78	40	200	0.81	555.75	551	8	5.54E-03	63.9	
15	0	295.21	379	194	1.13	590.61	586	10	5.26E-02	8.6	
16	0	299.84	87	141	1.32	599.86	596	8	1.21E-02	26.2	
17	0	328.19	12	254	1.14	656.57	650	11	1.65E-03	261.6	
18	0	338.07*	174	240	1.01	676.33	671	11	2.41E-02	19.2	
19	0	351.88*	575	168	1.13	703.95	698	10	7.99E-02	6.0	
20	0	463.12	84	105	1.54	926.42	921	11	1.16E-02	26.3	
21	0	511.03*	97	204	1.89	1022.23	1015	17	1.35E-02	38.4	
22	0	583.24*	277	98	1.34	1166.61	1162	11	3.84E-02	9.5	
23	0	609.46*	430	145	1.38	1219.05	1212	15	5.98E-02	7.9	
24	0	661.72	178	72	1.35	1323.56	1318	10	2.47E-02	11.7	
25	0	727.53*	75	96	1.00	1455.15	1449	12	1.04E-02	29.1	
26	0	767.52	86	109	2.66	1535.12	1528	15	1.20E-02	28.7	
27	0	795.50	33	78	1.53	1591.07	1583	12	4.61E-03	55.9	
28	0	860.54*	67	57	1.69	1721.12	1715	14	9.36E-03	27.0	
29	0	911.27*	215	81	1.24	1822.54	1817	12	2.99E-02	11.0	
30	0	934.62	20	39	1.00	1869.22	1865	9	2.72E-02	62.6	
31	0	965.67	28	81	0.95	1931.31	1922	14	3.88E-03	70.8	
32	0	969.16*	121	51	1.32	1938.29	1935	9	1.68E-02	14.2	
33	0	1001.23*	116	55	1.00	2002.41	1997	11	1.60E-02	15.9	
34	0	1120.16*	100	36	2.32	2240.20	2235	11	1.39E-02	15.7	
35	0	1460.89*	1348	41	1.88	2921.39	2914	17	1.87E-01	3.0	
36	0	1764.65*	57	15	1.11	3528.59	3523	12	7.89E-03	20.0	

Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395011.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:18:04
Sample ID        : G245395011 Sample quantity : 147.64 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.14 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type  : Empirical Efficiencies at : Peak Energy
Abundance limit  : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.659E+01	2.819E+00	4.405E-01	3.872E-02	60.366
CD-109	+	88.03	*	2.188E+00	9.366E-01	1.382E+00	1.331E-01	1.584
SN-126	+	64.28		6.184E+00	1.264E+00	6.764E-01	9.855E-02	9.143
	+	86.94		8.958E-01	5.275E-01	5.603E-01	2.328E-01	1.599
	+	87.57	*	2.155E-01	9.223E-02	1.355E-01	1.299E-02	1.590
BA-137M	+	661.65	*	2.088E-01	5.224E-02	4.739E-02	4.205E-03	4.406
CS-137	+	661.65	*	2.207E-01	5.523E-02	5.009E-02	4.453E-03	4.406
LU-177	+	112.95		4.203E+00	2.358E+00	2.112E+00	1.768E-01	1.991
	+	208.36	*	1.193E+00	8.384E-01	1.269E+00	1.288E-01	0.940
HG-203		70.83		-1.213E+00	9.295E-01	1.439E+00	1.900E-01	-0.843
		72.87		2.708E-01	5.629E-01	8.833E-01	1.138E-01	0.307
		82.60		-3.459E-01	9.843E-01	1.650E+00	2.311E-01	-0.210
	+	279.20	*	3.440E-02	4.413E-02	4.576E-02	5.577E-03	0.752
TL-208	+	277.35		3.179E-01	4.087E-01	4.776E-01	7.099E-02	0.666
	+	510.84		3.850E-01	2.995E-01	1.641E-01	2.076E-02	2.346
	+	583.14	*	3.130E-01	6.681E-02	4.494E-02	4.455E-03	6.964
	+	860.37		7.166E-01	3.941E-01	3.655E-01	3.660E-02	1.961
BI-211		72.87		1.387E+00	2.879E+00	4.523E+00	3.677E-01	0.307
	+	351.07	*	2.869E+00	4.655E-01	2.556E-01	2.795E-02	11.224
PB-212	+	74.81		1.226E+00	3.887E-01	4.995E-01	6.241E-02	2.454
	+	77.11		1.275E+00	2.381E-01	2.834E-01	2.407E-02	4.498
	+	87.30		9.965E-01	4.381E-01	6.073E-01	8.400E-02	1.641
	+	238.63	*	1.224E+00	1.702E-01	7.118E-02	8.427E-03	17.199
	+	300.09		1.462E+00	7.903E-01	9.805E-01	1.285E-01	1.492
PO-212	+	74.81		1.226E+00	3.887E-01	4.995E-01	6.241E-02	2.454
	+	77.11		1.275E+00	2.381E-01	2.834E-01	2.407E-02	4.498
	+	87.30		9.965E-01	4.381E-01	6.073E-01	8.400E-02	1.641
		115.19		3.130E+00	3.324E+00	5.226E+00	4.360E-01	0.599
	+	238.63	*	1.224E+00	1.702E-01	7.118E-02	8.427E-03	17.199
	+	300.09		1.462E+00	7.903E-01	9.805E-01	1.285E-01	1.492
BI-214	+	609.31	*	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145
	+	1120.29		1.115E+00	3.710E-01	3.671E-01	3.941E-02	3.037
	+	1764.49		8.660E-01	3.543E-01	2.726E-01	2.256E-02	3.177
PB-214	+	74.81		2.112E+00	6.588E-01	8.608E-01	9.570E-02	2.454

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	77.11		2.185E+00	4.409E-01	4.859E-01	5.544E-02	4.498
	+	87.30		1.707E+00	7.425E-01	1.040E+00	1.277E-01	1.641
	+	241.98		1.410E+00	5.104E-01	4.287E-01	5.311E-02	3.288
	+	295.21		1.117E+00	2.429E-01	1.708E-01	2.279E-02	6.543
	+	351.92	*	9.980E-01	1.701E-01	9.581E-02	1.159E-02	10.416
	+	74.81		2.112E+00	6.588E-01	8.608E-01	9.570E-02	2.454
	+	77.11		2.185E+00	4.409E-01	4.859E-01	5.544E-02	4.498
	+	87.30		1.707E+00	7.425E-01	1.040E+00	1.277E-01	1.641
PO-216	+	241.98		1.410E+00	5.104E-01	4.287E-01	5.311E-02	3.288
	+	295.21		1.117E+00	2.429E-01	1.708E-01	2.279E-02	6.543
	+	351.92	*	9.980E-01	1.701E-01	9.581E-02	1.159E-02	10.416
	+	74.81		1.226E+00	3.887E-01	4.995E-01	6.241E-02	2.454
	+	77.11		1.275E+00	2.381E-01	2.834E-01	2.407E-02	4.498
	+	87.30		9.965E-01	4.381E-01	6.073E-01	8.400E-02	1.641
	+	238.63	*	1.224E+00	1.702E-01	7.118E-02	8.427E-03	17.199
	+	300.09		1.462E+00	7.903E-01	9.805E-01	1.285E-01	1.492
PO-218	+	74.81		2.112E+00	6.588E-01	8.608E-01	9.570E-02	2.454
	+	77.11		2.185E+00	4.409E-01	4.859E-01	5.544E-02	4.498
	+	87.30		1.707E+00	7.425E-01	1.040E+00	1.277E-01	1.641
	+	241.98		1.410E+00	5.104E-01	4.287E-01	5.311E-02	3.288
	+	295.21		1.117E+00	2.429E-01	1.708E-01	2.279E-02	6.543
	+	351.92	*	9.980E-01	1.701E-01	9.581E-02	1.159E-02	10.416
	+	240.98	*	2.673E+00	9.561E-01	8.101E-01	8.928E-02	3.299
	+	609.31	*	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145
RA-224	+	1120.29		1.115E+00	3.710E-01	3.671E-01	3.941E-02	3.037
	+	1764.49		8.660E-01	3.543E-01	2.726E-01	2.256E-02	3.177
	+	338.32		9.541E-01	5.410E-01	2.949E-01	1.233E-01	3.236
	+	911.07	*	1.083E+00	2.708E-01	1.888E-01	2.242E-02	5.735
	+	969.11		1.072E+00	3.965E-01	3.545E-01	8.359E-02	3.025
	+	338.32		9.541E-01	5.410E-01	2.949E-01	1.233E-01	3.236
	+	911.07	*	1.083E+00	2.708E-01	1.888E-01	2.242E-02	5.735
	+	969.11		1.072E+00	3.965E-01	3.545E-01	8.359E-02	3.025
TH-228	+	74.81		1.243E+00	3.768E-01	5.065E-01	4.238E-02	2.454
	+	77.11		1.293E+00	2.414E-01	2.874E-01	2.441E-02	4.498
	+	87.30		1.010E+00	4.325E-01	6.157E-01	5.884E-02	1.641
	+	238.63	*	1.241E+00	1.726E-01	7.217E-02	8.545E-03	17.199
	+	300.09		1.483E+00	1.179E+00	9.942E-01	5.946E-01	1.492
	+	609.31	*	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145
	+	1120.29		1.115E+00	3.710E-01	3.671E-01	3.941E-02	3.037
	+	1764.49		8.659E-01	3.543E-01	2.726E-01	2.256E-02	3.177
TH-232	+	338.32		9.541E-01	3.800E-01	2.949E-01	3.219E-02	3.236
	+	911.07	*	1.083E+00	2.708E-01	1.888E-01	2.242E-02	5.735
	+	969.11		1.072E+00	3.965E-01	3.545E-01	8.359E-02	3.025
	+	766.42		3.239E+01	2.485E+01	1.538E+01	7.822E+00	2.106
	+	1001.03	*	2.085E+01	6.992E+00	6.252E+00	6.509E-01	3.335
	+	63.29	*	1.562E+01	3.530E+00	1.877E+00	3.274E-01	8.322
	+	92.38		1.740E+01	3.372E+00	8.599E-01	1.580E-01	20.232
	+	609.31	*	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145
U-234	+	1120.29		1.115E+00	3.710E-01	3.671E-01	3.941E-02	3.037

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235	+	1764.49		8.659E-01	3.543E-01	2.726E-01	2.256E-02	3.177
		89.95		9.679E-01	1.423E+00	1.763E+00	5.484E-01	0.549
	+	93.35		2.091E+01	6.040E+00	1.027E+00	2.895E-01	20.367
		105.00		9.972E-01	9.283E-01	1.541E+00	4.597E-01	0.647
	+	143.76	*	5.402E-01	2.808E-01	2.727E-01	4.766E-02	1.981
NP-237		163.35		8.492E-02	3.995E-01	6.476E-01	1.247E-01	0.131
	+	185.71		3.663E-01	7.597E-02	5.589E-02	5.339E-03	6.554
		205.31		3.129E-01	4.810E-01	7.113E-01	1.407E-01	0.440
	+	86.50	*	6.327E-01	3.007E-01	3.783E-01	8.588E-02	1.673
		95.87		1.113E+00	1.088E+00	1.376E+00	3.407E-01	0.809
U-238	+	63.29	*	1.562E+01	3.530E+00	1.877E+00	3.274E-01	8.322
	+	92.38		1.740E+01	1.929E+00	8.599E-01	7.934E-02	20.232
AM-243	+	74.67	*	1.987E-01	6.021E-02	8.124E-02	6.725E-03	2.446
	+	86.72		2.373E+01	1.016E+01	1.415E+01	1.343E+00	1.676
		117.66		-3.407E+00	3.142E+00	5.032E+00	4.187E-01	-0.677
ANH-511	+	142.18		4.537E+01	2.255E+01	2.305E+01	1.965E+00	1.969
	+	511.00	*	8.316E-02	6.432E-02	3.547E-02	3.373E-03	2.345

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	7.719E-02	2.498E-01	4.229E-01	4.278E-02	0.183
NA-22		1274.54	*	-4.092E-03	3.610E-02	5.827E-02	4.849E-03	-0.070
NA-24		1368.53	*	5.085E-02	3.610E-02	Half-Life too short		
AL-26		1129.67		3.823E-01	1.321E+00	2.228E+00	1.867E-01	0.172
		1808.65	*	1.235E-02	2.347E-02	4.261E-02	3.484E-03	0.290
TI-44		67.85		-9.433E-03	4.286E-02	6.589E-02	5.103E-03	-0.143
	+	78.38	*	2.352E-01	4.394E-02	5.914E-02	5.093E-03	3.978
SC-46		889.25	*	-2.693E-03	3.114E-02	5.160E-02	4.878E-03	-0.052
	+	1120.51		1.889E-01	6.161E-02	1.030E-01	8.704E-03	1.834
V-48		944.10		-3.321E-01	6.846E-01	1.075E+00	1.004E-01	-0.309
		983.50	*	1.777E-02	5.248E-02	8.986E-02	8.272E-03	0.198
CR-51		1312.09		6.702E-03	5.458E-02	8.980E-02	7.538E-03	0.075
		320.08	*	-9.721E-02	2.935E-01	4.536E-01	5.303E-02	-0.214
MN-52		744.21		1.455E-01	1.781E-01	3.049E-01	2.799E-02	0.477
		848.13		-3.355E-04	4.720E+00	7.915E+00	7.449E-01	0.000
	+	935.52		1.659E-01	2.085E-01	3.154E-01	2.955E-02	0.526
		1246.25		-3.694E-01	5.313E+00	8.574E+00	7.067E-01	-0.043
		1333.61		4.468E+00	3.574E+00	6.616E+00	5.582E-01	0.675
		1434.06	*	-9.743E-02	1.480E-01	2.082E-01	1.777E-02	-0.468
MN-54		834.83	*	1.903E-02	3.106E-02	5.452E-02	5.121E-03	0.349
CO-56		846.75	*	2.283E-03	3.240E-02	5.465E-02	5.143E-03	0.042
		977.42		-1.536E+00	2.333E+00	3.603E+00	3.325E-01	-0.426
		1037.82		-1.949E-01	2.742E-01	4.212E-01	3.959E-02	-0.463
		1175.09		-1.026E+00	1.914E+00	2.962E+00	2.383E-01	-0.347
		1238.25		6.957E-02	8.135E-02	1.406E-01	1.193E-02	0.495
		1360.21		-6.563E-01	8.040E-01	1.130E+00	9.572E-02	-0.581
		1771.40		-2.401E-01	2.323E-01	3.168E-01	2.617E-02	-0.758

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	3.505E-04	2.061E-02	3.455E-02	2.871E-03	0.010
		136.48		-1.053E-01	1.673E-01	2.712E-01	2.465E-02	-0.388
CO-58		810.76	*	-8.108E-03	3.052E-02	5.014E-02	4.698E-03	-0.162
FE-59	+	142.65		6.836E+00	3.397E+00	3.942E+00	3.365E-01	1.734
		192.34		-1.660E-01	7.547E-01	1.221E+00	1.729E-01	-0.136
		1099.22	*	-6.510E-02	7.653E-02	1.146E-01	1.066E-02	-0.568
		1291.56		9.539E-03	1.057E-01	1.728E-01	1.650E-02	0.055
CO-60		1173.22		3.325E-04	3.861E-02	6.311E-02	5.074E-03	0.005
		1332.49	*	2.689E-03	3.288E-02	5.366E-02	4.526E-03	0.050
ZN-65		1115.52	*	-1.050E-03	8.220E-02	1.165E-01	9.893E-03	-0.009
GE-68		1077.35	*	6.300E-01	1.069E+00	1.852E+00	1.618E-01	0.340
AS-73		53.44	*	1.384E-01	7.470E-01	1.181E+00	9.006E-02	0.117
AS-74		595.88	*	2.671E-02	6.891E-02	1.159E-01	1.075E-02	0.231
		634.78		4.433E-02	2.787E-01	4.582E-01	4.154E-02	0.097
SE-75		66.05		-4.347E+00	4.761E+00	6.462E+00	6.218E-01	-0.673
		96.73		6.323E-01	8.631E-01	1.099E+00	1.520E-01	0.575
		121.11		1.923E-02	1.103E-01	1.860E-01	2.043E-02	0.103
		136.00		-2.481E-02	3.166E-02	5.097E-02	4.326E-03	-0.487
		198.60		6.955E-01	1.405E+00	2.344E+00	2.512E-01	0.297
		264.65	*	3.112E-03	3.619E-02	5.202E-02	6.071E-03	0.060
		279.53		7.848E-02	8.679E-02	1.323E-01	1.620E-02	0.593
		303.91		3.848E-01	1.877E+00	2.695E+00	3.745E-01	0.143
		400.65		-1.432E-01	1.863E-01	2.945E-01	3.428E-02	-0.486
BR-77	+	87.88		3.309E+02	1.417E+02	2.064E+02	1.987E+01	1.603
		200.40		-1.904E+01	9.071E+01	1.464E+02	1.455E+01	-0.130
	+	239.00		1.374E+02	1.808E+01	2.105E+01	2.309E+00	6.525
		249.79		-9.467E+00	3.710E+01	5.880E+01	6.616E+00	-0.161
		281.68		6.184E-02	5.076E+01	7.209E+01	8.637E+00	0.001
		297.23		7.719E+01	4.517E+01	5.854E+01	6.886E+00	1.319
		303.76		5.499E+01	1.102E+02	1.621E+02	1.889E+01	0.339
		439.47		2.141E+01	7.877E+01	1.336E+02	1.261E+01	0.160
		484.57		1.202E+00	1.286E+02	2.130E+02	2.026E+01	0.006
		520.65	*	-3.312E+00	5.715E+00	8.959E+00	8.512E-01	-0.370
		574.64		-4.673E+01	1.192E+02	1.886E+02	1.767E+01	-0.248
		578.91		-1.197E+01	5.768E+01	8.069E+01	7.548E+00	-0.148
		585.48		3.158E+02	1.240E+02	2.113E+02	1.971E+01	1.494
		755.35		2.076E+01	9.861E+01	1.608E+02	1.482E+01	0.129
		817.79		-3.467E+01	7.792E+01	1.260E+02	1.179E+01	-0.275
SR-82		698.33		-3.006E+00	2.784E+01	4.441E+01	4.008E+00	-0.068
		776.49	*	-1.464E-01	3.165E-01	4.824E-01	4.473E-02	-0.303
		1395.20		1.631E+00	8.324E+00	1.378E+01	1.172E+00	0.118
RB-83		520.41	*	-3.000E-02	5.362E-02	8.421E-02	8.001E-03	-0.356
		529.64		-1.626E-02	7.998E-02	1.293E-01	1.227E-02	-0.126
		552.65		1.342E-01	1.508E-01	2.641E-01	2.493E-02	0.508
RB-84		881.50	*	8.282E-03	5.752E-02	9.736E-02	9.198E-03	0.085
KR-85		513.99	*	1.249E+01	6.616E+00	1.103E+01	1.048E+00	1.132
SR-85		513.99	*	6.320E-02	3.349E-02	5.581E-02	5.307E-03	1.132
RB-86		1076.63	*	4.003E-01	6.512E-01	1.131E+00	9.879E-02	0.354
Y-88		898.02		-5.500E-03	3.114E-02	5.107E-02	4.851E-03	-0.108

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1836.01	*		8.904E-03	2.732E-02	4.771E-02	3.873E-03	0.187
ZR-88	392.90	*		4.923E-03	2.469E-02	4.195E-02	3.880E-03	0.117
Y-91	1204.90	*		6.632E+00	1.752E+01	2.941E+01	2.392E+00	0.225
NB-94	702.63	*		-2.101E-02	2.679E-02	3.983E-02	3.600E-03	-0.528
	871.10			-5.931E-03	2.770E-02	4.544E-02	4.289E-03	-0.131
NB-95	765.79	*		1.019E-01	4.612E-02	7.696E-02	7.114E-03	1.324
NB-95M	235.69	*		-4.210E-02	1.110E-01	1.556E-01	1.851E-02	-0.270
ZR-95	724.18			3.648E-02	7.847E-02	1.165E-01	1.145E-02	0.313
	756.15	*		5.133E-02	5.720E-02	9.880E-02	9.918E-03	0.520
NB-97	657.90	*		1.527E-02	5.720E-02	Half-Life	too short	
	1024.50			-2.231E+00	5.720E-02	Half-Life	too short	
ZR-97	254.15			3.940E-01	5.720E-02	Half-Life	too short	
	355.39			1.798E-01	5.720E-02	Half-Life	too short	
	507.63	*		4.507E-01	5.720E-02	Half-Life	too short	
	602.52			3.044E-01	5.720E-02	Half-Life	too short	
	1021.30			1.653E+00	5.720E-02	Half-Life	too short	
	1147.95			5.846E-01	5.720E-02	Half-Life	too short	
	1362.66			-5.366E-01	5.720E-02	Half-Life	too short	
	1750.46			8.558E-01	5.720E-02	Half-Life	too short	
MO-99	140.51			-4.386E+00	1.709E+01	2.494E+01	6.898E+00	-0.176
	181.06			7.564E+00	1.093E+01	1.657E+01	3.096E+00	0.457
	366.43			-7.489E+00	4.659E+01	7.777E+01	7.866E+00	-0.096
	739.58	*		-4.927E+00	7.265E+00	1.082E+01	1.678E+00	-0.455
	778.00			3.459E+00	2.148E+01	3.480E+01	3.228E+00	0.099
TC-99M	140.51	*		-2.908E+08	2.148E+01	Half-Life	too short	
RH-101	127.23			-1.594E-02	2.695E-02	4.402E-02	3.665E-03	-0.362
	198.01	*		1.252E-02	2.628E-02	4.378E-02	4.323E-03	0.286
	325.23			6.902E-02	1.929E-01	2.795E-01	3.138E-02	0.247
RH-102	418.52			2.435E-01	2.247E-01	3.998E-01	3.745E-02	0.609
	475.06	*		-3.218E-03	2.242E-02	3.676E-02	3.494E-03	-0.088
	631.29			-4.560E-03	4.467E-02	7.186E-02	6.530E-03	-0.063
	697.49			3.194E-02	6.498E-02	1.088E-01	9.815E-03	0.294
+	766.84			3.077E-01	1.790E-01	2.077E-01	1.921E-02	1.481
	1046.59			2.282E-03	9.757E-02	1.612E-01	1.437E-02	0.014
	1112.84			-3.299E-02	2.065E-01	3.137E-01	2.667E-02	-0.105
RU-103	497.08	*		-8.466E-03	3.088E-02	4.990E-02	7.348E-03	-0.170
+	610.33			9.702E+00	2.256E+00	2.374E+00	4.036E-01	4.086
RH-106	511.85	+		4.144E-01	3.205E-01	3.562E-01	3.387E-02	1.163
	621.84	*		-6.510E-02	2.635E-01	4.190E-01	5.742E-02	-0.155
	1050.47			-8.111E-02	2.017E+00	3.312E+00	2.944E-01	-0.024
RU-106	511.85	+		4.144E-01	3.205E-01	3.562E-01	3.387E-02	1.163
	621.84	*		-6.510E-02	2.634E-01	4.190E-01	3.832E-02	-0.155
	1050.47			-8.111E-02	2.017E+00	3.312E+00	2.944E-01	-0.024
AG-108M	433.93	*		-1.425E-02	2.446E-02	3.899E-02	3.795E-03	-0.366
	614.37			-2.021E-02	3.412E-02	4.493E-02	4.271E-03	-0.450
	722.95			1.476E-04	3.611E-02	5.062E-02	4.774E-03	0.003
AG-110M	657.75	*		1.627E-02	3.378E-02	5.033E-02	4.606E-03	0.323
	677.61			-2.336E-02	2.527E-01	4.045E-01	3.712E-02	-0.058
	706.67			1.615E-01	1.649E-01	2.872E-01	2.666E-02	0.562

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		2.208E-01	1.525E-01	2.476E-01	2.344E-02	0.892
		884.67		2.606E-03	3.974E-02	6.681E-02	6.483E-03	0.039
		937.48		7.658E-03	9.056E-02	1.326E-01	1.279E-02	0.058
		1384.27		3.823E-03	1.168E-01	1.890E-01	1.652E-02	0.020
IN-111		171.28		1.079E-01	5.755E-01	9.552E-01	8.783E-02	0.113
		245.39	*	-4.601E-01	7.204E-01	9.824E-01	1.094E-01	-0.468
IN-113M		391.69	*	1.863E-02	3.601E-02	6.225E-02	5.908E-03	0.299
SN-113		391.69	*	1.863E-02	3.601E-02	6.225E-02	5.908E-03	0.299
IN-114M		190.27	*	-8.118E-03	1.597E-01	2.328E-01	2.251E-02	-0.035
CD-115		260.90		-3.325E+01	7.304E+01	1.139E+02	1.315E+01	-0.292
		492.35		-7.445E+00	1.871E+01	2.993E+01	2.848E+00	-0.249
		527.90	*	-3.936E+00	5.961E+00	9.273E+00	8.802E-01	-0.424
SN-117M		156.02		-7.748E-01	1.726E+00	2.800E+00	2.470E-01	-0.277
		158.56	*	1.378E-03	4.289E-02	7.099E-02	6.305E-03	0.019
SB-122		563.90	*	2.600E-01	1.292E+00	2.115E+00	1.990E-01	0.123
		692.80		8.683E+00	2.561E+01	4.249E+01	3.825E+00	0.204
I-123		159.00	*	5.711E-01	2.561E+01	Half-Life too short		
		528.96		-1.683E+01	2.561E+01	Half-Life too short		
TE-123M		159.00	*	1.330E-02	2.332E-02	3.939E-02	3.523E-03	0.338
I-124		602.71	*	1.744E-01	4.886E-01	7.239E-01	6.695E-02	0.241
		722.78		2.626E-01	3.052E+00	4.325E+00	3.941E-01	0.061
		1325.50		4.548E+00	2.259E+01	3.747E+01	3.155E+00	0.121
		1376.25		2.985E+01	2.089E+01	3.916E+01	3.324E+00	0.762
		1509.49		6.578E+00	1.023E+01	1.852E+01	1.584E+00	0.355
		1691.02		-8.419E-01	2.253E+00	3.437E+00	2.890E-01	-0.245
SB-124		602.71		1.226E-02	3.433E-02	5.086E-02	4.705E-03	0.241
		645.85		1.186E-01	4.059E-01	6.741E-01	6.395E-02	0.176
		709.31		-7.805E-01	2.278E+00	3.549E+00	3.217E-01	-0.220
		713.82		9.926E-02	1.244E+00	2.014E+00	2.492E-01	0.049
		722.78		2.675E-02	3.108E-01	4.405E-01	4.091E-02	0.061
	+	968.20		1.088E+01	3.260E+00	5.696E+00	5.276E-01	1.911
		1045.16		-1.022E+00	2.120E+00	3.333E+00	2.973E-01	-0.307
		1325.50		4.948E-01	2.458E+00	4.076E+00	3.432E-01	0.121
		1368.21		2.857E-01	1.355E+00	2.249E+00	3.011E-01	0.127
		1436.60		-1.092E-01	2.518E+00	4.200E+00	3.584E-01	-0.026
		1691.02	*	-2.023E-02	5.414E-02	8.256E-02	7.231E-03	-0.245
SB-125		427.89	*	-9.434E-03	6.984E-02	1.155E-01	1.103E-02	-0.082
	+	463.38		6.496E-01	3.473E-01	4.456E-01	4.504E-02	1.458
		600.56		-2.927E-02	1.470E-01	2.357E-01	2.322E-02	-0.124
		635.90		7.153E-02	2.209E-01	3.681E-01	3.579E-02	0.194
TE-125M		109.28	*	5.159E+00	8.567E+00	1.331E+01	1.354E+00	0.388
I-126		388.63		-1.007E-01	1.568E-01	2.528E-01	2.365E-02	-0.398
		666.33	*	1.149E-01	1.455E-01	2.252E-01	2.003E-02	0.510
		753.82		4.513E-01	1.159E+00	1.920E+00	1.768E-01	0.235
SB-126		223.80		-1.425E+00	3.105E+00	4.909E+00	5.184E-01	-0.290
	+	278.60		1.962E+00	2.517E+00	3.237E+00	3.883E-01	0.606
	+	296.50		1.038E+01	2.162E+00	2.686E+00	3.162E-01	3.867
		414.70		2.098E-02	5.230E-02	8.979E-02	8.397E-03	0.234
		415.30		1.489E+00	4.467E+00	7.632E+00	7.139E-01	0.195

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20	2.120E+00	2.961E+00	5.116E+00	4.826E-01	0.414
		573.80	-5.097E-01	7.779E-01	1.200E+00	1.125E-01	-0.425
		593.00	-8.710E-02	6.922E-01	1.117E+00	1.038E-01	-0.078
		656.30	2.345E+00	2.908E+00	4.490E+00	4.003E-01	0.522
		666.33	4.787E-02	6.062E-02	9.386E-02	8.348E-03	0.510
		675.00	6.379E-01	1.446E+00	2.428E+00	2.168E-01	0.263
		695.00	2.013E-02	6.259E-02	1.034E-01	9.322E-03	0.195
		697.00	1.500E-01	2.135E-01	3.630E-01	3.273E-02	0.413
		720.50	* 2.101E-02	1.066E-01	1.686E-01	1.535E-02	0.125
		856.80	1.388E-01	3.672E-01	5.621E-01	5.297E-02	0.247
		989.30	5.378E-02	9.541E-01	1.589E+00	1.459E-01	0.034
		1034.80	7.051E+00	7.056E+00	1.266E+01	1.136E+00	0.557
		1213.00	4.039E-02	3.821E+00	6.229E+00	5.079E-01	0.006
SB-127		61.10	1.619E+01	4.826E+01	7.017E+01	6.832E+00	0.231
		252.40	1.018E+00	2.827E+00	4.586E+00	1.953E+00	0.222
		290.80	4.255E-01	1.518E+01	2.155E+01	2.916E+00	0.020
		411.60	-5.946E+00	7.499E+00	1.179E+01	1.873E+00	-0.504
		444.90	9.187E+00	6.580E+00	1.174E+01	1.505E+00	0.782
		473.00	-4.740E-01	1.066E+00	1.707E+00	2.250E-01	-0.278
		543.00	4.014E+00	1.090E+01	1.837E+01	2.691E+00	0.219
		603.60	2.996E+00	8.540E+00	1.262E+01	1.596E+00	0.237
		685.20	* 2.451E-01	9.310E-01	1.535E+00	1.736E-01	0.160
		698.50	-1.036E+00	1.029E+01	1.642E+01	2.594E+00	-0.063
		722.20	-7.926E+00	2.135E+01	2.839E+01	3.179E+00	-0.279
		783.80	8.021E-01	2.607E+00	4.266E+00	5.369E-01	0.188
XE-127		57.60	-2.939E+00	5.813E+00	8.890E+00	6.427E-01	-0.331
		145.22	4.987E-01	6.178E-01	9.556E-01	8.204E-02	0.522
		172.10	-1.313E-02	9.310E-02	1.522E-01	1.402E-02	-0.086
		202.84	* -1.064E-02	3.734E-02	6.003E-02	6.004E-03	-0.177
		374.96	-1.354E-01	1.382E-01	2.158E-01	2.123E-02	-0.627
I-131		80.18	-4.930E-01	3.863E+00	5.914E+00	5.223E-01	-0.083
		284.30	3.465E-01	1.012E+00	1.650E+00	2.024E-01	0.210
		364.48	* -7.470E-02	7.600E-02	1.191E-01	1.259E-02	-0.627
		636.97	-1.758E-01	1.124E+00	1.797E+00	1.708E-01	-0.098
		722.89	3.746E-01	5.419E+00	7.663E+00	7.016E-01	0.049
TE-132		49.72	8.851E+00	1.348E+01	2.177E+01	2.201E+00	0.407
	+	111.76	6.677E+01	3.768E+01	3.968E+01	4.108E+00	1.683
		116.30	1.077E+01	1.946E+01	3.010E+01	3.101E+00	0.358
		228.16	* -1.078E-01	4.485E-01	7.166E-01	1.199E-01	-0.150
BA-133		53.15	-6.600E-01	3.298E+00	5.124E+00	3.926E-01	-0.129
		79.62	-4.332E-01	1.194E+00	1.808E+00	2.765E-01	-0.240
		81.00	-2.640E-04	8.881E-02	1.450E-01	2.321E-02	-0.002
	+	276.40	3.141E-01	4.045E-01	5.321E-01	8.855E-02	0.590
		302.84	2.332E-02	1.243E-01	1.783E-01	2.753E-02	0.131
		356.01	* 4.192E-03	3.869E-02	5.821E-02	8.412E-03	0.072
		383.85	-1.938E-02	2.413E-01	4.038E-01	5.347E-02	-0.048
I-133	+	510.53	3.165E-01	2.413E-01	Half-Life	too short	
		529.87	* -2.678E-04	2.413E-01	Half-Life	too short	
		706.58	1.152E-01	2.413E-01	Half-Life	too short	

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		856.28	2.030E-02	2.413E-01	Half-Life	too short	
		875.33	-2.399E-02	2.413E-01	Half-Life	too short	
		1236.41	2.296E-01	2.413E-01	Half-Life	too short	
		1298.22	5.715E-02	2.413E-01	Half-Life	too short	
		475.35	4.102E-01	1.464E+00	2.475E+00	2.353E-01	0.166
		563.23	4.260E-02	3.118E-01	5.081E-01	4.819E-02	0.084
		569.32	1.074E-01	1.584E-01	2.721E-01	2.584E-02	0.395
		604.70	-1.095E-02	3.363E-02	4.631E-02	4.288E-03	-0.236
	+	795.84	* 5.410E-02	6.075E-02	7.620E-02	7.145E-03	0.710
		801.93	-2.940E-01	3.218E-01	4.811E-01	4.511E-02	-0.611
		1038.57	-6.873E-01	3.287E+00	5.314E+00	4.758E-01	-0.129
		1167.94	1.664E-01	2.201E+00	3.620E+00	2.926E-01	0.046
		1365.15	1.829E-01	9.801E-01	1.622E+00	1.439E-01	0.113
		268.24	* 1.187E-01	1.398E-01	2.110E-01	2.691E-02	0.562
CS-135		288.45	-2.058E+08	1.398E-01	Half-Life	too short	
I-135		417.63	4.003E+08	1.398E-01	Half-Life	too short	
		546.56	-1.411E+08	1.398E-01	Half-Life	too short	
		836.80	1.132E+09	1.398E-01	Half-Life	too short	
		1038.76	-1.919E+08	1.398E-01	Half-Life	too short	
		1124.00	1.602E+08	1.398E-01	Half-Life	too short	
		1131.51	-1.226E+08	1.398E-01	Half-Life	too short	
		1260.41	* 5.923E+07	1.398E-01	Half-Life	too short	
		1457.56	1.390E+10	1.398E-01	Half-Life	too short	
		1678.03	3.865E+07	1.398E-01	Half-Life	too short	
		1706.46	4.782E+08	1.398E-01	Half-Life	too short	
		1791.20	5.259E+07	1.398E-01	Half-Life	too short	
CS-136		66.91	-8.166E-01	7.421E-01	9.872E-01	1.474E-01	-0.827
	+	86.29	2.636E+00	1.156E+00	1.657E+00	2.222E-01	1.591
		153.22	-9.143E-02	5.016E-01	8.243E-01	8.041E-02	-0.111
		163.89	3.352E-01	8.507E-01	1.389E+00	1.391E-01	0.241
		176.55	-1.214E-02	2.726E-01	4.470E-01	4.373E-02	-0.027
		273.65	-2.096E-02	4.787E-01	5.315E-01	6.531E-02	-0.039
		340.57	-2.370E-02	1.068E-01	1.573E-01	1.739E-02	-0.151
		818.51	-3.134E-02	5.656E-02	9.036E-02	8.467E-03	-0.347
		1048.07	* -1.873E-02	8.651E-02	1.397E-01	1.293E-02	-0.134
		1235.34	5.044E-02	5.186E-01	8.495E-01	9.817E-02	0.059
CE-139		165.85	* -1.016E-02	2.442E-02	3.952E-02	3.584E-03	-0.257
BA-140		162.64	1.022E-01	5.941E-01	9.623E-01	9.110E-02	0.106
		304.84	-7.329E-01	1.091E+00	1.522E+00	4.429E-01	-0.481
		423.70	-2.455E-01	1.347E+00	2.217E+00	7.235E-01	-0.111
LA-140		537.32	* 1.472E-01	2.085E-01	3.507E-01	1.170E-01	0.420
	+	328.77	7.537E-02	3.945E-01	4.180E-01	4.818E-02	0.180
		432.53	-2.645E-02	1.452E+00	2.419E+00	2.371E-01	-0.011
		487.03	4.000E-02	1.031E-01	1.752E-01	1.752E-02	0.228
		751.79	-7.756E-01	1.398E+00	2.119E+00	2.135E-01	-0.366
		815.85	2.577E-01	2.392E-01	4.361E-01	4.484E-02	0.591
		867.82	-2.403E-01	1.156E+00	1.718E+00	1.693E-01	-0.140
		919.63	-1.514E+00	2.137E+00	3.308E+00	3.737E-01	-0.458
		925.24	5.679E-01	9.040E-01	1.585E+00	1.568E-01	0.358

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1596.49	*		8.317E-04	6.572E-02	1.096E-01	9.333E-03	0.008
CE-141	145.44	*		2.583E-02	5.512E-02	8.398E-02	7.346E-03	0.308
CE-143	57.37			2.575E-05	5.512E-02	Half-Life	too short	
	231.56			3.024E-04	5.512E-02	Half-Life	too short	
	293.26	*		1.771E-04	5.512E-02	Half-Life	too short	
	350.59		+	1.224E-02	5.512E-02	Half-Life	too short	
	490.36			-1.007E-03	5.512E-02	Half-Life	too short	
	664.57			2.383E-04	5.512E-02	Half-Life	too short	
	721.93			-7.275E-04	5.512E-02	Half-Life	too short	
CE-144	80.11			-3.083E-01	1.970E+00	3.012E+00	2.645E-01	-0.102
	133.54	*		5.991E-02	1.672E-01	2.823E-01	4.359E-02	0.212
PM-144	476.78			2.112E-02	5.284E-02	9.001E-02	9.220E-03	0.235
	618.01			6.114E-03	2.468E-02	4.098E-02	3.848E-03	0.149
	696.49	*		1.596E-02	2.933E-02	4.930E-02	4.446E-03	0.324
	778.57			4.089E-01	1.975E+00	3.212E+00	2.981E-01	0.127
PR-144	696.49	*		1.081E+00	1.986E+00	3.339E+00	3.010E-01	0.324
	1489.15			-1.843E+00	8.278E+00	1.334E+01	1.140E+00	-0.138
PM-146	453.90	*		2.101E-02	3.536E-02	6.098E-02	6.964E-03	0.345
	633.02			1.329E-01	1.132E+00	1.854E+00	6.949E-01	0.072
	735.90			4.768E-02	1.210E-01	2.001E-01	5.755E-02	0.238
	747.13			-2.793E-02	8.002E-02	1.239E-01	1.783E-02	-0.226
ND-147	91.11			2.878E+00	4.472E-01	6.030E-01	6.027E-02	4.773
	319.41			3.920E-01	2.471E+00	3.953E+00	4.488E-01	0.099
	439.89			-1.353E+00	4.432E+00	7.233E+00	6.827E-01	-0.187
	531.02	*		-2.923E-02	4.063E-01	6.642E-01	1.027E-01	-0.044
PM-149	285.90	*		-1.150E+01	4.950E+01	7.771E+01	1.367E+01	-0.148
EU-152	121.78			-4.563E-03	5.994E-02	1.001E-01	9.665E-03	-0.046
	244.69			-4.588E-02	2.885E-01	4.092E-01	4.550E-02	-0.112
	344.27	*		1.652E-02	8.117E-02	1.346E-01	1.505E-02	0.123
	443.98			7.235E-01	7.829E-01	1.377E+00	1.301E-01	0.525
	778.89			5.342E-02	2.290E-01	3.733E-01	3.464E-02	0.143
	867.32			-9.127E-02	7.690E-01	1.103E+00	1.040E-01	-0.083
	964.01			2.427E-01	2.763E-01	4.364E-01	4.049E-02	0.556
	1085.78			3.915E-01	3.413E-01	6.171E-01	5.357E-02	0.634
	1112.02			9.765E-02	2.622E-01	4.452E-01	3.787E-02	0.219
	1407.95			-2.897E-02	1.295E-01	2.001E-01	1.704E-02	-0.145
GD-153	69.67			8.098E-01	1.385E+00	2.413E+00	1.901E-01	0.336
	83.37			1.238E+01	1.455E+01	2.290E+01	2.088E+00	0.540
	97.43	*	+	2.925E-01	1.149E-01	1.286E-01	1.143E-02	2.274
	103.18			-3.437E-02	8.976E-02	1.425E-01	1.228E-02	-0.241
EU-154	123.07			9.966E-03	4.227E-02	7.139E-02	7.944E-03	0.140
	247.94			1.046E-01	2.868E-01	4.708E-01	6.368E-02	0.222
	591.81			2.312E-01	4.912E-01	8.311E-01	1.012E-01	0.278
	723.30			4.673E-03	1.513E-01	2.128E-01	2.123E-02	0.022
	756.87			4.938E-01	6.249E-01	1.070E+00	1.328E-01	0.462
	873.19			6.185E-02	2.391E-01	4.091E-01	5.251E-02	0.151
	996.32			8.656E-02	3.397E-01	5.046E-01	9.098E-02	0.172
	1004.76			1.187E-01	1.942E-01	3.013E-01	3.619E-02	0.394
	1274.45	*		-1.867E-02	1.014E-01	1.623E-01	1.798E-02	-0.115

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-2.809E+00	2.273E+00	3.355E+00	2.757E-01	-0.837
		60.01		1.569E+00	5.190E+00	7.546E+00	5.390E-01	0.208
	+	86.54		2.594E-01	1.111E-01	1.638E-01	1.564E-02	1.583
TB-160		105.31	*	8.788E-02	9.012E-02	1.566E-01	1.355E-02	0.561
	+	86.79		6.851E-01	2.932E-01	4.349E-01	4.130E-02	1.575
		197.04		-7.795E-02	4.474E-01	7.246E-01	7.135E-02	-0.108
		215.65		7.243E-02	6.094E-01	9.953E-01	1.029E-01	0.073
	+	298.57		2.103E-01	1.130E-01	1.602E-01	1.881E-02	1.313
		879.36	*	1.404E-01	1.166E-01	2.132E-01	2.014E-02	0.659
		962.29		-6.286E-02	4.757E-01	6.868E-01	6.375E-02	-0.092
	+	966.15		1.936E-01	2.746E-01	3.383E-01	3.136E-02	0.572
		1177.93		-2.082E-01	3.164E-01	4.841E-01	3.899E-02	-0.430
		1271.85		-2.792E-01	6.040E-01	9.291E-01	7.716E-02	-0.300
HO-166M		80.57		1.102E-02	2.558E-01	3.941E-01	3.478E-02	0.028
	+	184.41		2.747E-01	5.698E-02	6.416E-02	6.108E-03	4.282
		280.46		1.566E-02	6.963E-02	1.008E-01	1.210E-02	0.155
		410.95		6.816E-03	1.847E-01	3.100E-01	2.894E-02	0.022
		711.68	*	1.043E-03	4.830E-02	7.781E-02	7.060E-03	0.013
		752.31		-9.161E-02	2.368E-01	3.650E-01	3.360E-02	-0.251
		810.29		-2.209E-02	4.669E-02	7.522E-02	7.032E-03	-0.294
TM-171		51.35		-8.723E+00	2.849E+01	4.411E+01	3.476E+00	-0.198
		52.39		7.729E-01	1.443E+01	2.269E+01	1.759E+00	0.034
		59.40		1.263E+01	2.780E+01	4.072E+01	2.892E+00	0.310
		66.72	*	-2.496E+01	2.812E+01	3.827E+01	2.932E+00	-0.652
LU-176	+	88.36		5.110E-01	2.188E-01	3.090E-01	2.966E-02	1.654
		201.83		-1.502E-02	2.367E-02	3.738E-02	3.728E-03	-0.402
		306.84	*	-3.890E-03	2.108E-02	3.266E-02	3.788E-03	-0.119
LU-177M		401.10		-3.825E+00	4.892E+00	7.737E+00	7.189E-01	-0.494
		52.97		-4.266E-01	1.482E+00	2.293E+00	1.762E-01	-0.186
		54.07		-3.844E-01	7.866E-01	1.205E+00	9.106E-02	-0.319
		61.30		6.066E-01	1.548E+00	2.256E+00	1.637E-01	0.269
		121.62		-4.952E-02	3.090E-01	5.144E-01	4.270E-02	-0.096
		147.16		3.807E-01	5.681E-01	8.742E-01	7.539E-02	0.435
		171.86		-3.313E-02	3.829E-01	6.276E-01	5.779E-02	-0.053
		218.09		2.706E-01	7.145E-01	1.180E+00	1.228E-01	0.229
	+	268.79		2.076E+00	1.063E+00	1.149E+00	1.350E-01	1.806
		319.02		-6.024E-02	2.089E-01	3.240E-01	3.681E-02	-0.186
HF-181		367.43		-3.504E-01	6.923E-01	1.129E+00	1.138E-01	-0.310
		413.65	*	-6.555E-03	1.316E-01	2.195E-01	2.052E-02	-0.030
		56.28		2.370E-01	8.750E-01	1.384E+00	1.016E-01	0.171
		57.53		-2.570E-01	4.907E-01	7.499E-01	5.425E-02	-0.343
		65.20		3.565E-01	9.067E-01	1.318E+00	9.955E-02	0.270
		133.02		1.680E-02	5.251E-02	8.864E-02	7.433E-03	0.189
		136.25		-1.919E-01	3.616E-01	5.890E-01	4.965E-02	-0.326
W-181		345.85		1.637E-01	1.538E-01	2.584E-01	2.770E-02	0.634
		482.03	*	1.247E-02	3.160E-02	5.385E-02	5.122E-03	0.232
		56.28		9.472E-02	3.470E-01	5.489E-01	4.029E-02	0.173
		57.53		-1.021E-01	1.948E-01	2.976E-01	2.153E-02	-0.343
		65.20	*	1.404E-01	3.570E-01	5.191E-01	3.920E-02	0.270

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75	-3.274E-02	1.013E-01	1.551E-01	1.200E-02	-0.211
	+	100.10	6.786E-01	2.665E-01	2.563E-01	2.241E-02	2.648
		152.43	1.171E-01	2.652E-01	4.469E-01	3.905E-02	0.262
		222.10	-1.949E-01	2.838E-01	4.429E-01	4.658E-02	-0.440
	+	1001.68	9.115E+00	3.023E+00	4.911E+00	4.483E-01	1.856
	+	1121.28	5.232E-01	1.706E-01	2.796E-01	2.360E-02	1.871
		1189.05	7.392E-02	2.690E-01	4.495E-01	3.635E-02	0.164
		1221.42	* 1.481E-01	1.680E-01	2.937E-01	2.402E-02	0.504
		1230.97	3.468E-01	4.353E-01	7.518E-01	6.167E-02	0.461
		57.98	-7.291E-02	1.926E-01	2.961E-01	2.132E-02	-0.246
RE-183		59.32	6.995E-02	1.120E-01	1.654E-01	1.175E-02	0.423
		67.20	-2.252E-01	2.005E-01	2.693E-01	2.073E-02	-0.836
		162.32	* 3.874E-03	8.920E-02	1.475E-01	1.324E-02	0.026
	+	208.81	1.203E+00	8.455E-01	1.367E+00	1.389E-01	0.880
		291.72	-5.178E-03	8.065E-01	1.141E+00	1.352E-01	-0.005
RE-184		57.98	-2.706E-01	7.147E-01	1.099E+00	7.911E-02	-0.246
		59.32	2.594E-01	4.154E-01	6.132E-01	4.358E-02	0.423
		67.20	-8.356E-01	7.438E-01	9.992E-01	7.690E-02	-0.836
		161.27	-2.628E-01	2.960E-01	4.691E-01	4.198E-02	-0.560
		216.55	9.561E-02	2.209E-01	3.656E-01	3.790E-02	0.262
		252.85	* 6.561E-02	1.893E-01	3.101E-01	3.514E-02	0.212
		318.01	1.409E-01	3.581E-01	5.818E-01	6.622E-02	0.242
		792.07	8.500E-02	8.351E-01	1.242E+00	1.157E-01	0.068
		903.28	-3.506E-01	7.409E-01	1.177E+00	1.112E-01	-0.298
		920.93	-1.049E-01	3.741E-01	6.070E-01	5.710E-02	-0.173
OS-185		59.72	7.443E-02	3.064E-01	4.444E-01	3.163E-02	0.167
		61.14	5.885E-02	1.697E-01	2.469E-01	1.788E-02	0.238
		69.30	3.529E-01	2.448E-01	4.343E-01	3.410E-02	0.813
		592.07	8.092E-01	1.975E+00	3.330E+00	3.096E-01	0.243
		646.12	* 1.544E-02	3.360E-02	5.662E-02	5.089E-03	0.273
		717.42	8.303E-02	6.976E-01	1.134E+00	1.031E-01	0.073
		874.81	-4.008E-01	4.838E-01	7.454E-01	7.038E-02	-0.538
		880.27	5.973E-01	6.375E-01	1.147E+00	1.084E-01	0.521
RE-188		155.03	* 1.426E-02	1.351E-01	2.245E-01	1.975E-02	0.064
		477.96	1.649E+00	2.359E+00	4.097E+00	3.895E-01	0.402
		633.10	2.807E-01	2.244E+00	3.681E+00	3.340E-01	0.076
W-188	+	63.58	6.203E+02	1.003E+02	1.223E+02	9.093E+00	5.070
		227.08	5.526E+00	1.049E+01	1.739E+01	1.852E+00	0.318
IR-192		290.67	* 1.395E-01	6.477E+00	9.191E+00	1.090E+00	0.015
	+	295.96	8.422E-01	1.756E-01	2.333E-01	2.760E-02	3.609
		308.46	9.516E-03	7.875E-02	1.259E-01	1.461E-02	0.076
		316.51	* -1.155E-03	2.816E-02	4.448E-02	5.083E-03	-0.026
		468.07	-4.316E-03	5.770E-02	8.342E-02	8.394E-03	-0.052
AU-195		604.41	-1.869E-01	4.480E-01	6.100E-01	8.197E-02	-0.306
		612.46	4.969E-01	6.029E-01	9.344E-01	9.725E-02	0.532
		65.12	1.152E-01	1.675E-01	2.465E-01	1.860E-02	0.467
		66.83	-8.220E-02	9.260E-02	1.260E-01	9.665E-03	-0.652
	+	75.70	6.401E-01	1.940E-01	3.391E-01	2.837E-02	1.888
	+	98.88	* 8.507E-01	3.341E-01	3.858E-01	3.397E-02	2.205

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200		129.76		2.658E+00	2.388E+00	4.131E+00	3.449E-01	0.643
		367.94	*	4.431E-06	2.388E+00	Half-Life	too short	
		579.30		-6.747E-04	2.388E+00	Half-Life	too short	
		828.27		1.408E-03	2.388E+00	Half-Life	too short	
TL-201		1205.75		5.708E-04	2.388E+00	Half-Life	too short	
		68.90		3.481E+00	2.998E+00	5.294E+00	4.141E-01	0.658
		70.82		-2.395E+00	1.824E+00	2.852E+00	2.272E-01	-0.840
		80.30		-2.771E-01	3.542E+00	5.432E+00	4.779E-01	-0.051
TL-202		135.34		-1.481E+01	1.553E+01	2.481E+01	2.088E+00	-0.597
		167.43	*	2.383E+00	4.167E+00	7.030E+00	6.400E-01	0.339
		68.90		3.864E-01	3.328E-01	5.875E-01	4.595E-02	0.658
		70.82		-2.651E-01	2.018E-01	3.156E-01	2.515E-02	-0.840
BI-207		80.30		-3.067E-02	3.921E-01	6.014E-01	5.291E-02	-0.051
		439.56	*	-5.583E-03	5.216E-02	8.629E-02	8.143E-03	-0.065
		72.80		8.035E-02	1.681E-01	2.641E-01	2.145E-02	0.304
	+	74.97		3.567E-01	1.081E-01	1.790E-01	1.487E-02	1.993
TL-207		84.90		1.207E-01	1.869E-01	2.922E-01	2.712E-02	0.413
		569.67		1.885E-02	2.412E-02	4.179E-02	3.923E-03	0.451
		1063.62	*	6.687E-03	4.281E-02	7.158E-02	6.310E-03	0.093
		1770.23		-1.820E-01	4.972E-01	6.391E-01	5.282E-02	-0.285
		81.07		-6.400E-03	1.958E-01	3.193E-01	2.834E-02	-0.020
		83.78		1.047E-01	1.264E-01	1.987E-01	1.820E-02	0.527
		94.90		5.357E-01	2.576E-01	3.513E-01	3.176E-02	1.525
		122.32		2.570E-01	1.438E+00	2.424E+00	2.171E-01	0.106
	+	144.24		1.751E+00	8.732E-01	1.033E+00	9.911E-02	1.695
		154.21		-7.331E-02	3.188E-01	5.226E-01	5.028E-02	-0.140
	+	269.46		4.885E-01	2.503E-01	2.887E-01	3.434E-02	1.692
		323.87	*	1.252E-01	5.912E-01	8.455E-01	1.617E-01	0.148
PO-209	+	338.28		3.984E+00	1.625E+00	2.001E+00	2.805E-01	1.991
		445.03		2.619E+00	1.907E+00	3.403E+00	4.320E-01	0.770
		260.50		-2.614E+00	7.951E+00	1.251E+01	1.443E+00	-0.209
		262.80		-2.551E+01	2.075E+01	3.030E+01	3.512E+00	-0.842
BI-210		896.60	*	2.053E-01	5.873E+00	9.838E+00	9.304E-01	0.021
		46.50	*	1.675E+00	3.290E+00	5.251E+00	4.897E-01	0.319
PB-210		46.50	*	1.675E+00	3.290E+00	5.251E+00	4.897E-01	0.319
PO-210		46.50	*	1.675E+00	3.290E+00	5.251E+00	4.436E-01	0.319
PB-211		404.84	*	6.400E-02	7.040E-01	1.185E+00	7.436E-01	0.054
BI-212		427.08		-8.026E-02	1.545E+00	2.569E+00	1.599E+00	-0.031
		831.96		-1.154E+00	1.217E+00	1.472E+00	9.244E-01	-0.784
	+	727.18	*	7.247E-01	4.287E-01	5.378E-01	5.619E-02	1.347
		785.46		9.595E-01	1.483E+00	2.615E+00	2.431E-01	0.367
PO-215		1620.62		5.423E-01	8.336E-01	1.545E+00	1.313E-01	0.351
		81.07		-6.400E-03	1.958E-01	3.193E-01	2.834E-02	-0.020
		83.78		1.047E-01	1.264E-01	1.987E-01	1.820E-02	0.527
		94.90		5.357E-01	2.576E-01	3.513E-01	3.176E-02	1.525
		122.32		2.570E-01	1.438E+00	2.424E+00	2.171E-01	0.106
	+	144.24		1.751E+00	8.732E-01	1.033E+00	9.911E-02	1.695
		154.21		-7.331E-02	3.188E-01	5.226E-01	5.028E-02	-0.140
	+	269.46		4.885E-01	2.503E-01	2.887E-01	3.434E-02	1.692

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		323.87	*	1.252E-01	5.912E-01	8.455E-01	1.617E-01	0.148
	+	338.28		3.984E+00	1.625E+00	2.001E+00	2.805E-01	1.991
		445.03		2.619E+00	1.907E+00	3.403E+00	4.320E-01	0.770
	+	271.23		6.268E-01	3.229E-01	3.599E-01	4.712E-02	1.742
		401.81	*	-2.123E-01	3.070E-01	4.876E-01	7.521E-02	-0.435
RN-220		549.76	*	-7.425E+00	2.127E+01	3.390E+01	3.203E+00	-0.219
RA-223		81.07		-6.400E-03	1.958E-01	3.193E-01	2.834E-02	-0.020
		83.78		1.047E-01	1.264E-01	1.987E-01	1.820E-02	0.527
		94.90		5.357E-01	2.576E-01	3.513E-01	3.176E-02	1.525
		122.32		2.570E-01	1.438E+00	2.424E+00	2.171E-01	0.106
	+	144.24		1.751E+00	8.732E-01	1.033E+00	9.911E-02	1.695
		154.21		-7.331E-02	3.188E-01	5.226E-01	5.028E-02	-0.140
	+	269.46		4.885E-01	2.503E-01	2.887E-01	3.434E-02	1.692
AC-227		323.87	*	1.252E-01	5.912E-01	8.455E-01	1.617E-01	0.148
	+	338.28		3.984E+00	1.625E+00	2.001E+00	2.805E-01	1.991
		445.03		2.619E+00	1.907E+00	3.403E+00	4.320E-01	0.770
		79.80		-3.384E-01	1.519E+00	2.316E+00	4.991E-01	-0.146
		236.00		1.538E-02	2.064E-01	2.985E-01	4.160E-02	0.052
		256.20	*	-9.122E-02	3.276E-01	5.176E-01	8.841E-02	-0.176
		286.10		2.813E-01	1.204E+00	1.948E+00	3.032E-01	0.144
	+	299.80		2.710E+00	1.513E+00	2.085E+00	4.006E-01	1.300
		304.40		-1.002E+00	1.679E+00	2.387E+00	4.781E-01	-0.420
		334.20		-1.659E+00	2.053E+00	2.842E+00	5.851E-01	-0.584
TH-227		79.80		-3.384E-01	1.519E+00	2.316E+00	5.055E-01	-0.146
	+	94.00		6.723E+01	1.537E+01	4.988E+00	1.096E+00	13.477
		236.00		1.538E-02	2.064E-01	2.985E-01	3.857E-02	0.052
		256.20	*	-9.122E-02	3.277E-01	5.176E-01	1.012E-01	-0.176
		286.10		2.813E-01	1.236E+00	1.948E+00	1.962E+00	0.144
	+	299.80		2.710E+00	1.513E+00	2.085E+00	4.006E-01	1.300
		304.40		-1.002E+00	1.679E+00	2.387E+00	4.781E-01	-0.420
		334.20		-1.659E+00	2.053E+00	2.842E+00	5.851E-01	-0.584
TH-229		85.43		1.179E-01	1.807E-01	2.831E-01	2.644E-02	0.417
	+	88.47		2.942E-01	1.259E-01	1.778E-01	1.704E-02	1.655
	+	100.00		7.094E-01	2.786E-01	2.713E-01	2.374E-02	2.615
		193.63	*	4.676E-02	4.115E-01	6.760E-01	6.596E-02	0.069
		210.97		1.875E-01	6.748E-01	9.962E-01	1.018E-01	0.188
PA-231		283.67	*	-6.816E-01	1.163E+00	1.773E+00	3.066E-01	-0.385
	+	301.29		1.084E+00	5.900E-01	7.840E-01	1.143E-01	1.383
TH-231		81.07		-6.400E-03	1.958E-01	3.193E-01	2.834E-02	-0.020
		83.78		1.047E-01	1.264E-01	1.987E-01	1.820E-02	0.527
		94.90		5.357E-01	2.576E-01	3.513E-01	3.176E-02	1.525
		122.32		2.570E-01	1.438E+00	2.424E+00	2.171E-01	0.106
	+	144.24		1.751E+00	8.732E-01	1.033E+00	9.911E-02	1.695
		154.21		-7.331E-02	3.188E-01	5.226E-01	5.028E-02	-0.140
	+	269.46		4.885E-01	2.503E-01	2.887E-01	3.434E-02	1.692
		323.87	*	1.252E-01	5.912E-01	8.455E-01	1.617E-01	0.148
	+	338.28		3.984E+00	1.625E+00	2.001E+00	2.805E-01	1.991
		445.03		2.619E+00	1.907E+00	3.403E+00	4.320E-01	0.770
U-231		84.21		4.653E+00	4.397E+00	6.952E+00	6.400E-01	0.669

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	92.29		5.420E+01	6.009E+00	5.586E+00	5.159E-01	9.702
		95.87	*	1.029E+00	9.781E-01	1.273E+00	1.143E-01	0.809
		108.00		-1.186E+00	1.586E+00	2.311E+00	1.958E-01	-0.513
	+	75.28		1.041E+01	3.420E+00	5.262E+00	7.991E-01	1.978
	+	86.59		4.218E+00	2.099E+00	2.667E+00	7.229E-01	1.582
	+	300.12		7.556E-01	4.161E-01	5.745E-01	9.685E-02	1.315
		311.98	*	2.754E-02	5.262E-02	8.616E-02	1.007E-02	0.320
		340.50		-5.601E-02	5.561E-01	8.262E-01	2.044E-01	-0.068
		398.62		-1.800E-01	1.580E+00	2.630E+00	7.060E-01	-0.068
		415.76		-6.026E-02	1.278E+00	2.132E+00	4.659E-01	-0.028
PA-234	+	63.00		1.821E+01	3.765E+00	3.720E+00	5.525E-01	4.896
		94.67		6.242E-01	2.093E-01	2.816E-01	3.579E-02	2.216
	+	98.44		3.463E-01	2.344E-01	1.556E-01	8.685E-02	2.226
	+	99.86		1.795E+00	7.050E-01	7.099E-01	6.217E-02	2.529
	+	111.00		5.408E-01	3.068E-01	2.892E-01	3.452E-02	1.870
		131.20		-1.024E-01	9.099E-02	1.448E-01	1.212E-02	-0.707
		152.70		1.332E-01	2.581E-01	4.348E-01	7.439E-02	0.306
	+	186.00		9.891E+00	3.607E+00	2.685E+00	8.453E-01	3.684
		226.40		2.566E-01	3.383E-01	5.646E-01	8.240E-02	0.454
		227.20		1.751E-01	3.580E-01	5.927E-01	6.314E-02	0.295
		248.90		-5.122E-02	6.578E-01	1.054E+00	2.481E-01	-0.049
		293.70		3.256E+00	9.386E-01	1.271E+00	2.427E-01	2.561
		369.80		6.326E-01	6.856E-01	1.193E+00	2.668E-01	0.530
		568.70		3.158E-02	8.163E-01	1.340E+00	1.258E-01	0.024
		569.50		1.365E-01	2.183E-01	3.739E-01	3.511E-02	0.365
		574.00		-6.334E-01	1.208E+00	1.888E+00	1.769E-01	-0.336
		699.00		-1.409E-02	5.917E-01	9.507E-01	1.832E-01	-0.015
		706.10		1.642E-01	8.453E-01	1.378E+00	6.158E-01	0.119
		733.00		2.309E-01	3.390E-01	5.113E-01	1.146E-01	0.452
		742.81		1.325E+00	1.452E+00	2.025E+00	1.362E+00	0.655
	+	796.30		1.053E+00	1.212E+00	1.443E+00	3.936E-01	0.730
		805.60		1.509E-01	7.897E-01	1.348E+00	4.161E-01	0.112
		819.60		-4.334E-01	9.819E-01	1.561E+00	5.964E-01	-0.278
		826.30		-2.103E-01	6.418E-01	1.034E+00	4.643E-01	-0.203
		831.60		-5.894E-01	5.301E-01	7.510E-01	2.258E-01	-0.785
		876.40		-4.145E-01	8.241E-01	1.118E+00	1.150E+00	-0.371
		880.51		1.980E-01	2.343E-01	4.188E-01	3.956E-02	0.473
		883.24		-2.117E-01	2.812E-01	3.730E-01	2.512E-01	-0.568
		899.00		-3.207E-01	6.517E-01	1.009E+00	4.428E-01	-0.318
		925.00		6.769E-01	1.000E+00	1.761E+00	1.654E-01	0.385
		926.50		7.518E-02	1.498E-01	2.583E-01	6.601E-02	0.291
		946.00	*	5.356E-02	2.490E-01	4.217E-01	8.056E-02	0.127
		949.00		3.300E-01	3.670E-01	6.567E-01	6.126E-02	0.502
		980.50		4.073E-03	5.632E-01	9.344E-01	8.612E-02	0.004
NP-236		1394.10		2.544E-01	9.338E-01	1.540E+00	1.002E+00	0.165
		94.67		4.786E-01	1.533E-01	2.141E-01	1.939E-02	2.236
	+	98.44		2.618E-01	1.028E-01	1.176E-01	1.038E-02	2.226
	+	111.00		4.090E-01	2.295E-01	2.188E-01	1.839E-02	1.870
		160.31	*	-1.318E-02	6.696E-02	1.097E-01	9.791E-03	-0.120

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		5.984E-01	2.350E-01	2.551E-01	2.238E-02	2.346
		117.00	*	-8.547E-02	1.735E-01	2.548E-01	2.121E-02	-0.335
	+	209.75		9.609E-01	6.752E-01	1.124E+00	1.145E-01	0.855
		228.18		-4.564E-02	1.905E-01	3.045E-01	3.252E-02	-0.150
	+	277.60		1.533E-01	1.966E-01	2.562E-01	3.066E-02	0.598
AM-241		334.30		-9.340E-01	1.152E+00	1.612E+00	1.775E-01	-0.580
		59.54	*	3.966E-02	1.632E-01	2.367E-01	1.858E-02	0.168
	+	99.55		6.157E-01	2.418E-01	2.624E-01	2.302E-02	2.346
		103.76	*	1.810E-03	7.957E-02	1.344E-01	1.156E-02	0.013
		117.00		-8.792E-02	1.785E-01	2.621E-01	2.182E-02	-0.335
CM-243	+	209.75		9.472E-01	6.655E-01	1.108E+00	1.129E-01	0.855
		228.18		-4.611E-02	1.924E-01	3.077E-01	3.285E-02	-0.150
	+	277.60		1.545E-01	1.982E-01	2.583E-01	3.091E-02	0.598
		798.80		2.206E-02	1.187E-01	1.783E-01	1.663E-02	0.124
		1036.00		-2.135E-01	2.631E-01	3.992E-01	3.579E-02	-0.535
AM-246		1062.04		6.088E-02	1.884E-01	3.200E-01	2.823E-02	0.190
		1078.86	*	-5.210E-03	1.271E-01	2.083E-01	1.817E-02	-0.025
	+	278.00		6.357E-01	8.154E-01	1.071E+00	1.283E-01	0.594
		287.40		3.574E-01	9.941E-01	1.619E+00	1.928E-01	0.221
		402.60	*	4.154E-03	2.704E-02	4.580E-02	4.258E-03	0.091
CF-249		252.85		2.475E-01	7.139E-01	1.169E+00	1.325E-01	0.212
		333.44		-1.035E-01	1.623E-01	2.138E-01	2.360E-02	-0.484
		387.95	*	-1.284E-03	3.226E-02	5.408E-02	5.073E-03	-0.024
CF-251		176.60	*	-4.466E-03	1.003E-01	1.644E-01	1.533E-02	-0.027
		227.00		1.544E-01	3.202E-01	5.300E-01	5.643E-02	0.291
		285.00		1.576E-01	1.367E+00	2.197E+00	2.623E-01	0.072

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395011      *
* Acquisition date   : 2-FEB-2010 09:18:04 Detector SN#      :              *
* Detector ID        : GAM16                      Sensitivity   : 5.000        *
* Geometry           : CAN                          Energy tolerance: 1.500      *
* Elapsed live time  : 0 02:00:00.00              Abundance limit : 75.000      *
* Elapsed real time  : 0 02:00:02.14              Half life ratio : 8.000      *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395011              Analyst initials: MXR1         *
* Batch Number       : 944966                  Sample Quantity : 1.4764E+02 GRAM  *
* Recovery           : 1.00000                 Carrier Weight  : 0.00000      *
*****
*
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                                         *
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16 MS Isotope      :                *
* MSD DPM             : 0.000                      MSD Isotope :                *
* LCS DPM             : 0.000                      LCS Isotope  :                *
* LCSD DPM            : 0.000                      LCSD Isotope :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.659E+01	2.762E+00	4.432E-01	0.000E+00
CD-109	2.188E+00	9.179E-01	1.484E+00	0.000E+00
SN-126	2.155E-01	9.039E-02	1.455E-01	0.000E+00
BA-137M	2.088E-01	5.119E-02	4.860E-02	0.000E+00
CS-137	2.207E-01	5.413E-02	5.138E-02	0.000E+00
LU-177	1.193E+00	8.216E-01	1.337E+00	0.000E+00
HG-203	3.440E-02	4.325E-02	4.790E-02	0.000E+00
TL-208	3.130E-01	6.547E-02	4.624E-02	0.000E+00
BI-211	2.869E+00	4.562E-01	2.661E-01	0.000E+00
PB-212	1.224E+00	1.668E-01	7.476E-02	0.000E+00
PO-212	1.224E+00	1.668E-01	7.476E-02	0.000E+00
BI-214	9.181E-01	1.715E-01	9.301E-02	0.000E+00
PB-214	9.980E-01	1.667E-01	9.974E-02	0.000E+00
PO-214	9.980E-01	1.667E-01	9.974E-02	0.000E+00
PO-216	1.224E+00	1.668E-01	7.476E-02	0.000E+00
PO-218	9.980E-01	1.667E-01	9.974E-02	0.000E+00
RA-224	2.673E+00	9.370E-01	8.507E-01	0.000E+00
RA-226	9.181E-01	1.715E-01	9.301E-02	0.000E+00
AC-228	1.083E+00	2.654E-01	1.922E-01	0.000E+00
RA-228	1.083E+00	2.654E-01	1.922E-01	0.000E+00
TH-228	1.241E+00	1.691E-01	7.580E-02	0.000E+00
TH-230	9.181E-01	1.715E-01	9.301E-02	0.000E+00
TH-232	1.083E+00	2.654E-01	1.922E-01	0.000E+00
PA-234M	2.085E+01	6.852E+00	6.349E+00	0.000E+00
TH-234	1.562E+01	3.460E+00	2.030E+00	0.000E+00
U-234	9.181E-01	1.715E-01	9.301E-02	0.000E+00
U-235	5.402E-01	2.751E-01	2.897E-01	0.000E+00
NP-237	6.327E-01	2.946E-01	4.064E-01	0.000E+00
U-238	1.562E+01	3.460E+00	2.030E+00	0.000E+00
AM-243	1.987E-01	5.901E-02	8.755E-02	0.000E+00
ANH-511	8.316E-02	6.303E-02	3.660E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	7.719E-02	2.448E-01	4.371E-01	0.000E+00	NOT IDENT.
NA-22	-4.092E-03	3.538E-02	5.883E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.479E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.235E-02	2.300E-02	4.264E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.306E-02	6.367E-02	0.000E+00	FAIL ABUN
SC-46	-2.693E-03	3.051E-02	5.255E-02	0.000E+00	FAIL ABUN
V-48	1.777E-02	5.144E-02	9.130E-02	0.000E+00	NOT IDENT.
CR-51	-9.721E-02	2.877E-01	4.732E-01	0.000E+00	NOT IDENT.
MN-52	-9.743E-02	1.451E-01	2.096E-01	0.000E+00	FAIL ABUN
MN-54	1.903E-02	3.044E-02	5.561E-02	0.000E+00	NOT IDENT.
CO-56	2.283E-03	3.175E-02	5.573E-02	0.000E+00	NOT IDENT.
CO-57	3.505E-04	2.020E-02	3.684E-02	0.000E+00	NOT IDENT.
CO-58	-8.108E-03	2.991E-02	5.118E-02	0.000E+00	NOT IDENT.
FE-59	-6.510E-02	7.500E-02	1.161E-01	0.000E+00	FAIL ABUN
CO-60	2.689E-03	3.222E-02	5.411E-02	0.000E+00	NOT IDENT.
ZN-65	-1.050E-03	8.056E-02	1.180E-01	0.000E+00	NOT IDENT.
GE-68	6.300E-01	1.048E+00	1.878E+00	0.000E+00	NOT IDENT.
AS-73	1.384E-01	7.321E-01	1.281E+00	0.000E+00	NOT IDENT.
AS-74	2.671E-02	6.753E-02	1.191E-01	0.000E+00	NOT IDENT.
SE-75	3.112E-03	3.546E-02	5.451E-02	0.000E+00	NOT IDENT.
BR-77	-3.312E+00	5.601E+00	9.241E+00	0.000E+00	FAIL ABUN
SR-82	-1.464E-01	3.102E-01	4.929E-01	0.000E+00	NOT IDENT.
RB-83	-3.000E-02	5.255E-02	8.686E-02	0.000E+00	NOT IDENT.
RB-84	8.282E-03	5.637E-02	9.917E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.484E+00	1.138E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.282E-02	5.759E-02	0.000E+00	NOT IDENT.
RB-86	4.003E-01	6.382E-01	1.146E+00	0.000E+00	NOT IDENT.
Y-88	8.904E-03	2.677E-02	4.773E-02	0.000E+00	NOT IDENT.
ZR-88	4.923E-03	2.420E-02	4.356E-02	0.000E+00	NOT IDENT.
Y-91	6.632E+00	1.717E+01	2.974E+01	0.000E+00	NOT IDENT.
NB-94	-2.101E-02	2.625E-02	4.079E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.519E-02	7.866E-02	0.000E+00	NOT IDENT.
NB-95M	-4.210E-02	1.088E-01	1.635E-01	0.000E+00	NOT IDENT.
ZR-95	5.133E-02	5.606E-02	1.010E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.773E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.259E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.927E+00	7.120E+00	1.107E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.110E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.252E-02	2.575E-02	4.618E-02	0.000E+00	NOT IDENT.
RH-102	-3.218E-03	2.197E-02	3.800E-02	0.000E+00	FAIL ABUN
RU-103	-8.466E-03	3.026E-02	5.153E-02	0.000E+00	FAIL ABUN
RH-106	-6.510E-02	2.583E-01	4.304E-01	0.000E+00	FAIL ABUN
RU-106	-6.510E-02	2.582E-01	4.304E-01	0.000E+00	FAIL ABUN
AG-108M	-1.425E-02	2.397E-02	4.039E-02	0.000E+00	NOT IDENT.
AG-110M	1.627E-02	3.310E-02	5.163E-02	0.000E+00	NOT IDENT.
IN-111	-4.601E-01	7.060E-01	1.031E+00	0.000E+00	NOT IDENT.
IN-113M	1.863E-02	3.529E-02	6.464E-02	0.000E+00	NOT IDENT.
SN-113	1.863E-02	3.529E-02	6.464E-02	0.000E+00	NOT IDENT.
IN-114M	-8.118E-03	1.565E-01	2.457E-01	0.000E+00	NOT IDENT.
CD-115	-3.936E+00	5.842E+00	9.562E+00	0.000E+00	NOT IDENT.
SN-117M	1.378E-03	4.203E-02	7.525E-02	0.000E+00	NOT IDENT.
SB-122	2.600E-01	1.266E+00	2.177E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.815E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.330E-02	2.286E-02	4.175E-02	0.000E+00	NOT IDENT.
I-124	1.744E-01	4.788E-01	7.442E-01	0.000E+00	NOT IDENT.
SB-124	-2.023E-02	5.305E-02	8.277E-02	0.000E+00	FAIL ABUN
SB-125	-9.434E-03	6.844E-02	1.197E-01	0.000E+00	FAIL ABUN
TE-125M	5.159E+00	8.395E+00	1.422E+01	0.000E+00	NOT IDENT.
I-126	1.149E-01	1.426E-01	2.310E-01	0.000E+00	NOT IDENT.
SB-126	2.101E-02	1.044E-01	1.726E-01	0.000E+00	FAIL ABUN
SB-127	2.451E-01	9.124E-01	1.573E+00	0.000E+00	NOT IDENT.
XE-127	-1.064E-02	3.659E-02	6.329E-02	0.000E+00	NOT IDENT.
I-131	-7.470E-02	7.448E-02	1.239E-01	0.000E+00	NOT IDENT.
TE-132	-1.078E-01	4.395E-01	7.535E-01	0.000E+00	FAIL ABUN
BA-133	4.192E-03	3.792E-02	6.058E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	1.724E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.410E-02	5.954E-02	7.782E-02	0.000E+00	FAIL ABUN
CS-135	1.187E-01	1.370E-01	2.211E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.141E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.873E-02	8.478E-02	1.417E-01	0.000E+00	FAIL ABUN
CE-139	-1.016E-02	2.393E-02	4.185E-02	0.000E+00	NOT IDENT.
BA-140	1.472E-01	2.044E-01	3.615E-01	0.000E+00	NOT IDENT.
LA-140	8.317E-04	6.441E-02	1.100E-01	0.000E+00	FAIL ABUN
CE-141	2.583E-02	5.402E-02	8.920E-02	0.000E+00	NOT IDENT.

CE-143	0.000E+00	7.865E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	5.991E-02	1.639E-01	3.004E-01	0.000E+00	NOT IDENT.
PM-144	1.596E-02	2.874E-02	5.050E-02	0.000E+00	NOT IDENT.
PR-144	1.081E+00	1.946E+00	3.420E+00	0.000E+00	NOT IDENT.
PM-146	2.101E-02	3.465E-02	6.311E-02	0.000E+00	NOT IDENT.
ND-147	-2.923E-02	3.981E-01	6.848E-01	0.000E+00	NOT IDENT.
PM-149	-1.150E+01	4.851E+01	8.128E+01	0.000E+00	NOT IDENT.
EU-152	1.652E-02	7.955E-02	1.402E-01	0.000E+00	NOT IDENT.
GD-153	0.000E+00	1.126E-01	1.378E-01	0.000E+00	FAIL ABUN
EU-154	-1.867E-02	9.935E-02	1.638E-01	0.000E+00	NOT IDENT.
EU-155	8.788E-02	8.832E-02	1.675E-01	0.000E+00	FAIL ABUN
TB-160	1.404E-01	1.142E-01	2.172E-01	0.000E+00	FAIL ABUN
HO-166M	1.043E-03	4.733E-02	7.967E-02	0.000E+00	FAIL ABUN
TM-171	-2.496E+01	2.756E+01	4.134E+01	0.000E+00	NOT IDENT.
LU-176	-3.890E-03	2.066E-02	3.410E-02	0.000E+00	FAIL ABUN
LU-177M	-6.555E-03	1.290E-01	2.277E-01	0.000E+00	FAIL ABUN
HF-181	1.247E-02	3.097E-02	5.565E-02	0.000E+00	NOT IDENT.
W-181	1.404E-01	3.499E-01	5.610E-01	0.000E+00	NOT IDENT.
TA-182	1.481E-01	1.646E-01	2.968E-01	0.000E+00	FAIL ABUN
RE-183	3.874E-03	8.742E-02	1.563E-01	0.000E+00	FAIL ABUN
RE-184	6.561E-02	1.855E-01	3.253E-01	0.000E+00	NOT IDENT.
OS-185	1.544E-02	3.293E-02	5.810E-02	0.000E+00	NOT IDENT.
RE-188	1.426E-02	1.324E-01	2.381E-01	0.000E+00	NOT IDENT.
W-188	1.395E-01	6.347E+00	9.610E+00	0.000E+00	FAIL ABUN
IR-192	-1.155E-03	2.760E-02	4.642E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	3.274E-01	4.133E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.594E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.383E+00	4.084E+00	7.443E+00	0.000E+00	NOT IDENT.
TL-202	-5.583E-03	5.111E-02	8.937E-02	0.000E+00	NOT IDENT.
BI-207	6.687E-03	4.196E-02	7.259E-02	0.000E+00	FAIL ABUN
TL-207	1.252E-01	5.794E-01	8.818E-01	0.000E+00	FAIL ABUN
PO-209	2.053E-01	5.756E+00	1.002E+01	0.000E+00	NOT IDENT.
BI-210	1.675E+00	3.225E+00	5.717E+00	0.000E+00	NOT IDENT.
PB-210	1.675E+00	3.225E+00	5.717E+00	0.000E+00	NOT IDENT.
PO-210	1.675E+00	3.224E+00	5.717E+00	0.000E+00	NOT IDENT.
PB-211	6.400E-02	6.899E-01	1.229E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.201E-01	5.504E-01	0.000E+00	FAIL ABUN
PO-215	1.252E-01	5.794E-01	8.818E-01	0.000E+00	FAIL ABUN
RN-219	-2.123E-01	3.009E-01	5.061E-01	0.000E+00	FAIL ABUN
RN-220	-7.425E+00	2.084E+01	3.492E+01	0.000E+00	NOT IDENT.
RA-223	1.252E-01	5.794E-01	8.818E-01	0.000E+00	FAIL ABUN
AC-227	-9.122E-02	3.210E-01	5.428E-01	0.000E+00	FAIL ABUN
TH-227	-9.122E-02	3.211E-01	5.428E-01	0.000E+00	FAIL ABUN
TH-229	4.676E-02	4.032E-01	7.134E-01	0.000E+00	FAIL ABUN
PA-231	-6.816E-01	1.140E+00	1.854E+00	0.000E+00	FAIL ABUN
TH-231	1.252E-01	5.794E-01	8.818E-01	0.000E+00	FAIL ABUN
U-231	1.029E+00	9.585E-01	1.364E+00	0.000E+00	FAIL ABUN
PA-233	2.754E-02	5.157E-02	8.994E-02	0.000E+00	FAIL ABUN
PA-234	5.356E-02	2.440E-01	4.288E-01	0.000E+00	FAIL ABUN
NP-236	-1.318E-02	6.562E-02	1.163E-01	0.000E+00	FAIL ABUN
NP-239	-8.547E-02	1.700E-01	2.719E-01	0.000E+00	FAIL ABUN
AM-241	3.966E-02	1.599E-01	2.564E-01	0.000E+00	NOT IDENT.
CM-243	1.810E-03	7.798E-02	1.438E-01	0.000E+00	FAIL ABUN
AM-246	-5.210E-03	1.246E-01	2.111E-01	0.000E+00	NOT IDENT.
CM-247	4.154E-03	2.650E-02	4.753E-02	0.000E+00	FAIL ABUN
CF-249	-1.284E-03	3.161E-02	5.617E-02	0.000E+00	NOT IDENT.
CF-251	-4.466E-03	9.828E-02	1.739E-01	0.000E+00	NOT IDENT.


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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKAl00:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395011.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:18:04.
Sample ID          : G245395011 Sample quantity : 1.47640E+02 GRAM
Detector name      : GAM16 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.14 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1348	10.67*	1.208E+00	2.659E+01	2.659E+01	10.60
CD-109	88.03	196	3.72*	6.254E+00	2.143E+00	2.188E+00	42.80
SN-126	64.28	823	9.60	3.526E+00	6.184E+00	6.184E+00	20.43
	86.94	196	8.90	6.254E+00	8.958E-01	8.958E-01	58.89
	87.57	196	37.00*	6.254E+00	2.155E-01	2.155E-01	42.80
BA-137M	661.65	178	89.98*	2.405E+00	2.086E-01	2.088E-01	25.02
CS-137	661.65	178	85.12*	2.405E+00	2.205E-01	2.207E-01	25.02
LU-177	112.95	179	6.40	7.145E+00	9.970E-01	4.203E+00	56.10
	208.36	70	11.00*	5.715E+00	2.830E-01	1.193E+00	70.26
HG-203	70.83	-----	4.75	4.611E+00	-----	Line Not Found	-----
	72.87	-----	8.00	4.872E+00	-----	Line Not Found	-----
	82.60	-----	3.55	5.895E+00	-----	Line Not Found	-----
	279.20	40	77.30*	4.689E+00	2.796E-02	3.440E-02	128.28
TL-208	277.35	40	6.80	4.689E+00	3.179E-01	3.179E-01	128.57
	510.84	97	21.60	2.963E+00	3.850E-01	3.850E-01	77.79
	583.14	277	84.20*	2.667E+00	3.130E-01	3.130E-01	21.34
	860.37	67	12.46	1.919E+00	7.166E-01	7.166E-01	55.00
BI-211	72.87	-----	1.27	4.872E+00	-----	Line Not Found	-----
	351.07	575	12.94*	3.940E+00	2.869E+00	2.869E+00	16.22
PB-212	74.81	264	10.70	5.122E+00	1.226E+00	1.226E+00	31.71
	77.11	485	18.00	5.370E+00	1.275E+00	1.275E+00	18.68
	87.30	196	8.00	6.254E+00	9.965E-01	9.965E-01	43.96
	238.63	1122	44.60*	5.225E+00	1.224E+00	1.224E+00	13.91
	300.09	87	3.41	4.435E+00	1.462E+00	1.462E+00	54.04
PO-212	74.81	264	10.70	5.122E+00	1.226E+00	1.226E+00	31.71
	77.11	485	18.00	5.370E+00	1.275E+00	1.275E+00	18.68
	87.30	196	8.00	6.254E+00	9.965E-01	9.965E-01	43.96
	115.19	-----	0.60	7.166E+00	-----	Line Not Found	-----
	238.63	1122	44.60*	5.225E+00	1.224E+00	1.224E+00	13.91
	300.09	87	3.41	4.435E+00	1.462E+00	1.462E+00	54.04
BI-214	609.31	430	46.30*	2.574E+00	9.181E-01	9.181E-01	19.06
	1120.29	100	15.10	1.516E+00	1.115E+00	1.115E+00	33.27

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	1764.49	57	15.80	1.056E+00	8.659E-01	8.660E-01	40.91
	74.81	264	6.21	5.122E+00	2.112E+00	2.112E+00	31.19
	77.11	485	10.50	5.370E+00	2.185E+00	2.185E+00	20.17
	87.30	196	4.67	6.254E+00	1.707E+00	1.707E+00	43.49
	241.98	215	7.49	5.178E+00	1.410E+00	1.410E+00	36.21
PO-214	295.21	379	19.20	4.486E+00	1.117E+00	1.117E+00	21.74
	351.92	575	37.20*	3.940E+00	9.980E-01	9.980E-01	17.04
	74.81	264	6.21	5.122E+00	2.112E+00	2.112E+00	31.19
	77.11	485	10.50	5.370E+00	2.185E+00	2.185E+00	20.17
	87.30	196	4.67	6.254E+00	1.707E+00	1.707E+00	43.49
PO-216	241.98	215	7.49	5.178E+00	1.410E+00	1.410E+00	36.21
	295.21	379	19.20	4.486E+00	1.117E+00	1.117E+00	21.74
	351.92	575	37.20*	3.940E+00	9.980E-01	9.980E-01	17.04
	74.81	264	10.70	5.122E+00	1.226E+00	1.226E+00	31.71
	77.11	485	18.00	5.370E+00	1.275E+00	1.275E+00	18.68
PO-218	87.30	196	8.00	6.254E+00	9.965E-01	9.965E-01	43.96
	238.63	1122	44.60*	5.225E+00	1.224E+00	1.224E+00	13.91
	300.09	87	3.41	4.435E+00	1.462E+00	1.462E+00	54.04
	74.81	264	6.21	5.122E+00	2.112E+00	2.112E+00	31.19
	77.11	485	10.50	5.370E+00	2.185E+00	2.185E+00	20.17
RA-224	87.30	196	4.67	6.254E+00	1.707E+00	1.707E+00	43.49
	241.98	215	7.49	5.178E+00	1.410E+00	1.410E+00	36.21
	295.21	379	19.20	4.486E+00	1.117E+00	1.117E+00	21.74
	351.92	575	37.20*	3.940E+00	9.980E-01	9.980E-01	17.04
	240.98	215	3.95*	5.178E+00	2.673E+00	2.673E+00	35.77
RA-226	609.31	430	46.30*	2.574E+00	9.181E-01	9.181E-01	19.06
	1120.29	100	15.10	1.516E+00	1.115E+00	1.115E+00	33.27
	1764.49	57	15.80	1.056E+00	8.659E-01	8.660E-01	40.91
	338.32	174	11.40	4.059E+00	9.541E-01	9.541E-01	56.70
	911.07	215	27.70*	1.824E+00	1.083E+00	1.083E+00	25.01
AC-228	969.11	121	16.60	1.727E+00	1.072E+00	1.072E+00	36.98
	338.32	174	11.40	4.059E+00	9.541E-01	9.541E-01	56.70
	911.07	215	27.70*	1.824E+00	1.083E+00	1.083E+00	25.01
	969.11	121	16.60	1.727E+00	1.072E+00	1.072E+00	36.98
	74.81	264	10.70	5.122E+00	1.226E+00	1.226E+00	30.32
TH-228	77.11	485	18.00	5.370E+00	1.275E+00	1.293E+00	18.68
	87.30	196	8.00	6.254E+00	9.965E-01	1.010E+00	42.80
	238.63	1122	44.60*	5.225E+00	1.224E+00	1.241E+00	13.91
	300.09	87	3.41	4.435E+00	1.462E+00	1.483E+00	79.53
	609.31	430	46.30*	2.574E+00	9.181E-01	9.181E-01	19.06
TH-230	1120.29	100	15.10	1.516E+00	1.115E+00	1.115E+00	33.27
	1764.49	57	15.80	1.056E+00	8.659E-01	8.659E-01	40.91
	338.32	174	11.40	4.059E+00	9.541E-01	9.541E-01	39.83
	911.07	215	27.70*	1.824E+00	1.083E+00	1.083E+00	25.01
	969.11	121	16.60	1.727E+00	1.072E+00	1.072E+00	36.98
PA-234M	766.42	86	0.32	2.121E+00	3.239E+01	3.239E+01	76.72
	1001.03	116	0.84*	1.677E+00	2.085E+01	2.085E+01	33.54
	63.29	823	3.80*	3.526E+00	1.562E+01	1.562E+01	22.60
	92.38	2440	5.41	6.591E+00	1.740E+01	1.740E+01	19.38

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	430	46.30*	2.574E+00	9.181E-01	9.181E-01	19.06
	1120.29	100	15.10	1.516E+00	1.115E+00	1.115E+00	33.27
	1764.49	57	15.80	1.056E+00	8.659E-01	8.659E-01	40.91
U-235	89.95	-----	2.70	6.435E+00	-----	Line Not Found	-----
	93.35	2440	4.50	6.591E+00	2.091E+01	2.091E+01	28.88
	105.00	-----	2.10	7.034E+00	-----	Line Not Found	-----
	143.76	155	10.50*	6.945E+00	5.402E-01	5.402E-01	51.98
	163.35	-----	4.70	6.588E+00	-----	Line Not Found	-----
	185.71	478	54.00	6.148E+00	3.663E-01	3.663E-01	20.74
	205.31	-----	4.70	5.780E+00	-----	Line Not Found	-----
NP-237	86.50	196	12.60*	6.254E+00	6.327E-01	6.327E-01	47.52
	95.87	-----	2.60	6.742E+00	-----	Line Not Found	-----
U-238	63.29	823	3.80*	3.526E+00	1.562E+01	1.562E+01	22.60
	92.38	2440	5.41	6.591E+00	1.740E+01	1.740E+01	11.09
AM-243	74.67	264	66.00*	5.122E+00	1.987E-01	1.987E-01	30.30
	86.72	196	0.34	6.254E+00	2.373E+01	2.373E+01	42.80
	117.66	-----	0.55	7.175E+00	-----	Line Not Found	-----
	142.18	155	0.13	6.945E+00	4.537E+01	4.537E+01	49.69
ANH-511	511.00	97	100.00*	2.963E+00	8.316E-02	8.316E-02	77.34

Flag: "*" = Keyline

Total number of lines in spectrum 36
Number of unidentified lines 0
Number of lines tentatively identified by NID 36 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.659E+01	2.659E+01	0.282E+01	10.60	
CD-109	464.00D	1.02	2.143E+00	2.188E+00	0.937E+00	42.80	
SN-126	1.00E+05Y	1.00	2.155E-01	2.155E-01	0.922E-01	42.80	
BA-137M	30.17Y	1.00	2.086E-01	2.088E-01	0.522E-01	25.02	
CS-137	30.17Y	1.00	2.205E-01	2.207E-01	0.552E-01	25.02	
LU-177	6.71D	4.22	2.830E-01	1.193E+00	0.838E+00	70.26	
HG-203	46.60D	1.23	2.796E-02	3.440E-02	4.413E-02	128.28	
TL-208	1.41E+10Y	1.00	3.130E-01	3.130E-01	0.668E-01	21.34	
BI-211	7.04E+08Y	1.00	2.869E+00	2.869E+00	0.465E+00	16.22	
PB-212	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.170E+00	13.91	
PO-212	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.170E+00	13.91	
BI-214	1600.00Y	1.00	9.181E-01	9.181E-01	1.750E-01	19.06	
PB-214	1600.00Y	1.00	9.980E-01	9.980E-01	1.701E-01	17.04	
PO-214	1600.00Y	1.00	9.980E-01	9.980E-01	1.701E-01	17.04	
PO-216	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.170E+00	13.91	
PO-218	1600.00Y	1.00	9.980E-01	9.980E-01	1.701E-01	17.04	
RA-224	1.41E+10Y	1.00	2.673E+00	2.673E+00	0.956E+00	35.77	
RA-226	1600.00Y	1.00	9.181E-01	9.181E-01	1.750E-01	19.06	
AC-228	1.41E+10Y	1.00	1.083E+00	1.083E+00	0.271E+00	25.01	
RA-228	1.41E+10Y	1.00	1.083E+00	1.083E+00	0.271E+00	25.01	
TH-228	1.91Y	1.01	1.224E+00	1.241E+00	0.173E+00	13.91	
TH-230	4.47E+09Y	1.00	9.181E-01	9.181E-01	1.750E-01	19.06	
TH-232	1.41E+10Y	1.00	1.083E+00	1.083E+00	0.271E+00	25.01	
PA-234M	4.47E+09Y	1.00	2.085E+01	2.085E+01	0.699E+01	33.54	
TH-234	4.47E+09Y	1.00	1.562E+01	1.562E+01	0.353E+01	22.60	
U-234	4.47E+09Y	1.00	9.181E-01	9.181E-01	1.750E-01	19.06	
U-235	7.04E+08Y	1.00	5.402E-01	5.402E-01	2.808E-01	51.98	
NP-237	2.14E+06Y	1.00	6.327E-01	6.327E-01	3.007E-01	47.52	
U-238	4.47E+09Y	1.00	1.562E+01	1.562E+01	0.353E+01	22.60	
AM-243	7380.00Y	1.00	1.987E-01	1.987E-01	0.602E-01	30.30	
ANH-511	1.00E+09Y	1.00	8.316E-02	8.316E-02	6.432E-02	77.34	

Total Activity : 1.039E+02 1.049E+02

Grand Total Activity : 1.039E+02 1.049E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395011

Page : 5
Acquisition date : 2-FEB-2010 09:18:04

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	98.61	237	545	0.91	197.42	193	9	3.29E-02	38.3	6.85E+00	T
0	269.98	125	226	1.33	540.15	535	11	1.74E-02	49.8	4.79E+00	T
0	328.19	12	254	1.14	656.57	650	11	1.65E-03	****	4.15E+00	T
0	463.12	84	105	1.54	926.42	921	11	1.16E-02	52.5	3.20E+00	T
0	727.53	75	96	1.00	1455.15	1449	12	1.04E-02	58.2	2.22E+00	T
0	795.50	33	78	1.53	1591.07	1583	12	4.61E-03	****	2.06E+00	T
0	934.62	20	39	1.00	1869.22	1865	9	2.72E-03	****	1.78E+00	T
0	965.67	28	81	0.95	1931.31	1922	14	3.88E-03	****	1.73E+00	T

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395011.CNF;1
* Acquisition date   : 2-FEB-2010 09:18:04.   Detector SN#      :
* Detector ID        : GAM16                   Sensitivity       : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit  : 75.00000
* Elapsed real time  : 0 02:00:02.14           Half life ratio  : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library : SOLID
* Sample ID          : G245395011             Analyst initials: MXR1
* Batch Number       : 944966                 Sample Quantity  : 1.47640E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16.1MS Isotope      :
* MSD ID             :                          MSD Isotope   :
* LCS ID             : 1032-A                   LCS Isotope       :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.659E+01	2.819E+00	4.405E-01	3.872E-02	60.366
CD-109	2.188E+00	9.366E-01	1.382E+00	1.331E-01	1.584
SN-126	2.155E-01	9.223E-02	1.355E-01	1.299E-02	1.590
BA-137M	2.088E-01	5.224E-02	4.739E-02	4.205E-03	4.406
CS-137	2.207E-01	5.523E-02	5.009E-02	4.453E-03	4.406
LU-177	1.193E+00	8.384E-01	1.269E+00	1.288E-01	0.940
HG-203	3.440E-02	4.413E-02	4.576E-02	5.577E-03	0.752
TL-208	3.130E-01	6.681E-02	4.494E-02	4.455E-03	6.964
BI-211	2.869E+00	4.655E-01	2.556E-01	2.795E-02	11.224
PB-212	1.224E+00	1.702E-01	7.118E-02	8.427E-03	17.199
PO-212	1.224E+00	1.702E-01	7.118E-02	8.427E-03	17.199
BI-214	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145
PB-214	9.980E-01	1.701E-01	9.581E-02	1.159E-02	10.416
PO-214	9.980E-01	1.701E-01	9.581E-02	1.159E-02	10.416
PO-216	1.224E+00	1.702E-01	7.118E-02	8.427E-03	17.199
PO-218	9.980E-01	1.701E-01	9.581E-02	1.159E-02	10.416
RA-224	2.673E+00	9.561E-01	8.101E-01	8.928E-02	3.299
RA-226	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.083E+00	2.708E-01	1.888E-01	2.242E-02	5.735
RA-228	1.083E+00	2.708E-01	1.888E-01	2.242E-02	5.735
TH-228	1.241E+00	1.726E-01	7.217E-02	8.545E-03	17.199
TH-230	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145
TH-232	1.083E+00	2.708E-01	1.888E-01	2.242E-02	5.735
PA-234M	2.085E+01	6.992E+00	6.252E+00	6.509E-01	3.335
TH-234	1.562E+01	3.530E+00	1.877E+00	3.274E-01	8.322
U-234	9.181E-01	1.750E-01	9.050E-02	9.569E-03	10.145
U-235	5.402E-01	2.808E-01	2.727E-01	4.766E-02	1.981
NP-237	6.327E-01	3.007E-01	3.783E-01	8.588E-02	1.673
U-238	1.562E+01	3.530E+00	1.877E+00	3.274E-01	8.322
AM-243	1.987E-01	6.021E-02	8.124E-02	6.725E-03	2.446
ANH-511	8.316E-02	6.432E-02	3.547E-02	3.373E-03	2.345

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.719E-02		2.498E-01	4.229E-01	4.278E-02	0.183
NA-22	-4.092E-03		3.610E-02	5.827E-02	4.849E-03	-0.070
NA-24	5.085E-02		7.546E-02	Half-Life too short		
AL-26	1.235E-02		2.347E-02	4.261E-02	3.484E-03	0.290
TI-44	2.352E-01	+	4.394E-02	5.914E-02	5.093E-03	3.978
SC-46	-2.693E-03		3.114E-02	5.160E-02	4.878E-03	-0.052
V-48	1.777E-02		5.248E-02	8.986E-02	8.272E-03	0.198
CR-51	-9.721E-02		2.935E-01	4.536E-01	5.303E-02	-0.214
MN-52	-9.743E-02		1.480E-01	2.082E-01	1.777E-02	-0.468
MN-54	1.903E-02		3.106E-02	5.452E-02	5.121E-03	0.349
CO-56	2.283E-03		3.240E-02	5.465E-02	5.143E-03	0.042
CO-57	3.505E-04		2.061E-02	3.455E-02	2.871E-03	0.010
CO-58	-8.108E-03		3.052E-02	5.014E-02	4.698E-03	-0.162
FE-59	-6.510E-02		7.653E-02	1.146E-01	1.066E-02	-0.568
CO-60	2.689E-03		3.288E-02	5.366E-02	4.526E-03	0.050
ZN-65	-1.050E-03		8.220E-02	1.165E-01	9.893E-03	-0.009
GE-68	6.300E-01		1.069E+00	1.852E+00	1.618E-01	0.340
AS-73	1.384E-01		7.470E-01	1.181E+00	9.006E-02	0.117
AS-74	2.671E-02		6.891E-02	1.159E-01	1.075E-02	0.231
SE-75	3.112E-03		3.619E-02	5.202E-02	6.071E-03	0.060
BR-77	-3.312E+00		5.715E+00	8.959E+00	8.512E-01	-0.370
SR-82	-1.464E-01		3.165E-01	4.824E-01	4.473E-02	-0.303
RB-83	-3.000E-02		5.362E-02	8.421E-02	8.001E-03	-0.356
RB-84	8.282E-03		5.752E-02	9.736E-02	9.198E-03	0.085
KR-85	1.249E+01		6.616E+00	1.103E+01	1.048E+00	1.132
SR-85	6.320E-02		3.349E-02	5.581E-02	5.307E-03	1.132
RB-86	4.003E-01		6.512E-01	1.131E+00	9.879E-02	0.354
Y-88	8.904E-03		2.732E-02	4.771E-02	3.873E-03	0.187
ZR-88	4.923E-03		2.469E-02	4.195E-02	3.880E-03	0.117
Y-91	6.632E+00		1.752E+01	2.941E+01	2.392E+00	0.225

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	-2.101E-02		2.679E-02	3.983E-02	3.600E-03	-0.528
NB-95	1.019E-01		4.612E-02	7.696E-02	7.114E-03	1.324
NB-95M	-4.210E-02		1.110E-01	1.556E-01	1.851E-02	-0.270
ZR-95	5.133E-02		5.720E-02	9.880E-02	9.918E-03	0.520
NB-97	1.527E-02		1.415E-02	Half-Life too short		
ZR-97	4.507E-01		2.173E-01	Half-Life too short		
MO-99	-4.927E+00		7.265E+00	1.082E+01	1.678E+00	-0.455
TC-99M	-2.908E+08		5.664E+08	Half-Life too short		
RH-101	1.252E-02		2.628E-02	4.378E-02	4.323E-03	0.286
RH-102	-3.218E-03		2.242E-02	3.676E-02	3.494E-03	-0.088
RU-103	-8.466E-03		3.088E-02	4.990E-02	7.348E-03	-0.170
RH-106	-6.510E-02		2.635E-01	4.190E-01	5.742E-02	-0.155
RU-106	-6.510E-02		2.634E-01	4.190E-01	3.832E-02	-0.155
AG-108M	-1.425E-02		2.446E-02	3.899E-02	3.795E-03	-0.366
AG-110M	1.627E-02		3.378E-02	5.033E-02	4.606E-03	0.323
IN-111	-4.601E-01		7.204E-01	9.824E-01	1.094E-01	-0.468
IN-113M	1.863E-02		3.601E-02	6.225E-02	5.908E-03	0.299
SN-113	1.863E-02		3.601E-02	6.225E-02	5.908E-03	0.299
IN-114M	-8.118E-03		1.597E-01	2.328E-01	2.251E-02	-0.035
CD-115	-3.936E+00		5.961E+00	9.273E+00	8.802E-01	-0.424
SN-117M	1.378E-03		4.289E-02	7.099E-02	6.305E-03	0.019
SB-122	2.600E-01		1.292E+00	2.115E+00	1.990E-01	0.123
I-123	5.711E-01		5.008E-01	Half-Life too short		
TE-123M	1.330E-02		2.332E-02	3.939E-02	3.523E-03	0.338
I-124	1.744E-01		4.886E-01	7.239E-01	6.695E-02	0.241
SB-124	-2.023E-02		5.414E-02	8.256E-02	7.231E-03	-0.245
SB-125	-9.434E-03		6.984E-02	1.155E-01	1.103E-02	-0.082
TE-125M	5.159E+00		8.567E+00	1.331E+01	1.354E+00	0.388
I-126	1.149E-01		1.455E-01	2.252E-01	2.003E-02	0.510
SB-126	2.101E-02		1.066E-01	1.686E-01	1.535E-02	0.125
SB-127	2.451E-01		9.310E-01	1.535E+00	1.736E-01	0.160
XE-127	-1.064E-02		3.734E-02	6.003E-02	6.004E-03	-0.177
I-131	-7.470E-02		7.600E-02	1.191E-01	1.259E-02	-0.627
TE-132	-1.078E-01		4.485E-01	7.166E-01	1.199E-01	-0.150
BA-133	4.192E-03		3.869E-02	5.821E-02	8.412E-03	0.072
I-133	-2.678E-04		8.798E-04	Half-Life too short		
CS-134	5.410E-02	+	6.075E-02	7.620E-02	7.145E-03	0.710
CS-135	1.187E-01		1.398E-01	2.110E-01	2.691E-02	0.562
I-135	5.923E+07		1.092E+08	Half-Life too short		
CS-136	-1.873E-02		8.651E-02	1.397E-01	1.293E-02	-0.134
CE-139	-1.016E-02		2.442E-02	3.952E-02	3.584E-03	-0.257
BA-140	1.472E-01		2.085E-01	3.507E-01	1.170E-01	0.420
LA-140	8.317E-04		6.572E-02	1.096E-01	9.333E-03	0.008
CE-141	2.583E-02		5.512E-02	8.398E-02	7.346E-03	0.308
CE-143	1.771E-04		4.013E-05	Half-Life too short		
CE-144	5.991E-02		1.672E-01	2.823E-01	4.359E-02	0.212
PM-144	1.596E-02		2.933E-02	4.930E-02	4.446E-03	0.324
PR-144	1.081E+00		1.986E+00	3.339E+00	3.010E-01	0.324

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	2.101E-02		3.536E-02	6.098E-02	6.964E-03	0.345
ND-147	-2.923E-02		4.063E-01	6.642E-01	1.027E-01	-0.044
PM-149	-1.150E+01		4.950E+01	7.771E+01	1.367E+01	-0.148
EU-152	1.652E-02		8.117E-02	1.346E-01	1.505E-02	0.123
GD-153	2.925E-01	+	1.149E-01	1.286E-01	1.143E-02	2.274
EU-154	-1.867E-02		1.014E-01	1.623E-01	1.798E-02	-0.115
EU-155	8.788E-02		9.012E-02	1.566E-01	1.355E-02	0.561
TB-160	1.404E-01		1.166E-01	2.132E-01	2.014E-02	0.659
HO-166M	1.043E-03		4.830E-02	7.781E-02	7.060E-03	0.013
TM-171	-2.496E+01		2.812E+01	3.827E+01	2.932E+00	-0.652
LU-176	-3.890E-03		2.108E-02	3.266E-02	3.788E-03	-0.119
LU-177M	-6.555E-03		1.316E-01	2.195E-01	2.052E-02	-0.030
HF-181	1.247E-02		3.160E-02	5.385E-02	5.122E-03	0.232
W-181	1.404E-01		3.570E-01	5.191E-01	3.920E-02	0.270
TA-182	1.481E-01		1.680E-01	2.937E-01	2.402E-02	0.504
RE-183	3.874E-03		8.920E-02	1.475E-01	1.324E-02	0.026
RE-184	6.561E-02		1.893E-01	3.101E-01	3.514E-02	0.212
OS-185	1.544E-02		3.360E-02	5.662E-02	5.089E-03	0.273
RE-188	1.426E-02		1.351E-01	2.245E-01	1.975E-02	0.064
W-188	1.395E-01		6.477E+00	9.191E+00	1.090E+00	0.015
IR-192	-1.155E-03		2.816E-02	4.448E-02	5.083E-03	-0.026
AU-195	8.507E-01	+	3.341E-01	3.858E-01	3.397E-02	2.205
TL-200	4.431E-06		8.133E-05	Half-Life too short		
TL-201	2.383E+00		4.167E+00	7.030E+00	6.400E-01	0.339
TL-202	-5.583E-03		5.216E-02	8.629E-02	8.143E-03	-0.065
BI-207	6.687E-03		4.281E-02	7.158E-02	6.310E-03	0.093
TL-207	1.252E-01		5.912E-01	8.455E-01	1.617E-01	0.148
PO-209	2.053E-01		5.873E+00	9.838E+00	9.304E-01	0.021
BI-210	1.675E+00		3.290E+00	5.251E+00	4.897E-01	0.319
PB-210	1.675E+00		3.290E+00	5.251E+00	4.897E-01	0.319
PO-210	1.675E+00		3.290E+00	5.251E+00	4.436E-01	0.319
PB-211	6.400E-02		7.040E-01	1.185E+00	7.436E-01	0.054
BI-212	7.247E-01	+	4.287E-01	5.378E-01	5.619E-02	1.347
PO-215	1.252E-01		5.912E-01	8.455E-01	1.617E-01	0.148
RN-219	-2.123E-01		3.070E-01	4.876E-01	7.521E-02	-0.435
RN-220	-7.425E+00		2.127E+01	3.390E+01	3.203E+00	-0.219
RA-223	1.252E-01		5.912E-01	8.455E-01	1.617E-01	0.148
AC-227	-9.122E-02		3.276E-01	5.176E-01	8.841E-02	-0.176
TH-227	-9.122E-02		3.277E-01	5.176E-01	1.012E-01	-0.176
TH-229	4.676E-02		4.115E-01	6.760E-01	6.596E-02	0.069
PA-231	-6.816E-01		1.163E+00	1.773E+00	3.066E-01	-0.385
TH-231	1.252E-01		5.912E-01	8.455E-01	1.617E-01	0.148
U-231	1.029E+00		9.781E-01	1.273E+00	1.143E-01	0.809
PA-233	2.754E-02		5.262E-02	8.616E-02	1.007E-02	0.320
PA-234	5.356E-02		2.490E-01	4.217E-01	8.056E-02	0.127
NP-236	-1.318E-02		6.696E-02	1.097E-01	9.791E-03	-0.120
NP-239	-8.547E-02		1.735E-01	2.548E-01	2.121E-02	-0.335
AM-241	3.966E-02		1.632E-01	2.367E-01	1.858E-02	0.168

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.810E-03		7.957E-02	1.344E-01	1.156E-02	0.013
AM-246	-5.210E-03		1.271E-01	2.083E-01	1.817E-02	-0.025
CM-247	4.154E-03		2.704E-02	4.580E-02	4.258E-03	0.091
CF-249	-1.284E-03		3.226E-02	5.408E-02	5.073E-03	-0.024
CF-251	-4.466E-03		1.003E-01	1.644E-01	1.533E-02	-0.027

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395011          *
* Acquisition date   : 2-FEB-2010 09:18:04 Detector SN#      :              *
* Detector ID        : GAM16 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000  *
* Elapsed real time  : 0 02:00:02.14 Half life ratio : 8.000  *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395011 Analyst initials: MXR1        *
* Batch Number       : 944966 Sample Quantity : 1.4764E+02 GRAM  *
* Recovery           : 1.00000 Carrier Weight  : 0.00000        *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 16-NOV-2009 11:22:16 MS Isotope      :              *
* MSD DPM             : 0.000 MSD Isotope                   :              *
* LCS DPM             : 0.000 LCS Isotope                    :              *
* LCSD DPM            : 0.000 LCSD Isotope                   :              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.659E+01	2.762E+00	2.218E-01	1.409E+00
CD-109	2.188E+00	9.179E-01	7.423E-01	4.683E-01
SN-126	2.155E-01	9.039E-02	7.281E-02	4.612E-02
BA-137M	2.088E-01	5.119E-02	2.432E-02	2.612E-02
CS-137	2.207E-01	5.413E-02	2.570E-02	2.762E-02
LU-177	1.193E+00	8.216E-01	6.690E-01	4.192E-01
HG-203	3.440E-02	4.325E-02	2.396E-02	2.206E-02
TL-208	3.130E-01	6.547E-02	2.313E-02	3.340E-02
BI-211	2.869E+00	4.562E-01	1.331E-01	2.327E-01
PB-212	1.224E+00	1.668E-01	3.740E-02	8.511E-02
PO-212	1.224E+00	1.668E-01	3.740E-02	8.511E-02
BI-214	9.181E-01	1.715E-01	4.653E-02	8.750E-02
PB-214	9.980E-01	1.667E-01	4.990E-02	8.504E-02
PO-214	9.980E-01	1.667E-01	4.990E-02	8.504E-02
PO-216	1.224E+00	1.668E-01	3.740E-02	8.511E-02
PO-218	9.980E-01	1.667E-01	4.990E-02	8.504E-02
RA-224	2.673E+00	9.370E-01	4.256E-01	4.780E-01
RA-226	9.181E-01	1.715E-01	4.653E-02	8.750E-02
AC-228	1.083E+00	2.654E-01	9.614E-02	1.354E-01
RA-228	1.083E+00	2.654E-01	9.614E-02	1.354E-01
TH-228	1.241E+00	1.691E-01	3.792E-02	8.630E-02
TH-230	9.181E-01	1.715E-01	4.653E-02	8.750E-02
TH-232	1.083E+00	2.654E-01	9.614E-02	1.354E-01
PA-234M	2.085E+01	6.852E+00	3.176E+00	3.496E+00
TH-234	1.562E+01	3.460E+00	1.016E+00	1.765E+00
U-234	9.181E-01	1.715E-01	4.653E-02	8.750E-02
U-235	5.402E-01	2.751E-01	1.449E-01	1.404E-01
NP-237	6.327E-01	2.946E-01	2.033E-01	1.503E-01
U-238	1.562E+01	3.460E+00	1.016E+00	1.765E+00
AM-243	1.987E-01	5.901E-02	4.380E-02	3.011E-02
ANH-511	8.316E-02	6.303E-02	1.831E-02	3.216E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	7.719E-02	2.448E-01	2.187E-01	1.249E-01 NOT IDENT.
NA-22	-4.092E-03	3.538E-02	2.943E-02	1.805E-02 NOT IDENT.
NA-24	5.085E+04	1.479E+05	0.000E+00	7.546E+04 SHORT HLIF
AL-26	1.235E-02	2.300E-02	2.134E-02	1.173E-02 NOT IDENT.
TI-44	2.352E-01	4.306E-02	3.185E-02	2.197E-02 FAIL ABUN
SC-46	-2.693E-03	3.051E-02	2.629E-02	1.557E-02 FAIL ABUN
V-48	1.777E-02	5.144E-02	4.568E-02	2.624E-02 NOT IDENT.
CR-51	-9.721E-02	2.877E-01	2.368E-01	1.468E-01 NOT IDENT.
MN-52	-9.743E-02	1.451E-01	1.049E-01	7.401E-02 FAIL ABUN
MN-54	1.903E-02	3.044E-02	2.782E-02	1.553E-02 NOT IDENT.
CO-56	2.283E-03	3.175E-02	2.788E-02	1.620E-02 NOT IDENT.
CO-57	3.505E-04	2.020E-02	1.843E-02	1.031E-02 NOT IDENT.
CO-58	-8.108E-03	2.991E-02	2.561E-02	1.526E-02 NOT IDENT.
FE-59	-6.510E-02	7.500E-02	5.811E-02	3.826E-02 FAIL ABUN
CO-60	2.689E-03	3.222E-02	2.707E-02	1.644E-02 NOT IDENT.
ZN-65	-1.050E-03	8.056E-02	5.903E-02	4.110E-02 NOT IDENT.
GE-68	6.300E-01	1.048E+00	9.394E-01	5.346E-01 NOT IDENT.
AS-73	1.384E-01	7.321E-01	6.411E-01	3.735E-01 NOT IDENT.
AS-74	2.671E-02	6.753E-02	5.960E-02	3.445E-02 NOT IDENT.
SE-75	3.112E-03	3.546E-02	2.727E-02	1.809E-02 NOT IDENT.
BR-77	-3.312E+00	5.601E+00	4.623E+00	2.858E+00 FAIL ABUN
SR-82	-1.464E-01	3.102E-01	2.466E-01	1.583E-01 NOT IDENT.
RB-83	-3.000E-02	5.255E-02	4.346E-02	2.681E-02 NOT IDENT.
RB-84	8.282E-03	5.637E-02	4.962E-02	2.876E-02 NOT IDENT.
KR-85	1.249E+01	6.484E+00	5.692E+00	3.308E+00 NOT IDENT.
SR-85	6.320E-02	3.282E-02	2.881E-02	1.674E-02 NOT IDENT.
RB-86	4.003E-01	6.382E-01	5.733E-01	3.256E-01 NOT IDENT.
Y-88	8.904E-03	2.677E-02	2.388E-02	1.366E-02 NOT IDENT.
ZR-88	4.923E-03	2.420E-02	2.179E-02	1.235E-02 NOT IDENT.
Y-91	6.632E+00	1.717E+01	1.488E+01	8.758E+00 NOT IDENT.
NB-94	-2.101E-02	2.625E-02	2.041E-02	1.339E-02 NOT IDENT.
NB-95	1.019E-01	4.519E-02	3.935E-02	2.306E-02 NOT IDENT.
NB-95M	-4.210E-02	1.088E-01	8.181E-02	5.550E-02 NOT IDENT.
ZR-95	5.133E-02	5.606E-02	5.054E-02	2.860E-02 NOT IDENT.
NB-97	1.527E+04	2.773E+04	0.000E+00	1.415E+04 SHORT HLIF
ZR-97	4.507E+05	4.259E+05	0.000E+00	2.173E+05 SHORT HLIF
MO-99	-4.927E+00	7.120E+00	5.539E+00	3.633E+00 NOT IDENT.
TC-99M	-2.908E+14	1.110E+15	0.000E+00	5.664E+14 SHORT HLIF
RH-101	1.252E-02	2.575E-02	2.310E-02	1.314E-02 NOT IDENT.
RH-102	-3.218E-03	2.197E-02	1.901E-02	1.121E-02 FAIL ABUN
RU-103	-8.466E-03	3.026E-02	2.578E-02	1.544E-02 FAIL ABUN
RH-106	-6.510E-02	2.583E-01	2.153E-01	1.318E-01 FAIL ABUN
RU-106	-6.510E-02	2.582E-01	2.153E-01	1.317E-01 FAIL ABUN
AG-108M	-1.425E-02	2.397E-02	2.021E-02	1.223E-02 NOT IDENT.
AG-110M	1.627E-02	3.310E-02	2.583E-02	1.689E-02 NOT IDENT.
IN-111	-4.601E-01	7.060E-01	5.159E-01	3.602E-01 NOT IDENT.
IN-113M	1.863E-02	3.529E-02	3.234E-02	1.801E-02 NOT IDENT.
SN-113	1.863E-02	3.529E-02	3.234E-02	1.801E-02 NOT IDENT.
IN-114M	-8.118E-03	1.565E-01	1.229E-01	7.986E-02 NOT IDENT.
CD-115	-3.936E+00	5.842E+00	4.784E+00	2.980E+00 NOT IDENT.
SN-117M	1.378E-03	4.203E-02	3.765E-02	2.145E-02 NOT IDENT.
SB-122	2.600E-01	1.266E+00	1.089E+00	6.460E-01 NOT IDENT.
I-123	5.711E+05	9.815E+05	0.000E+00	5.008E+05 SHORT HLIF
TE-123M	1.330E-02	2.286E-02	2.089E-02	1.166E-02 NOT IDENT.
I-124	1.744E-01	4.788E-01	3.723E-01	2.443E-01 NOT IDENT.
SB-124	-2.023E-02	5.305E-02	4.141E-02	2.707E-02 FAIL ABUN
SB-125	-9.434E-03	6.844E-02	5.988E-02	3.492E-02 FAIL ABUN
TE-125M	5.159E+00	8.395E+00	7.116E+00	4.283E+00 NOT IDENT.
I-126	1.149E-01	1.426E-01	1.156E-01	7.273E-02 NOT IDENT.
SB-126	2.101E-02	1.044E-01	8.633E-02	5.329E-02 FAIL ABUN
SB-127	2.451E-01	9.124E-01	7.868E-01	4.655E-01 NOT IDENT.
XE-127	-1.064E-02	3.659E-02	3.166E-02	1.867E-02 NOT IDENT.
I-131	-7.470E-02	7.448E-02	6.200E-02	3.800E-02 NOT IDENT.
TE-132	-1.078E-01	4.395E-01	3.770E-01	2.243E-01 FAIL ABUN
BA-133	4.192E-03	3.792E-02	3.031E-02	1.935E-02 FAIL ABUN
I-133	-2.678E+02	1.724E+03	0.000E+00	8.798E+02 SHORT HLIF
CS-134	5.410E-02	5.954E-02	3.893E-02	3.038E-02 FAIL ABUN
CS-135	1.187E-01	1.370E-01	1.106E-01	6.990E-02 NOT IDENT.
I-135	5.923E+13	2.141E+14	0.000E+00	1.092E+14 SHORT HLIF
CS-136	-1.873E-02	8.478E-02	7.088E-02	4.326E-02 FAIL ABUN
CE-139	-1.016E-02	2.393E-02	2.094E-02	1.221E-02 NOT IDENT.
BA-140	1.472E-01	2.044E-01	1.808E-01	1.043E-01 NOT IDENT.
LA-140	8.317E-04	6.441E-02	5.503E-02	3.286E-02 FAIL ABUN
CE-141	2.583E-02	5.402E-02	4.463E-02	2.756E-02 NOT IDENT.

CE-143	1.771E+02	7.865E+01	0.000E+00	4.013E+01	SHORT HLIF
CE-144	5.991E-02	1.639E-01	1.503E-01	8.360E-02	NOT IDENT.
PM-144	1.596E-02	2.874E-02	2.527E-02	1.466E-02	NOT IDENT.
PR-144	1.081E+00	1.946E+00	1.711E+00	9.931E-01	NOT IDENT.
PM-146	2.101E-02	3.465E-02	3.157E-02	1.768E-02	NOT IDENT.
ND-147	-2.923E-02	3.981E-01	3.426E-01	2.031E-01	NOT IDENT.
PM-149	-1.150E+01	4.851E+01	4.067E+01	2.475E+01	NOT IDENT.
EU-152	1.652E-02	7.955E-02	7.016E-02	4.059E-02	NOT IDENT.
GD-153	2.925E-01	1.126E-01	6.896E-02	5.743E-02	FAIL ABUN
EU-154	-1.867E-02	9.935E-02	8.197E-02	5.069E-02	NOT IDENT.
EU-155	8.788E-02	8.832E-02	8.380E-02	4.506E-02	FAIL ABUN
TB-160	1.404E-01	1.142E-01	1.086E-01	5.828E-02	FAIL ABUN
HO-166M	1.043E-03	4.733E-02	3.986E-02	2.415E-02	FAIL ABUN
TM-171	-2.496E+01	2.756E+01	2.068E+01	1.406E+01	NOT IDENT.
LU-176	-3.890E-03	2.066E-02	1.706E-02	1.054E-02	FAIL ABUN
LU-177M	-6.555E-03	1.290E-01	1.139E-01	6.582E-02	FAIL ABUN
HF-181	1.247E-02	3.097E-02	2.784E-02	1.580E-02	NOT IDENT.
W-181	1.404E-01	3.499E-01	2.807E-01	1.785E-01	NOT IDENT.
TA-182	1.481E-01	1.646E-01	1.485E-01	8.400E-02	FAIL ABUN
RE-183	3.874E-03	8.742E-02	7.819E-02	4.460E-02	FAIL ABUN
RE-184	6.561E-02	1.855E-01	1.627E-01	9.465E-02	NOT IDENT.
OS-185	1.544E-02	3.293E-02	2.907E-02	1.680E-02	NOT IDENT.
RE-188	1.426E-02	1.324E-01	1.191E-01	6.755E-02	NOT IDENT.
W-188	1.395E-01	6.347E+00	4.808E+00	3.238E+00	FAIL ABUN
IR-192	-1.155E-03	2.760E-02	2.322E-02	1.408E-02	FAIL ABUN
AU-195	8.507E-01	3.274E-01	2.068E-01	1.670E-01	FAIL ABUN
TL-200	4.431E+00	1.594E+02	0.000E+00	8.133E+01	SHORT HLIF
TL-201	2.383E+00	4.084E+00	3.724E+00	2.084E+00	NOT IDENT.
TL-202	-5.583E-03	5.111E-02	4.471E-02	2.608E-02	NOT IDENT.
BI-207	6.687E-03	4.196E-02	3.631E-02	2.141E-02	FAIL ABUN
TL-207	1.252E-01	5.794E-01	4.412E-01	2.956E-01	FAIL ABUN
PO-209	2.053E-01	5.756E+00	5.011E+00	2.937E+00	NOT IDENT.
BI-210	1.675E+00	3.225E+00	2.860E+00	1.645E+00	NOT IDENT.
PB-210	1.675E+00	3.225E+00	2.860E+00	1.645E+00	NOT IDENT.
PO-210	1.675E+00	3.224E+00	2.860E+00	1.645E+00	NOT IDENT.
PB-211	6.400E-02	6.899E-01	6.150E-01	3.520E-01	NOT IDENT.
BI-212	7.247E-01	4.201E-01	2.754E-01	2.143E-01	FAIL ABUN
PO-215	1.252E-01	5.794E-01	4.412E-01	2.956E-01	FAIL ABUN
RN-219	-2.123E-01	3.009E-01	2.532E-01	1.535E-01	FAIL ABUN
RN-220	-7.425E+00	2.084E+01	1.747E+01	1.063E+01	NOT IDENT.
RA-223	1.252E-01	5.794E-01	4.412E-01	2.956E-01	FAIL ABUN
AC-227	-9.122E-02	3.210E-01	2.716E-01	1.638E-01	FAIL ABUN
TH-227	-9.122E-02	3.211E-01	2.716E-01	1.638E-01	FAIL ABUN
TH-229	4.676E-02	4.032E-01	3.569E-01	2.057E-01	FAIL ABUN
PA-231	-6.816E-01	1.140E+00	9.278E-01	5.816E-01	FAIL ABUN
TH-231	1.252E-01	5.794E-01	4.412E-01	2.956E-01	FAIL ABUN
U-231	1.029E+00	9.585E-01	6.826E-01	4.890E-01	FAIL ABUN
PA-233	2.754E-02	5.157E-02	4.500E-02	2.631E-02	FAIL ABUN
PA-234	5.356E-02	2.440E-01	2.145E-01	1.245E-01	FAIL ABUN
NP-236	-1.318E-02	6.562E-02	5.817E-02	3.348E-02	FAIL ABUN
NP-239	-8.547E-02	1.700E-01	1.360E-01	8.676E-02	FAIL ABUN
AM-241	3.966E-02	1.599E-01	1.283E-01	8.160E-02	NOT IDENT.
CM-243	1.810E-03	7.798E-02	7.196E-02	3.979E-02	FAIL ABUN
AM-246	-5.210E-03	1.246E-01	1.056E-01	6.356E-02	NOT IDENT.
CM-247	4.154E-03	2.650E-02	2.378E-02	1.352E-02	FAIL ABUN
CF-249	-1.284E-03	3.161E-02	2.810E-02	1.613E-02	NOT IDENT.
CF-251	-4.466E-03	9.828E-02	8.700E-02	5.014E-02	NOT IDENT.

```

*****
*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD       *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
*****

```

ENERGY	MDA COUNTS
46.50	275.0614
46.50	275.0614
46.50	275.0614
48.70	351.5172
49.72	288.5013
51.35	335.2504
52.39	320.7210
52.97	333.2518
53.15	333.4263
53.44	318.1013
54.07	349.9451
56.28	363.0284
56.28	363.0306
57.37	0.0000
57.53	427.4350
57.53	427.4370
57.60	427.5176
57.98	427.9634
57.98	427.9634
59.32	403.4932
59.32	403.4932
59.40	416.5990
59.54	431.4081
59.72	431.6164
60.01	431.9527
61.10	456.0939
61.14	456.1415
61.30	456.3338
63.00	453.4393
63.29	453.7804
63.29	453.7804
63.58	454.1201
64.28	408.7828
65.12	429.4818
65.20	429.5670
65.20	429.5670
66.05	475.1949
66.72	477.6504
66.83	477.7822
66.91	494.4719
67.20	506.4500
67.20	506.4500
67.75	477.6250
67.85	477.7448
68.90	432.7059
68.90	432.7059
69.30	426.4519
69.67	469.4367
70.82	554.8334
70.82	554.8334
70.83	554.8469
72.80	526.3976
72.87	526.4835
72.87	526.4835
74.67	532.5046
74.81	532.6744
74.81	532.6744
74.81	532.6744
74.81	532.6744
74.81	532.6744
74.81	532.6744
74.81	532.6744
74.97	532.8731
75.28	533.2544
75.70	533.7671
77.11	535.4846
77.11	535.4846

77.11	535.4846
77.11	535.4846
77.11	535.4846
77.11	535.4846
77.11	535.4846
78.38	494.8251
79.62	502.6059
79.80	502.8063
79.80	502.8063
80.11	509.5679
80.18	509.6467
80.30	509.7800
80.30	509.7800
80.57	516.5071
81.00	539.1149
81.07	539.1981
81.07	539.1981
81.07	539.1981
81.07	539.1981
82.60	569.5595
83.37	517.0715
83.78	540.8181
83.78	540.8181
83.78	540.8181
83.78	540.8181
84.21	525.7755
84.90	535.6251
85.43	538.8237
86.29	615.2443
86.50	625.9254
86.54	625.9767
86.59	626.0428
86.72	626.2115
86.79	626.2996
86.94	692.0605
87.30	662.1650
87.30	662.1650
87.30	662.1650
87.30	662.1650
87.30	662.1650
87.30	662.1650
87.57	709.4885
87.88	722.1255
88.03	722.3492
88.36	603.5305
88.47	603.6680
89.95	605.5009
91.11	630.5750
92.29	668.9476
92.38	669.0677
92.38	669.0677
93.35	670.3622
94.00	671.2303
94.67	367.8083
94.67	367.8126
94.90	338.8574
94.90	338.8574
94.90	338.8574
94.90	338.8574
95.87	339.5020
95.87	339.5020
96.73	340.0742
97.43	343.1936
98.44	301.2098
98.44	301.2115
98.88	301.4650
99.55	291.1653
99.55	291.1653
99.86	296.6831
100.00	296.7610
100.10	296.8203
103.18	343.1820
103.76	333.8593
105.00	313.0333
105.31	318.6122
108.00	375.7924
109.28	333.1441

111.00	353.2558
111.00	353.2558
111.76	375.1248
112.95	375.9064
115.19	310.5034
116.30	304.2122
117.00	321.1145
117.00	321.1145
117.66	339.4099
121.11	294.1963
121.62	308.3343
121.78	300.0800
122.06	298.3669
122.32	297.5676
122.32	297.5676
122.32	297.5676
122.32	297.5676
123.07	294.2224
127.23	352.2812
129.76	308.6684
131.20	374.2546
133.02	296.1062
133.54	294.4551
135.34	317.0409
136.00	313.5752
136.25	303.2682
136.48	303.3756
140.51	284.7204
140.51	0.0000
142.18	288.2965
142.65	282.2792
143.76	282.7414
144.24	281.9803
144.24	281.9803
144.24	281.9803
144.24	281.9803
145.22	286.7093
145.44	286.8004
147.16	262.9552
152.43	265.9141
152.70	264.0728
153.22	295.3566
154.21	288.9544
154.21	288.9544
154.21	288.9544
154.21	288.9544
155.03	274.6763
156.02	294.5624
158.56	288.7462
159.00	0.0000
159.00	270.3090
160.31	299.2477
161.27	311.4277
162.32	280.3874
162.64	274.6009
163.35	273.8796
163.89	270.1341
165.85	287.6461
167.43	237.7295
171.28	230.9640
171.86	251.0643
172.10	251.1412
176.55	244.5585
176.60	244.5759
181.06	228.3110
184.41	255.0710
185.71	246.3519
186.00	246.4409
190.27	246.1898
192.34	252.4222
193.63	242.5740
197.04	250.7439
198.01	230.4531
198.60	223.4038
200.40	238.3151
201.83	265.5776
202.84	251.4021
205.31	227.2116

208.36	257.1459
208.81	241.6525
209.75	231.4803
209.75	231.4803
210.97	230.2303
215.65	228.7998
216.55	225.8742
218.09	228.3595
222.10	235.6921
223.80	228.7090
226.40	208.1065
227.00	212.4878
227.08	209.3185
227.20	209.3446
228.16	230.8318
228.18	230.8362
228.18	230.8362
231.56	0.0000
235.69	241.2209
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236.00	230.0381
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238.63	196.7849
238.63	196.7849
238.63	196.7849
239.00	196.8575
240.98	197.2541
241.98	197.4532
241.98	197.4532
241.98	197.4532
244.69	183.3836
245.39	203.0010
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248.90	174.9162
249.79	176.1575
252.40	163.5269
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252.85	170.1426
254.15	0.0000
256.20	199.1449
256.20	199.1449
260.50	181.2912
260.90	180.2592
262.80	170.6760
264.65	135.6749
268.24	152.7344
268.79	161.1180
269.46	158.4486
269.46	158.4486
269.46	158.4486
269.46	158.4486
271.23	173.1355
273.65	170.1857
276.40	178.9788
277.35	166.2972
277.60	137.3115
277.60	137.3115
278.00	137.3615
278.60	125.7042
279.20	129.1245
279.53	114.0673
280.46	127.5936
281.68	124.3714
283.67	142.5546
284.30	125.7881
285.00	139.3512
285.90	149.5871
286.10	138.3625
286.10	138.3625
287.40	144.1537
288.45	0.0000
290.67	149.0881
290.80	149.1042
291.72	145.8336
293.26	0.0000
293.70	144.3869
295.21	154.7816
295.21	154.7816

295.21	154.7816
295.96	153.1824
296.50	153.2538
297.23	153.3499
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299.80	153.6877
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300.09	157.1423
300.09	157.1423
300.12	157.1479
301.29	141.9166
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303.76	130.2214
303.91	140.5196
304.40	157.7207
304.40	157.7207
304.84	160.5237
306.84	143.1580
308.46	141.0601
311.98	128.8232
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318.01	122.5301
319.02	136.5143
319.41	127.2994
320.08	137.7899
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323.87	127.1819
323.87	127.1819
323.87	127.1819
325.23	120.3457
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334.20	158.8014
334.20	158.8014
334.30	158.8152
338.28	133.0535
338.28	133.0535
338.28	133.0535
338.28	133.0535
338.32	133.0582
338.32	133.0582
338.32	133.0582
340.50	165.2368
340.57	165.2454
344.27	138.6055
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351.92	141.0484
351.92	141.0484
351.92	141.0484
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364.48	116.8524
366.43	110.7199
367.43	120.7096
367.94	0.0000
369.80	103.7748
374.96	110.5048
383.85	122.1490
387.95	123.4190
388.63	136.2817
391.69	114.5763
391.69	114.5763
392.90	118.3432
398.62	105.9191
400.65	108.8335
401.10	108.8677
401.81	110.7660
402.60	96.0496
404.84	103.5952
410.95	104.9547
411.60	118.0083
413.65	101.4224
414.70	91.2514
415.30	96.8763

415.76	104.3608
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427.08	93.8782
427.89	96.7464
432.53	91.3860
433.93	97.1252
439.47	94.6335
439.56	105.0482
439.89	111.6963
443.98	90.1598
444.90	85.4640
445.03	85.4723
445.03	85.4723
445.03	85.4723
445.03	85.4723
453.90	92.6337
463.38	82.6118
468.07	87.8574
473.00	97.5895
475.06	88.0368
475.35	82.2465
476.78	84.2534
477.59	86.2323
477.96	77.5293
482.03	76.7458
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487.03	84.7684
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497.08	86.2490
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511.00	79.0369
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511.85	79.0741
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513.99	79.1699
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520.65	87.4146
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529.64	77.8691
529.87	0.0000
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537.32	79.2001
543.00	79.4436
546.56	0.0000
549.76	86.8005
552.65	61.6627
555.20	68.8322
563.23	83.3563
563.90	80.3332
568.70	84.6135
569.32	73.4238
569.50	73.4304
569.67	68.3372
573.80	87.9054
574.00	87.9133
574.64	87.9421
578.91	93.4655
579.30	0.0000
583.14	72.9219
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591.81	68.0867
592.07	68.0947
593.00	76.3848
595.88	70.2931
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602.52	0.0000
602.71	76.3425
602.71	76.3425
603.60	81.3572
604.41	106.3063
604.70	106.3219
609.31	83.2520

609.31	83.2520
609.31	83.2520
609.31	83.2520
610.33	83.2935
612.46	66.7051
614.37	80.1211
618.01	65.8416
621.84	79.5764
621.84	79.5764
631.29	73.6295
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633.10	69.4825
634.78	70.5925
635.90	67.4668
636.97	71.7208
645.85	67.7852
646.12	61.4391
656.30	63.0084
657.75	73.2764
657.90	0.0000
661.65	75.1158
661.65	75.1158
664.57	0.0000
666.33	54.7469
666.33	54.7469
675.00	57.9699
677.61	70.9367
685.20	71.1804
692.80	66.0114
695.00	76.9087
696.49	72.6229
696.49	72.6229
697.00	70.4709
697.49	72.6556
698.33	80.2758
698.50	80.2826
699.00	75.9601
702.63	78.2556
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706.67	55.5291
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717.42	60.1646
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722.78	59.6461
722.78	59.6461
722.89	59.6494
722.95	61.4055
723.30	61.4141
724.18	56.1719
727.18	61.5166
733.00	52.8604
735.90	57.3352
739.58	75.0930
742.81	53.0801
744.21	60.8562
747.13	75.3317
751.79	77.6990
752.31	74.3854
753.82	62.2122
755.35	65.5864
756.15	52.2640
756.87	52.2798
763.93	51.7625
765.79	67.8786
766.42	78.1711
766.84	78.1839
776.49	72.8850
778.00	65.0765
778.57	65.0907
778.89	65.0995
783.80	73.1012
785.46	66.6235
792.07	57.1701

795.84	57.2567
796.30	52.7464
798.80	54.3062
801.93	63.4358
805.60	58.0828
810.29	63.6460
810.76	60.9298
815.85	44.6491
817.79	68.3917
818.51	65.6736
819.60	60.2266
826.30	57.6382
828.27	0.0000
831.60	75.1753
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834.83	63.3348
836.80	0.0000
846.75	61.7787
848.13	59.0438
856.28	0.0000
856.80	46.2781
860.37	54.6816
867.32	57.3006
867.82	58.4175
871.10	57.6906
873.19	51.2161
874.81	67.0869
875.33	0.0000
876.40	66.1933
879.36	45.7329
880.27	46.6821
880.51	48.5532
881.50	57.9116
883.24	69.1636
884.67	53.3025
889.25	54.3283
896.60	51.6552
898.02	49.8027
899.00	53.5808
903.28	52.7215
911.07	65.1406
911.07	65.1406
911.07	65.1406
919.63	61.5516
920.93	58.7380
925.00	50.2827
925.24	51.2354
926.50	52.2084
935.52	41.2629
937.48	41.2915
944.10	51.5742
946.00	52.5629
949.00	44.9644
962.29	59.2638
964.01	60.9011
966.15	19.2461
968.20	19.2593
969.11	73.8516
969.11	73.8516
969.11	73.8516
977.42	56.0261
980.50	45.4475
983.50	43.5575
989.30	49.4610
996.32	48.6035
1001.03	55.4943
1001.68	58.4282
1004.76	43.8651
1021.30	0.0000
1024.50	0.0000
1034.80	43.3104
1036.00	65.9760
1037.82	66.9973
1038.57	56.1734
1038.76	0.0000
1045.16	62.2187
1046.59	54.3420
1048.07	57.3316

1050.47	58.3662
1050.47	58.3662
1062.04	47.6578
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1077.35	48.8828
1078.86	59.8828
1085.78	42.0082
1099.22	64.2750
1112.02	50.4102
1112.84	61.7704
1115.52	53.8281
1120.29	50.5371
1120.29	50.5371
1120.29	50.5371
1120.29	50.5371
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1129.67	44.5973
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1147.95	0.0000
1167.94	61.5000
1173.22	59.5406
1175.09	65.7375
1177.93	70.9305
1189.05	60.8438
1204.90	71.4763
1205.75	0.0000
1213.00	66.4500
1221.42	55.1583
1230.97	67.8247
1235.34	86.7123
1236.41	0.0000
1238.25	73.1890
1246.25	57.6345
1260.41	0.0000
1271.85	51.7036
1274.45	43.2942
1274.54	42.2383
1291.56	44.5532
1298.22	0.0000
1312.09	26.6638
1325.50	29.9688
1325.50	29.9688
1332.49	33.2387
1333.61	22.5237
1360.21	32.3965
1362.66	0.0000
1365.15	24.8687
1368.21	23.8058
1368.53	0.0000
1376.25	21.6855
1384.27	21.7295
1394.10	21.7832
1395.20	22.8785
1407.95	21.8584
1434.06	23.0990
1436.60	18.3439
1457.56	0.0000
1460.81	23.0642
1489.15	17.6471
1509.49	19.5978
1596.49	21.8938
1620.62	9.5699
1678.03	0.0000
1691.02	13.6024
1691.02	13.6024
1706.46	0.0000
1750.46	0.0000
1764.49	14.7980
1764.49	14.7980
1764.49	14.7980
1764.49	14.7980
1770.23	20.3178
1771.40	28.6495
1791.20	0.0000
1808.65	8.9583

1836.01

11.0085

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395011

Total Uranium Activity	4.6729E+01	ug/g
Total Uranium Counting Unc.	1.0294E+01	ug/g
Total Uranium Tpu	5.2519E-06	ug/g
Total Uranium Mda	3.0229E+00	ug/g


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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 944966                          SAMPLE ID   : G245395011
*  ANALYST       : MXR1                             DETECTOR    : GAM16
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 09:18:04.56          SAMPLE ALQT  : 147.640 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.114E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.456E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 3.109E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.511E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:19:43.75

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395012.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:18:37.
Sample ID          : G245395012      Sample quantity   : 1.45520E+02 GRAM
Detector name      : GAM17            Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time: 0 02:00:11.90 0.2%
Energy tolerance   : 1.50000 keV      Analyst Initials : MXR1
Abundance limit    : 75.00000         Sensitivity      : 5.00000
Batch ID           : 944966           Detector SN#     :
Matrix Spike ID    :                  LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.27*	8683	3308	0.91	126.18	121	11	1.21E+00	1.7	
2	2	74.86*	717	1784	0.95	149.37	143	16	9.96E-02	10.1	2.95E+00
3	2	77.12*	817	1753	0.95	153.89	143	16	1.14E-01	9.0	
4	0	83.86*	484	2596	1.53	167.37	163	9	6.73E-02	19.6	
5	0	86.83*	133	1784	0.71	173.31	172	6	1.84E-02	51.1	
6	3	92.58*	12921	1298	1.03	184.81	182	12	1.79E+00	1.0	7.76E+00
7	3	94.70	674	1007	1.24	189.06	182	12	9.37E-02	16.7	
8	0	98.58*	845	1068	1.02	196.83	193	8	1.17E-01	7.6	
9	2	111.07	177	707	1.11	221.81	219	11	2.46E-02	23.3	3.35E+00
10	2	112.81	554	683	0.84	225.30	219	11	7.70E-02	8.3	
11	0	143.81*	378	693	1.05	287.32	283	9	5.25E-02	13.7	
12	0	163.24	189	444	0.74	326.19	323	8	2.63E-02	20.6	
13	0	185.69*	1614	551	1.01	371.11	367	10	2.24E-01	3.7	
14	0	205.60	141	455	1.36	410.95	405	10	1.95E-02	29.7	
15	0	209.43	134	298	1.02	418.61	415	8	1.86E-02	24.0	
16	3	238.50*	986	219	0.97	476.77	471	17	1.37E-01	4.1	1.38E+00
17	3	240.93	96	241	1.12	481.64	471	17	1.33E-02	33.6	
18	3	241.86	116	239	1.09	483.50	471	17	1.62E-02	25.3	
19	0	258.28	124	237	1.04	516.36	513	8	1.73E-02	23.2	
20	0	270.34	129	273	3.05	540.48	535	12	1.79E-02	27.1	
21	0	277.17	50	221	1.49	554.15	549	9	6.96E-03	55.5	
22	1	295.04*	278	135	1.31	589.90	584	20	3.86E-02	9.8	1.26E+00
23	1	299.97*	65	145	1.31	599.76	584	20	9.05E-03	35.1	
24	0	338.07*	177	208	0.78	675.99	671	10	2.45E-02	17.3	
25	0	351.76*	507	210	1.16	703.38	697	12	7.04E-02	7.3	
26	0	510.88*	147	173	0.79	1021.78	1015	15	2.04E-02	23.3	
27	0	582.61*	269	170	1.13	1165.33	1159	13	3.74E-02	11.9	
28	0	608.97*	331	126	1.42	1218.06	1213	12	4.60E-02	8.9	
29	0	726.36	75	96	1.58	1453.00	1447	12	1.04E-02	28.7	
30	0	742.71	68	77	1.82	1485.70	1481	12	9.45E-03	28.6	
31	0	765.67	186	123	1.34	1531.66	1525	14	2.59E-02	14.6	
32	0	785.59	30	83	1.08	1571.53	1567	9	4.11E-03	58.6	
33	0	860.01*	31	56	1.26	1720.46	1716	9	4.24E-03	49.0	
34	0	910.49*	218	56	1.52	1821.48	1814	16	3.02E-02	10.4	
35	0	968.27*	109	52	1.52	1937.13	1933	10	1.52E-02	15.9	
36	0	1000.28*	427	39	1.68	2001.19	1996	12	5.93E-02	5.7	
37	0	1119.18	68	60	1.55	2239.16	2232	12	9.47E-03	25.7	
38	0	1377.14	23	21	1.07	2755.49	2748	12	3.20E-03	44.9	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1459.67*	838	14	1.76	2920.71	2911	16	1.16E-01	3.6	
40	0	1763.11*	47	9	1.84	3528.16	3521	17	6.59E-03	20.7	

Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395012.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:18:37
Sample ID        : G245395012 Sample quantity : 145.52 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:11.90 0.2%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type  : Empirical Efficiencies at : Peak Energy
Abundance limit  : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.603E+01	2.972E+00	5.231E-01	4.645E-02	49.758
NB-95	+	765.79	*	4.019E-01	1.223E-01	9.122E-02	7.968E-03	4.406
CD-109	+	88.03	*	1.407E+00	1.444E+00	2.184E+00	2.132E-01	0.644
SN-126	+	64.28		3.443E+01	5.622E+00	7.364E-01	1.175E-01	46.754
	+	86.94		5.761E-01	6.355E-01	7.982E-01	3.321E-01	0.722
	+	87.57	*	1.386E-01	1.422E-01	2.118E-01	2.067E-02	0.654
LU-177	+	112.95		1.513E+01	3.025E+00	3.440E+00	3.825E-01	4.397
	+	208.36	*	2.993E+00	1.458E+00	1.665E+00	1.464E-01	1.798
TL-208	+	277.35		5.322E-01	5.945E-01	6.679E-01	8.503E-02	0.797
	+	510.84		8.519E-01	4.100E-01	2.990E-01	3.652E-02	2.849
	+	583.14	*	4.553E-01	1.164E-01	8.339E-02	7.887E-03	5.460
	+	860.37		5.073E-01	4.993E-01	6.063E-01	5.704E-02	0.837
BI-211		72.87		3.329E+00	3.401E+00	5.811E+00	5.682E-01	0.573
	+	351.07	*	3.472E+00	6.030E-01	3.671E-01	3.426E-02	9.459
BI-212	+	727.18	*	1.113E+00	6.489E-01	6.241E-01	6.262E-02	1.783
	+	785.46		2.847E+00	3.348E+00	4.268E+00	3.740E-01	0.667
		1620.62		1.279E+00	1.562E+00	2.898E+00	2.497E-01	0.441
PB-212	+	74.81		2.544E+00	6.168E-01	6.697E-01	9.050E-02	3.799
	+	77.11		1.727E+00	3.525E-01	3.999E-01	3.898E-02	4.320
	+	87.30		6.409E-01	6.608E-01	9.790E-01	1.368E-01	0.655
	+	238.63	*	1.417E+00	1.838E-01	1.046E-01	1.055E-02	13.543
	+	300.09		1.475E+00	1.047E+00	1.392E+00	1.515E-01	1.060
PO-212	+	74.81		2.544E+00	6.168E-01	6.697E-01	9.050E-02	3.799
	+	77.11		1.727E+00	3.525E-01	3.999E-01	3.898E-02	4.320
	+	87.30		6.409E-01	6.608E-01	9.790E-01	1.368E-01	0.655
		115.19		6.285E+00	5.515E+00	8.461E+00	9.526E-01	0.743
	+	238.63	*	1.417E+00	1.838E-01	1.046E-01	1.055E-02	13.543
	+	300.09		1.475E+00	1.047E+00	1.392E+00	1.515E-01	1.060
BI-214	+	609.31	*	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
	+	1120.29		1.192E+00	6.264E-01	6.883E-01	7.358E-02	1.731
	+	1764.49		1.153E+00	4.880E-01	3.612E-01	3.054E-02	3.192
PB-214	+	74.81		4.383E+00	1.033E+00	1.154E+00	1.414E-01	3.799
	+	77.11		2.961E+00	6.450E-01	6.855E-01	8.482E-02	4.320
	+	87.30		1.098E+00	1.130E+00	1.677E+00	2.086E-01	0.655

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	241.98		1.008E+00	5.205E-01	6.309E-01	6.717E-02	1.597
	+	295.21		1.103E+00	2.485E-01	2.355E-01	2.616E-02	4.684
	+	351.92	*	1.208E+00	2.190E-01	1.280E-01	1.368E-02	9.435
	+	74.81		4.383E+00	1.033E+00	1.154E+00	1.414E-01	3.799
	+	77.11		2.961E+00	6.450E-01	6.855E-01	8.482E-02	4.320
	+	87.30		1.098E+00	1.130E+00	1.677E+00	2.086E-01	0.655
PO-216	+	241.98		1.008E+00	5.205E-01	6.309E-01	6.717E-02	1.597
	+	295.21		1.103E+00	2.485E-01	2.355E-01	2.616E-02	4.684
	+	351.92	*	1.208E+00	2.190E-01	1.280E-01	1.368E-02	9.435
	+	74.81		2.544E+00	6.168E-01	6.697E-01	9.050E-02	3.799
	+	77.11		1.727E+00	3.525E-01	3.999E-01	3.898E-02	4.320
	+	87.30		6.409E-01	6.608E-01	9.790E-01	1.368E-01	0.655
PO-218	+	238.63	*	1.417E+00	1.838E-01	1.046E-01	1.055E-02	13.543
	+	300.09		1.475E+00	1.047E+00	1.392E+00	1.515E-01	1.060
	+	74.81		4.383E+00	1.033E+00	1.154E+00	1.414E-01	3.799
	+	77.11		2.961E+00	6.450E-01	6.855E-01	8.482E-02	4.320
	+	87.30		1.098E+00	1.130E+00	1.677E+00	2.086E-01	0.655
	+	241.98		1.008E+00	5.205E-01	6.309E-01	6.717E-02	1.597
RA-224	+	295.21		1.103E+00	2.485E-01	2.355E-01	2.616E-02	4.684
	+	351.92	*	1.208E+00	2.190E-01	1.280E-01	1.368E-02	9.435
	+	240.98	*	1.565E+00	1.061E+00	1.192E+00	1.078E-01	1.313
RA-226	+	609.31	*	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
	+	1120.29		1.192E+00	6.264E-01	6.883E-01	7.358E-02	1.731
	+	1764.49		1.153E+00	4.880E-01	3.612E-01	3.054E-02	3.192
AC-228	+	338.32		1.326E+00	7.157E-01	4.401E-01	1.820E-01	3.014
	+	911.07	*	1.714E+00	4.053E-01	2.462E-01	2.793E-02	6.960
	+	969.11		1.523E+00	6.013E-01	4.658E-01	1.089E-01	3.269
RA-228	+	338.32		1.326E+00	7.157E-01	4.401E-01	1.820E-01	3.014
	+	911.07	*	1.714E+00	4.053E-01	2.462E-01	2.793E-02	6.960
	+	969.11		1.523E+00	6.013E-01	4.658E-01	1.089E-01	3.269
TH-228	+	74.81		2.579E+00	5.778E-01	6.790E-01	6.672E-02	3.799
	+	77.11		1.751E+00	3.574E-01	4.055E-01	3.952E-02	4.320
	+	87.30		6.498E-01	6.669E-01	9.927E-01	9.685E-02	0.655
TH-230	+	238.63	*	1.437E+00	1.864E-01	1.061E-01	1.070E-02	13.543
	+	300.09		1.496E+00	1.374E+00	1.411E+00	8.376E-01	1.060
	+	609.31	*	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
U-231	+	1120.29		1.191E+00	6.263E-01	6.883E-01	7.358E-02	1.731
	+	1764.49		1.153E+00	4.880E-01	3.612E-01	3.054E-02	3.192
	+	84.21		2.647E+01	1.067E+01	1.015E+01	9.894E-01	2.607
TH-232	+	92.29		2.910E+02	2.959E+01	4.646E+00	4.628E-01	62.633
	+	95.87	*	9.431E+00	3.293E+00	1.685E+00	1.709E-01	5.598
	+	108.00		-2.649E+00	2.785E+00	4.001E+00	4.328E-01	-0.662
PA-234M	+	338.32		1.326E+00	4.751E-01	4.401E-01	3.966E-02	3.014
	+	911.07	*	1.714E+00	4.053E-01	2.462E-01	2.793E-02	6.960
	+	969.11		1.523E+00	6.013E-01	4.658E-01	1.089E-01	3.269
TH-234	+	766.42		1.078E+02	6.311E+01	2.449E+01	1.243E+01	4.402
	+	1001.03	*	1.210E+02	1.840E+01	9.062E+00	9.094E-01	13.351
	+	63.29	*	8.698E+01	1.650E+01	1.860E+00	3.473E-01	46.751
	+	92.38		9.339E+01	1.762E+01	1.389E+00	2.606E-01	67.236

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
	+	1120.29		1.191E+00	6.263E-01	6.883E-01	7.358E-02	1.731
	+	1764.49		1.153E+00	4.880E-01	3.612E-01	3.054E-02	3.192
U-235		89.95		9.966E-01	2.396E+00	2.884E+00	9.006E-01	0.346
	+	93.35		1.123E+02	3.204E+01	1.675E+00	4.772E-01	67.017
		105.00		8.292E-01	1.469E+00	2.445E+00	7.453E-01	0.339
	+	143.76	*	1.660E+00	5.473E-01	4.417E-01	8.097E-02	3.757
	+	163.35		1.990E+00	9.037E-01	9.568E-01	1.823E-01	2.080
	+	185.71		1.603E+00	1.823E-01	8.830E-02	7.562E-03	18.148
	+	205.31		1.720E+00	1.074E+00	1.001E+00	1.917E-01	1.718
NP-237	+	86.50	*	4.069E-01	4.260E-01	5.630E-01	1.285E-01	0.723
	+	95.87		1.019E+01	4.267E+00	1.821E+00	4.591E-01	5.598
U-238	+	63.29	*	8.698E+01	1.650E+01	1.860E+00	3.473E-01	46.751
	+	92.38		9.339E+01	9.498E+00	1.389E+00	1.384E-01	67.236
AM-243	+	74.67	*	4.124E-01	9.227E-02	1.085E-01	1.060E-02	3.800
	+	86.72		1.526E+01	1.566E+01	2.113E+01	2.061E+00	0.722
		117.66		-3.789E+00	5.295E+00	8.137E+00	9.291E-01	-0.466
		142.18		6.528E+01	2.843E+01	4.399E+01	4.536E+00	1.484
ANH-511	+	511.00	*	1.840E-01	8.722E-02	6.461E-02	5.770E-03	2.848

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-4.892E-02	3.901E-01	6.338E-01	6.031E-02	-0.077
NA-22		1274.54	*	-2.813E-02	5.198E-02	7.751E-02	6.530E-03	-0.363
NA-24		1368.53	*	3.806E-02	5.198E-02	Half-Life too short		
AL-26		1129.67		8.659E-01	2.272E+00	3.822E+00	3.194E-01	0.227
		1808.65	*	2.296E-02	3.172E-02	6.048E-02	5.069E-03	0.380
TI-44		67.85		-3.767E-02	4.950E-02	7.366E-02	7.254E-03	-0.511
	+	78.38	*	3.188E-01	6.504E-02	8.250E-02	8.038E-03	3.864
SC-46		889.25	*	1.319E-02	4.829E-02	8.199E-02	7.177E-03	0.161
	+	1120.51		2.019E-01	1.053E-01	1.490E-01	1.250E-02	1.355
V-48		944.10		7.465E-01	1.051E+00	1.848E+00	1.617E-01	0.404
		983.50	*	4.122E-02	8.605E-02	1.478E-01	1.289E-02	0.279
		1312.09		6.172E-02	9.517E-02	1.706E-01	1.448E-02	0.362
CR-51		320.08	*	-6.676E-03	4.225E-01	7.103E-01	6.783E-02	-0.009
MN-52		744.21		4.586E-01	3.332E-01	5.486E-01	4.768E-02	0.836
		848.13		-1.232E+00	7.821E+00	1.282E+01	1.127E+00	-0.096
		935.52		2.283E-02	2.330E-01	3.883E-01	3.398E-02	0.059
		1246.25		-4.784E+00	7.709E+00	1.152E+01	9.623E-01	-0.415
		1333.61		1.745E+00	4.896E+00	8.567E+00	7.303E-01	0.204
		1434.06	*	8.400E-02	2.149E-01	3.797E-01	3.274E-02	0.221
MN-54		834.83	*	-1.069E-02	5.076E-02	8.301E-02	7.298E-03	-0.129
CO-56		977.42	*	7.505E-03	5.159E-02	8.677E-02	7.628E-03	0.086
				-2.831E+00	3.631E+00	5.453E+00	4.759E-01	-0.519
		1037.82		1.340E-01	3.801E-01	6.441E-01	5.857E-02	0.208
		1175.09		-1.797E+00	2.503E+00	3.688E+00	3.015E-01	-0.487
		1238.25		1.407E-01	1.219E-01	2.142E-01	1.841E-02	0.657

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1360.21		-4.560E-02	1.053E+00	1.751E+00	1.498E-01	-0.026
		1771.40		8.648E-03	2.571E-01	4.236E-01	3.578E-02	0.020
CO-57		122.06	*	1.755E-02	3.323E-02	5.571E-02	6.528E-03	0.315
		136.48		1.023E-01	2.765E-01	4.595E-01	5.172E-02	0.223
CO-58		810.76	*	-1.773E-05	4.969E-02	8.282E-02	7.294E-03	0.000
FE-59	+	142.65		2.100E+01	6.143E+00	7.274E+00	7.476E-01	2.888
		192.34		-1.852E-01	1.124E+00	1.802E+00	2.421E-01	-0.103
		1099.22	*	-2.629E-03	1.063E-01	1.724E-01	1.582E-02	-0.015
		1291.56		-4.502E-03	1.449E-01	2.316E-01	2.231E-02	-0.019
CO-60		1173.22		-2.347E-02	5.133E-02	7.852E-02	6.414E-03	-0.299
		1332.49	*	1.489E-02	4.565E-02	7.907E-02	6.739E-03	0.188
ZN-65		1115.52	*	7.539E-02	1.335E-01	2.015E-01	1.696E-02	0.374
GE-68		1077.35	*	4.168E-01	1.620E+00	2.708E+00	2.311E-01	0.154
AS-73		53.44	*	2.077E-01	4.675E-01	8.041E-01	8.045E-02	0.258
AS-74		595.88	*	7.359E-02	1.213E-01	2.041E-01	1.798E-02	0.361
		634.78		-4.274E-03	4.508E-01	7.231E-01	6.227E-02	-0.006
SE-75		66.05		-6.113E+00	4.655E+00	6.772E+00	7.790E-01	-0.903
		96.73		5.146E+00	1.560E+00	1.918E+00	2.813E-01	2.684
		121.11		-1.341E-01	1.805E-01	2.902E-01	3.972E-02	-0.462
		136.00		1.962E-02	5.141E-02	8.551E-02	9.247E-03	0.229
		198.60		2.197E-01	2.051E+00	3.320E+00	3.198E-01	0.066
		264.65	*	-4.312E-03	5.585E-02	7.804E-02	7.170E-03	-0.055
		279.53		1.874E-02	1.281E-01	1.940E-01	1.840E-02	0.097
		303.91		1.646E+00	2.526E+00	3.927E+00	4.671E-01	0.419
		400.65		1.474E-01	3.173E-01	5.396E-01	5.940E-02	0.273
BR-77	+	87.88		2.129E+02	2.184E+02	3.178E+02	3.101E+01	0.670
		200.40		-8.672E+01	1.499E+02	2.074E+02	1.808E+01	-0.418
	+	239.00		1.590E+02	1.936E+01	2.707E+01	2.445E+00	5.875
		249.79		-1.224E+01	5.660E+01	8.890E+01	8.082E+00	-0.138
		281.68		-2.024E+01	7.415E+01	1.150E+02	1.056E+01	-0.176
		297.23		5.716E+01	4.109E+01	7.326E+01	6.726E+00	0.780
		303.76		9.060E+01	1.508E+02	2.340E+02	2.146E+01	0.387
		439.47		5.237E+01	1.201E+02	2.036E+02	1.774E+01	0.257
		484.57		-1.023E+02	2.032E+02	3.207E+02	2.849E+01	-0.319
		520.65	*	-6.814E+00	9.754E+00	1.506E+01	1.346E+00	-0.452
		574.64		-1.673E+02	1.947E+02	2.929E+02	2.600E+01	-0.571
		578.91		3.121E+01	8.821E+01	1.292E+02	1.146E+01	0.242
		585.48		2.122E+02	1.955E+02	3.013E+02	2.665E+01	0.704
		755.35		8.241E+01	1.597E+02	2.773E+02	2.417E+01	0.297
		817.79		2.089E+01	1.141E+02	1.932E+02	1.698E+01	0.108
SR-82		698.33		-1.682E+01	4.429E+01	7.266E+01	6.222E+00	-0.232
		776.49	*	-3.207E-01	5.082E-01	8.071E-01	7.064E-02	-0.397
		1395.20		-1.555E+00	1.143E+01	1.867E+01	1.605E+00	-0.083
RB-83		520.41	*	-6.233E-02	9.146E-02	1.414E-01	1.264E-02	-0.441
		529.64		-4.696E-02	1.307E-01	2.067E-01	1.848E-02	-0.227
		552.65		-5.788E-02	2.591E-01	4.132E-01	3.687E-02	-0.140
RB-84		881.50	*	7.023E-02	9.568E-02	1.678E-01	1.470E-02	0.419
KR-85		513.99	*	6.139E+00	1.056E+01	1.584E+01	1.415E+00	0.388
SR-85		513.99	*	3.107E-02	5.347E-02	8.019E-02	7.164E-03	0.388

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86		1076.63	*	2.374E-01	9.617E-01	1.607E+00	1.372E-01	0.148
Y-88		898.02		3.886E-02	4.820E-02	8.586E-02	7.542E-03	0.453
		1836.01	*	1.901E-02	3.812E-02	6.902E-02	5.755E-03	0.275
ZR-88		392.90	*	-4.204E-02	3.515E-02	5.358E-02	4.514E-03	-0.785
Y-91		1204.90	*	-1.116E+01	2.303E+01	3.524E+01	2.909E+00	-0.317
NB-94		702.63	*	3.054E-02	4.426E-02	7.793E-02	6.685E-03	0.392
		871.10		-2.301E-03	4.337E-02	7.155E-02	6.278E-03	-0.032
NB-95M		235.69	*	4.265E-02	1.594E-01	2.297E-01	2.345E-02	0.186
ZR-95		724.18		1.944E-01	1.355E-01	2.247E-01	2.109E-02	0.865
		756.15	*	1.022E-01	9.733E-02	1.744E-01	1.671E-02	0.586
NB-97		657.90	*	-1.158E-02	9.733E-02	Half-Life	too short	
		1024.50		2.255E+00	9.733E-02	Half-Life	too short	
ZR-97		254.15		2.644E-01	9.733E-02	Half-Life	too short	
		355.39		-8.424E-01	9.733E-02	Half-Life	too short	
		507.63	*	1.066E+00	9.733E-02	Half-Life	too short	
		602.52		-1.474E+00	9.733E-02	Half-Life	too short	
		1021.30		1.250E+00	9.733E-02	Half-Life	too short	
		1147.95		-1.461E-03	9.733E-02	Half-Life	too short	
		1362.66		3.132E-01	9.733E-02	Half-Life	too short	
		1750.46		-7.388E-02	9.733E-02	Half-Life	too short	
MO-99		140.51		-5.628E+00	2.859E+01	4.118E+01	1.166E+01	-0.137
		181.06		-1.037E+01	1.844E+01	2.575E+01	4.696E+00	-0.403
		366.43		2.372E+01	7.080E+01	1.204E+02	1.054E+01	0.197
		739.58	*	4.836E+00	1.340E+01	2.029E+01	3.088E+00	0.238
		778.00		-2.703E+01	3.455E+01	5.411E+01	4.737E+00	-0.499
TC-99M		140.51	*	-3.736E+08	3.455E+01	Half-Life	too short	
RH-101		127.23		-2.793E-02	4.234E-02	6.827E-02	7.764E-03	-0.409
		198.01	*	2.868E-02	3.788E-02	6.292E-02	5.470E-03	0.456
		325.23		-1.539E-01	2.676E-01	4.366E-01	3.969E-02	-0.352
RH-102		418.52		-1.061E-01	3.640E-01	5.794E-01	4.982E-02	-0.183
		475.06	*	1.567E-02	3.460E-02	5.853E-02	5.184E-03	0.268
		631.29		-1.427E-02	7.261E-02	1.147E-01	9.900E-03	-0.124
		697.49		-6.322E-02	1.037E-01	1.672E-01	1.431E-02	-0.378
	+	766.84		1.024E+00	3.117E-01	4.243E-01	3.707E-02	2.413
		1046.59		5.372E-02	1.525E-01	2.576E-01	2.219E-02	0.209
		1112.84		1.003E-01	3.199E-01	4.698E-01	3.956E-02	0.214
RU-103		497.08	*	-6.473E-03	4.978E-02	8.060E-02	1.156E-02	-0.080
	+	610.33		1.122E+01	2.745E+00	3.142E+00	5.262E-01	3.572
RH-106		511.85		9.169E-01	4.347E-01	5.088E-01	4.544E-02	1.802
		621.84	*	-3.446E-02	4.343E-01	6.938E-01	9.298E-02	-0.050
		1050.47		-1.014E+00	2.978E+00	4.689E+00	4.035E-01	-0.216
RU-106		511.85		9.169E-01	4.347E-01	5.088E-01	4.544E-02	1.802
	+	621.84	*	-3.446E-02	4.343E-01	6.938E-01	6.028E-02	-0.050
		1050.47		-1.014E+00	2.978E+00	4.689E+00	4.035E-01	-0.216
AG-108M		433.93	*	8.106E-03	3.923E-02	6.560E-02	5.921E-03	0.124
		614.37		3.092E-03	5.546E-02	7.841E-02	7.105E-03	0.039
		722.95		-1.648E-02	6.147E-02	8.740E-02	7.845E-03	-0.189
AG-110M		657.75	*	-2.381E-02	5.065E-02	7.801E-02	6.799E-03	-0.305
		677.61		-1.606E-01	3.943E-01	6.056E-01	5.289E-02	-0.265

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		706.67		1.181E-01	2.673E-01	4.639E-01	4.096E-02	0.255
		763.93		1.290E+00	3.308E-01	5.915E-01	5.307E-02	2.182
		884.67		-4.411E-02	6.502E-02	1.006E-01	9.087E-03	-0.438
		937.48		-1.702E-01	1.231E-01	1.698E-01	1.538E-02	-1.002
	1384.27			8.168E-02	1.810E-01	3.097E-01	2.734E-02	0.264
IN-111	171.28			-2.396E-01	9.733E-01	1.567E+00	1.315E-01	-0.153
	245.39	*		-9.601E-01	1.062E+00	1.402E+00	1.271E-01	-0.685
IN-113M	391.69	*		-3.147E-02	5.020E-02	7.994E-02	6.946E-03	-0.394
SN-113	391.69	*		-3.147E-02	5.020E-02	7.994E-02	6.946E-03	-0.394
IN-114M	190.27	*		6.326E-02	2.386E-01	3.486E-01	3.002E-02	0.181
CD-115	260.90			2.106E+01	1.206E+02	1.719E+02	1.571E+01	0.123
	492.35			1.297E+01	3.056E+01	5.147E+01	4.582E+00	0.252
	527.90	*		2.599E+00	9.517E+00	1.580E+01	1.412E+00	0.164
SN-117M	156.02			7.714E-02	2.735E+00	4.470E+00	4.115E-01	0.017
	158.56	*		-4.438E-02	6.995E-02	1.057E-01	9.504E-03	-0.420
SB-122	563.90	*		1.354E+00	2.096E+00	3.541E+00	3.153E-01	0.382
	692.80			6.810E+00	4.022E+01	6.864E+01	5.865E+00	0.099
I-123	159.00	*		-3.553E-01	4.022E+01	Half-Life	too short	
	528.96			-1.959E+01	4.022E+01	Half-Life	too short	
TE-123M	159.00	*		-8.269E-03	4.072E-02	5.874E-02	5.287E-03	-0.141
I-124	602.71	*		-4.441E-01	8.217E-01	1.162E+00	1.020E-01	-0.382
	722.78			-2.957E+00	5.279E+00	7.252E+00	6.265E-01	-0.408
	1325.50			1.383E+01	3.401E+01	5.968E+01	5.079E+00	0.232
	1376.25		+	4.524E+01	4.082E+01	5.948E+01	5.100E+00	0.761
	1509.49			1.442E+01	1.510E+01	2.834E+01	2.451E+00	0.509
	1691.02			4.228E+00	3.615E+00	7.204E+00	6.162E-01	0.587
SB-124	602.71			-3.120E-02	5.773E-02	8.161E-02	7.168E-03	-0.382
	645.85			-7.361E-02	6.871E-01	1.092E+00	9.894E-02	-0.067
	709.31			-2.609E-01	3.569E+00	5.977E+00	5.139E-01	-0.044
	713.82			6.034E-01	2.027E+00	3.486E+00	4.195E-01	0.173
	722.78			-3.012E-01	5.377E-01	7.386E-01	6.518E-02	-0.408
	968.20		+	1.546E+01	5.101E+00	8.465E+00	7.395E-01	1.826
	1045.16			2.143E+00	3.213E+00	5.580E+00	4.810E-01	0.384
	1325.50			1.505E+00	3.699E+00	6.492E+00	5.525E-01	0.232
	1368.21			4.359E-01	2.089E+00	3.442E+00	4.627E-01	0.127
	1436.60			-1.788E+00	4.316E+00	6.726E+00	5.800E-01	-0.266
	1691.02	*		1.016E-01	8.689E-02	1.731E-01	1.540E-02	0.587
SB-125	427.89	*		-2.257E-02	1.091E-01	1.778E-01	1.568E-02	-0.127
	463.38			9.227E-01	3.791E-01	6.919E-01	6.559E-02	1.334
	600.56			-9.631E-02	2.427E-01	3.794E-01	3.572E-02	-0.254
	635.90			-5.074E-02	3.664E-01	5.814E-01	5.408E-02	-0.087
TE-125M	109.28	*		8.120E+00	1.514E+01	2.289E+01	2.812E+00	0.355
I-126	388.63			1.107E-01	2.226E-01	3.806E-01	3.221E-02	0.291
	666.33	*		1.641E-01	2.251E-01	3.808E-01	3.215E-02	0.431
	753.82			-3.466E-01	1.893E+00	3.130E+00	2.727E-01	-0.111
SB-126	223.80			-4.690E+00	4.586E+00	6.948E+00	6.202E-01	-0.675
	278.60		+	3.285E+00	3.658E+00	4.363E+00	4.005E-01	0.753
	296.50		+	1.025E+01	2.219E+00	3.222E+00	2.958E-01	3.182
	414.70			6.319E-02	8.603E-02	1.484E-01	1.272E-02	0.426

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.30		1.874E+00	7.356E+00	1.236E+01	1.060E+00	0.152
		555.20		8.229E-01	4.979E+00	8.173E+00	7.290E-01	0.101
		573.80		-3.125E-01	1.276E+00	2.024E+00	1.798E-01	-0.154
		593.00		-1.048E+00	1.246E+00	1.879E+00	1.657E-01	-0.558
		656.30		1.841E+00	4.262E+00	7.059E+00	5.975E-01	0.261
		666.33		6.839E-02	9.381E-02	1.587E-01	1.340E-02	0.431
		675.00		8.563E-01	2.535E+00	4.164E+00	3.530E-01	0.206
		695.00		3.642E-02	9.365E-02	1.621E-01	1.386E-02	0.225
		697.00		-2.104E-01	3.456E-01	5.577E-01	4.773E-02	-0.377
		720.50	*	9.641E-02	1.911E-01	2.951E-01	2.547E-02	0.327
		856.80		-2.042E-02	6.493E-01	9.320E-01	8.188E-02	-0.022
		989.30		-4.079E-02	1.468E+00	2.403E+00	2.094E-01	-0.017
		1034.80		-2.623E-01	9.944E+00	1.621E+01	1.401E+00	-0.016
		1213.00		-1.048E+00	5.525E+00	8.742E+00	7.234E-01	-0.120
SB-127		61.10		4.833E+01	4.424E+01	6.867E+01	8.208E+00	0.704
		252.40		2.378E+00	4.315E+00	6.865E+00	2.886E+00	0.346
		290.80		-5.332E+00	2.009E+01	2.943E+01	3.314E+00	-0.181
		411.60		-1.067E+00	1.158E+01	1.906E+01	2.943E+00	-0.056
		444.90		-2.290E+00	9.728E+00	1.559E+01	1.918E+00	-0.147
		473.00		-1.619E+00	1.683E+00	2.550E+00	3.243E-01	-0.635
		543.00		1.419E+01	1.831E+01	3.115E+01	4.459E+00	0.456
		603.60		2.502E+00	1.435E+01	2.055E+01	2.529E+00	0.122
		685.20	*	6.185E-01	1.454E+00	2.403E+00	2.632E-01	0.257
		698.50		-4.914E+00	1.639E+01	2.702E+01	4.198E+00	-0.182
		722.20		-2.363E+01	3.477E+01	4.691E+01	5.074E+00	-0.504
		783.80		5.977E+00	4.846E+00	7.806E+00	9.522E-01	0.766
XE-127		57.60		-1.250E+00	4.362E+00	7.404E+00	7.436E-01	-0.169
	+	145.22		5.358E+00	1.567E+00	1.692E+00	1.706E-01	3.166
		172.10		-1.334E-01	1.529E-01	2.395E-01	2.013E-02	-0.557
		202.84	*	7.582E-02	5.893E-02	9.029E-02	7.894E-03	0.840
		374.96		7.696E-02	2.365E-01	4.011E-01	3.469E-02	0.192
I-131		80.18		-1.852E+00	7.485E+00	8.945E+00	8.749E-01	-0.207
		284.30		5.943E-01	1.511E+00	2.606E+00	2.502E-01	0.228
		364.48	*	-1.567E-01	1.198E-01	1.824E-01	1.683E-02	-0.859
		636.97		6.461E-01	1.867E+00	3.081E+00	2.795E-01	0.210
		722.89		-4.479E+00	9.438E+00	1.311E+01	1.138E+00	-0.342
TE-132		49.72		-2.225E+00	5.765E+00	9.805E+00	1.149E+00	-0.227
	+	111.76		7.636E+01	3.693E+01	7.495E+01	9.443E+00	1.019
		116.30		5.302E+00	3.189E+01	4.763E+01	6.120E+00	0.111
		228.16	*	9.632E-02	6.404E-01	1.030E+00	1.617E-01	0.093
BA-133		53.15		2.459E+00	1.993E+00	3.447E+00	3.449E-01	0.713
		79.62		4.640E-01	2.271E+00	2.758E+00	4.381E-01	0.168
		81.00		-5.359E-02	1.803E-01	2.147E-01	3.545E-02	-0.250
	+	276.40		5.258E-01	5.887E-01	7.295E-01	1.079E-01	0.721
		302.84		6.905E-02	1.717E-01	2.629E-01	3.589E-02	0.263
		356.01	*	-3.855E-03	5.824E-02	8.529E-02	1.140E-02	-0.045
		383.85		1.731E-01	3.426E-01	5.863E-01	7.355E-02	0.295
I-133	+	510.53		7.005E-01	3.426E-01	Half-Life too short		
		529.87	*	-9.982E-04	3.426E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		706.58		8.622E-02	3.426E-01	Half-Life	too short	
		856.28		-3.317E-02	3.426E-01	Half-Life	too short	
		875.33		-2.216E-02	3.426E-01	Half-Life	too short	
		1236.41		3.711E-01	3.426E-01	Half-Life	too short	
		1298.22		-8.783E-03	3.426E-01	Half-Life	too short	
		475.35		1.079E+00	2.277E+00	3.856E+00	3.416E-01	0.280
		563.23		3.637E-01	5.028E-01	8.532E-01	7.666E-02	0.426
		569.32		1.579E-01	2.814E-01	4.723E-01	4.253E-02	0.334
		604.70		3.982E-02	5.060E-02	7.667E-02	6.742E-03	0.519
		795.84	*	1.040E-01	7.019E-02	1.275E-01	1.126E-02	0.816
		801.93		6.857E-02	5.444E-01	9.048E-01	7.987E-02	0.076
		1038.57		5.997E-01	4.881E+00	8.081E+00	6.977E-01	0.074
		1167.94		7.328E-01	3.070E+00	5.094E+00	4.173E-01	0.144
		1365.15		-6.404E-01	1.394E+00	2.173E+00	1.947E-01	-0.295
CS-135		268.24	*	2.058E-01	1.978E-01	2.978E-01	3.108E-02	0.691
I-135		288.45		-3.980E+08	1.978E-01	Half-Life	too short	
		417.63		1.702E+09	1.978E-01	Half-Life	too short	
		546.56		-5.104E+08	1.978E-01	Half-Life	too short	
		836.80		9.262E+08	1.978E-01	Half-Life	too short	
		1038.76		2.053E+08	1.978E-01	Half-Life	too short	
		1124.00		8.502E+08	1.978E-01	Half-Life	too short	
		1131.51		1.837E+08	1.978E-01	Half-Life	too short	
		1260.41	*	2.957E+07	1.978E-01	Half-Life	too short	
		1457.56		4.311E+10	1.978E-01	Half-Life	too short	
		1678.03		-3.935E+08	1.978E-01	Half-Life	too short	
		1706.46		-4.721E+08	1.978E-01	Half-Life	too short	
		1791.20		6.011E+08	1.978E-01	Half-Life	too short	
		66.91		-9.753E-01	7.537E-01	1.085E+00	1.754E-01	-0.899
	+	86.29		1.695E+00	1.747E+00	2.488E+00	3.393E-01	0.681
CS-136		153.22		1.236E-01	8.021E-01	1.318E+00	1.367E-01	0.094
	+	163.89		4.226E+00	1.788E+00	2.391E+00	2.287E-01	1.767
		176.55		6.310E-02	4.513E-01	7.357E-01	6.596E-02	0.086
		273.65		2.295E-02	6.803E-01	7.488E-01	7.268E-02	0.031
		340.57		3.476E-02	1.523E-01	2.286E-01	2.110E-02	0.152
		818.51		-2.839E-02	8.704E-02	1.406E-01	1.237E-02	-0.202
		1048.07	*	6.731E-02	1.340E-01	2.294E-01	2.060E-02	0.293
		1235.34		8.032E-01	7.690E-01	1.337E+00	1.556E-01	0.601
BA-137M		661.65	*	-1.842E-02	5.014E-02	7.783E-02	6.556E-03	-0.237
CS-137		661.65	*	-1.947E-02	5.301E-02	8.227E-02	6.945E-03	-0.237
CE-139		165.85	*	-1.234E-02	4.287E-02	6.139E-02	5.119E-03	-0.201
BA-140	+	162.64		2.970E+00	1.253E+00	1.658E+00	1.513E-01	1.792
		304.84		2.678E-02	1.401E+00	2.201E+00	6.205E-01	0.012
		423.70		8.049E-01	2.190E+00	3.676E+00	1.192E+00	0.219
		537.32	*	6.513E-02	3.279E-01	5.394E-01	1.792E-01	0.121
LA-140		328.77		2.806E-01	3.451E-01	5.993E-01	5.712E-02	0.468
		432.53		-6.498E-01	2.208E+00	3.568E+00	3.245E-01	-0.182
		487.03		8.831E-02	1.580E-01	2.686E-01	2.527E-02	0.329
		751.79		-8.582E-01	2.119E+00	3.437E+00	3.307E-01	-0.250
		815.85		-1.314E-02	3.735E-01	6.203E-01	6.057E-02	-0.021

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		867.82		2.529E-01	1.692E+00	2.844E+00	2.624E-01	0.089
		919.63		9.449E-01	3.311E+00	5.611E+00	6.034E-01	0.168
		925.24		1.072E+00	1.411E+00	2.481E+00	2.304E-01	0.432
		1596.49	*	-5.445E-02	9.289E-02	1.371E-01	1.184E-02	-0.397
CE-141		145.44	*	1.902E-01	9.186E-02	1.432E-01	1.461E-02	1.329
CE-143		57.37		-1.178E-04	9.186E-02	Half-Life	too short	
		231.56		-2.119E-04	9.186E-02	Half-Life	too short	
		293.26	*	2.439E-04	9.186E-02	Half-Life	too short	
	+	350.59		1.481E-02	9.186E-02	Half-Life	too short	
		490.36		-1.312E-03	9.186E-02	Half-Life	too short	
		664.57		-8.036E-04	9.186E-02	Half-Life	too short	
		721.93		-6.777E-04	9.186E-02	Half-Life	too short	
CE-144		80.11		-9.059E-01	3.815E+00	4.561E+00	4.443E-01	-0.199
		133.54	*	-1.831E-01	2.776E-01	4.448E-01	7.545E-02	-0.412
PM-144		476.78		4.589E-02	8.236E-02	1.400E-01	1.351E-02	0.328
		618.01		-4.301E-02	4.327E-02	6.360E-02	5.689E-03	-0.676
		696.49	*	-2.243E-03	4.647E-02	7.807E-02	6.683E-03	-0.029
		778.57		-1.362E+00	3.224E+00	5.061E+00	4.432E-01	-0.269
PR-144		696.49	*	-1.519E-01	3.147E+00	5.287E+00	4.524E-01	-0.029
		1489.15		-8.075E-01	1.301E+01	2.137E+01	1.847E+00	-0.038
PM-146		453.90	*	-4.550E-03	5.503E-02	9.003E-02	9.772E-03	-0.051
		633.02		-6.658E-01	1.802E+00	2.772E+00	1.036E+00	-0.240
		735.90		-9.329E-02	2.114E-01	3.193E-01	9.137E-02	-0.292
		747.13		4.976E-02	1.300E-01	1.963E-01	2.765E-02	0.254
ND-147	+	91.11		4.348E+01	4.687E+00	1.326E+00	1.396E-01	32.797
		319.41		1.168E+00	3.568E+00	6.101E+00	5.563E-01	0.191
		439.89		1.722E-01	6.585E+00	1.087E+01	9.481E-01	0.016
		531.02	*	-4.041E-01	6.693E-01	1.034E+00	1.565E-01	-0.391
PM-149		285.90	*	4.689E+01	7.161E+01	1.243E+02	1.971E+01	0.377
EU-152		121.78		1.995E-02	9.622E-02	1.601E-01	2.031E-02	0.125
		244.69		-3.316E-01	4.416E-01	5.905E-01	5.352E-02	-0.562
		344.27	*	-1.789E-02	1.094E-01	1.816E-01	1.718E-02	-0.098
		443.98		-6.670E-01	1.198E+00	1.876E+00	1.639E-01	-0.356
		778.89		-5.143E-02	3.786E-01	5.904E-01	5.169E-02	-0.087
		867.32		-1.941E-01	1.107E+00	1.807E+00	1.586E-01	-0.107
		964.01		3.429E-01	4.049E-01	6.364E-01	5.561E-02	0.539
		1085.78		-2.839E-01	4.481E-01	6.714E-01	5.713E-02	-0.423
		1112.02		1.449E-01	4.536E-01	6.668E-01	5.616E-02	0.217
		1407.95		-1.292E-02	2.173E-01	3.595E-01	3.093E-02	-0.036
GD-153		69.67		3.519E+00	1.864E+00	2.908E+00	2.855E-01	1.210
	+	83.37		8.798E+01	3.547E+01	3.837E+01	3.738E+00	2.293
	+	97.43	*	1.116E+00	2.044E-01	2.361E-01	2.414E-02	4.725
		103.18		-1.523E-01	1.488E-01	2.282E-01	2.405E-02	-0.667
EU-154		123.07		4.182E-02	6.928E-02	1.162E-01	1.603E-02	0.360
		247.94		1.107E-01	4.339E-01	6.988E-01	8.264E-02	0.158
		591.81		-5.014E-01	8.732E-01	1.345E+00	1.590E-01	-0.373
		723.30		1.237E-02	2.625E-01	3.862E-01	3.687E-02	0.032
		756.87		7.254E-01	1.064E+00	1.864E+00	2.246E-01	0.389
		873.19		-3.607E-01	3.893E-01	5.838E-01	7.211E-02	-0.618

----- Non-Identified Nuclides -----

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EU-155		996.32		6.045E-01	5.195E-01	8.426E-01	1.501E-01	0.717
		1004.76		6.869E-02	2.918E-01	4.286E-01	5.012E-02	0.160
		1274.45	*	-7.066E-02	1.440E-01	2.161E-01	2.411E-02	-0.327
		48.70		-1.819E+00	8.650E-01	1.395E+00	1.401E-01	-1.304
		60.01		2.418E+00	4.512E+00	6.987E+00	7.029E-01	0.346
	+	86.54		1.668E-01	1.712E-01	2.465E-01	2.423E-02	0.677
TB-160		105.31	*	9.806E-02	1.485E-01	2.508E-01	2.694E-02	0.391
	+	86.79		4.406E-01	4.521E-01	6.514E-01	6.354E-02	0.676
		197.04		-5.142E-02	6.520E-01	1.047E+00	9.096E-02	-0.049
		215.65		1.904E-01	8.377E-01	1.358E+00	1.203E-01	0.140
	+	298.57		2.122E-01	1.500E-01	2.137E-01	1.961E-02	0.993
		879.36	*	1.263E-01	1.917E-01	3.345E-01	2.933E-02	0.378
HO-166M		962.29		1.079E+00	7.071E-01	1.223E+00	1.069E-01	0.883
		966.15		9.003E-01	3.452E-01	6.014E-01	5.255E-02	1.497
		1177.93		-2.134E-01	4.297E-01	6.559E-01	5.366E-02	-0.325
		1271.85		4.176E-01	7.697E-01	1.324E+00	1.114E-01	0.315
	+	80.57		-1.472E-01	4.934E-01	5.883E-01	5.730E-02	-0.250
		184.41		1.202E+00	1.367E-01	1.409E-01	1.205E-02	8.530
TM-171		280.46		-3.628E-02	1.043E-01	1.525E-01	1.400E-02	-0.238
		410.95		-5.666E-02	2.875E-01	4.702E-01	4.021E-02	-0.120
		711.68	*	1.686E-02	7.795E-02	1.333E-01	1.147E-02	0.127
		752.31		2.825E-02	3.590E-01	6.054E-01	5.273E-02	0.047
		810.29		1.172E-02	7.561E-02	1.277E-01	1.122E-02	0.092
		51.35		1.882E+00	1.436E+01	2.463E+01	2.466E+00	0.076
LU-176		52.39		1.426E+01	8.282E+00	1.434E+01	1.435E+00	0.994
		59.40		1.443E+01	2.351E+01	3.647E+01	3.675E+00	0.396
		66.72	*	-3.799E+01	2.862E+01	4.176E+01	4.122E+00	-0.910
		88.36		-1.433E-01	3.628E-01	4.950E-01	4.840E-02	-0.289
		201.83		-2.111E-02	3.856E-02	5.346E-02	4.669E-03	-0.395
		306.84	*	-1.458E-02	2.811E-02	4.610E-02	4.224E-03	-0.316
LU-177M		401.10		7.622E-01	8.522E+00	1.421E+01	1.205E+00	0.054
		52.97		1.111E+00	8.868E-01	1.534E+00	1.535E-01	0.724
		54.07		-9.168E-02	5.051E-01	8.607E-01	8.612E-02	-0.107
		61.30		5.665E+00	1.589E+00	2.433E+00	2.436E-01	2.329
		121.62		5.731E-02	4.891E-01	8.116E-01	9.479E-02	0.071
		147.16		-1.449E-01	9.166E-01	1.332E+00	1.323E-01	-0.109
HF-181		171.86		-6.720E-01	6.336E-01	9.842E-01	8.271E-02	-0.683
		218.09		1.540E-01	9.994E-01	1.613E+00	1.432E-01	0.095
		268.79		1.386E+00	1.027E+00	1.571E+00	1.439E-01	0.883
		319.02		4.217E-02	2.998E-01	5.080E-01	4.633E-02	0.083
		367.43		2.281E-01	1.060E+00	1.790E+00	1.564E-01	0.127
		413.65	*	-1.471E-01	2.142E-01	3.389E-01	2.904E-02	-0.434
		56.28		4.135E-02	6.331E-01	1.082E+00	1.084E-01	0.038
		57.53		-1.048E-01	3.670E-01	6.229E-01	6.256E-02	-0.168
		65.20		2.768E+00	9.427E-01	1.469E+00	1.455E-01	1.884
		133.02		-4.187E-02	8.656E-02	1.402E-01	1.539E-02	-0.299
		136.25		2.498E-01	5.932E-01	9.875E-01	1.061E-01	0.253
		345.85		-8.090E-02	2.345E-01	3.360E-01	3.008E-02	-0.241
		482.03	*	2.553E-02	5.096E-02	8.635E-02	7.666E-03	0.296

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W-181		56.28		1.675E-02	2.511E-01	4.290E-01	4.301E-02	0.039
		57.53		-4.157E-02	1.456E-01	2.472E-01	2.483E-02	-0.168
		65.20	*	1.090E+00	3.712E-01	5.785E-01	5.729E-02	1.884
TA-182		67.75		-1.414E-01	1.180E-01	1.732E-01	1.706E-02	-0.817
		100.10		8.744E-01	2.870E-01	4.461E-01	4.624E-02	1.960
		152.43		2.409E-01	4.326E-01	7.197E-01	6.842E-02	0.335
		222.10		2.166E-01	4.021E-01	6.593E-01	5.876E-02	0.329
	+	1001.68		5.289E+01	7.595E+00	1.206E+01	1.049E+00	4.387
		1121.28		4.260E-01	2.382E-01	3.965E-01	3.326E-02	1.074
		1189.05		-1.966E-02	3.850E-01	6.190E-01	5.084E-02	-0.032
		1221.42	*	1.490E-01	2.348E-01	4.026E-01	3.339E-02	0.370
		1230.97		-1.760E-01	5.940E-01	9.284E-01	7.723E-02	-0.190
RE-183		57.98		-5.610E-02	1.549E-01	2.510E-01	2.522E-02	-0.224
		59.32		5.862E-02	9.530E-02	1.478E-01	1.489E-02	0.397
		67.20		-2.297E-01	2.019E-01	2.965E-01	2.924E-02	-0.774
	+	162.32	*	4.589E-01	1.932E-01	2.551E-01	2.208E-02	1.799
	+	208.81		3.018E+00	1.470E+00	2.025E+00	1.782E-01	1.490
		291.72		8.907E-02	1.067E+00	1.604E+00	1.473E-01	0.056
RE-184		57.98		-2.082E-01	5.750E-01	9.315E-01	9.361E-02	-0.224
		59.32		2.174E-01	3.534E-01	5.481E-01	5.523E-02	0.397
		67.20		-8.520E-01	7.489E-01	1.100E+00	1.085E-01	-0.774
		161.27		-4.834E-02	5.003E-01	7.248E-01	6.343E-02	-0.067
		216.55		2.312E-01	3.048E-01	5.049E-01	4.477E-02	0.458
		252.85	*	-4.778E-02	2.851E-01	4.487E-01	4.086E-02	-0.106
		318.01		1.760E-01	5.230E-01	8.949E-01	8.165E-02	0.197
		792.07		2.802E-01	1.540E+00	2.538E+00	2.226E-01	0.110
		903.28		4.773E-01	1.368E+00	2.045E+00	1.789E-01	0.233
		920.93		3.191E-01	5.986E-01	1.035E+00	9.053E-02	0.308
OS-185		59.72		1.712E-01	2.610E-01	4.049E-01	4.078E-02	0.423
		61.14		1.980E-01	1.562E-01	2.433E-01	2.438E-02	0.814
		69.30		2.959E-01	3.250E-01	5.035E-01	4.946E-02	0.588
		592.07		-2.515E+00	3.517E+00	5.355E+00	4.726E-01	-0.470
		646.12	*	3.177E-03	5.834E-02	9.395E-02	8.022E-03	0.034
		717.42		6.162E-01	1.106E+00	1.937E+00	1.671E-01	0.318
		874.81		-4.006E-01	7.635E-01	1.202E+00	1.055E-01	-0.333
		880.27		9.871E-01	1.066E+00	1.897E+00	1.663E-01	0.520
RE-188		155.03	*	2.791E-02	2.176E-01	3.571E-01	3.317E-02	0.078
		477.96		-1.716E+00	3.779E+00	5.991E+00	5.312E-01	-0.286
		633.10		-1.195E+00	3.577E+00	5.574E+00	4.806E-01	-0.214
W-188	+	63.58		3.453E+03	3.629E+02	1.859E+02	1.849E+01	18.574
		227.08		1.743E+01	1.502E+01	2.518E+01	2.254E+00	0.692
		290.67	*	-2.729E+00	8.551E+00	1.248E+01	1.146E+00	-0.219
IR-192	+	295.96		8.315E-01	1.801E-01	2.795E-01	2.582E-02	2.975
		308.46		2.170E-02	1.057E-01	1.802E-01	1.657E-02	0.120
		316.51	*	1.140E-02	3.966E-02	6.772E-02	6.195E-03	0.168
		468.07		1.623E-02	8.144E-02	1.355E-01	1.279E-02	0.120
		604.41		4.800E-01	6.751E-01	1.014E+00	1.331E-01	0.473
		612.46		-2.188E-02	9.910E-01	1.389E+00	1.389E-01	-0.016
AU-195		65.12		1.094E+00	2.051E-01	2.990E-01	2.961E-02	3.660

----- Non-Identified Nuclides -----

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		66.83		-1.243E-01	9.462E-02	1.381E-01	1.363E-02	-0.900
	+	75.70		1.328E+00	2.972E-01	4.385E-01	4.278E-02	3.029
	+	98.88	*	3.245E+00	5.944E-01	7.174E-01	7.389E-02	4.523
		129.76		2.972E+00	3.829E+00	6.418E+00	7.189E-01	0.463
TL-200		367.94	*	7.918E-05	3.829E+00	Half-Life	too short	
		579.30		1.508E-03	3.829E+00	Half-Life	too short	
		828.27		-5.356E-05	3.829E+00	Half-Life	too short	
		1205.75		3.861E-04	3.829E+00	Half-Life	too short	
TL-201		68.90		2.019E+00	3.711E+00	6.064E+00	5.961E-01	0.333
		70.82		9.976E-01	2.404E+00	3.691E+00	3.618E-01	0.270
		80.30		-1.816E+00	6.866E+00	8.200E+00	7.987E-01	-0.221
		135.34		2.124E+00	2.560E+01	4.222E+01	4.565E+00	0.050
		167.43	*	3.797E+00	7.636E+00	1.135E+01	9.475E-01	0.335
TL-202		68.90		2.240E-01	4.118E-01	6.729E-01	6.615E-02	0.333
		70.82		1.104E-01	2.661E-01	4.085E-01	4.004E-02	0.270
		80.30		-2.010E-01	7.601E-01	9.078E-01	8.842E-02	-0.221
		439.56	*	3.337E-02	7.757E-02	1.314E-01	1.145E-02	0.254
HG-203		70.83		5.122E-01	1.215E+00	1.864E+00	2.682E-01	0.275
		72.87		6.501E-01	6.674E-01	1.135E+00	1.587E-01	0.573
	+	82.60		6.445E+00	2.689E+00	2.662E+00	3.852E-01	2.421
		279.20	*	2.057E-02	4.805E-02	7.403E-02	6.967E-03	0.278
BI-207		72.80		1.711E-01	1.977E-01	3.375E-01	3.300E-02	0.507
	+	74.97		7.403E-01	1.656E-01	2.316E-01	2.261E-02	3.196
	+	84.90		1.142E+00	4.604E-01	4.802E-01	4.680E-02	2.378
		569.67		3.410E-02	4.254E-02	7.252E-02	6.449E-03	0.470
		1063.62	*	-6.392E-03	6.964E-02	1.126E-01	9.650E-03	-0.057
		1770.23		-2.135E-01	6.646E-01	8.376E-01	7.075E-02	-0.255
TL-207		81.07		-1.132E-01	3.980E-01	4.747E-01	4.624E-02	-0.238
	+	83.78		7.529E-01	3.036E-01	3.303E-01	3.218E-02	2.280
	+	94.90		2.367E+00	8.263E-01	6.742E-01	6.804E-02	3.510
		122.32		1.628E+00	2.324E+00	3.908E+00	4.757E-01	0.417
	+	144.24		5.378E+00	1.590E+00	1.940E+00	2.141E-01	2.772
		154.21		-3.372E-01	5.163E-01	8.227E-01	8.355E-02	-0.410
	+	269.46		6.703E-01	3.691E-01	3.869E-01	3.610E-02	1.732
		323.87	*	-6.750E-01	7.927E-01	1.260E+00	2.260E-01	-0.536
	+	338.28		5.539E+00	2.043E+00	2.697E+00	3.395E-01	2.054
		445.03		-8.367E-01	2.817E+00	4.493E+00	5.470E-01	-0.186
PO-209		260.50		7.899E+00	1.305E+01	1.913E+01	1.748E+00	0.413
		262.80		7.488E+00	3.495E+01	4.995E+01	4.567E+00	0.150
		896.60	*	3.987E+00	8.953E+00	1.544E+01	1.350E+00	0.258
BI-210		46.50	*	1.491E+00	9.956E-01	1.594E+00	1.729E-01	0.936
PB-210		46.50	*	1.491E+00	9.956E-01	1.594E+00	1.729E-01	0.936
PO-210		46.50	*	1.491E+00	9.938E-01	1.594E+00	1.610E-01	0.936
PB-211		404.84	*	-1.541E-01	1.180E+00	1.935E+00	1.213E+00	-0.080
		427.08		2.478E+00	2.851E+00	4.228E+00	2.627E+00	0.586
		831.96		-2.592E-01	1.597E+00	2.607E+00	1.635E+00	-0.099
PO-215		81.07		-1.132E-01	3.980E-01	4.747E-01	4.624E-02	-0.238
	+	83.78		7.529E-01	3.036E-01	3.303E-01	3.218E-02	2.280
	+	94.90		2.367E+00	8.263E-01	6.742E-01	6.804E-02	3.510

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		1.628E+00	2.324E+00	3.908E+00	4.757E-01	0.417
	+	144.24		5.378E+00	1.590E+00	1.940E+00	2.141E-01	2.772
		154.21		-3.372E-01	5.163E-01	8.227E-01	8.355E-02	-0.410
	+	269.46		6.703E-01	3.691E-01	3.869E-01	3.610E-02	1.732
		323.87	*	-6.750E-01	7.927E-01	1.260E+00	2.260E-01	-0.536
	+	338.28		5.539E+00	2.043E+00	2.697E+00	3.395E-01	2.054
		445.03		-8.367E-01	2.817E+00	4.493E+00	5.470E-01	-0.186
RN-219	+	271.23		8.600E-01	4.759E-01	5.076E-01	5.468E-02	1.694
		401.81	*	4.991E-02	5.274E-01	8.793E-01	1.315E-01	0.057
RN-220		549.76	*	1.002E+01	3.465E+01	5.741E+01	5.125E+00	0.175
RA-223		81.07		-1.132E-01	3.980E-01	4.747E-01	4.624E-02	-0.238
	+	83.78		7.529E-01	3.036E-01	3.303E-01	3.218E-02	2.280
	+	94.90		2.367E+00	8.263E-01	6.742E-01	6.804E-02	3.510
		122.32		1.628E+00	2.324E+00	3.908E+00	4.757E-01	0.417
	+	144.24		5.378E+00	1.590E+00	1.940E+00	2.141E-01	2.772
		154.21		-3.372E-01	5.163E-01	8.227E-01	8.355E-02	-0.410
	+	269.46		6.703E-01	3.691E-01	3.869E-01	3.610E-02	1.732
		323.87	*	-6.750E-01	7.927E-01	1.260E+00	2.260E-01	-0.536
	+	338.28		5.539E+00	2.043E+00	2.697E+00	3.395E-01	2.054
		445.03		-8.367E-01	2.817E+00	4.493E+00	5.470E-01	-0.186
AC-227		79.80		6.784E-01	2.893E+00	3.514E+00	7.723E-01	0.193
		236.00		2.653E-01	3.068E-01	4.550E-01	5.698E-02	0.583
		256.20	*	7.495E-02	5.524E-01	7.853E-01	1.228E-01	0.095
		286.10		1.013E+00	1.757E+00	3.046E+00	4.135E-01	0.333
	+	299.80		2.734E+00	1.978E+00	2.873E+00	5.105E-01	0.952
		304.40		9.493E-01	2.307E+00	3.526E+00	6.594E-01	0.269
		334.20		-3.091E+00	3.168E+00	4.269E+00	8.367E-01	-0.724
TH-227		79.80		6.784E-01	2.893E+00	3.514E+00	7.818E-01	0.193
	+	94.00		1.893E+01	7.618E+00	1.144E+01	2.561E+00	1.655
		236.00		2.653E-01	3.065E-01	4.550E-01	5.180E-02	0.583
		256.20	*	7.495E-02	5.524E-01	7.853E-01	1.438E-01	0.095
		286.10		1.013E+00	2.025E+00	3.046E+00	3.058E+00	0.333
	+	299.80		2.734E+00	1.978E+00	2.873E+00	5.105E-01	0.952
		304.40		9.493E-01	2.307E+00	3.526E+00	6.594E-01	0.269
		334.20		-3.091E+00	3.168E+00	4.269E+00	8.367E-01	-0.724
TH-229	+	85.43		3.107E-01	3.189E-01	4.612E-01	4.496E-02	0.674
		88.47		-8.900E-02	2.088E-01	2.847E-01	2.785E-02	-0.313
	+	100.00		2.706E+00	4.956E-01	4.857E-01	5.032E-02	5.571
		193.63	*	1.324E-01	6.178E-01	1.006E+00	8.698E-02	0.132
		210.97		9.160E-01	9.667E-01	1.455E+00	1.283E-01	0.630
PA-231		283.67	*	5.057E-02	1.751E+00	2.971E+00	4.608E-01	0.017
	+	301.29		1.094E+00	7.793E-01	1.120E+00	1.416E-01	0.976
TH-231		81.07		-1.132E-01	3.980E-01	4.747E-01	4.624E-02	-0.238
	+	83.78		7.529E-01	3.036E-01	3.303E-01	3.218E-02	2.280
	+	94.90		2.367E+00	8.263E-01	6.742E-01	6.804E-02	3.510
		122.32		1.628E+00	2.324E+00	3.908E+00	4.757E-01	0.417
	+	144.24		5.378E+00	1.590E+00	1.940E+00	2.141E-01	2.772
		154.21		-3.372E-01	5.163E-01	8.227E-01	8.355E-02	-0.410
	+	269.46		6.703E-01	3.691E-01	3.869E-01	3.610E-02	1.732

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		323.87	*	-6.750E-01	7.927E-01	1.260E+00	2.260E-01	-0.536
	+	338.28		5.539E+00	2.043E+00	2.697E+00	3.395E-01	2.054
		445.03		-8.367E-01	2.817E+00	4.493E+00	5.470E-01	-0.186
	+	75.28		2.160E+01	5.557E+00	6.896E+00	1.104E+00	3.133
	+	86.59		2.713E+00	2.868E+00	4.010E+00	1.091E+00	0.677
	+	300.12		7.623E-01	5.469E-01	7.924E-01	1.205E-01	0.962
		311.98	*	-3.404E-02	7.150E-02	1.173E-01	1.100E-02	-0.290
		340.50		3.138E-01	7.979E-01	1.206E+00	2.891E-01	0.260
		398.62		5.292E-02	2.619E+00	4.352E+00	1.157E+00	0.012
		415.76		1.249E+00	2.080E+00	3.536E+00	7.616E-01	0.353
PA-234	+	63.00		1.014E+02	1.686E+01	5.497E+00	8.952E-01	18.444
	+	94.67		1.688E+00	6.084E-01	5.764E-01	7.758E-02	2.929
	+	98.44		1.321E+00	7.672E-01	2.925E-01	1.640E-01	4.515
	+	99.86		6.847E+00	1.254E+00	1.292E+00	1.338E-01	5.300
	+	111.00		6.184E-01	3.013E-01	5.195E-01	7.213E-02	1.190
		131.20		1.573E-02	1.429E-01	2.361E-01	2.622E-02	0.067
		152.70		3.487E-01	4.198E-01	6.985E-01	1.222E-01	0.499
	+	186.00		4.327E+01	1.388E+01	5.633E+00	1.758E+00	7.681
		226.40		5.433E-01	4.813E-01	8.013E-01	1.075E-01	0.678
		227.20		5.010E-01	5.165E-01	8.599E-01	7.698E-02	0.583
		248.90		5.668E-01	9.901E-01	1.607E+00	3.632E-01	0.353
	+	293.70		5.295E+00	1.394E+00	1.701E+00	2.991E-01	3.113
		369.80		-3.682E-01	1.024E+00	1.667E+00	3.636E-01	-0.221
		568.70		6.801E-01	1.419E+00	2.370E+00	2.108E-01	0.287
		569.50		2.379E-01	3.839E-01	6.469E-01	5.753E-02	0.368
		574.00		-5.638E-01	1.946E+00	3.075E+00	2.731E-01	-0.183
		699.00		2.506E-01	9.575E-01	1.640E+00	3.125E-01	0.153
		706.10		1.281E-01	1.354E+00	2.293E+00	1.022E+00	0.056
		733.00		-7.872E-02	5.237E-01	8.196E-01	1.821E-01	-0.096
	+	742.81		5.099E+00	4.502E+00	3.918E+00	2.634E+00	1.301
		796.30		1.282E+00	1.365E+00	2.349E+00	6.365E-01	0.546
		805.60		2.479E-01	1.310E+00	2.215E+00	6.800E-01	0.112
		819.60		-2.894E-01	1.531E+00	2.499E+00	9.512E-01	-0.116
		826.30		-4.033E-01	1.078E+00	1.710E+00	7.656E-01	-0.236
		831.60		-2.101E-01	8.240E-01	1.338E+00	3.999E-01	-0.157
		876.40		-3.379E-01	1.191E+00	1.839E+00	1.891E+00	-0.184
		880.51		3.024E-01	3.924E-01	6.901E-01	6.049E-02	0.438
		883.24		-3.619E-02	3.762E-01	6.163E-01	4.144E-01	-0.059
		899.00		-1.487E-02	1.007E+00	1.664E+00	7.276E-01	-0.009
		925.00		1.314E+00	1.579E+00	2.791E+00	2.442E-01	0.471
		926.50		1.775E-01	2.225E-01	3.875E-01	9.812E-02	0.458
		946.00	*	3.041E-01	3.798E-01	6.665E-01	1.255E-01	0.456
		949.00		-3.576E-01	5.786E-01	8.933E-01	7.814E-02	-0.400
		980.50		-3.908E-03	9.471E-01	1.555E+00	1.357E-01	-0.003
NP-236		1394.10		1.874E-01	1.310E+00	2.223E+00	1.447E+00	0.084
	+	94.67		1.280E+00	4.471E-01	4.393E-01	4.428E-02	2.915
	+	98.44		9.986E-01	1.829E-01	2.211E-01	2.272E-02	4.516
	+	111.00		4.677E-01	2.244E-01	3.930E-01	4.321E-02	1.190
		160.31	*	5.595E-02	1.089E-01	1.625E-01	1.436E-02	0.344

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		2.282E+00	4.181E-01	4.686E-01	4.843E-02	4.871
		117.00	*	-3.246E-02	2.790E-01	4.121E-01	4.688E-02	-0.079
	+	209.75		2.410E+00	1.174E+00	1.622E+00	1.428E-01	1.486
		228.18		3.814E-02	2.719E-01	4.373E-01	3.918E-02	0.087
	+	277.60		2.567E-01	2.858E-01	3.552E-01	3.260E-02	0.723
AM-241		334.30		-1.743E+00	1.770E+00	2.421E+00	2.188E-01	-0.720
		59.54	*	8.414E-02	1.376E-01	2.134E-01	2.265E-02	0.394
CM-243	+	99.55		2.348E+00	4.302E-01	4.822E-01	4.983E-02	4.871
		103.76	*	-9.572E-02	1.303E-01	2.124E-01	2.244E-02	-0.451
		117.00		-3.340E-02	2.870E-01	4.240E-01	4.823E-02	-0.079
	+	209.75		2.375E+00	1.157E+00	1.598E+00	1.408E-01	1.486
		228.18		3.853E-02	2.747E-01	4.418E-01	3.958E-02	0.087
AM-246	+	277.60		2.588E-01	2.881E-01	3.581E-01	3.286E-02	0.723
		798.80		-2.788E-01	2.099E-01	3.135E-01	2.752E-02	-0.889
		1036.00		1.244E-01	3.658E-01	6.195E-01	5.352E-02	0.201
		1062.04		1.199E-01	2.978E-01	5.052E-01	4.333E-02	0.237
		1078.86	*	8.224E-02	1.755E-01	2.999E-01	2.558E-02	0.274
CM-247	+	278.00		1.064E+00	1.185E+00	1.478E+00	1.356E-01	0.720
		287.40		1.468E-01	1.402E+00	2.385E+00	2.191E-01	0.062
		402.60	*	-3.264E-03	4.717E-02	7.792E-02	6.619E-03	-0.042
CF-249		252.85		-1.802E-01	1.075E+00	1.692E+00	1.541E-01	-0.106
		333.44		-4.174E-03	2.248E-01	3.321E-01	3.003E-02	-0.013
		387.95	*	1.632E-02	4.666E-02	7.916E-02	6.706E-03	0.206
CF-251		176.60	*	2.058E-02	1.659E-01	2.704E-01	2.287E-02	0.076
		227.00		6.503E-01	4.516E-01	7.650E-01	6.847E-02	0.850
		285.00		1.368E+00	1.995E+00	3.480E+00	3.197E-01	0.393

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395012
* Acquisition date   : 2-FEB-2010 09:18:37 Detector SN#      :
* Detector ID        : GAM17 Sensitivity                    : 5.000
* Geometry           : CAN Energy tolerance                : 1.500
* Elapsed live time  : 0 02:00:00.00 Abundance limit       : 75.000
* Elapsed real time  : 0 02:00:11.90 Half life ratio       : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395012 Analyst initials       : MXR1
* Batch Number       : 944966 Sample Quantity           : 1.4552E+02 GRAM
* Recovery           : 1.00000 Carrier Weight           : 0.00000
*****
*
*                               QC DATA
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 6-JAN-2010 11:41:36 MS Isotope      :
* MSD DPM            : 0.000 MSD Isotope                  :
* LCS DPM            : 0.000 LCS Isotope                   :
* LCSD DPM           : 0.000 LCSD Isotope                  :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.603E+01	2.913E+00	5.260E-01	0.000E+00
NB-95	4.019E-01	1.199E-01	9.312E-02	0.000E+00
CD-109	1.407E+00	1.415E+00	2.338E+00	0.000E+00
SN-126	1.386E-01	1.394E-01	2.268E-01	0.000E+00
LU-177	2.993E+00	1.429E+00	1.750E+00	0.000E+00
TL-208	4.553E-01	1.141E-01	8.566E-02	0.000E+00
BI-211	3.472E+00	5.909E-01	3.815E-01	0.000E+00
BI-212	1.113E+00	6.359E-01	6.379E-01	0.000E+00
PB-212	1.417E+00	1.802E-01	1.097E-01	0.000E+00
PO-212	1.417E+00	1.802E-01	1.097E-01	0.000E+00
BI-214	1.062E+00	2.135E-01	1.529E-01	0.000E+00
PB-214	1.208E+00	2.146E-01	1.330E-01	0.000E+00
PO-214	1.208E+00	2.146E-01	1.330E-01	0.000E+00
PO-216	1.417E+00	1.802E-01	1.097E-01	0.000E+00
PO-218	1.208E+00	2.146E-01	1.330E-01	0.000E+00
RA-224	1.565E+00	1.039E+00	1.249E+00	0.000E+00
RA-226	1.062E+00	2.135E-01	1.529E-01	0.000E+00
AC-228	1.714E+00	3.972E-01	2.503E-01	0.000E+00
RA-228	1.714E+00	3.972E-01	2.503E-01	0.000E+00
TH-228	1.437E+00	1.827E-01	1.112E-01	0.000E+00
TH-230	1.062E+00	2.135E-01	1.529E-01	0.000E+00
U-231	9.431E+00	3.227E+00	1.801E+00	0.000E+00
TH-232	1.714E+00	3.972E-01	2.503E-01	0.000E+00
PA-234M	1.210E+02	1.803E+01	9.193E+00	0.000E+00
TH-234	8.698E+01	1.617E+01	2.006E+00	0.000E+00
U-234	1.062E+00	2.135E-01	1.529E-01	0.000E+00
U-235	1.660E+00	5.364E-01	4.680E-01	0.000E+00
NP-237	4.069E-01	4.174E-01	6.030E-01	0.000E+00
U-238	8.698E+01	1.617E+01	2.006E+00	0.000E+00
AM-243	4.124E-01	9.042E-02	1.166E-01	0.000E+00
ANH-511	1.840E-01	8.548E-02	6.657E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-4.892E-02	3.823E-01	6.540E-01	0.000E+00	NOT IDENT.
NA-22	-2.813E-02	5.094E-02	7.819E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.289E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.296E-02	3.109E-02	6.050E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.374E-02	8.854E-02	0.000E+00	FAIL ABUN
SC-46	1.319E-02	4.732E-02	8.340E-02	0.000E+00	FAIL ABUN
V-48	4.122E-02	8.432E-02	1.500E-01	0.000E+00	NOT IDENT.
CR-51	-6.676E-03	4.140E-01	7.396E-01	0.000E+00	NOT IDENT.
MN-52	8.400E-02	2.106E-01	3.820E-01	0.000E+00	NOT IDENT.
MN-54	-1.069E-02	4.974E-02	8.457E-02	0.000E+00	NOT IDENT.
CO-56	7.505E-03	5.056E-02	8.837E-02	0.000E+00	NOT IDENT.
CO-57	1.755E-02	3.257E-02	5.924E-02	0.000E+00	NOT IDENT.
CO-58	-1.773E-05	4.870E-02	8.444E-02	0.000E+00	NOT IDENT.
FE-59	-2.629E-03	1.041E-01	1.745E-01	0.000E+00	FAIL ABUN
CO-60	1.489E-02	4.474E-02	7.968E-02	0.000E+00	NOT IDENT.
ZN-65	7.539E-02	1.308E-01	2.039E-01	0.000E+00	NOT IDENT.
GE-68	4.168E-01	1.587E+00	2.742E+00	0.000E+00	NOT IDENT.
AS-73	2.077E-01	4.582E-01	8.699E-01	0.000E+00	NOT IDENT.
AS-74	7.359E-02	1.189E-01	2.095E-01	0.000E+00	NOT IDENT.
SE-75	-4.312E-03	5.473E-02	8.160E-02	0.000E+00	NOT IDENT.
BR-77	-6.814E+00	9.559E+00	1.551E+01	0.000E+00	FAIL ABUN
SR-82	-3.207E-01	4.980E-01	8.237E-01	0.000E+00	NOT IDENT.
RB-83	-6.233E-02	8.963E-02	1.456E-01	0.000E+00	NOT IDENT.
RB-84	7.023E-02	9.376E-02	1.707E-01	0.000E+00	NOT IDENT.
KR-85	6.139E+00	1.035E+01	1.632E+01	0.000E+00	NOT IDENT.
SR-85	3.107E-02	5.240E-02	8.261E-02	0.000E+00	NOT IDENT.
RB-86	2.374E-01	9.425E-01	1.628E+00	0.000E+00	NOT IDENT.
Y-88	1.901E-02	3.735E-02	6.902E-02	0.000E+00	NOT IDENT.
ZR-88	-4.204E-02	3.444E-02	5.553E-02	0.000E+00	NOT IDENT.
Y-91	-1.116E+01	2.257E+01	3.560E+01	0.000E+00	NOT IDENT.
NB-94	3.054E-02	4.337E-02	7.972E-02	0.000E+00	NOT IDENT.
NB-95M	4.265E-02	1.562E-01	2.408E-01	0.000E+00	NOT IDENT.
ZR-95	1.022E-01	9.538E-02	1.781E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.079E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.933E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.836E+00	1.313E+01	2.073E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.859E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.868E-02	3.712E-02	6.621E-02	0.000E+00	NOT IDENT.
RH-102	1.567E-02	3.390E-02	6.040E-02	0.000E+00	FAIL ABUN
RU-103	-6.473E-03	4.878E-02	8.309E-02	0.000E+00	FAIL ABUN
RH-106	-3.446E-02	4.256E-01	7.117E-01	0.000E+00	FAIL ABUN
RU-106	-3.446E-02	4.256E-01	7.117E-01	0.000E+00	FAIL ABUN
AG-108M	8.106E-03	3.844E-02	6.784E-02	0.000E+00	NOT IDENT.
AG-110M	-2.381E-02	4.963E-02	7.992E-02	0.000E+00	NOT IDENT.
IN-111	-9.601E-01	1.041E+00	1.468E+00	0.000E+00	NOT IDENT.
IN-113M	-3.147E-02	4.920E-02	8.286E-02	0.000E+00	NOT IDENT.
SN-113	-3.147E-02	4.920E-02	8.286E-02	0.000E+00	NOT IDENT.
IN-114M	6.326E-02	2.339E-01	3.671E-01	0.000E+00	NOT IDENT.
CD-115	2.599E+00	9.327E+00	1.626E+01	0.000E+00	NOT IDENT.
SN-117M	-4.438E-02	6.855E-02	1.118E-01	0.000E+00	NOT IDENT.
SB-122	1.354E+00	2.054E+00	3.640E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.715E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-8.269E-03	3.991E-02	6.211E-02	0.000E+00	NOT IDENT.
I-124	-4.441E-01	8.052E-01	1.192E+00	0.000E+00	FAIL ABUN
SB-124	1.016E-01	8.515E-02	1.734E-01	0.000E+00	FAIL ABUN
SB-125	-2.257E-02	1.069E-01	1.839E-01	0.000E+00	NOT IDENT.
TE-125M	8.120E+00	1.483E+01	2.440E+01	0.000E+00	NOT IDENT.
I-126	1.641E-01	2.206E-01	3.900E-01	0.000E+00	NOT IDENT.
SB-126	9.641E-02	1.873E-01	3.016E-01	0.000E+00	FAIL ABUN
SB-127	6.185E-01	1.425E+00	2.459E+00	0.000E+00	NOT IDENT.
XE-127	7.582E-02	5.775E-02	9.496E-02	0.000E+00	FAIL ABUN
I-131	-1.567E-01	1.174E-01	1.893E-01	0.000E+00	NOT IDENT.
TE-132	9.632E-02	6.275E-01	1.081E+00	0.000E+00	FAIL ABUN
BA-133	-3.855E-03	5.708E-02	8.859E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.775E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.040E-01	6.879E-02	1.300E-01	0.000E+00	NOT IDENT.
CS-135	2.058E-01	1.939E-01	3.113E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.908E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.731E-02	1.314E-01	2.325E-01	0.000E+00	FAIL ABUN
BA-137M	-1.842E-02	4.914E-02	7.972E-02	0.000E+00	NOT IDENT.
CS-137	-1.947E-02	5.195E-02	8.427E-02	0.000E+00	NOT IDENT.
CE-139	-1.234E-02	4.201E-02	6.485E-02	0.000E+00	NOT IDENT.
BA-140	6.513E-02	3.213E-01	5.551E-01	0.000E+00	FAIL ABUN
LA-140	-5.445E-02	9.103E-02	1.376E-01	0.000E+00	NOT IDENT.

CE-141	0.000E+00	9.003E-02	1.517E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.053E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.831E-01	2.721E-01	4.720E-01	0.000E+00	NOT IDENT.
PM-144	-2.243E-03	4.554E-02	7.987E-02	0.000E+00	NOT IDENT.
PR-144	-1.519E-01	3.084E+00	5.409E+00	0.000E+00	NOT IDENT.
PM-146	-4.550E-03	5.393E-02	9.301E-02	0.000E+00	NOT IDENT.
ND-147	-4.041E-01	6.559E-01	1.064E+00	0.000E+00	FAIL ABUN
PM-149	4.689E+01	7.018E+01	1.297E+02	0.000E+00	NOT IDENT.
EU-152	-1.789E-02	1.072E-01	1.888E-01	0.000E+00	NOT IDENT.
GD-153	0.000E+00	2.003E-01	2.522E-01	0.000E+00	FAIL ABUN
EU-154	-7.066E-02	1.412E-01	2.180E-01	0.000E+00	NOT IDENT.
EU-155	9.806E-02	1.456E-01	2.675E-01	0.000E+00	FAIL ABUN
TB-160	1.263E-01	1.879E-01	3.404E-01	0.000E+00	FAIL ABUN
HO-166M	1.686E-02	7.639E-02	1.363E-01	0.000E+00	FAIL ABUN
TM-171	-3.799E+01	2.805E+01	4.497E+01	0.000E+00	NOT IDENT.
LU-176	-1.458E-02	2.755E-02	4.805E-02	0.000E+00	NOT IDENT.
LU-177M	-1.471E-01	2.099E-01	3.509E-01	0.000E+00	NOT IDENT.
HF-181	2.553E-02	4.994E-02	8.909E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	3.638E-01	6.232E-01	0.000E+00	NOT IDENT.
TA-182	1.490E-01	2.301E-01	4.065E-01	0.000E+00	FAIL ABUN
RE-183	0.000E+00	1.893E-01	2.696E-01	0.000E+00	FAIL ABUN
RE-184	-4.778E-02	2.794E-01	4.697E-01	0.000E+00	NOT IDENT.
OS-185	3.177E-03	5.718E-02	9.629E-02	0.000E+00	NOT IDENT.
RE-188	2.791E-02	2.133E-01	3.777E-01	0.000E+00	NOT IDENT.
W-188	-2.729E+00	8.380E+00	1.302E+01	0.000E+00	FAIL ABUN
IR-192	1.140E-02	3.886E-02	7.053E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	5.825E-01	7.662E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.397E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.797E+00	7.484E+00	1.198E+01	0.000E+00	NOT IDENT.
TL-202	3.337E-02	7.602E-02	1.359E-01	0.000E+00	NOT IDENT.
HG-203	2.057E-02	4.709E-02	7.731E-02	0.000E+00	FAIL ABUN
BI-207	-6.392E-03	6.824E-02	1.140E-01	0.000E+00	FAIL ABUN
TL-207	-6.750E-01	7.768E-01	1.311E+00	0.000E+00	FAIL ABUN
PO-209	3.987E+00	8.774E+00	1.571E+01	0.000E+00	NOT IDENT.
BI-210	1.491E+00	9.757E-01	1.729E+00	0.000E+00	NOT IDENT.
PB-210	1.491E+00	9.757E-01	1.729E+00	0.000E+00	NOT IDENT.
PO-210	1.491E+00	9.740E-01	1.729E+00	0.000E+00	NOT IDENT.
PB-211	-1.541E-01	1.157E+00	2.005E+00	0.000E+00	NOT IDENT.
PO-215	-6.750E-01	7.768E-01	1.311E+00	0.000E+00	FAIL ABUN
RN-219	4.991E-02	5.168E-01	9.109E-01	0.000E+00	FAIL ABUN
RN-220	1.002E+01	3.396E+01	5.905E+01	0.000E+00	NOT IDENT.
RA-223	-6.750E-01	7.768E-01	1.311E+00	0.000E+00	FAIL ABUN
AC-227	7.495E-02	5.413E-01	8.217E-01	0.000E+00	FAIL ABUN
TH-227	7.495E-02	5.414E-01	8.217E-01	0.000E+00	FAIL ABUN
TH-229	1.324E-01	6.055E-01	1.059E+00	0.000E+00	FAIL ABUN
PA-231	5.057E-02	1.716E+00	3.101E+00	0.000E+00	FAIL ABUN
TH-231	-6.750E-01	7.768E-01	1.311E+00	0.000E+00	FAIL ABUN
PA-233	-3.404E-02	7.007E-02	1.222E-01	0.000E+00	FAIL ABUN
PA-234	3.041E-01	3.722E-01	6.770E-01	0.000E+00	FAIL ABUN
NP-236	5.595E-02	1.067E-01	1.718E-01	0.000E+00	FAIL ABUN
NP-239	-3.246E-02	2.734E-01	4.386E-01	0.000E+00	FAIL ABUN
AM-241	8.414E-02	1.349E-01	2.303E-01	0.000E+00	NOT IDENT.
CM-243	-9.572E-02	1.277E-01	2.266E-01	0.000E+00	FAIL ABUN
AM-246	8.224E-02	1.720E-01	3.037E-01	0.000E+00	NOT IDENT.
CM-247	-3.264E-03	4.623E-02	8.072E-02	0.000E+00	FAIL ABUN
CF-249	1.632E-02	4.573E-02	8.206E-02	0.000E+00	NOT IDENT.
CF-251	2.058E-02	1.626E-01	2.852E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                             *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395012.CNF;1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:18:37.
Sample ID        : G245395012 Sample quantity : 1.45520E+02 GRAM
Detector name    : GAM17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:11.90 0.2%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity : 5.00000
Batch ID        : 944966 Detector SN# :
Matrix Spike ID  : LCS ID : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	838	10.67*	7.783E-01	2.603E+01	2.603E+01	11.42
NB-95	765.79	186	99.81*	1.393E+00	3.456E-01	4.019E-01	30.44
CD-109	88.03	133	3.72*	6.681E+00	1.378E+00	1.407E+00	102.62
SN-126	64.28	8683	9.60	6.776E+00	3.443E+01	3.443E+01	16.33
	86.94	133	8.90	6.681E+00	5.761E-01	5.761E-01	110.31
	87.57	133	37.00*	6.681E+00	1.386E-01	1.386E-01	102.62
LU-177	112.95	554	6.40	6.225E+00	3.588E+00	1.513E+01	19.99
	208.36	134	11.00*	4.430E+00	7.098E-01	2.993E+00	48.72
TL-208	277.35	50	6.80	3.570E+00	5.322E-01	5.322E-01	111.69
	510.84	147	21.60	2.057E+00	8.519E-01	8.519E-01	48.13
	583.14	269	84.20*	1.813E+00	4.553E-01	4.553E-01	25.58
	860.37	31	12.46	1.247E+00	5.073E-01	5.073E-01	98.43
BI-211	72.87	-----	1.27	6.803E+00	-----	Line Not Found	-----
	351.07	507	12.94*	2.909E+00	3.472E+00	3.472E+00	17.36
BI-212	727.18	75	11.80*	1.465E+00	1.113E+00	1.113E+00	58.31
	785.46	30	1.97	1.359E+00	2.847E+00	2.847E+00	117.59
PB-212	1620.62	-----	2.75	7.161E-01	-----	Line Not Found	-----
	74.81	717	10.70	6.795E+00	2.544E+00	2.544E+00	24.25
	77.11	817	18.00	6.782E+00	1.727E+00	1.727E+00	20.41
	87.30	133	8.00	6.681E+00	6.409E-01	6.409E-01	103.11
	238.63	986	44.60*	4.023E+00	1.417E+00	1.417E+00	12.97
	300.09	65	3.41	3.342E+00	1.475E+00	1.475E+00	70.96
PO-212	74.81	717	10.70	6.795E+00	2.544E+00	2.544E+00	24.25
	77.11	817	18.00	6.782E+00	1.727E+00	1.727E+00	20.41
	87.30	133	8.00	6.681E+00	6.409E-01	6.409E-01	103.11
	115.19	-----	0.60	6.177E+00	-----	Line Not Found	-----
	238.63	986	44.60*	4.023E+00	1.417E+00	1.417E+00	12.97
	300.09	65	3.41	3.342E+00	1.475E+00	1.475E+00	70.96
BI-214	609.31	331	46.30*	1.737E+00	1.062E+00	1.062E+00	20.52
	1120.29	68	15.10	9.778E-01	1.191E+00	1.192E+00	52.57
	1764.49	47	15.80	6.718E-01	1.153E+00	1.153E+00	42.34
PB-214	74.81	717	6.21	6.795E+00	4.383E+00	4.383E+00	23.57

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	77.11	817	10.50	6.782E+00	2.961E+00	2.961E+00	21.78
	87.30	133	4.67	6.681E+00	1.098E+00	1.098E+00	102.91
	241.98	116	7.49	3.980E+00	1.008E+00	1.008E+00	51.66
	295.21	278	19.20	3.389E+00	1.103E+00	1.103E+00	22.52
	351.92	507	37.20*	2.909E+00	1.208E+00	1.208E+00	18.13
	74.81	717	6.21	6.795E+00	4.383E+00	4.383E+00	23.57
	77.11	817	10.50	6.782E+00	2.961E+00	2.961E+00	21.78
	87.30	133	4.67	6.681E+00	1.098E+00	1.098E+00	102.91
	241.98	116	7.49	3.980E+00	1.008E+00	1.008E+00	51.66
	295.21	278	19.20	3.389E+00	1.103E+00	1.103E+00	22.52
PO-216	351.92	507	37.20*	2.909E+00	1.208E+00	1.208E+00	18.13
	74.81	717	10.70	6.795E+00	2.544E+00	2.544E+00	24.25
	77.11	817	18.00	6.782E+00	1.727E+00	1.727E+00	20.41
	87.30	133	8.00	6.681E+00	6.409E-01	6.409E-01	103.11
	238.63	986	44.60*	4.023E+00	1.417E+00	1.417E+00	12.97
PO-218	300.09	65	3.41	3.342E+00	1.475E+00	1.475E+00	70.96
	74.81	717	6.21	6.795E+00	4.383E+00	4.383E+00	23.57
	77.11	817	10.50	6.782E+00	2.961E+00	2.961E+00	21.78
	87.30	133	4.67	6.681E+00	1.098E+00	1.098E+00	102.91
	241.98	116	7.49	3.980E+00	1.008E+00	1.008E+00	51.66
RA-224	295.21	278	19.20	3.389E+00	1.103E+00	1.103E+00	22.52
	351.92	507	37.20*	2.909E+00	1.208E+00	1.208E+00	18.13
	240.98	96	3.95*	3.992E+00	1.565E+00	1.565E+00	67.75
	609.31	331	46.30*	1.737E+00	1.062E+00	1.062E+00	20.52
	1120.29	68	15.10	9.778E-01	1.191E+00	1.192E+00	52.57
AC-228	1764.49	47	15.80	6.718E-01	1.153E+00	1.153E+00	42.34
	338.32	177	11.40	3.013E+00	1.326E+00	1.326E+00	53.96
	911.07	218	27.70*	1.182E+00	1.714E+00	1.714E+00	23.65
RA-228	969.11	109	16.60	1.116E+00	1.523E+00	1.523E+00	39.49
	338.32	177	11.40	3.013E+00	1.326E+00	1.326E+00	53.96
	911.07	218	27.70*	1.182E+00	1.714E+00	1.714E+00	23.65
TH-228	969.11	109	16.60	1.116E+00	1.523E+00	1.523E+00	39.49
	74.81	717	10.70	6.795E+00	2.544E+00	2.579E+00	22.40
	77.11	817	18.00	6.782E+00	1.727E+00	1.751E+00	20.41
TH-230	87.30	133	8.00	6.681E+00	6.409E-01	6.498E-01	102.62
	238.63	986	44.60*	4.023E+00	1.417E+00	1.437E+00	12.97
	300.09	65	3.41	3.342E+00	1.475E+00	1.496E+00	91.88
	609.31	331	46.30*	1.737E+00	1.062E+00	1.062E+00	20.52
	1120.29	68	15.10	9.778E-01	1.191E+00	1.191E+00	52.57
U-231	1764.49	47	15.80	6.718E-01	1.153E+00	1.153E+00	42.34
	84.21	484	7.00	6.718E+00	2.657E+00	2.647E+01	40.32
	92.29	12921	17.30	6.597E+00	2.921E+01	2.910E+02	10.17
TH-232	95.87	674	28.00*	6.562E+00	9.466E-01	9.431E+00	34.91
	108.00	-----	13.10	6.320E+00	-----	Line Not Found	-----
	338.32	177	11.40	3.013E+00	1.326E+00	1.326E+00	35.82
	911.07	218	27.70*	1.182E+00	1.714E+00	1.714E+00	23.65
PA-234M	969.11	109	16.60	1.116E+00	1.523E+00	1.523E+00	39.49
	766.42	186	0.32	1.393E+00	1.078E+02	1.078E+02	58.53
	1001.03	427	0.84*	1.083E+00	1.210E+02	1.210E+02	15.21

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	8683	3.80*	6.776E+00	8.698E+01	8.698E+01	18.97
	92.38	12921	5.41	6.597E+00	9.339E+01	9.339E+01	18.87
U-234	609.31	331	46.30*	1.737E+00	1.062E+00	1.062E+00	20.52
	1120.29	68	15.10	9.778E-01	1.191E+00	1.191E+00	52.57
	1764.49	47	15.80	6.718E-01	1.153E+00	1.153E+00	42.34
U-235	89.95	-----	2.70	6.637E+00	-----	Line Not Found	-----
	93.35	12921	4.50	6.597E+00	1.123E+02	1.123E+02	28.54
	105.00	-----	2.10	6.378E+00	-----	Line Not Found	-----
	143.76	378	10.50*	5.591E+00	1.660E+00	1.660E+00	32.98
	163.35	189	4.70	5.213E+00	1.990E+00	1.990E+00	45.40
	185.71	1614	54.00	4.810E+00	1.603E+00	1.603E+00	11.37
	205.31	141	4.70	4.488E+00	1.720E+00	1.720E+00	62.43
NP-237	86.50	133	12.60*	6.681E+00	4.069E-01	4.069E-01	104.68
	95.87	674	2.60	6.562E+00	1.019E+01	1.019E+01	41.85
U-238	63.29	8683	3.80*	6.776E+00	8.698E+01	8.698E+01	18.97
	92.38	12921	5.41	6.597E+00	9.339E+01	9.339E+01	10.17
AM-243	74.67	717	66.00*	6.795E+00	4.124E-01	4.124E-01	22.37
	86.72	133	0.34	6.681E+00	1.526E+01	1.526E+01	102.62
	117.66	-----	0.55	6.127E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.624E+00	-----	Line Not Found	-----
ANH-511	511.00	147	100.00*	2.057E+00	1.840E-01	1.840E-01	47.40

Flag: "*" = Keyline

Total number of lines in spectrum 40
Number of unidentified lines 1
Number of lines tentatively identified by NID 39 97.50%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.603E+01	2.603E+01	0.297E+01	11.42	
NB-95	64.02D	1.16	3.456E-01	4.019E-01	1.223E-01	30.44	
CD-109	464.00D	1.02	1.378E+00	1.407E+00	1.444E+00	102.62	
SN-126	1.00E+05Y	1.00	1.386E-01	1.386E-01	1.422E-01	102.62	
LU-177	6.71D	4.22	7.098E-01	2.993E+00	1.458E+00	48.72	
TL-208	1.41E+10Y	1.00	4.553E-01	4.553E-01	1.164E-01	25.58	
BI-211	7.04E+08Y	1.00	3.472E+00	3.472E+00	0.603E+00	17.36	
BI-212	1.41E+10Y	1.00	1.113E+00	1.113E+00	0.649E+00	58.31	
PB-212	1.41E+10Y	1.00	1.417E+00	1.417E+00	0.184E+00	12.97	
PO-212	1.41E+10Y	1.00	1.417E+00	1.417E+00	0.184E+00	12.97	
BI-214	1600.00Y	1.00	1.062E+00	1.062E+00	0.218E+00	20.52	
PB-214	1600.00Y	1.00	1.208E+00	1.208E+00	0.219E+00	18.13	
PO-214	1600.00Y	1.00	1.208E+00	1.208E+00	0.219E+00	18.13	
PO-216	1.41E+10Y	1.00	1.417E+00	1.417E+00	0.184E+00	12.97	
PO-218	1600.00Y	1.00	1.208E+00	1.208E+00	0.219E+00	18.13	
RA-224	1.41E+10Y	1.00	1.565E+00	1.565E+00	1.061E+00	67.75	
RA-226	1600.00Y	1.00	1.062E+00	1.062E+00	0.218E+00	20.52	
AC-228	1.41E+10Y	1.00	1.714E+00	1.714E+00	0.405E+00	23.65	
RA-228	1.41E+10Y	1.00	1.714E+00	1.714E+00	0.405E+00	23.65	
TH-228	1.91Y	1.01	1.417E+00	1.437E+00	0.186E+00	12.97	
TH-230	4.47E+09Y	1.00	1.062E+00	1.062E+00	0.218E+00	20.52	
U-231	4.20D	9.96	9.466E-01	9.431E+00	3.293E+00	34.91	
TH-232	1.41E+10Y	1.00	1.714E+00	1.714E+00	0.405E+00	23.65	
PA-234M	4.47E+09Y	1.00	1.210E+02	1.210E+02	0.184E+02	15.21	
TH-234	4.47E+09Y	1.00	8.698E+01	8.698E+01	1.650E+01	18.97	
U-234	4.47E+09Y	1.00	1.062E+00	1.062E+00	0.218E+00	20.52	
U-235	7.04E+08Y	1.00	1.660E+00	1.660E+00	0.547E+00	32.98	
NP-237	2.14E+06Y	1.00	4.069E-01	4.069E-01	4.260E-01	104.68	
U-238	4.47E+09Y	1.00	8.698E+01	8.698E+01	1.650E+01	18.97	
AM-243	7380.00Y	1.00	4.124E-01	4.124E-01	0.923E-01	22.37	
ANH-511	1.00E+09Y	1.00	1.840E-01	1.840E-01	0.872E-01	47.40	
Total Activity :			3.524E+02	3.633E+02			

Grand Total Activity : 3.524E+02 3.633E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395012

Page : 5
Acquisition date : 2-FEB-2010 09:18:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	98.58	845	1068	1.02	196.83	193	8	1.17E-01	15.2	6.50E+00	T
2	111.07	177	707	1.11	221.81	219	11	2.46E-02	46.7	6.26E+00	T
0	258.28	124	237	1.04	516.36	513	8	1.73E-02	46.5	3.78E+00	
0	270.34	129	273	3.05	540.48	535	12	1.79E-02	54.3	3.64E+00	T
0	742.71	68	77	1.82	1485.70	1481	12	9.45E-03	57.2	1.43E+00	T
0	1377.14	23	21	1.07	2755.49	2748	12	3.20E-03	89.8	8.17E-01	T

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395012.CNF;1
* Acquisition date   : 2-FEB-2010 09:18:37.   Detector SN#      :
* Detector ID        : GAM17                  Sensitivity         : 5.00000
* Geometry           : CAN                    Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00          Abundance limit  : 75.00000
* Elapsed real time  : 0 02:00:11.90          Half life ratio  : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library : SOLID
* Sample ID          : G245395012             Analyst initials: MXR1
* Batch Number       : 944966                 Sample Quantity  : 1.45520E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 6-JAN-2010 11:41:36.18MS Isotope      :
* MSD ID             :                          MSD Isotope   :
* LCS ID             : 1032-A                  LCS Isotope       :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.603E+01	2.972E+00	5.231E-01	4.645E-02	49.758
NB-95	4.019E-01	1.223E-01	9.122E-02	7.968E-03	4.406
CD-109	1.407E+00	1.444E+00	2.184E+00	2.132E-01	0.644
SN-126	1.386E-01	1.422E-01	2.118E-01	2.067E-02	0.654
LU-177	2.993E+00	1.458E+00	1.665E+00	1.464E-01	1.798
TL-208	4.553E-01	1.164E-01	8.339E-02	7.887E-03	5.460
BI-211	3.472E+00	6.030E-01	3.671E-01	3.426E-02	9.459
BI-212	1.113E+00	6.489E-01	6.241E-01	6.262E-02	1.783
PB-212	1.417E+00	1.838E-01	1.046E-01	1.055E-02	13.543
PO-212	1.417E+00	1.838E-01	1.046E-01	1.055E-02	13.543
BI-214	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
PB-214	1.208E+00	2.190E-01	1.280E-01	1.368E-02	9.435
PO-214	1.208E+00	2.190E-01	1.280E-01	1.368E-02	9.435
PO-216	1.417E+00	1.838E-01	1.046E-01	1.055E-02	13.543
PO-218	1.208E+00	2.190E-01	1.280E-01	1.368E-02	9.435
RA-224	1.565E+00	1.061E+00	1.192E+00	1.078E-01	1.313
RA-226	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
AC-228	1.714E+00	4.053E-01	2.462E-01	2.793E-02	6.960

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.714E+00	4.053E-01	2.462E-01	2.793E-02	6.960
TH-228	1.437E+00	1.864E-01	1.061E-01	1.070E-02	13.543
TH-230	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
U-231	9.431E+00	3.293E+00	1.685E+00	1.709E-01	5.598
TH-232	1.714E+00	4.053E-01	2.462E-01	2.793E-02	6.960
PA-234M	1.210E+02	1.840E+01	9.062E+00	9.094E-01	13.351
TH-234	8.698E+01	1.650E+01	1.860E+00	3.473E-01	46.751
U-234	1.062E+00	2.179E-01	1.490E-01	1.516E-02	7.126
U-235	1.660E+00	5.473E-01	4.417E-01	8.097E-02	3.757
NP-237	4.069E-01	4.260E-01	5.630E-01	1.285E-01	0.723
U-238	8.698E+01	1.650E+01	1.860E+00	3.473E-01	46.751
AM-243	4.124E-01	9.227E-02	1.085E-01	1.060E-02	3.800
ANH-511	1.840E-01	8.722E-02	6.461E-02	5.770E-03	2.848

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-4.892E-02		3.901E-01	6.338E-01	6.031E-02	-0.077
NA-22	-2.813E-02		5.198E-02	7.751E-02	6.530E-03	-0.363
NA-24	3.806E-02		1.168E-01	Half-Life	too short	
AL-26	2.296E-02		3.172E-02	6.048E-02	5.069E-03	0.380
TI-44	3.188E-01	+	6.504E-02	8.250E-02	8.038E-03	3.864
SC-46	1.319E-02		4.829E-02	8.199E-02	7.177E-03	0.161
V-48	4.122E-02		8.605E-02	1.478E-01	1.289E-02	0.279
CR-51	-6.676E-03		4.225E-01	7.103E-01	6.783E-02	-0.009
MN-52	8.400E-02		2.149E-01	3.797E-01	3.274E-02	0.221
MN-54	-1.069E-02		5.076E-02	8.301E-02	7.298E-03	-0.129
CO-56	7.505E-03		5.159E-02	8.677E-02	7.628E-03	0.086
CO-57	1.755E-02		3.323E-02	5.571E-02	6.528E-03	0.315
CO-58	-1.773E-05		4.969E-02	8.282E-02	7.294E-03	0.000
FE-59	-2.629E-03		1.063E-01	1.724E-01	1.582E-02	-0.015
CO-60	1.489E-02		4.565E-02	7.907E-02	6.739E-03	0.188
ZN-65	7.539E-02		1.335E-01	2.015E-01	1.696E-02	0.374
GE-68	4.168E-01		1.620E+00	2.708E+00	2.311E-01	0.154
AS-73	2.077E-01		4.675E-01	8.041E-01	8.045E-02	0.258
AS-74	7.359E-02		1.213E-01	2.041E-01	1.798E-02	0.361
SE-75	-4.312E-03		5.585E-02	7.804E-02	7.170E-03	-0.055
BR-77	-6.814E+00		9.754E+00	1.506E+01	1.346E+00	-0.452
SR-82	-3.207E-01		5.082E-01	8.071E-01	7.064E-02	-0.397
RB-83	-6.233E-02		9.146E-02	1.414E-01	1.264E-02	-0.441
RB-84	7.023E-02		9.568E-02	1.678E-01	1.470E-02	0.419
KR-85	6.139E+00		1.056E+01	1.584E+01	1.415E+00	0.388
SR-85	3.107E-02		5.347E-02	8.019E-02	7.164E-03	0.388
RB-86	2.374E-01		9.617E-01	1.607E+00	1.372E-01	0.148
Y-88	1.901E-02		3.812E-02	6.902E-02	5.755E-03	0.275
ZR-88	-4.204E-02		3.515E-02	5.358E-02	4.514E-03	-0.785
Y-91	-1.116E+01		2.303E+01	3.524E+01	2.909E+00	-0.317

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	3.054E-02		4.426E-02	7.793E-02	6.685E-03	0.392
NB-95M	4.265E-02		1.594E-01	2.297E-01	2.345E-02	0.186
ZR-95	1.022E-01		9.733E-02	1.744E-01	1.671E-02	0.586
NB-97	-1.158E-02		2.081E-02	Half-Life	too short	
ZR-97	1.066E+00		4.047E-01	Half-Life	too short	
MO-99	4.836E+00		1.340E+01	2.029E+01	3.088E+00	0.238
TC-99M	-3.736E+08		9.487E+08	Half-Life	too short	
RH-101	2.868E-02		3.788E-02	6.292E-02	5.470E-03	0.456
RH-102	1.567E-02		3.460E-02	5.853E-02	5.184E-03	0.268
RU-103	-6.473E-03		4.978E-02	8.060E-02	1.156E-02	-0.080
RH-106	-3.446E-02		4.343E-01	6.938E-01	9.298E-02	-0.050
RU-106	-3.446E-02		4.343E-01	6.938E-01	6.028E-02	-0.050
AG-108M	8.106E-03		3.923E-02	6.560E-02	5.921E-03	0.124
AG-110M	-2.381E-02		5.065E-02	7.801E-02	6.799E-03	-0.305
IN-111	-9.601E-01		1.062E+00	1.402E+00	1.271E-01	-0.685
IN-113M	-3.147E-02		5.020E-02	7.994E-02	6.946E-03	-0.394
SN-113	-3.147E-02		5.020E-02	7.994E-02	6.946E-03	-0.394
IN-114M	6.326E-02		2.386E-01	3.486E-01	3.002E-02	0.181
CD-115	2.599E+00		9.517E+00	1.580E+01	1.412E+00	0.164
SN-117M	-4.438E-02		6.995E-02	1.057E-01	9.504E-03	-0.420
SB-122	1.354E+00		2.096E+00	3.541E+00	3.153E-01	0.382
I-123	-3.553E-01		8.748E-01	Half-Life	too short	
TE-123M	-8.269E-03		4.072E-02	5.874E-02	5.287E-03	-0.141
I-124	-4.441E-01		8.217E-01	1.162E+00	1.020E-01	-0.382
SB-124	1.016E-01		8.689E-02	1.731E-01	1.540E-02	0.587
SB-125	-2.257E-02		1.091E-01	1.778E-01	1.568E-02	-0.127
TE-125M	8.120E+00		1.514E+01	2.289E+01	2.812E+00	0.355
I-126	1.641E-01		2.251E-01	3.808E-01	3.215E-02	0.431
SB-126	9.641E-02		1.911E-01	2.951E-01	2.547E-02	0.327
SB-127	6.185E-01		1.454E+00	2.403E+00	2.632E-01	0.257
XE-127	7.582E-02		5.893E-02	9.029E-02	7.894E-03	0.840
I-131	-1.567E-01		1.198E-01	1.824E-01	1.683E-02	-0.859
TE-132	9.632E-02		6.404E-01	1.030E+00	1.617E-01	0.093
BA-133	-3.855E-03		5.824E-02	8.529E-02	1.140E-02	-0.045
I-133	-9.982E-04		1.416E-03	Half-Life	too short	
CS-134	1.040E-01		7.019E-02	1.275E-01	1.126E-02	0.816
CS-135	2.058E-01		1.978E-01	2.978E-01	3.108E-02	0.691
I-135	2.957E+07		1.484E+08	Half-Life	too short	
CS-136	6.731E-02		1.340E-01	2.294E-01	2.060E-02	0.293
BA-137M	-1.842E-02		5.014E-02	7.783E-02	6.556E-03	-0.237
CS-137	-1.947E-02		5.301E-02	8.227E-02	6.945E-03	-0.237
CE-139	-1.234E-02		4.287E-02	6.139E-02	5.119E-03	-0.201
BA-140	6.513E-02		3.279E-01	5.394E-01	1.792E-01	0.121
LA-140	-5.445E-02		9.289E-02	1.371E-01	1.184E-02	-0.397
CE-141	1.902E-01		9.186E-02	1.432E-01	1.461E-02	1.329
CE-143	2.439E-04		5.372E-05	Half-Life	too short	
CE-144	-1.831E-01		2.776E-01	4.448E-01	7.545E-02	-0.412
PM-144	-2.243E-03		4.647E-02	7.807E-02	6.683E-03	-0.029

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	-1.519E-01		3.147E+00	5.287E+00	4.524E-01	-0.029
PM-146	-4.550E-03		5.503E-02	9.003E-02	9.772E-03	-0.051
ND-147	-4.041E-01		6.693E-01	1.034E+00	1.565E-01	-0.391
PM-149	4.689E+01		7.161E+01	1.243E+02	1.971E+01	0.377
EU-152	-1.789E-02		1.094E-01	1.816E-01	1.718E-02	-0.098
GD-153	1.116E+00	+	2.044E-01	2.361E-01	2.414E-02	4.725
EU-154	-7.066E-02		1.440E-01	2.161E-01	2.411E-02	-0.327
EU-155	9.806E-02		1.485E-01	2.508E-01	2.694E-02	0.391
TB-160	1.263E-01		1.917E-01	3.345E-01	2.933E-02	0.378
HO-166M	1.686E-02		7.795E-02	1.333E-01	1.147E-02	0.127
TM-171	-3.799E+01		2.862E+01	4.176E+01	4.122E+00	-0.910
LU-176	-1.458E-02		2.811E-02	4.610E-02	4.224E-03	-0.316
LU-177M	-1.471E-01		2.142E-01	3.389E-01	2.904E-02	-0.434
HF-181	2.553E-02		5.096E-02	8.635E-02	7.666E-03	0.296
W-181	1.090E+00		3.712E-01	5.785E-01	5.729E-02	1.884
TA-182	1.490E-01		2.348E-01	4.026E-01	3.339E-02	0.370
RE-183	4.589E-01	+	1.932E-01	2.551E-01	2.208E-02	1.799
RE-184	-4.778E-02		2.851E-01	4.487E-01	4.086E-02	-0.106
OS-185	3.177E-03		5.834E-02	9.395E-02	8.022E-03	0.034
RE-188	2.791E-02		2.176E-01	3.571E-01	3.317E-02	0.078
W-188	-2.729E+00		8.551E+00	1.248E+01	1.146E+00	-0.219
IR-192	1.140E-02		3.966E-02	6.772E-02	6.195E-03	0.168
AU-195	3.245E+00	+	5.944E-01	7.174E-01	7.389E-02	4.523
TL-200	7.918E-05		1.223E-04	Half-Life too short		
TL-201	3.797E+00		7.636E+00	1.135E+01	9.475E-01	0.335
TL-202	3.337E-02		7.757E-02	1.314E-01	1.145E-02	0.254
HG-203	2.057E-02		4.805E-02	7.403E-02	6.967E-03	0.278
BI-207	-6.392E-03		6.964E-02	1.126E-01	9.650E-03	-0.057
TL-207	-6.750E-01		7.927E-01	1.260E+00	2.260E-01	-0.536
PO-209	3.987E+00		8.953E+00	1.544E+01	1.350E+00	0.258
BI-210	1.491E+00		9.956E-01	1.594E+00	1.729E-01	0.936
PB-210	1.491E+00		9.956E-01	1.594E+00	1.729E-01	0.936
PO-210	1.491E+00		9.938E-01	1.594E+00	1.610E-01	0.936
PB-211	-1.541E-01		1.180E+00	1.935E+00	1.213E+00	-0.080
PO-215	-6.750E-01		7.927E-01	1.260E+00	2.260E-01	-0.536
RN-219	4.991E-02		5.274E-01	8.793E-01	1.315E-01	0.057
RN-220	1.002E+01		3.465E+01	5.741E+01	5.125E+00	0.175
RA-223	-6.750E-01		7.927E-01	1.260E+00	2.260E-01	-0.536
AC-227	7.495E-02		5.524E-01	7.853E-01	1.228E-01	0.095
TH-227	7.495E-02		5.524E-01	7.853E-01	1.438E-01	0.095
TH-229	1.324E-01		6.178E-01	1.006E+00	8.698E-02	0.132
PA-231	5.057E-02		1.751E+00	2.971E+00	4.608E-01	0.017
TH-231	-6.750E-01		7.927E-01	1.260E+00	2.260E-01	-0.536
PA-233	-3.404E-02		7.150E-02	1.173E-01	1.100E-02	-0.290
PA-234	3.041E-01		3.798E-01	6.665E-01	1.255E-01	0.456
NP-236	5.595E-02		1.089E-01	1.625E-01	1.436E-02	0.344
NP-239	-3.246E-02		2.790E-01	4.121E-01	4.688E-02	-0.079
AM-241	8.414E-02		1.376E-01	2.134E-01	2.265E-02	0.394

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-9.572E-02		1.303E-01	2.124E-01	2.244E-02	-0.451
AM-246	8.224E-02		1.755E-01	2.999E-01	2.558E-02	0.274
CM-247	-3.264E-03		4.717E-02	7.792E-02	6.619E-03	-0.042
CF-249	1.632E-02		4.666E-02	7.916E-02	6.706E-03	0.206
CF-251	2.058E-02		1.659E-01	2.704E-01	2.287E-02	0.076

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395012          *
* Acquisition date   : 2-FEB-2010 09:18:37 Detector SN#      :              *
* Detector ID        : GAM17 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000   *
* Elapsed real time  : 0 02:00:11.90 Half life ratio : 8.000   *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395012 Analyst initials: MXR1          *
* Batch Number       : 944966 Sample Quantity : 1.4552E+02 GRAM   *
* Recovery           : 1.00000 Carrier Weight  : 0.00000          *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 6-JAN-2010 11:41:36 MS Isotope      :              *
* MSD DPM             : 0.000 MSD Isotope                  :              *
* LCS DPM             : 0.000 LCS Isotope                   :              *
* LCSD DPM            : 0.000 LCSD Isotope                  :              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.603E+01	2.913E+00	2.632E-01	1.486E+00
NB-95	4.019E-01	1.199E-01	4.659E-02	6.116E-02
CD-109	1.407E+00	1.415E+00	1.170E+00	7.221E-01
SN-126	1.386E-01	1.394E-01	1.135E-01	7.111E-02
LU-177	2.993E+00	1.429E+00	8.755E-01	7.290E-01
TL-208	4.553E-01	1.141E-01	4.285E-02	5.822E-02
BI-211	3.472E+00	5.909E-01	1.908E-01	3.015E-01
BI-212	1.113E+00	6.359E-01	3.191E-01	3.244E-01
PB-212	1.417E+00	1.802E-01	5.487E-02	9.192E-02
PO-212	1.417E+00	1.802E-01	5.487E-02	9.192E-02
BI-214	1.062E+00	2.135E-01	7.652E-02	1.089E-01
PB-214	1.208E+00	2.146E-01	6.655E-02	1.095E-01
PO-214	1.208E+00	2.146E-01	6.655E-02	1.095E-01
PO-216	1.417E+00	1.802E-01	5.487E-02	9.192E-02
PO-218	1.208E+00	2.146E-01	6.655E-02	1.095E-01
RA-224	1.565E+00	1.039E+00	6.248E-01	5.303E-01
RA-226	1.062E+00	2.135E-01	7.652E-02	1.089E-01
AC-228	1.714E+00	3.972E-01	1.252E-01	2.026E-01
RA-228	1.714E+00	3.972E-01	1.252E-01	2.026E-01
TH-228	1.437E+00	1.827E-01	5.563E-02	9.320E-02
TH-230	1.062E+00	2.135E-01	7.652E-02	1.089E-01
U-231	9.431E+00	3.227E+00	9.008E-01	1.646E+00
TH-232	1.714E+00	3.972E-01	1.252E-01	2.026E-01
PA-234M	1.210E+02	1.803E+01	4.599E+00	9.198E+00
TH-234	8.698E+01	1.617E+01	1.003E+00	8.248E+00
U-234	1.062E+00	2.135E-01	7.652E-02	1.089E-01
U-235	1.660E+00	5.364E-01	2.341E-01	2.737E-01
NP-237	4.069E-01	4.174E-01	3.017E-01	2.130E-01
U-238	8.698E+01	1.617E+01	1.003E+00	8.248E+00
AM-243	4.124E-01	9.042E-02	5.834E-02	4.613E-02
ANH-511	1.840E-01	8.548E-02	3.330E-02	4.361E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-4.892E-02	3.823E-01	3.272E-01	1.950E-01 NOT IDENT.
NA-22	-2.813E-02	5.094E-02	3.912E-02	2.599E-02 NOT IDENT.
NA-24	3.806E+04	2.289E+05	0.000E+00	1.168E+05 SHORT HLIF
AL-26	2.296E-02	3.109E-02	3.027E-02	1.586E-02 NOT IDENT.
TI-44	3.188E-01	6.374E-02	4.430E-02	3.252E-02 FAIL ABUN
SC-46	1.319E-02	4.732E-02	4.173E-02	2.414E-02 FAIL ABUN
V-48	4.122E-02	8.432E-02	7.505E-02	4.302E-02 NOT IDENT.
CR-51	-6.676E-03	4.140E-01	3.700E-01	2.112E-01 NOT IDENT.
MN-52	8.400E-02	2.106E-01	1.911E-01	1.075E-01 NOT IDENT.
MN-54	-1.069E-02	4.974E-02	4.231E-02	2.538E-02 NOT IDENT.
CO-56	7.505E-03	5.056E-02	4.421E-02	2.580E-02 NOT IDENT.
CO-57	1.755E-02	3.257E-02	2.964E-02	1.661E-02 NOT IDENT.
CO-58	-1.773E-05	4.870E-02	4.224E-02	2.484E-02 NOT IDENT.
FE-59	-2.629E-03	1.041E-01	8.732E-02	5.313E-02 FAIL ABUN
CO-60	1.489E-02	4.474E-02	3.986E-02	2.283E-02 NOT IDENT.
ZN-65	7.539E-02	1.308E-01	1.020E-01	6.675E-02 NOT IDENT.
GE-68	4.168E-01	1.587E+00	1.372E+00	8.098E-01 NOT IDENT.
AS-73	2.077E-01	4.582E-01	4.352E-01	2.338E-01 NOT IDENT.
AS-74	7.359E-02	1.189E-01	1.048E-01	6.067E-02 NOT IDENT.
SE-75	-4.312E-03	5.473E-02	4.082E-02	2.793E-02 NOT IDENT.
BR-77	-6.814E+00	9.559E+00	7.759E+00	4.877E+00 FAIL ABUN
SR-82	-3.207E-01	4.980E-01	4.121E-01	2.541E-01 NOT IDENT.
RB-83	-6.233E-02	8.963E-02	7.286E-02	4.573E-02 NOT IDENT.
RB-84	7.023E-02	9.376E-02	8.540E-02	4.784E-02 NOT IDENT.
KR-85	6.139E+00	1.035E+01	8.166E+00	5.282E+00 NOT IDENT.
SR-85	3.107E-02	5.240E-02	4.133E-02	2.674E-02 NOT IDENT.
RB-86	2.374E-01	9.425E-01	8.143E-01	4.809E-01 NOT IDENT.
Y-88	1.901E-02	3.735E-02	3.453E-02	1.906E-02 NOT IDENT.
ZR-88	-4.204E-02	3.444E-02	2.778E-02	1.757E-02 NOT IDENT.
Y-91	-1.116E+01	2.257E+01	1.781E+01	1.152E+01 NOT IDENT.
NB-94	3.054E-02	4.337E-02	3.988E-02	2.213E-02 NOT IDENT.
NB-95M	4.265E-02	1.562E-01	1.205E-01	7.969E-02 NOT IDENT.
ZR-95	1.022E-01	9.538E-02	8.909E-02	4.867E-02 NOT IDENT.
NB-97	-1.158E+04	4.079E+04	0.000E+00	2.081E+04 SHORT HLIF
ZR-97	1.066E+06	7.933E+05	0.000E+00	4.047E+05 SHORT HLIF
MO-99	4.836E+00	1.313E+01	1.037E+01	6.699E+00 NOT IDENT.
TC-99M	-3.736E+14	1.859E+15	0.000E+00	9.487E+14 SHORT HLIF
RH-101	2.868E-02	3.712E-02	3.312E-02	1.894E-02 NOT IDENT.
RH-102	1.567E-02	3.390E-02	3.022E-02	1.730E-02 FAIL ABUN
RU-103	-6.473E-03	4.878E-02	4.157E-02	2.489E-02 FAIL ABUN
RH-106	-3.446E-02	4.256E-01	3.560E-01	2.171E-01 FAIL ABUN
RU-106	-3.446E-02	4.256E-01	3.560E-01	2.171E-01 FAIL ABUN
AG-108M	8.106E-03	3.844E-02	3.394E-02	1.961E-02 NOT IDENT.
AG-110M	-2.381E-02	4.963E-02	3.998E-02	2.532E-02 NOT IDENT.
IN-111	-9.601E-01	1.041E+00	7.345E-01	5.312E-01 NOT IDENT.
IN-113M	-3.147E-02	4.920E-02	4.146E-02	2.510E-02 NOT IDENT.
SN-113	-3.147E-02	4.920E-02	4.146E-02	2.510E-02 NOT IDENT.
IN-114M	6.326E-02	2.339E-01	1.837E-01	1.193E-01 NOT IDENT.
CD-115	2.599E+00	9.327E+00	8.137E+00	4.759E+00 NOT IDENT.
SN-117M	-4.438E-02	6.855E-02	5.593E-02	3.497E-02 NOT IDENT.
SB-122	1.354E+00	2.054E+00	1.821E+00	1.048E+00 NOT IDENT.
I-123	-3.553E+05	1.715E+06	0.000E+00	8.748E+05 SHORT HLIF
TE-123M	-8.269E-03	3.991E-02	3.107E-02	2.036E-02 NOT IDENT.
I-124	-4.441E-01	8.052E-01	5.965E-01	4.108E-01 FAIL ABUN
SB-124	1.016E-01	8.515E-02	8.675E-02	4.344E-02 FAIL ABUN
SB-125	-2.257E-02	1.069E-01	9.200E-02	5.457E-02 NOT IDENT.
TE-125M	8.120E+00	1.483E+01	1.221E+01	7.568E+00 NOT IDENT.
I-126	1.641E-01	2.206E-01	1.951E-01	1.126E-01 NOT IDENT.
SB-126	9.641E-02	1.873E-01	1.509E-01	9.554E-02 FAIL ABUN
SB-127	6.185E-01	1.425E+00	1.230E+00	7.269E-01 NOT IDENT.
XE-127	7.582E-02	5.775E-02	4.751E-02	2.946E-02 FAIL ABUN
I-131	-1.567E-01	1.174E-01	9.473E-02	5.991E-02 NOT IDENT.
TE-132	9.632E-02	6.275E-01	5.407E-01	3.202E-01 FAIL ABUN
BA-133	-3.855E-03	5.708E-02	4.432E-02	2.912E-02 FAIL ABUN
I-133	-9.982E+02	2.775E+03	0.000E+00	1.416E+03 SHORT HLIF
CS-134	1.040E-01	6.879E-02	6.505E-02	3.510E-02 NOT IDENT.
CS-135	2.058E-01	1.939E-01	1.557E-01	9.891E-02 NOT IDENT.
I-135	2.957E+13	2.908E+14	0.000E+00	1.484E+14 SHORT HLIF
CS-136	6.731E-02	1.314E-01	1.163E-01	6.702E-02 FAIL ABUN
BA-137M	-1.842E-02	4.914E-02	3.988E-02	2.507E-02 NOT IDENT.
CS-137	-1.947E-02	5.195E-02	4.216E-02	2.650E-02 NOT IDENT.
CE-139	-1.234E-02	4.201E-02	3.244E-02	2.143E-02 NOT IDENT.
BA-140	6.513E-02	3.213E-01	2.777E-01	1.639E-01 FAIL ABUN
LA-140	-5.445E-02	9.103E-02	6.883E-02	4.645E-02 NOT IDENT.

CE-141	1.902E-01	9.003E-02	7.589E-02	4.593E-02	NOT IDENT.
CE-143	2.439E+02	1.053E+02	0.000E+00	5.372E+01	SHORT HLIF
CE-144	-1.831E-01	2.721E-01	2.362E-01	1.388E-01	NOT IDENT.
PM-144	-2.243E-03	4.554E-02	3.996E-02	2.324E-02	NOT IDENT.
PR-144	-1.519E-01	3.084E+00	2.706E+00	1.573E+00	NOT IDENT.
PM-146	-4.550E-03	5.393E-02	4.653E-02	2.751E-02	NOT IDENT.
ND-147	-4.041E-01	6.559E-01	5.325E-01	3.346E-01	FAIL ABUN
PM-149	4.689E+01	7.018E+01	6.491E+01	3.581E+01	NOT IDENT.
EU-152	-1.789E-02	1.072E-01	9.445E-02	5.471E-02	NOT IDENT.
GD-153	1.116E+00	2.003E-01	1.262E-01	1.022E-01	FAIL ABUN
EU-154	-7.066E-02	1.412E-01	1.091E-01	7.202E-02	NOT IDENT.
EU-155	9.806E-02	1.456E-01	1.338E-01	7.427E-02	FAIL ABUN
TB-160	1.263E-01	1.879E-01	1.703E-01	9.585E-02	FAIL ABUN
HO-166M	1.686E-02	7.639E-02	6.817E-02	3.898E-02	FAIL ABUN
TM-171	-3.799E+01	2.805E+01	2.250E+01	1.431E+01	NOT IDENT.
LU-176	-1.458E-02	2.755E-02	2.404E-02	1.405E-02	NOT IDENT.
LU-177M	-1.471E-01	2.099E-01	1.755E-01	1.071E-01	NOT IDENT.
HF-181	2.553E-02	4.994E-02	4.457E-02	2.548E-02	NOT IDENT.
W-181	1.090E+00	3.638E-01	3.118E-01	1.856E-01	NOT IDENT.
TA-182	1.490E-01	2.301E-01	2.034E-01	1.174E-01	FAIL ABUN
RE-183	4.589E-01	1.893E-01	1.349E-01	9.658E-02	FAIL ABUN
RE-184	-4.778E-02	2.794E-01	2.350E-01	1.426E-01	NOT IDENT.
OS-185	3.177E-03	5.718E-02	4.817E-02	2.917E-02	NOT IDENT.
RE-188	2.791E-02	2.133E-01	1.890E-01	1.088E-01	NOT IDENT.
W-188	-2.729E+00	8.380E+00	6.513E+00	4.275E+00	FAIL ABUN
IR-192	1.140E-02	3.886E-02	3.528E-02	1.983E-02	FAIL ABUN
AU-195	3.245E+00	5.825E-01	3.833E-01	2.972E-01	FAIL ABUN
TL-200	7.918E+01	2.397E+02	0.000E+00	1.223E+02	SHORT HLIF
TL-201	3.797E+00	7.484E+00	5.995E+00	3.818E+00	NOT IDENT.
TL-202	3.337E-02	7.602E-02	6.798E-02	3.879E-02	NOT IDENT.
HG-203	2.057E-02	4.709E-02	3.868E-02	2.403E-02	FAIL ABUN
BI-207	-6.392E-03	6.824E-02	5.705E-02	3.482E-02	FAIL ABUN
TL-207	-6.750E-01	7.768E-01	6.560E-01	3.963E-01	FAIL ABUN
PO-209	3.987E+00	8.774E+00	7.858E+00	4.477E+00	NOT IDENT.
BI-210	1.491E+00	9.757E-01	8.650E-01	4.978E-01	NOT IDENT.
PB-210	1.491E+00	9.757E-01	8.650E-01	4.978E-01	NOT IDENT.
PO-210	1.491E+00	9.740E-01	8.650E-01	4.969E-01	NOT IDENT.
PB-211	-1.541E-01	1.157E+00	1.003E+00	5.901E-01	NOT IDENT.
PO-215	-6.750E-01	7.768E-01	6.560E-01	3.963E-01	FAIL ABUN
RN-219	4.991E-02	5.168E-01	4.557E-01	2.637E-01	FAIL ABUN
RN-220	1.002E+01	3.396E+01	2.954E+01	1.732E+01	NOT IDENT.
RA-223	-6.750E-01	7.768E-01	6.560E-01	3.963E-01	FAIL ABUN
AC-227	7.495E-02	5.413E-01	4.111E-01	2.762E-01	FAIL ABUN
TH-227	7.495E-02	5.414E-01	4.111E-01	2.762E-01	FAIL ABUN
TH-229	1.324E-01	6.055E-01	5.297E-01	3.089E-01	FAIL ABUN
PA-231	5.057E-02	1.716E+00	1.552E+00	8.753E-01	FAIL ABUN
TH-231	-6.750E-01	7.768E-01	6.560E-01	3.963E-01	FAIL ABUN
PA-233	-3.404E-02	7.007E-02	6.116E-02	3.575E-02	FAIL ABUN
PA-234	3.041E-01	3.722E-01	3.387E-01	1.899E-01	FAIL ABUN
NP-236	5.595E-02	1.067E-01	8.593E-02	5.445E-02	FAIL ABUN
NP-239	-3.246E-02	2.734E-01	2.194E-01	1.395E-01	FAIL ABUN
AM-241	8.414E-02	1.349E-01	1.152E-01	6.881E-02	NOT IDENT.
CM-243	-9.572E-02	1.277E-01	1.134E-01	6.517E-02	FAIL ABUN
AM-246	8.224E-02	1.720E-01	1.519E-01	8.773E-02	NOT IDENT.
CM-247	-3.264E-03	4.623E-02	4.038E-02	2.358E-02	FAIL ABUN
CF-249	1.632E-02	4.573E-02	4.106E-02	2.333E-02	NOT IDENT.
CF-251	2.058E-02	1.626E-01	1.427E-01	8.297E-02	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON , SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.50	925.0458
46.50	925.0458
46.50	925.0458
48.70	1372.1941
49.72	1314.1042
51.35	1453.6382
52.39	1430.8156
52.97	1495.0413
53.15	1495.7855
53.44	1579.3558
54.07	1633.9854
56.28	1686.5701
56.28	1686.5801
57.37	0.0000
57.53	1755.7213
57.53	1755.7317
57.60	1756.0437
57.98	1788.5737
57.98	1788.5737
59.32	1766.1000
59.32	1766.1000
59.40	1766.4645
59.54	1767.1050
59.72	1767.9225
60.01	1806.8281
61.10	1852.1510
61.14	1852.3358
61.30	1871.2917
63.00	1594.1508
63.29	1595.2963
63.29	1595.2963
63.58	1596.4418
64.28	1599.1914
65.12	1375.8019
65.20	1376.0677
65.20	1376.0677
66.05	1448.6324
66.72	1510.2628
66.83	1510.6650
66.91	1510.9535
67.20	1500.1283
67.20	1500.1283
67.75	1597.1986
67.85	1557.9437
68.90	1501.6533
68.90	1501.6533
69.30	1486.3564
69.67	1431.9109
70.82	1616.6753
70.82	1616.6753
70.83	1616.7124
72.80	1640.4740
72.87	1640.7269
72.87	1640.7269
74.67	1647.3564
74.81	1647.8621
74.81	1647.8621
74.81	1647.8621
74.81	1647.8621
74.81	1647.8621
74.81	1647.8621
74.81	1647.8621
74.97	1648.4520
75.28	1649.5757
75.70	1651.1113
77.11	1656.2052
77.11	1656.2052

77.11	1656.2052
77.11	1656.2052
77.11	1656.2052
77.11	1656.2052
77.11	1656.2052
78.38	1577.7633
79.62	1533.1108
79.80	1533.6970
79.80	1533.6970
80.11	1616.1946
80.18	1616.4397
80.30	1616.8483
80.30	1616.8483
80.57	1617.7653
81.00	1627.4003
81.07	1627.6375
81.07	1627.6375
81.07	1627.6375
81.07	1627.6375
82.60	1591.8900
83.37	1591.6815
83.78	1593.0403
83.78	1593.0403
83.78	1593.0403
83.78	1593.0403
84.21	1594.4435
84.90	1558.2819
85.43	1559.9633
86.29	1562.6847
86.50	1563.3434
86.54	1563.4647
86.59	1563.6294
86.72	1564.0367
86.79	1564.2448
86.94	1564.7214
87.30	1899.4285
87.30	1899.4285
87.30	1899.4285
87.30	1899.4285
87.30	1899.4285
87.30	1899.4285
87.57	1899.0691
87.88	1954.0653
88.03	1954.6487
88.36	1885.9375
88.47	1886.3542
89.95	1787.4795
91.11	1791.5245
92.29	1971.0048
92.38	1709.6176
92.38	1709.6176
93.35	1712.8030
94.00	1714.9203
94.67	1717.0845
94.67	1717.1033
94.90	1717.8528
94.90	1717.8528
94.90	1717.8528
94.90	1717.8528
95.87	667.0944
95.87	667.0944
96.73	668.1730
97.43	669.0409
98.44	737.8824
98.44	737.8824
98.88	738.4821
99.55	687.1808
99.55	687.1808
99.86	687.5709
100.00	687.7455
100.10	682.2257
103.18	757.8901
103.76	732.7003
105.00	702.0139
105.31	702.3973
108.00	853.7171
109.28	780.9541

111.00	731.4166
111.00	731.4166
111.76	732.3584
112.95	733.8273
115.19	597.3768
116.30	586.8499
117.00	556.9852
117.00	556.9852
117.66	580.0071
121.11	558.2592
121.62	508.9004
121.78	509.0302
122.06	501.4358
122.32	501.6419
122.32	501.6419
122.32	501.6419
122.32	501.6419
123.07	513.9877
127.23	561.6823
129.76	524.2959
131.20	544.2809
133.02	539.8073
133.54	547.1913
135.34	502.7695
136.00	477.2998
136.25	477.4749
136.48	482.6315
140.51	497.5328
140.51	0.0000
142.18	479.0843
142.65	483.9404
143.76	467.5403
144.24	467.8559
144.24	467.8559
144.24	467.8559
144.24	467.8559
145.22	444.7264
145.44	422.0861
147.16	442.8896
152.43	426.1880
152.70	409.9865
153.22	443.0163
154.21	464.1010
154.21	464.1010
154.21	464.1010
154.21	464.1010
155.03	427.6897
156.02	426.2041
158.56	432.8003
159.00	0.0000
159.00	417.5862
160.31	356.3358
161.27	397.1133
162.32	405.4270
162.64	371.4062
163.35	381.6001
163.89	392.2427
165.85	410.3997
167.43	383.0817
171.28	401.1869
171.86	426.6329
172.10	414.1786
176.55	385.8890
176.60	385.9151
181.06	415.0408
184.41	381.5846
185.71	365.6483
186.00	365.7739
190.27	308.6602
192.34	321.2188
193.63	313.0891
197.04	303.5048
198.01	269.2383
198.60	284.5635
200.40	302.4884
201.83	316.0019
202.84	247.8674
205.31	310.6794

208.36	259.2163
208.81	259.3441
209.75	226.7474
209.75	226.7474
210.97	253.3706
215.65	243.6162
216.55	237.2296
218.09	259.7182
222.10	240.8337
223.80	292.3970
226.40	228.5250
227.00	215.2795
227.08	227.5680
227.20	235.4068
228.16	256.8549
228.18	256.8595
228.18	256.8595
231.56	0.0000
235.69	264.9950
236.00	265.0789
236.00	265.0789
238.63	244.8910
238.63	244.8910
238.63	244.8910
238.63	244.8910
239.00	244.9793
240.98	245.4561
241.98	245.6945
241.98	245.6945
241.98	245.6945
244.69	248.6139
245.39	248.7810
247.94	212.9507
248.90	204.0280
249.79	227.0168
252.40	202.4200
252.85	226.5326
252.85	226.5326
254.15	0.0000
256.20	239.2965
256.20	239.2965
260.50	195.3154
260.90	202.3042
262.80	185.3365
264.65	180.4448
268.24	165.3687
268.79	172.4161
269.46	179.8378
269.46	179.8378
269.46	179.8378
269.46	179.8378
271.23	180.1244
273.65	185.4127
276.40	184.6966
277.35	182.5110
277.60	167.1055
277.60	167.1055
278.00	167.1636
278.60	170.0617
279.20	171.5595
279.53	171.6072
280.46	188.6403
281.68	187.9036
283.67	191.4610
284.30	176.5594
285.00	174.8996
285.90	176.8036
286.10	177.7183
286.10	177.7183
287.40	185.8841
288.45	0.0000
290.67	166.1651
290.80	166.1823
291.72	156.3633
293.26	0.0000
293.70	162.8559
295.21	163.0626
295.21	163.0626

295.21	163.0626
295.96	163.1659
296.50	163.2385
297.23	163.3390
298.57	163.5233
299.80	163.6880
299.80	163.6880
300.09	174.6453
300.09	174.6453
300.09	174.6453
300.09	174.6453
300.12	174.6482
301.29	156.1899
302.84	150.6504
303.76	147.8940
303.91	147.9116
304.40	155.1551
304.40	155.1551
304.84	162.8752
306.84	177.2387
308.46	155.8494
311.98	165.3300
316.51	161.3994
318.01	162.5001
319.02	164.4483
319.41	159.9539
320.08	169.1301
323.87	194.2630
323.87	194.2630
323.87	194.2630
323.87	194.2630
325.23	198.1231
328.77	188.5986
333.44	172.0037
334.20	197.1102
334.20	197.1102
334.30	197.1266
338.28	158.6229
338.28	158.6229
338.28	158.6229
338.28	158.6229
338.32	158.6281
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338.32	158.6281
340.50	167.0199
340.57	167.0281
344.27	146.3723
345.85	140.9808
350.59	0.0000
351.07	133.1482
351.92	133.2312
351.92	133.2312
351.92	133.2312
355.39	0.0000
356.01	152.5069
364.48	151.3772
366.43	122.4007
367.43	131.9101
367.94	0.0000
369.80	146.2893
374.96	139.2458
383.85	114.3750
387.95	123.2996
388.63	119.5316
391.69	129.3640
391.69	129.3640
392.90	140.9797
398.62	142.4852
400.65	134.0030
401.10	146.5797
401.81	147.6141
402.60	149.6217
404.84	147.9106
410.95	129.0934
411.60	128.1771
413.65	141.9633
414.70	116.7609
415.30	131.4075

415.76	122.6835
417.63	0.0000
418.52	126.8044
423.70	116.4615
427.08	94.1543
427.89	115.7907
432.53	106.2894
433.93	108.3534
439.47	103.7872
439.56	103.7920
439.89	113.7015
443.98	115.9717
444.90	109.0953
445.03	109.1037
445.03	109.1037
445.03	109.1037
445.03	109.1037
453.90	118.6713
463.38	95.2783
468.07	107.6139
473.00	120.0314
475.06	89.8786
475.35	90.9050
476.78	94.0132
477.59	105.1823
477.96	111.2740
482.03	92.2719
484.57	113.7329
487.03	90.5047
490.36	0.0000
492.35	91.8004
497.08	101.2508
507.63	0.0000
510.53	0.0000
510.84	122.6452
511.00	122.6561
511.85	122.7142
511.85	122.7142
513.99	115.6307
513.99	115.6307
520.41	116.0400
520.65	116.0537
527.90	92.5852
528.96	0.0000
529.64	95.7959
529.87	0.0000
531.02	103.1602
537.32	101.4166
543.00	94.3808
546.56	0.0000
549.76	93.6635
552.65	99.0746
555.20	96.0404
563.23	99.6168
563.90	99.6512
568.70	106.2714
569.32	106.3049
569.50	102.0615
569.67	95.6909
573.80	98.0223
574.00	96.9652
574.64	108.7236
578.91	88.8748
579.30	0.0000
583.14	112.3988
585.48	109.7438
591.81	109.6575
592.07	110.7451
593.00	117.2495
595.88	92.6400
600.56	107.9681
602.52	0.0000
602.71	116.7275
602.71	116.7275
603.60	102.0717
604.41	89.9971
604.70	90.0098
609.31	99.7518

609.31	99.7518
609.31	99.7518
609.31	99.7518
610.33	85.0466
612.46	88.6100
614.37	83.4727
618.01	103.4337
621.84	90.5330
621.84	90.5330
631.29	84.3621
633.02	81.1407
633.10	81.1453
634.78	81.2085
635.90	85.6434
636.97	77.9964
645.85	88.2446
646.12	84.9449
656.30	79.7981
657.75	104.2497
657.90	0.0000
661.65	97.7673
661.65	97.7673
664.57	0.0000
666.33	73.4806
666.33	73.4806
675.00	77.1175
677.61	76.0870
685.20	70.7289
692.80	78.3977
695.00	79.3762
696.49	93.8666
696.49	93.8666
697.00	105.6256
697.49	102.0338
698.33	98.4593
698.50	97.5639
699.00	88.5469
702.63	78.7312
706.10	82.4754
706.58	0.0000
706.67	76.1496
709.31	83.4940
711.68	75.4032
713.82	70.0162
717.42	64.6592
720.50	66.8701
721.93	0.0000
722.20	86.6898
722.78	89.7532
722.78	89.7532
722.89	89.7580
722.95	85.1940
723.30	85.2077
724.18	65.4518
727.18	80.7745
733.00	80.2069
735.90	82.5974
739.58	76.5950
742.81	71.7882
744.21	69.0674
747.13	55.3198
751.79	80.3667
752.31	72.9921
753.82	84.1306
755.35	74.9309
756.15	68.4789
756.87	72.2014
763.93	68.0750
765.79	82.6792
766.42	82.7009
766.84	100.6818
776.49	87.6981
778.00	88.6844
778.57	82.9970
778.89	77.0416
783.80	74.8516
785.46	90.8167
792.07	98.0391

795.84	76.1451
796.30	78.9797
798.80	111.0543
801.93	69.7291
805.60	65.1086
810.29	60.5000
810.76	62.4019
815.85	56.8389
817.79	53.0893
818.51	60.6906
819.60	57.8696
826.30	65.6241
828.27	0.0000
831.60	70.5204
831.96	69.5763
834.83	79.1925
836.80	0.0000
846.75	62.2927
848.13	67.1187
856.28	0.0000
856.80	62.5244
860.37	61.6422
867.32	63.7296
867.82	56.9805
871.10	55.1144
873.19	66.7679
874.81	63.9021
875.33	0.0000
876.40	65.8767
879.36	57.2182
880.27	53.3564
880.51	56.2710
881.50	57.2614
883.24	58.2686
884.67	65.0993
889.25	48.6609
896.60	43.9091
898.02	38.0736
899.00	48.8293
903.28	42.3822
911.07	45.1128
911.07	45.1128
911.07	45.1128
919.63	49.1809
920.93	51.1710
925.00	48.2870
925.24	48.2906
926.50	41.4104
935.52	37.5825
937.48	47.5043
944.10	41.6596
946.00	41.6862
949.00	60.6053
962.29	44.1949
964.01	51.5910
966.15	58.2892
968.20	81.9920
969.11	51.6780
969.11	51.6780
969.11	51.6780
977.42	55.1625
980.50	51.2030
983.50	45.2230
989.30	47.3224
996.32	35.3204
1001.03	47.1657
1001.68	42.1214
1004.76	42.1631
1021.30	0.0000
1024.50	0.0000
1034.80	42.9064
1036.00	40.8789
1037.82	41.9249
1038.57	46.0261
1038.76	0.0000
1045.16	45.0957
1046.59	49.2164
1048.07	47.1882

1050.47	53.3838
1050.47	53.3838
1062.04	46.3623
1063.62	53.5996
1076.63	45.5340
1077.35	47.6149
1078.86	40.3863
1085.78	42.5475
1099.22	42.7177
1112.02	45.3223
1112.84	45.3328
1115.52	50.6037
1120.29	71.6432
1120.29	71.6432
1120.29	71.6432
1120.29	71.6432
1120.51	71.6466
1121.28	55.9323
1124.00	0.0000
1129.67	51.5146
1131.51	0.0000
1147.95	0.0000
1167.94	45.7064
1173.22	45.7757
1175.09	46.8639
1177.93	51.1664
1189.05	52.3951
1204.90	56.9207
1205.75	0.0000
1213.00	57.0501
1221.42	44.2332
1230.97	60.5746
1235.34	62.8116
1236.41	0.0000
1238.25	60.6949
1246.25	53.2229
1260.41	0.0000
1271.85	26.2465
1274.45	39.3961
1274.54	40.4922
1291.56	34.0773
1298.22	0.0000
1312.09	29.4701
1325.50	27.7234
1325.50	27.7234
1332.49	24.0693
1333.61	24.0767
1360.21	21.4418
1362.66	0.0000
1365.15	26.1349
1368.21	22.4180
1368.53	0.0000
1376.25	21.5269
1384.27	18.0063
1394.10	19.7413
1395.20	20.6877
1407.95	25.4674
1434.06	15.1875
1436.60	23.7447
1457.56	0.0000
1460.81	13.1004
1489.15	16.3470
1509.49	14.4910
1596.49	20.6855
1620.62	12.8725
1678.03	0.0000
1691.02	6.0303
1691.02	6.0303
1706.46	0.0000
1750.46	0.0000
1764.49	10.2022
1764.49	10.2022
1764.49	10.2022
1764.49	10.2022
1770.23	14.0078
1771.40	10.2165
1791.20	0.0000
1808.65	5.1459

1836.01

7.2430

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395012

Total Uranium Activity	2.5953E+02	ug/g
Total Uranium Counting Unc.	4.8097E+01	ug/g
Total Uranium Tpu	2.4539E-05	ug/g
Total Uranium Mda	2.9872E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 944966                SAMPLE ID   : G245395012                *
*  ANALYST       : MXR1                  DETECTOR    : GAM17                    *
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00          *
*  ANALYSIS DATE : 2-FEB-2010 09:18:37.21  SAMPLE ALQT: 145.520 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.995E+01
GROSS GAMMA ERROR (pCi/GRAM )   : 1.821E+00
GROSS GAMMA MDA (pCi/GRAM )     : 8.706E+00
GROSS GAMMA DLC (pCi/GRAM )     : 4.291E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:27:18.10

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395013.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:26:45.
Sample ID          : G245395013      Sample quantity   : 1.45340E+02 GRAM
Detector name      : GAM18            Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00   Elapsed real time: 0 02:00:01.76  0.0%
Energy tolerance    : 1.50000 keV     Analyst Initials : MXR1
Abundance limit     : 75.00000         Sensitivity       : 5.00000
Batch ID           : 944966            Detector SN#      :
Matrix Spike ID     :                  LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.54*	142	437	0.91	126.20	123	7	1.97E-02	26.8	
2	3	74.98	508	594	1.30	149.09	142	19	7.06E-02	9.5	2.20E+00
3	3	77.31*	727	423	0.98	153.74	142	19	1.01E-01	6.0	
4	4	84.25*	132	467	1.47	167.62	164	28	1.83E-02	28.5	1.08E+00
5	4	87.46	326	447	1.15	174.03	164	28	4.53E-02	12.0	
6	4	90.16	205	368	0.95	179.42	164	28	2.85E-02	16.5	
7	4	92.92*	656	529	1.51	184.94	164	28	9.11E-02	7.9	
8	0	129.13	96	347	1.16	257.33	254	7	1.34E-02	33.7	
9	0	186.06*	314	464	1.25	371.15	366	10	4.36E-02	14.5	
10	0	209.47	155	378	1.02	417.95	414	8	2.15E-02	23.3	
11	4	238.72*	1963	213	1.21	476.45	469	21	2.73E-01	2.6	1.23E+00
12	4	241.63*	404	341	1.94	482.25	469	21	5.61E-02	14.7	
13	0	270.32	221	248	1.68	539.62	534	11	3.07E-02	15.4	
14	0	295.22*	507	269	1.21	589.40	584	11	7.04E-02	7.8	
15	0	300.15	116	256	1.18	599.27	595	11	1.61E-02	28.3	
16	0	327.72	152	197	1.29	654.38	650	10	2.11E-02	19.1	
17	0	338.28*	392	246	1.22	675.50	671	11	5.45E-02	9.4	
18	0	351.89*	941	222	1.36	702.70	696	12	1.31E-01	4.6	
19	0	408.95	101	150	1.00	816.79	812	11	1.40E-02	25.4	
20	0	462.80	165	145	1.53	924.47	919	11	2.29E-02	16.2	
21	0	510.70*	160	210	2.09	1020.23	1013	15	2.23E-02	24.5	
22	0	583.00*	580	166	1.54	1164.79	1158	13	8.06E-02	6.3	
23	0	609.01*	660	172	1.55	1216.79	1210	13	9.17E-02	5.8	
24	0	666.35	81	168	8.03	1331.46	1321	21	1.12E-02	41.7	
25	0	726.67	205	101	1.82	1452.06	1444	15	2.85E-02	12.8	
26	0	770.36	133	199	5.94	1539.42	1530	25	1.84E-02	30.7	
27	0	795.09	106	99	1.04	1588.88	1583	12	1.47E-02	21.4	
28	0	860.24*	103	105	2.18	1719.14	1712	14	1.43E-02	23.9	
29	0	910.80*	471	101	1.88	1820.24	1814	16	6.54E-02	6.7	
30	3	964.33	150	26	2.81	1927.28	1918	27	2.08E-02	14.6	2.95E+00
31	3	968.71*	313	31	2.08	1936.04	1918	27	4.35E-02	7.0	
32	0	1001.32*	36	70	2.14	2001.24	1996	14	5.03E-03	55.3	
33	0	1120.13*	182	110	1.95	2238.84	2230	18	2.53E-02	15.7	
34	0	1237.68*	56	74	1.18	2473.89	2469	10	7.72E-03	32.7	
35	0	1408.85	42	27	1.92	2816.20	2805	18	5.89E-03	32.5	
36	0	1459.98*	1766	48	2.32	2918.45	2906	22	2.45E-01	2.6	
37	0	1763.67*	143	11	2.49	3525.80	3518	15	1.99E-02	10.4	
38	0	1847.13	27	7	1.45	3692.72	3688	13	3.68E-03	27.8	

Peak Search Report (continued)
Sample ID : G245395013

Page : 2
Acquisition date : 2-FEB-2010 09:26:45

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
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Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 2-FEB-2010 11:27:21

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395013.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:26:45
 Sample ID : G245395013 Sample quantity : 145.34 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA18 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.76 0.0%
 Peak Width (FWHM): 3.00 Confidence level : 5.00 %
 Energy tolerance : 1.50 keV Half life ratio : 8.00
 Errors propagated: Yes Systematic Error : 0.00 %
 Efficiency type : Empirical Efficiencies at : Peak Energy
 Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.258E+01	2.073E+00	3.621E-01	2.748E-02	62.360
CD-109	+	88.03	*	3.573E+00	9.167E-01	1.035E+00	9.572E-02	3.451
SN-126	+	64.28		1.221E+00	6.798E-01	7.741E-01	1.144E-01	1.578
	+	86.94		1.463E+00	7.007E-01	4.304E-01	1.785E-01	3.398
	+	87.57	*	3.519E-01	9.026E-02	1.026E-01	9.454E-03	3.429
TL-208		277.35		5.837E-01	2.939E-01	5.082E-01	5.337E-02	1.148
	+	510.84		4.450E-01	2.234E-01	1.614E-01	1.716E-02	2.757
	+	583.14	*	4.523E-01	6.727E-02	4.504E-02	3.531E-03	10.043
	+	860.37		7.320E-01	3.592E-01	3.048E-01	3.409E-02	2.402
BI-211		72.87		5.194E+00	2.848E+00	4.915E+00	4.059E-01	1.057
	+	351.07	*	3.446E+00	3.877E-01	2.265E-01	1.454E-02	15.218
PB-212	+	74.81		2.487E+00	5.680E-01	4.914E-01	6.159E-02	5.062
	+	77.11		1.984E+00	2.909E-01	2.749E-01	2.330E-02	7.218
	+	87.30		1.627E+00	4.481E-01	4.764E-01	6.470E-02	3.416
	+	238.63	*	1.673E+00	1.481E-01	6.651E-02	4.751E-03	25.159
	+	300.09		1.467E+00	8.388E-01	8.156E-01	6.697E-02	1.799
PO-212	+	74.81		2.487E+00	5.680E-01	4.914E-01	6.159E-02	5.062
	+	77.11		1.984E+00	2.909E-01	2.749E-01	2.330E-02	7.218
	+	87.30		1.627E+00	4.481E-01	4.764E-01	6.470E-02	3.416
		115.19		-1.342E+00	3.015E+00	4.771E+00	3.006E-01	-0.281
	+	238.63	*	1.673E+00	1.481E-01	6.651E-02	4.751E-03	25.159
	+	300.09		1.467E+00	8.388E-01	8.156E-01	6.697E-02	1.799
BI-214	+	609.31	*	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338
	+	1120.29		1.333E+00	4.370E-01	3.179E-01	3.044E-02	4.192
	+	1764.49		1.380E+00	2.986E-01	2.155E-01	1.310E-02	6.406
PB-214	+	74.81		4.286E+00	9.477E-01	8.466E-01	9.452E-02	5.062
	+	77.11		3.401E+00	5.620E-01	4.712E-01	5.371E-02	7.218
	+	87.30		2.788E+00	7.467E-01	8.161E-01	9.790E-02	3.416
	+	241.98		2.066E+00	6.302E-01	3.998E-01	3.161E-02	5.167
	+	295.21		1.128E+00	2.008E-01	1.517E-01	1.287E-02	7.433
	+	351.92	*	1.199E+00	1.487E-01	7.892E-02	6.529E-03	15.190
PO-214	+	74.81		4.286E+00	9.477E-01	8.466E-01	9.452E-02	5.062
	+	77.11		3.401E+00	5.620E-01	4.712E-01	5.371E-02	7.218
	+	87.30		2.788E+00	7.467E-01	8.161E-01	9.790E-02	3.416

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	241.98		2.066E+00	6.302E-01	3.998E-01	3.161E-02	5.167
	+	295.21		1.128E+00	2.008E-01	1.517E-01	1.287E-02	7.433
	+	351.92	*	1.199E+00	1.487E-01	7.892E-02	6.529E-03	15.190
	+	74.81		2.487E+00	5.680E-01	4.914E-01	6.159E-02	5.062
	+	77.11		1.984E+00	2.909E-01	2.749E-01	2.330E-02	7.218
	+	87.30		1.627E+00	4.481E-01	4.764E-01	6.470E-02	3.416
PO-218	+	238.63	*	1.673E+00	1.481E-01	6.651E-02	4.751E-03	25.159
	+	300.09		1.467E+00	8.388E-01	8.156E-01	6.697E-02	1.799
	+	74.81		4.286E+00	9.477E-01	8.466E-01	9.452E-02	5.062
	+	77.11		3.401E+00	5.620E-01	4.712E-01	5.371E-02	7.218
	+	87.30		2.788E+00	7.467E-01	8.161E-01	9.790E-02	3.416
	+	241.98		2.066E+00	6.302E-01	3.998E-01	3.161E-02	5.167
RA-224	+	295.21		1.128E+00	2.008E-01	1.517E-01	1.287E-02	7.433
	+	351.92	*	1.199E+00	1.487E-01	7.892E-02	6.529E-03	15.190
	+	240.98	*	3.917E+00	1.175E+00	7.559E-01	4.211E-02	5.181
	+	609.31	*	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338
	+	1120.29		1.333E+00	4.370E-01	3.179E-01	3.044E-02	4.192
	+	1764.49		1.380E+00	2.986E-01	2.155E-01	1.310E-02	6.406
AC-228	+	338.32		1.592E+00	7.148E-01	2.832E-01	1.154E-01	5.621
	+	911.07	*	1.580E+00	2.987E-01	1.578E-01	2.090E-02	10.018
	+	969.11		1.846E+00	5.112E-01	2.375E-01	5.688E-02	7.770
	+	338.32		1.592E+00	7.148E-01	2.832E-01	1.154E-01	5.621
	+	911.07	*	1.580E+00	2.987E-01	1.578E-01	2.090E-02	10.018
	+	969.11		1.846E+00	5.112E-01	2.375E-01	5.688E-02	7.770
TH-228	+	74.81		2.522E+00	5.262E-01	4.982E-01	4.198E-02	5.062
	+	77.11		2.012E+00	2.949E-01	2.787E-01	2.362E-02	7.218
	+	87.30		1.650E+00	4.233E-01	4.830E-01	4.440E-02	3.416
	+	238.63	*	1.697E+00	1.502E-01	6.743E-02	4.817E-03	25.159
	+	300.09		1.487E+00	1.215E+00	8.270E-01	4.874E-01	1.799
	+	609.31	*	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338
TH-230	+	1120.29		1.333E+00	4.370E-01	3.179E-01	3.044E-02	4.192
	+	1764.49		1.380E+00	2.986E-01	2.155E-01	1.310E-02	6.406
	+	338.32		1.592E+00	3.139E-01	2.832E-01	1.638E-02	5.621
	+	911.07	*	1.580E+00	2.987E-01	1.578E-01	2.090E-02	10.018
	+	969.11		1.846E+00	5.112E-01	2.375E-01	5.688E-02	7.770
	+	63.29	*	3.085E+00	1.743E+00	2.054E+00	3.622E-01	1.502
U-234	+	92.38		4.500E+00	1.076E+00	6.615E-01	1.192E-01	6.802
	+	609.31	*	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338
	+	1120.29		1.333E+00	4.370E-01	3.179E-01	3.044E-02	4.192
	+	1764.49		1.380E+00	2.986E-01	2.155E-01	1.310E-02	6.406
	+	86.50	*	1.033E+00	3.402E-01	3.060E-01	6.904E-02	3.376
	+	95.87		-7.941E-01	9.305E-01	1.268E+00	3.098E-01	-0.626
U-238	+	63.29	*	3.085E+00	1.743E+00	2.054E+00	3.622E-01	1.502
	+	92.38		4.500E+00	8.036E-01	6.615E-01	5.622E-02	6.802
	+	74.67	*	4.033E-01	8.402E-02	7.998E-02	6.674E-03	5.042
	+	86.72		3.875E+01	9.940E+00	1.144E+01	1.046E+00	3.387
	+	117.66		3.264E-01	3.070E+00	4.960E+00	3.051E-01	0.066
	+	142.18		3.810E+00	1.488E+01	2.386E+01	1.314E+00	0.160
ANH-511	+	511.00	*	9.611E-02	4.758E-02	3.487E-02	2.303E-03	2.756

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.864E-02	2.273E-01	3.731E-01	2.703E-02	-0.050
NA-22		1274.54	*	-2.445E-02	3.068E-02	4.691E-02	3.192E-03	-0.521
NA-24		1368.53	*	-1.034E-01	3.068E-02	Half-Life too short		
AL-26		1129.67		3.073E-02	1.227E+00	1.869E+00	1.248E-01	0.016
		1808.65	*	-1.583E-03	1.890E-02	3.057E-02	1.785E-03	-0.052
TI-44		67.85		-2.741E-02	4.623E-02	7.121E-02	5.726E-03	-0.385
	+	78.38	*	3.661E-01	5.367E-02	7.292E-02	6.235E-03	5.021
SC-46		889.25	*	-1.480E-02	2.842E-02	4.456E-02	4.970E-03	-0.332
	+	1120.51		2.259E-01	7.253E-02	9.392E-02	6.489E-03	2.405
V-48		944.10		-4.615E-01	6.239E-01	9.521E-01	1.008E-01	-0.485
		983.50	*	-7.270E-03	4.628E-02	7.393E-02	7.312E-03	-0.098
		1312.09		1.805E-02	5.406E-02	9.108E-02	6.635E-03	0.198
CR-51		320.08	*	8.988E-02	2.781E-01	4.551E-01	2.930E-02	0.197
MN-52		744.21		8.206E-03	1.404E-01	2.341E-01	2.064E-02	0.035
		848.13		1.481E+00	4.323E+00	7.258E+00	7.593E-01	0.204
		935.52		3.696E-02	1.678E-01	2.770E-01	2.971E-02	0.133
		1246.25		-2.055E+00	4.913E+00	7.513E+00	4.831E-01	-0.274
		1333.61		2.029E-01	3.011E+00	4.954E+00	3.743E-01	0.041
		1434.06	*	5.515E-02	1.380E-01	2.340E-01	1.724E-02	0.236
MN-54		834.83	*	-1.352E-03	2.835E-02	4.646E-02	4.759E-03	-0.029
CO-56		846.75	*	-4.034E-04	2.862E-02	4.693E-02	4.900E-03	-0.009
		977.42		4.344E-01	2.169E+00	3.205E+00	3.206E-01	0.136
		1037.82		1.660E-01	2.046E-01	3.620E-01	3.354E-02	0.458
		1175.09		4.324E-01	1.434E+00	2.427E+00	1.347E-01	0.178
	+	1238.25		1.128E-01	7.409E-02	1.230E-01	8.198E-03	0.917
		1360.21		4.022E-01	6.819E-01	1.177E+00	8.848E-02	0.342
		1771.40		7.144E-02	1.442E-01	2.399E-01	1.450E-02	0.298
CO-57		122.06	*	1.173E-02	2.038E-02	3.346E-02	1.982E-03	0.351
		136.48		7.226E-02	1.667E-01	2.702E-01	1.768E-02	0.267
CO-58		810.76	*	-2.563E-02	2.627E-02	3.986E-02	3.935E-03	-0.643
FE-59		142.65		2.575E+00	2.244E+00	3.710E+00	2.041E-01	0.694
		192.34		-5.518E-01	6.985E-01	1.129E+00	1.310E-01	-0.489
		1099.22	*	-8.162E-02	6.097E-02	9.014E-02	7.420E-03	-0.906
		1291.56		2.915E-03	8.301E-02	1.365E-01	1.148E-02	0.021
CO-60		1173.22		1.517E-02	2.935E-02	5.045E-02	2.788E-03	0.301
		1332.49	*	-6.642E-03	2.719E-02	4.340E-02	3.279E-03	-0.153
ZN-65		1115.52	*	-1.971E-02	8.108E-02	1.127E-01	7.937E-03	-0.175
GE-68		1077.35	*	4.684E-01	8.959E-01	1.548E+00	1.229E-01	0.303
AS-73		53.44	*	-3.165E-01	9.468E-01	1.573E+00	1.247E-01	-0.201
AS-74		595.88	*	9.929E-03	6.440E-02	1.052E-01	7.560E-03	0.094
		634.78		-4.876E-02	2.494E-01	3.959E-01	2.947E-02	-0.123
SE-75		66.05		-3.261E+00	5.035E+00	7.269E+00	7.199E-01	-0.449
		96.73		-4.088E-01	7.442E-01	1.050E+00	1.385E-01	-0.389
		121.11		-9.992E-02	1.107E-01	1.704E-01	1.590E-02	-0.586
		136.00		1.761E-02	3.131E-02	5.099E-02	2.904E-03	0.345
		198.60		-3.041E-01	1.428E+00	2.366E+00	1.605E-01	-0.129
		264.65	*	-6.511E-03	3.555E-02	5.027E-02	2.875E-03	-0.130
		279.53		6.423E-02	8.316E-02	1.398E-01	8.639E-03	0.459
		303.91		-1.143E+00	1.733E+00	2.328E+00	2.214E-01	-0.491

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77	+	400.65		-1.346E-01	1.861E-01	2.994E-01	2.728E-02	-0.449
		87.88		5.414E+02	1.389E+02	2.040E+02	1.885E+01	2.653
		200.40		1.139E+02	8.850E+01	1.539E+02	8.292E+00	0.740
	+	239.00		1.881E+02	1.436E+01	2.155E+01	1.199E+00	8.727
		249.79		2.096E+01	3.536E+01	5.951E+01	3.336E+00	0.352
		281.68		-7.331E+01	4.855E+01	7.305E+01	4.169E+00	-1.003
		297.23		1.859E+02	4.509E+01	6.273E+01	3.601E+00	2.964
		303.76		-6.775E+01	1.040E+02	1.399E+02	8.051E+00	-0.484
		439.47		1.132E+00	6.953E+01	1.156E+02	7.045E+00	0.010
		484.57		-8.103E+01	1.149E+02	1.811E+02	1.162E+01	-0.447
		520.65	*	1.399E-01	5.058E+00	8.297E+00	5.535E-01	0.017
		574.64		-5.186E+01	1.055E+02	1.606E+02	1.131E+01	-0.323
		578.91		5.259E+01	4.794E+01	7.355E+01	5.201E+00	0.715
		585.48		1.001E+03	1.501E+02	2.605E+02	1.853E+01	3.843
		755.35		1.856E+01	7.901E+01	1.331E+02	1.196E+01	0.139
		817.79		-3.196E+01	6.258E+01	9.887E+01	9.854E+00	-0.323
SR-82		698.33		-7.961E+00	2.315E+01	3.785E+01	3.082E+00	-0.210
		776.49	*	-1.236E-01	2.978E-01	4.055E-01	3.777E-02	-0.305
		1395.20		-6.176E+00	7.490E+00	1.105E+01	8.236E-01	-0.559
RB-83		520.41	*	-8.153E-04	4.718E-02	7.716E-02	5.146E-03	-0.011
		529.64		7.656E-03	7.336E-02	1.207E-01	8.129E-03	0.063
		552.65		-9.633E-02	1.343E-01	2.078E-01	1.432E-02	-0.464
RB-84		881.50	*	-2.582E-03	4.778E-02	7.783E-02	8.578E-03	-0.033
KR-85		513.99	*	1.500E+01	5.877E+00	9.788E+00	6.484E-01	1.532
SR-85		513.99	*	7.591E-02	2.975E-02	4.954E-02	3.282E-03	1.532
RB-86		1076.63	*	-5.087E-02	5.440E-01	9.015E-01	7.176E-02	-0.056
Y-88		898.02		-7.162E-03	2.845E-02	4.552E-02	5.160E-03	-0.157
		1836.01	*	-1.283E-03	2.421E-02	3.936E-02	2.242E-03	-0.033
ZR-88		392.90	*	-1.328E-02	2.148E-02	3.482E-02	2.003E-03	-0.381
Y-91		1204.90	*	5.767E+00	1.262E+01	2.150E+01	1.271E+00	0.268
NB-94		702.63	*	6.212E-03	2.370E-02	4.017E-02	3.295E-03	0.155
		871.10		5.428E-03	2.335E-02	3.890E-02	4.219E-03	0.140
NB-95		765.79	*	7.038E-02	3.655E-02	5.934E-02	5.428E-03	1.186
NB-95M		235.69	*	9.459E-02	1.006E-01	1.527E-01	1.120E-02	0.619
ZR-95		724.18		1.451E-01	8.061E-02	1.303E-01	1.208E-02	1.114
		756.15	*	3.514E-02	4.861E-02	8.422E-02	8.287E-03	0.417
NB-97		657.90	*	8.661E-03	4.861E-02	Half-Life	too short	
		1024.50		1.190E+00	4.861E-02	Half-Life	too short	
ZR-97		254.15		-1.199E+00	4.861E-02	Half-Life	too short	
		355.39		-1.337E-01	4.861E-02	Half-Life	too short	
		507.63	*	1.089E+00	4.861E-02	Half-Life	too short	
		602.52		-1.437E-01	4.861E-02	Half-Life	too short	
		1021.30		6.544E-01	4.861E-02	Half-Life	too short	
		1147.95		-1.041E+00	4.861E-02	Half-Life	too short	
		1362.66		-1.038E+00	4.861E-02	Half-Life	too short	
		1750.46		-6.372E-01	4.861E-02	Half-Life	too short	
MO-99		140.51		-9.990E+00	1.679E+01	2.516E+01	6.767E+00	-0.397
		181.06		2.278E+00	1.043E+01	1.560E+01	2.648E+00	0.146
		366.43		2.520E+01	4.046E+01	7.033E+01	4.063E+00	0.358

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TC-99M		739.58	*	3.896E+00	5.654E+00	9.785E+00	1.493E+00	0.398
		778.00		-6.402E+00	2.066E+01	2.846E+01	2.657E+00	-0.225
		140.51	*	-6.725E+08	2.066E+01	Half-Life too short		
		127.23		-8.475E-03	3.037E-02	4.261E-02	2.461E-03	-0.199
RH-101		198.01	*	-8.489E-03	2.596E-02	4.285E-02	2.303E-03	-0.198
		325.23		4.530E-02	1.900E-01	2.711E-01	1.567E-02	0.167
		418.52		-5.239E-02	2.036E-01	3.298E-01	1.960E-02	-0.159
		475.06	*	-1.498E-02	2.070E-02	3.265E-02	2.074E-03	-0.459
RH-102		631.29		3.930E-04	3.977E-02	6.406E-02	4.755E-03	0.006
		697.49		-3.162E-02	5.446E-02	8.768E-02	7.128E-03	-0.361
		766.84		2.055E-01	9.556E-02	1.564E-01	1.433E-02	1.314
		1046.59		-1.930E-02	8.265E-02	1.359E-01	1.173E-02	-0.142
RU-103		1112.84		4.894E-03	1.946E-01	2.776E-01	1.971E-02	0.018
		497.08	*	8.442E-03	2.911E-02	4.862E-02	6.313E-03	0.174
	+	610.33		1.021E+01	2.015E+00	2.038E+00	3.267E-01	5.009
	+	511.85		4.790E-01	2.371E-01	3.240E-01	2.142E-02	1.478
RH-106		621.84	*	-3.083E-02	2.236E-01	3.569E-01	4.490E-02	-0.086
		1050.47		1.412E+00	1.655E+00	2.922E+00	2.496E-01	0.483
	+	511.85		4.790E-01	2.371E-01	3.240E-01	2.142E-02	1.478
		621.84	*	-3.083E-02	2.236E-01	3.569E-01	2.626E-02	-0.086
RU-106		1050.47		1.412E+00	1.655E+00	2.922E+00	2.496E-01	0.483
	+	511.85		4.790E-01	2.371E-01	3.240E-01	2.142E-02	1.478
		621.84	*	-3.083E-02	2.236E-01	3.569E-01	2.626E-02	-0.086
		1050.47		1.412E+00	1.655E+00	2.922E+00	2.496E-01	0.483
AG-108M		433.93	*	1.078E-02	2.314E-02	3.942E-02	2.576E-03	0.274
		614.37		1.712E-02	3.075E-02	4.499E-02	3.466E-03	0.381
		722.95		6.879E-03	3.267E-02	4.775E-02	4.223E-03	0.144
		657.75	*	1.150E-02	2.536E-02	3.832E-02	3.022E-03	0.300
AG-110M		677.61		5.430E-02	2.093E-01	3.562E-01	2.889E-02	0.152
		706.67		-4.953E-02	1.474E-01	2.407E-01	2.048E-02	-0.206
		763.93		2.891E-02	1.355E-01	1.969E-01	1.841E-02	0.147
		884.67		2.258E-02	3.499E-02	5.980E-02	6.752E-03	0.378
IN-111		937.48		-8.576E-02	8.754E-02	1.277E-01	1.398E-02	-0.671
		1384.27		-1.064E-01	1.269E-01	1.897E-01	1.471E-02	-0.561
		171.28		-2.816E-01	5.542E-01	9.168E-01	4.824E-02	-0.307
		245.39	*	3.554E-02	6.600E-01	9.549E-01	5.336E-02	0.037
IN-113M		391.69	*	-1.920E-02	3.136E-02	5.089E-02	3.122E-03	-0.377
SN-113		391.69	*	-1.920E-02	3.136E-02	5.089E-02	3.122E-03	-0.377
IN-114M		190.27	*	-6.244E-03	1.480E-01	2.178E-01	1.163E-02	-0.029
CD-115		260.90		3.145E+00	6.640E+01	1.089E+02	6.148E+00	0.029
SN-117M		492.35		-2.485E+00	1.741E+01	2.839E+01	1.838E+00	-0.088
		527.90	*	8.338E-01	5.242E+00	8.657E+00	5.819E-01	0.096
		156.02		-1.941E+00	1.642E+00	2.668E+00	1.425E-01	-0.728
		158.56	*	4.345E-02	3.912E-02	6.863E-02	3.648E-03	0.633
SB-122		563.90	*	-5.489E-02	1.133E+00	1.837E+00	1.280E-01	-0.030
I-123		692.80		6.793E+00	2.281E+01	3.878E+01	3.127E+00	0.175
		159.00	*	1.307E+00	2.281E+01	Half-Life too short		
		528.96		1.742E+01	2.281E+01	Half-Life too short		
		159.00	*	3.020E-02	2.148E-02	3.798E-02	2.049E-03	0.795
TE-123M		159.00	*	3.020E-02	2.148E-02	3.798E-02	2.049E-03	0.795
I-124		602.71	*	4.414E-02	4.737E-01	6.657E-01	4.813E-02	0.066
		722.78		2.325E-01	2.765E+00	3.997E+00	3.396E-01	0.058
		1325.50		-6.747E+00	2.074E+01	3.291E+01	2.456E+00	-0.205

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-124		1376.25		3.667E+01	2.054E+01	3.780E+01	2.831E+00	0.970
		1509.49		8.422E+00	8.729E+00	1.575E+01	1.128E+00	0.535
		1691.02		3.617E-01	2.131E+00	3.600E+00	2.322E-01	0.100
		602.71		3.099E-03	3.325E-02	4.673E-02	3.380E-03	0.066
		645.85		2.231E-01	3.443E-01	5.778E-01	4.683E-02	0.386
		709.31		-5.889E-01	1.915E+00	3.132E+00	2.599E-01	-0.188
		713.82		3.000E-01	1.143E+00	1.936E+00	2.295E-01	0.155
		722.78		2.366E-02	2.813E-01	4.067E-01	3.533E-02	0.058
	+	968.20		1.873E+01	3.229E+00	5.512E+00	5.605E-01	3.398
		1045.16		-7.685E-01	1.720E+00	2.781E+00	2.408E-01	-0.276
		1325.50		-7.333E-01	2.254E+00	3.577E+00	2.669E-01	-0.205
		1368.21		-6.157E-01	1.324E+00	2.057E+00	2.631E-01	-0.299
		1436.60		-6.147E-01	2.648E+00	4.072E+00	2.998E-01	-0.151
		1691.02		8.681E-03	5.115E-02	8.642E-02	5.962E-03	0.100
SB-125		427.89	*	-1.217E-02	6.328E-02	1.042E-01	6.510E-03	-0.117
	+	463.38		9.022E-01	2.991E-01	4.349E-01	3.118E-02	2.074
		600.56		-1.063E-01	1.395E-01	2.078E-01	1.655E-02	-0.511
		635.90		2.998E-02	1.965E-01	3.193E-01	2.634E-02	0.094
TE-125M		109.28	*	-4.338E+00	7.673E+00	1.211E+01	1.065E+00	-0.358
I-126		388.63		8.777E-02	1.374E-01	2.373E-01	1.364E-02	0.370
	+	666.33	*	3.063E-01	2.567E-01	2.089E-01	1.606E-02	1.466
SB-126		753.82		1.545E-01	9.358E-01	1.570E+00	1.407E-01	0.098
		223.80		-5.654E-01	2.808E+00	4.610E+00	2.534E-01	-0.123
		278.60		3.068E+00	1.773E+00	3.087E+00	1.759E-01	0.994
	+	296.50		1.049E+01	1.748E+00	2.544E+00	1.460E-01	4.123
		414.70		4.069E-02	5.492E-02	8.407E-02	4.972E-03	0.484
		415.30		4.748E+00	4.367E+00	7.105E+00	4.205E-01	0.668
		555.20		-1.407E+00	2.520E+00	3.943E+00	2.724E-01	-0.357
		573.80		-3.046E-01	6.859E-01	1.081E+00	7.602E-02	-0.282
		593.00		-3.504E-01	6.542E-01	1.022E+00	7.323E-02	-0.343
		656.30		1.563E+00	2.208E+00	3.625E+00	2.750E-01	0.431
	+	666.33		1.276E-01	1.070E-01	8.703E-02	6.691E-03	1.466
		675.00		-6.421E-01	1.497E+00	2.075E+00	1.620E-01	-0.309
		695.00		1.705E-02	5.114E-02	8.710E-02	7.050E-03	0.196
		697.00		-6.013E-02	1.790E-01	2.929E-01	2.379E-02	-0.205
SB-127		720.50	*	4.985E-02	1.028E-01	1.542E-01	1.306E-02	0.323
		856.80		1.460E-01	3.948E-01	5.743E-01	6.091E-02	0.254
		989.30		7.590E-02	7.869E-01	1.284E+00	1.256E-01	0.059
		1034.80		-2.384E+00	5.843E+00	9.080E+00	8.062E-01	-0.263
		1213.00		-1.300E+00	2.924E+00	4.663E+00	2.804E-01	-0.279
		61.10		-1.507E+01	4.968E+01	7.339E+01	7.411E+00	-0.205
		252.40		-1.472E+00	2.684E+00	4.181E+00	1.732E+00	-0.352
		290.80		-4.669E+00	1.468E+01	2.038E+01	1.769E+00	-0.229
		411.60		5.447E+00	8.042E+00	1.218E+01	1.723E+00	0.447
		444.90		6.373E-01	5.618E+00	9.378E+00	9.951E-01	0.068
		473.00		-3.370E-01	9.712E-01	1.570E+00	1.745E-01	-0.215
		543.00		4.513E+00	9.293E+00	1.560E+01	2.044E+00	0.289
		603.60		2.088E+00	7.908E+00	1.127E+01	1.269E+00	0.185
		685.20	*	-1.375E-01	7.637E-01	1.263E+00	1.329E-01	-0.109

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
XE-127		698.50		-2.757E+00	8.578E+00	1.403E+01	2.148E+00	-0.196
		722.20		1.191E+01	1.724E+01	2.636E+01	2.821E+00	0.452
		783.80		2.549E+00	2.152E+00	3.713E+00	4.711E-01	0.686
		57.60		1.602E+00	6.090E+00	1.030E+01	7.938E-01	0.155
		145.22		4.531E-01	5.817E-01	9.486E-01	5.185E-02	0.478
I-131		172.10		-5.110E-02	8.581E-02	1.414E-01	7.442E-03	-0.361
		202.84	*	-1.872E-02	3.561E-02	5.821E-02	3.142E-03	-0.322
		374.96		9.170E-02	1.294E-01	2.253E-01	1.299E-02	0.407
		80.18		3.238E+00	4.759E+00	5.804E+00	5.055E-01	0.558
		284.30		-7.712E-01	9.991E-01	1.561E+00	9.926E-02	-0.494
TE-132		364.48	*	5.689E-02	6.975E-02	1.222E-01	7.875E-03	0.465
		636.97		6.676E-01	9.886E-01	1.662E+00	1.330E-01	0.402
		722.89		8.204E-01	4.938E+00	7.190E+00	6.146E-01	0.114
		49.72		3.381E+00	1.839E+01	3.124E+01	3.082E+00	0.108
		111.76		2.981E+00	1.940E+01	3.148E+01	2.804E+00	0.095
BA-133		116.30		3.151E+00	1.755E+01	2.845E+01	2.474E+00	0.111
		228.16	*	2.857E-01	4.035E-01	6.822E-01	9.559E-02	0.419
		53.15		-1.010E+00	4.124E+00	6.875E+00	5.455E-01	-0.147
		79.62		-2.800E-01	1.345E+00	1.789E+00	2.724E-01	-0.156
		81.00		5.028E-02	1.116E-01	1.338E-01	2.131E-02	0.376
I-133		276.40		4.871E-01	2.964E-01	4.917E-01	6.351E-02	0.991
		302.84		-4.068E-02	1.235E-01	1.706E-01	1.984E-02	-0.238
		356.01	*	-9.869E-03	3.302E-02	4.470E-02	5.164E-03	-0.221
		383.85		-2.118E-01	2.209E-01	3.465E-01	3.759E-02	-0.611
	+	510.53		3.676E-01	2.209E-01	Half-Life	too short	
CS-134		529.87	*	1.646E-04	2.209E-01	Half-Life	too short	
		706.58		-3.376E-02	2.209E-01	Half-Life	too short	
		856.28		-2.855E-02	2.209E-01	Half-Life	too short	
		875.33		2.153E-02	2.209E-01	Half-Life	too short	
	+	1236.41		3.105E-01	2.209E-01	Half-Life	too short	
I-135		1298.22		2.910E-02	2.209E-01	Half-Life	too short	
		475.35		-5.948E-01	1.356E+00	2.179E+00	1.384E-01	-0.273
		563.23		-3.817E-02	2.684E-01	4.327E-01	3.057E-02	-0.088
		569.32		7.703E-02	1.412E-01	2.315E-01	1.655E-02	0.333
		604.70		2.730E-02	2.844E-02	4.275E-02	3.108E-03	0.639
CS-135	+	795.84	*	1.157E-01	5.074E-02	7.262E-02	7.024E-03	1.593
		801.93		8.289E-02	3.184E-01	4.809E-01	4.691E-02	0.172
		1038.57		2.603E+00	2.588E+00	4.634E+00	4.077E-01	0.562
		1167.94		3.778E-01	1.750E+00	2.941E+00	1.668E-01	0.128
		1365.15		-3.689E-01	9.033E-01	1.412E+00	1.123E-01	-0.261
I-135		268.24	*	2.877E-01	1.328E-01	2.118E-01	1.601E-02	1.358
		288.45		7.225E+08	1.328E-01	Half-Life	too short	
		417.63		-2.865E+08	1.328E-01	Half-Life	too short	
		546.56		1.907E+08	1.328E-01	Half-Life	too short	
		836.80		8.532E+08	1.328E-01	Half-Life	too short	
I-135		1038.76		5.021E+08	1.328E-01	Half-Life	too short	
		1124.00		1.570E+09	1.328E-01	Half-Life	too short	
		1131.51		-7.823E+07	1.328E-01	Half-Life	too short	
		1260.41	*	6.413E+07	1.328E-01	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-136		1457.56		4.275E+10	1.328E-01	Half-Life	too short	
		1678.03		1.596E+08	1.328E-01	Half-Life	too short	
		1706.46		-1.046E+08	1.328E-01	Half-Life	too short	
		1791.20		2.606E+08	1.328E-01	Half-Life	too short	
		66.91		-7.785E-02	7.709E-01	1.143E+00	1.725E-01	-0.068
	+	86.29		4.305E+00	1.178E+00	1.632E+00	2.151E-01	2.638
		153.22		4.922E-01	4.722E-01	8.267E-01	5.689E-02	0.595
		163.89		-1.914E-02	7.610E-01	1.285E+00	8.779E-02	-0.015
		176.55		1.029E-01	2.550E-01	4.351E-01	2.636E-02	0.237
		273.65		-7.074E-01	3.720E-01	4.620E-01	3.009E-02	-1.531
		340.57		3.426E-01	1.171E-01	1.884E-01	1.159E-02	1.819
		818.51		-1.717E-02	4.698E-02	7.516E-02	7.503E-03	-0.228
		1048.07	*	1.636E-02	7.328E-02	1.244E-01	1.115E-02	0.131
		1235.34		7.802E-01	4.795E-01	7.597E-01	7.809E-02	1.027
BA-137M		661.65	*	-6.531E-03	2.722E-02	3.852E-02	2.937E-03	-0.170
CS-137		661.65	*	-6.904E-03	2.877E-02	4.072E-02	3.112E-03	-0.170
CE-139		165.85	*	-1.170E-02	2.225E-02	3.688E-02	1.936E-03	-0.317
BA-140		162.64		1.855E-02	5.334E-01	9.033E-01	5.476E-02	0.021
		304.84		-2.320E-01	1.014E+00	1.407E+00	3.839E-01	-0.165
		423.70		-6.357E-01	1.202E+00	1.912E+00	6.083E-01	-0.333
LA-140		537.32	*	-1.140E-01	1.715E-01	2.609E-01	8.536E-02	-0.437
	+	328.77		7.157E-01	2.777E-01	3.874E-01	2.510E-02	1.847
		432.53		9.065E-01	1.386E+00	2.382E+00	1.579E-01	0.380
		487.03		2.914E-02	8.798E-02	1.477E-01	1.054E-02	0.197
		751.79		-8.684E-01	1.071E+00	1.668E+00	1.639E-01	-0.520
		815.85		9.129E-02	1.994E-01	3.393E-01	3.668E-02	0.269
		867.82		-8.550E-01	1.023E+00	1.359E+00	1.517E-01	-0.629
		919.63		-1.277E+00	2.113E+00	2.869E+00	3.625E-01	-0.445
		925.24		7.965E-01	7.561E-01	1.320E+00	1.495E-01	0.603
		1596.49	*	-5.473E-02	5.601E-02	8.215E-02	5.636E-03	-0.666
CE-141		145.44	*	3.715E-02	5.250E-02	8.540E-02	4.875E-03	0.435
CE-143		57.37		1.955E-04	5.250E-02	Half-Life	too short	
		231.56		-3.018E-04	5.250E-02	Half-Life	too short	
		293.26	*	3.423E-04	5.250E-02	Half-Life	too short	
	+	350.59		1.474E-02	5.250E-02	Half-Life	too short	
		490.36		-1.123E-03	5.250E-02	Half-Life	too short	
		664.57		4.489E-04	5.250E-02	Half-Life	too short	
		721.93		4.285E-04	5.250E-02	Half-Life	too short	
CE-144		80.11		1.523E+00	2.424E+00	2.948E+00	2.552E-01	0.517
		133.54	*	-1.281E-01	1.807E-01	2.637E-01	3.729E-02	-0.486
PM-144		476.78		-2.511E-02	4.959E-02	7.940E-02	5.891E-03	-0.316
		618.01		5.863E-03	2.236E-02	3.670E-02	2.793E-03	0.160
		696.49	*	-4.032E-03	2.447E-02	4.048E-02	3.286E-03	-0.100
		778.57		-1.043E+00	1.950E+00	2.625E+00	2.454E-01	-0.397
PR-144		696.49	*	-2.730E-01	1.657E+00	2.741E+00	2.225E-01	-0.100
		1489.15		-8.357E+00	8.874E+00	1.267E+01	9.152E-01	-0.660
PM-146		453.90	*	-1.201E-02	3.011E-02	4.869E-02	4.332E-03	-0.247
		633.02		-6.769E-02	1.002E+00	1.604E+00	5.952E-01	-0.042
		735.90		-5.782E-03	9.567E-02	1.583E-01	4.532E-02	-0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	+	747.13		-1.122E-03	6.063E-02	1.005E-01	1.426E-02	-0.011
		91.11		6.781E-01	2.324E-01	4.329E-01	4.071E-02	1.567
		319.41		3.338E-01	2.377E+00	3.855E+00	2.226E-01	0.087
		439.89		2.411E-01	3.768E+00	6.279E+00	3.831E-01	0.038
PM-149	*	531.02		5.550E-02	3.618E-01	5.971E-01	8.331E-02	0.093
		285.90		-2.886E+00	4.654E+01	7.540E+01	1.066E+01	-0.038
EU-152		121.78		-2.773E-02	6.114E-02	9.626E-02	7.418E-03	-0.288
		244.69		-2.934E-02	2.830E-01	4.058E-01	2.267E-02	-0.072
		344.27	*	7.946E-03	9.287E-02	1.212E-01	7.911E-03	0.066
		443.98		2.934E-02	6.863E-01	1.141E+00	6.995E-02	0.026
		778.89		-1.339E-01	2.249E-01	3.007E-01	2.811E-02	-0.445
		867.32		-3.899E-01	6.722E-01	8.794E-01	9.482E-02	-0.443
		964.01		1.016E+00	3.142E-01	4.302E-01	4.407E-02	2.361
		1085.78		-2.310E-01	2.774E-01	4.322E-01	3.349E-02	-0.535
		1112.02		1.400E-01	2.684E-01	4.017E-01	2.860E-02	0.349
		1407.95		2.729E-01	1.788E-01	2.382E-01	1.769E-02	1.146
GD-153	+	69.67		-3.262E-01	1.673E+00	2.467E+00	2.002E-01	-0.132
		83.37		2.636E+01	1.519E+01	2.140E+01	1.901E+00	1.231
		97.43	*	6.188E-04	7.670E-02	1.115E-01	8.717E-03	0.006
EU-154		103.18		-1.120E-01	8.855E-02	1.359E-01	9.804E-03	-0.824
		123.07		3.342E-02	4.263E-02	7.032E-02	6.650E-03	0.475
		247.94		1.107E-01	3.149E-01	4.629E-01	4.361E-02	0.239
		591.81		-5.254E-01	4.640E-01	6.897E-01	7.336E-02	-0.762
		723.30		6.036E-02	1.403E-01	2.088E-01	1.968E-02	0.289
		756.87		4.772E-01	5.295E-01	9.249E-01	1.134E-01	0.516
		873.19		1.626E-01	2.031E-01	3.508E-01	4.886E-02	0.463
		996.32		2.120E-01	2.877E-01	4.291E-01	7.848E-02	0.494
EU-155		1004.76		-9.369E-02	1.673E-01	2.137E-01	2.628E-02	-0.438
		1274.45	*	-7.946E-02	8.677E-02	1.309E-01	1.308E-02	-0.607
		48.70		-2.536E+00	3.113E+00	5.093E+00	3.863E-01	-0.498
		60.01		3.055E+00	5.150E+00	7.948E+00	6.065E-01	0.384
		86.54		4.236E-01	1.088E-01	1.636E-01	1.507E-02	2.589
		105.31	*	6.115E-02	8.812E-02	1.464E-01	1.047E-02	0.418
TB-160	+	86.79		1.119E+00	2.870E-01	4.344E-01	3.974E-02	2.575
		197.04		-1.541E-01	4.301E-01	7.093E-01	3.809E-02	-0.217
		215.65		3.697E-02	5.467E-01	9.097E-01	4.966E-02	0.041
		298.57		1.778E-01	1.220E-01	1.445E-01	8.299E-03	1.231
		879.36	*	-7.375E-02	9.889E-02	1.520E-01	1.669E-02	-0.485
		962.29		1.104E+00	4.119E-01	7.013E-01	7.205E-02	1.574
		966.15		1.525E+00	2.558E-01	4.318E-01	4.407E-02	3.531
		1177.93		-7.241E-02	2.287E-01	3.688E-01	2.059E-02	-0.196
HO-166M		1271.85		-4.375E-01	4.877E-01	7.376E-01	4.985E-02	-0.593
		80.57		9.113E-02	3.163E-01	3.758E-01	3.265E-02	0.243
		184.41		1.185E-01	3.182E-02	5.329E-02	2.831E-03	2.223
		280.46		-7.121E-02	6.586E-02	1.017E-01	5.798E-03	-0.700
		410.95		2.401E-01	2.011E-01	3.154E-01	1.857E-02	0.761
		711.68	*	1.073E-02	4.180E-02	7.081E-02	5.903E-03	0.151
		752.31		-1.133E-01	1.862E-01	2.954E-01	2.641E-02	-0.384
		810.29		-5.605E-02	4.067E-02	5.931E-02	5.839E-03	-0.945

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		51.35		-7.946E+00	3.678E+01	6.149E+01	4.873E+00	-0.129
		52.39		-5.565E+00	1.815E+01	3.020E+01	2.399E+00	-0.184
		59.40		1.053E+01	2.908E+01	4.442E+01	3.372E+00	0.237
		66.72	*	9.680E+00	2.925E+01	4.418E+01	3.533E+00	0.219
LU-176	+	88.36		8.345E-01	2.141E-01	3.142E-01	2.885E-02	2.656
		201.83		-1.309E-02	2.235E-02	3.646E-02	1.966E-03	-0.359
		306.84	*	-3.192E-03	2.063E-02	3.050E-02	1.756E-03	-0.105
		401.10		-2.027E+00	4.883E+00	7.998E+00	4.649E-01	-0.253
LU-177		112.95		6.508E-01	1.202E+00	1.978E+00	1.274E-01	0.329
	+	208.36	*	2.117E+00	9.917E-01	1.474E+00	7.997E-02	1.436
LU-177M		52.97		-2.792E-01	1.853E+00	3.101E+00	2.462E-01	-0.090
		54.07		2.087E-01	9.397E-01	1.592E+00	1.259E-01	0.131
		61.30		-2.658E-01	1.592E+00	2.368E+00	1.830E-01	-0.112
		121.62		-1.723E-01	3.109E-01	4.874E-01	2.891E-02	-0.354
		147.16		-3.243E-01	5.520E-01	8.538E-01	4.646E-02	-0.380
		171.86		-2.120E-01	3.530E-01	5.815E-01	3.061E-02	-0.365
		218.09		6.420E-02	6.232E-01	1.038E+00	5.677E-02	0.062
		268.79		1.924E+00	6.930E-01	1.134E+00	6.429E-02	1.697
		319.02		2.244E-02	1.993E-01	3.229E-01	1.864E-02	0.070
		367.43		1.171E-01	5.828E-01	9.920E-01	5.729E-02	0.118
		413.65	*	4.017E-02	1.366E-01	2.027E-01	1.197E-02	0.198
HF-181		56.28		-9.394E-01	9.989E-01	1.614E+00	1.257E-01	-0.582
		57.53		1.766E-01	5.129E-01	8.700E-01	6.709E-02	0.203
		65.20		-3.066E-01	9.915E-01	1.458E+00	1.156E-01	-0.210
		133.02		4.508E-02	5.874E-02	8.588E-02	4.858E-03	0.525
		136.25		1.826E-01	3.597E-01	5.846E-01	3.273E-02	0.312
		345.85		-7.399E-02	1.705E-01	2.304E-01	1.333E-02	-0.321
		482.03	*	1.786E-03	3.048E-02	5.040E-02	3.226E-03	0.035
W-181		56.28		-3.723E-01	3.961E-01	6.399E-01	4.985E-02	-0.582
		57.53		7.004E-02	2.036E-01	3.453E-01	2.663E-02	0.203
		65.20	*	-1.207E-01	3.904E-01	5.741E-01	4.553E-02	-0.210
TA-182		67.75		-4.206E-02	1.090E-01	1.693E-01	1.360E-02	-0.249
		100.10		5.289E-02	1.494E-01	2.459E-01	1.849E-02	0.215
		152.43		1.194E-01	2.781E-01	4.469E-01	2.404E-02	0.267
		222.10		-1.004E-01	2.530E-01	4.121E-01	2.262E-02	-0.244
	+	1001.68		1.899E+00	2.107E+00	2.605E+00	2.487E-01	0.729
	+	1121.28		6.255E-01	2.009E-01	2.543E-01	1.752E-02	2.460
		1189.05		9.047E-02	2.128E-01	3.622E-01	2.071E-02	0.250
		1221.42	*	5.685E-02	1.339E-01	2.272E-01	1.390E-02	0.250
		1230.97		5.127E-02	3.722E-01	5.308E-01	3.310E-02	0.097
RE-183		57.98		2.058E-02	2.006E-01	3.373E-01	2.591E-02	0.061
		59.32		4.489E-02	1.185E-01	1.812E-01	1.377E-02	0.248
		67.20		-4.276E-02	2.080E-01	3.068E-01	2.459E-02	-0.139
		162.32	*	-4.923E-03	8.262E-02	1.395E-01	7.363E-03	-0.035
	+	208.81		2.134E+00	9.994E-01	1.477E+00	8.014E-02	1.445
		291.72		-4.808E-01	7.912E-01	1.076E+00	6.167E-02	-0.447
RE-184		57.98		7.638E-02	7.444E-01	1.252E+00	9.616E-02	0.061
		59.32		1.665E-01	4.396E-01	6.720E-01	5.106E-02	0.248
		67.20		-1.586E-01	7.717E-01	1.138E+00	9.124E-02	-0.139

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
OS-185		161.27		-1.137E-01	2.716E-01	4.530E-01	2.396E-02	-0.251
		216.55		6.334E-03	1.972E-01	3.277E-01	1.790E-02	0.019
		252.85	*	-6.307E-02	1.728E-01	2.787E-01	1.566E-02	-0.226
		318.01		-6.277E-02	3.446E-01	5.502E-01	3.176E-02	-0.114
		792.07		1.156E+00	9.126E-01	1.421E+00	1.358E-01	0.814
		903.28		8.202E-02	7.776E-01	1.145E+00	1.286E-01	0.072
		920.93		-2.068E-01	3.396E-01	4.968E-01	5.444E-02	-0.416
		59.72		5.120E-02	3.144E-01	4.757E-01	3.619E-02	0.108
		61.14		-4.876E-02	1.745E-01	2.582E-01	1.992E-02	-0.189
		69.30		3.017E-02	2.974E-01	4.443E-01	3.600E-02	0.068
		592.07		-1.513E+00	1.853E+00	2.833E+00	2.028E-01	-0.534
		646.12	*	1.224E-02	2.956E-02	4.886E-02	3.674E-03	0.251
		717.42		1.041E-01	6.553E-01	1.054E+00	8.875E-02	0.099
		874.81		3.435E-01	3.921E-01	6.821E-01	7.440E-02	0.504
		880.27		-3.416E-01	5.515E-01	8.572E-01	9.429E-02	-0.398
RE-188		155.03	*	1.306E-02	1.301E-01	2.214E-01	1.185E-02	0.059
		477.96		-2.673E-01	2.217E+00	3.630E+00	2.313E-01	-0.074
		633.10		-7.062E-03	1.990E+00	3.201E+00	2.380E-01	-0.002
W-188	+	63.58		1.225E+02	6.644E+01	9.384E+01	7.373E+00	1.305
		227.08		-8.078E-01	9.829E+00	1.588E+01	8.752E-01	-0.051
IR-192		290.67	*	-1.895E+00	6.260E+00	8.706E+00	4.987E-01	-0.218
	+	295.96		8.503E-01	1.420E-01	2.106E-01	1.228E-02	4.038
		308.46		7.462E-02	7.088E-02	1.203E-01	7.008E-03	0.620
		316.51	*	5.384E-03	2.588E-02	4.216E-02	2.445E-03	0.128
		468.07		5.321E-04	5.277E-02	7.566E-02	5.392E-03	0.007
AU-195		604.41		2.222E-01	3.781E-01	5.523E-01	6.711E-02	0.402
		612.46		1.228E+00	6.576E-01	1.031E+00	9.041E-02	1.191
		65.12		-8.649E-02	1.821E-01	2.682E-01	2.126E-02	-0.322
		66.83		-1.111E-02	9.840E-02	1.458E-01	1.166E-02	-0.076
	+	75.70		1.299E+00	2.706E-01	3.978E-01	3.341E-02	3.265
		98.88	*	3.919E-01	2.015E-01	3.335E-01	2.551E-02	1.175
	+	129.76		3.928E+00	2.654E+00	3.928E+00	2.248E-01	1.000
TL-200		367.94	*	-4.193E-05	2.654E+00	Half-Life	too short	
		579.30		2.101E-03	2.654E+00	Half-Life	too short	
		828.27		1.306E-03	2.654E+00	Half-Life	too short	
		1205.75		-5.926E-05	2.654E+00	Half-Life	too short	
TL-201		68.90		-7.085E-01	3.729E+00	5.503E+00	4.449E-01	-0.129
		70.82		5.108E-01	2.060E+00	3.091E+00	2.524E-01	0.165
		80.30		1.623E+00	4.442E+00	5.306E+00	4.601E-01	0.306
		135.34		4.873E+00	1.547E+01	2.496E+01	1.402E+00	0.195
TL-202		167.43	*	-1.369E+00	4.047E+00	6.752E+00	3.544E-01	-0.203
		68.90		-7.855E-02	4.135E-01	6.101E-01	4.932E-02	-0.129
		70.82		5.647E-02	2.277E-01	3.418E-01	2.791E-02	0.165
		80.30		1.795E-01	4.913E-01	5.869E-01	5.088E-02	0.306
HG-203		439.56	*	9.673E-04	4.488E-02	7.462E-02	4.549E-03	0.013
		70.83		2.662E-01	1.039E+00	1.560E+00	2.078E-01	0.171
		72.87		1.014E+00	5.655E-01	9.601E-01	1.245E-01	1.057
		82.60		1.434E+00	1.247E+00	1.542E+00	2.139E-01	0.930
		279.20	*	3.723E-02	3.089E-02	5.279E-02	3.201E-03	0.705

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-207		72.80		2.710E-01	1.650E-01	2.841E-01	2.344E-02	0.954
	+	74.97		7.238E-01	1.508E-01	2.056E-01	1.719E-02	3.520
	+	84.90		3.421E-01	1.971E-01	2.779E-01	2.501E-02	1.231
		569.67		8.733E-03	2.235E-02	3.631E-02	2.544E-03	0.241
		1063.62	*	1.325E-03	3.749E-02	6.277E-02	5.182E-03	0.021
TL-207		1770.23		1.777E-01	3.079E-01	4.890E-01	2.958E-02	0.363
		81.07		1.055E-01	2.456E-01	2.945E-01	2.569E-02	0.358
	+	83.78		2.256E-01	1.300E-01	1.855E-01	1.653E-02	1.216
		94.90		4.736E-01	2.256E-01	3.534E-01	2.877E-02	1.340
		122.32		1.198E+00	1.429E+00	2.366E+00	1.607E-01	0.506
		144.24		4.924E-01	5.843E-01	9.547E-01	6.662E-02	0.516
		154.21		2.219E-01	3.051E-01	5.294E-01	3.523E-02	0.419
	+	269.46		6.615E-01	2.073E-01	2.762E-01	1.641E-02	2.395
		323.87	*	3.022E-01	5.456E-01	7.940E-01	1.311E-01	0.381
	+	338.28		6.646E+00	1.435E+00	1.954E+00	2.056E-01	3.401
		445.03		5.620E-02	1.629E+00	2.707E+00	2.833E-01	0.021
		260.50		3.060E+00	7.189E+00	1.199E+01	6.766E-01	0.255
PO-209		262.80		-2.417E+01	1.971E+01	3.028E+01	1.711E+00	-0.798
		896.60	*	-1.080E+00	5.111E+00	8.204E+00	9.254E-01	-0.132
BI-210		46.50	*	2.307E+00	4.689E+00	8.070E+00	6.243E-01	0.286
PB-210		46.50	*	2.307E+00	4.689E+00	8.070E+00	6.243E-01	0.286
PO-210		46.50	*	2.307E+00	4.688E+00	8.070E+00	5.368E-01	0.286
PB-211		404.84	*	1.739E-01	7.885E-01	1.150E+00	7.168E-01	0.151
		427.08		-2.976E-01	1.413E+00	2.305E+00	1.425E+00	-0.129
		831.96		-1.804E-01	8.961E-01	1.442E+00	9.069E-01	-0.125
BI-212	+	727.18	*	1.345E+00	3.685E-01	5.039E-01	5.019E-02	2.669
		785.46		7.602E-01	1.298E+00	2.220E+00	2.099E-01	0.342
		1620.62		5.490E-01	1.018E+00	1.777E+00	1.201E-01	0.309
PO-215		81.07		1.055E-01	2.456E-01	2.945E-01	2.569E-02	0.358
	+	83.78		2.256E-01	1.300E-01	1.855E-01	1.653E-02	1.216
		94.90		4.736E-01	2.256E-01	3.534E-01	2.877E-02	1.340
		122.32		1.198E+00	1.429E+00	2.366E+00	1.607E-01	0.506
		144.24		4.924E-01	5.843E-01	9.547E-01	6.662E-02	0.516
		154.21		2.219E-01	3.051E-01	5.294E-01	3.523E-02	0.419
	+	269.46		6.615E-01	2.073E-01	2.762E-01	1.641E-02	2.395
		323.87	*	3.022E-01	5.456E-01	7.940E-01	1.311E-01	0.381
	+	338.28		6.646E+00	1.435E+00	1.954E+00	2.056E-01	3.401
		445.03		5.620E-02	1.629E+00	2.707E+00	2.833E-01	0.021
	+	271.23		8.488E-01	2.698E-01	3.498E-01	2.804E-02	2.426
		401.81	*	-1.485E-01	3.078E-01	4.873E-01	6.634E-02	-0.305
RN-219		549.76	*	4.241E+00	1.833E+01	3.032E+01	2.083E+00	0.140
RN-220		81.07		1.055E-01	2.456E-01	2.945E-01	2.569E-02	0.358
RA-223	+	83.78		2.256E-01	1.300E-01	1.855E-01	1.653E-02	1.216
		94.90		4.736E-01	2.256E-01	3.534E-01	2.877E-02	1.340
		122.32		1.198E+00	1.429E+00	2.366E+00	1.607E-01	0.506
		144.24		4.924E-01	5.843E-01	9.547E-01	6.662E-02	0.516
		154.21		2.219E-01	3.051E-01	5.294E-01	3.523E-02	0.419
	+	269.46		6.615E-01	2.073E-01	2.762E-01	1.641E-02	2.395
		323.87	*	3.022E-01	5.456E-01	7.940E-01	1.311E-01	0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227	+	338.28		6.646E+00	1.435E+00	1.954E+00	2.056E-01	3.401
		445.03		5.620E-02	1.629E+00	2.707E+00	2.833E-01	0.021
		79.80		7.410E-01	1.880E+00	2.246E+00	4.831E-01	0.330
		236.00		5.871E-01	2.123E-01	3.350E-01	3.456E-02	1.752
		256.20	*	-6.797E-03	2.927E-01	4.792E-01	6.656E-02	-0.014
TH-227		286.10		2.349E-02	1.149E+00	1.868E+00	2.152E-01	0.013
	+	299.80		2.719E+00	1.601E+00	1.959E+00	3.186E-01	1.388
		304.40		-8.079E-01	1.584E+00	2.148E+00	3.712E-01	-0.376
		334.20		3.946E-01	2.081E+00	2.747E+00	5.035E-01	0.144
		79.80		7.410E-01	1.880E+00	2.246E+00	4.892E-01	0.330
TH-229	+	94.00		1.739E+01	4.662E+00	3.687E+00	7.979E-01	4.716
		236.00		5.871E-01	2.101E-01	3.350E-01	2.982E-02	1.752
		256.20	*	-6.797E-03	2.927E-01	4.792E-01	8.071E-02	-0.014
		286.10		2.349E-02	1.149E+00	1.868E+00	1.871E+00	0.013
	+	299.80		2.719E+00	1.601E+00	1.959E+00	3.186E-01	1.388
PA-231		304.40		-8.079E-01	1.584E+00	2.148E+00	3.712E-01	-0.376
		334.20		3.946E-01	2.081E+00	2.747E+00	5.035E-01	0.144
	+	85.43		3.377E-01	1.946E-01	2.777E-01	2.511E-02	1.216
	+	88.47		4.804E-01	1.232E-01	1.809E-01	1.657E-02	2.656
		100.00		7.976E-02	1.572E-01	2.601E-01	1.958E-02	0.307
TH-231		193.63	*	1.162E-01	3.781E-01	6.393E-01	3.423E-02	0.182
		210.97		1.702E+00	6.711E-01	1.090E+00	5.925E-02	1.562
		283.67	*	-4.400E-01	1.116E+00	1.777E+00	2.442E-01	-0.248
	+	301.29		1.087E+00	6.257E-01	7.757E-01	8.085E-02	1.402
		81.07		1.055E-01	2.456E-01	2.945E-01	2.569E-02	0.358
U-231	+	83.78		2.256E-01	1.300E-01	1.855E-01	1.653E-02	1.216
		94.90		4.736E-01	2.256E-01	3.534E-01	2.877E-02	1.340
		122.32		1.198E+00	1.429E+00	2.366E+00	1.607E-01	0.506
		144.24		4.924E-01	5.843E-01	9.547E-01	6.662E-02	0.516
		154.21		2.219E-01	3.051E-01	5.294E-01	3.523E-02	0.419
PA-233	+	269.46		6.615E-01	2.073E-01	2.762E-01	1.641E-02	2.395
		323.87	*	3.022E-01	5.456E-01	7.940E-01	1.311E-01	0.381
	+	338.28		6.646E+00	1.435E+00	1.954E+00	2.056E-01	3.401
		445.03		5.620E-02	1.629E+00	2.707E+00	2.833E-01	0.021
	+	84.21		7.937E+00	4.574E+00	6.550E+00	5.859E-01	1.212
PA-234	+	92.29		1.403E+01	2.506E+00	3.259E+00	2.775E-01	4.306
		95.87	*	-7.353E-01	8.448E-01	1.174E+00	9.409E-02	-0.626
		108.00		-5.834E-01	1.385E+00	2.203E+00	1.498E-01	-0.265
	+	75.28		2.112E+01	5.154E+00	6.071E+00	9.235E-01	3.479
	+	86.59		6.888E+00	2.487E+00	2.670E+00	7.206E-01	2.580
PA-234	+	300.12		7.579E-01	4.408E-01	5.442E-01	7.300E-02	1.393
		311.98	*	-3.856E-02	4.907E-02	7.592E-02	4.651E-03	-0.508
		340.50		1.986E+00	7.563E-01	9.985E-01	2.293E-01	1.989
		398.62		7.204E-02	1.455E+00	2.440E+00	6.309E-01	0.030
		415.76		7.045E-01	1.230E+00	1.992E+00	4.107E-01	0.354
PA-234	+	63.00		3.596E+00	2.005E+00	2.831E+00	4.268E-01	1.270
		94.67		5.354E-01	1.768E-01	2.715E-01	3.284E-02	1.972
		98.44		1.679E-01	1.265E-01	1.357E-01	7.550E-02	1.237
		99.86		2.853E-01	4.014E-01	6.684E-01	5.042E-02	0.427

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		111.00		4.372E-02	1.555E-01	2.536E-01	2.721E-02	0.172
		131.20		6.214E-02	9.678E-02	1.407E-01	8.011E-03	0.442
		152.70		1.953E-01	2.676E-01	4.325E-01	6.772E-02	0.452
	+	186.00		5.301E+00	2.231E+00	2.142E+00	6.527E-01	2.475
		226.40		1.164E-01	3.117E-01	5.124E-01	5.850E-02	0.227
		227.20		-1.647E-02	3.360E-01	5.436E-01	2.996E-02	-0.030
		248.90		5.264E-01	6.535E-01	1.060E+00	2.273E-01	0.496
		293.70		4.754E+00	1.032E+00	1.287E+00	2.066E-01	3.695
		369.80		-4.840E-01	5.556E-01	8.746E-01	1.821E-01	-0.553
		568.70		3.314E-01	7.265E-01	1.185E+00	8.296E-02	0.280
		569.50		6.952E-02	1.978E-01	3.206E-01	2.246E-02	0.217
		574.00		-5.801E-01	1.057E+00	1.652E+00	1.163E-01	-0.351
		699.00		-2.332E-01	5.042E-01	8.153E-01	1.539E-01	-0.286
		706.10		1.038E-01	7.399E-01	1.242E+00	5.532E-01	0.084
		733.00		-1.924E-01	2.878E-01	3.785E-01	8.406E-02	-0.508
		742.81		-2.481E-01	9.614E-01	1.545E+00	1.039E+00	-0.161
	+	796.30		2.251E+00	1.143E+00	1.408E+00	3.857E-01	1.599
		805.60		4.958E-01	7.129E-01	1.204E+00	3.731E-01	0.412
		819.60		-6.338E-01	8.623E-01	1.281E+00	4.913E-01	-0.495
		826.30		-1.827E-01	5.885E-01	9.370E-01	4.221E-01	-0.195
		831.60		-2.667E-01	4.779E-01	7.453E-01	2.261E-01	-0.358
		876.40		-1.004E-02	5.725E-01	9.355E-01	9.638E-01	-0.011
		880.51		-1.019E-01	2.005E-01	3.147E-01	3.463E-02	-0.324
		883.24		1.620E-01	2.283E-01	3.475E-01	2.348E-01	0.466
		899.00		-4.600E-01	6.201E-01	8.966E-01	3.973E-01	-0.513
		925.00		8.837E-01	8.339E-01	1.458E+00	1.588E-01	0.606
		926.50		1.793E-02	1.295E-01	2.129E-01	5.565E-02	0.084
		946.00	*	-1.664E-01	2.224E-01	3.362E-01	6.632E-02	-0.495
		949.00		3.537E-01	3.092E-01	5.430E-01	5.703E-02	0.651
		980.50		5.991E-02	5.011E-01	8.195E-01	8.151E-02	0.073
		1394.10		-5.483E-01	8.869E-01	1.221E+00	7.931E-01	-0.449
PA-234M		766.42		2.067E+01	1.441E+01	1.637E+01	8.322E+00	1.263
	+	1001.03	*	4.342E+00	4.823E+00	6.152E+00	6.636E-01	0.706
U-235	+	89.95		2.918E+00	1.318E+00	1.613E+00	4.989E-01	1.809
	+	93.35		5.410E+00	1.736E+00	1.238E+00	3.461E-01	4.368
		105.00		1.019E+00	9.049E-01	1.447E+00	4.259E-01	0.704
		143.76	*	1.732E-01	1.817E-01	2.952E-01	4.781E-02	0.587
		163.35		5.568E-02	3.545E-01	6.025E-01	1.074E-01	0.092
	+	185.71		1.963E-01	5.797E-02	7.947E-02	4.227E-03	2.471
		205.31		-6.410E-02	4.621E-01	6.673E-01	1.192E-01	-0.096
NP-236		94.67		4.100E-01	1.293E-01	2.063E-01	1.686E-02	1.988
		98.44		1.269E-01	6.523E-02	1.026E-01	7.898E-03	1.237
		111.00		3.307E-02	1.176E-01	1.919E-01	1.262E-02	0.172
		160.31	*	-1.257E-03	6.097E-02	1.032E-01	5.465E-03	-0.012
NP-239		99.55		2.519E-01	1.334E-01	2.295E-01	1.739E-02	1.097
		117.00	*	1.240E-01	1.536E-01	2.549E-01	1.578E-02	0.487
	+	209.75		1.704E+00	7.981E-01	1.162E+00	6.312E-02	1.466
		228.18		1.204E-01	1.704E-01	2.894E-01	1.596E-02	0.416
		277.60		2.772E-01	1.394E-01	2.447E-01	1.394E-02	1.133

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-241		334.30		2.327E-01	1.179E+00	1.558E+00	9.011E-02	0.149
		59.54	*	5.611E-02	1.685E-01	2.570E-01	2.131E-02	0.218
CM-243		99.55		2.591E-01	1.373E-01	2.361E-01	1.789E-02	1.097
		103.76	*	9.258E-03	7.816E-02	1.273E-01	9.114E-03	0.073
		117.00		1.276E-01	1.581E-01	2.622E-01	1.623E-02	0.487
	+	209.75		1.679E+00	7.867E-01	1.146E+00	6.222E-02	1.466
		228.18		1.216E-01	1.722E-01	2.924E-01	1.613E-02	0.416
		277.60		2.795E-01	1.406E-01	2.466E-01	1.405E-02	1.133
AM-246		798.80		-1.128E-02	1.183E-01	1.663E-01	1.607E-02	-0.068
		1036.00		-1.573E-02	2.000E-01	3.328E-01	2.947E-02	-0.047
		1062.04		1.129E-01	1.637E-01	2.860E-01	2.371E-02	0.395
		1078.86	*	9.167E-02	1.009E-01	1.786E-01	1.413E-02	0.513
CM-247		278.00		1.232E+00	5.753E-01	1.015E+00	5.781E-02	1.214
		287.40		6.921E-01	9.249E-01	1.554E+00	8.889E-02	0.445
		402.60	*	1.462E-02	2.878E-02	4.522E-02	2.634E-03	0.323
		252.85		-2.378E-01	6.516E-01	1.051E+00	5.904E-02	-0.226
CF-249		333.44		1.603E-01	1.876E-01	2.087E-01	1.207E-02	0.768
		387.95	*	4.153E-02	2.861E-02	5.113E-02	2.939E-03	0.812
CF-251		176.60	*	3.897E-02	9.382E-02	1.602E-01	8.459E-03	0.243
		227.00		-2.742E-02	2.984E-01	4.820E-01	2.656E-02	-0.057
		285.00		-5.789E-01	1.305E+00	2.075E+00	1.186E-01	-0.279

VAX/VMS Nuclide Identification Report Generated

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
*                               DETECTOR DATA                               *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395013
* Acquisition date   : 2-FEB-2010 09:26:45 Detector SN#      :
* Detector ID        : GAM18 Sensitivity      : 5.000
* Geometry           : CAN Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000
* Elapsed real time  : 0 02:00:01.76 Half life ratio : 8.000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395013 Analyst initials: MXR1
* Batch Number       : 944966 Sample Quantity : 1.4534E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*                               QC DATA                               *
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 23-APR-2009 11:59:23 MS Isotope      :
* MSD DPM            : 0.000 MSD Isotope      :
* LCS DPM            : 0.000 LCS Isotope      :
* LCSD DPM           : 0.000 LCSD Isotope     :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.258E+01	2.031E+00	3.640E-01	0.000E+00
CD-109	3.573E+00	8.983E-01	1.108E+00	0.000E+00
SN-126	3.519E-01	8.846E-02	1.098E-01	0.000E+00
TL-208	4.523E-01	6.592E-02	4.626E-02	0.000E+00
BI-211	3.446E+00	3.799E-01	2.353E-01	0.000E+00
PB-212	1.673E+00	1.452E-01	6.968E-02	0.000E+00
PO-212	1.673E+00	1.452E-01	6.968E-02	0.000E+00
BI-214	9.658E-01	1.379E-01	8.032E-02	0.000E+00
PB-214	1.199E+00	1.457E-01	8.199E-02	0.000E+00
PO-214	1.199E+00	1.457E-01	8.199E-02	0.000E+00
PO-216	1.673E+00	1.452E-01	6.968E-02	0.000E+00
PO-218	1.199E+00	1.457E-01	8.199E-02	0.000E+00
RA-224	3.917E+00	1.151E+00	7.919E-01	0.000E+00
RA-226	9.658E-01	1.379E-01	8.032E-02	0.000E+00
AC-228	1.580E+00	2.927E-01	1.604E-01	0.000E+00
RA-228	1.580E+00	2.927E-01	1.604E-01	0.000E+00
TH-228	1.697E+00	1.472E-01	7.066E-02	0.000E+00
TH-230	9.658E-01	1.379E-01	8.032E-02	0.000E+00
TH-232	1.580E+00	2.927E-01	1.604E-01	0.000E+00
TH-234	3.085E+00	1.708E+00	2.214E+00	0.000E+00
U-234	9.658E-01	1.379E-01	8.032E-02	0.000E+00
NP-237	1.033E+00	3.334E-01	3.277E-01	0.000E+00
U-238	3.085E+00	1.708E+00	2.214E+00	0.000E+00
AM-243	4.033E-01	8.234E-02	8.590E-02	0.000E+00
ANH-511	9.611E-02	4.663E-02	3.592E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.864E-02	2.227E-01	3.849E-01	0.000E+00 NOT IDENT.
NA-22	-2.445E-02	3.006E-02	4.732E-02	0.000E+00 NOT IDENT.

NA-24	0.000E+00	1.486E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.583E-03	1.852E-02	3.058E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.260E-02	7.824E-02	0.000E+00	FAIL ABUN
SC-46	-1.480E-02	2.785E-02	4.532E-02	0.000E+00	FAIL ABUN
V-48	-7.270E-03	4.536E-02	7.502E-02	0.000E+00	NOT IDENT.
CR-51	8.988E-02	2.726E-01	4.738E-01	0.000E+00	NOT IDENT.
MN-52	5.515E-02	1.352E-01	2.353E-01	0.000E+00	NOT IDENT.
MN-54	-1.352E-03	2.778E-02	4.733E-02	0.000E+00	NOT IDENT.
CO-56	-4.034E-04	2.804E-02	4.780E-02	0.000E+00	FAIL ABUN
CO-57	1.173E-02	1.998E-02	3.556E-02	0.000E+00	NOT IDENT.
CO-58	-2.563E-02	2.574E-02	4.063E-02	0.000E+00	NOT IDENT.
FE-59	-8.162E-02	5.975E-02	9.124E-02	0.000E+00	NOT IDENT.
CO-60	-6.642E-03	2.665E-02	4.373E-02	0.000E+00	NOT IDENT.
ZN-65	-1.971E-02	7.946E-02	1.140E-01	0.000E+00	NOT IDENT.
GE-68	4.684E-01	8.780E-01	1.567E+00	0.000E+00	NOT IDENT.
AS-73	-3.165E-01	9.279E-01	1.701E+00	0.000E+00	NOT IDENT.
AS-74	9.929E-03	6.312E-02	1.080E-01	0.000E+00	NOT IDENT.
SE-75	-6.511E-03	3.484E-02	5.256E-02	0.000E+00	NOT IDENT.
BR-77	1.399E-01	4.957E+00	8.544E+00	0.000E+00	FAIL ABUN
SR-82	-1.236E-01	2.919E-01	4.138E-01	0.000E+00	NOT IDENT.
RB-83	-8.153E-04	4.623E-02	7.946E-02	0.000E+00	NOT IDENT.
RB-84	-2.582E-03	4.683E-02	7.919E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.759E+00	1.008E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.915E-02	5.103E-02	0.000E+00	NOT IDENT.
RB-86	-5.087E-02	5.331E-01	9.129E-01	0.000E+00	NOT IDENT.
Y-88	-1.283E-03	2.373E-02	3.936E-02	0.000E+00	NOT IDENT.
ZR-88	-1.328E-02	2.105E-02	3.609E-02	0.000E+00	NOT IDENT.
Y-91	5.767E+00	1.236E+01	2.171E+01	0.000E+00	NOT IDENT.
NB-94	6.212E-03	2.323E-02	4.108E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.582E-02	6.057E-02	0.000E+00	NOT IDENT.
NB-95M	9.459E-02	9.862E-02	1.600E-01	0.000E+00	NOT IDENT.
ZR-95	3.514E-02	4.764E-02	8.599E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.079E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.694E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.896E+00	5.541E+00	9.996E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.107E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-8.489E-03	2.544E-02	4.508E-02	0.000E+00	NOT IDENT.
RH-102	-1.498E-02	2.028E-02	3.369E-02	0.000E+00	NOT IDENT.
RU-103	8.442E-03	2.853E-02	5.012E-02	0.000E+00	FAIL ABUN
RH-106	-3.083E-02	2.191E-01	3.660E-01	0.000E+00	FAIL ABUN
RU-106	-3.083E-02	2.191E-01	3.660E-01	0.000E+00	FAIL ABUN
AG-108M	1.078E-02	2.268E-02	4.076E-02	0.000E+00	NOT IDENT.
AG-110M	1.150E-02	2.485E-02	3.925E-02	0.000E+00	NOT IDENT.
IN-111	3.554E-02	6.468E-01	9.999E-01	0.000E+00	NOT IDENT.
IN-113M	-1.920E-02	3.073E-02	5.274E-02	0.000E+00	NOT IDENT.
SN-113	-1.920E-02	3.073E-02	5.274E-02	0.000E+00	NOT IDENT.
IN-114M	-6.244E-03	1.451E-01	2.293E-01	0.000E+00	NOT IDENT.
CD-115	8.338E-01	5.137E+00	8.912E+00	0.000E+00	NOT IDENT.
SN-117M	4.345E-02	3.834E-02	7.255E-02	0.000E+00	NOT IDENT.
SB-122	-5.489E-02	1.110E+00	1.888E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.106E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	3.020E-02	2.105E-02	4.014E-02	0.000E+00	NOT IDENT.
I-124	4.414E-02	4.642E-01	6.832E-01	0.000E+00	NOT IDENT.
SB-124	8.681E-03	5.013E-02	8.658E-02	0.000E+00	FAIL ABUN
SB-125	-1.217E-02	6.202E-02	1.078E-01	0.000E+00	FAIL ABUN
TE-125M	-4.338E+00	7.520E+00	1.291E+01	0.000E+00	NOT IDENT.
I-126	0.000E+00	2.516E-01	2.139E-01	0.000E+00	FAIL ABUN
SB-126	4.985E-02	1.007E-01	1.577E-01	0.000E+00	FAIL ABUN
SB-127	-1.375E-01	7.484E-01	1.292E+00	0.000E+00	NOT IDENT.
XE-127	-1.872E-02	3.490E-02	6.120E-02	0.000E+00	NOT IDENT.
I-131	5.689E-02	6.836E-02	1.269E-01	0.000E+00	NOT IDENT.
TE-132	2.857E-01	3.954E-01	7.155E-01	0.000E+00	NOT IDENT.
BA-133	-9.869E-03	3.236E-02	4.643E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.544E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.973E-02	7.406E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.301E-01	2.214E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.759E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.636E-02	7.181E-02	1.261E-01	0.000E+00	FAIL ABUN
BA-137M	-6.531E-03	2.668E-02	3.945E-02	0.000E+00	NOT IDENT.
CS-137	-6.904E-03	2.820E-02	4.171E-02	0.000E+00	NOT IDENT.
CE-139	-1.170E-02	2.180E-02	3.895E-02	0.000E+00	NOT IDENT.
BA-140	-1.140E-01	1.680E-01	2.685E-01	0.000E+00	NOT IDENT.
LA-140	-5.473E-02	5.489E-02	8.242E-02	0.000E+00	FAIL ABUN
CE-141	3.715E-02	5.145E-02	9.044E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.935E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.281E-01	1.770E-01	2.798E-01	0.000E+00	NOT IDENT.
PM-144	-4.032E-03	2.398E-02	4.141E-02	0.000E+00	NOT IDENT.
PR-144	-2.730E-01	1.624E+00	2.804E+00	0.000E+00	NOT IDENT.

PM-146	-1.201E-02	2.951E-02	5.030E-02	0.000E+00	NOT IDENT.
ND-147	5.550E-02	3.546E-01	6.146E-01	0.000E+00	FAIL ABUN
PM-149	-2.886E+00	4.561E+01	7.869E+01	0.000E+00	NOT IDENT.
EU-152	7.946E-03	9.101E-02	1.260E-01	0.000E+00	FAIL ABUN
GD-153	6.188E-04	7.517E-02	1.191E-01	0.000E+00	FAIL ABUN
EU-154	-7.946E-02	8.504E-02	1.321E-01	0.000E+00	NOT IDENT.
EU-155	6.115E-02	8.636E-02	1.561E-01	0.000E+00	FAIL ABUN
TB-160	-7.375E-02	9.692E-02	1.546E-01	0.000E+00	FAIL ABUN
HO-166M	1.073E-02	4.097E-02	7.240E-02	0.000E+00	NOT IDENT.
TM-171	9.680E+00	2.867E+01	4.757E+01	0.000E+00	NOT IDENT.
LU-176	-3.192E-03	2.022E-02	3.178E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	9.718E-01	1.549E+00	0.000E+00	FAIL ABUN
LU-177M	4.017E-02	1.339E-01	2.098E-01	0.000E+00	NOT IDENT.
HF-181	1.786E-03	2.987E-02	5.198E-02	0.000E+00	NOT IDENT.
W-181	-1.207E-01	3.826E-01	6.183E-01	0.000E+00	NOT IDENT.
TA-182	5.685E-02	1.312E-01	2.294E-01	0.000E+00	FAIL ABUN
RE-183	-4.923E-03	8.097E-02	1.474E-01	0.000E+00	FAIL ABUN
RE-184	-6.307E-02	1.693E-01	2.917E-01	0.000E+00	NOT IDENT.
OS-185	1.224E-02	2.897E-02	5.007E-02	0.000E+00	NOT IDENT.
RE-188	1.306E-02	1.275E-01	2.342E-01	0.000E+00	NOT IDENT.
W-188	-1.895E+00	6.135E+00	9.083E+00	0.000E+00	FAIL ABUN
IR-192	5.384E-03	2.536E-02	4.390E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	1.974E-01	3.561E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.320E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.369E+00	3.966E+00	7.129E+00	0.000E+00	NOT IDENT.
TL-202	9.673E-04	4.399E-02	7.714E-02	0.000E+00	NOT IDENT.
HG-203	3.723E-02	3.027E-02	5.512E-02	0.000E+00	NOT IDENT.
BI-207	1.325E-03	3.674E-02	6.358E-02	0.000E+00	FAIL ABUN
TL-207	3.022E-01	5.347E-01	8.264E-01	0.000E+00	FAIL ABUN
PO-209	-1.080E+00	5.008E+00	8.344E+00	0.000E+00	NOT IDENT.
BI-210	2.307E+00	4.595E+00	8.753E+00	0.000E+00	NOT IDENT.
PB-210	2.307E+00	4.595E+00	8.753E+00	0.000E+00	NOT IDENT.
PO-210	2.307E+00	4.594E+00	8.753E+00	0.000E+00	NOT IDENT.
PB-211	1.739E-01	7.727E-01	1.191E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.611E-01	5.150E-01	0.000E+00	FAIL ABUN
PO-215	3.022E-01	5.347E-01	8.264E-01	0.000E+00	FAIL ABUN
RN-219	-1.485E-01	3.016E-01	5.048E-01	0.000E+00	FAIL ABUN
RN-220	4.241E+00	1.797E+01	3.118E+01	0.000E+00	NOT IDENT.
RA-223	3.022E-01	5.347E-01	8.264E-01	0.000E+00	FAIL ABUN
AC-227	-6.797E-03	2.868E-01	5.013E-01	0.000E+00	FAIL ABUN
TH-227	-6.797E-03	2.868E-01	5.013E-01	0.000E+00	FAIL ABUN
TH-229	1.162E-01	3.705E-01	6.729E-01	0.000E+00	FAIL ABUN
PA-231	-4.400E-01	1.094E+00	1.854E+00	0.000E+00	FAIL ABUN
TH-231	3.022E-01	5.347E-01	8.264E-01	0.000E+00	FAIL ABUN
U-231	-7.353E-01	8.279E-01	1.255E+00	0.000E+00	FAIL ABUN
PA-233	-3.856E-02	4.809E-02	7.908E-02	0.000E+00	FAIL ABUN
PA-234	-1.664E-01	2.179E-01	3.415E-01	0.000E+00	FAIL ABUN
PA-234M	4.342E+00	4.727E+00	6.240E+00	0.000E+00	FAIL ABUN
U-235	1.732E-01	1.781E-01	3.127E-01	0.000E+00	FAIL ABUN
NP-236	-1.257E-03	5.975E-02	1.090E-01	0.000E+00	NOT IDENT.
NP-239	1.240E-01	1.506E-01	2.712E-01	0.000E+00	FAIL ABUN
AM-241	5.611E-02	1.651E-01	2.773E-01	0.000E+00	NOT IDENT.
CM-243	9.258E-03	7.660E-02	1.358E-01	0.000E+00	FAIL ABUN
AM-246	9.167E-02	9.890E-02	1.809E-01	0.000E+00	NOT IDENT.
CM-247	1.462E-02	2.820E-02	4.684E-02	0.000E+00	NOT IDENT.
CF-249	4.153E-02	2.804E-02	5.300E-02	0.000E+00	NOT IDENT.
CF-251	3.897E-02	9.194E-02	1.689E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395013.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:26:45.
Sample ID          : G245395013 Sample quantity      : 1.45340E+02 GRAM
Detector name      : GAM18 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.76 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials   : MXR1
Abundance limit    : 75.00000 Sensitivity        : 5.00000
Batch ID           : 944966 Detector SN#         :
Matrix Spike ID    : LCS ID              : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1766	10.67*	1.894E+00	2.258E+01	2.258E+01	9.18
CD-109	88.03	326	3.72*	6.463E+00	3.500E+00	3.573E+00	25.65
SN-126	64.28	142	9.60	3.122E+00	1.221E+00	1.221E+00	55.66
	86.94	326	8.90	6.463E+00	1.463E+00	1.463E+00	47.90
	87.57	326	37.00*	6.463E+00	3.519E-01	3.519E-01	25.65
TL-208	277.35	-----	6.80	6.258E+00	-----	Line Not Found	-----
	510.84	160	21.60	4.311E+00	4.450E-01	4.450E-01	50.21
	583.14	580	84.20*	3.934E+00	4.523E-01	4.523E-01	14.87
	860.37	103	12.46	2.915E+00	7.320E-01	7.320E-01	49.07
BI-211	72.87	-----	1.27	4.622E+00	-----	Line Not Found	-----
	351.07	941	12.94*	5.451E+00	3.446E+00	3.446E+00	11.25
PB-212	74.81	508	10.70	4.934E+00	2.487E+00	2.487E+00	22.84
	77.11	727	18.00	5.261E+00	1.984E+00	1.984E+00	14.66
	87.30	326	8.00	6.463E+00	1.627E+00	1.627E+00	27.53
	238.63	1963	44.60*	6.792E+00	1.673E+00	1.673E+00	8.85
	300.09	116	3.41	5.984E+00	1.467E+00	1.467E+00	57.18
PO-212	74.81	508	10.70	4.934E+00	2.487E+00	2.487E+00	22.84
	77.11	727	18.00	5.261E+00	1.984E+00	1.984E+00	14.66
	87.30	326	8.00	6.463E+00	1.627E+00	1.627E+00	27.53
	115.19	-----	0.60	8.058E+00	-----	Line Not Found	-----
	238.63	1963	44.60*	6.792E+00	1.673E+00	1.673E+00	8.85
	300.09	116	3.41	5.984E+00	1.467E+00	1.467E+00	57.18
BI-214	609.31	660	46.30*	3.813E+00	9.658E-01	9.658E-01	14.57
	1120.29	182	15.10	2.334E+00	1.333E+00	1.333E+00	32.79
	1764.49	143	15.80	1.695E+00	1.380E+00	1.380E+00	21.63
PB-214	74.81	508	6.21	4.934E+00	4.286E+00	4.286E+00	22.11
	77.11	727	10.50	5.261E+00	3.401E+00	3.401E+00	16.52
	87.30	326	4.67	6.463E+00	2.788E+00	2.788E+00	26.79
	241.98	404	7.49	6.749E+00	2.066E+00	2.066E+00	30.51
	295.21	507	19.20	6.041E+00	1.128E+00	1.128E+00	17.80
	351.92	941	37.20*	5.451E+00	1.199E+00	1.199E+00	12.40
PO-214	74.81	508	6.21	4.934E+00	4.286E+00	4.286E+00	22.11

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	727	10.50	5.261E+00	3.401E+00	3.401E+00	16.52
	87.30	326	4.67	6.463E+00	2.788E+00	2.788E+00	26.79
	241.98	404	7.49	6.749E+00	2.066E+00	2.066E+00	30.51
	295.21	507	19.20	6.041E+00	1.128E+00	1.128E+00	17.80
	351.92	941	37.20*	5.451E+00	1.199E+00	1.199E+00	12.40
PO-216	74.81	508	10.70	4.934E+00	2.487E+00	2.487E+00	22.84
	77.11	727	18.00	5.261E+00	1.984E+00	1.984E+00	14.66
	87.30	326	8.00	6.463E+00	1.627E+00	1.627E+00	27.53
	238.63	1963	44.60*	6.792E+00	1.673E+00	1.673E+00	8.85
	300.09	116	3.41	5.984E+00	1.467E+00	1.467E+00	57.18
PO-218	74.81	508	6.21	4.934E+00	4.286E+00	4.286E+00	22.11
	77.11	727	10.50	5.261E+00	3.401E+00	3.401E+00	16.52
	87.30	326	4.67	6.463E+00	2.788E+00	2.788E+00	26.79
	241.98	404	7.49	6.749E+00	2.066E+00	2.066E+00	30.51
	295.21	507	19.20	6.041E+00	1.128E+00	1.128E+00	17.80
	351.92	941	37.20*	5.451E+00	1.199E+00	1.199E+00	12.40
RA-224	240.98	404	3.95*	6.749E+00	3.917E+00	3.917E+00	29.99
RA-226	609.31	660	46.30*	3.813E+00	9.658E-01	9.658E-01	14.57
	1120.29	182	15.10	2.334E+00	1.333E+00	1.333E+00	32.79
	1764.49	143	15.80	1.695E+00	1.380E+00	1.380E+00	21.63
AC-228	338.32	392	11.40	5.581E+00	1.592E+00	1.592E+00	44.91
	911.07	471	27.70*	2.780E+00	1.580E+00	1.580E+00	18.90
	969.11	313	16.60	2.639E+00	1.846E+00	1.846E+00	27.70
RA-228	338.32	392	11.40	5.581E+00	1.592E+00	1.592E+00	44.91
	911.07	471	27.70*	2.780E+00	1.580E+00	1.580E+00	18.90
	969.11	313	16.60	2.639E+00	1.846E+00	1.846E+00	27.70
TH-228	74.81	508	10.70	4.934E+00	2.487E+00	2.522E+00	20.87
	77.11	727	18.00	5.261E+00	1.984E+00	2.012E+00	14.66
	87.30	326	8.00	6.463E+00	1.627E+00	1.650E+00	25.65
	238.63	1963	44.60*	6.792E+00	1.673E+00	1.697E+00	8.85
	300.09	116	3.41	5.984E+00	1.467E+00	1.487E+00	81.70
TH-230	609.31	660	46.30*	3.813E+00	9.658E-01	9.658E-01	14.57
	1120.29	182	15.10	2.334E+00	1.333E+00	1.333E+00	32.79
	1764.49	143	15.80	1.695E+00	1.380E+00	1.380E+00	21.63
TH-232	338.32	392	11.40	5.581E+00	1.592E+00	1.592E+00	19.72
	911.07	471	27.70*	2.780E+00	1.580E+00	1.580E+00	18.90
	969.11	313	16.60	2.639E+00	1.846E+00	1.846E+00	27.70
TH-234	63.29	142	3.80*	3.122E+00	3.085E+00	3.085E+00	56.49
	92.38	656	5.41	6.956E+00	4.500E+00	4.500E+00	23.91
U-234	609.31	660	46.30*	3.813E+00	9.658E-01	9.658E-01	14.57
	1120.29	182	15.10	2.334E+00	1.333E+00	1.333E+00	32.79
	1764.49	143	15.80	1.695E+00	1.380E+00	1.380E+00	21.63
NP-237	86.50	326	12.60*	6.463E+00	1.033E+00	1.033E+00	32.92
	95.87	-----	2.60	7.180E+00	-----	Line Not Found	-----
U-238	63.29	142	3.80*	3.122E+00	3.085E+00	3.085E+00	56.49
	92.38	656	5.41	6.956E+00	4.500E+00	4.500E+00	17.86
AM-243	74.67	508	66.00*	4.934E+00	4.033E-01	4.033E-01	20.84
	86.72	326	0.34	6.463E+00	3.875E+01	3.875E+01	25.65
	117.66	-----	0.55	8.112E+00	-----	Line Not Found	-----

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	142.18	-----	0.13	8.232E+00	-----	Line Not Found	-----
ANH-511	511.00	160	100.00*	4.311E+00	9.611E-02	9.611E-02	49.51

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G245395013

Page : 4
Acquisition date : 2-FEB-2010 09:26:45

Total number of lines in spectrum 38
Number of unidentified lines 3
Number of lines tentatively identified by NID 35 92.11%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.258E+01	2.258E+01	0.207E+01	9.18	
CD-109	464.00D	1.02	3.500E+00	3.573E+00	0.917E+00	25.65	
SN-126	1.00E+05Y	1.00	3.519E-01	3.519E-01	0.903E-01	25.65	
TL-208	1.41E+10Y	1.00	4.523E-01	4.523E-01	0.673E-01	14.87	
BI-211	7.04E+08Y	1.00	3.446E+00	3.446E+00	0.388E+00	11.25	
PB-212	1.41E+10Y	1.00	1.673E+00	1.673E+00	0.148E+00	8.85	
PO-212	1.41E+10Y	1.00	1.673E+00	1.673E+00	0.148E+00	8.85	
BI-214	1600.00Y	1.00	9.658E-01	9.658E-01	1.407E-01	14.57	
PB-214	1600.00Y	1.00	1.199E+00	1.199E+00	0.149E+00	12.40	
PO-214	1600.00Y	1.00	1.199E+00	1.199E+00	0.149E+00	12.40	
PO-216	1.41E+10Y	1.00	1.673E+00	1.673E+00	0.148E+00	8.85	
PO-218	1600.00Y	1.00	1.199E+00	1.199E+00	0.149E+00	12.40	
RA-224	1.41E+10Y	1.00	3.917E+00	3.917E+00	1.175E+00	29.99	
RA-226	1600.00Y	1.00	9.658E-01	9.658E-01	1.407E-01	14.57	
AC-228	1.41E+10Y	1.00	1.580E+00	1.580E+00	0.299E+00	18.90	
RA-228	1.41E+10Y	1.00	1.580E+00	1.580E+00	0.299E+00	18.90	
TH-228	1.91Y	1.01	1.673E+00	1.697E+00	0.150E+00	8.85	
TH-230	4.47E+09Y	1.00	9.658E-01	9.658E-01	1.407E-01	14.57	
TH-232	1.41E+10Y	1.00	1.580E+00	1.580E+00	0.299E+00	18.90	
TH-234	4.47E+09Y	1.00	3.085E+00	3.085E+00	1.743E+00	56.49	
U-234	4.47E+09Y	1.00	9.658E-01	9.658E-01	1.407E-01	14.57	
NP-237	2.14E+06Y	1.00	1.033E+00	1.033E+00	0.340E+00	32.92	
U-238	4.47E+09Y	1.00	3.085E+00	3.085E+00	1.743E+00	56.49	
AM-243	7380.00Y	1.00	4.033E-01	4.033E-01	0.840E-01	20.84	
ANH-511	1.00E+09Y	1.00	9.611E-02	9.611E-02	4.758E-02	49.51	

Total Activity : 6.084E+01 6.094E+01

Grand Total Activity : 6.084E+01 6.094E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245395013

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Acquisition date : 2-FEB-2010 09:26:45

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	84.25	132	467	1.47	167.62	164	28	1.83E-02	56.9	6.12E+00	T
4	90.16	205	368	0.95	179.42	164	28	2.85E-02	32.9	6.72E+00	T
0	129.13	96	347	1.16	257.33	254	7	1.34E-02	67.3	8.25E+00	T
0	186.06	314	464	1.25	371.15	366	10	4.36E-02	29.0	7.65E+00	T
0	209.47	155	378	1.02	417.95	414	8	2.15E-02	46.5	7.25E+00	T
0	270.32	221	248	1.68	539.62	534	11	3.07E-02	30.8	6.35E+00	T
0	327.72	152	197	1.29	654.38	650	10	2.11E-02	38.3	5.69E+00	T
0	408.95	101	150	1.00	816.79	812	11	1.40E-02	50.8	4.97E+00	
0	462.80	165	145	1.53	924.47	919	11	2.29E-02	32.4	4.60E+00	T
0	666.35	81	168	8.03	1331.46	1321	21	1.12E-02	83.5	3.57E+00	T
0	726.67	205	101	1.82	1452.06	1444	15	2.85E-02	25.5	3.34E+00	T
0	770.36	133	199	5.94	1539.42	1530	25	1.84E-02	61.4	3.19E+00	
0	795.09	106	99	1.04	1588.88	1583	12	1.47E-02	42.8	3.11E+00	T
3	964.33	150	26	2.81	1927.28	1918	27	2.08E-02	29.2	2.65E+00	T
0	1001.32	36	70	2.14	2001.24	1996	14	5.03E-03	****	2.57E+00	T
0	1237.68	56	74	1.18	2473.89	2469	10	7.72E-03	65.4	2.15E+00	T
0	1408.85	42	27	1.92	2816.20	2805	18	5.89E-03	65.1	1.94E+00	T
0	1847.13	27	7	1.45	3692.72	3688	13	3.68E-03	55.5	1.66E+00	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395013.CNF;1
* Acquisition date   : 2-FEB-2010 09:26:45. Detector SN#      :
* Detector ID        : GAM18 Sensitivity      : 5.00000
* Geometry           : CAN Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.00000
* Elapsed real time  : 0 02:00:01.76 Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G245395013 Analyst initials: MXR1
* Batch Number       : 944966 Sample Quantity : 1.45340E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 23-APR-2009 11:59:23.2MS Isotope      :
* MSD ID             : MSD Isotope      :
* LCS ID             : 1032-A LCS Isotope :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.258E+01	2.073E+00	3.621E-01	2.748E-02	62.360
CD-109	3.573E+00	9.167E-01	1.035E+00	9.572E-02	3.451
SN-126	3.519E-01	9.026E-02	1.026E-01	9.454E-03	3.429
TL-208	4.523E-01	6.727E-02	4.504E-02	3.531E-03	10.043
BI-211	3.446E+00	3.877E-01	2.265E-01	1.454E-02	15.218
PB-212	1.673E+00	1.481E-01	6.651E-02	4.751E-03	25.159
PO-212	1.673E+00	1.481E-01	6.651E-02	4.751E-03	25.159
BI-214	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338
PB-214	1.199E+00	1.487E-01	7.892E-02	6.529E-03	15.190
PO-214	1.199E+00	1.487E-01	7.892E-02	6.529E-03	15.190
PO-216	1.673E+00	1.481E-01	6.651E-02	4.751E-03	25.159
PO-218	1.199E+00	1.487E-01	7.892E-02	6.529E-03	15.190
RA-224	3.917E+00	1.175E+00	7.559E-01	4.211E-02	5.181
RA-226	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338
AC-228	1.580E+00	2.987E-01	1.578E-01	2.090E-02	10.018
RA-228	1.580E+00	2.987E-01	1.578E-01	2.090E-02	10.018
TH-228	1.697E+00	1.502E-01	6.743E-02	4.817E-03	25.159
TH-230	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.580E+00	2.987E-01	1.578E-01	2.090E-02	10.018
TH-234	3.085E+00	1.743E+00	2.054E+00	3.622E-01	1.502
U-234	9.658E-01	1.407E-01	7.828E-02	6.993E-03	12.338
NP-237	1.033E+00	3.402E-01	3.060E-01	6.904E-02	3.376
U-238	3.085E+00	1.743E+00	2.054E+00	3.622E-01	1.502
AM-243	4.033E-01	8.402E-02	7.998E-02	6.674E-03	5.042
ANH-511	9.611E-02	4.758E-02	3.487E-02	2.303E-03	2.756

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.864E-02		2.273E-01	3.731E-01	2.703E-02	-0.050
NA-22	-2.445E-02		3.068E-02	4.691E-02	3.192E-03	-0.521
NA-24	-1.034E-01		7.581E-02	Half-Life too short		
AL-26	-1.583E-03		1.890E-02	3.057E-02	1.785E-03	-0.052
TI-44	3.661E-01	+	5.367E-02	7.292E-02	6.235E-03	5.021
SC-46	-1.480E-02		2.842E-02	4.456E-02	4.970E-03	-0.332
V-48	-7.270E-03		4.628E-02	7.393E-02	7.312E-03	-0.098
CR-51	8.988E-02		2.781E-01	4.551E-01	2.930E-02	0.197
MN-52	5.515E-02		1.380E-01	2.340E-01	1.724E-02	0.236
MN-54	-1.352E-03		2.835E-02	4.646E-02	4.759E-03	-0.029
CO-56	-4.034E-04		2.862E-02	4.693E-02	4.900E-03	-0.009
CO-57	1.173E-02		2.038E-02	3.346E-02	1.982E-03	0.351
CO-58	-2.563E-02		2.627E-02	3.986E-02	3.935E-03	-0.643
FE-59	-8.162E-02		6.097E-02	9.014E-02	7.420E-03	-0.906
CO-60	-6.642E-03		2.719E-02	4.340E-02	3.279E-03	-0.153
ZN-65	-1.971E-02		8.108E-02	1.127E-01	7.937E-03	-0.175
GE-68	4.684E-01		8.959E-01	1.548E+00	1.229E-01	0.303
AS-73	-3.165E-01		9.468E-01	1.573E+00	1.247E-01	-0.201
AS-74	9.929E-03		6.440E-02	1.052E-01	7.560E-03	0.094
SE-75	-6.511E-03		3.555E-02	5.027E-02	2.875E-03	-0.130
BR-77	1.399E-01		5.058E+00	8.297E+00	5.535E-01	0.017
SR-82	-1.236E-01		2.978E-01	4.055E-01	3.777E-02	-0.305
RB-83	-8.153E-04		4.718E-02	7.716E-02	5.146E-03	-0.011
RB-84	-2.582E-03		4.778E-02	7.783E-02	8.578E-03	-0.033
KR-85	1.500E+01		5.877E+00	9.788E+00	6.484E-01	1.532
SR-85	7.591E-02		2.975E-02	4.954E-02	3.282E-03	1.532
RB-86	-5.087E-02		5.440E-01	9.015E-01	7.176E-02	-0.056
Y-88	-1.283E-03		2.421E-02	3.936E-02	2.242E-03	-0.033
ZR-88	-1.328E-02		2.148E-02	3.482E-02	2.003E-03	-0.381
Y-91	5.767E+00		1.262E+01	2.150E+01	1.271E+00	0.268
NB-94	6.212E-03		2.370E-02	4.017E-02	3.295E-03	0.155
NB-95	7.038E-02		3.655E-02	5.934E-02	5.428E-03	1.186
NB-95M	9.459E-02		1.006E-01	1.527E-01	1.120E-02	0.619
ZR-95	3.514E-02		4.861E-02	8.422E-02	8.287E-03	0.417
NB-97	8.661E-03		1.061E-02	Half-Life too short		
ZR-97	1.089E+00		2.395E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	3.896E+00		5.654E+00	9.785E+00	1.493E+00	0.398
TC-99M	-6.725E+08		5.647E+08	Half-Life too short		
RH-101	-8.489E-03		2.596E-02	4.285E-02	2.303E-03	-0.198
RH-102	-1.498E-02		2.070E-02	3.265E-02	2.074E-03	-0.459
RU-103	8.442E-03		2.911E-02	4.862E-02	6.313E-03	0.174
RH-106	-3.083E-02		2.236E-01	3.569E-01	4.490E-02	-0.086
RU-106	-3.083E-02		2.236E-01	3.569E-01	2.626E-02	-0.086
AG-108M	1.078E-02		2.314E-02	3.942E-02	2.576E-03	0.274
AG-110M	1.150E-02		2.536E-02	3.832E-02	3.022E-03	0.300
IN-111	3.554E-02		6.600E-01	9.549E-01	5.336E-02	0.037
IN-113M	-1.920E-02		3.136E-02	5.089E-02	3.122E-03	-0.377
SN-113	-1.920E-02		3.136E-02	5.089E-02	3.122E-03	-0.377
IN-114M	-6.244E-03		1.480E-01	2.178E-01	1.163E-02	-0.029
CD-115	8.338E-01		5.242E+00	8.657E+00	5.819E-01	0.096
SN-117M	4.345E-02		3.912E-02	6.863E-02	3.648E-03	0.633
SB-122	-5.489E-02		1.133E+00	1.837E+00	1.280E-01	-0.030
I-123	1.307E+00		4.646E-01	Half-Life too short		
TE-123M	3.020E-02		2.148E-02	3.798E-02	2.049E-03	0.795
I-124	4.414E-02		4.737E-01	6.657E-01	4.813E-02	0.066
SB-124	8.681E-03		5.115E-02	8.642E-02	5.962E-03	0.100
SB-125	-1.217E-02		6.328E-02	1.042E-01	6.510E-03	-0.117
TE-125M	-4.338E+00		7.673E+00	1.211E+01	1.065E+00	-0.358
I-126	3.063E-01	+	2.567E-01	2.089E-01	1.606E-02	1.466
SB-126	4.985E-02		1.028E-01	1.542E-01	1.306E-02	0.323
SB-127	-1.375E-01		7.637E-01	1.263E+00	1.329E-01	-0.109
XE-127	-1.872E-02		3.561E-02	5.821E-02	3.142E-03	-0.322
I-131	5.689E-02		6.975E-02	1.222E-01	7.875E-03	0.465
TE-132	2.857E-01		4.035E-01	6.822E-01	9.559E-02	0.419
BA-133	-9.869E-03		3.302E-02	4.470E-02	5.164E-03	-0.221
I-133	1.646E-04		7.878E-04	Half-Life too short		
CS-134	1.157E-01	+	5.074E-02	7.262E-02	7.024E-03	1.593
CS-135	2.877E-01		1.328E-01	2.118E-01	1.601E-02	1.358
I-135	6.413E+07		8.976E+07	Half-Life too short		
CS-136	1.636E-02		7.328E-02	1.244E-01	1.115E-02	0.131
BA-137M	-6.531E-03		2.722E-02	3.852E-02	2.937E-03	-0.170
CS-137	-6.904E-03		2.877E-02	4.072E-02	3.112E-03	-0.170
CE-139	-1.170E-02		2.225E-02	3.688E-02	1.936E-03	-0.317
BA-140	-1.140E-01		1.715E-01	2.609E-01	8.536E-02	-0.437
LA-140	-5.473E-02		5.601E-02	8.215E-02	5.636E-03	-0.666
CE-141	3.715E-02		5.250E-02	8.540E-02	4.875E-03	0.435
CE-143	3.423E-04		5.069E-05	Half-Life too short		
CE-144	-1.281E-01		1.807E-01	2.637E-01	3.729E-02	-0.486
PM-144	-4.032E-03		2.447E-02	4.048E-02	3.286E-03	-0.100
PR-144	-2.730E-01		1.657E+00	2.741E+00	2.225E-01	-0.100
PM-146	-1.201E-02		3.011E-02	4.869E-02	4.332E-03	-0.247
ND-147	5.550E-02		3.618E-01	5.971E-01	8.331E-02	0.093
PM-149	-2.886E+00		4.654E+01	7.540E+01	1.066E+01	-0.038
EU-152	7.946E-03		9.287E-02	1.212E-01	7.911E-03	0.066

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	6.188E-04		7.670E-02	1.115E-01	8.717E-03	0.006
EU-154	-7.946E-02		8.677E-02	1.309E-01	1.308E-02	-0.607
EU-155	6.115E-02		8.812E-02	1.464E-01	1.047E-02	0.418
TB-160	-7.375E-02		9.889E-02	1.520E-01	1.669E-02	-0.485
HO-166M	1.073E-02		4.180E-02	7.081E-02	5.903E-03	0.151
TM-171	9.680E+00		2.925E+01	4.418E+01	3.533E+00	0.219
LU-176	-3.192E-03		2.063E-02	3.050E-02	1.756E-03	-0.105
LU-177	2.117E+00	+	9.917E-01	1.474E+00	7.997E-02	1.436
LU-177M	4.017E-02		1.366E-01	2.027E-01	1.197E-02	0.198
HF-181	1.786E-03		3.048E-02	5.040E-02	3.226E-03	0.035
W-181	-1.207E-01		3.904E-01	5.741E-01	4.553E-02	-0.210
TA-182	5.685E-02		1.339E-01	2.272E-01	1.390E-02	0.250
RE-183	-4.923E-03		8.262E-02	1.395E-01	7.363E-03	-0.035
RE-184	-6.307E-02		1.728E-01	2.787E-01	1.566E-02	-0.226
OS-185	1.224E-02		2.956E-02	4.886E-02	3.674E-03	0.251
RE-188	1.306E-02		1.301E-01	2.214E-01	1.185E-02	0.059
W-188	-1.895E+00		6.260E+00	8.706E+00	4.987E-01	-0.218
IR-192	5.384E-03		2.588E-02	4.216E-02	2.445E-03	0.128
AU-195	3.919E-01		2.015E-01	3.335E-01	2.551E-02	1.175
TL-200	-4.193E-05		6.735E-05	Half-Life too short		
TL-201	-1.369E+00		4.047E+00	6.752E+00	3.544E-01	-0.203
TL-202	9.673E-04		4.488E-02	7.462E-02	4.549E-03	0.013
HG-203	3.723E-02		3.089E-02	5.279E-02	3.201E-03	0.705
BI-207	1.325E-03		3.749E-02	6.277E-02	5.182E-03	0.021
TL-207	3.022E-01		5.456E-01	7.940E-01	1.311E-01	0.381
PO-209	-1.080E+00		5.111E+00	8.204E+00	9.254E-01	-0.132
BI-210	2.307E+00		4.689E+00	8.070E+00	6.243E-01	0.286
PB-210	2.307E+00		4.689E+00	8.070E+00	6.243E-01	0.286
PO-210	2.307E+00		4.688E+00	8.070E+00	5.368E-01	0.286
PB-211	1.739E-01		7.885E-01	1.150E+00	7.168E-01	0.151
BI-212	1.345E+00	+	3.685E-01	5.039E-01	5.019E-02	2.669
PO-215	3.022E-01		5.456E-01	7.940E-01	1.311E-01	0.381
RN-219	-1.485E-01		3.078E-01	4.873E-01	6.634E-02	-0.305
RN-220	4.241E+00		1.833E+01	3.032E+01	2.083E+00	0.140
RA-223	3.022E-01		5.456E-01	7.940E-01	1.311E-01	0.381
AC-227	-6.797E-03		2.927E-01	4.792E-01	6.656E-02	-0.014
TH-227	-6.797E-03		2.927E-01	4.792E-01	8.071E-02	-0.014
TH-229	1.162E-01		3.781E-01	6.393E-01	3.423E-02	0.182
PA-231	-4.400E-01		1.116E+00	1.777E+00	2.442E-01	-0.248
TH-231	3.022E-01		5.456E-01	7.940E-01	1.311E-01	0.381
U-231	-7.353E-01		8.448E-01	1.174E+00	9.409E-02	-0.626
PA-233	-3.856E-02		4.907E-02	7.592E-02	4.651E-03	-0.508
PA-234	-1.664E-01		2.224E-01	3.362E-01	6.632E-02	-0.495
PA-234M	4.342E+00	+	4.823E+00	6.152E+00	6.636E-01	0.706
U-235	1.732E-01		1.817E-01	2.952E-01	4.781E-02	0.587
NP-236	-1.257E-03		6.097E-02	1.032E-01	5.465E-03	-0.012
NP-239	1.240E-01		1.536E-01	2.549E-01	1.578E-02	0.487
AM-241	5.611E-02		1.685E-01	2.570E-01	2.131E-02	0.218

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	9.258E-03		7.816E-02	1.273E-01	9.114E-03	0.073
AM-246	9.167E-02		1.009E-01	1.786E-01	1.413E-02	0.513
CM-247	1.462E-02		2.878E-02	4.522E-02	2.634E-03	0.323
CF-249	4.153E-02		2.861E-02	5.113E-02	2.939E-03	0.812
CF-251	3.897E-02		9.382E-02	1.602E-01	8.459E-03	0.243

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395013          *
* Acquisition date   : 2-FEB-2010 09:26:45 Detector SN#      :              *
* Detector ID        : GAM18 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000   *
* Elapsed real time  : 0 02:00:01.76 Half life ratio : 8.000   *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395013 Analyst initials: MXR1          *
* Batch Number       : 944966 Sample Quantity : 1.4534E+02 GRAM      *
* Recovery           : 1.00000 Carrier Weight  : 0.00000          *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME  : 23-APR-2009 11:59:23 MS Isotope      :              *
* MSD DPM           : 0.000 MSD Isotope      :              *
* LCS DPM           : 0.000 LCS Isotope      :              *
* LCSD DPM          : 0.000 LCSD Isotope     :              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.258E+01	2.031E+00	1.821E-01	1.036E+00
CD-109	3.573E+00	8.983E-01	5.545E-01	4.583E-01
SN-126	3.519E-01	8.846E-02	5.495E-02	4.513E-02
TL-208	4.523E-01	6.592E-02	2.314E-02	3.363E-02
BI-211	3.446E+00	3.799E-01	1.177E-01	1.938E-01
PB-212	1.673E+00	1.452E-01	3.486E-02	7.407E-02
PO-212	1.673E+00	1.452E-01	3.486E-02	7.407E-02
BI-214	9.658E-01	1.379E-01	4.019E-02	7.037E-02
PB-214	1.199E+00	1.457E-01	4.102E-02	7.433E-02
PO-214	1.199E+00	1.457E-01	4.102E-02	7.433E-02
PO-216	1.673E+00	1.452E-01	3.486E-02	7.407E-02
PO-218	1.199E+00	1.457E-01	4.102E-02	7.433E-02
RA-224	3.917E+00	1.151E+00	3.962E-01	5.873E-01
RA-226	9.658E-01	1.379E-01	4.019E-02	7.037E-02
AC-228	1.580E+00	2.927E-01	8.023E-02	1.493E-01
RA-228	1.580E+00	2.927E-01	8.023E-02	1.493E-01
TH-228	1.697E+00	1.472E-01	3.535E-02	7.511E-02
TH-230	9.658E-01	1.379E-01	4.018E-02	7.037E-02
TH-232	1.580E+00	2.927E-01	8.023E-02	1.493E-01
TH-234	3.085E+00	1.708E+00	1.108E+00	8.714E-01
U-234	9.658E-01	1.379E-01	4.018E-02	7.037E-02
NP-237	1.033E+00	3.334E-01	1.639E-01	1.701E-01
U-238	3.085E+00	1.708E+00	1.108E+00	8.714E-01
AM-243	4.033E-01	8.234E-02	4.297E-02	4.201E-02
ANH-511	9.611E-02	4.663E-02	1.797E-02	2.379E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.864E-02	2.227E-01	1.926E-01	1.136E-01 NOT IDENT.
NA-22	-2.445E-02	3.006E-02	2.367E-02	1.534E-02 NOT IDENT.

NA-24	-1.034E+05	1.486E+05	0.000E+00	7.581E+04	SHORT HLIF
AL-26	-1.583E-03	1.852E-02	1.530E-02	9.449E-03	NOT IDENT.
TI-44	3.661E-01	5.260E-02	3.914E-02	2.684E-02	FAIL ABUN
SC-46	-1.480E-02	2.785E-02	2.267E-02	1.421E-02	FAIL ABUN
V-48	-7.270E-03	4.536E-02	3.753E-02	2.314E-02	NOT IDENT.
CR-51	8.988E-02	2.726E-01	2.370E-01	1.391E-01	NOT IDENT.
MN-52	5.515E-02	1.352E-01	1.177E-01	6.899E-02	NOT IDENT.
MN-54	-1.352E-03	2.778E-02	2.368E-02	1.417E-02	NOT IDENT.
CO-56	-4.034E-04	2.804E-02	2.391E-02	1.431E-02	FAIL ABUN
CO-57	1.173E-02	1.998E-02	1.779E-02	1.019E-02	NOT IDENT.
CO-58	-2.563E-02	2.574E-02	2.033E-02	1.313E-02	NOT IDENT.
FE-59	-8.162E-02	5.975E-02	4.565E-02	3.049E-02	NOT IDENT.
CO-60	-6.642E-03	2.665E-02	2.188E-02	1.360E-02	NOT IDENT.
ZN-65	-1.971E-02	7.946E-02	5.704E-02	4.054E-02	NOT IDENT.
GE-68	4.684E-01	8.780E-01	7.841E-01	4.479E-01	NOT IDENT.
AS-73	-3.165E-01	9.279E-01	8.510E-01	4.734E-01	NOT IDENT.
AS-74	9.929E-03	6.312E-02	5.404E-02	3.220E-02	NOT IDENT.
SE-75	-6.511E-03	3.484E-02	2.629E-02	1.777E-02	NOT IDENT.
BR-77	1.399E-01	4.957E+00	4.274E+00	2.529E+00	FAIL ABUN
SR-82	-1.236E-01	2.919E-01	2.070E-01	1.489E-01	NOT IDENT.
RB-83	-8.153E-04	4.623E-02	3.975E-02	2.359E-02	NOT IDENT.
RB-84	-2.582E-03	4.683E-02	3.962E-02	2.389E-02	NOT IDENT.
KR-85	1.500E+01	5.759E+00	5.044E+00	2.938E+00	NOT IDENT.
SR-85	7.591E-02	2.915E-02	2.553E-02	1.487E-02	NOT IDENT.
RB-86	-5.087E-02	5.331E-01	4.567E-01	2.720E-01	NOT IDENT.
Y-88	-1.283E-03	2.373E-02	1.969E-02	1.211E-02	NOT IDENT.
ZR-88	-1.328E-02	2.105E-02	1.805E-02	1.074E-02	NOT IDENT.
Y-91	5.767E+00	1.236E+01	1.086E+01	6.308E+00	NOT IDENT.
NB-94	6.212E-03	2.323E-02	2.055E-02	1.185E-02	NOT IDENT.
NB-95	7.038E-02	3.582E-02	3.030E-02	1.828E-02	NOT IDENT.
NB-95M	9.459E-02	9.862E-02	8.007E-02	5.032E-02	NOT IDENT.
ZR-95	3.514E-02	4.764E-02	4.302E-02	2.431E-02	NOT IDENT.
NB-97	8.661E+03	2.079E+04	0.000E+00	1.061E+04	SHORT HLIF
ZR-97	1.089E+06	4.694E+05	0.000E+00	2.395E+05	SHORT HLIF
MO-99	3.896E+00	5.541E+00	5.001E+00	2.827E+00	NOT IDENT.
TC-99M	-6.725E+14	1.107E+15	0.000E+00	5.647E+14	SHORT HLIF
RH-101	-8.489E-03	2.544E-02	2.255E-02	1.298E-02	NOT IDENT.
RH-102	-1.498E-02	2.028E-02	1.686E-02	1.035E-02	NOT IDENT.
RU-103	8.442E-03	2.853E-02	2.507E-02	1.456E-02	FAIL ABUN
RH-106	-3.083E-02	2.191E-01	1.831E-01	1.118E-01	FAIL ABUN
RU-106	-3.083E-02	2.191E-01	1.831E-01	1.118E-01	FAIL ABUN
AG-108M	1.078E-02	2.268E-02	2.039E-02	1.157E-02	NOT IDENT.
AG-110M	1.150E-02	2.485E-02	1.964E-02	1.268E-02	NOT IDENT.
IN-111	3.554E-02	6.468E-01	5.002E-01	3.300E-01	NOT IDENT.
IN-113M	-1.920E-02	3.073E-02	2.639E-02	1.568E-02	NOT IDENT.
SN-113	-1.920E-02	3.073E-02	2.639E-02	1.568E-02	NOT IDENT.
IN-114M	-6.244E-03	1.451E-01	1.147E-01	7.401E-02	NOT IDENT.
CD-115	8.338E-01	5.137E+00	4.458E+00	2.621E+00	NOT IDENT.
SN-117M	4.345E-02	3.834E-02	3.630E-02	1.956E-02	NOT IDENT.
SB-122	-5.489E-02	1.110E+00	9.444E-01	5.664E-01	NOT IDENT.
I-123	1.307E+06	9.106E+05	0.000E+00	4.646E+05	SHORT HLIF
TE-123M	3.020E-02	2.105E-02	2.008E-02	1.074E-02	NOT IDENT.
I-124	4.414E-02	4.642E-01	3.418E-01	2.368E-01	NOT IDENT.
SB-124	8.681E-03	5.013E-02	4.332E-02	2.557E-02	FAIL ABUN
SB-125	-1.217E-02	6.202E-02	5.391E-02	3.164E-02	FAIL ABUN
TE-125M	-4.338E+00	7.520E+00	6.458E+00	3.836E+00	NOT IDENT.
I-126	3.063E-01	2.516E-01	1.070E-01	1.284E-01	FAIL ABUN
SB-126	4.985E-02	1.007E-01	7.888E-02	5.140E-02	FAIL ABUN
SB-127	-1.375E-01	7.484E-01	6.466E-01	3.818E-01	NOT IDENT.
XE-127	-1.872E-02	3.490E-02	3.062E-02	1.780E-02	NOT IDENT.
I-131	5.689E-02	6.836E-02	6.347E-02	3.488E-02	NOT IDENT.
TE-132	2.857E-01	3.954E-01	3.580E-01	2.017E-01	NOT IDENT.
BA-133	-9.869E-03	3.236E-02	2.323E-02	1.651E-02	NOT IDENT.
I-133	1.646E+02	1.544E+03	0.000E+00	7.878E+02	SHORT HLIF
CS-134	1.157E-01	4.973E-02	3.705E-02	2.537E-02	FAIL ABUN
CS-135	2.877E-01	1.301E-01	1.108E-01	6.638E-02	NOT IDENT.
I-135	6.413E+13	1.759E+14	0.000E+00	8.976E+13	SHORT HLIF
CS-136	1.636E-02	7.181E-02	6.308E-02	3.664E-02	FAIL ABUN
BA-137M	-6.531E-03	2.668E-02	1.974E-02	1.361E-02	NOT IDENT.
CS-137	-6.904E-03	2.820E-02	2.087E-02	1.439E-02	NOT IDENT.
CE-139	-1.170E-02	2.180E-02	1.949E-02	1.112E-02	NOT IDENT.
BA-140	-1.140E-01	1.680E-01	1.343E-01	8.573E-02	NOT IDENT.
LA-140	-5.473E-02	5.489E-02	4.123E-02	2.801E-02	FAIL ABUN
CE-141	3.715E-02	5.145E-02	4.525E-02	2.625E-02	NOT IDENT.
CE-143	3.423E+02	9.935E+01	0.000E+00	5.069E+01	SHORT HLIF
CE-144	-1.281E-01	1.770E-01	1.400E-01	9.033E-02	NOT IDENT.
PM-144	-4.032E-03	2.398E-02	2.072E-02	1.224E-02	NOT IDENT.
PR-144	-2.730E-01	1.624E+00	1.403E+00	8.287E-01	NOT IDENT.

PM-146	-1.201E-02	2.951E-02	2.516E-02	1.506E-02	NOT IDENT.
ND-147	5.550E-02	3.546E-01	3.075E-01	1.809E-01	FAIL ABUN
PM-149	-2.886E+00	4.561E+01	3.937E+01	2.327E+01	NOT IDENT.
EU-152	7.946E-03	9.101E-02	6.304E-02	4.643E-02	FAIL ABUN
GD-153	6.188E-04	7.517E-02	5.958E-02	3.835E-02	FAIL ABUN
EU-154	-7.946E-02	8.504E-02	6.607E-02	4.339E-02	NOT IDENT.
EU-155	6.115E-02	8.636E-02	7.810E-02	4.406E-02	FAIL ABUN
TB-160	-7.375E-02	9.692E-02	7.735E-02	4.945E-02	FAIL ABUN
HO-166M	1.073E-02	4.097E-02	3.622E-02	2.090E-02	NOT IDENT.
TM-171	9.680E+00	2.867E+01	2.380E+01	1.463E+01	NOT IDENT.
LU-176	-3.192E-03	2.022E-02	1.590E-02	1.031E-02	FAIL ABUN
LU-177	2.117E+00	9.718E-01	7.751E-01	4.958E-01	FAIL ABUN
LU-177M	4.017E-02	1.339E-01	1.049E-01	6.831E-02	NOT IDENT.
HF-181	1.786E-03	2.987E-02	2.601E-02	1.524E-02	NOT IDENT.
W-181	-1.207E-01	3.826E-01	3.093E-01	1.952E-01	NOT IDENT.
TA-182	5.685E-02	1.312E-01	1.148E-01	6.696E-02	FAIL ABUN
RE-183	-4.923E-03	8.097E-02	7.373E-02	4.131E-02	FAIL ABUN
RE-184	-6.307E-02	1.693E-01	1.459E-01	8.639E-02	NOT IDENT.
OS-185	1.224E-02	2.897E-02	2.505E-02	1.478E-02	NOT IDENT.
RE-188	1.306E-02	1.275E-01	1.171E-01	6.503E-02	NOT IDENT.
W-188	-1.895E+00	6.135E+00	4.544E+00	3.130E+00	FAIL ABUN
IR-192	5.384E-03	2.536E-02	2.196E-02	1.294E-02	FAIL ABUN
AU-195	3.919E-01	1.974E-01	1.781E-01	1.007E-01	FAIL ABUN
TL-200	-4.193E+01	1.320E+02	0.000E+00	6.735E+01	SHORT HLIF
TL-201	-1.369E+00	3.966E+00	3.566E+00	2.023E+00	NOT IDENT.
TL-202	9.673E-04	4.399E-02	3.859E-02	2.244E-02	NOT IDENT.
HG-203	3.723E-02	3.027E-02	2.758E-02	1.545E-02	NOT IDENT.
BI-207	1.325E-03	3.674E-02	3.181E-02	1.874E-02	FAIL ABUN
TL-207	3.022E-01	5.347E-01	4.134E-01	2.728E-01	FAIL ABUN
PO-209	-1.080E+00	5.008E+00	4.174E+00	2.555E+00	NOT IDENT.
BI-210	2.307E+00	4.595E+00	4.379E+00	2.344E+00	NOT IDENT.
PB-210	2.307E+00	4.595E+00	4.379E+00	2.344E+00	NOT IDENT.
PO-210	2.307E+00	4.594E+00	4.379E+00	2.344E+00	NOT IDENT.
PB-211	1.739E-01	7.727E-01	5.957E-01	3.942E-01	NOT IDENT.
BI-212	1.345E+00	3.611E-01	2.577E-01	1.842E-01	FAIL ABUN
PO-215	3.022E-01	5.347E-01	4.134E-01	2.728E-01	FAIL ABUN
RN-219	-1.485E-01	3.016E-01	2.525E-01	1.539E-01	FAIL ABUN
RN-220	4.241E+00	1.797E+01	1.560E+01	9.167E+00	NOT IDENT.
RA-223	3.022E-01	5.347E-01	4.134E-01	2.728E-01	FAIL ABUN
AC-227	-6.797E-03	2.868E-01	2.508E-01	1.463E-01	FAIL ABUN
TH-227	-6.797E-03	2.868E-01	2.508E-01	1.463E-01	FAIL ABUN
TH-229	1.162E-01	3.705E-01	3.366E-01	1.890E-01	FAIL ABUN
PA-231	-4.400E-01	1.094E+00	9.277E-01	5.579E-01	FAIL ABUN
TH-231	3.022E-01	5.347E-01	4.134E-01	2.728E-01	FAIL ABUN
U-231	-7.353E-01	8.279E-01	6.278E-01	4.224E-01	FAIL ABUN
PA-233	-3.856E-02	4.809E-02	3.956E-02	2.454E-02	FAIL ABUN
PA-234	-1.664E-01	2.179E-01	1.708E-01	1.112E-01	FAIL ABUN
PA-234M	4.342E+00	4.727E+00	3.122E+00	2.412E+00	FAIL ABUN
U-235	1.732E-01	1.781E-01	1.564E-01	9.085E-02	FAIL ABUN
NP-236	-1.257E-03	5.975E-02	5.454E-02	3.049E-02	NOT IDENT.
NP-239	1.240E-01	1.506E-01	1.357E-01	7.682E-02	FAIL ABUN
AM-241	5.611E-02	1.651E-01	1.387E-01	8.425E-02	NOT IDENT.
CM-243	9.258E-03	7.660E-02	6.795E-02	3.908E-02	FAIL ABUN
AM-246	9.167E-02	9.890E-02	9.048E-02	5.046E-02	NOT IDENT.
CM-247	1.462E-02	2.820E-02	2.343E-02	1.439E-02	NOT IDENT.
CF-249	4.153E-02	2.804E-02	2.652E-02	1.430E-02	NOT IDENT.
CF-251	3.897E-02	9.194E-02	8.451E-02	4.691E-02	NOT IDENT.

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*                                     GEL Laboratories LLC                      *
*                                     2040 SAVAGE ROAD                        *
*                                     CHARLESTON ,SC 29417                     *
*                                     GAMMA SPECTROSCOPY BACKGROUND REPORT      *
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ENERGY	MDA COUNTS
46.50	315.4310
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46.50	315.4310
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49.72	317.8092
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52.39	328.4068
52.97	331.8645
53.15	338.4608
53.44	347.0321
54.07	315.9031
56.28	367.2863
56.28	367.2903
57.37	0.0000
57.53	324.5734
57.53	324.5752
57.60	329.2794
57.98	336.2128
57.98	336.2128
59.32	337.8163
59.32	337.8163
59.40	337.9114
59.54	338.0775
59.72	339.6887
60.01	310.6479
61.10	386.2708
61.14	386.3243
61.30	386.5373
63.00	370.4044
63.29	400.9558
63.29	400.9558
63.58	401.3460
64.28	403.2329
65.12	418.5937
65.20	418.7042
65.20	418.7042
66.05	418.4446
66.72	386.4359
66.83	418.0747
66.91	418.1816
67.20	424.3076
67.20	424.3076
67.75	431.9502
67.85	443.5819
68.90	455.4434
68.90	455.4434
69.30	435.8162
69.67	450.7756
70.82	449.4920
70.82	449.4920
70.83	449.5062
72.80	459.0433
72.87	459.1418
72.87	459.1418
74.67	461.6385
74.81	461.8318
74.81	461.8318
74.81	461.8318
74.81	461.8318
74.81	461.8318
74.81	461.8318
74.81	461.8318
74.97	462.0514
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75.70	463.0549
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77.11	464.9755

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77.11	464.9755
77.11	464.9755
77.11	464.9755
77.11	464.9755
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79.80	405.0574
80.11	405.4143
80.18	405.4952
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80.30	429.4929
80.57	429.8225
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81.07	406.5162
81.07	406.5162
81.07	406.5162
81.07	406.5162
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83.37	465.2791
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83.78	414.6112
83.78	414.6112
83.78	414.6112
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84.90	415.8821
85.43	416.4807
86.29	417.4492
86.50	417.6844
86.54	417.7285
86.59	417.7852
86.72	417.9302
86.79	418.0058
86.94	418.1760
87.30	418.5793
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87.57	418.8797
87.88	419.2242
88.03	419.3922
88.36	419.7577
88.47	419.8796
89.95	421.5139
91.11	422.7847
92.29	424.0703
92.38	424.1690
92.38	424.1690
93.35	425.2173
94.00	425.9189
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94.67	402.8778
94.90	403.1099
94.90	403.1099
94.90	403.1099
94.90	403.1099
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95.87	446.0508
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98.44	323.7597
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99.55	328.2939
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100.10	371.6569
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103.76	341.1093
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105.31	338.1068
108.00	379.6624
109.28	394.6713

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111.00	375.7985
111.76	388.2649
112.95	368.7988
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116.30	357.3797
117.00	320.9292
117.00	320.9292
117.66	338.8148
121.11	367.6313
121.62	370.2204
121.78	370.3438
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122.32	323.4511
122.32	323.4511
122.32	323.4511
122.32	323.4511
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144.24	397.2608
144.24	397.2608
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145.44	398.1337
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152.70	355.5324
153.22	346.5242
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154.21	360.2710
154.21	360.2710
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162.64	358.3684
163.35	348.1091
163.89	360.0067
165.85	362.9629
167.43	367.4898
171.28	345.4340
171.86	339.4362
172.10	337.7591
176.55	318.3197
176.60	318.3438
181.06	332.6442
184.41	347.6045
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186.00	359.8824
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198.60	372.2319
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202.84	375.4223
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209.75	329.9643
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216.55	310.2719
218.09	296.4272
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223.80	305.4692
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227.08	304.8137
227.20	303.8842
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228.18	286.6559
228.18	286.6559
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236.00	301.9535
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238.63	281.5299
238.63	281.5299
238.63	281.5299
239.00	281.6577
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241.98	282.6913
241.98	282.6913
241.98	282.6913
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248.90	250.0780
249.79	255.2247
252.40	271.1364
252.85	264.2208
252.85	264.2208
254.15	0.0000
256.20	271.3380
256.20	271.3380
260.50	242.1691
260.90	248.3896
262.80	268.3173
264.65	229.0107
268.24	210.2344
268.79	218.5830
269.46	225.1186
269.46	225.1186
269.46	225.1186
269.46	225.1186
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277.60	228.1976
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281.68	289.6441
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286.10	233.4463
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295.21	214.7776

295.21	214.7776
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299.80	195.4102
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300.09	192.0697
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303.91	228.6539
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304.40	230.4756
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323.87	189.7175
323.87	189.7175
323.87	189.7175
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334.20	208.7344
334.30	208.7547
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338.28	224.9740
338.28	224.9740
338.28	224.9740
338.32	224.9833
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338.32	224.9833
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351.92	177.5600
351.92	177.5600
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391.69	189.5499
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445.03	156.1940
445.03	156.1940
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513.99	121.4268
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546.56	0.0000
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569.50	119.4746
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602.71	151.4166
603.60	144.3636
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609.31	132.3214
609.31	132.3214
609.31	132.3214
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618.01	114.2890
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621.84	117.7764
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661.65	115.1675
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696.49	132.1387
697.00	135.9227
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911.07	102.2589
911.07	102.2589
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969.11	75.0345
969.11	75.0345
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1001.68	75.9633
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1038.76	0.0000
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1076.63	92.3398
1077.35	83.8783
1078.86	75.4381
1085.78	95.4695
1099.22	99.7119
1112.02	91.8021
1112.84	103.5162
1115.52	123.6646
1120.29	87.0391
1120.29	87.0391
1120.29	87.0391
1120.29	87.0391
1120.51	87.0454
1121.28	75.3470
1124.00	0.0000
1129.67	80.5986
1131.51	0.0000
1147.95	0.0000
1167.94	90.3695
1173.22	74.9509
1175.09	75.9706
1177.93	82.8655
1189.05	89.0322
1204.90	87.5163
1205.75	0.0000
1213.00	98.5875
1221.42	92.9148
1230.97	97.1592
1235.34	104.2419
1236.41	0.0000
1238.25	96.3843
1246.25	112.7286
1260.41	0.0000
1271.85	84.3311
1274.45	88.4143
1274.54	85.4032
1291.56	66.6514
1298.22	0.0000
1312.09	60.9626
1325.50	67.3213
1325.50	67.3213
1332.49	58.2604
1333.61	55.2110
1360.21	43.2715
1362.66	0.0000
1365.15	57.7773
1368.21	62.9892
1368.53	0.0000
1376.25	54.8540
1384.27	71.5750
1394.10	50.9688
1395.20	55.1461
1407.95	59.5168
1434.06	36.8079
1436.60	42.0954
1457.56	0.0000
1460.81	37.0740
1489.15	50.1604
1509.49	27.2256
1596.49	47.0261
1620.62	41.5132
1678.03	0.0000
1691.02	24.5453
1691.02	24.5453
1706.46	0.0000
1750.46	0.0000
1764.49	23.0773
1764.49	23.0773
1764.49	23.0773
1764.49	23.0773
1770.23	14.2196
1771.40	10.6676
1791.20	0.0000
1808.65	19.1600

1836.01

25.3624

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395013

Total Uranium Activity	9.2591E+00	ug/g
Total Uranium Counting Unc.	5.0820E+00	ug/g
Total Uranium Tpu	2.5929E-06	ug/g
Total Uranium Mda	3.2963E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON , SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 944966                SAMPLE ID   : G245395013
*  ANALYST       : MXR1                  DETECTOR    : GAM18
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00  COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 09:26:45.71  SAMPLE ALQT  : 145.340 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 8.886E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.112E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.434E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.181E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:28:19.18

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395014.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:27:14.
Sample ID          : G245395014      Sample quantity   : 1.69810E+02 GRAM
Detector name      : GAM19            Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00    Elapsed real time: 0 02:00:02.37  0.0%
Energy tolerance    : 1.50000 keV      Analyst Initials : MXR1
Abundance limit     : 75.00000          Sensitivity      : 5.00000
Batch ID           : 944966            Detector SN#      :
Matrix Spike ID     :                  LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.32*	4572	3216	1.24	126.51	121	13	6.35E-01	3.0	
2	2	74.86	501	2807	1.62	149.56	143	16	6.96E-02	20.6	1.15E+00
3	2	77.30	520	2445	1.44	154.45	143	16	7.22E-02	18.2	
4	0	83.88*	193	2573	0.95	167.59	165	8	2.68E-02	46.1	
5	0	92.67*	12364	3909	1.37	185.15	177	16	1.72E+00	1.5	
6	0	98.59	859	1290	1.27	196.99	193	9	1.19E-01	8.3	
7	0	112.35*	754	1666	1.25	224.49	218	11	1.05E-01	11.1	
8	0	143.52*	353	923	1.35	286.77	282	10	4.90E-02	17.1	
9	0	163.08	205	749	1.41	325.86	322	10	2.85E-02	25.9	
10	0	185.75*	2034	742	1.25	371.18	366	12	2.82E-01	3.5	
11	0	205.32	102	602	1.18	410.28	403	10	1.42E-02	46.1	
12	2	238.56*	1157	337	1.39	476.73	471	16	1.61E-01	4.1	3.83E-01
13	2	241.39	228	392	1.68	482.38	471	16	3.16E-02	21.2	
14	0	258.25	156	314	1.45	516.07	511	10	2.17E-02	22.8	
15	0	270.01	113	322	1.43	539.57	535	10	1.58E-02	31.0	
16	0	295.00*	346	336	1.56	589.52	583	12	4.81E-02	12.0	
17	0	300.21	72	210	1.33	599.94	596	8	1.01E-02	36.7	
18	0	327.64	77	244	1.30	654.76	651	11	1.08E-02	40.4	
19	0	338.26	224	247	1.33	675.99	671	10	3.11E-02	14.7	
20	0	351.78*	518	256	1.17	703.02	696	11	7.19E-02	7.5	
21	0	510.56*	148	212	2.12	1020.43	1012	18	2.06E-02	26.6	
22	0	568.60*	209	204	2.54	1136.46	1128	20	2.90E-02	18.5	
23	0	583.32*	327	158	1.50	1165.89	1160	14	4.54E-02	10.1	
24	0	609.40*	440	128	1.62	1218.02	1212	15	6.12E-02	7.5	
25	0	661.92*	53	196	1.44	1323.04	1315	16	7.40E-03	60.5	
26	0	727.59	121	99	1.87	1454.34	1448	14	1.69E-02	19.5	
27	0	743.27	92	101	1.16	1485.71	1481	11	1.27E-02	23.7	
28	0	766.48	365	162	1.84	1532.12	1523	18	5.07E-02	9.7	
29	0	787.40	107	132	6.21	1573.95	1565	19	1.48E-02	27.6	
30	0	861.03	68	81	1.59	1721.18	1715	14	9.45E-03	30.5	
31	0	911.56*	267	79	1.61	1822.24	1815	16	3.70E-02	9.7	
32	3	964.99	61	65	2.27	1929.10	1920	25	8.46E-03	31.3	1.90E+00
33	3	969.11	127	53	1.90	1937.34	1920	25	1.76E-02	14.5	
34	0	1001.28*	657	87	1.70	2001.68	1994	17	9.12E-02	5.1	
35	0	1120.50	101	49	2.31	2240.14	2235	12	1.40E-02	17.3	
36	0	1378.28	48	11	3.79	2755.85	2749	15	6.60E-03	21.2	
37	0	1461.10*	1182	21	1.92	2921.55	2913	17	1.64E-01	3.1	
38	0	1509.37	27	6	1.25	3018.15	3012	11	3.68E-03	25.9	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1765.25*	75	25	2.00	3530.23	3519	20	1.04E-02	20.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 2-FEB-2010 11:28:22

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395014.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:27:14
Sample ID        : G245395014 Sample quantity : 169.81 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA19 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.37 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00
    
```

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.096E+01	2.020E+00	4.413E-01	3.287E-02	47.503
NB-95	+	765.79	*	4.629E-01	9.567E-02	6.386E-02	4.512E-03	7.249
BA-137M	+	661.65	*	5.697E-02	6.904E-02	5.050E-02	2.941E-03	1.128
CS-137	+	661.65	*	6.023E-02	7.299E-02	5.339E-02	3.122E-03	1.128
TL-208		277.35		-1.001E-01	3.537E-01	5.893E-01	6.218E-02	-0.170
	+	510.84		5.326E-01	2.882E-01	2.053E-01	2.096E-02	2.594
	+	583.14	*	3.361E-01	7.158E-02	5.497E-02	3.738E-03	6.114
	+	860.37		6.578E-01	4.056E-01	3.860E-01	3.456E-02	1.704
BI-211		72.87		1.271E+01	5.718E+00	8.485E+00	6.648E-01	1.498
	+	351.07	*	2.334E+00	3.786E-01	3.087E-01	1.971E-02	7.563
PB-212	+	74.81		2.040E+00	8.780E-01	9.041E-01	1.109E-01	2.256
	+	77.11		1.200E+00	4.472E-01	5.145E-01	4.156E-02	2.333
		87.30		3.920E-02	1.078E+00	1.117E+00	1.494E-01	0.035
	+	238.63	*	1.143E+00	1.246E-01	9.040E-02	6.524E-03	12.646
	+	300.09		1.103E+00	8.139E-01	1.162E+00	9.595E-02	0.949
PO-212	+	74.81		2.040E+00	8.780E-01	9.041E-01	1.109E-01	2.256
	+	77.11		1.200E+00	4.472E-01	5.145E-01	4.156E-02	2.333
		87.30		3.920E-02	1.078E+00	1.117E+00	1.494E-01	0.035
		115.19		1.675E+01	5.768E+00	8.801E+00	5.603E-01	1.903
	+	238.63	*	1.143E+00	1.246E-01	9.040E-02	6.524E-03	12.646
	+	300.09		1.103E+00	8.139E-01	1.162E+00	9.595E-02	0.949
BI-214	+	609.31	*	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
	+	1120.29		1.012E+00	3.622E-01	4.020E-01	3.677E-02	2.518
	+	1764.49		1.020E+00	4.194E-01	2.564E-01	1.554E-02	3.978
PB-214	+	74.81		3.514E+00	1.500E+00	1.558E+00	1.691E-01	2.256
	+	77.11		2.058E+00	7.825E-01	8.820E-01	9.794E-02	2.333
		87.30		6.715E-02	1.847E+00	1.913E+00	2.252E-01	0.035
	+	241.98		1.351E+00	5.836E-01	5.203E-01	4.149E-02	2.597
	+	295.21		9.239E-01	2.348E-01	2.019E-01	1.724E-02	4.575
	+	351.92	*	8.121E-01	1.384E-01	1.029E-01	8.487E-03	7.889
PO-214	+	74.81		3.514E+00	1.500E+00	1.558E+00	1.691E-01	2.256
	+	77.11		2.058E+00	7.825E-01	8.820E-01	9.794E-02	2.333
		87.30		6.715E-02	1.847E+00	1.913E+00	2.252E-01	0.035
	+	241.98		1.351E+00	5.836E-01	5.203E-01	4.149E-02	2.597

----- Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	295.21		9.239E-01	2.348E-01	2.019E-01	1.724E-02	4.575
	+	351.92	*	8.121E-01	1.384E-01	1.029E-01	8.487E-03	7.889
	+	74.81		2.040E+00	8.780E-01	9.041E-01	1.109E-01	2.256
	+	77.11		1.200E+00	4.472E-01	5.145E-01	4.156E-02	2.333
	+	87.30		3.920E-02	1.078E+00	1.117E+00	1.494E-01	0.035
PO-218	+	238.63	*	1.143E+00	1.246E-01	9.040E-02	6.524E-03	12.646
	+	300.09		1.103E+00	8.139E-01	1.162E+00	9.595E-02	0.949
	+	74.81		3.514E+00	1.500E+00	1.558E+00	1.691E-01	2.256
	+	77.11		2.058E+00	7.825E-01	8.820E-01	9.794E-02	2.333
	+	87.30		6.715E-02	1.847E+00	1.913E+00	2.252E-01	0.035
RA-224	+	241.98		1.351E+00	5.836E-01	5.203E-01	4.149E-02	2.597
	+	295.21		9.239E-01	2.348E-01	2.019E-01	1.724E-02	4.575
	+	351.92	*	8.121E-01	1.384E-01	1.029E-01	8.487E-03	7.889
	+	240.98	*	2.562E+00	1.097E+00	1.028E+00	5.826E-02	2.492
	+	609.31	*	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
AC-228	+	1120.29		1.012E+00	3.622E-01	4.020E-01	3.677E-02	2.518
	+	1764.49		1.020E+00	4.194E-01	2.564E-01	1.554E-02	3.978
	+	338.32		1.113E+00	5.601E-01	3.598E-01	1.467E-01	3.094
	+	911.07	*	1.219E+00	2.731E-01	1.768E-01	2.000E-02	6.896
	+	969.11		1.021E+00	3.783E-01	2.904E-01	6.732E-02	3.515
RA-228	+	338.32		1.113E+00	5.601E-01	3.598E-01	1.467E-01	3.094
	+	911.07	*	1.219E+00	2.731E-01	1.768E-01	2.000E-02	6.896
	+	969.11		1.021E+00	3.783E-01	2.904E-01	6.732E-02	3.515
	+	74.81		2.068E+00	8.693E-01	9.167E-01	7.350E-02	2.256
	+	77.11		1.217E+00	4.534E-01	5.217E-01	4.214E-02	2.333
TH-228	+	87.30		3.974E-02	1.093E+00	1.132E+00	1.007E-01	0.035
	+	238.63	*	1.159E+00	1.263E-01	9.166E-02	6.615E-03	12.646
	+	300.09		1.118E+00	1.052E+00	1.178E+00	6.942E-01	0.949
	+	609.31	*	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
	+	1120.29		1.012E+00	3.622E-01	4.019E-01	3.677E-02	2.518
TH-230	+	1764.49		1.020E+00	4.194E-01	2.564E-01	1.554E-02	3.978
	+	338.32		1.113E+00	3.345E-01	3.598E-01	2.080E-02	3.094
	+	911.07	*	1.219E+00	2.731E-01	1.768E-01	2.000E-02	6.896
	+	969.11		1.021E+00	3.783E-01	2.904E-01	6.732E-02	3.515
	+	766.42		1.242E+02	6.717E+01	1.714E+01	8.656E+00	7.243
PA-234M	+	1001.03	*	1.075E+02	1.483E+01	6.315E+00	5.878E-01	17.032
	+	63.29	*	7.329E+01	1.355E+01	3.343E+00	5.849E-01	21.922
	+	92.38		7.915E+01	1.439E+01	1.527E+00	2.742E-01	51.836
	+	609.31	*	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
	+	1120.29		1.012E+00	3.622E-01	4.019E-01	3.677E-02	2.518
U-234	+	1764.49		1.020E+00	4.194E-01	2.564E-01	1.554E-02	3.978
	+	89.95		1.852E+01	6.310E+00	4.030E+00	1.244E+00	4.595
	+	93.35		9.516E+01	2.672E+01	1.824E+00	5.091E-01	52.170
	+	105.00		-5.813E-01	1.519E+00	2.357E+00	6.939E-01	-0.247
	+	143.76	*	1.119E+00	4.231E-01	4.179E-01	6.776E-02	2.676
U-235	+	163.35		1.529E+00	8.374E-01	9.008E-01	1.605E-01	1.698
	+	185.71		1.415E+00	1.252E-01	7.716E-02	4.123E-03	18.334
	+	205.31		8.659E-01	8.131E-01	9.936E-01	1.777E-01	0.871
	+	63.29	*	7.329E+01	1.355E+01	3.343E+00	5.849E-01	21.922
	+							

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	+	92.38		7.915E+01	6.972E+00	1.527E+00	1.275E-01	51.836
	+	74.67	*	3.307E-01	1.389E-01	1.470E-01	1.166E-02	2.250
		86.72		8.928E-02	2.580E+01	2.670E+01	2.360E+00	0.003
		117.66		-4.704E+00	5.439E+00	7.967E+00	4.950E-01	-0.590
ANH-511	+	142.18		9.396E+01	3.253E+01	3.540E+01	1.971E+00	2.654
	+	511.00	*	1.150E-01	6.152E-02	4.436E-02	2.618E-03	2.593

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.615E-02	3.112E-01	5.129E-01	3.481E-02	-0.051
NA-22		1274.54	*	6.238E-03	3.488E-02	5.889E-02	3.928E-03	0.106
NA-24		1368.53	*	-1.724E-02	3.488E-02	Half-Life too short		
AL-26		1129.67		6.415E-01	1.427E+00	2.468E+00	1.523E-01	0.260
		1808.65	*	-6.013E-03	2.508E-02	3.907E-02	2.281E-03	-0.154
TI-44		67.85		-1.681E-01	9.975E-02	1.141E-01	8.706E-03	-1.474
	+	78.38	*	2.215E-01	8.252E-02	1.009E-01	8.233E-03	2.196
SC-46		889.25	*	-2.052E-02	3.393E-02	5.166E-02	4.489E-03	-0.397
	+	1120.51		1.715E-01	6.033E-02	9.677E-02	6.104E-03	1.772
V-48		944.10		2.740E-01	7.136E-01	1.188E+00	1.001E-01	0.231
		983.50	*	2.129E-02	5.463E-02	9.102E-02	7.318E-03	0.234
		1312.09		-4.705E-02	5.868E-02	8.834E-02	6.287E-03	-0.533
CR-51		320.08	*	3.341E-01	3.334E-01	5.818E-01	3.765E-02	0.574
MN-52	+	744.21		6.072E-01	2.912E-01	4.249E-01	2.889E-02	1.429
		848.13		-3.100E+00	5.361E+00	8.247E+00	6.706E-01	-0.376
		935.52		9.795E-02	1.825E-01	3.006E-01	2.556E-02	0.326
		1246.25		-5.753E-01	5.079E+00	8.362E+00	5.285E-01	-0.069
		1333.61		-1.237E+00	3.317E+00	5.254E+00	3.871E-01	-0.236
		1434.06	*	5.278E-02	1.484E-01	2.567E-01	1.852E-02	0.206
MN-54		834.83	*	-4.505E-03	3.370E-02	5.397E-02	4.293E-03	-0.083
CO-56		846.75	*	8.427E-03	3.519E-02	5.799E-02	4.705E-03	0.145
		977.42		-1.589E+00	2.607E+00	3.652E+00	2.959E-01	-0.435
		1037.82		-1.854E-03	2.399E-01	4.020E-01	3.198E-02	-0.005
		1175.09		9.658E-02	1.802E+00	3.017E+00	1.660E-01	0.032
		1238.25		5.080E-02	7.159E-02	1.250E-01	8.213E-03	0.406
		1360.21		3.665E-01	7.288E-01	1.279E+00	9.387E-02	0.286
		1771.40		1.121E-01	1.696E-01	2.838E-01	1.710E-02	0.395
CO-57		122.06	*	-2.728E-02	3.228E-02	5.123E-02	3.057E-03	-0.532
		136.48		-9.430E-02	2.597E-01	4.176E-01	2.757E-02	-0.226
CO-58		810.76	*	-5.018E-02	3.382E-02	4.721E-02	3.617E-03	-1.063
FE-59	+	142.65		1.416E+01	4.901E+00	6.366E+00	3.540E-01	2.224
		192.34		-8.886E-01	1.107E+00	1.584E+00	1.839E-01	-0.561
		1099.22	*	-4.550E-02	7.025E-02	1.105E-01	8.292E-03	-0.412
		1291.56		-6.214E-02	9.143E-02	1.403E-01	1.162E-02	-0.443
CO-60		1173.22		-1.261E-02	3.824E-02	6.157E-02	3.374E-03	-0.205
		1332.49	*	-1.185E-02	3.072E-02	4.864E-02	3.584E-03	-0.244
ZN-65		1115.52	*	5.073E-02	8.018E-02	1.242E-01	7.938E-03	0.409
GE-68		1077.35	*	8.738E-01	9.635E-01	1.735E+00	1.200E-01	0.504

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AS-73	53.44	*		4.347E-01	1.288E+00	2.140E+00	1.583E-01	0.203
AS-74	595.88	*		-2.073E-02	8.139E-02	1.314E-01	7.787E-03	-0.158
	634.78			-1.124E-01	3.182E-01	5.086E-01	2.989E-02	-0.221
SE-75	66.05			1.087E+01	8.675E+00	1.277E+01	1.226E+00	0.851
	96.73			8.360E+00	2.174E+00	2.302E+00	3.028E-01	3.632
	121.11			-1.832E-02	1.705E-01	2.762E-01	2.587E-02	-0.066
	136.00			-4.288E-02	4.878E-02	7.728E-02	4.451E-03	-0.555
	198.60			-7.209E-01	2.272E+00	3.143E+00	2.145E-01	-0.229
	264.65	*		-1.856E-03	5.413E-02	6.963E-02	4.049E-03	-0.027
	279.53			-6.907E-02	1.012E-01	1.657E-01	1.038E-02	-0.417
	303.91			-1.871E-01	2.207E+00	3.212E+00	3.068E-01	-0.058
	400.65			-6.482E-03	2.328E-01	3.872E-01	3.477E-02	-0.017
BR-77	87.88			8.530E+01	3.575E+02	3.726E+02	3.335E+01	0.229
	200.40			1.272E+01	1.464E+02	2.062E+02	1.121E+01	0.262
+	239.00			1.285E+02	1.276E+01	2.097E+01	1.187E+00	6.127
	249.79			-2.719E+01	4.803E+01	7.488E+01	4.270E+00	-0.363
	281.68			-2.450E+01	5.973E+01	9.894E+01	5.734E+00	-0.248
	297.23			1.097E+02	6.284E+01	7.211E+01	4.192E+00	1.521
	303.76			-1.743E+01	1.323E+02	1.920E+02	1.117E+01	-0.091
	439.47			1.711E+01	9.334E+01	1.565E+02	8.984E+00	0.109
	484.57			-7.904E+01	1.485E+02	2.379E+02	1.394E+01	-0.332
	520.65	*		-4.008E+00	6.399E+00	1.012E+01	5.986E-01	-0.396
	574.64			-1.592E+02	1.595E+02	2.059E+02	1.222E+01	-0.773
	578.91			3.460E+01	6.663E+01	9.396E+01	5.575E+00	0.368
	585.48			5.098E+02	1.481E+02	2.544E+02	1.509E+01	2.004
	755.35			2.824E+01	1.094E+02	1.811E+02	1.256E+01	0.156
	817.79			7.538E+01	8.311E+01	1.440E+02	1.113E+01	0.523
SR-82	698.33			1.404E+01	3.205E+01	5.369E+01	3.354E+00	0.262
	776.49	*		-4.149E-01	3.536E-01	5.215E-01	3.755E-02	-0.796
	1395.20			-1.380E-02	7.474E+00	1.235E+01	8.997E-01	-0.001
RB-83	520.41	*		-4.427E-02	6.062E-02	9.526E-02	5.632E-03	-0.465
	529.64			-1.480E-02	9.534E-02	1.557E-01	9.219E-03	-0.095
	552.65			-8.242E-02	1.806E-01	2.886E-01	1.712E-02	-0.286
RB-84	881.50	*		7.368E-02	6.272E-02	1.103E-01	9.463E-03	0.668
KR-85	513.99	*		1.425E+01	7.301E+00	1.193E+01	7.043E-01	1.195
SR-85	513.99	*		7.215E-02	3.696E-02	6.038E-02	3.565E-03	1.195
RB-86	1076.63	*		4.822E-01	5.950E-01	1.063E+00	7.364E-02	0.454
Y-88	898.02			-2.118E-03	3.627E-02	5.819E-02	5.151E-03	-0.036
	1836.01	*		-1.254E-02	2.682E-02	3.966E-02	2.264E-03	-0.316
ZR-88	392.90	*		-1.524E-02	2.919E-02	4.741E-02	2.640E-03	-0.321
Y-91	1204.90	*		1.097E+00	1.468E+01	2.459E+01	1.436E+00	0.045
NB-94	702.63	*		-9.374E-03	3.217E-02	5.145E-02	3.240E-03	-0.182
	871.10			9.171E-03	2.844E-02	4.725E-02	3.989E-03	0.194
NB-95M	235.69	*		3.084E-01	1.473E-01	2.234E-01	1.655E-02	1.381
ZR-95	724.18			4.645E-02	9.343E-02	1.379E-01	1.035E-02	0.337
	756.15	*		3.530E-02	6.503E-02	1.097E-01	8.781E-03	0.322
NB-97	657.90	*		-6.601E-03	6.503E-02	Half-Life	too short	
	1024.50			-7.143E-02	6.503E-02	Half-Life	too short	
ZR-97	254.15			4.481E-01	6.503E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		355.39		-3.934E-01	6.503E-02	Half-Life	too short	
		507.63	*	8.773E-01	6.503E-02	Half-Life	too short	
		602.52		-5.086E-01	6.503E-02	Half-Life	too short	
		1021.30		-1.764E+00	6.503E-02	Half-Life	too short	
		1147.95		6.624E-02	6.503E-02	Half-Life	too short	
		1362.66		7.185E-01	6.503E-02	Half-Life	too short	
		1750.46		1.004E-01	6.503E-02	Half-Life	too short	
MO-99		140.51		1.096E+01	2.763E+01	3.953E+01	1.063E+01	0.277
		181.06		2.105E+00	1.641E+01	2.322E+01	3.944E+00	0.091
		366.43		4.270E+01	6.059E+01	1.043E+02	5.938E+00	0.409
		739.58	*	1.332E+01	9.456E+00	1.483E+01	2.107E+00	0.898
		778.00		-1.520E+01	2.407E+01	3.600E+01	2.599E+00	-0.422
TC-99M		140.51	*	7.382E+08	2.407E+01	Half-Life	too short	
RH-101		127.23		2.950E-02	4.045E-02	6.689E-02	3.904E-03	0.441
		198.01	*	-2.618E-02	3.985E-02	5.757E-02	3.123E-03	-0.455
		325.23		-1.355E-01	2.260E-01	3.166E-01	1.838E-02	-0.428
RH-102		418.52		-2.625E-01	2.691E-01	4.241E-01	2.405E-02	-0.619
		475.06	*	2.535E-03	2.807E-02	4.669E-02	2.725E-03	0.054
		631.29		6.312E-02	5.043E-02	8.904E-02	5.238E-03	0.709
		697.49		1.781E-02	7.589E-02	1.223E-01	7.628E-03	0.146
	+	766.84		1.179E+00	2.437E-01	3.184E-01	2.254E-02	3.703
		1046.59		-2.738E-02	9.370E-02	1.531E-01	1.120E-02	-0.179
		1112.84		-7.762E-02	1.933E-01	2.967E-01	1.905E-02	-0.262
RU-103		497.08	*	-4.225E-03	3.509E-02	5.757E-02	7.301E-03	-0.073
	+	610.33		9.018E+00	1.948E+00	2.176E+00	3.364E-01	4.144
RH-106	+	511.85		5.733E-01	3.066E-01	3.535E-01	2.086E-02	1.622
		621.84	*	1.480E-01	2.977E-01	5.025E-01	5.923E-02	0.294
		1050.47		-9.434E-02	1.737E+00	2.896E+00	2.106E-01	-0.033
RU-106	+	511.85		5.733E-01	3.066E-01	3.535E-01	2.086E-02	1.622
		621.84	*	1.480E-01	2.973E-01	5.025E-01	2.963E-02	0.294
		1050.47		-9.434E-02	1.737E+00	2.896E+00	2.106E-01	-0.033
AG-108M		433.93	*	-1.365E-02	3.007E-02	4.870E-02	3.033E-03	-0.280
		614.37		-1.546E-03	3.827E-02	5.409E-02	3.457E-03	-0.029
		722.95		1.390E-02	3.969E-02	5.794E-02	4.044E-03	0.240
CD-109		88.03	*	9.238E-01	2.360E+00	2.472E+00	2.214E-01	0.374
AG-110M		657.75	*	-5.338E-03	3.804E-02	5.307E-02	3.293E-03	-0.101
		677.61		2.172E-01	2.741E-01	4.718E-01	2.995E-02	0.460
		706.67		-5.081E-02	1.901E-01	3.040E-01	2.026E-02	-0.167
		763.93		9.847E-01	2.328E-01	4.061E-01	2.981E-02	2.424
		884.67		-3.720E-03	4.541E-02	7.278E-02	6.480E-03	-0.051
		937.48		3.310E-02	8.874E-02	1.478E-01	1.301E-02	0.224
		1384.27		1.392E-01	1.191E-01	2.076E-01	1.575E-02	0.671
IN-111		171.28		-4.219E-01	8.599E-01	1.367E+00	7.176E-02	-0.309
		245.39	*	7.431E-01	8.867E-01	1.293E+00	7.352E-02	0.575
IN-113M		391.69	*	-2.976E-02	4.163E-02	6.688E-02	3.990E-03	-0.445
SN-113		391.69	*	-2.976E-02	4.163E-02	6.688E-02	3.990E-03	-0.445
IN-114M		190.27	*	-2.842E-02	2.124E-01	2.966E-01	1.594E-02	-0.096
CD-115		260.90		-7.534E+00	1.053E+02	1.458E+02	8.374E+00	-0.052
		492.35		1.915E-01	2.299E+01	3.803E+01	2.233E+00	0.005

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA	
SN-117M		527.90	*	-1.343E+00	6.847E+00	1.116E+01	6.603E-01	-0.120	
		156.02		3.571E-01	2.508E+00	4.075E+00	2.184E-01	0.088	
		158.56	*	2.595E-02	7.011E-02	1.005E-01	5.351E-03	0.258	
SB-122		563.90	*	2.854E+00	1.513E+00	2.497E+00	1.482E-01	1.143	
		692.80		-3.878E+00	2.985E+01	4.827E+01	2.984E+00	-0.080	
I-123		159.00	*	4.631E-01	2.985E+01	Half-Life	too short		
		528.96		-2.187E+01	2.985E+01	Half-Life	too short		
TE-123M		159.00	*	1.070E-02	3.835E-02	5.480E-02	2.959E-03	0.195	
I-124		602.71	*	4.831E-02	5.497E-01	7.871E-01	4.658E-02	0.061	
		722.78		1.295E+00	3.392E+00	4.967E+00	3.248E-01	0.261	
		1325.50		-1.904E+00	2.209E+01	3.626E+01	2.641E+00	-0.053	
		1376.25		2.341E+01	2.061E+01	3.477E+01	2.543E+00	0.673	
	+	1509.49		1.780E+01	9.306E+00	1.838E+01	1.293E+00	0.968	
		1691.02		4.389E-01	1.899E+00	3.264E+00	2.088E-01	0.134	
	SB-124		602.71		3.391E-03	3.859E-02	5.525E-02	3.271E-03	0.061
			645.85		3.757E-02	4.564E-01	7.509E-01	4.952E-02	0.050
			709.31		-1.638E-01	2.553E+00	4.143E+00	2.642E-01	-0.040
			713.82		2.749E-01	1.522E+00	2.511E+00	2.657E-01	0.109
+		722.78		1.318E-01	3.451E-01	5.054E-01	3.428E-02	0.261	
		968.20		1.036E+01	3.113E+00	5.347E+00	4.382E-01	1.938	
		1045.16		2.493E-01	1.963E+00	3.325E+00	2.439E-01	0.075	
		1325.50		-2.070E-01	2.401E+00	3.941E+00	2.870E-01	-0.053	
		1368.21		-2.103E-01	1.250E+00	2.022E+00	2.565E-01	-0.104	
		1436.60		-3.721E-01	2.795E+00	4.529E+00	3.264E-01	-0.082	
	SB-125		1691.02	*	1.053E-02	4.558E-02	7.833E-02	5.365E-03	0.134
			427.89	*	1.785E-03	8.598E-02	1.430E-01	8.516E-03	0.012
			463.38		5.609E-01	2.715E-01	4.903E-01	3.320E-02	1.144
			600.56		-1.823E-02	1.606E-01	2.617E-01	1.783E-02	-0.070
TE-125M		635.90		-1.976E-01	2.531E-01	3.915E-01	2.684E-02	-0.505	
		109.28	*	2.688E+01	1.569E+01	2.323E+01	2.052E+00	1.157	
I-126		388.63		1.434E-02	1.771E-01	2.963E-01	1.654E-02	0.048	
		666.33	*	2.350E-03	1.760E-01	2.490E-01	1.463E-02	0.009	
		753.82		2.274E-01	1.295E+00	2.132E+00	1.475E-01	0.107	
SB-126		223.80		-2.649E+00	4.000E+00	6.250E+00	3.488E-01	-0.424	
		278.60		-1.822E-01	2.181E+00	3.661E+00	2.119E-01	-0.050	
		296.50		6.546E+00	2.254E+00	2.773E+00	1.612E-01	2.361	
		414.70		-1.572E-02	6.407E-02	1.052E-01	5.952E-03	-0.149	
		415.30		-2.744E+00	5.312E+00	8.591E+00	4.862E-01	-0.319	
		555.20		1.994E+00	3.275E+00	5.598E+00	3.322E-01	0.356	
		573.80		-1.498E-02	1.007E+00	1.431E+00	8.495E-02	-0.010	
		593.00		-4.220E-01	8.090E-01	1.283E+00	7.603E-02	-0.329	
		656.30		-1.459E+00	3.521E+00	4.784E+00	2.792E-01	-0.305	
		666.33		9.793E-04	7.334E-02	1.038E-01	6.098E-03	0.009	
		675.00		4.244E-01	1.729E+00	2.871E+00	1.715E-01	0.148	
		695.00		-5.917E-02	7.318E-02	1.098E-01	6.817E-03	-0.539	
		697.00		1.089E-01	2.459E-01	4.012E-01	2.500E-02	0.271	
		720.50	*	-9.524E-03	1.336E-01	1.959E-01	1.275E-02	-0.049	
		856.80		-8.996E-02	4.426E-01	6.017E-01	4.963E-02	-0.150	
		989.30		-7.089E-01	9.742E-01	1.445E+00	1.153E-01	-0.491	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-126	+	1034.80		4.954E-01	6.311E+00	1.066E+01	7.953E-01	0.046
		1213.00		-1.234E+00	3.371E+00	5.434E+00	3.224E-01	-0.227
		64.28		2.901E+01	4.575E+00	2.259E+00	3.299E-01	12.841
		86.94		-2.053E-02	9.720E-01	1.005E+00	4.161E-01	-0.020
SB-127	*	87.57		2.531E-02	2.327E-01	2.416E-01	2.155E-02	0.105
		61.10		1.003E+03	1.382E+02	1.637E+02	1.630E+01	6.129
		252.40		2.213E+00	4.147E+00	5.810E+00	2.408E+00	0.381
		290.80		1.588E+01	1.731E+01	2.665E+01	2.326E+00	0.596
XE-127	*	411.60		2.634E+00	9.026E+00	1.522E+01	2.137E+00	0.173
		444.90		1.205E+00	7.395E+00	1.238E+01	2.137E+00	0.097
		473.00		5.916E-01	1.276E+00	2.163E+00	2.344E-01	0.273
		543.00		2.913E+00	1.219E+01	2.036E+01	2.578E+00	0.143
I-131	*	603.60		-2.691E+00	9.383E+00	1.296E+01	1.356E+00	-0.208
		685.20		-4.782E-01	1.020E+00	1.609E+00	1.481E-01	-0.297
		698.50		5.315E+00	1.188E+01	1.987E+01	2.860E+00	0.267
		722.20		-4.215E+00	2.380E+01	3.285E+01	3.031E+00	-0.128
TE-132	+	783.80		3.061E+00	3.226E+00	4.910E+00	5.496E-01	0.623
		57.60		9.144E+00	1.096E+01	1.615E+01	1.210E+00	0.566
		145.22		3.436E+00	1.013E+00	1.566E+00	8.641E-02	2.194
		172.10		-9.643E-02	1.343E-01	2.119E-01	1.113E-02	-0.455
BA-133	*	202.84		2.692E-02	5.931E-02	8.484E-02	4.628E-03	0.317
		374.96		1.392E-01	1.784E-01	3.085E-01	1.744E-02	0.451
		80.18		-2.692E+00	1.097E+01	1.127E+01	9.397E-01	-0.239
		284.30		7.514E-01	1.259E+00	2.167E+00	1.395E-01	0.347
I-133	+	364.48		3.398E-02	1.000E-01	1.696E-01	1.081E-02	0.200
		636.97		-8.019E-01	1.298E+00	2.033E+00	1.331E-01	-0.394
		722.89		2.175E+00	6.020E+00	8.798E+00	5.807E-01	0.247
		49.72		-2.800E+01	2.184E+01	3.500E+01	3.282E+00	-0.800
CS-134	+	111.76		2.550E+02	6.107E+01	7.046E+01	6.312E+00	3.619
		116.30		3.198E+01	3.226E+01	4.732E+01	4.137E+00	0.676
		228.16		4.415E-01	5.698E-01	9.331E-01	1.311E-01	0.473
		53.15		3.937E+00	5.585E+00	9.328E+00	6.889E-01	0.422
I-133	*	79.62		1.601E+00	3.392E+00	3.571E+00	5.363E-01	0.448
		81.00		8.360E-02	2.563E-01	2.686E-01	4.226E-02	0.311
		276.40		1.370E-01	3.714E-01	6.002E-01	7.777E-02	0.228
		302.84		4.360E-02	1.519E-01	2.258E-01	2.634E-02	0.193
I-133	+	356.01		1.692E-02	4.434E-02	6.609E-02	7.618E-03	0.256
		383.85		5.102E-02	2.771E-01	4.662E-01	5.021E-02	0.109
		510.53		4.401E-01	2.771E-01	Half-Life too short		
		529.87		-1.739E-04	2.771E-01	Half-Life too short		
CS-134	+	706.58		-3.958E-02	2.771E-01	Half-Life too short		
		856.28		-1.564E-02	2.771E-01	Half-Life too short		
		875.33		-2.543E-02	2.771E-01	Half-Life too short		
		1236.41		4.476E-02	2.771E-01	Half-Life too short		
CS-134	+	1298.22		-1.029E-01	2.771E-01	Half-Life too short		
		475.35		-6.076E-04	1.825E+00	3.021E+00	1.764E-01	0.000
		563.23		5.226E-01	3.634E-01	5.812E-01	3.519E-02	0.899
		569.32		1.162E+00	4.353E-01	4.414E-01	2.694E-02	2.633
CS-134	+	604.70		-1.543E-02	3.454E-02	4.702E-02	2.797E-03	-0.328

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-135 I-135	795.84	*		1.038E-01	5.135E-02	8.690E-02	6.534E-03	1.195
	801.93			-2.623E-01	3.889E-01	5.914E-01	4.483E-02	-0.443
	1038.57			1.127E-01	3.103E+00	5.219E+00	3.871E-01	0.022
	1167.94			-1.778E-01	1.979E+00	3.274E+00	1.823E-01	-0.054
	1365.15			-1.640E-01	9.466E-01	1.532E+00	1.193E-01	-0.107
	268.24	*		1.757E-01	1.724E-01	2.657E-01	2.028E-02	0.661
	288.45			-4.233E+08	1.724E-01	Half-Life	too short	
	417.63			-2.566E+08	1.724E-01	Half-Life	too short	
	546.56			1.581E+07	1.724E-01	Half-Life	too short	
	836.80			6.673E+08	1.724E-01	Half-Life	too short	
	1038.76			-1.093E+07	1.724E-01	Half-Life	too short	
	1124.00			-3.248E+08	1.724E-01	Half-Life	too short	
	1131.51			5.977E+07	1.724E-01	Half-Life	too short	
	1260.41	*		-2.113E+08	1.724E-01	Half-Life	too short	
	1457.56			1.076E+10	1.724E-01	Half-Life	too short	
	1678.03			1.253E+08	1.724E-01	Half-Life	too short	
	1706.46			-4.331E+08	1.724E-01	Half-Life	too short	
	1791.20			1.133E+08	1.724E-01	Half-Life	too short	
CS-136	66.91			-3.585E+00	1.398E+00	1.748E+00	2.603E-01	-2.051
	86.29			1.699E+00	2.854E+00	3.004E+00	3.897E-01	0.565
	153.22			3.489E-01	7.158E-01	1.174E+00	8.107E-02	0.297
	163.89	+		3.248E+00	1.696E+00	2.161E+00	1.472E-01	1.504
	176.55			1.835E-01	3.963E-01	6.481E-01	3.927E-02	0.283
	273.65			7.112E-02	4.680E-01	6.926E-01	4.567E-02	0.103
	340.57			3.331E-01	1.289E-01	2.123E-01	1.304E-02	1.569
	818.51			2.396E-02	6.353E-02	1.059E-01	8.207E-03	0.226
	1048.07	*		5.244E-03	7.927E-02	1.336E-01	1.032E-02	0.039
	1235.34			2.285E-02	4.341E-01	7.249E-01	7.407E-02	0.032
CE-139	165.85	*		3.114E-02	4.021E-02	5.846E-02	3.052E-03	0.533
BA-140	162.64	+		2.283E+00	1.190E+00	1.509E+00	9.130E-02	1.513
	304.84			-4.597E-01	1.300E+00	1.853E+00	5.057E-01	-0.248
	423.70			-2.724E-01	1.691E+00	2.784E+00	8.844E-01	-0.098
LA-140	537.32	*		-4.517E-02	2.200E-01	3.572E-01	1.162E-01	-0.126
	328.77	+		4.451E-01	3.607E-01	4.570E-01	2.969E-02	0.974
	432.53			-5.273E-01	1.779E+00	2.908E+00	1.842E-01	-0.181
	487.03			2.498E-02	1.190E-01	1.992E-01	1.319E-02	0.125
	751.79			-7.297E-02	1.509E+00	2.445E+00	1.960E-01	-0.030
	815.85			8.668E-02	2.679E-01	4.452E-01	3.919E-02	0.195
	867.82			-3.083E-01	1.204E+00	1.618E+00	1.434E-01	-0.191
	919.63			1.597E-01	2.439E+00	3.581E+00	3.818E-01	0.045
	925.24			2.506E-01	9.473E-01	1.560E+00	1.425E-01	0.161
CE-141	1596.49	*		-2.515E-02	6.293E-02	9.712E-02	6.571E-03	-0.259
CE-143	145.44	*		2.792E-01	9.074E-02	1.393E-01	8.022E-03	2.004
	57.37			6.745E-04	9.074E-02	Half-Life	too short	
	231.56			-6.063E-04	9.074E-02	Half-Life	too short	
	293.26	*		3.344E-04	9.074E-02	Half-Life	too short	
	350.59	+		9.990E-03	9.074E-02	Half-Life	too short	
	490.36			7.682E-04	9.074E-02	Half-Life	too short	
	664.57			1.425E-03	9.074E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		721.93		-9.461E-05	9.074E-02	Half-Life too short		
CE-144		80.11		-1.252E+00	5.595E+00	5.753E+00	4.767E-01	-0.218
		133.54	*	-1.092E-01	2.575E-01	4.130E-01	5.851E-02	-0.264
PM-144		476.78		-1.078E-02	6.655E-02	1.092E-01	7.620E-03	-0.099
		618.01		-1.199E-02	3.145E-02	4.715E-02	2.944E-03	-0.254
		696.49	*	1.054E-02	3.347E-02	5.417E-02	3.374E-03	0.195
		778.57		5.181E-02	2.313E+00	3.407E+00	2.463E-01	0.015
PR-144		696.49	*	7.140E-01	2.267E+00	3.668E+00	2.284E-01	0.195
		1489.15		-3.074E+00	8.459E+00	1.312E+01	9.299E-01	-0.234
PM-146		319.90	*	-1.385E-02	4.197E-02	6.835E-02	5.886E-03	-0.203
		633.02		7.126E-01	1.314E+00	2.185E+00	8.049E-01	0.326
		735.90		-2.938E-02	1.488E-01	2.239E-01	6.289E-02	-0.131
		747.13		2.490E-02	9.758E-02	1.406E-01	1.831E-02	0.177
ND-147		91.11		2.800E+01	2.697E+00	1.530E+00	1.413E-01	18.298
		319.41		2.728E+00	2.887E+00	5.027E+00	2.922E-01	0.543
		439.89		1.140E+00	5.097E+00	8.560E+00	4.919E-01	0.133
		531.02	*	-4.042E-02	4.784E-01	7.846E-01	1.065E-01	-0.052
PM-149		285.90	*	-3.622E+01	5.887E+01	9.627E+01	1.364E+01	-0.376
EU-152		121.78		-6.507E-02	9.366E-02	1.492E-01	1.155E-02	-0.436
		244.69		2.148E-01	3.776E-01	5.426E-01	3.083E-02	0.396
		344.27	*	-1.873E-02	1.213E-01	1.526E-01	9.935E-03	-0.123
		443.98		-2.984E-01	9.132E-01	1.489E+00	8.571E-02	-0.200
		778.89		1.366E-01	2.591E-01	4.003E-01	2.895E-02	0.341
		867.32		-4.595E-01	8.127E-01	1.045E+00	8.770E-02	-0.440
	+	964.01		5.643E-01	3.560E-01	4.481E-01	3.691E-02	1.259
		1085.78		-1.658E-01	3.072E-01	4.880E-01	3.321E-02	-0.340
		1112.02		-1.044E-01	2.723E-01	4.305E-01	2.769E-02	-0.242
		1407.95		4.784E-02	1.679E-01	2.853E-01	2.072E-02	0.168
GD-153		69.67		-3.143E-01	4.119E+00	4.276E+00	3.290E-01	-0.074
	+	83.37		3.444E+01	3.186E+01	4.391E+01	3.751E+00	0.784
	+	97.43	*	9.561E-01	1.750E-01	2.402E-01	1.868E-02	3.981
		103.18		-3.824E-02	1.615E-01	2.293E-01	1.660E-02	-0.167
EU-154		123.07		-4.891E-02	6.583E-02	1.046E-01	9.924E-03	-0.468
		247.94		-2.167E-01	3.775E-01	5.881E-01	5.574E-02	-0.368
		591.81		2.873E-01	5.810E-01	9.589E-01	9.446E-02	0.300
		723.30		5.596E-02	1.658E-01	2.417E-01	1.861E-02	0.232
		756.87		-8.225E-02	7.492E-01	1.174E+00	1.273E-01	-0.070
		873.19		1.012E-01	2.507E-01	4.189E-01	5.085E-02	0.242
		996.32		2.433E-02	3.293E-01	4.598E-01	8.015E-02	0.053
		1004.76		8.610E-01	2.674E-01	4.682E-01	5.176E-02	1.839
		1274.45	*	1.684E-02	9.745E-02	1.644E-01	1.627E-02	0.102
EU-155		48.70		-5.701E+00	3.487E+00	5.553E+00	3.895E-01	-1.027
		60.01		1.858E+01	9.423E+00	1.406E+01	1.058E+00	1.321
		86.54		1.980E-02	2.827E-01	2.933E-01	2.612E-02	0.068
		105.31	*	-1.148E-02	1.603E-01	2.416E-01	1.738E-02	-0.048
TB-160		86.79		-1.616E-02	7.444E-01	7.697E-01	6.808E-02	-0.021
		197.04		1.795E-02	6.113E-01	9.842E-01	5.333E-02	0.018
		215.65		3.113E-01	7.833E-01	1.274E+00	7.052E-02	0.244
		298.57		2.567E-02	1.819E-01	1.820E-01	1.058E-02	0.141

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		879.36	*	2.932E-02	1.287E-01	2.115E-01	1.809E-02	0.139
		962.29		5.838E-01	4.467E-01	7.179E-01	5.925E-02	0.813
	+	966.15		3.830E-01	2.417E-01	3.660E-01	3.007E-02	1.047
		1177.93		-4.972E-02	2.855E-01	4.689E-01	2.594E-02	-0.106
		1271.85		5.544E-02	5.421E-01	9.092E-01	6.024E-02	0.061
		80.57		1.295E-01	7.072E-01	7.383E-01	6.143E-02	0.175
	+	184.41		1.061E+00	9.393E-02	1.206E-01	6.434E-03	8.796
		280.46		-6.908E-02	7.988E-02	1.298E-01	7.519E-03	-0.532
		410.95		1.175E-01	2.283E-01	3.892E-01	2.196E-02	0.302
		711.68	*	1.692E-02	5.626E-02	9.356E-02	5.993E-03	0.181
TM-171		752.31		-2.168E-02	2.561E-01	4.138E-01	2.855E-02	-0.052
		810.29		-6.450E-02	5.234E-02	7.542E-02	5.757E-03	-0.855
		51.35		2.019E+00	4.595E+01	7.603E+01	5.545E+00	0.027
		52.39		1.154E+01	2.438E+01	4.060E+01	2.985E+00	0.284
		59.40		7.482E+01	5.011E+01	7.444E+01	5.600E+00	1.005
LU-176		66.72	*	-1.069E+02	5.008E+01	6.782E+01	5.156E+00	-1.577
		88.36		3.871E-01	5.518E-01	5.829E-01	5.192E-02	0.664
		201.83		-3.914E-03	3.675E-02	5.130E-02	2.796E-03	-0.076
		306.84	*	-3.479E-03	2.369E-02	3.955E-02	2.300E-03	-0.088
LU-177		401.10		-2.478E+00	6.133E+00	1.000E+01	5.604E-01	-0.248
	+	112.95		1.604E+01	3.717E+00	4.351E+00	2.833E-01	3.687
LU-177M		208.36	*	1.412E+00	1.154E+00	1.704E+00	9.357E-02	0.828
		52.97		1.828E+00	2.516E+00	4.204E+00	3.102E-01	0.435
		54.07		4.538E-01	1.339E+00	2.224E+00	1.649E-01	0.204
		61.30		4.245E+01	4.524E+00	5.650E+00	4.251E-01	7.512
		121.62		-3.228E-01	4.778E-01	7.620E-01	4.556E-02	-0.424
		147.16		4.803E-02	8.745E-01	1.242E+00	6.816E-02	0.039
		171.86		-3.310E-01	5.518E-01	8.740E-01	4.591E-02	-0.379
		218.09		2.303E-01	9.078E-01	1.469E+00	8.151E-02	0.157
	+	268.79		1.703E+00	1.060E+00	1.362E+00	7.854E-02	1.250
		319.02		1.810E-01	2.418E-01	4.180E-01	2.429E-02	0.433
		367.43		7.433E-01	8.726E-01	1.512E+00	8.595E-02	0.492
		413.65	*	-3.013E-02	1.600E-01	2.636E-01	1.490E-02	-0.114
HF-181		56.28		-1.876E+00	1.528E+00	2.461E+00	1.838E-01	-0.762
		57.53		7.175E-01	9.244E-01	1.361E+00	1.019E-01	0.527
		65.20		2.889E+01	2.939E+00	3.520E+00	2.664E-01	8.208
		133.02		-7.959E-03	8.148E-02	1.320E-01	7.555E-03	-0.060
W-181		136.25		-4.420E-01	5.629E-01	8.942E-01	5.066E-02	-0.494
		345.85		-9.862E-02	2.099E-01	2.963E-01	1.708E-02	-0.333
		482.03	*	-2.296E-02	3.986E-02	6.379E-02	3.733E-03	-0.360
		56.28		-6.455E-01	6.036E-01	9.759E-01	7.288E-02	-0.661
		57.53		2.841E-01	3.668E-01	5.399E-01	4.044E-02	0.526
TA-182		65.20	*	1.138E+01	1.157E+00	1.386E+00	1.049E-01	8.208
		67.75		-4.093E-01	2.133E-01	2.694E-01	2.056E-02	-1.519
		100.10		2.075E+00	3.378E-01	5.054E-01	3.798E-02	4.105
		152.43		8.348E-02	3.894E-01	6.343E-01	3.433E-02	0.132
		222.10		-2.002E-01	3.657E-01	5.743E-01	3.199E-02	-0.349
	+	1001.68		4.702E+01	6.040E+00	8.961E+00	7.030E-01	5.247
	+	1121.28		4.749E-01	1.671E-01	2.639E-01	1.661E-02	1.800

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		1189.05		2.398E-02	2.360E-01	3.965E-01	2.244E-02	0.060
		1221.42	*	7.569E-02	1.502E-01	2.600E-01	1.568E-02	0.291
		1230.97		2.635E-01	3.565E-01	6.279E-01	3.856E-02	0.420
		57.98		4.003E-01	3.648E-01	5.397E-01	4.046E-02	0.742
		59.32		2.929E-01	2.037E-01	3.023E-01	2.274E-02	0.969
		67.20		-8.959E-01	3.561E-01	4.754E-01	3.620E-02	-1.885
	+	162.32	*	3.526E-01	1.835E-01	2.330E-01	1.228E-02	1.513
		208.81		1.904E+00	1.143E+00	1.719E+00	9.441E-02	1.108
		291.72		8.392E-01	9.449E-01	1.454E+00	8.444E-02	0.577
		57.98		1.486E+00	1.354E+00	2.003E+00	1.502E-01	0.742
RE-184		59.32		1.086E+00	7.552E-01	1.121E+00	8.431E-02	0.969
		67.20		-3.324E+00	1.321E+00	1.764E+00	1.343E-01	-1.885
		161.27		2.850E-01	4.975E-01	7.180E-01	3.793E-02	0.397
		216.55		1.333E-01	2.817E-01	4.593E-01	2.544E-02	0.290
		252.85	*	1.873E-01	2.642E-01	3.828E-01	2.188E-02	0.489
		318.01		-1.821E-01	4.258E-01	7.012E-01	4.076E-02	-0.260
		792.07		-7.378E-01	1.226E+00	1.618E+00	1.197E-01	-0.456
		903.28		-2.046E-01	9.042E-01	1.339E+00	1.174E-01	-0.153
		920.93		-6.700E-02	3.894E-01	6.173E-01	5.325E-02	-0.109
		59.72		9.206E-01	5.497E-01	8.181E-01	6.155E-02	1.125
OS-185		61.14		3.769E+00	4.416E-01	5.843E-01	4.396E-02	6.451
		69.30		8.149E-01	7.012E-01	7.610E-01	5.846E-02	1.071
		592.07		1.048E+00	2.342E+00	3.857E+00	2.286E-01	0.272
		646.12	*	-7.054E-03	3.924E-02	6.341E-02	3.714E-03	-0.111
		717.42		-7.160E-01	8.451E-01	1.292E+00	8.364E-02	-0.554
		874.81		1.192E-02	5.029E-01	8.137E-01	6.909E-02	0.015
		880.27		1.673E-01	7.243E-01	1.191E+00	1.020E-01	0.140
		155.03	*	-3.091E-02	2.007E-01	3.235E-01	1.738E-02	-0.096
		477.96		-1.305E-01	2.991E+00	4.940E+00	2.887E-01	-0.026
		633.10		1.329E+00	2.567E+00	4.345E+00	2.555E-01	0.306
W-188	+	63.58		2.910E+03	2.797E+02	2.366E+02	1.784E+01	12.299
		227.08		1.953E+01	1.334E+01	2.242E+01	1.255E+00	0.871
IR-192		290.67	*	5.618E+00	7.429E+00	1.136E+01	6.595E-01	0.495
	+	295.96		6.965E-01	1.717E-01	2.311E-01	1.364E-02	3.014
		308.46		5.997E-02	9.166E-02	1.578E-01	9.285E-03	0.380
		316.51	*	6.974E-03	3.285E-02	5.560E-02	3.248E-03	0.125
		468.07		-1.084E-01	6.225E-02	9.221E-02	6.183E-03	-1.175
		604.41		-2.541E-01	4.634E-01	6.235E-01	7.114E-02	-0.408
AU-195		612.46		1.140E+00	7.502E-01	1.190E+00	9.109E-02	0.958
		65.12		5.795E+00	5.705E-01	6.613E-01	5.003E-02	8.763
		66.83		-3.686E-01	1.649E-01	2.225E-01	1.692E-02	-1.657
	+	75.70		1.065E+00	4.476E-01	5.444E-01	4.350E-02	1.957
	+	98.88	*	2.781E+00	5.091E-01	6.758E-01	5.157E-02	4.115
		129.76		2.195E+00	3.606E+00	5.944E+00	3.438E-01	0.369
TL-200		367.94	*	2.783E-05	3.606E+00	Half-Life	too short	
		579.30		1.620E-03	3.606E+00	Half-Life	too short	
		828.27		6.277E-04	3.606E+00	Half-Life	too short	
TL-201		1205.75		4.673E-04	3.606E+00	Half-Life	too short	
		68.90		6.631E+00	8.584E+00	9.203E+00	7.056E-01	0.720

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		70.82		5.624E+00	3.935E+00	5.440E+00	4.212E-01	1.034
		80.30		-2.842E+00	1.005E+01	1.031E+01	8.555E-01	-0.276
		135.34		-3.333E+01	2.426E+01	3.786E+01	2.151E+00	-0.880
		167.43	*	-1.130E+00	7.095E+00	9.948E+00	5.198E-01	-0.114
		68.90		7.351E-01	9.517E-01	1.020E+00	7.823E-02	0.720
		70.82		6.218E-01	4.351E-01	6.015E-01	4.656E-02	1.034
HG-203		80.30		-3.143E-01	1.111E+00	1.140E+00	9.461E-02	-0.276
		439.56	*	1.314E-02	6.034E-02	1.013E-01	5.819E-03	0.130
		70.83		3.290E+00	1.882E+00	2.744E+00	3.585E-01	1.199
BI-207		72.87		2.483E+00	1.144E+00	1.657E+00	2.105E-01	1.498
	+	82.60		2.523E+00	2.350E+00	3.196E+00	4.365E-01	0.789
		279.20	*	-1.537E-02	3.741E-02	6.198E-02	3.811E-03	-0.248
		72.80		8.554E-01	3.321E-01	4.938E-01	3.867E-02	1.732
	+	74.97		5.935E-01	2.494E-01	2.996E-01	2.381E-02	1.981
	+	84.90		4.469E-01	4.135E-01	5.667E-01	4.916E-02	0.789
TL-207	+	569.67		1.813E-01	6.786E-02	6.756E-02	4.010E-03	2.684
		1063.62	*	-1.439E-02	4.144E-02	6.726E-02	4.776E-03	-0.214
		1770.23		6.500E-02	3.919E-01	5.735E-01	3.459E-02	0.113
		81.07		2.014E-01	5.653E-01	5.936E-01	4.961E-02	0.339
	+	83.78		2.947E-01	2.727E-01	3.749E-01	3.216E-02	0.786
		94.90		1.403E+01	1.304E+00	1.093E+00	8.798E-02	12.835
PO-209		122.32		-1.923E+00	2.246E+00	3.562E+00	2.433E-01	-0.540
	+	144.24		3.625E+00	1.265E+00	1.600E+00	1.124E-01	2.265
		154.21		-1.229E-01	4.660E-01	7.486E-01	4.997E-02	-0.164
	+	269.46		4.008E-01	2.496E-01	3.259E-01	1.966E-02	1.230
		323.87	*	-7.084E-01	6.765E-01	9.025E-01	1.491E-01	-0.785
	+	338.28		4.649E+00	1.455E+00	2.054E+00	2.162E-01	2.263
BI-210		445.03		9.819E-01	2.128E+00	3.614E+00	3.703E-01	0.272
		260.50		5.771E+00	1.157E+01	1.653E+01	9.493E-01	0.349
		262.80		3.270E+01	2.890E+01	4.295E+01	2.469E+00	0.761
PB-210		896.60	*	3.932E+00	6.351E+00	1.079E+01	9.482E-01	0.365
		46.50	*	4.432E-01	4.687E+00	7.747E+00	5.905E-01	0.057
		46.50	*	4.432E-01	4.687E+00	7.747E+00	5.905E-01	0.057
PB-211		46.50	*	4.432E-01	4.687E+00	7.747E+00	5.049E-01	0.057
		404.84	*	-1.165E+00	1.117E+00	1.312E+00	8.178E-01	-0.888
		427.08		-1.424E+00	2.149E+00	3.135E+00	1.937E+00	-0.454
BI-212		831.96		-9.672E-01	1.240E+00	1.622E+00	1.015E+00	-0.596
	+	727.18	*	1.072E+00	4.280E-01	5.636E-01	4.692E-02	1.901
		785.46		1.491E+00	1.912E+00	3.244E+00	2.373E-01	0.460
PO-215		1620.62		1.747E-01	9.941E-01	1.673E+00	1.117E-01	0.104
		81.07		2.014E-01	5.653E-01	5.936E-01	4.961E-02	0.339
	+	83.78		2.947E-01	2.727E-01	3.749E-01	3.216E-02	0.786
		94.90		1.403E+01	1.304E+00	1.093E+00	8.798E-02	12.835
		122.32		-1.923E+00	2.246E+00	3.562E+00	2.433E-01	-0.540
	+	144.24		3.625E+00	1.265E+00	1.600E+00	1.124E-01	2.265
		154.21		-1.229E-01	4.660E-01	7.486E-01	4.997E-02	-0.164
	+	269.46		4.008E-01	2.496E-01	3.259E-01	1.966E-02	1.230
		323.87	*	-7.084E-01	6.765E-01	9.025E-01	1.491E-01	-0.785
	+	338.28		4.649E+00	1.455E+00	2.054E+00	2.162E-01	2.263

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		9.819E-01	2.128E+00	3.614E+00	3.703E-01	0.272
		271.23		5.142E-01	3.214E-01	4.311E-01	3.485E-02	1.193
		401.81	*	-1.580E-01	3.773E-01	6.139E-01	8.302E-02	-0.257
RN-220		549.76	*	-6.553E+00	2.394E+01	3.874E+01	2.298E+00	-0.169
RA-223	+	81.07		2.014E-01	5.653E-01	5.936E-01	4.961E-02	0.339
		83.78		2.947E-01	2.727E-01	3.749E-01	3.216E-02	0.786
		94.90		1.403E+01	1.304E+00	1.093E+00	8.798E-02	12.835
	+	122.32		-1.923E+00	2.246E+00	3.562E+00	2.433E-01	-0.540
		144.24		3.625E+00	1.265E+00	1.600E+00	1.124E-01	2.265
		154.21		-1.229E-01	4.660E-01	7.486E-01	4.997E-02	-0.164
	+	269.46		4.008E-01	2.496E-01	3.259E-01	1.966E-02	1.230
		323.87	*	-7.084E-01	6.765E-01	9.025E-01	1.491E-01	-0.785
		338.28		4.649E+00	1.455E+00	2.054E+00	2.162E-01	2.263
AC-227	+	445.03		9.819E-01	2.128E+00	3.614E+00	3.703E-01	0.272
		79.80		1.337E+00	4.294E+00	4.496E+00	9.604E-01	0.297
		236.00		1.292E+00	3.209E-01	4.833E-01	5.010E-02	2.673
	+	256.20	*	2.702E-01	4.765E-01	6.813E-01	9.490E-02	0.397
		286.10		-9.406E-01	1.444E+00	2.360E+00	2.728E-01	-0.399
		299.80		2.044E+00	1.535E+00	2.343E+00	3.817E-01	0.872
TH-227	+	304.40		-7.765E-01	2.044E+00	2.916E+00	5.046E-01	-0.266
		334.20		-2.788E+00	3.796E+00	3.340E+00	6.122E-01	-0.835
		79.80		1.337E+00	4.294E+00	4.496E+00	9.729E-01	0.297
	+	94.00		3.059E+02	6.684E+01	1.263E+01	2.727E+00	24.226
		236.00		1.292E+00	3.137E-01	4.833E-01	4.329E-02	2.673
		256.20	*	2.702E-01	4.772E-01	6.813E-01	1.150E-01	0.397
	+	286.10		-9.406E-01	1.721E+00	2.360E+00	2.364E+00	-0.399
		299.80		2.044E+00	1.535E+00	2.343E+00	3.817E-01	0.872
		304.40		-7.765E-01	2.044E+00	2.916E+00	5.046E-01	-0.266
TH-229	+	334.20		-2.788E+00	3.796E+00	3.340E+00	6.122E-01	-0.835
		85.43		2.618E-01	5.356E-01	5.634E-01	4.914E-02	0.465
		88.47		4.395E-01	3.121E-01	3.356E-01	2.983E-02	1.310
	+	100.00		2.319E+00	4.245E-01	5.364E-01	4.036E-02	4.323
		193.63	*	-2.333E-01	5.537E-01	8.754E-01	4.723E-02	-0.267
		210.97		5.143E-01	8.044E-01	1.318E+00	7.260E-02	0.390
PA-231		283.67	*	1.162E+00	1.439E+00	2.483E+00	3.421E-01	0.468
TH-231	+	301.29		8.175E-01	6.056E-01	9.585E-01	1.003E-01	0.853
		81.07		2.014E-01	5.653E-01	5.936E-01	4.961E-02	0.339
		83.78		2.947E-01	2.727E-01	3.749E-01	3.216E-02	0.786
	+	94.90		1.403E+01	1.304E+00	1.093E+00	8.798E-02	12.835
		122.32		-1.923E+00	2.246E+00	3.562E+00	2.433E-01	-0.540
		144.24		3.625E+00	1.265E+00	1.600E+00	1.124E-01	2.265
	+	154.21		-1.229E-01	4.660E-01	7.486E-01	4.997E-02	-0.164
		269.46		4.008E-01	2.496E-01	3.259E-01	1.966E-02	1.230
		323.87	*	-7.084E-01	6.765E-01	9.025E-01	1.491E-01	-0.785
	+	338.28		4.649E+00	1.455E+00	2.054E+00	2.162E-01	2.263
		445.03		9.819E-01	2.128E+00	3.614E+00	3.703E-01	0.272
U-231	+	84.21		1.037E+01	9.594E+00	1.315E+01	1.133E+00	0.789
		92.29		2.469E+02	2.174E+01	1.097E+01	9.171E-01	22.511
		95.87	*	9.085E+00	2.226E+00	2.574E+00	2.045E-01	3.529

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		108.00		9.133E-01	2.755E+00	3.973E+00	2.725E-01	0.230
	+	75.28		1.732E+01	7.603E+00	8.816E+00	1.322E+00	1.965
		86.59		2.369E-01	4.595E+00	4.763E+00	1.281E+00	0.050
	+	300.12		5.698E-01	4.248E-01	6.505E-01	8.745E-02	0.876
		311.98	*	-2.797E-02	6.239E-02	1.028E-01	6.344E-03	-0.272
		340.50		1.857E+00	7.887E-01	1.115E+00	2.560E-01	1.666
PA-234		398.62		2.428E+00	2.064E+00	3.466E+00	8.947E-01	0.701
		415.76		-1.189E+00	1.540E+00	2.425E+00	4.983E-01	-0.490
	+	63.00		8.543E+01	1.373E+01	7.159E+00	1.068E+00	11.934
		94.67		1.412E+01	1.771E+00	8.958E-01	1.078E-01	15.763
	+	98.44		1.132E+00	6.575E-01	2.773E-01	1.543E-01	4.083
	+	99.86		5.868E+00	1.074E+00	1.381E+00	1.041E-01	4.248
	+	111.00		2.062E+00	5.088E-01	5.465E-01	5.885E-02	3.774
		131.20		1.643E-01	1.336E-01	2.231E-01	1.284E-02	0.737
		152.70		1.058E-01	3.785E-01	6.170E-01	9.668E-02	0.172
	+	186.00		3.819E+01	1.195E+01	4.467E+00	1.361E+00	8.550
		226.40		2.598E-01	4.280E-01	6.992E-01	8.012E-02	0.372
		227.20		7.554E-01	4.553E-01	7.699E-01	4.310E-02	0.981
		248.90		-5.174E-01	8.575E-01	1.324E+00	2.842E-01	-0.391
	+	293.70		4.435E+00	1.279E+00	1.452E+00	2.335E-01	3.055
		369.80		7.623E-02	8.286E-01	1.389E+00	2.888E-01	0.055
	+	568.70		5.902E+00	2.209E+00	2.261E+00	1.342E-01	2.611
	+	569.50		1.610E+00	6.023E-01	6.053E-01	3.593E-02	2.659
		574.00		-1.767E-01	1.540E+00	2.169E+00	1.287E-01	-0.081
		699.00		3.562E-01	6.850E-01	1.149E+00	2.084E-01	0.310
		706.10		-3.627E-01	9.453E-01	1.476E+00	6.526E-01	-0.246
		733.00		-1.922E-01	3.923E-01	5.190E-01	1.117E-01	-0.370
	+	742.81		4.046E+00	3.323E+00	2.823E+00	1.892E+00	1.433
		796.30		1.841E+00	1.088E+00	1.650E+00	4.406E-01	1.116
		805.60		5.985E-01	9.389E-01	1.566E+00	4.755E-01	0.382
		819.60		6.390E-01	1.127E+00	1.866E+00	7.059E-01	0.343
		826.30		-4.035E-02	7.188E-01	1.158E+00	5.164E-01	-0.035
		831.60		-5.750E-01	5.867E-01	8.317E-01	2.466E-01	-0.691
		876.40		-6.083E-01	9.922E-01	1.159E+00	1.192E+00	-0.525
		880.51		1.636E-01	2.587E-01	4.385E-01	3.758E-02	0.373
		883.24		1.507E-01	2.802E-01	4.417E-01	2.969E-01	0.341
		899.00		7.930E-03	7.254E-01	1.171E+00	5.123E-01	0.007
		925.00		2.782E-01	1.052E+00	1.732E+00	1.489E-01	0.161
		926.50		1.802E-02	1.726E-01	2.622E-01	6.625E-02	0.069
		946.00	*	2.257E-01	2.605E-01	4.459E-01	8.323E-02	0.506
		949.00		-6.805E-02	3.856E-01	6.102E-01	5.113E-02	-0.112
		980.50		-1.943E-01	6.012E-01	9.339E-01	7.537E-02	-0.208
		1394.10		2.976E-01	8.511E-01	1.437E+00	9.329E-01	0.207
NP-236		94.67		1.078E+01	9.506E-01	6.812E-01	5.503E-02	15.822
	+	98.44		8.558E-01	1.567E-01	2.096E-01	1.609E-02	4.082
	+	111.00		1.560E+00	3.614E-01	4.134E-01	2.747E-02	3.774
NP-237		160.31	*	5.548E-02	1.074E-01	1.548E-01	8.200E-03	0.358
		86.50	*	5.853E-02	6.902E-01	7.161E-01	1.607E-01	0.082
		95.87		9.810E+00	3.302E+00	2.780E+00	6.784E-01	3.529

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		1.956E+00	3.581E-01	4.684E-01	3.544E-02	4.176
		117.00	*	1.149E-01	2.843E-01	4.108E-01	2.569E-02	0.280
		209.75		1.185E+00	8.775E-01	1.368E+00	7.523E-02	0.866
		228.18		1.843E-01	2.405E-01	3.956E-01	2.217E-02	0.466
		277.60		-5.178E-02	1.705E-01	2.839E-01	1.643E-02	-0.182
		334.30		-1.569E+00	2.133E+00	1.894E+00	1.097E-01	-0.828
AM-241		59.54	*	4.590E-01	2.922E-01	4.339E-01	3.572E-02	1.058
CM-243	+	99.55		2.013E+00	3.685E-01	4.819E-01	3.647E-02	4.176
		103.76	*	-1.265E-01	1.523E-01	2.118E-01	1.524E-02	-0.597
		117.00		1.182E-01	2.925E-01	4.226E-01	2.643E-02	0.280
		209.75		1.168E+00	8.650E-01	1.348E+00	7.415E-02	0.866
		228.18		1.862E-01	2.430E-01	3.997E-01	2.240E-02	0.466
		277.60		-5.220E-02	1.719E-01	2.862E-01	1.656E-02	-0.182
AM-246		798.80		-2.102E-01	1.475E-01	2.144E-01	1.605E-02	-0.980
		1036.00		3.710E-03	2.346E-01	3.938E-01	2.933E-02	0.009
		1062.04		-6.015E-03	1.835E-01	3.065E-01	2.183E-02	-0.020
		1078.86	*	9.168E-02	1.114E-01	1.992E-01	1.374E-02	0.460
CM-247		278.00		-2.207E-01	7.098E-01	1.182E+00	6.838E-02	-0.187
		287.40		-1.148E+00	1.231E+00	1.868E+00	1.084E-01	-0.615
		402.60	*	-2.470E-02	3.316E-02	5.303E-02	2.974E-03	-0.466
CF-249		252.85		7.064E-01	9.962E-01	1.444E+00	8.250E-02	0.489
		333.44		8.433E-02	2.504E-01	2.561E-01	1.483E-02	0.329
		387.95	*	1.188E-02	3.686E-02	6.239E-02	3.484E-03	0.190
CF-251		176.60	*	6.743E-02	1.457E-01	2.383E-01	1.259E-02	0.283
		227.00		5.732E-01	4.044E-01	6.790E-01	3.801E-02	0.844
		285.00		8.175E-02	1.637E+00	2.760E+00	1.601E-01	0.030

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC.                      *
*                                     2040 Savage Road                          *
*                                     Charleston, SC 29414                      *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395014      *
* Acquisition date   : 2-FEB-2010 09:27:14 Detector SN#      :              *
* Detector ID        : GAM19 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000   *
* Elapsed real time  : 0 02:00:02.37 Half life ratio : 8.000   *
*****
*
*                                     SAMPLE DATA                          *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID      *
* Sample ID          : G245395014 Analyst initials: MXR1          *
* Batch Number       : 944966 Sample Quantity : 1.6981E+02 GRAM      *
* Recovery           : 1.00000 Carrier Weight  : 0.00000          *
*****
*
*                                     QC DATA                          *
*
* Standard Weight    : 0.00000                                              *
* CALIB. DATE/TIME   : 12-MAR-2009 10:24:54 MS Isotope      :              *
* MSD DPM             : 0.000 MSD Isotope      :              *
* LCS DPM             : 0.000 LCS Isotope      :              *
* LCSD DPM            : 0.000 LCSD Isotope     :              *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.096E+01	1.979E+00	4.470E-01	0.000E+00
NB-95	4.629E-01	9.375E-02	6.611E-02	0.000E+00
BA-137M	5.697E-02	6.766E-02	5.254E-02	0.000E+00
CS-137	6.023E-02	7.153E-02	5.554E-02	0.000E+00
TL-208	3.361E-01	7.014E-02	5.743E-02	0.000E+00
BI-211	2.334E+00	3.710E-01	3.277E-01	0.000E+00
PB-212	1.143E+00	1.221E-01	9.715E-02	0.000E+00
PO-212	1.143E+00	1.221E-01	9.715E-02	0.000E+00
BI-214	8.533E-01	1.423E-01	1.026E-01	0.000E+00
PB-214	8.121E-01	1.356E-01	1.093E-01	0.000E+00
PO-214	8.121E-01	1.356E-01	1.093E-01	0.000E+00
PO-216	1.143E+00	1.221E-01	9.715E-02	0.000E+00
PO-218	8.121E-01	1.356E-01	1.093E-01	0.000E+00
RA-224	2.562E+00	1.075E+00	1.105E+00	0.000E+00
RA-226	8.533E-01	1.423E-01	1.026E-01	0.000E+00
AC-228	1.219E+00	2.676E-01	1.820E-01	0.000E+00
RA-228	1.219E+00	2.676E-01	1.820E-01	0.000E+00
TH-228	1.159E+00	1.238E-01	9.850E-02	0.000E+00
TH-230	8.533E-01	1.423E-01	1.026E-01	0.000E+00
TH-232	1.219E+00	2.676E-01	1.820E-01	0.000E+00
PA-234M	1.075E+02	1.453E+01	6.480E+00	0.000E+00
TH-234	7.329E+01	1.328E+01	3.737E+00	0.000E+00
U-234	8.533E-01	1.423E-01	1.026E-01	0.000E+00
U-235	1.119E+00	4.146E-01	4.561E-01	0.000E+00
U-238	7.329E+01	1.328E+01	3.737E+00	0.000E+00
AM-243	3.307E-01	1.362E-01	1.635E-01	0.000E+00
ANH-511	1.150E-01	6.029E-02	4.654E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	-2.615E-02	3.050E-01	5.393E-01	0.000E+00	NOT IDENT.
NA-22	6.238E-03	3.419E-02	5.993E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.357E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-6.013E-03	2.458E-02	3.928E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	8.087E-02	1.120E-01	0.000E+00	FAIL ABUN
SC-46	-2.052E-02	3.325E-02	5.323E-02	0.000E+00	FAIL ABUN
V-48	2.129E-02	5.354E-02	9.346E-02	0.000E+00	NOT IDENT.
CR-51	3.341E-01	3.267E-01	6.196E-01	0.000E+00	NOT IDENT.
MN-52	5.278E-02	1.454E-01	2.602E-01	0.000E+00	FAIL ABUN
MN-54	-4.505E-03	3.302E-02	5.571E-02	0.000E+00	NOT IDENT.
CO-56	8.427E-03	3.448E-02	5.984E-02	0.000E+00	NOT IDENT.
CO-57	-2.728E-02	3.163E-02	5.618E-02	0.000E+00	NOT IDENT.
CO-58	-5.018E-02	3.314E-02	4.878E-02	0.000E+00	NOT IDENT.
FE-59	-4.550E-02	6.885E-02	1.130E-01	0.000E+00	FAIL ABUN
CO-60	-1.185E-02	3.011E-02	4.943E-02	0.000E+00	NOT IDENT.
ZN-65	5.073E-02	7.857E-02	1.269E-01	0.000E+00	NOT IDENT.
GE-68	8.738E-01	9.442E-01	1.776E+00	0.000E+00	NOT IDENT.
AS-73	4.347E-01	1.262E+00	2.404E+00	0.000E+00	NOT IDENT.
AS-74	-2.073E-02	7.976E-02	1.372E-01	0.000E+00	NOT IDENT.
SE-75	-1.856E-03	5.305E-02	7.459E-02	0.000E+00	NOT IDENT.
BR-77	-4.008E+00	6.271E+00	1.062E+01	0.000E+00	FAIL ABUN
SR-82	-4.149E-01	3.465E-01	5.397E-01	0.000E+00	NOT IDENT.
RB-83	-4.427E-02	5.941E-02	9.989E-02	0.000E+00	NOT IDENT.
RB-84	7.368E-02	6.147E-02	1.136E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.155E+00	1.251E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.622E-02	6.334E-02	0.000E+00	NOT IDENT.
RB-86	4.822E-01	5.831E-01	1.088E+00	0.000E+00	NOT IDENT.
Y-88	-1.254E-02	2.628E-02	3.985E-02	0.000E+00	NOT IDENT.
ZR-88	-1.524E-02	2.861E-02	5.016E-02	0.000E+00	NOT IDENT.
Y-91	1.097E+00	1.439E+01	2.508E+01	0.000E+00	NOT IDENT.
NB-94	-9.374E-03	3.153E-02	5.342E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.444E-01	2.402E-01	0.000E+00	NOT IDENT.
ZR-95	3.530E-02	6.373E-02	1.136E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.118E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.784E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.332E+01	9.267E+00	1.538E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.824E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.618E-02	3.905E-02	6.222E-02	0.000E+00	NOT IDENT.
RH-102	2.535E-03	2.750E-02	4.910E-02	0.000E+00	FAIL ABUN
RU-103	-4.225E-03	3.439E-02	6.046E-02	0.000E+00	FAIL ABUN
RH-106	1.480E-01	2.917E-01	5.239E-01	0.000E+00	FAIL ABUN
RU-106	1.480E-01	2.914E-01	5.239E-01	0.000E+00	FAIL ABUN
AG-108M	-1.365E-02	2.947E-02	5.136E-02	0.000E+00	NOT IDENT.
CD-109	9.238E-01	2.313E+00	2.737E+00	0.000E+00	NOT IDENT.
AG-110M	-5.338E-03	3.728E-02	5.522E-02	0.000E+00	NOT IDENT.
IN-111	7.431E-01	8.690E-01	1.388E+00	0.000E+00	NOT IDENT.
IN-113M	-2.976E-02	4.079E-02	7.076E-02	0.000E+00	NOT IDENT.
SN-113	-2.976E-02	4.079E-02	7.076E-02	0.000E+00	NOT IDENT.
IN-114M	-2.842E-02	2.081E-01	3.209E-01	0.000E+00	NOT IDENT.
CD-115	-1.343E+00	6.710E+00	1.169E+01	0.000E+00	NOT IDENT.
SN-117M	2.595E-02	6.871E-02	1.094E-01	0.000E+00	NOT IDENT.
SB-122	0.000E+00	1.483E+00	2.611E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.627E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.070E-02	3.758E-02	5.962E-02	0.000E+00	NOT IDENT.
I-124	4.831E-02	5.387E-01	8.214E-01	0.000E+00	FAIL ABUN
SB-124	1.053E-02	4.467E-02	7.894E-02	0.000E+00	FAIL ABUN
SB-125	1.785E-03	8.427E-02	1.509E-01	0.000E+00	NOT IDENT.
TE-125M	0.000E+00	1.537E+01	2.555E+01	0.000E+00	NOT IDENT.
I-126	2.350E-03	1.725E-01	2.590E-01	0.000E+00	NOT IDENT.
SB-126	-9.524E-03	1.310E-01	2.032E-01	0.000E+00	NOT IDENT.
SN-126	2.531E-02	2.280E-01	2.675E-01	0.000E+00	FAIL ABUN
SB-127	-4.782E-01	1.000E+00	1.672E+00	0.000E+00	NOT IDENT.
XE-127	2.692E-02	5.813E-02	9.163E-02	0.000E+00	NOT IDENT.
I-131	3.398E-02	9.801E-02	1.799E-01	0.000E+00	NOT IDENT.
TE-132	4.415E-01	5.585E-01	1.004E+00	0.000E+00	FAIL ABUN
BA-133	1.692E-02	4.346E-02	7.015E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.040E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.032E-02	8.986E-02	0.000E+00	FAIL ABUN
CS-135	1.757E-01	1.690E-01	2.846E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.854E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.244E-03	7.769E-02	1.369E-01	0.000E+00	FAIL ABUN
CE-139	3.114E-02	3.941E-02	6.353E-02	0.000E+00	NOT IDENT.
BA-140	-4.517E-02	2.156E-01	3.741E-01	0.000E+00	FAIL ABUN
LA-140	-2.515E-02	6.167E-02	9.807E-02	0.000E+00	FAIL ABUN
CE-141	0.000E+00	8.892E-02	1.520E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.094E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.092E-01	2.524E-01	4.517E-01	0.000E+00	NOT IDENT.
PM-144	1.054E-02	3.280E-02	5.626E-02	0.000E+00	NOT IDENT.

PR-144	7.140E-01	2.221E+00	3.810E+00	0.000E+00	NOT IDENT.
PM-146	-1.385E-02	4.113E-02	7.199E-02	0.000E+00	NOT IDENT.
ND-147	-4.042E-02	4.688E-01	8.222E-01	0.000E+00	NOT IDENT.
PM-149	-3.622E+01	5.770E+01	1.029E+02	0.000E+00	NOT IDENT.
EU-152	-1.873E-02	1.189E-01	1.622E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	1.715E-01	2.652E-01	0.000E+00	FAIL ABUN
EU-154	1.684E-02	9.550E-02	1.673E-01	0.000E+00	NOT IDENT.
EU-155	-1.148E-02	1.571E-01	2.661E-01	0.000E+00	NOT IDENT.
TB-160	2.932E-02	1.261E-01	2.180E-01	0.000E+00	FAIL ABUN
HO-166M	1.692E-02	5.514E-02	9.711E-02	0.000E+00	FAIL ABUN
TM-171	-1.069E+02	4.907E+01	7.569E+01	0.000E+00	NOT IDENT.
LU-176	-3.479E-03	2.322E-02	4.217E-02	0.000E+00	NOT IDENT.
LU-177	1.412E+00	1.131E+00	1.839E+00	0.000E+00	FAIL ABUN
LU-177M	-3.013E-02	1.568E-01	2.785E-01	0.000E+00	FAIL ABUN
HF-181	-2.296E-02	3.906E-02	6.705E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	1.134E+00	1.548E+00	0.000E+00	NOT IDENT.
TA-182	7.569E-02	1.472E-01	2.650E-01	0.000E+00	FAIL ABUN
RE-183	0.000E+00	1.798E-01	2.534E-01	0.000E+00	FAIL ABUN
RE-184	1.873E-01	2.589E-01	4.106E-01	0.000E+00	NOT IDENT.
OS-185	-7.054E-03	3.846E-02	6.603E-02	0.000E+00	NOT IDENT.
RE-188	-3.091E-02	1.967E-01	3.523E-01	0.000E+00	NOT IDENT.
W-188	5.618E+00	7.280E+00	1.213E+01	0.000E+00	FAIL ABUN
IR-192	6.974E-03	3.219E-02	5.923E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	4.989E-01	7.457E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.022E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.130E+00	6.953E+00	1.081E+01	0.000E+00	NOT IDENT.
TL-202	1.314E-02	5.914E-02	1.068E-01	0.000E+00	NOT IDENT.
HG-203	-1.537E-02	3.666E-02	6.629E-02	0.000E+00	FAIL ABUN
BI-207	-1.439E-02	4.061E-02	6.887E-02	0.000E+00	FAIL ABUN
TL-207	-7.084E-01	6.630E-01	9.607E-01	0.000E+00	FAIL ABUN
PO-209	3.932E+00	6.224E+00	1.111E+01	0.000E+00	NOT IDENT.
BI-210	4.432E-01	4.593E+00	8.735E+00	0.000E+00	NOT IDENT.
PB-210	4.432E-01	4.593E+00	8.735E+00	0.000E+00	NOT IDENT.
PO-210	4.432E-01	4.593E+00	8.735E+00	0.000E+00	NOT IDENT.
PB-211	-1.165E+00	1.094E+00	1.387E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.195E-01	5.846E-01	0.000E+00	FAIL ABUN
PO-215	-7.084E-01	6.630E-01	9.607E-01	0.000E+00	FAIL ABUN
RN-219	-1.580E-01	3.697E-01	6.491E-01	0.000E+00	FAIL ABUN
RN-220	-6.553E+00	2.346E+01	4.055E+01	0.000E+00	NOT IDENT.
RA-223	-7.084E-01	6.630E-01	9.607E-01	0.000E+00	FAIL ABUN
AC-227	2.702E-01	4.670E-01	7.306E-01	0.000E+00	FAIL ABUN
TH-227	2.702E-01	4.676E-01	7.306E-01	0.000E+00	FAIL ABUN
TH-229	-2.333E-01	5.426E-01	9.468E-01	0.000E+00	FAIL ABUN
PA-231	1.162E+00	1.410E+00	2.654E+00	0.000E+00	FAIL ABUN
TH-231	-7.084E-01	6.630E-01	9.607E-01	0.000E+00	FAIL ABUN
U-231	0.000E+00	2.182E+00	2.843E+00	0.000E+00	FAIL ABUN
PA-233	-2.797E-02	6.114E-02	1.095E-01	0.000E+00	FAIL ABUN
PA-234	2.257E-01	2.553E-01	4.584E-01	0.000E+00	FAIL ABUN
NP-236	5.548E-02	1.052E-01	1.684E-01	0.000E+00	FAIL ABUN
NP-237	5.853E-02	6.764E-01	7.933E-01	0.000E+00	NOT IDENT.
NP-239	1.149E-01	2.786E-01	4.510E-01	0.000E+00	FAIL ABUN
AM-241	4.590E-01	2.864E-01	4.858E-01	0.000E+00	NOT IDENT.
CM-243	-1.265E-01	1.493E-01	2.334E-01	0.000E+00	FAIL ABUN
AM-246	9.168E-02	1.092E-01	2.039E-01	0.000E+00	NOT IDENT.
CM-247	-2.470E-02	3.250E-02	5.606E-02	0.000E+00	NOT IDENT.
CF-249	1.188E-02	3.612E-02	6.604E-02	0.000E+00	NOT IDENT.
CF-251	6.743E-02	1.428E-01	2.585E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395014.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:27:14.
Sample ID          : G245395014 Sample quantity      : 1.69810E+02 GRAM
Detector name      : GAM19 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.37 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity          : 5.00000
Batch ID           : 944966 Detector SN#           :
Matrix Spike ID    : LCS ID                          : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1182	10.67*	1.168E+00	2.096E+01	2.096E+01	9.63
NB-95	765.79	365	99.81*	2.031E+00	3.981E-01	4.629E-01	20.67
BA-137M	661.65	53	89.98*	2.301E+00	5.692E-02	5.697E-02	121.19
CS-137	661.65	53	85.12*	2.301E+00	6.017E-02	6.023E-02	121.19
TL-208	277.35	-----	6.80	4.511E+00	-----	Line Not Found	-----
	510.84	148	21.60	2.843E+00	5.326E-01	5.326E-01	54.12
	583.14	327	84.20*	2.554E+00	3.361E-01	3.361E-01	21.30
	860.37	68	12.46	1.835E+00	6.578E-01	6.578E-01	61.66
BI-211	72.87	-----	1.27	4.857E+00	-----	Line Not Found	-----
	351.07	518	12.94*	3.788E+00	2.334E+00	2.334E+00	16.22
PB-212	74.81	501	10.70	5.073E+00	2.040E+00	2.040E+00	43.05
	77.11	520	18.00	5.318E+00	1.200E+00	1.200E+00	37.25
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	238.63	1157	44.60*	5.017E+00	1.143E+00	1.143E+00	10.90
	300.09	72	3.41	4.260E+00	1.103E+00	1.103E+00	73.80
PO-212	74.81	501	10.70	5.073E+00	2.040E+00	2.040E+00	43.05
	77.11	520	18.00	5.318E+00	1.200E+00	1.200E+00	37.25
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	115.19	-----	0.60	6.866E+00	-----	Line Not Found	-----
	238.63	1157	44.60*	5.017E+00	1.143E+00	1.143E+00	10.90
	300.09	72	3.41	4.260E+00	1.103E+00	1.103E+00	73.80
BI-214	609.31	440	46.30*	2.464E+00	8.533E-01	8.533E-01	17.01
	1120.29	101	15.10	1.455E+00	1.012E+00	1.012E+00	35.79
	1764.49	75	15.80	1.029E+00	1.020E+00	1.020E+00	41.12
PB-214	74.81	501	6.21	5.073E+00	3.514E+00	3.514E+00	42.67
	77.11	520	10.50	5.318E+00	2.058E+00	2.058E+00	38.02
	87.30	-----	4.67	6.097E+00	-----	Line Not Found	-----
	241.98	228	7.49	4.976E+00	1.351E+00	1.351E+00	43.19
	295.21	346	19.20	4.314E+00	9.239E-01	9.239E-01	25.41
	351.92	518	37.20*	3.788E+00	8.120E-01	8.121E-01	17.04
PO-214	74.81	501	6.21	5.073E+00	3.514E+00	3.514E+00	42.67
	77.11	520	10.50	5.318E+00	2.058E+00	2.058E+00	38.02

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	-----	4.67	6.097E+00	-----	Line Not Found	-----
	241.98	228	7.49	4.976E+00	1.351E+00	1.351E+00	43.19
	295.21	346	19.20	4.314E+00	9.239E-01	9.239E-01	25.41
	351.92	518	37.20*	3.788E+00	8.120E-01	8.121E-01	17.04
PO-216	74.81	501	10.70	5.073E+00	2.040E+00	2.040E+00	43.05
	77.11	520	18.00	5.318E+00	1.200E+00	1.200E+00	37.25
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	238.63	1157	44.60*	5.017E+00	1.143E+00	1.143E+00	10.90
	300.09	72	3.41	4.260E+00	1.103E+00	1.103E+00	73.80
PO-218	74.81	501	6.21	5.073E+00	3.514E+00	3.514E+00	42.67
	77.11	520	10.50	5.318E+00	2.058E+00	2.058E+00	38.02
	87.30	-----	4.67	6.097E+00	-----	Line Not Found	-----
	241.98	228	7.49	4.976E+00	1.351E+00	1.351E+00	43.19
	295.21	346	19.20	4.314E+00	9.239E-01	9.239E-01	25.41
	351.92	518	37.20*	3.788E+00	8.120E-01	8.121E-01	17.04
RA-224	240.98	228	3.95*	4.976E+00	2.562E+00	2.562E+00	42.83
RA-226	609.31	440	46.30*	2.464E+00	8.533E-01	8.533E-01	17.01
	1120.29	101	15.10	1.455E+00	1.012E+00	1.012E+00	35.79
	1764.49	75	15.80	1.029E+00	1.020E+00	1.020E+00	41.12
AC-228	338.32	224	11.40	3.900E+00	1.113E+00	1.113E+00	50.31
	911.07	267	27.70*	1.745E+00	1.219E+00	1.219E+00	22.40
	969.11	127	16.60	1.654E+00	1.021E+00	1.021E+00	37.05
RA-228	338.32	224	11.40	3.900E+00	1.113E+00	1.113E+00	50.31
	911.07	267	27.70*	1.745E+00	1.219E+00	1.219E+00	22.40
	969.11	127	16.60	1.654E+00	1.021E+00	1.021E+00	37.05
TH-228	74.81	501	10.70	5.073E+00	2.040E+00	2.068E+00	42.04
	77.11	520	18.00	5.318E+00	1.200E+00	1.217E+00	37.25
	87.30	-----	8.00	6.097E+00	-----	Line Not Found	-----
	238.63	1157	44.60*	5.017E+00	1.143E+00	1.159E+00	10.90
	300.09	72	3.41	4.260E+00	1.103E+00	1.118E+00	94.08
TH-230	609.31	440	46.30*	2.464E+00	8.533E-01	8.533E-01	17.01
	1120.29	101	15.10	1.455E+00	1.012E+00	1.012E+00	35.79
	1764.49	75	15.80	1.029E+00	1.020E+00	1.020E+00	41.12
TH-232	338.32	224	11.40	3.900E+00	1.113E+00	1.113E+00	30.04
	911.07	267	27.70*	1.745E+00	1.219E+00	1.219E+00	22.40
	969.11	127	16.60	1.654E+00	1.021E+00	1.021E+00	37.05
PA-234M	766.42	365	0.32	2.031E+00	1.242E+02	1.242E+02	54.10
	1001.03	657	0.84*	1.607E+00	1.075E+02	1.075E+02	13.78
TH-234	63.29	4572	3.80*	3.629E+00	7.329E+01	7.329E+01	18.49
	92.38	12364	5.41	6.383E+00	7.915E+01	7.915E+01	18.17
U-234	609.31	440	46.30*	2.464E+00	8.533E-01	8.533E-01	17.01
	1120.29	101	15.10	1.455E+00	1.012E+00	1.012E+00	35.79
	1764.49	75	15.80	1.029E+00	1.020E+00	1.020E+00	41.12
U-235	89.95	-----	2.70	6.249E+00	-----	Line Not Found	-----
	93.35	12364	4.50	6.383E+00	9.516E+01	9.516E+01	28.08
	105.00	-----	2.10	6.763E+00	-----	Line Not Found	-----
	143.76	353	10.50*	6.639E+00	1.119E+00	1.119E+00	37.82
	163.35	205	4.70	6.305E+00	1.529E+00	1.529E+00	54.75
	185.71	2034	54.00	5.886E+00	1.415E+00	1.415E+00	8.85

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-238	205.31	102	4.70	5.540E+00	8.659E-01	8.659E-01	93.91
	63.29	4572	3.80*	3.629E+00	7.329E+01	7.329E+01	18.49
	92.38	12364	5.41	6.383E+00	7.915E+01	7.915E+01	8.81
AM-243	74.67	501	66.00*	5.073E+00	3.307E-01	3.307E-01	42.02
	86.72	-----	0.34	6.061E+00	-----	Line Not Found	-----
	117.66	-----	0.55	6.871E+00	-----	Line Not Found	-----
	142.18	353	0.13	6.639E+00	9.396E+01	9.396E+01	34.62
ANH-511	511.00	148	100.00*	2.843E+00	1.150E-01	1.150E-01	53.47

Flag: "*" = Keyline

Total number of lines in spectrum 39
Number of unidentified lines 3
Number of lines tentatively identified by NID 36 92.31%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.096E+01	2.096E+01	0.202E+01	9.63	
NB-95	64.02D	1.16	3.981E-01	4.629E-01	0.957E-01	20.67	
BA-137M	30.17Y	1.00	5.692E-02	5.697E-02	6.904E-02	121.19	
CS-137	30.17Y	1.00	6.017E-02	6.023E-02	7.299E-02	121.19	
TL-208	1.41E+10Y	1.00	3.361E-01	3.361E-01	0.716E-01	21.30	
BI-211	7.04E+08Y	1.00	2.334E+00	2.334E+00	0.379E+00	16.22	
PB-212	1.41E+10Y	1.00	1.143E+00	1.143E+00	0.125E+00	10.90	
PO-212	1.41E+10Y	1.00	1.143E+00	1.143E+00	0.125E+00	10.90	
BI-214	1600.00Y	1.00	8.533E-01	8.533E-01	1.452E-01	17.01	
PB-214	1600.00Y	1.00	8.120E-01	8.121E-01	1.384E-01	17.04	
PO-214	1600.00Y	1.00	8.120E-01	8.121E-01	1.384E-01	17.04	
PO-216	1.41E+10Y	1.00	1.143E+00	1.143E+00	0.125E+00	10.90	
PO-218	1600.00Y	1.00	8.120E-01	8.121E-01	1.384E-01	17.04	
RA-224	1.41E+10Y	1.00	2.562E+00	2.562E+00	1.097E+00	42.83	
RA-226	1600.00Y	1.00	8.533E-01	8.533E-01	1.452E-01	17.01	
AC-228	1.41E+10Y	1.00	1.219E+00	1.219E+00	0.273E+00	22.40	
RA-228	1.41E+10Y	1.00	1.219E+00	1.219E+00	0.273E+00	22.40	
TH-228	1.91Y	1.01	1.143E+00	1.159E+00	0.126E+00	10.90	
TH-230	4.47E+09Y	1.00	8.533E-01	8.533E-01	1.452E-01	17.01	
TH-232	1.41E+10Y	1.00	1.219E+00	1.219E+00	0.273E+00	22.40	
PA-234M	4.47E+09Y	1.00	1.075E+02	1.075E+02	0.148E+02	13.78	
TH-234	4.47E+09Y	1.00	7.329E+01	7.329E+01	1.355E+01	18.49	
U-234	4.47E+09Y	1.00	8.533E-01	8.533E-01	1.452E-01	17.01	
U-235	7.04E+08Y	1.00	1.119E+00	1.119E+00	0.423E+00	37.82	
U-238	4.47E+09Y	1.00	7.329E+01	7.329E+01	1.355E+01	18.49	
AM-243	7380.00Y	1.00	3.307E-01	3.307E-01	1.389E-01	42.02	
ANH-511	1.00E+09Y	1.00	1.150E-01	1.150E-01	0.615E-01	53.47	
Total Activity :			2.965E+02	2.966E+02			

Grand Total Activity : 2.965E+02 2.966E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	83.88	193	2573	0.95	167.59	165	8	2.68E-02	92.1	5.87E+00	T
0	98.59	859	1290	1.27	196.99	193	9	1.19E-01	16.6	6.61E+00	T
0	112.35	754	1666	1.25	224.49	218	11	1.05E-01	22.2	6.85E+00	T
0	258.25	156	314	1.45	516.07	511	10	2.17E-02	45.6	4.75E+00	
0	270.01	113	322	1.43	539.57	535	10	1.58E-02	62.0	4.60E+00	T
0	327.64	77	244	1.30	654.76	651	11	1.08E-02	80.8	3.99E+00	T
0	568.60	209	204	2.54	1136.46	1128	20	2.90E-02	36.9	2.61E+00	T
0	727.59	121	99	1.87	1454.34	1448	14	1.69E-02	39.1	2.12E+00	T
0	743.27	92	101	1.16	1485.71	1481	11	1.27E-02	47.5	2.09E+00	T
0	787.40	107	132	6.21	1573.95	1565	19	1.48E-02	55.2	1.98E+00	
3	964.99	61	65	2.27	1929.10	1920	25	8.46E-03	62.6	1.66E+00	T
0	1378.28	48	11	3.79	2755.85	2749	15	6.60E-03	42.3	1.22E+00	
0	1509.37	27	6	1.25	3018.15	3012	11	3.68E-03	51.8	1.14E+00	T

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395014.CNF;1
* Acquisition date   : 2-FEB-2010 09:27:14.   Detector SN#      :
* Detector ID        : GAM19                   Sensitivity         : 5.00000
* Geometry           : CAN                     Energy tolerance   : 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit     : 75.00000
* Elapsed real time  : 0 02:00:02.37           Half life ratio     : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library     : SOLID
* Sample ID          : G245395014             Analyst initials    : MXR1
* Batch Number       : 944966                 Sample Quantity     : 1.69810E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 12-MAR-2009 10:24:54.1MS Isotope      :
* MSD ID              :                      MSD Isotope      :
* LCS ID              : 1032-A                LCS Isotope         :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.096E+01	2.020E+00	4.413E-01	3.287E-02	47.503
NB-95	4.629E-01	9.567E-02	6.386E-02	4.512E-03	7.249
BA-137M	5.697E-02	6.904E-02	5.050E-02	2.941E-03	1.128
CS-137	6.023E-02	7.299E-02	5.339E-02	3.122E-03	1.128
TL-208	3.361E-01	7.158E-02	5.497E-02	3.738E-03	6.114
BI-211	2.334E+00	3.786E-01	3.087E-01	1.971E-02	7.563
PB-212	1.143E+00	1.246E-01	9.040E-02	6.524E-03	12.646
PO-212	1.143E+00	1.246E-01	9.040E-02	6.524E-03	12.646
BI-214	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
PB-214	8.121E-01	1.384E-01	1.029E-01	8.487E-03	7.889
PO-214	8.121E-01	1.384E-01	1.029E-01	8.487E-03	7.889
PO-216	1.143E+00	1.246E-01	9.040E-02	6.524E-03	12.646
PO-218	8.121E-01	1.384E-01	1.029E-01	8.487E-03	7.889
RA-224	2.562E+00	1.097E+00	1.028E+00	5.826E-02	2.492
RA-226	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
AC-228	1.219E+00	2.731E-01	1.768E-01	2.000E-02	6.896
RA-228	1.219E+00	2.731E-01	1.768E-01	2.000E-02	6.896
TH-228	1.159E+00	1.263E-01	9.166E-02	6.615E-03	12.646

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
TH-232	1.219E+00	2.731E-01	1.768E-01	2.000E-02	6.896
PA-234M	1.075E+02	1.483E+01	6.315E+00	5.878E-01	17.032
TH-234	7.329E+01	1.355E+01	3.343E+00	5.849E-01	21.922
U-234	8.533E-01	1.452E-01	9.833E-02	7.731E-03	8.678
U-235	1.119E+00	4.231E-01	4.179E-01	6.776E-02	2.676
U-238	7.329E+01	1.355E+01	3.343E+00	5.849E-01	21.922
AM-243	3.307E-01	1.389E-01	1.470E-01	1.166E-02	2.250
ANH-511	1.150E-01	6.152E-02	4.436E-02	2.618E-03	2.593

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.615E-02		3.112E-01	5.129E-01	3.481E-02	-0.051
NA-22	6.238E-03		3.488E-02	5.889E-02	3.928E-03	0.106
NA-24	-1.724E-02		6.924E-02	Half-Life too short		
AL-26	-6.013E-03		2.508E-02	3.907E-02	2.281E-03	-0.154
TI-44	2.215E-01	+	8.252E-02	1.009E-01	8.233E-03	2.196
SC-46	-2.052E-02		3.393E-02	5.166E-02	4.489E-03	-0.397
V-48	2.129E-02		5.463E-02	9.102E-02	7.318E-03	0.234
CR-51	3.341E-01		3.334E-01	5.818E-01	3.765E-02	0.574
MN-52	5.278E-02		1.484E-01	2.567E-01	1.852E-02	0.206
MN-54	-4.505E-03		3.370E-02	5.397E-02	4.293E-03	-0.083
CO-56	8.427E-03		3.519E-02	5.799E-02	4.705E-03	0.145
CO-57	-2.728E-02		3.228E-02	5.123E-02	3.057E-03	-0.532
CO-58	-5.018E-02		3.382E-02	4.721E-02	3.617E-03	-1.063
FE-59	-4.550E-02		7.025E-02	1.105E-01	8.292E-03	-0.412
CO-60	-1.185E-02		3.072E-02	4.864E-02	3.584E-03	-0.244
ZN-65	5.073E-02		8.018E-02	1.242E-01	7.938E-03	0.409
GE-68	8.738E-01		9.635E-01	1.735E+00	1.200E-01	0.504
AS-73	4.347E-01		1.288E+00	2.140E+00	1.583E-01	0.203
AS-74	-2.073E-02		8.139E-02	1.314E-01	7.787E-03	-0.158
SE-75	-1.856E-03		5.413E-02	6.963E-02	4.049E-03	-0.027
BR-77	-4.008E+00		6.399E+00	1.012E+01	5.986E-01	-0.396
SR-82	-4.149E-01		3.536E-01	5.215E-01	3.755E-02	-0.796
RB-83	-4.427E-02		6.062E-02	9.526E-02	5.632E-03	-0.465
RB-84	7.368E-02		6.272E-02	1.103E-01	9.463E-03	0.668
KR-85	1.425E+01		7.301E+00	1.193E+01	7.043E-01	1.195
SR-85	7.215E-02		3.696E-02	6.038E-02	3.565E-03	1.195
RB-86	4.822E-01		5.950E-01	1.063E+00	7.364E-02	0.454
Y-88	-1.254E-02		2.682E-02	3.966E-02	2.264E-03	-0.316
ZR-88	-1.524E-02		2.919E-02	4.741E-02	2.640E-03	-0.321
Y-91	1.097E+00		1.468E+01	2.459E+01	1.436E+00	0.045
NB-94	-9.374E-03		3.217E-02	5.145E-02	3.240E-03	-0.182
NB-95M	3.084E-01		1.473E-01	2.234E-01	1.655E-02	1.381
ZR-95	3.530E-02		6.503E-02	1.097E-01	8.781E-03	0.322
NB-97	-6.601E-03		1.591E-02	Half-Life too short		

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	8.773E-01		2.951E-01	Half-Life too short		
MO-99	1.332E+01		9.456E+00	1.483E+01	2.107E+00	0.898
TC-99M	7.382E+08		9.305E+08	Half-Life too short		
RH-101	-2.618E-02		3.985E-02	5.757E-02	3.123E-03	-0.455
RH-102	2.535E-03		2.807E-02	4.669E-02	2.725E-03	0.054
RU-103	-4.225E-03		3.509E-02	5.757E-02	7.301E-03	-0.073
RH-106	1.480E-01		2.977E-01	5.025E-01	5.923E-02	0.294
RU-106	1.480E-01		2.973E-01	5.025E-01	2.963E-02	0.294
AG-108M	-1.365E-02		3.007E-02	4.870E-02	3.033E-03	-0.280
CD-109	9.238E-01		2.360E+00	2.472E+00	2.214E-01	0.374
AG-110M	-5.338E-03		3.804E-02	5.307E-02	3.293E-03	-0.101
IN-111	7.431E-01		8.867E-01	1.293E+00	7.352E-02	0.575
IN-113M	-2.976E-02		4.163E-02	6.688E-02	3.990E-03	-0.445
SN-113	-2.976E-02		4.163E-02	6.688E-02	3.990E-03	-0.445
IN-114M	-2.842E-02		2.124E-01	2.966E-01	1.594E-02	-0.096
CD-115	-1.343E+00		6.847E+00	1.116E+01	6.603E-01	-0.120
SN-117M	2.595E-02		7.011E-02	1.005E-01	5.351E-03	0.258
SB-122	2.854E+00		1.513E+00	2.497E+00	1.482E-01	1.143
I-123	4.631E-01		8.300E-01	Half-Life too short		
TE-123M	1.070E-02		3.835E-02	5.480E-02	2.959E-03	0.195
I-124	4.831E-02		5.497E-01	7.871E-01	4.658E-02	0.061
SB-124	1.053E-02		4.558E-02	7.833E-02	5.365E-03	0.134
SB-125	1.785E-03		8.598E-02	1.430E-01	8.516E-03	0.012
TE-125M	2.688E+01		1.569E+01	2.323E+01	2.052E+00	1.157
I-126	2.350E-03		1.760E-01	2.490E-01	1.463E-02	0.009
SB-126	-9.524E-03		1.336E-01	1.959E-01	1.275E-02	-0.049
SN-126	2.531E-02		2.327E-01	2.416E-01	2.155E-02	0.105
SB-127	-4.782E-01		1.020E+00	1.609E+00	1.481E-01	-0.297
XE-127	2.692E-02		5.931E-02	8.484E-02	4.628E-03	0.317
I-131	3.398E-02		1.000E-01	1.696E-01	1.081E-02	0.200
TE-132	4.415E-01		5.698E-01	9.331E-01	1.311E-01	0.473
BA-133	1.692E-02		4.434E-02	6.609E-02	7.618E-03	0.256
I-133	-1.739E-04		1.041E-03	Half-Life too short		
CS-134	1.038E-01		5.135E-02	8.690E-02	6.534E-03	1.195
CS-135	1.757E-01		1.724E-01	2.657E-01	2.028E-02	0.661
I-135	-2.113E+08		9.461E+07	Half-Life too short		
CS-136	5.244E-03		7.927E-02	1.336E-01	1.032E-02	0.039
CE-139	3.114E-02		4.021E-02	5.846E-02	3.052E-03	0.533
BA-140	-4.517E-02		2.200E-01	3.572E-01	1.162E-01	-0.126
LA-140	-2.515E-02		6.293E-02	9.712E-02	6.571E-03	-0.259
CE-141	2.792E-01		9.074E-02	1.393E-01	8.022E-03	2.004
CE-143	3.344E-04		5.582E-05	Half-Life too short		
CE-144	-1.092E-01		2.575E-01	4.130E-01	5.851E-02	-0.264
PM-144	1.054E-02		3.347E-02	5.417E-02	3.374E-03	0.195
PR-144	7.140E-01		2.267E+00	3.668E+00	2.284E-01	0.195
PM-146	-1.385E-02		4.197E-02	6.835E-02	5.886E-03	-0.203
ND-147	-4.042E-02		4.784E-01	7.846E-01	1.065E-01	-0.052
PM-149	-3.622E+01		5.887E+01	9.627E+01	1.364E+01	-0.376

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-1.873E-02		1.213E-01	1.526E-01	9.935E-03	-0.123
GD-153	9.561E-01	+	1.750E-01	2.402E-01	1.868E-02	3.981
EU-154	1.684E-02		9.745E-02	1.644E-01	1.627E-02	0.102
EU-155	-1.148E-02		1.603E-01	2.416E-01	1.738E-02	-0.048
TB-160	2.932E-02		1.287E-01	2.115E-01	1.809E-02	0.139
HO-166M	1.692E-02		5.626E-02	9.356E-02	5.993E-03	0.181
TM-171	-1.069E+02		5.008E+01	6.782E+01	5.156E+00	-1.577
LU-176	-3.479E-03		2.369E-02	3.955E-02	2.300E-03	-0.088
LU-177	1.412E+00		1.154E+00	1.704E+00	9.357E-02	0.828
LU-177M	-3.013E-02		1.600E-01	2.636E-01	1.490E-02	-0.114
HF-181	-2.296E-02		3.986E-02	6.379E-02	3.733E-03	-0.360
W-181	1.138E+01		1.157E+00	1.386E+00	1.049E-01	8.208
TA-182	7.569E-02		1.502E-01	2.600E-01	1.568E-02	0.291
RE-183	3.526E-01	+	1.835E-01	2.330E-01	1.228E-02	1.513
RE-184	1.873E-01		2.642E-01	3.828E-01	2.188E-02	0.489
OS-185	-7.054E-03		3.924E-02	6.341E-02	3.714E-03	-0.111
RE-188	-3.091E-02		2.007E-01	3.235E-01	1.738E-02	-0.096
W-188	5.618E+00		7.429E+00	1.136E+01	6.595E-01	0.495
IR-192	6.974E-03		3.285E-02	5.560E-02	3.248E-03	0.125
AU-195	2.781E+00	+	5.091E-01	6.758E-01	5.157E-02	4.115
TL-200	2.783E-05		1.032E-04	Half-Life too short		
TL-201	-1.130E+00		7.095E+00	9.948E+00	5.198E-01	-0.114
TL-202	1.314E-02		6.034E-02	1.013E-01	5.819E-03	0.130
HG-203	-1.537E-02		3.741E-02	6.198E-02	3.811E-03	-0.248
BI-207	-1.439E-02		4.144E-02	6.726E-02	4.776E-03	-0.214
TL-207	-7.084E-01		6.765E-01	9.025E-01	1.491E-01	-0.785
PO-209	3.932E+00		6.351E+00	1.079E+01	9.482E-01	0.365
BI-210	4.432E-01		4.687E+00	7.747E+00	5.905E-01	0.057
PB-210	4.432E-01		4.687E+00	7.747E+00	5.905E-01	0.057
PO-210	4.432E-01		4.687E+00	7.747E+00	5.049E-01	0.057
PB-211	-1.165E+00		1.117E+00	1.312E+00	8.178E-01	-0.888
BI-212	1.072E+00	+	4.280E-01	5.636E-01	4.692E-02	1.901
PO-215	-7.084E-01		6.765E-01	9.025E-01	1.491E-01	-0.785
RN-219	-1.580E-01		3.773E-01	6.139E-01	8.302E-02	-0.257
RN-220	-6.553E+00		2.394E+01	3.874E+01	2.298E+00	-0.169
RA-223	-7.084E-01		6.765E-01	9.025E-01	1.491E-01	-0.785
AC-227	2.702E-01		4.765E-01	6.813E-01	9.490E-02	0.397
TH-227	2.702E-01		4.772E-01	6.813E-01	1.150E-01	0.397
TH-229	-2.333E-01		5.537E-01	8.754E-01	4.723E-02	-0.267
PA-231	1.162E+00		1.439E+00	2.483E+00	3.421E-01	0.468
TH-231	-7.084E-01		6.765E-01	9.025E-01	1.491E-01	-0.785
U-231	9.085E+00		2.226E+00	2.574E+00	2.045E-01	3.529
PA-233	-2.797E-02		6.239E-02	1.028E-01	6.344E-03	-0.272
PA-234	2.257E-01		2.605E-01	4.459E-01	8.323E-02	0.506
NP-236	5.548E-02		1.074E-01	1.548E-01	8.200E-03	0.358
NP-237	5.853E-02		6.902E-01	7.161E-01	1.607E-01	0.082
NP-239	1.149E-01		2.843E-01	4.108E-01	2.569E-02	0.280
AM-241	4.590E-01		2.922E-01	4.339E-01	3.572E-02	1.058

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.265E-01		1.523E-01	2.118E-01	1.524E-02	-0.597
AM-246	9.168E-02		1.114E-01	1.992E-01	1.374E-02	0.460
CM-247	-2.470E-02		3.316E-02	5.303E-02	2.974E-03	-0.466
CF-249	1.188E-02		3.686E-02	6.239E-02	3.484E-03	0.190
CF-251	6.743E-02		1.457E-01	2.383E-01	1.259E-02	0.283

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395014            *
* Acquisition date   : 2-FEB-2010 09:27:14 Detector SN#      :                *
* Detector ID        : GAM19                      Sensitivity   : 5.000         *
* Geometry           : CAN                        Energy tolerance: 1.500        *
* Elapsed live time  : 0 02:00:00.00             Abundance limit : 75.000       *
* Elapsed real time  : 0 02:00:02.37             Half life ratio : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID          : G245395014              Analyst initials: MXR1          *
* Batch Number       : 944966                  Sample Quantity : 1.6981E+02 GRAM  *
* Recovery           : 1.00000                 Carrier Weight  : 0.00000        *
*****
*
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 12-MAR-2009 10:24:54 MS Isotope       :                *
* MSD DPM             : 0.000                     MSD Isotope   :                *
* LCS DPM             : 0.000                     LCS Isotope    :                *
* LCSD DPM            : 0.000                     LCSD Isotope   :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.096E+01	1.979E+00	2.236E-01	1.010E+00
NB-95	4.629E-01	9.375E-02	3.308E-02	4.783E-02
BA-137M	5.697E-02	6.766E-02	2.629E-02	3.452E-02
CS-137	6.023E-02	7.153E-02	2.779E-02	3.649E-02
TL-208	3.361E-01	7.014E-02	2.873E-02	3.579E-02
BI-211	2.334E+00	3.710E-01	1.640E-01	1.893E-01
PB-212	1.143E+00	1.221E-01	4.860E-02	6.229E-02
PO-212	1.143E+00	1.221E-01	4.860E-02	6.229E-02
BI-214	8.533E-01	1.423E-01	5.132E-02	7.258E-02
PB-214	8.121E-01	1.356E-01	5.468E-02	6.918E-02
PO-214	8.121E-01	1.356E-01	5.468E-02	6.918E-02
PO-216	1.143E+00	1.221E-01	4.860E-02	6.229E-02
PO-218	8.121E-01	1.356E-01	5.468E-02	6.918E-02
RA-224	2.562E+00	1.075E+00	5.526E-01	5.486E-01
RA-226	8.533E-01	1.423E-01	5.132E-02	7.258E-02
AC-228	1.219E+00	2.676E-01	9.104E-02	1.365E-01
RA-228	1.219E+00	2.676E-01	9.104E-02	1.365E-01
TH-228	1.159E+00	1.238E-01	4.928E-02	6.316E-02
TH-230	8.533E-01	1.423E-01	5.132E-02	7.258E-02
TH-232	1.219E+00	2.676E-01	9.104E-02	1.365E-01
PA-234M	1.075E+02	1.453E+01	3.242E+00	7.413E+00
TH-234	7.329E+01	1.328E+01	1.870E+00	6.774E+00
U-234	8.533E-01	1.423E-01	5.132E-02	7.258E-02
U-235	1.119E+00	4.146E-01	2.282E-01	2.115E-01
U-238	7.329E+01	1.328E+01	1.870E+00	6.774E+00
AM-243	3.307E-01	1.362E-01	8.181E-02	6.947E-02
ANH-511	1.150E-01	6.029E-02	2.328E-02	3.076E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-2.615E-02	3.050E-01	2.698E-01	1.556E-01	NOT IDENT.
NA-22	6.238E-03	3.419E-02	2.998E-02	1.744E-02	NOT IDENT.
NA-24	-1.724E+04	1.357E+05	0.000E+00	6.924E+04	SHORT HLIF
AL-26	-6.013E-03	2.458E-02	1.965E-02	1.254E-02	NOT IDENT.
TI-44	2.215E-01	8.087E-02	5.605E-02	4.126E-02	FAIL ABUN
SC-46	-2.052E-02	3.325E-02	2.663E-02	1.697E-02	FAIL ABUN
V-48	2.129E-02	5.354E-02	4.676E-02	2.732E-02	NOT IDENT.
CR-51	3.341E-01	3.267E-01	3.100E-01	1.667E-01	NOT IDENT.
MN-52	5.278E-02	1.454E-01	1.302E-01	7.421E-02	FAIL ABUN
MN-54	-4.505E-03	3.302E-02	2.787E-02	1.685E-02	NOT IDENT.
CO-56	8.427E-03	3.448E-02	2.994E-02	1.759E-02	NOT IDENT.
CO-57	-2.728E-02	3.163E-02	2.811E-02	1.614E-02	NOT IDENT.
CO-58	-5.018E-02	3.314E-02	2.441E-02	1.691E-02	NOT IDENT.
FE-59	-4.550E-02	6.885E-02	5.654E-02	3.513E-02	FAIL ABUN
CO-60	-1.185E-02	3.011E-02	2.473E-02	1.536E-02	NOT IDENT.
ZN-65	5.073E-02	7.857E-02	6.351E-02	4.009E-02	NOT IDENT.
GE-68	8.738E-01	9.442E-01	8.885E-01	4.818E-01	NOT IDENT.
AS-73	4.347E-01	1.262E+00	1.203E+00	6.441E-01	NOT IDENT.
AS-74	-2.073E-02	7.976E-02	6.865E-02	4.069E-02	NOT IDENT.
SE-75	-1.856E-03	5.305E-02	3.732E-02	2.706E-02	NOT IDENT.
BR-77	-4.008E+00	6.271E+00	5.311E+00	3.199E+00	FAIL ABUN
SR-82	-4.149E-01	3.465E-01	2.700E-01	1.768E-01	NOT IDENT.
RB-83	-4.427E-02	5.941E-02	4.997E-02	3.031E-02	NOT IDENT.
RB-84	7.368E-02	6.147E-02	5.684E-02	3.136E-02	NOT IDENT.
KR-85	1.425E+01	7.155E+00	6.260E+00	3.651E+00	NOT IDENT.
SR-85	7.215E-02	3.622E-02	3.169E-02	1.848E-02	NOT IDENT.
RB-86	4.822E-01	5.831E-01	5.442E-01	2.975E-01	NOT IDENT.
Y-88	-1.254E-02	2.628E-02	1.994E-02	1.341E-02	NOT IDENT.
ZR-88	-1.524E-02	2.861E-02	2.510E-02	1.460E-02	NOT IDENT.
Y-91	1.097E+00	1.439E+01	1.255E+01	7.341E+00	NOT IDENT.
NB-94	-9.374E-03	3.153E-02	2.673E-02	1.609E-02	NOT IDENT.
NB-95M	3.084E-01	1.444E-01	1.202E-01	7.366E-02	NOT IDENT.
ZR-95	3.530E-02	6.373E-02	5.684E-02	3.251E-02	NOT IDENT.
NB-97	-6.601E+03	3.118E+04	0.000E+00	1.591E+04	SHORT HLIF
ZR-97	8.773E+05	5.784E+05	0.000E+00	2.951E+05	SHORT HLIF
MO-99	1.332E+01	9.267E+00	7.692E+00	4.728E+00	NOT IDENT.
TC-99M	7.382E+14	1.824E+15	0.000E+00	9.305E+14	SHORT HLIF
RH-101	-2.618E-02	3.905E-02	3.113E-02	1.992E-02	NOT IDENT.
RH-102	2.535E-03	2.750E-02	2.457E-02	1.403E-02	FAIL ABUN
RU-103	-4.225E-03	3.439E-02	3.025E-02	1.755E-02	FAIL ABUN
RH-106	1.480E-01	2.917E-01	2.621E-01	1.488E-01	FAIL ABUN
RU-106	1.480E-01	2.914E-01	2.621E-01	1.487E-01	FAIL ABUN
AG-108M	-1.365E-02	2.947E-02	2.569E-02	1.504E-02	NOT IDENT.
CD-109	9.238E-01	2.313E+00	1.369E+00	1.180E+00	NOT IDENT.
AG-110M	-5.338E-03	3.728E-02	2.763E-02	1.902E-02	NOT IDENT.
IN-111	7.431E-01	8.690E-01	6.946E-01	4.433E-01	NOT IDENT.
IN-113M	-2.976E-02	4.079E-02	3.540E-02	2.081E-02	NOT IDENT.
SN-113	-2.976E-02	4.079E-02	3.540E-02	2.081E-02	NOT IDENT.
IN-114M	-2.842E-02	2.081E-01	1.606E-01	1.062E-01	NOT IDENT.
CD-115	-1.343E+00	6.710E+00	5.849E+00	3.423E+00	NOT IDENT.
SN-117M	2.595E-02	6.871E-02	5.473E-02	3.505E-02	NOT IDENT.
SB-122	2.854E+00	1.483E+00	1.307E+00	7.566E-01	NOT IDENT.
I-123	4.631E+05	1.627E+06	0.000E+00	8.300E+05	SHORT HLIF
TE-123M	1.070E-02	3.758E-02	2.983E-02	1.917E-02	NOT IDENT.
I-124	4.831E-02	5.387E-01	4.109E-01	2.749E-01	FAIL ABUN
SB-124	1.053E-02	4.467E-02	3.949E-02	2.279E-02	FAIL ABUN
SB-125	1.785E-03	8.427E-02	7.551E-02	4.299E-02	NOT IDENT.
TE-125M	2.688E+01	1.537E+01	1.278E+01	7.843E+00	NOT IDENT.
I-126	2.350E-03	1.725E-01	1.296E-01	8.800E-02	NOT IDENT.
SB-126	-9.524E-03	1.310E-01	1.017E-01	6.682E-02	NOT IDENT.
SN-126	2.531E-02	2.280E-01	1.338E-01	1.163E-01	FAIL ABUN
SB-127	-4.782E-01	1.000E+00	8.367E-01	5.102E-01	NOT IDENT.
XE-127	2.692E-02	5.813E-02	4.584E-02	2.966E-02	NOT IDENT.
I-131	3.398E-02	9.801E-02	9.000E-02	5.000E-02	NOT IDENT.
TE-132	4.415E-01	5.585E-01	5.024E-01	2.849E-01	FAIL ABUN
BA-133	1.692E-02	4.346E-02	3.510E-02	2.217E-02	NOT IDENT.
I-133	-1.739E+02	2.040E+03	0.000E+00	1.041E+03	SHORT HLIF
CS-134	1.038E-01	5.032E-02	4.496E-02	2.567E-02	FAIL ABUN
CS-135	1.757E-01	1.690E-01	1.424E-01	8.620E-02	NOT IDENT.
I-135	-2.113E+14	1.854E+14	0.000E+00	9.461E+13	SHORT HLIF
CS-136	5.244E-03	7.769E-02	6.849E-02	3.964E-02	FAIL ABUN
CE-139	3.114E-02	3.941E-02	3.178E-02	2.011E-02	NOT IDENT.
BA-140	-4.517E-02	2.156E-01	1.872E-01	1.100E-01	FAIL ABUN
LA-140	-2.515E-02	6.167E-02	4.907E-02	3.146E-02	FAIL ABUN
CE-141	2.792E-01	8.892E-02	7.603E-02	4.537E-02	NOT IDENT.
CE-143	3.344E+02	1.094E+02	0.000E+00	5.582E+01	SHORT HLIF
CE-144	-1.092E-01	2.524E-01	2.260E-01	1.288E-01	NOT IDENT.
PM-144	1.054E-02	3.280E-02	2.815E-02	1.673E-02	NOT IDENT.

PR-144	7.140E-01	2.221E+00	1.906E+00	1.133E+00	NOT IDENT.
PM-146	-1.385E-02	4.113E-02	3.602E-02	2.098E-02	NOT IDENT.
ND-147	-4.042E-02	4.688E-01	4.113E-01	2.392E-01	NOT IDENT.
PM-149	-3.622E+01	5.770E+01	5.147E+01	2.944E+01	NOT IDENT.
EU-152	-1.873E-02	1.189E-01	8.113E-02	6.064E-02	FAIL ABUN
GD-153	9.561E-01	1.715E-01	1.327E-01	8.752E-02	FAIL ABUN
EU-154	1.684E-02	9.550E-02	8.371E-02	4.872E-02	NOT IDENT.
EU-155	-1.148E-02	1.571E-01	1.331E-01	8.014E-02	NOT IDENT.
TB-160	2.932E-02	1.261E-01	1.091E-01	6.433E-02	FAIL ABUN
HO-166M	1.692E-02	5.514E-02	4.858E-02	2.813E-02	FAIL ABUN
TM-171	-1.069E+02	4.907E+01	3.787E+01	2.504E+01	NOT IDENT.
LU-176	-3.479E-03	2.322E-02	2.110E-02	1.185E-02	NOT IDENT.
LU-177	1.412E+00	1.131E+00	9.201E-01	5.771E-01	FAIL ABUN
LU-177M	-3.013E-02	1.568E-01	1.393E-01	8.000E-02	FAIL ABUN
HF-181	-2.296E-02	3.906E-02	3.354E-02	1.993E-02	NOT IDENT.
W-181	1.138E+01	1.134E+00	7.744E-01	5.786E-01	NOT IDENT.
TA-182	7.569E-02	1.472E-01	1.326E-01	7.509E-02	FAIL ABUN
RE-183	3.526E-01	1.798E-01	1.268E-01	9.176E-02	FAIL ABUN
RE-184	1.873E-01	2.589E-01	2.054E-01	1.321E-01	NOT IDENT.
OS-185	-7.054E-03	3.846E-02	3.303E-02	1.962E-02	NOT IDENT.
RE-188	-3.091E-02	1.967E-01	1.762E-01	1.004E-01	NOT IDENT.
W-188	5.618E+00	7.280E+00	6.068E+00	3.714E+00	FAIL ABUN
IR-192	6.974E-03	3.219E-02	2.963E-02	1.642E-02	FAIL ABUN
AU-195	2.781E+00	4.989E-01	3.731E-01	2.546E-01	FAIL ABUN
TL-200	2.783E+01	2.022E+02	0.000E+00	1.032E+02	SHORT HLIF
TL-201	-1.130E+00	6.953E+00	5.407E+00	3.548E+00	NOT IDENT.
TL-202	1.314E-02	5.914E-02	5.344E-02	3.017E-02	NOT IDENT.
HG-203	-1.537E-02	3.666E-02	3.316E-02	1.870E-02	FAIL ABUN
BI-207	-1.439E-02	4.061E-02	3.446E-02	2.072E-02	FAIL ABUN
TL-207	-7.084E-01	6.630E-01	4.806E-01	3.383E-01	FAIL ABUN
PO-209	3.932E+00	6.224E+00	5.558E+00	3.176E+00	NOT IDENT.
BI-210	4.432E-01	4.593E+00	4.370E+00	2.343E+00	NOT IDENT.
PB-210	4.432E-01	4.593E+00	4.370E+00	2.343E+00	NOT IDENT.
PO-210	4.432E-01	4.593E+00	4.370E+00	2.343E+00	NOT IDENT.
PB-211	-1.165E+00	1.094E+00	6.939E-01	5.584E-01	NOT IDENT.
BI-212	1.072E+00	4.195E-01	2.925E-01	2.140E-01	FAIL ABUN
PO-215	-7.084E-01	6.630E-01	4.806E-01	3.383E-01	FAIL ABUN
RN-219	-1.580E-01	3.697E-01	3.247E-01	1.886E-01	FAIL ABUN
RN-220	-6.553E+00	2.346E+01	2.029E+01	1.197E+01	NOT IDENT.
RA-223	-7.084E-01	6.630E-01	4.806E-01	3.383E-01	FAIL ABUN
AC-227	2.702E-01	4.670E-01	3.655E-01	2.382E-01	FAIL ABUN
TH-227	2.702E-01	4.670E-01	3.655E-01	2.386E-01	FAIL ABUN
TH-229	-2.333E-01	5.426E-01	4.737E-01	2.768E-01	FAIL ABUN
PA-231	1.162E+00	1.410E+00	1.328E+00	7.193E-01	FAIL ABUN
TH-231	-7.084E-01	6.630E-01	4.806E-01	3.383E-01	FAIL ABUN
U-231	9.085E+00	2.182E+00	1.422E+00	1.113E+00	FAIL ABUN
PA-233	-2.797E-02	6.114E-02	5.479E-02	3.119E-02	FAIL ABUN
PA-234	2.257E-01	2.553E-01	2.293E-01	1.303E-01	FAIL ABUN
NP-236	5.548E-02	1.052E-01	8.424E-02	5.369E-02	FAIL ABUN
NP-237	5.853E-02	6.764E-01	3.969E-01	3.451E-01	NOT IDENT.
NP-239	1.149E-01	2.786E-01	2.257E-01	1.422E-01	FAIL ABUN
AM-241	4.590E-01	2.864E-01	2.430E-01	1.461E-01	NOT IDENT.
CM-243	-1.265E-01	1.493E-01	1.168E-01	7.617E-02	FAIL ABUN
AM-246	9.168E-02	1.092E-01	1.020E-01	5.570E-02	NOT IDENT.
CM-247	-2.470E-02	3.250E-02	2.805E-02	1.658E-02	NOT IDENT.
CF-249	1.188E-02	3.612E-02	3.304E-02	1.843E-02	NOT IDENT.
CF-251	6.743E-02	1.428E-01	1.293E-01	7.287E-02	NOT IDENT.

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*                                     *
*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD      *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUNND REPORT *
*                                     *
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ENERGY	MDA COUNTS
46.50	1250.7310
46.50	1250.7310
46.50	1250.7310
48.70	1477.2042
49.72	1497.5332
51.35	1505.2809
52.39	1571.6769
52.97	1579.5732
53.15	1579.8994
53.44	1627.4497
54.07	1649.1998
56.28	1934.3748
56.28	1914.7239
57.37	0.0000
57.53	1807.8951
57.53	1807.9004
57.60	1808.0334
57.98	1815.0820
57.98	1815.0820
59.32	1937.6190
59.32	1937.6190
59.40	1937.7839
59.54	1938.0762
59.72	1938.4473
60.01	1961.1531
61.10	1964.9968
61.14	1965.0765
61.30	2009.6796
63.00	2005.7222
63.29	2006.3230
63.29	2006.3230
63.58	2006.9220
64.28	2008.3634
65.12	1904.9139
65.20	1905.0677
65.20	1905.0677
66.05	1997.2750
66.72	2070.1672
66.83	2070.3977
66.91	2156.4407
67.20	2157.0613
67.20	2157.0613
67.75	2152.6658
67.85	2156.8682
68.90	1876.2670
68.90	1876.2670
69.30	1877.0072
69.67	2132.8325
70.82	2037.4275
70.82	2037.4275
70.83	2001.9302
72.80	2165.6643
72.87	2237.7937
72.87	2237.7937
74.67	2274.2488
74.81	2274.5520
74.81	2274.5520
74.81	2274.5520
74.81	2274.5520
74.81	2274.5520
74.81	2274.5520
74.81	2274.5520
74.97	2274.8896
75.28	2275.5481
75.70	2276.4404
77.11	2279.4207
77.11	2279.4207

77.11	2279.4207
77.11	2279.4207
77.11	2279.4207
77.11	2279.4207
77.11	2279.4207
78.38	2335.3389
79.62	2285.6592
79.80	2286.0320
79.80	2286.0320
80.11	2375.2415
80.18	2375.3855
80.30	2375.6467
80.30	2375.6467
80.57	2287.6179
81.00	2288.5020
81.07	2288.6406
81.07	2288.6406
81.07	2288.6406
81.07	2288.6406
82.60	2302.5291
83.37	2314.3162
83.78	2315.1558
83.78	2315.1558
83.78	2315.1558
83.78	2315.1558
84.21	2663.7178
84.90	2883.9844
85.43	2794.9778
86.29	2703.9648
86.50	2797.5715
86.54	2797.6665
86.59	2797.7930
86.72	2798.1094
86.79	2798.2673
86.94	2798.6365
87.30	2799.5010
87.30	2799.5010
87.30	2799.5010
87.30	2799.5010
87.30	2799.5010
87.30	2799.5010
87.30	2799.5010
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87.88	2800.8928
88.03	2801.2512
88.36	2802.0422
88.47	2644.1438
89.95	2962.1577
91.11	2617.5276
92.29	2620.1118
92.38	2620.3083
92.38	2620.3083
93.35	2622.4114
94.00	2623.8167
94.67	1345.2374
94.67	1345.2424
94.90	1345.4993
94.90	1345.4993
94.90	1345.4993
94.90	1345.4993
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95.87	1346.5618
96.73	1347.5034
97.43	1348.2637
98.44	1108.9257
98.44	1108.9298
98.88	1065.1423
99.55	941.2958
99.55	941.2958
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100.00	987.4861
100.10	987.5671
103.18	1049.0614
103.76	1107.0237
105.00	1097.9858
105.31	1079.8486
108.00	1158.4225
109.28	1166.1400

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111.00	1136.4730
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115.19	939.3360
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117.00	889.1469
117.66	951.5325
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121.78	847.8774
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122.32	864.8526
122.32	864.8526
122.32	864.8526
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136.48	813.3638
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140.51	0.0000
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143.76	802.4496
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144.24	760.4517
144.24	760.4517
144.24	760.4517
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145.44	730.5926
147.16	721.2307
152.43	681.5764
152.70	680.6273
153.22	665.9771
154.21	709.9590
154.21	709.9590
154.21	709.9590
154.21	709.9590
155.03	713.5057
156.02	688.4050
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159.00	0.0000
159.00	671.9595
160.31	653.7135
161.27	710.4500
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162.64	685.3957
163.35	673.2875
163.89	665.3790
165.85	643.8862
167.43	649.6297
171.28	625.9626
171.86	622.9495
172.10	625.1820
176.55	584.7756
176.60	584.7922
181.06	613.2590
184.41	598.8267
185.71	569.3772
186.00	569.4695
190.27	489.6308
192.34	553.3334
193.63	526.1772
197.04	542.3851
198.01	576.8058
198.60	559.8378
200.40	542.9137
201.83	550.3079
202.84	543.6084
205.31	633.5663

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208.81	440.0895
209.75	460.4741
209.75	460.4741
210.97	478.3153
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216.55	441.1606
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222.10	455.6228
223.80	452.6917
226.40	413.4681
227.00	381.5210
227.08	381.5367
227.20	373.8161
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228.18	407.1887
228.18	407.1887
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236.00	406.9474
236.00	406.9474
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238.63	386.9944
238.63	386.9944
238.63	386.9944
239.00	387.0608
240.98	387.4219
241.98	354.6364
241.98	354.6364
241.98	354.6364
244.69	342.5953
245.39	315.9316
247.94	369.6931
248.90	364.2703
249.79	358.8303
252.40	313.3743
252.85	299.1098
252.85	299.1098
254.15	0.0000
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256.20	360.5560
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260.90	328.9622
262.80	248.2787
264.65	306.1038
268.24	306.5894
268.79	282.6120
269.46	290.2147
269.46	290.2147
269.46	290.2147
269.46	290.2147
271.23	323.5454
273.65	338.9511
276.40	311.0786
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277.60	323.2349
277.60	323.2349
278.00	325.1027
278.60	315.2221
279.20	308.9605
279.53	315.3474
280.46	316.3792
281.68	304.7543
283.67	256.9006
284.30	261.5098
285.00	274.3032
285.90	292.5790
286.10	292.6065
286.10	292.6065
287.40	301.1759
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290.80	233.6976
291.72	242.8971
293.26	0.0000
293.70	290.1955
295.21	264.5330
295.21	264.5330

295.21	264.5330
295.96	310.2375
296.50	310.3081
297.23	310.4036
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300.09	269.6376
300.09	269.6376
300.09	269.6376
300.09	269.6376
300.12	269.6412
301.29	242.3365
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303.76	262.4127
303.91	262.4302
304.40	280.7954
304.40	280.7954
304.84	276.2651
306.84	266.7133
308.46	249.4617
311.98	275.5334
316.51	250.2686
318.01	259.6245
319.02	225.6500
319.41	221.0786
320.08	211.9218
323.87	238.3844
323.87	238.3844
323.87	238.3844
323.87	238.3844
325.23	238.5105
328.77	226.5114
333.44	208.3969
334.20	273.3107
334.20	273.3107
334.30	273.3215
338.28	242.1897
338.28	242.1897
338.28	242.1897
338.28	242.1897
338.32	242.1928
338.32	242.1928
338.32	242.1928
340.50	212.0557
340.57	212.0612
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345.85	252.8105
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351.07	217.2514
351.92	198.9766
351.92	198.9766
351.92	198.9766
355.39	0.0000
356.01	191.4943
364.48	207.0796
366.43	203.4772
367.43	196.9827
367.94	0.0000
369.80	214.9894
374.96	178.7048
383.85	187.7625
387.95	186.1424
388.63	191.8563
391.69	211.9305
391.69	211.9305
392.90	214.8575
398.62	169.7594
400.65	186.0110
401.10	193.6331
401.81	192.7310
402.60	191.8334
404.84	210.9894
410.95	183.8071
411.60	181.9420
413.65	183.0188
414.70	180.2237
415.30	183.1219

415.76	191.7352
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427.08	195.3265
427.89	173.3508
432.53	170.7361
433.93	171.7740
439.47	163.4299
439.56	163.4362
439.89	167.2987
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444.90	164.6794
445.03	156.0179
445.03	156.0179
445.03	156.0179
445.03	156.0179
453.90	179.6380
463.38	145.3015
468.07	195.9563
473.00	150.5914
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475.35	162.3684
476.78	176.0574
477.59	172.2077
477.96	171.2541
482.03	168.5441
484.57	156.9750
487.03	142.4552
490.36	0.0000
492.35	144.6378
497.08	132.1210
507.63	0.0000
510.53	0.0000
510.84	150.3470
511.00	150.3535
511.85	150.3899
511.85	150.3899
513.99	122.9454
513.99	122.9454
520.41	136.9707
520.65	132.0535
527.90	137.2659
528.96	0.0000
529.64	133.3817
529.87	0.0000
531.02	133.4344
537.32	130.7045
543.00	124.9633
546.56	0.0000
549.76	132.1558
552.65	135.2430
555.20	107.4753
563.23	99.7363
563.90	91.4406
568.70	138.8405
569.32	138.8643
569.50	138.8710
569.67	138.8778
573.80	123.3634
574.00	123.3695
574.64	150.0696
578.91	122.1966
579.30	0.0000
583.14	132.3642
585.48	130.4412
591.81	112.7921
592.07	112.8003
593.00	133.7176
595.88	132.8153
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602.52	0.0000
602.71	120.9580
602.71	120.9580
603.60	127.7088
604.41	137.8211
604.70	136.1503
609.31	119.1495

609.31	119.1495
609.31	119.1495
609.31	119.1495
610.33	119.1812
612.46	117.8971
614.37	112.9017
618.01	127.7665
621.84	112.4444
621.84	112.4444
631.29	94.4395
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633.10	106.6740
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635.90	127.0813
636.97	124.0671
645.85	110.0751
646.12	115.1794
656.30	132.8438
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657.90	0.0000
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661.65	103.3475
664.57	0.0000
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666.33	110.9782
675.00	107.7916
677.61	90.3977
685.20	117.3204
692.80	119.5967
695.00	140.2915
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696.49	113.5127
697.00	113.5261
697.49	119.7326
698.33	122.8524
698.50	122.8582
699.00	116.6775
702.63	129.1779
706.10	111.7020
706.58	0.0000
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709.31	113.8564
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713.82	108.7965
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720.50	103.7793
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722.78	86.5275
722.89	86.5295
722.95	86.5316
723.30	86.5377
724.18	98.6738
727.18	100.8222
733.00	104.0796
735.90	106.7542
739.58	85.1279
742.81	135.6082
744.21	99.1307
747.13	95.7174
751.79	104.5288
752.31	103.4956
753.82	101.4403
755.35	100.4273
756.15	93.1219
756.87	105.8112
763.93	103.0675
765.79	117.4414
766.42	117.4578
766.84	117.4688
776.49	121.9274
778.00	107.4806
778.57	94.6428
778.89	82.6304
783.80	96.5051
785.46	126.3809
792.07	145.9018

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796.30	87.4713
798.80	148.9313
801.93	109.9262
805.60	83.5672
810.29	97.4176
810.76	97.4288
815.85	76.3312
817.79	68.9387
818.51	79.5575
819.60	73.2097
826.30	78.6268
828.27	0.0000
831.60	101.0535
831.96	98.9351
834.83	95.8008
836.80	0.0000
846.75	80.0354
848.13	92.8666
856.28	0.0000
856.80	81.9843
860.37	73.8415
867.32	75.0193
867.82	64.3081
871.10	62.2070
873.19	62.2339
874.81	70.8404
875.33	0.0000
876.40	90.1913
879.36	79.5012
880.27	80.5902
880.51	71.9988
881.50	64.4883
883.24	70.9629
884.67	80.6635
889.25	78.5855
896.60	61.4517
898.02	74.4108
899.00	71.1901
903.28	74.2201
911.07	69.1984
911.07	69.1984
911.07	69.1984
919.63	64.9849
920.93	70.4177
925.00	69.3906
925.24	69.3938
926.50	71.5800
935.52	53.2373
937.48	56.5183
944.10	59.8555
946.00	56.6122
949.00	70.8065
962.29	49.1451
964.01	60.0864
966.15	60.1106
968.20	60.1348
969.11	60.1455
969.11	60.1455
969.11	60.1455
977.42	68.4540
980.50	62.4676
983.50	53.7301
989.30	66.9615
996.32	53.1277
1001.03	68.7592
1001.68	68.7683
1004.76	58.1919
1021.30	0.0000
1024.50	0.0000
1034.80	53.5065
1036.00	57.2092
1037.82	57.2294
1038.57	60.0065
1038.76	0.0000
1045.16	60.0779
1046.59	66.5654
1048.07	57.3354

1050.47	54.5851
1050.47	54.5851
1062.04	61.1875
1063.62	63.0610
1076.63	49.2627
1077.35	46.4803
1078.86	48.3543
1085.78	61.4480
1099.22	66.2592
1112.02	75.5044
1112.84	72.9631
1115.52	57.7567
1120.29	73.8612
1120.29	73.8612
1120.29	73.8612
1120.29	73.8612
1120.51	73.9982
1121.28	75.4800
1124.00	0.0000
1129.67	64.7324
1131.51	0.0000
1147.95	0.0000
1167.94	65.1536
1173.22	71.8283
1175.09	67.1230
1177.93	68.1006
1189.05	61.5934
1204.90	67.4552
1205.75	0.0000
1213.00	70.3988
1221.42	60.9688
1230.97	58.2027
1235.34	78.2931
1236.41	0.0000
1238.25	74.5088
1246.25	67.9117
1260.41	0.0000
1271.85	48.0204
1274.45	50.9211
1274.54	50.9232
1291.56	50.0957
1298.22	0.0000
1312.09	48.3236
1325.50	39.7071
1325.50	39.7071
1332.49	41.6877
1333.61	39.7555
1360.21	26.2870
1362.66	0.0000
1365.15	33.1270
1368.21	29.2432
1368.53	0.0000
1376.25	23.4229
1384.27	15.0751
1394.10	22.5068
1395.20	25.4456
1407.95	42.1637
1434.06	22.6388
1436.60	27.5705
1457.56	0.0000
1460.81	28.6554
1489.15	22.8184
1509.49	15.9193
1596.49	27.1868
1620.62	21.2136
1678.03	0.0000
1691.02	9.1758
1691.02	9.1758
1706.46	0.0000
1750.46	0.0000
1764.49	16.4661
1764.49	16.4661
1764.49	16.4661
1764.49	16.4661
1770.23	12.3584
1771.40	7.0628
1791.20	0.0000
1808.65	17.5914

1836.01

17.6502

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395014

Total Uranium Activity	2.1856E+02	ug/g
Total Uranium Counting Unc.	3.9500E+01	ug/g
Total Uranium Tpu	2.0153E-05	ug/g
Total Uranium Mda	5.5629E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 944966                          SAMPLE ID   : G245395014
*  ANALYST       : MXR1                             DETECTOR    : GAM19
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 09:27:14.40          SAMPLE ALQT  : 169.810 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.655E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.688E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 6.739E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 3.326E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:49:06.08

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395015.CNF;1
Sample date        : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:47:21.
Sample ID          : G245395015 Sample quantity : 1.57390E+02 GRAM
Detector name      : GAM01 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.59 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944966 Detector SN# :
Matrix Spike ID    : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.22*	1423	1166	1.13	127.17	121	12	1.98E-01	5.5	
2	2	74.92*	375	979	1.30	150.55	143	19	5.21E-02	15.9	1.89E+00
3	2	77.17*	533	854	1.09	155.06	143	19	7.40E-02	10.3	
4	2	87.26	294	780	1.30	175.23	172	22	4.09E-02	15.4	5.99E+00
5	2	90.08	219	981	1.29	180.86	172	22	3.05E-02	26.0	
6	2	92.69*	3562	845	1.28	186.08	172	22	4.95E-01	2.3	
7	0	98.54*	284	638	1.31	197.77	194	8	3.94E-02	16.7	
8	1	111.28	97	427	1.25	223.23	220	14	1.34E-02	32.2	2.74E+00
9	1	113.05*	205	607	1.25	226.77	220	14	2.85E-02	22.8	
10	0	128.88	80	495	1.31	258.42	255	8	1.11E-02	49.4	
11	0	144.21*	93	503	1.01	289.06	285	8	1.29E-02	44.3	
12	0	186.15*	862	627	1.31	372.90	366	15	1.20E-01	7.3	
13	5	238.96*	1194	245	1.20	478.45	472	23	1.66E-01	3.7	7.85E-01
14	5	242.08*	340	316	1.89	484.70	472	23	4.72E-02	14.0	
15	0	270.50	99	278	1.85	541.49	536	10	1.37E-02	33.1	
16	0	295.59*	313	292	1.40	591.66	586	11	4.35E-02	12.1	
17	0	300.71	61	213	1.05	601.88	598	9	8.41E-03	45.4	
18	0	338.65*	216	261	1.04	677.72	672	12	3.01E-02	16.6	
19	0	352.25*	595	263	1.14	704.90	698	14	8.27E-02	7.1	
20	0	463.44	69	111	1.36	927.14	921	10	9.54E-03	31.3	
21	0	511.04*	87	218	2.16	1022.29	1015	15	1.22E-02	41.4	
22	0	583.57*	308	152	1.42	1167.26	1161	14	4.28E-02	10.5	
23	0	609.51*	415	144	1.47	1219.10	1211	16	5.76E-02	8.3	
24	0	727.15	78	33	1.26	1454.24	1450	9	1.08E-02	17.5	
25	0	767.29	131	118	1.40	1534.47	1528	15	1.82E-02	20.1	
26	0	786.61*	32	54	1.47	1573.08	1569	10	4.50E-03	50.6	
27	0	795.15	58	50	2.62	1590.14	1585	11	8.04E-03	27.0	
28	0	860.55	65	66	1.77	1720.87	1715	13	9.09E-03	28.3	
29	0	911.44*	240	64	1.55	1822.57	1817	14	3.33E-02	9.8	
30	1	964.60*	42	73	1.92	1928.81	1921	29	5.80E-03	39.4	1.44E+00
31	1	969.16*	159	56	1.92	1937.94	1921	29	2.20E-02	13.0	
32	0	1001.18*	246	45	1.79	2001.94	1996	15	3.42E-02	8.8	
33	0	1121.17*	49	99	0.87	2241.73	2234	17	6.74E-03	50.1	
34	0	1269.73	18	59	4.33	2538.64	2523	18	2.55E-03	103.4	
35	0	1408.78	25	9	1.39	2816.52	2812	9	3.40E-03	31.4	
36	0	1460.98*	1397	26	2.08	2920.84	2911	16	1.94E-01	2.8	
37	0	1588.30	38	10	2.21	3175.30	3170	12	5.31E-03	22.7	
38	0	1764.76*	74	3	1.19	3527.92	3522	11	1.03E-02	13.5	

Peak Search Report (continued)
Sample ID : G245395015

Page : 2
Acquisition date : 2-FEB-2010 09:47:21

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
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Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395015.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:47:21
Sample ID        : G245395015 Sample quantity : 157.39 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.59 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type  : Empirical Efficiencies at : Peak Energy
Abundance limit  : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.301E+01	3.471E+00	4.858E-01	4.319E-02	67.954
CD-109	+	88.03	*	3.711E+00	1.198E+00	1.783E+00	1.687E-01	2.081
SN-126	+	64.28		1.278E+01	2.349E+00	1.033E+00	1.520E-01	12.374
	+	86.94		1.519E+00	7.861E-01	7.885E-01	3.274E-01	1.926
	+	87.57	*	3.654E-01	1.180E-01	1.765E-01	1.662E-02	2.070
CE-141	+	145.44	*	1.048E-01	9.325E-02	1.095E-01	9.526E-03	0.957
TL-208		277.35		3.908E-01	4.011E-01	6.849E-01	8.704E-02	0.571
	+	510.84		4.038E-01	3.378E-01	2.369E-01	2.815E-02	1.705
	+	583.14	*	4.076E-01	9.317E-02	6.132E-02	5.569E-03	6.647
	+	860.37		8.228E-01	4.720E-01	4.784E-01	4.585E-02	1.720
BI-211		72.87		8.158E+00	4.155E+00	6.941E+00	5.693E-01	1.175
	+	351.07	*	3.403E+00	5.750E-01	3.117E-01	2.835E-02	10.916
BI-212	+	727.18	*	8.904E-01	3.243E-01	4.531E-01	4.490E-02	1.965
	+	785.46		2.378E+00	2.417E+00	2.836E+00	2.478E-01	0.838
		1620.62		1.159E+00	1.169E+00	2.186E+00	1.881E-01	0.530
PB-212	+	74.81		2.010E+00	6.868E-01	7.124E-01	8.916E-02	2.821
	+	77.11		1.610E+00	3.598E-01	4.020E-01	3.411E-02	4.005
	+	87.30		1.690E+00	5.711E-01	8.187E-01	1.123E-01	2.064
	+	238.63	*	1.469E+00	1.835E-01	9.485E-02	9.603E-03	15.488
	+	300.09		1.160E+00	1.060E+00	1.207E+00	1.305E-01	0.960
PO-212	+	74.81		2.010E+00	6.868E-01	7.124E-01	8.916E-02	2.821
	+	77.11		1.610E+00	3.598E-01	4.020E-01	3.411E-02	4.005
	+	87.30		1.690E+00	5.711E-01	8.187E-01	1.123E-01	2.064
		115.19		4.512E+00	4.853E+00	7.121E+00	6.188E-01	0.634
	+	238.63	*	1.469E+00	1.835E-01	9.485E-02	9.603E-03	15.488
	+	300.09		1.160E+00	1.060E+00	1.207E+00	1.305E-01	0.960
BI-214	+	609.31	*	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
	+	1120.29		6.430E-01	6.476E-01	4.889E-01	5.231E-02	1.315
	+	1764.49		1.356E+00	3.836E-01	2.592E-01	2.174E-02	5.232
PB-214	+	74.81		3.463E+00	1.167E+00	1.227E+00	1.368E-01	2.821
	+	77.11		2.760E+00	6.517E-01	6.891E-01	7.859E-02	4.005
	+	87.30		2.895E+00	9.608E-01	1.403E+00	1.704E-01	2.064
	+	241.98		2.514E+00	7.532E-01	5.713E-01	6.103E-02	4.399
	+	295.21		1.051E+00	2.796E-01	2.290E-01	2.529E-02	4.588

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	351.92	*	1.184E+00	2.093E-01	1.087E-01	1.139E-02	10.892
	+	74.81		3.463E+00	1.167E+00	1.227E+00	1.368E-01	2.821
	+	77.11		2.760E+00	6.517E-01	6.891E-01	7.859E-02	4.005
	+	87.30		2.895E+00	9.608E-01	1.403E+00	1.704E-01	2.064
	+	241.98		2.514E+00	7.532E-01	5.713E-01	6.103E-02	4.399
PO-216	+	295.21		1.051E+00	2.796E-01	2.290E-01	2.529E-02	4.588
	+	351.92	*	1.184E+00	2.093E-01	1.087E-01	1.139E-02	10.892
	+	74.81		2.010E+00	6.868E-01	7.124E-01	8.916E-02	2.821
	+	77.11		1.610E+00	3.598E-01	4.020E-01	3.411E-02	4.005
	+	87.30		1.690E+00	5.711E-01	8.187E-01	1.123E-01	2.064
PO-218	+	238.63	*	1.469E+00	1.835E-01	9.485E-02	9.603E-03	15.488
	+	300.09		1.160E+00	1.060E+00	1.207E+00	1.305E-01	0.960
	+	74.81		3.463E+00	1.167E+00	1.227E+00	1.368E-01	2.821
	+	77.11		2.760E+00	6.517E-01	6.891E-01	7.859E-02	4.005
	+	87.30		2.895E+00	9.608E-01	1.403E+00	1.704E-01	2.064
RA-224	+	241.98		2.514E+00	7.532E-01	5.713E-01	6.103E-02	4.399
	+	295.21		1.051E+00	2.796E-01	2.290E-01	2.529E-02	4.588
	+	351.92	*	1.184E+00	2.093E-01	1.087E-01	1.139E-02	10.892
	+	240.98	*	4.766E+00	1.403E+00	1.080E+00	9.811E-02	4.414
	+	609.31	*	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
AC-228	+	1120.29		6.430E-01	6.476E-01	4.889E-01	5.231E-02	1.315
	+	1764.49		1.356E+00	3.836E-01	2.592E-01	2.174E-02	5.232
	+	338.32		1.361E+00	7.215E-01	3.765E-01	1.555E-01	3.614
	+	911.07	*	1.430E+00	3.257E-01	2.250E-01	2.604E-02	6.354
	+	969.11		1.672E+00	5.855E-01	3.782E-01	8.873E-02	4.421
TH-228	+	338.32		1.361E+00	7.215E-01	3.765E-01	1.555E-01	3.614
	+	911.07	*	1.430E+00	3.257E-01	2.250E-01	2.604E-02	6.354
	+	969.11		1.672E+00	5.855E-01	3.782E-01	8.873E-02	4.421
	+	74.81		2.038E+00	6.702E-01	7.223E-01	6.068E-02	2.821
	+	77.11		1.632E+00	3.648E-01	4.076E-01	3.459E-02	4.005
TH-230	+	87.30		1.713E+00	5.531E-01	8.301E-01	7.796E-02	2.064
	+	238.63	*	1.489E+00	1.861E-01	9.617E-02	9.737E-03	15.488
	+	300.09		1.176E+00	1.275E+00	1.224E+00	7.265E-01	0.960
	+	609.31	*	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
	+	1120.29		6.430E-01	6.476E-01	4.889E-01	5.231E-02	1.315
TH-232	+	1764.49		1.356E+00	3.836E-01	2.592E-01	2.174E-02	5.232
	+	338.32		1.361E+00	4.680E-01	3.765E-01	3.314E-02	3.614
	+	911.07	*	1.430E+00	3.257E-01	2.250E-01	2.604E-02	6.354
	+	969.11		1.672E+00	5.855E-01	3.782E-01	8.873E-02	4.421
	+	766.42		5.797E+01	3.755E+01	1.963E+01	9.959E+00	2.954
PA-234M	+	1001.03	*	5.275E+01	1.073E+01	7.097E+00	7.234E-01	7.433
	+	63.29	*	3.228E+01	6.702E+00	2.728E+00	4.795E-01	11.833
	+	92.38		2.857E+01	5.393E+00	1.151E+00	2.111E-01	24.812
	+	609.31	*	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
	+	1120.29		6.430E-01	6.476E-01	4.889E-01	5.231E-02	1.315
U-234	+	1764.49		1.356E+00	3.836E-01	2.592E-01	2.174E-02	5.232
	+	89.95		3.614E+00	2.191E+00	2.358E+00	7.324E-01	1.532
	+	93.35		3.435E+01	9.804E+00	1.374E+00	3.869E-01	25.007
U-235		105.00		7.667E-01	1.313E+00	2.103E+00	6.280E-01	0.365

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	143.76	*	3.587E-01	3.238E-01	3.741E-01	6.536E-02	0.959
		163.35		3.955E-01	5.418E-01	9.161E-01	1.744E-01	0.432
	+	185.71		7.377E-01	1.258E-01	7.291E-02	6.335E-03	10.119
		205.31		-1.370E-01	5.798E-01	9.498E-01	1.823E-01	-0.144
NP-237	+	86.50	*	1.073E+00	4.111E-01	5.503E-01	1.246E-01	1.950
		95.87		3.138E+00	1.859E+00	2.100E+00	5.197E-01	1.495
U-238	+	63.29	*	3.228E+01	6.702E+00	2.728E+00	4.795E-01	11.833
	+	92.38		2.857E+01	2.907E+00	1.151E+00	1.052E-01	24.812
AM-243	+	74.67	*	3.258E-01	1.071E-01	1.159E-01	9.637E-03	2.812
	+	86.72		4.023E+01	1.299E+01	2.094E+01	1.954E+00	1.921
		117.66		1.125E+00	4.904E+00	6.998E+00	6.101E-01	0.161
		142.18		1.611E+01	2.141E+01	3.301E+01	2.823E+00	0.488
ANH-511	+	511.00	*	8.722E-02	7.261E-02	5.118E-02	4.337E-03	1.704

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.782E-02	3.188E-01	5.092E-01	4.632E-02	-0.035
NA-22		1274.54	*	3.053E-02	4.810E-02	7.780E-02	6.533E-03	0.392
NA-24		1368.53	*	-2.934E-03	4.810E-02	Half-Life too short		
AL-26		1129.67		-9.609E-01	2.253E+00	3.113E+00	2.600E-01	-0.309
		1808.65	*	-1.210E-02	2.718E-02	3.952E-02	3.275E-03	-0.306
TI-44		67.85		-1.177E-02	7.220E-02	9.415E-02	7.466E-03	-0.125
	+	78.38	*	2.971E-01	6.640E-02	8.888E-02	7.627E-03	3.343
SC-46		889.25	*	2.036E-02	4.125E-02	7.029E-02	6.354E-03	0.290
	+	1120.51		1.090E-01	1.095E-01	1.131E-01	9.506E-03	0.963
V-48		944.10		4.260E-01	9.242E-01	1.565E+00	1.410E-01	0.272
		983.50	*	4.907E-02	6.952E-02	1.202E-01	1.073E-02	0.408
		1312.09		6.143E-03	6.934E-02	1.167E-01	9.898E-03	0.053
CR-51		320.08	*	-2.753E-01	3.816E-01	5.995E-01	5.639E-02	-0.459
MN-52		744.21		1.688E-01	2.278E-01	3.960E-01	3.397E-02	0.426
		848.13		-4.265E+00	5.565E+00	8.408E+00	7.516E-01	-0.507
		935.52		1.217E-02	2.357E-01	3.858E-01	3.479E-02	0.032
		1246.25		-2.355E+00	6.563E+00	1.063E+01	8.839E-01	-0.221
		1333.61		-3.113E+00	3.793E+00	5.579E+00	4.757E-01	-0.558
		1434.06	*	6.313E-02	1.834E-01	3.187E-01	2.751E-02	0.198
MN-54		834.83	*	2.954E-02	3.810E-02	6.630E-02	5.901E-03	0.446
CO-56		846.75	*	-3.382E-03	3.659E-02	5.947E-02	5.313E-03	-0.057
		977.42		1.938E+00	3.192E+00	4.871E+00	4.356E-01	0.398
		1037.82		3.337E-02	3.479E-01	5.677E-01	5.233E-02	0.059
		1175.09		-1.290E+00	2.317E+00	3.704E+00	3.000E-01	-0.348
		1238.25		1.664E-01	1.016E-01	1.864E-01	1.593E-02	0.893
		1360.21		-5.600E-02	9.316E-01	1.536E+00	1.315E-01	-0.036
		1771.40		-6.614E-01	3.057E-01	2.944E-01	2.465E-02	-2.246
CO-57		122.06	*	-1.094E-02	2.962E-02	4.631E-02	4.077E-03	-0.236
		136.48		5.783E-03	2.241E-01	3.808E-01	3.518E-02	0.015
CO-58		810.76	*	-6.566E-03	4.193E-02	6.805E-02	6.021E-03	-0.096
FE-59		142.65		4.886E+00	3.349E+00	5.270E+00	4.507E-01	0.927

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		3.414E-01	1.074E+00	1.610E+00	2.175E-01	0.212
		1099.22	*	3.526E-02	9.585E-02	1.598E-01	1.473E-02	0.221
		1291.56		4.588E-02	1.198E-01	2.074E-01	1.995E-02	0.221
CO-60		1173.22		-8.445E-03	4.839E-02	8.010E-02	6.483E-03	-0.105
		1332.49	*	-3.157E-02	3.440E-02	4.977E-02	4.242E-03	-0.634
ZN-65		1115.52	*	-2.484E-02	1.147E-01	1.546E-01	1.304E-02	-0.161
GE-68		1077.35	*	7.970E-01	1.427E+00	2.415E+00	2.079E-01	0.330
AS-73		53.44	*	7.351E-01	1.189E+00	1.971E+00	1.595E-01	0.373
AS-74		595.88	*	-1.160E-01	8.856E-02	1.334E-01	1.124E-02	-0.869
		634.78		4.019E-03	3.337E-01	5.575E-01	4.631E-02	0.007
SE-75		66.05		2.002E+00	6.736E+00	9.831E+00	9.640E-01	0.204
		96.73		2.263E+00	1.418E+00	1.699E+00	2.347E-01	1.332
		121.11		-1.631E-01	1.614E-01	2.447E-01	2.775E-02	-0.667
		136.00		7.749E-03	4.183E-02	7.141E-02	6.180E-03	0.109
		198.60		-1.523E+00	1.995E+00	3.145E+00	3.060E-01	-0.484
		264.65	*	2.842E-02	5.052E-02	7.595E-02	6.977E-03	0.374
		279.53		2.420E-02	1.169E-01	1.946E-01	1.839E-02	0.124
		303.91		-1.642E-02	2.444E+00	3.518E+00	4.157E-01	-0.005
		400.65		7.999E-02	2.573E-01	4.247E-01	4.551E-02	0.188
BR-77	+	87.88		5.645E+02	1.822E+02	3.013E+02	2.848E+01	1.873
		200.40		8.943E+01	1.241E+02	2.125E+02	1.874E+01	0.421
	+	239.00		1.658E+02	1.933E+01	2.513E+01	2.281E+00	6.598
		249.79		-6.399E+00	5.493E+01	7.942E+01	7.243E+00	-0.081
		281.68		-3.420E+01	6.799E+01	1.093E+02	9.993E+00	-0.313
		297.23		2.030E+02	6.623E+01	8.701E+01	7.915E+00	2.333
		303.76		-5.880E+00	1.471E+02	2.113E+02	1.916E+01	-0.028
		439.47		5.410E+01	9.792E+01	1.639E+02	1.359E+01	0.330
		484.57		-3.644E+00	1.674E+02	2.678E+02	2.258E+01	-0.014
		520.65	*	-6.096E-02	7.736E+00	1.234E+01	1.047E+00	-0.005
		574.64		4.342E+01	1.508E+02	2.578E+02	2.182E+01	0.168
		578.91		-4.918E+01	7.331E+01	1.001E+02	8.467E+00	-0.491
		585.48		9.412E+02	1.933E+02	3.426E+02	2.894E+01	2.747
		755.35		1.547E+02	1.241E+02	2.227E+02	1.921E+01	0.695
		817.79		1.766E+01	9.679E+01	1.616E+02	1.430E+01	0.109
SR-82		698.33		6.621E+00	3.554E+01	5.973E+01	5.002E+00	0.111
		776.49	*	-2.343E-01	3.744E-01	5.837E-01	5.082E-02	-0.401
		1395.20		1.124E+01	9.396E+00	1.800E+01	1.548E+00	0.625
RB-83		520.41	*	1.797E-03	7.222E-02	1.155E-01	9.795E-03	0.016
		529.64		-4.274E-02	1.148E-01	1.849E-01	1.570E-02	-0.231
		552.65		-4.913E-02	2.018E-01	3.339E-01	2.834E-02	-0.147
RB-84		881.50	*	6.884E-02	7.628E-02	1.336E-01	1.205E-02	0.515
KR-85		513.99	*	1.561E+01	9.147E+00	1.445E+01	1.225E+00	1.081
SR-85		513.99	*	7.903E-02	4.631E-02	7.314E-02	6.201E-03	1.081
RB-86		1076.63	*	2.302E-01	9.004E-01	1.485E+00	1.279E-01	0.155
Y-88		898.02		9.531E-03	4.686E-02	7.783E-02	7.082E-03	0.122
		1836.01	*	2.191E-02	2.886E-02	5.460E-02	4.490E-03	0.401
ZR-88		392.90	*	-2.393E-03	3.161E-02	5.100E-02	4.106E-03	-0.047
Y-91		1204.90	*	7.244E+00	2.077E+01	3.569E+01	2.924E+00	0.203
NB-94		702.63	*	1.816E-02	3.532E-02	6.066E-02	5.092E-03	0.299

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	871.10			-1.093E-02	3.233E-02	5.108E-02	4.596E-03	-0.214
NB-95	765.79	*		1.482E-01	6.320E-02	1.054E-01	9.134E-03	1.406
NB-95M	235.69	*		8.137E-02	1.401E-01	2.108E-01	2.162E-02	0.386
ZR-95	724.18			-6.078E-02	1.072E-01	1.440E-01	1.332E-02	-0.422
	756.15	*		5.952E-02	7.581E-02	1.321E-01	1.255E-02	0.450
NB-97	657.90	*		-2.503E-02	7.581E-02	Half-Life	too short	
	1024.50			-3.400E+00	7.581E-02	Half-Life	too short	
ZR-97	254.15			2.307E-02	7.581E-02	Half-Life	too short	
	355.39			5.381E-01	7.581E-02	Half-Life	too short	
	507.63	*		3.804E-01	7.581E-02	Half-Life	too short	
	602.52			5.722E-01	7.581E-02	Half-Life	too short	
	1021.30			1.498E+00	7.581E-02	Half-Life	too short	
	1147.95			2.745E-01	7.581E-02	Half-Life	too short	
	1362.66			1.189E+00	7.581E-02	Half-Life	too short	
	1750.46			2.009E+00	7.581E-02	Half-Life	too short	
MO-99	140.51			-2.475E+00	2.321E+01	3.430E+01	9.493E+00	-0.072
	181.06			-1.659E+00	1.490E+01	2.194E+01	4.016E+00	-0.076
	366.43			2.036E+01	6.229E+01	1.034E+02	8.741E+00	0.197
	739.58	*		8.691E-01	1.004E+01	1.670E+01	2.530E+00	0.052
	778.00			-2.641E+00	2.608E+01	4.264E+01	3.715E+00	-0.062
TC-99M	140.51	*		-1.727E+08	2.608E+01	Half-Life	too short	
RH-101	127.23			-1.273E-02	4.264E-02	5.908E-02	5.139E-03	-0.215
	198.01	*		-3.463E-02	3.641E-02	5.691E-02	5.008E-03	-0.609
	325.23			-3.678E-01	2.529E-01	3.805E-01	3.396E-02	-0.967
RH-102	418.52			-1.167E-01	2.986E-01	4.697E-01	3.849E-02	-0.248
	475.06	*		-1.162E-02	3.079E-02	4.803E-02	4.039E-03	-0.242
	631.29			-5.077E-02	5.541E-02	8.583E-02	7.142E-03	-0.592
	697.49			-3.590E-03	8.319E-02	1.377E-01	1.152E-02	-0.026
+	766.84			5.506E-01	2.268E-01	2.807E-01	2.433E-02	1.962
	1046.59			-8.443E-02	1.254E-01	1.889E-01	1.650E-02	-0.447
	1112.84			-1.696E-01	2.849E-01	3.847E-01	3.248E-02	-0.441
RU-103	497.08	*		-2.489E-02	4.270E-02	6.511E-02	9.156E-03	-0.382
+	610.33			1.094E+01	2.562E+00	2.756E+00	4.566E-01	3.971
RH-106	511.85	+		4.347E-01	3.618E-01	4.254E-01	3.606E-02	1.022
	621.84	*		-2.560E-01	3.154E-01	4.916E-01	6.483E-02	-0.521
	1050.47			1.578E+00	2.433E+00	4.170E+00	3.636E-01	0.379
RU-106	511.85	+		4.347E-01	3.618E-01	4.254E-01	3.606E-02	1.022
	621.84	*		-2.560E-01	3.144E-01	4.916E-01	4.107E-02	-0.521
	1050.47			1.578E+00	2.433E+00	4.170E+00	3.636E-01	0.379
AG-108M	433.93	*		-2.855E-03	3.204E-02	5.133E-02	4.426E-03	-0.056
	614.37			3.934E-03	4.108E-02	6.035E-02	5.265E-03	0.065
	722.95			-8.162E-03	4.599E-02	6.471E-02	5.714E-03	-0.126
AG-110M	657.75	*		-3.221E-02	3.833E-02	5.995E-02	5.083E-03	-0.537
	677.61			-4.349E-02	3.125E-01	5.141E-01	4.383E-02	-0.085
	706.67			-1.716E-01	2.308E-01	3.522E-01	3.049E-02	-0.487
	763.93			2.797E-01	2.111E-01	3.385E-01	3.013E-02	0.826
	884.67			-6.165E-02	5.796E-02	8.569E-02	7.965E-03	-0.719
	937.48			2.033E-03	1.181E-01	1.927E-01	1.795E-02	0.011
	1384.27			-9.927E-02	1.774E-01	2.749E-01	2.429E-02	-0.361

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111	171.28			-9.088E-02	7.570E-01	1.269E+00	1.086E-01	-0.072
	245.39	*		-3.297E-01	9.048E-01	1.288E+00	1.173E-01	-0.256
IN-113M	391.69	*		-1.319E-02	4.607E-02	7.335E-02	6.109E-03	-0.180
SN-113	391.69	*		-1.319E-02	4.607E-02	7.335E-02	6.109E-03	-0.180
IN-114M	190.27	*		-4.861E-02	2.044E-01	2.981E-01	2.603E-02	-0.163
CD-115	260.90			-1.595E+01	9.453E+01	1.552E+02	1.419E+01	-0.103
	492.35			1.381E+01	2.575E+01	4.282E+01	3.617E+00	0.323
	527.90	*		-2.072E+00	7.733E+00	1.281E+01	1.088E+00	-0.162
SN-117M	156.02			-2.620E-01	2.292E+00	3.858E+00	3.285E-01	-0.068
	158.56	*		-1.370E-02	5.447E-02	9.120E-02	7.764E-03	-0.150
SB-122	563.90	*		1.728E+00	1.541E+00	2.762E+00	2.341E-01	0.626
	692.80			1.950E+01	3.464E+01	5.792E+01	4.835E+00	0.337
I-123	159.00	*		1.828E-01	3.464E+01	Half-Life too short		
	528.96			-9.074E+00	3.464E+01	Half-Life too short		
TE-123M	159.00	*		4.148E-03	2.959E-02	5.019E-02	4.299E-03	0.083
I-124	602.71	*		-6.322E-02	6.240E-01	8.997E-01	7.565E-02	-0.070
	722.78			-6.579E-01	3.934E+00	5.542E+00	4.703E-01	-0.119
	1325.50			1.434E+01	2.651E+01	4.688E+01	3.989E+00	0.306
	1376.25			3.218E+01	2.959E+01	5.389E+01	4.625E+00	0.597
	1509.49			1.573E+01	1.313E+01	2.482E+01	2.149E+00	0.634
	1691.02			2.982E-01	2.491E+00	4.186E+00	3.566E-01	0.071
SB-124	602.71			-4.428E-03	4.371E-02	6.302E-02	5.300E-03	-0.070
	645.85			4.954E-02	5.143E-01	8.634E-01	7.599E-02	0.057
	709.31			3.854E-01	2.815E+00	4.715E+00	3.972E-01	0.082
	713.82			-9.884E-01	1.608E+00	2.526E+00	3.009E-01	-0.391
	722.78			-6.679E-02	3.994E-01	5.627E-01	4.882E-02	-0.119
+	968.20			1.697E+01	4.667E+00	7.358E+00	6.594E-01	2.307
	1045.16			-2.045E+00	2.665E+00	3.973E+00	3.472E-01	-0.515
	1325.50			1.555E+00	2.875E+00	5.083E+00	4.325E-01	0.306
	1368.21			-4.265E-01	1.838E+00	2.967E+00	3.990E-01	-0.144
	1436.60			-1.231E+00	3.368E+00	5.262E+00	4.544E-01	-0.234
	1691.02	*		7.140E-03	5.966E-02	1.002E-01	8.887E-03	0.071
SB-125	427.89	*		7.717E-03	9.692E-02	1.572E-01	1.323E-02	0.049
+	463.38			6.165E-01	3.897E-01	5.342E-01	4.845E-02	1.154
	600.56			1.231E-01	1.791E-01	3.063E-01	2.776E-02	0.402
	635.90			-4.203E-02	2.722E-01	4.491E-01	4.052E-02	-0.094
TE-125M	109.28	*		8.607E-01	1.318E+01	1.871E+01	1.939E+00	0.046
I-126	388.63			5.846E-02	1.982E-01	3.272E-01	2.650E-02	0.179
	666.33	*		-7.412E-02	1.848E-01	2.990E-01	2.456E-02	-0.248
	753.82			7.024E-01	1.449E+00	2.480E+00	2.137E-01	0.283
SB-126	223.80			-5.341E+00	4.015E+00	6.282E+00	5.652E-01	-0.850
	278.60			3.664E+00	2.489E+00	4.330E+00	3.960E-01	0.846
+	296.50			9.778E+00	2.529E+00	3.321E+00	3.022E-01	2.944
	414.70			3.056E-02	7.191E-02	1.194E-01	9.759E-03	0.256
	415.30			4.048E+00	5.946E+00	1.002E+01	8.195E-01	0.404
	555.20			-2.171E+00	3.802E+00	6.140E+00	5.210E-01	-0.354
	573.80			-1.621E-01	1.019E+00	1.693E+00	1.434E-01	-0.096
	593.00			5.670E-01	8.763E-01	1.531E+00	1.291E-01	0.370
	656.30			6.034E-02	3.201E+00	5.339E+00	4.387E-01	0.011

---- Non-Identified Nuclides ----

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SB-127		666.33	-3.089E-02	7.702E-02	1.246E-01	1.023E-02	-0.248
		675.00	5.990E-01	1.942E+00	3.300E+00	2.726E-01	0.182
		695.00	-3.265E-02	7.975E-02	1.286E-01	1.074E-02	-0.254
		697.00	-9.296E-04	2.694E-01	4.470E-01	3.740E-02	-0.002
		720.50 *	7.740E-02	1.391E-01	2.283E-01	1.935E-02	0.339
		856.80	6.576E-02	5.197E-01	7.485E-01	6.708E-02	0.088
		989.30	-1.718E-01	1.339E+00	2.149E+00	1.915E-01	-0.080
		1034.80	-1.161E+00	8.885E+00	1.419E+01	1.246E+00	-0.082
		1213.00	-4.987E-01	4.704E+00	7.814E+00	6.421E-01	-0.064
		61.10	1.459E+02	7.468E+01	1.133E+02	1.137E+01	1.288
		252.40	-6.861E-01	3.706E+00	6.071E+00	2.553E+00	-0.113
		290.80	-6.420E+00	2.024E+01	2.858E+01	3.204E+00	-0.225
		411.60	-5.921E-02	1.060E+01	1.713E+01	2.609E+00	-0.003
		444.90	-4.659E+00	8.466E+00	1.309E+01	1.572E+00	-0.356
		473.00	7.285E-01	1.410E+00	2.341E+00	2.906E-01	0.311
		543.00	1.221E-01	1.422E+01	2.396E+01	3.365E+00	0.005
		603.60	-7.358E+00	1.080E+01	1.460E+01	1.759E+00	-0.504
		685.20 *	6.332E-01	1.087E+00	1.883E+00	2.034E-01	0.336
		698.50	-2.149E+00	1.335E+01	2.190E+01	3.382E+00	-0.098
		722.20	-2.536E+00	2.725E+01	3.875E+01	4.147E+00	-0.065
XE-127		783.80	5.404E-01	3.464E+00	5.033E+00	6.132E-01	0.107
		57.60	8.195E+00	9.293E+00	1.391E+01	1.068E+00	0.589
	+	145.22	1.158E+00	1.031E+00	1.391E+00	1.188E-01	0.833
		172.10	-3.100E-02	1.176E-01	1.960E-01	1.679E-02	-0.158
I-131		202.84 *	-4.101E-02	5.087E-02	8.247E-02	7.291E-03	-0.497
		374.96	-5.815E-02	2.015E-01	3.169E-01	2.639E-02	-0.183
		80.18	-4.771E+00	6.184E+00	8.606E+00	7.549E-01	-0.554
		284.30	-2.386E-01	1.393E+00	2.276E+00	2.174E-01	-0.105
TE-132		364.48 *	2.651E-03	1.032E-01	1.683E-01	1.506E-02	0.016
		636.97	3.500E-01	1.407E+00	2.390E+00	2.101E-01	0.146
		722.89	-1.239E+00	6.979E+00	9.820E+00	8.380E-01	-0.126
		49.72	-1.561E+01	2.123E+01	3.369E+01	3.514E+00	-0.463
BA-133	+	111.76	4.036E+01	2.636E+01	5.483E+01	5.802E+00	0.736
		116.30	2.571E+01	2.806E+01	4.115E+01	4.366E+00	0.625
		228.16 *	5.318E-01	5.620E-01	9.597E-01	1.510E-01	0.554
		53.15	4.636E+00	5.158E+00	8.610E+00	6.996E-01	0.538
I-133		79.62	-2.909E-01	1.915E+00	2.731E+00	4.167E-01	-0.107
		81.00	-2.843E-01	1.591E-01	2.048E-01	3.271E-02	-1.388
		276.40	2.064E-01	4.139E-01	6.739E-01	9.952E-02	0.306
		302.84	6.947E-02	1.691E-01	2.501E-01	3.398E-02	0.278
		356.01 *	-1.257E-02	5.274E-02	7.378E-02	9.730E-03	-0.170
		383.85	-9.396E-02	3.082E-01	4.904E-01	6.036E-02	-0.192
	+	510.53	3.374E-01	3.082E-01	Half-Life	too short	
		529.87 *	-7.864E-04	3.082E-01	Half-Life	too short	
		706.58	-1.360E-01	3.082E-01	Half-Life	too short	
		856.28	5.013E-02	3.082E-01	Half-Life	too short	
		875.33	5.351E-02	3.082E-01	Half-Life	too short	
		1236.41	3.249E-01	3.082E-01	Half-Life	too short	
		1298.22	-1.414E-01	3.082E-01	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		-1.606E+00	2.020E+00	3.044E+00	2.560E-01	-0.528
		563.23		2.390E-01	3.704E-01	6.469E-01	5.539E-02	0.369
		569.32		-3.259E-02	2.065E-01	3.419E-01	2.937E-02	-0.095
		604.70		-1.044E-02	3.842E-02	5.443E-02	4.587E-03	-0.192
	+	795.84	*	1.113E-01	6.086E-02	9.095E-02	8.038E-03	1.224
		801.93		-1.491E-01	4.627E-01	6.966E-01	6.161E-02	-0.214
		1038.57		4.066E+00	4.310E+00	7.539E+00	6.608E-01	0.539
		1167.94		6.714E-01	2.878E+00	4.915E+00	3.995E-01	0.137
		1365.15		4.366E-01	1.249E+00	2.161E+00	1.937E-01	0.202
		268.24	*	8.202E-02	1.812E-01	2.703E-01	2.818E-02	0.303
I-135		288.45		-4.172E+08	1.812E-01	Half-Life	too short	
		417.63		-8.066E+07	1.812E-01	Half-Life	too short	
		546.56		4.553E+08	1.812E-01	Half-Life	too short	
		836.80		3.955E+08	1.812E-01	Half-Life	too short	
		1038.76		1.050E+09	1.812E-01	Half-Life	too short	
		1124.00		-1.219E+09	1.812E-01	Half-Life	too short	
		1131.51		1.694E+08	1.812E-01	Half-Life	too short	
		1260.41	*	-1.260E+08	1.812E-01	Half-Life	too short	
		1457.56		2.156E+10	1.812E-01	Half-Life	too short	
		1678.03		1.486E+08	1.812E-01	Half-Life	too short	
CS-136		1706.46		1.024E+09	1.812E-01	Half-Life	too short	
		1791.20		1.428E+08	1.812E-01	Half-Life	too short	
	+	66.91		-8.569E-01	1.058E+00	1.469E+00	2.209E-01	-0.583
		86.29		4.474E+00	1.506E+00	2.416E+00	3.215E-01	1.852
		153.22		4.828E-01	6.842E-01	1.179E+00	1.125E-01	0.410
		163.89		1.346E+00	1.154E+00	1.983E+00	1.895E-01	0.679
		176.55		2.307E-01	3.593E-01	6.166E-01	5.613E-02	0.374
		273.65		-5.369E-01	5.259E-01	7.100E-01	6.877E-02	-0.756
		340.57		4.990E-01	1.533E-01	2.543E-01	2.295E-02	1.962
		818.51		1.371E-02	7.214E-02	1.205E-01	1.067E-02	0.114
BA-137M		1048.07	*	3.350E-02	1.067E-01	1.776E-01	1.615E-02	0.189
		1235.34		-1.038E-01	6.400E-01	1.059E+00	1.229E-01	-0.098
		661.65	*	3.672E-02	3.919E-02	6.904E-02	5.655E-03	0.532
		661.65	*	3.882E-02	4.143E-02	7.298E-02	5.991E-03	0.532
		165.85	*	3.518E-02	3.318E-02	5.755E-02	4.901E-03	0.611
		162.64		-2.927E-01	7.936E-01	1.309E+00	1.181E-01	-0.224
		304.84		-5.631E-01	1.431E+00	1.991E+00	5.606E-01	-0.283
		423.70		-6.084E-01	1.882E+00	2.958E+00	9.557E-01	-0.206
		537.32	*	-6.073E-02	2.468E-01	4.077E-01	1.350E-01	-0.149
		328.77		3.158E-01	3.004E-01	5.141E-01	4.814E-02	0.614
LA-140		432.53		1.404E+00	1.938E+00	3.274E+00	2.848E-01	0.429
		487.03		5.376E-02	1.365E-01	2.246E-01	2.017E-02	0.239
		751.79		-1.193E+00	1.676E+00	2.602E+00	2.480E-01	-0.458
		815.85		9.485E-02	3.239E-01	5.450E-01	5.348E-02	0.174
		867.82		-1.638E-02	1.313E+00	1.946E+00	1.835E-01	-0.008
		919.63		-3.605E-01	2.934E+00	4.447E+00	4.887E-01	-0.081
		925.24		-3.573E-01	1.108E+00	1.750E+00	1.671E-01	-0.204
		1596.49	*	-4.013E-02	9.512E-02	1.390E-01	1.199E-02	-0.289
		57.37		4.049E-04	9.512E-02	Half-Life	too short	
CE-143								

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	231.56			-6.754E-04	9.512E-02	Half-Life	too short	
	293.26	*		2.199E-04	9.512E-02	Half-Life	too short	
	350.59			1.146E-02	9.512E-02	Half-Life	too short	
	490.36			-1.026E-03	9.512E-02	Half-Life	too short	
	664.57			3.767E-04	9.512E-02	Half-Life	too short	
	721.93			4.835E-05	9.512E-02	Half-Life	too short	
CE-144	80.11			-2.440E+00	3.151E+00	4.385E+00	3.823E-01	-0.557
	133.54	*		-1.135E-01	2.720E-01	3.729E-01	5.805E-02	-0.304
PM-144	476.78			-2.729E-02	7.007E-02	1.091E-01	1.008E-02	-0.250
	618.01			2.106E-03	3.126E-02	5.117E-02	4.406E-03	0.041
	696.49	*		-4.646E-03	3.789E-02	6.236E-02	5.218E-03	-0.075
	778.57			9.698E-01	2.287E+00	3.900E+00	3.399E-01	0.249
PR-144	696.49	*		-3.146E-01	2.566E+00	4.223E+00	3.533E-01	-0.075
	1489.15			6.910E+00	9.885E+00	1.819E+01	1.574E+00	0.380
PM-146	453.90	*		2.991E-02	4.865E-02	8.116E-02	8.525E-03	0.369
	633.02			-4.550E-01	1.418E+00	2.293E+00	8.555E-01	-0.198
	735.90			-6.056E-02	1.618E-01	2.585E-01	7.387E-02	-0.234
	747.13			-7.169E-02	9.691E-02	1.498E-01	2.100E-02	-0.479
ND-147	91.11	+		8.406E-01	4.457E-01	9.745E-01	9.633E-02	0.863
	319.41			-2.062E+00	3.244E+00	5.126E+00	4.599E-01	-0.402
	439.89			5.100E+00	5.493E+00	9.383E+00	7.782E-01	0.544
	531.02	*		-2.475E-01	5.769E-01	9.247E-01	1.376E-01	-0.268
PM-149	285.90	*		-1.364E+01	6.507E+01	1.060E+02	1.678E+01	-0.129
EU-152	121.78			-3.963E-02	8.600E-02	1.339E-01	1.349E-02	-0.296
	244.69			9.979E-02	3.526E-01	5.916E-01	5.384E-02	0.169
	344.27	*		7.030E-02	1.070E-01	1.609E-01	1.488E-02	0.437
	443.98			-2.871E-01	1.013E+00	1.600E+00	1.329E-01	-0.179
	778.89			1.421E-01	2.634E-01	4.532E-01	3.950E-02	0.314
	867.32			6.058E-01	8.219E-01	1.289E+00	1.159E-01	0.470
	964.01	+		5.055E-01	4.009E-01	5.784E-01	5.189E-02	0.874
	1085.78			-9.479E-03	4.797E-01	7.722E-01	6.621E-02	-0.012
	1112.02			7.392E-02	3.514E-01	5.617E-01	4.745E-02	0.132
	1407.95	+		2.905E-01	1.842E-01	3.490E-01	3.006E-02	0.832
GD-153	69.67			5.954E-01	2.349E+00	3.415E+00	2.739E-01	0.174
	83.37			2.623E+01	2.477E+01	3.347E+01	3.014E+00	0.784
	97.43	+	*	3.925E-01	1.354E-01	1.831E-01	1.626E-02	2.143
	103.18			-1.524E-01	1.367E-01	1.976E-01	1.724E-02	-0.771
EU-154	123.07			3.770E-02	6.026E-02	9.750E-02	1.120E-02	0.387
	247.94			1.252E-01	4.107E-01	6.098E-01	7.227E-02	0.205
	591.81			4.591E-01	6.340E-01	1.087E+00	1.254E-01	0.422
	723.30			-5.154E-02	1.931E-01	2.688E-01	2.529E-02	-0.192
	756.87			2.566E-01	8.469E-01	1.429E+00	1.713E-01	0.180
	873.19			-5.351E-02	2.922E-01	4.696E-01	5.878E-02	-0.114
	996.32			-5.768E-02	4.303E-01	5.907E-01	1.057E-01	-0.098
	1004.76			8.116E-02	2.696E-01	3.926E-01	4.643E-02	0.207
	1274.45	*		1.021E-01	1.377E-01	2.183E-01	2.431E-02	0.468
EU-155	48.70			-4.395E-01	3.382E+00	5.497E+00	4.704E-01	-0.080
	60.01			5.817E+00	7.647E+00	1.137E+01	8.598E-01	0.511
	86.54	+		4.398E-01	1.421E-01	2.372E-01	2.229E-02	1.854

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160	+	105.31	*	7.774E-02	1.325E-01	2.151E-01	1.892E-02	0.361
		86.79		1.162E+00	3.751E-01	6.277E-01	5.862E-02	1.851
		197.04		-6.333E-01	6.121E-01	9.529E-01	8.377E-02	-0.665
		215.65		-4.721E-01	7.935E-01	1.292E+00	1.155E-01	-0.365
		298.57		6.064E-02	1.754E-01	1.900E-01	1.727E-02	0.319
		879.36	*	7.758E-02	1.529E-01	2.605E-01	2.349E-02	0.298
		962.29		9.288E-01	6.213E-01	1.014E+00	9.103E-02	0.916
		966.15		7.664E-01	2.546E-01	4.794E-01	4.299E-02	1.599
		1177.93		-5.913E-02	3.529E-01	5.836E-01	4.733E-02	-0.101
		1271.85		6.606E-01	7.567E-01	1.226E+00	1.027E-01	0.539
HO-166M		80.57		-4.912E-01	4.133E-01	5.649E-01	4.948E-02	-0.869
		184.41		3.459E-01	5.324E-02	8.795E-02	7.632E-03	3.933
		280.46		-7.200E-02	9.100E-02	1.441E-01	1.317E-02	-0.500
		410.95		5.373E-02	2.596E-01	4.251E-01	3.467E-02	0.126
		711.68	*	4.225E-02	5.888E-02	1.029E-01	8.681E-03	0.411
		752.31		-1.709E-01	2.887E-01	4.537E-01	3.907E-02	-0.377
		810.29		-2.287E-02	6.537E-02	1.044E-01	9.213E-03	-0.219
		51.35		-4.990E+00	4.343E+01	7.054E+01	5.870E+00	-0.071
		52.39		1.848E+01	2.255E+01	3.760E+01	3.086E+00	0.491
		59.40		3.764E+01	4.078E+01	6.102E+01	4.599E+00	0.617
LU-176	+	66.72	*	-1.611E+01	4.020E+01	5.710E+01	4.497E+00	-0.282
		88.36		8.666E-01	2.798E-01	4.637E-01	4.374E-02	1.869
		201.83		2.047E-02	3.145E-02	5.370E-02	4.743E-03	0.381
		306.84	*	-1.510E-03	2.696E-02	4.263E-02	3.858E-03	-0.035
LU-177	+	401.10		2.717E+00	6.888E+00	1.142E+01	9.255E-01	0.238
		112.95		5.353E+00	2.483E+00	3.397E+00	2.946E-01	1.576
LU-177M		208.36	*	7.253E-01	1.052E+00	1.796E+00	1.596E-01	0.404
		52.97		2.093E+00	2.328E+00	3.887E+00	3.166E-01	0.538
		54.07		1.408E-01	1.232E+00	2.013E+00	1.616E-01	0.070
		61.30		6.554E+00	2.430E+00	3.761E+00	2.869E-01	1.743
		121.62		-2.771E-01	4.406E-01	6.813E-01	5.985E-02	-0.407
		147.16		3.374E-02	7.845E-01	1.175E+00	1.003E-01	0.029
		171.86		-9.050E-02	4.838E-01	8.088E-01	6.927E-02	-0.112
		218.09		-4.788E-01	9.216E-01	1.505E+00	1.348E-01	-0.318
		268.79		7.977E-01	9.436E-01	1.435E+00	1.313E-01	0.556
		319.02		-2.747E-01	2.699E-01	4.158E-01	3.731E-02	-0.661
		367.43		4.293E-01	8.923E-01	1.494E+00	1.261E-01	0.287
		413.65	*	-1.511E-01	1.865E-01	2.852E-01	2.330E-02	-0.530
		56.28		-8.786E-01	1.343E+00	2.139E+00	1.668E-01	-0.411
		57.53		6.964E-01	7.853E-01	1.176E+00	9.037E-02	0.592
		65.20		5.479E+00	1.516E+00	2.357E+00	1.840E-01	2.325
		133.02		7.847E-03	8.354E-02	1.178E-01	1.016E-02	0.067
		136.25		-1.461E-02	4.819E-01	8.174E-01	7.024E-02	-0.018
		345.85		-6.409E-03	2.129E-01	3.035E-01	2.647E-02	-0.021
W-181		482.03	*	-1.980E-02	4.311E-02	6.666E-02	5.617E-03	-0.297
		56.28		-3.473E-01	5.325E-01	8.481E-01	6.615E-02	-0.410
		57.53		2.764E-01	3.116E-01	4.666E-01	3.586E-02	0.592
TA-182		65.20	*	2.157E+00	5.966E-01	9.278E-01	7.243E-02	2.325
		67.75		-7.197E-02	1.573E-01	2.228E-01	1.766E-02	-0.323

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		100.10		5.866E-01	2.520E-01	3.849E-01	3.384E-02	1.524
		152.43		2.083E-01	3.704E-01	6.362E-01	5.420E-02	0.327
		222.10		1.649E-01	3.635E-01	6.156E-01	5.532E-02	0.268
	+	1001.68		2.307E+01	4.547E+00	7.297E+00	6.480E-01	3.161
	+	1121.28		3.018E-01	3.033E-01	3.129E-01	2.627E-02	0.965
		1189.05		1.780E-02	3.197E-01	5.385E-01	4.386E-02	0.033
		1221.42	*	-5.859E-02	2.338E-01	3.845E-01	3.169E-02	-0.152
		1230.97		-3.570E-01	5.371E-01	8.536E-01	7.060E-02	-0.418
RE-183		57.98		1.726E-01	3.090E-01	4.574E-01	3.498E-02	0.377
		59.32		1.441E-01	1.658E-01	2.477E-01	1.868E-02	0.582
		67.20		-2.085E-01	2.838E-01	3.974E-01	3.139E-02	-0.525
		162.32	*	-5.052E-02	1.222E-01	2.012E-01	1.712E-02	-0.251
		208.81		8.504E-01	1.067E+00	1.826E+00	1.623E-01	0.466
		291.72		-5.895E-01	1.116E+00	1.553E+00	1.416E-01	-0.380
RE-184		57.98		6.406E-01	1.147E+00	1.697E+00	1.298E-01	0.377
		59.32		5.342E-01	6.147E-01	9.185E-01	6.928E-02	0.582
		67.20		-7.734E-01	1.053E+00	1.474E+00	1.164E-01	-0.525
		161.27		-4.249E-01	3.846E-01	6.226E-01	5.301E-02	-0.682
		216.55		-6.574E-02	2.814E-01	4.651E-01	4.162E-02	-0.141
		252.85	*	-5.628E-02	2.453E-01	4.021E-01	3.671E-02	-0.140
		318.01		-2.649E-01	4.767E-01	7.573E-01	6.800E-02	-0.350
		792.07		1.200E+00	1.337E+00	1.578E+00	1.383E-01	0.760
		903.28		1.498E-01	1.061E+00	1.755E+00	1.589E-01	0.085
		920.93		-4.444E-01	4.713E-01	6.947E-01	6.279E-02	-0.640
OS-185		59.72		4.624E-01	4.474E-01	6.715E-01	5.065E-02	0.689
		61.14		5.530E-01	2.609E-01	4.003E-01	3.050E-02	1.381
		69.30		1.392E-01	4.137E-01	6.035E-01	4.829E-02	0.231
		592.07		9.515E-01	2.550E+00	4.378E+00	3.692E-01	0.217
		646.12	*	1.654E-02	4.329E-02	7.413E-02	6.124E-03	0.223
		717.42		1.218E-01	8.810E-01	1.476E+00	1.249E-01	0.083
		874.81		7.760E-01	5.727E-01	1.046E+00	9.418E-02	0.742
		880.27		-1.312E-02	8.475E-01	1.384E+00	1.249E-01	-0.009
RE-188		155.03	*	9.593E-02	1.854E-01	3.180E-01	2.708E-02	0.302
		477.96		-6.035E-01	3.103E+00	4.903E+00	4.127E-01	-0.123
		633.10		1.440E-02	2.744E+00	4.582E+00	3.809E-01	0.003
W-188	+	63.58		1.282E+03	1.728E+02	1.843E+02	1.426E+01	6.955
		227.08		2.014E+00	1.323E+01	2.215E+01	1.998E+00	0.091
		290.67	*	-2.347E+00	8.622E+00	1.222E+01	1.114E+00	-0.192
IR-192	+	295.96		7.922E-01	2.051E-01	2.711E-01	2.483E-02	2.922
		308.46		3.458E-02	9.967E-02	1.664E-01	1.512E-02	0.208
		316.51	*	2.111E-02	3.454E-02	5.840E-02	5.262E-03	0.362
		468.07		-4.337E-02	7.799E-02	1.029E-01	9.288E-03	-0.421
		604.41		-1.390E-01	5.104E-01	7.229E-01	9.308E-02	-0.192
		612.46		1.909E+00	8.541E-01	1.447E+00	1.402E-01	1.320
AU-195		65.12		1.212E+00	2.865E-01	4.460E-01	3.480E-02	2.718
		66.83		-1.076E-01	1.343E-01	1.876E-01	1.478E-02	-0.573
	+	75.70		1.050E+00	3.450E-01	4.948E-01	4.149E-02	2.121
	+	98.88	*	1.142E+00	3.937E-01	5.315E-01	4.693E-02	2.148
	+	129.76		4.124E+00	4.094E+00	5.463E+00	4.733E-01	0.755

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200	367.94	*		7.527E-05	4.094E+00	Half-Life	too short	
	579.30			-1.527E-03	4.094E+00	Half-Life	too short	
	828.27			-4.375E-04	4.094E+00	Half-Life	too short	
	1205.75			5.229E-05	4.094E+00	Half-Life	too short	
TL-201	68.90			7.657E-01	5.665E+00	7.483E+00	5.972E-01	0.102
	70.82			3.744E+00	2.930E+00	4.389E+00	3.548E-01	0.853
	80.30			-7.321E+00	5.803E+00	7.905E+00	6.906E-01	-0.926
	135.34			1.488E+01	2.222E+01	3.593E+01	3.090E+00	0.414
	167.43	*		-3.151E+00	5.800E+00	9.590E+00	8.177E-01	-0.329
TL-202	68.90			8.469E-02	6.265E-01	8.276E-01	6.605E-02	0.102
	70.82			4.129E-01	3.231E-01	4.841E-01	3.913E-02	0.853
	80.30			-8.077E-01	6.402E-01	8.722E-01	7.619E-02	-0.926
	439.56	*		4.168E-02	6.347E-02	1.069E-01	8.861E-03	0.390
HG-203	70.83			1.896E+00	1.487E+00	2.208E+00	2.930E-01	0.859
	72.87			1.594E+00	8.273E-01	1.356E+00	1.754E-01	1.175
	82.60			-8.211E-01	1.884E+00	2.408E+00	3.358E-01	-0.341
	279.20	*		3.202E-02	4.324E-02	7.347E-02	6.889E-03	0.436
BI-207	72.80			4.313E-01	2.411E-01	4.021E-01	3.296E-02	1.073
	74.97	+		5.848E-01	1.922E-01	2.579E-01	2.150E-02	2.268
	84.90			4.073E-01	2.928E-01	4.332E-01	3.964E-02	0.940
	569.67			1.021E-03	3.197E-02	5.359E-02	4.539E-03	0.019
	1063.62	*		-6.893E-03	5.821E-02	9.294E-02	8.057E-03	-0.074
	1770.23			-2.867E+00	8.388E-01	6.182E-01	5.176E-02	-4.638
TL-207	81.07			-6.268E-01	3.411E-01	4.519E-01	3.977E-02	-1.387
	83.78			1.995E-01	1.948E-01	2.862E-01	2.588E-02	0.697
	94.90			3.251E+00	5.287E-01	6.693E-01	6.017E-02	4.858
	122.32			-4.167E-01	2.060E+00	3.241E+00	3.050E-01	-0.129
	144.24	+		1.162E+00	1.036E+00	1.398E+00	1.338E-01	0.832
	154.21			1.410E-01	4.319E-01	7.370E-01	6.918E-02	0.191
	269.46	+		4.382E-01	2.927E-01	3.601E-01	3.356E-02	1.217
	323.87	*		6.646E-01	7.087E-01	1.199E+00	2.142E-01	0.554
	338.28	+		5.682E+00	2.017E+00	2.412E+00	3.001E-01	2.356
	445.03			-1.369E+00	2.451E+00	3.787E+00	4.495E-01	-0.362
PO-209	260.50			8.918E-01	1.042E+01	1.730E+01	1.582E+00	0.052
	262.80			-3.104E+01	2.899E+01	4.538E+01	4.150E+00	-0.684
	896.60	*		7.299E+00	8.444E+00	1.472E+01	1.333E+00	0.496
BI-210	46.50	*		-2.451E+00	4.961E+00	7.914E+00	7.470E-01	-0.310
PB-210	46.50	*		-2.451E+00	4.961E+00	7.914E+00	7.470E-01	-0.310
PO-210	46.50	*		-2.451E+00	4.960E+00	7.914E+00	6.784E-01	-0.310
PB-211	404.84	*		-8.970E-01	1.131E+00	1.498E+00	9.375E-01	-0.599
	427.08			1.207E+00	2.280E+00	3.601E+00	2.236E+00	0.335
	831.96			-1.351E+00	1.478E+00	1.785E+00	1.119E+00	-0.757
PO-215	81.07			-6.268E-01	3.411E-01	4.519E-01	3.977E-02	-1.387
	83.78			1.995E-01	1.948E-01	2.862E-01	2.588E-02	0.697
	94.90			3.251E+00	5.287E-01	6.693E-01	6.017E-02	4.858
	122.32			-4.167E-01	2.060E+00	3.241E+00	3.050E-01	-0.129
	144.24	+		1.162E+00	1.036E+00	1.398E+00	1.338E-01	0.832
	154.21			1.410E-01	4.319E-01	7.370E-01	6.918E-02	0.191
	269.46	+		4.382E-01	2.927E-01	3.601E-01	3.356E-02	1.217

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		323.87	*	6.646E-01	7.087E-01	1.199E+00	2.142E-01	0.554
	+	338.28		5.682E+00	2.017E+00	2.412E+00	3.001E-01	2.356
		445.03		-1.369E+00	2.451E+00	3.787E+00	4.495E-01	-0.362
	+	271.23		5.623E-01	3.767E-01	4.811E-01	5.176E-02	1.169
		401.81	*	9.123E-02	4.250E-01	6.971E-01	1.027E-01	0.131
RN-220		549.76	*	-6.280E+00	2.797E+01	4.615E+01	3.917E+00	-0.136
RA-223		81.07		-6.268E-01	3.411E-01	4.519E-01	3.977E-02	-1.387
		83.78		1.995E-01	1.948E-01	2.862E-01	2.588E-02	0.697
		94.90		3.251E+00	5.287E-01	6.693E-01	6.017E-02	4.858
		122.32		-4.167E-01	2.060E+00	3.241E+00	3.050E-01	-0.129
	+	144.24		1.162E+00	1.036E+00	1.398E+00	1.338E-01	0.832
		154.21		1.410E-01	4.319E-01	7.370E-01	6.918E-02	0.191
	+	269.46		4.382E-01	2.927E-01	3.601E-01	3.356E-02	1.217
		323.87	*	6.646E-01	7.087E-01	1.199E+00	2.142E-01	0.554
	+	338.28		5.682E+00	2.017E+00	2.412E+00	3.001E-01	2.356
		445.03		-1.369E+00	2.451E+00	3.787E+00	4.495E-01	-0.362
AC-227		79.80		-1.513E+00	2.474E+00	3.441E+00	7.409E-01	-0.440
		236.00		1.236E-01	2.696E-01	4.028E-01	5.060E-02	0.307
		256.20	*	-1.374E-01	4.234E-01	6.905E-01	1.080E-01	-0.199
		286.10		5.947E-02	1.581E+00	2.609E+00	3.533E-01	0.023
	+	299.80		2.149E+00	1.988E+00	2.593E+00	4.595E-01	0.829
		304.40		-2.896E-01	2.196E+00	3.132E+00	5.840E-01	-0.092
		334.20		6.404E-01	2.683E+00	3.906E+00	7.621E-01	0.164
		79.80		-1.513E+00	2.474E+00	3.441E+00	7.503E-01	-0.440
	+	94.00		1.104E+02	2.478E+01	8.485E+00	1.862E+00	13.012
		236.00		1.236E-01	2.695E-01	4.028E-01	4.603E-02	0.307
		256.20	*	-1.374E-01	4.236E-01	6.905E-01	1.265E-01	-0.199
		286.10		5.947E-02	1.582E+00	2.609E+00	2.620E+00	0.023
	+	299.80		2.149E+00	1.988E+00	2.593E+00	4.595E-01	0.829
		304.40		-2.896E-01	2.196E+00	3.132E+00	5.840E-01	-0.092
		334.20		6.404E-01	2.683E+00	3.906E+00	7.621E-01	0.164
TH-229		85.43		4.173E-01	2.927E-01	4.330E-01	3.985E-02	0.964
	+	88.47		4.988E-01	1.610E-01	2.671E-01	2.517E-02	1.867
	+	100.00		9.520E-01	3.283E-01	4.082E-01	3.590E-02	2.332
		193.63	*	5.093E-02	5.452E-01	8.870E-01	7.771E-02	0.057
		210.97		6.569E-01	8.357E-01	1.429E+00	1.273E-01	0.460
PA-231		283.67	*	-2.005E-01	1.602E+00	2.623E+00	4.061E-01	-0.076
	+	301.29		8.596E-01	7.880E-01	1.055E+00	1.327E-01	0.814
TH-231		81.07		-6.268E-01	3.411E-01	4.519E-01	3.977E-02	-1.387
		83.78		1.995E-01	1.948E-01	2.862E-01	2.588E-02	0.697
		94.90		3.251E+00	5.287E-01	6.693E-01	6.017E-02	4.858
		122.32		-4.167E-01	2.060E+00	3.241E+00	3.050E-01	-0.129
	+	144.24		1.162E+00	1.036E+00	1.398E+00	1.338E-01	0.832
		154.21		1.410E-01	4.319E-01	7.370E-01	6.918E-02	0.191
	+	269.46		4.382E-01	2.927E-01	3.601E-01	3.356E-02	1.217
		323.87	*	6.646E-01	7.087E-01	1.199E+00	2.142E-01	0.554
	+	338.28		5.682E+00	2.017E+00	2.412E+00	3.001E-01	2.356
		445.03		-1.369E+00	2.451E+00	3.787E+00	4.495E-01	-0.362
U-231		84.21		6.667E+00	6.814E+00	1.000E+01	9.085E-01	0.667

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	92.29		8.931E+01	9.088E+00	7.793E+00	7.120E-01	11.461
		95.87	*	2.913E+00	1.590E+00	1.949E+00	1.743E-01	1.495
		108.00		-1.191E+00	2.424E+00	3.358E+00	2.911E-01	-0.355
	+	75.28		1.707E+01	6.014E+00	7.658E+00	1.164E+00	2.229
	+	86.59		7.153E+00	2.938E+00	3.861E+00	1.044E+00	1.853
	+	300.12		5.991E-01	5.515E-01	7.263E-01	1.100E-01	0.825
		311.98	*	-1.185E-02	6.775E-02	1.101E-01	1.019E-02	-0.108
		340.50		2.697E+00	9.983E-01	1.330E+00	3.178E-01	2.028
		398.62		-1.375E+00	2.187E+00	3.350E+00	8.865E-01	-0.411
		415.76		4.130E-01	1.703E+00	2.792E+00	5.970E-01	0.148
PA-234	+	63.00		3.763E+01	7.017E+00	5.572E+00	8.366E-01	6.753
		94.67		2.498E+00	4.498E-01	5.467E-01	6.927E-02	4.569
	+	98.44		4.647E-01	3.022E-01	2.181E-01	1.217E-01	2.131
	+	99.86		2.409E+00	8.307E-01	1.052E+00	9.258E-02	2.290
	+	111.00		3.255E-01	2.134E-01	4.157E-01	5.039E-02	0.783
		131.20		-1.844E-02	1.387E-01	1.935E-01	1.672E-02	-0.095
		152.70		2.787E-01	3.611E-01	6.195E-01	1.053E-01	0.450
	+	186.00		1.992E+01	6.874E+00	3.720E+00	1.162E+00	5.355
		226.40		5.307E-02	4.171E-01	6.978E-01	9.394E-02	0.076
		227.20		8.440E-02	4.531E-01	7.596E-01	6.849E-02	0.111
		248.90		1.831E-01	9.535E-01	1.405E+00	3.176E-01	0.130
		293.70		3.194E+00	1.046E+00	1.518E+00	2.665E-01	2.104
		369.80		-3.825E-01	8.568E-01	1.347E+00	2.923E-01	-0.284
		568.70		-5.083E-01	1.042E+00	1.686E+00	1.428E-01	-0.302
		569.50		9.079E-03	2.837E-01	4.755E-01	4.028E-02	0.019
		574.00		-4.971E-01	1.583E+00	2.603E+00	2.203E-01	-0.191
		699.00		5.584E-02	7.649E-01	1.276E+00	2.420E-01	0.044
		706.10		-9.616E-01	1.208E+00	1.709E+00	7.612E-01	-0.563
		733.00		1.685E-01	4.160E-01	6.485E-01	1.437E-01	0.260
		742.81		1.257E+00	1.782E+00	2.738E+00	1.840E+00	0.459
	+	796.30		2.166E+00	1.308E+00	1.707E+00	4.625E-01	1.269
		805.60		1.548E-01	1.096E+00	1.821E+00	5.590E-01	0.085
		819.60		-4.474E-01	1.308E+00	2.066E+00	7.869E-01	-0.217
		826.30		5.370E-02	7.372E-01	1.219E+00	5.459E-01	0.044
		831.60		-5.976E-01	6.467E-01	9.302E-01	2.783E-01	-0.642
		876.40		-4.753E-01	1.030E+00	1.413E+00	1.453E+00	-0.336
		880.51		5.061E-03	3.123E-01	5.115E-01	4.614E-02	0.010
		883.24		8.916E-02	3.276E-01	5.389E-01	3.625E-01	0.165
		899.00		5.230E-01	9.804E-01	1.627E+00	7.127E-01	0.321
		925.00		-2.089E-01	1.246E+00	1.999E+00	1.805E-01	-0.105
		926.50		-1.141E-02	1.871E-01	3.032E-01	7.708E-02	-0.038
		946.00	*	1.734E-01	3.303E-01	5.599E-01	1.061E-01	0.310
		949.00		-1.705E-01	5.087E-01	8.064E-01	7.256E-02	-0.211
		980.50		-3.693E-01	7.493E-01	1.155E+00	1.032E-01	-0.320
NP-236		1394.10		9.623E-01	1.255E+00	2.014E+00	1.311E+00	0.478
		94.67		1.914E+00	2.977E-01	4.157E-01	3.743E-02	4.605
	+	98.44		3.513E-01	1.211E-01	1.648E-01	1.458E-02	2.131
	+	111.00		2.462E-01	1.601E-01	3.145E-01	2.725E-02	0.783
		160.31	*	-9.201E-02	8.617E-02	1.397E-01	1.190E-02	-0.658

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		8.030E-01	2.769E-01	3.633E-01	3.200E-02	2.210
		117.00	*	1.187E-01	2.490E-01	3.593E-01	3.129E-02	0.330
		209.75		1.035E+00	8.526E-01	1.473E+00	1.311E-01	0.702
		228.18		2.258E-01	2.360E-01	4.061E-01	3.664E-02	0.556
		277.60		2.284E-01	1.912E-01	3.301E-01	3.019E-02	0.692
AM-241	+	334.30		3.279E-01	1.517E+00	2.207E+00	1.952E-01	0.149
		59.54	*	2.243E-01	2.379E-01	3.560E-01	2.934E-02	0.630
		99.55		8.262E-01	2.849E-01	3.738E-01	3.293E-02	2.210
		103.76	*	-5.506E-02	1.178E-01	1.848E-01	1.611E-02	-0.298
		117.00		1.221E-01	2.562E-01	3.696E-01	3.219E-02	0.330
CM-243	+	209.75		1.020E+00	8.404E-01	1.452E+00	1.292E-01	0.702
		228.18		2.281E-01	2.385E-01	4.103E-01	3.702E-02	0.556
		277.60		2.303E-01	1.927E-01	3.328E-01	3.044E-02	0.692
		798.80		1.682E-02	1.620E-01	2.338E-01	2.055E-02	0.072
		1036.00		-2.129E-01	3.295E-01	4.986E-01	4.374E-02	-0.427
AM-246	+	1062.04		-2.928E-02	2.456E-01	3.920E-01	3.401E-02	-0.075
		1078.86	*	8.876E-02	1.633E-01	2.760E-01	2.375E-02	0.322
		278.00		8.873E-01	7.954E-01	1.370E+00	1.253E-01	0.648
		287.40		-3.610E-01	1.284E+00	2.085E+00	1.903E-01	-0.173
		402.60	*	1.719E-02	3.733E-02	6.217E-02	5.042E-03	0.277
CM-247	+	252.85		-2.122E-01	9.249E-01	1.516E+00	1.384E-01	-0.140
		333.44		-1.753E-01	2.136E-01	2.869E-01	2.540E-02	-0.611
		387.95	*	-3.706E-03	4.249E-02	6.857E-02	5.562E-03	-0.054
CF-249	+	176.60	*	8.452E-02	1.320E-01	2.266E-01	1.950E-02	0.373
		227.00		3.433E-02	4.020E-01	6.714E-01	6.053E-02	0.051
		285.00		-8.471E-01	1.822E+00	2.931E+00	2.677E-01	-0.289

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395015      *
* Acquisition date   : 2-FEB-2010 09:47:21 Detector SN# :                  *
* Detector ID        : GAM01 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                       *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000            *
* Elapsed real time  : 0 02:00:01.59 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G245395015 Analyst initials: MXR1                 *
* Batch Number       : 944966 Sample Quantity : 1.5739E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                             *
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52 MS Isotope :                  *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.301E+01	3.402E+00	4.903E-01	0.000E+00
CD-109	3.711E+00	1.174E+00	1.941E+00	0.000E+00
SN-126	3.654E-01	1.156E-01	1.921E-01	0.000E+00
CE-141	1.048E-01	9.139E-02	1.177E-01	0.000E+00
TL-208	4.076E-01	9.130E-02	6.352E-02	0.000E+00
BI-211	3.403E+00	5.635E-01	3.274E-01	0.000E+00
BI-212	8.904E-01	3.178E-01	4.665E-01	0.000E+00
PB-212	1.469E+00	1.798E-01	1.006E-01	0.000E+00
PO-212	1.469E+00	1.798E-01	1.006E-01	0.000E+00
BI-214	1.035E+00	1.954E-01	1.135E-01	0.000E+00
PB-214	1.184E+00	2.052E-01	1.141E-01	0.000E+00
PO-214	1.184E+00	2.052E-01	1.141E-01	0.000E+00
PO-216	1.469E+00	1.798E-01	1.006E-01	0.000E+00
PO-218	1.184E+00	2.052E-01	1.141E-01	0.000E+00
RA-224	4.766E+00	1.375E+00	1.145E+00	0.000E+00
RA-226	1.035E+00	1.954E-01	1.135E-01	0.000E+00
AC-228	1.430E+00	3.192E-01	2.302E-01	0.000E+00
RA-228	1.430E+00	3.192E-01	2.302E-01	0.000E+00
TH-228	1.489E+00	1.823E-01	1.020E-01	0.000E+00
TH-230	1.035E+00	1.954E-01	1.135E-01	0.000E+00
TH-232	1.430E+00	3.192E-01	2.302E-01	0.000E+00
PA-234M	5.275E+01	1.051E+01	7.240E+00	0.000E+00
TH-234	3.228E+01	6.568E+00	2.994E+00	0.000E+00
U-234	1.035E+00	1.954E-01	1.135E-01	0.000E+00
U-235	3.587E-01	3.174E-01	4.022E-01	0.000E+00
NP-237	1.073E+00	4.029E-01	5.994E-01	0.000E+00
U-238	3.228E+01	6.568E+00	2.994E+00	0.000E+00
AM-243	3.258E-01	1.050E-01	1.267E-01	0.000E+00
ANH-511	8.722E-02	7.116E-02	5.320E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line	Activity	K.L. Act error	MDA
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Nuclide	(pCi/GRAM) Ided	(pCi/GRAM)	
BE-7	-1.782E-02	3.125E-01	5.303E-01	0.000E+00	NOT IDENT.
NA-22	3.053E-02	4.714E-02	7.882E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.954E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.210E-02	2.664E-02	3.963E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.507E-02	9.704E-02	0.000E+00	FAIL ABUN
SC-46	2.036E-02	4.042E-02	7.195E-02	0.000E+00	FAIL ABUN
V-48	4.907E-02	6.813E-02	1.227E-01	0.000E+00	NOT IDENT.
CR-51	-2.753E-01	3.739E-01	6.312E-01	0.000E+00	NOT IDENT.
MN-52	6.313E-02	1.797E-01	3.217E-01	0.000E+00	NOT IDENT.
MN-54	2.954E-02	3.734E-02	6.799E-02	0.000E+00	NOT IDENT.
CO-56	-3.382E-03	3.586E-02	6.096E-02	0.000E+00	NOT IDENT.
CO-57	-1.094E-02	2.903E-02	5.001E-02	0.000E+00	NOT IDENT.
CO-58	-6.566E-03	4.109E-02	6.984E-02	0.000E+00	NOT IDENT.
FE-59	3.526E-02	9.393E-02	1.626E-01	0.000E+00	NOT IDENT.
CO-60	-3.157E-02	3.371E-02	5.036E-02	0.000E+00	NOT IDENT.
ZN-65	-2.484E-02	1.124E-01	1.572E-01	0.000E+00	NOT IDENT.
GE-68	7.970E-01	1.399E+00	2.458E+00	0.000E+00	NOT IDENT.
AS-73	7.351E-01	1.165E+00	2.172E+00	0.000E+00	NOT IDENT.
AS-74	-1.160E-01	8.679E-02	1.381E-01	0.000E+00	NOT IDENT.
SE-75	2.842E-02	4.951E-02	8.038E-02	0.000E+00	NOT IDENT.
BR-77	-6.096E-02	7.581E+00	1.282E+01	0.000E+00	FAIL ABUN
SR-82	-2.343E-01	3.669E-01	5.998E-01	0.000E+00	NOT IDENT.
RB-83	1.797E-03	7.077E-02	1.200E-01	0.000E+00	NOT IDENT.
RB-84	6.884E-02	7.475E-02	1.368E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.964E+00	1.502E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.538E-02	7.602E-02	0.000E+00	NOT IDENT.
RB-86	2.302E-01	8.824E-01	1.512E+00	0.000E+00	NOT IDENT.
Y-88	2.191E-02	2.828E-02	5.473E-02	0.000E+00	NOT IDENT.
ZR-88	-2.393E-03	3.097E-02	5.340E-02	0.000E+00	NOT IDENT.
Y-91	7.244E+00	2.036E+01	3.622E+01	0.000E+00	NOT IDENT.
NB-94	1.816E-02	3.462E-02	6.251E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	6.194E-02	1.083E-01	0.000E+00	NOT IDENT.
NB-95M	8.137E-02	1.373E-01	2.237E-01	0.000E+00	NOT IDENT.
ZR-95	5.952E-02	7.430E-02	1.359E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.182E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.581E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	8.691E-01	9.835E+00	1.718E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.587E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.463E-02	3.568E-02	6.069E-02	0.000E+00	NOT IDENT.
RH-102	-1.162E-02	3.018E-02	5.003E-02	0.000E+00	FAIL ABUN
RU-103	-2.489E-02	4.184E-02	6.773E-02	0.000E+00	FAIL ABUN
RH-106	-2.560E-01	3.091E-01	5.083E-01	0.000E+00	FAIL ABUN
RU-106	-2.560E-01	3.081E-01	5.083E-01	0.000E+00	FAIL ABUN
AG-108M	-2.855E-03	3.140E-02	5.360E-02	0.000E+00	NOT IDENT.
AG-110M	-3.221E-02	3.756E-02	6.189E-02	0.000E+00	NOT IDENT.
IN-111	-3.297E-01	8.867E-01	1.366E+00	0.000E+00	NOT IDENT.
IN-113M	-1.319E-02	4.515E-02	7.681E-02	0.000E+00	NOT IDENT.
SN-113	-1.319E-02	4.515E-02	7.681E-02	0.000E+00	NOT IDENT.
IN-114M	-4.861E-02	2.003E-01	3.182E-01	0.000E+00	NOT IDENT.
CD-115	-2.072E+00	7.579E+00	1.331E+01	0.000E+00	NOT IDENT.
SN-117M	-1.370E-02	5.339E-02	9.781E-02	0.000E+00	NOT IDENT.
SB-122	1.728E+00	1.510E+00	2.863E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.278E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	4.148E-03	2.900E-02	5.382E-02	0.000E+00	NOT IDENT.
I-124	-6.322E-02	6.115E-01	9.311E-01	0.000E+00	NOT IDENT.
SB-124	7.140E-03	5.847E-02	1.007E-01	0.000E+00	FAIL ABUN
SB-125	7.717E-03	9.498E-02	1.642E-01	0.000E+00	FAIL ABUN
TE-125M	8.607E-01	1.292E+01	2.026E+01	0.000E+00	NOT IDENT.
I-126	-7.412E-02	1.811E-01	3.085E-01	0.000E+00	NOT IDENT.
SB-126	7.740E-02	1.363E-01	2.350E-01	0.000E+00	FAIL ABUN
SB-127	6.332E-01	1.066E+00	1.942E+00	0.000E+00	NOT IDENT.
XE-127	-4.101E-02	4.986E-02	8.789E-02	0.000E+00	FAIL ABUN
I-131	2.651E-03	1.012E-01	1.766E-01	0.000E+00	NOT IDENT.
TE-132	5.318E-01	5.508E-01	1.020E+00	0.000E+00	FAIL ABUN
BA-133	-1.257E-02	5.169E-02	7.746E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.484E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.965E-02	9.340E-02	0.000E+00	FAIL ABUN
CS-135	8.202E-02	1.776E-01	2.859E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.198E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.350E-02	1.045E-01	1.810E-01	0.000E+00	FAIL ABUN
BA-137M	3.672E-02	3.841E-02	7.126E-02	0.000E+00	NOT IDENT.
CS-137	3.882E-02	4.060E-02	7.533E-02	0.000E+00	NOT IDENT.
CE-139	3.518E-02	3.252E-02	6.165E-02	0.000E+00	NOT IDENT.
BA-140	-6.073E-02	2.419E-01	4.232E-01	0.000E+00	NOT IDENT.
LA-140	-4.013E-02	9.322E-02	1.399E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.826E+01	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-1.135E-01	2.665E-01	4.017E-01	0.000E+00	NOT IDENT.
PM-144	-4.646E-03	3.713E-02	6.427E-02	0.000E+00	NOT IDENT.
PR-144	-3.146E-01	2.514E+00	4.353E+00	0.000E+00	NOT IDENT.
PM-146	2.991E-02	4.768E-02	8.465E-02	0.000E+00	NOT IDENT.
ND-147	-2.475E-01	5.653E-01	9.603E-01	0.000E+00	FAIL ABUN
PM-149	-1.364E+01	6.377E+01	1.120E+02	0.000E+00	NOT IDENT.
EU-152	7.030E-02	1.049E-01	1.691E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	1.326E-01	1.989E-01	0.000E+00	FAIL ABUN
EU-154	1.021E-01	1.350E-01	2.212E-01	0.000E+00	NOT IDENT.
EU-155	7.774E-02	1.298E-01	2.331E-01	0.000E+00	FAIL ABUN
TB-160	7.758E-02	1.498E-01	2.667E-01	0.000E+00	FAIL ABUN
HO-166M	4.225E-02	5.770E-02	1.060E-01	0.000E+00	NOT IDENT.
TM-171	-1.611E+01	3.940E+01	6.260E+01	0.000E+00	NOT IDENT.
LU-176	-1.510E-03	2.642E-02	4.493E-02	0.000E+00	FAIL ABUN
LU-177	7.253E-01	1.031E+00	1.912E+00	0.000E+00	FAIL ABUN
LU-177M	-1.511E-01	1.828E-01	2.982E-01	0.000E+00	NOT IDENT.
HF-181	-1.980E-02	4.225E-02	6.941E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	5.847E-01	1.018E+00	0.000E+00	NOT IDENT.
TA-182	-5.859E-02	2.291E-01	3.900E-01	0.000E+00	FAIL ABUN
RE-183	-5.052E-02	1.197E-01	2.156E-01	0.000E+00	NOT IDENT.
RE-184	-5.628E-02	2.404E-01	4.261E-01	0.000E+00	NOT IDENT.
OS-185	1.654E-02	4.242E-02	7.657E-02	0.000E+00	NOT IDENT.
RE-188	9.593E-02	1.817E-01	3.413E-01	0.000E+00	NOT IDENT.
W-188	-2.347E+00	8.450E+00	1.290E+01	0.000E+00	FAIL ABUN
IR-192	2.111E-02	3.385E-02	6.151E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	3.858E-01	5.770E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.034E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.151E+00	5.684E+00	1.027E+01	0.000E+00	NOT IDENT.
TL-202	4.168E-02	6.220E-02	1.116E-01	0.000E+00	NOT IDENT.
HG-203	3.202E-02	4.237E-02	7.764E-02	0.000E+00	NOT IDENT.
BI-207	-6.893E-03	5.704E-02	9.466E-02	0.000E+00	FAIL ABUN
TL-207	6.646E-01	6.946E-01	1.262E+00	0.000E+00	FAIL ABUN
PO-209	7.299E+00	8.275E+00	1.507E+01	0.000E+00	NOT IDENT.
BI-210	-2.451E+00	4.862E+00	8.753E+00	0.000E+00	NOT IDENT.
PB-210	-2.451E+00	4.862E+00	8.753E+00	0.000E+00	NOT IDENT.
PO-210	-2.451E+00	4.861E+00	8.753E+00	0.000E+00	NOT IDENT.
PB-211	-8.970E-01	1.109E+00	1.567E+00	0.000E+00	NOT IDENT.
PO-215	6.646E-01	6.946E-01	1.262E+00	0.000E+00	FAIL ABUN
RN-219	9.123E-02	4.165E-01	7.295E-01	0.000E+00	FAIL ABUN
RN-220	-6.280E+00	2.741E+01	4.788E+01	0.000E+00	NOT IDENT.
RA-223	6.646E-01	6.946E-01	1.262E+00	0.000E+00	FAIL ABUN
AC-227	-1.374E-01	4.150E-01	7.314E-01	0.000E+00	FAIL ABUN
TH-227	-1.374E-01	4.152E-01	7.314E-01	0.000E+00	FAIL ABUN
TH-229	5.093E-02	5.343E-01	9.464E-01	0.000E+00	FAIL ABUN
PA-231	-2.005E-01	1.570E+00	2.771E+00	0.000E+00	FAIL ABUN
TH-231	6.646E-01	6.946E-01	1.262E+00	0.000E+00	FAIL ABUN
U-231	0.000E+00	1.558E+00	2.117E+00	0.000E+00	FAIL ABUN
PA-233	-1.185E-02	6.639E-02	1.160E-01	0.000E+00	FAIL ABUN
PA-234	1.734E-01	3.237E-01	5.721E-01	0.000E+00	FAIL ABUN
NP-236	-9.201E-02	8.445E-02	1.498E-01	0.000E+00	FAIL ABUN
NP-239	1.187E-01	2.441E-01	3.884E-01	0.000E+00	FAIL ABUN
AM-241	2.243E-01	2.331E-01	3.913E-01	0.000E+00	NOT IDENT.
CM-243	-5.506E-02	1.155E-01	2.004E-01	0.000E+00	FAIL ABUN
AM-246	8.876E-02	1.601E-01	2.810E-01	0.000E+00	NOT IDENT.
CM-247	1.719E-02	3.658E-02	6.505E-02	0.000E+00	NOT IDENT.
CF-249	-3.706E-03	4.164E-02	7.182E-02	0.000E+00	NOT IDENT.
CF-251	8.452E-02	1.294E-01	2.423E-01	0.000E+00	NOT IDENT.

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395015.CNF;1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:47:21.
Sample ID        : G245395015 Sample quantity : 1.57390E+02 GRAM
Detector name    : GAM01 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.59 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity : 5.00000
Batch ID        : 944966 Detector SN# :
Matrix Spike ID  : LCS ID : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1397	10.67*	9.456E-01	3.301E+01	3.301E+01	10.51
CD-109	88.03	294	3.72*	5.191E+00	3.634E+00	3.711E+00	32.28
SN-126	64.28	1423	9.60	2.767E+00	1.278E+01	1.278E+01	18.38
	86.94	294	8.90	5.191E+00	1.519E+00	1.519E+00	51.75
	87.57	294	37.00*	5.191E+00	3.654E-01	3.654E-01	32.28
CE-141	145.44	93	48.40*	5.859E+00	7.782E-02	1.048E-01	89.00
TL-208	277.35	-----	6.80	3.885E+00	-----	Line Not Found	-----
	510.84	87	21.60	2.393E+00	4.038E-01	4.038E-01	83.66
	583.14	308	84.20*	2.142E+00	4.076E-01	4.076E-01	22.86
	860.37	65	12.46	1.522E+00	8.228E-01	8.228E-01	57.36
BI-211	72.87	-----	1.27	3.944E+00	-----	Line Not Found	-----
	351.07	595	12.94*	3.226E+00	3.403E+00	3.403E+00	16.90
BI-212	727.18	78	11.80*	1.771E+00	8.904E-01	8.904E-01	36.42
	785.46	32	1.97	1.651E+00	2.378E+00	2.378E+00	101.68
	1620.62	-----	2.75	8.735E-01	-----	Line Not Found	-----
PB-212	74.81	375	10.70	4.161E+00	2.010E+00	2.010E+00	34.17
	77.11	533	18.00	4.386E+00	1.610E+00	1.610E+00	22.35
	87.30	294	8.00	5.191E+00	1.690E+00	1.690E+00	33.80
	238.63	1194	44.60*	4.346E+00	1.469E+00	1.469E+00	12.49
	300.09	61	3.41	3.650E+00	1.160E+00	1.160E+00	91.44
PO-212	74.81	375	10.70	4.161E+00	2.010E+00	2.010E+00	34.17
	77.11	533	18.00	4.386E+00	1.610E+00	1.610E+00	22.35
	87.30	294	8.00	5.191E+00	1.690E+00	1.690E+00	33.80
	115.19	-----	0.60	6.043E+00	-----	Line Not Found	-----
	238.63	1194	44.60*	4.346E+00	1.469E+00	1.469E+00	12.49
	300.09	61	3.41	3.650E+00	1.160E+00	1.160E+00	91.44
BI-214	609.31	415	46.30*	2.065E+00	1.035E+00	1.035E+00	19.26
	1120.29	49	15.10	1.193E+00	6.430E-01	6.430E-01	100.72
	1764.49	74	15.80	8.256E-01	1.356E+00	1.356E+00	28.29
PB-214	74.81	375	6.21	4.161E+00	3.463E+00	3.463E+00	33.69
	77.11	533	10.50	4.386E+00	2.760E+00	2.760E+00	23.61
	87.30	294	4.67	5.191E+00	2.895E+00	2.895E+00	33.19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	241.98	340	7.49	4.305E+00	2.513E+00	2.514E+00	29.97
	295.21	313	19.20	3.699E+00	1.051E+00	1.051E+00	26.61
	351.92	595	37.20*	3.226E+00	1.184E+00	1.184E+00	17.69
	74.81	375	6.21	4.161E+00	3.463E+00	3.463E+00	33.69
	77.11	533	10.50	4.386E+00	2.760E+00	2.760E+00	23.61
	87.30	294	4.67	5.191E+00	2.895E+00	2.895E+00	33.19
PO-216	241.98	340	7.49	4.305E+00	2.513E+00	2.514E+00	29.97
	295.21	313	19.20	3.699E+00	1.051E+00	1.051E+00	26.61
	351.92	595	37.20*	3.226E+00	1.184E+00	1.184E+00	17.69
	74.81	375	10.70	4.161E+00	2.010E+00	2.010E+00	34.17
	77.11	533	18.00	4.386E+00	1.610E+00	1.610E+00	22.35
	87.30	294	8.00	5.191E+00	1.690E+00	1.690E+00	33.80
PO-218	238.63	1194	44.60*	4.346E+00	1.469E+00	1.469E+00	12.49
	300.09	61	3.41	3.650E+00	1.160E+00	1.160E+00	91.44
	74.81	375	6.21	4.161E+00	3.463E+00	3.463E+00	33.69
	77.11	533	10.50	4.386E+00	2.760E+00	2.760E+00	23.61
	87.30	294	4.67	5.191E+00	2.895E+00	2.895E+00	33.19
	241.98	340	7.49	4.305E+00	2.513E+00	2.514E+00	29.97
RA-224	295.21	313	19.20	3.699E+00	1.051E+00	1.051E+00	26.61
	351.92	595	37.20*	3.226E+00	1.184E+00	1.184E+00	17.69
	240.98	340	3.95*	4.305E+00	4.766E+00	4.766E+00	29.44
	609.31	415	46.30*	2.065E+00	1.035E+00	1.035E+00	19.26
	1120.29	49	15.10	1.193E+00	6.430E-01	6.430E-01	100.72
	1764.49	74	15.80	8.256E-01	1.356E+00	1.356E+00	28.29
AC-228	338.32	216	11.40	3.327E+00	1.361E+00	1.361E+00	53.02
	911.07	240	27.70*	1.444E+00	1.430E+00	1.430E+00	22.78
	969.11	159	16.60	1.364E+00	1.672E+00	1.672E+00	35.02
	338.32	216	11.40	3.327E+00	1.361E+00	1.361E+00	53.02
	911.07	240	27.70*	1.444E+00	1.430E+00	1.430E+00	22.78
	969.11	159	16.60	1.364E+00	1.672E+00	1.672E+00	35.02
TH-228	74.81	375	10.70	4.161E+00	2.010E+00	2.038E+00	32.89
	77.11	533	18.00	4.386E+00	1.610E+00	1.632E+00	22.35
	87.30	294	8.00	5.191E+00	1.690E+00	1.713E+00	32.28
	238.63	1194	44.60*	4.346E+00	1.469E+00	1.489E+00	12.49
	300.09	61	3.41	3.650E+00	1.160E+00	1.176E+00	108.48
	609.31	415	46.30*	2.065E+00	1.035E+00	1.035E+00	19.26
TH-230	1120.29	49	15.10	1.193E+00	6.430E-01	6.430E-01	100.72
	1764.49	74	15.80	8.256E-01	1.356E+00	1.356E+00	28.29
	338.32	216	11.40	3.327E+00	1.361E+00	1.361E+00	34.40
	911.07	240	27.70*	1.444E+00	1.430E+00	1.430E+00	22.78
	969.11	159	16.60	1.364E+00	1.672E+00	1.672E+00	35.02
	766.42	131	0.32	1.688E+00	5.797E+01	5.797E+01	64.78
PA-234M	1001.03	246	0.84*	1.324E+00	5.275E+01	5.275E+01	20.34
	63.29	1423	3.80*	2.767E+00	3.228E+01	3.228E+01	20.76
	92.38	3562	5.41	5.495E+00	2.857E+01	2.857E+01	18.87
	609.31	415	46.30*	2.065E+00	1.035E+00	1.035E+00	19.26
	1120.29	49	15.10	1.193E+00	6.430E-01	6.430E-01	100.72
	1764.49	74	15.80	8.256E-01	1.356E+00	1.356E+00	28.29
U-235	89.95	219	2.70	5.359E+00	3.614E+00	3.614E+00	60.64

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	93.35	3562	4.50	5.495E+00	3.435E+01	3.435E+01	28.54
	105.00	-----	2.10	5.912E+00	-----	Line Not Found	-----
	143.76	93	10.50*	5.859E+00	3.587E-01	3.587E-01	90.28
	163.35	-----	4.70	5.554E+00	-----	Line Not Found	-----
	185.71	862	54.00	5.159E+00	7.377E-01	7.377E-01	17.05
	205.31	-----	4.70	4.840E+00	-----	Line Not Found	-----
NP-237	86.50	294	12.60*	5.191E+00	1.073E+00	1.073E+00	38.31
	95.87	-----	2.60	5.636E+00	-----	Line Not Found	-----
U-238	63.29	1423	3.80*	2.767E+00	3.228E+01	3.228E+01	20.76
	92.38	3562	5.41	5.495E+00	2.857E+01	2.857E+01	10.18
AM-243	74.67	375	66.00*	4.161E+00	3.258E-01	3.258E-01	32.87
	86.72	294	0.34	5.191E+00	4.023E+01	4.023E+01	32.28
	117.66	-----	0.55	6.054E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.887E+00	-----	Line Not Found	-----
ANH-511	511.00	87	100.00*	2.393E+00	8.722E-02	8.722E-02	83.25

Flag: "*" = Keyline

Total number of lines in spectrum 38
Number of unidentified lines 2
Number of lines tentatively identified by NID 36 94.74%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.301E+01	3.301E+01	0.347E+01	10.51	
CD-109	464.00D	1.02	3.634E+00	3.711E+00	1.198E+00	32.28	
SN-126	1.00E+05Y	1.00	3.654E-01	3.654E-01	1.180E-01	32.28	
CE-141	32.50D	1.35	7.782E-02	1.048E-01	0.933E-01	89.00	
TL-208	1.41E+10Y	1.00	4.076E-01	4.076E-01	0.932E-01	22.86	
BI-211	7.04E+08Y	1.00	3.403E+00	3.403E+00	0.575E+00	16.90	
BI-212	1.41E+10Y	1.00	8.904E-01	8.904E-01	3.243E-01	36.42	
PB-212	1.41E+10Y	1.00	1.469E+00	1.469E+00	0.184E+00	12.49	
PO-212	1.41E+10Y	1.00	1.469E+00	1.469E+00	0.184E+00	12.49	
BI-214	1600.00Y	1.00	1.035E+00	1.035E+00	0.199E+00	19.26	
PB-214	1600.00Y	1.00	1.184E+00	1.184E+00	0.209E+00	17.69	
PO-214	1600.00Y	1.00	1.184E+00	1.184E+00	0.209E+00	17.69	
PO-216	1.41E+10Y	1.00	1.469E+00	1.469E+00	0.184E+00	12.49	
PO-218	1600.00Y	1.00	1.184E+00	1.184E+00	0.209E+00	17.69	
RA-224	1.41E+10Y	1.00	4.766E+00	4.766E+00	1.403E+00	29.44	
RA-226	1600.00Y	1.00	1.035E+00	1.035E+00	0.199E+00	19.26	
AC-228	1.41E+10Y	1.00	1.430E+00	1.430E+00	0.326E+00	22.78	
RA-228	1.41E+10Y	1.00	1.430E+00	1.430E+00	0.326E+00	22.78	
TH-228	1.91Y	1.01	1.469E+00	1.489E+00	0.186E+00	12.49	
TH-230	4.47E+09Y	1.00	1.035E+00	1.035E+00	0.199E+00	19.26	
TH-232	1.41E+10Y	1.00	1.430E+00	1.430E+00	0.326E+00	22.78	
PA-234M	4.47E+09Y	1.00	5.275E+01	5.275E+01	1.073E+01	20.34	
TH-234	4.47E+09Y	1.00	3.228E+01	3.228E+01	0.670E+01	20.76	
U-234	4.47E+09Y	1.00	1.035E+00	1.035E+00	0.199E+00	19.26	
U-235	7.04E+08Y	1.00	3.587E-01	3.587E-01	3.238E-01	90.28	
NP-237	2.14E+06Y	1.00	1.073E+00	1.073E+00	0.411E+00	38.31	
U-238	4.47E+09Y	1.00	3.228E+01	3.228E+01	0.670E+01	20.76	
AM-243	7380.00Y	1.00	3.258E-01	3.258E-01	1.071E-01	32.87	
ANH-511	1.00E+09Y	1.00	8.722E-02	8.722E-02	7.261E-02	83.25	

Total Activity : 1.836E+02 1.837E+02

Grand Total Activity : 1.836E+02 1.837E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	98.54	284	638	1.31	197.77	194	8	3.94E-02	33.3	5.74E+00	T
1	111.28	97	427	1.25	223.23	220	14	1.34E-02	64.5	6.01E+00	T
1	113.05	205	607	1.25	226.77	220	14	2.85E-02	45.6	6.03E+00	T
0	128.88	80	495	1.31	258.42	255	8	1.11E-02	98.9	6.03E+00	T
0	270.50	99	278	1.85	541.49	536	10	1.37E-02	66.1	3.96E+00	T
0	463.44	69	111	1.36	927.14	921	10	9.54E-03	62.5	2.59E+00	T
0	795.15	58	50	2.62	1590.14	1585	11	8.04E-03	54.0	1.64E+00	T
1	964.60	42	73	1.92	1928.81	1921	29	5.80E-03	78.8	1.37E+00	T
0	1269.73	18	59	4.33	2538.64	2523	18	2.55E-03	****	1.07E+00	
0	1408.78	25	9	1.39	2816.52	2812	9	3.40E-03	62.8	9.74E-01	T
0	1588.30	38	10	2.21	3175.30	3170	12	5.31E-03	45.3	8.86E-01	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245395015.CNF;1
* Acquisition date   : 2-FEB-2010 09:47:21.   Detector SN#      :
* Detector ID        : GAM01                   Sensitivity         : 5.00000
* Geometry           : CAN                     Energy tolerance    : 1.50000
* Elapsed live time  : 0 02:00:00.00           Abundance limit      : 75.00000
* Elapsed real time  : 0 02:00:01.59           Half life ratio      : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 19-JAN-2010 12:00:00   Nuclide Library      : SOLID
* Sample ID          : G245395015             Analyst initials     : MXR1
* Batch Number       : 944966                 Sample Quantity      : 1.57390E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52.7MS Isotope      :
* MSD ID             :                          MSD Isotope    :
* LCS ID             : 1032-A                   LCS Isotope          :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.301E+01	3.471E+00	4.858E-01	4.319E-02	67.954
CD-109	3.711E+00	1.198E+00	1.783E+00	1.687E-01	2.081
SN-126	3.654E-01	1.180E-01	1.765E-01	1.662E-02	2.070
CE-141	1.048E-01	9.325E-02	1.095E-01	9.526E-03	0.957
TL-208	4.076E-01	9.317E-02	6.132E-02	5.569E-03	6.647
BI-211	3.403E+00	5.750E-01	3.117E-01	2.835E-02	10.916
BI-212	8.904E-01	3.243E-01	4.531E-01	4.490E-02	1.965
PB-212	1.469E+00	1.835E-01	9.485E-02	9.603E-03	15.488
PO-212	1.469E+00	1.835E-01	9.485E-02	9.603E-03	15.488
BI-214	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
PB-214	1.184E+00	2.093E-01	1.087E-01	1.139E-02	10.892
PO-214	1.184E+00	2.093E-01	1.087E-01	1.139E-02	10.892
PO-216	1.469E+00	1.835E-01	9.485E-02	9.603E-03	15.488
PO-218	1.184E+00	2.093E-01	1.087E-01	1.139E-02	10.892
RA-224	4.766E+00	1.403E+00	1.080E+00	9.811E-02	4.414
RA-226	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
AC-228	1.430E+00	3.257E-01	2.250E-01	2.604E-02	6.354
RA-228	1.430E+00	3.257E-01	2.250E-01	2.604E-02	6.354

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.489E+00	1.861E-01	9.617E-02	9.737E-03	15.488
TH-230	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
TH-232	1.430E+00	3.257E-01	2.250E-01	2.604E-02	6.354
PA-234M	5.275E+01	1.073E+01	7.097E+00	7.234E-01	7.433
TH-234	3.228E+01	6.702E+00	2.728E+00	4.795E-01	11.833
U-234	1.035E+00	1.994E-01	1.097E-01	1.082E-02	9.438
U-235	3.587E-01	3.238E-01	3.741E-01	6.536E-02	0.959
NP-237	1.073E+00	4.111E-01	5.503E-01	1.246E-01	1.950
U-238	3.228E+01	6.702E+00	2.728E+00	4.795E-01	11.833
AM-243	3.258E-01	1.071E-01	1.159E-01	9.637E-03	2.812
ANH-511	8.722E-02	7.261E-02	5.118E-02	4.337E-03	1.704

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.782E-02		3.188E-01	5.092E-01	4.632E-02	-0.035
NA-22	3.053E-02		4.810E-02	7.780E-02	6.533E-03	0.392
NA-24	-2.934E-03		9.969E-02	Half-Life too short		
AL-26	-1.210E-02		2.718E-02	3.952E-02	3.275E-03	-0.306
TI-44	2.971E-01	+	6.640E-02	8.888E-02	7.627E-03	3.343
SC-46	2.036E-02		4.125E-02	7.029E-02	6.354E-03	0.290
V-48	4.907E-02		6.952E-02	1.202E-01	1.073E-02	0.408
CR-51	-2.753E-01		3.816E-01	5.995E-01	5.639E-02	-0.459
MN-52	6.313E-02		1.834E-01	3.187E-01	2.751E-02	0.198
MN-54	2.954E-02		3.810E-02	6.630E-02	5.901E-03	0.446
CO-56	-3.382E-03		3.659E-02	5.947E-02	5.313E-03	-0.057
CO-57	-1.094E-02		2.962E-02	4.631E-02	4.077E-03	-0.236
CO-58	-6.566E-03		4.193E-02	6.805E-02	6.021E-03	-0.096
FE-59	3.526E-02		9.585E-02	1.598E-01	1.473E-02	0.221
CO-60	-3.157E-02		3.440E-02	4.977E-02	4.242E-03	-0.634
ZN-65	-2.484E-02		1.147E-01	1.546E-01	1.304E-02	-0.161
GE-68	7.970E-01		1.427E+00	2.415E+00	2.079E-01	0.330
AS-73	7.351E-01		1.189E+00	1.971E+00	1.595E-01	0.373
AS-74	-1.160E-01		8.856E-02	1.334E-01	1.124E-02	-0.869
SE-75	2.842E-02		5.052E-02	7.595E-02	6.977E-03	0.374
BR-77	-6.096E-02		7.736E+00	1.234E+01	1.047E+00	-0.005
SR-82	-2.343E-01		3.744E-01	5.837E-01	5.082E-02	-0.401
RB-83	1.797E-03		7.222E-02	1.155E-01	9.795E-03	0.016
RB-84	6.884E-02		7.628E-02	1.336E-01	1.205E-02	0.515
KR-85	1.561E+01		9.147E+00	1.445E+01	1.225E+00	1.081
SR-85	7.903E-02		4.631E-02	7.314E-02	6.201E-03	1.081
RB-86	2.302E-01		9.004E-01	1.485E+00	1.279E-01	0.155
Y-88	2.191E-02		2.886E-02	5.460E-02	4.490E-03	0.401
ZR-88	-2.393E-03		3.161E-02	5.100E-02	4.106E-03	-0.047
Y-91	7.244E+00		2.077E+01	3.569E+01	2.924E+00	0.203
NB-94	1.816E-02		3.532E-02	6.066E-02	5.092E-03	0.299
NB-95	1.482E-01		6.320E-02	1.054E-01	9.134E-03	1.406

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	8.137E-02		1.401E-01	2.108E-01	2.162E-02	0.386
ZR-95	5.952E-02		7.581E-02	1.321E-01	1.255E-02	0.450
NB-97	-2.503E-02		1.623E-02	Half-Life	too short	
ZR-97	3.804E-01		3.358E-01	Half-Life	too short	
MO-99	8.691E-01		1.004E+01	1.670E+01	2.530E+00	0.052
TC-99M	-1.727E+08		8.099E+08	Half-Life	too short	
RH-101	-3.463E-02		3.641E-02	5.691E-02	5.008E-03	-0.609
RH-102	-1.162E-02		3.079E-02	4.803E-02	4.039E-03	-0.242
RU-103	-2.489E-02		4.270E-02	6.511E-02	9.156E-03	-0.382
RH-106	-2.560E-01		3.154E-01	4.916E-01	6.483E-02	-0.521
RU-106	-2.560E-01		3.144E-01	4.916E-01	4.107E-02	-0.521
AG-108M	-2.855E-03		3.204E-02	5.133E-02	4.426E-03	-0.056
AG-110M	-3.221E-02		3.833E-02	5.995E-02	5.083E-03	-0.537
IN-111	-3.297E-01		9.048E-01	1.288E+00	1.173E-01	-0.256
IN-113M	-1.319E-02		4.607E-02	7.335E-02	6.109E-03	-0.180
SN-113	-1.319E-02		4.607E-02	7.335E-02	6.109E-03	-0.180
IN-114M	-4.861E-02		2.044E-01	2.981E-01	2.603E-02	-0.163
CD-115	-2.072E+00		7.733E+00	1.281E+01	1.088E+00	-0.162
SN-117M	-1.370E-02		5.447E-02	9.120E-02	7.764E-03	-0.150
SB-122	1.728E+00		1.541E+00	2.762E+00	2.341E-01	0.626
I-123	1.828E-01		6.519E-01	Half-Life	too short	
TE-123M	4.148E-03		2.959E-02	5.019E-02	4.299E-03	0.083
I-124	-6.322E-02		6.240E-01	8.997E-01	7.565E-02	-0.070
SB-124	7.140E-03		5.966E-02	1.002E-01	8.887E-03	0.071
SB-125	7.717E-03		9.692E-02	1.572E-01	1.323E-02	0.049
TE-125M	8.607E-01		1.318E+01	1.871E+01	1.939E+00	0.046
I-126	-7.412E-02		1.848E-01	2.990E-01	2.456E-02	-0.248
SB-126	7.740E-02		1.391E-01	2.283E-01	1.935E-02	0.339
SB-127	6.332E-01		1.087E+00	1.883E+00	2.034E-01	0.336
XE-127	-4.101E-02		5.087E-02	8.247E-02	7.291E-03	-0.497
I-131	2.651E-03		1.032E-01	1.683E-01	1.506E-02	0.016
TE-132	5.318E-01		5.620E-01	9.597E-01	1.510E-01	0.554
BA-133	-1.257E-02		5.274E-02	7.378E-02	9.730E-03	-0.170
I-133	-7.864E-04		1.267E-03	Half-Life	too short	
CS-134	1.113E-01	+	6.086E-02	9.095E-02	8.038E-03	1.224
CS-135	8.202E-02		1.812E-01	2.703E-01	2.818E-02	0.303
I-135	-1.260E+08		1.632E+08	Half-Life	too short	
CS-136	3.350E-02		1.067E-01	1.776E-01	1.615E-02	0.189
BA-137M	3.672E-02		3.919E-02	6.904E-02	5.655E-03	0.532
CS-137	3.882E-02		4.143E-02	7.298E-02	5.991E-03	0.532
CE-139	3.518E-02		3.318E-02	5.755E-02	4.901E-03	0.611
BA-140	-6.073E-02		2.468E-01	4.077E-01	1.350E-01	-0.149
LA-140	-4.013E-02		9.512E-02	1.390E-01	1.199E-02	-0.289
CE-143	2.199E-04		5.013E-05	Half-Life	too short	
CE-144	-1.135E-01		2.720E-01	3.729E-01	5.805E-02	-0.304
PM-144	-4.646E-03		3.789E-02	6.236E-02	5.218E-03	-0.075
PR-144	-3.146E-01		2.566E+00	4.223E+00	3.533E-01	-0.075
PM-146	2.991E-02		4.865E-02	8.116E-02	8.525E-03	0.369

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-2.475E-01		5.769E-01	9.247E-01	1.376E-01	-0.268
PM-149	-1.364E+01		6.507E+01	1.060E+02	1.678E+01	-0.129
EU-152	7.030E-02		1.070E-01	1.609E-01	1.488E-02	0.437
GD-153	3.925E-01	+	1.354E-01	1.831E-01	1.626E-02	2.143
EU-154	1.021E-01		1.377E-01	2.183E-01	2.431E-02	0.468
EU-155	7.774E-02		1.325E-01	2.151E-01	1.892E-02	0.361
TB-160	7.758E-02		1.529E-01	2.605E-01	2.349E-02	0.298
HO-166M	4.225E-02		5.888E-02	1.029E-01	8.681E-03	0.411
TM-171	-1.611E+01		4.020E+01	5.710E+01	4.497E+00	-0.282
LU-176	-1.510E-03		2.696E-02	4.263E-02	3.858E-03	-0.035
LU-177	7.253E-01		1.052E+00	1.796E+00	1.596E-01	0.404
LU-177M	-1.511E-01		1.865E-01	2.852E-01	2.330E-02	-0.530
HF-181	-1.980E-02		4.311E-02	6.666E-02	5.617E-03	-0.297
W-181	2.157E+00		5.966E-01	9.278E-01	7.243E-02	2.325
TA-182	-5.859E-02		2.338E-01	3.845E-01	3.169E-02	-0.152
RE-183	-5.052E-02		1.222E-01	2.012E-01	1.712E-02	-0.251
RE-184	-5.628E-02		2.453E-01	4.021E-01	3.671E-02	-0.140
OS-185	1.654E-02		4.329E-02	7.413E-02	6.124E-03	0.223
RE-188	9.593E-02		1.854E-01	3.180E-01	2.708E-02	0.302
W-188	-2.347E+00		8.622E+00	1.222E+01	1.114E+00	-0.192
IR-192	2.111E-02		3.454E-02	5.840E-02	5.262E-03	0.362
AU-195	1.142E+00	+	3.937E-01	5.315E-01	4.693E-02	2.148
TL-200	7.527E-05		1.038E-04	Half-Life too short		
TL-201	-3.151E+00		5.800E+00	9.590E+00	8.177E-01	-0.329
TL-202	4.168E-02		6.347E-02	1.069E-01	8.861E-03	0.390
HG-203	3.202E-02		4.324E-02	7.347E-02	6.889E-03	0.436
BI-207	-6.893E-03		5.821E-02	9.294E-02	8.057E-03	-0.074
TL-207	6.646E-01		7.087E-01	1.199E+00	2.142E-01	0.554
PO-209	7.299E+00		8.444E+00	1.472E+01	1.333E+00	0.496
BI-210	-2.451E+00		4.961E+00	7.914E+00	7.470E-01	-0.310
PB-210	-2.451E+00		4.961E+00	7.914E+00	7.470E-01	-0.310
PO-210	-2.451E+00		4.960E+00	7.914E+00	6.784E-01	-0.310
PB-211	-8.970E-01		1.131E+00	1.498E+00	9.375E-01	-0.599
PO-215	6.646E-01		7.087E-01	1.199E+00	2.142E-01	0.554
RN-219	9.123E-02		4.250E-01	6.971E-01	1.027E-01	0.131
RN-220	-6.280E+00		2.797E+01	4.615E+01	3.917E+00	-0.136
RA-223	6.646E-01		7.087E-01	1.199E+00	2.142E-01	0.554
AC-227	-1.374E-01		4.234E-01	6.905E-01	1.080E-01	-0.199
TH-227	-1.374E-01		4.236E-01	6.905E-01	1.265E-01	-0.199
TH-229	5.093E-02		5.452E-01	8.870E-01	7.771E-02	0.057
PA-231	-2.005E-01		1.602E+00	2.623E+00	4.061E-01	-0.076
TH-231	6.646E-01		7.087E-01	1.199E+00	2.142E-01	0.554
U-231	2.913E+00		1.590E+00	1.949E+00	1.743E-01	1.495
PA-233	-1.185E-02		6.775E-02	1.101E-01	1.019E-02	-0.108
PA-234	1.734E-01		3.303E-01	5.599E-01	1.061E-01	0.310
NP-236	-9.201E-02		8.617E-02	1.397E-01	1.190E-02	-0.658
NP-239	1.187E-01		2.490E-01	3.593E-01	3.129E-02	0.330
AM-241	2.243E-01		2.379E-01	3.560E-01	2.934E-02	0.630

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-5.506E-02		1.178E-01	1.848E-01	1.611E-02	-0.298
AM-246	8.876E-02		1.633E-01	2.760E-01	2.375E-02	0.322
CM-247	1.719E-02		3.733E-02	6.217E-02	5.042E-03	0.277
CF-249	-3.706E-03		4.249E-02	6.857E-02	5.562E-03	-0.054
CF-251	8.452E-02		1.320E-01	2.266E-01	1.950E-02	0.373

VAX/VMS Nuclide Identification Report Generated

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
*                               DETECTOR DATA                               *
*                               *                                              *
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G245395015             *
* Acquisition date   : 2-FEB-2010 09:47:21 Detector SN# :                    *
* Detector ID        : GAM01 Sensitivity      : 5.000                        *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000              *
* Elapsed real time  : 0 02:00:01.59 Half life ratio : 8.000              *
*****
*                               SAMPLE DATA                               *
*                               *                                              *
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245395015 Analyst initials: MXR1                  *
* Batch Number       : 944966 Sample Quantity : 1.5739E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*                               QC DATA                               *
*                               *                                              *
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52 MS Isotope :                    *
* MSD DPM             : 0.000 MSD Isotope :                    *
* LCS DPM             : 0.000 LCS Isotope :                    *
* LCSD DPM            : 0.000 LCSD Isotope :                    *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.301E+01	3.402E+00	2.453E-01	1.736E+00
CD-109	3.711E+00	1.174E+00	9.711E-01	5.989E-01
SN-126	3.654E-01	1.156E-01	9.613E-02	5.898E-02
CE-141	1.048E-01	9.139E-02	5.890E-02	4.663E-02
TL-208	4.076E-01	9.130E-02	3.178E-02	4.658E-02
BI-211	3.403E+00	5.635E-01	1.638E-01	2.875E-01
BI-212	8.904E-01	3.178E-01	2.334E-01	1.621E-01
PB-212	1.469E+00	1.798E-01	5.035E-02	9.175E-02
PO-212	1.469E+00	1.798E-01	5.035E-02	9.175E-02
BI-214	1.035E+00	1.954E-01	5.677E-02	9.970E-02
PB-214	1.184E+00	2.052E-01	5.709E-02	1.047E-01
PO-214	1.184E+00	2.052E-01	5.709E-02	1.047E-01
PO-216	1.469E+00	1.798E-01	5.035E-02	9.175E-02
PO-218	1.184E+00	2.052E-01	5.709E-02	1.047E-01
RA-224	4.766E+00	1.375E+00	5.730E-01	7.015E-01
RA-226	1.035E+00	1.954E-01	5.677E-02	9.970E-02
AC-228	1.430E+00	3.192E-01	1.151E-01	1.629E-01
RA-228	1.430E+00	3.192E-01	1.151E-01	1.629E-01
TH-228	1.489E+00	1.823E-01	5.105E-02	9.304E-02
TH-230	1.035E+00	1.954E-01	5.677E-02	9.970E-02
TH-232	1.430E+00	3.192E-01	1.151E-01	1.629E-01
PA-234M	5.275E+01	1.051E+01	3.622E+00	5.365E+00
TH-234	3.228E+01	6.568E+00	1.498E+00	3.351E+00
U-234	1.035E+00	1.954E-01	5.677E-02	9.970E-02
U-235	3.587E-01	3.174E-01	2.012E-01	1.619E-01
NP-237	1.073E+00	4.029E-01	2.999E-01	2.055E-01
U-238	3.228E+01	6.568E+00	1.498E+00	3.351E+00
AM-243	3.258E-01	1.050E-01	6.338E-02	5.355E-02
ANH-511	8.722E-02	7.116E-02	2.662E-02	3.630E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU
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Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	-1.782E-02	3.125E-01	2.653E-01	1.594E-01	NOT IDENT.
NA-22	3.053E-02	4.714E-02	3.944E-02	2.405E-02	NOT IDENT.
NA-24	-2.934E+03	1.954E+05	0.000E+00	9.969E+04	SHORT HLIF
AL-26	-1.210E-02	2.664E-02	1.983E-02	1.359E-02	NOT IDENT.
TI-44	2.971E-01	6.507E-02	4.855E-02	3.320E-02	FAIL ABUN
SC-46	2.036E-02	4.042E-02	3.600E-02	2.062E-02	FAIL ABUN
V-48	4.907E-02	6.813E-02	6.140E-02	3.476E-02	NOT IDENT.
CR-51	-2.753E-01	3.739E-01	3.158E-01	1.908E-01	NOT IDENT.
MN-52	6.313E-02	1.797E-01	1.610E-01	9.169E-02	NOT IDENT.
MN-54	2.954E-02	3.734E-02	3.401E-02	1.905E-02	NOT IDENT.
CO-56	-3.382E-03	3.586E-02	3.050E-02	1.830E-02	NOT IDENT.
CO-57	-1.094E-02	2.903E-02	2.502E-02	1.481E-02	NOT IDENT.
CO-58	-6.566E-03	4.109E-02	3.494E-02	2.096E-02	NOT IDENT.
FE-59	3.526E-02	9.393E-02	8.134E-02	4.792E-02	NOT IDENT.
CO-60	-3.157E-02	3.371E-02	2.519E-02	1.720E-02	NOT IDENT.
ZN-65	-2.484E-02	1.124E-01	7.865E-02	5.737E-02	NOT IDENT.
GE-68	7.970E-01	1.399E+00	1.230E+00	7.135E-01	NOT IDENT.
AS-73	7.351E-01	1.165E+00	1.087E+00	5.946E-01	NOT IDENT.
AS-74	-1.160E-01	8.679E-02	6.910E-02	4.428E-02	NOT IDENT.
SE-75	2.842E-02	4.951E-02	4.021E-02	2.526E-02	NOT IDENT.
BR-77	-6.096E-02	7.581E+00	6.413E+00	3.868E+00	FAIL ABUN
SR-82	-2.343E-01	3.669E-01	3.001E-01	1.872E-01	NOT IDENT.
RB-83	1.797E-03	7.077E-02	6.002E-02	3.611E-02	NOT IDENT.
RB-84	6.884E-02	7.475E-02	6.844E-02	3.814E-02	NOT IDENT.
KR-85	1.561E+01	8.964E+00	7.513E+00	4.574E+00	NOT IDENT.
SR-85	7.903E-02	4.538E-02	3.803E-02	2.315E-02	NOT IDENT.
RB-86	2.302E-01	8.824E-01	7.563E-01	4.502E-01	NOT IDENT.
Y-88	2.191E-02	2.828E-02	2.738E-02	1.443E-02	NOT IDENT.
ZR-88	-2.393E-03	3.097E-02	2.671E-02	1.580E-02	NOT IDENT.
Y-91	7.244E+00	2.036E+01	1.812E+01	1.039E+01	NOT IDENT.
NB-94	1.816E-02	3.462E-02	3.127E-02	1.766E-02	NOT IDENT.
NB-95	1.482E-01	6.194E-02	5.421E-02	3.160E-02	NOT IDENT.
NB-95M	8.137E-02	1.373E-01	1.119E-01	7.003E-02	NOT IDENT.
ZR-95	5.952E-02	7.430E-02	6.798E-02	3.791E-02	NOT IDENT.
NB-97	-2.503E+04	3.182E+04	0.000E+00	1.623E+04	SHORT HLIF
ZR-97	3.804E+05	6.581E+05	0.000E+00	3.358E+05	SHORT HLIF
MO-99	8.691E-01	9.835E+00	8.595E+00	5.018E+00	NOT IDENT.
TC-99M	-1.727E+14	1.587E+15	0.000E+00	8.099E+14	SHORT HLIF
RH-101	-3.463E-02	3.568E-02	3.036E-02	1.821E-02	NOT IDENT.
RH-102	-1.162E-02	3.018E-02	2.503E-02	1.540E-02	FAIL ABUN
RU-103	-2.489E-02	4.184E-02	3.389E-02	2.135E-02	FAIL ABUN
RH-106	-2.560E-01	3.091E-01	2.543E-01	1.577E-01	FAIL ABUN
RU-106	-2.560E-01	3.081E-01	2.543E-01	1.572E-01	FAIL ABUN
AG-108M	-2.855E-03	3.140E-02	2.682E-02	1.602E-02	NOT IDENT.
AG-110M	-3.221E-02	3.756E-02	3.096E-02	1.917E-02	NOT IDENT.
IN-111	-3.297E-01	8.867E-01	6.834E-01	4.524E-01	NOT IDENT.
IN-113M	-1.319E-02	4.515E-02	3.843E-02	2.303E-02	NOT IDENT.
SN-113	-1.319E-02	4.515E-02	3.843E-02	2.303E-02	NOT IDENT.
IN-114M	-4.861E-02	2.003E-01	1.592E-01	1.022E-01	NOT IDENT.
CD-115	-2.072E+00	7.579E+00	6.659E+00	3.867E+00	NOT IDENT.
SN-117M	-1.370E-02	5.339E-02	4.893E-02	2.724E-02	NOT IDENT.
SB-122	1.728E+00	1.510E+00	1.433E+00	7.707E-01	NOT IDENT.
I-123	1.828E+05	1.278E+06	0.000E+00	6.519E+05	SHORT HLIF
TE-123M	4.148E-03	2.900E-02	2.693E-02	1.480E-02	NOT IDENT.
I-124	-6.322E-02	6.115E-01	4.658E-01	3.120E-01	NOT IDENT.
SB-124	7.140E-03	5.847E-02	5.040E-02	2.983E-02	FAIL ABUN
SB-125	7.717E-03	9.498E-02	8.217E-02	4.846E-02	FAIL ABUN
TE-125M	8.607E-01	1.292E+01	1.014E+01	6.591E+00	NOT IDENT.
I-126	-7.412E-02	1.811E-01	1.544E-01	9.241E-02	NOT IDENT.
SB-126	7.740E-02	1.363E-01	1.176E-01	6.953E-02	FAIL ABUN
SB-127	6.332E-01	1.066E+00	9.716E-01	5.437E-01	NOT IDENT.
XE-127	-4.101E-02	4.986E-02	4.397E-02	2.544E-02	FAIL ABUN
I-131	2.651E-03	1.012E-01	8.833E-02	5.161E-02	NOT IDENT.
TE-132	5.318E-01	5.508E-01	5.101E-01	2.810E-01	FAIL ABUN
BA-133	-1.257E-02	5.169E-02	3.875E-02	2.637E-02	NOT IDENT.
I-133	-7.864E+02	2.484E+03	0.000E+00	1.267E+03	SHORT HLIF
CS-134	1.113E-01	5.965E-02	4.673E-02	3.043E-02	FAIL ABUN
CS-135	8.202E-02	1.776E-01	1.430E-01	9.062E-02	NOT IDENT.
I-135	-1.260E+14	3.198E+14	0.000E+00	1.632E+14	SHORT HLIF
CS-136	3.350E-02	1.045E-01	9.055E-02	5.334E-02	FAIL ABUN
BA-137M	3.672E-02	3.841E-02	3.565E-02	1.960E-02	NOT IDENT.
CS-137	3.882E-02	4.060E-02	3.769E-02	2.072E-02	NOT IDENT.
CE-139	3.518E-02	3.252E-02	3.084E-02	1.659E-02	NOT IDENT.
BA-140	-6.073E-02	2.419E-01	2.117E-01	1.234E-01	NOT IDENT.
LA-140	-4.013E-02	9.322E-02	6.999E-02	4.756E-02	NOT IDENT.
CE-143	2.199E+02	9.826E+01	0.000E+00	5.013E+01	SHORT HLIF

CE-144	-1.135E-01	2.665E-01	2.010E-01	1.360E-01	NOT IDENT.
PM-144	-4.646E-03	3.713E-02	3.216E-02	1.894E-02	NOT IDENT.
PR-144	-3.146E-01	2.514E+00	2.178E+00	1.283E+00	NOT IDENT.
PM-146	2.991E-02	4.768E-02	4.235E-02	2.433E-02	NOT IDENT.
ND-147	-2.475E-01	5.653E-01	4.804E-01	2.884E-01	FAIL ABUN
PM-149	-1.364E+01	6.377E+01	5.602E+01	3.253E+01	NOT IDENT.
EU-152	7.030E-02	1.049E-01	8.461E-02	5.350E-02	FAIL ABUN
GD-153	3.925E-01	1.326E-01	9.949E-02	6.768E-02	FAIL ABUN
EU-154	1.021E-01	1.350E-01	1.107E-01	6.887E-02	NOT IDENT.
EU-155	7.774E-02	1.298E-01	1.166E-01	6.625E-02	FAIL ABUN
TB-160	7.758E-02	1.498E-01	1.335E-01	7.645E-02	FAIL ABUN
HO-166M	4.225E-02	5.770E-02	5.303E-02	2.944E-02	NOT IDENT.
TM-171	-1.611E+01	3.940E+01	3.132E+01	2.010E+01	NOT IDENT.
LU-176	-1.510E-03	2.642E-02	2.248E-02	1.348E-02	FAIL ABUN
LU-177	7.253E-01	1.031E+00	9.566E-01	5.262E-01	FAIL ABUN
LU-177M	-1.511E-01	1.828E-01	1.492E-01	9.325E-02	NOT IDENT.
HF-181	-1.980E-02	4.225E-02	3.472E-02	2.155E-02	NOT IDENT.
W-181	2.157E+00	5.847E-01	5.091E-01	2.983E-01	NOT IDENT.
TA-182	-5.859E-02	2.291E-01	1.951E-01	1.169E-01	FAIL ABUN
RE-183	-5.052E-02	1.197E-01	1.079E-01	6.109E-02	NOT IDENT.
RE-184	-5.628E-02	2.404E-01	2.132E-01	1.226E-01	NOT IDENT.
OS-185	1.654E-02	4.242E-02	3.831E-02	2.165E-02	NOT IDENT.
RE-188	9.593E-02	1.817E-01	1.707E-01	9.272E-02	NOT IDENT.
W-188	-2.347E+00	8.450E+00	6.451E+00	4.311E+00	FAIL ABUN
IR-192	2.111E-02	3.385E-02	3.077E-02	1.727E-02	FAIL ABUN
AU-195	1.142E+00	3.858E-01	2.887E-01	1.968E-01	FAIL ABUN
TL-200	7.527E+01	2.034E+02	0.000E+00	1.038E+02	SHORT HLIF
TL-201	-3.151E+00	5.684E+00	5.138E+00	2.900E+00	NOT IDENT.
TL-202	4.168E-02	6.220E-02	5.582E-02	3.173E-02	NOT IDENT.
HG-203	3.202E-02	4.237E-02	3.884E-02	2.162E-02	NOT IDENT.
BI-207	-6.893E-03	5.704E-02	4.736E-02	2.910E-02	FAIL ABUN
TL-207	6.646E-01	6.946E-01	6.315E-01	3.544E-01	FAIL ABUN
PO-209	7.299E+00	8.275E+00	7.539E+00	4.222E+00	NOT IDENT.
BI-210	-2.451E+00	4.862E+00	4.379E+00	2.480E+00	NOT IDENT.
PB-210	-2.451E+00	4.862E+00	4.379E+00	2.480E+00	NOT IDENT.
PO-210	-2.451E+00	4.861E+00	4.379E+00	2.480E+00	NOT IDENT.
PB-211	-8.970E-01	1.109E+00	7.839E-01	5.657E-01	NOT IDENT.
PO-215	6.646E-01	6.946E-01	6.315E-01	3.544E-01	FAIL ABUN
RN-219	9.123E-02	4.165E-01	3.649E-01	2.125E-01	FAIL ABUN
RN-220	-6.280E+00	2.741E+01	2.395E+01	1.398E+01	NOT IDENT.
RA-223	6.646E-01	6.946E-01	6.315E-01	3.544E-01	FAIL ABUN
AC-227	-1.374E-01	4.150E-01	3.659E-01	2.117E-01	FAIL ABUN
TH-227	-1.374E-01	4.152E-01	3.659E-01	2.118E-01	FAIL ABUN
TH-229	5.093E-02	5.343E-01	4.735E-01	2.726E-01	FAIL ABUN
PA-231	-2.005E-01	1.570E+00	1.386E+00	8.008E-01	FAIL ABUN
TH-231	6.646E-01	6.946E-01	6.315E-01	3.544E-01	FAIL ABUN
U-231	2.913E+00	1.558E+00	1.059E+00	7.948E-01	FAIL ABUN
PA-233	-1.185E-02	6.639E-02	5.804E-02	3.387E-02	FAIL ABUN
PA-234	1.734E-01	3.237E-01	2.862E-01	1.651E-01	FAIL ABUN
NP-236	-9.201E-02	8.445E-02	7.496E-02	4.308E-02	FAIL ABUN
NP-239	1.187E-01	2.441E-01	1.943E-01	1.245E-01	FAIL ABUN
AM-241	2.243E-01	2.331E-01	1.958E-01	1.189E-01	NOT IDENT.
CM-243	-5.506E-02	1.155E-01	1.003E-01	5.891E-02	FAIL ABUN
AM-246	8.876E-02	1.601E-01	1.406E-01	8.167E-02	NOT IDENT.
CM-247	1.719E-02	3.658E-02	3.254E-02	1.866E-02	NOT IDENT.
CF-249	-3.706E-03	4.164E-02	3.593E-02	2.124E-02	NOT IDENT.
CF-251	8.452E-02	1.294E-01	1.212E-01	6.600E-02	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON ,SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.50	455.5146
46.50	455.5146
46.50	455.5146
48.70	462.7590
49.72	508.0389
51.35	511.7817
52.39	503.5161
52.97	517.5759
53.15	517.7574
53.44	539.8536
54.07	571.6984
56.28	641.9701
56.28	641.9732
57.37	0.0000
57.53	579.1349
57.53	579.1370
57.60	579.2103
57.98	603.1816
57.98	603.1816
59.32	607.8251
59.32	607.8251
59.40	607.9135
59.54	612.7955
59.72	612.9973
60.01	640.1240
61.10	682.4619
61.14	682.5106
61.30	682.7075
63.00	673.1522
63.29	673.4964
63.29	673.4964
63.58	673.8406
64.28	674.6668
65.12	690.5013
65.20	690.5973
65.20	690.5973
66.05	658.1431
66.72	700.3763
66.83	732.4243
66.91	732.5223
67.20	732.8830
67.20	732.8830
67.75	722.3786
67.85	701.1899
68.90	710.9684
68.90	710.9684
69.30	693.8168
69.67	718.2964
70.82	700.3835
70.82	700.3835
70.83	700.3936
72.80	811.1581
72.87	811.2502
72.87	811.2502
74.67	813.5927
74.81	813.7770
74.81	813.7770
74.81	813.7770
74.81	813.7770
74.81	813.7770
74.81	813.7770
74.97	813.9805
75.28	814.3838
75.70	814.9214
77.11	816.7263
77.11	816.7263

77.11	816.7263
77.11	816.7263
77.11	816.7263
77.11	816.7263
77.11	816.7263
78.38	818.3391
79.62	848.6761
79.80	883.1277
79.80	883.1277
80.11	883.5453
80.18	883.6364
80.30	934.3469
80.30	934.3469
80.57	934.7316
81.00	1012.0599
81.07	1012.1688
81.07	1012.1688
81.07	1012.1688
81.07	1012.1688
82.60	975.2275
83.37	854.0278
83.78	876.9507
83.78	876.9507
83.78	876.9507
83.78	876.9507
84.21	875.8697
84.90	868.5485
85.43	903.7327
86.29	1033.1920
86.50	1033.5083
86.54	1033.5658
86.59	1069.8528
86.72	1070.0562
86.79	1070.1603
86.94	1070.3934
87.30	940.7917
87.30	940.7917
87.30	940.7917
87.30	940.7917
87.30	940.7917
87.30	940.7917
87.57	941.1576
87.88	941.5758
88.03	941.7806
88.36	942.2249
88.47	942.3730
89.95	944.3639
91.11	945.9105
92.29	947.4700
92.38	947.5920
92.38	947.5920
93.35	948.8684
94.00	949.7179
94.67	950.5892
94.67	950.5936
94.90	576.1985
94.90	576.1985
94.90	576.1985
94.90	576.1985
95.87	576.9614
95.87	576.9614
96.73	577.6372
97.43	578.1810
98.44	527.0925
98.44	527.0948
98.88	507.3133
99.55	494.3600
99.55	494.3600
99.86	492.8860
100.00	492.9780
100.10	493.0453
103.18	577.8801
103.76	539.2236
105.00	514.2064
105.31	518.9135
108.00	599.7571
109.28	580.3578

111.00	559.4973
111.00	559.4973
111.76	516.3323
112.95	517.0891
115.19	476.9088
116.30	436.4700
117.00	440.2619
117.00	440.2619
117.66	432.0387
121.11	487.7444
121.62	466.2181
121.78	458.2661
122.06	458.4153
122.32	456.2568
122.32	456.2568
122.32	456.2568
122.32	456.2568
123.07	423.2969
127.23	492.3599
129.76	438.1315
131.20	466.7018
133.02	439.7234
133.54	471.4041
135.34	416.3547
136.00	428.9070
136.25	436.0293
136.48	436.1375
140.51	426.4229
140.51	0.0000
142.18	429.9971
142.65	437.2657
143.76	431.5983
144.24	416.8027
144.24	416.8027
144.24	416.8027
144.24	416.8027
145.22	429.9604
145.44	430.0568
147.16	433.6594
152.43	437.2482
152.70	428.4604
153.22	432.2491
154.21	429.1136
154.21	429.1136
154.21	429.1136
154.21	429.1136
155.03	424.1087
156.02	425.4192
158.56	400.5068
159.00	0.0000
159.00	382.7532
160.31	439.7895
161.27	444.6926
162.32	436.1529
162.64	436.2898
163.35	409.5840
163.89	398.9880
165.85	397.9370
167.43	422.0323
171.28	342.8451
171.86	340.3073
172.10	340.3845
176.55	337.2321
176.60	337.2462
181.06	373.3951
184.41	335.9654
185.71	336.3535
186.00	336.4401
190.27	333.6452
192.34	319.4569
193.63	336.3112
197.04	370.3091
198.01	369.6877
198.60	372.6609
200.40	342.5153
201.83	355.0394
202.84	402.9071
205.31	383.1770

208.36	370.0865
208.81	371.1624
209.75	354.5625
209.75	354.5625
210.97	356.7950
215.65	343.0662
216.55	326.3390
218.09	342.7939
222.10	293.6760
223.80	335.8047
226.40	285.1570
227.00	291.9465
227.08	290.0632
227.20	290.0911
228.16	264.6061
228.18	264.6103
228.18	264.6103
231.56	0.0000
235.69	289.4916
236.00	309.4777
236.00	309.4777
238.63	275.3577
238.63	275.3577
238.63	275.3577
238.63	275.3577
239.00	275.4344
240.98	275.8416
241.98	276.0475
241.98	276.0475
241.98	276.0475
244.69	276.6014
245.39	251.4800
247.94	219.4916
248.90	230.4716
249.79	241.4553
252.40	250.0536
252.85	252.0734
252.85	252.0734
254.15	0.0000
256.20	276.9766
256.20	276.9766
260.50	248.5799
260.90	240.8491
262.80	269.4849
264.65	204.9178
268.24	219.5430
268.79	229.0411
269.46	229.1480
269.46	229.1480
269.46	229.1480
269.46	229.1480
271.23	221.5690
273.65	286.4723
276.40	242.1749
277.35	222.8895
277.60	213.0634
277.60	213.0634
278.00	216.0794
278.60	211.2342
279.20	226.1312
279.53	239.0201
280.46	250.0429
281.68	241.3454
283.67	213.9335
284.30	209.0682
285.00	217.0952
285.90	210.2823
286.10	202.3751
286.10	202.3751
287.40	213.4679
288.45	0.0000
290.67	218.1063
290.80	218.1263
291.72	234.1879
293.26	0.0000
293.70	215.3507
295.21	215.5616
295.21	215.5616

295.21	215.5616
295.96	215.6638
296.50	191.7686
297.23	199.8535
298.57	200.0275
299.80	200.1831
299.80	200.1831
300.09	184.2050
300.09	184.2050
300.09	184.2050
300.09	184.2050
300.12	184.2078
301.29	189.1543
302.84	192.5508
303.76	195.8731
303.91	195.8940
304.40	195.9536
304.40	195.9536
304.84	205.6469
306.84	193.0400
308.46	182.1655
311.98	191.6438
316.51	157.7948
318.01	198.4374
319.02	199.5731
319.41	195.5680
320.08	197.6749
323.87	171.7154
323.87	171.7154
323.87	171.7154
323.87	171.7154
325.23	252.1929
328.77	187.5095
333.44	220.7362
334.20	175.0349
334.20	175.0349
334.30	175.0453
338.28	166.0292
338.28	166.0292
338.28	166.0292
338.28	166.0292
338.32	166.0317
338.32	166.0317
338.32	166.0317
340.50	151.0565
340.57	151.0633
344.27	133.2901
345.85	151.5305
350.59	0.0000
351.07	138.3572
351.92	138.4247
351.92	138.4247
351.92	138.4247
355.39	0.0000
356.01	172.2957
364.48	134.2103
366.43	130.1918
367.43	125.0537
367.94	0.0000
369.80	142.9578
374.96	142.3169
383.85	144.0595
387.95	151.7520
388.63	137.0499
391.69	146.7755
391.69	146.7755
392.90	141.5878
398.62	147.3142
400.65	127.3132
401.10	130.5280
401.81	133.7596
402.60	124.2572
404.84	159.4894
410.95	142.9271
411.60	150.4450
413.65	154.8745
414.70	121.8295
415.30	115.4520

415.76	125.1034
417.63	0.0000
418.52	135.9859
423.70	135.2689
427.08	118.2916
427.89	126.9469
432.53	102.4393
433.93	108.9831
439.47	97.3801
439.56	97.3842
439.89	100.6459
443.98	126.8726
444.90	134.5238
445.03	134.5314
445.03	134.5314
445.03	134.5314
445.03	134.5314
453.90	124.2126
463.38	96.3158
468.07	121.0987
473.00	103.3475
475.06	118.8534
475.35	125.4720
476.78	115.6432
477.59	103.5670
477.96	107.9920
482.03	112.6100
484.57	107.2157
487.03	104.0159
490.36	0.0000
492.35	95.3931
497.08	117.8283
507.63	0.0000
510.53	0.0000
510.84	121.9057
511.00	121.9140
511.85	121.9589
511.85	121.9589
513.99	112.8894
513.99	112.8894
520.41	101.0770
520.65	101.0880
527.90	111.7695
528.96	0.0000
529.64	115.4625
529.87	0.0000
531.02	117.3333
537.32	104.9806
543.00	110.6757
546.56	0.0000
549.76	105.5300
552.65	104.7466
555.20	107.5915
563.23	95.1412
563.90	85.1009
568.70	109.1046
569.32	105.4653
569.50	100.8879
569.67	100.8933
573.80	108.4125
574.00	113.0153
574.64	97.4211
578.91	119.6851
579.30	0.0000
583.14	99.5968
585.48	87.6918
591.81	80.2005
592.07	88.8469
593.00	83.3225
595.88	113.0764
600.56	84.6025
602.52	0.0000
602.71	100.6791
602.71	100.6791
603.60	111.5596
604.41	103.8451
604.70	105.4089
609.31	89.4469

609.31	89.4469
609.31	89.4469
609.31	89.4469
610.33	89.4820
612.46	80.8480
614.37	80.9072
618.01	79.9827
621.84	94.5580
621.84	94.5580
631.29	97.7158
633.02	90.2578
633.10	81.7983
634.78	79.9677
635.90	85.6502
636.97	80.9756
645.85	86.9126
646.12	80.3080
656.30	87.2473
657.75	113.8594
657.90	0.0000
661.65	89.3184
661.65	89.3184
664.57	0.0000
666.33	107.5542
666.33	107.5542
675.00	83.0663
677.61	84.0984
685.20	69.9524
692.80	76.8652
695.00	106.7345
696.49	103.9025
696.49	103.9025
697.00	97.1854
697.49	100.0898
698.33	96.2695
698.50	103.9764
699.00	96.2915
702.63	85.8081
706.10	100.3895
706.58	0.0000
706.67	103.3062
709.31	83.1067
711.68	64.7999
713.82	84.2048
717.42	73.6491
720.50	67.9065
721.93	0.0000
722.20	80.8879
722.78	77.6680
722.78	77.6680
722.89	77.6699
722.95	77.6719
723.30	79.3000
724.18	92.2748
727.18	72.9218
733.00	70.9788
735.90	89.7157
739.58	97.6367
742.81	84.0579
744.21	78.2305
747.13	89.0738
751.79	87.2509
752.31	87.2661
753.82	73.5754
755.35	64.7786
756.15	73.6304
756.87	82.4865
763.93	80.3807
765.79	100.1278
766.42	91.6105
766.84	91.6218
776.49	80.0508
778.00	76.1353
778.57	64.2811
778.89	62.3094
783.80	75.9460
785.46	69.3796
792.07	39.7285

795.84	69.6086
796.30	82.8796
798.80	69.6736
801.93	80.9525
805.60	77.8039
810.29	82.9129
810.76	76.9304
815.85	68.0465
817.79	64.0813
818.51	64.0969
819.60	72.1318
826.30	49.1914
828.27	0.0000
831.60	76.4221
831.96	79.4475
834.83	63.4122
836.80	0.0000
846.75	55.5613
848.13	63.6691
856.28	0.0000
856.80	65.8617
860.37	66.9475
867.32	37.2700
867.82	49.3778
871.10	54.9492
873.19	57.0199
874.81	40.7480
875.33	0.0000
876.40	73.3816
879.36	64.2643
880.27	69.3829
880.51	70.4083
881.50	60.2215
883.24	68.4231
884.67	90.9273
889.25	58.3123
896.60	62.5384
898.02	71.7944
899.00	67.7112
903.28	65.7406
911.07	65.8875
911.07	65.8875
911.07	65.8875
919.63	63.2104
920.93	70.2014
925.00	63.0477
925.24	63.0522
926.50	63.0745
935.52	66.3453
937.48	64.3068
944.10	59.2307
946.00	59.2613
949.00	71.7981
962.29	55.6992
964.01	59.5564
966.15	59.5912
968.20	59.6246
969.11	59.6399
969.11	59.6399
969.11	59.6399
977.42	41.9473
980.50	59.8249
983.50	48.3191
989.30	68.3833
996.32	56.2148
1001.03	50.6566
1001.68	50.6660
1004.76	56.3411
1021.30	0.0000
1024.50	0.0000
1034.80	59.6258
1036.00	68.1656
1037.82	63.9346
1038.57	52.2252
1038.76	0.0000
1045.16	69.3958
1046.59	68.3531
1048.07	53.4204

1050.47	50.2473
1050.47	50.2473
1062.04	60.0441
1063.62	64.3594
1076.63	68.8781
1077.35	60.2793
1078.86	60.3012
1085.78	73.3490
1099.22	55.1960
1112.02	60.3163
1112.84	77.5670
1115.52	72.4414
1120.29	63.0977
1120.29	63.0977
1120.29	63.0977
1120.29	63.0977
1120.51	63.1033
1121.28	63.1147
1124.00	0.0000
1129.67	80.9997
1131.51	0.0000
1147.95	0.0000
1167.94	76.1137
1173.22	71.6174
1175.09	71.6492
1177.93	60.6665
1189.05	66.3545
1204.90	74.9224
1205.75	0.0000
1213.00	75.9908
1221.42	97.4890
1230.97	96.7721
1235.34	101.5266
1236.41	0.0000
1238.25	72.6997
1246.25	68.1613
1260.41	0.0000
1271.85	33.8057
1274.45	38.6585
1274.54	40.8733
1291.56	39.6125
1298.22	0.0000
1312.09	32.2098
1325.50	27.5521
1325.50	27.5521
1332.49	34.2539
1333.61	33.3110
1360.21	28.7134
1362.66	0.0000
1365.15	28.7427
1368.21	36.4306
1368.53	0.0000
1376.25	38.4131
1384.27	42.3242
1394.10	18.3135
1395.20	14.4611
1407.95	27.0646
1434.06	19.4352
1436.60	24.3062
1457.56	0.0000
1460.81	19.5386
1489.15	11.7891
1509.49	17.7532
1596.49	31.2825
1620.62	8.0570
1678.03	0.0000
1691.02	9.1794
1691.02	9.1794
1706.46	0.0000
1750.46	0.0000
1764.49	9.2970
1764.49	9.2970
1764.49	9.2970
1764.49	9.2970
1770.23	77.5513
1771.40	40.3346
1791.20	0.0000
1808.65	12.4893

1836.01

6.2729

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245395015

Total Uranium Activity	9.6202E+01	ug/g
Total Uranium Counting Unc.	1.9540E+01	ug/g
Total Uranium Tpu	9.9695E-06	ug/g
Total Uranium Mda	4.4576E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417              *
*               GROSS GAMMA REPORT                 *
*
*****
*
*   BATCH ID      : 944966          SAMPLE ID   : G245395015
*   ANALYST       : MXR1            DETECTOR    : GAM01
*   SAMPLE DATE   : 19-JAN-2010 12:00:00.00    COUNT TIME : 0 02:00:00.00
*   ANALYSIS DATE : 2-FEB-2010 09:47:21.72    SAMPLE ALQT: 157.390 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.268E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.721E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 5.147E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 2.516E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:50:07.44

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                          *
*                                     Charleston, SC 29414                       *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023719.CNF;1
Sample date        : 26-JAN-2010 00:00:00 Acquisition date : 2-FEB-2010 09:48:17.
Sample ID          : G1202023719      Sample quantity   : 1.81030E+02 GRAM
Detector name      : GAM04             Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00     Elapsed real time: 0 02:00:00.43  0.0%
Energy tolerance   : 1.50000 keV       Analyst Initials : MXR1
Abundance limit    : 75.00000          Sensitivity       : 5.00000
Batch ID           : 944966             Detector SN#       :
Matrix Spike ID    :                    LCS ID           : 1032-A
*****
No peaks were found
```

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023719.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 26-JAN-2010 00:00:00 Acquisition date : 2-FEB-2010 09:48:17
Sample ID        : G1202023719 Sample quantity : 181.03 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA4 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.43 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	477.59	*	-2.912E-02	1.040E-01	1.622E-01	1.074E-02	-0.180	
NA-22	1274.54	*	6.515E-03	1.680E-02	3.012E-02	1.969E-03	0.216	
NA-24	1368.53	*	8.754E-06	1.680E-02	Half-Life	too short		
AL-26	1129.67		-7.055E-02	6.224E-01	9.806E-01	6.326E-02	-0.072	
	1808.65	*	-1.301E-02	1.744E-02	2.198E-02	1.303E-03	-0.592	
K-40	1460.81	*	2.098E-02	1.528E-01	2.659E-01	1.890E-02	0.079	
TI-44	67.85		-1.899E-02	1.652E-02	2.446E-02	2.845E-03	-0.776	
	78.38	*	-4.955E-03	9.998E-03	1.591E-02	1.829E-03	-0.311	
SC-46	889.25	*	1.243E-06	1.438E-02	2.104E-02	1.702E-03	0.000	
	1120.51		4.864E-04	1.540E-02	2.506E-02	1.641E-03	0.019	
V-48	944.10		1.158E-01	2.235E-01	4.038E-01	3.228E-02	0.287	
	983.50	*	1.527E-03	1.462E-02	2.452E-02	1.900E-03	0.062	
	1312.09		5.909E-03	1.825E-02	3.290E-02	2.217E-03	0.180	
CR-51	320.08	*	-5.050E-02	1.089E-01	1.725E-01	1.215E-02	-0.293	
MN-52	744.21		-1.503E-02	3.166E-02	4.829E-02	2.866E-03	-0.311	
	848.13		3.522E-01	1.109E+00	1.922E+00	1.430E-01	0.183	
	935.52		2.157E-02	2.952E-02	5.603E-02	4.506E-03	0.385	
	1246.25		-6.101E-01	9.922E-01	1.457E+00	9.275E-02	-0.419	
	1333.61		2.423E-01	7.024E-01	1.264E+00	8.660E-02	0.192	
	1434.06	*	-4.159E-02	3.099E-02	2.227E-02	1.520E-03	-1.867	
MN-54	834.83	*	3.439E-03	1.243E-02	2.158E-02	1.562E-03	0.159	
CO-56	846.75	*	5.879E-03	1.495E-02	2.625E-02	1.947E-03	0.224	
	977.42		-4.571E-01	8.627E-01	1.217E+00	9.475E-02	-0.376	
	1037.82		-3.337E-02	9.762E-02	1.456E-01	1.146E-02	-0.229	
	1175.09		-7.922E-01	6.899E-01	7.483E-01	4.458E-02	-1.059	
	1238.25		1.690E-03	2.599E-02	4.412E-02	2.937E-03	0.038	
	1360.21		2.586E-01	3.724E-01	7.120E-01	4.880E-02	0.363	
	1771.40		3.632E-02	7.758E-02	1.481E-01	8.991E-03	0.245	
CO-57	122.06	*	-6.230E-03	8.423E-03	1.286E-02	8.930E-04	-0.484	
	136.48		-3.662E-02	6.889E-02	1.069E-01	7.951E-03	-0.343	
CO-58	810.76	*	8.404E-03	9.876E-03	1.939E-02	1.339E-03	0.433	
FE-59	142.65		3.853E-01	8.495E-01	1.393E+00	9.102E-02	0.277	
	192.34		-1.719E-01	2.845E-01	4.256E-01	5.176E-02	-0.404	
	1099.22	*	-2.081E-02	2.474E-02	3.010E-02	2.300E-03	-0.691	

----- Non-Identified Nuclides -----

	Line Energy	Activity	Act error	MDA	MDA error	Act/MDA
Nuclide	Ided (keV) Key	(pCi/GRAM)		(pCi/GRAM)		
CO-60	1291.56	1.676E-02	3.663E-02	6.735E-02	5.442E-03	0.249
	1173.22	2.007E-04	1.527E-02	2.465E-02	1.466E-03	0.008
	1332.49 *	-2.494E-03	1.556E-02	2.502E-02	1.715E-03	-0.100
ZN-65	1115.52 *	-1.455E-02	2.710E-02	3.766E-02	2.491E-03	-0.386
GE-68	1077.35 *	-1.142E-01	3.761E-01	5.603E-01	3.914E-02	-0.204
AS-73	53.44 *	3.264E-01	4.547E-01	8.207E-01	1.074E-01	0.398
AS-74	595.88 *	-1.201E-02	2.497E-02	3.664E-02	1.934E-03	-0.328
SE-75	634.78	-4.843E-03	9.631E-02	1.523E-01	7.706E-03	-0.032
	66.05	-1.866E+00	1.974E+00	2.893E+00	3.796E-01	-0.645
	96.73	-2.686E-01	2.184E-01	3.097E-01	4.492E-02	-0.867
BR-77	121.11	-8.605E-03	4.151E-02	6.687E-02	6.711E-03	-0.129
	136.00	-7.425E-04	1.220E-02	1.983E-02	1.329E-03	-0.037
	198.60	-8.523E-02	6.949E-01	1.043E+00	8.048E-02	-0.082
	264.65 *	9.108E-03	1.447E-02	2.595E-02	1.746E-03	0.351
	279.53	7.881E-05	3.836E-02	6.474E-02	4.571E-03	0.001
	303.91	-3.367E-01	7.486E-01	1.198E+00	1.199E-01	-0.281
	400.65	1.798E-03	9.297E-02	1.538E-01	1.384E-02	0.012
	87.88	-3.192E-01	5.207E+00	8.637E+00	1.038E+00	-0.037
	200.40	-4.379E+00	6.358E+00	9.465E+00	6.175E-01	-0.463
	239.00	-3.215E-01	4.139E-01	6.175E-01	4.114E-02	-0.521
	249.79	-1.109E+00	2.368E+00	3.833E+00	2.559E-01	-0.289
	281.68	-2.866E+00	3.614E+00	5.619E+00	3.731E-01	-0.510
	297.23	-2.260E+00	1.848E+00	2.666E+00	1.754E-01	-0.848
	303.76	-1.606E+00	6.985E+00	1.145E+01	7.498E-01	-0.140
	439.47	1.974E-01	5.230E+00	8.624E+00	4.892E-01	0.023
	484.57	1.109E+00	9.457E+00	1.565E+01	8.833E-01	0.071
	520.65 *	-7.763E-02	3.661E-01	5.707E-01	3.178E-02	-0.136
	574.64	-4.430E+00	8.485E+00	1.247E+01	6.706E-01	-0.355
	578.91	1.278E+00	3.303E+00	5.637E+00	3.022E-01	0.227
	585.48	-1.024E+00	5.754E+00	8.941E+00	4.766E-01	-0.115
SR-82	755.35	-3.886E+00	5.670E+00	8.159E+00	4.967E-01	-0.476
	817.79	2.604E+00	5.430E+00	9.705E+00	6.775E-01	0.268
	698.33	-4.948E+00	1.070E+01	1.617E+01	8.622E-01	-0.306
RB-83	776.49 *	-9.653E-02	1.033E-01	1.393E-01	8.893E-03	-0.693
	1395.20	-2.845E-01	3.619E+00	5.897E+00	4.037E-01	-0.048
RB-84	520.41 *	-3.877E-03	2.165E-02	3.398E-02	1.892E-03	-0.114
	529.64	-2.913E-03	3.298E-02	5.253E-02	2.912E-03	-0.055
RB-85	552.65	3.008E-02	6.928E-02	1.194E-01	6.527E-03	0.252
KR-85	881.50 *	1.599E-02	2.463E-02	4.293E-02	3.419E-03	0.373
SR-85	513.99 *	-1.139E+01	4.568E+00	5.619E+00	3.138E-01	-2.028
RB-86	513.99 *	-5.387E-02	2.160E-02	2.657E-02	1.484E-03	-2.028
Y-88	1076.63 *	-7.419E-03	1.704E-01	2.729E-01	1.908E-02	-0.027
ZR-88	898.02	2.160E-03	1.623E-02	2.632E-02	2.177E-03	0.082
	1836.01 *	-4.558E-04	1.673E-02	2.692E-02	1.571E-03	-0.017
Y-91	392.90 *	-2.398E-03	1.039E-02	1.665E-02	9.373E-04	-0.144
NB-94	1204.90 *	-5.504E+00	5.416E+00	6.189E+00	3.793E-01	-0.889
NB-95	702.63 *	4.650E-03	1.256E-02	2.215E-02	1.193E-03	0.210
	871.10	-1.123E-02	1.182E-02	1.526E-02	1.190E-03	-0.735
	765.79 *	-3.980E-03	1.268E-02	1.993E-02	1.242E-03	-0.200

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	235.69	*		-5.428E-02	4.180E-02	5.640E-02	4.629E-03	-0.962
ZR-95	724.18			2.857E-02	3.129E-02	5.898E-02	3.980E-03	0.484
	756.15	*		-6.200E-03	1.893E-02	2.934E-02	2.136E-03	-0.211
NB-97	657.90	*		-2.705E-05	1.893E-02	Half-Life	too short	
	1024.50			-1.928E-03	1.893E-02	Half-Life	too short	
ZR-97	254.15			-1.238E-04	1.893E-02	Half-Life	too short	
	355.39			-1.172E-03	1.893E-02	Half-Life	too short	
	507.63	*		-1.323E-03	1.893E-02	Half-Life	too short	
	602.52			3.175E-04	1.893E-02	Half-Life	too short	
	1021.30			8.285E-04	1.893E-02	Half-Life	too short	
	1147.95			1.958E-04	1.893E-02	Half-Life	too short	
	1362.66			-1.070E-04	1.893E-02	Half-Life	too short	
	1750.46			7.469E-04	1.893E-02	Half-Life	too short	
MO-99	140.51			-5.311E-01	1.284E+00	2.003E+00	5.433E-01	-0.265
	181.06			2.661E-02	7.981E-01	1.289E+00	2.239E-01	0.021
	366.43			1.125E+00	4.515E+00	7.712E+00	4.609E-01	0.146
	739.58	*		3.574E-01	6.189E-01	1.122E+00	1.550E-01	0.318
	778.00			-5.638E-01	1.553E+00	2.396E+00	1.534E-01	-0.235
TC-99M	140.51	*		-3.021E+00	1.553E+00	Half-Life	too short	
RH-101	127.23			2.255E-03	1.084E-02	1.810E-02	1.229E-03	0.125
	198.01	*		1.197E-04	1.319E-02	2.005E-02	1.306E-03	0.006
	325.23			6.024E-02	8.839E-02	1.571E-01	1.006E-02	0.383
RH-102	418.52			-2.142E-02	1.048E-01	1.677E-01	9.495E-03	-0.128
	475.06	*		2.531E-03	1.090E-02	1.836E-02	1.038E-03	0.138
	631.29			1.246E-02	2.189E-02	3.810E-02	1.935E-03	0.327
	697.49			-1.588E-02	3.064E-02	4.608E-02	2.452E-03	-0.345
	766.84			-1.719E-02	3.655E-02	5.595E-02	3.495E-03	-0.307
	1046.59			1.347E-03	4.659E-02	7.613E-02	5.529E-03	0.018
	1112.84			-3.585E-02	6.305E-02	8.465E-02	5.613E-03	-0.424
RU-103	497.08	*		-1.394E-03	1.315E-02	2.104E-02	2.643E-03	-0.066
	610.33			1.627E-01	3.111E-01	4.942E-01	7.514E-02	0.329
RH-106	511.85			-2.221E-01	1.138E-01	1.990E-01	1.113E-02	-1.116
	621.84	*		-1.277E-02	1.147E-01	1.796E-01	2.052E-02	-0.071
	1050.47			2.683E-01	8.721E-01	1.502E+00	1.086E-01	0.179
RU-106	511.85			-2.221E-01	1.138E-01	1.990E-01	1.113E-02	-1.116
	621.84	*		-1.277E-02	1.146E-01	1.796E-01	9.228E-03	-0.071
	1050.47			2.683E-01	8.721E-01	1.502E+00	1.086E-01	0.179
AG-108M	433.93	*		-3.168E-03	1.169E-02	1.844E-02	1.139E-03	-0.172
	614.37			-4.295E-03	1.484E-02	2.261E-02	1.295E-03	-0.190
	722.95			1.332E-02	1.593E-02	2.966E-02	1.825E-03	0.449
CD-109	88.03	*		-2.375E-02	2.241E-01	3.701E-01	4.448E-02	-0.064
AG-110M	657.75	*		-1.844E-02	1.290E-02	1.665E-02	8.898E-04	-1.107
	677.61			-5.461E-02	1.153E-01	1.798E-01	9.843E-03	-0.304
	706.67			2.213E-03	7.829E-02	1.317E-01	7.650E-03	0.017
	763.93			2.169E-03	5.182E-02	8.696E-02	5.688E-03	0.025
	884.67			-8.152E-03	1.906E-02	2.889E-02	2.401E-03	-0.282
	937.48			-3.983E-03	3.379E-02	5.388E-02	4.507E-03	-0.074
	1384.27			-6.097E-03	4.555E-02	7.232E-02	5.173E-03	-0.084
IN-111	171.28			-3.376E-02	5.462E-02	8.286E-02	5.282E-03	-0.407

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	245.39	*		5.625E-03	5.926E-02	9.470E-02	6.319E-03	0.059
IN-113M	391.69	*		4.046E-03	1.474E-02	2.522E-02	1.520E-03	0.160
SN-113	391.69	*		4.046E-03	1.474E-02	2.522E-02	1.520E-03	0.160
IN-114M	190.27	*		1.649E-02	5.346E-02	8.858E-02	5.733E-03	0.186
CD-115	260.90			-5.710E+00	4.054E+00	5.799E+00	3.872E-01	-0.985
	492.35			-3.563E-01	1.364E+00	2.139E+00	1.204E-01	-0.167
	527.90	*		-1.491E-01	3.173E-01	4.675E-01	2.594E-02	-0.319
SN-117M	156.02			1.769E-02	5.352E-01	8.714E-01	5.589E-02	0.020
	158.56	*		4.651E-04	1.309E-02	2.129E-02	1.362E-03	0.022
SB-122	563.90	*		4.891E-02	1.105E-01	1.897E-01	1.029E-02	0.258
	692.80			-3.554E-01	2.323E+00	3.813E+00	2.006E-01	-0.093
I-123	159.00	*		6.211E-05	2.323E+00	Half-Life too short		
	528.96			9.352E-04	2.323E+00	Half-Life too short		
TE-123M	159.00	*		5.117E-03	9.408E-03	1.601E-02	1.035E-03	0.320
I-124	602.71	*		1.874E-02	7.651E-02	1.269E-01	6.657E-03	0.148
	722.78			2.556E-01	4.727E-01	8.487E-01	4.794E-02	0.301
	1325.50			2.626E-01	2.734E+00	4.691E+00	3.196E-01	0.056
	1376.25			2.514E+00	2.715E+00	5.538E+00	3.795E-01	0.454
	1509.49			5.049E-01	2.276E+00	3.920E+00	2.643E-01	0.129
	1691.02			2.883E-01	3.573E-01	7.541E-01	4.780E-02	0.382
SB-124	602.71			3.578E-03	1.461E-02	2.424E-02	1.272E-03	0.148
	645.85			-4.418E-02	1.539E-01	2.472E-01	1.442E-02	-0.179
	709.31			-2.574E-01	9.403E-01	1.508E+00	8.255E-02	-0.171
	713.82			4.731E-02	5.576E-01	9.455E-01	9.513E-02	0.050
	722.78			7.074E-02	1.308E-01	2.349E-01	1.393E-02	0.301
	968.20			-6.514E-01	8.385E-01	1.180E+00	9.261E-02	-0.552
	1045.16			6.946E-01	9.143E-01	1.687E+00	1.227E-01	0.412
	1325.50			7.763E-02	8.083E-01	1.387E+00	9.448E-02	0.056
	1368.21			9.808E-02	5.160E-01	9.048E-01	1.124E-01	0.108
	1436.60			9.152E-02	9.084E-01	1.563E+00	1.066E-01	0.059
	1691.02	*		1.882E-02	2.333E-02	4.923E-02	3.345E-03	0.382
SB-125	427.89	*		-2.337E-02	3.871E-02	5.644E-02	3.341E-03	-0.414
	463.38			8.995E-02	9.534E-02	1.758E-01	1.169E-02	0.512
	600.56			2.978E-02	7.083E-02	1.206E-01	7.528E-03	0.247
	635.90			-7.648E-02	1.027E-01	1.406E-01	8.666E-03	-0.544
TE-125M	109.28	*		-1.027E+00	3.172E+00	4.738E+00	4.694E-01	-0.217
I-126	388.63			-6.628E-03	4.718E-02	7.656E-02	4.342E-03	-0.087
	666.33	*		-4.161E-02	4.153E-02	5.803E-02	2.863E-03	-0.717
	753.82			-9.766E-02	3.039E-01	4.746E-01	2.879E-02	-0.206
SB-126	223.80			-1.481E-01	8.688E-01	1.354E+00	8.966E-02	-0.109
	278.60			9.186E-02	5.874E-01	1.005E+00	6.686E-02	0.091
	296.50			-2.469E-01	3.134E-01	4.669E-01	3.074E-02	-0.529
	414.70			-4.572E-03	1.878E-02	2.996E-02	1.695E-03	-0.153
	415.30			-1.731E-01	1.543E+00	2.504E+00	1.417E-01	-0.069
	555.20			3.262E-02	9.554E-01	1.549E+00	8.458E-02	0.021
	573.80			-1.134E-02	2.591E-01	4.139E-01	2.228E-02	-0.027
	593.00			-8.297E-02	1.963E-01	2.880E-01	1.525E-02	-0.288
	656.30			-5.525E-01	7.213E-01	1.052E+00	5.171E-02	-0.525
	666.33			-1.709E-02	1.705E-02	2.383E-02	1.175E-03	-0.717

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	675.00			-1.097E-01	4.676E-01	7.572E-01	3.816E-02	-0.145
	695.00			1.080E-02	1.867E-02	3.386E-02	1.791E-03	0.319
	697.00			-4.026E-02	7.086E-02	1.059E-01	5.627E-03	-0.380
	720.50	*		3.071E-03	3.869E-02	6.544E-02	3.677E-03	0.047
	856.80			-3.556E-02	1.035E-01	1.591E-01	1.205E-02	-0.223
	989.30			2.130E-01	2.952E-01	5.497E-01	4.237E-02	0.388
	1034.80			1.731E-03	1.774E+00	2.886E+00	2.125E-01	0.001
	1213.00			-8.634E-02	8.761E-01	1.369E+00	8.456E-02	-0.063
SN-126	64.28			-9.739E-03	2.294E-01	3.736E-01	6.436E-02	-0.026
	86.94			-3.380E-02	9.963E-02	1.595E-01	6.725E-02	-0.212
	87.57	*		-3.494E-03	2.294E-02	3.773E-02	4.525E-03	-0.093
SB-127	61.10			-3.823E+00	6.674E+00	1.017E+01	1.278E+00	-0.376
	252.40			-1.258E-01	3.710E-01	6.022E-01	2.482E-01	-0.209
	290.80			-1.969E+00	1.849E+00	2.741E+00	2.048E-01	-0.718
	411.60			-2.215E-01	1.184E+00	1.905E+00	2.460E-01	-0.116
	444.90			-2.906E-01	8.624E-01	1.341E+00	1.175E-01	-0.217
	473.00			9.599E-02	1.591E-01	2.805E-01	2.588E-02	0.342
	543.00			7.533E-01	1.332E+00	2.364E+00	2.643E-01	0.319
	603.60			2.261E-01	1.174E+00	1.934E+00	1.635E-01	0.117
	685.20	*		-9.509E-02	1.285E-01	1.904E-01	1.261E-02	-0.499
	698.50			-3.215E-01	1.437E+00	2.254E+00	2.906E-01	-0.143
	722.20			5.663E-01	2.937E+00	5.045E+00	3.345E-01	0.112
	783.80			9.180E-02	2.769E-01	4.892E-01	4.479E-02	0.188
XE-127	57.60			4.248E-01	2.342E+00	4.044E+00	5.063E-01	0.105
	145.22			-1.267E-01	2.041E-01	3.132E-01	2.038E-02	-0.405
	172.10			1.140E-02	3.669E-02	6.096E-02	3.888E-03	0.187
	202.84	*		7.109E-03	1.363E-02	2.296E-02	1.501E-03	0.310
	374.96			8.838E-03	6.315E-02	1.064E-01	6.242E-03	0.083
I-131	80.18			6.214E-01	6.663E-01	1.207E+00	1.396E-01	0.515
	284.30			1.299E-01	2.814E-01	4.951E-01	3.543E-02	0.262
	364.48	*		-1.565E-02	2.357E-02	3.607E-02	2.381E-03	-0.434
	636.97			-2.997E-01	2.917E-01	3.667E-01	2.115E-02	-0.817
	722.89			1.128E+00	1.376E+00	2.559E+00	1.451E-01	0.441
TE-132	49.72			5.198E-02	2.676E+00	4.568E+00	5.823E-01	0.011
	111.76			-3.844E-01	1.832E+00	2.964E+00	2.521E-01	-0.130
	116.30			6.231E-01	1.781E+00	3.024E+00	2.449E-01	0.206
	228.16	*		2.596E-02	4.442E-02	7.508E-02	1.018E-02	0.346
BA-133	53.15			9.976E-01	2.103E+00	3.728E+00	4.880E-01	0.268
	79.62			-2.586E-01	3.825E-01	5.943E-01	1.013E-01	-0.435
	81.00			7.247E-03	2.849E-02	4.876E-02	8.613E-03	0.149
	276.40			-4.132E-02	1.391E-01	2.171E-01	2.903E-02	-0.190
	302.84			4.518E-03	5.225E-02	8.849E-02	1.066E-02	0.051
	356.01	*		-2.027E-02	1.591E-02	2.186E-02	2.561E-03	-0.927
	383.85			-3.088E-02	1.044E-01	1.659E-01	1.799E-02	-0.186
I-133	510.53			-3.157E-04	1.044E-01	Half-Life	too short	
	529.87	*		-3.730E-07	1.044E-01	Half-Life	too short	
	706.58			1.869E-05	1.044E-01	Half-Life	too short	
	856.28			-2.535E-04	1.044E-01	Half-Life	too short	
	875.33			8.176E-05	1.044E-01	Half-Life	too short	

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Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134	1236.41			-7.560E-05	1.044E-01	Half-Life	too short	
	1298.22			-7.234E-05	1.044E-01	Half-Life	too short	
	475.35			-6.800E-02	7.076E-01	1.138E+00	6.433E-02	-0.060
	563.23			5.250E-03	1.428E-01	2.313E-01	1.286E-02	0.023
	569.32			-3.648E-02	8.461E-02	1.260E-01	7.039E-03	-0.290
	604.70			-5.249E-04	1.335E-02	2.126E-02	1.121E-03	-0.025
	795.84	*		8.840E-03	1.501E-02	2.750E-02	1.854E-03	0.321
	801.93			-6.375E-02	1.596E-01	2.552E-01	1.738E-02	-0.250
	1038.57			-2.060E-01	1.277E+00	1.996E+00	1.463E-01	-0.103
	1167.94			-4.070E-01	9.250E-01	1.345E+00	8.087E-02	-0.303
CS-135	1365.15			-3.742E-02	4.568E-01	7.443E-01	5.464E-02	-0.050
	268.24	*		-2.750E-02	5.002E-02	7.950E-02	6.627E-03	-0.346
	288.45			2.785E+01	5.002E-02	Half-Life	too short	
	417.63			-3.619E+01	5.002E-02	Half-Life	too short	
	546.56			-3.454E+01	5.002E-02	Half-Life	too short	
	836.80			2.603E+01	5.002E-02	Half-Life	too short	
	1038.76			-2.030E+01	5.002E-02	Half-Life	too short	
	1124.00			-7.610E+00	5.002E-02	Half-Life	too short	
	1131.51			-1.355E+00	5.002E-02	Half-Life	too short	
	1260.41	*		1.109E+01	5.002E-02	Half-Life	too short	
CS-136	1457.56			5.931E+00	5.002E-02	Half-Life	too short	
	1678.03			-8.905E-01	5.002E-02	Half-Life	too short	
	1706.46			4.336E+01	5.002E-02	Half-Life	too short	
	1791.20			8.713E+00	5.002E-02	Half-Life	too short	
	66.91			-2.560E-01	2.076E-01	2.847E-01	4.933E-02	-0.900
	86.29			-5.952E-03	2.062E-01	3.434E-01	5.233E-02	-0.017
	153.22			1.106E-02	1.343E-01	2.200E-01	1.702E-02	0.050
	163.89			-1.195E-02	2.410E-01	3.883E-01	2.991E-02	-0.031
	176.55			1.693E-02	8.724E-02	1.432E-01	1.010E-02	0.118
	273.65			-6.567E-02	9.490E-02	1.480E-01	1.091E-02	-0.444
BA-137M	340.57			-1.827E-02	2.892E-02	4.465E-02	2.946E-03	-0.409
	818.51			1.474E-02	1.898E-02	3.537E-02	2.474E-03	0.417
	1048.07	*		-1.259E-02	3.105E-02	4.660E-02	3.576E-03	-0.270
	1235.34			2.978E-02	1.222E-01	2.141E-01	2.202E-02	0.139
	661.65	*		-4.569E-03	1.590E-02	2.814E-02	1.372E-03	-0.162
	661.65	*		-4.830E-03	1.680E-02	2.975E-02	1.459E-03	-0.162
	165.85	*		-1.614E-03	1.010E-02	1.610E-02	1.023E-03	-0.100
	162.64			-8.317E-02	1.647E-01	2.531E-01	1.780E-02	-0.329
	304.84			-1.039E-01	3.209E-01	5.191E-01	1.425E-01	-0.200
	423.70			-1.070E-04	4.605E-01	7.569E-01	2.404E-01	0.000
LA-140	537.32	*		5.011E-02	6.621E-02	1.158E-01	3.761E-02	0.433
	328.77			-2.748E-02	7.346E-02	1.180E-01	8.271E-03	-0.233
	432.53			1.364E-01	5.112E-01	8.685E-01	5.463E-02	0.157
	487.03			2.774E-03	3.745E-02	6.157E-02	3.955E-03	0.045
	751.79			2.144E-01	3.787E-01	6.918E-01	5.046E-02	0.310
	815.85			-1.598E-02	7.918E-02	1.265E-01	1.031E-02	-0.126
	867.82			1.779E-01	3.202E-01	5.825E-01	4.806E-02	0.305
	919.63			1.412E-01	7.005E-01	1.193E+00	1.223E-01	0.118
	925.24			-1.904E-01	2.232E-01	2.793E-01	2.422E-02	-0.682

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141	1596.49	*		3.132E-03	2.331E-02	3.968E-02	2.613E-03	0.079
	145.44	*		-1.546E-02	1.829E-02	2.740E-02	1.839E-03	-0.564
	57.37			-8.934E-01	1.020E+01	1.714E+01	2.290E+00	-0.052
	231.56			8.209E+00	1.941E+01	3.005E+01	9.336E+00	0.273
	293.26	*		6.363E-01	8.600E-01	1.542E+00	3.187E-01	0.413
	350.59			5.155E+00	1.367E+01	2.215E+01	6.731E+00	0.233
CE-143	490.36			5.924E+00	2.423E+01	4.060E+01	1.253E+01	0.146
	664.57			-9.517E+00	1.023E+01	1.396E+01	4.395E+00	-0.682
	721.93			1.661E+00	1.143E+01	1.948E+01	5.531E+00	0.085
	80.11			2.032E-01	6.042E-01	1.043E+00	1.205E-01	0.195
	133.54	*		-1.160E-02	6.591E-02	1.060E-01	1.546E-02	-0.109
	476.78			-2.217E-02	2.519E-02	3.547E-02	2.418E-03	-0.625
PM-144	618.01			6.979E-03	1.195E-02	2.092E-02	1.160E-03	0.334
	696.49	*		-6.477E-03	1.400E-02	2.133E-02	1.133E-03	-0.304
	778.57			-3.438E-01	7.299E-01	1.099E+00	7.049E-02	-0.313
PR-144	696.49	*		-4.371E-01	9.447E-01	1.439E+00	7.642E-02	-0.304
	1489.15			-3.093E+00	3.983E+00	4.599E+00	3.113E-01	-0.672
PM-146	453.90	*		-6.475E-04	1.481E-02	2.407E-02	2.054E-03	-0.027
	633.02			3.698E-01	5.525E-01	9.515E-01	3.494E-01	0.389
	735.90			-5.369E-02	5.675E-02	7.566E-02	2.110E-02	-0.710
	747.13			-3.011E-02	3.287E-02	4.531E-02	5.704E-03	-0.665
ND-147	91.11			1.866E-02	4.851E-02	8.337E-02	9.776E-03	0.224
	319.41			-2.248E-01	7.278E-01	1.175E+00	7.577E-02	-0.191
	439.89			3.549E-01	1.232E+00	2.104E+00	1.194E-01	0.169
	531.02	*		2.071E-02	1.169E-01	1.949E-01	2.614E-02	0.106
PM-149	285.90	*		-2.728E+00	3.124E+00	4.763E+00	6.912E-01	-0.573
EU-152	121.78			-1.716E-02	2.503E-02	3.844E-02	3.276E-03	-0.446
	244.69			-2.679E-02	1.217E-01	1.877E-01	1.253E-02	-0.143
	344.27	*		8.659E-03	3.376E-02	5.794E-02	4.010E-03	0.149
	443.98			-8.622E-02	3.552E-01	5.620E-01	3.188E-02	-0.153
GD-153	778.89			-1.871E-02	8.000E-02	1.266E-01	8.122E-03	-0.148
	867.32			2.505E-01	2.852E-01	5.457E-01	4.223E-02	0.459
	964.01			3.465E-02	9.086E-02	1.599E-01	1.259E-02	0.217
	1085.78			3.092E-02	1.070E-01	1.875E-01	1.294E-02	0.165
	1112.02			-1.680E-02	8.536E-02	1.300E-01	8.633E-03	-0.129
	1407.95			7.698E-03	7.240E-02	1.232E-01	8.427E-03	0.062
	69.67			4.324E-01	5.419E-01	9.745E-01	1.125E-01	0.444
	83.37			-1.073E+00	4.400E+00	7.193E+00	8.420E-01	-0.149
	97.43	*		-2.153E-02	2.244E-02	3.330E-02	3.269E-03	-0.646
	103.18			2.713E-02	3.352E-02	5.935E-02	5.281E-03	0.457
EU-154	123.07			2.690E-03	1.625E-02	2.712E-02	2.745E-03	0.099
	247.94			8.264E-02	1.330E-01	2.246E-01	2.268E-02	0.368
	591.81			-4.624E-02	2.076E-01	3.189E-01	3.025E-02	-0.145
	723.30			6.491E-02	6.656E-02	1.258E-01	8.761E-03	0.516
	756.87			-5.737E-02	2.068E-01	3.226E-01	3.328E-02	-0.178
	873.19			-1.014E-02	9.984E-02	1.611E-01	1.885E-02	-0.063
	996.32			2.976E-02	1.390E-01	2.360E-01	4.088E-02	0.126
	1004.76			7.975E-04	8.067E-02	1.318E-01	1.437E-02	0.006
	1274.45	*		1.774E-02	4.701E-02	8.413E-02	8.252E-03	0.211

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		3.241E-01	2.032E+00	3.266E+00	3.763E-01	0.099
		60.01		-2.581E+00	2.330E+00	3.281E+00	3.986E-01	-0.787
		86.54		-2.772E-03	2.817E-02	4.660E-02	5.581E-03	-0.059
TB-160		105.31	*	-5.709E-02	3.569E-02	4.925E-02	4.293E-03	-1.159
		86.79		-1.424E-02	7.028E-02	1.151E-01	1.373E-02	-0.124
		197.04		-1.313E-01	2.172E-01	3.116E-01	2.028E-02	-0.421
		215.65		1.106E-02	2.446E-01	3.918E-01	2.583E-02	0.028
		298.57		-1.044E-02	3.398E-02	5.518E-02	3.627E-03	-0.189
		879.36	*	-1.232E-02	4.912E-02	7.711E-02	6.114E-03	-0.160
		962.29		9.013E-02	1.618E-01	2.924E-01	2.306E-02	0.308
		966.15		-5.275E-02	6.259E-02	8.394E-02	6.598E-03	-0.628
HO-166M		1177.93		1.969E-02	7.825E-02	1.360E-01	8.125E-03	0.145
		1271.85		1.116E-01	2.161E-01	4.016E-01	2.615E-02	0.278
		80.57		6.506E-02	7.901E-02	1.416E-01	1.638E-02	0.460
		184.41		1.511E-03	1.384E-02	2.241E-02	1.444E-03	0.067
		280.46		-4.924E-03	3.082E-02	5.117E-02	3.400E-03	-0.096
		410.95		-3.922E-02	9.616E-02	1.505E-01	8.511E-03	-0.261
		711.68	*	-1.849E-03	2.181E-02	3.603E-02	1.983E-03	-0.051
		752.31		3.266E-02	9.130E-02	1.617E-01	9.777E-03	0.202
TM-171		810.29		1.350E-02	1.689E-02	3.265E-02	2.243E-03	0.413
		51.35		-1.089E+01	1.976E+01	3.175E+01	4.111E+00	-0.343
		52.39		6.072E-01	9.737E+00	1.666E+01	2.179E+00	0.036
		59.40		-9.164E+00	1.206E+01	1.759E+01	2.145E+00	-0.521
LU-176		66.72	*	-9.490E+00	1.100E+01	1.606E+01	1.878E+00	-0.591
		88.36		2.364E-04	5.173E-02	8.631E-02	1.029E-02	0.003
		201.83		-1.382E-03	1.013E-02	1.599E-02	1.044E-03	-0.086
		306.84	*	7.478E-03	9.343E-03	1.689E-02	1.102E-03	0.443
LU-177		401.10		-1.255E+00	2.571E+00	3.982E+00	2.246E-01	-0.315
		112.95		2.399E-03	2.345E-01	3.872E-01	2.998E-02	0.006
		208.36	*	-4.604E-03	1.617E-01	2.575E-01	1.690E-02	-0.018
LU-177M		52.97		2.662E-01	9.274E-01	1.619E+00	2.120E-01	0.164
		54.07		1.663E-01	4.767E-01	8.352E-01	1.089E-01	0.199
		61.30		-1.162E-01	6.278E-01	1.044E+00	1.260E-01	-0.111
		121.62		-6.516E-02	1.219E-01	1.902E-01	1.325E-02	-0.343
		147.16		1.636E-02	2.142E-01	3.512E-01	2.278E-02	0.047
		171.86		3.385E-02	1.640E-01	2.700E-01	1.722E-02	0.125
		218.09		9.435E-02	2.919E-01	4.808E-01	3.175E-02	0.196
		268.79		-4.048E-02	2.402E-01	3.988E-01	2.660E-02	-0.101
HF-181		319.02		-1.926E-03	8.657E-02	1.445E-01	9.320E-03	-0.013
		367.43		-4.365E-02	3.302E-01	5.392E-01	3.216E-02	-0.081
		413.65	*	5.048E-02	6.198E-02	1.123E-01	6.352E-03	0.450
		56.28		-1.790E-01	4.197E-01	6.809E-01	8.680E-02	-0.263
		57.53		5.288E-03	2.049E-01	3.483E-01	4.364E-02	0.015
		65.20		-1.969E-01	3.640E-01	5.599E-01	6.599E-02	-0.352
		133.02		-1.283E-03	1.861E-02	3.025E-02	2.019E-03	-0.042
		136.25		-5.132E-02	1.353E-01	2.132E-01	1.412E-02	-0.241
W-181		345.85		2.211E-02	5.633E-02	9.829E-02	6.106E-03	0.225
		482.03	*	2.408E-03	1.413E-02	2.359E-02	1.332E-03	0.102
		56.28		-7.616E-02	1.783E-01	2.892E-01	3.686E-02	-0.263

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182	57.53			2.288E-03	8.711E-02	1.481E-01	1.856E-02	0.015
	65.20	*		-8.306E-02	1.535E-01	2.361E-01	2.783E-02	-0.352
	67.75			-6.495E-02	4.150E-02	5.501E-02	6.400E-03	-1.181
	100.10			-7.537E-03	5.234E-02	8.560E-02	8.012E-03	-0.088
	152.43			-8.745E-02	1.023E-01	1.513E-01	9.748E-03	-0.578
	222.10			-3.425E-02	1.128E-01	1.732E-01	1.146E-02	-0.198
	1001.68			-4.155E-01	8.710E-01	1.375E+00	1.047E-01	-0.302
	1121.28			-1.172E-02	4.479E-02	6.811E-02	4.456E-03	-0.172
	1189.05			6.169E-02	9.713E-02	1.777E-01	1.073E-02	0.347
	1221.42	*		2.473E-03	5.147E-02	8.736E-02	5.437E-03	0.028
RE-183	1230.97			1.522E-02	1.310E-01	2.252E-01	1.414E-02	0.068
	57.98			9.265E-03	8.223E-02	1.410E-01	1.755E-02	0.066
	59.32			-3.334E-02	4.663E-02	6.850E-02	8.363E-03	-0.487
	67.20			-1.226E-01	7.344E-02	9.561E-02	1.115E-02	-1.282
	162.32	*		-1.209E-02	3.337E-02	5.206E-02	3.317E-03	-0.232
	208.81			1.524E-01	2.888E-01	4.870E-01	3.197E-02	0.313
RE-184	291.72			-3.127E-01	3.003E-01	4.470E-01	2.952E-02	-0.700
	57.98			3.570E-02	3.169E-01	5.432E-01	6.764E-02	0.066
	59.32			-1.284E-01	1.795E-01	2.637E-01	3.220E-02	-0.487
	67.20			-4.723E-01	2.829E-01	3.683E-01	4.296E-02	-1.282
	161.27			-9.672E-02	1.204E-01	1.797E-01	1.146E-02	-0.538
	216.55			-1.370E-04	9.165E-02	1.460E-01	9.633E-03	-0.001
OS-185	252.85	*		6.522E-03	7.454E-02	1.276E-01	8.519E-03	0.051
	318.01			-1.348E-02	1.471E-01	2.436E-01	1.573E-02	-0.055
	792.07			-1.989E-03	3.504E-01	5.163E-01	3.410E-02	-0.004
	903.28			-1.086E-01	4.069E-01	6.390E-01	5.243E-02	-0.170
	920.93			1.889E-02	1.522E-01	2.562E-01	2.081E-02	0.074
	59.72			-1.650E-01	1.324E-01	1.823E-01	2.218E-02	-0.905
	61.14			-3.892E-02	7.192E-02	1.100E-01	1.328E-02	-0.354
	69.30			6.221E-02	9.477E-02	1.687E-01	1.950E-02	0.369
	592.07			-1.390E-01	7.812E-01	1.210E+00	6.412E-02	-0.115
	646.12	*		-5.446E-03	1.398E-02	2.208E-02	1.101E-03	-0.247
RE-188	717.42			3.348E-03	3.502E-01	5.868E-01	3.274E-02	0.006
	874.81			2.160E-01	1.874E-01	3.741E-01	2.939E-02	0.577
	880.27			1.326E-01	2.784E-01	4.972E-01	3.949E-02	0.267
	155.03	*		1.305E-02	5.311E-02	8.821E-02	5.664E-03	0.148
	477.96			-2.138E-01	1.030E+00	1.627E+00	9.192E-02	-0.131
	633.10			6.691E-01	1.002E+00	1.774E+00	8.992E-02	0.377
W-188	63.58			1.511E+00	2.288E+01	3.764E+01	4.479E+00	0.040
	227.08			-5.131E-02	4.012E+00	6.365E+00	4.223E-01	-0.008
IR-192	290.67	*		-2.459E+00	2.381E+00	3.550E+00	2.346E-01	-0.693
	295.96			-1.200E-02	3.378E-02	5.299E-02	3.532E-03	-0.227
	308.46			5.530E-03	3.139E-02	5.366E-02	3.530E-03	0.103
	316.51	*		-3.657E-03	1.113E-02	1.792E-02	1.163E-03	-0.204
AU-195	468.07			-2.354E-03	2.385E-02	3.841E-02	2.522E-03	-0.061
	604.41			4.955E-03	1.671E-01	2.690E-01	2.978E-02	0.018
	612.46			-2.456E-01	2.764E-01	3.817E-01	2.716E-02	-0.643
	65.12			-3.761E-02	7.246E-02	1.117E-01	1.318E-02	-0.337
	66.83			-3.362E-02	3.524E-02	5.076E-02	5.931E-03	-0.662

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200		75.70		4.268E-02	5.263E-02	9.434E-02	1.081E-02	0.452
		98.88	*	-2.027E-03	6.541E-02	1.082E-01	1.035E-02	-0.019
		129.76		-3.630E-01	9.227E-01	1.458E+00	9.818E-02	-0.249
		367.94	*	-1.198E-01	1.275E+00	2.092E+00	1.247E-01	-0.057
		579.30		1.127E+00	9.430E+00	1.545E+01	8.281E-01	0.073
TL-201		828.27		4.190E-01	1.233E+01	2.054E+01	1.466E+00	0.020
		1205.75		-2.895E+00	5.739E+00	8.013E+00	4.915E-01	-0.361
		68.90		4.087E-02	2.869E-01	4.894E-01	5.667E-02	0.084
		70.82		9.613E-02	1.562E-01	2.765E-01	3.182E-02	0.348
		80.30		2.672E-01	2.483E-01	4.537E-01	5.245E-02	0.589
TL-202		135.34		3.868E-01	1.428E+00	2.393E+00	1.588E-01	0.162
		167.43	*	1.928E-01	4.081E-01	6.896E-01	4.384E-02	0.280
		68.90		1.374E-02	9.642E-02	1.645E-01	1.905E-02	0.084
		70.82		3.222E-02	5.235E-02	9.268E-02	1.067E-02	0.348
		80.30		8.960E-02	8.326E-02	1.521E-01	1.759E-02	0.589
HG-203		439.56	*	3.822E-04	1.546E-02	2.544E-02	1.443E-03	0.015
		70.83		1.920E-01	3.136E-01	5.540E-01	8.641E-02	0.347
		72.87		-2.694E-02	1.712E-01	2.834E-01	4.312E-02	-0.095
		82.60		1.052E-01	3.009E-01	5.178E-01	8.197E-02	0.203
		279.20	*	-1.721E-03	1.356E-02	2.260E-02	1.574E-03	-0.076
BI-207		72.80		-3.726E-02	5.906E-02	9.337E-02	1.071E-02	-0.399
		74.97		2.662E-02	3.123E-02	5.610E-02	6.425E-03	0.474
		84.90		3.115E-02	5.434E-02	9.523E-02	1.124E-02	0.327
		569.67		-6.726E-03	1.364E-02	2.016E-02	1.089E-03	-0.334
		1063.62	*	-7.522E-04	1.596E-02	2.559E-02	1.820E-03	-0.029
TL-207		1770.23		1.296E-02	1.903E-01	3.170E-01	1.926E-02	0.041
		81.07		1.334E-02	6.259E-02	1.068E-01	1.238E-02	0.125
		83.78		4.440E-03	3.870E-02	6.532E-02	7.662E-03	0.068
		94.90		-1.318E-02	7.260E-02	1.188E-01	1.224E-02	-0.111
		122.32		-2.004E-01	5.706E-01	9.058E-01	6.968E-02	-0.221
TL-208		144.24		-8.085E-02	2.432E-01	3.713E-01	2.904E-02	-0.218
		154.21		5.535E-02	1.285E-01	2.171E-01	1.637E-02	0.255
		269.46		3.956E-02	5.799E-02	1.048E-01	7.228E-03	0.378
		323.87	*	6.434E-02	2.648E-01	4.528E-01	7.581E-02	0.142
		338.28		1.970E-01	3.629E-01	6.380E-01	6.896E-02	0.309
PO-209		445.03		-2.560E-01	8.071E-01	1.259E+00	1.284E-01	-0.203
		277.35		1.157E-01	1.384E-01	2.394E-01	2.645E-02	0.483
		510.84		-7.472E-02	1.062E-01	2.001E-01	2.008E-02	-0.373
		583.14	*	-1.234E-02	1.475E-02	2.006E-02	1.262E-03	-0.615
		860.37		1.064E-03	9.630E-02	1.593E-01	1.329E-02	0.007
BI-210		260.50		-4.626E+00	3.284E+00	4.698E+00	3.137E-01	-0.985
		262.80		8.122E+00	8.845E+00	1.630E+01	1.088E+00	0.498
		896.60	*	-8.078E-01	2.947E+00	4.396E+00	3.608E-01	-0.184
		46.50	*	-6.447E-01	3.316E+00	5.157E+00	4.494E-01	-0.125
		46.50	*	-6.447E-01	3.316E+00	5.157E+00	4.494E-01	-0.125
PB-211		46.50	*	-6.447E-01	3.316E+00	5.157E+00	4.006E-01	-0.125
		72.87		-1.519E-01	9.649E-01	1.598E+00	1.832E-01	-0.095
		351.07	*	2.734E-02	8.396E-02	1.362E-01	9.200E-03	0.201
		404.84	*	1.374E-01	3.691E-01	6.187E-01	3.856E-01	0.222

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-212	427.08		-7.663E-01	9.839E-01	1.202E+00	7.429E-01	-0.637
	831.96		-4.371E-01	4.977E-01	5.375E-01	3.359E-01	-0.813
	727.18	*	-7.369E-02	1.021E-01	1.498E-01	1.145E-02	-0.492
	785.46		-1.943E-01	5.499E-01	8.494E-01	5.529E-02	-0.229
PB-212	1620.62		1.465E-01	5.676E-01	9.932E-01	6.484E-02	0.147
	74.81		7.123E-02	1.105E-01	1.950E-01	2.883E-02	0.365
	77.11		-6.546E-02	5.963E-02	8.861E-02	1.017E-02	-0.739
	87.30		-1.847E-02	1.064E-01	1.746E-01	2.723E-02	-0.106
PO-212	238.63	*	-2.267E-02	2.468E-02	3.626E-02	2.912E-03	-0.625
	300.09		4.190E-02	2.544E-01	4.349E-01	3.829E-02	0.096
	74.81		7.123E-02	1.105E-01	1.950E-01	2.883E-02	0.365
	77.11		-6.546E-02	5.963E-02	8.861E-02	1.017E-02	-0.739
BI-214	87.30		-1.847E-02	1.064E-01	1.746E-01	2.723E-02	-0.106
	115.19		-1.260E-01	1.167E+00	1.904E+00	1.433E-01	-0.066
	238.63	*	-2.267E-02	2.468E-02	3.626E-02	2.912E-03	-0.625
	300.09		4.190E-02	2.544E-01	4.349E-01	3.829E-02	0.096
PB-214	609.31	*	1.142E-02	3.270E-02	5.087E-02	3.738E-03	0.224
	1120.29		2.987E-02	9.202E-02	1.596E-01	1.487E-02	0.187
	1764.49		-1.265E-01	1.055E-01	1.432E-01	8.730E-03	-0.884
	74.81		1.227E-01	1.902E-01	3.360E-01	4.583E-02	0.365
PO-214	77.11		-1.122E-01	1.026E-01	1.519E-01	2.092E-02	-0.739
	87.30		-3.164E-02	1.822E-01	2.991E-01	4.258E-02	-0.106
	241.98		-8.056E-02	1.450E-01	1.936E-01	1.687E-02	-0.416
	295.21		1.140E-02	4.712E-02	7.881E-02	7.157E-03	0.145
PO-215	351.92	*	2.981E-02	2.940E-02	5.086E-02	4.338E-03	0.586
	74.81		1.227E-01	1.902E-01	3.360E-01	4.583E-02	0.365
	77.11		-1.122E-01	1.026E-01	1.519E-01	2.092E-02	-0.739
	87.30		-3.164E-02	1.822E-01	2.991E-01	4.258E-02	-0.106
PO-216	241.98		-8.056E-02	1.450E-01	1.936E-01	1.687E-02	-0.416
	295.21		1.140E-02	4.712E-02	7.881E-02	7.157E-03	0.145
	351.92	*	2.981E-02	2.940E-02	5.086E-02	4.338E-03	0.586
	81.07		1.334E-02	6.259E-02	1.068E-01	1.238E-02	0.125
PO-218	83.78		4.440E-03	3.870E-02	6.532E-02	7.662E-03	0.068
	94.90		-1.318E-02	7.260E-02	1.188E-01	1.224E-02	-0.111
	122.32		-2.004E-01	5.706E-01	9.058E-01	6.968E-02	-0.221
	144.24		-8.085E-02	2.432E-01	3.713E-01	2.904E-02	-0.218
PO-216	154.21		5.535E-02	1.285E-01	2.171E-01	1.637E-02	0.255
	269.46		3.956E-02	5.799E-02	1.048E-01	7.228E-03	0.378
	323.87	*	6.434E-02	2.648E-01	4.528E-01	7.581E-02	0.142
	338.28		1.970E-01	3.629E-01	6.380E-01	6.896E-02	0.309
PO-216	445.03		-2.560E-01	8.071E-01	1.259E+00	1.284E-01	-0.203
	74.81		7.123E-02	1.105E-01	1.950E-01	2.883E-02	0.365
	77.11		-6.546E-02	5.963E-02	8.861E-02	1.017E-02	-0.739
	87.30		-1.847E-02	1.064E-01	1.746E-01	2.723E-02	-0.106
PO-218	238.63	*	-2.267E-02	2.468E-02	3.626E-02	2.912E-03	-0.625
	300.09		4.190E-02	2.544E-01	4.349E-01	3.829E-02	0.096
	74.81		1.227E-01	1.902E-01	3.360E-01	4.583E-02	0.365
	77.11		-1.122E-01	1.026E-01	1.519E-01	2.092E-02	-0.739
	87.30		-3.164E-02	1.822E-01	2.991E-01	4.258E-02	-0.106

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	241.98			-8.056E-02	1.450E-01	1.936E-01	1.687E-02	-0.416
	295.21			1.140E-02	4.712E-02	7.881E-02	7.157E-03	0.145
	351.92	*		2.981E-02	2.940E-02	5.086E-02	4.338E-03	0.586
RN-219	271.23			1.861E-02	7.538E-02	1.306E-01	1.142E-02	0.142
	401.81	*		-1.430E-01	1.609E-01	2.335E-01	3.161E-02	-0.612
RN-220	549.76	*		1.108E+01	8.141E+00	1.620E+01	8.877E-01	0.684
RA-223	81.07			1.334E-02	6.259E-02	1.068E-01	1.238E-02	0.125
	83.78			4.440E-03	3.870E-02	6.532E-02	7.662E-03	0.068
	94.90			-1.318E-02	7.260E-02	1.188E-01	1.224E-02	-0.111
	122.32			-2.004E-01	5.706E-01	9.058E-01	6.968E-02	-0.221
	144.24			-8.085E-02	2.432E-01	3.713E-01	2.904E-02	-0.218
	154.21			5.535E-02	1.285E-01	2.171E-01	1.637E-02	0.255
	269.46			3.956E-02	5.799E-02	1.048E-01	7.228E-03	0.378
	323.87	*		6.434E-02	2.648E-01	4.528E-01	7.581E-02	0.142
	338.28			1.970E-01	3.629E-01	6.380E-01	6.896E-02	0.309
	445.03			-2.560E-01	8.071E-01	1.259E+00	1.284E-01	-0.203
RA-224	240.98	*		-3.465E-01	2.954E-01	3.727E-01	2.485E-02	-0.930
RA-226	609.31	*		1.142E-02	3.270E-02	5.087E-02	3.738E-03	0.224
	1120.29			2.987E-02	9.202E-02	1.596E-01	1.487E-02	0.187
AC-227	1764.49			-1.265E-01	1.055E-01	1.432E-01	8.730E-03	-0.884
	79.80			-1.882E-01	4.755E-01	7.624E-01	1.741E-01	-0.247
	236.00			-7.533E-02	8.026E-02	1.131E-01	1.238E-02	-0.666
	256.20	*		8.749E-02	1.291E-01	2.320E-01	3.328E-02	0.377
	286.10			-3.387E-01	5.678E-01	8.967E-01	1.076E-01	-0.378
	299.80			-3.724E-02	4.689E-01	7.811E-01	1.295E-01	-0.048
	304.40			-4.249E-01	7.152E-01	1.122E+00	1.970E-01	-0.379
	334.20			-3.287E-01	8.519E-01	1.359E+00	2.515E-01	-0.242
TH-227	79.80			-1.882E-01	4.756E-01	7.624E-01	1.761E-01	-0.247
	94.00			-4.881E-01	6.956E-01	1.041E+00	2.351E-01	-0.469
	236.00			-7.533E-02	8.017E-02	1.131E-01	1.089E-02	-0.666
	256.20	*		8.749E-02	1.294E-01	2.320E-01	3.995E-02	0.377
	286.10			-3.387E-01	6.603E-01	8.967E-01	8.987E-01	-0.378
	299.80			-3.724E-02	4.689E-01	7.811E-01	1.295E-01	-0.048
	304.40			-4.249E-01	7.152E-01	1.122E+00	1.970E-01	-0.379
	334.20			-3.287E-01	8.519E-01	1.359E+00	2.515E-01	-0.242
AC-228	338.32			4.640E-02	8.871E-02	1.525E-01	6.229E-02	0.304
	911.07	*		-7.661E-03	5.791E-02	9.882E-02	1.077E-02	-0.078
	969.11			-1.982E-02	8.902E-02	1.415E-01	3.264E-02	-0.140
RA-228	338.32			4.640E-02	8.871E-02	1.525E-01	6.229E-02	0.304
	911.07	*		-7.661E-03	5.791E-02	9.882E-02	1.077E-02	-0.078
	969.11			-1.982E-02	8.902E-02	1.415E-01	3.264E-02	-0.140
TH-228	74.81			7.176E-02	1.111E-01	1.965E-01	2.261E-02	0.365
	77.11			-6.595E-02	6.007E-02	8.926E-02	1.024E-02	-0.739
	87.30			-1.861E-02	1.071E-01	1.759E-01	2.106E-02	-0.106
	238.63	*		-2.284E-02	2.487E-02	3.653E-02	2.933E-03	-0.625
	300.09			4.221E-02	2.575E-01	4.381E-01	2.586E-01	0.096
TH-229	85.43			2.245E-02	5.367E-02	9.286E-02	1.099E-02	0.242
	88.47			4.652E-04	2.976E-02	4.970E-02	5.908E-03	0.009
	100.00			-6.431E-03	5.711E-02	9.370E-02	8.786E-03	-0.069

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	193.63	*		-3.390E-03	1.728E-01	2.766E-01	1.795E-02	-0.012
	210.97			-6.555E-02	2.577E-01	4.001E-01	2.630E-02	-0.164
	609.31	*		1.142E-02	3.270E-02	5.087E-02	3.738E-03	0.224
	1120.29			2.987E-02	9.202E-02	1.596E-01	1.487E-02	0.187
PA-231	1764.49			-1.265E-01	1.055E-01	1.432E-01	8.730E-03	-0.884
	283.67	*		6.693E-01	5.598E-01	1.036E+00	1.467E-01	0.646
	301.29			6.096E-02	1.928E-01	3.343E-01	3.642E-02	0.182
TH-231	81.07			1.334E-02	6.259E-02	1.068E-01	1.238E-02	0.125
	83.78			4.440E-03	3.870E-02	6.532E-02	7.662E-03	0.068
	94.90			-1.318E-02	7.260E-02	1.188E-01	1.224E-02	-0.111
U-231	122.32			-2.004E-01	5.706E-01	9.058E-01	6.968E-02	-0.221
	144.24			-8.085E-02	2.432E-01	3.713E-01	2.904E-02	-0.218
	154.21			5.535E-02	1.285E-01	2.171E-01	1.637E-02	0.255
	269.46			3.956E-02	5.799E-02	1.048E-01	7.228E-03	0.378
	323.87	*		6.434E-02	2.648E-01	4.528E-01	7.581E-02	0.142
	338.28			1.970E-01	3.629E-01	6.380E-01	6.896E-02	0.309
	445.03			-2.560E-01	8.071E-01	1.259E+00	1.284E-01	-0.203
	84.21			1.503E-01	4.615E-01	7.921E-01	9.312E-02	0.190
	92.29			-2.136E-01	2.066E-01	3.049E-01	3.318E-02	-0.700
	95.87	*		-4.895E-02	8.997E-02	1.414E-01	1.429E-02	-0.346
TH-232	108.00			1.671E-01	1.859E-01	3.307E-01	2.738E-02	0.505
	338.32			4.640E-02	8.672E-02	1.525E-01	9.589E-03	0.304
	911.07	*		-7.661E-03	5.791E-02	9.882E-02	1.077E-02	-0.078
PA-233	969.11			-1.982E-02	8.902E-02	1.415E-01	3.264E-02	-0.140
	75.28			6.242E-01	8.978E-01	1.590E+00	2.718E-01	0.393
	86.59			-5.178E-02	4.584E-01	7.569E-01	2.123E-01	-0.068
	300.12			2.581E-02	1.320E-01	2.262E-01	3.119E-02	0.114
PA-234	311.98	*		1.117E-02	2.187E-02	3.873E-02	2.641E-03	0.288
	340.50			-1.295E-01	2.128E-01	3.264E-01	7.537E-02	-0.397
	398.62			1.618E-01	7.662E-01	1.296E+00	3.347E-01	0.125
	415.76			-3.710E-02	5.916E-01	9.654E-01	1.984E-01	-0.038
	63.00			1.655E-01	7.320E-01	1.218E+00	2.139E-01	0.136
	94.67			-1.868E-03	5.179E-02	8.585E-02	1.173E-02	-0.022
	98.44			-1.082E-03	2.598E-02	4.293E-02	2.402E-02	-0.025
	99.86			-1.026E-02	1.453E-01	2.393E-01	2.250E-02	-0.043
	111.00			-3.978E-02	6.703E-02	9.646E-02	1.120E-02	-0.412
	131.20			-1.237E-02	3.556E-02	5.639E-02	3.782E-03	-0.219
	152.70			-5.193E-02	1.009E-01	1.547E-01	2.483E-02	-0.336
	186.00			4.791E-02	5.041E-01	8.147E-01	2.500E-01	0.059
	226.40			-4.238E-03	1.307E-01	2.069E-01	2.483E-02	-0.020
	227.20			1.629E-03	1.467E-01	2.334E-01	1.549E-02	0.007
	248.90			-4.031E-02	3.031E-01	4.711E-01	1.024E-01	-0.086
	293.70			7.749E-02	2.280E-01	3.848E-01	6.306E-02	0.201
	369.80			-8.073E-02	3.311E-01	5.327E-01	1.111E-01	-0.152
	568.70			-6.342E-02	4.314E-01	6.713E-01	3.629E-02	-0.094
	569.50			-6.859E-02	1.200E-01	1.749E-01	9.448E-03	-0.392
	574.00			1.430E-01	5.409E-01	9.079E-01	4.887E-02	0.157
	699.00			3.610E-02	2.676E-01	4.573E-01	8.158E-02	0.079
	706.10			3.173E-01	4.110E-01	7.223E-01	3.185E-01	0.439

---- Non-Identified Nuclides ----

	Line Nuclide	Energy Ided (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		733.00	8.754E-02	1.111E-01	2.101E-01	4.466E-02	0.417
		742.81	1.570E-01	4.793E-01	8.250E-01	5.521E-01	0.190
		796.30	1.885E-01	3.010E-01	5.473E-01	1.450E-01	0.344
		805.60	-2.545E-02	3.082E-01	5.025E-01	1.517E-01	-0.051
		819.60	4.932E-01	5.160E-01	9.258E-01	3.490E-01	0.533
		826.30	-6.812E-02	2.879E-01	4.523E-01	2.011E-01	-0.151
		831.60	-1.752E-01	2.162E-01	2.869E-01	8.453E-02	-0.611
		876.40	-4.394E-02	3.045E-01	4.823E-01	4.955E-01	-0.091
		880.51	5.076E-02	1.066E-01	1.903E-01	1.513E-02	0.267
		883.24	-4.972E-02	1.224E-01	1.686E-01	1.132E-01	-0.295
		899.00	-3.114E-02	3.705E-01	5.810E-01	2.535E-01	-0.054
		925.00	-1.922E-01	3.360E-01	4.639E-01	3.757E-02	-0.414
		926.50	-4.085E-02	4.787E-02	5.562E-02	1.396E-02	-0.734
		946.00 *	7.620E-02	1.101E-01	2.025E-01	3.742E-02	0.376
		949.00	2.195E-02	1.493E-01	2.522E-01	2.009E-02	0.087
		980.50	-2.502E-01	2.135E-01	2.167E-01	1.683E-02	-1.154
		1394.10	8.306E-02	4.301E-01	7.450E-01	4.833E-01	0.111
PA-234M		766.42	-1.485E+00	3.665E+00	5.521E+00	2.782E+00	-0.269
		1001.03 *	-9.673E-01	2.074E+00	3.279E+00	2.989E-01	-0.295
TH-234		63.29 *	1.001E-02	6.237E-01	1.022E+00	2.022E-01	0.010
		92.38	-1.766E-01	1.936E-01	2.855E-01	5.497E-02	-0.619
U-234		609.31 *	1.142E-02	3.270E-02	5.087E-02	3.738E-03	0.224
		1120.29	2.987E-02	9.202E-02	1.596E-01	1.487E-02	0.187
		1764.49	-1.265E-01	1.055E-01	1.432E-01	8.730E-03	-0.884
U-235		89.95	-3.505E-01	3.435E-01	4.893E-01	1.555E-01	-0.716
		93.35	-3.723E-02	2.232E-01	3.550E-01	1.019E-01	-0.105
		105.00	-4.533E-01	3.720E-01	5.011E-01	1.496E-01	-0.905
		143.76 *	-2.351E-03	7.518E-02	1.182E-01	1.959E-02	-0.020
		163.35	3.868E-03	1.531E-01	2.485E-01	4.516E-02	0.016
		185.71	4.557E-03	1.851E-02	3.028E-02	1.952E-03	0.150
		205.31	-2.571E-01	1.882E-01	2.464E-01	4.493E-02	-1.043
NP-236		94.67	-1.399E-03	3.928E-02	6.512E-02	6.742E-03	-0.021
		98.44	-8.325E-04	1.963E-02	3.245E-02	3.127E-03	-0.026
		111.00	-3.009E-02	5.063E-02	7.296E-02	5.796E-03	-0.412
		160.31 *	-7.377E-03	2.724E-02	4.300E-02	2.745E-03	-0.172
NP-237		86.50 *	-5.986E-03	6.902E-02	1.143E-01	2.723E-02	-0.052
		95.87	-1.542E-01	2.856E-01	4.452E-01	1.122E-01	-0.346
U-238		63.29 *	1.001E-02	6.237E-01	1.022E+00	2.022E-01	0.010
		92.38	-1.766E-01	1.915E-01	2.855E-01	3.101E-02	-0.619
NP-239		99.55	2.025E-02	4.591E-02	7.942E-02	7.505E-03	0.255
		117.00 *	-2.181E-02	6.286E-02	1.001E-01	7.369E-03	-0.218
		209.75	6.996E-02	2.576E-01	4.228E-01	2.777E-02	0.165
		228.18	4.501E-02	7.484E-02	1.270E-01	8.429E-03	0.354
		277.60	5.122E-02	6.671E-02	1.150E-01	7.652E-03	0.445
		334.30	-1.700E-01	4.834E-01	7.763E-01	4.909E-02	-0.219
AM-241		59.54 *	-8.389E-02	7.328E-02	1.020E-01	1.288E-02	-0.823
AM-243		74.67 *	1.282E-02	1.809E-02	3.213E-02	3.679E-03	0.399
		86.72	-5.422E-01	2.592E+00	4.242E+00	5.059E-01	-0.128
		117.66	2.707E-01	1.260E+00	2.115E+00	1.544E-01	0.128

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	142.18			2.530E+00	6.111E+00	9.981E+00	6.529E-01	0.254
	99.55			2.083E-02	4.722E-02	8.168E-02	7.719E-03	0.255
	103.76	*		8.695E-03	3.072E-02	5.219E-02	4.601E-03	0.167
	117.00			-2.243E-02	6.463E-02	1.030E-01	7.577E-03	-0.218
	209.75			6.893E-02	2.538E-01	4.166E-01	2.736E-02	0.165
	228.18			4.545E-02	7.558E-02	1.283E-01	8.513E-03	0.354
AM-246	277.60			5.161E-02	6.722E-02	1.159E-01	7.710E-03	0.445
	798.80			-4.758E-03	5.131E-02	8.386E-02	5.620E-03	-0.057
	1036.00			-3.659E-02	8.909E-02	1.283E-01	9.434E-03	-0.285
	1062.04			2.328E-02	6.248E-02	1.117E-01	7.958E-03	0.209
	1078.86	*		1.750E-02	3.675E-02	6.764E-02	4.715E-03	0.259
	278.00			1.371E-01	2.789E-01	4.696E-01	3.123E-02	0.292
CM-247	287.40			6.548E-02	4.502E-01	7.692E-01	5.093E-02	0.085
	402.60	*		-5.375E-03	1.461E-02	2.303E-02	1.300E-03	-0.233
	252.85			2.526E-02	2.887E-01	4.940E-01	3.299E-02	0.051
CF-249	333.44			-2.952E-02	6.087E-02	9.602E-02	6.079E-03	-0.307
	387.95	*		-3.272E-03	1.351E-02	2.159E-02	1.227E-03	-0.152
CF-251	176.60	*		7.760E-03	4.506E-02	7.384E-02	4.726E-03	0.105
	227.00			-4.150E-02	1.341E-01	2.055E-01	1.363E-02	-0.202
	285.00			-2.902E-01	6.555E-01	1.056E+00	7.002E-02	-0.275
ANH-511	511.00	*		-1.760E-02	2.282E-02	4.295E-02	2.402E-03	-0.410

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023719      *
* Acquisition date   : 2-FEB-2010 09:48:17 Detector SN#      :              *
* Detector ID        : GAM04          Sensitivity            : 5.000          *
* Geometry           : CAN            Energy tolerance       : 1.500          *
* Elapsed live time  : 0 02:00:00.00 Abundance limit        : 75.000         *
* Elapsed real time  : 0 02:00:00.43 Half life ratio        : 8.000          *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 26-JAN-2010 00:00:00 Nuclide Library   : SOLID          *
* Sample ID         : G1202023719      Analyst initials    : MXR1            *
* Batch Number      : 944966           Sample Quantity     : 1.8103E+02 GRAM    *
* Recovery          : 1.00000          Carrier Weight       : 0.00000         *
*****
*
*                                     QC DATA                              *
*
* Standard Weight   : 0.00000          *
* CALIB. DATE/TIME  : 5-MAY-2009 14:25:41 MS Isotope       :              *
* MSD DPM           : 0.000            MSD Isotope         :              *
* LCS DPM           : 0.000            LCS Isotope         :              *
* LCSD DPM          : 0.000            LCSD Isotope        :              *
*****

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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)
---------	-------------------------------------	------------------------	--------------------

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-2.912E-02	1.019E-01	1.720E-01	0.000E+00 NOT IDENT.
NA-22	6.515E-03	1.646E-02	3.077E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	4.514E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-1.301E-02	1.709E-02	2.215E-02	0.000E+00 NOT IDENT.
K-40	2.098E-02	1.497E-01	2.703E-01	0.000E+00 NOT IDENT.
TI-44	-4.955E-03	9.798E-03	1.794E-02	0.000E+00 NOT IDENT.
SC-46	1.243E-06	1.409E-02	2.180E-02	0.000E+00 NOT IDENT.
V-48	1.527E-03	1.432E-02	2.531E-02	0.000E+00 NOT IDENT.
CR-51	-5.050E-02	1.067E-01	1.855E-01	0.000E+00 NOT IDENT.
MN-52	-4.159E-02	3.037E-02	2.265E-02	0.000E+00 NOT IDENT.
MN-54	3.439E-03	1.218E-02	2.242E-02	0.000E+00 NOT IDENT.
CO-56	5.879E-03	1.465E-02	2.725E-02	0.000E+00 NOT IDENT.
CO-57	-6.230E-03	8.255E-03	1.430E-02	0.000E+00 NOT IDENT.
CO-58	8.404E-03	9.678E-03	2.016E-02	0.000E+00 NOT IDENT.
FE-59	-2.081E-02	2.425E-02	3.093E-02	0.000E+00 NOT IDENT.
CO-60	-2.494E-03	1.525E-02	2.553E-02	0.000E+00 NOT IDENT.
ZN-65	-1.455E-02	2.655E-02	3.869E-02	0.000E+00 NOT IDENT.
GE-68	-1.142E-01	3.686E-01	5.763E-01	0.000E+00 NOT IDENT.
AS-73	3.264E-01	4.456E-01	9.370E-01	0.000E+00 NOT IDENT.
AS-74	-1.201E-02	2.447E-02	3.854E-02	0.000E+00 NOT IDENT.
SE-75	9.108E-03	1.418E-02	2.810E-02	0.000E+00 NOT IDENT.
BR-77	-7.763E-02	3.588E-01	6.033E-01	0.000E+00 NOT IDENT.
SR-82	-9.653E-02	1.013E-01	1.451E-01	0.000E+00 NOT IDENT.
RB-83	-3.877E-03	2.122E-02	3.592E-02	0.000E+00 NOT IDENT.
RB-84	1.599E-02	2.414E-02	4.450E-02	0.000E+00 NOT IDENT.
KR-85	-1.139E+01	4.477E+00	5.942E+00	0.000E+00 NOT IDENT.

SR-85	-5.387E-02	2.117E-02	2.810E-02	0.000E+00	NOT IDENT.
RB-86	-7.419E-03	1.670E-01	2.807E-01	0.000E+00	NOT IDENT.
Y-88	-4.558E-04	1.640E-02	2.711E-02	0.000E+00	NOT IDENT.
ZR-88	-2.398E-03	1.019E-02	1.778E-02	0.000E+00	NOT IDENT.
Y-91	-5.504E+00	5.307E+00	6.338E+00	0.000E+00	NOT IDENT.
NB-94	4.650E-03	1.231E-02	2.316E-02	0.000E+00	NOT IDENT.
NB-95	-3.980E-03	1.242E-02	2.076E-02	0.000E+00	NOT IDENT.
NB-95M	-5.428E-02	4.097E-02	6.132E-02	0.000E+00	NOT IDENT.
ZR-95	-6.200E-03	1.855E-02	3.059E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.816E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.729E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.574E-01	6.065E-01	1.171E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.125E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.197E-04	1.293E-02	2.193E-02	0.000E+00	NOT IDENT.
RH-102	2.531E-03	1.068E-02	1.948E-02	0.000E+00	NOT IDENT.
RU-103	-1.394E-03	1.289E-02	2.228E-02	0.000E+00	NOT IDENT.
RH-106	-1.277E-02	1.124E-01	1.886E-01	0.000E+00	NOT IDENT.
RU-106	-1.277E-02	1.124E-01	1.886E-01	0.000E+00	NOT IDENT.
AG-108M	-3.168E-03	1.146E-02	1.962E-02	0.000E+00	NOT IDENT.
CD-109	-2.375E-02	2.196E-01	4.159E-01	0.000E+00	NOT IDENT.
AG-110M	-1.844E-02	1.264E-02	1.745E-02	0.000E+00	NOT IDENT.
IN-111	5.625E-03	5.807E-02	1.028E-01	0.000E+00	NOT IDENT.
IN-113M	4.046E-03	1.444E-02	2.694E-02	0.000E+00	NOT IDENT.
SN-113	4.046E-03	1.444E-02	2.694E-02	0.000E+00	NOT IDENT.
IN-114M	1.649E-02	5.239E-02	9.702E-02	0.000E+00	NOT IDENT.
CD-115	-1.491E-01	3.110E-01	4.939E-01	0.000E+00	NOT IDENT.
SN-117M	4.651E-04	1.282E-02	2.347E-02	0.000E+00	NOT IDENT.
SB-122	4.891E-02	1.082E-01	1.999E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.119E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	5.117E-03	9.220E-03	1.764E-02	0.000E+00	NOT IDENT.
I-124	1.874E-02	7.498E-02	1.335E-01	0.000E+00	NOT IDENT.
SB-124	1.882E-02	2.286E-02	4.975E-02	0.000E+00	NOT IDENT.
SB-125	-2.337E-02	3.794E-02	6.009E-02	0.000E+00	NOT IDENT.
TE-125M	-1.027E+00	3.109E+00	5.286E+00	0.000E+00	NOT IDENT.
I-126	-4.161E-02	4.070E-02	6.079E-02	0.000E+00	NOT IDENT.
SB-126	3.071E-03	3.792E-02	6.834E-02	0.000E+00	NOT IDENT.
SN-126	-3.494E-03	2.248E-02	4.240E-02	0.000E+00	NOT IDENT.
SB-127	-9.509E-02	1.259E-01	1.992E-01	0.000E+00	NOT IDENT.
XE-127	7.109E-03	1.336E-02	2.510E-02	0.000E+00	NOT IDENT.
I-131	-1.565E-02	2.310E-02	3.862E-02	0.000E+00	NOT IDENT.
TE-132	2.596E-02	4.353E-02	8.173E-02	0.000E+00	NOT IDENT.
BA-133	-2.027E-02	1.559E-02	2.343E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.138E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.840E-03	1.471E-02	2.862E-02	0.000E+00	NOT IDENT.
CS-135	-2.750E-02	4.902E-02	8.605E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.749E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.259E-02	3.043E-02	4.798E-02	0.000E+00	NOT IDENT.
BA-137M	-4.569E-03	1.558E-02	2.948E-02	0.000E+00	NOT IDENT.
CS-137	-4.830E-03	1.647E-02	3.117E-02	0.000E+00	NOT IDENT.
CE-139	-1.614E-03	9.899E-03	1.771E-02	0.000E+00	NOT IDENT.
BA-140	5.011E-02	6.488E-02	1.223E-01	0.000E+00	NOT IDENT.
LA-140	3.132E-03	2.284E-02	4.019E-02	0.000E+00	NOT IDENT.
CE-141	-1.546E-02	1.792E-02	3.029E-02	0.000E+00	NOT IDENT.
CE-143	6.363E-01	8.428E-01	1.664E+00	0.000E+00	NOT IDENT.
CE-144	-1.160E-02	6.459E-02	1.175E-01	0.000E+00	NOT IDENT.
PM-144	-6.477E-03	1.372E-02	2.231E-02	0.000E+00	NOT IDENT.
PR-144	-4.371E-01	9.258E-01	1.505E+00	0.000E+00	NOT IDENT.
PM-146	-6.475E-04	1.451E-02	2.557E-02	0.000E+00	NOT IDENT.
ND-147	2.071E-02	1.146E-01	2.059E-01	0.000E+00	NOT IDENT.
PM-149	-2.728E+00	3.062E+00	5.144E+00	0.000E+00	NOT IDENT.
EU-152	8.659E-03	3.309E-02	6.217E-02	0.000E+00	NOT IDENT.
GD-153	-2.153E-02	2.199E-02	3.730E-02	0.000E+00	NOT IDENT.
EU-154	1.774E-02	4.607E-02	8.596E-02	0.000E+00	NOT IDENT.
EU-155	-5.709E-02	3.498E-02	5.502E-02	0.000E+00	NOT IDENT.
TB-160	-1.232E-02	4.814E-02	7.993E-02	0.000E+00	NOT IDENT.
HO-166M	-1.849E-03	2.138E-02	3.765E-02	0.000E+00	NOT IDENT.
TM-171	-9.490E+00	1.078E+01	1.821E+01	0.000E+00	NOT IDENT.
LU-176	7.478E-03	9.156E-03	1.819E-02	0.000E+00	NOT IDENT.
LU-177	-4.604E-03	1.585E-01	2.811E-01	0.000E+00	NOT IDENT.
LU-177M	5.048E-02	6.074E-02	1.197E-01	0.000E+00	NOT IDENT.
HF-181	2.408E-03	1.385E-02	2.501E-02	0.000E+00	NOT IDENT.
W-181	-8.306E-02	1.505E-01	2.679E-01	0.000E+00	NOT IDENT.
TA-182	2.473E-03	5.044E-02	8.942E-02	0.000E+00	NOT IDENT.
RE-183	-1.209E-02	3.270E-02	5.732E-02	0.000E+00	NOT IDENT.
RE-184	6.522E-03	7.305E-02	1.384E-01	0.000E+00	NOT IDENT.
OS-185	-5.446E-03	1.370E-02	2.316E-02	0.000E+00	NOT IDENT.
RE-188	1.305E-02	5.205E-02	9.729E-02	0.000E+00	NOT IDENT.
W-188	-2.459E+00	2.334E+00	3.832E+00	0.000E+00	NOT IDENT.

IR-192	-3.657E-03	1.090E-02	1.928E-02	0.000E+00	NOT IDENT.
AU-195	-2.027E-03	6.410E-02	1.212E-01	0.000E+00	NOT IDENT.
TL-200	-1.198E-01	1.250E+00	2.240E+00	0.000E+00	NOT IDENT.
TL-201	1.928E-01	4.000E-01	7.586E-01	0.000E+00	NOT IDENT.
TL-202	3.822E-04	1.515E-02	2.706E-02	0.000E+00	NOT IDENT.
HG-203	-1.721E-03	1.329E-02	2.443E-02	0.000E+00	NOT IDENT.
BI-207	-7.522E-04	1.564E-02	2.633E-02	0.000E+00	NOT IDENT.
TL-207	6.434E-02	2.595E-01	4.869E-01	0.000E+00	NOT IDENT.
TL-208	-1.234E-02	1.446E-02	2.112E-02	0.000E+00	NOT IDENT.
PO-209	-8.078E-01	2.888E+00	4.553E+00	0.000E+00	NOT IDENT.
BI-210	-6.447E-01	3.250E+00	5.913E+00	0.000E+00	NOT IDENT.
PB-210	-6.447E-01	3.250E+00	5.913E+00	0.000E+00	NOT IDENT.
PO-210	-6.447E-01	3.250E+00	5.913E+00	0.000E+00	NOT IDENT.
BI-211	2.734E-02	8.228E-02	1.460E-01	0.000E+00	NOT IDENT.
PB-211	1.374E-01	3.617E-01	6.599E-01	0.000E+00	NOT IDENT.
BI-212	-7.369E-02	1.001E-01	1.564E-01	0.000E+00	NOT IDENT.
PB-212	-2.267E-02	2.419E-02	3.940E-02	0.000E+00	NOT IDENT.
PO-212	-2.267E-02	2.419E-02	3.940E-02	0.000E+00	NOT IDENT.
BI-214	1.142E-02	3.204E-02	5.346E-02	0.000E+00	NOT IDENT.
PB-214	2.981E-02	2.881E-02	5.452E-02	0.000E+00	NOT IDENT.
PO-214	2.981E-02	2.881E-02	5.452E-02	0.000E+00	NOT IDENT.
PO-215	6.434E-02	2.595E-01	4.869E-01	0.000E+00	NOT IDENT.
PO-216	-2.267E-02	2.419E-02	3.940E-02	0.000E+00	NOT IDENT.
PO-218	2.981E-02	2.881E-02	5.452E-02	0.000E+00	NOT IDENT.
RN-219	-1.430E-01	1.577E-01	2.491E-01	0.000E+00	NOT IDENT.
RN-220	1.108E+01	7.978E+00	1.709E+01	0.000E+00	NOT IDENT.
RA-223	6.434E-02	2.595E-01	4.869E-01	0.000E+00	NOT IDENT.
RA-224	-3.465E-01	2.895E-01	4.050E-01	0.000E+00	NOT IDENT.
RA-226	1.142E-02	3.204E-02	5.346E-02	0.000E+00	NOT IDENT.
AC-227	8.749E-02	1.265E-01	2.515E-01	0.000E+00	NOT IDENT.
TH-227	8.749E-02	1.268E-01	2.515E-01	0.000E+00	NOT IDENT.
AC-228	-7.661E-03	5.675E-02	1.023E-01	0.000E+00	NOT IDENT.
RA-228	-7.661E-03	5.675E-02	1.023E-01	0.000E+00	NOT IDENT.
TH-228	-2.284E-02	2.437E-02	3.970E-02	0.000E+00	NOT IDENT.
TH-229	-3.390E-03	1.693E-01	3.027E-01	0.000E+00	NOT IDENT.
TH-230	1.142E-02	3.204E-02	5.346E-02	0.000E+00	NOT IDENT.
PA-231	6.693E-01	5.487E-01	1.120E+00	0.000E+00	NOT IDENT.
TH-231	6.434E-02	2.595E-01	4.869E-01	0.000E+00	NOT IDENT.
U-231	-4.895E-02	8.817E-02	1.584E-01	0.000E+00	NOT IDENT.
TH-232	-7.661E-03	5.675E-02	1.023E-01	0.000E+00	NOT IDENT.
PA-233	1.117E-02	2.144E-02	4.170E-02	0.000E+00	NOT IDENT.
PA-234	7.620E-02	1.079E-01	2.093E-01	0.000E+00	NOT IDENT.
PA-234M	-9.673E-01	2.033E+00	3.382E+00	0.000E+00	NOT IDENT.
TH-234	1.001E-02	6.112E-01	1.160E+00	0.000E+00	NOT IDENT.
U-234	1.142E-02	3.204E-02	5.346E-02	0.000E+00	NOT IDENT.
U-235	-2.351E-03	7.367E-02	1.307E-01	0.000E+00	NOT IDENT.
NP-236	-7.377E-03	2.669E-02	4.737E-02	0.000E+00	NOT IDENT.
NP-237	-5.986E-03	6.764E-02	1.285E-01	0.000E+00	NOT IDENT.
U-238	1.001E-02	6.112E-01	1.160E+00	0.000E+00	NOT IDENT.
NP-239	-2.181E-02	6.160E-02	1.115E-01	0.000E+00	NOT IDENT.
AM-241	-8.389E-02	7.181E-02	1.160E-01	0.000E+00	NOT IDENT.
AM-243	1.282E-02	1.773E-02	3.629E-02	0.000E+00	NOT IDENT.
CM-243	8.695E-03	3.010E-02	5.833E-02	0.000E+00	NOT IDENT.
AM-246	1.750E-02	3.601E-02	6.957E-02	0.000E+00	NOT IDENT.
CM-247	-5.375E-03	1.432E-02	2.457E-02	0.000E+00	NOT IDENT.
CF-249	-3.272E-03	1.324E-02	2.307E-02	0.000E+00	NOT IDENT.
CF-251	7.760E-03	4.416E-02	8.108E-02	0.000E+00	NOT IDENT.
ANH-511	-1.760E-02	2.236E-02	4.543E-02	0.000E+00	NOT IDENT.


```

*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023719.CNF;1
Sample date        : 26-JAN-2010 00:00:00 Acquisition date : 2-FEB-2010 09:48:17.
Sample ID          : G1202023719      Sample quantity   : 1.81030E+02 GRAM
Detector name      : GAM04             Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00     Elapsed real time: 0 02:00:00.43  0.0%
Energy tolerance  : 1.50000 keV        Analyst Initials : MXR1
Abundance limit   : 75.00000           Sensitivity      : 5.00000
Batch ID          : 944966             Detector SN#     :
Matrix Spike ID   :                    LCS ID          : 1032-A
*****

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Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202023719

Page : 2
Acquisition date : 2-FEB-2010 09:48:17

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202023719

Page : 3
Acquisition date : 2-FEB-2010 09:48:17

None

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023719.CNF;1 *
* Acquisition date   : 2-FEB-2010 09:48:17.  Detector SN#      :             *
* Detector ID        : GAM04                      Sensitivity    : 5.00000      *
* Geometry           : CAN                      Energy tolerance: 1.50000      *
* Elapsed live time  : 0 02:00:00.00             Abundance limit : 75.00000      *
* Elapsed real time  : 0 02:00:00.43             Half life ratio : 8.00000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-JAN-2010 00:00:00  Nuclide Library : SOLID          *
* Sample ID          : G1202023719           Analyst initials: MXR1          *
* Batch Number       : 944966                Sample Quantity : 1.81030E+02 GRAM *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 5-MAY-2009 14:25:41.36MS Isotope         :             *
* MSD ID              :                      MSD Isotope         :             *
* LCS ID              : 1032-A                LCS Isotope        :             *
*****

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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.912E-02		1.040E-01	1.622E-01	1.074E-02	-0.180
NA-22	6.515E-03		1.680E-02	3.012E-02	1.969E-03	0.216
NA-24	8.754E-06		2.303E-05	Half-Life too short		
AL-26	-1.301E-02		1.744E-02	2.198E-02	1.303E-03	-0.592
K-40	2.098E-02		1.528E-01	2.659E-01	1.890E-02	0.079
TI-44	-4.955E-03		9.998E-03	1.591E-02	1.829E-03	-0.311
SC-46	1.243E-06		1.438E-02	2.104E-02	1.702E-03	0.000
V-48	1.527E-03		1.462E-02	2.452E-02	1.900E-03	0.062
CR-51	-5.050E-02		1.089E-01	1.725E-01	1.215E-02	-0.293
MN-52	-4.159E-02		3.099E-02	2.227E-02	1.520E-03	-1.867
MN-54	3.439E-03		1.243E-02	2.158E-02	1.562E-03	0.159
CO-56	5.879E-03		1.495E-02	2.625E-02	1.947E-03	0.224
CO-57	-6.230E-03		8.423E-03	1.286E-02	8.930E-04	-0.484
CO-58	8.404E-03		9.876E-03	1.939E-02	1.339E-03	0.433
FE-59	-2.081E-02		2.474E-02	3.010E-02	2.300E-03	-0.691
CO-60	-2.494E-03		1.556E-02	2.502E-02	1.715E-03	-0.100
ZN-65	-1.455E-02		2.710E-02	3.766E-02	2.491E-03	-0.386

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-1.142E-01		3.761E-01	5.603E-01	3.914E-02	-0.204
AS-73	3.264E-01		4.547E-01	8.207E-01	1.074E-01	0.398
AS-74	-1.201E-02		2.497E-02	3.664E-02	1.934E-03	-0.328
SE-75	9.108E-03		1.447E-02	2.595E-02	1.746E-03	0.351
BR-77	-7.763E-02		3.661E-01	5.707E-01	3.178E-02	-0.136
SR-82	-9.653E-02		1.033E-01	1.393E-01	8.893E-03	-0.693
RB-83	-3.877E-03		2.165E-02	3.398E-02	1.892E-03	-0.114
RB-84	1.599E-02		2.463E-02	4.293E-02	3.419E-03	0.373
KR-85	-1.139E+01		4.568E+00	5.619E+00	3.138E-01	-2.028
SR-85	-5.387E-02		2.160E-02	2.657E-02	1.484E-03	-2.028
RB-86	-7.419E-03		1.704E-01	2.729E-01	1.908E-02	-0.027
Y-88	-4.558E-04		1.673E-02	2.692E-02	1.571E-03	-0.017
ZR-88	-2.398E-03		1.039E-02	1.665E-02	9.373E-04	-0.144
Y-91	-5.504E+00		5.416E+00	6.189E+00	3.793E-01	-0.889
NB-94	4.650E-03		1.256E-02	2.215E-02	1.193E-03	0.210
NB-95	-3.980E-03		1.268E-02	1.993E-02	1.242E-03	-0.200
NB-95M	-5.428E-02		4.180E-02	5.640E-02	4.629E-03	-0.962
ZR-95	-6.200E-03		1.893E-02	2.934E-02	2.136E-03	-0.211
NB-97	-2.705E-05		9.268E-06	Half-Life	too short	
ZR-97	-1.323E-03		2.923E-04	Half-Life	too short	
MO-99	3.574E-01		6.189E-01	1.122E+00	1.550E-01	0.318
TC-99M	-3.021E+00		3.635E+00	Half-Life	too short	
RH-101	1.197E-04		1.319E-02	2.005E-02	1.306E-03	0.006
RH-102	2.531E-03		1.090E-02	1.836E-02	1.038E-03	0.138
RU-103	-1.394E-03		1.315E-02	2.104E-02	2.643E-03	-0.066
RH-106	-1.277E-02		1.147E-01	1.796E-01	2.052E-02	-0.071
RU-106	-1.277E-02		1.146E-01	1.796E-01	9.228E-03	-0.071
AG-108M	-3.168E-03		1.169E-02	1.844E-02	1.139E-03	-0.172
CD-109	-2.375E-02		2.241E-01	3.701E-01	4.448E-02	-0.064
AG-110M	-1.844E-02		1.290E-02	1.665E-02	8.898E-04	-1.107
IN-111	5.625E-03		5.926E-02	9.470E-02	6.319E-03	0.059
IN-113M	4.046E-03		1.474E-02	2.522E-02	1.520E-03	0.160
SN-113	4.046E-03		1.474E-02	2.522E-02	1.520E-03	0.160
IN-114M	1.649E-02		5.346E-02	8.858E-02	5.733E-03	0.186
CD-115	-1.491E-01		3.173E-01	4.675E-01	2.594E-02	-0.319
SN-117M	4.651E-04		1.309E-02	2.129E-02	1.362E-03	0.022
SB-122	4.891E-02		1.105E-01	1.897E-01	1.029E-02	0.258
I-123	6.211E-05		5.710E-05	Half-Life	too short	
TE-123M	5.117E-03		9.408E-03	1.601E-02	1.035E-03	0.320
I-124	1.874E-02		7.651E-02	1.269E-01	6.657E-03	0.148
SB-124	1.882E-02		2.333E-02	4.923E-02	3.345E-03	0.382
SB-125	-2.337E-02		3.871E-02	5.644E-02	3.341E-03	-0.414
TE-125M	-1.027E+00		3.172E+00	4.738E+00	4.694E-01	-0.217
I-126	-4.161E-02		4.153E-02	5.803E-02	2.863E-03	-0.717
SB-126	3.071E-03		3.869E-02	6.544E-02	3.677E-03	0.047
SN-126	-3.494E-03		2.294E-02	3.773E-02	4.525E-03	-0.093
SB-127	-9.509E-02		1.285E-01	1.904E-01	1.261E-02	-0.499
XE-127	7.109E-03		1.363E-02	2.296E-02	1.501E-03	0.310

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	-1.565E-02		2.357E-02	3.607E-02	2.381E-03	-0.434
TE-132	2.596E-02		4.442E-02	7.508E-02	1.018E-02	0.346
BA-133	-2.027E-02		1.591E-02	2.186E-02	2.561E-03	-0.927
I-133	-3.730E-07		2.111E-06	Half-Life too short		
CS-134	8.840E-03		1.501E-02	2.750E-02	1.854E-03	0.321
CS-135	-2.750E-02		5.002E-02	7.950E-02	6.627E-03	-0.346
I-135	1.109E+01		3.444E+00	Half-Life too short		
CS-136	-1.259E-02		3.105E-02	4.660E-02	3.576E-03	-0.270
BA-137M	-4.569E-03		1.590E-02	2.814E-02	1.372E-03	-0.162
CS-137	-4.830E-03		1.680E-02	2.975E-02	1.459E-03	-0.162
CE-139	-1.614E-03		1.010E-02	1.610E-02	1.023E-03	-0.100
BA-140	5.011E-02		6.621E-02	1.158E-01	3.761E-02	0.433
LA-140	3.132E-03		2.331E-02	3.968E-02	2.613E-03	0.079
CE-141	-1.546E-02		1.829E-02	2.740E-02	1.839E-03	-0.564
CE-143	6.363E-01		8.600E-01	1.542E+00	3.187E-01	0.413
CE-144	-1.160E-02		6.591E-02	1.060E-01	1.546E-02	-0.109
PM-144	-6.477E-03		1.400E-02	2.133E-02	1.133E-03	-0.304
PR-144	-4.371E-01		9.447E-01	1.439E+00	7.642E-02	-0.304
PM-146	-6.475E-04		1.481E-02	2.407E-02	2.054E-03	-0.027
ND-147	2.071E-02		1.169E-01	1.949E-01	2.614E-02	0.106
PM-149	-2.728E+00		3.124E+00	4.763E+00	6.912E-01	-0.573
EU-152	8.659E-03		3.376E-02	5.794E-02	4.010E-03	0.149
GD-153	-2.153E-02		2.244E-02	3.330E-02	3.269E-03	-0.646
EU-154	1.774E-02		4.701E-02	8.413E-02	8.252E-03	0.211
EU-155	-5.709E-02		3.569E-02	4.925E-02	4.293E-03	-1.159
TB-160	-1.232E-02		4.912E-02	7.711E-02	6.114E-03	-0.160
HO-166M	-1.849E-03		2.181E-02	3.603E-02	1.983E-03	-0.051
TM-171	-9.490E+00		1.100E+01	1.606E+01	1.878E+00	-0.591
LU-176	7.478E-03		9.343E-03	1.689E-02	1.102E-03	0.443
LU-177	-4.604E-03		1.617E-01	2.575E-01	1.690E-02	-0.018
LU-177M	5.048E-02		6.198E-02	1.123E-01	6.352E-03	0.450
HF-181	2.408E-03		1.413E-02	2.359E-02	1.332E-03	0.102
W-181	-8.306E-02		1.535E-01	2.361E-01	2.783E-02	-0.352
TA-182	2.473E-03		5.147E-02	8.736E-02	5.437E-03	0.028
RE-183	-1.209E-02		3.337E-02	5.206E-02	3.317E-03	-0.232
RE-184	6.522E-03		7.454E-02	1.276E-01	8.519E-03	0.051
OS-185	-5.446E-03		1.398E-02	2.208E-02	1.101E-03	-0.247
RE-188	1.305E-02		5.311E-02	8.821E-02	5.664E-03	0.148
W-188	-2.459E+00		2.381E+00	3.550E+00	2.346E-01	-0.693
IR-192	-3.657E-03		1.113E-02	1.792E-02	1.163E-03	-0.204
AU-195	-2.027E-03		6.541E-02	1.082E-01	1.035E-02	-0.019
TL-200	-1.198E-01		1.275E+00	2.092E+00	1.247E-01	-0.057
TL-201	1.928E-01		4.081E-01	6.896E-01	4.384E-02	0.280
TL-202	3.822E-04		1.546E-02	2.544E-02	1.443E-03	0.015
HG-203	-1.721E-03		1.356E-02	2.260E-02	1.574E-03	-0.076
BI-207	-7.522E-04		1.596E-02	2.559E-02	1.820E-03	-0.029
TL-207	6.434E-02		2.648E-01	4.528E-01	7.581E-02	0.142
TL-208	-1.234E-02		1.475E-02	2.006E-02	1.262E-03	-0.615

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-8.078E-01		2.947E+00	4.396E+00	3.608E-01	-0.184
BI-210	-6.447E-01		3.316E+00	5.157E+00	4.494E-01	-0.125
PB-210	-6.447E-01		3.316E+00	5.157E+00	4.494E-01	-0.125
PO-210	-6.447E-01		3.316E+00	5.157E+00	4.006E-01	-0.125
BI-211	2.734E-02		8.396E-02	1.362E-01	9.200E-03	0.201
PB-211	1.374E-01		3.691E-01	6.187E-01	3.856E-01	0.222
BI-212	-7.369E-02		1.021E-01	1.498E-01	1.145E-02	-0.492
PB-212	-2.267E-02		2.468E-02	3.626E-02	2.912E-03	-0.625
PO-212	-2.267E-02		2.468E-02	3.626E-02	2.912E-03	-0.625
BI-214	1.142E-02		3.270E-02	5.087E-02	3.738E-03	0.224
PB-214	2.981E-02		2.940E-02	5.086E-02	4.338E-03	0.586
PO-214	2.981E-02		2.940E-02	5.086E-02	4.338E-03	0.586
PO-215	6.434E-02		2.648E-01	4.528E-01	7.581E-02	0.142
PO-216	-2.267E-02		2.468E-02	3.626E-02	2.912E-03	-0.625
PO-218	2.981E-02		2.940E-02	5.086E-02	4.338E-03	0.586
RN-219	-1.430E-01		1.609E-01	2.335E-01	3.161E-02	-0.612
RN-220	1.108E+01		8.141E+00	1.620E+01	8.877E-01	0.684
RA-223	6.434E-02		2.648E-01	4.528E-01	7.581E-02	0.142
RA-224	-3.465E-01		2.954E-01	3.727E-01	2.485E-02	-0.930
RA-226	1.142E-02		3.270E-02	5.087E-02	3.738E-03	0.224
AC-227	8.749E-02		1.291E-01	2.320E-01	3.328E-02	0.377
TH-227	8.749E-02		1.294E-01	2.320E-01	3.995E-02	0.377
AC-228	-7.661E-03		5.791E-02	9.882E-02	1.077E-02	-0.078
RA-228	-7.661E-03		5.791E-02	9.882E-02	1.077E-02	-0.078
TH-228	-2.284E-02		2.487E-02	3.653E-02	2.933E-03	-0.625
TH-229	-3.390E-03		1.728E-01	2.766E-01	1.795E-02	-0.012
TH-230	1.142E-02		3.270E-02	5.087E-02	3.738E-03	0.224
PA-231	6.693E-01		5.598E-01	1.036E+00	1.467E-01	0.646
TH-231	6.434E-02		2.648E-01	4.528E-01	7.581E-02	0.142
U-231	-4.895E-02		8.997E-02	1.414E-01	1.429E-02	-0.346
TH-232	-7.661E-03		5.791E-02	9.882E-02	1.077E-02	-0.078
PA-233	1.117E-02		2.187E-02	3.873E-02	2.641E-03	0.288
PA-234	7.620E-02		1.101E-01	2.025E-01	3.742E-02	0.376
PA-234M	-9.673E-01		2.074E+00	3.279E+00	2.989E-01	-0.295
TH-234	1.001E-02		6.237E-01	1.022E+00	2.022E-01	0.010
U-234	1.142E-02		3.270E-02	5.087E-02	3.738E-03	0.224
U-235	-2.351E-03		7.518E-02	1.182E-01	1.959E-02	-0.020
NP-236	-7.377E-03		2.724E-02	4.300E-02	2.745E-03	-0.172
NP-237	-5.986E-03		6.902E-02	1.143E-01	2.723E-02	-0.052
U-238	1.001E-02		6.237E-01	1.022E+00	2.022E-01	0.010
NP-239	-2.181E-02		6.286E-02	1.001E-01	7.369E-03	-0.218
AM-241	-8.389E-02		7.328E-02	1.020E-01	1.288E-02	-0.823
AM-243	1.282E-02		1.809E-02	3.213E-02	3.679E-03	0.399
CM-243	8.695E-03		3.072E-02	5.219E-02	4.601E-03	0.167
AM-246	1.750E-02		3.675E-02	6.764E-02	4.715E-03	0.259
CM-247	-5.375E-03		1.461E-02	2.303E-02	1.300E-03	-0.233
CF-249	-3.272E-03		1.351E-02	2.159E-02	1.227E-03	-0.152
CF-251	7.760E-03		4.506E-02	7.384E-02	4.726E-03	0.105

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	-1.760E-02		2.282E-02	4.295E-02	2.402E-03	-0.410

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202023719          *
* Acquisition date   : 2-FEB-2010 09:48:17 Detector SN#      :              *
* Detector ID        : GAM04                      Sensitivity   : 5.000        *
* Geometry           : CAN                        Energy tolerance: 1.500      *
* Elapsed live time  : 0 02:00:00.00             Abundance limit : 75.000     *
* Elapsed real time  : 0 02:00:00.43             Half life ratio : 8.000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202023719             Analyst initials: MXR1         *
* Batch Number       : 944966                  Sample Quantity : 1.8103E+02 GRAM *
* Recovery           : 1.00000                 Carrier Weight  : 0.00000      *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 5-MAY-2009 14:25:41 MS Isotope        :              *
* MSD DPM             : 0.000                    MSD Isotope   :              *
* LCS DPM             : 0.000                    LCS Isotope    :              *
* LCSD DPM            : 0.000                    LCSD Isotope   :              *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU
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---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.912E-02	1.019E-01	8.606E-02	5.201E-02 NOT IDENT.
NA-22	6.515E-03	1.646E-02	1.540E-02	8.398E-03 NOT IDENT.
NA-24	8.754E+00	4.514E+01	0.000E+00	2.303E+01 SHORT HLIF
AL-26	-1.301E-02	1.709E-02	1.108E-02	8.720E-03 NOT IDENT.
K-40	2.098E-02	1.497E-01	1.352E-01	7.640E-02 NOT IDENT.
TI-44	-4.955E-03	9.798E-03	8.977E-03	4.999E-03 NOT IDENT.
SC-46	1.243E-06	1.409E-02	1.091E-02	7.190E-03 NOT IDENT.
V-48	1.527E-03	1.432E-02	1.266E-02	7.308E-03 NOT IDENT.
CR-51	-5.050E-02	1.067E-01	9.282E-02	5.445E-02 NOT IDENT.
MN-52	-4.159E-02	3.037E-02	1.133E-02	1.549E-02 NOT IDENT.
MN-54	3.439E-03	1.218E-02	1.122E-02	6.214E-03 NOT IDENT.
CO-56	5.879E-03	1.465E-02	1.363E-02	7.476E-03 NOT IDENT.
CO-57	-6.230E-03	8.255E-03	7.155E-03	4.211E-03 NOT IDENT.
CO-58	8.404E-03	9.678E-03	1.009E-02	4.938E-03 NOT IDENT.
FE-59	-2.081E-02	2.425E-02	1.548E-02	1.237E-02 NOT IDENT.
CO-60	-2.494E-03	1.525E-02	1.277E-02	7.782E-03 NOT IDENT.
ZN-65	-1.455E-02	2.655E-02	1.936E-02	1.355E-02 NOT IDENT.
GE-68	-1.142E-01	3.686E-01	2.883E-01	1.881E-01 NOT IDENT.
AS-73	3.264E-01	4.456E-01	4.688E-01	2.273E-01 NOT IDENT.
AS-74	-1.201E-02	2.447E-02	1.928E-02	1.249E-02 NOT IDENT.
SE-75	9.108E-03	1.418E-02	1.406E-02	7.235E-03 NOT IDENT.
BR-77	-7.763E-02	3.588E-01	3.018E-01	1.830E-01 NOT IDENT.
SR-82	-9.653E-02	1.013E-01	7.261E-02	5.166E-02 NOT IDENT.
RB-83	-3.877E-03	2.122E-02	1.797E-02	1.083E-02 NOT IDENT.
RB-84	1.599E-02	2.414E-02	2.226E-02	1.231E-02 NOT IDENT.
KR-85	-1.139E+01	4.477E+00	2.973E+00	2.284E+00 NOT IDENT.

SR-85	-5.387E-02	2.117E-02	1.406E-02	1.080E-02	NOT IDENT.
RB-86	-7.419E-03	1.670E-01	1.404E-01	8.519E-02	NOT IDENT.
Y-88	-4.558E-04	1.640E-02	1.356E-02	8.366E-03	NOT IDENT.
ZR-88	-2.398E-03	1.019E-02	8.898E-03	5.196E-03	NOT IDENT.
Y-91	-5.504E+00	5.307E+00	3.171E+00	2.708E+00	NOT IDENT.
NB-94	4.650E-03	1.231E-02	1.159E-02	6.279E-03	NOT IDENT.
NB-95	-3.980E-03	1.242E-02	1.039E-02	6.339E-03	NOT IDENT.
NB-95M	-5.428E-02	4.097E-02	3.068E-02	2.090E-02	NOT IDENT.
ZR-95	-6.200E-03	1.855E-02	1.530E-02	9.466E-03	NOT IDENT.
NB-97	-2.705E+01	1.816E+01	0.000E+00	9.268E+00	SHORT HLIF
ZR-97	-1.323E+03	5.729E+02	0.000E+00	2.923E+02	SHORT HLIF
MO-99	3.574E-01	6.065E-01	5.857E-01	3.095E-01	NOT IDENT.
TC-99M	-3.021E+06	7.125E+06	0.000E+00	3.635E+06	SHORT HLIF
RH-101	1.197E-04	1.293E-02	1.097E-02	6.596E-03	NOT IDENT.
RH-102	2.531E-03	1.068E-02	9.743E-03	5.451E-03	NOT IDENT.
RU-103	-1.394E-03	1.289E-02	1.114E-02	6.577E-03	NOT IDENT.
RH-106	-1.277E-02	1.124E-01	9.437E-02	5.733E-02	NOT IDENT.
RU-106	-1.277E-02	1.124E-01	9.437E-02	5.732E-02	NOT IDENT.
AG-108M	-3.168E-03	1.146E-02	9.815E-03	5.846E-03	NOT IDENT.
CD-109	-2.375E-02	2.196E-01	2.081E-01	1.121E-01	NOT IDENT.
AG-110M	-1.844E-02	1.264E-02	8.731E-03	6.448E-03	NOT IDENT.
IN-111	5.625E-03	5.807E-02	5.144E-02	2.963E-02	NOT IDENT.
IN-113M	4.046E-03	1.444E-02	1.348E-02	7.369E-03	NOT IDENT.
SN-113	4.046E-03	1.444E-02	1.348E-02	7.369E-03	NOT IDENT.
IN-114M	1.649E-02	5.239E-02	4.854E-02	2.673E-02	NOT IDENT.
CD-115	-1.491E-01	3.110E-01	2.471E-01	1.587E-01	NOT IDENT.
SN-117M	4.651E-04	1.282E-02	1.174E-02	6.543E-03	NOT IDENT.
SB-122	4.891E-02	1.082E-01	1.000E-01	5.523E-02	NOT IDENT.
I-123	6.211E+01	1.119E+02	0.000E+00	5.710E+01	SHORT HLIF
TE-123M	5.117E-03	9.220E-03	8.824E-03	4.704E-03	NOT IDENT.
I-124	1.874E-02	7.498E-02	6.677E-02	3.825E-02	NOT IDENT.
SB-124	1.882E-02	2.286E-02	2.489E-02	1.167E-02	NOT IDENT.
SB-125	-2.337E-02	3.794E-02	3.006E-02	1.936E-02	NOT IDENT.
TE-125M	-1.027E+00	3.109E+00	2.645E+00	1.586E+00	NOT IDENT.
I-126	-4.161E-02	4.070E-02	3.041E-02	2.076E-02	NOT IDENT.
SB-126	3.071E-03	3.792E-02	3.419E-02	1.935E-02	NOT IDENT.
SN-126	-3.494E-03	2.248E-02	2.121E-02	1.147E-02	NOT IDENT.
SB-127	-9.509E-02	1.259E-01	9.967E-02	6.425E-02	NOT IDENT.
XE-127	7.109E-03	1.336E-02	1.256E-02	6.814E-03	NOT IDENT.
I-131	-1.565E-02	2.310E-02	1.932E-02	1.179E-02	NOT IDENT.
TE-132	2.596E-02	4.353E-02	4.089E-02	2.221E-02	NOT IDENT.
BA-133	-2.027E-02	1.559E-02	1.172E-02	7.953E-03	NOT IDENT.
I-133	-3.730E-01	4.138E+00	0.000E+00	2.111E+00	SHORT HLIF
CS-134	8.840E-03	1.471E-02	1.432E-02	7.507E-03	NOT IDENT.
CS-135	-2.750E-02	4.902E-02	4.305E-02	2.501E-02	NOT IDENT.
I-135	1.109E+07	6.749E+06	0.000E+00	3.444E+06	SHORT HLIF
CS-136	-1.259E-02	3.043E-02	2.401E-02	1.552E-02	NOT IDENT.
BA-137M	-4.569E-03	1.558E-02	1.475E-02	7.948E-03	NOT IDENT.
CS-137	-4.830E-03	1.647E-02	1.559E-02	8.402E-03	NOT IDENT.
CE-139	-1.614E-03	9.899E-03	8.862E-03	5.050E-03	NOT IDENT.
BA-140	5.011E-02	6.488E-02	6.118E-02	3.310E-02	NOT IDENT.
LA-140	3.132E-03	2.284E-02	2.011E-02	1.166E-02	NOT IDENT.
CE-141	-1.546E-02	1.792E-02	1.515E-02	9.143E-03	NOT IDENT.
CE-143	6.363E-01	8.428E-01	8.324E-01	4.300E-01	NOT IDENT.
CE-144	-1.160E-02	6.459E-02	5.880E-02	3.296E-02	NOT IDENT.
PM-144	-6.477E-03	1.372E-02	1.116E-02	6.999E-03	NOT IDENT.
PR-144	-4.371E-01	9.258E-01	7.531E-01	4.724E-01	NOT IDENT.
PM-146	-6.475E-04	1.451E-02	1.279E-02	7.405E-03	NOT IDENT.
ND-147	2.071E-02	1.146E-01	1.030E-01	5.847E-02	NOT IDENT.
PM-149	-2.728E+00	3.062E+00	2.574E+00	1.562E+00	NOT IDENT.
EU-152	8.659E-03	3.309E-02	3.110E-02	1.688E-02	NOT IDENT.
GD-153	-2.153E-02	2.199E-02	1.866E-02	1.122E-02	NOT IDENT.
EU-154	1.774E-02	4.607E-02	4.301E-02	2.350E-02	NOT IDENT.
EU-155	-5.709E-02	3.498E-02	2.753E-02	1.784E-02	NOT IDENT.
TB-160	-1.232E-02	4.814E-02	3.999E-02	2.456E-02	NOT IDENT.
HO-166M	-1.849E-03	2.138E-02	1.884E-02	1.091E-02	NOT IDENT.
TM-171	-9.490E+00	1.078E+01	9.109E+00	5.500E+00	NOT IDENT.
LU-176	7.478E-03	9.156E-03	9.101E-03	4.672E-03	NOT IDENT.
LU-177	-4.604E-03	1.585E-01	1.406E-01	8.085E-02	NOT IDENT.
LU-177M	5.048E-02	6.074E-02	5.987E-02	3.099E-02	NOT IDENT.
HF-181	2.408E-03	1.385E-02	1.251E-02	7.067E-03	NOT IDENT.
W-181	-8.306E-02	1.505E-01	1.340E-01	7.676E-02	NOT IDENT.
TA-182	2.473E-03	5.044E-02	4.473E-02	2.573E-02	NOT IDENT.
RE-183	-1.209E-02	3.270E-02	2.868E-02	1.668E-02	NOT IDENT.
RE-184	6.522E-03	7.305E-02	6.922E-02	3.727E-02	NOT IDENT.
OS-185	-5.446E-03	1.370E-02	1.159E-02	6.990E-03	NOT IDENT.
RE-188	1.305E-02	5.205E-02	4.867E-02	2.656E-02	NOT IDENT.
W-188	-2.459E+00	2.334E+00	1.917E+00	1.191E+00	NOT IDENT.

IR-192	-3.657E-03	1.090E-02	9.646E-03	5.563E-03	NOT IDENT.
AU-195	-2.027E-03	6.410E-02	6.061E-02	3.270E-02	NOT IDENT.
TL-200	-1.198E-01	1.250E+00	1.121E+00	6.377E-01	NOT IDENT.
TL-201	1.928E-01	4.000E-01	3.795E-01	2.041E-01	NOT IDENT.
TL-202	3.822E-04	1.515E-02	1.354E-02	7.730E-03	NOT IDENT.
HG-203	-1.721E-03	1.329E-02	1.222E-02	6.779E-03	NOT IDENT.
BI-207	-7.522E-04	1.564E-02	1.317E-02	7.980E-03	NOT IDENT.
TL-207	6.434E-02	2.595E-01	2.436E-01	1.324E-01	NOT IDENT.
TL-208	-1.234E-02	1.446E-02	1.057E-02	7.377E-03	NOT IDENT.
PO-209	-8.078E-01	2.888E+00	2.278E+00	1.473E+00	NOT IDENT.
BI-210	-6.447E-01	3.250E+00	2.959E+00	1.658E+00	NOT IDENT.
PB-210	-6.447E-01	3.250E+00	2.959E+00	1.658E+00	NOT IDENT.
PO-210	-6.447E-01	3.250E+00	2.959E+00	1.658E+00	NOT IDENT.
BI-211	2.734E-02	8.228E-02	7.305E-02	4.198E-02	NOT IDENT.
PB-211	1.374E-01	3.617E-01	3.302E-01	1.845E-01	NOT IDENT.
BI-212	-7.369E-02	1.001E-01	7.822E-02	5.107E-02	NOT IDENT.
PB-212	-2.267E-02	2.419E-02	1.971E-02	1.234E-02	NOT IDENT.
PO-212	-2.267E-02	2.419E-02	1.971E-02	1.234E-02	NOT IDENT.
BI-214	1.142E-02	3.204E-02	2.675E-02	1.635E-02	NOT IDENT.
PB-214	2.981E-02	2.881E-02	2.728E-02	1.470E-02	NOT IDENT.
PO-214	2.981E-02	2.881E-02	2.728E-02	1.470E-02	NOT IDENT.
PO-215	6.434E-02	2.595E-01	2.436E-01	1.324E-01	NOT IDENT.
PO-216	-2.267E-02	2.419E-02	1.971E-02	1.234E-02	NOT IDENT.
PO-218	2.981E-02	2.881E-02	2.728E-02	1.470E-02	NOT IDENT.
RN-219	-1.430E-01	1.577E-01	1.246E-01	8.044E-02	NOT IDENT.
RN-220	1.108E+01	7.978E+00	8.552E+00	4.071E+00	NOT IDENT.
RA-223	6.434E-02	2.595E-01	2.436E-01	1.324E-01	NOT IDENT.
RA-224	-3.465E-01	2.895E-01	2.026E-01	1.477E-01	NOT IDENT.
RA-226	1.142E-02	3.204E-02	2.675E-02	1.635E-02	NOT IDENT.
AC-227	8.749E-02	1.265E-01	1.258E-01	6.455E-02	NOT IDENT.
TH-227	8.749E-02	1.268E-01	1.258E-01	6.468E-02	NOT IDENT.
AC-228	-7.661E-03	5.675E-02	5.118E-02	2.896E-02	NOT IDENT.
RA-228	-7.661E-03	5.675E-02	5.118E-02	2.896E-02	NOT IDENT.
TH-228	-2.284E-02	2.437E-02	1.986E-02	1.243E-02	NOT IDENT.
TH-229	-3.390E-03	1.693E-01	1.515E-01	8.639E-02	NOT IDENT.
TH-230	1.142E-02	3.204E-02	2.675E-02	1.635E-02	NOT IDENT.
PA-231	6.693E-01	5.487E-01	5.601E-01	2.799E-01	NOT IDENT.
TH-231	6.434E-02	2.595E-01	2.436E-01	1.324E-01	NOT IDENT.
U-231	-4.895E-02	8.817E-02	7.924E-02	4.498E-02	NOT IDENT.
TH-232	-7.661E-03	5.675E-02	5.118E-02	2.896E-02	NOT IDENT.
PA-233	1.117E-02	2.144E-02	2.086E-02	1.094E-02	NOT IDENT.
PA-234	7.620E-02	1.079E-01	1.047E-01	5.505E-02	NOT IDENT.
PA-234M	-9.673E-01	2.033E+00	1.692E+00	1.037E+00	NOT IDENT.
TH-234	1.001E-02	6.112E-01	5.805E-01	3.118E-01	NOT IDENT.
U-234	1.142E-02	3.204E-02	2.675E-02	1.635E-02	NOT IDENT.
U-235	-2.351E-03	7.367E-02	6.537E-02	3.759E-02	NOT IDENT.
NP-236	-7.377E-03	2.669E-02	2.370E-02	1.362E-02	NOT IDENT.
NP-237	-5.986E-03	6.764E-02	6.428E-02	3.451E-02	NOT IDENT.
U-238	1.001E-02	6.112E-01	5.805E-01	3.118E-01	NOT IDENT.
NP-239	-2.181E-02	6.160E-02	5.577E-02	3.143E-02	NOT IDENT.
AM-241	-8.389E-02	7.181E-02	5.806E-02	3.664E-02	NOT IDENT.
AM-243	1.282E-02	1.773E-02	1.816E-02	9.047E-03	NOT IDENT.
CM-243	8.695E-03	3.010E-02	2.918E-02	1.536E-02	NOT IDENT.
AM-246	1.750E-02	3.601E-02	3.481E-02	1.837E-02	NOT IDENT.
CM-247	-5.375E-03	1.432E-02	1.229E-02	7.305E-03	NOT IDENT.
CF-249	-3.272E-03	1.324E-02	1.154E-02	6.754E-03	NOT IDENT.
CF-251	7.760E-03	4.416E-02	4.057E-02	2.253E-02	NOT IDENT.
ANH-511	-1.760E-02	2.236E-02	2.273E-02	1.141E-02	NOT IDENT.

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*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD      *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUN REPORT *
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ENERGY	MDA COUNTS
46.50	49.5013
46.50	49.5013
46.50	49.5013
48.70	45.5287
49.72	45.6632
51.35	50.2031
52.39	45.1406
52.97	40.8656
53.15	39.1461
53.44	37.4360
54.07	42.7332
56.28	47.3736
56.28	47.3740
57.37	42.2313
57.53	39.6083
57.53	39.6086
57.60	36.9746
57.98	38.7736
57.98	38.7736
59.32	45.0979
59.32	45.0979
59.40	45.1071
59.54	53.0861
59.72	55.7660
60.01	54.9214
61.10	55.0729
61.14	55.0784
61.30	55.1007
63.00	51.7639
63.29	56.2664
63.29	56.2664
63.58	56.3064
64.28	55.5073
65.12	59.2087
65.20	59.2201
65.20	59.2201
66.05	62.9373
66.72	52.2309
66.83	52.2448
66.91	57.6605
67.20	63.1092
67.20	63.1092
67.75	62.2884
67.85	62.3031
68.90	49.7836
68.90	49.7836
69.30	42.5818
69.67	40.8051
70.82	45.4582
70.82	45.4582
70.83	45.4592
72.80	63.9271
72.87	53.8898
72.87	53.8898
74.67	48.6030
74.81	48.6181
74.81	48.6181
74.81	48.6181
74.81	48.6181
74.81	48.6181
74.81	48.6181
74.97	44.0469
75.28	44.9952
75.70	43.1983
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77.11	64.5348

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77.11	64.5348
78.38	52.6930
79.62	57.4662
79.80	52.8519
79.80	52.8519
80.11	46.3915
80.18	37.1186
80.30	37.1279
80.30	37.1279
80.57	41.7927
81.00	48.3371
81.07	48.3440
81.07	48.3440
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81.07	48.3440
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83.37	60.7173
83.78	58.8988
83.78	58.8988
83.78	58.8988
83.78	58.8988
84.21	56.1432
84.90	47.7886
85.43	50.6536
86.29	56.3791
86.50	56.4026
86.54	56.4072
86.59	56.4127
86.72	58.3082
86.79	58.3161
86.94	61.1564
87.30	56.4926
87.30	56.4926
87.30	56.4926
87.30	56.4926
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87.57	56.5228
87.88	53.7294
88.03	53.7454
88.36	50.9499
88.47	50.9609
89.95	75.7161
91.11	56.9147
92.29	61.7974
92.38	58.9553
92.38	58.9553
93.35	45.7271
94.00	46.7373
94.67	62.0758
94.67	62.0764
94.90	64.0141
94.90	64.0141
94.90	64.0141
94.90	64.0141
95.87	57.4301
95.87	57.4301
96.73	60.3981
97.43	55.6763
98.44	44.2389
98.44	44.2389
98.88	49.0869
99.55	42.4012
99.55	42.4012
99.86	53.0312
100.00	53.0446
100.10	53.0547
103.18	48.4975
103.76	51.4602
105.00	72.9797
105.31	76.9138
108.00	47.9286
109.28	60.7771

111.00	58.9883
111.00	58.9883
111.76	59.0634
112.95	57.2085
115.19	60.3906
116.30	56.5332
117.00	62.5552
117.00	62.5552
117.66	56.6582
121.11	55.9727
121.62	65.0208
121.78	69.0393
122.06	69.0698
122.32	60.0854
122.32	60.0854
122.32	60.0854
122.32	60.0854
123.07	51.1328
127.23	63.5728
129.76	68.8833
131.20	68.0176
133.02	58.0228
133.54	61.1243
135.34	55.1580
136.00	58.2785
136.25	65.4596
136.48	67.5277
140.51	69.9804
140.51	0.0000
142.18	51.5788
142.65	53.6774
143.76	60.9986
144.24	64.1437
144.24	64.1437
144.24	64.1437
144.24	64.1437
145.22	72.5200
145.44	75.6511
147.16	63.3667
152.43	63.8246
152.70	57.5681
153.22	50.2764
154.21	52.4404
154.21	52.4404
154.21	52.4404
154.21	52.4404
155.03	57.7482
156.02	65.1838
158.56	64.3477
159.00	0.0000
159.00	55.9410
160.31	63.4381
161.27	71.9865
162.32	59.3633
162.64	62.5693
163.35	54.1351
163.89	59.4835
165.85	64.9571
167.43	52.2833
171.28	69.6907
171.86	57.9386
172.10	57.9556
176.55	59.3523
176.60	59.3562
181.06	53.1661
184.41	59.9140
185.71	57.8237
186.00	61.1173
190.27	48.2597
192.34	59.3690
193.63	53.9511
197.04	66.3177
198.01	53.1123
198.60	55.3614
200.40	69.8958
201.83	58.8945
202.84	46.7232
205.31	72.5054

208.36	52.6010
208.81	43.6687
209.75	50.4382
209.75	50.4382
210.97	56.1157
215.65	51.8834
216.55	53.0615
218.09	48.6243
222.10	49.9624
223.80	45.4997
226.40	42.1994
227.00	51.3547
227.08	45.6523
227.20	45.6580
228.16	37.7044
228.18	37.7051
228.18	37.7051
231.56	40.1262
235.69	72.5246
236.00	63.3341
236.00	63.3341
238.63	55.4165
238.63	55.4165
238.63	55.4165
238.63	55.4165
239.00	51.9717
240.98	71.7436
241.98	52.1228
241.98	52.1228
241.98	52.1228
244.69	52.2592
245.39	47.6457
247.94	39.6075
248.90	46.6394
249.79	48.1376
252.40	46.5012
252.85	40.3767
252.85	40.3767
254.15	0.0000
256.20	36.1004
256.20	36.1004
260.50	55.6922
260.90	55.7124
262.80	31.0052
264.65	36.3811
268.24	43.6212
268.79	39.1895
269.46	31.1922
269.46	31.1922
269.46	31.1922
269.46	31.1922
271.23	35.7043
273.65	44.7266
276.40	46.6283
277.35	32.3080
277.60	33.2128
277.60	33.2128
278.00	36.8159
278.60	47.6164
279.20	51.2370
279.53	48.5544
280.46	47.6940
281.68	57.6533
283.67	31.5831
284.30	39.7266
285.00	50.5911
285.90	56.0551
286.10	50.6389
286.10	50.6389
287.40	42.5479
288.45	0.0000
290.67	50.8363
290.80	50.8414
291.72	50.8807
293.26	30.0226
293.70	29.1235
295.21	29.1602
295.21	29.1602

295.21	29.1602
295.96	35.5616
296.50	41.0504
297.23	50.2038
298.57	40.2073
299.80	38.4188
299.80	38.4188
300.09	36.5985
300.09	36.5985
300.09	36.5985
300.09	36.5985
300.12	36.5991
301.29	36.6345
302.84	42.1830
303.76	45.8862
303.91	48.6451
304.40	51.4191
304.40	51.4191
304.84	48.6823
306.84	34.9611
308.46	35.0069
311.98	29.5630
316.51	37.0880
318.01	33.4188
319.02	34.3742
319.41	39.0315
320.08	39.9818
323.87	44.7634
323.87	44.7634
323.87	44.7634
323.87	44.7634
325.23	41.0768
328.77	47.7425
333.44	42.2768
334.20	44.1815
334.20	44.1815
334.30	44.1844
338.28	35.8314
338.28	35.8314
338.28	35.8314
338.32	35.8326
338.32	35.8326
338.32	35.8326
340.50	42.5034
340.57	42.5054
344.27	30.3096
345.85	26.5521
350.59	31.4033
351.07	32.3663
351.92	25.7187
351.92	25.7187
351.92	25.7187
355.39	0.0000
356.01	44.9030
364.48	43.2552
366.43	30.8018
367.43	34.6767
367.94	34.6893
369.80	37.6295
374.96	30.9873
383.85	30.2044
387.95	28.3349
388.63	29.3253
391.69	25.4680
391.69	25.4680
392.90	31.3706
398.62	28.5389
400.65	32.5191
401.10	37.4573
401.81	41.4200
402.60	38.4811
404.84	30.6329
410.95	38.6923
411.60	35.7314
413.65	22.8586
414.70	33.8143
415.30	31.8374

415.76	27.8658
417.63	0.0000
418.52	29.9094
423.70	28.0081
427.08	34.0825
427.89	32.0942
432.53	26.1527
433.93	27.1821
439.47	23.2348
439.56	23.2362
439.89	21.2201
443.98	28.3644
444.90	26.3535
445.03	26.3555
445.03	26.3555
445.03	26.3555
445.03	26.3555
453.90	22.4213
463.38	17.4239
468.07	28.7780
473.00	21.6460
475.06	23.7359
475.35	25.8041
476.78	32.0236
477.59	24.8042
477.96	24.8097
482.03	23.8318
484.57	25.9418
487.03	29.0959
490.36	27.0688
492.35	31.2685
497.08	24.0364
507.63	0.0000
510.53	0.0000
510.84	34.7516
511.00	34.7548
511.85	53.7369
511.85	53.7369
513.99	111.8195
513.99	111.8195
520.41	19.0547
520.65	19.0574
527.90	19.1316
528.96	0.0000
529.64	18.0858
529.87	0.0000
531.02	17.0342
537.32	17.0913
543.00	12.8569
546.56	0.0000
549.76	7.5264
552.65	18.3058
555.20	20.4861
563.23	24.9015
563.90	20.5777
568.70	21.7133
569.32	23.8926
569.50	26.0669
569.67	26.0691
573.80	22.8579
574.00	18.5061
574.64	26.1343
578.91	18.5512
579.30	20.7378
583.14	21.8707
585.48	18.6119
591.81	17.5718
592.07	16.4754
593.00	17.5820
595.88	23.1085
600.56	22.0581
602.52	0.0000
602.71	25.3935
602.71	25.3935
603.60	25.4047
604.41	25.4146
604.70	26.5232
609.31	17.7212

609.31	17.7212
609.31	17.7212
609.31	17.7212
610.33	16.6219
612.46	35.4961
614.37	24.4257
618.01	16.6827
621.84	18.9408
621.84	18.9408
631.29	17.9058
633.02	15.6804
633.10	15.6808
634.78	17.9351
635.90	23.5519
636.97	23.5635
645.85	18.0264
646.12	19.8317
656.30	20.8291
657.75	30.8108
657.90	0.0000
661.65	11.8012
661.65	11.8012
664.57	27.2695
666.33	24.5617
666.33	24.5617
675.00	20.0906
677.61	23.7707
685.20	24.7667
692.80	23.0078
695.00	16.5814
696.49	23.9665
696.49	23.9665
697.00	23.9719
697.49	23.0548
698.33	21.2177
698.50	18.4517
699.00	20.3011
702.63	18.4844
706.10	14.8094
706.58	0.0000
706.67	21.2935
709.31	21.3177
711.68	18.5557
713.82	18.5723
717.42	23.2507
720.50	23.2806
721.93	22.3629
722.20	21.4333
722.78	18.6426
722.78	18.6426
722.89	15.8466
722.95	15.8470
723.30	14.9172
724.18	13.9900
727.18	22.4121
733.00	7.4887
735.90	23.4302
739.58	14.0793
742.81	13.1582
744.21	17.8677
747.13	21.6552
751.79	11.3197
752.31	12.2656
753.82	14.1610
755.35	17.0038
756.15	12.2846
756.87	10.3976
763.93	14.2189
765.79	17.0754
766.42	17.0793
766.84	19.9295
776.49	19.0532
778.00	14.2983
778.57	15.2551
778.89	12.3963
783.80	10.5094
785.46	14.3401
792.07	11.5017

795.84	10.5588
796.30	10.5606
798.80	17.2978
801.93	14.4320
805.60	11.5619
810.29	5.7913
810.76	4.8269
815.85	16.4434
817.79	13.5516
818.51	11.6188
819.60	10.6549
826.30	14.5660
828.27	12.6334
831.60	17.5140
831.96	19.4624
834.83	12.6642
836.80	0.0000
846.75	15.6555
848.13	17.6216
856.28	0.0000
856.80	14.7312
860.37	12.7835
867.32	7.8867
867.82	9.8601
871.10	16.7821
873.19	11.8550
874.81	5.9309
875.33	0.0000
876.40	13.8465
879.36	15.8414
880.27	11.8849
880.51	11.8860
881.50	9.9084
883.24	15.8633
884.67	17.8554
889.25	8.9422
896.60	11.9537
898.02	10.9632
899.00	14.9550
903.28	19.9697
911.07	14.0167
911.07	14.0167
911.07	14.0167
919.63	13.0540
920.93	11.0505
925.00	10.0601
925.24	12.0729
926.50	10.0652
935.52	6.0577
937.48	10.1028
944.10	9.1129
946.00	9.1187
949.00	10.1421
962.29	10.1870
964.01	10.1929
966.15	18.3599
968.20	15.3105
969.11	12.2520
969.11	12.2520
969.11	12.2520
977.42	11.2616
980.50	12.2979
983.50	7.1808
989.30	8.2221
996.32	12.3609
1001.03	15.4746
1001.68	15.4779
1004.76	13.4275
1021.30	0.0000
1024.50	0.0000
1034.80	8.3418
1036.00	9.3880
1037.82	11.4807
1038.57	10.4395
1038.76	0.0000
1045.16	10.4609
1046.59	14.6515
1048.07	18.8464

1050.47	11.5258
1050.47	11.5258
1062.04	5.2576
1063.62	8.4164
1076.63	7.3934
1077.35	9.5080
1078.86	4.2277
1085.78	5.2957
1099.22	11.6972
1112.02	7.4717
1112.84	9.6091
1115.52	11.7536
1120.29	8.5598
1120.29	8.5598
1120.29	8.5598
1120.29	8.5598
1120.51	10.7007
1121.28	12.8438
1124.00	0.0000
1129.67	12.8748
1131.51	0.0000
1147.95	0.0000
1167.94	15.1860
1173.22	10.8633
1175.09	15.2168
1177.93	4.3512
1189.05	7.6381
1204.90	14.2473
1205.75	12.0586
1213.00	8.7871
1221.42	8.2570
1230.97	9.1984
1235.34	11.0508
1236.41	0.0000
1238.25	11.9812
1246.25	15.7016
1260.41	0.0000
1271.85	6.5092
1274.45	10.2360
1274.54	10.2360
1291.56	6.5428
1298.22	0.0000
1312.09	5.6379
1325.50	4.7144
1325.50	4.7144
1332.49	10.3902
1333.61	6.6138
1360.21	5.7068
1362.66	0.0000
1365.15	7.6185
1368.21	4.7652
1368.53	0.0000
1376.25	2.8647
1384.27	4.7841
1394.10	5.7546
1395.20	8.6345
1407.95	7.6989
1434.06	9.6838
1436.60	2.9069
1457.56	0.0000
1460.81	4.8726
1489.15	6.8667
1509.49	10.8407
1596.49	6.0288
1620.62	6.0603
1678.03	0.0000
1691.02	1.0251
1691.02	1.0251
1706.46	0.0000
1750.46	0.0000
1764.49	7.2840
1764.49	7.2840
1764.49	7.2840
1764.49	7.2840
1770.23	4.1670
1771.40	2.0840
1791.20	0.0000
1808.65	10.4964

1836.01

6.3315

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202023719

Total Uranium Activity	2.8686E-02	ug/g
Total Uranium Counting Unc.	1.8186E+00	ug/g
Total Uranium Tpu	9.2788E-07	ug/g
Total Uranium Mda	1.7273E+00	ug/g

THERE ARE NO PEAKS !

VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 11:51:02.87

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023720.CNF;1
Sample date   : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:49:21.
Sample ID     : G1202023720 Sample quantity : 1.43580E+02 GRAM
Detector name : GAM06 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.40 0.0%
Energy tolerance: 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 944966 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.92*	787	903	1.02	125.85	120	11	1.09E-01	8.3	
2	2	74.64	325	753	1.35	149.27	141	17	4.51E-02	15.8	2.31E+00
3	2	76.85	427	672	1.11	153.69	141	17	5.93E-02	11.4	
4	1	83.91*	135	755	1.40	167.81	162	31	1.88E-02	34.2	7.66E+00
5	1	86.97	206	701	1.41	173.95	162	31	2.86E-02	22.5	
6	1	92.37*	2152	473	1.17	184.74	162	31	2.99E-01	2.8	
7	0	98.49	271	504	1.05	196.98	193	10	3.76E-02	16.7	
8	0	143.36*	119	306	1.00	286.72	283	8	1.65E-02	27.6	
9	0	185.70*	379	441	1.11	371.39	365	11	5.27E-02	12.2	
10	0	205.12	55	290	1.33	410.25	404	9	7.57E-03	58.0	
11	0	209.39	39	345	1.14	418.78	414	9	5.48E-03	86.4	
12	3	238.36*	845	188	1.07	476.72	472	15	1.17E-01	4.4	2.33E+00
13	3	241.33	205	201	1.68	482.67	472	15	2.84E-02	14.7	
14	0	295.00*	278	169	1.21	590.01	586	9	3.86E-02	10.6	
15	0	327.98	55	158	1.53	655.95	652	9	7.59E-03	43.6	
16	0	337.81*	185	145	1.21	675.63	671	12	2.56E-02	15.2	
17	0	351.59*	465	216	1.19	703.19	696	14	6.45E-02	8.3	
18	0	410.16	28	132	0.90	820.32	812	12	3.94E-03	83.2	
19	0	510.45*	94	159	2.44	1020.90	1012	21	1.30E-02	38.0	
20	0	582.82*	214	92	1.37	1165.63	1158	12	2.98E-02	11.4	
21	0	608.97*	306	136	1.51	1217.93	1209	17	4.25E-02	10.6	
22	0	661.03	132	57	1.50	1322.06	1316	11	1.83E-02	14.1	
23	0	727.11	81	98	2.27	1454.22	1447	19	1.12E-02	31.0	
24	0	795.20	49	57	0.70	1590.40	1585	12	6.77E-03	35.8	
25	0	836.88*	11	40	1.35	1673.76	1667	8	1.54E-03	108.8	
26	0	860.78*	37	48	1.46	1721.56	1714	15	5.16E-03	46.0	
27	0	910.91*	157	86	1.39	1821.81	1814	15	2.17E-02	15.5	
28	0	968.72*	77	56	1.77	1937.43	1933	10	1.07E-02	22.1	
29	0	1000.89	90	64	1.19	2001.79	1995	14	1.26E-02	21.4	
30	0	1120.09	86	49	1.55	2240.19	2235	13	1.19E-02	20.0	
31	0	1460.23	1031	4	2.22	2920.46	2912	15	1.43E-01	3.1	
32	0	1763.89	62	4	2.36	3527.78	3521	14	8.68E-03	14.2	

Flag: "*" = Peak area was modified by background subtraction


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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023720.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:49:21
Sample ID        : G1202023720 Sample quantity : 143.58 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA6 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.40 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type  : Empirical Efficiencies at : Peak Energy
Abundance limit  : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.624E+01	2.394E+00	4.542E-01	3.005E-02	57.759
CD-109	+	88.03	*	2.873E+00	1.325E+00	1.677E+00	1.656E-01	1.713
SN-126	+	64.28		7.925E+00	1.791E+00	1.108E+00	1.706E-01	7.150
	+	86.94		1.176E+00	7.214E-01	6.954E-01	2.894E-01	1.691
	+	87.57	*	2.829E-01	1.304E-01	1.660E-01	1.634E-02	1.704
BA-137M	+	661.65	*	1.980E-01	5.675E-02	7.251E-02	3.581E-03	2.730
CS-137	+	661.65	*	2.093E-01	6.000E-02	7.665E-02	3.807E-03	2.730
TL-208		277.35		1.738E-01	4.122E-01	6.715E-01	7.152E-02	0.259
	+	510.84		4.715E-01	3.618E-01	2.046E-01	2.053E-02	2.304
	+	583.14	*	3.085E-01	7.302E-02	6.152E-02	3.888E-03	5.015
	+	860.37		5.064E-01	4.675E-01	5.143E-01	3.932E-02	0.985
BI-211		72.87		1.319E+01	4.445E+00	7.639E+00	6.859E-01	1.727
	+	351.07	*	2.894E+00	5.137E-01	3.408E-01	2.200E-02	8.493
PB-212	+	74.81		1.934E+00	6.611E-01	7.434E-01	9.664E-02	2.601
	+	77.11		1.434E+00	3.525E-01	4.233E-01	3.865E-02	3.387
	+	87.30		1.309E+00	6.174E-01	7.703E-01	1.080E-01	1.699
	+	238.63	*	1.134E+00	1.296E-01	1.018E-01	7.504E-03	11.139
		300.09		1.367E+00	9.397E-01	1.496E+00	1.252E-01	0.914
PO-212	+	74.81		1.934E+00	6.611E-01	7.434E-01	9.664E-02	2.601
	+	77.11		1.434E+00	3.525E-01	4.233E-01	3.865E-02	3.387
	+	87.30		1.309E+00	6.174E-01	7.703E-01	1.080E-01	1.699
		115.19		-8.961E+00	4.551E+00	6.951E+00	4.587E-01	-1.289
	+	238.63	*	1.134E+00	1.296E-01	1.018E-01	7.504E-03	11.139
		300.09		1.367E+00	9.397E-01	1.496E+00	1.252E-01	0.914
BI-214	+	609.31	*	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
	+	1120.29		1.226E+00	5.024E-01	4.845E-01	4.426E-02	2.529
	+	1764.49		1.230E+00	3.556E-01	1.686E-01	9.871E-03	7.294
PB-214	+	74.81		3.332E+00	1.123E+00	1.281E+00	1.497E-01	2.601
	+	77.11		2.458E+00	6.327E-01	7.257E-01	8.629E-02	3.387
	+	87.30		2.242E+00	1.048E+00	1.320E+00	1.647E-01	1.699
	+	241.98		1.650E+00	5.018E-01	6.166E-01	5.003E-02	2.676
	+	295.21		1.017E+00	2.324E-01	2.709E-01	2.342E-02	3.756
	+	351.92	*	1.007E+00	1.862E-01	1.188E-01	9.857E-03	8.475
PO-214	+	74.81		3.332E+00	1.123E+00	1.281E+00	1.497E-01	2.601

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		2.458E+00	6.327E-01	7.257E-01	8.629E-02	3.387
	+	87.30		2.242E+00	1.048E+00	1.320E+00	1.647E-01	1.699
	+	241.98		1.650E+00	5.018E-01	6.166E-01	5.003E-02	2.676
	+	295.21		1.017E+00	2.324E-01	2.709E-01	2.342E-02	3.756
	+	351.92	*	1.007E+00	1.862E-01	1.188E-01	9.857E-03	8.475
	+	74.81		1.934E+00	6.611E-01	7.434E-01	9.664E-02	2.601
	+	77.11		1.434E+00	3.525E-01	4.233E-01	3.865E-02	3.387
	+	87.30		1.309E+00	6.174E-01	7.703E-01	1.080E-01	1.699
PO-218	+	238.63	*	1.134E+00	1.296E-01	1.018E-01	7.504E-03	11.139
	+	300.09		1.367E+00	9.397E-01	1.496E+00	1.252E-01	0.914
	+	74.81		3.332E+00	1.123E+00	1.281E+00	1.497E-01	2.601
	+	77.11		2.458E+00	6.327E-01	7.257E-01	8.629E-02	3.387
	+	87.30		2.242E+00	1.048E+00	1.320E+00	1.647E-01	1.699
	+	241.98		1.650E+00	5.018E-01	6.166E-01	5.003E-02	2.676
	+	295.21		1.017E+00	2.324E-01	2.709E-01	2.342E-02	3.756
	+	351.92	*	1.007E+00	1.862E-01	1.188E-01	9.857E-03	8.475
RA-224	+	240.98	*	3.129E+00	9.352E-01	1.159E+00	6.790E-02	2.701
RA-226	+	609.31	*	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
AC-228	+	1120.29		1.226E+00	5.024E-01	4.845E-01	4.426E-02	2.529
	+	1764.49		1.230E+00	3.556E-01	1.686E-01	9.871E-03	7.294
	+	338.32		1.265E+00	6.431E-01	3.720E-01	1.517E-01	3.401
	+	911.07	*	1.011E+00	3.295E-01	2.052E-01	2.097E-02	4.925
RA-228	+	969.11		8.787E-01	4.367E-01	4.862E-01	1.109E-01	1.807
	+	338.32		1.265E+00	6.431E-01	3.720E-01	1.517E-01	3.401
	+	911.07	*	1.011E+00	3.295E-01	2.052E-01	2.097E-02	4.925
	+	969.11		8.787E-01	4.367E-01	4.862E-01	1.109E-01	1.807
TH-228	+	74.81		1.961E+00	6.452E-01	7.537E-01	6.863E-02	2.601
	+	77.11		1.454E+00	3.575E-01	4.292E-01	3.919E-02	3.387
	+	87.30		1.327E+00	6.117E-01	7.811E-01	7.668E-02	1.699
	+	238.63	*	1.150E+00	1.314E-01	1.032E-01	7.608E-03	11.139
TH-230	+	300.09		1.386E+00	1.250E+00	1.517E+00	8.944E-01	0.914
	+	609.31	*	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
	+	1120.29		1.226E+00	5.024E-01	4.845E-01	4.426E-02	2.529
	+	1764.49		1.230E+00	3.556E-01	1.686E-01	9.871E-03	7.294
TH-232	+	338.32		1.265E+00	3.912E-01	3.720E-01	2.188E-02	3.401
	+	911.07	*	1.011E+00	3.295E-01	2.052E-01	2.097E-02	4.925
	+	969.11		8.787E-01	4.367E-01	4.862E-01	1.109E-01	1.807
	+	63.29	*	2.002E+01	4.920E+00	2.977E+00	5.412E-01	6.726
TH-234	+	92.38		1.907E+01	3.657E+00	1.082E+00	1.982E-01	17.626
	+	609.31	*	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
U-234	+	1120.29		1.226E+00	5.024E-01	4.845E-01	4.426E-02	2.529
	+	1764.49		1.230E+00	3.556E-01	1.686E-01	9.871E-03	7.294
U-235	+	89.95		9.821E+00	3.517E+00	2.963E+00	9.221E-01	3.314
	+	93.35		2.293E+01	6.590E+00	1.291E+00	3.630E-01	17.768
	+	105.00		1.110E-01	1.325E+00	2.109E+00	6.230E-01	0.053
	+	143.76	*	5.044E-01	2.907E-01	3.766E-01	6.125E-02	1.339
	+	163.35		4.464E-01	5.485E-01	9.113E-01	1.628E-01	0.490
	+	185.71		3.546E-01	8.849E-02	7.393E-02	4.091E-03	4.796
	+	205.31		6.245E-01	7.324E-01	9.367E-01	1.680E-01	0.667

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237	+	86.50	*	8.308E-01	4.197E-01	4.939E-01	1.127E-01	1.682
		95.87		3.374E+00	1.848E+00	2.014E+00	4.958E-01	1.675
U-238	+	63.29	*	2.002E+01	4.920E+00	2.977E+00	5.412E-01	6.726
	+	92.38		1.907E+01	2.044E+00	1.082E+00	9.838E-02	17.626
AM-243	+	74.67	*	3.135E-01	1.031E-01	1.209E-01	1.092E-02	2.592
	+	86.72		3.116E+01	1.436E+01	1.847E+01	1.804E+00	1.687
		117.66		-6.525E+00	4.429E+00	6.870E+00	4.404E-01	-0.950
	+	142.18		4.237E+01	2.355E+01	3.156E+01	1.802E+00	1.343
ANH-511	+	511.00	*	1.018E-01	7.769E-02	4.420E-02	2.471E-03	2.304

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.806E-01	3.570E-01	5.966E-01	3.941E-02	0.303
NA-22		1274.54	*	-6.015E-02	4.531E-02	6.160E-02	3.804E-03	-0.976
NA-24		1368.53	*	-2.741E-02	4.531E-02	Half-Life too short		
AL-26		1129.67		1.128E+00	1.896E+00	3.220E+00	2.006E-01	0.350
		1808.65	*	1.520E-02	2.562E-02	4.804E-02	2.759E-03	0.316
TI-44		67.85		5.716E-02	9.393E-02	1.042E-01	9.300E-03	0.548
		78.38	*	1.572E-01	7.719E-02	8.997E-02	8.270E-03	1.748
SC-46		889.25	*	-7.237E-03	4.064E-02	6.660E-02	4.773E-03	-0.109
	+	1120.51		2.077E-01	8.403E-02	1.298E-01	8.162E-03	1.601
V-48		944.10		1.747E-01	8.893E-01	1.504E+00	1.073E-01	0.116
		983.50	*	-5.915E-03	6.671E-02	1.095E-01	7.666E-03	-0.054
		1312.09		-7.821E-03	7.856E-02	1.262E-01	7.876E-03	-0.062
CR-51		320.08	*	-1.419E-01	3.867E-01	6.359E-01	4.189E-02	-0.223
MN-52		744.21		2.627E-01	2.271E-01	4.006E-01	2.285E-02	0.656
		848.13		2.004E+00	6.370E+00	1.092E+01	7.354E-01	0.184
		935.52		8.396E-02	2.184E-01	3.759E-01	2.693E-02	0.223
		1246.25		-8.700E+00	7.427E+00	1.076E+01	6.562E-01	-0.808
		1333.61		-7.476E-01	4.083E+00	6.457E+00	4.056E-01	-0.116
		1434.06	*	4.950E-02	1.585E-01	2.720E-01	1.712E-02	0.182
MN-54		834.83	*	1.408E-02	3.906E-02	6.718E-02	4.434E-03	0.210
CO-56		846.75	*	1.191E-02	4.253E-02	7.268E-02	4.886E-03	0.164
		977.42		-1.111E+00	3.144E+00	5.033E+00	3.536E-01	-0.221
		1037.82		-1.960E-01	3.328E-01	5.170E-01	3.795E-02	-0.379
		1175.09		4.828E-01	2.393E+00	3.995E+00	2.366E-01	0.121
		1238.25		1.947E-01	1.014E-01	1.884E-01	1.211E-02	1.034
		1360.21		4.168E-01	9.496E-01	1.638E+00	1.031E-01	0.254
		1771.40		-7.907E-01	3.035E-01	2.358E-01	1.377E-02	-3.353
CO-57		122.06	*	-2.011E-02	2.940E-02	4.712E-02	2.878E-03	-0.427
		136.48		-2.668E-01	2.450E-01	3.811E-01	2.561E-02	-0.700
CO-58		810.76	*	-3.029E-02	3.717E-02	5.727E-02	3.657E-03	-0.529
FE-59	+	142.65		6.386E+00	3.549E+00	5.238E+00	2.987E-01	1.219
		192.34		-2.879E-01	1.026E+00	1.640E+00	1.920E-01	-0.175
		1099.22	*	-4.615E-03	9.449E-02	1.547E-01	1.135E-02	-0.030
		1291.56		1.181E-01	1.331E-01	2.364E-01	1.829E-02	0.499
CO-60		1173.22		-7.078E-03	4.900E-02	7.919E-02	4.685E-03	-0.089

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1332.49	*		-1.370E-02	3.667E-02	5.625E-02	3.534E-03	-0.244
ZN-65	1115.52	*		-9.759E-02	1.148E-01	1.424E-01	9.017E-03	-0.686
GE-68	1077.35	*		-8.329E-01	1.337E+00	2.062E+00	1.351E-01	-0.404
AS-73	53.44	*		1.272E+00	1.313E+00	2.255E+00	2.062E-01	0.564
AS-74	595.88	*		1.330E-02	9.739E-02	1.602E-01	8.518E-03	0.083
	634.78			-5.356E-03	3.631E-01	5.884E-01	3.007E-02	-0.009
SE-75	66.05			-2.040E+00	7.314E+00	1.066E+01	1.140E+00	-0.191
	96.73			3.393E+00	1.445E+00	1.714E+00	2.318E-01	1.980
	121.11			-8.767E-02	1.547E-01	2.489E-01	2.356E-02	-0.352
	136.00			-2.995E-02	4.593E-02	7.282E-02	4.292E-03	-0.411
	198.60			-1.709E+00	2.249E+00	3.194E+00	2.229E-01	-0.535
	264.65	*		-3.328E-03	4.835E-02	7.699E-02	4.618E-03	-0.043
	279.53			-8.980E-02	1.171E-01	1.903E-01	1.222E-02	-0.472
	303.91			-1.734E+00	2.256E+00	3.638E+00	3.509E-01	-0.477
	400.65			-8.358E-04	2.739E-01	4.547E-01	4.074E-02	-0.002
BR-77	+	87.88		4.373E+02	2.016E+02	3.060E+02	3.020E+01	1.429
	+	200.40		1.808E+01	1.461E+02	2.079E+02	1.171E+01	0.087
	+	239.00		1.280E+02	1.346E+01	2.442E+01	1.429E+00	5.243
		249.79		-5.855E+01	5.456E+01	8.249E+01	4.863E+00	-0.710
		281.68		-1.245E+01	7.002E+01	1.171E+02	6.989E+00	-0.106
		297.23		1.075E+02	5.127E+01	8.336E+01	4.979E+00	1.290
		303.76		-1.003E+02	1.361E+02	2.202E+02	1.314E+01	-0.456
		439.47		3.743E+01	1.063E+02	1.798E+02	1.012E+01	0.208
		484.57		8.216E+01	1.775E+02	3.010E+02	1.693E+01	0.273
		520.65	*	5.311E+00	7.827E+00	1.283E+01	7.148E-01	0.414
		574.64		-5.140E+01	1.655E+02	2.470E+02	1.336E+01	-0.208
		578.91		3.825E+01	7.879E+01	1.165E+02	6.280E+00	0.328
		585.48		4.685E+02	1.616E+02	2.821E+02	1.513E+01	1.661
		755.35		3.686E+01	1.284E+02	2.115E+02	1.229E+01	0.174
		817.79		-3.256E+01	9.389E+01	1.521E+02	9.778E+00	-0.214
SR-82		698.33		9.100E+00	3.539E+01	5.833E+01	3.075E+00	0.156
		776.49	*	-2.158E-01	4.034E-01	6.483E-01	3.900E-02	-0.333
		1395.20		-1.067E+01	9.892E+00	1.288E+01	8.111E-01	-0.828
RB-83		520.41	*	4.816E-02	7.278E-02	1.191E-01	6.639E-03	0.404
		529.64		1.492E-01	1.064E-01	1.921E-01	1.067E-02	0.777
		552.65		-3.459E-02	2.108E-01	3.402E-01	1.867E-02	-0.102
RB-84		881.50	*	2.860E-02	7.500E-02	1.290E-01	9.143E-03	0.222
KR-85		513.99	*	1.137E+01	7.892E+00	1.279E+01	7.146E-01	0.889
SR-85		513.99	*	5.758E-02	3.995E-02	6.477E-02	3.618E-03	0.889
RB-86		1076.63	*	-3.663E-01	8.334E-01	1.314E+00	8.616E-02	-0.279
Y-88		898.02		-2.137E-02	3.991E-02	6.168E-02	4.509E-03	-0.347
		1836.01	*	6.657E-03	3.086E-02	5.339E-02	3.035E-03	0.125
ZR-88		392.90	*	-9.218E-03	3.278E-02	5.356E-02	2.972E-03	-0.172
Y-91		1204.90	*	-2.309E+00	1.891E+01	3.056E+01	1.833E+00	-0.076
NB-94		702.63	*	1.333E-02	3.535E-02	5.884E-02	3.125E-03	0.227
		871.10		-1.305E-02	3.687E-02	5.954E-02	4.154E-03	-0.219
NB-95		765.79	*	6.060E-02	4.881E-02	8.560E-02	5.060E-03	0.708
NB-95M		235.69	*	3.578E-01	1.706E-01	2.634E-01	1.990E-02	1.359
ZR-95		724.18		1.163E-01	1.148E-01	1.776E-01	1.175E-02	0.655

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	756.15	*		4.038E-02	7.573E-02	1.274E-01	8.978E-03	0.317
	657.90	*		1.279E-02	7.573E-02	Half-Life	too short	
	1024.50			4.548E-01	7.573E-02	Half-Life	too short	
ZR-97	254.15			5.444E-02	7.573E-02	Half-Life	too short	
	355.39			-3.952E-01	7.573E-02	Half-Life	too short	
	507.63	*		1.674E+00	7.573E-02	Half-Life	too short	
	602.52			-2.414E-01	7.573E-02	Half-Life	too short	
	1021.30			-9.646E-01	7.573E-02	Half-Life	too short	
	1147.95			-1.463E+00	7.573E-02	Half-Life	too short	
	1362.66			1.037E+00	7.573E-02	Half-Life	too short	
MO-99	1750.46			1.560E-01	7.573E-02	Half-Life	too short	
	140.51			1.744E+00	2.447E+01	3.513E+01	9.463E+00	0.050
	181.06			-9.465E+00	1.679E+01	2.297E+01	3.915E+00	-0.412
	366.43			3.108E+01	6.588E+01	1.128E+02	6.470E+00	0.276
	739.58	*		2.282E+00	9.538E+00	1.566E+01	2.148E+00	0.146
	778.00			-7.920E-01	2.661E+01	4.456E+01	2.687E+00	-0.018
TC-99M	140.51	*		1.221E+08	2.661E+01	Half-Life	too short	
RH-101	127.23			1.137E-02	3.722E-02	6.177E-02	3.688E-03	0.184
	198.01	*		-4.392E-02	3.982E-02	5.811E-02	3.264E-03	-0.756
RH-102	325.23			2.637E-01	2.687E-01	4.188E-01	2.483E-02	0.630
	418.52			6.688E-02	3.205E-01	5.377E-01	3.012E-02	0.124
	475.06	*		1.824E-02	3.203E-02	5.472E-02	3.081E-03	0.333
	631.29			-1.629E-02	5.732E-02	9.073E-02	4.656E-03	-0.180
	697.49			2.683E-04	8.265E-02	1.334E-01	7.023E-03	0.002
	766.84			2.108E-01	1.273E-01	2.285E-01	1.353E-02	0.923
RU-103	1046.59			-9.306E-02	1.146E-01	1.721E-01	1.157E-02	-0.541
	1112.84			-1.922E-02	2.742E-01	3.996E-01	2.533E-02	-0.048
	497.08	*		1.275E-02	3.873E-02	6.523E-02	8.192E-03	0.195
RH-106	610.33	+		8.775E+00	2.292E+00	2.628E+00	4.000E-01	3.339
	511.85	+		5.075E-01	3.872E-01	4.194E-01	2.344E-02	1.210
RU-106	621.84	*		8.864E-02	3.428E-01	5.683E-01	6.504E-02	0.156
	1050.47			8.673E-01	2.104E+00	3.628E+00	2.431E-01	0.239
	511.85	+		5.075E-01	3.872E-01	4.194E-01	2.344E-02	1.210
	621.84	*		8.864E-02	3.427E-01	5.683E-01	2.947E-02	0.156
AG-108M	1050.47			8.673E-01	2.104E+00	3.628E+00	2.431E-01	0.239
	433.93	*		-1.437E-02	3.649E-02	5.885E-02	3.609E-03	-0.244
	614.37			-7.790E-03	4.727E-02	6.509E-02	3.754E-03	-0.120
AG-110M	722.95			1.035E-02	4.737E-02	6.765E-02	4.070E-03	0.153
	657.75	*		5.245E-03	4.225E-02	5.993E-02	3.235E-03	0.088
	677.61			1.237E-01	3.324E-01	5.452E-01	2.990E-02	0.227
	706.67			-1.442E-03	2.259E-01	3.641E-01	2.084E-02	-0.004
	763.93			3.500E-02	1.949E-01	3.173E-01	1.981E-02	0.110
	884.67			1.036E-02	5.510E-02	9.329E-02	6.952E-03	0.111
IN-111	937.48			-1.071E-01	1.125E-01	1.686E-01	1.270E-02	-0.635
	1384.27			-4.415E-02	1.477E-01	2.276E-01	1.508E-02	-0.194
	171.28			3.486E-01	8.685E-01	1.434E+00	7.796E-02	0.243
	245.39	*		8.334E-01	1.010E+00	1.489E+00	8.753E-02	0.560
IN-113M	391.69	*		-1.111E-02	4.710E-02	7.717E-02	4.593E-03	-0.144
SN-113	391.69	*		-1.111E-02	4.710E-02	7.717E-02	4.593E-03	-0.144

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-114M	190.27	*		-7.841E-02	2.222E-01	3.079E-01	1.713E-02	-0.255
CD-115	260.90			-1.262E+01	9.926E+01	1.577E+02	9.350E+00	-0.080
	492.35			-2.651E+00	2.433E+01	3.966E+01	2.228E+00	-0.067
	527.90	*		8.300E+00	7.485E+00	1.328E+01	7.379E-01	0.625
SN-117M	156.02			-1.456E+00	2.354E+00	3.745E+00	2.069E-01	-0.389
	158.56	*		4.165E-02	5.722E-02	9.587E-02	5.267E-03	0.434
SB-122	563.90	*		-4.205E-01	1.657E+00	2.654E+00	1.446E-01	-0.158
	692.80			-4.575E+01	3.633E+01	5.018E+01	2.620E+00	-0.912
I-123	159.00	*		2.922E-02	3.633E+01	Half-Life	too short	
	528.96			1.531E+02	3.633E+01	Half-Life	too short	
TE-123M	159.00	*		6.621E-04	3.192E-02	5.207E-02	2.900E-03	0.013
I-124	602.71	*		-2.195E-02	7.195E-01	1.008E+00	5.328E-02	-0.022
	722.78			9.356E-01	4.054E+00	5.799E+00	3.189E-01	0.161
	1325.50			2.242E+01	2.941E+01	5.223E+01	3.274E+00	0.429
	1376.25			4.373E+01	2.322E+01	4.670E+01	2.940E+00	0.936
	1509.49			2.601E+00	1.206E+01	2.015E+01	1.261E+00	0.129
	1691.02			5.526E-01	2.485E+00	4.339E+00	2.609E-01	0.127
SB-124	602.71			-1.537E-03	5.039E-02	7.060E-02	3.733E-03	-0.022
	645.85			2.441E-02	5.141E-01	8.367E-01	4.923E-02	0.029
	709.31			1.534E+00	2.900E+00	4.888E+00	2.626E-01	0.314
	713.82			-1.301E+00	1.721E+00	2.571E+00	2.571E-01	-0.506
	722.78			9.498E-02	4.115E-01	5.887E-01	3.407E-02	0.161
	968.20	+		8.921E+00	3.989E+00	6.625E+00	4.676E-01	1.347
	1045.16			8.590E-01	2.386E+00	4.084E+00	2.747E-01	0.210
	1325.50			2.430E+00	3.188E+00	5.663E+00	3.550E-01	0.429
	1368.21			-6.916E-01	1.521E+00	2.268E+00	2.750E-01	-0.305
	1436.60			-2.716E+00	3.242E+00	4.360E+00	2.744E-01	-0.623
	1691.02	*		1.323E-02	5.950E-02	1.039E-01	6.746E-03	0.127
SB-125	427.89	*		-5.844E-02	9.825E-02	1.562E-01	9.166E-03	-0.374
	463.38			3.135E-01	3.256E-01	5.659E-01	3.747E-02	0.554
	600.56			6.113E-02	2.224E-01	3.362E-01	2.111E-02	0.182
	635.90			-1.063E-02	2.874E-01	4.648E-01	2.885E-02	-0.023
TE-125M	109.28	*		-1.106E+01	1.204E+01	1.904E+01	1.730E+00	-0.581
I-126	388.63			8.414E-02	2.063E-01	3.512E-01	1.957E-02	0.240
	666.33	*		1.626E-01	2.018E-01	3.087E-01	1.537E-02	0.527
	753.82			3.912E-01	1.488E+00	2.448E+00	1.418E-01	0.160
SB-126	223.80			1.276E+00	4.293E+00	7.002E+00	4.045E-01	0.182
	278.60			-7.286E-01	2.490E+00	4.143E+00	2.472E-01	-0.176
	296.50	+		9.468E+00	2.080E+00	3.363E+00	2.009E-01	2.815
	414.70			-4.441E-02	8.805E-02	1.209E-01	6.764E-03	-0.367
	415.30			1.493E+00	6.835E+00	1.048E+01	5.864E-01	0.142
	555.20			-3.047E+00	4.200E+00	6.483E+00	3.552E-01	-0.470
	573.80			-1.017E+00	1.109E+00	1.623E+00	8.784E-02	-0.627
	593.00			-2.309E-01	9.357E-01	1.493E+00	7.962E-02	-0.155
	656.30			1.381E+00	3.548E+00	5.207E+00	2.590E-01	0.265
	666.33			6.776E-02	8.411E-02	1.286E-01	6.405E-03	0.527
	675.00			-6.733E-01	1.985E+00	3.113E+00	1.575E-01	-0.216
	695.00			-2.514E-03	8.187E-02	1.277E-01	6.693E-03	-0.020
	697.00			9.734E-02	2.654E-01	4.415E-01	2.322E-02	0.220

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		720.50	*	3.435E-02	1.548E-01	2.213E-01	1.212E-02	0.155
		856.80		1.794E-02	5.245E-01	7.581E-01	5.175E-02	0.024
		989.30		3.771E-01	1.086E+00	1.865E+00	1.302E-01	0.202
		1034.80		-6.394E+00	8.788E+00	1.342E+01	9.095E-01	-0.477
		1213.00		-2.733E-01	4.729E+00	7.690E+00	4.628E-01	-0.036
		61.10		3.429E+02	8.935E+01	1.351E+02	1.513E+01	2.538
		252.40		-2.284E-01	3.994E+00	6.377E+00	2.644E+00	-0.036
		290.80		-6.571E+00	2.104E+01	3.020E+01	2.671E+00	-0.218
	+	411.60		9.272E+00	1.548E+01	1.797E+01	2.519E+00	0.516
		444.90		9.218E-01	8.447E+00	1.406E+01	1.452E+00	0.066
		473.00		-1.510E+00	1.511E+00	2.303E+00	2.472E-01	-0.656
		543.00		-8.913E+00	1.518E+01	2.370E+01	2.957E+00	-0.376
		603.60		2.023E+00	1.193E+01	1.706E+01	1.726E+00	0.119
		685.20	*	3.333E-01	1.154E+00	1.911E+00	1.645E-01	0.174
XE-127		698.50		4.390E+00	1.303E+01	2.159E+01	3.023E+00	0.203
		722.20		9.816E+00	2.726E+01	3.962E+01	3.380E+00	0.248
		783.80		1.022E+00	2.987E+00	5.145E+00	5.377E-01	0.199
		57.60		4.116E-01	1.001E+01	1.483E+01	1.365E+00	0.028
		145.22		1.116E+00	8.750E-01	1.330E+00	7.536E-02	0.839
		172.10		3.128E-02	1.367E-01	2.242E-01	1.220E-02	0.140
I-131		202.84	*	1.871E-02	5.836E-02	8.394E-02	4.742E-03	0.223
		374.96		9.050E-02	2.058E-01	3.514E-01	1.995E-02	0.258
		80.18		-7.596E+00	8.886E+00	8.883E+00	8.294E-01	-0.855
		284.30		1.939E+00	1.492E+00	2.649E+00	1.747E-01	0.732
TE-132		364.48	*	3.745E-02	1.128E-01	1.916E-01	1.230E-02	0.195
		636.97		2.087E-01	1.460E+00	2.397E+00	1.405E-01	0.087
		722.89		1.602E+00	7.192E+00	1.028E+01	5.727E-01	0.156
		49.72		-3.783E+01	2.442E+01	3.871E+01	4.098E+00	-0.977
BA-133		111.76		7.852E+01	3.133E+01	5.399E+01	4.953E+00	1.454
		116.30		-5.720E+01	2.650E+01	3.959E+01	3.525E+00	-1.445
		228.16	*	-4.141E-01	6.239E-01	9.685E-01	1.368E-01	-0.428
		53.15		6.355E+00	5.731E+00	9.869E+00	9.009E-01	0.644
I-133		79.62		-1.855E+00	2.791E+00	2.822E+00	4.401E-01	-0.657
		81.00		-1.946E-02	1.997E-01	2.103E-01	3.425E-02	-0.092
		276.40		3.260E-01	4.129E-01	6.823E-01	8.896E-02	0.478
		302.84		-8.285E-02	1.567E-01	2.562E-01	3.009E-02	-0.323
CS-134		356.01	*	-3.712E-02	5.169E-02	7.016E-02	8.110E-03	-0.529
		383.85		1.884E-01	3.367E-01	5.766E-01	6.211E-02	0.327
	+	510.53		3.944E-01	3.367E-01	Half-Life	too short	
		529.87	*	1.621E-03	3.367E-01	Half-Life	too short	
		706.58		3.739E-03	3.367E-01	Half-Life	too short	
		856.28		-1.688E-02	3.367E-01	Half-Life	too short	
		875.33		-1.090E-02	3.367E-01	Half-Life	too short	
		1236.41		2.290E-01	3.367E-01	Half-Life	too short	
		1298.22		-3.008E-02	3.367E-01	Half-Life	too short	
		475.35		1.453E+00	2.092E+00	3.602E+00	2.028E-01	0.403
		563.23		-3.615E-01	3.962E-01	6.009E-01	3.353E-02	-0.602
		569.32		9.496E-02	2.027E-01	3.428E-01	1.924E-02	0.277
		604.70		6.018E-03	4.344E-02	6.191E-02	3.288E-03	0.097

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-135 I-135	+	795.84	*	1.017E-01	7.304E-02	9.419E-02	5.928E-03	1.079
		801.93		-2.862E-01	4.757E-01	6.342E-01	4.017E-02	-0.451
		1038.57		-8.552E-01	4.185E+00	6.771E+00	4.578E-01	-0.126
		1167.94		-2.684E-01	2.765E+00	4.491E+00	2.675E-01	-0.060
		1365.15		-5.988E-02	1.059E+00	1.702E+00	1.161E-01	-0.035
		268.24	*	1.272E-01	1.804E-01	2.979E-01	2.315E-02	0.427
		288.45		-2.421E+09	1.804E-01	Half-Life	too short	
		417.63		-2.841E+08	1.804E-01	Half-Life	too short	
		546.56		-4.990E+07	1.804E-01	Half-Life	too short	
	+	836.80		4.869E+08	1.804E-01	Half-Life	too short	
		1038.76		-5.396E+07	1.804E-01	Half-Life	too short	
		1124.00		1.949E+08	1.804E-01	Half-Life	too short	
		1131.51		2.165E+08	1.804E-01	Half-Life	too short	
		1260.41	*	-1.728E+08	1.804E-01	Half-Life	too short	
		1457.56		4.013E+10	1.804E-01	Half-Life	too short	
CS-136		1678.03		-9.612E+06	1.804E-01	Half-Life	too short	
		1706.46		-3.080E+08	1.804E-01	Half-Life	too short	
		1791.20		-5.636E+07	1.804E-01	Half-Life	too short	
		66.91		-1.790E-01	1.299E+00	1.605E+00	2.505E-01	-0.112
	+	86.29		3.465E+00	1.631E+00	2.417E+00	3.292E-01	1.433
		153.22		-2.610E-01	6.790E-01	1.091E+00	7.674E-02	-0.239
		163.89		1.264E+00	1.149E+00	1.944E+00	1.352E-01	0.650
		176.55		1.163E-01	3.936E-01	6.467E-01	4.025E-02	0.180
		273.65		-6.775E-01	5.093E-01	7.554E-01	5.101E-02	-0.897
		340.57		6.545E-02	1.386E-01	2.087E-01	1.301E-02	0.314
		818.51		-2.177E-02	7.073E-02	1.151E-01	7.414E-03	-0.189
		1048.07	*	-1.102E-01	1.018E-01	1.474E-01	1.058E-02	-0.747
		1235.34		4.712E-01	6.657E-01	1.142E+00	1.159E-01	0.413
		165.85	*	-3.316E-02	3.462E-02	5.419E-02	2.930E-03	-0.612
		162.64		4.388E-01	8.136E-01	1.352E+00	8.390E-02	0.325
CE-139 BA-140		304.84		-9.038E-01	1.275E+00	2.025E+00	5.534E-01	-0.446
		423.70		1.098E+00	1.979E+00	3.337E+00	1.059E+00	0.329
		537.32	*	4.210E-01	3.049E-01	4.933E-01	1.602E-01	0.853
	+	328.77		4.332E-01	3.789E-01	5.534E-01	3.653E-02	0.783
		432.53		8.768E-01	2.097E+00	3.561E+00	2.223E-01	0.246
		487.03		5.433E-02	1.385E-01	2.340E-01	1.500E-02	0.232
		751.79		6.116E-02	1.729E+00	2.787E+00	1.973E-01	0.022
		815.85		-1.518E-01	2.895E-01	4.598E-01	3.537E-02	-0.330
		867.82		3.238E-01	1.601E+00	2.362E+00	1.772E-01	0.137
		919.63		3.645E-02	2.700E+00	4.399E+00	4.197E-01	0.008
		925.24		4.459E-01	1.016E+00	1.762E+00	1.380E-01	0.253
		1596.49	*	-2.032E-02	8.099E-02	1.299E-01	8.013E-03	-0.156
		145.44	*	7.543E-02	7.830E-02	1.175E-01	6.931E-03	0.642
		57.37		-9.959E-05	7.830E-02	Half-Life	too short	
CE-141 CE-143		231.56		-6.158E-04	7.830E-02	Half-Life	too short	
		293.26	*	5.282E-04	7.830E-02	Half-Life	too short	
	+	350.59		1.248E-02	7.830E-02	Half-Life	too short	
		490.36		-8.113E-04	7.830E-02	Half-Life	too short	
		664.57		1.172E-03	7.830E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		721.93		3.502E-04	7.830E-02	Half-Life too short		
CE-144		80.11		-3.783E+00	4.528E+00	4.534E+00	4.211E-01	-0.834
		133.54	*	1.407E-02	2.408E-01	3.957E-01	5.627E-02	0.036
PM-144		476.78		3.270E-02	7.507E-02	1.249E-01	8.494E-03	0.262
		618.01		1.348E-02	3.379E-02	5.667E-02	3.168E-03	0.238
		696.49	*	3.146E-02	3.553E-02	6.160E-02	3.239E-03	0.511
		778.57		8.416E-01	2.439E+00	4.204E+00	2.539E-01	0.200
PR-144		696.49	*	2.130E+00	2.406E+00	4.171E+00	2.192E-01	0.511
		1489.15		-3.068E+00	1.194E+01	1.839E+01	1.153E+00	-0.167
PM-146		453.90	*	5.009E-03	4.649E-02	7.729E-02	6.578E-03	0.065
		633.02		5.436E-01	1.454E+00	2.413E+00	8.861E-01	0.225
		735.90		-6.888E-02	1.939E-01	2.551E-01	7.103E-02	-0.270
		747.13		-8.897E-02	1.035E-01	1.523E-01	1.900E-02	-0.584
ND-147	+	91.11		8.891E+00	1.004E+00	1.015E+00	1.012E-01	8.757
		319.41		-2.418E+00	3.364E+00	5.428E+00	3.227E-01	-0.446
		439.89		1.290E+00	5.733E+00	9.618E+00	5.414E-01	0.134
		531.02	*	-1.259E-01	5.575E-01	8.971E-01	1.204E-01	-0.140
PM-149		285.90	*	4.639E+01	6.851E+01	1.185E+02	1.687E+01	0.392
EU-152		121.78		-6.193E-02	8.551E-02	1.367E-01	1.074E-02	-0.453
		244.69		3.451E-01	4.140E-01	6.111E-01	3.591E-02	0.565
		344.27	*	1.744E-02	1.463E-01	1.702E-01	1.121E-02	0.102
		443.98		-2.660E-02	1.031E+00	1.701E+00	9.574E-02	-0.016
		778.89		9.738E-02	2.821E-01	4.863E-01	2.937E-02	0.200
		867.32		5.843E-01	9.642E-01	1.497E+00	1.038E-01	0.390
		964.01		5.449E-01	3.385E-01	5.714E-01	4.042E-02	0.954
		1085.78		-2.691E-01	4.417E-01	6.833E-01	4.445E-02	-0.394
		1112.02		1.001E-01	3.575E-01	5.771E-01	3.661E-02	0.174
		1407.95		8.656E-02	1.777E-01	3.082E-01	1.941E-02	0.281
GD-153		69.67		7.507E-01	2.497E+00	3.710E+00	3.312E-01	0.202
	+	83.37		3.389E+01	2.340E+01	3.452E+01	3.280E+00	0.982
	+	97.43	*	4.121E-01	1.416E-01	1.809E-01	1.512E-02	2.278
		103.18		8.221E-02	1.384E-01	2.062E-01	1.584E-02	0.399
EU-154		123.07		1.664E-02	5.927E-02	9.840E-02	9.421E-03	0.169
		247.94		9.754E-02	4.153E-01	6.732E-01	6.460E-02	0.145
		591.81		-2.501E-01	6.689E-01	1.056E+00	1.004E-01	-0.237
		723.30		4.627E-02	2.065E-01	2.948E-01	2.016E-02	0.157
		756.87		3.127E-01	8.440E-01	1.400E+00	1.421E-01	0.223
		873.19		1.740E-01	3.058E-01	5.352E-01	5.974E-02	0.325
		996.32		1.143E-02	4.379E-01	6.255E-01	1.064E-01	0.018
		1004.76		-2.261E-02	2.295E-01	3.212E-01	3.354E-02	-0.070
		1274.45	*	-1.681E-01	1.272E-01	1.722E-01	1.648E-02	-0.976
EU-155		48.70		-5.402E+00	3.891E+00	6.239E+00	5.225E-01	-0.866
		60.01		9.122E+00	8.119E+00	1.242E+01	1.138E+00	0.735
	+	86.54		3.406E-01	1.571E-01	2.346E-01	2.306E-02	1.452
		105.31	*	4.759E-02	1.289E-01	2.141E-01	1.624E-02	0.222
TB-160	+	86.79		8.997E-01	4.148E-01	6.130E-01	5.991E-02	1.468
		197.04		-2.131E-01	6.398E-01	1.004E+00	5.634E-02	-0.212
		215.65		-3.157E-01	8.313E-01	1.297E+00	7.433E-02	-0.243
		298.57		1.760E-01	1.326E-01	2.106E-01	1.258E-02	0.836

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		879.36	*	-1.148E-01	1.486E-01	2.298E-01	1.623E-02	-0.500
		962.29		8.948E-01	5.901E-01	1.017E+00	7.196E-02	0.880
		966.15		8.432E-01	2.945E-01	5.202E-01	3.676E-02	1.621
		1177.93		2.820E-02	3.931E-01	6.481E-01	3.843E-02	0.044
		1271.85		-3.977E-01	7.088E-01	1.077E+00	6.631E-02	-0.369
		80.57		-4.725E-01	5.805E-01	5.821E-01	5.423E-02	-0.812
	+	184.41		2.659E-01	6.637E-02	8.955E-02	4.947E-03	2.970
		280.46		-5.285E-02	9.264E-02	1.521E-01	9.075E-03	-0.348
	+	410.95		2.304E-01	3.836E-01	4.619E-01	2.581E-02	0.499
		711.68	*	-5.792E-03	6.418E-02	1.026E-01	5.536E-03	-0.056
TM-171		752.31		1.216E-01	2.952E-01	4.919E-01	2.844E-02	0.247
		810.29		-3.081E-02	5.608E-02	8.890E-02	5.646E-03	-0.347
		51.35		3.398E+01	4.888E+01	8.362E+01	7.499E+00	0.406
		52.39		2.897E+01	2.532E+01	4.365E+01	3.962E+00	0.664
		59.40		4.905E+01	4.353E+01	6.665E+01	6.126E+00	0.736
LU-176		66.72	*	-3.074E+01	4.658E+01	6.204E+01	5.542E+00	-0.495
	+	88.36		6.710E-01	3.094E-01	4.732E-01	4.641E-02	1.418
		201.83		-8.769E-03	3.645E-02	5.071E-02	2.861E-03	-0.173
		306.84	*	-1.121E-02	2.505E-02	4.106E-02	2.449E-03	-0.273
LU-177		401.10		-7.886E-03	7.427E+00	1.201E+01	6.687E-01	-0.001
		112.95		6.080E+00	1.894E+00	3.341E+00	2.264E-01	1.820
LU-177M	+	208.36	*	8.278E-01	1.432E+00	1.852E+00	1.053E-01	0.447
		52.97		2.537E+00	2.592E+00	4.453E+00	4.061E-01	0.570
HF-181		54.07		1.256E+00	1.339E+00	2.299E+00	2.108E-01	0.546
		61.30		1.478E+01	2.987E+00	4.592E+00	4.176E-01	3.218
		121.62		-3.117E-01	4.340E-01	6.945E-01	4.253E-02	-0.449
		147.16		1.677E-01	8.113E-01	1.174E+00	6.623E-02	0.143
		171.86		1.586E-01	5.618E-01	9.233E-01	5.023E-02	0.172
		218.09		1.175E-01	9.654E-01	1.542E+00	8.857E-02	0.076
		268.79		8.021E-01	9.153E-01	1.523E+00	9.060E-02	0.527
		319.02		-2.279E-01	2.839E-01	4.562E-01	2.711E-02	-0.500
		367.43		2.906E-01	9.494E-01	1.611E+00	9.228E-02	0.180
		413.65	*	-1.083E-01	2.160E-01	2.966E-01	1.659E-02	-0.365
		56.28		-1.648E+00	1.488E+00	2.323E+00	2.138E-01	-0.710
		57.53		-1.699E-01	8.534E-01	1.252E+00	1.152E-01	-0.136
		65.20		3.388E+00	1.501E+00	2.335E+00	2.092E-01	1.451
		133.02		-7.051E-03	7.762E-02	1.269E-01	7.434E-03	-0.056
		136.25		-5.118E-01	5.308E-01	8.310E-01	4.821E-02	-0.616
W-181		345.85		1.133E-01	2.358E-01	3.375E-01	1.974E-02	0.336
		482.03	*	-3.080E-02	4.737E-02	7.449E-02	4.192E-03	-0.413
		56.28		-6.535E-01	5.898E-01	9.209E-01	8.477E-02	-0.710
		57.53		-6.754E-02	3.386E-01	4.967E-01	4.572E-02	-0.136
TA-182		65.20	*	1.334E+00	5.909E-01	9.192E-01	8.234E-02	1.451
		67.75		1.372E-01	2.228E-01	2.473E-01	2.207E-02	0.555
		100.10		6.386E-01	2.499E-01	3.947E-01	3.168E-02	1.618
		152.43		4.537E-02	3.653E-01	5.993E-01	3.338E-02	0.076
		222.10		-5.484E-02	3.943E-01	6.309E-01	3.638E-02	-0.087
	+	1001.68		9.169E+00	3.977E+00	5.699E+00	3.948E-01	1.609
	+	1121.28		5.752E-01	2.327E-01	3.619E-01	2.274E-02	1.590

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		1189.05		-8.817E-02	3.294E-01	5.254E-01	3.130E-02	-0.168
		1221.42	*	-7.473E-02	2.144E-01	3.391E-01	2.048E-02	-0.220
		1230.97		-3.395E-01	5.862E-01	9.134E-01	5.537E-02	-0.372
		57.98		6.528E-02	3.282E-01	4.888E-01	4.498E-02	0.134
		59.32		1.954E-01	1.771E-01	2.711E-01	2.491E-02	0.721
		67.20		4.301E-02	3.502E-01	4.384E-01	3.914E-02	0.098
		162.32	*	5.182E-02	1.253E-01	2.073E-01	1.129E-02	0.250
	+	208.81		8.330E-01	1.441E+00	1.877E+00	1.068E-01	0.444
		291.72		4.897E-01	1.114E+00	1.683E+00	1.005E-01	0.291
		57.98		2.422E-01	1.218E+00	1.814E+00	1.669E-01	0.134
RE-184		59.32		7.246E-01	6.568E-01	1.005E+00	9.238E-02	0.721
		67.20		1.596E-01	1.299E+00	1.626E+00	1.452E-01	0.098
		161.27		1.216E-01	4.018E-01	6.623E-01	3.616E-02	0.184
		216.55		-2.916E-02	2.986E-01	4.722E-01	2.708E-02	-0.062
		252.85	*	1.177E-01	2.595E-01	4.251E-01	2.511E-02	0.277
		318.01		-1.558E-01	4.872E-01	8.038E-01	4.779E-02	-0.194
		792.07		1.426E+00	1.293E+00	2.078E+00	1.282E-01	0.686
		903.28		4.896E-01	1.097E+00	1.679E+00	1.217E-01	0.292
		920.93		3.315E-02	4.488E-01	7.517E-01	5.416E-02	0.044
		59.72		4.600E-01	4.784E-01	7.288E-01	6.688E-02	0.631
OS-185		61.14		1.270E+00	3.077E-01	4.796E-01	4.365E-02	2.648
		69.30		-5.036E-03	4.416E-01	6.491E-01	5.792E-02	-0.008
		592.07		-3.019E-01	2.676E+00	4.319E+00	2.304E-01	-0.070
		646.12	*	-2.773E-03	4.454E-02	7.181E-02	3.620E-03	-0.039
		717.42		3.813E-01	9.089E-01	1.520E+00	8.285E-02	0.251
		874.81		7.740E-02	6.106E-01	1.030E+00	7.224E-02	0.075
		880.27		-2.059E-01	8.370E-01	1.365E+00	9.651E-02	-0.151
		155.03	*	-2.038E-02	1.856E-01	3.016E-01	1.670E-02	-0.068
		477.96		2.044E+00	3.424E+00	5.755E+00	3.240E-01	0.355
		633.10		1.238E+00	2.891E+00	4.861E+00	2.489E-01	0.255
W-188	+	63.58		7.950E+02	1.497E+02	1.680E+02	1.512E+01	4.731
		227.08		-4.214E+00	1.452E+01	2.304E+01	1.335E+00	-0.183
IR-192		290.67	*	-2.793E+00	8.945E+00	1.284E+01	7.671E-01	-0.218
	+	295.96		7.671E-01	1.687E-01	2.754E-01	1.670E-02	2.786
		308.46		-7.800E-02	9.584E-02	1.536E-01	9.258E-03	-0.508
		316.51	*	2.051E-02	3.689E-02	6.359E-02	3.801E-03	0.322
		468.07		5.431E-02	7.485E-02	1.288E-01	8.427E-03	0.422
		604.41		3.857E-02	5.788E-01	8.190E-01	9.084E-02	0.047
AU-195		612.46		-1.113E-02	8.406E-01	1.178E+00	8.426E-02	-0.009
		65.12		7.126E-01	2.785E-01	4.346E-01	3.893E-02	1.640
		66.83		-1.000E-01	1.534E-01	2.043E-01	1.825E-02	-0.490
	+	75.70		1.010E+00	3.321E-01	5.278E-01	4.787E-02	1.913
	+	98.88	*	1.199E+00	4.118E-01	5.254E-01	4.295E-02	2.281
		129.76		3.578E+00	3.345E+00	5.677E+00	3.360E-01	0.630
TL-200		367.94	*	-6.307E-06	3.345E+00	Half-Life too short		
		579.30		1.818E-03	3.345E+00	Half-Life too short		
		828.27		-1.056E-03	3.345E+00	Half-Life too short		
TL-201		1205.75		-2.241E-04	3.345E+00	Half-Life too short		
		68.90		1.109E-01	5.842E+00	8.018E+00	7.155E-01	0.014

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		70.82		5.925E+00	3.109E+00	4.804E+00	4.294E-01	1.233
		80.30		-7.117E+00	8.156E+00	8.142E+00	7.572E-01	-0.874
		135.34		-1.512E+01	2.305E+01	3.658E+01	2.128E+00	-0.413
		167.43	*	-4.879E+00	6.164E+00	9.712E+00	5.256E-01	-0.502
		68.90		1.226E-02	6.459E-01	8.866E-01	7.911E-02	0.014
		70.82		6.534E-01	3.428E-01	5.298E-01	4.735E-02	1.233
HG-203		80.30		-7.850E-01	8.997E-01	8.981E-01	8.352E-02	-0.874
		439.56	*	2.365E-02	6.832E-02	1.155E-01	6.499E-03	0.205
		70.83		2.979E+00	1.594E+00	2.415E+00	3.334E-01	1.234
		72.87		2.578E+00	9.057E-01	1.492E+00	2.006E-01	1.727
BI-207	+	82.60		2.483E+00	1.735E+00	2.511E+00	3.585E-01	0.989
		279.20	*	-2.663E-02	4.385E-02	7.189E-02	4.540E-03	-0.371
		72.80		7.228E-01	2.574E-01	4.427E-01	3.974E-02	1.633
	+	74.97		5.627E-01	1.851E-01	2.810E-01	2.541E-02	2.003
TL-207	+	84.90		4.399E-01	3.037E-01	4.546E-01	4.373E-02	0.968
		569.67		8.520E-03	3.213E-02	5.350E-02	2.904E-03	0.159
		1063.62	*	1.768E-02	5.583E-02	9.481E-02	6.286E-03	0.186
		1770.23		-5.081E-01	5.375E-01	5.119E-01	2.990E-02	-0.992
		81.07		-4.185E-02	4.407E-01	4.642E-01	4.339E-02	-0.090
	+	83.78		2.900E-01	2.002E-01	2.936E-01	2.799E-02	0.988
PO-209		94.90		2.064E+00	4.499E-01	5.807E-01	5.056E-02	3.555
		122.32		-6.663E-01	2.020E+00	3.281E+00	2.281E-01	-0.203
	+	144.24		1.635E+00	9.111E-01	1.370E+00	9.781E-02	1.193
		154.21		-1.816E-01	4.318E-01	6.928E-01	4.715E-02	-0.262
		269.46		2.621E-01	2.184E-01	3.681E-01	2.285E-02	0.712
	+	323.87	*	-5.333E-02	8.131E-01	1.180E+00	1.955E-01	-0.045
BI-210	+	338.28		5.283E+00	1.698E+00	2.318E+00	2.452E-01	2.279
		445.03		3.532E-01	2.452E+00	4.089E+00	4.160E-01	0.086
		260.50		9.749E-01	1.069E+01	1.718E+01	1.019E+00	0.057
		262.80		-2.986E+01	2.988E+01	4.506E+01	2.674E+00	-0.663
		896.60	*	-4.134E+00	7.206E+00	1.108E+01	8.030E-01	-0.373
		46.50	*	-2.277E+00	5.624E+00	9.293E+00	7.651E-01	-0.245
PB-210		46.50	*	-2.277E+00	5.624E+00	9.293E+00	7.651E-01	-0.245
PO-210		46.50	*	-2.277E+00	5.623E+00	9.293E+00	6.712E-01	-0.245
PB-211		404.84	*	-5.977E-02	1.097E+00	1.572E+00	9.796E-01	-0.038
BI-212		427.08		-1.701E+00	2.414E+00	3.411E+00	2.108E+00	-0.499
		831.96		-1.098E-01	1.303E+00	1.855E+00	1.158E+00	-0.059
	+	727.18	*	1.003E+00	6.271E-01	6.439E-01	4.842E-02	1.557
		785.46		-6.684E-02	1.812E+00	3.032E+00	1.850E-01	-0.022
		1620.62		7.694E-01	1.002E+00	1.910E+00	1.172E-01	0.403
		81.07		-4.185E-02	4.407E-01	4.642E-01	4.339E-02	-0.090
PO-215	+	83.78		2.900E-01	2.002E-01	2.936E-01	2.799E-02	0.988
		94.90		2.064E+00	4.499E-01	5.807E-01	5.056E-02	3.555
		122.32		-6.663E-01	2.020E+00	3.281E+00	2.281E-01	-0.203
	+	144.24		1.635E+00	9.111E-01	1.370E+00	9.781E-02	1.193
		154.21		-1.816E-01	4.318E-01	6.928E-01	4.715E-02	-0.262
		269.46		2.621E-01	2.184E-01	3.681E-01	2.285E-02	0.712
		323.87	*	-5.333E-02	8.131E-01	1.180E+00	1.955E-01	-0.045
	+	338.28		5.283E+00	1.698E+00	2.318E+00	2.452E-01	2.279

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		445.03		3.532E-01	2.452E+00	4.089E+00	4.160E-01	0.086
		271.23		3.219E-01	2.823E-01	4.735E-01	3.890E-02	0.680
		401.81	*	-3.616E-01	4.811E-01	7.098E-01	9.589E-02	-0.509
RN-220		549.76	*	4.291E+00	2.893E+01	4.781E+01	2.628E+00	0.090
RA-223		81.07		-4.185E-02	4.407E-01	4.642E-01	4.339E-02	-0.090
	+	83.78		2.900E-01	2.002E-01	2.936E-01	2.799E-02	0.988
		94.90		2.064E+00	4.499E-01	5.807E-01	5.056E-02	3.555
		122.32		-6.663E-01	2.020E+00	3.281E+00	2.281E-01	-0.203
	+	144.24		1.635E+00	9.111E-01	1.370E+00	9.781E-02	1.193
		154.21		-1.816E-01	4.318E-01	6.928E-01	4.715E-02	-0.262
		269.46		2.621E-01	2.184E-01	3.681E-01	2.285E-02	0.712
		323.87	*	-5.333E-02	8.131E-01	1.180E+00	1.955E-01	-0.045
	+	338.28		5.283E+00	1.698E+00	2.318E+00	2.452E-01	2.279
AC-227		445.03		3.532E-01	2.452E+00	4.089E+00	4.160E-01	0.086
		79.80		-2.583E+00	3.560E+00	3.557E+00	7.744E-01	-0.726
		236.00		1.635E+00	3.829E-01	5.887E-01	6.166E-02	2.776
		256.20	*	2.977E-01	4.452E-01	7.330E-01	1.027E-01	0.406
		286.10		3.539E-01	1.690E+00	2.873E+00	3.346E-01	0.123
		299.80		2.350E+00	1.774E+00	2.761E+00	4.513E-01	0.851
		304.40		-1.754E+00	2.030E+00	3.227E+00	5.600E-01	-0.543
		334.20		-6.660E-01	3.083E+00	3.841E+00	7.054E-01	-0.173
	TH-227	79.80		-2.583E+00	3.562E+00	3.557E+00	7.841E-01	-0.726
		94.00		4.820E+01	1.123E+01	7.335E+00	1.604E+00	6.572
		236.00		1.635E+00	3.733E-01	5.887E-01	5.347E-02	2.776
		256.20	*	2.977E-01	4.461E-01	7.330E-01	1.242E-01	0.406
		286.10		3.539E-01	1.726E+00	2.873E+00	2.878E+00	0.123
		299.80		2.350E+00	1.774E+00	2.761E+00	4.513E-01	0.851
		304.40		-1.754E+00	2.030E+00	3.227E+00	5.600E-01	-0.543
TH-229		334.20		-6.660E-01	3.083E+00	3.841E+00	7.054E-01	-0.173
		85.43		8.391E-01	2.957E-01	4.543E-01	4.389E-02	1.847
	+	88.47		3.863E-01	1.781E-01	2.708E-01	2.650E-02	1.427
		100.00		7.028E-01	2.629E-01	4.161E-01	3.345E-02	1.689
		193.63	*	1.286E-01	5.590E-01	9.136E-01	5.105E-02	0.141
		210.97		1.089E+00	9.511E-01	1.428E+00	8.140E-02	0.763
PA-231		283.67	*	1.626E+00	1.711E+00	2.981E+00	4.129E-01	0.546
TH-231		301.29		6.123E-01	6.476E-01	1.076E+00	1.135E-01	0.569
		81.07		-4.185E-02	4.407E-01	4.642E-01	4.339E-02	-0.090
	+	83.78		2.900E-01	2.002E-01	2.936E-01	2.799E-02	0.988
		94.90		2.064E+00	4.499E-01	5.807E-01	5.056E-02	3.555
		122.32		-6.663E-01	2.020E+00	3.281E+00	2.281E-01	-0.203
	+	144.24		1.635E+00	9.111E-01	1.370E+00	9.781E-02	1.193
		154.21		-1.816E-01	4.318E-01	6.928E-01	4.715E-02	-0.262
		269.46		2.621E-01	2.184E-01	3.681E-01	2.285E-02	0.712
		323.87	*	-5.333E-02	8.131E-01	1.180E+00	1.955E-01	-0.045
		338.28		5.283E+00	1.698E+00	2.318E+00	2.452E-01	2.279
	+	445.03		3.532E-01	2.452E+00	4.089E+00	4.160E-01	0.086
U-231	+	84.21		1.023E+01	7.064E+00	1.043E+01	9.976E-01	0.981
	+	92.29		5.964E+01	6.390E+00	6.838E+00	6.227E-01	8.721
		95.87	*	3.132E+00	1.556E+00	1.870E+00	1.602E-01	1.675

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		108.00		-4.799E+00	2.133E+00	3.217E+00	2.318E-01	-1.492
	+	75.28		1.642E+01	5.789E+00	8.481E+00	1.323E+00	1.936
	+	86.59		5.539E+00	2.916E+00	3.805E+00	1.035E+00	1.456
		300.12		7.026E-01	4.910E-01	7.725E-01	1.044E-01	0.909
		311.98	*	-2.371E-02	6.524E-02	1.073E-01	6.771E-03	-0.221
		340.50		5.045E-01	7.334E-01	1.107E+00	2.545E-01	0.456
		398.62		8.436E-02	2.247E+00	3.740E+00	9.650E-01	0.023
		415.76		-2.530E-01	1.906E+00	2.952E+00	6.061E-01	-0.086
	+	63.00		2.334E+01	5.325E+00	5.106E+00	8.031E-01	4.570
		94.67		2.055E+00	3.995E-01	4.580E-01	5.718E-02	4.487
PA-234	+	98.44		4.879E-01	3.169E-01	2.150E-01	1.198E-01	2.269
	+	99.86		2.529E+00	8.688E-01	1.065E+00	8.579E-02	2.375
		111.00		4.633E-01	2.524E-01	4.261E-01	4.668E-02	1.087
		131.20		1.201E-01	1.246E-01	2.108E-01	1.242E-02	0.570
		152.70		-5.358E-02	3.561E-01	5.778E-01	9.085E-02	-0.093
	+	186.00		9.573E+00	3.736E+00	3.273E+00	9.985E-01	2.925
		226.40		8.282E-02	4.526E-01	7.342E-01	8.484E-02	0.113
		227.20		-1.319E-01	4.968E-01	7.894E-01	4.574E-02	-0.167
		248.90		-8.091E-01	9.638E-01	1.453E+00	3.126E-01	-0.557
	+	293.70		4.884E+00	1.299E+00	1.753E+00	2.830E-01	2.786
		369.80		-6.375E-01	9.190E-01	1.452E+00	3.021E-01	-0.439
		568.70		8.600E-01	1.033E+00	1.791E+00	9.729E-02	0.480
		569.50		7.561E-02	2.851E-01	4.748E-01	2.578E-02	0.159
		574.00		-6.285E-01	1.632E+00	2.505E+00	1.356E-01	-0.251
		699.00		-4.280E-01	7.908E-01	1.212E+00	2.160E-01	-0.353
		706.10		-1.025E-01	1.149E+00	1.837E+00	8.097E-01	-0.056
		733.00		4.270E-01	4.372E-01	6.717E-01	1.424E-01	0.636
		742.81		1.643E+00	1.894E+00	2.702E+00	1.808E+00	0.608
	+	796.30		1.978E+00	1.509E+00	1.799E+00	4.745E-01	1.100
		805.60		1.040E+00	1.026E+00	1.786E+00	5.373E-01	0.582
		819.60		-3.168E-01	1.346E+00	2.200E+00	8.269E-01	-0.144
		826.30		5.421E-01	9.067E-01	1.538E+00	6.826E-01	0.352
		831.60		-3.850E-02	6.753E-01	9.660E-01	2.832E-01	-0.040
		876.40		-9.956E-02	8.732E-01	1.431E+00	1.469E+00	-0.070
		880.51		-9.511E-02	3.083E-01	4.999E-01	3.537E-02	-0.190
		883.24		1.656E-01	3.271E-01	5.369E-01	3.599E-01	0.308
		899.00		-5.049E-01	8.639E-01	1.286E+00	5.590E-01	-0.393
		925.00		5.225E-01	1.118E+00	1.945E+00	1.399E-01	0.269
		926.50		-7.428E-02	1.742E-01	2.754E-01	6.838E-02	-0.270
		946.00	*	1.548E-01	3.077E-01	5.330E-01	9.663E-02	0.290
		949.00		3.819E-01	4.380E-01	7.865E-01	5.602E-02	0.486
		980.50		7.435E-01	7.507E-01	1.357E+00	9.519E-02	0.548
		1394.10		-8.200E-01	1.198E+00	1.502E+00	9.735E-01	-0.546
PA-234M		766.42		1.929E+01	1.646E+01	2.365E+01	1.191E+01	0.816
NP-236	+	1001.03	*	2.097E+01	9.156E+00	1.306E+01	1.116E+00	1.605
		94.67		1.578E+00	2.705E-01	3.488E-01	3.048E-02	4.525
	+	98.44		3.689E-01	1.267E-01	1.626E-01	1.338E-02	2.269
		111.00		3.504E-01	1.886E-01	3.223E-01	2.237E-02	1.087
		160.31	*	-7.124E-02	9.211E-02	1.455E-01	7.962E-03	-0.490

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	99.55		8.431E-01	2.896E-01	3.624E-01	2.933E-02	2.326
		117.00	*	-3.188E-01	2.239E-01	3.485E-01	2.251E-02	-0.915
	+	209.75		6.651E-01	1.150E+00	1.489E+00	8.477E-02	0.447
		228.18		-1.769E-01	2.628E-01	4.093E-01	2.374E-02	-0.432
		277.60		3.545E-02	2.002E-01	3.224E-01	1.923E-02	0.110
		334.30		-4.155E-01	1.744E+00	2.169E+00	1.279E-01	-0.192
AM-241		59.54	*	2.894E-01	2.531E-01	3.873E-01	3.787E-02	0.747
CM-243	+	99.55		8.675E-01	2.980E-01	3.729E-01	3.018E-02	2.326
		103.76	*	1.367E-01	1.284E-01	1.949E-01	1.486E-02	0.701
	+	117.00		-3.280E-01	2.304E-01	3.585E-01	2.316E-02	-0.915
		209.75		6.556E-01	1.134E+00	1.468E+00	8.356E-02	0.447
		228.18		-1.787E-01	2.655E-01	4.136E-01	2.399E-02	-0.432
		277.60		3.574E-02	2.019E-01	3.250E-01	1.938E-02	0.110
AM-246		798.80		-7.065E-02	1.563E-01	2.123E-01	1.324E-02	-0.333
		1036.00		-1.379E-01	3.113E-01	4.904E-01	3.321E-02	-0.281
		1062.04		4.400E-02	2.406E-01	4.038E-01	2.681E-02	0.109
	*	1078.86		8.828E-02	1.493E-01	2.598E-01	1.701E-02	0.340
		278.00		-1.561E-01	7.946E-01	1.328E+00	7.923E-02	-0.118
CM-247		287.40		-1.658E+00	1.367E+00	2.166E+00	1.294E-01	-0.765
	*	402.60		-1.634E-02	4.730E-02	6.616E-02	3.686E-03	-0.247
CF-249		252.85		4.438E-01	9.787E-01	1.603E+00	9.469E-02	0.277
		333.44		2.285E-01	2.596E-01	2.909E-01	1.717E-02	0.785
	*	387.95		3.306E-02	4.485E-02	7.755E-02	4.326E-03	0.426
CF-251	*	176.60		4.053E-02	1.445E-01	2.374E-01	1.299E-02	0.171
		227.00		-1.460E-01	4.401E-01	6.971E-01	4.039E-02	-0.209
		285.00		2.711E+00	1.876E+00	3.359E+00	2.006E-01	0.807

VAX/VMS Nuclide Identification Report Generated

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
*
*                               DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023720
* Acquisition date   : 2-FEB-2010 09:49:21 Detector SN#      :
* Detector ID        : GAM06 Sensitivity      : 5.000
* Geometry           : CAN Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000
* Elapsed real time  : 0 02:00:01.40 Half life ratio : 8.000
*****
*
*                               SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G1202023720 Analyst initials: MXR1
* Batch Number       : 944966 Sample Quantity : 1.4358E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*
*                               QC DATA                               *
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 4-FEB-2009 13:05:54 MS Isotope      :
* MSD DPM             : 0.000 MSD Isotope                  :
* LCS DPM             : 0.000 LCS Isotope                   :
* LCSD DPM            : 0.000 LCSD Isotope                  :
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.624E+01	2.346E+00	4.565E-01	0.000E+00
CD-109	2.873E+00	1.298E+00	1.791E+00	0.000E+00
SN-126	2.829E-01	1.278E-01	1.773E-01	0.000E+00
BA-137M	1.980E-01	5.562E-02	7.417E-02	0.000E+00
CS-137	2.093E-01	5.880E-02	7.841E-02	0.000E+00
TL-208	3.085E-01	7.156E-02	6.311E-02	0.000E+00
BI-211	2.894E+00	5.034E-01	3.535E-01	0.000E+00
PB-212	1.134E+00	1.270E-01	1.065E-01	0.000E+00
PO-212	1.134E+00	1.270E-01	1.065E-01	0.000E+00
BI-214	8.301E-01	1.829E-01	1.226E-01	0.000E+00
PB-214	1.007E+00	1.825E-01	1.232E-01	0.000E+00
PO-214	1.007E+00	1.825E-01	1.232E-01	0.000E+00
PO-216	1.134E+00	1.270E-01	1.065E-01	0.000E+00
PO-218	1.007E+00	1.825E-01	1.232E-01	0.000E+00
RA-224	3.129E+00	9.165E-01	1.211E+00	0.000E+00
RA-226	8.301E-01	1.829E-01	1.226E-01	0.000E+00
AC-228	1.011E+00	3.229E-01	2.084E-01	0.000E+00
RA-228	1.011E+00	3.229E-01	2.084E-01	0.000E+00
TH-228	1.150E+00	1.288E-01	1.079E-01	0.000E+00
TH-230	8.301E-01	1.828E-01	1.226E-01	0.000E+00
TH-232	1.011E+00	3.229E-01	2.084E-01	0.000E+00
TH-234	2.002E+01	4.822E+00	3.200E+00	0.000E+00
U-234	8.301E-01	1.828E-01	1.226E-01	0.000E+00
U-235	5.044E-01	2.848E-01	3.980E-01	0.000E+00
NP-237	8.308E-01	4.113E-01	5.275E-01	0.000E+00
U-238	2.002E+01	4.822E+00	3.200E+00	0.000E+00
AM-243	3.135E-01	1.010E-01	1.295E-01	0.000E+00
ANH-511	1.018E-01	7.614E-02	4.548E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	1.806E-01	3.499E-01	6.147E-01	0.000E+00	NOT IDENT.
NA-22	-6.015E-02	4.440E-02	6.210E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.511E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.520E-02	2.511E-02	4.803E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.565E-02	9.628E-02	0.000E+00	NOT IDENT.
SC-46	-7.237E-03	3.983E-02	6.768E-02	0.000E+00	FAIL ABUN
V-48	-5.915E-03	6.537E-02	1.110E-01	0.000E+00	NOT IDENT.
CR-51	-1.419E-01	3.789E-01	6.608E-01	0.000E+00	NOT IDENT.
MN-52	4.950E-02	1.553E-01	2.735E-01	0.000E+00	NOT IDENT.
MN-54	1.408E-02	3.828E-02	6.837E-02	0.000E+00	NOT IDENT.
CO-56	1.191E-02	4.168E-02	7.394E-02	0.000E+00	NOT IDENT.
CO-57	-2.011E-02	2.881E-02	4.997E-02	0.000E+00	NOT IDENT.
CO-58	-3.029E-02	3.643E-02	5.832E-02	0.000E+00	NOT IDENT.
FE-59	-4.615E-03	9.260E-02	1.565E-01	0.000E+00	FAIL ABUN
CO-60	-1.370E-02	3.593E-02	5.664E-02	0.000E+00	NOT IDENT.
ZN-65	-9.759E-02	1.125E-01	1.439E-01	0.000E+00	NOT IDENT.
GE-68	-8.329E-01	1.310E+00	2.086E+00	0.000E+00	NOT IDENT.
AS-73	1.272E+00	1.287E+00	2.432E+00	0.000E+00	NOT IDENT.
AS-74	1.330E-02	9.544E-02	1.642E-01	0.000E+00	NOT IDENT.
SE-75	-3.328E-03	4.738E-02	8.034E-02	0.000E+00	NOT IDENT.
BR-77	5.311E+00	7.671E+00	1.319E+01	0.000E+00	FAIL ABUN
SR-82	-2.158E-01	3.953E-01	6.609E-01	0.000E+00	NOT IDENT.
RB-83	4.816E-02	7.133E-02	1.225E-01	0.000E+00	NOT IDENT.
RB-84	2.860E-02	7.350E-02	1.312E-01	0.000E+00	NOT IDENT.
KR-85	1.137E+01	7.734E+00	1.316E+01	0.000E+00	NOT IDENT.
SR-85	5.758E-02	3.916E-02	6.663E-02	0.000E+00	NOT IDENT.
RB-86	-3.663E-01	8.167E-01	1.329E+00	0.000E+00	NOT IDENT.
Y-88	6.657E-03	3.025E-02	5.337E-02	0.000E+00	NOT IDENT.
ZR-88	-9.218E-03	3.213E-02	5.542E-02	0.000E+00	NOT IDENT.
Y-91	-2.309E+00	1.853E+01	3.084E+01	0.000E+00	NOT IDENT.
NB-94	1.333E-02	3.464E-02	6.012E-02	0.000E+00	NOT IDENT.
NB-95	6.060E-02	4.783E-02	8.728E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.672E-01	2.755E-01	0.000E+00	NOT IDENT.
ZR-95	4.038E-02	7.421E-02	1.299E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.585E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.530E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.282E+00	9.347E+00	1.598E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.679E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-4.392E-02	3.903E-02	6.101E-02	0.000E+00	NOT IDENT.
RH-102	1.824E-02	3.139E-02	5.639E-02	0.000E+00	NOT IDENT.
RU-103	1.275E-02	3.795E-02	6.715E-02	0.000E+00	FAIL ABUN
RH-106	8.864E-02	3.359E-01	5.821E-01	0.000E+00	FAIL ABUN
RU-106	8.864E-02	3.358E-01	5.821E-01	0.000E+00	FAIL ABUN
AG-108M	-1.437E-02	3.576E-02	6.076E-02	0.000E+00	NOT IDENT.
AG-110M	5.245E-03	4.140E-02	6.131E-02	0.000E+00	NOT IDENT.
IN-111	8.334E-01	9.893E-01	1.556E+00	0.000E+00	NOT IDENT.
IN-113M	-1.111E-02	4.616E-02	7.986E-02	0.000E+00	NOT IDENT.
SN-113	-1.111E-02	4.616E-02	7.986E-02	0.000E+00	NOT IDENT.
IN-114M	-7.841E-02	2.178E-01	3.235E-01	0.000E+00	NOT IDENT.
CD-115	8.300E+00	7.335E+00	1.366E+01	0.000E+00	NOT IDENT.
SN-117M	4.165E-02	5.608E-02	1.011E-01	0.000E+00	NOT IDENT.
SB-122	-4.205E-01	1.624E+00	2.725E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.380E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	6.621E-04	3.128E-02	5.493E-02	0.000E+00	NOT IDENT.
I-124	-2.195E-02	7.052E-01	1.033E+00	0.000E+00	NOT IDENT.
SB-124	1.323E-02	5.831E-02	1.040E-01	0.000E+00	FAIL ABUN
SB-125	-5.844E-02	9.628E-02	1.613E-01	0.000E+00	NOT IDENT.
TE-125M	-1.106E+01	1.179E+01	2.024E+01	0.000E+00	NOT IDENT.
I-126	1.626E-01	1.978E-01	3.157E-01	0.000E+00	NOT IDENT.
SB-126	3.435E-02	1.517E-01	2.260E-01	0.000E+00	FAIL ABUN
SB-127	3.333E-01	1.131E+00	1.953E+00	0.000E+00	FAIL ABUN
XE-127	1.871E-02	5.719E-02	8.809E-02	0.000E+00	NOT IDENT.
I-131	3.745E-02	1.106E-01	1.986E-01	0.000E+00	NOT IDENT.
TE-132	-4.141E-01	6.114E-01	1.014E+00	0.000E+00	NOT IDENT.
BA-133	-3.712E-02	5.065E-02	7.275E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.366E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.158E-02	9.596E-02	0.000E+00	FAIL ABUN
CS-135	1.272E-01	1.768E-01	3.108E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.687E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.102E-01	9.975E-02	1.493E-01	0.000E+00	FAIL ABUN
CE-139	-3.316E-02	3.393E-02	5.711E-02	0.000E+00	NOT IDENT.
BA-140	4.210E-01	2.988E-01	5.070E-01	0.000E+00	NOT IDENT.
LA-140	-2.032E-02	7.937E-02	1.302E-01	0.000E+00	FAIL ABUN
CE-141	7.543E-02	7.673E-02	1.241E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.488E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.407E-02	2.360E-01	4.189E-01	0.000E+00	NOT IDENT.
PM-144	3.146E-02	3.482E-02	6.294E-02	0.000E+00	NOT IDENT.

PR-144	2.130E+00	2.358E+00	4.262E+00	0.000E+00	NOT IDENT.
PM-146	5.009E-03	4.556E-02	7.972E-02	0.000E+00	NOT IDENT.
ND-147	-1.259E-01	5.464E-01	9.222E-01	0.000E+00	FAIL ABUN
PM-149	4.639E+01	6.714E+01	1.234E+02	0.000E+00	NOT IDENT.
EU-152	1.744E-02	1.433E-01	1.766E-01	0.000E+00	NOT IDENT.
GD-153	0.000E+00	1.387E-01	1.928E-01	0.000E+00	FAIL ABUN
EU-154	-1.681E-01	1.247E-01	1.736E-01	0.000E+00	NOT IDENT.
EU-155	4.759E-02	1.264E-01	2.277E-01	0.000E+00	FAIL ABUN
TB-160	-1.148E-01	1.456E-01	2.336E-01	0.000E+00	FAIL ABUN
HO-166M	-5.792E-03	6.289E-02	1.048E-01	0.000E+00	FAIL ABUN
TM-171	-3.074E+01	4.565E+01	6.661E+01	0.000E+00	NOT IDENT.
LU-176	-1.121E-02	2.455E-02	4.271E-02	0.000E+00	FAIL ABUN
LU-177	8.278E-01	1.403E+00	1.943E+00	0.000E+00	FAIL ABUN
LU-177M	-1.083E-01	2.117E-01	3.065E-01	0.000E+00	NOT IDENT.
HF-181	-3.080E-02	4.642E-02	7.674E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	5.791E-01	9.874E-01	0.000E+00	NOT IDENT.
TA-182	-7.473E-02	2.101E-01	3.422E-01	0.000E+00	FAIL ABUN
RE-183	5.182E-02	1.228E-01	2.186E-01	0.000E+00	FAIL ABUN
RE-184	1.177E-01	2.543E-01	4.441E-01	0.000E+00	NOT IDENT.
OS-185	-2.773E-03	4.365E-02	7.350E-02	0.000E+00	NOT IDENT.
RE-188	-2.038E-02	1.819E-01	3.183E-01	0.000E+00	NOT IDENT.
W-188	-2.793E+00	8.766E+00	1.337E+01	0.000E+00	FAIL ABUN
IR-192	2.051E-02	3.615E-02	6.610E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	4.035E-01	5.597E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.193E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.879E+00	6.041E+00	1.023E+01	0.000E+00	NOT IDENT.
TL-202	2.365E-02	6.696E-02	1.192E-01	0.000E+00	NOT IDENT.
HG-203	-2.663E-02	4.297E-02	7.493E-02	0.000E+00	FAIL ABUN
BI-207	1.768E-02	5.471E-02	9.597E-02	0.000E+00	FAIL ABUN
TL-207	-5.333E-02	7.968E-01	1.226E+00	0.000E+00	FAIL ABUN
PO-209	-4.134E+00	7.062E+00	1.126E+01	0.000E+00	NOT IDENT.
BI-210	-2.277E+00	5.511E+00	1.005E+01	0.000E+00	NOT IDENT.
PB-210	-2.277E+00	5.511E+00	1.005E+01	0.000E+00	NOT IDENT.
PO-210	-2.277E+00	5.511E+00	1.005E+01	0.000E+00	NOT IDENT.
PB-211	-5.977E-02	1.075E+00	1.625E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.146E-01	6.573E-01	0.000E+00	FAIL ABUN
PO-215	-5.333E-02	7.968E-01	1.226E+00	0.000E+00	FAIL ABUN
RN-219	-3.616E-01	4.715E-01	7.341E-01	0.000E+00	NOT IDENT.
RN-220	4.291E+00	2.835E+01	4.911E+01	0.000E+00	NOT IDENT.
RA-223	-5.333E-02	7.968E-01	1.226E+00	0.000E+00	FAIL ABUN
AC-227	2.977E-01	4.363E-01	7.654E-01	0.000E+00	NOT IDENT.
TH-227	2.977E-01	4.372E-01	7.654E-01	0.000E+00	NOT IDENT.
TH-229	1.286E-01	5.478E-01	9.597E-01	0.000E+00	FAIL ABUN
PA-231	1.626E+00	1.677E+00	3.106E+00	0.000E+00	NOT IDENT.
TH-231	-5.333E-02	7.968E-01	1.226E+00	0.000E+00	FAIL ABUN
U-231	0.000E+00	1.525E+00	1.993E+00	0.000E+00	FAIL ABUN
PA-233	-2.371E-02	6.393E-02	1.116E-01	0.000E+00	FAIL ABUN
PA-234	1.548E-01	3.016E-01	5.409E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	8.973E+00	1.324E+01	0.000E+00	FAIL ABUN
NP-236	-7.124E-02	9.027E-02	1.535E-01	0.000E+00	FAIL ABUN
NP-239	-3.188E-01	2.194E-01	3.699E-01	0.000E+00	FAIL ABUN
AM-241	2.894E-01	2.480E-01	4.168E-01	0.000E+00	NOT IDENT.
CM-243	1.367E-01	1.258E-01	2.074E-01	0.000E+00	FAIL ABUN
AM-246	8.828E-02	1.463E-01	2.629E-01	0.000E+00	NOT IDENT.
CM-247	-1.634E-02	4.635E-02	6.842E-02	0.000E+00	NOT IDENT.
CF-249	3.306E-02	4.395E-02	8.027E-02	0.000E+00	NOT IDENT.
CF-251	4.053E-02	1.417E-01	2.498E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023720.CNF;1
Sample date       : 19-JAN-2010 12:00:00 Acquisition date : 2-FEB-2010 09:49:21.
Sample ID        : G1202023720 Sample quantity : 1.43580E+02 GRAM
Detector name    : GAM06 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.40 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity : 5.00000
Batch ID        : 944966 Detector SN# :
Matrix Spike ID  : LCS ID : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1031	10.67*	9.626E-01	2.624E+01	2.624E+01	9.12
CD-109	88.03	206	3.72*	5.143E+00	2.814E+00	2.873E+00	46.11
SN-126	64.28	787	9.60	2.705E+00	7.925E+00	7.925E+00	22.60
	86.94	206	8.90	5.143E+00	1.176E+00	1.176E+00	61.34
	87.57	206	37.00*	5.143E+00	2.829E-01	2.829E-01	46.11
BA-137M	661.65	132	89.98*	1.940E+00	1.978E-01	1.980E-01	28.67
CS-137	661.65	132	85.12*	1.940E+00	2.091E-01	2.093E-01	28.68
TL-208	277.35	-----	6.80	3.899E+00	-----	Line Not Found	-----
	510.84	94	21.60	2.408E+00	4.715E-01	4.715E-01	76.75
	583.14	214	84.20*	2.158E+00	3.085E-01	3.085E-01	23.67
	860.37	37	12.46	1.538E+00	5.064E-01	5.064E-01	92.34
BI-211	72.87	-----	1.27	3.913E+00	-----	Line Not Found	-----
	351.07	465	12.94*	3.243E+00	2.894E+00	2.894E+00	17.75
PB-212	74.81	325	10.70	4.101E+00	1.934E+00	1.934E+00	34.19
	77.11	427	18.00	4.324E+00	1.434E+00	1.434E+00	24.59
	87.30	206	8.00	5.143E+00	1.309E+00	1.309E+00	47.18
	238.63	845	44.60*	4.368E+00	1.134E+00	1.134E+00	11.43
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
PO-212	74.81	325	10.70	4.101E+00	1.934E+00	1.934E+00	34.19
	77.11	427	18.00	4.324E+00	1.434E+00	1.434E+00	24.59
	87.30	206	8.00	5.143E+00	1.309E+00	1.309E+00	47.18
	115.19	-----	0.60	6.030E+00	-----	Line Not Found	-----
	238.63	845	44.60*	4.368E+00	1.134E+00	1.134E+00	11.43
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
BI-214	609.31	306	46.30*	2.080E+00	8.301E-01	8.301E-01	22.48
	1120.29	86	15.10	1.211E+00	1.226E+00	1.226E+00	40.99
	1764.49	62	15.80	8.405E-01	1.230E+00	1.230E+00	28.92
PB-214	74.81	325	6.21	4.101E+00	3.332E+00	3.332E+00	33.71
	77.11	427	10.50	4.324E+00	2.458E+00	2.458E+00	25.74
	87.30	206	4.67	5.143E+00	2.242E+00	2.242E+00	46.75
	241.98	205	7.49	4.328E+00	1.650E+00	1.650E+00	30.41
	295.21	278	19.20	3.718E+00	1.017E+00	1.017E+00	22.84

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	465	37.20*	3.243E+00	1.007E+00	1.007E+00	18.50
	74.81	325	6.21	4.101E+00	3.332E+00	3.332E+00	33.71
	77.11	427	10.50	4.324E+00	2.458E+00	2.458E+00	25.74
	87.30	206	4.67	5.143E+00	2.242E+00	2.242E+00	46.75
	241.98	205	7.49	4.328E+00	1.650E+00	1.650E+00	30.41
PO-216	295.21	278	19.20	3.718E+00	1.017E+00	1.017E+00	22.84
	351.92	465	37.20*	3.243E+00	1.007E+00	1.007E+00	18.50
	74.81	325	10.70	4.101E+00	1.934E+00	1.934E+00	34.19
	77.11	427	18.00	4.324E+00	1.434E+00	1.434E+00	24.59
	87.30	206	8.00	5.143E+00	1.309E+00	1.309E+00	47.18
PO-218	238.63	845	44.60*	4.368E+00	1.134E+00	1.134E+00	11.43
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
	74.81	325	6.21	4.101E+00	3.332E+00	3.332E+00	33.71
	77.11	427	10.50	4.324E+00	2.458E+00	2.458E+00	25.74
	87.30	206	4.67	5.143E+00	2.242E+00	2.242E+00	46.75
RA-224	241.98	205	7.49	4.328E+00	1.650E+00	1.650E+00	30.41
	295.21	278	19.20	3.718E+00	1.017E+00	1.017E+00	22.84
	351.92	465	37.20*	3.243E+00	1.007E+00	1.007E+00	18.50
	240.98	205	3.95*	4.328E+00	3.129E+00	3.129E+00	29.89
	609.31	306	46.30*	2.080E+00	8.301E-01	8.301E-01	22.48
RA-226	1120.29	86	15.10	1.211E+00	1.226E+00	1.226E+00	40.99
	1764.49	62	15.80	8.405E-01	1.230E+00	1.230E+00	28.92
	338.32	185	11.40	3.346E+00	1.265E+00	1.265E+00	50.83
	911.07	157	27.70*	1.462E+00	1.011E+00	1.011E+00	32.60
	969.11	77	16.60	1.382E+00	8.787E-01	8.787E-01	49.70
TH-228	338.32	185	11.40	3.346E+00	1.265E+00	1.265E+00	50.83
	911.07	157	27.70*	1.462E+00	1.011E+00	1.011E+00	32.60
	969.11	77	16.60	1.382E+00	8.787E-01	8.787E-01	49.70
	74.81	325	10.70	4.101E+00	1.934E+00	1.961E+00	32.91
	77.11	427	18.00	4.324E+00	1.434E+00	1.454E+00	24.59
TH-230	87.30	206	8.00	5.143E+00	1.309E+00	1.327E+00	46.11
	238.63	845	44.60*	4.368E+00	1.134E+00	1.150E+00	11.43
	300.09	-----	3.41	3.669E+00	-----	Line Not Found	-----
	609.31	306	46.30*	2.080E+00	8.301E-01	8.301E-01	22.48
	1120.29	86	15.10	1.211E+00	1.226E+00	1.226E+00	40.99
TH-232	1764.49	62	15.80	8.405E-01	1.230E+00	1.230E+00	28.92
	338.32	185	11.40	3.346E+00	1.265E+00	1.265E+00	30.92
	911.07	157	27.70*	1.462E+00	1.011E+00	1.011E+00	32.60
	969.11	77	16.60	1.382E+00	8.787E-01	8.787E-01	49.70
	63.29	787	3.80*	2.705E+00	2.002E+01	2.002E+01	24.58
U-234	92.38	2152	5.41	5.452E+00	1.907E+01	1.907E+01	19.17
	609.31	306	46.30*	2.080E+00	8.301E-01	8.301E-01	22.48
	1120.29	86	15.10	1.211E+00	1.226E+00	1.226E+00	40.99
	1764.49	62	15.80	8.405E-01	1.230E+00	1.230E+00	28.92
	89.95	-----	2.70	5.324E+00	-----	Line Not Found	-----
U-235	93.35	2152	4.50	5.452E+00	2.293E+01	2.293E+01	28.74
	105.00	-----	2.10	5.892E+00	-----	Line Not Found	-----
	143.76	119	10.50*	5.872E+00	5.044E-01	5.044E-01	57.63
	163.35	-----	4.70	5.561E+00	-----	Line Not Found	-----

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	185.71	379	54.00	5.178E+00	3.546E-01	3.546E-01	24.96
	205.31	55	4.70	4.856E+00	6.245E-01	6.245E-01	117.28
NP-237	86.50	206	12.60*	5.143E+00	8.308E-01	8.308E-01	50.51
	95.87	-----	2.60	5.611E+00	-----	Line Not Found	-----
U-238	63.29	787	3.80*	2.705E+00	2.002E+01	2.002E+01	24.58
	92.38	2152	5.41	5.452E+00	1.907E+01	1.907E+01	10.72
AM-243	74.67	325	66.00*	4.101E+00	3.135E-01	3.135E-01	32.89
	86.72	206	0.34	5.143E+00	3.116E+01	3.116E+01	46.11
	117.66	-----	0.55	6.042E+00	-----	Line Not Found	-----
	142.18	119	0.13	5.872E+00	4.237E+01	4.237E+01	55.58
ANH-511	511.00	94	100.00*	2.408E+00	1.018E-01	1.018E-01	76.29

Flag: "*" = Keyline

Total number of lines in spectrum 32
Number of unidentified lines 0
Number of lines tentatively identified by NID 32 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.624E+01	2.624E+01	0.239E+01	9.12	
CD-109	464.00D	1.02	2.814E+00	2.873E+00	1.325E+00	46.11	
SN-126	1.00E+05Y	1.00	2.829E-01	2.829E-01	1.304E-01	46.11	
BA-137M	30.17Y	1.00	1.978E-01	1.980E-01	0.568E-01	28.67	
CS-137	30.17Y	1.00	2.091E-01	2.093E-01	0.600E-01	28.68	
TL-208	1.41E+10Y	1.00	3.085E-01	3.085E-01	0.730E-01	23.67	
BI-211	7.04E+08Y	1.00	2.894E+00	2.894E+00	0.514E+00	17.75	
PB-212	1.41E+10Y	1.00	1.134E+00	1.134E+00	0.130E+00	11.43	
PO-212	1.41E+10Y	1.00	1.134E+00	1.134E+00	0.130E+00	11.43	
BI-214	1600.00Y	1.00	8.301E-01	8.301E-01	1.866E-01	22.48	
PB-214	1600.00Y	1.00	1.007E+00	1.007E+00	0.186E+00	18.50	
PO-214	1600.00Y	1.00	1.007E+00	1.007E+00	0.186E+00	18.50	
PO-216	1.41E+10Y	1.00	1.134E+00	1.134E+00	0.130E+00	11.43	
PO-218	1600.00Y	1.00	1.007E+00	1.007E+00	0.186E+00	18.50	
RA-224	1.41E+10Y	1.00	3.129E+00	3.129E+00	0.935E+00	29.89	
RA-226	1600.00Y	1.00	8.301E-01	8.301E-01	1.866E-01	22.48	
AC-228	1.41E+10Y	1.00	1.011E+00	1.011E+00	0.329E+00	32.60	
RA-228	1.41E+10Y	1.00	1.011E+00	1.011E+00	0.329E+00	32.60	
TH-228	1.91Y	1.01	1.134E+00	1.150E+00	0.131E+00	11.43	
TH-230	4.47E+09Y	1.00	8.301E-01	8.301E-01	1.866E-01	22.48	
TH-232	1.41E+10Y	1.00	1.011E+00	1.011E+00	0.329E+00	32.60	
TH-234	4.47E+09Y	1.00	2.002E+01	2.002E+01	0.492E+01	24.58	
U-234	4.47E+09Y	1.00	8.301E-01	8.301E-01	1.866E-01	22.48	
U-235	7.04E+08Y	1.00	5.044E-01	5.044E-01	2.907E-01	57.63	
NP-237	2.14E+06Y	1.00	8.308E-01	8.308E-01	4.197E-01	50.51	
U-238	4.47E+09Y	1.00	2.002E+01	2.002E+01	0.492E+01	24.58	
AM-243	7380.00Y	1.00	3.135E-01	3.135E-01	1.031E-01	32.89	
ANH-511	1.00E+09Y	1.00	1.018E-01	1.018E-01	0.777E-01	76.29	

Total Activity : 9.177E+01 9.185E+01

Grand Total Activity : 9.177E+01 9.185E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202023720

Page : 5
Acquisition date : 2-FEB-2010 09:49:21

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	83.91	135	755	1.40	167.81	162	31	1.88E-02	68.4	4.93E+00	T
0	98.49	271	504	1.05	196.98	193	10	3.76E-02	33.4	5.71E+00	T
0	209.39	39	345	1.14	418.78	414	9	5.48E-03	****	4.79E+00	T
0	327.98	55	158	1.53	655.95	652	9	7.59E-03	87.2	3.42E+00	T
0	410.16	28	132	0.90	820.32	812	12	3.94E-03	****	2.87E+00	T
0	727.11	81	98	2.27	1454.22	1447	19	1.12E-02	62.1	1.79E+00	T
0	795.20	49	57	0.70	1590.40	1585	12	6.77E-03	71.6	1.65E+00	T
0	836.88	11	40	1.35	1673.76	1667	8	1.54E-03	****	1.58E+00	T
0	1000.89	90	64	1.19	2001.79	1995	14	1.26E-02	42.8	1.34E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023720.CNF;1
* Acquisition date   : 2-FEB-2010 09:49:21.  Detector SN#      :
* Detector ID        : GAM06              Sensitivity         : 5.00000
* Geometry           : CAN                 Energy tolerance    : 1.50000
* Elapsed live time  : 0 02:00:00.00      Abundance limit     : 75.00000
* Elapsed real time  : 0 02:00:01.40      Half life ratio     : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00  Nuclide Library   : SOLID
* Sample ID          : G1202023720          Analyst initials: MXR1
* Batch Number       : 944966              Sample Quantity  : 1.43580E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 4-FEB-2009 13:05:54.47MS Isotope       :
* MSD ID             :                      MSD Isotope        :
* LCS ID             : 1032-A              LCS Isotope         :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.624E+01	2.394E+00	4.542E-01	3.005E-02	57.759
CD-109	2.873E+00	1.325E+00	1.677E+00	1.656E-01	1.713
SN-126	2.829E-01	1.304E-01	1.660E-01	1.634E-02	1.704
BA-137M	1.980E-01	5.675E-02	7.251E-02	3.581E-03	2.730
CS-137	2.093E-01	6.000E-02	7.665E-02	3.807E-03	2.730
TL-208	3.085E-01	7.302E-02	6.152E-02	3.888E-03	5.015
BI-211	2.894E+00	5.137E-01	3.408E-01	2.200E-02	8.493
PB-212	1.134E+00	1.296E-01	1.018E-01	7.504E-03	11.139
PO-212	1.134E+00	1.296E-01	1.018E-01	7.504E-03	11.139
BI-214	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
PB-214	1.007E+00	1.862E-01	1.188E-01	9.857E-03	8.475
PO-214	1.007E+00	1.862E-01	1.188E-01	9.857E-03	8.475
PO-216	1.134E+00	1.296E-01	1.018E-01	7.504E-03	11.139
PO-218	1.007E+00	1.862E-01	1.188E-01	9.857E-03	8.475
RA-224	3.129E+00	9.352E-01	1.159E+00	6.790E-02	2.701
RA-226	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
AC-228	1.011E+00	3.295E-01	2.052E-01	2.097E-02	4.925
RA-228	1.011E+00	3.295E-01	2.052E-01	2.097E-02	4.925

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.150E+00	1.314E-01	1.032E-01	7.608E-03	11.139
TH-230	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
TH-232	1.011E+00	3.295E-01	2.052E-01	2.097E-02	4.925
TH-234	2.002E+01	4.920E+00	2.977E+00	5.412E-01	6.726
U-234	8.301E-01	1.866E-01	1.197E-01	8.831E-03	6.937
U-235	5.044E-01	2.907E-01	3.766E-01	6.125E-02	1.339
NP-237	8.308E-01	4.197E-01	4.939E-01	1.127E-01	1.682
U-238	2.002E+01	4.920E+00	2.977E+00	5.412E-01	6.726
AM-243	3.135E-01	1.031E-01	1.209E-01	1.092E-02	2.592
ANH-511	1.018E-01	7.769E-02	4.420E-02	2.471E-03	2.304

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.806E-01		3.570E-01	5.966E-01	3.941E-02	0.303
NA-22	-6.015E-02		4.531E-02	6.160E-02	3.804E-03	-0.976
NA-24	-2.741E-02		7.710E-02	Half-Life too short		
AL-26	1.520E-02		2.562E-02	4.804E-02	2.759E-03	0.316
TI-44	1.572E-01		7.719E-02	8.997E-02	8.270E-03	1.748
SC-46	-7.237E-03		4.064E-02	6.660E-02	4.773E-03	-0.109
V-48	-5.915E-03		6.671E-02	1.095E-01	7.666E-03	-0.054
CR-51	-1.419E-01		3.867E-01	6.359E-01	4.189E-02	-0.223
MN-52	4.950E-02		1.585E-01	2.720E-01	1.712E-02	0.182
MN-54	1.408E-02		3.906E-02	6.718E-02	4.434E-03	0.210
CO-56	1.191E-02		4.253E-02	7.268E-02	4.886E-03	0.164
CO-57	-2.011E-02		2.940E-02	4.712E-02	2.878E-03	-0.427
CO-58	-3.029E-02		3.717E-02	5.727E-02	3.657E-03	-0.529
FE-59	-4.615E-03		9.449E-02	1.547E-01	1.135E-02	-0.030
CO-60	-1.370E-02		3.667E-02	5.625E-02	3.534E-03	-0.244
ZN-65	-9.759E-02		1.148E-01	1.424E-01	9.017E-03	-0.686
GE-68	-8.329E-01		1.337E+00	2.062E+00	1.351E-01	-0.404
AS-73	1.272E+00		1.313E+00	2.255E+00	2.062E-01	0.564
AS-74	1.330E-02		9.739E-02	1.602E-01	8.518E-03	0.083
SE-75	-3.328E-03		4.835E-02	7.699E-02	4.618E-03	-0.043
BR-77	5.311E+00		7.827E+00	1.283E+01	7.148E-01	0.414
SR-82	-2.158E-01		4.034E-01	6.483E-01	3.900E-02	-0.333
RB-83	4.816E-02		7.278E-02	1.191E-01	6.639E-03	0.404
RB-84	2.860E-02		7.500E-02	1.290E-01	9.143E-03	0.222
KR-85	1.137E+01		7.892E+00	1.279E+01	7.146E-01	0.889
SR-85	5.758E-02		3.995E-02	6.477E-02	3.618E-03	0.889
RB-86	-3.663E-01		8.334E-01	1.314E+00	8.616E-02	-0.279
Y-88	6.657E-03		3.086E-02	5.339E-02	3.035E-03	0.125
ZR-88	-9.218E-03		3.278E-02	5.356E-02	2.972E-03	-0.172
Y-91	-2.309E+00		1.891E+01	3.056E+01	1.833E+00	-0.076
NB-94	1.333E-02		3.535E-02	5.884E-02	3.125E-03	0.227
NB-95	6.060E-02		4.881E-02	8.560E-02	5.060E-03	0.708
NB-95M	3.578E-01		1.706E-01	2.634E-01	1.990E-02	1.359

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	4.038E-02		7.573E-02	1.274E-01	8.978E-03	0.317
NB-97	1.279E-02		1.829E-02	Half-Life too short		
ZR-97	1.674E+00		3.331E-01	Half-Life too short		
MO-99	2.282E+00		9.538E+00	1.566E+01	2.148E+00	0.146
TC-99M	1.221E+08		8.568E+08	Half-Life too short		
RH-101	-4.392E-02		3.982E-02	5.811E-02	3.264E-03	-0.756
RH-102	1.824E-02		3.203E-02	5.472E-02	3.081E-03	0.333
RU-103	1.275E-02		3.873E-02	6.523E-02	8.192E-03	0.195
RH-106	8.864E-02		3.428E-01	5.683E-01	6.504E-02	0.156
RU-106	8.864E-02		3.427E-01	5.683E-01	2.947E-02	0.156
AG-108M	-1.437E-02		3.649E-02	5.885E-02	3.609E-03	-0.244
AG-110M	5.245E-03		4.225E-02	5.993E-02	3.235E-03	0.088
IN-111	8.334E-01		1.010E+00	1.489E+00	8.753E-02	0.560
IN-113M	-1.111E-02		4.710E-02	7.717E-02	4.593E-03	-0.144
SN-113	-1.111E-02		4.710E-02	7.717E-02	4.593E-03	-0.144
IN-114M	-7.841E-02		2.222E-01	3.079E-01	1.713E-02	-0.255
CD-115	8.300E+00		7.485E+00	1.328E+01	7.379E-01	0.625
SN-117M	4.165E-02		5.722E-02	9.587E-02	5.267E-03	0.434
SB-122	-4.205E-01		1.657E+00	2.654E+00	1.446E-01	-0.158
I-123	2.922E-02		7.043E-01	Half-Life too short		
TE-123M	6.621E-04		3.192E-02	5.207E-02	2.900E-03	0.013
I-124	-2.195E-02		7.195E-01	1.008E+00	5.328E-02	-0.022
SB-124	1.323E-02		5.950E-02	1.039E-01	6.746E-03	0.127
SB-125	-5.844E-02		9.825E-02	1.562E-01	9.166E-03	-0.374
TE-125M	-1.106E+01		1.204E+01	1.904E+01	1.730E+00	-0.581
I-126	1.626E-01		2.018E-01	3.087E-01	1.537E-02	0.527
SB-126	3.435E-02		1.548E-01	2.213E-01	1.212E-02	0.155
SB-127	3.333E-01		1.154E+00	1.911E+00	1.645E-01	0.174
XE-127	1.871E-02		5.836E-02	8.394E-02	4.742E-03	0.223
I-131	3.745E-02		1.128E-01	1.916E-01	1.230E-02	0.195
TE-132	-4.141E-01		6.239E-01	9.685E-01	1.368E-01	-0.428
BA-133	-3.712E-02		5.169E-02	7.016E-02	8.110E-03	-0.529
I-133	1.621E-03		1.207E-03	Half-Life too short		
CS-134	1.017E-01	+	7.304E-02	9.419E-02	5.928E-03	1.079
CS-135	1.272E-01		1.804E-01	2.979E-01	2.315E-02	0.427
I-135	-1.728E+08		1.371E+08	Half-Life too short		
CS-136	-1.102E-01		1.018E-01	1.474E-01	1.058E-02	-0.747
CE-139	-3.316E-02		3.462E-02	5.419E-02	2.930E-03	-0.612
BA-140	4.210E-01		3.049E-01	4.933E-01	1.602E-01	0.853
LA-140	-2.032E-02		8.099E-02	1.299E-01	8.013E-03	-0.156
CE-141	7.543E-02		7.830E-02	1.175E-01	6.931E-03	0.642
CE-143	5.282E-04		7.591E-05	Half-Life too short		
CE-144	1.407E-02		2.408E-01	3.957E-01	5.627E-02	0.036
PM-144	3.146E-02		3.553E-02	6.160E-02	3.239E-03	0.511
PR-144	2.130E+00		2.406E+00	4.171E+00	2.192E-01	0.511
PM-146	5.009E-03		4.649E-02	7.729E-02	6.578E-03	0.065
ND-147	-1.259E-01		5.575E-01	8.971E-01	1.204E-01	-0.140
PM-149	4.639E+01		6.851E+01	1.185E+02	1.687E+01	0.392

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	1.744E-02		1.463E-01	1.702E-01	1.121E-02	0.102
GD-153	4.121E-01	+	1.416E-01	1.809E-01	1.512E-02	2.278
EU-154	-1.681E-01		1.272E-01	1.722E-01	1.648E-02	-0.976
EU-155	4.759E-02		1.289E-01	2.141E-01	1.624E-02	0.222
TB-160	-1.148E-01		1.486E-01	2.298E-01	1.623E-02	-0.500
HO-166M	-5.792E-03		6.418E-02	1.026E-01	5.536E-03	-0.056
TM-171	-3.074E+01		4.658E+01	6.204E+01	5.542E+00	-0.495
LU-176	-1.121E-02		2.505E-02	4.106E-02	2.449E-03	-0.273
LU-177	8.278E-01	+	1.432E+00	1.852E+00	1.053E-01	0.447
LU-177M	-1.083E-01		2.160E-01	2.966E-01	1.659E-02	-0.365
HF-181	-3.080E-02		4.737E-02	7.449E-02	4.192E-03	-0.413
W-181	1.334E+00		5.909E-01	9.192E-01	8.234E-02	1.451
TA-182	-7.473E-02		2.144E-01	3.391E-01	2.048E-02	-0.220
RE-183	5.182E-02		1.253E-01	2.073E-01	1.129E-02	0.250
RE-184	1.177E-01		2.595E-01	4.251E-01	2.511E-02	0.277
OS-185	-2.773E-03		4.454E-02	7.181E-02	3.620E-03	-0.039
RE-188	-2.038E-02		1.856E-01	3.016E-01	1.670E-02	-0.068
W-188	-2.793E+00		8.945E+00	1.284E+01	7.671E-01	-0.218
IR-192	2.051E-02		3.689E-02	6.359E-02	3.801E-03	0.322
AU-195	1.199E+00	+	4.118E-01	5.254E-01	4.295E-02	2.281
TL-200	-6.307E-06		1.119E-04	Half-Life too short		
TL-201	-4.879E+00		6.164E+00	9.712E+00	5.256E-01	-0.502
TL-202	2.365E-02		6.832E-02	1.155E-01	6.499E-03	0.205
HG-203	-2.663E-02		4.385E-02	7.189E-02	4.540E-03	-0.371
BI-207	1.768E-02		5.583E-02	9.481E-02	6.286E-03	0.186
TL-207	-5.333E-02		8.131E-01	1.180E+00	1.955E-01	-0.045
PO-209	-4.134E+00		7.206E+00	1.108E+01	8.030E-01	-0.373
BI-210	-2.277E+00		5.624E+00	9.293E+00	7.651E-01	-0.245
PB-210	-2.277E+00		5.624E+00	9.293E+00	7.651E-01	-0.245
PO-210	-2.277E+00		5.623E+00	9.293E+00	6.712E-01	-0.245
PB-211	-5.977E-02		1.097E+00	1.572E+00	9.796E-01	-0.038
BI-212	1.003E+00	+	6.271E-01	6.439E-01	4.842E-02	1.557
PO-215	-5.333E-02		8.131E-01	1.180E+00	1.955E-01	-0.045
RN-219	-3.616E-01		4.811E-01	7.098E-01	9.589E-02	-0.509
RN-220	4.291E+00		2.893E+01	4.781E+01	2.628E+00	0.090
RA-223	-5.333E-02		8.131E-01	1.180E+00	1.955E-01	-0.045
AC-227	2.977E-01		4.452E-01	7.330E-01	1.027E-01	0.406
TH-227	2.977E-01		4.461E-01	7.330E-01	1.242E-01	0.406
TH-229	1.286E-01		5.590E-01	9.136E-01	5.105E-02	0.141
PA-231	1.626E+00		1.711E+00	2.981E+00	4.129E-01	0.546
TH-231	-5.333E-02		8.131E-01	1.180E+00	1.955E-01	-0.045
U-231	3.132E+00		1.556E+00	1.870E+00	1.602E-01	1.675
PA-233	-2.371E-02		6.524E-02	1.073E-01	6.771E-03	-0.221
PA-234	1.548E-01		3.077E-01	5.330E-01	9.663E-02	0.290
PA-234M	2.097E+01	+	9.156E+00	1.306E+01	1.116E+00	1.605
NP-236	-7.124E-02		9.211E-02	1.455E-01	7.962E-03	-0.490
NP-239	-3.188E-01		2.239E-01	3.485E-01	2.251E-02	-0.915
AM-241	2.894E-01		2.531E-01	3.873E-01	3.787E-02	0.747

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.367E-01		1.284E-01	1.949E-01	1.486E-02	0.701
AM-246	8.828E-02		1.493E-01	2.598E-01	1.701E-02	0.340
CM-247	-1.634E-02		4.730E-02	6.616E-02	3.686E-03	-0.247
CF-249	3.306E-02		4.485E-02	7.755E-02	4.326E-03	0.426
CF-251	4.053E-02		1.445E-01	2.374E-01	1.299E-02	0.171

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202023720          *
* Acquisition date   : 2-FEB-2010 09:49:21 Detector SN#      :              *
* Detector ID        : GAM06                      Sensitivity   : 5.000        *
* Geometry           : CAN                      Energy tolerance: 1.500        *
* Elapsed live time  : 0 02:00:00.00           Abundance limit : 75.000        *
* Elapsed real time  : 0 02:00:01.40           Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 19-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202023720           Analyst initials: MXR1          *
* Batch Number       : 944966                Sample Quantity : 1.4358E+02 GRAM  *
* Recovery           : 1.00000               Carrier Weight  : 0.00000        *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 4-FEB-2009 13:05:54 MS Isotope        :              *
* MSD DPM             : 0.000                  MSD Isotope     :              *
* LCS DPM             : 0.000                  LCS Isotope     :              *
* LCSD DPM           : 0.000                  LCSD Isotope     :              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.624E+01	2.346E+00	2.284E-01	1.197E+00
CD-109	2.873E+00	1.298E+00	8.960E-01	6.624E-01
SN-126	2.829E-01	1.278E-01	8.870E-02	6.522E-02
BA-137M	1.980E-01	5.562E-02	3.711E-02	2.838E-02
CS-137	2.093E-01	5.880E-02	3.923E-02	3.000E-02
TL-208	3.085E-01	7.156E-02	3.157E-02	3.651E-02
BI-211	2.894E+00	5.034E-01	1.768E-01	2.568E-01
PB-212	1.134E+00	1.270E-01	5.326E-02	6.478E-02
PO-212	1.134E+00	1.270E-01	5.326E-02	6.478E-02
BI-214	8.301E-01	1.829E-01	6.136E-02	9.329E-02
PB-214	1.007E+00	1.825E-01	6.164E-02	9.312E-02
PO-214	1.007E+00	1.825E-01	6.164E-02	9.312E-02
PO-216	1.134E+00	1.270E-01	5.326E-02	6.478E-02
PO-218	1.007E+00	1.825E-01	6.164E-02	9.312E-02
RA-224	3.129E+00	9.165E-01	6.061E-01	4.676E-01
RA-226	8.301E-01	1.829E-01	6.136E-02	9.329E-02
AC-228	1.011E+00	3.229E-01	1.043E-01	1.647E-01
RA-228	1.011E+00	3.229E-01	1.043E-01	1.647E-01
TH-228	1.150E+00	1.288E-01	5.400E-02	6.569E-02
TH-230	8.301E-01	1.828E-01	6.136E-02	9.329E-02
TH-232	1.011E+00	3.229E-01	1.043E-01	1.647E-01
U-234	2.002E+01	4.822E+00	1.601E+00	2.460E+00
U-235	8.301E-01	1.828E-01	6.136E-02	9.329E-02
NP-237	5.044E-01	2.848E-01	1.991E-01	1.453E-01
U-238	8.308E-01	4.113E-01	2.639E-01	2.098E-01
AM-243	2.002E+01	4.822E+00	1.601E+00	2.460E+00
ANH-511	3.135E-01	1.010E-01	6.481E-02	5.155E-02
	1.018E-01	7.614E-02	2.275E-02	3.885E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	1.806E-01	3.499E-01	3.075E-01	1.785E-01	NOT IDENT.
NA-22	-6.015E-02	4.440E-02	3.107E-02	2.265E-02	NOT IDENT.
NA-24	-2.741E+04	1.511E+05	0.000E+00	7.710E+04	SHORT HLIF
AL-26	1.520E-02	2.511E-02	2.403E-02	1.281E-02	NOT IDENT.
TI-44	1.572E-01	7.565E-02	4.817E-02	3.860E-02	NOT IDENT.
SC-46	-7.237E-03	3.983E-02	3.386E-02	2.032E-02	FAIL ABUN
V-48	-5.915E-03	6.537E-02	5.554E-02	3.335E-02	NOT IDENT.
CR-51	-1.419E-01	3.789E-01	3.306E-01	1.933E-01	NOT IDENT.
MN-52	4.950E-02	1.553E-01	1.368E-01	7.926E-02	NOT IDENT.
MN-54	1.408E-02	3.828E-02	3.421E-02	1.953E-02	NOT IDENT.
CO-56	1.191E-02	4.168E-02	3.699E-02	2.126E-02	NOT IDENT.
CO-57	-2.011E-02	2.881E-02	2.500E-02	1.470E-02	NOT IDENT.
CO-58	-3.029E-02	3.643E-02	2.918E-02	1.859E-02	NOT IDENT.
FE-59	-4.615E-03	9.260E-02	7.828E-02	4.725E-02	FAIL ABUN
CO-60	-1.370E-02	3.593E-02	2.834E-02	1.833E-02	NOT IDENT.
ZN-65	-9.759E-02	1.125E-01	7.201E-02	5.739E-02	NOT IDENT.
GE-68	-8.329E-01	1.310E+00	1.044E+00	6.683E-01	NOT IDENT.
AS-73	1.272E+00	1.287E+00	1.217E+00	6.566E-01	NOT IDENT.
AS-74	1.330E-02	9.544E-02	8.217E-02	4.870E-02	NOT IDENT.
SE-75	-3.328E-03	4.738E-02	4.019E-02	2.417E-02	NOT IDENT.
BR-77	5.311E+00	7.671E+00	6.600E+00	3.914E+00	FAIL ABUN
SR-82	-2.158E-01	3.953E-01	3.306E-01	2.017E-01	NOT IDENT.
RB-83	4.816E-02	7.133E-02	6.130E-02	3.639E-02	NOT IDENT.
RB-84	2.860E-02	7.350E-02	6.562E-02	3.750E-02	NOT IDENT.
KR-85	1.137E+01	7.734E+00	6.585E+00	3.946E+00	NOT IDENT.
SR-85	5.758E-02	3.916E-02	3.333E-02	1.998E-02	NOT IDENT.
RB-86	-3.663E-01	8.167E-01	6.651E-01	4.167E-01	NOT IDENT.
Y-88	6.657E-03	3.025E-02	2.670E-02	1.543E-02	NOT IDENT.
ZR-88	-9.218E-03	3.213E-02	2.773E-02	1.639E-02	NOT IDENT.
Y-91	-2.309E+00	1.853E+01	1.543E+01	9.455E+00	NOT IDENT.
NB-94	1.333E-02	3.464E-02	3.008E-02	1.767E-02	NOT IDENT.
NB-95	6.060E-02	4.783E-02	4.367E-02	2.440E-02	NOT IDENT.
NB-95M	3.578E-01	1.672E-01	1.378E-01	8.532E-02	NOT IDENT.
ZR-95	4.038E-02	7.421E-02	6.500E-02	3.786E-02	NOT IDENT.
NB-97	1.279E+04	3.585E+04	0.000E+00	1.829E+04	SHORT HLIF
ZR-97	1.674E+06	6.530E+05	0.000E+00	3.331E+05	SHORT HLIF
MO-99	2.282E+00	9.347E+00	7.993E+00	4.769E+00	NOT IDENT.
TC-99M	1.221E+14	1.679E+15	0.000E+00	8.568E+14	SHORT HLIF
RH-101	-4.392E-02	3.903E-02	3.052E-02	1.991E-02	NOT IDENT.
RH-102	1.824E-02	3.139E-02	2.821E-02	1.601E-02	NOT IDENT.
RU-103	1.275E-02	3.795E-02	3.359E-02	1.936E-02	FAIL ABUN
RH-106	8.864E-02	3.359E-01	2.912E-01	1.714E-01	FAIL ABUN
RU-106	8.864E-02	3.358E-01	2.912E-01	1.713E-01	FAIL ABUN
AG-108M	-1.437E-02	3.576E-02	3.040E-02	1.824E-02	NOT IDENT.
AG-110M	5.245E-03	4.140E-02	3.067E-02	2.112E-02	NOT IDENT.
IN-111	8.334E-01	9.893E-01	7.785E-01	5.048E-01	NOT IDENT.
IN-113M	-1.111E-02	4.616E-02	3.995E-02	2.355E-02	NOT IDENT.
SN-113	-1.111E-02	4.616E-02	3.995E-02	2.355E-02	NOT IDENT.
IN-114M	-7.841E-02	2.178E-01	1.619E-01	1.111E-01	NOT IDENT.
CD-115	8.300E+00	7.335E+00	6.832E+00	3.742E+00	NOT IDENT.
SN-117M	4.165E-02	5.608E-02	5.059E-02	2.861E-02	NOT IDENT.
SB-122	-4.205E-01	1.624E+00	1.363E+00	8.286E-01	NOT IDENT.
I-123	2.922E+04	1.380E+06	0.000E+00	7.043E+05	SHORT HLIF
TE-123M	6.621E-04	3.128E-02	2.748E-02	1.596E-02	NOT IDENT.
I-124	-2.195E-02	7.052E-01	5.170E-01	3.598E-01	NOT IDENT.
SB-124	1.323E-02	5.831E-02	5.205E-02	2.975E-02	FAIL ABUN
SB-125	-5.844E-02	9.628E-02	8.072E-02	4.912E-02	NOT IDENT.
TE-125M	-1.106E+01	1.179E+01	1.012E+01	6.018E+00	NOT IDENT.
I-126	1.626E-01	1.978E-01	1.579E-01	1.009E-01	NOT IDENT.
SB-126	3.435E-02	1.517E-01	1.131E-01	7.740E-02	FAIL ABUN
SB-127	3.333E-01	1.131E+00	9.772E-01	5.769E-01	FAIL ABUN
XE-127	1.871E-02	5.719E-02	4.407E-02	2.918E-02	NOT IDENT.
I-131	3.745E-02	1.106E-01	9.936E-02	5.641E-02	NOT IDENT.
TE-132	-4.141E-01	6.114E-01	5.072E-01	3.119E-01	NOT IDENT.
BA-133	-3.712E-02	5.065E-02	3.640E-02	2.584E-02	NOT IDENT.
I-133	1.621E+03	2.366E+03	0.000E+00	1.207E+03	SHORT HLIF
CS-134	1.017E-01	7.158E-02	4.801E-02	3.652E-02	FAIL ABUN
CS-135	1.272E-01	1.768E-01	1.555E-01	9.022E-02	NOT IDENT.
I-135	-1.728E+14	2.687E+14	0.000E+00	1.371E+14	SHORT HLIF
CS-136	-1.102E-01	9.975E-02	7.469E-02	5.089E-02	FAIL ABUN
CE-139	-3.316E-02	3.393E-02	2.857E-02	1.731E-02	NOT IDENT.
BA-140	4.210E-01	2.988E-01	2.537E-01	1.525E-01	NOT IDENT.
LA-140	-2.032E-02	7.937E-02	6.516E-02	4.050E-02	FAIL ABUN
CE-141	7.543E-02	7.673E-02	6.211E-02	3.915E-02	NOT IDENT.
CE-143	5.282E+02	1.488E+02	0.000E+00	7.591E+01	SHORT HLIF
CE-144	1.407E-02	2.360E-01	2.096E-01	1.204E-01	NOT IDENT.
PM-144	3.146E-02	3.482E-02	3.149E-02	1.777E-02	NOT IDENT.

PR-144	2.130E+00	2.358E+00	2.132E+00	1.203E+00	NOT IDENT.
PM-146	5.009E-03	4.556E-02	3.989E-02	2.324E-02	NOT IDENT.
ND-147	-1.259E-01	5.464E-01	4.614E-01	2.788E-01	FAIL ABUN
PM-149	4.639E+01	6.714E+01	6.174E+01	3.425E+01	NOT IDENT.
EU-152	1.744E-02	1.433E-01	8.835E-02	7.313E-02	NOT IDENT.
GD-153	4.121E-01	1.387E-01	9.645E-02	7.078E-02	FAIL ABUN
EU-154	-1.681E-01	1.247E-01	8.683E-02	6.361E-02	NOT IDENT.
EU-155	4.759E-02	1.264E-01	1.139E-01	6.447E-02	FAIL ABUN
TB-160	-1.148E-01	1.456E-01	1.168E-01	7.429E-02	FAIL ABUN
HO-166M	-5.792E-03	6.289E-02	5.243E-02	3.209E-02	FAIL ABUN
TM-171	-3.074E+01	4.565E+01	3.333E+01	2.329E+01	NOT IDENT.
LU-176	-1.121E-02	2.455E-02	2.137E-02	1.252E-02	FAIL ABUN
LU-177	8.278E-01	1.403E+00	9.720E-01	7.158E-01	FAIL ABUN
LU-177M	-1.083E-01	2.117E-01	1.534E-01	1.080E-01	NOT IDENT.
HF-181	-3.080E-02	4.642E-02	3.839E-02	2.369E-02	NOT IDENT.
W-181	1.334E+00	5.791E-01	4.940E-01	2.955E-01	NOT IDENT.
TA-182	-7.473E-02	2.101E-01	1.712E-01	1.072E-01	FAIL ABUN
RE-183	5.182E-02	1.228E-01	1.094E-01	6.267E-02	FAIL ABUN
RE-184	1.177E-01	2.543E-01	2.222E-01	1.298E-01	NOT IDENT.
OS-185	-2.773E-03	4.365E-02	3.677E-02	2.227E-02	NOT IDENT.
RE-188	-2.038E-02	1.819E-01	1.592E-01	9.281E-02	NOT IDENT.
W-188	-2.793E+00	8.766E+00	6.690E+00	4.472E+00	FAIL ABUN
IR-192	2.051E-02	3.615E-02	3.307E-02	1.844E-02	FAIL ABUN
AU-195	1.199E+00	4.035E-01	2.800E-01	2.059E-01	FAIL ABUN
TL-200	-6.307E+00	2.193E+02	0.000E+00	1.119E+02	SHORT HLIF
TL-201	-4.879E+00	6.041E+00	5.119E+00	3.082E+00	NOT IDENT.
TL-202	2.365E-02	6.696E-02	5.965E-02	3.416E-02	NOT IDENT.
HG-203	-2.663E-02	4.297E-02	3.749E-02	2.193E-02	FAIL ABUN
BI-207	1.768E-02	5.471E-02	4.801E-02	2.791E-02	FAIL ABUN
TL-207	-5.333E-02	7.968E-01	6.136E-01	4.065E-01	FAIL ABUN
PO-209	-4.134E+00	7.062E+00	5.634E+00	3.603E+00	NOT IDENT.
BI-210	-2.277E+00	5.511E+00	5.028E+00	2.812E+00	NOT IDENT.
PB-210	-2.277E+00	5.511E+00	5.028E+00	2.812E+00	NOT IDENT.
PO-210	-2.277E+00	5.511E+00	5.028E+00	2.812E+00	NOT IDENT.
PB-211	-5.977E-02	1.075E+00	8.132E-01	5.485E-01	NOT IDENT.
BI-212	1.003E+00	6.146E-01	3.288E-01	3.136E-01	FAIL ABUN
PO-215	-5.333E-02	7.968E-01	6.136E-01	4.065E-01	FAIL ABUN
RN-219	-3.616E-01	4.715E-01	3.672E-01	2.405E-01	NOT IDENT.
RN-220	4.291E+00	2.835E+01	2.457E+01	1.446E+01	NOT IDENT.
RA-223	-5.333E-02	7.968E-01	6.136E-01	4.065E-01	FAIL ABUN
AC-227	2.977E-01	4.363E-01	3.829E-01	2.226E-01	NOT IDENT.
TH-227	2.977E-01	4.372E-01	3.829E-01	2.231E-01	NOT IDENT.
TH-229	1.286E-01	5.478E-01	4.801E-01	2.795E-01	FAIL ABUN
PA-231	1.626E+00	1.677E+00	1.554E+00	8.556E-01	NOT IDENT.
TH-231	-5.333E-02	7.968E-01	6.136E-01	4.065E-01	FAIL ABUN
U-231	3.132E+00	1.525E+00	9.971E-01	7.778E-01	FAIL ABUN
PA-233	-2.371E-02	6.393E-02	5.584E-02	3.262E-02	FAIL ABUN
PA-234	1.548E-01	3.016E-01	2.706E-01	1.539E-01	FAIL ABUN
PA-234M	2.097E+01	8.973E+00	6.624E+00	4.578E+00	FAIL ABUN
NP-236	-7.124E-02	9.027E-02	7.678E-02	4.605E-02	FAIL ABUN
NP-239	-3.188E-01	2.194E-01	1.851E-01	1.120E-01	FAIL ABUN
AM-241	2.894E-01	2.480E-01	2.085E-01	1.265E-01	NOT IDENT.
CM-243	1.367E-01	1.258E-01	1.038E-01	6.420E-02	FAIL ABUN
AM-246	8.828E-02	1.463E-01	1.315E-01	7.465E-02	NOT IDENT.
CM-247	-1.634E-02	4.635E-02	3.423E-02	2.365E-02	NOT IDENT.
CF-249	3.306E-02	4.395E-02	4.016E-02	2.243E-02	NOT IDENT.
CF-251	4.053E-02	1.417E-01	1.250E-01	7.227E-02	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON ,SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.50	505.0168
46.50	505.0168
46.50	505.0168
48.70	568.6995
49.72	600.6198
51.35	534.8932
52.39	538.5857
52.97	554.6495
53.15	546.5923
53.44	557.8329
54.07	554.7610
56.28	653.1290
56.28	653.1317
57.37	0.0000
57.53	617.2105
57.53	617.2118
57.60	599.6009
57.98	589.6484
57.98	589.6484
59.32	577.6127
59.32	577.6127
59.40	577.6855
59.54	577.8132
59.72	595.7164
60.01	595.9882
61.10	623.6692
61.14	629.6337
61.30	629.7906
63.00	655.5837
63.29	655.8726
63.29	655.8726
63.58	669.1745
64.28	635.6447
65.12	639.4284
65.20	639.5043
65.20	639.5043
66.05	679.1230
66.72	702.2031
66.83	702.3207
66.91	660.0604
67.20	655.3570
67.20	655.3570
67.75	620.9701
67.85	621.0613
68.90	678.2170
68.90	678.2170
69.30	685.3577
69.67	690.2274
70.82	635.7496
70.82	635.7496
70.83	635.7599
72.80	724.3814
72.87	724.4518
72.87	724.4518
74.67	726.2648
74.81	726.4056
74.81	726.4056
74.81	726.4056
74.81	726.4056
74.81	726.4056
74.81	726.4056
74.81	726.4056
74.97	726.5640
75.28	726.8749
75.70	727.2914
77.11	742.9015
77.11	742.9015

77.11	742.9015
77.11	742.9015
77.11	742.9015
77.11	742.9015
77.11	742.9015
78.38	778.3438
79.62	813.8570
79.80	814.0497
79.80	814.0497
80.11	814.3860
80.18	814.4611
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80.30	814.5884
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81.07	727.7766
81.07	727.7766
81.07	727.7766
81.07	727.7766
82.60	748.3207
83.37	681.7996
83.78	682.1617
83.78	682.1617
83.78	682.1617
83.78	682.1617
84.21	682.5400
84.90	683.1417
85.43	683.6017
86.29	684.3475
86.50	684.5300
86.54	684.5626
86.59	684.6061
86.72	684.7205
86.79	684.7776
86.94	684.9083
87.30	685.2186
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87.30	685.2186
87.30	685.2186
87.57	685.4500
87.88	685.7168
88.03	685.8447
88.36	686.1251
88.47	686.2204
89.95	687.4780
91.11	688.4580
92.29	689.4462
92.38	689.5224
92.38	689.5224
93.35	690.3309
94.00	690.8699
94.67	395.3177
94.67	395.3200
94.90	395.4290
94.90	395.4290
94.90	395.4290
94.90	395.4290
95.87	395.8850
95.87	395.8850
96.73	396.2881
97.43	396.6134
98.44	400.1947
98.44	400.1963
98.88	400.4002
99.55	413.1859
99.55	413.1859
99.86	405.5343
100.00	405.5994
100.10	405.6486
103.18	408.6425
103.76	396.3764
105.00	446.0131
105.31	425.7089
108.00	568.6512
109.28	546.7897

111.00	473.7854
111.00	473.7854
111.76	471.2100
112.95	414.4431
115.19	555.2319
116.30	516.1755
117.00	450.9917
117.00	450.9917
117.66	441.3629
121.11	395.0544
121.62	408.2371
121.78	412.2958
122.06	412.4139
122.32	395.5423
122.32	395.5423
122.32	395.5423
122.32	395.5423
123.07	374.8527
127.23	409.5463
129.76	402.5208
131.20	395.0266
133.02	436.1034
133.54	410.0640
135.34	416.8438
136.00	401.9189
136.25	413.1548
136.48	411.2194
140.51	359.5081
140.51	0.0000
142.18	364.9543
142.65	374.8927
143.76	364.0598
144.24	329.7369
144.24	329.7369
144.24	329.7369
144.24	329.7369
145.22	351.2725
145.44	351.3434
147.16	350.2578
152.43	341.2276
152.70	351.5890
153.22	358.9503
154.21	352.0561
154.21	352.0561
154.21	352.0561
154.21	352.0561
155.03	346.1309
156.02	361.8965
158.56	318.2642
159.00	0.0000
159.00	349.3954
160.31	386.0108
161.27	344.9001
162.32	353.5008
162.64	350.4862
163.35	339.2845
163.89	325.9458
165.85	391.9912
167.43	377.9330
171.28	337.3619
171.86	344.8393
172.10	344.9073
176.55	325.1793
176.60	325.1911
181.06	370.5706
184.41	336.7179
185.71	289.0906
186.00	289.1574
190.27	305.3848
192.34	306.9302
193.63	291.2860
197.04	309.0919
198.01	336.4400
198.60	327.2371
200.40	297.4759
201.83	304.6360
202.84	292.8751
205.31	308.8499

208.36	309.5376
208.81	264.9131
209.75	263.3703
209.75	263.3703
210.97	268.7706
215.65	278.7468
216.55	272.4373
218.09	268.4043
222.10	284.3537
223.80	267.3039
226.40	261.2512
227.00	283.1392
227.08	283.1551
227.20	283.1789
228.16	296.4417
228.18	296.4458
228.18	296.4458
231.56	0.0000
235.69	290.9438
236.00	283.9924
236.00	283.9924
238.63	265.6125
238.63	265.6125
238.63	265.6125
238.63	265.6125
239.00	265.6771
240.98	266.0261
241.98	269.2815
241.98	269.2815
241.98	269.2815
244.69	216.8656
245.39	218.7286
247.94	228.5872
248.90	253.0388
249.79	260.9230
252.40	225.9218
252.85	207.1550
252.85	207.1550
254.15	0.0000
256.20	217.5870
256.20	217.5870
260.50	204.8185
260.90	207.0987
262.80	225.1787
264.65	202.0010
268.24	214.7520
268.79	217.0630
269.46	214.9131
269.46	214.9131
269.46	214.9131
269.46	214.9131
271.23	216.2680
273.65	282.7963
276.40	194.4640
277.35	196.8243
277.60	204.7278
277.60	204.7278
278.00	216.9294
278.60	224.2094
279.20	232.3984
279.53	229.7397
280.46	224.4587
281.68	218.3081
283.67	187.8576
284.30	177.9902
285.00	162.6965
285.90	184.4890
286.10	198.9802
286.10	198.9802
287.40	230.8136
288.45	0.0000
290.67	204.0491
290.80	204.0628
291.72	186.0240
293.26	0.0000
293.70	186.2392
295.21	252.7757
295.21	252.7757

295.21	252.7757
295.96	242.5781
296.50	244.1696
297.23	216.9613
298.57	170.0576
299.80	174.7367
299.80	174.7367
300.09	171.7254
300.09	171.7254
300.09	171.7254
300.09	171.7254
300.12	171.7277
301.29	182.4878
302.84	206.3933
303.76	204.6734
303.91	204.6898
304.40	202.0051
304.40	202.0051
304.84	189.2539
306.84	163.8401
308.46	167.6532
311.98	159.7202
316.51	159.1993
318.01	178.6732
319.02	191.6713
319.41	187.1035
320.08	173.3423
323.87	172.4684
323.87	172.4684
323.87	172.4684
323.87	172.4684
325.23	152.5605
328.77	174.4681
333.44	111.4424
334.20	160.2637
334.20	160.2637
334.30	160.2721
338.28	135.9358
338.28	135.9358
338.28	135.9358
338.28	135.9358
338.32	135.9375
338.32	135.9375
338.32	135.9375
340.50	156.9125
340.57	156.9166
344.27	143.2109
345.85	136.4722
350.59	0.0000
351.07	138.7157
351.92	138.7753
351.92	138.7753
351.92	138.7753
355.39	0.0000
356.01	150.3398
364.48	135.8842
366.43	125.6275
367.43	127.5793
367.94	0.0000
369.80	147.5983
374.96	127.1053
383.85	136.2305
387.95	134.5903
388.63	128.9042
391.69	134.8295
391.69	134.8295
392.90	137.7773
398.62	130.4750
400.65	132.5201
401.10	133.4025
401.81	148.9264
402.60	145.7774
404.84	120.2713
410.95	122.2197
411.60	117.4309
413.65	133.6423
414.70	135.3174
415.30	118.7809

415.76	129.3401
417.63	0.0000
418.52	128.7756
423.70	115.4904
427.08	126.3580
427.89	125.4317
432.53	111.0762
433.93	129.6685
439.47	104.5758
439.56	104.5797
439.89	107.5280
443.98	112.6163
444.90	109.7223
445.03	109.7291
445.03	109.7291
445.03	109.7291
445.03	109.7291
453.90	107.1997
463.38	122.4470
468.07	110.8160
473.00	126.9094
475.06	100.2245
475.35	98.2519
476.78	100.2960
477.59	101.3239
477.96	99.3518
482.03	123.4036
484.57	99.6228
487.03	94.7379
490.36	0.0000
492.35	82.9504
497.08	76.1002
507.63	0.0000
510.53	0.0000
510.84	76.5191
511.00	76.5237
511.85	76.5501
511.85	76.5501
513.99	73.9259
513.99	73.9259
520.41	73.2700
520.65	73.2770
527.90	65.8823
528.96	0.0000
529.64	63.8982
529.87	0.0000
531.02	93.3611
537.32	77.3100
543.00	108.0600
546.56	0.0000
549.76	91.9841
552.65	90.0367
555.20	106.5086
563.23	107.8531
563.90	97.6069
568.70	73.0766
569.32	77.2119
569.50	82.3652
569.67	82.3691
573.80	106.5549
574.00	91.6667
574.64	90.2557
578.91	94.6991
579.30	0.0000
583.14	84.4979
585.48	75.9401
591.81	89.2586
592.07	84.0771
593.00	87.2197
595.88	90.4260
600.56	96.6748
602.52	0.0000
602.71	104.1895
602.71	104.1895
603.60	97.2754
604.41	100.7778
604.70	100.7873
609.31	89.8108

609.31	89.8108
609.31	89.8108
609.31	89.8108
610.33	80.0920
612.46	88.8640
614.37	87.1806
618.01	74.3715
621.84	76.5662
621.84	76.5662
631.29	76.8158
633.02	67.3844
633.10	67.3859
634.78	75.8531
635.90	74.8273
636.97	70.6379
645.85	69.7915
646.12	72.9705
656.30	60.1309
657.75	72.5458
657.90	0.0000
661.65	108.0730
661.65	108.0730
664.57	0.0000
666.33	63.8789
666.33	63.8789
675.00	76.8709
677.61	63.0447
685.20	66.4124
692.80	82.6810
695.00	66.6212
696.49	61.2778
696.49	61.2778
697.00	70.9645
697.49	78.5035
698.33	75.2961
698.50	73.1498
699.00	89.3000
702.63	70.0131
706.10	80.8722
706.58	0.0000
706.67	77.6514
709.31	65.8431
711.68	71.2932
713.82	78.9063
717.42	59.5171
720.50	59.5735
721.93	0.0000
722.20	59.6050
722.78	61.4216
722.78	61.4216
722.89	61.4244
722.95	61.4258
723.30	66.8532
724.18	66.8713
727.18	65.1240
733.00	48.9298
735.90	76.1814
739.58	68.6386
742.81	61.0723
744.21	56.7341
747.13	82.9933
751.79	66.7053
752.31	62.3410
753.82	64.5586
755.35	66.7768
756.15	61.3184
756.87	64.6177
763.93	86.7033
765.79	72.4759
766.42	72.4888
766.84	70.3016
776.49	80.7830
778.00	68.8797
778.57	65.2162
778.89	65.2220
783.80	63.4760
785.46	68.1088
792.07	69.5572

795.84	41.1464
796.30	45.9001
798.80	61.7727
801.93	69.7552
805.60	44.4355
810.29	56.5459
810.76	60.2617
815.85	55.7068
817.79	58.5242
818.51	59.4648
819.60	66.9185
826.30	54.9392
828.27	0.0000
831.60	51.1574
831.96	51.1629
834.83	63.4719
836.80	0.0000
846.75	61.8079
848.13	60.8952
856.28	0.0000
856.80	59.5636
860.37	65.7988
867.32	46.8185
867.82	56.5125
871.10	63.1615
873.19	47.1619
874.81	54.7325
875.33	0.0000
876.40	55.6990
879.36	67.0811
880.27	62.3732
880.51	64.2674
881.50	56.7212
883.24	52.0179
884.67	60.5534
889.25	56.8384
896.60	48.4070
898.02	48.4247
899.00	52.2361
903.28	39.1197
911.07	46.6852
911.07	46.6852
911.07	46.6852
919.63	50.0007
920.93	47.7600
925.00	39.2041
925.24	40.1628
926.50	51.6555
935.52	46.9813
937.48	61.3932
944.10	50.9275
946.00	45.1841
949.00	38.4839
962.29	46.3350
964.01	46.3545
966.15	62.9441
968.20	87.0062
969.11	84.1255
969.11	84.1255
969.11	84.1255
977.42	58.1372
980.50	38.7874
983.50	46.5801
989.30	35.9567
996.32	50.0642
1001.03	43.8565
1001.68	33.4194
1004.76	41.8056
1021.30	0.0000
1024.50	0.0000
1034.80	57.9701
1036.00	53.0706
1037.82	58.9941
1038.57	55.0703
1038.76	0.0000
1045.16	40.3827
1046.59	53.2046
1048.07	56.1790

1050.47	34.5158
1050.47	34.5158
1062.04	48.4537
1063.62	48.4716
1076.63	59.5313
1077.35	58.5487
1078.86	43.6777
1085.78	61.6443
1099.22	51.8604
1112.02	52.8107
1112.84	58.5238
1115.52	70.3544
1120.29	53.1100
1120.29	53.1100
1120.29	53.1100
1120.29	53.1100
1120.51	53.1121
1121.28	51.5458
1124.00	0.0000
1129.67	50.3901
1131.51	0.0000
1147.95	0.0000
1167.94	60.7568
1173.22	59.8138
1175.09	54.7668
1177.93	58.8591
1189.05	61.0352
1204.90	55.1162
1205.75	0.0000
1213.00	62.3676
1221.42	68.6248
1230.97	87.2343
1235.34	78.0688
1236.41	0.0000
1238.25	54.4751
1246.25	80.3042
1260.41	0.0000
1271.85	44.5030
1274.45	53.8451
1274.54	53.8472
1291.56	35.3281
1298.22	0.0000
1312.09	35.4734
1325.50	26.1525
1325.50	26.1525
1332.49	28.2843
1333.61	27.2420
1360.21	21.0645
1362.66	0.0000
1365.15	18.9756
1368.21	22.1519
1368.53	0.0000
1376.25	11.6213
1384.27	23.2783
1394.10	24.3813
1395.20	27.5679
1407.95	20.1937
1434.06	11.7484
1436.60	21.3704
1457.56	0.0000
1460.81	14.7199
1489.15	20.4983
1509.49	17.3242
1596.49	21.6724
1620.62	7.5692
1678.03	0.0000
1691.02	7.6582
1691.02	7.6582
1706.46	0.0000
1750.46	0.0000
1764.49	3.3903
1764.49	3.3903
1764.49	3.3903
1764.49	3.3903
1770.23	16.9666
1771.40	39.7574
1791.20	0.0000
1808.65	5.8523

1836.01

8.8154

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202023720

Total Uranium Activity	5.9795E+01	ug/g
Total Uranium Counting Unc.	1.4345E+01	ug/g
Total Uranium Tpu	7.3190E-06	ug/g
Total Uranium Mda	4.7630E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 944966                      SAMPLE ID   : G1202023720
*  ANALYST       : MXR1                        DETECTOR    : GAM06
*  SAMPLE DATE   : 19-JAN-2010 12:00:00.00    COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 09:49:21.21    SAMPLE ALQT  : 143.580 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.246E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.474E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 4.179E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.042E+00

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VAX/VMS Nuclide Identification Report Generated 2-FEB-2010 10:51:21.41

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023721.CNF;1
Sample date   : 26-JAN-2010 00:00:00 Acquisition date : 2-FEB-2010 09:50:49.
Sample ID     : G1202023721 Sample quantity : 1.55440E+02 GRAM
Detector name : GAM07 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.32 0.0%
Energy tolerance: 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 944966 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	5	57.88	169	862	1.41	115.42	112	13	4.69E-02	27.7	9.50E-01
2	5	59.55	4214	567	0.97	118.76	112	13	1.17E+00	1.8	
3	3	74.63*	190	435	1.34	148.90	144	14	5.29E-02	20.4	9.97E-01
4	3	77.15*	305	355	1.11	153.94	144	14	8.47E-02	11.9	
5	2	88.03	1567	297	1.07	175.71	171	11	4.35E-01	3.1	2.67E+00
6	2	89.77	61	225	1.02	179.18	171	11	1.71E-02	66.9	
7	2	92.35*	53	144	1.00	184.35	182	9	1.46E-02	37.8	6.24E-01
8	2	93.46*	33	300	1.26	186.56	182	9	9.27E-03	98.1	
9	0	122.19	249	357	0.99	244.01	239	10	6.91E-02	15.6	
10	0	186.26*	98	364	2.13	372.13	367	13	2.71E-02	42.1	
11	2	238.65*	527	203	1.17	476.89	472	15	1.47E-01	6.4	2.65E-01
12	2	241.51	88	268	1.51	482.61	472	15	2.46E-02	37.3	
13	0	295.04	79	219	1.25	589.66	585	9	2.19E-02	35.7	
14	0	338.30	120	161	1.49	676.17	671	10	3.32E-02	21.9	
15	0	352.03*	205	167	1.22	703.61	699	10	5.70E-02	13.8	
16	0	510.72*	36	157	1.42	1020.95	1015	13	1.00E-02	78.6	
17	0	583.37*	181	111	1.49	1166.23	1161	13	5.03E-02	14.3	
18	0	609.27*	150	110	1.44	1218.01	1213	10	4.16E-02	15.5	
19	0	661.64	2301	141	1.52	1322.74	1316	14	6.39E-01	2.4	
20	0	911.62*	55	125	1.25	1822.64	1817	10	1.53E-02	41.0	
21	0	968.83*	58	106	1.19	1937.05	1932	10	1.61E-02	36.1	
22	0	1173.11	1807	70	1.88	2345.56	2336	20	5.02E-01	2.6	
23	0	1332.38*	1587	16	1.90	2664.07	2656	16	4.41E-01	2.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 2-FEB-2010 10:51:24

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023721.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 26-JAN-2010 00:00:00 Acquisition date : 2-FEB-2010 09:50:49
Sample ID         : G1202023721 Sample quantity : 155.44 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA7 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.32 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	2.025E-01	6.553E-02	5.699E-02	4.903E-03	3.554
		136.48		3.560E-01	3.130E-01	5.250E-01	4.726E-02	0.678
CO-60	+	1173.22		6.443E+00	6.230E-01	1.050E-01	8.541E-03	61.386
	+	1332.49	*	6.310E+00	6.106E-01	8.244E-02	6.753E-03	76.550
CD-109	+	88.03	*	2.996E+01	3.372E+00	1.742E+00	1.641E-01	17.201
SN-126		64.28		-3.253E-01	6.018E-01	8.744E-01	1.268E-01	-0.372
	+	86.94		1.238E+01	5.199E+00	8.118E-01	3.369E-01	15.254
	+	87.57	*	2.979E+00	3.352E-01	1.735E-01	1.626E-02	17.163
BA-137M	+	661.65	*	5.537E+00	5.553E-01	1.204E-01	1.065E-02	45.999
CS-137	+	661.65	*	5.853E+00	5.878E-01	1.273E-01	1.128E-02	45.999
TL-208		277.35		4.346E-01	6.205E-01	1.061E+00	1.299E-01	0.410
	+	510.84		2.931E-01	4.623E-01	3.979E-01	4.847E-02	0.737
	+	583.14	*	4.199E-01	1.267E-01	1.095E-01	1.047E-02	3.835
		860.37		4.440E-01	6.496E-01	1.104E+00	1.080E-01	0.402
BI-211		72.87		1.927E+00	4.004E+00	6.015E+00	4.747E-01	0.320
	+	351.07	*	2.082E+00	6.046E-01	5.955E-01	5.342E-02	3.496
PB-212	+	74.81		1.419E+00	6.046E-01	6.632E-01	8.181E-02	2.140
	+	77.11		1.307E+00	3.302E-01	3.835E-01	3.165E-02	3.407
	+	87.30		1.378E+01	2.074E+00	8.037E-01	1.100E-01	17.141
	+	238.63	*	1.163E+00	1.851E-01	1.529E-01	1.463E-02	7.608
		300.09		6.042E-01	1.518E+00	2.373E+00	2.461E-01	0.255
PO-212	+	74.81		1.419E+00	6.046E-01	6.632E-01	8.181E-02	2.140
	+	77.11		1.307E+00	3.302E-01	3.835E-01	3.165E-02	3.407
	+	87.30		1.378E+01	2.074E+00	8.037E-01	1.100E-01	17.141
		115.19		4.377E+00	4.891E+00	8.206E+00	7.068E-01	0.533
	+	238.63	*	1.163E+00	1.851E-01	1.529E-01	1.463E-02	7.608
		300.09		6.042E-01	1.518E+00	2.373E+00	2.461E-01	0.255
PB-214	+	74.81		2.445E+00	1.032E+00	1.143E+00	1.250E-01	2.140
	+	77.11		2.240E+00	5.912E-01	6.574E-01	7.384E-02	3.408
	+	87.30		2.360E+01	3.219E+00	1.377E+00	1.667E-01	17.141
	+	241.98		1.172E+00	8.816E-01	9.125E-01	9.262E-02	1.284
	+	295.21		4.712E-01	3.398E-01	4.153E-01	4.396E-02	1.134
	+	351.92	*	7.242E-01	2.137E-01	2.097E-01	2.176E-02	3.454
PO-214	+	74.81		2.445E+00	1.032E+00	1.143E+00	1.250E-01	2.140

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		2.240E+00	5.912E-01	6.574E-01	7.384E-02	3.408
	+	87.30		2.360E+01	3.219E+00	1.377E+00	1.667E-01	17.141
	+	241.98		1.172E+00	8.816E-01	9.125E-01	9.262E-02	1.284
	+	295.21		4.712E-01	3.398E-01	4.153E-01	4.396E-02	1.134
	+	351.92	*	7.242E-01	2.137E-01	2.097E-01	2.176E-02	3.454
PO-216	+	74.81		1.419E+00	6.046E-01	6.632E-01	8.181E-02	2.140
	+	77.11		1.307E+00	3.302E-01	3.835E-01	3.165E-02	3.407
	+	87.30		1.378E+01	2.074E+00	8.037E-01	1.100E-01	17.141
	+	238.63	*	1.163E+00	1.851E-01	1.529E-01	1.463E-02	7.608
	+	300.09		6.042E-01	1.518E+00	2.373E+00	2.461E-01	0.255
PO-218	+	74.81		2.445E+00	1.032E+00	1.143E+00	1.250E-01	2.140
	+	77.11		2.240E+00	5.912E-01	6.574E-01	7.384E-02	3.408
	+	87.30		2.360E+01	3.219E+00	1.377E+00	1.667E-01	17.141
	+	241.98		1.172E+00	8.816E-01	9.125E-01	9.262E-02	1.284
	+	295.21		4.712E-01	3.398E-01	4.153E-01	4.396E-02	1.134
	+	351.92	*	7.242E-01	2.137E-01	2.097E-01	2.176E-02	3.454
RA-224	+	240.98	*	2.222E+00	1.667E+00	1.741E+00	1.472E-01	1.276
AC-228	+	338.32		1.337E+00	8.043E-01	6.872E-01	2.835E-01	1.945
	+	911.07	*	5.652E-01	4.684E-01	4.944E-01	5.759E-02	1.143
	+	969.11		1.049E+00	7.971E-01	9.623E-01	2.261E-01	1.090
RA-228	+	338.32		1.337E+00	8.043E-01	6.872E-01	2.835E-01	1.945
	+	911.07	*	5.652E-01	4.684E-01	4.944E-01	5.759E-02	1.143
	+	969.11		1.049E+00	7.971E-01	9.623E-01	2.261E-01	1.090
TH-228	+	74.81		1.430E+00	5.945E-01	6.681E-01	5.431E-02	2.140
	+	77.11		1.316E+00	3.326E-01	3.863E-01	3.188E-02	3.407
	+	87.30		1.388E+01	1.562E+00	8.097E-01	7.560E-02	17.141
	+	238.63	*	1.172E+00	1.865E-01	1.540E-01	1.473E-02	7.608
	+	300.09		6.087E-01	1.569E+00	2.390E+00	1.417E+00	0.255
TH-232	+	338.32		1.337E+00	5.967E-01	6.872E-01	5.883E-02	1.945
	+	911.07	*	5.652E-01	4.684E-01	4.944E-01	5.759E-02	1.143
	+	969.11		1.049E+00	7.971E-01	9.623E-01	2.261E-01	1.090
AM-241	+	59.54	*	1.332E+01	1.161E+00	3.650E-01	2.893E-02	36.502
AM-243	+	74.67	*	2.301E-01	9.564E-02	1.077E-01	8.659E-03	2.136
	+	86.72		3.280E+02	3.692E+01	2.153E+01	1.995E+00	15.237
		117.66		-6.131E+00	6.217E+00	8.305E+00	7.143E-01	-0.738
		142.18		-1.138E+01	2.493E+01	3.892E+01	3.212E+00	-0.292
ANH-511	+	511.00	*	6.331E-02	9.972E-02	8.597E-02	7.638E-03	0.736

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.262E-01	6.775E-01	1.115E+00	1.052E-01	0.293
NA-22		1274.54	*	-1.137E-02	5.295E-02	8.478E-02	6.959E-03	-0.134
NA-24		1368.53	*	4.223E-05	5.295E-02	Half-Life too short		
AL-26		1129.67		-1.311E+00	3.024E+00	4.849E+00	4.073E-01	-0.270
		1808.65	*	-2.545E-02	3.567E-02	4.652E-02	3.794E-03	-0.547
K-40		1460.81	*	8.777E-01	5.491E-01	1.116E+00	9.582E-02	0.787
TI-44		67.85		4.054E-02	5.202E-02	8.802E-02	6.641E-03	0.461

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SC-46	+	78.38	*	2.411E-01	6.091E-02	8.354E-02	6.994E-03	2.886
		889.25	*	3.526E-02	8.290E-02	1.387E-01	1.271E-02	0.254
		1120.51		5.008E-02	9.704E-02	1.676E-01	1.416E-02	0.299
V-48		944.10		-1.633E+00	1.725E+00	2.599E+00	2.363E-01	-0.628
		983.50	*	-2.564E-02	1.208E-01	1.914E-01	1.723E-02	-0.134
		1312.09		-1.078E-02	6.955E-02	1.118E-01	9.167E-03	-0.096
CR-51		320.08	*	-2.625E-01	5.617E-01	8.996E-01	8.129E-02	-0.292
MN-52		744.21		6.664E-02	1.686E-01	2.857E-01	2.593E-02	0.233
		848.13		-3.353E+00	5.746E+00	8.940E+00	8.207E-01	-0.375
		935.52		-1.257E-01	2.531E-01	3.954E-01	3.601E-02	-0.318
	+	1246.25		2.944E+00	3.450E+00	6.283E+00	5.146E-01	0.469
		1333.61		3.119E+02	3.018E+01	3.613E+01	2.960E+00	8.632
		1434.06	*	-7.805E-02	1.268E-01	1.842E-01	1.532E-02	-0.424
MN-54		834.83	*	4.686E-02	7.793E-02	1.323E-01	1.214E-02	0.354
CO-56		846.75	*	-7.647E-02	7.948E-02	1.193E-01	1.096E-02	-0.641
		977.42		-4.426E-01	6.667E+00	1.069E+01	9.640E-01	-0.041
		1037.82		3.994E-01	6.374E-01	1.114E+00	1.034E-01	0.358
		1175.09		2.608E+02	2.516E+01	3.105E+01	2.528E+00	8.397
		1238.25		-1.016E-02	1.014E-01	1.660E-01	1.403E-02	-0.061
		1360.21		3.782E-01	1.059E+00	1.854E+00	1.526E-01	0.204
CO-58		1771.40		-6.580E-01	3.492E-01	3.148E-01	2.586E-02	-2.090
		810.76	*	-4.123E-02	7.340E-02	1.145E-01	1.052E-02	-0.360
		142.65		-1.711E+00	3.378E+00	5.256E+00	4.334E-01	-0.326
FE-59		192.34		3.960E-01	1.456E+00	2.206E+00	2.897E-01	0.179
		1099.22	*	-5.586E-02	1.620E-01	2.633E-01	2.439E-02	-0.212
		1291.56		1.077E-01	1.334E-01	2.445E-01	2.303E-02	0.440
ZN-65		1115.52	*	-8.688E-02	1.966E-01	3.184E-01	2.702E-02	-0.273
GE-68		1077.35	*	7.957E-01	2.685E+00	4.586E+00	3.974E-01	0.174
AS-73		53.44	*	2.963E-01	1.247E+00	1.989E+00	1.494E-01	0.149
AS-74		595.88	*	-4.081E-02	1.187E-01	1.934E-01	1.733E-02	-0.211
		634.78		3.297E-01	4.674E-01	8.157E-01	7.272E-02	0.404
		66.05		-4.046E+00	5.099E+00	8.133E+00	7.716E-01	-0.497
SE-75		96.73		3.532E-01	1.041E+00	1.539E+00	2.132E-01	0.229
	+	121.11		1.062E+00	3.520E-01	4.216E-01	4.722E-02	2.520
		136.00		8.044E-02	5.641E-02	9.574E-02	8.049E-03	0.840
		198.60		-8.334E-01	2.678E+00	4.453E+00	4.093E-01	-0.187
		264.65	*	-7.865E-02	7.175E-02	1.121E-01	9.573E-03	-0.702
		279.53		5.221E-02	1.740E-01	2.927E-01	2.580E-02	0.178
		303.91		-5.937E+00	3.753E+00	5.581E+00	6.380E-01	-1.064
		400.65		1.682E-01	4.928E-01	8.141E-01	8.900E-02	0.207
	+	87.88		6.876E+02	7.739E+01	8.861E+01	8.336E+00	7.759
BR-77		200.40		1.842E+01	2.704E+01	4.683E+01	3.850E+00	0.393
	+	239.00		1.962E+01	2.995E+00	4.857E+00	4.104E-01	4.039
		249.79		8.958E-01	1.157E+01	1.937E+01	1.643E+00	0.046
		281.68		-6.577E+00	1.604E+01	2.600E+01	2.209E+00	-0.253
		297.23		-5.141E+00	1.252E+01	1.768E+01	1.511E+00	-0.291
		303.76		-5.658E+01	3.482E+01	5.203E+01	4.454E+00	-1.087
		439.47		-2.397E+01	3.182E+01	4.885E+01	4.208E+00	-0.491
		484.57		-4.743E+01	5.076E+01	7.598E+01	6.691E+00	-0.624

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	520.65	*		-8.875E-01	2.056E+00	3.371E+00	3.002E-01	-0.263
	574.64			-1.472E+01	3.918E+01	6.390E+01	5.731E+00	-0.230
	578.91			7.717E+00	1.768E+01	2.683E+01	2.407E+00	0.288
	585.48			8.125E+01	4.013E+01	6.678E+01	5.989E+00	1.217
	755.35			1.637E+01	3.337E+01	5.679E+01	5.167E+00	0.288
	817.79			2.311E+00	3.153E+01	5.177E+01	4.748E+00	0.045
SR-82	698.33			6.008E-01	5.039E+01	8.335E+01	7.473E+00	0.007
	776.49	*		-2.616E-01	5.906E-01	9.341E-01	8.529E-02	-0.280
	1395.20			-6.085E+00	9.792E+00	1.385E+01	1.146E+00	-0.439
RB-83	520.41	*		-5.647E-02	1.214E-01	1.985E-01	1.768E-02	-0.284
	529.64			-7.022E-03	1.847E-01	3.102E-01	2.768E-02	-0.023
	552.65			1.386E-01	3.388E-01	5.835E-01	5.226E-02	0.238
RB-84	881.50	*		5.673E-02	1.312E-01	2.198E-01	2.016E-02	0.258
KR-85	513.99	*		1.522E+00	1.526E+01	2.262E+01	2.011E+00	0.067
SR-85	513.99	*		7.193E-03	7.214E-02	1.069E-01	9.507E-03	0.067
RB-86	1076.63	*		4.158E-02	1.302E+00	2.184E+00	1.893E-01	0.019
Y-88	898.02			5.806E-04	9.889E-02	1.605E-01	1.476E-02	0.004
	1836.01	*		1.640E-02	3.735E-02	6.917E-02	5.614E-03	0.237
ZR-88	392.90	*		8.254E-03	5.652E-02	9.255E-02	7.709E-03	0.089
Y-91	1204.90	*		1.654E+01	2.083E+01	3.773E+01	3.081E+00	0.438
NB-94	702.63	*		-2.607E-02	6.118E-02	9.791E-02	8.791E-03	-0.266
	871.10			-1.003E-02	7.979E-02	1.286E-01	1.179E-02	-0.078
NB-95	765.79	*		9.507E-03	7.277E-02	1.206E-01	1.099E-02	0.079
NB-95M	235.69	*		7.887E-02	1.983E-01	2.992E-01	2.905E-02	0.264
ZR-95	724.18			-1.470E-01	1.665E-01	2.561E-01	2.496E-02	-0.574
	756.15	*		2.665E-02	1.239E-01	2.069E-01	2.054E-02	0.129
NB-97	657.90	*		2.522E-04	1.239E-01	Half-Life	too short	
	1024.50			1.471E-03	1.239E-01	Half-Life	too short	
ZR-97	254.15			3.489E-03	1.239E-01	Half-Life	too short	
	355.39			1.388E-03	1.239E-01	Half-Life	too short	
	507.63	*		5.929E-04	1.239E-01	Half-Life	too short	
	602.52			-2.237E-03	1.239E-01	Half-Life	too short	
	1021.30			6.472E-04	1.239E-01	Half-Life	too short	
	1147.95			-1.738E-03	1.239E-01	Half-Life	too short	
	1362.66			-4.439E-03	1.239E-01	Half-Life	too short	
	1750.46			3.720E-04	1.239E-01	Half-Life	too short	
MO-99	140.51			-1.422E+00	5.324E+00	8.376E+00	2.311E+00	-0.170
	181.06			2.843E+00	3.978E+00	6.162E+00	1.111E+00	0.461
	366.43			3.647E+00	2.276E+01	3.747E+01	3.174E+00	0.097
	739.58	*		7.242E-01	3.124E+00	5.229E+00	8.075E-01	0.138
	778.00			-2.589E+00	9.347E+00	1.499E+01	1.369E+00	-0.173
TC-99M	140.51	*		-7.720E+00	9.347E+00	Half-Life	too short	
RH-101	127.23			1.603E-03	4.945E-02	7.564E-02	6.424E-03	0.021
	198.01	*		-3.194E-02	5.147E-02	8.441E-02	6.924E-03	-0.378
	325.23			1.027E-01	4.043E-01	6.728E-01	5.769E-02	0.153
RH-102	418.52			2.905E-01	5.517E-01	9.201E-01	7.817E-02	0.316
	475.06	*		-2.443E-02	6.867E-02	1.078E-01	9.461E-03	-0.227
	631.29			4.575E-02	1.001E-01	1.719E-01	1.533E-02	0.266
	697.49			-3.208E-02	1.415E-01	2.300E-01	2.062E-02	-0.139

---- Non-Identified Nuclides ----

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		766.84		-1.643E-02	2.016E-01	3.290E-01	3.000E-02	-0.050
		1046.59		1.014E-02	2.511E-01	4.225E-01	3.715E-02	0.024
		1112.84		2.437E-01	5.002E-01	8.617E-01	7.317E-02	0.283
RU-103		497.08	*	-1.764E-02	7.258E-02	1.140E-01	1.631E-02	-0.155
	+	610.33		6.169E+00	2.179E+00	3.047E+00	5.136E-01	2.025
RH-106	+	511.85		3.117E-01	4.909E-01	5.922E-01	5.263E-02	0.526
		621.84	*	1.891E-01	6.008E-01	1.021E+00	1.385E-01	0.185
		1050.47		-2.213E+00	4.922E+00	7.982E+00	7.008E-01	-0.277
RU-106	+	511.85		3.117E-01	4.909E-01	5.922E-01	5.263E-02	0.526
		621.84	*	1.891E-01	6.005E-01	1.021E+00	9.124E-02	0.185
		1050.47		-2.213E+00	4.922E+00	7.982E+00	7.008E-01	-0.277
AG-108M		433.93	*	1.541E-02	6.917E-02	1.130E-01	1.009E-02	0.136
		614.37		3.966E-03	7.959E-02	1.159E-01	1.075E-02	0.034
		722.95		-1.232E-01	8.288E-02	1.198E-01	1.120E-02	-1.029
AG-110M		657.75	*	1.277E-01	8.170E-02	1.324E-01	1.206E-02	0.964
		677.61		2.356E-01	5.445E-01	9.300E-01	8.499E-02	0.253
		706.67		1.656E-02	3.740E-01	6.196E-01	5.711E-02	0.027
		763.93		9.055E-02	3.067E-01	5.143E-01	4.805E-02	0.176
		884.67		-4.008E-02	1.088E-01	1.716E-01	1.618E-02	-0.234
		937.48		9.479E-02	2.827E-01	4.668E-01	4.387E-02	0.203
		1384.27		-9.904E-02	2.087E-01	3.141E-01	2.675E-02	-0.315
IN-111		171.28		-1.705E-01	2.345E-01	3.554E-01	2.828E-02	-0.480
		245.39	*	1.689E-02	3.001E-01	4.425E-01	3.748E-02	0.038
IN-113M		391.69	*	-8.542E-03	8.500E-02	1.363E-01	1.172E-02	-0.063
SN-113		391.69	*	-8.542E-03	8.500E-02	1.363E-01	1.172E-02	-0.063
IN-114M		190.27	*	-2.004E-01	2.840E-01	4.053E-01	3.297E-02	-0.494
CD-115		260.90		1.057E+01	1.996E+01	3.403E+01	2.892E+00	0.311
		492.35		2.114E+00	6.547E+00	1.070E+01	9.451E-01	0.198
		527.90	*	-7.509E-02	1.852E+00	3.111E+00	2.776E-01	-0.024
SN-117M		156.02		-4.401E-01	2.248E+00	3.535E+00	2.847E-01	-0.125
		158.56	*	3.475E-02	5.463E-02	8.952E-02	7.178E-03	0.388
SB-122		563.90	*	-6.473E-02	5.263E-01	8.754E-01	7.848E-02	-0.074
		692.80		9.204E+00	1.134E+01	1.975E+01	1.767E+00	0.466
I-123		159.00	*	3.184E-04	1.134E+01	Half-Life	too short	
		528.96		8.535E-03	1.134E+01	Half-Life	too short	
TE-123M		159.00	*	2.686E-02	3.993E-02	6.556E-02	5.289E-03	0.410
I-124		602.71	*	-1.153E-02	3.593E-01	5.442E-01	4.876E-02	-0.021
		722.78		-3.377E+00	2.413E+00	3.524E+00	3.182E-01	-0.958
		1325.50		3.425E+00	1.482E+01	2.201E+01	1.803E+00	0.156
		1376.25		9.472E+00	1.136E+01	2.086E+01	1.721E+00	0.454
		1509.49		1.978E+00	6.513E+00	1.113E+01	9.305E-01	0.178
		1691.02		8.909E-02	1.210E+00	1.994E+00	1.656E-01	0.045
SB-124		602.71		-2.208E-03	6.880E-02	1.042E-01	9.340E-03	-0.021
		645.85		-4.946E-02	8.505E-01	1.407E+00	1.322E-01	-0.035
		709.31		5.826E-01	4.606E+00	7.674E+00	6.904E-01	0.076
		713.82		-5.367E-01	2.762E+00	4.489E+00	5.531E-01	-0.120
		722.78		-9.375E-01	6.702E-01	9.782E-01	9.008E-02	-0.958
	+	968.20		9.883E+00	7.195E+00	1.058E+01	9.563E-01	0.934
		1045.16		2.407E+00	5.088E+00	8.800E+00	7.745E-01	0.274

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SB-125		1325.50		1.016E+00	4.393E+00	6.525E+00	5.347E-01	0.156
		1368.21		2.576E-01	1.633E+00	2.773E+00	3.671E-01	0.093
		1436.60		4.501E+00	4.408E+00	8.453E+00	7.031E-01	0.532
		1691.02	*	5.834E-03	7.922E-02	1.305E-01	1.131E-02	0.045
		427.89	*	-2.317E-02	1.896E-01	3.039E-01	2.650E-02	-0.076
		463.38		5.407E-01	6.297E-01	1.055E+00	9.910E-02	0.513
TE-125M		600.56		9.876E-03	3.126E-01	5.230E-01	5.008E-02	0.019
		635.90		-1.428E-01	4.894E-01	7.963E-01	7.635E-02	-0.179
I-126		109.28	*	-3.327E+00	1.170E+01	1.865E+01	1.931E+00	-0.178
		388.63		1.238E-01	2.642E-01	4.405E-01	3.675E-02	0.281
SB-126		666.33	*	-4.279E-02	2.557E-01	3.616E-01	3.206E-02	-0.118
		753.82		8.566E-01	1.844E+00	3.134E+00	2.851E-01	0.273
		223.80		-1.299E-01	4.390E+00	7.354E+00	6.163E-01	-0.018
		278.60		1.976E+00	2.633E+00	4.521E+00	3.837E-01	0.437
	+	296.50		3.046E+00	2.188E+00	3.057E+00	2.612E-01	0.996
		414.70		-1.493E-02	9.743E-02	1.562E-01	1.324E-02	-0.096
SB-127		415.30		-1.210E+00	7.962E+00	1.276E+01	1.082E+00	-0.095
		555.20		-2.585E+00	4.711E+00	7.608E+00	6.816E-01	-0.340
		573.80		-9.174E-01	1.235E+00	1.961E+00	1.758E-01	-0.468
		593.00		-4.176E-01	1.071E+00	1.740E+00	1.560E-01	-0.240
		656.30		2.332E+00	4.742E+00	7.156E+00	6.344E-01	0.326
		666.33		-1.757E-02	1.050E-01	1.484E-01	1.316E-02	-0.118
		675.00		2.474E+00	2.352E+00	4.174E+00	3.713E-01	0.593
		695.00		2.082E-02	9.551E-02	1.603E-01	1.435E-02	0.130
		697.00		-1.767E-01	3.279E-01	5.203E-01	4.664E-02	-0.340
		720.50	*	1.038E-01	1.715E-01	2.951E-01	2.663E-02	0.352
		856.80		-6.521E-01	6.851E-01	1.033E+00	9.484E-02	-0.631
		989.30		7.336E-01	1.857E+00	3.081E+00	2.769E-01	0.238
		1034.80		-1.057E+01	1.255E+01	1.971E+01	1.742E+00	-0.536
		1213.00		1.039E-03	3.380E+00	5.607E+00	4.582E-01	0.000
		61.10		5.135E+02	5.100E+01	6.234E+01	5.002E+00	8.237
		252.40		-1.245E+00	1.903E+00	2.950E+00	1.226E+00	-0.422
		290.80		-1.164E+00	1.007E+01	1.450E+01	1.335E+00	-0.080
		411.60		2.591E+00	6.111E+00	1.011E+01	1.453E+00	0.256
XE-127		444.90		2.681E+00	5.215E+00	8.639E+00	9.433E-01	0.310
		473.00		-5.495E-01	9.826E-01	1.523E+00	1.735E-01	-0.361
		543.00		-7.109E+00	7.774E+00	1.220E+01	1.612E+00	-0.583
		603.60		7.608E-01	5.908E+00	8.677E+00	9.671E-01	0.088
		685.20	*	5.118E-01	5.966E-01	1.048E+00	1.031E-01	0.488
		698.50		2.210E+00	6.789E+00	1.147E+01	1.694E+00	0.193
		722.20		-1.495E+01	1.466E+01	2.214E+01	2.142E+00	-0.675
		783.80		1.842E+00	1.766E+00	3.092E+00	3.461E-01	0.596
	+	57.60		1.796E+01	1.004E+01	1.975E+01	1.431E+00	0.910
		145.22		9.598E-01	8.381E-01	1.410E+00	1.157E-01	0.681
I-131		172.10		-5.804E-02	1.586E-01	2.456E-01	1.956E-02	-0.236
		202.84	*	2.292E-02	6.284E-02	1.075E-01	8.861E-03	0.213
		374.96		-5.573E-02	3.355E-01	5.413E-01	4.561E-02	-0.103
		80.18		-2.993E+00	3.359E+00	4.684E+00	4.011E-01	-0.639
		284.30		-6.417E-01	1.305E+00	2.102E+00	1.875E-01	-0.305

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE-132	364.48	*		4.806E-02	1.091E-01	1.826E-01	1.627E-02	0.263
	636.97			-1.207E+00	1.450E+00	2.253E+00	2.104E-01	-0.536
	722.89			-1.045E+01	7.178E+00	1.041E+01	9.418E-01	-1.004
	49.72			2.849E+00	4.864E+00	8.214E+00	7.039E-01	0.347
	111.76			4.944E+00	7.922E+00	1.315E+01	1.213E+00	0.376
	116.30			6.185E-01	7.395E+00	1.197E+01	1.100E+00	0.052
BA-133	228.16	*		4.798E-02	2.172E-01	3.674E-01	5.327E-02	0.131
	53.15			7.563E-01	5.742E+00	9.136E+00	6.884E-01	0.083
	79.62			-1.513E+00	1.822E+00	2.533E+00	3.839E-01	-0.597
	81.00			-1.681E-01	1.481E-01	2.013E-01	3.198E-02	-0.835
	276.40			7.144E-02	6.022E-01	1.005E+00	1.444E-01	0.071
	302.84			-3.177E-01	2.631E-01	4.014E-01	5.318E-02	-0.792
I-133	356.01	*		5.937E-02	8.625E-02	1.311E-01	1.721E-02	0.453
	383.85			1.578E-01	5.901E-01	9.738E-01	1.211E-01	0.162
	510.53			1.333E-03	5.901E-01	Half-Life	too short	
	529.87	*		-4.129E-06	5.901E-01	Half-Life	too short	
	706.58			1.219E-04	5.901E-01	Half-Life	too short	
	856.28			-2.390E-03	5.901E-01	Half-Life	too short	
CS-134	875.33			-6.119E-04	5.901E-01	Half-Life	too short	
	1236.41			1.318E-03	5.901E-01	Half-Life	too short	
	1298.22			6.050E-05	5.901E-01	Half-Life	too short	
	475.35			1.212E-01	4.375E+00	7.027E+00	6.165E-01	0.017
	563.23			-1.869E-01	6.546E-01	1.077E+00	9.740E-02	-0.174
	569.32			3.069E-01	3.687E-01	6.475E-01	5.879E-02	0.474
CS-135	604.70			2.482E-02	6.809E-02	1.021E-01	9.169E-03	0.243
	795.84	*		1.872E-01	1.018E-01	1.837E-01	1.692E-02	1.019
	801.93			-3.102E-01	8.133E-01	1.297E+00	1.194E-01	-0.239
	1038.57			3.791E+00	8.577E+00	1.482E+01	1.308E+00	0.256
	1167.94			1.629E+00	4.571E+00	6.869E+00	5.613E-01	0.237
	1365.15			-3.885E-01	1.233E+00	1.882E+00	1.628E-01	-0.206
I-135	268.24	*		6.591E-02	2.679E-01	4.501E-01	4.438E-02	0.146
	288.45			1.085E+02	2.679E-01	Half-Life	too short	
	417.63			1.068E+02	2.679E-01	Half-Life	too short	
	546.56			9.225E-01	2.679E-01	Half-Life	too short	
	836.80			1.108E+02	2.679E-01	Half-Life	too short	
	1038.76			5.091E+01	2.679E-01	Half-Life	too short	
CS-136	1124.00			-1.967E+02	2.679E-01	Half-Life	too short	
	1131.51			-4.426E+00	2.679E-01	Half-Life	too short	
	1260.41	*		-5.851E+00	2.679E-01	Half-Life	too short	
	1457.56			5.523E+00	2.679E-01	Half-Life	too short	
	1678.03			8.397E-01	2.679E-01	Half-Life	too short	
	1706.46			-8.134E+01	2.679E-01	Half-Life	too short	
CS-136	1791.20			1.923E+01	2.679E-01	Half-Life	too short	
	66.91			1.897E-01	5.698E-01	9.499E-01	1.409E-01	0.200
	86.29			7.863E+00	1.714E+00	2.379E+00	3.153E-01	3.305
	153.22			4.545E-01	6.446E-01	1.060E+00	9.713E-02	0.429
	163.89			3.793E-01	1.049E+00	1.694E+00	1.532E-01	0.224
	176.55			-9.099E-02	3.523E-01	5.910E-01	5.045E-02	-0.154
	273.65			-6.891E-01	4.979E-01	7.611E-01	6.899E-02	-0.905

---- Non-Identified Nuclides ----

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		340.57		2.215E-01	1.656E-01	2.594E-01	2.283E-02	0.854
		818.51		1.795E-02	1.127E-01	1.862E-01	1.708E-02	0.096
	1048.07	*		-4.064E-02	1.586E-01	2.612E-01	2.388E-02	-0.156
	1235.34			2.477E-01	4.617E-01	8.101E-01	9.343E-02	0.306
CE-139	165.85	*		-6.309E-03	4.422E-02	6.950E-02	5.497E-03	-0.091
BA-140	162.64			-1.993E-01	7.300E-01	1.140E+00	9.686E-02	-0.175
	304.84			-1.931E-01	1.432E+00	2.344E+00	6.564E-01	-0.082
	423.70			1.143E-01	2.550E+00	4.132E+00	1.338E+00	0.028
	537.32	*		-3.284E-02	3.122E-01	5.213E-01	1.732E-01	-0.063
LA-140	328.77			8.410E-02	3.470E-01	5.769E-01	5.225E-02	0.146
	432.53			6.551E-01	2.880E+00	4.709E+00	4.237E-01	0.139
	487.03			-4.439E-03	1.833E-01	2.930E-01	2.736E-02	-0.015
	751.79			-2.837E-01	2.091E+00	3.400E+00	3.389E-01	-0.083
	815.85			-3.857E-02	4.546E-01	7.381E-01	7.462E-02	-0.052
	867.82			1.007E+00	2.208E+00	3.699E+00	3.553E-01	0.272
	919.63			6.562E+00	4.582E+00	8.035E+00	8.891E-01	0.817
	925.24			-2.422E+00	1.923E+00	2.811E+00	2.709E-01	-0.862
	1596.49	*		-1.083E-02	7.988E-02	1.262E-01	1.056E-02	-0.086
CE-141	145.44	*		7.447E-02	7.474E-02	1.249E-01	1.046E-02	0.596
CE-143	+	57.37		7.331E+01	4.110E+01	7.063E+01	6.047E+00	1.038
	231.56			-3.293E+01	8.355E+01	1.363E+02	4.291E+01	-0.242
	293.26	*		3.151E+00	5.310E+00	7.952E+00	1.699E+00	0.396
	+	350.59		3.356E+02	1.392E+02	1.383E+02	4.283E+01	2.426
	490.36			-9.115E+01	1.236E+02	1.823E+02	5.761E+01	-0.500
	664.57			8.417E+02	2.876E+02	1.943E+02	6.284E+01	4.332
	721.93			-2.590E+01	5.376E+01	8.407E+01	2.459E+01	-0.308
CE-144	80.11			-2.751E+00	2.950E+00	4.104E+00	3.505E-01	-0.670
	133.54	*		-2.070E-01	3.052E-01	4.697E-01	7.252E-02	-0.441
PM-144	476.78			-1.991E-03	1.533E-01	2.456E-01	2.351E-02	-0.008
	618.01			4.692E-03	6.022E-02	1.009E-01	9.250E-03	0.047
	696.49	*		-1.749E-02	6.479E-02	1.050E-01	9.412E-03	-0.167
	778.57			-1.286E-01	4.324E+00	7.074E+00	6.462E-01	-0.018
PR-144	696.49	*		-1.181E+00	4.372E+00	7.088E+00	6.352E-01	-0.167
	1489.15			1.211E+01	1.650E+01	3.030E+01	2.531E+00	0.400
PM-146	453.90	*		8.626E-03	9.694E-02	1.567E-01	1.689E-02	0.055
	633.02			1.725E+00	2.644E+00	4.464E+00	1.671E+00	0.387
	735.90			5.064E-02	2.710E-01	4.522E-01	1.299E-01	0.112
	747.13			-1.434E-01	1.677E-01	2.541E-01	3.641E-02	-0.564
ND-147	+	91.11		2.068E-01	1.576E-01	3.368E-01	3.333E-02	0.614
	319.41			-2.330E+00	3.787E+00	6.015E+00	5.159E-01	-0.387
	439.89			-5.695E+00	7.630E+00	1.172E+01	1.010E+00	-0.486
	531.02	*		7.669E-02	6.545E-01	1.109E+00	1.678E-01	0.069
PM-149	285.90	*		-3.108E+00	1.381E+01	2.258E+01	3.491E+00	-0.138
EU-152	+	121.78		5.989E-01	1.960E-01	2.431E-01	2.408E-02	2.464
	244.69			3.655E-01	6.068E-01	9.256E-01	7.838E-02	0.395
	344.27	*		1.980E-02	1.832E-01	2.916E-01	2.643E-02	0.068
	443.98			2.302E-01	2.041E+00	3.310E+00	2.859E-01	0.070
	778.89			2.244E-02	5.089E-01	8.373E-01	7.648E-02	0.027
	867.32			8.863E-01	2.015E+00	3.371E+00	3.094E-01	0.263

---- Non-Identified Nuclides ----

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GD-153		964.01		2.223E-01	8.135E-01	1.159E+00	1.049E-01	0.192
		1085.78		-6.050E-01	8.285E-01	1.305E+00	1.126E-01	-0.463
		1112.02		-1.119E-01	7.145E-01	1.181E+00	1.003E-01	-0.095
		1407.95		6.316E-03	2.571E-01	4.231E-01	3.508E-02	0.015
		69.67		7.274E-02	2.115E+00	3.119E+00	2.389E-01	0.023
		83.37		2.177E+01	2.191E+01	3.337E+01	2.965E+00	0.652
EU-154		97.43	*	5.090E-02	1.085E-01	1.617E-01	1.446E-02	0.315
		103.18		5.303E-02	1.354E-01	2.234E-01	1.961E-02	0.237
	+	123.07		4.202E-01	1.395E-01	1.671E-01	1.894E-02	2.514
		247.94		6.068E-02	5.989E-01	1.004E+00	1.141E-01	0.060
		591.81		-3.872E-01	1.096E+00	1.734E+00	2.068E-01	-0.223
		723.30		-6.205E-01	3.536E-01	4.968E-01	4.920E-02	-1.249
EU-155		756.87		9.700E-01	1.484E+00	2.548E+00	3.141E-01	0.381
		873.19		-3.201E-01	6.706E-01	1.049E+00	1.326E-01	-0.305
		996.32		-7.239E-01	8.396E-01	1.240E+00	2.224E-01	-0.584
		1004.76		-9.600E-02	4.784E-01	7.609E-01	9.038E-02	-0.126
		1274.45	*	-4.244E-02	1.500E-01	2.377E-01	2.614E-02	-0.179
		48.70		8.535E-01	2.984E+00	5.009E+00	4.054E-01	0.170
TB-160	+	60.01		4.321E+02	3.477E+01	3.192E+01	2.298E+00	13.538
	+	86.54		3.577E+00	4.050E-01	3.762E-01	3.509E-02	9.508
		105.31	*	-8.123E-02	1.441E-01	2.266E-01	2.002E-02	-0.358
	+	86.79		8.898E+00	1.002E+00	1.051E+00	9.750E-02	8.465
		197.04		-8.504E-01	8.101E-01	1.300E+00	1.065E-01	-0.654
		215.65		-1.790E-02	1.113E+00	1.869E+00	1.557E-01	-0.010
HO-166M		298.57		2.146E-01	2.166E-01	3.331E-01	2.848E-02	0.644
		879.36	*	9.808E-02	2.882E-01	4.800E-01	4.402E-02	0.204
		962.29		1.004E+00	1.296E+00	2.007E+00	1.817E-01	0.500
		966.15		4.277E-01	5.525E-01	8.163E-01	7.383E-02	0.524
		1177.93		2.549E-01	5.775E-01	8.796E-01	7.162E-02	0.290
		1271.85		-1.188E-02	7.959E-01	1.313E+00	1.076E-01	-0.009
TM-171		80.57		-4.071E-01	3.960E-01	5.482E-01	4.709E-02	-0.743
		184.41		-1.490E-02	5.784E-02	8.752E-02	7.075E-03	-0.170
		280.46		-8.240E-03	1.430E-01	2.363E-01	2.007E-02	-0.035
		410.95		3.320E-01	4.876E-01	8.186E-01	6.917E-02	0.406
		711.68	*	4.964E-02	1.097E-01	1.871E-01	1.684E-02	0.265
		752.31		1.862E-01	5.038E-01	8.515E-01	7.743E-02	0.219
LU-176		810.29		-1.031E-01	1.202E-01	1.824E-01	1.672E-02	-0.565
		51.35		-3.039E+01	4.307E+01	7.023E+01	5.423E+00	-0.433
		52.39		-1.129E+01	2.317E+01	3.798E+01	2.889E+00	-0.297
	+	59.40		2.262E+03	1.820E+02	1.747E+02	1.256E+01	12.943
		66.72	*	-3.883E+00	3.131E+01	5.137E+01	3.842E+00	-0.076
	+	88.36		7.065E+00	7.951E-01	9.037E-01	8.492E-02	7.818
LU-177		201.83		3.169E-02	4.511E-02	7.816E-02	6.435E-03	0.405
		306.84	*	5.259E-04	4.354E-02	7.183E-02	6.153E-03	0.007
		401.10		1.001E+01	1.339E+01	2.259E+01	1.894E+00	0.443
		112.95		-3.611E-01	1.022E+00	1.620E+00	1.398E-01	-0.223
		208.36	*	1.378E+00	7.915E-01	1.410E+00	1.168E-01	0.977
		52.97		9.056E-01	2.378E+00	3.985E+00	3.009E-01	0.227
LU-177M		54.07		1.437E+00	1.420E+00	2.178E+00	1.624E-01	0.660

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA	
HF-181		61.30		2.861E+01	3.279E+00	4.986E+00	3.609E-01	5.739	
	+	121.62		2.974E+00	9.623E-01	1.207E+00	1.037E-01	2.465	
		147.16		-2.678E-01	9.100E-01	1.427E+00	1.168E-01	-0.188	
		171.86		-2.701E-01	7.156E-01	1.107E+00	8.819E-02	-0.244	
		218.09		3.777E-02	1.365E+00	2.295E+00	1.916E-01	0.016	
		268.79		1.232E+00	1.292E+00	2.237E+00	1.901E-01	0.551	
		319.02		-2.479E-01	4.668E-01	7.454E-01	6.393E-02	-0.333	
		367.43		-8.643E-01	1.653E+00	2.610E+00	2.209E-01	-0.331	
		413.65	*	-4.420E-01	3.464E-01	5.143E-01	4.355E-02	-0.859	
		56.28		1.341E+00	1.584E+00	2.410E+00	1.762E-01	0.557	
	+	57.53		1.538E+00	8.592E-01	1.597E+00	1.158E-01	0.963	
		65.20		-8.366E-01	9.451E-01	1.426E+00	1.055E-01	-0.586	
		133.02		-1.089E-01	8.859E-02	1.326E-01	1.112E-02	-0.821	
		136.25		8.927E-01	6.108E-01	1.038E+00	8.655E-02	0.860	
		345.85		-2.177E-01	3.283E-01	4.970E-01	4.246E-02	-0.438	
W-181		482.03	*	-3.871E-02	8.214E-02	1.276E-01	1.123E-02	-0.303	
		56.28		5.738E-01	6.732E-01	1.024E+00	7.490E-02	0.560	
	+	57.53		6.538E-01	3.653E-01	6.778E-01	4.915E-02	0.965	
TA-182		65.20	*	-3.529E-01	3.987E-01	6.018E-01	4.453E-02	-0.586	
		67.75		9.140E-02	1.184E-01	2.003E-01	1.510E-02	0.456	
		100.10		-5.652E-02	2.236E-01	3.583E-01	3.173E-02	-0.158	
RE-183		152.43		2.664E-01	4.728E-01	7.730E-01	6.266E-02	0.345	
		222.10		-1.274E-02	5.519E-01	9.252E-01	7.745E-02	-0.014	
		1001.68		7.467E-01	4.184E+00	6.866E+00	6.146E-01	0.109	
		1121.28		9.703E-02	2.694E-01	4.609E-01	3.893E-02	0.211	
		1189.05		-2.837E-04	4.147E-01	6.890E-01	5.617E-02	0.000	
		1221.42	*	-6.308E-03	2.173E-01	3.590E-01	2.936E-02	-0.018	
		1230.97		4.245E-02	5.240E-01	8.771E-01	7.178E-02	0.048	
	+	57.98		6.428E-01	3.592E-01	8.905E-01	6.442E-02	0.722	
	+	59.32		8.651E+00	6.962E-01	6.715E-01	4.829E-02	12.884	
		67.20		1.594E-01	2.031E-01	3.440E-01	2.582E-02	0.463	
		162.32	*	-3.881E-02	1.503E-01	2.349E-01	1.870E-02	-0.165	
		208.81		3.113E+00	1.469E+00	2.640E+00	2.187E-01	1.179	
		291.72		-5.776E-01	1.627E+00	2.299E+00	1.961E-01	-0.251	
	RE-184	+	57.98		2.477E+00	1.384E+00	3.432E+00	2.483E-01	0.722
		+	59.32		3.331E+01	2.681E+00	2.586E+00	1.860E-01	12.884
		67.20		6.140E-01	7.826E-01	1.325E+00	9.949E-02	0.463	
OS-185		161.27		-3.207E-01	5.176E-01	7.925E-01	6.322E-02	-0.405	
		216.55		-8.682E-02	4.179E-01	6.958E-01	5.801E-02	-0.125	
		252.85	*	5.341E-03	3.771E-01	6.290E-01	5.338E-02	0.008	
		318.01		3.818E-01	8.070E-01	1.359E+00	1.166E-01	0.281	
		792.07		-6.154E-01	1.950E+00	3.119E+00	2.854E-01	-0.197	
		903.28		7.458E-01	2.458E+00	4.063E+00	3.718E-01	0.184	
		920.93		1.365E+00	1.087E+00	1.898E+00	1.733E-01	0.719	
	+	59.72		2.406E+01	1.936E+00	1.821E+00	1.310E-01	13.213	
		61.14		5.052E+00	4.824E-01	6.481E-01	4.688E-02	7.794	
		69.30		6.772E-03	3.384E-01	5.317E-01	4.060E-02	0.013	
		592.07		-1.978E+00	4.150E+00	6.689E+00	5.998E-01	-0.296	
		646.12	*	-1.354E-02	7.559E-02	1.240E-01	1.102E-02	-0.109	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188		717.42		1.488E-01	1.570E+00	2.607E+00	2.351E-01	0.057
		874.81		-9.910E-01	1.233E+00	1.873E+00	1.718E-01	-0.529
		880.27		1.160E+00	1.617E+00	2.762E+00	2.533E-01	0.420
		155.03	*	-1.751E-01	2.416E-01	3.690E-01	2.978E-02	-0.475
W-188		477.96		6.672E+00	6.489E+00	1.097E+01	9.636E-01	0.608
		633.10		3.265E+00	4.821E+00	8.381E+00	7.474E-01	0.390
		63.58		-2.423E+01	5.768E+01	8.459E+01	6.195E+00	-0.286
		227.08		4.538E+00	1.967E+01	3.329E+01	2.796E+00	0.136
IR-192	+	290.67	*	-1.419E+00	1.298E+01	1.870E+01	1.595E+00	-0.076
		295.96		3.342E-01	2.402E-01	3.397E-01	2.924E-02	0.984
		308.46		1.104E-01	1.527E-01	2.611E-01	2.249E-02	0.423
		316.51	*	5.291E-02	5.829E-02	1.002E-01	8.612E-03	0.528
AU-195		468.07		-3.555E-02	1.420E-01	2.247E-01	2.103E-02	-0.158
		604.41		3.054E-01	8.624E-01	1.292E+00	1.711E-01	0.236
		612.46		8.119E-01	1.324E+00	2.026E+00	2.064E-01	0.401
		65.12		-1.621E-01	1.875E-01	2.833E-01	2.095E-02	-0.572
TL-200	+	66.83		-1.218E-02	1.014E-01	1.664E-01	1.246E-02	-0.073
		75.70		7.230E-01	3.006E-01	4.413E-01	3.587E-02	1.638
		98.88	*	-7.722E-02	2.837E-01	4.544E-01	4.041E-02	-0.170
		129.76		2.119E+00	4.088E+00	6.708E+00	5.666E-01	0.316
TL-201	*	367.94		-1.666E+00	6.284E+00	1.008E+01	8.534E-01	-0.165
		579.30		2.113E+01	4.955E+01	7.512E+01	6.738E+00	0.281
		828.27		1.018E+01	7.702E+01	1.269E+02	1.165E+01	0.080
		1205.75		1.851E+01	2.164E+01	3.944E+01	3.222E+00	0.469
TL-202		68.90		-4.690E-02	9.457E-01	1.554E+00	1.183E-01	-0.030
		70.82		1.554E-02	6.019E-01	8.868E-01	6.864E-02	0.018
		80.30		-1.008E+00	1.229E+00	1.722E+00	1.474E-01	-0.586
		135.34		5.950E+00	6.660E+00	1.108E+01	9.256E-01	0.537
HG-203	*	167.43		8.874E-01	1.848E+00	2.997E+00	2.374E-01	0.296
		68.90		-1.581E-02	3.189E-01	5.241E-01	3.988E-02	-0.030
		70.82		5.227E-03	2.024E-01	2.982E-01	2.308E-02	0.018
		80.30		-3.392E-01	4.135E-01	5.792E-01	4.959E-02	-0.586
BI-207	*	439.56		-7.317E-02	9.458E-02	1.450E-01	1.249E-02	-0.505
		70.83		2.929E-02	1.212E+00	1.785E+00	2.332E-01	0.016
		72.87		3.416E-01	7.107E-01	1.066E+00	1.359E-01	0.320
		82.60		8.468E-01	1.396E+00	2.221E+00	3.078E-01	0.381
TL-207	+	279.20	*	3.042E-02	6.066E-02	1.030E-01	8.997E-03	0.295
		72.80		1.013E-01	2.332E-01	3.496E-01	2.758E-02	0.290
		74.97		4.128E-01	1.716E-01	2.330E-01	1.879E-02	1.771
		84.90		1.796E-01	2.951E-01	4.421E-01	4.004E-02	0.406
TL-207	+	569.67		4.407E-02	5.757E-02	1.008E-01	9.038E-03	0.437
		1063.62	*	-1.659E-02	1.072E-01	1.775E-01	1.549E-02	-0.093
		1770.23		-1.888E+00	8.484E-01	7.224E-01	5.935E-02	-2.614
		81.07		-3.577E-01	3.239E-01	4.467E-01	3.859E-02	-0.801
	+	83.78		2.272E-01	1.903E-01	2.918E-01	2.606E-02	0.778
		94.90		2.045E-01	4.017E-01	4.924E-01	4.452E-02	0.415
		122.32		1.428E+01	4.645E+00	5.845E+00	5.391E-01	2.443
		144.24		2.153E-01	9.654E-01	1.561E+00	1.450E-01	0.138
		154.21		-1.590E-01	5.892E-01	9.232E-01	8.301E-02	-0.172

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		269.46		2.917E-01	3.147E-01	5.439E-01	4.720E-02	0.536
		323.87	*	-2.487E-01	1.211E+00	1.967E+00	3.478E-01	-0.126
	+	338.28		5.582E+00	2.540E+00	3.382E+00	4.150E-01	1.650
		445.03		2.476E+00	4.883E+00	8.084E+00	9.784E-01	0.306
PO-209		260.50		1.580E+01	1.611E+01	2.800E+01	2.379E+00	0.564
		262.80		2.432E+00	4.483E+01	7.476E+01	6.353E+00	0.033
		896.60	*	1.800E+01	1.834E+01	3.158E+01	2.892E+00	0.570
BI-210		46.50	*	-2.582E+00	3.825E+00	6.288E+00	5.898E-01	-0.411
PB-210		46.50	*	-2.582E+00	3.825E+00	6.288E+00	5.898E-01	-0.411
PO-210		46.50	*	-2.582E+00	3.824E+00	6.288E+00	5.350E-01	-0.411
PB-211		404.84	*	8.589E-01	1.971E+00	3.151E+00	1.974E+00	0.273
		427.08		3.104E-01	4.353E+00	7.053E+00	4.382E+00	0.044
		831.96		-8.333E-01	2.709E+00	4.241E+00	2.661E+00	-0.196
BI-212		727.18	*	8.740E-01	5.742E-01	1.029E+00	1.068E-01	0.849
		785.46		1.483E+00	3.402E+00	5.751E+00	5.258E-01	0.258
		1620.62		7.081E-01	1.569E+00	2.789E+00	2.330E-01	0.254
BI-214	+	609.31	*	6.546E-01	2.141E-01	3.247E-01	3.359E-02	2.016
		1120.29		3.616E-01	6.085E-01	1.055E+00	1.133E-01	0.343
		1764.49		7.666E-01	4.170E-01	8.649E-01	7.112E-02	0.886
PO-215		81.07		-3.577E-01	3.239E-01	4.467E-01	3.859E-02	-0.801
		83.78		2.272E-01	1.903E-01	2.918E-01	2.606E-02	0.778
	+	94.90		2.045E-01	4.017E-01	4.924E-01	4.452E-02	0.415
	+	122.32		1.428E+01	4.645E+00	5.845E+00	5.391E-01	2.443
		144.24		2.153E-01	9.654E-01	1.561E+00	1.450E-01	0.138
		154.21		-1.590E-01	5.892E-01	9.232E-01	8.301E-02	-0.172
		269.46		2.917E-01	3.147E-01	5.439E-01	4.720E-02	0.536
		323.87	*	-2.487E-01	1.211E+00	1.967E+00	3.478E-01	-0.126
	+	338.28		5.582E+00	2.540E+00	3.382E+00	4.150E-01	1.650
		445.03		2.476E+00	4.883E+00	8.084E+00	9.784E-01	0.306
RN-219		271.23		2.802E-01	4.010E-01	6.864E-01	7.008E-02	0.408
		401.81	*	2.660E-01	8.426E-01	1.389E+00	2.069E-01	0.192
RN-220		549.76	*	1.228E+00	4.895E+01	8.234E+01	7.372E+00	0.015
RA-223		81.07		-3.577E-01	3.239E-01	4.467E-01	3.859E-02	-0.801
		83.78		2.272E-01	1.903E-01	2.918E-01	2.606E-02	0.778
	+	94.90		2.045E-01	4.017E-01	4.924E-01	4.452E-02	0.415
	+	122.32		1.428E+01	4.645E+00	5.845E+00	5.391E-01	2.443
		144.24		2.153E-01	9.654E-01	1.561E+00	1.450E-01	0.138
		154.21		-1.590E-01	5.892E-01	9.232E-01	8.301E-02	-0.172
		269.46		2.917E-01	3.147E-01	5.439E-01	4.720E-02	0.536
		323.87	*	-2.487E-01	1.211E+00	1.967E+00	3.478E-01	-0.126
	+	338.28		5.582E+00	2.540E+00	3.382E+00	4.150E-01	1.650
		445.03		2.476E+00	4.883E+00	8.084E+00	9.784E-01	0.306
RA-226	+	609.31	*	6.546E-01	2.141E-01	3.247E-01	3.359E-02	2.016
		1120.29		3.616E-01	6.085E-01	1.055E+00	1.133E-01	0.343
		1764.49		7.666E-01	4.170E-01	8.649E-01	7.112E-02	0.886
AC-227		79.80		-2.162E+00	2.349E+00	3.212E+00	6.893E-01	-0.673
		236.00		2.414E-01	4.143E-01	6.302E-01	7.636E-02	0.383
		256.20	*	1.434E-01	6.430E-01	1.082E+00	1.653E-01	0.133
		286.10		-2.739E-01	2.587E+00	4.258E+00	5.592E-01	-0.064

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TH-227		299.80		1.241E+00	2.994E+00	4.445E+00	7.760E-01	0.279
		304.40		-1.804E+00	3.339E+00	5.324E+00	9.800E-01	-0.339
		334.20		4.124E+00	4.301E+00	6.555E+00	1.271E+00	0.629
		79.80		-2.162E+00	2.350E+00	3.212E+00	6.982E-01	-0.673
	+	94.00		1.636E+00	3.230E+00	4.241E+00	9.316E-01	0.386
		236.00		2.414E-01	4.141E-01	6.302E-01	6.892E-02	0.383
		256.20	*	1.434E-01	6.431E-01	1.082E+00	1.947E-01	0.133
		286.10		-2.739E-01	2.601E+00	4.258E+00	4.273E+00	-0.064
		299.80		1.241E+00	2.994E+00	4.445E+00	7.760E-01	0.279
		304.40		-1.804E+00	3.339E+00	5.324E+00	9.800E-01	-0.339
TH-229		334.20		4.124E+00	4.301E+00	6.555E+00	1.271E+00	0.629
		85.43		1.762E-01	2.921E-01	4.372E-01	3.986E-02	0.403
	+	88.47		4.067E+00	4.577E-01	5.189E-01	4.873E-02	7.837
		100.00		-5.106E-02	2.409E-01	3.867E-01	3.426E-02	-0.132
		193.63	*	7.985E-01	8.120E-01	1.381E+00	1.128E-01	0.578
TH-230		210.97		-2.357E-01	1.259E+00	2.101E+00	1.744E-01	-0.112
	+	609.31	*	6.545E-01	2.141E-01	3.247E-01	3.359E-02	2.016
		1120.29		3.616E-01	6.085E-01	1.055E+00	1.133E-01	0.343
PA-231		1764.49		7.666E-01	4.170E-01	8.649E-01	7.112E-02	0.886
		283.67	*	-3.836E-01	2.539E+00	4.170E+00	6.305E-01	-0.092
TH-231		301.29		5.781E-01	1.027E+00	1.737E+00	2.119E-01	0.333
		81.07		-3.577E-01	3.239E-01	4.467E-01	3.859E-02	-0.801
		83.78		2.272E-01	1.903E-01	2.918E-01	2.606E-02	0.778
	+	94.90		2.045E-01	4.017E-01	4.924E-01	4.452E-02	0.415
	+	122.32		1.428E+01	4.645E+00	5.845E+00	5.391E-01	2.443
		144.24		2.153E-01	9.654E-01	1.561E+00	1.450E-01	0.138
		154.21		-1.590E-01	5.892E-01	9.232E-01	8.301E-02	-0.172
		269.46		2.917E-01	3.147E-01	5.439E-01	4.720E-02	0.536
		323.87	*	-2.487E-01	1.211E+00	1.967E+00	3.478E-01	-0.126
	+	338.28		5.582E+00	2.540E+00	3.382E+00	4.150E-01	1.650
U-231		445.03		2.476E+00	4.883E+00	8.084E+00	9.784E-01	0.306
		84.21		2.005E+00	2.297E+00	3.480E+00	3.125E-01	0.576
	+	92.29		7.136E-01	5.433E-01	1.216E+00	1.115E-01	0.587
		95.87	*	9.254E-02	4.252E-01	6.248E-01	5.624E-02	0.148
		108.00		-4.649E-01	7.874E-01	1.235E+00	1.073E-01	-0.376
PA-233	+	75.28		1.205E+01	5.238E+00	6.972E+00	1.050E+00	1.728
	+	86.59		5.831E+01	1.620E+01	6.293E+00	1.701E+00	9.266
		300.12		3.058E-01	7.845E-01	1.225E+00	1.817E-01	0.250
		311.98	*	-1.025E-01	1.085E-01	1.681E-01	1.483E-02	-0.610
		340.50		1.677E+00	1.265E+00	1.900E+00	4.525E-01	0.883
PA-234		398.62		4.954E-01	4.165E+00	6.800E+00	1.805E+00	0.073
		415.76		8.028E-01	3.199E+00	5.248E+00	1.128E+00	0.153
		63.00		3.624E-01	1.808E+00	2.736E+00	4.052E-01	0.132
	+	94.67		1.459E-01	2.868E-01	3.564E-01	4.528E-02	0.409
		98.44		-4.477E-02	1.295E-01	1.928E-01	1.077E-01	-0.232
		99.86		-1.602E-01	6.082E-01	9.740E-01	8.633E-02	-0.165
		111.00		1.554E-01	2.559E-01	4.241E-01	5.134E-02	0.367
		131.20		1.543E-02	1.559E-01	2.510E-01	2.114E-02	0.061
		152.70		3.117E-01	4.814E-01	7.865E-01	1.321E-01	0.396

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	186.00	4.059E+00	3.641E+00	3.457E+00	1.074E+00	1.174
		226.40	-7.849E-02	6.700E-01	1.117E+00	1.459E-01	-0.070
		227.20	1.031E-01	7.175E-01	1.210E+00	1.016E-01	0.085
		248.90	-2.465E-01	1.373E+00	2.268E+00	5.072E-01	-0.109
	+	293.70	2.262E+00	1.660E+00	2.127E+00	3.671E-01	1.063
		369.80	-5.940E-01	1.639E+00	2.607E+00	5.661E-01	-0.228
		568.70	1.356E+00	1.888E+00	3.297E+00	2.957E-01	0.411
		569.50	4.090E-01	5.123E-01	8.984E-01	8.056E-02	0.455
		574.00	-1.361E+00	2.691E+00	4.347E+00	3.899E-01	-0.313
		699.00	3.730E-01	1.283E+00	2.162E+00	4.159E-01	0.173
		706.10	5.604E-01	1.855E+00	3.106E+00	1.387E+00	0.180
		733.00	-9.417E-01	7.393E-01	1.044E+00	2.336E-01	-0.902
		742.81	2.875E-01	2.586E+00	4.278E+00	2.878E+00	0.067
		796.30	3.477E+00	2.186E+00	3.586E+00	9.764E-01	0.970
		805.60	6.619E-01	1.971E+00	3.290E+00	1.014E+00	0.201
		819.60	2.625E+00	2.950E+00	4.828E+00	1.842E+00	0.544
		826.30	-9.134E-01	1.862E+00	2.855E+00	1.280E+00	-0.320
		831.60	-8.472E-01	1.404E+00	2.155E+00	6.466E-01	-0.393
		876.40	-7.588E-01	2.009E+00	2.913E+00	2.996E+00	-0.260
		880.51	4.381E-01	6.221E-01	1.061E+00	9.734E-02	0.413
		883.24	-2.052E-01	6.773E-01	1.052E+00	7.081E-01	-0.195
		899.00	-1.076E+00	2.200E+00	3.368E+00	1.476E+00	-0.320
		925.00	-4.220E+00	3.081E+00	4.467E+00	4.075E-01	-0.945
		926.50	-1.833E-01	4.476E-01	6.998E-01	1.781E-01	-0.262
		946.00 *	-2.805E-01	7.949E-01	1.251E+00	2.375E-01	-0.224
		949.00	3.307E-01	1.182E+00	1.943E+00	1.765E-01	0.170
		980.50	-5.915E-01	1.795E+00	2.820E+00	2.540E-01	-0.210
		1394.10	-1.313E-01	1.286E+00	2.059E+00	1.339E+00	-0.064
PA-234M		766.42	-6.330E-01	2.128E+01	3.485E+01	1.771E+01	-0.018
		1001.03 *	-2.179E+00	1.015E+01	1.614E+01	1.655E+00	-0.135
TH-234		63.29 *	1.083E-01	1.532E+00	2.304E+00	4.009E-01	0.047
	+	92.38	6.694E-01	5.206E-01	1.148E+00	2.106E-01	0.583
U-234	+	609.31 *	6.545E-01	2.141E-01	3.247E-01	3.359E-02	2.016
		1120.29	3.616E-01	6.085E-01	1.055E+00	1.133E-01	0.343
		1764.49	7.666E-01	4.170E-01	8.649E-01	7.112E-02	0.886
U-235	+	89.95	1.587E+00	2.178E+00	2.890E+00	8.975E-01	0.549
	+	93.35	5.091E-01	1.009E+00	1.400E+00	3.944E-01	0.364
		105.00	-8.693E-01	1.441E+00	2.226E+00	6.652E-01	-0.390
		143.76 *	-1.286E-01	3.034E-01	4.733E-01	8.197E-02	-0.272
		163.35	-2.376E-01	7.119E-01	1.106E+00	2.078E-01	-0.215
	+	185.71	1.503E-01	1.271E-01	1.261E-01	1.021E-02	1.192
		205.31	-2.006E+00	9.054E-01	1.239E+00	2.344E-01	-1.619
NP-236	+	94.67	1.107E-01	2.173E-01	2.704E-01	2.447E-02	0.409
		98.44	-3.385E-02	9.613E-02	1.458E-01	1.298E-02	-0.232
		111.00	1.176E-01	1.933E-01	3.208E-01	2.774E-02	0.367
		160.31 *	-7.132E-02	1.190E-01	1.825E-01	1.459E-02	-0.391
NP-237		86.50 *	3.943E+00	1.019E+00	9.003E-01	2.036E-01	4.380
		95.87	2.923E-01	1.345E+00	1.974E+00	4.889E-01	0.148
U-238		63.29 *	1.083E-01	1.532E+00	2.304E+00	4.009E-01	0.047

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239	+	92.38		6.694E-01	5.096E-01	1.148E+00	1.052E-01	0.583
		99.55		-4.734E-02	2.039E-01	3.272E-01	2.903E-02	-0.145
		117.00	*	-3.035E-01	3.057E-01	4.079E-01	3.509E-02	-0.744
		209.75		1.965E+00	1.250E+00	2.217E+00	1.838E-01	0.887
		228.18		8.051E-02	3.676E-01	6.219E-01	5.226E-02	0.129
CM-243		277.60		1.410E-01	2.997E-01	5.081E-01	4.313E-02	0.278
		334.30		2.387E+00	2.406E+00	3.724E+00	3.190E-01	0.641
		99.55		-4.869E-02	2.097E-01	3.365E-01	2.985E-02	-0.145
		103.76	*	-1.752E-02	1.290E-01	2.076E-01	1.819E-02	-0.084
		117.00		-3.121E-01	3.143E-01	4.194E-01	3.608E-02	-0.744
AM-246		209.75		1.937E+00	1.232E+00	2.184E+00	1.811E-01	0.887
		228.18		8.131E-02	3.712E-01	6.280E-01	5.278E-02	0.129
		277.60		1.421E-01	3.019E-01	5.120E-01	4.346E-02	0.278
		798.80		-2.964E-01	3.159E-01	4.819E-01	4.413E-02	-0.615
		1036.00		-1.529E-01	6.580E-01	1.086E+00	9.599E-02	-0.141
CM-247		1062.04		-1.066E-01	4.658E-01	7.668E-01	6.696E-02	-0.139
		1078.86	*	-7.586E-02	3.078E-01	5.059E-01	4.380E-02	-0.150
		278.00		3.109E-01	1.232E+00	2.069E+00	1.756E-01	0.150
		287.40		-2.256E-01	2.101E+00	3.457E+00	2.945E-01	-0.065
		402.60	*	-1.974E-02	7.643E-02	1.221E-01	1.025E-02	-0.162
CF-249		252.85		2.069E-02	1.461E+00	2.436E+00	2.068E-01	0.008
		333.44		1.601E-01	3.198E-01	4.781E-01	4.096E-02	0.335
		387.95	*	1.950E-02	7.912E-02	1.303E-01	1.088E-02	0.150
CF-251		176.60	*	-4.760E-02	1.825E-01	3.061E-01	2.452E-02	-0.155
		227.00		1.421E-01	6.372E-01	1.078E+00	9.055E-02	0.132
		285.00		-1.150E+00	2.927E+00	4.741E+00	4.035E-01	-0.242

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023721      *
* Acquisition date   : 2-FEB-2010 09:50:49 Detector SN#      :              *
* Detector ID        : GAM07 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time  : 0 01:00:00.00 Abundance limit : 75.000   *
* Elapsed real time  : 0 01:00:01.32 Half life ratio : 8.000   *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-JAN-2010 00:00:00 Nuclide Library : SOLID      *
* Sample ID          : G1202023721 Analyst initials: MXR1          *
* Batch Number       : 944966 Sample Quantity : 1.5544E+02 GRAM      *
* Recovery           : 1.00000 Carrier Weight : 0.00000          *
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                              *
* CALIB. DATE/TIME   : 20-JUL-2009 15:29:58 MS Isotope      :          *
* MSD DPM             : 0.000 MSD Isotope      :              *
* LCS DPM             : 0.000 LCS Isotope      :              *
* LCSD DPM           : 0.000 LCSD Isotope     :              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	2.025E-01	6.422E-02	6.138E-02	0.000E+00
CO-60	6.310E+00	5.984E-01	8.336E-02	0.000E+00
CD-109	2.996E+01	3.304E+00	1.891E+00	0.000E+00
SN-126	2.979E+00	3.285E-01	1.884E-01	0.000E+00
BA-137M	5.537E+00	5.442E-01	1.241E-01	0.000E+00
CS-137	5.853E+00	5.761E-01	1.312E-01	0.000E+00
TL-208	4.199E-01	1.241E-01	1.133E-01	0.000E+00
BI-211	2.082E+00	5.925E-01	6.243E-01	0.000E+00
PB-212	1.163E+00	1.814E-01	1.619E-01	0.000E+00
PO-212	1.163E+00	1.814E-01	1.619E-01	0.000E+00
PB-214	7.242E-01	2.094E-01	2.198E-01	0.000E+00
PO-214	7.242E-01	2.094E-01	2.198E-01	0.000E+00
PO-216	1.163E+00	1.814E-01	1.619E-01	0.000E+00
PO-218	7.242E-01	2.094E-01	2.198E-01	0.000E+00
RA-224	2.222E+00	1.634E+00	1.843E+00	0.000E+00
AC-228	5.652E-01	4.590E-01	5.052E-01	0.000E+00
RA-228	5.652E-01	4.590E-01	5.052E-01	0.000E+00
TH-228	1.172E+00	1.827E-01	1.631E-01	0.000E+00
TH-232	5.652E-01	4.590E-01	5.052E-01	0.000E+00
AM-241	1.332E+01	1.138E+00	4.000E-01	0.000E+00
AM-243	2.301E-01	9.372E-02	1.174E-01	0.000E+00
ANH-511	6.331E-02	9.773E-02	8.924E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	3.262E-01	6.640E-01	1.159E+00	0.000E+00 NOT IDENT.
NA-22	-1.137E-02	5.189E-02	8.583E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	1.441E+02	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-2.545E-02	3.495E-02	4.663E-02	0.000E+00 NOT IDENT.
K-40	8.777E-01	5.381E-01	1.125E+00	0.000E+00 NOT IDENT.

TI-44	0.000E+00	5.969E-02	9.096E-02	0.000E+00	FAIL ABUN
SC-46	3.526E-02	8.125E-02	1.419E-01	0.000E+00	NOT IDENT.
V-48	-2.564E-02	1.184E-01	1.951E-01	0.000E+00	NOT IDENT.
CR-51	-2.625E-01	5.504E-01	9.455E-01	0.000E+00	NOT IDENT.
MN-52	-7.805E-02	1.242E-01	1.859E-01	0.000E+00	FAIL ABUN
MN-54	4.686E-02	7.637E-02	1.355E-01	0.000E+00	NOT IDENT.
CO-56	-7.647E-02	7.789E-02	1.222E-01	0.000E+00	NOT IDENT.
CO-58	-4.123E-02	7.194E-02	1.174E-01	0.000E+00	NOT IDENT.
FE-59	-5.586E-02	1.587E-01	2.677E-01	0.000E+00	NOT IDENT.
ZN-65	-8.688E-02	1.927E-01	3.236E-01	0.000E+00	NOT IDENT.
GE-68	7.957E-01	2.631E+00	4.665E+00	0.000E+00	NOT IDENT.
AS-73	2.963E-01	1.222E+00	2.186E+00	0.000E+00	NOT IDENT.
AS-74	-4.081E-02	1.163E-01	1.999E-01	0.000E+00	NOT IDENT.
SE-75	-7.865E-02	7.032E-02	1.184E-01	0.000E+00	FAIL ABUN
BR-77	-8.875E-01	2.015E+00	3.497E+00	0.000E+00	FAIL ABUN
SR-82	-2.616E-01	5.788E-01	9.587E-01	0.000E+00	NOT IDENT.
RB-83	-5.647E-02	1.190E-01	2.060E-01	0.000E+00	NOT IDENT.
RB-84	5.673E-02	1.285E-01	2.248E-01	0.000E+00	NOT IDENT.
KR-85	1.522E+00	1.495E+01	2.347E+01	0.000E+00	NOT IDENT.
SR-85	7.193E-03	7.069E-02	1.110E-01	0.000E+00	NOT IDENT.
RB-86	4.158E-02	1.276E+00	2.222E+00	0.000E+00	NOT IDENT.
Y-88	1.640E-02	3.660E-02	6.930E-02	0.000E+00	NOT IDENT.
ZR-88	8.254E-03	5.539E-02	9.674E-02	0.000E+00	NOT IDENT.
Y-91	1.654E+01	2.042E+01	3.825E+01	0.000E+00	NOT IDENT.
NB-94	-2.607E-02	5.996E-02	1.008E-01	0.000E+00	NOT IDENT.
NB-95	9.507E-03	7.131E-02	1.238E-01	0.000E+00	NOT IDENT.
NB-95M	7.887E-02	1.943E-01	3.170E-01	0.000E+00	NOT IDENT.
ZR-95	2.665E-02	1.214E-01	2.125E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.183E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.755E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	7.242E-01	3.061E+00	5.374E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.829E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.194E-02	5.044E-02	8.981E-02	0.000E+00	NOT IDENT.
RH-102	-2.443E-02	6.729E-02	1.122E-01	0.000E+00	NOT IDENT.
RU-103	-1.764E-02	7.113E-02	1.185E-01	0.000E+00	FAIL ABUN
RH-106	1.891E-01	5.888E-01	1.054E+00	0.000E+00	FAIL ABUN
RU-106	1.891E-01	5.885E-01	1.054E+00	0.000E+00	FAIL ABUN
AG-108M	1.541E-02	6.778E-02	1.178E-01	0.000E+00	NOT IDENT.
AG-110M	1.277E-01	8.007E-02	1.365E-01	0.000E+00	NOT IDENT.
IN-111	1.689E-02	2.941E-01	4.683E-01	0.000E+00	NOT IDENT.
IN-113M	-8.542E-03	8.330E-02	1.425E-01	0.000E+00	NOT IDENT.
SN-113	-8.542E-03	8.330E-02	1.425E-01	0.000E+00	NOT IDENT.
IN-114M	-2.004E-01	2.783E-01	4.316E-01	0.000E+00	NOT IDENT.
CD-115	-7.509E-02	1.815E+00	3.227E+00	0.000E+00	NOT IDENT.
SN-117M	3.475E-02	5.353E-02	9.579E-02	0.000E+00	NOT IDENT.
SB-122	-6.473E-02	5.157E-01	9.064E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.639E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.686E-02	3.913E-02	7.014E-02	0.000E+00	NOT IDENT.
I-124	-1.153E-02	3.521E-01	5.624E-01	0.000E+00	NOT IDENT.
SB-124	5.834E-03	7.763E-02	1.311E-01	0.000E+00	FAIL ABUN
SB-125	-2.317E-02	1.858E-01	3.170E-01	0.000E+00	NOT IDENT.
TE-125M	-3.327E+00	1.147E+01	2.014E+01	0.000E+00	NOT IDENT.
I-126	-4.279E-02	2.506E-01	3.727E-01	0.000E+00	NOT IDENT.
SB-126	1.038E-01	1.681E-01	3.035E-01	0.000E+00	FAIL ABUN
SB-127	5.118E-01	5.847E-01	1.079E+00	0.000E+00	NOT IDENT.
XE-127	2.292E-02	6.158E-02	1.143E-01	0.000E+00	FAIL ABUN
I-131	4.806E-02	1.070E-01	1.912E-01	0.000E+00	NOT IDENT.
TE-132	4.798E-02	2.129E-01	3.896E-01	0.000E+00	NOT IDENT.
BA-133	5.937E-02	8.453E-02	1.374E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.298E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.872E-01	9.976E-02	1.884E-01	0.000E+00	NOT IDENT.
CS-135	6.591E-02	2.625E-01	4.752E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.398E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.064E-02	1.554E-01	2.659E-01	0.000E+00	NOT IDENT.
CE-139	-6.309E-03	4.333E-02	7.429E-02	0.000E+00	NOT IDENT.
BA-140	-3.284E-02	3.060E-01	5.404E-01	0.000E+00	NOT IDENT.
LA-140	-1.083E-02	7.828E-02	1.269E-01	0.000E+00	NOT IDENT.
CE-141	7.447E-02	7.325E-02	1.339E-01	0.000E+00	NOT IDENT.
CE-143	3.151E+00	5.203E+00	8.377E+00	0.000E+00	FAIL ABUN
CE-144	-2.070E-01	2.991E-01	5.048E-01	0.000E+00	NOT IDENT.
PM-144	-1.749E-02	6.349E-02	1.081E-01	0.000E+00	NOT IDENT.
PR-144	-1.181E+00	4.285E+00	7.296E+00	0.000E+00	NOT IDENT.
PM-146	8.626E-03	9.501E-02	1.632E-01	0.000E+00	NOT IDENT.
ND-147	7.669E-02	6.414E-01	1.151E+00	0.000E+00	FAIL ABUN
PM-149	-3.108E+00	1.353E+01	2.380E+01	0.000E+00	NOT IDENT.
EU-152	1.980E-02	1.795E-01	3.058E-01	0.000E+00	FAIL ABUN
GD-153	5.090E-02	1.063E-01	1.752E-01	0.000E+00	NOT IDENT.
EU-154	-4.244E-02	1.470E-01	2.407E-01	0.000E+00	FAIL ABUN

EU-155	-8.123E-02	1.412E-01	2.449E-01	0.000E+00	FAIL ABUN
TB-160	9.808E-02	2.825E-01	4.910E-01	0.000E+00	FAIL ABUN
HO-166M	4.964E-02	1.075E-01	1.925E-01	0.000E+00	NOT IDENT.
TM-171	-3.883E+00	3.068E+01	5.616E+01	0.000E+00	FAIL ABUN
LU-176	5.259E-04	4.267E-02	7.558E-02	0.000E+00	FAIL ABUN
LU-177	1.378E+00	7.757E-01	1.498E+00	0.000E+00	NOT IDENT.
LU-177M	-4.420E-01	3.394E-01	5.369E-01	0.000E+00	FAIL ABUN
HF-181	-3.871E-02	8.050E-02	1.327E-01	0.000E+00	FAIL ABUN
W-181	-3.529E-01	3.908E-01	6.581E-01	0.000E+00	FAIL ABUN
TA-182	-6.308E-03	2.130E-01	3.639E-01	0.000E+00	NOT IDENT.
RE-183	-3.881E-02	1.473E-01	2.512E-01	0.000E+00	FAIL ABUN
RE-184	5.341E-03	3.696E-01	6.651E-01	0.000E+00	FAIL ABUN
OS-185	-1.354E-02	7.408E-02	1.279E-01	0.000E+00	FAIL ABUN
RE-188	-1.751E-01	2.368E-01	3.951E-01	0.000E+00	NOT IDENT.
W-188	-1.419E+00	1.272E+01	1.970E+01	0.000E+00	NOT IDENT.
IR-192	5.291E-02	5.713E-02	1.053E-01	0.000E+00	FAIL ABUN
AU-195	-7.722E-02	2.780E-01	4.919E-01	0.000E+00	FAIL ABUN
TL-200	-1.666E+00	6.158E+00	1.056E+01	0.000E+00	NOT IDENT.
TL-201	8.874E-01	1.811E+00	3.202E+00	0.000E+00	NOT IDENT.
TL-202	-7.317E-02	9.269E-02	1.511E-01	0.000E+00	NOT IDENT.
HG-203	3.042E-02	5.945E-02	1.086E-01	0.000E+00	NOT IDENT.
BI-207	-1.659E-02	1.050E-01	1.806E-01	0.000E+00	FAIL ABUN
TL-207	-2.487E-01	1.187E+00	2.066E+00	0.000E+00	FAIL ABUN
PO-209	1.800E+01	1.797E+01	3.229E+01	0.000E+00	NOT IDENT.
BI-210	-2.582E+00	3.749E+00	6.932E+00	0.000E+00	NOT IDENT.
PB-210	-2.582E+00	3.749E+00	6.932E+00	0.000E+00	NOT IDENT.
PO-210	-2.582E+00	3.747E+00	6.932E+00	0.000E+00	NOT IDENT.
PB-211	8.589E-01	1.932E+00	3.291E+00	0.000E+00	NOT IDENT.
BI-212	8.740E-01	5.627E-01	1.058E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	2.098E-01	3.355E-01	0.000E+00	FAIL ABUN
PO-215	-2.487E-01	1.187E+00	2.066E+00	0.000E+00	FAIL ABUN
RN-219	2.660E-01	8.257E-01	1.451E+00	0.000E+00	NOT IDENT.
RN-220	1.228E+00	4.797E+01	8.531E+01	0.000E+00	NOT IDENT.
RA-223	-2.487E-01	1.187E+00	2.066E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.098E-01	3.355E-01	0.000E+00	FAIL ABUN
AC-227	1.434E-01	6.301E-01	1.143E+00	0.000E+00	NOT IDENT.
TH-227	1.434E-01	6.303E-01	1.143E+00	0.000E+00	FAIL ABUN
TH-229	7.985E-01	7.958E-01	1.471E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.098E-01	3.355E-01	0.000E+00	FAIL ABUN
PA-231	-3.836E-01	2.489E+00	4.397E+00	0.000E+00	NOT IDENT.
TH-231	-2.487E-01	1.187E+00	2.066E+00	0.000E+00	FAIL ABUN
U-231	9.254E-02	4.167E-01	6.769E-01	0.000E+00	FAIL ABUN
PA-233	-1.025E-01	1.063E-01	1.768E-01	0.000E+00	FAIL ABUN
PA-234	-2.805E-01	7.790E-01	1.277E+00	0.000E+00	FAIL ABUN
PA-234M	-2.179E+00	9.947E+00	1.645E+01	0.000E+00	NOT IDENT.
TH-234	1.083E-01	1.501E+00	2.522E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.098E-01	3.355E-01	0.000E+00	FAIL ABUN
U-235	-1.286E-01	2.974E-01	5.077E-01	0.000E+00	FAIL ABUN
NP-236	-7.132E-02	1.167E-01	1.953E-01	0.000E+00	FAIL ABUN
NP-237	0.000E+00	9.990E-01	9.779E-01	0.000E+00	NOT IDENT.
U-238	1.083E-01	1.501E+00	2.522E+00	0.000E+00	FAIL ABUN
NP-239	-3.035E-01	2.996E-01	4.397E-01	0.000E+00	NOT IDENT.
CM-243	-1.752E-02	1.264E-01	2.245E-01	0.000E+00	NOT IDENT.
AM-246	-7.586E-02	3.016E-01	5.145E-01	0.000E+00	NOT IDENT.
CM-247	-1.974E-02	7.490E-02	1.276E-01	0.000E+00	NOT IDENT.
CF-249	1.950E-02	7.754E-02	1.363E-01	0.000E+00	NOT IDENT.
CF-251	-4.760E-02	1.789E-01	3.266E-01	0.000E+00	NOT IDENT.

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023721.CNF;1
Sample date        : 26-JAN-2010 00:00:00 Acquisition date : 2-FEB-2010 09:50:49.
Sample ID          : G1202023721      Sample quantity   : 1.55440E+02 GRAM
Detector name      : GAM07             Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00     Elapsed real time: 0 01:00:01.32  0.0%
Energy tolerance   : 1.50000 keV       Analyst Initials : MXR1
Abundance limit    : 75.00000          Sensitivity       : 5.00000
Batch ID           : 944966            Detector SN#      :
Matrix Spike ID    :                   LCS ID           : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	249	85.51*	7.072E+00	1.987E-01	2.025E-01	32.36
	136.48	-----	10.60	6.835E+00	-----	Line Not Found	-----
CO-60	1173.22	1807	100.00	1.358E+00	6.426E+00	6.443E+00	9.67
	1332.49	1587	100.00*	1.218E+00	6.294E+00	6.310E+00	9.68
CD-109	88.03	1567	3.72*	6.867E+00	2.963E+01	2.996E+01	11.26
SN-126	64.28	-----	9.60	4.930E+00	-----	Line Not Found	-----
	86.94	1567	8.90	6.867E+00	1.238E+01	1.238E+01	41.99
	87.57	1567	37.00*	6.867E+00	2.979E+00	2.979E+00	11.26
BA-137M	661.65	2301	89.98*	2.232E+00	5.535E+00	5.537E+00	10.03
CS-137	661.65	2301	85.12*	2.232E+00	5.851E+00	5.853E+00	10.04
TL-208	277.35	-----	6.80	4.401E+00	-----	Line Not Found	-----
	510.84	36	21.60	2.756E+00	2.931E-01	2.931E-01	157.74
	583.14	181	84.20*	2.476E+00	4.199E-01	4.199E-01	30.17
	860.37	-----	12.46	1.783E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	5.899E+00	-----	Line Not Found	-----
	351.07	205	12.94*	3.680E+00	2.082E+00	2.082E+00	29.04
PB-212	74.81	190	10.70	6.057E+00	1.419E+00	1.419E+00	42.61
	77.11	305	18.00	6.260E+00	1.307E+00	1.307E+00	25.27
	87.30	1567	8.00	6.867E+00	1.378E+01	1.378E+01	15.06
	238.63	527	44.60*	4.910E+00	1.163E+00	1.163E+00	15.91
	300.09	-----	3.41	4.151E+00	-----	Line Not Found	-----
PO-212	74.81	190	10.70	6.057E+00	1.419E+00	1.419E+00	42.61
	77.11	305	18.00	6.260E+00	1.307E+00	1.307E+00	25.27
	87.30	1567	8.00	6.867E+00	1.378E+01	1.378E+01	15.06
	115.19	-----	0.60	7.150E+00	-----	Line Not Found	-----
	238.63	527	44.60*	4.910E+00	1.163E+00	1.163E+00	15.91
	300.09	-----	3.41	4.151E+00	-----	Line Not Found	-----
PB-214	74.81	190	6.21	6.057E+00	2.445E+00	2.445E+00	42.22
	77.11	305	10.50	6.260E+00	2.240E+00	2.240E+00	26.39
	87.30	1567	4.67	6.867E+00	2.360E+01	2.360E+01	13.64
	241.98	88	7.49	4.868E+00	1.172E+00	1.172E+00	75.25
	295.21	79	19.20	4.204E+00	4.712E-01	4.712E-01	72.12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	205	37.20*	3.680E+00	7.242E-01	7.242E-01	29.50
	74.81	190	6.21	6.057E+00	2.445E+00	2.445E+00	42.22
	77.11	305	10.50	6.260E+00	2.240E+00	2.240E+00	26.39
	87.30	1567	4.67	6.867E+00	2.360E+01	2.360E+01	13.64
	241.98	88	7.49	4.868E+00	1.172E+00	1.172E+00	75.25
PO-216	295.21	79	19.20	4.204E+00	4.712E-01	4.712E-01	72.12
	351.92	205	37.20*	3.680E+00	7.242E-01	7.242E-01	29.50
	74.81	190	10.70	6.057E+00	1.419E+00	1.419E+00	42.61
	77.11	305	18.00	6.260E+00	1.307E+00	1.307E+00	25.27
	87.30	1567	8.00	6.867E+00	1.378E+01	1.378E+01	15.06
PO-218	238.63	527	44.60*	4.910E+00	1.163E+00	1.163E+00	15.91
	300.09	-----	3.41	4.151E+00	-----	Line Not Found	-----
	74.81	190	6.21	6.057E+00	2.445E+00	2.445E+00	42.22
	77.11	305	10.50	6.260E+00	2.240E+00	2.240E+00	26.39
	87.30	1567	4.67	6.867E+00	2.360E+01	2.360E+01	13.64
RA-224	241.98	88	7.49	4.868E+00	1.172E+00	1.172E+00	75.25
	295.21	79	19.20	4.204E+00	4.712E-01	4.712E-01	72.12
	351.92	205	37.20*	3.680E+00	7.242E-01	7.242E-01	29.50
	240.98	88	3.95*	4.868E+00	2.222E+00	2.222E+00	75.04
	338.32	120	11.40	3.793E+00	1.337E+00	1.337E+00	60.17
AC-228	911.07	55	27.70*	1.695E+00	5.652E-01	5.652E-01	82.87
	969.11	58	16.60	1.607E+00	1.049E+00	1.049E+00	75.96
	338.32	120	11.40	3.793E+00	1.337E+00	1.337E+00	60.17
	911.07	55	27.70*	1.695E+00	5.652E-01	5.652E-01	82.87
	969.11	58	16.60	1.607E+00	1.049E+00	1.049E+00	75.96
TH-228	74.81	190	10.70	6.057E+00	1.419E+00	1.430E+00	41.58
	77.11	305	18.00	6.260E+00	1.307E+00	1.316E+00	25.27
	87.30	1567	8.00	6.867E+00	1.378E+01	1.388E+01	11.26
	238.63	527	44.60*	4.910E+00	1.163E+00	1.172E+00	15.91
	300.09	-----	3.41	4.151E+00	-----	Line Not Found	-----
TH-232	338.32	120	11.40	3.793E+00	1.337E+00	1.337E+00	44.64
	911.07	55	27.70*	1.695E+00	5.652E-01	5.652E-01	82.87
	969.11	58	16.60	1.607E+00	1.049E+00	1.049E+00	75.96
	AM-241	59.54	4214	35.90*	4.256E+00	1.332E+01	8.71
	AM-243	74.67	190	66.00*	6.057E+00	2.301E-01	41.57
ANH-511	86.72	1567	0.34	6.867E+00	3.280E+02	3.280E+02	11.26
	117.66	-----	0.55	7.126E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.723E+00	-----	Line Not Found	-----
	511.00	36	100.00*	2.756E+00	6.331E-02	6.331E-02	157.52

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202023721

Page : 3
Acquisition date : 2-FEB-2010 09:50:49

Total number of lines in spectrum 23
Number of unidentified lines 0
Number of lines tentatively identified by NID 23 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	1.987E-01	2.025E-01	0.655E-01	32.36	
CO-60	5.27Y	1.00	6.294E+00	6.310E+00	0.611E+00	9.68	
CD-109	464.00D	1.01	2.963E+01	2.996E+01	0.337E+01	11.26	
SN-126	1.00E+05Y	1.00	2.979E+00	2.979E+00	0.335E+00	11.26	
BA-137M	30.17Y	1.00	5.535E+00	5.537E+00	0.555E+00	10.03	
CS-137	30.17Y	1.00	5.851E+00	5.853E+00	0.588E+00	10.04	
TL-208	1.41E+10Y	1.00	4.199E-01	4.199E-01	1.267E-01	30.17	
BI-211	7.04E+08Y	1.00	2.082E+00	2.082E+00	0.605E+00	29.04	
PB-212	1.41E+10Y	1.00	1.163E+00	1.163E+00	0.185E+00	15.91	
PO-212	1.41E+10Y	1.00	1.163E+00	1.163E+00	0.185E+00	15.91	
PB-214	1600.00Y	1.00	7.242E-01	7.242E-01	2.137E-01	29.50	
PO-214	1600.00Y	1.00	7.242E-01	7.242E-01	2.137E-01	29.50	
PO-216	1.41E+10Y	1.00	1.163E+00	1.163E+00	0.185E+00	15.91	
PO-218	1600.00Y	1.00	7.242E-01	7.242E-01	2.137E-01	29.50	
RA-224	1.41E+10Y	1.00	2.222E+00	2.222E+00	1.667E+00	75.04	
AC-228	1.41E+10Y	1.00	5.652E-01	5.652E-01	4.684E-01	82.87	
RA-228	1.41E+10Y	1.00	5.652E-01	5.652E-01	4.684E-01	82.87	
TH-228	1.91Y	1.01	1.163E+00	1.172E+00	0.186E+00	15.91	
TH-232	1.41E+10Y	1.00	5.652E-01	5.652E-01	4.684E-01	82.87	
AM-241	432.20Y	1.00	1.332E+01	1.332E+01	0.116E+01	8.71	
AM-243	7380.00Y	1.00	2.301E-01	2.301E-01	0.956E-01	41.57	
ANH-511	1.00E+09Y	1.00	6.331E-02	6.331E-02	9.972E-02	157.52	

Total Activity : 7.734E+01 7.771E+01

Grand Total Activity : 7.734E+01 7.771E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202023721

Page : 4
Acquisition date : 2-FEB-2010 09:50:49

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	57.88	169	862	1.41	115.42	112	13	4.69E-02	55.4	4.00E+00	T
2	89.77	61	225	1.02	179.18	171	11	1.71E-02	****	6.93E+00	T
2	92.35	53	144	1.00	184.35	182	9	1.46E-02	75.6	7.01E+00	T
2	93.46	33	300	1.26	186.56	182	9	9.27E-03	****	7.04E+00	T
0	186.26	98	364	2.13	372.13	367	13	2.71E-02	84.1	5.81E+00	T
0	609.27	150	110	1.44	1218.01	1213	10	4.16E-02	31.0	2.39E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023721.CNF;1 *
* Acquisition date   : 2-FEB-2010 09:50:49.  Detector SN#      :             *
* Detector ID        : GAM07                      Sensitivity    : 5.00000      *
* Geometry           : CAN                      Energy tolerance: 1.50000      *
* Elapsed live time  : 0 01:00:00.00             Abundance limit : 75.00000      *
* Elapsed real time  : 0 01:00:01.32             Half life ratio : 8.00000      *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 26-JAN-2010 00:00:00   Nuclide Library : SOLID          *
* Sample ID          : G1202023721           Analyst initials: MXR1            *
* Batch Number       : 944966                Sample Quantity : 1.55440E+02 GRAM *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 20-JUL-2009 15:29:58.0MS Isotope       :             *
* MSD ID             :                      MSD Isotope        :             *
* LCS ID             : 1032-A                LCS Isotope       :             *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	2.025E-01	6.553E-02	5.699E-02	4.903E-03	3.554
CO-60	6.310E+00	6.106E-01	8.244E-02	6.753E-03	76.550
CD-109	2.996E+01	3.372E+00	1.742E+00	1.641E-01	17.201
SN-126	2.979E+00	3.352E-01	1.735E-01	1.626E-02	17.163
BA-137M	5.537E+00	5.553E-01	1.204E-01	1.065E-02	45.999
CS-137	5.853E+00	5.878E-01	1.273E-01	1.128E-02	45.999
TL-208	4.199E-01	1.267E-01	1.095E-01	1.047E-02	3.835
BI-211	2.082E+00	6.046E-01	5.955E-01	5.342E-02	3.496
PB-212	1.163E+00	1.851E-01	1.529E-01	1.463E-02	7.608
PO-212	1.163E+00	1.851E-01	1.529E-01	1.463E-02	7.608
PB-214	7.242E-01	2.137E-01	2.097E-01	2.176E-02	3.454
PO-214	7.242E-01	2.137E-01	2.097E-01	2.176E-02	3.454
PO-216	1.163E+00	1.851E-01	1.529E-01	1.463E-02	7.608
PO-218	7.242E-01	2.137E-01	2.097E-01	2.176E-02	3.454
RA-224	2.222E+00	1.667E+00	1.741E+00	1.472E-01	1.276
AC-228	5.652E-01	4.684E-01	4.944E-01	5.759E-02	1.143
RA-228	5.652E-01	4.684E-01	4.944E-01	5.759E-02	1.143
TH-228	1.172E+00	1.865E-01	1.540E-01	1.473E-02	7.608

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	5.652E-01	4.684E-01	4.944E-01	5.759E-02	1.143
AM-241	1.332E+01	1.161E+00	3.650E-01	2.893E-02	36.502
AM-243	2.301E-01	9.564E-02	1.077E-01	8.659E-03	2.136
ANH-511	6.331E-02	9.972E-02	8.597E-02	7.638E-03	0.736

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.262E-01		6.775E-01	1.115E+00	1.052E-01	0.293
NA-22	-1.137E-02		5.295E-02	8.478E-02	6.959E-03	-0.134
NA-24	4.223E-05		7.352E-05	Half-Life too short		
AL-26	-2.545E-02		3.567E-02	4.652E-02	3.794E-03	-0.547
K-40	8.777E-01		5.491E-01	1.116E+00	9.582E-02	0.787
TI-44	2.411E-01	+	6.091E-02	8.354E-02	6.994E-03	2.886
SC-46	3.526E-02		8.290E-02	1.387E-01	1.271E-02	0.254
V-48	-2.564E-02		1.208E-01	1.914E-01	1.723E-02	-0.134
CR-51	-2.625E-01		5.617E-01	8.996E-01	8.129E-02	-0.292
MN-52	-7.805E-02		1.268E-01	1.842E-01	1.532E-02	-0.424
MN-54	4.686E-02		7.793E-02	1.323E-01	1.214E-02	0.354
CO-56	-7.647E-02		7.948E-02	1.193E-01	1.096E-02	-0.641
CO-58	-4.123E-02		7.340E-02	1.145E-01	1.052E-02	-0.360
FE-59	-5.586E-02		1.620E-01	2.633E-01	2.439E-02	-0.212
ZN-65	-8.688E-02		1.966E-01	3.184E-01	2.702E-02	-0.273
GE-68	7.957E-01		2.685E+00	4.586E+00	3.974E-01	0.174
AS-73	2.963E-01		1.247E+00	1.989E+00	1.494E-01	0.149
AS-74	-4.081E-02		1.187E-01	1.934E-01	1.733E-02	-0.211
SE-75	-7.865E-02		7.175E-02	1.121E-01	9.573E-03	-0.702
BR-77	-8.875E-01		2.056E+00	3.371E+00	3.002E-01	-0.263
SR-82	-2.616E-01		5.906E-01	9.341E-01	8.529E-02	-0.280
RB-83	-5.647E-02		1.214E-01	1.985E-01	1.768E-02	-0.284
RB-84	5.673E-02		1.312E-01	2.198E-01	2.016E-02	0.258
KR-85	1.522E+00		1.526E+01	2.262E+01	2.011E+00	0.067
SR-85	7.193E-03		7.214E-02	1.069E-01	9.507E-03	0.067
RB-86	4.158E-02		1.302E+00	2.184E+00	1.893E-01	0.019
Y-88	1.640E-02		3.735E-02	6.917E-02	5.614E-03	0.237
ZR-88	8.254E-03		5.652E-02	9.255E-02	7.709E-03	0.089
Y-91	1.654E+01		2.083E+01	3.773E+01	3.081E+00	0.438
NB-94	-2.607E-02		6.118E-02	9.791E-02	8.791E-03	-0.266
NB-95	9.507E-03		7.277E-02	1.206E-01	1.099E-02	0.079
NB-95M	7.887E-02		1.983E-01	2.992E-01	2.905E-02	0.264
ZR-95	2.665E-02		1.239E-01	2.069E-01	2.054E-02	0.129
NB-97	2.522E-04		6.034E-05	Half-Life too short		
ZR-97	5.929E-04		8.954E-04	Half-Life too short		
MO-99	7.242E-01		3.124E+00	5.229E+00	8.075E-01	0.138
TC-99M	-7.720E+00		1.443E+01	Half-Life too short		
RH-101	-3.194E-02		5.147E-02	8.441E-02	6.924E-03	-0.378
RH-102	-2.443E-02		6.867E-02	1.078E-01	9.461E-03	-0.227

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RU-103	-1.764E-02		7.258E-02	1.140E-01	1.631E-02	-0.155
RH-106	1.891E-01		6.008E-01	1.021E+00	1.385E-01	0.185
RU-106	1.891E-01		6.005E-01	1.021E+00	9.124E-02	0.185
AG-108M	1.541E-02		6.917E-02	1.130E-01	1.009E-02	0.136
AG-110M	1.277E-01		8.170E-02	1.324E-01	1.206E-02	0.964
IN-111	1.689E-02		3.001E-01	4.425E-01	3.748E-02	0.038
IN-113M	-8.542E-03		8.500E-02	1.363E-01	1.172E-02	-0.063
SN-113	-8.542E-03		8.500E-02	1.363E-01	1.172E-02	-0.063
IN-114M	-2.004E-01		2.840E-01	4.053E-01	3.297E-02	-0.494
CD-115	-7.509E-02		1.852E+00	3.111E+00	2.776E-01	-0.024
SN-117M	3.475E-02		5.463E-02	8.952E-02	7.178E-03	0.388
SB-122	-6.473E-02		5.263E-01	8.754E-01	7.848E-02	-0.074
I-123	3.184E-04		2.367E-04	Half-Life too short		
TE-123M	2.686E-02		3.993E-02	6.556E-02	5.289E-03	0.410
I-124	-1.153E-02		3.593E-01	5.442E-01	4.876E-02	-0.021
SB-124	5.834E-03		7.922E-02	1.305E-01	1.131E-02	0.045
SB-125	-2.317E-02		1.896E-01	3.039E-01	2.650E-02	-0.076
TE-125M	-3.327E+00		1.170E+01	1.865E+01	1.931E+00	-0.178
I-126	-4.279E-02		2.557E-01	3.616E-01	3.206E-02	-0.118
SB-126	1.038E-01		1.715E-01	2.951E-01	2.663E-02	0.352
SB-127	5.118E-01		5.966E-01	1.048E+00	1.031E-01	0.488
XE-127	2.292E-02		6.284E-02	1.075E-01	8.861E-03	0.213
I-131	4.806E-02		1.091E-01	1.826E-01	1.627E-02	0.263
TE-132	4.798E-02		2.172E-01	3.674E-01	5.327E-02	0.131
BA-133	5.937E-02		8.625E-02	1.311E-01	1.721E-02	0.453
I-133	-4.129E-06		1.173E-05	Half-Life too short		
CS-134	1.872E-01		1.018E-01	1.837E-01	1.692E-02	1.019
CS-135	6.591E-02		2.679E-01	4.501E-01	4.438E-02	0.146
I-135	-5.851E+00		1.223E+01	Half-Life too short		
CS-136	-4.064E-02		1.586E-01	2.612E-01	2.388E-02	-0.156
CE-139	-6.309E-03		4.422E-02	6.950E-02	5.497E-03	-0.091
BA-140	-3.284E-02		3.122E-01	5.213E-01	1.732E-01	-0.063
LA-140	-1.083E-02		7.988E-02	1.262E-01	1.056E-02	-0.086
CE-141	7.447E-02		7.474E-02	1.249E-01	1.046E-02	0.596
CE-143	3.151E+00		5.310E+00	7.952E+00	1.699E+00	0.396
CE-144	-2.070E-01		3.052E-01	4.697E-01	7.252E-02	-0.441
PM-144	-1.749E-02		6.479E-02	1.050E-01	9.412E-03	-0.167
PR-144	-1.181E+00		4.372E+00	7.088E+00	6.352E-01	-0.167
PM-146	8.626E-03		9.694E-02	1.567E-01	1.689E-02	0.055
ND-147	7.669E-02		6.545E-01	1.109E+00	1.678E-01	0.069
PM-149	-3.108E+00		1.381E+01	2.258E+01	3.491E+00	-0.138
EU-152	1.980E-02		1.832E-01	2.916E-01	2.643E-02	0.068
GD-153	5.090E-02		1.085E-01	1.617E-01	1.446E-02	0.315
EU-154	-4.244E-02		1.500E-01	2.377E-01	2.614E-02	-0.179
EU-155	-8.123E-02		1.441E-01	2.266E-01	2.002E-02	-0.358
TB-160	9.808E-02		2.882E-01	4.800E-01	4.402E-02	0.204
HO-166M	4.964E-02		1.097E-01	1.871E-01	1.684E-02	0.265
TM-171	-3.883E+00		3.131E+01	5.137E+01	3.842E+00	-0.076

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-176	5.259E-04		4.354E-02	7.183E-02	6.153E-03	0.007
LU-177	1.378E+00		7.915E-01	1.410E+00	1.168E-01	0.977
LU-177M	-4.420E-01		3.464E-01	5.143E-01	4.355E-02	-0.859
HF-181	-3.871E-02		8.214E-02	1.276E-01	1.123E-02	-0.303
W-181	-3.529E-01		3.987E-01	6.018E-01	4.453E-02	-0.586
TA-182	-6.308E-03		2.173E-01	3.590E-01	2.936E-02	-0.018
RE-183	-3.881E-02		1.503E-01	2.349E-01	1.870E-02	-0.165
RE-184	5.341E-03		3.771E-01	6.290E-01	5.338E-02	0.008
OS-185	-1.354E-02		7.559E-02	1.240E-01	1.102E-02	-0.109
RE-188	-1.751E-01		2.416E-01	3.690E-01	2.978E-02	-0.475
W-188	-1.419E+00		1.298E+01	1.870E+01	1.595E+00	-0.076
IR-192	5.291E-02		5.829E-02	1.002E-01	8.612E-03	0.528
AU-195	-7.722E-02		2.837E-01	4.544E-01	4.041E-02	-0.170
TL-200	-1.666E+00		6.284E+00	1.008E+01	8.534E-01	-0.165
TL-201	8.874E-01		1.848E+00	2.997E+00	2.374E-01	0.296
TL-202	-7.317E-02		9.458E-02	1.450E-01	1.249E-02	-0.505
HG-203	3.042E-02		6.066E-02	1.030E-01	8.997E-03	0.295
BI-207	-1.659E-02		1.072E-01	1.775E-01	1.549E-02	-0.093
TL-207	-2.487E-01		1.211E+00	1.967E+00	3.478E-01	-0.126
PO-209	1.800E+01		1.834E+01	3.158E+01	2.892E+00	0.570
BI-210	-2.582E+00		3.825E+00	6.288E+00	5.898E-01	-0.411
PB-210	-2.582E+00		3.825E+00	6.288E+00	5.898E-01	-0.411
PO-210	-2.582E+00		3.824E+00	6.288E+00	5.350E-01	-0.411
PB-211	8.589E-01		1.971E+00	3.151E+00	1.974E+00	0.273
BI-212	8.740E-01		5.742E-01	1.029E+00	1.068E-01	0.849
BI-214	6.546E-01	+	2.141E-01	3.247E-01	3.359E-02	2.016
PO-215	-2.487E-01		1.211E+00	1.967E+00	3.478E-01	-0.126
RN-219	2.660E-01		8.426E-01	1.389E+00	2.069E-01	0.192
RN-220	1.228E+00		4.895E+01	8.234E+01	7.372E+00	0.015
RA-223	-2.487E-01		1.211E+00	1.967E+00	3.478E-01	-0.126
RA-226	6.546E-01	+	2.141E-01	3.247E-01	3.359E-02	2.016
AC-227	1.434E-01		6.430E-01	1.082E+00	1.653E-01	0.133
TH-227	1.434E-01		6.431E-01	1.082E+00	1.947E-01	0.133
TH-229	7.985E-01		8.120E-01	1.381E+00	1.128E-01	0.578
TH-230	6.545E-01	+	2.141E-01	3.247E-01	3.359E-02	2.016
PA-231	-3.836E-01		2.539E+00	4.170E+00	6.305E-01	-0.092
TH-231	-2.487E-01		1.211E+00	1.967E+00	3.478E-01	-0.126
U-231	9.254E-02		4.252E-01	6.248E-01	5.624E-02	0.148
PA-233	-1.025E-01		1.085E-01	1.681E-01	1.483E-02	-0.610
PA-234	-2.805E-01		7.949E-01	1.251E+00	2.375E-01	-0.224
PA-234M	-2.179E+00		1.015E+01	1.614E+01	1.655E+00	-0.135
TH-234	1.083E-01		1.532E+00	2.304E+00	4.009E-01	0.047
U-234	6.545E-01	+	2.141E-01	3.247E-01	3.359E-02	2.016
U-235	-1.286E-01		3.034E-01	4.733E-01	8.197E-02	-0.272
NP-236	-7.132E-02		1.190E-01	1.825E-01	1.459E-02	-0.391
NP-237	3.943E+00		1.019E+00	9.003E-01	2.036E-01	4.380
U-238	1.083E-01		1.532E+00	2.304E+00	4.009E-01	0.047
NP-239	-3.035E-01		3.057E-01	4.079E-01	3.509E-02	-0.744

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.752E-02		1.290E-01	2.076E-01	1.819E-02	-0.084
AM-246	-7.586E-02		3.078E-01	5.059E-01	4.380E-02	-0.150
CM-247	-1.974E-02		7.643E-02	1.221E-01	1.025E-02	-0.162
CF-249	1.950E-02		7.912E-02	1.303E-01	1.088E-02	0.150
CF-251	-4.760E-02		1.825E-01	3.061E-01	2.452E-02	-0.155

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202023721          *
* Acquisition date   : 2-FEB-2010 09:50:49 Detector SN# :                  *
* Detector ID       : GAM07 Sensitivity      : 5.000                      *
* Geometry          : CAN Energy tolerance: 1.500                      *
* Elapsed live time: 0 01:00:00.00 Abundance limit : 75.000             *
* Elapsed real time: 0 01:00:01.32 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 26-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID        : G1202023721 Analyst initials: MXR1                 *
* Batch Number     : 944966 Sample Quantity : 1.5544E+02 GRAM          *
* Recovery         : 1.00000 Carrier Weight : 0.00000                  *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME : 20-JUL-2009 15:29:58 MS Isotope :                  *
* MSD DPM          : 0.000 MSD Isotope :                  *
* LCS DPM          : 0.000 LCS Isotope :                  *
* LCSD DPM         : 0.000 LCSD Isotope :                  *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	2.025E-01	6.422E-02	3.071E-02	3.277E-02
CO-60	6.310E+00	5.984E-01	4.170E-02	3.053E-01
CD-109	2.996E+01	3.304E+00	9.460E-01	1.686E+00
SN-126	2.979E+00	3.285E-01	9.428E-02	1.676E-01
BA-137M	5.537E+00	5.442E-01	6.209E-02	2.776E-01
CS-137	5.853E+00	5.761E-01	6.563E-02	2.939E-01
TL-208	4.199E-01	1.241E-01	5.666E-02	6.334E-02
BI-211	2.082E+00	5.925E-01	3.123E-01	3.023E-01
PB-212	1.163E+00	1.814E-01	8.101E-02	9.255E-02
PO-212	1.163E+00	1.814E-01	8.101E-02	9.255E-02
PB-214	7.242E-01	2.094E-01	1.100E-01	1.068E-01
PO-214	7.242E-01	2.094E-01	1.100E-01	1.068E-01
PO-216	1.163E+00	1.814E-01	8.101E-02	9.255E-02
PO-218	7.242E-01	2.094E-01	1.100E-01	1.068E-01
RA-224	2.222E+00	1.634E+00	9.219E-01	8.335E-01
AC-228	5.652E-01	4.590E-01	2.527E-01	2.342E-01
RA-228	5.652E-01	4.590E-01	2.527E-01	2.342E-01
TH-228	1.172E+00	1.827E-01	8.161E-02	9.323E-02
TH-232	5.652E-01	4.590E-01	2.527E-01	2.342E-01
AM-241	1.332E+01	1.138E+00	2.001E-01	5.804E-01
AM-243	2.301E-01	9.372E-02	5.875E-02	4.782E-02
ANH-511	6.331E-02	9.773E-02	4.465E-02	4.986E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.262E-01	6.640E-01	5.799E-01	3.388E-01 NOT IDENT.
NA-22	-1.137E-02	5.189E-02	4.294E-02	2.648E-02 NOT IDENT.
NA-24	4.223E+01	1.441E+02	0.000E+00	7.352E+01 SHORT HLIF
AL-26	-2.545E-02	3.495E-02	2.333E-02	1.783E-02 NOT IDENT.
K-40	8.777E-01	5.381E-01	5.630E-01	2.746E-01 NOT IDENT.

TI-44	2.411E-01	5.969E-02	4.551E-02	3.046E-02	FAIL ABUN
SC-46	3.526E-02	8.125E-02	7.097E-02	4.145E-02	NOT IDENT.
V-48	-2.564E-02	1.184E-01	9.763E-02	6.039E-02	NOT IDENT.
CR-51	-2.625E-01	5.504E-01	4.730E-01	2.808E-01	NOT IDENT.
MN-52	-7.805E-02	1.242E-01	9.298E-02	6.338E-02	FAIL ABUN
MN-54	4.686E-02	7.637E-02	6.778E-02	3.897E-02	NOT IDENT.
CO-56	-7.647E-02	7.789E-02	6.114E-02	3.974E-02	NOT IDENT.
CO-58	-4.123E-02	7.194E-02	5.872E-02	3.670E-02	NOT IDENT.
FE-59	-5.586E-02	1.587E-01	1.339E-01	8.099E-02	NOT IDENT.
ZN-65	-8.688E-02	1.927E-01	1.619E-01	9.831E-02	NOT IDENT.
GE-68	7.957E-01	2.631E+00	2.334E+00	1.342E+00	NOT IDENT.
AS-73	2.963E-01	1.222E+00	1.093E+00	6.234E-01	NOT IDENT.
AS-74	-4.081E-02	1.163E-01	1.000E-01	5.934E-02	NOT IDENT.
SE-75	-7.865E-02	7.032E-02	5.923E-02	3.588E-02	FAIL ABUN
BR-77	-8.875E-01	2.015E+00	1.750E+00	1.028E+00	FAIL ABUN
SR-82	-2.616E-01	5.788E-01	4.797E-01	2.953E-01	NOT IDENT.
RB-83	-5.647E-02	1.190E-01	1.031E-01	6.070E-02	NOT IDENT.
RB-84	5.673E-02	1.285E-01	1.125E-01	6.558E-02	NOT IDENT.
KR-85	1.522E+00	1.495E+01	1.174E+01	7.630E+00	NOT IDENT.
SR-85	7.193E-03	7.069E-02	5.551E-02	3.607E-02	NOT IDENT.
RB-86	4.158E-02	1.276E+00	1.111E+00	6.508E-01	NOT IDENT.
Y-88	1.640E-02	3.660E-02	3.467E-02	1.867E-02	NOT IDENT.
ZR-88	8.254E-03	5.539E-02	4.840E-02	2.826E-02	NOT IDENT.
Y-91	1.654E+01	2.042E+01	1.914E+01	1.042E+01	NOT IDENT.
NB-94	-2.607E-02	5.996E-02	5.042E-02	3.059E-02	NOT IDENT.
NB-95	9.507E-03	7.131E-02	6.195E-02	3.638E-02	NOT IDENT.
NB-95M	7.887E-02	1.943E-01	1.586E-01	9.915E-02	NOT IDENT.
ZR-95	2.665E-02	1.214E-01	1.063E-01	6.194E-02	NOT IDENT.
NB-97	2.522E+02	1.183E+02	0.000E+00	6.034E+01	SHORT HLIF
ZR-97	5.929E+02	1.755E+03	0.000E+00	8.954E+02	SHORT HLIF
MO-99	7.242E-01	3.061E+00	2.689E+00	1.562E+00	NOT IDENT.
TC-99M	-7.720E+06	2.829E+07	0.000E+00	1.443E+07	SHORT HLIF
RH-101	-3.194E-02	5.044E-02	4.493E-02	2.574E-02	NOT IDENT.
RH-102	-2.443E-02	6.729E-02	5.612E-02	3.433E-02	NOT IDENT.
RU-103	-1.764E-02	7.113E-02	5.927E-02	3.629E-02	FAIL ABUN
RH-106	1.891E-01	5.888E-01	5.274E-01	3.004E-01	FAIL ABUN
RU-106	1.891E-01	5.885E-01	5.274E-01	3.002E-01	FAIL ABUN
AG-108M	1.541E-02	6.778E-02	5.896E-02	3.458E-02	NOT IDENT.
AG-110M	1.277E-01	8.007E-02	6.830E-02	4.085E-02	NOT IDENT.
IN-111	1.689E-02	2.941E-01	2.343E-01	1.500E-01	NOT IDENT.
IN-113M	-8.542E-03	8.330E-02	7.130E-02	4.250E-02	NOT IDENT.
SN-113	-8.542E-03	8.330E-02	7.130E-02	4.250E-02	NOT IDENT.
IN-114M	-2.004E-01	2.783E-01	2.159E-01	1.420E-01	NOT IDENT.
CD-115	-7.509E-02	1.815E+00	1.614E+00	9.262E-01	NOT IDENT.
SN-117M	3.475E-02	5.353E-02	4.792E-02	2.731E-02	NOT IDENT.
SB-122	-6.473E-02	5.157E-01	4.535E-01	2.631E-01	NOT IDENT.
I-123	3.184E+02	4.639E+02	0.000E+00	2.367E+02	SHORT HLIF
TE-123M	2.686E-02	3.913E-02	3.509E-02	1.997E-02	NOT IDENT.
I-124	-1.153E-02	3.521E-01	2.814E-01	1.796E-01	NOT IDENT.
SB-124	5.834E-03	7.763E-02	6.559E-02	3.961E-02	FAIL ABUN
SB-125	-2.317E-02	1.858E-01	1.586E-01	9.478E-02	NOT IDENT.
TE-125M	-3.327E+00	1.147E+01	1.008E+01	5.852E+00	NOT IDENT.
I-126	-4.279E-02	2.506E-01	1.865E-01	1.279E-01	NOT IDENT.
SB-126	1.038E-01	1.681E-01	1.518E-01	8.576E-02	FAIL ABUN
SB-127	5.118E-01	5.847E-01	5.398E-01	2.983E-01	NOT IDENT.
XE-127	2.292E-02	6.158E-02	5.720E-02	3.142E-02	FAIL ABUN
I-131	4.806E-02	1.070E-01	9.566E-02	5.457E-02	NOT IDENT.
TE-132	4.798E-02	2.129E-01	1.949E-01	1.086E-01	NOT IDENT.
BA-133	5.937E-02	8.453E-02	6.873E-02	4.313E-02	NOT IDENT.
I-133	-4.129E+00	2.298E+01	0.000E+00	1.173E+01	SHORT HLIF
CS-134	1.872E-01	9.976E-02	9.426E-02	5.090E-02	NOT IDENT.
CS-135	6.591E-02	2.625E-01	2.378E-01	1.339E-01	NOT IDENT.
I-135	-5.851E+06	2.398E+07	0.000E+00	1.223E+07	SHORT HLIF
CS-136	-4.064E-02	1.554E-01	1.330E-01	7.930E-02	NOT IDENT.
CE-139	-6.309E-03	4.333E-02	3.716E-02	2.211E-02	NOT IDENT.
BA-140	-3.284E-02	3.060E-01	2.704E-01	1.561E-01	NOT IDENT.
LA-140	-1.083E-02	7.828E-02	6.351E-02	3.994E-02	NOT IDENT.
CE-141	7.447E-02	7.325E-02	6.701E-02	3.737E-02	NOT IDENT.
CE-143	3.151E+00	5.203E+00	4.191E+00	2.655E+00	FAIL ABUN
CE-144	-2.070E-01	2.991E-01	2.525E-01	1.526E-01	NOT IDENT.
PM-144	-1.749E-02	6.349E-02	5.409E-02	3.239E-02	NOT IDENT.
PR-144	-1.181E+00	4.285E+00	3.650E+00	2.186E+00	NOT IDENT.
PM-146	8.626E-03	9.501E-02	8.166E-02	4.847E-02	NOT IDENT.
ND-147	7.669E-02	6.414E-01	5.756E-01	3.273E-01	FAIL ABUN
PM-149	-3.108E+00	1.353E+01	1.191E+01	6.905E+00	NOT IDENT.
EU-152	1.980E-02	1.795E-01	1.530E-01	9.158E-02	FAIL ABUN
GD-153	5.090E-02	1.063E-01	8.764E-02	5.423E-02	NOT IDENT.
EU-154	-4.244E-02	1.470E-01	1.204E-01	7.502E-02	FAIL ABUN

EU-155	-8.123E-02	1.412E-01	1.225E-01	7.206E-02	FAIL	ABUN
TB-160	9.808E-02	2.825E-01	2.456E-01	1.441E-01	FAIL	ABUN
HO-166M	4.964E-02	1.075E-01	9.629E-02	5.485E-02	NOT	IDENT.
TM-171	-3.883E+00	3.068E+01	2.809E+01	1.565E+01	FAIL	ABUN
LU-176	5.259E-04	4.267E-02	3.781E-02	2.177E-02	FAIL	ABUN
LU-177	1.378E+00	7.757E-01	7.494E-01	3.958E-01	NOT	IDENT.
LU-177M	-4.420E-01	3.394E-01	2.686E-01	1.732E-01	FAIL	ABUN
HF-181	-3.871E-02	8.050E-02	6.638E-02	4.107E-02	FAIL	ABUN
W-181	-3.529E-01	3.908E-01	3.293E-01	1.994E-01	FAIL	ABUN
TA-182	-6.308E-03	2.130E-01	1.821E-01	1.087E-01	NOT	IDENT.
RE-183	-3.881E-02	1.473E-01	1.257E-01	7.514E-02	FAIL	ABUN
RE-184	5.341E-03	3.696E-01	3.327E-01	1.886E-01	FAIL	ABUN
OS-185	-1.354E-02	7.408E-02	6.398E-02	3.779E-02	FAIL	ABUN
RE-188	-1.751E-01	2.368E-01	1.976E-01	1.208E-01	NOT	IDENT.
W-188	-1.419E+00	1.272E+01	9.856E+00	6.490E+00	NOT	IDENT.
IR-192	5.291E-02	5.713E-02	5.270E-02	2.915E-02	FAIL	ABUN
AU-195	-7.722E-02	2.780E-01	2.461E-01	1.418E-01	FAIL	ABUN
TL-200	-1.666E+00	6.158E+00	5.283E+00	3.142E+00	NOT	IDENT.
TL-201	8.874E-01	1.811E+00	1.602E+00	9.240E-01	NOT	IDENT.
TL-202	-7.317E-02	9.269E-02	7.559E-02	4.729E-02	NOT	IDENT.
HG-203	3.042E-02	5.945E-02	5.434E-02	3.033E-02	NOT	IDENT.
BI-207	-1.659E-02	1.050E-01	9.036E-02	5.359E-02	FAIL	ABUN
TL-207	-2.487E-01	1.187E+00	1.034E+00	6.054E-01	FAIL	ABUN
PO-209	1.800E+01	1.797E+01	1.615E+01	9.169E+00	NOT	IDENT.
BI-210	-2.582E+00	3.749E+00	3.468E+00	1.913E+00	NOT	IDENT.
PB-210	-2.582E+00	3.749E+00	3.468E+00	1.913E+00	NOT	IDENT.
PO-210	-2.582E+00	3.747E+00	3.468E+00	1.912E+00	NOT	IDENT.
PB-211	8.589E-01	1.932E+00	1.647E+00	9.856E-01	NOT	IDENT.
BI-212	8.740E-01	5.627E-01	5.295E-01	2.871E-01	NOT	IDENT.
BI-214	6.546E-01	2.098E-01	1.678E-01	1.071E-01	FAIL	ABUN
PO-215	-2.487E-01	1.187E+00	1.034E+00	6.054E-01	FAIL	ABUN
RN-219	2.660E-01	8.257E-01	7.259E-01	4.213E-01	NOT	IDENT.
RN-220	1.228E+00	4.797E+01	4.268E+01	2.447E+01	NOT	IDENT.
RA-223	-2.487E-01	1.187E+00	1.034E+00	6.054E-01	FAIL	ABUN
RA-226	6.546E-01	2.098E-01	1.678E-01	1.071E-01	FAIL	ABUN
AC-227	1.434E-01	6.301E-01	5.721E-01	3.215E-01	NOT	IDENT.
TH-227	1.434E-01	6.303E-01	5.721E-01	3.216E-01	FAIL	ABUN
TH-229	7.985E-01	7.958E-01	7.358E-01	4.060E-01	FAIL	ABUN
TH-230	6.545E-01	2.098E-01	1.678E-01	1.071E-01	FAIL	ABUN
PA-231	-3.836E-01	2.489E+00	2.200E+00	1.270E+00	NOT	IDENT.
TH-231	-2.487E-01	1.187E+00	1.034E+00	6.054E-01	FAIL	ABUN
U-231	9.254E-02	4.167E-01	3.387E-01	2.126E-01	FAIL	ABUN
PA-233	-1.025E-01	1.063E-01	8.845E-02	5.423E-02	FAIL	ABUN
PA-234	-2.805E-01	7.790E-01	6.389E-01	3.974E-01	FAIL	ABUN
PA-234M	-2.179E+00	9.947E+00	8.231E+00	5.075E+00	NOT	IDENT.
TH-234	1.083E-01	1.501E+00	1.262E+00	7.658E-01	FAIL	ABUN
U-234	6.545E-01	2.098E-01	1.678E-01	1.071E-01	FAIL	ABUN
U-235	-1.286E-01	2.974E-01	2.540E-01	1.517E-01	FAIL	ABUN
NP-236	-7.132E-02	1.167E-01	9.769E-02	5.952E-02	FAIL	ABUN
NP-237	3.943E+00	9.990E-01	4.892E-01	5.097E-01	NOT	IDENT.
U-238	1.083E-01	1.501E+00	1.262E+00	7.658E-01	FAIL	ABUN
NP-239	-3.035E-01	2.996E-01	2.200E-01	1.528E-01	NOT	IDENT.
CM-243	-1.752E-02	1.264E-01	1.123E-01	6.450E-02	NOT	IDENT.
AM-246	-7.586E-02	3.016E-01	2.574E-01	1.539E-01	NOT	IDENT.
CM-247	-1.974E-02	7.490E-02	6.382E-02	3.821E-02	NOT	IDENT.
CF-249	1.950E-02	7.754E-02	6.819E-02	3.956E-02	NOT	IDENT.
CF-251	-4.760E-02	1.789E-01	1.634E-01	9.126E-02	NOT	IDENT.

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*               GEL Laboratories LLC   *
*               2040 SAVAGE ROAD      *
*               CHARLESTON ,SC 29417  *
*               GAMMA SPECTROSCOPY BACKGROUND REPORT *
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ENERGY	MDA COUNTS
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46.50	566.7648
46.50	566.7648
46.50	566.7648
48.70	606.1360
49.72	626.7681
51.35	736.2484
52.39	756.3801
52.97	743.1299
53.15	764.5450
53.44	754.7484
54.07	718.7763
56.28	854.4899
56.28	854.4944
57.37	852.3932
57.53	613.0288
57.53	613.0320
57.60	613.1318
57.98	613.6888
57.98	613.6888
59.32	615.6415
59.32	615.6415
59.40	615.7558
59.54	615.9586
59.72	616.2194
60.01	616.6364
61.10	376.4864
61.14	376.5207
61.30	376.6599
63.00	322.2147
63.29	322.4261
63.29	322.4261
63.58	347.6819
64.28	348.2275
65.12	368.9837
65.20	369.0489
65.20	369.0489
66.05	375.2705
66.72	359.9954
66.83	360.0843
66.91	336.4013
67.20	322.7517
67.20	322.7517
67.75	333.0486
67.85	333.1204
68.90	370.6380
68.90	370.6380
69.30	368.7669
69.67	377.7184
70.82	369.6539
70.82	369.6539
70.83	369.6614
72.80	372.6812
72.87	372.7360
72.87	372.7360
74.67	368.0757
74.81	368.1799
74.81	368.1799
74.81	368.1799
74.81	368.1799
74.81	368.1799
74.81	368.1799
74.97	368.2990
75.28	368.5299
75.70	368.8408
77.11	369.8814
77.11	369.8814

77.11	369.8814
77.11	369.8814
77.11	369.8814
77.11	369.8814
77.11	369.8814
78.38	357.1329
79.62	393.0370
79.80	393.1748
79.80	393.1748
80.11	397.9856
80.18	398.0393
80.30	398.1310
80.30	398.1310
80.57	421.2310
81.00	441.4376
81.07	441.4972
81.07	441.4972
81.07	441.4972
81.07	441.4972
82.60	391.0028
83.37	383.5907
83.78	376.2123
83.78	376.2123
83.78	376.2123
83.78	376.2123
84.21	391.8851
84.90	420.0870
85.43	425.1224
86.29	468.9976
86.50	481.5253
86.54	481.5610
86.59	481.6062
86.72	481.7205
86.79	481.7800
86.94	481.9156
87.30	383.3128
87.30	383.3128
87.30	383.3128
87.30	383.3128
87.30	383.3128
87.30	383.3128
87.57	383.5020
87.88	383.7196
88.03	383.8237
88.36	384.0545
88.47	384.1321
89.95	217.4277
91.11	217.8795
92.29	218.3345
92.38	290.1198
92.38	290.1198
93.35	251.5527
94.00	264.3526
94.67	238.0358
94.67	238.0381
94.90	245.9665
94.90	245.9665
94.90	245.9665
94.90	245.9665
95.87	251.0864
95.87	251.0864
96.73	235.7414
97.43	223.4340
98.44	258.4934
98.44	258.4934
98.88	246.0661
99.55	244.2379
99.55	244.2379
99.86	242.2587
100.00	242.3149
100.10	247.6257
103.18	223.4706
103.76	238.5246
105.00	250.6900
105.31	248.6905
108.00	257.2356
109.28	251.3394

111.00	228.4251
111.00	228.4251
111.76	227.6211
112.95	251.7052
115.19	208.3167
116.30	227.0471
117.00	256.5101
117.00	256.5101
117.66	263.2648
121.11	226.5024
121.62	226.6727
121.78	226.7256
122.06	226.8187
122.32	226.9044
122.32	226.9044
122.32	226.9044
122.32	226.9044
123.07	235.8896
127.23	253.1244
129.76	243.6662
131.20	245.2628
133.02	283.5391
133.54	264.8999
135.34	231.1097
136.00	209.0750
136.25	211.3707
136.48	223.6775
140.51	223.7711
140.51	0.0000
142.18	224.2655
142.65	222.1619
143.76	230.3497
144.24	209.1327
144.24	209.1327
144.24	209.1327
144.24	209.1327
145.22	188.0092
145.44	191.4402
147.16	227.9815
152.43	211.3351
152.70	211.4070
153.22	208.1331
154.21	232.3036
154.21	232.3036
154.21	232.3036
154.21	232.3036
155.03	250.7786
156.02	222.5548
158.56	199.2086
159.00	0.0000
159.00	195.8784
160.31	228.3164
161.27	230.8789
162.32	216.2199
162.64	216.3021
163.35	225.6979
163.89	201.6477
165.85	228.6817
167.43	210.5949
171.28	231.3023
171.86	219.8271
172.10	219.8886
176.55	220.1325
176.60	220.1459
181.06	205.9131
184.41	250.5635
185.71	226.8203
186.00	226.8926
190.27	253.5891
192.34	227.0233
193.63	210.3827
197.04	257.3939
198.01	253.1657
198.60	242.5410
200.40	226.7965
201.83	225.3304
202.84	226.4672
205.31	299.4031

208.36	220.4857
208.81	209.6927
209.75	224.4279
209.75	224.4279
210.97	275.6479
215.65	230.3188
216.55	238.7555
218.09	240.0321
222.10	240.0478
223.80	239.5189
226.40	236.4199
227.00	227.3143
227.08	227.3330
227.20	229.2059
228.16	216.4632
228.18	216.4686
228.18	216.4686
231.56	222.7258
235.69	213.1489
236.00	226.6288
236.00	226.6288
238.63	222.3188
238.63	222.3188
238.63	222.3188
238.63	222.3188
239.00	222.3951
240.98	222.7963
241.98	218.8761
241.98	218.8761
241.98	218.8761
244.69	193.8638
245.39	206.0168
247.94	194.0523
248.90	201.7597
249.79	192.4842
252.40	212.7880
252.85	193.9502
252.85	193.9502
254.15	0.0000
256.20	191.6728
256.20	191.6728
260.50	168.5762
260.90	181.9740
262.80	186.0855
264.65	212.1866
268.24	199.4084
268.79	180.3177
269.46	182.3404
269.46	182.3404
269.46	182.3404
269.46	182.3404
271.23	182.6100
273.65	220.5369
276.40	180.5000
277.35	172.9119
277.60	178.7445
277.60	178.7445
278.00	179.7703
278.60	167.2875
279.20	174.1415
279.53	178.0591
280.46	184.0045
281.68	190.0036
283.67	170.8921
284.30	184.5786
285.00	176.9068
285.90	178.9800
286.10	174.1437
286.10	174.1437
287.40	178.2223
288.45	0.0000
290.67	176.5377
290.80	176.5570
291.72	178.2502
293.26	192.5569
293.70	184.7927
295.21	222.6412
295.21	222.6412

295.21	222.6412
295.96	247.8741
296.50	280.9373
297.23	266.9656
298.57	196.5027
299.80	209.2802
299.80	209.2802
300.09	205.9156
300.09	205.9156
300.09	205.9156
300.09	205.9156
300.12	205.9220
301.29	193.9640
302.84	219.8253
303.76	230.8329
303.91	230.8579
304.40	193.4429
304.40	193.4429
304.84	170.8011
306.84	170.0736
308.46	145.5331
311.98	168.7523
316.51	155.3811
318.01	171.5092
319.02	192.5936
319.41	192.6496
320.08	184.7544
323.87	185.2710
323.87	185.2710
323.87	185.2710
323.87	185.2710
325.23	179.4397
328.77	176.8889
333.44	140.3746
334.20	127.5360
334.20	127.5360
334.30	127.5457
338.28	175.0643
338.28	175.0643
338.28	175.0643
338.28	175.0643
338.32	175.0696
338.32	175.0696
338.32	175.0696
340.50	147.5684
340.57	147.5751
344.27	161.4338
345.85	183.7014
350.59	150.2457
351.07	160.0970
351.92	163.4619
351.92	163.4619
351.92	163.4619
355.39	0.0000
356.01	129.4975
364.48	140.1338
366.43	151.6678
367.43	163.1255
367.94	159.0498
369.80	165.4517
374.96	169.1284
383.85	158.6310
387.95	162.1899
388.63	153.8861
391.69	164.6756
391.69	164.6756
392.90	157.4547
398.62	161.1851
400.65	161.3905
401.10	151.9387
401.81	166.7853
402.60	181.6530
404.84	163.9283
410.95	152.8704
411.60	159.3040
413.65	187.1504
414.70	159.6062
415.30	153.2769

415.76	141.6088
417.63	0.0000
418.52	134.3806
423.70	156.1966
427.08	165.0890
427.89	160.8788
432.53	159.1718
433.93	157.1501
439.47	172.7808
439.56	172.7881
439.89	174.9825
443.98	158.0746
444.90	151.6595
445.03	151.6724
445.03	151.6724
445.03	151.6724
445.03	151.6724
453.90	170.9569
463.38	172.9692
468.07	185.4962
473.00	191.5073
475.06	189.5212
475.35	174.1240
476.78	174.2590
477.59	167.7158
477.96	148.9890
482.03	161.4875
484.57	156.1723
487.03	129.7630
490.36	144.4389
492.35	119.0117
497.08	132.6929
507.63	0.0000
510.53	0.0000
510.84	111.1937
511.00	111.2028
511.85	118.6687
511.85	118.6687
513.99	139.5000
513.99	139.5000
520.41	121.9021
520.65	121.9186
527.90	116.0250
528.96	0.0000
529.64	112.4991
529.87	0.0000
531.02	113.4857
537.32	108.3812
543.00	124.2129
546.56	0.0000
549.76	109.0523
552.65	96.3585
555.20	110.2617
563.23	111.6148
563.90	111.6503
568.70	102.6587
569.32	99.9158
569.50	99.9237
569.67	99.9316
573.80	114.9634
574.00	108.4821
574.64	104.8064
578.91	88.2902
579.30	88.3064
583.14	103.3660
585.48	99.4401
591.81	92.4621
592.07	95.3810
593.00	98.2299
595.88	97.4238
600.56	98.5734
602.52	0.0000
602.71	102.0269
602.71	102.0269
603.60	103.4124
604.41	100.3151
604.70	100.3281
609.31	115.9341

609.31	115.9341
609.31	115.9341
609.31	115.9341
610.33	106.8726
612.46	94.3896
614.37	99.1963
618.01	104.0891
621.84	97.6337
621.84	97.6337
631.29	85.6692
633.02	83.8299
633.10	83.8320
634.78	75.3142
635.90	92.5194
636.97	100.1986
645.85	91.9664
646.12	95.8081
656.30	91.4189
657.75	94.6842
657.90	0.0000
661.65	115.7402
661.65	115.7402
664.57	82.0844
666.33	98.2538
666.33	98.2538
675.00	71.7778
677.61	78.6527
685.20	68.1868
692.80	85.0119
695.00	94.8710
696.49	103.7356
696.49	103.7356
697.00	104.7351
697.49	97.9028
698.33	93.0402
698.50	85.2116
699.00	85.2286
702.63	95.1670
706.10	79.5801
706.58	0.0000
706.67	89.4248
709.31	84.6017
711.68	77.7907
713.82	88.6992
717.42	84.8788
720.50	78.0665
721.93	99.8633
722.20	116.6834
722.78	124.6219
722.78	124.6219
722.89	124.6280
722.95	124.6311
723.30	132.5638
724.18	115.7860
727.18	80.2545
733.00	105.2650
735.90	76.5545
739.58	80.6460
742.81	82.7427
744.21	74.8077
747.13	88.8718
751.79	83.0304
752.31	75.0421
753.82	79.0907
755.35	80.1387
756.15	82.1682
756.87	78.1809
763.93	89.4476
765.79	91.5221
766.42	96.5742
766.84	97.5944
776.49	90.8833
778.00	87.9027
778.57	83.8794
778.89	83.8896
783.80	76.9556
785.46	83.0831
792.07	103.6012

795.84	85.4376
796.30	87.4865
798.80	131.3495
801.93	96.8416
805.60	79.6187
810.29	98.1586
810.76	93.0617
815.85	95.2841
817.79	102.5269
818.51	103.5793
819.60	89.2578
826.30	106.9555
828.27	93.6505
831.60	115.3988
831.96	110.2628
834.83	94.9020
836.80	0.0000
846.75	107.7324
848.13	106.7468
856.28	0.0000
856.80	119.5455
860.37	98.8779
867.32	108.5043
867.82	106.4351
871.10	104.4666
873.19	102.4502
874.81	104.5996
875.33	0.0000
876.40	98.3764
879.36	89.0466
880.27	81.7400
880.51	82.7938
881.50	85.9679
883.24	104.8999
884.67	99.7036
889.25	89.3455
896.60	99.0511
898.02	119.1273
899.00	132.8783
903.28	121.4491
911.07	106.9402
911.07	106.9402
911.07	106.9402
919.63	90.2544
920.93	92.4163
925.00	143.5957
925.24	138.2900
926.50	123.4482
935.52	136.6188
937.48	121.7512
944.10	145.5592
946.00	131.7265
949.00	124.3488
962.29	118.4165
964.01	132.8423
966.15	141.9146
968.20	136.9715
969.11	130.5388
969.11	130.5388
969.11	130.5388
977.42	103.8375
980.50	109.3517
983.50	101.8670
989.30	83.5946
996.32	103.3612
1001.03	91.5243
1001.68	82.8244
1004.76	91.6289
1021.30	0.0000
1024.50	0.0000
1034.80	99.0703
1036.00	92.6820
1037.82	80.7956
1038.57	86.3235
1038.76	0.0000
1045.16	88.3320
1046.59	90.2122
1048.07	94.8567

1050.47	94.0022
1050.47	94.0022
1062.04	80.4509
1063.62	80.4863
1076.63	89.1484
1077.35	85.4526
1078.86	90.1363
1085.78	89.3867
1099.22	80.3835
1112.02	103.1877
1112.84	92.8890
1115.52	112.6807
1120.29	84.6240
1120.29	84.6240
1120.29	84.6240
1120.29	84.6240
1120.51	84.6277
1121.28	84.6460
1124.00	0.0000
1129.67	66.9323
1131.51	0.0000
1147.95	0.0000
1167.94	47.3617
1173.22	40.0688
1175.09	40.0894
1177.93	40.9389
1189.05	41.1978
1204.90	25.0151
1205.75	24.0580
1213.00	26.9963
1221.42	29.9556
1230.97	30.0300
1235.34	30.0640
1236.41	0.0000
1238.25	37.8495
1246.25	23.3408
1260.41	0.0000
1271.85	23.4932
1274.45	26.4474
1274.54	25.4679
1291.56	16.7233
1298.22	0.0000
1312.09	20.7633
1325.50	20.4065
1325.50	20.4065
1332.49	19.8739
1333.61	15.3350
1360.21	12.0039
1362.66	0.0000
1365.15	12.0181
1368.21	10.0224
1368.53	0.0000
1376.25	16.0664
1384.27	21.1273
1394.10	12.1006
1395.20	15.1294
1407.95	20.2327
1434.06	21.3726
1436.60	9.1648
1457.56	0.0000
1460.81	8.1914
1489.15	11.3348
1509.49	17.5963
1596.49	15.8173
1620.62	8.4785
1678.03	0.0000
1691.02	6.4502
1691.02	6.4502
1706.46	0.0000
1750.46	0.0000
1764.49	7.4785
1764.49	7.4785
1764.49	7.4785
1764.49	7.4785
1770.23	30.8823
1771.40	23.4018
1791.20	0.0000
1808.65	8.4843

1836.01

4.7377

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202023721

Total Uranium Activity	2.6264E-01	ug/g
Total Uranium Counting Unc.	4.4673E+00	ug/g
Total Uranium Tpu	2.2793E-06	ug/g
Total Uranium Mda	3.7549E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON ,SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 944966          SAMPLE ID   : G1202023721
*  ANALYST       : MXR1           DETECTOR    : GAM07
*  SAMPLE DATE   : 26-JAN-2010 00:00:00.00 COUNT TIME : 0 01:00:00.00
*  ANALYSIS DATE : 2-FEB-2010 09:50:49.53 SAMPLE ALQT: 155.440 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.670E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 3.197E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 4.260E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.084E+00

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Radiochemistry Batch Checklist, Rev10

Batch#

948398

Product:

Tritium

Date:

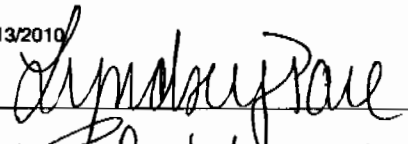
2/11/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		case narrative
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%.			NA
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line outs initialed and dated.	✓		
No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly stated.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

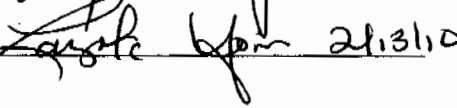
GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:



Secondary Review Performed By:



LANL 2/20/10

Tritium Que Sheet

03-FEB-10

Batch #: 948398

Analyst: KXK2

First Client Due Date 20-FEB-10

Internal Due Date: 09-FEB-10

Spike Isotope: Hydrogen-3

LCS Isotope: Hydrogen-3

Spike Code: 0134-K

LCS Code: 0134-K

Expiration Date: 3/27/10

Expiration Date: 3/27/10

Vol: 0.1

Vol: 0.1

Prep Date: 2/3/10 Initials: YKJ Pipet ID: 2970968 Witness: 2/3/10

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rtg #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Dist
245395001-1	RE15-10-7869	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-2	1		356.04	268.10	87.94
245395002-1	RE15-10-7874	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-3	2		478.08	410.53	17.55
245395003-1	RE15-10-7871	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-4	3		515.81	462.68	53.13
245395004-1	RE15-10-7872	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-5	4		507.58	445.66	61.92
245395005-1	RE15-10-7870	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-6	5		408.55	355.44	53.11
245395006-1	RE15-10-7873	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-7	6		400.14	367.61	52.52
245395007-1	RE15-10-7911	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-8	7		400.17	370.70	50.07
245395008-1	RE15-10-7908	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-9	8		410.89	383.06	33.76
245395009-1	RE15-10-7912	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-10	9		416.48	343.35	53.13
245395010-1	RE15-10-7906	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-11	10		544.18	490.31	53.87
245395011-1	RE15-10-7905	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	24-12	11		144.71	195.28	54.44
245395012-1	RE15-10-7907	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	31-1	12		433.81	350.95	82.86
245395013-1	RE15-10-7913	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	31-2	13		238.49	187.69	50.80
245395014-1	RE15-10-7909	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	31-3	14		328.48	276.91	51.57
245395015-1	RE15-10-7910	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	19-JAN-10	10	31-4	15		389.23	351.09	38.14
1202031673-1	MB for batch 948398	MB		.25 pCi/mL SOIL	QC ACCOUNT	QC ACCOUNT	19-JAN-10	10	31-5	16		20.00	0	20.00
1202031674-1	RE15-10-7869(245395001(DUP))	DUP		.25 pCi/mL SOIL	QC ACCOUNT	QC ACCOUNT	19-JAN-10	10	31-6	1		356.04	268.10	87.94
1202031675-1	LCS for batch 948398	LCS		.25 pCi/mL SOIL	QC ACCOUNT	QC ACCOUNT	19-JAN-10	10	31-7	17		20.00	0	20.00

Bkg Rack #: 24-1

Bkg prepared with dead water? Yes No

Comments:

Instrument Used (circle as appropriate): LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4140127, (LS6000 (Brown) 7060655) Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656, Orange DG06095168

Calibration Used : Ecoscint Ultra (10 mL sample/13 mL Ecoscint Ultra)
Data Reviewed By: 2/3/10

GEL Laboratories LLC, Radiochemistry Division

Page 1 of 1

DATE	2/3/2010	INITIALS	KXK2	BATCH NUMBER	948398	
Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
245395001	356.04	0.247	87.94	268.10	10	
245395002	428.08	0.041	17.55	410.53	10	
245395003	515.81	0.103	53.13	462.68	10	
245395004	507.58	0.122	61.92	445.66	10	
245395005	408.55	0.130	53.11	355.44	10	
245395006	420.12	0.125	52.52	367.61	10	
245395007	420.77	0.119	50.07	370.70	10	
245395008	416.82	0.081	33.76	383.06	10	
245395009	396.48	0.134	53.13	343.35	10	
245395010	544.18	0.099	53.87	490.31	10	
245395011	249.72	0.218	54.44	195.28	10	
245395012	433.81	0.191	82.86	350.95	10	
245395013	238.49	0.213	50.80	187.69	10	
245395014	328.48	0.157	51.57	276.91	10	
245395015	389.23	0.098	38.14	351.09	10	
MB	20.00	1.00	20.00	0.00	10.00	
DUP	356.04	0.25	87.94	268.10	10.00	
LCS	20.00	1.00	20.00	0.00	10.00	

Tritium Solid

Filename : H3VAC.XLS

File type : Excel

Version # : 1.2.5

Batch : 948398

Analyst : KKK2

Prep Date : 2/3/2010

H-3 Abundance : 1

Method Uncertainty : 0.0691

Geometry: 10mL DW/13mL
Ecoscint Ultra

Spike S/N : N/A

Spike Exp Date : N/A

Spike Activity (dpm/ml): N/A

Spike Volume Added: N/A

LCS S/N : 0134-K

LCS Exp Date : 3/27/2010

LCS Activity (dpm/ml): 2471.24

LCS Volume Added: 0.10

Procedure Code : LSC_VH3S

Parmaname : Tritium

Required MDC : 250 pCi/L

Half-life of Tritium : 12.28 years

Sample Characteristics			Total		Sample		Sample		%		Rig number	Sample Date/Time
Pos.	Sample ID	Wet Sample Weight (g)	Moisture L	Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	Moisture of Sample	Sample number	Sample Date/Time	Sample Date/Time		
1	245395001.2	356.04	0.0879	0.0100	2.5729E-05	268.10	24.70%	1	1/19/2010 12:00	1/19/2010 12:00		
2	245395002.2	428.08	0.0176	0.0100	2.5729E-05	410.53	4.10%	2	1/19/2010 12:00	1/19/2010 12:00		
3	245395003.2	515.81	0.0531	0.0100	2.5729E-05	462.68	10.30%	3	1/19/2010 12:00	1/19/2010 12:00		
4	245395004.2	507.58	0.0619	0.0100	2.5729E-05	445.66	12.20%	4	1/19/2010 12:00	1/19/2010 12:00		
5	245395005.2	408.55	0.0531	0.0100	2.5729E-05	355.44	13.00%	5	1/19/2010 12:00	1/19/2010 12:00		
6	245395006.2	420.12	0.0525	0.0100	2.5729E-05	367.61	12.50%	6	1/19/2010 12:00	1/19/2010 12:00		
7	245395007.2	420.77	0.0501	0.0100	2.5729E-05	370.70	11.90%	7	1/19/2010 12:00	1/19/2010 12:00		
8	245395008.2	418.82	0.0338	0.0100	2.5729E-05	383.06	8.10%	8	1/19/2010 12:00	1/19/2010 12:00		
9	245395009.2	396.48	0.0531	0.0100	2.5729E-05	343.35	13.40%	9	1/19/2010 12:00	1/19/2010 12:00		
10	245395010.2	544.18	0.0539	0.0100	2.5729E-05	490.31	9.90%	10	1/19/2010 12:00	1/19/2010 12:00		
11	245395011.2	249.72	0.0544	0.0100	2.5729E-05	195.28	21.80%	11	1/19/2010 12:00	1/19/2010 12:00		
12	245395012.2	433.81	0.0829	0.0100	2.5729E-05	350.95	19.10%	12	1/19/2010 12:00	1/19/2010 12:00		
13	245395013.2	238.49	0.0508	0.0100	2.5729E-05	187.69	21.30%	13	1/19/2010 12:00	1/19/2010 12:00		
14	245395014.2	328.48	0.0516	0.0100	2.5729E-05	278.91	15.70%	14	1/19/2010 12:00	1/19/2010 12:00		
15	245395015.2	389.23	0.0381	0.0100	2.5729E-05	351.09	9.80%	15	1/19/2010 12:00	1/19/2010 12:00		
16	1202031673.2	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	16	2/3/2010 0:00	2/3/2010 0:00		
17	1202031674.2	356.04	0.0879	0.0100	2.5729E-05	268.10	24.70%	1	1/19/2010 12:00	1/19/2010 12:00		
18	1202031675.2	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	17	2/3/2010 0:00	2/3/2010 0:00		

Count raw data			Background			Count			Calibration Data			Detector Efficiency			Backgrounds		
Pos.	Rack	Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Error (cpm/dpm)	Rack	Position #	Count Start Date/Time
1	24-2	15	110.5	110.5	45.6	3.40	15	2/8/2010 13:52	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2363	0.00792	24-1	24-1	2/8/2010 13:36
2	24-3	15	110.5	110.5	167.93	3.40	15	2/8/2010 14:08	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2363	0.00792	24-1	24-1	2/8/2010 13:36
3	24-4	15	110	110	145.27	3.40	15	2/8/2010 14:25	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2366	0.00792	24-1	24-1	2/8/2010 13:36
4	24-5	15	110.2	110.2	48.47	3.40	15	2/8/2010 14:41	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2365	0.00792	24-1	24-1	2/8/2010 13:36
5	24-6	15	110	110	42.87	3.40	15	2/8/2010 14:57	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2366	0.00792	24-1	24-1	2/8/2010 13:36
6	24-7	15	110.6	110.6	106.93	3.40	15	2/8/2010 15:13	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2362	0.00792	24-1	24-1	2/8/2010 13:36
7	24-8	9.7	110.2	110.2	1035.88	3.40	15	2/8/2010 15:30	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2365	0.00792	24-1	24-1	2/8/2010 13:36
8	24-9	15	108.9	108.9	568.33	3.40	15	2/8/2010 15:40	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2371	0.00792	24-1	24-1	2/8/2010 13:36
9	24-10	15	110.4	110.4	429.33	3.40	15	2/8/2010 15:57	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2364	0.00792	24-1	24-1	2/8/2010 13:36
10	24-11	15	110.7	110.7	29	3.40	15	2/8/2010 16:13	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2362	0.00792	24-1	24-1	2/8/2010 13:36
11	24-12	15	110.1	110.1	62.33	3.40	15	2/8/2010 16:29	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2365	0.00792	24-1	24-1	2/8/2010 13:36
12	31-1	15	109.7	109.7	396.2	3.40	15	2/8/2010 16:46	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2367	0.00792	24-1	24-1	2/8/2010 13:36
13	31-2	15	109.8	109.8	21.33	3.40	15	2/8/2010 17:02	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2367	0.00792	24-1	24-1	2/8/2010 13:36
14	31-3	15	110	110	559.8	3.40	15	2/8/2010 17:18	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2366	0.00792	24-1	24-1	2/8/2010 13:36
15	31-4	15	110.6	110.6	631.87	3.40	15	2/8/2010 17:35	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2362	0.00792	24-1	24-1	2/8/2010 13:36
16	31-5	15	108.5	108.5	3.8	3.40	15	2/8/2010 17:51	0.999	LSCBROWN	9/9/2009	9/30/2010	0.2368	0.00792	24-1	24-1	2/8/2010 13:36
17	31-6	15	111.4	111.4	46.73	3.40	15	2/8/2010 18:07	0.997	LSCBROWN	9/9/2009	9/30/2010	0.2359	0.00792	24-1	24-1	2/8/2010 13:36
18	31-7	15	110.9	110.9	35.93	3.40	15	2/8/2010 18:23	0.999	LSCBROWN	9/9/2009	9/30/2010	0.2361	0.00792	24-1	24-1	2/8/2010 13:36

PAGE: 1

8 FEB 2010 13:43

ID: TRITIUM

USER: 6

COMMENT: BROWN

PRESET TIME : 15.00

DATA CALC : CPM H# : YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 : EDIT

TWO PHASE : NO AGC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX: YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 0.0 - 240.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

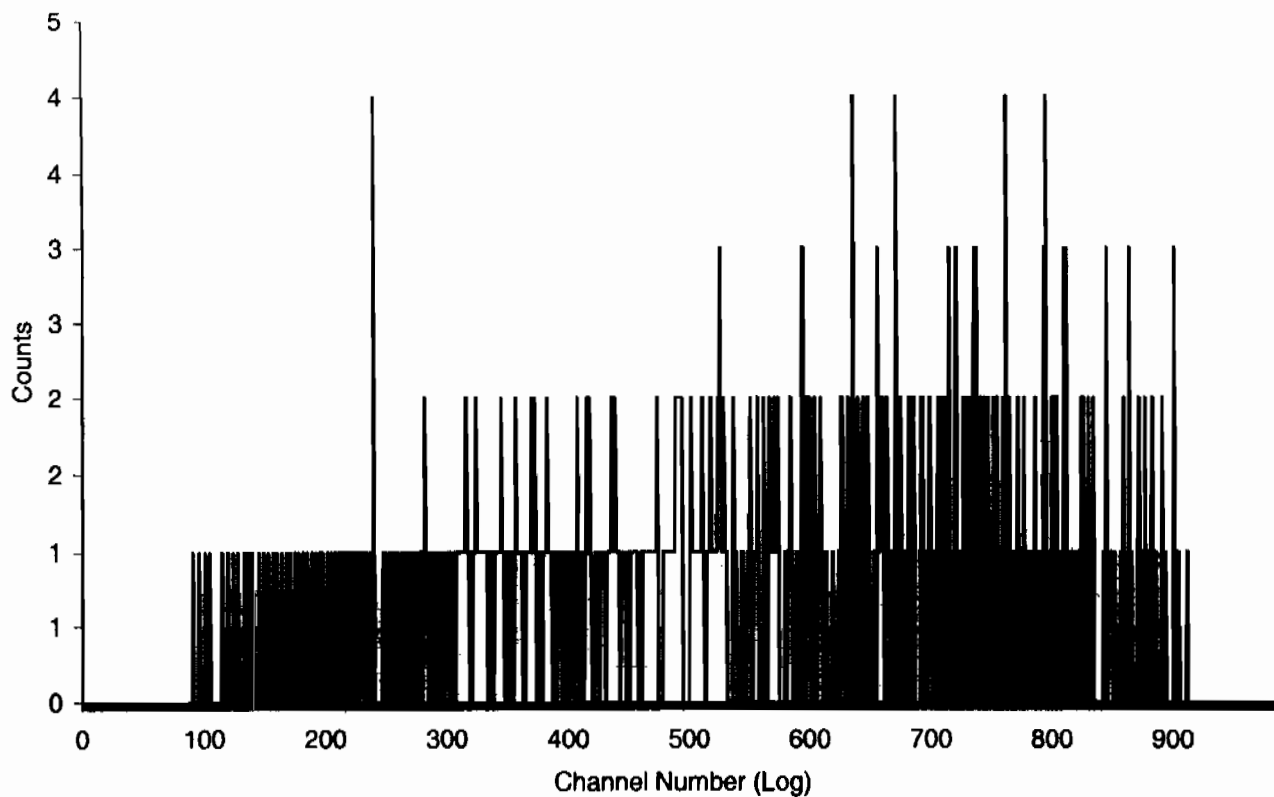
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

SAM	POS	TIME	H#	<u>WIND1</u>		LUMEX	ELAPSED
NO		MIN		CPM	%ERROR	%	TIME
1	24-1	15.00	108.7	3.40	28.28	0.50	15.79
2	24-2	15.00	110.5	45.60	7.65	0.21	32.05
3	24-3	15.00	110.5	167.93	3.99	0.09	48.32
4	24-4	15.00	110.0	145.27	4.29	0.09	64.58
5	24-5	15.00	110.2	48.47	7.42	0.21	80.84
6	24-6	15.00	110.0	42.87	7.89	0.22	97.10
7	24-7	15.00	110.6	106.93	5.00	0.11	113.37
8	24-8	9.70	110.2	1035.88	2.00	0.02	124.23
9	24-9	15.00	108.9	568.33	2.17	0.03	140.49
10	24-10	15.00	110.4	429.33	2.49	0.04	156.75
11	24-11	15.00	110.7	29.00	9.60	0.26	173.04
12	24-12	15.00	110.1	62.33	6.55	0.23	189.31
13	31-1	15.00	109.7	396.20	2.59	0.04	205.68
14	31-2	15.00	109.8	21.33	11.20	0.36	221.97
15	31-3	15.00	110.0	559.80	2.18	0.04	238.25
16	31-4	15.00	110.6	631.87	2.05	0.03	254.54
17	31-5	15.00	109.5	3.80	26.72	0.41	270.80
18	31-6	15.00	111.4	46.73	7.56	0.20	287.06
19	31-7	15.00	110.9	35.93	8.62	0.23	303.33

Sample Count Start Time:	8 Feb 2010 13:36:15		
Data Capture Date	08 Feb 2010 13:51:38		
User Filename	S06020824-1A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	24-1	15.00
H#, Total Counts:	108.7	570	
Win1: Tritium - Start, End, Counts:	0	240	51
Win2: - Start, End, Counts:	0	990	570

SPECTRUM PLOT

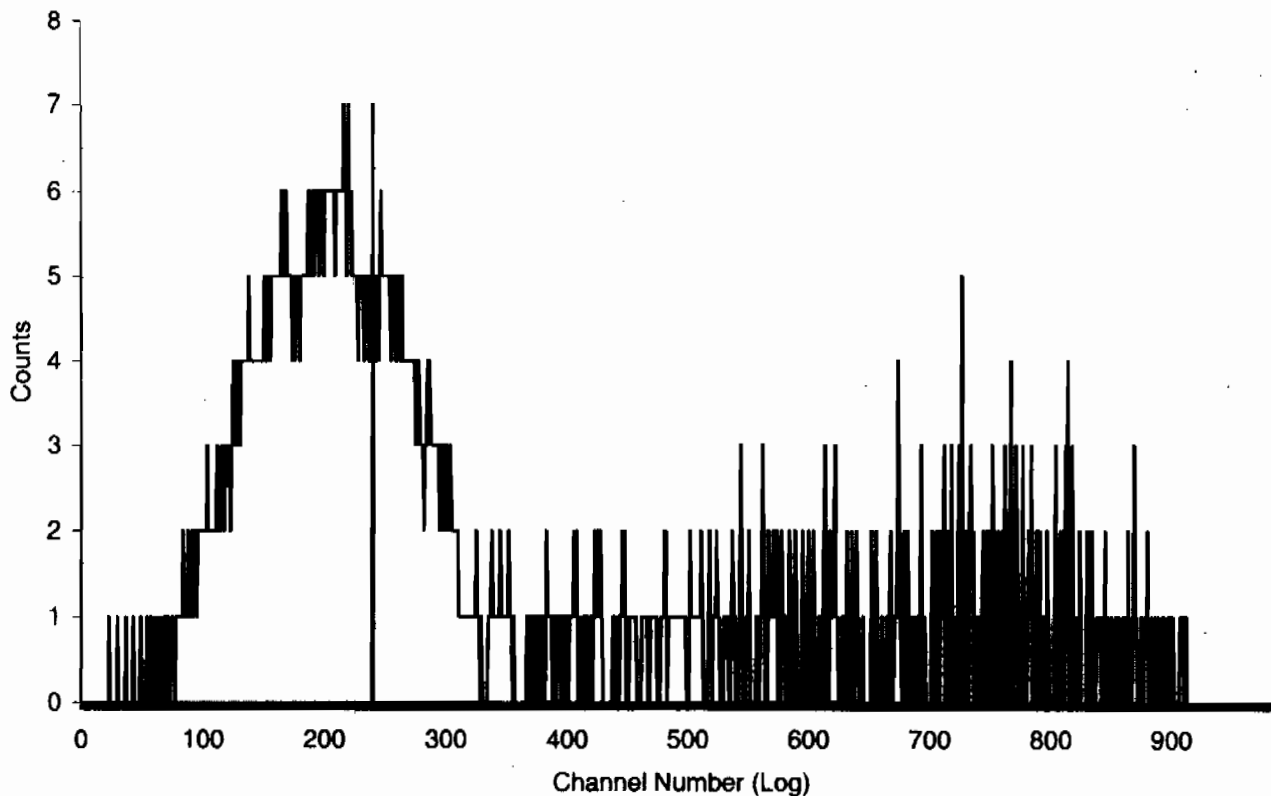
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 13:52:31		
Data Capture Date	08 Feb 2010 14:07:53		
User Filename	S06020824-2A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	24-2	15.00
H#, Total Counts:	110.5	1400	
Win1: Tritium - Start, End, Counts:	0	240	684
Win2: - Start, End, Counts:	0	990	1400

SPECTRUM PLOT

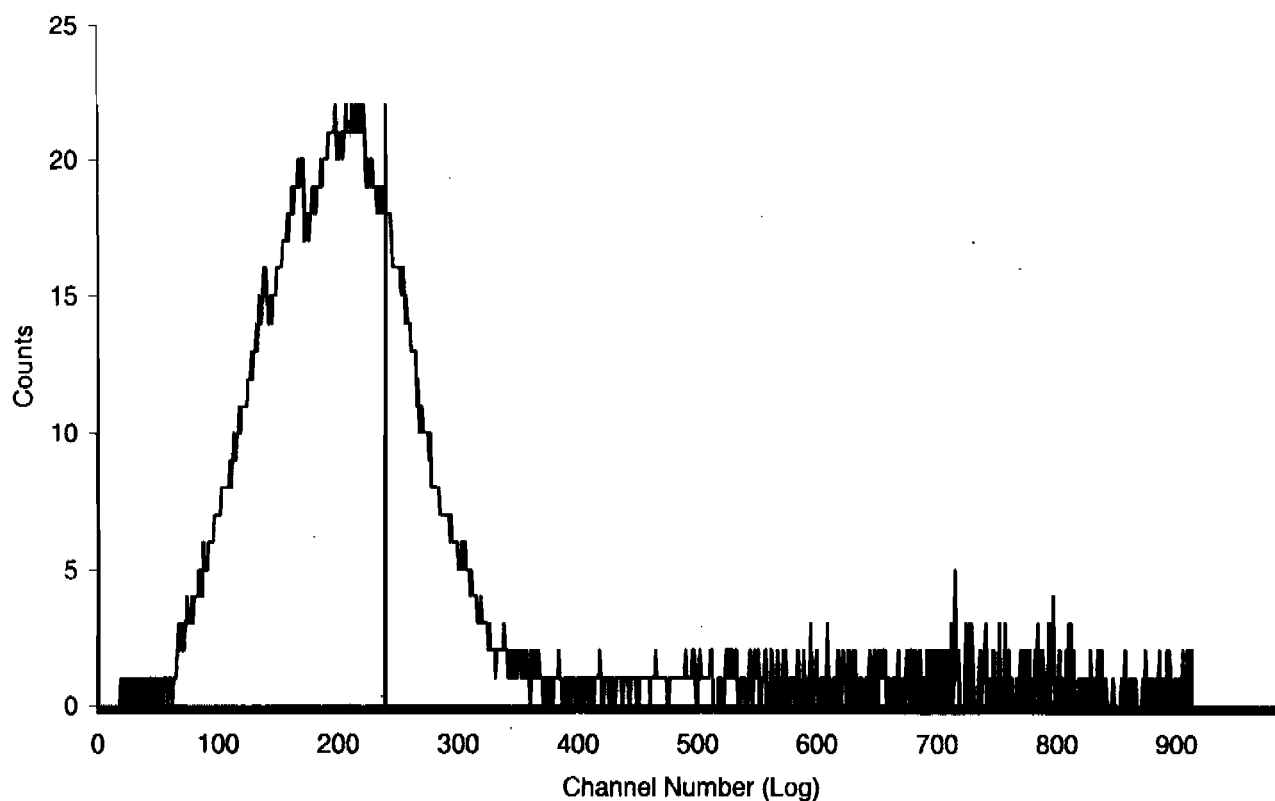
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 14:08:47		
Data Capture Date	08 Feb 2010 14:24:49		
User Filename	S06020824-3A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	24-3	15.00
H#, Total Counts:	110.5	3800	
Win1: Tritium - Start, End, Counts:	0	240	2519
Win2: - Start, End, Counts:	0	990	3800

SPECTRUM PLOT

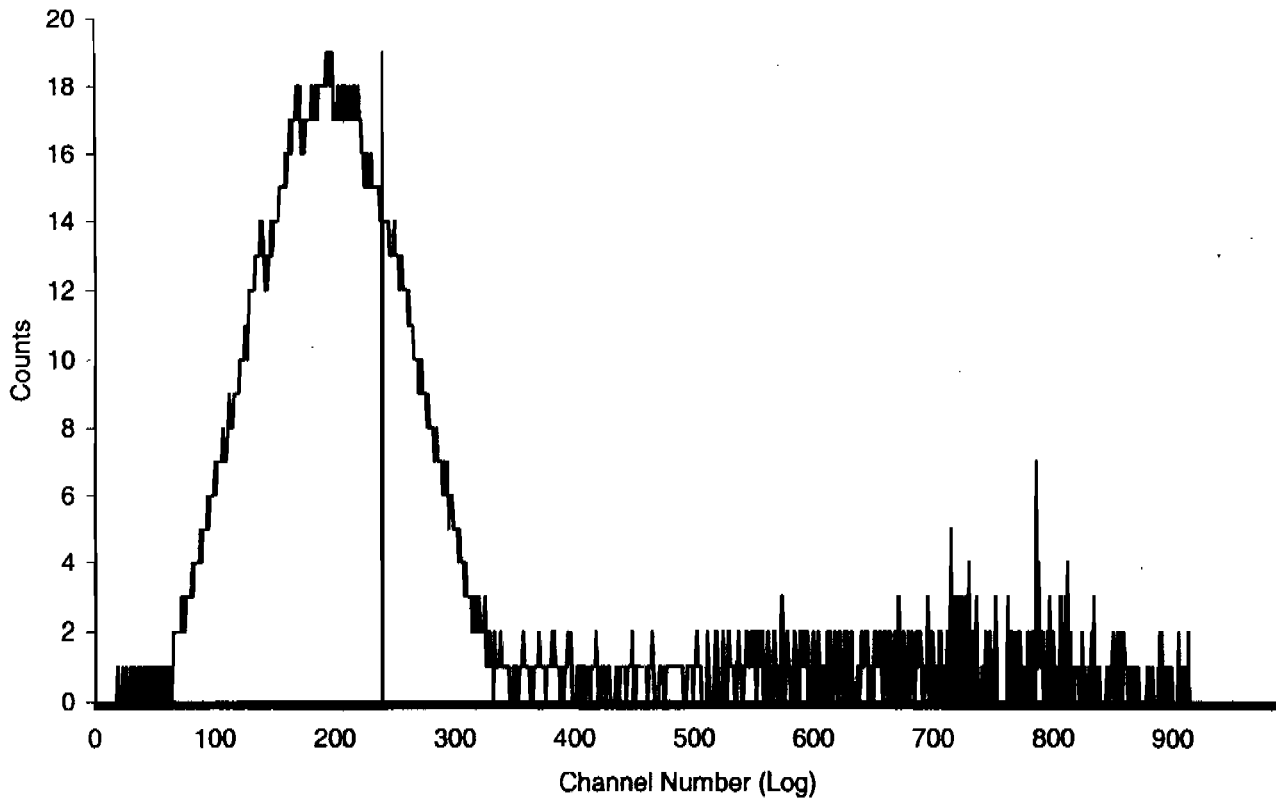
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 14:25:03		
Data Capture Date	08 Feb 2010 14:40:26		
User Filename	S06020824-4A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	24-4	15.00
H#, Total Counts:	110.0	3340	
Win1: Tritium - Start, End, Counts:	0	240	2179
Win2: - Start, End, Counts:	0	990	3340

SPECTRUM PLOT

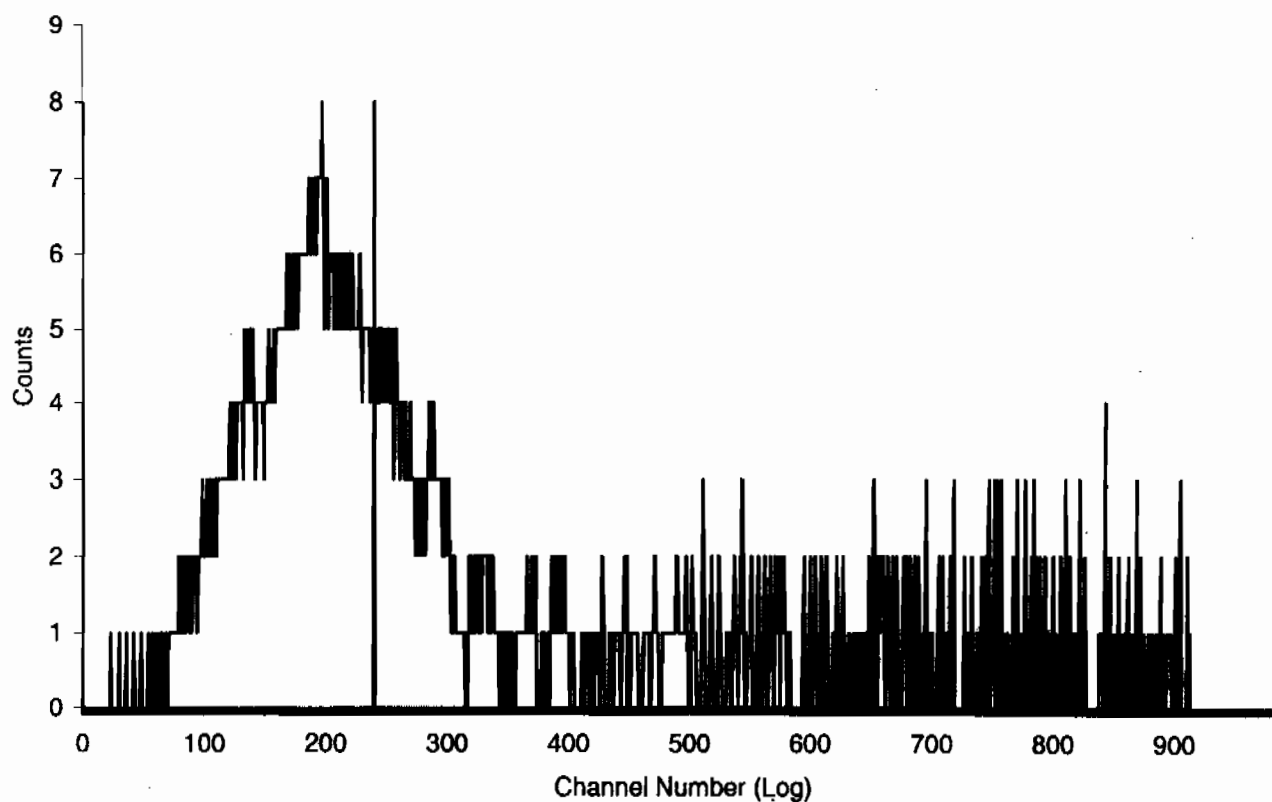
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 14:41:18		
Data Capture Date	08 Feb 2010 14:56:41		
User Filename	S06020824-5A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	24-5	15.00
H#, Total Counts:	110.2	1419	
Win1: Tritium - Start, End, Counts:	0	240	727
Win2: - Start, End, Counts:	0	990	1419

SPECTRUM PLOT

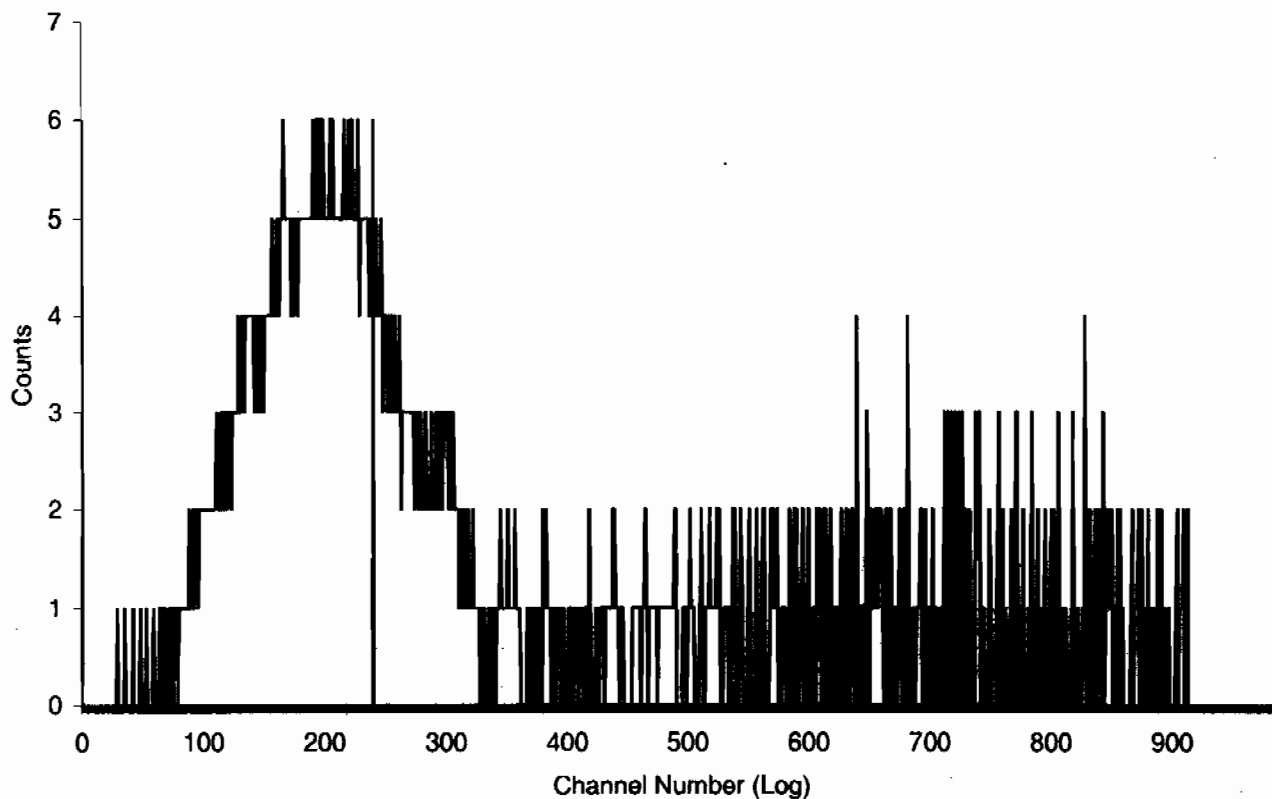
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 14:57:34		
Data Capture Date	08 Feb 2010 15:12:57		
User Filename	S06020824-6A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	24-6	15.00
H#, Total Counts:	110.0	1348	
Win1: Tritium - Start, End, Counts:	0	240	643
Win2: - Start, End, Counts:	0	990	1348

SPECTRUM PLOT

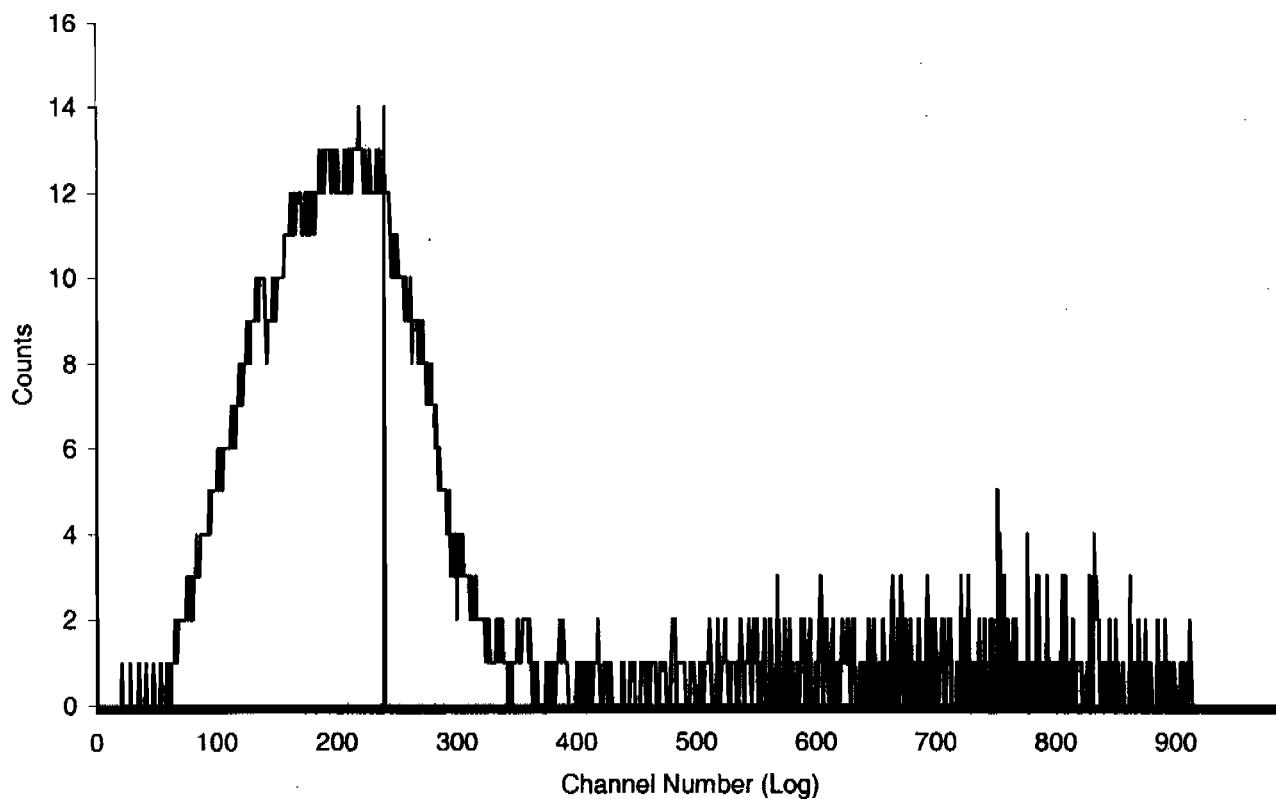
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 15:13:50		
Data Capture Date	08 Feb 2010 15:29:13		
User Filename	S06020824-7A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	24-7	15.00
H#, Total Counts:	110.6	2591	
Win1: Tritium - Start, End, Counts:	0	240	1604
Win2: - Start, End, Counts:	0	990	2591

SPECTRUM PLOT

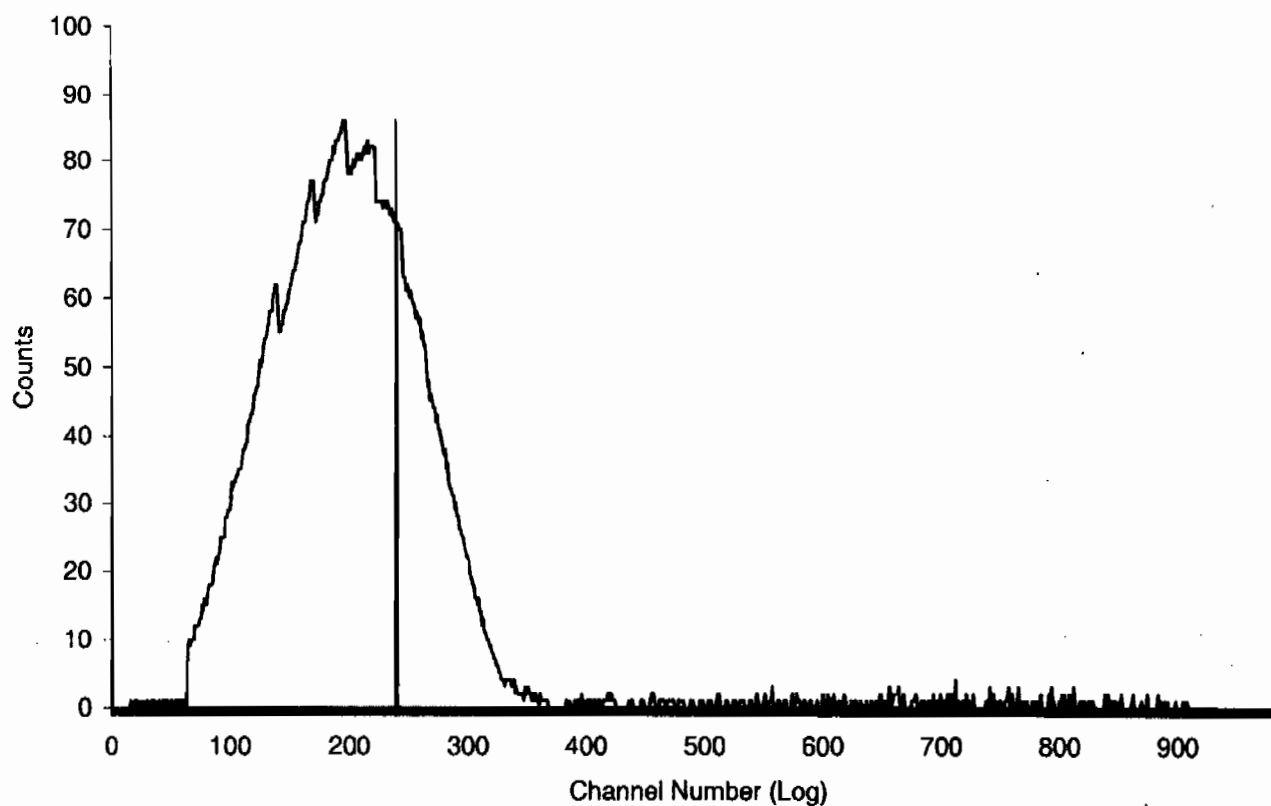
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 15:30:00		
Data Capture Date	08 Feb 2010 15:40:04		
User Filename	S06020824-8A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	24-8	9.70
H#, Total Counts:	110.2	13394	
Win1: Tritium - Start, End, Counts:	0	240	9984
Win2: - Start, End, Counts:	0	990	13394

SPECTRUM PLOT

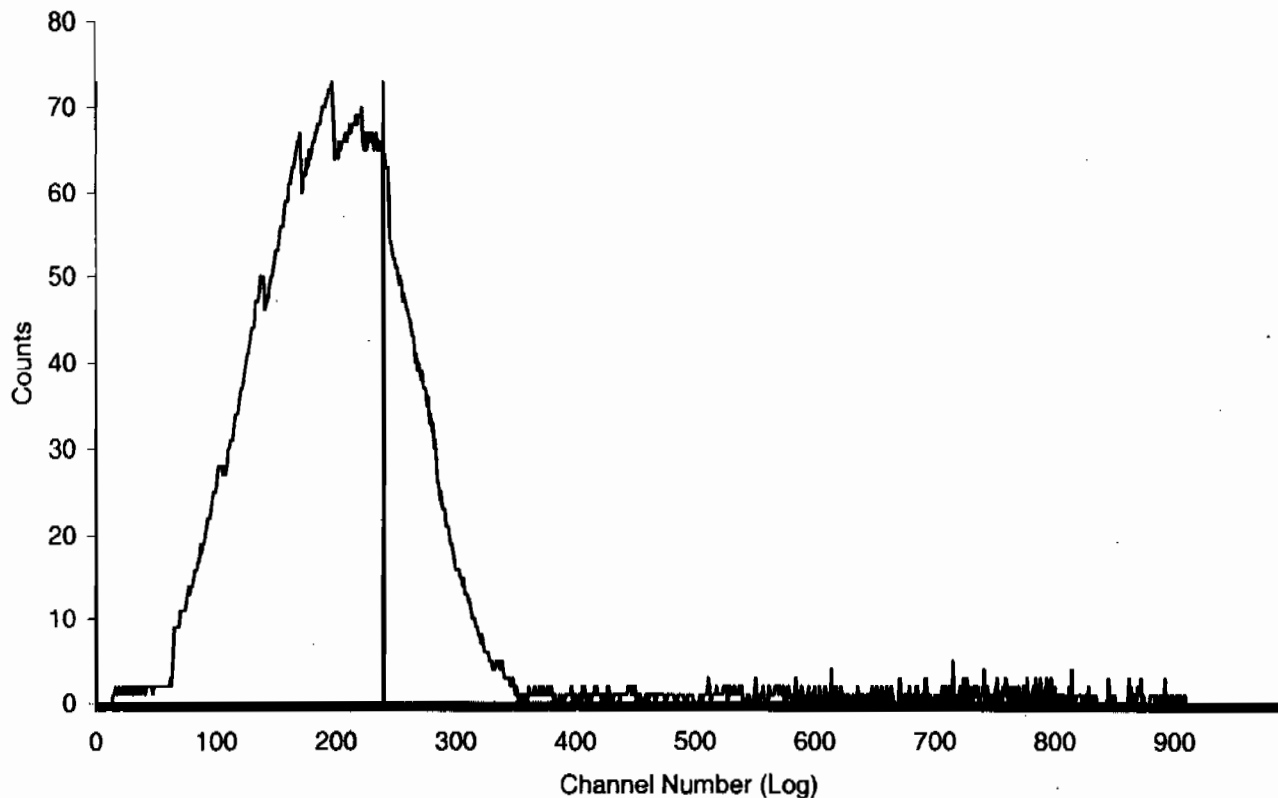
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 15:40:57		
Data Capture Date	08 Feb 2010 15:56:20		
User Filename	S06020824-9A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	24-9	15.00
H#, Total Counts:	108.9	11656	
Win1: Tritium - Start, End, Counts:	0	240	8525
Win2: - Start, End, Counts:	0	990	11656

SPECTRUM PLOT

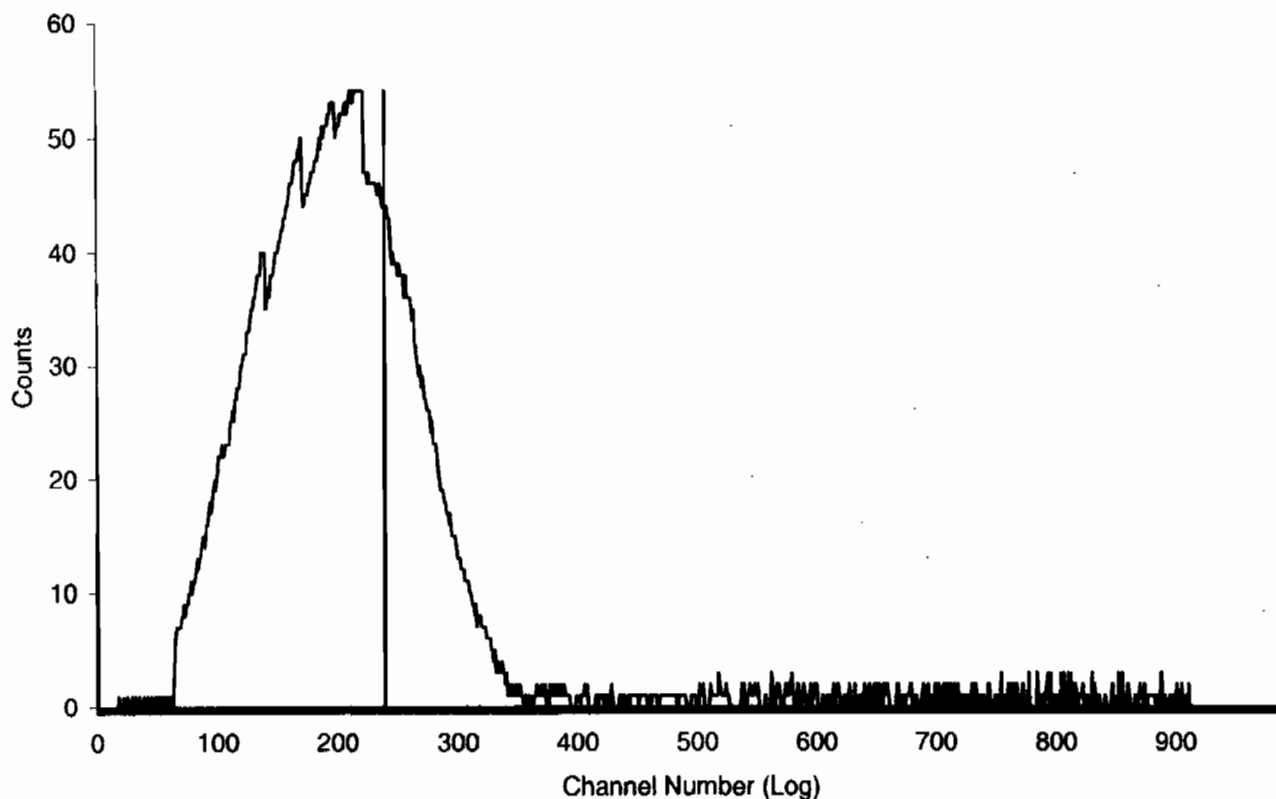
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 15:57:13		
Data Capture Date	08 Feb 2010 16:12:36		
User Filename	S06020824-10A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	24-10	15.00
H#, Total Counts:	110.4	8859	
Win1: Tritium - Start, End, Counts:	0	240	6408
Win2: - Start, End, Counts:	0	990	8859

SPECTRUM PLOT

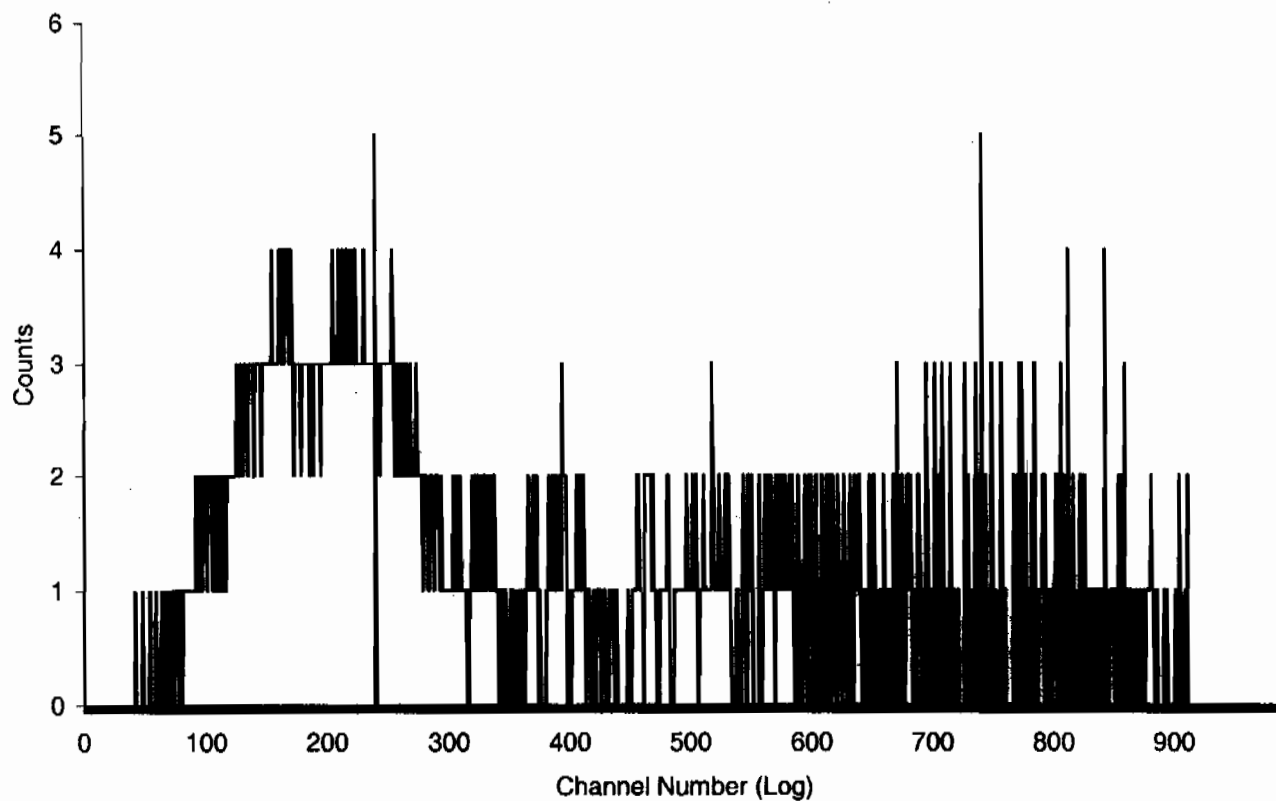
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 16:13:30		
Data Capture Date	08 Feb 2010 16:28:53		
User Filename	S06020824-11A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	24-11	15.00
H#, Total Counts:	110.7	1101	
Win1: Tritium - Start, End, Counts:	0	240	435
Win2: - Start, End, Counts:	0	990	1101

SPECTRUM PLOT

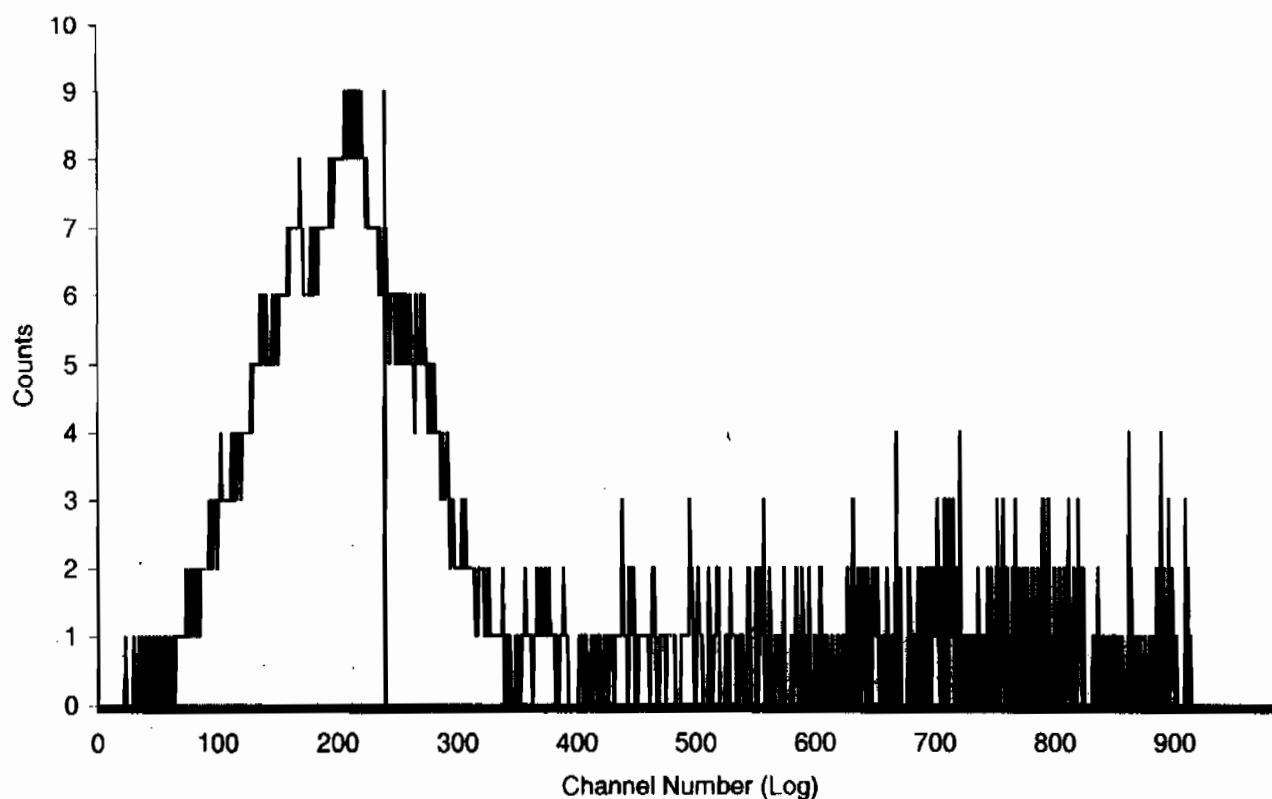
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 16:29:47		
Data Capture Date	08 Feb 2010 16:45:09		
User Filename	S06020824-12A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	24-12	15.00
H#, Total Counts:	110.1	1723	
Win1: Tritium - Start, End, Counts:	0	240	935
Win2: - Start, End, Counts:	0	990	1723

SPECTRUM PLOT

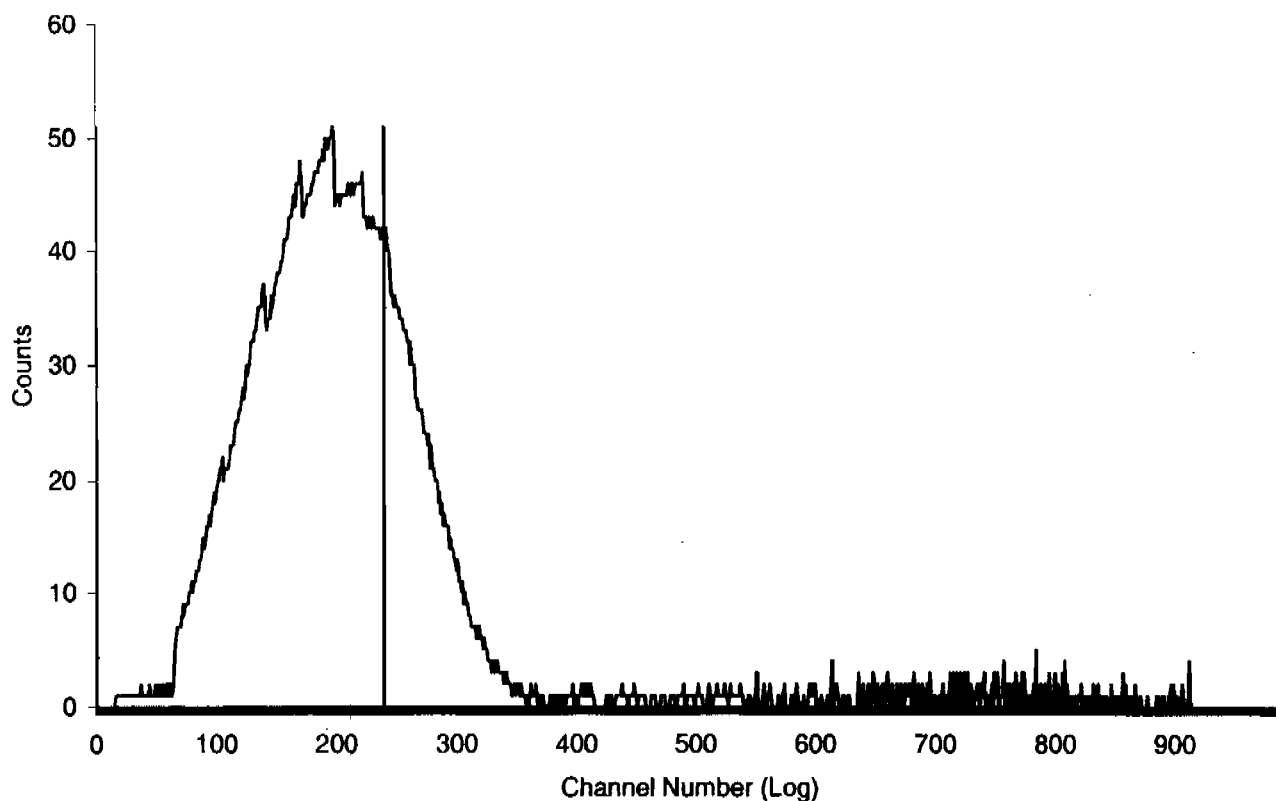
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 16:46:09		
Data Capture Date	08 Feb 2010 17:01:32		
User Filename	S06020831-1A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	13	31-1	15.00
H#, Total Counts:	109.7	8215	
Win1: Tritium - Start, End, Counts:	0	240	5943
Win2: - Start, End, Counts:	0	990	8215

SPECTRUM PLOT

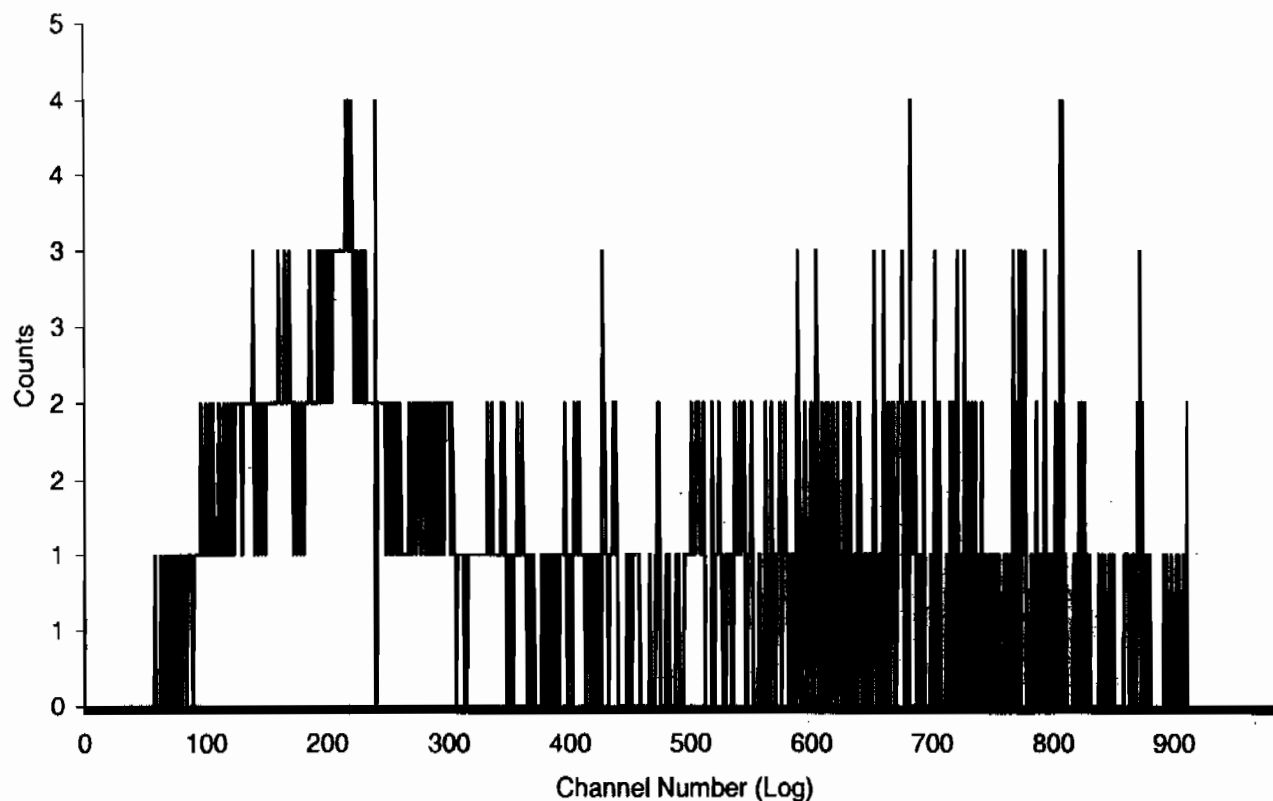
USER 06 - TRITIUM



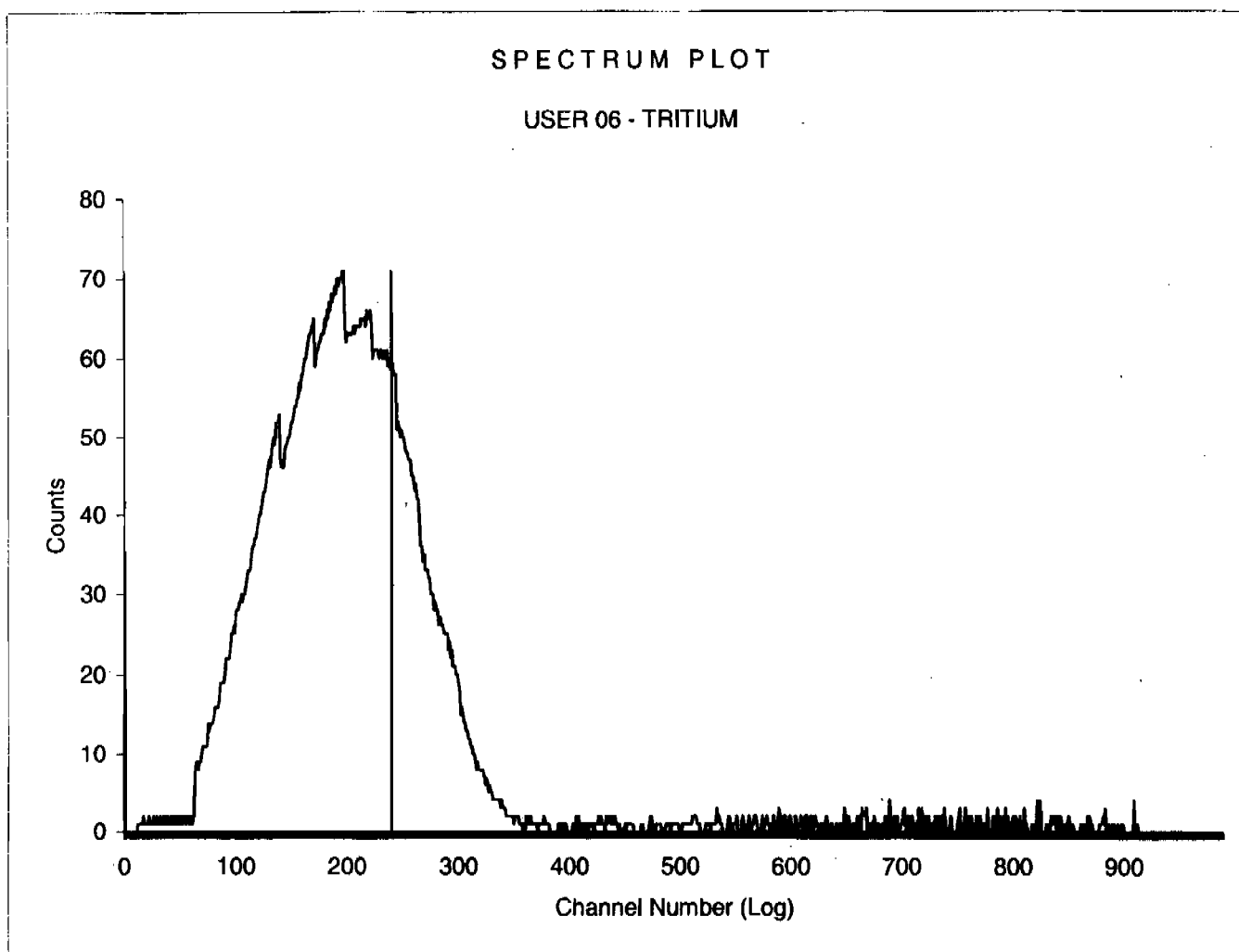
Sample Count Start Time:	8 Feb 2010 17:02:26		
Data Capture Date	08 Feb 2010 17:17:49		
User Filename	S06020831-2A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	14	31-2	15.00
H#, Total Counts:	109.8	869	
Win1: Tritium - Start, End, Counts:	0	240	320
Win2: - Start, End, Counts:	0	990	869

SPECTRUM PLOT

USER 06 - TRITIUM



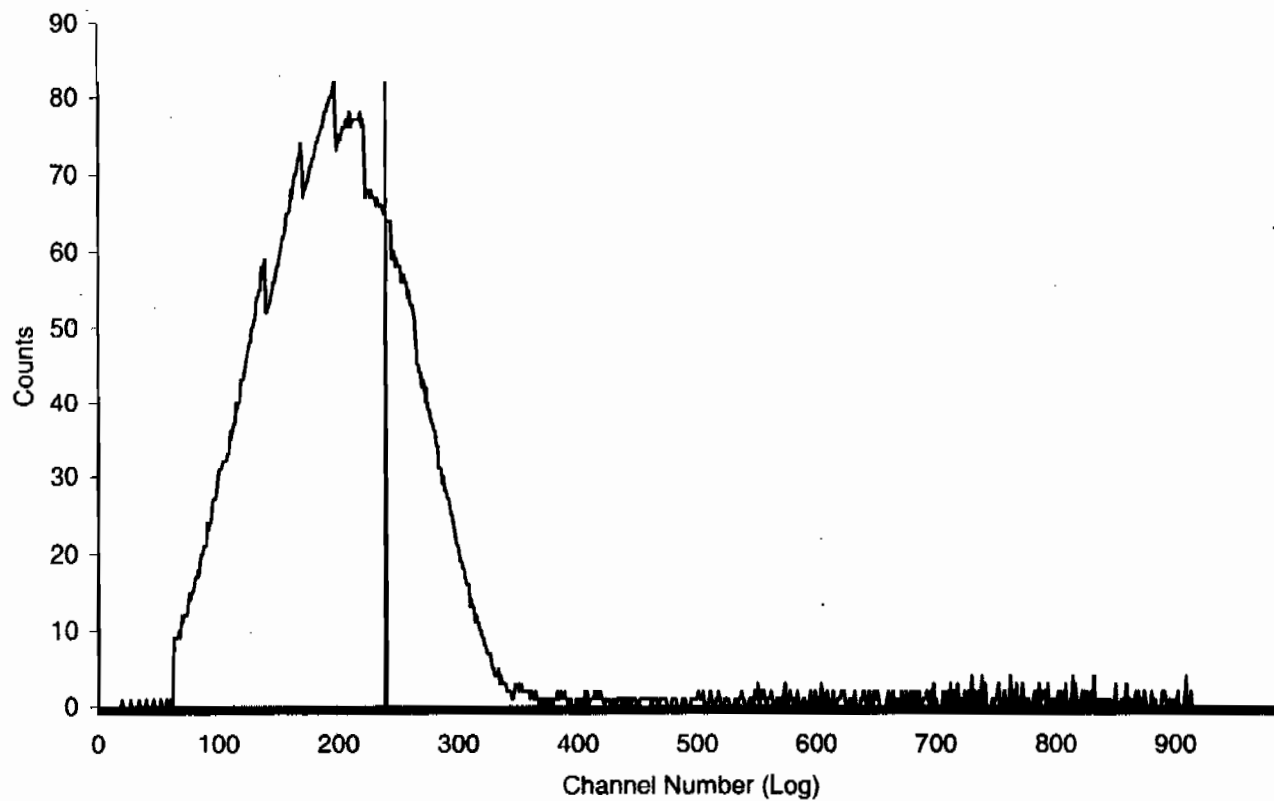
Sample Count Start Time:	8 Feb 2010 17:18:43		
Data Capture Date	08 Feb 2010 17:34:06		
User Filename	S06020831-3A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	15	31-3	15.00
H#, Total Counts:	110.0	11367	
Win1: Tritium - Start, End, Counts:	0	240	8397
Win2: - Start, End, Counts:	0	990	11367



Sample Count Start Time:	8 Feb 2010 17:35:00		
Data Capture Date	08 Feb 2010 17:50:23		
User Filename	S06020831-4A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	16	31-4	15.00
H#, Total Counts:	110.6	12875	
Win1: Tritium - Start, End, Counts:	0	240	9414
Win2: - Start, End, Counts:	0	990	12875

SPECTRUM PLOT

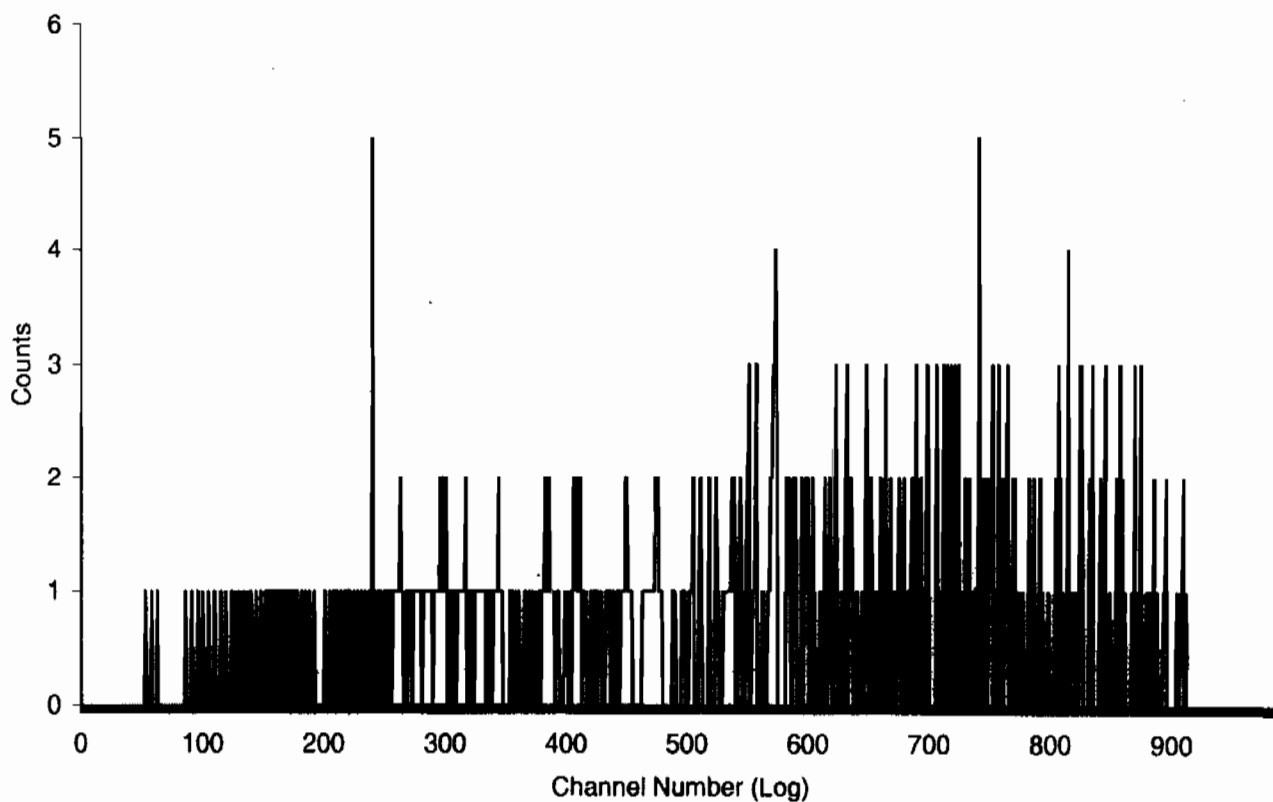
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 17:51:16		
Data Capture Date	08 Feb 2010 18:07:14		
User Filename	S06020831-5A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	17	31-5	15.00
H#, Total Counts:	109.5	559	
Win1: Tritium - Start, End, Counts:	0	240	57
Win2: - Start, End, Counts:	0	990	559

SPECTRUM PLOT

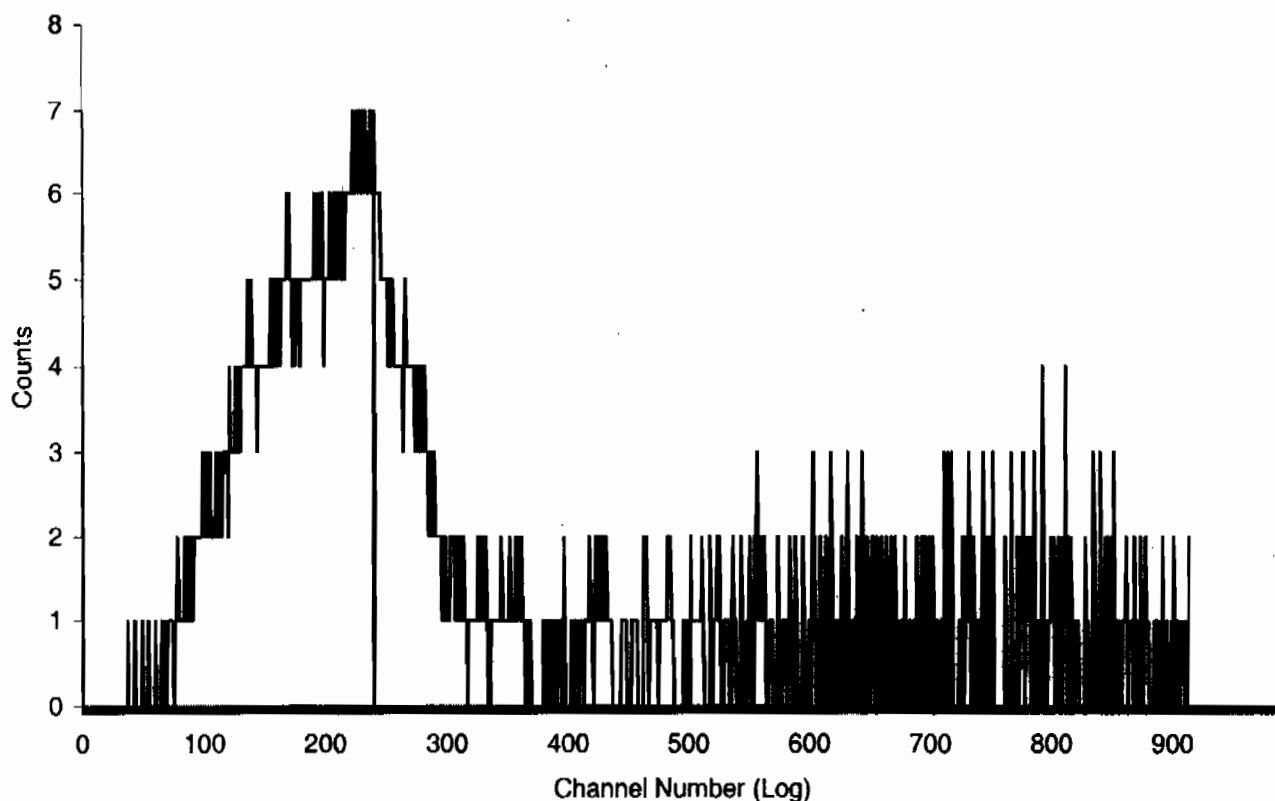
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 18:07:32		
Data Capture Date	08 Feb 2010 18:23:31		
User Filename	S06020831-6A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	18	31-6	15.00
H#, Total Counts:	111.4	1424	
Win1: Tritium - Start, End, Counts:	0	240	701
Win2: - Start, End, Counts:	0	990	1424

SPECTRUM PLOT

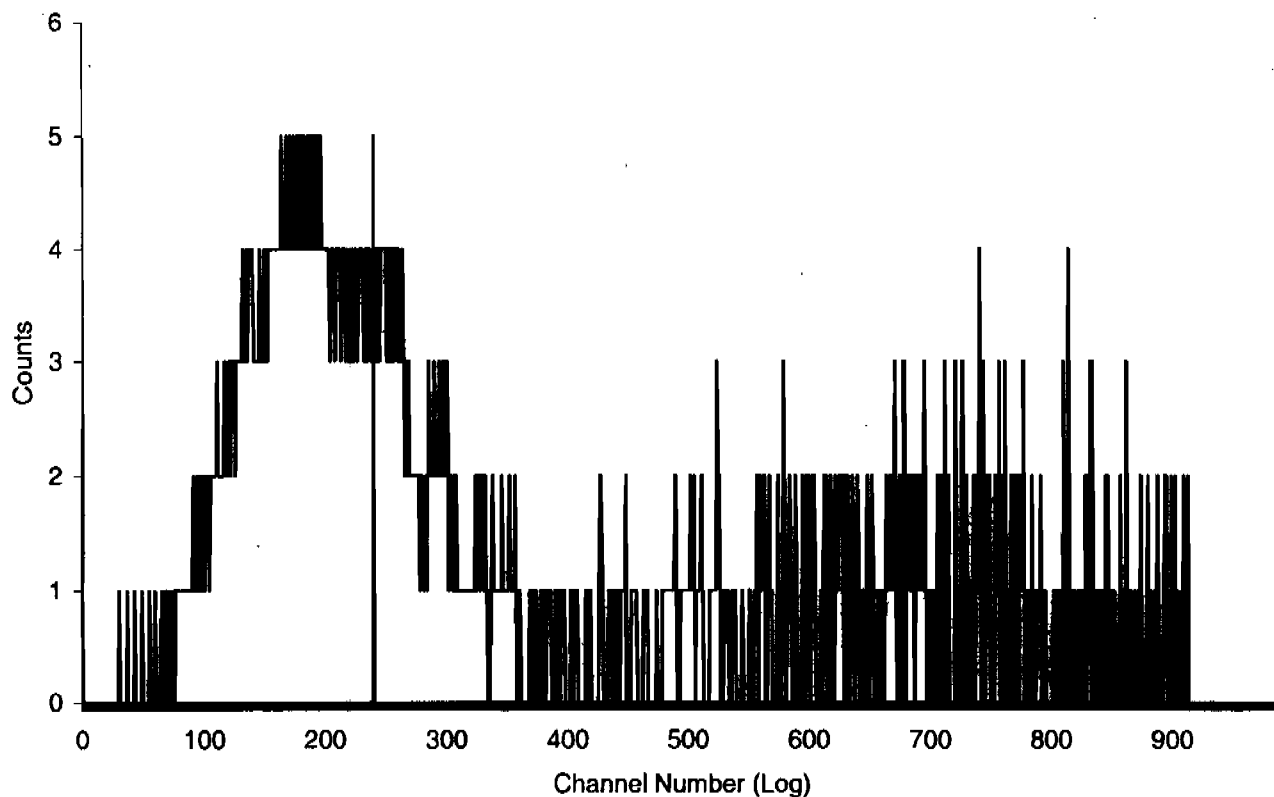
USER 06 - TRITIUM



Sample Count Start Time:	8 Feb 2010 18:23:48		
Data Capture Date	08 Feb 2010 18:39:26		
User Filename	S06020831-7A.XLS		
	U06020824-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	19	31-7	15.00
H#, Total Counts:	110.9	1191	
Win1: Tritium - Start, End, Counts:	0	240	539
Win2: - Start, End, Counts:	0	990	1191

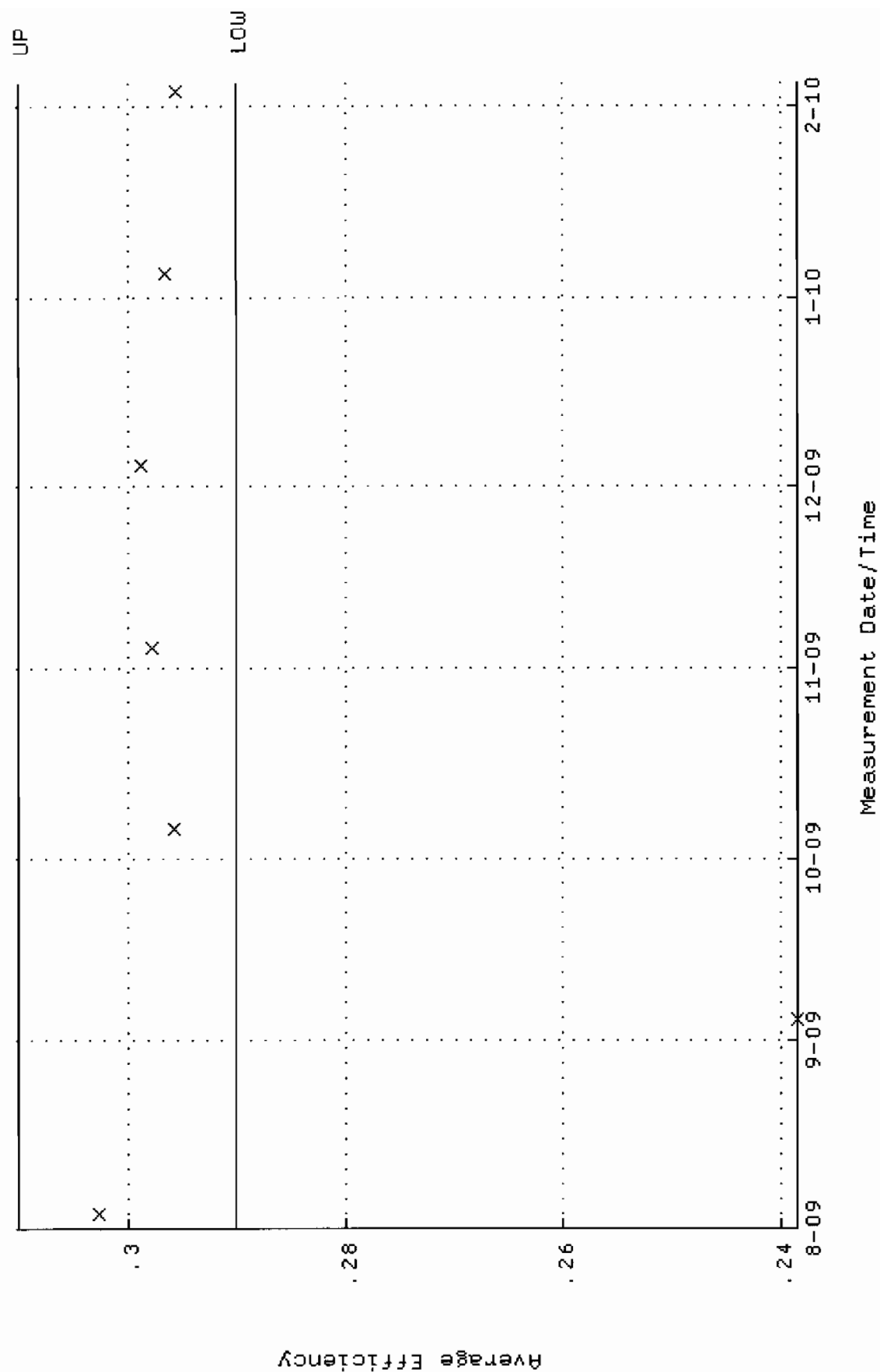
SPECTRUM PLOT

USER 06 - TRITIUM

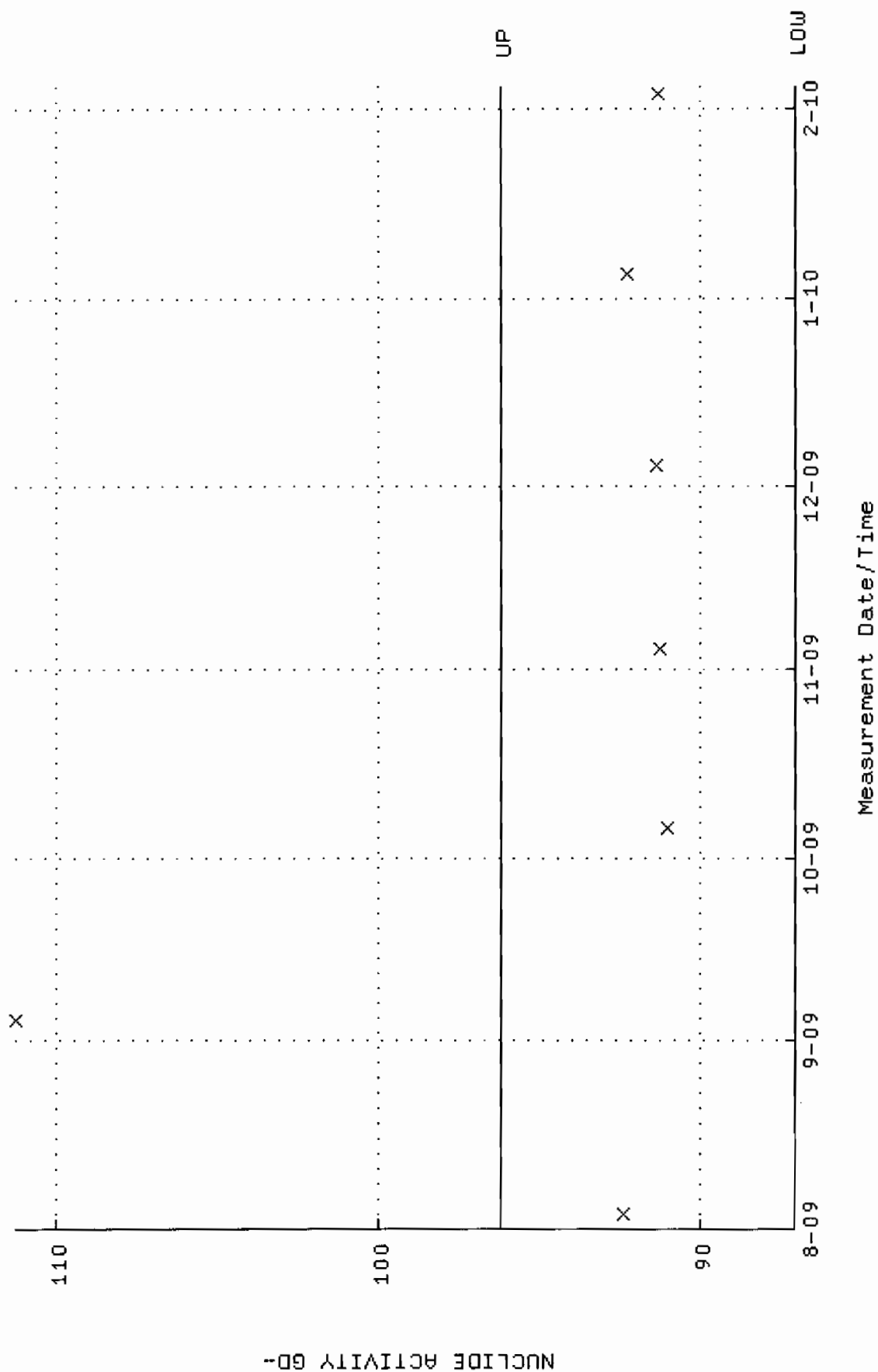


BACKGROUND AND EFFICIENCY DATA

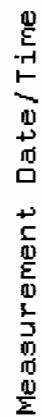
QA filename : DKA100:[ENV_ALPHA.QA.W]W007.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:33 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.290108 through 0.310108



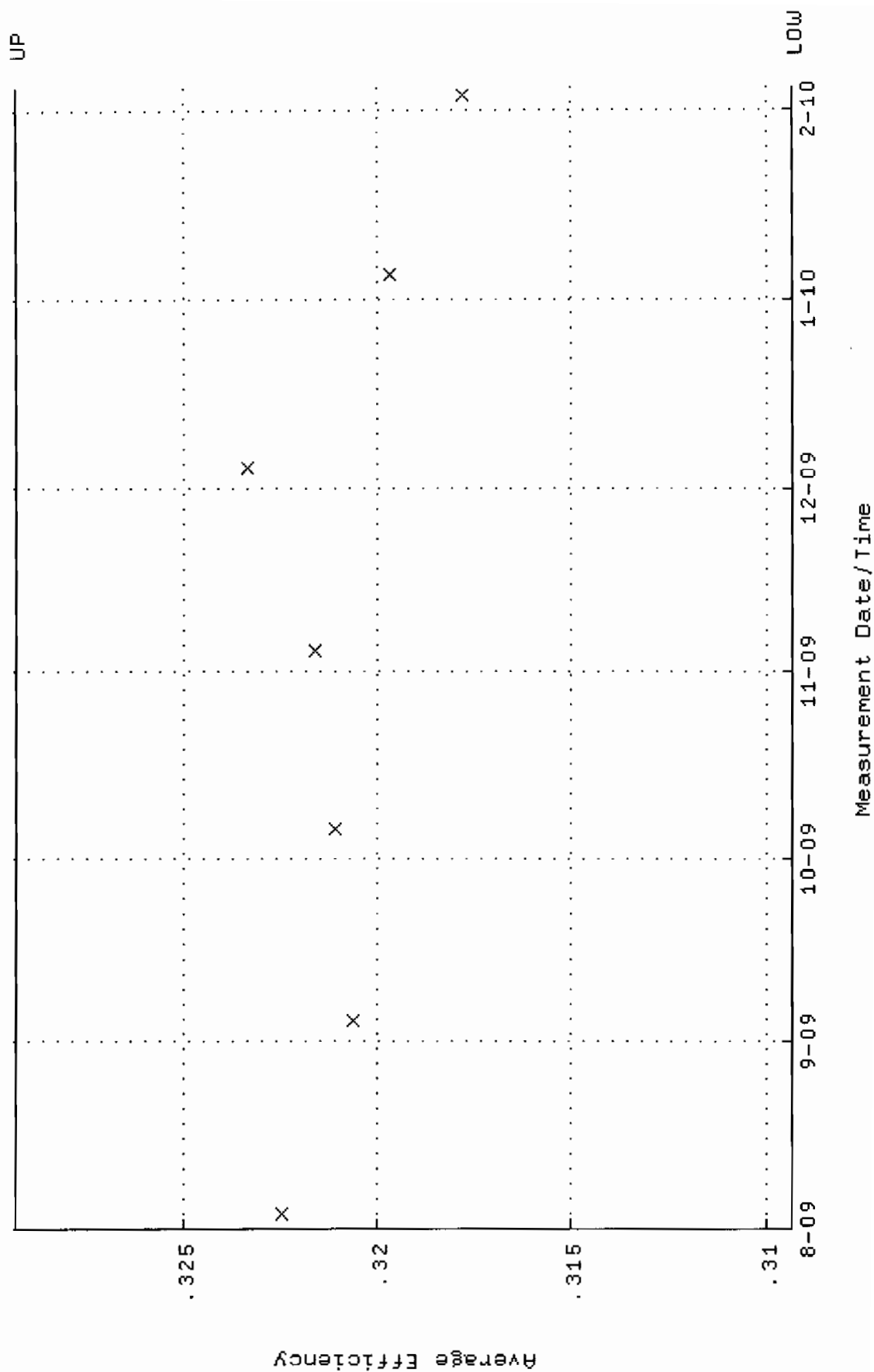
QA filename : DKA100:[ENV_ALPHA.QA.W]W007.QAF;3
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:33 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.0687 through 96.2339



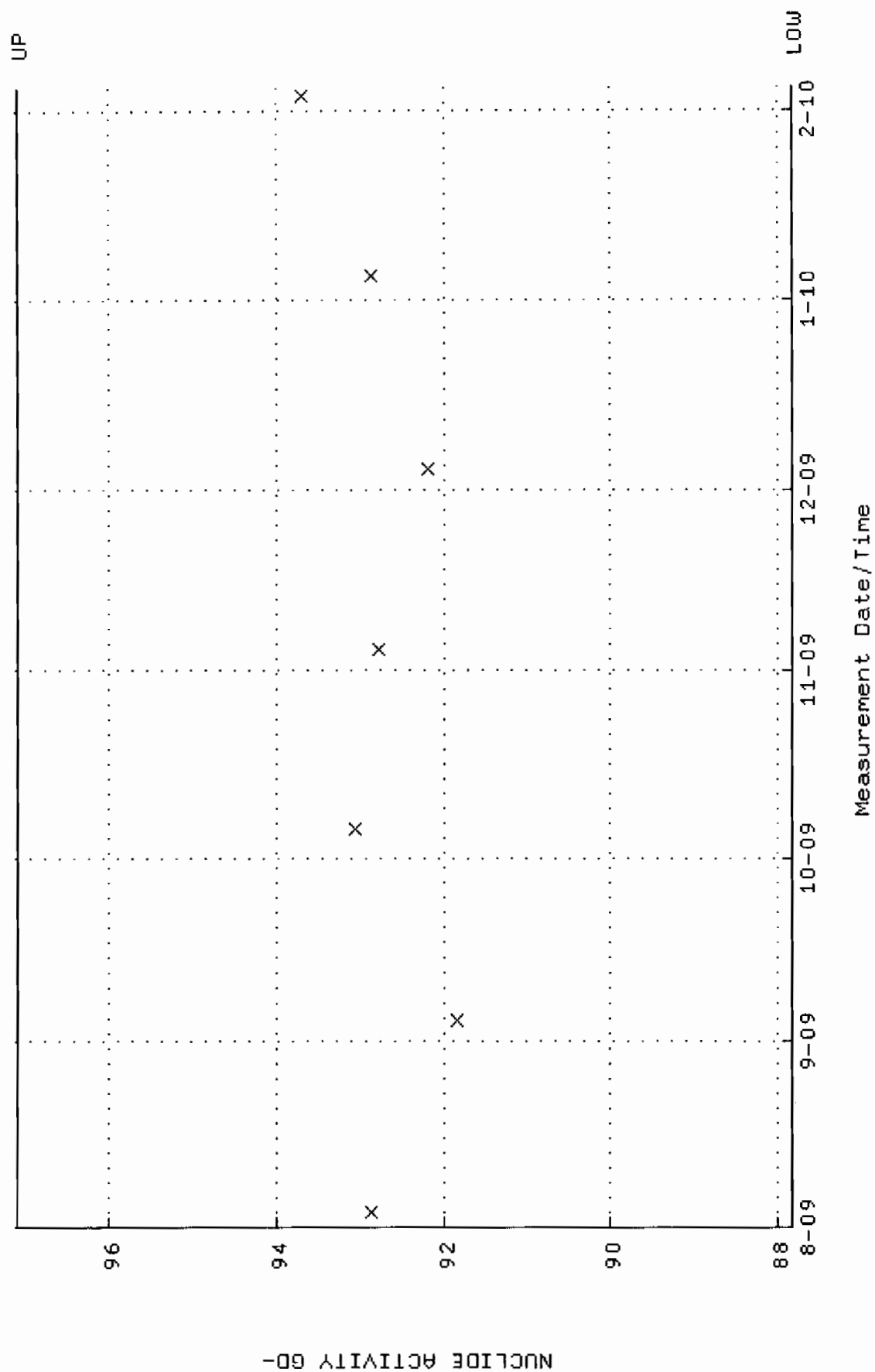
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



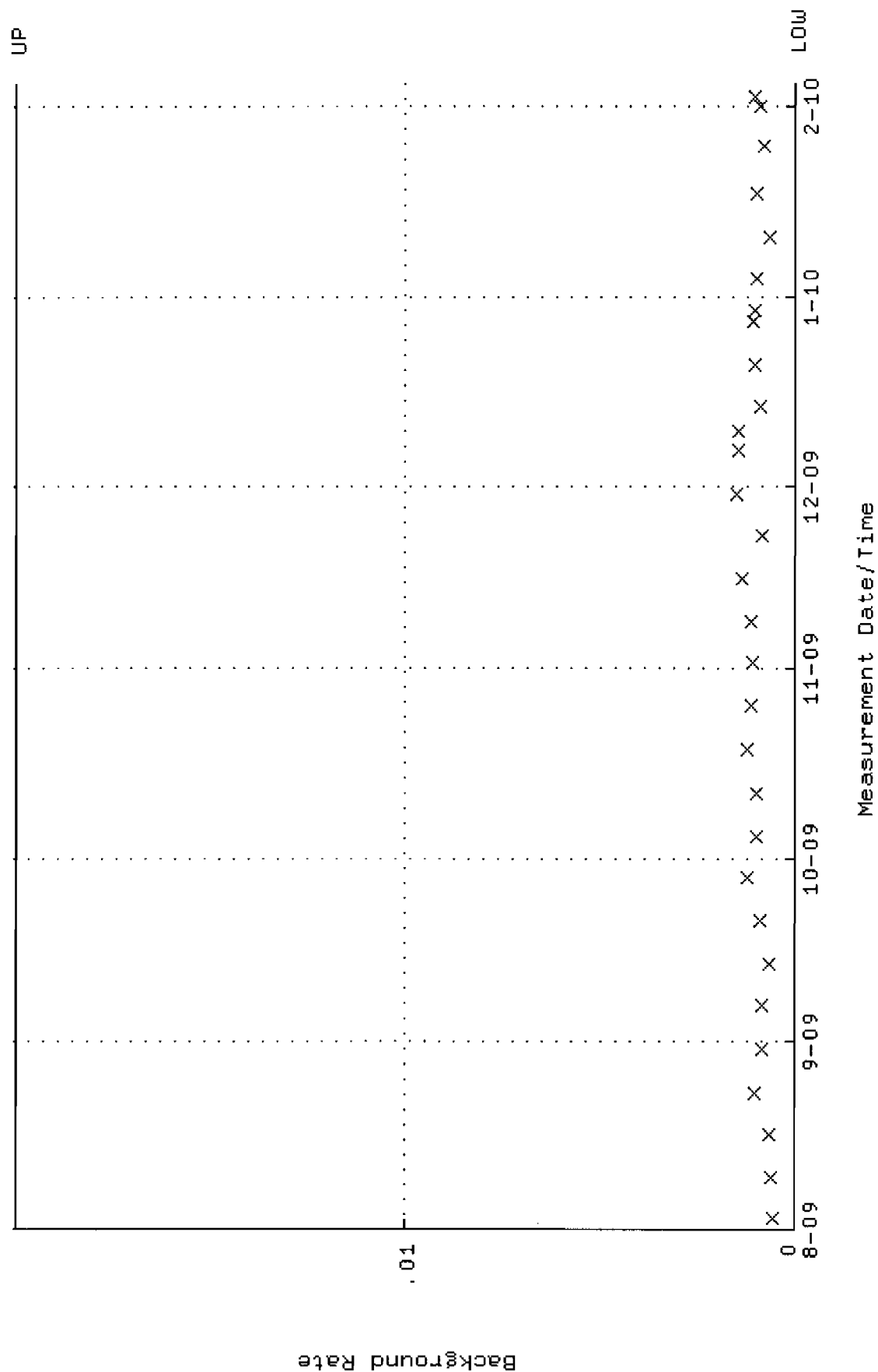
QA filename : DKA100:[ENV_ALPHA.QA.W]W008.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:33 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.309318 through 0.329318



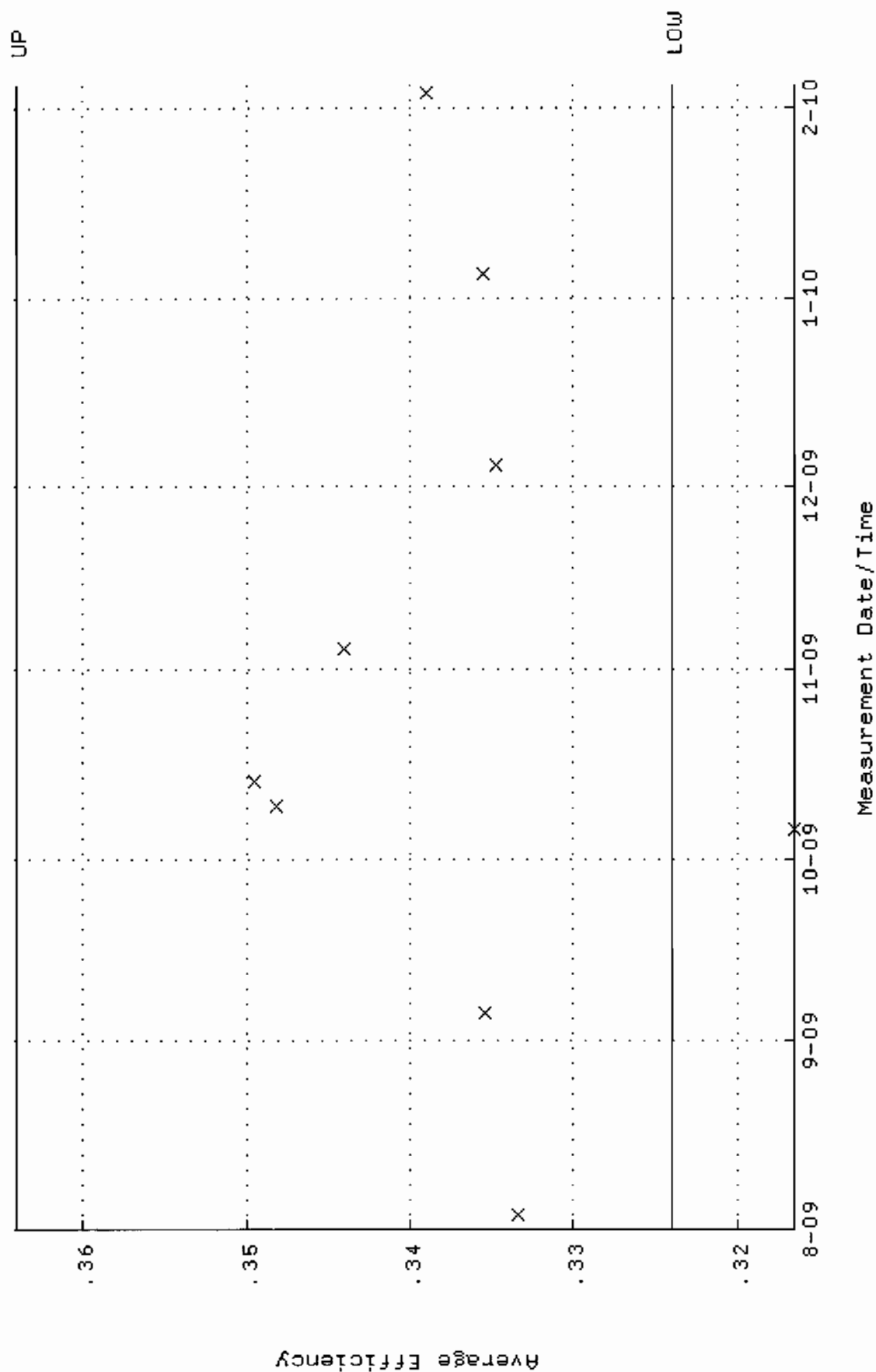
QA filename : DKA100:[ENV_ALPHA.QA.W]W008.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:33 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.8346 through 97.0804



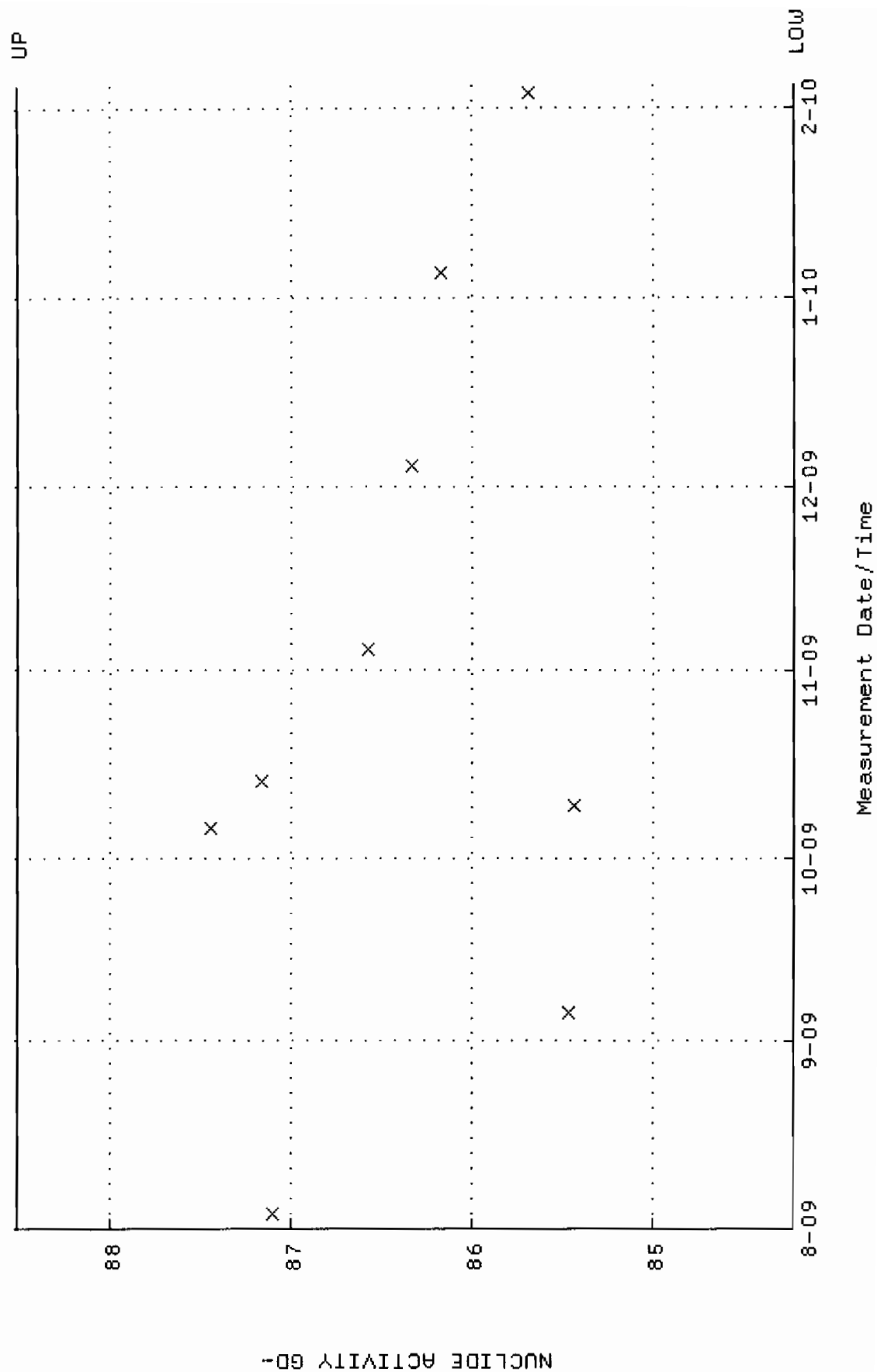
QA filename : DKA100:[ENV-ALPHA.QA.B]B008.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:32 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



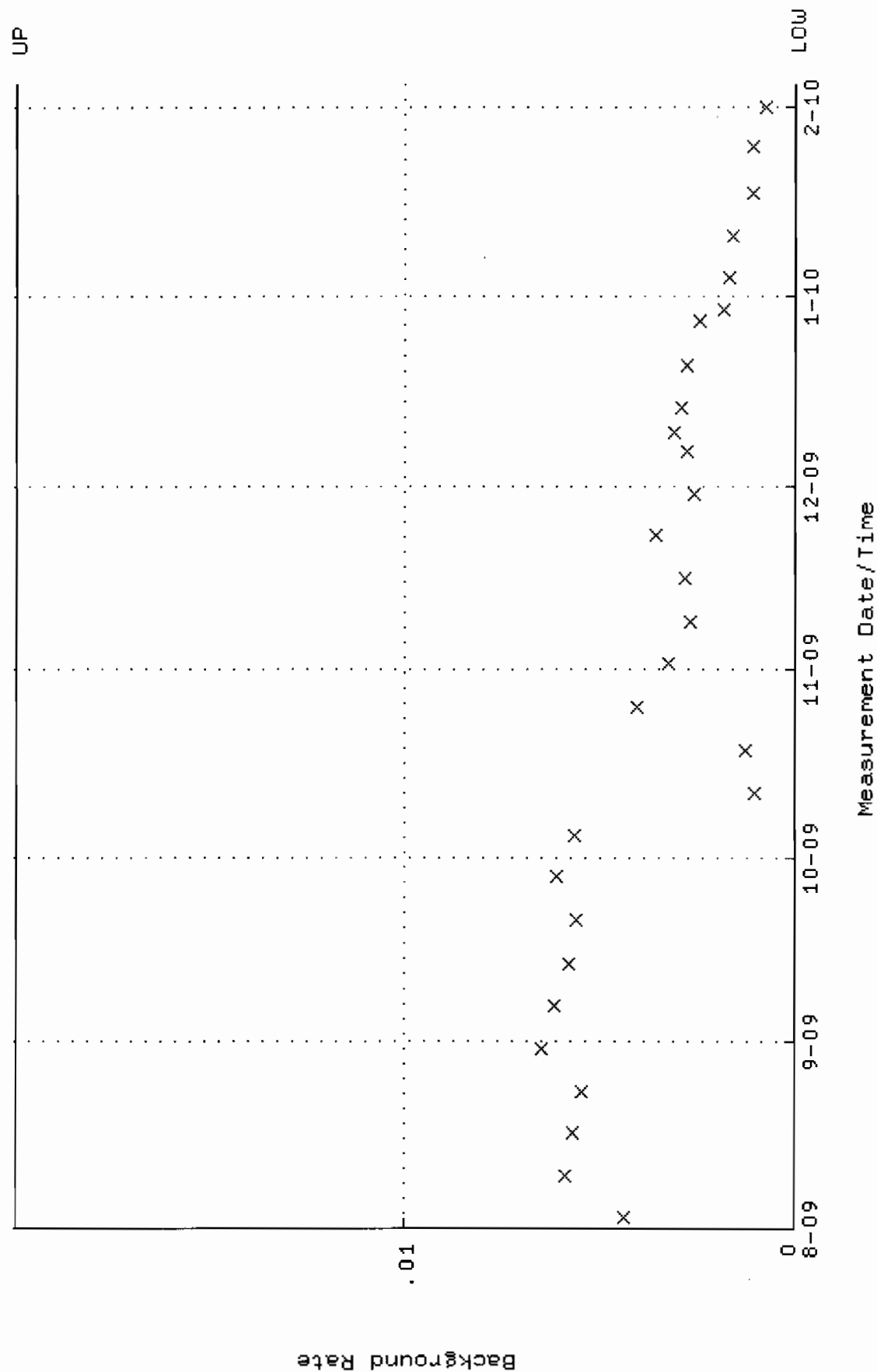
QA filename : DKA100:[ENV_ALPHA.QA.W]W031.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.324029 through 0.364065



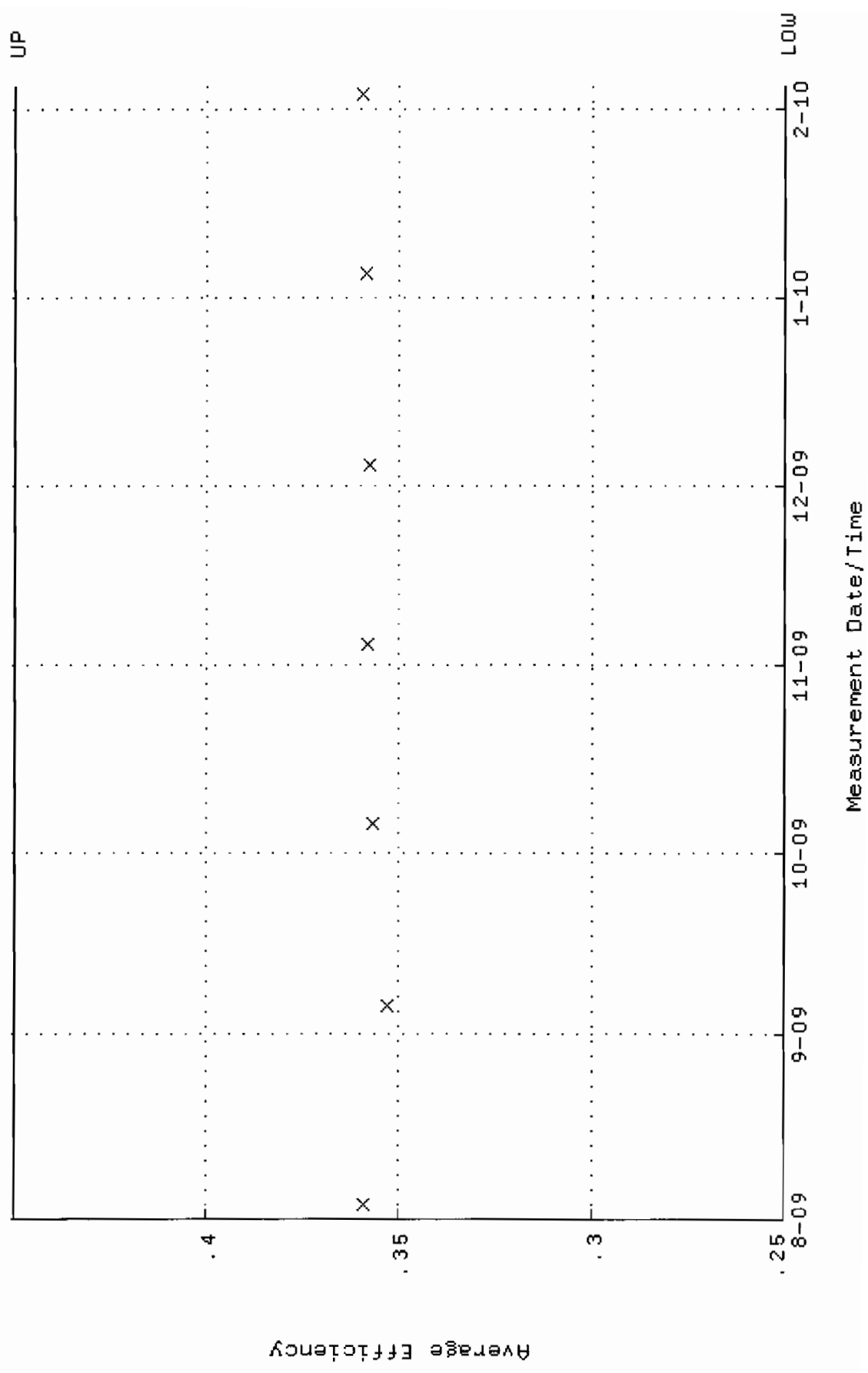
QA filename : DKA100:[ENV_ALPHA.QA.w]w031.QAF;4
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.2165 through 88.5165



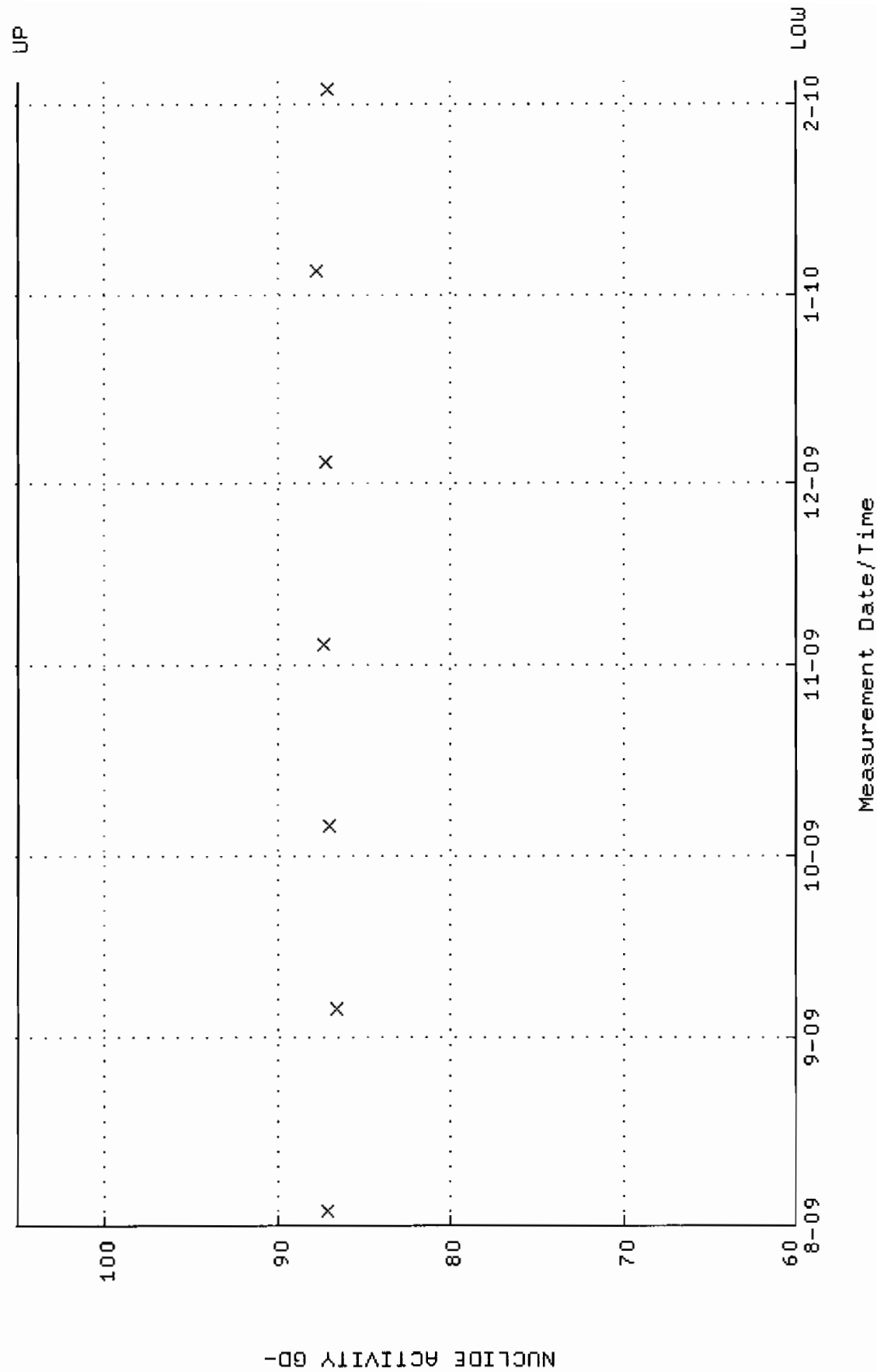
QA filename : DKA100:[ENV_ALPHA.QA.B]B031.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:35 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



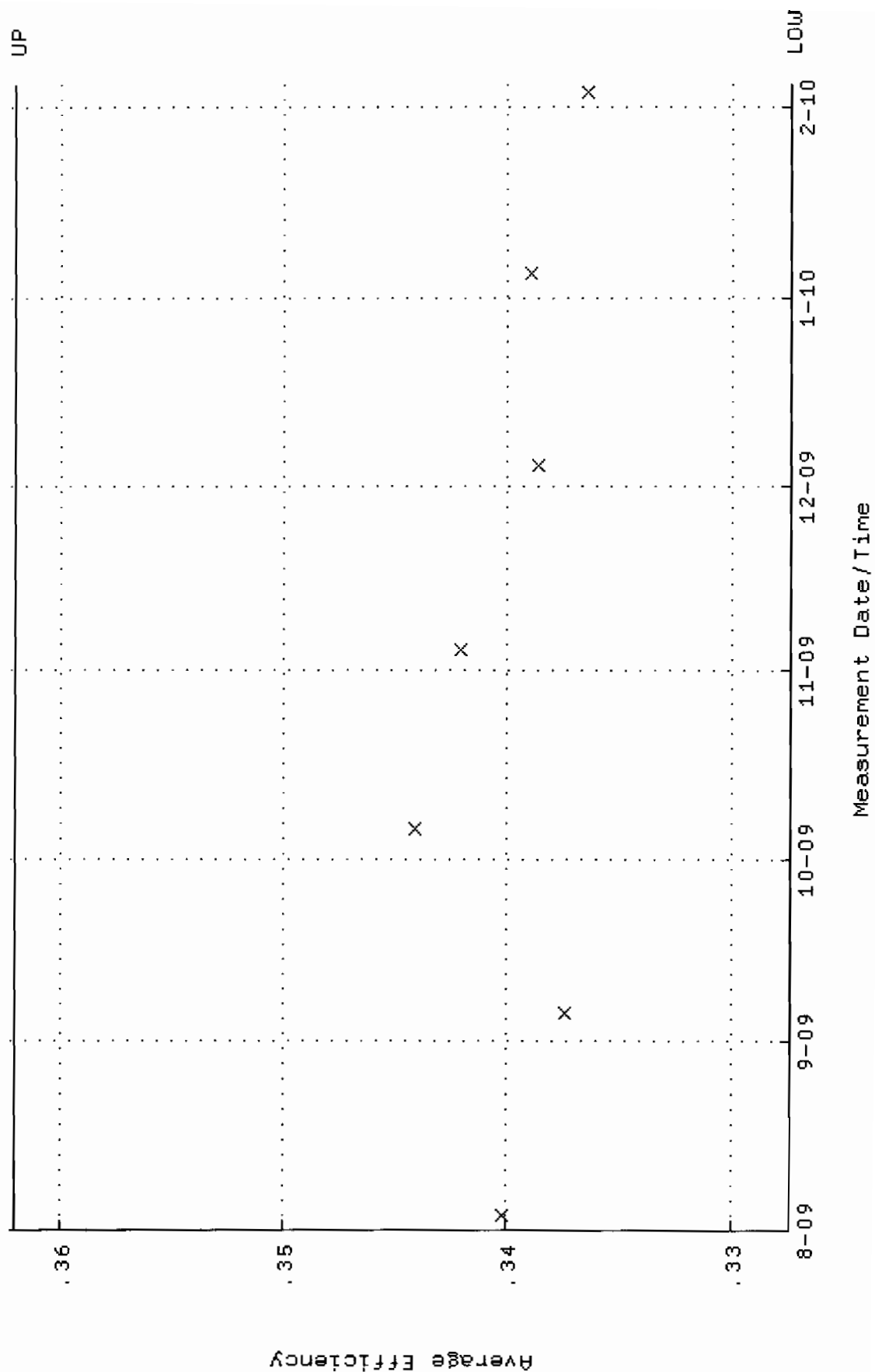
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



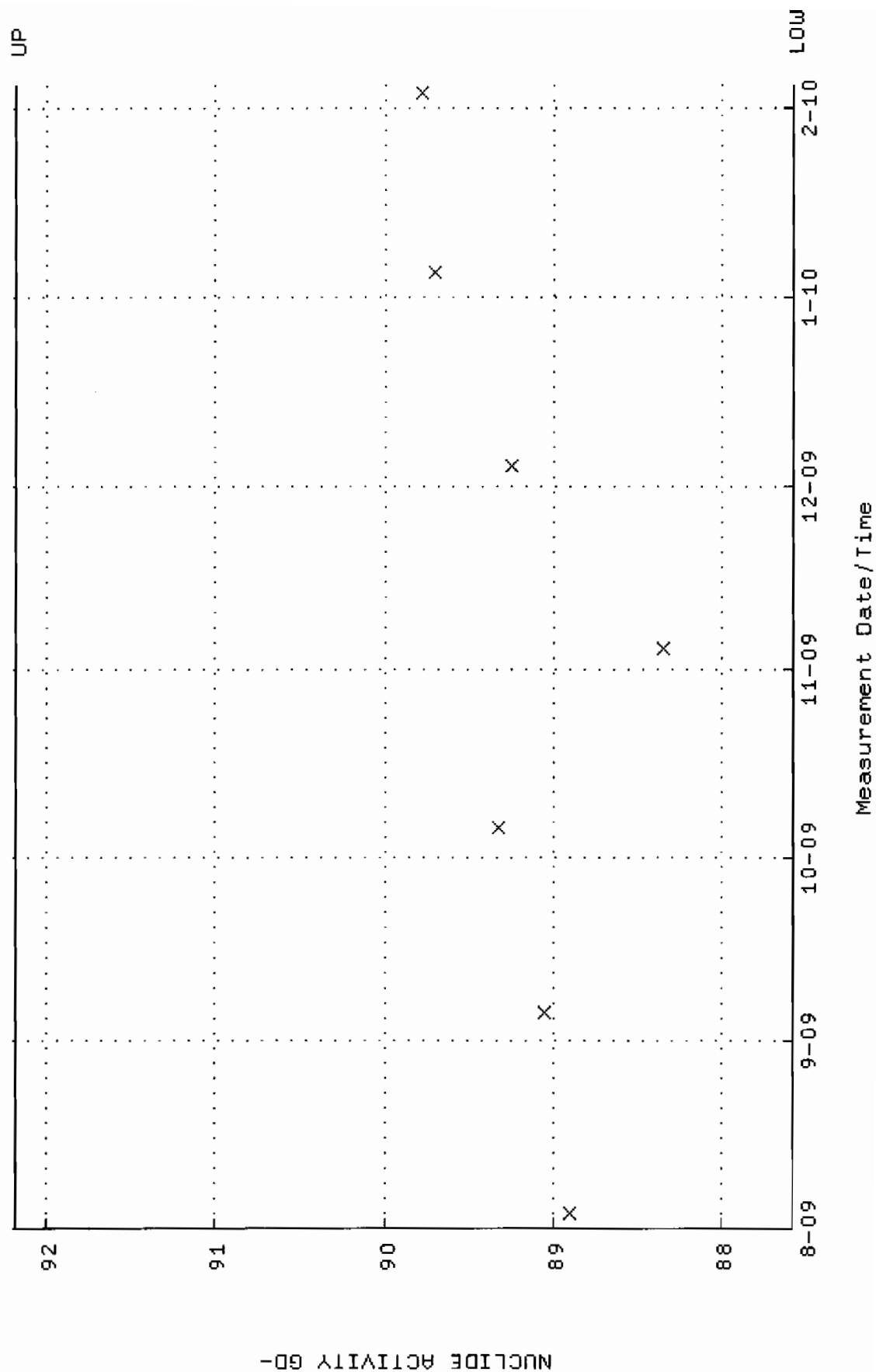
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



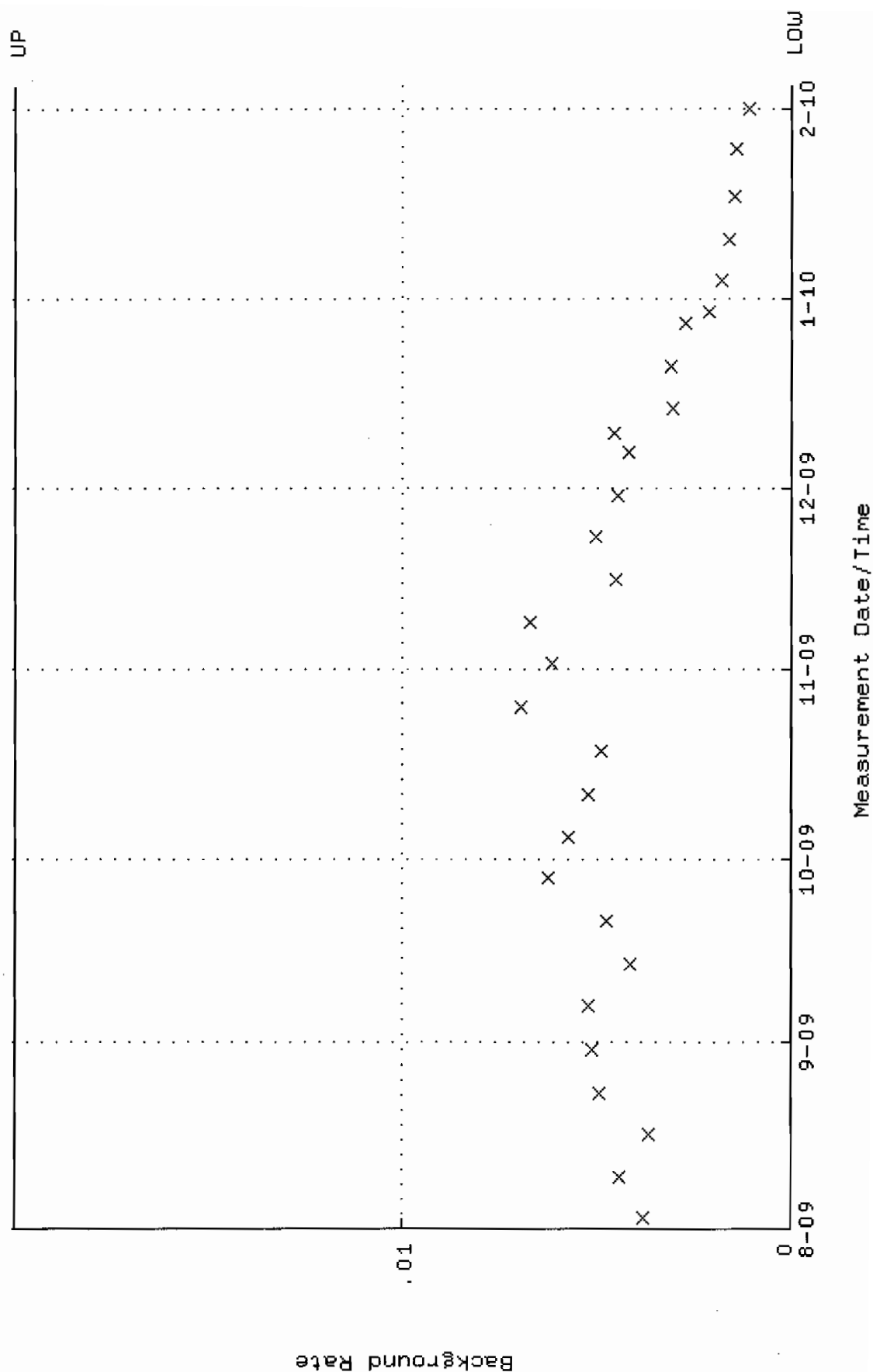
QA filename : DKA100:[ENV_ALPHA.QA.W]W038.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
Lower/Upper Lmts: 0.327380 through 0.362086



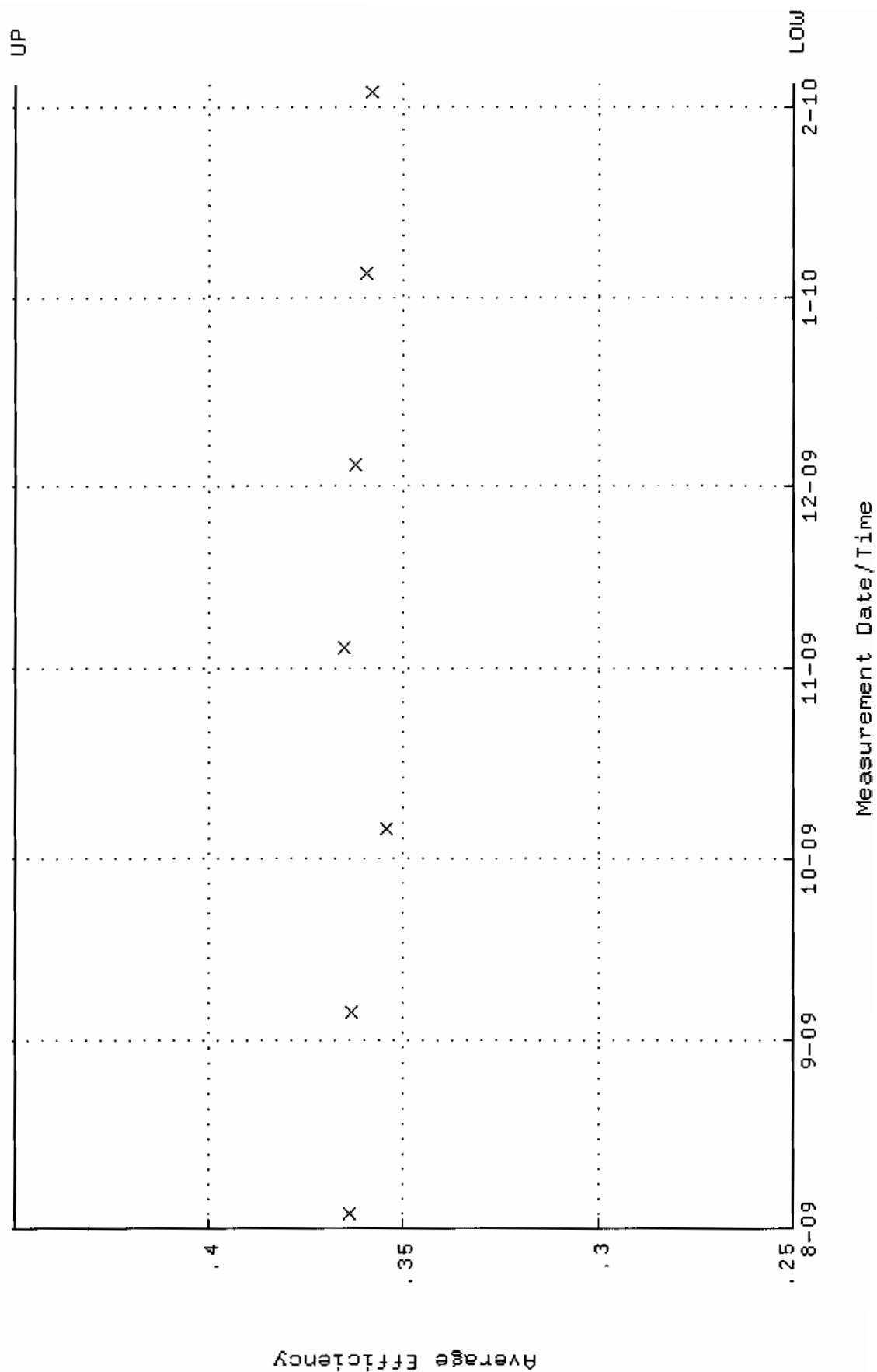
QA filename : DKA100:[ENV_ALPHA.QA,w]w038.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.5715 through 92.1899



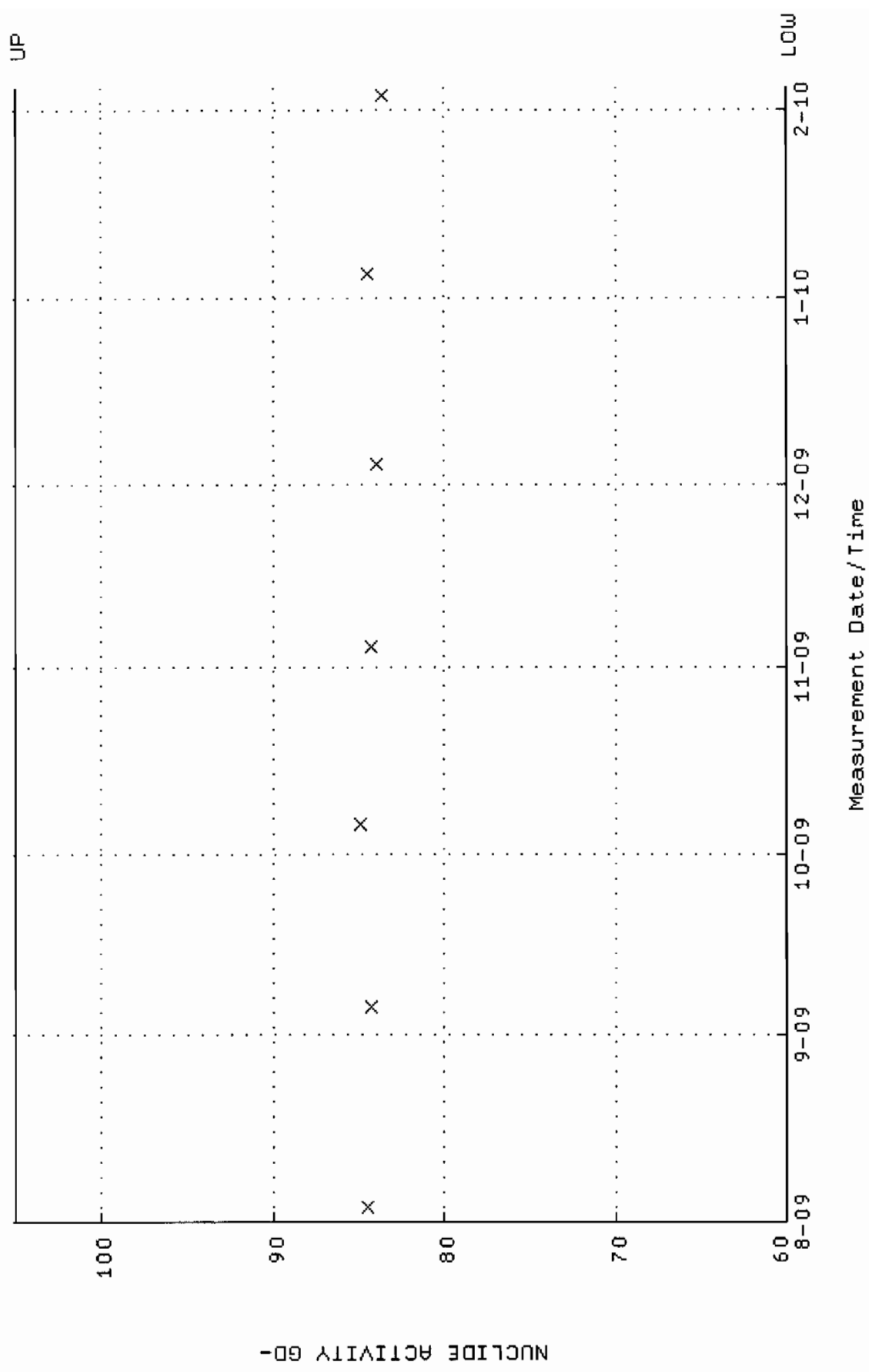
QA filename : DKA100:[ENV_ALPHA.QA.B]B038.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:36 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



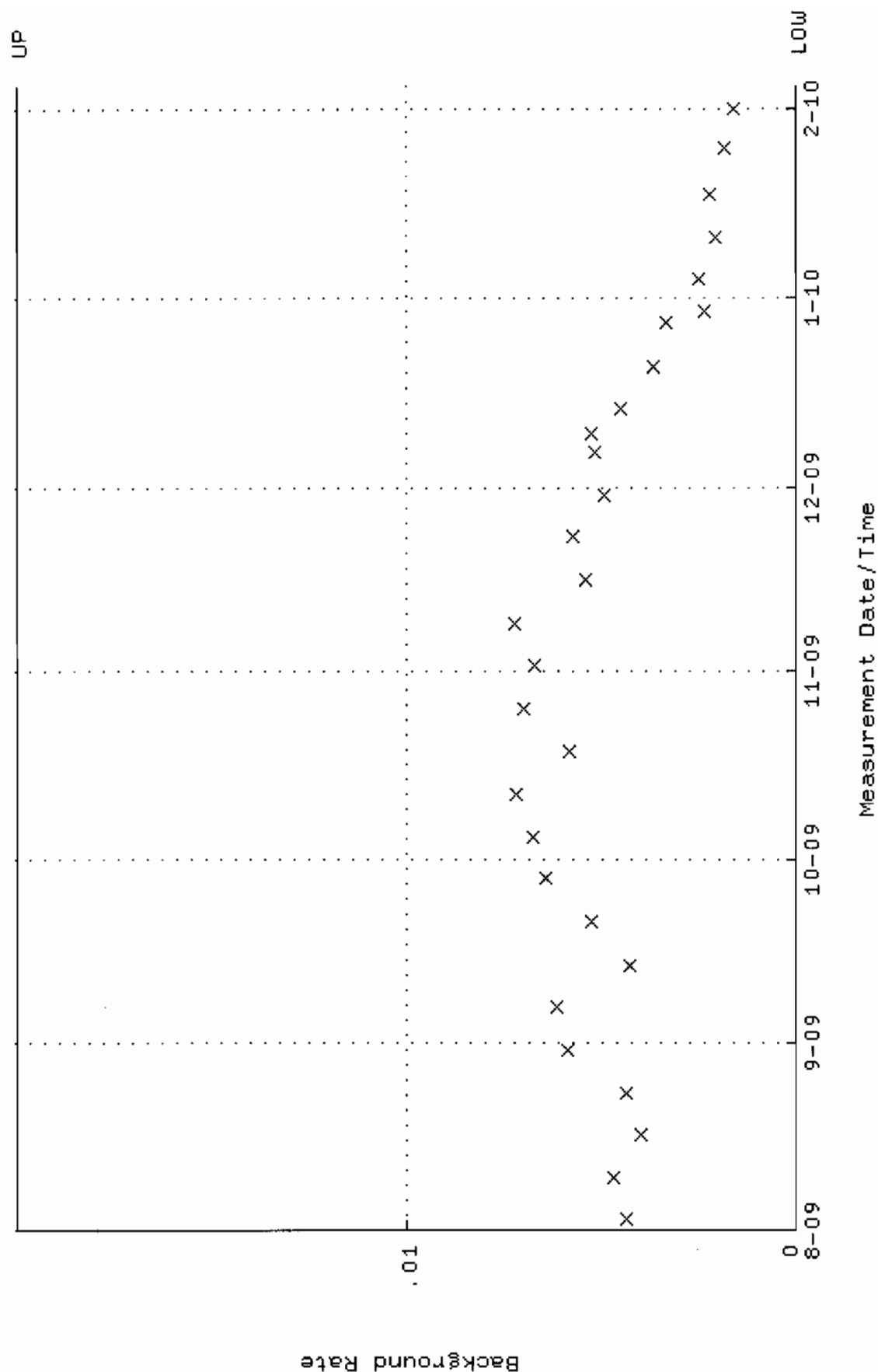
QA filename : DKA100:[ENV_ALPHA.QA.W]W039.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



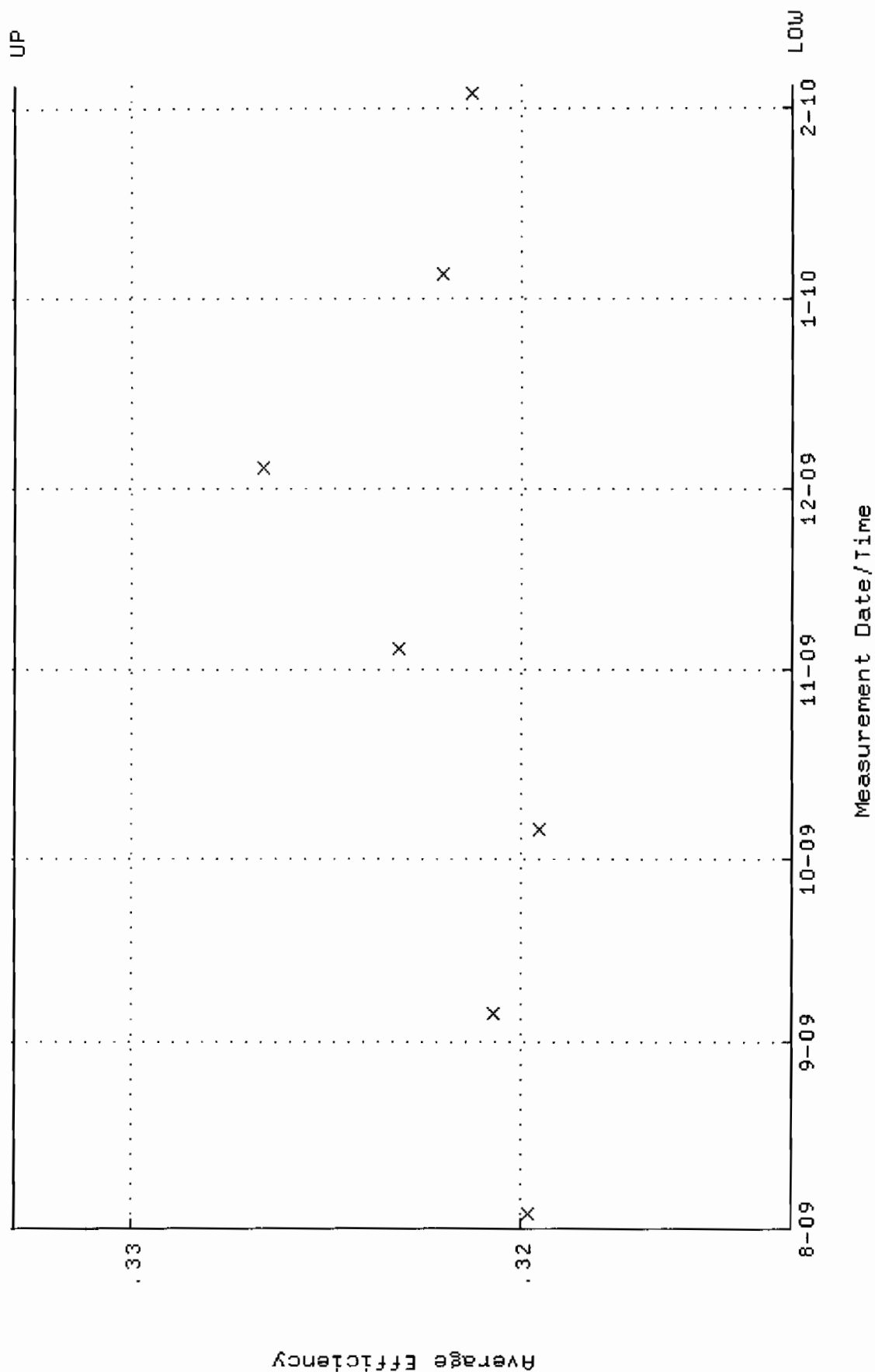
QA filename : DKA100:[ENV_ALPHA.QA.W]W039.QAF;3
Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



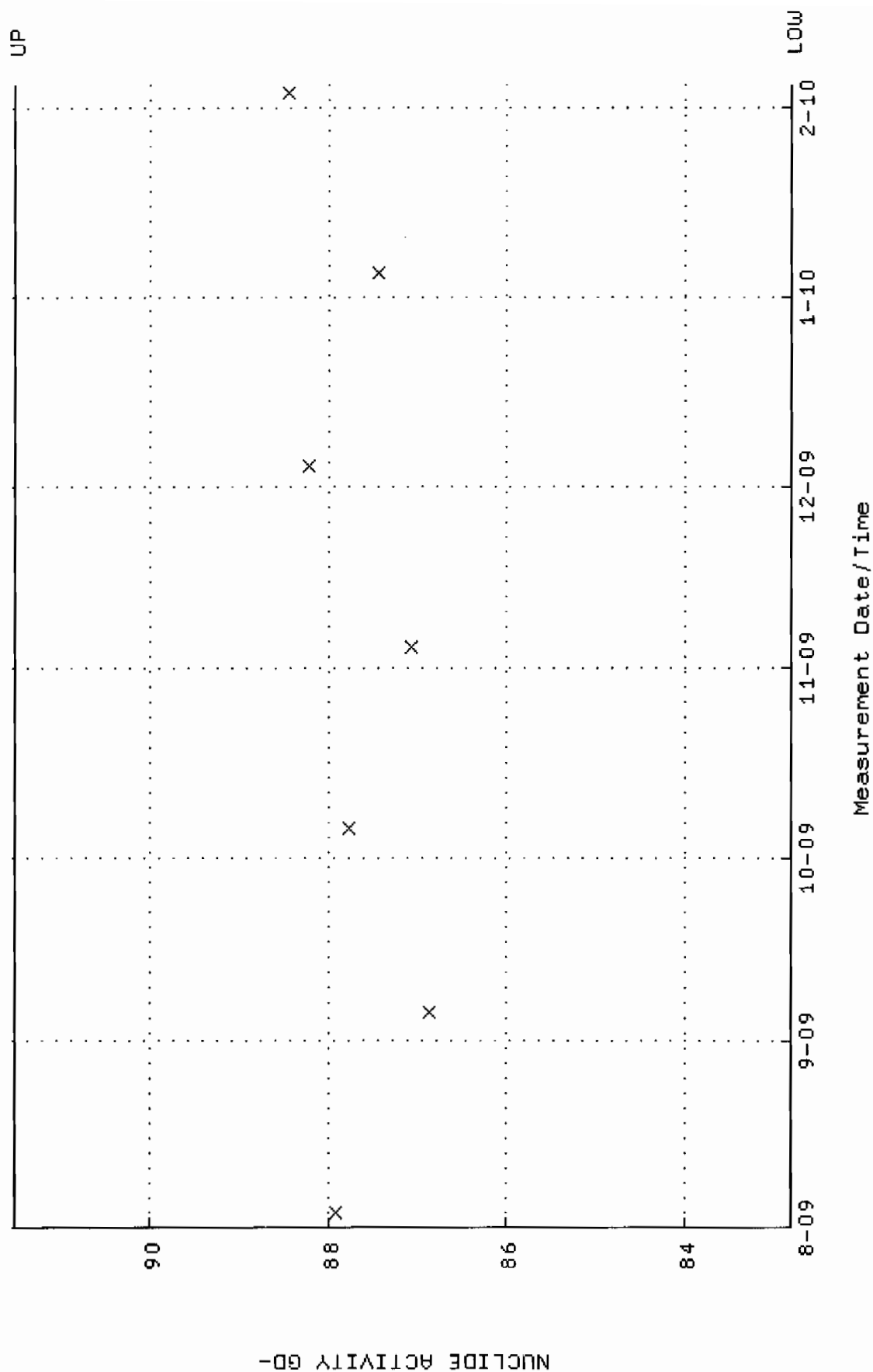
QA filename : DKA100:[ENV-ALPHA.QA.B]B039.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:36 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.313016 through 0.333016



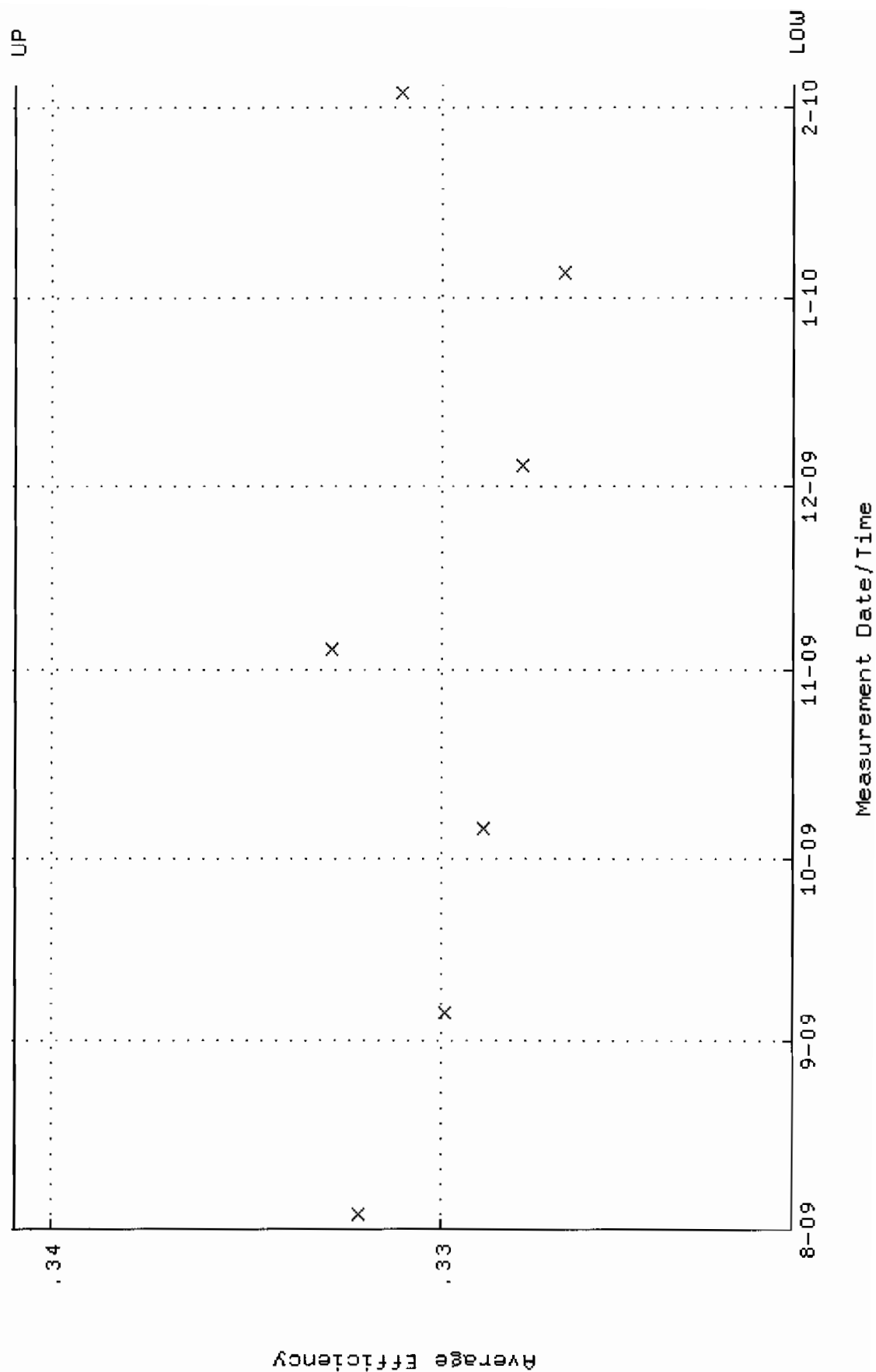
QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 82.8065 through 91.5229



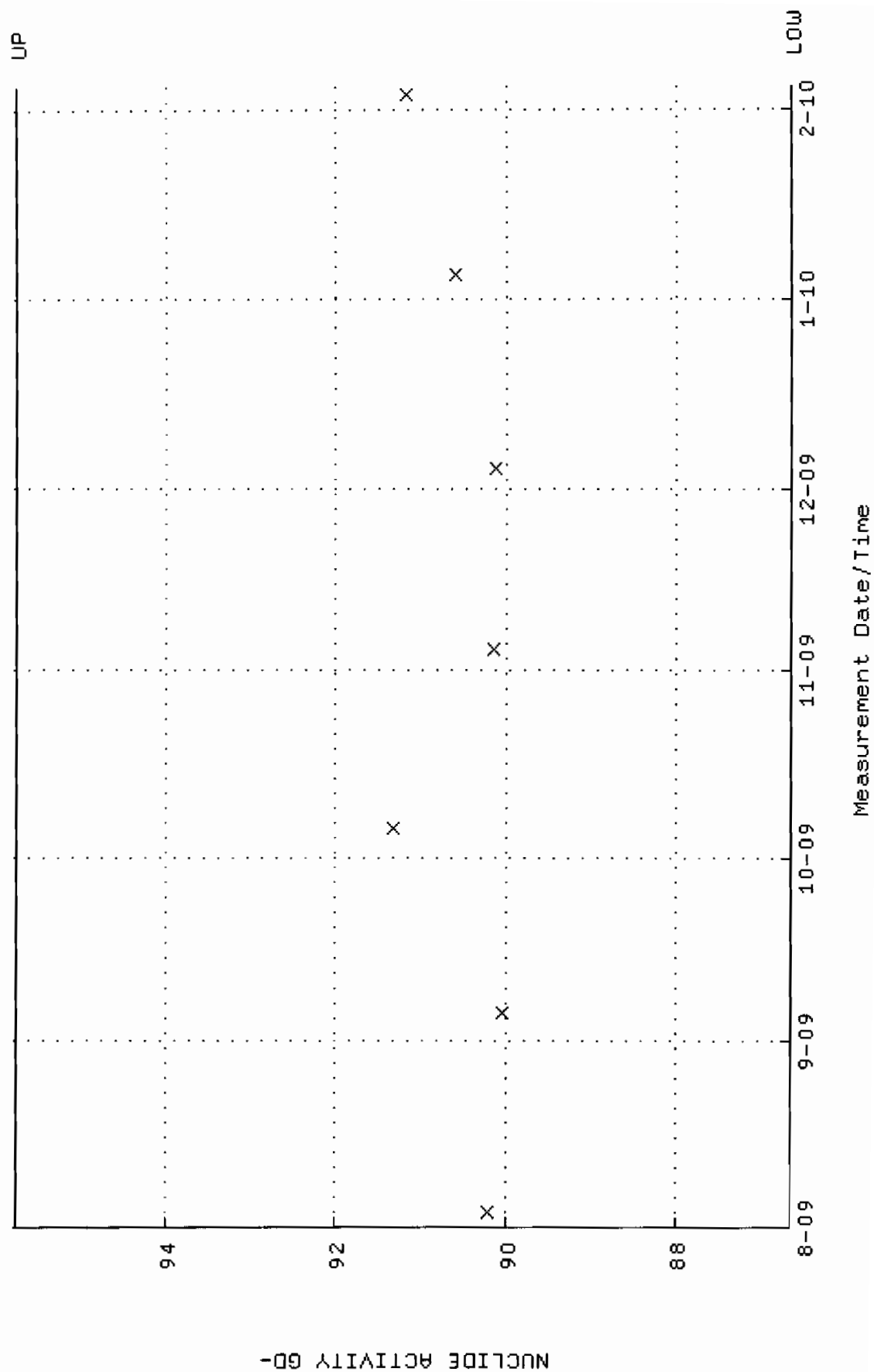
Lower/Upper Lmts: 0.00000E+00 through 2.00000E-02



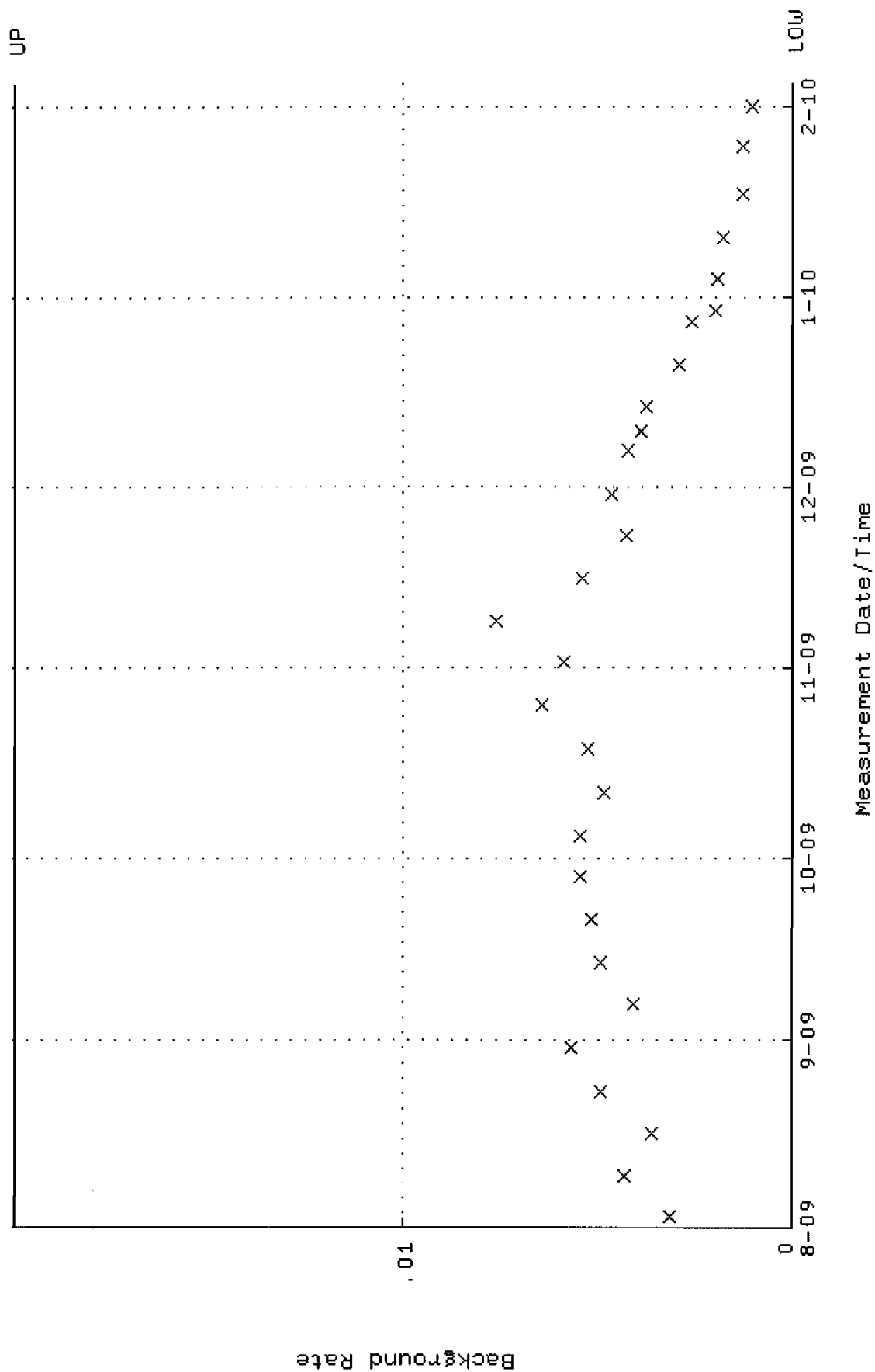
QA filename : DKA100:[ENV_ALPHA.QA.W]W041.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.320943 through 0.340943



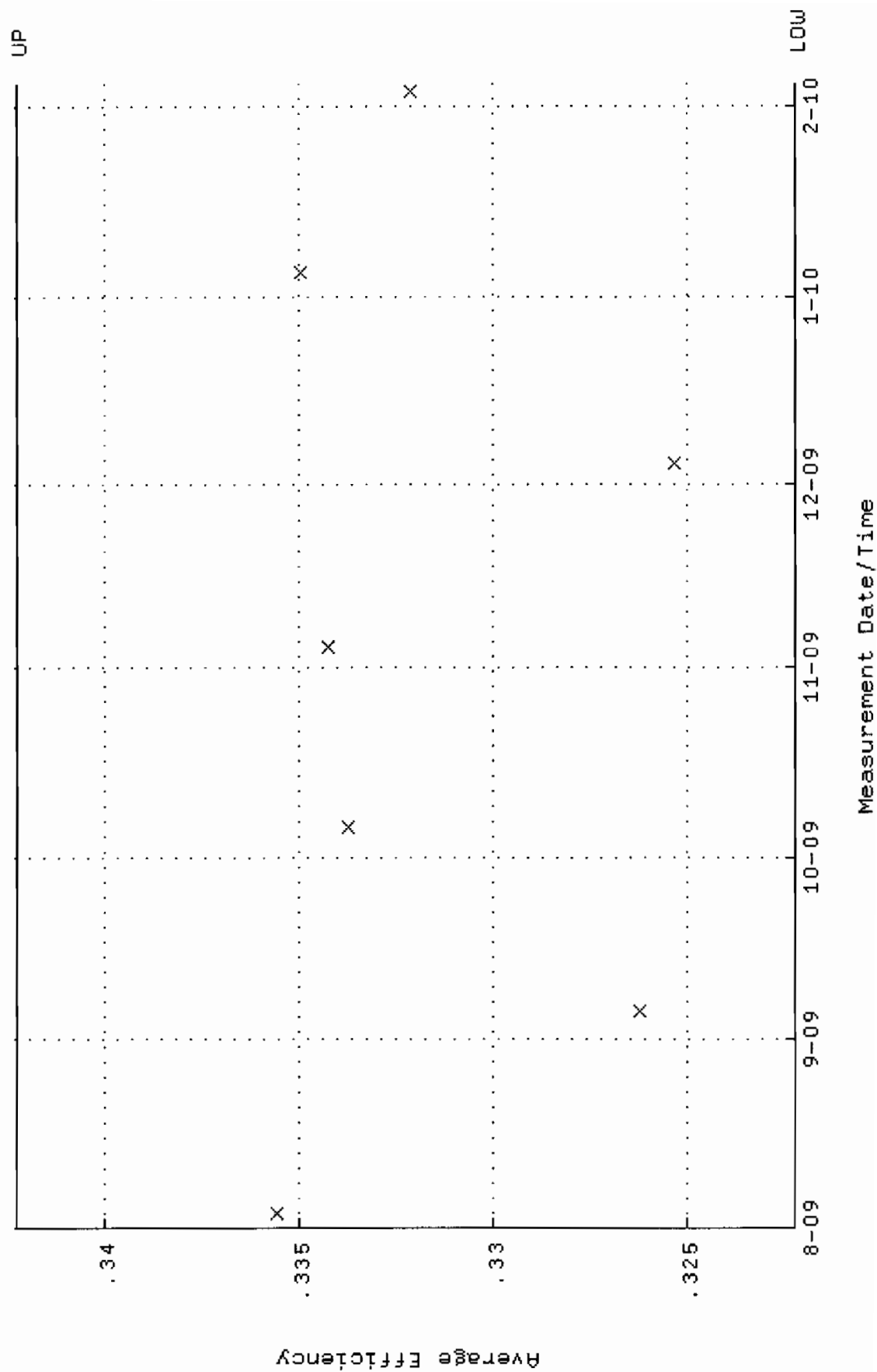
QA filename : DKA100:[ENV_ALPHA.QA.W]W041.QAF;5
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.6435 through 95.7639



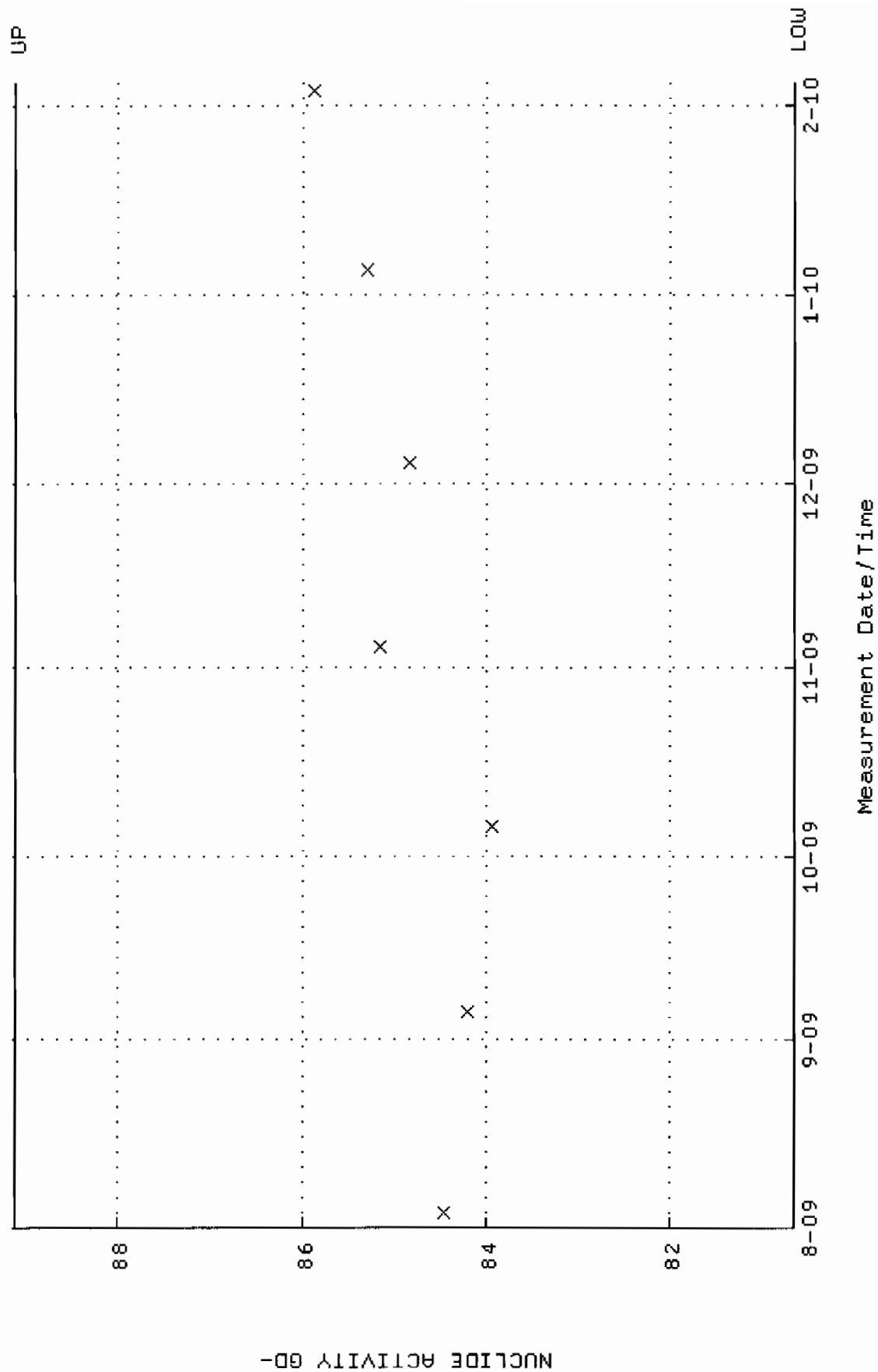
QA filename : DKA100:[ENV_ALPHA.QA.B]B041.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:36 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



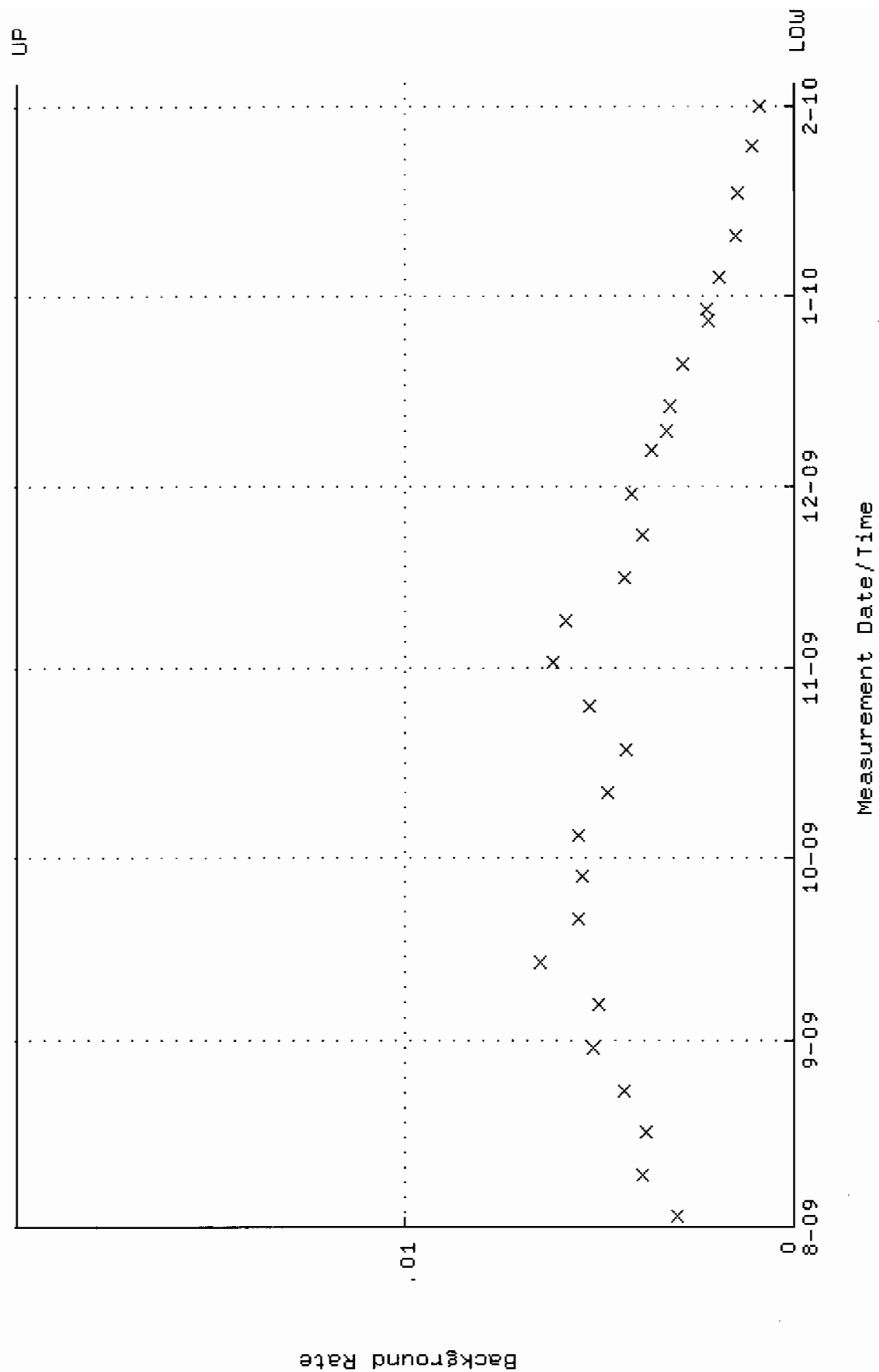
QA filename : DKA100:[ENV_ALPHA.QA.W]U042.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.322243 through 0.342243



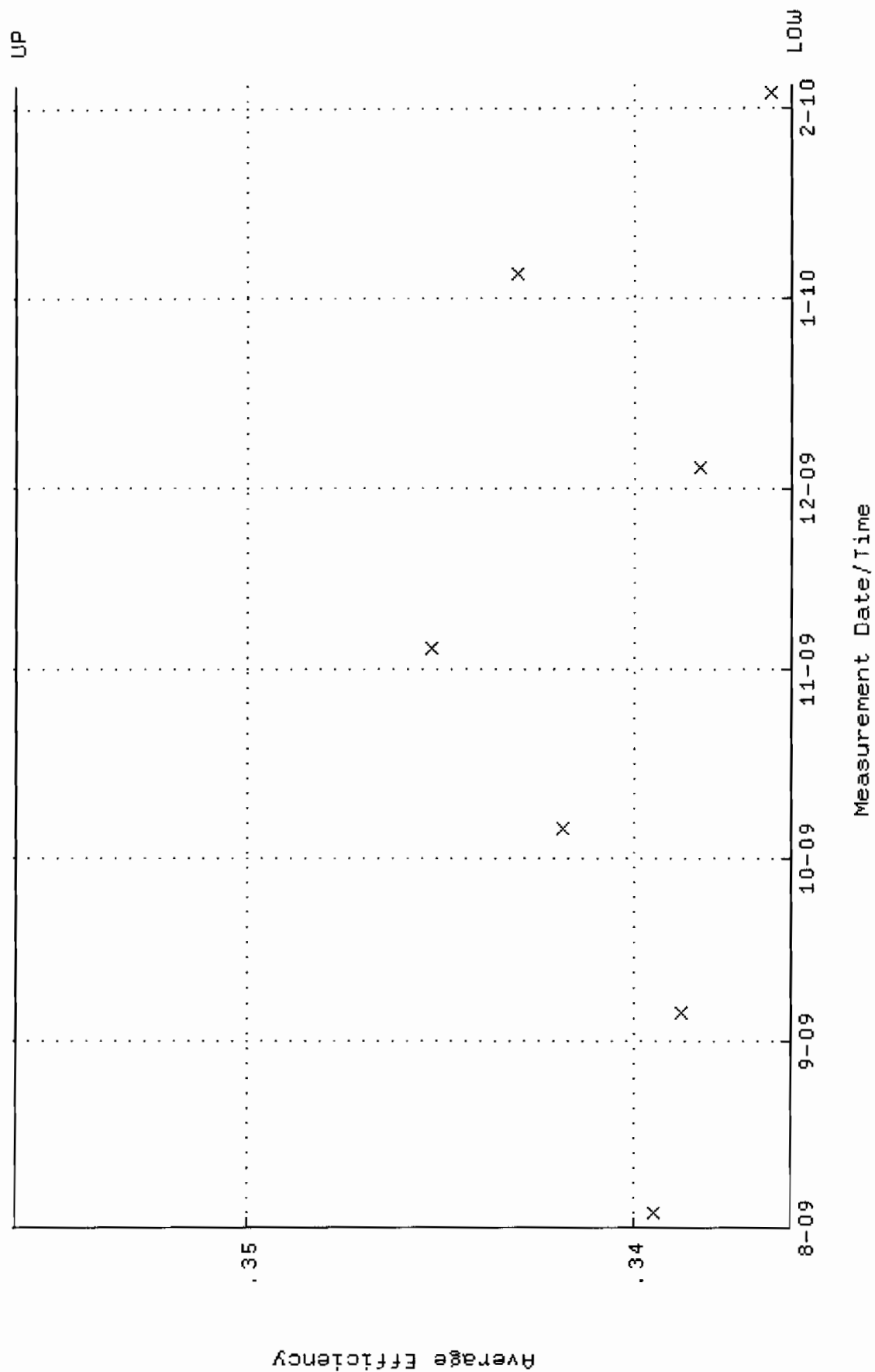
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 80.6389 through 89.1273



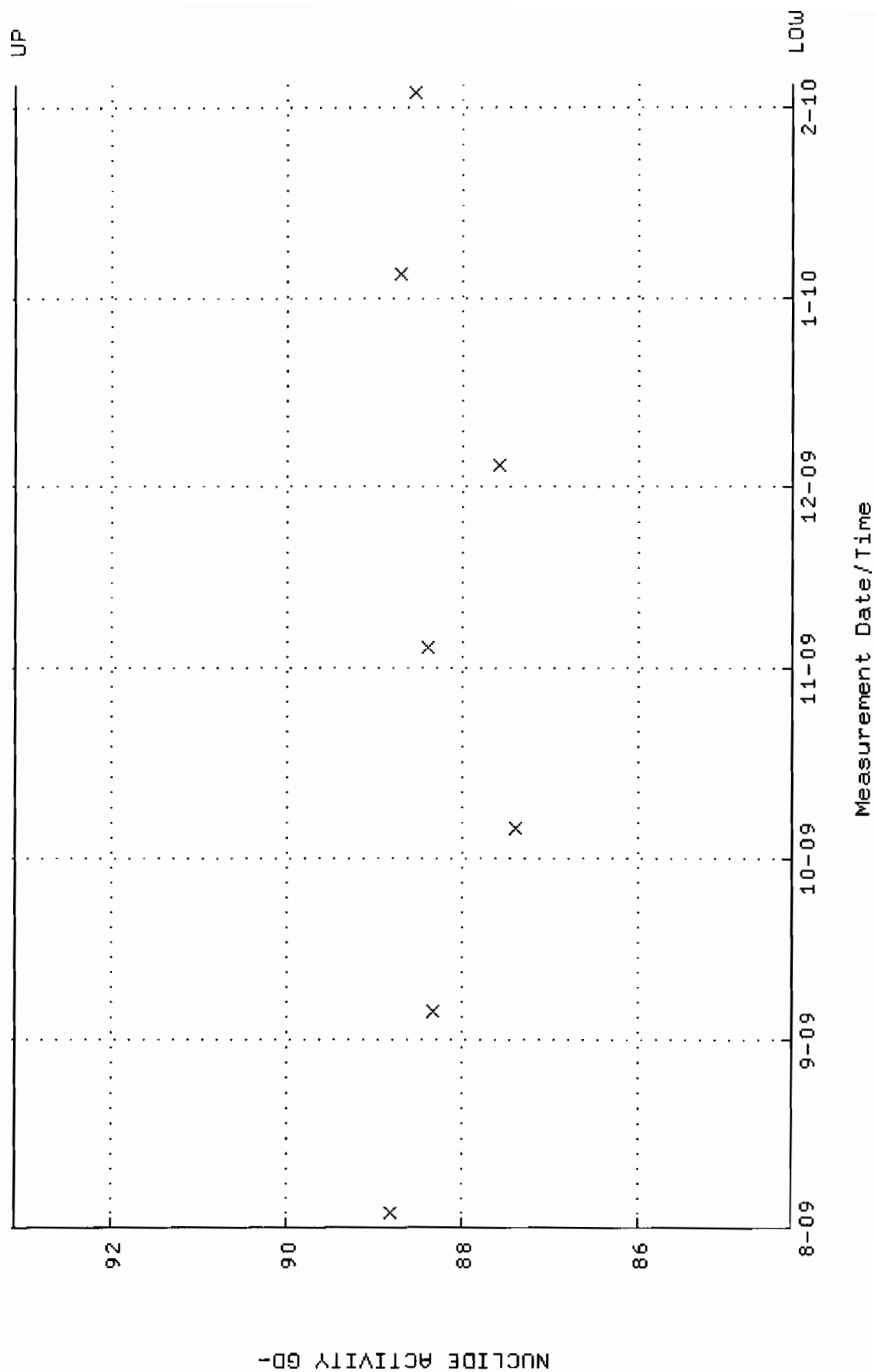
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QA filename      : DKA100:[ENV_ALPHA.QA.B]B042.QAF;1
Parameter Name   : BACKRATE (Background Rate)
Start/End Dates  : 2-AUG-2009 17:38:36 through 4-FEB-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02
```



QA filename : DKA100:[ENV_ALPHA.QA.W]W043.QAF;102
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.335973 through 0.355973



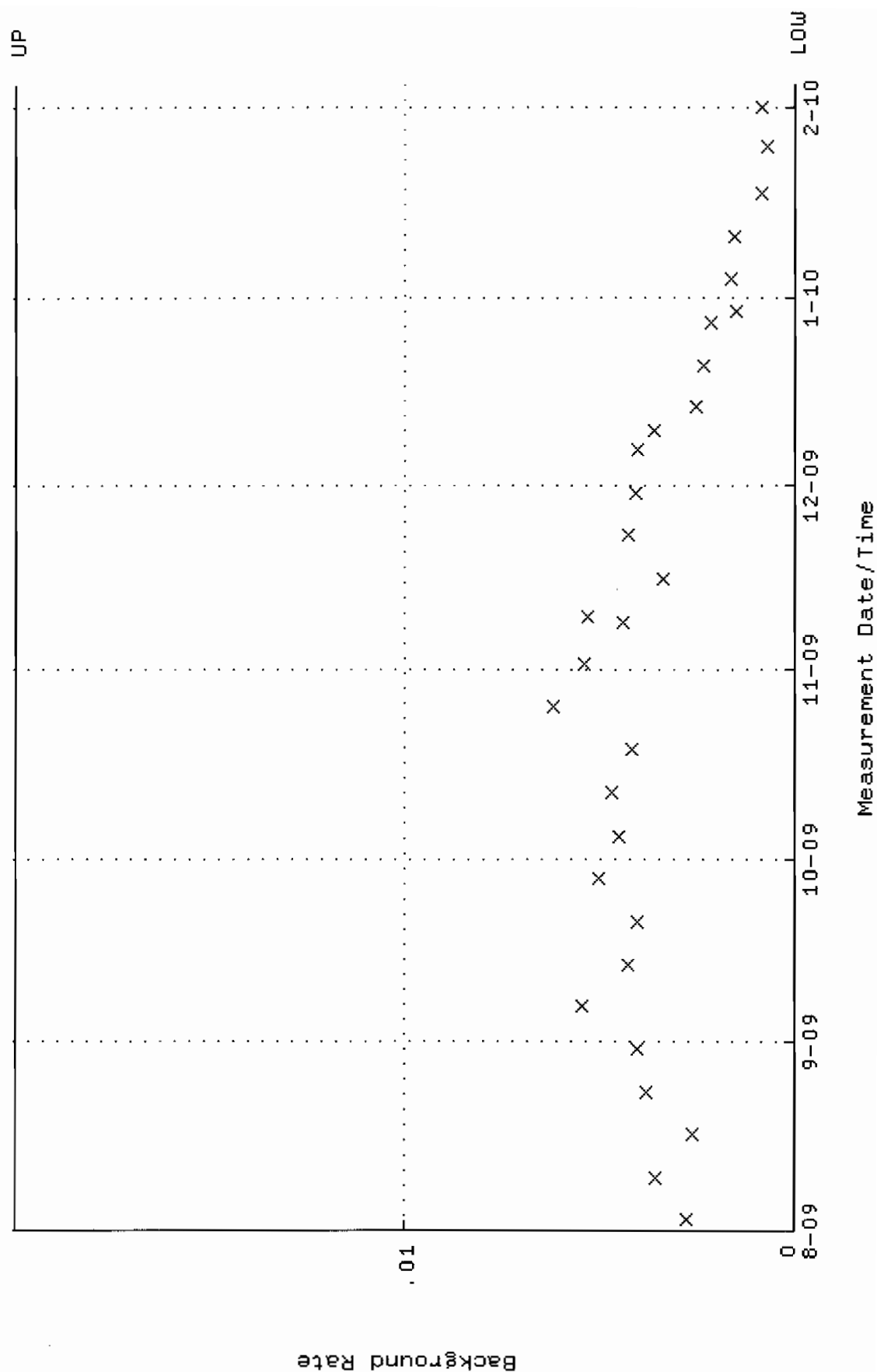
QA filename : DKA100:[ENV_ALPHA.QA.w]w043.QAF;102
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.2440 through 93.1118



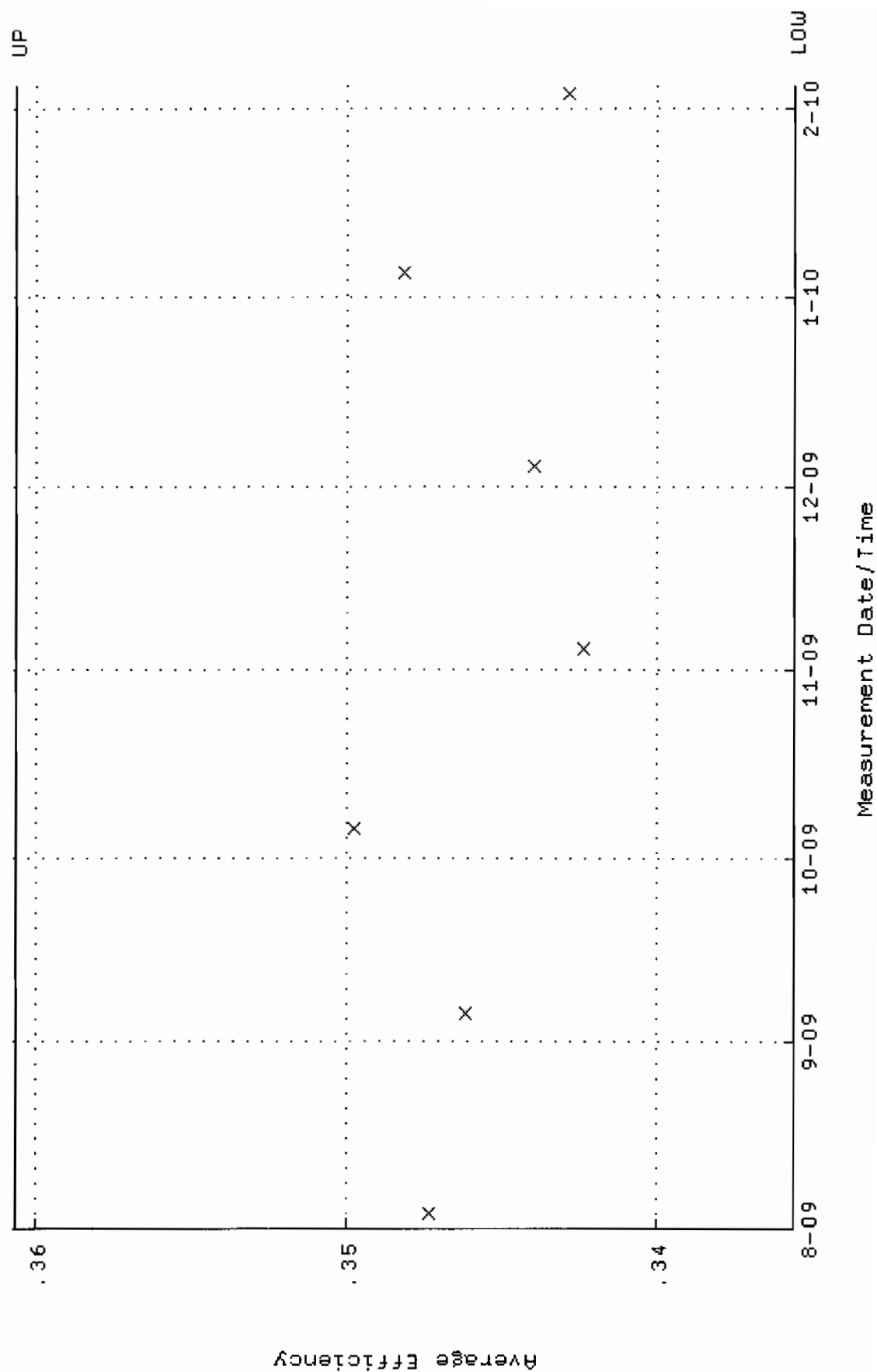
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: DKA100:[ENV_ALPHA.QA.B]B043.QAF;1
: BACKRATE (Background Rate)
: 2-AUG-2009 17:38:37 through 4-FEB-
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

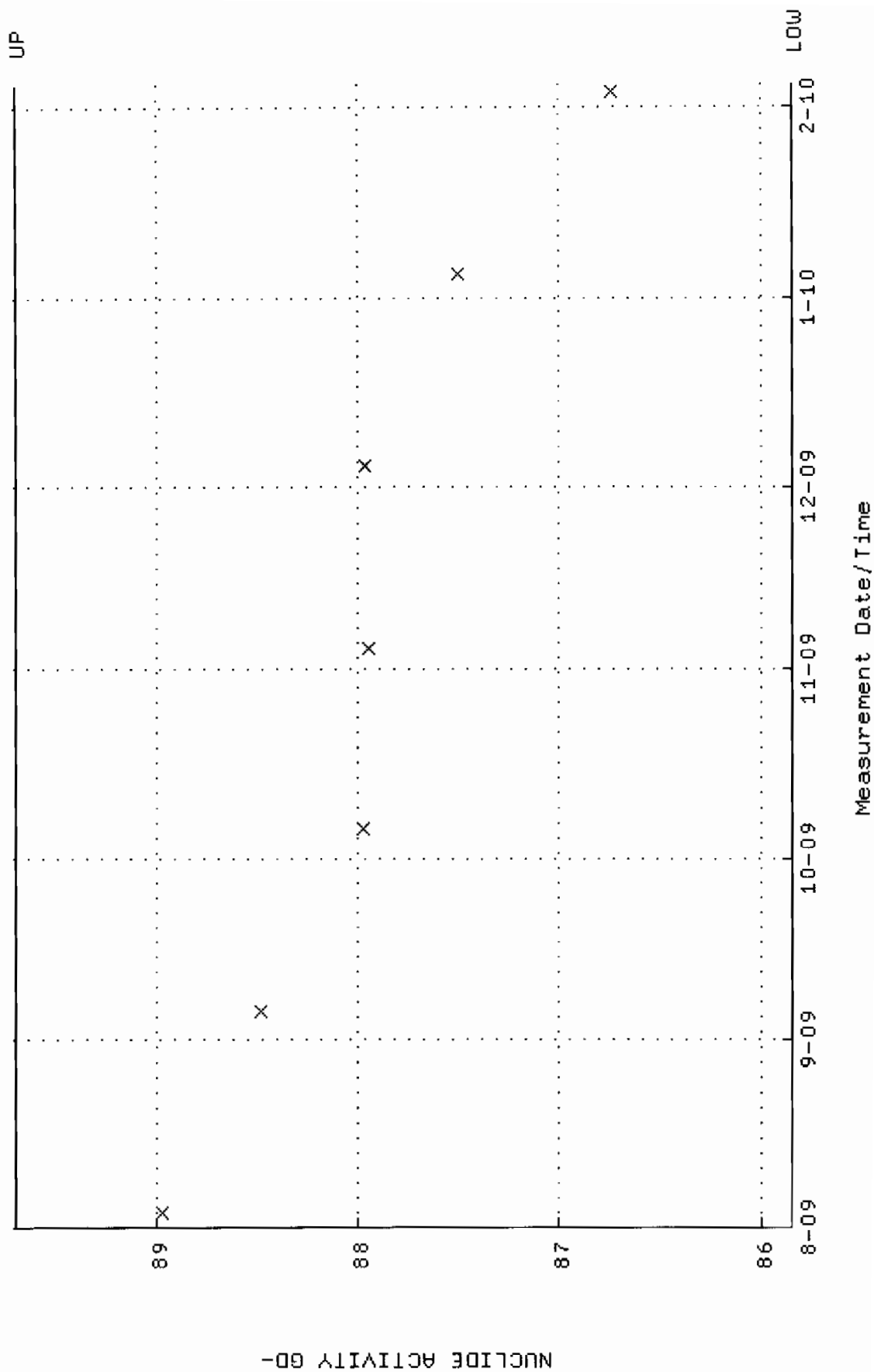
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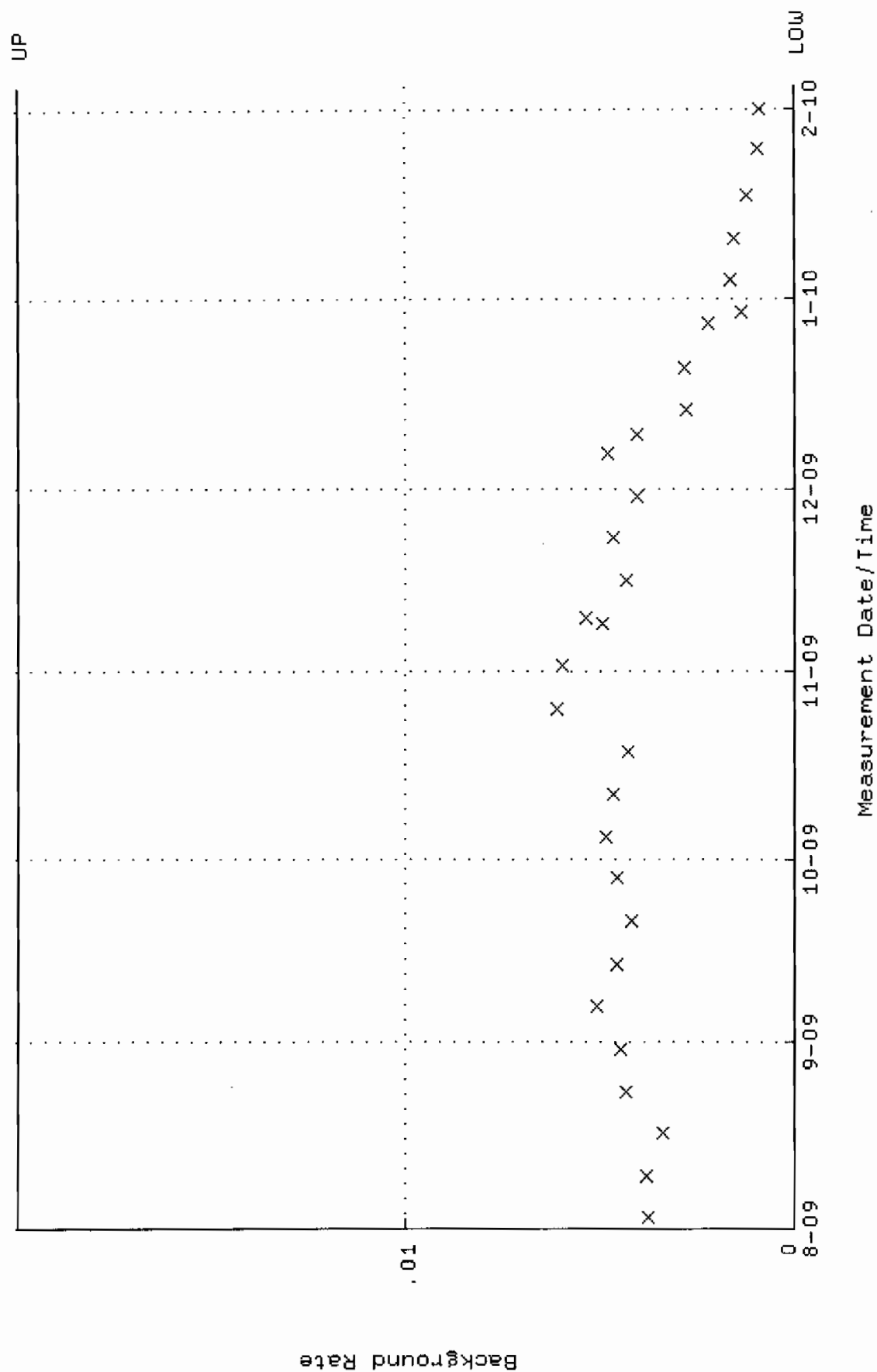
QA filename : DKA100:[ENV_ALPHA.QA.W]W044.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.335557 through 0.360677



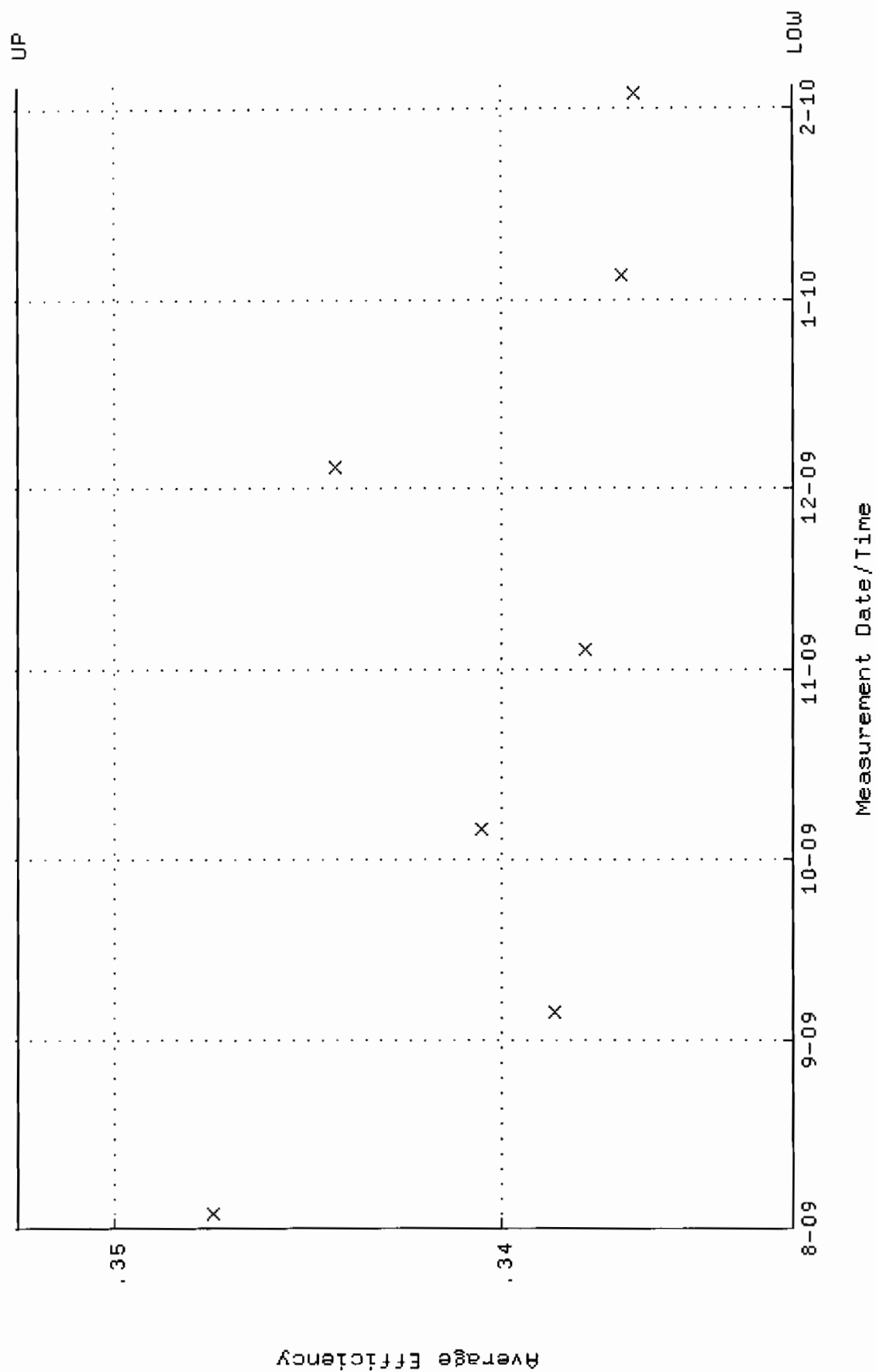
QA filename : DKA100:[ENV_ALPHA,QA,W]U044.QAF;5
 Parameter Name : NLAIVITY-G0148 (NUCLIDE ACTIVITY G0-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.8425 through 89.6949



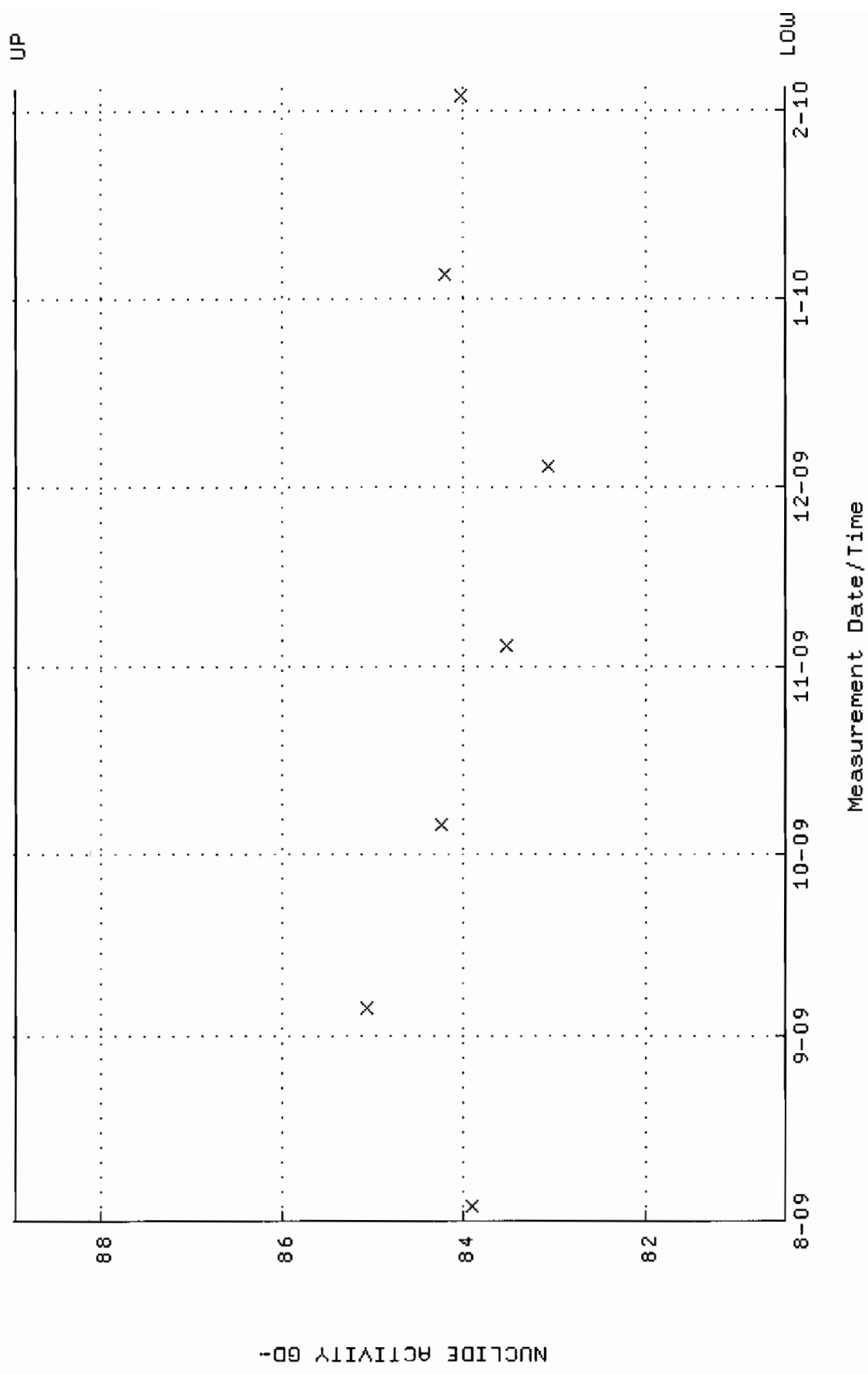
QA filename : DKA100:[ENV_ALPHA.QA.B]B044.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:37 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



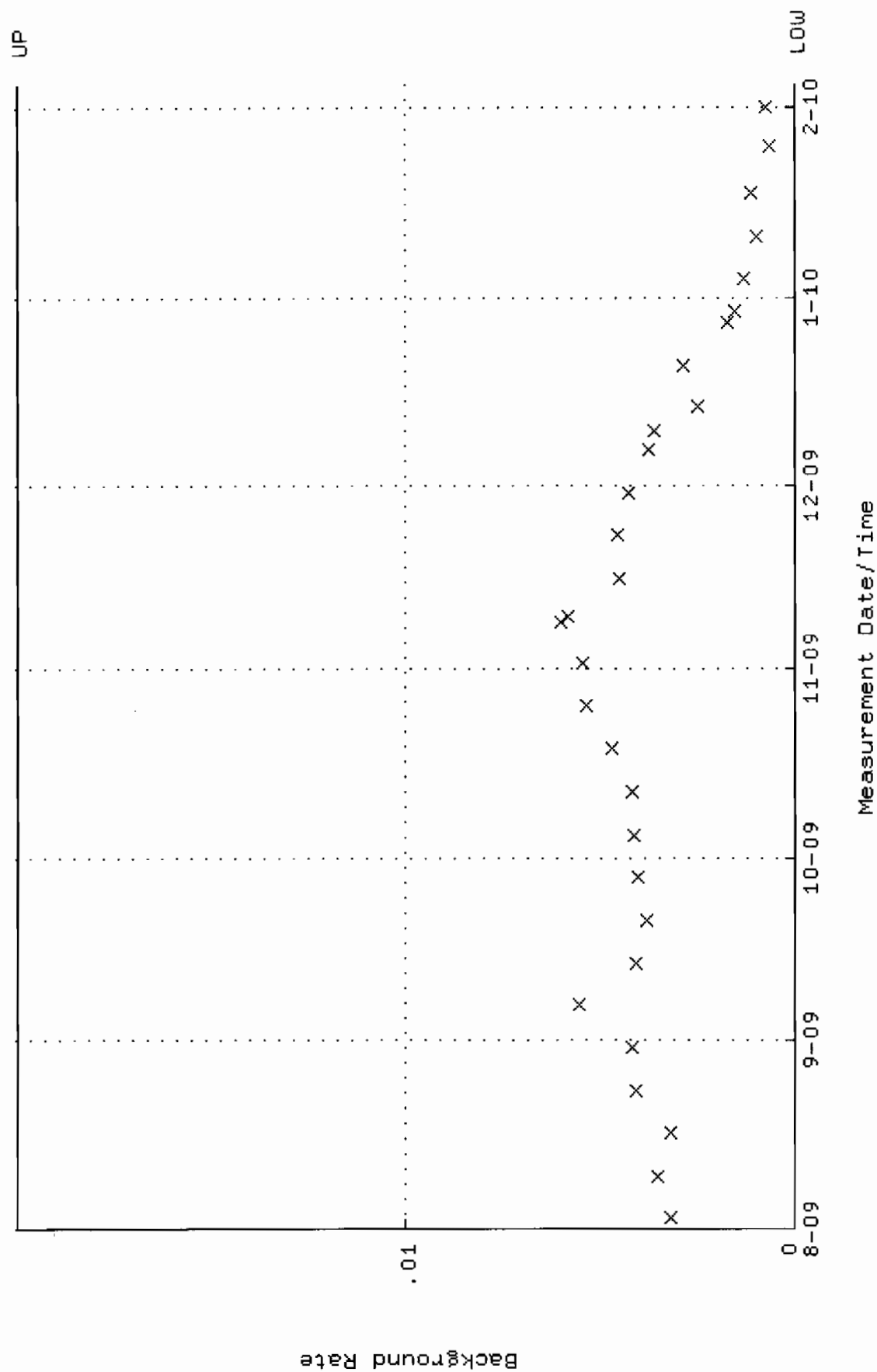
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.332472 through 0.352472



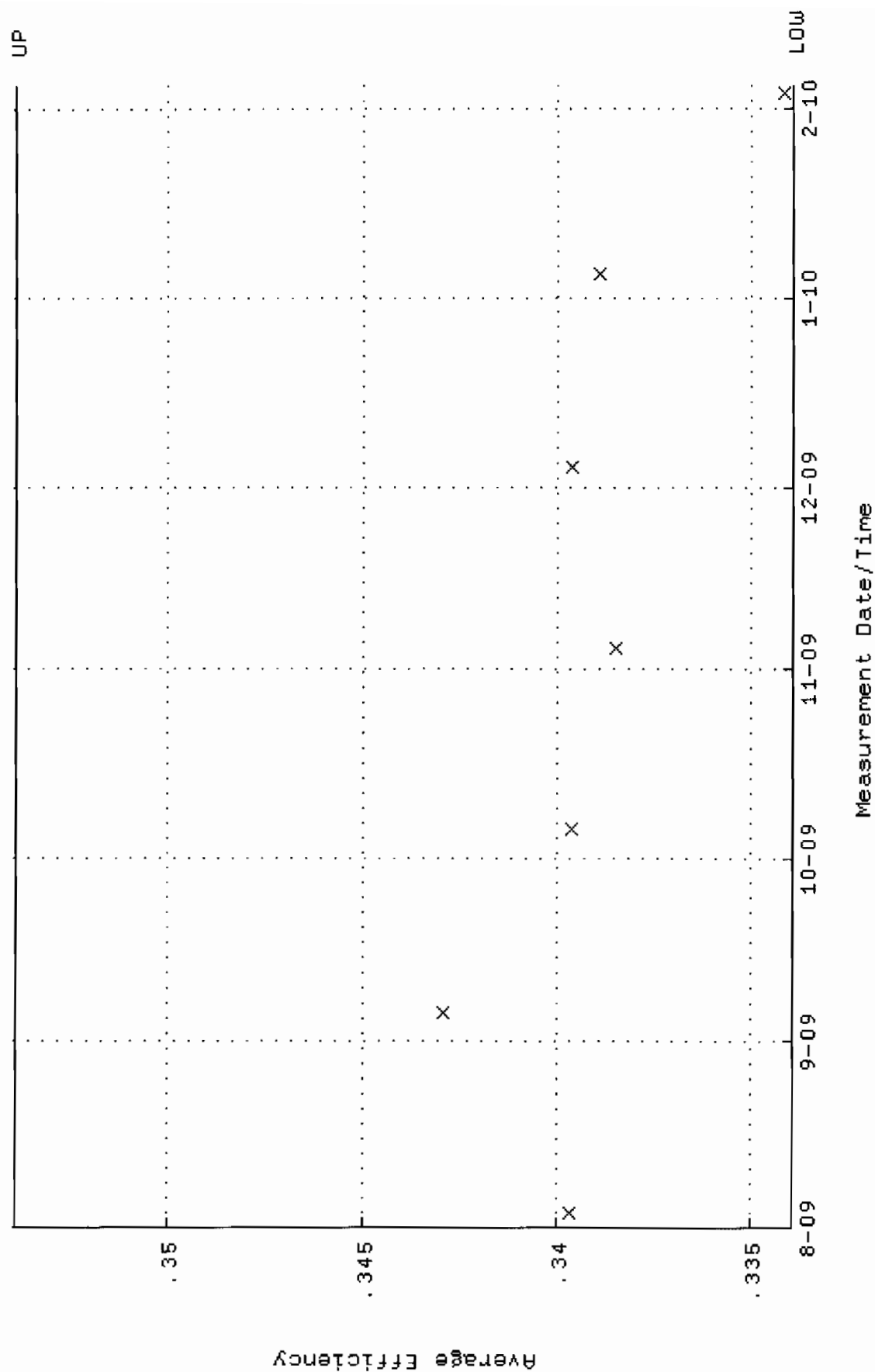
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
Lower/Upper Lmts: 80.4622 through 88.9320



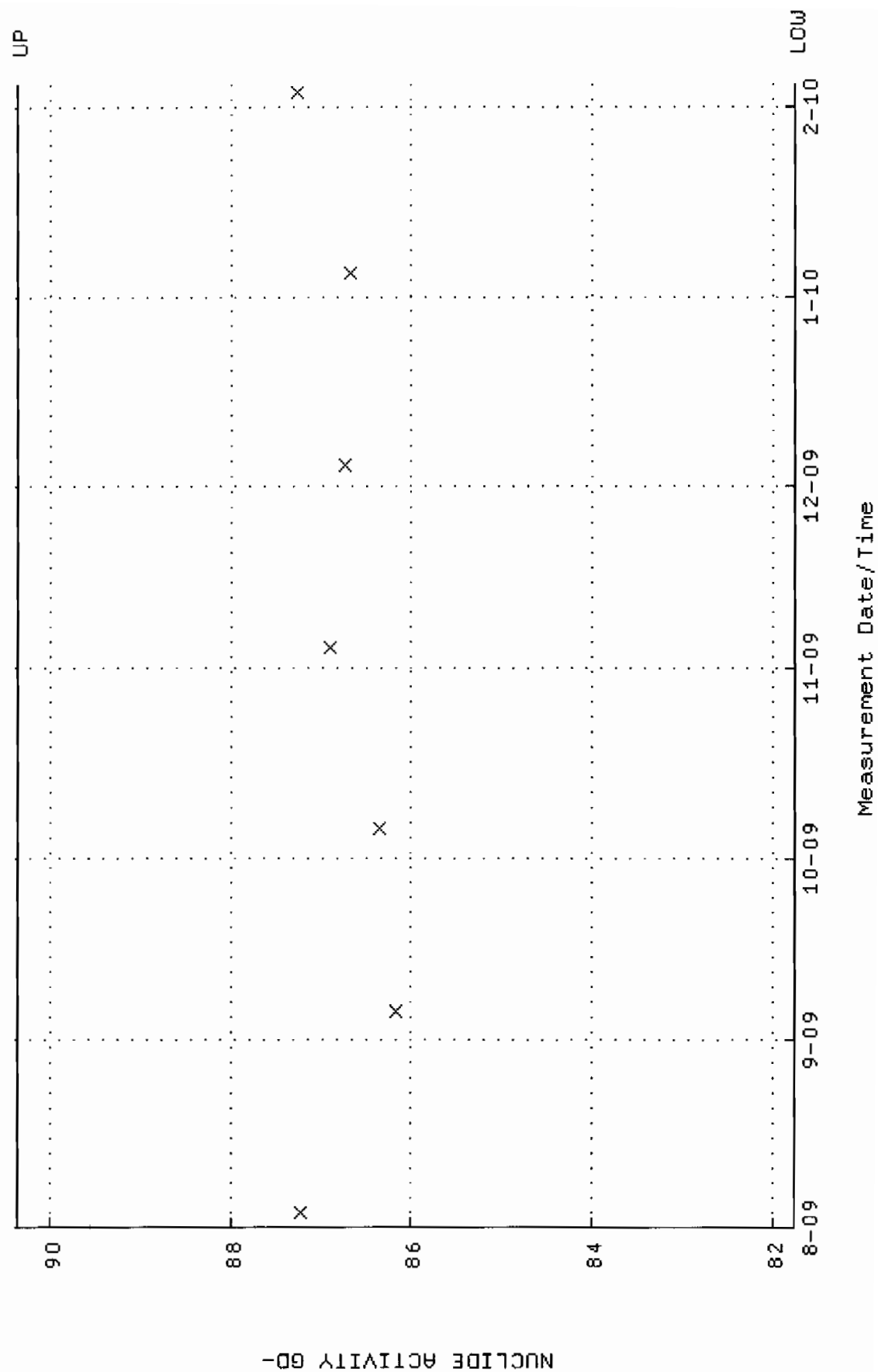
QA filename : DKA100:[ENV_ALPHA.QA.B]B045.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:37 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



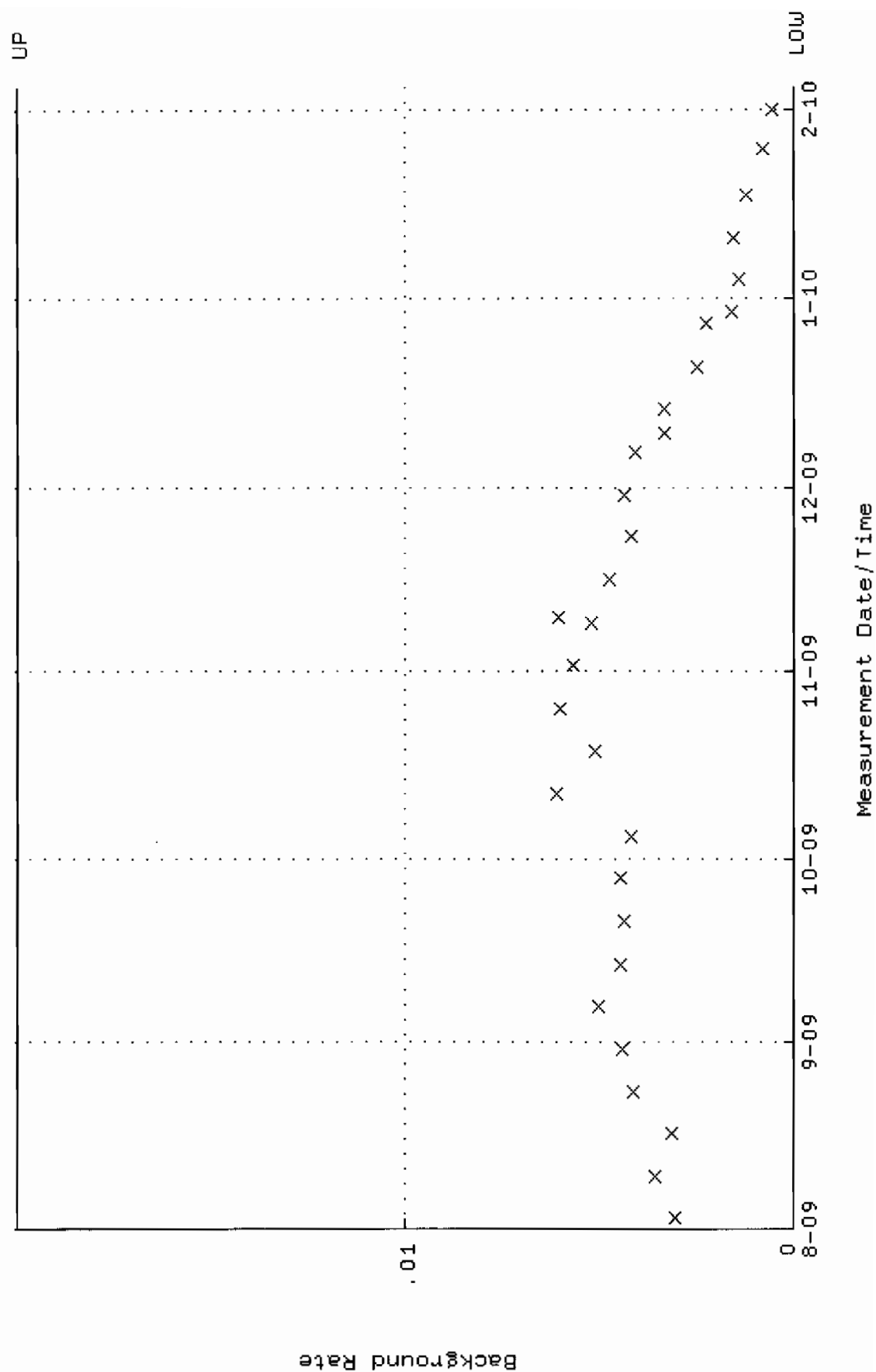
QA filename : DKA100:[ENV_ALPHA.QA.W]W046.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.333927 through 0.353927



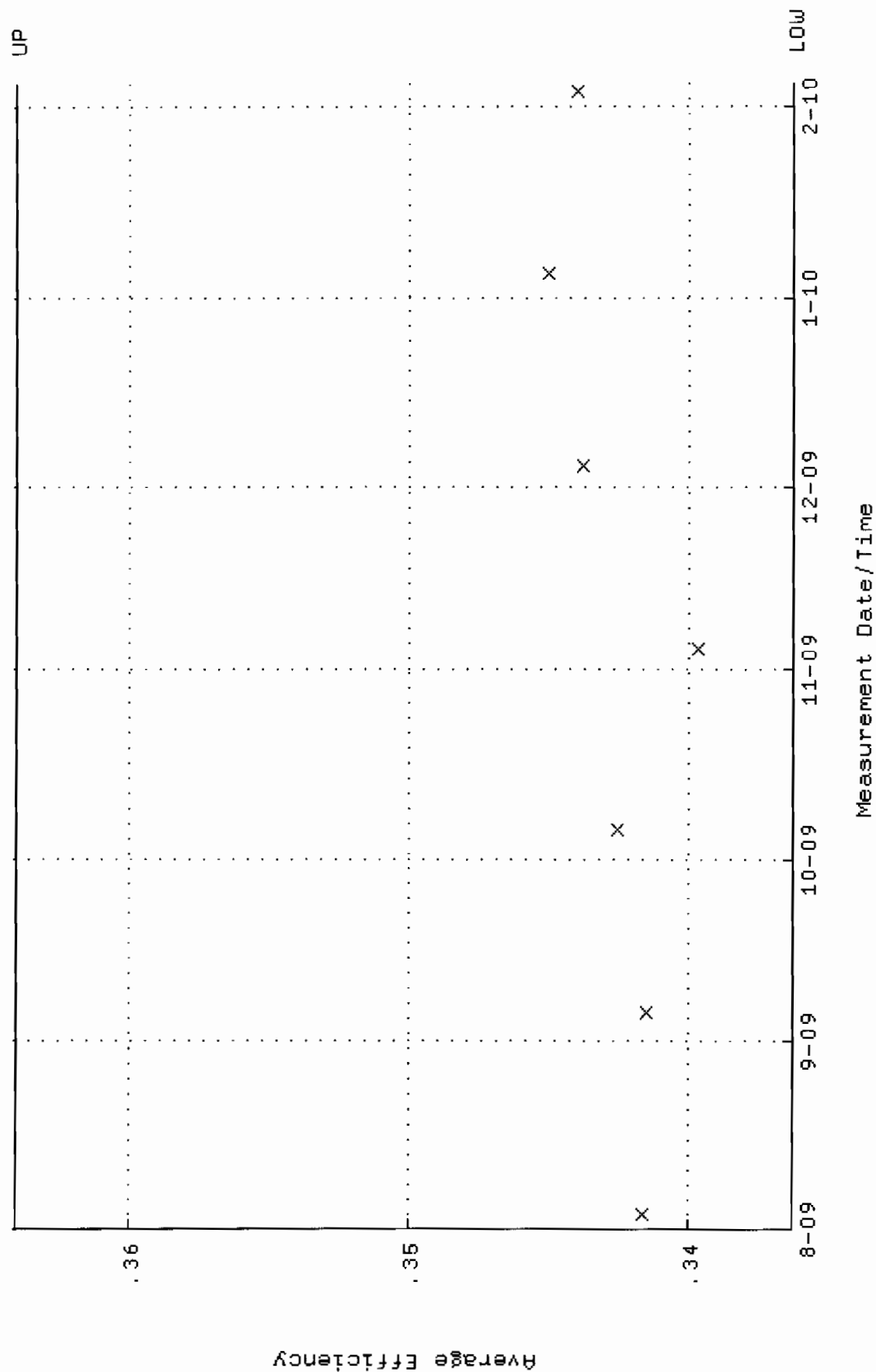
QA filename : DKA100:[ENV_ALPHA.QA.W]W046.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 81.7568 through 90.3628



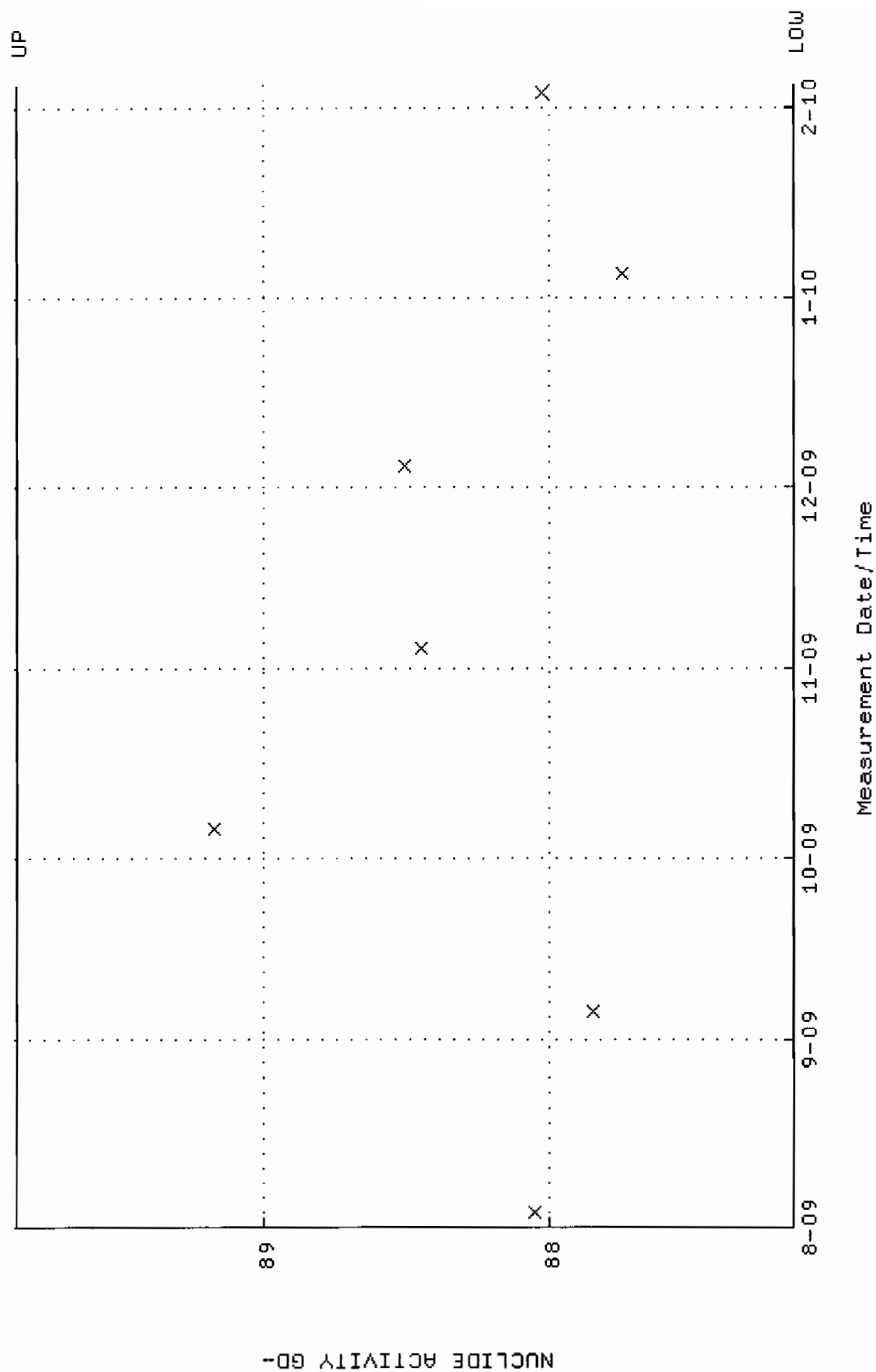
QA filename : DKA100:[ENV_ALPHA.QA.B]B046.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:37 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



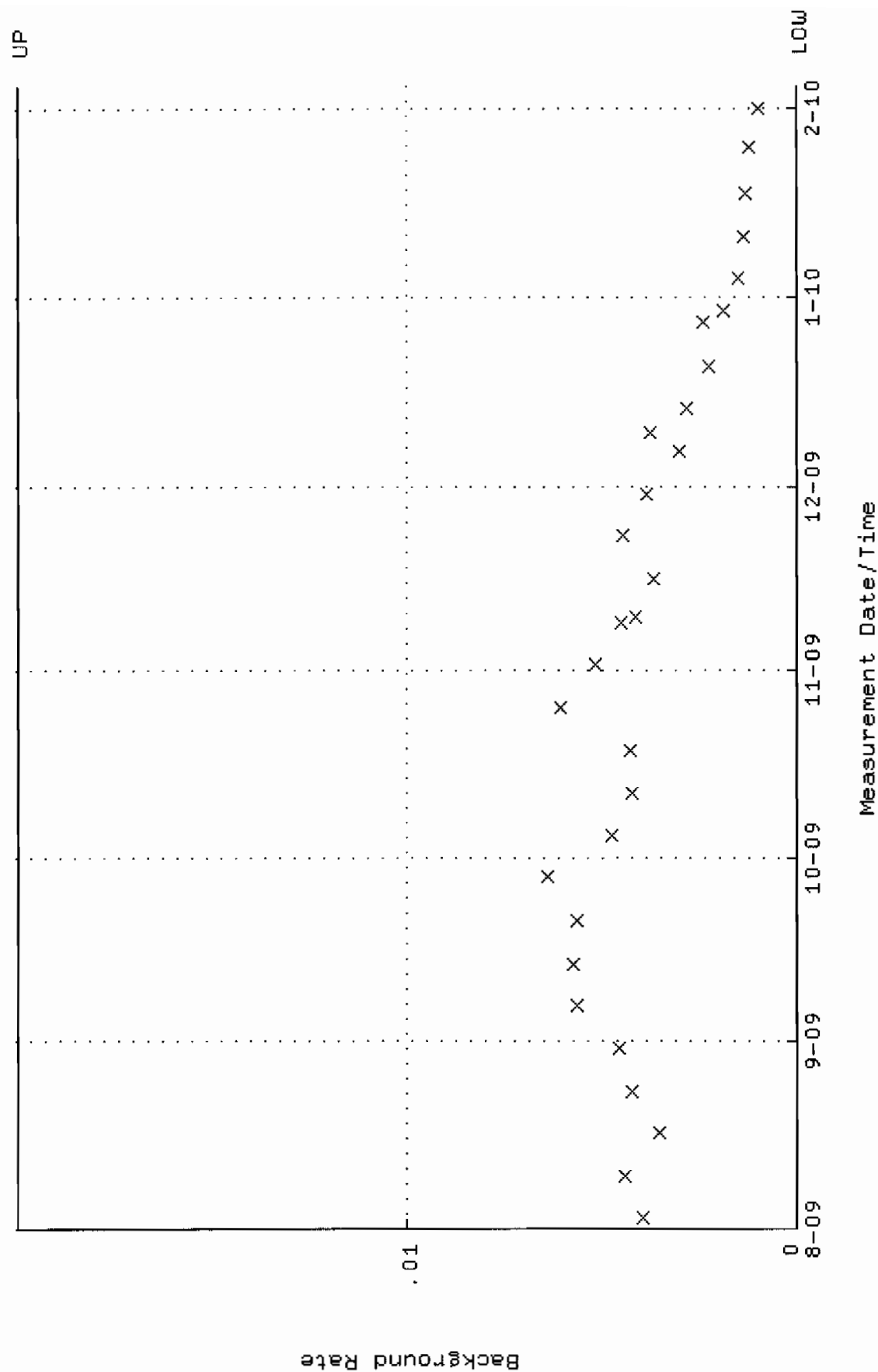
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.336276 through 0.364038



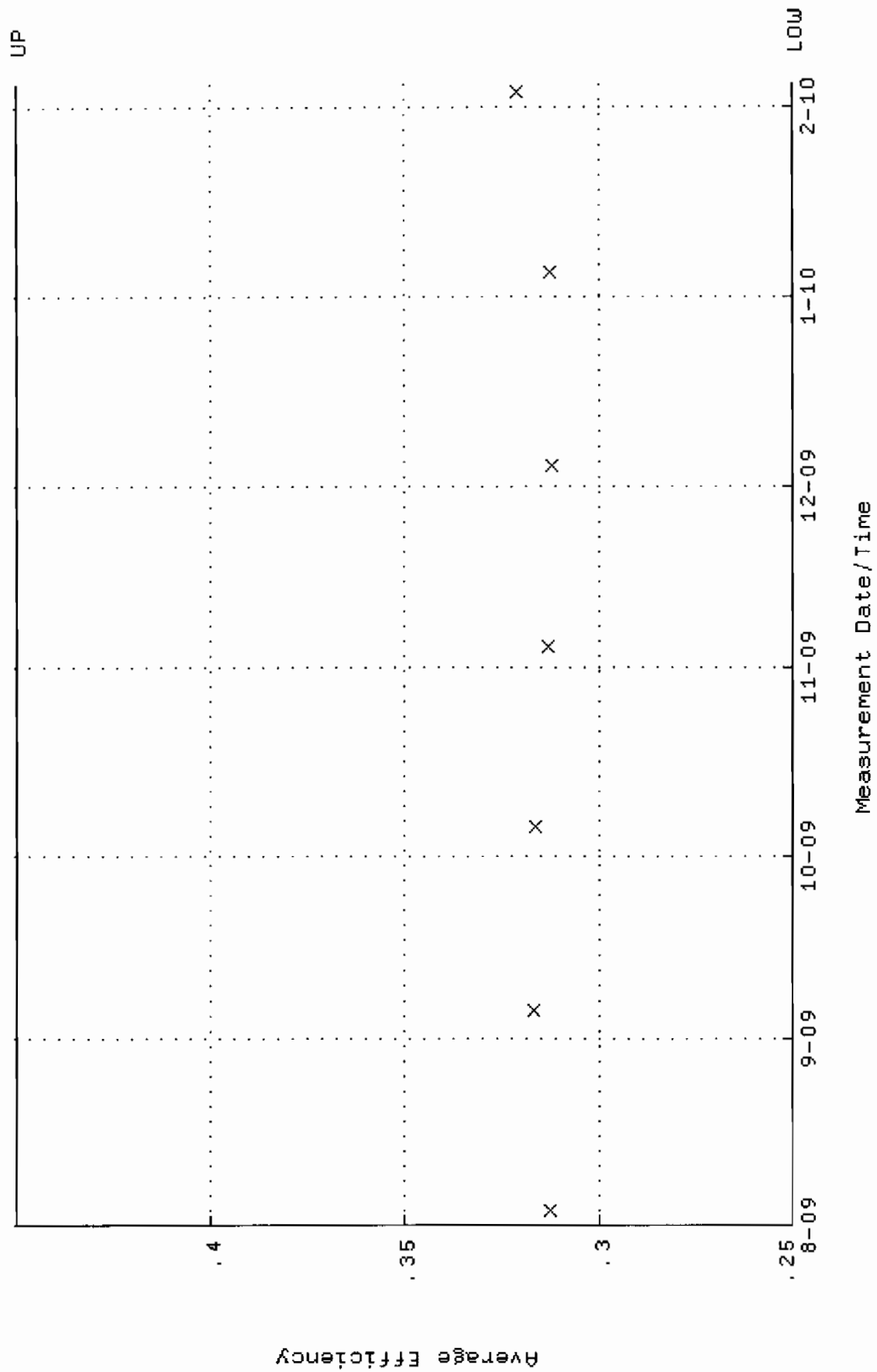
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
Lower/Upper Lmts: 87.1403 through 89.8631



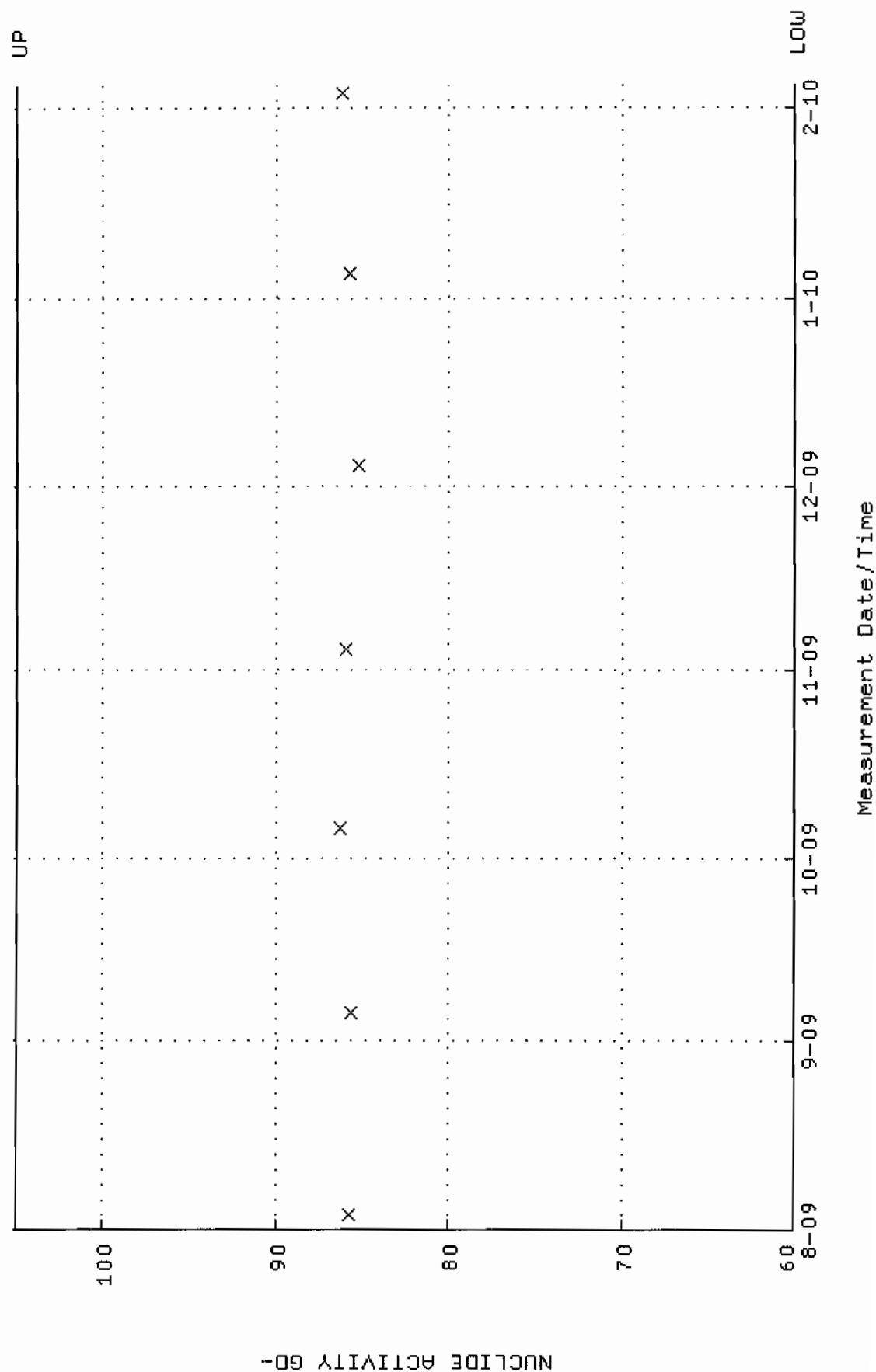
QA filename : DKA100:[ENV_ALPHA.QA.B]B047.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:37 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



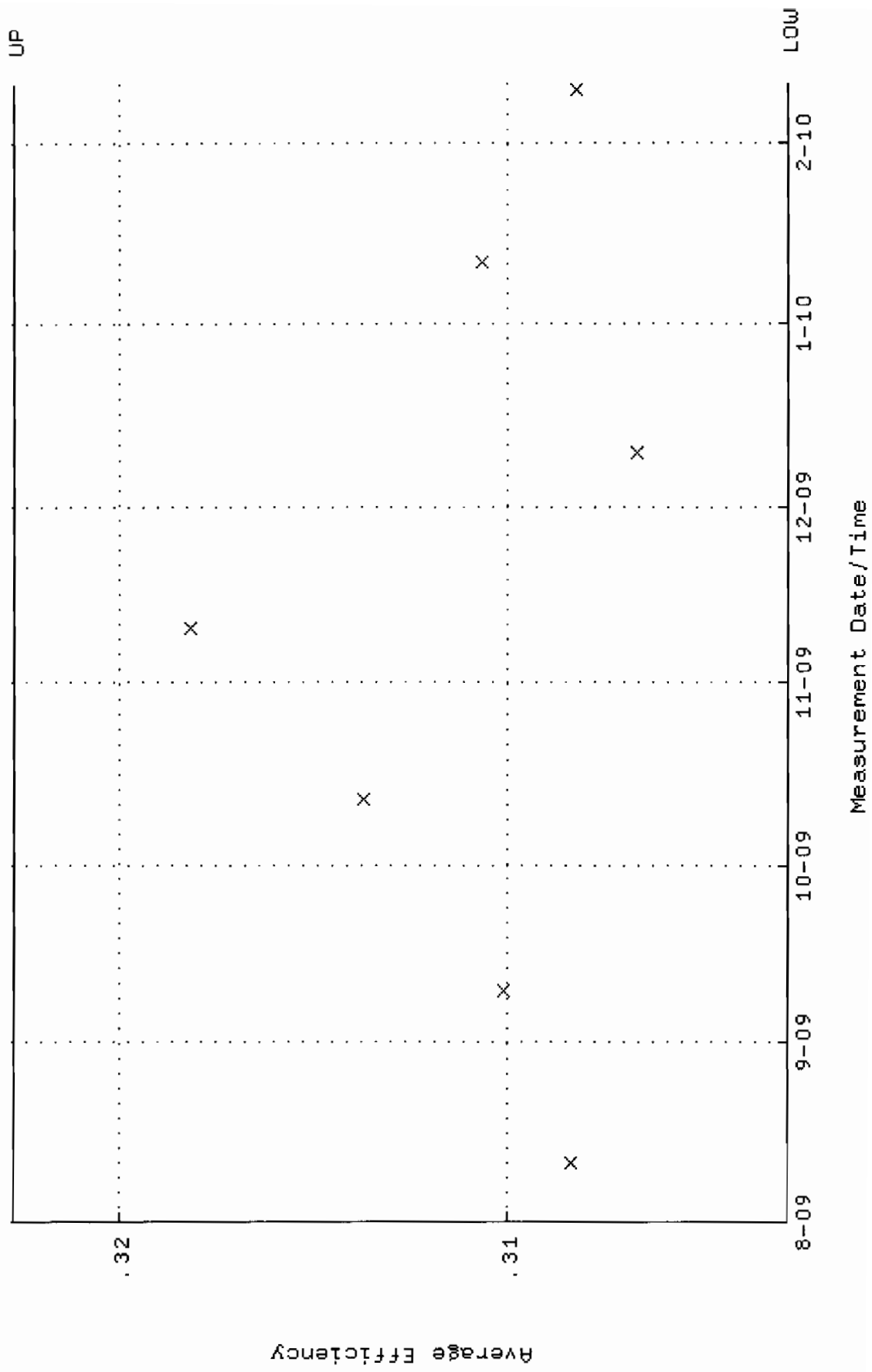
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



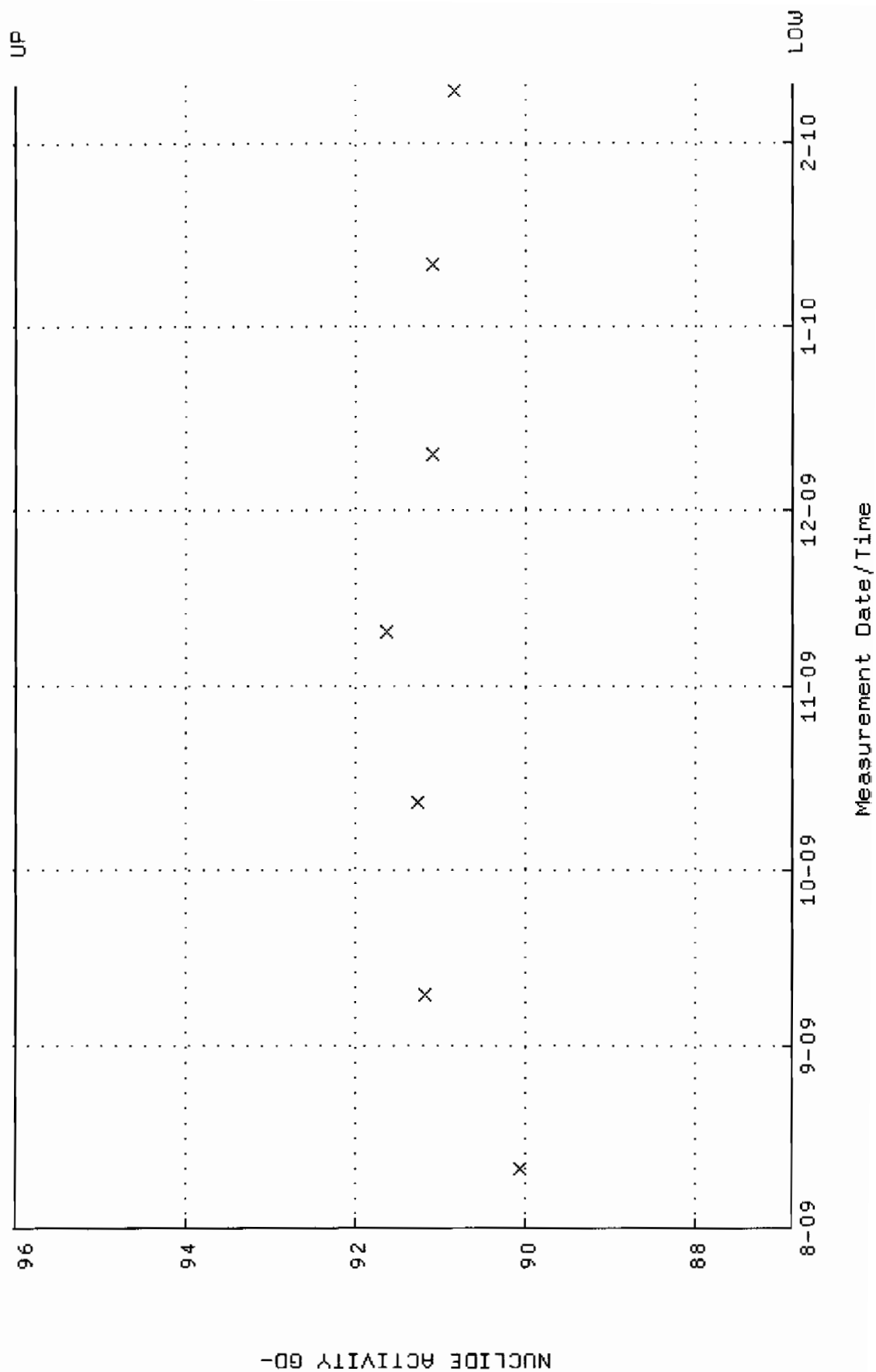
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



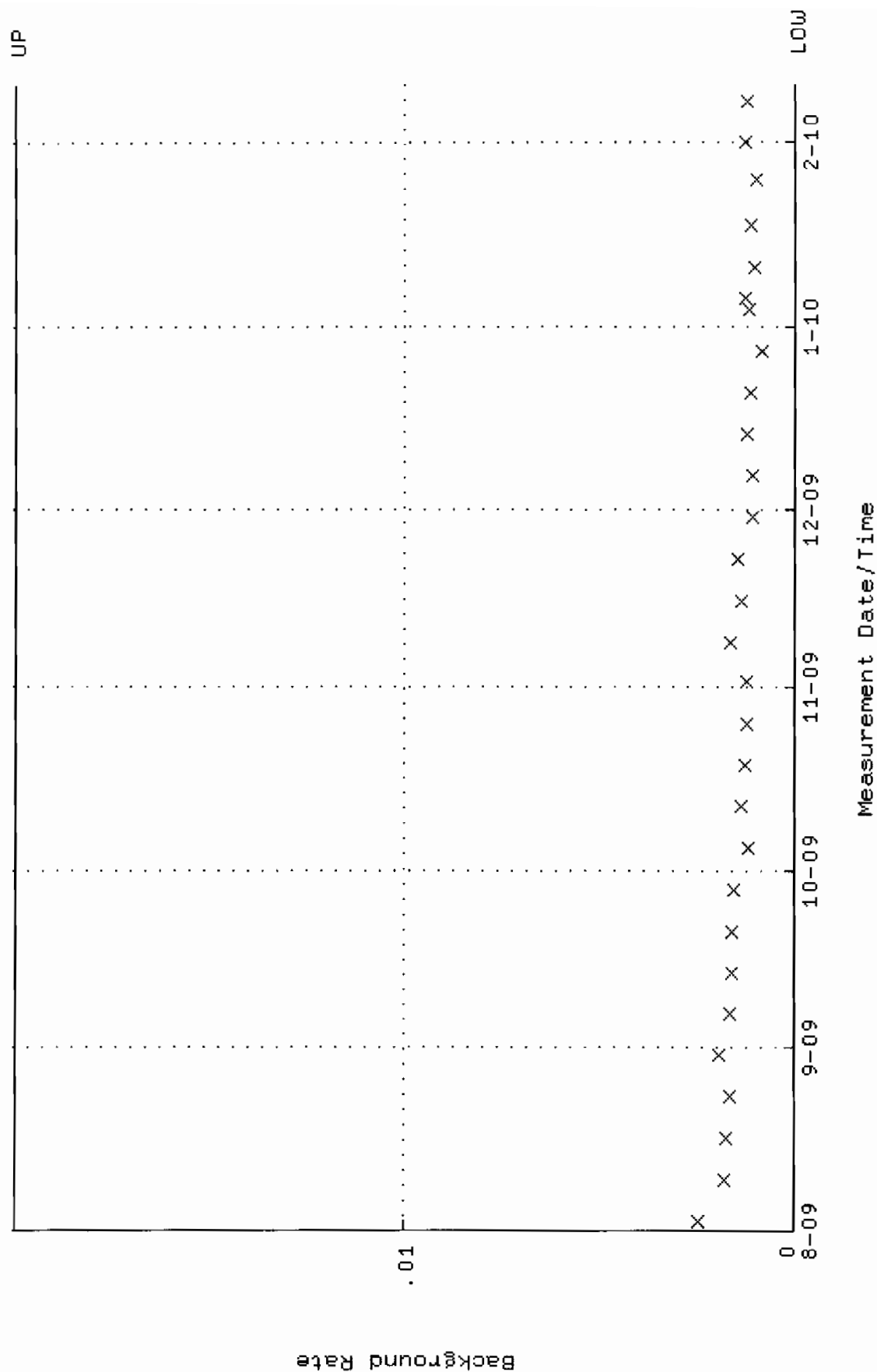
QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
Lower/Upper Lmts: 0.302750 through 0.322750



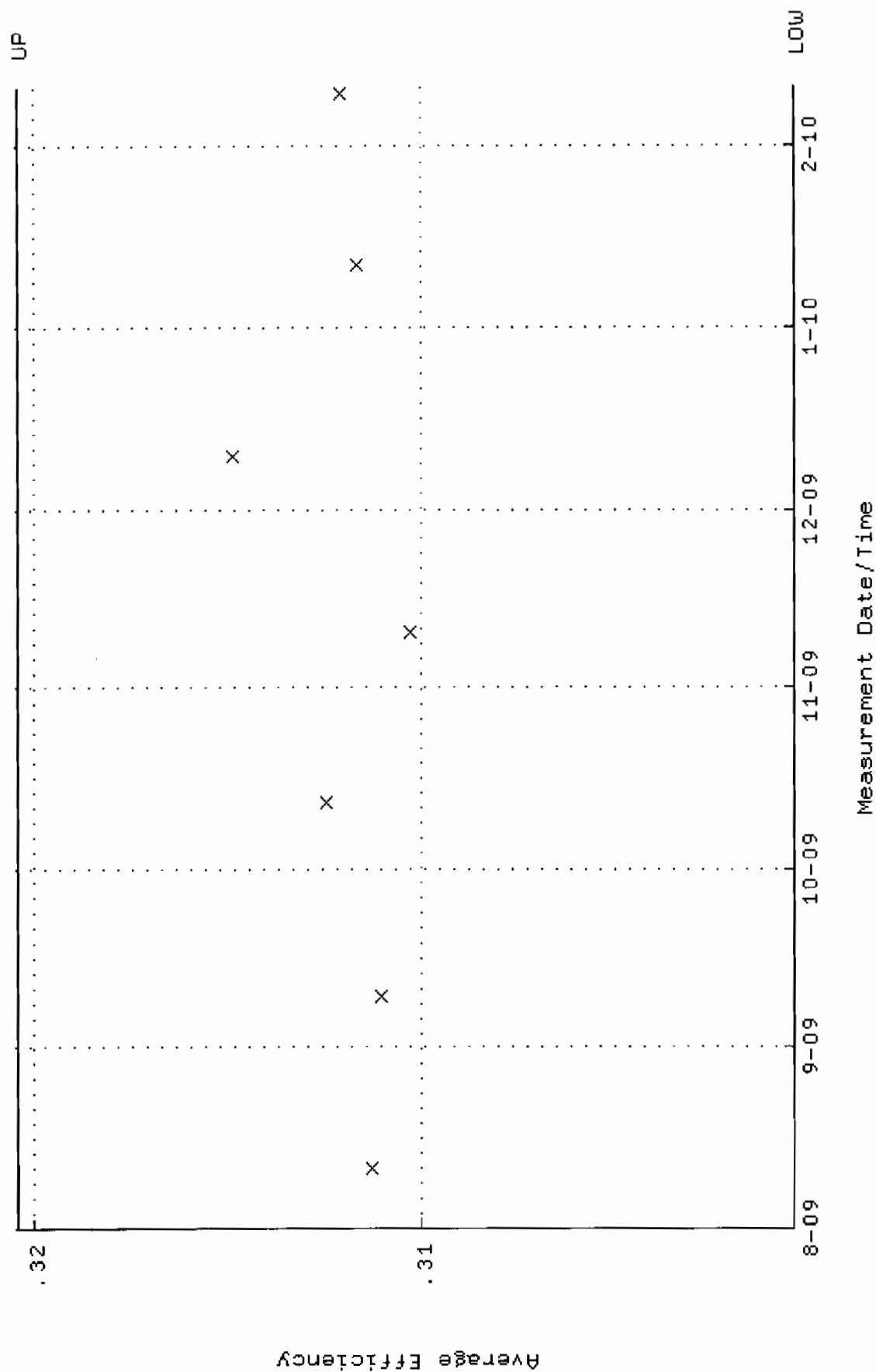
QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.8638 through 96.0074



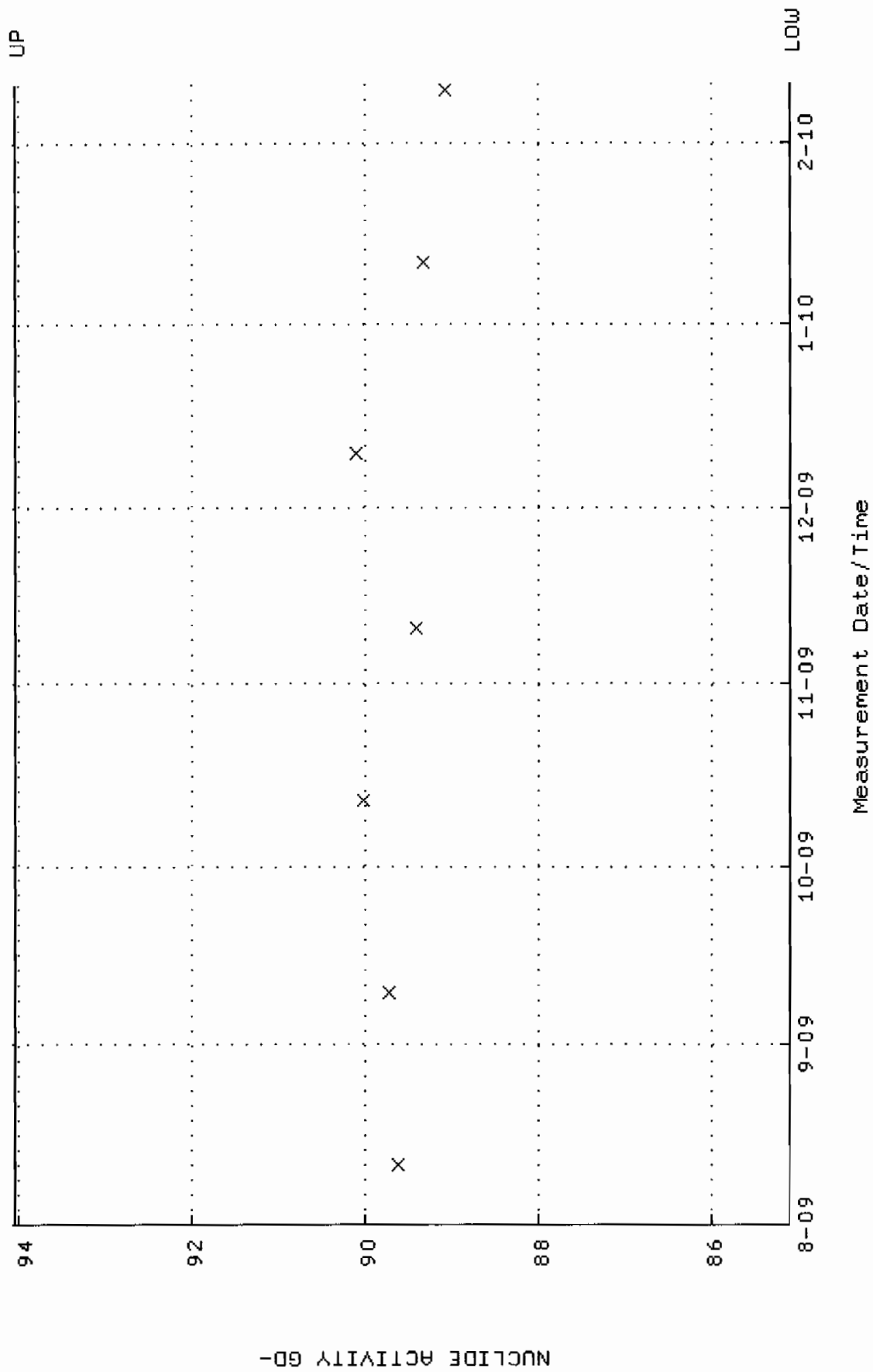
QA filename : DKA100:[ENV_ALPHA.QA.B]B065.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



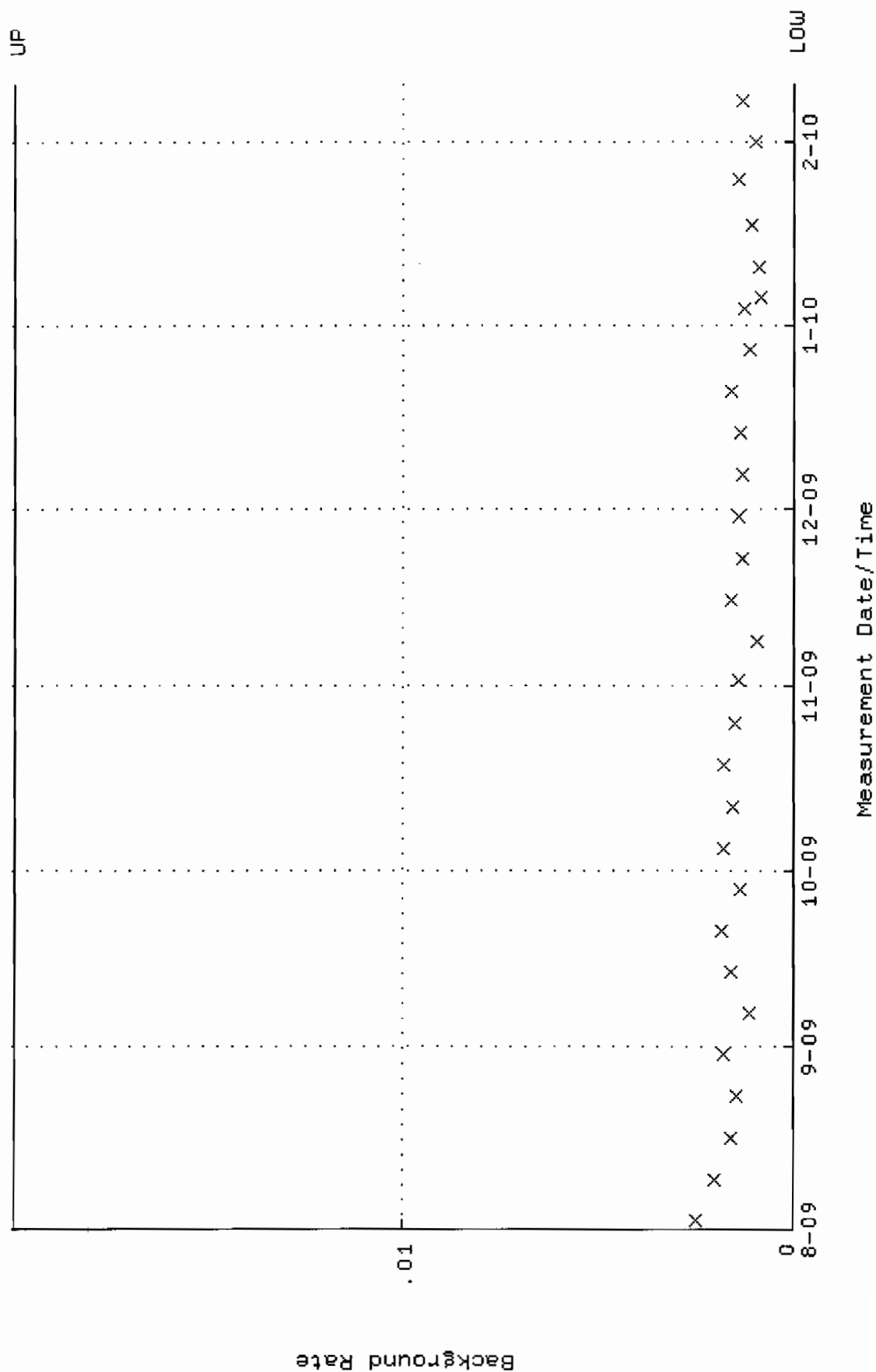
QA filename : DKA100: [ENV_ALPHA.QA.W]W066.QAF; 4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.300416 through 0.320416



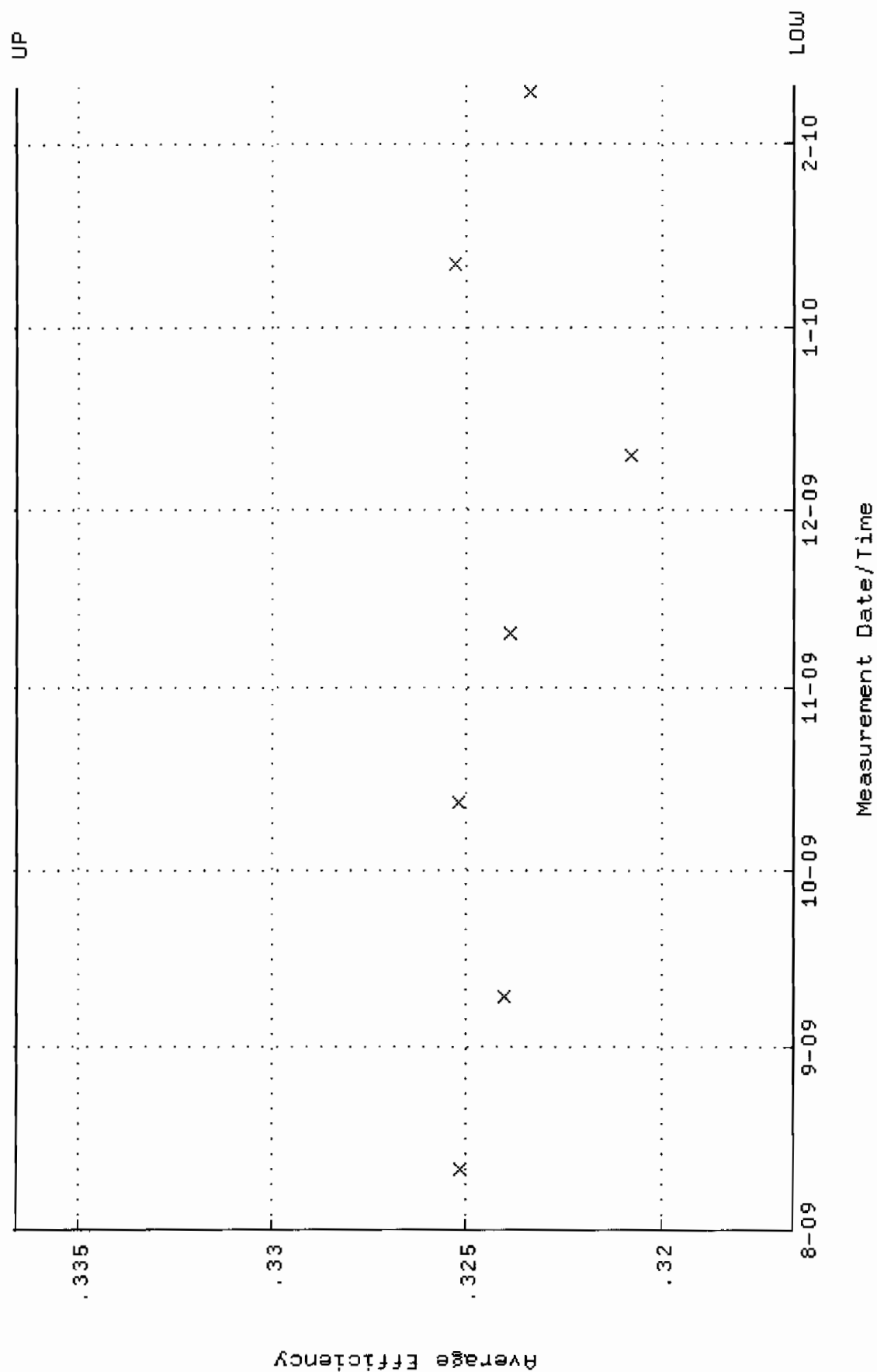
QA filename : DKA100:[ENV_ALPHA.QA.W]W066.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.0864 through 94.0428



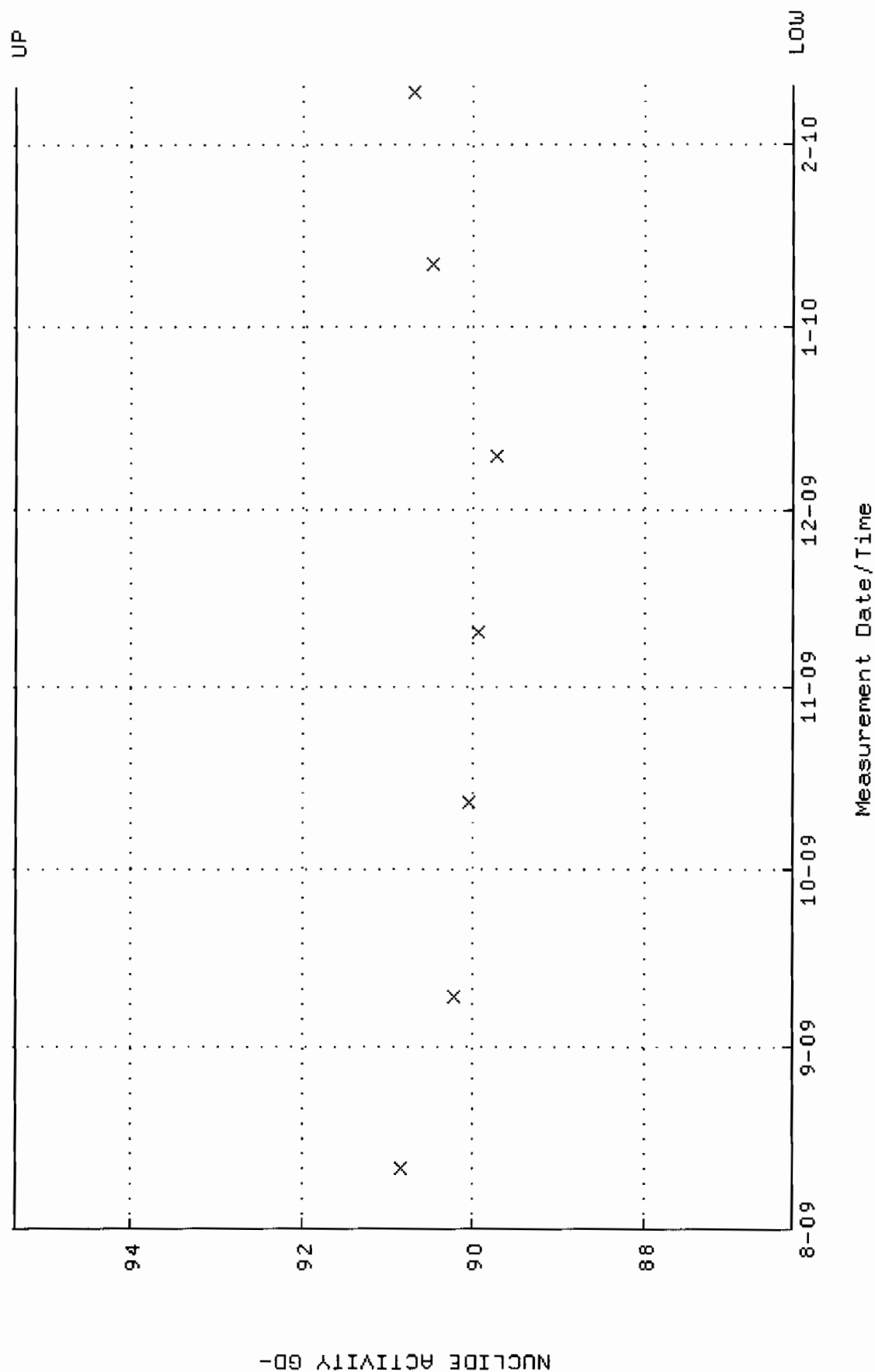
QA filename : DKA100:[ENV-ALPHA.QA.B]B066.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



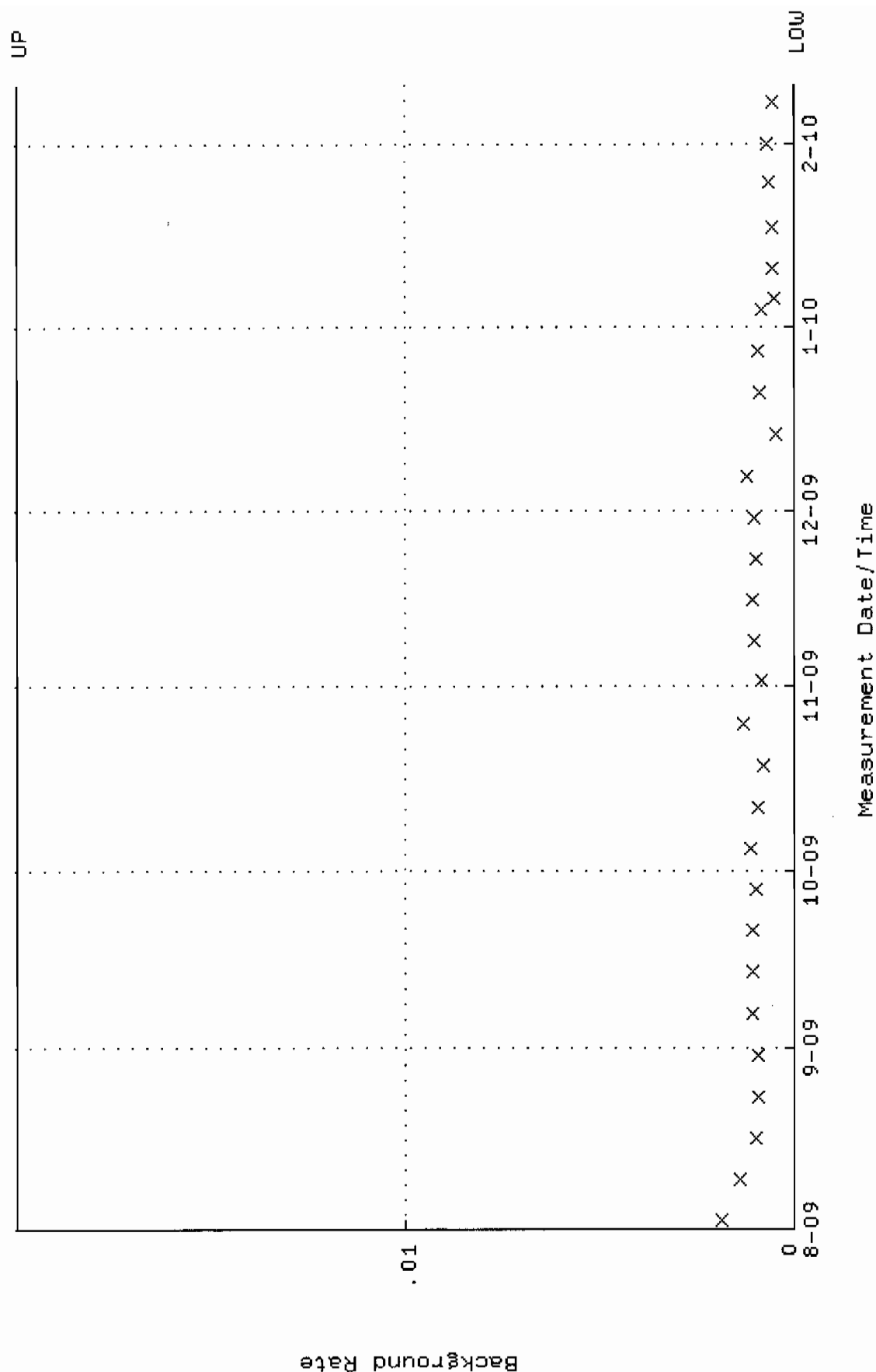
QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.316597 through 0.336597



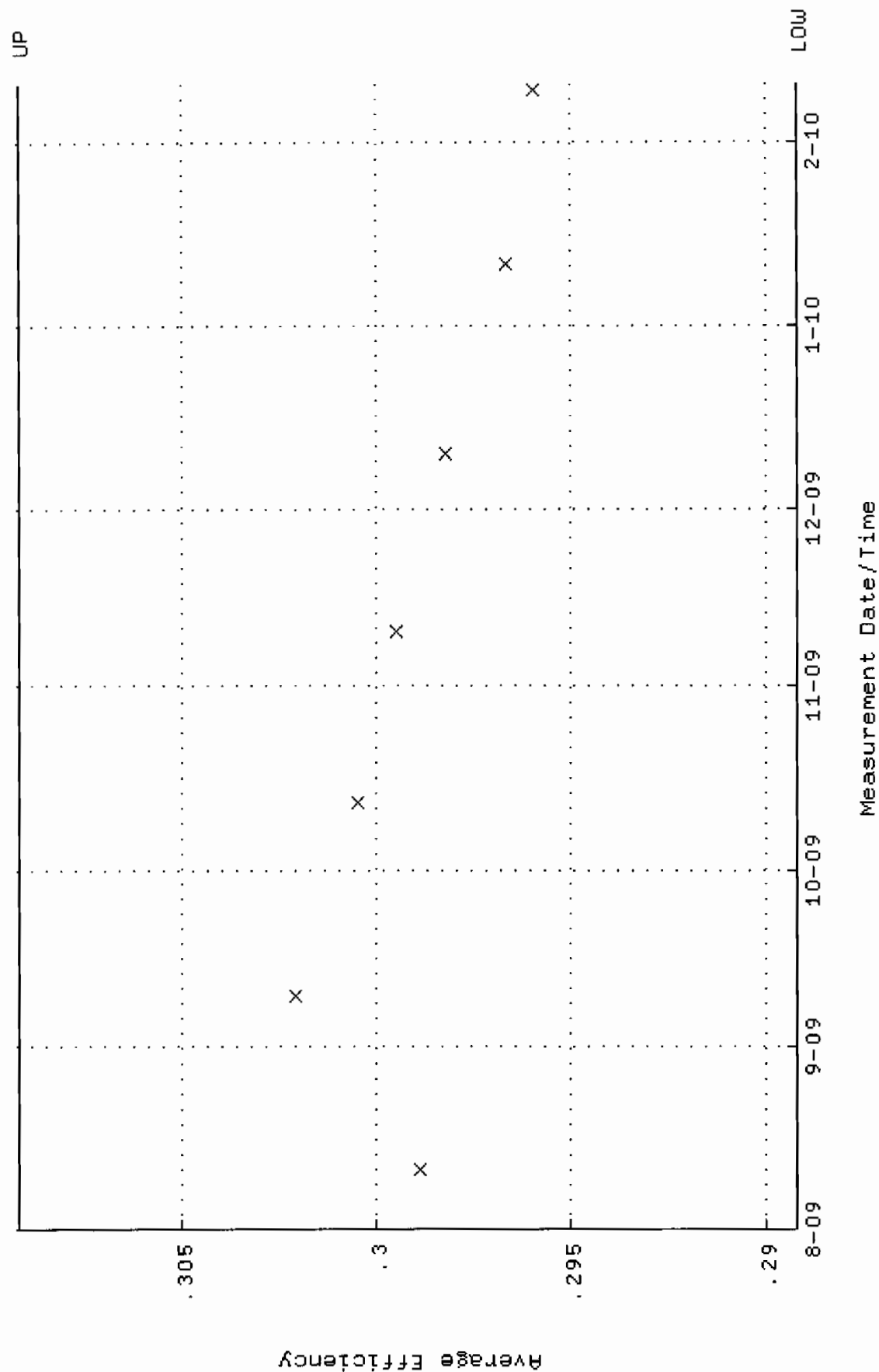
QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.2683 through 95.3491



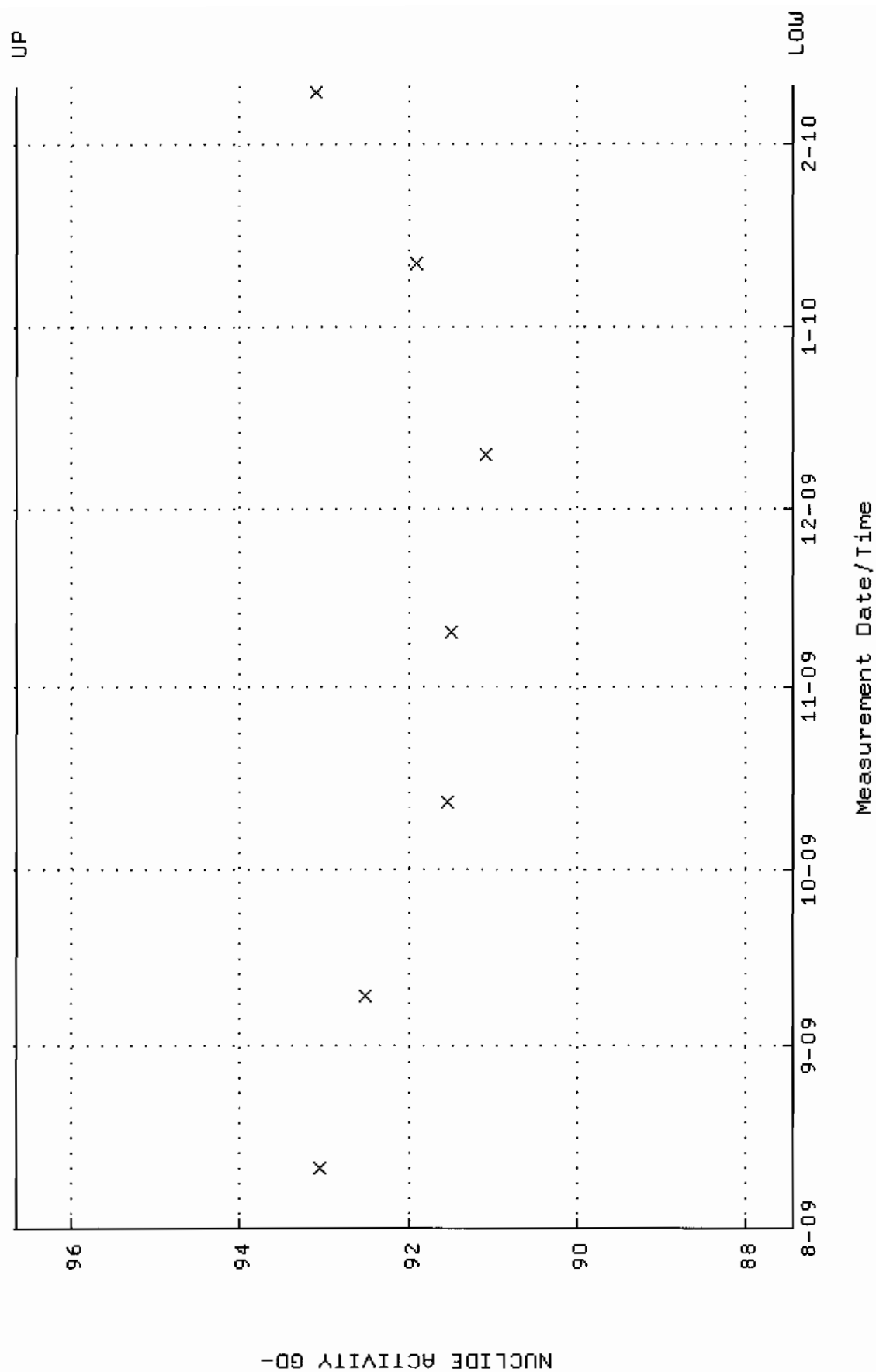
QA filename : DKA100:[ENV_ALPHA.QA.B]B067.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



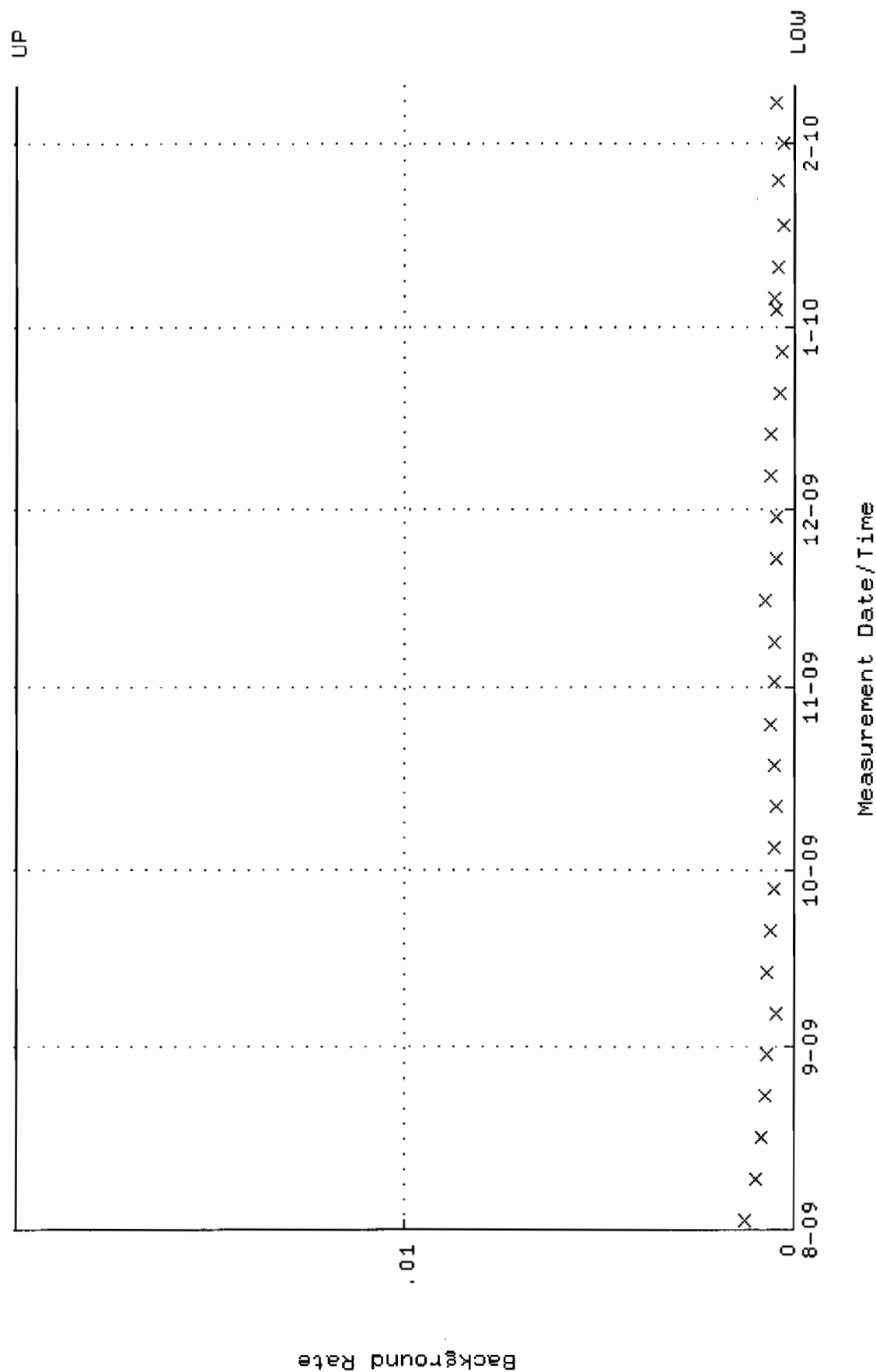
QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.289178 through 0.309178



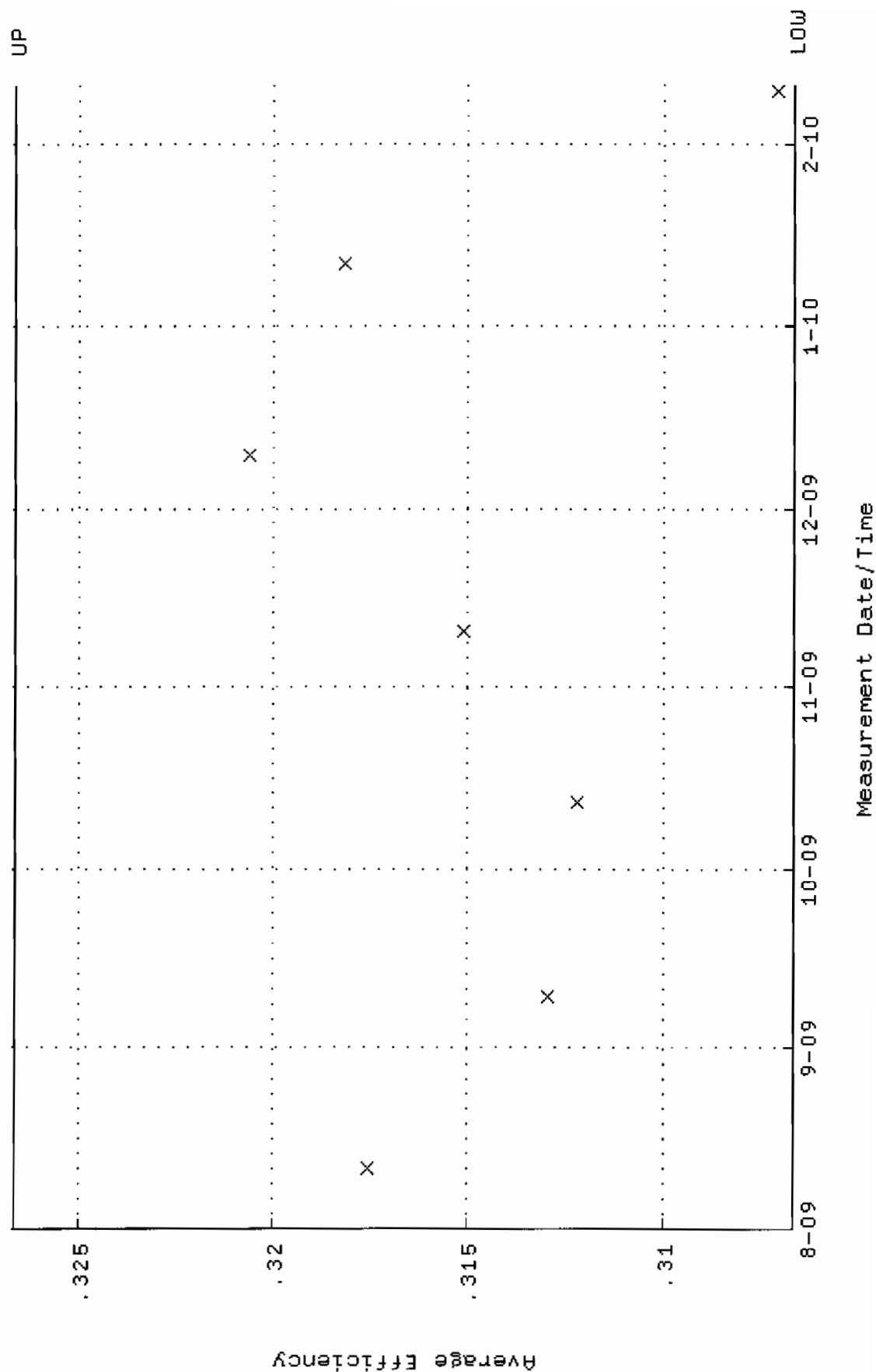
QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
Lower/Upper Lmts: 87.4419 through 96.6463



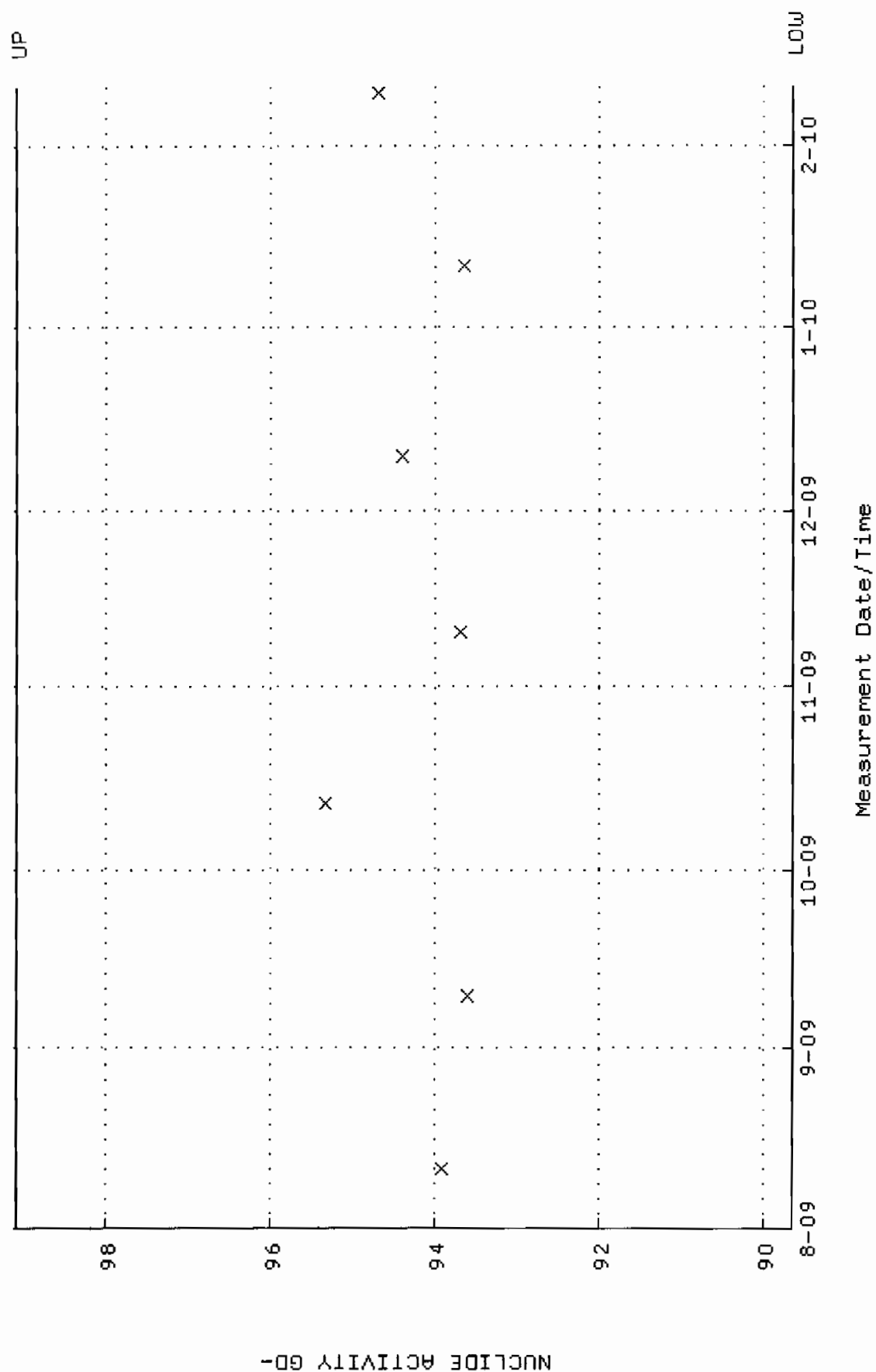
QA filename : DKA100:[ENV_ALPHA.QA.B]B068.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



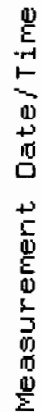
QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.306636 through 0.326636



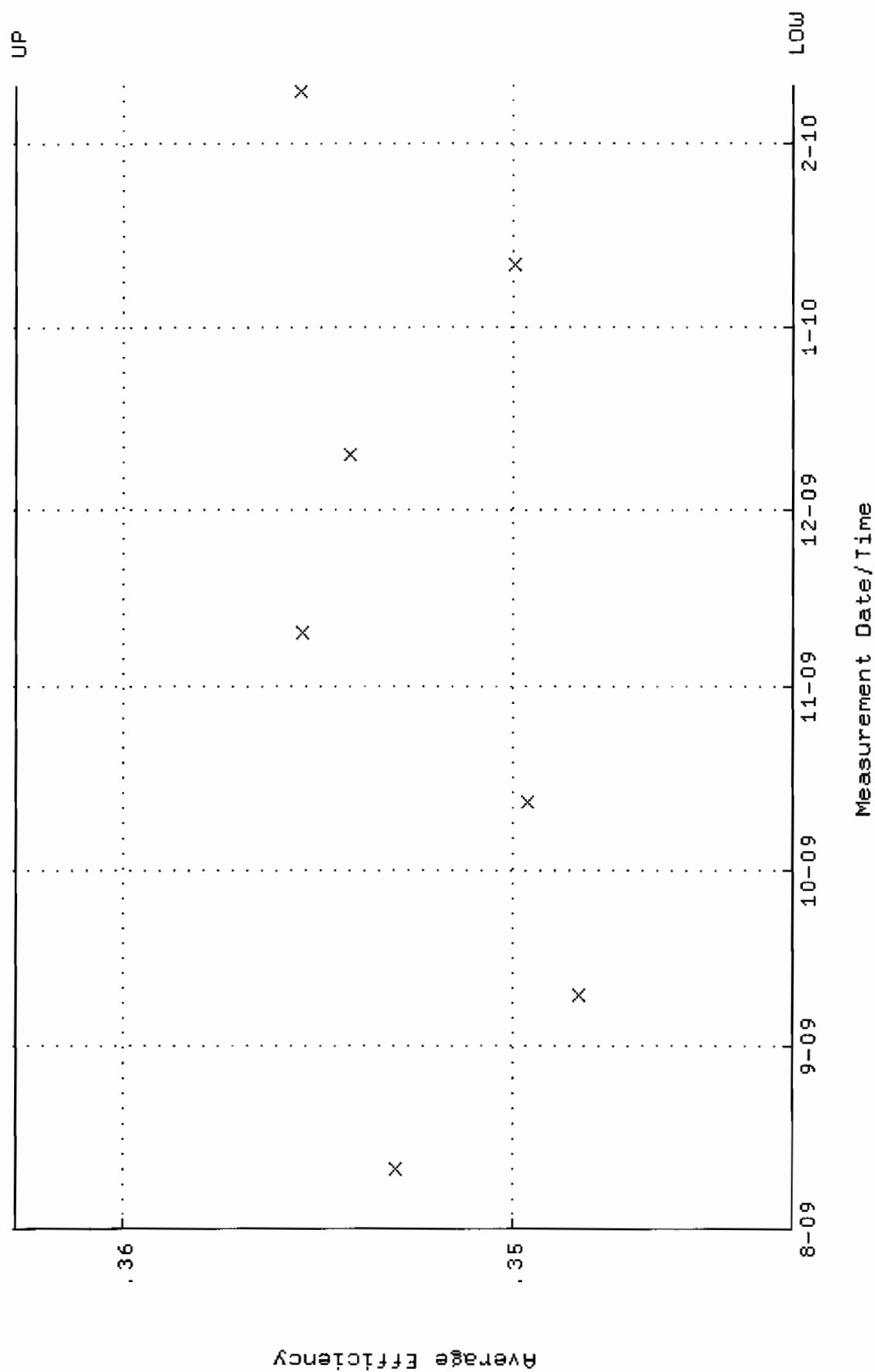
QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.6479 through 99.0845



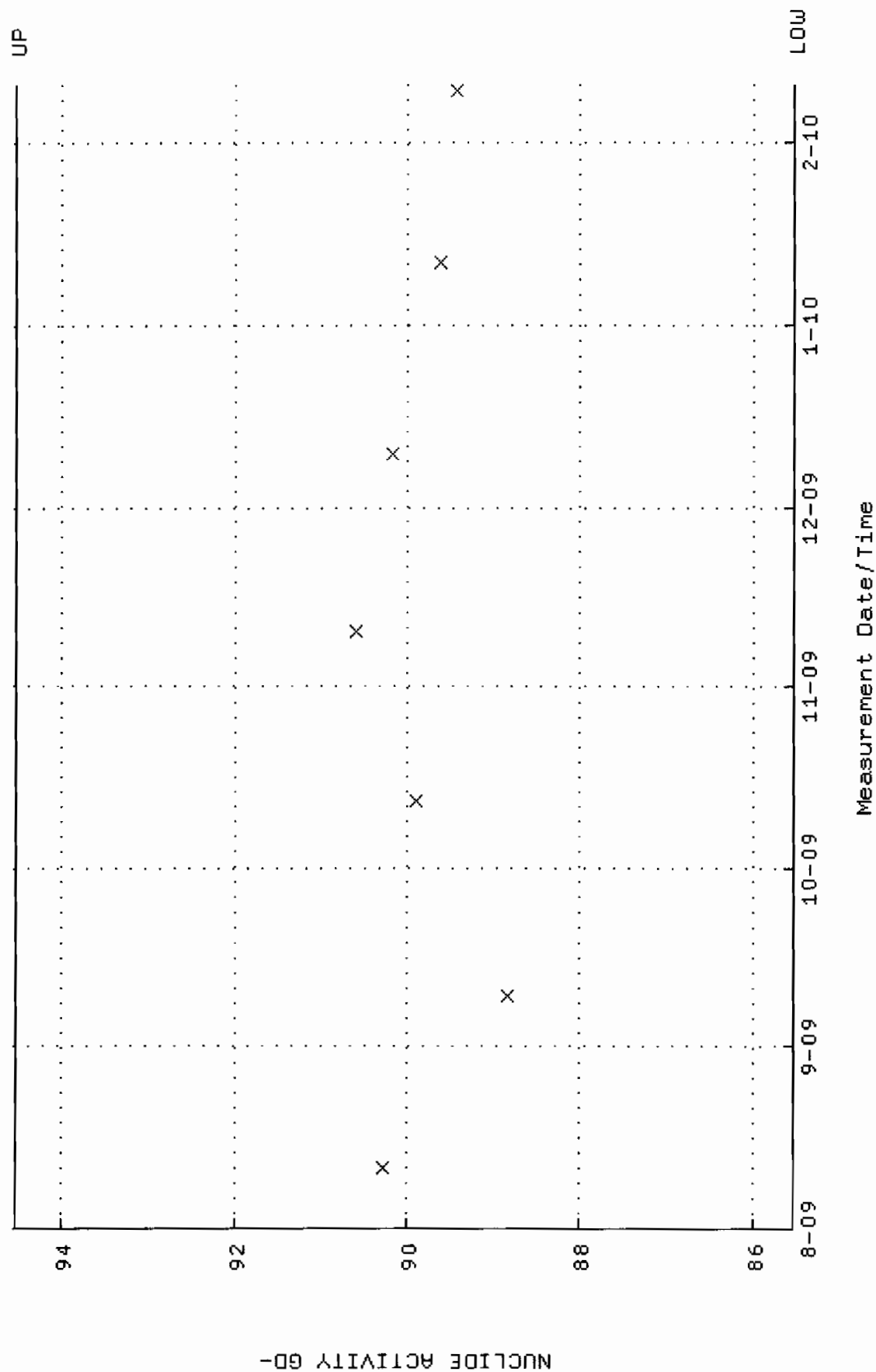
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



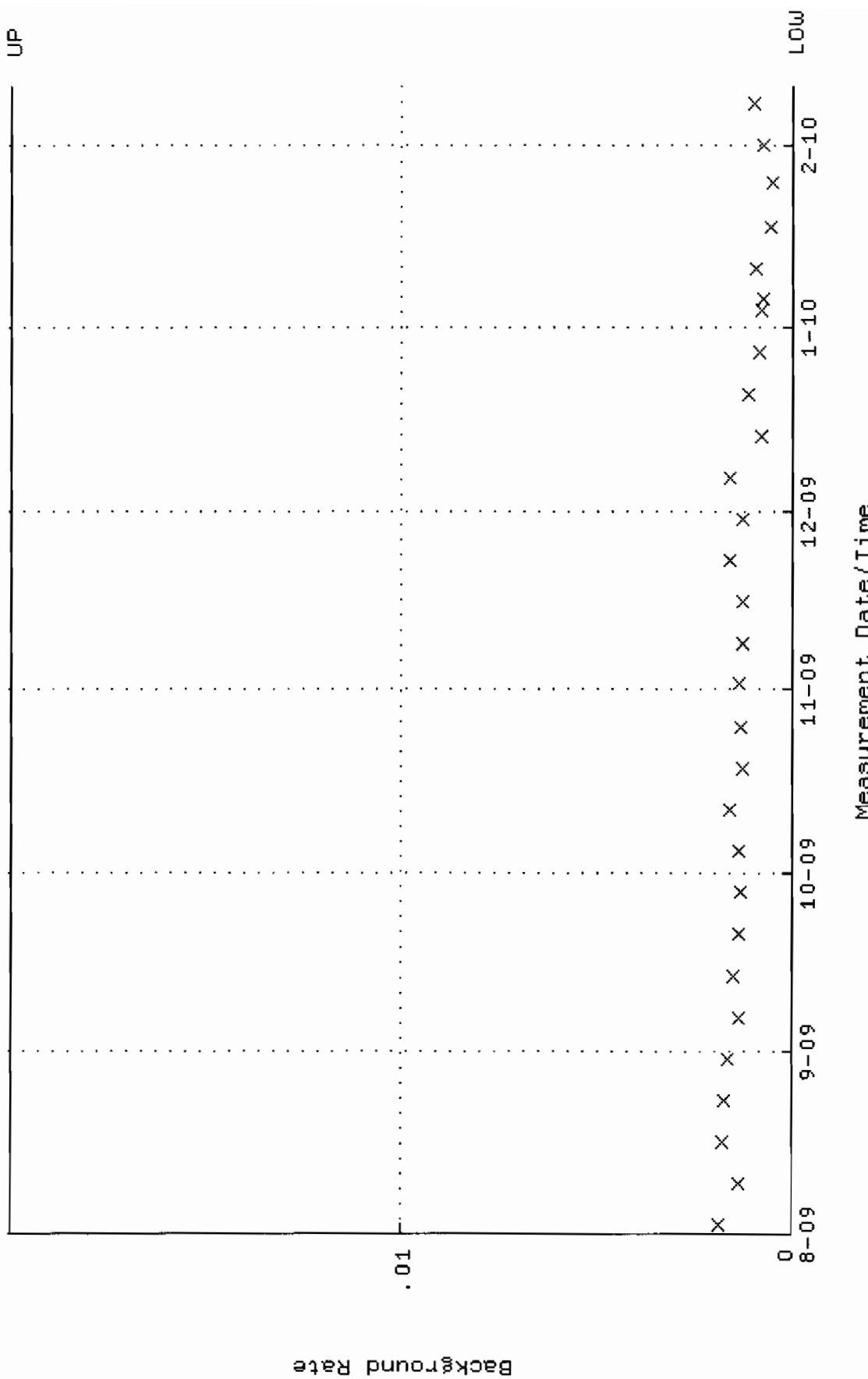
QA filename : DKA100:[ENV_ALPHA.QA.W]W070.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.342785 through 0.362785



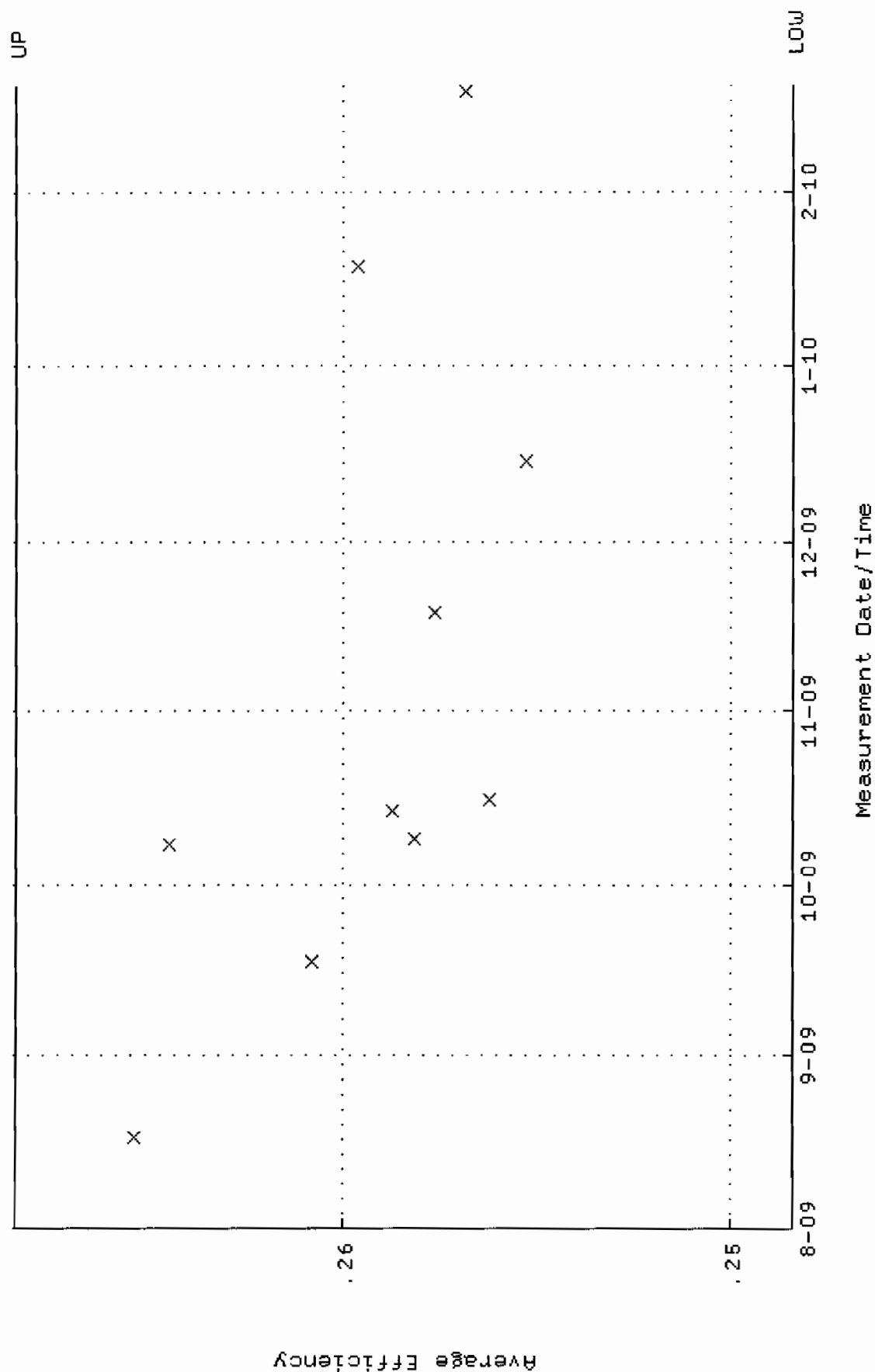
QA filename : DKA100:[ENV_ALPHA.QA.w]w070.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.5293 through 94.5323



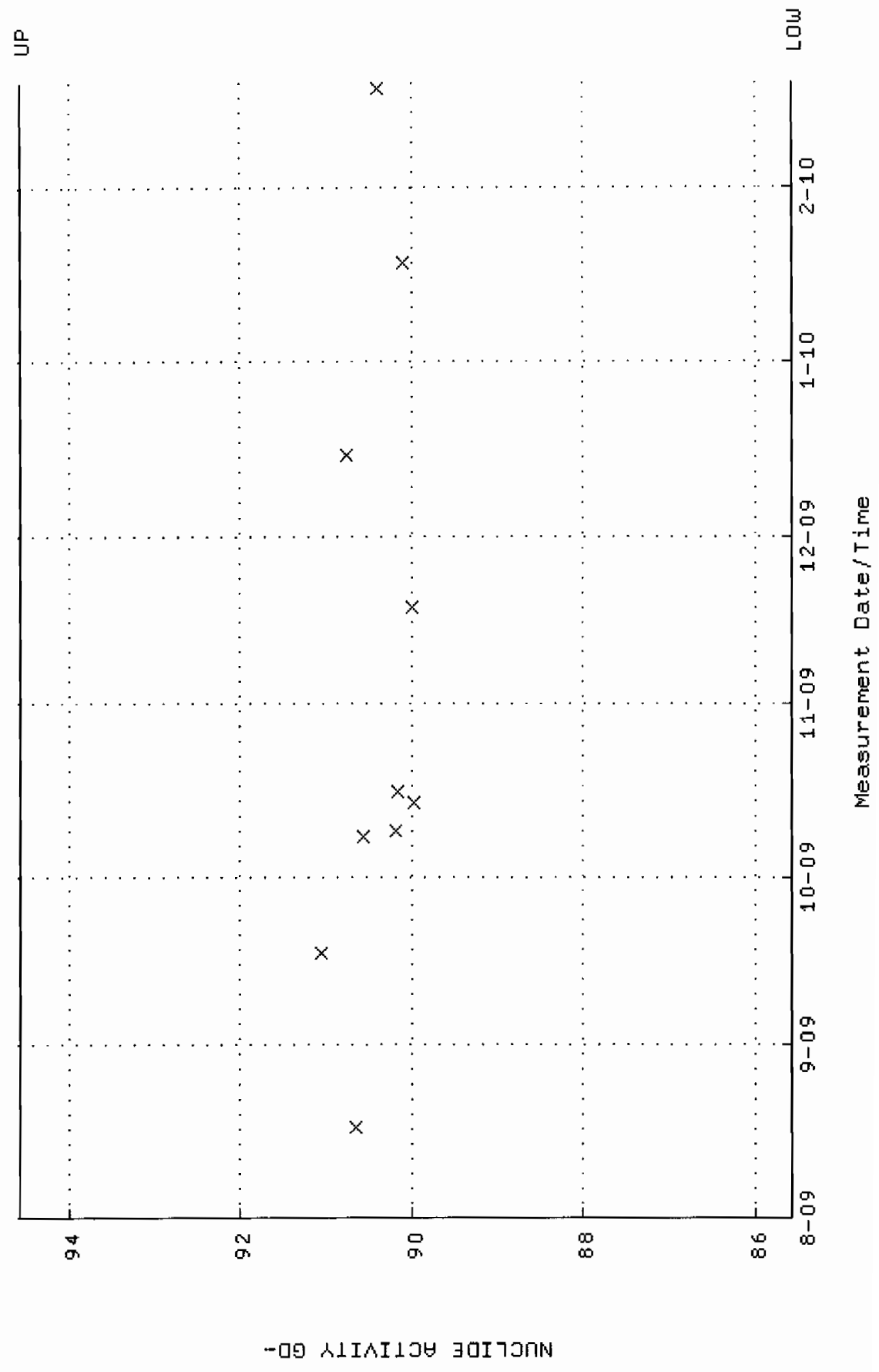
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QA filename      : DKA100:[ENV_ALPHA.QA.B]B070.QAF;2
Parameter Name   : BACKRATE (Background Rate)
Start/End Dates  : 2-AUG-2009 17:38:38 through 10-FEB-2010 00:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02
```



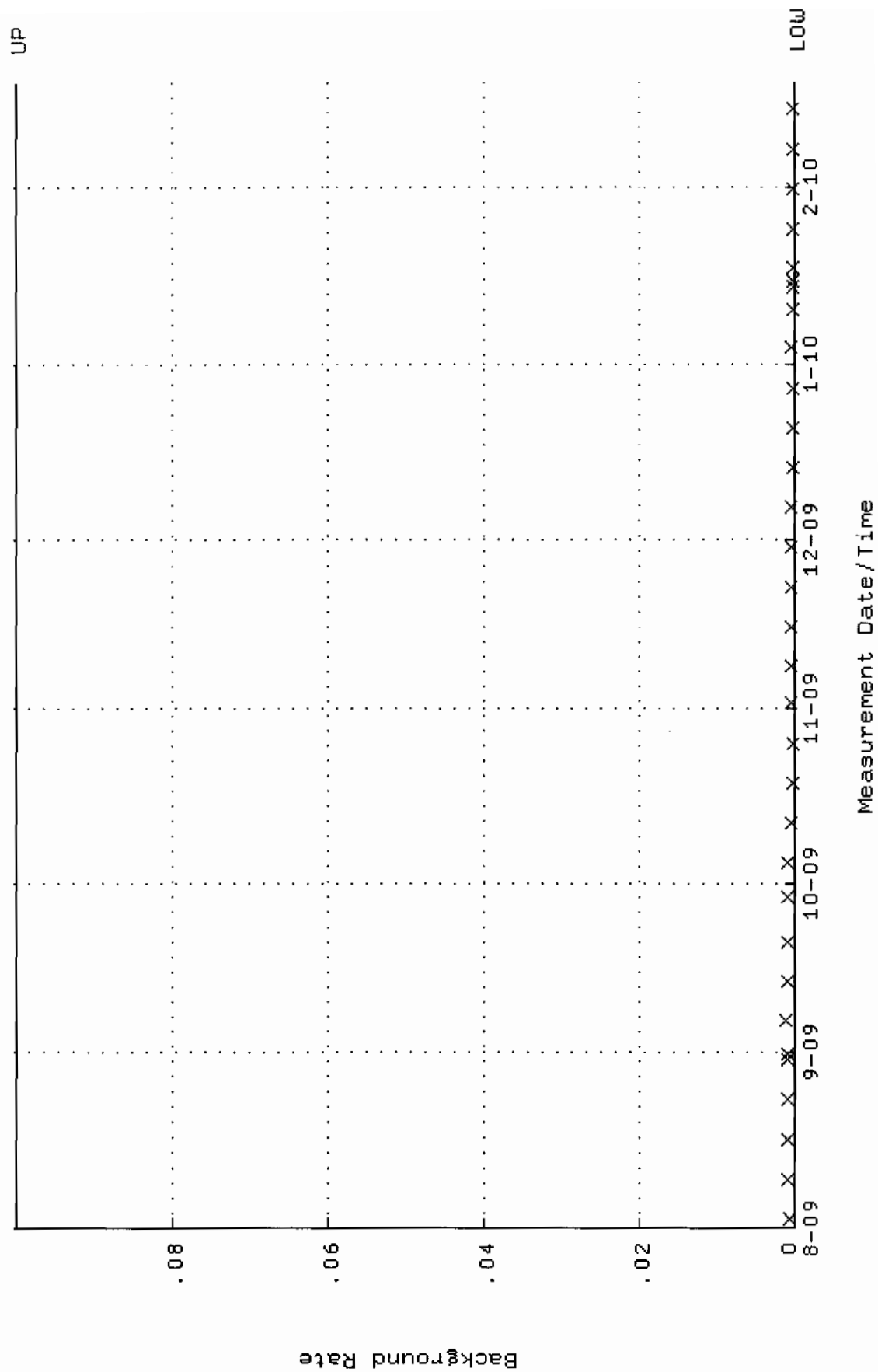
QA filename : DKA100:[ENV_ALPHA.QA.W]w115.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:02 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.248404 through 0.268404



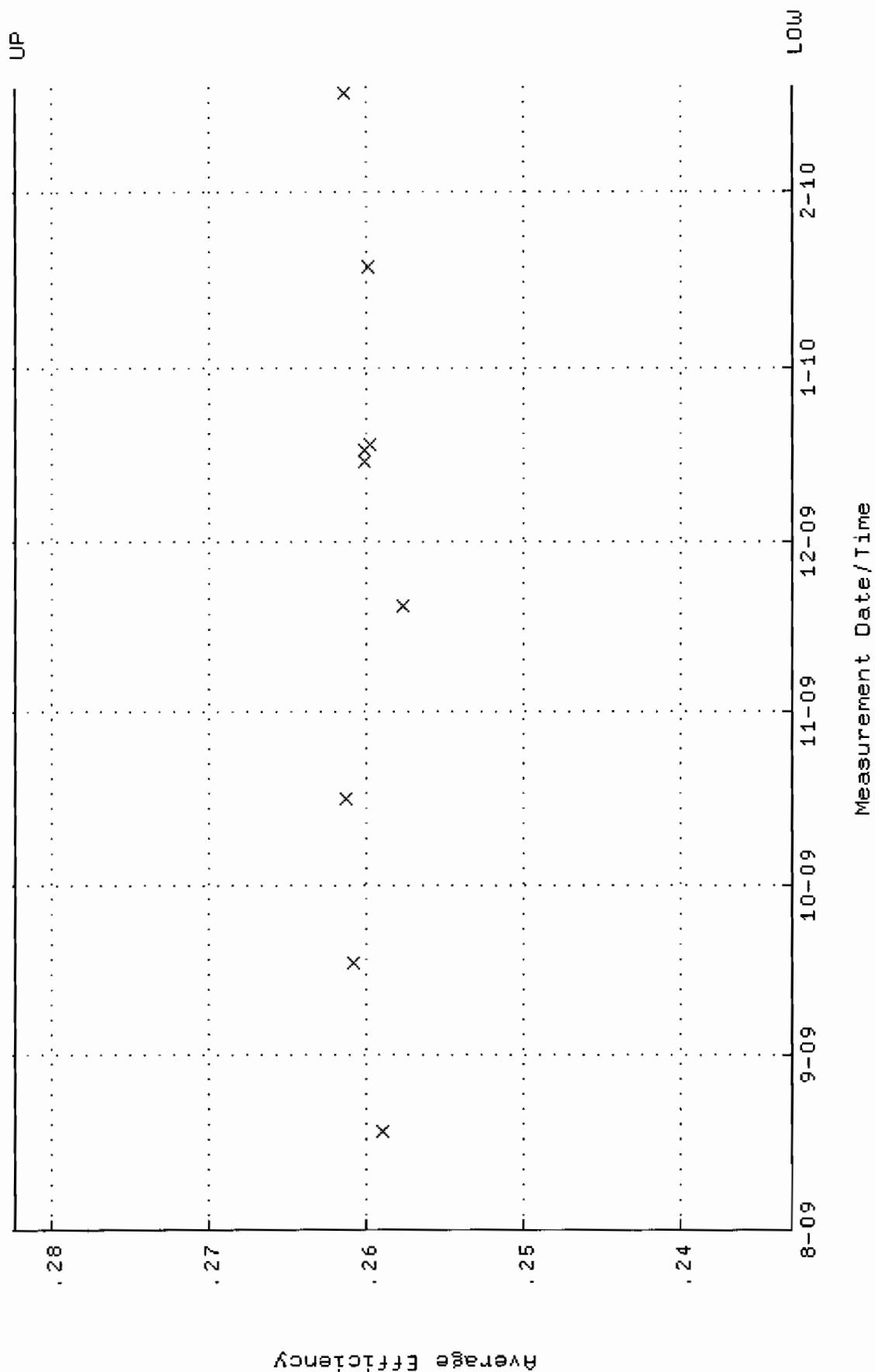
QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:02 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.5661 through 94.5731



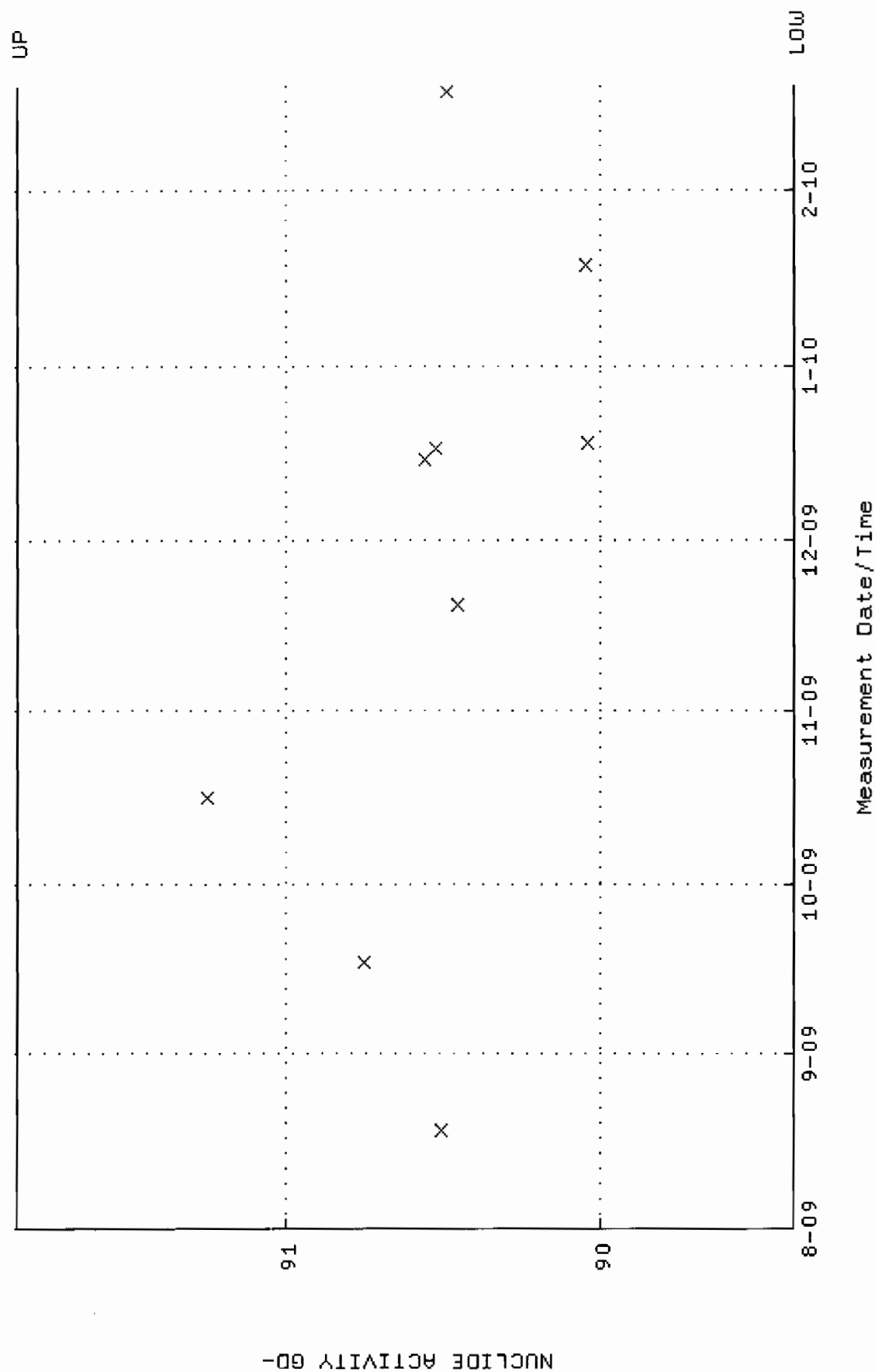
QA filename : DKA100:[ENV_ALPHA.QA.B]B115.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:05 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



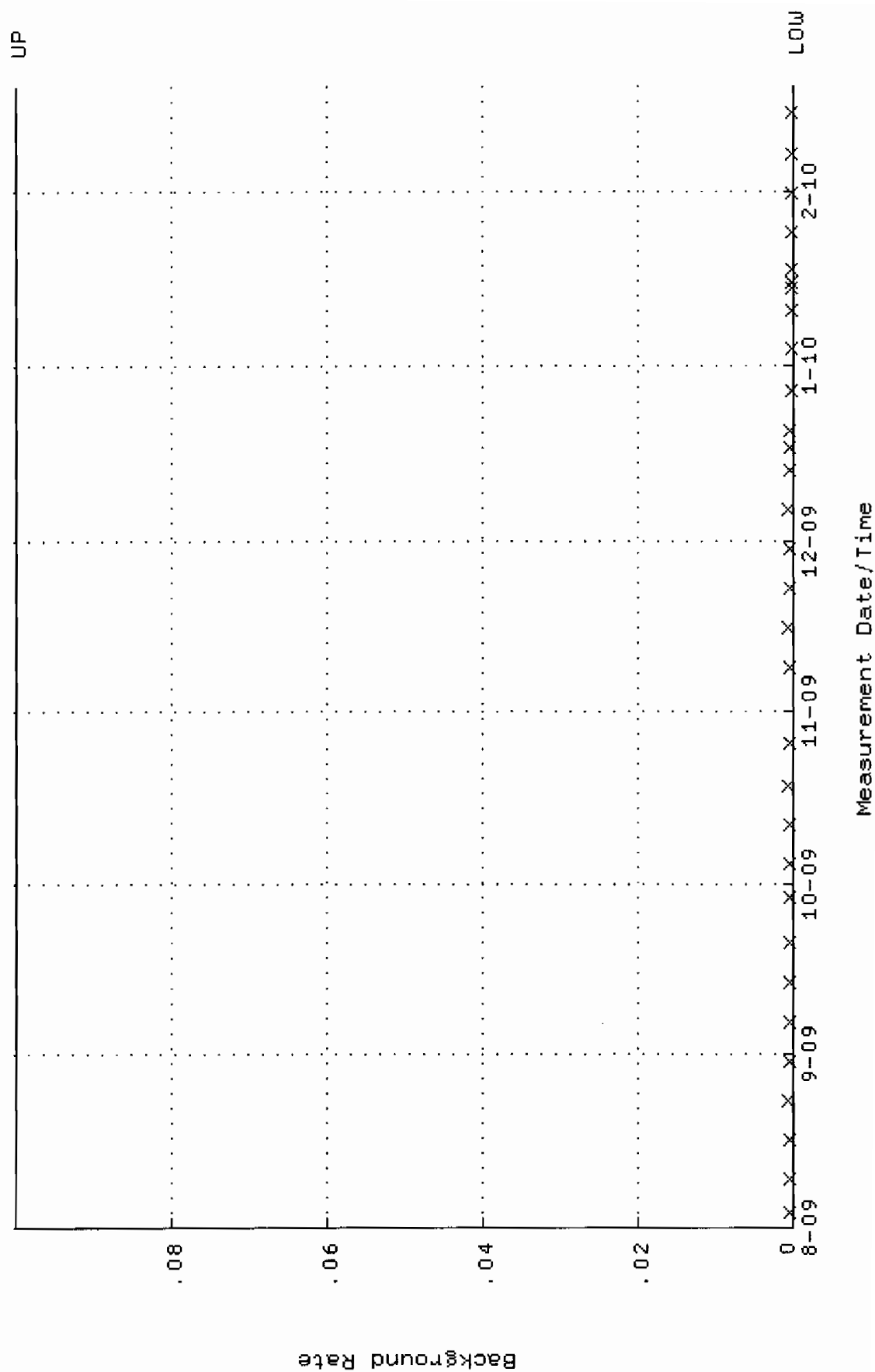
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 18-AUG-2009 08:35:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.232847 through 0.282381



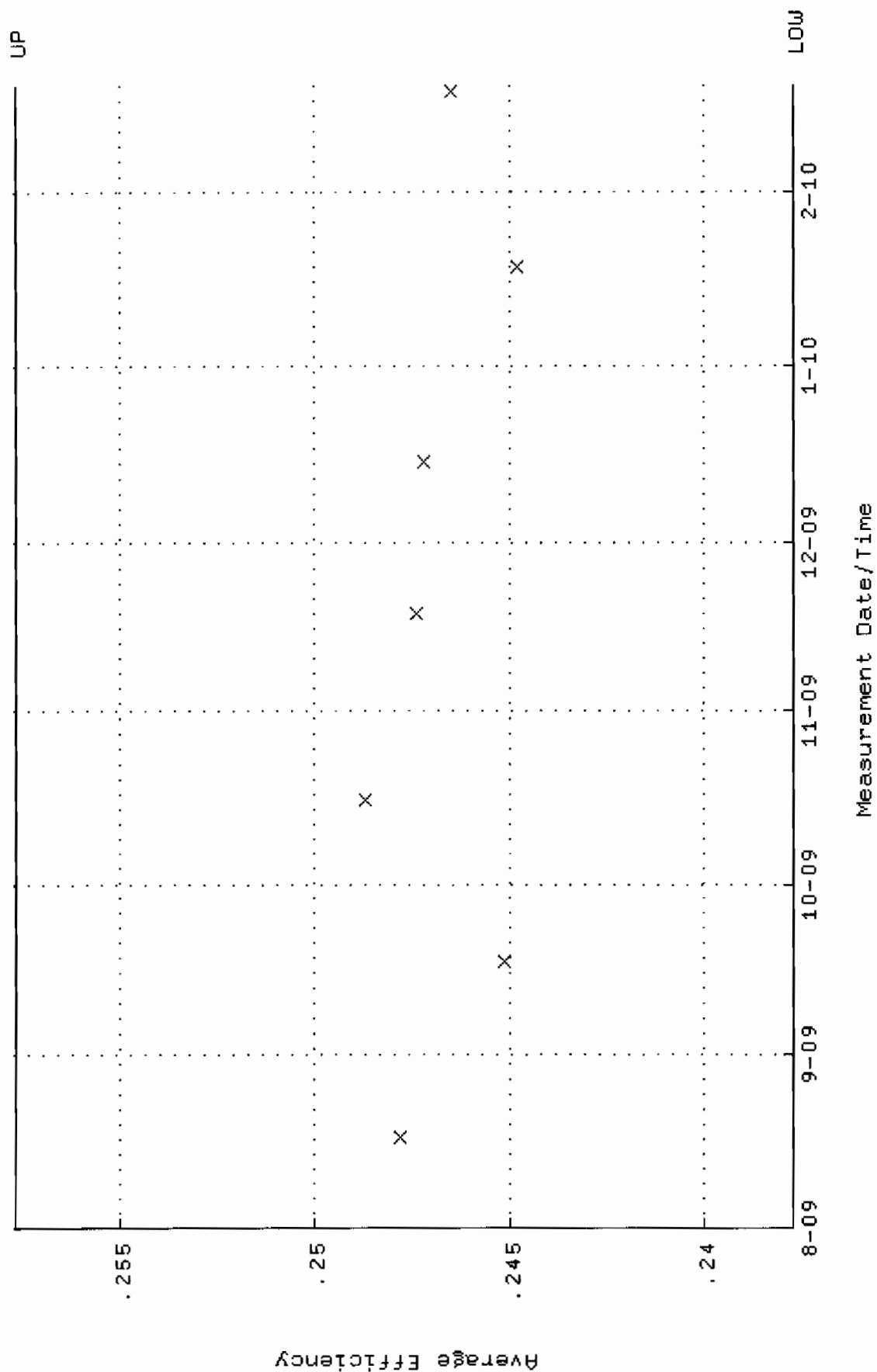
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 18-AUG-2009 08:35:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.3881 through 91.8481



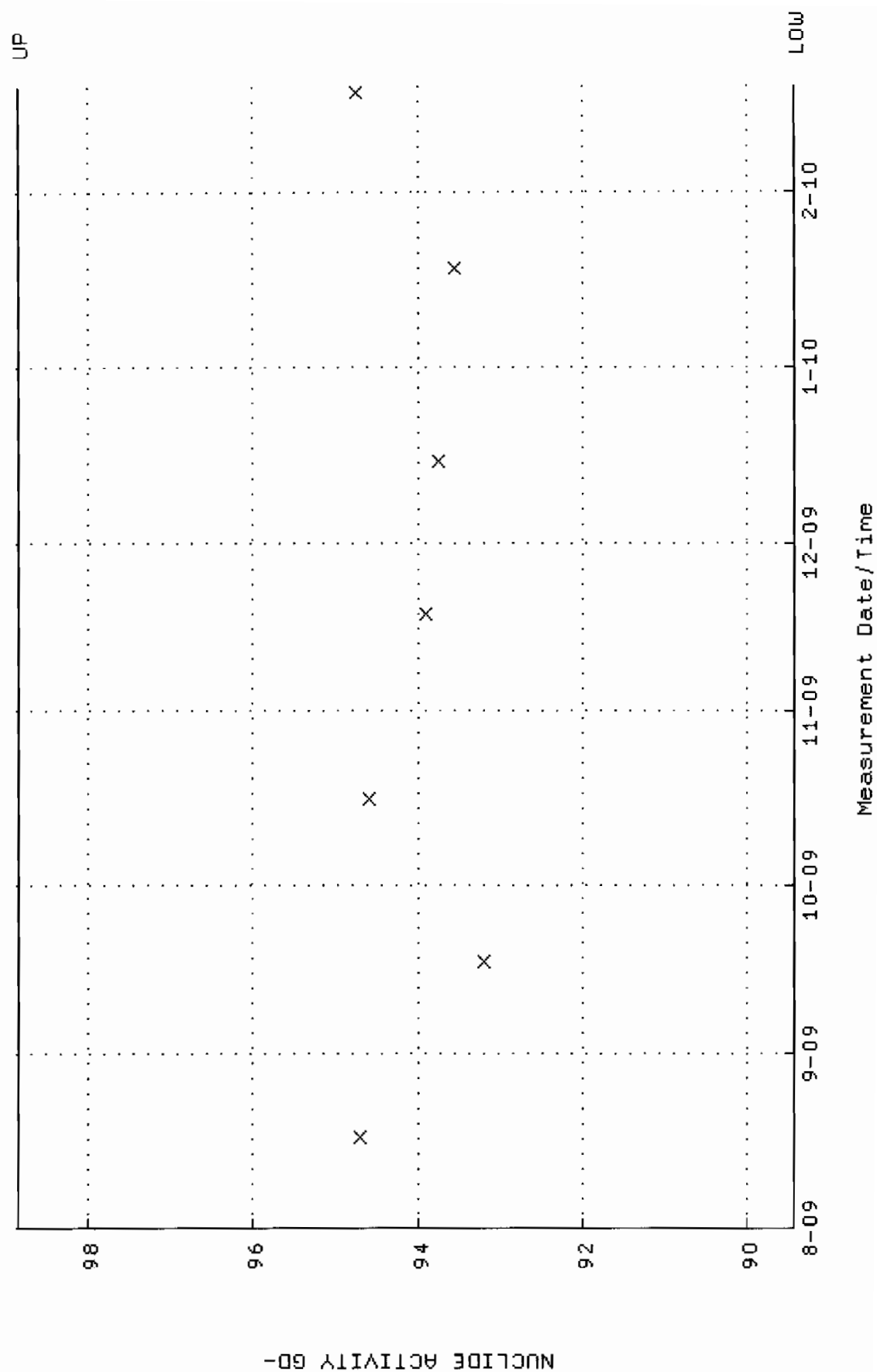
QA filename : DKA100:[ENV_ALPHA.QA.B]B120.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 3-AUG-2009 15:38:20 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



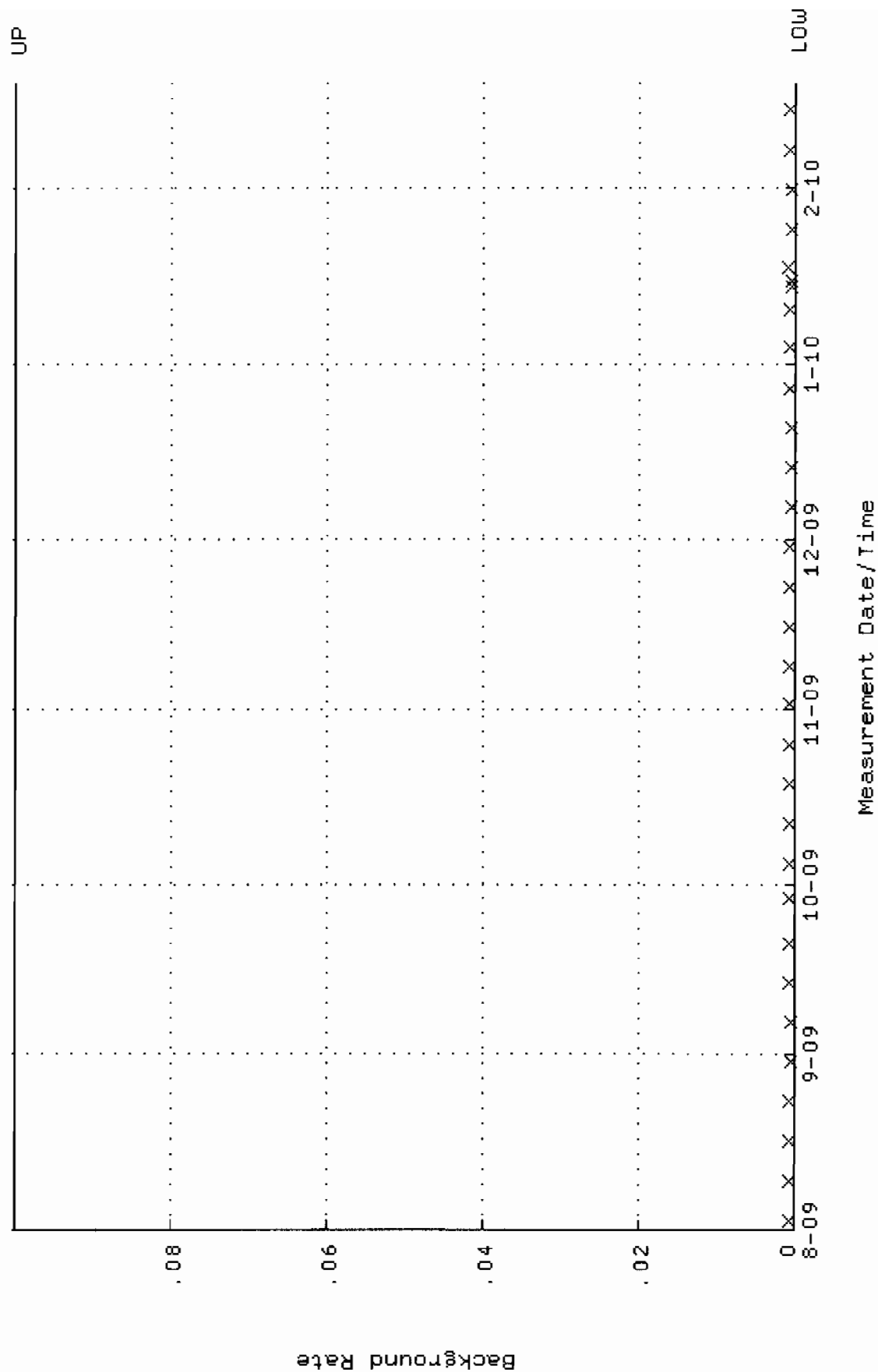
QA filename : DKA100:[ENV_ALPHA.QA.W]W121.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:25 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.237686 through 0.257686



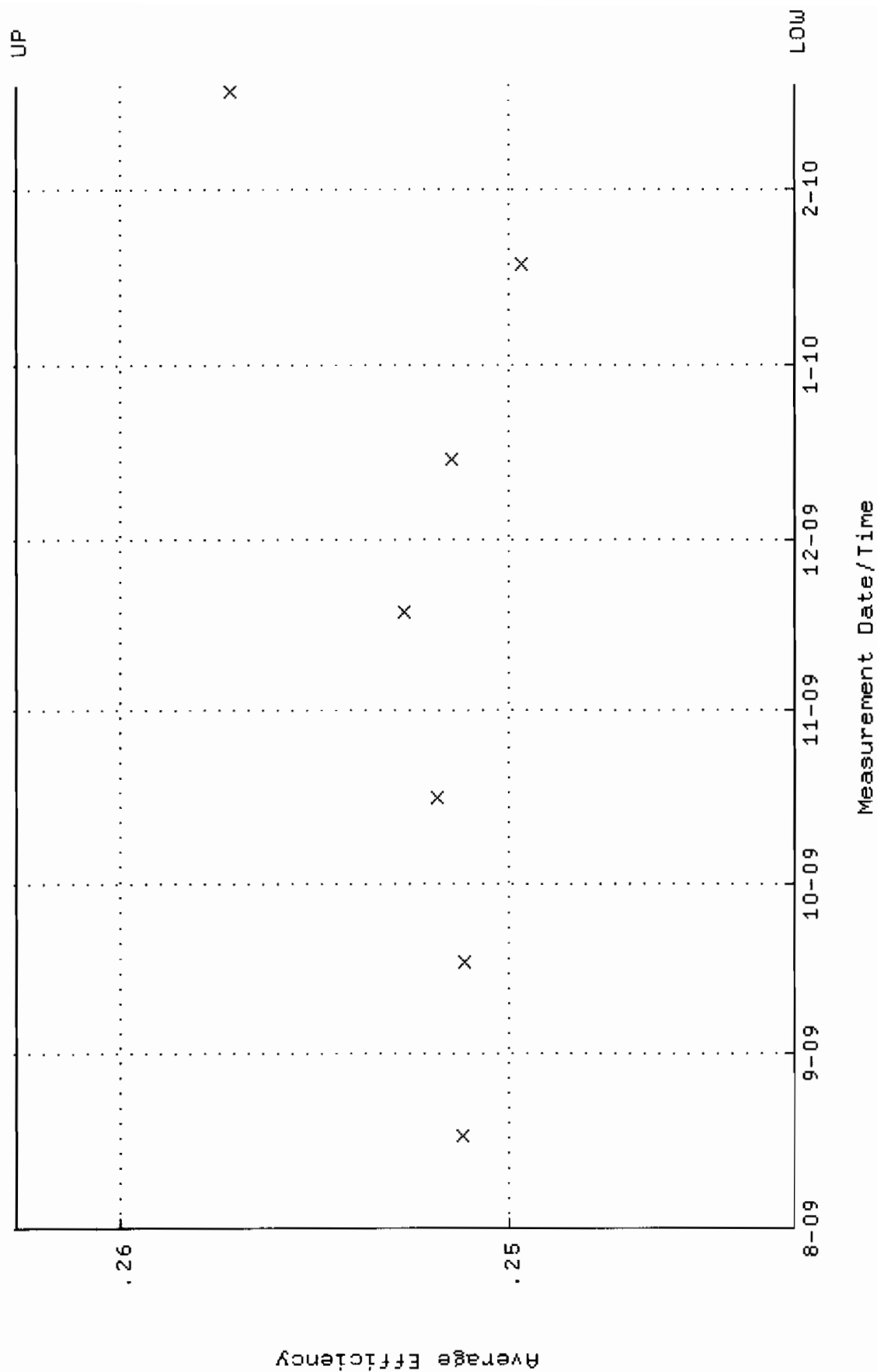
QA filename : DKA100:[ENV_ALPHA.QA.W]w121.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:25 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.4263 through 98.8395



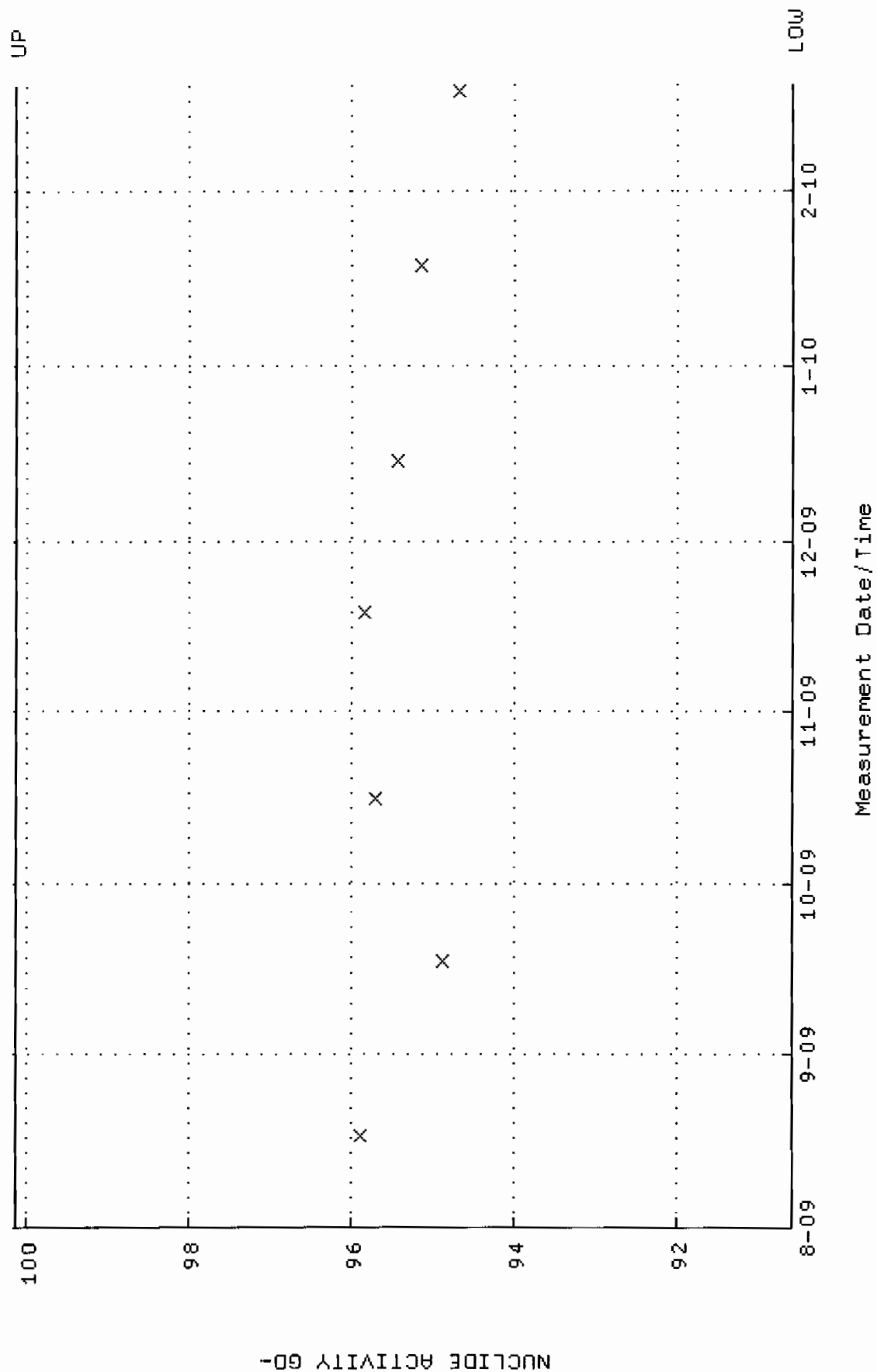
QA filename : DKA100:[ENV_ALPHA.QA.B]B121.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:33 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



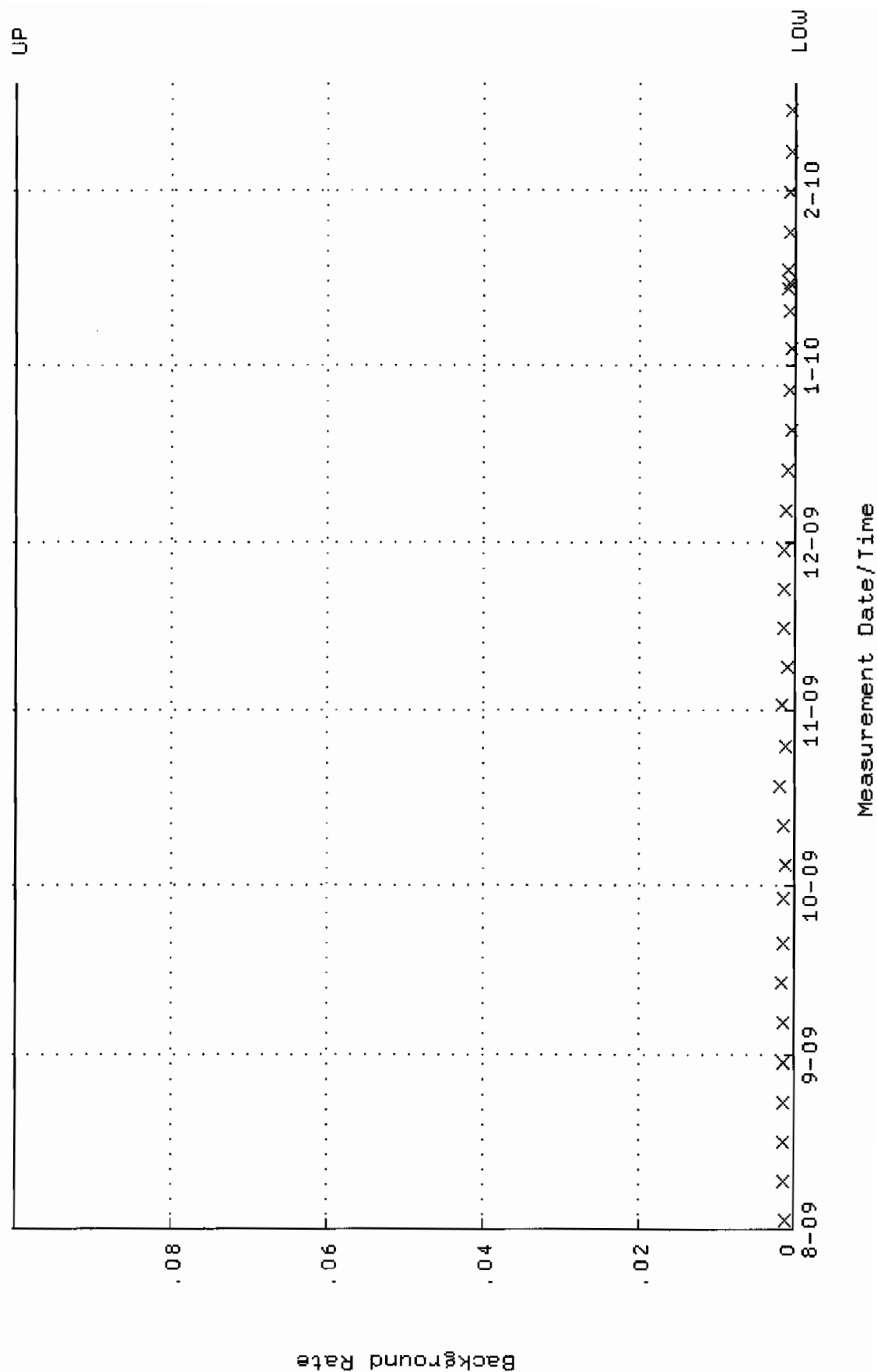
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:30 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.242659 through 0.262659



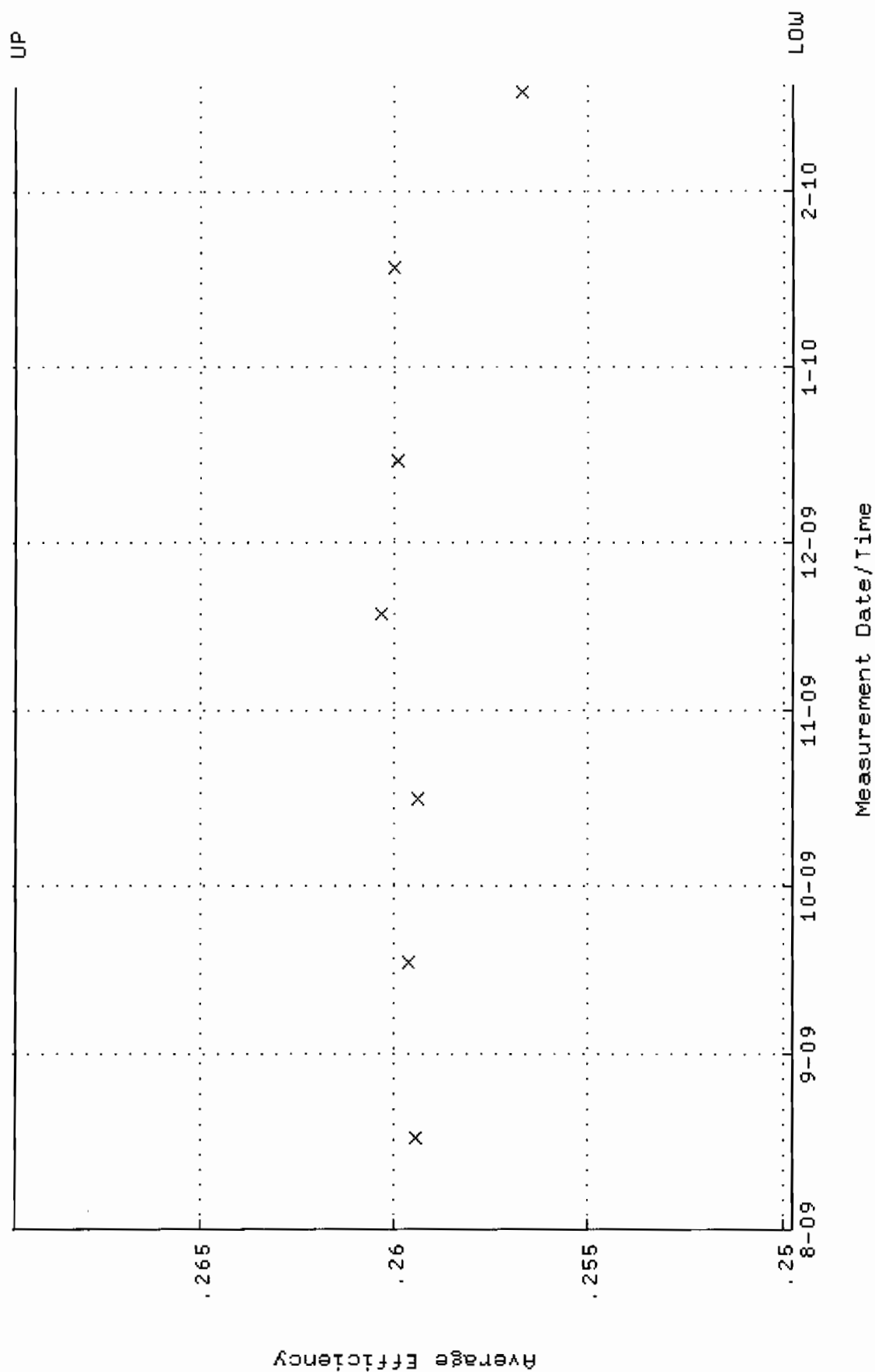
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
 Parameter Name : NLACTVY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:30 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 90.5949 through 100.131



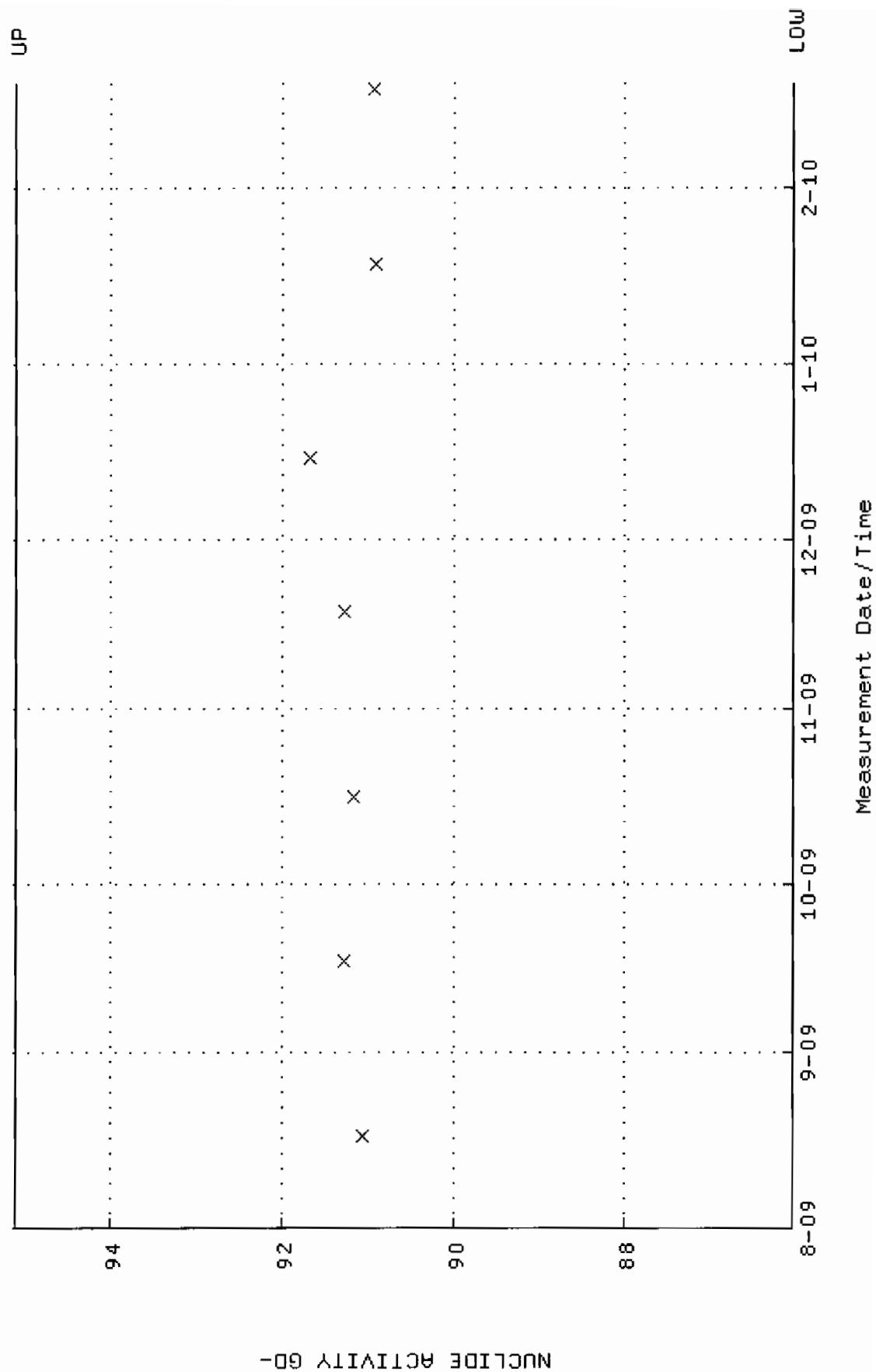
QA filename : DKA100:[ENV_ALPHA.QA.B]B122.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:37 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



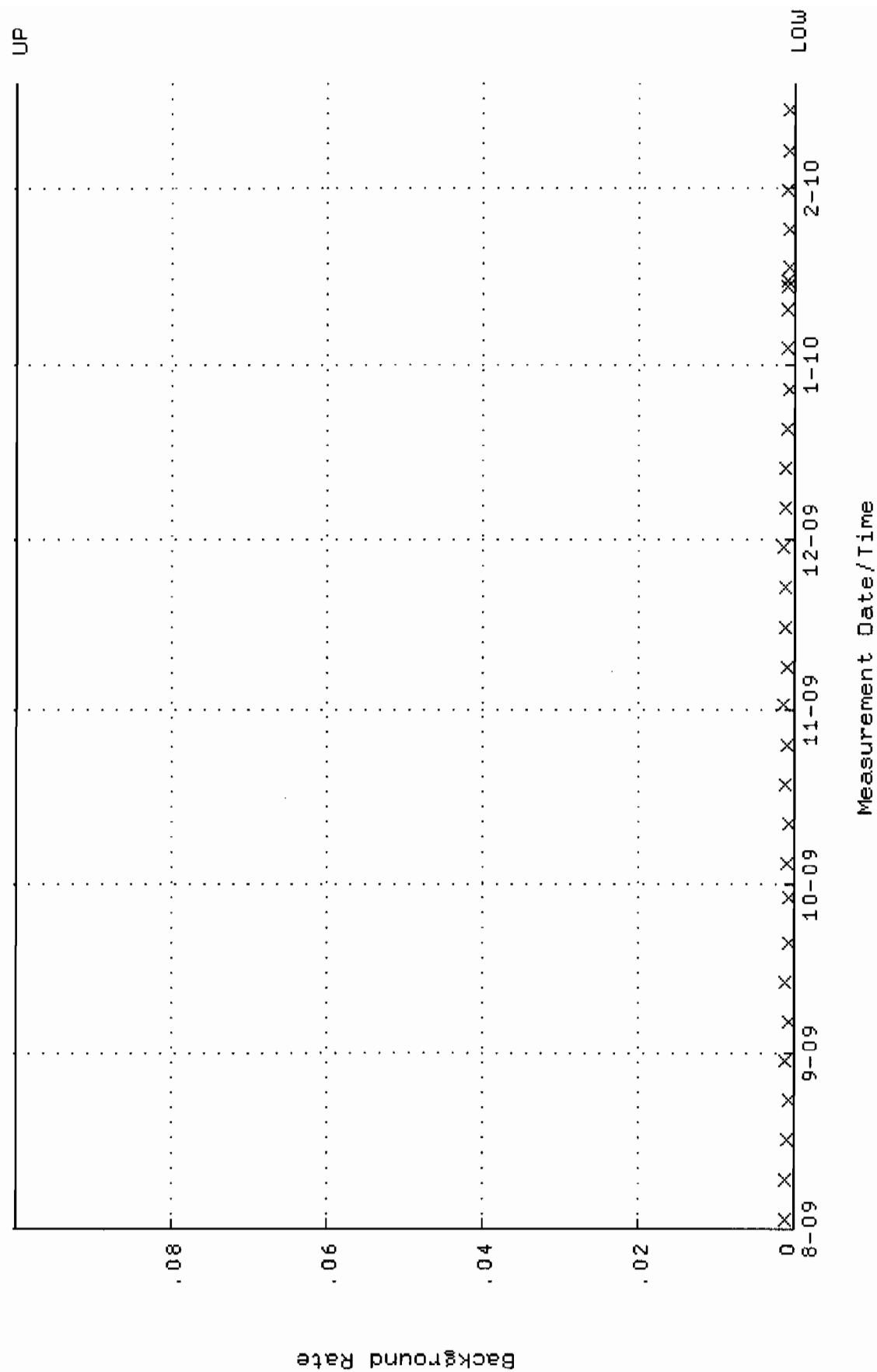
QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:34 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.249752 through 0.269752



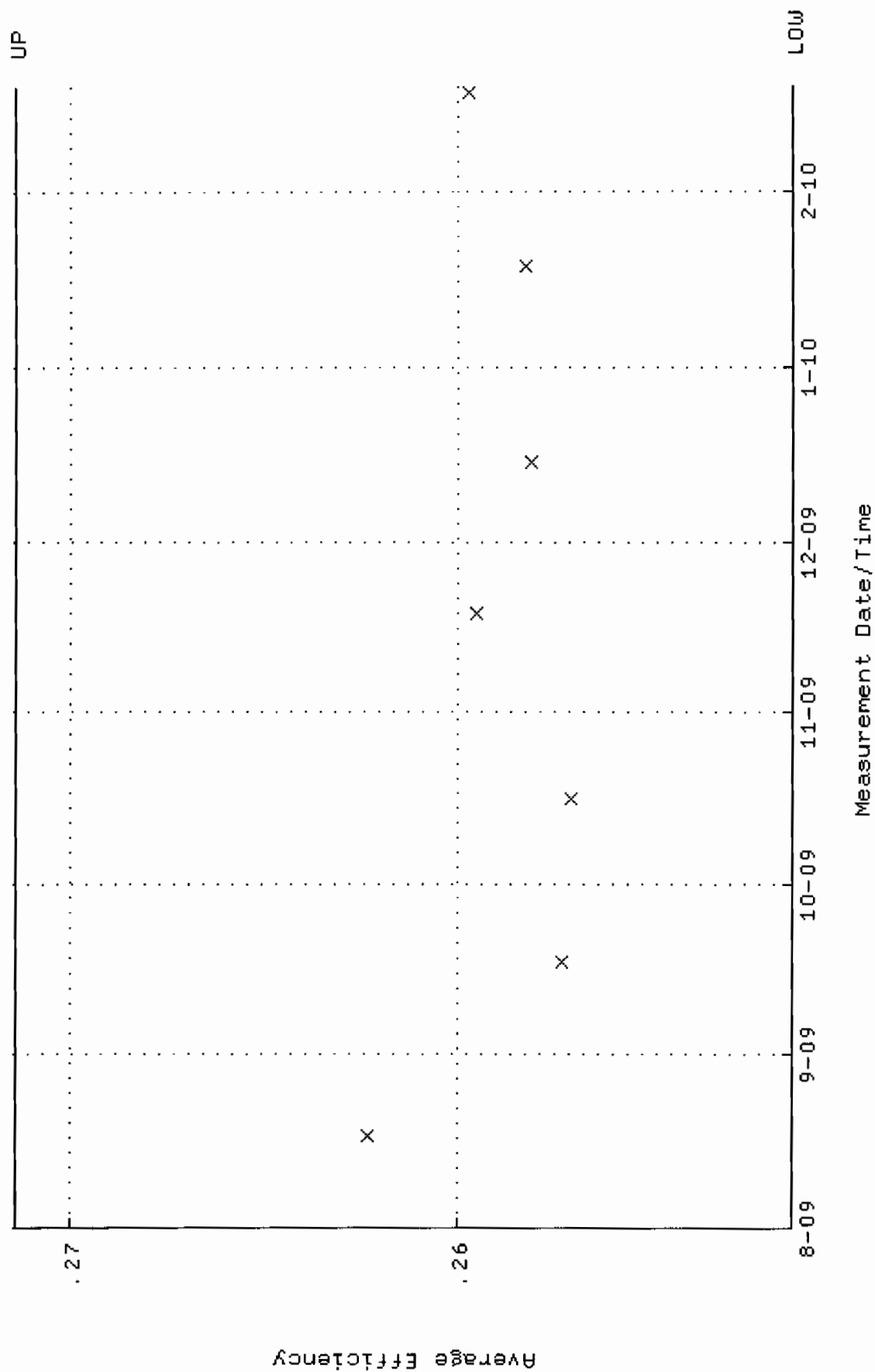
QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:34 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.0496 through 95.1074



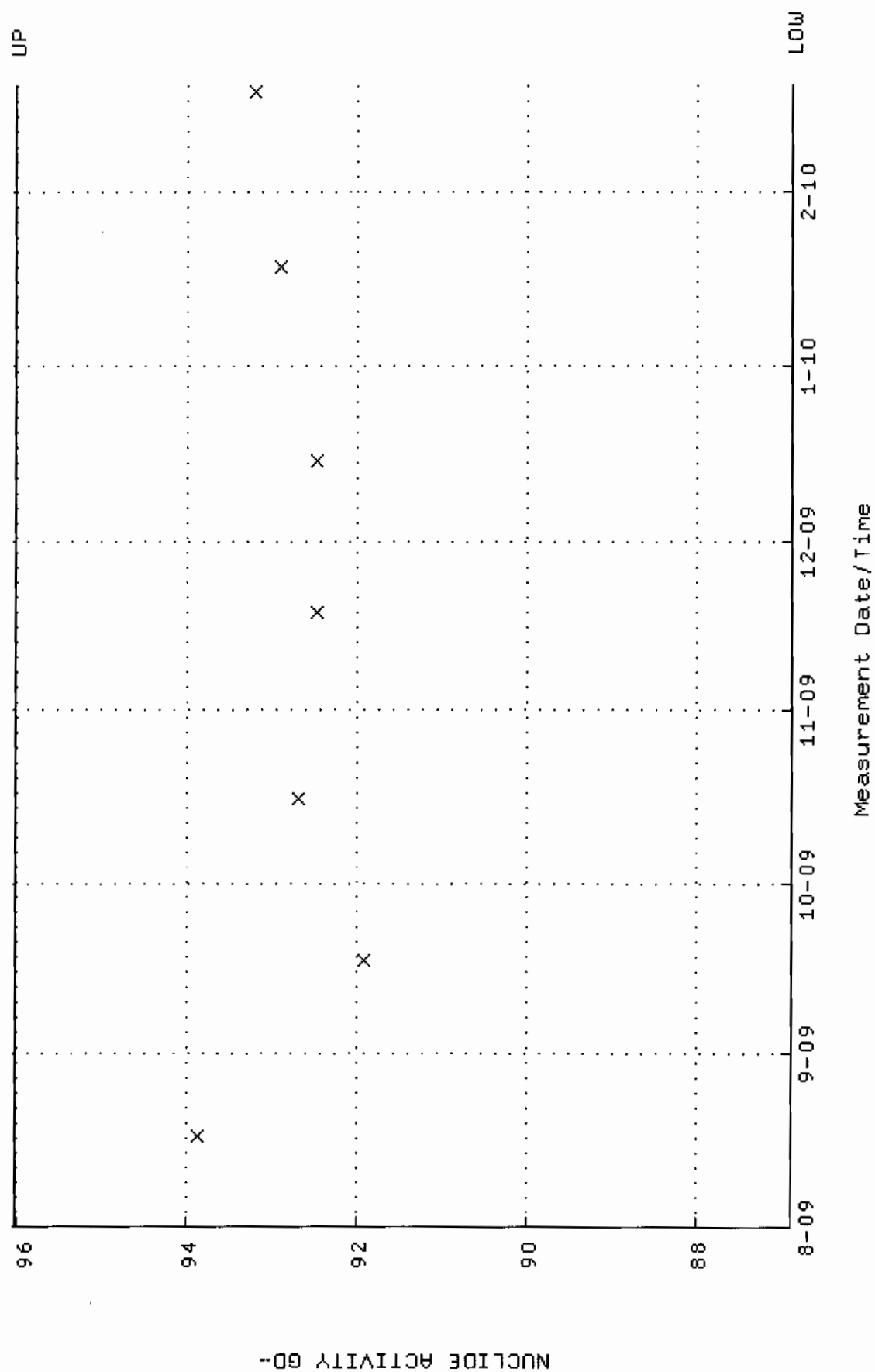
QA filename : DKA100:[ENV_ALPHA.QA.B]B123.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:42 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



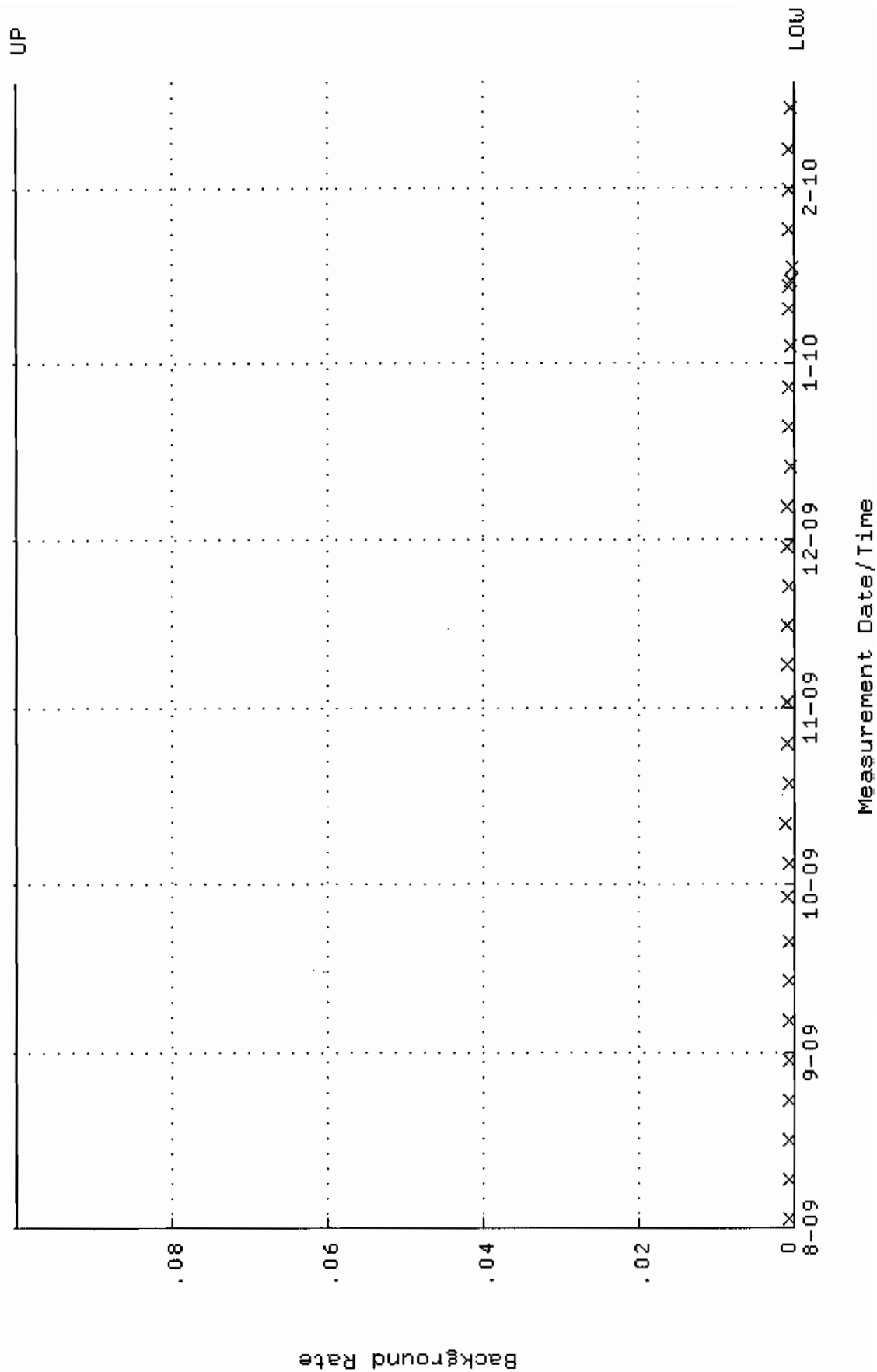
QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:39 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.251398 through 0.271398



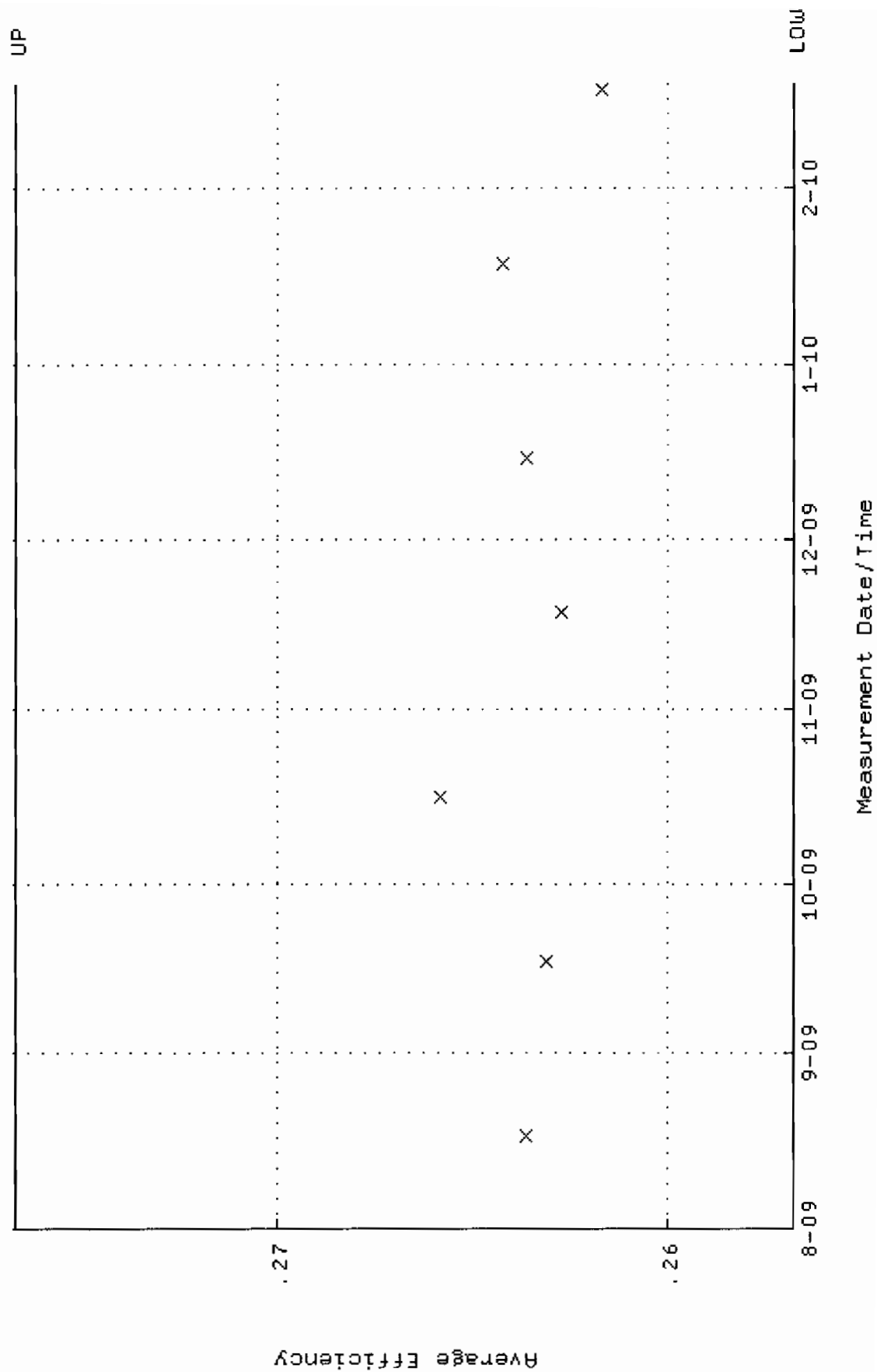
QA filename : DKA100:[ENV_ALPHA.QA.W]w124.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:39 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.8862 through 96.0322



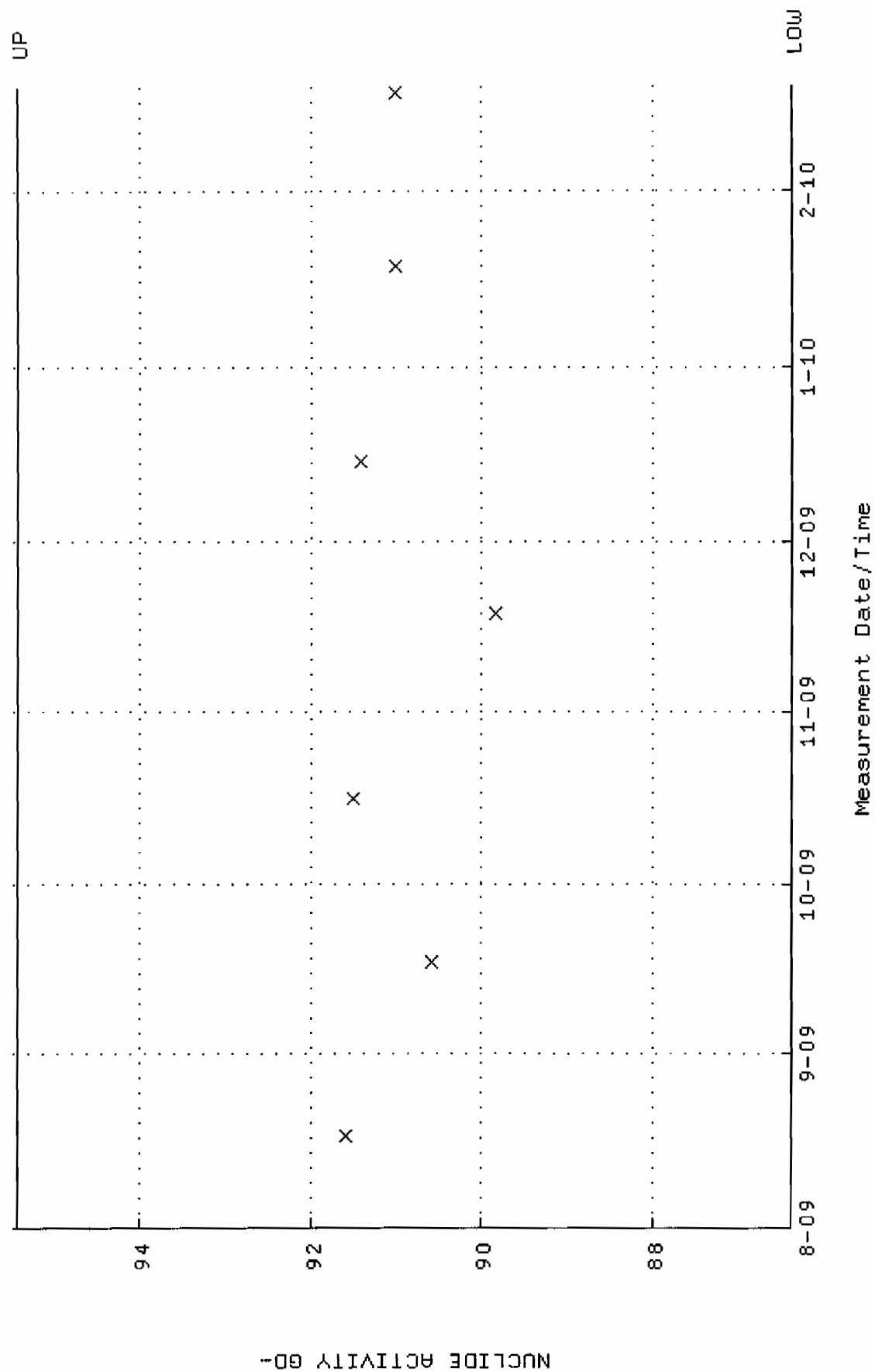
QA filename : DKA100:[ENV_ALPHA.QA.B]B124.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:47 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



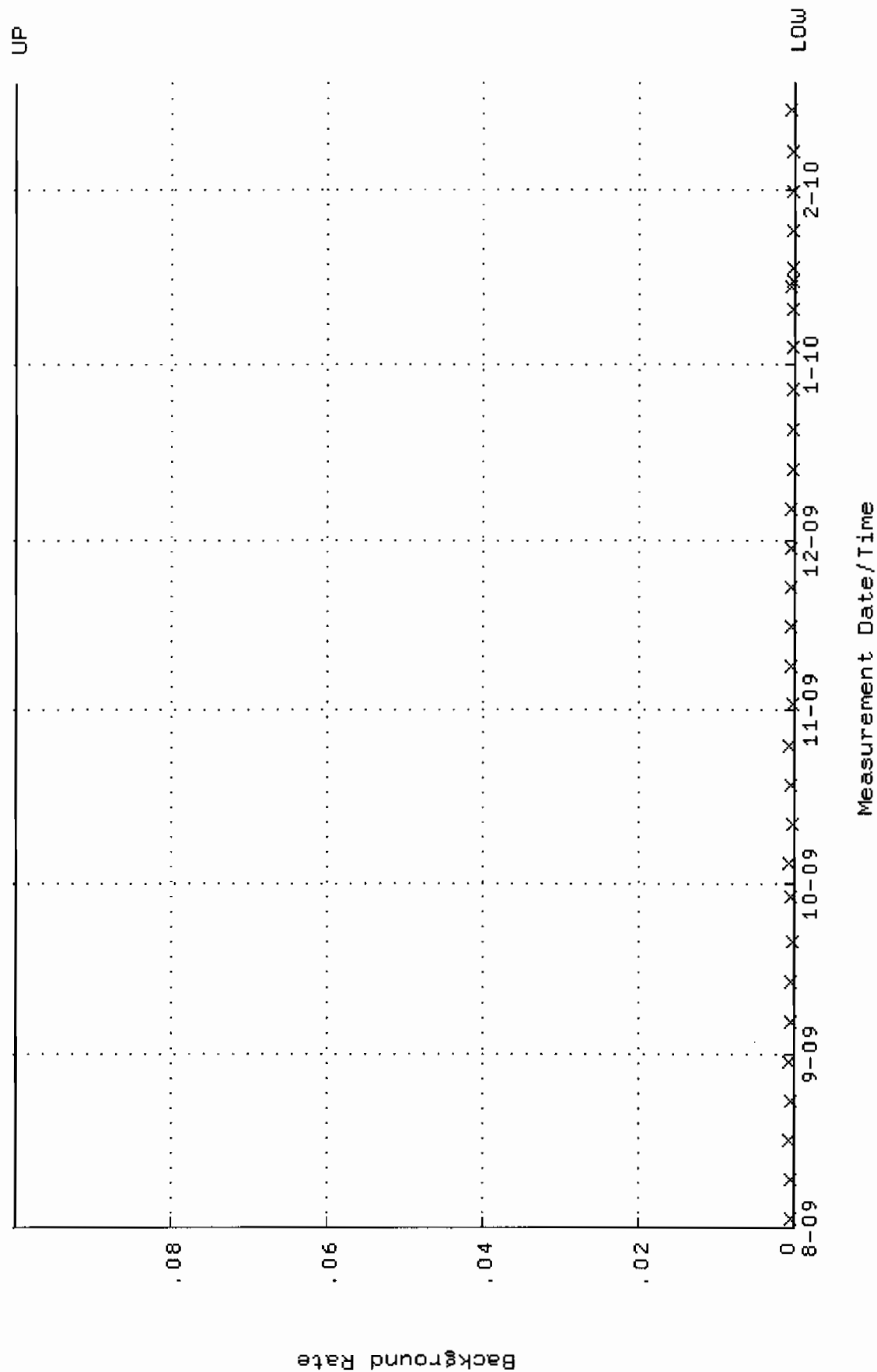
QA filename : DKA100:[ENV_ALPHA.QA.W]U129.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:42:03 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.256741 through 0.276741



QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:42:03 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.3646 through 95.4556



QA filename : DKA100:[ENV_ALPHA.QA.B]B129.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:09 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000

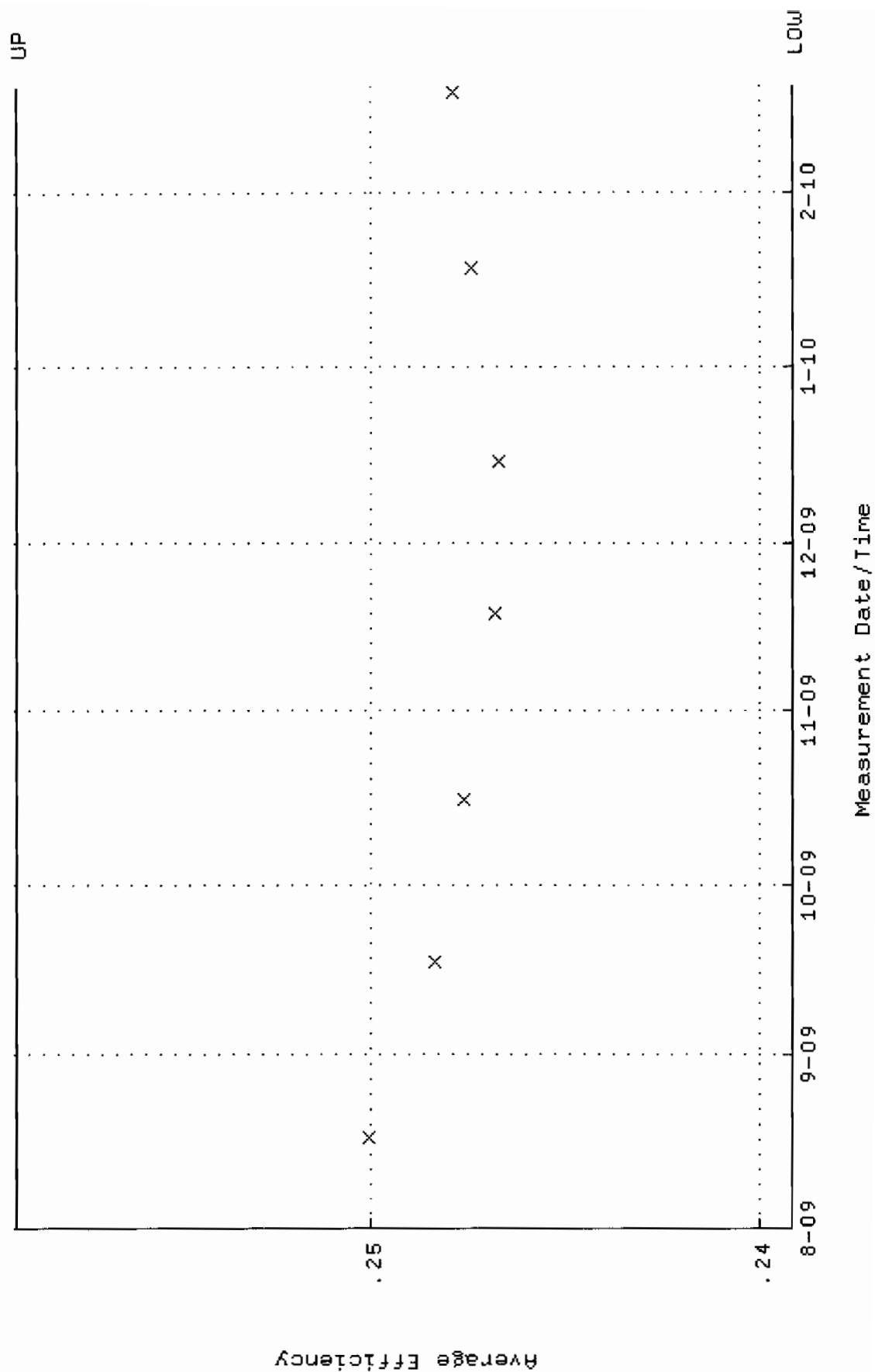


QA filename : DKA100:[ENV_ALPHA.QA.W]U130.QAF;1

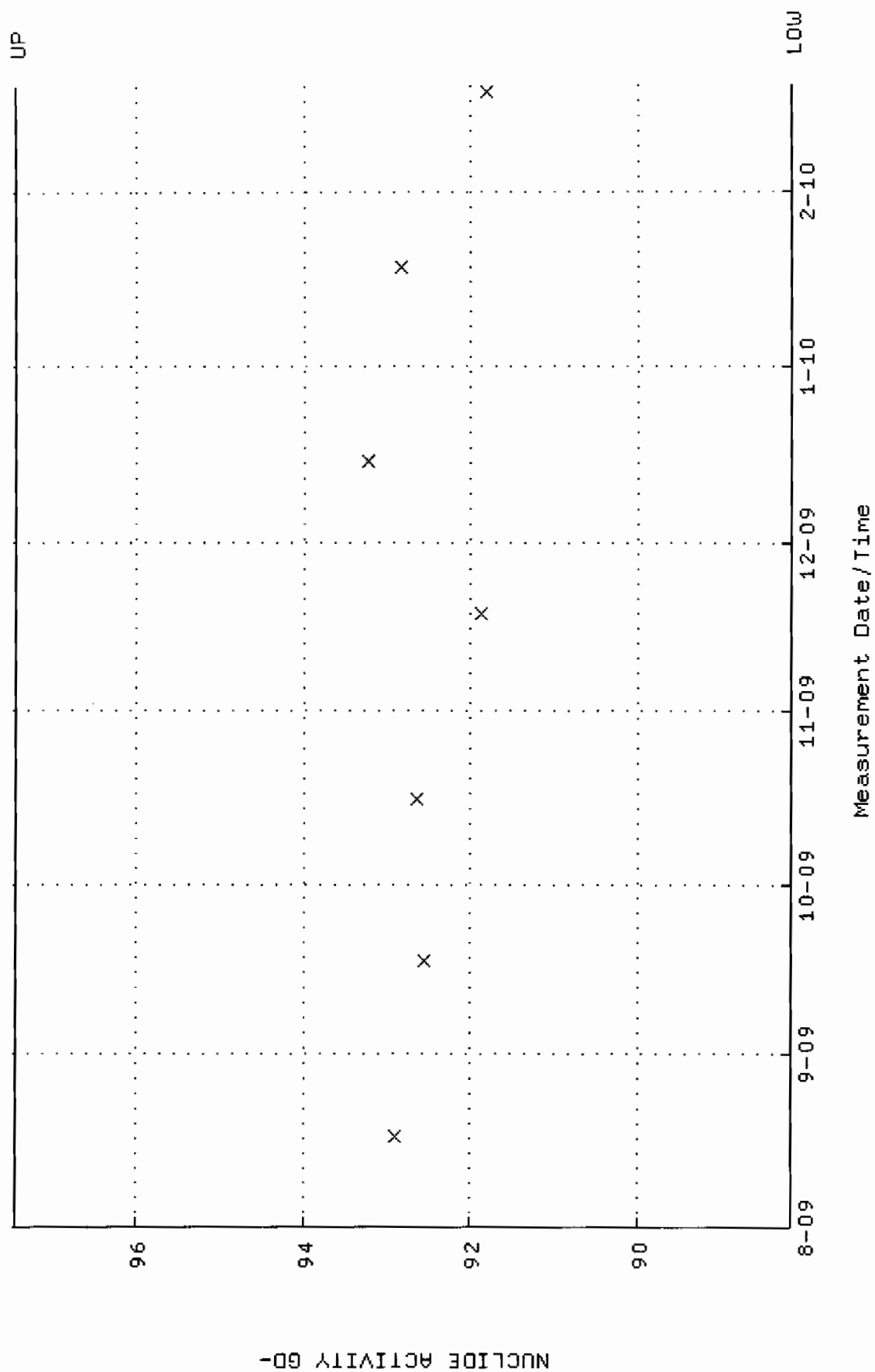
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 17-AUG-2009 09:42:09 through 19-FEB-2010 12:00:00

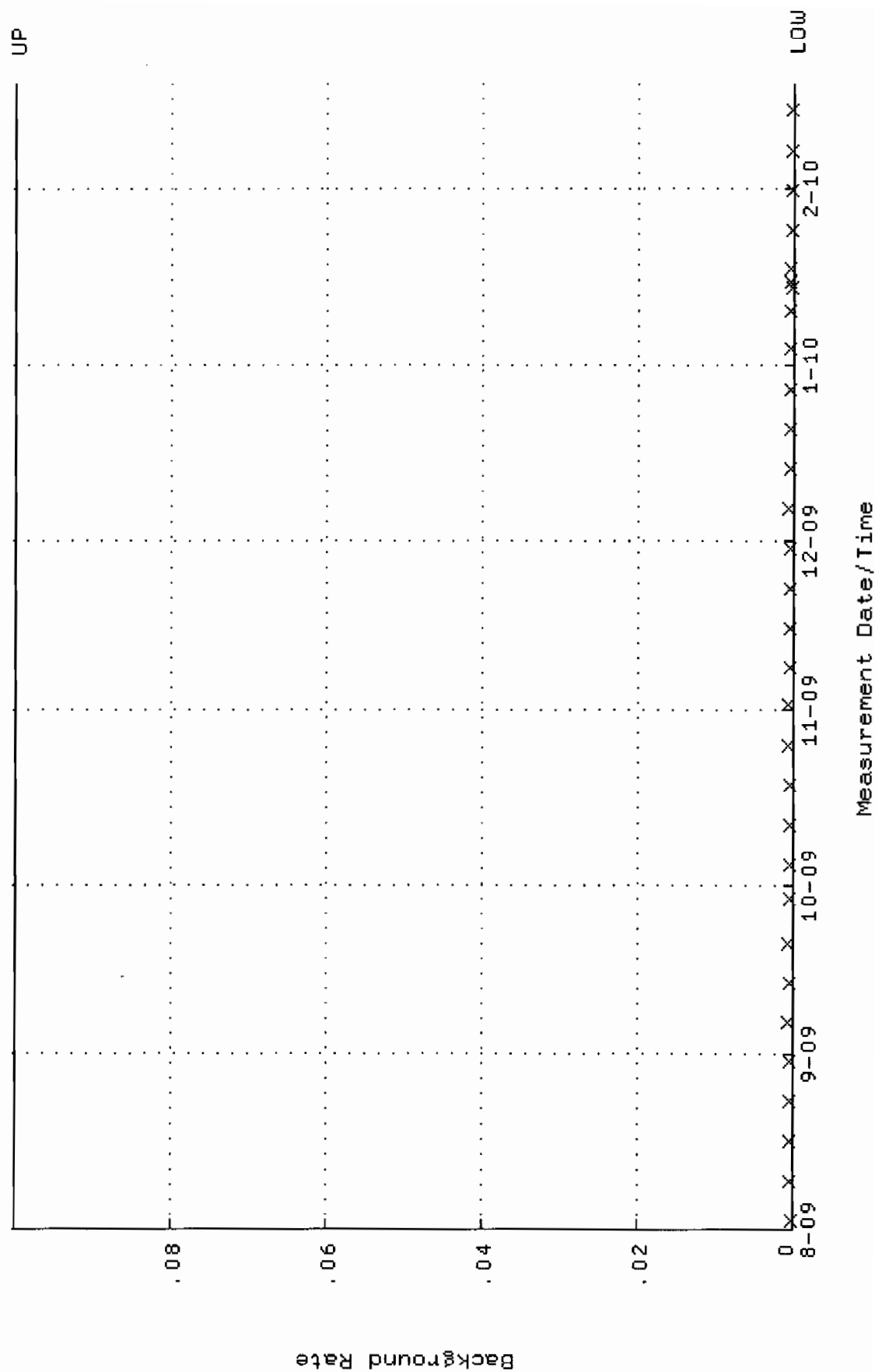
Lower/Upper Lmts: 0.239131 through 0.259131



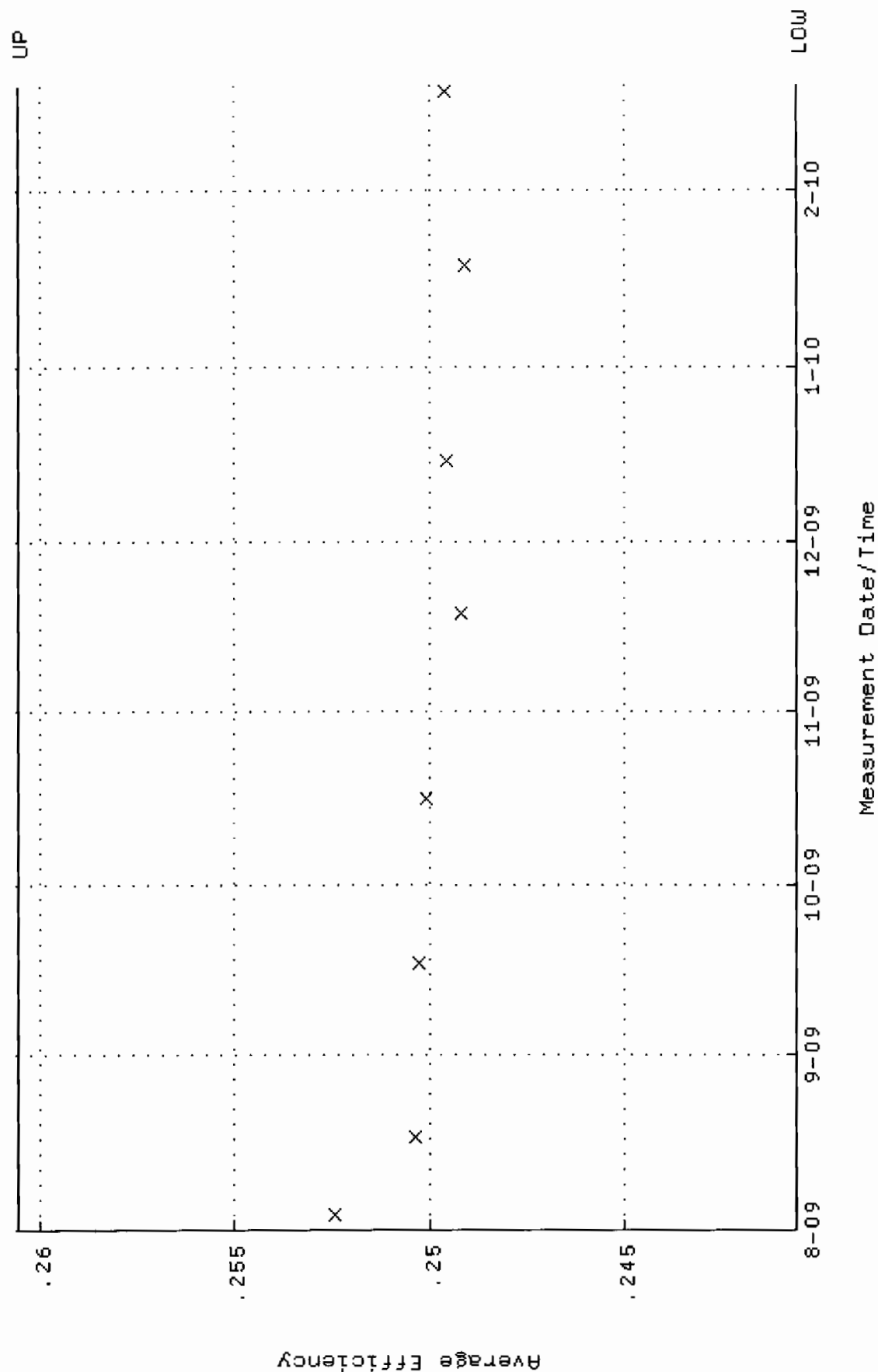
QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:42:09 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 88.1614 through 97.4416



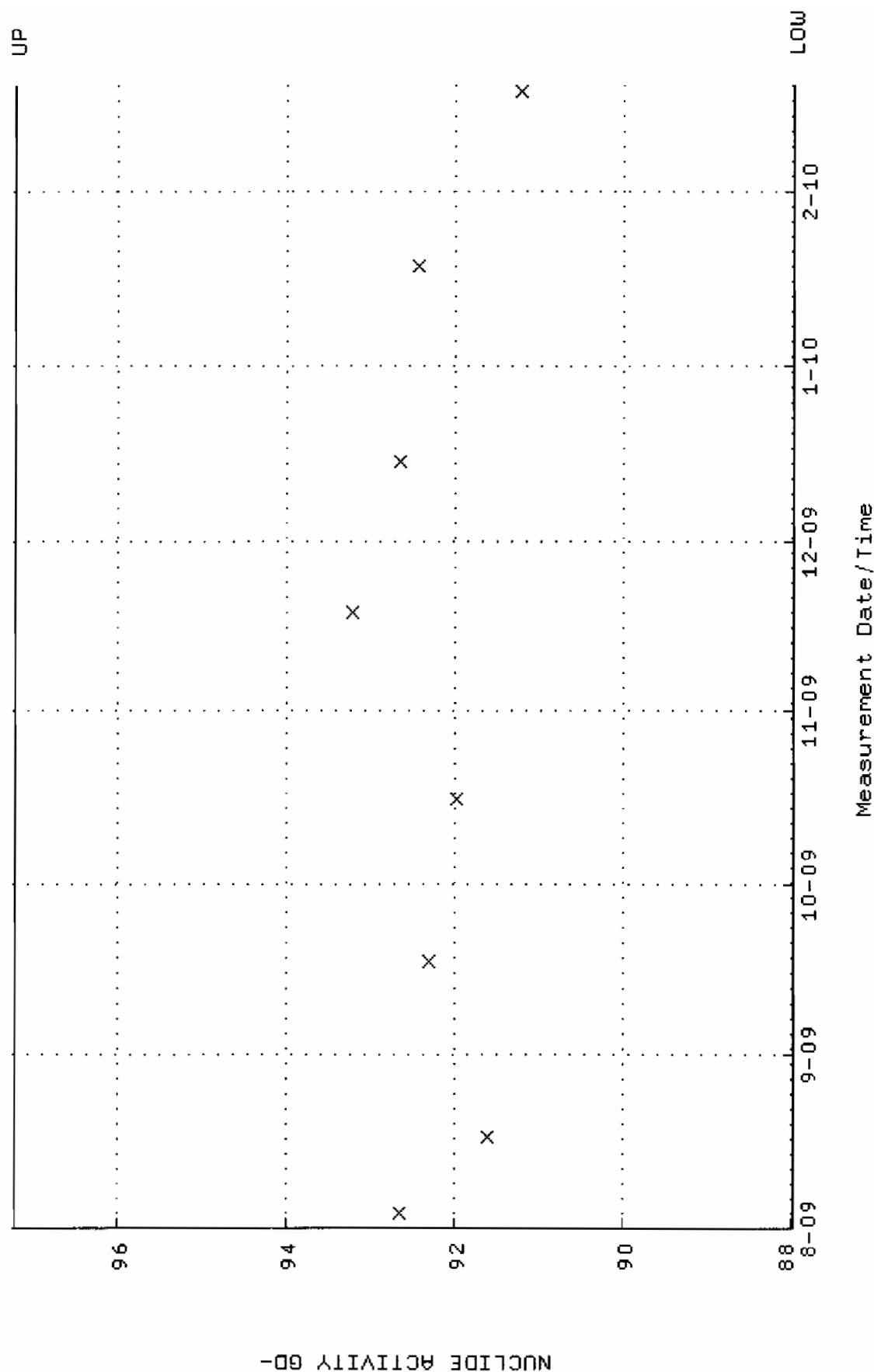
QA filename : DKA100:[ENV_ALPHA.QA.B]B130.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:13 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



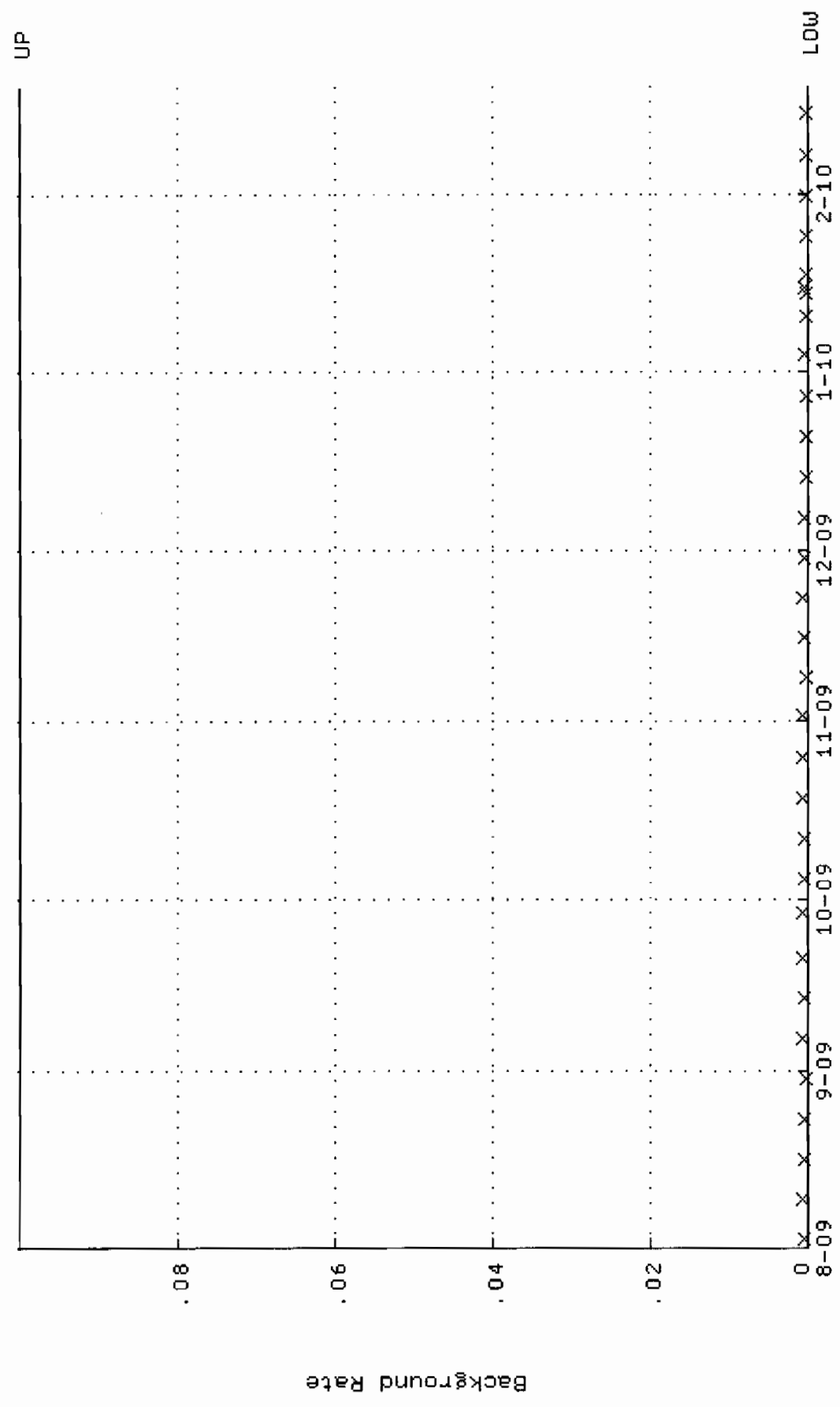
QA filename : DKA100:[ENV_ALPHA.QA.W]w132.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 15:01:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.240573 through 0.260573



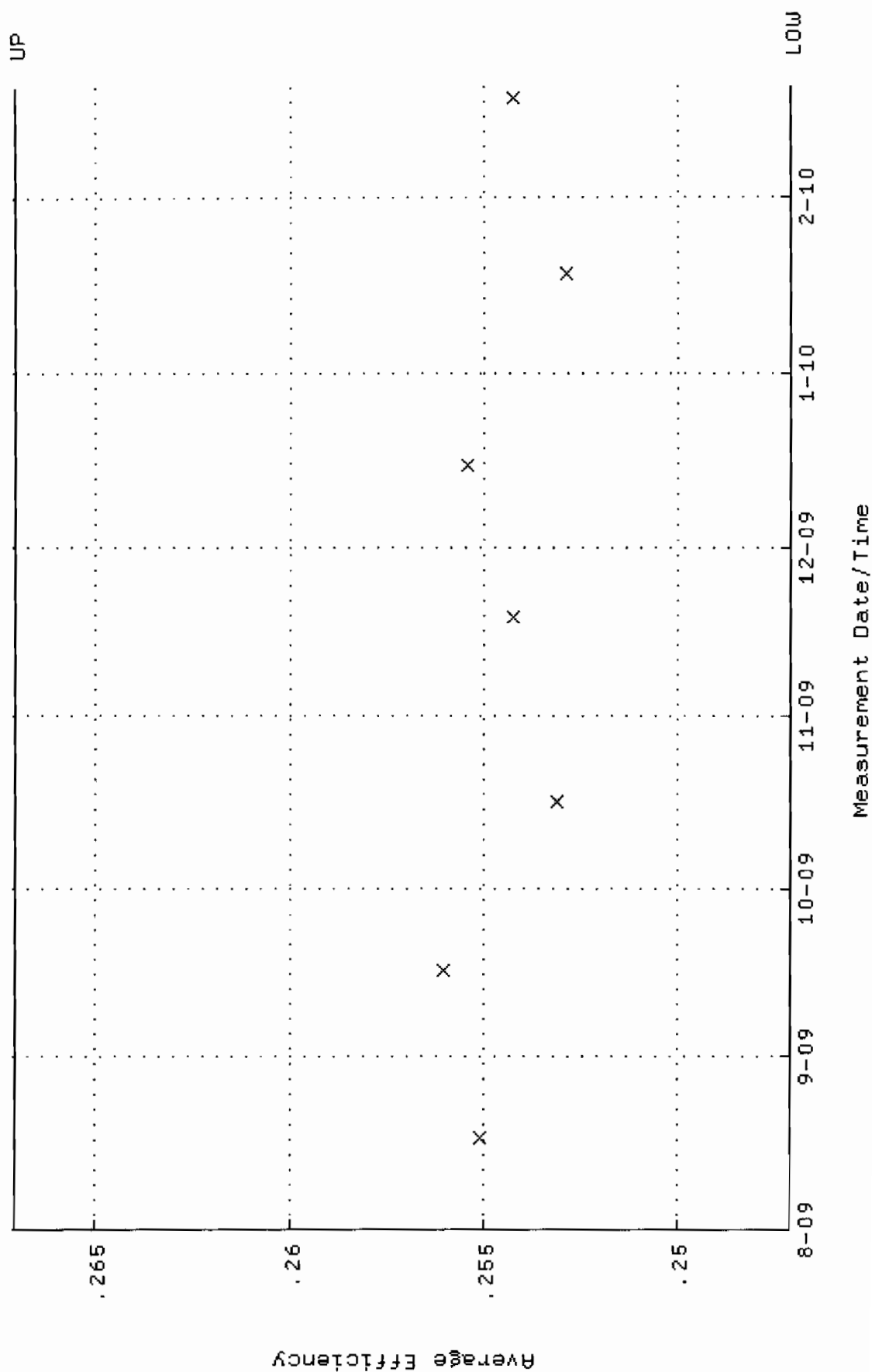
QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 15:01:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.9674 through 97.2272



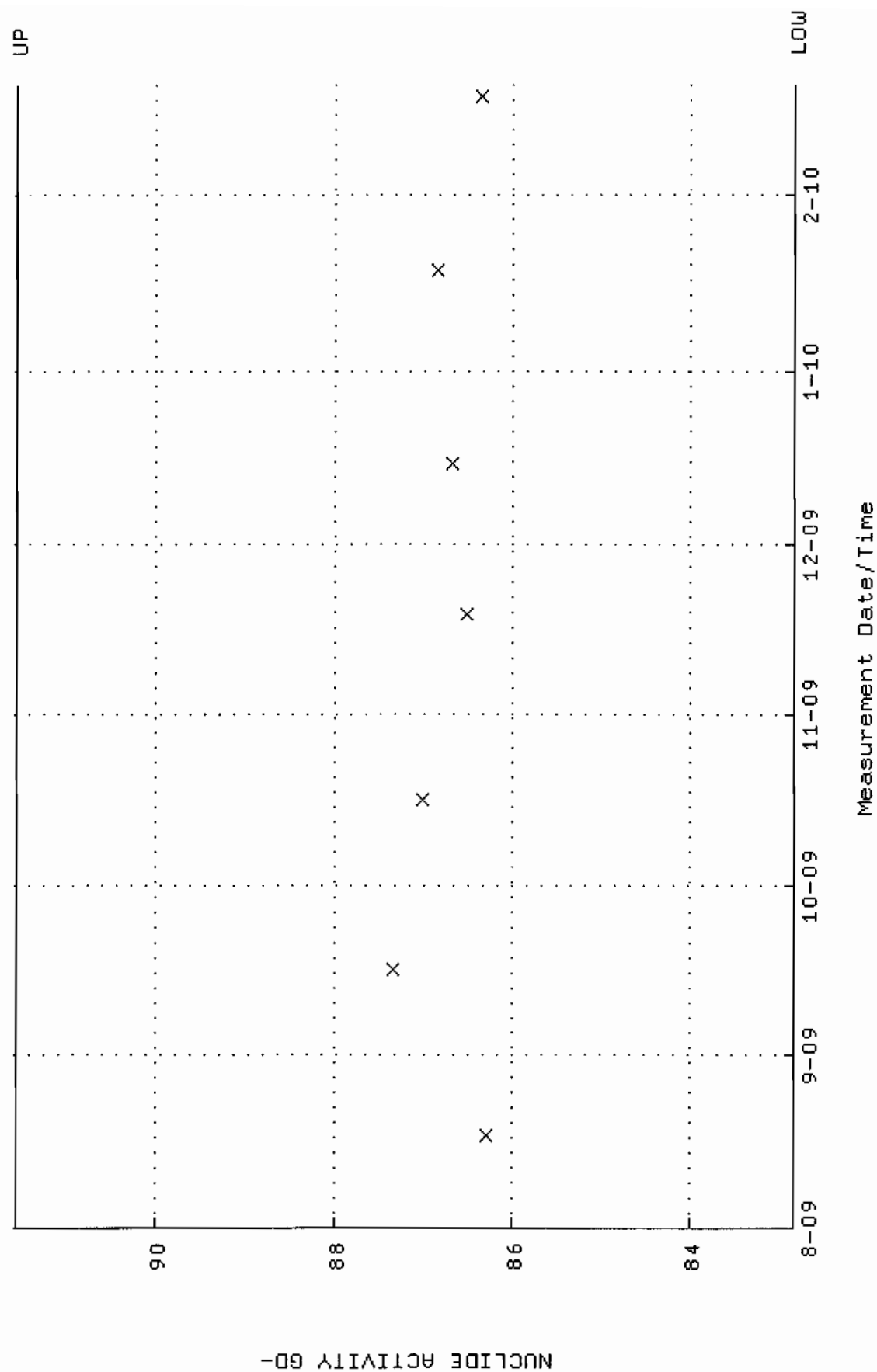
QA filename : DKA100:[ENV_ALPHA.QA.B]B132.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:22 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



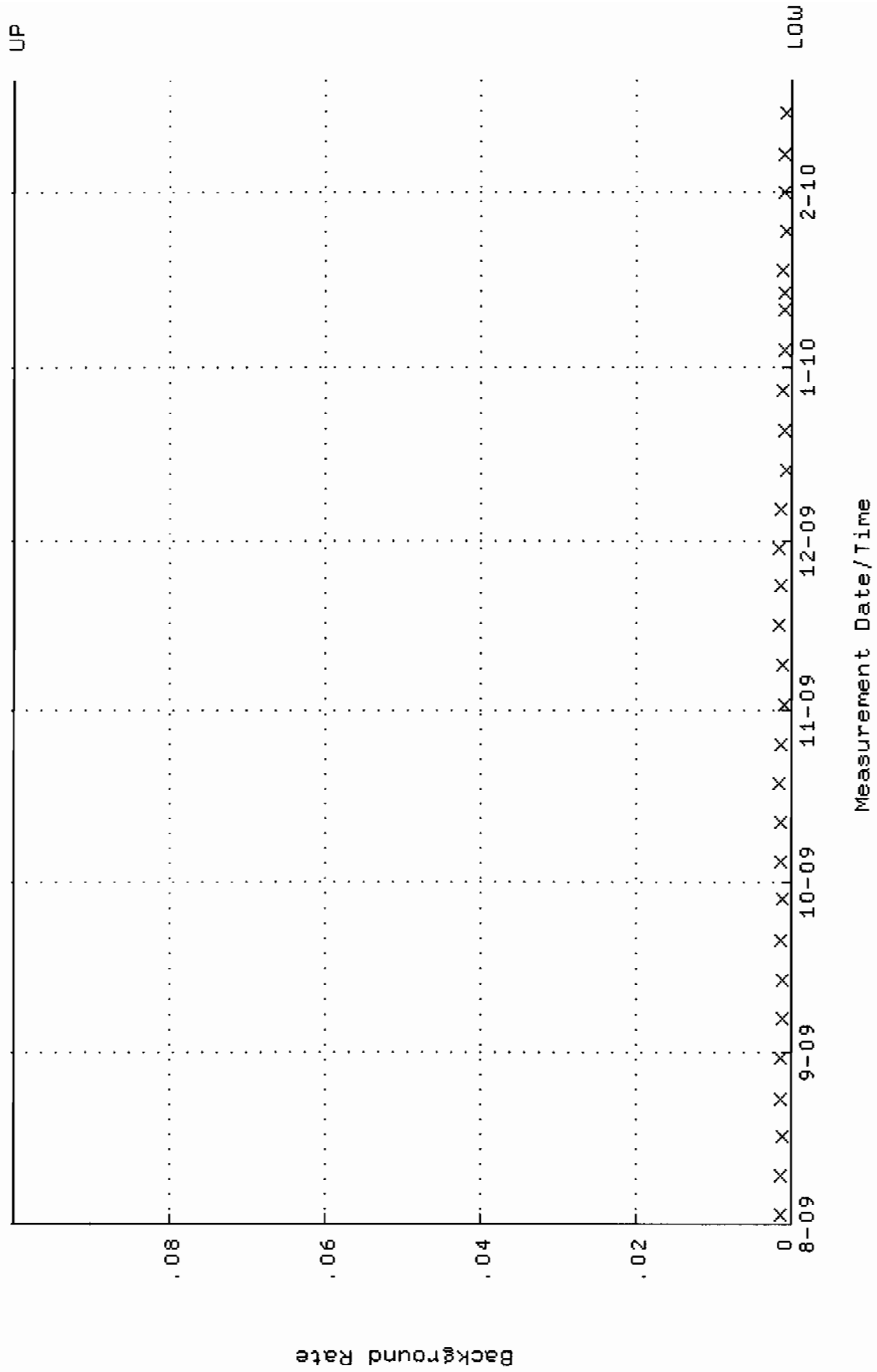
QA filename : DKA100:[ENV_ALPHA.QA.W]W138.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:05:25 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.247085 through 0.267085



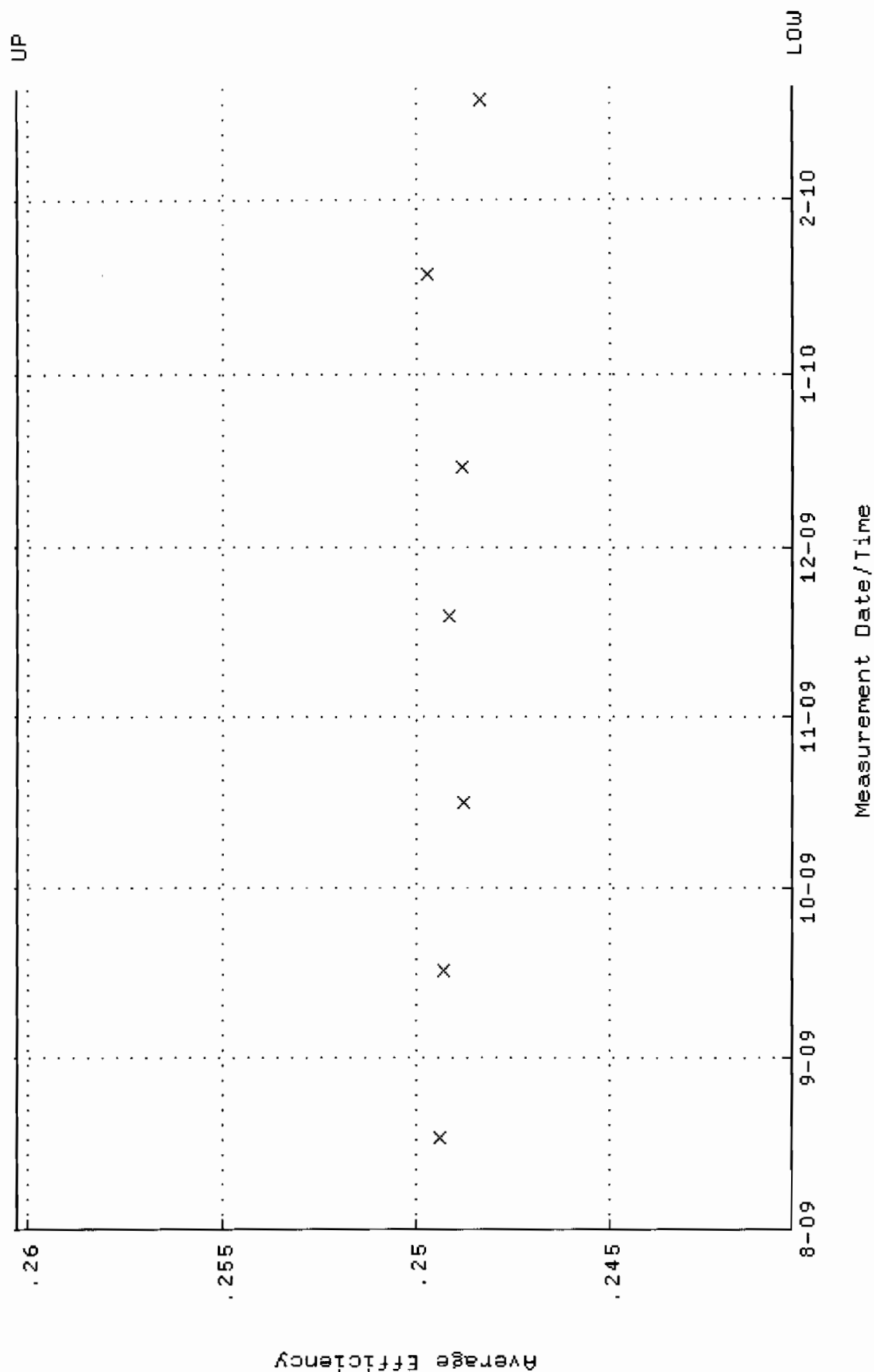
QA filename : DKA100:[ENV_ALPHA.QA.W]W138.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:05:25 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 82.8399 through 91.5599



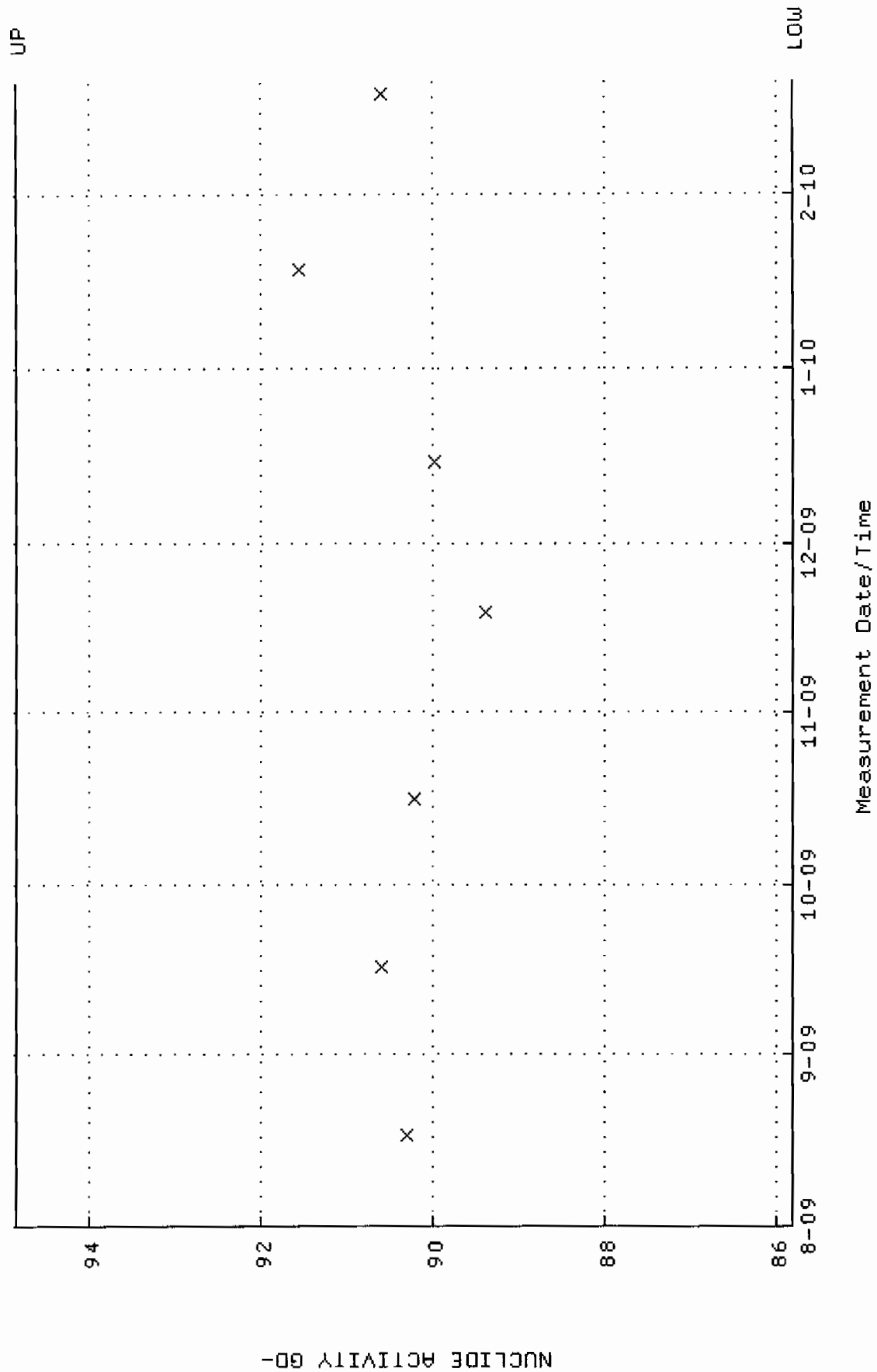
QA filename : DKA100:[ENV_ALPHA.QA.B]B138.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:48 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



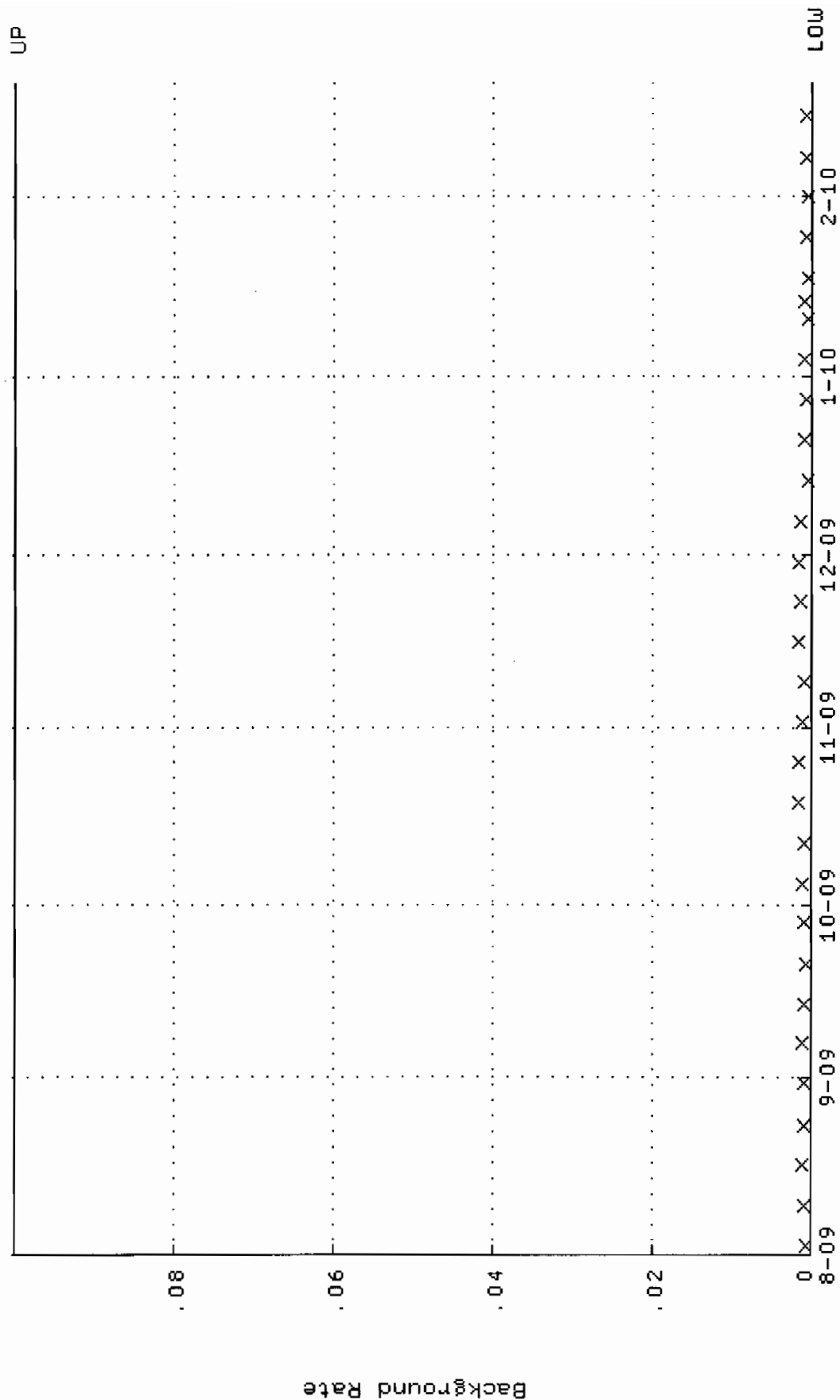
QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:05:40 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.240299 through 0.260299



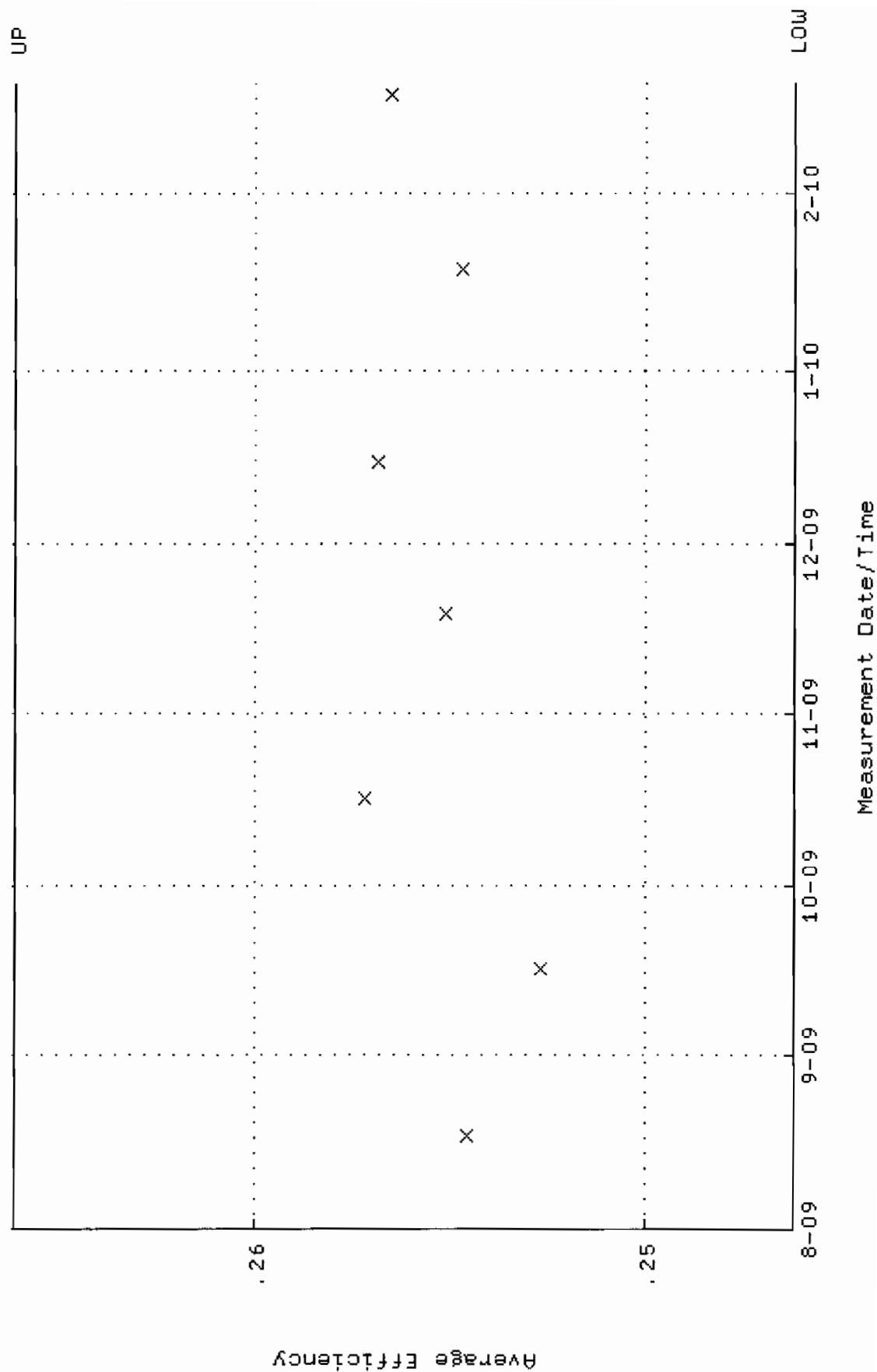
QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:05:40 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.8145 through 94.8477



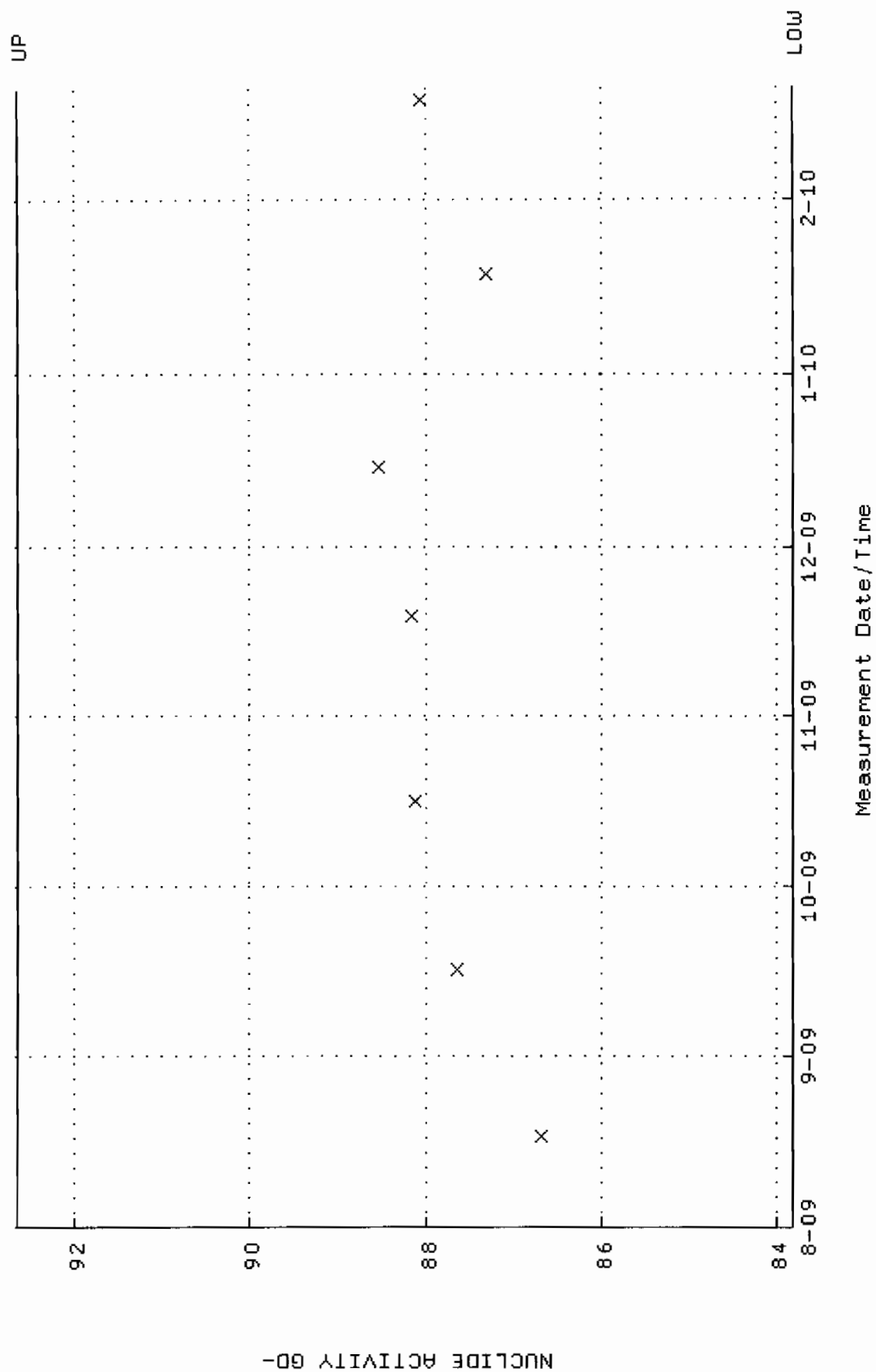
QA filename : DKA100:[ENV_ALPHA.QA.B]B139.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:52 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



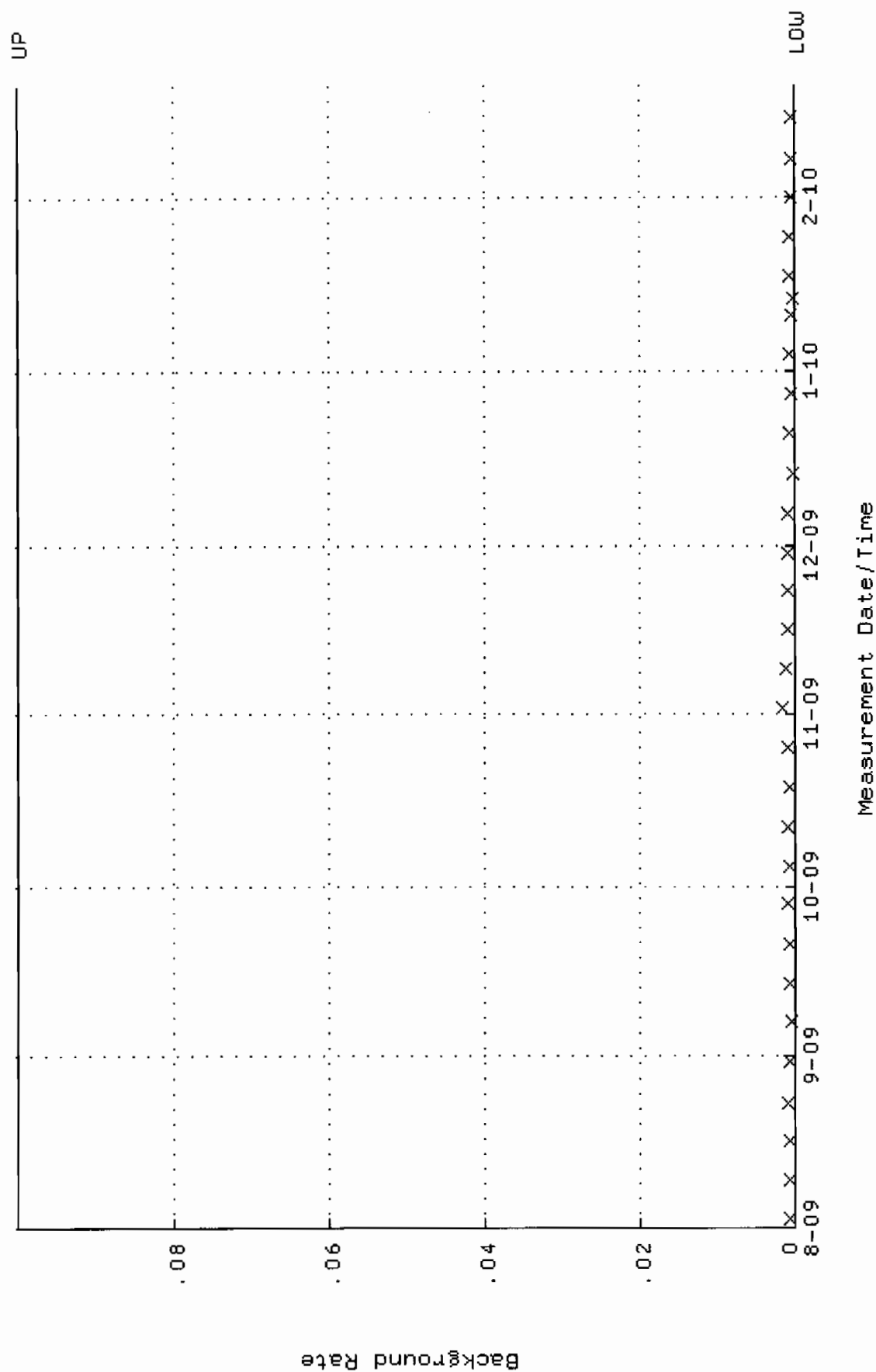
QA filename : DKA100:[ENV_ALPHA.QA.W]W140.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:05:55 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.246178 through 0.266178



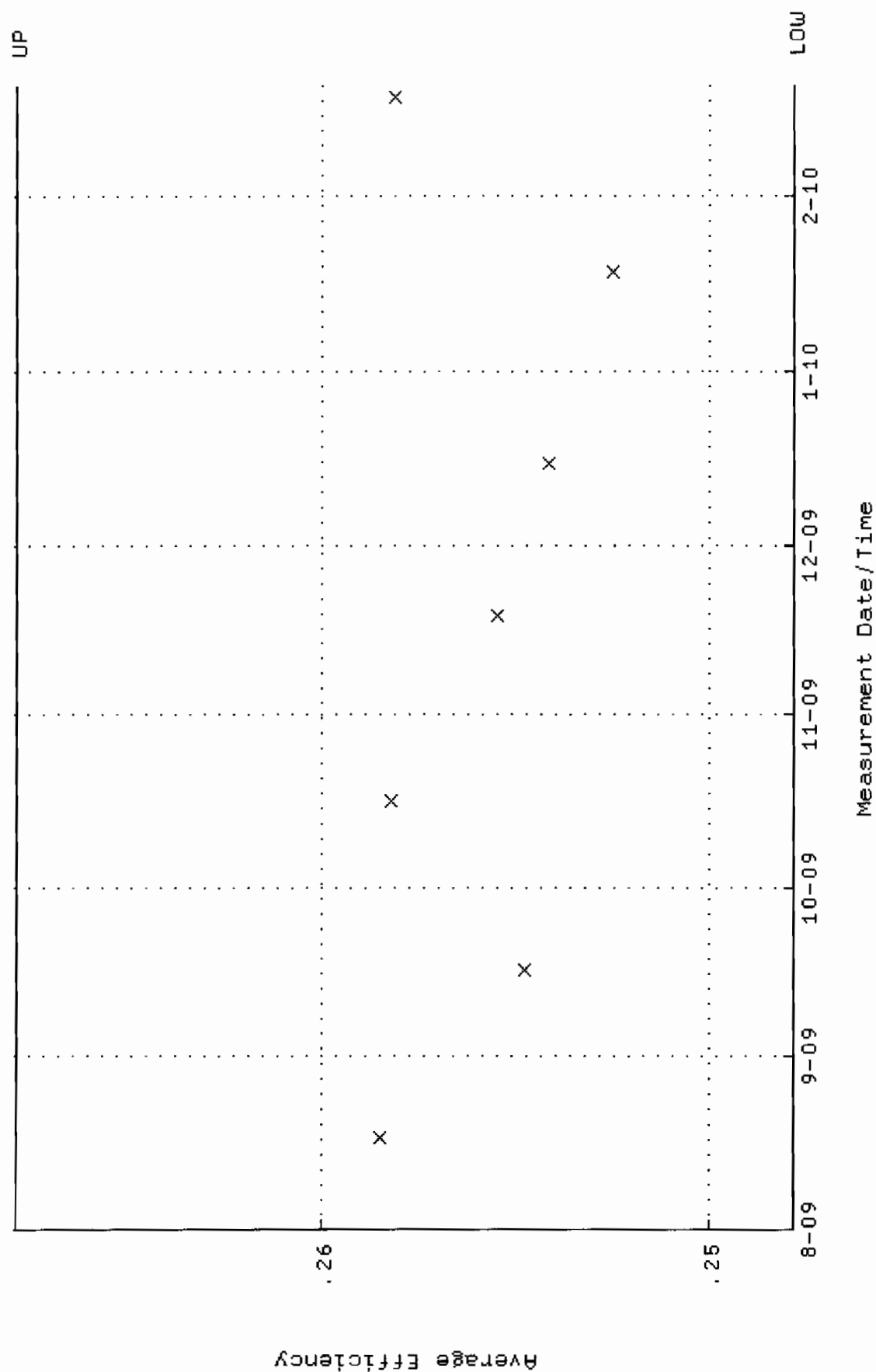
QA filename : DKA100:[ENV_ALPHA.QA.W]W140.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:05:55 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 83.8171 through 92.6399



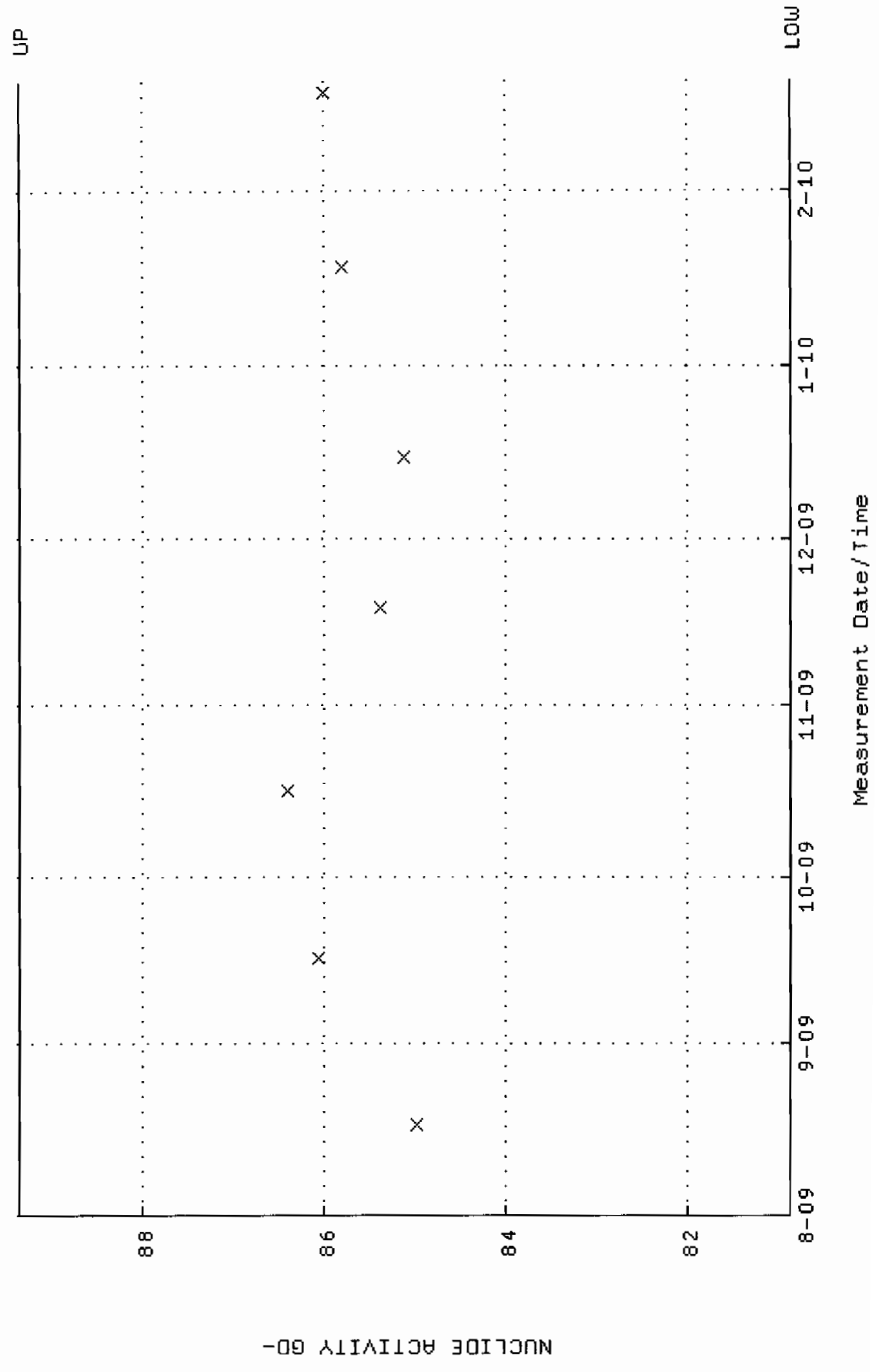
QA filename : DKA100:[ENV_ALPHA.QA.B]B140.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:56 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



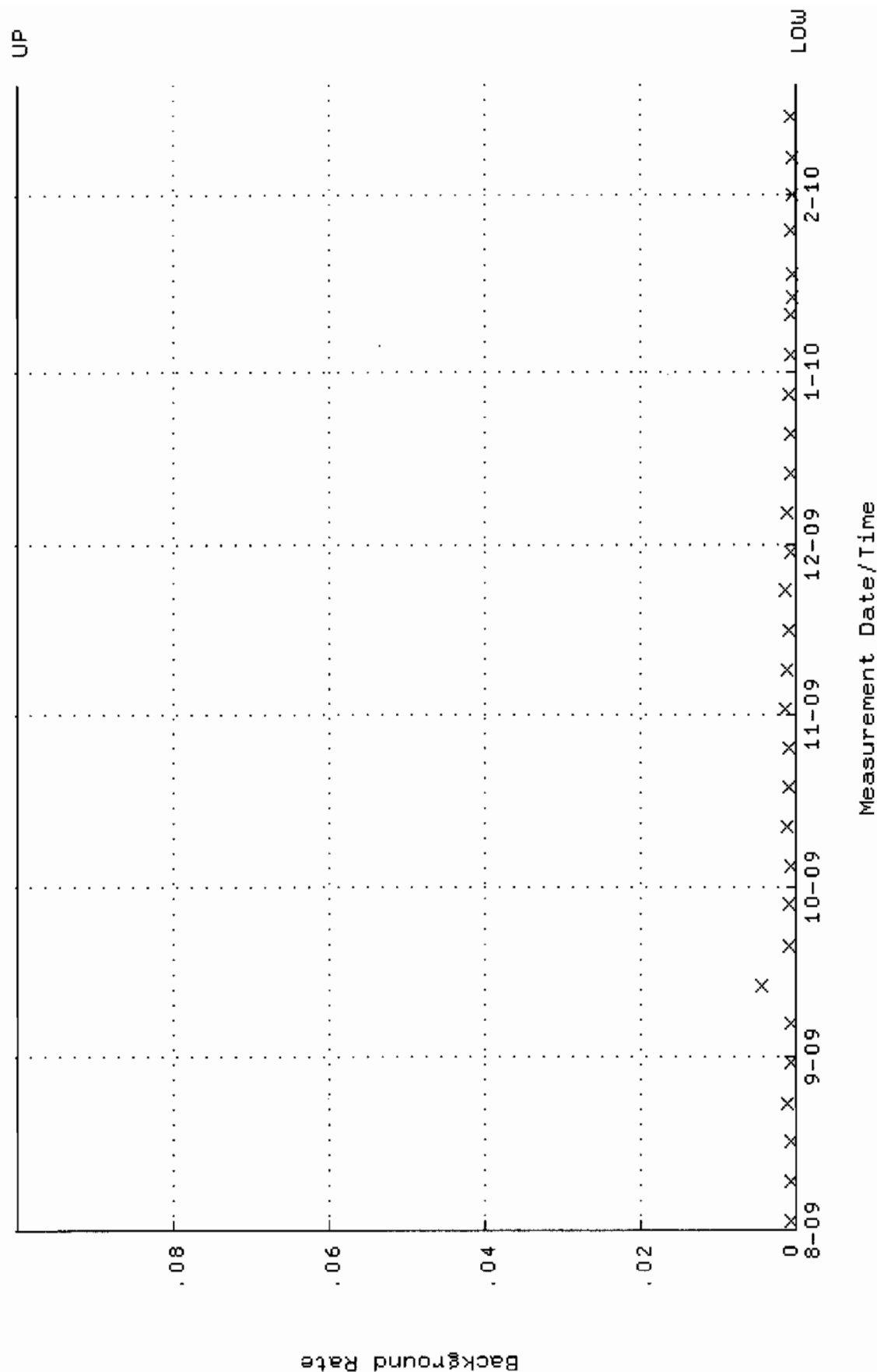
QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:09 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.247845 through 0.267845



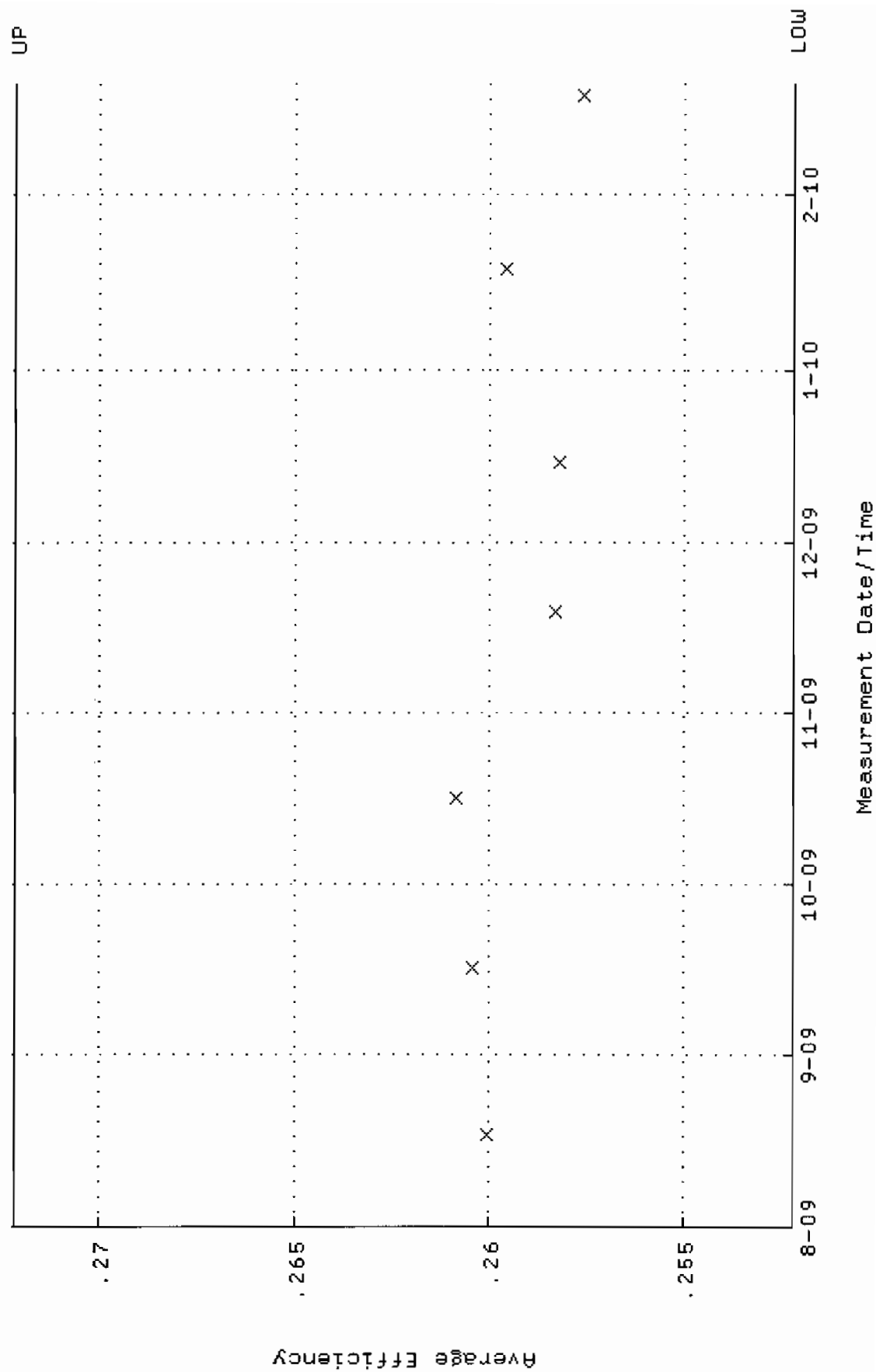
QA filename : DKA100:[ENV_ALPHA.QA.W]U141.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:09 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 80.8595 through 89.3711



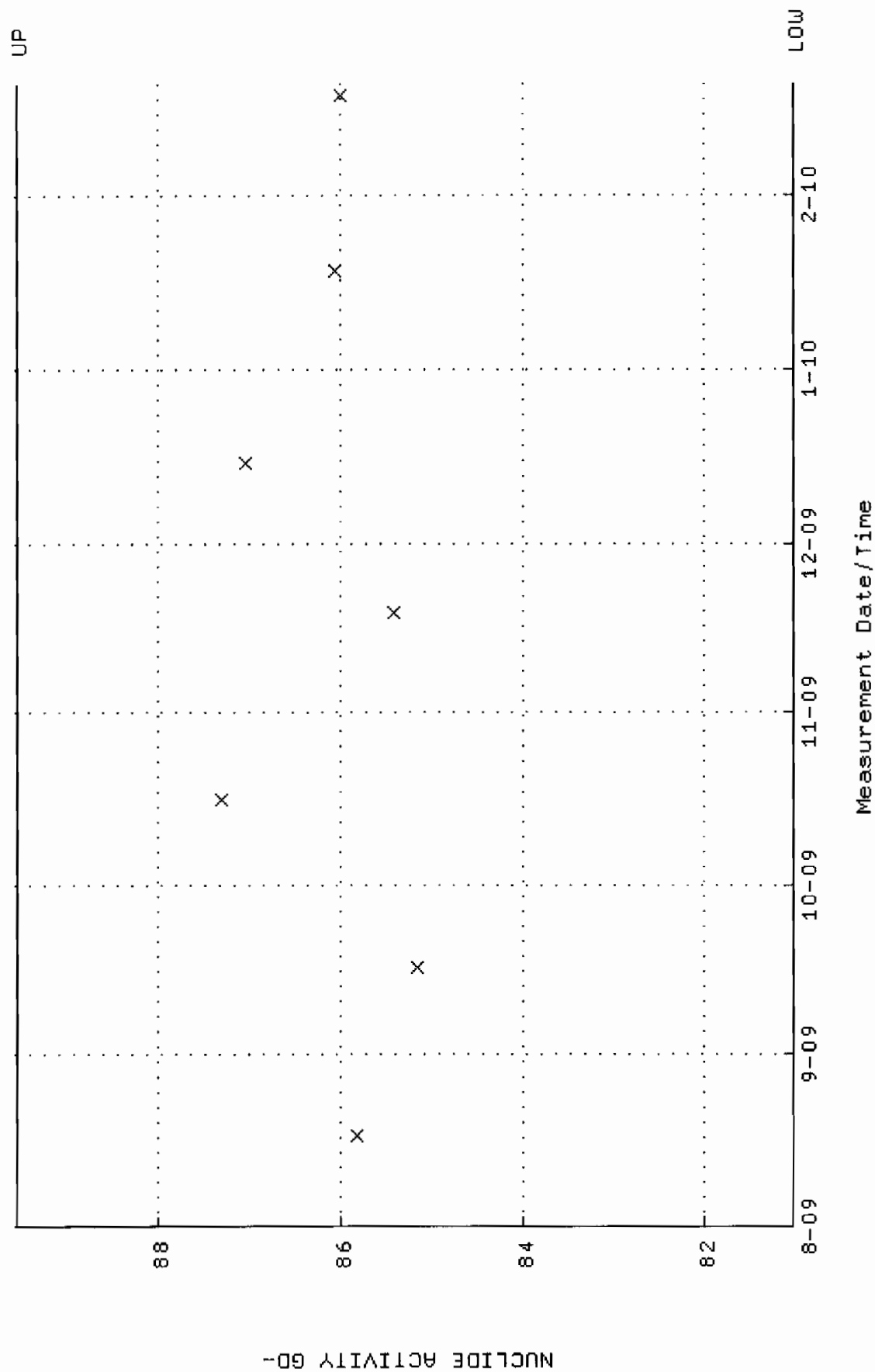
QA filename : DKA100:[ENV_ALPHA.QA.B]B141.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:00 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



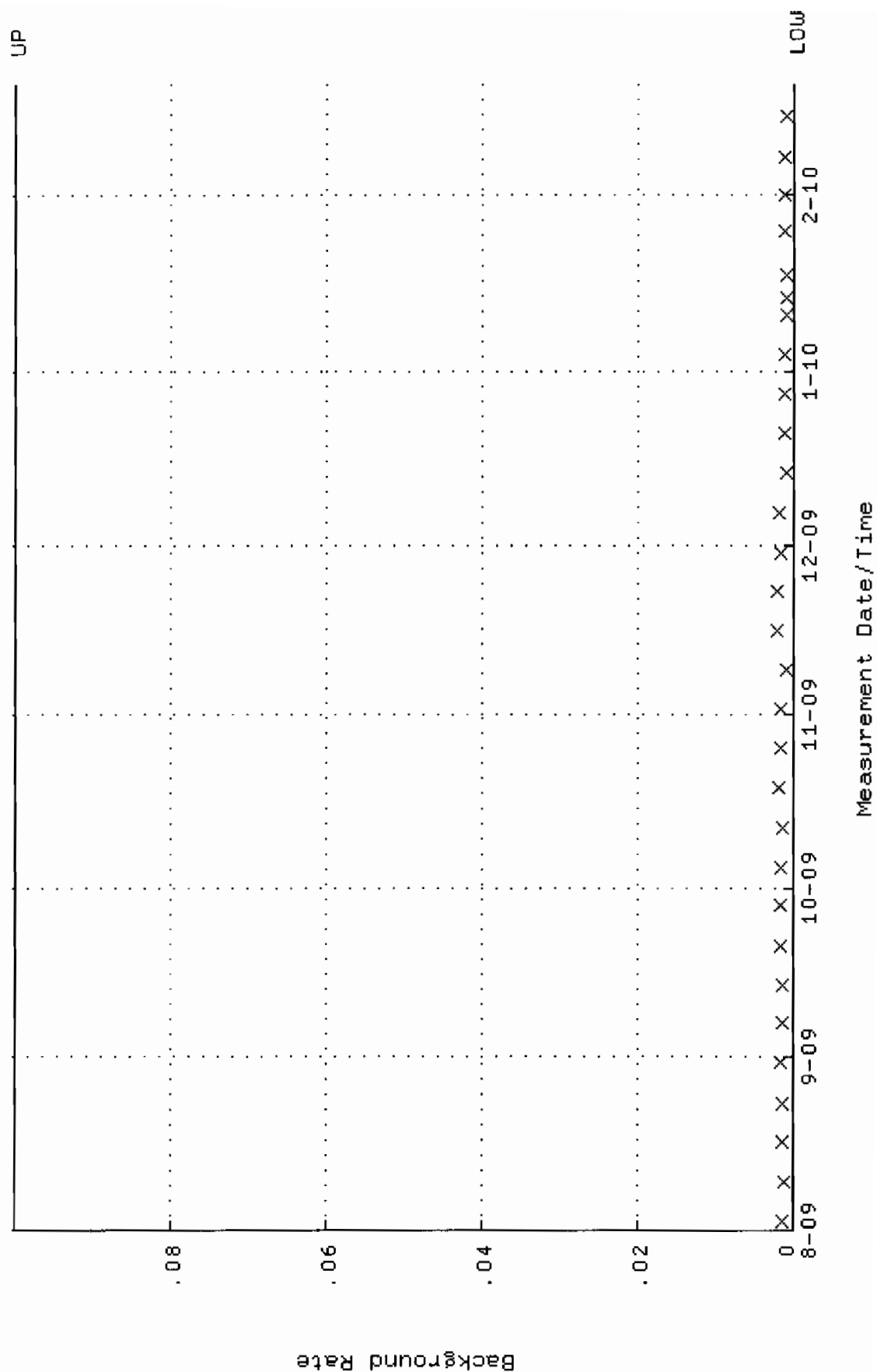
QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:21 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.252182 through 0.272182



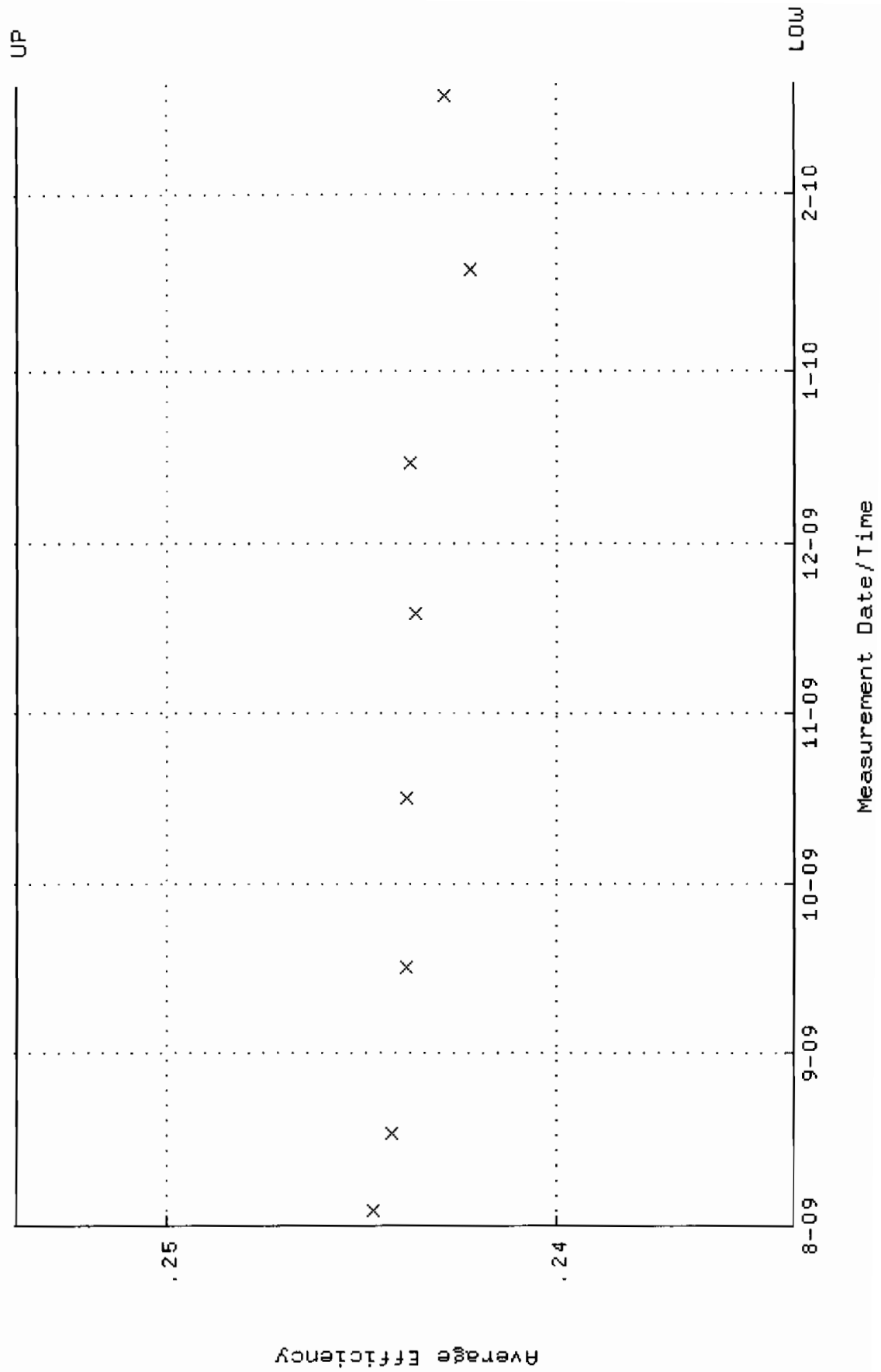
QA filename : DKA100:[ENV_ALPHA.QA.W]w142.QAF;2
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:21 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 81.0245 through 89.5533



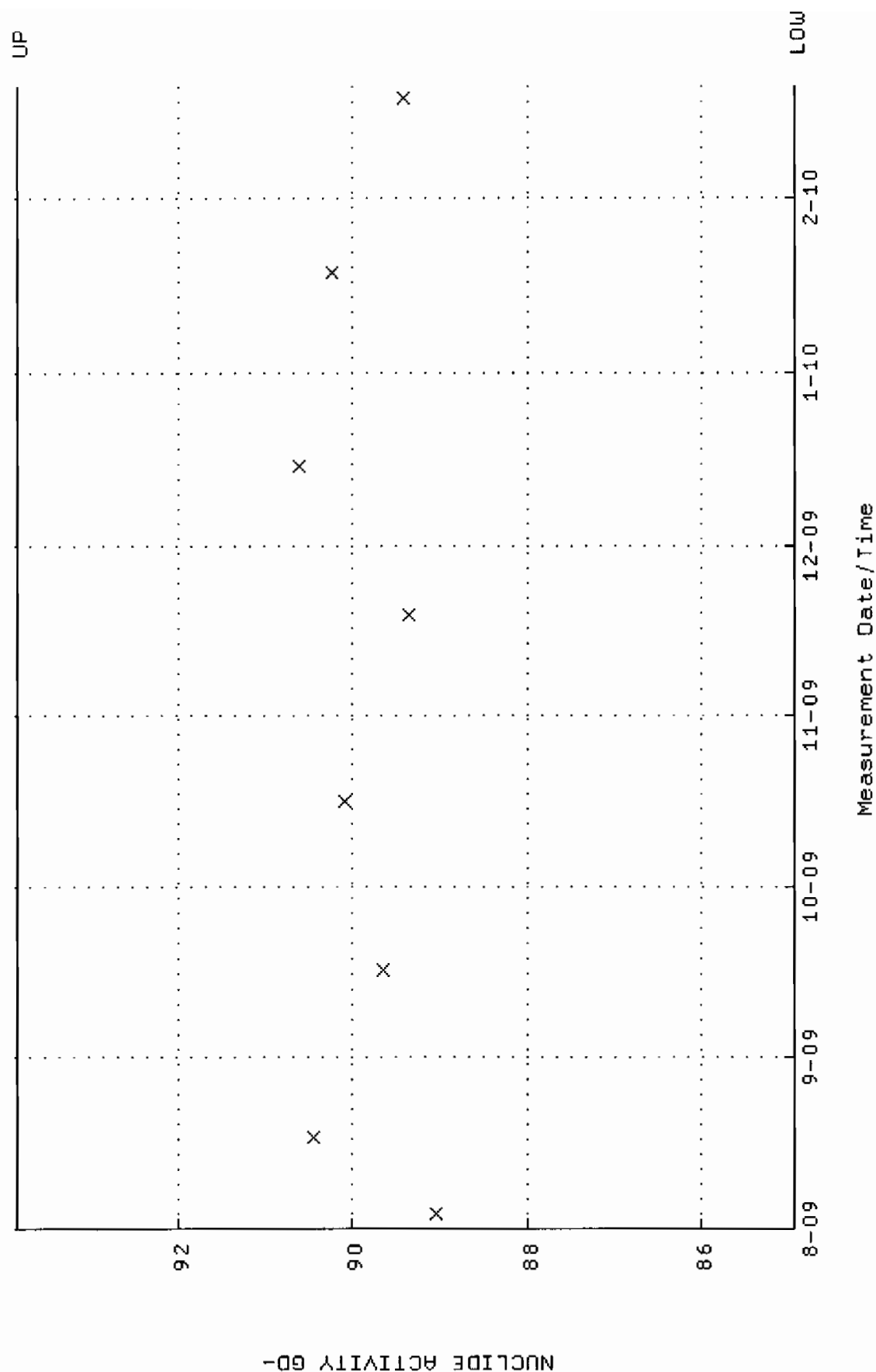
QA filename : DKA100:[ENV_ALPHA.QA.B]B142.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:04 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



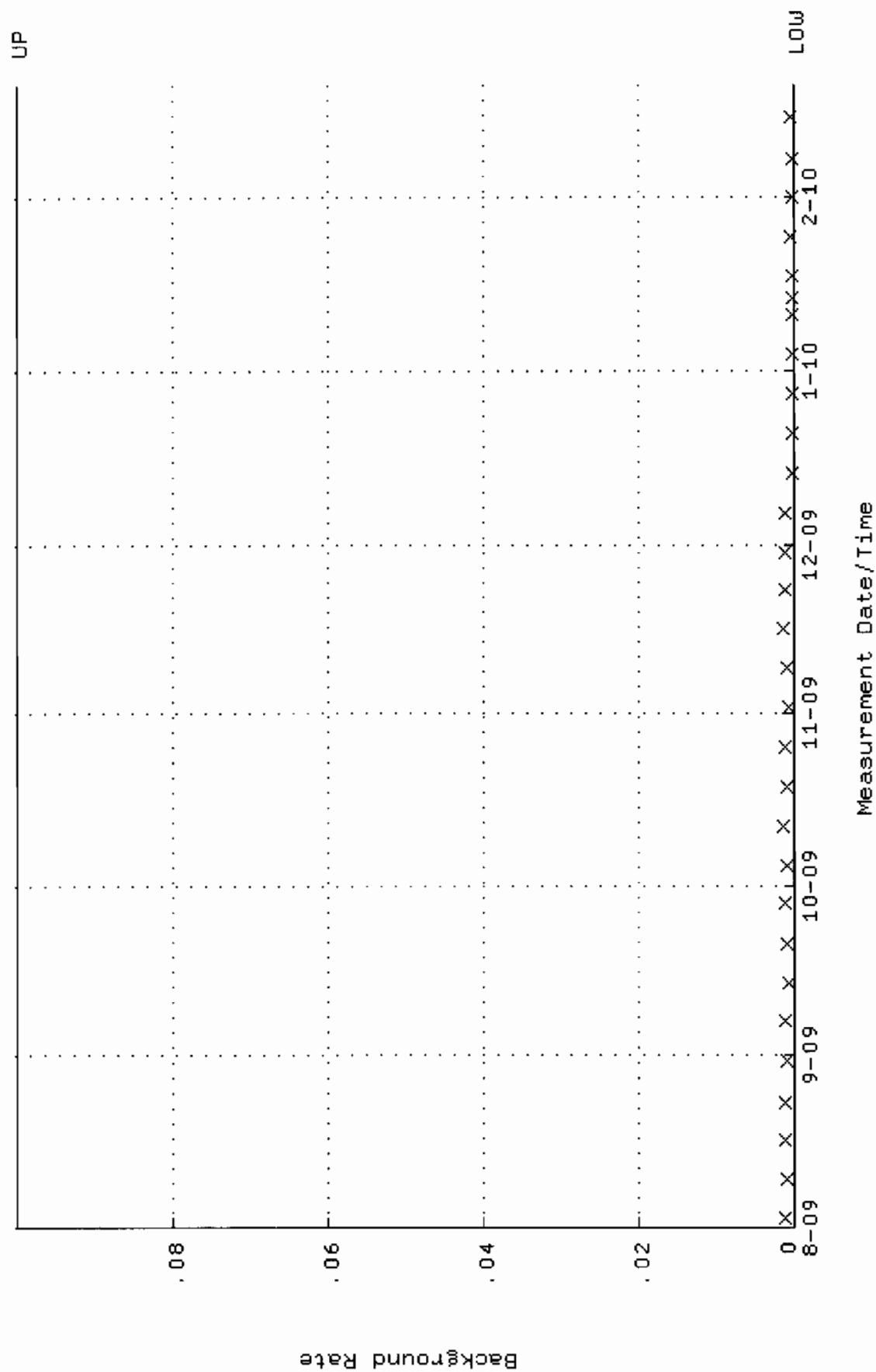
QA filename : DKA100:[ENV_ALPHA.QA.W]W143.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 15:01:06 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.233879 through 0.253879



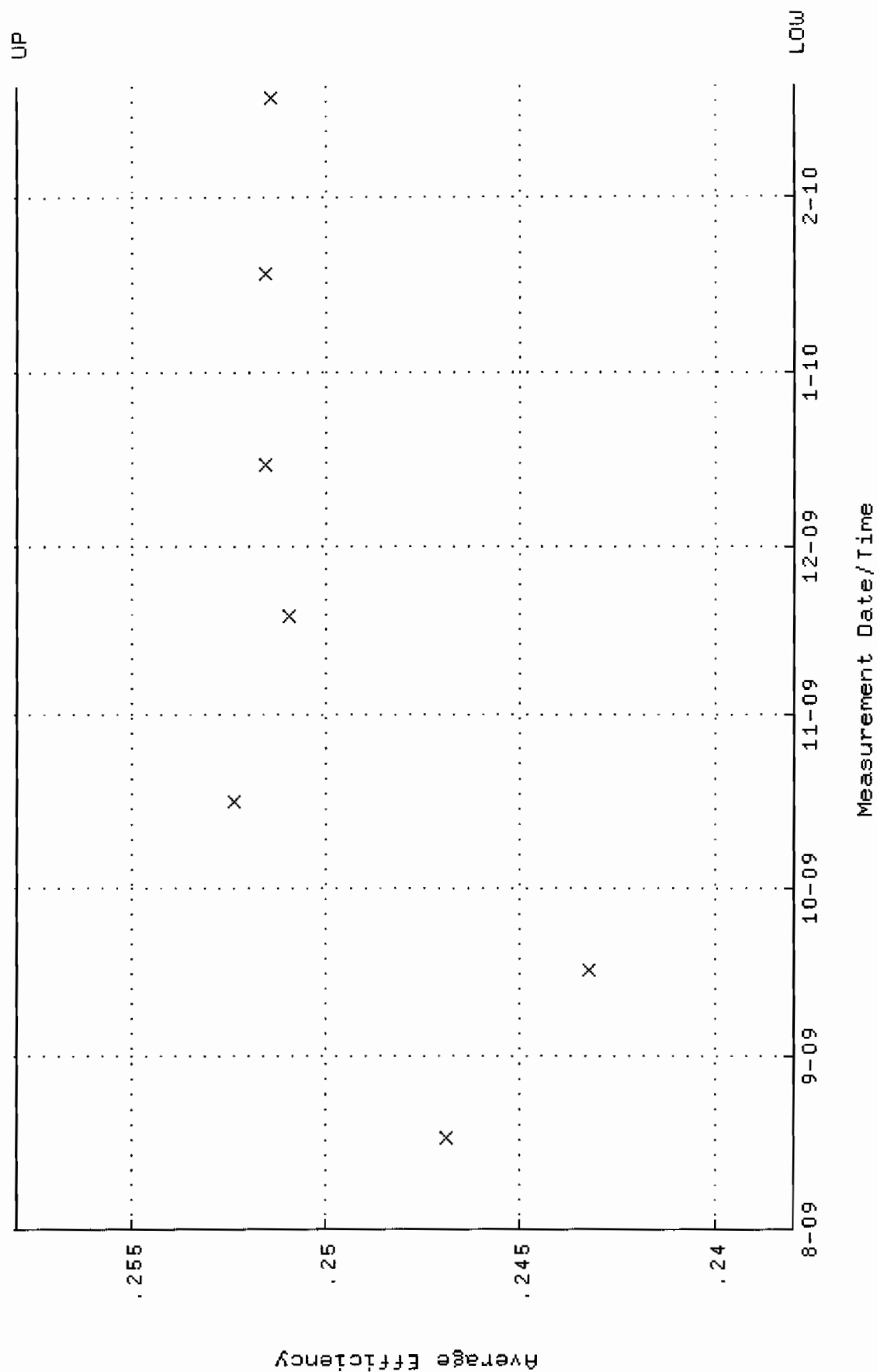
QA filename : DKA100:[ENV_ALPHA.QA.W]W143.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 15:01:06 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.9200 through 93.8590



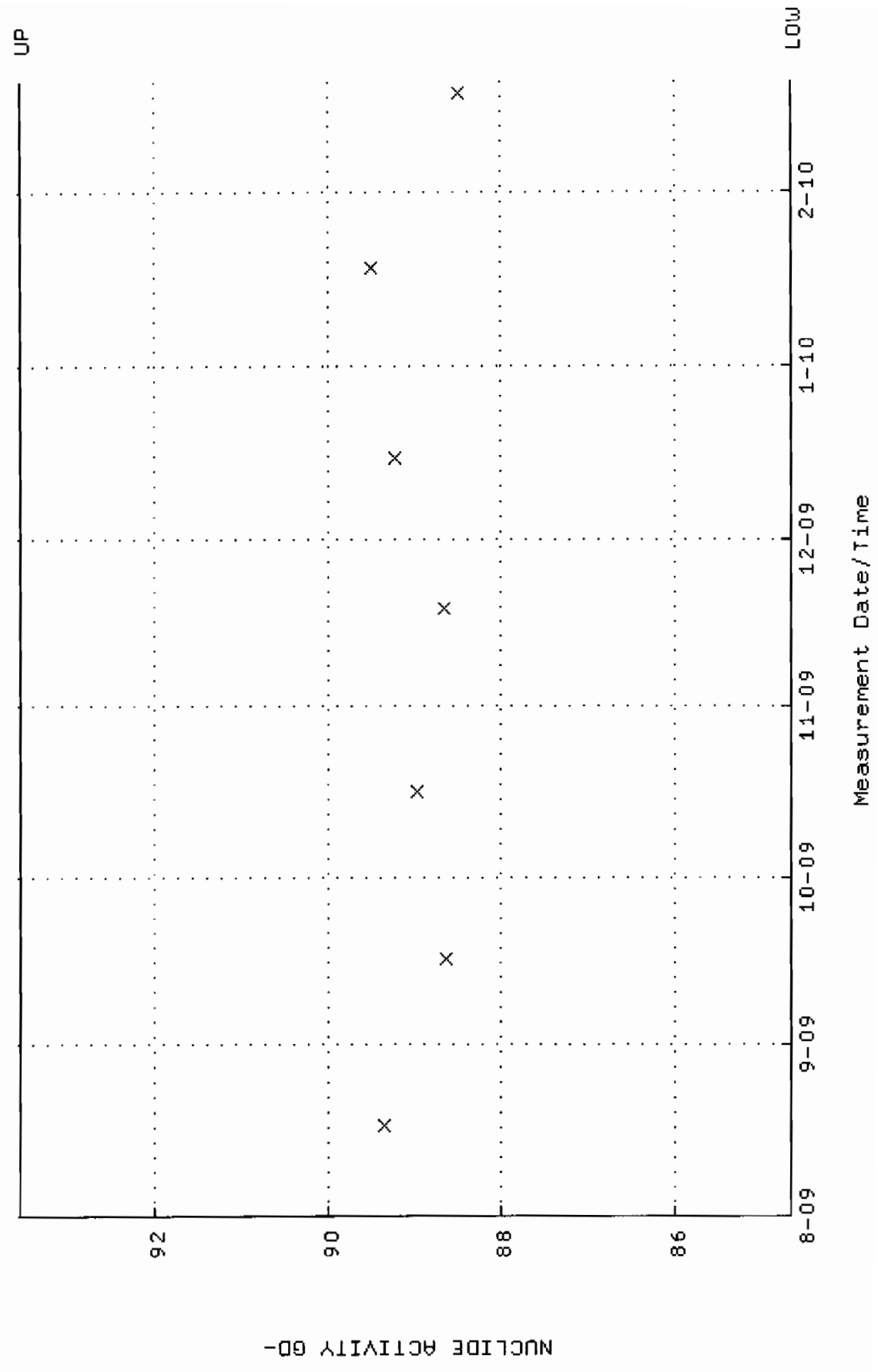
QA filename : DKA100:[ENV_ALPHA.QA.B]B143.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:08 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



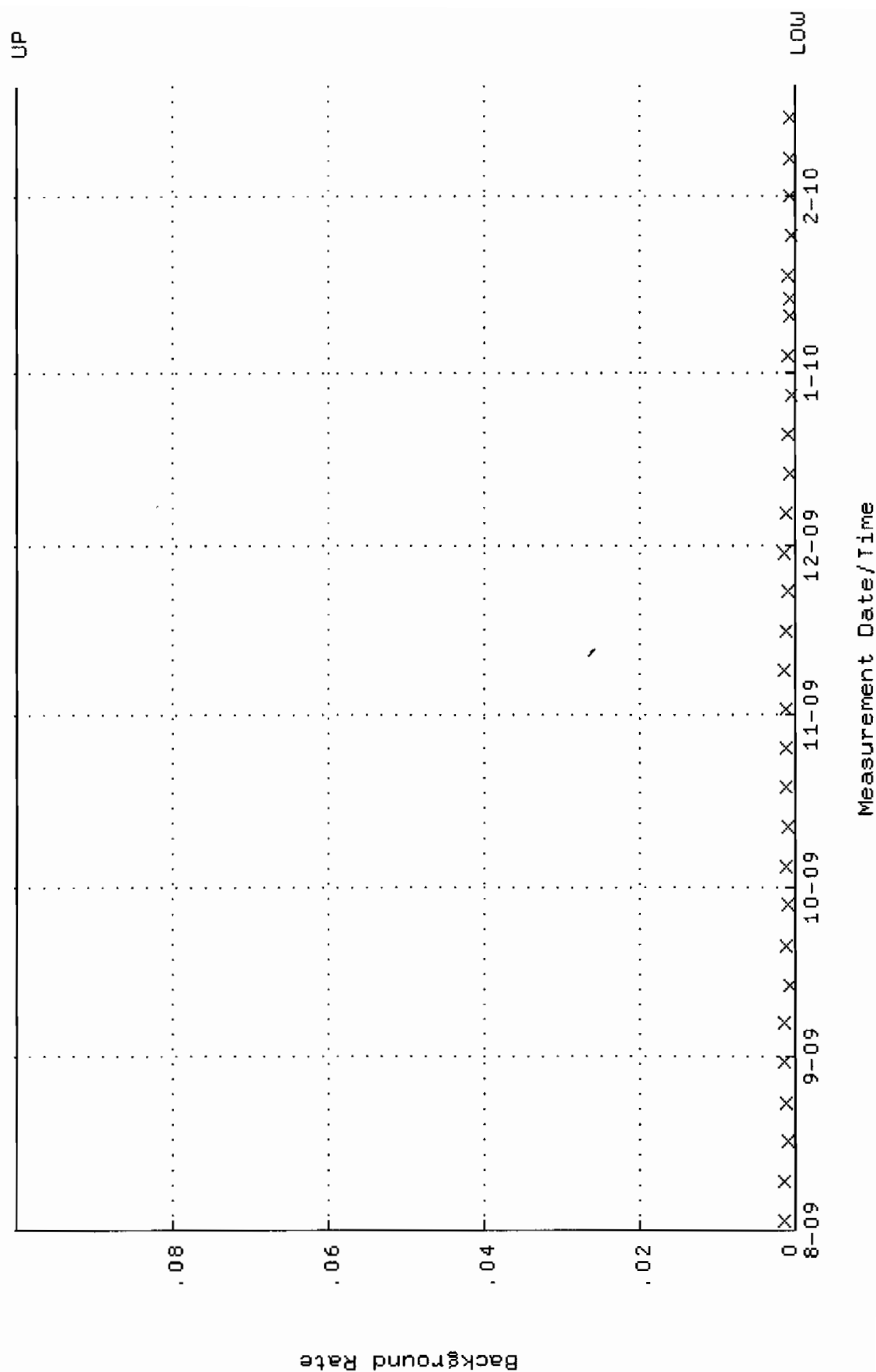
QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:42 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.237963 through 0.257963



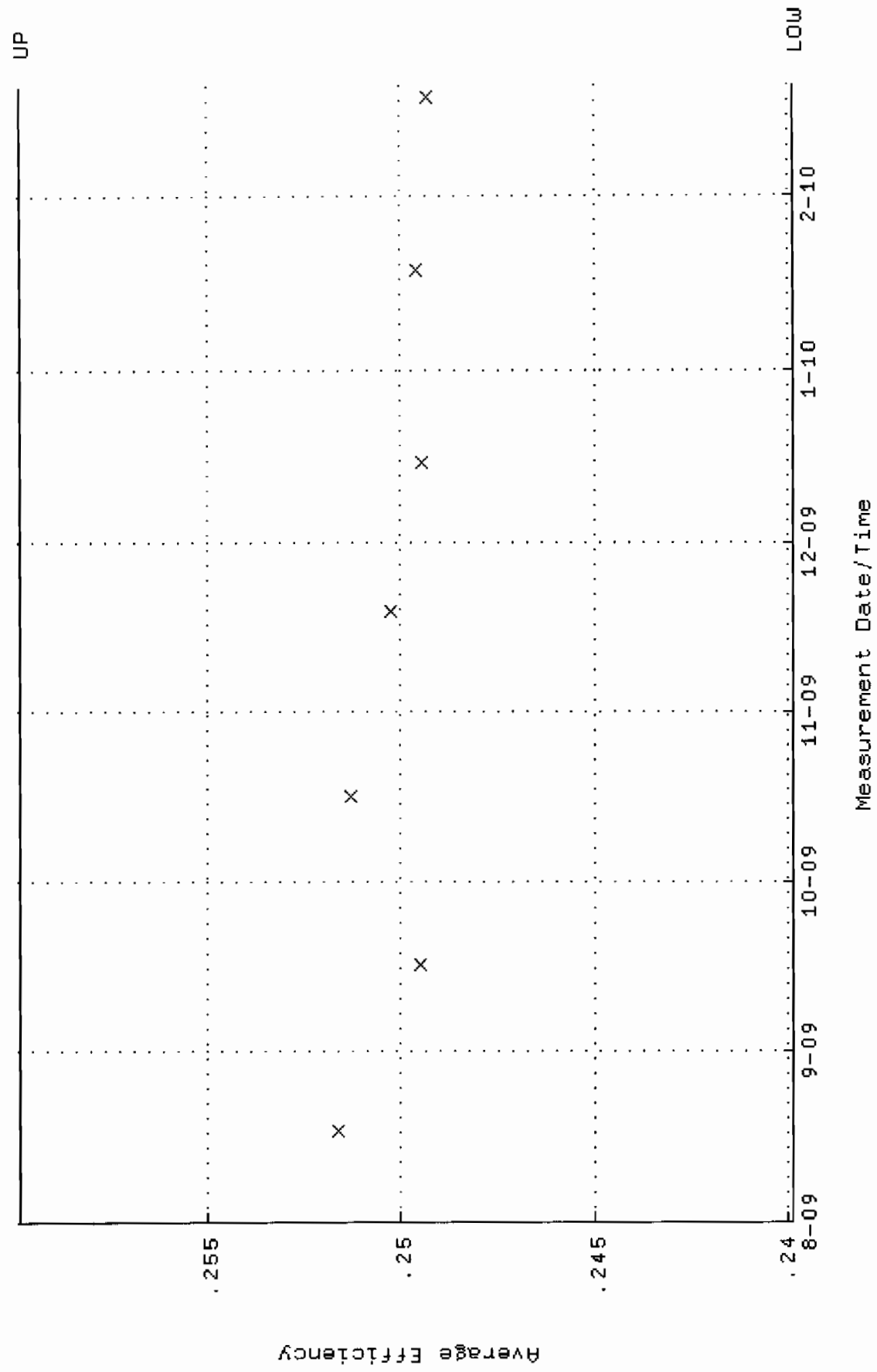
QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-AUG-2009 10:06:42 through 20-FEB-2010 12:00:00
Lower/Upper Lmts: 84.6507 through 93.5613



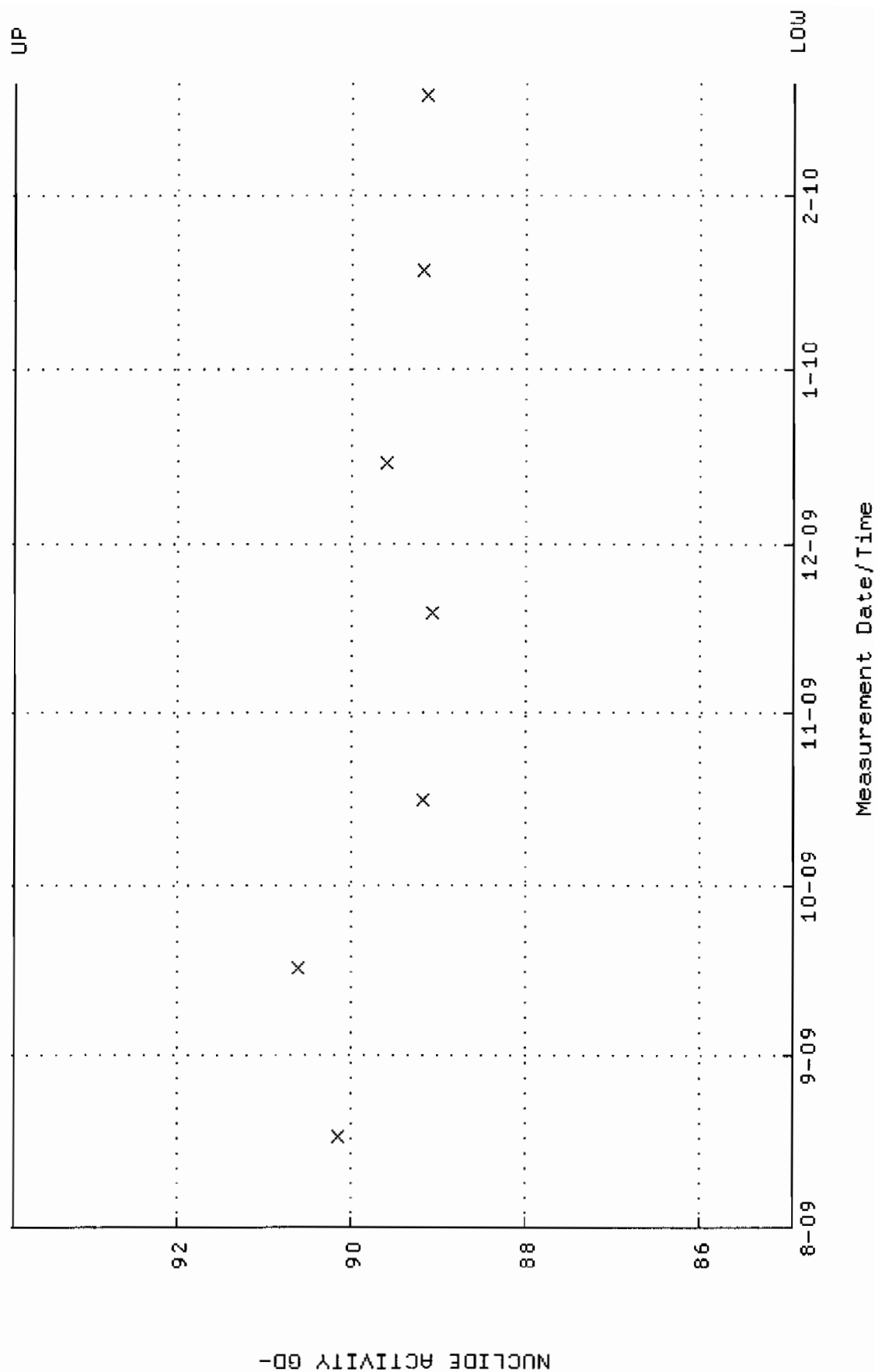
QA filename : DKA100:[ENV_ALPHA.QA.B]B144.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:12 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



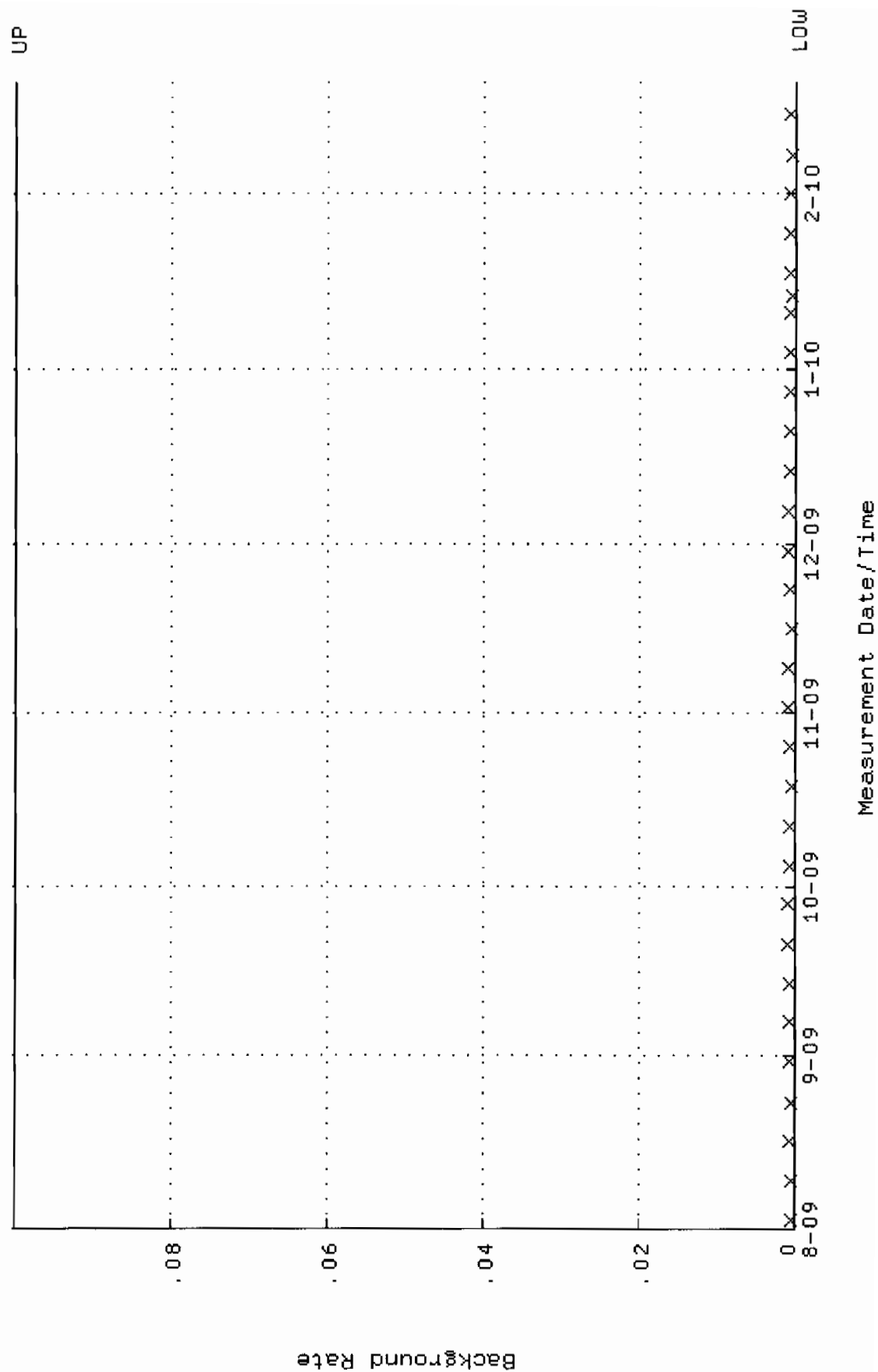
QA filename : DKA100:[ENV_ALPHA.QA.W]U145.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:50 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.239850 through 0.259850



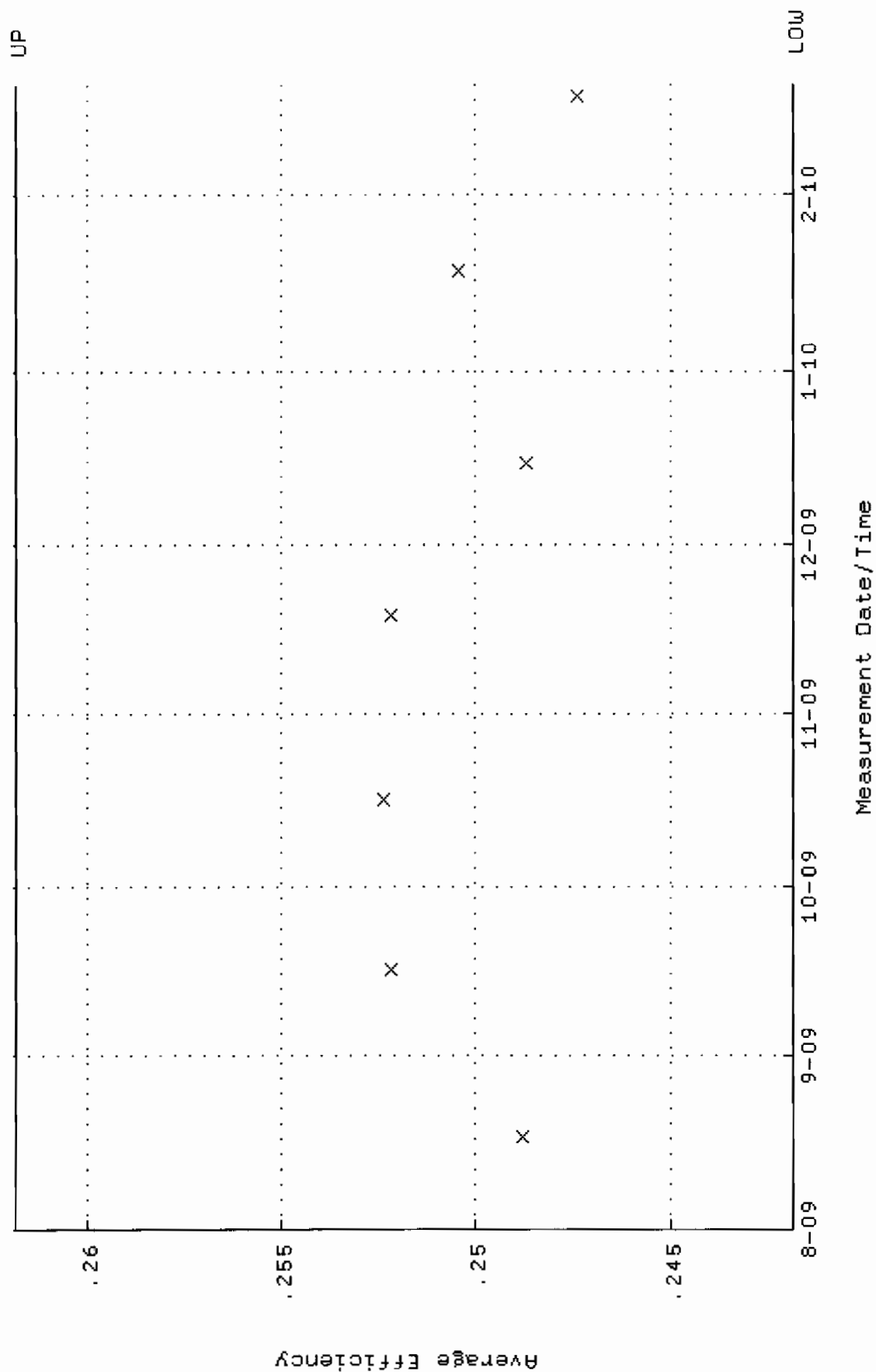
QA filename : DKA100:[ENV_ALPHA.QA.W]W145.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:50 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.9354 through 93.8760



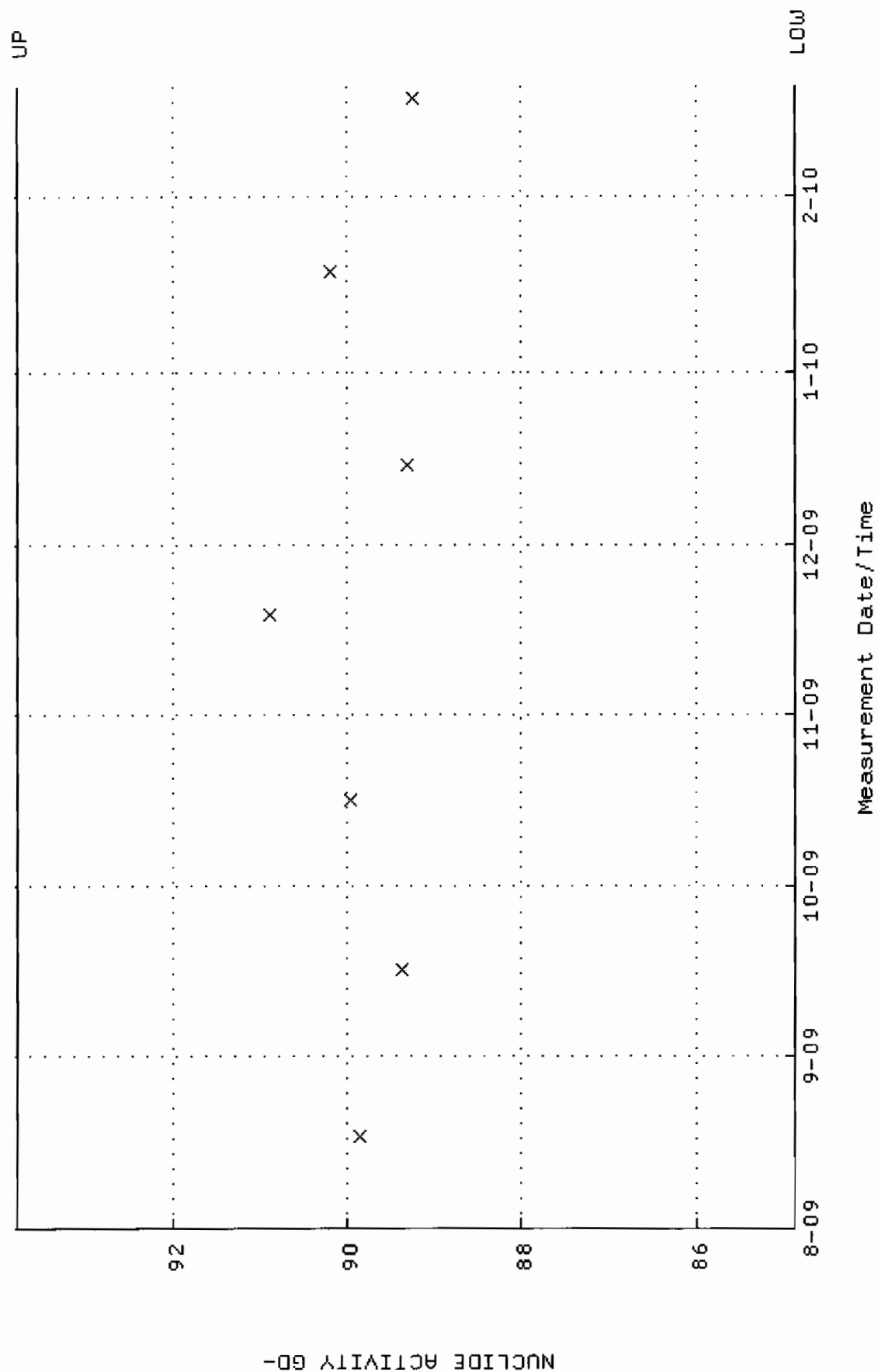
QA filename : DKA100:[ENV_ALPHA.QA.B]B145.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:16 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



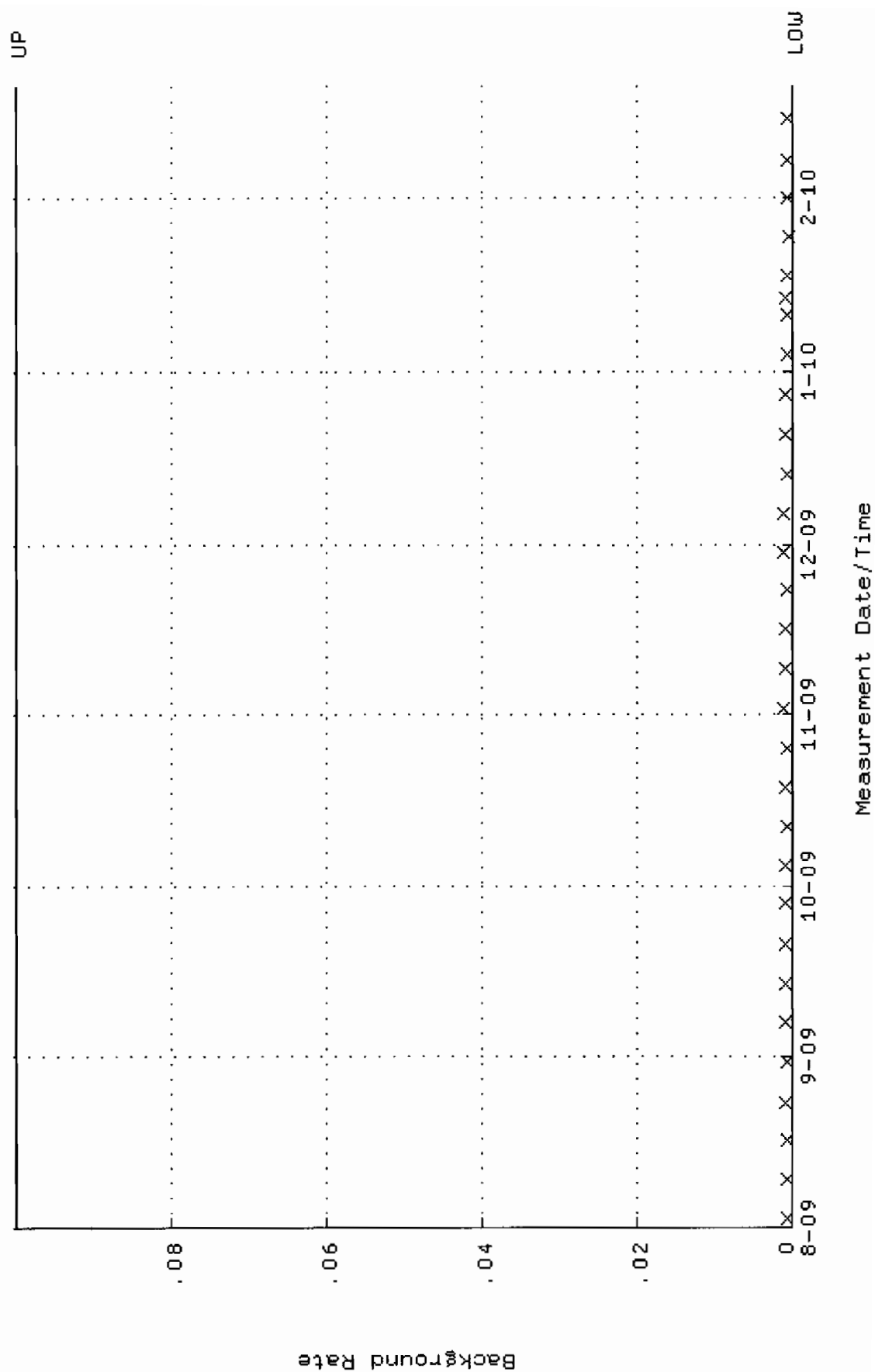
QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:56 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.241831 through 0.261831



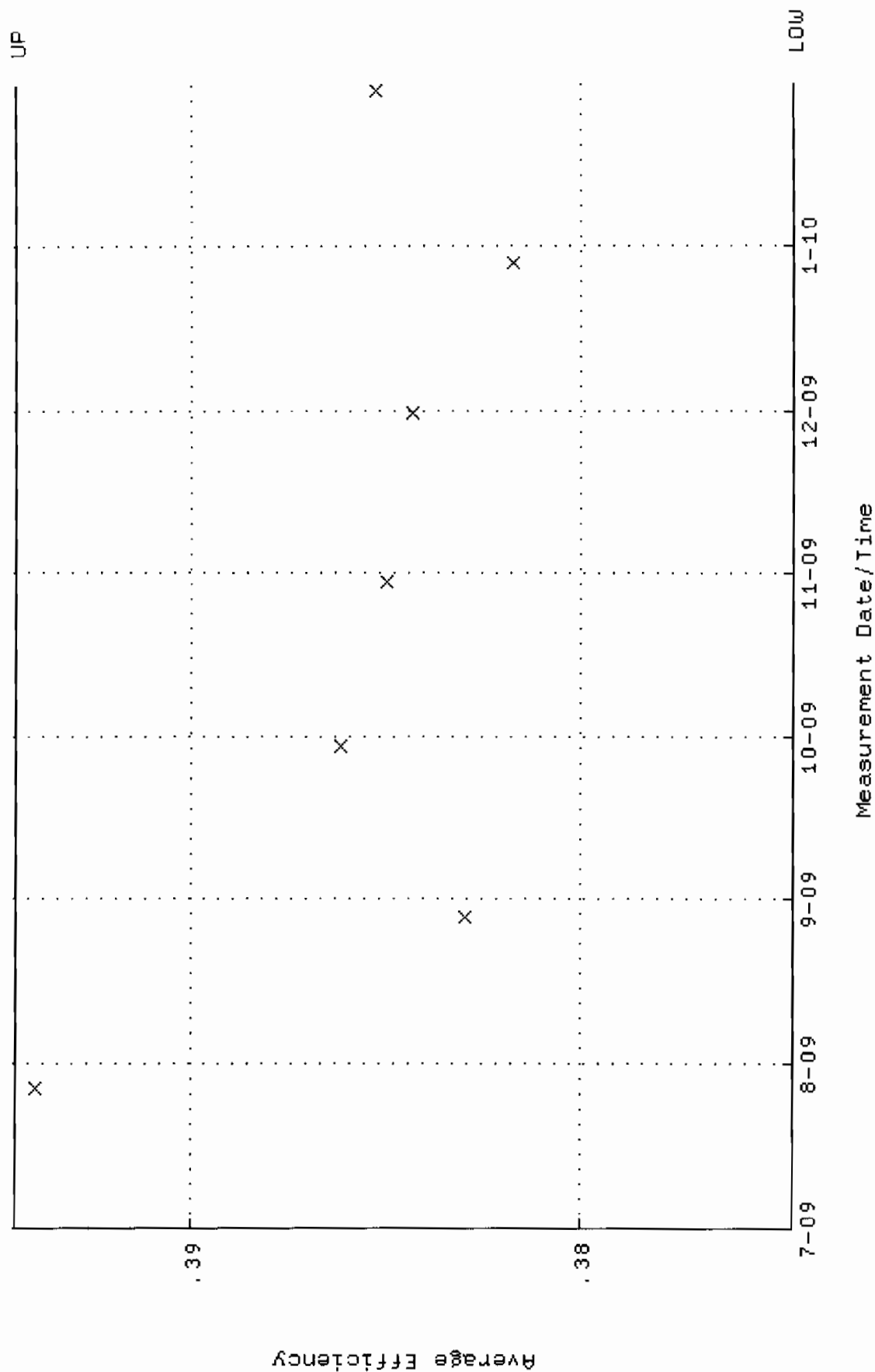
QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:56 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.8578 through 93.7902



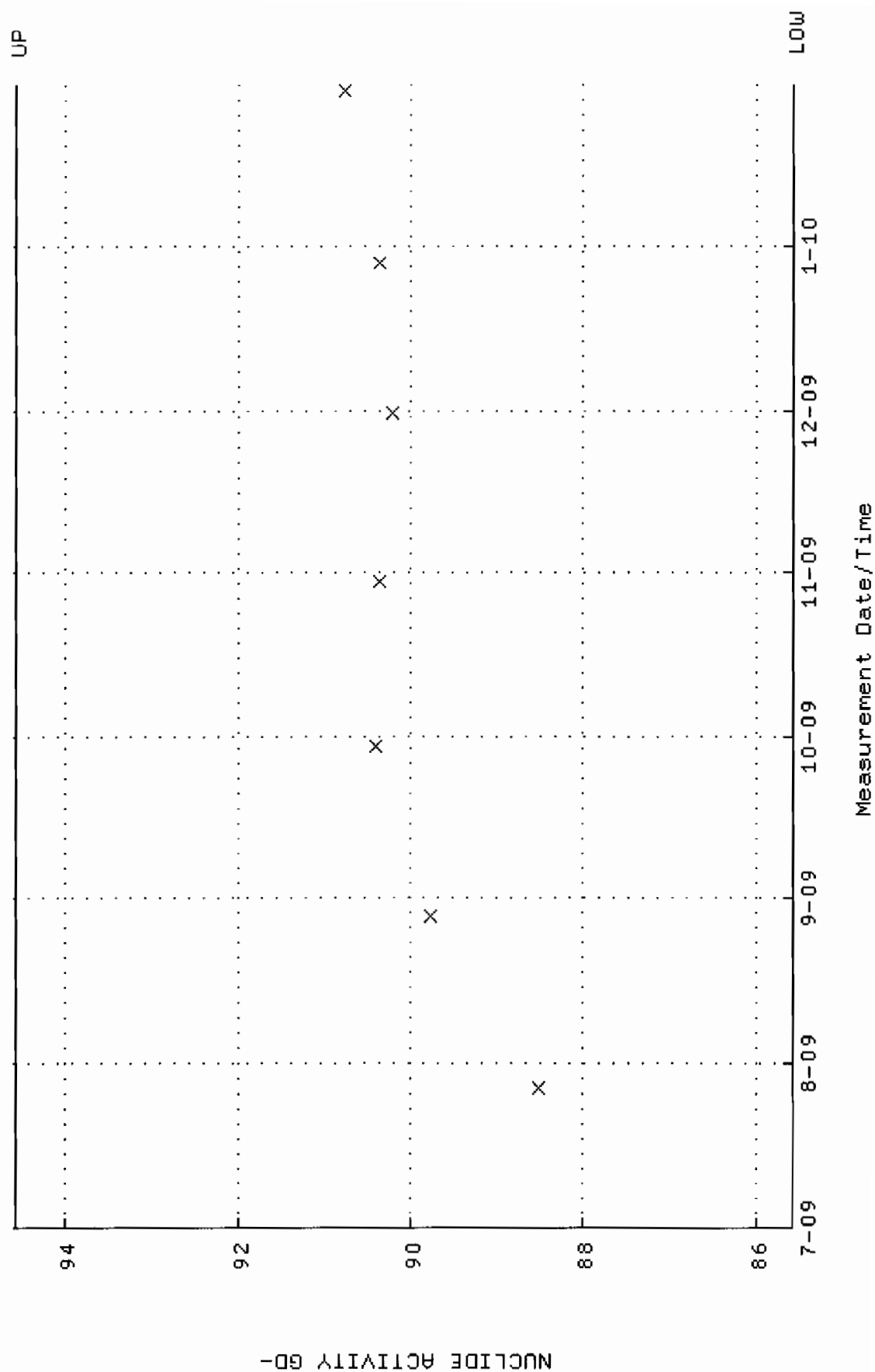
QA filename : DKA100:[ENV_ALPHA.QA.B]B146.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:20 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



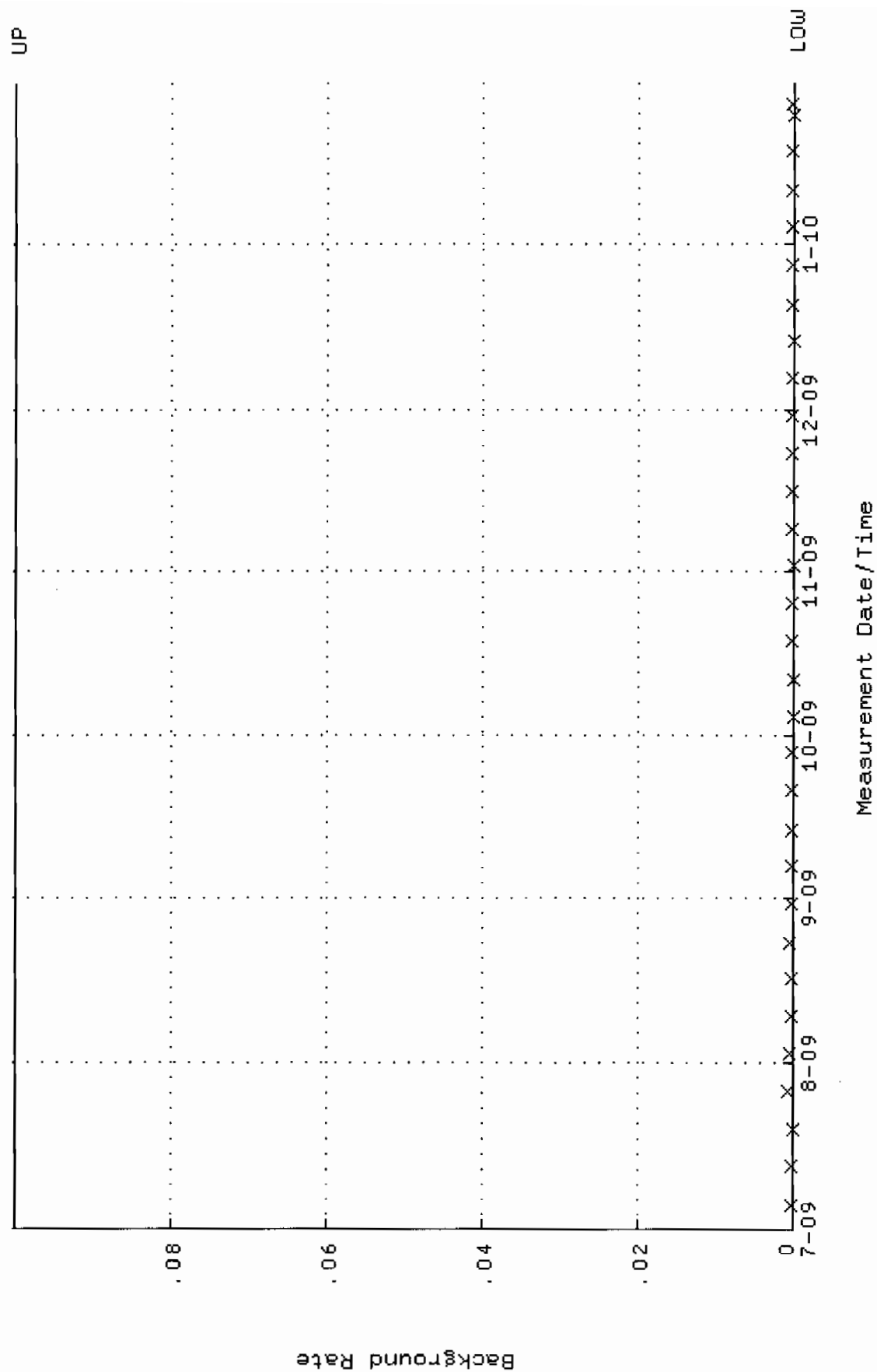
QA filename : DKA100:[ENV_ALPHA.QA.W]W210.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:47:19 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.374526 through 0.394526



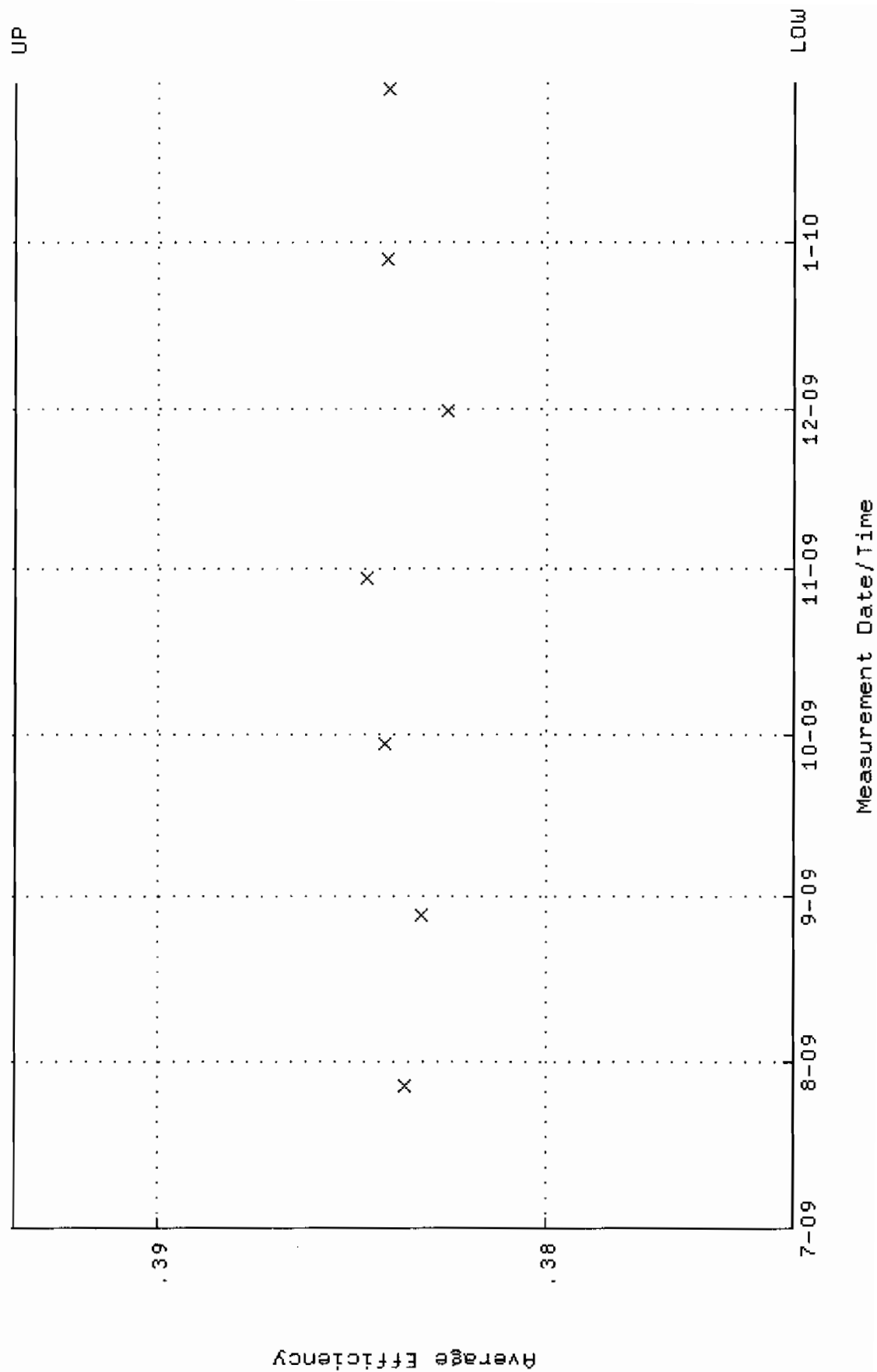
QA filename : DKA100:[ENV_ALPHA.QA.W]W210.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:47:19 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 85.5688 through 94.5760



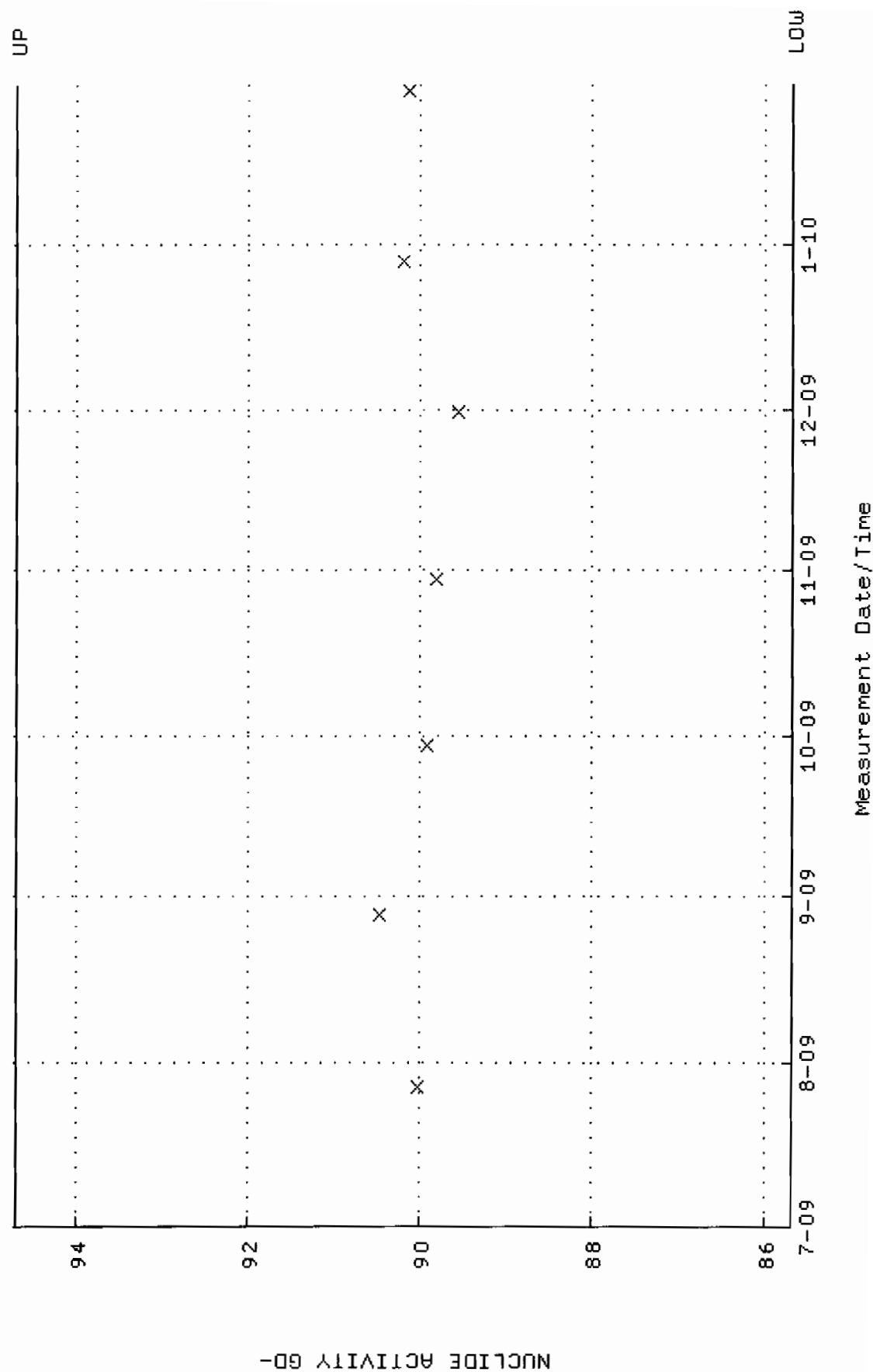
QA filename : DKA100:[ENV_ALPHA.QA.B]B210.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:03:24 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



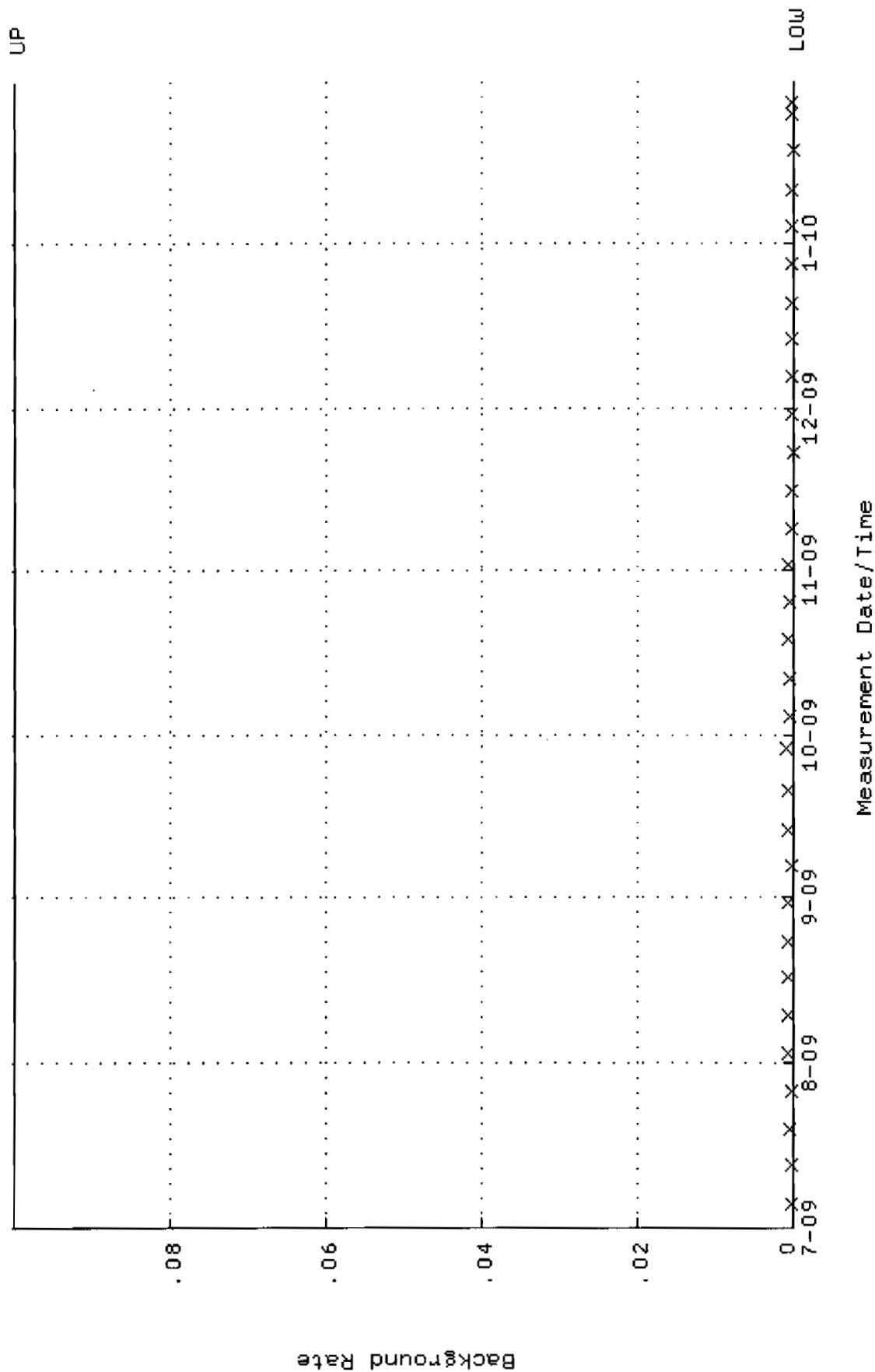
QA filename : DKA100:[ENV_ALPHA.QA.W]W214.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:47:45 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.373649 through 0.393649



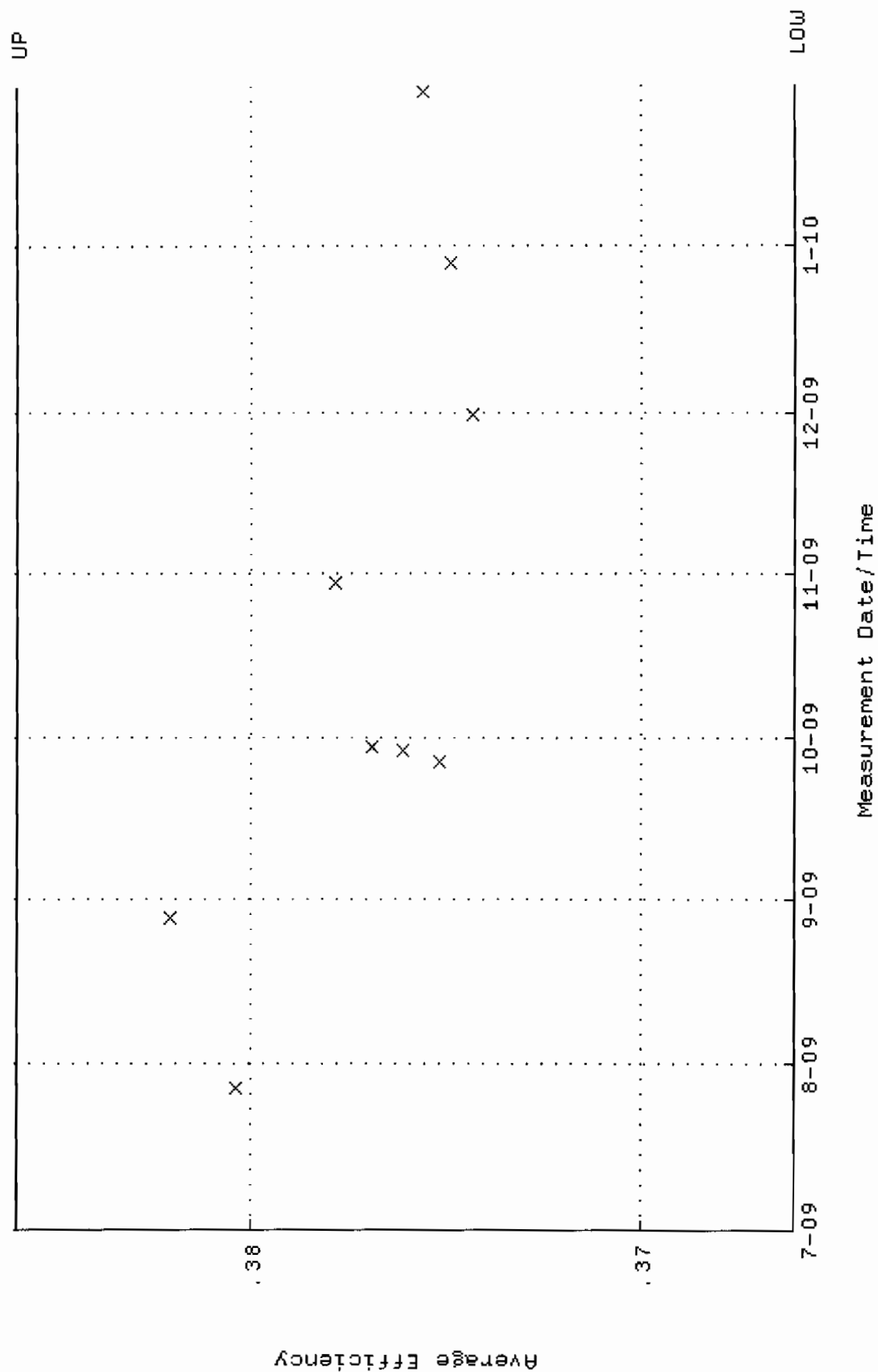
QA filename : DKA100:[ENV_ALPHA.QA.W]W214.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:47:45 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 85.6739 through 94.6921



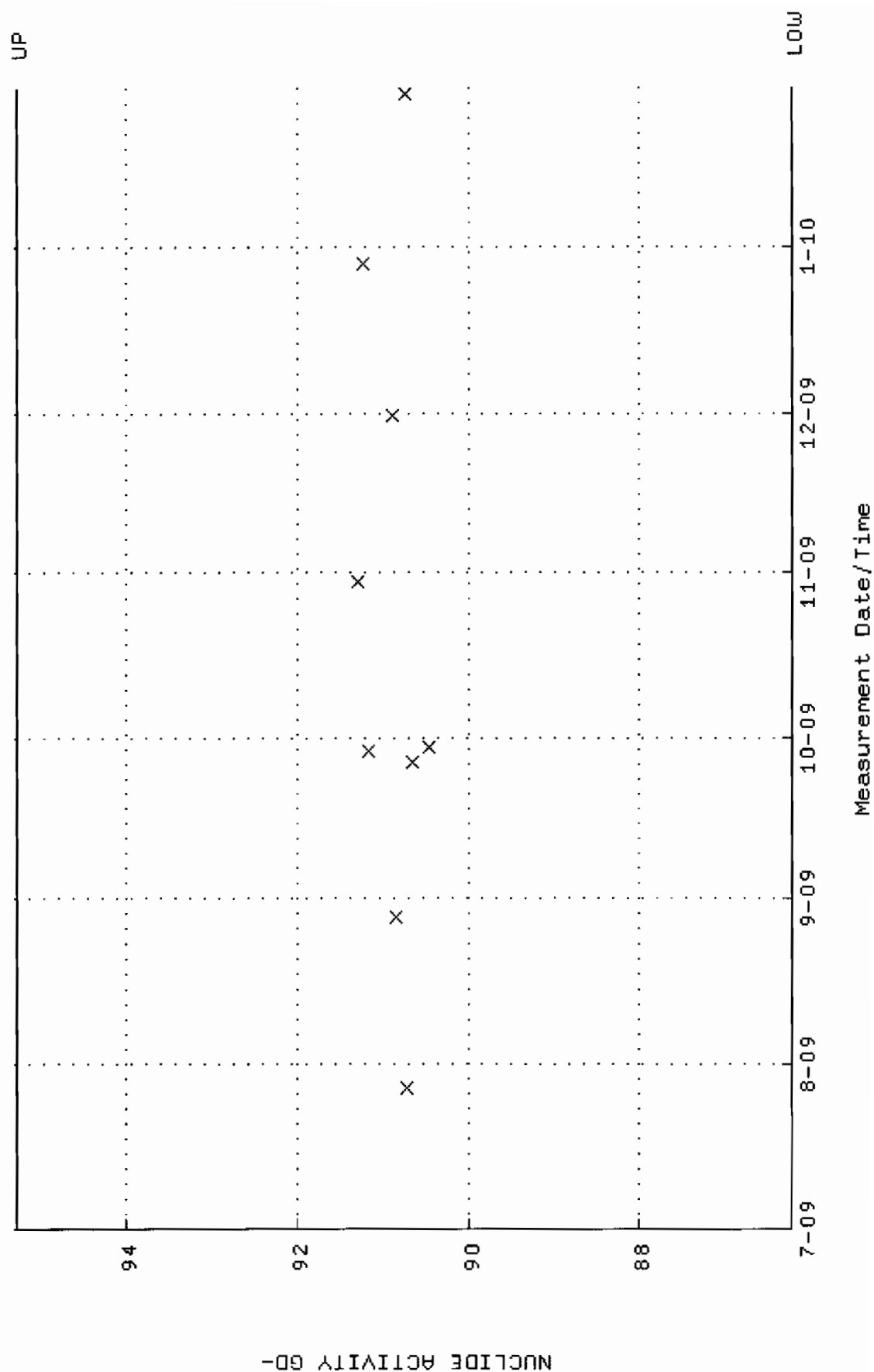
QA filename : DKA100:[ENV_ALPHA.QA.B]B214.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:03:43 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



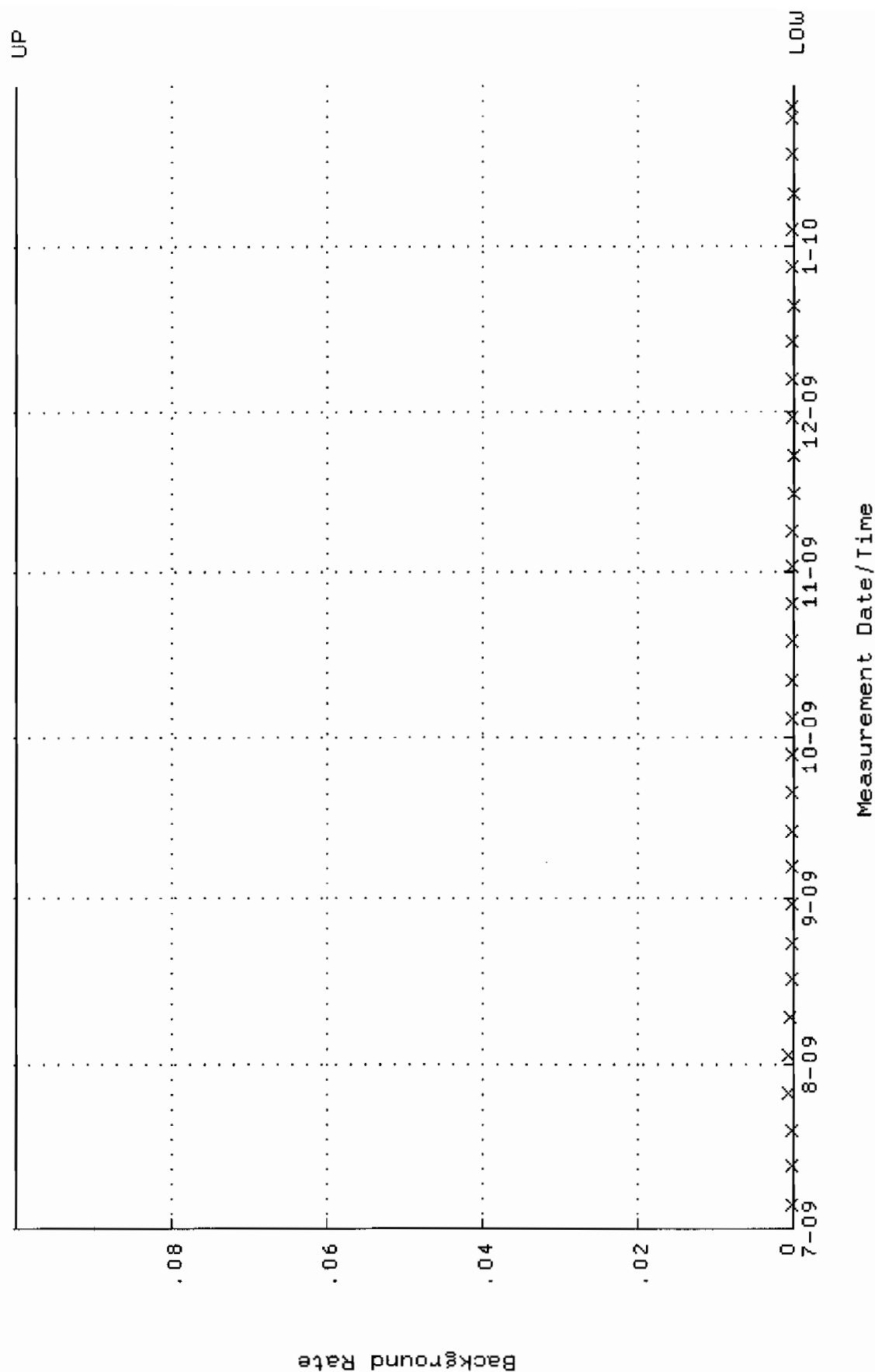
QA filename : DKA100:[ENV_ALPHA.QA.W]W215.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:47:51 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.366025 through 0.386025



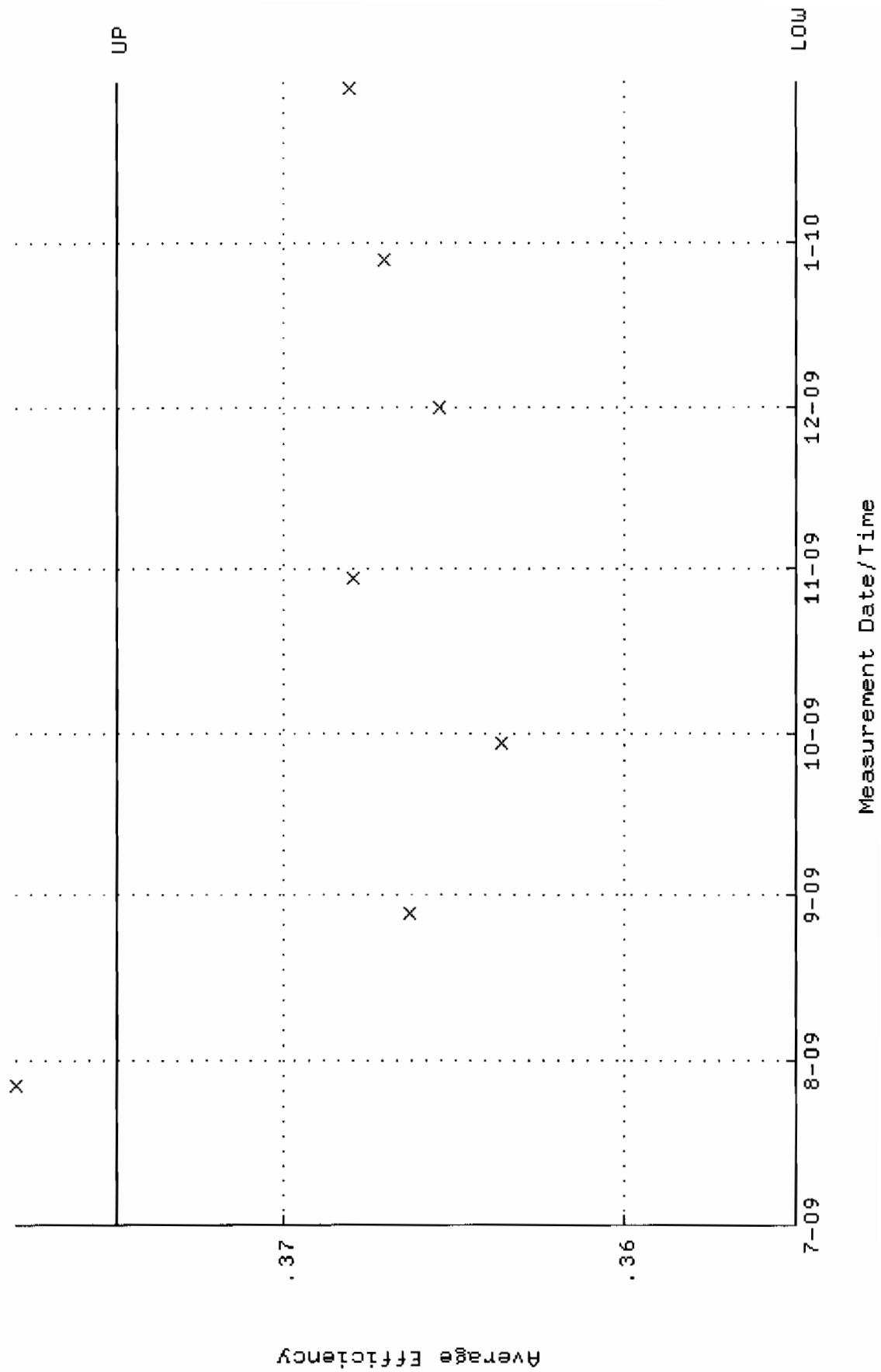
QA filename : DKA100:[ENV_ALPHA.QA.W]W215.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:47:51 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 86.2153 through 95.2905



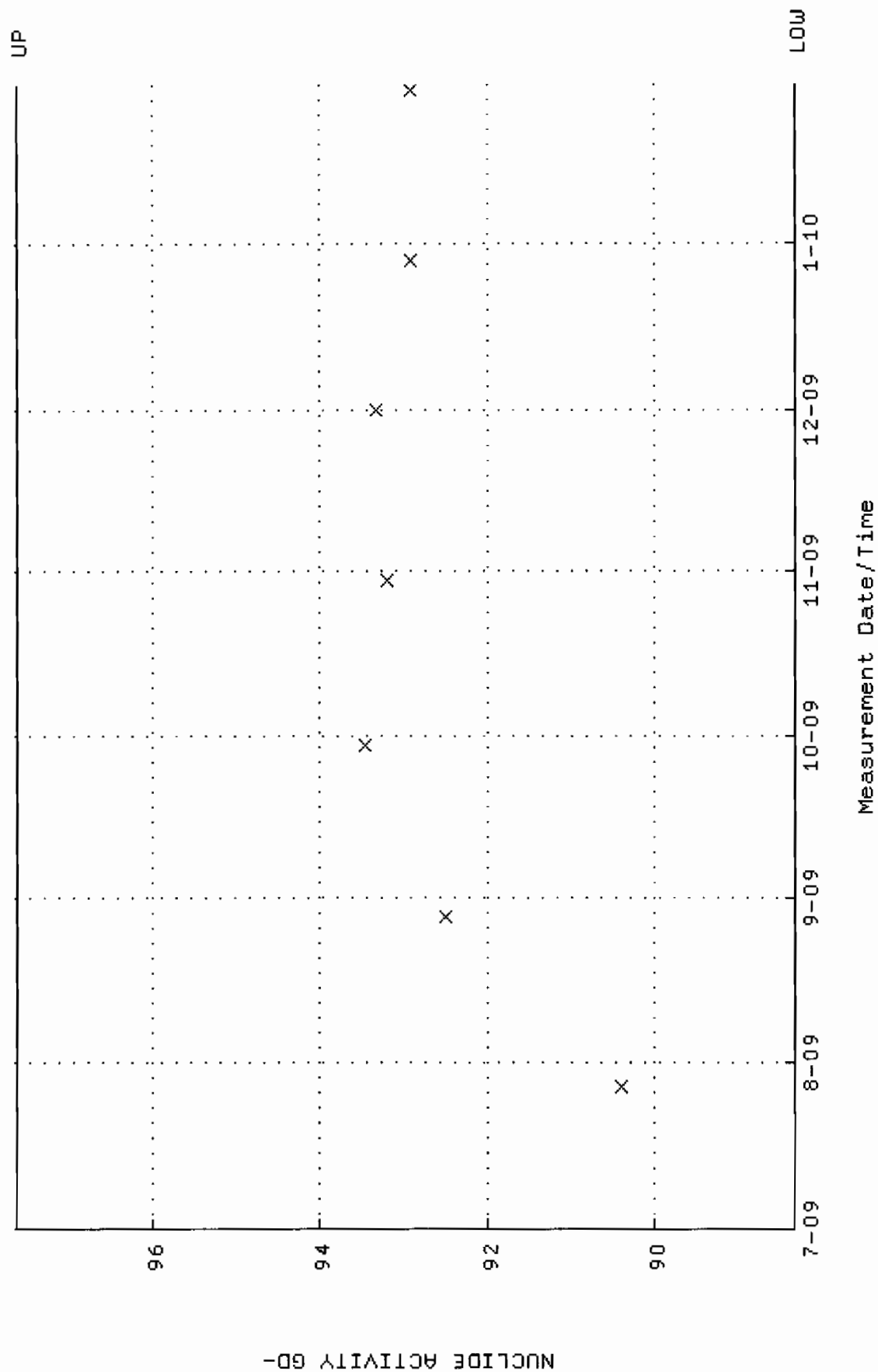
QA filename : DKA100:[ENV_ALPHA.QA.B]B215.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:03:47 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



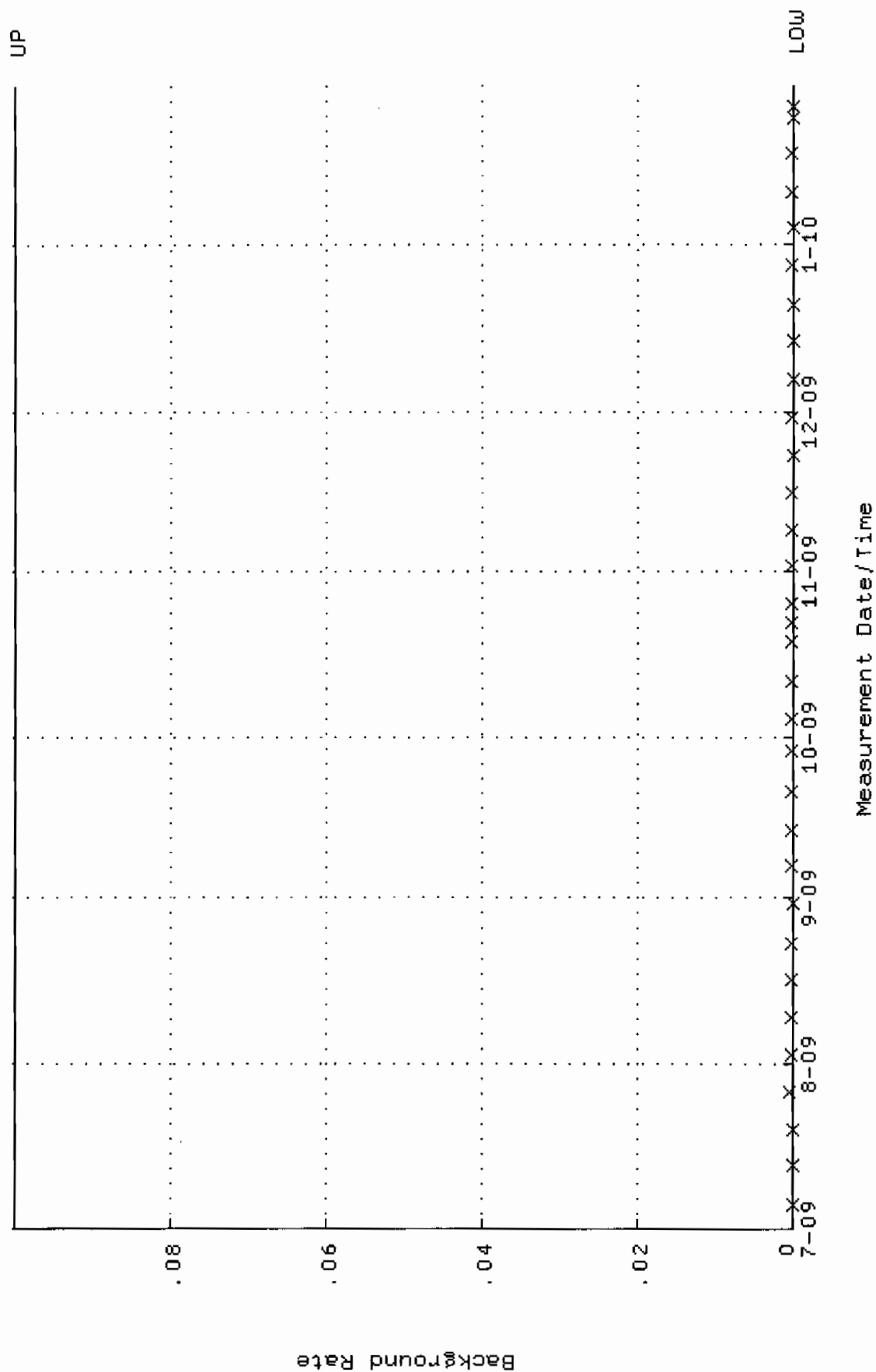
QA filename : DKA100:[ENV_ALPHA.QA.W]W217.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:48:04 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.354934 through 0.374934



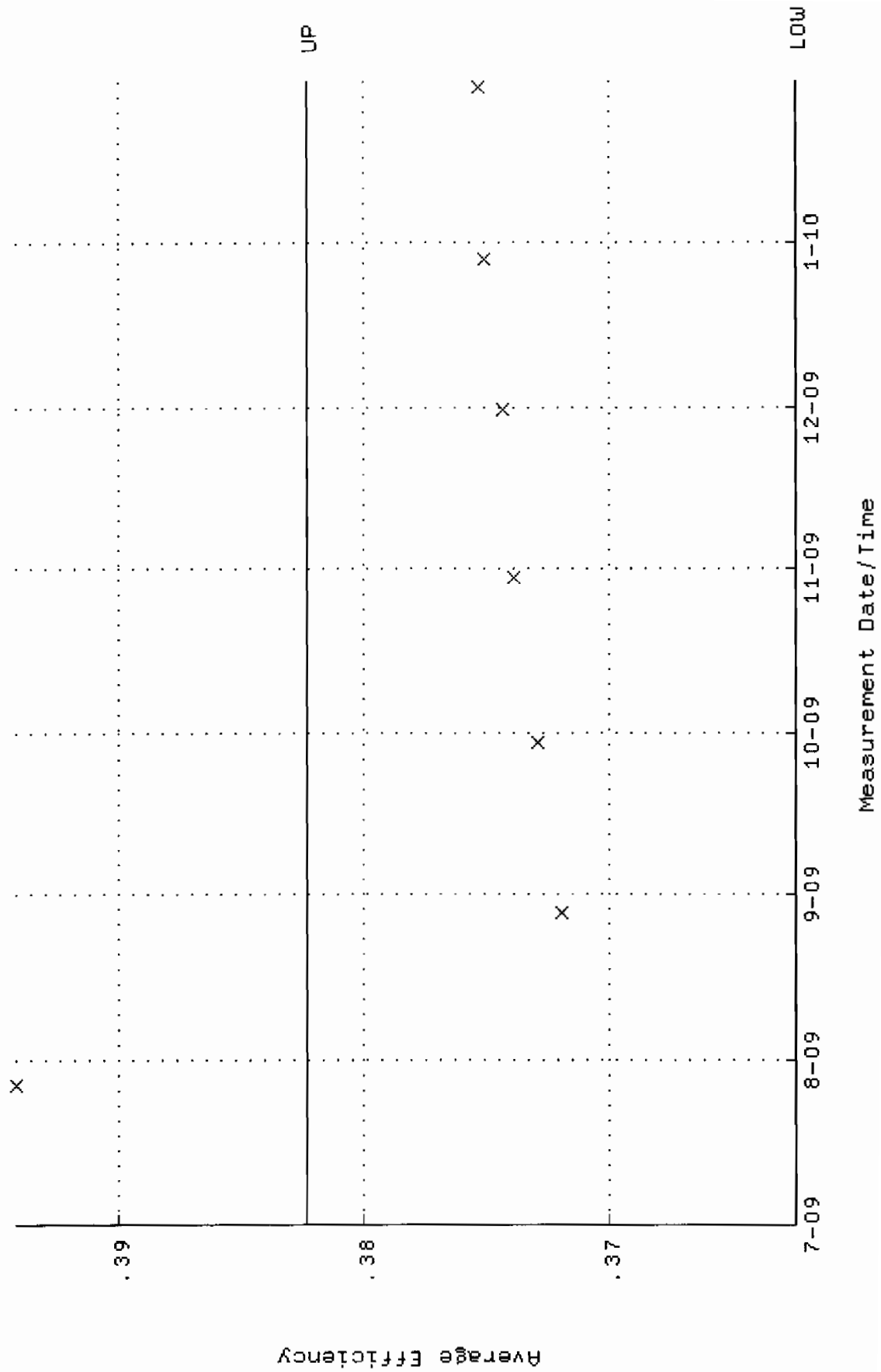
QA filename : DKA100:[ENV_ALPHA.QA.W]W217.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:48:04 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 88.3174 through 97.6140



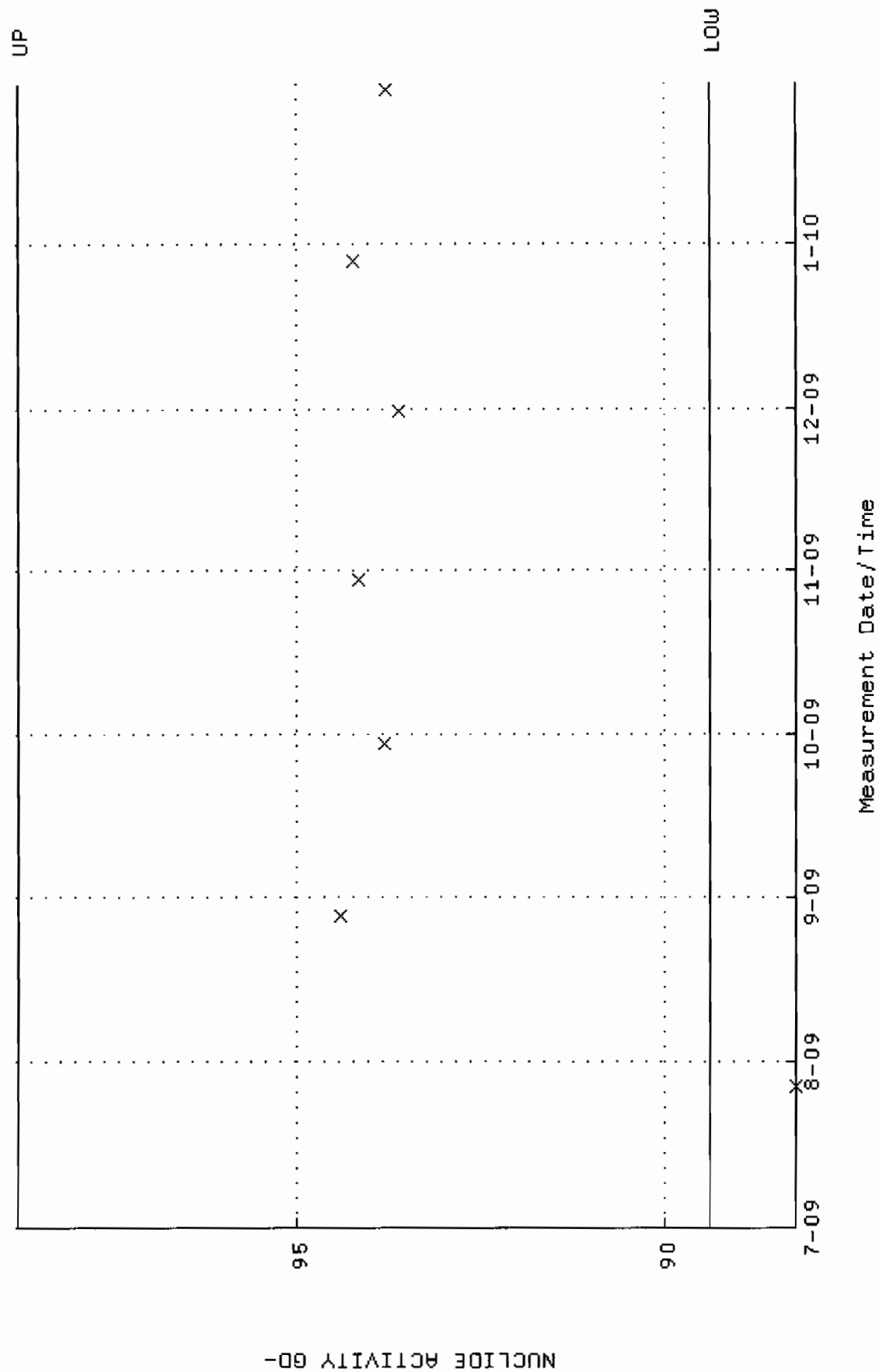
QA filename : DKA100:[ENV_ALPHA.QA.B]B217.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:03:56 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



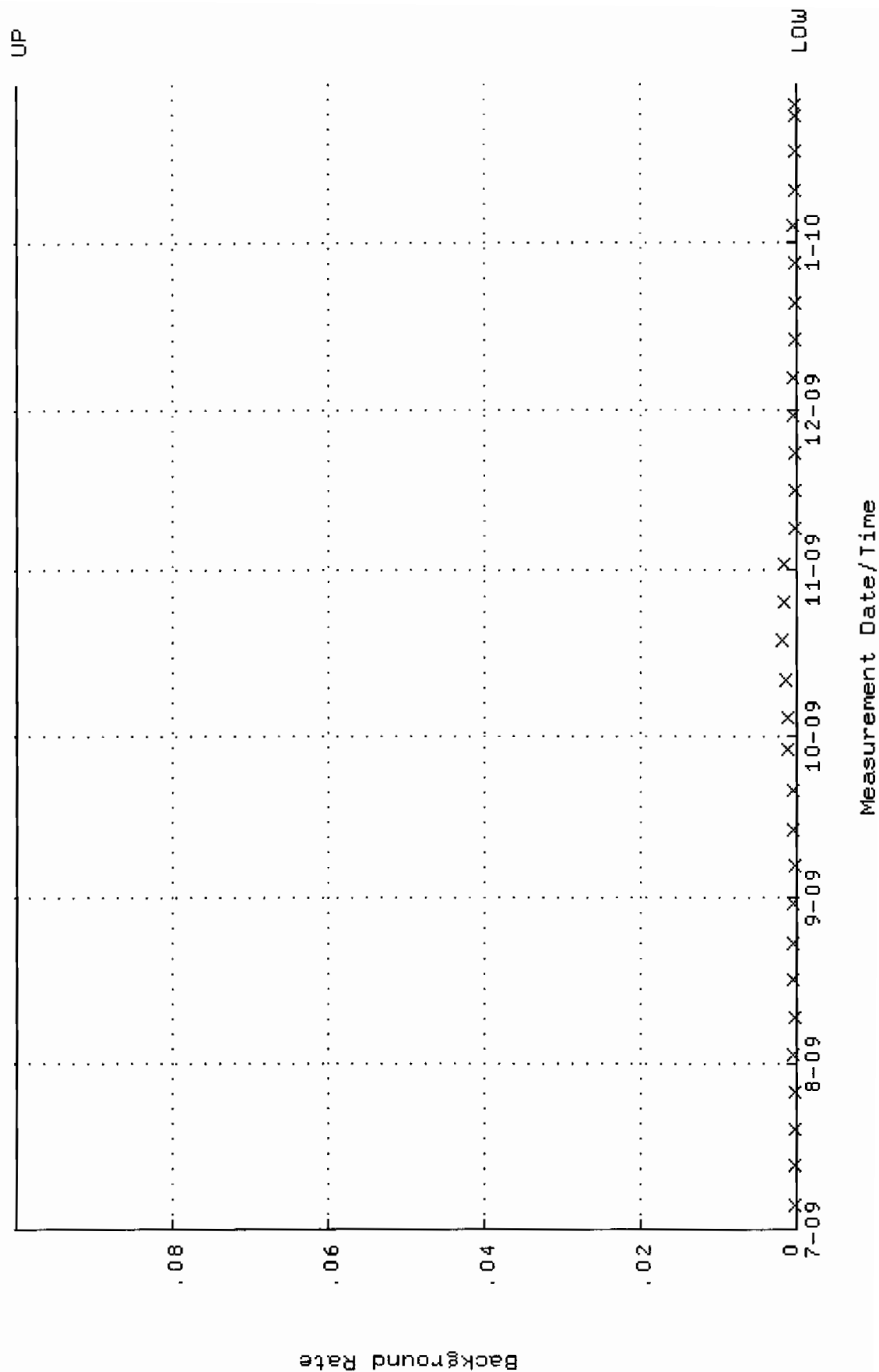
QA filename : DKA100:[ENV_ALPHA.QA.W]w218.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:48:10 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.362380 through 0.382380



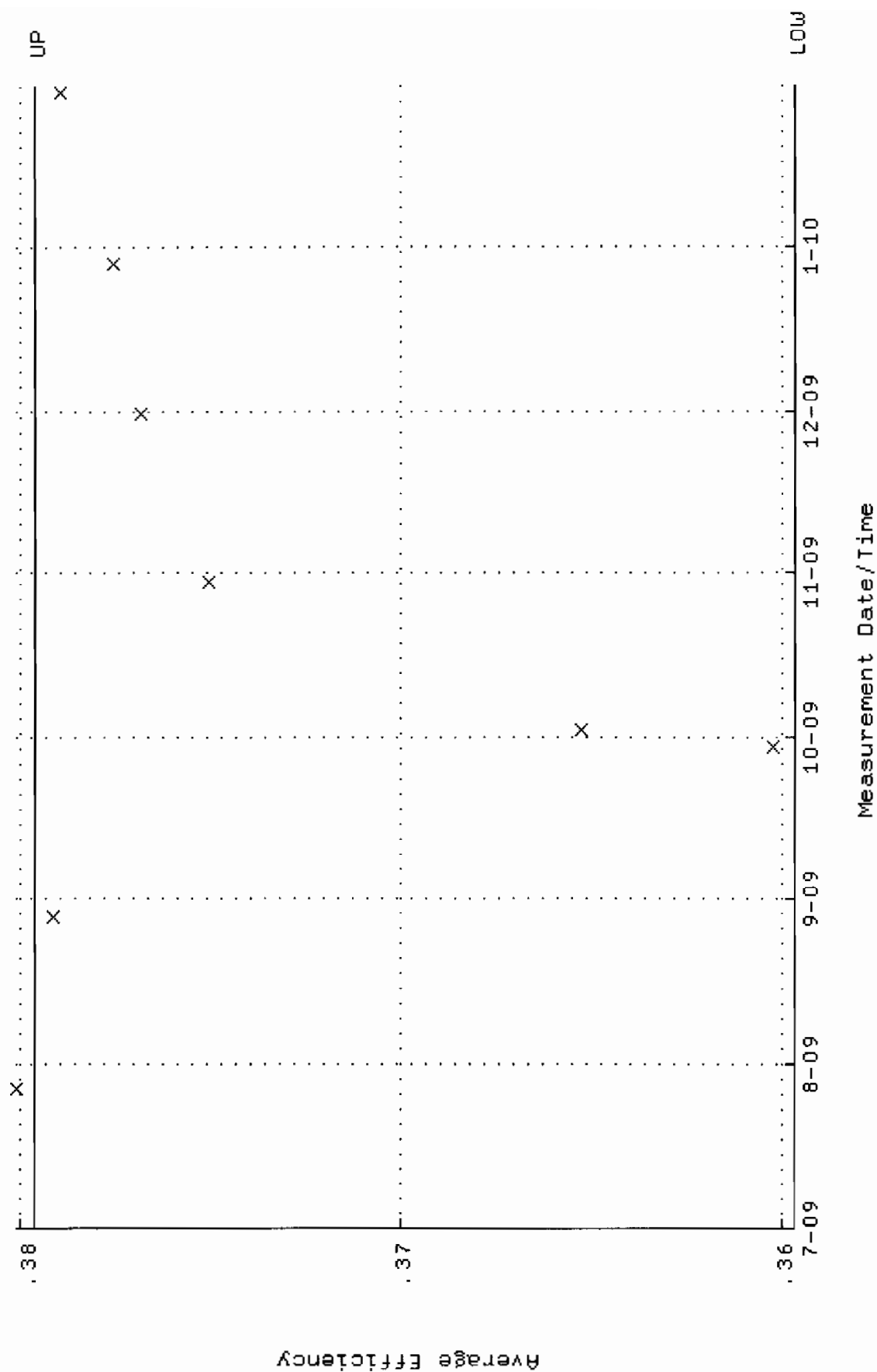
QA filename : DKA100:[ENV_ALPHA.QA.W]w218.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:48:10 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 89.3892 through 98.7986



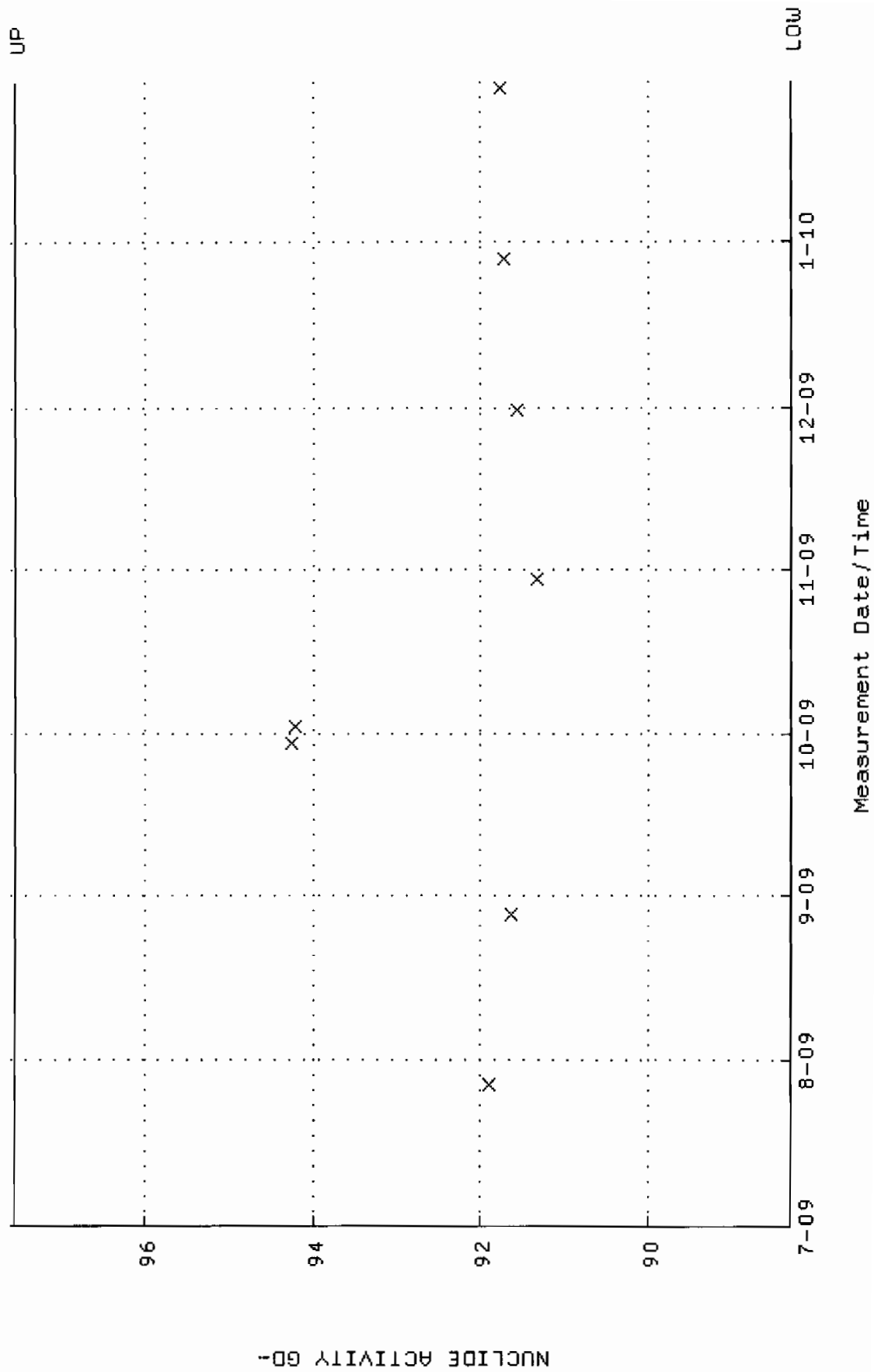
QA filename : DKA100:[ENV_ALPHA.QA.B]B218.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:04:01 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



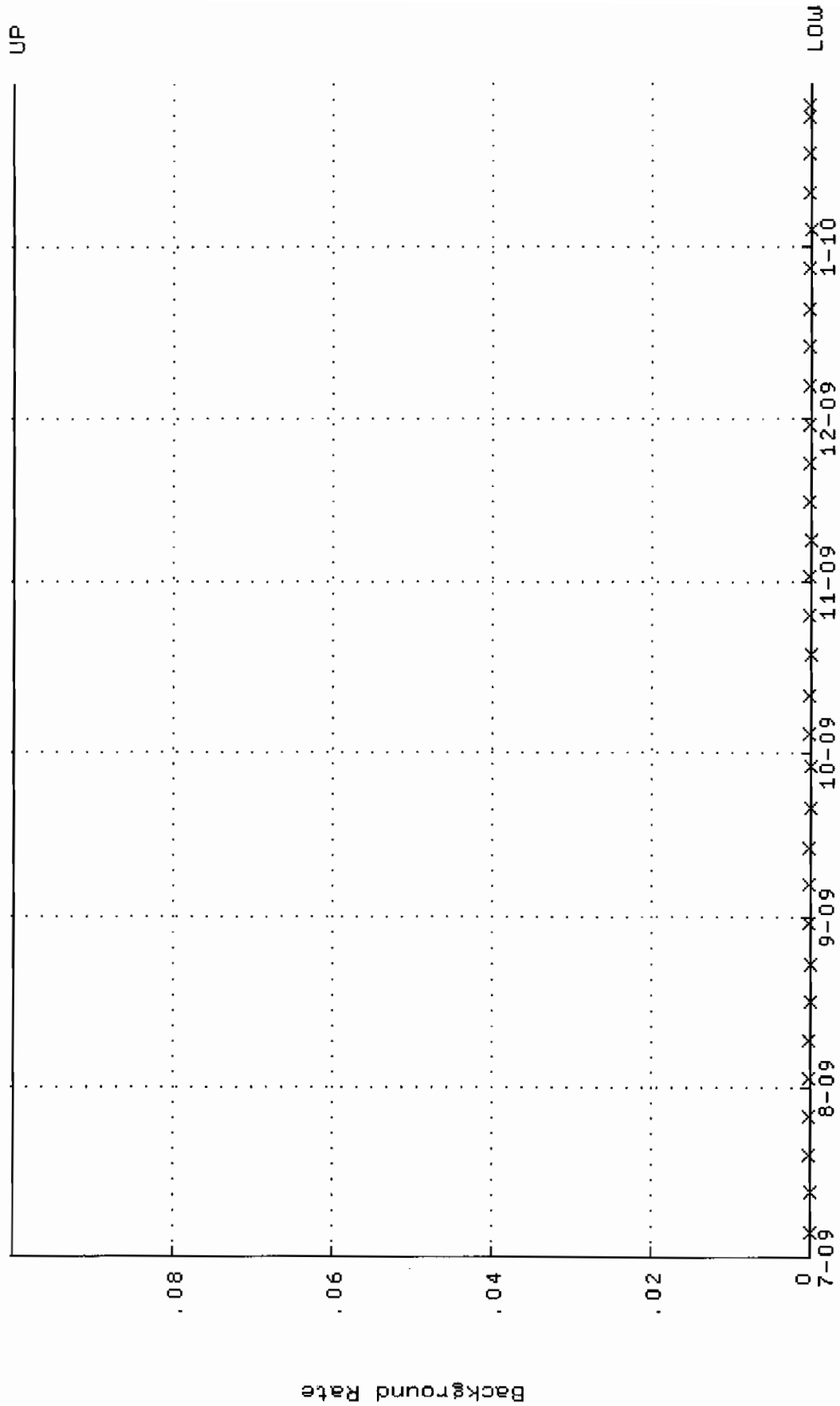
QA filename : DKA100:[ENV_ALPHA.QA.W]W220.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:48:23 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.359644 through 0.379644



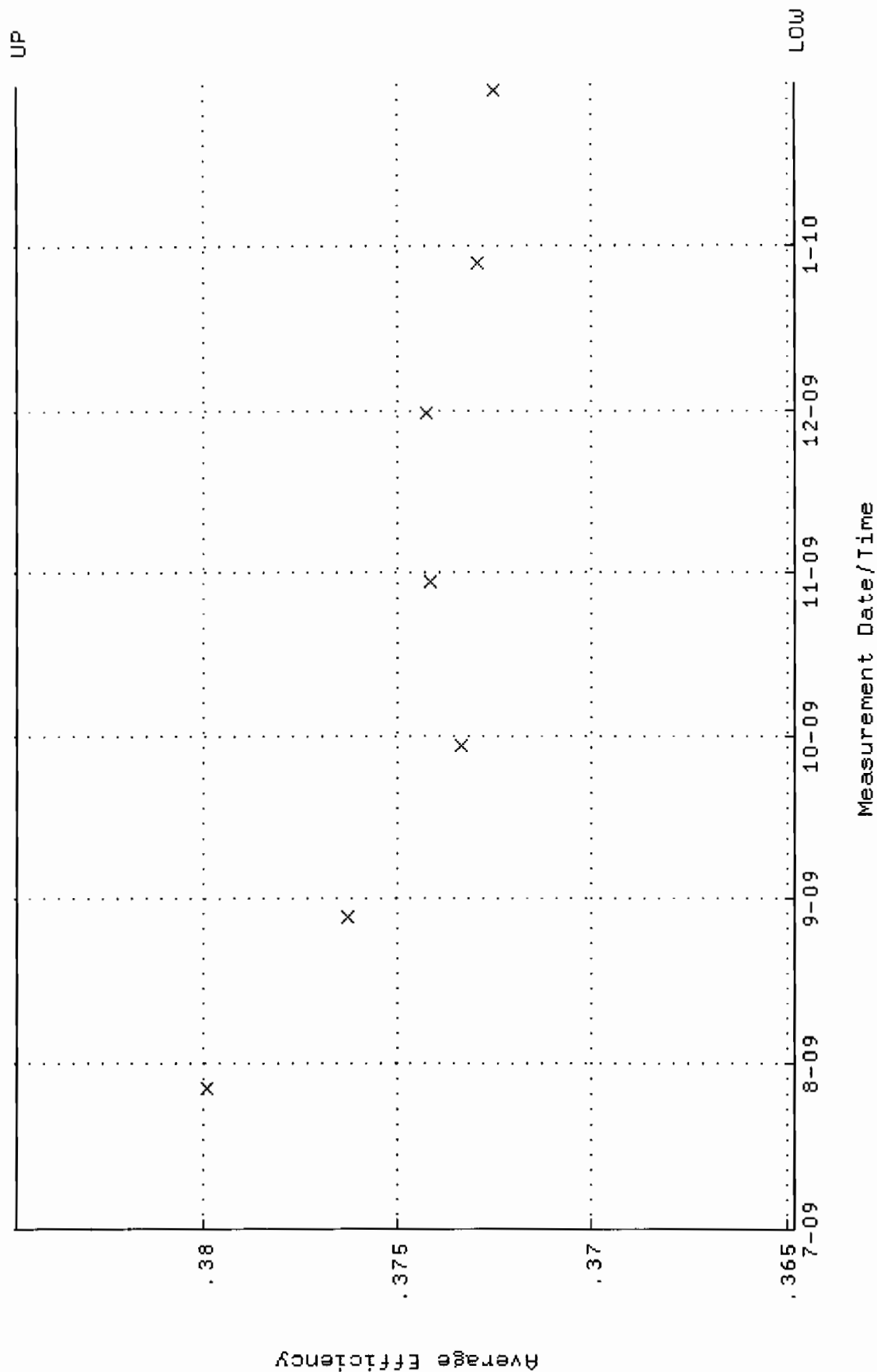
QA filename : DKA100:[ENV_ALPHA.QA.W]w220.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:48:23 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 88.2863 through 97.5795



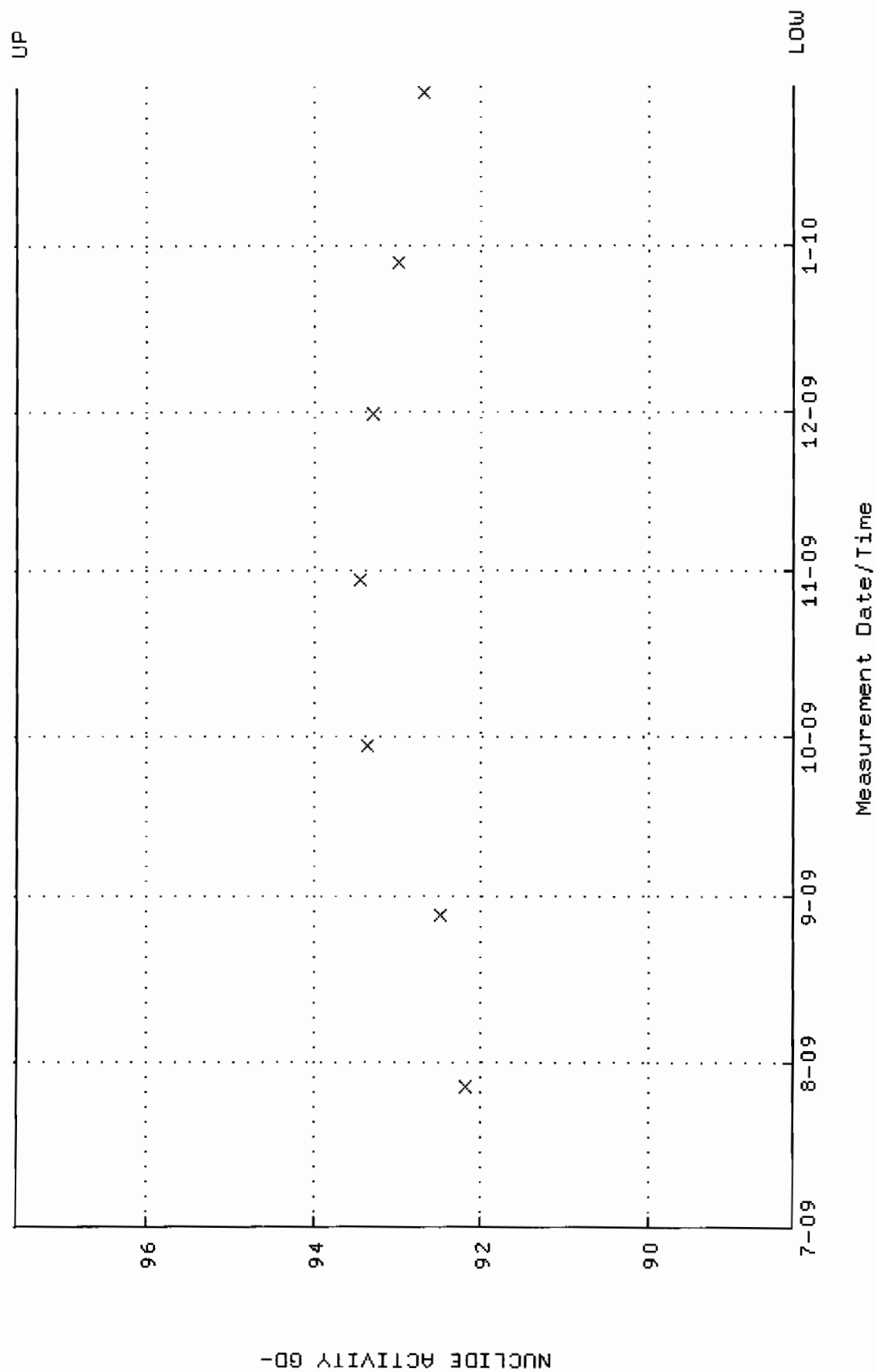
QA filename : DKA100:[ENV_ALPHA.QA.B]B220.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:04:10 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



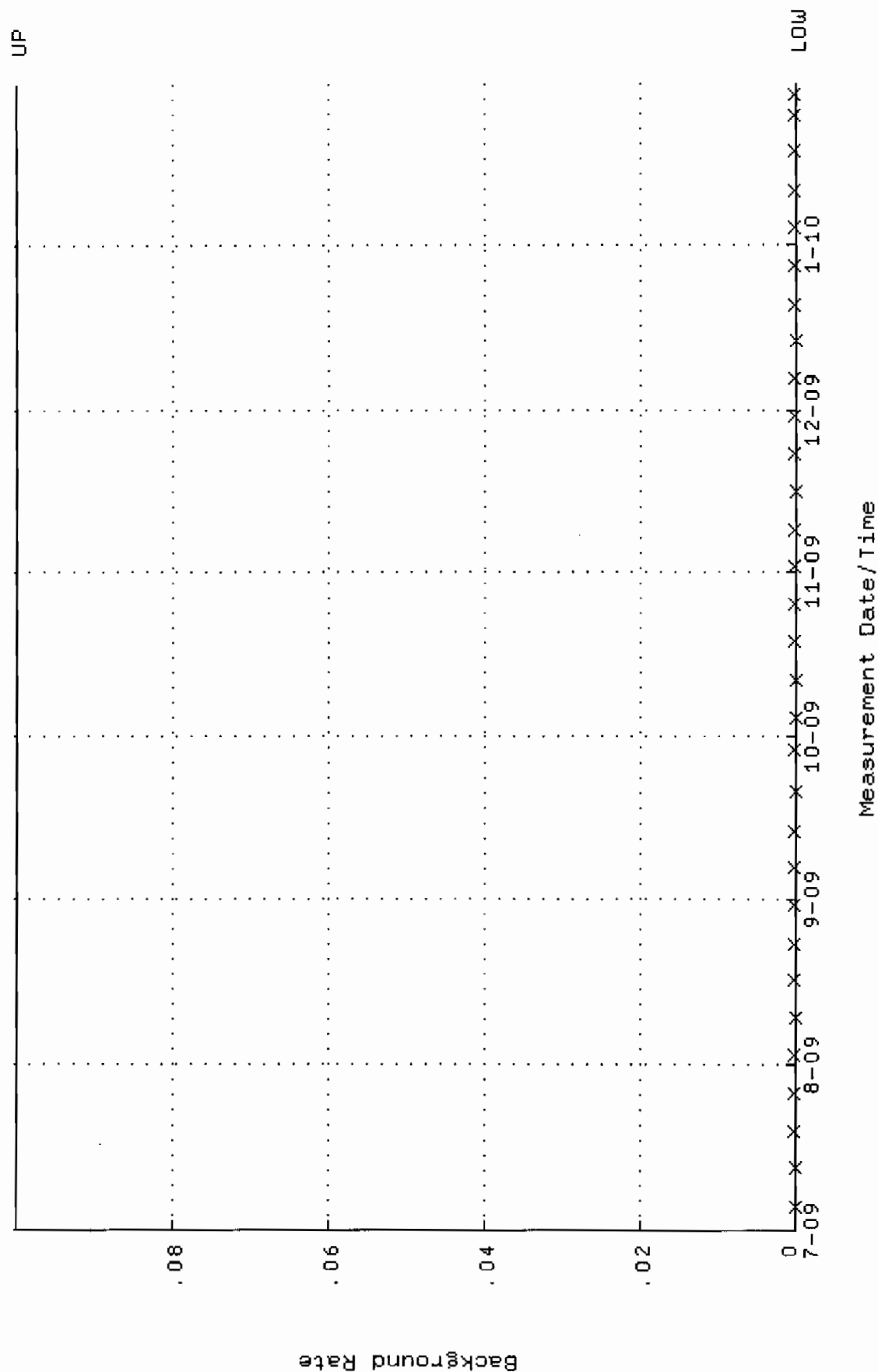
QA filename : DKA100:[ENV_ALPHA.QA.W]W229.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:49:22 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.364789 through 0.384789



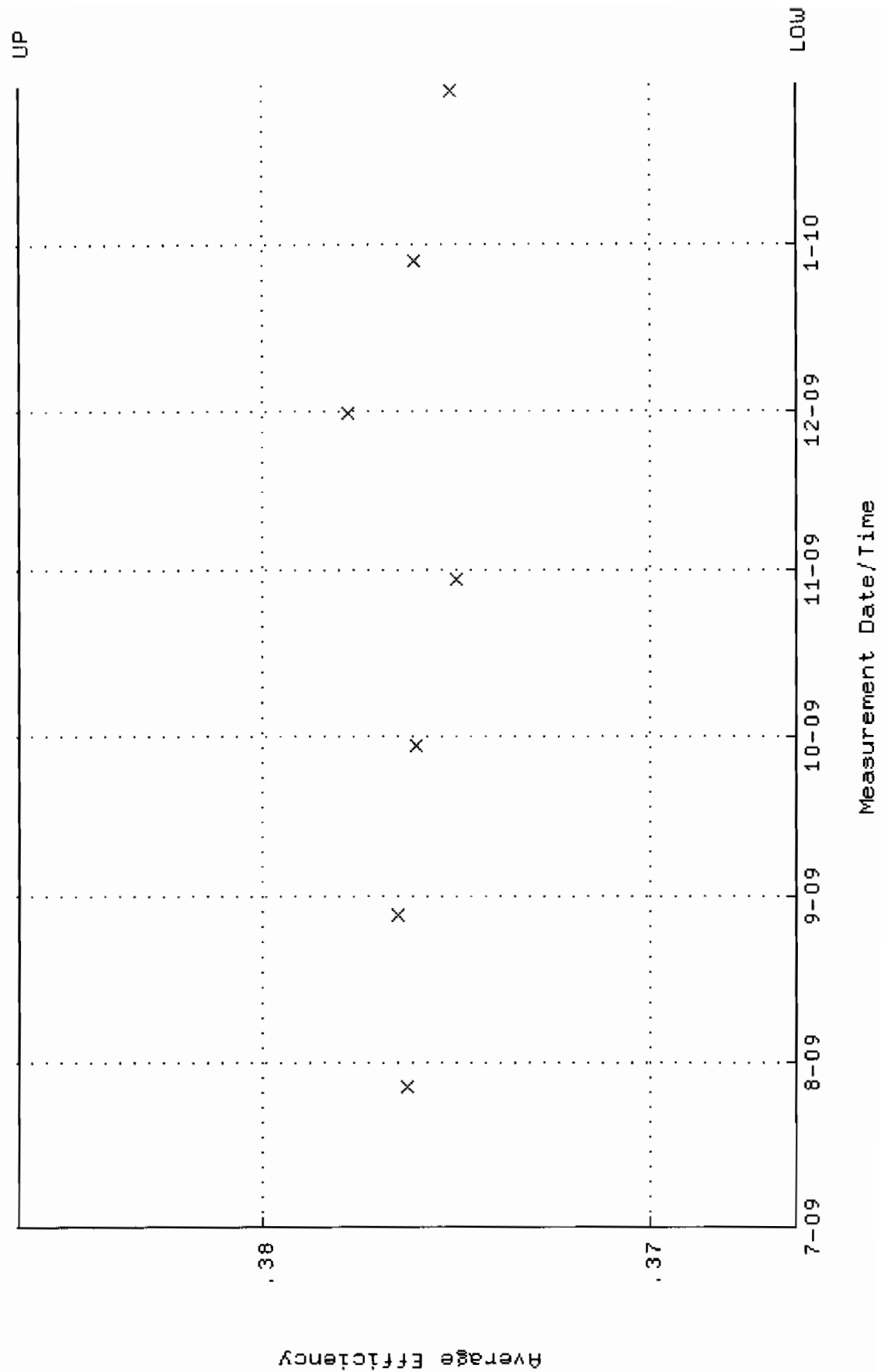
QA filename : DKA100:[ENV_ALPHA.QA.W]w229.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:49:22 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 88.2691 through 97.5605



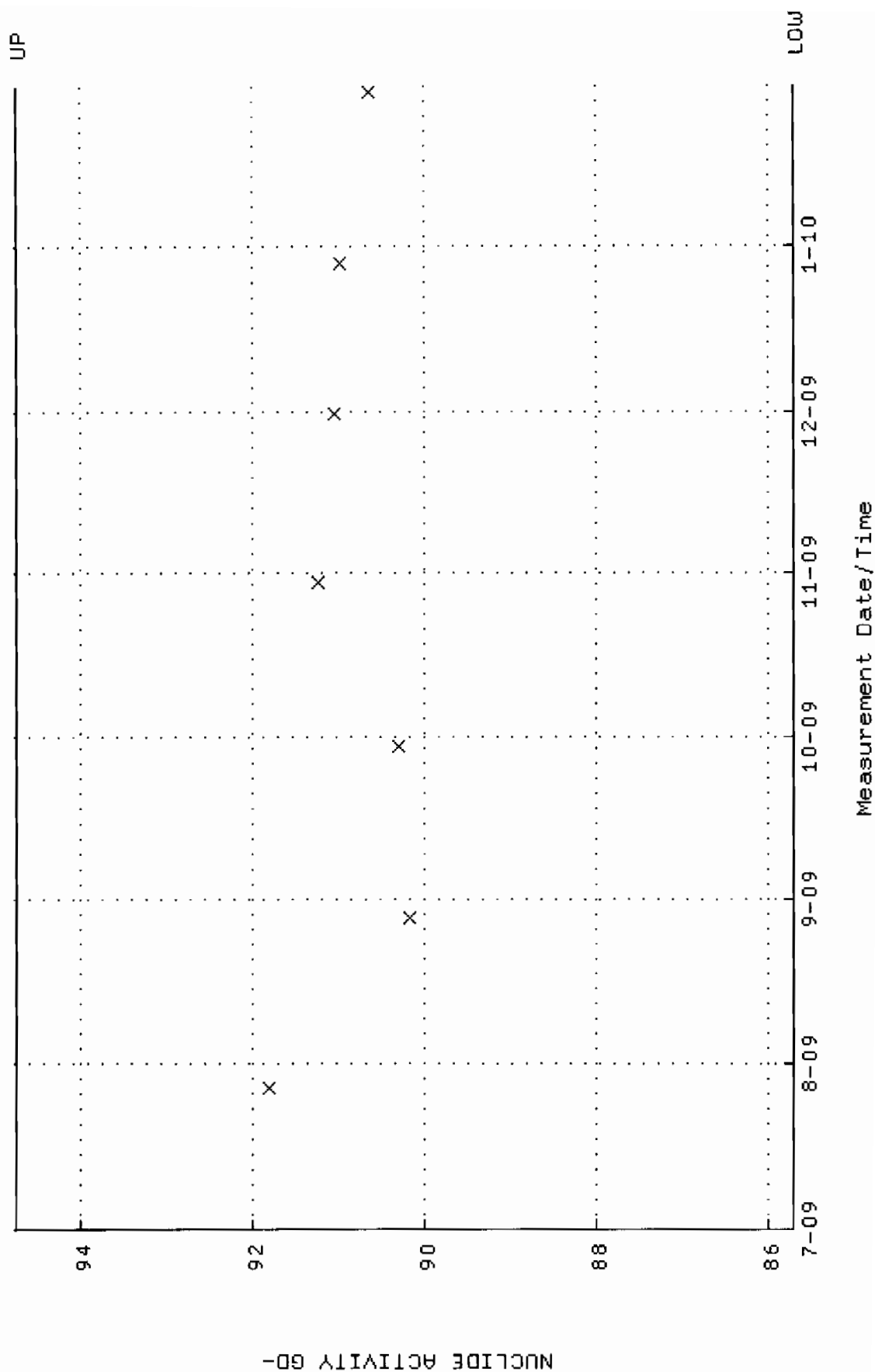
QA filename : DKA100:[ENV_ALPHA.QA.B]B229.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:04:53 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



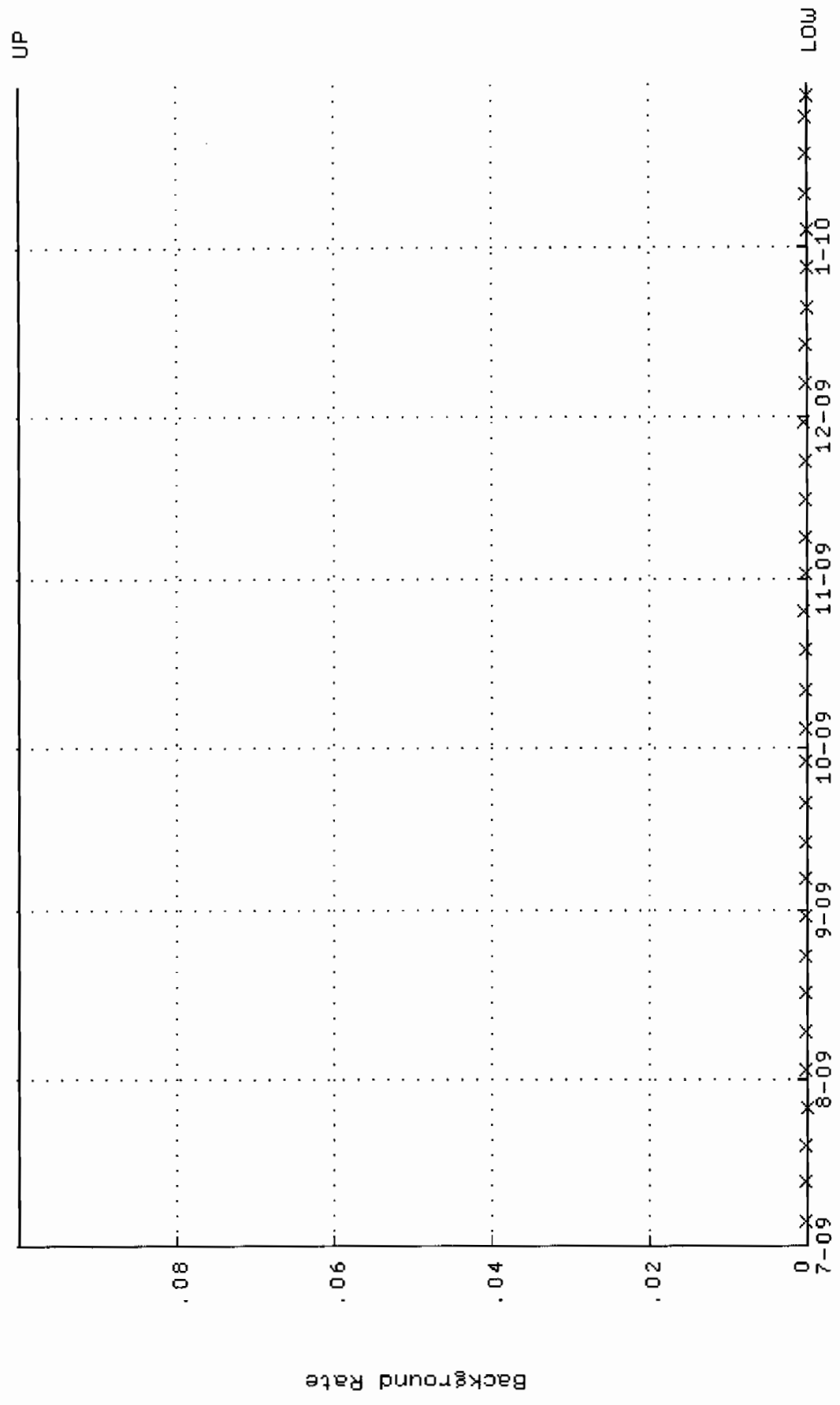
QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:49:29 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.366240 through 0.386240



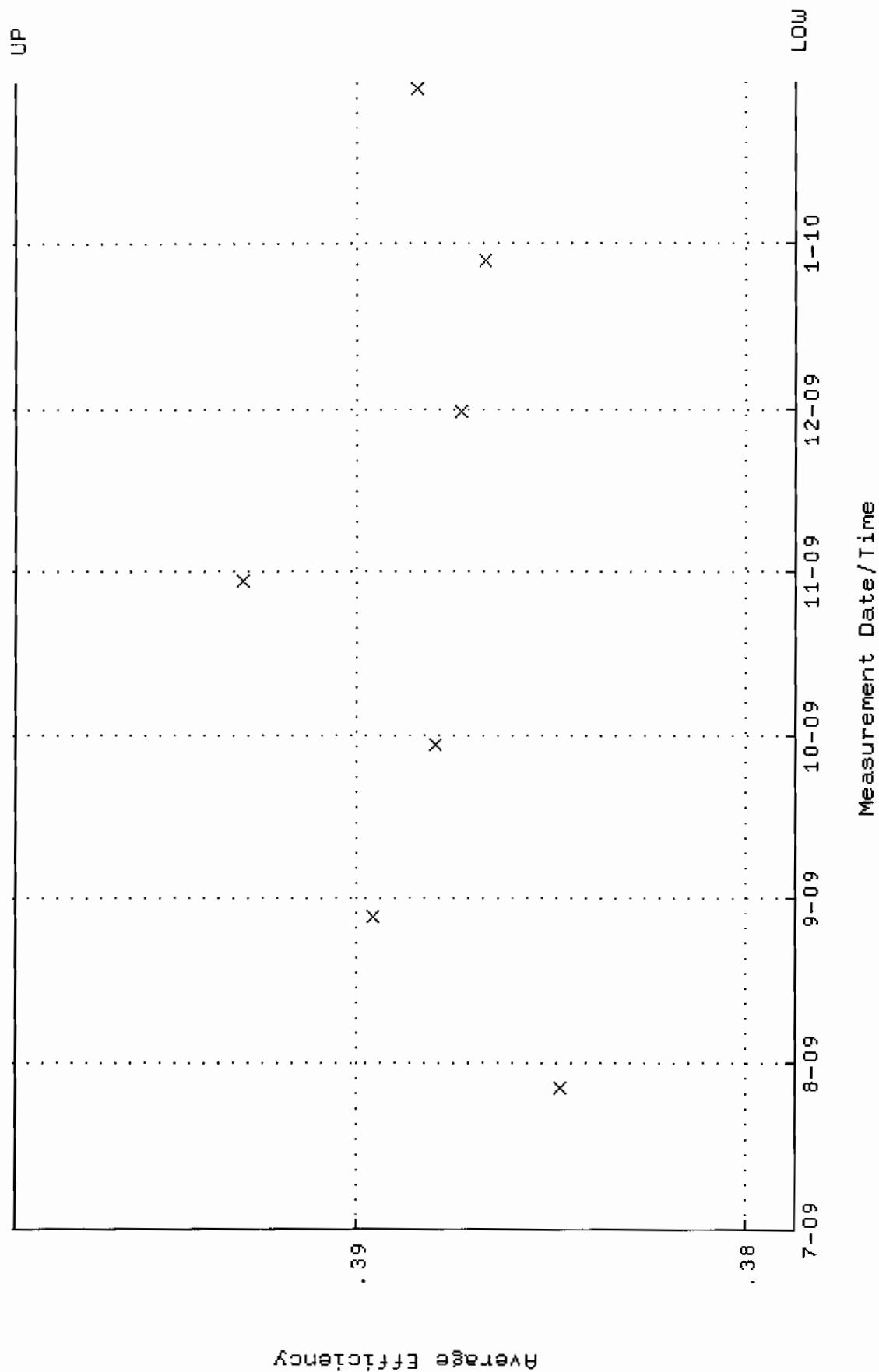
QA filename : DKA100:[ENV_ALPHA,QA.W]W230.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:49:29 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 85.7127 through 94.7351



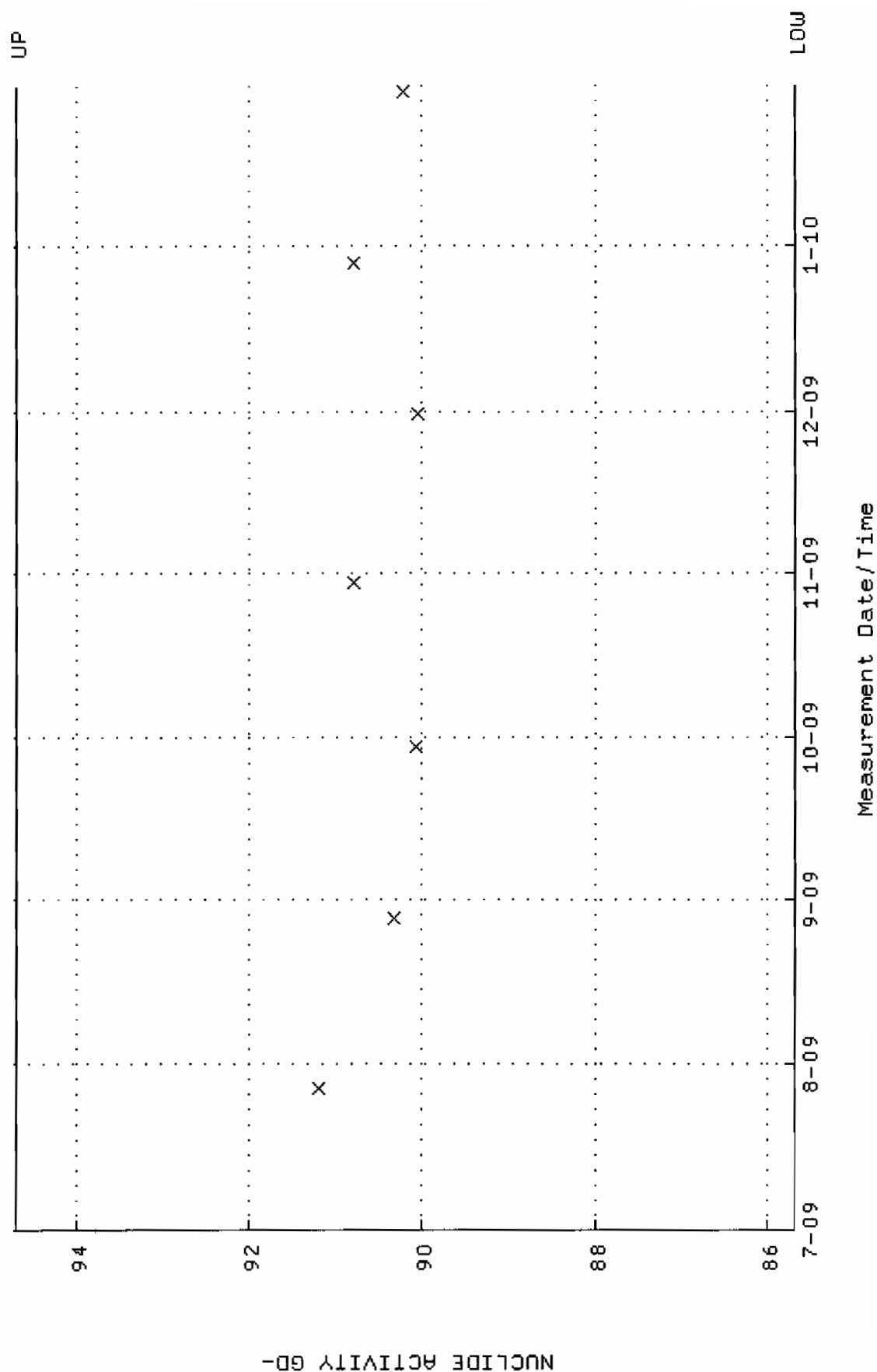
QA filename : DKA100:[ENV_ALPHA.QA.B]B230.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:04:57 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



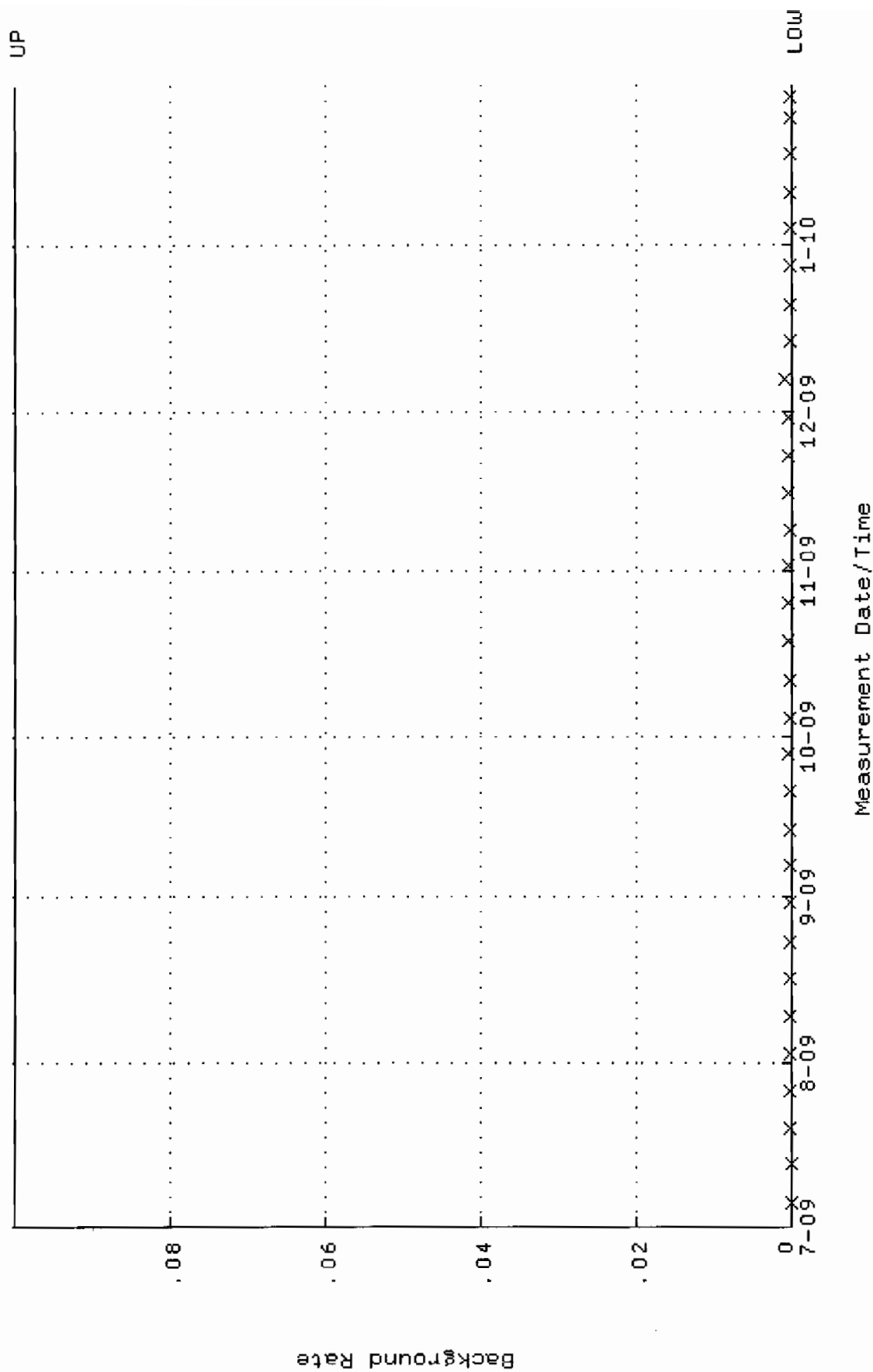
QA filename : DKA100:[ENV_ALPHA.QA.W]W231.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:49:35 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.378748 through 0.398748



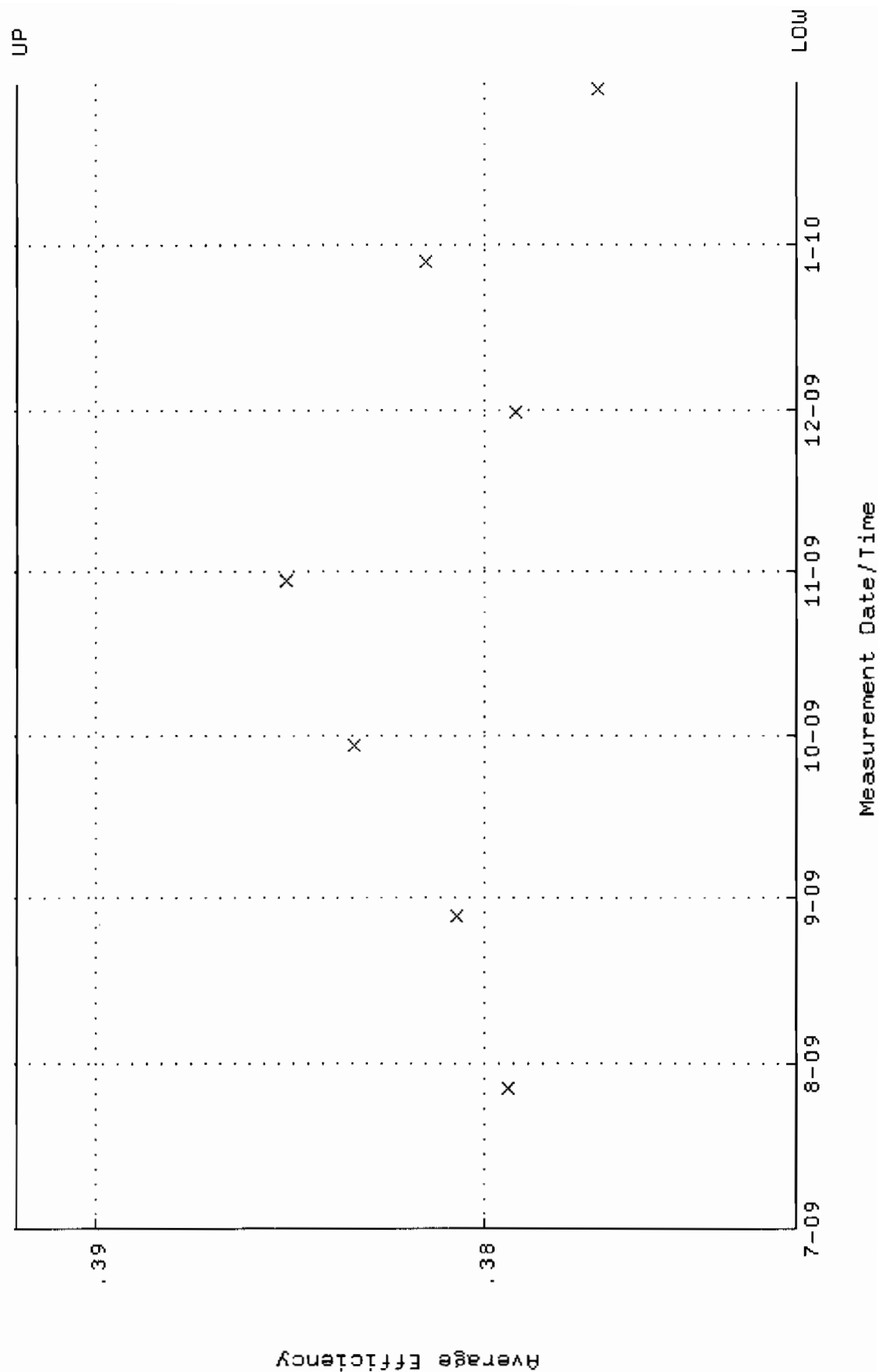
QA filename : DKA100:[ENV_ALPHA.QA.W]W231.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:49:35 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 85.6783 through 94.6971



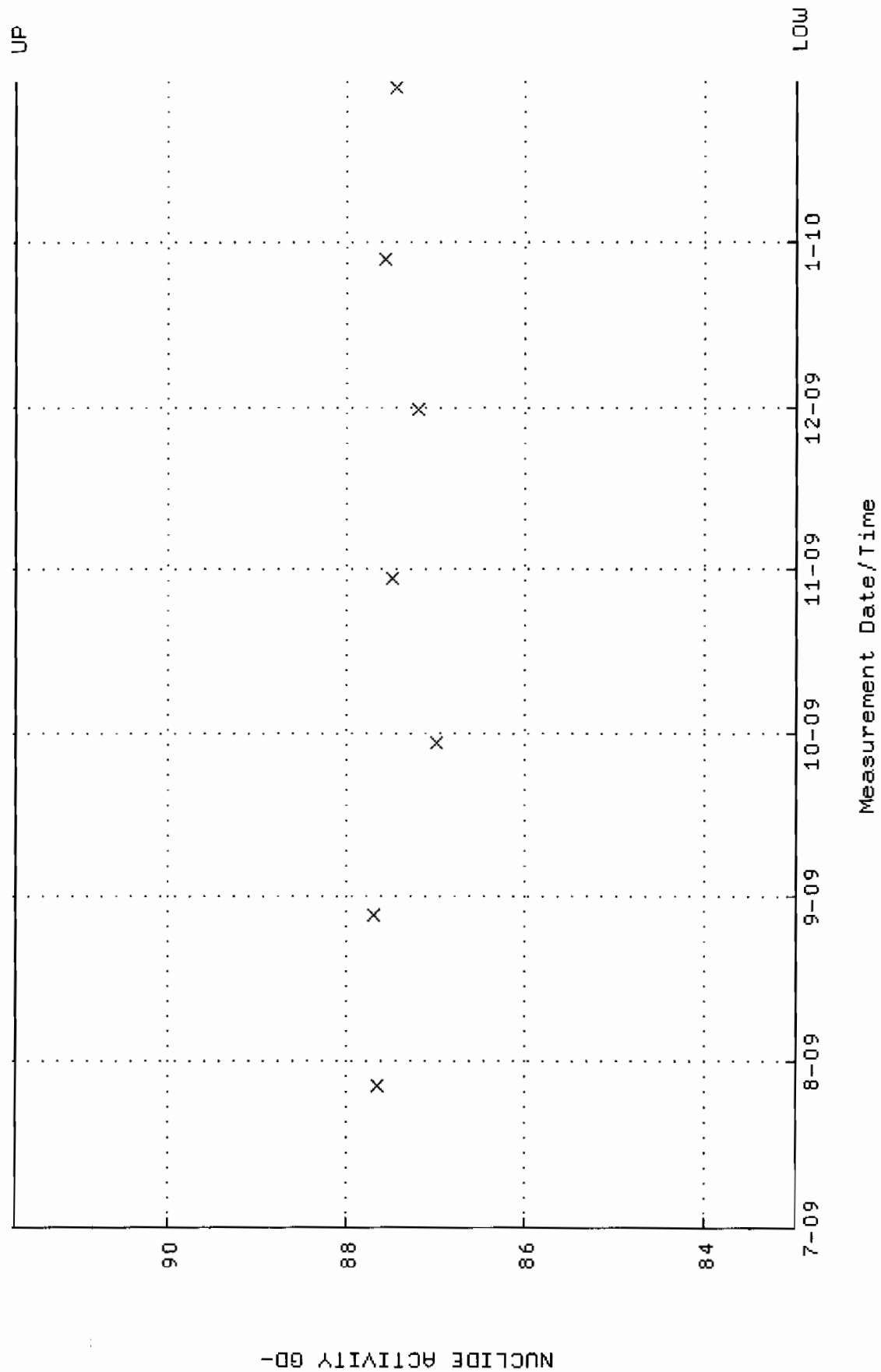
QA filename : DKA100:[ENV_ALPHA.QA.B]B231.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:01 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



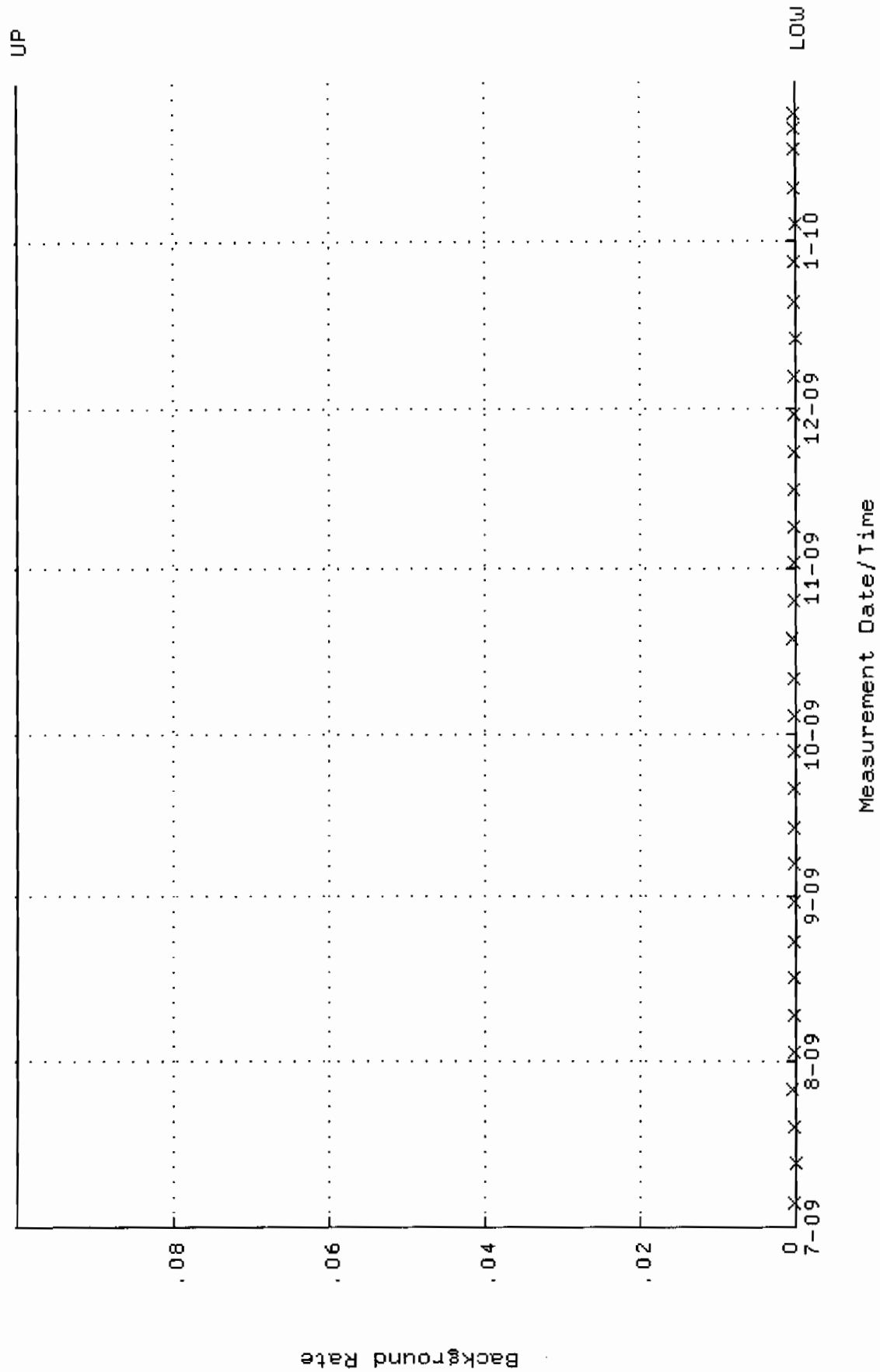
QA filename : DKA100:[ENV_ALPHA.QA.W]W233.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:49:48 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.372001 through 0.392001



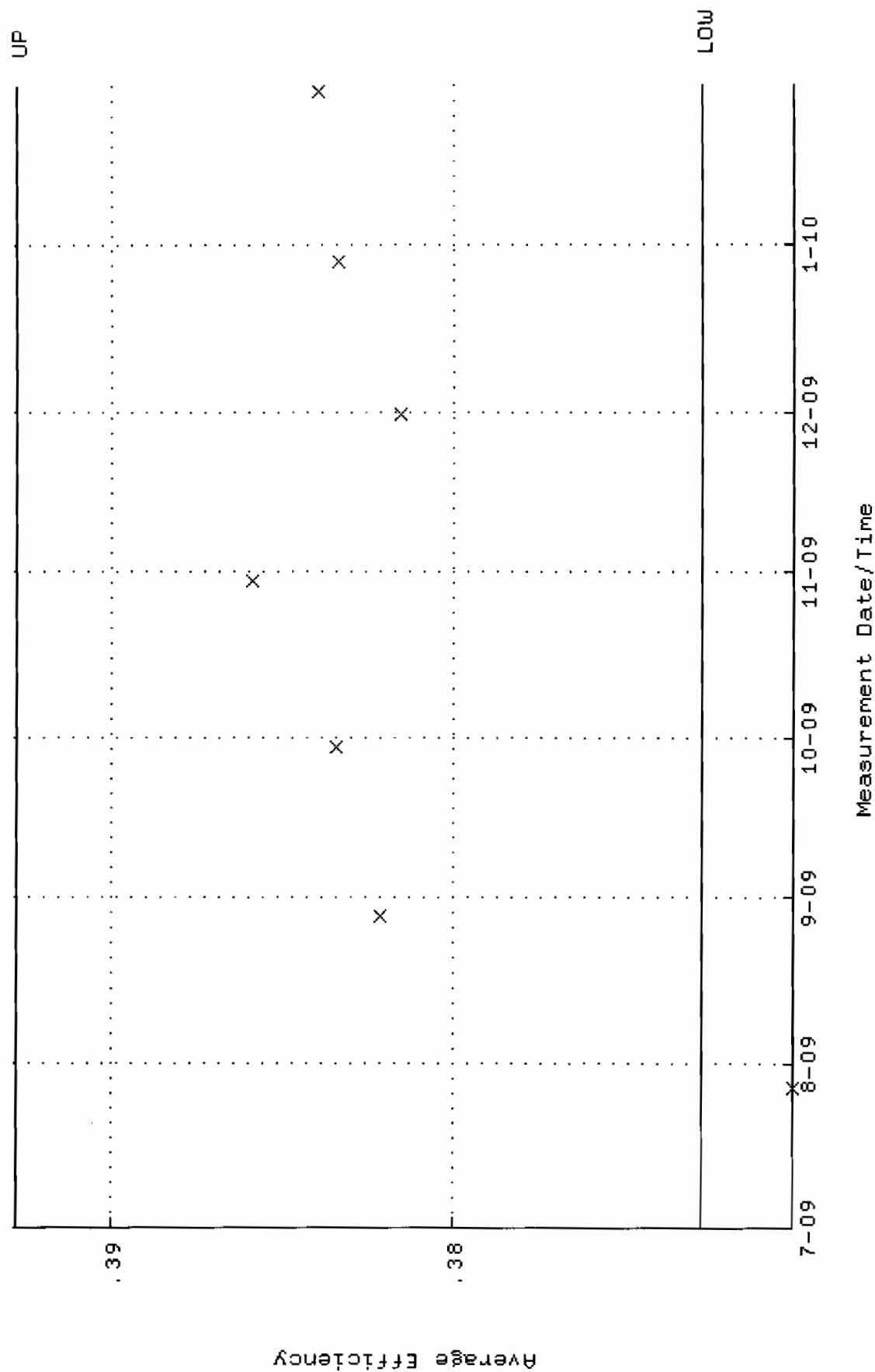
QA filename : DKA100:[ENV_ALPHA.QA.W]W233.QAF;1
 Parameter Name : NLACTVY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:49:48 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 82.9652 through 91.6984



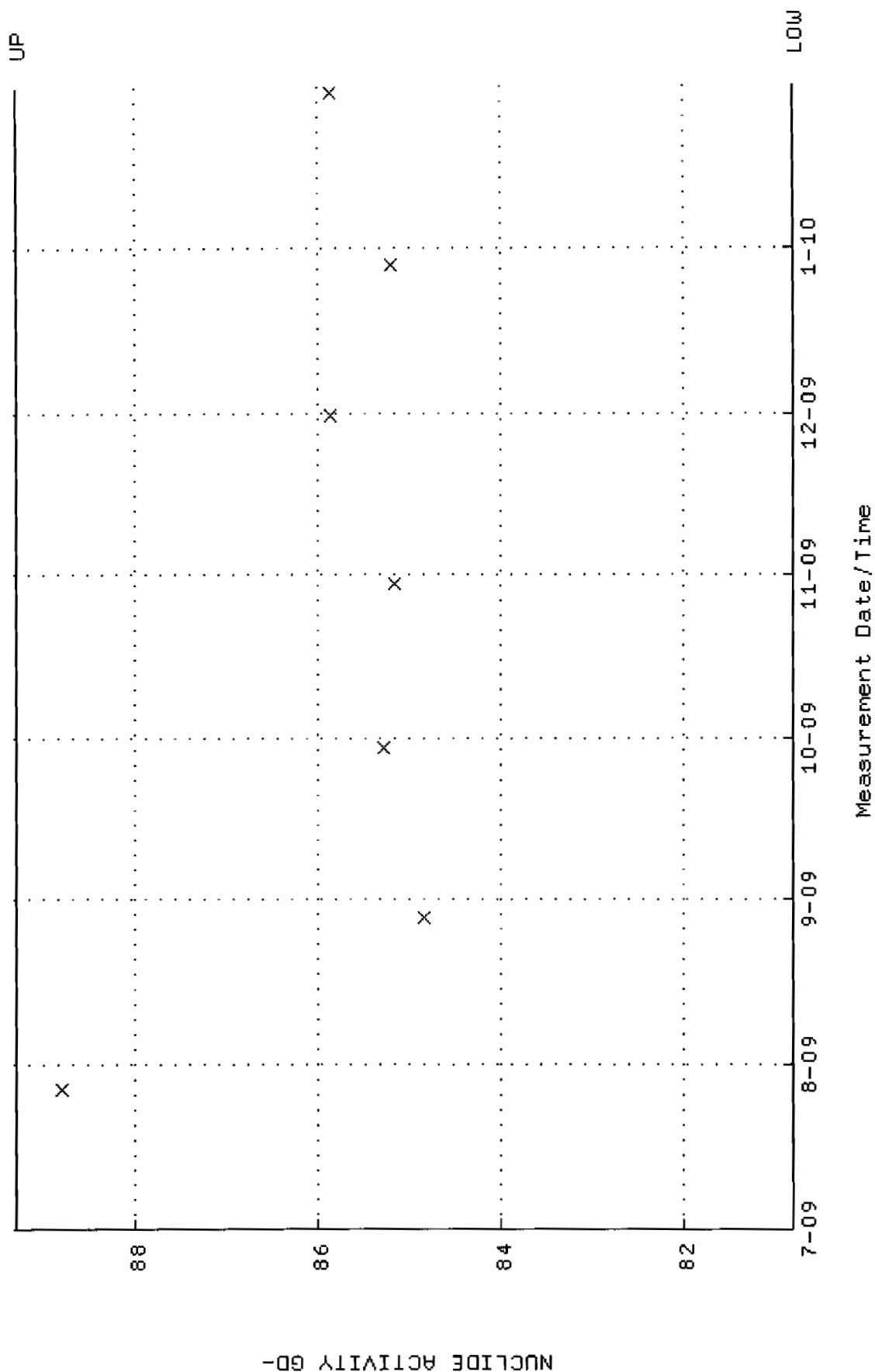
QA filename : OKA100:[ENV_ALPHA.QA.B]B233.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:10 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



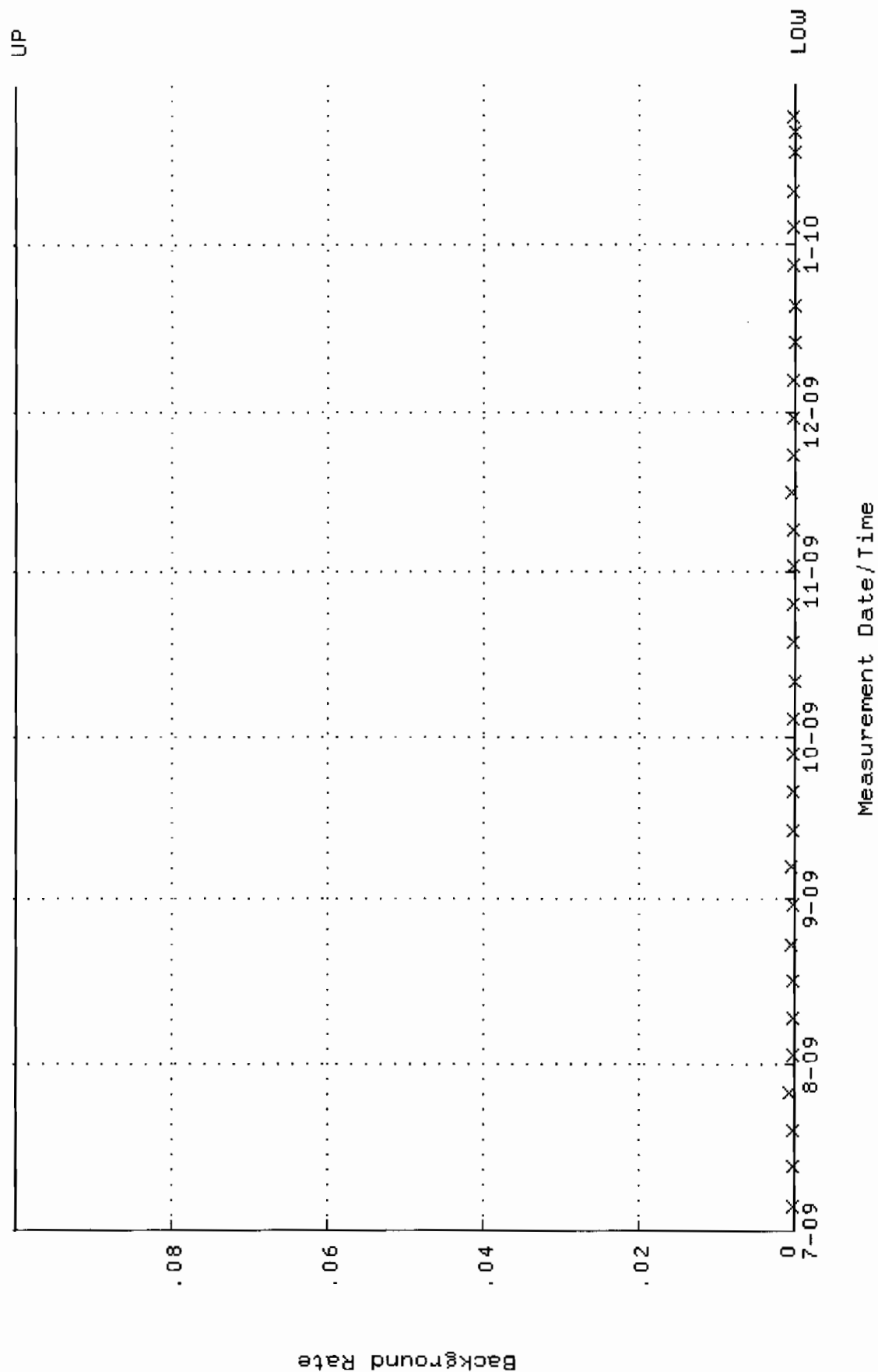
QA filename : DKA100:[ENV_ALPHA.QA.W]W234.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:49:54 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.372763 through 0.392763



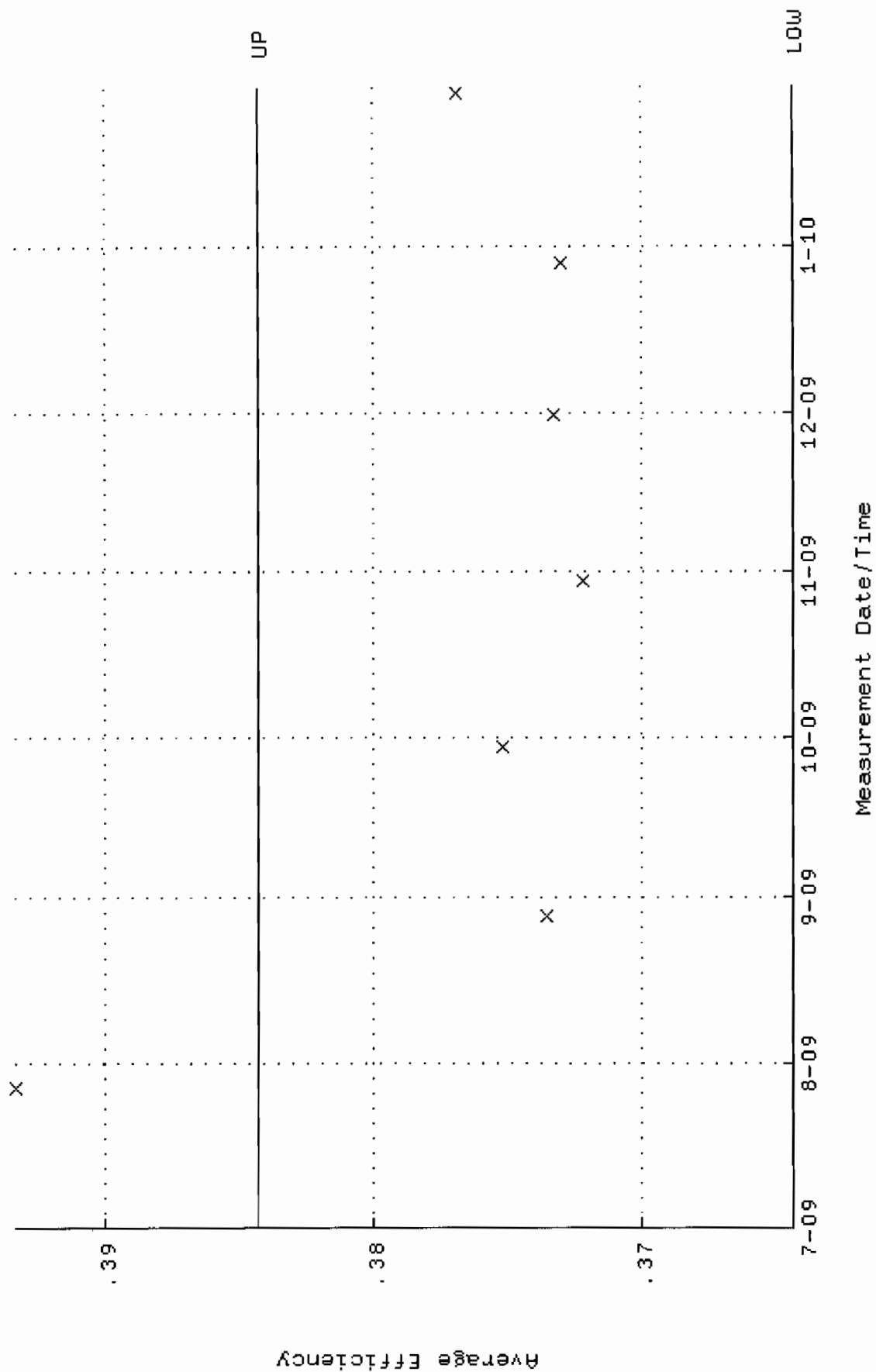
QA filename : DKA100:[ENV_ALPHA.QA.W]W234.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:49:54 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 80.7996 through 89.3048



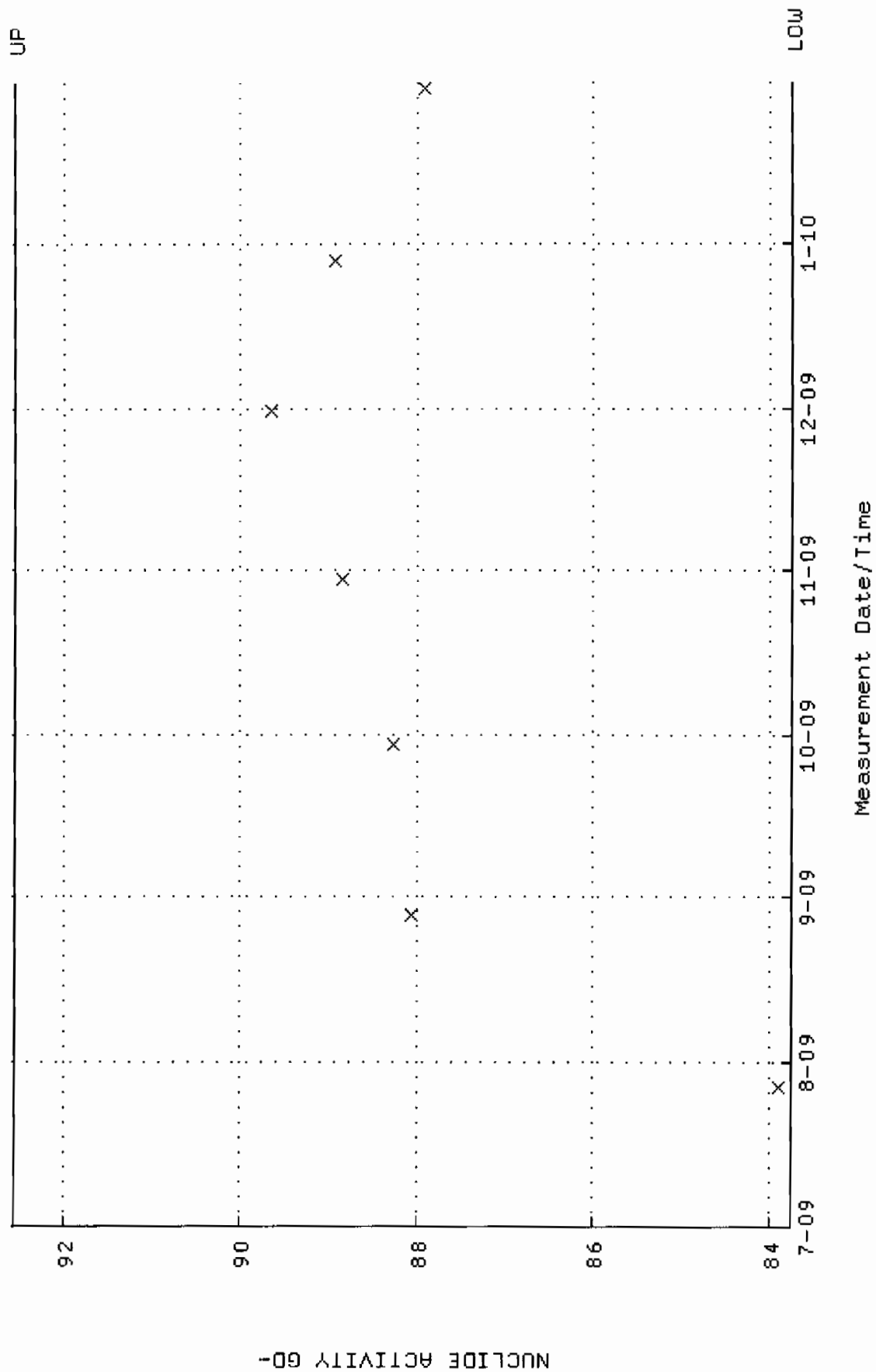
QA filename : DKA100:[ENV_ALPHA.QA.B]B234.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:15 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



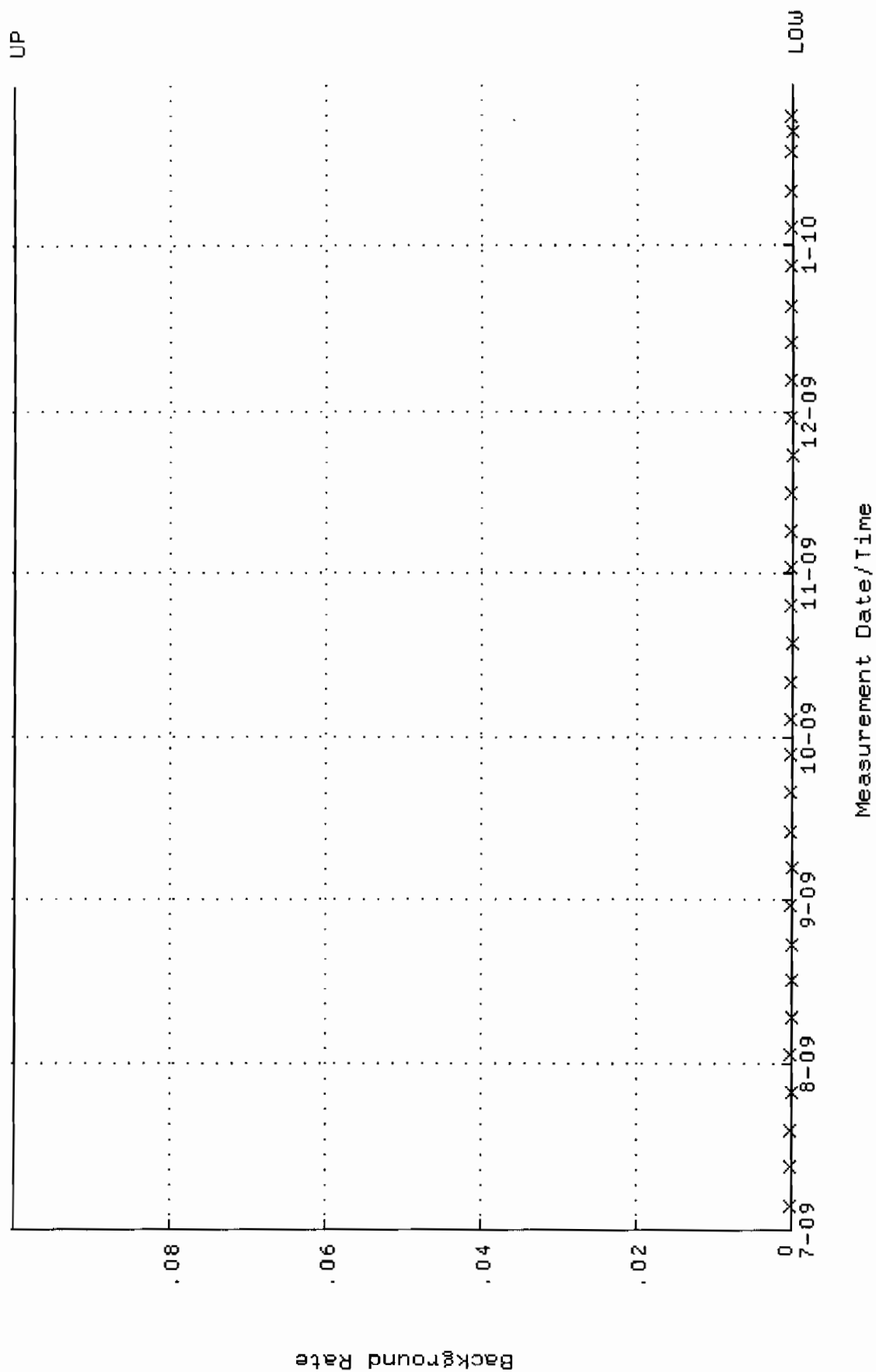
QA filename : DKA100:[ENV_ALPHA.QA.W]W235.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:50:01 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.364314 through 0.384314



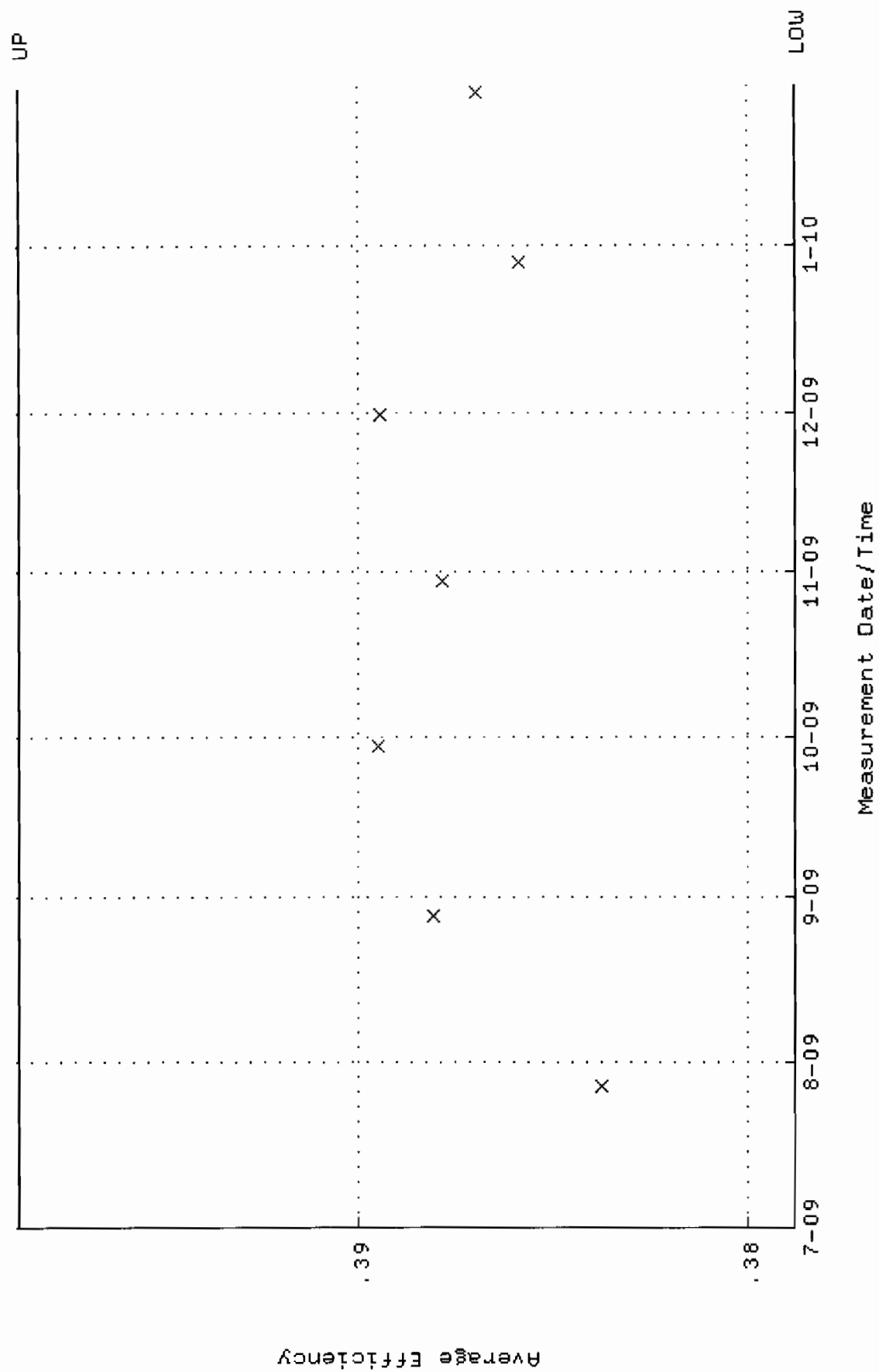
QA filename : DKA100:[ENV_ALPHA.QA.W]W235.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:50:01 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 83.7416 through 92.5566



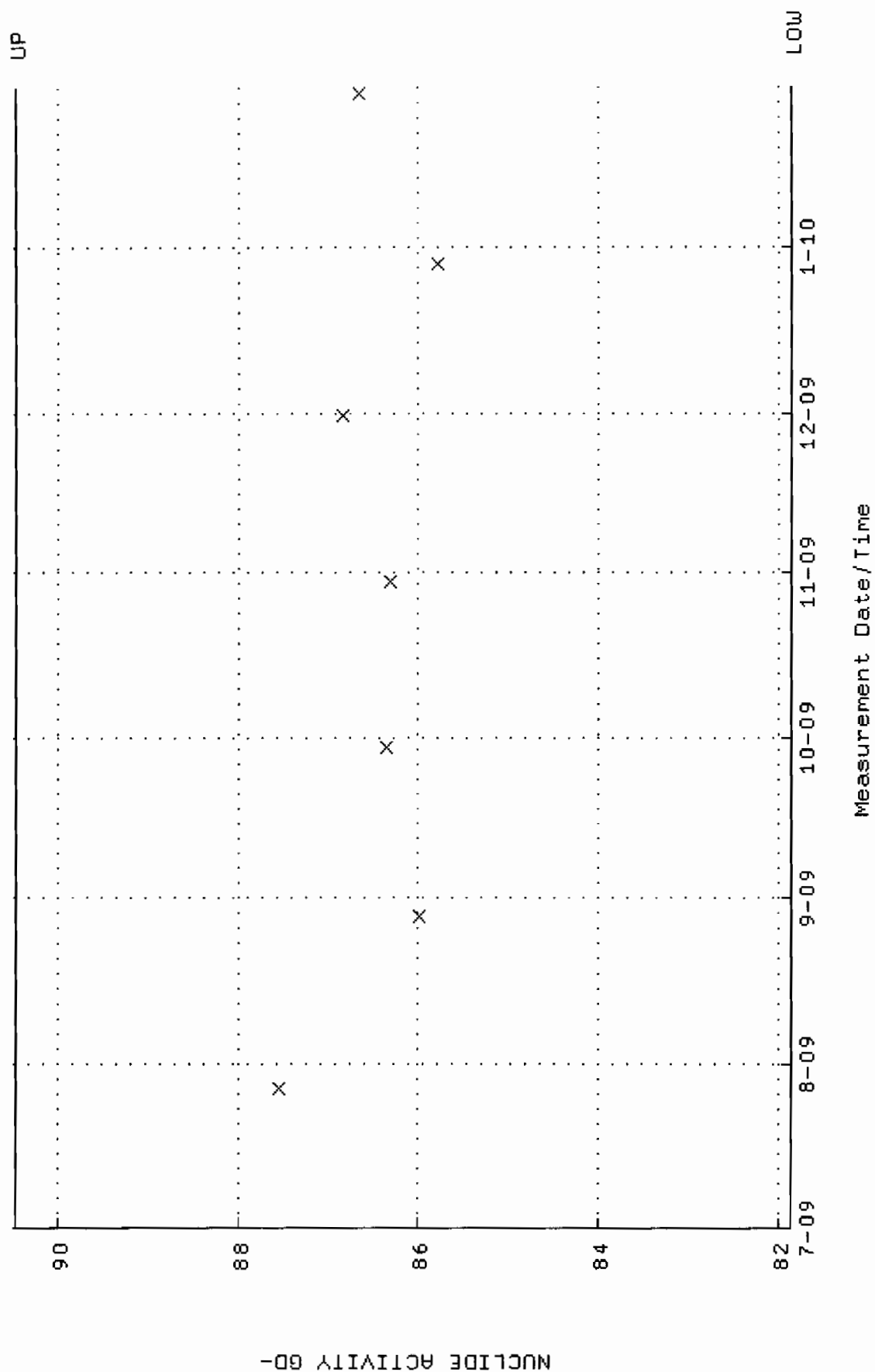
QA filename : DKA100:[ENV_ALPHA.QA.B]B235.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:20 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



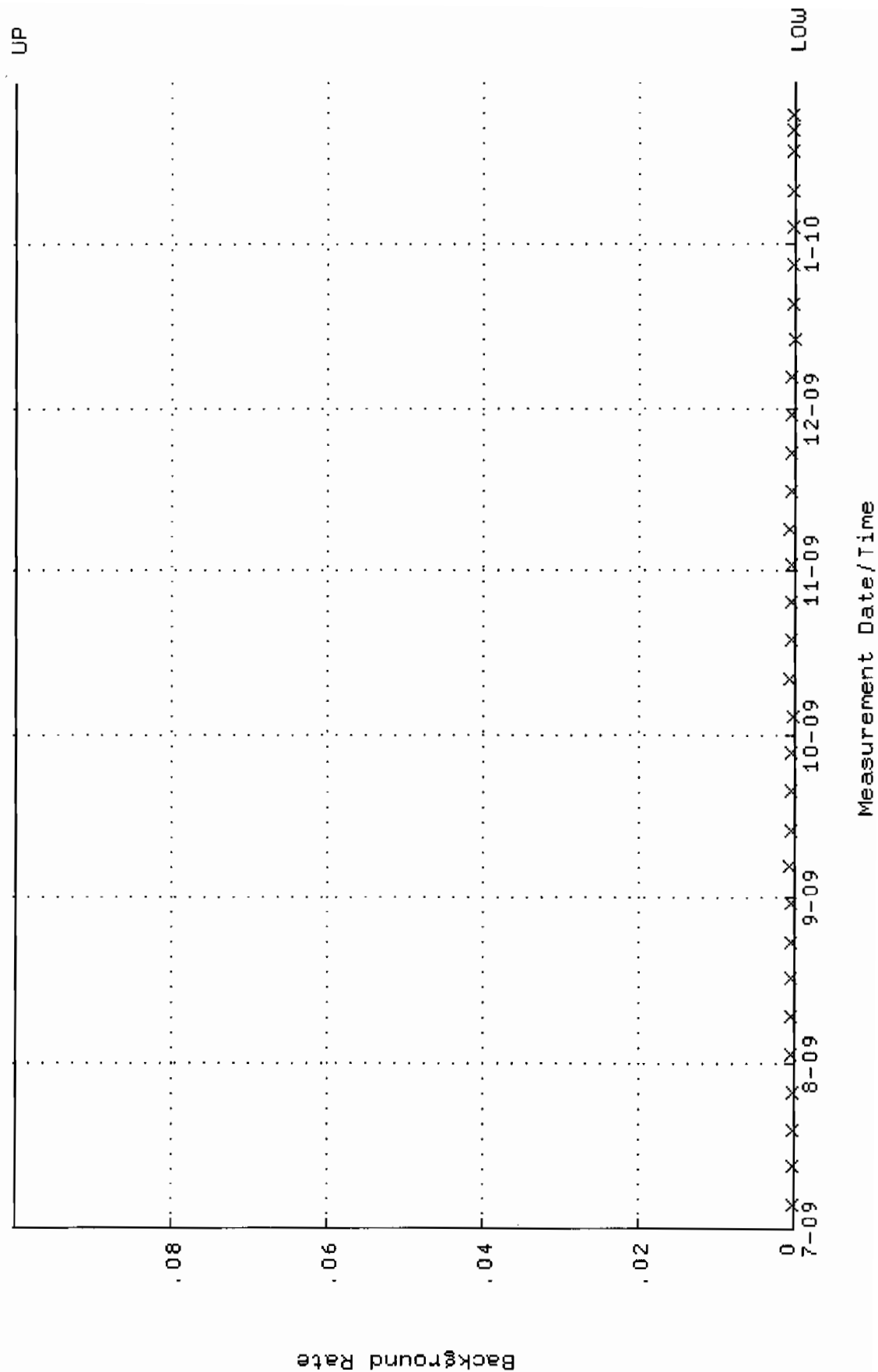
QA filename : DKA100:[ENV_ALPHA.QA.W]W236.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:50:07 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.378766 through 0.398766



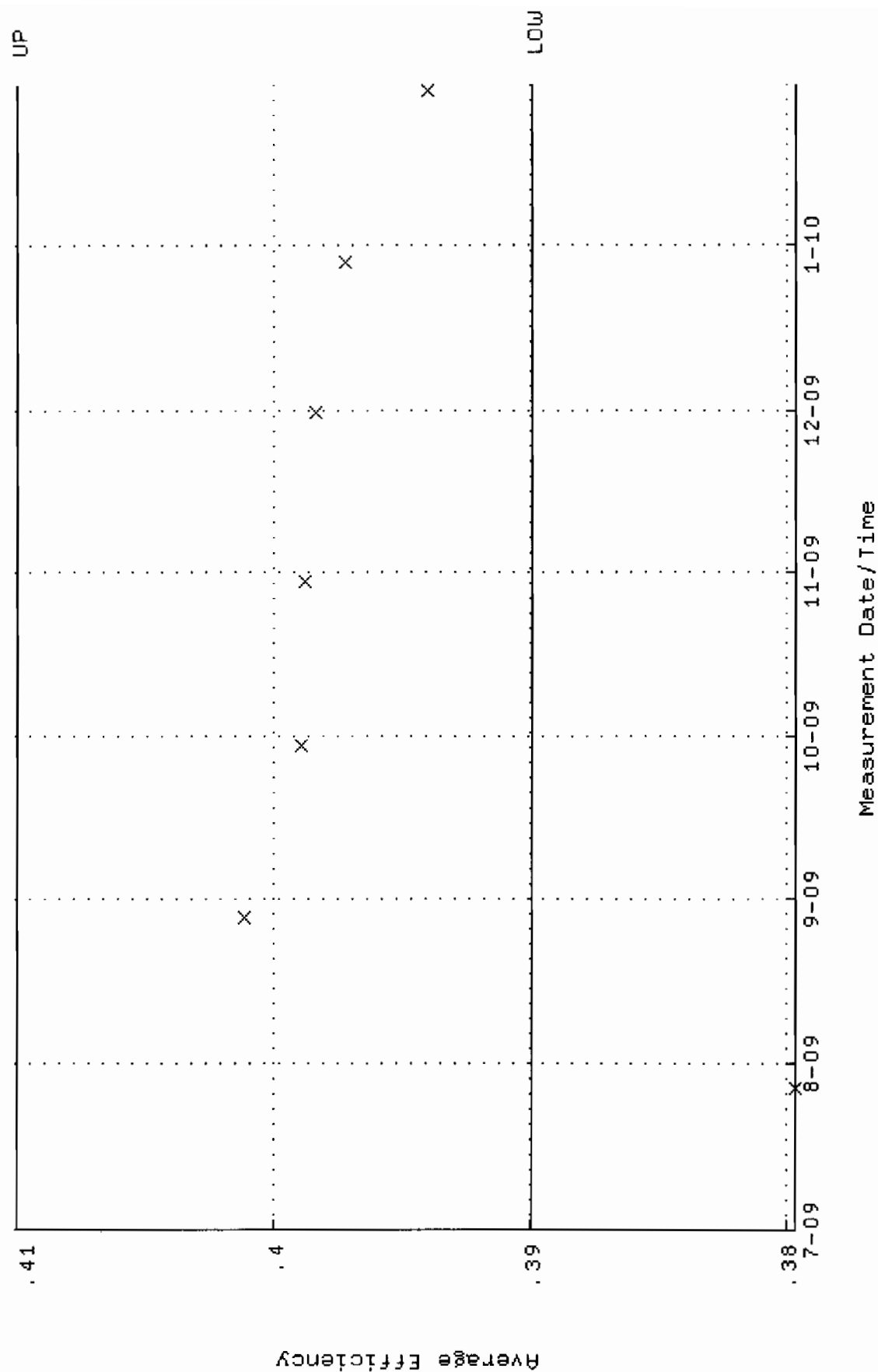
QA filename : DKA100:[ENV_ALPHA.QA.W]W236.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:50:07 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 81.8490 through 90.4646



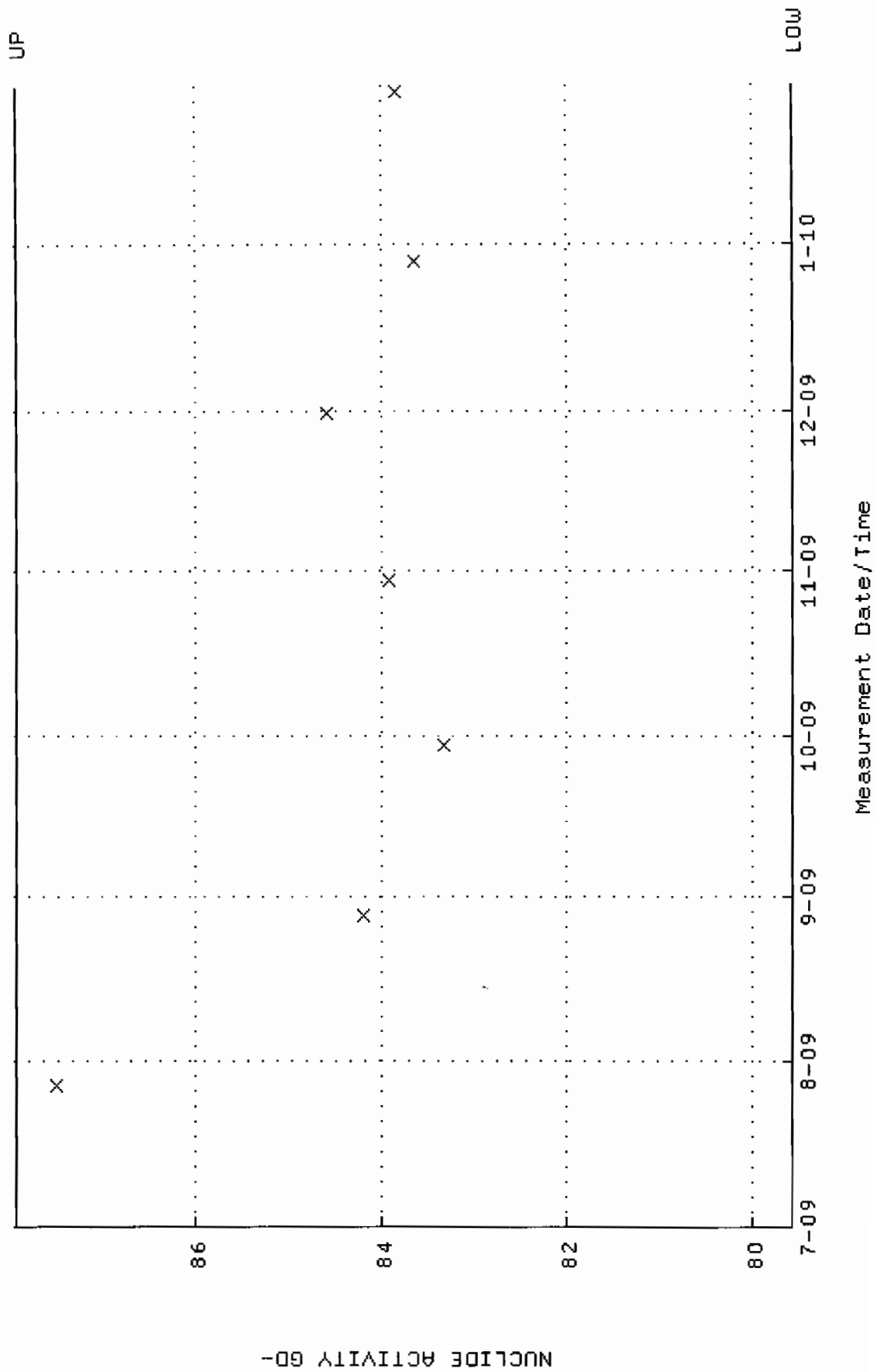
QA filename : DKA100:[ENV_ALPHA.QA.B]B236.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:24 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



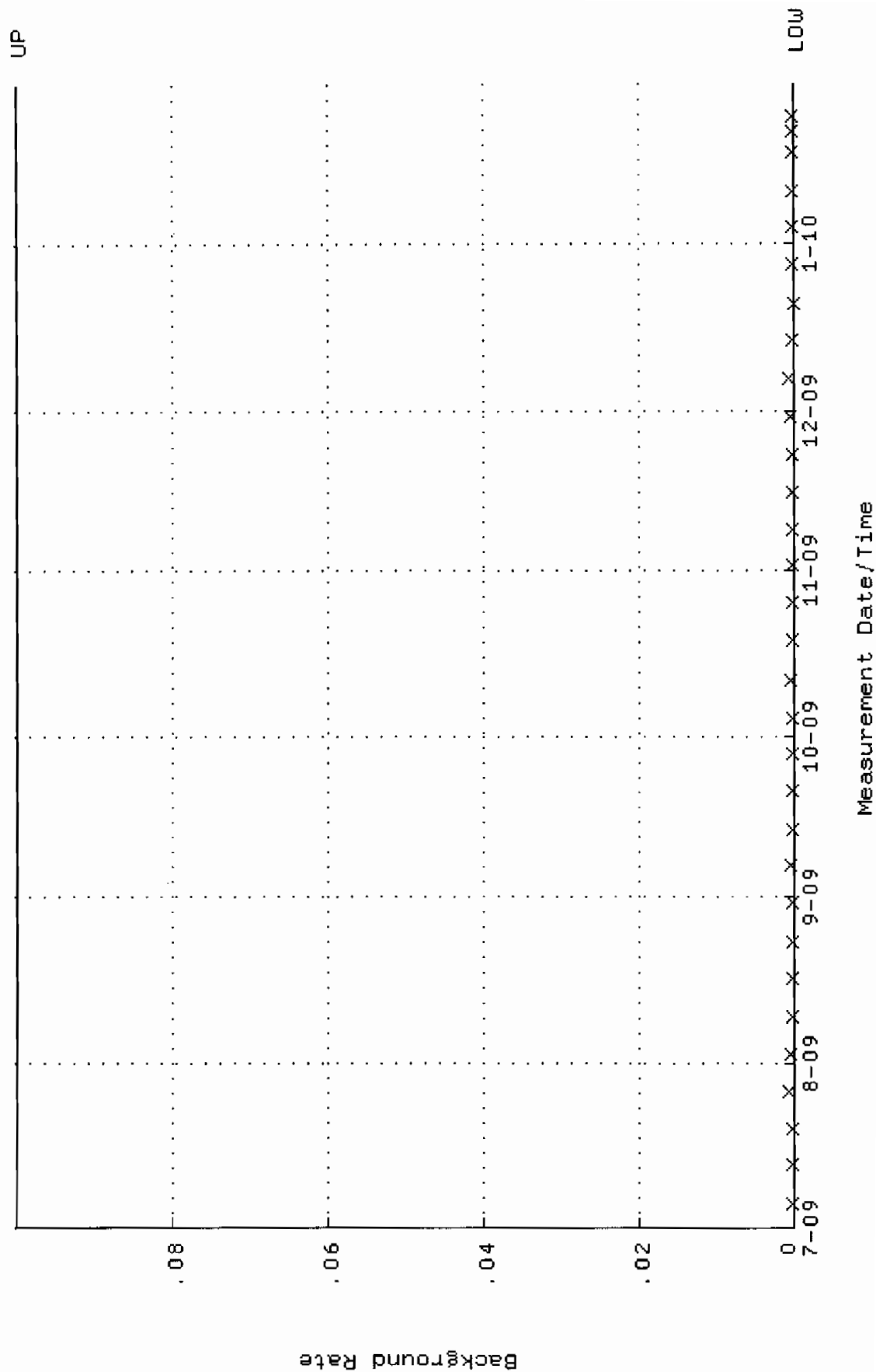
QA filename : DKA100:[ENV_ALPHA.QA.W]W237.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:50:14 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.390000 through 0.410000



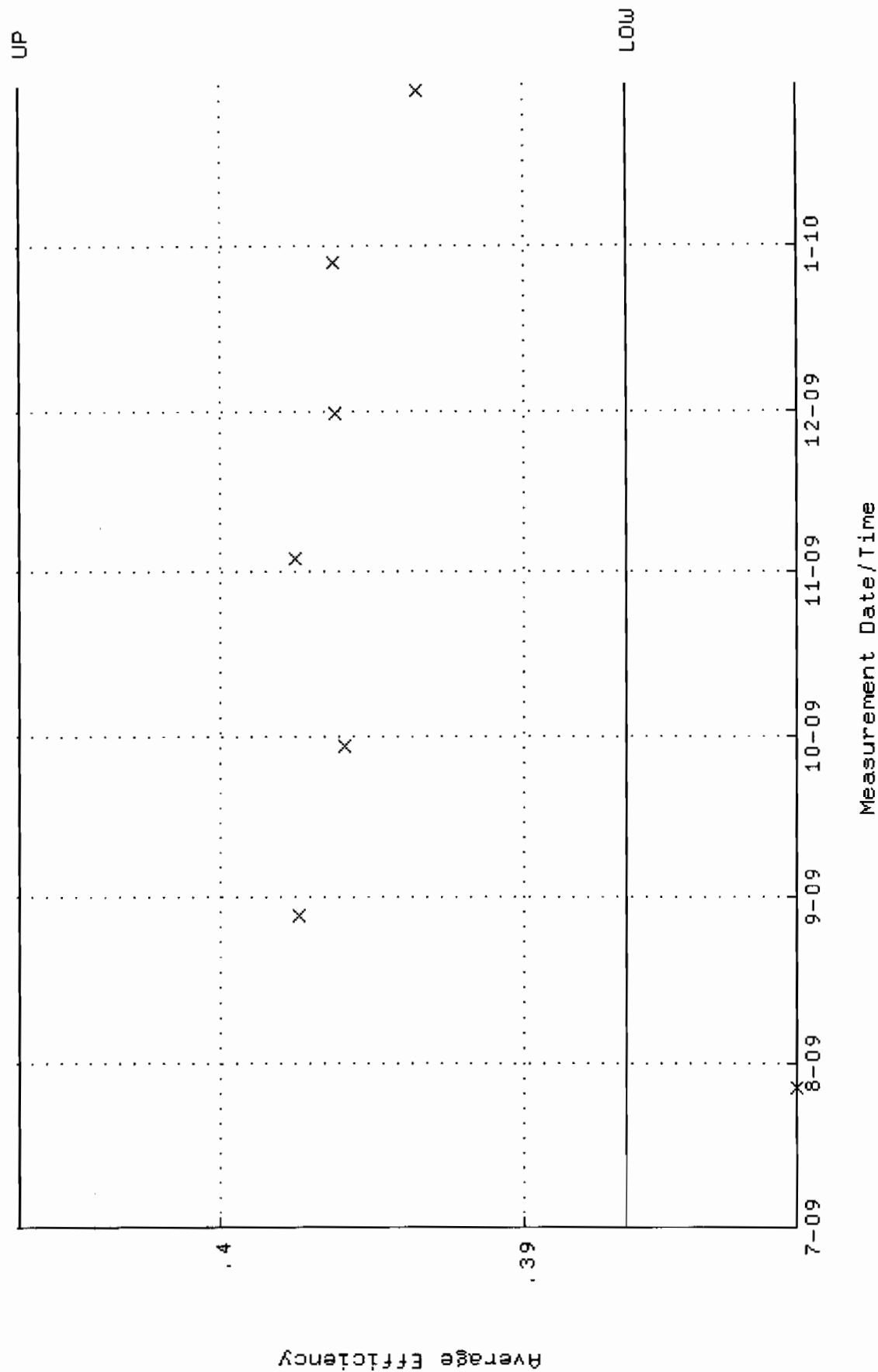
QA filename : DKA100:[ENV_ALPHA.QA.W]W237.QAF;1
 Parameter Name : NLACTVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:50:14 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 79.5642 through 87.9394



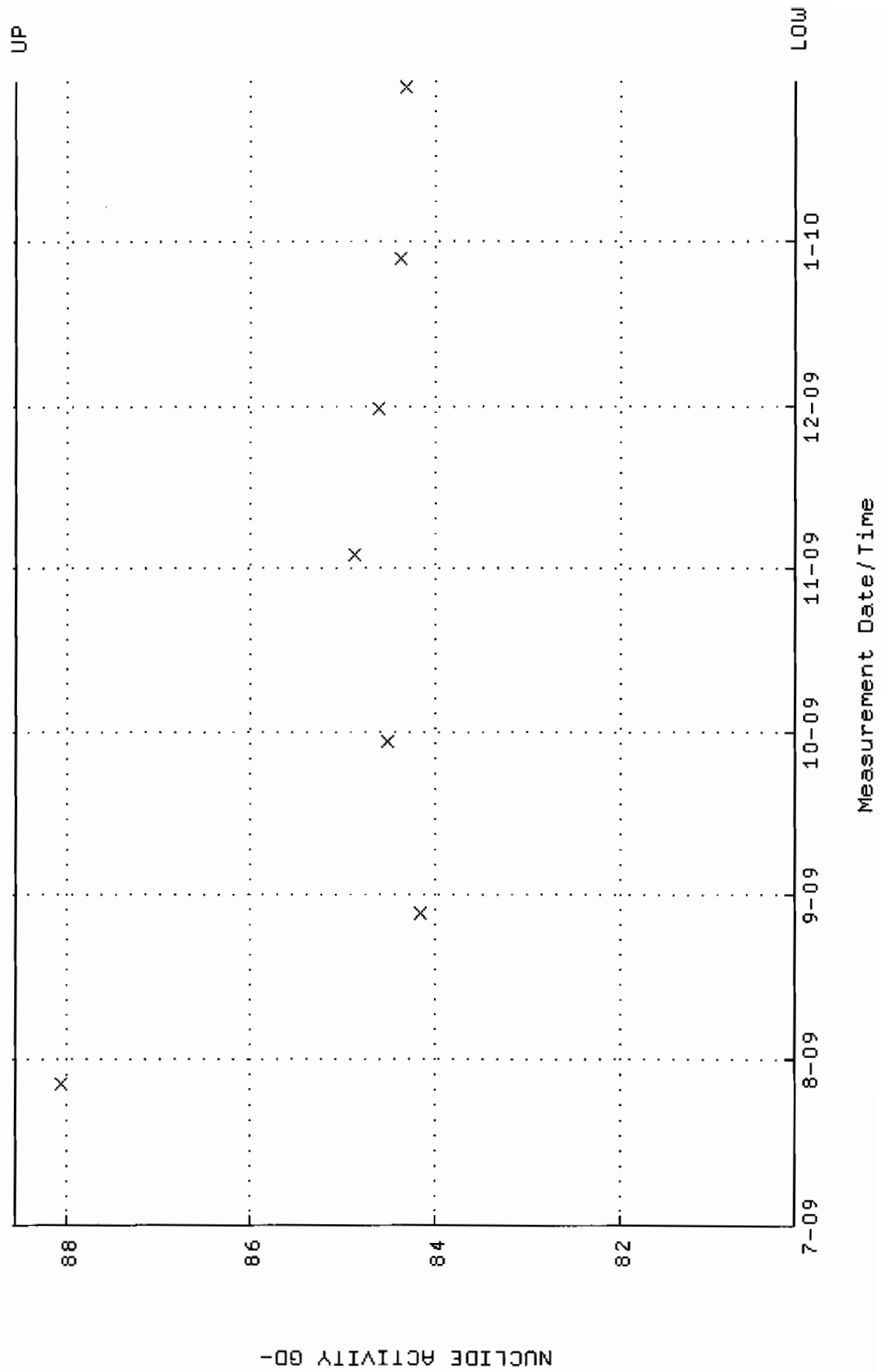
QA filename : DKA100:[ENV_ALPHA.QA.B]B237.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:29 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



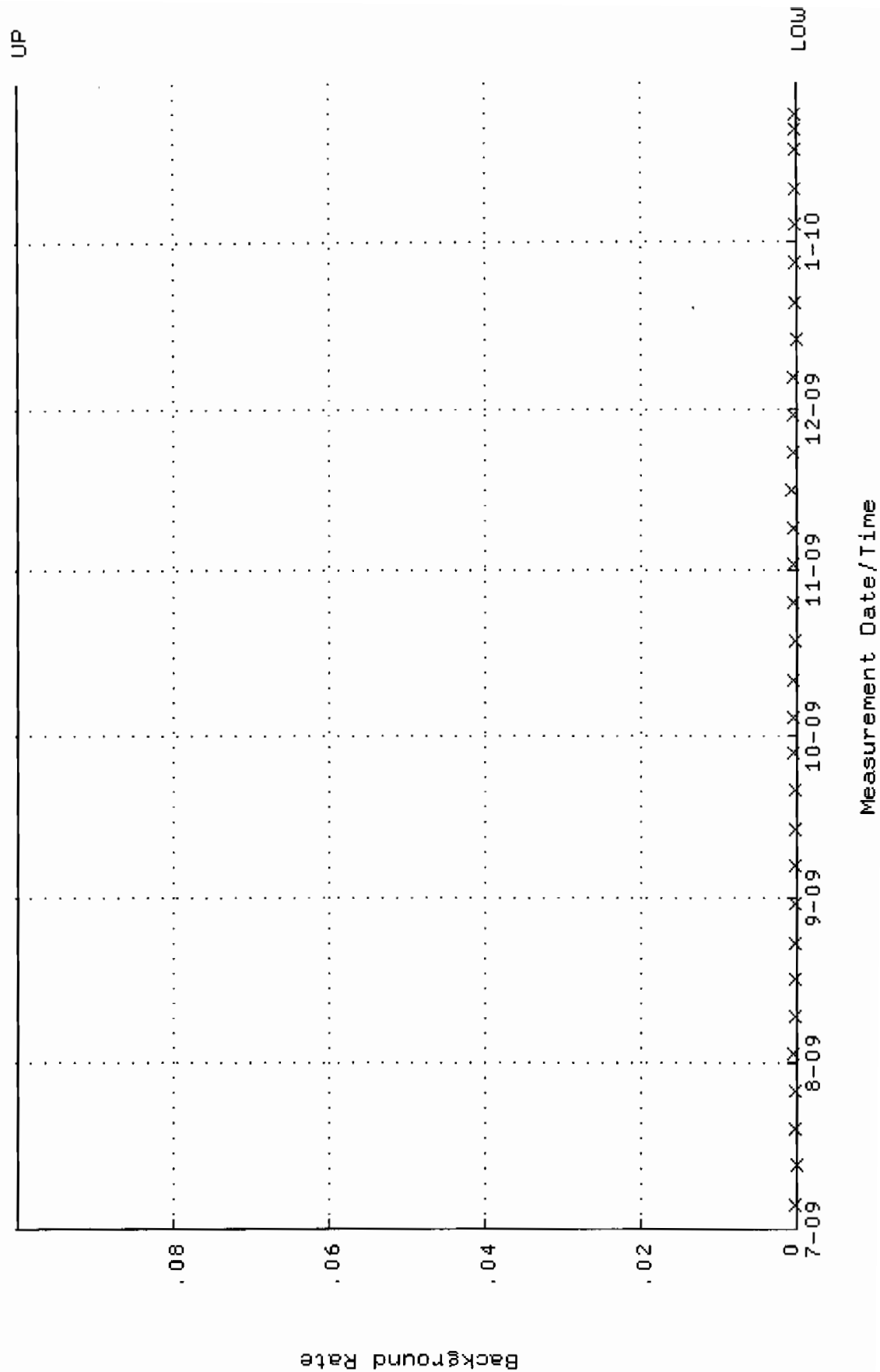
QA filename : DKA100: [ENV_ALPHA.QA.W]W238.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:50:20 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.386660 through 0.406660



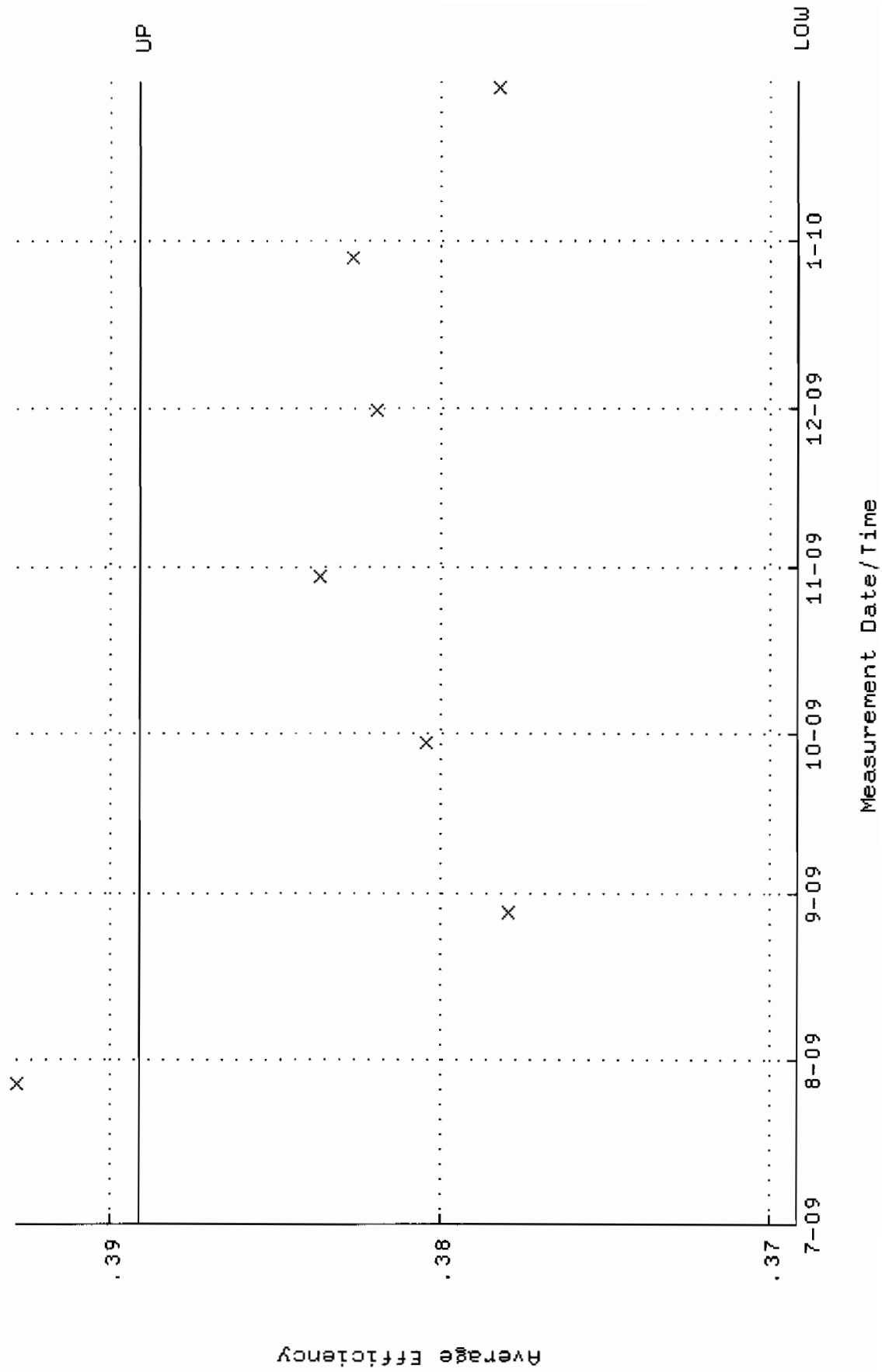
QA filename : DKA100:[ENV_ALPHA.QA.W]W238.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:50:20 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 80.1146 through 88.5478



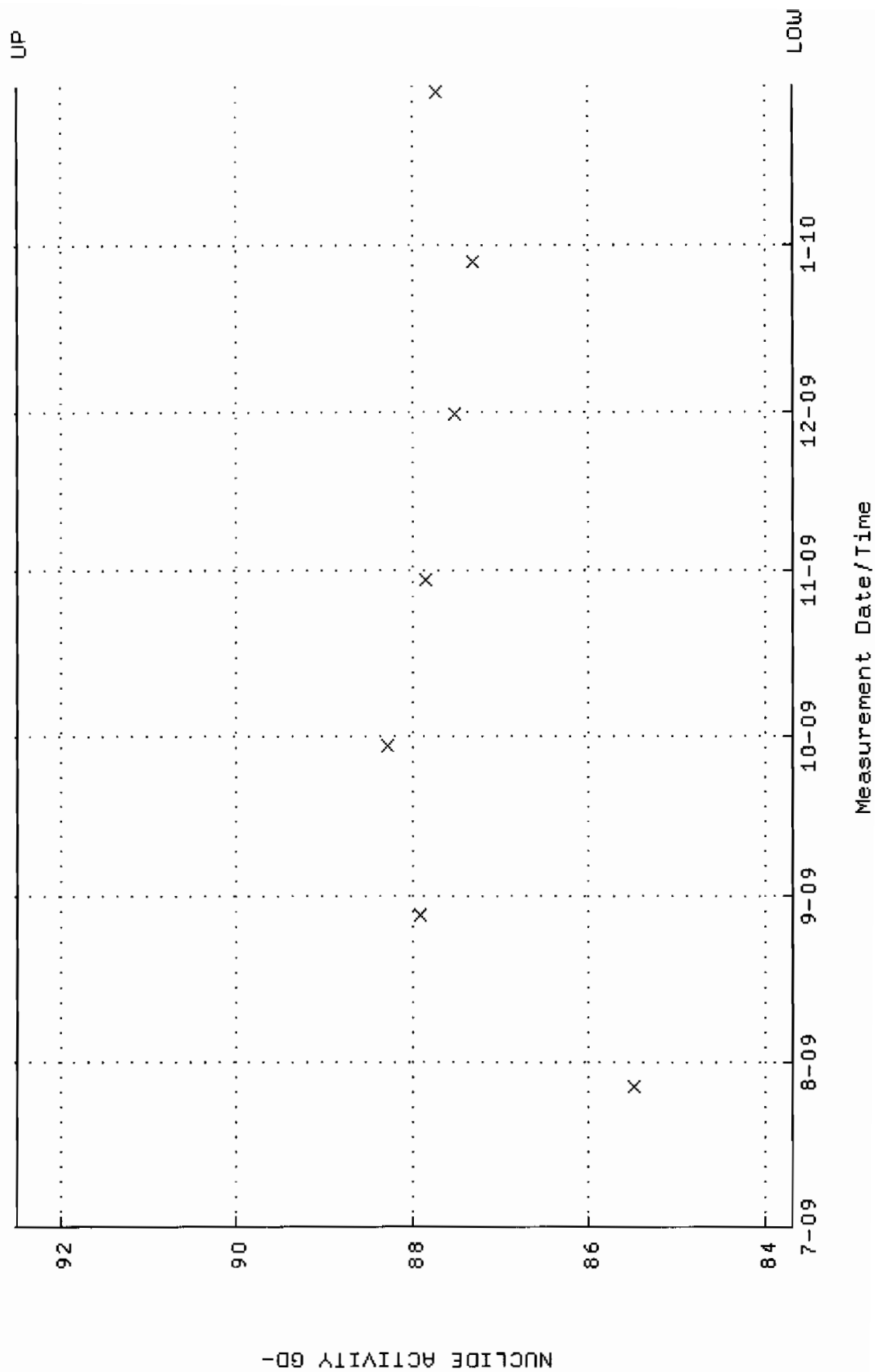
QA filename : DKA100:[ENV_ALPHA.QA.B]B238.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:34 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



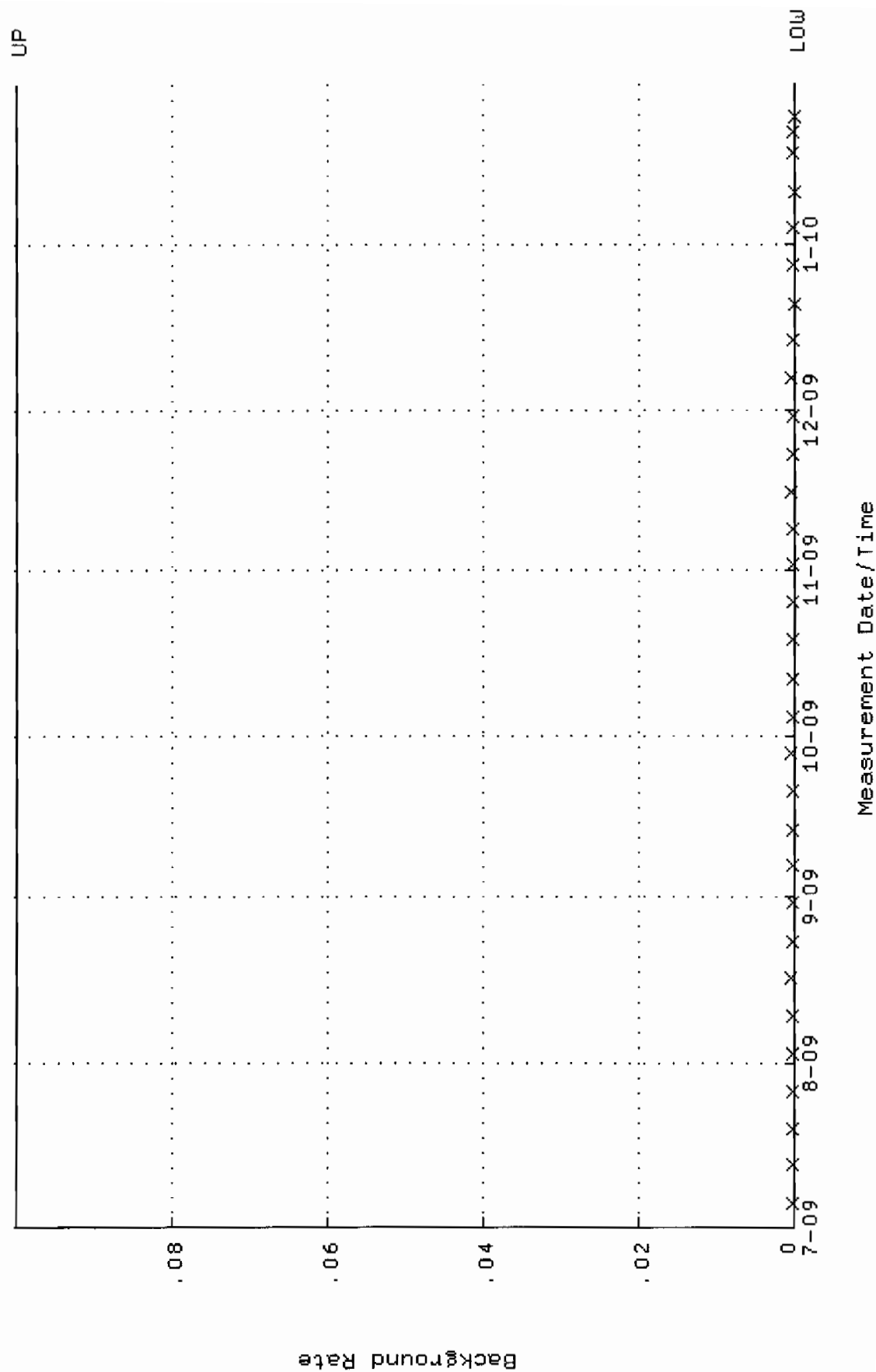
QA filename : DKA100:[ENV_ALPHA.QA.W]W239.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:50:26 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.369142 through 0.389142



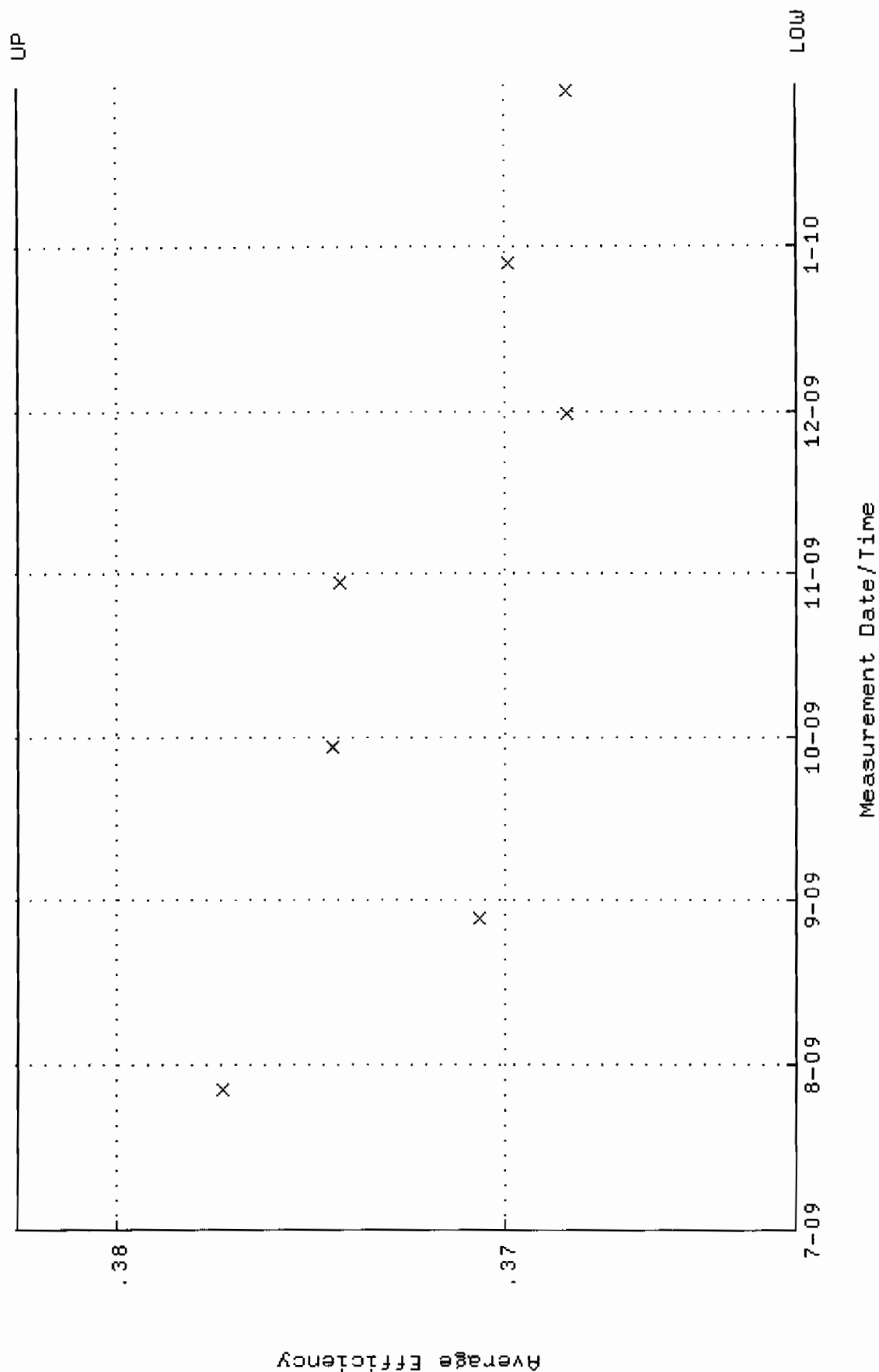
QA filename : DKA100:[ENV_ALPHA.QA.W]W239.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:50:26 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 83.6848 through 92.4938



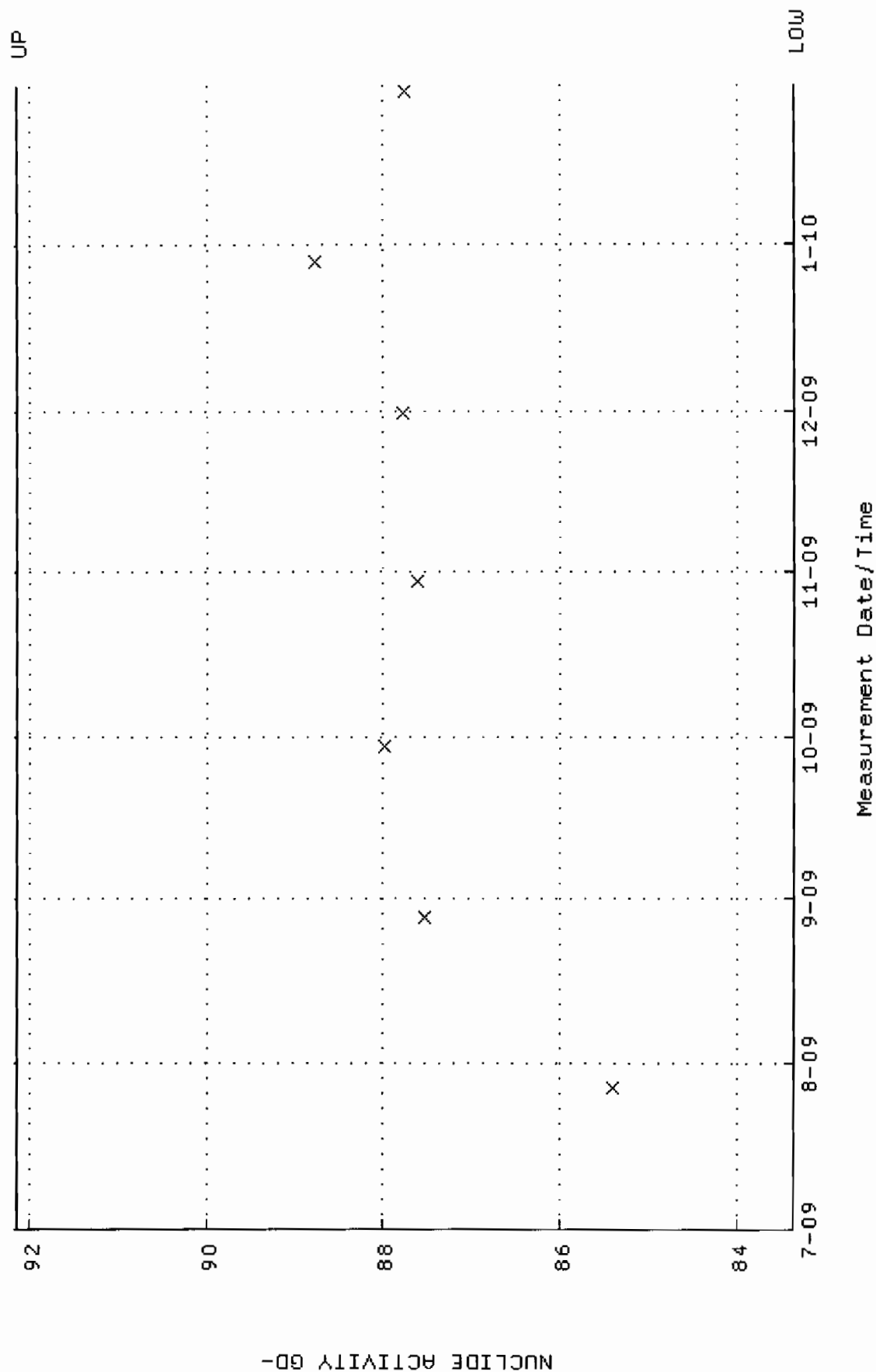
QA filename : DKA100:[ENV_ALPHA.QA.B]B239.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:05:39 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



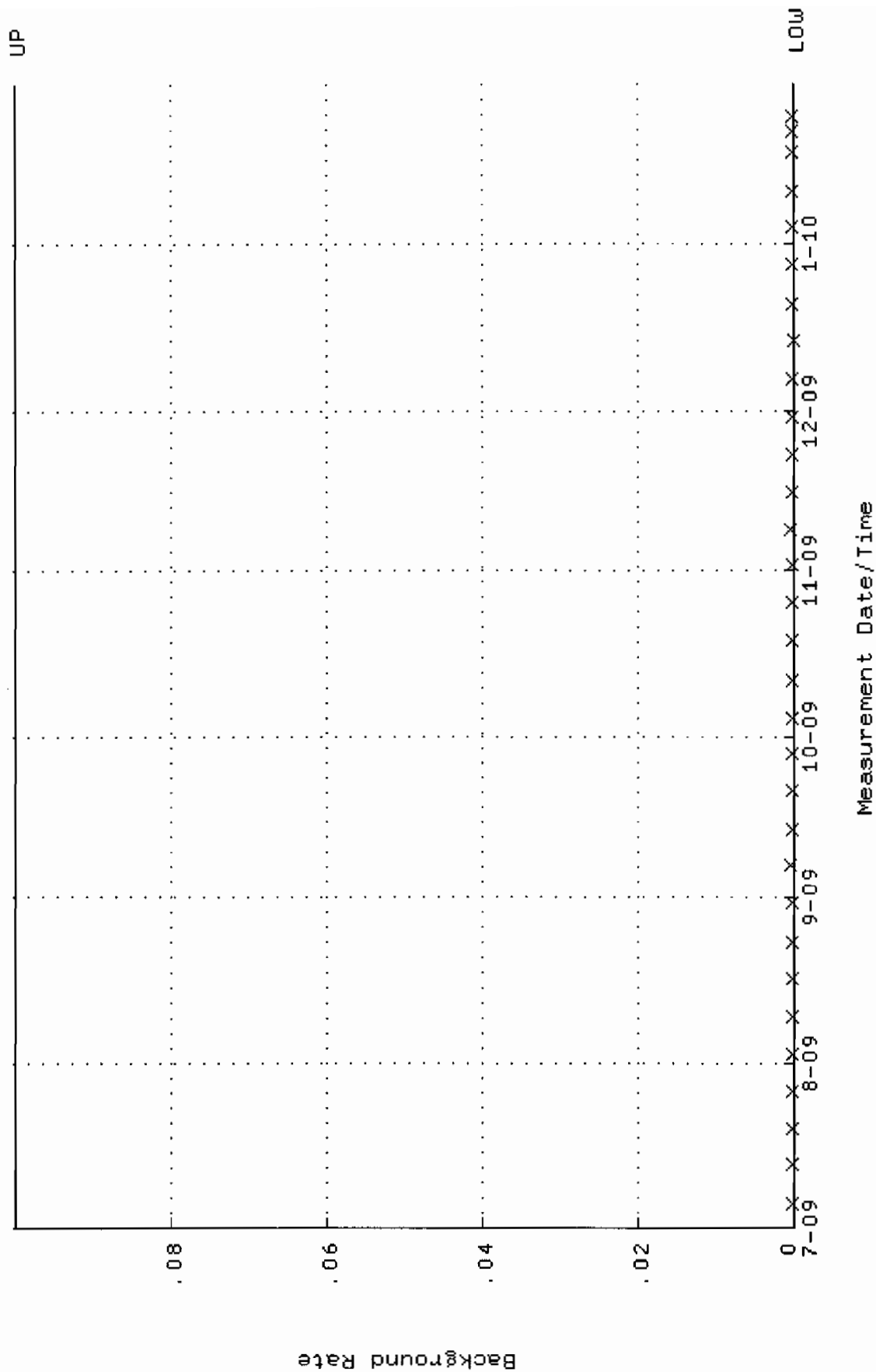
QA filename : DKA100:[ENV_ALPHA.QA.W]W240.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:50:32 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.362523 through 0.382523



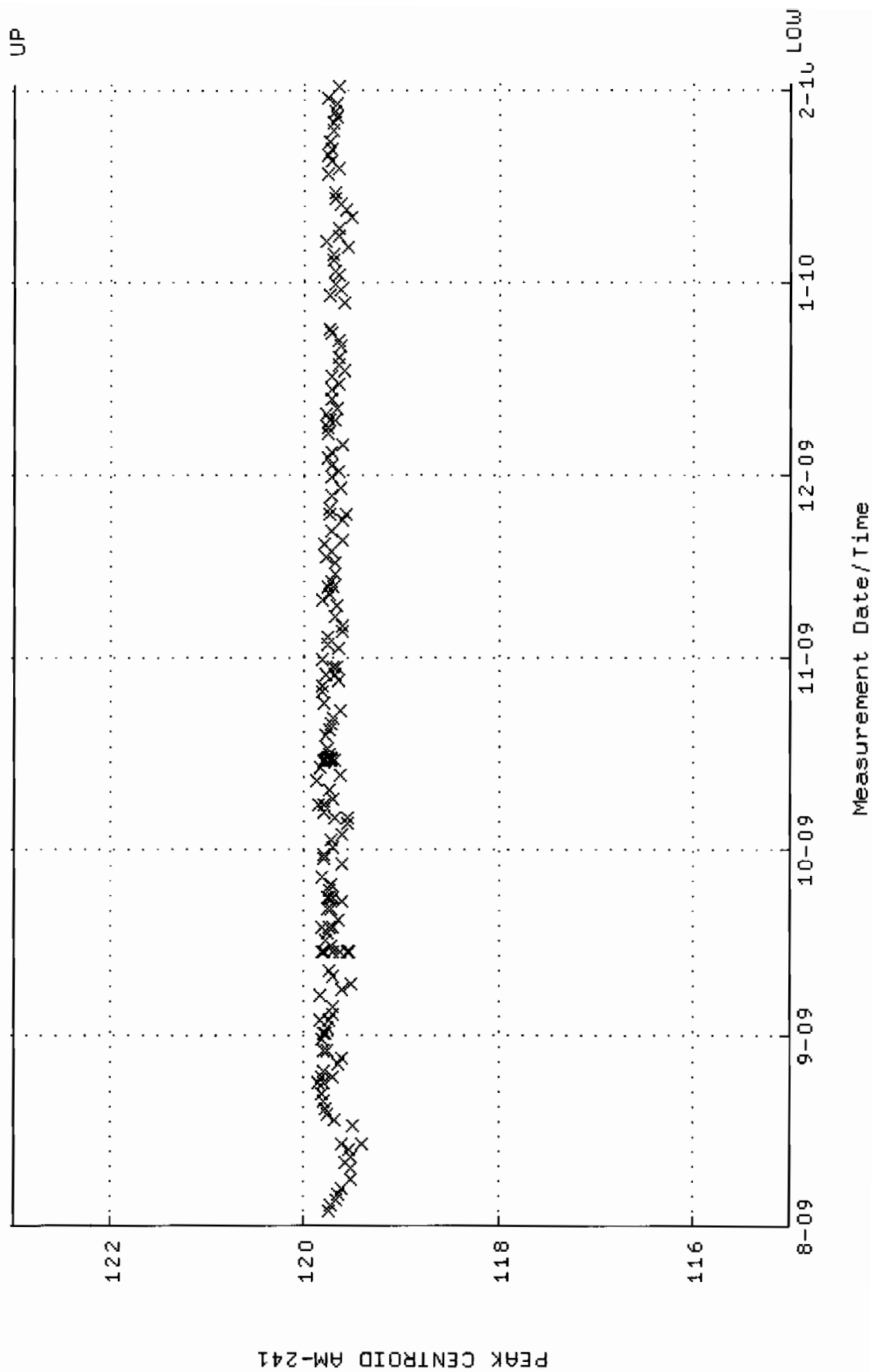
QA filename : DKA100:[ENV_ALPHA.QA.W]W240.QAF;1
 Parameter Name : NLAIVITY-G0148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:50:32 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 83.3638 through 92.1390



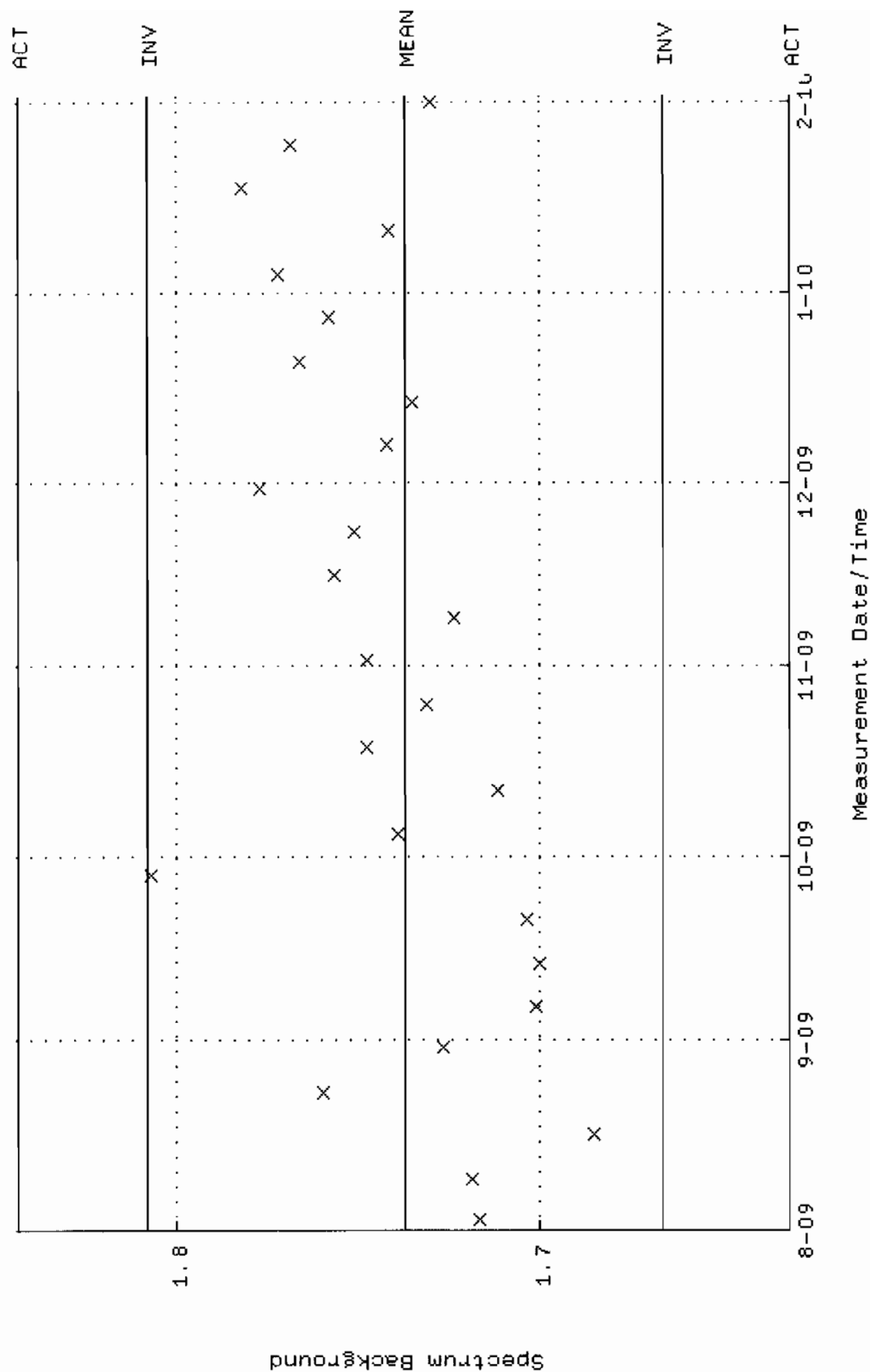
QA filename : DKA100:[ENV_ALPHA.QA.B]B240.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:05:43 through 30-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



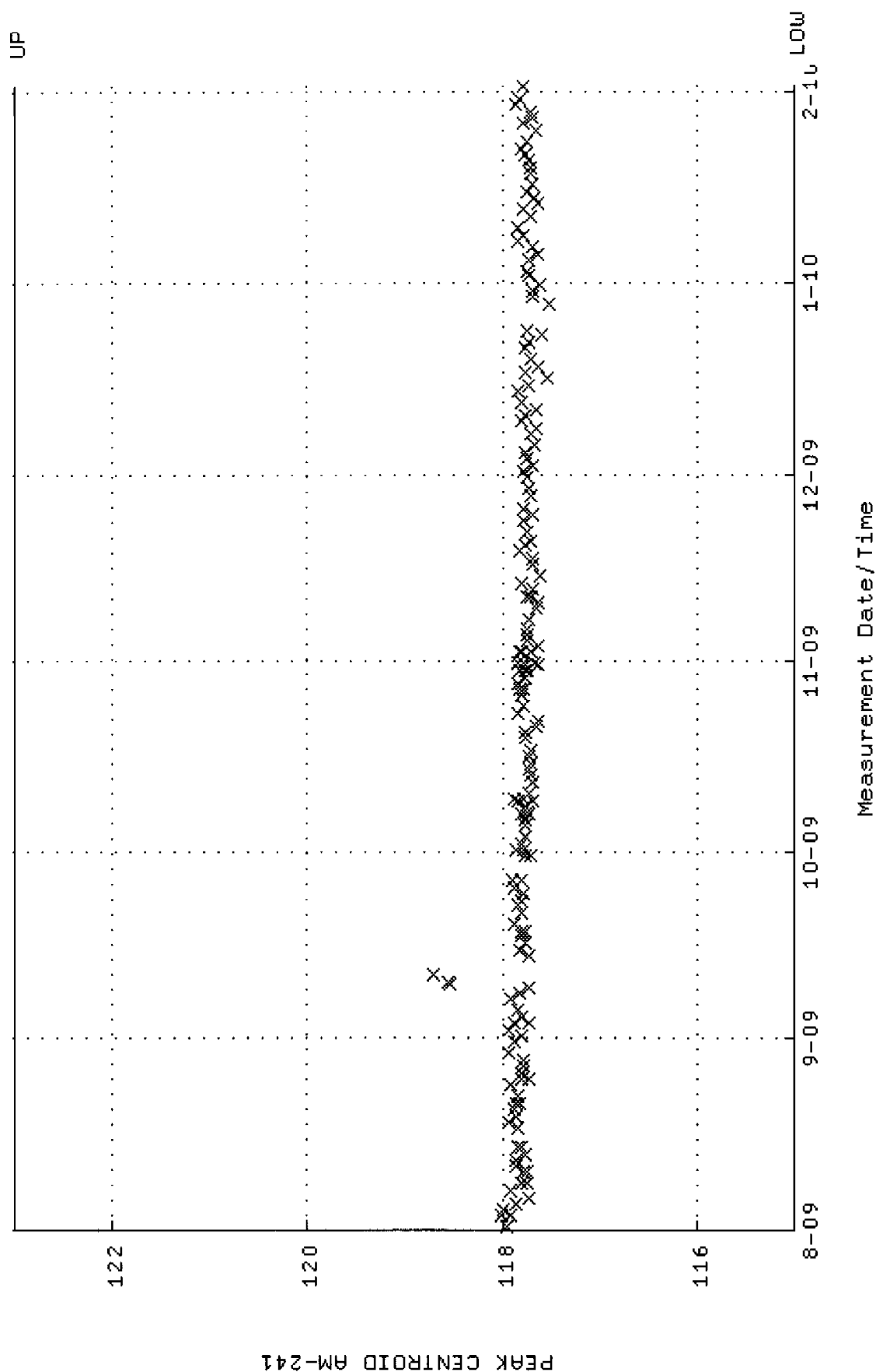
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_500MLMB.QAF;1
Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-AUG-2009 09:08:48 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



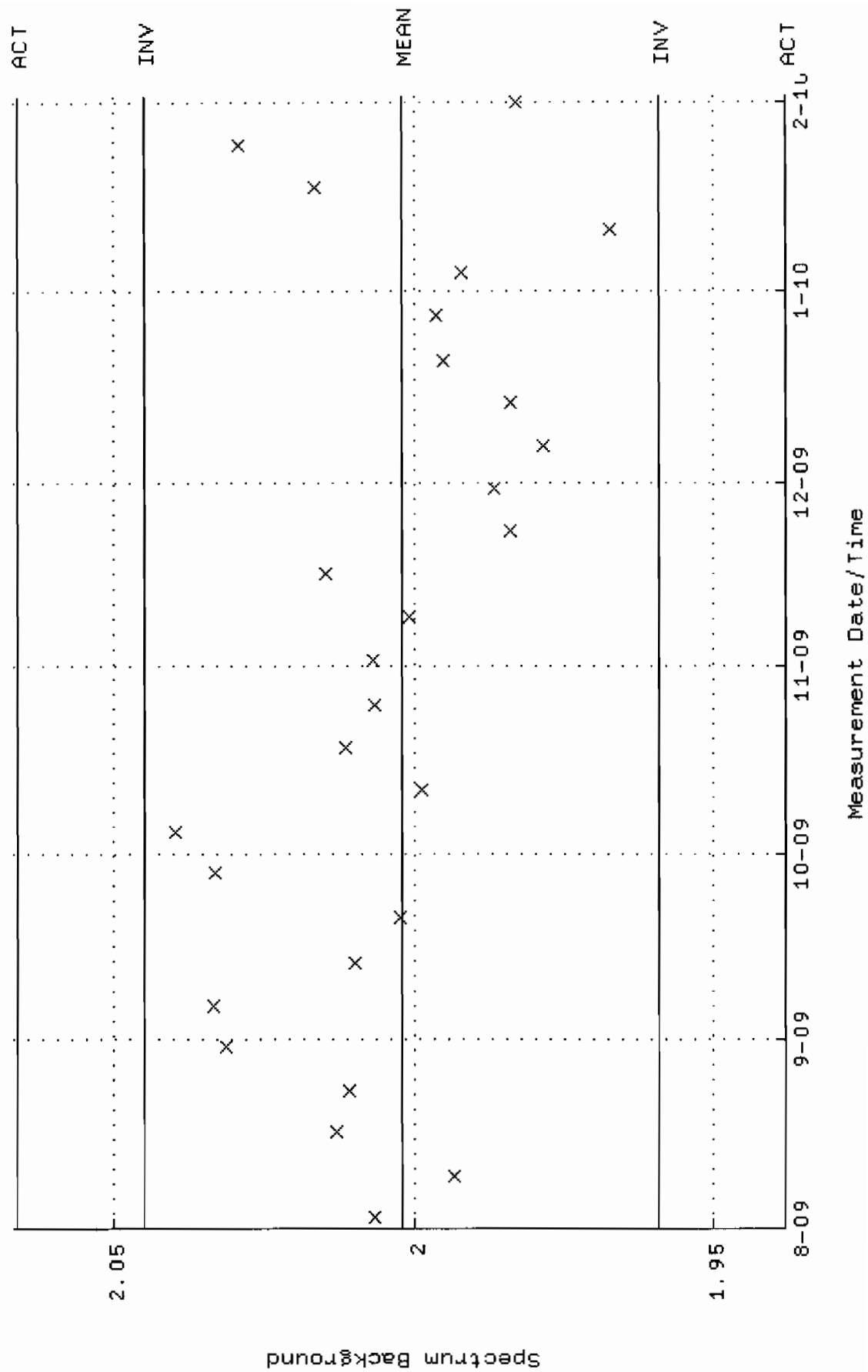
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:21:01 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.73723 +- 3.552524E-02 (2.04 %)



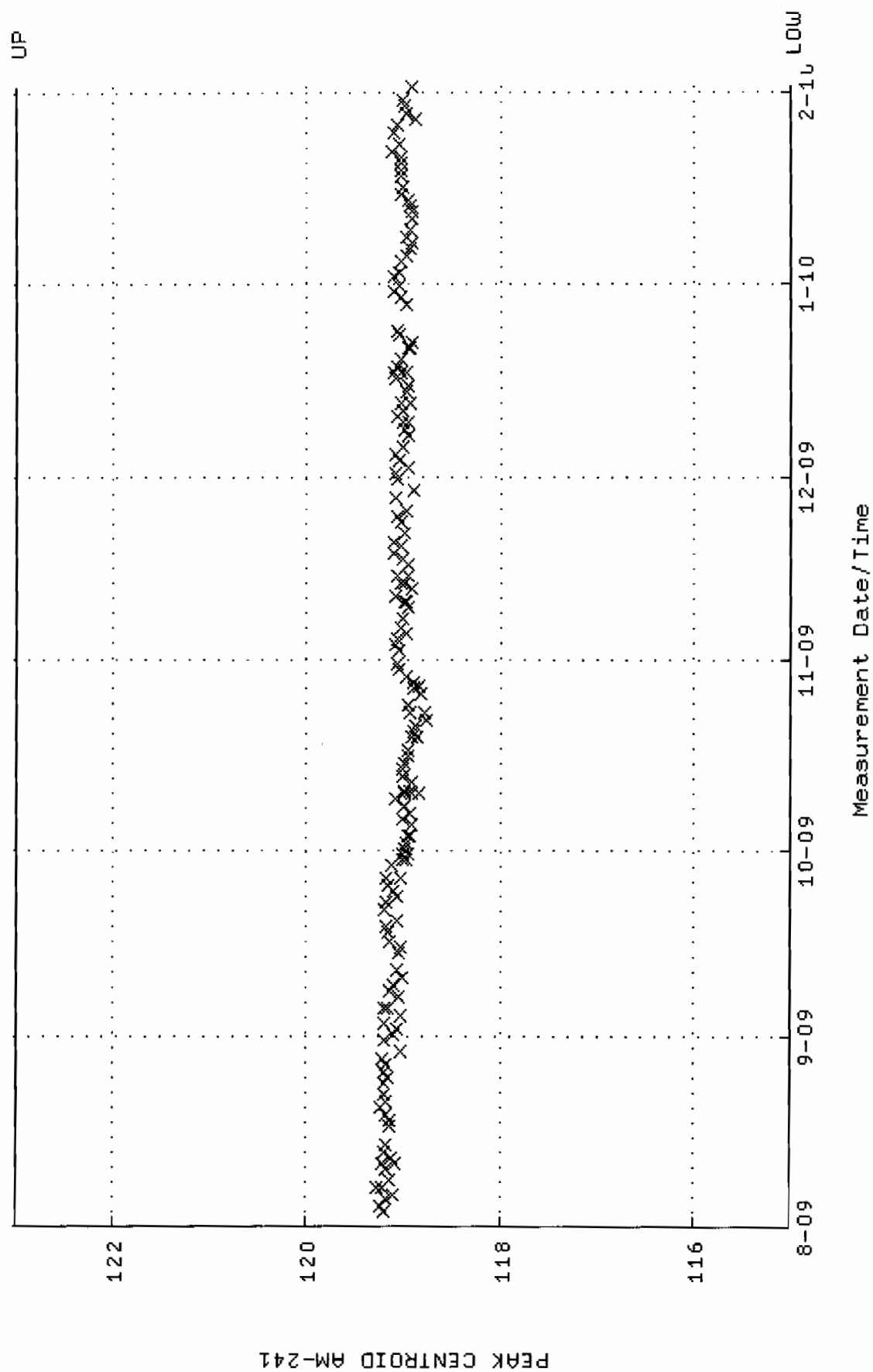
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM02-CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 1-AUG-2009 13:19:33 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



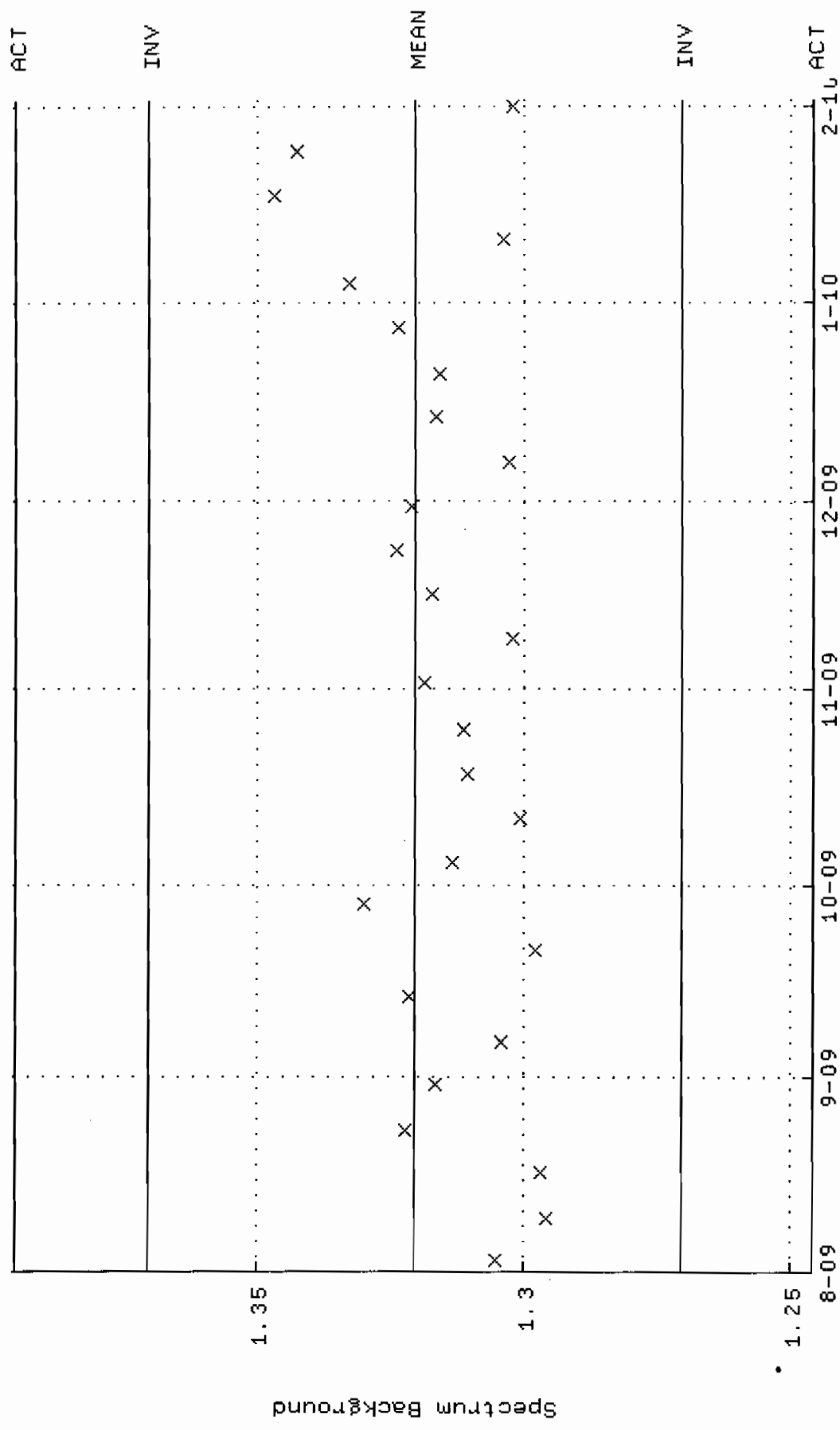
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:22:27 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 2.00226 +- 2.139827E-02 (1.07 %)



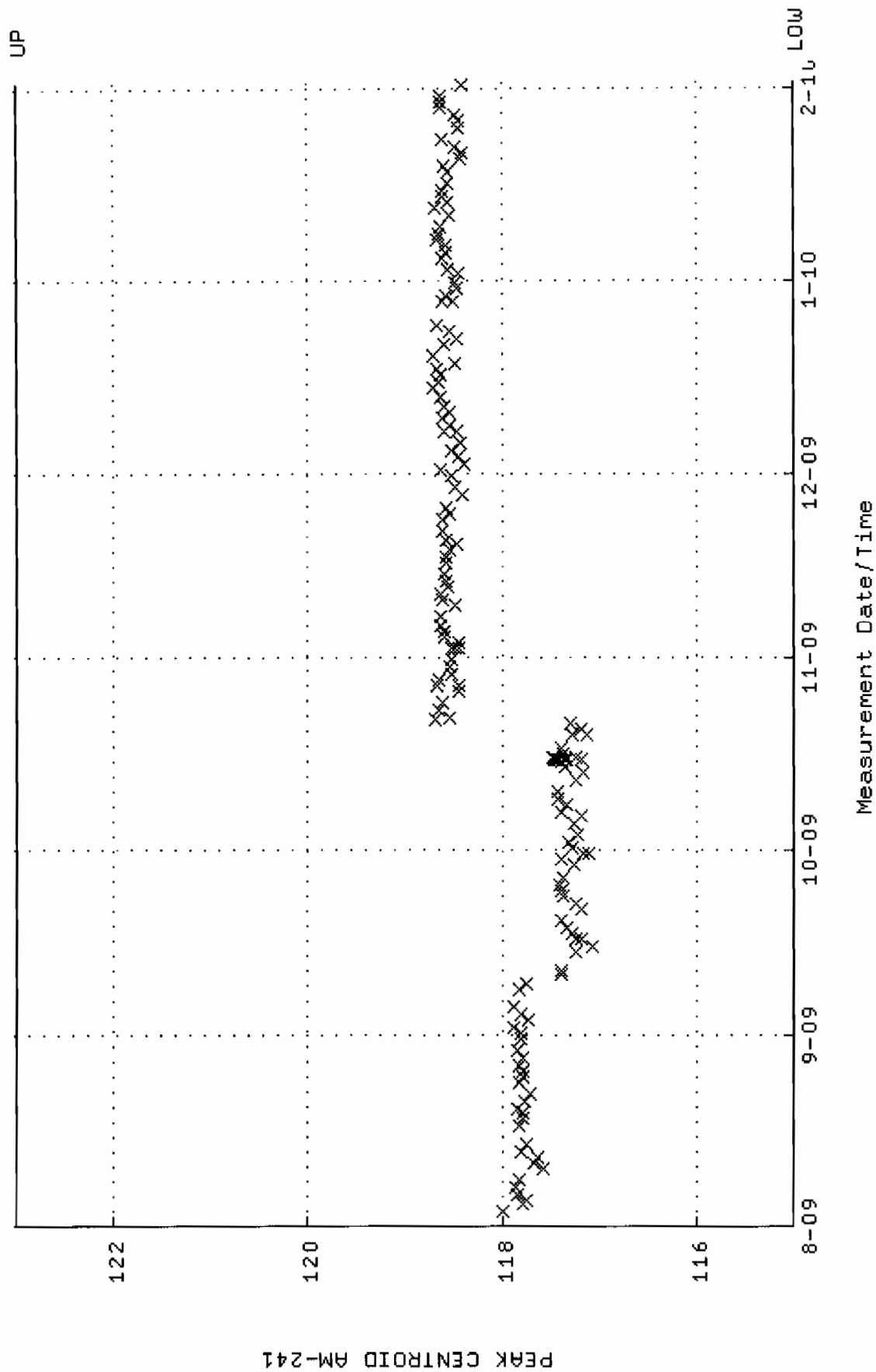
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM04-CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:11:46 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



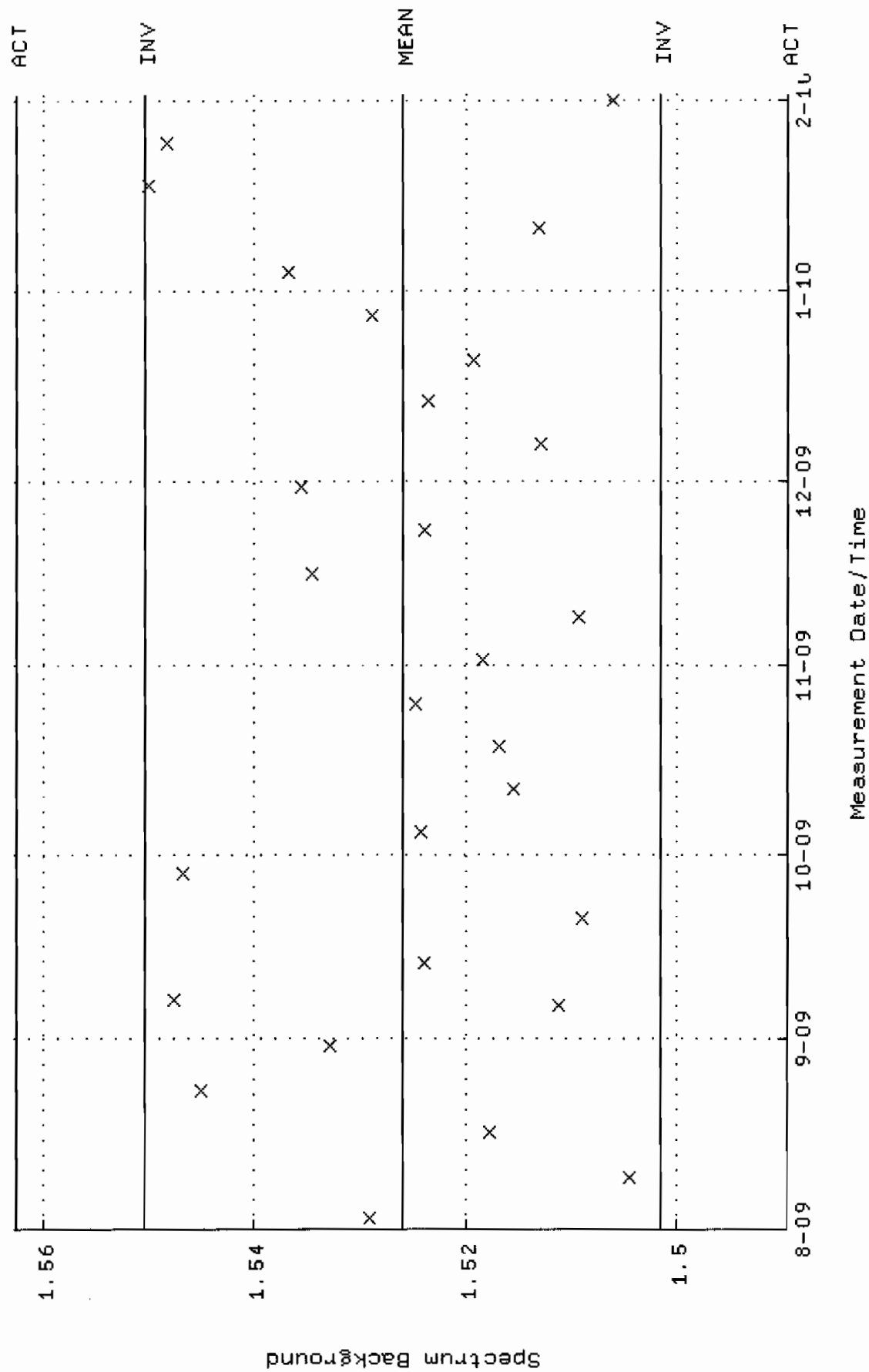
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM04.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:22:48 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.32050 +- 2.495234E-02 (1.89 %)



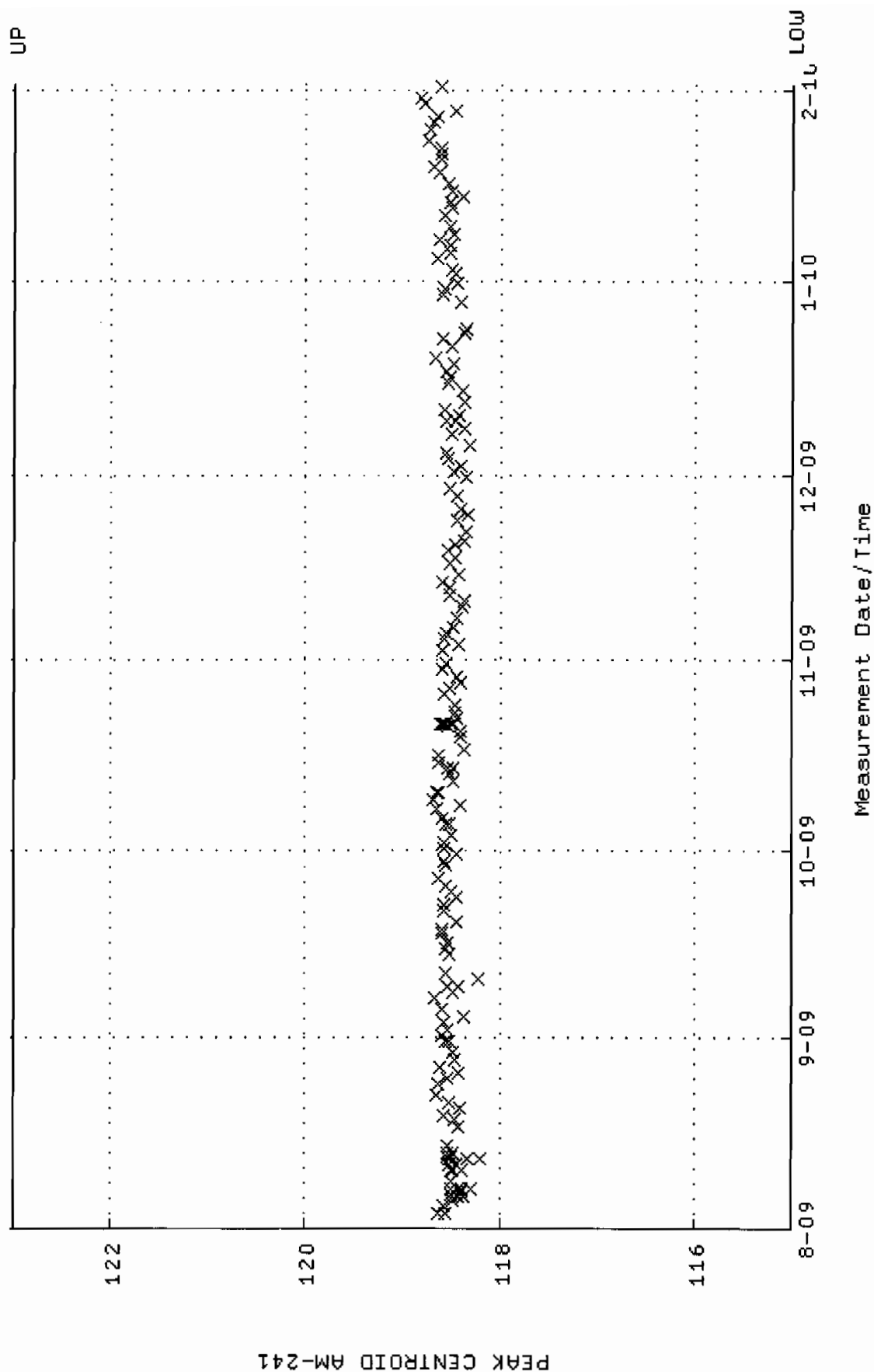
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM06_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:13:43 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



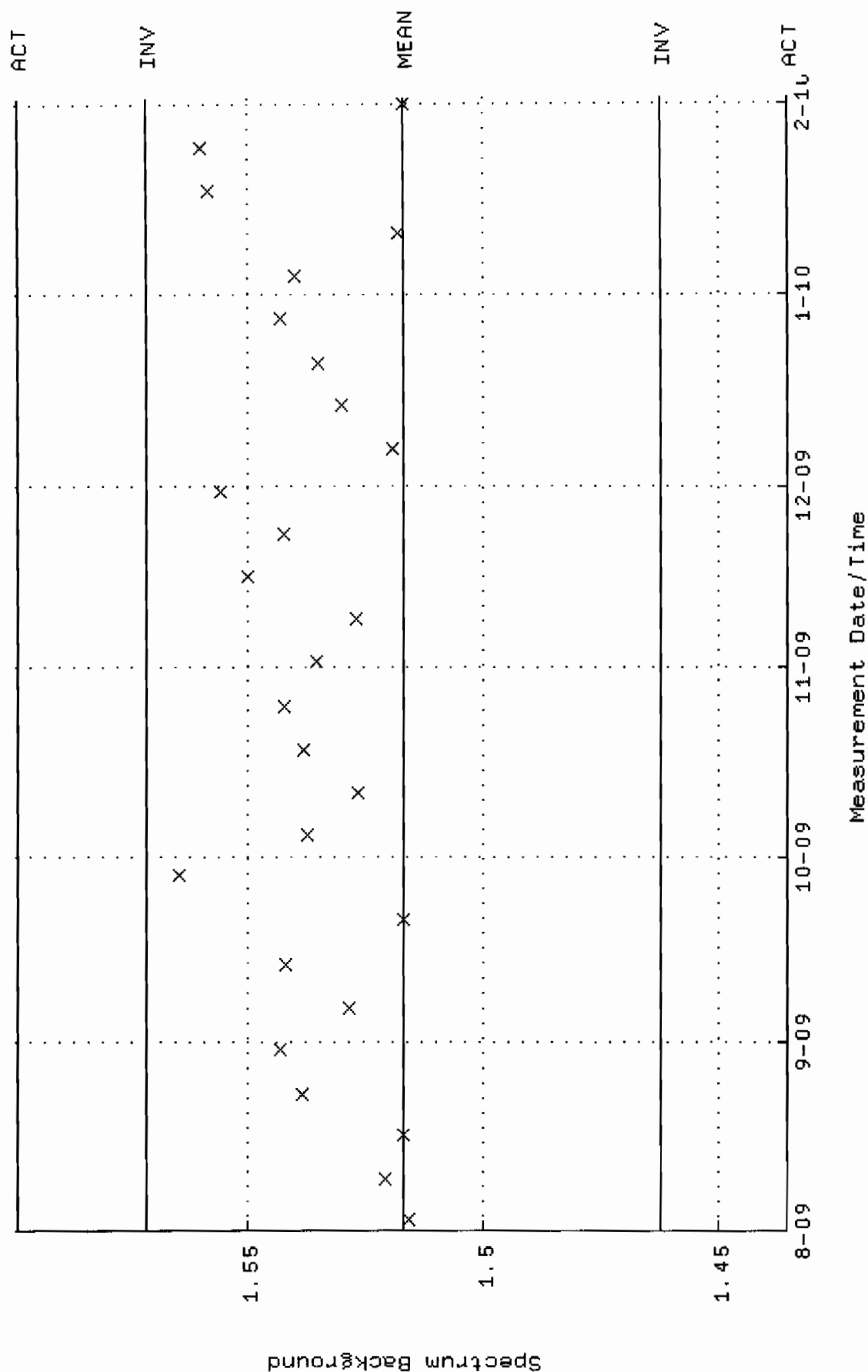
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM06.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:13 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.52603 +- 1.215987E-02 (0.80 %)



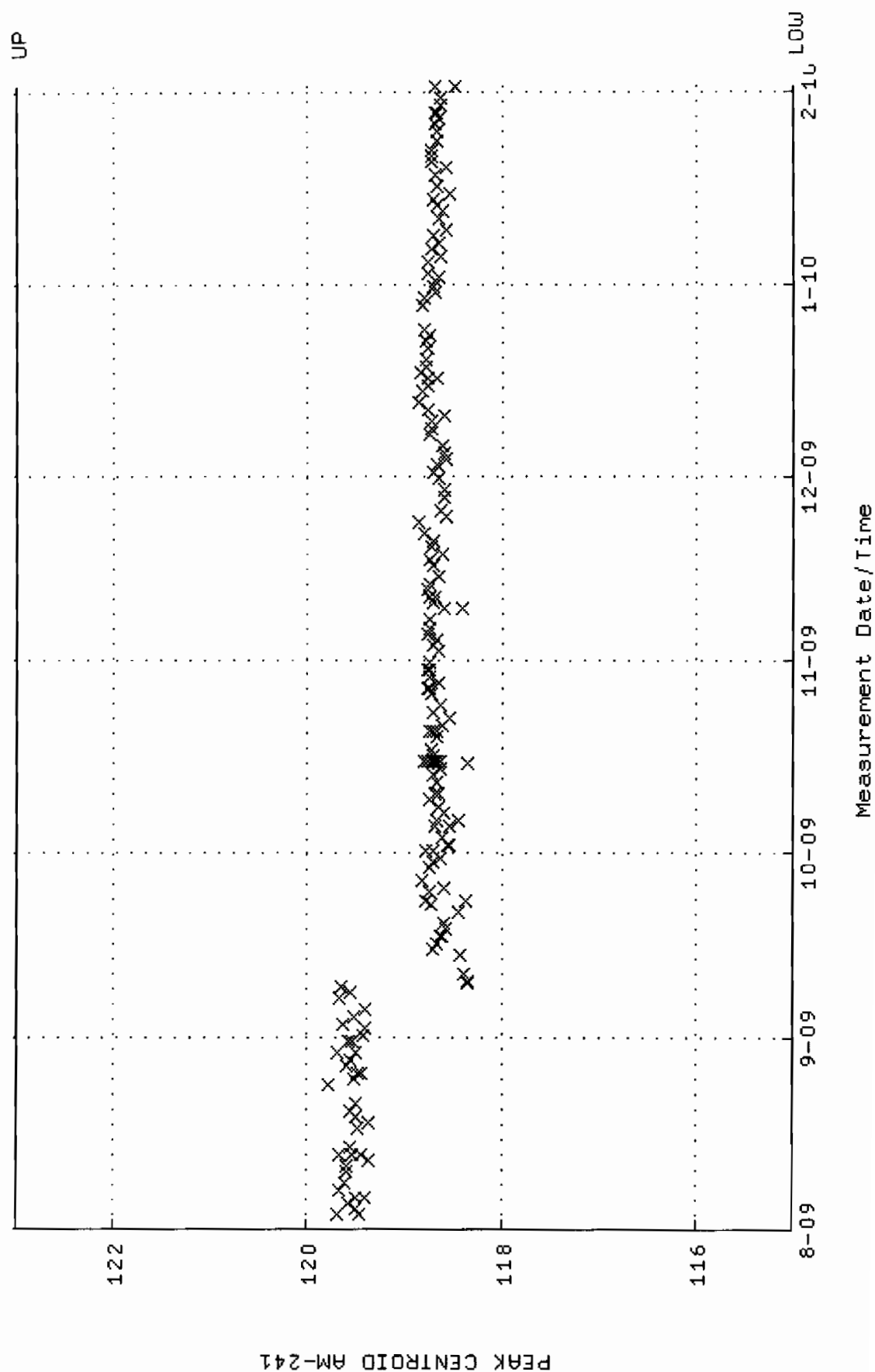
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM07-JAR.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:13:52 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



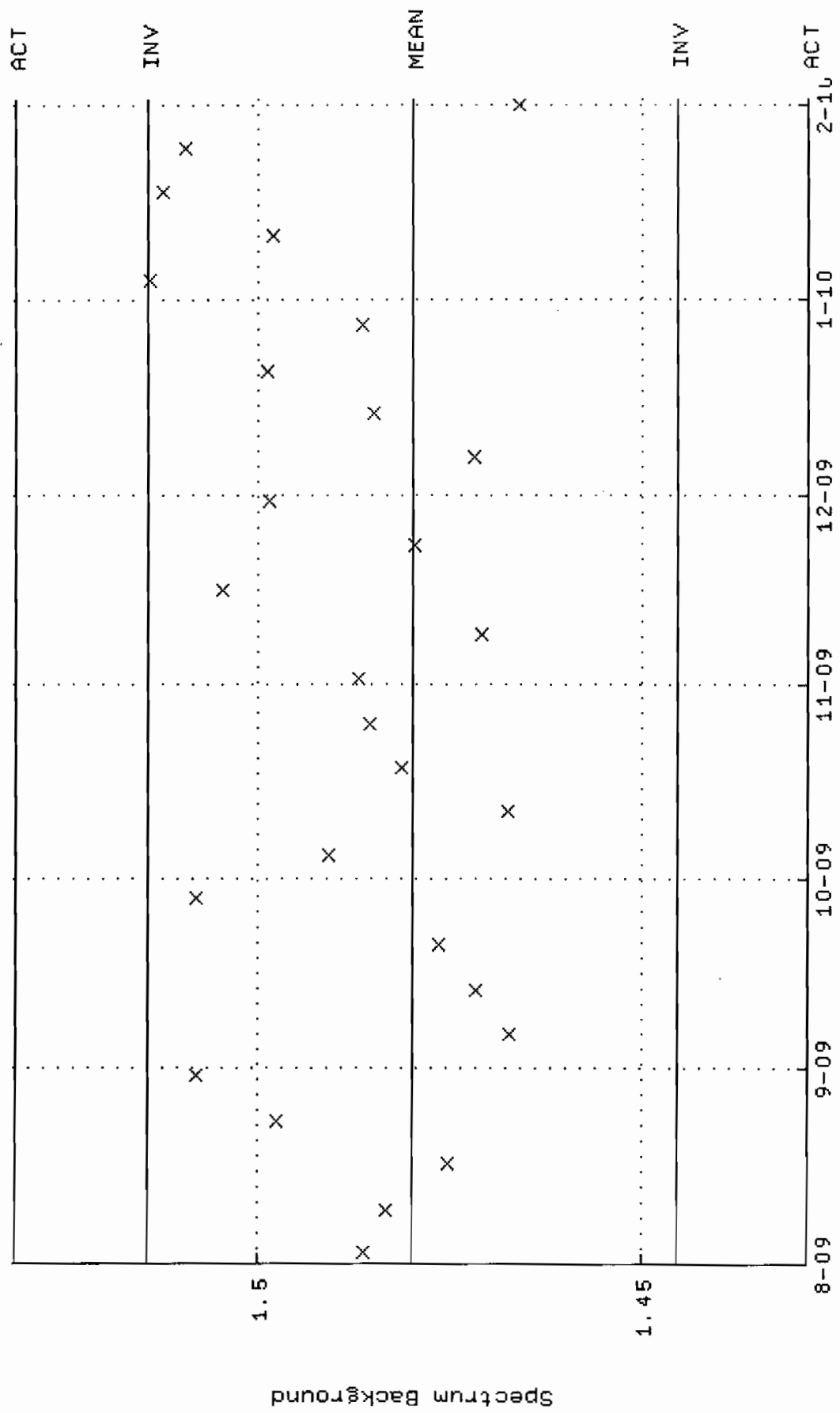
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM07.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:26 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.51715 +- 2.726376E-02 (1.80 %)



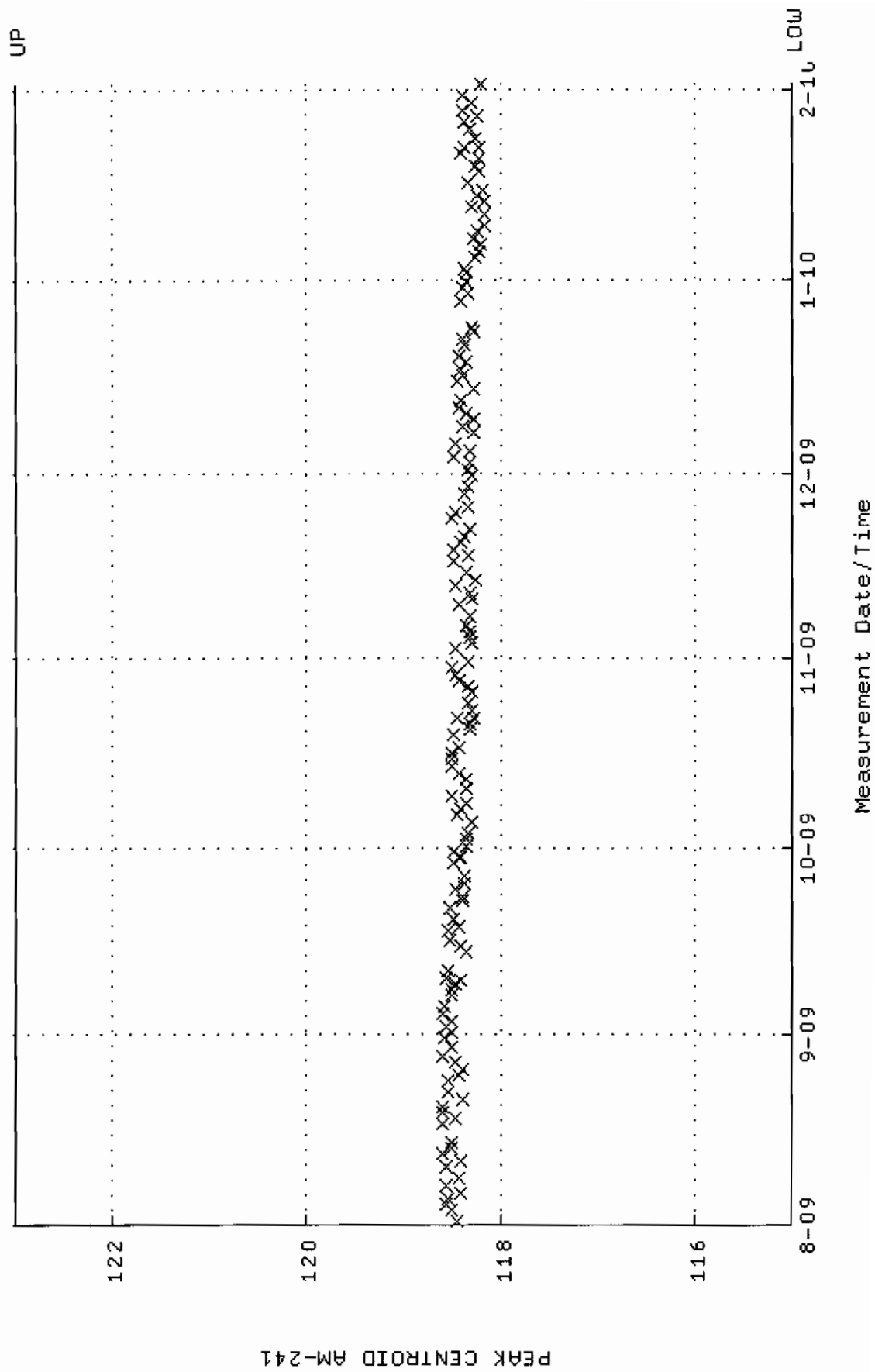
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:36:50 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



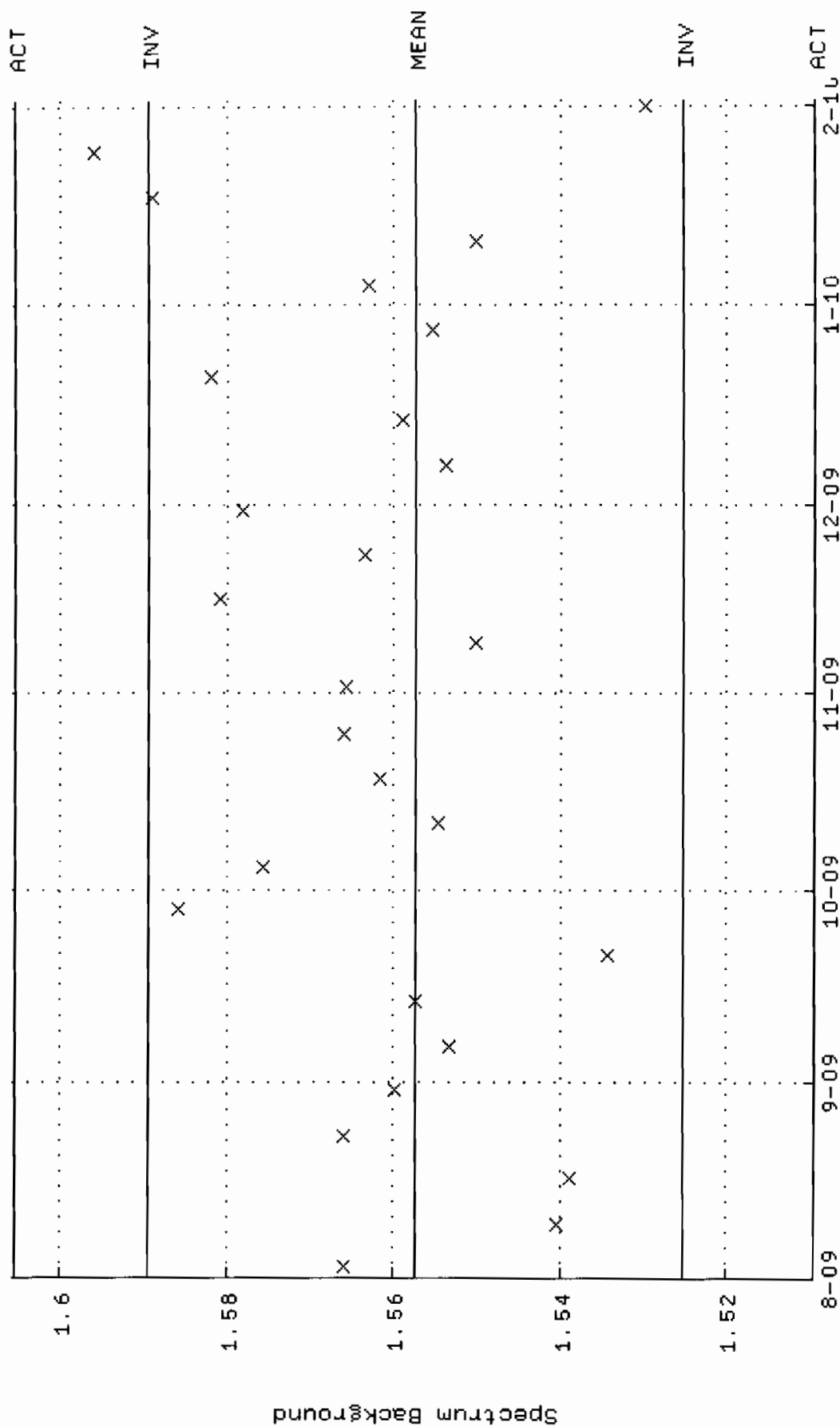
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:43 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48000 +- 1.723892E-02 (1.16 %)



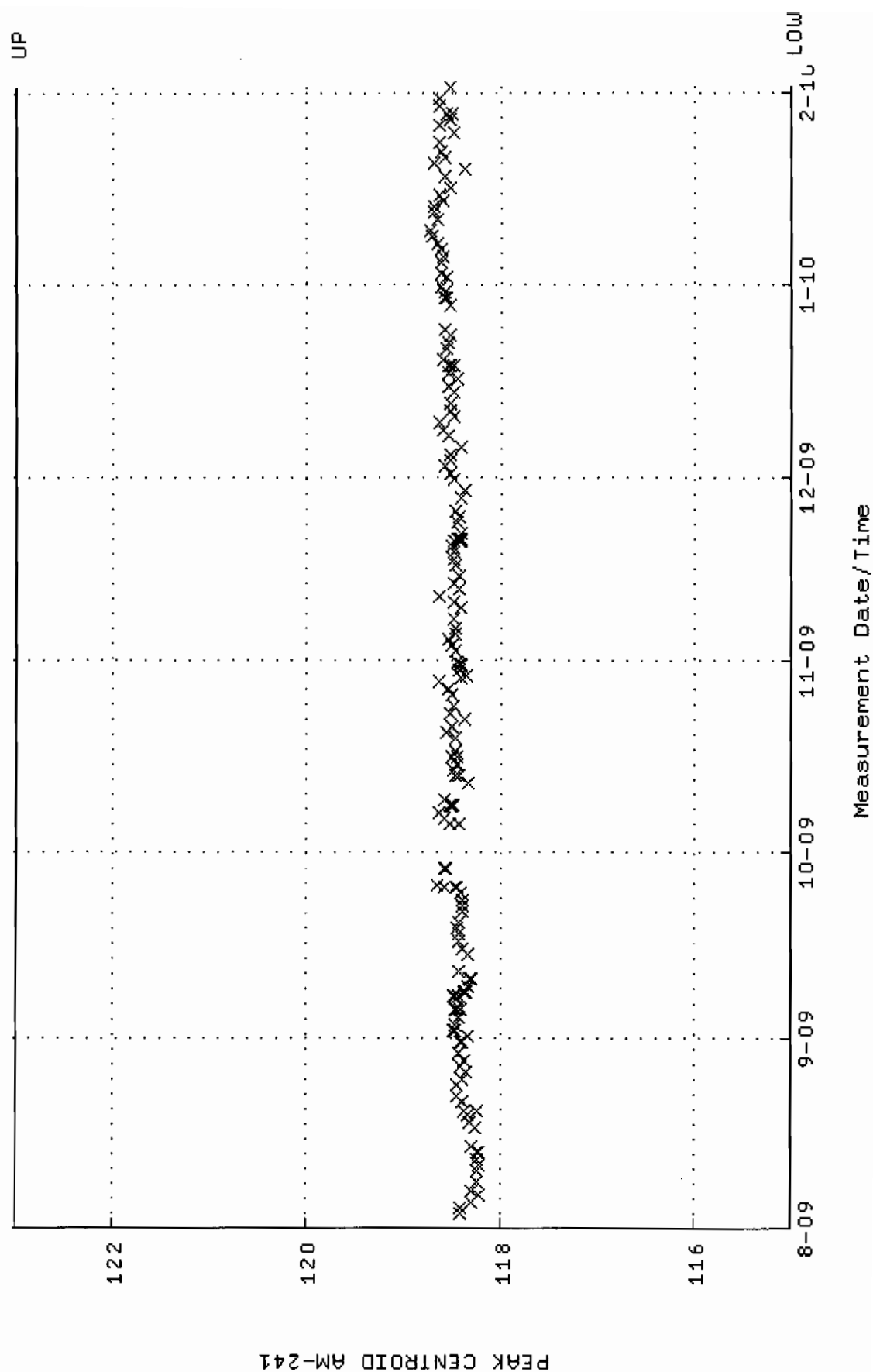
QA filename : DKA100:[CANNBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 1-AUG-2009 13:58:23 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



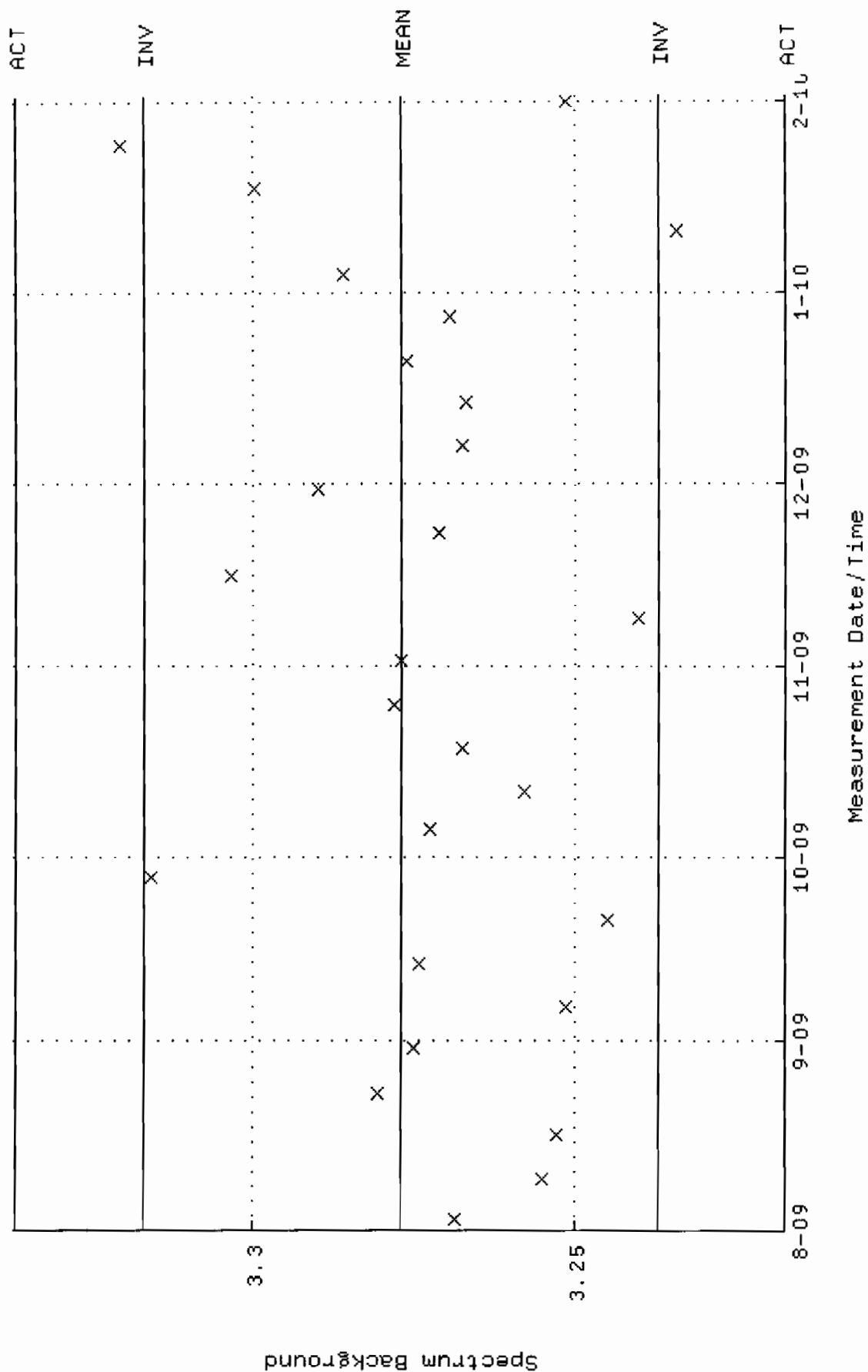
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:08 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.55746 +- 1.601675E-02 (1.03 %)



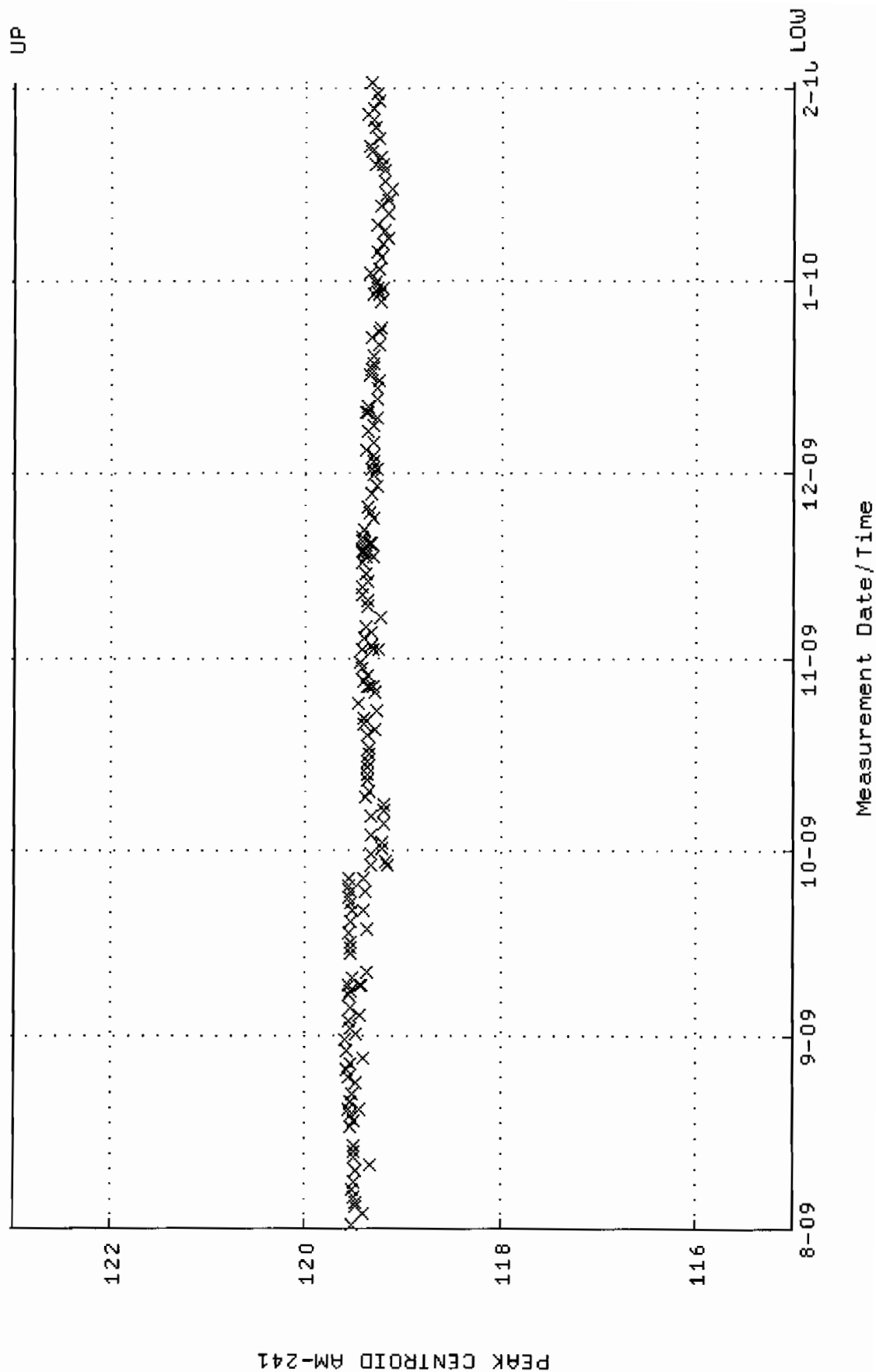
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-AUG-2009 09:34:18 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



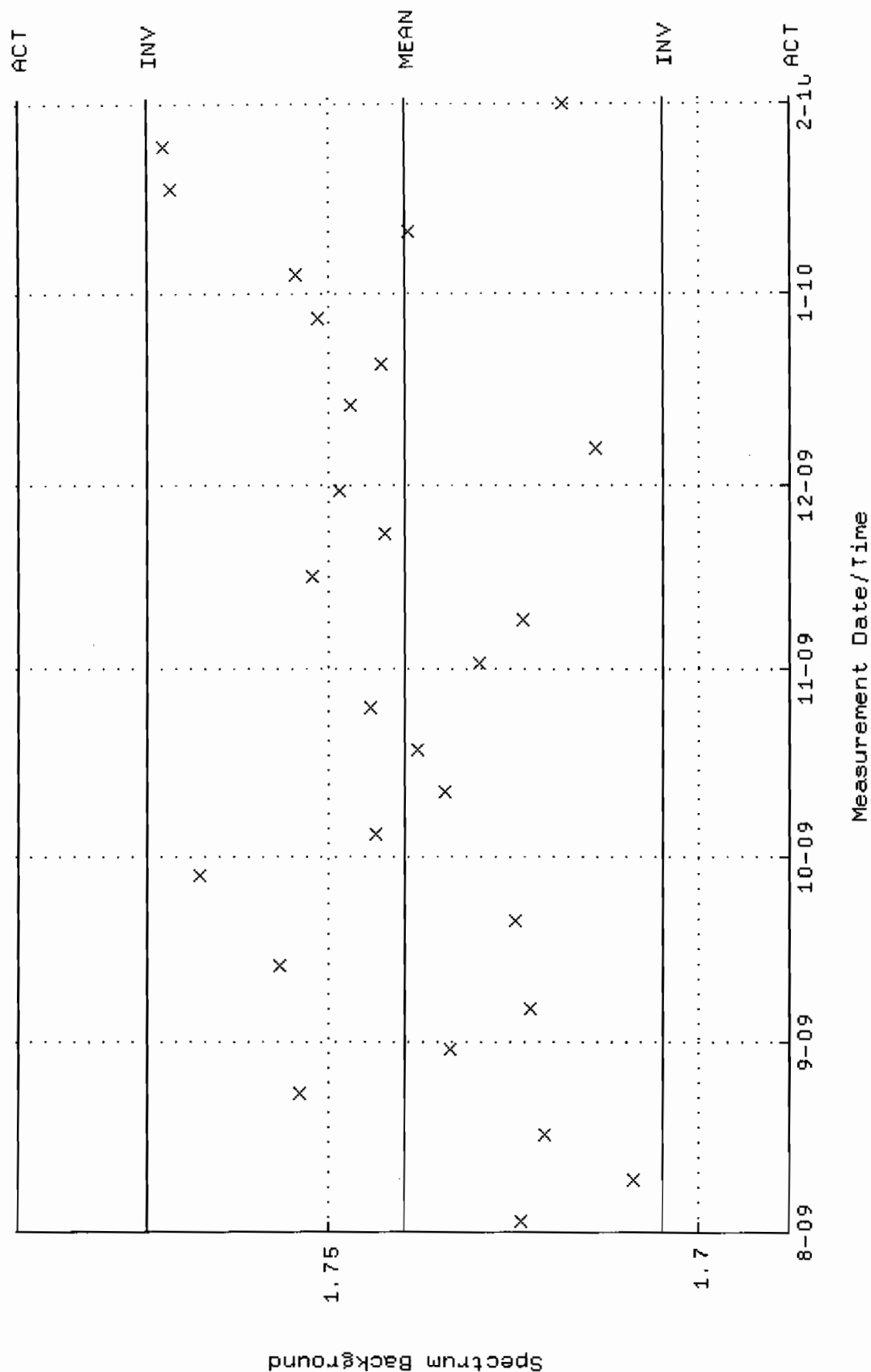
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:20 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 3.27712 +- 1.999120E-02 (0.61 %)



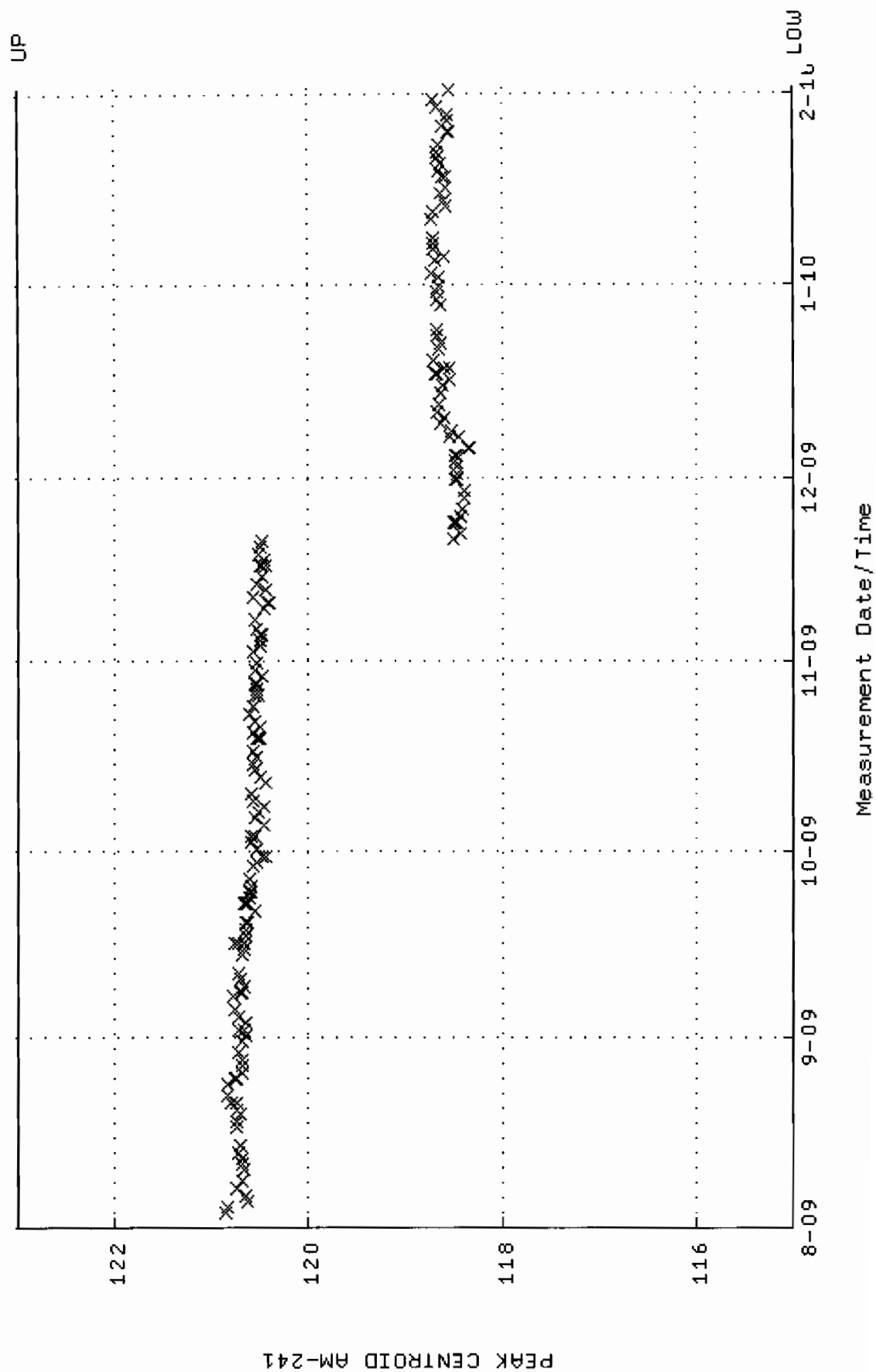
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 1-AUG-2009 13:27:30 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



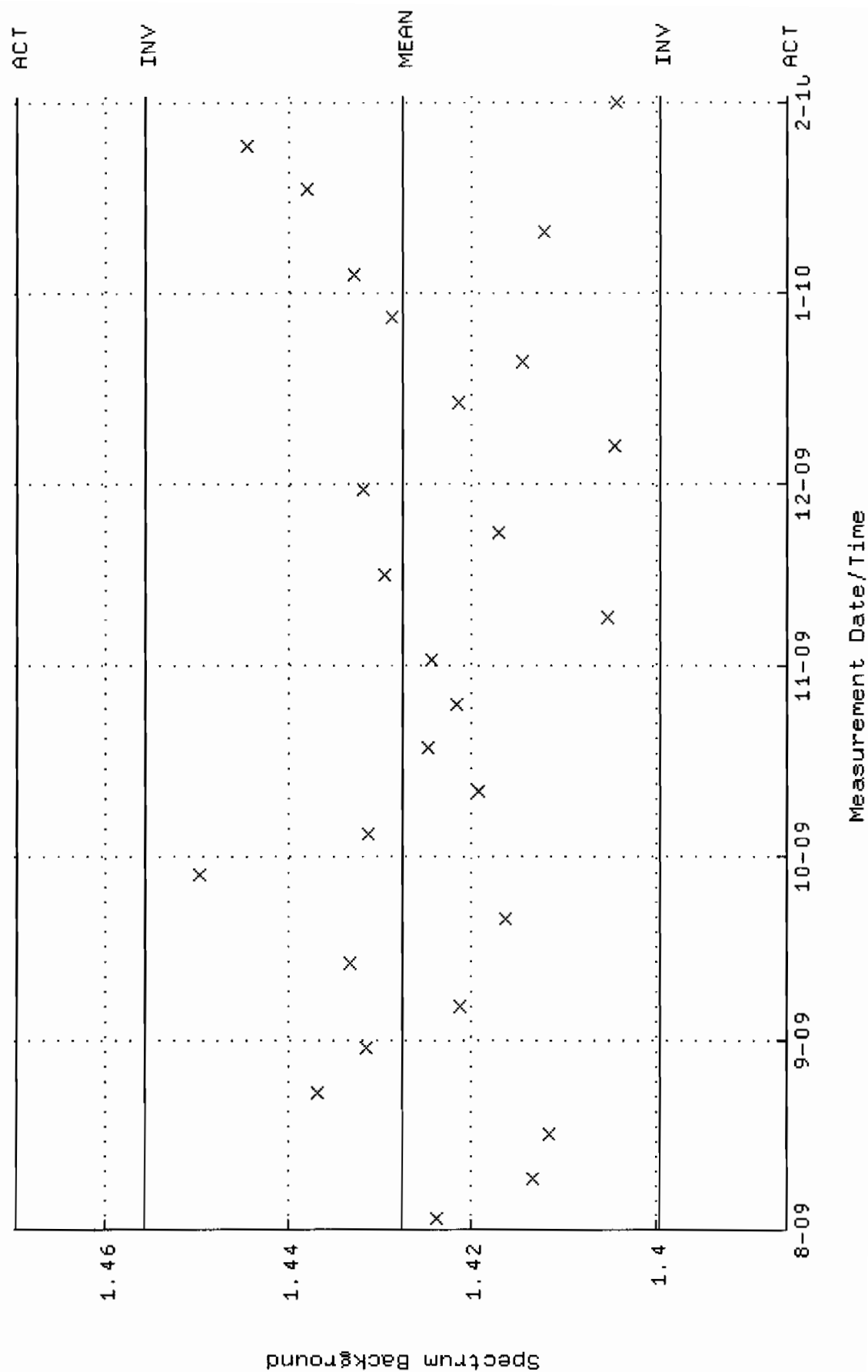
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM16.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:58 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.73980 +- 1.729897E-02 (0.99 %)



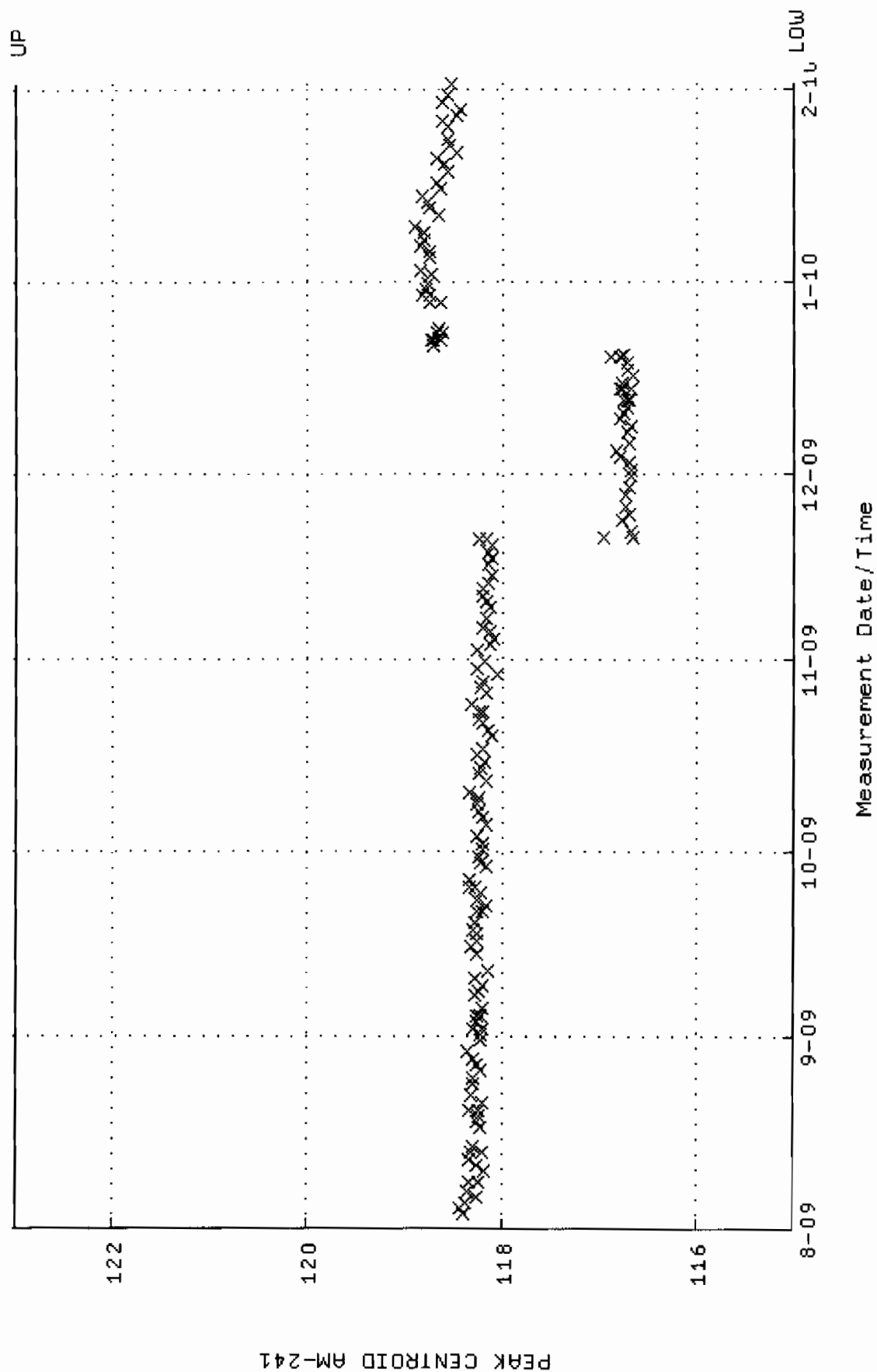
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM17-CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:55:06 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



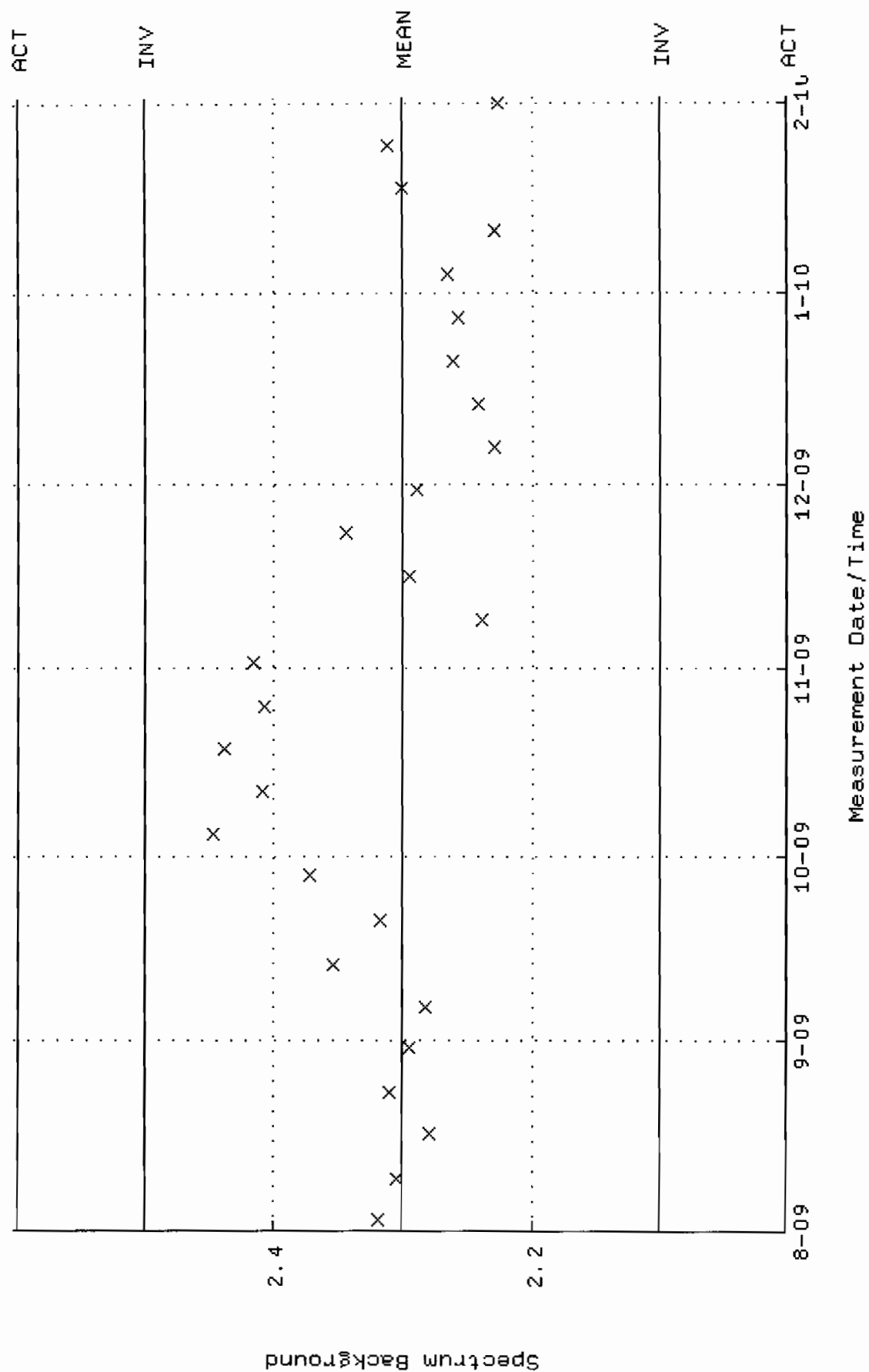
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:10 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.42766 +- 1.396974E-02 (0.98 %)



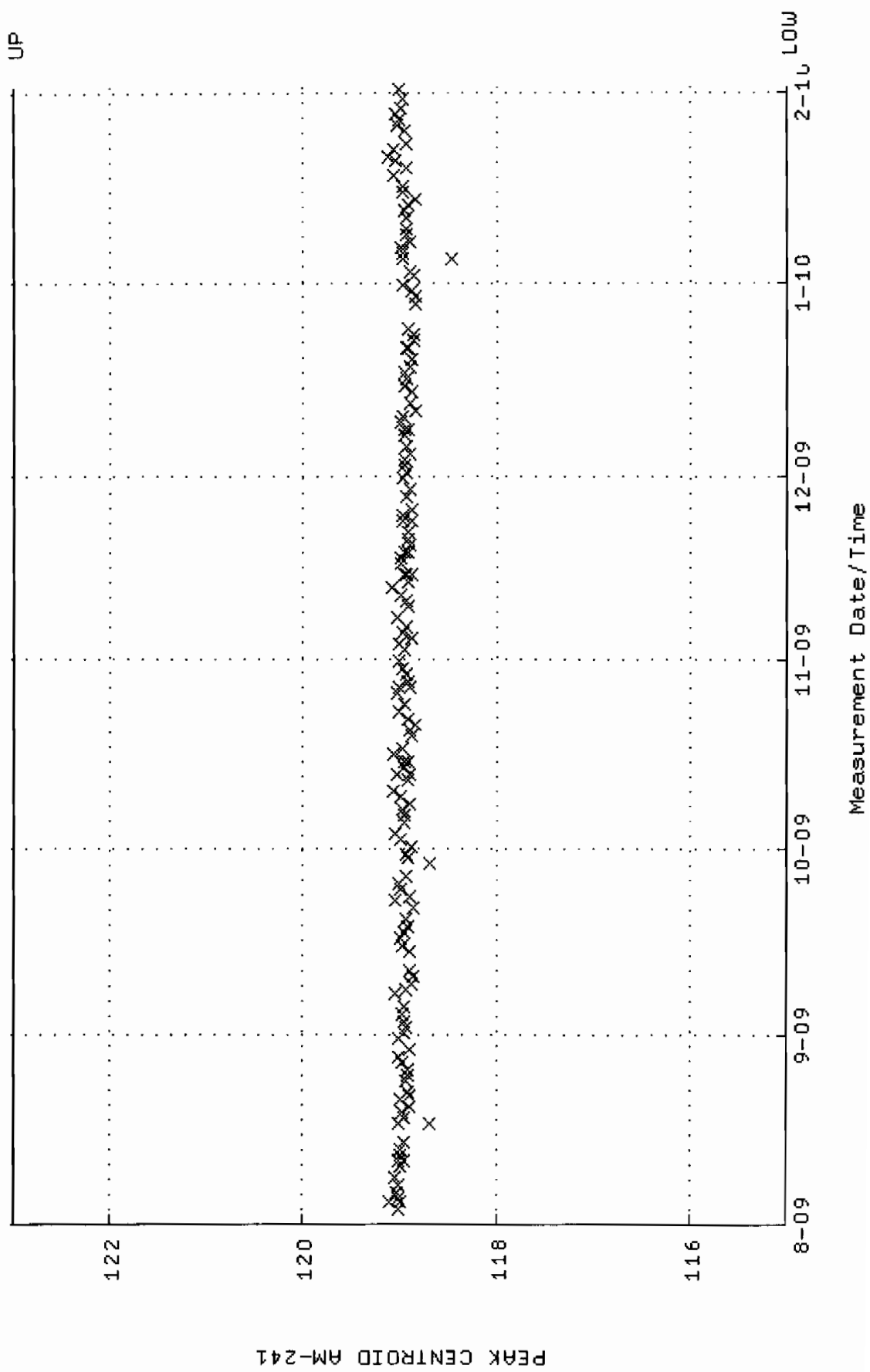
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 10:02:47 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



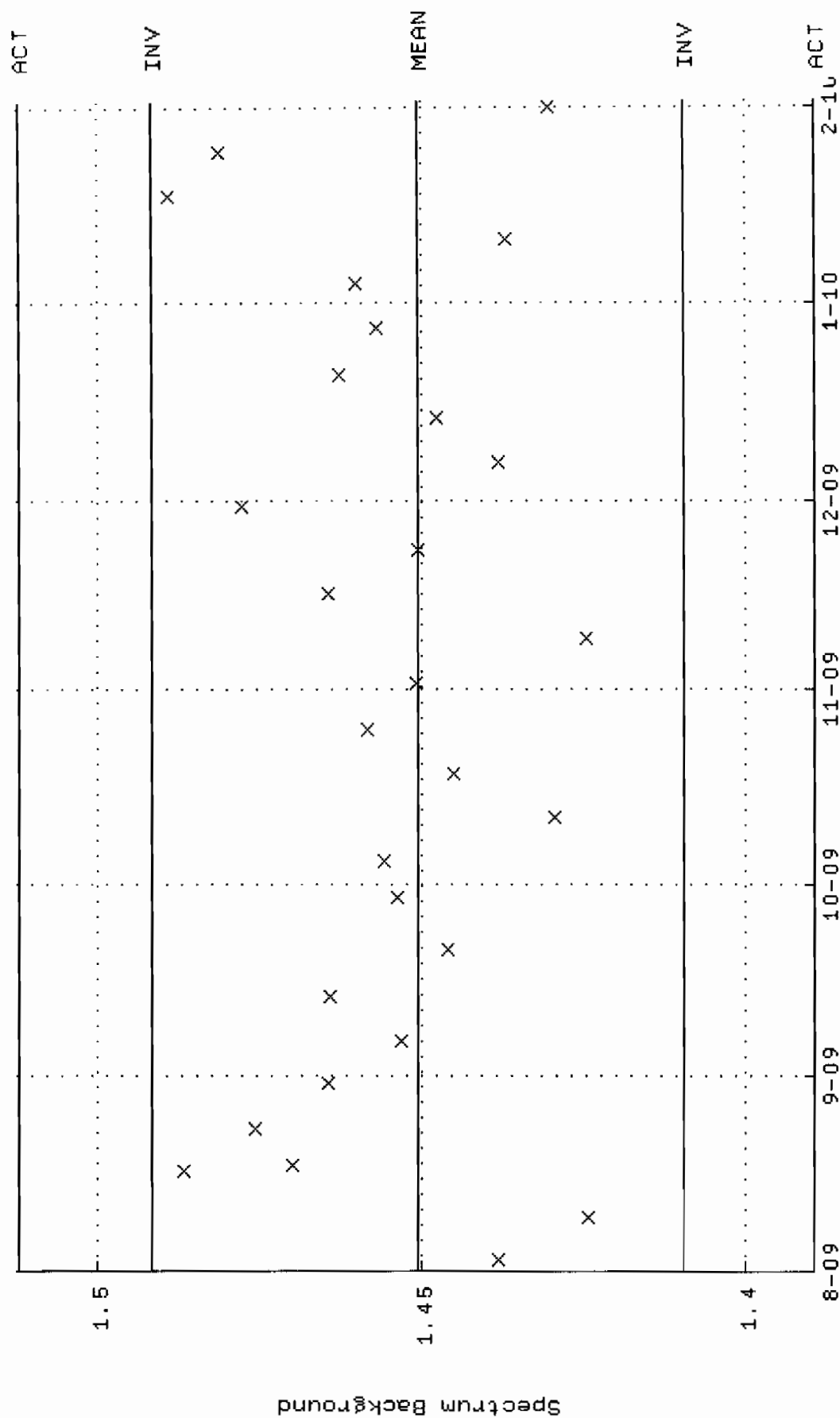
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:23 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 2.30164 +- 9.930626E-02 (4.31 %)



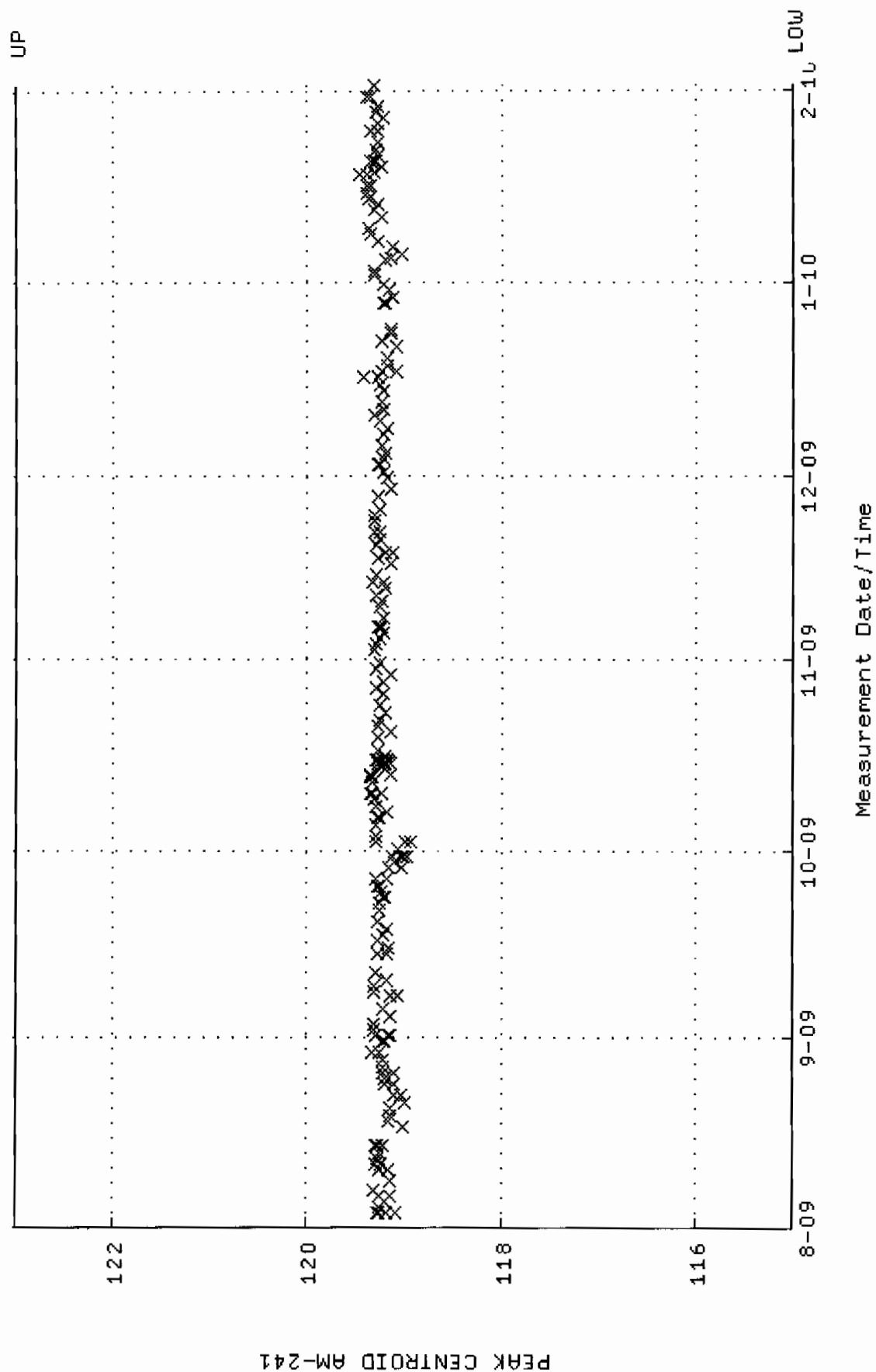
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM19_CAN.QAF;1
 Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 10:08:04 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



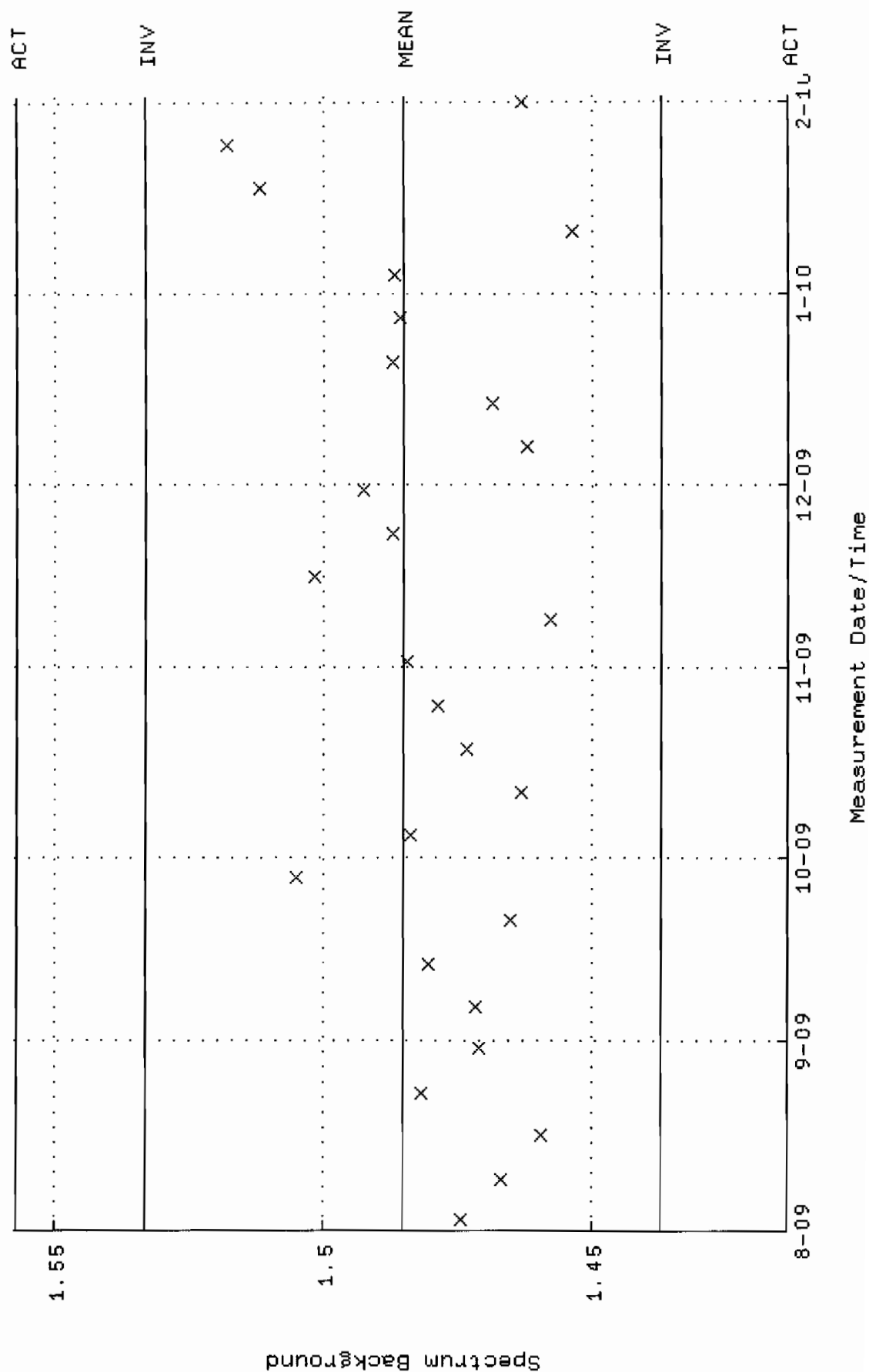
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM19.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:41 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.45067 +- 2.046038E-02 (1.41 %)



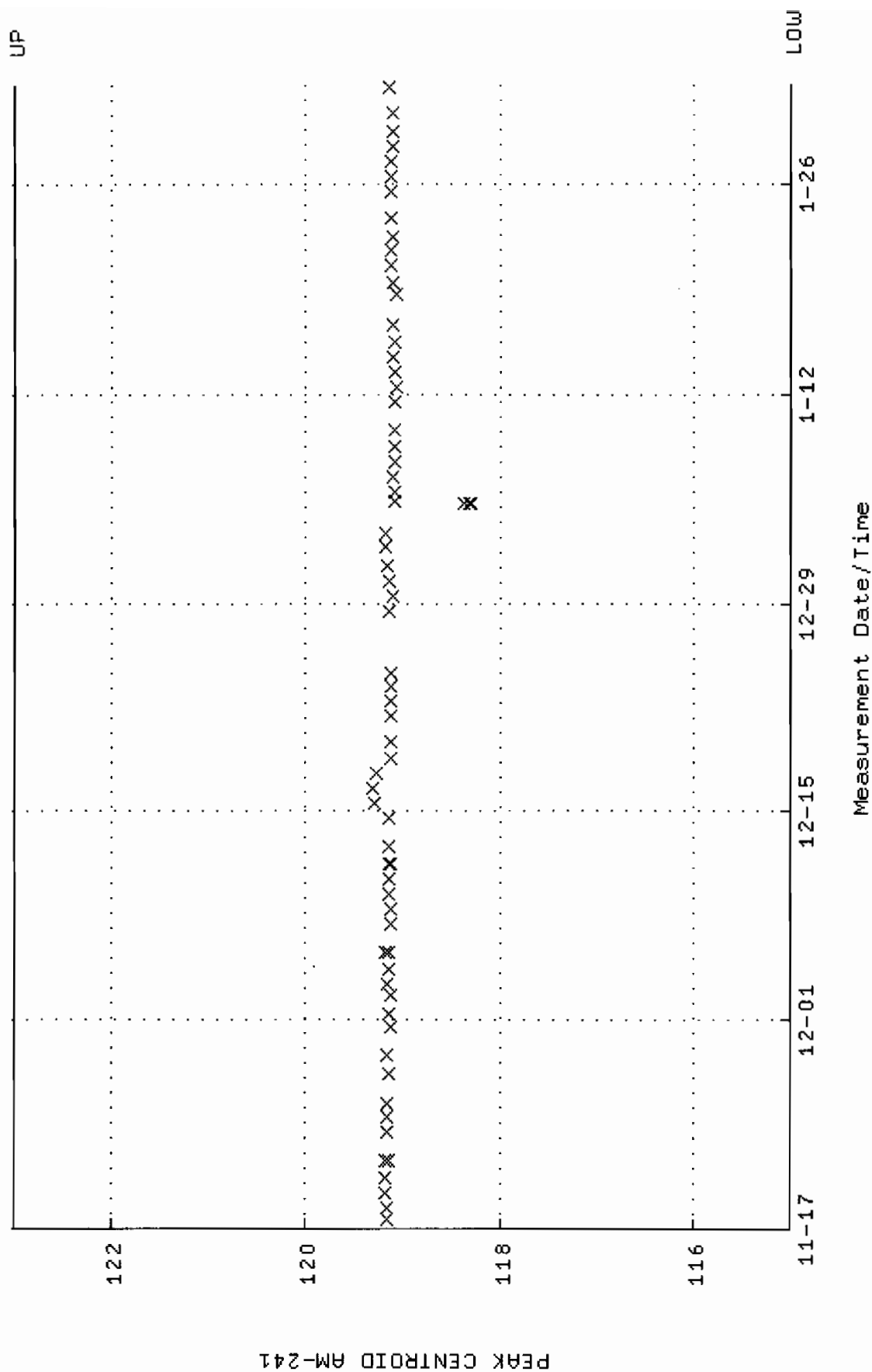
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:19:21 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



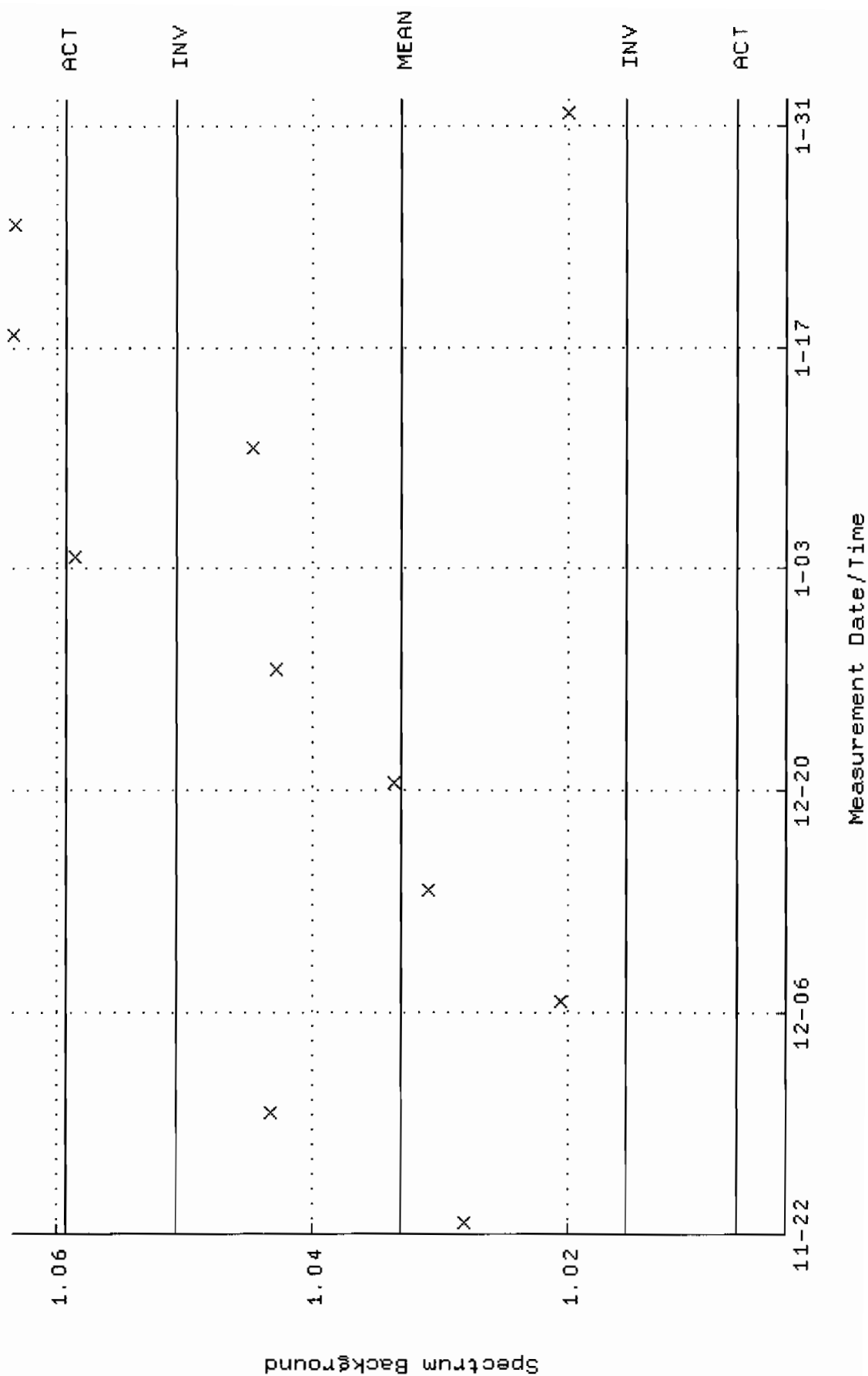
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM20.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:55 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48527 +- 2.388665E-02 (1.61 %)



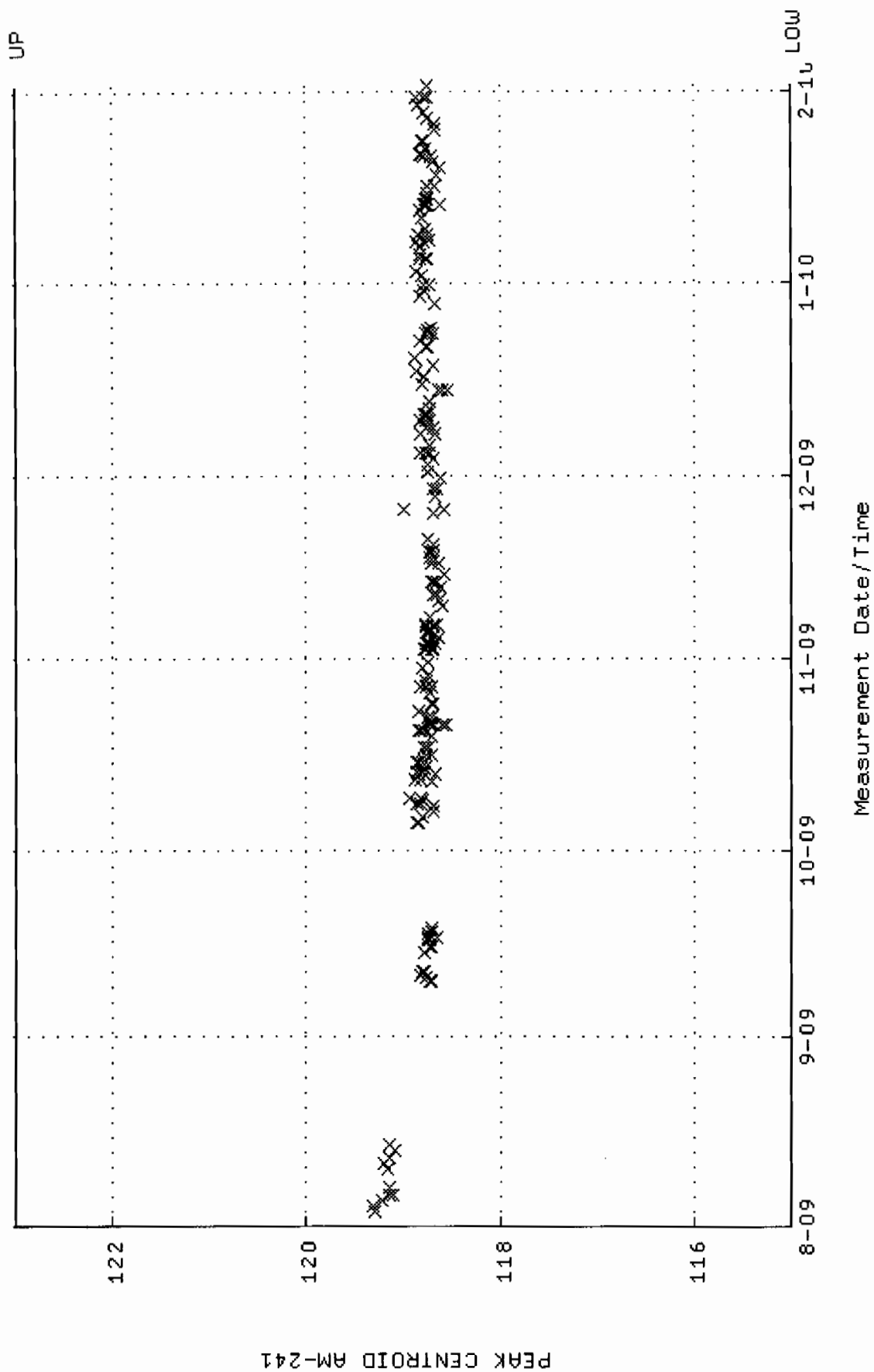
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM21-CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 17-NOV-2009 15:50:12 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



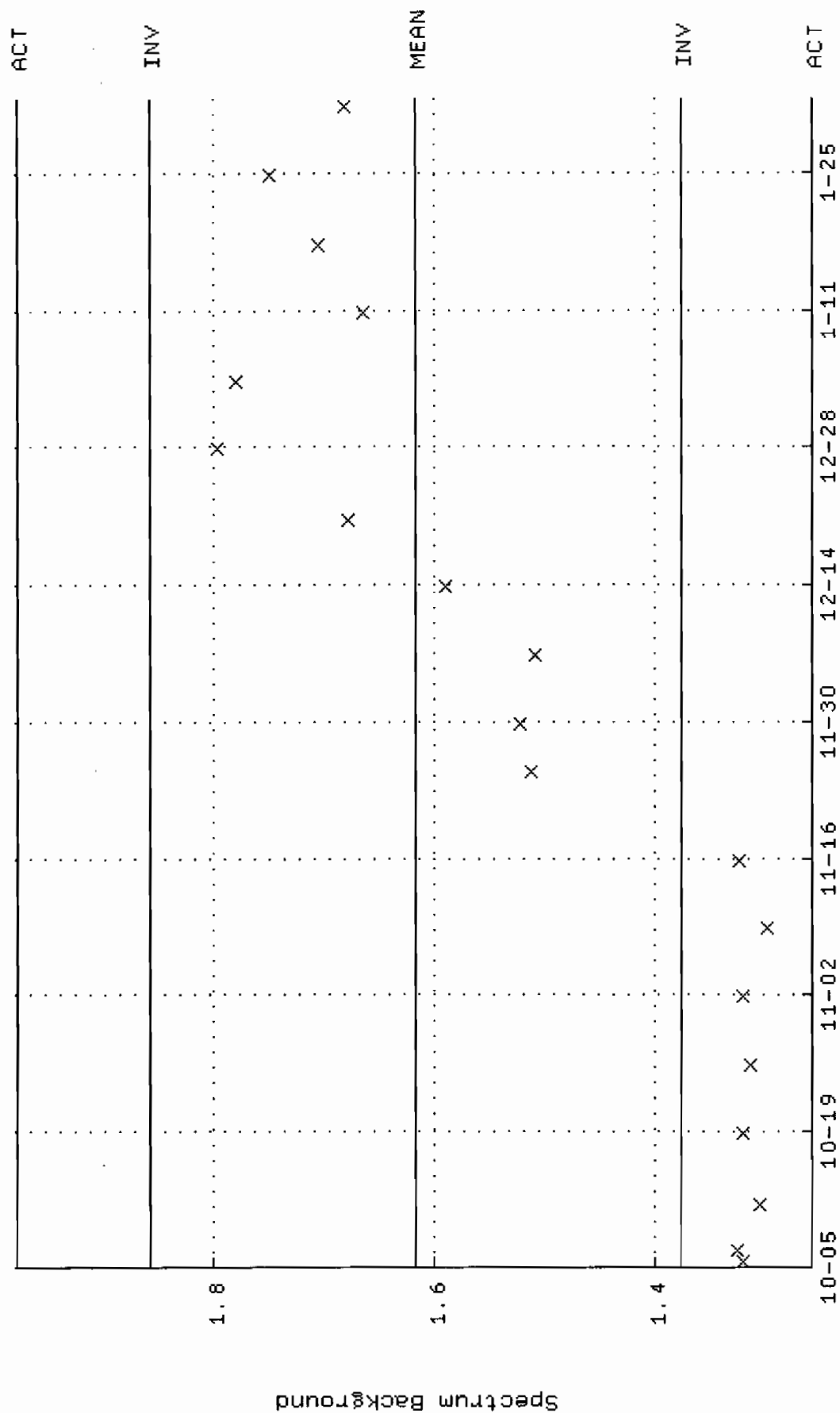
QA filename : DKA100: [CANBERRA.GAMMA.SCUSR.QA] LBC-GAM21.QAF; 1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 22-NOV-2009 17:05:16 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.03312 +- 8.784250E-03 (0.85 %)

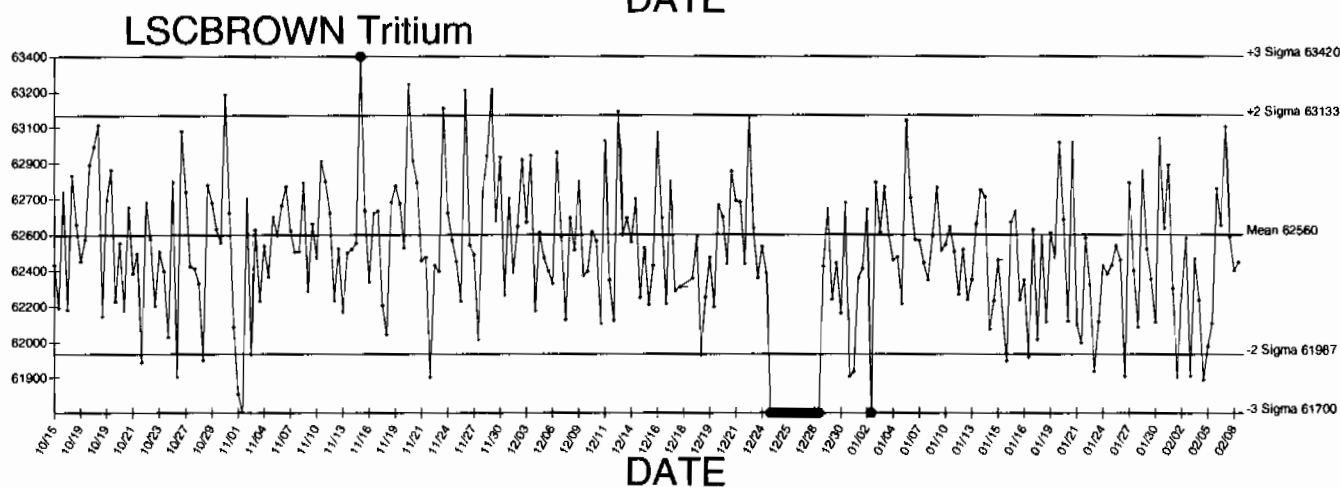
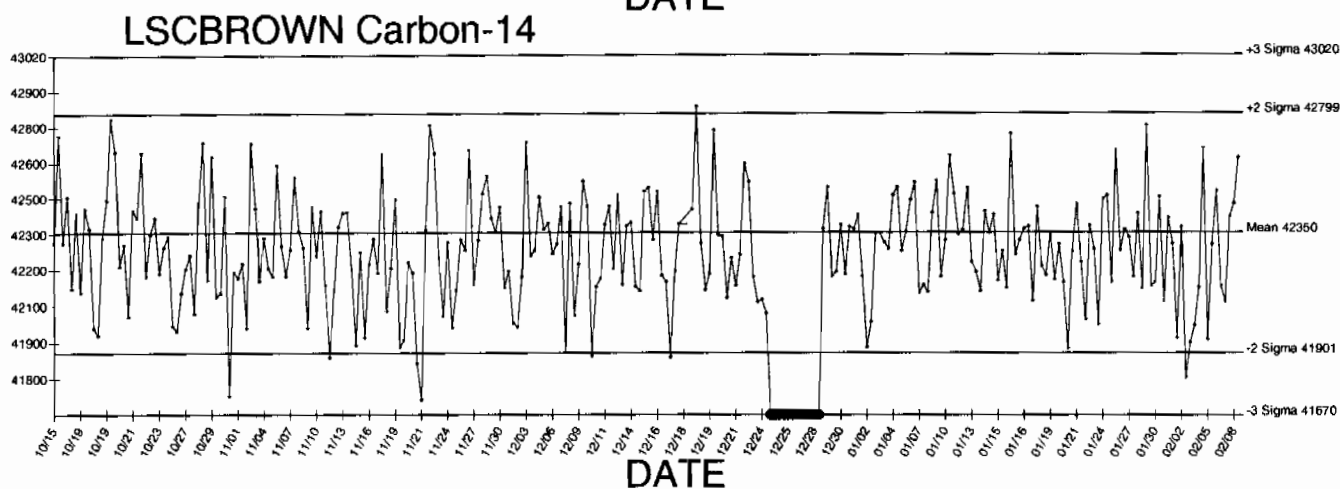
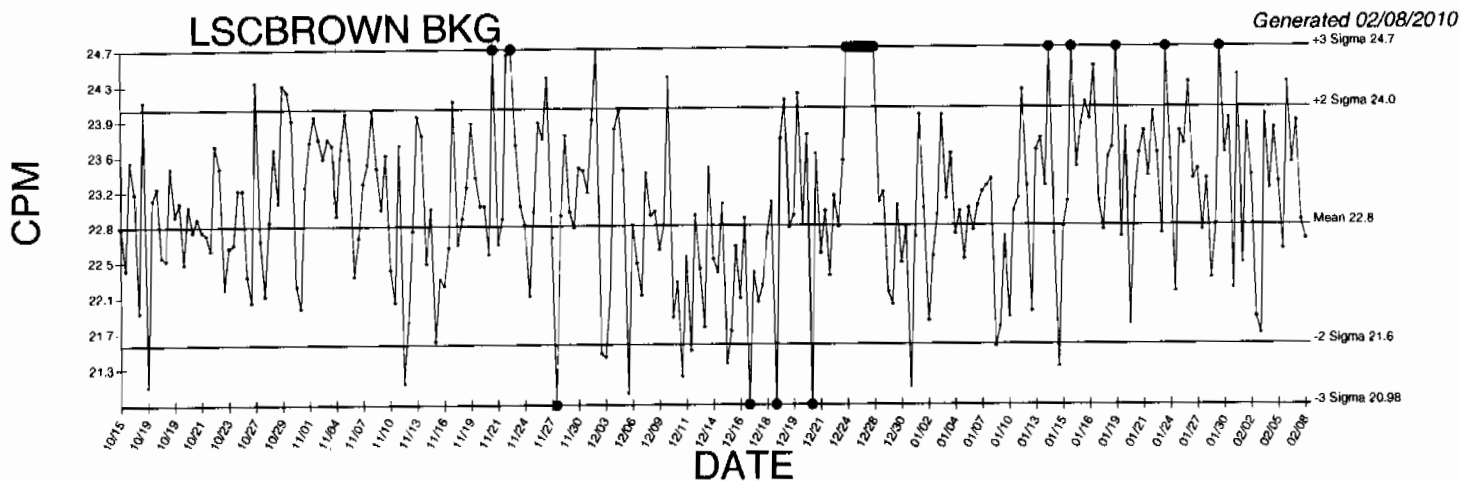


QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:16:07 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-OCT-2009 15:13:53 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.61827 +- 0.119991 (7.41 %)





● Denotes Outlier

STANDARDS DATA

0134



CALIBRATION
No. 0146

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY-64
Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996
Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water
which is equivalent to: 13.19 microcuries per gram of water
or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement

This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than $\pm 2.5\%$

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99.7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12.43 ± 0.11 years
Maximum beta energy of tritium: 18.6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = 3.7×10^{10} becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = 3.7×10^4 Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27.027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

**Approved
signatory**

W. F. Case

2C-5-023-061a

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (100 \text{ mL}) = 985535.5200 \text{ dpm/mL}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (1.0004 \text{ g/mL}) / (100 \text{ mL}) = 985180.3116 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff. Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	1.0000	2709.776428
Mean Value (Counting) =	2709.776428				Average =	2709.776428
Stddev =	31.53347278					

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	Fail	*exception taken due to full recovery of standard
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	Pass	
	104.954429	Pass
	0.01163693	Rule 3 (Pass/Fail)

Verification Rules

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

$$\text{Source dpm/g} = (A - B)/(C)(D)$$

where:

- A = Ver. source cpm,
- B = BKG cpm,
- C = System efficiency, (cpm/dpm), and
- D = mass used for standard verification.

Reference RAD SOP M-001

Handwritten signature: Amanda J. Fehr 4/9/09

1032

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytix maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE	GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432 y	3339	3.0
Cd-109	88	462.6 d	4815	3.3
Co-57	122	271.79 d	2409	3.0
Ce-139	166	137.6 d	3408	2.8
Hg-203	279	46.61 d	7522	2.7
Sn-113	392	115.1 d	4728	2.6
Cs-137	662	30.07 y	2973	3.0
Y-88	898	106.6 d	11600	2.6
Co-60	1173	5.2714 y	5780	2.7
Co-60	1332	5.2714 y	5783	2.6
Y-88	1836	106.6 d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY:

M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED:

W.M. [Signature] 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

1380 Seaboard Industrial Blvd.
 Atlanta, Georgia 30318

Tel 404-352-8677

Fax 404-352-2837

www.analytiscinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method ¹	Statistics ²	Calibration ²	Peak Fitting ²	Geometry ²	Impurities ²	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertainty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

¹Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)

HPGe (High Purity Germanium Gamma Ray Spectrometer)

IC (Gamma Ray Ionization Chamber)

²As Percent (%) from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/02/2009
Expiration Date:	12/02/2010
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2163.7461 \text{ dpm/mL}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (1.0611 \text{ g/mL}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2039.2400 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
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GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Am-241

Isotope	Result	pCi/L - Ver. Jar. 1
Mixed Gamma N1	2534	pCi/L
Mixed Gamma N2	2510	pCi/L
Mixed Gamma N3	2413	pCi/L - Ver. Jar. 5

Mean Value (Counting) = 2485.67
Stdev = 64.065
100.00
Rule 3 (Pass/Fail) Pass

Certificate Value = 2485.68018
Lower Limit = 2357.536524
Upper Limit = 2613.796809
Rule 1 (Pass/Fail) Pass
Two sigma = 128.1301422
10 % of Mean = 248.5666667
Rule 2 (Pass/Fail) Pass

Verification Rules

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 5% of the certificate value.

M. Stamps
12/2/09
independent
12/2/09

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Isotope	Result	pCi/L - Ver. Tar. 1
Mixed Gamma N1	854.2	pCi/L - Ver. Tar. 3
Mixed Gamma N2	907.6	pCi/L - Ver. Tar. 2
Mixed Gamma N3	898.9	

Mean Value (Counting) = 886.90
Stdev = 28.651

Handwritten: 12/2/09
Signature:
12/2/09

Certificate Value = 933.44144
Lower Limit = 829.597644
Upper Limit = 944.202356
Rule 1 (Pass/Fail) Pass
Two sigma = 57.30235597
10 % of Mean = 88.69000000
Rule 2 (Pass/Fail) Pass

Verification Rules

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)

Isotope	Result	pCi/L - Ver-Isr-5
Mixed Gamma N1	1572	pCi/L - Ver-Isr-2
Mixed Gamma N2	1495	pCi/L - Ver-Isr-3
Mixed Gamma N3	1501	

Mean Value (Counting) =
Stdev =

98.50 Pass
Rule 3 (Pass/Fail)

Certificate Value =
Lower Limit =
Upper Limit =
Rule 1 (Pass/Fail)
Two sigma =
10 % of Mean =
Rule 2 (Pass/Fail)

1545.8378
1437.008431
1608.324902
Pass
85.65823564
152.26666667
Pass

pCi/L
pCi/L
pCi/L

U.S. Stamp issued 12/2/09

Verification Rules

- Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
- Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
- Rule 3 = The determined mean value shall be within 5% of the certificate value.

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATA 4/11/2000 *lett c held 12/1/04*

angela d. johnson 12/13/04

TRM

Invoice:

5 bottles of TRM-1
 10 " " TRM-2 and 3
 5 " each of NRM-1 through 6
 7 " baghouse dirt

use 1/4 gm x 10 samples WITH together
 for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM-1	TRM-2	TRM-3	TRM-4
U-238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U-234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Tn-230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra-226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb-210	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0	

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Lehn 4/30/04
lett & shah 5/1/04

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not for Log-In

9911627-01-20

SF 2001-COC (10-97)
Supervisor (4-57)Jesse

Internal Lab
Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SARWR No. N/A

Press F1 for instructions for each field.

AR/COC-

Page 1 of 1

602945

Dep't. No./Mail Stop: 7132 / 1042 Project/Task Manager: PAM PUISSANT Project Name: Record Center Code: N/A Logbook Ref. No.: N/A Service Order No.:		Date Samples Shipped: 11-15-99 Carrier/Vendor No.: 326494 Lab Contact: EDIE KENT Lab Destination: G.E.L. SMO Contact/Phone: Doug Salim / 844-3110 Send Report to SMO: Suzi Jensen/844-3184		Contract No.: AJ-2480A Case No.: 10204 13 SMO Authorization: Bill to: Sandia National Laboratories Supplier Services, Dept. P.O. Box 5800 MS 0154						
Location Building N/A Tech Area VI Room N/A		Reference LOV (available at SMO)		LAB USE						
Sample No. - Fraction	ER Sample ID or Sample Location Detail	Sample No.	Date/Time Collected	Container Type	Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	11/15/99 1100	P	1 L	4C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	11/15/99 1100	G	1 L	4C	G	SA		
050486 - 001	WRM-2 NBHD	N/A	11/15/99 1100	G	1 L	4C	G	SA		
-										
-										
-										
-										
-										
-										
RMMA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ref. No.		Sample Tracking <input type="checkbox"/> SMO USE		Special Instructions/QC Requirements		Abnormal Conditions on Receipt/Use				
Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by lab		Date Entered (mm/dd/yyyy)		EDD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Raw data package <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Turnaround Time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Required Report Delay		Init		Company/Organization/Phone		These "samples" are not characterized and materials being sent to GEL are better off back in storage.				
Sample Team		Douglas E. Perry		Weston / 7577 / 845-0887		Please list as separate report.				
Members		Signature		Date		Time				
1. Relinquished by		Date		Time		Date				
1. Received by		Date		Time		Date				
2. Relinquished by		Date		Time		Date				
2. Received by		Date		Time		Date				
3. Relinquished by		Date		Time		Date				
3. Received by		Date		Time		Date				

Original To Accompany Samples, Laboratory Copy (White) 1st Copy To Accompany Samples, Return to SMO (Blue) 2nd Copy SMO Suspense Copy (Yellow) 3rd Copy Field Copy (Pink)

Radionuclide	Am-243	Customer:	GENERAL ENGINEERING LABS	
Half Life:	7380 ± 40 years	P.O.No.:	9290-RAD	
Catalog No.:	7243	Reference Date:	January 1 1994	12:00 PST.
Source No.:	445-96-2	Contained Radioactivity:	(Am-243) 101.2 µCi	
		Contained Radioactivity:	(Am-243) 3750 kBq	

a. Mass of solution:	5.3739 g (in a 5 ml Flame Sealed Ampoule)	
b. Chemical form:	Am(NO ₃) ₃ in 2N HNO ₃	
c. Carrier content:	None added	
d. Density:	1.0651	g/ml @ 20°C.

None detected

Np-239 (beta active) in equilibrium

(Am-243) 18.84 $\mu\text{Ci/g}$

Weighed aliquots of the solution were assayed using gamma spectrometry for Np-239:
 Energy peak(s) integrated under: 228, 278 keV.
 Branching ratio(s) used: 0.108, 0.1420 gamma rays per decay.

a. Systematic uncertainty in instrument calibration:	$\pm 3.0\%$
b. Random uncertainty in assay:	$\pm 0.4\%$
c. Random uncertainty in weighing(s):	$\pm 0.0\%$
d. Total uncertainty at the 99% confidence level:	$\pm 3.0\%$

This calibration is implicitly traceable to the National Institute of Standards and Technology.

See reverse side for Leak Test(s) applied to this source.

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).



ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

Anna H. Khan
QUALITY CONTROL

Jan 3, 1994
Date Signed

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO
DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE

☒ 1. STANDARD WIPE TEST

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 2. SOAK TEST

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 3. SOAK TEST -- BERYLLIUM WINDOW

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 4. GAS SOURCE TEST (Radioactive Gas)

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.

☒ 5. OTHER LEAK TEST

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 6. LEAK TEST NOT APPLICABLE

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	445-96-2	Isotope:	Americium-243
Prepared By:	Genie Bost	Prepared By:	Angela Johnson
Carrier Conc:	2M HNO3	Prep Date:	01/05/1994
Reference Date:	01/01/1994	Verification Date:	05/11/2009
Ampoule Mass (g):	5.3739 g	Expiration Date:	05/11/2010
Uncertainty:	+/- 3 %	Primary Code:	445-96-2-A
LogBook No:	RC S 005 032	Dilution(mL):	100 mL
		Mass of Parent(g):	5.3419 g
		Density(g/mL):	1.0785
		Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (100 \text{ mL}) = 2234238.9912 \text{ dpm/mL}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (1.0785 \text{ g/mL}) / (100 \text{ mL}) = 2071617.0528 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	Joe Davis	.1809	100	445-96-2-P	3745.92 dpm/mL	05/13/1999	05/13/2000
01/04/2008	Julie Strock	.00001005	100	445-96-2-PP	.20819 dpm/mL	12/29/2008	12/29/2009
01/28/2000	Angela Johnson	.0354	1000	445-96-2-Q	73.3 dpm/mL	02/08/2001	02/08/2002
09/29/2008	Julie Strock	.0025219	250	445-96-2-QQ	20.8977 dpm/mL	09/30/2008	09/29/2009
04/18/2000	Robert Timm	.429	250	445-96-2-R	3553.34 dpm/mL	04/18/2000	04/18/2001
04/23/2009	Tina Schoneman	.001251	500	445-96-2-RR	4.8075 dpm/mL	04/23/2009	04/23/2010
04/13/2001	Angela Johnson	.1869	100	445-96-2-S	3870.16 dpm/mL	04/13/2001	04/13/2002
05/08/2009	Mary Aders	.0141	1000	445-96-2-SS	29.2098 dpm/ml	05/11/2009	05/11/2010
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-103	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-203	4153.225 dpm/mL	07/03/2002	07/03/2003

07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-303	4153.225 dpm/mL	07/03/2002	07/03/2003
06/03/2009	Julie Strock	.00000927	100	445-96-2-TT	.1923 dpm/mL	06/05/2009	06/03/2010
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-103	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-203	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-303	80.34 dpm/mL	08/23/2001	08/23/2002
06/02/2009	Mary Aders	2.1177	1000	445-96-2-UU	4385.1449 dpm/mL	06/04/2009	06/04/2010
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-103	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-203	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-303	81.586 dpm/mL	08/27/2002	08/27/2003
03/17/2003	Angela Johnson	2.1108	1000	445-96-2-W	4370.857 dpm/mL	03/14/2006	03/14/2007
04/14/2003	Lonnie Morris	.0315	1000	445-96-2-X	65.2559 dpm/mL	04/14/2004	04/14/2005
05/03/2003	Tim Chandler	.0103	1000	445-96-2-Y	21.3376 dpm/mL	05/05/2003	05/05/2004
05/05/2003	Eric Williamson	.011	1000	445-96-2-Z	22.7877 dpm/mL	04/03/2007	04/03/2008

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-243 Standard 445-96-2-SS

M. Aders 5/15/2009	Isotope	Value	Uncertainty
	445-96-2-SS #1	1.360	0.1690
	445-96-2-SS #2	1.370	0.1690
	445-96-2-SS #3	1.290	0.1590
Mean Value (Counting) =	1.340	101.99	Pass
Stdev =	0.043588989		Rule 3 (Pass/Fail)
Target =	1.314		
Lower Limit =	1.252822021		
Upper Limit =	1.427177979		
Rule 1 Pass/Fail	Pass		
Two sigma =	0.087177979		
10 % of Mean =	0.134		
Rule 2 (Pass/Fail)	Pass		

The analyst prepared three standard verification sources for standard **445-96-2-SS** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **Cm-244** standard **0533-O** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 48% HF was added to precipitate Nd (and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241 certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 5% of the certificate value.

M. Aders 5/15/09
Taheri
007509



Eckert & Ziegler

Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

78747-278

1283

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:

Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO₃ solution.

Source Prepared By: WMS

W. Mao, Radiochemist

QA Approved: DM Montgomery

D. M. Montgomery, QA Manager

Date: 12-11-08

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$
$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2174.4872 \text{ dpm/mL}$
$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (1.0285 \text{ g/mL}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2114.1700 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/02/2009	12/02/2010
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010
12/02/2009	Julie Strock	2.076	250	1283-F	17.5561 dpm/mL	01/09/2009	12/30/2009
12/02/2009	Julie Strock	.517	250	1283-G	4.3721 dpm/mL	01/08/2010	12/02/2010
12/09/2009	Ashley Drochter	21.56	1000	1283-H	45.58 dpm/mL	12/09/2009	12/09/2010

GEL Laboratories LLC

Version 1.0 9/18/2000

Verification for Uranium-232 Standard 1283-H

Analyst: A. Drochter	Serial #	Value	Uncertainty					
Date: 12/10/09	1283-H N1	2.020	pCi/L	0.238	pCi/L			
	1283-H N2	2.000	pCi/L	0.234	pCi/L			
	1283-H N3	2.060	pCi/L	0.242	pCi/L			
Mean Value (Counting) =	2.027	pCi/L	99.66904	Pass				
Stdev =	0.030550505	pCi/L	Rule 3 (Pass/Fail)					
Target =	2.033	pCi/L						
Lower Limit =	1.965565657	pCi/L						
Upper Limit =	2.087767676	pCi/L						
Rule 1 Pass/Fail	Pass							
Two sigma =	0.061101009							
10 % of Mean =	0.202666667							
Rule 2 (Pass/Fail)	Pass							

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 1283-H using 0.1 mL for each source. Each standard was combined with 0.1 mL of U-238 standard 1163-G and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

A. Drochter
12/14/09



National Institute of Standards & Technology Certificate

Standard Reference Material 4334H Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

RECEIVED
JAN 11 2005

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
January 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

Recommended Procedure for Opening the SRM Ampoule

- 1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.
- 2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.
- 3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.
- 4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.
- 5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.
- 6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.
- 7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.
- 8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.
- 9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	Plutonium-242
Reference time	1200 EST, 07 June 1994 [b]*
Massic activity of the solution [c]	26.31 Bq·g ⁻¹
Relative expanded uncertainty (k=2)	0.72% [d] [e]
Solution density	(1.105 ± 0.002) g·mL ⁻¹ at 20 °C [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter	(16.5 ± 0.5) mm	
	Wall thickness	(0.60 ± 0.04) mm	
	Barium content	Less than 2.5%	
	Lead-oxide content	Less than 0.02%	
	Other heavy elements	Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L ⁻¹)	Mass Fraction (g·g ⁻¹)
	H ₂ O HNO ₃ ²⁴² Pu ⁺⁶	50 3.2 8 × 10 ⁻⁷	0.81 0.19 2 × 10 ⁻⁷
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g ⁻¹ [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4π α liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [c]*

Input Quantity x_i , the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $ \partial y/\partial x_i \cdot$ (x_i/y) [m]	Relative Uncertainty Of Output Quantity, $u(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid- scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha- particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha- particle-count-rate- versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				<u>x 2</u>
Relative Expanded Uncertainty of the Output Quantity, U/y , (%)				0.72

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [i] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	--	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	²³⁹ Pu + ²⁴⁰ Pu <0.000 001 [u]	²³⁹ Pu + ²⁴⁰ Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	²³⁸ Pu + ²⁴¹ Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

- [a] The Sievert is the SI unit for dose equivalent. See reference [1]. One μSv is equal to 0.1 mrem.
 Distance from Ampoule (cm): 1 30 100
 Approximate Dose Rate ($\mu\text{Sv/h}$): <0.1 - -
- [b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.
- [c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].
- [d] The reported value, y , of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \dots, x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i , used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y , $u_i(y) = |\partial y / \partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y . The **combined standard uncertainty** of y , $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k=2$ to obtain U , the **expanded uncertainty** of y .

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

- [e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).
- [f] The stated uncertainty is two times the standard uncertainty.
- [g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
 $0.003 \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies less than 3.1 MeV,
 $0.03 \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 3.1 and 4.4 MeV, and
 $0.003 \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies greater than 5.0 MeV.
- [h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.
- [i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
 $5 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 19 and 39 keV,
 $7 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 49 and 92 keV,
 $2 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 106 and 507 keV,
 $1 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 515 and 1456 keV, and
 $5 \times 10^{-6} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.
- [j] The stated uncertainty is the standard uncertainty.
- [k] Relative standard uncertainty of the input quantity x_i .
- [m] The relative change in the output quantity y divided by the relative change in the input quantity x_i . If $|\partial y / \partial x_i| \cdot (x_i / y) = 1.0$, then a 1% change in x_i results in a 1% change in y . If $|\partial y / \partial x_i| \cdot (x_i / y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y .
- [n] Relative component of combined standard uncertainty of output quantity y , rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u(y)/y \approx |\partial y / \partial x_i| \cdot u(x_i)/y = |\partial y / \partial x_i| \cdot (x_i / y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y / \partial x_i| \cdot (x_i / y)$, and $u(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

- [p] The relative standard uncertainty of λt is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.
- [q] $|\partial y / \partial x_i| \cdot (x_i / y) = |\lambda \cdot t|$
- [r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.
- [s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i) / x_i = 100\%$. $|\partial y / \partial x_i| \cdot (x_i / y) = \{(\text{response per Bq of impurity}) / (\text{response per Bq of Pu-242})\} \cdot \{(\text{Bq of impurity}) / (\text{Bq of Pu-242})\}$. Thus $u(y) / y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.
- [t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.
- [u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.
- [v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999.

REFERENCES

- [1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.
- [2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.
- [3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.
- [4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.
- [5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.



Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	1375	Isotope:	Plutonium-242
Prepared By:	Mary Aders	Prepared By:	Ashley Drochter
Carrier Conc:	0.5M HNO3	Prep Date:	01/08/2010
Reference Date:	06/07/1994	Verification Date:	01/08/2010
Ampoule Mass (g):	5.5 g	Expiration Date:	01/08/2011
Uncertainty:	+/- .72 %	Primary Code:	1375-A
LogBook No:	RC-S-051-094	Dilution(mL):	250 mL
		Mass of Parent(g):	5.3542 g
		Density(g/mL):	1.0148
		Balance ID:	38080204

Calculations Converting parent activity to dpm/mL/dpm/g

$(\text{Mass of parent(g)}) * (\text{Parent Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parent Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(5.3542 \text{ g}) * (26.31 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (250 \text{ mL}) = 33.8086 \text{ dpm/mL}$
$(5.3542 \text{ g}) * (26.31 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (1.0148 \text{ g/mL}) / (250 \text{ mL}) = 33.3155 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
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GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1375-A

A.Drochter 1/9/2010	Isotope	Value	Uncertainty
	1375-A	1.530	0.2410
	1375-A	1.630	0.2630
	1375-A	1.580	0.2480
Mean Value (Counting) =	1.580	103.75	Pass
Stdev =	0.05		Rule 3 (Pass/Fail)
Target =	1.52		
Lower Limit =	1.48		
Upper Limit =	1.68		
Rule 1 Pass/Fail	Pass		
Two sigma =	0.1		
10 % of Mean =	0.158		
Rule 2 (Pass/Fail)	Pass		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1375-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu 239 standard 0338-BB and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Four drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 49% HF was added to precipitate neodymium (and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

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RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER

Batch ID: 944966

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245371001	SAMPLE	MXR1	GAM02	02-FEB-10 06:51	DONE	CAN	29-OCT-09 00:00
245371002	SAMPLE	MXR1	GAM10	02-FEB-10 07:08	DONE	CAN	16-MAR-09 00:00
245393010	SAMPLE	MXR1	GAM12	02-FEB-10 07:09	DONE	CAN	10-FEB-09 00:00
245393011	SAMPLE	MXR1	GAM13	02-FEB-10 07:09	DONE	CAN	02-FEB-09 00:00
245395001	SAMPLE	MXR1	GAM16	02-FEB-10 07:10	DONE	CAN	16-NOV-09 00:00
245395002	SAMPLE	MXR1	GAM18	02-FEB-10 07:20	DONE	CAN	23-APR-09 00:00
245395003	SAMPLE	MXR1	GAM19	02-FEB-10 07:21	DONE	CAN	12-MAR-09 00:00
245395004	SAMPLE	MXR1	GAM20	02-FEB-10 08:23	DONE	CAN	26-AUG-09 00:00
245395005	SAMPLE	MXR1	GAM21	02-FEB-10 08:24	DONE	CAN	28-JUL-09 00:00
245395006	SAMPLE	MXR1	GAM23	02-FEB-10 08:24	DONE	CAN	02-JUN-09 00:00
245395007	SAMPLE	MXR1	GAM02	02-FEB-10 09:13	DONE	CAN	29-OCT-09 00:00
245395008	SAMPLE	MXR1	GAM10	02-FEB-10 09:14	DONE	CAN	16-MAR-09 00:00
245395009	SAMPLE	MXR1	GAM12	02-FEB-10 09:14	DONE	CAN	10-FEB-09 00:00
245395010	SAMPLE	MXR1	GAM13	02-FEB-10 09:15	DONE	CAN	02-FEB-09 00:00
245395011	SAMPLE	MXR1	GAM16	02-FEB-10 09:18	DONE	CAN	16-NOV-09 00:00
245395012	SAMPLE	MXR1	GAM17	02-FEB-10 09:18	DONE	CAN	06-JAN-10 00:00
245395013	SAMPLE	MXR1	GAM18	02-FEB-10 09:26	DONE	CAN	23-APR-09 00:00
245395014	SAMPLE	MXR1	GAM19	02-FEB-10 09:27	DONE	CAN	12-MAR-09 00:00
245395015	SAMPLE	MXR1	GAM01	02-FEB-10 09:47	DONE	CAN	12-JAN-10 00:00
1202023719	MB	MXR1	GAM04	02-FEB-10 09:48	DONE	CAN	05-MAY-09 00:00
1202023720	DUP	MXR1	GAM06	02-FEB-10 09:49	DONE	CAN	04-FEB-09 00:00
1202023721	LCS	MXR1	GAM07	02-FEB-10 09:50	DONE	CAN	20-JUL-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 944985

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245371001	SAMPLE	JXD2	1031	08-FEB-10 10:21	DONE		
245371002	SAMPLE	JXD2	1033	08-FEB-10 10:21	DONE		
245393010	SAMPLE	JXD2	1035	08-FEB-10 10:21	DONE		
245393011	SAMPLE	JXD2	1036	08-FEB-10 10:21	DONE		
245395001	SAMPLE	JXD2	1037	08-FEB-10 10:21	DONE		
245395002	SAMPLE	JXD2	1038	08-FEB-10 10:21	DONE		
245395003	SAMPLE	JXD2	1039	08-FEB-10 10:21	DONE		
245395004	SAMPLE	JXD2	1040	08-FEB-10 10:21	DONE		
245395005	SAMPLE	JXD2	1041	08-FEB-10 10:21	DONE		
245395006	SAMPLE	JXD2	1042	08-FEB-10 10:21	DONE		
245395007	SAMPLE	JXD2	1043	08-FEB-10 10:21	DONE		
245395008	SAMPLE	JXD2	1044	08-FEB-10 10:21	DONE		
245395009	SAMPLE	JXD2	1045	08-FEB-10 10:21	DONE		
245395010	SAMPLE	JXD2	1046	08-FEB-10 10:21	DONE		
245395011	SAMPLE	JXD2	1047	08-FEB-10 10:21	DONE		
245395012	SAMPLE	JXD2	1048	08-FEB-10 10:21	DONE		
245395013	SAMPLE	JXD2	1065	08-FEB-10 10:21	DONE		
245395014	SAMPLE	JXD2	1066	08-FEB-10 10:21	DONE		
245395015	SAMPLE	JXD2	1067	08-FEB-10 10:21	DONE		
1202023804	MB	JXD2	1068	08-FEB-10 10:21	DONE		
1202023805	DUP	JXD2	1069	08-FEB-10 10:21	DONE		
1202023806	LCS	JXD2	1070	08-FEB-10 10:21	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 944994

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245371001	SAMPLE	JXD2	1210	05-FEB-10 18:17	DONE		
245371002	SAMPLE	JXD2	1211	05-FEB-10 18:17	DONE		
245393010	SAMPLE	JXD2	1212	05-FEB-10 18:17	DUSE		
245393011	SAMPLE	JXD2	1213	05-FEB-10 18:17	DONE		
245395001	SAMPLE	JXD2	1214	05-FEB-10 18:17	DONE		
245395002	SAMPLE	JXD2	1215	05-FEB-10 18:17	DONE		
245395003	SAMPLE	JXD2	1216	05-FEB-10 18:17	DUSE		
245395004	SAMPLE	JXD2	1217	05-FEB-10 18:17	DONE		
245395005	SAMPLE	JXD2	1218	05-FEB-10 18:17	DONE		
245395006	SAMPLE	JXD2	1219	05-FEB-10 18:17	DUSE		
245395007	SAMPLE	JXD2	1220	05-FEB-10 18:17	DONE		
245395008	SAMPLE	JXD2	1229	05-FEB-10 18:17	DONE		
245395009	SAMPLE	JXD2	1230	05-FEB-10 18:17	DONE		
245395010	SAMPLE	JXD2	1231	05-FEB-10 18:17	DONE		
245395011	SAMPLE	JXD2	1232	05-FEB-10 18:17	DUSE		
245395012	SAMPLE	JXD2	1233	05-FEB-10 18:17	DONE		
245395013	SAMPLE	JXD2	1234	05-FEB-10 18:17	DONE		
245395014	SAMPLE	JXD2	1235	05-FEB-10 18:18	DUSE		
245395015	SAMPLE	JXD2	1236	05-FEB-10 18:18	DUSE		
1202023807	MB	JXD2	1237	05-FEB-10 18:18	DONE		
1202023808	DUP	JXD2	1238	05-FEB-10 18:18	DONE		
1202023809	LCS	JXD2	1239	05-FEB-10 18:18	DONE		
245393010	SAMPLE	JXD2	1233	08-FEB-10 20:42	DONE		
245395003	SAMPLE	JXD2	1234	08-FEB-10 20:42	DONE		
245395006	SAMPLE	JXD2	1235	08-FEB-10 20:42	DONE		
245395011	SAMPLE	JXD2	1236	08-FEB-10 20:42	DONE		
245395014	SAMPLE	JXD2	1239	08-FEB-10 20:42	DONE		
245395015	SAMPLE	JXD2	1240	08-FEB-10 20:42	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 944996

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245395015	SAMPLE	JXD2	1007	08-FEB-10 11:56	DONE		
1202023820	MB	JXD2	1008	08-FEB-10 11:56	DONE		
245371001	SAMPLE	JXD2	1115	08-FEB-10 12:04	DONE		
245371002	SAMPLE	JXD2	1117	08-FEB-10 12:04	DONE		
245393010	SAMPLE	JXD2	1118	08-FEB-10 12:04	DONE		
245393011	SAMPLE	JXD2	1119	08-FEB-10 12:04	DONE		
245395001	SAMPLE	JXD2	1120	08-FEB-10 12:04	DONE		
245395002	SAMPLE	JXD2	1121	08-FEB-10 12:04	DONE		
245395003	SAMPLE	JXD2	1122	08-FEB-10 12:04	DONE		
245395004	SAMPLE	JXD2	1123	08-FEB-10 12:04	DONE		
245395005	SAMPLE	JXD2	1124	08-FEB-10 12:04	DONE		
245395006	SAMPLE	JXD2	1125	08-FEB-10 12:04	DUSE		
245395007	SAMPLE	JXD2	1126	08-FEB-10 12:04	DUSE		
245395008	SAMPLE	JXD2	1127	08-FEB-10 12:04	DUSE		
245395009	SAMPLE	JXD2	1128	08-FEB-10 12:04	DUSE		
245395010	SAMPLE	JXD2	1129	08-FEB-10 12:04	DONE		
245395011	SAMPLE	JXD2	1130	08-FEB-10 12:04	DONE		
245395012	SAMPLE	JXD2	1131	08-FEB-10 12:04	DUSE		
245395013	SAMPLE	JXD2	1132	08-FEB-10 12:04	DONE		
245395014	SAMPLE	JXD2	1133	08-FEB-10 12:04	DUSE		
1202023821	DUP	JXD2	1139	08-FEB-10 12:05	DONE		
1202023822	LCS	JXD2	1140	08-FEB-10 12:05	DONE		

Instrument Run Log

Instrument Type: LSC

Batch ID: 948398

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245395005	SAMPLE	KXK2	LSCSILVER	07-FEB-10 01:22	DUSE		
245395006	SAMPLE	KXK2	LSCSILVER	07-FEB-10 03:01	DUSE		
245395007	SAMPLE	KXK2	LSCSILVER	07-FEB-10 04:39	DUSE		
245395008	SAMPLE	KXK2	LSCSILVER	07-FEB-10 06:17	DUSE		
245395009	SAMPLE	KXK2	LSCSILVER	07-FEB-10 07:55	DUSE		
245395010	SAMPLE	KXK2	LSCSILVER	07-FEB-10 09:33	DUSE		
245395011	SAMPLE	KXK2	LSCSILVER	07-FEB-10 11:11	DUSE		
245395012	SAMPLE	KXK2	LSCSILVER	07-FEB-10 12:50	DUSE		
245395013	SAMPLE	KXK2	LSCSILVER	07-FEB-10 14:28	DUSE		
245395014	SAMPLE	KXK2	LSCSILVER	07-FEB-10 16:06	DUSE		
245395015	SAMPLE	KXK2	LSCSILVER	07-FEB-10 18:58	DUSE		
1202031673	MB	KXK2	LSCSILVER	07-FEB-10 20:36	DUSE		
1202031675	LCS	KXK2	LSCSILVER	07-FEB-10 23:51	DUSE		
245395001	SAMPLE	KXK2	LSCBROWN	08-FEB-10 13:52	DONE		
245395001	SAMPLE	KXK2	LSCBROWN	08-FEB-10 13:52	DUSE	10mL DW/13mL Ecoscint Ultra	09-SEP-09 00:00
245395002	SAMPLE	KXK2	LSCBROWN	08-FEB-10 14:08	DONE		
245395002	SAMPLE	KXK2	LSCBROWN	08-FEB-10 14:08	DUSE	10mL DW/13mL Ecoscint Ultra	09-SEP-09 00:00
245395003	SAMPLE	KXK2	LSCBROWN	08-FEB-10 14:25	DONE		
245395003	SAMPLE	KXK2	LSCBROWN	08-FEB-10 14:25	DUSE	10mL DW/13mL Ecoscint Ultra	09-SEP-09 00:00
245395004	SAMPLE	KXK2	LSCBROWN	08-FEB-10 14:41	DONE		
245395004	SAMPLE	KXK2	LSCBROWN	08-FEB-10 14:41	DUSE	10mL DW/13mL Ecoscint Ultra	09-SEP-09 00:00
245395005	SAMPLE	KXK2	LSCBROWN	08-FEB-10 14:57	DONE		
245395006	SAMPLE	KXK2	LSCBROWN	08-FEB-10 15:13	DONE		
245395007	SAMPLE	KXK2	LSCBROWN	08-FEB-10 15:30	DONE		
245395008	SAMPLE	KXK2	LSCBROWN	08-FEB-10 15:40	DONE		
245395009	SAMPLE	KXK2	LSCBROWN	08-FEB-10 15:57	DONE		
245395010	SAMPLE	KXK2	LSCBROWN	08-FEB-10 16:13	DONE		
245395011	SAMPLE	KXK2	LSCBROWN	08-FEB-10 16:29	DONE		
245395012	SAMPLE	KXK2	LSCBROWN	08-FEB-10 16:46	DONE		
245395013	SAMPLE	KXK2	LSCBROWN	08-FEB-10 17:02	DONE		
245395014	SAMPLE	KXK2	LSCBROWN	08-FEB-10 17:18	DONE		
245395015	SAMPLE	KXK2	LSCBROWN	08-FEB-10 17:35	DONE		
1202031673	MB	KXK2	LSCBROWN	08-FEB-10 17:51	DONE		
1202031674	DUP	KXK2	LSCBROWN	08-FEB-10 18:07	DONE		
1202031674	DUP	KXK2	LSCBROWN	08-FEB-10 18:07	DUSE	10mL DW/13mL Ecoscint Ultra	09-SEP-09 00:00
1202031675	LCS	KXK2	LSCBROWN	08-FEB-10 18:23	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 954840

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202047013	MB	AXD2	1138	19-FEB-10 07:56	DONE		
1202047014	DUP	AXD2	1139	19-FEB-10 07:56	DONE		
1202047015	LCS	AXD2	1140	19-FEB-10 07:56	DONE		
245395006	SAMPLE	AXD2	1141	19-FEB-10 07:56	DONE		
245395007	SAMPLE	AXD2	1142	19-FEB-10 07:56	DONE		
245395008	SAMPLE	AXD2	1143	19-FEB-10 07:56	DONE		
245395009	SAMPLE	AXD2	1144	19-FEB-10 07:56	DONE		
245395012	SAMPLE	AXD2	1145	19-FEB-10 07:56	DONE		
245395014	SAMPLE	AXD2	1146	19-FEB-10 07:56	DONE		