

Friday, February 05, 2010

REQUEST NUMBER: 10-1622

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA:901.1		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
		1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
EPA:906.0		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
		1	RE15-10-8336	R	2/2/2010	
HASL-300-AM-241		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	

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PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300:ISOPU	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300:ISOU	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	

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REQUEST NUMBER: 10-1622

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
HASL-300:ISOU						
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	

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LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1622

LOS ALAMOS

REQUEST NUMBER: 10-1622

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/7/2010

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
RE15-10-8354	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8354	1	POLY	H3	Ice	R
RE15-10-8356	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8356	1	POLY	H3	Ice	R
RE15-10-8353	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8353	1	POLY	H3	Ice	R
RE15-10-8352	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8352	1	POLY	H3	Ice	R
RE15-10-8355	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8355	1	POLY	H3	Ice	R
RE15-10-8351	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8351	1	POLY	H3	Ice	R
RE15-10-8350	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8350	1	POLY	H3	Ice	R
RE15-10-8357	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8357	1	POLY	H3	Ice	R
RE15-10-8338	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8338	1	POLY	H3	Ice	R
RE15-10-8336	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8336	1	POLY	H3	Ice	R
RE15-10-8339	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8339	1	POLY	H3	Ice	R
RE15-10-8337	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8337	1	POLY	H3	Ice	R
RE15-10-8375	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8375	1	POLY	H3	Ice	R
RE15-10-8374	1	POLY	AM241+GS+ISOPU+ISO	None	R

Friday, February 05, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1622

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8374	1	POLY	H3	Ice	R
Relinquished By:			Received By:		
Date			Date		
Time			Time		
					
Printed Name	Signature		Printed Name	Signature	
Printed Name	Signature		Printed Name	Signature	
Printed Name	Signature		Printed Name	Signature	
Received for DISPOSAL By:			Remarks:		
Date					
Time					
Printed Name	Signature				

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8336

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		SEP
TIME COLLECTED (HH:MM)		0950		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610838	↓		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	SED		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+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Light brown sand and tuff fragments, frozen

FTB: RE15-10-8382

SAMPLE COMMENTS:

NA

LOCATION DESC:

9C-5, drainage below septic tanks

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha \leq 33 dpm
 Beta/Gamma \leq 1976 dpm

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

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

R. M. E.

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 2/3/10 08:10	RECEIVED BY (Printed Name) (Signature)	Date/Time 2/3/10 8:10
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8337

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		1006		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610838	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	1.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	1.5		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+N03+pH	500 ML POLY	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:

qc-5 drainage below septic tanks

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 11 dpm
Beta/Gamma \leq 2010 dpm

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

COLLECTED BY (PRINT)

TLMcFarlane

REVIEWED BY (PRINT)

Rkey E

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	2/3/10	(Printed Name)	2/3/10
(Signature)	8:09 AM	(Signature)	8:09
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8338

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		ok
TIME COLLECTED (HH:MM)		1353		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-009(c)		ok	SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610839		↓	FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC		↓	FIELD PREP:	NA		↓
TOP DEPTH:	0		0.0	SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0		0.8	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	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray Tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

9C-9

~~Area where drainage ceases to be defined~~ 17m 2/2/10

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha \leq 11 dpmBeta/Gamma \leq 2100 dpmPID $\frac{\text{Ambient Reading}}{0.0} = 0.0$ ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

Riley G

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	2/3/10	(Printed Name)	2/3/10
(Signature) E-Lujan	8:14 AM	(Signature)	8:14
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8339

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		ok
TIME COLLECTED (HH:MM)		1405		SUB-MEDIA:	TUFF 1		L
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610839			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			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray and white tuff, roots

FO: RE 15-10-8374

SAMPLE COMMENTS:

NA

LOCATION DESC:

qc-9

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 11 dpm

Beta/Gamma = 2140 dpm

PID $\frac{\text{Ambient Reading}}{4.1} = 0.0$ ppm

COLLECTED BY (PRINT)

Th McFarland

REVIEWED BY (PRINT)

Kry G.

RELINQUISHED BY (Printed Name) <i>Esther Lujan</i>	Date/Time 2/3/10	RECEIVED BY (Printed Name)	Date/Time 2/3/10
(Signature) <i>[Signature]</i>	08:14 AM	(Signature) <i>[Signature]</i>	814
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8350

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		ok
TIME COLLECTED(HH:MM)		1040		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610845	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	0.7		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	UA			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	8260B	125 ML SEPTUM AMBER GLASS	Ice	y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	y	
1		H3	500 ML POLY	Ice	y	
1		METALS+U-GEL	125 ML POLY	Ice	y	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	y	

SAMPLE DESC:

Whitish gray tuff and brown sand

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-6 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha = 0 dpm
Beta/Gamma = 1811 dpm

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

COLLECTED BY (PRINT)

Th McFarlane

REVIEWED BY (PRINT)

Riley S.

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	2/3/10	(Printed Name)	2/3/10
(Signature)	8:11 AM	(Signature)	8:11
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8351

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		ok
TIME COLLECTED (HH:MM)		1051		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		NA
LOCATION ID:	15-610845	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	1.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	1.2		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	ok		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+N03+pH	500 ML POLY	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:

9c-6 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha \leq 22 dpm
 Beta/Gamma \leq 2080 dpm

PID Ambient Reading $\frac{0.0}{0.0}$ ppm T3m 2/2/10
 1.3

COLLECTED BY (PRINT)

Th McFarland

REVIEWED BY (PRINT)

K. Ray E.

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Luis	2/3/10	(Printed Name)	2/3/10
(Signature)	8:10 AM	(Signature)	8:10
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8352

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1127		SUB-MEDIA:		TUFF 1	
PRS ID: 15-009(c)		OK		SAMPLE TECH CODE:		HA	
LOCATION ID: 15-610846		↓		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		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

moist pinkish gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-7 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 16 dpm
Beta/Gamma = 2036 dpm

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

COLLECTED BY (PRINT)

ThMcFarland

REVIEWED BY (PRINT)

RMY G.

RELINQUISHED BY (Printed Name) Estevan Lujan	Date/Time 2/3/10	RECEIVED BY (Printed Name)	Date/Time 2/3/10
(Signature)	08:11	(Signature)	8:11
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8353

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	OBT3		ok
TIME COLLECTED (HH:MM)		1137		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610846	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	1.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	2.0		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	y	
1		H3	500 ML POLY	Ice	y	
1		METALS+U-GEL	125 ML POLY	Ice	y	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	v	

SAMPLE DESC:

Gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

qc-7 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 0 dpm
Beta/Gamma \leq 2380 dpm

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

COLLECTED BY (PRINT)

T. McFarlane

REVIEWED BY (PRINT)

R. E.

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	2/3/10	(Printed Name)	2/3/10
(Signature)	8:12 AM	(Signature)	8:12
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8354

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		SED
TIME COLLECTED (HH:MM)		1309		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610847	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	0.7		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	SED		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

moist brown sand and tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-8 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

14E negative

Alpha \leq 11 dpm
Beta/Gamma \leq 2100 dpm

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

COLLECTED BY (PRINT)

T. McFarlane

REVIEWED BY (PRINT)

R. E.

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	2/3/10	(Printed Name)	2/3/10
(Signature) E. Lujan	8:13 PM	(Signature)	8:13
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8355

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	OBT3		ok
TIME COLLECTED (HH:MM)		1317		SUB-MEDIA:	TUFF 1		
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		
LOCATION ID:	15-610847			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		
TOP DEPTH:	0	1.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	2.0		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray sandy till

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-8 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 33 dpm
Beta/Gamma \leq 2280 dpm

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

COLLECTED BY (PRINT)

Th McFarland

REVIEWED BY (PRINT)

R. W. S.

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	2/3/10	(Printed Name)	2/3/10
(Signature) E. J.	8:13 AM	(Signature)	8:13
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8356

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	OBT3		Alh
TIME COLLECTED (HH:MM)		1427		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610848	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	0.8		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown silty sand, moist, tuff fragments
FD: RE 15-10-8356

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-10

Area where drainage ceased to be defined
HE neg

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 11 dpm
Beta/Gamma \leq 2220 dpm

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

COLLECTED BY (PRINT)

L. McFarlane

REVIEWED BY (PRINT)

Riley E

RELINQUISHED BY (Printed Name) <i>Estevan Lujan</i>	Date/Time 2/3/10	RECEIVED BY (Printed Name)	Date/Time 2/3/10
(Signature) <i>[Signature]</i>	08:15h	(Signature) <i>[Signature]</i>	8:15
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8357

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		1440		SUB-MEDIA:	TUFF 1		1
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610848			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		
TOP DEPTH:	0	1.0		SAMPLE USAGE:	INV		
BOTTOM DEPTH:	0	2.0		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA	NO/NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA	NO/NA		
BOREHOLE: YES/NO/NA	NO/NA			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray tuff

FR: RE15-10-8378

SAMPLE COMMENTS:

Tuff at 9 inches

LOCATION DESC:

9c-10

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 27 dpm
Beta/Gamma ≤ 2210 dpm

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

COLLECTED BY (PRINT)

ThMcFarland

REVIEWED BY (PRINT)

R. Mey

RELINQUISHED BY (Printed Name) Estevan Lujan	Date/Time 2/3/10	RECEIVED BY (Printed Name)	Date/Time 2/3/10
(Signature)	08:15 AM	(Signature)	8:15
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8374

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		ok
TIME COLLECTED(HH:MM)		1405		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	UNK	15-610839		FIELD QC TYPE:	ED		↓
LOCATION TYPE:	GENERIC	ok		FIELD PREP:	NA		↓
TOP DEPTH:	0	1.0		SAMPLE USAGE:	QC		↓
BOTTOM DEPTH:	0	2.5		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: QC Sample of RE 15-10-8339

Gray, and white tuff, roots

SAMPLE COMMENTS:

NA

LOCATION DESC:

qc - q

FIELD SCREENING/MEASUREMENT RESULTS:

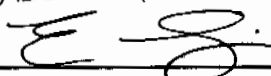
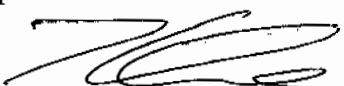
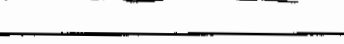
PID $\frac{\text{Ambient Reading}}{4.1} \frac{0.0}{4.1}$ ppmAlpha ≤ 11 dpm
Beta/Gamma ≤ 2140 dpm

COLLECTED BY (PRINT)

TLMcfarland

REVIEWED BY (PRINT)

R. May 6.

RELINQUISHED BY (Printed Name) Estewey Lujan (Signature) 	Date/Time 2/3/10 08:15	RECEIVED BY (Printed Name)  (Signature) 	Date/Time 2/3/10 8:15
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8375

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/02/2010		MEDIA:	QBT3		AMH
TIME COLLECTED (HH:MM)		1427		SUB-MEDIA:	TUFF.1		NA
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	UNK	15-610848		FIELD QC TYPE:	ED		
LOCATION TYPE:	GENERIC	ok		FIELD PREP:	NA		
TOP DEPTH:	0	0.0		SAMPLE USAGE:	QC		
BOTTOM DEPTH:	0	0.8		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA	NO/NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA	NO/NA			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	12m 2/2/10 8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U- GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: QC Sample of

RE15-10-8356

Brown silty sand, moist, tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

qc-10

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

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

$$\text{Alpha} \leq 11 \text{ dpm}$$

$$\text{Beta/Gamma} \leq 2220 \text{ dpm}$$

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

Ray G.

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature) <i>E Lujan</i>	Date/Time 2/3/10 08:15 AM	RECEIVED BY (Printed Name) <i>Ray G.</i> (Signature) <i>Ray G.</i>	Date/Time 2/3/10 8:15
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8378

WORK ORDER:

AS PLANNED	AS COLLECTED	AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):	02/02/2010	MEDIA:	NA
TIME COLLECTED (HH:MM)	1537	SUB-MEDIA:	OTHER
PRS ID: 15-009(c)	OK	SAMPLE TECH CODE:	DC
LOCATION ID: UNK	15-610848	FIELD QC TYPE:	ER
LOCATION TYPE: GENERIC	OK	FIELD PREP:	UF
TOP DEPTH: 0		SAMPLE USAGE:	QC
BOTTOM DEPTH: 0		SCREEN/PORT DESC:	NA
FIELD MATRIX: W		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	METALS+U-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)	N	
1	Normal	SW-846:6850	250 ML POLY	Ice	Y	
1	↓	TCN	500 ML POLY	Sodium Hydroxide	Y	

SAMPLE DESC: QC Sample of RE 15-10-8357

SAMPLE COMMENTS:

Rinsate

LOCATION DESC:

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT)

Th McFarlane

REVIEWED BY (PRINT)

R. E.

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Esten Lujan	2/3/10	(Printed Name)	2/3/10
(Signature) [Signature]	0821 AM	(Signature) [Signature]	8:21
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8382

WORK ORDER:

AS PLANNED	AS COLLECTED	AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):	02/02/2010	MEDIA:	FILL
TIME COLLECTED (HH:MM)	0945	SUB-MEDIA:	SOIL
PRS ID: 15-009(c)	ok	SAMPLE TECH CODE:	DC
LOCATION ID: UNK	15-610838	FIELD QC TYPE:	FTB
LOCATION TYPE: GENERIC	ok	FIELD PREP:	NA
TOP DEPTH: 0		SAMPLE USAGE:	QC
BOTTOM DEPTH: 0		SCREEN/PORT DESC:	NA
FIELD MATRIX: 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
12/2/10 1 2	Normal	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of RE15-10-8336

SAMPLE COMMENTS: NA

LOCATION DESC: NA

FIELD SCREENING/MEASUREMENT RESULTS: NA

COLLECTED BY (PRINT)
TLMcFarland

REVIEWED BY (PRINT)

Riley E

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature) [Signature]	Date/Time 2/3/10 8:21 AM	RECEIVED BY (Printed Name) [Signature] (Signature) [Signature]	Date/Time 2/3/10 8:21
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number):

RE15-10-8337	RE15-10-8338
" " 8336	" " 8339
" " 8350	" " 8374
" " 8351	" " 8375
" " 8352	" " 8356
" " 8353	8357
" " 8354	
" " 8355	

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

.....

The following samples do not require rad screening data for the reasons stated (list sample numbers):

RE15-10-8378
RE15-10-~~8378~~ 8382

Reason:

.....

Print Last Name Lujan Signature E. J. Date 2/3/10

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number):

RE15-10-8337	RE15-10-8338
" "8336	" "8339
" "8350	" "8374
" "8351	" "8375
" "8352	" "8356
" "8353	8357
" "8354	
" "8355	

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

.....

The following samples do not require rad screening data for the reasons stated (list sample numbers):

RE15-10-8378
RE15-10-~~8378~~ 8382

Reason:

.....

Print Last Name


Lujan

Signature





Date

2/3/10


DATA VALIDATION COVER SHEET	
5119-1 <div style="text-align: center; padding-top: 20px;">Data Validation Cover Sheet</div>	Records Use only 

Section I.							
REQUEST NUMBER: <u>10-1622</u>		VALIDATION DATE: <u>03/18/10</u>		LAB CODE: <u>GEL</u>			
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>							
VALIDATOR: <u>David Schwent</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"/> LCMSMS PERCHLORATES				
<input type="checkbox"/> TPH-DRO	<input type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS	<input type="checkbox"/> ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS				
<input type="checkbox"/> GENERAL CHEMISTRY	<input checked="" type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES					
<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):							
<p>1. All reported sample results that were rejected by the laboratory due to interference, low abundance, or no valid peak were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.</p> <p>2. The %R of alpha spec isotopic tracer Am-243 for sample RE15-10-8352 was < the laboratory LAL. The associated sample result was an ND and, thus, was not qualified.</p> <p>3. It should be noted that the matrix QC analyses for the isotopic-Am, isotopic-Pu, and gamma batches in this RN were performed on LANL samples from other RNs. No sample data were qualified as a result.</p>							
Reviewed by: <u>ETM</u>				Level: <u>1</u>		Date: <u>3/19/10</u>	


DATA VALIDATION COVER SHEET	
5119-1 Data Validation Cover Sheet	Records Use only  Los Alamos NATIONAL LABORATORY EST. 1942
VALIDATOR'S SIGNATURE: <u>David Schwartz</u> DATE: <u>03/18/10</u>	
Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				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: March 4, 2010

Client Sample ID: RE15-10-8354
Sample ID: 246440001
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 22%

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	0.00253	0.0231	+/-0.00192	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00948	0.0351	+/-0.00971	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.0169	0.0266	+/-0.00645	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.16	0.0885	+/-0.104	0.100	pCi/g		MXE1	02/27/10	2003	953497	4
Uranium-235/236		0.0824	0.0564	+/-0.0198	0.100	pCi/g						
Uranium-238		2.94	0.0604	+/-0.231	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.283	0.486	+/-0.146	0.200	pCi/g		MXR1	02/19/10	1757	950788	5
Bismuth-211	UI	3.39	R,R5a	0.410	+/-0.286	pCi/g						
Bismuth-214		1.04		0.125	+/-0.0965	pCi/g						
Cadmium-109	UI	4.11	R,R5a	1.80	+/-0.885	pCi/g						
Cerium-139	U	-0.0211		0.0577	+/-0.0172	pCi/g						
Cesium-134	U	0.0863		0.0954	+/-0.037	pCi/g						
Cesium-137		0.0857		0.0677	+/-0.0308	pCi/g						
Cobalt-60	U	0.00112		0.0636	+/-0.0194	pCi/g						
Europium-152	U	-0.0407		0.188	+/-0.0638	pCi/g						
Lanthanum-140	U	-0.00953		0.122	+/-0.0442	pCi/g						
Lead-212		1.74		0.104	+/-0.120	pCi/g						
Lead-214		1.18		0.138	+/-0.104	pCi/g						
Mercury-203	U	0.0443		0.087	+/-0.0238	pCi/g						
Potassium-40		33.1		0.545	+/-1.88	pCi/g						
Radium-223	U	-0.244		1.23	+/-0.416	pCi/g						
Radium-224	UI	4.06	R,R5a	1.18	+/-0.707	pCi/g						
Radium-226		1.04		0.125	+/-0.0965	pCi/g						
Radium-228		1.55		0.214	+/-0.158	pCi/g						
Ruthenium-106	U	0.126		0.585	+/-0.171	pCi/g						
Sodium-22	U	0.00713		0.0833	+/-0.0251	pCi/g						
Strontium-85	UI	0.104	R,R5a	0.0809	+/-0.0239	pCi/g						

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8354
Sample ID: 246440001

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>											
Thallium-208		0.558	0.0653	+/-0.0491	0.080	pCi/g					
Thorium-227	U	-0.231	0.717	+/-0.208		pCi/g					
Thorium-231	U	-0.244	1.23	+/-0.416		pCi/g					
Thorium-234		4.31	3.67	+/-1.73	2.00	pCi/g					
Tin-113	U	-0.000801	0.0859	+/-0.0249	0.100	pCi/g					
Uranium-235	U	0.126	0.439	+/-0.126	0.500	pCi/g					
Yttrium-88	U	0.00292	0.0443	+/-0.0131	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		292	155	+/-60.2	250	pCi/L		KXK2	02/27/10	0253 953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	77.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.5	(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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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8356
Sample ID: 246440002
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 14.7%

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	-0.00325	0.0231	+/-0.00348	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00231	0.0346	+/-0.0056	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.0262	0.0263	+/-0.00802	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.54	0.102	+/-0.135	0.100	pCi/g		MXE1	02/27/10	2003	953497	4
Uranium-235/236		0.120	0.065	+/-0.0269	0.100	pCi/g						
Uranium-238		2.70	0.0696	+/-0.219	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0837	0.241	+/-0.0775	0.200	pCi/g		MXR1	02/19/10	1757	950788	5
Bismuth-211	UI	3.56	R,R5a	+/-0.292		pCi/g						
Bismuth-214		1.14		+/-0.095	0.200	pCi/g						
Cadmium-109	UI	2.60	R,R5a	+/-0.469		pCi/g						
Cerium-139	U	-0.0205	0.0432	+/-0.0132	0.050	pCi/g						
Cesium-134	UI	0.123	R,R5a	+/-0.033	0.100	pCi/g						
Cesium-137	U	0.0441	0.0656	+/-0.0322	0.100	pCi/g						
Cobalt-60	U	-0.011	0.064	+/-0.0204	0.100	pCi/g						
Europium-152	U	0.00263	0.144	+/-0.0469	0.200	pCi/g						
Lanthanum-140	U	-0.0502	0.115	+/-0.0391		pCi/g						
Lead-212		1.64	0.0836	+/-0.111	0.100	pCi/g						
Lead-214		1.24	0.108	+/-0.107	0.100	pCi/g						
Mercury-203	U	0.00703	0.0651	+/-0.022	0.100	pCi/g						
Potassium-40		33.4	0.517	+/-1.74	1.00	pCi/g						
Radium-223	U	-0.509	0.945	+/-0.355		pCi/g						
Radium-224	UI	5.06	R,R5a	+/-0.675		pCi/g						
Radium-226		1.14	0.0959	+/-0.095		pCi/g						
Radium-228		1.75	0.209	+/-0.170	0.500	pCi/g						
Ruthenium-106	U	-0.0975	0.441	+/-0.139	0.800	pCi/g						
Sodium-22	U	-0.035	0.0726	+/-0.0241	0.080	pCi/g						
Strontium-85	U	0.0264	0.0623	+/-0.020		pCi/g						
Thallium-208		0.577	0.0554	+/-0.0459	0.080	pCi/g						

DJS
03/18/10

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8356
Sample ID: 246440002
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	0.0698	0.609	+/-0.183		pCi/g						
Thorium-231	U	-0.509	0.945	+/-0.355		pCi/g						
Thorium-234		3.23	1.98	+/-0.948	2.00	pCi/g						
Tin-113	U	0.0165	0.0685	+/-0.0195	0.100	pCi/g						
Uranium-235	U	0.223	0.314	+/-0.153	0.500	pCi/g						
Yttrium-88	U	0.0424	0.0633	+/-0.0155	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		380	158	+/-66.5	250	pCi/L		KXK2	02/27/10	0331	953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	81.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	93.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	85.2	(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: March 4, 2010

Client Sample ID: RE15-10-8353
Sample ID: 246440003
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 13%

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	0.0224	+/-0.00244	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0113	0.0264	+/-0.00539	0.050	pCi/g		MXE1	02/27/10	1945	953494	2
Plutonium-239/240	U	0.00808	0.0199	+/-0.00537	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		2.33	0.0958	+/-0.191	0.100	pCi/g		MXE1	02/27/10	2003	953497	3
Uranium-235/236		0.221	0.0611	+/-0.0358	0.100	pCi/g						
Uranium-238		7.96	0.0654	+/-0.591	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.215	0.284	+/-0.0871	0.200	pCi/g		MXR1	02/19/10	1758	950788	4
Bismuth-211	UI	3.21	R,R5a	0.345	+/-0.244	pCi/g						
Bismuth-214		1.10		0.119	+/-0.0942	pCi/g						
Cadmium-109	UI	3.70	R,R5a	1.39	+/-0.605	pCi/g						
Cerium-139	U	0.0126		0.053	+/-0.0153	pCi/g						
Cesium-134	U	0.0786		0.090	+/-0.0361	pCi/g						
Cesium-137	U	0.0165		0.0697	+/-0.0203	pCi/g						
Cobalt-60	U	-0.0433		0.0528	+/-0.0185	pCi/g						
Europium-152	U	-0.0163		0.169	+/-0.0567	pCi/g						
Lanthanum-140	U	-0.0092		0.153	+/-0.0495	pCi/g						
Lead-212		1.89		0.0893	+/-0.0886	pCi/g						
Lead-214		1.12		0.120	+/-0.0896	pCi/g						
Mercury-203	U	0.0398		0.0758	+/-0.0208	pCi/g						
Potassium-40		34.6		0.526	+/-1.56	pCi/g						
Radium-223	U	0.0925		1.10	+/-0.359	pCi/g						
Radium-224	UI	4.86	R,R5a	1.02	+/-0.652	pCi/g						
Radium-226		1.10		0.119	+/-0.0942	pCi/g						
Radium-228		1.64		0.196	+/-0.183	pCi/g						
Ruthenium-106	U	0.228		0.557	+/-0.158	pCi/g						
Sodium-22	U	-0.00922		0.0684	+/-0.0209	pCi/g						
Strontium-85	U	0.0605		0.0691	+/-0.021	pCi/g						
Thallium-208		0.609		0.0588	+/-0.0463	pCi/g						

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8353
Sample ID: 246440003

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	0.0607	0.657	+/-0.196		pCi/g					
Thorium-231	U	0.0925	1.10	+/-0.359		pCi/g					
Thorium-234		3.95	2.28	+/-1.05	2.00	pCi/g					
Tin-113	U	0.0028	0.076	+/-0.022	0.100	pCi/g					
Uranium-235	U	0.255	0.408	+/-0.118	0.500	pCi/g					
Yttrium-88	U	-0.00242	0.0523	+/-0.0163	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		273	155	+/-59.2	250	pCi/L	KXK2	02/27/10	0408	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	79.0	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	75.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.4	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8352
Sample ID: 246440004
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 23%

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	0.00593	0.0289	+/-0.00305	0.050	pCi/g		MXE1	03/01/10	1821	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.019	0.0194	+/-0.00512	0.050	pCi/g		MXE1	02/27/10	1945	953494	3
Plutonium-239/240	U	0.00476	0.0146	+/-0.00337	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.938	0.0893	+/-0.0881	0.100	pCi/g		MXE1	02/27/10	2003	953497	4
Uranium-235/236	U	0.0525	0.0569	+/-0.0168	0.100	pCi/g						
Uranium-238		1.21	0.061	+/-0.108	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.00444	0.0825	+/-0.0255	0.200	pCi/g		MXR1	02/19/10	1758	950788	5
Bismuth-211	UI	4.04	R,R5a 0.314	+/-0.285		pCi/g						
Bismuth-214		1.24	0.136	+/-0.129	0.200	pCi/g						
Cadmium-109	UI	4.37	R,R5a 0.725	+/-0.436		pCi/g						
Cerium-139	U	-0.0448	0.0384	+/-0.0121	0.050	pCi/g						
Cesium-134	U	0.0966	0.117	+/-0.0376	0.100	pCi/g						
Cesium-137	U	0.0268	0.0841	+/-0.0243	0.100	pCi/g						
Cobalt-60	U	-0.0151	0.0841	+/-0.026	0.100	pCi/g						
Europium-152	U	0.0455	0.171	+/-0.0502	0.200	pCi/g						
Lanthanum-140	U	-0.0925	0.151	+/-0.0563		pCi/g						
Lead-212		1.83	0.0883	+/-0.107	0.100	pCi/g						
Lead-214		1.41	0.106	+/-0.106	0.100	pCi/g						
Mercury-203	U	-0.0238	0.0644	+/-0.0199	0.100	pCi/g						
Potassium-40		36.9	0.811	+/-2.00	1.00	pCi/g						
Radium-223	U	-0.597	1.09	+/-0.354		pCi/g						
Radium-224	UI	4.86	R,R5a 1.01	+/-0.781		pCi/g						
Radium-226		1.24	0.136	+/-0.129		pCi/g						
Radium-228		2.00	0.238	+/-0.206	0.500	pCi/g						
Ruthenium-106	U	-0.148	0.604	+/-0.189	0.800	pCi/g						
Sodium-22	U	-0.00293	0.100	+/-0.0312	0.080	pCi/g						
Strontium-85	U	0.0387	0.069	+/-0.0209		pCi/g						
Thallium-208		0.607	0.0673	+/-0.0625	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8352
Sample ID: 246440004

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	0.135	0.598	+/-0.172		pCi/g						
Thorium-231	U	-0.597	1.09	+/-0.354		pCi/g						
Thorium-234		1.76	0.794	+/-0.490	2.00	pCi/g						
Tin-113	U	-0.00704	0.0805	+/-0.0251	0.100	pCi/g						
Uranium-235	U	0.103	0.309	+/-0.093	0.500	pCi/g						
Yttrium-88	U	-0.0366	0.0519	+/-0.0218	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	98.1	155	+/-48.4	250	pCi/L		KXX2	02/27/10	0446	953105	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Am-05-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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	35.5 *	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	98.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	90.0	(50%-105%)

Notes:

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

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- 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: March 4, 2010

Client Sample ID: RE15-10-8355
Sample ID: 246440005
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 12.7%

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	0.00193		0.0198	+/-0.00235	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>													
Plutonium-238	U	0.0161		0.0361	+/-0.00674	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.021		0.0273	+/-0.00821	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>													
Uranium-233/234		1.17		0.105	+/-0.109	0.100	pCi/g		MXE1	02/27/10	2003	953497	4
Uranium-235/236	U	0.0566		0.067	+/-0.0175	0.100	pCi/g						
Uranium-238		1.69		0.0718	+/-0.148	0.100	pCi/g						
Rad Gamma Spec Analysis													
<i>GAMMA SPEC "Dry Weight Corrected"</i>													
Americium-241	U	0.110		0.230	+/-0.0708	0.200	pCi/g		MXR1	02/19/10	1759	950788	5
Bismuth-211	UI	4.18	R,R5a	0.309	+/-0.329		pCi/g						
Bismuth-214		1.19		0.116	+/-0.0951	0.200	pCi/g						
Cadmium-109	UI	2.11	R,R5a	1.25	+/-0.506		pCi/g						
Cerium-139	U	0.0272		0.0515	+/-0.0145	0.050	pCi/g						
Cesium-134	UI	0.0816	R,R5a	0.0801	+/-0.0227	0.100	pCi/g						
Cesium-137	U	0.0205		0.0613	+/-0.0179	0.100	pCi/g						
Cobalt-60	U	-0.0181		0.0565	+/-0.0178	0.100	pCi/g						
Europium-152	U	-0.0739		0.139	+/-0.057	0.200	pCi/g						
Lanthanum-140	U	0.0663		0.153	+/-0.0498		pCi/g						
Lead-212		1.79		0.0898	+/-0.129	0.100	pCi/g						
Lead-214		1.45		0.108	+/-0.120	0.100	pCi/g						
Mercury-203	U	0.027		0.0695	+/-0.0206	0.100	pCi/g						
Potassium-40		38.9		0.478	+/-1.96	1.00	pCi/g						
Radium-223	U	0.607		1.02	+/-0.330		pCi/g						
Radium-224	UI	4.72	R,R5a	1.02	+/-0.684		pCi/g						
Radium-226		1.19		0.116	+/-0.0951		pCi/g						
Radium-228		1.68		0.194	+/-0.185	0.500	pCi/g						
Ruthenium-106	U	-0.102		0.485	+/-0.147	0.800	pCi/g						
Sodium-22	U	0.00933		0.0713	+/-0.0212	0.080	pCi/g						
Strontium-85	UI	0.150	R,R5a	0.0707	+/-0.0216		pCi/g						
Thallium-208		0.556		0.0529	+/-0.0457	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8355
Sample ID: 246440005

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	0.0233	0.647	+/-0.194		pCi/g						
Thorium-231	U	0.607	1.02	+/-0.330		pCi/g						
Thorium-234	U	1.76	1.94	+/-0.833	2.00	pCi/g						
Tin-113	U	-0.0475	0.0638	+/-0.0202	0.100	pCi/g						
Uranium-235	U	-0.049	0.359	+/-0.106	0.500	pCi/g						
Yttrium-88	U	-0.000753	0.0452	+/-0.0139	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		412	158	+/-68.8	250	pCi/L		KXX2	02/27/10	0523	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	83.5	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	84.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	81.5	(50%-105%)

Notes:

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

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- 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: March 4, 2010

Client Sample ID: RE15-10-8351
Sample ID: 246440006
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 15.1%

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	-0.00322	0.0225	+/-0.002	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00516	0.0211	+/-0.00632	0.050	pCi/g		MXE1	02/27/10	1945	953494	2
Plutonium-239/240	U	0.00645	0.0159	+/-0.00342	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.10	0.100	+/-0.103	0.100	pCi/g		MXE1	02/27/10	2003	953497	3
Uranium-235/236	U	0.0638	0.0639	+/-0.0195	0.100	pCi/g						
Uranium-238		1.82	0.0684	+/-0.155	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.000907	0.111	+/-0.0346	0.200	pCi/g		MXR1	02/19/10	1802	950788	4
Bismuth-211	UI	4.30	R,R5a	+/-0.331		pCi/g						
Bismuth-214		1.25		+/-0.122	0.200	pCi/g						
Cadmium-109	UI	4.07	R,R5a	+/-0.503		pCi/g						
Cerium-139	U	-0.00625	0.0542	+/-0.0163	0.050	pCi/g						
Cesium-134	U	0.0302	0.104	+/-0.0294	0.100	pCi/g						
Cesium-137	UI	0.100	R,R5a	+/-0.0271	0.100	pCi/g						
Cobalt-60	U	0.0451	0.0963	+/-0.0261	0.100	pCi/g						
Europium-152	U	-0.01	0.181	+/-0.0551	0.200	pCi/g						
Lanthanum-140	U	-0.0953	0.152	+/-0.0563		pCi/g						
Lead-212		1.42	0.125	+/-0.107	0.100	pCi/g						
Lead-214		1.49	0.125	+/-0.121	0.100	pCi/g						
Mercury-203	U	-0.0107	0.0811	+/-0.0236	0.100	pCi/g						
Potassium-40		33.0	0.671	+/-1.86	1.00	pCi/g						
Radium-223	U	-0.222	1.20	+/-0.413		pCi/g						
Radium-224	UI	3.46	R,R5a	+/-0.557		pCi/g						
Radium-226		1.25	0.131	+/-0.122		pCi/g						
Radium-228		1.49	0.297	+/-0.275	0.500	pCi/g						
Ruthenium-106	U	0.192	0.746	+/-0.221	0.800	pCi/g						
Sodium-22	U	-0.0421	0.093	+/-0.0316	0.080	pCi/g						
Strontium-85	U	0.0137	0.0728	+/-0.0243		pCi/g						
Thallium-208		0.619	0.0682	+/-0.0573	0.080	pCi/g						

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Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8351 Project: LANL01004
Sample ID: 246440006 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	-0.30	0.700	+/-0.231		pCi/g					
Thorium-231	U	-0.222	1.20	+/-0.413		pCi/g					
Thorium-234		2.17	1.08	+/-0.639	2.00	pCi/g					
Tin-113	U	0.0145	0.0889	+/-0.0257	0.100	pCi/g					
Uranium-235	U	0.108	0.403	+/-0.117	0.500	pCi/g					
Yttrium-88	U	0.00468	0.0757	+/-0.0228	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium	U	83.2	155	+/-47.6	250	pCi/L		KXK2	02/27/10	0601 953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.1	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	88.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.5	(50%-105%)

Notes:

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

The Qualifiers in this report are defined as follows :

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- 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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8350
Sample ID: 246440007
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 23.1%

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	-0.00179	0.0221	+/-0.00359	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.013	0.0212	+/-0.00415	0.050	pCi/g		MXE1	02/27/10	1945	953494	2
Plutonium-239/240	U	0.013	0.016	+/-0.00454	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.904	0.0874	+/-0.0852	0.100	pCi/g		MXE1	02/27/10	2004	953497	3
Uranium-235/236		0.0685	0.0557	+/-0.0178	0.100	pCi/g						
Uranium-238		1.31	0.0597	+/-0.115	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.042	0.273	+/-0.086	0.200	pCi/g		MXR1	02/19/10	1830	950788	4
Bismuth-211	UI	3.61	R,R5a	0.260	+/-0.201	pCi/g						
Bismuth-214		1.00		0.093	+/-0.0752	0.200	pCi/g					
Cadmium-109	UI	3.81	R,R5a	1.10	+/-0.510	pCi/g						
Cerium-139	U	-0.00218		0.0421	+/-0.0119	0.050	pCi/g					
Cesium-134	UI	0.117	R,R5a	0.0747	+/-0.0283	0.100	pCi/g					
Cesium-137	U	0.0333		0.0504	+/-0.0157	0.100	pCi/g					
Cobalt-60	U	-0.00358		0.0507	+/-0.0154	0.100	pCi/g					
Europium-152	U	-0.0315		0.130	+/-0.0463	0.200	pCi/g					
Lanthanum-140	U	0.0274		0.117	+/-0.0335	pCi/g						
Lead-212		1.66		0.0775	+/-0.0755	0.100	pCi/g					
Lead-214		1.26		0.0905	+/-0.0773	0.100	pCi/g					
Mercury-203	U	0.0152		0.0603	+/-0.0175	0.100	pCi/g					
Potassium-40		36.6		0.462	+/-1.58	1.00	pCi/g					
Radium-223	U	-0.00939		0.856	+/-0.295	pCi/g						
Radium-224	UI	4.38	R,R5a	0.881	+/-0.562	pCi/g						
Radium-226		1.00		0.093	+/-0.0752	pCi/g						
Radium-228		1.68		0.141	+/-0.158	0.500	pCi/g					
Ruthenium-106	U	-0.112		0.374	+/-0.118	0.800	pCi/g					
Sodium-22	U	-0.0142		0.058	+/-0.0181	0.080	pCi/g					
Strontium-85	UI	0.0654	R,R5a	0.0549	+/-0.0167	pCi/g						
Thallium-208		0.486		0.0464	+/-0.0385	0.080	pCi/g					

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8350
Sample ID: 246440007

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	-0.0538	0.508	+/-0.150		pCi/g					
Thorium-231	U	-0.00939	0.856	+/-0.295		pCi/g					
Thorium-234		3.14	2.21	+/-1.14	2.00	pCi/g					
Tin-113	U	0.0222	0.0619	+/-0.0174	0.100	pCi/g					
Uranium-235	U	-0.0187	0.309	+/-0.0947	0.500	pCi/g					
Yttrium-88	U	-0.0205	0.037	+/-0.0129	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		561	153	+/-77.0	250	pCi/L		KXK2	02/27/10	0638 953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	76.5	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	84.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	88.9	(50%-105%)

Notes:

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

The Qualifiers in this report are defined as follows :

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- < 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
- H Analytical holding time was exceeded

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8357
Sample ID: 246440008
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 5.95%

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	-0.00179	0.0223	+/-0.00458	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0152	0.0369	+/-0.00628	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.0114	0.028	+/-0.00585	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.26	0.0947	+/-0.112	0.100	pCi/g		MXE1	02/27/10	2004	953497	4
Uranium-235/236	U	0.0464	0.0604	+/-0.015	0.100	pCi/g						
Uranium-238		1.70	0.0647	+/-0.144	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.116	0.278	+/-0.093	0.200	pCi/g		MXR1	02/19/10	1926	950788	5
Bismuth-211	UI	3.76	R,R5a	0.388	+/-0.286	pCi/g						
Bismuth-214		1.05		0.117	+/-0.0911	pCi/g						
Cadmium-109	UI	3.19	R,R5a	1.34	+/-0.501	pCi/g						
Cerium-139	U	-0.00994		0.0528	+/-0.0151	pCi/g						
Cesium-134	UI	0.116	R,R5a	0.104	+/-0.0274	pCi/g						
Cesium-137	U	0.0634		0.0712	+/-0.0258	pCi/g						
Cobalt-60	U	0.0016		0.0705	+/-0.021	pCi/g						
Europium-152	U	-0.0229		0.175	+/-0.0602	pCi/g						
Lanthanum-140	U	-0.0436		0.176	+/-0.0566	pCi/g						
Lead-212		1.72		0.101	+/-0.107	pCi/g						
Lead-214		1.31		0.126	+/-0.105	pCi/g						
Mercury-203	U	0.0788		0.0883	+/-0.0242	pCi/g						
Potassium-40		32.4		0.517	+/-1.77	pCi/g						
Radium-223	U	0.369		1.26	+/-0.364	pCi/g						
Radium-224	UI	4.46	R,R5a	1.15	+/-0.623	pCi/g						
Radium-226		1.05		0.117	+/-0.0911	pCi/g						
Radium-228		1.28		0.263	+/-0.193	pCi/g						
Ruthenium-106	U	0.118		0.598	+/-0.171	pCi/g						
Sodium-22	U	0.00567		0.0848	+/-0.0249	pCi/g						
Strontium-85	UI	0.0887	R,R5a	0.0816	+/-0.0248	pCi/g						
Thallium-208		0.504		0.0626	+/-0.0493	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8357
246440008

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	0.0204	0.715	+/-0.207		pCi/g					
Thorium-231	U	0.369	1.26	+/-0.364		pCi/g					
Thorium-234		2.61	2.35	+/-1.00	2.00	pCi/g					
Tin-113	U	0.00402	0.0826	+/-0.0245	0.100	pCi/g					
Uranium-235	U	0.300	0.413	+/-0.116	0.500	pCi/g					
Yttrium-88	U	-0.0595	0.0491	+/-0.0216	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		722	155	+/-88.4	250	pCi/L		KXK2	02/27/10	0716 953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.6	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	89.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.3	(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: March 4, 2010

Client Sample ID: RE15-10-8338
Sample ID: 246440009
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 22.4%

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	-0.00659	0.0253	+/-0.00634	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0178	0.0224	+/-0.00536	0.050	pCi/g		MXE1	02/27/10	1945	953494	2
Plutonium-239/240	U	0.00821	0.0168	+/-0.00337	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.06	0.0874	+/-0.0964	0.100	pCi/g		MXE1	02/27/10	2004	953497	3
Uranium-235/236	U	0.0513	0.0557	+/-0.0153	0.100	pCi/g						
Uranium-238		1.58	0.0596	+/-0.133	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.234	0.338	+/-0.0982	0.200	pCi/g		MXR1	02/19/10	1950	950788	4
Bismuth-211	UI	3.93	R,R5a	0.346	+/-0.351	pCi/g						
Bismuth-214		0.999		0.135	+/-0.113	0.200	pCi/g					
Cadmium-109	UI	3.00	R,R5a	1.30	+/-0.566	pCi/g						
Cerium-139	U	0.00696	0.0547	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0529	0.0956	+/-0.0269	0.100	pCi/g						
Cesium-137	U	0.0519	0.068	+/-0.025	0.100	pCi/g						
Cobalt-60	U	-0.00978	0.0754	+/-0.0235	0.100	pCi/g						
Europium-152	U	0.00236	0.161	+/-0.0574	0.200	pCi/g						
Lanthanum-140	U	-0.0557	0.155	+/-0.0603		pCi/g						
Lead-212		1.80	0.0991	+/-0.129	0.100	pCi/g						
Lead-214		1.37	0.121	+/-0.127	0.100	pCi/g						
Mercury-203	U	-0.0157	0.0772	+/-0.0226	0.100	pCi/g						
Potassium-40		36.0	0.523	+/-1.99	1.00	pCi/g						
Radium-223	U	-0.0927	1.17	+/-0.393		pCi/g						
Radium-224	UI	5.44	R,R5a	1.13	+/-0.758	pCi/g						
Radium-226		0.999	0.135	+/-0.113		pCi/g						
Radium-228		1.89	0.225	+/-0.193	0.500	pCi/g						
Ruthenium-106	U	0.197	0.602	+/-0.170	0.800	pCi/g						
Sodium-22	U	0.0286	0.0937	+/-0.0271	0.080	pCi/g						
Strontium-85	U	0.060	0.075	+/-0.0236		pCi/g						
Thallium-208		0.587	0.0626	+/-0.0535	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8338
Sample ID: 246440009

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	0.0155	0.725	+/-0.207		pCi/g					
Thorium-231	U	-0.0927	1.17	+/-0.393		pCi/g					
Thorium-234		2.83	2.41	+/-1.17	2.00	pCi/g					
Tin-113	U	-0.000361	0.0869	+/-0.0258	0.100	pCi/g					
Uranium-235	U	0.0888	0.406	+/-0.120	0.500	pCi/g					
Yttrium-88	U	0.00337	0.0605	+/-0.018	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	64.3	158	+/-47.2	250	pCi/L		KXK2	02/27/10	0753 953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	70.3	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	81.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	101	(50%-105%)

Notes:

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

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- 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

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8336
 Sample ID: 246440010
 Matrix: R
 Collect Date: 02-FEB-10
 Receive Date: 06-FEB-10
 Collector: Client
 Moisture: 17.6%

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	-0.00181	0.0244	+/-0.00822	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0131	0.0214	+/-0.00419	0.050	pCi/g		MXE1	02/27/10	1945	953494	2
Plutonium-239/240	U	-0.00262	0.0161	+/-0.00262	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.944	0.0997	+/-0.0907	0.100	pCi/g		MXE1	02/27/10	2004	953497	3
Uranium-235/236		0.0976	0.0635	+/-0.0229	0.100	pCi/g						
Uranium-238		1.33	0.068	+/-0.119	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.145	0.402	+/-0.121	0.200	pCi/g		MXR1	02/19/10	1950	950788	4
Bismuth-211	UI	3.80	R,R5a	0.309	+/-0.280	pCi/g						
Bismuth-214		1.17		0.106	+/-0.0867	pCi/g						
Cadmium-109	UI	3.30	R,R5a	1.35	+/-0.618	pCi/g						
Cerium-139	U	-0.0132		0.0493	+/-0.015	pCi/g						
Cesium-134	UI	0.135	R,R5a	0.0969	+/-0.0389	pCi/g						
Cesium-137	U	-0.00719		0.071	+/-0.0211	pCi/g						
Cobalt-60	U	0.0108		0.0694	+/-0.0201	pCi/g						
Europium-152	U	-0.00906		0.163	+/-0.0478	pCi/g						
Lanthanum-140	U	0.00847		0.120	+/-0.0414	pCi/g						
Lead-212		1.71		0.090	+/-0.0884	pCi/g						
Lead-214		1.32		0.108	+/-0.103	pCi/g						
Mercury-203	U	0.0101		0.069	+/-0.0196	pCi/g						
Potassium-40		34.5		0.642	+/-1.60	pCi/g						
Radium-223	U	0.446		1.17	+/-0.371	pCi/g						
Radium-224	UI	4.68	R,R5a	1.03	+/-0.768	pCi/g						
Radium-226		1.17		0.106	+/-0.0867	pCi/g						
Radium-228		1.65		0.196	+/-0.209	pCi/g						
Ruthenium-106	U	-0.186		0.495	+/-0.161	pCi/g						
Sodium-22	U	0.00924		0.0898	+/-0.0264	pCi/g						
Strontium-85	U	0.0483		0.0643	+/-0.0198	pCi/g						
Thallium-208		0.490		0.0663	+/-0.0433	pCi/g						

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Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8336
246440010

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	-0.639	0.584	+/-0.191		pCi/g					
Thorium-231	U	0.446	1.17	+/-0.371		pCi/g					
Thorium-234	UI	4.87	R,R5a	+/-1.56	2.00	pCi/g					
Tin-113	U	-0.0276	0.0695	+/-0.0215	0.100	pCi/g					
Uranium-235	U	0.0669	0.359	+/-0.105	0.500	pCi/g					
Yttrium-88	U	0.00374	0.0617	+/-0.0187	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		173	156	+/-53.2	250	pCi/L		KXX2	02/27/10	0831 953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.9	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	84.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.0	(50%-105%)

Notes:

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

The Qualifiers in this report are defined as follows :

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- A The TIC is a suspected aldol-condensation product
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- 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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8339
Sample ID: 246440011
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 5.98%

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	-0.000436	0.0218	+/-0.00505	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00976	0.0358	+/-0.00783	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.00239	0.0272	+/-0.0058	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.33	0.0994	+/-0.119	0.100	pCi/g		MXE1	02/27/10	2004	953497	4
Uranium-235/236	U	0.0633	0.0634	+/-0.0181	0.100	pCi/g						
Uranium-238		3.33	0.0678	+/-0.263	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.106	0.194	+/-0.0596	0.200	pCi/g		MXR1	02/19/10	1950	950788	5
Bismuth-211	UI	3.64	R,R5a	0.375	+/-0.276	pCi/g						
Bismuth-214		1.38		0.108	+/-0.115	pCi/g						
Cadmium-109	UI	4.50	R,R5a	1.12	+/-0.527	pCi/g						
Cerium-139	U	0.0035		0.0502	+/-0.0152	pCi/g						
Cesium-134	U	0.0579		0.0932	+/-0.0363	pCi/g						
Cesium-137		0.086		0.0713	+/-0.0317	pCi/g						
Cobalt-60	U	-0.0212		0.070	+/-0.0223	pCi/g						
Europium-152	U	0.0558		0.176	+/-0.0548	pCi/g						
Lanthanum-140	U	0.114		0.192	+/-0.0517	pCi/g						
Lead-212		1.85		0.0975	+/-0.107	pCi/g						
Lead-214		1.27		0.134	+/-0.102	pCi/g						
Mercury-203	U	0.0199		0.0751	+/-0.0244	pCi/g						
Potassium-40		37.3		0.600	+/-1.90	pCi/g						
Radium-223	U	-0.187		1.14	+/-0.392	pCi/g						
Radium-224	UI	4.59	R,R5a	1.11	+/-0.675	pCi/g						
Radium-226		1.38		0.108	+/-0.115	pCi/g						
Radium-228		1.64		0.249	+/-0.175	pCi/g						
Ruthenium-106	U	-0.104		0.537	+/-0.163	pCi/g						
Sodium-22	U	-0.0181		0.0803	+/-0.025	pCi/g						
Strontium-85	UI	0.0798	R,R5a	0.0736	+/-0.0216	pCi/g						
Thallium-208		0.594		0.0618	+/-0.0453	pCi/g						

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

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8339
246440011

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	-0.0353	0.634	+/-0.186		pCi/g					
Thorium-231	U	-0.187	1.14	+/-0.392		pCi/g					
Thorium-234		2.65	1.62	+/-0.736	2.00	pCi/g					
Tin-113	U	-0.0559	0.0714	+/-0.0235	0.100	pCi/g					
Uranium-235	U	-0.0196	0.366	+/-0.112	0.500	pCi/g					
Yttrium-88	U	0.0256	0.0642	+/-0.0171	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		998	153	+/-106	250	pCi/L	KXK2	02/27/10	0909	953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.3	(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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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8337
Sample ID: 246440012
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 11.4%

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	-0.00179	0.0204	+/-0.00182	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0304	0.0355	+/-0.0112	0.050	pCi/g		MXE1	03/03/10	0724	953494	2
Plutonium-239/240	U	0.00241	0.0269	+/-0.00387	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.995	0.104	+/-0.0956	0.100	pCi/g		MXE1	02/27/10	2004	953497	5
Uranium-235/236		0.0816	0.0664	+/-0.0224	0.100	pCi/g						
Uranium-238		1.60	0.0711	+/-0.140	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0548	0.414	+/-0.132	0.200	pCi/g		MXR1	02/19/10	1951	950788	6
Bismuth-211	UI	3.69	R,R5a	+/-0.280		pCi/g						
Bismuth-214		1.06		+/-0.0824	0.200	pCi/g						
Cadmium-109	UI	3.59	R,R5a	+/-0.614		pCi/g						
Cerium-139	U	-0.0357	0.0499	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0846	0.0962	+/-0.0261	0.100	pCi/g						
Cesium-137	U	0.0386	0.0744	+/-0.0208	0.100	pCi/g						
Cobalt-60	U	0.00462	0.0713	+/-0.0212	0.100	pCi/g						
Europium-152	U	-0.0588	0.159	+/-0.0511	0.200	pCi/g						
Lanthanum-140	U	-0.016	0.171	+/-0.0537		pCi/g						
Lead-212		1.64	0.0915	+/-0.0848	0.100	pCi/g						
Lead-214		1.28	0.112	+/-0.103	0.100	pCi/g						
Mercury-203	U	0.0248	0.0702	+/-0.0225	0.100	pCi/g						
Potassium-40		38.0	0.550	+/-1.94	1.00	pCi/g						
Radium-223	U	-0.0358	1.09	+/-0.371		pCi/g						
Radium-224	UI	4.65	R,R5a	+/-0.715		pCi/g						
Radium-226		1.06	0.110	+/-0.0824		pCi/g						
Radium-228		1.62	0.219	+/-0.193	0.500	pCi/g						
Ruthenium-106	U	-0.251	0.535	+/-0.170	0.800	pCi/g						
Sodium-22	U	-0.0214	0.0805	+/-0.0252	0.080	pCi/g						
Strontium-85	U	0.0474	0.0615	+/-0.0192		pCi/g						
Thallium-208		0.530	0.0606	+/-0.0409	0.080	pCi/g						

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

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8337
246440012

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	0.0556	0.638	+/-0.185		pCi/g						
Thorium-231	U	-0.0358	1.09	+/-0.371		pCi/g						
Thorium-234		4.44	3.02	+/-1.56	2.00	pCi/g						
Tin-113	U	-0.0447	0.0735	+/-0.0236	0.100	pCi/g						
Uranium-235	U	-0.00441	0.359	+/-0.111	0.500	pCi/g						
Yttrium-88	U	-0.0115	0.0456	+/-0.0157	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		205	155	+/-54.9	250	pCi/L		KXK2	02/27/10	0946	953105	7

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, Pu-11-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE HASL 300, 4.5.2.3/Ga-01-R
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	81.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	79.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.4	(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

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8375
Sample ID: 246440013
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 19.7%

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	0.00555	0.0234	+/-0.00288	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0339	0.0352	+/-0.00923	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.00961	0.0267	+/-0.00709	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.46	0.105	+/-0.131	0.100	pCi/g		MXE1	02/27/10	2004	953497	4
Uranium-235/236		0.113	0.0671	+/-0.0255	0.100	pCi/g						
Uranium-238		2.49	0.0719	+/-0.206	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0212	0.168	+/-0.0529	0.200	pCi/g		MXR1	02/19/10	1951	950788	5
Bismuth-211	UI	3.63	R,R5a	0.282	+/-0.308	pCi/g						
Bismuth-214		1.05		0.0902	+/-0.0922	pCi/g						
Cadmium-109	UI	3.89	R,R5a	0.888	+/-0.484	pCi/g						
Cerium-139	U	-0.0111		0.0403	+/-0.0117	pCi/g						
Cesium-134	UI	0.111	R,R5a	0.080	+/-0.0243	pCi/g						
Cesium-137		0.0637		0.0567	+/-0.0222	pCi/g						
Cobalt-60	U	-0.0212		0.0495	+/-0.0166	pCi/g						
Europium-152	U	-0.0317		0.135	+/-0.0422	pCi/g						
Lanthanum-140	U	0.000731		0.110	+/-0.0382	pCi/g						
Lead-212		1.61		0.0808	+/-0.123	pCi/g						
Lead-214		1.26		0.0934	+/-0.112	pCi/g						
Mercury-203	U	0.0436		0.0605	+/-0.0188	pCi/g						
Potassium-40		30.7		0.493	+/-1.56	pCi/g						
Radium-223	U	0.0566		0.905	+/-0.305	pCi/g						
Radium-224	UI	4.12	R,R5a	0.920	+/-0.527	pCi/g						
Radium-226		1.05		0.0902	+/-0.0922	pCi/g						
Radium-228		1.34		0.184	+/-0.146	pCi/g						
Ruthenium-106	U	-0.156		0.417	+/-0.132	pCi/g						
Sodium-22	U	0.0148		0.0679	+/-0.0207	pCi/g						
Strontium-85	U	0.0313		0.0542	+/-0.0167	pCi/g						
Thallium-208		0.609		0.0445	+/-0.0484	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8375
Sample ID: 246440013
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	0.00173	0.529	+/-0.156		pCi/g						
Thorium-231	U	0.0566	0.905	+/-0.305		pCi/g						
Thorium-234		2.41	1.44	+/-0.682	2.00	pCi/g						
Tin-113	U	-0.0128	0.0611	+/-0.0179	0.100	pCi/g						
Uranium-235	U	0.130	0.298	+/-0.0838	0.500	pCi/g						
Yttrium-88	U	0.00591	0.0397	+/-0.0114	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		820	153	+/-94.2	250	pCi/L		KXK2	02/27/10	1024	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	71.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	85.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	80.6	(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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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8374
Sample ID: 246440014
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 6.31%

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	-0.00181		0.0235	+/-0.00209	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>													
Plutonium-238	U	0.0186		0.0217	+/-0.00569	0.050	pCi/g		MXE1	02/27/10	2033	953494	2
Plutonium-239/240	U	0.00795		0.0163	+/-0.00421	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>													
Uranium-233/234		0.989		0.0849	+/-0.0905	0.100	pCi/g		MXE1	02/27/10	2004	953497	3
Uranium-235/236		0.0707		0.0541	+/-0.0179	0.100	pCi/g						
Uranium-238		1.68		0.058	+/-0.141	0.100	pCi/g						
Rad Gamma Spec Analysis													
<i>GAMMA SPEC "Dry Weight Corrected"</i>													
Americium-241	U	0.0918		0.243	+/-0.0708	0.200	pCi/g		MXR1	02/19/10	1952	950788	4
Bismuth-211	UI	2.91	R,R5a	0.308	+/-0.208		pCi/g						
Bismuth-214		1.08		0.101	+/-0.0875	0.200	pCi/g						
Cadmium-109	UI	2.90	R,R5a	1.18	+/-0.449		pCi/g						
Cerium-139	U	-0.005		0.0453	+/-0.0133	0.050	pCi/g						
Cesium-134	UI	0.0926	R,R5a	0.0919	+/-0.0316	0.100	pCi/g						
Cesium-137	U	0.033		0.0666	+/-0.0185	0.100	pCi/g						
Cobalt-60	U	0.00343		0.0562	+/-0.0168	0.100	pCi/g						
Europium-152	U	-0.0231		0.143	+/-0.0481	0.200	pCi/g						
Lanthanum-140	U	-0.101		0.0963	+/-0.0425		pCi/g						
Lead-212		1.65		0.0814	+/-0.0769	0.100	pCi/g						
Lead-214		1.01		0.105	+/-0.077	0.100	pCi/g						
Mercury-203	U	0.0164		0.0605	+/-0.0168	0.100	pCi/g						
Potassium-40		32.2		0.312	+/-1.42	1.00	pCi/g						
Radium-223	U	-0.631		0.910	+/-0.327		pCi/g						
Radium-224	UI	4.53	R,R5a	0.926	+/-0.586		pCi/g						
Radium-226		1.08		0.101	+/-0.0875		pCi/g						
Radium-228		1.75		0.196	+/-0.169	0.500	pCi/g						
Ruthenium-106	U	-0.0927		0.500	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.0178		0.0759	+/-0.022	0.080	pCi/g						
Strontium-85	U	0.0374		0.0574	+/-0.018		pCi/g						
Thallium-208		0.489		0.0572	+/-0.0391	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8374
246440014

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	-0.206	0.558	+/-0.163		pCi/g						
Thorium-231	U	-0.631	0.910	+/-0.327		pCi/g						
Thorium-234		4.02	1.96	+/-1.17	2.00	pCi/g						
Tin-113	U	-0.0119	0.0701	+/-0.0209	0.100	pCi/g						
Uranium-235	U	-0.0128	0.324	+/-0.0944	0.500	pCi/g						
Yttrium-88	U	-0.00298	0.0437	+/-0.0135	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		1920	154	+/-170	250	pCi/L		KXK2	02/27/10	1102	953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	74.1	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	96.5	(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
- F Estimated Value
- H Analytical holding time was exceeded

Friday, February 05, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1622

LOS ALAMOS

REQUEST NUMBER: 10-1622

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/7/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

2464407

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8354	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8354	1	POLY	H3	Ice	R
RE15-10-8356	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8356	1	POLY	H3	Ice	R
RE15-10-8353	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8353	1	POLY	H3	Ice	R
RE15-10-8352	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8352	1	POLY	H3	Ice	R
RE15-10-8355	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8355	1	POLY	H3	Ice	R
RE15-10-8351	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8351	1	POLY	H3	Ice	R
RE15-10-8350	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8350	1	POLY	H3	Ice	R
RE15-10-8357	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8357	1	POLY	H3	Ice	R
RE15-10-8338	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8338	1	POLY	H3	Ice	R
RE15-10-8336	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8336	1	POLY	H3	Ice	R
RE15-10-8339	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8339	1	POLY	H3	Ice	R
RE15-10-8337	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8337	1	POLY	H3	Ice	R
RE15-10-8375	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8375	1	POLY	H3	Ice	R
RE15-10-8375	1	POLY	AM241+GS+ISOPU+ISO	None	R

Friday, February 05, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1622

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8374	1	POLY	H3	Ice	R
Relinquished By:		Date	Time	Received By:	
Signature		2/5/10	1400	Greg Tyler	
Printed Name				Signature	
Printed Name				Signature	
Printed Name				Signature	
Printed Name				Signature	
Received for DISPOSAL By:		Date	Time	Remarks:	
Printed Name					
Signature					

REQUEST NUMBER: 10-1622

Friday, February 05, 2010

**LOS ALAMOS
NATIONAL LABORATORY**

ATTN: Valerie Davis

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

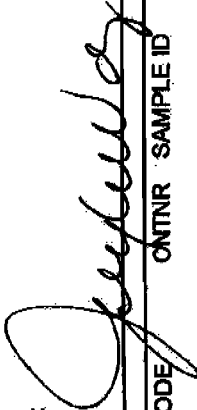
These Samples are on:

LANL Request Number: 10-1622
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 2/5/2010
TURNAROUND/REPORT DUE: 3/7/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature: 

PRIORITY	METHOD CODE	ONTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA 901.1						
1	RE15-10-8336	1	RE15-10-8336	R	2/2/2010	
1	RE15-10-8337	1	RE15-10-8337	R	2/2/2010	
1	RE15-10-8338	1	RE15-10-8338	R	2/2/2010	
1	RE15-10-8339	1	RE15-10-8339	R	2/2/2010	
1	RE15-10-8350	1	RE15-10-8350	R	2/2/2010	
1	RE15-10-8351	1	RE15-10-8351	R	2/2/2010	
1	RE15-10-8352	1	RE15-10-8352	R	2/2/2010	
1	RE15-10-8353	1	RE15-10-8353	R	2/2/2010	
1	RE15-10-8354	1	RE15-10-8354	R	2/2/2010	

Friday, February 05, 2010

Page 2 of 4

REQUEST NUMBER: 10-1622

PRIORITY	METHOD CODE	CNTR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-901.1	1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	EPA-906.0	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300:AM-241	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	

Friday, February 05, 2010

Page 3 of 4

REQUEST NUMBER: 10-1622

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300:ISOPU	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300:ISOU	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	

REQUEST NUMBER: 10-1622

Friday, February 05, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	

Final Page of REQUEST NUMBER 10-1622



February 12, 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: 246440
SDG: 10-1622

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on February 06, 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: 10-1622
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 246440
SDG: 10-1622

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Case Narrative

**Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 246440
SDG # : 10-1622**

February 12, 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 February 06, 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 samples were delivered with proper chain of custody documentation and signatures. 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 12/15C 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>
246440001	RE15-10-8354
246440002	RE15-10-8356
246440003	RE15-10-8353
246440004	RE15-10-8352
246440005	RE15-10-8355
246440006	RE15-10-8351
246440007	RE15-10-8350
246440008	RE15-10-8357
246440009	RE15-10-8338
246440010	RE15-10-8336
246440011	RE15-10-8339
246440012	RE15-10-8337
246440013	RE15-10-8375
246440014	RE15-10-8374

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 "Valerie Davis" with a stylized flourish.

Valerie Davis

Project Manager

List of current GEL Certifications as of 12 February 2010

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	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, February 05, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1622

LOS ALAMOS

REQUEST NUMBER: 10-1622

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/7/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

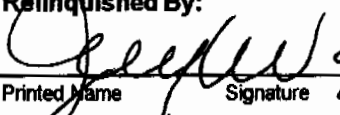
LAB REQUEST COMMENTS:

2464407

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8354	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8354	1	POLY	H3	Ice	R
RE15-10-8356	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8356	1	POLY	H3	Ice	R
RE15-10-8353	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8353	1	POLY	H3	Ice	R
RE15-10-8352	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8352	1	POLY	H3	Ice	R
RE15-10-8355	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8355	1	POLY	H3	Ice	R
RE15-10-8351	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8351	1	POLY	H3	Ice	R
RE15-10-8350	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8350	1	POLY	H3	Ice	R
RE15-10-8357	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8357	1	POLY	H3	Ice	R
RE15-10-8338	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8338	1	POLY	H3	Ice	R
RE15-10-8336	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8336	1	POLY	H3	Ice	R
RE15-10-8339	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8339	1	POLY	H3	Ice	R
RE15-10-8337	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8337	1	POLY	H3	Ice	R
RE15-10-8375	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8375	1	POLY	H3	Ice	R
RE15-10-8375	1	POLY	AM241+GS+ISOPU+ISO U	None	R

Friday, February 05, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1622

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8374	1	POLY	H3	Ice	R
Relinquished By:		Date	Time	Received By:	
 Printed Name Signature		2-5-10	1400	Greg Tyler 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		_____			

REQUEST NUMBER: 10-1622

Friday, February 05, 2010

**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: 10-1622

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 2/5/2010

TURNAROUND/REPORT DUE: 3/7/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



PRIORITY	METHOD CODE	QNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1					
1		1	RE15-10-8336	R	2/2/2010	
1		1	RE15-10-8337	R	2/2/2010	
1		1	RE15-10-8338	R	2/2/2010	
1		1	RE15-10-8339	R	2/2/2010	
1		1	RE15-10-8350	R	2/2/2010	
1		1	RE15-10-8351	R	2/2/2010	
1		1	RE15-10-8352	R	2/2/2010	
1		1	RE15-10-8353	R	2/2/2010	
1		1	RE15-10-8354	R	2/2/2010	

Friday, February 05, 2010

REQUEST NUMBER: 10-1622

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-901.1	1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	EPA-906.0	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300-AM-241	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	

Friday, February 05, 2010

REQUEST NUMBER: 10-1622

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300:ISOPU	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	
		1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	
	HASL-300:ISOU	1	RE15-10-8336	R	2/2/2010	
		1	RE15-10-8337	R	2/2/2010	
		1	RE15-10-8338	R	2/2/2010	
		1	RE15-10-8339	R	2/2/2010	
		1	RE15-10-8350	R	2/2/2010	
		1	RE15-10-8351	R	2/2/2010	
		1	RE15-10-8352	R	2/2/2010	
		1	RE15-10-8353	R	2/2/2010	
		1	RE15-10-8354	R	2/2/2010	

REQUEST NUMBER: 10-1622

Friday, February 05, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	RE15-10-8355	R	2/2/2010	
		1	RE15-10-8356	R	2/2/2010	
		1	RE15-10-8357	R	2/2/2010	
		1	RE15-10-8374	R	2/2/2010	
		1	RE15-10-8375	R	2/2/2010	

Final Page of REQUEST NUMBER 10-1622



SAMPLE RECEIPT & REVIEW FORM

Client: LANL			SDG/ARCO/Work Order: 10-1622		
Received By: Greg Tyler			Date Received: 2/06/10		
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*: 80cpm	
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 ≤ 6 deg. C?	X			Preservation Method: ice bags blue ice dry ice none other 2- 6C 12,15C
3	Chain of custody documents included with shipment?	X			
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: No time on Chain of Custody.
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:

Fed Ex Tracking Numbers:

7209 7849 9293 2C 7209 7849 9282 4C 7209 7849 9179 15C
 7209 7849 9271 3C 7209 7849 9180 5C 7209 7849 9227 15C
 7209 7849 9308 3C 7209 7849 9216 5C
 7209 7849 9319 3C 7209 7849 9205 5C
 7209 7849 9260 3C 7209 7849 9190 6C
 7209 7849 9250 3C 7209 7849 9238 6C
 7209 7849 9249 4C 7209 7849 9157 12C
 7209 7849 9341 4C 7209 7849 9146 12C

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 06FEB10
ACTWT: 55.0 LB MAN
CAD: 0014176/CAFE2449
BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR2A05158YD0

2

UNITED STATES MAIL PERMIT NO. 1111 CHARLESTON, SC 29407

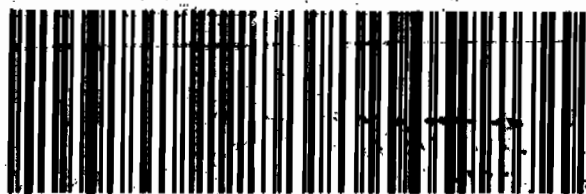


2 of 2
PSN 7209 7849 9293
269
Strm 7209 7849 9282 (0201)

SATURDAY ### A1
PRIORITY OVERNIGHT

29407
SC-US
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LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 06FEB10
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1 of 2
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ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 06FEB10
ACTWT: 55.0 LB MAN
CAD: 0014176/CAFE2449
BILL SENDER

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2040 SAVAGE RD

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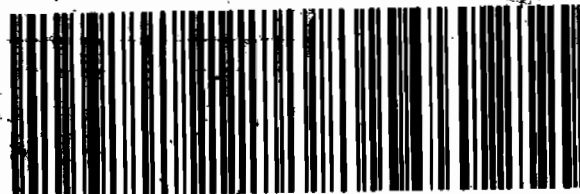


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0263
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SATURDAY ### A1
PRIORITY OVERNIGHT

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X0 CHSA



JOYLENE VALDEZ (505) 665-9969
LOS ALAMOS NATL LAB
TAGG BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 06FEB10
ACTWT: 55.0 LB MAN
CAD: 0014176/CAFE2449
BILL SENDER

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SATURDAY ### A1
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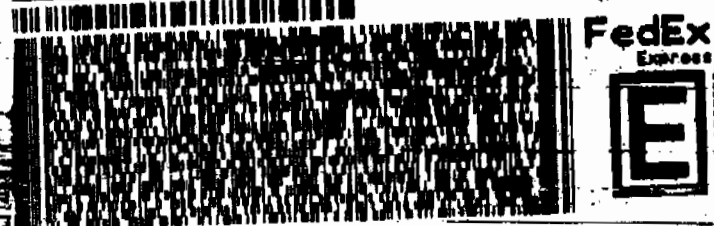
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JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

ACTGNT: 0014175/CAFE2449
BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR3A05529E00

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1 of 2
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SATURDAY ### A1
PRIORITY OVERNIGHT
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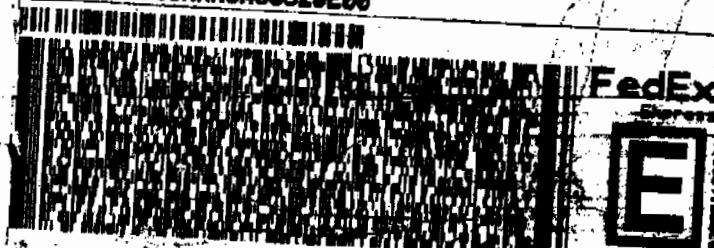
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LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

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(843) 556-8171
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2 of 3
MPS# 7209 7849 9249
MSTR# 7209 7849 9238
SATURDAY ### A1
PRIORITY OVERNIGHT
29407
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ORIGIN ID: 0000
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 106FEB10
ACTGNT: 0014175/CAFE2449
BILL SENDER

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3 of 3
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SATURDAY ### A1
PRIORITY OVERNIGHT
29407
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ORIGIN ID: 0000
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 106FEB10
ACTGNT: 0014175/CAFE2449
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MPS# 7209 7849 9341
MSTR# 7209 7849 9238
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PRIORITY OVERNIGHT
29407
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CHS

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 63

SHIP DATE: 05FEB10
ACTWGT: 54.8 LB MAN
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LOS ALAMOS, NM 87545
UNITED STATES US

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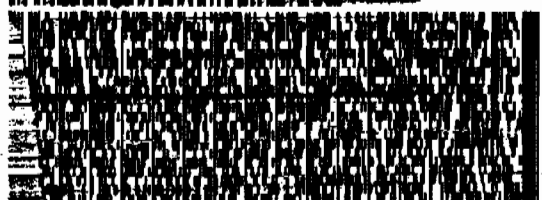
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TAGS BLDG 1237 DPU 63
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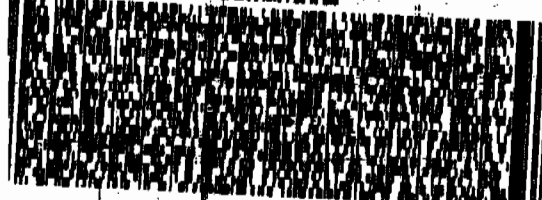
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JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 63

SHIP DATE: 05FEB10
ACTWGT: 53.8 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
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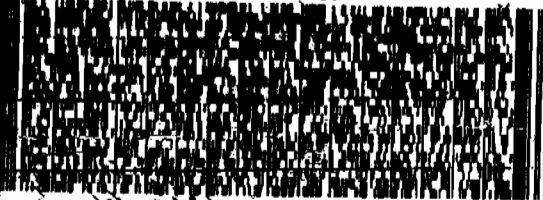
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LOS ALAMOS NATL LAB
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SHIP DATE: 05FEB10
ACTWGT: 59.8 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

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JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGO BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 05FEB10
ACTWGT: 51.0 LB MAN
CAD: 0014176/CAFE2449

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6°

JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGO BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

ACTWGT: 51.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

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3 of 3
NPS# 7209 7849 9190
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SATURDAY ### A1
PRIORITY OVERNIGHT

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JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGO BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 05FEB10
ACTWGT: 51.0 LB MAN
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BILL SENDER

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

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3 of 3
NPS# 7209 7849 9157
Matr# 7209 7849 9135 0201
SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

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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: 05FEB10
ACTWGT: 50.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AREW0140T500

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2 of 3
NPS# 7209 7849 9146
Matr# 7209 7849 9135 0201
SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

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ORIGIN ID: SAFA (505) 665-9968 7
JOYCE VALDES
LOS ALAMOS NATL LAB
1500 BLDG 1237 CPU 83
LOS ALAMOS, NM 87545
UNITED STATES AS

SHIP DATE: 06FEB19
ACTVGT: 48 8 18 MAN
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VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 866-9171
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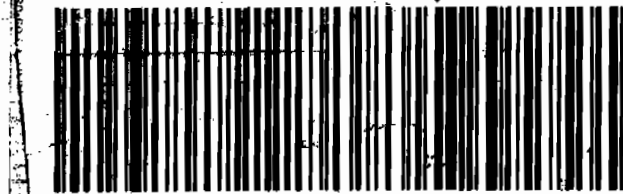
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1 of 3 ### SATURDAY ### A1
7209 7849 9179 PRIORITY OVERNIGHT
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VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD
CHARLESTON SC 29407
(843) 866-9171
REF: 68010AMR390532VA00

15°



3 of 3 ### SATURDAY ### A1
7209 7849 9227 PRIORITY OVERNIGHT
NN 7209 7849 9205 (0201)

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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 10-1622**

Method/Analysis Information

Product: AM241
Analytical Method: DOE EML HASL-300, Am-05-RC Modified
Prep Method: Dry Soil Prep
Analytical Batch Number: 953491
Prep Batch Number: 950434

Sample ID	Client ID
246440001	RE15-10-8354
246440002	RE15-10-8356
246440003	RE15-10-8353
246440004	RE15-10-8352
246440005	RE15-10-8355
246440006	RE15-10-8351
246440007	RE15-10-8350
246440008	RE15-10-8357
246440009	RE15-10-8338
246440010	RE15-10-8336
246440011	RE15-10-8339
246440012	RE15-10-8337
246440013	RE15-10-8375
246440014	RE15-10-8374
1202052623	Method Blank (MB)
1202052624	246444001(RE15-10-8361) Sample Duplicate (DUP)
1202052625	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 solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

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

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

Aliquot for sample 1202052623 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 246444001 (RE15-10-8361). The QC was from LANL work order 246444.

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

Sample 246440004 (RE15-10-8352) was recounted due to low carrier/tracer yield.

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. Sample 246440004 (RE15-10-8352) did not meet the client's yield requirement. However, there are 400 tracer counts, GEL's standard tracer yield requirements are met, and the client's detection limits are met.

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:	953494
Prep Batch Number:	950434

Sample ID	Client ID
246440001	RE15-10-8354
246440002	RE15-10-8356
246440003	RE15-10-8353
246440004	RE15-10-8352
246440005	RE15-10-8355
246440006	RE15-10-8351
246440007	RE15-10-8350
246440008	RE15-10-8357
246440009	RE15-10-8338
246440010	RE15-10-8336
246440011	RE15-10-8339
246440012	RE15-10-8337
246440013	RE15-10-8375
246440014	RE15-10-8374
1202044064	Method Blank (MB)
1202044065	246444001(RE15-10-8361) Sample Duplicate (DUP)
1202044066	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 solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202044064 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 246444001 (RE15-10-8361). The QC was from LANL work order 246444.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The Pu-238 and Pu-239/240 blank results are 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

Sample 246440012 (RE15-10-8337) was given additional clean-up steps and recounted in order to remove suspected interferences. Samples 1202044065 (RE15-10-8361), 246440001 (RE15-10-8354), 246440002 (RE15-10-8356), 246440005 (RE15-10-8355), 246440008 (RE15-10-8357), 246440011 (RE15-10-8339), 246440012 (RE15-10-8337) and 246440013 (RE15-10-8375) were recounted due to a suspected false positive.

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 799122 was generated due to Peak Centroid Values Off. 1. The Pu-236 tracer peak centroid value for sample 246440011 is greater than 50 keV from the expected energy of 5749 keV. 1. The Pu-236 tracer peak is within the region of interest, the tracer yield recovery meets the client requirements, and there is no activity present in the sample. Reporting results.

Manual Integration

Manual integration of alpha spectroscopy spectra 246440011 (RE15-10-8339) was performed to fully separate counts in Regions of Interest which would have been biased.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The Pu-238 and Pu-239/240 blank results are 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:	953497
Prep Batch Number:	950434

Sample ID	Client ID
246440001	RE15-10-8354
246440002	RE15-10-8356
246440003	RE15-10-8353
246440004	RE15-10-8352
246440005	RE15-10-8355
246440006	RE15-10-8351
246440007	RE15-10-8350
246440008	RE15-10-8357
246440009	RE15-10-8338
246440010	RE15-10-8336
246440011	RE15-10-8339
246440012	RE15-10-8337
246440013	RE15-10-8375
246440014	RE15-10-8374
1202044075	Method Blank (MB)
1202044076	246440001(RE15-10-8354) Sample Duplicate (DUP)
1202044077	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 solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202044075 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 246440001 (RE15-10-8354). The QC was from LANL work order 246440.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The U-233/234, U-235/236, and U-238 blank, 1202044075 (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, 1202044075 (MB), result is greater than the decision level but less than the MDC.

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:	950788
Prep Batch Number:	950434

Sample ID	Client ID
246440001	RE15-10-8354
246440002	RE15-10-8356
246440003	RE15-10-8353
246440004	RE15-10-8352
246440005	RE15-10-8355
246440006	RE15-10-8351
246440007	RE15-10-8350
246440008	RE15-10-8357
246440009	RE15-10-8338
246440010	RE15-10-8336
246440011	RE15-10-8339
246440012	RE15-10-8337
246440013	RE15-10-8375
246440014	RE15-10-8374
1202037552	Method Blank (MB)
1202037553	246444001(RE15-10-8361) Sample Duplicate (DUP)
1202037554	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# 19.

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, July 2009, October 2009, November 2009, December 2009, January 2010 and February 2010.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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: 246444001 (RE15-10-8361). The QC was from LANL work order 246444.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank 1202037552 (MB) result is greater than 1.65 times the CSU but less than the MDC for TI-208.

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 1202037552 (MB) result is greater than the decision level but less than the MDC for Bi-211.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	246440001	RE15-10-8354
			246440002	RE15-10-8356
			246440003	RE15-10-8353
			246440004	RE15-10-8352
			246440005	RE15-10-8355
			246440006	RE15-10-8351
			246440007	RE15-10-8350
			246440008	RE15-10-8357
			246440009	RE15-10-8338
			246440010	RE15-10-8336
			246440011	RE15-10-8339
			246440012	RE15-10-8337
			246440013	RE15-10-8375
			246440014	RE15-10-8374
			1202037553	RE15-10-8361(246444001DUP)
		Cadmium-109	246440001	RE15-10-8354
			246440002	RE15-10-8356
			246440003	RE15-10-8353
			246440004	RE15-10-8352
			246440005	RE15-10-8355
			246440006	RE15-10-8351
			246440007	RE15-10-8350
			246440008	RE15-10-8357
			246440009	RE15-10-8338
			246440010	RE15-10-8336
			246440011	RE15-10-8339

			246440012	RE15-10-8337
			246440013	RE15-10-8375
			246440014	RE15-10-8374
			1202037553	RE15-10-8361(246444001DUP)
		Mercury-203	1202037553	RE15-10-8361(246444001DUP)
		Radium-224	246440001	RE15-10-8354
			246440002	RE15-10-8356
			246440003	RE15-10-8353
			246440004	RE15-10-8352
			246440005	RE15-10-8355
			246440006	RE15-10-8351
			246440007	RE15-10-8350
			246440008	RE15-10-8357
			246440009	RE15-10-8338
			246440010	RE15-10-8336
			246440011	RE15-10-8339
			246440012	RE15-10-8337
			246440013	RE15-10-8375
			246440014	RE15-10-8374
			1202037553	RE15-10-8361(246444001DUP)
UI	Data rejected due to low abundance.	Cesium-134	246440002	RE15-10-8356
			246440005	RE15-10-8355
			246440007	RE15-10-8350
			246440008	RE15-10-8357
			246440010	RE15-10-8336
			246440013	RE15-10-8375
			246440014	RE15-10-8374
		Cesium-137	246440006	RE15-10-8351
		Strontium-85	246440001	RE15-10-8354

			246440005	RE15-10-8355
			246440007	RE15-10-8350
			246440008	RE15-10-8357
			246440011	RE15-10-8339
			1202037553	RE15-10-8361(246444001DUP)
UI	Data rejected due to no valid peak.	Thorium-234	246440010	RE15-10-8336

Method/Analysis Information

Product: H3
Analytical Method: GL-RAD-A-002
Analytical Batch Number: 953105

Sample ID	Client ID
246440001	RE15-10-8354
246440002	RE15-10-8356
246440003	RE15-10-8353
246440004	RE15-10-8352
246440005	RE15-10-8355
246440006	RE15-10-8351
246440007	RE15-10-8350
246440008	RE15-10-8357
246440009	RE15-10-8338
246440010	RE15-10-8336
246440011	RE15-10-8339
246440012	RE15-10-8337
246440013	RE15-10-8375
246440014	RE15-10-8374
1202042922	Method Blank (MB)
1202042923	246440001(RE15-10-8354) Sample Duplicate (DUP)
1202042924	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.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

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: 246440001 (RE15-10-8354). The QC was from LANL work order 246440.

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.

Additional Comments

Additional comments were not required for this sample set.

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: _____

 3/1/10

DATA EXCEPTION REPORT

Mo.Day Yr.
04-MAR-10

Division:
Radiochemistry

Quality Criteria:
Specifications

Type:
Process

Instrument Type:
ALPHA SPECTROMETER

Test / Method:
DOE EML HASL-300, Pu-11-RC
Modified

Matrix Type:
Solid

Client Code:
LANL

Batch ID:
953494

Sample Numbers:
See below

Potentially affected work order(s)(SDG): 246325(10-1603),246440(10-1622),246444(10-1625)

Application Issues:

Peak Centroid Values Off

**Specification and Requirements
Exception Description:**

1. The Pu-236 tracer peak centroid value for sample 246440011 is greater than 50 keV from the expected energy of 5749 keV.

DER Disposition:

1. The Pu-236 tracer peak is within the region of interest, the tracer yield recovery meets the client requirements, and there is no activity present in the sample. Reporting results.

Originator's Name:

Jessica Downey 04-MAR-10

Data Validator/Group Leader:

Joseph Moulden 04-MAR-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: 10-1622 GEL Work Order: 246440

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

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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: March 4, 2010

Client Sample ID: RE15-10-8354
Sample ID: 246440001
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 22%

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	0.00253	0.0231	+/-0.00192	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00948	0.0351	+/-0.00971	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.0169	0.0266	+/-0.00645	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.16	0.0885	+/-0.104	0.100	pCi/g		MXE1	02/27/10	2003	953497	4
Uranium-235/236		0.0824	0.0564	+/-0.0198	0.100	pCi/g						
Uranium-238		2.94	0.0604	+/-0.231	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.283	0.486	+/-0.146	0.200	pCi/g		MXR1	02/19/10	1757	950788	5
Bismuth-211	UI	3.39	0.410	+/-0.286		pCi/g						
Bismuth-214		1.04	0.125	+/-0.0965	0.200	pCi/g						
Cadmium-109	UI	4.11	1.80	+/-0.885		pCi/g						
Cerium-139	U	-0.0211	0.0577	+/-0.0172	0.050	pCi/g						
Cesium-134	U	0.0863	0.0954	+/-0.037	0.100	pCi/g						
Cesium-137		0.0857	0.0677	+/-0.0308	0.100	pCi/g						
Cobalt-60	U	0.00112	0.0636	+/-0.0194	0.100	pCi/g						
Europium-152	U	-0.0407	0.188	+/-0.0638	0.200	pCi/g						
Lanthanum-140	U	-0.00953	0.122	+/-0.0442		pCi/g						
Lead-212		1.74	0.104	+/-0.120	0.100	pCi/g						
Lead-214		1.18	0.138	+/-0.104	0.100	pCi/g						
Mercury-203	U	0.0443	0.087	+/-0.0238	0.100	pCi/g						
Potassium-40		33.1	0.545	+/-1.88	1.00	pCi/g						
Radium-223	U	-0.244	1.23	+/-0.416		pCi/g						
Radium-224	UI	4.06	1.18	+/-0.707		pCi/g						
Radium-226		1.04	0.125	+/-0.0965		pCi/g						
Radium-228		1.55	0.214	+/-0.158	0.500	pCi/g						
Ruthenium-106	U	0.126	0.585	+/-0.171	0.800	pCi/g						
Sodium-22	U	0.00713	0.0833	+/-0.0251	0.080	pCi/g						
Strontium-85	UI	0.104	0.0809	+/-0.0239		pCi/g						

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Certificate of Analysis

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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylenc Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8354
246440001

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		0.558	0.0653	+/-0.0491	0.080	pCi/g						
Thorium-227	U	-0.231	0.717	+/-0.208		pCi/g						
Thorium-231	U	-0.244	1.23	+/-0.416		pCi/g						
Thorium-234		4.31	3.67	+/-1.73	2.00	pCi/g						
Tin-113	U	-0.000801	0.0859	+/-0.0249	0.100	pCi/g						
Uranium-235	U	0.126	0.439	+/-0.126	0.500	pCi/g						
Yttrium-88	U	0.00292	0.0443	+/-0.0131	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		292	155	+/-60.2	250	pCi/L		KXK2	02/27/10	0253	953105	6
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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, 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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	77.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.5	(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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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: March 4, 2010

Client Sample ID: RE15-10-8354
Sample ID: 246440001
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: March 4, 2010

Client Sample ID: RE15-10-8356
Sample ID: 246440002
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 14.7%

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	-0.00325	0.0231	+/-0.00348	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00231	0.0346	+/-0.0056	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.0262	0.0263	+/-0.00802	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.54	0.102	+/-0.135	0.100	pCi/g		MXE1	02/27/10	2003	953497	4
Uranium-235/236		0.120	0.065	+/-0.0269	0.100	pCi/g						
Uranium-238		2.70	0.0696	+/-0.219	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0837	0.241	+/-0.0775	0.200	pCi/g		MXR1	02/19/10	1757	950788	5
Bismuth-211	UI	3.56	0.311	+/-0.292		pCi/g						
Bismuth-214		1.14	0.0959	+/-0.095	0.200	pCi/g						
Cadmium-109	UI	2.60	1.18	+/-0.469		pCi/g						
Cerium-139	U	-0.0205	0.0432	+/-0.0132	0.050	pCi/g						
Cesium-134	UI	0.123	0.0924	+/-0.033	0.100	pCi/g						
Cesium-137	U	0.0441	0.0656	+/-0.0322	0.100	pCi/g						
Cobalt-60	U	-0.011	0.064	+/-0.0204	0.100	pCi/g						
Europium-152	U	0.00263	0.144	+/-0.0469	0.200	pCi/g						
Lanthanum-140	U	-0.0502	0.115	+/-0.0391		pCi/g						
Lead-212		1.64	0.0836	+/-0.111	0.100	pCi/g						
Lead-214		1.24	0.108	+/-0.107	0.100	pCi/g						
Mercury-203	U	0.00703	0.0651	+/-0.022	0.100	pCi/g						
Potassium-40		33.4	0.517	+/-1.74	1.00	pCi/g						
Radium-223	U	-0.509	0.945	+/-0.355		pCi/g						
Radium-224	UI	5.06	0.951	+/-0.675		pCi/g						
Radium-226		1.14	0.0959	+/-0.095		pCi/g						
Radium-228		1.75	0.209	+/-0.170	0.500	pCi/g						
Ruthenium-106	U	-0.0975	0.441	+/-0.139	0.800	pCi/g						
Sodium-22	U	-0.035	0.0726	+/-0.0241	0.080	pCi/g						
Strontium-85	U	0.0264	0.0623	+/-0.020		pCi/g						
Thallium-208		0.577	0.0554	+/-0.0459	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: March 4, 2010

Client Sample ID: RE15-10-8356
Sample ID: 246440002

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	0.0698	0.609	+/-0.183		pCi/g					
Thorium-231	U	-0.509	0.945	+/-0.355		pCi/g					
Thorium-234		3.23	1.98	+/-0.948	2.00	pCi/g					
Tin-113	U	0.0165	0.0685	+/-0.0195	0.100	pCi/g					
Uranium-235	U	0.223	0.314	+/-0.153	0.500	pCi/g					
Yttrium-88	U	0.0424	0.0633	+/-0.0155	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		380	158	+/-66.5	250	pCi/L		KXK2	02/27/10	0331 953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	81.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	93.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	85.2	(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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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: March 4, 2010

Client Sample ID: RE15-10-8356
Sample ID: 246440002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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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: March 4, 2010

Client Sample ID: RE15-10-8353
Sample ID: 246440003
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 13%

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	0.0224	+/-0.00244	0.050	pCi/g		MXE1	02/27/10	1945 953491	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.0113	0.0264	+/-0.00539	0.050	pCi/g		MXE1	02/27/10	1945 953494	2
Plutonium-239/240	U	0.00808	0.0199	+/-0.00537	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		2.33	0.0958	+/-0.191	0.100	pCi/g		MXE1	02/27/10	2003 953497	3
Uranium-235/236		0.221	0.0611	+/-0.0358	0.100	pCi/g					
Uranium-238		7.96	0.0654	+/-0.591	0.100	pCi/g					
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	0.215	0.284	+/-0.0871	0.200	pCi/g		MXR1	02/19/10	1758 950788	4
Bismuth-211	UI	3.21	0.345	+/-0.244		pCi/g					
Bismuth-214		1.10	0.119	+/-0.0942	0.200	pCi/g					
Cadmium-109	UI	3.70	1.39	+/-0.605		pCi/g					
Cerium-139	U	0.0126	0.053	+/-0.0153	0.050	pCi/g					
Cesium-134	U	0.0786	0.090	+/-0.0361	0.100	pCi/g					
Cesium-137	U	0.0165	0.0697	+/-0.0203	0.100	pCi/g					
Cobalt-60	U	-0.0433	0.0528	+/-0.0185	0.100	pCi/g					
Europium-152	U	-0.0163	0.169	+/-0.0567	0.200	pCi/g					
Lanthanum-140	U	-0.0092	0.153	+/-0.0495		pCi/g					
Lead-212		1.89	0.0893	+/-0.0886	0.100	pCi/g					
Lead-214		1.12	0.120	+/-0.0896	0.100	pCi/g					
Mercury-203	U	0.0398	0.0758	+/-0.0208	0.100	pCi/g					
Potassium-40		34.6	0.526	+/-1.56	1.00	pCi/g					
Radium-223	U	0.0925	1.10	+/-0.359		pCi/g					
Radium-224	UI	4.86	1.02	+/-0.652		pCi/g					
Radium-226		1.10	0.119	+/-0.0942		pCi/g					
Radium-228		1.64	0.196	+/-0.183	0.500	pCi/g					
Ruthenium-106	U	0.228	0.557	+/-0.158	0.800	pCi/g					
Sodium-22	U	-0.00922	0.0684	+/-0.0209	0.080	pCi/g					
Strontium-85	U	0.0605	0.0691	+/-0.021		pCi/g					
Thallium-208		0.609	0.0588	+/-0.0463	0.080	pCi/g					

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8353
Sample ID: 246440003

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	0.0607	0.657	+/-0.196		pCi/g						
Thorium-231	U	0.0925	1.10	+/-0.359		pCi/g						
Thorium-234		3.95	2.28	+/-1.05	2.00	pCi/g						
Tin-113	U	0.0028	0.076	+/-0.022	0.100	pCi/g						
Uranium-235	U	0.255	0.408	+/-0.118	0.500	pCi/g						
Yttrium-88	U	-0.00242	0.0523	+/-0.0163	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		273	155	+/-59.2	250	pCi/L		KXK2	02/27/10	0408	953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	79.0	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	75.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.4	(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
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded

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Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8353
Sample ID: 246440003

Project: LANL01004
Client ID: LANL010

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

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: March 4, 2010

Client Sample ID: RE15-10-8352
Sample ID: 246440004
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 23%

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	0.00593	0.0289	+/-0.00305	0.050	pCi/g		MXE1	03/01/10 1821	953491	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.019	0.0194	+/-0.00512	0.050	pCi/g		MXE1	02/27/10 1945	953494	3
Plutonium-239/240	U	0.00476	0.0146	+/-0.00337	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		0.938	0.0893	+/-0.0881	0.100	pCi/g		MXE1	02/27/10 2003	953497	4
Uranium-235/236	U	0.0525	0.0569	+/-0.0168	0.100	pCi/g					
Uranium-238		1.21	0.061	+/-0.108	0.100	pCi/g					
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	-0.00444	0.0825	+/-0.0255	0.200	pCi/g		MXR1	02/19/10 1758	950788	5
Bismuth-211	UI	4.04	0.314	+/-0.285		pCi/g					
Bismuth-214		1.24	0.136	+/-0.129	0.200	pCi/g					
Cadmium-109	UI	4.37	0.725	+/-0.436		pCi/g					
Cerium-139	U	-0.0448	0.0384	+/-0.0121	0.050	pCi/g					
Cesium-134	U	0.0966	0.117	+/-0.0376	0.100	pCi/g					
Cesium-137	U	0.0268	0.0841	+/-0.0243	0.100	pCi/g					
Cobalt-60	U	-0.0151	0.0841	+/-0.026	0.100	pCi/g					
Europium-152	U	0.0455	0.171	+/-0.0502	0.200	pCi/g					
Lanthanum-140	U	-0.0925	0.151	+/-0.0563		pCi/g					
Lead-212		1.83	0.0883	+/-0.107	0.100	pCi/g					
Lead-214		1.41	0.106	+/-0.106	0.100	pCi/g					
Mercury-203	U	-0.0238	0.0644	+/-0.0199	0.100	pCi/g					
Potassium-40		36.9	0.811	+/-2.00	1.00	pCi/g					
Radium-223	U	-0.597	1.09	+/-0.354		pCi/g					
Radium-224	UI	4.86	1.01	+/-0.781		pCi/g					
Radium-226		1.24	0.136	+/-0.129		pCi/g					
Radium-228		2.00	0.238	+/-0.206	0.500	pCi/g					
Ruthenium-106	U	-0.148	0.604	+/-0.189	0.800	pCi/g					
Sodium-22	U	-0.00293	0.100	+/-0.0312	0.080	pCi/g					
Strontium-85	U	0.0387	0.069	+/-0.0209		pCi/g					
Thallium-208		0.607	0.0673	+/-0.0625	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8352
246440004

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	0.135	0.598	+/-0.172		pCi/g						
Thorium-231	U	-0.597	1.09	+/-0.354		pCi/g						
Thorium-234		1.76	0.794	+/-0.490	2.00	pCi/g						
Tin-113	U	-0.00704	0.0805	+/-0.0251	0.100	pCi/g						
Uranium-235	U	0.103	0.309	+/-0.093	0.500	pCi/g						
Yttrium-88	U	-0.0366	0.0519	+/-0.0218	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	98.1	155	+/-48.4	250	pCi/L		KXX2	02/27/10	0446	953105	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Am-05-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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	35.5 *	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	98.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	90.0	(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
- 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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Client Sample ID: RE15-10-8352
Sample ID: 246440004

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: March 4, 2010

Client Sample ID: RE15-10-8355
Sample ID: 246440005
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 12.7%

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	0.00193	0.0198	+/-0.00235	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0161	0.0361	+/-0.00674	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.021	0.0273	+/-0.00821	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.17	0.105	+/-0.109	0.100	pCi/g		MXE1	02/27/10	2003	953497	4
Uranium-235/236	U	0.0566	0.067	+/-0.0175	0.100	pCi/g						
Uranium-238		1.69	0.0718	+/-0.148	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.110	0.230	+/-0.0708	0.200	pCi/g		MXR1	02/19/10	1759	950788	5
Bismuth-211	UI	4.18	0.309	+/-0.329		pCi/g						
Bismuth-214		1.19	0.116	+/-0.0951	0.200	pCi/g						
Cadmium-109	UI	2.11	1.25	+/-0.506		pCi/g						
Cerium-139	U	0.0272	0.0515	+/-0.0145	0.050	pCi/g						
Cesium-134	UI	0.0816	0.0801	+/-0.0227	0.100	pCi/g						
Cesium-137	U	0.0205	0.0613	+/-0.0179	0.100	pCi/g						
Cobalt-60	U	-0.0181	0.0565	+/-0.0178	0.100	pCi/g						
Europium-152	U	-0.0739	0.139	+/-0.057	0.200	pCi/g						
Lanthanum-140	U	0.0663	0.153	+/-0.0498		pCi/g						
Lead-212		1.79	0.0898	+/-0.129	0.100	pCi/g						
Lead-214		1.45	0.108	+/-0.120	0.100	pCi/g						
Mercury-203	U	0.027	0.0695	+/-0.0206	0.100	pCi/g						
Potassium-40		38.9	0.478	+/-1.96	1.00	pCi/g						
Radium-223	U	0.607	1.02	+/-0.330		pCi/g						
Radium-224	UI	4.72	1.02	+/-0.684		pCi/g						
Radium-226		1.19	0.116	+/-0.0951		pCi/g						
Radium-228		1.68	0.194	+/-0.185	0.500	pCi/g						
Ruthenium-106	U	-0.102	0.485	+/-0.147	0.800	pCi/g						
Sodium-22	U	0.00933	0.0713	+/-0.0212	0.080	pCi/g						
Strontium-85	UI	0.150	0.0707	+/-0.0216		pCi/g						
Thallium-208		0.556	0.0529	+/-0.0457	0.080	pCi/g						

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Report Date: March 4, 2010

Client Sample ID: RE15-10-8355
Sample ID: 246440005

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	0.0233	0.647	+/-0.194		pCi/g						
Thorium-231	U	0.607	1.02	+/-0.330		pCi/g						
Thorium-234	U	1.76	1.94	+/-0.833	2.00	pCi/g						
Tin-113	U	-0.0475	0.0638	+/-0.0202	0.100	pCi/g						
Uranium-235	U	-0.049	0.359	+/-0.106	0.500	pCi/g						
Yttrium-88	U	-0.000753	0.0452	+/-0.0139	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		412	158	+/-68.8	250	pCi/L		KXK2	02/27/10	0523	953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	83.5	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	84.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	81.5	(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: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8355
246440005

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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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8351
Sample ID: 246440006
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 15.1%

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	-0.00322	0.0225	+/-0.002	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00516	0.0211	+/-0.00632	0.050	pCi/g		MXE1	02/27/10	1945	953494	2
Plutonium-239/240	U	0.00645	0.0159	+/-0.00342	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.10	0.100	+/-0.103	0.100	pCi/g		MXE1	02/27/10	2003	953497	3
Uranium-235/236	U	0.0638	0.0639	+/-0.0195	0.100	pCi/g						
Uranium-238		1.82	0.0684	+/-0.155	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.000907	0.111	+/-0.0346	0.200	pCi/g		MXR1	02/19/10	1802	950788	4
Bismuth-211	UI	4.30	0.360	+/-0.331		pCi/g						
Bismuth-214		1.25	0.131	+/-0.122	0.200	pCi/g						
Cadmium-109	UI	4.07	0.988	+/-0.503		pCi/g						
Cerium-139	U	-0.00625	0.0542	+/-0.0163	0.050	pCi/g						
Cesium-134	U	0.0302	0.104	+/-0.0294	0.100	pCi/g						
Cesium-137	UI	0.100	0.100	+/-0.0271	0.100	pCi/g						
Cobalt-60	U	0.0451	0.0963	+/-0.0261	0.100	pCi/g						
Europium-152	U	-0.01	0.181	+/-0.0551	0.200	pCi/g						
Lanthanum-140	U	-0.0953	0.152	+/-0.0563		pCi/g						
Lead-212		1.42	0.125	+/-0.107	0.100	pCi/g						
Lead-214		1.49	0.125	+/-0.121	0.100	pCi/g						
Mercury-203	U	-0.0107	0.0811	+/-0.0236	0.100	pCi/g						
Potassium-40		33.0	0.671	+/-1.86	1.00	pCi/g						
Radium-223	U	-0.222	1.20	+/-0.413		pCi/g						
Radium-224	UI	3.46	1.61	+/-0.557		pCi/g						
Radium-226		1.25	0.131	+/-0.122		pCi/g						
Radium-228		1.49	0.297	+/-0.275	0.500	pCi/g						
Ruthenium-106	U	0.192	0.746	+/-0.221	0.800	pCi/g						
Sodium-22	U	-0.0421	0.093	+/-0.0316	0.080	pCi/g						
Strontium-85	U	0.0137	0.0728	+/-0.0243		pCi/g						
Thallium-208		0.619	0.0682	+/-0.0573	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: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8351
246440006

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"

Thorium-227	U	-0.30	0.700	+/-0.231		pCi/g						
Thorium-231	U	-0.222	1.20	+/-0.413		pCi/g						
Thorium-234		2.17	1.08	+/-0.639	2.00	pCi/g						
Tin-113	U	0.0145	0.0889	+/-0.0257	0.100	pCi/g						
Uranium-235	U	0.108	0.403	+/-0.117	0.500	pCi/g						
Yttrium-88	U	0.00468	0.0757	+/-0.0228	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium	U	83.2	155	+/-47.6	250	pCi/L		KXK2	02/27/10	0601	953105	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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.1	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	88.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.5	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8351 Project: LANL01004
Sample ID: 246440006 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
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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: March 4, 2010

Client Sample ID: RE15-10-8350
Sample ID: 246440007
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 23.1%

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	-0.00179	0.0221	+/-0.00359	0.050	pCi/g		MXE1	02/27/10	1945 953491	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.013	0.0212	+/-0.00415	0.050	pCi/g		MXE1	02/27/10	1945 953494	2
Plutonium-239/240	U	0.013	0.016	+/-0.00454	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		0.904	0.0874	+/-0.0852	0.100	pCi/g		MXE1	02/27/10	2004 953497	3
Uranium-235/236		0.0685	0.0557	+/-0.0178	0.100	pCi/g					
Uranium-238		1.31	0.0597	+/-0.115	0.100	pCi/g					
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	-0.042	0.273	+/-0.086	0.200	pCi/g		MXR1	02/19/10	1830 950788	4
Bismuth-211	UI	3.61	0.260	+/-0.201		pCi/g					
Bismuth-214		1.00	0.093	+/-0.0752	0.200	pCi/g					
Cadmium-109	UI	3.81	1.10	+/-0.510		pCi/g					
Cerium-139	U	-0.00218	0.0421	+/-0.0119	0.050	pCi/g					
Cesium-134	UI	0.117	0.0747	+/-0.0283	0.100	pCi/g					
Cesium-137	U	0.0333	0.0504	+/-0.0157	0.100	pCi/g					
Cobalt-60	U	-0.00358	0.0507	+/-0.0154	0.100	pCi/g					
Europium-152	U	-0.0315	0.130	+/-0.0463	0.200	pCi/g					
Lanthanum-140	U	0.0274	0.117	+/-0.0335		pCi/g					
Lead-212		1.66	0.0775	+/-0.0755	0.100	pCi/g					
Lead-214		1.26	0.0905	+/-0.0773	0.100	pCi/g					
Mercury-203	U	0.0152	0.0603	+/-0.0175	0.100	pCi/g					
Potassium-40		36.6	0.462	+/-1.58	1.00	pCi/g					
Radium-223	U	-0.00939	0.856	+/-0.295		pCi/g					
Radium-224	UI	4.38	0.881	+/-0.562		pCi/g					
Radium-226		1.00	0.093	+/-0.0752		pCi/g					
Radium-228		1.68	0.141	+/-0.158	0.500	pCi/g					
Ruthenium-106	U	-0.112	0.374	+/-0.118	0.800	pCi/g					
Sodium-22	U	-0.0142	0.058	+/-0.0181	0.080	pCi/g					
Strontium-85	UI	0.0654	0.0549	+/-0.0167		pCi/g					
Thallium-208		0.486	0.0464	+/-0.0385	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8350
246440007

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	-0.0538	0.508	+/-0.150		pCi/g						
Thorium-231	U	-0.00939	0.856	+/-0.295		pCi/g						
Thorium-234		3.14	2.21	+/-1.14	2.00	pCi/g						
Tin-113	U	0.0222	0.0619	+/-0.0174	0.100	pCi/g						
Uranium-235	U	-0.0187	0.309	+/-0.0947	0.500	pCi/g						
Yttrium-88	U	-0.0205	0.037	+/-0.0129	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		561	153	+/-77.0	250	pCi/L		KXK2	02/27/10	0638	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	76.5	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	84.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	88.9	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8350
246440007

Project: LANL01004
Client ID: LANL010

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

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: March 4, 2010

Client Sample ID: RE15-10-8357
Sample ID: 246440008
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 5.95%

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	-0.00179	0.0223	+/-0.00458	0.050	pCi/g		MXE1	02/27/10	1945	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0152	0.0369	+/-0.00628	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.0114	0.028	+/-0.00585	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.26	0.0947	+/-0.112	0.100	pCi/g		MXE1	02/27/10	2004	953497	4
Uranium-235/236	U	0.0464	0.0604	+/-0.015	0.100	pCi/g						
Uranium-238		1.70	0.0647	+/-0.144	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.116	0.278	+/-0.093	0.200	pCi/g		MXR1	02/19/10	1926	950788	5
Bismuth-211	UI	3.76	0.388	+/-0.286		pCi/g						
Bismuth-214		1.05	0.117	+/-0.0911	0.200	pCi/g						
Cadmium-109	UI	3.19	1.34	+/-0.501		pCi/g						
Cerium-139	U	-0.00994	0.0528	+/-0.0151	0.050	pCi/g						
Cesium-134	UI	0.116	0.104	+/-0.0274	0.100	pCi/g						
Cesium-137	U	0.0634	0.0712	+/-0.0258	0.100	pCi/g						
Cobalt-60	U	0.0016	0.0705	+/-0.021	0.100	pCi/g						
Europium-152	U	-0.0229	0.175	+/-0.0602	0.200	pCi/g						
Lanthanum-140	U	-0.0436	0.176	+/-0.0566		pCi/g						
Lead-212		1.72	0.101	+/-0.107	0.100	pCi/g						
Lead-214		1.31	0.126	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0788	0.0883	+/-0.0242	0.100	pCi/g						
Potassium-40		32.4	0.517	+/-1.77	1.00	pCi/g						
Radium-223	U	0.369	1.26	+/-0.364		pCi/g						
Radium-224	UI	4.46	1.15	+/-0.623		pCi/g						
Radium-226		1.05	0.117	+/-0.0911		pCi/g						
Radium-228		1.28	0.263	+/-0.193	0.500	pCi/g						
Ruthenium-106	U	0.118	0.598	+/-0.171	0.800	pCi/g						
Sodium-22	U	0.00567	0.0848	+/-0.0249	0.080	pCi/g						
Strontium-85	UI	0.0887	0.0816	+/-0.0248		pCi/g						
Thallium-208		0.504	0.0626	+/-0.0493	0.080	pCi/g						

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8357
Sample ID: 246440008

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	0.0204	0.715	+/-0.207		pCi/g						
Thorium-231	U	0.369	1.26	+/-0.364		pCi/g						
Thorium-234		2.61	2.35	+/-1.00	2.00	pCi/g						
Tin-113	U	0.00402	0.0826	+/-0.0245	0.100	pCi/g						
Uranium-235	U	0.300	0.413	+/-0.116	0.500	pCi/g						
Yttrium-88	U	-0.0595	0.0491	+/-0.0216	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		722	155	+/-88.4	250	pCi/L		KXK2	02/27/10	0716	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	73.6	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	89.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.3	(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
- 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: March 4, 2010

Client Sample ID: RE15-10-8357
Sample ID: 246440008

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8338
Sample ID: 246440009
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 22.4%

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	-0.00659	0.0253	+/-0.00634	0.050	pCi/g		MXE1	02/27/10	1945 953491	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.0178	0.0224	+/-0.00536	0.050	pCi/g		MXE1	02/27/10	1945 953494	2
Plutonium-239/240	U	0.00821	0.0168	+/-0.00337	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		1.06	0.0874	+/-0.0964	0.100	pCi/g		MXE1	02/27/10	2004 953497	3
Uranium-235/236	U	0.0513	0.0557	+/-0.0153	0.100	pCi/g					
Uranium-238		1.58	0.0596	+/-0.133	0.100	pCi/g					
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	0.234	0.338	+/-0.0982	0.200	pCi/g		MXR1	02/19/10	1950 950788	4
Bismuth-211	UI	3.93	0.346	+/-0.351		pCi/g					
Bismuth-214		0.999	0.135	+/-0.113	0.200	pCi/g					
Cadmium-109	UI	3.00	1.30	+/-0.566		pCi/g					
Cerium-139	U	0.00696	0.0547	+/-0.0161	0.050	pCi/g					
Cesium-134	U	0.0529	0.0956	+/-0.0269	0.100	pCi/g					
Cesium-137	U	0.0519	0.068	+/-0.025	0.100	pCi/g					
Cobalt-60	U	-0.00978	0.0754	+/-0.0235	0.100	pCi/g					
Europium-152	U	0.00236	0.161	+/-0.0574	0.200	pCi/g					
Lanthanum-140	U	-0.0557	0.155	+/-0.0603		pCi/g					
Lead-212		1.80	0.0991	+/-0.129	0.100	pCi/g					
Lead-214		1.37	0.121	+/-0.127	0.100	pCi/g					
Mercury-203	U	-0.0157	0.0772	+/-0.0226	0.100	pCi/g					
Potassium-40		36.0	0.523	+/-1.99	1.00	pCi/g					
Radium-223	U	-0.0927	1.17	+/-0.393		pCi/g					
Radium-224	UI	5.44	1.13	+/-0.758		pCi/g					
Radium-226		0.999	0.135	+/-0.113		pCi/g					
Radium-228		1.89	0.225	+/-0.193	0.500	pCi/g					
Ruthenium-106	U	0.197	0.602	+/-0.170	0.800	pCi/g					
Sodium-22	U	0.0286	0.0937	+/-0.0271	0.080	pCi/g					
Strontium-85	U	0.060	0.075	+/-0.0236		pCi/g					
Thallium-208		0.587	0.0626	+/-0.0535	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: March 4, 2010

Client Sample ID: RE15-10-8338
Sample ID: 246440009

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	0.0155	0.725	+/-0.207		pCi/g						
Thorium-231	U	-0.0927	1.17	+/-0.393		pCi/g						
Thorium-234		2.83	2.41	+/-1.17	2.00	pCi/g						
Tin-113	U	-0.000361	0.0869	+/-0.0258	0.100	pCi/g						
Uranium-235	U	0.0888	0.406	+/-0.120	0.500	pCi/g						
Yttrium-88	U	0.00337	0.0605	+/-0.018	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	64.3	158	+/-47.2	250	pCi/L		KXK2	02/27/10	0753	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	70.3	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	81.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	101	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Report Date: March 4, 2010

Client Sample ID: RE15-10-8338
Sample ID: 246440009

Project: LANL01004
Client ID: LANL010

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

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: March 4, 2010

Client Sample ID: RE15-10-8336
Sample ID: 246440010
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 17.6%

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	-0.00181	0.0244	+/-0.00822	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0131	0.0214	+/-0.00419	0.050	pCi/g		MXE1	02/27/10	1945	953494	2
Plutonium-239/240	U	-0.00262	0.0161	+/-0.00262	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.944	0.0997	+/-0.0907	0.100	pCi/g		MXE1	02/27/10	2004	953497	3
Uranium-235/236		0.0976	0.0635	+/-0.0229	0.100	pCi/g						
Uranium-238		1.33	0.068	+/-0.119	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.145	0.402	+/-0.121	0.200	pCi/g		MXR1	02/19/10	1950	950788	4
Bismuth-211	UI	3.80	0.309	+/-0.280		pCi/g						
Bismuth-214		1.17	0.106	+/-0.0867	0.200	pCi/g						
Cadmium-109	UI	3.30	1.35	+/-0.618		pCi/g						
Cerium-139	U	-0.0132	0.0493	+/-0.015	0.050	pCi/g						
Cesium-134	UI	0.135	0.0969	+/-0.0389	0.100	pCi/g						
Cesium-137	U	-0.00719	0.071	+/-0.0211	0.100	pCi/g						
Cobalt-60	U	0.0108	0.0694	+/-0.0201	0.100	pCi/g						
Europium-152	U	-0.00906	0.163	+/-0.0478	0.200	pCi/g						
Lanthanum-140	U	0.00847	0.120	+/-0.0414		pCi/g						
Lead-212		1.71	0.090	+/-0.0884	0.100	pCi/g						
Lead-214		1.32	0.108	+/-0.103	0.100	pCi/g						
Mercury-203	U	0.0101	0.069	+/-0.0196	0.100	pCi/g						
Potassium-40		34.5	0.642	+/-1.60	1.00	pCi/g						
Radium-223	U	0.446	1.17	+/-0.371		pCi/g						
Radium-224	UI	4.68	1.03	+/-0.768		pCi/g						
Radium-226		1.17	0.106	+/-0.0867		pCi/g						
Radium-228		1.65	0.196	+/-0.209	0.500	pCi/g						
Ruthenium-106	U	-0.186	0.495	+/-0.161	0.800	pCi/g						
Sodium-22	U	0.00924	0.0898	+/-0.0264	0.080	pCi/g						
Strontium-85	U	0.0483	0.0643	+/-0.0198		pCi/g						
Thallium-208		0.490	0.0663	+/-0.0433	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8336
Sample ID: 246440010

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	-0.639	0.584	+/-0.191		pCi/g						
Thorium-231	U	0.446	1.17	+/-0.371		pCi/g						
Thorium-234	UI	4.87	2.94	+/-1.56	2.00	pCi/g						
Tin-113	U	-0.0276	0.0695	+/-0.0215	0.100	pCi/g						
Uranium-235	U	0.0669	0.359	+/-0.105	0.500	pCi/g						
Yttrium-88	U	0.00374	0.0617	+/-0.0187	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		173	156	+/-53.2	250	pCi/L		KXK2	02/27/10	0831	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.9	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	84.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.0	(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
- 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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8336
246440010

Project: LANL01004
Client ID: LANL010

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

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: March 4, 2010

Client Sample ID: RE15-10-8339
Sample ID: 246440011
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 5.98%

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	-0.000436	0.0218	+/-0.00505	0.050	pCi/g		MXE1	02/27/10	1946 953491	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.00976	0.0358	+/-0.00783	0.050	pCi/g		MXE1	03/01/10	1820 953494	2
Plutonium-239/240	U	0.00239	0.0272	+/-0.0058	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		1.33	0.0994	+/-0.119	0.100	pCi/g		MXE1	02/27/10	2004 953497	4
Uranium-235/236	U	0.0633	0.0634	+/-0.0181	0.100	pCi/g					
Uranium-238		3.33	0.0678	+/-0.263	0.100	pCi/g					
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	0.106	0.194	+/-0.0596	0.200	pCi/g		MXR1	02/19/10	1950 950788	5
Bismuth-211	UI	3.64	0.375	+/-0.276		pCi/g					
Bismuth-214		1.38	0.108	+/-0.115	0.200	pCi/g					
Cadmium-109	UI	4.50	1.12	+/-0.527		pCi/g					
Cerium-139	U	0.0035	0.0502	+/-0.0152	0.050	pCi/g					
Cesium-134	U	0.0579	0.0932	+/-0.0363	0.100	pCi/g					
Cesium-137		0.086	0.0713	+/-0.0317	0.100	pCi/g					
Cobalt-60	U	-0.0212	0.070	+/-0.0223	0.100	pCi/g					
Europium-152	U	0.0558	0.176	+/-0.0548	0.200	pCi/g					
Lanthanum-140	U	0.114	0.192	+/-0.0517		pCi/g					
Lead-212		1.85	0.0975	+/-0.107	0.100	pCi/g					
Lead-214		1.27	0.134	+/-0.102	0.100	pCi/g					
Mercury-203	U	0.0199	0.0751	+/-0.0244	0.100	pCi/g					
Potassium-40		37.3	0.600	+/-1.90	1.00	pCi/g					
Radium-223	U	-0.187	1.14	+/-0.392		pCi/g					
Radium-224	UI	4.59	1.11	+/-0.675		pCi/g					
Radium-226		1.38	0.108	+/-0.115		pCi/g					
Radium-228		1.64	0.249	+/-0.175	0.500	pCi/g					
Ruthenium-106	U	-0.104	0.537	+/-0.163	0.800	pCi/g					
Sodium-22	U	-0.0181	0.0803	+/-0.025	0.080	pCi/g					
Strontium-85	UI	0.0798	0.0736	+/-0.0216		pCi/g					
Thallium-208		0.594	0.0618	+/-0.0453	0.080	pCi/g					

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Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8339
246440011

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	-0.0353	0.634	+/-0.186		pCi/g						
Thorium-231	U	-0.187	1.14	+/-0.392		pCi/g						
Thorium-234		2.65	1.62	+/-0.736	2.00	pCi/g						
Tin-113	U	-0.0559	0.0714	+/-0.0235	0.100	pCi/g						
Uranium-235	U	-0.0196	0.366	+/-0.112	0.500	pCi/g						
Yttrium-88	U	0.0256	0.0642	+/-0.0171	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		998	153	+/-106	250	pCi/L		KXK2	02/27/10	0909	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	75.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.3	(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: March 4, 2010

Client Sample ID: RE15-10-8339
Sample ID: 246440011

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time Batch	Mtd.
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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: March 4, 2010

Client Sample ID: RE15-10-8337
Sample ID: 246440012
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 11.4%

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	-0.00179	0.0204	+/-0.00182	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0304	0.0355	+/-0.0112	0.050	pCi/g		MXE1	03/03/10	0724	953494	2
Plutonium-239/240	U	0.00241	0.0269	+/-0.00387	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.995	0.104	+/-0.0956	0.100	pCi/g		MXE1	02/27/10	2004	953497	5
Uranium-235/236		0.0816	0.0664	+/-0.0224	0.100	pCi/g						
Uranium-238		1.60	0.0711	+/-0.140	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0548	0.414	+/-0.132	0.200	pCi/g		MXR1	02/19/10	1951	950788	6
Bismuth-211	UI	3.69	0.321	+/-0.280		pCi/g						
Bismuth-214		1.06	0.110	+/-0.0824	0.200	pCi/g						
Cadmium-109	UI	3.59	1.29	+/-0.614		pCi/g						
Cerium-139	U	-0.0357	0.0499	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0846	0.0962	+/-0.0261	0.100	pCi/g						
Cesium-137	U	0.0386	0.0744	+/-0.0208	0.100	pCi/g						
Cobalt-60	U	0.00462	0.0713	+/-0.0212	0.100	pCi/g						
Europium-152	U	-0.0588	0.159	+/-0.0511	0.200	pCi/g						
Lanthanum-140	U	-0.016	0.171	+/-0.0537		pCi/g						
Lead-212		1.64	0.0915	+/-0.0848	0.100	pCi/g						
Lead-214		1.28	0.112	+/-0.103	0.100	pCi/g						
Mercury-203	U	0.0248	0.0702	+/-0.0225	0.100	pCi/g						
Potassium-40		38.0	0.550	+/-1.94	1.00	pCi/g						
Radium-223	U	-0.0358	1.09	+/-0.371		pCi/g						
Radium-224	UI	4.65	1.04	+/-0.715		pCi/g						
Radium-226		1.06	0.110	+/-0.0824		pCi/g						
Radium-228		1.62	0.219	+/-0.193	0.500	pCi/g						
Ruthenium-106	U	-0.251	0.535	+/-0.170	0.800	pCi/g						
Sodium-22	U	-0.0214	0.0805	+/-0.0252	0.080	pCi/g						
Strontium-85	U	0.0474	0.0615	+/-0.0192		pCi/g						
Thallium-208		0.530	0.0606	+/-0.0409	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: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8337
246440012

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	0.0556	0.638	+/-0.185		pCi/g					
Thorium-231	U	-0.0358	1.09	+/-0.371		pCi/g					
Thorium-234		4.44	3.02	+/-1.56	2.00	pCi/g					
Tin-113	U	-0.0447	0.0735	+/-0.0236	0.100	pCi/g					
Uranium-235	U	-0.00441	0.359	+/-0.111	0.500	pCi/g					
Yttrium-88	U	-0.0115	0.0456	+/-0.0157	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		205	155	+/-54.9	250	pCi/L		KXK2	02/27/10	0946 953105	7

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, Pu-11-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE HASL 300, 4.5.2.3/Ga-01-R
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	81.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	79.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.4	(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: March 4, 2010

Client Sample ID: RE15-10-8337 Project: LANL01004
Sample ID: 246440012 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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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID: RE15-10-8375
Sample ID: 246440013
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 19.7%

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	0.00555	0.0234	+/-0.00288	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0339	0.0352	+/-0.00923	0.050	pCi/g		MXE1	03/01/10	1820	953494	2
Plutonium-239/240	U	0.00961	0.0267	+/-0.00709	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.46	0.105	+/-0.131	0.100	pCi/g		MXE1	02/27/10	2004	953497	4
Uranium-235/236		0.113	0.0671	+/-0.0255	0.100	pCi/g						
Uranium-238		2.49	0.0719	+/-0.206	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0212	0.168	+/-0.0529	0.200	pCi/g		MXR1	02/19/10	1951	950788	5
Bismuth-211	UI	3.63	0.282	+/-0.308		pCi/g						
Bismuth-214		1.05	0.0902	+/-0.0922	0.200	pCi/g						
Cadmium-109	UI	3.89	0.888	+/-0.484		pCi/g						
Cerium-139	U	-0.0111	0.0403	+/-0.0117	0.050	pCi/g						
Cesium-134	UI	0.111	0.080	+/-0.0243	0.100	pCi/g						
Cesium-137		0.0637	0.0567	+/-0.0222	0.100	pCi/g						
Cobalt-60	U	-0.0212	0.0495	+/-0.0166	0.100	pCi/g						
Europium-152	U	-0.0317	0.135	+/-0.0422	0.200	pCi/g						
Lanthanum-140	U	0.000731	0.110	+/-0.0382		pCi/g						
Lead-212		1.61	0.0808	+/-0.123	0.100	pCi/g						
Lead-214		1.26	0.0934	+/-0.112	0.100	pCi/g						
Mercury-203	U	0.0436	0.0605	+/-0.0188	0.100	pCi/g						
Potassium-40		30.7	0.493	+/-1.56	1.00	pCi/g						
Radium-223	U	0.0566	0.905	+/-0.305		pCi/g						
Radium-224	UI	4.12	0.920	+/-0.527		pCi/g						
Radium-226		1.05	0.0902	+/-0.0922		pCi/g						
Radium-228		1.34	0.184	+/-0.146	0.500	pCi/g						
Ruthenium-106	U	-0.156	0.417	+/-0.132	0.800	pCi/g						
Sodium-22	U	0.0148	0.0679	+/-0.0207	0.080	pCi/g						
Strontium-85	U	0.0313	0.0542	+/-0.0167		pCi/g						
Thallium-208		0.609	0.0445	+/-0.0484	0.080	pCi/g						

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

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8375
246440013

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	0.00173	0.529	+/-0.156		pCi/g					
Thorium-231	U	0.0566	0.905	+/-0.305		pCi/g					
Thorium-234		2.41	1.44	+/-0.682	2.00	pCi/g					
Tin-113	U	-0.0128	0.0611	+/-0.0179	0.100	pCi/g					
Uranium-235	U	0.130	0.298	+/-0.0838	0.500	pCi/g					
Yttrium-88	U	0.00591	0.0397	+/-0.0114	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		820	153	+/-94.2	250	pCi/L		KXK2	02/27/10	1024 953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	71.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	85.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	80.6	(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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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 4, 2010

Client Sample ID:
Sample ID:

RE15-10-8375
246440013

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8374
Sample ID: 246440014
Matrix: R
Collect Date: 02-FEB-10
Receive Date: 06-FEB-10
Collector: Client
Moisture: 6.31%

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	-0.00181	0.0235	+/-0.00209	0.050	pCi/g		MXE1	02/27/10	1946	953491	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0186	0.0217	+/-0.00569	0.050	pCi/g		MXE1	02/27/10	2033	953494	2
Plutonium-239/240	U	0.00795	0.0163	+/-0.00421	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.989	0.0849	+/-0.0905	0.100	pCi/g		MXE1	02/27/10	2004	953497	3
Uranium-235/236		0.0707	0.0541	+/-0.0179	0.100	pCi/g						
Uranium-238		1.68	0.058	+/-0.141	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0918	0.243	+/-0.0708	0.200	pCi/g		MXR1	02/19/10	1952	950788	4
Bismuth-211	UI	2.91	0.308	+/-0.208		pCi/g						
Bismuth-214		1.08	0.101	+/-0.0875	0.200	pCi/g						
Cadmium-109	UI	2.90	1.18	+/-0.449		pCi/g						
Cerium-139	U	-0.005	0.0453	+/-0.0133	0.050	pCi/g						
Cesium-134	UI	0.0926	0.0919	+/-0.0316	0.100	pCi/g						
Cesium-137	U	0.033	0.0666	+/-0.0185	0.100	pCi/g						
Cobalt-60	U	0.00343	0.0562	+/-0.0168	0.100	pCi/g						
Europium-152	U	-0.0231	0.143	+/-0.0481	0.200	pCi/g						
Lanthanum-140	U	-0.101	0.0963	+/-0.0425		pCi/g						
Lead-212		1.65	0.0814	+/-0.0769	0.100	pCi/g						
Lead-214		1.01	0.105	+/-0.077	0.100	pCi/g						
Mercury-203	U	0.0164	0.0605	+/-0.0168	0.100	pCi/g						
Potassium-40		32.2	0.312	+/-1.42	1.00	pCi/g						
Radium-223	U	-0.631	0.910	+/-0.327		pCi/g						
Radium-224	UI	4.53	0.926	+/-0.586		pCi/g						
Radium-226		1.08	0.101	+/-0.0875		pCi/g						
Radium-228		1.75	0.196	+/-0.169	0.500	pCi/g						
Ruthenium-106	U	-0.0927	0.500	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.0178	0.0759	+/-0.022	0.080	pCi/g						
Strontium-85	U	0.0374	0.0574	+/-0.018		pCi/g						
Thallium-208		0.489	0.0572	+/-0.0391	0.080	pCi/g						

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8374
Sample ID: 246440014
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	-0.206	0.558	+/-0.163		pCi/g						
Thorium-231	U	-0.631	0.910	+/-0.327		pCi/g						
Thorium-234		4.02	1.96	+/-1.17	2.00	pCi/g						
Tin-113	U	-0.0119	0.0701	+/-0.0209	0.100	pCi/g						
Uranium-235	U	-0.0128	0.324	+/-0.0944	0.500	pCi/g						
Yttrium-88	U	-0.00298	0.0437	+/-0.0135	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		1920	154	+/-170	250	pCi/L		KXK2	02/27/10	1102	953105	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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	74.1	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	96.5	(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
- F Estimated Value
- H Analytical holding time was exceeded

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

Report Date: March 4, 2010

Client Sample ID: RE15-10-8374
Sample ID: 246440014

Project: LANL01004
Client ID: LANL010

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

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: March 4, 2010

Page 1 of 6

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez
Workorder: 246440

Parname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	953491										
QC1202052624	246444001	DUP									
Americium-241			U	-0.00333	U	-0.00181	pCi/g	0.131	(0-1)	MXE1	02/27/1019:46
			TPU:	+/-0.00302		+/-0.0028					
			Yield:	72.9		66.8					
QC1202052625	LCS										
Americium-241			33.2			26.2	pCi/g	79	(75%-125%)		
			TPU:			+/-1.78					
			Yield:			89.1					
QC1202052623	MB										
Americium-241				U	0.00112	pCi/g					
			TPU:		+/-0.00171						
			Yield:			74.2					
Batch	953494										
QC1202044065	246444001	DUP									
Plutonium-238			U	0.0186	U	0.0274	pCi/g	0.246	(0-1)	MXE1	03/01/1018:20
			TPU:	+/-0.00782		+/-0.00997					
			Yield:	84.2		84.0					
Plutonium-239/240			U	0.0252	U	0.00388	pCi/g	0.781	(0-1)		
			TPU:	+/-0.00861		+/-0.00507					
			Yield:	84.2		84.0					
QC1202044066	LCS										
Plutonium-238						7.37	pCi/g		(75%-125%)		02/27/1019:46
			TPU:			+/-0.493					
			Yield:			89.9					
Plutonium-239/240			41.8			38.7	pCi/g	92.6	(75%-125%)		
			TPU:			+/-2.17					
			Yield:			89.9					
QC1202044064	MB										
Plutonium-238				U	0.025	pCi/g					
			TPU:		+/-0.00656						
			Yield:			85.9					
Plutonium-239/240				U	0.00998	pCi/g					
			TPU:		+/-0.00528						
			Yield:			85.9					
Batch	953497										
QC1202044076	246440001	DUP									
Uranium-233/234				1.16		1.06	pCi/g	0.244	(0-1)	MXE1	02/27/1020:04
			TPU:	+/-0.104		+/-0.0993					
			Yield:	95.5		90.6					
Uranium-235/236				0.0824		0.126	pCi/g	0.484	(0-1)		
			TPU:	+/-0.0198		+/-0.0256					
			Yield:	95.5		90.6					
Uranium-238				2.94		3.34	pCi/g	0.397	(0-1)		
			TPU:	+/-0.231		+/-0.266					

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QC Summary

Workorder: 246440

Page 2 of 6

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	953497										
		Yield:	95.5	90.6							
QC1202044077	LCS										
Uranium-233/234				6.28	pCi/g		(75%-125%)			02/27/10	20:04
		TPU:		+/-0.584							
		Yield:		80.0							
Uranium-235/236				0.352	pCi/g		(75%-125%)				
		TPU:		+/-0.0919							
		Yield:		80.0							
Uranium-238	5.75			5.42	pCi/g		94.3 (75%-125%)				
		TPU:		+/-0.517							
		Yield:		80.0							
QC1202044075	MB										
Uranium-233/234			U	0.0227	pCi/g					02/27/10	20:04
		TPU:		+/-0.00896							
		Yield:		63.6							
Uranium-235/236			U	0.017	pCi/g						
		TPU:		+/-0.0077							
		Yield:		63.6							
Uranium-238			U	0.0275	pCi/g						
		TPU:		+/-0.00892							
		Yield:		63.6							
Rad Gamma Spec											
Batch	950788										
QC1202037553	246444001	DUP									
Americium-241		U	0.00321	U	0.0718	pCi/g	0.374	(0-1)	MXR1	02/19/10	20:42
		TPU:	+/-0.025		+/-0.0667						
Bismuth-211		UI	4.04	UI	3.95	pCi/g	0.0725	(0-1)			
		TPU:	+/-0.302		+/-0.305						
Bismuth-214			1.30		1.20	pCi/g	0.246	(0-1)			
		TPU:	+/-0.107		+/-0.0963						
Cadmium-109		UI	3.30	UI	1.75	pCi/g	0.917	(0-1)			
		TPU:	+/-0.392		+/-0.454						
Cerium-139		U	-0.00185	U	0.0129	pCi/g	0.285	(0-1)			
		TPU:	+/-0.0124		+/-0.0135						
Cesium-134		UI	0.110	U	0.0766	pCi/g	0.244	(0-1)			
		TPU:	+/-0.0376		+/-0.0301						
Cesium-137			0.238		0.247	pCi/g	0.0609	(0-1)			
		TPU:	+/-0.0358		+/-0.0331						
Cobalt-60		U	-0.0286	U	-0.00354	pCi/g	0.347	(0-1)			
		TPU:	+/-0.0201		+/-0.0161						
Europium-152		U	0.0419	U	-0.063	pCi/g	0.556	(0-1)			
		TPU:	+/-0.0455		+/-0.0488						
Lanthanum-140		U	0.0054	U	-0.124	pCi/g	0.748	(0-1)			
		TPU:	+/-0.0476		+/-0.0388						
Lead-212			1.86		1.67	pCi/g	0.401	(0-1)			
		TPU:	+/-0.118		+/-0.120						
Lead-214			1.41		1.37	pCi/g	0.0694	(0-1)			
		TPU:	+/-0.111		+/-0.112						
Mercury-203		UI	0.0753	UI	0.0622	pCi/g	0.115	(0-1)			
		TPU:	+/-0.0287		+/-0.0282						

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QC Summary

Workorder: 246440

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC %	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	950788										
Potassium-40		32.6		34.4	pCi/g	0.255		(0-1)			
	TPU:	+/-1.65		+/-1.75							
Radium-223	U	-0.0274	U	0.0605	pCi/g	0.0685		(0-1)			
	TPU:	+/-0.319		+/-0.324							
Radium-224	UI	4.60	UI	4.51	pCi/g	0.0369		(0-1)			
	TPU:	+/-0.667		+/-0.633							
Radium-226		1.30		1.20	pCi/g	0.246		(0-1)			
	TPU:	+/-0.107		+/-0.0963							
Radium-228		1.83		1.49	pCi/g	0.483		(0-1)			
	TPU:	+/-0.183		+/-0.169							
Ruthenium-106	U	0.0984	U	-0.0447	pCi/g	0.259		(0-1)			
	TPU:	+/-0.150		+/-0.127							
Sodium-22	U	-0.041	U	-0.00462	pCi/g	0.436		(0-1)			
	TPU:	+/-0.0227		+/-0.0189							
Strontium-85	U	0.0477	UI	0.117	pCi/g	0.864		(0-1)			
	TPU:	+/-0.0203		+/-0.0197							
Thallium-208		0.528		0.535	pCi/g	0.0378		(0-1)			
	TPU:	+/-0.0502		+/-0.0451							
Thorium-227	U	0.166	U	-0.0279	pCi/g	0.284		(0-1)			
	TPU:	+/-0.170		+/-0.170							
Thorium-231	U	-0.0274	U	0.0605	pCi/g	0.0685		(0-1)			
	TPU:	+/-0.319		+/-0.324							
Thorium-234		3.58		5.11	pCi/g	0.463		(0-1)			
	TPU:	+/-0.515		+/-1.14							
Tin-113	U	-0.0364	U	-0.027	pCi/g	0.114		(0-1)			
	TPU:	+/-0.0219		+/-0.0194							
Uranium-235	UI	0.295	U	-0.0357	pCi/g	0.716		(0-1)			
	TPU:	+/-0.133		+/-0.0979							
Yttrium-88	U	0.0259	U	0.00691	pCi/g	0.325		(0-1)			
	TPU:	+/-0.0156		+/-0.0136							
QC1202037554	LCS										
Americium-241	15.9			13.1	pCi/g		82.2 (75%-125%)			02/19/1021:35	
	TPU:			+/-0.585							
Bismuth-211				2.33	pCi/g						
	TPU:			+/-0.351							
Bismuth-214				0.753	pCi/g						
	TPU:			+/-0.124							
Cadmium-109				29.7	pCi/g						
	TPU:			+/-1.81							
Cerium-139			U	-0.0217	pCi/g						
	TPU:			+/-0.023							
Cesium-134			U	0.122	pCi/g						
	TPU:			+/-0.047							
Cesium-137	5.56			5.89	pCi/g		106 (75%-125%)				
	TPU:			+/-0.221							
Cobalt-60	6.39			6.74	pCi/g		105 (75%-125%)				
	TPU:			+/-0.291							
Europium-152			U	0.059	pCi/g						
	TPU:			+/-0.0903							
Lanthanum-140			U	-0.0252	pCi/g						
	TPU:			+/-0.0441							

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QC Summary

Workorder: 246440

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Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Analst	Date Time
Rad Gamma Spec									
Batch	950788								
Lead-212			0.760	pCi/g					
	TPU:		+/-0.0929						
Lead-214			0.809	pCi/g					
	TPU:		+/-0.124						
Mercury-203		U	0.0131	pCi/g					
	TPU:		+/-0.0306						
Potassium-40			1.20	pCi/g					
	TPU:		+/-0.353						
Radium-223		U	-1.12	pCi/g					
	TPU:		+/-0.595						
Radium-224			6.57	pCi/g					
	TPU:		+/-0.725						
Radium-226			0.753	pCi/g					
	TPU:		+/-0.124						
Radium-228			0.995	pCi/g					
	TPU:		+/-0.201						
Ruthenium-106		U	-0.187	pCi/g					
	TPU:		+/-0.293						
Sodium-22		U	-0.00715	pCi/g					
	TPU:		+/-0.0247						
Strontium-85		U	0.00571	pCi/g					
	TPU:		+/-0.0346						
Thallium-208			0.355	pCi/g					
	TPU:		+/-0.0498						
Thorium-227		U	-0.0514	pCi/g					
	TPU:		+/-0.322						
Thorium-231		U	-1.12	pCi/g					
	TPU:		+/-0.595						
Thorium-234		U	-0.0667	pCi/g					
	TPU:		+/-0.950						
Tin-113		U	0.0148	pCi/g					
	TPU:		+/-0.0398						
Uranium-235		U	-0.0594	pCi/g					
	TPU:		+/-0.160						
Yttrium-88		U	-0.00675	pCi/g					
	TPU:		+/-0.0262						
QC1202037552 MB									
Americium-241		U	0.00353	pCi/g					02/19/1020:41
	TPU:		+/-0.00625						
Bismuth-211		U	0.0684	pCi/g					
	TPU:		+/-0.0573						
Bismuth-214		U	-0.00645	pCi/g					
	TPU:		+/-0.0194						
Cadmium-109		U	-0.0123	pCi/g					
	TPU:		+/-0.0668						
Cerium-139		U	0.00623	pCi/g					
	TPU:		+/-0.004						
Cesium-134		U	0.0138	pCi/g					
	TPU:		+/-0.0101						
Cesium-137		U	0.0126	pCi/g					
	TPU:		+/-0.00797						

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QC Summary

Workorder: 246440

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Parname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	950788										
Cobalt-60			U	-0.0106	pCi/g						
	TPU:			+/-0.00804							
Europium-152			U	0.00203	pCi/g						
	TPU:			+/-0.0178							
Lanthanum-140			U	0.00623	pCi/g						
	TPU:			+/-0.0182							
Lead-212			U	-0.00384	pCi/g						
	TPU:			+/-0.0113							
Lead-214			U	0.0238	pCi/g						
	TPU:			+/-0.020							
Mercury-203			U	0.000731	pCi/g						
	TPU:			+/-0.00704							
Potassium-40			U	-0.106	pCi/g						
	TPU:			+/-0.101							
Radium-223			U	0.105	pCi/g						
	TPU:			+/-0.135							
Radium-224			U	-0.0689	pCi/g						
	TPU:			+/-0.135							
Radium-226			U	-0.00645	pCi/g						
	TPU:			+/-0.0194							
Radium-228			U	0.0336	pCi/g						
	TPU:			+/-0.0314							
Ruthenium-106			U	0.0134	pCi/g						
	TPU:			+/-0.0684							
Sodium-22			U	-0.0129	pCi/g						
	TPU:			+/-0.0107							
Strontium-85			U	-0.0594	pCi/g						
	TPU:			+/-0.0129							
Thallium-208			U	0.0182	pCi/g						
	TPU:			+/-0.00995							
Thorium-227			U	0.0359	pCi/g						
	TPU:			+/-0.0713							
Thorium-231			U	0.105	pCi/g						
	TPU:			+/-0.135							
Thorium-234			U	-0.00512	pCi/g						
	TPU:			+/-0.0611							
Tin-113			U	-0.00767	pCi/g						
	TPU:			+/-0.00864							
Uranium-235			U	-0.0103	pCi/g						
	TPU:			+/-0.0283							
Yttrium-88			U	-0.00998	pCi/g						
	TPU:			+/-0.0111							
Rad Liquid Scintillation											
Batch	953105										
QC1202042923	246440001	DUP									
Tritium			292	202	pCi/L	0.393		(0-1)	KXK2	02/27/1013:44	
		TPU:	+/-60.2	+/-55.1							
QC1202042924	LCS										
Tritium	5550			6340	pCi/L			114 (80%-120%)		02/27/1014:21	
		TPU:		+/-517							

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QC Summary

Workorder: 246440

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Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation									
Batch	953105								
QC1202042922	MB								
Tritium		U	4.93	pCi/L					02/27/1013:06
	TPU:		+/-42.6						

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
- 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: 953491Product: AmDate: 3/3/10

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%.	✓		See narrative
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.			
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly stated.	✓		
OC data entered into OC database and batch is in REVW	✓		
Hit 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 Reviewer Performed By: Debbie Green

3/3/10

Secondary Reviewer Performed By: [Signature]

3/3/10

3/5
LANL

pv

Am/Cm Que Sheet

24-FEB-10

Batch #: 953491 Analyst: MXE1 First Client Due Date: 05-MAR-10 Internal Due Date: 22-FEB-10
Tracer(s): Am241/Cm244 Tracer Code: 445-96-2-SS Expiration Date: 5/11/10
LCS Isotope(s): Am241/Cm244 LCS Code(s): / / / Expiration Date: / / /
Spike Isotope(s): Am241/Cm244 Spike Code(s): / / / Expiration Date: / / /
Prep Date: 2/24/10 Initials: ME Pipet ID: 2971058 Balance ID: 50410272
Comments: Vol: 0.1
Vol(s): / / /
Vol(s): / / /
Witness: PFB 02/24/10

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Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Am/Cm Det #
246325001-1	RE46-10-11906	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	1	1	1.254	31
246440001-1	RE15-10-8354	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	2	2	1.259	38
246440002-1	RE15-10-8356	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	3	3	1.269	35
246440003-1	RE15-10-8353	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	4	4	1.251	36
246440004-1	RE15-10-8352	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	5	5	1.260	99
246440005-1	RE15-10-8355	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	6	6	1.264	44
246440006-1	RE15-10-8351	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	7	7	1.263	45
246440007-1	RE15-10-8350	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	8	8	1.273	46
246440008-1	RE15-10-8357	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	9	9	1.272	47
246440009-1	RE15-10-8338	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	10	10	1.255	48
246440010-1	RE15-10-8336	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	11	11	1.262	95
246440011-1	RE15-10-8339	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	12	12	1.261	97
246440012-1	RE15-10-8337	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	13	13	1.275	99
246440013-1	RE15-10-8375	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	14	14	1.270	101
246440014-1	RE15-10-8374	SAMPLE		.05 pCi/g	SOIL	LANL010	02-FEB-10	15	15	1.260	102
246444001-1	RE15-10-8361	SAMPLE		.05 pCi/g	SOIL	LANL010	03-FEB-10	16	16	1.254	103
246444002-1	RE15-10-8362	SAMPLE		.05 pCi/g	SOIL	LANL010	03-FEB-10	17	17	1.252	105
246444003-1	RE15-10-8359	SAMPLE		.05 pCi/g	SOIL	LANL010	03-FEB-10	18	18	1.273	106
246444004-1	RE15-10-8358	SAMPLE		.05 pCi/g	SOIL	LANL010	03-FEB-10	19	19	1.263	107
246444005-1	RE15-10-8360	SAMPLE		.05 pCi/g	SOIL	LANL010	03-FEB-10	20	20	1.274	108
1202052623-1	MB for batch 953491	MB		.05 pCi/g	SOIL	QC ACCOUNT		21	21		109
1202052624-1	RE15-10-8361(246444001DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	03-FEB-10	22	22	1.263	111
1202052625-1	LCS for batch 953491	LCS		.05 pCi/g	SOIL	QC ACCOUNT		23	23	0.137	112

Choose SOP Used: GL-RAD-A-036
GL-RAD-A-036

Solid Sample Dissolution by: LEACH or DIGESTION

Circle One

Data Reviewed By: PFB

GEL Laboratories LLC, Radiochemistry Division

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Blank Correction Report

Batch ID 953491

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202052624	DUP	Americium-241	1.26 g	-0.00181	0.0028	0.0257	.000888889	pCi/g	YES
1202052625	LCS	Americium-241	0.137 g	26.2	1.78	0.185	.008175182	pCi/g	NO
1202052623	MB	Americium-241	1.00 g	0.00112	0.00171	0.0271	.00112	pCi/g	YES
246325001	RE46-10-11906	Americium-241	1.25 g	-0.000395	0.00202	0.0227	.000896	pCi/g	YES
246440001	RE15-10-8354	Americium-241	1.26 g	0.00253	0.00192	0.0231	.000888889	pCi/g	YES
246440002	RE15-10-8356	Americium-241	1.27 g	-0.00325	0.00348	0.0231	.000881890	pCi/g	YES
246440003	RE15-10-8353	Americium-241	1.26 g	-0.00182	0.00244	0.0224	.000888889	pCi/g	YES
246440004	RE15-10-8352	Americium-241	1.26 g	0.00593	0.00305	0.0289	.000888889	pCi/g	NO
246440005	RE15-10-8355	Americium-241	1.26 g	0.00193	0.00235	0.0198	.000888889	pCi/g	YES
246440006	RE15-10-8351	Americium-241	1.26 g	-0.00322	0.002	0.0225	.000888889	pCi/g	YES
246440007	RE15-10-8350	Americium-241	1.27 g	-0.00179	0.00359	0.0221	.000881890	pCi/g	YES
246440008	RE15-10-8357	Americium-241	1.27 g	-0.00179	0.00458	0.0223	.000881890	pCi/g	YES
246440009	RE15-10-8338	Americium-241	1.26 g	-0.00659	0.00634	0.0253	.000888889	pCi/g	YES
246440010	RE15-10-8336	Americium-241	1.26 g	-0.00181	0.00822	0.0244	.000888889	pCi/g	YES
246440011	RE15-10-8339	Americium-241	1.27 g	-0.000436	0.00505	0.0218	.000881890	pCi/g	YES
246440012	RE15-10-8337	Americium-241	1.28 g	-0.00179	0.00182	0.0204	.000875	pCi/g	YES
246440013	RE15-10-8375	Americium-241	1.27 g	0.00555	0.00288	0.0234	.000881890	pCi/g	NO
246440014	RE15-10-8374	Americium-241	1.26 g	-0.00181	0.00209	0.0235	.000888889	pCi/g	YES
246444001	RE15-10-8361	Americium-241	1.25 g	-0.00333	0.00302	0.024	.000896	pCi/g	YES
246444002	RE15-10-8362	Americium-241	1.25 g	0.00273	0.00204	0.0241	.000896	pCi/g	YES
246444003	RE15-10-8359	Americium-241	1.27 g	0.00987	0.00384	0.0232	.000881890	pCi/g	NO
246444004	RE15-10-8358	Americium-241	1.26 g	0.00265	0.0029	0.0237	.000888889	pCi/g	YES
246444005	RE15-10-8360	Americium-241	1.27 g	0.00243	0.00185	0.0224	.000881890	pCi/g	YES

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953491 SAMPLE ID : S0246440001_AM SAMPLE QTY : 1.259 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 77.683	CHAMBER : 033 DETECTOR S/N : 78785 AVERAGE %EFFICIENCY : 31.8048 COUNT DATE : 27-FEB-2010 19:45:23 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_AM BKG FILE : B033.CNF;1111 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W033.CNF;330 CAL DATE : 3-FEB-2010
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TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.2657E+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
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NUCLIDE ACTIVITY SUMMARY

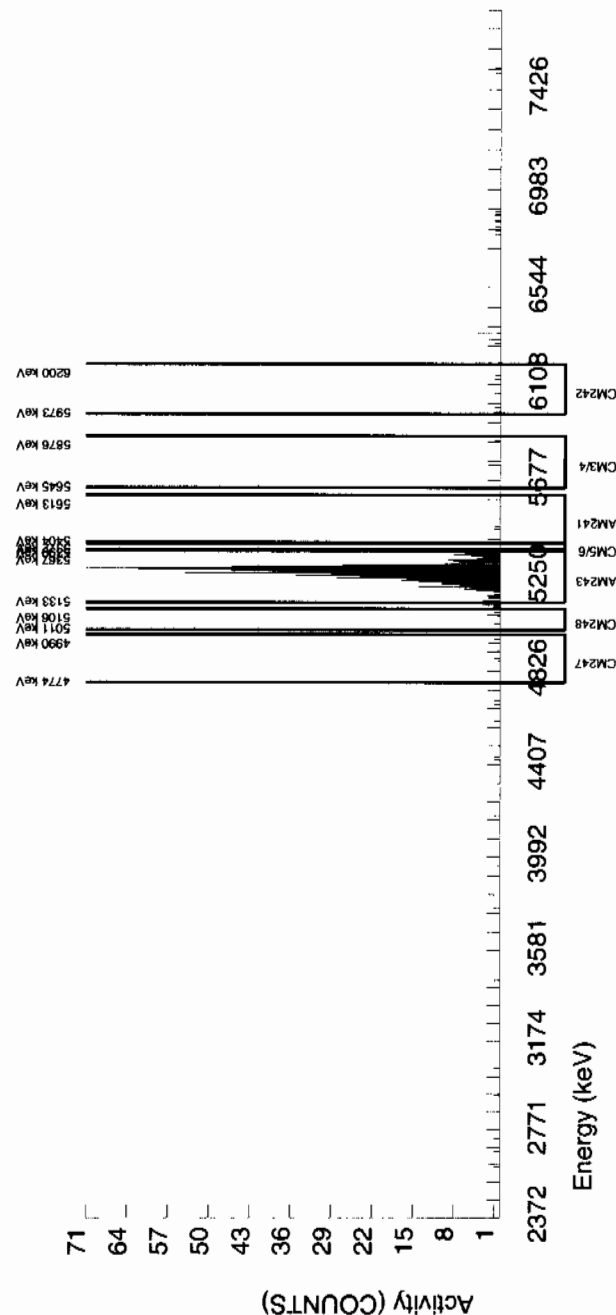
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5519.816	0.000	3.000	1.749	0.000	2.8409	99.94000	2.53E-03	1.92E-03	9.58E-03	2.31E-02	1.92E-03
AM243	5270.000	5276.266	36.029	720.000	719.000	1.000	1.0000	99.78000	1.04E+00	7.54E-02	3.38E-03	1.07E-02	3.90E-02
CM-242	6102.000	6047.328	163.123	8.000	7.000	1.000	4.3413	100.0000	1.13E-02	4.91E-03	1.46E-02	3.32E-02	4.86E-03
CM-3/4	5795.020	5787.969	4.962	3.000	-2.000	5.000	5.1799	100.0000	-2.90E-03	4.11E-03	1.75E-02	3.88E-02	4.11E-03
CM-5/6	5386.000	5374.781	0.000	2.000	2.000	0.000	14.2480	86.09000	3.36E-03	2.39E-03	5.58E-02	1.16E-01	2.38E-03
CM-247	4946.000	4890.761	175.993	10.000	10.000	0.000	13.7917	79.30000	1.83E-02	5.88E-03	5.86E-02	1.22E-01	5.77E-03
CM-248	5078.600	5069.336	54.581	4.000	3.000	1.000	19.5080	91.00000	4.77E-03	3.57E-03	7.22E-02	1.49E-01	3.56E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-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 : 953491	CHAMBER : 035	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0246440002_AM	DETECTOR S/N : 78202	BKG FILE : B035.CNF:1109
SAMPLE QTY : 1.269 G	AVERAGE %EFFICIENCY : 30.0240	BKG DATE : 21-FEB-2010
SAMPLE DATE : 2-FEB-2010 00:00:00.	COUNT DATE : 27-FEB-2010 19:45:23	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W035.CNF:319
% YIELD : 81.718		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 : 3.3155E+01 pCi/G	NOMINAL : 3.3155E+01 pCi/G
RESULTS : 2.3834E+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	5541.093	104.187	3.000	-2.242	4.000	2.8409	99.94000	-3.25E-03	3.48E-03	9.57E-03	2.31E-02	3.47E-03
AM243	5270.000	5267.178	33.212	719.000	714.000	5.000	2.2361	99.78000	1.04E+00	7.52E-02	7.54E-03	1.90E-02	3.90E-02
CM-242	6102.000	6054.540	64.497	4.000	0.000	4.000	4.3413	100.0000	0.00E+00	4.58E-03	1.46E-02	3.31E-02	4.57E-03
CM-3/4	5795.020	5761.251	114.109	11.000	9.000	2.000	5.1799	100.0000	1.31E-02	5.29E-03	1.74E-02	3.88E-02	5.23E-03
CM-5/6	5386.000	5386.690	0.000	0.000	-2.000	2.000	14.2480	86.09000	-3.36E-03	2.91E-03	5.57E-02	1.16E-01	2.91E-03
CM-247	4946.000	4858.537	86.667	10.000	6.000	4.000	13.7917	79.30000	1.09E-02	6.86E-03	5.85E-02	1.22E-01	6.83E-03
CM-248	5078.600	5061.812	0.000	20.000	14.000	6.000	19.5080	91.00000	2.23E-02	8.22E-03	7.22E-02	1.49E-01	8.11E-03

NOTES:

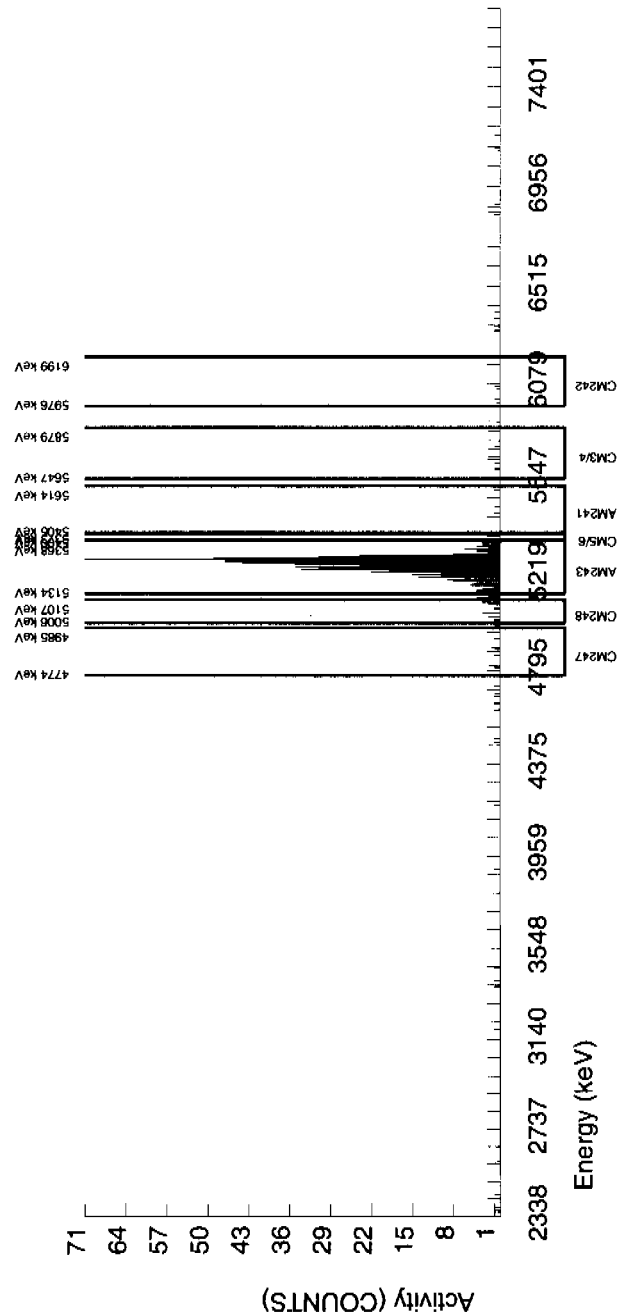
* Sg calculated via blank population.

(Sg updated 10-FEB-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 : 953491 SAMPLE ID : S0246440003_AM SAMPLE QTY : 1.257 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 78.970		CHAMBER : 036 DETECTOR S/N : 78203 AVERAGE %EFFICIENCY : 32.2436 COUNT DATE : 27-FEB-2010 19:45:23 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_AM BKG FILE : B036.CNF;1107 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W036.CNF;331 CAL DATE : 3-FEB-2010
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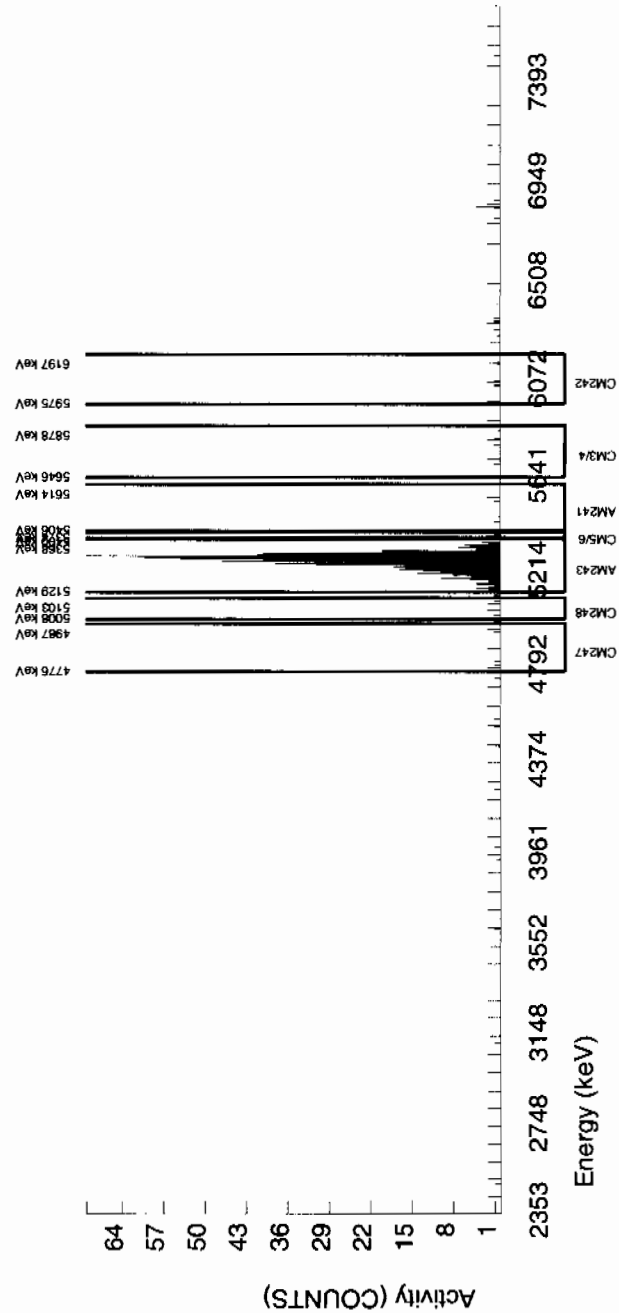
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.3032E+00 dpm		MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5496.472	93.322	2.000	-1.289	2.000	2.8409	99.94000	-1.82E-03	2.44E-03	9.31E-03	2.24E-02	2.44E-03
AM243	5270.000	5275.205	47.274	744.000	741.000	3.000	1.7321	99.78000	1.05E+00	7.50E-02	5.68E-03	1.52E-02	3.86E-02
CM-242	6102.000	6092.672	92.708	4.000	2.000	2.000	4.3413	100.0000	3.15E-03	3.86E-03	1.42E-02	3.22E-02	3.85E-03
CM-3/4	5795.020	5787.884	0.000	6.000	1.000	5.000	5.1799	100.0000	1.41E-03	4.68E-03	1.70E-02	3.77E-02	4.68E-03
CM-5/6	5386.000	5389.726	0.000	3.000	3.000	0.000	14.2480	86.09000	4.90E-03	2.85E-03	5.42E-02	1.13E-01	2.83E-03
CM-247	4946.000	4893.117	0.000	4.000	1.000	3.000	13.7917	79.30000	1.77E-03	4.70E-03	5.69E-02	1.19E-01	4.70E-03
CM-248	5078.600	5057.966	4.912	6.000	5.000	1.000	19.5080	91.00000	7.73E-03	4.12E-03	7.02E-02	1.45E-01	4.09E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491 SAMPLE ID : S0246440004_AM SAMPLE QTY : 1.260 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 35.526	CHAMBER : 099 DETECTOR S/N : 70317 AVERAGE %EFFICIENCY : 33.8661 COUNT DATE : 1-MAR-2010 18:21:05 ELAPSED LIVE TIME(SEC) : 115200.01	LIB FILE : ENV_ALPHA_AM BKG FILE : B099.CNF:683 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W099.CNF:193 CAL DATE : 9-FEB-2010
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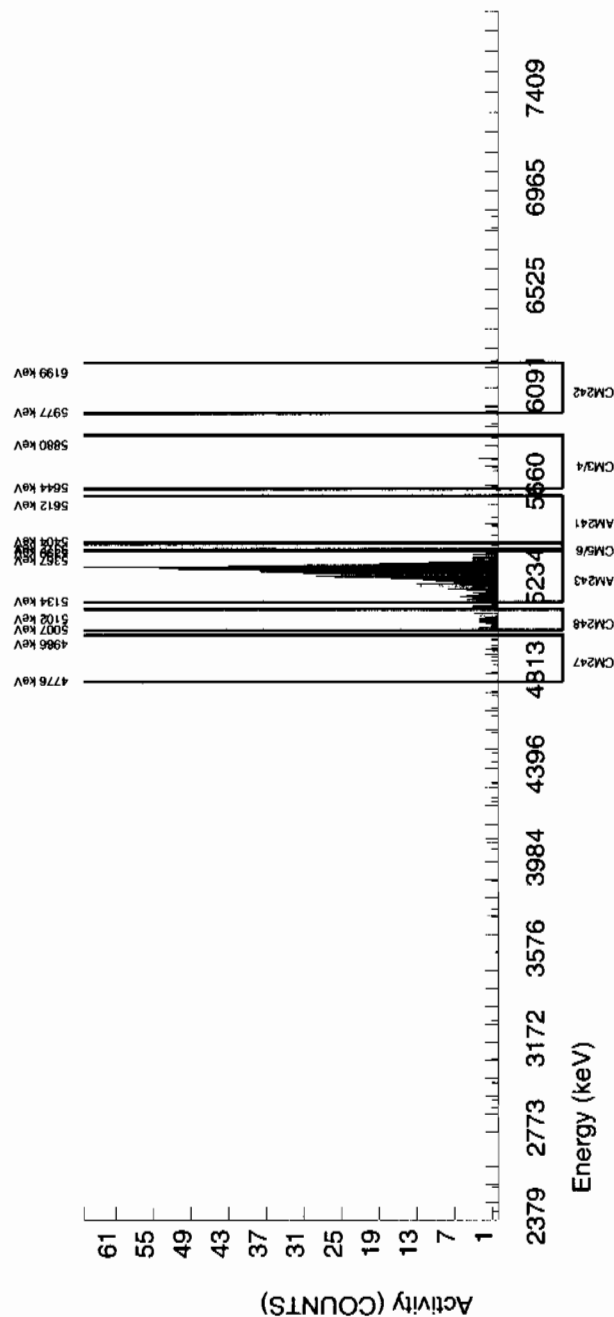
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 1.0361E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5466.884	0.000	5.000	3.830	0.000	2.8409	99.94000	5.93E-03	3.05E-03	1.24E-02	2.89E-02	3.03E-03
AM243	5270.000	5271.450	35.595	678.000	672.240	5.760	2.4000	99.78000	1.04E+00	7.72E-02	1.05E-02	2.51E-02	4.07E-02
CM-242	6102.000	6004.110	24.510	4.000	2.080	1.920	4.3413	100.0000	3.63E-03	4.85E-03	1.89E-02	4.20E-02	4.84E-03
CM-3/4	5795.020	5765.546	6.077	9.000	5.160	3.840	5.1799	100.0000	8.01E-03	6.30E-03	2.25E-02	4.93E-02	6.28E-03
CM-5/6	5386.000	5376.741	0.000	7.000	7.000	0.000	14.2480	86.09000	1.26E-02	4.82E-03	7.20E-02	1.49E-01	4.76E-03
CM-247	4946.000	4917.348	7.200	12.000	12.000	0.000	13.7917	79.30000	2.34E-02	6.92E-03	7.57E-02	1.57E-01	6.76E-03
CM-248	5078.600	5060.792	0.000	35.000	35.000	0.000	19.5080	91.00000	5.95E-02	1.07E-02	9.33E-02	1.91E-01	1.01E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491 SAMPLE ID : S0246440005_AM SAMPLE QTY : 1.264 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 83.495				CHAMBER : 044 DETECTOR S/N : 79459 AVERAGE %EFFICIENCY : 34.2824 COUNT DATE : 27-FEB-2010 19:45:43 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_AM BKG FILE : B044.CNF;1119 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W044.CNF;307 CAL DATE : 3-FEB-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.4352E+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	5474.735	73.843	4.000	1.551	1.000	2.8409	99.94000	1.93E-03	2.35E-03	8.23E-03	1.98E-02	2.35E-03
AM-243	5270.000	5275.026	42.978	834.000	833.000	1.000	1.0000	99.78000	1.04E+00	7.23E-02	2.90E-03	9.19E-03	3.61E-02
CM-242	6102.000	6056.193	88.611	4.000	4.000	0.000	4.3413	100.0000	5.57E-03	2.80E-03	1.26E-02	2.85E-02	2.78E-03
CM-3/4	5795.020	5734.845	4.923	6.000	4.000	2.000	5.1799	100.0000	4.99E-03	3.54E-03	1.50E-02	3.34E-02	3.53E-03
CM-5/6	5386.000	5375.062	0.000	3.000	2.000	1.000	14.2480	86.09000	2.89E-03	2.90E-03	4.79E-02	9.98E-02	2.89E-03
CM-247	4946.000	4890.885	137.839	8.000	5.000	3.000	13.7917	79.30000	7.85E-03	5.23E-03	5.04E-02	1.05E-01	5.21E-03
CM-248	5078.600	5049.720	61.382	12.000	10.000	2.000	19.5080	91.00000	1.37E-02	5.19E-03	6.21E-02	1.28E-01	5.12E-03

NOTES:

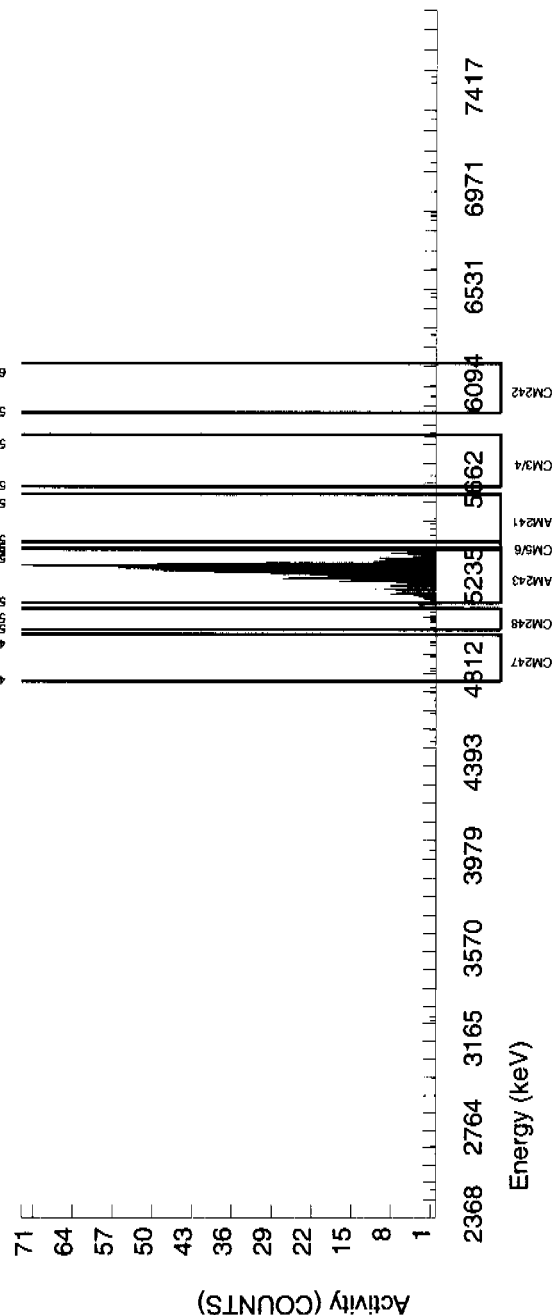
* Sg calculated via blank population.

(Sg updated 10-FEB-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 : 953491	CHAMBER : 045	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0246440006_AM	DETECTOR S/N : 78783	BKG FILE : B045.CNF:1108
SAMPLE QTY : 1.263 G	AVERAGE %EFFICIENCY : 33.6564	BKG DATE : 21-FEB-2010
SAMPLE DATE : 2-FEB-2010 00:00:00.	COUNT DATE : 27-FEB-2010 19:45:43	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W045.CNF:298
% YIELD : 75.144		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 : 3.3155E+01 pCi/G	NOMINAL : 3.3155E+01 pCi/G
RESULTS : 2.1916E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

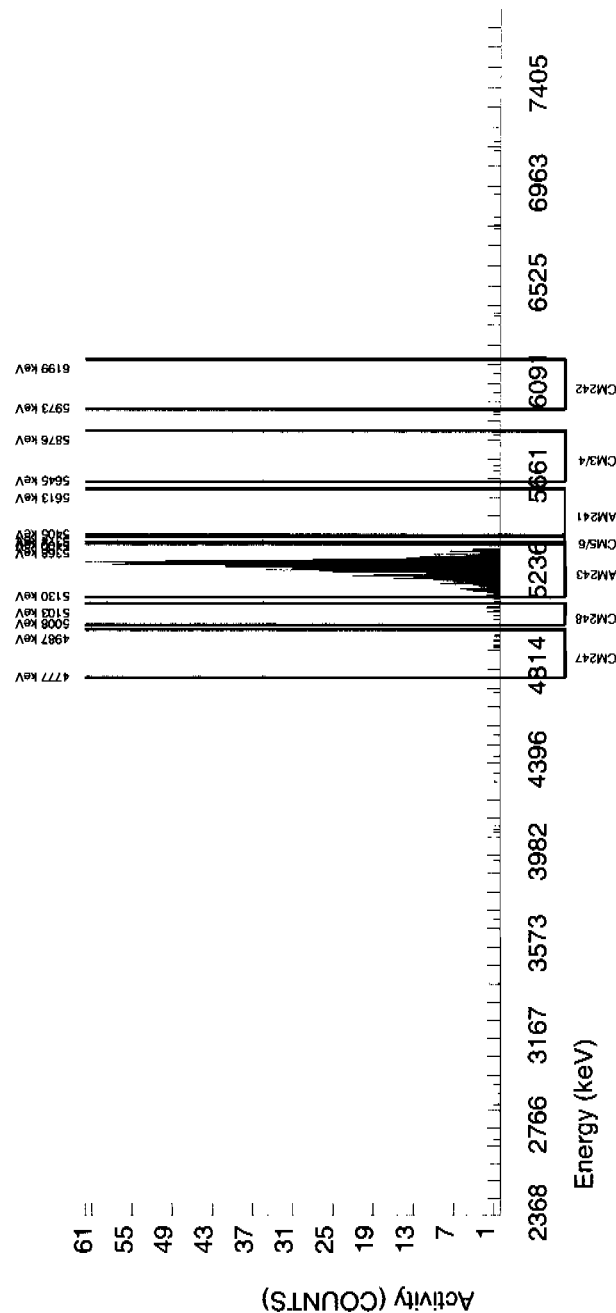
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5509.242	0.000	0.000	-2.281	1.000	2.8409	99.94000	-3.22E-03	2.00E-03	9.33E-03	2.25E-02	2.00E-03
AM243	5270.000	5267.778	46.169	739.000	736.000	3.000	1.7321	99.78000	1.04E+00	7.48E-02	5.69E-03	1.52E-02	3.85E-02
CM-242	6102.000	6067.924	123.546	3.000	1.000	2.000	4.3413	100.0000	1.58E-03	3.53E-03	1.42E-02	3.23E-02	3.52E-03
CM-3/4	5795.020	5732.335	0.000	4.000	1.000	3.000	5.1799	100.0000	1.41E-03	3.74E-03	1.70E-02	3.78E-02	3.74E-03
CM-5/6	5386.000	5386.813	0.000	1.000	1.000	0.000	14.2480	86.09000	1.64E-03	1.64E-03	5.43E-02	1.13E-01	1.64E-03
CM-247	4946.000	4939.146	58.685	7.000	7.000	0.000	13.7917	79.30000	1.24E-02	4.77E-03	5.71E-02	1.19E-01	4.70E-03
CM-248	5078.600	5068.350	9.266	8.000	7.000	1.000	19.5080	91.00000	1.08E-02	4.70E-03	7.03E-02	1.45E-01	4.65E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491	CHAMBER : 046	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0246440007_AM	DETECTOR S/N : 76544	BKG FILE : B046.CNF;1119
SAMPLE QTY : 1.273 G	AVERAGE %EFFICIENCY : 33.4175	BKG DATE : 21-FEB-2010
SAMPLE DATE : 2-FEB-2010 00:00:00.	COUNT DATE : 27-FEB-2010 19:45:43	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W046.CNF;289
% YIELD : 76.504		CAL DATE : 3-FEB-2010

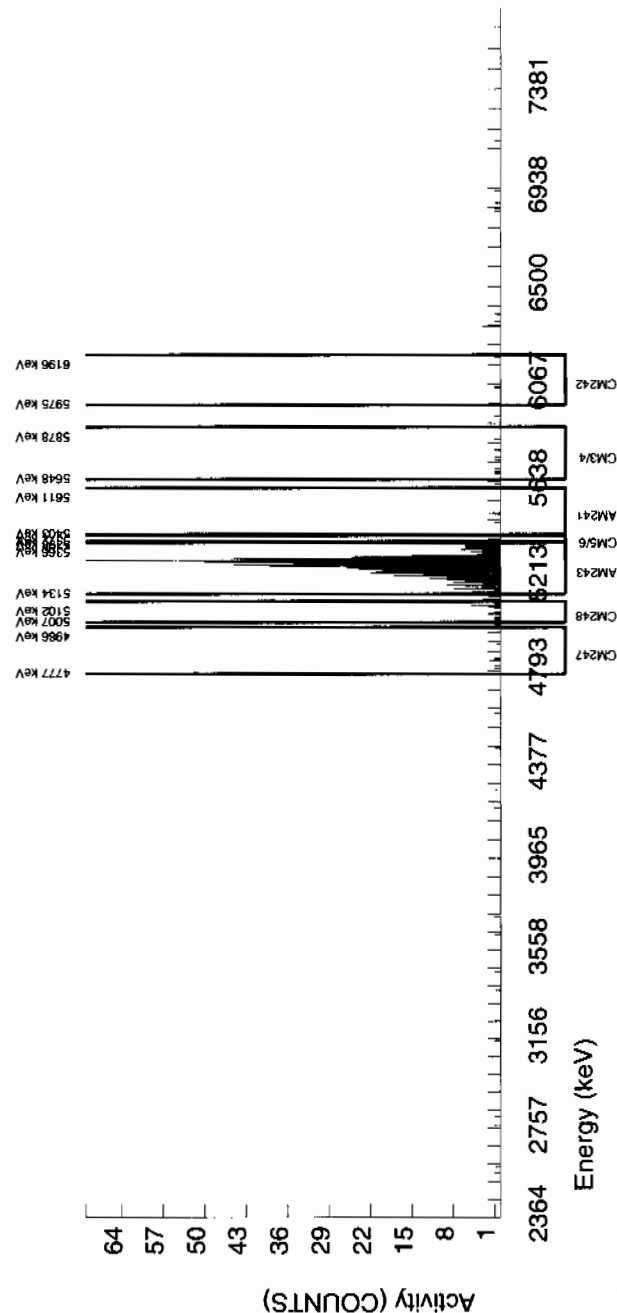
TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3155E+01 pCi/G	NOMINAL : 3.3155E+01 pCi/G
RESULTS : 2.2313E+00 dpm		

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	5491.119	4.894	4.000	-1.295	4.000	2.8409	99.94000	-1.79E-03	3.59E-03	9.15E-03	2.21E-02	3.59E-03
AM243	5270.000	5266.775	37.978	745.000	744.000	1.000	1.0000	99.78000	1.03E+00	7.39E-02	3.23E-03	1.02E-02	3.79E-02
CM-242	6102.000	6102.779	126.621	3.000	2.000	1.000	4.3413	100.0000	3.09E-03	3.10E-03	1.40E-02	3.17E-02	3.09E-03
CM-3/4	5795.020	5752.536	0.000	10.000	8.000	2.000	5.1799	100.0000	1.11E-02	4.86E-03	1.67E-02	3.71E-02	4.81E-03
CM-5/6	5386.000	5384.895	0.000	1.000	1.000	0.000	14.2480	86.09000	1.61E-03	1.61E-03	5.33E-02	1.11E-01	1.61E-03
CM-247	4946.000	4869.709	83.088	12.000	10.000	2.000	13.7917	79.30000	1.75E-02	6.62E-03	5.60E-02	1.17E-01	6.53E-03
CM-248	5078.600	5070.038	0.000	22.000	19.000	3.000	19.5080	91.00000	2.89E-02	7.81E-03	6.90E-02	1.42E-01	7.60E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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	: 953491
SAMPLE ID	: S0246440008_AM
SAMPLE QTY	: 1.272 G
SAMPLE DATE	: 2-FEB-2010 00:00:00.
ANALYST	: MXE1
% YIELD	: 73.622

CHAMBER :	047
DETECTOR S/N :	46-089B1
AVERAGE %EFFICIENCY :	34.3991
COUNT DATE :	27-FEB-20
ELAPSED LIVE TIME(SEC) :	60000.00

```
LIB FILE      : ENV_ALPHA_AM
BKG FILE      : B047.CNF;1114
3KG DATE      : 21-FEB-2010
TIME(SEC)     : 60000.00
EFF FILE      : W047.CNF;303
CAL DATE      : 3-FEB-2010
```

TRACER

ID : 445-96-2-SS
NUCLIDE : AM243
NOMINAL : 2.9166E+00 dpm
RESULTS : 2.1472E+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

NUCLIDE ACTIVITY SUMMARY

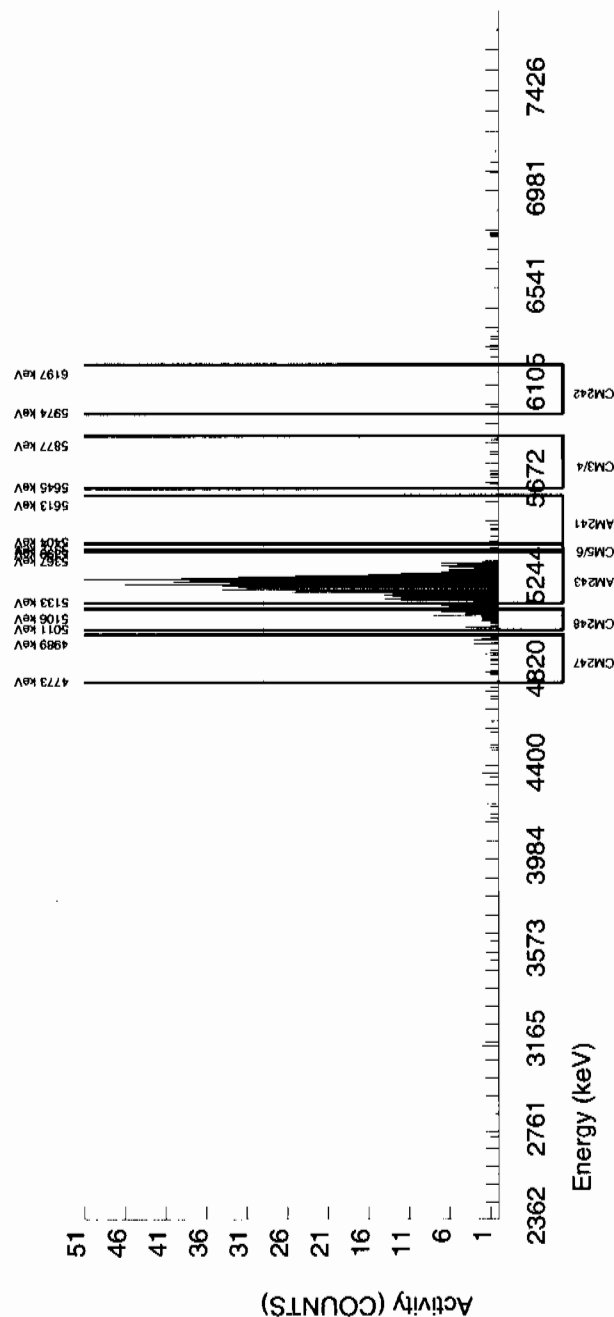
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5451.550	73.901	6.000	-1.282	6.000	2.8409	99.94000	-1.79E-03	4.58E-03	9.25E-03	2.23E-02	4.58E-03
AM243	5270.000	5225.915	74.033	741.000	737.000	4.000	2.0000	99.78000	1.03E+00	7.43E-02	6.52E-03	1.68E-02	3.83E-02
CM-242	6102.000	6058.417	178.852	4.000	3.000	1.000	4.3413	100.0000	4.69E-03	3.51E-03	1.41E-02	3.20E-02	3.49E-03
CM-3/4	5795.020	5724.080	0.000	13.000	6.000	7.000	5.1799	100.0000	8.41E-03	6.29E-03	1.69E-02	3.75E-02	6.27E-03
CM-5/6	5386.000	5380.267	0.000	2.000	1.000	1.000	14.2480	86.09000	1.62E-03	2.82E-03	5.38E-02	1.12E-01	2.81E-03
CM-247	4946.000	4922.638	0.000	23.000	17.000	6.000	13.7917	79.30000	3.00E-02	9.67E-03	5.66E-02	1.18E-01	9.50E-03
CM-248	5078.600	5076.145	0.000	48.000	46.000	2.000	19.5080	91.00000	7.07E-02	1.17E-02	6.97E-02	1.44E-01	1.09E-02

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-2010)

* Sg 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 : 953491	CHAMBER : 048	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0246440009_AM	DETECTOR S/N : 42483	BKG FILE : B048.CNF;1115
SAMPLE QTY : 1.255 G	AVERAGE %EFFICIENCY : 32.0990	BKG DATE : 21-FEB-2010
SAMPLE DATE : 2-FEB-2010 00:00:00.	COUNT DATE : 27-FEB-2010 19:45:43	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W048.CNF;316
% YIELD : 70.333		CAL DATE : 3-FEB-2010

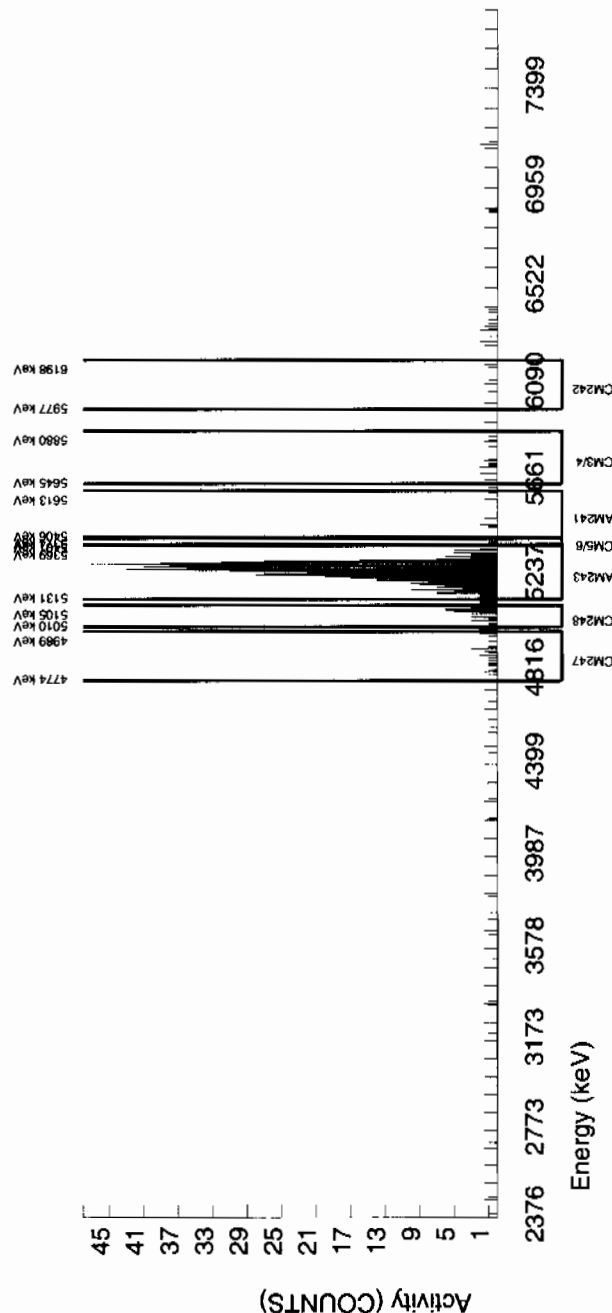
TRACER ID : 445-96-2-SS	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3155E+01 pCi/G	NOMINAL : 3.3155E+01 pCi/G
RESULTS : 2.0513E+00 dpm		

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	5477.285	7.247	7.000	-4.143	10.000	2.8409	99.94000	-6.59E-03	6.34E-03	1.05E-02	2.53E-02	6.34E-03
AM243	5270.000	5260.399	63.015	665.000	657.000	8.000	2.8284	99.78000	1.05E+00	7.80E-02	1.05E-02	2.53E-02	4.13E-02
CM-242	6102.000	6114.924	103.611	3.000	1.000	2.000	4.3413	100.0000	1.78E-03	3.98E-03	1.61E-02	3.64E-02	3.97E-03
CM-3/4	5795.020	5757.328	32.070	11.000	-2.000	13.000	5.1799	100.0000	-3.19E-03	7.81E-03	1.92E-02	4.26E-02	7.81E-03
CM-5/6	5386.000	5381.290	7.401	6.000	3.000	3.000	14.2480	86.09000	5.54E-03	5.55E-03	6.12E-02	1.27E-01	5.54E-03
CM-247	4946.000	4904.206	0.000	23.000	18.000	5.000	13.7917	79.30000	3.61E-02	1.09E-02	6.43E-02	1.34E-01	1.06E-02
CM-248	5078.600	5074.029	17.885	39.000	36.000	3.000	19.5080	91.00000	6.29E-02	1.20E-02	7.93E-02	1.63E-01	1.13E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491		CHAMBER : 095		LIB FILE : ENV_ALPHA_AM	
SAMPLE ID : S0246440010_AM		DETECTOR S/N : 64279		BKG FILE : B095.CNF;684	
SAMPLE QTY : 1.262 G		AVERAGE %EFFICIENCY : 30.7522		BKG DATE : 21-FEB-2010	
SAMPLE DATE : 2-FEB-2010 00:00:00.		COUNT DATE : 27-FEB-2010 19:46:23		BKG LIVE TIME(SEC) : 60000.00	
ANALYST : MXE1		ELAPSED LIVE TIME(SEC) : 60000.00		EFF FILE : W095.CNF;209	
% YIELD : 75.872				CAL DATE : 9-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 : 3.3155E+01 pCi/G		NOMINAL : 3.3155E+01 pCi/G	
RESULTS : 2.2129E+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	5464.813	49.336	15.000	-1.182	15.000	2.8409	99.94000	-1.81E-03	8.22E-03	1.01E-02	2.44E-02	8.22E-03
AM243	5270.000	5272.176	47.174	683.000	679.000	4.000	2.0000	99.78000	1.04E+00	7.66E-02	7.13E-03	1.84E-02	4.02E-02
CM-242	6102.000	6109.577	54.383	15.000	8.000	7.000	4.3413	100.0000	1.37E-02	8.07E-03	1.55E-02	3.50E-02	8.02E-03
CM-3/4	5795.020	5730.989	48.110	26.000	15.000	11.000	5.1799	100.0000	2.30E-02	9.44E-03	1.84E-02	4.10E-02	9.33E-03
CM-5/6	5386.000	5372.368	0.000	9.000	8.000	1.000	14.2480	86.09000	1.42E-02	5.69E-03	5.89E-02	1.23E-01	5.62E-03
CM-247	4946.000	4884.026	0.000	6.000	5.000	1.000	13.7917	79.30000	9.65E-03	5.14E-03	6.19E-02	1.29E-01	5.10E-03
CM-248	5078.600	5051.108	54.383	15.000	15.000	0.000	19.5080	91.00000	2.52E-02	6.70E-03	7.63E-02	1.57E-01	6.51E-03

NOTES:

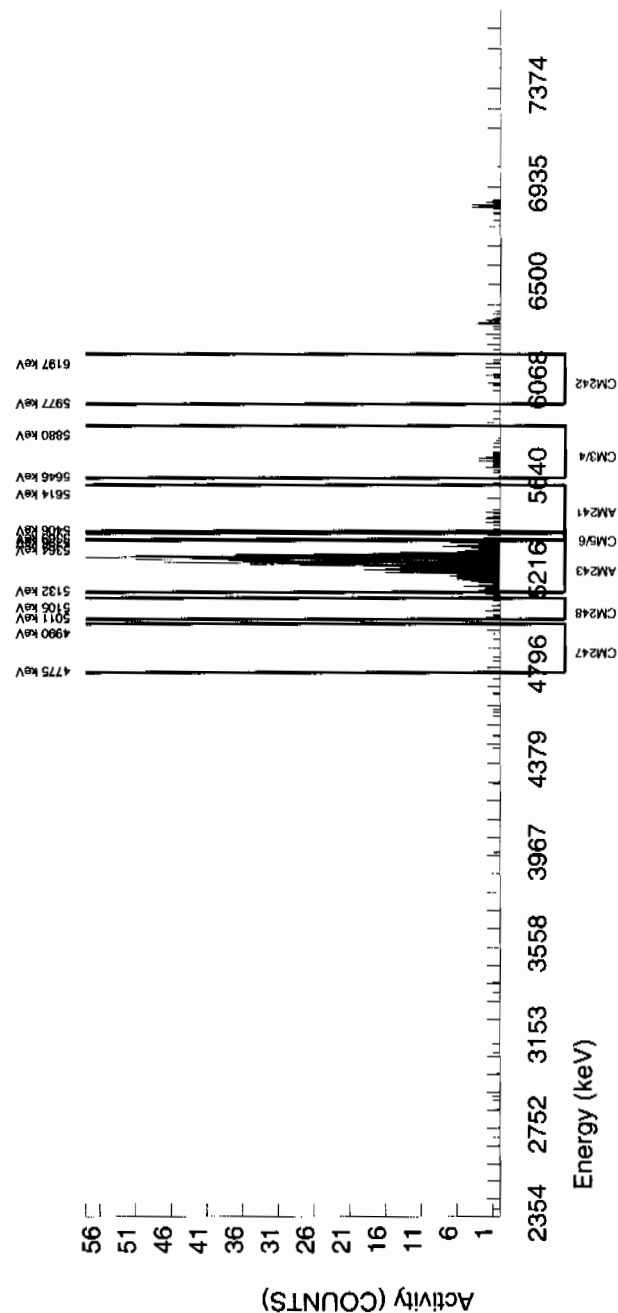
* Sg calculated via blank population.

(Sg updated 10-FEB-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 : 953491
SAMPLE ID : S0246440011_AM
SAMPLE QTY : 1.267 G
SAMPLE DATE : 2-FEB-2010 00:00:00.
ANALYST : MXE1
% YIELD : 75.382

CHAMBER : 097
DETECTOR S/N : 67599
AVERAGE %EFFICIENCY : 34.5530
COUNT DATE : 27-FEB-2010 19:46:23
ELAPSED LIVE TIME(SEC) : 60000.00

LIB FILE : ENV_ALPHA_AM
BKG FILE : B097.CNF;678
BKG DATE : 21-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W097.CNF;193
CAL DATE : 9-FEB-2010

TRACER
ID : 445-96-2-SS
NUCLIDE : AM243
NOMINAL : 2.9166E+00 dpm
RESULTS : 2.1986E+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	5495.496	0.000	8.000	-0.319	7.000	2.8409	99.94000	-4.36E-04	5.05E-03	9.03E-03	2.18E-02	5.05E-03
AM243	5270.000	5270.209	46.465	760.000	758.000	2.000	1.4142	99.78000	1.04E+00	7.39E-02	4.50E-03	1.27E-02	3.78E-02
CM-242	6102.000	6069.346	93.469	3.000	2.000	1.000	4.3413	100.0000	3.05E-03	3.06E-03	1.38E-02	3.13E-02	3.05E-03
CM-3/4	5795.020	5708.260	7.225	5.000	1.000	4.000	5.1799	100.0000	1.37E-03	4.11E-03	1.64E-02	3.66E-02	4.11E-03
CM-5/6	5386.000	5373.772	0.000	3.000	2.000	1.000	14.2480	86.09000	3.17E-03	3.18E-03	5.26E-02	1.09E-01	3.17E-03
CM-247	4946.000	4888.330	126.675	16.000	14.000	2.000	13.7917	79.30000	2.41E-02	7.45E-03	5.52E-02	1.15E-01	7.30E-03
CM-248	5078.600	5073.815	0.000	16.000	16.000	0.000	19.5080	91.00000	2.40E-02	6.18E-03	6.81E-02	1.40E-01	6.00E-03

NOTES:

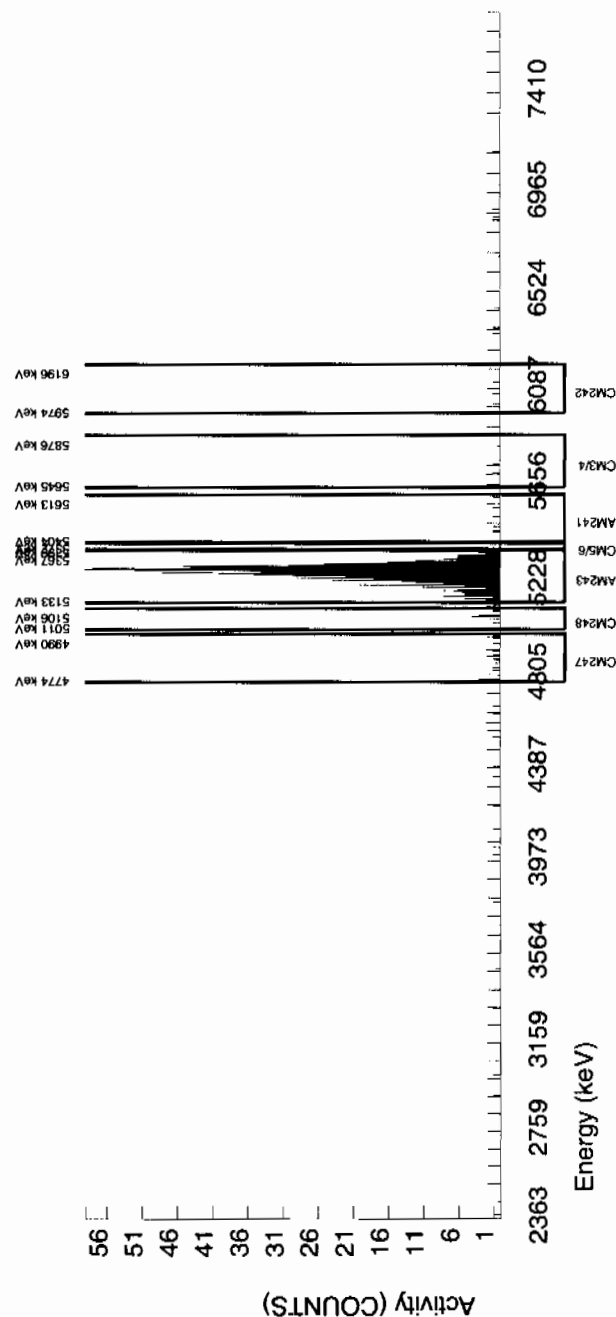
* Sg calculated via blank population.

(Sg updated 10-FEB-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

<p>BATCH NUMBER : 953491 SAMPLE ID : S0246440012_AM SAMPLE QTY : 1.275 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 81.376</p>		<p>CHAMBER : 099 DETECTOR S/N : 70317 AVERAGE %EFFICIENCY : 33.8661 COUNT DATE : 27-FEB-2010 19:46:23 ELAPSED LIVE TIME(SEC) : 60000.00</p>	<p>LIB FILE : ENV_ALPHA_AM BKG FILE : B099.CNF;681 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W099.CNF;193 CAL DATE : 9-FEB-2010</p>
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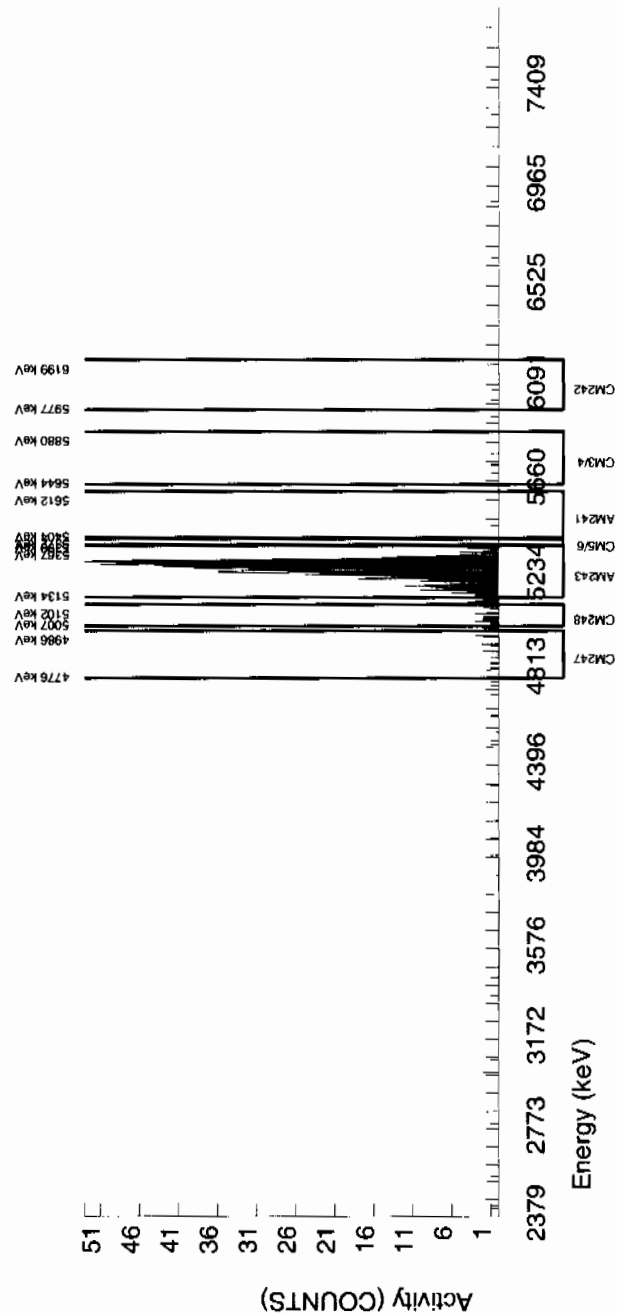
<p>TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.3734E+00 dpm</p>	<p>MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G</p>	<p>LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G</p>
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NUCLIDE ACTIVITY 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
AM-241	5479.150	5462.624	4.902	1.000	-1.396	1.000	2.8409	99.94000	-1.79E-03	1.82E-03	8.48E-03	2.04E-02	1.81E-03
AM243	5270.000	5268.550	63.201	803.000	802.000	1.000	1.0000	99.78000	1.03E+00	7.23E-02	2.99E-03	9.46E-03	3.64E-02
CM-242	6102.000	6047.306	44.119	2.000	1.000	1.000	4.3413	100.0000	1.43E-03	2.48E-03	1.29E-02	2.94E-02	2.48E-03
CM-3/4	5795.020	5723.359	127.454	5.000	4.000	1.000	5.1799	100.0000	5.14E-03	3.16E-03	1.54E-02	3.44E-02	3.15E-03
CM-5/6	5386.000	5375.375	0.000	5.000	5.000	0.000	14.2480	86.09000	7.45E-03	3.36E-03	4.94E-02	1.03E-01	3.33E-03
CM-247	4946.000	4904.654	86.756	22.000	17.000	5.000	13.7917	79.30000	2.75E-02	8.56E-03	5.19E-02	1.08E-01	8.40E-03
CM-248	5078.600	5058.978	0.000	29.000	29.000	0.000	19.5080	91.00000	4.09E-02	7.98E-03	6.39E-02	1.32E-01	7.59E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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

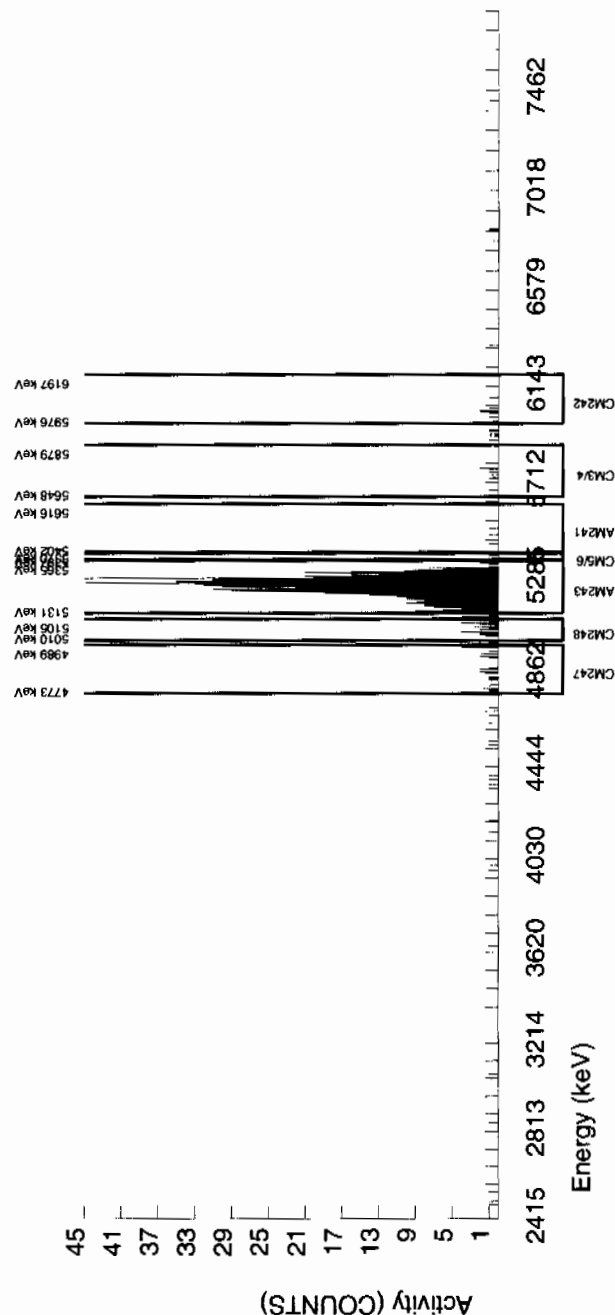
BATCH NUMBER : 953491	CHAMBER : 101	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0246440013_AM	DETECTOR S/N : 64253	BKG FILE : B101.CNF:685
SAMPLE QTY : 1.270 G	AVERAGE %EFFICIENCY : 33.7124	BKG DATE : 21-FEB-2010
SAMPLE DATE : 2-FEB-2010 00:00:00.	COUNT DATE : 27-FEB-2010 19:46:33	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W101.CNF:180
% YIELD : 71.656		CAL DATE : 9-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 : 3.3155E+01 pCi/G	NOMINAL : 3.3155E+01 pCi/G
RESULTS : 2.0899E+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	5463.854	98.754	5.000	3.777	0.000	2.8409	99.94000	5.55E-03
AM-243	5270.000	5255.516	61.960	706.000	703.000	3.000	1.7321	99.78000	1.03E+00
CM-242	6102.000	6025.109	53.697	12.000	11.000	1.000	4.3413	100.00000	1.81E-02
CM-3/4	5795.020	5751.581	7.252	8.000	7.000	1.000	5.1799	100.00000	1.03E-02
CM-5/6	5386.000	5376.488	0.000	5.000	5.000	0.000	14.2480	86.09000	8.53E-03
CM-247	4946.000	4883.216	7.252	32.000	31.000	1.000	13.7917	79.30000	5.74E-02
CM-248	5078.600	5062.224	78.866	28.000	28.000	0.000	19.5080	91.00000	4.52E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491 SAMPLE ID : S0246440014_AM SAMPLE QTY : 1.260 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 74.119	CHAMBER : 102 DETECTOR S/N : 72525 AVERAGE %EFFICIENCY : 32.7311 COUNT DATE : 27-FEB-2010 19:46:33 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_AM BKG FILE : B102.CNF.683 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W102.CNF.194 CAL DATE : 9-FEB-2010
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TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.1617E+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
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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	5497.446	4.875	1.000	-1.228	1.000	2.8409	99.94000	-1.81E-03	2.09E-03	9.74E-03	2.35E-02	2.09E-03
AM243	5270.000	5263.379	43.424	706.000	706.000	0.000	0.0000	99.78000	1.04E+00	7.57E-02	0.00E+00	4.00E-03	3.92E-02
CM-242	6102.000	5997.877	0.000	3.000	3.000	0.000	4.3413	100.0000	4.94E-03	2.87E-03	1.49E-02	3.38E-02	2.85E-03
CM-3/4	5795.020	5769.102	146.239	6.000	4.000	2.000	5.1799	100.0000	5.91E-03	4.20E-03	1.78E-02	3.95E-02	4.18E-03
CM-5/6	5386.000	5375.911	9.749	4.000	4.000	0.000	14.2480	86.09000	6.85E-03	3.45E-03	5.67E-02	1.18E-01	3.42E-03
CM-247	4946.000	4876.514	4.875	13.000	10.000	3.000	13.7917	79.30000	1.86E-02	7.52E-03	5.98E-02	1.24E-01	7.43E-03
CM-248	5078.600	5067.823	0.000	18.000	18.000	0.000	19.5080	91.00000	2.91E-02	7.10E-03	7.35E-02	1.51E-01	6.87E-03

NOTES:

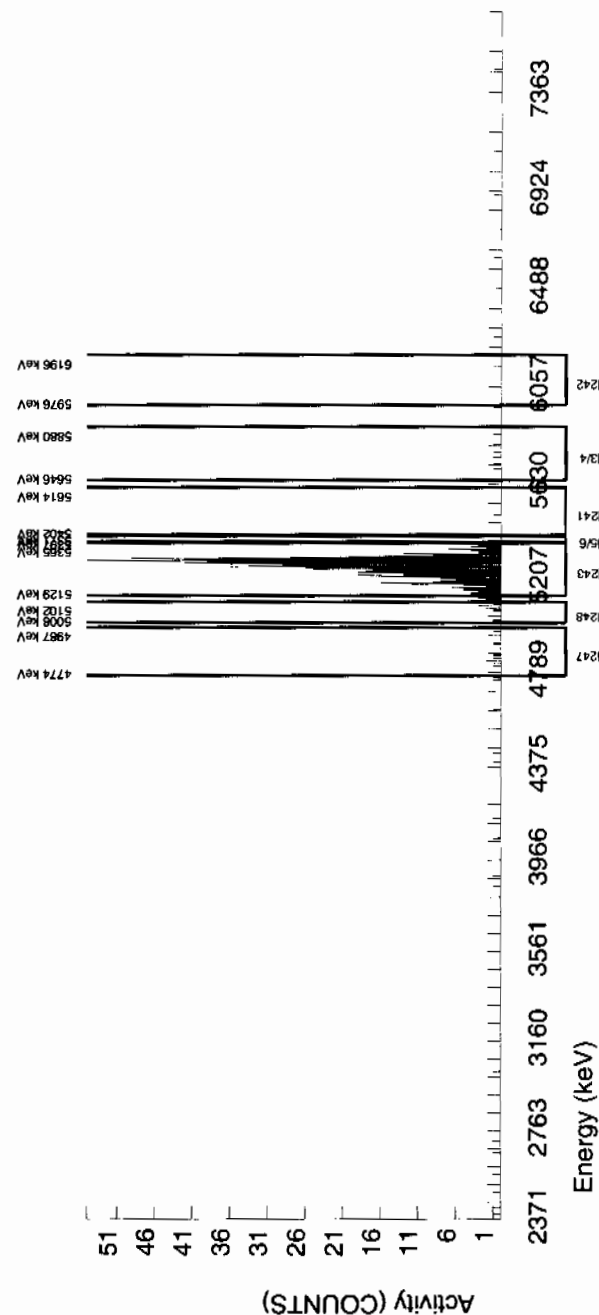
* Sg calculated via blank population.

(Sg updated 10-FEB-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 : 953491	CHAMBER : 103	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S024644001_AM	DETECTOR S/N : 79461	BKG FILE : B103.CNF:687
SAMPLE QTY : 1.254 G	AVERAGE %EFFICIENCY : 32.6574	BKG DATE : 21-FEB-2010
SAMPLE DATE : 3-FEB-2010 00:00:00.	COUNT DATE : 27-FEB-2010 19:46:33	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W103.CNF:198
% YIELD : 72.919		CAL DATE : 9-FEB-2010

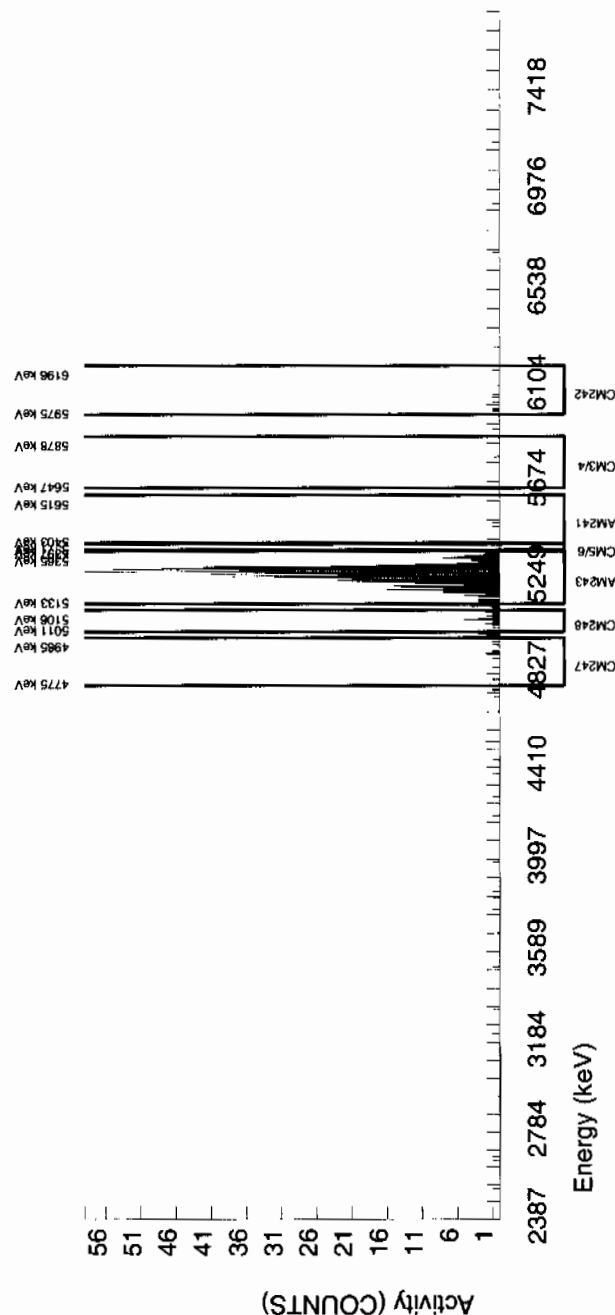
TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3155E+01 pCi/G	NOMINAL : 3.3155E+01 pCi/G
RESULTS : 2.1267E+00 dpm		

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	5490.229	19.706	2.000	-2.206	3.000	2.8409	99.94000	-3.33E-03	3.02E-03	9.98E-03	2.40E-02	3.02E-03
AM243	5270.000	5265.390	48.864	693.000	693.000	0.000	0.0000	99.78000	1.05E+00	7.64E-02	0.00E+00	4.10E-03	3.98E-02
CM-242	6102.000	6048.548	171.809	8.000	8.000	0.000	4.3413	100.0000	1.34E-02	4.82E-03	1.52E-02	3.46E-02	4.75E-03
CM-3/4	5795.020	5791.940	4.926	1.000	0.000	1.000	5.1799	100.0000	-1.80E-10	2.14E-03	1.82E-02	4.04E-02	2.14E-03
CM-5/6	5386.000	5373.311	0.000	2.000	2.000	0.000	14.2480	86.09000	3.50E-03	2.49E-03	5.81E-02	1.21E-01	2.48E-03
CM-247	4946.000	4904.957	7.236	13.000	13.000	0.000	13.7917	79.30000	2.47E-02	7.03E-03	6.10E-02	1.27E-01	6.86E-03
CM-248	5078.600	5065.368	9.083	26.000	25.000	1.000	19.5080	91.00000	4.14E-02	8.99E-03	7.52E-02	1.55E-01	8.61E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491	CHAMBER : 109	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S1202052623_AM	DETECTOR S/N : 79463	BKG FILE : B109.CNF:683
SAMPLE QTY : 1.000 G	AVERAGE %EFFICIENCY : 35.6501	BKG DATE : 21-FEB-2010
SAMPLE DATE : 24-FEB-2010 00:00:00	COUNT DATE : 27-FEB-2010 19:46:40	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W109.CNF:194
% YIELD : 74.219		CAL DATE : 9-FEB-2010

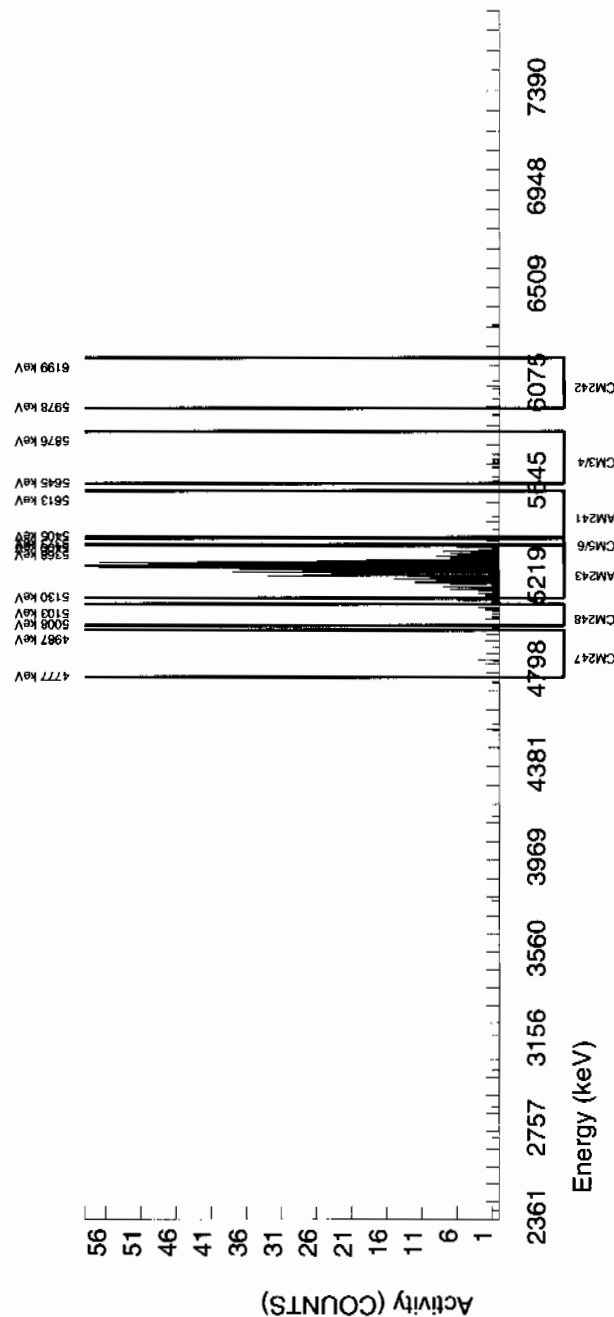
TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9165E+00 dpm	NOMINAL : 3.3152E+01 pCi/G	NOMINAL : 3.3152E+01 pCi/G
RESULTS : 2.1646E+00 dpm		

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	5471.581	58.973	2.000	0.660	0.000	2.8409	99.94000	1.12E-03	1.71E-03	1.13E-02	2.71E-02	1.70E-03
AM243	5270.000	5267.016	63.669	773.000	770.000	3.000	1.7321	99.78000	1.31E+00	9.34E-02	6.87E-03	1.84E-02	4.75E-02
CM-242	6102.000	6065.885	73.717	3.000	3.000	0.000	4.3413	100.0000	5.20E-03	3.02E-03	1.72E-02	3.90E-02	3.00E-03
CM-3/4	5795.020	5728.617	108.118	8.000	6.000	2.000	5.1799	100.0000	1.02E-02	5.42E-03	2.05E-02	4.56E-02	5.39E-03
CM-5/6	5386.000	5374.959	0.000	3.000	3.000	0.000	14.2480	86.09000	5.93E-03	3.44E-03	6.55E-02	1.36E-01	3.43E-03
CM-247	4946.000	4871.563	100.685	10.000	10.000	0.000	13.7917	79.30000	2.15E-02	6.91E-03	6.89E-02	1.44E-01	6.79E-03
CM-248	5078.600	5066.209	52.574	16.000	16.000	0.000	19.5080	91.00000	2.99E-02	7.70E-03	8.49E-02	1.75E-01	7.48E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491 SAMPLE ID : S1202052624_AM SAMPLE QTY : 1.263 G SAMPLE DATE : 3-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 66.813	CHAMBER : 111 DETECTOR S/N : 79462 AVERAGE %EFFICIENCY : 33.1216 COUNT DATE : 27-FEB-2010 19:46:40 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_AM BKG FILE : B111.CNF:682 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W111.CNF:209 CAL DATE : 9-FEB-2010
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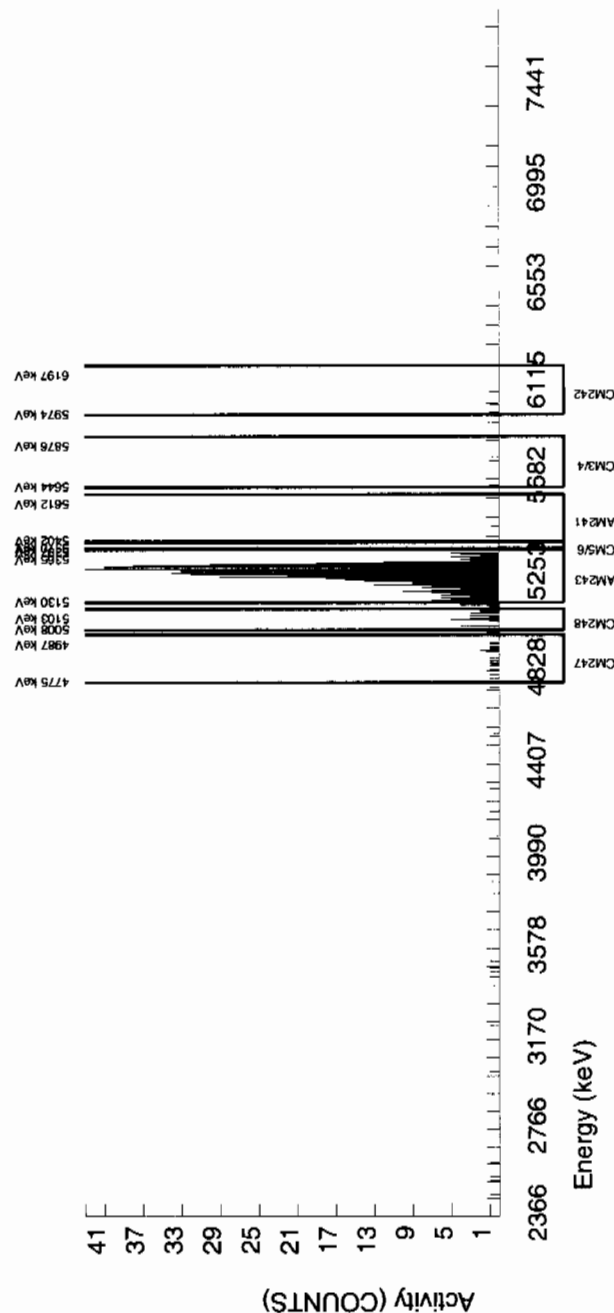
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 1.9486E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3155E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5437.256	0.000	2.000	-1.121	2.000	2.8409	99.94000	-1.81E-03	2.80E-03	1.07E-02	2.57E-02	2.79E-03
AM243	5270.000	5262.540	61.852	646.000	644.000	2.000	1.4142	99.78000	1.04E+00	7.75E-02	5.31E-03	1.50E-02	4.11E-02
CM-242	6102.000	6031.903	89.446	3.000	3.000	0.000	4.3413	100.0000	5.38E-03	3.13E-03	1.63E-02	3.69E-02	3.11E-03
CM-3/4	5795.020	5732.591	133.548	5.000	4.000	1.000	5.1799	100.0000	6.46E-03	3.98E-03	1.94E-02	4.32E-02	3.96E-03
CM-5/6	5386.000	5372.967	0.000	2.000	2.000	0.000	14.2480	86.09000	3.74E-03	2.66E-03	6.21E-02	1.29E-01	2.65E-03
CM-247	4946.000	4891.876	7.299	15.000	14.000	1.000	13.7917	79.30000	2.85E-02	8.33E-03	6.52E-02	1.36E-01	8.13E-03
CM-248	5078.600	5065.621	0.000	35.000	34.000	1.000	19.5080	91.00000	6.02E-02	1.13E-02	8.04E-02	1.66E-01	1.06E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-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 : 953491 SAMPLE ID : S1202052625_AM SAMPLE QTY : 0.137 G SAMPLE DATE : 24-FEB-2010 00:00:00 ANALYST : MXE1 % YIELD : 89.106	CHAMBER : 112 DETECTOR S/N : 78261 AVERAGE %EFFICIENCY : 31.8150 COUNT DATE : 27-FEB-2010 19:46:40 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_AM BKG FILE : B112.CNF:690 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W112.CNF:221 CAL DATE : 15-FEB-2010
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TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9165E+00 dpm RESULTS : 2.5988E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3152E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3152E+01 pCi/G
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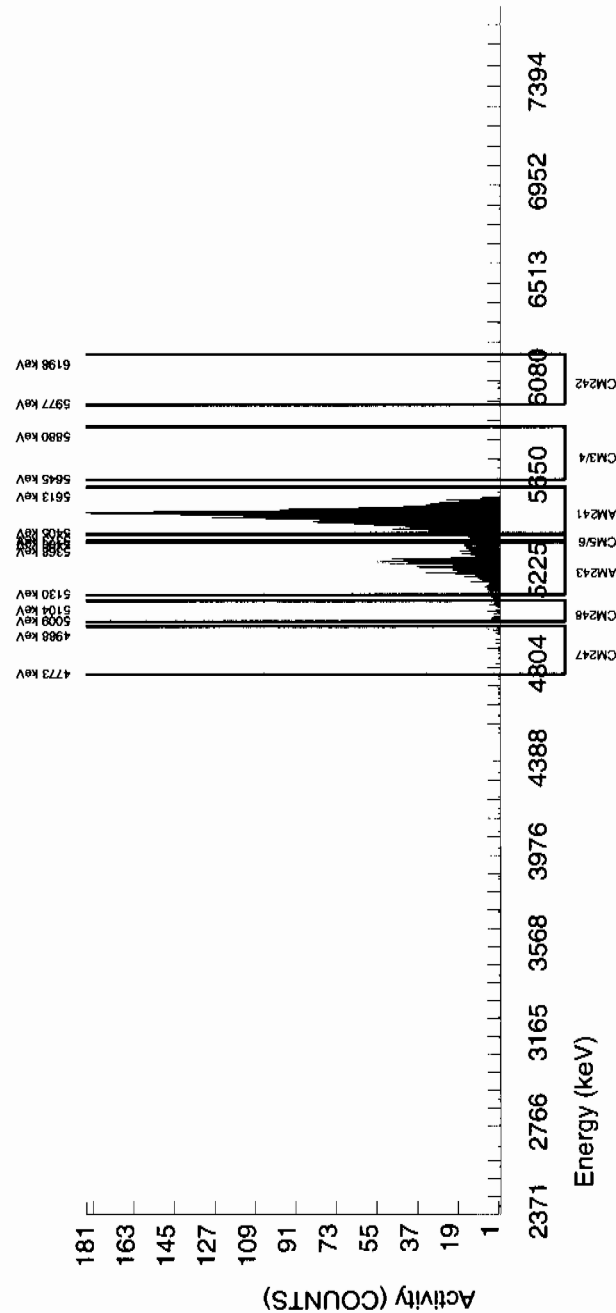
NUCLIDE ACTIVITY SUMMARY

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	5488.363	46.347	2258.000	2255.564	1.000	2.8409	99.94000	2.62E+01	1.78E+00	7.67E-02	1.85E-01	5.51E-01
AM-243	5270.000	5270.994	64.534	828.000	825.000	3.000	1.7321	99.78000	9.59E+00	7.06E-01	4.68E-02	1.25E-01	3.35E-01
CM-242	6102.000	6036.440	83.363	5.000	5.000	0.000	4.3413	100.0000	5.90E-02	2.67E-02	1.17E-01	2.66E-01	2.64E-02
CM-3/4	5795.020	5719.586	34.326	2.000	2.000	0.000	5.1799	100.0000	2.32E-02	1.65E-02	1.40E-01	3.11E-01	1.64E-02
CM-5/6	5386.000	5386.774	0.000	97.000	0.000	0.000	14.2480	86.09000	1.31E+00	1.57E-01	4.47E-01	9.30E-01	1.33E-01
CM-247	4946.000	4903.743	142.208	25.000	24.000	1.000	13.7917	79.30000	3.51E-01	7.80E-02	4.69E-01	9.78E-01	7.46E-02
CM-248	5078.600	5061.133	0.000	39.000	39.000	0.000	19.5080	91.00000	4.97E-01	8.59E-02	5.78E-01	1.19E+00	7.96E-02

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-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# 953494 Product: pu Date: 3/3/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required)	/		
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)	/		Case Narrative
Sample was run within hold time.	/		
Sample was correctly preserved if required.	/		
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.	/		NA
Client Special requirements page has been checked.	/		
Raw Data and/ or spectrum are included and properly stasured.	/		
QC data entered into QC database and batch is in REVW	/		
Hit notification complete (if necessary)	/		NA
Batch entered into Case Narrative.	/		03/04/10
Batch Data Exception Reports (DER) completed, if applicable.	/		NA DER# 799122
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.	/		NA DER# 799122
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: Cam 3/3/10Secondary Review Performed By: J. L. M. 3/4/10
 2
 3/22-3/5
 03/03/10
 CAM

Plutonium Que Sheet

15-FEB-10

Internal Due Date: 22-FEB-10

First Client Due Date: 05-MAR-10

Analyst: MXE1

Batch #: 953494

Tracer Isotope(s): Pu-239/Pu-238 Tracer Code: 1730-B Expiration Date: 1/27/11

LCS Isotope(s): Pu-239/Pu-238 LCS Code: 1730-B Expiration Date: 1/27/11

Spike Isotope(s): Pu-239/Pu-238 Spike Code: 1730-B Expiration Date: 1/27/11

Prep Date: 2/24/10 Initials: me Pipet ID: 2971058 Balance ID: 50410272

Witness: *[Signature]*

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Aliquot (g) 1/1	Pu Δ 0	Det # 311c
246325001-1	RE46-10-11906	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	1	1	1.254	23	65
246440001-1	RE15-10-4354	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	2	2	1.259	23	66
246440002-1	RE15-10-4356	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	3	3	1.260	24	67
246440003-1	RE15-10-4353	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	4	4	1.257	63	68
246440004-1	RE15-10-4352	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	5	5	1.260	69	69
246440005-1	RE15-10-4355	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	6	6	1.264	27	70
246440006-1	RE15-10-4351	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	7	7	1.263	77	71
246440007-1	RE15-10-4350	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	8	8	1.243	79	72
246440008-1	RE15-10-4357	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	9	9	1.242	28	73
246440009-1	RE15-10-4338	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	10	10	1.255	81	74
246440010-1	RE15-10-4336	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	11	11	1.262	82	75
246440011-1	RE15-10-4339	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	12	12	1.267	29	76
246440012-1	RE15-10-4337	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	13	13	1.215	37	77
246440013-1	RE15-10-4375	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	14	14	1.240	31	78
246440014-1	RE15-10-4374	SAMPLE	.05 pC/g		SOIL	LANL010	02-FEB-10	15	15	1.260	96	79
246440015-1	RE15-10-4361	SAMPLE	.05 pC/g		SOIL	LANL010	03-FEB-10	16	16	1.254	33	80
246440016-1	RE15-10-4362	SAMPLE	.05 pC/g		SOIL	LANL010	03-FEB-10	17	17	1.252	88	81
246440017-1	RE15-10-4359	SAMPLE	.05 pC/g		SOIL	LANL010	03-FEB-10	18	18	1.243	89	82
246440018-1	RE15-10-4358	SAMPLE	.05 pC/g		SOIL	LANL010	03-FEB-10	19	19	1.257	35	83
246440019-1	RE15-10-4360	SAMPLE	.05 pC/g		SOIL	LANL010	03-FEB-10	20	20	1.214	91	84
246440020-1	MB for batch 953494	MB	.05 pC/g		SOIL	QC ACCOUNT	03-FEB-10	21	21	1.00	92	85
246440021-1	RE15-10-4361(24644001DUP)	DUP	.05 pC/g		SOIL	QC ACCOUNT	03-FEB-10	22	22	1.263	36	86
246440022-1	LCS for batch 953494	LCS	.05 pC/g		SOIL	QC ACCOUNT	03-FEB-10	23	23	0.137	94	87

* 9 RM

Solid Sample Dissolution by LEACH or DIGESTION

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:

[Signature] 0244-B exp 4/30/20

[Signature] 3/4/10

Blank Correction Report

Batch ID 953494

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202044085	DUP	Plutonium-238	1.26 g	0.0274	0.00997	0.0379	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00388	0.00507	0.0288	.007920635	pCi/g	YES
1202044066	LCS	Plutonium-238	0.137 g	7.37	0.493	0.195	.182481752	pCi/g	NO
		Plutonium-239/240	0.137 g	38.7	2.17	0.147	.072848715	pCi/g	NO
1202044064	MB	Plutonium-238	1.00 g	0.025	0.00656	0.0272	.025	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00998	0.00528	0.0205	.00998	pCi/g	YES
246325001	RE46-10-11908	Plutonium-238	1.25 g	0.0161	0.00831	0.0219	.02	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00134	0.00403	0.0165	.007984	pCi/g	YES
246440001	RE15-10-8354	Plutonium-238	1.26 g	0.00948	0.00971	0.0351	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0169	0.00645	0.0266	.007920635	pCi/g	YES
246440002	RE15-10-8356	Plutonium-238	1.27 g	0.00231	0.0056	0.0346	.019685039	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0262	0.00802	0.0263	.007858268	pCi/g	YES
246440003	RE15-10-8353	Plutonium-238	1.26 g	0.0113	0.00539	0.0284	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00808	0.00537	0.0199	.007920635	pCi/g	YES
246440004	RE15-10-8352	Plutonium-238	1.26 g	0.019	0.00512	0.0194	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00476	0.00337	0.0146	.007920635	pCi/g	YES
246440005	RE15-10-8355	Plutonium-238	1.26 g	0.0161	0.00674	0.0361	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.021	0.00821	0.0273	.007920635	pCi/g	YES
246440006	RE15-10-8351	Plutonium-238	1.26 g	0.00516	0.00632	0.0211	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00645	0.00342	0.0159	.007920635	pCi/g	YES
246440007	RE15-10-8350	Plutonium-238	1.27 g	0.013	0.00415	0.0212	.019685039	pCi/g	YES
		Plutonium-239/240	1.27 g	0.013	0.00454	0.016	.007858268	pCi/g	YES
246440008	RE15-10-8357	Plutonium-238	1.27 g	0.0152	0.00628	0.0369	.019685039	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0114	0.00585	0.028	.007858268	pCi/g	YES
246440009	RE15-10-8338	Plutonium-238	1.26 g	0.0178	0.00536	0.0224	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00821	0.00337	0.0168	.007920635	pCi/g	YES
246440010	RE15-10-8336	Plutonium-238	1.26 g	0.0131	0.00419	0.0214	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	-0.00262	0.00262	0.0161	.007920635	pCi/g	YES
246440011	RE15-10-8339	Plutonium-238	1.27 g	0.00976	0.00783	0.0358	.019685039	pCi/g	YES
		Plutonium-239/240	1.27 g	0.00239	0.0058	0.0272	.007858268	pCi/g	YES
246440012	RE15-10-8337	Plutonium-238	1.28 g	0.0304	0.0112	0.0355	.01953125	pCi/g	YES
		Plutonium-239/240	1.28 g	0.00241	0.00387	0.0269	.007796875	pCi/g	YES
246440013	RE15-10-8375	Plutonium-238	1.27 g	0.0339	0.00923	0.0352	.019685039	pCi/g	YES
		Plutonium-239/240	1.27 g	0.00961	0.00709	0.0267	.007858268	pCi/g	YES
246440014	RE15-10-8374	Plutonium-238	1.26 g	0.0186	0.00569	0.0217	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00795	0.00421	0.0163	.007920635	pCi/g	YES
246444001	RE15-10-8361	Plutonium-238	1.25 g	0.0186	0.00782	0.0387	.02	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0252	0.00661	0.0293	.007984	pCi/g	YES
246444002	RE15-10-8362	Plutonium-238	1.25 g	0.0184	0.00793	0.0231	.02	pCi/g	YES

20m
3/4/16

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
246444002	RE15-10-8362	Plutonium-239/240	1.25 g	0.0113	0.00532	0.0174	.007984	pCi/g	YES
246444003	RE15-10-8359	Plutonium-238	1.27 g	0.0158	0.00523	0.0235	.019685039	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0115	0.00612	0.0177	.007858268	pCi/g	YES
246444004	RE15-10-8358	Plutonium-238	1.26 g	0.0172	0.00721	0.0386	.019841270	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00641	0.0104	0.0293	.007920635	pCi/g	YES
246444005	RE15-10-8360	Plutonium-238	1.27 g	0.0142	0.00415	0.0193	.019685039	pCi/g	YES
		Plutonium-239/240	1.27 g	0.00828	0.00315	0.0145	.007858268	pCi/g	YES

GEL Laboratories LLC
 ALPHA SPECTROSCOPY REPORT

<p>BATCH NUMBER : 953494 SAMPLE ID : S0246440011_PU SAMPLE QTY : 1.267 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 87.315</p>	<p>CHAMBER : 029 DETECTOR SN : 33454 AVERAGE %EFFICIENCY : 31.3340 COUNT DATE : 1-MAR-2010 18:20:57 ELAPSED LIVE TIME(SEC) : 30300.00</p>	<p>LIB FILE : ENV ALPHA PU BKG FILE : B029.CNF:1119 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W029.CNF:320 CAL DATE : 3-FEB-2010</p>
<p>TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6429E+00 dpm RESULTS : 5.8003E+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>

NUCLIDE ACTIVITY SUMMARY

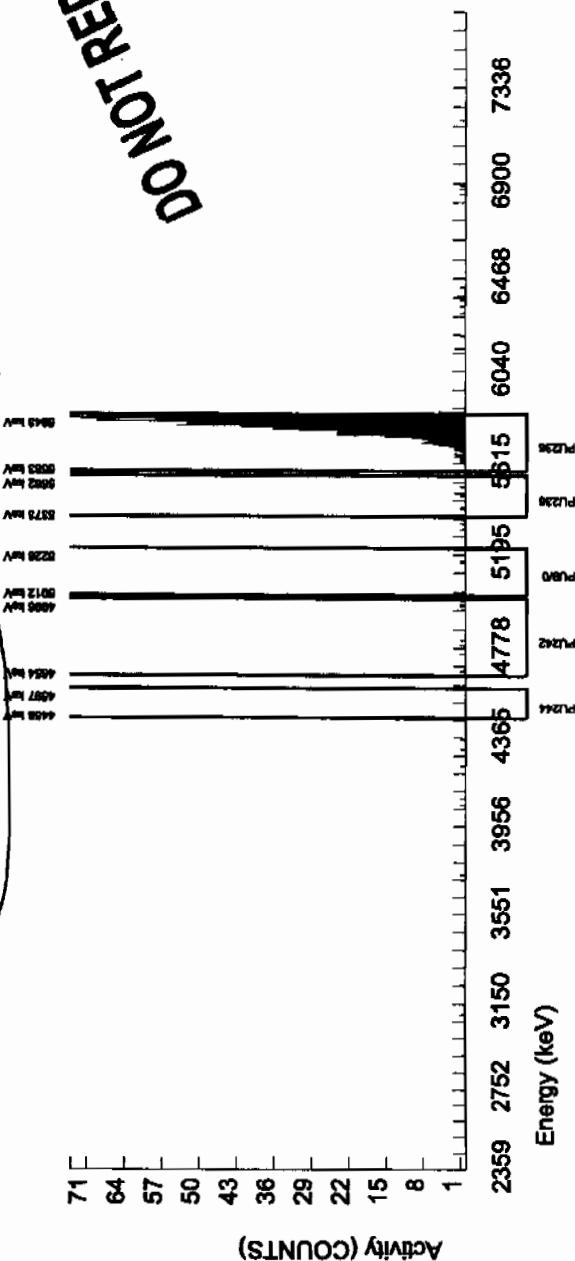
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
PU-236	5748.000	5796.992	0.000	906.000	900.950	5.050	2.2472	100.0000	2.36E+00	1.49E-01	1.17E-02	3.03E-02	7.90E-02
PU-238	5498.000	5468.838	4.894	8.000	3.960	4.040	2.9312	98.900000	1.02E-02	8.18E-03	1.52E-02	3.75E-02	8.17E-03
PU-940	5155.000	5190.868	0.000	4.000	0.970	3.030	2.0604	98.900000	2.50E-03	6.06E-03	1.07E-02	2.94E-02	6.06E-03
PU242	4890.000	4828.768	313.243	10.060	6.970	3.030	*****	100.0000	1.79E-02	8.79E-03	6.66E-01	1.34E+00	8.74E-03
PU-244	4569.000	4527.150	0.000	0.000	0.000	0.000	3.7241	98.900000	0.00E+00	2.58E-03	1.94E-02	4.57E-02	2.58E-03

NOTES:

- * Sg calculated via blank population.
 (Sg updated 10-FEB-2010)
- * Sg of PU-236 calculated as sqrt(BKG AREA).

DO NOT REPORT

Integrated



DO NOT REPORT

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494 SAMPLE ID : S0246440001_PU SAMPLE QTY : 1.259 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 91.018		CHAMBER : 025 DETECTOR S/N : 45-149AA5 AVERAGE %EFFICIENCY : 32.2436 COUNT DATE : 1-MAR-2010 18:20:57 ELAPSED LIVE TIME(SEC) : 30300.00		LIB FILE : ENV_ALPHA_PU BKG FILE : B025.CNF:1117 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W025.CNF:328 CAL DATE : 3-FEB-2010	
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TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6429E+00 dpm RESULTS : 6.0462E+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

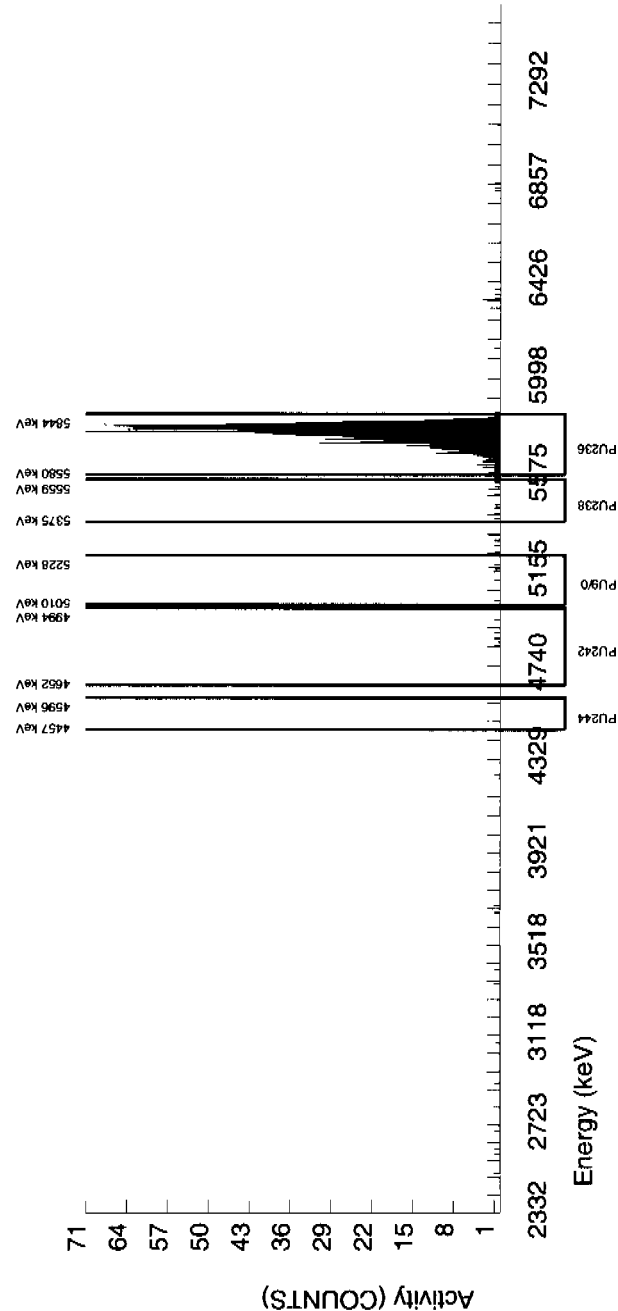
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5764.269	52.703	975.000	966.415	8.585	2.9300	100.0000	2.38E+00	1.43E-01	1.43E-02	3.51E-02	7.70E-02
PU-238	5499.000	5475.262	4.866	12.000	3.920	8.080	2.9312	99.900000	9.48E-03	9.71E-03	1.43E-02	3.51E-02	9.70E-03
PU-9/0	5155.000	5150.921	7.148	7.000	7.000	0.000	2.0604	99.900000	1.69E-02	6.45E-03	1.00E-02	2.66E-02	6.39E-03
PU242	4890.000	4875.424	111.928	6.000	4.990	1.010	*****	100.0000	1.20E-02	6.19E-03	6.25E-01	1.26E+00	6.16E-03
PU-244	4589.000	4497.816	4.866	1.000	-0.010	1.010	3.7241	99.900000	-2.42E-05	2.97E-03	1.82E-02	4.29E-02	2.97E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

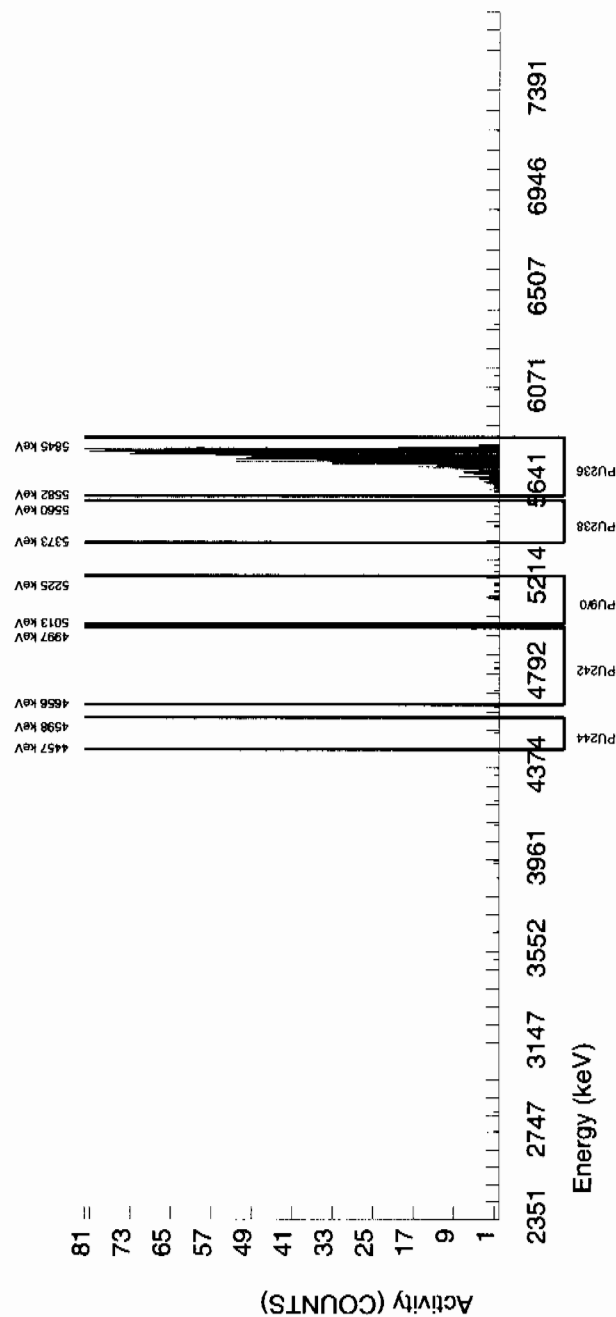
BATCH NUMBER : 953494				CHAMBER : 026				LIB FILE : ENV_ALPHA_PU					
SAMPLE ID : S0246440002_PU				DETECTOR S/N : 78204				BKG FILE : B026.CNF,1118					
SAMPLE QTY : 1.269 G				AVERAGE %EFFICIENCY : 31.5547				BKG DATE : 28-FEB-2010					
SAMPLE DATE : 2-FEB-2010 00:00:00.				COUNT DATE : 1-MAR-2010 18:20:57				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : MXE1				ELAPSED LIVE TIME(SEC) : 30300.00				EFF FILE : W026.CNF,302					
% YIELD : 93.637								CAL DATE : 3-FEB-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1430-B				ID : 0244-B				ID : 0244-B					
NUCLIDE : PU-236				NUCLIDE : PU-9/0				NUCLIDE : PU-9/0					
NOMINAL : 6.6429E+00 dpm				NOMINAL : 4.1778E+01 pCi/G				NOMINAL : 4.1778E+01 pCi/G					
RESULTS : 6.2202E+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	5762.422	59.459	975.000	972.980	2.020	1.4213	100.0000	2.36E+00	1.45E-01	6.82E-03	2.01E-02	7.57E-02
PU-238	5499.000	5486.709	87.918	4.000	0.970	3.030	2.9312	99.900000	2.31E-03	5.60E-03	1.41E-02	3.46E-02	5.60E-03
PU-9/0	5155.000	5144.592	21.979	11.000	11.000	0.000	2.0604	99.900000	2.62E-02	8.02E-03	9.90E-03	2.63E-02	7.90E-03
PU242	4890.000	4802.336	0.000	8.000	7.495	0.505	*****	100.0000	1.78E-02	6.90E-03	6.16E-01	1.24E+00	6.84E-03
PU-244	4589.000	4535.454	4.918	1.000	1.000	0.000	3.7241	99.900000	2.38E-03	2.38E-03	1.79E-02	4.22E-02	2.38E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as $\text{sqrt}(\text{BKG AREA})$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494
SAMPLE ID : S0246440003_PU
SAMPLE QTY : 1.257 G
SAMPLE DATE : 2-FEB-2010 00:00:00.
ANALYST : MXE1
% YIELD : 74.999

CHAMBER : 068
DETECTOR S/N : 78794
AVERAGE %EFFICIENCY : 29.5953
COUNT DATE : 27-FEB-2010 19:45:51
ELAPSED LIVE TIME(SEC) : 60000.00

LIB FILE : ENV_ALPHA_PU
BKG FILE : B068.CNF:1099
BKG DATE : 21-FEB-2010
BKG LIVE TIME(SEC) : 59999.99
EFF FILE : W068.CNF:280
CAL DATE : 9-FEB-2010

TRACER ID : 1430-B
NUCLIDE : PU-236
NOMINAL : 6.6426E+00 dpm
RESULTS : 4.9819E+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

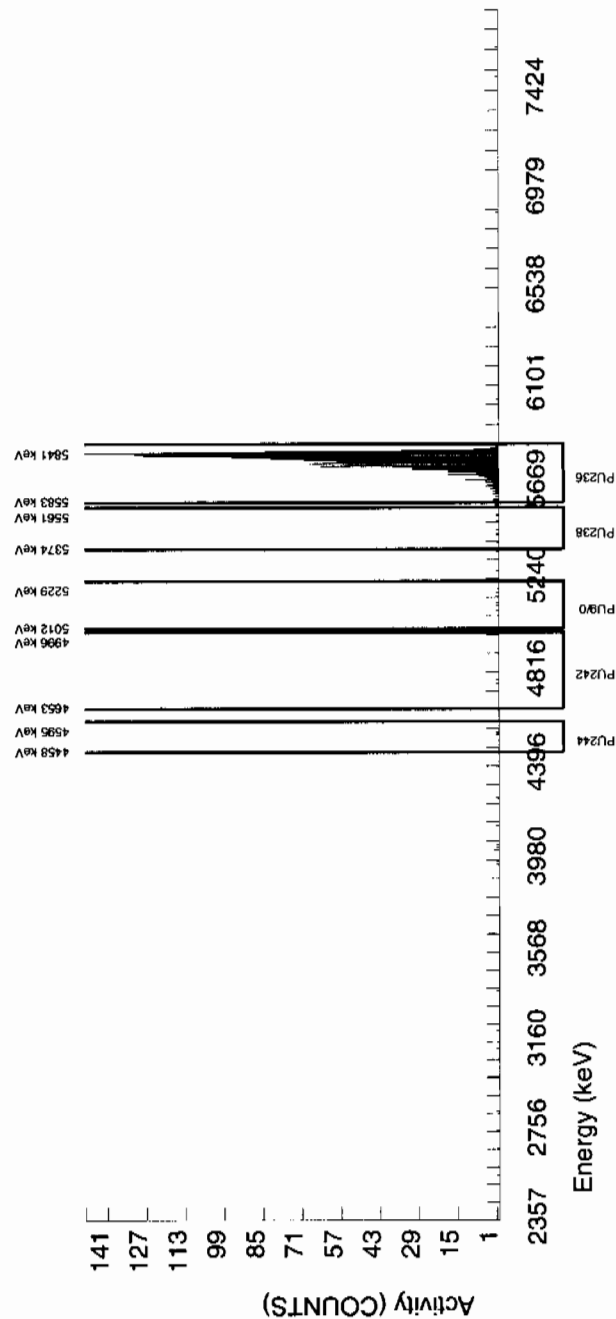
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5776.862	33.864	1453.000	1449.000	4.000	2.0000	100.0000	2.38E+00	1.29E-01	7.51E-03	1.94E-02	6.27E-02
PU-238	5499.000	5488.999	0.000	9.000	7.000	2.000	2.9312	99.900000	1.13E-02	5.39E-03	1.10E-02	2.64E-02	5.36E-03
PU-9/0	5155.000	5144.324	0.000	8.000	5.000	3.000	2.0604	99.900000	8.08E-03	5.37E-03	7.75E-03	1.99E-02	5.36E-03
PU242	4890.000	4778.902	24.834	2.000	0.000	2.000	*****	100.0000	-3.85E-10	3.23E-03	4.82E-01	9.68E-01	3.23E-03
PU-244	4589.000	4547.489	14.900	2.000	1.000	1.000	3.7241	99.900000	1.62E-03	2.80E-03	1.40E-02	3.24E-02	2.80E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494 SAMPLE ID : S0246440004_PU SAMPLE QTY : 1.260 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 98.030	CHAMBER : 069 DETECTOR S/N : 78795 AVERAGE %EFFICIENCY : 30.7054 COUNT DATE : 27-FEB-2010 19:45:51 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B069.CNF;1101 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W069.CNF;287 CAL DATE : 9-FEB-2010
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TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6426E+00 dpm RESULTS : 6.5117E+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

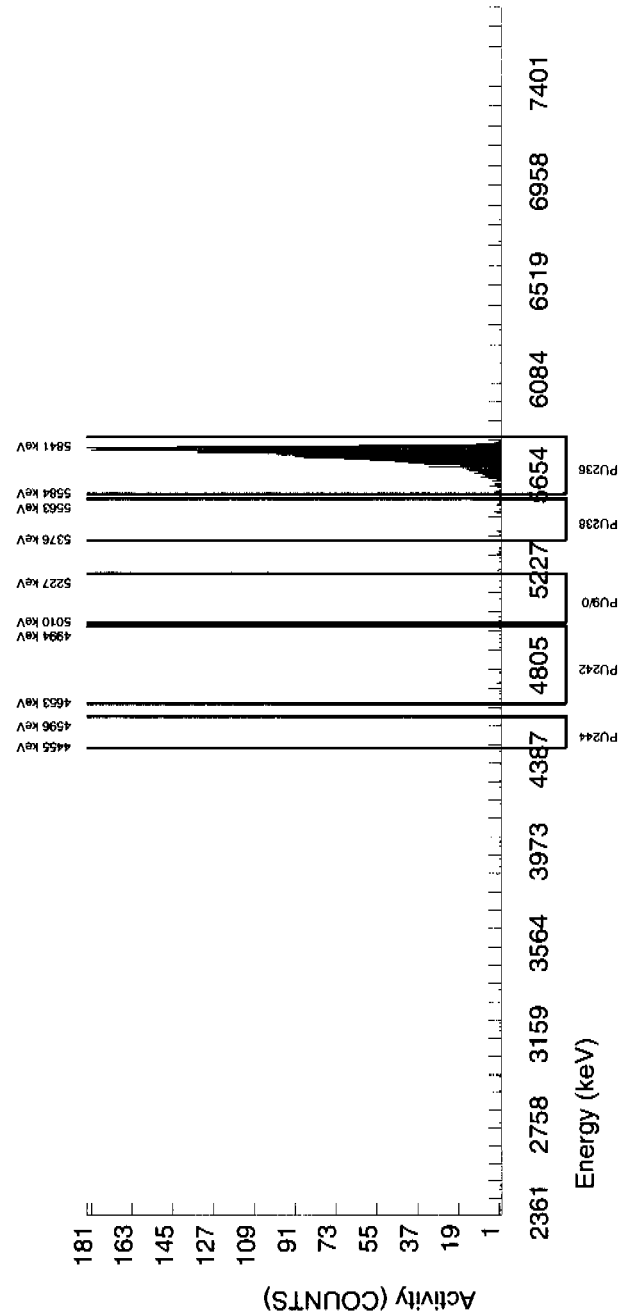
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5766.665	50.553	1968.000	1965.000	3.000	1.7321	100.0000	2.37E+00	1.20E-01	4.79E-03	1.28E-02	5.37E-02
PU-238	5499.000	5493.450	117.778	17.000	16.000	1.000	2.9312	99.900000	1.90E-02	5.12E-03	8.11E-03	1.94E-02	5.05E-03
PU-9/0	5155.000	5096.560	172.043	6.000	4.000	2.000	2.0604	99.900000	4.76E-03	3.37E-03	5.70E-03	1.46E-02	3.36E-03
PU242	4890.000	4805.315	7.246	19.000	17.000	2.000	*****	100.0000	2.02E-02	5.52E-03	3.55E-01	7.12E-01	5.44E-03
PU-244	4589.000	4579.890	0.000	2.000	0.000	2.000	3.7241	99.900000	-2.83E-10	2.38E-03	1.03E-02	2.38E-02	2.38E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494	CHAMBER : 027	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0246440005_PU	DETECTOR S/N : 42484	BKG FILE : B027.CNF:1124
SAMPLE QTY : 1.264 G	AVERAGE %EFFICIENCY : 33.6745	BKG DATE : 28-FEB-2010
SAMPLE DATE : 2-FEB-2010 00:00:00.	COUNT DATE : 1-MAR-2010 18:20:57	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 30300.00	EFF FILE : W027.CNF:329
% YIELD : 84.587		CAL DATE : 3-FEB-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1430-B	ID : 0244-B	ID : 0244-B
NUCLIDE : PU-236	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 6.6429E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 5.6190E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

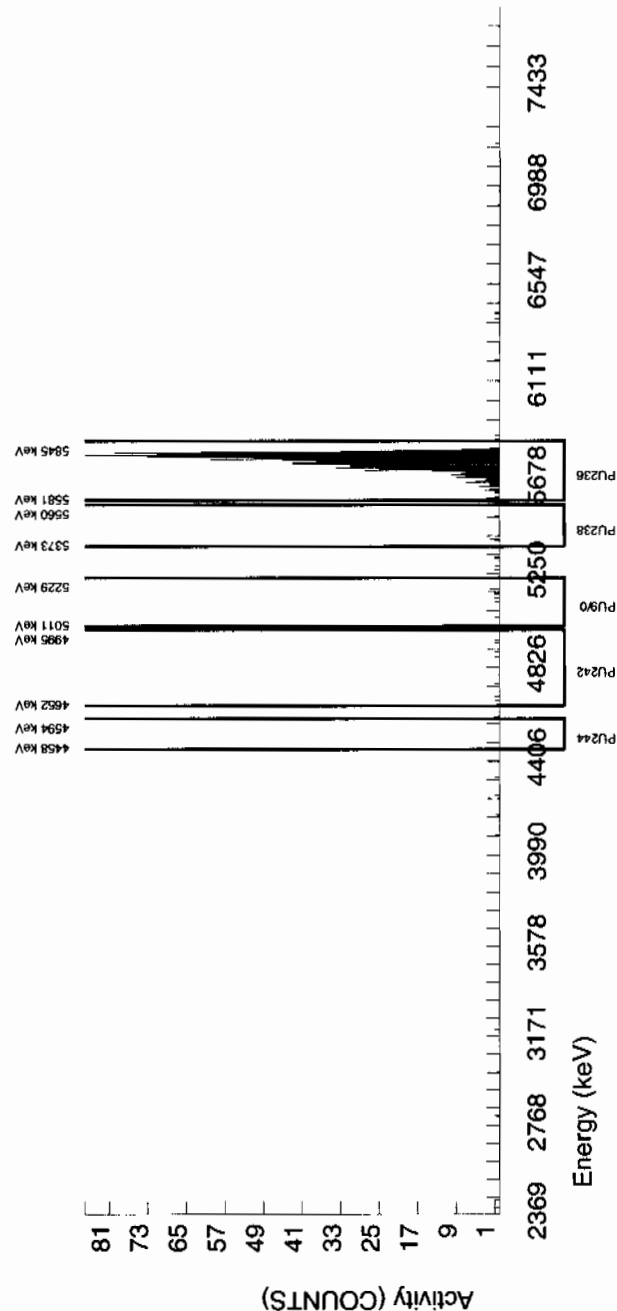
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5762.865	39.396	939.000	937.990	1.010	1.0050	100.0000	2.37E+00	1.47E-01	5.02E-03	1.68E-02	7.74E-02
PU-238	5499.000	5455.098	7.288	7.000	6.495	0.505	2.9312	99.900000	1.61E-02	6.74E-03	1.47E-02	3.61E-02	6.68E-03
PU-9/0	5155.000	5129.128	4.962	10.000	8.485	1.515	2.0604	99.900000	2.10E-02	8.21E-03	1.03E-02	2.73E-02	8.14E-03
PU242	4890.000	4826.443	258.033	8.000	6.485	1.515	*****	100.0000	1.61E-02	7.38E-03	6.42E-01	1.29E+00	7.33E-03
PU-244	4589.000	4526.149	0.000	0.000	0.000	0.000	3.7241	99.900000	0.00E+00	2.48E-03	1.86E-02	4.40E-02	2.48E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494
SAMPLE ID : S0246440006_PU
SAMPLE QTY : 1.263 G
SAMPLE DATE : 2-FEB-2010 00:00:00.
ANALYST : MXE1
% YIELD : 88.334

CHAMBER	:	077
DETECTOR S/N	:	67576
AVERAGE %EFFICIENCY	:	31.3532
COUNT DATE	:	27-FEB-2010 19:45:58
ELAPSED LIVE TIME(SEC)	:	60000.00

LIB FILE	:	ENV_ALPHA_PU
BKG FILE	:	B077.CNF:1019
BKG DATE	:	21-FEB-2010
BKG LIVE TIME(SEC)	:	59999.99
EFF FILE	:	W077.CNF:263
CAL DATE	:	9-FEB-2010

TRACER

ID : 1430-B
NUCLIDE : PU-236
NOMINAL : 6.6426E+00 dpm
RESULTS : 5.8676E+00 dpm

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

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
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NUCLIDE ACTIVITY SUMMARY

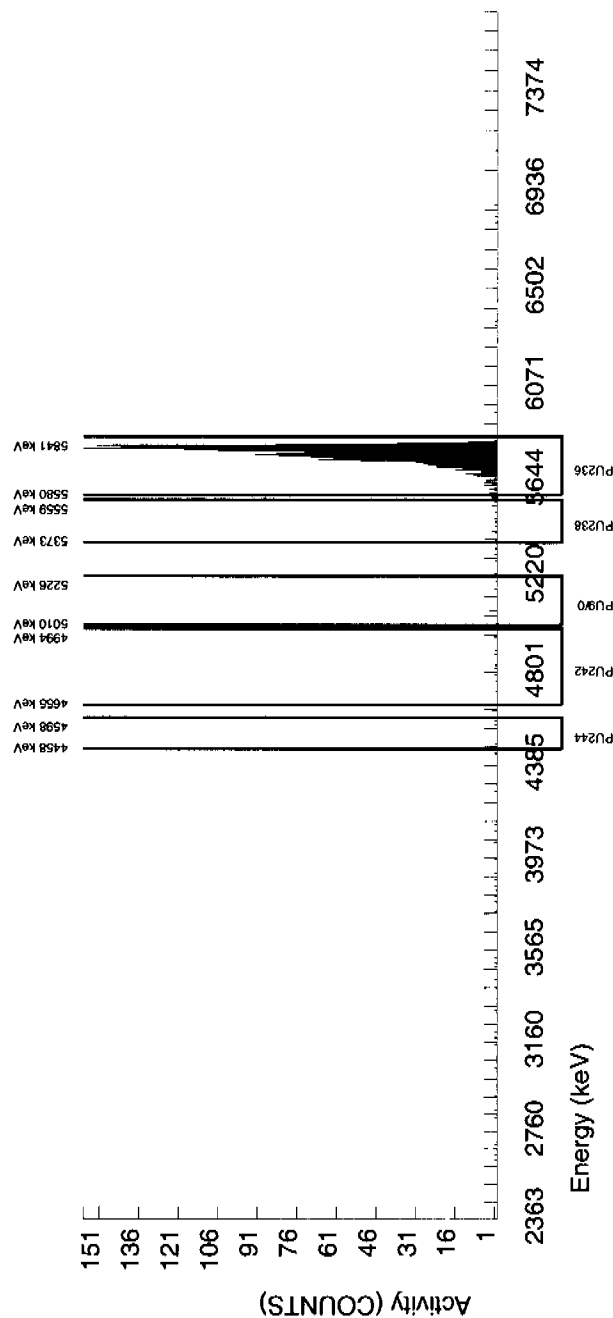
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5771.510	51.460	1818.000	1808.000	10.000	3.1623	100.0000	2.37E+00	1.22E-01	9.47E-03	2.24E-02	5.60E-02
PU-238	5499.000	5460.275	110.945	14.000	4.000	10.000	2.9312	99.900000	5.16E-03	6.32E-03	8.79E-03	2.11E-02	6.32E-03
PU-9/0	5155.000	5104.624	4.938	6.000	5.000	1.000	2.0604	99.900000	6.45E-03	3.42E-03	6.18E-03	1.59E-02	3.41E-03
PU242	4890.000	4878.055	7.252	9.000	9.000	0.000	*****	100.0000	1.16E-02	3.90E-03	3.84E-01	7.72E-01	3.86E-03
PU-244	4589.000	4549.202	98.755	3.000	0.000	3.000	3.7241	99.900000	-6.15E-10	3.16E-03	1.12E-02	2.58E-02	3.16E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

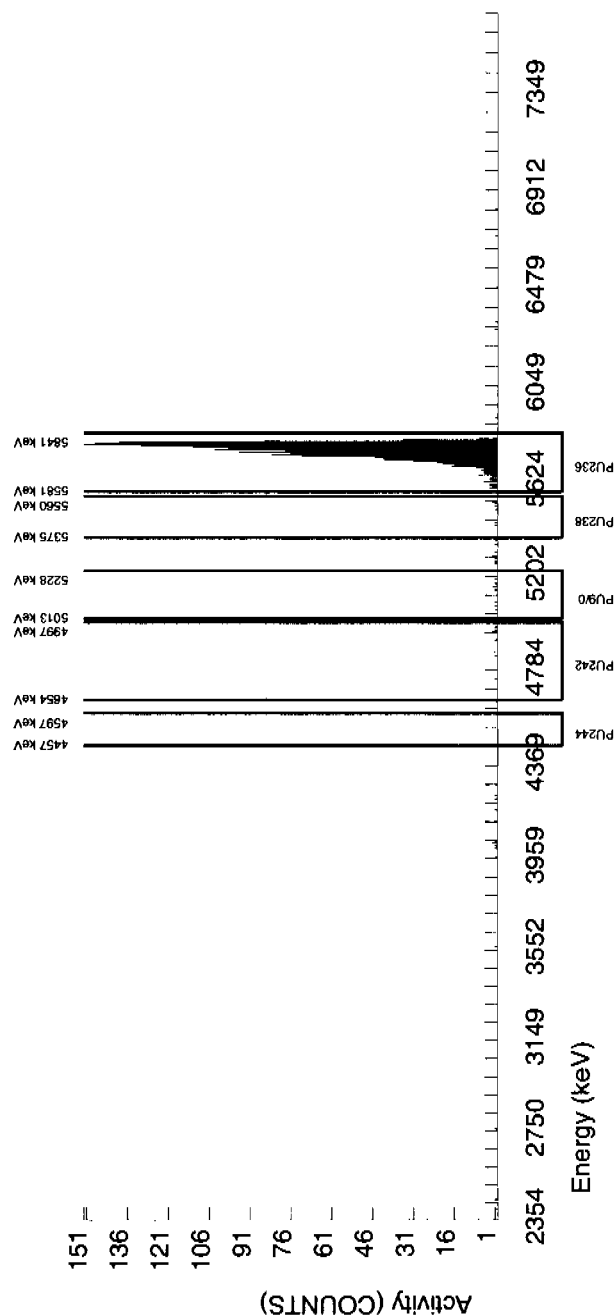
BATCH NUMBER : 953494				CHAMBER : 079				LIB FILE : ENV_ALPHA_PU					
SAMPLE ID : S0246440007_PU				DETECTOR S/N : 79466				BKG FILE : B079.CNF;1021					
SAMPLE QTY : 1.273 G				AVERAGE %EFFICIENCY : 32.2486				BKG DATE : 21-FEB-2010					
SAMPLE DATE : 2-FEB-2010 00:00:00.				COUNT DATE : 27-FEB-2010 19:45:58				BKG LIVE TIME(SEC) : 59999.99					
ANALYST : MXE1				ELAPSED LIVE TIME(SEC) : 60000.00				EFF FILE : W079.CNF;268					
% YIELD : 84.551								CAL DATE : 9-FEB-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1430-B				ID : 0244-B				ID : 0244-B					
NUCLIDE : PU-236				NUCLIDE : PU-9/0				NUCLIDE : PU-9/0					
NOMINAL : 6.6426E+00 dpm				NOMINAL : 4.1778E+01 pCi/G				NOMINAL : 4.1778E+01 pCi/G					
RESULTS : 5.6164E+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	5767.642	57.798	1780.000	1780.000	0.000	0.0000	100.0000	2.35E+00	1.21E-01	0.00E+00	3.52E-03	5.57E-02
PU-238	5499.000	5474.367	7.223	10.000	10.000	0.000	2.9312	99.90000	1.30E-02	4.15E-03	8.86E-03	2.12E-02	4.11E-03
PU-9/0	5155.000	5129.127	4.918	11.000	10.000	1.000	2.0604	99.90000	1.30E-02	4.54E-03	6.23E-03	1.60E-02	4.50E-03
PU242	4890.000	4880.567	9.836	11.000	11.000	0.000	*****	100.0000	1.43E-02	4.35E-03	3.87E-01	7.78E-01	4.30E-03
PU-244	4589.000	4526.695	0.000	0.000	0.000	0.000	3.7241	99.90000	0.00E+00	1.30E-03	1.13E-02	2.60E-02	1.30E-03

NOTES:

* Sq calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494 SAMPLE ID : S0246440008_PU SAMPLE QTY : 1.272 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 89.798	CHAMBER : 028 DETECTOR SN : 78792 AVERAGE %EFFICIENCY : 30.7898 COUNT DATE : 1-MAR-2010 18:20:57 ELAPSED LIVE TIME(SEC) : 30300.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B028.CNF;1128 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W028.CNF;321 CAL DATE : 3-FEB-2010
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TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6429E+00 dpm RESULTS : 5.9652E+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

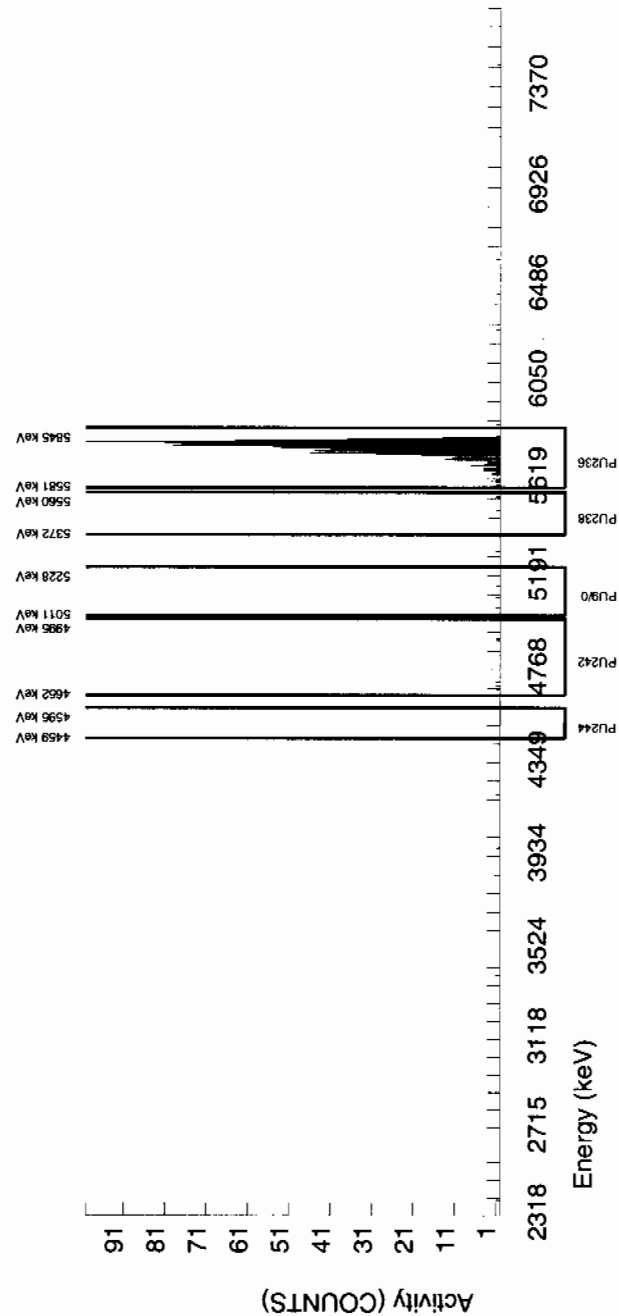
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5762.738	33.285	913.000	910.475	2.525	1.5890	100.0000	2.35E+00	1.48E-01	8.13E-03	2.31E-02	7.81E-02
PU-238	5499.000	5521.232	0.000	6.000	6.000	0.000	2.9312	99.900000	1.52E-02	6.28E-03	1.50E-02	3.69E-02	6.22E-03
PU-9/0	5155.000	5115.841	118.716	5.000	4.495	0.505	2.0604	99.900000	1.14E-02	5.85E-03	1.06E-02	2.80E-02	5.82E-03
PU242	4890.000	4784.931	222.593	5.000	3.990	1.010	*****	100.0000	1.01E-02	5.98E-03	6.57E-01	1.32E+00	5.95E-03
PU-244	4589.000	4526.667	0.000	0.000	-0.505	0.505	3.7241	99.900000	-1.28E-03	2.85E-03	1.91E-02	4.50E-02	2.84E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

<p>BATCH NUMBER : 953494 SAMPLE ID : S0246440009_PU SAMPLE QTY : 1.255 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 81.537</p>		<p>CHAMBER : 081 DETECTOR S/N : 79996 AVERAGE %EFFICIENCY : 32.2195 COUNT DATE : 27-FEB-2010 19:45:58 ELAPSED LIVE TIME(SEC) : 60000.00</p>	<p>LIB FILE : ENV_ALPHA_PU BKG FILE : B081.CNF;1029 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W081.CNF;274 CAL DATE : 9-FEB-2010</p>
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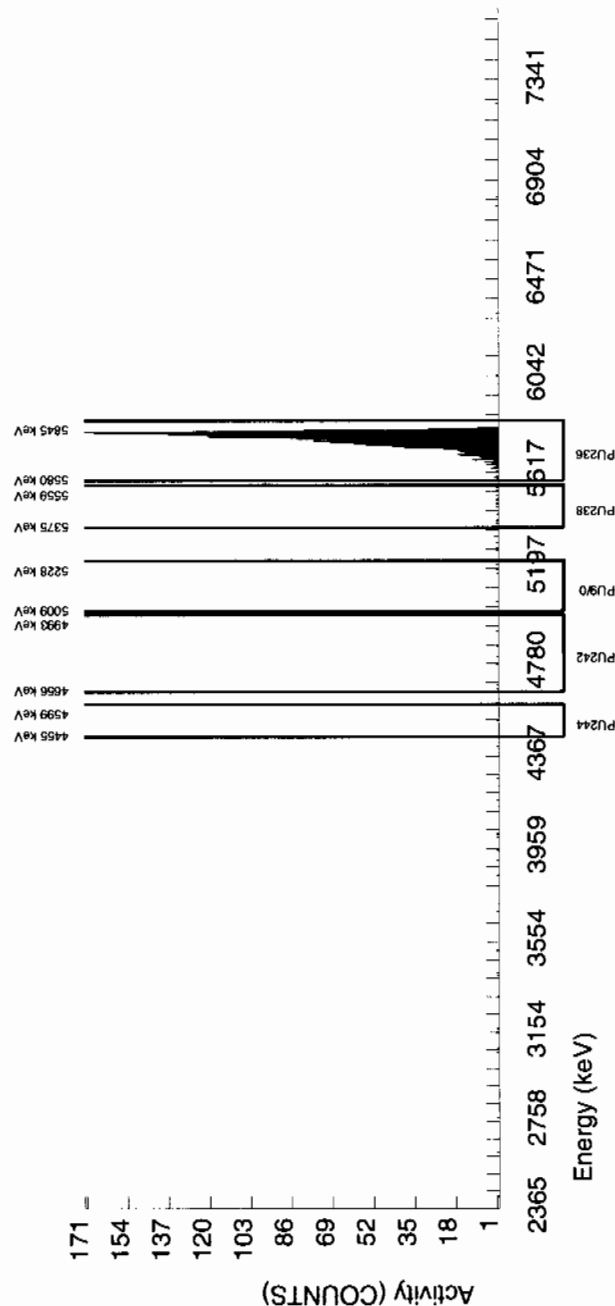
<p>TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6426E+00 dpm RESULTS : 5.4162E+00 dpm</p>	<p>MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G</p>	<p>LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G</p>
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NUCLIDE ACTIVITY 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	5769.443	33.223	1716.000	1715.000	1.000	1.0000	100.0000	2.38E+00	1.24E-01	3.18E-03	1.01E-02	5.76E-02
PU-238	5499.000	5465.217	0.000	14.000	13.000	1.000	2.9312	99.900000	1.78E-02	5.36E-03	9.33E-03	2.24E-02	5.30E-03
PU-9/0	5155.000	5138.336	0.000	6.000	6.000	0.000	2.0604	99.900000	8.21E-03	3.37E-03	6.56E-03	1.68E-02	3.35E-03
PU242	4890.000	4791.317	239.052	6.000	6.000	0.000	*****	100.0000	8.20E-03	3.37E-03	4.08E-01	8.20E-01	3.35E-03
PU-244	4589.000	4532.039	4.879	1.000	1.000	0.000	3.7241	99.900000	1.37E-03	1.37E-03	1.18E-02	2.74E-02	1.37E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	953494
SAMPLE ID	S0246440010_PU
SAMPLE QTY	1.262 G
SAMPLE DATE	2-FEB-2010 00:00:00.
ANALYST	MXE1
% YIELD	84.673

CHAMBER	:	082
DETECTOR S/N	:	79997
AVERAGE %EFFICIENCY	:	32.1841
COUNT DATE	:	27-FEB-2000
ELAPSED LIVE TIME(SEC)	:	60000.00

LIB FILE	ENV_ALPHA_PU
BKG FILE	B082.CNF;1019
BKG DATE	21-FEB-2010
BKG LIVE TIME(SEC)	59999.99
EFF FILE	W082.CNF;257
CAL DATE	9-FEB-2010

TRACER

ID : 1430-B
NUCLIDE : PU-236
NOMINAL : 6.6426E+00 dpm
RESULTS : 5.6245E+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

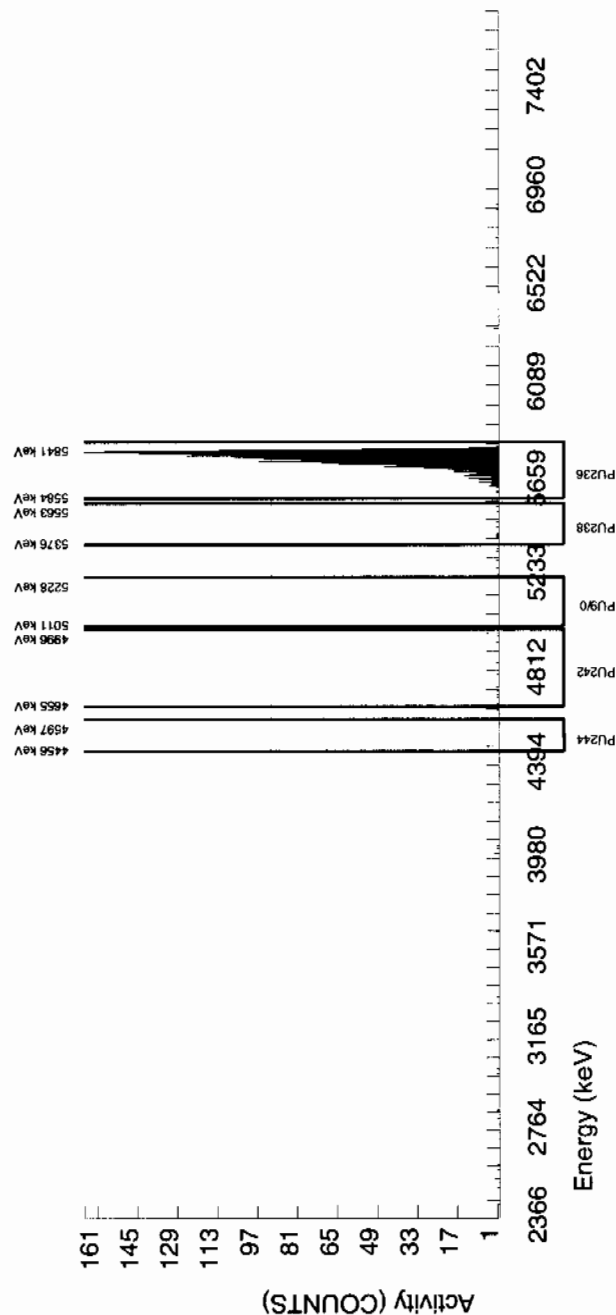
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLCL pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5771.858	54.391	1779.000	1779.000	0.000	0.0000	100.0000	2.37E+00	1.22E-01	0.00E+00	3.55E-03	5.62E-02
PU-238	5499.000	5473.228	0.000	10.000	10.000	0.000	2.9312	99.900000	1.31E-02	4.19E-03	8.14E-03	2.14E-02	4.15E-03
PU-9/0	5155.000	5190.889	4.942	1.000	-2.000	3.000	2.0604	99.900000	-2.62E-03	2.62E-03	6.28E-03	1.61E-02	2.62E-03
PO-242	4890.000	4791.220	286.654	9.000	7.000	2.000	*****	100.0000	9.17E-03	4.36E-03	3.91E-01	7.86E-01	4.34E-03
PU-244	4589.000	4526.691	0.000	0.000	0.000	0.000	3.7241	99.900000	0.00E+00	1.31E-03	1.14E-02	2.63E-02	1.31E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

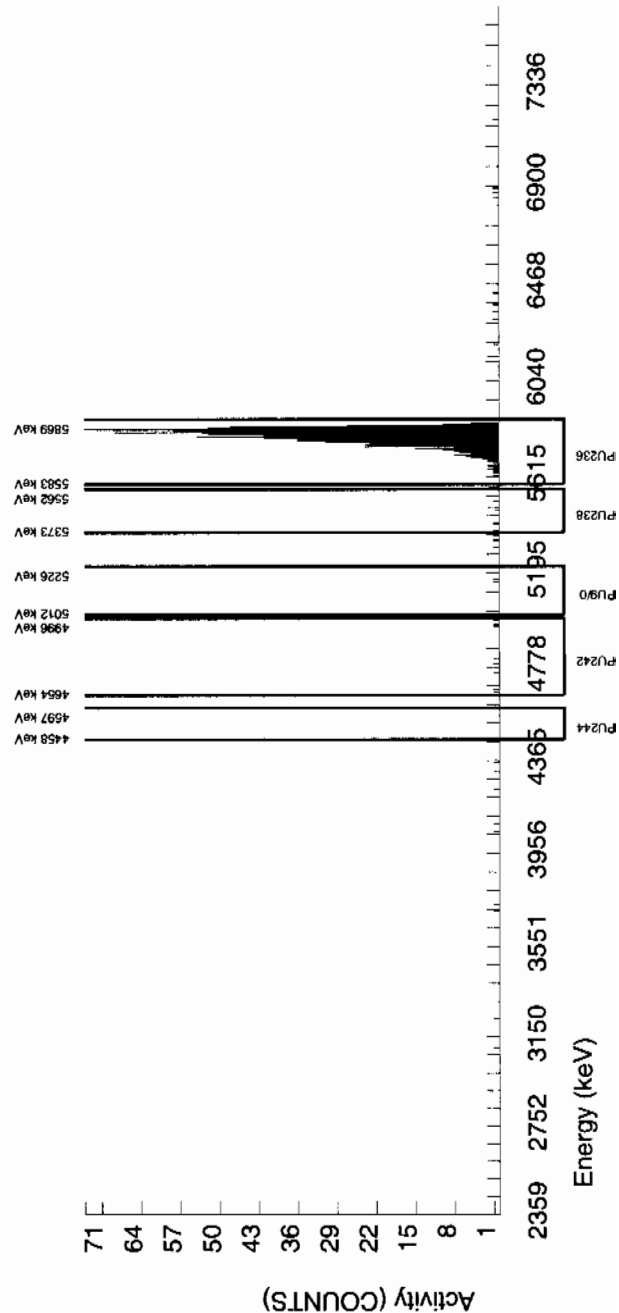
BATCH NUMBER : 953494 SAMPLE ID : S0246440011_PU SAMPLE QTY : 1.267 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 91.288				CHAMBER : 029 DETECTOR S/N : 33454 AVERAGE %EFFICIENCY : 31.3340 COUNT DATE : 1-MAR-2010 18:20:57 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B029.CNF:1119 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W029.CNF:320 CAL DATE : 3-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6429E+00 dpm RESULTS : 6.0642E+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	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	5799.368	54.489	948.000	941.940	6.060	2.4617	100.0000	2.36E+00	1.47E-01	1.22E-02	3.11E-02	7.73E-02
PU-238	5499.000	5468.838	4.894	8.000	3.960	4.040	2.9312	99.900000	9.76E-03	7.83E-03	1.46E-02	3.58E-02	7.81E-03
PU-9/0	5155.000	5190.668	0.000	4.000	0.970	3.030	2.0604	99.900000	2.39E-03	5.80E-03	1.02E-02	2.72E-02	5.79E-03
PU242	4890.000	4829.768	313.213	10.000	6.970	3.030	*****	100.0000	1.72E-02	8.41E-03	6.37E-01	1.28E+00	8.36E-03
PU-244	4589.000	4527.150	0.000	0.000	0.000	0.000	3.7241	99.900000	0.00E+00	2.47E-03	1.85E-02	4.37E-02	2.46E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494 SAMPLE ID : S0246440012_PU SAMPLE QTY : 1.275 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 79.930		CHAMBER : 037 DETECTOR S/N : 45-149BB5 AVERAGE %EFFICIENCY : 35.9189 COUNT DATE : 3-MAR-2010 07:24:05 ELAPSED LIVE TIME(SEC) : 30299.99	LIB FILE : ENV_ALPHA_PU BKG FILE : B037.CNF:1121 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W037.CNF:307 CAL DATE : 3-FEB-2010
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TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6429E+00 dpm RESULTS : 5.3097E+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

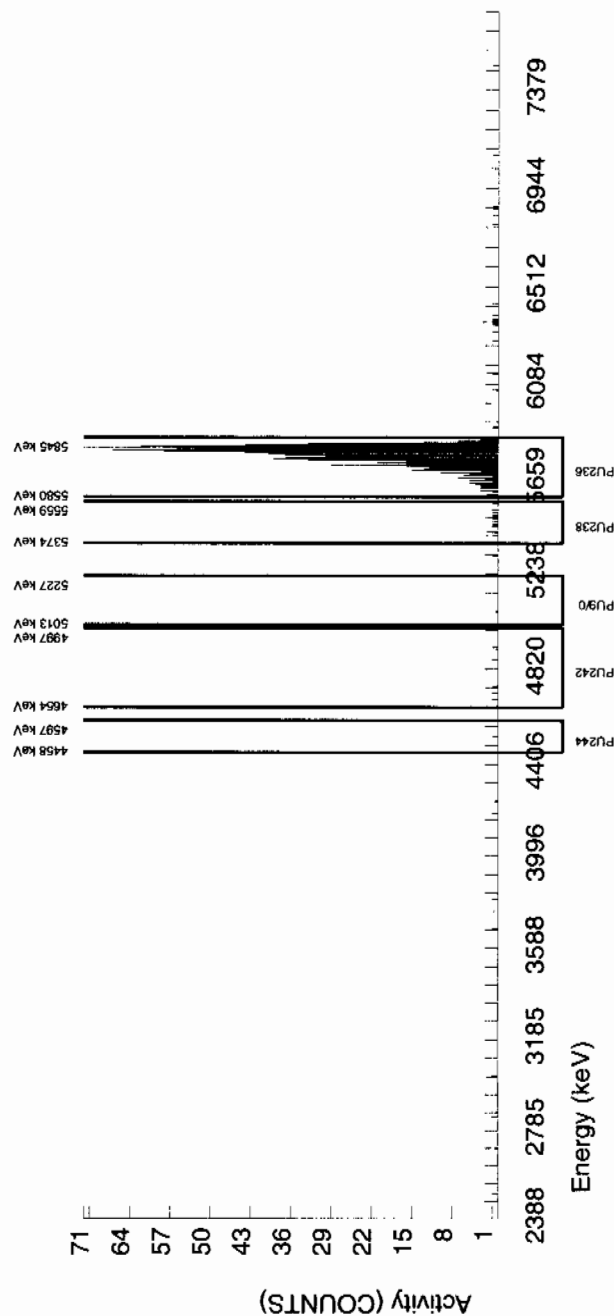
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5770.509	65.140	949.000	944.455	4.545	2.1319	100.0000	2.35E+00	1.42E-01	1.05E-02	2.76E-02	7.66E-02
PU-238	5499.000	5470.908	0.000	18.000	12.445	5.555	2.9312	99.900000	3.04E-02	1.12E-02	1.44E-02	3.55E-02	1.11E-02
PU-9/0	5155.000	5088.718	138.124	2.000	0.990	1.010	2.0604	99.900000	2.41E-03	3.87E-03	1.01E-02	2.69E-02	3.86E-03
PU242	4890.000	4838.815	286.113	7.000	3.970	3.030	*****	100.0000	9.67E-03	7.13E-03	6.31E-01	1.27E+00	7.12E-03
PU-244	4589.000	4535.143	4.933	1.000	0.495	0.505	3.7241	99.900000	1.21E-03	2.74E-03	1.83E-02	4.33E-02	2.73E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	953494
SAMPLE ID	S0246440013_PU
SAMPLE QTY	1.270 G
SAMPLE DATE	2-FEB-2010 00:00
ANALYST	MXE1
% YIELD	85.660

CHAMBER : 031
DETECTOR S/N : 79988
AVERAGE %EFFICIENCY : 33.8909
COUNT DATE : 1-MAR-2010 18:20:58
ELAPSED LIVE TIME(SEC) : 30300.00

LIB FILE	:	ENV_ALPHA_PU
BKG FILE	:	B031.CNF:1114
BKG DATE	:	28-FEB-2010
BKG LIVE TIME(SEC)	:	59999.99
EFF FILE	:	W031.CNF:345
CAL DATE	:	3-FEB-2010

TRACER	:	1430-B
ID	:	PU-236
NUCLIDE	:	6.6429E+00 dpm
NOMINAL	:	5.6903E+00 dpm
RESULTS	:	

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

NUCLIDE ACTIVITY SUMMARY

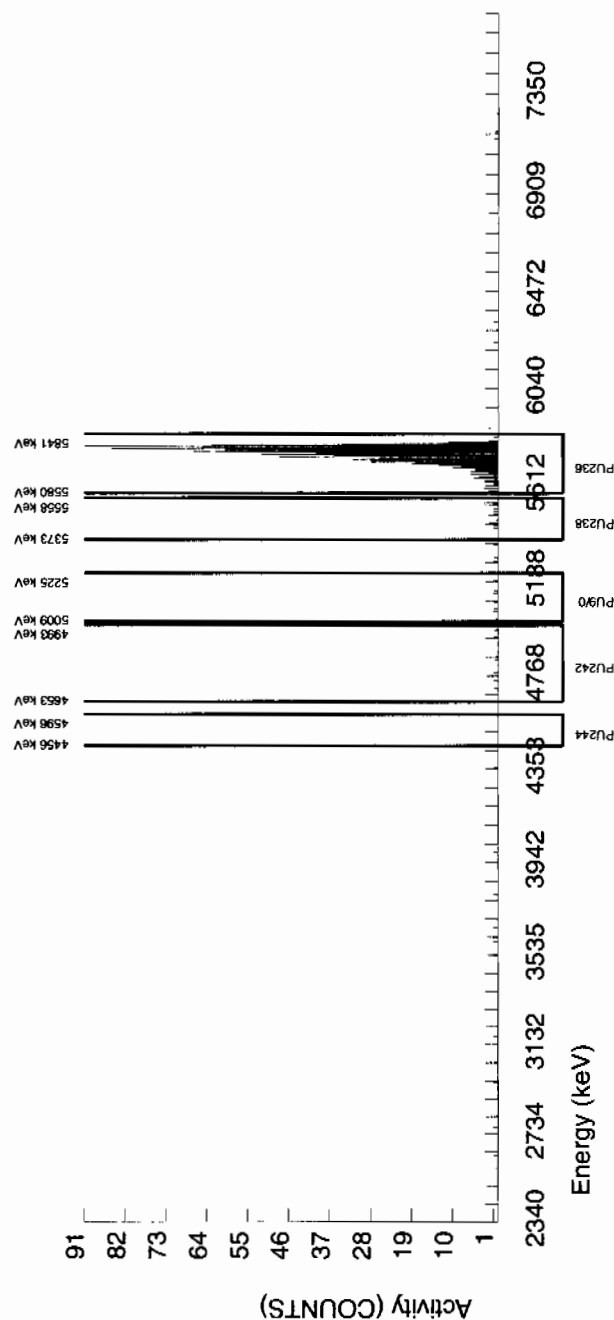
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
PU-236	5749.000	5759.426	52.472	957.000	955.990	1.010	1.0050	100.0000	2.36E+00	1.42E-01	4.91E-03	1.64E-02	7.63E-02
PU-238	5499.000	5493.055	86.858	14.000	14.000	0.000	2.9312	99.900000	3.39E-02	9.23E-03	1.43E-02	3.52E-02	9.07E-03
PU-9/0	5155.000	5117.647	132.199	7.000	3.970	3.030	2.0604	99.900000	9.61E-03	7.09E-03	1.01E-02	2.67E-02	7.07E-03
PU242	4890.000	4820.203	254.605	7.000	2.960	4.040	*****	100.00000	7.16E-03	7.28E-03	6.27E-01	1.26E+00	7.27E-03
PU-244	4589.000	4526.027	0.000	1.000	1.000	0.000	3.7241	99.900000	2.42E-03	2.42E-03	1.82E-02	4.30E-02	2.42E-03

NOTES:

* Sq calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494 SAMPLE ID : S0246440014_PU SAMPLE QTY : 1.260 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 91.695		LIB FILE : ENV_ALPHA_PU BKG FILE : B086.CNF:1026 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W086.CNF:283 CAL DATE : 9-FEB-2010
AVERAGE %EFFICIENCY : 29.4361 COUNT DATE : 27-FEB-2010 20:33:01 ELAPSED LIVE TIME(SEC) : 60000.00		

TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6426E+00 dpm RESULTS : 6.0909E+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

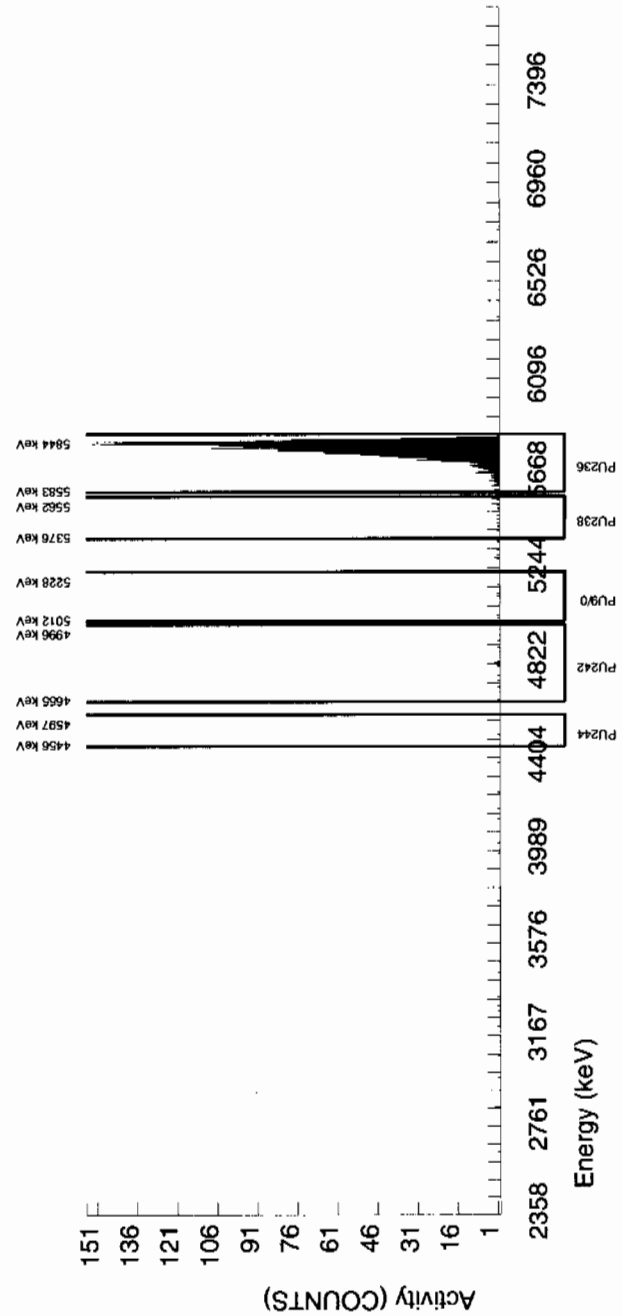
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5781.313	52.072	1762.000	1762.000	0.000	0.0000	100.0000	2.37E+00	1.23E-01	0.00E+00	3.59E-03	5.66E-02
PU-238	5499.000	5495.338	26.306	16.000	14.000	2.000	2.9312	99.900000	1.86E-02	5.69E-03	9.04E-03	2.17E-02	5.63E-03
PU-9/0	5155.000	5126.841	0.000	8.000	6.000	2.000	2.0604	99.900000	7.95E-03	4.21E-03	6.36E-03	1.63E-02	4.19E-03
PU242	4890.000	4797.658	7.374	13.000	11.000	2.000	*****	100.0000	1.46E-02	5.17E-03	3.95E-01	7.94E-01	5.13E-03
PU-244	4589.000	4489.948	50.206	2.000	1.000	1.000	3.7241	99.900000	1.33E-03	2.30E-03	1.15E-02	2.66E-02	2.30E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494	CHAMBER : 033	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0246444001_PU	DETECTOR S/N : 78785	BKG FILE : B033.CNF;1113
SAMPLE QTY : 1.254 G	AVERAGE %EFFICIENCY : 31.8048	BKG DATE : 28-FEB-2010
SAMPLE DATE : 3-FEB-2010 00:00:00.	COUNT DATE : 1-MAR-2010 18:20:58	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 30300.00	EFF FILE : W033.CNF;330
% YIELD : 84.213		CAL DATE : 3-FEB-2010

TRACER	MS/MSD	LCS/LCSD
ID : 1430-B	ID : 0244-B	ID : 0244-B
NUCLIDE : PU-236	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 6.6385E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 5.5905E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

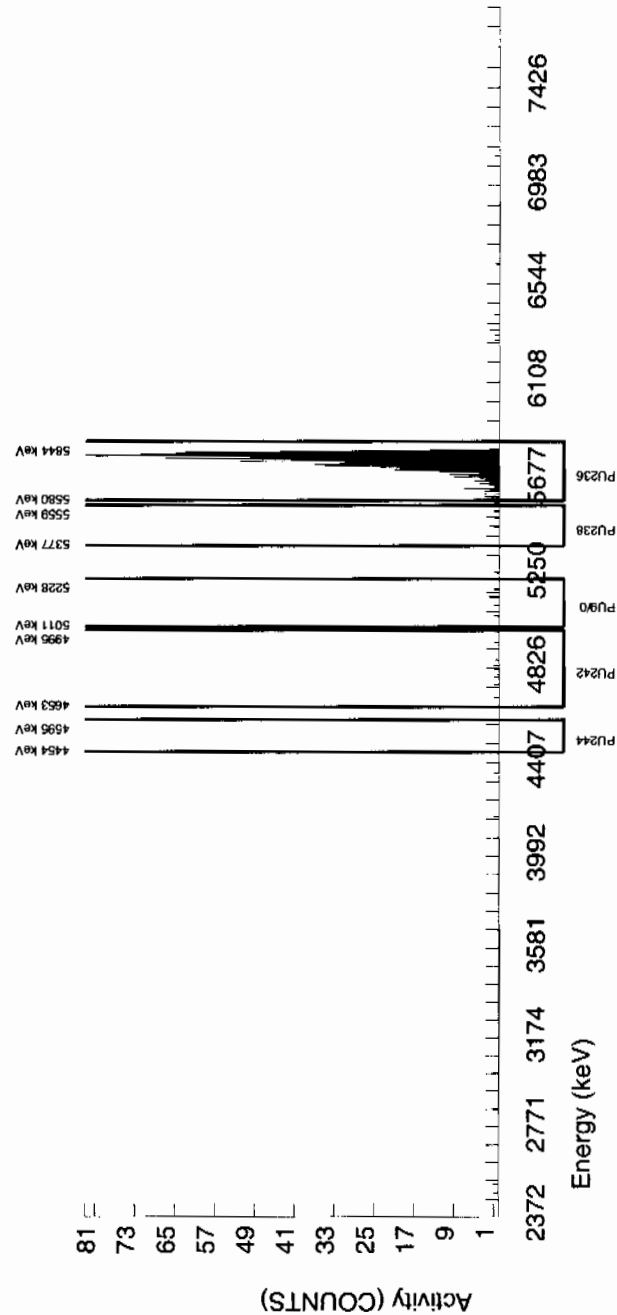
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5762.972	42.433	863.000	881.990	1.010	1.0050	100.0000	2.38E+00	1.47E-01	5.39E-03	1.80E-02	8.04E-02
PU-238	5499.000	5494.869	7.288	8.000	6.990	1.010	2.9312	99.900000	1.86E-02	7.82E-03	1.57E-02	3.87E-02	7.76E-03
PU-9/0	5155.000	5148.817	24.189	10.000	9.495	0.505	2.0604	99.900000	2.52E-02	8.61E-03	1.11E-02	2.93E-02	8.51E-03
PU242	4890.000	4829.406	238.172	9.000	8.495	0.505	*****	100.0000	2.26E-02	8.16E-03	6.88E-01	1.38E+00	8.08E-03
PU-244	4589.000	4524.787	0.000	0.000	-1.515	1.515	3.7241	99.900000	-4.03E-03	3.53E-03	2.00E-02	4.72E-02	3.53E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	:	953494
SAMPLE ID	:	S1202044064_PU
SAMPLE QTY	:	1,000 G
SAMPLE DATE	:	24-FEB-2010 00:00
ANALYST	:	MXE1
% YIELD	:	85.886

CHAMBER : 092
DETECTOR S/N : 79457
AVERAGE %EFFICIENCY : 31.5514
COUNT DATE : 27-FEB-2010 19:46:14
ELAPSED LIVE TIME(SEC) : 59999.99

```
LIB FILE      : ENV_ALPHA_PU
BKG FILE     : B092.CNF:729
BKG DATE     : 21-FEB-2010
BKG LIVE TIME(SEC) : 59999.99
EFF FILE     : W092.CNF:235
CAL DATE     : 9-FEB-2010
```

TRACER

ID : 1430-B
NUCLIDE : PU-236
NOMINAL : 6.5462E+00 dpm
RESULTS : 5.6223E+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

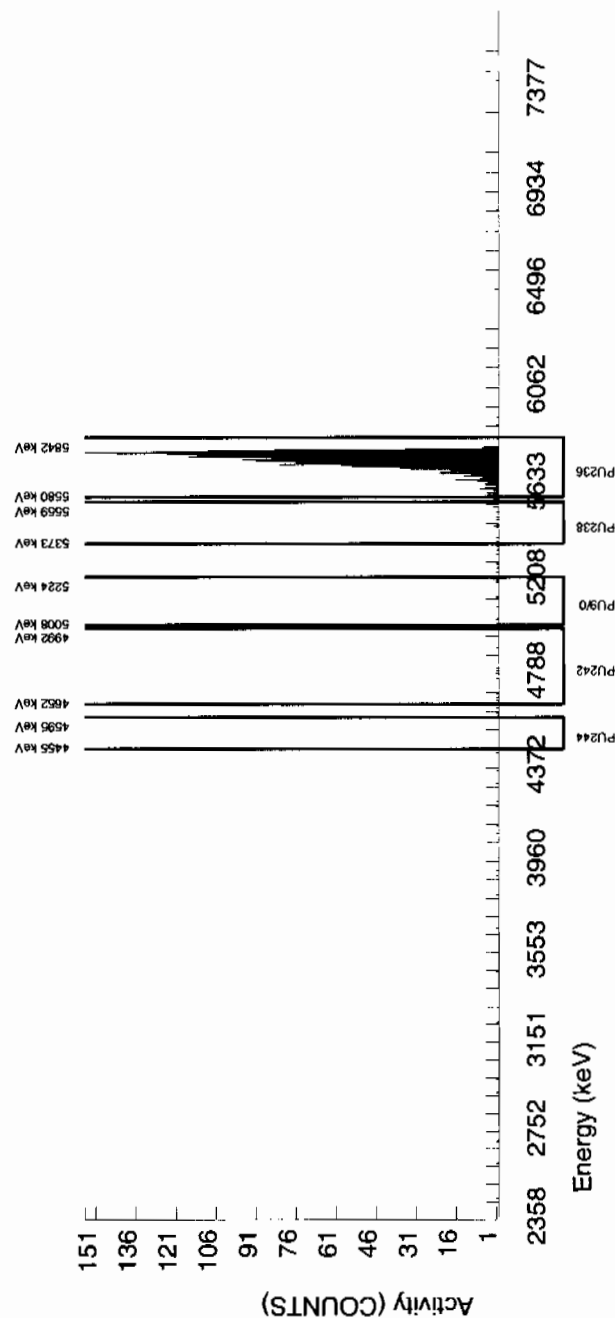
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	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	5750.160	59.959	1769.000	1769.000	0.000	0.0000	100.0000	2.95E+00	1.58E-01	0.00E+00	4.50E-03	7.01E-02
PU-238	5499.000	5489.734	0.000	15.000	15.000	0.000	2.9312	99.90000	2.50E-02	6.56E-03	1.13E-02	2.72E-02	6.45E-03
PU-9/0	5155.000	5126.633	165.823	8.000	6.000	2.000	2.0604	99.90000	9.98E-03	5.28E-03	7.98E-03	2.05E-02	5.26E-03
PU242	4890.000	4771.699	225.177	8.000	3.000	5.000	*****	100.0000	4.99E-03	6.00E-03	4.96E-01	9.97E-01	5.99E-03
PU-244	4589.000	4460.078	4.895	1.000	1.000	0.000	3.7241	99.90000	1.66E-03	1.67E-03	1.44E-02	3.33E-02	1.66E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

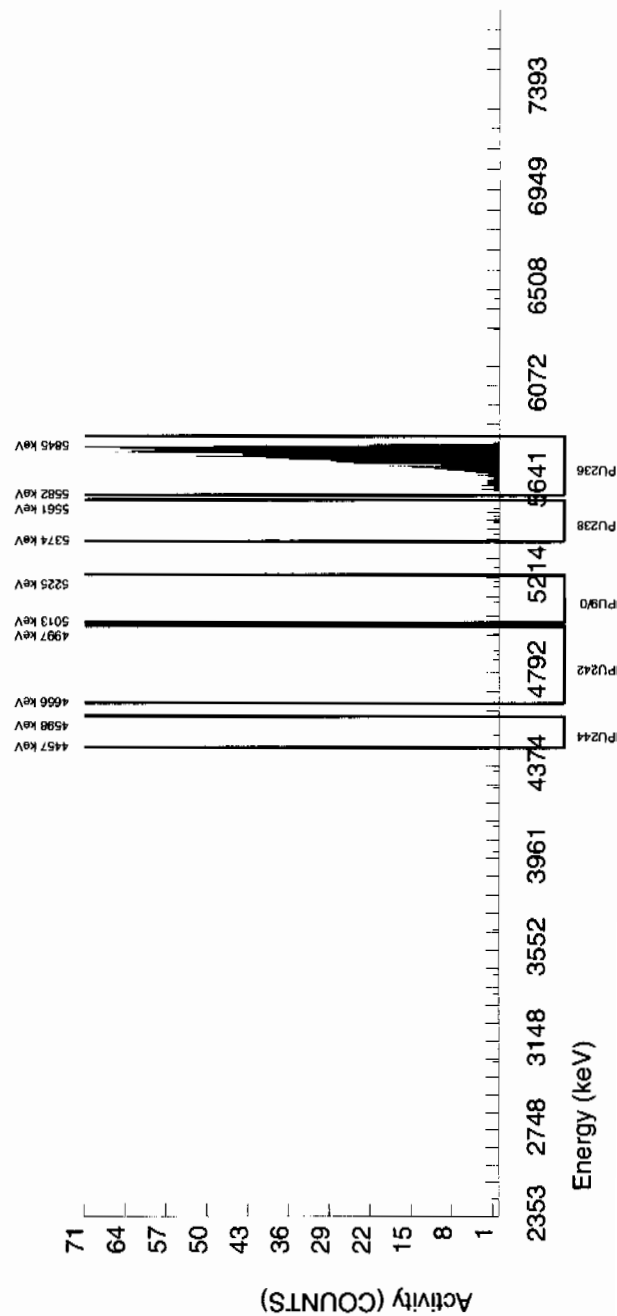
BATCH NUMBER : 953494 SAMPLE ID : S1202044065_PU SAMPLE QTY : 1.263 G SAMPLE DATE : 3-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 84.008				CHAMBER : 036 DETECTOR S/N : 78203 AVERAGE %EFFICIENCY : 32.2436 COUNT DATE : 1-MAR-2010 18:20:58 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B036.CNF.1109 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W036.CNF.331 CAL DATE : 3-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6385E+00 dpm RESULTS : 5.5769E+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	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	5765.271	56.292	893.000	891.990	1.010	1.0050	100.0000	2.37E+00	1.46E-01	5.29E-03	1.76E-02	7.93E-02
PU-238	5499.000	5474.278	73.675	13.000	10.475	2.525	2.9312	99.900000	2.74E-02	9.97E-03	1.54E-02	3.79E-02	9.87E-03
PU-9/0	5155.000	5162.946	93.322	3.000	1.485	1.515	2.0604	99.900000	3.88E-03	5.07E-03	1.09E-02	2.88E-02	5.06E-03
PU242	4890.000	4895.749	112.354	4.000	4.000	0.000	*****	100.0000	1.04E-02	5.24E-03	6.75E-01	1.36E+00	5.21E-03
PU-244	4589.000	4519.836	4.912	1.000	1.000	0.000	3.7241	99.900000	2.61E-03	2.61E-03	1.96E-02	4.63E-02	2.61E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU-236 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953494 SAMPLE ID : S1202044066_PU SAMPLE QTY : 0.137 G SAMPLE DATE : 24-FEB-2010 00:00:00 ANALYST : MXE1 % YIELD : 89.850		CHAMBER : 094 DETECTOR S/N : 78267 AVERAGE %EFFICIENCY : 30.6536 COUNT DATE : 27-FEB-2010 19:46:14 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_PU BKG FILE : B094.CNF:718 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W094.CNF:193 CAL DATE : 9-FEB-2010
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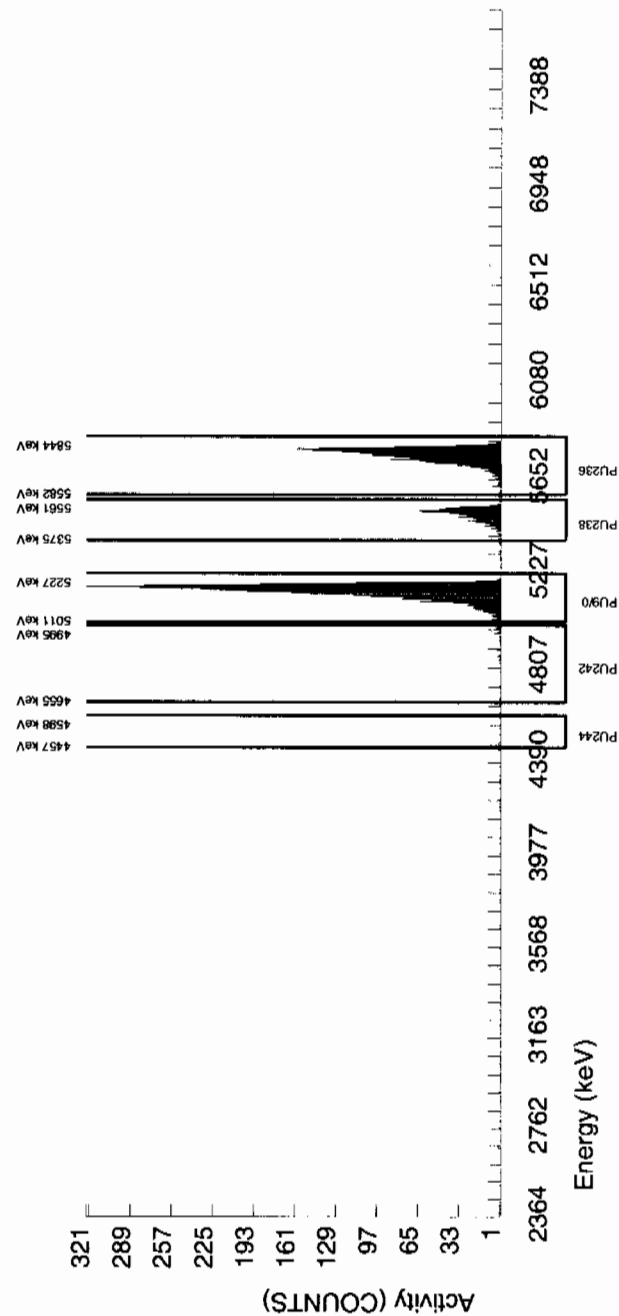
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.5462E+00 dpm RESULTS : 5.8818E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5766.997	55.996	1800.000	1798.000	2.000	1.4142	100.0000	2.15E+01	1.26E+00	3.93E-02	1.11E-01	5.08E-01
PU-238	5499.000	5496.954	44.933	617.000	617.000	0.000	2.9312	99.900000	7.37E+00	4.93E-01	8.15E-02	1.95E-01	2.97E-01
PU-9/0	5155.000	5152.252	41.790	3235.000	3235.000	1.000	2.0604	99.900000	3.87E+01	2.17E+00	5.73E-02	1.47E-01	6.80E-01
PU242	4890.000	4892.756	121.752	52.000	49.000	3.000	*****	100.0000	5.85E-01	9.39E-02	3.56E+00	7.16E+00	8.85E-02
PU-244	4589.000	4506.330	4.943	7.000	7.000	0.000	3.7241	99.900000	8.36E-02	3.19E-02	1.04E-01	2.39E-01	3.16E-02

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of PU-236 calculated as sqrt(BKG AREA).



Radiochemistry Batch Checklist, Rev10

Batch# 953497Product: ()Date: 3/1/10

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.			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	✓		
Hit 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 qm-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: Denise Green 3/1/10Secondary Review Performed By: E. H. 3/2/103/5
LANC

Uranium Que Sheet

01-MAR-10

* Que sheet recapped 3/1/10

Batch #: 953497 Analyst: ~~PRO~~ ROXET

First Client Due Date: 05-MAR-10 Internal Due Date: 22-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: /

Expiration Date: / Vol: /

Spike Isotope: U-238 Spike Code: /

Expiration Date: / Vol: /

Prep Date: 2/24/10 Initials: ME Pipet ID: 2971058 Balance ID: 50410272

Witness: ARB 2/24/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	U Det #
246325001-1	RE46-10-11906	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	1	1	0.514	118
246440001-1	RE15-10-8354	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	2	2	0.527	119
246440002-1	RE15-10-8356	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	3	3	0.501	120
246440003-1	RE15-10-8353	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	4	4	0.521	121
246440004-1	RE15-10-8352	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	5	5	0.550	122
246440005-1	RE15-10-8355	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	6	6	0.517	123
246440006-1	RE15-10-8351	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	7	7	0.517	124
246440007-1	RE15-10-8350	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	8	8	0.570	125
246440008-1	RE15-10-8357	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	9	9	0.508	126
246440009-1	RE15-10-8358	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	10	10	0.525	127
246440010-1	RE15-10-8336	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	11	11	0.504	128
246440011-1	RE15-10-8339	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	12	12	0.504	129
246440012-1	RE15-10-8337	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	13	13	0.504	130
246440013-1	RE15-10-8375	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	14	14	0.524	131
246440014-1	RE15-10-8374	SAMPLE		.1 pCi/g	SOIL	LANL010	02-FEB-10	15	15	0.550	132
246440015-1	RE15-10-8361	SAMPLE		.1 pCi/g	SOIL	LANL010	03-FEB-10	16	16	0.515	133
246440016-1	RE15-10-8362	SAMPLE		.1 pCi/g	SOIL	LANL010	03-FEB-10	17	17	0.513	138
246440017-1	RE15-10-8359	SAMPLE		.1 pCi/g	SOIL	LANL010	03-FEB-10	18	18	0.517	139
246440018-1	RE15-10-8358	SAMPLE		.1 pCi/g	SOIL	LANL010	03-FEB-10	19	19	0.523	140
246440019-1	RE15-10-8360	SAMPLE		.1 pCi/g	SOIL	LANL010	03-FEB-10	20	20	0.502	141
1202044075-1	MB for batch 953497	MB		.1 pCi/g	SOIL	QC ACCOUNT		21	21	1	142
1202044076-1	RE15-10-8354(246440001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	02-FEB-10	22	22	0.526	143
1202044077-1	LCS for batch 953497	LCS		.1 pCi/g	SOIL	QC ACCOUNT		23	23	0.126	144

*SEM 0244-A exp. 10/31/20

Solid Sample Dissolution by: LEACH OF DIGESTION

Choose SOP used: GL-RAD-A-011

Data Reviewed By: [Signature] 3/1/10

Circle One

Blank Correction Report

Batch ID 953497

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202044076	DUP	Uranium-233/234	0.561 g	1.06	0.0993	0.0921	.040463458	pCi/g	NO
		Uranium-235/236	0.561 g	0.126	0.0256	0.0587	.030303030	pCi/g	YES
		Uranium-238	0.561 g	3.34	0.266	0.0629	.049019608	pCi/g	NO
1202044077	LCS	Uranium-233/234	0.126 g	6.28	0.584	0.449	.180158730	pCi/g	NO
		Uranium-235/236	0.126 g	0.352	0.0919	0.286	.134920635	pCi/g	YES
		Uranium-238	0.126 g	5.42	0.517	0.306	.218253968	pCi/g	NO
1202044075	MB	Uranium-233/234	1.00 g	0.0227	0.00896	0.0694	.0227	pCi/g	YES
		Uranium-235/236	1.00 g	0.017	0.0077	0.0442	.017	pCi/g	YES
		Uranium-238	1.00 g	0.0275	0.00892	0.0474	.0275	pCi/g	YES
246325001	RE46-10-11906	Uranium-233/234	0.514 g	0.805	0.078	0.0891	.044163424	pCi/g	NO
		Uranium-235/236	0.514 g	0.0306	0.0118	0.0568	.033073930	pCi/g	YES
		Uranium-238	0.514 g	0.834	0.0801	0.0609	.053501946	pCi/g	NO
246440001	RE15-10-8354	Uranium-233/234	0.527 g	1.16	0.104	0.0885	.043074004	pCi/g	NO
		Uranium-235/236	0.527 g	0.0824	0.0198	0.0564	.032258065	pCi/g	YES
		Uranium-238	0.527 g	2.94	0.231	0.0804	.052182163	pCi/g	NO
246440002	RE15-10-8356	Uranium-233/234	0.501 g	1.54	0.135	0.102	.045309381	pCi/g	NO
		Uranium-235/236	0.501 g	0.120	0.0269	0.065	.033932136	pCi/g	YES
		Uranium-238	0.501 g	2.70	0.219	0.0696	.054890220	pCi/g	NO
246440003	RE15-10-8353	Uranium-233/234	0.521 g	2.33	0.191	0.0958	.043570058	pCi/g	NO
		Uranium-235/236	0.521 g	0.221	0.0358	0.0611	.032629559	pCi/g	NO
		Uranium-238	0.521 g	7.96	0.591	0.0654	.052783109	pCi/g	NO
246440004	RE15-10-8352	Uranium-233/234	0.550 g	0.938	0.0881	0.0893	.041272727	pCi/g	NO
		Uranium-235/236	0.550 g	0.0525	0.0168	0.0569	.030909091	pCi/g	YES
		Uranium-238	0.550 g	1.21	0.108	0.061	.05	pCi/g	NO
246440005	RE15-10-8355	Uranium-233/234	0.517 g	1.17	0.109	0.105	.043907157	pCi/g	NO
		Uranium-235/236	0.517 g	0.0566	0.0175	0.067	.032882012	pCi/g	YES
		Uranium-238	0.517 g	1.89	0.148	0.0718	.053191489	pCi/g	NO
246440006	RE15-10-8351	Uranium-233/234	0.517 g	1.10	0.103	0.100	.043907157	pCi/g	NO
		Uranium-235/236	0.517 g	0.0638	0.0195	0.0639	.032882012	pCi/g	YES
		Uranium-238	0.517 g	1.82	0.155	0.0684	.053191489	pCi/g	NO
246440007	RE15-10-8350	Uranium-233/234	0.570 g	0.904	0.0852	0.0874	.039824561	pCi/g	NO
		Uranium-235/236	0.570 g	0.0685	0.0178	0.0557	.029824561	pCi/g	YES
		Uranium-238	0.570 g	1.31	0.115	0.0597	.048245614	pCi/g	NO
246440008	RE15-10-8357	Uranium-233/234	0.508 g	1.26	0.112	0.0947	.044685039	pCi/g	NO
		Uranium-235/236	0.508 g	0.0464	0.015	0.0604	.033464567	pCi/g	YES
		Uranium-238	0.508 g	1.70	0.144	0.0647	.054133858	pCi/g	NO
246440009	RE15-10-8338	Uranium-233/234	0.525 g	1.06	0.0964	0.0874	.043238095	pCi/g	NO
		Uranium-235/236	0.525 g	0.0513	0.0153	0.0557	.032380952	pCi/g	YES
		Uranium-238	0.525 g	1.58	0.133	0.0598	.052380962	pCi/g	NO
246440010	RE15-10-8336	Uranium-233/234	0.504 g	0.944	0.0907	0.0997	.045039683	pCi/g	NO
		Uranium-235/236	0.504 g	0.0978	0.0229	0.0635	.033730159	pCi/g	YES

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
246440010	RE15-10-8336	Uranium-238	0.504 g	1.33	0.119	0.068	.054563492	pCi/g	NO
246440011	RE15-10-8339	Uranium-233/234	0.504 g	1.33	0.119	0.0994	.045039683	pCi/g	NO
		Uranium-235/236	0.504 g	0.0633	0.0181	0.0634	.033730159	pCi/g	YES
		Uranium-238	0.504 g	3.33	0.263	0.0678	.054563492	pCi/g	NO
246440012	RE15-10-8337	Uranium-233/234	0.504 g	0.995	0.0956	0.104	.045039683	pCi/g	NO
		Uranium-235/236	0.504 g	0.0816	0.0224	0.0664	.033730159	pCi/g	YES
		Uranium-238	0.504 g	1.60	0.140	0.0711	.054563492	pCi/g	NO
246440013	RE15-10-8375	Uranium-233/234	0.524 g	1.46	0.131	0.105	.043320611	pCi/g	NO
		Uranium-235/236	0.524 g	0.113	0.0255	0.0671	.032442748	pCi/g	YES
		Uranium-238	0.524 g	2.49	0.206	0.0719	.052480916	pCi/g	NO
246440014	RE15-10-8374	Uranium-233/234	0.556 g	0.989	0.0905	0.0849	.040827338	pCi/g	NO
		Uranium-235/236	0.556 g	0.0707	0.0179	0.0541	.030575540	pCi/g	YES
		Uranium-238	0.556 g	1.68	0.141	0.058	.049460432	pCi/g	NO
246444001	RE15-10-8361	Uranium-233/234	0.515 g	13.9	1.05	0.121	.044077670	pCi/g	NO
		Uranium-235/236	0.515 g	0.780	0.0892	0.0769	.033009709	pCi/g	NO
		Uranium-238	0.515 g	15.1	1.13	0.0823	.053398058	pCi/g	NO
246444002	RE15-10-8362	Uranium-233/234	0.513 g	0.945	0.0914	0.0998	.044249513	pCi/g	NO
		Uranium-235/236	0.513 g	0.0831	0.0221	0.0636	.033138402	pCi/g	YES
		Uranium-238	0.513 g	1.63	0.142	0.0681	.053606238	pCi/g	NO
246444003	RE15-10-8359	Uranium-233/234	0.517 g	1.04	0.101	0.104	.043907157	pCi/g	NO
		Uranium-235/236	0.517 g	0.0866	0.0219	0.0663	.032882012	pCi/g	YES
		Uranium-238	0.517 g	2.02	0.173	0.071	.053191489	pCi/g	NO
246444004	RE15-10-8358	Uranium-233/234	0.523 g	1.81	0.157	0.108	.043403442	pCi/g	NO
		Uranium-235/236	0.523 g	0.0847	0.022	0.0689	.032504780	pCi/g	YES
		Uranium-238	0.523 g	2.56	0.212	0.0738	.052581262	pCi/g	NO
246444005	RE15-10-8360	Uranium-233/234	0.502 g	1.27	0.116	0.0996	.045219124	pCi/g	NO
		Uranium-235/236	0.502 g	0.078	0.0203	0.0635	.033864542	pCi/g	YES
		Uranium-238	0.502 g	1.78	0.154	0.068	.054780876	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953497 SAMPLE ID : S0246440001_UU SAMPLE QTY : 0.527 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 95.474				CHAMBER : 119 DETECTOR S/N : 79450 AVERAGE %EFFICIENCY : 25.5204 COUNT DATE : 27-FEB-2010 20:03:42 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_UU BKG FILE : B119.CNF;463 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W119.CNF;121 CAL DATE : 18-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 4.3016E+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	5283.581	76.830	1098.000	1097.000	1.000	1.0000	100.0000	3.85E+00	2.95E-01	8.16E-03	2.58E-02	1.16E-01
U-3/4	4763.020	4736.786	85.538	333.000	330.889	1.000	4.8416	100.0000	1.16E+00	1.04E-01	3.95E-02	8.85E-02	6.40E-02
U-235	4391.000	4396.813	158.205	19.000	19.000	0.000	2.2152	80.90000	8.24E-02	1.98E-02	2.23E-02	5.64E-02	1.89E-02
U-238	4184.730	4169.214	80.190	840.000	839.000	1.000	3.1208	100.0000	2.94E+00	2.31E-01	2.55E-02	6.04E-02	1.02E-01

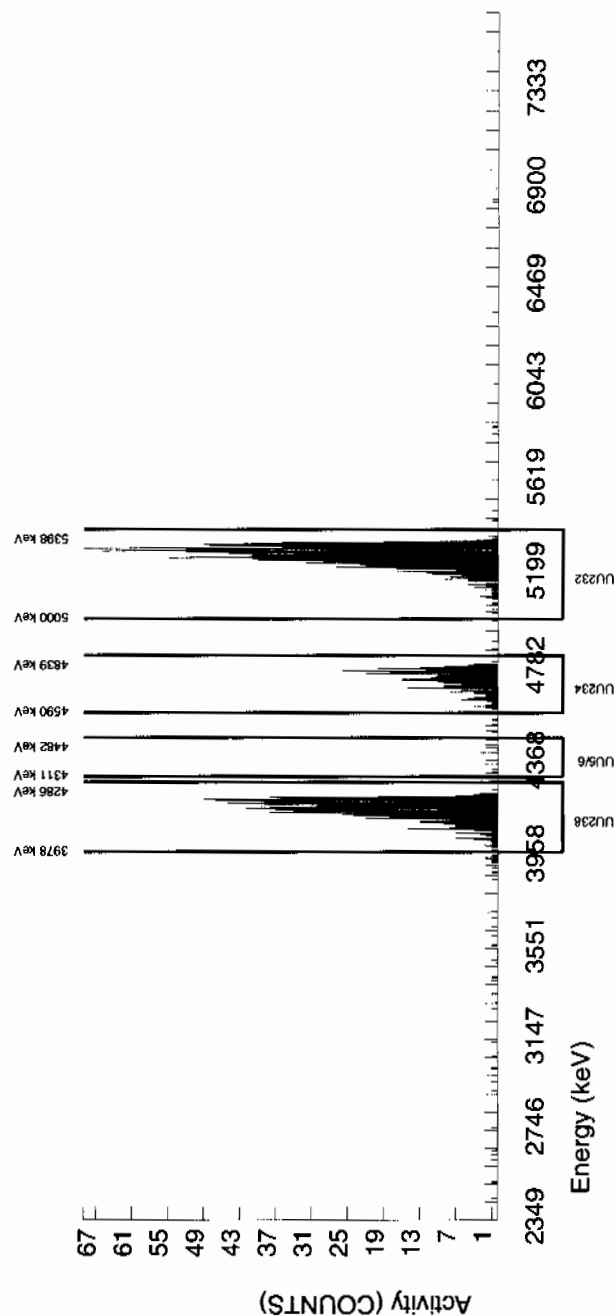
NOTES:

* 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:



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

<p>BATCH NUMBER : 953497 SAMPLE ID : S0246440002_UU SAMPLE QTY : 0.501 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 85.158</p>	<p>CHAMBER : 120 DETECTOR S/N : 74430 AVERAGE %EFFICIENCY : 26.1342 COUNT DATE : 27-FEB-2010 20:03:46 ELAPSED LIVE TIME(SEC) : 60000.00</p>	<p>LIB FILE : ENV_ALPHA_UU BKG FILE : B120.CNF;467 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W120.CNF;128 CAL DATE : 18-FEB-2010</p>
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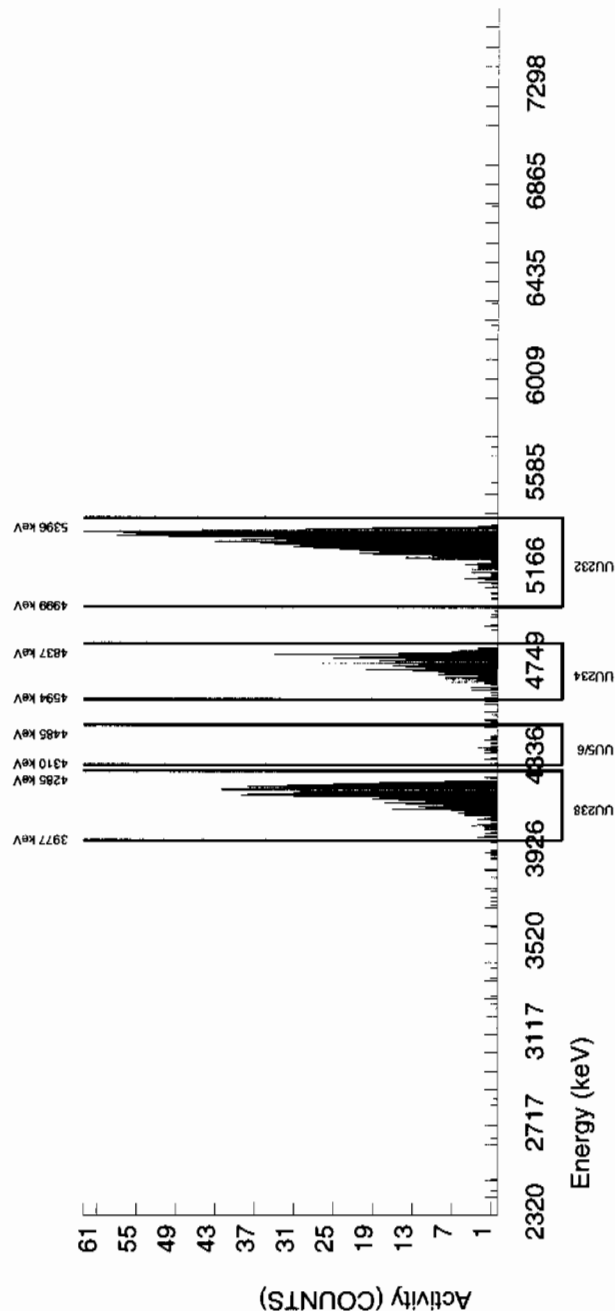
<p>TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 3.8368E+00 dpm</p>	<p>MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G</p>	<p>LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G</p>
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NUCLIDE ACTIVITY 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
U232	5302.100	5294.212	71.397	1004.000	1002.000	2.000	1.4142	100.0000	4.05E+00	3.15E-01	1.33E-02	3.75E-02	1.28E-01
U-3/4	4763.020	4751.531	70.688	384.000	379.986	3.000	4.8416	100.0000	1.54E+00	1.35E-01	4.55E-02	1.02E-01	7.94E-02
U-235	4391.000	4398.439	110.939	25.000	24.000	1.000	2.2152	80.90000	1.20E-01	2.69E-02	2.57E-02	6.50E-02	2.55E-02
U-238	4184.730	4180.706	60.090	668.000	668.000	0.000	3.1208	100.0000	2.70E+00	2.19E-01	2.93E-02	6.96E-02	1.04E-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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953497 SAMPLE ID : S0246440003_UU SAMPLE QTY : 0.521 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 92.377	CHAMBER : 121 DETECTOR S/N : 75545 AVERAGE %EFFICIENCY : 24.6447 COUNT DATE : 27-FEB-2010 20:03:49 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B121.CNF:449 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W121.CNF:119 CAL DATE : 18-FEB-2010
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TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 4.1621E+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

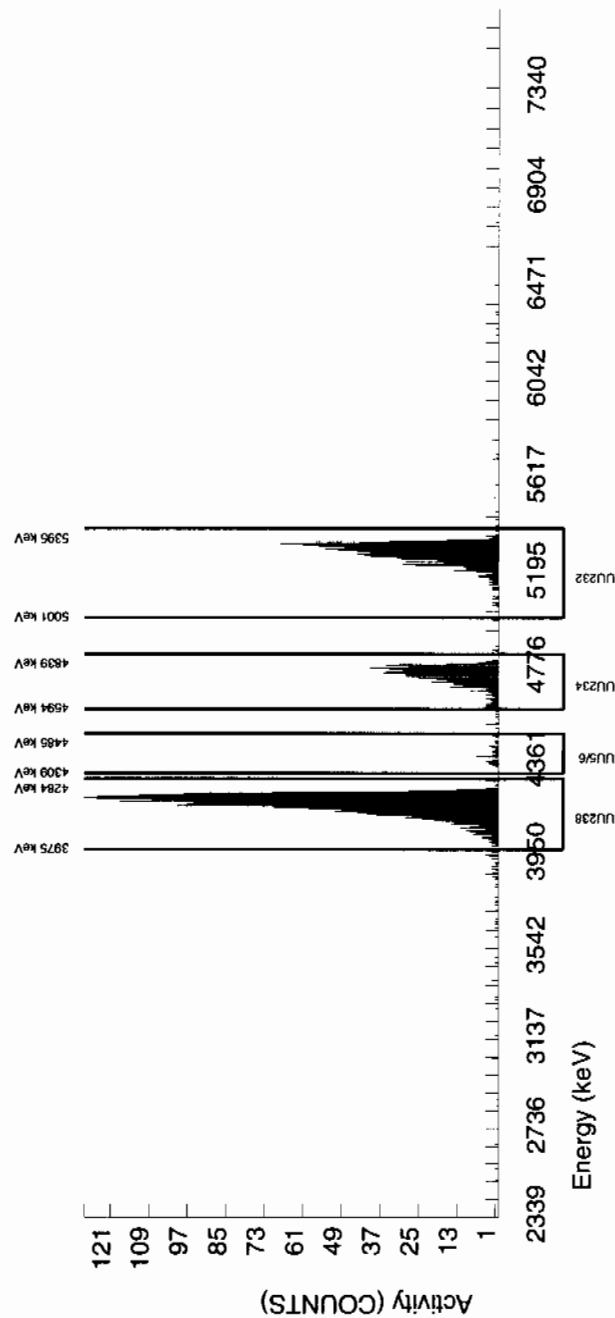
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5289.242	67.458	1030.000	1025.000	5.000	2.2361	100.0000	3.90E+00	3.02E-01	1.98E-02	4.98E-02	1.22E-01
U-3/4	4763.020	4748.003	78.368	616.000	613.962	1.000	4.8416	100.0000	2.33E+00	1.91E-01	4.28E-02	9.58E-02	9.43E-02
U-235	4391.000	4399.918	7.772	47.000	47.000	0.000	2.2152	80.900000	2.21E-01	3.58E-02	2.42E-02	6.11E-02	3.22E-02
U-238	4184.730	4176.688	72.340	2096.000	2096.000	0.000	3.1208	100.0000	7.96E+00	5.91E-01	2.76E-02	6.54E-02	1.74E-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

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

<p>BATCH NUMBER : 953497 SAMPLE ID : S0246440004_UU SAMPLE QTY : 0.550 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 90.007</p>	<p>CHAMBER : 122 DETECTOR S/N : 75546 AVERAGE %EFFICIENCY : 25.7131 COUNT DATE : 27-FEB-2010 20:03:51 ELAPSED LIVE TIME(SEC) : 60000.00</p>	<p>LIB FILE : ENV_ALPHA_UU BKG FILE : B122.CNF:451 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W122.CNF:122 CAL DATE : 18-FEB-2010</p>
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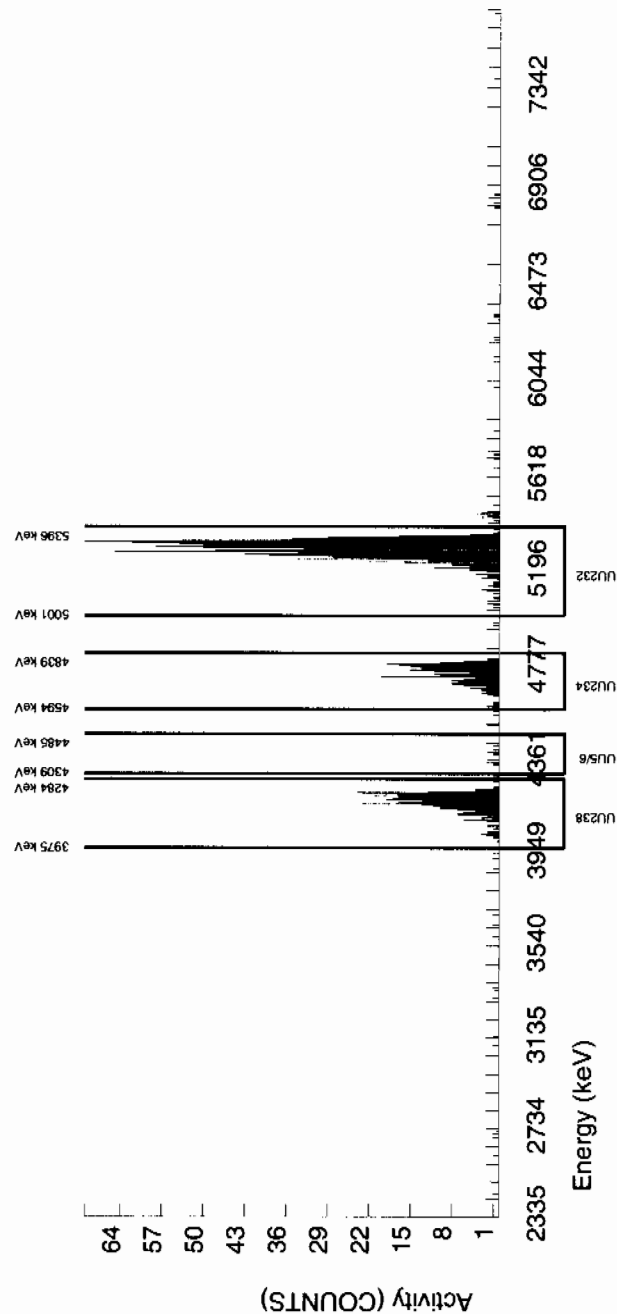
<p>TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 4.0553E+00 dpm</p>	<p>MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G</p>	<p>LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G</p>
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NUCLIDE ACTIVITY 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
U232	5302.100	5297.535	71.350	1049.000	1042.000	7.000	2.6458	100.0000	3.69E+00	2.86E-01	2.18E-02	5.32E-02	1.15E-01
U-3/4	4763.020	4751.065	62.483	267.000	264.945	1.000	4.8416	100.0000	9.38E-01	8.81E-02	3.99E-02	8.93E-02	5.78E-02
U-235	4391.000	4391.680	34.685	13.000	12.000	1.000	2.2152	80.90000	5.25E-02	1.68E-02	2.25E-02	5.69E-02	1.64E-02
U-238	4184.730	4180.941	60.257	341.000	341.000	0.000	3.1208	100.0000	1.21E+00	1.08E-01	2.57E-02	6.10E-02	6.53E-02

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 : 953497 SAMPLE ID : S0246440005_UU SAMPLE QTY : 0.517 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 81.512	CHAMBER : 123 DETECTOR S/N : 45-142V3 AVERAGE %EFFICIENCY : 25.6683 COUNT DATE : 27-FEB-2010 20:03:54 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B123.CNF;449 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W123.CNF;118 CAL DATE : 18-FEB-2010
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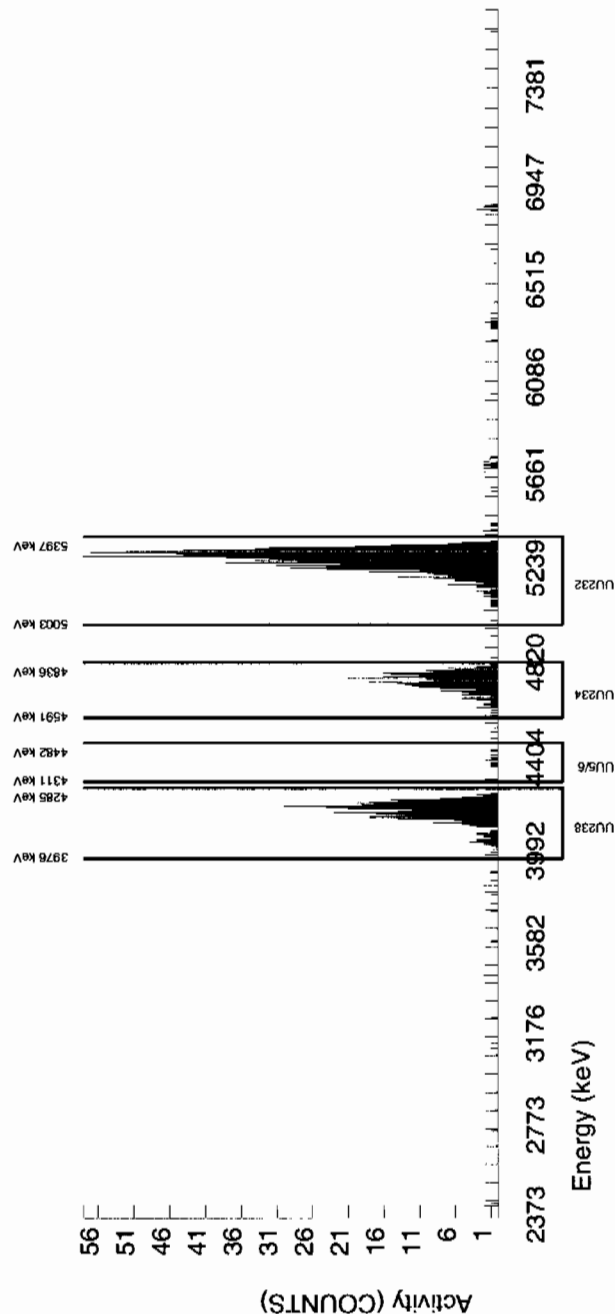
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 3.6725E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5297.270	82.229	948.000	942.000	6.000	2.4495	100.0000	3.93E+00	3.09E-01	2.37E-02	5.87E-02	1.29E-01
U-3/4	4763.020	4752.239	64.135	283.000	281.046	1.000	4.8416	100.0000	1.17E+00	1.09E-01	4.69E-02	1.05E-01	7.01E-02
U-235	4391.000	4399.646	4.977	11.000	11.000	0.000	2.2152	80.90000	5.66E-02	1.75E-02	2.65E-02	6.70E-02	1.71E-02
U-238	4184.730	4181.551	70.391	407.000	407.000	0.000	3.1208	100.0000	1.69E+00	1.48E-01	3.02E-02	7.18E-02	8.40E-02

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



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LIB FILE      : ENV_ALPHA_UU
BKG FILE      : B124.CNF:445
BKG DATE      : 21-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE      : W124.CNF:114
CAL DATE      : 18-FEB-2010
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ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/G

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
U-232	5302.100	5292.327	81.736	990.000	988.000	2.000	1.4142	100.0000	3.93E+00	3.06E-01	1.31E-02	3.69E-02	1.25E-01
U-3/4	4763.020	4749.284	90.590	279.000	278.000	0.000	4.8416	100.0000	1.10E+00	1.03E-01	4.47E-02	1.00E-01	6.62E-02
U-235	4391.000	4397.328	65.669	14.000	13.000	1.000	2.2152	80.90000	6.38E-02	1.95E-02	2.53E-02	6.39E-02	1.90E-02
U-238	4184.730	4178.355	74.665	459.000	459.000	0.000	3.1208	100.0000	1.82E+00	1.55E-01	2.88E-02	6.84E-02	8.51E-02

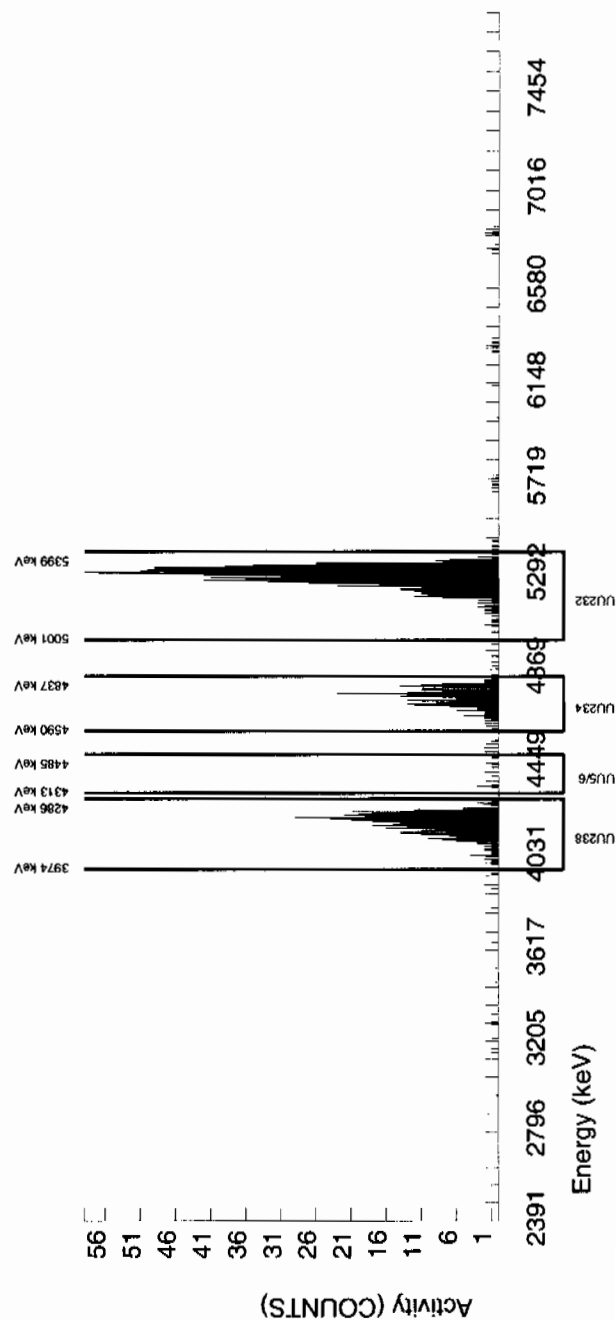
NOTES:

* 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:



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953497 SAMPLE ID : S0246440007_UU SAMPLE QTY : 0.570 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 88.865	CHAMBER : 125 DETECTOR S/N : 75547 AVERAGE %EFFICIENCY : 25.6687 COUNT DATE : 27-FEB-2010 20:04:00 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B125.CNF;455 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W125.CNF;132 CAL DATE : 18-FEB-2010
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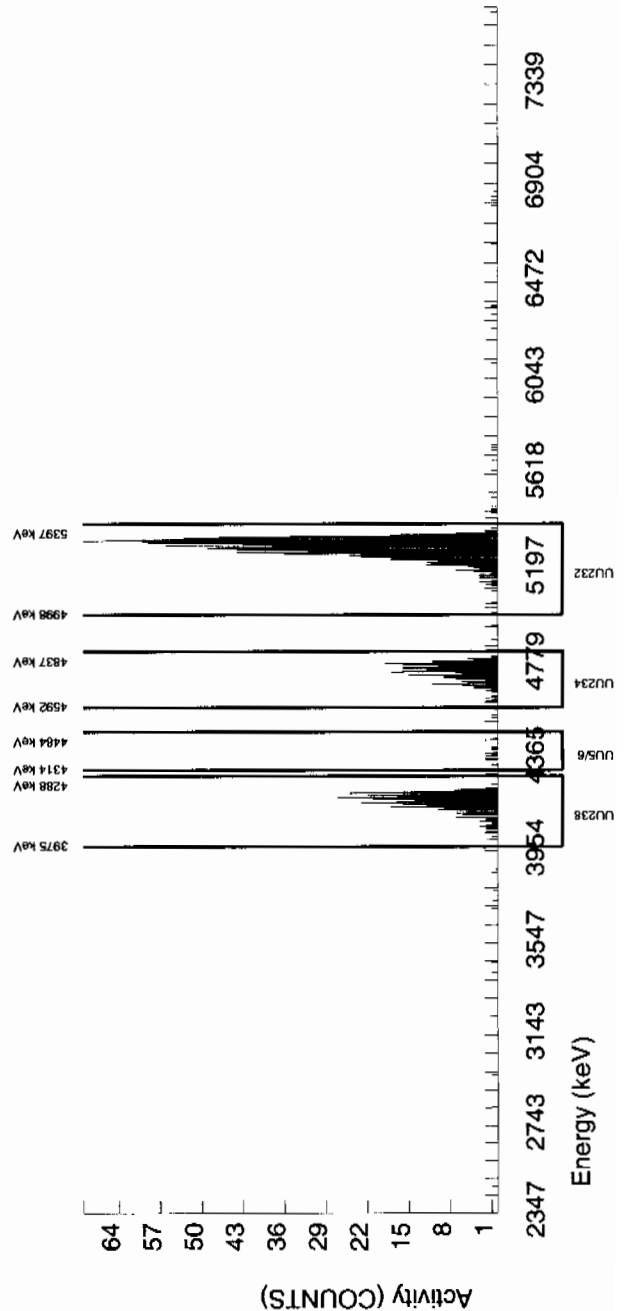
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 4.0039E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5295.759	74.277	1028.000	1027.000	1.000	1.0000	100.0000	3.56E+00	2.76E-01	8.06E-03	2.55E-02	1.11E-01
U-3/4	4763.020	4749.926	95.466	263.000	260.960	1.000	4.8416	100.0000	9.04E-01	8.52E-02	3.90E-02	8.74E-02	5.62E-02
U-235	4391.000	4389.876	31.974	16.000	16.000	0.000	2.2152	80.90000	6.85E-02	1.78E-02	2.21E-02	5.57E-02	1.71E-02
U-238	4184.730	4175.413	71.831	378.000	378.000	0.000	3.1208	100.0000	1.31E+00	1.15E-01	2.52E-02	5.97E-02	6.74E-02

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 : 953497 SAMPLE ID : S0246440008_UU SAMPLE QTY : 0.508 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 94.263		CHAMBER : 126 DETECTOR S/N : 75548 AVERAGE %EFFICIENCY : 25.0705 COUNT DATE : 27-FEB-2010 20:04:04 ELAPSED LIVE TIME(SEC) : 60000.00		LIB FILE : ENV_ALPHA_UU BKG FILE : B126.CNF;454 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W126.CNF;134 CAL DATE : 18-FEB-2010	
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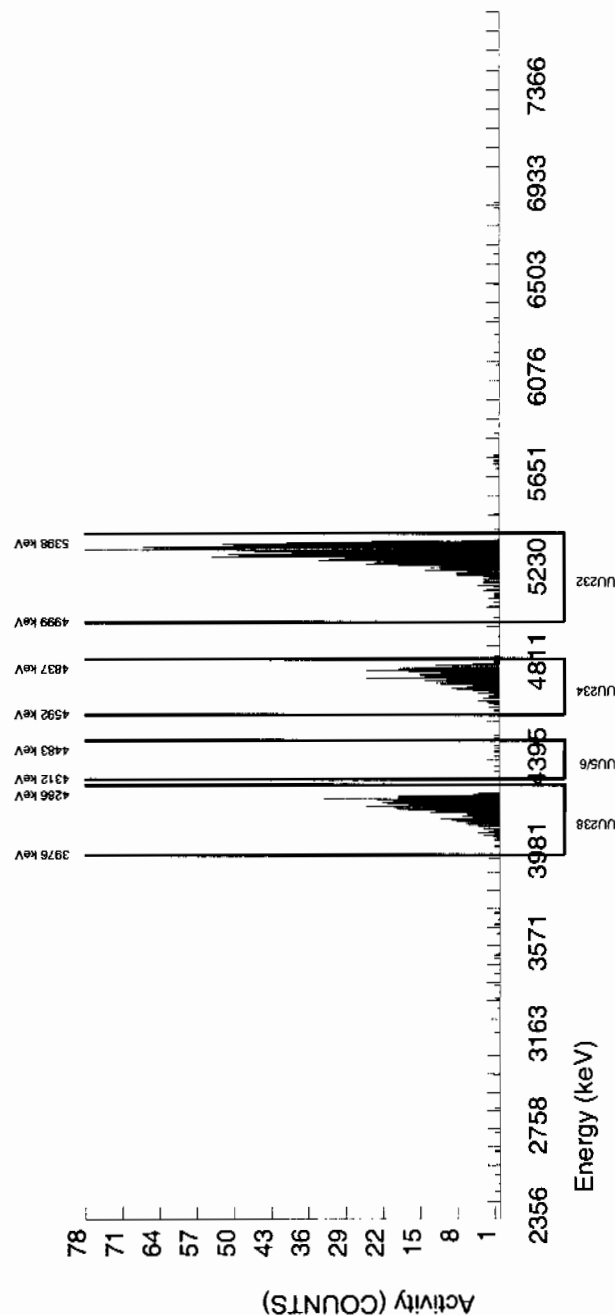
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 4.2471E+00 dpm		MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G		LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	
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NUCLIDE ACTIVITY SUMMARY

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	5306.375	63.203	1068.000	1064.000	4.000	2.0000	100.0000	4.00E+00	3.08E-01	1.75E-02	4.51E-02	1.23E-01
U-3/4	4763.020	4760.372	60.050	337.000	334.923	1.000	4.8416	100.0000	1.26E+00	1.12E-01	4.23E-02	9.47E-02	6.89E-02
U-235	4391.000	4408.112	135.227	10.000	10.000	0.000	2.2152	80.90000	4.64E-02	1.50E-02	2.39E-02	6.04E-02	1.47E-02
U-238	4184.730	4189.833	64.394	452.000	452.000	0.000	3.1208	100.0000	1.70E+00	1.44E-01	2.72E-02	6.47E-02	7.98E-02

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 : 953497 SAMPLE ID : S0246440009_UU SAMPLE QTY : 0.525 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 101.198	CHAMBER : 127 DETECTOR S/N : 78770 AVERAGE %EFFICIENCY : 24.4938 COUNT DATE : 27-FEB-2010 20:04:07 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B127.CNF:458 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W127.CNF:125 CAL DATE : 18-FEB-2010
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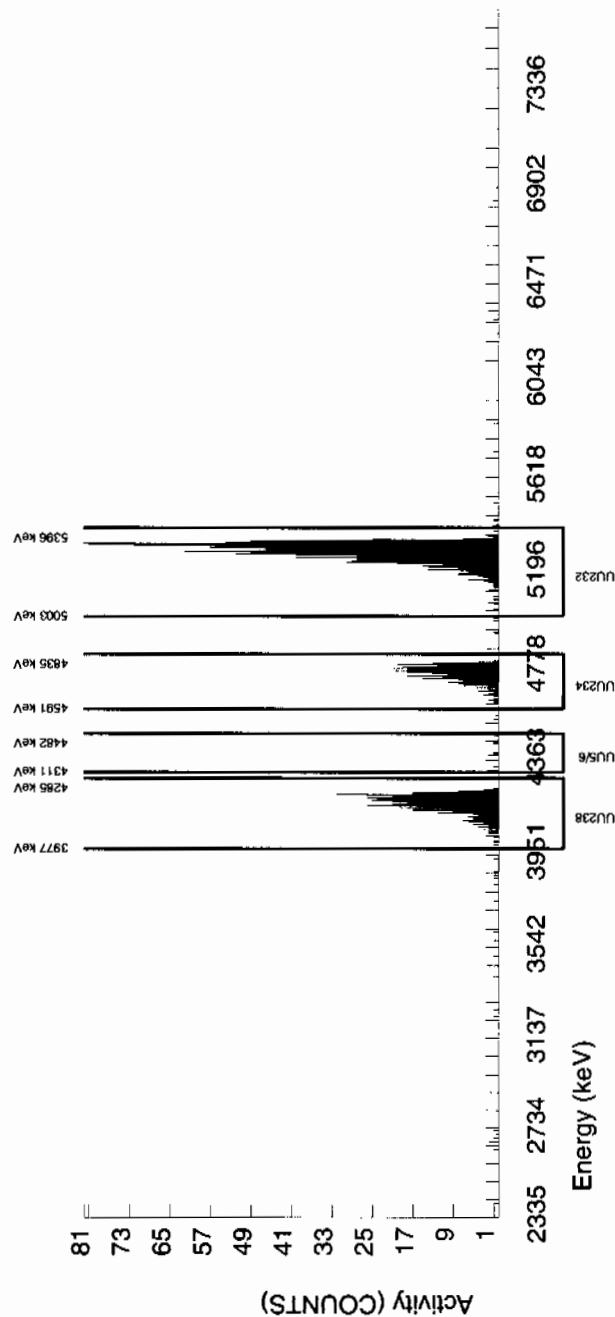
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 4.5595E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5292.157	59.894	1118.000	1116.000	2.000	1.4142	100.0000	3.87E+00	2.96E-01	1.14E-02	3.22E-02	1.16E-01
U-3/4	4763.020	4750.000	67.909	309.000	306.870	1.000	4.8416	100.0000	1.06E+00	9.64E-02	3.90E-02	8.74E-02	6.08E-02
U-235	4391.000	4399.086	67.081	12.000	12.000	0.000	2.2152	80.90000	5.13E-02	1.53E-02	2.20E-02	5.57E-02	1.48E-02
U-238	4184.730	4174.530	80.394	455.000	455.000	0.000	3.1208	100.0000	1.57E+00	1.33E-01	2.51E-02	5.96E-02	7.38E-02

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

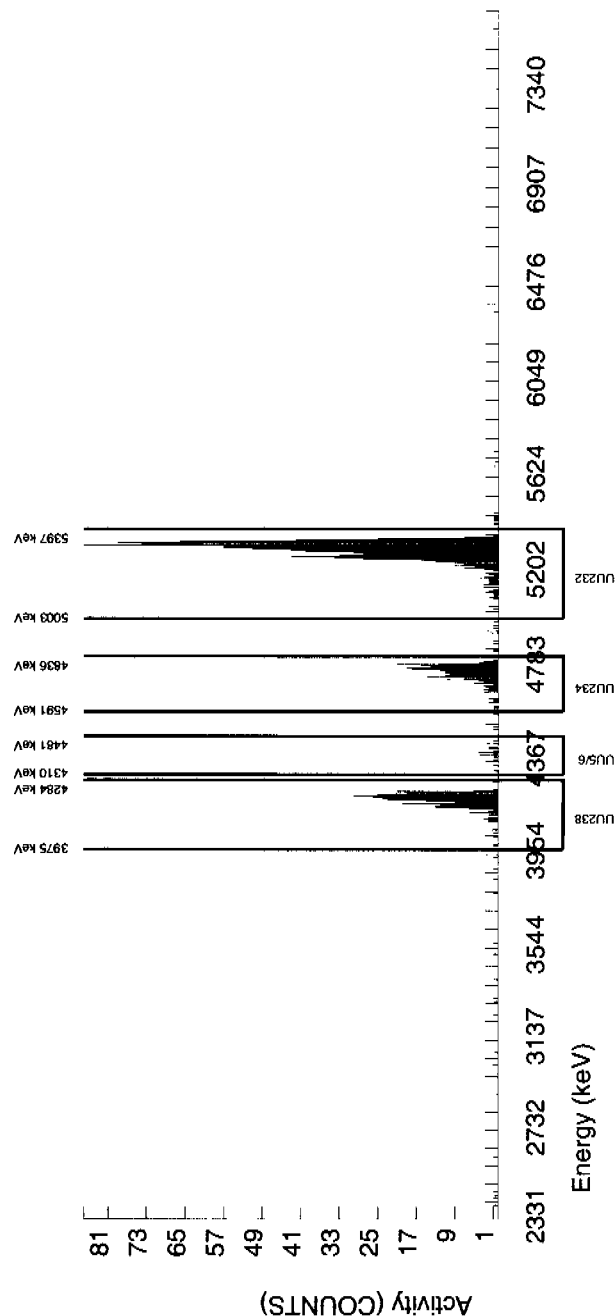
BATCH NUMBER : 953497	CHAMBER : 128	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0246440010_UU	DETECTOR S/N : 75549	BKG FILE : B128.CNF:464
SAMPLE QTY : 0.504 G	AVERAGE %EFFICIENCY : 25.4275	BKG DATE : 21-FEB-2010
SAMPLE DATE : 2-FEB-2010 00:00:00.	COUNT DATE : 27-FEB-2010 20:04:11	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXE1	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W128.CNF:135
% YIELD : 89.009		CAL DATE : 18-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 : 4.5056E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 4.0104E+00 dpm		

NUCLIDE ACTIVITY SUMMARY									
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G
U232	5302.100	5307.928	44.605	1020.000	1019.000	1.000	1.0000	100.0000	4.03E+00
U-3/4	4763.020	4765.602	66.419	240.000	238.968	0.000	4.8416	100.0000	9.44E-01
U-235	4391.000	4406.949	15.805	20.000	20.000	0.000	2.2152	80.90000	9.76E-02
U-238	4184.730	4195.624	59.985	337.000	337.000	0.000	3.1208	100.0000	1.33E+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

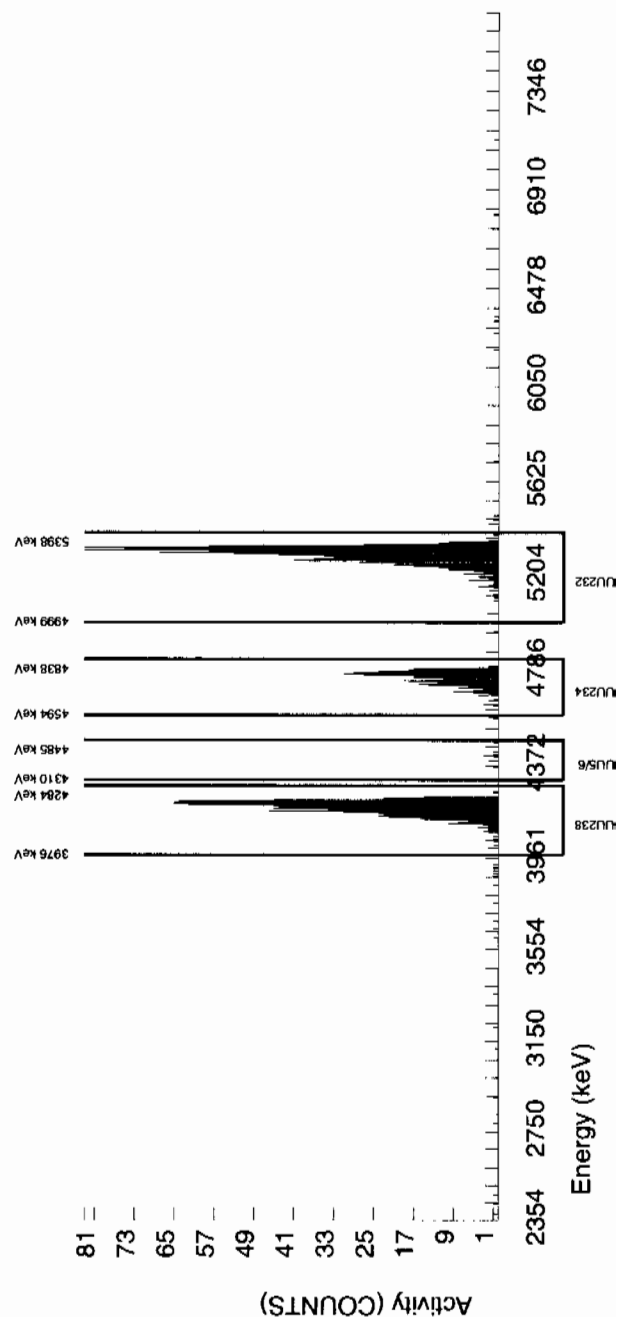
NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

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



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953497 SAMPLE ID : S0246440012_UU SAMPLE QTY : 0.504 G SAMPLE DATE : 2-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 87.363	CHAMBER : 130 DETECTOR S/N : 76228 AVERAGE %EFFICIENCY : 24.7879 COUNT DATE : 27-FEB-2010 20:04:17 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B130.CNF;453 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W130.CNF;132 CAL DATE : 18-FEB-2010
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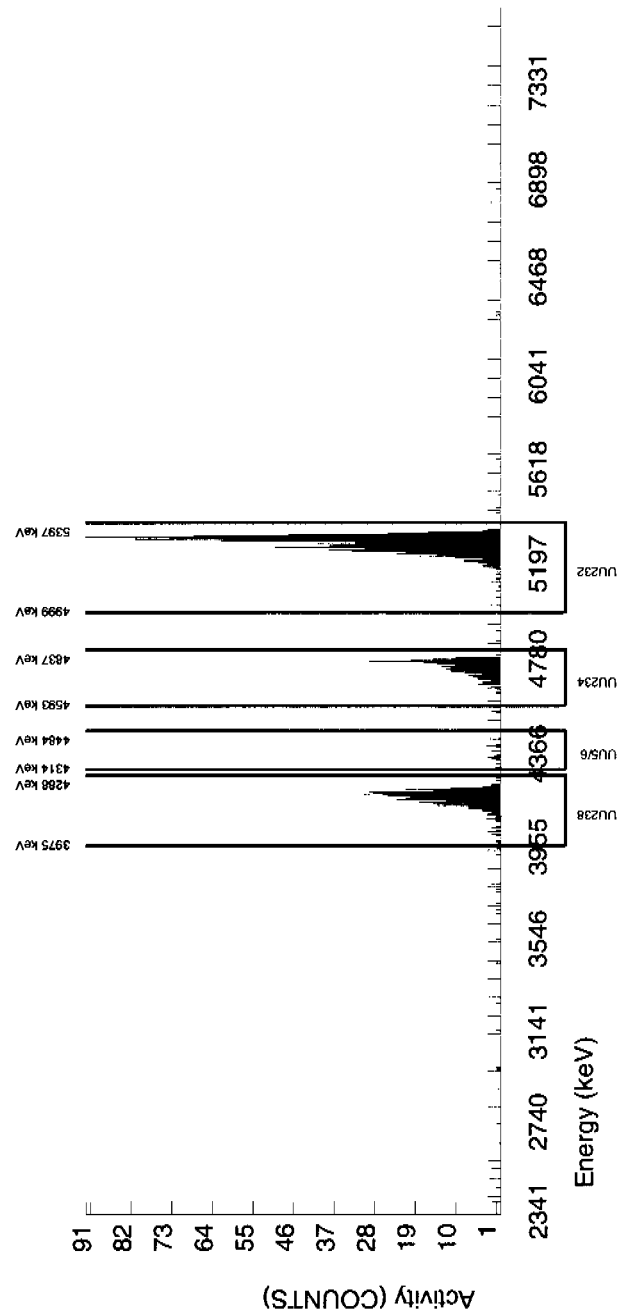
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5056E+00 dpm RESULTS : 3.9362E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5308.794	55.816	976.000	975.000	1.000	1.0000	100.0000	4.03E+00	3.15E-01	9.60E-03	3.04E-02	1.29E-01
U-3/4	4763.020	4763.187	19.458	242.000	241.013	0.000	4.8416	100.0000	9.95E-01	9.56E-02	4.65E-02	1.04E-01	6.41E-02
U-235	4391.000	4389.679	60.820	17.000	16.000	1.000	2.2152	80.90000	8.16E-02	2.24E-02	2.63E-02	6.64E-02	2.16E-02
U-238	4184.730	4188.063	61.415	388.000	388.000	0.000	3.1208	100.0000	1.60E+00	1.40E-01	3.00E-02	7.11E-02	8.13E-02

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

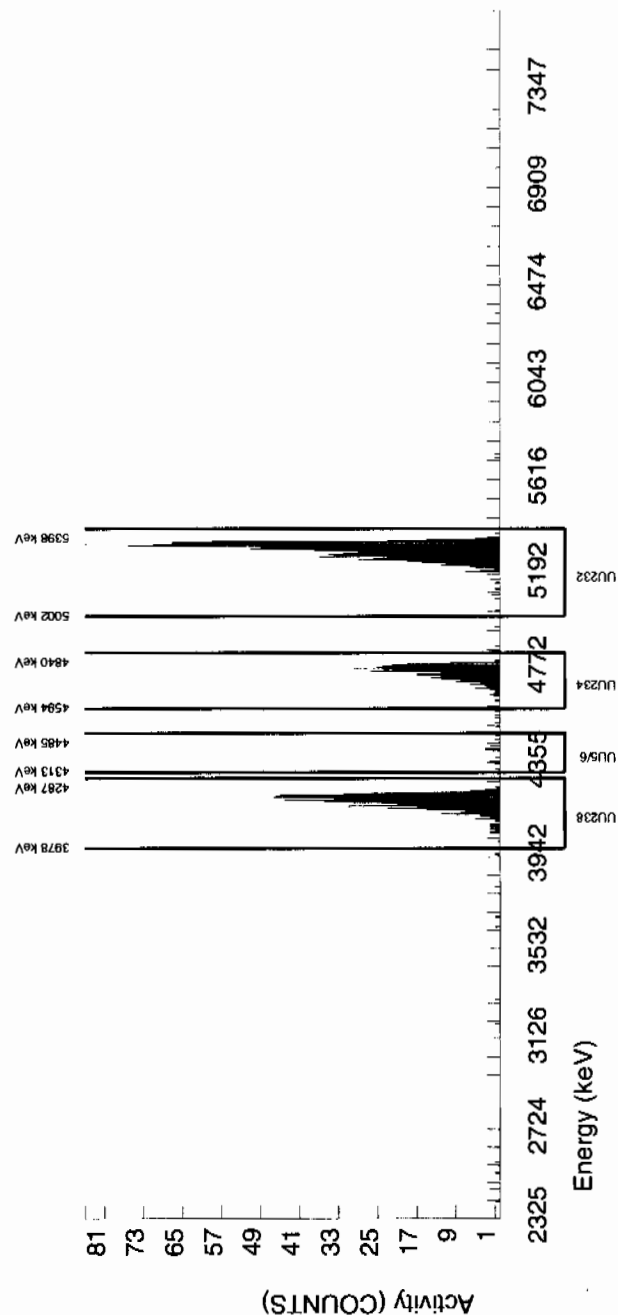



```
LIB FILE : ENV_ALPHA_UU
BKG FILE : B131.CNF;451
BKG DATE : 21-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W131.CNF;134
CAL DATE : 18-FEB-2010
```

ID	:	0244-A
NUCLIDE	:	U-238
NOMINAL	:	5.7500E+00 pCi/G

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	5304.670	36.246	928.000	928.000	0.000	0.0000	100.0000	3.87E+00	3.05E-01	0.00E+00	1.13E-02	1.27E-01
U-3/4	4763.020	4757.113	53.804	352.000	351.061	0.000	4.8416	100.0000	1.46E+00	1.31E-01	4.70E-02	1.05E-01	7.81E-02
U-235	4391.000	4399.870	106.379	22.000	22.000	0.000	2.2152	80.90000	1.13E-01	2.55E-02	2.66E-02	6.71E-02	2.42E-02
U-238	4184.730	4187.901	57.456	599.000	598.000	1.000	3.1208	100.0000	2.49E+00	2.06E-01	3.03E-02	7.19E-02	1.02E-01

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



LIB FILE	:	ENV_ALPHA_UU
BKG FILE	:	B132.CNF:445
BKG DATE	:	21-FEB-2010
BKG LIVE TIME(SEC)	:	60000.00
EFF FILE	:	W132.CNF:132
CAL DATE	:	18-FEB-2010

RESULTS : 4.3465E+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	5308.140	74.738	1084.000	1084.000	0.000	0.0000	100.0000	3.65E+00	2.80E-01	0.00E+00	9.12E-03	1.11E-01
U-3/4	4763.020	4766.574	48.330	295.000	293.903	0.000	4.8416	100.0000	9.89E-01	9.05E-02	3.79E-02	8.49E-02	5.77E-02
U-235	4391.000	4409.849	14.998	17.000	17.000	0.000	2.2152	80.90000	7.07E-02	1.79E-02	2.14E-02	5.41E-02	1.71E-02
U-238	4184.730	4194.375	58.971	500.000	500.000	0.000	3.1208	100.0000	1.68E+00	1.41E-01	2.44E-02	5.80E-02	7.52E-02

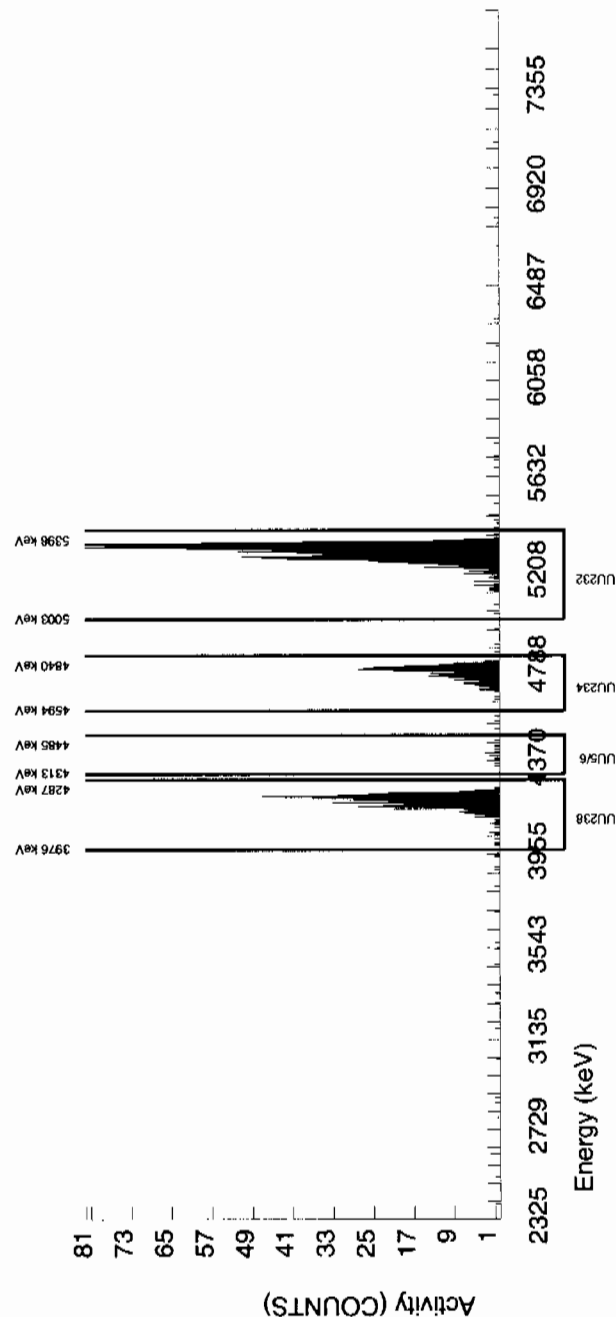
NOTES:

* Sq calculated via blank population.

(Sq updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

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



```
LIB FILE      : ENV_ALPHA_UU
BKG FILE      : B142.CNF;396
BKG DATE      : 21-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE      : W142.CNF;111
CAL DATE      : 19-FEB-2010
```

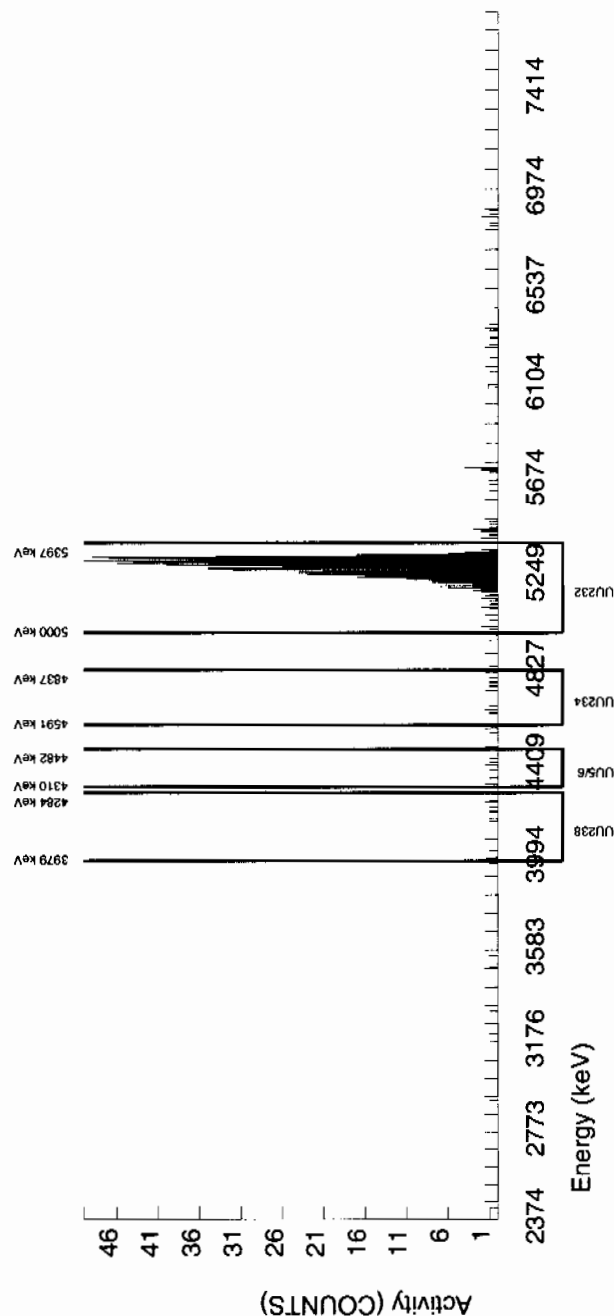
RESULTS : 2.8652E

NOMINAL : 5.7500E+00 pCi/G

NUCLIDE ACTIVITY SUMMARY

NOTES:

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



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 953497 SAMPLE ID : S1202044076_UU SAMPLE QTY : 0.561 G SAMPLE DATE : 3-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 90.629	CHAMBER : 143 DETECTOR S/N : 65882 AVERAGE %EFFICIENCY : 24.2868 COUNT DATE : 27-FEB-2010 20:04:56 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B143.CNF:398 BKG DATE : 21-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W143.CNF:114 CAL DATE : 19-FEB-2010
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TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5054E+00 dpm RESULTS : 4.0832E+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

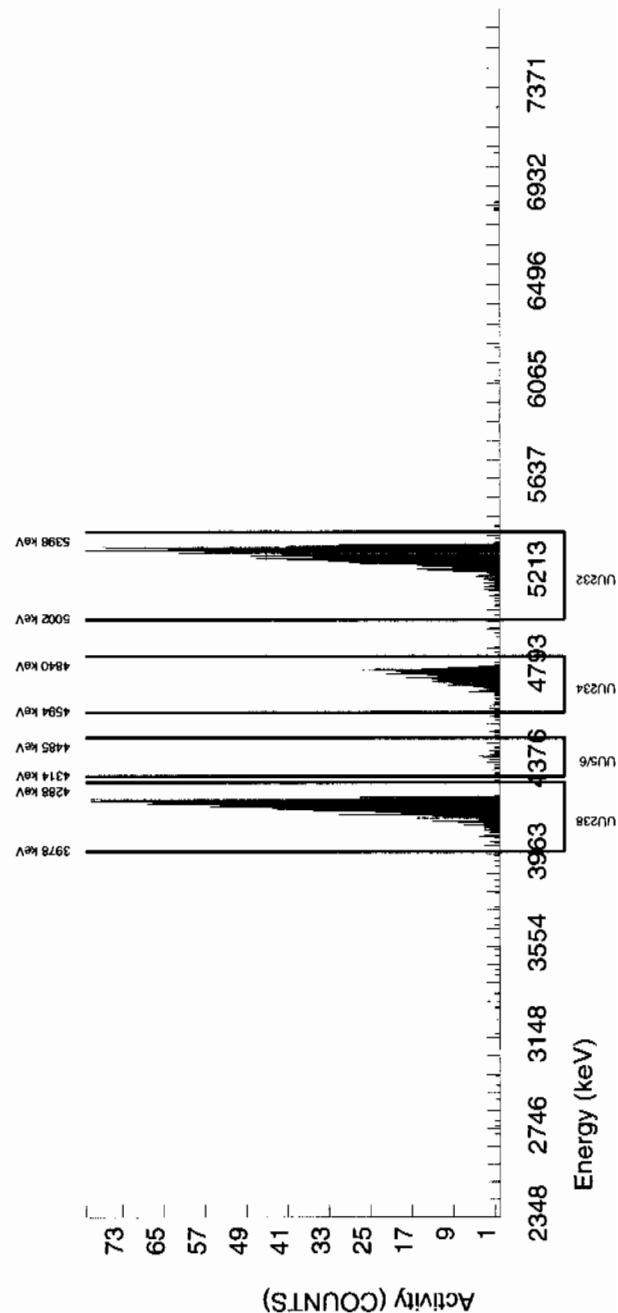
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5295.274	60.459	993.000	991.000	2.000	1.4142	100.0000	3.62E+00	2.87E-01	1.20E-02	3.39E-02	1.15E-01
U-3/4	4763.020	4753.264	45.367	294.000	290.997	2.000	4.8416	100.0000	1.06E+00	9.93E-02	4.11E-02	9.21E-02	6.27E-02
U-235	4391.000	4396.453	9.699	28.000	28.000	0.000	2.2152	80.90000	1.26E-01	2.56E-02	2.32E-02	5.87E-02	2.39E-02
U-238	4184.730	4181.239	52.060	915.000	915.000	0.000	3.1208	100.0000	3.34E+00	2.66E-01	2.65E-02	6.29E-02	1.10E-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

BATCH NUMBER	953497	CHAMBER	: 144	LIB FILE	: ENV_ALPHA_UU
SAMPLE ID	S1202044077_UU	DETECTOR S/N	: 75551	BKG FILE	: B144.CNF:397
SAMPLE QTY	0.126 G	AVERAGE %EFFICIENCY	: 25.1386	BKG DATE	: 21-FEB-2010
SAMPLE DATE	24-FEB-2010 00:00:00	COUNT DATE	: 27-FEB-2010 20:04:59	BKG LIVE TIME(SEC)	: 60000.00
ANALYST	MXE1	ELAPSED LIVE TIME(SEC)	: 60000.00	EFF FILE	: W144.CNF:108
% YIELD	79.960			CAL DATE	: 19-FEB-2010

TRACER	ID	: 1283-H		
	NUCLIDE	: U232		
	NOMINAL	: 4.5028E+00 dpm		
	RESULTS	: 3.6005E+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	5302.033	70.251	908.000	905.000	3.000	1.7321	100.0000	1.61E+01	1.34E+00	7.17E-02	1.92E-01	5.37E-01
U-3/4	4763.020	4753.355	41.137	356.000	353.084	2.000	4.8416	100.0000	6.28E+00	5.84E-01	2.00E-01	4.49E-01	3.36E-01
U-235	4391.000	4418.962	69.079	16.000	16.000	0.000	2.2152	80.90000	3.52E-01	9.19E-02	1.13E-01	2.86E-01	8.79E-02
U-238	4184.730	4188.179	46.056	305.000	305.000	0.000	3.1208	100.0000	5.42E+00	5.17E-01	1.29E-01	3.06E-01	3.11E-01

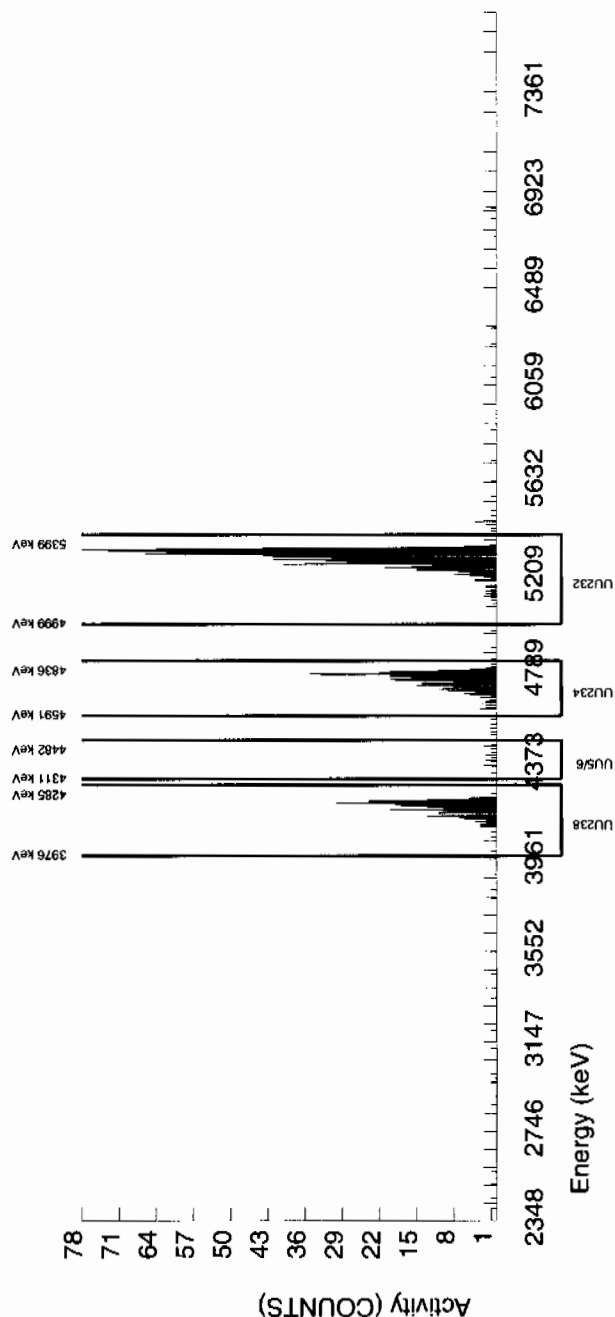
NOTES:

* 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# 950788 Product: Y-S Date: 2/24/10

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: 2/24/10

Secondary Review Performed By: 2/25/10

LANL
3/6

I.6-2/18/10

02/09/2010

Ratch #:950788

Analyst: MXR1

First Client DueDate03/06/2010

Internal Due Date: 02/23/2010

Gamma Spike Isotope: Mixed Gamma

Spike Code: _____

2

Expiration Date:

10A

Nominal Concentration: _____

3

Co-60 6.390

Gamma LCS Isotope: Mixed Gamma

LCS Code: 1032-A

Expiration Date: 12/

Box

Nominal Concentration:

5-137

06.51 15.90

Initials:

Prep Date: _____

01/11/20

Library: Solid

3

Hazard

Sealing Date/Time

Can	158.75	15	2/11/10
Can	158.75	15	2/11/10
128.31	128.31	16	
143.18	143.18	19	
131.53	131.53	21	
132.62	132.62	22	
126.87	126.87	17	
139.29	139.29	18	
140.80	140.80	1	
136.19	136.19	2	
130.51	130.51	4	
131.76	131.76	7	
122.74	122.74	10	
142.35	142.35	11	
153.01	153.01	12	
144.98	144.98	25	
142.27	142.27	16	
148.03	148.03	17	
119.20	119.20	18	
141.47	141.47	19	
158.75	158.75	21	
144.98	144.98	22	
155.44	155.44	14	

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: KHester 2/24/10 Page 1 of 1
✓ no history ✓ details

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
950788	246440001	SAMPLE	19-FEB-10		Americium-241	0.2833	0.486	0.200
					Cerium-139	-0.02107	0.05765	0.050
					Sodium-22	0.00713	0.08332	0.080
950788	246440002	SAMPLE	19-FEB-10		Americium-241	0.08373	0.2405	0.200
950788	246440003	SAMPLE	19-FEB-10		Americium-241	0.2147	0.2838	0.200
					Cerium-139	0.01258	0.053	0.050
950788	246440004	SAMPLE	19-FEB-10		Cesium-134	0.09655	0.1165	0.100
					Sodium-22	-0.00293	0.1002	0.080
950788	246440005	SAMPLE	19-FEB-10		Americium-241	0.1101	0.2301	0.200
					Cerium-139	0.0272	0.0515	0.050
950788	246440006	SAMPLE	19-FEB-10		Cerium-139	-0.00625	0.05418	0.050
					Cesium-134	0.03021	0.1035	0.100
					Sodium-22	-0.04209	0.09299	0.080
950788	246440007	SAMPLE	19-FEB-10		Americium-241	-0.04196	0.2725	0.200
950788	246440008	SAMPLE	19-FEB-10		Americium-241	-0.1156	0.2782	0.200
					Cerium-139	-0.00994	0.05281	0.050
					Sodium-22	0.00567	0.08483	0.080
950788	246440009	SAMPLE	19-FEB-10		Americium-241	0.2337	0.3378	0.200
					Cerium-139	0.00696	0.05473	0.050
					Sodium-22	0.02856	0.09374	0.080
950788	246440010	SAMPLE	19-FEB-10		Americium-241	0.1446	0.4018	0.200
					Sodium-22	0.00924	0.0898	0.080
950788	246440011	SAMPLE	19-FEB-10		Cerium-139	0.0035	0.05018	0.050
					Sodium-22	-0.01805	0.08026	0.080
950788	246440012	SAMPLE	19-FEB-10		Americium-241	0.05484	0.4138	0.200
					Sodium-22	-0.02138	0.08045	0.080
950788	246440013	SAMPLE	19-FEB-10					
950788	246440014	SAMPLE	19-FEB-10		Americium-241	0.09175	0.2427	0.200
950788	246444001	SAMPLE	19-FEB-10					
950788	246444002	SAMPLE	19-FEB-10		Americium-241	0.02356	0.2139	0.200
950788	246444003	SAMPLE	19-FEB-10		Cesium-134	0.06823	0.1035	0.100
					Sodium-22	0.02911	0.1002	0.080
950788	246444004	SAMPLE	19-FEB-10		Americium-241	0.1489	0.3184	0.200
950788	246444005	SAMPLE	19-FEB-10		Americium-241	-0.08129	0.2521	0.200
					Cerium-139	0.01515	0.05282	0.050
					Thorium-234	1.589	2.088	2.00
950788	1202037552	MB	19-FEB-10					
950788	1202037553	DUP	19-FEB-10		Americium-241	0.07181	0.2192	0.200
950788	1202037554	LCS	19-FEB-10		Cerium-139	-0.02168	0.07679	0.050
					Cesium-134	0.1223	0.1678	0.100
					Europium-152	0.059	0.3017	0.200
					Mercury-203	0.01312	0.1088	0.100

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Paramname	Result	MDA	RDL
950788	1202037554	LCS	19-FEB-10		Ruthenium-106	-0.1873	0.9596	0.800
					Sodium-22	-0.00715	0.08071	0.080
					Thorium-234	-0.0667	2.998	2.00
					Tin-113	0.01481	0.1386	0.100
					Uranium-235	-0.05935	0.5448	0.500

GEL QUALS

Batch ID: 950788

Report run on: February 24, 2010 11:04 AM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
246440001-1 19-FEB-2010 17:57	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.387			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.11			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.061			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1039			
246440002-1 19-FEB-2010 17:57	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.563			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.604			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1229		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.057			
246440003-1 19-FEB-2010 17:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.21			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.702			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.863			
246440004-1 19-FEB-2010 17:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.043			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.374			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.857			
246440005-1 19-FEB-2010 17:59	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.18			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.107			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08162		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.722			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1498			

GEL QUALS

Batch ID: 950788

Report run on: February 24, 2010 11:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
24644001-1 19-FEB-2010 17:59	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.039			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.3			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1096		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.07528		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.802			
	Uranium-235	UI	UI	UI	Data rejected due to high counting uncertainty.		.2951		.5	.5
24644006-1 19-FEB-2010 18:02	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.295			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.069			
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.1002		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.462			
24644007-1 19-FEB-2010 18:30	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.61			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.812			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1169		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.378			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.06535			
24644008-1 19-FEB-2010 19:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.762			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.19			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1162		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.462			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08872			

GEL QUALS

Batch ID: 950788

Report run on: February 24, 2010 11:04 AM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
24644009-1 19-FEB-2010 19:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.934			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.996			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.436			
246440010-1 19-FEB-2010 19:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.801			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.3			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1346		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.683			
	Thorium-234	UI	UI	UI	Data rejected due to no valid peak.		4.868		2	2
246440011-1 19-FEB-2010 19:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.639			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.496			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.593			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07977			
246440012-1 19-FEB-2010 19:51	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.691			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.589			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.65			
246440013-1 19-FEB-2010 19:51	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.628			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.887			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1112		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.118			

GEL QUALS

Batch ID: 950788

Report run on: February 24, 2010 11:04 AM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
246440014-1 19-FEB-2010 19:52	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.905			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.902			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.0926		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.532			
24644002-1 19-FEB-2010 20:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.095			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.621			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.951			
24644003-1 19-FEB-2010 20:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.461			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.862			
	Cesium-137	UI	UI	UI	Data rejected due to high peak-width.		.176		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.923			
24644004-1 19-FEB-2010 20:40	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.416			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.549			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.913			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07717			
24644005-1 19-FEB-2010 20:40	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.972			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.622			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.131		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.043			
	Radium-228	UI	UI	UI	Data rejected due to low abundance.		1.358		.5	.5

GEL QUALS

Batch ID: 950788

Report run on: February 24, 2010 11:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
1202037553-1 DUP 19-FEB-2010 20:42	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.951			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.748			
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.06224		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.508			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1167			

Gamma Review Report based on Result > MDA for Batch:950788

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
246440001	02-FEB-10 12:00	19-FEB-10 17:57	17.2	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.551	0.1583	pCi/g 0.2144	N	911.1 3	1.996	IDENTIFIED	8.341	<input type="checkbox"/>	
Americium-243	INT	0.3284	0.05152	pCi/g 0.1252	N	74.96 1	1.34	IDENTIFIED	14.6	<input type="checkbox"/>	
Annihilation Rad.	—	0.1604	0.03112	pCi/g 0.05007	N	510.9 1	1.939	IDENTIFIED	18.91	<input type="checkbox"/>	
Barium-137m	HE	0.08108	0.02913	pCi/g 0.06405	N	662.1 2	1.785	IDENTIFIED	35.7	<input type="checkbox"/>	
Bismuth-211	INT	3.387	0.286	pCi/g 0.41	Y	352.1 4	1.425	IDENTIFIED	6.828	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	1.004	0.2643	pCi/g 0.6981	N	0 10 0		FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.041	0.0965	pCi/g 0.1245	0.200	609.6 4	1.544	IDENTIFIED	7.831	<input type="checkbox"/>	
Cadmium-109	INT	4.11	0.8854	pCi/g 1.803	Y	86.56 3	1.351	IDENTIFIED	20.65	<input checked="" type="checkbox"/>	UI
Cerium-143	—	2204	384	pCi/g 0	N	0 10 0		SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-137	✓	0.08571	0.0308	pCi/g 0.06771	0.100	662.1 2	1.785	IDENTIFIED	35.7	<input type="checkbox"/>	
Gross Gamma	—	9.745	1.709	pCi/g 3.684	N	0				<input type="checkbox"/>	
Krypton-85	HE	19.81	4.56	pCi/g 15.42	N	0 10 0		NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212	✓	1.74	0.1204	pCi/g 0.1035	0.100	238.8 4	1.419	IDENTIFIED	3.53	<input type="checkbox"/>	
Lead-214	✓	1.178	0.1041	pCi/g 0.138	0.100	352.1 4	1.425	IDENTIFIED	6.828	<input type="checkbox"/>	
Lutetium-177	HE	3.556	1.157	pCi/g 2.932	N	0 10 0		FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	1.182	0.2824	pCi/g 0.5189	N	86.56 3	1.351	IDENTIFIED	20.65	<input type="checkbox"/>	
Niobium-95m	HE	0.3884	0.08519	pCi/g 0.284	N	0 10 0		NOT_IDENTI	0	<input type="checkbox"/>	
Polonium-212	NR	1.74	0.1204	pCi/g 0.1035	N	238.8 4	1.419	IDENTIFIED	3.53	<input type="checkbox"/>	
Polonium-214	NR	1.178	0.1041	pCi/g 0.138	N	352.1 4	1.425	IDENTIFIED	6.828	<input type="checkbox"/>	
Polonium-216	NR	1.74	0.1204	pCi/g 0.1035	N	238.8 4	1.419	IDENTIFIED	3.53	<input type="checkbox"/>	
Polonium-218	NR	1.178	0.1041	pCi/g 0.138	N	352.1 4	1.425	IDENTIFIED	6.828	<input type="checkbox"/>	
Potassium-40	✓	33.13	1.876	pCi/g 0.5453	1.00	1461 1	2.019	IDENTIFIED	2.814	<input type="checkbox"/>	
Radium-224	INT	4.061	0.7071	pCi/g 1.177	Y	241.7 1	1.854	IDENTIFIED	16.52	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.041	0.0965	pCi/g 0.1245	Y	609.6 4	1.544	IDENTIFIED	7.831	<input type="checkbox"/>	
Radium-228	✓	1.551	0.1583	pCi/g 0.2144	0.500	911.1 3	1.996	IDENTIFIED	8.341	<input type="checkbox"/>	
Sodium-24	HE	1.67E+06	4.38E+06	pCi/g 0	N	0 10 0		SHORT_HLIF	0	<input type="checkbox"/>	
Strontium-85	LA	0.1039	0.02391	pCi/g 0.08088	Y	0 10 0		NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-200	—	2358	961.2	pCi/g 0	N	0 10 0		SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.5576	0.04912	pCi/g 0.06534	0.080	583.3 1	1.643	IDENTIFIED	7.525	<input type="checkbox"/>	
Thorium-228	NR	1.77	0.1225	pCi/g 0.1052	N	238.8 4	1.419	IDENTIFIED	3.53	<input type="checkbox"/>	
Thorium-230	NR	1.041	0.0965	pCi/g 0.1245	N	609.6 4	1.544	IDENTIFIED	7.831	<input type="checkbox"/>	
Thorium-232	NR	1.551	0.1583	pCi/g 0.2144	N	911.1 3	1.996	IDENTIFIED	8.341	<input type="checkbox"/>	
Thorium-234	✓	4.305	1.731	pCi/g 3.673	2.00	63.06 2	1.592	IDENTIFIED	39	<input type="checkbox"/>	
Tin-126	NR	0.4027	0.08675	pCi/g 0.1946	N	86.56 3	1.351	IDENTIFIED	20.65	<input type="checkbox"/>	
Titanium-44	—	0.3293	0.03728	pCi/g 0.1032	N	0 10 0		FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	—	12.866	5.15E-06	ug/g 5.4675	N	0				<input type="checkbox"/>	
Uranium-234	NR	1.041	0.0965	pCi/g 0.1245	N	609.6 4	1.544	IDENTIFIED	7.831	<input type="checkbox"/>	
Uranium-238	HE	4.305	1.731	pCi/g 3.673	N	63.06 2	1.592	IDENTIFIED	39	<input type="checkbox"/>	
Zirconium-97	—	3.88E+07	8.77E+06	pCi/g 0	N	0 10 0		SHORT_HLIF	0	<input type="checkbox"/>	

*** = Number of isotopes identified with a keyline at this energy.

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246440002	02-FEB-10 12:00	19-FEB-10 17:57	17.2	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.747	0.1703	pCi/g	0.2092	N	911.2	3	1.697 IDENTIFIED	7.728	<input type="checkbox"/>
Americium-243 INT	0.3531	0.03369	pCi/g	0.08175	N	74.84	1	0.9162 IDENTIFIED	8.593	<input type="checkbox"/>
Annihilation Rad.	0.1353	0.03246	pCi/g	0.04639	N	511	1	1.809 IDENTIFIED	23.52	<input type="checkbox"/>
Bismuth-211 INT	3.563	0.2917	pCi/g	0.3105	Y	351.8	4	1.149 IDENTIFIED	6.101	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Bismuth-212 —	1.398	0.2804	pCi/g	0.6889	N	0	11	0 FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214 ✓	1.139	0.09499	pCi/g	0.09591	0.200	609.4	4	1.283 IDENTIFIED	6.448	<input type="checkbox"/>
Cadmium-109 INT	2.604	0.4686	pCi/g	1.178	Y	87.18	3	1.002 IDENTIFIED	17.35	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Cerium-143 —	1587	285.1	pCi/g	0	N	0	11	0 SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134 LA	0.1229	0.03299	pCi/g	0.0924	0.100	0	11	0 FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Gross Gamma —	9.843	1.717	pCi/g	3.396	N	0				<input type="checkbox"/>
Indium-114m HE	0.3456	0.08997	pCi/g	0.2997	N	0	11	0 NOT_IDENTI	0	<input type="checkbox"/>
Iodine-123 HE	4.05E+07	3.93E+07	pCi/g	0	N	0	11	0 SHORT_HLIF	0	<input type="checkbox"/>
Iodine-135 —	6.10E+17	0	pCi/g	0	N	0	11	0 SHORT_HLIF	0	<input type="checkbox"/>
Lead-212 ✓	1.639	0.1108	pCi/g	0.08355	0.100	238.5	4	0.9552 IDENTIFIED	3.275	<input type="checkbox"/>
Lead-214 ✓	1.239	0.1065	pCi/g	0.1082	0.100	351.8	4	1.149 IDENTIFIED	6.101	<input type="checkbox"/>
Lutetium-177 HE	3.592	0.9809	pCi/g	2.509	N	0	11	0 FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237 INT	0.7491	0.1554	pCi/g	0.385	N	87.18	3	1.002 IDENTIFIED	17.35	<input type="checkbox"/>
Niobium-97 HE	2.55E+05	4.37E+05	pCi/g	0	N	0	11	0 SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212 NR	1.639	0.1108	pCi/g	0.08355	N	238.5	4	0.9552 IDENTIFIED	3.275	<input type="checkbox"/>
Polonium-214 NR	1.239	0.1065	pCi/g	0.1082	N	351.8	4	1.149 IDENTIFIED	6.101	<input type="checkbox"/>
Polonium-216 NR	1.639	0.1108	pCi/g	0.08355	N	238.5	4	0.9552 IDENTIFIED	3.275	<input type="checkbox"/>
Polonium-218 NR	1.239	0.1065	pCi/g	0.1082	N	351.8	4	1.149 IDENTIFIED	6.101	<input type="checkbox"/>
Potassium-40 ✓	33.38	1.736	pCi/g	0.517	1.00	1461	1	1.952 IDENTIFIED	2.781	<input type="checkbox"/>
Radium-224 INT	5.057	0.6751	pCi/g	0.9508	Y	241.4	1	1.72 IDENTIFIED	12.16	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Radium-226 ✓	1.139	0.09499	pCi/g	0.09591	Y	609.4	4	1.283 IDENTIFIED	6.448	<input type="checkbox"/>
Radium-228 ✓	1.747	0.1703	pCi/g	0.2092	0.500	911.2	3	1.697 IDENTIFIED	7.728	<input type="checkbox"/>
Technetium-99m —	7.69E+18	0	pCi/g	0	N	0	11	0 SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208 ✓	0.5773	0.04588	pCi/g	0.05535	0.080	583.1	1	1.302 IDENTIFIED	6.213	<input type="checkbox"/>
Thorium-228 NR	1.667	0.1128	pCi/g	0.085	N	238.5	4	0.9552 IDENTIFIED	3.275	<input type="checkbox"/>
Thorium-230 NR	1.139	0.09499	pCi/g	0.09591	N	609.4	4	1.283 IDENTIFIED	6.448	<input type="checkbox"/>
Thorium-232 NR	1.747	0.1703	pCi/g	0.2092	N	911.2	3	1.697 IDENTIFIED	7.728	<input type="checkbox"/>
Thorium-234 ✓	3.225	0.9484	pCi/g	1.98	2.00	63.29	2	0.8411 IDENTIFIED	28.09	<input type="checkbox"/>
Tin-126 NR	0.2551	0.04591	pCi/g	0.116	N	87.18	3	1.002 IDENTIFIED	17.35	<input type="checkbox"/>
Titanium-44 —	0.335	0.02543	pCi/g	0.06737	N	0	11	0 FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium —	9.6974	2.82E-06	ug/g	2.9481	N	0				<input type="checkbox"/>
Uranium-234 NR	1.139	0.09499	pCi/g	0.09591	N	609.4	4	1.283 IDENTIFIED	6.448	<input type="checkbox"/>
Uranium-238 HE	3.225	0.9484	pCi/g	1.98	N	63.29	2	0.8411 IDENTIFIED	28.09	<input type="checkbox"/>
Zirconium-97 HE	1.12E+07	7.44E+06	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
246440003	02-FEB-10 12:00	19-FEB-10 17:58	17.2	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.637	0.1831	pCi/g	0.1956	N	911.5	3	1.415 IDENTIFIED	9.647	<input type="checkbox"/>

Americium-243	INT	0.4589	0.04622	pCi/g 0.1023	N	74.76	1	1.479	IDENTIFIED	9.258	<input type="checkbox"/>	
Annihilation Rad.	HE	0.09691	0.03476	pCi/g 0.04691	N	510.7	1	2.162	IDENTIFIED	35.74	<input type="checkbox"/>	
Bismuth-211	INT	3.21	0.2437	pCi/g 0.3454	Y	351.7	4	1.471	IDENTIFIED	6.888	<input checked="" type="checkbox"/>	UI
Bismuth-212	—	1.273	0.251	pCi/g 0.72	N	0	8	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.103	0.09421	pCi/g 0.1185	0.200	609.4	4	1.788	IDENTIFIED	7.587	<input type="checkbox"/>	
Cadmium-109	INT	3.702	0.6051	pCi/g 1.393	Y	87.28	3	1.447	IDENTIFIED	15.73	<input checked="" type="checkbox"/>	UI
Cerium-143	—	3079	436	pCi/g 0	N	0	8	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-135	HE	0.3653	0.08927	pCi/g 0.3022	N	0	8	0	NOT_IDENTI	0	<input type="checkbox"/>	
Gross Gamma	—	10.55	1.472	pCi/g 3.911	N						<input type="checkbox"/>	
Iodine-123	HE	4.33E+07	4.81E+07	pCi/g 0	N	0	8	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.892	0.08862	pCi/g 0.08931	0.100	238.5	4	1.332	IDENTIFIED	2.985	<input type="checkbox"/>	
Lead-214	✓	1.117	0.08963	pCi/g 0.1204	0.100	351.7	4	1.471	IDENTIFIED	6.888	<input type="checkbox"/>	
Neptunium-237	INT	1.065	0.2059	pCi/g 0.407	N	87.28	3	1.447	IDENTIFIED	15.73	<input type="checkbox"/>	
Niobium-95m	—	0.5403	0.0849	pCi/g 0.28	N	0	8	0	NOT_IDENTI	0	<input type="checkbox"/>	
Polonium-212	NR	1.892	0.08862	pCi/g 0.08931	N	238.5	4	1.332	IDENTIFIED	2.985	<input type="checkbox"/>	
Polonium-214	NR	1.117	0.08963	pCi/g 0.1204	N	351.7	4	1.471	IDENTIFIED	6.888	<input type="checkbox"/>	
Polonium-216	NR	1.892	0.08862	pCi/g 0.08931	N	238.5	4	1.332	IDENTIFIED	2.985	<input type="checkbox"/>	
Polonium-218	NR	1.117	0.08963	pCi/g 0.1204	N	351.7	4	1.471	IDENTIFIED	6.888	<input type="checkbox"/>	
Potassium-40	✓	34.61	1.563	pCi/g 0.5259	1.00	1461	1	1.923	IDENTIFIED	2.553	<input type="checkbox"/>	
Radium-224	INT	4.863	0.6515	pCi/g 1.016	Y	241.4	1	1.798	IDENTIFIED	13.09	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.103	0.09421	pCi/g 0.1185	Y	609.4	4	1.788	IDENTIFIED	7.587	<input type="checkbox"/>	
Radium-228	✓	1.637	0.1831	pCi/g 0.1956	0.500	911.5	3	1.415	IDENTIFIED	9.647	<input type="checkbox"/>	
Rhenium-188	HE	0.343	0.1229	pCi/g 0.3077	N	153.7	1	1.44	IDENTIFIED	35.74	<input type="checkbox"/>	
Thallium-200	HE	89.53	875.8	pCi/g 0	N	0	8	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.6085	0.04629	pCi/g 0.05878	0.080	583.2	1	1.563	IDENTIFIED	6.804	<input type="checkbox"/>	
Thorium-228	NR	1.925	0.09016	pCi/g 0.09086	N	238.5	4	1.332	IDENTIFIED	2.985	<input type="checkbox"/>	
Thorium-230	NR	1.103	0.09421	pCi/g 0.1185	N	609.4	4	1.788	IDENTIFIED	7.587	<input type="checkbox"/>	
Thorium-232	NR	1.637	0.1831	pCi/g 0.1956	N	911.5	3	1.415	IDENTIFIED	9.647	<input type="checkbox"/>	
Thorium-234	✓	3.95	1.051	pCi/g 2.283	2.00	63.43	2	1.033	IDENTIFIED	25.13	<input type="checkbox"/>	
Tin-126	NR	0.3627	0.05929	pCi/g 0.1371	N	87.28	3	1.447	IDENTIFIED	15.73	<input type="checkbox"/>	
Titanium-44	—	0.3649	0.02808	pCi/g 0.08617	N	0	8	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	—	11.869	3.13E-06	ug/g 3.3989	N						<input type="checkbox"/>	
Uranium-234	NR	1.103	0.09421	pCi/g 0.1185	N	609.4	4	1.788	IDENTIFIED	7.587	<input type="checkbox"/>	
Uranium-238	HE	3.95	1.051	pCi/g 2.283	N	63.43	2	1.033	IDENTIFIED	25.13	<input type="checkbox"/>	
Zirconium-97	—	3.71E+07	8.25E+06	pCi/g 0	N	0	8	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
246440004	02-FEB-10 12:00	19-FEB-10 17:58	172	SAMPLE	LOAD	1	LANL	LANL01004GEL		N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.996	0.206	pCi/g 0.2381	N	910.6	3	1.415	IDENTIFIED	8.621	<input type="checkbox"/>
Americium-243	INT	0.3458	0.02549	pCi/g 0.047	N	74.88	1	0.821	IDENTIFIED	6.027	<input type="checkbox"/>
Annihilation Rad.	HE	0.1218	0.03795	pCi/g 0.05594	N	510.9	1	1.359	IDENTIFIED	30.8	<input type="checkbox"/>
Bismuth-210	NR	1.461	0.336	pCi/g 0.648	N	46.63	3	0.7702	IDENTIFIED	22.5	<input type="checkbox"/>
Bismuth-211	INT	4.043	0.2853	pCi/g 0.3138	Y	351.7	4	0.9711	IDENTIFIED	5.426	<input checked="" type="checkbox"/>
Bismuth-212	—	1.848	0.4015	pCi/g 0.8865	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>

Bismuth-214	✓	1.243	0.1289	pCi/g 0.1358	0.200	609.2	4	1.254	IDENTIFIED	8.517	<input type="checkbox"/>	
Cadmium-109	INT	4.374	0.4359	pCi/g 0.7246	Y	87.3	3	1.14	IDENTIFIED	8.8	<input checked="" type="checkbox"/>	UI
Cerium-143	—	994.3	241.1	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Gross Gamma	—	10.67	1.498	pCi/g 3.914	N		0				<input type="checkbox"/>	
Iodine-123	HE	3.08E+07	3.41E+07	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	—	1.47E+18	0	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-210	✓	1.461	0.336	pCi/g 0.648	N	46.63	3	0.7702	IDENTIFIED	22.5	<input type="checkbox"/>	
Lead-212	✓	1.83	0.1074	pCi/g 0.08825	0.100	238.5	4	0.8716	IDENTIFIED	3.116	<input type="checkbox"/>	
Lead-214	✓	1.406	0.1058	pCi/g 0.1064	0.100	351.7	4	0.9711	IDENTIFIED	5.426	<input type="checkbox"/>	
Lutetium-177	HE	2.773	0.9234	pCi/g 2.445	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	1.258	0.1805	pCi/g 0.2073	N	87.3	3	1.14	IDENTIFIED	8.8	<input type="checkbox"/>	
Polonium-210	NR	1.461	0.3348	pCi/g 0.648	N	46.63	3	0.7702	IDENTIFIED	22.5	<input type="checkbox"/>	
Polonium-212	NR	1.83	0.1074	pCi/g 0.08825	N	238.5	4	0.8716	IDENTIFIED	3.116	<input type="checkbox"/>	
Polonium-214	NR	1.406	0.1058	pCi/g 0.1064	N	351.7	4	0.9711	IDENTIFIED	5.426	<input type="checkbox"/>	
Polonium-216	NR	1.83	0.1074	pCi/g 0.08825	N	238.5	4	0.8716	IDENTIFIED	3.116	<input type="checkbox"/>	
Polonium-218	NR	1.406	0.1058	pCi/g 0.1064	N	351.7	4	0.9711	IDENTIFIED	5.426	<input type="checkbox"/>	
Potassium-40	✓	36.91	1.997	pCi/g 0.8112	1.00	1460	1	1.8	IDENTIFIED	3.324	<input type="checkbox"/>	
Radium-224	INT	4.857	0.7811	pCi/g 1.007	Y	241.3	1	1.882	IDENTIFIED	15.46	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.243	0.1289	pCi/g 0.1358	Y	609.2	4	1.254	IDENTIFIED	8.517	<input type="checkbox"/>	
Radium-228	✓	1.996	0.206	pCi/g 0.2381	0.500	910.6	3	1.415	IDENTIFIED	8.621	<input type="checkbox"/>	
Technetium-99m	—	1.54E+18	0	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-200	HE	311.4	923.6	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.6066	0.0625	pCi/g 0.06731	0.080	583	1	1.474	IDENTIFIED	8.746	<input type="checkbox"/>	
Thorium-228	NR	1.862	0.1092	pCi/g 0.08978	N	238.5	4	0.8716	IDENTIFIED	3.116	<input type="checkbox"/>	
Thorium-230	NR	1.243	0.1289	pCi/g 0.1358	N	609.2	4	1.254	IDENTIFIED	8.517	<input type="checkbox"/>	
Thorium-232	NR	1.996	0.206	pCi/g 0.2381	N	910.6	3	1.415	IDENTIFIED	8.621	<input type="checkbox"/>	
Thorium-234	✓	1.763	0.4898	pCi/g 0.7942	2.00	63.12	2	0.9055	IDENTIFIED	26.35	<input type="checkbox"/>	
Tin-126	NR	0.4286	0.04271	pCi/g 0.07087	N	87.3	3	1.14	IDENTIFIED	8.8	<input type="checkbox"/>	
Titanium-44	—	0.4126	0.02326	pCi/g 0.0404	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	—	5.2915	1.46E-06	ug/g 1.1843	N		0				<input type="checkbox"/>	
Uranium-234	NR	1.243	0.1289	pCi/g 0.1358	N	609.2	4	1.254	IDENTIFIED	8.517	<input type="checkbox"/>	
Uranium-238	HE	1.763	0.4898	pCi/g 0.7942	N	63.12	2	0.9055	IDENTIFIED	26.35	<input type="checkbox"/>	
Zirconium-97	HE	2.25E+05	9.18E+06	pCi/g 0	N	0	9	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	
246440005	02-FEB-10 12:00	19-FEB-10 17:59	17.2	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.684	0.1848	pCi/g 0.1944	N	911	3	1.798	IDENTIFIED 8.749	<input type="checkbox"/>	
Americium-243	INT	0.4204	0.04213	pCi/g 0.07952	N	74.76	1	1.347	IDENTIFIED 9.153	<input type="checkbox"/>	
Annihilation Rad.	—	0.1486	0.02964	pCi/g 0.04414	N	510.9	1	2.218	IDENTIFIED 19.31	<input type="checkbox"/>	
Bismuth-211	INT	4.18	0.3286	pCi/g 0.3087	Y	351.9	4	1.481	IDENTIFIED 5.291	<input checked="" type="checkbox"/>	
Bismuth-212	—	1.561	0.2661	pCi/g 0.6152	N	0	14	0	FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214	✓	1.192	0.0951	pCi/g 0.1161	0.200	609.4	4	1.699	IDENTIFIED 5.464	<input type="checkbox"/>	
Cadmium-109	INT	2.107	0.5061	pCi/g 1.246	Y	86.78	3	1.006	IDENTIFIED 23.56	<input checked="" type="checkbox"/>	
Cerium-143	—	2848	433.6	pCi/g 0	N	0	14	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134	LA	0.08162	0.02273	pCi/g 0.08011	0.100	0	14	0	NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.

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Krypton-85	HE	12.46	3.176	pCi/g 10.48	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212	✓	1.663	0.07551	pCi/g 0.07752	0.100	238.7	4	1.178	IDENTIFIED	2.805	<input type="checkbox"/>	
Lead-214	✓	1.256	0.07729	pCi/g 0.09052	0.100	351.9	4	1.491	IDENTIFIED	4.557	<input type="checkbox"/>	
Lutetium-177	HE	2.697	0.8425	pCi/g 2.132	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	1.097	0.1852	pCi/g 0.323	N	87.43	3	1.324	IDENTIFIED	12.55	<input type="checkbox"/>	
Niobium-95m	HE	0.212	0.05829	pCi/g 0.19	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>	
Niobium-97	HE	3.88E+05	3.17E+05	pCi/g 0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Polonium-212	NR	1.663	0.07551	pCi/g 0.07752	N	238.7	4	1.178	IDENTIFIED	2.805	<input type="checkbox"/>	
Polonium-214	NR	1.256	0.07729	pCi/g 0.09052	N	351.9	4	1.491	IDENTIFIED	4.557	<input type="checkbox"/>	
Polonium-216	NR	1.663	0.07551	pCi/g 0.07752	N	238.7	4	1.178	IDENTIFIED	2.805	<input type="checkbox"/>	
Polonium-218	NR	1.256	0.07729	pCi/g 0.09052	N	351.9	4	1.491	IDENTIFIED	4.557	<input type="checkbox"/>	
Potassium-40	✓	36.63	1.579	pCi/g 0.4621	1.00	1460	1	2.214	IDENTIFIED	2.041	<input type="checkbox"/>	
Radium-224	INT	4.378	0.5615	pCi/g 0.8809	Y	241.6	1	1.796	IDENTIFIED	12.52	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.003	0.07522	pCi/g 0.09296	Y	609.2	4	1.502	IDENTIFIED	6.023	<input type="checkbox"/>	
Radium-228	✓	1.677	0.1576	pCi/g 0.1406	0.500	910.7	3	1.534	IDENTIFIED	6.662	<input type="checkbox"/>	
Strontium-85	LA	0.06535	0.01666	pCi/g 0.05494	Y	0	12	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.4855	0.03849	pCi/g 0.04639	0.080	582.9	1	1.64	IDENTIFIED	6.892	<input type="checkbox"/>	
Thorium-228	NR	1.692	0.07682	pCi/g 0.07886	N	238.7	4	1.178	IDENTIFIED	2.805	<input type="checkbox"/>	
Thorium-230	NR	1.003	0.07521	pCi/g 0.09296	N	609.2	4	1.502	IDENTIFIED	6.023	<input type="checkbox"/>	
Thorium-232	NR	1.677	0.1576	pCi/g 0.1406	N	910.7	3	1.534	IDENTIFIED	6.662	<input type="checkbox"/>	
Thorium-234	✓	3.136	1.141	pCi/g 2.206	2.00	63.43	2	0.9802	IDENTIFIED	35.3	<input type="checkbox"/>	
Tin-126	NR	0.3734	0.04992	pCi/g 0.1083	N	87.43	3	1.324	IDENTIFIED	12.55	<input type="checkbox"/>	
Titanium-44	-	0.3922	0.03014	pCi/g 0.07874	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	-	9.3213	3.40E-06	ug/g 3.2847	N	0					<input type="checkbox"/>	
Uranium-234	NR	1.003	0.07521	pCi/g 0.09296	N	609.2	4	1.502	IDENTIFIED	6.023	<input type="checkbox"/>	
Uranium-238	HE	3.136	1.141	pCi/g 2.206	N	63.43	2	0.9802	IDENTIFIED	35.3	<input type="checkbox"/>	
Zirconium-97	✓	2.85E+07	6.83E+06	pCi/g 0	N	0	12	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		
246440008	02-FEB-10 12:00	19-FEB-10 19:26	17.3	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment		
Actinium-228 ✓	1.277	0.1925	pCi/g	0.2629	N	911.7	3	1.837	IDENTIFIED	13.92	<input type="checkbox"/>	
Americium-243 INT	0.4124	0.04553	pCi/g	0.09321	N	74.81	1	1.305	IDENTIFIED	10.23	<input type="checkbox"/>	
Annihilation Rad. HE	0.1309	0.0408	pCi/g	0.05366	N	511.1	1	1.536	IDENTIFIED	30.88	<input type="checkbox"/>	
Bismuth-211 INT	3.762	0.2857	pCi/g	0.388	Y	352.3	4	1.476	IDENTIFIED	6.089	<input checked="" type="checkbox"/>	UI
Bismuth-212 HE	1.186	0.2653	pCi/g	0.7726	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214 ✓	1.054	0.09105	pCi/g	0.1166	0.200	609.6	4	1.582	IDENTIFIED	7.091	<input type="checkbox"/>	
Cadmium-109 INT	3.19	0.5009	pCi/g	1.337	Y	87.23	3	1.179	IDENTIFIED	14.99	<input checked="" type="checkbox"/>	UI
Cerium-143 —	1239	291.9	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134 LA	0.1162	0.02735	pCi/g	0.1043	0.100	0	13	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma —	9.486	1.344	pCi/g	2.852	N	0					<input type="checkbox"/>	
Iodine-133 HE	17780	18060	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135 —	5.88E+16	0	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85 HE	16.91	4.723	pCi/g	15.55	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212 ✓	1.722	0.1068	pCi/g	0.1011	0.100	239	4	1.262	IDENTIFIED	3.582	<input type="checkbox"/>	
Lead-214 ✓	1.308	0.1051	pCi/g	0.1257	0.100	352.3	4	1.476	IDENTIFIED	6.089	<input type="checkbox"/>	

Lutetium-177	HE	3.348	0.9878	pCi/g 2.75	N	0	13	0	FAIL_ABUND 0	<input type="checkbox"/>	
Neptunium-237	INT	0.9177	0.1724	pCi/g 0.3917	N	87.23	3	1.179	IDENTIFIED 14.99	<input type="checkbox"/>	
Niobium-97	HE	3.18E+05	5.21E+05	pCi/g 0	N	0	13	0	SHORT_HLIF 0	<input type="checkbox"/>	
Polonium-212	NR	1.722	0.1068	pCi/g 0.1011	N	239	4	1.262	IDENTIFIED 3.582	<input type="checkbox"/>	
Polonium-214	NR	1.308	0.1051	pCi/g 0.1257	N	352.3	4	1.476	IDENTIFIED 6.089	<input type="checkbox"/>	
Polonium-216	NR	1.722	0.1068	pCi/g 0.1011	N	239	4	1.262	IDENTIFIED 3.582	<input type="checkbox"/>	
Polonium-218	NR	1.308	0.1051	pCi/g 0.1257	N	352.3	4	1.476	IDENTIFIED 6.089	<input type="checkbox"/>	
Potassium-40	✓	32.38	1.768	pCi/g 0.5173	1.00	1461	1	2.277	IDENTIFIED 3.17	<input type="checkbox"/>	
Radium-224	INT	4.462	0.623	pCi/g 1.151	Y	242.1	1	1.708	IDENTIFIED 13.2	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.054	0.09105	pCi/g 0.1166	Y	609.6	4	1.582	IDENTIFIED 7.091	<input type="checkbox"/>	
Radium-228	✓	1.277	0.1925	pCi/g 0.2629	0.500	911.7	3	1.837	IDENTIFIED 13.92	<input type="checkbox"/>	
Sodium-24	HE	3.06E+06	4.06E+06	pCi/g 0	N	0	13	0	SHORT_HLIF 0	<input type="checkbox"/>	
Strontium-85	LA	0.08872	0.02478	pCi/g 0.08159	Y	0	13	0	NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-200	HE	841.3	1018	pCi/g 0	N	0	13	0	SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-208	✓	0.5044	0.04934	pCi/g 0.06263	0.080	583.6	1	1.284	IDENTIFIED 8.664	<input type="checkbox"/>	
Thorium-228	NR	1.752	0.1087	pCi/g 0.1029	N	239	4	1.262	IDENTIFIED 3.582	<input type="checkbox"/>	
Thorium-230	NR	1.054	0.09105	pCi/g 0.1166	N	609.6	4	1.582	IDENTIFIED 7.091	<input type="checkbox"/>	
Thorium-232	NR	1.277	0.1925	pCi/g 0.2629	N	911.7	3	1.837	IDENTIFIED 13.92	<input type="checkbox"/>	
Thorium-234	✓	2.613	1.001	pCi/g 2.349	2.00	63.2	2	1.28	IDENTIFIED 37.29	<input type="checkbox"/>	
Tin-126	NR	0.3125	0.04908	pCi/g 0.1317	N	87.23	3	1.179	IDENTIFIED 14.99	<input type="checkbox"/>	
Titanium-44	-	0.4254	0.03274	pCi/g 0.08973	N	0	13	0	FAIL_ABUND 0	<input type="checkbox"/>	
Total Uranium	-	7.9124	2.98E-06	ug/g 3.4972	N		0			<input type="checkbox"/>	
Uranium-234	NR	1.054	0.09105	pCi/g 0.1166	N	609.6	4	1.582	IDENTIFIED 7.091	<input type="checkbox"/>	
Uranium-238	HE	2.613	1.001	pCi/g 2.349	N	63.2	2	1.28	IDENTIFIED 37.29	<input type="checkbox"/>	
Zirconium-97	HE	1.69E+07	9.34E+06	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
246440009	02-FEB-10 12:00	19-FEB-10 19:50	17.3	SAMPLE	LOAD	1	LANL	LANL01004KEL		N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.891	0.1934	pCi/g 0.2247	N	910.6	3	1.663	IDENTIFIED 8.101	<input type="checkbox"/>	
Americium-243	INT	0.4038	0.04355	pCi/g 0.09899	N	74.55	1	1.031	IDENTIFIED 9.86	<input type="checkbox"/>	
Annihilation Rad.	-	0.1384	0.03976	pCi/g 0.05135	N	510.7	1	2.05	IDENTIFIED 28.3	<input type="checkbox"/>	
Bismuth-211	INT	3.934	0.3511	pCi/g 0.3459	Y	351.6	4	1.23	IDENTIFIED 6.818	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	0.986	0.3374	pCi/g 0.762	N	0	8	0	FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214	✓	0.9989	0.1134	pCi/g 0.1353	0.200	608.9	4	1.8	IDENTIFIED 10.05	<input type="checkbox"/>	
Cadmium-109	INT	2.996	0.5658	pCi/g 1.302	Y	87.04	3	1.102	IDENTIFIED 18.22	<input checked="" type="checkbox"/>	UI
Cerium-143	-	2655	423.7	pCi/g 0	N	0	8	0	SHORT_HLIF 0	<input type="checkbox"/>	
Gross Gamma	-	10.12	1.565	pCi/g 2.958	N		0			<input type="checkbox"/>	
Lead-212	✓	1.803	0.1292	pCi/g 0.09909	0.100	238.4	4	1.101	IDENTIFIED 3.432	<input type="checkbox"/>	
Lead-214	✓	1.368	0.1273	pCi/g 0.1206	0.100	351.6	4	1.23	IDENTIFIED 6.818	<input type="checkbox"/>	
Lutetium-177	HE	4.621	1.498	pCi/g 2.747	N	0	8	0	FAIL_ABUND 0	<input type="checkbox"/>	
Neptunium-237	INT	0.862	0.1855	pCi/g 0.382	N	87.04	3	1.102	IDENTIFIED 18.22	<input type="checkbox"/>	
Niobium-97	HE	1.20E+05	4.82E+05	pCi/g 0	N	0	8	0	SHORT_HLIF 0	<input type="checkbox"/>	
Polonium-212	NR	1.803	0.1292	pCi/g 0.09909	N	238.4	4	1.101	IDENTIFIED 3.432	<input type="checkbox"/>	
Polonium-214	NR	1.368	0.1273	pCi/g 0.1206	N	351.6	4	1.23	IDENTIFIED 6.818	<input type="checkbox"/>	
Polonium-216	NR	1.803	0.1292	pCi/g 0.09909	N	238.4	4	1.101	IDENTIFIED 3.432	<input type="checkbox"/>	

Polonium-218	NR	1.368	0.1273	pCi/g 0.1206	N	351.6	4	1.23	IDENTIFIED	6.818	<input type="checkbox"/>	
Potassium-40	✓	36.01	1.987	pCi/g 0.5232	1.00	1460	1	2.128	IDENTIFIED	2.801	<input type="checkbox"/>	
Radium-224	INT	5.436	0.7584	pCi/g 1.128	Y	241.5	1	1.723	IDENTIFIED	12.64	<input checked="" type="checkbox"/>	UI
Radium-226	✓	0.9989	0.1134	pCi/g 0.1353	Y	608.9	4	1.8	IDENTIFIED	10.05	<input type="checkbox"/>	
Radium-228	✓	1.891	0.1934	pCi/g 0.2247	0.500	910.6	3	1.663	IDENTIFIED	8.101	<input type="checkbox"/>	
Sodium-24	HE	2.29E+06	5.43E+06	pCi/g 0	N	0	8	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-200	HE	1116	978.1	pCi/g 0	N	0	8	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.5871	0.05353	pCi/g 0.06257	0.080	582.8	1	1.273	IDENTIFIED	7.619	<input type="checkbox"/>	
Thorium-228	NR	1.834	0.1314	pCi/g 0.1008	N	238.4	4	1.101	IDENTIFIED	3.432	<input type="checkbox"/>	
Thorium-230	NR	0.9989	0.1134	pCi/g 0.1353	N	608.9	4	1.8	IDENTIFIED	10.05	<input type="checkbox"/>	
Thorium-232	NR	1.891	0.1934	pCi/g 0.2247	N	910.6	3	1.663	IDENTIFIED	8.101	<input type="checkbox"/>	
Thorium-234	✓	2.825	1.173	pCi/g 2.413	2.00	63.01	2	1.002	IDENTIFIED	40.59	<input type="checkbox"/>	
Tin-126	NR	0.2935	0.05543	pCi/g 0.1283	N	87.04	3	1.102	IDENTIFIED	18.22	<input type="checkbox"/>	
Titanium-44	HE	0.1207	0.02583	pCi/g 0.0742	N	0	8	0	NOT_IDENTI	0	<input type="checkbox"/>	
Total Uranium	✓	8.4456	3.49E-06	ug/g 3.5927	N	0					<input type="checkbox"/>	
Uranium-234	NR	0.9989	0.1134	pCi/g 0.1353	N	608.9	4	1.8	IDENTIFIED	10.05	<input type="checkbox"/>	
Uranium-238	HE	2.825	1.173	pCi/g 2.413	N	63.01	2	1.002	IDENTIFIED	40.59	<input type="checkbox"/>	
Zirconium-97	HE	1.39E+07	9.87E+06	pCi/g 0	N	0	8	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		
246440010	02-FEB-10 12:00	19-FEB-10 19:50	17.3	SAMPLE	LOAD	1	LANL	LANL01004IGEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment	
Actinium-228	✓	1.649	0.2093	pCi/g 0.1956	N	911.4	3	1.758	IDENTIFIED	11.46	<input type="checkbox"/>	
Americium-243	INT	0.3421	0.04492	pCi/g 0.1026	N	74.75	1	0.9805	IDENTIFIED	11.82	<input type="checkbox"/>	
Annihilation Rad.	HE	0.0756	0.03149	pCi/g 0.04777	N	510.7	1	1.805	IDENTIFIED	41.57	<input type="checkbox"/>	
Bismuth-211	INT	3.801	0.28	pCi/g 0.309	Y	351.9	4	1.251	IDENTIFIED	6.549	<input checked="" type="checkbox"/>	UI
Bismuth-212	-	1.292	0.2805	pCi/g 0.7272	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.168	0.08672	pCi/g 0.1059	0.200	609.3	4	1.41	IDENTIFIED	6.455	<input type="checkbox"/>	
Cadmium-109	INT	3.3	0.6175	pCi/g 1.352	Y	87.13	3	1.145	IDENTIFIED	17.73	<input checked="" type="checkbox"/>	UI
Cerium-143	-	1575	297	pCi/g 0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1346	0.0389	pCi/g 0.09691	0.100	0	10	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma	-	10.18	1.462	pCi/g 3.138	N	0					<input type="checkbox"/>	
Iodine-123	HE	1.51E+07	4.57E+07	pCi/g 0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-133	-	39310	16580	pCi/g 0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.712	0.08836	pCi/g 0.09003	0.100	238.6	4	1.047	IDENTIFIED	3.241	<input type="checkbox"/>	
Lead-214	✓	1.322	0.1033	pCi/g 0.1077	0.100	351.9	4	1.251	IDENTIFIED	6.549	<input type="checkbox"/>	
Lutetium-177	HE	2.686	0.9942	pCi/g 2.582	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	0.9493	0.2029	pCi/g 0.4312	N	87.13	3	1.145	IDENTIFIED	17.73	<input type="checkbox"/>	
Polonium-212	NR	1.712	0.08836	pCi/g 0.09003	N	238.6	4	1.047	IDENTIFIED	3.241	<input type="checkbox"/>	
Polonium-214	NR	1.322	0.1033	pCi/g 0.1077	N	351.9	4	1.251	IDENTIFIED	6.549	<input type="checkbox"/>	
Polonium-216	NR	1.712	0.08836	pCi/g 0.09003	N	238.6	4	1.047	IDENTIFIED	3.241	<input type="checkbox"/>	
Polonium-218	NR	1.322	0.1033	pCi/g 0.1077	N	351.9	4	1.251	IDENTIFIED	6.549	<input type="checkbox"/>	
Potassium-40	✓	34.51	1.597	pCi/g 0.6417	1.00	1461	1	2.22	IDENTIFIED	2.965	<input type="checkbox"/>	
Radium-224	INT	4.683	0.7678	pCi/g 1.025	Y	241.4	1	1.863	IDENTIFIED	16.05	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.168	0.08672	pCi/g 0.1059	Y	609.3	4	1.41	IDENTIFIED	6.455	<input type="checkbox"/>	
Radium-228	✓	1.649	0.2093	pCi/g 0.1956	0.500	911.4	3	1.758	IDENTIFIED	11.46	<input type="checkbox"/>	

Technetium-99m	—	4.15E+18 0	pCi/g 0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>	<input type="checkbox"/>	
Thallium-200	HE	1587 898.4	pCi/g 0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>	<input type="checkbox"/>	
Thallium-208	✓	0.4901 0.04326	pCi/g 0.06631	0.080	583.2	1	1.489	IDENTIFIED 8.248	<input type="checkbox"/>	<input type="checkbox"/>	
Thorium-228	NR	1.742 0.0899	pCi/g 0.0916	N	238.6	4	1.047	IDENTIFIED 3.241	<input type="checkbox"/>	<input type="checkbox"/>	
Thorium-230	NR	1.168 0.08672	pCi/g 0.1059	N	609.3	4	1.41	IDENTIFIED 6.455	<input type="checkbox"/>	<input type="checkbox"/>	
Thorium-232	NR	1.649 0.2093	pCi/g 0.1956	N	911.4	3	1.758	IDENTIFIED 11.46	<input type="checkbox"/>	<input type="checkbox"/>	
Thorium-234	NR	4.868 1.56	pCi/g 2.944	2.00	63.51	2	1.863	IDENTIFIED 30.49	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Tin-126	NR	0.3233 0.0605	pCi/g 0.1335	N	87.13	3	1.145	IDENTIFIED 17.73	<input type="checkbox"/>	<input type="checkbox"/>	
Titanium-44	—	0.4275 0.03948	pCi/g 0.08538	N	0	10	0	FAIL_ABUND 0	<input type="checkbox"/>	<input type="checkbox"/>	
Total Uranium	NR	14.513 4.64E-06	ug/g 4.382	N					<input type="checkbox"/>	<input type="checkbox"/>	
Uranium-234	NR	1.168 0.08672	pCi/g 0.1059	N	609.3	4	1.41	IDENTIFIED 6.455	<input type="checkbox"/>	<input type="checkbox"/>	
Uranium-238	HE	4.868 1.56	pCi/g 2.944	N	63.51	2	1.863	IDENTIFIED 30.49	<input type="checkbox"/>	<input type="checkbox"/>	
Zirconium-97	HE	1.67E+07 8.74E+06	pCi/g 0	N	0	10	0	SHORT_HLIF 0	<input type="checkbox"/>	<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
246440011	02-FEB-10 12:00	19-FEB-10 19:50	17.3	SAMPLE	LOAD	1	LANL	LANL01004KEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.644	0.1753	pCi/g 0.2485	N	911.4	3	1.737	IDENTIFIED 8.93	<input type="checkbox"/>	
Americium-243	INT	0.3795	0.0368	pCi/g 0.07775	N	74.77	1	1.217	IDENTIFIED 8.823	<input type="checkbox"/>	
Annihilation Rad.	—	0.2196	0.0389	pCi/g 0.04676	N	511	1	1.864	IDENTIFIED 17.15	<input type="checkbox"/>	
Barium-137m	HE	0.08135	0.02994	pCi/g 0.06746	N	661.7	2	1.907	IDENTIFIED 36.53	<input type="checkbox"/>	
Bismuth-211	INT	3.639	0.2763	pCi/g 0.3748	Y	352	4	1.198	IDENTIFIED 6.128	<input checked="" type="checkbox"/>	
Bismuth-212	HE	0.9368	0.2569	pCi/g 0.6833	N	0	11	0	FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214	✓	1.375	0.1154	pCi/g 0.1083	0.200	609.5	4	1.327	IDENTIFIED 6.613	<input type="checkbox"/>	
Cadmium-109	INT	4.496	0.5271	pCi/g 1.122	Y	87.16	3	1.371	IDENTIFIED 10.76	<input checked="" type="checkbox"/>	
Cerium-143	—	1832	331.3	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-137	✓	0.08599	0.03165	pCi/g 0.07131	0.100	661.7	2	1.907	IDENTIFIED 36.53	<input type="checkbox"/>	
Gross Gamma	—	11.15	1.93	pCi/g 4.42	N					<input type="checkbox"/>	
Iodine-123	HE	5.35E+07 5.42E+07	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>	<input type="checkbox"/>	
Iodine-133	HE	17740 17530	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>	<input type="checkbox"/>	
Krypton-85	HE	15.2 4.107	pCi/g 14.02	N	0	11	0	NOT_IDENTI 0	<input type="checkbox"/>	<input type="checkbox"/>	
Lead-212	✓	1.852	0.1072	pCi/g 0.09753	0.100	238.8	4	1.121	IDENTIFIED 3.258	<input type="checkbox"/>	
Lead-214	✓	1.266	0.1016	pCi/g 0.1335	0.100	352	4	1.198	IDENTIFIED 6.128	<input type="checkbox"/>	
Lutetium-177	—	7.324	1.29	pCi/g 2.721	N	0	11	0	FAIL_ABUND 0	<input type="checkbox"/>	
Neptunium-237	INT	1.293	0.202	pCi/g 0.3253	N	87.16	3	1.371	IDENTIFIED 10.76	<input type="checkbox"/>	
Niobium-97	HE	4.27E+05 5.28E+05	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>	<input type="checkbox"/>	
Polonium-212	NR	1.852	0.1072	pCi/g 0.09753	N	238.8	4	1.121	IDENTIFIED 3.258	<input type="checkbox"/>	
Polonium-214	NR	1.266	0.1016	pCi/g 0.1335	N	352	4	1.198	IDENTIFIED 6.128	<input type="checkbox"/>	
Polonium-216	NR	1.852	0.1072	pCi/g 0.09753	N	238.8	4	1.121	IDENTIFIED 3.258	<input type="checkbox"/>	
Polonium-218	NR	1.266	0.1016	pCi/g 0.1335	N	352	4	1.198	IDENTIFIED 6.128	<input type="checkbox"/>	
Potassium-40	✓	37.28	1.902	pCi/g 0.5998	1.00	1461	1	1.958	IDENTIFIED 2.758	<input type="checkbox"/>	
Radium-224	INT	4.593	0.6753	pCi/g 1.11	Y	241.7	1	1.665	IDENTIFIED 14.08	<input checked="" type="checkbox"/>	
Radium-226	✓	1.375	0.1154	pCi/g 0.1083	Y	609.5	4	1.327	IDENTIFIED 6.613	<input type="checkbox"/>	
Radium-228	✓	1.644	0.1753	pCi/g 0.2485	0.500	911.4	3	1.737	IDENTIFIED 8.93	<input type="checkbox"/>	
Sodium-24	HE	6.35E+05 3.90E+06	pCi/g 0	N	0	11	0	SHORT_HLIF 0	<input type="checkbox"/>	<input type="checkbox"/>	
Strontium-85	LA	0.07977	0.02155	pCi/g 0.0736	Y	0	11	0	NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.

Thallium-208	✓	0.5935	0.04533	pCi/g 0.06183	0.080	583.4	1	1.438	IDENTIFIED	5.955	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-228	NR	1.884	0.109	pCi/g 0.09923	N	238.8	4	1.121	IDENTIFIED	3.258	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-230	NR	1.375	0.1154	pCi/g 0.1083	N	609.5	4	1.327	IDENTIFIED	6.613	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-232	NR	1.644	0.1753	pCi/g 0.2485	N	911.4	3	1.737	IDENTIFIED	8.93	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-234	✓	2.65	0.7361	pCi/g 1.622	2.00	63.49	2	0.9609	IDENTIFIED	26.38	<input type="checkbox"/>	<input type="checkbox"/>
Tin-126	NR	0.4404	0.05164	pCi/g 0.1101	N	87.16	3	1.371	IDENTIFIED	10.76	<input type="checkbox"/>	<input type="checkbox"/>
Titanium-44	—	0.3918	0.0268	pCi/g 0.07447	N	0	11	0	FAIL_ABUND	0	<input type="checkbox"/>	<input type="checkbox"/>
Total Uranium	—	7.8759	2.19E-06	ug/g 2.4154	N	0					<input type="checkbox"/>	<input type="checkbox"/>
Uranium-234	NR	1.375	0.1154	pCi/g 0.1083	N	609.5	4	1.327	IDENTIFIED	6.613	<input type="checkbox"/>	<input type="checkbox"/>
Uranium-238	HE	2.65	0.7361	pCi/g 1.622	N	63.49	2	0.9609	IDENTIFIED	26.38	<input type="checkbox"/>	<input type="checkbox"/>
Zirconium-97	—	2.88E+07	9.42E+06	pCi/g 0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	<input type="checkbox"/>

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246440012	02-FEB-10 12:00	19-FEB-10 19:51	17.3	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.62	0.1931	pCi/g 0.219	N	910.7	3	1.552 IDENTIFIED	10.2	<input type="checkbox"/>
Americium-243	INT	0.3842	0.04905	pCi/g 0.1094	N	74.53	1	0.9454 IDENTIFIED	11.53	<input type="checkbox"/>
Annihilation Rad.	—	0.1547	0.03164	pCi/g 0.04449	N	510.5	1	1.832 IDENTIFIED	20.2	<input type="checkbox"/>
Bismuth-211	INT	3.691	0.2801	pCi/g 0.3211	Y	351.6	4	1.401 IDENTIFIED	6.656	<input checked="" type="checkbox"/> us
Bismuth-212	✓	1.179	0.2711	pCi/g 0.483	N	726.7	1	1.57 IDENTIFIED	22.64	<input type="checkbox"/>
Bismuth-214	✓	1.06	0.08237	pCi/g 0.1103	0.200	608.9	4	1.396 IDENTIFIED	6.775	<input type="checkbox"/>
Cadmium-109	INT	3.589	0.614	pCi/g 1.29	Y	86.87	3	1.321 IDENTIFIED	16.15	<input checked="" type="checkbox"/> us
Cerium-143	—	2831	427.1	pCi/g 0	N	0	10	0 SHORT_HLIF	0	<input type="checkbox"/>
Cesium-135	HE	0.3323	0.08762	pCi/g 0.2932	N	0	10	0 NOT_IDENTI	0	<input type="checkbox"/>
Gross Gamma	—	10.11	1.491	pCi/g 3.233	N	0				<input type="checkbox"/>
Iodine-123	HE	2.22E+07	4.98E+07	pCi/g 0	N	0	10	0 SHORT_HLIF	0	<input type="checkbox"/>
Iodine-133	HE	1352	18130	pCi/g 0	N	0	10	0 SHORT_HLIF	0	<input type="checkbox"/>
Lead-212	✓	1.641	0.08475	pCi/g 0.09149	0.100	238.3	4	1.117 IDENTIFIED	3.506	<input type="checkbox"/>
Lead-214	✓	1.284	0.103	pCi/g 0.1119	0.100	351.6	4	1.401 IDENTIFIED	6.656	<input type="checkbox"/>
Lutetium-177	HE	3.421	0.9518	pCi/g 2.544	N	0	10	0 FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	INT	1.032	0.2063	pCi/g 0.4662	N	86.87	3	1.321 IDENTIFIED	16.15	<input type="checkbox"/>
Niobium-95m	HE	0.2574	0.07229	pCi/g 0.2391	N	0	10	0 NOT_IDENTI	0	<input type="checkbox"/>
Polonium-212	NR	1.641	0.08475	pCi/g 0.09149	N	238.3	4	1.117 IDENTIFIED	3.506	<input type="checkbox"/>
Polonium-214	NR	1.284	0.103	pCi/g 0.1119	N	351.6	4	1.401 IDENTIFIED	6.656	<input type="checkbox"/>
Polonium-216	NR	1.641	0.08475	pCi/g 0.09149	N	238.3	4	1.117 IDENTIFIED	3.506	<input type="checkbox"/>
Polonium-218	NR	1.284	0.103	pCi/g 0.1119	N	351.6	4	1.401 IDENTIFIED	6.656	<input type="checkbox"/>
Potassium-40	✓	37.95	1.942	pCi/g 0.5498	1.00	1460	1	1.962 IDENTIFIED	2.761	<input type="checkbox"/>
Radium-224	INT	4.65	0.7147	pCi/g 1.041	Y	241.3	1	1.87 IDENTIFIED	15.06	<input checked="" type="checkbox"/> us
Radium-226	✓	1.06	0.08237	pCi/g 0.1103	Y	608.9	4	1.396 IDENTIFIED	6.775	<input type="checkbox"/>
Radium-228	✓	1.62	0.1931	pCi/g 0.219	0.500	910.7	3	1.552 IDENTIFIED	10.2	<input type="checkbox"/>
Sodium-24	HE	4.55E+06	5.42E+06	pCi/g 0	N	0	10	0 SHORT_HLIF	0	<input type="checkbox"/>
Thallium-200	HE	1322	907	pCi/g 0	N	0	10	0 SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.5303	0.0409	pCi/g 0.06057	0.080	582.9	1	1.564 IDENTIFIED	6.942	<input type="checkbox"/>
Thorium-228	NR	1.67	0.08622	pCi/g 0.09308	N	238.3	4	1.117 IDENTIFIED	3.506	<input type="checkbox"/>
Thorium-230	NR	1.06	0.08237	pCi/g 0.1103	N	608.9	4	1.396 IDENTIFIED	6.775	<input type="checkbox"/>
Thorium-232	NR	1.62	0.1931	pCi/g 0.219	N	910.7	3	1.552 IDENTIFIED	10.2	<input type="checkbox"/>

Thorium-234	✓	4.435	1.56	pCi/g	3.019	2.00	62.94	2	1.656	IDENTIFIED	33.75	<input type="checkbox"/>	
Tin-126	NR	0.3516	0.06015	pCi/g	0.1273	N	86.87	3	1.321	IDENTIFIED	16.15	<input type="checkbox"/>	
Titanium-44	—	0.1453	0.02562	pCi/g	0.0838	N	0	10	0	NOT_IDENTI	0	<input type="checkbox"/>	
Total Uranium	—	13.193	4.64E-06	ug/g	4.4945	N		0				<input type="checkbox"/>	
Uranium-234	NR	1.06	0.08237	pCi/g	0.1103	N	608.9	4	1.396	IDENTIFIED	6.775	<input type="checkbox"/>	
Uranium-238	HE	4.435	1.56	pCi/g	3.019	N	62.94	2	1.656	IDENTIFIED	33.75	<input type="checkbox"/>	
Zirconium-97	—	3.08E+07	9.14E+06	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
246440013	02-FEB-10 12:00	19-FEB-10 19:51	17.3	SAMPLE	LOAD	1	LANL	LANL01004KEL		N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.337	0.1459	pCi/g	0.1843	N	911.5	3	1.39	IDENTIFIED	9.059	<input type="checkbox"/>	
Americium-243	INT	0.3546	0.03196	pCi/g	0.06515	N	74.76	1	0.918	IDENTIFIED	8.052	<input type="checkbox"/>	
Annihilation Rad.	—	0.1245	0.029	pCi/g	0.04011	N	510.8	1	1.753	IDENTIFIED	22.68	<input type="checkbox"/>	
Barium-137m	HE	0.06023	0.02096	pCi/g	0.05364	N	662.1	2	1.33	IDENTIFIED	34.48	<input type="checkbox"/>	
Bismuth-211	INT	3.628	0.3076	pCi/g	0.2816	Y	351.9	4	1.166	IDENTIFIED	5.354	<input checked="" type="checkbox"/>	UI
Bismuth-212	✓	1.199	0.2366	pCi/g	0.3633	N	727.1	1	1.345	IDENTIFIED	18.95	<input type="checkbox"/>	
Bismuth-214	✓	1.051	0.09215	pCi/g	0.09021	0.200	609.5	4	1.233	IDENTIFIED	6.702	<input type="checkbox"/>	
Cadmium-109	INT	3.887	0.484	pCi/g	0.8883	Y	87.21	3	1.323	IDENTIFIED	11.53	<input checked="" type="checkbox"/>	UI
Cerium-143	—	1080	233.4	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1112	0.0243	pCi/g	0.08	0.100	0	9	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137	✓	0.06367	0.02216	pCi/g	0.0567	0.100	662.1	2	1.33	IDENTIFIED	34.48	<input type="checkbox"/>	
Gross Gamma	—	9.713	1.387	pCi/g	3.231	N		0				<input type="checkbox"/>	
Iodine-123	HE	4.30E+07	3.68E+07	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	—	1.57E+18	0	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.611	0.1233	pCi/g	0.0808	0.100	238.6	4	0.934	IDENTIFIED	3.087	<input type="checkbox"/>	
Lead-214	✓	1.262	0.112	pCi/g	0.09341	0.100	351.9	4	1.166	IDENTIFIED	5.354	<input type="checkbox"/>	
Lutetium-177	—	4.931	1.03	pCi/g	2.14	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	1.118	0.1808	pCi/g	0.2585	N	87.21	3	1.323	IDENTIFIED	11.53	<input type="checkbox"/>	
Polonium-212	NR	1.611	0.1233	pCi/g	0.0808	N	238.6	4	0.934	IDENTIFIED	3.087	<input type="checkbox"/>	
Polonium-214	NR	1.262	0.112	pCi/g	0.09341	N	351.9	4	1.166	IDENTIFIED	5.354	<input type="checkbox"/>	
Polonium-216	NR	1.611	0.1233	pCi/g	0.0808	N	238.6	4	0.934	IDENTIFIED	3.087	<input type="checkbox"/>	
Polonium-218	NR	1.262	0.112	pCi/g	0.09341	N	351.9	4	1.166	IDENTIFIED	5.354	<input type="checkbox"/>	
Potassium-40	✓	30.71	1.556	pCi/g	0.4934	1.00	1461	1	1.958	IDENTIFIED	2.643	<input type="checkbox"/>	
Radium-224	INT	4.118	0.5267	pCi/g	0.9197	Y	241.5	1	1.529	IDENTIFIED	10.89	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.051	0.09215	pCi/g	0.09021	Y	609.5	4	1.233	IDENTIFIED	6.702	<input type="checkbox"/>	
Radium-228	✓	1.337	0.1459	pCi/g	0.1843	0.500	911.5	3	1.39	IDENTIFIED	9.059	<input type="checkbox"/>	
Sodium-24	HE	5.30E+06	3.48E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-200	HE	557.9	835.9	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.6091	0.04838	pCi/g	0.04453	0.080	583.1	1	1.253	IDENTIFIED	5.825	<input type="checkbox"/>	
Thorium-228	NR	1.639	0.1254	pCi/g	0.08221	N	238.6	4	0.934	IDENTIFIED	3.087	<input type="checkbox"/>	
Thorium-230	NR	1.051	0.09215	pCi/g	0.09021	N	609.5	4	1.233	IDENTIFIED	6.702	<input type="checkbox"/>	
Thorium-232	NR	1.337	0.1459	pCi/g	0.1843	N	911.5	3	1.39	IDENTIFIED	9.059	<input type="checkbox"/>	
Thorium-234	✓	2.41	0.6821	pCi/g	1.438	2.00	63.11	2	0.8126	IDENTIFIED	26.93	<input type="checkbox"/>	
Tin-126	NR	0.3808	0.04741	pCi/g	0.08731	N	87.21	3	1.323	IDENTIFIED	11.53	<input type="checkbox"/>	
Titanium-44	—	0.3172	0.02252	pCi/g	0.05488	N	0	9	0	FAIL_ABUND	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
246444001	03-FEB-10 12:00	19-FEB-10 17:59	16.2	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.828	0.1827	pCi/g	0.2021	N	910.9	3	1.431 IDENTIFIED 8.031	<input type="checkbox"/>	
Americium-243 INT	0.3528	0.02713	pCi/g	0.04745	N	74.84	1	0.9581 IDENTIFIED 5.772	<input type="checkbox"/>	
Annihilation Rad. —	0.1576	0.03437	pCi/g	0.04751	N	510.7	1	1.88 IDENTIFIED 21.2	<input type="checkbox"/>	
Barium-137m ✓	0.2254	0.03389	pCi/g	0.05756	N	661.2	2	1.224 IDENTIFIED 13.98	<input type="checkbox"/>	
Bismuth-210 HE	0.9596	0.3267	pCi/g	0.6474	N	46.62	3	0.9852 IDENTIFIED 33.65	<input type="checkbox"/>	
Bismuth-211 INT	4.039	0.3022	pCi/g	0.2824	Y	351.7	4	1.148 IDENTIFIED 5.32	<input checked="" type="checkbox"/>	UI
Bismuth-212 —	1.468	0.2613	pCi/g	0.6857	N	0	13	0 FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214 ✓	1.298	0.1071	pCi/g	0.09858	0.200	609.2	4	1.24 IDENTIFIED 5.632	<input type="checkbox"/>	
Cadmium-109 INT	3.3	0.392	pCi/g	0.7733	Y	87.17	3	1.089 IDENTIFIED 10.61	<input checked="" type="checkbox"/>	UI
Cerium-143 —	978.9	171.6	pCi/g	0	N	0	13	0 SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134 LA	0.1096	0.03755	pCi/g	0.08875	0.100	0	13	0 FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137 ✓	0.2382	0.03583	pCi/g	0.06085	0.100	661.2	2	1.224 IDENTIFIED 13.98	<input type="checkbox"/>	
Europium-155 HE	0.1642	0.06011	pCi/g	0.1256	N	105.5	1	1.626 IDENTIFIED 36.12	<input type="checkbox"/>	
Gross Gamma —	10.37	1.375	pCi/g	3.165	N	0			<input type="checkbox"/>	
Iodine-123 HE	7.34E+06	9.64E+06	pCi/g	0	N	0	13	0 SHORT_HLIF 0	<input type="checkbox"/>	
Iodine-133 HE	6254	6804	pCi/g	0	N	0	13	0 SHORT_HLIF 0	<input type="checkbox"/>	
Iodine-135 —	1.71E+16	0	pCi/g	0	N	0	13	0 SHORT_HLIF 0	<input type="checkbox"/>	
Lead-210 HE	0.9596	0.3267	pCi/g	0.6474	N	46.62	3	0.9852 IDENTIFIED 33.65	<input type="checkbox"/>	
Lead-212 ✓	1.861	0.1176	pCi/g	0.07519	0.100	238.5	4	0.9987 IDENTIFIED 2.744	<input type="checkbox"/>	
Lead-214 ✓	1.405	0.1113	pCi/g	0.09848	0.100	351.7	4	1.148 IDENTIFIED 5.32	<input type="checkbox"/>	
Lutetium-177 HE	3.175	0.6999	pCi/g	2.054	N	0	13	0 FAIL_ABUND 0	<input type="checkbox"/>	
Mercury-203 INT	0.07528	0.02868	pCi/g	0.05451	0.100	278.2	1	0.9393 IDENTIFIED 37.67	<input checked="" type="checkbox"/>	UI
Neptunium-237 NR	0.9509	0.1496	pCi/g	0.2372	N	87.17	3	1.089 IDENTIFIED 10.61	<input type="checkbox"/>	
Niobium-95 HE	0.09149	0.02415	pCi/g	0.08923	N	0	13	0 NOT_IDENTI 0	<input type="checkbox"/>	
Niobium-97 HE	1.37E+05	1.61E+05	pCi/g	0	N	0	13	0 SHORT_HLIF 0	<input type="checkbox"/>	
Polonium-210 HE	0.9596	0.3261	pCi/g	0.6474	N	46.62	3	0.9852 IDENTIFIED 33.65	<input type="checkbox"/>	
Polonium-212 NR	1.861	0.1176	pCi/g	0.07519	N	238.5	4	0.9987 IDENTIFIED 2.744	<input type="checkbox"/>	
Polonium-214 NR	1.405	0.1113	pCi/g	0.09848	N	351.7	4	1.148 IDENTIFIED 5.32	<input type="checkbox"/>	
Polonium-216 NR	1.861	0.1176	pCi/g	0.07519	N	238.5	4	0.9987 IDENTIFIED 2.744	<input type="checkbox"/>	
Polonium-218 NR	1.405	0.1113	pCi/g	0.09848	N	351.7	4	1.148 IDENTIFIED 5.32	<input type="checkbox"/>	
Potassium-40 ✓	32.61	1.654	pCi/g	0.4933	1.00	1460	1	2.106 IDENTIFIED 2.758	<input type="checkbox"/>	
Radium-224 INT	4.602	0.6669	pCi/g	0.8566	Y	241.4	1	1.769 IDENTIFIED 13.5	<input checked="" type="checkbox"/>	UI
Radium-226 ✓	1.298	0.1071	pCi/g	0.09858	Y	609.2	4	1.24 IDENTIFIED 5.632	<input type="checkbox"/>	
Radium-228 ✓	1.828	0.1827	pCi/g	0.2021	0.500	910.9	3	1.431 IDENTIFIED 8.031	<input type="checkbox"/>	
Technetium-99m —	6.62E+16	0	pCi/g	0	N	0	13	0 SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-200 HE	211.5	409.6	pCi/g	0	N	0	13	0 SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-208 ✓	0.5279	0.05015	pCi/g	0.06266	0.080	583	1	1.4 IDENTIFIED 7.649	<input type="checkbox"/>	
Thorium-228 NR	1.891	0.1195	pCi/g	0.07642	N	238.5	4	0.9987 IDENTIFIED 2.744	<input type="checkbox"/>	
Thorium-230 NR	1.298	0.1071	pCi/g	0.09858	N	609.2	4	1.24 IDENTIFIED 5.632	<input type="checkbox"/>	
Thorium-232 NR	1.828	0.1827	pCi/g	0.2021	N	910.9	3	1.431 IDENTIFIED 8.031	<input type="checkbox"/>	
Thorium-234 ✓	3.576	0.5151	pCi/g	0.7624	2.00	63.19	2	0.6804 IDENTIFIED 10.99	<input type="checkbox"/>	
Tin-126 NR	0.3238	0.03847	pCi/g	0.07573	N	87.17	3	1.089 IDENTIFIED 10.61	<input type="checkbox"/>	
Titanium-44 —	0.3873	0.02439	pCi/g	0.0454	N	0	13	0 FAIL_ABUND 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	
246444003	03-FEB-10 12:00	19-FEB-10 20:39	16.4	SAMPLE	LOAD	1	LANL	LANL01004KGL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.304	0.2154	pCi/g	0.2595	N	910.8	3	1.411	IDENTIFIED 15.52	<input type="checkbox"/>	
Americium-243 INT	0.3462	0.02865	pCi/g	0.05628	N	74.8	1	1.031	IDENTIFIED 6.685	<input type="checkbox"/>	
Annihilation Rad. HE	0.08992	0.04462	pCi/g	0.05135	N	511	1	2.105	IDENTIFIED 49.42	<input type="checkbox"/>	
Barium-137m ✓	0.1665	0.03969	pCi/g	0.06562	N	662.3	2	5.263	IDENTIFIED 23.47	<input type="checkbox"/>	
Bismuth-211 INT	3.461	0.2943	pCi/g	0.3205	Y	351.8	4	1.206	IDENTIFIED 7.111	<input checked="" type="checkbox"/>	UI
Bismuth-212 HE	0.9725	0.2943	pCi/g	0.7431	N	0	8	0	FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214 ✓	1.025	0.09603	pCi/g	0.1141	0.200	609	4	1.137	IDENTIFIED 7.867	<input type="checkbox"/>	
Cadmium-109 INT	2.862	0.4293	pCi/g	0.8614	Y	87.25	3	1.111	IDENTIFIED 14.19	<input checked="" type="checkbox"/>	UI
Cerium-143 —	969.3	186.3	pCi/g	0	N	0	8	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-137 AN	0.176	0.04196	pCi/g	0.06936	0.100	662.3	2	5.263	IDENTIFIED 23.47	<input checked="" type="checkbox"/>	UI Data rejected due to high peak-width.
Gross Gamma —	8.884	1.402	pCi/g	3.636	N	0				<input type="checkbox"/>	
Iodine-123 HE	9.11E+06	1.28E+07	pCi/g	0	N	0	8	0	SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212 ✓	1.411	0.08871	pCi/g	0.08714	0.100	238.6	4	1.045	IDENTIFIED 3.754	<input type="checkbox"/>	
Lead-214 ✓	1.204	0.1071	pCi/g	0.1118	0.100	351.8	4	1.206	IDENTIFIED 7.111	<input type="checkbox"/>	
Lutetium-177 HE	2.917	0.9059	pCi/g	2.197	N	0	8	0	FAIL_ABUND 0	<input type="checkbox"/>	
Neptunium-237 INT	0.8245	0.1501	pCi/g	0.2868	N	87.25	3	1.111	IDENTIFIED 14.19	<input type="checkbox"/>	
Niobium-97 HE	1622	2.20E+05	pCi/g	0	N	0	8	0	SHORT_HLIF 0	<input type="checkbox"/>	
Polonium-212 NR	1.411	0.08871	pCi/g	0.08714	N	238.6	4	1.045	IDENTIFIED 3.754	<input type="checkbox"/>	
Polonium-214 NR	1.204	0.1071	pCi/g	0.1118	N	351.8	4	1.206	IDENTIFIED 7.111	<input type="checkbox"/>	
Polonium-216 NR	1.411	0.08871	pCi/g	0.08714	N	238.6	4	1.045	IDENTIFIED 3.754	<input type="checkbox"/>	
Polonium-218 NR	1.204	0.1071	pCi/g	0.1118	N	351.8	4	1.206	IDENTIFIED 7.111	<input type="checkbox"/>	
Potassium-40 ✓	32.47	1.769	pCi/g	0.5489	1.00	1460	1	1.954	IDENTIFIED 3.16	<input type="checkbox"/>	
Radium-224 INT	3.923	0.5678	pCi/g	0.9922	Y	241.5	1	1.502	IDENTIFIED 13.75	<input checked="" type="checkbox"/>	UI
Radium-226 ✓	1.025	0.09603	pCi/g	0.1141	Y	609	4	1.137	IDENTIFIED 7.867	<input type="checkbox"/>	
Radium-228 ✓	1.304	0.2154	pCi/g	0.2595	0.500	910.8	3	1.411	IDENTIFIED 15.52	<input type="checkbox"/>	
Thallium-200 HE	113	487.5	pCi/g	0	N	0	8	0	SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-208 ✓	0.4809	0.05021	pCi/g	0.05583	0.080	582.8	1	1.213	IDENTIFIED 9.309	<input type="checkbox"/>	
Thorium-228 NR	1.435	0.09017	pCi/g	0.08857	N	238.6	4	1.045	IDENTIFIED 3.754	<input type="checkbox"/>	
Thorium-230 NR	1.025	0.09603	pCi/g	0.1141	N	609	4	1.137	IDENTIFIED 7.867	<input type="checkbox"/>	
Thorium-232 NR	1.304	0.2154	pCi/g	0.2595	N	910.8	3	1.411	IDENTIFIED 15.52	<input type="checkbox"/>	
Thorium-234 ✓	2.656	0.5513	pCi/g	0.9812	2.00	63.4	2	0.9878	IDENTIFIED 18.54	<input type="checkbox"/>	
Tin-126 NR	0.2808	0.04212	pCi/g	0.0844	N	87.25	3	1.111	IDENTIFIED 14.19	<input type="checkbox"/>	
Titanium-44 —	0.3368	0.02343	pCi/g	0.05617	N	0	8	0	FAIL_ABUND 0	<input type="checkbox"/>	
Total Uranium —	7.9062	1.64E-06	ug/g	1.4628	N	0				<input type="checkbox"/>	
Uranium-234 NR	1.025	0.09603	pCi/g	0.1141	N	609	4	1.137	IDENTIFIED 7.867	<input type="checkbox"/>	
Uranium-238 NR	2.656	0.5513	pCi/g	0.9812	N	63.4	2	0.9878	IDENTIFIED 18.54	<input type="checkbox"/>	
Zirconium-97 HE	3.83E+06	3.90E+06	pCi/g	0	N	0	8	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	
246444004	03-FEB-10 12:00	19-FEB-10 20:40	16.4	SAMPLE	LOAD	1	LANL	LANL01004KGL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.457	0.1519	pCi/g	0.174	N	910.8	3	1.602	IDENTIFIED 8.056	<input type="checkbox"/>	

Americium-243	INT	0.3272	0.03759	pCi/g	0.09374	N	75.02	1	1.077	IDENTIFIED	10.7	<input type="checkbox"/>	<input type="checkbox"/>
Annihilation Rad.	—	0.1479	0.02884	pCi/g	0.04006	N	510.9	1	1.925	IDENTIFIED	19.22	<input type="checkbox"/>	<input type="checkbox"/>
Barium-133	HE	0.06644	0.0198	pCi/g	0.06263	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	<input type="checkbox"/>
Barium-137m	HE	0.07264	0.02653	pCi/g	0.05416	N	661	2	1.392	IDENTIFIED	36.32	<input type="checkbox"/>	<input type="checkbox"/>
Bismuth-211	INT	3.416	0.234	pCi/g	0.292	Y	352	4	1.307	IDENTIFIED	6.054	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bismuth-212	HE	0.7695	0.214	pCi/g	0.5666	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	<input type="checkbox"/>
Bismuth-214	✓	1.103	0.08467	pCi/g	0.09525	0.200	609.1	4	1.615	IDENTIFIED	6.244	<input type="checkbox"/>	<input type="checkbox"/>
Cadmium-109	INT	2.549	0.4934	pCi/g	1.268	Y	87.4	3	1.082	IDENTIFIED	18.8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cerium-143	—	1458	211.4	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	<input type="checkbox"/>
Cesium-137	✓	0.07679	0.02805	pCi/g	0.05726	0.100	661	2	1.392	IDENTIFIED	36.32	<input type="checkbox"/>	<input type="checkbox"/>
Gross Gamma	—	9.467	1.292	pCi/g	2.144	N	0					<input type="checkbox"/>	<input type="checkbox"/>
Iodine-123	HE	4.79E+06	1.26E+07	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	<input type="checkbox"/>
Iodine-133	HE	3233	6601	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	<input type="checkbox"/>
Iodine-135	—	2.10E+16	0	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	<input type="checkbox"/>
Krypton-85	HE	14.86	3.684	pCi/g	12.01	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>	<input type="checkbox"/>
Lead-212	✓	1.561	0.07459	pCi/g	0.07654	0.100	238.7	4	1.147	IDENTIFIED	3.173	<input type="checkbox"/>	<input type="checkbox"/>
Lead-214	✓	1.188	0.08711	pCi/g	0.1018	0.100	352	4	1.307	IDENTIFIED	6.054	<input type="checkbox"/>	<input type="checkbox"/>
Lutetium-177	—	3.839	0.8373	pCi/g	2.024	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	<input type="checkbox"/>
Neptunium-237	INT	0.7345	0.1611	pCi/g	0.3734	N	87.4	3	1.082	IDENTIFIED	18.8	<input type="checkbox"/>	<input type="checkbox"/>
Niobium-97	HE	1.23E+05	1.55E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	<input type="checkbox"/>
Polonium-212	NR	1.561	0.07459	pCi/g	0.07654	N	238.7	4	1.147	IDENTIFIED	3.173	<input type="checkbox"/>	<input type="checkbox"/>
Polonium-214	NR	1.188	0.08711	pCi/g	0.1018	N	352	4	1.307	IDENTIFIED	6.054	<input type="checkbox"/>	<input type="checkbox"/>
Polonium-216	NR	1.561	0.07459	pCi/g	0.07654	N	238.7	4	1.147	IDENTIFIED	3.173	<input type="checkbox"/>	<input type="checkbox"/>
Polonium-218	NR	1.188	0.08711	pCi/g	0.1018	N	352	4	1.307	IDENTIFIED	6.054	<input type="checkbox"/>	<input type="checkbox"/>
Potassium-40	✓	33.62	1.497	pCi/g	0.3938	1.00	1460	1	2.234	IDENTIFIED	2.328	<input type="checkbox"/>	<input type="checkbox"/>
Radium-224	INT	3.913	0.4996	pCi/g	0.8698	Y	241.8	1	1.607	IDENTIFIED	12.46	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Radium-226	✓	1.103	0.08467	pCi/g	0.09525	Y	609.1	4	1.615	IDENTIFIED	6.244	<input type="checkbox"/>	<input type="checkbox"/>
Radium-228	✓	1.457	0.1519	pCi/g	0.174	0.500	910.8	3	1.602	IDENTIFIED	8.056	<input type="checkbox"/>	<input type="checkbox"/>
Strontium-85	LA	0.07717	0.01914	pCi/g	0.06237	Y	0	12	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5249	0.03807	pCi/g	0.04672	0.080	583	1	1.516	IDENTIFIED	6.103	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-228	NR	1.587	0.07581	pCi/g	0.07779	N	238.7	4	1.147	IDENTIFIED	3.173	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-230	NR	1.103	0.08467	pCi/g	0.09525	N	609.1	4	1.615	IDENTIFIED	6.244	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-232	NR	1.457	0.1519	pCi/g	0.174	N	910.8	3	1.602	IDENTIFIED	8.056	<input type="checkbox"/>	<input type="checkbox"/>
Thorium-234	✓	3.371	1.208	pCi/g	2.332	2.00	63.33	2	0.8872	IDENTIFIED	34.74	<input type="checkbox"/>	<input type="checkbox"/>
Tin-126	NR	0.2501	0.04841	pCi/g	0.1252	N	87.4	3	1.082	IDENTIFIED	18.8	<input type="checkbox"/>	<input type="checkbox"/>
Titanium-44	—	0.364	0.02862	pCi/g	0.08229	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	<input type="checkbox"/>
Total Uranium	—	10.094	3.59E-06	ug/g	3.4719	N	0					<input type="checkbox"/>	<input type="checkbox"/>
Uranium-234	NR	1.103	0.08467	pCi/g	0.09525	N	609.1	4	1.615	IDENTIFIED	6.244	<input type="checkbox"/>	<input type="checkbox"/>
Uranium-238	HE	3.371	1.208	pCi/g	2.332	N	63.33	2	0.8872	IDENTIFIED	34.74	<input type="checkbox"/>	<input type="checkbox"/>
Zirconium-97	—	1.84E+07	3.15E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	<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
246444005	03-FEB-10 12:00	19-FEB-10 20:40	16.4	SAMPLE	LOAD	1	LANL	LANL01004KJEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.358	0.1593	pCi/g	0.452	N	0	13	0	FAIL_ABUND	0
Americium-243	0.3598	0.04193	pCi/g	0.09192	N	74.81	1	1.457	IDENTIFIED	10.96

Annihilation Rad.	HE	0.06226	0.03111	pCi/g	0.04658	N	510.6	1	2.05	IDENTIFIED	49.88	<input type="checkbox"/>	
Bismuth-211	INT	2.972	0.2611	pCi/g	0.3237	Y	351.7	4	1.381	IDENTIFIED	8.184	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	0.7819	0.1638	pCi/g	0.603	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	0.9455	0.0793	pCi/g	0.1106	0.200	609.4	4	1.524	IDENTIFIED	7.409	<input type="checkbox"/>	
Cadmium-109	INT	2.622	0.457	pCi/g	1.229	Y	87.18	3	1.228	IDENTIFIED	16.85	<input checked="" type="checkbox"/>	UI
Cerium-143	—	1610	237.9	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.131	0.04507	pCi/g	0.09587	0.100	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-135	HE	0.43	0.08129	pCi/g	0.2847	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>	
Gross Gamma	—	9.071	1.472	pCi/g	3.821	N	0					<input type="checkbox"/>	
Iodine-135	—	1.24E+17	0	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.428	0.07238	pCi/g	0.09043	0.100	238.5	4	1.334	IDENTIFIED	3.559	<input type="checkbox"/>	
Lead-214	✓	1.034	0.09473	pCi/g	0.1128	0.100	351.7	4	1.381	IDENTIFIED	8.184	<input type="checkbox"/>	
Lutetium-177	—	4.189	0.9123	pCi/g	2.258	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	0.7555	0.153	pCi/g	0.3596	N	87.18	3	1.228	IDENTIFIED	16.85	<input type="checkbox"/>	
Niobium-95m	—	0.4316	0.07796	pCi/g	0.2563	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>	
Polonium-212	NR	1.428	0.07238	pCi/g	0.09043	N	238.5	4	1.334	IDENTIFIED	3.559	<input type="checkbox"/>	
Polonium-214	NR	1.034	0.09473	pCi/g	0.1128	N	351.7	4	1.381	IDENTIFIED	8.184	<input type="checkbox"/>	
Polonium-216	NR	1.428	0.07238	pCi/g	0.09043	N	238.5	4	1.334	IDENTIFIED	3.559	<input type="checkbox"/>	
Polonium-218	NR	1.034	0.09473	pCi/g	0.1128	N	351.7	4	1.381	IDENTIFIED	8.184	<input type="checkbox"/>	
Potassium-40	✓	35.17	1.572	pCi/g	0.409	1.00	1461	1	1.869	IDENTIFIED	2.475	<input type="checkbox"/>	
Radium-224	INT	4.043	0.6062	pCi/g	1.028	Y	241.5	1	1.798	IDENTIFIED	14.72	<input checked="" type="checkbox"/>	UI
Radium-226	✓	0.9455	0.0793	pCi/g	0.1106	Y	609.4	4	1.524	IDENTIFIED	7.409	<input type="checkbox"/>	
Radium-228	LA	1.358	0.1593	pCi/g	0.452	0.500	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Sodium-24	HE	1.35E+06	1.35E+06	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.4509	0.03839	pCi/g	0.05424	0.080	583.2	1	1.266	IDENTIFIED	7.805	<input type="checkbox"/>	
Thorium-228	NR	1.451	0.07357	pCi/g	0.09191	N	238.5	4	1.334	IDENTIFIED	3.559	<input type="checkbox"/>	
Thorium-230	NR	0.9455	0.0793	pCi/g	0.1106	N	609.4	4	1.524	IDENTIFIED	7.409	<input type="checkbox"/>	
Thorium-232	—	1.358	0.1593	pCi/g	0.452	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Tin-126	NR	0.2573	0.04484	pCi/g	0.1211	N	87.18	3	1.228	IDENTIFIED	16.85	<input type="checkbox"/>	
Titanium-44	—	0.343	0.02854	pCi/g	0.08242	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	—	4.8102	2.57E-06	ug/g	3.1092	N	0					<input type="checkbox"/>	
Uranium-234	NR	0.9455	0.0793	pCi/g	0.1106	N	609.4	4	1.524	IDENTIFIED	7.409	<input type="checkbox"/>	
Zirconium-97	—	1.32E+07	3.29E+06	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
1202037552		19-FEB-10 20:41	0	MB	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Sodium-24 HE	16.41	163.7	pCi/g	0	N	0	1	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
1202037553	03-FEB-10 12:00	19-FEB-10 20:42	16.4	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.488	0.169	pCi/g	0.1705	N	911.4	3	2.004	IDENTIFIED	9.226	<input type="checkbox"/>	
Americium-243	INT	0.3639	0.03631	pCi/g	0.07972	N	74.82	1	1.167	IDENTIFIED	9.105	<input type="checkbox"/>	
Annihilation Rad.	—	0.1546	0.03241	pCi/g	0.03917	N	510.8	1	2.436	IDENTIFIED	20.35	<input type="checkbox"/>	

Barium-137m	✓	0.2332	0.0313	pCi/g	0.04965	N	661.6	2	1.673	IDENTIFIED	12.34	<input type="checkbox"/>	
Bismuth-211	INT	3.951	0.3046	pCi/g	0.292	Y	352	4	1.324	IDENTIFIED	5.066	<input checked="" type="checkbox"/>	UT
Bismuth-212	—	1.439	0.2229	pCi/g	0.5617	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.198	0.09631	pCi/g	0.09627	0.200	609.2	4	1.656	IDENTIFIED	5.557	<input type="checkbox"/>	
Cadmium-109	INT	1.748	0.4544	pCi/g	1.097	Y	86.78	3	1.057	IDENTIFIED	25.57	<input checked="" type="checkbox"/>	UT
Cerium-143	—	1761	264.6	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-135	HE	0.2772	0.0815	pCi/g	0.2533	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>	
Cesium-137	✓	0.2466	0.03309	pCi/g	0.05249	0.100	661.6	2	1.673	IDENTIFIED	12.34	<input type="checkbox"/>	
Gross Gamma	—	10.34	1.359	pCi/g	2.332	N	0					<input type="checkbox"/>	
Iodine-123	HE	1.39E+06	1.25E+07	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-133	HE	3427	6882	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85	—	22.46	3.787	pCi/g	12.34	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212	✓	1.67	0.1203	pCi/g	0.08597	0.100	238.7	4	1.21	IDENTIFIED	2.874	<input type="checkbox"/>	
Lead-214	✓	1.374	0.1119	pCi/g	0.1017	0.100	352	4	1.324	IDENTIFIED	5.066	<input type="checkbox"/>	
Lutetium-177	HE	4.083	1.019	pCi/g	2.158	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Mercury-203	INT	0.06224	0.02824	pCi/g	0.06129	0.100	278.1	1	1.336	IDENTIFIED	44.83	<input checked="" type="checkbox"/>	UT
Neptunium-237	HE	0.5036	0.1408	pCi/g	0.327	N	86.78	3	1.057	IDENTIFIED	25.57	<input type="checkbox"/>	
Niobium-95	HE	0.0911	0.02237	pCi/g	0.07123	N	0	12	0	NOT_IDENTI	0	<input type="checkbox"/>	
Niobium-97	—	4.28E+05	1.66E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0	<input type="checkbox"/>	
Polonium-212	NR	1.67	0.1203	pCi/g	0.08597	N	238.7	4	1.21	IDENTIFIED	2.874	<input type="checkbox"/>	
Polonium-214	NR	1.374	0.1119	pCi/g	0.1017	N	352	4	1.324	IDENTIFIED	5.066	<input type="checkbox"/>	
Polonium-216	NR	1.67	0.1203	pCi/g	0.08597	N	238.7	4	1.21	IDENTIFIED	2.874	<input type="checkbox"/>	
Polonium-218	NR	1.374	0.1119	pCi/g	0.1017	N	352	4	1.324	IDENTIFIED	5.066	<input type="checkbox"/>	
Potassium-40	✓	34.35	1.754	pCi/g	0.4262	1.00	1461	1	2.656	IDENTIFIED	2.255	<input type="checkbox"/>	
Radium-224	INT	4.506	0.6325	pCi/g	0.9772	Y	241.7	1	1.886	IDENTIFIED	12.56	<input checked="" type="checkbox"/>	UT
Radium-226	✓	1.198	0.09631	pCi/g	0.09627	Y	609.2	4	1.656	IDENTIFIED	5.557	<input type="checkbox"/>	
Radium-228	✓	1.488	0.169	pCi/g	0.1705	0.500	911.4	3	2.004	IDENTIFIED	9.226	<input type="checkbox"/>	
Strontium-85	LA	0.1167	0.01967	pCi/g	0.06412	Y	0	12	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5351	0.04509	pCi/g	0.0484	0.080	583.3	1	1.591	IDENTIFIED	6.45	<input type="checkbox"/>	
Thorium-228	NR	1.697	0.1223	pCi/g	0.08738	N	238.7	4	1.21	IDENTIFIED	2.874	<input type="checkbox"/>	
Thorium-230	NR	1.198	0.09631	pCi/g	0.09627	N	609.2	4	1.656	IDENTIFIED	5.557	<input type="checkbox"/>	
Thorium-232	NR	1.488	0.169	pCi/g	0.1705	N	911.4	3	2.004	IDENTIFIED	9.226	<input type="checkbox"/>	
Thorium-234	✓	5.105	1.137	pCi/g	1.765	2.00	63.02	2	1.116	IDENTIFIED	20.5	<input type="checkbox"/>	
Tin-126	HE	0.1715	0.04458	pCi/g	0.1289	N	86.78	3	1.057	IDENTIFIED	25.57	<input type="checkbox"/>	
Titanium-44	—	0.3198	0.0244	pCi/g	0.06901	N	0	12	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	—	15.171	3.38E-06	ug/g	2.6279	N	0					<input type="checkbox"/>	
Uranium-234	NR	1.198	0.09631	pCi/g	0.09627	N	609.2	4	1.656	IDENTIFIED	5.557	<input type="checkbox"/>	
Uranium-238	NR	5.105	1.137	pCi/g	1.765	N	63.02	2	1.116	IDENTIFIED	20.5	<input type="checkbox"/>	
Zirconium-97	—	2.13E+07	3.40E+06	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
1202037554		19-FEB-10 21:35	0	LCS	LOAD	1		GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	0.9947	0.2006	pCi/g	0.5159	N	911.4	3	1.954	IDENTIFIED	19.3
Americium-241	13.08	0.5854	pCi/g	0.4826	0.200	59.62	1	1.235	IDENTIFIED	2.498
Americium-243 HE	0.2187	0.04705	pCi/g	0.1535	N	74.6	1	1.51	IDENTIFIED	21.18

Barium-137m	5.573	0.2084	pCi/g 0.1086	N	661.5	2	1.636	IDENTIFIED	2.269	<input type="checkbox"/>	
Bismuth-211	2.326	0.3511	pCi/g 0.5951	Y	351.8	4	1.606	IDENTIFIED	14.76	<input type="checkbox"/>	
Bismuth-214	0.7534	0.1239	pCi/g 0.2028	0.200	608.8	4	1.662	IDENTIFIED	15.96	<input type="checkbox"/>	
Cadmium-109	29.73	1.808	pCi/g 2.395	Y	88.08	2	1.301	IDENTIFIED	4.227	<input type="checkbox"/>	
Cerium-143 HE	29.97	6.369	pCi/g 19.56	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Cesium-137 ✓	5.891	0.2209	pCi/g 0.1148	0.100	661.5	2	1.636	IDENTIFIED	2.269	<input type="checkbox"/>	106.0%
Cobalt-57	0.2301	0.03399	pCi/g 0.06807	N	122.2	1	1.334	IDENTIFIED	14.34	<input type="checkbox"/>	
Cobalt-60 ✓	6.739	0.2911	pCi/g 0.1091	0.100	1332	1	1.94	IDENTIFIED	2.44	<input type="checkbox"/>	105.5%
Gross Gamma	26.77	2.566	pCi/g 5.674	N	0					<input type="checkbox"/>	
Lead-212	0.7596	0.09288	pCi/g 0.1793	0.100	238.4	4	1.256	IDENTIFIED	11.67	<input type="checkbox"/>	
Lead-214	0.809	0.124	pCi/g 0.2074	0.100	351.8	4	1.606	IDENTIFIED	14.76	<input type="checkbox"/>	
Neptunium-237	7.433	0.9077	pCi/g 1.222	N	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>	
Niobium-95m HE	0.4541	0.1143	pCi/g 0.3836	N	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>	
Niobium-97	2925	316.5	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Polonium-212	0.7596	0.09288	pCi/g 0.1793	N	238.4	4	1.256	IDENTIFIED	11.67	<input type="checkbox"/>	
Polonium-214	0.809	0.124	pCi/g 0.2074	N	351.8	4	1.606	IDENTIFIED	14.76	<input type="checkbox"/>	
Polonium-216	0.7596	0.09288	pCi/g 0.1793	N	238.4	4	1.256	IDENTIFIED	11.67	<input type="checkbox"/>	
Polonium-218	0.809	0.124	pCi/g 0.2074	N	351.8	4	1.606	IDENTIFIED	14.76	<input type="checkbox"/>	
Potassium-40	1.198	0.353	pCi/g 0.6143	1.00	1461	1	1.576	IDENTIFIED	29.24	<input type="checkbox"/>	
Radium-224	6.566	0.725	pCi/g 2.608	Y	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>	
Radium-226	0.7534	0.1239	pCi/g 0.2028	Y	608.8	4	1.662	IDENTIFIED	15.96	<input type="checkbox"/>	
Radium-228	0.9947	0.2006	pCi/g 0.5159	0.500	911.4	3	1.954	IDENTIFIED	19.3	<input type="checkbox"/>	
Silver-110m	0.2812	0.04626	pCi/g 0.1607	N	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>	
Sodium-24 HE	114.3	349.7	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	0.3554	0.04975	pCi/g 0.1119	0.080	582.6	1	1.93	IDENTIFIED	13.58	<input type="checkbox"/>	
Thorium-228	0.7664	0.09371	pCi/g 0.1809	N	238.4	4	1.256	IDENTIFIED	11.67	<input type="checkbox"/>	
Thorium-230	0.7534	0.1239	pCi/g 0.2028	N	608.8	4	1.662	IDENTIFIED	15.96	<input type="checkbox"/>	
Thorium-232	0.9947	0.2006	pCi/g 0.5159	N	911.4	3	1.954	IDENTIFIED	19.3	<input type="checkbox"/>	
Tin-126	2.95	0.1793	pCi/g 0.2486	N	88.08	2	1.301	IDENTIFIED	4.227	<input type="checkbox"/>	
Titanium-44	0.2455	0.03583	pCi/g 0.112	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>	
Uranium-234	0.7534	0.1239	pCi/g 0.2028	N	608.8	4	1.662	IDENTIFIED	15.96	<input type="checkbox"/>	
Zirconium-97	13000	4068	pCi/g 0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
950788	246444004	SAMPLE	19-FEB-10	Strontium-85	0.07717	0.01914	pCi/g	0.0312	Y
				Thallium-208	0.5249	0.03807	pCi/g	0.02337	0.080
				Thorium-234	3.371	1.208	pCi/g	1.167	2.00
				Zirconium-97	1.84E+07	3.15E+06	pCi/g	0	N
950788	246444005	SAMPLE	19-FEB-10	Bismuth-211	2.972	0.2611	pCi/g	0.162	Y
				Bismuth-214	0.9455	0.0793	pCi/g	0.05535	0.200
				Cadmium-109	2.622	0.457	pCi/g	0.6151	Y
				Cadmium-115	15.76	7.65	pCi/g	13.6	N
				Cerium-143	1610	237.9	pCi/g	0	N
				Cesium-134	0.131	0.04507	pCi/g	0.04796	0.100
				Cesium-137	0.05493	0.0203	pCi/g	0.03682	0.100
				Gross Gamma	9.071	1.472	pCi/g	1.86	N
				Iodine-135	1.24E+17	0	pCi/g	0	N
				Krypton-85	7.707	4.045	pCi/g	6.419	N
				Lead-212	1.428	0.07238	pCi/g	0.04524	0.100
				Lead-214	1.034	0.09473	pCi/g	0.05645	0.100
				Mercury-203	0.04245	0.0219	pCi/g	0.03551	0.100
				Potassium-40	35.17	1.572	pCi/g	0.2046	1.00
				Radium-224	4.043	0.8002	pCi/g	0.5145	Y
				Radium-226	0.9455	0.0793	pCi/g	0.05535	Y
				Radium-228	1.358	0.1593	pCi/g	0.2261	0.500
				Sodium-24	1.35E+06	1.35E+06	pCi/g	0	N
				Strontium-85	0.04003	0.02101	pCi/g	0.03335	Y
				Thallium-208	0.4509	0.03839	pCi/g	0.02714	0.080
				Thorium-234	1.589	0.864	pCi/g	1.045	2.00
				Zirconium-97	1.32E+07	3.29E+06	pCi/g	0	N
950788	1202037552	MB	19-FEB-10	Bismuth-211	0.06844	0.05731	pCi/g	0.06803	(Y)
				Sodium-24	16.41	163.7	pCi/g	0	N
950788	1202037553	DUP	19-FEB-10	Bismuth-211	3.951	0.3046	pCi/g	0.1461	Y
				Bismuth-214	1.198	0.09631	pCi/g	0.04816	0.200
				Cadmium-109	1.748	0.4544	pCi/g	0.5487	Y
				Cerium-143	1761	264.8	pCi/g	0	N
				Cesium-134	0.07655	0.03007	pCi/g	0.04008	0.100
				Cesium-137	0.2466	0.03309	pCi/g	0.02626	0.100
				Gross Gamma	10.34	1.359	pCi/g	1.135	N
				Iodine-123	1.39E+06	1.25E+07	pCi/g	0	N
				Iodine-133	3427	6882	pCi/g	0	N

no 246444005

no 246444005

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 19:57:34.15

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440001.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:57:08
Sample ID          : G246440001      Sample quantity   : 1.58750E+02 GRAM
Detector name      : GAM15           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.48  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 950788          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	63.06*	124	574	1.59	125.04	121	11	1.72E-02	39.0	
2	4	74.96*	297	489	1.34	148.84	144	16	4.13E-02	14.6	1.96E+00
3	4	77.26*	476	459	1.41	153.44	144	16	6.60E-02	9.7	
4	0	86.56*	276	735	1.35	172.04	165	12	3.84E-02	20.7	
5	0	93.32*	437	775	1.59	185.55	180	12	6.06E-02	14.4	
6	0	129.93	50	544	1.43	258.78	252	11	6.92E-03	92.0	
7	0	186.09*	240	408	1.47	371.08	366	11	3.34E-02	18.3	
8	0	209.76	125	391	0.96	418.42	412	11	1.73E-02	32.1	
9	2	238.80*	1350	242	1.42	476.50	468	21	1.87E-01	3.5	1.63E+00
10	2	241.73*	277	251	1.85	482.36	468	21	3.84E-02	16.5	
11	0	270.82	131	227	1.51	540.54	536	10	1.82E-02	23.3	
12	0	295.29*	345	212	1.06	589.49	585	10	4.79E-02	9.8	
13	0	299.93	71	235	0.84	598.77	595	10	9.86E-03	42.1	
14	0	327.96	99	293	1.52	654.82	647	16	1.38E-02	39.8	
15	0	338.32*	255	230	1.22	675.55	670	13	3.54E-02	13.9	
16	0	352.10*	582	212	1.43	703.10	698	13	8.08E-02	6.8	
17	0	409.81	99	95	1.57	818.53	814	10	1.37E-02	21.2	
18	0	463.19	74	140	1.09	925.28	919	12	1.03E-02	34.1	
19	0	510.92*	164	120	1.94	1020.73	1013	15	2.28E-02	18.9	
20	0	583.29*	435	123	1.64	1165.49	1158	15	6.04E-02	7.5	
21	0	609.61*	431	126	1.54	1218.14	1211	16	5.99E-02	7.8	
22	0	662.06	61	97	1.78	1323.04	1315	13	8.48E-03	35.7	
23	0	727.47*	92	97	1.32	1453.88	1448	14	1.27E-02	25.9	
24	0	795.83	47	74	1.08	1590.61	1586	13	6.49E-03	42.6	
25	0	860.61*	47	75	1.14	1720.19	1714	13	6.49E-03	41.9	
26	0	911.14*	271	52	2.00	1821.27	1815	13	3.77E-02	8.3	
27	1	964.80	68	55	2.20	1928.60	1919	26	9.39E-03	26.5	1.34E+00
28	1	968.80*	194	50	2.20	1936.60	1919	26	2.69E-02	10.7	
29	0	1120.37*	97	121	2.27	2239.80	2232	18	1.34E-02	28.9	
30	0	1377.49	42	23	3.81	2754.19	2747	16	5.85E-03	30.1	
31	0	1432.42	15	16	0.71	2864.07	2854	13	2.12E-03	59.9	
32	0	1460.63*	1445	32	2.02	2920.52	2911	21	2.01E-01	2.8	
33	0	1594.93	8	21	0.57	3189.22	3177	14	1.08E-03	137.8	
34	0	1765.03*	55	32	2.42	3529.54	3520	16	7.65E-03	27.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 19:57:36

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440001.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 17:57:08
Sample ID        : G246440001             Sample quantity  : 158.75 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA15                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00           Elapsed real time: 0 02:00:01.48   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	*	3.313E+01	3.752E+00	5.402E-01	5.308E-02	61.333
CD-109	+	88.03	*	4.110E+00	1.771E+00	1.653E+00	2.052E-01	2.486
SN-126	+	64.28		1.704E+00	1.360E+00	1.239E+00	2.098E-01	1.375
	+	86.94		1.674E+00	9.893E-01	7.495E-01	3.169E-01	2.233
	+	87.57	*	4.027E-01	1.735E-01	1.783E-01	2.207E-02	2.258
BA-137M	+	661.65	*	8.108E-02	5.827E-02	6.200E-02	5.097E-03	1.308
CS-137	+	661.65	*	8.571E-02	6.160E-02	6.554E-02	5.400E-03	1.308
TL-208		277.35		4.101E-01	4.475E-01	7.313E-01	1.022E-01	0.561
	+	510.84		7.427E-01	2.947E-01	2.227E-01	2.674E-02	3.335
	+	583.14	*	5.576E-01	9.823E-02	6.302E-02	5.771E-03	8.847
	+	860.37		5.627E-01	4.743E-01	5.064E-01	4.953E-02	1.111
BI-211		72.87		7.212E+00	4.779E+00	7.230E+00	8.281E-01	0.998
	+	351.07	*	3.387E+00	5.720E-01	3.899E-01	3.882E-02	8.688
PB-212	+	74.81		2.025E+00	6.632E-01	7.015E-01	1.040E-01	2.887
	+	77.11		1.785E+00	4.040E-01	3.868E-01	4.483E-02	4.614
	+	87.30		1.862E+00	8.238E-01	8.286E-01	1.317E-01	2.247
	+	238.63	*	1.740E+00	2.408E-01	9.736E-02	1.159E-02	17.867
	+	300.09		1.403E+00	1.194E+00	1.305E+00	1.576E-01	1.076
PO-212	+	74.81		2.025E+00	6.632E-01	7.015E-01	1.040E-01	2.887
	+	77.11		1.785E+00	4.040E-01	3.868E-01	4.483E-02	4.614
	+	87.30		1.862E+00	8.238E-01	8.286E-01	1.317E-01	2.247
		115.19		-8.170E-02	4.149E+00	6.750E+00	6.832E-01	-0.012
	+	238.63	*	1.740E+00	2.408E-01	9.736E-02	1.159E-02	17.867
	+	300.09		1.403E+00	1.194E+00	1.305E+00	1.576E-01	1.076
BI-214	+	609.31	*	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
	+	1120.29		1.235E+00	7.263E-01	5.129E-01	5.529E-02	2.409
	+	1764.49		9.642E-01	5.390E-01	3.149E-01	2.761E-02	3.062
PB-214	+	74.81		3.490E+00	1.125E+00	1.209E+00	1.654E-01	2.887
	+	77.11		3.059E+00	7.308E-01	6.631E-01	9.198E-02	4.614
	+	87.30		3.190E+00	1.396E+00	1.420E+00	2.066E-01	2.247
	+	241.98		2.142E+00	7.554E-01	5.860E-01	7.250E-02	3.654
	+	295.21		1.197E+00	2.763E-01	2.552E-01	3.146E-02	4.690
	+	351.92	*	1.178E+00	2.083E-01	1.312E-01	1.473E-02	8.979
PO-214	+	74.81		3.490E+00	1.125E+00	1.209E+00	1.654E-01	2.887

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		3.059E+00	7.308E-01	6.631E-01	9.198E-02	4.614
	+	87.30		3.190E+00	1.396E+00	1.420E+00	2.066E-01	2.247
	+	241.98		2.142E+00	7.554E-01	5.860E-01	7.250E-02	3.654
	+	295.21		1.197E+00	2.763E-01	2.552E-01	3.146E-02	4.690
	+	351.92	*	1.178E+00	2.083E-01	1.312E-01	1.473E-02	8.979
	+	74.81		2.025E+00	6.632E-01	7.015E-01	1.040E-01	2.887
	+	77.11		1.785E+00	4.040E-01	3.868E-01	4.483E-02	4.614
	+	87.30		1.862E+00	8.238E-01	8.286E-01	1.317E-01	2.247
	+	238.63	*	1.740E+00	2.408E-01	9.736E-02	1.159E-02	17.867
	+	300.09		1.403E+00	1.194E+00	1.305E+00	1.576E-01	1.076
PO-218	+	74.81		3.490E+00	1.125E+00	1.209E+00	1.654E-01	2.887
	+	77.11		3.059E+00	7.308E-01	6.631E-01	9.198E-02	4.614
	+	87.30		3.190E+00	1.396E+00	1.420E+00	2.066E-01	2.247
	+	241.98		2.142E+00	7.554E-01	5.860E-01	7.250E-02	3.654
RA-224	+	295.21		1.197E+00	2.763E-01	2.552E-01	3.146E-02	4.690
	+	351.92	*	1.178E+00	2.083E-01	1.312E-01	1.473E-02	8.979
	+	240.98	*	4.061E+00	1.414E+00	1.108E+00	1.222E-01	3.666
	+	609.31	*	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
RA-226	+	1120.29		1.235E+00	7.263E-01	5.129E-01	5.529E-02	2.409
	+	1764.49		9.642E-01	5.390E-01	3.149E-01	2.761E-02	3.062
	+	338.32		1.637E+00	8.188E-01	4.122E-01	1.712E-01	3.972
	+	911.07	*	1.551E+00	3.167E-01	2.095E-01	2.467E-02	7.404
AC-228	+	969.11		1.960E+00	6.230E-01	3.878E-01	9.132E-02	5.054
	+	338.32		1.637E+00	8.188E-01	4.122E-01	1.712E-01	3.972
	+	911.07	*	1.551E+00	3.167E-01	2.095E-01	2.467E-02	7.404
	+	969.11		1.960E+00	6.230E-01	3.878E-01	9.132E-02	5.054
RA-228	+	74.81		2.060E+00	6.470E-01	7.137E-01	8.249E-02	2.887
	+	77.11		1.815E+00	4.110E-01	3.935E-01	4.561E-02	4.614
	+	87.30		1.895E+00	8.163E-01	8.430E-01	1.041E-01	2.247
	+	238.63	*	1.770E+00	2.450E-01	9.905E-02	1.180E-02	17.867
TH-228	+	300.09		1.428E+00	1.473E+00	1.327E+00	7.909E-01	1.076
	+	609.31	*	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
	+	1120.29		1.235E+00	7.263E-01	5.129E-01	5.529E-02	2.409
	+	1764.49		9.642E-01	5.390E-01	3.149E-01	2.761E-02	3.062
TH-232	+	338.32		1.637E+00	4.837E-01	4.122E-01	4.064E-02	3.972
	+	911.07	*	1.551E+00	3.167E-01	2.095E-01	2.467E-02	7.404
	+	969.11		1.960E+00	6.230E-01	3.878E-01	9.132E-02	5.054
	+	63.29	*	4.305E+00	3.461E+00	3.339E+00	6.506E-01	1.289
TH-234	+	92.38		3.926E+00	1.367E+00	9.889E-01	1.949E-01	3.970
	+	609.31	*	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
	+	1120.29		1.235E+00	7.263E-01	5.129E-01	5.529E-02	2.409
	+	1764.49		9.642E-01	5.390E-01	3.149E-01	2.761E-02	3.062
U-234	+	86.50	*	1.182E+00	5.649E-01	4.756E-01	1.142E-01	2.486
	+	95.87		4.009E-01	1.297E+00	1.880E+00	4.821E-01	0.213
	+	63.29	*	4.305E+00	3.461E+00	3.339E+00	6.506E-01	1.289
	+	92.38		3.926E+00	1.216E+00	9.889E-01	1.153E-01	3.970
NP-237	+	74.67	*	3.284E-01	1.030E-01	1.143E-01	1.314E-02	2.873
	+	86.72		4.434E+01	1.911E+01	1.776E+01	2.183E+00	2.496
	+	117.66		-2.906E+00	4.394E+00	6.960E+00	7.021E-01	-0.418
	+							

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	+	142.18	*	1.249E+01	2.031E+01	3.351E+01	3.401E+00	0.373
		511.00	*	1.604E-01	6.223E-02	4.812E-02	4.158E-03	3.334

---- 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	*	1.774E-01	3.764E-01	6.306E-01	5.863E-02	0.281
NA-22		1274.54	*	7.131E-03	5.020E-02	8.220E-02	7.467E-03	0.087
NA-24		1368.53	*	1.668E+00	5.020E-02	Half-Life too short		
AL-26		1129.67		-1.021E+00	2.212E+00	3.046E+00	2.573E-01	-0.335
		1808.65	*	1.384E-02	2.809E-02	5.044E-02	4.315E-03	0.274
TI-44		67.85		-7.510E-02	7.900E-02	1.084E-01	1.237E-02	-0.693
	+	78.38	*	3.293E-01	7.457E-02	9.433E-02	1.099E-02	3.492
SC-46		889.25	*	-3.508E-02	4.204E-02	6.421E-02	5.967E-03	-0.546
	+	1120.51		2.152E-01	1.257E-01	1.419E-01	1.207E-02	1.517
V-48		944.10		1.301E-01	1.034E+00	1.720E+00	1.590E-01	0.076
		983.50	*	3.807E-02	7.946E-02	1.359E-01	1.243E-02	0.280
		1312.09		-2.560E-02	9.152E-02	1.428E-01	1.345E-02	-0.179
CR-51		320.08	*	1.958E-01	4.651E-01	7.202E-01	7.648E-02	0.272
MN-52		744.21		4.171E-02	3.113E-01	5.245E-01	4.540E-02	0.080
		848.13		-4.299E+00	9.308E+00	1.482E+01	1.354E+00	-0.290
		935.52		1.142E-01	3.662E-01	6.176E-01	5.721E-02	0.185
		1246.25		-4.110E+00	1.143E+01	1.795E+01	1.582E+00	-0.229
		1333.61		2.830E-01	6.512E+00	1.055E+01	1.014E+00	0.027
		1434.06	*	2.186E-01	2.921E-01	4.831E-01	4.650E-02	0.452
MN-54		834.83	*	1.652E-02	3.989E-02	6.806E-02	6.177E-03	0.243
CO-56		846.75	*	-1.099E-02	4.144E-02	6.713E-02	6.126E-03	-0.164
		977.42		-8.822E-01	3.503E+00	5.181E+00	4.746E-01	-0.170
		1037.82		-1.478E-01	3.335E-01	5.230E-01	4.908E-02	-0.283
		1175.09		3.211E+00	2.568E+00	4.569E+00	3.727E-01	0.703
		1238.25		5.617E-02	1.108E-01	1.855E-01	1.666E-02	0.303
		1360.21		2.293E-01	9.516E-01	1.637E+00	1.577E-01	0.140
		1771.40		-2.079E-02	2.546E-01	3.486E-01	3.045E-02	-0.060
CO-57		122.06	*	1.614E-02	2.896E-02	4.795E-02	4.830E-03	0.337
		136.48		-1.739E-01	2.409E-01	3.784E-01	4.024E-02	-0.460
CO-58		810.76	*	-1.856E-02	3.981E-02	6.347E-02	5.706E-03	-0.292
FE-59		142.65		1.876E+00	3.342E+00	5.437E+00	5.523E-01	0.345
		192.34		-9.010E-01	1.273E+00	1.802E+00	2.697E-01	-0.500
		1099.22	*	1.347E-01	1.020E-01	1.838E-01	1.715E-02	0.733
		1291.56		-2.447E-02	1.356E-01	2.146E-01	2.217E-02	-0.114
CO-60		1173.22		5.965E-02	5.192E-02	9.160E-02	7.456E-03	0.651
		1332.49	*	1.123E-03	3.885E-02	6.282E-02	6.039E-03	0.018
ZN-65		1115.52	*	-9.975E-03	1.203E-01	1.662E-01	1.420E-02	-0.060
GE-68		1077.35	*	1.669E+00	1.319E+00	2.379E+00	2.082E-01	0.702
AS-73		53.44	*	-2.825E-01	1.854E+00	3.059E+00	3.971E-01	-0.092
AS-74		595.88	*	-1.872E-02	1.054E-01	1.677E-01	1.425E-02	-0.112
		634.78		3.964E-03	4.058E-01	6.526E-01	5.449E-02	0.006
SE-75		66.05		-9.080E-01	8.486E+00	1.218E+01	1.564E+00	-0.075

Sample ID : G246440001

Acquisition date : 19-FEB-2010 17:57:08

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		96.73		1.160E+00	1.037E+00	1.543E+00	2.364E-01	0.752
		121.11		7.947E-02	1.561E-01	2.581E-01	3.192E-02	0.308
		136.00		-4.288E-02	4.595E-02	7.149E-02	7.236E-03	-0.600
		198.60		1.588E+00	2.158E+00	3.538E+00	4.129E-01	0.449
		264.65	*	-8.995E-03	5.253E-02	7.917E-02	8.681E-03	-0.114
		279.53		1.216E-01	1.223E-01	2.116E-01	2.342E-02	0.575
		303.91		-1.310E-03	2.583E+00	3.732E+00	4.832E-01	0.000
		400.65		7.374E-02	2.862E-01	4.771E-01	5.240E-02	0.155
BR-77	+	87.88		1.648E+03	7.100E+02	7.467E+02	9.264E+01	2.207
		200.40		-2.208E+02	3.678E+02	5.723E+02	6.252E+01	-0.386
	+	239.00		5.201E+02	6.812E+01	7.472E+01	8.243E+00	6.961
		249.79		-1.129E+00	1.319E+02	2.211E+02	2.434E+01	-0.005
		281.68		-2.395E+02	1.952E+02	3.053E+02	3.294E+01	-0.784
		297.23		7.469E+02	2.136E+02	2.651E+02	2.809E+01	2.818
		303.76		-2.866E+00	4.045E+02	5.842E+02	6.137E+01	-0.005
		439.47		1.561E+02	2.880E+02	4.864E+02	4.168E+01	0.321
		484.57		-2.067E+00	4.787E+02	7.798E+02	6.734E+01	-0.003
		520.65	*	-2.169E+00	2.162E+01	3.487E+01	3.011E+00	-0.062
		574.64		-3.730E+02	4.789E+02	6.807E+02	5.823E+01	-0.548
		578.91		1.117E+01	2.059E+02	2.882E+02	2.462E+01	0.039
		585.48		3.792E+03	6.077E+02	1.037E+03	8.838E+01	3.658
		755.35		3.894E+02	3.117E+02	5.632E+02	4.906E+01	0.691
		817.79		-7.503E+01	2.406E+02	3.883E+02	3.495E+01	-0.193
SR-82		698.33		-1.458E+01	3.760E+01	6.125E+01	5.157E+00	-0.238
		776.49	*	-2.653E-01	4.498E-01	7.094E-01	6.252E-02	-0.374
		1395.20		-4.990E+00	1.146E+01	1.807E+01	1.741E+00	-0.276
RB-83		520.41	*	-3.443E-02	7.884E-02	1.242E-01	1.072E-02	-0.277
		529.64		-2.871E-02	1.168E-01	1.861E-01	1.606E-02	-0.154
		552.65		2.886E-02	2.116E-01	3.459E-01	2.975E-02	0.083
RB-84		881.50	*	4.117E-02	7.798E-02	1.342E-01	1.243E-02	0.307
KR-85		513.99	*	1.981E+01	9.121E+00	1.482E+01	1.281E+00	1.336
SR-85		513.99	*	1.039E-01	4.782E-02	7.773E-02	6.715E-03	1.336
RB-86		1076.63	*	1.258E+00	9.123E-01	1.656E+00	1.450E-01	0.760
Y-88		898.02		-5.959E-03	4.423E-02	7.133E-02	6.679E-03	-0.084
		1836.01	*	2.915E-03	2.621E-02	4.413E-02	3.717E-03	0.066
ZR-88		392.90	*	2.656E-02	3.508E-02	5.995E-02	5.047E-03	0.443
Y-91		1204.90	*	-2.110E+01	2.185E+01	3.239E+01	2.731E+00	-0.651
NB-94		702.63	*	-2.589E-02	3.479E-02	5.510E-02	4.652E-03	-0.470
		871.10		-1.440E-02	3.508E-02	5.592E-02	5.157E-03	-0.257
NB-95		765.79	*	4.511E-02	4.543E-02	8.035E-02	7.039E-03	0.561
NB-95M		235.69	*	3.884E-01	1.704E-01	2.672E-01	3.215E-02	1.454
ZR-95		724.18		1.403E-01	1.138E-01	1.820E-01	1.693E-02	0.771
		756.15	*	6.355E-02	7.351E-02	1.298E-01	1.244E-02	0.490
NB-97		657.90	*	-1.553E-01	7.351E-02	Half-Life	too short	
		1024.50		-1.226E+01	7.351E-02	Half-Life	too short	
ZR-97		254.15		3.464E+00	7.351E-02	Half-Life	too short	
		355.39		3.845E+01	7.351E-02	Half-Life	too short	
		507.63	*	3.879E+01	7.351E-02	Half-Life	too short	
		602.52		-3.302E+01	7.351E-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
	1021.30			4.874E+01	7.351E-02	Half-Life	too short	
	1147.95			-2.201E+01	7.351E-02	Half-Life	too short	
	1362.66			-3.072E+01	7.351E-02	Half-Life	too short	
	1750.46			-1.572E+01	7.351E-02	Half-Life	too short	
MO-99	140.51			-4.550E+00	5.225E+01	8.425E+01	2.376E+01	-0.054
	181.06			-9.267E+00	3.929E+01	5.419E+01	1.052E+01	-0.171
	366.43			8.853E+01	1.576E+02	2.677E+02	2.453E+01	0.331
	739.58	*		-2.980E+00	2.049E+01	3.381E+01	5.136E+00	-0.088
	778.00			-5.876E+01	6.419E+01	9.932E+01	8.760E+00	-0.592
TC-99M	140.51	*		-1.396E+12	6.419E+01	Half-Life	too short	
RH-101	127.23			2.215E-02	4.193E-02	6.099E-02	6.119E-03	0.363
	198.01	*		5.377E-02	4.051E-02	6.554E-02	7.150E-03	0.820
	325.23			3.466E-02	2.797E-01	4.062E-01	4.115E-02	0.085
RH-102	418.52			-5.454E-02	3.161E-01	5.134E-01	4.371E-02	-0.106
	475.06	*		1.866E-03	3.323E-02	5.438E-02	4.692E-03	0.034
	631.29			-1.114E-03	6.108E-02	9.803E-02	8.201E-03	-0.011
	697.49			-9.310E-03	8.311E-02	1.381E-01	1.162E-02	-0.067
	766.84			8.965E-02	1.151E-01	2.009E-01	1.761E-02	0.446
	1046.59			-5.478E-03	1.199E-01	1.954E-01	1.740E-02	-0.028
	1112.84			2.138E-02	2.805E-01	3.953E-01	3.381E-02	0.054
RU-103	497.08	*		-1.945E-02	4.407E-02	6.935E-02	9.831E-03	-0.280
+	610.33			1.167E+01	2.664E+00	2.932E+00	4.867E-01	3.981
RH-106	511.85	+		8.045E-01	3.121E-01	4.480E-01	3.870E-02	1.796
	621.84	*		1.257E-01	3.421E-01	5.649E-01	7.467E-02	0.223
	1050.47			-5.955E-01	2.455E+00	3.925E+00	3.488E-01	-0.152
RU-106	511.85	+		8.045E-01	3.121E-01	4.480E-01	3.870E-02	1.796
	621.84	*		1.257E-01	3.419E-01	5.649E-01	4.747E-02	0.223
	1050.47			-5.955E-01	2.455E+00	3.925E+00	3.488E-01	-0.152
AG-108M	433.93	*		5.146E-03	3.643E-02	6.016E-02	5.355E-03	0.086
	614.37			3.393E-02	4.380E-02	6.573E-02	5.770E-03	0.516
	722.95			-8.872E-03	4.651E-02	6.557E-02	5.828E-03	-0.135
AG-110M	657.75	*		-6.880E-03	3.822E-02	5.428E-02	4.619E-03	-0.127
	677.61			4.306E-02	3.108E-01	5.260E-01	4.503E-02	0.082
	706.67			-1.077E-02	2.142E-01	3.569E-01	3.107E-02	-0.030
	763.93			-4.571E-03	1.722E-01	2.863E-01	2.575E-02	-0.016
	884.67			3.569E-02	5.281E-02	9.182E-02	8.754E-03	0.389
	937.48			-1.801E-02	1.225E-01	1.993E-01	1.904E-02	-0.090
	1384.27			9.509E-02	1.532E-01	2.466E-01	2.430E-02	0.386
IN-111	171.28			1.292E+00	1.968E+00	3.237E+00	3.467E-01	0.399
	245.39	*		1.110E+00	2.080E+00	3.134E+00	3.454E-01	0.354
IN-113M	391.69	*		-8.014E-04	4.985E-02	8.196E-02	7.119E-03	-0.010
SN-113	391.69	*		-8.014E-04	4.985E-02	8.196E-02	7.119E-03	-0.010
IN-114M	190.27	*		5.575E-02	2.467E-01	3.469E-01	3.767E-02	0.161
CD-115	260.90			2.400E+02	2.752E+02	4.757E+02	5.212E+01	0.505
	492.35			-3.344E+01	7.774E+01	1.229E+02	1.062E+01	-0.272
	527.90	*		3.136E+00	2.272E+01	3.722E+01	3.212E+00	0.084
SN-117M	156.02			1.826E+00	2.856E+00	4.706E+00	4.905E-01	0.388
	158.56	*		-6.920E-02	7.111E-02	1.097E-01	1.150E-02	-0.631
SB-122	563.90	*		1.248E+00	4.082E+00	6.729E+00	5.772E-01	0.185

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-123	692.80			8.477E+01	8.089E+01	1.439E+02	1.207E+01	0.589
	159.00	*		-5.997E+01	8.089E+01	Half-Life	too short	
	528.96			-3.256E+03	8.089E+01	Half-Life	too short	
TE-123M	159.00	*		-2.016E-02	3.323E-02	5.217E-02	5.498E-03	-0.386
I-124	602.71	*		-7.755E-01	1.238E+00	1.609E+00	1.364E-01	-0.482
	722.78			-1.558E+00	6.901E+00	9.691E+00	8.283E-01	-0.161
	1325.50			5.542E+01	5.103E+01	9.195E+01	8.780E+00	0.603
+	1376.25			1.067E+02	6.505E+01	9.055E+01	8.724E+00	1.178
	1509.49			2.005E+01	2.286E+01	4.188E+01	4.000E+00	0.479
	1691.02			-2.317E+00	5.364E+00	8.150E+00	7.395E-01	-0.284
SB-124	602.71			-3.244E-02	5.179E-02	6.733E-02	5.706E-03	-0.482
	645.85			2.973E-01	5.397E-01	9.027E-01	7.977E-02	0.329
	709.31			9.114E-01	2.841E+00	4.856E+00	4.117E-01	0.188
	713.82			4.289E-01	1.679E+00	2.856E+00	3.414E-01	0.150
	722.78			-9.445E-02	4.185E-01	5.876E-01	5.133E-02	-0.161
+	968.20			2.068E+01	4.806E+00	7.776E+00	7.143E-01	2.659
	1045.16			1.837E+00	2.603E+00	4.521E+00	4.028E-01	0.406
	1325.50			3.590E+00	3.305E+00	5.956E+00	5.687E-01	0.603
	1368.21			3.883E-01	1.936E+00	3.124E+00	4.419E-01	0.124
	1436.60			-3.227E+00	3.944E+00	4.497E+00	4.329E-01	-0.717
	1691.02	*		-3.314E-02	7.673E-02	1.166E-01	1.096E-02	-0.284
SB-125	427.89	*		-6.334E-02	1.039E-01	1.639E-01	1.428E-02	-0.386
+	463.38			6.591E-01	4.538E-01	5.805E-01	5.393E-02	1.135
	600.56			-7.032E-02	1.941E-01	3.045E-01	2.779E-02	-0.231
	635.90			-1.266E-02	2.840E-01	4.546E-01	4.120E-02	-0.028
TE-125M	109.28	*		-7.626E+00	1.128E+01	1.791E+01	2.104E+00	-0.426
I-126	388.63			-3.725E-02	2.473E-01	4.036E-01	3.435E-02	-0.092
	666.33	*		5.460E-02	2.334E-01	3.458E-01	2.852E-02	0.158
	753.82			7.996E-01	1.706E+00	2.937E+00	2.556E-01	0.272
SB-126	223.80			3.137E+00	5.084E+00	8.731E+00	9.625E-01	0.359
	278.60			2.652E+00	3.169E+00	5.450E+00	5.895E-01	0.487
+	296.50			1.342E+01	2.983E+00	4.308E+00	4.570E-01	3.116
	414.70			-1.849E-02	9.925E-02	1.386E-01	1.178E-02	-0.133
	415.30			-8.148E+00	8.940E+00	1.166E+01	9.912E-01	-0.699
	555.20			-2.329E+00	4.833E+00	7.540E+00	6.481E-01	-0.309
	573.80			-1.388E+00	1.348E+00	2.013E+00	1.723E-01	-0.690
	593.00			-8.093E-02	1.065E+00	1.707E+00	1.451E-01	-0.047
	656.30			-2.290E+00	4.404E+00	6.029E+00	4.973E-01	-0.380
	666.33			2.293E-02	9.801E-02	1.452E-01	1.198E-02	0.158
	675.00			8.546E-01	2.282E+00	3.922E+00	3.253E-01	0.218
	695.00			5.019E-02	9.160E-02	1.587E-01	1.333E-02	0.316
	697.00			-6.765E-02	3.268E-01	5.396E-01	4.539E-02	-0.125
	720.50	*		-8.206E-02	1.881E-01	2.578E-01	2.200E-02	-0.318
	856.80			5.309E-02	6.215E-01	8.935E-01	8.190E-02	0.059
	989.30			-4.780E-01	1.412E+00	2.242E+00	2.046E-01	-0.213
	1034.80			1.091E+01	1.041E+01	1.853E+01	1.660E+00	0.589
	1213.00			3.787E+00	6.138E+00	1.041E+01	8.854E-01	0.364
SB-127	61.10			1.674E+02	1.573E+02	2.376E+02	3.313E+01	0.705
	252.40			1.181E+00	6.859E+00	1.155E+01	4.938E+00	0.102

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	290.80		-1.392E+01	4.079E+01	5.773E+01	7.734E+00	-0.241
	411.60		3.414E+01	2.202E+01	3.424E+01	5.523E+00	0.997
	444.90		-4.464E+00	1.472E+01	2.358E+01	3.088E+00	-0.189
	473.00		-1.750E+00	2.838E+00	4.436E+00	5.964E-01	-0.395
	543.00		2.048E-01	2.675E+01	4.336E+01	6.464E+00	0.005
	603.60		-9.176E+00	2.178E+01	2.892E+01	3.760E+00	-0.317
	685.20	*	3.701E-01	2.001E+00	3.395E+00	4.018E-01	0.109
	698.50		-4.889E+00	2.282E+01	3.761E+01	6.087E+00	-0.130
	722.20		-2.409E+01	4.899E+01	6.658E+01	7.832E+00	-0.362
	783.80		8.902E+00	5.781E+00	1.041E+01	1.371E+00	0.855
XE-127	57.60		6.924E+00	1.256E+01	1.972E+01	2.318E+00	0.351
	145.22		4.413E-01	8.641E-01	1.403E+00	1.431E-01	0.315
	172.10		7.632E-02	1.469E-01	2.404E-01	2.577E-02	0.317
	202.84	*	-3.292E-02	6.356E-02	9.103E-02	9.959E-03	-0.362
	374.96		5.404E-02	2.138E-01	3.577E-01	3.191E-02	0.151
I-131	80.18		6.710E+00	9.866E+00	1.081E+01	1.276E+00	0.621
	284.30		-4.846E-01	2.026E+00	3.341E+00	3.721E-01	-0.145
	364.48	*	-6.216E-02	1.511E-01	2.436E-01	2.356E-02	-0.255
	636.97		-5.448E-01	1.889E+00	2.960E+00	2.621E-01	-0.184
	722.89		-1.910E+00	9.405E+00	1.324E+01	1.141E+00	-0.144
TE-132	49.72		-4.515E+01	8.110E+01	1.314E+02	2.043E+01	-0.343
	111.76		3.394E+00	5.378E+01	8.782E+01	1.113E+01	0.039
	116.30		-1.239E+01	5.027E+01	8.105E+01	1.021E+01	-0.153
	228.16	*	-2.714E-01	1.205E+00	2.007E+00	3.520E-01	-0.135
BA-133	53.15		1.907E+00	7.856E+00	1.315E+01	1.718E+00	0.145
	79.62		3.521E+00	2.163E+00	2.781E+00	4.776E-01	1.266
	81.00		6.604E-02	1.722E-01	1.844E-01	3.284E-02	0.358
	276.40		6.291E-01	4.707E-01	7.231E-01	1.148E-01	0.870
	302.84		1.222E-01	1.775E-01	2.671E-01	3.897E-02	0.458
	356.01	*	1.802E-02	5.247E-02	7.712E-02	1.060E-02	0.234
	383.85		-6.095E-02	3.234E-01	5.269E-01	6.654E-02	-0.116
I-133	510.53	+	8.973E+00	3.234E-01	Half-Life	too short	
	529.87	*	-9.696E-03	3.234E-01	Half-Life	too short	
	706.58		5.244E-01	3.234E-01	Half-Life	too short	
	856.28		1.702E+00	3.234E-01	Half-Life	too short	
	875.33		-1.544E-01	3.234E-01	Half-Life	too short	
	1236.41		4.413E+00	3.234E-01	Half-Life	too short	
	1298.22		1.745E+00	3.234E-01	Half-Life	too short	
CS-134	475.35		6.277E-04	2.190E+00	3.572E+00	3.082E-01	0.000
	563.23		1.326E-01	4.144E-01	6.838E-01	5.923E-02	0.194
	569.32		1.225E-01	2.180E-01	3.652E-01	3.171E-02	0.336
	604.70		2.925E-03	4.112E-02	5.749E-02	4.881E-03	0.051
	795.84	*	8.633E-02	7.390E-02	9.283E-02	8.320E-03	0.930
	801.93		-1.859E-01	4.897E-01	6.700E-01	6.015E-02	-0.277
	1038.57		-4.217E+00	4.152E+00	6.117E+00	5.468E-01	-0.689
	1167.94		-2.178E+00	2.972E+00	4.529E+00	3.704E-01	-0.481
	1365.15		-1.274E+00	1.251E+00	1.817E+00	1.814E-01	-0.701
CS-135	268.24	*	2.395E-01	1.996E-01	3.079E-01	3.694E-02	0.778
I-135	288.45		7.794E+12	1.996E-01	Half-Life	too short	

Sample ID : G246440001

Acquisition date : 19-FEB-2010 17:57:08

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		417.63		2.248E+11	1.996E-01	Half-Life too short		
		546.56		-3.710E+12	1.996E-01	Half-Life too short		
		836.80		2.218E+12	1.996E-01	Half-Life too short		
		1038.76		-3.937E+12	1.996E-01	Half-Life too short		
		1124.00		1.911E+13	1.996E-01	Half-Life too short		
		1131.51		-3.522E+11	1.996E-01	Half-Life too short		
		1260.41	*	-7.688E+11	1.996E-01	Half-Life too short		
		1457.56		1.953E+14	1.996E-01	Half-Life too short		
		1678.03		-1.750E+12	1.996E-01	Half-Life too short		
		1706.46		-2.638E+12	1.996E-01	Half-Life too short		
		1791.20		-1.049E+11	1.996E-01	Half-Life too short		
CS-136		66.91		-1.837E+00	1.556E+00	2.080E+00	3.568E-01	-0.883
	+	86.29		5.879E+00	2.594E+00	2.757E+00	4.279E-01	2.132
		153.22		6.180E-01	8.410E-01	1.389E+00	1.559E-01	0.445
		163.89		3.287E-01	1.392E+00	2.226E+00	2.555E-01	0.148
		176.55		1.042E-02	4.952E-01	7.955E-01	8.876E-02	0.013
		273.65		-8.646E-01	6.764E-01	8.965E-01	1.015E-01	-0.964
		340.57		6.220E-01	2.032E-01	3.295E-01	3.305E-02	1.888
		818.51		-5.324E-02	8.127E-02	1.269E-01	1.144E-02	-0.420
		1048.07	*	-4.651E-02	1.308E-01	2.070E-01	1.916E-02	-0.225
		1235.34		3.353E-01	7.976E-01	1.328E+00	1.583E-01	0.253
CE-139		165.85	*	-2.107E-02	3.431E-02	5.373E-02	5.735E-03	-0.392
BA-140		162.64		8.749E-01	1.004E+00	1.638E+00	1.802E-01	0.534
		304.84		-1.317E+00	1.826E+00	2.447E+00	7.012E-01	-0.538
		423.70		4.594E-01	2.460E+00	4.069E+00	1.318E+00	0.113
		537.32	*	-1.120E-01	3.168E-01	4.972E-01	1.648E-01	-0.225
LA-140	+	328.77		8.861E-01	7.113E-01	6.789E-01	7.113E-02	1.305
		432.53		1.110E+00	2.580E+00	4.330E+00	3.887E-01	0.256
		487.03		2.202E-01	1.738E-01	3.032E-01	2.780E-02	0.726
		751.79		-1.193E+00	1.971E+00	3.130E+00	3.007E-01	-0.381
		815.85		-2.605E-01	3.505E-01	5.419E-01	5.391E-02	-0.481
		867.82		3.724E-01	1.814E+00	2.747E+00	2.647E-01	0.136
		919.63		2.581E+00	3.363E+00	5.660E+00	6.339E-01	0.456
		925.24		-4.624E-01	1.339E+00	2.139E+00	2.093E-01	-0.216
		1596.49	*	-9.532E-03	8.833E-02	1.213E-01	1.137E-02	-0.079
CE-141		145.44	*	5.464E-02	7.825E-02	1.277E-01	1.320E-02	0.428
CE-143		57.37		1.855E-03	7.825E-02	Half-Life too short		
		231.56		-1.999E-03	7.825E-02	Half-Life too short		
		293.26	*	2.204E-03	7.825E-02	Half-Life too short		
		350.59		7.063E-02	7.825E-02	Half-Life too short		
		490.36		-6.279E-03	7.825E-02	Half-Life too short		
		664.57		5.774E-03	7.825E-02	Half-Life too short		
		721.93		-3.509E-03	7.825E-02	Half-Life too short		
CE-144		80.11		2.898E+00	3.812E+00	4.198E+00	4.934E-01	0.690
		133.54	*	9.828E-02	2.646E-01	3.813E-01	6.254E-02	0.258
PM-144		476.78		3.419E-02	7.746E-02	1.296E-01	1.223E-02	0.264
		618.01		-1.205E-02	3.926E-02	5.557E-02	4.815E-03	-0.217
		696.49	*	-1.345E-02	3.769E-02	6.159E-02	5.182E-03	-0.218
		778.57		-1.923E+00	2.551E+00	4.005E+00	3.534E-01	-0.480

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144		696.49	*	-9.121E-01	2.557E+00	4.179E+00	3.514E-01	-0.218
		1489.15		-3.832E+00	1.263E+01	2.015E+01	1.930E+00	-0.190
PM-146		453.90	*	4.171E-02	4.731E-02	8.114E-02	8.688E-03	0.514
		633.02		1.286E-01	1.495E+00	2.418E+00	9.021E-01	0.053
		735.90		3.213E-02	1.631E-01	2.568E-01	7.344E-02	0.125
		747.13		-4.793E-02	9.112E-02	1.453E-01	2.044E-02	-0.330
ND-147		91.11		1.553E+00	6.872E-01	7.806E-01	9.663E-02	1.990
		319.41		6.802E-01	4.381E+00	6.926E+00	7.095E-01	0.098
		439.89		2.789E+00	7.189E+00	1.204E+01	1.032E+00	0.232
		531.02	*	-9.304E-02	6.873E-01	1.104E+00	1.651E-01	-0.084
PM-149		285.90	*	-8.926E+01	2.040E+02	3.327E+02	5.596E+01	-0.268
EU-152		121.78		8.055E-03	8.471E-02	1.381E-01	1.548E-02	0.058
		244.69		6.119E-01	3.999E-01	6.277E-01	6.919E-02	0.975
		344.27	*	-4.072E-02	1.277E-01	1.790E-01	1.822E-02	-0.228
		443.98		-6.195E-01	9.823E-01	1.537E+00	1.319E-01	-0.403
		778.89		-1.175E-01	2.902E-01	4.685E-01	4.134E-02	-0.251
		867.32		1.575E-01	1.010E+00	1.463E+00	1.347E-01	0.108
	+	964.01		7.864E-01	4.229E-01	6.151E-01	5.657E-02	1.279
		1085.78		3.728E-01	4.562E-01	7.928E-01	6.903E-02	0.470
		1112.02		8.565E-02	3.788E-01	5.658E-01	4.842E-02	0.151
		1407.95		1.556E-01	2.006E-01	3.608E-01	3.477E-02	0.431
GD-153		69.67		-3.807E-01	3.175E+00	3.846E+00	4.391E-01	-0.099
		83.37		3.209E+01	2.292E+01	2.982E+01	3.575E+00	1.076
		97.43	*	1.298E-01	1.039E-01	1.563E-01	1.726E-02	0.830
		103.18		-5.825E-02	1.220E-01	1.955E-01	2.067E-02	-0.298
EU-154		123.07		-9.649E-03	6.451E-02	9.619E-02	1.201E-02	-0.100
		247.94		-7.135E-02	4.415E-01	6.376E-01	8.524E-02	-0.112
		591.81		-3.323E-01	6.532E-01	9.782E-01	1.134E-01	-0.340
		723.30		-6.111E-02	2.003E-01	2.789E-01	2.640E-02	-0.219
		756.87		7.272E-01	7.885E-01	1.394E+00	1.679E-01	0.522
		873.19		6.081E-02	3.030E-01	5.094E-01	6.460E-02	0.119
		996.32		-4.842E-01	4.193E-01	6.039E-01	1.087E-01	-0.802
		1004.76		-1.241E-01	2.322E-01	3.623E-01	4.339E-02	-0.343
		1274.45	*	6.121E-02	1.366E-01	2.299E-01	2.680E-02	0.266
EU-155		48.70		-2.181E+00	6.889E+00	1.131E+01	1.517E+00	-0.193
		60.01		5.783E+00	9.330E+00	1.395E+01	1.575E+00	0.414
	+	86.54		4.853E-01	2.092E-01	2.248E-01	2.772E-02	2.159
		105.31	*	-2.955E-02	1.255E-01	2.030E-01	2.139E-02	-0.146
TB-160	+	86.79		1.322E+00	5.697E-01	6.047E-01	7.435E-02	2.186
		197.04		4.816E-01	7.025E-01	1.118E+00	1.219E-01	0.431
		215.65		-1.607E-02	8.585E-01	1.367E+00	1.503E-01	-0.012
	+	298.57		2.084E-01	1.769E-01	2.411E-01	2.551E-02	0.864
		879.36	*	1.460E-02	1.510E-01	2.515E-01	2.328E-02	0.058
		962.29		6.852E-01	6.938E-01	1.075E+00	9.891E-02	0.637
	+	966.15		5.510E-01	2.963E-01	5.775E-01	5.308E-02	0.954
		1177.93		-3.064E-01	4.394E-01	6.718E-01	5.498E-02	-0.456
		1271.85		6.518E-02	7.921E-01	1.290E+00	1.168E-01	0.051
HO-166M		80.57		1.328E-01	4.850E-01	5.156E-01	6.075E-02	0.258
		184.41		1.537E-01	5.030E-02	7.636E-02	8.258E-03	2.013

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		280.46		-9.420E-03	9.504E-02	1.579E-01	1.705E-02	-0.060
	+	410.95		7.378E-01	3.186E-01	4.830E-01	4.099E-02	1.528
		711.68	*	-5.092E-02	6.219E-02	9.752E-02	8.280E-03	-0.522
		752.31		1.605E-01	2.767E-01	4.804E-01	4.177E-02	0.334
		810.29		-5.571E-03	5.808E-02	9.567E-02	8.579E-03	-0.058
		51.35		-1.137E+00	7.401E+01	1.229E+02	1.656E+01	-0.009
		52.39		5.089E+00	3.571E+01	5.961E+01	7.905E+00	0.085
		59.40		4.493E+01	5.024E+01	7.603E+01	8.572E+00	0.591
		66.72	*	-3.068E+01	4.891E+01	6.835E+01	7.802E+00	-0.449
		88.36		2.061E-01	4.095E-01	4.375E-01	5.401E-02	0.471
LU-176		201.83		-1.269E-02	3.389E-02	5.326E-02	5.823E-03	-0.238
		306.84	*	-2.522E-02	2.892E-02	4.290E-02	4.486E-03	-0.588
		401.10		-1.067E+00	7.357E+00	1.200E+01	1.014E+00	-0.089
LU-177		112.95		1.905E+00	2.340E+00	3.907E+00	3.972E-01	0.488
LU-177M	+	208.36	*	3.556E+00	2.313E+00	2.749E+00	3.016E-01	1.294
		52.97		7.754E-01	3.615E+00	6.048E+00	7.931E-01	0.128
HF-181		54.07		-1.031E+00	1.839E+00	2.979E+00	3.813E-01	-0.346
		61.30		3.476E+00	2.800E+00	4.264E+00	4.846E-01	0.815
		121.62		7.418E-02	4.349E-01	7.112E-01	7.158E-02	0.104
		147.16		-1.016E+00	7.778E-01	1.185E+00	1.212E-01	-0.857
		171.86		2.403E-01	5.748E-01	9.375E-01	1.005E-01	0.256
		218.09		-2.345E-02	9.314E-01	1.568E+00	1.726E-01	-0.015
		268.79		2.043E+00	1.045E+00	1.653E+00	1.803E-01	1.235
		319.02		7.533E-02	2.925E-01	4.792E-01	4.911E-02	0.157
		367.43		7.625E-01	1.006E+00	1.724E+00	1.575E-01	0.442
		413.65	*	8.247E-02	1.966E-01	2.901E-01	2.465E-02	0.284
		56.28		-6.902E-01	1.917E+00	3.133E+00	3.803E-01	-0.220
		57.53		5.016E-01	1.050E+00	1.645E+00	1.936E-01	0.305
		65.20		1.367E+00	1.734E+00	2.577E+00	2.943E-01	0.530
		133.02		-1.299E-03	8.812E-02	1.248E-01	1.254E-02	-0.010
		136.25		-4.627E-01	5.444E-01	8.503E-01	8.566E-02	-0.544
		345.85		-4.786E-02	2.813E-01	3.756E-01	3.639E-02	-0.127
		482.03	*	-7.662E-02	5.142E-02	7.510E-02	6.485E-03	-1.020
W-181		56.28		-2.630E-01	7.334E-01	1.199E+00	1.455E-01	-0.219
		57.53		1.912E-01	4.022E-01	6.298E-01	7.416E-02	0.304
		65.20	*	5.195E-01	6.588E-01	9.792E-01	1.118E-01	0.530
TA-182		67.75		-2.012E-01	1.920E-01	2.618E-01	2.988E-02	-0.768
		100.10		2.568E-01	2.163E-01	3.541E-01	3.822E-02	0.725
		152.43		1.710E-01	3.901E-01	6.390E-01	6.608E-02	0.268
		222.10		-9.613E-02	3.916E-01	6.530E-01	7.196E-02	-0.147
RE-183		1001.68		3.057E+00	2.246E+00	4.051E+00	3.680E-01	0.755
	+	1121.28		5.917E-01	3.456E-01	3.902E-01	3.317E-02	1.516
		1189.05		9.626E-02	3.770E-01	6.238E-01	5.168E-02	0.154
		1221.42	*	-1.711E-01	2.281E-01	3.460E-01	2.969E-02	-0.495
		1230.97		2.902E-02	5.698E-01	9.263E-01	8.032E-02	0.031
		57.98		5.062E-01	4.133E-01	6.327E-01	7.371E-02	0.800
		59.32		1.823E-01	2.109E-01	3.189E-01	3.602E-02	0.572
		67.20		-4.574E-01	3.569E-01	4.797E-01	5.474E-02	-0.954
		162.32	*	1.456E-01	1.327E-01	2.178E-01	2.304E-02	0.669

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184	+	208.81		2.620E+00	1.704E+00	2.039E+00	2.237E-01	1.285
		291.72		-3.861E-01	1.236E+00	1.753E+00	1.871E-01	-0.220
		57.98		1.842E+00	1.504E+00	2.303E+00	2.683E-01	0.800
		59.32		6.629E-01	7.671E-01	1.160E+00	1.310E-01	0.572
		67.20		-1.664E+00	1.299E+00	1.745E+00	1.992E-01	-0.954
		161.27		3.555E-01	4.100E-01	6.795E-01	7.170E-02	0.523
		216.55		1.278E-01	2.930E-01	4.892E-01	5.384E-02	0.261
		252.85	*	3.554E-02	2.519E-01	4.246E-01	4.669E-02	0.084
		318.01		1.419E-02	4.889E-01	8.131E-01	8.348E-02	0.017
		792.07		7.740E-01	1.263E+00	1.915E+00	1.702E-01	0.404
OS-185		903.28		-1.620E+00	1.139E+00	1.450E+00	1.351E-01	-1.117
		920.93		-1.995E-01	4.860E-01	7.724E-01	7.176E-02	-0.258
		59.72		6.021E-01	5.594E-01	8.516E-01	9.596E-02	0.707
		61.14		3.440E-01	3.088E-01	4.688E-01	5.325E-02	0.734
		69.30		3.313E-02	5.187E-01	7.020E-01	8.013E-02	0.047
		592.07		-1.344E+00	2.608E+00	4.029E+00	3.428E-01	-0.333
		646.12	*	1.555E-02	4.645E-02	7.647E-02	6.346E-03	0.203
		717.42		4.504E-01	9.038E-01	1.563E+00	1.332E-01	0.288
		874.81		-2.035E-01	6.252E-01	1.005E+00	9.283E-02	-0.203
		880.27		1.214E-01	8.640E-01	1.444E+00	1.337E-01	0.084
RE-188		155.03	*	1.386E-01	2.004E-01	3.307E-01	3.439E-02	0.419
		477.96		3.366E+00	3.505E+00	6.031E+00	5.205E-01	0.558
		633.10		9.454E-01	3.027E+00	4.980E+00	4.162E-01	0.190
W-188	+	63.58		1.768E+02	1.393E+02	1.524E+02	1.740E+01	1.159
		227.08		-9.262E+00	1.467E+01	2.403E+01	2.650E+00	-0.385
IR-192		290.67	*	-2.738E+00	9.851E+00	1.401E+01	1.497E+00	-0.195
	+	295.96		9.309E-01	2.071E-01	3.003E-01	3.203E-02	3.100
		308.46		2.923E-02	1.068E-01	1.799E-01	1.883E-02	0.163
		316.51	*	-1.506E-02	3.835E-02	6.238E-02	6.431E-03	-0.241
		468.07		-4.782E-02	8.589E-02	1.148E-01	1.061E-02	-0.417
AU-195		604.41		-5.857E-02	5.741E-01	7.888E-01	1.019E-01	-0.074
		612.46		3.250E+00	1.038E+00	1.732E+00	1.688E-01	1.877
		65.12		2.639E-01	3.055E-01	4.552E-01	5.197E-02	0.580
		66.83		-1.954E-01	1.669E-01	2.261E-01	2.581E-02	-0.864
	+	75.70		1.071E+00	3.362E-01	5.567E-01	6.421E-02	1.924
TL-200		98.88	*	3.943E-01	2.991E-01	4.511E-01	4.917E-02	0.874
	+	129.76		2.758E+00	5.083E+00	5.625E+00	5.645E-01	0.490
		367.94	*	2.358E-03	5.083E+00	Half-Life	too short	
		579.30		1.160E-02	5.083E+00	Half-Life	too short	
		828.27		-1.879E-02	5.083E+00	Half-Life	too short	
TL-201		1205.75		-1.057E-02	5.083E+00	Half-Life	too short	
		68.90		-2.972E+00	1.492E+01	1.799E+01	2.053E+00	-0.165
		70.82		3.860E+00	6.743E+00	9.985E+00	1.141E+00	0.387
		80.30		5.502E+00	1.465E+01	1.570E+01	1.847E+00	0.351
TL-202		135.34		-3.375E+01	5.199E+01	7.536E+01	7.585E+00	-0.448
		167.43	*	-2.026E+01	1.339E+01	1.995E+01	2.131E+00	-1.015
		68.90		-1.857E-01	9.321E-01	1.124E+00	1.282E-01	-0.165
		70.82		2.405E-01	4.200E-01	6.220E-01	7.105E-02	0.387
		80.30		3.429E-01	9.129E-01	9.781E-01	1.151E-01	0.351

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203	439.56	*		4.397E-02	8.436E-02	1.423E-01	1.220E-02	0.309
	70.83			9.554E-01	1.668E+00	2.466E+00	3.830E-01	0.388
	72.87			1.481E+00	9.922E-01	1.484E+00	2.257E-01	0.998
	82.60			8.163E-01	2.062E+00	2.206E+00	3.536E-01	0.370
BI-207	279.20	*		4.430E-02	4.765E-02	8.221E-02	9.050E-03	0.539
	72.80			3.600E-01	2.767E-01	4.170E-01	4.775E-02	0.863
	74.97		+	5.895E-01	1.850E-01	2.836E-01	3.264E-02	2.079
	84.90			1.735E-01	2.449E-01	3.957E-01	4.795E-02	0.438
	569.67			1.653E-02	3.406E-02	5.679E-02	4.865E-03	0.291
	1063.62	*		4.367E-02	5.814E-02	1.008E-01	8.894E-03	0.433
TL-207	1770.23			6.287E-02	5.128E-01	7.429E-01	6.494E-02	0.085
	81.07			1.479E-01	3.790E-01	4.066E-01	4.804E-02	0.364
	83.78			2.734E-01	1.928E-01	2.509E-01	3.016E-02	1.090
	94.90			1.142E+00	3.564E-01	5.405E-01	6.116E-02	2.113
	122.32			1.070E+00	2.060E+00	3.295E+00	3.495E-01	0.325
	144.24			3.766E-01	8.101E-01	1.313E+00	1.453E-01	0.287
	154.21			1.138E-01	4.534E-01	7.379E-01	8.194E-02	0.154
	269.46		+	6.048E-01	2.897E-01	3.874E-01	4.277E-02	1.561
	323.87	*		-2.436E-01	8.319E-01	1.171E+00	2.167E-01	-0.208
	338.28		+	6.837E+00	2.107E+00	2.625E+00	3.468E-01	2.604
	445.03			-7.478E-01	2.334E+00	3.734E+00	4.503E-01	-0.200
	260.50			7.442E+00	1.057E+01	1.816E+01	1.991E+00	0.410
	262.80			-1.269E+01	2.921E+01	4.788E+01	5.241E+00	-0.265
	896.60	*		1.257E+00	7.805E+00	1.306E+01	1.217E+00	0.096
BI-210	46.50	*		9.134E+00	1.134E+01	1.935E+01	2.383E+00	0.472
PB-210	46.50	*		9.134E+00	1.134E+01	1.935E+01	2.383E+00	0.472
PO-210	46.50	*		9.134E+00	1.133E+01	1.935E+01	2.257E+00	0.472
PB-211	404.84	*		3.375E-01	1.150E+00	1.649E+00	1.033E+00	0.205
B1-212	427.08			-1.004E+00	2.408E+00	3.716E+00	2.308E+00	-0.270
	831.96			3.813E-01	1.275E+00	2.125E+00	1.333E+00	0.179
	727.18	*	+	1.004E+00	5.286E-01	6.776E-01	6.752E-02	1.482
	785.46			1.714E+00	1.913E+00	3.365E+00	2.980E-01	0.509
PO-215	1620.62			8.579E-01	1.153E+00	2.121E+00	1.974E-01	0.404
	81.07			1.479E-01	3.790E-01	4.066E-01	4.804E-02	0.364
	83.78			2.734E-01	1.928E-01	2.509E-01	3.016E-02	1.090
	94.90			1.142E+00	3.564E-01	5.405E-01	6.116E-02	2.113
	122.32			1.070E+00	2.060E+00	3.295E+00	3.495E-01	0.325
	144.24			3.766E-01	8.101E-01	1.313E+00	1.453E-01	0.287
	154.21			1.138E-01	4.534E-01	7.379E-01	8.194E-02	0.154
	269.46		+	6.048E-01	2.897E-01	3.874E-01	4.277E-02	1.561
	323.87	*		-2.436E-01	8.319E-01	1.171E+00	2.167E-01	-0.208
	338.28		+	6.837E+00	2.107E+00	2.625E+00	3.468E-01	2.604
	445.03			-7.478E-01	2.334E+00	3.734E+00	4.503E-01	-0.200
	271.23		+	7.760E-01	3.740E-01	5.106E-01	6.264E-02	1.520
	401.81	*		-4.059E-01	4.583E-01	7.084E-01	1.058E-01	-0.573
	549.76	*		2.240E-02	2.749E+01	4.452E+01	3.830E+00	0.001
RN-220	81.07			1.479E-01	3.790E-01	4.066E-01	4.804E-02	0.364
RA-223	83.78			2.734E-01	1.928E-01	2.509E-01	3.016E-02	1.090
	94.90			1.142E+00	3.564E-01	5.405E-01	6.116E-02	2.113

---- 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		1.070E+00	2.060E+00	3.295E+00	3.495E-01	0.325
		144.24		3.766E-01	8.101E-01	1.313E+00	1.453E-01	0.287
		154.21		1.138E-01	4.534E-01	7.379E-01	8.194E-02	0.154
	+	269.46		6.048E-01	2.897E-01	3.874E-01	4.277E-02	1.561
		323.87	*	-2.436E-01	8.319E-01	1.171E+00	2.167E-01	-0.208
	+	338.28		6.837E+00	2.107E+00	2.625E+00	3.468E-01	2.604
		445.03		-7.478E-01	2.334E+00	3.734E+00	4.503E-01	-0.200
		79.80		3.307E+00	3.054E+00	3.356E+00	7.694E-01	0.986
		236.00		1.409E+00	3.750E-01	5.553E-01	7.802E-02	2.537
		256.20	*	-2.307E-01	4.154E-01	6.759E-01	1.135E-01	-0.341
TH-227		286.10		-7.659E-01	1.759E+00	2.871E+00	4.213E-01	-0.267
	+	299.80		2.601E+00	2.242E+00	2.908E+00	5.388E-01	0.894
		304.40		-1.024E+00	2.315E+00	3.229E+00	6.258E-01	-0.317
		334.20		-2.678E-01	4.243E+00	4.043E+00	8.101E-01	-0.066
		79.80		3.307E+00	3.056E+00	3.356E+00	7.781E-01	0.986
	+	94.00		1.517E+01	5.594E+00	5.109E+00	1.177E+00	2.970
		236.00		1.409E+00	3.678E-01	5.553E-01	7.244E-02	2.537
		256.20	*	-2.307E-01	4.160E-01	6.759E-01	1.304E-01	-0.341
		286.10		-7.659E-01	1.917E+00	2.871E+00	2.887E+00	-0.267
	+	299.80		2.601E+00	2.242E+00	2.908E+00	5.388E-01	0.894
TH-229		304.40		-1.024E+00	2.315E+00	3.229E+00	6.258E-01	-0.317
		334.20		-2.678E-01	4.243E+00	4.043E+00	8.101E-01	-0.066
	+	85.43		9.029E-01	3.891E-01	4.099E-01	4.987E-02	2.203
		88.47		1.129E-01	2.352E-01	2.509E-01	3.093E-02	0.450
		100.00		2.793E-01	2.225E-01	3.647E-01	3.940E-02	0.766
		193.63	*	-6.251E-01	6.161E-01	9.394E-01	1.022E-01	-0.665
	+	210.97		2.009E+00	1.307E+00	1.557E+00	1.709E-01	1.291
		283.67	*	-5.887E-01	1.726E+00	2.831E+00	4.671E-01	-0.208
	+	301.29		1.040E+00	8.874E-01	1.161E+00	1.586E-01	0.896
		81.07		1.479E-01	3.790E-01	4.066E-01	4.804E-02	0.364
PA-231		83.78		2.734E-01	1.928E-01	2.509E-01	3.016E-02	1.090
		94.90		1.142E+00	3.564E-01	5.405E-01	6.116E-02	2.113
		122.32		1.070E+00	2.060E+00	3.295E+00	3.495E-01	0.325
		144.24		3.766E-01	8.101E-01	1.313E+00	1.453E-01	0.287
		154.21		1.138E-01	4.534E-01	7.379E-01	8.194E-02	0.154
	+	269.46		6.048E-01	2.897E-01	3.874E-01	4.277E-02	1.561
		323.87	*	-2.436E-01	8.319E-01	1.171E+00	2.167E-01	-0.208
	+	338.28		6.837E+00	2.107E+00	2.625E+00	3.468E-01	2.604
		445.03		-7.478E-01	2.334E+00	3.734E+00	4.503E-01	-0.200
		84.21		1.709E+01	1.082E+01	1.540E+01	1.857E+00	1.109
U-231	+	92.29		2.130E+01	6.597E+00	7.603E+00	8.872E-01	2.801
		95.87	*	6.458E-01	2.083E+00	3.027E+00	3.392E-01	0.213
		108.00		-5.940E-01	3.373E+00	5.466E+00	5.642E-01	-0.109
	+	75.28		1.720E+01	5.823E+00	8.595E+00	1.474E+00	2.001
	+	86.59		7.883E+00	3.943E+00	3.642E+00	1.027E+00	2.165
	+	300.12		7.250E-01	6.215E-01	8.165E-01	1.313E-01	0.888
		311.98	*	2.319E-02	7.054E-02	1.190E-01	1.259E-02	0.195
		340.50		2.827E+00	1.088E+00	1.444E+00	3.508E-01	1.957
		398.62		4.098E-01	2.292E+00	3.802E+00	1.010E+00	0.108

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76	-1.728E+00	2.114E+00	2.742E+00	5.898E-01	-0.630
	+	63.00	5.018E+00	4.008E+00	4.460E+00	7.675E-01	1.125
	+	94.67	1.353E+00	4.361E-01	4.065E-01	5.866E-02	3.328
		98.44	1.296E-01	1.407E-01	1.814E-01	1.019E-01	0.715
		99.86	7.621E-01	5.663E-01	9.299E-01	1.006E-01	0.820
		111.00	-4.660E-02	2.154E-01	3.483E-01	4.623E-02	-0.134
	+	131.20	1.026E-01	1.890E-01	2.038E-01	2.046E-02	0.503
		152.70	1.964E-01	3.728E-01	6.105E-01	1.098E-01	0.322
	+	186.00	5.854E+00	2.845E+00	2.880E+00	9.185E-01	2.033
		226.40	1.642E-01	4.537E-01	7.723E-01	1.150E-01	0.213
		227.20	-3.133E-01	4.849E-01	7.936E-01	8.754E-02	-0.395
		248.90	-4.364E-01	9.365E-01	1.439E+00	3.373E-01	-0.303
		293.70	4.896E+00	1.340E+00	1.773E+00	3.261E-01	2.762
		369.80	2.288E-01	9.361E-01	1.563E+00	3.432E-01	0.146
		568.70	3.688E-01	1.120E+00	1.850E+00	1.585E-01	0.199
		569.50	2.334E-01	2.972E-01	5.048E-01	4.324E-02	0.462
		574.00	-1.559E+00	1.708E+00	2.576E+00	2.203E-01	-0.605
		699.00	1.618E-02	7.344E-01	1.231E+00	2.337E-01	0.013
		706.10	6.165E-01	1.064E+00	1.792E+00	7.984E-01	0.344
		733.00	2.583E-01	4.289E-01	6.518E-01	1.446E-01	0.396
		742.81	6.454E-01	1.438E+00	2.367E+00	1.591E+00	0.273
	+	796.30	1.675E+00	1.496E+00	1.786E+00	4.849E-01	0.937
		805.60	-1.199E-01	1.176E+00	1.777E+00	5.463E-01	-0.067
		819.60	-5.146E-01	1.212E+00	1.909E+00	7.278E-01	-0.270
		826.30	-9.325E-02	8.344E-01	1.369E+00	6.138E-01	-0.068
		831.60	1.496E-01	6.579E-01	1.107E+00	3.318E-01	0.135
		876.40	1.369E-02	8.738E-01	1.446E+00	1.487E+00	0.009
		880.51	-2.178E-02	3.042E-01	4.997E-01	4.628E-02	-0.044
		883.24	6.901E-02	3.161E-01	5.257E-01	3.539E-01	0.131
		899.00	5.460E-02	8.702E-01	1.427E+00	6.257E-01	0.038
		925.00	-6.595E-01	1.247E+00	1.958E+00	1.818E-01	-0.337
		926.50	-4.884E-02	1.873E-01	3.011E-01	7.681E-02	-0.162
		946.00	* -1.349E-01	3.302E-01	5.231E-01	9.969E-02	-0.258
		949.00	3.622E-01	4.870E-01	8.473E-01	7.824E-02	0.428
		980.50	2.214E-01	7.777E-01	1.308E+00	1.197E-01	0.169
		1394.10	-1.784E-01	1.160E+00	1.890E+00	1.233E+00	-0.094
PA-234M		766.42	1.096E+01	1.302E+01	2.082E+01	1.057E+01	0.526
		1001.03	* 6.988E+00	5.089E+00	9.160E+00	9.498E-01	0.763
U-235		89.95	-5.520E-01	2.273E+00	2.306E+00	7.377E-01	-0.239
	+	93.35	4.720E+00	1.929E+00	1.645E+00	4.778E-01	2.870
		105.00	3.298E-02	1.222E+00	1.996E+00	6.073E-01	0.017
		143.76	* 1.259E-01	2.516E-01	4.073E-01	7.462E-02	0.309
		163.35	4.281E-01	5.560E-01	8.969E-01	1.799E-01	0.477
	+	185.71	2.168E-01	8.288E-02	1.059E-01	1.146E-02	2.047
		205.31	-1.116E-01	6.965E-01	9.533E-01	1.929E-01	-0.117
NP-236	+	94.67	1.026E+00	3.178E-01	3.086E-01	3.502E-02	3.325
		98.44	9.796E-02	9.163E-02	1.371E-01	1.500E-02	0.715
		111.00	-3.525E-02	1.629E-01	2.634E-01	2.692E-02	-0.134
		160.31	* -1.056E-02	9.320E-02	1.495E-01	1.573E-02	-0.071

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		2.950E-01	1.959E-01	3.112E-01	3.374E-02	0.948
		117.00	*	-1.498E-02	2.176E-01	3.531E-01	3.565E-02	-0.042
	+	209.75		2.024E+00	1.317E+00	1.594E+00	1.749E-01	1.270
		228.18		-5.557E-02	2.503E-01	4.173E-01	4.604E-02	-0.133
		277.60		1.858E-01	2.156E-01	3.527E-01	3.819E-02	0.527
AM-241		334.30		-5.088E-01	2.454E+00	2.289E+00	2.277E-01	-0.222
		59.54	*	2.833E-01	2.909E-01	4.412E-01	5.179E-02	0.642
CM-243		99.55		3.036E-01	2.016E-01	3.203E-01	3.472E-02	0.948
		103.76	*	2.417E-02	1.101E-01	1.811E-01	1.908E-02	0.133
		117.00		-1.541E-02	2.239E-01	3.633E-01	3.668E-02	-0.042
	+	209.75		1.995E+00	1.298E+00	1.571E+00	1.725E-01	1.270
		228.18		-5.616E-02	2.530E-01	4.218E-01	4.653E-02	-0.133
AM-246		277.60		1.874E-01	2.174E-01	3.557E-01	3.851E-02	0.527
		798.80		-3.079E-02	1.593E-01	2.227E-01	1.986E-02	-0.138
		1036.00		2.354E-01	3.030E-01	5.301E-01	4.744E-02	0.444
		1062.04		1.742E-01	2.581E-01	4.447E-01	3.927E-02	0.392
		1078.86	*	1.227E-02	1.590E-01	2.614E-01	2.286E-02	0.047
CM-247		278.00		6.779E-01	8.713E-01	1.461E+00	1.581E-01	0.464
		287.40		9.820E-01	1.415E+00	2.424E+00	2.599E-01	0.405
		402.60	*	-2.739E-02	4.231E-02	6.491E-02	5.490E-03	-0.422
CF-249		252.85		1.322E-01	9.369E-01	1.579E+00	1.737E-01	0.084
		333.44		-4.196E-02	3.136E-01	2.957E-01	2.947E-02	-0.142
		387.95	*	-2.183E-02	4.295E-02	6.859E-02	5.851E-03	-0.318
CF-251		176.60	*	4.579E-02	1.512E-01	2.454E-01	2.639E-02	0.187
		227.00		-1.574E-01	4.274E-01	7.083E-01	7.812E-02	-0.222
		285.00		-6.360E-02	1.974E+00	3.288E+00	3.535E-01	-0.019

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]G246440001      *
* Acquisition date   : 19-FEB-2010 17:57:08 Detector SN#                   *
* Detector ID        : GAM15 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 02:00:01.48 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID           : G246440001 Analyst initials: MXR1                 *
* Batch Number        : 950788 Sample Quantity : 1.5875E+02 GRAM          *
* Recovery             : 1.00000 Carrier Weight : 0.00000                 *
*****
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                             *
* CALIB. DATE/TIME   : 3-FEB-2010 11:04:32 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	3.313E+01	3.677E+00	5.453E-01	0.000E+00
CD-109	4.110E+00	1.735E+00	1.803E+00	0.000E+00
SN-126	4.027E-01	1.700E-01	1.946E-01	0.000E+00
BA-137M	8.108E-02	5.710E-02	6.405E-02	0.000E+00
CS-137	8.571E-02	6.036E-02	6.771E-02	0.000E+00
TL-208	5.576E-01	9.627E-02	6.534E-02	0.000E+00
BI-211	3.387E+00	5.606E-01	4.100E-01	0.000E+00
PB-212	1.740E+00	2.360E-01	1.035E-01	0.000E+00
PO-212	1.740E+00	2.360E-01	1.035E-01	0.000E+00
BI-214	1.041E+00	1.891E-01	1.245E-01	0.000E+00
PB-214	1.178E+00	2.041E-01	1.380E-01	0.000E+00
PO-214	1.178E+00	2.041E-01	1.380E-01	0.000E+00
PO-216	1.740E+00	2.360E-01	1.035E-01	0.000E+00
PO-218	1.178E+00	2.041E-01	1.380E-01	0.000E+00
RA-224	4.061E+00	1.386E+00	1.177E+00	0.000E+00
RA-226	1.041E+00	1.891E-01	1.245E-01	0.000E+00
AC-228	1.551E+00	3.104E-01	2.144E-01	0.000E+00
RA-228	1.551E+00	3.104E-01	2.144E-01	0.000E+00
TH-228	1.770E+00	2.401E-01	1.052E-01	0.000E+00
TH-230	1.041E+00	1.891E-01	1.245E-01	0.000E+00
TH-232	1.551E+00	3.104E-01	2.144E-01	0.000E+00
TH-234	4.305E+00	3.392E+00	3.673E+00	0.000E+00
U-234	1.041E+00	1.891E-01	1.245E-01	0.000E+00
NP-237	1.182E+00	5.536E-01	5.189E-01	0.000E+00
U-238	4.305E+00	3.392E+00	3.673E+00	0.000E+00
AM-243	3.284E-01	1.010E-01	1.252E-01	0.000E+00
ANH-511	1.604E-01	6.099E-02	5.007E-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	1.774E-01	3.689E-01	6.575E-01	0.000E+00	NOT IDENT.
NA-22	7.131E-03	4.920E-02	8.332E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.578E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.384E-02	2.753E-02	5.059E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.308E-02	1.032E-01	0.000E+00	FAIL ABUN
SC-46	-3.508E-02	4.120E-02	6.577E-02	0.000E+00	FAIL ABUN
V-48	3.807E-02	7.788E-02	1.389E-01	0.000E+00	NOT IDENT.
CR-51	1.958E-01	4.558E-01	7.593E-01	0.000E+00	NOT IDENT.
MN-52	2.186E-01	2.862E-01	4.880E-01	0.000E+00	NOT IDENT.
MN-54	1.652E-02	3.909E-02	6.985E-02	0.000E+00	NOT IDENT.
CO-56	-1.099E-02	4.061E-02	6.887E-02	0.000E+00	NOT IDENT.
CO-57	1.614E-02	2.838E-02	5.187E-02	0.000E+00	NOT IDENT.
CO-58	-1.856E-02	3.902E-02	6.519E-02	0.000E+00	NOT IDENT.
FE-59	1.347E-01	1.000E-01	1.871E-01	0.000E+00	NOT IDENT.
CO-60	1.123E-03	3.807E-02	6.359E-02	0.000E+00	NOT IDENT.
ZN-65	-9.975E-03	1.179E-01	1.691E-01	0.000E+00	NOT IDENT.
GE-68	1.669E+00	1.293E+00	2.424E+00	0.000E+00	NOT IDENT.
AS-73	-2.825E-01	1.817E+00	3.378E+00	0.000E+00	NOT IDENT.
AS-74	-1.872E-02	1.033E-01	1.738E-01	0.000E+00	NOT IDENT.
SE-75	-8.995E-03	5.148E-02	8.389E-02	0.000E+00	NOT IDENT.
BR-77	-2.169E+00	2.119E+01	3.627E+01	0.000E+00	FAIL ABUN
SR-82	-2.653E-01	4.408E-01	7.296E-01	0.000E+00	NOT IDENT.
RB-83	-3.443E-02	7.727E-02	1.292E-01	0.000E+00	NOT IDENT.
RB-84	4.117E-02	7.642E-02	1.375E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.938E+00	1.542E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.687E-02	8.088E-02	0.000E+00	NOT IDENT.
RB-86	1.258E+00	8.941E-01	1.687E+00	0.000E+00	NOT IDENT.
Y-88	2.915E-03	2.569E-02	4.425E-02	0.000E+00	NOT IDENT.
ZR-88	2.656E-02	3.438E-02	6.284E-02	0.000E+00	NOT IDENT.
Y-91	-2.110E+01	2.141E+01	3.288E+01	0.000E+00	NOT IDENT.
NB-94	-2.589E-02	3.410E-02	5.683E-02	0.000E+00	NOT IDENT.
NB-95	4.511E-02	4.452E-02	8.266E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.670E-01	2.840E-01	0.000E+00	NOT IDENT.
ZR-95	6.355E-02	7.204E-02	1.336E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.458E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.719E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.980E+00	2.008E+01	3.481E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.571E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.377E-02	3.970E-02	6.999E-02	0.000E+00	NOT IDENT.
RH-102	1.866E-03	3.256E-02	5.670E-02	0.000E+00	NOT IDENT.
RU-103	-1.945E-02	4.319E-02	7.223E-02	0.000E+00	FAIL ABUN
RH-106	1.257E-01	3.353E-01	5.846E-01	0.000E+00	FAIL ABUN
RU-106	1.257E-01	3.350E-01	5.846E-01	0.000E+00	FAIL ABUN
AG-108M	5.146E-03	3.570E-02	6.289E-02	0.000E+00	NOT IDENT.
AG-110M	-6.880E-03	3.745E-02	5.608E-02	0.000E+00	NOT IDENT.
IN-111	1.110E+00	2.039E+00	3.328E+00	0.000E+00	NOT IDENT.
IN-113M	-8.014E-04	4.885E-02	8.593E-02	0.000E+00	NOT IDENT.
SN-113	-8.014E-04	4.885E-02	8.593E-02	0.000E+00	NOT IDENT.
IN-114M	5.575E-02	2.418E-01	3.709E-01	0.000E+00	NOT IDENT.
CD-115	3.136E+00	2.227E+01	3.869E+01	0.000E+00	NOT IDENT.
SN-117M	-6.920E-02	6.969E-02	1.178E-01	0.000E+00	NOT IDENT.
SB-122	1.248E+00	4.000E+00	6.983E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.689E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.016E-02	3.257E-02	5.604E-02	0.000E+00	NOT IDENT.
I-124	-7.755E-01	1.213E+00	1.667E+00	0.000E+00	FAIL ABUN
SB-124	-3.314E-02	7.520E-02	1.172E-01	0.000E+00	FAIL ABUN
SB-125	-6.334E-02	1.018E-01	1.715E-01	0.000E+00	FAIL ABUN
TE-125M	-7.626E+00	1.106E+01	1.942E+01	0.000E+00	NOT IDENT.
I-126	5.460E-02	2.287E-01	3.572E-01	0.000E+00	NOT IDENT.
SB-126	-8.206E-02	1.843E-01	2.656E-01	0.000E+00	FAIL ABUN
SB-127	3.701E-01	1.961E+00	3.504E+00	0.000E+00	NOT IDENT.
XE-127	-3.292E-02	6.229E-02	9.716E-02	0.000E+00	NOT IDENT.
I-131	-6.216E-02	1.481E-01	2.559E-01	0.000E+00	NOT IDENT.
TE-132	-2.714E-01	1.181E+00	2.135E+00	0.000E+00	NOT IDENT.
BA-133	1.802E-02	5.142E-02	8.106E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.570E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.633E-02	7.243E-02	9.539E-02	0.000E+00	FAIL ABUN
CS-135	2.395E-01	1.956E-01	3.261E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.313E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.651E-02	1.282E-01	2.111E-01	0.000E+00	FAIL ABUN
CE-139	-2.107E-02	3.362E-02	5.765E-02	0.000E+00	NOT IDENT.
BA-140	-1.120E-01	3.105E-01	5.166E-01	0.000E+00	NOT IDENT.
LA-140	-9.532E-03	8.656E-02	1.221E-01	0.000E+00	FAIL ABUN
CE-141	5.464E-02	7.669E-02	1.375E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.527E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	9.828E-02	2.593E-01	4.114E-01	0.000E+00	NOT IDENT.
PM-144	-1.345E-02	3.693E-02	6.354E-02	0.000E+00	NOT IDENT.
PR-144	-9.121E-01	2.506E+00	4.311E+00	0.000E+00	NOT IDENT.

PM-146	4.171E-02	4.636E-02	8.471E-02	0.000E+00	NOT IDENT.
ND-147	-9.304E-02	6.735E-01	1.147E+00	0.000E+00	NOT IDENT.
PM-149	-8.926E+01	1.999E+02	3.518E+02	0.000E+00	NOT IDENT.
EU-152	-4.072E-02	1.251E-01	1.883E-01	0.000E+00	FAIL ABUN
GD-153	1.298E-01	1.018E-01	1.701E-01	0.000E+00	NOT IDENT.
EU-154	6.121E-02	1.339E-01	2.330E-01	0.000E+00	NOT IDENT.
EU-155	-2.955E-02	1.229E-01	2.204E-01	0.000E+00	FAIL ABUN
TB-160	1.460E-02	1.480E-01	2.577E-01	0.000E+00	FAIL ABUN
HO-166M	-5.092E-02	6.094E-02	1.005E-01	0.000E+00	FAIL ABUN
TM-171	-3.068E+01	4.793E+01	7.507E+01	0.000E+00	NOT IDENT.
LU-176	-2.522E-02	2.834E-02	4.528E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	2.267E+00	2.932E+00	0.000E+00	FAIL ABUN
LU-177M	8.247E-02	1.927E-01	3.037E-01	0.000E+00	NOT IDENT.
HF-181	-7.662E-02	5.039E-02	7.828E-02	0.000E+00	NOT IDENT.
W-181	5.195E-01	6.456E-01	1.076E+00	0.000E+00	NOT IDENT.
TA-182	-1.711E-01	2.235E-01	3.511E-01	0.000E+00	FAIL ABUN
RE-183	1.456E-01	1.301E-01	2.338E-01	0.000E+00	FAIL ABUN
RE-184	3.554E-02	2.468E-01	4.504E-01	0.000E+00	NOT IDENT.
OS-185	1.555E-02	4.552E-02	7.905E-02	0.000E+00	NOT IDENT.
RE-188	1.386E-01	1.964E-01	3.555E-01	0.000E+00	NOT IDENT.
W-188	-2.738E+00	9.654E+00	1.481E+01	0.000E+00	FAIL ABUN
IR-192	-1.506E-02	3.758E-02	6.578E-02	0.000E+00	FAIL ABUN
AU-195	3.943E-01	2.931E-01	4.906E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.884E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.026E+01	1.312E+01	2.140E+01	0.000E+00	NOT IDENT.
TL-202	4.397E-02	8.268E-02	1.487E-01	0.000E+00	NOT IDENT.
HG-203	4.430E-02	4.670E-02	8.698E-02	0.000E+00	NOT IDENT.
BI-207	4.367E-02	5.698E-02	1.027E-01	0.000E+00	FAIL ABUN
TL-207	-2.436E-01	8.153E-01	1.234E+00	0.000E+00	FAIL ABUN
PO-209	1.257E+00	7.649E+00	1.337E+01	0.000E+00	NOT IDENT.
BI-210	9.134E+00	1.111E+01	2.144E+01	0.000E+00	NOT IDENT.
PB-210	9.134E+00	1.111E+01	2.144E+01	0.000E+00	NOT IDENT.
PO-210	9.134E+00	1.111E+01	2.144E+01	0.000E+00	NOT IDENT.
PB-211	3.375E-01	1.127E+00	1.727E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.181E-01	6.981E-01	0.000E+00	FAIL ABUN
PO-215	-2.436E-01	8.153E-01	1.234E+00	0.000E+00	FAIL ABUN
RN-219	-4.059E-01	4.491E-01	7.422E-01	0.000E+00	FAIL ABUN
RN-220	2.240E-02	2.694E+01	4.623E+01	0.000E+00	NOT IDENT.
RA-223	-2.436E-01	8.153E-01	1.234E+00	0.000E+00	FAIL ABUN
AC-227	-2.307E-01	4.071E-01	7.168E-01	0.000E+00	FAIL ABUN
TH-227	-2.307E-01	4.077E-01	7.168E-01	0.000E+00	FAIL ABUN
TH-229	-6.251E-01	6.038E-01	1.004E+00	0.000E+00	FAIL ABUN
PA-231	-5.887E-01	1.692E+00	2.995E+00	0.000E+00	FAIL ABUN
TH-231	-2.436E-01	8.153E-01	1.234E+00	0.000E+00	FAIL ABUN
U-231	6.458E-01	2.042E+00	3.295E+00	0.000E+00	FAIL ABUN
PA-233	2.319E-02	6.913E-02	1.256E-01	0.000E+00	FAIL ABUN
PA-234	-1.349E-01	3.236E-01	5.349E-01	0.000E+00	FAIL ABUN
PA-234M	6.988E+00	4.987E+00	9.351E+00	0.000E+00	NOT IDENT.
U-235	1.259E-01	2.465E-01	4.386E-01	0.000E+00	FAIL ABUN
NP-236	-1.056E-02	9.133E-02	1.605E-01	0.000E+00	FAIL ABUN
NP-239	-1.498E-02	2.132E-01	3.823E-01	0.000E+00	FAIL ABUN
AM-241	2.833E-01	2.851E-01	4.860E-01	0.000E+00	NOT IDENT.
CM-243	2.417E-02	1.079E-01	1.967E-01	0.000E+00	FAIL ABUN
AM-246	1.227E-02	1.559E-01	2.663E-01	0.000E+00	NOT IDENT.
CM-247	-2.739E-02	4.147E-02	6.800E-02	0.000E+00	NOT IDENT.
CF-249	-2.183E-02	4.209E-02	7.192E-02	0.000E+00	NOT IDENT.
CF-251	4.579E-02	1.482E-01	2.629E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 19:57:35.01

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440001.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:57:08
Sample ID          : G246440001      Sample quantity   : 1.58750E+02 GRAM
Detector name      : GAM15            Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time: 0 02:00:01.48  0.0%
Energy tolerance   : 1.50000 keV      Analyst Initials : MXR1
Abundance limit    : 75.00000         Sensitivity       : 5.00000
Batch ID           : 950788           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	1445	10.67*	9.662E-01	3.313E+01	3.313E+01	11.32
CD-109	88.03	276	3.72*	4.385E+00	4.005E+00	4.110E+00	43.09
SN-126	64.28	124	9.60	1.790E+00	1.704E+00	1.704E+00	79.81
	86.94	276	8.90	4.385E+00	1.674E+00	1.674E+00	59.10
	87.57	276	37.00*	4.385E+00	4.027E-01	4.027E-01	43.09
BA-137M	661.65	61	89.98*	1.981E+00	8.099E-02	8.108E-02	71.87
CS-137	661.65	61	85.12*	1.981E+00	8.561E-02	8.571E-02	71.87
TL-208	277.35	-----	6.80	3.705E+00	-----	Line Not Found	-----
	510.84	164	21.60	2.419E+00	7.427E-01	7.427E-01	39.68
	583.14	435	84.20*	2.190E+00	5.576E-01	5.576E-01	17.62
	860.37	47	12.46	1.576E+00	5.627E-01	5.627E-01	84.29
BI-211	72.87	-----	1.27	3.001E+00	-----	Line Not Found	-----
	351.07	582	12.94*	3.140E+00	3.387E+00	3.387E+00	16.89
PB-212	74.81	297	10.70	3.244E+00	2.025E+00	2.025E+00	32.74
	77.11	476	18.00	3.501E+00	1.785E+00	1.785E+00	22.64
	87.30	276	8.00	4.385E+00	1.862E+00	1.862E+00	44.23
	238.63	1350	44.60*	4.114E+00	1.740E+00	1.740E+00	13.84
	300.09	71	3.41	3.508E+00	1.403E+00	1.403E+00	85.06
PO-212	74.81	297	10.70	3.244E+00	2.025E+00	2.025E+00	32.74
	77.11	476	18.00	3.501E+00	1.785E+00	1.785E+00	22.64
	87.30	276	8.00	4.385E+00	1.862E+00	1.862E+00	44.23
	115.19	-----	0.60	5.586E+00	-----	Line Not Found	-----
	238.63	1350	44.60*	4.114E+00	1.740E+00	1.740E+00	13.84
	300.09	71	3.41	3.508E+00	1.403E+00	1.403E+00	85.06
BI-214	609.31	431	46.30*	2.116E+00	1.041E+00	1.041E+00	18.54
	1120.29	97	15.10	1.226E+00	1.235E+00	1.235E+00	58.79
	1764.49	55	15.80	8.552E-01	9.642E-01	9.642E-01	55.90
PB-214	74.81	297	6.21	3.244E+00	3.490E+00	3.490E+00	32.24
	77.11	476	10.50	3.501E+00	3.059E+00	3.059E+00	23.89
	87.30	276	4.67	4.385E+00	3.190E+00	3.190E+00	43.77
	241.98	277	7.49	4.079E+00	2.141E+00	2.142E+00	35.27
	295.21	345	19.20	3.547E+00	1.197E+00	1.197E+00	23.09

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	582	37.20*	3.140E+00	1.178E+00	1.178E+00	17.67
	74.81	297	6.21	3.244E+00	3.490E+00	3.490E+00	32.24
	77.11	476	10.50	3.501E+00	3.059E+00	3.059E+00	23.89
	87.30	276	4.67	4.385E+00	3.190E+00	3.190E+00	43.77
	241.98	277	7.49	4.079E+00	2.141E+00	2.142E+00	35.27
PO-216	295.21	345	19.20	3.547E+00	1.197E+00	1.197E+00	23.09
	351.92	582	37.20*	3.140E+00	1.178E+00	1.178E+00	17.67
	74.81	297	10.70	3.244E+00	2.025E+00	2.025E+00	32.74
	77.11	476	18.00	3.501E+00	1.785E+00	1.785E+00	22.64
	87.30	276	8.00	4.385E+00	1.862E+00	1.862E+00	44.23
PO-218	238.63	1350	44.60*	4.114E+00	1.740E+00	1.740E+00	13.84
	300.09	71	3.41	3.508E+00	1.403E+00	1.403E+00	85.06
	74.81	297	6.21	3.244E+00	3.490E+00	3.490E+00	32.24
	77.11	476	10.50	3.501E+00	3.059E+00	3.059E+00	23.89
	87.30	276	4.67	4.385E+00	3.190E+00	3.190E+00	43.77
RA-224	241.98	277	7.49	4.079E+00	2.141E+00	2.142E+00	35.27
	295.21	345	19.20	3.547E+00	1.197E+00	1.197E+00	23.09
	351.92	582	37.20*	3.140E+00	1.178E+00	1.178E+00	17.67
	240.98	277	3.95*	4.079E+00	4.061E+00	4.061E+00	34.82
	609.31	431	46.30*	2.116E+00	1.041E+00	1.041E+00	18.54
RA-226	1120.29	97	15.10	1.226E+00	1.235E+00	1.235E+00	58.79
	1764.49	55	15.80	8.552E-01	9.642E-01	9.642E-01	55.90
	338.32	255	11.40	3.228E+00	1.637E+00	1.637E+00	50.01
	911.07	271	27.70*	1.494E+00	1.551E+00	1.551E+00	20.42
	969.11	194	16.60	1.410E+00	1.960E+00	1.960E+00	31.79
RA-228	338.32	255	11.40	3.228E+00	1.637E+00	1.637E+00	50.01
	911.07	271	27.70*	1.494E+00	1.551E+00	1.551E+00	20.42
	969.11	194	16.60	1.410E+00	1.960E+00	1.960E+00	31.79
	74.81	297	10.70	3.244E+00	2.025E+00	2.060E+00	31.40
	77.11	476	18.00	3.501E+00	1.785E+00	1.815E+00	22.64
TH-228	87.30	276	8.00	4.385E+00	1.862E+00	1.895E+00	43.09
	238.63	1350	44.60*	4.114E+00	1.740E+00	1.770E+00	13.84
	300.09	71	3.41	3.508E+00	1.403E+00	1.428E+00	103.16
	609.31	431	46.30*	2.116E+00	1.041E+00	1.041E+00	18.54
	1120.29	97	15.10	1.226E+00	1.235E+00	1.235E+00	58.79
TH-230	1764.49	55	15.80	8.552E-01	9.642E-01	9.642E-01	55.90
	338.32	255	11.40	3.228E+00	1.637E+00	1.637E+00	29.54
	911.07	271	27.70*	1.494E+00	1.551E+00	1.551E+00	20.42
	969.11	194	16.60	1.410E+00	1.960E+00	1.960E+00	31.79
	63.29	124	3.80*	1.790E+00	4.305E+00	4.305E+00	80.39
TH-232	92.38	437	5.41	4.860E+00	3.926E+00	3.926E+00	34.81
	609.31	431	46.30*	2.116E+00	1.041E+00	1.041E+00	18.54
	1120.29	97	15.10	1.226E+00	1.235E+00	1.235E+00	58.79
	1764.49	55	15.80	8.552E-01	9.642E-01	9.642E-01	55.90
	86.50	276	12.60*	4.385E+00	1.182E+00	1.182E+00	47.78
NP-237	95.87	-----	2.60	5.004E+00	-----	Line Not Found	-----
	63.29	124	3.80*	1.790E+00	4.305E+00	4.305E+00	80.39
	92.38	437	5.41	4.860E+00	3.926E+00	3.926E+00	30.97
	74.67	297	66.00*	3.244E+00	3.284E-01	3.284E-01	31.38

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	276	0.34	4.385E+00	4.434E+01	4.434E+01	43.09
	117.66	-----	0.55	5.611E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.525E+00	-----	Line Not Found	-----
ANH-511	511.00	164	100.00*	2.419E+00	1.604E-01	1.604E-01	38.79

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	3.313E+01	3.313E+01	0.375E+01	11.32	
CD-109	464.00D	1.03	4.005E+00	4.110E+00	1.771E+00	43.09	
SN-126	1.00E+05Y	1.00	4.027E-01	4.027E-01	1.735E-01	43.09	
BA-137M	30.17Y	1.00	8.099E-02	8.108E-02	5.827E-02	71.87	
CS-137	30.17Y	1.00	8.561E-02	8.571E-02	6.160E-02	71.87	
TL-208	1.41E+10Y	1.00	5.576E-01	5.576E-01	0.982E-01	17.62	
BI-211	7.04E+08Y	1.00	3.387E+00	3.387E+00	0.572E+00	16.89	
PB-212	1.41E+10Y	1.00	1.740E+00	1.740E+00	0.241E+00	13.84	
PO-212	1.41E+10Y	1.00	1.740E+00	1.740E+00	0.241E+00	13.84	
BI-214	1600.00Y	1.00	1.041E+00	1.041E+00	0.193E+00	18.54	
PB-214	1600.00Y	1.00	1.178E+00	1.178E+00	0.208E+00	17.67	
PO-214	1600.00Y	1.00	1.178E+00	1.178E+00	0.208E+00	17.67	
PO-216	1.41E+10Y	1.00	1.740E+00	1.740E+00	0.241E+00	13.84	
PO-218	1600.00Y	1.00	1.178E+00	1.178E+00	0.208E+00	17.67	
RA-224	1.41E+10Y	1.00	4.061E+00	4.061E+00	1.414E+00	34.82	
RA-226	1600.00Y	1.00	1.041E+00	1.041E+00	0.193E+00	18.54	
AC-228	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.317E+00	20.42	
RA-228	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.317E+00	20.42	
TH-228	1.91Y	1.02	1.740E+00	1.770E+00	0.245E+00	13.84	
TH-230	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.193E+00	18.54	
TH-232	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.317E+00	20.42	
TH-234	4.47E+09Y	1.00	4.305E+00	4.305E+00	3.461E+00	80.39	
U-234	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.193E+00	18.54	
NP-237	2.14E+06Y	1.00	1.182E+00	1.182E+00	0.565E+00	47.78	
U-238	4.47E+09Y	1.00	4.305E+00	4.305E+00	3.461E+00	80.39	
AM-243	7380.00Y	1.00	3.284E-01	3.284E-01	1.030E-01	31.38	
ANH-511	1.00E+09Y	1.00	1.604E-01	1.604E-01	0.622E-01	38.79	
Total Activity :			7.530E+01	7.544E+01			

Grand Total Activity : 7.530E+01 7.544E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440001

Page : 5
Acquisition date : 19-FEB-2010 17:57:08

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.93	50	544	1.43	258.78	252	11	6.92E-03	****	5.63E+00	T
0	186.09	240	408	1.47	371.08	366	11	3.34E-02	36.7	4.86E+00	T
0	209.76	125	391	0.96	418.42	412	11	1.73E-02	64.1	4.50E+00	T
0	270.82	131	227	1.51	540.54	536	10	1.82E-02	46.6	3.77E+00	T
0	327.96	99	293	1.52	654.82	647	16	1.38E-02	79.6	3.30E+00	T
0	409.81	99	95	1.57	818.53	814	10	1.37E-02	42.3	2.83E+00	T
0	463.19	74	140	1.09	925.28	919	12	1.03E-02	68.2	2.60E+00	T
0	727.47	92	97	1.32	1453.88	1448	14	1.27E-02	51.7	1.83E+00	T
0	795.83	47	74	1.08	1590.61	1586	13	6.49E-03	85.1	1.69E+00	T
1	964.80	68	55	2.20	1928.60	1919	26	9.39E-03	53.0	1.42E+00	T
0	1377.49	42	23	3.81	2754.19	2747	16	5.85E-03	60.2	1.01E+00	T
0	1432.42	15	16	0.71	2864.07	2854	13	2.12E-03	****	9.81E-01	
0	1594.93	8	21	0.57	3189.22	3177	14	1.08E-03	****	9.06E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 19:57:39.53

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440001.CNF;1
* Acquisition date   : 19-FEB-2010 17:57:08  Detector SN#      :
* Detector ID        : GAM15                  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 02:00:01.48          Half life ratio   : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G246440001            Analyst initials: MXR1
* Batch Number       : 950788                Sample Quantity  : 1.58750E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 3-FEB-2010 11:04:32.11MS 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	3.313E+01	3.752E+00	5.402E-01	5.308E-02	61.333
CD-109	4.110E+00	1.771E+00	1.653E+00	2.052E-01	2.486
SN-126	4.027E-01	1.735E-01	1.783E-01	2.207E-02	2.258
BA-137M	8.108E-02	5.827E-02	6.200E-02	5.097E-03	1.308
CS-137	8.571E-02	6.160E-02	6.554E-02	5.400E-03	1.308
TL-208	5.576E-01	9.823E-02	6.302E-02	5.771E-03	8.847
BI-211	3.387E+00	5.720E-01	3.899E-01	3.882E-02	8.688
PB-212	1.740E+00	2.408E-01	9.736E-02	1.159E-02	17.867
PO-212	1.740E+00	2.408E-01	9.736E-02	1.159E-02	17.867
BI-214	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
PB-214	1.178E+00	2.083E-01	1.312E-01	1.473E-02	8.979
PO-214	1.178E+00	2.083E-01	1.312E-01	1.473E-02	8.979
PO-216	1.740E+00	2.408E-01	9.736E-02	1.159E-02	17.867
PO-218	1.178E+00	2.083E-01	1.312E-01	1.473E-02	8.979
RA-224	4.061E+00	1.414E+00	1.108E+00	1.222E-01	3.666
RA-226	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
AC-228	1.551E+00	3.167E-01	2.095E-01	2.467E-02	7.404
RA-228	1.551E+00	3.167E-01	2.095E-01	2.467E-02	7.404

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.770E+00	2.450E-01	9.905E-02	1.180E-02	17.867
TH-230	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
TH-232	1.551E+00	3.167E-01	2.095E-01	2.467E-02	7.404
TH-234	4.305E+00	3.461E+00	3.339E+00	6.506E-01	1.289
U-234	1.041E+00	1.930E-01	1.203E-01	1.192E-02	8.657
NP-237	1.182E+00	5.649E-01	4.756E-01	1.142E-01	2.486
U-238	4.305E+00	3.461E+00	3.339E+00	6.506E-01	1.289
AM-243	3.284E-01	1.030E-01	1.143E-01	1.314E-02	2.873
ANH-511	1.604E-01	6.223E-02	4.812E-02	4.158E-03	3.334

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.774E-01		3.764E-01	6.306E-01	5.863E-02	0.281
NA-22	7.131E-03		5.020E-02	8.220E-02	7.467E-03	0.087
NA-24	1.668E+00		4.376E+00	Half-Life too short		
AL-26	1.384E-02		2.809E-02	5.044E-02	4.315E-03	0.274
TI-44	3.293E-01	+	7.457E-02	9.433E-02	1.099E-02	3.492
SC-46	-3.508E-02		4.204E-02	6.421E-02	5.967E-03	-0.546
V-48	3.807E-02		7.946E-02	1.359E-01	1.243E-02	0.280
CR-51	1.958E-01		4.651E-01	7.202E-01	7.648E-02	0.272
MN-52	2.186E-01		2.921E-01	4.831E-01	4.650E-02	0.452
MN-54	1.652E-02		3.989E-02	6.806E-02	6.177E-03	0.243
CO-56	-1.099E-02		4.144E-02	6.713E-02	6.126E-03	-0.164
CO-57	1.614E-02		2.896E-02	4.795E-02	4.830E-03	0.337
CO-58	-1.856E-02		3.981E-02	6.347E-02	5.706E-03	-0.292
FE-59	1.347E-01		1.020E-01	1.838E-01	1.715E-02	0.733
CO-60	1.123E-03		3.885E-02	6.282E-02	6.039E-03	0.018
ZN-65	-9.975E-03		1.203E-01	1.662E-01	1.420E-02	-0.060
GE-68	1.669E+00		1.319E+00	2.379E+00	2.082E-01	0.702
AS-73	-2.825E-01		1.854E+00	3.059E+00	3.971E-01	-0.092
AS-74	-1.872E-02		1.054E-01	1.677E-01	1.425E-02	-0.112
SE-75	-8.995E-03		5.253E-02	7.917E-02	8.681E-03	-0.114
BR-77	-2.169E+00		2.162E+01	3.487E+01	3.011E+00	-0.062
SR-82	-2.653E-01		4.498E-01	7.094E-01	6.252E-02	-0.374
RB-83	-3.443E-02		7.884E-02	1.242E-01	1.072E-02	-0.277
RB-84	4.117E-02		7.798E-02	1.342E-01	1.243E-02	0.307
KR-85	1.981E+01		9.121E+00	1.482E+01	1.281E+00	1.336
SR-85	1.039E-01		4.782E-02	7.773E-02	6.715E-03	1.336
RB-86	1.258E+00		9.123E-01	1.656E+00	1.450E-01	0.760
Y-88	2.915E-03		2.621E-02	4.413E-02	3.717E-03	0.066
ZR-88	2.656E-02		3.508E-02	5.995E-02	5.047E-03	0.443
Y-91	-2.110E+01		2.185E+01	3.239E+01	2.731E+00	-0.651
NB-94	-2.589E-02		3.479E-02	5.510E-02	4.652E-03	-0.470
NB-95	4.511E-02		4.543E-02	8.035E-02	7.039E-03	0.561
NB-95M	3.884E-01		1.704E-01	2.672E-01	3.215E-02	1.454
ZR-95	6.355E-02		7.351E-02	1.298E-01	1.244E-02	0.490

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-1.553E-01		4.315E-01	Half-Life too short		
ZR-97	3.879E+01		8.772E+00	Half-Life too short		
MO-99	-2.980E+00		2.049E+01	3.381E+01	5.136E+00	-0.088
TC-99M	-1.396E+12		8.015E+12	Half-Life too short		
RH-101	5.377E-02		4.051E-02	6.554E-02	7.150E-03	0.820
RH-102	1.866E-03		3.323E-02	5.438E-02	4.692E-03	0.034
RU-103	-1.945E-02		4.407E-02	6.935E-02	9.831E-03	-0.280
RH-106	1.257E-01		3.421E-01	5.649E-01	7.467E-02	0.223
RU-106	1.257E-01		3.419E-01	5.649E-01	4.747E-02	0.223
AG-108M	5.146E-03		3.643E-02	6.016E-02	5.355E-03	0.086
AG-110M	-6.880E-03		3.822E-02	5.428E-02	4.619E-03	-0.127
IN-111	1.110E+00		2.080E+00	3.134E+00	3.454E-01	0.354
IN-113M	-8.014E-04		4.985E-02	8.196E-02	7.119E-03	-0.010
SN-113	-8.014E-04		4.985E-02	8.196E-02	7.119E-03	-0.010
IN-114M	5.575E-02		2.467E-01	3.469E-01	3.767E-02	0.161
CD-115	3.136E+00		2.272E+01	3.722E+01	3.212E+00	0.084
SN-117M	-6.920E-02		7.111E-02	1.097E-01	1.150E-02	-0.631
SB-122	1.248E+00		4.082E+00	6.729E+00	5.772E-01	0.185
I-123	-5.997E+01		4.943E+01	Half-Life too short		
TE-123M	-2.016E-02		3.323E-02	5.217E-02	5.498E-03	-0.386
I-124	-7.755E-01		1.238E+00	1.609E+00	1.364E-01	-0.482
SB-124	-3.314E-02		7.673E-02	1.166E-01	1.096E-02	-0.284
SB-125	-6.334E-02		1.039E-01	1.639E-01	1.428E-02	-0.386
TE-125M	-7.626E+00		1.128E+01	1.791E+01	2.104E+00	-0.426
I-126	5.460E-02		2.334E-01	3.458E-01	2.852E-02	0.158
SB-126	-8.206E-02		1.881E-01	2.578E-01	2.200E-02	-0.318
SB-127	3.701E-01		2.001E+00	3.395E+00	4.018E-01	0.109
XE-127	-3.292E-02		6.356E-02	9.103E-02	9.959E-03	-0.362
I-131	-6.216E-02		1.511E-01	2.436E-01	2.356E-02	-0.255
TE-132	-2.714E-01		1.205E+00	2.007E+00	3.520E-01	-0.135
BA-133	1.802E-02		5.247E-02	7.712E-02	1.060E-02	0.234
I-133	-9.696E-03		1.822E-02	Half-Life too short		
CS-134	8.633E-02	+	7.390E-02	9.283E-02	8.320E-03	0.930
CS-135	2.395E-01		1.996E-01	3.079E-01	3.694E-02	0.778
I-135	-7.688E+11		6.698E+11	Half-Life too short		
CS-136	-4.651E-02		1.308E-01	2.070E-01	1.916E-02	-0.225
CE-139	-2.107E-02		3.431E-02	5.373E-02	5.735E-03	-0.392
BA-140	-1.120E-01		3.168E-01	4.972E-01	1.648E-01	-0.225
LA-140	-9.532E-03		8.833E-02	1.213E-01	1.137E-02	-0.079
CE-141	5.464E-02		7.825E-02	1.277E-01	1.320E-02	0.428
CE-143	2.204E-03		3.840E-04	Half-Life too short		
CE-144	9.828E-02		2.646E-01	3.813E-01	6.254E-02	0.258
PM-144	-1.345E-02		3.769E-02	6.159E-02	5.182E-03	-0.218
PR-144	-9.121E-01		2.557E+00	4.179E+00	3.514E-01	-0.218
PM-146	4.171E-02		4.731E-02	8.114E-02	8.688E-03	0.514
ND-147	-9.304E-02		6.873E-01	1.104E+00	1.651E-01	-0.084
PM-149	-8.926E+01		2.040E+02	3.327E+02	5.596E+01	-0.268
EU-152	-4.072E-02		1.277E-01	1.790E-01	1.822E-02	-0.228

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.298E-01		1.039E-01	1.563E-01	1.726E-02	0.830
EU-154	6.121E-02		1.366E-01	2.299E-01	2.680E-02	0.266
EU-155	-2.955E-02		1.255E-01	2.030E-01	2.139E-02	-0.146
TB-160	1.460E-02		1.510E-01	2.515E-01	2.328E-02	0.058
HO-166M	-5.092E-02		6.219E-02	9.752E-02	8.280E-03	-0.522
TM-171	-3.068E+01		4.891E+01	6.835E+01	7.802E+00	-0.449
LU-176	-2.522E-02		2.892E-02	4.290E-02	4.486E-03	-0.588
LU-177	3.556E+00	+	2.313E+00	2.749E+00	3.016E-01	1.294
LU-177M	8.247E-02		1.966E-01	2.901E-01	2.465E-02	0.284
HF-181	-7.662E-02		5.142E-02	7.510E-02	6.485E-03	-1.020
W-181	5.195E-01		6.588E-01	9.792E-01	1.118E-01	0.530
TA-182	-1.711E-01		2.281E-01	3.460E-01	2.969E-02	-0.495
RE-183	1.456E-01		1.327E-01	2.178E-01	2.304E-02	0.669
RE-184	3.554E-02		2.519E-01	4.246E-01	4.669E-02	0.084
OS-185	1.555E-02		4.645E-02	7.647E-02	6.346E-03	0.203
RE-188	1.386E-01		2.004E-01	3.307E-01	3.439E-02	0.419
W-188	-2.738E+00		9.851E+00	1.401E+01	1.497E+00	-0.195
IR-192	-1.506E-02		3.835E-02	6.238E-02	6.431E-03	-0.241
AU-195	3.943E-01		2.991E-01	4.511E-01	4.917E-02	0.874
TL-200	2.358E-03		9.612E-04	Half-Life too short		
TL-201	-2.026E+01		1.339E+01	1.995E+01	2.131E+00	-1.015
TL-202	4.397E-02		8.436E-02	1.423E-01	1.220E-02	0.309
HG-203	4.430E-02		4.765E-02	8.221E-02	9.050E-03	0.539
BI-207	4.367E-02		5.814E-02	1.008E-01	8.894E-03	0.433
TL-207	-2.436E-01		8.319E-01	1.171E+00	2.167E-01	-0.208
PO-209	1.257E+00		7.805E+00	1.306E+01	1.217E+00	0.096
BI-210	9.134E+00		1.134E+01	1.935E+01	2.383E+00	0.472
PB-210	9.134E+00		1.134E+01	1.935E+01	2.383E+00	0.472
PO-210	9.134E+00		1.133E+01	1.935E+01	2.257E+00	0.472
PB-211	3.375E-01		1.150E+00	1.649E+00	1.033E+00	0.205
BI-212	1.004E+00	+	5.286E-01	6.776E-01	6.752E-02	1.482
PO-215	-2.436E-01		8.319E-01	1.171E+00	2.167E-01	-0.208
RN-219	-4.059E-01		4.583E-01	7.084E-01	1.058E-01	-0.573
RN-220	2.240E-02		2.749E+01	4.452E+01	3.830E+00	0.001
RA-223	-2.436E-01		8.319E-01	1.171E+00	2.167E-01	-0.208
AC-227	-2.307E-01		4.154E-01	6.759E-01	1.135E-01	-0.341
TH-227	-2.307E-01		4.160E-01	6.759E-01	1.304E-01	-0.341
TH-229	-6.251E-01		6.161E-01	9.394E-01	1.022E-01	-0.665
PA-231	-5.887E-01		1.726E+00	2.831E+00	4.671E-01	-0.208
TH-231	-2.436E-01		8.319E-01	1.171E+00	2.167E-01	-0.208
U-231	6.458E-01		2.083E+00	3.027E+00	3.392E-01	0.213
PA-233	2.319E-02		7.054E-02	1.190E-01	1.259E-02	0.195
PA-234	-1.349E-01		3.302E-01	5.231E-01	9.969E-02	-0.258
PA-234M	6.988E+00		5.089E+00	9.160E+00	9.498E-01	0.763
U-235	1.259E-01		2.516E-01	4.073E-01	7.462E-02	0.309
NP-236	-1.056E-02		9.320E-02	1.495E-01	1.573E-02	-0.071
NP-239	-1.498E-02		2.176E-01	3.531E-01	3.565E-02	-0.042
AM-241	2.833E-01		2.909E-01	4.412E-01	5.179E-02	0.642

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.417E-02		1.101E-01	1.811E-01	1.908E-02	0.133
AM-246	1.227E-02		1.590E-01	2.614E-01	2.286E-02	0.047
CM-247	-2.739E-02		4.231E-02	6.491E-02	5.490E-03	-0.422
CF-249	-2.183E-02		4.295E-02	6.859E-02	5.851E-03	-0.318
CF-251	4.579E-02		1.512E-01	2.454E-01	2.639E-02	0.187

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]G246440001          *
* Acquisition date   : 19-FEB-2010 17:57:08 Detector SN#      :          *
* Detector ID        : GAM15 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 02:00:01.48 Half life ratio : 8.000    *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID      *
* Sample ID          : G246440001 Analyst initials: MXR1          *
* Batch Number       : 950788 Sample Quantity : 1.5875E+02 GRAM    *
* Recovery           : 1.00000 Carrier Weight : 0.00000          *
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 3-FEB-2010 11:04:32 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	3.313E+01	3.677E+00	2.728E-01	1.876E+00
CD-109	4.110E+00	1.735E+00	9.019E-01	8.854E-01
SN-126	4.027E-01	1.700E-01	9.733E-02	8.675E-02
BA-137M	8.108E-02	5.710E-02	3.205E-02	2.913E-02
CS-137	8.571E-02	6.036E-02	3.388E-02	3.080E-02
TL-208	5.576E-01	9.627E-02	3.269E-02	4.912E-02
BI-211	3.387E+00	5.606E-01	2.051E-01	2.860E-01
PB-212	1.740E+00	2.360E-01	5.176E-02	1.204E-01
PO-212	1.740E+00	2.360E-01	5.176E-02	1.204E-01
BI-214	1.041E+00	1.891E-01	6.231E-02	9.650E-02
PB-214	1.178E+00	2.041E-01	6.903E-02	1.041E-01
PO-214	1.178E+00	2.041E-01	6.903E-02	1.041E-01
PO-216	1.740E+00	2.360E-01	5.176E-02	1.204E-01
PO-218	1.178E+00	2.041E-01	6.903E-02	1.041E-01
RA-224	4.061E+00	1.386E+00	5.887E-01	7.071E-01
RA-226	1.041E+00	1.891E-01	6.231E-02	9.650E-02
AC-228	1.551E+00	3.104E-01	1.073E-01	1.583E-01
RA-228	1.551E+00	3.104E-01	1.073E-01	1.583E-01
TH-228	1.770E+00	2.401E-01	5.266E-02	1.225E-01
TH-230	1.041E+00	1.891E-01	6.231E-02	9.650E-02
TH-232	1.551E+00	3.104E-01	1.073E-01	1.583E-01
TH-234	4.305E+00	3.392E+00	1.837E+00	1.731E+00
U-234	1.041E+00	1.891E-01	6.231E-02	9.650E-02
NP-237	1.182E+00	5.536E-01	2.596E-01	2.824E-01
U-238	4.305E+00	3.392E+00	1.837E+00	1.731E+00
AM-243	3.284E-01	1.010E-01	6.263E-02	5.152E-02
ANH-511	1.604E-01	6.099E-02	2.505E-02	3.112E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	1.774E-01	3.689E-01	3.290E-01	1.882E-01	NOT IDENT.
NA-22	7.131E-03	4.920E-02	4.168E-02	2.510E-02	NOT IDENT.
NA-24	1.668E+06	8.578E+06	0.000E+00	4.376E+06	SHORT HLIF
AL-26	1.384E-02	2.753E-02	2.531E-02	1.405E-02	NOT IDENT.
TI-44	3.293E-01	7.308E-02	5.162E-02	3.728E-02	FAIL ABUN
SC-46	-3.508E-02	4.120E-02	3.290E-02	2.102E-02	FAIL ABUN
V-48	3.807E-02	7.788E-02	6.947E-02	3.973E-02	NOT IDENT.
CR-51	1.958E-01	4.558E-01	3.799E-01	2.326E-01	NOT IDENT.
MN-52	2.186E-01	2.862E-01	2.441E-01	1.460E-01	NOT IDENT.
MN-54	1.652E-02	3.909E-02	3.494E-02	1.995E-02	NOT IDENT.
CO-56	-1.099E-02	4.061E-02	3.445E-02	2.072E-02	NOT IDENT.
CO-57	1.614E-02	2.838E-02	2.595E-02	1.448E-02	NOT IDENT.
CO-58	-1.856E-02	3.902E-02	3.261E-02	1.991E-02	NOT IDENT.
FE-59	1.347E-01	1.000E-01	9.360E-02	5.102E-02	NOT IDENT.
CO-60	1.123E-03	3.807E-02	3.182E-02	1.942E-02	NOT IDENT.
ZN-65	-9.975E-03	1.179E-01	8.462E-02	6.014E-02	NOT IDENT.
GE-68	1.669E+00	1.293E+00	1.212E+00	6.596E-01	NOT IDENT.
AS-73	-2.825E-01	1.817E+00	1.690E+00	9.269E-01	NOT IDENT.
AS-74	-1.872E-02	1.033E-01	8.696E-02	5.272E-02	NOT IDENT.
SE-75	-8.995E-03	5.148E-02	4.197E-02	2.626E-02	NOT IDENT.
BR-77	-2.169E+00	2.119E+01	1.815E+01	1.081E+01	FAIL ABUN
SR-82	-2.653E-01	4.408E-01	3.650E-01	2.249E-01	NOT IDENT.
RB-83	-3.443E-02	7.727E-02	6.461E-02	3.942E-02	NOT IDENT.
RB-84	4.117E-02	7.642E-02	6.878E-02	3.899E-02	NOT IDENT.
KR-85	1.981E+01	8.938E+00	7.717E+00	4.560E+00	NOT IDENT.
SR-85	1.039E-01	4.687E-02	4.046E-02	2.391E-02	NOT IDENT.
RB-86	1.258E+00	8.941E-01	8.438E-01	4.561E-01	NOT IDENT.
Y-88	2.915E-03	2.569E-02	2.214E-02	1.310E-02	NOT IDENT.
ZR-88	2.656E-02	3.438E-02	3.144E-02	1.754E-02	NOT IDENT.
Y-91	-2.110E+01	2.141E+01	1.645E+01	1.092E+01	NOT IDENT.
NB-94	-2.589E-02	3.410E-02	2.843E-02	1.740E-02	NOT IDENT.
NB-95	4.511E-02	4.452E-02	4.135E-02	2.271E-02	NOT IDENT.
NB-95M	3.884E-01	1.670E-01	1.421E-01	8.519E-02	NOT IDENT.
ZR-95	6.355E-02	7.204E-02	6.684E-02	3.676E-02	NOT IDENT.
NB-97	-1.553E+05	8.458E+05	0.000E+00	4.315E+05	SHORT HLIF
ZR-97	3.879E+07	1.719E+07	0.000E+00	8.772E+06	SHORT HLIF
MO-99	-2.980E+00	2.008E+01	1.742E+01	1.024E+01	NOT IDENT.
TC-99M	-1.396E+18	1.571E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.377E-02	3.970E-02	3.502E-02	2.025E-02	NOT IDENT.
RH-102	1.866E-03	3.256E-02	2.837E-02	1.661E-02	NOT IDENT.
RU-103	-1.945E-02	4.319E-02	3.614E-02	2.204E-02	FAIL ABUN
RH-106	1.257E-01	3.353E-01	2.925E-01	1.711E-01	FAIL ABUN
RU-106	1.257E-01	3.350E-01	2.925E-01	1.709E-01	FAIL ABUN
AG-108M	5.146E-03	3.570E-02	3.146E-02	1.821E-02	NOT IDENT.
AG-110M	-6.880E-03	3.745E-02	2.806E-02	1.911E-02	NOT IDENT.
IN-111	1.110E+00	2.039E+00	1.665E+00	1.040E+00	NOT IDENT.
IN-113M	-8.014E-04	4.885E-02	4.299E-02	2.492E-02	NOT IDENT.
SN-113	-8.014E-04	4.885E-02	4.299E-02	2.492E-02	NOT IDENT.
IN-114M	5.575E-02	2.418E-01	1.856E-01	1.234E-01	NOT IDENT.
CD-115	3.136E+00	2.227E+01	1.936E+01	1.136E+01	NOT IDENT.
SN-117M	-6.920E-02	6.969E-02	5.893E-02	3.556E-02	NOT IDENT.
SB-122	1.248E+00	4.000E+00	3.494E+00	2.041E+00	NOT IDENT.
I-123	-5.997E+07	9.689E+07	0.000E+00	4.943E+07	SHORT HLIF
TE-123M	-2.016E-02	3.257E-02	2.804E-02	1.662E-02	NOT IDENT.
I-124	-7.755E-01	1.213E+00	8.341E-01	6.190E-01	FAIL ABUN
SB-124	-3.314E-02	7.520E-02	5.862E-02	3.837E-02	FAIL ABUN
SB-125	-6.334E-02	1.018E-01	8.578E-02	5.196E-02	FAIL ABUN
TE-125M	-7.626E+00	1.106E+01	9.717E+00	5.642E+00	NOT IDENT.
I-126	5.460E-02	2.287E-01	1.787E-01	1.167E-01	NOT IDENT.
SB-126	-8.206E-02	1.843E-01	1.329E-01	9.403E-02	FAIL ABUN
SB-127	3.701E-01	1.961E+00	1.753E+00	1.000E+00	NOT IDENT.
XE-127	-3.292E-02	6.229E-02	4.861E-02	3.178E-02	NOT IDENT.
I-131	-6.216E-02	1.481E-01	1.280E-01	7.557E-02	NOT IDENT.
TE-132	-2.714E-01	1.181E+00	1.068E+00	6.024E-01	NOT IDENT.
BA-133	1.802E-02	5.142E-02	4.055E-02	2.623E-02	NOT IDENT.
I-133	-9.696E+03	3.570E+04	0.000E+00	1.822E+04	SHORT HLIF
CS-134	8.633E-02	7.243E-02	4.773E-02	3.695E-02	FAIL ABUN
CS-135	2.395E-01	1.956E-01	1.632E-01	9.982E-02	NOT IDENT.
I-135	-7.688E+17	1.313E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.651E-02	1.282E-01	1.056E-01	6.540E-02	FAIL ABUN
CE-139	-2.107E-02	3.362E-02	2.884E-02	1.715E-02	NOT IDENT.
BA-140	-1.120E-01	3.105E-01	2.585E-01	1.584E-01	NOT IDENT.
LA-140	-9.532E-03	8.656E-02	6.108E-02	4.416E-02	FAIL ABUN
CE-141	5.464E-02	7.669E-02	6.879E-02	3.913E-02	NOT IDENT.
CE-143	2.204E+03	7.527E+02	0.000E+00	3.840E+02	SHORT HLIF
CE-144	9.828E-02	2.593E-01	2.058E-01	1.323E-01	NOT IDENT.
PM-144	-1.345E-02	3.693E-02	3.179E-02	1.884E-02	NOT IDENT.
PR-144	-9.121E-01	2.506E+00	2.157E+00	1.278E+00	NOT IDENT.

PM-146	4.171E-02	4.636E-02	4.238E-02	2.365E-02	NOT IDENT.
ND-147	-9.304E-02	6.735E-01	5.740E-01	3.436E-01	NOT IDENT.
PM-149	-8.926E+01	1.999E+02	1.760E+02	1.020E+02	NOT IDENT.
EU-152	-4.072E-02	1.251E-01	9.421E-02	6.384E-02	FAIL ABUN
GD-153	1.298E-01	1.018E-01	8.509E-02	5.193E-02	NOT IDENT.
EU-154	6.121E-02	1.339E-01	1.166E-01	6.832E-02	NOT IDENT.
EU-155	-2.955E-02	1.229E-01	1.103E-01	6.273E-02	FAIL ABUN
TB-160	1.460E-02	1.480E-01	1.289E-01	7.549E-02	FAIL ABUN
HO-166M	-5.092E-02	6.094E-02	5.030E-02	3.109E-02	FAIL ABUN
TM-171	-3.068E+01	4.793E+01	3.756E+01	2.445E+01	NOT IDENT.
LU-176	-2.522E-02	2.834E-02	2.265E-02	1.446E-02	NOT IDENT.
LU-177	3.556E+00	2.267E+00	1.467E+00	1.157E+00	FAIL ABUN
LU-177M	8.247E-02	1.927E-01	1.519E-01	9.831E-02	NOT IDENT.
HF-181	-7.662E-02	5.039E-02	3.916E-02	2.571E-02	NOT IDENT.
W-181	5.195E-01	6.456E-01	5.384E-01	3.294E-01	NOT IDENT.
TA-182	-1.711E-01	2.235E-01	1.778E-01	1.140E-01	FAIL ABUN
RE-183	1.456E-01	1.301E-01	1.170E-01	6.636E-02	FAIL ABUN
RE-184	3.554E-02	2.468E-01	2.254E-01	1.259E-01	NOT IDENT.
OS-185	1.555E-02	4.552E-02	3.955E-02	2.323E-02	NOT IDENT.
RE-188	1.386E-01	1.964E-01	1.778E-01	1.002E-01	NOT IDENT.
W-188	-2.738E+00	9.654E+00	7.408E+00	4.925E+00	FAIL ABUN
IR-192	-1.506E-02	3.758E-02	3.291E-02	1.917E-02	FAIL ABUN
AU-195	3.943E-01	2.931E-01	2.454E-01	1.495E-01	FAIL ABUN
TL-200	2.358E+03	1.884E+03	0.000E+00	9.612E+02	SHORT HLIF
TL-201	-2.026E+01	1.312E+01	1.071E+01	6.695E+00	NOT IDENT.
TL-202	4.397E-02	8.268E-02	7.441E-02	4.218E-02	NOT IDENT.
HG-203	4.430E-02	4.670E-02	4.352E-02	2.383E-02	NOT IDENT.
BI-207	4.367E-02	5.698E-02	5.139E-02	2.907E-02	FAIL ABUN
TL-207	-2.436E-01	8.153E-01	6.176E-01	4.159E-01	FAIL ABUN
PO-209	1.257E+00	7.649E+00	6.690E+00	3.903E+00	NOT IDENT.
BI-210	9.134E+00	1.111E+01	1.073E+01	5.670E+00	NOT IDENT.
PB-210	9.134E+00	1.111E+01	1.073E+01	5.670E+00	NOT IDENT.
PO-210	9.134E+00	1.111E+01	1.073E+01	5.667E+00	NOT IDENT.
PB-211	3.375E-01	1.127E+00	8.639E-01	5.750E-01	NOT IDENT.
BI-212	1.004E+00	5.181E-01	3.493E-01	2.643E-01	FAIL ABUN
PO-215	-2.436E-01	8.153E-01	6.176E-01	4.159E-01	FAIL ABUN
RN-219	-4.059E-01	4.491E-01	3.713E-01	2.291E-01	FAIL ABUN
RN-220	2.240E-02	2.694E+01	2.313E+01	1.375E+01	NOT IDENT.
RA-223	-2.436E-01	8.153E-01	6.176E-01	4.159E-01	FAIL ABUN
AC-227	-2.307E-01	4.071E-01	3.586E-01	2.077E-01	FAIL ABUN
TH-227	-2.307E-01	4.077E-01	3.586E-01	2.080E-01	FAIL ABUN
TH-229	-6.251E-01	6.038E-01	5.022E-01	3.081E-01	FAIL ABUN
PA-231	-5.887E-01	1.692E+00	1.498E+00	8.631E-01	FAIL ABUN
TH-231	-2.436E-01	8.153E-01	6.176E-01	4.159E-01	FAIL ABUN
U-231	6.458E-01	2.042E+00	1.648E+00	1.042E+00	FAIL ABUN
PA-233	2.319E-02	6.913E-02	6.282E-02	3.527E-02	FAIL ABUN
PA-234	-1.349E-01	3.236E-01	2.676E-01	1.651E-01	FAIL ABUN
PA-234M	6.988E+00	4.987E+00	4.678E+00	2.544E+00	NOT IDENT.
U-235	1.259E-01	2.465E-01	2.195E-01	1.258E-01	FAIL ABUN
NP-236	-1.056E-02	9.133E-02	8.030E-02	4.660E-02	FAIL ABUN
NP-239	-1.498E-02	2.132E-01	1.913E-01	1.088E-01	FAIL ABUN
AM-241	2.833E-01	2.851E-01	2.432E-01	1.455E-01	NOT IDENT.
CM-243	2.417E-02	1.079E-01	9.840E-02	5.503E-02	FAIL ABUN
AM-246	1.227E-02	1.559E-01	1.332E-01	7.952E-02	NOT IDENT.
CM-247	-2.739E-02	4.147E-02	3.402E-02	2.116E-02	NOT IDENT.
CF-249	-2.183E-02	4.209E-02	3.598E-02	2.148E-02	NOT IDENT.
CF-251	4.579E-02	1.482E-01	1.315E-01	7.559E-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	304.3750
46.50	304.3750
46.50	304.3750
48.70	338.9485
49.72	343.3585
51.35	327.0280
52.39	317.9794
52.97	321.1634
53.15	321.2570
53.44	342.5779
54.07	355.4467
56.28	370.2211
56.28	370.2233
57.37	0.0000
57.53	348.6659
57.53	348.6669
57.60	348.7033
57.98	319.4440
57.98	319.4440
59.32	330.9742
59.32	330.9742
59.40	331.0145
59.54	331.0841
59.72	331.1744
60.01	359.3175
61.10	380.1584
61.14	380.1807
61.30	383.3885
63.00	440.4009
63.29	440.5867
63.29	440.5867
63.58	440.7729
64.28	441.2198
65.12	459.1882
65.20	459.2414
65.20	459.2414
66.05	488.0450
66.72	507.3568
66.83	546.7119
66.91	546.7746
67.20	546.9976
67.20	546.9976
67.75	533.2609
67.85	528.6176
68.90	501.5557
68.90	501.5557
69.30	494.6063
69.67	509.9762
70.82	473.9172
70.82	473.9172
70.83	473.9246
72.80	511.6190
72.87	511.6674
72.87	511.6674
74.67	485.3047
74.81	485.3942
74.81	485.3942
74.81	485.3942
74.81	485.3942
74.81	485.3942
74.81	485.3942
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77.11	486.8548
77.11	486.8548

77.11	486.8548
77.11	486.8548
77.11	486.8548
77.11	486.8548
77.11	486.8548
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79.80	423.5989
79.80	423.5989
80.11	423.7655
80.18	423.8027
80.30	439.8624
80.30	439.8624
80.57	440.0117
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81.07	424.2782
81.07	424.2782
81.07	424.2782
81.07	424.2782
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83.78	428.3887
83.78	428.3887
83.78	428.3887
83.78	428.3887
84.21	437.9925
84.90	568.7798
85.43	569.1477
86.29	569.7433
86.50	569.8879
86.54	569.9138
86.59	569.9484
86.72	570.0390
86.79	717.5001
86.94	717.6331
87.30	717.9427
87.30	717.9427
87.30	717.9427
87.30	717.9427
87.30	717.9427
87.30	717.9427
87.57	718.1763
87.88	601.3929
88.03	601.5020
88.36	718.8553
88.47	718.9504
89.95	720.2134
91.11	700.9383
92.29	722.1907
92.38	546.0475
92.38	546.0475
93.35	546.6595
94.00	547.0701
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94.67	473.5624
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94.90	475.3145
94.90	475.3145
94.90	475.3145
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95.87	472.5811
96.73	401.2710
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98.44	390.5996
98.44	390.6010
98.88	377.7112
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99.55	369.5388
99.86	381.1629
100.00	381.2226
100.10	381.2652
103.18	427.1449
103.76	395.5641
105.00	418.7267
105.31	432.2454
108.00	430.3876
109.28	464.0401

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111.00	438.9887
111.76	423.7924
112.95	400.4509
115.19	427.3636
116.30	423.6794
117.00	403.1432
117.00	403.1432
117.66	425.3009
121.11	370.2778
121.62	388.2534
121.78	396.6876
122.06	372.7174
122.32	373.4095
122.32	373.4095
122.32	373.4095
122.32	373.4095
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131.20	412.3249
133.02	401.1758
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136.00	432.8307
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136.48	421.3461
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140.51	0.0000
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142.65	408.7521
143.76	409.1553
144.24	406.1215
144.24	406.1215
144.24	406.1215
144.24	406.1215
145.22	406.4723
145.44	393.7122
147.16	465.0255
152.43	384.2614
152.70	383.2720
153.22	373.7493
154.21	389.1536
154.21	389.1536
154.21	389.1536
154.21	389.1536
155.03	373.2424
156.02	362.7576
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159.00	399.3765
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161.27	350.2477
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162.64	361.4952
163.35	349.7579
163.89	362.9529
165.85	382.0317
167.43	419.5722
171.28	347.6208
171.86	365.2794
172.10	360.9727
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176.60	374.3216
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186.00	390.2843
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201.83	366.8679
202.84	379.0699
205.31	339.0695

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209.75	293.3343
210.97	294.1834
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216.55	285.2692
218.09	303.1644
222.10	321.2252
223.80	296.1538
226.40	305.7653
227.00	316.8108
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227.20	327.7793
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228.18	307.9485
228.18	307.9485
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236.00	296.0896
236.00	296.0896
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238.63	264.1781
238.63	264.1781
238.63	264.1781
239.00	264.2397
240.98	264.5736
241.98	264.7424
241.98	264.7424
241.98	264.7424
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245.39	219.5579
247.94	241.4380
248.90	251.5835
249.79	238.3288
252.40	233.1631
252.85	234.1532
252.85	234.1532
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256.20	254.1089
256.20	254.1089
260.50	225.0198
260.90	214.8424
262.80	245.8145
264.65	230.3750
268.24	227.3082
268.79	219.5953
269.46	216.5653
269.46	216.5653
269.46	216.5653
269.46	216.5653
271.23	224.5898
273.65	310.8120
276.40	214.3189
277.35	237.1318
277.60	239.5170
277.60	239.5170
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278.60	241.5336
279.20	230.3365
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283.67	240.3512
284.30	237.6097
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285.90	246.3219
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286.10	248.2351
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290.80	249.2120
291.72	247.7624
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293.70	232.2386
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295.21	249.8259

295.21	249.8259
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297.23	223.1955
298.57	223.3619
299.80	223.5110
299.80	223.5110
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300.09	201.3521
300.09	201.3521
300.09	201.3521
300.12	201.3546
301.29	190.3784
302.84	193.7152
303.76	198.5804
303.91	198.5957
304.40	209.7734
304.40	209.7734
304.84	219.3619
306.84	218.4043
308.46	191.1230
311.98	190.5269
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323.87	202.3275
323.87	202.3275
323.87	202.3275
325.23	199.2572
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334.20	193.7256
334.30	203.4221
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338.28	190.2458
338.28	190.2458
338.28	190.2458
338.32	190.2506
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338.32	190.2506
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340.57	187.8746
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351.92	194.4817
351.92	194.4817
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391.69	162.3454
392.90	151.4749
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402.60	174.6105
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414.70	132.5057
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427.89	161.9512
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433.93	142.0764
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439.56	126.1418
439.89	128.1933
443.98	129.4355
444.90	124.3873
445.03	124.3947
445.03	124.3947
445.03	124.3947
445.03	124.3947
453.90	117.6925
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468.07	142.3996
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475.35	141.4435
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477.59	131.2370
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511.00	112.0267
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511.85	123.9322
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513.99	110.0584
520.41	130.2908
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546.56	0.0000
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552.65	101.0187
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569.32	109.1121
569.50	102.7008
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583.14	111.7924
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602.71	133.4746
603.60	128.1010
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604.70	111.9058
609.31	114.9722

609.31	114.9722
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609.31	114.9722
610.33	115.0136
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614.37	81.4874
618.01	99.4598
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621.84	92.5848
631.29	103.8019
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633.10	88.5562
634.78	90.7934
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636.97	88.6689
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646.12	88.9339
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661.65	100.8884
664.57	0.0000
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666.33	89.9869
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677.61	85.9520
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692.80	89.1445
695.00	92.9220
696.49	115.2762
696.49	115.2762
697.00	111.5747
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698.50	101.3936
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722.78	86.7480
722.89	86.7518
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911.07	62.1758
911.07	62.1758
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926.50	72.3257
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969.11	68.0830
969.11	68.0830
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1001.68	56.5070
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1036.00	48.8242
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1038.76	0.0000
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1099.22	50.5572
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1112.84	67.4145
1115.52	83.4302
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1120.29	74.6309
1120.29	74.6309
1120.29	74.6309
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1124.00	0.0000
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1147.95	0.0000
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1173.22	64.9971
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1260.41	0.0000
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1312.09	45.2795
1325.50	29.1841
1325.50	29.1841
1332.49	34.6354
1333.61	34.6419
1360.21	27.9785
1362.66	0.0000
1365.15	42.0070
1368.21	32.0961
1368.53	0.0000
1376.25	45.8350
1384.27	18.0334
1394.10	30.9709
1395.20	33.7939
1407.95	31.9912
1434.06	14.8898
1436.60	26.4834
1457.56	0.0000
1460.81	25.6487
1489.15	29.5966
1509.49	22.0366
1596.49	15.3155
1620.62	13.6685
1678.03	0.0000
1691.02	18.7628
1691.02	18.7628
1706.46	0.0000
1750.46	0.0000
1764.49	14.9843
1764.49	14.9843
1764.49	14.9843
1764.49	14.9843
1770.23	13.9976
1771.40	14.0000
1791.20	0.0000
1808.65	10.0569

1836.01

8.0787

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440001

Total Uranium Activity	1.2866E+01	ug/g
Total Uranium Counting Unc.	1.0091E+01	ug/g
Total Uranium Tpu	5.1486E-06	ug/g
Total Uranium Mda	5.4675E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON ,SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 950788          SAMPLE ID   : G246440001
*  ANALYST       : MXR1            DETECTOR    : GAM15
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 17:57:08.33  SAMPLE ALQT: 158.750 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.745E+00
GROSS GAMMA ERROR (pCi/GRAM ) : 1.709E+00
GROSS GAMMA MDA (pCi/GRAM ) : 3.684E+00
GROSS GAMMA DLC (pCi/GRAM ) : 1.788E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 19:58:25.00

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440002.CNF;1
Sample date   : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:57:37
Sample ID     : G246440002      Sample quantity  : 1.28310E+02 GRAM
Detector name : GAM16           Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.02 0.0%
Energy tolerance: 1.50000 keV   Analyst Initials : MXR1
Abundance limit: 75.00000      Sensitivity    : 5.00000
Batch ID      : 950788         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	63.29*	148	504	0.84	126.77	124	8	2.05E-02	28.1	
2	3	74.84	407	378	0.92	149.86	144	15	5.65E-02	8.6	2.54E+00
3	3	77.12*	599	348	0.91	154.43	144	15	8.32E-02	6.3	
4	0	87.18	202	410	1.00	174.56	172	6	2.80E-02	17.4	
5	4	89.88	139	259	0.95	179.94	178	14	1.93E-02	17.8	4.12E+00
6	4	92.78*	497	411	1.29	185.75	178	14	6.90E-02	8.8	
7	0	129.04	46	348	0.64	258.27	255	7	6.36E-03	69.1	
8	0	143.92*	55	399	0.78	288.04	284	9	7.71E-03	67.9	
9	0	185.57*	264	383	1.14	371.33	367	11	3.66E-02	16.1	
10	0	209.02	129	331	1.06	418.23	413	9	1.80E-02	26.8	
11	6	238.55*	1305	187	0.96	477.29	473	16	1.81E-01	3.3	2.57E+00
12	6	241.44*	354	237	1.72	483.07	473	16	4.91E-02	12.2	
13	0	270.13	57	239	1.17	540.45	537	9	7.87E-03	51.2	
14	0	277.62	72	180	1.07	555.44	552	9	1.00E-02	35.3	
15	0	295.07*	408	154	1.15	590.33	587	8	5.67E-02	7.3	
16	0	300.20	94	173	1.16	600.60	596	9	1.30E-02	27.5	
17	0	328.05	103	184	1.48	656.28	652	11	1.43E-02	27.6	
18	0	338.18*	218	213	1.10	676.54	673	11	3.03E-02	14.7	
19	0	351.77*	621	193	1.15	703.72	697	12	8.63E-02	6.1	
20	0	463.70	40	133	1.13	927.56	922	10	5.51E-03	57.7	
21	0	510.96*	137	141	1.81	1022.08	1016	15	1.90E-02	23.5	
22	0	583.13*	443	74	1.30	1166.40	1161	11	6.16E-02	6.2	
23	0	609.36*	464	100	1.28	1218.84	1213	12	6.45E-02	6.4	
24	0	661.54	31	127	1.10	1323.19	1318	11	4.29E-03	72.9	
25	0	727.66	125	97	1.67	1455.42	1447	15	1.74E-02	19.4	
26	0	769.70	15	108	0.99	1539.47	1533	10	2.11E-03	132.4	
27	0	795.09*	65	57	1.66	1590.25	1586	12	9.08E-03	26.4	
28	0	860.69	54	75	1.63	1721.41	1715	12	7.46E-03	35.0	
29	0	911.22*	302	57	1.70	1822.45	1817	12	4.19E-02	7.7	
30	0	964.92	30	74	1.78	1929.81	1924	11	4.20E-03	57.4	
31	0	968.97*	159	44	1.11	1937.91	1934	11	2.21E-02	11.5	
32	0	1001.34*	13	73	0.87	2002.63	1996	12	1.85E-03	132.6	
33	0	1121.04	107	86	1.71	2241.96	2233	17	1.49E-02	22.3	
34	0	1377.65*	38	17	1.22	2754.97	2749	12	5.23E-03	29.1	
35	0	1460.73*	1471	35	1.95	2921.07	2911	18	2.04E-01	2.8	
36	0	1662.14	14	1	0.97	3323.67	3321	6	1.91E-03	30.2	
37	0	1764.30*	78	15	1.38	3527.89	3521	15	1.09E-02	16.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 19:58:27

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440002.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 17:57:37
Sample ID        : G246440002             Sample quantity  : 128.31 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA16                Detector geometry: CAN
Elapsed live time : 0 02:00:00.00          Elapsed real time: 0 02:00:02.02   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	*	3.338E+01	3.472E+00	5.169E-01	4.544E-02	64.577
CD-109	+	88.03	*	2.604E+00	9.372E-01	1.128E+00	1.087E-01	2.307
SN-126	+	64.28		1.277E+00	7.407E-01	7.175E-01	1.045E-01	1.779
	+	86.94		1.061E+00	5.743E-01	5.270E-01	2.190E-01	2.013
	+	87.57	*	2.551E-01	9.183E-02	1.111E-01	1.065E-02	2.297
BA-137M	+	661.65	*	4.175E-02	6.098E-02	6.132E-02	5.442E-03	0.681
CS-137	+	661.65	*	4.413E-02	6.446E-02	6.482E-02	5.763E-03	0.681
TL-208	+	277.35		6.630E-01	4.786E-01	5.532E-01	8.224E-02	1.198
	+	510.84		6.263E-01	3.051E-01	2.112E-01	2.670E-02	2.966
	+	583.14	*	5.773E-01	9.176E-02	5.455E-02	5.407E-03	10.582
	+	860.37		6.572E-01	4.651E-01	4.241E-01	4.246E-02	1.549
BI-211		72.87		2.060E+00	2.861E+00	4.546E+00	3.695E-01	0.453
	+	351.07	*	3.563E+00	5.834E-01	3.036E-01	3.320E-02	11.736
PB-212	+	74.81		2.178E+00	4.627E-01	4.804E-01	6.001E-02	4.534
	+	77.11		1.815E+00	2.756E-01	2.725E-01	2.315E-02	6.660
	+	87.30		1.180E+00	4.408E-01	5.589E-01	7.731E-02	2.111
	+	238.63	*	1.639E+00	2.217E-01	8.123E-02	9.617E-03	20.173
	+	300.09		1.814E+00	1.024E+00	1.059E+00	1.387E-01	1.713
PO-212	+	74.81		2.178E+00	4.627E-01	4.804E-01	6.001E-02	4.534
	+	77.11		1.815E+00	2.756E-01	2.725E-01	2.315E-02	6.660
	+	87.30		1.180E+00	4.408E-01	5.589E-01	7.731E-02	2.111
	+	115.19		1.759E-01	3.166E+00	5.330E+00	4.447E-01	0.033
	+	238.63	*	1.639E+00	2.217E-01	8.123E-02	9.617E-03	20.173
	+	300.09		1.814E+00	1.024E+00	1.059E+00	1.387E-01	1.713
BI-214	+	609.31	*	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
	+	1120.29		1.372E+00	6.292E-01	4.666E-01	5.009E-02	2.940
	+	1764.49		1.371E+00	4.662E-01	2.686E-01	2.223E-02	5.106
PB-214	+	74.81		3.752E+00	7.681E-01	8.277E-01	9.202E-02	4.534
	+	77.11		3.112E+00	5.286E-01	4.672E-01	5.331E-02	6.660
	+	87.30		2.021E+00	7.441E-01	9.574E-01	1.176E-01	2.111
	+	241.98		2.667E+00	7.276E-01	4.892E-01	6.061E-02	5.451
	+	295.21		1.387E+00	2.738E-01	1.854E-01	2.474E-02	7.481
	+	351.92	*	1.239E+00	2.130E-01	1.058E-01	1.280E-02	11.711
PO-214	+	74.81		3.752E+00	7.681E-01	8.277E-01	9.202E-02	4.534

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		3.112E+00	5.286E-01	4.672E-01	5.331E-02	6.660
	+	87.30		2.021E+00	7.441E-01	9.574E-01	1.176E-01	2.111
	+	241.98		2.667E+00	7.276E-01	4.892E-01	6.061E-02	5.451
	+	295.21		1.387E+00	2.738E-01	1.854E-01	2.474E-02	7.481
	+	351.92	*	1.239E+00	2.130E-01	1.058E-01	1.280E-02	11.711
PO-216	+	74.81		2.178E+00	4.627E-01	4.804E-01	6.001E-02	4.534
	+	77.11		1.815E+00	2.756E-01	2.725E-01	2.315E-02	6.660
	+	87.30		1.180E+00	4.408E-01	5.589E-01	7.731E-02	2.111
	+	238.63	*	1.639E+00	2.217E-01	8.123E-02	9.617E-03	20.173
	+	300.09		1.814E+00	1.024E+00	1.059E+00	1.387E-01	1.713
PO-218	+	74.81		3.752E+00	7.681E-01	8.277E-01	9.202E-02	4.534
	+	77.11		3.112E+00	5.286E-01	4.672E-01	5.331E-02	6.660
	+	87.30		2.021E+00	7.441E-01	9.574E-01	1.176E-01	2.111
	+	241.98		2.667E+00	7.276E-01	4.892E-01	6.061E-02	5.451
	+	295.21		1.387E+00	2.738E-01	1.854E-01	2.474E-02	7.481
	+	351.92	*	1.239E+00	2.130E-01	1.058E-01	1.280E-02	11.711
RA-224	+	240.98	*	5.057E+00	1.350E+00	9.245E-01	1.019E-01	5.469
RA-226	+	609.31	*	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
	+	1120.29		1.372E+00	6.292E-01	4.666E-01	5.009E-02	2.940
	+	1764.49		1.371E+00	4.662E-01	2.686E-01	2.223E-02	5.106
AC-228	+	338.32		1.381E+00	7.051E-01	3.302E-01	1.380E-01	4.181
	+	911.07	*	1.747E+00	3.405E-01	2.076E-01	2.466E-02	8.416
	+	969.11		1.621E+00	5.346E-01	3.898E-01	9.191E-02	4.160
RA-228	+	338.32		1.381E+00	7.051E-01	3.302E-01	1.380E-01	4.181
	+	911.07	*	1.747E+00	3.405E-01	2.076E-01	2.466E-02	8.416
	+	969.11		1.621E+00	5.346E-01	3.898E-01	9.191E-02	4.160
TH-228	+	74.81		2.216E+00	4.235E-01	4.887E-01	4.089E-02	4.534
	+	77.11		1.847E+00	2.804E-01	2.773E-01	2.355E-02	6.660
	+	87.30		1.200E+00	4.321E-01	5.686E-01	5.434E-02	2.111
	+	238.63	*	1.667E+00	2.255E-01	8.263E-02	9.784E-03	20.173
	+	300.09		1.845E+00	1.498E+00	1.077E+00	6.441E-01	1.713
TH-230	+	609.31	*	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
	+	1120.29		1.372E+00	6.292E-01	4.666E-01	5.009E-02	2.940
	+	1764.49		1.371E+00	4.661E-01	2.686E-01	2.223E-02	5.106
TH-232	+	338.32		1.381E+00	4.323E-01	3.302E-01	3.604E-02	4.181
	+	911.07	*	1.747E+00	3.405E-01	2.076E-01	2.466E-02	8.416
	+	969.11		1.621E+00	5.346E-01	3.898E-01	9.191E-02	4.160
TH-234	+	63.29	*	3.225E+00	1.897E+00	1.888E+00	3.292E-01	1.708
	+	92.38		4.072E+00	1.036E+00	6.346E-01	1.166E-01	6.416
U-234	+	609.31	*	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
	+	1120.29		1.372E+00	6.292E-01	4.666E-01	5.009E-02	2.940
	+	1764.49		1.371E+00	4.661E-01	2.686E-01	2.223E-02	5.106
U-235	+	89.95		2.342E+00	1.107E+00	1.558E+00	4.844E-01	1.504
	+	93.35		4.895E+00	1.627E+00	7.579E-01	2.137E-01	6.459
	+	105.00		7.870E-01	9.230E-01	1.558E+00	4.647E-01	0.505
	+	143.76	*	2.228E-01	3.050E-01	3.030E-01	5.295E-02	0.735
	+	163.35		1.370E-01	4.421E-01	7.217E-01	1.390E-01	0.190
	+	185.71		2.323E-01	7.810E-02	6.444E-02	6.156E-03	3.604
	+	205.31		-1.492E-01	5.359E-01	7.577E-01	1.498E-01	-0.197

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237	+	86.50	*	7.491E-01	3.108E-01	3.687E-01	8.369E-02	2.032
		95.87		-3.324E-01	8.526E-01	1.267E+00	3.137E-01	-0.262
U-238	+	63.29	*	3.225E+00	1.897E+00	1.888E+00	3.292E-01	1.708
	+	92.38		4.072E+00	8.085E-01	6.346E-01	5.856E-02	6.416
AM-243	+	74.67	*	3.531E-01	6.737E-02	7.812E-02	6.467E-03	4.520
	+	86.72		2.809E+01	1.011E+01	1.379E+01	1.309E+00	2.037
		117.66		2.289E-01	3.330E+00	5.603E+00	4.662E-01	0.041
		142.18		-4.923E+00	1.811E+01	2.643E+01	2.253E+00	-0.186
ANH-511	+	511.00	*	1.353E-01	6.493E-02	4.563E-02	4.339E-03	2.965

---- 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	*	-8.257E-02	3.063E-01	4.975E-01	5.033E-02	-0.166
NA-22		1274.54	*	-3.499E-02	4.824E-02	7.242E-02	6.026E-03	-0.483
NA-24		1368.53	*	-5.604E+00	4.824E-02	Half-Life too short		
AL-26		1129.67		-8.757E-01	1.708E+00	2.574E+00	2.157E-01	-0.340
		1808.65	*	-8.444E-03	2.693E-02	4.132E-02	3.379E-03	-0.204
TI-44		67.85		-1.555E-02	4.711E-02	6.580E-02	5.096E-03	-0.236
	+	78.38	*	3.350E-01	5.086E-02	6.442E-02	5.547E-03	5.200
SC-46		889.25	*	-1.222E-02	3.789E-02	6.142E-02	5.806E-03	-0.199
	+	1120.51		2.390E-01	1.085E-01	1.274E-01	1.076E-02	1.876
V-48		944.10		-7.779E-01	9.809E-01	1.508E+00	1.409E-01	-0.516
		983.50	*	-4.786E-02	7.118E-02	1.096E-01	1.009E-02	-0.437
		1312.09		1.411E-02	9.835E-02	1.614E-01	1.355E-02	0.087
CR-51		320.08	*	5.392E-01	3.885E-01	6.604E-01	7.721E-02	0.816
MN-52		744.21		4.553E-01	2.973E-01	5.369E-01	4.929E-02	0.848
		848.13		-5.912E+00	8.022E+00	1.250E+01	1.177E+00	-0.473
		935.52		1.117E-01	3.054E-01	5.248E-01	4.916E-02	0.213
		1246.25		-1.258E+00	9.471E+00	1.519E+01	1.252E+00	-0.083
		1333.61		7.004E+00	6.632E+00	1.198E+01	1.010E+00	0.585
		1434.06	*	1.913E-01	2.777E-01	4.918E-01	4.196E-02	0.389
MN-54		834.83	*	1.362E-02	3.687E-02	6.359E-02	5.973E-03	0.214
CO-56		846.75	*	-2.935E-04	3.784E-02	6.341E-02	5.967E-03	-0.005
		977.42		1.194E+00	2.661E+00	4.606E+00	4.251E-01	0.259
		1037.82		-4.177E-02	3.309E-01	5.398E-01	5.074E-02	-0.077
		1175.09		2.849E-01	2.266E+00	3.744E+00	3.012E-01	0.076
		1238.25		7.971E-02	9.377E-02	1.623E-01	1.377E-02	0.491
		1360.21		9.550E-01	8.727E-01	1.621E+00	1.373E-01	0.589
		1771.40		-4.165E-01	2.350E-01	2.316E-01	1.914E-02	-1.798
CO-57		122.06	*	1.197E-02	2.201E-02	3.767E-02	3.130E-03	0.318
		136.48		1.733E-01	1.864E-01	3.213E-01	2.921E-02	0.539
CO-58		810.76	*	-4.084E-03	3.709E-02	6.182E-02	5.791E-03	-0.066
FE-59	+	142.65		2.971E+00	4.042E+00	4.463E+00	3.810E-01	0.666
		192.34		-1.196E-01	8.700E-01	1.413E+00	2.000E-01	-0.085
		1099.22	*	1.949E-02	9.751E-02	1.630E-01	1.515E-02	0.120
		1291.56		-3.575E-02	1.167E-01	1.819E-01	1.737E-02	-0.197
CO-60		1173.22		-4.489E-03	4.666E-02	7.555E-02	6.075E-03	-0.059

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1332.49	*		-1.102E-02	4.088E-02	6.386E-02	5.387E-03	-0.173
ZN-65	1115.52	*		1.998E-02	1.002E-01	1.459E-01	1.239E-02	0.137
GE-68	1077.35	*		-5.011E-01	1.188E+00	1.870E+00	1.633E-01	-0.268
AS-73	53.44	*		-2.042E-01	7.995E-01	1.237E+00	9.436E-02	-0.165
AS-74	595.88	*		-1.292E-02	9.265E-02	1.493E-01	1.386E-02	-0.087
	634.78			5.767E-02	3.408E-01	5.614E-01	5.089E-02	0.103
SE-75	66.05			1.238E+00	4.877E+00	7.042E+00	6.775E-01	0.176
	96.73			-4.126E-01	7.211E-01	1.062E+00	1.469E-01	-0.388
	121.11			-9.056E-02	1.205E-01	1.949E-01	2.140E-02	-0.465
	136.00			4.004E-02	3.491E-02	6.064E-02	5.147E-03	0.660
	198.60			4.962E-01	1.748E+00	2.857E+00	3.063E-01	0.174
	264.65	*		-5.111E-02	4.117E-02	6.016E-02	7.020E-03	-0.850
	279.53			-1.149E-02	1.160E-01	1.635E-01	2.001E-02	-0.070
	303.91			-1.490E+00	2.231E+00	2.949E+00	4.098E-01	-0.505
	400.65			1.903E-01	2.223E-01	3.914E-01	4.557E-02	0.486
BR-77	87.88	+		1.044E+03	3.758E+02	5.682E+02	5.469E+01	1.838
	200.40			1.841E+01	2.852E+02	4.666E+02	4.636E+01	0.039
	239.00	+		4.899E+02	6.254E+01	6.969E+01	7.643E+00	7.030
	249.79			-8.676E+01	1.136E+02	1.739E+02	1.957E+01	-0.499
	281.68			7.182E+01	1.763E+02	2.582E+02	3.094E+01	0.278
	297.23			1.026E+02	1.397E+02	1.667E+02	1.961E+01	0.616
	303.76			-3.008E+02	3.545E+02	4.604E+02	5.366E+01	-0.653
	439.47			1.101E+02	2.516E+02	4.309E+02	4.066E+01	0.256
	484.57			-1.053E+02	3.968E+02	6.439E+02	6.125E+01	-0.164
	520.65	*		-8.853E+00	1.685E+01	2.650E+01	2.517E+00	-0.334
	574.64			-1.439E+02	3.540E+02	5.589E+02	5.237E+01	-0.258
	578.91			-3.414E+00	1.625E+02	2.319E+02	2.170E+01	-0.015
	585.48			1.263E+03	3.987E+02	6.934E+02	6.468E+01	1.822
	755.35			-6.540E+01	2.810E+02	4.389E+02	4.044E+01	-0.149
	817.79			-1.229E+01	2.245E+02	3.756E+02	3.517E+01	-0.033
SR-82	698.33			-1.845E+00	3.602E+01	5.776E+01	5.212E+00	-0.032
	776.49	*		-1.634E-01	3.915E-01	5.990E-01	5.554E-02	-0.273
	1395.20			-8.573E+00	1.046E+01	1.450E+01	1.234E+00	-0.591
RB-83	520.41	*		-2.837E-02	6.114E-02	9.671E-02	9.189E-03	-0.293
	529.64			-5.948E-02	1.024E-01	1.606E-01	1.524E-02	-0.370
	552.65			1.224E-01	1.871E-01	3.218E-01	3.038E-02	0.380
RB-84	881.50	*		-1.215E-02	7.119E-02	1.172E-01	1.108E-02	-0.104
KR-85	513.99	*		5.037E+00	7.625E+00	1.168E+01	1.111E+00	0.431
SR-85	513.99	*		2.641E-02	3.998E-02	6.126E-02	5.824E-03	0.431
RB-86	1076.63	*		-5.223E-01	8.099E-01	1.242E+00	1.085E-01	-0.421
Y-88	898.02			2.676E-03	3.824E-02	6.426E-02	6.103E-03	0.042
	1836.01	*		4.241E-02	3.101E-02	6.348E-02	5.154E-03	0.668
ZR-88	392.90	*		1.728E-02	2.741E-02	4.778E-02	4.419E-03	0.362
Y-91	1204.90	*		-2.633E+00	2.025E+01	3.262E+01	2.652E+00	-0.081
NB-94	702.63	*		9.412E-03	3.453E-02	5.676E-02	5.131E-03	0.166
	871.10			1.828E-02	3.324E-02	5.813E-02	5.487E-03	0.314
NB-95	765.79	*		2.115E-02	5.068E-02	7.391E-02	6.832E-03	0.286
NB-95M	235.69	*		-4.567E-03	1.277E-01	1.834E-01	2.181E-02	-0.025
ZR-95	724.18			1.287E-02	1.085E-01	1.547E-01	1.520E-02	0.083

---- Non-Identified Nuclides ----

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NB-97	756.15	*		-1.377E-02	6.566E-02	1.028E-01	1.032E-02	-0.134
	657.90	*		2.546E-01	6.566E-02	Half-Life	too short	
	1024.50			1.013E+02	6.566E-02	Half-Life	too short	
ZR-97	254.15			4.227E+00	6.566E-02	Half-Life	too short	
	355.39			1.123E+01	6.566E-02	Half-Life	too short	
	507.63	*		1.123E+01	6.566E-02	Half-Life	too short	
	602.52			1.716E+01	6.566E-02	Half-Life	too short	
	1021.30			-4.170E+01	6.566E-02	Half-Life	too short	
	1147.95			-5.645E+00	6.566E-02	Half-Life	too short	
	1362.66			3.989E+01	6.566E-02	Half-Life	too short	
MO-99	1750.46			-2.814E+01	6.566E-02	Half-Life	too short	
	140.51			2.504E+01	4.380E+01	6.659E+01	1.841E+01	0.376
	181.06			2.534E+01	2.886E+01	4.403E+01	8.228E+00	0.576
	366.43			-3.625E+01	1.245E+02	2.059E+02	2.083E+01	-0.176
	739.58	*		-1.574E+01	1.996E+01	2.937E+01	4.553E+00	-0.536
	778.00			-3.439E+01	5.547E+01	8.284E+01	7.684E+00	-0.415
	140.51	*		7.687E+12	5.547E+01	Half-Life	too short	
RH-101	127.23			5.802E-03	3.001E-02	4.551E-02	3.789E-03	0.127
	198.01	*		-6.782E-03	3.189E-02	5.100E-02	5.036E-03	-0.133
	325.23			-9.834E-02	2.357E-01	3.179E-01	3.569E-02	-0.309
RH-102	418.52			1.388E-01	2.620E-01	4.524E-01	4.237E-02	0.307
	475.06	*		8.716E-03	2.638E-02	4.474E-02	4.252E-03	0.195
	631.29			-1.004E-02	4.985E-02	7.975E-02	7.248E-03	-0.126
	697.49			-1.534E-02	8.001E-02	1.261E-01	1.137E-02	-0.122
	766.84			1.951E-01	1.301E-01	2.080E-01	1.924E-02	0.938
RU-103	1046.59			4.390E-02	1.145E-01	1.953E-01	1.740E-02	0.225
	1112.84			-4.974E-02	2.487E-01	3.433E-01	2.918E-02	-0.145
	497.08	*		-1.169E-02	3.957E-02	6.389E-02	9.407E-03	-0.183
RH-106	610.33	+		1.277E+01	2.725E+00	2.965E+00	5.040E-01	4.307
	511.85	+		6.785E-01	3.256E-01	4.158E-01	3.954E-02	1.632
	621.84	*		-9.754E-02	2.772E-01	4.351E-01	5.962E-02	-0.224
RU-106	1050.47			7.194E-01	2.292E+00	3.886E+00	3.455E-01	0.185
	511.85	+		6.785E-01	3.256E-01	4.158E-01	3.954E-02	1.632
	621.84	*		-9.754E-02	2.770E-01	4.351E-01	3.979E-02	-0.224
AG-108M	1050.47			7.194E-01	2.292E+00	3.886E+00	3.455E-01	0.185
	433.93	*		-1.707E-02	3.106E-02	4.984E-02	4.852E-03	-0.342
	614.37			1.345E-02	3.446E-02	5.154E-02	4.899E-03	0.261
AG-110M	722.95			-1.451E-02	4.857E-02	6.590E-02	6.216E-03	-0.220
	657.75	*		1.287E-02	3.879E-02	5.693E-02	5.211E-03	0.226
	677.61			1.082E-02	2.806E-01	4.545E-01	4.170E-02	0.024
	706.67			-3.851E-02	2.039E-01	3.226E-01	2.994E-02	-0.119
	763.93			2.077E-02	1.648E-01	2.337E-01	2.212E-02	0.089
	884.67			3.587E-03	4.854E-02	8.165E-02	7.923E-03	0.044
	937.48			-9.215E-02	1.063E-01	1.617E-01	1.560E-02	-0.570
IN-111	1384.27			7.154E-02	1.588E-01	2.505E-01	2.190E-02	0.286
	171.28			4.963E-01	1.525E+00	2.546E+00	2.341E-01	0.195
	245.39	*		-2.636E-01	1.762E+00	2.500E+00	2.784E-01	-0.105
IN-113M	391.69	*		1.652E-02	3.895E-02	6.713E-02	6.372E-03	0.246
SN-113	391.69	*		1.652E-02	3.895E-02	6.713E-02	6.372E-03	0.246

---- Non-Identified Nuclides ----

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IN-114M		190.27	*	3.456E-01	1.799E-01	2.903E-01	2.808E-02	1.190
CD-115		260.90		4.382E+00	2.348E+02	3.772E+02	4.354E+01	0.012
		492.35		6.053E+00	6.611E+01	1.100E+02	1.047E+01	0.055
		527.90	*	1.552E+01	1.964E+01	3.412E+01	3.239E+00	0.455
SN-117M		156.02		-4.821E-01	2.299E+00	3.768E+00	3.324E-01	-0.128
		158.56	*	2.034E-02	5.626E-02	9.436E-02	8.381E-03	0.216
SB-122		563.90	*	3.116E+00	3.143E+00	5.532E+00	5.204E-01	0.563
		692.80		9.039E+00	7.440E+01	1.211E+02	1.090E+01	0.075
I-123		159.00	*	4.051E+01	7.440E+01	Half-Life	too short	
		528.96		1.448E+03	7.440E+01	Half-Life	too short	
TE-123M		159.00	*	1.361E-02	2.641E-02	4.455E-02	3.984E-03	0.306
I-124		602.71	*	2.582E-01	9.550E-01	1.475E+00	1.364E-01	0.175
		722.78		-1.168E+00	7.135E+00	9.843E+00	8.969E-01	-0.119
		1325.50		-1.670E+01	5.040E+01	7.813E+01	6.579E+00	-0.214
	+	1376.25		9.434E+01	5.551E+01	8.922E+01	7.573E+00	1.057
		1509.49		2.172E+01	1.986E+01	3.786E+01	3.238E+00	0.574
		1691.02		1.542E+00	4.450E+00	7.872E+00	6.619E-01	0.196
SB-124		602.71		1.080E-02	3.995E-02	6.171E-02	5.708E-03	0.175
		645.85		-1.526E-01	4.644E-01	7.291E-01	6.917E-02	-0.209
		709.31		-1.528E+00	2.637E+00	4.002E+00	3.628E-01	-0.382
		713.82		3.753E-01	1.550E+00	2.547E+00	3.151E-01	0.147
		722.78		-7.083E-02	4.326E-01	5.969E-01	5.544E-02	-0.119
	+	968.20		1.711E+01	4.248E+00	7.158E+00	6.630E-01	2.390
		1045.16		9.811E-01	2.456E+00	4.199E+00	3.745E-01	0.234
		1325.50		-1.081E+00	3.264E+00	5.060E+00	4.261E-01	-0.214
		1368.21		-1.281E+00	1.613E+00	2.252E+00	3.014E-01	-0.569
		1436.60		2.311E-01	3.427E+00	5.807E+00	4.956E-01	0.040
		1691.02		2.205E-02	6.365E-02	1.126E-01	9.861E-03	0.196
SB-125		427.89	*	-2.653E-02	8.601E-02	1.406E-01	1.344E-02	-0.189
	+	463.38		3.549E-01	4.109E-01	5.009E-01	5.062E-02	0.709
		600.56		-8.133E-02	1.712E-01	2.681E-01	2.642E-02	-0.303
		635.90		3.529E-02	2.370E-01	3.897E-01	3.789E-02	0.091
TE-125M		109.28	*	5.805E+00	7.967E+00	1.377E+01	1.402E+00	0.422
I-126		388.63		1.055E-01	1.997E-01	3.462E-01	3.239E-02	0.305
		666.33	*	1.656E-01	2.168E-01	3.326E-01	2.959E-02	0.498
		753.82		1.056E+00	1.485E+00	2.536E+00	2.335E-01	0.416
SB-126		223.80		-1.073E-01	4.174E+00	6.754E+00	7.133E-01	-0.016
	+	278.60		4.938E+00	3.538E+00	4.466E+00	5.357E-01	1.106
	+	296.50		1.555E+01	2.913E+00	3.752E+00	4.417E-01	4.146
		414.70		1.688E-02	7.646E-02	1.297E-01	1.213E-02	0.130
		415.30		-1.394E-01	6.407E+00	1.070E+01	1.001E+00	-0.013
		555.20		2.105E+00	4.093E+00	6.976E+00	6.580E-01	0.302
		573.80		-2.611E-01	1.058E+00	1.694E+00	1.588E-01	-0.154
		593.00		-3.610E-01	9.752E-01	1.540E+00	1.432E-01	-0.234
		656.30		-7.922E-01	4.348E+00	6.019E+00	5.366E-01	-0.132
		666.33		6.953E-02	9.103E-02	1.397E-01	1.242E-02	0.498
		675.00		3.709E-01	2.129E+00	3.489E+00	3.116E-01	0.106
		695.00		-4.527E-02	9.067E-02	1.390E-01	1.253E-02	-0.326
		697.00		5.960E-04	3.102E-01	4.965E-01	4.477E-02	0.001

---- Non-Identified Nuclides ----

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SB-127		720.50	*	3.486E-02	1.821E-01	2.611E-01	2.377E-02	0.134
		856.80		6.979E-02	5.222E-01	7.749E-01	7.302E-02	0.090
		989.30		1.861E-01	1.386E+00	2.324E+00	2.134E-01	0.080
		1034.80		1.254E+01	1.083E+01	1.949E+01	1.749E+00	0.644
		1213.00		-3.012E-01	5.598E+00	9.074E+00	7.400E-01	-0.033
		61.10		2.764E+01	8.300E+01	1.211E+02	1.314E+01	0.228
		252.40		2.629E+00	6.074E+00	9.837E+00	4.215E+00	0.267
		290.80		-2.635E+00	2.994E+01	4.206E+01	6.037E+00	-0.063
		411.60		-3.992E+00	1.667E+01	2.746E+01	4.557E+00	-0.145
		444.90		-5.672E+00	1.222E+01	1.959E+01	2.681E+00	-0.289
		473.00		-8.113E-02	2.143E+00	3.543E+00	4.969E-01	-0.023
		543.00		-3.407E+00	2.284E+01	3.706E+01	5.712E+00	-0.092
		603.60		2.797E+00	1.810E+01	2.623E+01	3.545E+00	0.107
		685.20	*	-5.192E-01	1.892E+00	2.973E+00	3.652E-01	-0.175
		698.50		-5.561E+00	2.260E+01	3.563E+01	5.881E+00	-0.156
XE-127		722.20		-3.140E+01	5.337E+01	6.983E+01	8.505E+00	-0.450
		783.80		5.185E-01	5.438E+00	8.747E+00	1.178E+00	0.059
		57.60		8.171E-01	5.722E+00	9.003E+00	6.508E-01	0.091
	+	145.22		7.668E-01	1.043E+00	1.103E+00	9.470E-02	0.695
		172.10		-3.846E-02	1.118E-01	1.810E-01	1.668E-02	-0.212
I-131		202.84	*	-1.491E-02	4.475E-02	7.174E-02	7.175E-03	-0.208
		374.96		4.910E-02	1.854E-01	3.171E-01	3.119E-02	0.155
		80.18		2.884E-01	4.908E+00	7.571E+00	6.704E-01	0.038
		284.30		6.582E-01	1.733E+00	2.825E+00	3.471E-01	0.233
		364.48	*	2.948E-02	1.194E-01	2.045E-01	2.165E-02	0.144
TE-132		636.97		2.580E-01	1.583E+00	2.608E+00	2.484E-01	0.099
		722.89		-1.661E+00	9.704E+00	1.337E+01	1.228E+00	-0.124
		49.72		1.786E+01	2.839E+01	4.594E+01	5.075E+00	0.389
		111.76		1.937E+01	3.981E+01	6.816E+01	7.684E+00	0.284
		116.30		1.608E+00	3.780E+01	6.357E+01	7.138E+00	0.025
BA-133		228.16	*	2.151E-01	1.019E+00	1.665E+00	2.883E-01	0.129
		53.15		-1.342E+00	3.380E+00	5.189E+00	3.976E-01	-0.259
		79.62		-1.690E-01	1.132E+00	1.730E+00	2.645E-01	-0.098
		81.00		-1.223E-01	9.225E-02	1.301E-01	2.083E-02	-0.941
	+	276.40		6.554E-01	4.757E-01	5.790E-01	9.635E-02	1.132
I-133		302.84		-1.524E-01	1.559E-01	1.989E-01	3.072E-02	-0.766
		356.01	*	3.174E-02	4.162E-02	6.462E-02	9.338E-03	0.491
		383.85		-1.690E-01	2.612E-01	4.191E-01	5.550E-02	-0.403
	+	510.53		7.569E+00	2.612E-01	Half-Life	too short	
		529.87	*	-1.387E-02	2.612E-01	Half-Life	too short	
CS-134		706.58		-3.217E-01	2.612E-01	Half-Life	too short	
		856.28		1.892E+00	2.612E-01	Half-Life	too short	
		875.33		-1.960E-01	2.612E-01	Half-Life	too short	
		1236.41		9.273E+00	2.612E-01	Half-Life	too short	
		1298.22		-3.112E-01	2.612E-01	Half-Life	too short	
CS-134		475.35		6.958E-01	1.716E+00	2.926E+00	2.781E-01	0.238
		563.23		2.084E-01	3.210E-01	5.518E-01	5.234E-02	0.378
		569.32		-1.580E-01	1.886E-01	2.787E-01	2.647E-02	-0.567
		604.70		2.467E-02	3.388E-02	5.208E-02	4.823E-03	0.474

---- 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	*	1.229E-01	6.597E-02	9.151E-02	8.579E-03	1.344
		801.93		-4.182E-01	4.522E-01	6.070E-01	5.691E-02	-0.689
		1038.57		-8.672E-01	3.856E+00	6.225E+00	5.574E-01	-0.139
		1167.94		-8.610E-03	2.820E+00	4.606E+00	3.723E-01	-0.002
		1365.15		4.546E-02	1.132E+00	1.835E+00	1.629E-01	0.025
		268.24	*	1.611E-01	1.647E-01	2.501E-01	3.189E-02	0.644
		288.45		1.003E+12	1.647E-01	Half-Life	too short	
		417.63		-3.227E+12	1.647E-01	Half-Life	too short	
		546.56		7.576E+11	1.647E-01	Half-Life	too short	
		836.80		4.097E+12	1.647E-01	Half-Life	too short	
		1038.76		-1.379E+12	1.647E-01	Half-Life	too short	
		1124.00		3.409E+12	1.647E-01	Half-Life	too short	
		1131.51		2.409E+10	1.647E-01	Half-Life	too short	
		1260.41	*	6.104E+11	1.647E-01	Half-Life	too short	
		1457.56		1.070E+14	1.647E-01	Half-Life	too short	
		1678.03		1.310E+12	1.647E-01	Half-Life	too short	
		1706.46		3.088E+12	1.647E-01	Half-Life	too short	
		1791.20		3.304E+11	1.647E-01	Half-Life	too short	
CS-136		66.91		1.963E-01	8.789E-01	1.266E+00	1.890E-01	0.155
	+	86.29		3.725E+00	1.387E+00	1.996E+00	2.677E-01	1.867
		153.22		-4.265E-01	6.596E-01	1.060E+00	1.034E-01	-0.402
		163.89		4.198E-01	1.102E+00	1.806E+00	1.808E-01	0.232
		176.55		1.521E-01	3.660E-01	6.125E-01	5.994E-02	0.248
		273.65		4.202E-01	6.096E-01	7.380E-01	9.069E-02	0.569
		340.57		1.271E-01	1.337E-01	2.136E-01	2.362E-02	0.595
		818.51		-3.078E-02	7.700E-02	1.248E-01	1.170E-02	-0.247
		1048.07	*	6.200E-02	1.209E-01	2.084E-01	1.930E-02	0.298
		1235.34		4.533E-01	6.741E-01	1.152E+00	1.332E-01	0.394
CE-139 BA-140		165.85	*	-2.047E-02	2.634E-02	4.174E-02	3.786E-03	-0.490
		162.64		-5.341E-03	7.956E-01	1.284E+00	1.216E-01	-0.004
		304.84		1.238E+00	1.479E+00	2.176E+00	6.332E-01	0.569
		423.70		-1.858E+00	2.095E+00	3.120E+00	1.018E+00	-0.596
LA-140		537.32	*	-1.623E-01	2.733E-01	4.187E-01	1.397E-01	-0.388
	+	328.77		9.005E-01	5.075E-01	5.979E-01	6.891E-02	1.506
		432.53		7.801E-01	2.164E+00	3.693E+00	3.620E-01	0.211
		487.03		5.487E-02	1.446E-01	2.455E-01	2.455E-02	0.224
		751.79		1.857E-01	1.752E+00	2.833E+00	2.854E-01	0.066
		815.85		-1.775E-01	3.381E-01	5.417E-01	5.569E-02	-0.328
		867.82		-6.814E-02	1.557E+00	2.528E+00	2.491E-01	-0.027
		919.63		-3.691E-01	3.176E+00	5.239E+00	5.918E-01	-0.070
		925.24		3.571E-01	1.287E+00	2.193E+00	2.170E-01	0.163
		1596.49	*	-5.022E-02	7.819E-02	1.150E-01	9.791E-03	-0.437
CE-141 CE-143		145.44	*	3.349E-02	6.324E-02	9.683E-02	8.470E-03	0.346
		57.37		-2.853E-03	6.324E-02	Half-Life	too short	
		231.56		9.606E-05	6.324E-02	Half-Life	too short	
		293.26	*	1.587E-03	6.324E-02	Half-Life	too short	
	+	350.59		8.272E-02	6.324E-02	Half-Life	too short	
		490.36		1.621E-03	6.324E-02	Half-Life	too short	
		664.57		2.375E-03	6.324E-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		-3.404E-03	6.324E-02	Half-Life too short		
CE-144		80.11		3.599E-02	1.887E+00	2.906E+00	2.551E-01	0.012
		133.54	*	-2.360E-01	1.999E-01	2.952E-01	4.558E-02	-0.800
PM-144		476.78		2.791E-03	6.312E-02	1.049E-01	1.075E-02	0.027
		618.01		4.268E-03	2.790E-02	4.597E-02	4.318E-03	0.093
		696.49	*	9.713E-03	3.491E-02	5.712E-02	5.153E-03	0.170
		778.57		-7.098E-01	2.207E+00	3.408E+00	3.163E-01	-0.208
PR-144		696.49	*	6.590E-01	2.368E+00	3.875E+00	3.494E-01	0.170
		1489.15		1.187E+01	9.421E+00	1.875E+01	1.603E+00	0.633
PM-146		453.90	*	3.685E-02	4.041E-02	7.091E-02	8.098E-03	0.520
		633.02		2.914E-01	1.211E+00	2.001E+00	7.498E-01	0.146
		735.90		-5.445E-02	1.480E-01	2.279E-01	6.558E-02	-0.239
		747.13		-1.087E-01	9.072E-02	1.259E-01	1.812E-02	-0.863
ND-147	+	91.11		6.728E-01	2.489E-01	5.154E-01	5.152E-02	1.305
		319.41		1.865E+00	3.863E+00	6.290E+00	7.142E-01	0.297
		439.89		1.397E+00	6.283E+00	1.062E+01	1.003E+00	0.132
		531.02	*	-1.554E-01	6.127E-01	9.872E-01	1.527E-01	-0.157
PM-149		285.90	*	-2.077E+01	1.703E+02	2.696E+02	4.745E+01	-0.077
EU-152		121.78		-9.133E-03	6.383E-02	1.063E-01	1.026E-02	-0.086
		244.69		-1.344E-02	3.125E-01	4.471E-01	4.971E-02	-0.030
		344.27	*	2.630E-03	9.387E-02	1.407E-01	1.573E-02	0.019
		443.98		-5.131E-01	8.395E-01	1.333E+00	1.260E-01	-0.385
		778.89		-1.168E-01	2.508E-01	3.811E-01	3.536E-02	-0.306
		867.32		9.278E-02	8.371E-01	1.339E+00	1.263E-01	0.069
	+	964.01		3.551E-01	4.088E-01	5.442E-01	5.049E-02	0.652
		1085.78		-1.324E-01	3.819E-01	6.057E-01	5.259E-02	-0.219
		1112.02		-2.268E-01	3.222E-01	4.559E-01	3.878E-02	-0.498
		1407.95		1.672E-01	1.776E-01	3.200E-01	2.725E-02	0.522
GD-153		69.67		-8.873E-02	1.549E+00	2.393E+00	1.885E-01	-0.037
		83.37		1.138E+01	1.403E+01	2.217E+01	2.020E+00	0.514
		97.43	*	2.179E-02	7.346E-02	1.136E-01	1.009E-02	0.192
		103.18		-1.348E-01	9.154E-02	1.441E-01	1.242E-02	-0.935
EU-154		123.07		4.413E-02	4.485E-02	7.769E-02	8.644E-03	0.568
		247.94		1.268E-01	3.243E-01	5.333E-01	7.212E-02	0.238
		591.81		-1.113E-02	5.618E-01	9.148E-01	1.114E-01	-0.012
		723.30		-8.712E-02	2.015E-01	2.687E-01	2.680E-02	-0.324
		756.87		-2.879E-01	7.069E-01	1.082E+00	1.344E-01	-0.266
		873.19		-5.519E-02	2.864E-01	4.708E-01	6.043E-02	-0.117
		996.32		-4.066E-03	3.942E-01	5.654E-01	1.019E-01	-0.007
		1004.76		1.892E-02	2.124E-01	3.088E-01	3.709E-02	0.061
		1274.45	*	-7.536E-02	1.330E-01	2.030E-01	2.249E-02	-0.371
EU-155		48.70		-2.009E+00	2.379E+00	3.575E+00	2.937E-01	-0.562
		60.01		5.604E+00	4.871E+00	7.418E+00	5.299E-01	0.755
	+	86.54		3.075E-01	1.108E-01	1.673E-01	1.597E-02	1.838
		105.31	*	7.222E-02	9.249E-02	1.604E-01	1.387E-02	0.450
TB-160	+	86.79		8.377E-01	3.015E-01	4.592E-01	4.360E-02	1.824
		197.04		-3.296E-02	5.458E-01	8.793E-01	8.659E-02	-0.037
		215.65		2.958E-01	6.682E-01	1.109E+00	1.147E-01	0.267
		298.57		9.477E-02	1.609E-01	1.901E-01	2.231E-02	0.499

---- 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	*	-3.109E-02	1.365E-01	2.236E-01	2.112E-02	-0.139
		962.29		8.246E-01	5.599E-01	9.426E-01	8.750E-02	0.875
	+	966.15		2.488E-01	2.864E-01	4.334E-01	4.017E-02	0.574
		1177.93		-2.062E-01	3.578E-01	5.506E-01	4.435E-02	-0.374
		1271.85		2.981E-01	7.789E-01	1.309E+00	1.087E-01	0.228
		80.57		1.384E-01	2.349E-01	3.707E-01	3.271E-02	0.373
	+	184.41		1.742E-01	5.857E-02	6.378E-02	6.072E-03	2.731
		280.46		-2.914E-02	9.172E-02	1.269E-01	1.522E-02	-0.230
		410.95		1.233E-01	2.262E-01	3.906E-01	3.646E-02	0.316
		711.68	*	-1.130E-02	5.545E-02	8.740E-02	7.930E-03	-0.129
TM-171		752.31		8.832E-02	2.460E-01	4.076E-01	3.752E-02	0.217
		810.29		-1.884E-02	5.554E-02	9.073E-02	8.482E-03	-0.208
		51.35		-1.693E+01	2.915E+01	4.436E+01	3.496E+00	-0.382
		52.39		4.218E+00	1.455E+01	2.316E+01	1.795E+00	0.182
		59.40		1.745E+00	2.501E+01	3.915E+01	2.780E+00	0.045
LU-176		66.72	*	3.164E+00	2.878E+01	4.123E+01	3.159E+00	0.077
	+	88.36		6.051E-01	2.178E-01	3.121E-01	2.996E-02	1.939
		201.83		-9.646E-03	2.635E-02	4.219E-02	4.208E-03	-0.229
		306.84	*	2.141E-03	2.373E-02	3.789E-02	4.394E-03	0.057
LU-177		401.10		5.599E-01	5.788E+00	9.766E+00	9.073E-01	0.057
		112.95		-3.840E-01	1.783E+00	2.973E+00	2.489E-01	-0.129
LU-177M	+	208.36	*	3.592E+00	1.962E+00	2.435E+00	2.471E-01	1.475
		52.97		-7.875E-01	1.538E+00	2.346E+00	1.803E-01	-0.336
HF-181		54.07		6.256E-01	7.950E-01	1.292E+00	9.768E-02	0.484
		61.30		5.210E-01	1.473E+00	2.152E+00	1.561E-01	0.242
		121.62		-1.220E-01	3.312E-01	5.460E-01	4.532E-02	-0.224
		147.16		-3.769E-01	6.433E-01	9.227E-01	7.957E-02	-0.408
		171.86		-1.116E-01	4.384E-01	7.128E-01	6.564E-02	-0.157
		218.09		3.370E-01	7.837E-01	1.298E+00	1.351E-01	0.260
	+	268.79		1.098E+00	1.133E+00	1.367E+00	1.606E-01	0.803
		319.02		1.685E-01	2.613E-01	4.293E-01	4.877E-02	0.393
		367.43		-5.521E-01	8.218E-01	1.325E+00	1.336E-01	-0.417
		413.65	*	-2.742E-02	1.607E-01	2.658E-01	2.485E-02	-0.103
		56.28		2.125E-01	8.778E-01	1.390E+00	1.020E-01	0.153
		57.53		2.947E-02	4.773E-01	7.481E-01	5.412E-02	0.039
		65.20		-9.826E-02	9.894E-01	1.405E+00	1.061E-01	-0.070
		133.02		-6.811E-02	6.830E-02	9.611E-02	8.060E-03	-0.709
		136.25		3.994E-01	4.208E-01	7.260E-01	6.120E-02	0.550
W-181		345.85		-1.363E-02	1.923E-01	2.858E-01	3.063E-02	-0.048
		482.03	*	-7.809E-03	4.127E-02	6.740E-02	6.410E-03	-0.116
		56.28		8.145E-02	3.359E-01	5.318E-01	3.903E-02	0.153
TA-182		57.53		1.085E-02	1.828E-01	2.864E-01	2.072E-02	0.038
		65.20	*	-3.733E-02	3.759E-01	5.338E-01	4.031E-02	-0.070
		67.75		-3.505E-02	1.140E-01	1.595E-01	1.234E-02	-0.220
		100.10		1.039E-01	1.580E-01	2.733E-01	2.390E-02	0.380
		152.43		-7.423E-02	3.065E-01	5.023E-01	4.389E-02	-0.148
		222.10		-2.446E-01	3.294E-01	5.121E-01	5.386E-02	-0.478
	+	1001.68		1.233E+00	3.274E+00	3.762E+00	3.435E-01	0.328
	+	1121.28		6.570E-01	2.982E-01	3.564E-01	3.009E-02	1.843

---- 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		8.268E-02	2.971E-01	4.974E-01	4.022E-02	0.166
		1221.42	*	-6.111E-02	2.135E-01	3.389E-01	2.772E-02	-0.180
		1230.97		-3.056E-01	4.881E-01	7.499E-01	6.152E-02	-0.408
		57.98		4.243E-02	1.891E-01	2.985E-01	2.149E-02	0.142
		59.32		6.084E-03	1.042E-01	1.630E-01	1.159E-02	0.037
		67.20		-4.722E-02	2.089E-01	2.937E-01	2.260E-02	-0.161
RE-184		162.32	*	-1.254E-02	1.060E-01	1.703E-01	1.529E-02	-0.074
	+	208.81		2.646E+00	1.445E+00	1.789E+00	1.817E-01	1.479
		291.72		-6.125E-01	9.369E-01	1.244E+00	1.474E-01	-0.492
		57.98		1.544E-01	6.883E-01	1.087E+00	7.823E-02	0.142
		59.32		2.212E-02	3.790E-01	5.929E-01	4.214E-02	0.037
		67.20		-1.718E-01	7.599E-01	1.069E+00	8.224E-02	-0.161
OS-185		161.27		-1.612E-01	3.353E-01	5.418E-01	4.849E-02	-0.298
		216.55		-2.201E-03	2.420E-01	3.927E-01	4.071E-02	-0.006
		252.85	*	1.556E-01	2.200E-01	3.667E-01	4.156E-02	0.424
		318.01		1.712E-01	4.472E-01	7.248E-01	8.250E-02	0.236
		792.07		7.222E-01	9.903E-01	1.577E+00	1.468E-01	0.458
		903.28		7.301E-02	9.200E-01	1.546E+00	1.461E-01	0.047
		920.93		-1.036E-01	4.702E-01	7.686E-01	7.230E-02	-0.135
		59.72		2.053E-01	3.002E-01	4.466E-01	3.178E-02	0.460
		61.14		5.508E-02	1.633E-01	2.384E-01	1.726E-02	0.231
		69.30		-1.140E-01	2.655E-01	4.291E-01	3.369E-02	-0.266
		592.07		-1.455E-01	2.321E+00	3.765E+00	3.501E-01	-0.039
		646.12	*	-1.508E-02	3.930E-02	6.138E-02	5.517E-03	-0.246
RE-188		717.42		1.433E-02	8.863E-01	1.426E+00	1.297E-01	0.010
		874.81		-1.538E-01	5.673E-01	9.256E-01	8.740E-02	-0.166
		880.27		1.645E-01	7.591E-01	1.293E+00	1.221E-01	0.127
		155.03	*	6.126E-02	1.544E-01	2.597E-01	2.285E-02	0.236
		477.96		-6.847E-02	2.924E+00	4.836E+00	4.598E-01	-0.014
		633.10		9.727E-01	2.437E+00	4.100E+00	3.721E-01	0.237
W-188	+	63.58		1.324E+02	7.502E+01	9.186E+01	6.827E+00	1.441
IR-192		227.08		-6.359E+00	1.226E+01	1.929E+01	2.055E+00	-0.330
		290.67	*	-5.352E-01	7.220E+00	1.016E+01	1.205E+00	-0.053
	+	295.96		1.079E+00	2.023E-01	2.854E-01	3.375E-02	3.780
		308.46		-3.780E-02	9.418E-02	1.453E-01	1.686E-02	-0.260
		316.51	*	-1.623E-02	3.361E-02	5.141E-02	5.875E-03	-0.316
		468.07		6.221E-02	6.342E-02	1.015E-01	1.022E-02	0.613
AU-195		604.41		3.417E-01	4.678E-01	7.175E-01	9.642E-02	0.476
		612.46		1.256E-01	6.881E-01	1.001E+00	1.042E-01	0.125
		65.12		-1.455E-02	1.736E-01	2.467E-01	1.862E-02	-0.059
		66.83		1.085E-02	9.569E-02	1.371E-01	1.051E-02	0.079
	+	75.70		1.152E+00	2.198E-01	3.880E-01	3.247E-02	2.969
		98.88	*	1.186E-01	1.967E-01	3.397E-01	2.991E-02	0.349
TL-200	+	129.76		2.477E+00	3.427E+00	4.667E+00	3.897E-01	0.531
TL-201		367.94	*	-8.118E-04	3.427E+00	Half-Life too short		
		579.30		-4.948E-03	3.427E+00	Half-Life too short		
		828.27		6.858E-03	3.427E+00	Half-Life too short		
		1205.75		-4.140E-03	3.427E+00	Half-Life too short		
		68.90		-5.118E+00	6.518E+00	1.088E+01	8.512E-01	-0.470

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		70.82		1.716E+00	4.039E+00	6.363E+00	5.069E-01	0.270
		80.30		9.168E-01	7.246E+00	1.121E+01	9.863E-01	0.082
		135.34		2.364E+01	3.664E+01	6.258E+01	5.267E+00	0.378
TL-202		167.43	*	-6.053E+00	9.950E+00	1.591E+01	1.448E+00	-0.381
		68.90		-3.197E-01	4.071E-01	6.798E-01	5.317E-02	-0.470
		70.82		1.069E-01	2.516E-01	3.964E-01	3.158E-02	0.270
		80.30		5.713E-02	4.515E-01	6.986E-01	6.146E-02	0.082
HG-203		439.56	*	2.630E-02	7.371E-02	1.256E-01	1.185E-02	0.209
		70.83		4.244E-01	9.984E-01	1.571E+00	2.074E-01	0.270
		72.87		4.229E-01	5.889E-01	9.332E-01	1.203E-01	0.453
		82.60		-1.037E+00	9.646E-01	1.553E+00	2.176E-01	-0.668
BI-207		279.20	*	7.031E-03	4.407E-02	6.340E-02	7.727E-03	0.111
		72.80		1.137E-01	1.669E-01	2.648E-01	2.151E-02	0.429
	+	74.97		6.338E-01	1.209E-01	2.021E-01	1.679E-02	3.136
		84.90		2.635E-01	1.759E-01	2.836E-01	2.633E-02	0.929
		569.67		-1.855E-02	2.943E-02	4.441E-02	4.169E-03	-0.418
		1063.62	*	1.081E-02	5.179E-02	8.622E-02	7.600E-03	0.125
TL-207		1770.23		-7.213E-02	4.110E-01	5.469E-01	4.520E-02	-0.132
		81.07		-2.679E-01	2.003E-01	2.871E-01	2.548E-02	-0.933
		83.78		1.388E-01	1.183E-01	1.891E-01	1.732E-02	0.734
		94.90		1.026E-01	2.033E-01	3.176E-01	2.872E-02	0.323
		122.32		1.303E+00	1.505E+00	2.605E+00	2.332E-01	0.500
	+	144.24		7.220E-01	9.828E-01	1.113E+00	1.068E-01	0.649
		154.21		1.998E-01	3.512E-01	5.946E-01	5.721E-02	0.336
	+	269.46		2.547E-01	2.628E-01	3.264E-01	3.883E-02	0.780
		323.87	*	-5.086E-01	7.106E-01	9.225E-01	1.765E-01	-0.551
	+	338.28		5.765E+00	1.875E+00	2.355E+00	3.301E-01	2.448
		445.03		-8.412E-01	1.943E+00	3.125E+00	3.967E-01	-0.269
PO-209		260.50		-8.455E-01	8.968E+00	1.431E+01	1.651E+00	-0.059
		262.80		4.212E+00	2.379E+01	3.857E+01	4.471E+00	0.109
		896.60	*	3.901E+00	6.767E+00	1.187E+01	1.123E+00	0.328
BI-210		46.50	*	3.521E-01	3.483E+00	5.489E+00	5.119E-01	0.064
PB-210		46.50	*	3.521E-01	3.483E+00	5.489E+00	5.119E-01	0.064
PO-210		46.50	*	3.521E-01	3.483E+00	5.489E+00	4.636E-01	0.064
PB-211		404.84	*	-1.160E-01	8.476E-01	1.403E+00	8.806E-01	-0.083
		427.08		2.549E-01	1.878E+00	3.153E+00	1.963E+00	0.081
		831.96		-3.269E-01	1.200E+00	1.941E+00	1.219E+00	-0.168
BI-212		727.18	*	1.398E+00	5.608E-01	6.813E-01	7.118E-02	2.052
		785.46		6.420E-01	1.727E+00	2.990E+00	2.779E-01	0.215
		1620.62		3.760E-01	1.254E+00	2.172E+00	1.845E-01	0.173
PO-215		81.07		-2.679E-01	2.003E-01	2.871E-01	2.548E-02	-0.933
		83.78		1.388E-01	1.183E-01	1.891E-01	1.732E-02	0.734
		94.90		1.026E-01	2.033E-01	3.176E-01	2.872E-02	0.323
		122.32		1.303E+00	1.505E+00	2.605E+00	2.332E-01	0.500
	+	144.24		7.220E-01	9.828E-01	1.113E+00	1.068E-01	0.649
		154.21		1.998E-01	3.512E-01	5.946E-01	5.721E-02	0.336
	+	269.46		2.547E-01	2.628E-01	3.264E-01	3.883E-02	0.780
		323.87	*	-5.086E-01	7.106E-01	9.225E-01	1.765E-01	-0.551
	+	338.28		5.765E+00	1.875E+00	2.355E+00	3.301E-01	2.448

----- 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		-8.412E-01	1.943E+00	3.125E+00	3.967E-01	-0.269
		271.23		3.268E-01	3.376E-01	4.067E-01	5.325E-02	0.804
		401.81	*	2.232E-02	3.575E-01	6.018E-01	9.282E-02	0.037
RN-220		549.76	*	-2.556E+01	2.446E+01	3.646E+01	3.445E+00	-0.701
RA-223		81.07		-2.679E-01	2.003E-01	2.871E-01	2.548E-02	-0.933
		83.78		1.388E-01	1.183E-01	1.891E-01	1.732E-02	0.734
		94.90		1.026E-01	2.033E-01	3.176E-01	2.872E-02	0.323
AC-227		122.32		1.303E+00	1.505E+00	2.605E+00	2.332E-01	0.500
		144.24		7.220E-01	9.828E-01	1.113E+00	1.068E-01	0.649
		154.21		1.998E-01	3.512E-01	5.946E-01	5.721E-02	0.336
	+	269.46		2.547E-01	2.628E-01	3.264E-01	3.883E-02	0.780
		323.87	*	-5.086E-01	7.106E-01	9.225E-01	1.765E-01	-0.551
	+	338.28		5.765E+00	1.875E+00	2.355E+00	3.301E-01	2.448
		445.03		-8.412E-01	1.943E+00	3.125E+00	3.967E-01	-0.269
		79.80		-5.522E-02	1.441E+00	2.213E+00	4.770E-01	-0.025
		236.00		3.210E-02	2.297E-01	3.337E-01	4.650E-02	0.096
		256.20	*	6.981E-02	3.650E-01	5.923E-01	1.012E-01	0.118
	+	286.10		-6.802E-01	1.481E+00	2.290E+00	3.563E-01	-0.297
		299.80		3.361E+00	1.956E+00	2.522E+00	4.844E-01	1.333
TH-227		304.40		1.509E+00	1.901E+00	2.835E+00	5.677E-01	0.532
		334.20		4.222E-01	2.553E+00	3.306E+00	6.807E-01	0.128
		79.80		-5.522E-02	1.441E+00	2.213E+00	4.831E-01	-0.025
	+	94.00		1.573E+01	4.434E+00	3.569E+00	7.842E-01	4.409
		236.00		3.210E-02	2.297E-01	3.337E-01	4.312E-02	0.096
		256.20	*	6.981E-02	3.650E-01	5.923E-01	1.158E-01	0.118
	+	286.10		-6.802E-01	1.628E+00	2.290E+00	2.306E+00	-0.297
		299.80		3.361E+00	1.956E+00	2.522E+00	4.844E-01	1.333
		304.40		1.509E+00	1.901E+00	2.835E+00	5.677E-01	0.532
		334.20		4.222E-01	2.553E+00	3.306E+00	6.807E-01	0.128
		85.43		1.727E-01	1.725E-01	2.740E-01	2.560E-02	0.630
		88.47		3.483E-01	1.254E-01	1.784E-01	1.711E-02	1.952
TH-229	+	100.00		9.647E-02	1.615E-01	2.787E-01	2.439E-02	0.346
		193.63	*	-6.501E-01	4.717E-01	7.027E-01	6.857E-02	-0.925
		210.97		8.525E-01	7.390E-01	1.145E+00	1.170E-01	0.744
PA-231		283.67	*	3.771E-01	1.483E+00	2.401E+00	4.152E-01	0.157
TH-231	+	301.29		1.345E+00	7.641E-01	9.665E-01	1.409E-01	1.391
		81.07		-2.679E-01	2.003E-01	2.871E-01	2.548E-02	-0.933
		83.78		1.388E-01	1.183E-01	1.891E-01	1.732E-02	0.734
U-231		94.90		1.026E-01	2.033E-01	3.176E-01	2.872E-02	0.323
		122.32		1.303E+00	1.505E+00	2.605E+00	2.332E-01	0.500
		144.24		7.220E-01	9.828E-01	1.113E+00	1.068E-01	0.649
	+	154.21		1.998E-01	3.512E-01	5.946E-01	5.721E-02	0.336
		269.46		2.547E-01	2.628E-01	3.264E-01	3.883E-02	0.780
	+	323.87	*	-5.086E-01	7.106E-01	9.225E-01	1.765E-01	-0.551
		338.28		5.765E+00	1.875E+00	2.355E+00	3.301E-01	2.448
		445.03		-8.412E-01	1.943E+00	3.125E+00	3.967E-01	-0.269
		84.21		1.082E+01	7.146E+00	1.154E+00	1.062E+00	0.938
	+	92.29		2.209E+01	4.386E+00	5.938E+00	5.484E-01	3.720
		95.87	*	-5.355E-01	1.368E+00	2.041E+00	1.832E-01	-0.262

---- 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		-1.844E+00	2.499E+00	4.076E+00	3.453E-01	-0.452
	+	75.28		1.849E+01	4.239E+00	5.870E+00	8.915E-01	3.151
	+	86.59		4.994E+00	2.200E+00	2.721E+00	7.376E-01	1.835
	+	300.12		9.371E-01	5.384E-01	7.044E-01	1.188E-01	1.330
		311.98	*	-4.232E-02	5.962E-02	8.952E-02	1.046E-02	-0.473
		340.50		6.209E-01	6.003E-01	9.387E-01	2.322E-01	0.661
PA-234		398.62		-1.539E-01	1.821E+00	3.038E+00	8.157E-01	-0.051
		415.76		-7.989E-01	1.489E+00	2.385E+00	5.212E-01	-0.335
	+	63.00		3.759E+00	2.184E+00	2.639E+00	3.920E-01	1.424
		94.67		2.288E-01	1.518E-01	2.440E-01	3.101E-02	0.938
		98.44		1.887E-02	8.441E-02	1.368E-01	7.634E-02	0.138
		99.86		3.110E-01	4.052E-01	7.033E-01	6.159E-02	0.442
		111.00		-7.348E-02	1.575E-01	2.596E-01	3.099E-02	-0.283
		131.20		6.461E-02	1.025E-01	1.586E-01	1.326E-02	0.407
		152.70		-1.825E-01	2.960E-01	4.747E-01	8.122E-02	-0.384
	+	186.00		6.272E+00	2.826E+00	2.559E+00	8.058E-01	2.451
		226.40		-7.670E-02	3.741E-01	5.991E-01	8.744E-02	-0.128
		227.20		-2.103E-01	4.055E-01	6.380E-01	6.796E-02	-0.330
		248.90		-1.888E-01	7.512E-01	1.189E+00	2.800E-01	-0.159
	+	293.70		6.657E+00	1.597E+00	1.557E+00	2.973E-01	4.276
		369.80		1.913E-01	7.578E-01	1.295E+00	2.896E-01	0.148
		568.70		-7.148E-01	9.866E-01	1.481E+00	1.391E-01	-0.483
		569.50		-2.005E-01	2.617E-01	3.897E-01	3.659E-02	-0.515
		574.00		-2.028E-01	1.359E+00	2.194E+00	2.057E-01	-0.092
		699.00		1.565E-01	7.186E-01	1.176E+00	2.267E-01	0.133
		706.10		4.021E-01	1.031E+00	1.689E+00	7.545E-01	0.238
		733.00		1.722E-01	4.009E-01	5.879E-01	1.317E-01	0.293
		742.81		1.368E+00	1.642E+00	2.369E+00	1.594E+00	0.578
	+	796.30		2.385E+00	1.418E+00	1.722E+00	4.697E-01	1.385
		805.60		3.707E-01	9.521E-01	1.641E+00	5.064E-01	0.226
		819.60		4.227E-01	1.114E+00	1.916E+00	7.318E-01	0.221
		826.30		5.029E-02	7.881E-01	1.331E+00	5.973E-01	0.038
		831.60		-1.830E-01	6.092E-01	9.940E-01	2.989E-01	-0.184
		876.40		1.097E-01	7.977E-01	1.337E+00	1.375E+00	0.082
		880.51		-1.490E-02	2.740E-01	4.559E-01	4.307E-02	-0.033
		883.24		1.354E-01	2.895E-01	4.788E-01	3.224E-01	0.283
		899.00		-1.594E-01	7.771E-01	1.267E+00	5.562E-01	-0.126
		925.00		6.142E-01	1.172E+00	2.038E+00	1.914E-01	0.301
		926.50		7.968E-02	1.687E-01	2.907E-01	7.428E-02	0.274
		946.00	*	-2.717E-01	3.078E-01	4.634E-01	8.853E-02	-0.586
		949.00		5.275E-01	4.412E-01	8.030E-01	7.489E-02	0.657
		980.50		6.848E-02	6.479E-01	1.086E+00	1.001E-01	0.063
		1394.10		-1.571E+00	1.490E+00	1.308E+00	8.510E-01	-1.201
PA-234M		766.42		1.815E+01	1.637E+01	2.151E+01	1.094E+01	0.844
NP-236	+	1001.03	*	2.765E+00	7.338E+00	8.422E+00	8.768E-01	0.328
		94.67		1.757E-01	1.142E-01	1.853E-01	1.678E-02	0.948
		98.44		1.424E-02	6.332E-02	1.034E-01	9.127E-03	0.138
		111.00		-5.558E-02	1.191E-01	1.964E-01	1.651E-02	-0.283
		160.31	*	1.651E-02	7.380E-02	1.230E-01	1.098E-02	0.134

---- 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		3.872E-02	1.371E-01	2.343E-01	2.055E-02	0.165
		117.00	*	-4.213E-02	1.661E-01	2.758E-01	2.296E-02	-0.153
	+	209.75		2.044E+00	1.116E+00	1.377E+00	1.402E-01	1.485
		228.18		4.592E-02	2.117E-01	3.463E-01	3.698E-02	0.133
	+	277.60		3.197E-01	2.291E-01	2.936E-01	3.514E-02	1.089
AM-241		334.30		3.167E-01	1.450E+00	1.889E+00	2.081E-01	0.168
		59.54	*	8.373E-02	1.551E-01	2.291E-01	1.798E-02	0.365
CM-243		99.55		3.985E-02	1.411E-01	2.411E-01	2.115E-02	0.165
		103.76	*	-6.012E-02	8.295E-02	1.357E-01	1.166E-02	-0.443
		117.00		-4.335E-02	1.709E-01	2.838E-01	2.362E-02	-0.153
	+	209.75		2.015E+00	1.101E+00	1.357E+00	1.382E-01	1.485
		228.18		4.641E-02	2.140E-01	3.500E-01	3.738E-02	0.133
AM-246	+	277.60		3.224E-01	2.310E-01	2.960E-01	3.543E-02	1.089
		798.80		-5.328E-02	1.479E-01	2.076E-01	1.936E-02	-0.257
		1036.00		1.387E-01	3.171E-01	5.427E-01	4.866E-02	0.256
		1062.04		-6.873E-02	2.274E-01	3.603E-01	3.180E-02	-0.191
		1078.86	*	-2.576E-02	1.355E-01	2.186E-01	1.907E-02	-0.118
CM-247	+	278.00		1.326E+00	9.500E-01	1.240E+00	1.486E-01	1.069
		287.40		4.312E-01	1.124E+00	1.833E+00	2.183E-01	0.235
		402.60	*	-2.593E-02	3.342E-02	5.309E-02	4.936E-03	-0.488
CF-249		252.85		5.787E-01	8.185E-01	1.364E+00	1.546E-01	0.424
		333.44		-6.761E-02	2.349E-01	2.466E-01	2.722E-02	-0.274
		387.95	*	2.700E-02	3.440E-02	6.051E-02	5.677E-03	0.446
CF-251		176.60	*	4.820E-02	1.129E-01	1.890E-01	1.762E-02	0.255
		227.00		-1.858E-01	3.602E-01	5.669E-01	6.036E-02	-0.328
		285.00		3.207E-02	1.668E+00	2.663E+00	3.180E-01	0.012

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]G246440002          *
* Acquisition date   : 19-FEB-2010 17:57:37 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 02:00:02.02             Half life ratio : 8.000         *
*****
*                               SAMPLE DATA                               *
*
* Sample date       : 2-FEB-2010 12:00:00 Nuclide Library : SOLID                *
* Sample ID        : G246440002                 Analyst initials: MXR1          *
* Batch Number     : 950788                     Sample Quantity : 1.2831E+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	3.338E+01	3.403E+00	5.170E-01	0.000E+00
CD-109	2.604E+00	9.185E-01	1.178E+00	0.000E+00
SN-126	2.551E-01	8.999E-02	1.160E-01	0.000E+00
BA-137M	4.175E-02	5.976E-02	6.210E-02	0.000E+00
CS-137	4.413E-02	6.317E-02	6.564E-02	0.000E+00
TL-208	5.773E-01	8.992E-02	5.535E-02	0.000E+00
BI-211	3.563E+00	5.717E-01	3.105E-01	0.000E+00
PB-212	1.639E+00	2.172E-01	8.355E-02	0.000E+00
PO-212	1.639E+00	2.172E-01	8.355E-02	0.000E+00
BI-214	1.139E+00	1.862E-01	9.591E-02	0.000E+00
PB-214	1.239E+00	2.087E-01	1.082E-01	0.000E+00
PO-214	1.239E+00	2.087E-01	1.082E-01	0.000E+00
PO-216	1.639E+00	2.172E-01	8.355E-02	0.000E+00
PO-218	1.239E+00	2.087E-01	1.082E-01	0.000E+00
RA-224	5.057E+00	1.323E+00	9.508E-01	0.000E+00
RA-226	1.139E+00	1.862E-01	9.591E-02	0.000E+00
AC-228	1.747E+00	3.337E-01	2.092E-01	0.000E+00
RA-228	1.747E+00	3.337E-01	2.092E-01	0.000E+00
TH-228	1.667E+00	2.210E-01	8.500E-02	0.000E+00
TH-230	1.139E+00	1.862E-01	9.591E-02	0.000E+00
TH-232	1.747E+00	3.337E-01	2.092E-01	0.000E+00
TH-234	3.225E+00	1.859E+00	1.980E+00	0.000E+00
U-234	1.139E+00	1.862E-01	9.591E-02	0.000E+00
U-235	2.228E-01	2.989E-01	3.140E-01	0.000E+00
NP-237	7.491E-01	3.046E-01	3.850E-01	0.000E+00
U-238	3.225E+00	1.859E+00	1.980E+00	0.000E+00
AM-243	3.531E-01	6.602E-02	8.175E-02	0.000E+00
ANH-511	1.353E-01	6.363E-02	4.639E-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	-8.257E-02	3.002E-01	5.064E-01	0.000E+00	NOT IDENT.
NA-22	-3.499E-02	4.727E-02	7.259E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.913E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-8.444E-03	2.640E-02	4.118E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.984E-02	6.737E-02	0.000E+00	FAIL ABUN
SC-46	-1.222E-02	3.713E-02	6.191E-02	0.000E+00	FAIL ABUN
V-48	-4.786E-02	6.975E-02	1.103E-01	0.000E+00	NOT IDENT.
CR-51	5.392E-01	3.808E-01	6.763E-01	0.000E+00	NOT IDENT.
MN-52	1.913E-01	2.721E-01	4.920E-01	0.000E+00	NOT IDENT.
MN-54	1.362E-02	3.613E-02	6.417E-02	0.000E+00	NOT IDENT.
CO-56	-2.935E-04	3.708E-02	6.397E-02	0.000E+00	NOT IDENT.
CO-57	1.197E-02	2.157E-02	3.914E-02	0.000E+00	NOT IDENT.
CO-58	-4.084E-03	3.635E-02	6.240E-02	0.000E+00	NOT IDENT.
FE-59	1.949E-02	9.556E-02	1.637E-01	0.000E+00	FAIL ABUN
CO-60	-1.102E-02	4.006E-02	6.396E-02	0.000E+00	NOT IDENT.
ZN-65	1.998E-02	9.815E-02	1.465E-01	0.000E+00	NOT IDENT.
GE-68	-5.011E-01	1.164E+00	1.879E+00	0.000E+00	NOT IDENT.
AS-73	-2.042E-01	7.835E-01	1.301E+00	0.000E+00	NOT IDENT.
AS-74	-1.292E-02	9.080E-02	1.515E-01	0.000E+00	NOT IDENT.
SE-75	-5.111E-02	4.034E-02	6.179E-02	0.000E+00	NOT IDENT.
BR-77	-8.853E+00	1.651E+01	2.693E+01	0.000E+00	FAIL ABUN
SR-82	-1.634E-01	3.836E-01	6.051E-01	0.000E+00	NOT IDENT.
RB-83	-2.837E-02	5.991E-02	9.830E-02	0.000E+00	NOT IDENT.
RB-84	-1.215E-02	6.977E-02	1.182E-01	0.000E+00	NOT IDENT.
KR-85	5.037E+00	7.472E+00	1.188E+01	0.000E+00	NOT IDENT.
SR-85	2.641E-02	3.918E-02	6.228E-02	0.000E+00	NOT IDENT.
RB-86	-5.223E-01	7.937E-01	1.248E+00	0.000E+00	NOT IDENT.
Y-88	4.241E-02	3.039E-02	6.326E-02	0.000E+00	NOT IDENT.
ZR-88	1.728E-02	2.687E-02	4.877E-02	0.000E+00	NOT IDENT.
Y-91	-2.633E+00	1.984E+01	3.272E+01	0.000E+00	NOT IDENT.
NB-94	9.412E-03	3.384E-02	5.743E-02	0.000E+00	NOT IDENT.
NB-95	2.115E-02	4.966E-02	7.468E-02	0.000E+00	NOT IDENT.
NB-95M	-4.567E-03	1.252E-01	1.887E-01	0.000E+00	NOT IDENT.
ZR-95	-1.377E-02	6.435E-02	1.039E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.563E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.458E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.574E+01	1.956E+01	2.969E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.325E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.782E-03	3.125E-02	5.261E-02	0.000E+00	NOT IDENT.
RH-102	8.716E-03	2.585E-02	4.554E-02	0.000E+00	NOT IDENT.
RU-103	-1.169E-02	3.877E-02	6.498E-02	0.000E+00	FAIL ABUN
RH-106	-9.754E-02	2.717E-01	4.410E-01	0.000E+00	FAIL ABUN
RU-106	-9.754E-02	2.715E-01	4.410E-01	0.000E+00	FAIL ABUN
AG-108M	-1.707E-02	3.043E-02	5.081E-02	0.000E+00	NOT IDENT.
AG-110M	1.287E-02	3.802E-02	5.766E-02	0.000E+00	NOT IDENT.
IN-111	-2.636E-01	1.727E+00	2.570E+00	0.000E+00	NOT IDENT.
IN-113M	1.652E-02	3.817E-02	6.854E-02	0.000E+00	NOT IDENT.
SN-113	1.652E-02	3.817E-02	6.854E-02	0.000E+00	NOT IDENT.
IN-114M	0.000E+00	1.763E-01	2.997E-01	0.000E+00	NOT IDENT.
CD-115	1.552E+01	1.924E+01	3.468E+01	0.000E+00	NOT IDENT.
SN-117M	2.034E-02	5.513E-02	9.766E-02	0.000E+00	NOT IDENT.
SB-122	3.116E+00	3.081E+00	5.616E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.703E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.361E-02	2.588E-02	4.610E-02	0.000E+00	NOT IDENT.
I-124	2.582E-01	9.359E-01	1.496E+00	0.000E+00	FAIL ABUN
SB-124	2.205E-02	6.238E-02	1.123E-01	0.000E+00	FAIL ABUN
SB-125	-2.653E-02	8.429E-02	1.434E-01	0.000E+00	FAIL ABUN
TE-125M	5.805E+00	7.808E+00	1.433E+01	0.000E+00	NOT IDENT.
I-126	1.656E-01	2.124E-01	3.368E-01	0.000E+00	NOT IDENT.
SB-126	3.486E-02	1.784E-01	2.640E-01	0.000E+00	FAIL ABUN
SB-127	-5.192E-01	1.854E+00	3.009E+00	0.000E+00	NOT IDENT.
XE-127	-1.491E-02	4.385E-02	7.397E-02	0.000E+00	FAIL ABUN
I-131	2.948E-02	1.170E-01	2.090E-01	0.000E+00	NOT IDENT.
TE-132	2.151E-01	9.983E-01	1.714E+00	0.000E+00	NOT IDENT.
BA-133	3.174E-02	4.078E-02	6.607E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	3.107E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.466E-02	9.240E-02	0.000E+00	FAIL ABUN
CS-135	1.611E-01	1.614E-01	2.568E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.117E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.200E-02	1.185E-01	2.095E-01	0.000E+00	FAIL ABUN
CE-139	-2.047E-02	2.581E-02	4.317E-02	0.000E+00	NOT IDENT.
BA-140	-1.623E-01	2.679E-01	4.254E-01	0.000E+00	NOT IDENT.
LA-140	-5.022E-02	7.663E-02	1.148E-01	0.000E+00	FAIL ABUN
CE-141	3.349E-02	6.197E-02	1.003E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.589E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.360E-01	1.959E-01	3.063E-01	0.000E+00	NOT IDENT.
PM-144	9.713E-03	3.421E-02	5.780E-02	0.000E+00	NOT IDENT.

PR-144	6.590E-01	2.321E+00	3.921E+00	0.000E+00	NOT IDENT.
PM-146	3.685E-02	3.960E-02	7.223E-02	0.000E+00	NOT IDENT.
ND-147	-1.554E-01	6.004E-01	1.003E+00	0.000E+00	FAIL ABUN
PM-149	-2.077E+01	1.669E+02	2.765E+02	0.000E+00	NOT IDENT.
EU-152	2.630E-03	9.199E-02	1.439E-01	0.000E+00	FAIL ABUN
GD-153	2.179E-02	7.199E-02	1.184E-01	0.000E+00	NOT IDENT.
EU-154	-7.536E-02	1.303E-01	2.035E-01	0.000E+00	NOT IDENT.
EU-155	7.222E-02	9.064E-02	1.670E-01	0.000E+00	FAIL ABUN
TB-160	-3.109E-02	1.338E-01	2.254E-01	0.000E+00	FAIL ABUN
HO-166M	-1.130E-02	5.434E-02	8.841E-02	0.000E+00	FAIL ABUN
TM-171	3.164E+00	2.821E+01	4.321E+01	0.000E+00	NOT IDENT.
LU-176	2.141E-03	2.326E-02	3.882E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.923E+00	2.509E+00	0.000E+00	FAIL ABUN
LU-177M	-2.742E-02	1.574E-01	2.712E-01	0.000E+00	FAIL ABUN
HF-181	-7.809E-03	4.044E-02	6.859E-02	0.000E+00	NOT IDENT.
W-181	-3.733E-02	3.684E-01	5.597E-01	0.000E+00	NOT IDENT.
TA-182	-6.111E-02	2.092E-01	3.400E-01	0.000E+00	FAIL ABUN
RE-183	-1.254E-02	1.039E-01	1.762E-01	0.000E+00	FAIL ABUN
RE-184	1.556E-01	2.156E-01	3.769E-01	0.000E+00	NOT IDENT.
OS-185	-1.508E-02	3.852E-02	6.218E-02	0.000E+00	NOT IDENT.
RE-188	6.126E-02	1.513E-01	2.689E-01	0.000E+00	NOT IDENT.
W-188	-5.352E-01	7.075E+00	1.042E+01	0.000E+00	FAIL ABUN
IR-192	-1.623E-02	3.294E-02	5.265E-02	0.000E+00	FAIL ABUN
AU-195	1.186E-01	1.927E-01	3.540E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.550E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-6.053E+00	9.751E+00	1.645E+01	0.000E+00	NOT IDENT.
TL-202	2.630E-02	7.223E-02	1.280E-01	0.000E+00	NOT IDENT.
HG-203	7.031E-03	4.319E-02	6.506E-02	0.000E+00	NOT IDENT.
BI-207	1.081E-02	5.076E-02	8.666E-02	0.000E+00	FAIL ABUN
TL-207	-5.086E-01	6.964E-01	9.445E-01	0.000E+00	FAIL ABUN
PO-209	3.901E+00	6.632E+00	1.197E+01	0.000E+00	NOT IDENT.
BI-210	3.521E-01	3.414E+00	5.784E+00	0.000E+00	NOT IDENT.
PB-210	3.521E-01	3.414E+00	5.784E+00	0.000E+00	NOT IDENT.
PO-210	3.521E-01	3.414E+00	5.784E+00	0.000E+00	NOT IDENT.
PB-211	-1.160E-01	8.307E-01	1.432E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.496E-01	6.889E-01	0.000E+00	FAIL ABUN
PO-215	-5.086E-01	6.964E-01	9.445E-01	0.000E+00	FAIL ABUN
RN-219	2.232E-02	3.504E-01	6.142E-01	0.000E+00	FAIL ABUN
RN-220	-2.556E+01	2.397E+01	3.703E+01	0.000E+00	NOT IDENT.
RA-223	-5.086E-01	6.964E-01	9.445E-01	0.000E+00	FAIL ABUN
AC-227	6.981E-02	3.577E-01	6.086E-01	0.000E+00	FAIL ABUN
TH-227	6.981E-02	3.577E-01	6.086E-01	0.000E+00	FAIL ABUN
TH-229	-6.501E-01	4.623E-01	7.251E-01	0.000E+00	FAIL ABUN
PA-231	3.771E-01	1.454E+00	2.463E+00	0.000E+00	FAIL ABUN
TH-231	-5.086E-01	6.964E-01	9.445E-01	0.000E+00	FAIL ABUN
U-231	-5.355E-01	1.341E+00	2.128E+00	0.000E+00	FAIL ABUN
PA-233	-4.232E-02	5.843E-02	9.171E-02	0.000E+00	FAIL ABUN
PA-234	-2.717E-01	3.016E-01	4.667E-01	0.000E+00	FAIL ABUN
PA-234M	2.765E+00	7.192E+00	8.473E+00	0.000E+00	FAIL ABUN
NP-236	1.651E-02	7.233E-02	1.273E-01	0.000E+00	NOT IDENT.
NP-239	-4.213E-02	1.627E-01	2.867E-01	0.000E+00	FAIL ABUN
AM-241	8.373E-02	1.520E-01	2.405E-01	0.000E+00	NOT IDENT.
CM-243	-6.012E-02	8.130E-02	1.413E-01	0.000E+00	FAIL ABUN
AM-246	-2.576E-02	1.328E-01	2.196E-01	0.000E+00	NOT IDENT.
CM-247	-2.593E-02	3.275E-02	5.418E-02	0.000E+00	FAIL ABUN
CF-249	2.700E-02	3.372E-02	6.179E-02	0.000E+00	NOT IDENT.
CF-251	4.820E-02	1.106E-01	1.953E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration   : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440002.CNF;1
Sample date     : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:57:37
Sample ID      : G246440002           Sample quantity  : 1.28310E+02 GRAM
Detector name   : GAM16               Detector geometry: CAN
Elapsed live time: 0 02:00:00.00      Elapsed real time: 0 02:00:02.02  0.0%
Energy tolerance: 1.50000 keV         Analyst Initials : MXR1
Abundance limit : 75.00000            Sensitivity     : 5.00000
Batch ID       : 950788               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	1471	10.67*	1.208E+00	3.338E+01	3.338E+01	10.40
CD-109	88.03	202	3.72*	6.254E+00	2.537E+00	2.604E+00	35.99
SN-126	64.28	148	9.60	3.531E+00	1.277E+00	1.277E+00	58.02
	86.94	202	8.90	6.254E+00	1.061E+00	1.061E+00	54.15
	87.57	202	37.00*	6.254E+00	2.551E-01	2.551E-01	35.99
BA-137M	661.65	31	89.98*	2.406E+00	4.170E-02	4.175E-02	146.06
CS-137	661.65	31	85.12*	2.406E+00	4.408E-02	4.413E-02	146.06
TL-208	277.35	72	6.80	4.691E+00	6.630E-01	6.630E-01	72.19
	510.84	137	21.60	2.964E+00	6.263E-01	6.263E-01	48.71
	583.14	443	84.20*	2.668E+00	5.773E-01	5.773E-01	15.90
	860.37	54	12.46	1.919E+00	6.572E-01	6.572E-01	70.77
BI-211	72.87	-----	1.27	4.872E+00	-----	Line Not Found	-----
	351.07	621	12.94*	3.941E+00	3.563E+00	3.563E+00	16.37
PB-212	74.81	407	10.70	5.108E+00	2.178E+00	2.178E+00	21.25
	77.11	599	18.00	5.364E+00	1.815E+00	1.815E+00	15.18
	87.30	202	8.00	6.254E+00	1.180E+00	1.180E+00	37.36
	238.63	1305	44.60*	5.226E+00	1.639E+00	1.639E+00	13.53
	300.09	94	3.41	4.431E+00	1.814E+00	1.814E+00	56.46
PO-212	74.81	407	10.70	5.108E+00	2.178E+00	2.178E+00	21.25
	77.11	599	18.00	5.364E+00	1.815E+00	1.815E+00	15.18
	87.30	202	8.00	6.254E+00	1.180E+00	1.180E+00	37.36
	115.19	-----	0.60	7.166E+00	-----	Line Not Found	-----
	238.63	1305	44.60*	5.226E+00	1.639E+00	1.639E+00	13.53
	300.09	94	3.41	4.431E+00	1.814E+00	1.814E+00	56.46
BI-214	609.31	464	46.30*	2.574E+00	1.139E+00	1.139E+00	16.68
	1120.29	107	15.10	1.515E+00	1.372E+00	1.372E+00	45.87
	1764.49	78	15.80	1.056E+00	1.371E+00	1.371E+00	33.99
PB-214	74.81	407	6.21	5.108E+00	3.752E+00	3.752E+00	20.47
	77.11	599	10.50	5.364E+00	3.112E+00	3.112E+00	16.99
	87.30	202	4.67	6.254E+00	2.021E+00	2.021E+00	36.81
	241.98	354	7.49	5.182E+00	2.667E+00	2.667E+00	27.28
	295.21	408	19.20	4.488E+00	1.387E+00	1.387E+00	19.74

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	621	37.20*	3.941E+00	1.239E+00	1.239E+00	17.18
	74.81	407	6.21	5.108E+00	3.752E+00	3.752E+00	20.47
	77.11	599	10.50	5.364E+00	3.112E+00	3.112E+00	16.99
	87.30	202	4.67	6.254E+00	2.021E+00	2.021E+00	36.81
	241.98	354	7.49	5.182E+00	2.667E+00	2.667E+00	27.28
PO-216	295.21	408	19.20	4.488E+00	1.387E+00	1.387E+00	19.74
	351.92	621	37.20*	3.941E+00	1.239E+00	1.239E+00	17.18
	74.81	407	10.70	5.108E+00	2.178E+00	2.178E+00	21.25
	77.11	599	18.00	5.364E+00	1.815E+00	1.815E+00	15.18
	87.30	202	8.00	6.254E+00	1.180E+00	1.180E+00	37.36
PO-218	238.63	1305	44.60*	5.226E+00	1.639E+00	1.639E+00	13.53
	300.09	94	3.41	4.431E+00	1.814E+00	1.814E+00	56.46
	74.81	407	6.21	5.108E+00	3.752E+00	3.752E+00	20.47
	77.11	599	10.50	5.364E+00	3.112E+00	3.112E+00	16.99
	87.30	202	4.67	6.254E+00	2.021E+00	2.021E+00	36.81
RA-224	241.98	354	7.49	5.182E+00	2.667E+00	2.667E+00	27.28
	295.21	408	19.20	4.488E+00	1.387E+00	1.387E+00	19.74
	351.92	621	37.20*	3.941E+00	1.239E+00	1.239E+00	17.18
	240.98	354	3.95*	5.182E+00	5.057E+00	5.057E+00	26.70
	609.31	464	46.30*	2.574E+00	1.139E+00	1.139E+00	16.68
AC-228	1120.29	107	15.10	1.515E+00	1.372E+00	1.372E+00	45.87
	1764.49	78	15.80	1.056E+00	1.371E+00	1.371E+00	33.99
	338.32	218	11.40	4.058E+00	1.381E+00	1.381E+00	51.07
	911.07	302	27.70*	1.824E+00	1.747E+00	1.747E+00	19.49
	969.11	159	16.60	1.727E+00	1.621E+00	1.621E+00	32.97
TH-228	338.32	218	11.40	4.058E+00	1.381E+00	1.381E+00	51.07
	911.07	302	27.70*	1.824E+00	1.747E+00	1.747E+00	19.49
	969.11	159	16.60	1.727E+00	1.621E+00	1.621E+00	32.97
	74.81	407	10.70	5.108E+00	2.178E+00	2.216E+00	19.11
	77.11	599	18.00	5.364E+00	1.815E+00	1.847E+00	15.18
TH-230	87.30	202	8.00	6.254E+00	1.180E+00	1.200E+00	35.99
	238.63	1305	44.60*	5.226E+00	1.639E+00	1.667E+00	13.53
	300.09	94	3.41	4.431E+00	1.814E+00	1.845E+00	81.20
	609.31	464	46.30*	2.574E+00	1.139E+00	1.139E+00	16.68
	1120.29	107	15.10	1.515E+00	1.372E+00	1.372E+00	45.87
TH-232	1764.49	78	15.80	1.056E+00	1.371E+00	1.371E+00	33.99
	338.32	218	11.40	4.058E+00	1.381E+00	1.381E+00	31.31
	911.07	302	27.70*	1.824E+00	1.747E+00	1.747E+00	19.49
	969.11	159	16.60	1.727E+00	1.621E+00	1.621E+00	32.97
	63.29	148	3.80*	3.531E+00	3.225E+00	3.225E+00	58.82
U-234	92.38	497	5.41	6.595E+00	4.072E+00	4.072E+00	25.44
	609.31	464	46.30*	2.574E+00	1.139E+00	1.139E+00	16.68
	1120.29	107	15.10	1.515E+00	1.372E+00	1.372E+00	45.87
	1764.49	78	15.80	1.056E+00	1.371E+00	1.371E+00	33.99
	89.95	139	2.70	6.431E+00	2.342E+00	2.342E+00	47.26
U-235	93.35	497	4.50	6.595E+00	4.895E+00	4.895E+00	33.25
	105.00	-----	2.10	7.034E+00	-----	Line Not Found	-----
	143.76	55	10.50*	6.940E+00	2.228E-01	2.228E-01	136.90
	163.35	-----	4.70	6.588E+00	-----	Line Not Found	-----

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	185.71	264	54.00	6.151E+00	2.323E-01	2.323E-01	33.62
	205.31	-----	4.70	5.780E+00	-----	Line Not Found	-----
NP-237	86.50	202	12.60*	6.254E+00	7.491E-01	7.491E-01	41.49
	95.87	-----	2.60	6.742E+00	-----	Line Not Found	-----
U-238	63.29	148	3.80*	3.531E+00	3.225E+00	3.225E+00	58.82
	92.38	497	5.41	6.595E+00	4.072E+00	4.072E+00	19.86
AM-243	74.67	407	66.00*	5.108E+00	3.531E-01	3.531E-01	19.08
	86.72	202	0.34	6.254E+00	2.809E+01	2.809E+01	35.99
	117.66	-----	0.55	7.175E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.968E+00	-----	Line Not Found	-----
ANH-511	511.00	137	100.00*	2.964E+00	1.353E-01	1.353E-01	47.99

Flag: "*" = Keyline

Total number of lines in spectrum 37
Number of unidentified lines 2
Number of lines tentatively identified by NID 35 94.59%

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	3.338E+01	3.338E+01	0.347E+01	10.40	
CD-109	464.00D	1.03	2.537E+00	2.604E+00	0.937E+00	35.99	
SN-126	1.00E+05Y	1.00	2.551E-01	2.551E-01	0.918E-01	35.99	
BA-137M	30.17Y	1.00	4.170E-02	4.175E-02	6.098E-02	146.06	
CS-137	30.17Y	1.00	4.408E-02	4.413E-02	6.446E-02	146.06	
TL-208	1.41E+10Y	1.00	5.773E-01	5.773E-01	0.918E-01	15.90	
BI-211	7.04E+08Y	1.00	3.563E+00	3.563E+00	0.583E+00	16.37	
PB-212	1.41E+10Y	1.00	1.639E+00	1.639E+00	0.222E+00	13.53	
PO-212	1.41E+10Y	1.00	1.639E+00	1.639E+00	0.222E+00	13.53	
BI-214	1600.00Y	1.00	1.139E+00	1.139E+00	0.190E+00	16.68	
PB-214	1600.00Y	1.00	1.239E+00	1.239E+00	0.213E+00	17.18	
PO-214	1600.00Y	1.00	1.239E+00	1.239E+00	0.213E+00	17.18	
PO-216	1.41E+10Y	1.00	1.639E+00	1.639E+00	0.222E+00	13.53	
PO-218	1600.00Y	1.00	1.239E+00	1.239E+00	0.213E+00	17.18	
RA-224	1.41E+10Y	1.00	5.057E+00	5.057E+00	1.350E+00	26.70	
RA-226	1600.00Y	1.00	1.139E+00	1.139E+00	0.190E+00	16.68	
AC-228	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.341E+00	19.49	
RA-228	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.341E+00	19.49	
TH-228	1.91Y	1.02	1.639E+00	1.667E+00	0.226E+00	13.53	
TH-230	4.47E+09Y	1.00	1.139E+00	1.139E+00	0.190E+00	16.68	
TH-232	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.341E+00	19.49	
TH-234	4.47E+09Y	1.00	3.225E+00	3.225E+00	1.897E+00	58.82	
U-234	4.47E+09Y	1.00	1.139E+00	1.139E+00	0.190E+00	16.68	
U-235	7.04E+08Y	1.00	2.228E-01	2.228E-01	3.050E-01	136.90	
NP-237	2.14E+06Y	1.00	7.491E-01	7.491E-01	3.108E-01	41.49	
U-238	4.47E+09Y	1.00	3.225E+00	3.225E+00	1.897E+00	58.82	
AM-243	7380.00Y	1.00	3.531E-01	3.531E-01	0.674E-01	19.08	
ANH-511	1.00E+09Y	1.00	1.353E-01	1.353E-01	0.649E-01	47.99	

Total Activity : 7.344E+01 7.353E+01

Grand Total Activity : 7.344E+01 7.353E+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
0	129.04	46	348	0.64	258.27	255	7	6.36E-03	****	7.13E+00	T
0	209.02	129	331	1.06	418.23	413	9	1.80E-02	53.7	5.71E+00	T
0	270.13	57	239	1.17	540.45	537	9	7.87E-03	****	4.78E+00	T
0	328.05	103	184	1.48	656.28	652	11	1.43E-02	55.2	4.15E+00	T
0	463.70	40	133	1.13	927.56	922	10	5.51E-03	****	3.20E+00	T
0	727.66	125	97	1.67	1455.42	1447	15	1.74E-02	38.7	2.22E+00	T
0	769.70	15	108	0.99	1539.47	1533	10	2.11E-03	****	2.12E+00	
0	795.09	65	57	1.66	1590.25	1586	12	9.08E-03	52.8	2.06E+00	T
0	964.92	30	74	1.78	1929.81	1924	11	4.20E-03	****	1.73E+00	T
0	1001.34	13	73	0.87	2002.63	1996	12	1.85E-03	****	1.68E+00	T
0	1377.65	38	17	1.22	2754.97	2749	12	5.23E-03	58.2	1.27E+00	T
0	1662.14	14	1	0.97	3323.67	3321	6	1.91E-03	60.5	1.10E+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]G246440002.CNF;1
* Acquisition date   : 19-FEB-2010 17:57:37   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 02:00:02.02          Half life ratio    : 8.00000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library  : SOLID
* Sample ID          : G246440002             Analyst initials: MXR1
* Batch Number       : 950788                 Sample Quantity   : 1.28310E+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	3.338E+01	3.472E+00	5.169E-01	4.544E-02	64.577
CD-109	2.604E+00	9.372E-01	1.128E+00	1.087E-01	2.307
SN-126	2.551E-01	9.183E-02	1.111E-01	1.065E-02	2.297
BA-137M	4.175E-02	6.098E-02	6.132E-02	5.442E-03	0.681
CS-137	4.413E-02	6.446E-02	6.482E-02	5.763E-03	0.681
TL-208	5.773E-01	9.176E-02	5.455E-02	5.407E-03	10.582
BI-211	3.563E+00	5.834E-01	3.036E-01	3.320E-02	11.736
PB-212	1.639E+00	2.217E-01	8.123E-02	9.617E-03	20.173
PO-212	1.639E+00	2.217E-01	8.123E-02	9.617E-03	20.173
BI-214	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
PB-214	1.239E+00	2.130E-01	1.058E-01	1.280E-02	11.711
PO-214	1.239E+00	2.130E-01	1.058E-01	1.280E-02	11.711
PO-216	1.639E+00	2.217E-01	8.123E-02	9.617E-03	20.173
PO-218	1.239E+00	2.130E-01	1.058E-01	1.280E-02	11.711
RA-224	5.057E+00	1.350E+00	9.245E-01	1.019E-01	5.469
RA-226	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
AC-228	1.747E+00	3.405E-01	2.076E-01	2.466E-02	8.416
RA-228	1.747E+00	3.405E-01	2.076E-01	2.466E-02	8.416

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.667E+00	2.255E-01	8.263E-02	9.784E-03	20.173
TH-230	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
TH-232	1.747E+00	3.405E-01	2.076E-01	2.466E-02	8.416
TH-234	3.225E+00	1.897E+00	1.888E+00	3.292E-01	1.708
U-234	1.139E+00	1.900E-01	9.459E-02	1.000E-02	12.045
U-235	2.228E-01	3.050E-01	3.030E-01	5.295E-02	0.735
NP-237	7.491E-01	3.108E-01	3.687E-01	8.369E-02	2.032
U-238	3.225E+00	1.897E+00	1.888E+00	3.292E-01	1.708
AM-243	3.531E-01	6.737E-02	7.812E-02	6.467E-03	4.520
ANH-511	1.353E-01	6.493E-02	4.563E-02	4.339E-03	2.965

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-8.257E-02		3.063E-01	4.975E-01	5.033E-02	-0.166
NA-22	-3.499E-02		4.824E-02	7.242E-02	6.026E-03	-0.483
NA-24	-5.604E+00		3.527E+00	Half-Life too short		
AL-26	-8.444E-03		2.693E-02	4.132E-02	3.379E-03	-0.204
TI-44	3.350E-01	+	5.086E-02	6.442E-02	5.547E-03	5.200
SC-46	-1.222E-02		3.789E-02	6.142E-02	5.806E-03	-0.199
V-48	-4.786E-02		7.118E-02	1.096E-01	1.009E-02	-0.437
CR-51	5.392E-01		3.885E-01	6.604E-01	7.721E-02	0.816
MN-52	1.913E-01		2.777E-01	4.918E-01	4.196E-02	0.389
MN-54	1.362E-02		3.687E-02	6.359E-02	5.973E-03	0.214
CO-56	-2.935E-04		3.784E-02	6.341E-02	5.967E-03	-0.005
CO-57	1.197E-02		2.201E-02	3.767E-02	3.130E-03	0.318
CO-58	-4.084E-03		3.709E-02	6.182E-02	5.791E-03	-0.066
FE-59	1.949E-02		9.751E-02	1.630E-01	1.515E-02	0.120
CO-60	-1.102E-02		4.088E-02	6.386E-02	5.387E-03	-0.173
ZN-65	1.998E-02		1.002E-01	1.459E-01	1.239E-02	0.137
GE-68	-5.011E-01		1.188E+00	1.870E+00	1.633E-01	-0.268
AS-73	-2.042E-01		7.995E-01	1.237E+00	9.436E-02	-0.165
AS-74	-1.292E-02		9.265E-02	1.493E-01	1.386E-02	-0.087
SE-75	-5.111E-02		4.117E-02	6.016E-02	7.020E-03	-0.850
BR-77	-8.853E+00		1.685E+01	2.650E+01	2.517E+00	-0.334
SR-82	-1.634E-01		3.915E-01	5.990E-01	5.554E-02	-0.273
RB-83	-2.837E-02		6.114E-02	9.671E-02	9.189E-03	-0.293
RB-84	-1.215E-02		7.119E-02	1.172E-01	1.108E-02	-0.104
KR-85	5.037E+00		7.625E+00	1.168E+01	1.111E+00	0.431
SR-85	2.641E-02		3.998E-02	6.126E-02	5.824E-03	0.431
RB-86	-5.223E-01		8.099E-01	1.242E+00	1.085E-01	-0.421
Y-88	4.241E-02		3.101E-02	6.348E-02	5.154E-03	0.668
ZR-88	1.728E-02		2.741E-02	4.778E-02	4.419E-03	0.362
Y-91	-2.633E+00		2.025E+01	3.262E+01	2.652E+00	-0.081
NB-94	9.412E-03		3.453E-02	5.676E-02	5.131E-03	0.166
NB-95	2.115E-02		5.068E-02	7.391E-02	6.832E-03	0.286
NB-95M	-4.567E-03		1.277E-01	1.834E-01	2.181E-02	-0.025

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-1.377E-02		6.566E-02	1.028E-01	1.032E-02	-0.134
NB-97	2.546E-01		4.369E-01	Half-Life too short		
ZR-97	1.123E+01		7.440E+00	Half-Life too short		
MO-99	-1.574E+01		1.996E+01	2.937E+01	4.553E+00	-0.536
TC-99M	7.687E+12		6.758E+12	Half-Life too short		
RH-101	-6.782E-03		3.189E-02	5.100E-02	5.036E-03	-0.133
RH-102	8.716E-03		2.638E-02	4.474E-02	4.252E-03	0.195
RU-103	-1.169E-02		3.957E-02	6.389E-02	9.407E-03	-0.183
RH-106	-9.754E-02		2.772E-01	4.351E-01	5.962E-02	-0.224
RU-106	-9.754E-02		2.770E-01	4.351E-01	3.979E-02	-0.224
AG-108M	-1.707E-02		3.106E-02	4.985E-02	4.852E-03	-0.342
AG-110M	1.287E-02		3.879E-02	5.693E-02	5.211E-03	0.226
IN-111	-2.636E-01		1.762E+00	2.500E+00	2.784E-01	-0.105
IN-113M	1.652E-02		3.895E-02	6.713E-02	6.372E-03	0.246
SN-113	1.652E-02		3.895E-02	6.713E-02	6.372E-03	0.246
IN-114M	3.456E-01		1.799E-01	2.903E-01	2.808E-02	1.190
CD-115	1.552E+01		1.964E+01	3.412E+01	3.239E+00	0.455
SN-117M	2.034E-02		5.626E-02	9.436E-02	8.381E-03	0.216
SB-122	3.116E+00		3.143E+00	5.532E+00	5.204E-01	0.563
I-123	4.051E+01		3.930E+01	Half-Life too short		
TE-123M	1.361E-02		2.641E-02	4.455E-02	3.984E-03	0.306
I-124	2.582E-01		9.550E-01	1.475E+00	1.364E-01	0.175
SB-124	2.205E-02		6.365E-02	1.126E-01	9.861E-03	0.196
SB-125	-2.653E-02		8.601E-02	1.406E-01	1.344E-02	-0.189
TE-125M	5.805E+00		7.967E+00	1.377E+01	1.402E+00	0.422
I-126	1.656E-01		2.168E-01	3.326E-01	2.959E-02	0.498
SB-126	3.486E-02		1.821E-01	2.611E-01	2.377E-02	0.134
SB-127	-5.192E-01		1.892E+00	2.973E+00	3.652E-01	-0.175
XE-127	-1.491E-02		4.475E-02	7.174E-02	7.175E-03	-0.208
I-131	2.948E-02		1.194E-01	2.045E-01	2.165E-02	0.144
TE-132	2.151E-01		1.019E+00	1.665E+00	2.883E-01	0.129
BA-133	3.174E-02		4.162E-02	6.462E-02	9.338E-03	0.491
I-133	-1.387E-02		1.585E-02	Half-Life too short		
CS-134	1.229E-01	+	6.597E-02	9.151E-02	8.579E-03	1.344
CS-135	1.611E-01		1.647E-01	2.501E-01	3.189E-02	0.644
I-135	6.104E+11		5.698E+11	Half-Life too short		
CS-136	6.200E-02		1.209E-01	2.084E-01	1.930E-02	0.298
CE-139	-2.047E-02		2.634E-02	4.174E-02	3.786E-03	-0.490
BA-140	-1.623E-01		2.733E-01	4.187E-01	1.397E-01	-0.388
LA-140	-5.022E-02		7.819E-02	1.150E-01	9.791E-03	-0.437
CE-141	3.349E-02		6.324E-02	9.683E-02	8.470E-03	0.346
CE-143	1.587E-03		2.851E-04	Half-Life too short		
CE-144	-2.360E-01		1.999E-01	2.952E-01	4.558E-02	-0.800
PM-144	9.713E-03		3.491E-02	5.712E-02	5.153E-03	0.170
PR-144	6.590E-01		2.368E+00	3.875E+00	3.494E-01	0.170
PM-146	3.685E-02		4.041E-02	7.091E-02	8.098E-03	0.520
ND-147	-1.554E-01		6.127E-01	9.872E-01	1.527E-01	-0.157
PM-149	-2.077E+01		1.703E+02	2.696E+02	4.745E+01	-0.077

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	2.630E-03		9.387E-02	1.407E-01	1.573E-02	0.019
GD-153	2.179E-02		7.346E-02	1.136E-01	1.009E-02	0.192
EU-154	-7.536E-02		1.330E-01	2.030E-01	2.249E-02	-0.371
EU-155	7.222E-02		9.249E-02	1.604E-01	1.387E-02	0.450
TB-160	-3.109E-02		1.365E-01	2.236E-01	2.112E-02	-0.139
HO-166M	-1.130E-02		5.545E-02	8.740E-02	7.930E-03	-0.129
TM-171	3.164E+00		2.878E+01	4.123E+01	3.159E+00	0.077
LU-176	2.141E-03		2.373E-02	3.789E-02	4.394E-03	0.057
LU-177	3.592E+00	+	1.962E+00	2.435E+00	2.471E-01	1.475
LU-177M	-2.742E-02		1.607E-01	2.658E-01	2.485E-02	-0.103
HF-181	-7.809E-03		4.127E-02	6.740E-02	6.410E-03	-0.116
W-181	-3.733E-02		3.759E-01	5.338E-01	4.031E-02	-0.070
TA-182	-6.111E-02		2.135E-01	3.389E-01	2.772E-02	-0.180
RE-183	-1.254E-02		1.060E-01	1.703E-01	1.529E-02	-0.074
RE-184	1.556E-01		2.200E-01	3.667E-01	4.156E-02	0.424
OS-185	-1.508E-02		3.930E-02	6.138E-02	5.517E-03	-0.246
RE-188	6.126E-02		1.544E-01	2.597E-01	2.285E-02	0.236
W-188	-5.352E-01		7.220E+00	1.016E+01	1.205E+00	-0.053
IR-192	-1.623E-02		3.361E-02	5.141E-02	5.875E-03	-0.316
AU-195	1.186E-01		1.967E-01	3.397E-01	2.991E-02	0.349
TL-200	-8.118E-04		7.910E-04	Half-Life	too short	
TL-201	-6.053E+00		9.950E+00	1.591E+01	1.448E+00	-0.381
TL-202	2.630E-02		7.371E-02	1.256E-01	1.185E-02	0.209
HG-203	7.031E-03		4.407E-02	6.340E-02	7.727E-03	0.111
BI-207	1.081E-02		5.179E-02	8.622E-02	7.600E-03	0.125
TL-207	-5.086E-01		7.106E-01	9.225E-01	1.765E-01	-0.551
PO-209	3.901E+00		6.767E+00	1.187E+01	1.123E+00	0.328
BI-210	3.521E-01		3.483E+00	5.489E+00	5.119E-01	0.064
PB-210	3.521E-01		3.483E+00	5.489E+00	5.119E-01	0.064
PO-210	3.521E-01		3.483E+00	5.489E+00	4.636E-01	0.064
PB-211	-1.160E-01		8.476E-01	1.403E+00	8.806E-01	-0.083
BI-212	1.398E+00	+	5.608E-01	6.813E-01	7.118E-02	2.052
PO-215	-5.086E-01		7.106E-01	9.225E-01	1.765E-01	-0.551
RN-219	2.232E-02		3.575E-01	6.018E-01	9.282E-02	0.037
RN-220	-2.556E+01		2.446E+01	3.646E+01	3.445E+00	-0.701
RA-223	-5.086E-01		7.106E-01	9.225E-01	1.765E-01	-0.551
AC-227	6.981E-02		3.650E-01	5.923E-01	1.012E-01	0.118
TH-227	6.981E-02		3.650E-01	5.923E-01	1.158E-01	0.118
TH-229	-6.501E-01		4.717E-01	7.027E-01	6.857E-02	-0.925
PA-231	3.771E-01		1.483E+00	2.401E+00	4.152E-01	0.157
TH-231	-5.086E-01		7.106E-01	9.225E-01	1.765E-01	-0.551
U-231	-5.355E-01		1.368E+00	2.041E+00	1.832E-01	-0.262
PA-233	-4.232E-02		5.962E-02	8.952E-02	1.046E-02	-0.473
PA-234	-2.717E-01		3.078E-01	4.634E-01	8.853E-02	-0.586
PA-234M	2.765E+00	+	7.338E+00	8.422E+00	8.768E-01	0.328
NP-236	1.651E-02		7.380E-02	1.230E-01	1.098E-02	0.134
NP-239	-4.213E-02		1.661E-01	2.758E-01	2.296E-02	-0.153
AM-241	8.373E-02		1.551E-01	2.291E-01	1.798E-02	0.365

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-6.012E-02		8.295E-02	1.357E-01	1.166E-02	-0.443
AM-246	-2.576E-02		1.355E-01	2.186E-01	1.907E-02	-0.118
CM-247	-2.593E-02		3.342E-02	5.309E-02	4.936E-03	-0.488
CF-249	2.700E-02		3.440E-02	6.051E-02	5.677E-03	0.446
CF-251	4.820E-02		1.129E-01	1.890E-01	1.762E-02	0.255

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]G246440002
* Acquisition date   : 19-FEB-2010 17:57:37 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 02:00:02.02                      Half life ratio  : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246440002 Analyst initials: MXR1
* Batch Number       : 950788 Sample Quantity: 1.2831E+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	3.338E+01	3.403E+00	2.587E-01	1.736E+00
CD-109	2.604E+00	9.185E-01	5.894E-01	4.686E-01
SN-126	2.551E-01	8.999E-02	5.801E-02	4.591E-02
BA-137M	4.175E-02	5.976E-02	3.107E-02	3.049E-02
CS-137	4.413E-02	6.317E-02	3.284E-02	3.223E-02
TL-208	5.773E-01	8.992E-02	2.769E-02	4.588E-02
BI-211	3.563E+00	5.717E-01	1.553E-01	2.917E-01
PB-212	1.639E+00	2.172E-01	4.180E-02	1.108E-01
PO-212	1.639E+00	2.172E-01	4.180E-02	1.108E-01
BI-214	1.139E+00	1.862E-01	4.799E-02	9.499E-02
PB-214	1.239E+00	2.087E-01	5.415E-02	1.065E-01
PO-214	1.239E+00	2.087E-01	5.415E-02	1.065E-01
PO-216	1.639E+00	2.172E-01	4.180E-02	1.108E-01
PO-218	1.239E+00	2.087E-01	5.415E-02	1.065E-01
RA-224	5.057E+00	1.323E+00	4.757E-01	6.751E-01
RA-226	1.139E+00	1.862E-01	4.799E-02	9.499E-02
AC-228	1.747E+00	3.337E-01	1.047E-01	1.703E-01
RA-228	1.747E+00	3.337E-01	1.047E-01	1.703E-01
TH-228	1.667E+00	2.210E-01	4.252E-02	1.128E-01
TH-230	1.139E+00	1.862E-01	4.798E-02	9.499E-02
TH-232	1.747E+00	3.337E-01	1.047E-01	1.703E-01
TH-234	3.225E+00	1.859E+00	9.907E-01	9.484E-01
U-234	1.139E+00	1.862E-01	4.798E-02	9.499E-02
U-235	2.228E-01	2.989E-01	1.571E-01	1.525E-01
NP-237	7.491E-01	3.046E-01	1.926E-01	1.554E-01
U-238	3.225E+00	1.859E+00	9.907E-01	9.484E-01
AM-243	3.531E-01	6.602E-02	4.090E-02	3.369E-02
ANH-511	1.353E-01	6.363E-02	2.321E-02	3.246E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-8.257E-02	3.002E-01	2.533E-01	1.532E-01	NOT IDENT.
NA-22	-3.499E-02	4.727E-02	3.632E-02	2.412E-02	NOT IDENT.
NA-24	-5.604E+06	6.913E+06	0.000E+00	3.527E+06	SHORT HLIF
AL-26	-8.444E-03	2.640E-02	2.060E-02	1.347E-02	NOT IDENT.
TI-44	3.350E-01	4.984E-02	3.370E-02	2.543E-02	FAIL ABUN
SC-46	-1.222E-02	3.713E-02	3.097E-02	1.894E-02	FAIL ABUN
V-48	-4.786E-02	6.975E-02	5.518E-02	3.559E-02	NOT IDENT.
CR-51	5.392E-01	3.808E-01	3.383E-01	1.943E-01	NOT IDENT.
MN-52	1.913E-01	2.721E-01	2.462E-01	1.388E-01	NOT IDENT.
MN-54	1.362E-02	3.613E-02	3.210E-02	1.843E-02	NOT IDENT.
CO-56	-2.935E-04	3.708E-02	3.200E-02	1.892E-02	NOT IDENT.
CO-57	1.197E-02	2.157E-02	1.958E-02	1.101E-02	NOT IDENT.
CO-58	-4.084E-03	3.635E-02	3.122E-02	1.854E-02	NOT IDENT.
FE-59	1.949E-02	9.556E-02	8.192E-02	4.876E-02	FAIL ABUN
CO-60	-1.102E-02	4.006E-02	3.200E-02	2.044E-02	NOT IDENT.
ZN-65	1.998E-02	9.815E-02	7.332E-02	5.008E-02	NOT IDENT.
GE-68	-5.011E-01	1.164E+00	9.400E-01	5.941E-01	NOT IDENT.
AS-73	-2.042E-01	7.835E-01	6.507E-01	3.998E-01	NOT IDENT.
AS-74	-1.292E-02	9.080E-02	7.577E-02	4.633E-02	NOT IDENT.
SE-75	-5.111E-02	4.034E-02	3.091E-02	2.058E-02	NOT IDENT.
BR-77	-8.853E+00	1.651E+01	1.347E+01	8.425E+00	FAIL ABUN
SR-82	-1.634E-01	3.836E-01	3.027E-01	1.957E-01	NOT IDENT.
RB-83	-2.837E-02	5.991E-02	4.918E-02	3.057E-02	NOT IDENT.
RB-84	-1.215E-02	6.977E-02	5.913E-02	3.560E-02	NOT IDENT.
KR-85	5.037E+00	7.472E+00	5.942E+00	3.812E+00	NOT IDENT.
SR-85	2.641E-02	3.918E-02	3.116E-02	1.999E-02	NOT IDENT.
RB-86	-5.223E-01	7.937E-01	6.244E-01	4.050E-01	NOT IDENT.
Y-88	4.241E-02	3.039E-02	3.165E-02	1.550E-02	NOT IDENT.
ZR-88	1.728E-02	2.687E-02	2.440E-02	1.371E-02	NOT IDENT.
Y-91	-2.633E+00	1.984E+01	1.637E+01	1.012E+01	NOT IDENT.
NB-94	9.412E-03	3.384E-02	2.873E-02	1.726E-02	NOT IDENT.
NB-95	2.115E-02	4.966E-02	3.736E-02	2.534E-02	NOT IDENT.
NB-95M	-4.567E-03	1.252E-01	9.442E-02	6.386E-02	NOT IDENT.
ZR-95	-1.377E-02	6.435E-02	5.197E-02	3.283E-02	NOT IDENT.
NB-97	2.546E+05	8.563E+05	0.000E+00	4.369E+05	SHORT HLIF
ZR-97	1.123E+07	1.458E+07	0.000E+00	7.440E+06	SHORT HLIF
MO-99	-1.574E+01	1.956E+01	1.486E+01	9.980E+00	NOT IDENT.
TC-99M	7.687E+18	1.325E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.782E-03	3.125E-02	2.632E-02	1.594E-02	NOT IDENT.
RH-102	8.716E-03	2.585E-02	2.278E-02	1.319E-02	NOT IDENT.
RU-103	-1.169E-02	3.877E-02	3.251E-02	1.978E-02	FAIL ABUN
RH-106	-9.754E-02	2.717E-01	2.206E-01	1.386E-01	FAIL ABUN
RU-106	-9.754E-02	2.715E-01	2.206E-01	1.385E-01	FAIL ABUN
AG-108M	-1.707E-02	3.043E-02	2.542E-02	1.553E-02	NOT IDENT.
AG-110M	1.287E-02	3.802E-02	2.885E-02	1.940E-02	NOT IDENT.
IN-111	-2.636E-01	1.727E+00	1.286E+00	8.811E-01	NOT IDENT.
IN-113M	1.652E-02	3.817E-02	3.429E-02	1.947E-02	NOT IDENT.
SN-113	1.652E-02	3.817E-02	3.429E-02	1.947E-02	NOT IDENT.
IN-114M	3.456E-01	1.763E-01	1.499E-01	8.997E-02	NOT IDENT.
CD-115	1.552E+01	1.924E+01	1.735E+01	9.819E+00	NOT IDENT.
SN-117M	2.034E-02	5.513E-02	4.886E-02	2.813E-02	NOT IDENT.
SB-122	3.116E+00	3.081E+00	2.810E+00	1.572E+00	NOT IDENT.
I-123	4.051E+07	7.703E+07	0.000E+00	3.930E+07	SHORT HLIF
TE-123M	1.361E-02	2.588E-02	2.306E-02	1.320E-02	NOT IDENT.
I-124	2.582E-01	9.359E-01	7.485E-01	4.775E-01	FAIL ABUN
SB-124	2.205E-02	6.238E-02	5.621E-02	3.183E-02	FAIL ABUN
SB-125	-2.653E-02	8.429E-02	7.174E-02	4.301E-02	FAIL ABUN
TE-125M	5.805E+00	7.808E+00	7.170E+00	3.984E+00	NOT IDENT.
I-126	1.656E-01	2.124E-01	1.685E-01	1.084E-01	NOT IDENT.
SB-126	3.486E-02	1.784E-01	1.321E-01	9.104E-02	FAIL ABUN
SB-127	-5.192E-01	1.854E+00	1.505E+00	9.458E-01	NOT IDENT.
XE-127	-1.491E-02	4.385E-02	3.701E-02	2.237E-02	FAIL ABUN
I-131	2.948E-02	1.170E-01	1.046E-01	5.971E-02	NOT IDENT.
TE-132	2.151E-01	9.983E-01	8.576E-01	5.094E-01	NOT IDENT.
BA-133	3.174E-02	4.078E-02	3.305E-02	2.081E-02	FAIL ABUN
I-133	-1.387E+04	3.107E+04	0.000E+00	1.585E+04	SHORT HLIF
CS-134	1.229E-01	6.466E-02	4.623E-02	3.299E-02	FAIL ABUN
CS-135	1.611E-01	1.614E-01	1.285E-01	8.236E-02	NOT IDENT.
I-135	6.104E+17	1.117E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.200E-02	1.185E-01	1.048E-01	6.045E-02	FAIL ABUN
CE-139	-2.047E-02	2.581E-02	2.160E-02	1.317E-02	NOT IDENT.
BA-140	-1.623E-01	2.679E-01	2.128E-01	1.367E-01	NOT IDENT.
LA-140	-5.022E-02	7.663E-02	5.744E-02	3.910E-02	FAIL ABUN
CE-141	3.349E-02	6.197E-02	5.020E-02	3.162E-02	NOT IDENT.
CE-143	1.587E+03	5.589E+02	0.000E+00	2.851E+02	SHORT HLIF
CE-144	-2.360E-01	1.959E-01	1.532E-01	9.995E-02	NOT IDENT.
PM-144	9.713E-03	3.421E-02	2.892E-02	1.746E-02	NOT IDENT.

PR-144	6.590E-01	2.321E+00	1.962E+00	1.184E+00	NOT IDENT.
PM-146	3.685E-02	3.960E-02	3.614E-02	2.021E-02	NOT IDENT.
ND-147	-1.554E-01	6.004E-01	5.019E-01	3.063E-01	FAIL ABUN
PM-149	-2.077E+01	1.669E+02	1.383E+02	8.516E+01	NOT IDENT.
EU-152	2.630E-03	9.199E-02	7.202E-02	4.693E-02	FAIL ABUN
GD-153	2.179E-02	7.199E-02	5.923E-02	3.673E-02	NOT IDENT.
EU-154	-7.536E-02	1.303E-01	1.018E-01	6.650E-02	NOT IDENT.
EU-155	7.222E-02	9.064E-02	8.354E-02	4.624E-02	FAIL ABUN
TB-160	-3.109E-02	1.338E-01	1.128E-01	6.825E-02	FAIL ABUN
HO-166M	-1.130E-02	5.434E-02	4.423E-02	2.772E-02	FAIL ABUN
TM-171	3.164E+00	2.821E+01	2.162E+01	1.439E+01	NOT IDENT.
LU-176	2.141E-03	2.326E-02	1.942E-02	1.187E-02	FAIL ABUN
LU-177	3.592E+00	1.923E+00	1.255E+00	9.809E-01	FAIL ABUN
LU-177M	-2.742E-02	1.574E-01	1.357E-01	8.033E-02	FAIL ABUN
HF-181	-7.809E-03	4.044E-02	3.431E-02	2.063E-02	NOT IDENT.
W-181	-3.733E-02	3.684E-01	2.800E-01	1.880E-01	NOT IDENT.
TA-182	-6.111E-02	2.092E-01	1.701E-01	1.067E-01	FAIL ABUN
RE-183	-1.254E-02	1.039E-01	8.816E-02	5.302E-02	FAIL ABUN
RE-184	1.556E-01	2.156E-01	1.885E-01	1.100E-01	NOT IDENT.
OS-185	-1.508E-02	3.852E-02	3.111E-02	1.965E-02	NOT IDENT.
RE-188	6.126E-02	1.513E-01	1.345E-01	7.721E-02	NOT IDENT.
W-188	-5.352E-01	7.075E+00	5.212E+00	3.610E+00	FAIL ABUN
IR-192	-1.623E-02	3.294E-02	2.634E-02	1.681E-02	FAIL ABUN
AU-195	1.186E-01	1.927E-01	1.771E-01	9.833E-02	FAIL ABUN
TL-200	-8.118E+02	1.550E+03	0.000E+00	7.910E+02	SHORT HLIF
TL-201	-6.053E+00	9.751E+00	8.229E+00	4.975E+00	NOT IDENT.
TL-202	2.630E-02	7.223E-02	6.405E-02	3.685E-02	NOT IDENT.
HG-203	7.031E-03	4.319E-02	3.255E-02	2.203E-02	NOT IDENT.
BI-207	1.081E-02	5.076E-02	4.336E-02	2.590E-02	FAIL ABUN
TL-207	-5.086E-01	6.964E-01	4.726E-01	3.553E-01	FAIL ABUN
PO-209	3.901E+00	6.632E+00	5.988E+00	3.384E+00	NOT IDENT.
BI-210	3.521E-01	3.414E+00	2.894E+00	1.742E+00	NOT IDENT.
PB-210	3.521E-01	3.414E+00	2.894E+00	1.742E+00	NOT IDENT.
PO-210	3.521E-01	3.414E+00	2.894E+00	1.742E+00	NOT IDENT.
PB-211	-1.160E-01	8.307E-01	7.162E-01	4.238E-01	NOT IDENT.
BI-212	1.398E+00	5.496E-01	3.447E-01	2.804E-01	FAIL ABUN
PO-215	-5.086E-01	6.964E-01	4.726E-01	3.553E-01	FAIL ABUN
RN-219	2.232E-02	3.504E-01	3.073E-01	1.788E-01	FAIL ABUN
RN-220	-2.556E+01	2.397E+01	1.853E+01	1.223E+01	NOT IDENT.
RA-223	-5.086E-01	6.964E-01	4.726E-01	3.553E-01	FAIL ABUN
AC-227	6.981E-02	3.577E-01	3.045E-01	1.825E-01	FAIL ABUN
TH-227	6.981E-02	3.577E-01	3.045E-01	1.825E-01	FAIL ABUN
TH-229	-6.501E-01	4.623E-01	3.627E-01	2.359E-01	FAIL ABUN
PA-231	3.771E-01	1.454E+00	1.232E+00	7.416E-01	FAIL ABUN
TH-231	-5.086E-01	6.964E-01	4.726E-01	3.553E-01	FAIL ABUN
U-231	-5.355E-01	1.341E+00	1.065E+00	6.839E-01	FAIL ABUN
PA-233	-4.232E-02	5.843E-02	4.588E-02	2.981E-02	FAIL ABUN
PA-234	-2.717E-01	3.016E-01	2.335E-01	1.539E-01	FAIL ABUN
PA-234M	2.765E+00	7.192E+00	4.239E+00	3.669E+00	FAIL ABUN
NP-236	1.651E-02	7.233E-02	6.370E-02	3.690E-02	NOT IDENT.
NP-239	-4.213E-02	1.627E-01	1.434E-01	8.303E-02	FAIL ABUN
AM-241	8.373E-02	1.520E-01	1.203E-01	7.753E-02	NOT IDENT.
CM-243	-6.012E-02	8.130E-02	7.070E-02	4.148E-02	FAIL ABUN
AM-246	-2.576E-02	1.328E-01	1.099E-01	6.773E-02	NOT IDENT.
CM-247	-2.593E-02	3.275E-02	2.710E-02	1.671E-02	FAIL ABUN
CF-249	2.700E-02	3.372E-02	3.091E-02	1.720E-02	NOT IDENT.
CF-251	4.820E-02	1.106E-01	9.769E-02	5.644E-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	253.9028
46.50	253.9028
46.50	253.9028
48.70	285.2378
49.72	230.3262
51.35	269.6320
52.39	239.3440
52.97	268.5195
53.15	268.6600
53.44	268.8856
54.07	235.7018
56.28	246.8593
56.28	246.8608
57.37	0.0000
57.53	263.5040
57.53	263.5052
57.60	263.5549
57.98	279.6352
57.98	279.6352
59.32	302.6199
59.32	302.6199
59.40	306.3467
59.54	286.5201
59.72	286.6584
60.01	265.6916
61.10	302.4279
61.14	302.4594
61.30	302.5869
63.00	346.2403
63.29	346.5008
63.29	346.5008
63.58	346.7602
64.28	347.3830
65.12	356.8002
65.20	356.8711
65.20	356.8711
66.05	324.5233
66.72	339.9942
66.83	340.0880
66.91	333.5197
67.20	357.0058
67.20	357.0058
67.75	354.1658
67.85	354.2546
68.90	386.8508
68.90	386.8508
69.30	382.5549
69.67	370.8717
70.82	358.0786
70.82	358.0786
70.83	358.0873
72.80	383.7527
72.87	383.8153
72.87	383.8153
74.67	371.9080
74.81	372.0266
74.81	372.0266
74.81	372.0266
74.81	372.0266
74.81	372.0266
74.81	372.0266
74.97	372.1653
75.28	372.4316
75.70	372.7897
77.11	373.9893
77.11	373.9893

77.11	373.9893
77.11	373.9893
77.11	373.9893
77.11	373.9893
77.11	373.9893
78.38	370.7992
79.62	338.4897
79.80	338.6246
79.80	338.6246
80.11	343.9904
80.18	344.0436
80.30	344.1336
80.30	344.1336
80.57	314.7867
81.00	406.3939
81.07	406.4565
81.07	406.4565
81.07	406.4565
81.07	406.4565
82.60	385.4420
83.37	351.6086
83.78	340.2755
83.78	340.2755
83.78	340.2755
83.78	340.2755
84.21	322.4583
84.90	324.2283
85.43	341.4714
86.29	443.5482
86.50	448.9485
86.54	448.9854
86.59	449.0327
86.72	449.1538
86.79	449.2170
86.94	462.3867
87.30	423.6292
87.30	423.6292
87.30	423.6292
87.30	423.6292
87.30	423.6292
87.30	423.6292
87.30	423.6292
87.57	359.9611
87.88	360.1927
88.03	360.3043
88.36	360.5507
88.47	360.6328
89.95	395.8036
91.11	274.5628
92.29	275.2166
92.38	275.2661
92.38	275.2661
93.35	275.7986
94.00	276.1558
94.67	272.5486
94.67	272.5518
94.90	280.6163
94.90	280.6163
94.90	280.6163
94.90	280.6163
95.87	286.4548
95.87	286.4548
96.73	296.2365
97.43	271.3624
98.44	294.2793
98.44	294.2810
98.88	277.4545
99.55	290.2749
99.55	290.2749
99.86	269.0640
100.00	278.9376
100.10	278.9933
103.18	312.8802
103.76	290.7806
105.00	246.4687
105.31	255.6098
108.00	291.2278
109.28	242.0394

111.00	279.1494
111.00	279.1494
111.76	257.6707
112.95	291.0538
115.19	283.0253
116.30	267.9637
117.00	271.9596
117.00	271.9596
117.66	264.9053
121.11	274.7682
121.62	264.8156
121.78	258.4023
122.06	239.9908
122.32	228.9695
122.32	228.9695
122.32	228.9695
122.32	228.9695
123.07	229.2522
127.23	249.4936
129.76	270.2021
131.20	253.8913
133.02	299.8783
133.54	312.5754
135.34	252.6863
136.00	232.1025
136.25	242.6146
136.48	242.7005
140.51	248.9515
140.51	0.0000
142.18	278.2563
142.65	275.5811
143.76	263.5724
144.24	263.7570
144.24	263.7570
144.24	263.7570
144.24	263.7570
145.22	244.9275
145.44	245.0053
147.16	273.0689
152.43	273.6780
152.70	288.3441
153.22	280.7831
154.21	246.1464
154.21	246.1464
154.21	246.1464
154.21	246.1464
155.03	246.4295
156.02	275.0550
158.56	258.4033
159.00	0.0000
159.00	252.6801
160.31	264.9078
161.27	285.8848
162.32	255.7920
162.64	251.9635
163.35	239.3984
163.89	228.7267
165.85	252.0610
167.43	246.6443
171.28	232.9550
171.86	245.0866
172.10	245.1617
176.55	223.5104
176.60	223.5263
181.06	214.7031
184.41	227.7420
185.71	247.3657
186.00	247.4551
190.27	171.2625
192.34	226.8734
193.63	251.7856
197.04	243.5504
198.01	254.1157
198.60	238.8465
200.40	244.5051
201.83	243.8767
202.84	241.0563
205.31	234.9928

208.36	218.6261
208.81	218.7372
209.75	186.1227
209.75	186.1227
210.97	189.5093
215.65	187.8677
216.55	208.0144
218.09	199.9461
222.10	231.4644
223.80	206.4734
226.40	213.4153
227.00	223.1122
227.08	223.1314
227.20	223.1592
228.16	206.3658
228.18	206.3697
228.18	206.3697
231.56	0.0000
235.69	218.7069
236.00	213.9515
236.00	213.9515
238.63	193.5590
238.63	193.5590
238.63	193.5590
238.63	193.5590
239.00	193.6304
240.98	194.0204
241.98	194.2163
241.98	194.2163
241.98	194.2163
244.69	160.6635
245.39	170.5209
247.94	157.3842
248.90	174.9162
249.79	183.7693
252.40	166.7975
252.85	161.4173
252.85	161.4173
254.15	0.0000
256.20	178.3550
256.20	178.3550
260.50	170.3039
260.90	165.9704
262.80	148.6533
264.65	180.8998
268.24	157.7148
268.79	156.1350
269.46	171.1910
269.46	171.1910
269.46	171.1910
269.46	171.1910
271.23	196.4422
273.65	136.8160
276.40	189.0150
277.35	168.5294
277.60	168.5694
277.60	168.5694
278.00	168.6308
278.60	160.9014
279.20	162.6633
279.53	167.7460
280.46	176.2807
281.68	152.9432
283.67	160.5143
284.30	156.1120
285.00	158.4557
285.90	160.8343
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286.10	169.8596
287.40	138.5226
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290.67	132.1463
290.80	132.1606
291.72	147.5294
293.26	0.0000
293.70	120.6055
295.21	137.7727
295.21	137.7727

295.21	137.7727
295.96	170.2026
296.50	170.2820
297.23	170.3888
298.57	170.5841
299.80	138.3190
299.80	138.3190
300.09	138.3536
300.09	138.3536
300.09	138.3536
300.09	138.3536
300.12	138.3585
301.29	129.9478
302.84	171.2097
303.76	162.7768
303.91	155.9425
304.40	121.7192
304.40	121.7192
304.84	120.0497
306.84	144.3032
308.46	151.3816
311.98	143.7759
316.51	145.4696
318.01	141.0253
319.02	139.9850
319.41	148.1302
320.08	121.5793
323.87	149.8307
323.87	149.8307
323.87	149.8307
323.87	149.8307
325.23	146.5078
328.77	124.7680
333.44	147.4717
334.20	124.1368
334.20	124.1368
334.30	124.1476
338.28	126.0043
338.28	126.0043
338.28	126.0043
338.28	126.0043
338.32	126.0087
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338.32	126.0087
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340.57	118.6377
344.27	118.9781
345.85	120.5419
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351.07	129.9221
351.92	130.0067
351.92	130.0067
351.92	130.0067
355.39	0.0000
356.01	95.7523
364.48	104.2683
366.43	111.6201
367.43	127.0153
367.94	0.0000
369.80	110.0915
374.96	112.3163
383.85	115.7681
387.95	93.2499
388.63	99.6960
391.69	98.0773
391.69	98.0773
392.90	97.2432
398.62	105.9191
400.65	88.5425
401.10	102.4094
401.81	103.3816
402.60	124.6797
404.84	116.5446
410.95	110.5275
411.60	123.5835
413.65	112.5882
414.70	104.2874
415.30	108.9859

415.76	112.7470
417.63	0.0000
418.52	98.9512
423.70	120.8351
427.08	101.3884
427.89	112.7142
432.53	100.8072
433.93	116.9274
439.47	100.3115
439.56	101.2627
439.89	103.1771
443.98	98.7013
444.90	91.1616
445.03	91.1704
445.03	91.1704
445.03	91.1704
445.03	91.1704
453.90	85.9488
463.38	103.7450
468.07	66.2784
473.00	84.0622
475.06	85.1345
475.35	83.2141
476.78	94.9061
477.59	97.8592
477.96	94.9734
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484.57	96.3202
487.03	87.6915
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492.35	90.8984
497.08	95.0699
507.63	0.0000
510.53	0.0000
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511.00	98.7961
511.85	98.8426
511.85	98.8426
513.99	98.1707
513.99	98.1707
520.41	80.4488
520.65	80.4611
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528.96	0.0000
529.64	95.8389
529.87	0.0000
531.02	90.9167
537.32	89.2254
543.00	85.4773
546.56	0.0000
549.76	94.8749
552.65	71.7714
555.20	70.8566
563.23	68.1082
563.90	62.0294
568.70	91.7496
569.32	86.6809
569.50	86.6887
569.67	84.6566
573.80	79.7281
574.00	79.7353
574.64	82.8292
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579.30	0.0000
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591.81	73.2448
592.07	73.2534
593.00	81.5459
595.88	80.6303
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602.52	0.0000
602.71	81.5979
602.71	81.5979
603.60	84.6779
604.41	69.7635
604.70	69.7737
609.31	68.6829

609.31	68.6829
609.31	68.6829
609.31	68.6829
610.33	61.6372
612.46	68.3727
614.37	53.4141
618.01	63.7514
621.84	67.0117
621.84	67.0117
631.29	64.1628
633.02	58.9531
633.10	54.7438
634.78	61.1099
635.90	60.0876
636.97	56.9548
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646.12	69.9135
656.30	85.1465
657.75	73.2764
657.90	0.0000
661.65	94.9618
661.65	94.9618
664.57	0.0000
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666.33	65.0119
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677.61	63.4131
685.20	72.2589
692.80	77.9150
695.00	88.8242
696.49	74.7907
696.49	74.7907
697.00	81.3126
697.49	86.7529
698.33	83.5302
698.50	88.9618
699.00	81.3858
702.63	83.6900
706.10	71.8431
706.58	0.0000
706.67	78.3940
709.31	74.1239
711.68	66.5624
713.82	62.2550
717.42	71.1037
720.50	71.8561
721.93	0.0000
722.20	94.7083
722.78	80.6977
722.78	80.6977
722.89	80.7021
722.95	84.2133
723.30	84.2250
724.18	77.2363
727.18	75.7972
733.00	52.8604
735.90	73.8742
739.58	79.5103
742.81	58.6093
744.21	46.4720
747.13	80.8708
751.79	57.7192
752.31	53.2910
753.82	49.9919
755.35	61.1398
756.15	60.0480
756.87	63.4031
763.93	57.1172
765.79	78.5963
766.42	73.2575
766.84	71.4824
776.49	69.5211
778.00	68.4426
778.57	66.2130
778.89	66.2220
783.80	74.2258
785.46	72.0254
792.07	52.6567

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796.30	55.1576
798.80	69.3912
801.93	75.5188
805.60	60.8054
810.29	66.3737
810.76	61.8392
815.85	65.6068
817.79	56.5372
818.51	62.9372
819.60	50.1888
826.30	62.2127
828.27	0.0000
831.60	72.4250
831.96	73.3516
834.83	69.7601
836.80	0.0000
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848.13	63.6565
856.28	0.0000
856.80	50.9059
860.37	55.6084
867.32	58.0750
867.82	61.9580
871.10	53.9686
873.19	60.5281
874.81	60.5646
875.33	0.0000
876.40	55.0057
879.36	60.6661
880.27	56.0186
880.51	60.6915
881.50	61.6478
883.24	52.3400
884.67	58.9133
889.25	59.9484
896.60	46.0200
898.02	51.6820
899.00	56.4009
903.28	53.6629
911.07	59.4762
911.07	59.4762
911.07	59.4762
919.63	64.3925
920.93	67.2645
925.00	54.0776
925.24	58.8258
926.50	50.3099
935.52	50.4678
937.48	65.7488
944.10	68.7656
946.00	71.6766
949.00	45.9211
962.29	43.2466
964.01	49.6825
966.15	28.8691
968.20	28.8889
969.11	67.4297
969.11	67.4297
969.11	67.4297
977.42	41.5366
980.50	44.4805
983.50	55.1728
989.30	53.3403
996.32	51.8438
1001.03	48.6792
1001.68	42.1982
1004.76	43.8651
1021.30	0.0000
1024.50	0.0000
1034.80	52.1693
1036.00	58.0983
1037.82	63.0563
1038.57	58.1444
1038.76	0.0000
1045.16	49.3799
1046.59	52.3660
1048.07	51.4008

1050.47	52.4307
1050.47	52.4307
1062.04	56.5937
1063.62	50.6613
1076.63	56.8497
1077.35	54.8684
1078.86	52.8965
1085.78	55.0107
1099.22	59.2535
1112.02	61.7524
1112.84	57.1481
1115.52	57.1924
1120.29	61.6553
1120.29	61.6553
1120.29	61.6553
1120.29	61.6553
1120.51	61.6583
1121.28	61.6731
1124.00	0.0000
1129.67	61.9406
1131.51	0.0000
1147.95	0.0000
1167.94	76.8750
1173.22	66.7266
1175.09	58.5475
1177.93	63.7347
1189.05	53.6250
1204.90	72.5122
1205.75	0.0000
1213.00	74.7562
1221.42	80.1356
1230.97	75.1289
1235.34	69.9967
1236.41	0.0000
1238.25	69.0067
1246.25	60.7782
1260.41	0.0000
1271.85	51.7036
1274.45	63.3574
1274.54	66.5253
1291.56	40.3101
1298.22	0.0000
1312.09	49.0614
1325.50	41.7422
1325.50	41.7422
1332.49	41.8165
1333.61	27.8865
1360.21	16.1982
1362.66	0.0000
1365.15	25.9500
1368.21	30.2982
1368.53	0.0000
1376.25	30.7212
1384.27	21.7295
1394.10	34.8531
1395.20	29.4152
1407.95	21.8584
1434.06	17.5992
1436.60	22.9299
1457.56	0.0000
1460.81	23.9867
1489.15	8.3591
1509.49	14.9316
1596.49	19.9900
1620.62	20.0968
1678.03	0.0000
1691.02	9.7160
1691.02	9.7160
1706.46	0.0000
1750.46	0.0000
1764.49	10.8518
1764.49	10.8518
1764.49	10.8518
1764.49	10.8518
1770.23	10.1589
1771.40	25.6858
1791.20	0.0000
1808.65	12.9397

1836.01

5.0039

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440002

Total Uranium Activity	9.6974E+00	ug/g
Total Uranium Counting Unc.	5.5319E+00	ug/g
Total Uranium Tpu	2.8224E-06	ug/g
Total Uranium Mda	2.9481E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 950788                      SAMPLE ID : G246440002
*  ANALYST       : MXR1                        DETECTOR  : GAM16
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00    COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 17:57:37.06    SAMPLE ALQT: 128.310 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.843E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.717E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.396E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.644E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 19:59:14.59

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440003.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:58:08
Sample ID          : G246440003          Sample quantity  : 1.43180E+02 GRAM
Detector name      : GAM19              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.74  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 950788             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	63.43*	209	704	1.03	126.73	122	10	2.90E-02	25.1	
2	2	74.76	585	705	1.48	149.36	144	17	8.12E-02	9.3	5.43E+00
3	2	77.16	720	488	1.20	154.15	144	17	1.00E-01	6.5	
4	3	84.25*	166	688	1.48	168.33	164	29	2.30E-02	28.9	1.16E+00
5	3	87.28	312	655	1.45	174.39	164	29	4.33E-02	15.7	
6	3	89.81	164	420	0.99	179.45	164	29	2.27E-02	21.7	
7	3	92.77*	817	582	1.51	185.35	164	29	1.13E-01	6.7	
8	0	128.63	107	368	1.08	257.01	254	8	1.48E-02	32.4	
9	0	153.75	107	383	1.44	307.21	301	10	1.48E-02	35.7	
10	0	185.60*	398	484	1.28	370.87	364	14	5.53E-02	13.0	
11	0	209.41	94	329	1.09	418.47	413	9	1.30E-02	36.6	
12	2	238.50*	1615	213	1.33	476.60	469	20	2.24E-01	3.0	1.10E+00
13	2	241.39	365	251	1.80	482.38	469	20	5.06E-02	13.1	
14	0	269.92	128	285	0.90	539.40	533	12	1.77E-02	27.9	
15	0	295.13	424	227	1.51	589.78	585	10	5.89E-02	8.3	
16	0	299.78	131	142	1.25	599.07	595	9	1.81E-02	18.7	
17	0	327.64	64	187	1.11	654.77	651	9	8.90E-03	40.3	
18	0	338.01*	315	140	1.36	675.51	671	9	4.38E-02	9.1	
19	0	351.75*	600	268	1.47	702.96	697	12	8.34E-02	6.9	
20	0	462.37	108	147	1.28	924.08	917	14	1.50E-02	25.7	
21	0	510.66*	105	200	2.16	1020.63	1012	17	1.46E-02	35.7	
22	0	583.18*	499	127	1.56	1165.61	1159	16	6.93E-02	6.8	
23	0	609.39*	480	137	1.79	1218.01	1209	19	6.66E-02	7.6	
24	0	727.51	122	104	1.30	1454.19	1449	12	1.69E-02	19.3	
25	0	795.95	45	87	0.92	1591.04	1584	13	6.19E-03	45.8	
26	0	860.81	84	64	1.66	1720.76	1715	14	1.17E-02	22.9	
27	0	911.51*	302	113	1.42	1822.14	1815	15	4.19E-02	9.6	
28	3	964.72	79	52	2.43	1928.55	1922	22	1.10E-02	22.8	2.25E+00
29	3	969.00	217	44	1.77	1937.13	1922	22	3.01E-02	9.1	
30	0	1120.89	67	107	2.14	2240.93	2234	14	9.36E-03	35.3	
31	0	1378.22*	33	20	1.64	2755.73	2750	13	4.55E-03	33.7	
32	0	1460.92	1646	24	1.92	2921.20	2914	16	2.29E-01	2.6	
33	0	1588.74	24	17	0.86	3176.96	3172	10	3.39E-03	37.7	
34	0	1730.04	23	30	2.21	3459.76	3451	22	3.25E-03	61.1	
35	0	1764.74*	96	10	2.12	3529.21	3522	14	1.33E-02	13.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 19:59:17

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440003.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 2-FEB-2010 12:00:00 Acquisition date : 19-FEB-2010 17:58:08
 Sample ID : G246440003 Sample quantity : 143.18 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA19 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.74 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	*	3.461E+01	3.125E+00	5.234E-01	3.898E-02	66.130
CD-109	+	88.03	*	3.702E+00	1.210E+00	1.306E+00	1.170E-01	2.835
SN-126	+	64.28		1.563E+00	8.184E-01	8.149E-01	1.190E-01	1.919
	+	86.94		1.508E+00	7.842E-01	5.374E-01	2.225E-01	2.806
	+	87.57	*	3.627E-01	1.186E-01	1.285E-01	1.146E-02	2.823
RE-188	+	155.03	*	3.430E-01	2.459E-01	2.917E-01	1.568E-02	1.176
		477.96		-1.590E+00	2.892E+00	4.603E+00	2.690E-01	-0.345
		633.10		1.405E+00	2.679E+00	4.563E+00	2.683E-01	0.308
TL-208		277.35		3.943E-01	3.703E-01	6.472E-01	6.829E-02	0.609
	+	510.84		4.487E-01	3.240E-01	2.111E-01	2.156E-02	2.125
	+	583.14	*	6.085E-01	9.257E-02	5.731E-02	3.898E-03	10.618
	+	860.37		9.626E-01	4.484E-01	4.340E-01	3.886E-02	2.218
BI-211		72.87		1.139E+01	3.956E+00	6.110E+00	4.788E-01	1.864
	+	351.07	*	3.210E+00	4.874E-01	3.332E-01	2.127E-02	9.635
PB-212	+	74.81		2.830E+00	6.285E-01	5.877E-01	7.207E-02	4.816
	+	77.11		1.977E+00	3.043E-01	3.344E-01	2.702E-02	5.912
	+	87.30		1.678E+00	5.735E-01	5.958E-01	7.974E-02	2.816
	+	238.63	*	1.892E+00	1.772E-01	8.543E-02	6.166E-03	22.151
	+	300.09		2.356E+00	9.023E-01	1.185E+00	9.790E-02	1.987
PO-212	+	74.81		2.830E+00	6.285E-01	5.877E-01	7.207E-02	4.816
	+	77.11		1.977E+00	3.043E-01	3.344E-01	2.702E-02	5.912
	+	87.30		1.678E+00	5.735E-01	5.958E-01	7.974E-02	2.816
		115.19		-3.268E+00	3.799E+00	5.967E+00	3.799E-01	-0.548
	+	238.63	*	1.892E+00	1.772E-01	8.543E-02	6.166E-03	22.151
	+	300.09		2.356E+00	9.023E-01	1.185E+00	9.790E-02	1.987
BI-214	+	609.31	*	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
	+	1120.29		8.039E-01	5.726E-01	4.711E-01	4.309E-02	1.706
	+	1764.49		1.542E+00	4.106E-01	2.741E-01	1.661E-02	5.627
PB-214	+	74.81		4.877E+00	1.047E+00	1.013E+00	1.100E-01	4.816
	+	77.11		3.389E+00	5.820E-01	5.733E-01	6.367E-02	5.912
	+	87.30		2.874E+00	9.652E-01	1.021E+00	1.201E-01	2.816
	+	241.98		2.565E+00	7.021E-01	5.141E-01	4.100E-02	4.989
	+	295.21		1.343E+00	2.501E-01	2.201E-01	1.879E-02	6.102
	+	351.92	*	1.117E+00	1.793E-01	1.161E-01	9.574E-03	9.616

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.877E+00	1.047E+00	1.013E+00	1.100E-01	4.816
	+	77.11		3.389E+00	5.820E-01	5.733E-01	6.367E-02	5.912
	+	87.30		2.874E+00	9.652E-01	1.021E+00	1.201E-01	2.816
	+	241.98		2.565E+00	7.021E-01	5.141E-01	4.100E-02	4.989
	+	295.21		1.343E+00	2.501E-01	2.201E-01	1.879E-02	6.102
PO-216	+	351.92	*	1.117E+00	1.793E-01	1.161E-01	9.574E-03	9.616
	+	74.81		2.830E+00	6.285E-01	5.877E-01	7.207E-02	4.816
	+	77.11		1.977E+00	3.043E-01	3.344E-01	2.702E-02	5.912
	+	87.30		1.678E+00	5.735E-01	5.958E-01	7.974E-02	2.816
	+	238.63	*	1.892E+00	1.772E-01	8.543E-02	6.166E-03	22.151
PO-218	+	300.09		2.356E+00	9.023E-01	1.185E+00	9.790E-02	1.987
	+	74.81		4.877E+00	1.047E+00	1.013E+00	1.100E-01	4.816
	+	77.11		3.389E+00	5.820E-01	5.733E-01	6.367E-02	5.912
	+	87.30		2.874E+00	9.652E-01	1.021E+00	1.201E-01	2.816
	+	241.98		2.565E+00	7.021E-01	5.141E-01	4.100E-02	4.989
RA-224	+	295.21		1.343E+00	2.501E-01	2.201E-01	1.879E-02	6.102
	+	351.92	*	1.117E+00	1.793E-01	1.161E-01	9.574E-03	9.616
	+	240.98	*	4.863E+00	1.303E+00	9.717E-01	5.506E-02	5.005
	+	609.31	*	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
	+	1120.29		8.039E-01	5.726E-01	4.711E-01	4.309E-02	1.706
AC-228	+	1764.49		1.542E+00	4.106E-01	2.741E-01	1.661E-02	5.627
	+	338.32		1.858E+00	8.295E-01	3.564E-01	1.453E-01	5.215
	+	911.07	*	1.637E+00	3.661E-01	1.926E-01	2.178E-02	8.501
	+	969.11		2.070E+00	6.088E-01	3.218E-01	7.459E-02	6.433
	+	338.32		1.858E+00	8.295E-01	3.564E-01	1.453E-01	5.215
RA-228	+	911.07	*	1.637E+00	3.661E-01	1.926E-01	2.178E-02	8.501
	+	969.11		2.070E+00	6.088E-01	3.218E-01	7.459E-02	6.433
	+	74.81		2.879E+00	5.809E-01	5.979E-01	4.794E-02	4.816
	+	77.11		2.011E+00	3.095E-01	3.402E-01	2.749E-02	5.912
	+	87.30		1.707E+00	5.579E-01	6.061E-01	5.391E-02	2.816
TH-228	+	238.63	*	1.925E+00	1.803E-01	8.691E-02	6.273E-03	22.151
	+	300.09		2.397E+00	1.673E+00	1.206E+00	7.107E-01	1.987
	+	609.31	*	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
	+	1120.29		8.038E-01	5.726E-01	4.711E-01	4.309E-02	1.706
	+	1764.49		1.542E+00	4.105E-01	2.741E-01	1.661E-02	5.627
TH-232	+	338.32		1.858E+00	3.546E-01	3.564E-01	2.060E-02	5.215
	+	911.07	*	1.637E+00	3.661E-01	1.926E-01	2.178E-02	8.501
	+	969.11		2.070E+00	6.088E-01	3.218E-01	7.459E-02	6.433
	+	63.29	*	3.950E+00	2.102E+00	2.125E+00	3.718E-01	1.859
	+	92.38		6.199E+00	1.386E+00	8.452E-01	1.518E-01	7.334
U-234	+	609.31	*	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
	+	1120.29		8.038E-01	5.726E-01	4.711E-01	4.309E-02	1.706
	+	1764.49		1.542E+00	4.105E-01	2.741E-01	1.661E-02	5.627
	+	86.50	*	1.065E+00	4.118E-01	3.813E-01	8.556E-02	2.793
	+	95.87		2.985E-01	1.177E+00	1.702E+00	4.155E-01	0.175
U-238	+	63.29	*	3.950E+00	2.102E+00	2.125E+00	3.718E-01	1.859
	+	92.38		6.199E+00	9.751E-01	8.452E-01	7.059E-02	7.334
	+	74.67	*	4.589E-01	9.243E-02	9.555E-02	7.578E-03	4.802
	+	86.72		3.994E+01	1.306E+01	1.427E+01	1.261E+00	2.800

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-8.189E-01	3.962E+00	6.405E+00	3.979E-01	-0.128
		142.18		2.645E+01	1.921E+01	3.253E+01	1.811E+00	0.813
ANH-511	+	511.00	*	9.691E-02	6.951E-02	4.561E-02	2.691E-03	2.125

---- 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	*	-1.374E-01	3.029E-01	4.856E-01	3.296E-02	-0.283
NA-22		1274.54	*	-9.215E-03	4.173E-02	6.782E-02	4.524E-03	-0.136
NA-24		1368.53	*	-6.936E-01	4.173E-02	Half-Life too short		
AL-26		1129.67		4.624E-01	1.798E+00	3.000E+00	1.851E-01	0.154
		1808.65	*	-2.810E-02	2.798E-02	3.569E-02	2.084E-03	-0.787
TI-44		67.85		-2.672E-02	5.823E-02	7.658E-02	5.846E-03	-0.349
	+	78.38	*	3.649E-01	5.615E-02	8.057E-02	6.576E-03	4.529
SC-46		889.25	*	1.341E-03	4.036E-02	6.531E-02	5.675E-03	0.021
	+	1120.51		1.401E-01	9.933E-02	1.219E-01	7.690E-03	1.149
V-48		944.10		-1.128E+00	1.018E+00	1.457E+00	1.228E-01	-0.774
		983.50	*	-2.327E-02	7.655E-02	1.192E-01	9.581E-03	-0.195
		1312.09		-4.438E-02	8.357E-02	1.306E-01	9.294E-03	-0.340
CR-51		320.08	*	2.195E-01	3.831E-01	6.599E-01	4.270E-02	0.333
MN-52		744.21		2.626E-01	3.166E-01	5.467E-01	3.717E-02	0.480
		848.13		4.189E+00	8.359E+00	1.412E+01	1.148E+00	0.297
		935.52		4.639E-01	3.358E-01	6.005E-01	5.106E-02	0.773
		1246.25		-1.158E+00	9.631E+00	1.585E+01	1.002E+00	-0.073
		1333.61		-1.660E+00	5.950E+00	9.534E+00	7.025E-01	-0.174
		1434.06	*	2.606E-01	2.801E-01	5.152E-01	3.716E-02	0.506
MN-54		834.83	*	-2.892E-02	4.180E-02	6.399E-02	5.091E-03	-0.452
CO-56		846.75	*	3.431E-02	3.798E-02	6.619E-02	5.370E-03	0.518
		977.42		-1.356E+00	2.957E+00	4.380E+00	3.549E-01	-0.309
		1037.82		8.317E-02	2.870E-01	4.935E-01	3.925E-02	0.169
		1175.09		1.468E+00	2.182E+00	3.833E+00	2.109E-01	0.383
		1238.25		7.386E-02	9.951E-02	1.731E-01	1.137E-02	0.427
		1360.21		8.324E-02	8.411E-01	1.410E+00	1.035E-01	0.059
		1771.40		-6.959E-01	3.144E-01	3.350E-01	2.019E-02	-2.077
CO-57		122.06	*	-2.170E-02	2.718E-02	4.290E-02	2.561E-03	-0.506
		136.48		-1.329E-01	2.252E-01	3.575E-01	2.360E-02	-0.372
CO-58		810.76	*	-3.884E-02	3.885E-02	5.694E-02	4.364E-03	-0.682
FE-59		142.65		4.387E+00	3.053E+00	5.177E+00	2.879E-01	0.847
		192.34		1.007E+00	1.103E+00	1.703E+00	1.978E-01	0.591
		1099.22	*	-4.703E-02	9.901E-02	1.593E-01	1.195E-02	-0.295
		1291.56		3.346E-02	1.209E-01	2.059E-01	1.705E-02	0.163
CO-60		1173.22		2.786E-02	4.284E-02	7.514E-02	4.118E-03	0.371
		1332.49	*	-4.332E-02	3.693E-02	5.241E-02	3.862E-03	-0.826
ZN-65		1115.52	*	-3.708E-02	1.080E-01	1.496E-01	9.565E-03	-0.248
GE-68		1077.35	*	1.485E+00	1.309E+00	2.371E+00	1.641E-01	0.626
AS-73		53.44	*	3.849E-01	8.445E-01	1.415E+00	1.046E-01	0.272
AS-74		595.88	*	6.920E-03	9.677E-02	1.597E-01	9.458E-03	0.043
		634.78		6.669E-02	3.599E-01	5.979E-01	3.514E-02	0.112

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		-5.104E+00	5.731E+00	7.950E+00	7.632E-01	-0.642
		96.73		-1.337E-01	9.657E-01	1.375E+00	1.809E-01	-0.097
		121.11		-8.929E-02	1.451E-01	2.305E-01	2.159E-02	-0.387
		136.00		-3.158E-02	4.269E-02	6.739E-02	3.881E-03	-0.469
		198.60		-7.176E-01	1.873E+00	2.963E+00	2.022E-01	-0.242
		264.65	*	1.828E-02	4.566E-02	6.892E-02	4.008E-03	0.265
		279.53		7.246E-02	1.080E-01	1.868E-01	1.170E-02	0.388
		303.91		4.989E-03	2.218E+00	3.245E+00	3.100E-01	0.002
		400.65		1.301E-01	2.578E-01	4.405E-01	3.955E-02	0.295
BR-77	+	87.88		1.485E+03	4.854E+02	6.853E+02	6.133E+01	2.166
		200.40		7.514E+01	3.151E+02	5.115E+02	2.782E+01	0.147
	+	239.00		5.659E+02	4.653E+01	7.318E+01	4.140E+00	7.734
		249.79		-1.172E+02	1.259E+02	1.913E+02	1.091E+01	-0.613
		281.68		-1.501E+02	1.666E+02	2.689E+02	1.558E+01	-0.558
		297.23		6.547E+02	1.621E+02	2.244E+02	1.305E+01	2.917
		303.76		-2.854E+01	3.462E+02	5.034E+02	2.928E+01	-0.057
		439.47		-9.739E+01	2.556E+02	4.142E+02	2.379E+01	-0.235
		484.57		2.226E+02	3.907E+02	6.708E+02	3.929E+01	0.332
		520.65	*	-1.217E-02	1.784E+01	2.944E+01	1.740E+00	0.000
		574.64		-1.301E+01	3.995E+02	6.376E+02	3.784E+01	-0.020
		578.91		-1.850E+01	1.792E+02	2.524E+02	1.497E+01	-0.073
		585.48		2.671E+03	4.979E+02	9.044E+02	5.364E+01	2.954
		755.35		9.259E+01	3.030E+02	5.044E+02	3.499E+01	0.184
		817.79		1.594E+02	2.335E+02	4.009E+02	3.099E+01	0.398
SR-82		698.33		-2.161E+01	4.041E+01	6.352E+01	3.968E+00	-0.340
		776.49	*	-5.482E-01	4.386E-01	6.388E-01	4.600E-02	-0.858
		1395.20		-2.809E-01	1.042E+01	1.716E+01	1.250E+00	-0.016
RB-83		520.41	*	7.885E-04	6.483E-02	1.071E-01	6.329E-03	0.007
		529.64		-1.480E-02	1.049E-01	1.712E-01	1.014E-02	-0.086
		552.65		2.715E-02	1.919E-01	3.192E-01	1.894E-02	0.085
RB-84		881.50	*	1.008E-02	7.260E-02	1.187E-01	1.019E-02	0.085
KR-85		513.99	*	1.153E+01	8.023E+00	1.281E+01	7.563E-01	0.900
SR-85		513.99	*	6.047E-02	4.207E-02	6.716E-02	3.966E-03	0.900
RB-86		1076.63	*	1.050E+00	8.797E-01	1.602E+00	1.110E-01	0.656
Y-88		898.02		-2.134E-02	4.145E-02	6.352E-02	5.622E-03	-0.336
		1836.01	*	-2.420E-03	3.257E-02	5.230E-02	2.985E-03	-0.046
ZR-88		392.90	*	-2.230E-02	3.004E-02	4.788E-02	2.666E-03	-0.466
Y-91		1204.90	*	1.322E+01	1.889E+01	3.313E+01	1.934E+00	0.399
NB-94		702.63	*	-3.933E-03	3.651E-02	5.909E-02	3.722E-03	-0.067
		871.10		2.437E-02	3.215E-02	5.549E-02	4.684E-03	0.439
NB-95		765.79	*	2.688E-02	4.761E-02	7.944E-02	5.614E-03	0.338
NB-95M		235.69	*	5.403E-01	1.698E-01	2.678E-01	1.983E-02	2.018
ZR-95		724.18		7.713E-02	1.123E-01	1.688E-01	1.267E-02	0.457
		756.15	*	3.349E-02	7.132E-02	1.202E-01	9.622E-03	0.279
NB-97		657.90	*	-8.263E-01	7.132E-02	Half-Life too short		
		1024.50		1.786E+01	7.132E-02	Half-Life too short		
ZR-97		254.15		3.109E+01	7.132E-02	Half-Life too short		
		355.39		-1.951E+01	7.132E-02	Half-Life too short		
		507.63	*	3.710E+01	7.132E-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		-2.141E+01	7.132E-02	Half-Life	too short	
		1021.30		-4.008E+01	7.132E-02	Half-Life	too short	
		1147.95		1.995E+01	7.132E-02	Half-Life	too short	
		1362.66		3.383E+01	7.132E-02	Half-Life	too short	
		1750.46		-2.525E-01	7.132E-02	Half-Life	too short	
MO-99		140.51		-3.369E+01	5.062E+01	7.841E+01	2.110E+01	-0.430
		181.06		-4.047E+00	3.318E+01	4.638E+01	7.875E+00	-0.087
		366.43		2.005E+01	1.406E+02	2.366E+02	1.347E+01	0.085
		739.58	*	7.804E-01	1.985E+01	3.239E+01	4.601E+00	0.024
		778.00		-4.031E+01	6.137E+01	9.428E+01	6.808E+00	-0.428
TC-99M		140.51	*	-1.035E+13	6.137E+01	Half-Life	too short	
RH-101	+	127.23		6.102E-02	3.975E-02	5.941E-02	3.467E-03	1.027
		198.01	*	1.339E-02	3.337E-02	5.455E-02	2.959E-03	0.245
		325.23		4.188E-02	2.479E-01	3.659E-01	2.124E-02	0.114
RH-102		418.52		-1.298E-01	2.823E-01	4.567E-01	2.590E-02	-0.284
		475.06	*	1.527E-02	2.616E-02	4.499E-02	2.626E-03	0.339
		631.29		-6.884E-03	5.166E-02	8.372E-02	4.925E-03	-0.082
		697.49		9.233E-04	8.509E-02	1.389E-01	8.662E-03	0.007
		766.84		8.185E-02	1.206E-01	2.024E-01	1.433E-02	0.404
		1046.59		-3.509E-02	1.095E-01	1.784E-01	1.305E-02	-0.197
		1112.84		-3.785E-03	2.385E-01	3.694E-01	2.372E-02	-0.010
RU-103		497.08	*	-2.904E-03	4.050E-02	6.662E-02	8.448E-03	-0.044
	+	610.33		1.236E+01	2.678E+00	2.805E+00	4.336E-01	4.407
RH-106	+	511.85		4.860E-01	3.486E-01	4.221E-01	2.491E-02	1.151
		621.84	*	2.275E-01	3.165E-01	5.435E-01	6.405E-02	0.419
		1050.47		1.898E+00	2.233E+00	3.995E+00	2.904E-01	0.475
RU-106	+	511.85		4.860E-01	3.486E-01	4.221E-01	2.491E-02	1.151
		621.84	*	2.275E-01	3.157E-01	5.435E-01	3.205E-02	0.419
		1050.47		1.898E+00	2.233E+00	3.995E+00	2.904E-01	0.475
AG-108M		433.93	*	-1.656E-02	3.258E-02	5.245E-02	3.267E-03	-0.316
		614.37		2.582E-02	3.949E-02	5.993E-02	3.829E-03	0.431
		722.95		-2.122E-02	4.738E-02	6.328E-02	4.417E-03	-0.335
AG-110M		657.75	*	-3.543E-02	3.618E-02	5.476E-02	3.398E-03	-0.647
		677.61		2.271E-01	3.015E-01	5.199E-01	3.301E-02	0.437
		706.67		-7.681E-02	2.156E-01	3.421E-01	2.280E-02	-0.225
		763.93		-1.151E-01	1.797E-01	2.781E-01	2.041E-02	-0.414
		884.67		-5.297E-03	5.205E-02	8.324E-02	7.411E-03	-0.064
		937.48		-6.489E-02	1.130E-01	1.719E-01	1.513E-02	-0.377
		1384.27		1.495E-01	1.702E-01	2.777E-01	2.107E-02	0.538
IN-111		171.28		8.828E-01	1.737E+00	2.860E+00	1.501E-01	0.309
		245.39	*	1.220E+00	1.859E+00	2.713E+00	1.543E-01	0.450
IN-113M		391.69	*	2.804E-03	4.395E-02	7.350E-02	4.386E-03	0.038
SN-113		391.69	*	2.804E-03	4.395E-02	7.350E-02	4.386E-03	0.038
IN-114M		190.27	*	-7.170E-03	2.223E-01	3.119E-01	1.676E-02	-0.023
CD-115		260.90		-1.244E+02	2.465E+02	3.824E+02	2.196E+01	-0.325
		492.35		-2.667E+00	6.745E+01	1.112E+02	6.531E+00	-0.024
		527.90	*	-7.209E+00	2.067E+01	3.261E+01	1.930E+00	-0.221
SN-117M		156.02		2.158E+00	2.963E+00	4.348E+00	2.330E-01	0.496
		158.56	*	6.278E-02	6.774E-02	1.055E-01	5.616E-03	0.595

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122	563.90	*	-5.908E+00	4.565E+00	6.959E+00	4.131E-01	-0.849	
	692.80		3.243E+01	8.179E+01	1.370E+02	8.468E+00	0.237	
I-123	159.00	*	4.331E+01	8.179E+01	Half-Life too short			
	528.96		8.790E+02	8.179E+01	Half-Life too short			
TE-123M	159.00	*	1.454E-02	3.231E-02	4.929E-02	2.662E-03	0.295	
I-124	602.71	*	-4.856E-01	1.105E+00	1.501E+00	8.884E-02	-0.324	
	722.78		-3.534E+00	7.024E+00	9.316E+00	6.091E-01	-0.379	
	1325.50		-7.231E+00	5.074E+01	8.287E+01	6.035E+00	-0.087	
	1376.25		2.695E+01	4.821E+01	7.555E+01	5.526E+00	0.357	
	1509.49		5.890E+00	2.220E+01	3.772E+01	2.654E+00	0.156	
	1691.02		9.671E-01	4.820E+00	8.170E+00	5.225E-01	0.118	
SB-124	602.71		-2.031E-02	4.621E-02	6.279E-02	3.717E-03	-0.324	
	645.85		1.502E-01	4.903E-01	8.209E-01	5.414E-02	0.183	
	709.31		-1.289E+00	2.765E+00	4.337E+00	2.766E-01	-0.297	
	713.82		1.097E+00	1.564E+00	2.685E+00	2.842E-01	0.408	
	722.78		-2.143E-01	4.259E-01	5.649E-01	3.831E-02	-0.379	
+	968.20		2.184E+01	4.339E+00	7.818E+00	6.407E-01	2.793	
	1045.16		-2.666E+00	2.427E+00	3.655E+00	2.681E-01	-0.729	
	1325.50		-4.682E-01	3.286E+00	5.367E+00	3.908E-01	-0.087	
	1368.21		-2.913E-01	1.482E+00	2.385E+00	3.025E-01	-0.122	
	1436.60		7.328E-01	3.482E+00	5.906E+00	4.257E-01	0.124	
	1691.02	*	1.383E-02	6.894E-02	1.168E-01	8.002E-03	0.118	
SB-125	427.89	*	2.344E-03	8.865E-02	1.475E-01	8.784E-03	0.016	
+	463.38		8.991E-01	4.666E-01	5.512E-01	3.733E-02	1.631	
	600.56		1.334E-01	1.826E-01	2.986E-01	2.035E-02	0.447	
	635.90		2.016E-01	2.430E-01	4.236E-01	2.904E-02	0.476	
TE-125M	109.28	*	-7.904E+00	1.067E+01	1.696E+01	1.500E+00	-0.466	
I-126	388.63		1.114E-01	2.246E-01	3.843E-01	2.145E-02	0.290	
	666.33	*	3.630E-02	2.099E-01	3.472E-01	2.040E-02	0.105	
	753.82		5.887E-01	1.623E+00	2.714E+00	1.877E-01	0.217	
SB-126	223.80		-1.408E+00	4.791E+00	7.579E+00	4.229E-01	-0.186	
	278.60		3.092E+00	2.743E+00	4.825E+00	2.793E-01	0.641	
+	296.50		1.507E+01	2.642E+00	4.032E+00	2.344E-01	3.736	
	414.70		4.787E-02	8.424E-02	1.444E-01	8.171E-03	0.331	
	415.30		3.266E+00	6.867E+00	1.173E+01	6.636E-01	0.279	
	555.20		-1.467E+00	4.196E+00	6.727E+00	3.992E-01	-0.218	
	573.80		-1.206E+00	1.258E+00	1.935E+00	1.148E-01	-0.623	
	593.00		-1.819E-01	1.012E+00	1.640E+00	9.718E-02	-0.111	
	656.30		-2.144E+00	3.874E+00	6.075E+00	3.545E-01	-0.353	
	666.33		1.524E-02	8.816E-02	1.458E-01	8.567E-03	0.105	
	675.00		-1.237E+00	2.213E+00	3.454E+00	2.064E-01	-0.358	
	695.00		7.319E-03	9.607E-02	1.575E-01	9.778E-03	0.046	
	697.00		2.001E-01	3.262E-01	5.536E-01	3.450E-02	0.362	
	720.50	*	-3.138E-02	1.590E-01	2.391E-01	1.557E-02	-0.131	
	856.80		5.975E-01	5.593E-01	8.825E-01	7.279E-02	0.677	
	989.30		-5.348E-01	1.422E+00	2.197E+00	1.753E-01	-0.243	
	1034.80		-8.350E+00	9.158E+00	1.402E+01	1.046E+00	-0.596	
	1213.00		2.351E+00	5.237E+00	9.010E+00	5.345E-01	0.261	
SB-127	61.10		1.401E+02	9.663E+01	1.462E+02	1.615E+01	0.958	

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		252.40		3.921E+00	6.724E+00	1.073E+01	4.474E+00	0.366
		290.80		1.300E+01	3.495E+01	5.239E+01	5.216E+00	0.248
		411.60		-1.863E+01	1.872E+01	2.913E+01	4.321E+00	-0.640
		444.90		1.499E+01	1.326E+01	2.337E+01	2.675E+00	0.641
		473.00		3.405E-01	2.208E+00	3.693E+00	4.376E-01	0.092
		543.00		-1.238E+01	2.497E+01	3.968E+01	5.371E+00	-0.312
		603.60		-5.871E+00	1.951E+01	2.688E+01	3.091E+00	-0.218
		685.20	*	-1.278E+00	1.911E+00	2.941E+00	3.050E-01	-0.435
		698.50		-1.278E+01	2.500E+01	3.926E+01	5.955E+00	-0.325
		722.20		7.741E-01	4.703E+01	6.630E+01	6.891E+00	0.012
		783.80		5.687E+00	5.629E+00	9.741E+00	1.186E+00	0.584
XE-127		57.60		1.039E+00	6.919E+00	1.064E+01	7.969E-01	0.098
		145.22		1.885E-01	7.926E-01	1.283E+00	7.084E-02	0.147
		172.10		1.547E-01	1.276E-01	2.154E-01	1.132E-02	0.718
		202.84	*	-1.031E-02	5.594E-02	8.221E-02	4.485E-03	-0.125
		374.96		-6.365E-02	1.952E-01	3.197E-01	1.807E-02	-0.199
I-131		80.18		-2.975E+00	8.986E+00	9.093E+00	7.607E-01	-0.327
		284.30		-8.298E-01	1.723E+00	2.833E+00	1.833E-01	-0.293
		364.48	*	-1.066E-01	1.355E-01	2.162E-01	1.385E-02	-0.493
		636.97		7.782E-01	1.693E+00	2.872E+00	1.890E-01	0.271
		722.89		-4.476E+00	9.578E+00	1.276E+01	8.466E-01	-0.351
TE-132		49.72		-3.280E+01	2.992E+01	4.739E+01	4.919E+00	-0.692
		111.76		1.131E+01	5.113E+01	8.356E+01	8.360E+00	0.135
		116.30		-4.152E+01	4.606E+01	7.200E+01	7.065E+00	-0.577
		228.16	*	-1.856E-01	1.154E+00	1.835E+00	2.704E-01	-0.101
BA-133		53.15		1.851E+00	3.551E+00	5.961E+00	4.402E-01	0.310
		79.62		2.955E+00	2.080E+00	2.323E+00	3.489E-01	1.272
		81.00		-5.732E-02	1.595E-01	1.607E-01	2.529E-02	-0.357
		276.40		3.926E-01	3.865E-01	6.405E-01	8.299E-02	0.613
		302.84		1.755E-03	1.495E-01	2.190E-01	2.555E-02	0.008
		356.01	*	-1.618E-02	4.968E-02	7.044E-02	8.118E-03	-0.230
		383.85		1.879E-02	2.810E-01	4.705E-01	5.067E-02	0.040
I-133	+	510.53		5.424E+00	2.810E-01	Half-Life	too short	
		529.87	*	-2.022E-03	2.810E-01	Half-Life	too short	
		706.58		-7.711E-01	2.810E-01	Half-Life	too short	
		856.28		2.547E+00	2.810E-01	Half-Life	too short	
		875.33		-2.786E-01	2.810E-01	Half-Life	too short	
		1236.41		2.763E+00	2.810E-01	Half-Life	too short	
		1298.22		-1.618E+00	2.810E-01	Half-Life	too short	
CS-134		475.35		6.656E-01	1.695E+00	2.881E+00	1.682E-01	0.231
		563.23		-9.433E-01	4.460E-01	6.375E-01	3.860E-02	-1.480
		569.32		3.832E-01	2.688E-01	4.614E-01	2.817E-02	0.830
		604.70		4.053E-05	3.767E-02	5.350E-02	3.182E-03	0.001
	+	795.84	*	7.857E-02	7.227E-02	8.838E-02	6.645E-03	0.889
		801.93		-2.091E-01	4.843E-01	6.366E-01	4.826E-02	-0.329
		1038.57		1.027E+00	3.576E+00	6.144E+00	4.557E-01	0.167
		1167.94		-2.001E+00	2.520E+00	3.925E+00	2.185E-01	-0.510
		1365.15		-4.794E-01	1.035E+00	1.602E+00	1.248E-01	-0.299
CS-135		268.24	*	3.653E-01	1.785E-01	2.898E-01	2.212E-02	1.260

---- 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		-1.732E+12	1.785E-01	Half-Life	too short	
		417.63		-2.231E+12	1.785E-01	Half-Life	too short	
		546.56		1.339E+12	1.785E-01	Half-Life	too short	
		836.80		1.160E+12	1.785E-01	Half-Life	too short	
		1038.76		1.074E+12	1.785E-01	Half-Life	too short	
		1124.00		-6.338E+12	1.785E-01	Half-Life	too short	
		1131.51		1.082E+12	1.785E-01	Half-Life	too short	
		1260.41	*	-6.153E+11	1.785E-01	Half-Life	too short	
		1457.56		1.074E+14	1.785E-01	Half-Life	too short	
		1678.03		-4.734E+11	1.785E-01	Half-Life	too short	
		1706.46		2.401E+12	1.785E-01	Half-Life	too short	
		1791.20		5.525E+11	1.785E-01	Half-Life	too short	
CS-136		66.91		-1.334E+00	1.040E+00	1.396E+00	2.079E-01	-0.956
	+	86.29		5.296E+00	1.803E+00	2.482E+00	3.220E-01	2.133
	+	153.22		1.443E+00	1.036E+00	1.289E+00	8.905E-02	1.119
		163.89		9.612E-02	1.222E+00	1.981E+00	1.351E-01	0.049
		176.55		-4.907E-02	4.222E-01	6.779E-01	4.112E-02	-0.072
		273.65		-4.312E-01	5.766E-01	8.074E-01	5.328E-02	-0.534
		340.57		4.555E-01	1.682E-01	2.812E-01	1.728E-02	1.620
		818.51		2.773E-02	7.983E-02	1.333E-01	1.033E-02	0.208
		1048.07	*	7.165E-02	1.121E-01	1.980E-01	1.530E-02	0.362
		1235.34		2.210E-01	6.953E-01	1.180E+00	1.206E-01	0.187
BA-137M		661.65	*	1.559E-02	3.842E-02	6.449E-02	3.755E-03	0.242
CS-137		661.65	*	1.648E-02	4.062E-02	6.817E-02	3.986E-03	0.242
CE-139		165.85	*	1.258E-02	3.065E-02	5.032E-02	2.627E-03	0.250
BA-140		162.64		-1.568E-01	8.705E-01	1.397E+00	8.456E-02	-0.112
		304.84		7.934E-01	1.527E+00	2.292E+00	6.256E-01	0.346
LA-140		423.70		1.321E+00	2.101E+00	3.550E+00	1.128E+00	0.372
		537.32	*	3.576E-02	2.698E-01	4.484E-01	1.459E-01	0.080
	+	328.77		5.236E-01	4.233E-01	6.203E-01	4.030E-02	0.844
		432.53		1.242E-02	2.257E+00	3.750E+00	2.376E-01	0.003
		487.03		-1.508E-02	1.448E-01	2.378E-01	1.574E-02	-0.063
		751.79		-7.149E-01	1.896E+00	2.986E+00	2.393E-01	-0.239
		815.85		2.335E-01	3.401E-01	5.839E-01	5.139E-02	0.400
		867.82		-1.010E-01	1.664E+00	2.297E+00	2.036E-01	-0.044
		919.63		1.873E+00	2.974E+00	4.832E+00	5.152E-01	0.388
		925.24		7.376E-02	1.228E+00	1.989E+00	1.817E-01	0.037
		1596.49	*	-9.203E-03	9.900E-02	1.526E-01	1.033E-02	-0.060
		145.44	*	1.175E-02	7.193E-02	1.162E-01	6.690E-03	0.101
CE-141		57.37		2.174E-04	7.193E-02	Half-Life	too short	
CE-143		231.56		3.158E-03	7.193E-02	Half-Life	too short	
		293.26	*	3.079E-03	7.193E-02	Half-Life	too short	
	+	350.59		7.453E-02	7.193E-02	Half-Life	too short	
		490.36		-2.848E-04	7.193E-02	Half-Life	too short	
		664.57		2.524E-03	7.193E-02	Half-Life	too short	
		721.93		1.192E-03	7.193E-02	Half-Life	too short	
CE-144		80.11		-8.843E-01	3.465E+00	3.526E+00	2.922E-01	-0.251
		133.54	*	1.305E-02	2.530E-01	3.603E-01	5.104E-02	0.036
PM-144		476.78		3.241E-02	6.045E-02	1.036E-01	7.232E-03	0.313

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		-3.561E-02	3.732E-02	5.053E-02	3.156E-03	-0.705
		696.49	*	1.578E-02	3.824E-02	6.404E-02	3.990E-03	0.246
		778.57		-8.587E-01	2.377E+00	3.745E+00	2.708E-01	-0.229
PR-144		696.49	*	1.071E+00	2.594E+00	4.345E+00	2.705E-01	0.246
		1489.15		-1.115E+00	9.516E+00	1.537E+01	1.089E+00	-0.073
PM-146		453.90	*	3.450E-02	4.297E-02	7.288E-02	6.277E-03	0.473
		633.02		7.050E-01	1.326E+00	2.217E+00	8.168E-01	0.318
		735.90		4.044E-02	1.399E-01	2.324E-01	6.526E-02	0.174
		747.13		-3.915E-02	9.482E-02	1.489E-01	1.939E-02	-0.263
ND-147	+	91.11		7.309E-01	3.247E-01	7.535E-01	6.960E-02	0.970
		319.41		1.067E-01	3.671E+00	6.166E+00	3.585E-01	0.017
		439.89		-3.920E+00	6.402E+00	1.021E+01	5.871E-01	-0.384
		531.02	*	1.762E-01	6.342E-01	1.064E+00	1.445E-01	0.166
PM-149		285.90	*	-2.082E+01	1.724E+02	2.885E+02	4.092E+01	-0.072
EU-152		121.78		-5.871E-02	7.805E-02	1.233E-01	9.548E-03	-0.476
		244.69		1.705E-01	3.503E-01	5.049E-01	2.869E-02	0.338
		344.27	*	-1.630E-02	1.133E-01	1.633E-01	1.063E-02	-0.100
		443.98		7.493E-01	8.794E-01	1.536E+00	8.841E-02	0.488
		778.89		6.121E-02	2.668E-01	4.411E-01	3.189E-02	0.139
		867.32		-3.440E-01	9.149E-01	1.207E+00	1.013E-01	-0.285
	+	964.01		8.735E-01	4.052E-01	5.964E-01	4.912E-02	1.465
		1085.78		1.234E-01	3.940E-01	6.760E-01	4.600E-02	0.183
		1112.02		-6.891E-02	3.301E-01	5.166E-01	3.323E-02	-0.133
		1407.95		1.777E-01	1.762E-01	3.231E-01	2.347E-02	0.550
GD-153		69.67		2.106E+00	2.034E+00	2.855E+00	2.197E-01	0.738
	+	83.37		3.515E+01	2.057E+01	2.815E+01	2.405E+00	1.249
		97.43	*	5.233E-02	9.767E-02	1.431E-01	1.113E-02	0.366
		103.18		-1.462E-01	1.159E-01	1.806E-01	1.307E-02	-0.810
EU-154		123.07		4.157E-03	5.604E-02	8.830E-02	8.377E-03	0.047
		247.94		6.811E-02	3.789E-01	5.646E-01	5.352E-02	0.121
		591.81		1.390E-01	6.265E-01	9.880E-01	9.732E-02	0.141
		723.30		3.182E-02	1.906E-01	2.732E-01	2.105E-02	0.116
		756.87		3.057E-02	7.724E-01	1.259E+00	1.365E-01	0.024
		873.19		1.410E-01	2.773E-01	4.686E-01	5.689E-02	0.301
		996.32		-2.641E-01	4.400E-01	6.677E-01	1.164E-01	-0.396
		1004.76		-3.371E-01	2.238E-01	3.244E-01	3.586E-02	-1.039
		1274.45	*	-1.121E-02	1.147E-01	1.886E-01	1.867E-02	-0.059
EU-155		48.70		-1.359E+00	2.318E+00	3.757E+00	2.635E-01	-0.362
		60.01		5.959E+00	5.534E+00	8.351E+00	6.282E-01	0.714
	+	86.54		4.372E-01	1.430E-01	2.023E-01	1.802E-02	2.161
		105.31	*	6.431E-02	1.180E-01	1.947E-01	1.400E-02	0.330
TB-160	+	86.79		1.191E+00	3.893E-01	5.439E-01	4.811E-02	2.190
		197.04		-2.146E-01	5.870E-01	9.296E-01	5.037E-02	-0.231
		215.65		-1.152E-01	7.913E-01	1.262E+00	6.982E-02	-0.091
	+	298.57		3.499E-01	1.324E-01	2.126E-01	1.236E-02	1.645
		879.36	*	-1.454E-02	1.369E-01	2.188E-01	1.872E-02	-0.066
		962.29		9.795E-01	5.846E-01	9.617E-01	7.937E-02	1.018
	+	966.15		6.120E-01	2.839E-01	5.414E-01	4.447E-02	1.130
		1177.93		-1.344E-01	3.606E-01	5.826E-01	3.223E-02	-0.231

----- 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		5.608E-01	6.501E-01	1.167E+00	7.735E-02	0.480
		80.57		-2.032E-01	4.397E-01	4.403E-01	3.663E-02	-0.462
	+	184.41		2.462E-01	6.543E-02	7.616E-02	4.063E-03	3.233
		280.46		-6.671E-02	8.511E-02	1.383E-01	8.011E-03	-0.482
		410.95		1.048E-01	2.524E-01	4.289E-01	2.420E-02	0.244
		711.68	*	-1.616E-02	5.691E-02	9.056E-02	5.801E-03	-0.178
		752.31		-9.470E-02	2.726E-01	4.305E-01	2.970E-02	-0.220
TM-171		810.29		-3.129E-02	5.584E-02	8.570E-02	6.541E-03	-0.365
		51.35		8.376E+00	3.008E+01	5.017E+01	3.659E+00	0.167
		52.39		2.456E+00	1.567E+01	2.602E+01	1.913E+00	0.094
		59.40		3.798E+01	3.006E+01	4.565E+01	3.434E+00	0.832
		66.72	*	-4.352E+01	3.336E+01	4.538E+01	3.450E+00	-0.959
LU-176	+	88.36		8.603E-01	2.812E-01	4.052E-01	3.609E-02	2.123
		201.83		6.705E-03	2.992E-02	4.854E-02	2.645E-03	0.138
		306.84	*	-2.932E-03	2.347E-02	3.917E-02	2.278E-03	-0.075
LU-177		401.10		3.504E+00	6.556E+00	1.123E+01	6.293E-01	0.312
		112.95		9.605E-01	2.165E+00	3.563E+00	2.320E-01	0.270
LU-177M	+	208.36	*	2.430E+00	1.785E+00	2.478E+00	1.360E-01	0.981
		52.97		6.529E-01	1.614E+00	2.701E+00	1.993E-01	0.242
HF-181		54.07		2.654E-01	8.570E-01	1.429E+00	1.060E-01	0.186
		61.30		2.748E+00	1.762E+00	2.688E+00	2.022E-01	1.023
		121.62		-3.082E-01	4.034E-01	6.377E-01	3.812E-02	-0.483
		147.16		-1.198E+00	7.827E-01	1.088E+00	5.972E-02	-1.101
		171.86		4.766E-01	5.009E-01	8.382E-01	4.403E-02	0.569
		218.09		-3.079E-01	8.941E-01	1.412E+00	7.836E-02	-0.218
	+	268.79		2.306E+00	1.293E+00	1.499E+00	8.646E-02	1.538
		319.02		-1.248E-01	2.532E-01	4.141E-01	2.407E-02	-0.301
		367.43		2.469E-01	8.854E-01	1.501E+00	8.534E-02	0.165
		413.65	*	-1.791E-01	1.829E-01	2.873E-01	1.624E-02	-0.623
		56.28		-8.146E-01	1.005E+00	1.615E+00	1.206E-01	-0.504
		57.53		7.213E-02	5.785E-01	8.886E-01	6.656E-02	0.081
		65.20		9.558E-01	1.176E+00	1.747E+00	1.322E-01	0.547
		133.02		3.653E-02	8.259E-02	1.199E-01	6.859E-03	0.305
		136.25		-3.985E-01	5.086E-01	8.014E-01	4.540E-02	-0.497
W-181		345.85		8.565E-04	2.298E-01	3.346E-01	1.928E-02	0.003
		482.03	*	-5.277E-03	4.033E-02	6.614E-02	3.870E-03	-0.080
		56.28		-2.169E-01	3.814E-01	6.180E-01	4.616E-02	-0.351
TA-182		57.53		2.746E-02	2.215E-01	3.403E-01	2.549E-02	0.081
		65.20	*	3.632E-01	4.466E-01	6.639E-01	5.024E-02	0.547
		67.75		-1.274E-01	1.333E-01	1.847E-01	1.410E-02	-0.690
RE-183		100.10		1.460E-01	2.031E-01	3.243E-01	2.437E-02	0.450
	+	152.43		6.703E-01	4.805E-01	6.044E-01	3.271E-02	1.109
		222.10		-1.135E-02	3.657E-01	5.854E-01	3.262E-02	-0.019
		1001.68		1.459E+00	2.258E+00	3.920E+00	3.075E-01	0.372
	+	1121.28		3.850E-01	2.730E-01	3.297E-01	2.076E-02	1.168
RE-183		1189.05		3.016E-01	3.400E-01	6.009E-01	3.400E-02	0.502
		1221.42	*	-6.740E-02	2.146E-01	3.474E-01	2.095E-02	-0.194
		1230.97		-2.886E-01	5.173E-01	8.258E-01	5.071E-02	-0.349
		57.98		1.253E-01	2.319E-01	3.436E-01	2.576E-02	0.365

Sample ID : G246440003

Acquisition date : 19-FEB-2010 17:58:08

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184		59.32		1.590E-01	1.260E-01	1.914E-01	1.439E-02	0.831
		67.20		-2.672E-01	2.405E-01	3.305E-01	2.516E-02	-0.809
		162.32	*	-3.882E-02	1.166E-01	1.861E-01	9.805E-03	-0.209
	+	208.81		1.791E+00	1.315E+00	1.810E+00	9.942E-02	0.989
		291.72		3.815E-01	1.068E+00	1.600E+00	9.293E-02	0.238
		57.98		4.560E-01	8.442E-01	1.250E+00	9.376E-02	0.365
		59.32		5.782E-01	4.583E-01	6.959E-01	5.234E-02	0.831
		67.20		-9.722E-01	8.750E-01	1.202E+00	9.156E-02	-0.809
		161.27		-1.733E-01	3.716E-01	5.897E-01	3.116E-02	-0.294
		216.55		1.340E-02	2.771E-01	4.455E-01	2.468E-02	0.030
		252.85	*	9.053E-02	2.394E-01	3.894E-01	2.225E-02	0.233
		318.01		-9.964E-02	4.308E-01	7.142E-01	4.151E-02	-0.140
		792.07		-2.524E-01	1.101E+00	1.471E+00	1.089E-01	-0.172
		903.28		8.745E-01	1.010E+00	1.669E+00	1.464E-01	0.524
OS-185		920.93		6.030E-02	4.221E-01	6.896E-01	5.950E-02	0.087
		59.72		4.003E-01	3.346E-01	5.071E-01	3.815E-02	0.789
		61.14		2.980E-01	1.897E-01	2.899E-01	2.181E-02	1.028
		69.30		1.835E-01	4.141E-01	5.154E-01	3.959E-02	0.356
		592.07		6.228E-01	2.600E+00	4.106E+00	2.434E-01	0.152
		646.12	*	4.656E-03	4.173E-02	6.886E-02	4.033E-03	0.068
		717.42		-1.050E-01	8.471E-01	1.366E+00	8.841E-02	-0.077
		874.81		-9.568E-02	5.833E-01	9.273E-01	7.874E-02	-0.103
		880.27		-6.099E-02	7.486E-01	1.199E+00	1.027E-01	-0.051
	+	63.58		1.622E+02	8.243E+01	1.018E+02	7.676E+00	1.593
W-188		227.08		2.834E-01	1.378E+01	2.210E+01	1.237E+00	0.013
		290.67	*	1.974E+00	8.455E+00	1.257E+01	7.302E-01	0.157
	+	295.96		1.045E+00	1.836E-01	2.853E-01	1.684E-02	3.663
		308.46		4.290E-02	9.233E-02	1.585E-01	9.325E-03	0.271
IR-192		316.51	*	1.795E-03	3.320E-02	5.585E-02	3.263E-03	0.032
		468.07		1.551E-02	6.914E-02	1.015E-01	6.808E-03	0.153
		604.41		-1.223E-01	5.275E-01	7.319E-01	8.351E-02	-0.167
		612.46		1.411E+00	8.513E-01	1.373E+00	1.052E-01	1.027
		65.12		2.140E-01	2.075E-01	3.104E-01	2.349E-02	0.689
		66.83		-1.477E-01	1.109E-01	1.506E-01	1.145E-02	-0.981
AU-195	+	75.70		1.497E+00	3.016E-01	4.820E-01	3.851E-02	3.106
		98.88	*	3.921E-01	2.716E-01	4.122E-01	3.146E-02	0.951
	+	129.76		5.415E+00	3.528E+00	5.319E+00	3.077E-01	1.018
		367.94	*	8.953E-05	3.528E+00	Half-Life	too short	
TL-200		579.30		5.803E-04	3.528E+00	Half-Life	too short	
		828.27		3.033E-03	3.528E+00	Half-Life	too short	
		1205.75		7.599E-03	3.528E+00	Half-Life	too short	
TL-201		68.90		2.497E+00	1.063E+01	1.309E+01	1.004E+00	0.191
		70.82		5.139E+00	5.166E+00	7.715E+00	5.972E-01	0.666
		80.30		-6.096E+00	1.321E+01	1.323E+01	1.098E+00	-0.461
		135.34		-2.015E+01	4.423E+01	7.063E+01	4.012E+00	-0.285
TL-202		167.43	*	-1.036E+01	1.190E+01	1.854E+01	9.685E-01	-0.559
		68.90		1.560E-01	6.640E-01	8.178E-01	6.271E-02	0.191
		70.82		3.201E-01	3.218E-01	4.805E-01	3.720E-02	0.666
		80.30		-3.798E-01	8.232E-01	8.244E-01	6.842E-02	-0.461

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203		439.56	*	-2.986E-02	7.490E-02	1.212E-01	6.962E-03	-0.246
		70.83		1.346E+00	1.281E+00	1.905E+00	2.489E-01	0.706
		72.87		2.339E+00	8.453E-01	1.254E+00	1.594E-01	1.864
		82.60		2.747E+00	1.889E+00	2.114E+00	2.887E-01	1.300
BI-207		279.20	*	3.980E-02	4.160E-02	7.274E-02	4.473E-03	0.547
		72.80		6.388E-01	2.282E-01	3.525E-01	2.761E-02	1.812
	+	74.97		8.238E-01	1.659E-01	2.442E-01	1.941E-02	3.374
	+	84.90		4.519E-01	2.645E-01	3.695E-01	3.205E-02	1.223
		569.67		4.211E-02	3.999E-02	6.911E-02	4.102E-03	0.609
TL-207		1063.62	*	-2.377E-03	5.340E-02	8.864E-02	6.294E-03	-0.027
		1770.23		3.946E-01	3.375E-01	6.519E-01	3.932E-02	0.605
		81.07		-1.190E-01	3.514E-01	3.553E-01	2.969E-02	-0.335
	+	83.78		2.980E-01	1.743E-01	2.364E-01	2.028E-02	1.260
		94.90		1.232E+00	3.223E-01	5.028E-01	4.048E-02	2.450
		122.32		-1.415E+00	1.872E+00	2.959E+00	2.021E-01	-0.478
		144.24		6.237E-01	7.514E-01	1.240E+00	8.704E-02	0.503
	+	154.21		7.758E-01	5.570E-01	6.967E-01	4.650E-02	1.114
	+	269.46		5.349E-01	3.002E-01	3.570E-01	2.153E-02	1.498
		323.87	*	9.250E-02	7.183E-01	1.058E+00	1.747E-01	0.087
PO-209	+	338.28		7.760E+00	1.630E+00	2.502E+00	2.633E-01	3.101
		445.03		2.344E+00	2.089E+00	3.688E+00	3.779E-01	0.636
		260.50		-4.713E+00	9.423E+00	1.463E+01	8.398E-01	-0.322
		262.80		-1.012E+01	2.824E+01	4.052E+01	2.330E+00	-0.250
		896.60	*	2.972E-01	7.270E+00	1.177E+01	1.035E+00	0.025
BI-210		46.50	*	1.367E+00	3.291E+00	5.481E+00	4.178E-01	0.249
PB-210		46.50	*	1.367E+00	3.291E+00	5.481E+00	4.178E-01	0.249
PO-210		46.50	*	1.367E+00	3.290E+00	5.481E+00	3.573E-01	0.249
PB-211		404.84	*	-1.465E+00	1.327E+00	1.468E+00	9.152E-01	-0.998
BI-212		427.08		-1.219E+00	2.166E+00	3.254E+00	2.011E+00	-0.375
		831.96		-5.595E-01	1.386E+00	2.101E+00	1.315E+00	-0.266
	+	727.18	*	1.273E+00	5.020E-01	7.055E-01	5.873E-02	1.804
		785.46		2.712E+00	1.780E+00	3.201E+00	2.342E-01	0.847
		1620.62		9.784E-01	1.241E+00	2.250E+00	1.502E-01	0.435
PO-215		81.07		-1.190E-01	3.514E-01	3.553E-01	2.969E-02	-0.335
	+	83.78		2.980E-01	1.743E-01	2.364E-01	2.028E-02	1.260
		94.90		1.232E+00	3.223E-01	5.028E-01	4.048E-02	2.450
		122.32		-1.415E+00	1.872E+00	2.959E+00	2.021E-01	-0.478
		144.24		6.237E-01	7.514E-01	1.240E+00	8.704E-02	0.503
	+	154.21		7.758E-01	5.570E-01	6.967E-01	4.650E-02	1.114
	+	269.46		5.349E-01	3.002E-01	3.570E-01	2.153E-02	1.498
		323.87	*	9.250E-02	7.183E-01	1.058E+00	1.747E-01	0.087
	+	338.28		7.760E+00	1.630E+00	2.502E+00	2.633E-01	3.101
		445.03		2.344E+00	2.089E+00	3.688E+00	3.779E-01	0.636
RN-219	+	271.23		6.863E-01	3.869E-01	4.526E-01	3.659E-02	1.516
		401.81	*	-1.651E-01	4.114E-01	6.690E-01	9.047E-02	-0.247
RN-220		549.76	*	-1.026E+01	2.640E+01	4.232E+01	2.511E+00	-0.242
RA-223		81.07		-1.190E-01	3.514E-01	3.553E-01	2.969E-02	-0.335
	+	83.78		2.980E-01	1.743E-01	2.364E-01	2.028E-02	1.260
		94.90		1.232E+00	3.223E-01	5.028E-01	4.048E-02	2.450

---- 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		-1.415E+00	1.872E+00	2.959E+00	2.021E-01	-0.478
		144.24		6.237E-01	7.514E-01	1.240E+00	8.704E-02	0.503
	+	154.21		7.758E-01	5.570E-01	6.967E-01	4.650E-02	1.114
	+	269.46		5.349E-01	3.002E-01	3.570E-01	2.153E-02	1.498
		323.87	*	9.250E-02	7.183E-01	1.058E+00	1.747E-01	0.087
	+	338.28		7.760E+00	1.630E+00	2.502E+00	2.633E-01	3.101
		445.03		2.344E+00	2.089E+00	3.688E+00	3.779E-01	0.636
		79.80		2.354E+00	2.600E+00	2.822E+00	6.028E-01	0.834
		236.00		2.292E+00	4.110E-01	6.016E-01	6.236E-02	3.809
		256.20	*	6.069E-02	3.915E-01	6.296E-01	8.771E-02	0.096
		286.10		-2.532E-01	1.478E+00	2.467E+00	2.852E-01	-0.103
	+	299.80		4.366E+00	1.781E+00	2.577E+00	4.199E-01	1.694
TH-227		304.40		1.113E+00	1.951E+00	2.956E+00	5.115E-01	0.376
		334.20		-9.266E-01	2.875E+00	3.552E+00	6.512E-01	-0.261
		79.80		2.354E+00	2.601E+00	2.822E+00	6.106E-01	0.834
	+	94.00		2.396E+01	6.095E+00	4.902E+00	1.059E+00	4.887
		236.00		2.292E+00	3.932E-01	6.016E-01	5.389E-02	3.809
		256.20	*	6.069E-02	3.915E-01	6.296E-01	1.063E-01	0.096
		286.10		-2.532E-01	1.499E+00	2.467E+00	2.471E+00	-0.103
	+	299.80		4.366E+00	1.781E+00	2.577E+00	4.199E-01	1.694
		304.40		1.113E+00	1.951E+00	2.956E+00	5.115E-01	0.376
		334.20		-9.266E-01	2.875E+00	3.552E+00	6.512E-01	-0.261
	+	85.43		4.460E-01	2.610E-01	3.798E-01	3.313E-02	1.174
	+	88.47		4.952E-01	1.619E-01	2.318E-01	2.061E-02	2.136
TH-229		100.00		1.595E-01	2.084E-01	3.333E-01	2.508E-02	0.479
		193.63	*	4.150E-01	5.308E-01	8.803E-01	4.750E-02	0.471
		210.97		9.017E-01	9.042E-01	1.335E+00	7.351E-02	0.675
	PA-231	283.67	*	-5.650E-01	1.476E+00	2.438E+00	3.359E-01	-0.232
		301.29		1.258E+00	6.351E-01	1.023E+00	1.070E-01	1.229
	TH-231	81.07		-1.190E-01	3.514E-01	3.553E-01	2.969E-02	-0.335
	+	83.78		2.980E-01	1.743E-01	2.364E-01	2.028E-02	1.260
		94.90		1.232E+00	3.223E-01	5.028E-01	4.048E-02	2.450
		122.32		-1.415E+00	1.872E+00	2.959E+00	2.021E-01	-0.478
		144.24		6.237E-01	7.514E-01	1.240E+00	8.704E-02	0.503
	+	154.21		7.758E-01	5.570E-01	6.967E-01	4.650E-02	1.114
	+	269.46		5.349E-01	3.002E-01	3.570E-01	2.153E-02	1.498
U-231		323.87	*	9.250E-02	7.183E-01	1.058E+00	1.747E-01	0.087
	+	338.28		7.760E+00	1.630E+00	2.502E+00	2.633E-01	3.101
		445.03		2.344E+00	2.089E+00	3.688E+00	3.779E-01	0.636
	+	84.21		1.824E+01	1.067E+01	1.444E+01	1.244E+00	1.263
	+	92.29		3.363E+01	5.290E+00	7.245E+00	6.059E-01	4.642
		95.87	*	4.809E-01	1.894E+00	2.743E+00	2.178E-01	0.175
		108.00		-1.665E+00	3.227E+00	5.173E+00	3.548E-01	-0.322
	PA-233	75.28		2.404E+01	5.723E+00	7.475E+00	1.120E+00	3.216
	+	86.59		7.101E+00	2.939E+00	3.277E+00	8.810E-01	2.167
	+	300.12		1.217E+00	4.837E-01	7.200E-01	9.680E-02	1.690
		311.98	*	-1.424E-02	5.988E-02	9.929E-02	6.130E-03	-0.143
		340.50		2.191E+00	8.847E-01	1.247E+00	2.864E-01	1.756
		398.62		5.889E-01	2.029E+00	3.424E+00	8.838E-01	0.172

---- 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		8.049E-01	1.619E+00	2.754E+00	5.660E-01	0.292
		63.00		4.604E+00	2.414E+00	2.965E+00	4.425E-01	1.553
		94.67		1.301E+00	2.724E-01	3.836E-01	4.615E-02	3.392
		98.44		1.504E-01	1.378E-01	1.665E-01	9.267E-02	0.903
		99.86		5.417E-01	5.469E-01	8.478E-01	6.391E-02	0.639
		111.00		4.769E-02	2.009E-01	3.302E-01	3.556E-02	0.144
		131.20		1.118E-01	1.280E-01	1.895E-01	1.091E-02	0.590
		152.70		6.366E-01	4.659E-01	5.760E-01	9.025E-02	1.105
		186.00		8.863E+00	3.552E+00	2.797E+00	8.524E-01	3.169
		226.40		-1.519E-01	4.282E-01	6.749E-01	7.733E-02	-0.225
		227.20		-1.770E-02	4.563E-01	7.297E-01	4.086E-02	-0.024
		248.90		6.634E-02	8.146E-01	1.307E+00	2.804E-01	0.051
		293.70		6.447E+00	1.488E+00	1.782E+00	2.867E-01	3.618
		369.80		3.104E-01	8.529E-01	1.447E+00	3.009E-01	0.214
		568.70		3.702E+00	1.366E+00	2.458E+00	1.459E-01	1.506
		569.50		4.501E-01	3.668E-01	6.248E-01	3.708E-02	0.720
		574.00		-1.558E+00	1.602E+00	2.462E+00	1.461E-01	-0.633
		699.00		-3.941E-01	8.008E-01	1.258E+00	2.281E-01	-0.313
		706.10		-2.807E-01	1.079E+00	1.713E+00	7.573E-01	-0.164
		733.00		1.263E-01	3.942E-01	5.745E-01	1.236E-01	0.220
		742.81		3.443E-01	1.404E+00	2.297E+00	1.539E+00	0.150
		796.30		1.524E+00	1.455E+00	1.734E+00	4.631E-01	0.879
		805.60		1.223E+00	1.048E+00	1.750E+00	5.314E-01	0.699
		819.60		-2.224E-01	1.211E+00	1.924E+00	7.282E-01	-0.116
		826.30		-5.681E-01	8.943E-01	1.310E+00	5.840E-01	-0.434
		831.60		-1.869E-01	6.922E-01	1.093E+00	3.242E-01	-0.171
		876.40		-6.782E-01	1.077E+00	1.219E+00	1.254E+00	-0.556
		880.51		-3.591E-02	2.699E-01	4.301E-01	3.686E-02	-0.083
		883.24		-6.097E-02	2.933E-01	4.597E-01	3.090E-01	-0.133
		899.00		-2.556E-01	8.323E-01	1.291E+00	5.650E-01	-0.198
		925.00		-5.346E-02	1.126E+00	1.805E+00	1.551E-01	-0.030
		926.50		1.348E-01	1.709E-01	2.881E-01	7.279E-02	0.468
		946.00	*	1.243E-01	3.036E-01	5.052E-01	9.431E-02	0.246
		949.00		4.073E-01	4.666E-01	8.049E-01	6.744E-02	0.506
		980.50		2.525E-01	7.102E-01	1.179E+00	9.519E-02	0.214
		1394.10		-7.406E-01	1.176E+00	1.610E+00	1.046E+00	-0.460
PA-234M	+	766.42		8.224E+00	1.313E+01	2.092E+01	1.056E+01	0.393
		1001.03	*	4.354E+00	5.097E+00	8.954E+00	8.335E-01	0.486
U-235	+	89.95		2.545E+00	1.356E+00	2.130E+00	6.576E-01	1.195
		93.35		7.453E+00	2.307E+00	1.579E+00	4.407E-01	4.719
		105.00		2.283E-01	1.166E+00	1.901E+00	5.597E-01	0.120
		143.76	*	2.551E-01	2.353E-01	3.862E-01	6.262E-02	0.661
		163.35		-8.122E-02	4.871E-01	7.819E-01	1.393E-01	-0.104
		185.71		3.283E-01	8.724E-02	1.038E-01	5.547E-03	3.162
NP-236	+	205.31		-4.843E-01	6.400E-01	8.504E-01	1.520E-01	-0.569
		94.67		9.923E-01	1.872E-01	2.913E-01	2.353E-02	3.406
		98.44		1.137E-01	8.320E-02	1.259E-01	9.662E-03	0.903
		111.00		3.607E-02	1.520E-01	2.498E-01	1.659E-02	0.144
		160.31	*	-5.440E-02	8.421E-02	1.327E-01	7.031E-03	-0.410

---- 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		2.175E-01	1.823E-01	2.845E-01	2.152E-02	0.764
		117.00	*	-6.366E-02	2.006E-01	3.216E-01	2.011E-02	-0.198
	+	209.75		1.383E+00	1.016E+00	1.398E+00	7.685E-02	0.990
		228.18		-3.649E-02	2.398E-01	3.816E-01	2.138E-02	-0.096
		277.60		2.067E-01	1.788E-01	3.147E-01	1.821E-02	0.657
		334.30		-4.725E-01	1.629E+00	2.022E+00	1.171E-01	-0.234
AM-241		59.54	*	2.147E-01	1.741E-01	2.639E-01	2.173E-02	0.813
CM-243		99.55		2.238E-01	1.876E-01	2.927E-01	2.215E-02	0.764
		103.76	*	-4.405E-02	1.062E-01	1.698E-01	1.221E-02	-0.259
		117.00		-6.550E-02	2.064E-01	3.309E-01	2.069E-02	-0.198
	+	209.75		1.364E+00	1.001E+00	1.378E+00	7.577E-02	0.990
		228.18		-3.687E-02	2.424E-01	3.856E-01	2.161E-02	-0.096
		277.60		2.085E-01	1.802E-01	3.173E-01	1.836E-02	0.657
AM-246		798.80		-5.245E-02	1.648E-01	2.220E-01	1.661E-02	-0.236
		1036.00		-2.469E-01	2.750E-01	4.215E-01	3.140E-02	-0.586
		1062.04		-1.636E-01	2.404E-01	3.782E-01	2.694E-02	-0.432
		1078.86	*	1.249E-01	1.487E-01	2.643E-01	1.823E-02	0.472
CM-247		278.00		9.353E-01	7.351E-01	1.300E+00	7.523E-02	0.720
		287.40		-5.683E-02	1.194E+00	2.004E+00	1.163E-01	-0.028
		402.60	*	-1.336E-02	3.626E-02	5.912E-02	3.316E-03	-0.226
CF-249		252.85		3.367E-01	8.903E-01	1.448E+00	8.277E-02	0.233
		333.44		-1.529E-02	2.336E-01	2.666E-01	1.544E-02	-0.057
		387.95	*	9.937E-03	3.942E-02	6.661E-02	3.720E-03	0.149
CF-251		176.60	*	1.264E-02	1.291E-01	2.091E-01	1.105E-02	0.060
		227.00		9.638E-03	4.048E-01	6.493E-01	3.635E-02	0.015
		285.00		-4.141E-01	1.692E+00	2.816E+00	1.633E-01	-0.147

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]G246440003      *
* Acquisition date   : 19-FEB-2010 17:58:08 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 02:00:01.74 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G246440003 Analyst initials: MXR1                  *
* Batch Number      : 950788 Sample Quantity : 1.4318E+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	3.461E+01	3.063E+00	5.259E-01	0.000E+00
CD-109	3.702E+00	1.186E+00	1.393E+00	0.000E+00
SN-126	3.627E-01	1.162E-01	1.371E-01	0.000E+00
RE-188	3.430E-01	2.410E-01	3.077E-01	0.000E+00
TL-208	6.085E-01	9.072E-02	5.878E-02	0.000E+00
BI-211	3.210E+00	4.776E-01	3.454E-01	0.000E+00
PB-212	1.892E+00	1.737E-01	8.931E-02	0.000E+00
PO-212	1.892E+00	1.737E-01	8.931E-02	0.000E+00
BI-214	1.103E+00	1.847E-01	1.185E-01	0.000E+00
PB-214	1.117E+00	1.757E-01	1.204E-01	0.000E+00
PO-214	1.117E+00	1.757E-01	1.204E-01	0.000E+00
PO-216	1.892E+00	1.737E-01	8.931E-02	0.000E+00
PO-218	1.117E+00	1.757E-01	1.204E-01	0.000E+00
RA-224	4.863E+00	1.277E+00	1.016E+00	0.000E+00
RA-226	1.103E+00	1.847E-01	1.185E-01	0.000E+00
AC-228	1.637E+00	3.588E-01	1.956E-01	0.000E+00
RA-228	1.637E+00	3.588E-01	1.956E-01	0.000E+00
TH-228	1.925E+00	1.767E-01	9.086E-02	0.000E+00
TH-230	1.103E+00	1.846E-01	1.185E-01	0.000E+00
TH-232	1.637E+00	3.588E-01	1.956E-01	0.000E+00
TH-234	3.950E+00	2.060E+00	2.283E+00	0.000E+00
U-234	1.103E+00	1.846E-01	1.185E-01	0.000E+00
NP-237	1.065E+00	4.035E-01	4.070E-01	0.000E+00
U-238	3.950E+00	2.060E+00	2.283E+00	0.000E+00
AM-243	4.589E-01	9.059E-02	1.023E-01	0.000E+00
ANH-511	9.691E-02	6.812E-02	4.691E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.374E-01	2.969E-01	5.002E-01	0.000E+00 NOT IDENT.

NA-22	-9.215E-03	4.089E-02	6.836E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.433E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.810E-02	2.742E-02	3.568E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.503E-02	8.617E-02	0.000E+00	FAIL ABUN
SC-46	1.341E-03	3.955E-02	6.636E-02	0.000E+00	FAIL ABUN
V-48	-2.327E-02	7.502E-02	1.208E-01	0.000E+00	NOT IDENT.
CR-51	2.195E-01	3.755E-01	6.855E-01	0.000E+00	NOT IDENT.
MN-52	2.606E-01	2.745E-01	5.179E-01	0.000E+00	NOT IDENT.
MN-54	-2.892E-02	4.096E-02	6.511E-02	0.000E+00	NOT IDENT.
CO-56	3.431E-02	3.722E-02	6.732E-02	0.000E+00	NOT IDENT.
CO-57	-2.170E-02	2.664E-02	4.548E-02	0.000E+00	NOT IDENT.
CO-58	-3.884E-02	3.808E-02	5.798E-02	0.000E+00	NOT IDENT.
FE-59	-4.703E-02	9.703E-02	1.610E-01	0.000E+00	NOT IDENT.
CO-60	-4.332E-02	3.619E-02	5.277E-02	0.000E+00	NOT IDENT.
ZN-65	-3.708E-02	1.059E-01	1.512E-01	0.000E+00	NOT IDENT.
GE-68	1.485E+00	1.283E+00	2.399E+00	0.000E+00	NOT IDENT.
AS-73	3.849E-01	8.276E-01	1.525E+00	0.000E+00	NOT IDENT.
AS-74	6.920E-03	9.484E-02	1.637E-01	0.000E+00	NOT IDENT.
SE-75	1.828E-02	4.474E-02	7.189E-02	0.000E+00	NOT IDENT.
BR-77	-1.217E-02	1.748E+01	3.026E+01	0.000E+00	FAIL ABUN
SR-82	-5.482E-01	4.299E-01	6.510E-01	0.000E+00	NOT IDENT.
RB-83	7.885E-04	6.353E-02	1.101E-01	0.000E+00	NOT IDENT.
RB-84	1.008E-02	7.115E-02	1.206E-01	0.000E+00	NOT IDENT.
KR-85	1.153E+01	7.862E+00	1.317E+01	0.000E+00	NOT IDENT.
SR-85	6.047E-02	4.123E-02	6.907E-02	0.000E+00	NOT IDENT.
RB-86	1.050E+00	8.621E-01	1.620E+00	0.000E+00	NOT IDENT.
Y-88	-2.420E-03	3.192E-02	5.227E-02	0.000E+00	NOT IDENT.
ZR-88	-2.230E-02	2.944E-02	4.953E-02	0.000E+00	NOT IDENT.
Y-91	1.322E+01	1.852E+01	3.343E+01	0.000E+00	NOT IDENT.
NB-94	-3.933E-03	3.578E-02	6.035E-02	0.000E+00	NOT IDENT.
NB-95	2.688E-02	4.666E-02	8.098E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.664E-01	2.800E-01	0.000E+00	NOT IDENT.
ZR-95	3.349E-02	6.990E-02	1.226E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.995E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.617E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	7.804E-01	1.945E+01	3.305E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.535E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.339E-02	3.270E-02	5.725E-02	0.000E+00	FAIL ABUN
RH-102	1.527E-02	2.563E-02	4.634E-02	0.000E+00	NOT IDENT.
RU-103	-2.904E-03	3.969E-02	6.855E-02	0.000E+00	FAIL ABUN
RH-106	2.275E-01	3.102E-01	5.566E-01	0.000E+00	FAIL ABUN
RU-106	2.275E-01	3.094E-01	5.566E-01	0.000E+00	FAIL ABUN
AG-108M	-1.656E-02	3.193E-02	5.414E-02	0.000E+00	NOT IDENT.
AG-110M	-3.543E-02	3.546E-02	5.601E-02	0.000E+00	NOT IDENT.
IN-111	1.220E+00	1.822E+00	2.835E+00	0.000E+00	NOT IDENT.
IN-113M	2.804E-03	4.307E-02	7.603E-02	0.000E+00	NOT IDENT.
SN-113	2.804E-03	4.307E-02	7.603E-02	0.000E+00	NOT IDENT.
IN-114M	-7.170E-03	2.179E-01	3.276E-01	0.000E+00	NOT IDENT.
CD-115	-7.209E+00	2.025E+01	3.352E+01	0.000E+00	NOT IDENT.
SN-117M	6.278E-02	6.638E-02	1.112E-01	0.000E+00	NOT IDENT.
SB-122	-5.908E+00	4.474E+00	7.142E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.430E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.454E-02	3.167E-02	5.197E-02	0.000E+00	NOT IDENT.
I-124	-4.856E-01	1.083E+00	1.538E+00	0.000E+00	NOT IDENT.
SB-124	1.383E-02	6.756E-02	1.170E-01	0.000E+00	FAIL ABUN
SB-125	2.344E-03	8.687E-02	1.523E-01	0.000E+00	FAIL ABUN
TE-125M	-7.904E+00	1.046E+01	1.801E+01	0.000E+00	NOT IDENT.
I-126	3.630E-02	2.057E-01	3.550E-01	0.000E+00	NOT IDENT.
SB-126	-3.138E-02	1.558E-01	2.441E-01	0.000E+00	FAIL ABUN
SB-127	-1.278E+00	1.873E+00	3.006E+00	0.000E+00	NOT IDENT.
XE-127	-1.031E-02	5.482E-02	8.624E-02	0.000E+00	NOT IDENT.
I-131	-1.066E-01	1.328E-01	2.240E-01	0.000E+00	NOT IDENT.
TE-132	-1.856E-01	1.131E+00	1.920E+00	0.000E+00	NOT IDENT.
BA-133	-1.618E-02	4.868E-02	7.301E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.199E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.857E-02	7.082E-02	9.002E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.750E-01	3.022E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.090E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.165E-02	1.099E-01	2.004E-01	0.000E+00	FAIL ABUN
BA-137M	1.559E-02	3.766E-02	6.595E-02	0.000E+00	NOT IDENT.
CS-137	1.648E-02	3.981E-02	6.972E-02	0.000E+00	NOT IDENT.
CE-139	1.258E-02	3.004E-02	5.300E-02	0.000E+00	NOT IDENT.
BA-140	3.576E-02	2.644E-01	4.607E-01	0.000E+00	NOT IDENT.
LA-140	-9.203E-03	9.702E-02	1.530E-01	0.000E+00	FAIL ABUN
CE-141	1.175E-02	7.050E-02	1.227E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.545E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.305E-02	2.479E-01	3.813E-01	0.000E+00	NOT IDENT.
PM-144	1.578E-02	3.747E-02	6.542E-02	0.000E+00	NOT IDENT.

PR-144	1.071E+00	2.542E+00	4.438E+00	0.000E+00	NOT IDENT.
PM-146	3.450E-02	4.211E-02	7.515E-02	0.000E+00	NOT IDENT.
ND-147	1.762E-01	6.215E-01	1.094E+00	0.000E+00	FAIL ABUN
PM-149	-2.082E+01	1.690E+02	3.005E+02	0.000E+00	NOT IDENT.
EU-152	-1.630E-02	1.111E-01	1.694E-01	0.000E+00	FAIL ABUN
GD-153	5.233E-02	9.571E-02	1.524E-01	0.000E+00	FAIL ABUN
EU-154	-1.121E-02	1.124E-01	1.901E-01	0.000E+00	NOT IDENT.
EU-155	6.431E-02	1.156E-01	2.070E-01	0.000E+00	FAIL ABUN
TB-160	-1.454E-02	1.342E-01	2.224E-01	0.000E+00	FAIL ABUN
HO-166M	-1.616E-02	5.578E-02	9.247E-02	0.000E+00	FAIL ABUN
TM-171	-4.352E+01	3.269E+01	4.870E+01	0.000E+00	NOT IDENT.
LU-176	-2.932E-03	2.300E-02	4.073E-02	0.000E+00	FAIL ABUN
LU-177	2.430E+00	1.749E+00	2.598E+00	0.000E+00	FAIL ABUN
LU-177M	-1.791E-01	1.792E-01	2.969E-01	0.000E+00	FAIL ABUN
HF-181	-5.277E-03	3.953E-02	6.811E-02	0.000E+00	NOT IDENT.
W-181	3.632E-01	4.377E-01	7.127E-01	0.000E+00	NOT IDENT.
TA-182	-6.740E-02	2.103E-01	3.504E-01	0.000E+00	FAIL ABUN
RE-183	-3.882E-02	1.143E-01	1.961E-01	0.000E+00	FAIL ABUN
RE-184	9.053E-02	2.346E-01	4.065E-01	0.000E+00	NOT IDENT.
OS-185	4.656E-03	4.089E-02	7.046E-02	0.000E+00	NOT IDENT.
W-188	1.974E+00	8.286E+00	1.309E+01	0.000E+00	FAIL ABUN
IR-192	1.795E-03	3.253E-02	5.804E-02	0.000E+00	FAIL ABUN
AU-195	3.921E-01	2.662E-01	4.388E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.717E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.036E+01	1.166E+01	1.952E+01	0.000E+00	NOT IDENT.
TL-202	-2.986E-02	7.340E-02	1.251E-01	0.000E+00	NOT IDENT.
HG-203	3.980E-02	4.077E-02	7.578E-02	0.000E+00	NOT IDENT.
BI-207	-2.377E-03	5.233E-02	8.970E-02	0.000E+00	FAIL ABUN
TL-207	9.250E-02	7.040E-01	1.099E+00	0.000E+00	FAIL ABUN
PO-209	2.972E-01	7.125E+00	1.196E+01	0.000E+00	NOT IDENT.
BI-210	1.367E+00	3.225E+00	5.924E+00	0.000E+00	NOT IDENT.
PB-210	1.367E+00	3.225E+00	5.924E+00	0.000E+00	NOT IDENT.
PO-210	1.367E+00	3.224E+00	5.924E+00	0.000E+00	NOT IDENT.
PB-211	-1.465E+00	1.300E+00	1.518E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.919E-01	7.200E-01	0.000E+00	FAIL ABUN
PO-215	9.250E-02	7.040E-01	1.099E+00	0.000E+00	FAIL ABUN
RN-219	-1.651E-01	4.032E-01	6.916E-01	0.000E+00	FAIL ABUN
RN-220	-1.026E+01	2.588E+01	4.346E+01	0.000E+00	NOT IDENT.
RA-223	9.250E-02	7.040E-01	1.099E+00	0.000E+00	FAIL ABUN
AC-227	6.069E-02	3.837E-01	6.572E-01	0.000E+00	FAIL ABUN
TH-227	6.069E-02	3.837E-01	6.572E-01	0.000E+00	FAIL ABUN
TH-229	4.150E-01	5.202E-01	9.243E-01	0.000E+00	FAIL ABUN
PA-231	-5.650E-01	1.447E+00	2.539E+00	0.000E+00	NOT IDENT.
TH-231	9.250E-02	7.040E-01	1.099E+00	0.000E+00	FAIL ABUN
U-231	4.809E-01	1.856E+00	2.921E+00	0.000E+00	FAIL ABUN
PA-233	-1.424E-02	5.868E-02	1.032E-01	0.000E+00	FAIL ABUN
PA-234	1.243E-01	2.975E-01	5.126E-01	0.000E+00	FAIL ABUN
PA-234M	4.354E+00	4.995E+00	9.073E+00	0.000E+00	NOT IDENT.
U-235	2.551E-01	2.306E-01	4.080E-01	0.000E+00	FAIL ABUN
NP-236	-5.440E-02	8.253E-02	1.399E-01	0.000E+00	NOT IDENT.
NP-239	-6.366E-02	1.966E-01	3.411E-01	0.000E+00	FAIL ABUN
AM-241	2.147E-01	1.706E-01	2.838E-01	0.000E+00	NOT IDENT.
CM-243	-4.405E-02	1.040E-01	1.806E-01	0.000E+00	FAIL ABUN
AM-246	1.249E-01	1.457E-01	2.674E-01	0.000E+00	NOT IDENT.
CM-247	-1.336E-02	3.553E-02	6.112E-02	0.000E+00	NOT IDENT.
CF-249	9.937E-03	3.863E-02	6.892E-02	0.000E+00	NOT IDENT.
CF-251	1.264E-02	1.265E-01	2.200E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 19:59:15.60

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440003.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:58:08
Sample ID          : G246440003           Sample quantity  : 1.43180E+02 GRAM
Detector name      : GAM19                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:01.74  0.0%
Energy tolerance   : 1.50000 keV          Analyst Initials : MXR1
Abundance limit    : 75.00000             Sensitivity        : 5.00000
Batch ID           : 950788               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	1646	10.67*	1.168E+00	3.461E+01	3.461E+01	9.03
CD-109	88.03	312	3.72*	6.096E+00	3.608E+00	3.702E+00	32.69
SN-126	64.28	209	9.60	3.644E+00	1.563E+00	1.563E+00	52.35
	86.94	312	8.90	6.096E+00	1.508E+00	1.508E+00	52.01
	87.57	312	37.00*	6.096E+00	3.627E-01	3.627E-01	32.69
RE-188	155.03	107	15.00*	6.472E+00	2.886E-01	3.430E-01	71.69
	477.96	-----	1.04	2.995E+00	-----	Line Not Found	-----
	633.10	-----	1.26	2.388E+00	-----	Line Not Found	-----
TL-208	277.35	-----	6.80	4.511E+00	-----	Line Not Found	-----
	510.84	105	21.60	2.843E+00	4.487E-01	4.487E-01	72.21
	583.14	499	84.20*	2.555E+00	6.085E-01	6.085E-01	15.21
	860.37	84	12.46	1.836E+00	9.626E-01	9.626E-01	46.59
BI-211	72.87	-----	1.27	4.857E+00	-----	Line Not Found	-----
	351.07	600	12.94*	3.788E+00	3.210E+00	3.210E+00	15.18
PB-212	74.81	585	10.70	5.062E+00	2.830E+00	2.830E+00	22.21
	77.11	720	18.00	5.304E+00	1.977E+00	1.977E+00	15.39
	87.30	312	8.00	6.096E+00	1.678E+00	1.678E+00	34.19
	238.63	1615	44.60*	5.018E+00	1.892E+00	1.892E+00	9.37
	300.09	131	3.41	4.264E+00	2.356E+00	2.356E+00	38.30
PO-212	74.81	585	10.70	5.062E+00	2.830E+00	2.830E+00	22.21
	77.11	720	18.00	5.304E+00	1.977E+00	1.977E+00	15.39
	87.30	312	8.00	6.096E+00	1.678E+00	1.678E+00	34.19
	115.19	-----	0.60	6.866E+00	-----	Line Not Found	-----
	238.63	1615	44.60*	5.018E+00	1.892E+00	1.892E+00	9.37
	300.09	131	3.41	4.264E+00	2.356E+00	2.356E+00	38.30
BI-214	609.31	480	46.30*	2.464E+00	1.103E+00	1.103E+00	17.09
	1120.29	67	15.10	1.455E+00	8.038E-01	8.039E-01	71.23
	1764.49	96	15.80	1.030E+00	1.542E+00	1.542E+00	26.62
PB-214	74.81	585	6.21	5.062E+00	4.877E+00	4.877E+00	21.46
	77.11	720	10.50	5.304E+00	3.389E+00	3.389E+00	17.17
	87.30	312	4.67	6.096E+00	2.874E+00	2.874E+00	33.59
	241.98	365	7.49	4.976E+00	2.565E+00	2.565E+00	27.37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	424	19.20	4.313E+00	1.343E+00	1.343E+00	18.62
	351.92	600	37.20*	3.788E+00	1.117E+00	1.117E+00	16.06
	74.81	585	6.21	5.062E+00	4.877E+00	4.877E+00	21.46
	77.11	720	10.50	5.304E+00	3.389E+00	3.389E+00	17.17
	87.30	312	4.67	6.096E+00	2.874E+00	2.874E+00	33.59
PO-216	241.98	365	7.49	4.976E+00	2.565E+00	2.565E+00	27.37
	295.21	424	19.20	4.313E+00	1.343E+00	1.343E+00	18.62
	351.92	600	37.20*	3.788E+00	1.117E+00	1.117E+00	16.06
	74.81	585	10.70	5.062E+00	2.830E+00	2.830E+00	22.21
	77.11	720	18.00	5.304E+00	1.977E+00	1.977E+00	15.39
PO-218	87.30	312	8.00	6.096E+00	1.678E+00	1.678E+00	34.19
	238.63	1615	44.60*	5.018E+00	1.892E+00	1.892E+00	9.37
	300.09	131	3.41	4.264E+00	2.356E+00	2.356E+00	38.30
	74.81	585	6.21	5.062E+00	4.877E+00	4.877E+00	21.46
	77.11	720	10.50	5.304E+00	3.389E+00	3.389E+00	17.17
RA-224	87.30	312	4.67	6.096E+00	2.874E+00	2.874E+00	33.59
	241.98	365	7.49	4.976E+00	2.565E+00	2.565E+00	27.37
	295.21	424	19.20	4.313E+00	1.343E+00	1.343E+00	18.62
	351.92	600	37.20*	3.788E+00	1.117E+00	1.117E+00	16.06
	240.98	365	3.95*	4.976E+00	4.863E+00	4.863E+00	26.79
AC-228	609.31	480	46.30*	2.464E+00	1.103E+00	1.103E+00	17.09
	1120.29	67	15.10	1.455E+00	8.038E-01	8.039E-01	71.23
	1764.49	96	15.80	1.030E+00	1.542E+00	1.542E+00	26.62
	338.32	315	11.40	3.902E+00	1.858E+00	1.858E+00	44.64
	911.07	302	27.70*	1.746E+00	1.637E+00	1.637E+00	22.36
RA-228	969.11	217	16.60	1.654E+00	2.070E+00	2.070E+00	29.41
	338.32	315	11.40	3.902E+00	1.858E+00	1.858E+00	44.64
	911.07	302	27.70*	1.746E+00	1.637E+00	1.637E+00	22.36
	969.11	217	16.60	1.654E+00	2.070E+00	2.070E+00	29.41
	74.81	585	10.70	5.062E+00	2.830E+00	2.879E+00	20.18
TH-228	77.11	720	18.00	5.304E+00	1.977E+00	2.011E+00	15.39
	87.30	312	8.00	6.096E+00	1.678E+00	1.707E+00	32.69
	238.63	1615	44.60*	5.018E+00	1.892E+00	1.925E+00	9.37
	300.09	131	3.41	4.264E+00	2.356E+00	2.397E+00	69.80
	609.31	480	46.30*	2.464E+00	1.103E+00	1.103E+00	17.09
TH-230	1120.29	67	15.10	1.455E+00	8.038E-01	8.038E-01	71.23
	1764.49	96	15.80	1.030E+00	1.542E+00	1.542E+00	26.62
	338.32	315	11.40	3.902E+00	1.858E+00	1.858E+00	19.08
	911.07	302	27.70*	1.746E+00	1.637E+00	1.637E+00	22.36
	969.11	217	16.60	1.654E+00	2.070E+00	2.070E+00	29.41
TH-234	63.29	209	3.80*	3.644E+00	3.950E+00	3.950E+00	53.23
	92.38	817	5.41	6.387E+00	6.199E+00	6.199E+00	22.36
	609.31	480	46.30*	2.464E+00	1.103E+00	1.103E+00	17.09
	1120.29	67	15.10	1.455E+00	8.038E-01	8.038E-01	71.23
	1764.49	96	15.80	1.030E+00	1.542E+00	1.542E+00	26.62
NP-237	86.50	312	12.60*	6.096E+00	1.065E+00	1.065E+00	38.66
	95.87	---	2.60	6.515E+00	---	Line Not Found	---
	63.29	209	3.80*	3.644E+00	3.950E+00	3.950E+00	53.23
	92.38	817	5.41	6.387E+00	6.199E+00	6.199E+00	15.73

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	585	66.00*	5.062E+00	4.589E-01	4.589E-01	20.14
	86.72	312	0.34	6.096E+00	3.994E+01	3.994E+01	32.69
	117.66	-----	0.55	6.871E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.659E+00	-----	Line Not Found	-----
ANH-511	511.00	105	100.00*	2.843E+00	9.691E-02	9.691E-02	71.73

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G246440003

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Acquisition date : 19-FEB-2010 17:58:08

Total number of lines in spectrum 35
Number of unidentified lines 3
Number of lines tentatively identified by NID 32 91.43%

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	3.461E+01	3.461E+01	0.313E+01	9.03	
CD-109	464.00D	1.03	3.608E+00	3.702E+00	1.210E+00	32.69	
SN-126	1.00E+05Y	1.00	3.627E-01	3.627E-01	1.186E-01	32.69	
RE-188	69.40D	1.19	2.886E-01	3.430E-01	2.459E-01	71.69	
TL-208	1.41E+10Y	1.00	6.085E-01	6.085E-01	0.926E-01	15.21	
BI-211	7.04E+08Y	1.00	3.210E+00	3.210E+00	0.487E+00	15.18	
PB-212	1.41E+10Y	1.00	1.892E+00	1.892E+00	0.177E+00	9.37	
PO-212	1.41E+10Y	1.00	1.892E+00	1.892E+00	0.177E+00	9.37	
BI-214	1600.00Y	1.00	1.103E+00	1.103E+00	0.188E+00	17.09	
PB-214	1600.00Y	1.00	1.117E+00	1.117E+00	0.179E+00	16.06	
PO-214	1600.00Y	1.00	1.117E+00	1.117E+00	0.179E+00	16.06	
PO-216	1.41E+10Y	1.00	1.892E+00	1.892E+00	0.177E+00	9.37	
PO-218	1600.00Y	1.00	1.117E+00	1.117E+00	0.179E+00	16.06	
RA-224	1.41E+10Y	1.00	4.863E+00	4.863E+00	1.303E+00	26.79	
RA-226	1600.00Y	1.00	1.103E+00	1.103E+00	0.188E+00	17.09	
AC-228	1.41E+10Y	1.00	1.637E+00	1.637E+00	0.366E+00	22.36	
RA-228	1.41E+10Y	1.00	1.637E+00	1.637E+00	0.366E+00	22.36	
TH-228	1.91Y	1.02	1.892E+00	1.925E+00	0.180E+00	9.37	
TH-230	4.47E+09Y	1.00	1.103E+00	1.103E+00	0.188E+00	17.09	
TH-232	1.41E+10Y	1.00	1.637E+00	1.637E+00	0.366E+00	22.36	
TH-234	4.47E+09Y	1.00	3.950E+00	3.950E+00	2.102E+00	53.23	
U-234	4.47E+09Y	1.00	1.103E+00	1.103E+00	0.188E+00	17.09	
NP-237	2.14E+06Y	1.00	1.065E+00	1.065E+00	0.412E+00	38.66	
U-238	4.47E+09Y	1.00	3.950E+00	3.950E+00	2.102E+00	53.23	
AM-243	7380.00Y	1.00	4.589E-01	4.589E-01	0.924E-01	20.14	
ANH-511	1.00E+09Y	1.00	9.691E-02	9.691E-02	6.951E-02	71.73	

Total Activity : 7.731E+01 7.750E+01

Grand Total Activity : 7.731E+01 7.750E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440003

Page : 5
Acquisition date : 19-FEB-2010 17:58:08

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	84.25	166	688	1.48	168.33	164	29	2.30E-02	57.9	5.90E+00	T
3	89.81	164	420	0.99	179.45	164	29	2.27E-02	43.4	6.24E+00	T
0	128.63	107	368	1.08	257.01	254	8	1.48E-02	64.9	6.82E+00	T
0	185.60	398	484	1.28	370.87	364	14	5.53E-02	26.0	5.89E+00	T
0	209.41	94	329	1.09	418.47	413	9	1.30E-02	73.2	5.47E+00	T
0	269.92	128	285	0.90	539.40	533	12	1.77E-02	55.8	4.60E+00	T
0	327.64	64	187	1.11	654.77	651	9	8.90E-03	80.6	3.99E+00	T
0	462.37	108	147	1.28	924.08	917	14	1.50E-02	51.5	3.07E+00	T
0	727.51	122	104	1.30	1454.19	1449	12	1.69E-02	38.6	2.12E+00	T
0	795.95	45	87	0.92	1591.04	1584	13	6.19E-03	91.7	1.97E+00	T
3	964.72	79	52	2.43	1928.55	1922	22	1.10E-02	45.7	1.66E+00	T
0	1378.22	33	20	1.64	2755.73	2750	13	4.55E-03	67.5	1.22E+00	
0	1588.74	24	17	0.86	3176.96	3172	10	3.39E-03	75.4	1.10E+00	
0	1730.04	23	30	2.21	3459.76	3451	22	3.25E-03	****	1.04E+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]G246440003.CNF;1
* Acquisition date   : 19-FEB-2010 17:58:08   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 02:00:01.74          Half life ratio   : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library  : SOLID
* Sample ID          : G246440003             Analyst initials: MXR1
* Batch Number       : 950788                 Sample Quantity  : 1.43180E+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	3.461E+01	3.125E+00	5.234E-01	3.898E-02	66.130
CD-109	3.702E+00	1.210E+00	1.306E+00	1.170E-01	2.835
SN-126	3.627E-01	1.186E-01	1.285E-01	1.146E-02	2.823
RE-188	3.430E-01	2.459E-01	2.917E-01	1.568E-02	1.176
TL-208	6.085E-01	9.257E-02	5.731E-02	3.898E-03	10.618
BI-211	3.210E+00	4.874E-01	3.332E-01	2.127E-02	9.635
PB-212	1.892E+00	1.772E-01	8.543E-02	6.166E-03	22.151
PO-212	1.892E+00	1.772E-01	8.543E-02	6.166E-03	22.151
BI-214	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
PB-214	1.117E+00	1.793E-01	1.161E-01	9.574E-03	9.616
PO-214	1.117E+00	1.793E-01	1.161E-01	9.574E-03	9.616
PO-216	1.892E+00	1.772E-01	8.543E-02	6.166E-03	22.151
PO-218	1.117E+00	1.793E-01	1.161E-01	9.574E-03	9.616
RA-224	4.863E+00	1.303E+00	9.717E-01	5.506E-02	5.005
RA-226	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
AC-228	1.637E+00	3.661E-01	1.926E-01	2.178E-02	8.501
RA-228	1.637E+00	3.661E-01	1.926E-01	2.178E-02	8.501
TH-228	1.925E+00	1.803E-01	8.691E-02	6.273E-03	22.151

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
TH-232	1.637E+00	3.661E-01	1.926E-01	2.178E-02	8.501
TH-234	3.950E+00	2.102E+00	2.125E+00	3.718E-01	1.859
U-234	1.103E+00	1.884E-01	1.156E-01	9.091E-03	9.535
NP-237	1.065E+00	4.118E-01	3.813E-01	8.556E-02	2.793
U-238	3.950E+00	2.102E+00	2.125E+00	3.718E-01	1.859
AM-243	4.589E-01	9.243E-02	9.555E-02	7.578E-03	4.802
ANH-511	9.691E-02	6.951E-02	4.561E-02	2.691E-03	2.125

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.374E-01		3.029E-01	4.856E-01	3.296E-02	-0.283
NA-22	-9.215E-03		4.173E-02	6.782E-02	4.524E-03	-0.136
NA-24	-6.936E-01		3.282E+00	Half-Life too short		
AL-26	-2.810E-02		2.798E-02	3.569E-02	2.084E-03	-0.787
TI-44	3.649E-01	+	5.615E-02	8.057E-02	6.576E-03	4.529
SC-46	1.341E-03		4.036E-02	6.531E-02	5.675E-03	0.021
V-48	-2.327E-02		7.655E-02	1.192E-01	9.581E-03	-0.195
CR-51	2.195E-01		3.831E-01	6.599E-01	4.270E-02	0.333
MN-52	2.606E-01		2.801E-01	5.152E-01	3.716E-02	0.506
MN-54	-2.892E-02		4.180E-02	6.399E-02	5.091E-03	-0.452
CO-56	3.431E-02		3.798E-02	6.619E-02	5.370E-03	0.518
CO-57	-2.170E-02		2.718E-02	4.290E-02	2.561E-03	-0.506
CO-58	-3.884E-02		3.885E-02	5.694E-02	4.364E-03	-0.682
FE-59	-4.703E-02		9.901E-02	1.593E-01	1.195E-02	-0.295
CO-60	-4.332E-02		3.693E-02	5.241E-02	3.862E-03	-0.826
ZN-65	-3.708E-02		1.080E-01	1.496E-01	9.565E-03	-0.248
GE-68	1.485E+00		1.309E+00	2.371E+00	1.641E-01	0.626
AS-73	3.849E-01		8.445E-01	1.415E+00	1.046E-01	0.272
AS-74	6.920E-03		9.677E-02	1.597E-01	9.458E-03	0.043
SE-75	1.828E-02		4.566E-02	6.892E-02	4.008E-03	0.265
BR-77	-1.217E-02		1.784E+01	2.944E+01	1.740E+00	0.000
SR-82	-5.482E-01		4.386E-01	6.388E-01	4.600E-02	-0.858
RB-83	7.885E-04		6.483E-02	1.071E-01	6.329E-03	0.007
RB-84	1.008E-02		7.260E-02	1.187E-01	1.019E-02	0.085
KR-85	1.153E+01		8.023E+00	1.281E+01	7.563E-01	0.900
SR-85	6.047E-02		4.207E-02	6.716E-02	3.966E-03	0.900
RB-86	1.050E+00		8.797E-01	1.602E+00	1.110E-01	0.656
Y-88	-2.420E-03		3.257E-02	5.230E-02	2.985E-03	-0.046
ZR-88	-2.230E-02		3.004E-02	4.788E-02	2.666E-03	-0.466
Y-91	1.322E+01		1.889E+01	3.313E+01	1.934E+00	0.399
NB-94	-3.933E-03		3.651E-02	5.909E-02	3.722E-03	-0.067
NB-95	2.688E-02		4.761E-02	7.944E-02	5.614E-03	0.338
NB-95M	5.403E-01		1.698E-01	2.678E-01	1.983E-02	2.018
ZR-95	3.349E-02		7.132E-02	1.202E-01	9.622E-03	0.279
NB-97	-8.263E-01		4.079E-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
ZR-97	3.710E+01		8.249E+00	Half-Life too short		
MO-99	7.804E-01		1.985E+01	3.239E+01	4.601E+00	0.024
TC-99M	-1.035E+13		7.830E+12	Half-Life too short		
RH-101	1.339E-02		3.337E-02	5.455E-02	2.959E-03	0.245
RH-102	1.527E-02		2.616E-02	4.499E-02	2.626E-03	0.339
RU-103	-2.904E-03		4.050E-02	6.662E-02	8.448E-03	-0.044
RH-106	2.275E-01		3.165E-01	5.435E-01	6.405E-02	0.419
RU-106	2.275E-01		3.157E-01	5.435E-01	3.205E-02	0.419
AG-108M	-1.656E-02		3.258E-02	5.245E-02	3.267E-03	-0.316
AG-110M	-3.543E-02		3.618E-02	5.476E-02	3.398E-03	-0.647
IN-111	1.220E+00		1.859E+00	2.713E+00	1.543E-01	0.450
IN-113M	2.804E-03		4.395E-02	7.350E-02	4.386E-03	0.038
SN-113	2.804E-03		4.395E-02	7.350E-02	4.386E-03	0.038
IN-114M	-7.170E-03		2.223E-01	3.119E-01	1.676E-02	-0.023
CD-115	-7.209E+00		2.067E+01	3.261E+01	1.930E+00	-0.221
SN-117M	6.278E-02		6.774E-02	1.055E-01	5.616E-03	0.595
SB-122	-5.908E+00		4.565E+00	6.959E+00	4.131E-01	-0.849
I-123	4.331E+01		4.811E+01	Half-Life too short		
TE-123M	1.454E-02		3.231E-02	4.929E-02	2.662E-03	0.295
I-124	-4.856E-01		1.105E+00	1.501E+00	8.884E-02	-0.324
SB-124	1.383E-02		6.894E-02	1.168E-01	8.002E-03	0.118
SB-125	2.344E-03		8.865E-02	1.475E-01	8.784E-03	0.016
TE-125M	-7.904E+00		1.067E+01	1.696E+01	1.500E+00	-0.466
I-126	3.630E-02		2.099E-01	3.472E-01	2.040E-02	0.105
SB-126	-3.138E-02		1.590E-01	2.391E-01	1.557E-02	-0.131
SB-127	-1.278E+00		1.911E+00	2.941E+00	3.050E-01	-0.435
XE-127	-1.031E-02		5.594E-02	8.221E-02	4.485E-03	-0.125
I-131	-1.066E-01		1.355E-01	2.162E-01	1.385E-02	-0.493
TE-132	-1.856E-01		1.154E+00	1.835E+00	2.704E-01	-0.101
BA-133	-1.618E-02		4.968E-02	7.044E-02	8.118E-03	-0.230
I-133	-2.022E-03		1.632E-02	Half-Life too short		
CS-134	7.857E-02	+	7.227E-02	8.838E-02	6.645E-03	0.889
CS-135	3.653E-01		1.785E-01	2.898E-01	2.212E-02	1.260
I-135	-6.153E+11		5.564E+11	Half-Life too short		
CS-136	7.165E-02		1.121E-01	1.980E-01	1.530E-02	0.362
BA-137M	1.559E-02		3.842E-02	6.449E-02	3.755E-03	0.242
CS-137	1.648E-02		4.062E-02	6.817E-02	3.986E-03	0.242
CE-139	1.258E-02		3.065E-02	5.032E-02	2.627E-03	0.250
BA-140	3.576E-02		2.698E-01	4.484E-01	1.459E-01	0.080
LA-140	-9.203E-03		9.900E-02	1.526E-01	1.033E-02	-0.060
CE-141	1.175E-02		7.193E-02	1.162E-01	6.690E-03	0.101
CE-143	3.079E-03		4.360E-04	Half-Life too short		
CE-144	1.305E-02		2.530E-01	3.603E-01	5.104E-02	0.036
PM-144	1.578E-02		3.824E-02	6.404E-02	3.990E-03	0.246
PR-144	1.071E+00		2.594E+00	4.345E+00	2.705E-01	0.246
PM-146	3.450E-02		4.297E-02	7.288E-02	6.277E-03	0.473
ND-147	1.762E-01		6.342E-01	1.064E+00	1.445E-01	0.166
PM-149	-2.082E+01		1.724E+02	2.885E+02	4.092E+01	-0.072

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-1.630E-02		1.133E-01	1.633E-01	1.063E-02	-0.100
GD-153	5.233E-02		9.767E-02	1.431E-01	1.113E-02	0.366
EU-154	-1.121E-02		1.147E-01	1.886E-01	1.867E-02	-0.059
EU-155	6.431E-02		1.180E-01	1.947E-01	1.400E-02	0.330
TB-160	-1.454E-02		1.369E-01	2.188E-01	1.872E-02	-0.066
HO-166M	-1.616E-02		5.691E-02	9.056E-02	5.801E-03	-0.178
TM-171	-4.352E+01		3.336E+01	4.538E+01	3.450E+00	-0.959
LU-176	-2.932E-03		2.347E-02	3.917E-02	2.278E-03	-0.075
LU-177	2.430E+00	+	1.785E+00	2.478E+00	1.360E-01	0.981
LU-177M	-1.791E-01		1.829E-01	2.873E-01	1.624E-02	-0.623
HF-181	-5.277E-03		4.033E-02	6.614E-02	3.870E-03	-0.080
W-181	3.632E-01		4.466E-01	6.639E-01	5.024E-02	0.547
TA-182	-6.740E-02		2.146E-01	3.474E-01	2.095E-02	-0.194
RE-183	-3.882E-02		1.166E-01	1.861E-01	9.805E-03	-0.209
RE-184	9.053E-02		2.394E-01	3.894E-01	2.225E-02	0.233
OS-185	4.656E-03		4.173E-02	6.886E-02	4.033E-03	0.068
W-188	1.974E+00		8.455E+00	1.257E+01	7.302E-01	0.157
IR-192	1.795E-03		3.320E-02	5.585E-02	3.263E-03	0.032
AU-195	3.921E-01		2.716E-01	4.122E-01	3.146E-02	0.951
TL-200	8.953E-05		8.758E-04	Half-Life	too short	
TL-201	-1.036E+01		1.190E+01	1.854E+01	9.685E-01	-0.559
TL-202	-2.986E-02		7.490E-02	1.212E-01	6.962E-03	-0.246
HG-203	3.980E-02		4.160E-02	7.274E-02	4.473E-03	0.547
BI-207	-2.377E-03		5.340E-02	8.864E-02	6.294E-03	-0.027
TL-207	9.250E-02		7.183E-01	1.058E+00	1.747E-01	0.087
PO-209	2.972E-01		7.270E+00	1.177E+01	1.035E+00	0.025
BI-210	1.367E+00		3.291E+00	5.481E+00	4.178E-01	0.249
PB-210	1.367E+00		3.291E+00	5.481E+00	4.178E-01	0.249
PO-210	1.367E+00		3.290E+00	5.481E+00	3.573E-01	0.249
PB-211	-1.465E+00		1.327E+00	1.468E+00	9.152E-01	-0.998
BI-212	1.273E+00	+	5.020E-01	7.055E-01	5.873E-02	1.804
PO-215	9.250E-02		7.183E-01	1.058E+00	1.747E-01	0.087
RN-219	-1.651E-01		4.114E-01	6.690E-01	9.047E-02	-0.247
RN-220	-1.026E+01		2.640E+01	4.232E+01	2.511E+00	-0.242
RA-223	9.250E-02		7.183E-01	1.058E+00	1.747E-01	0.087
AC-227	6.069E-02		3.915E-01	6.296E-01	8.771E-02	0.096
TH-227	6.069E-02		3.915E-01	6.296E-01	1.063E-01	0.096
TH-229	4.150E-01		5.308E-01	8.803E-01	4.750E-02	0.471
PA-231	-5.650E-01		1.476E+00	2.438E+00	3.359E-01	-0.232
TH-231	9.250E-02		7.183E-01	1.058E+00	1.747E-01	0.087
U-231	4.809E-01		1.894E+00	2.743E+00	2.178E-01	0.175
PA-233	-1.424E-02		5.988E-02	9.929E-02	6.130E-03	-0.143
PA-234	1.243E-01		3.036E-01	5.052E-01	9.431E-02	0.246
PA-234M	4.354E+00		5.097E+00	8.954E+00	8.335E-01	0.486
U-235	2.551E-01		2.353E-01	3.862E-01	6.262E-02	0.661
NP-236	-5.440E-02		8.421E-02	1.327E-01	7.031E-03	-0.410
NP-239	-6.366E-02		2.006E-01	3.216E-01	2.011E-02	-0.198
AM-241	2.147E-01		1.741E-01	2.639E-01	2.173E-02	0.813

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-4.405E-02		1.062E-01	1.698E-01	1.221E-02	-0.259
AM-246	1.249E-01		1.487E-01	2.643E-01	1.823E-02	0.472
CM-247	-1.336E-02		3.626E-02	5.912E-02	3.316E-03	-0.226
CF-249	9.937E-03		3.942E-02	6.661E-02	3.720E-03	0.149
CF-251	1.264E-02		1.291E-01	2.091E-01	1.105E-02	0.060

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]G246440003          *
* Acquisition date   : 19-FEB-2010 17:58:08 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 02:00:01.74 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246440003 Analyst initials: MXR1                 *
* Batch Number       : 950788 Sample Quantity : 1.4318E+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	3.461E+01	3.063E+00	2.631E-01	1.563E+00
CD-109	3.702E+00	1.186E+00	6.971E-01	6.051E-01
SN-126	3.627E-01	1.162E-01	6.860E-02	5.929E-02
RE-188	3.430E-01	2.410E-01	1.540E-01	1.229E-01
TL-208	6.085E-01	9.072E-02	2.941E-02	4.629E-02
BI-211	3.210E+00	4.776E-01	1.728E-01	2.437E-01
PB-212	1.892E+00	1.737E-01	4.468E-02	8.862E-02
PO-212	1.892E+00	1.737E-01	4.468E-02	8.862E-02
BI-214	1.103E+00	1.847E-01	5.927E-02	9.421E-02
PB-214	1.117E+00	1.757E-01	6.023E-02	8.963E-02
PO-214	1.117E+00	1.757E-01	6.023E-02	8.963E-02
PO-216	1.892E+00	1.737E-01	4.468E-02	8.862E-02
PO-218	1.117E+00	1.757E-01	6.023E-02	8.963E-02
RA-224	4.863E+00	1.277E+00	5.081E-01	6.515E-01
RA-226	1.103E+00	1.847E-01	5.927E-02	9.421E-02
AC-228	1.637E+00	3.588E-01	9.784E-02	1.831E-01
RA-228	1.637E+00	3.588E-01	9.784E-02	1.831E-01
TH-228	1.925E+00	1.767E-01	4.546E-02	9.016E-02
TH-230	1.103E+00	1.846E-01	5.927E-02	9.421E-02
TH-232	1.637E+00	3.588E-01	9.784E-02	1.831E-01
TH-234	3.950E+00	2.060E+00	1.142E+00	1.051E+00
U-234	1.103E+00	1.846E-01	5.927E-02	9.421E-02
NP-237	1.065E+00	4.035E-01	2.036E-01	2.059E-01
U-238	3.950E+00	2.060E+00	1.142E+00	1.051E+00
AM-243	4.589E-01	9.059E-02	5.118E-02	4.622E-02
ANH-511	9.691E-02	6.812E-02	2.347E-02	3.476E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.374E-01	2.969E-01	2.502E-01	1.515E-01 NOT IDENT.

NA-22	-9.215E-03	4.089E-02	3.420E-02	2.086E-02	NOT IDENT.
NA-24	-6.936E+05	6.433E+06	0.000E+00	3.282E+06	SHORT HLIF
AL-26	-2.810E-02	2.742E-02	1.785E-02	1.399E-02	NOT IDENT.
TI-44	3.649E-01	5.503E-02	4.311E-02	2.808E-02	FAIL ABUN
SC-46	1.341E-03	3.955E-02	3.320E-02	2.018E-02	FAIL ABUN
V-48	-2.327E-02	7.502E-02	6.044E-02	3.827E-02	NOT IDENT.
CR-51	2.195E-01	3.755E-01	3.430E-01	1.916E-01	NOT IDENT.
MN-52	2.606E-01	2.745E-01	2.591E-01	1.400E-01	NOT IDENT.
MN-54	-2.892E-02	4.096E-02	3.258E-02	2.090E-02	NOT IDENT.
CO-56	3.431E-02	3.722E-02	3.368E-02	1.899E-02	NOT IDENT.
CO-57	-2.170E-02	2.664E-02	2.275E-02	1.359E-02	NOT IDENT.
CO-58	-3.884E-02	3.808E-02	2.900E-02	1.943E-02	NOT IDENT.
FE-59	-4.703E-02	9.703E-02	8.057E-02	4.950E-02	NOT IDENT.
CO-60	-4.332E-02	3.619E-02	2.640E-02	1.846E-02	NOT IDENT.
ZN-65	-3.708E-02	1.059E-01	7.566E-02	5.402E-02	NOT IDENT.
GE-68	1.485E+00	1.283E+00	1.200E+00	6.545E-01	NOT IDENT.
AS-73	3.849E-01	8.276E-01	7.628E-01	4.222E-01	NOT IDENT.
AS-74	6.920E-03	9.484E-02	8.188E-02	4.839E-02	NOT IDENT.
SE-75	1.828E-02	4.474E-02	3.597E-02	2.283E-02	NOT IDENT.
BR-77	-1.217E-02	1.748E+01	1.514E+01	8.921E+00	FAIL ABUN
SR-82	-5.482E-01	4.299E-01	3.257E-01	2.193E-01	NOT IDENT.
RB-83	7.885E-04	6.353E-02	5.507E-02	3.241E-02	NOT IDENT.
RB-84	1.008E-02	7.115E-02	6.033E-02	3.630E-02	NOT IDENT.
KR-85	1.153E+01	7.862E+00	6.590E+00	4.011E+00	NOT IDENT.
SR-85	6.047E-02	4.123E-02	3.455E-02	2.103E-02	NOT IDENT.
RB-86	1.050E+00	8.621E-01	8.107E-01	4.399E-01	NOT IDENT.
Y-88	-2.420E-03	3.192E-02	2.615E-02	1.628E-02	NOT IDENT.
ZR-88	-2.230E-02	2.944E-02	2.478E-02	1.502E-02	NOT IDENT.
Y-91	1.322E+01	1.852E+01	1.672E+01	9.447E+00	NOT IDENT.
NB-94	-3.933E-03	3.578E-02	3.020E-02	1.826E-02	NOT IDENT.
NB-95	2.688E-02	4.666E-02	4.051E-02	2.381E-02	NOT IDENT.
NB-95M	5.403E-01	1.664E-01	1.401E-01	8.490E-02	NOT IDENT.
ZR-95	3.349E-02	6.990E-02	6.132E-02	3.566E-02	NOT IDENT.
NB-97	-8.263E+05	7.995E+05	0.000E+00	4.079E+05	SHORT HLIF
ZR-97	3.710E+07	1.617E+07	0.000E+00	8.249E+06	SHORT HLIF
MO-99	7.804E-01	1.945E+01	1.653E+01	9.924E+00	NOT IDENT.
TC-99M	-1.035E+19	1.535E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.339E-02	3.270E-02	2.864E-02	1.668E-02	FAIL ABUN
RH-102	1.527E-02	2.563E-02	2.318E-02	1.308E-02	NOT IDENT.
RU-103	-2.904E-03	3.969E-02	3.430E-02	2.025E-02	FAIL ABUN
RH-106	2.275E-01	3.102E-01	2.785E-01	1.583E-01	FAIL ABUN
RU-106	2.275E-01	3.094E-01	2.785E-01	1.578E-01	FAIL ABUN
AG-108M	-1.656E-02	3.193E-02	2.709E-02	1.629E-02	NOT IDENT.
AG-110M	-3.543E-02	3.546E-02	2.802E-02	1.809E-02	NOT IDENT.
IN-111	1.220E+00	1.822E+00	1.418E+00	9.295E-01	NOT IDENT.
IN-113M	2.804E-03	4.307E-02	3.804E-02	2.197E-02	NOT IDENT.
SN-113	2.804E-03	4.307E-02	3.804E-02	2.197E-02	NOT IDENT.
IN-114M	-7.170E-03	2.179E-01	1.639E-01	1.112E-01	NOT IDENT.
CD-115	-7.209E+00	2.025E+01	1.677E+01	1.033E+01	NOT IDENT.
SN-117M	6.278E-02	6.638E-02	5.566E-02	3.387E-02	NOT IDENT.
SB-122	-5.908E+00	4.474E+00	3.573E+00	2.283E+00	NOT IDENT.
I-123	4.331E+07	9.430E+07	0.000E+00	4.811E+07	SHORT HLIF
TE-123M	1.454E-02	3.167E-02	2.600E-02	1.616E-02	NOT IDENT.
I-124	-4.856E-01	1.083E+00	7.696E-01	5.524E-01	NOT IDENT.
SB-124	1.383E-02	6.756E-02	5.854E-02	3.447E-02	FAIL ABUN
SB-125	2.344E-03	8.687E-02	7.621E-02	4.432E-02	FAIL ABUN
TE-125M	-7.904E+00	1.046E+01	9.012E+00	5.337E+00	NOT IDENT.
I-126	3.630E-02	2.057E-01	1.776E-01	1.050E-01	NOT IDENT.
SB-126	-3.138E-02	1.558E-01	1.221E-01	7.948E-02	FAIL ABUN
SB-127	-1.278E+00	1.873E+00	1.504E+00	9.557E-01	NOT IDENT.
XE-127	-1.031E-02	5.482E-02	4.314E-02	2.797E-02	NOT IDENT.
I-131	-1.066E-01	1.328E-01	1.121E-01	6.773E-02	NOT IDENT.
TE-132	-1.856E-01	1.131E+00	9.604E-01	5.769E-01	NOT IDENT.
BA-133	-1.618E-02	4.868E-02	3.653E-02	2.484E-02	NOT IDENT.
I-133	-2.022E+03	3.199E+04	0.000E+00	1.632E+04	SHORT HLIF
CS-134	7.857E-02	7.082E-02	4.504E-02	3.613E-02	FAIL ABUN
CS-135	3.653E-01	1.750E-01	1.512E-01	8.927E-02	NOT IDENT.
I-135	-6.153E+17	1.090E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.165E-02	1.099E-01	1.003E-01	5.607E-02	FAIL ABUN
BA-137M	1.559E-02	3.766E-02	3.300E-02	1.921E-02	NOT IDENT.
CS-137	1.648E-02	3.981E-02	3.488E-02	2.031E-02	NOT IDENT.
CE-139	1.258E-02	3.004E-02	2.652E-02	1.532E-02	NOT IDENT.
BA-140	3.576E-02	2.644E-01	2.305E-01	1.349E-01	NOT IDENT.
LA-140	-9.203E-03	9.702E-02	7.656E-02	4.950E-02	FAIL ABUN
CE-141	1.175E-02	7.050E-02	6.139E-02	3.597E-02	NOT IDENT.
CE-143	3.079E+03	8.545E+02	0.000E+00	4.360E+02	SHORT HLIF
CE-144	1.305E-02	2.479E-01	1.907E-01	1.265E-01	NOT IDENT.
PM-144	1.578E-02	3.747E-02	3.273E-02	1.912E-02	NOT IDENT.

PR-144	1.071E+00	2.542E+00	2.220E+00	1.297E+00	NOT IDENT.
PM-146	3.450E-02	4.211E-02	3.760E-02	2.148E-02	NOT IDENT.
ND-147	1.762E-01	6.215E-01	5.472E-01	3.171E-01	FAIL ABUN
PM-149	-2.082E+01	1.690E+02	1.503E+02	8.621E+01	NOT IDENT.
EU-152	-1.630E-02	1.111E-01	8.476E-02	5.667E-02	FAIL ABUN
GD-153	5.233E-02	9.571E-02	7.624E-02	4.883E-02	FAIL ABUN
EU-154	-1.121E-02	1.124E-01	9.511E-02	5.734E-02	NOT IDENT.
EU-155	6.431E-02	1.156E-01	1.035E-01	5.898E-02	FAIL ABUN
TB-160	-1.454E-02	1.342E-01	1.113E-01	6.847E-02	FAIL ABUN
HO-166M	-1.616E-02	5.578E-02	4.626E-02	2.846E-02	FAIL ABUN
TM-171	-4.352E+01	3.269E+01	2.436E+01	1.668E+01	NOT IDENT.
LU-176	-2.932E-03	2.300E-02	2.037E-02	1.173E-02	FAIL ABUN
LU-177	2.430E+00	1.749E+00	1.300E+00	8.924E-01	FAIL ABUN
LU-177M	-1.791E-01	1.792E-01	1.485E-01	9.144E-02	FAIL ABUN
HF-181	-5.277E-03	3.953E-02	3.407E-02	2.017E-02	NOT IDENT.
W-181	3.632E-01	4.377E-01	3.566E-01	2.233E-01	NOT IDENT.
TA-182	-6.740E-02	2.103E-01	1.753E-01	1.073E-01	FAIL ABUN
RE-183	-3.882E-02	1.143E-01	9.812E-02	5.832E-02	FAIL ABUN
RE-184	9.053E-02	2.346E-01	2.034E-01	1.197E-01	NOT IDENT.
OS-185	4.656E-03	4.089E-02	3.525E-02	2.086E-02	NOT IDENT.
W-188	1.974E+00	8.286E+00	6.549E+00	4.228E+00	FAIL ABUN
IR-192	1.795E-03	3.253E-02	2.904E-02	1.660E-02	FAIL ABUN
AU-195	3.921E-01	2.662E-01	2.195E-01	1.358E-01	FAIL ABUN
TL-200	8.953E+01	1.717E+03	0.000E+00	8.758E+02	SHORT HLIF
TL-201	-1.036E+01	1.166E+01	9.766E+00	5.948E+00	NOT IDENT.
TL-202	-2.986E-02	7.340E-02	6.258E-02	3.745E-02	NOT IDENT.
HG-203	3.980E-02	4.077E-02	3.791E-02	2.080E-02	NOT IDENT.
BI-207	-2.377E-03	5.233E-02	4.488E-02	2.670E-02	FAIL ABUN
TL-207	9.250E-02	7.040E-01	5.497E-01	3.592E-01	FAIL ABUN
PO-209	2.972E-01	7.125E+00	5.982E+00	3.635E+00	NOT IDENT.
BI-210	1.367E+00	3.225E+00	2.964E+00	1.645E+00	NOT IDENT.
PB-210	1.367E+00	3.225E+00	2.964E+00	1.645E+00	NOT IDENT.
PO-210	1.367E+00	3.224E+00	2.964E+00	1.645E+00	NOT IDENT.
PB-211	-1.465E+00	1.300E+00	7.594E-01	6.633E-01	NOT IDENT.
BI-212	1.273E+00	4.919E-01	3.602E-01	2.510E-01	FAIL ABUN
PO-215	9.250E-02	7.040E-01	5.497E-01	3.592E-01	FAIL ABUN
RN-219	-1.651E-01	4.032E-01	3.460E-01	2.057E-01	FAIL ABUN
RN-220	-1.026E+01	2.588E+01	2.174E+01	1.320E+01	NOT IDENT.
RA-223	9.250E-02	7.040E-01	5.497E-01	3.592E-01	FAIL ABUN
AC-227	6.069E-02	3.837E-01	3.288E-01	1.957E-01	FAIL ABUN
TH-227	6.069E-02	3.837E-01	3.288E-01	1.958E-01	FAIL ABUN
TH-229	4.150E-01	5.202E-01	4.624E-01	2.654E-01	FAIL ABUN
PA-231	-5.650E-01	1.447E+00	1.270E+00	7.380E-01	NOT IDENT.
TH-231	9.250E-02	7.040E-01	5.497E-01	3.592E-01	FAIL ABUN
U-231	4.809E-01	1.856E+00	1.462E+00	9.468E-01	FAIL ABUN
PA-233	-1.424E-02	5.868E-02	5.164E-02	2.994E-02	FAIL ABUN
PA-234	1.243E-01	2.975E-01	2.565E-01	1.518E-01	FAIL ABUN
PA-234M	4.354E+00	4.995E+00	4.539E+00	2.549E+00	NOT IDENT.
U-235	2.551E-01	2.306E-01	2.041E-01	1.176E-01	FAIL ABUN
NP-236	-5.440E-02	8.253E-02	7.000E-02	4.211E-02	NOT IDENT.
NP-239	-6.366E-02	1.966E-01	1.707E-01	1.003E-01	FAIL ABUN
AM-241	2.147E-01	1.706E-01	1.420E-01	8.705E-02	NOT IDENT.
CM-243	-4.405E-02	1.040E-01	9.035E-02	5.308E-02	FAIL ABUN
AM-246	1.249E-01	1.457E-01	1.338E-01	7.434E-02	NOT IDENT.
CM-247	-1.336E-02	3.553E-02	3.058E-02	1.813E-02	NOT IDENT.
CF-249	9.937E-03	3.863E-02	3.448E-02	1.971E-02	NOT IDENT.
CF-251	1.264E-02	1.265E-01	1.101E-01	6.456E-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	408.1639
46.50	408.1639
46.50	408.1639
48.70	457.9723
49.72	491.6982
51.35	447.6745
52.39	461.9125
52.97	449.4880
53.15	449.5808
53.44	460.5066
54.07	462.7957
56.28	541.5856
56.28	525.8610
57.37	0.0000
57.53	511.8170
57.53	511.8185
57.60	511.8562
57.98	491.5847
57.98	491.5847
59.32	479.6711
59.32	479.6711
59.40	479.7119
59.54	479.7843
59.72	479.8762
60.01	484.7617
61.10	515.3572
61.14	515.3781
61.30	548.6694
63.00	576.1749
63.29	576.3475
63.29	576.3475
63.58	576.5195
64.28	583.6744
65.12	617.5096
65.20	617.5595
65.20	617.5595
66.05	637.1578
66.72	650.3060
66.83	650.3784
66.91	652.0211
67.20	652.2088
67.20	652.2088
67.75	676.4385
67.85	640.6934
68.90	610.8158
68.90	610.8158
69.30	611.0568
69.67	570.0842
70.82	621.0063
70.82	621.0063
70.83	616.2241
72.80	674.9708
72.87	687.8137
72.87	687.8137
74.67	683.2617
74.81	683.3528
74.81	683.3528
74.81	683.3528
74.81	683.3528
74.81	683.3528
74.81	683.3528
74.81	683.3528
74.97	683.4543
75.28	683.6521
75.70	683.9202
77.11	684.8156
77.11	684.8156

77.11	684.8156
77.11	684.8156
77.11	684.8156
77.11	684.8156
77.11	684.8156
78.38	651.1616
79.62	559.3427
79.80	559.4338
79.80	559.4338
80.11	640.1075
80.18	640.1463
80.30	640.2167
80.30	640.2167
80.57	640.3719
81.00	640.6194
81.07	640.6582
81.07	640.6582
81.07	640.6582
81.07	640.6582
82.60	589.0816
83.37	654.0809
83.78	654.3182
83.78	654.3182
83.78	654.3182
83.78	654.3182
84.21	566.8283
84.90	567.1708
85.43	567.4319
86.29	567.8558
86.50	567.9585
86.54	567.9778
86.59	568.0035
86.72	568.0677
86.79	568.0998
86.94	568.1747
87.30	568.3503
87.30	568.3503
87.30	568.3503
87.30	568.3503
87.30	568.3503
87.30	568.3503
87.30	568.3503
87.57	568.4830
87.88	568.6328
88.03	568.7056
88.36	568.8661
88.47	568.9197
89.95	569.6346
91.11	570.1890
92.29	570.7520
92.38	570.7948
92.38	570.7948
93.35	571.2529
94.00	571.5590
94.67	516.8973
94.67	516.8992
94.90	554.5088
94.90	554.5088
94.90	554.5088
94.90	554.5088
95.87	540.2568
95.87	540.2568
96.73	529.2014
97.43	488.6434
98.44	428.5229
98.44	428.5245
98.88	420.4940
99.55	436.5430
99.55	436.5430
99.86	444.8376
100.00	457.3644
100.10	457.4019
103.18	522.2733
103.76	481.4485
105.00	468.5522
105.31	450.1654
108.00	508.7666
109.28	524.7218

111.00	463.4663
111.00	463.4663
111.76	458.5660
112.95	425.8919
115.19	451.4445
116.30	439.3737
117.00	413.6773
117.00	413.6773
117.66	411.8006
121.11	420.0987
121.62	430.6520
121.78	430.7009
122.06	437.0295
122.32	437.1096
122.32	437.1096
122.32	437.1096
122.32	437.1096
123.07	397.4754
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129.76	468.6642
131.20	405.4564
133.02	409.3106
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135.34	435.7766
136.00	442.2697
136.25	442.3436
136.48	436.1059
140.51	468.8708
140.51	0.0000
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142.65	407.2684
143.76	397.0014
144.24	403.4619
144.24	403.4619
144.24	403.4619
144.24	403.4619
145.22	414.2839
145.44	412.2267
147.16	485.3352
152.43	380.4937
152.70	375.8846
153.22	376.0062
154.21	382.6126
154.21	382.6126
154.21	382.6126
154.21	382.6126
155.03	379.4022
156.02	355.8000
158.56	336.7433
159.00	0.0000
159.00	358.1510
160.31	401.1036
161.27	381.0557
162.32	380.2273
162.64	370.6863
163.35	369.7738
163.89	354.9258
165.85	339.2818
167.43	388.8779
171.28	328.5499
171.86	317.9191
172.10	307.2200
176.55	343.5422
176.60	332.7823
181.06	333.4056
184.41	312.6100
185.71	312.8327
186.00	312.8834
190.27	345.5196
192.34	314.3282
193.63	320.7072
197.04	343.0749
198.01	314.9185
198.60	345.5385
200.40	327.3193
201.83	333.0237
202.84	351.0440
205.31	378.0396

208.36	304.5737
208.81	326.5605
209.75	292.9492
209.75	292.9492
210.97	317.7067
215.65	312.3021
216.55	303.6417
218.09	312.6856
222.10	301.1744
223.80	311.3635
226.40	316.1815
227.00	301.8992
227.08	301.9117
227.20	304.1403
228.16	307.6024
228.18	307.6045
228.18	307.6045
231.56	0.0000
235.69	314.4926
236.00	314.5402
236.00	314.5402
238.63	245.7637
238.63	245.7637
238.63	245.7637
238.63	245.7637
239.00	245.8058
240.98	246.0352
241.98	246.1515
241.98	246.1515
241.98	246.1515
244.69	208.7690
245.39	190.9869
247.94	212.9551
248.90	225.7135
249.79	257.1058
252.40	223.8388
252.85	227.2429
252.85	227.2429
254.15	0.0000
256.20	234.3166
256.20	234.3166
260.50	221.2913
260.90	217.9599
262.80	212.8960
264.65	186.0631
268.24	205.8958
268.79	211.0570
269.46	211.1199
269.46	211.1199
269.46	211.1199
269.46	211.1199
271.23	233.2537
273.65	274.1738
276.40	220.5830
277.35	219.0880
277.60	219.1116
277.60	219.1116
278.00	211.9054
278.60	215.5829
279.20	215.6381
279.53	217.4810
280.46	255.6417
281.68	249.4269
283.67	216.9584
284.30	216.1088
285.00	214.3561
285.90	210.8022
286.10	210.8221
286.10	210.8221
287.40	210.9368
288.45	0.0000
290.67	216.9933
290.80	212.4524
291.72	215.5712
293.26	0.0000
293.70	229.4216
295.21	223.4847
295.21	223.4847

295.21	223.4847
295.96	159.6811
296.50	159.7174
297.23	159.7665
298.57	159.8541
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300.09	199.5623
300.09	199.5623
300.12	199.5650
301.29	175.2749
302.84	181.4852
303.76	180.0273
303.91	180.0393
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304.40	166.3408
304.84	172.4749
306.84	186.0577
308.46	170.5878
311.98	178.1783
316.51	172.9797
318.01	181.3689
319.02	193.4143
319.41	182.3898
320.08	175.0658
323.87	178.4038
323.87	178.4038
323.87	178.4038
323.87	178.4038
325.23	190.8084
328.77	189.5299
333.44	182.1543
334.20	189.9278
334.20	189.9278
334.30	189.9353
338.28	168.8832
338.28	168.8832
338.28	168.8832
338.28	168.8832
338.32	168.8854
338.32	168.8854
338.32	168.8854
340.50	173.3594
340.57	173.3639
344.27	192.2061
345.85	186.1182
350.59	0.0000
351.07	179.9551
351.92	180.0116
351.92	180.0116
351.92	180.0116
355.39	0.0000
356.01	182.1531
364.48	170.5361
366.43	151.9047
367.43	148.2060
367.94	0.0000
369.80	155.8439
374.96	151.4288
383.85	138.6989
387.95	152.1265
388.63	145.5462
391.69	149.4867
391.69	149.4867
392.90	158.0670
398.62	141.3081
400.65	146.1515
401.10	141.4281
401.81	163.2992
402.60	157.6453
404.84	196.7334
410.95	160.9502
411.60	186.7048
413.65	179.2059
414.70	138.2668
415.30	133.5264

415.76	132.5930
417.63	0.0000
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423.70	123.3783
427.08	148.4099
427.89	130.2525
432.53	131.4093
433.93	144.9043
439.47	131.7053
439.56	131.7103
439.89	135.5696
443.98	100.1267
444.90	95.3407
445.03	94.3812
445.03	94.3812
445.03	94.3812
445.03	94.3812
453.90	109.4569
463.38	103.3255
468.07	100.2417
473.00	99.0989
475.06	92.3571
475.35	93.3375
476.78	92.4058
477.59	111.8864
477.96	113.8451
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484.57	94.5750
487.03	108.3049
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492.35	110.4329
497.08	110.5902
507.63	0.0000
510.53	0.0000
510.84	113.0059
511.00	113.0108
511.85	113.0382
511.85	113.0382
513.99	111.4705
513.99	111.4705
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520.65	95.5909
527.90	104.6776
528.96	0.0000
529.64	108.6814
529.87	0.0000
531.02	103.7823
537.32	93.0774
543.00	121.9880
546.56	0.0000
549.76	116.2573
552.65	95.4656
555.20	98.5190
563.23	206.4542
563.90	205.4921
568.70	122.8589
569.32	150.8525
569.50	150.8599
569.67	166.8532
573.80	140.0342
574.00	140.0410
574.64	108.9394
578.91	106.8385
579.30	0.0000
583.14	102.2814
585.48	103.6840
591.81	90.4570
592.07	90.4636
593.00	98.5288
595.88	98.6053
600.56	93.1865
602.52	0.0000
602.71	120.9580
602.71	120.9580
603.60	117.6265
604.41	115.9714
604.70	109.2564
609.31	117.1300

609.31	117.1300
609.31	117.1300
609.31	117.1300
610.33	117.1611
612.46	97.6862
614.37	77.5146
618.01	124.3329
621.84	85.0931
621.84	85.0931
631.29	86.3157
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633.10	76.1957
634.78	79.2759
635.90	65.0656
636.97	72.2030
645.85	80.5179
646.12	84.6008
656.30	108.3188
657.75	115.5133
657.90	0.0000
661.65	107.4404
661.65	107.4404
664.57	0.0000
666.33	102.4414
666.33	102.4414
675.00	96.4992
677.61	76.0162
685.20	90.5631
692.80	106.1936
695.00	114.5026
696.49	111.4488
696.49	111.4488
697.00	103.2056
697.49	118.7004
698.33	130.0790
698.50	130.0852
699.00	129.0680
702.63	115.7434
706.10	103.4277
706.58	0.0000
706.67	104.4768
709.31	93.1553
711.68	82.8516
713.82	68.3864
717.42	77.7777
720.50	79.1317
721.93	0.0000
722.20	81.3263
722.78	96.9108
722.78	96.9108
722.89	96.9131
722.95	96.9154
723.30	83.0762
724.18	91.7493
727.18	79.6877
733.00	67.6517
735.90	69.7808
739.58	82.3482
742.81	82.4080
744.21	75.1307
747.13	93.9771
751.79	85.7136
752.31	86.7690
753.82	76.3417
755.35	76.3666
756.15	74.2883
756.87	82.6723
763.93	116.3440
765.79	101.7126
766.42	102.7756
766.84	105.9316
776.49	112.4676
778.00	97.7840
778.57	90.4365
778.89	78.8745
783.80	80.0115
785.46	65.2968
792.07	75.5877

795.84	63.3354
796.30	70.3792
798.80	88.0208
801.93	88.0819
805.60	59.2375
810.29	73.0632
810.76	81.5437
815.85	56.1883
817.79	56.2116
818.51	62.5852
819.60	71.0877
826.30	87.1270
828.27	0.0000
831.60	97.8623
831.96	101.0627
834.83	110.7031
836.80	0.0000
846.75	54.4241
848.13	58.7087
856.28	0.0000
856.80	51.6858
860.37	66.3503
867.32	66.0884
867.82	58.9491
871.10	51.4816
873.19	52.5769
874.81	66.5471
875.33	0.0000
876.40	74.0857
879.36	63.3861
880.27	61.2486
880.51	63.4020
881.50	64.4883
883.24	70.9629
884.67	74.2104
889.25	67.8204
896.60	63.6079
898.02	71.1756
899.00	69.0328
903.28	52.6288
911.07	58.3862
911.07	58.3862
911.07	58.3862
919.63	46.0309
920.93	54.1675
925.00	59.6326
925.24	59.6353
926.50	45.5509
935.52	53.2373
937.48	74.9954
944.10	81.6211
946.00	60.9670
949.00	61.0025
962.29	52.7855
964.01	52.4391
966.15	52.4602
968.20	52.4813
969.11	52.4906
969.11	52.4906
969.11	52.4906
977.42	62.0649
980.50	54.7961
983.50	63.5989
989.30	65.8638
996.32	98.9275
1001.03	70.5927
1001.68	72.4360
1004.76	94.4963
1021.30	0.0000
1024.50	0.0000
1034.80	65.4993
1036.00	65.5138
1037.82	51.6911
1038.57	53.5443
1038.76	0.0000
1045.16	73.9421
1046.59	64.7164
1048.07	50.8620

1050.47	52.7347
1050.47	52.7347
1062.04	77.8750
1063.62	65.8431
1076.63	55.7690
1077.35	58.5652
1078.86	62.3027
1085.78	61.4480
1099.22	81.1908
1112.02	72.9536
1112.84	69.8451
1115.52	85.0307
1120.29	72.1217
1120.29	72.1217
1120.29	72.1217
1120.29	72.1217
1120.51	72.1248
1121.28	72.1342
1124.00	0.0000
1129.67	72.6641
1131.51	0.0000
1147.95	0.0000
1167.94	83.0944
1173.22	58.5968
1175.09	58.6144
1177.93	74.7215
1189.05	76.7549
1204.90	65.5551
1205.75	0.0000
1213.00	72.3014
1221.42	94.3110
1230.97	104.0015
1235.34	96.4341
1236.41	0.0000
1238.25	97.4346
1246.25	75.5637
1260.41	0.0000
1271.85	38.4163
1274.45	52.8426
1274.54	55.7273
1291.56	46.2422
1298.22	0.0000
1312.09	49.2900
1325.50	49.3917
1325.50	49.3917
1332.49	49.4436
1333.61	38.7858
1360.21	26.2870
1362.66	0.0000
1365.15	30.2041
1368.21	27.2936
1368.53	0.0000
1376.25	33.4612
1384.27	25.1252
1394.10	35.2280
1395.20	29.3604
1407.95	26.4749
1434.06	20.6702
1436.60	25.6012
1457.56	0.0000
1460.81	28.6554
1489.15	18.8500
1509.49	29.8486
1596.49	27.7909
1620.62	19.1933
1678.03	0.0000
1691.02	14.2734
1691.02	14.2734
1706.46	0.0000
1750.46	0.0000
1764.49	13.3787
1764.49	13.3787
1764.49	13.3787
1764.49	13.3787
1770.23	3.5310
1771.40	50.4694
1791.20	0.0000
1808.65	19.6610

1836.01

15.5737

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440003

Total Uranium Activity	1.1869E+01	ug/g
Total Uranium Counting Unc.	6.1304E+00	ug/g
Total Uranium Tpu	3.1277E-06	ug/g
Total Uranium Mda	3.3989E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON ,SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 950788                SAMPLE ID   : G246440003
*  ANALYST       : MXR1                  DETECTOR    : GAM19
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00  COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 17:58:08.12  SAMPLE ALQT  : 143.180 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.055E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.472E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.911E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.908E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 20:00:03.91

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440004.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:58:33
Sample ID          : G246440004      Sample quantity   : 1.31530E+02 GRAM
Detector name      : GAM21           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:26.15 0.4%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 950788          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	46.63	152	371	0.77	93.24	90	7	2.12E-02	22.5	
2	0	63.12	192	730	0.91	126.20	122	9	2.67E-02	26.3	
3	2	74.88*	662	401	0.82	149.72	144	18	9.19E-02	6.0	5.22E+00
4	2	77.08*	1165	303	0.74	154.12	144	18	1.62E-01	3.6	
5	5	84.11	135	414	1.13	168.16	165	25	1.87E-02	26.3	1.79E+00
6	5	87.30*	452	402	1.14	174.54	165	25	6.28E-02	8.8	
7	5	89.91	223	280	0.83	179.76	165	25	3.10E-02	13.1	
8	5	92.92*	414	379	1.16	185.77	165	25	5.75E-02	9.6	
9	0	128.67	108	328	0.98	257.24	254	8	1.50E-02	30.6	
10	0	185.99*	233	393	1.13	371.83	367	12	3.24E-02	18.5	
11	0	209.14	88	256	0.63	418.11	414	8	1.23E-02	33.0	
12	7	238.47*	1255	118	0.87	476.76	473	15	1.74E-01	3.1	2.46E+00
13	7	241.27*	292	224	1.88	482.36	473	15	4.05E-02	15.5	
14	3	269.93	81	141	1.34	539.66	536	10	1.13E-02	28.0	2.15E+00
15	3	271.00	37	120	1.11	541.80	536	10	5.08E-03	56.7	
16	0	295.19*	277	209	0.91	590.16	585	11	3.85E-02	11.9	
17	0	299.85	63	103	1.04	599.49	597	6	8.74E-03	28.3	
18	0	338.01	240	150	0.84	675.77	671	10	3.34E-02	11.5	
19	0	351.66*	550	92	0.97	703.07	697	10	7.63E-02	5.4	
20	0	409.74	32	106	1.13	819.21	813	11	4.39E-03	65.9	
21	0	462.86	65	97	1.41	925.43	920	12	8.99E-03	32.8	
22	0	510.91*	87	108	1.36	1021.53	1014	14	1.21E-02	30.8	
23	0	582.98	318	101	1.47	1165.66	1160	14	4.42E-02	8.7	
24	0	609.19*	343	114	1.25	1218.07	1211	13	4.76E-02	8.5	
25	0	727.58*	108	61	2.03	1454.86	1447	19	1.51E-02	20.9	
26	0	794.55	33	41	1.50	1588.82	1584	9	4.62E-03	38.6	
27	0	860.01	40	51	1.68	1719.76	1713	12	5.56E-03	39.0	
28	0	910.58	220	28	1.42	1820.94	1813	16	3.06E-02	8.6	
29	0	964.68	34	41	1.36	1929.17	1923	10	4.69E-03	37.0	
30	0	968.50	106	29	1.36	1936.81	1933	9	1.47E-02	13.2	
31	0	1119.66*	104	39	1.90	2239.25	2232	16	1.45E-02	17.0	
32	0	1460.06*	994	17	1.80	2920.48	2914	15	1.38E-01	3.3	
33	0	1629.14	14	6	1.38	3258.95	3251	12	1.91E-03	44.8	
34	0	1763.96*	42	15	1.88	3528.85	3523	12	5.79E-03	25.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 20:00:06

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440004.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 17:58:33
Sample ID        : G246440004             Sample quantity  : 131.53 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA21                Detector geometry: CAN
Elapsed live time : 0 02:00:00.00          Elapsed real time: 0 02:00:26.15    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	*	3.691E+01	3.993E+00	8.102E-01	6.917E-02	45.550
CD-109	+	88.03	*	4.374E+00	8.718E-01	6.907E-01	6.499E-02	6.333
SN-126	+	64.28		6.977E-01	3.819E-01	2.980E-01	4.415E-02	2.341
	+	86.94		1.782E+00	8.034E-01	2.802E-01	1.163E-01	6.359
	+	87.57	*	4.286E-01	8.541E-02	6.755E-02	6.332E-03	6.344
TL-208		277.35		6.526E-01	3.549E-01	6.314E-01	7.922E-02	1.034
	+	510.84		5.637E-01	3.545E-01	2.540E-01	3.226E-02	2.219
	+	583.14	*	6.066E-01	1.250E-01	6.618E-02	7.209E-03	9.166
	+	860.37		7.637E-01	6.003E-01	5.395E-01	5.357E-02	1.415
BI-210	+	46.50	*	1.461E+00	6.721E-01	6.116E-01	5.832E-02	2.389
PB-210	+	46.50	*	1.461E+00	6.721E-01	6.116E-01	5.832E-02	2.389
PO-210	+	46.50	*	1.461E+00	6.696E-01	6.116E-01	5.308E-02	2.389
BI-211		72.87		1.660E+00	1.480E+00	2.516E+00	2.106E-01	0.660
	+	351.07	*	4.043E+00	5.705E-01	3.059E-01	2.762E-02	13.215
PB-212	+	74.81		2.133E+00	3.723E-01	2.757E-01	3.480E-02	7.735
	+	77.11		2.235E+00	2.520E-01	1.648E-01	1.421E-02	13.565
	+	87.30		1.982E+00	4.420E-01	3.121E-01	4.273E-02	6.350
	+	238.63	*	1.830E+00	2.148E-01	8.549E-02	8.501E-03	21.407
	+	300.09		1.496E+00	8.611E-01	1.205E+00	1.286E-01	1.242
PO-212	+	74.81		2.133E+00	3.723E-01	2.757E-01	3.480E-02	7.735
	+	77.11		2.235E+00	2.520E-01	1.648E-01	1.421E-02	13.565
	+	87.30		1.982E+00	4.420E-01	3.121E-01	4.273E-02	6.350
		115.19		-1.242E+00	2.782E+00	4.304E+00	4.728E-01	-0.289
	+	238.63	*	1.830E+00	2.148E-01	8.549E-02	8.501E-03	21.407
	+	300.09		1.496E+00	8.611E-01	1.205E+00	1.286E-01	1.242
BI-214	+	609.31	*	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
	+	1120.29		2.121E+00	7.555E-01	6.364E-01	6.833E-02	3.334
	+	1764.49		1.259E+00	6.411E-01	4.584E-01	3.811E-02	2.747
PB-214	+	74.81		3.675E+00	6.063E-01	4.751E-01	5.351E-02	7.735
	+	77.11		3.832E+00	5.215E-01	2.825E-01	3.251E-02	13.565
	+	87.30		3.395E+00	7.256E-01	5.347E-01	6.480E-02	6.350
	+	241.98		2.561E+00	8.363E-01	5.169E-01	5.433E-02	4.955
	+	295.21		1.152E+00	3.013E-01	1.881E-01	2.049E-02	6.125
	+	351.92	*	1.406E+00	2.116E-01	1.038E-01	1.081E-02	13.553

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.675E+00	6.063E-01	4.751E-01	5.351E-02	7.735
	+	77.11		3.832E+00	5.215E-01	2.825E-01	3.251E-02	13.565
	+	87.30		3.395E+00	7.256E-01	5.347E-01	6.480E-02	6.350
	+	241.98		2.561E+00	8.363E-01	5.169E-01	5.433E-02	4.955
	+	295.21		1.152E+00	3.013E-01	1.881E-01	2.049E-02	6.125
	+	351.92	*	1.406E+00	2.116E-01	1.038E-01	1.081E-02	13.553
PO-216	+	74.81		2.133E+00	3.723E-01	2.757E-01	3.480E-02	7.735
	+	77.11		2.235E+00	2.520E-01	1.648E-01	1.421E-02	13.565
	+	87.30		1.982E+00	4.420E-01	3.121E-01	4.273E-02	6.350
	+	238.63	*	1.830E+00	2.148E-01	8.549E-02	8.501E-03	21.407
	+	300.09		1.496E+00	8.611E-01	1.205E+00	1.286E-01	1.242
PO-218	+	74.81		3.675E+00	6.063E-01	4.751E-01	5.351E-02	7.735
	+	77.11		3.832E+00	5.215E-01	2.825E-01	3.251E-02	13.565
	+	87.30		3.395E+00	7.256E-01	5.347E-01	6.480E-02	6.350
	+	241.98		2.561E+00	8.363E-01	5.169E-01	5.433E-02	4.955
	+	295.21		1.152E+00	3.013E-01	1.881E-01	2.049E-02	6.125
	+	351.92	*	1.406E+00	2.116E-01	1.038E-01	1.081E-02	13.553
RA-224	+	240.98	*	4.857E+00	1.562E+00	9.757E-01	8.670E-02	4.978
RA-226	+	609.31	*	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
	+	1120.29		2.121E+00	7.555E-01	6.364E-01	6.833E-02	3.334
	+	1764.49		1.259E+00	6.411E-01	4.584E-01	3.811E-02	2.747
AC-228	+	338.32		1.928E+00	9.111E-01	3.585E-01	1.480E-01	5.377
	+	911.07	*	1.996E+00	4.120E-01	2.358E-01	2.677E-02	8.463
	+	969.11		1.706E+00	6.012E-01	3.804E-01	8.897E-02	4.486
RA-228	+	338.32		1.928E+00	9.111E-01	3.585E-01	1.480E-01	5.377
	+	911.07	*	1.996E+00	4.120E-01	2.358E-01	2.677E-02	8.463
	+	969.11		1.706E+00	6.012E-01	3.804E-01	8.897E-02	4.486
TH-228	+	74.81		2.170E+00	3.208E-01	2.805E-01	2.400E-02	7.735
	+	77.11		2.274E+00	2.564E-01	1.677E-01	1.446E-02	13.565
	+	87.30		2.016E+00	4.019E-01	3.175E-01	2.970E-02	6.350
	+	238.63	*	1.862E+00	2.185E-01	8.697E-02	8.648E-03	21.407
	+	300.09		1.522E+00	1.247E+00	1.226E+00	7.271E-01	1.242
TH-230	+	609.31	*	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
	+	1120.29		2.121E+00	7.555E-01	6.364E-01	6.833E-02	3.334
	+	1764.49		1.259E+00	6.411E-01	4.584E-01	3.811E-02	2.747
TH-232	+	338.32		1.928E+00	4.744E-01	3.585E-01	3.125E-02	5.377
	+	911.07	*	1.996E+00	4.120E-01	2.358E-01	2.677E-02	8.463
	+	969.11		1.706E+00	6.012E-01	3.804E-01	8.897E-02	4.486
TH-234	+	63.29	*	1.763E+00	9.796E-01	7.532E-01	1.330E-01	2.340
	+	92.38		2.721E+00	7.265E-01	4.711E-01	8.752E-02	5.777
U-234	+	609.31	*	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
	+	1120.29		2.121E+00	7.555E-01	6.364E-01	6.833E-02	3.334
	+	1764.49		1.259E+00	6.411E-01	4.584E-01	3.811E-02	2.747
NP-237	+	86.50	*	1.258E+00	3.610E-01	1.976E-01	4.471E-02	6.370
		95.87		-5.538E-01	6.662E-01	9.158E-01	2.296E-01	-0.605
U-238	+	63.29	*	1.763E+00	9.796E-01	7.532E-01	1.330E-01	2.340
	+	92.38		2.721E+00	5.837E-01	4.711E-01	4.529E-02	5.777
AM-243	+	74.67	*	3.458E-01	5.097E-02	4.469E-02	3.788E-03	7.737
	+	86.72		4.719E+01	9.406E+00	7.415E+00	6.901E-01	6.364

Sample ID : G246440004

Acquisition date : 19-FEB-2010 17:58:33

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		8.889E-02	2.954E+00	4.687E+00	5.231E-01	0.019
		142.18		3.733E+00	1.531E+01	2.419E+01	2.452E+00	0.154
ANH-511	+	511.00	*	1.218E-01	7.591E-02	5.488E-02	5.261E-03	2.218

---- 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	*	1.192E-01	3.554E-01	6.117E-01	5.994E-02	0.195
NA-22		1274.54	*	-2.934E-03	6.235E-02	9.981E-02	8.187E-03	-0.029
NA-24		1368.53	*	-5.663E-02	6.235E-02	Half-Life too short		
AL-26		1129.67		-9.461E-01	2.471E+00	3.864E+00	3.252E-01	-0.245
		1808.65	*	-5.945E-03	3.642E-02	5.639E-02	4.667E-03	-0.105
TI-44		67.85		5.865E-03	1.944E-02	3.240E-02	2.627E-03	0.181
	+	78.38	*	4.126E-01	4.652E-02	3.844E-02	3.348E-03	10.732
SC-46		889.25	*	-6.585E-03	5.025E-02	8.211E-02	7.302E-03	-0.080
	+	1120.51		3.696E-01	1.293E-01	1.819E-01	1.538E-02	2.031
V-48		944.10		-3.943E-01	1.279E+00	2.053E+00	1.800E-01	-0.192
		983.50	*	-3.854E-02	1.040E-01	1.648E-01	1.442E-02	-0.234
		1312.09		2.216E-03	1.158E-01	1.863E-01	1.518E-02	0.012
CR-51		320.08	*	2.423E-01	4.110E-01	6.912E-01	6.425E-02	0.351
MN-52		744.21		1.469E-01	4.101E-01	6.827E-01	7.257E-02	0.215
		848.13		9.049E-01	1.048E+01	1.774E+01	1.687E+00	0.051
		935.52		3.963E-01	4.478E-01	8.051E-01	7.057E-02	0.492
		1246.25		-1.357E+01	1.373E+01	1.957E+01	1.608E+00	-0.693
		1333.61		-4.060E+00	8.944E+00	1.411E+01	1.145E+00	-0.288
		1434.06	*	-1.295E-01	3.929E-01	6.184E-01	5.107E-02	-0.209
MN-54		834.83	*	1.529E-03	4.634E-02	7.812E-02	7.571E-03	0.020
CO-56		846.75	*	-1.102E-02	4.788E-02	7.836E-02	7.469E-03	-0.141
		977.42		-1.309E+00	3.964E+00	6.318E+00	5.530E-01	-0.207
		1037.82		-3.786E-01	3.969E-01	5.711E-01	5.214E-02	-0.663
		1175.09		1.973E+00	3.072E+00	5.330E+00	4.392E-01	0.370
		1238.25		1.278E-03	1.435E-01	2.319E-01	1.968E-02	0.006
		1360.21		-6.965E-01	1.294E+00	1.989E+00	1.623E-01	-0.350
		1771.40		-2.530E-01	3.260E-01	4.248E-01	3.530E-02	-0.596
CO-57		122.06	*	-1.010E-02	2.047E-02	3.139E-02	3.606E-03	-0.322
		136.48		1.520E-02	1.726E-01	2.715E-01	3.008E-02	0.056
CO-58		810.76	*	-3.529E-02	5.128E-02	8.039E-02	8.045E-03	-0.439
FE-59		142.65		1.029E+00	2.511E+00	3.997E+00	4.038E-01	0.257
		192.34		-1.793E-02	8.109E-01	1.368E+00	1.823E-01	-0.013
		1099.22	*	1.526E-02	1.332E-01	2.204E-01	2.034E-02	0.069
		1291.56		-5.639E-02	1.695E-01	2.596E-01	2.439E-02	-0.217
CO-60		1173.22		2.574E-03	6.237E-02	1.018E-01	8.385E-03	0.025
		1332.49	*	-1.506E-02	5.200E-02	8.388E-02	6.808E-03	-0.179
ZN-65		1115.52	*	1.200E-01	1.313E-01	2.117E-01	1.795E-02	0.567
GE-68		1077.35	*	-3.251E-01	1.678E+00	2.688E+00	2.308E-01	-0.121
AS-73		53.44	*	2.926E-01	1.808E-01	3.200E-01	2.591E-02	0.914
AS-74		595.88	*	3.907E-02	1.217E-01	2.054E-01	2.156E-02	0.190
		634.78		-1.324E-01	4.916E-01	7.820E-01	8.474E-02	-0.169

---- 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		-8.864E-01	2.133E+00	3.195E+00	3.180E-01	-0.277
		96.73		-4.217E-01	5.500E-01	7.714E-01	1.113E-01	-0.547
		121.11		3.360E-02	1.087E-01	1.745E-01	2.354E-02	0.193
		136.00		1.049E-02	3.276E-02	5.220E-02	5.548E-03	0.201
		198.60		1.275E+00	1.542E+00	2.693E+00	2.558E-01	0.473
		264.65	*	-2.922E-02	4.001E-02	6.243E-02	5.605E-03	-0.468
		279.53		-1.253E-01	1.061E-01	1.591E-01	1.469E-02	-0.787
		303.91		3.181E-01	2.312E+00	3.397E+00	3.973E-01	0.094
		400.65		1.925E-01	2.894E-01	4.825E-01	5.165E-02	0.399
BR-77	+	87.88		1.754E+03	3.497E+02	4.542E+02	4.269E+01	3.862
		200.40		-3.509E+01	2.529E+02	4.226E+02	3.620E+01	-0.083
	+	239.00		5.473E+02	5.936E+01	7.677E+01	6.815E+00	7.129
		249.79		4.938E+00	1.122E+02	1.860E+02	1.659E+01	0.027
		281.68		1.350E+01	1.545E+02	2.543E+02	2.269E+01	0.053
		297.23		8.859E+01	1.292E+02	1.619E+02	1.445E+01	0.547
		303.76		1.098E+02	3.607E+02	5.379E+02	4.795E+01	0.204
		439.47		-2.306E+01	3.187E+02	5.357E+02	4.635E+01	-0.043
		484.57		6.872E+01	4.592E+02	7.784E+02	7.207E+01	0.088
		520.65	*	2.310E+00	2.021E+01	3.399E+01	3.297E+00	0.068
		574.64		-1.746E+02	4.352E+02	6.893E+02	7.093E+01	-0.253
		578.91		1.736E+01	1.956E+02	2.862E+02	2.957E+01	0.061
		585.48		3.646E+02	4.649E+02	7.338E+02	7.629E+01	0.497
		755.35		2.124E+02	4.029E+02	6.807E+02	7.175E+01	0.312
		817.79		8.263E+01	3.158E+02	5.447E+02	5.396E+01	0.152
SR-82		698.33		-1.866E+01	4.934E+01	7.699E+01	8.400E+00	-0.242
		776.49	*	7.876E-02	4.869E-01	7.936E-01	8.215E-02	0.099
		1395.20		2.772E-01	1.417E+01	2.373E+01	1.948E+00	0.012
RB-83		520.41	*	1.491E-02	7.298E-02	1.237E-01	1.200E-02	0.121
		529.64		-2.403E-02	1.206E-01	1.969E-01	1.930E-02	-0.122
		552.65		2.942E-01	2.237E-01	4.099E-01	4.124E-02	0.718
RB-84		881.50	*	1.518E-02	8.648E-02	1.474E-01	1.329E-02	0.103
KR-85		513.99	*	7.383E+00	7.976E+00	1.292E+01	1.243E+00	0.571
SR-85		513.99	*	3.871E-02	4.182E-02	6.774E-02	6.518E-03	0.571
RB-86		1076.63	*	3.600E-01	1.093E+00	1.859E+00	1.596E-01	0.194
Y-88		898.02		-1.670E-02	5.200E-02	8.368E-02	7.355E-03	-0.200
		1836.01	*	-3.656E-02	4.357E-02	5.200E-02	4.293E-03	-0.703
ZR-88		392.90	*	-1.997E-02	3.586E-02	5.425E-02	4.322E-03	-0.368
Y-91		1204.90	*	-1.397E+01	2.963E+01	4.571E+01	3.766E+00	-0.306
NB-94		702.63	*	3.536E-02	4.497E-02	7.755E-02	8.445E-03	0.456
		871.10		-5.780E-03	4.355E-02	7.188E-02	6.598E-03	-0.080
NB-95		765.79	*	5.948E-02	5.973E-02	1.039E-01	1.086E-02	0.573
NB-95M		235.69	*	2.071E-02	1.201E-01	1.812E-01	1.825E-02	0.114
ZR-95		724.18		1.779E-01	1.390E-01	2.256E-01	2.566E-02	0.788
		756.15	*	3.812E-02	9.667E-02	1.612E-01	1.815E-02	0.236
NB-97		657.90	*	-5.660E-01	9.667E-02	Half-Life	too short	
		1024.50		-2.554E+01	9.667E-02	Half-Life	too short	
ZR-97		254.15		-2.040E+01	9.667E-02	Half-Life	too short	
		355.39		7.617E+00	9.667E-02	Half-Life	too short	
		507.63	*	2.247E-01	9.667E-02	Half-Life	too short	

----- Non-Identified Nuclides -----

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		602.52		-5.730E+01	9.667E-02	Half-Life	too short	
		1021.30		4.121E+00	9.667E-02	Half-Life	too short	
		1147.95		5.447E+01	9.667E-02	Half-Life	too short	
		1362.66		1.067E+01	9.667E-02	Half-Life	too short	
		1750.46		2.264E+00	9.667E-02	Half-Life	too short	
MO-99		140.51		4.994E+00	3.922E+01	6.152E+01	1.738E+01	0.081
		181.06		-1.425E+01	2.642E+01	3.872E+01	7.029E+00	-0.368
		366.43		2.071E+01	1.481E+02	2.394E+02	2.008E+01	0.086
		739.58	*	1.642E+01	2.641E+01	4.490E+01	7.377E+00	0.366
		778.00		-4.318E+01	7.335E+01	1.090E+02	1.127E+01	-0.396
TC-99M		140.51	*	1.536E+12	7.335E+01	Half-Life	too short	
RH-101	+	127.23		6.508E-02	4.050E-02	4.147E-02	4.629E-03	1.569
		198.01	*	2.196E-02	2.796E-02	4.879E-02	4.167E-03	0.450
		325.23		-2.875E-01	2.475E-01	3.662E-01	3.229E-02	-0.785
RH-102		418.52		-1.440E-02	3.058E-01	5.169E-01	4.316E-02	-0.028
		475.06	*	1.425E-02	3.247E-02	5.628E-02	5.141E-03	0.253
		631.29		1.802E-02	6.832E-02	1.143E-01	1.236E-02	0.158
		697.49		-1.054E-01	1.083E-01	1.586E-01	1.732E-02	-0.664
		766.84		2.741E-01	1.562E-01	2.831E-01	2.956E-02	0.968
		1046.59		-9.138E-02	1.547E-01	2.366E-01	2.048E-02	-0.386
		1112.84		1.915E-02	3.148E-01	4.493E-01	3.809E-02	0.043
RU-103		497.08	*	6.050E-03	4.628E-02	7.816E-02	1.146E-02	0.077
	+	610.33		1.394E+01	3.434E+00	3.799E+00	6.764E-01	3.669
RH-106	+	511.85		6.106E-01	3.807E-01	4.739E-01	4.548E-02	1.288
		621.84	*	-1.478E-01	3.784E-01	5.940E-01	8.795E-02	-0.249
		1050.47		-5.885E-01	3.252E+00	5.238E+00	4.530E-01	-0.112
RU-106	+	511.85		6.106E-01	3.807E-01	4.739E-01	4.548E-02	1.288
		621.84	*	-1.478E-01	3.781E-01	5.940E-01	6.373E-02	-0.249
		1050.47		-5.885E-01	3.252E+00	5.238E+00	4.530E-01	-0.112
AG-108M		433.93	*	-2.753E-02	3.390E-02	5.351E-02	4.771E-03	-0.514
		614.37		3.269E-02	5.109E-02	7.911E-02	8.654E-03	0.413
		722.95		-4.365E-02	6.382E-02	8.103E-02	8.952E-03	-0.539
AG-110M		657.75	*	-9.592E-03	4.236E-02	6.734E-02	7.554E-03	-0.142
		677.61		2.460E-01	4.063E-01	6.949E-01	7.774E-02	0.354
		706.67		-7.072E-03	2.756E-01	4.441E-01	4.912E-02	-0.016
		763.93		-1.929E-01	2.350E-01	3.450E-01	3.681E-02	-0.559
		884.67		-4.031E-02	6.218E-02	9.629E-02	8.891E-03	-0.419
		937.48		1.607E-02	1.567E-01	2.630E-01	2.386E-02	0.061
		1384.27		6.870E-02	1.600E-01	2.882E-01	2.436E-02	0.238
IN-111		171.28		-2.631E+00	1.398E+00	2.132E+00	1.748E-01	-1.234
		245.39	*	6.916E-01	1.742E+00	2.666E+00	2.373E-01	0.259
IN-113M		391.69	*	-7.039E-03	5.011E-02	7.863E-02	6.476E-03	-0.090
SN-113		391.69	*	-7.039E-03	5.011E-02	7.863E-02	6.476E-03	-0.090
IN-114M		190.27	*	-8.437E-02	1.726E-01	2.535E-01	2.142E-02	-0.333
CD-115		260.90		3.893E+01	2.195E+02	3.660E+02	3.271E+01	0.106
		492.35		3.382E+01	7.432E+01	1.290E+02	1.207E+01	0.262
		527.90	*	1.024E+00	2.360E+01	3.936E+01	3.851E+00	0.026
SN-117M		156.02		-1.819E+00	2.066E+00	3.396E+00	3.065E-01	-0.536
		158.56	*	1.988E-02	4.808E-02	8.383E-02	7.379E-03	0.237

---- Non-Identified Nuclides ----

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SB-122		563.90	*	2.825E+00	4.025E+00	7.042E+00	7.169E-01	0.401
		692.80		7.125E+01	1.060E+02	1.810E+02	1.980E+01	0.394
I-123		159.00	*	3.082E+01	1.060E+02	Half-Life	too short	
		528.96		-2.201E+03	1.060E+02	Half-Life	too short	
TE-123M		159.00	*	1.035E-02	2.288E-02	3.995E-02	3.521E-03	0.259
I-124		602.71	*	-1.002E+00	1.292E+00	1.665E+00	1.758E-01	-0.602
		722.78		-6.493E+00	9.491E+00	1.205E+01	1.299E+00	-0.539
		1325.50		2.736E+01	6.536E+01	1.153E+02	9.373E+00	0.237
		1376.25		4.026E+01	5.300E+01	9.762E+01	7.990E+00	0.412
		1509.49		5.429E+01	2.974E+01	6.164E+01	5.131E+00	0.881
		1691.02		-6.003E+00	8.654E+00	1.216E+01	1.016E+00	-0.494
SB-124		602.71		-4.189E-02	5.405E-02	6.964E-02	7.354E-03	-0.602
		645.85		5.136E-01	6.304E-01	1.103E+00	1.250E-01	0.466
		709.31		1.312E+00	3.572E+00	5.975E+00	6.486E-01	0.220
		713.82		2.917E-01	2.056E+00	3.367E+00	4.616E-01	0.087
		722.78		-3.937E-01	5.755E-01	7.308E-01	7.985E-02	-0.539
	+	968.20		1.800E+01	4.999E+00	9.195E+00	8.054E-01	1.958
		1045.16		2.190E+00	3.240E+00	5.722E+00	4.955E-01	0.383
		1325.50		1.772E+00	4.232E+00	7.468E+00	6.070E-01	0.237
		1368.21		6.242E-01	2.055E+00	3.603E+00	4.754E-01	0.173
		1436.60		7.171E-01	4.813E+00	8.205E+00	6.778E-01	0.087
		1691.02	*	-8.584E-02	1.238E-01	1.739E-01	1.514E-02	-0.494
SB-125		427.89	*	-2.811E-02	9.053E-02	1.494E-01	1.293E-02	-0.188
	+	463.38		7.999E-01	5.301E-01	6.505E-01	6.265E-02	1.230
		600.56		4.527E-02	2.007E-01	3.364E-01	3.722E-02	0.135
		635.90		-2.240E-02	3.429E-01	5.564E-01	6.347E-02	-0.040
TE-125M		109.28	*	-4.992E+00	6.919E+00	1.055E+01	1.269E+00	-0.473
I-126		388.63		-2.495E-02	2.574E-01	4.058E-01	3.250E-02	-0.061
		666.33	*	2.616E-02	2.689E-01	4.407E-01	4.862E-02	0.059
		753.82		7.342E-01	2.197E+00	3.644E+00	3.846E-01	0.201
SB-126		223.80		-1.329E+00	3.831E+00	6.261E+00	5.500E-01	-0.212
		278.60		1.226E+00	2.559E+00	4.317E+00	3.850E-01	0.284
	+	296.50		1.292E+01	3.281E+00	3.813E+00	3.404E-01	3.388
		414.70		1.375E-03	9.144E-02	1.446E-01	1.199E-02	0.010
		415.30		5.537E+00	7.066E+00	1.233E+01	1.024E+00	0.449
		555.20		-2.050E+00	5.178E+00	8.248E+00	8.320E-01	-0.249
		573.80		-1.001E+00	1.325E+00	2.019E+00	2.076E-01	-0.496
		593.00		-1.330E-02	1.285E+00	2.110E+00	2.209E-01	-0.006
		656.30		-1.354E+00	4.397E+00	6.922E+00	7.618E-01	-0.196
		666.33		1.098E-02	1.129E-01	1.851E-01	2.042E-02	0.059
		675.00		-2.146E+00	2.909E+00	4.358E+00	4.797E-01	-0.492
		695.00		7.151E-02	1.227E-01	2.081E-01	2.274E-02	0.344
		697.00		-3.359E-01	4.262E-01	6.377E-01	6.962E-02	-0.527
		720.50	*	1.727E-01	2.192E-01	3.430E-01	3.701E-02	0.504
		856.80		4.468E-01	7.570E-01	1.193E+00	1.120E-01	0.375
		989.30		1.226E+00	1.712E+00	3.059E+00	2.675E-01	0.401
		1034.80		-2.141E+00	1.293E+01	2.086E+01	1.811E+00	-0.103
		1213.00		3.678E+00	8.130E+00	1.371E+01	1.129E+00	0.268
SB-127		61.10		1.284E+01	2.913E+01	4.570E+01	5.147E+00	0.281

----- Non-Identified Nuclides -----

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	252.40			3.118E+00	5.916E+00	9.845E+00	4.162E+00	0.317
	290.80			-2.002E+01	3.271E+01	4.479E+01	5.395E+00	-0.447
	411.60			-1.177E+01	2.059E+01	2.661E+01	4.260E+00	-0.442
	444.90			-5.124E+00	1.472E+01	2.411E+01	3.181E+00	-0.213
	473.00			1.419E+00	2.717E+00	4.733E+00	6.511E-01	0.300
	543.00			6.474E+00	2.909E+01	4.908E+01	7.716E+00	0.132
	603.60			-6.848E+00	2.292E+01	3.169E+01	4.581E+00	-0.216
	685.20	*		-1.206E-01	2.715E+00	4.383E+00	6.052E-01	-0.028
	698.50			-1.237E+01	3.039E+01	4.719E+01	8.310E+00	-0.262
	722.20			-2.875E+01	6.373E+01	8.372E+01	1.128E+01	-0.343
	783.80			6.300E+00	7.186E+00	1.240E+01	1.756E+00	0.508
XE-127	57.60			9.577E-01	1.706E+00	2.904E+00	2.287E-01	0.330
	145.22			-5.924E-01	6.468E-01	9.510E-01	9.420E-02	-0.623
	172.10			4.229E-03	1.028E-01	1.754E-01	1.440E-02	0.024
	202.84	*		2.246E-03	3.993E-02	6.735E-02	5.788E-03	0.033
	374.96			1.928E-02	2.233E-01	3.586E-01	2.959E-02	0.054
I-131	80.18			-5.657E-01	3.108E+00	4.638E+00	4.127E-01	-0.122
	284.30			3.109E-01	1.675E+00	2.774E+00	2.600E-01	0.112
	364.48	*		-5.874E-02	1.431E-01	2.206E-01	1.965E-02	-0.266
	636.97			3.753E-01	2.318E+00	3.841E+00	4.322E-01	0.098
	722.89			-8.835E+00	1.291E+01	1.640E+01	1.777E+00	-0.539
TE-132	49.72			-7.999E-01	4.826E+00	7.454E+00	8.391E-01	-0.107
	111.76			1.287E+01	3.441E+01	5.575E+01	7.317E+00	0.231
	116.30			1.903E+01	3.258E+01	5.316E+01	7.113E+00	0.358
	228.16	*		1.045E-01	9.382E-01	1.573E+00	2.553E-01	0.066
BA-133	53.15			9.257E-01	7.575E-01	1.325E+00	1.076E-01	0.699
	79.62			-8.242E-01	7.003E-01	1.067E+00	1.634E-01	-0.773
	81.00			-3.724E-02	6.457E-02	8.178E-02	1.310E-02	-0.455
	276.40			5.207E-01	3.393E-01	5.961E-01	8.721E-02	0.874
	302.84			8.248E-02	1.523E-01	2.316E-01	3.122E-02	0.356
	356.01	*		4.068E-02	4.606E-02	7.170E-02	9.423E-03	0.567
	383.85			-3.975E-01	3.431E-01	4.835E-01	5.924E-02	-0.822
I-133	510.53	+		6.816E+00	3.431E-01	Half-Life	too short	
	529.87	*		-2.992E-03	3.431E-01	Half-Life	too short	
	706.58			9.078E-02	3.431E-01	Half-Life	too short	
	856.28			3.281E+00	3.431E-01	Half-Life	too short	
	875.33			-8.943E-01	3.431E-01	Half-Life	too short	
	1236.41			6.973E+00	3.431E-01	Half-Life	too short	
	1298.22			-2.037E+00	3.431E-01	Half-Life	too short	
CS-134	475.35			8.638E-01	2.132E+00	3.686E+00	3.368E-01	0.234
	563.23			2.539E-01	4.065E-01	7.072E-01	7.243E-02	0.359
	569.32			2.150E-01	2.295E-01	4.073E-01	4.209E-02	0.528
	604.70			-1.347E-02	4.629E-02	6.416E-02	6.797E-03	-0.210
	795.84	+	*	9.655E-02	7.526E-02	1.151E-01	1.176E-02	0.838
	801.93			-3.220E-03	4.622E-01	7.790E-01	7.892E-02	-0.004
	1038.57			-6.076E+00	5.044E+00	7.003E+00	6.073E-01	-0.868
	1167.94			1.405E+00	3.685E+00	6.216E+00	5.137E-01	0.226
	1365.15			-5.513E-02	1.478E+00	2.459E+00	2.110E-01	-0.022
CS-135	268.24	*		1.171E-01	1.598E-01	2.485E-01	2.545E-02	0.471

---- 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			1.755E+12	1.598E-01	Half-Life	too short	
	417.63			-1.009E+13	1.598E-01	Half-Life	too short	
	546.56			2.326E+12	1.598E-01	Half-Life	too short	
	836.80			-1.871E+12	1.598E-01	Half-Life	too short	
	1038.76			-5.987E+12	1.598E-01	Half-Life	too short	
	1124.00			7.488E+12	1.598E-01	Half-Life	too short	
	1131.51			3.815E+11	1.598E-01	Half-Life	too short	
	1260.41	*		1.469E+12	1.598E-01	Half-Life	too short	
	1457.56			2.513E+14	1.598E-01	Half-Life	too short	
	1678.03			-8.922E+11	1.598E-01	Half-Life	too short	
	1706.46			8.056E+11	1.598E-01	Half-Life	too short	
	1791.20			3.176E+12	1.598E-01	Half-Life	too short	
CS-136	66.91			1.535E-01	3.864E-01	6.002E-01	9.085E-02	0.256
	86.29		+	6.257E+00	1.382E+00	1.468E+00	1.952E-01	4.263
	153.22			8.344E-01	6.233E-01	1.117E+00	1.141E-01	0.747
	163.89			8.561E-01	9.347E-01	1.658E+00	1.557E-01	0.516
	176.55			-1.639E-01	3.426E-01	5.684E-01	4.998E-02	-0.288
	273.65			-4.412E-01	4.830E-01	6.441E-01	6.107E-02	-0.685
	340.57			8.530E-03	1.521E-01	2.193E-01	1.962E-02	0.039
	818.51			-5.314E-02	1.077E-01	1.724E-01	1.708E-02	-0.308
	1048.07	*		-1.580E-01	1.662E-01	2.422E-01	2.184E-02	-0.653
	1235.34			8.859E-01	1.046E+00	1.803E+00	2.085E-01	0.491
BA-137M	661.65	*		2.534E-02	4.602E-02	7.842E-02	8.661E-03	0.323
	661.65	*		2.679E-02	4.865E-02	8.290E-02	9.166E-03	0.323
CE-139	165.85	*		-4.482E-02	2.413E-02	3.698E-02	3.006E-03	-1.212
BA-140	162.64			6.476E-01	6.567E-01	1.169E+00	1.046E-01	0.554
	304.84			-6.692E-01	1.409E+00	2.193E+00	6.165E-01	-0.305
LA-140	423.70			-5.525E-02	2.195E+00	3.713E+00	1.202E+00	-0.015
	537.32	*		1.154E-01	2.959E-01	5.053E-01	1.693E-01	0.228
	328.77			2.026E-01	3.537E-01	5.917E-01	5.485E-02	0.342
	432.53			-1.763E+00	2.344E+00	3.717E+00	3.336E-01	-0.474
	487.03			3.342E-02	1.693E-01	2.880E-01	2.818E-02	0.116
	751.79			1.053E-01	2.463E+00	3.973E+00	4.503E-01	0.027
	815.85			1.252E-01	4.642E-01	8.013E-01	8.656E-02	0.156
	867.82			-1.061E-01	2.003E+00	3.336E+00	3.221E-01	-0.032
	919.63			8.274E-01	4.061E+00	6.902E+00	7.428E-01	0.120
	925.24			-2.561E-01	1.472E+00	2.398E+00	2.229E-01	-0.107
	1596.49	*		-9.249E-02	1.126E-01	1.508E-01	1.261E-02	-0.613
CE-141	145.44	*		-5.578E-02	5.897E-02	8.650E-02	8.673E-03	-0.645
CE-143	57.37			3.824E-04	5.897E-02	Half-Life	too short	
	231.56			-5.760E-03	5.897E-02	Half-Life	too short	
	293.26	*		9.943E-04	5.897E-02	Half-Life	too short	
	350.59		+	9.389E-02	5.897E-02	Half-Life	too short	
	490.36			-9.885E-03	5.897E-02	Half-Life	too short	
	664.57			1.523E-03	5.897E-02	Half-Life	too short	
CE-144	721.93			-2.540E-03	5.897E-02	Half-Life	too short	
	80.11			-2.306E-01	1.195E+00	1.782E+00	1.572E-01	-0.129
	133.54	*		-1.698E-03	1.673E-01	2.621E-01	4.414E-02	-0.006
PM-144	476.78			2.504E-02	7.273E-02	1.253E-01	1.243E-02	0.200

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		1.217E-02	3.976E-02	6.686E-02	7.280E-03	0.182
		696.49	*	-3.172E-02	4.893E-02	7.437E-02	8.123E-03	-0.427
		778.57		-5.727E-01	2.760E+00	4.304E+00	4.448E-01	-0.133
PR-144		696.49	*	-2.152E+00	3.320E+00	5.045E+00	5.509E-01	-0.427
		1489.15		1.107E+01	1.405E+01	2.657E+01	2.208E+00	0.417
PM-146		453.90	*	-1.299E-02	4.765E-02	7.856E-02	8.571E-03	-0.165
		633.02		1.833E-01	1.772E+00	2.920E+00	1.108E+00	0.063
		735.90		-1.725E-01	2.357E-01	2.872E-01	8.414E-02	-0.601
		747.13		2.391E-02	1.205E-01	1.975E-01	3.030E-02	0.121
ND-147	+	91.11		8.386E-01	2.360E-01	3.322E-01	3.389E-02	2.524
		319.41		5.479E-01	3.963E+00	6.476E+00	5.735E-01	0.085
		439.89		-2.967E+00	7.801E+00	1.282E+01	1.110E+00	-0.231
		531.02	*	1.475E-01	7.243E-01	1.224E+00	1.918E-01	0.121
PM-149		285.90	*	-1.197E+02	1.692E+02	2.611E+02	4.104E+01	-0.459
EU-152		121.78		-1.201E-02	5.841E-02	9.118E-02	1.137E-02	-0.132
		244.69		3.160E-02	3.162E-01	4.730E-01	4.210E-02	0.067
		344.27	*	4.552E-02	1.004E-01	1.667E-01	1.529E-02	0.273
		443.98		4.466E-01	9.972E-01	1.739E+00	1.516E-01	0.257
		778.89		-8.642E-02	3.195E-01	4.944E-01	5.106E-02	-0.175
		867.32		1.671E-01	1.055E+00	1.794E+00	1.657E-01	0.093
	+	964.01		6.248E-01	4.657E-01	7.340E-01	6.431E-02	0.851
		1085.78		5.151E-01	5.652E-01	1.009E+00	8.640E-02	0.510
		1112.02		-9.658E-02	4.611E-01	6.614E-01	5.608E-02	-0.146
		1407.95		1.175E-01	2.324E-01	4.157E-01	3.420E-02	0.283
GD-153		69.67		-2.158E-01	7.471E-01	1.215E+00	9.964E-02	-0.178
	+	83.37		2.245E+01	1.200E+01	1.470E+01	1.331E+00	1.526
		97.43	*	-1.148E-02	5.353E-02	8.470E-02	8.367E-03	-0.136
		103.18		-7.931E-02	7.514E-02	1.128E-01	1.151E-02	-0.703
EU-154		123.07		-1.972E-02	4.182E-02	6.414E-02	8.732E-03	-0.308
		247.94		7.076E-02	3.253E-01	5.452E-01	6.377E-02	0.130
		591.81		-3.305E-01	7.566E-01	1.192E+00	1.560E-01	-0.277
		723.30		-1.439E-01	2.660E-01	3.458E-01	3.981E-02	-0.416
		756.87		2.229E-01	1.011E+00	1.659E+00	2.225E-01	0.134
		873.19		1.150E-01	3.573E-01	6.181E-01	7.801E-02	0.186
		996.32		-3.652E-01	4.393E-01	6.406E-01	1.142E-01	-0.570
		1004.76		-1.097E-01	2.792E-01	4.399E-01	5.155E-02	-0.249
		1274.45	*	-1.511E-02	1.757E-01	2.799E-01	3.076E-02	-0.054
EU-155		48.70		-6.745E-02	3.458E-01	5.339E-01	4.516E-02	-0.126
		60.01		3.434E-01	1.648E+00	2.563E+00	2.002E-01	0.134
	+	86.54		5.166E-01	1.031E-01	1.304E-01	1.222E-02	3.962
		105.31	*	8.624E-02	7.852E-02	1.315E-01	1.372E-02	0.656
TB-160	+	86.79		1.407E+00	2.805E-01	3.731E-01	3.475E-02	3.771
		197.04		-1.869E-01	5.018E-01	8.301E-01	7.081E-02	-0.225
		215.65		3.267E-03	6.871E-01	1.150E+00	1.003E-01	0.003
	+	298.57		2.222E-01	1.272E-01	2.038E-01	1.818E-02	1.090
		879.36	*	5.993E-02	1.758E-01	3.043E-01	2.754E-02	0.197
		962.29		1.069E+00	8.041E-01	1.347E+00	1.180E-01	0.793
	+	966.15		4.378E-01	3.263E-01	6.697E-01	5.867E-02	0.654
		1177.93		-5.941E-01	5.425E-01	7.718E-01	6.360E-02	-0.770

---- Non-Identified Nuclides ----

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HO-166M	1271.85			5.808E-01	9.705E-01	1.679E+00	1.376E-01	0.346
	80.57			-6.304E-02	1.753E-01	2.266E-01	2.006E-02	-0.278
	184.41			6.349E-02	3.392E-02	5.617E-02	4.705E-03	1.130
	280.46			-1.062E-01	7.991E-02	1.178E-01	1.051E-02	-0.901
	410.95		+	3.143E-01	4.148E-01	4.105E-01	3.382E-02	0.766
	711.68		*	3.031E-03	7.701E-02	1.248E-01	1.353E-02	0.024
TM-171	752.31			3.575E-02	3.571E-01	5.794E-01	6.121E-02	0.062
	810.29			-1.759E-02	7.476E-02	1.231E-01	1.230E-02	-0.143
	51.35			-8.142E+00	5.559E+00	8.636E+00	7.118E-01	-0.943
	52.39			2.009E+00	3.085E+00	5.303E+00	4.331E-01	0.379
	59.40			-8.536E-01	8.730E+00	1.339E+01	1.044E+00	-0.064
	66.72		*	7.279E+00	1.231E+01	1.931E+01	1.556E+00	0.377
LU-176	88.36		+	1.016E+00	2.026E-01	2.314E-01	2.181E-02	4.392
	201.83			-2.872E-02	2.404E-02	3.768E-02	3.234E-03	-0.762
	306.84		*	-3.931E-04	2.379E-02	3.860E-02	3.437E-03	-0.010
	401.10			6.850E+00	7.315E+00	1.246E+01	1.008E+00	0.550
LU-177	112.95			-5.415E-02	1.536E+00	2.436E+00	2.639E-01	-0.022
LU-177M	208.36		+	2.773E+00	1.847E+00	2.364E+00	2.045E-01	1.173
	52.97			4.067E-01	3.412E-01	5.964E-01	4.847E-02	0.682
	54.07			2.085E-01	1.871E-01	3.263E-01	2.630E-02	0.639
	61.30			1.021E-01	5.273E-01	8.182E-01	6.422E-02	0.125
	121.62			-5.451E-02	3.032E-01	4.741E-01	5.427E-02	-0.115
	147.16			3.362E-01	5.460E-01	8.784E-01	8.569E-02	0.383
HF-181	171.86			-8.572E-02	3.930E-01	6.622E-01	5.434E-02	-0.129
	218.09			1.782E-01	7.476E-01	1.266E+00	1.106E-01	0.141
	268.79		+	1.880E+00	1.065E+00	1.395E+00	1.247E-01	1.348
	319.02			3.369E-02	2.695E-01	4.401E-01	3.897E-02	0.077
	367.43			1.080E-01	9.549E-01	1.540E+00	1.289E-01	0.070
	413.65		*	1.170E-01	2.010E-01	3.019E-01	2.499E-02	0.388
W-181	56.28			-2.257E-01	2.414E-01	3.846E-01	3.053E-02	-0.587
	57.53			7.557E-02	1.421E-01	2.416E-01	1.903E-02	0.313
	65.20			-1.746E-01	4.091E-01	6.133E-01	4.902E-02	-0.285
	133.02			1.053E-02	5.596E-02	8.868E-02	9.562E-03	0.119
	136.25			7.295E-02	3.910E-01	6.184E-01	6.532E-02	0.118
	345.85			-3.010E-03	2.247E-01	3.210E-01	2.775E-02	-0.009
TA-182	482.03		*	3.484E-03	4.440E-02	7.491E-02	6.911E-03	0.047
	56.28			-8.628E-02	9.238E-02	1.472E-01	1.169E-02	-0.586
	57.53			2.889E-02	5.440E-02	9.250E-02	7.287E-03	0.312
	65.20		*	-6.634E-02	1.554E-01	2.330E-01	1.862E-02	-0.285
RE-183	67.75			4.445E-03	4.730E-02	7.823E-02	6.341E-03	0.057
	100.10			2.319E-02	1.281E-01	2.064E-01	2.070E-02	0.112
	152.43			5.749E-02	3.170E-01	4.964E-01	4.631E-02	0.116
	222.10			1.553E-01	2.923E-01	5.022E-01	4.405E-02	0.309
	1001.68			1.105E+00	2.584E+00	4.462E+00	3.896E-01	0.248
	1121.28			5.484E-01	2.777E-01	4.771E-01	4.030E-02	1.149
RE-183	1189.05			2.598E-02	4.589E-01	7.486E-01	6.169E-02	0.035
	1221.42		*	-2.621E-02	3.146E-01	5.049E-01	4.157E-02	-0.052
	1230.97			-1.641E-01	8.006E-01	1.270E+00	1.045E-01	-0.129
	57.98			2.028E-02	5.676E-02	9.582E-02	7.530E-03	0.212

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184		59.32		-3.788E-03	3.645E-02	5.589E-02	4.361E-03	-0.068
		67.20		4.464E-02	9.139E-02	1.426E-01	1.152E-02	0.313
		162.32	*	9.520E-03	8.930E-02	1.534E-01	1.298E-02	0.062
	+	208.81		2.042E+00	1.360E+00	1.772E+00	1.533E-01	1.153
		291.72		-3.090E-01	9.687E-01	1.368E+00	1.221E-01	-0.226
		57.98		7.379E-02	2.066E-01	3.487E-01	2.740E-02	0.212
		59.32		-1.377E-02	1.326E-01	2.032E-01	1.586E-02	-0.068
		67.20		1.624E-01	3.325E-01	5.189E-01	4.193E-02	0.313
		161.27		-3.203E-01	2.914E-01	4.713E-01	4.033E-02	-0.680
		216.55		3.914E-02	2.381E-01	4.017E-01	3.505E-02	0.097
OS-185		252.85	*	1.387E-01	2.109E-01	3.619E-01	3.230E-02	0.383
		318.01		1.849E-02	4.594E-01	7.461E-01	6.611E-02	0.025
		792.07		8.020E-01	1.493E+00	2.235E+00	2.279E-01	0.359
		903.28		-3.979E-01	1.533E+00	2.137E+00	1.871E-01	-0.186
		920.93		2.442E-01	5.804E-01	1.008E+00	8.835E-02	0.242
		59.72		-7.261E-03	9.900E-02	1.519E-01	1.185E-02	-0.048
		61.14		2.514E-02	5.738E-02	9.007E-02	7.065E-03	0.279
		69.30		-8.007E-02	1.324E-01	2.126E-01	1.739E-02	-0.377
		592.07		-9.377E-01	3.146E+00	5.031E+00	5.262E-01	-0.186
		646.12	*	2.916E-02	5.422E-02	9.271E-02	1.013E-02	0.315
RE-188		717.42		5.337E-02	1.114E+00	1.806E+00	1.952E-01	0.030
		874.81		-3.285E-01	7.532E-01	1.200E+00	1.095E-01	-0.274
		880.27		2.748E-01	9.575E-01	1.649E+00	1.491E-01	0.167
		155.03	*	7.468E-02	1.420E-01	2.487E-01	2.266E-02	0.300
		477.96		5.839E-01	3.311E+00	5.632E+00	5.166E-01	0.104
		633.10		4.836E-01	3.663E+00	6.055E+00	6.553E-01	0.080
	+	63.58		7.237E+01	3.856E+01	3.915E+01	3.104E+00	1.849
		227.08		-5.222E+00	1.101E+01	1.783E+01	1.570E+00	-0.293
		290.67	*	-4.947E+00	7.864E+00	1.076E+01	9.609E-01	-0.460
	+	295.96		8.960E-01	2.277E-01	3.044E-01	2.735E-02	2.944
IR-192		308.46		4.932E-02	9.102E-02	1.536E-01	1.374E-02	0.321
		316.51	*	-1.509E-02	3.506E-02	5.492E-02	4.881E-03	-0.275
		468.07		-6.075E-03	7.835E-02	1.150E-01	1.108E-02	-0.053
		604.41		-1.232E-01	6.265E-01	8.787E-01	1.264E-01	-0.140
		612.46		2.941E-01	9.562E-01	1.425E+00	1.668E-01	0.206
		65.12		-2.807E-02	7.160E-02	1.075E-01	8.591E-03	-0.261
		66.83		1.551E-02	4.164E-02	6.470E-02	5.216E-03	0.240
	+	75.70		1.128E+00	1.663E-01	2.364E-01	2.018E-02	4.772
		98.88	*	2.017E-01	1.600E-01	2.692E-01	2.681E-02	0.749
	+	129.76		5.776E+00	3.594E+00	4.165E+00	4.581E-01	1.387
TL-200		367.94	*	3.114E-04	3.594E+00	Half-Life	too short	
		579.30		1.982E-03	3.594E+00	Half-Life	too short	
		828.27		4.554E-03	3.594E+00	Half-Life	too short	
		1205.75		-1.640E-02	3.594E+00	Half-Life	too short	
TL-201		68.90		-2.574E+00	3.422E+00	5.461E+00	4.456E-01	-0.471
		70.82		-2.529E-02	2.170E+00	3.299E+00	2.724E-01	-0.008
		80.30		-1.495E+00	5.254E+00	6.830E+00	6.036E-01	-0.219
		135.34		1.302E+01	3.351E+01	5.362E+01	5.697E+00	0.243
		167.43	*	7.940E+00	8.908E+00	1.579E+01	1.286E+00	0.503

---- 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		-1.608E-01	2.137E-01	3.411E-01	2.783E-02	-0.471
		70.82		-1.575E-03	1.351E-01	2.055E-01	1.697E-02	-0.008
		80.30		-9.312E-02	3.273E-01	4.255E-01	3.760E-02	-0.219
		439.56	*	-1.053E-02	9.321E-02	1.562E-01	1.352E-02	-0.067
HG-203		70.83		-5.505E-03	5.358E-01	8.148E-01	1.090E-01	-0.007
		72.87		3.408E-01	3.058E-01	5.166E-01	6.737E-02	0.660
		82.60		-2.930E-01	7.714E-01	9.922E-01	1.387E-01	-0.295
		279.20	*	-2.375E-02	3.980E-02	6.253E-02	5.723E-03	-0.380
BI-207		72.80		9.347E-02	8.615E-02	1.463E-01	1.224E-02	0.639
	+	74.97		6.208E-01	9.151E-02	1.382E-01	1.173E-02	4.493
	+	84.90		2.886E-01	1.542E-01	1.881E-01	1.725E-02	1.534
		569.67		4.573E-02	3.556E-02	6.458E-02	6.613E-03	0.708
		1063.62	*	8.489E-02	7.789E-02	1.407E-01	1.212E-02	0.604
		1770.23		-2.275E+00	9.875E-01	8.585E-01	7.134E-02	-2.650
TL-207		81.07		-8.194E-02	1.422E-01	1.806E-01	1.606E-02	-0.454
	+	83.78		1.902E-01	1.017E-01	1.285E-01	1.167E-02	1.481
		94.90		7.756E-03	1.500E-01	2.237E-01	2.179E-02	0.035
		122.32		-7.704E-01	1.419E+00	2.168E+00	2.591E-01	-0.355
		144.24		1.745E-02	6.119E-01	9.547E-01	1.038E-01	0.018
		154.21		4.468E-01	3.379E-01	6.053E-01	6.047E-02	0.738
	+	269.46		4.360E-01	2.473E-01	3.425E-01	3.119E-02	1.273
		323.87	*	-5.971E-01	7.087E-01	1.064E+00	1.895E-01	-0.561
	+	338.28		8.050E+00	2.104E+00	2.821E+00	3.493E-01	2.854
		445.03		-9.748E-01	2.322E+00	3.779E+00	4.598E-01	-0.258
PO-209		260.50		-6.937E+00	8.413E+00	1.304E+01	1.165E+00	-0.532
		262.80		1.410E+01	2.374E+01	4.055E+01	3.624E+00	0.348
		896.60	*	-1.350E+01	9.721E+00	1.359E+01	1.192E+00	-0.994
PB-211		404.84	*	-5.207E-01	1.249E+00	1.612E+00	1.009E+00	-0.323
		427.08		-2.166E+00	2.439E+00	3.147E+00	1.955E+00	-0.688
		831.96		5.732E-01	1.569E+00	2.657E+00	1.670E+00	0.216
BI-212	+	727.18	*	1.848E+00	8.029E-01	8.749E-01	1.040E-01	2.112
		785.46		1.615E+00	2.567E+00	4.335E+00	4.450E-01	0.373
		1620.62		9.565E-01	1.704E+00	2.871E+00	2.401E-01	0.333
PO-215		81.07		-8.194E-02	1.422E-01	1.806E-01	1.606E-02	-0.454
	+	83.78		1.902E-01	1.017E-01	1.285E-01	1.167E-02	1.481
		94.90		7.756E-03	1.500E-01	2.237E-01	2.179E-02	0.035
		122.32		-7.704E-01	1.419E+00	2.168E+00	2.591E-01	-0.355
		144.24		1.745E-02	6.119E-01	9.547E-01	1.038E-01	0.018
		154.21		4.468E-01	3.379E-01	6.053E-01	6.047E-02	0.738
	+	269.46		4.360E-01	2.473E-01	3.425E-01	3.119E-02	1.273
		323.87	*	-5.971E-01	7.087E-01	1.064E+00	1.895E-01	-0.561
	+	338.28		8.050E+00	2.104E+00	2.821E+00	3.493E-01	2.854
		445.03		-9.748E-01	2.322E+00	3.779E+00	4.598E-01	-0.258
RN-219	+	271.23		2.535E-01	2.889E-01	4.244E-01	4.489E-02	0.597
		401.81	*	7.264E-02	4.732E-01	7.588E-01	1.118E-01	0.096
RN-220		549.76	*	-3.056E+01	3.093E+01	4.635E+01	4.648E+00	-0.659
RA-223		81.07		-8.194E-02	1.422E-01	1.806E-01	1.606E-02	-0.454
	+	83.78		1.902E-01	1.017E-01	1.285E-01	1.167E-02	1.481
		94.90		7.756E-03	1.500E-01	2.237E-01	2.179E-02	0.035

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32	-7.704E-01	1.419E+00	2.168E+00	2.591E-01	-0.355
		144.24	1.745E-02	6.119E-01	9.547E-01	1.038E-01	0.018
		154.21	4.468E-01	3.379E-01	6.053E-01	6.047E-02	0.738
	+	269.46	4.360E-01	2.473E-01	3.425E-01	3.119E-02	1.273
		323.87	* -5.971E-01	7.087E-01	1.064E+00	1.895E-01	-0.561
	+	338.28	8.050E+00	2.104E+00	2.821E+00	3.493E-01	2.854
		445.03	-9.748E-01	2.322E+00	3.779E+00	4.598E-01	-0.258
		79.80	-2.288E-01	9.145E-01	1.358E+00	2.931E-01	-0.168
		236.00	3.047E-02	2.206E-01	3.317E-01	4.118E-02	0.092
		256.20	* 1.345E-01	3.435E-01	5.797E-01	9.000E-02	0.232
TH-227		286.10	-8.737E-01	1.460E+00	2.279E+00	3.055E-01	-0.383
	+	299.80	2.772E+00	1.643E+00	2.671E+00	4.712E-01	1.038
		304.40	-1.972E-01	1.900E+00	2.917E+00	5.418E-01	-0.068
		334.20	-4.027E-01	2.548E+00	3.599E+00	7.007E-01	-0.112
		79.80	-2.288E-01	9.145E-01	1.358E+00	2.968E-01	-0.168
	+	94.00	1.052E+01	3.084E+00	2.553E+00	5.674E-01	4.120
		236.00	3.047E-02	2.206E-01	3.317E-01	3.737E-02	0.092
		256.20	* 1.345E-01	3.437E-01	5.797E-01	1.056E-01	0.232
		286.10	-8.737E-01	1.699E+00	2.279E+00	2.288E+00	-0.383
	+	299.80	2.772E+00	1.643E+00	2.671E+00	4.712E-01	1.038
TH-229		304.40	-1.972E-01	1.900E+00	2.917E+00	5.418E-01	-0.068
		334.20	-4.027E-01	2.548E+00	3.599E+00	7.007E-01	-0.112
	+	85.43	2.848E-01	1.522E-01	1.769E-01	1.629E-02	1.610
	+	88.47	5.851E-01	1.166E-01	1.299E-01	1.225E-02	4.504
		100.00	3.107E-02	1.315E-01	2.124E-01	2.129E-02	0.146
		193.63	* -2.695E-01	4.282E-01	6.987E-01	5.932E-02	-0.386
		210.97	4.023E-02	7.475E-01	1.129E+00	9.797E-02	0.036
	PA-231	283.67	* 9.308E-01	1.441E+00	2.447E+00	3.759E-01	0.380
	+	301.29	1.109E+00	6.423E-01	1.044E+00	1.300E-01	1.062
	TH-231	81.07	-8.194E-02	1.422E-01	1.806E-01	1.606E-02	-0.454
U-231	+	83.78	1.902E-01	1.017E-01	1.285E-01	1.167E-02	1.481
		94.90	7.756E-03	1.500E-01	2.237E-01	2.179E-02	0.035
		122.32	-7.704E-01	1.419E+00	2.168E+00	2.591E-01	-0.355
		144.24	1.745E-02	6.119E-01	9.547E-01	1.038E-01	0.018
		154.21	4.468E-01	3.379E-01	6.053E-01	6.047E-02	0.738
	+	269.46	4.360E-01	2.473E-01	3.425E-01	3.119E-02	1.273
		323.87	* -5.971E-01	7.087E-01	1.064E+00	1.895E-01	-0.561
	+	338.28	8.050E+00	2.104E+00	2.821E+00	3.493E-01	2.854
		445.03	-9.748E-01	2.322E+00	3.779E+00	4.598E-01	-0.258
	+	84.21	1.165E+01	6.225E+00	7.830E+00	7.138E-01	1.488
PA-233	+	92.29	1.477E+01	3.167E+00	4.107E+00	3.947E-01	3.595
		95.87	* -8.921E-01	1.053E+00	1.475E+00	1.445E-01	-0.605
		108.00	8.167E-01	2.051E+00	3.338E+00	3.508E-01	0.245
	+	75.28	1.811E+01	3.524E+00	4.046E+00	6.185E-01	4.477
	+	86.59	8.390E+00	2.708E+00	2.146E+00	5.804E-01	3.909
	+	300.12	7.728E-01	4.524E-01	7.608E-01	1.145E-01	1.016
		311.98	* 1.872E-02	5.931E-02	9.849E-02	8.988E-03	0.190
		340.50	5.702E-02	6.608E-01	9.551E-01	2.279E-01	0.060
		398.62	-2.103E+00	2.405E+00	3.418E+00	9.042E-01	-0.615

---- 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		7.550E-01	1.674E+00	2.921E+00	6.260E-01	0.258
		63.00		2.055E+00	1.126E+00	1.106E+00	1.672E-01	1.857
		94.67		1.269E-01	1.115E-01	1.748E-01	2.308E-02	0.726
		98.44		4.183E-02	6.743E-02	1.044E-01	5.845E-02	0.401
		99.86		1.509E-01	3.314E-01	5.406E-01	5.414E-02	0.279
		111.00		-6.164E-03	1.365E-01	2.167E-01	2.958E-02	-0.028
		131.20		-5.436E-03	9.195E-02	1.323E-01	1.443E-02	-0.041
		152.70		2.588E-01	3.008E-01	4.829E-01	8.404E-02	0.536
		186.00		6.108E+00	2.953E+00	2.493E+00	7.766E-01	2.450
		226.40		-1.267E-01	3.384E-01	5.511E-01	7.342E-02	-0.230
		227.20		-1.412E-01	3.660E-01	5.960E-01	5.249E-02	-0.237
		248.90		3.570E-01	7.572E-01	1.281E+00	2.885E-01	0.279
		293.70		5.529E+00	1.631E+00	1.634E+00	2.853E-01	3.383
		369.80		-4.382E-01	9.343E-01	1.427E+00	3.091E-01	-0.307
		568.70		7.235E-01	1.133E+00	1.972E+00	2.017E-01	0.367
		569.50		3.815E-01	3.129E-01	5.664E-01	5.799E-02	0.674
		574.00		-1.438E+00	1.704E+00	2.572E+00	2.645E-01	-0.559
		699.00		-1.262E-01	9.579E-01	1.530E+00	3.093E-01	-0.082
		706.10		6.820E-01	1.394E+00	2.300E+00	1.037E+00	0.297
		733.00		-1.248E-01	4.705E-01	6.293E-01	1.453E-01	-0.198
		742.81		-1.385E+00	2.116E+00	2.825E+00	1.907E+00	-0.490
		796.30		1.178E+00	1.403E+00	2.128E+00	5.868E-01	0.554
		805.60		2.257E-01	1.215E+00	2.082E+00	6.470E-01	0.108
		819.60		2.296E-01	1.557E+00	2.654E+00	1.018E+00	0.086
		826.30		-2.577E-01	1.028E+00	1.675E+00	7.533E-01	-0.154
		831.60		2.855E-01	7.867E-01	1.360E+00	4.104E-01	0.210
		876.40		-4.167E-01	1.136E+00	1.685E+00	1.733E+00	-0.247
		880.51		7.871E-02	3.385E-01	5.801E-01	5.239E-02	0.136
		883.24		-3.702E-01	4.294E-01	5.129E-01	3.450E-01	-0.722
		899.00		1.532E-01	1.079E+00	1.823E+00	7.972E-01	0.084
		925.00		1.292E-01	1.349E+00	2.270E+00	1.989E-01	0.057
		926.50		2.228E-02	2.041E-01	3.438E-01	8.708E-02	0.065
		946.00	*	1.407E-02	3.973E-01	6.621E-01	1.247E-01	0.021
		949.00		4.775E-01	5.649E-01	1.018E+00	8.924E-02	0.469
		980.50		8.788E-02	9.461E-01	1.581E+00	1.384E-01	0.056
		1394.10		-3.614E-01	1.314E+00	2.048E+00	1.332E+00	-0.176
PA-234M	+	766.42		2.824E+01	2.122E+01	2.888E+01	1.475E+01	0.978
		1001.03	*	2.650E+00	5.737E+00	9.941E+00	1.000E+00	0.267
U-235	+	89.95		2.919E+00	1.188E+00	1.293E+00	4.022E-01	2.259
		93.35		3.272E+00	1.120E+00	9.454E-01	2.682E-01	3.461
		105.00		1.353E+00	8.427E-01	1.286E+00	3.907E-01	1.052
		143.76	*	1.032E-01	1.860E-01	2.971E-01	5.418E-02	0.347
NP-236	+	163.35		4.184E-01	3.808E-01	6.687E-01	1.268E-01	0.626
		185.71		2.262E-01	8.575E-02	9.272E-02	7.782E-03	2.440
		205.31		1.988E-01	4.703E-01	7.286E-01	1.390E-01	0.273
		94.67		9.830E-02	8.426E-02	1.329E-01	1.293E-02	0.740
		98.44		3.156E-02	4.790E-02	7.889E-02	7.837E-03	0.400
		111.00		-4.662E-03	1.033E-01	1.639E-01	1.754E-02	-0.028
		160.31	*	1.205E-02	6.320E-02	1.091E-01	9.430E-03	0.110

---- 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		4.966E-02	1.113E-01	1.815E-01	1.814E-02	0.274
		117.00	*	2.436E-02	1.494E-01	2.389E-01	2.655E-02	0.102
	+	209.75		1.578E+00	1.051E+00	1.413E+00	1.224E-01	1.116
		228.18		2.243E-02	1.950E-01	3.270E-01	2.882E-02	0.069
		277.60		2.678E-01	1.682E-01	2.999E-01	2.675E-02	0.893
AM-241		334.30		-1.609E-01	1.447E+00	2.055E+00	1.799E-01	-0.078
		59.54	*	-4.435E-03	5.094E-02	7.814E-02	6.628E-03	-0.057
CM-243		99.55		5.111E-02	1.145E-01	1.868E-01	1.867E-02	0.274
		103.76	*	-7.361E-02	7.001E-02	1.051E-01	1.077E-02	-0.700
		117.00		2.507E-02	1.538E-01	2.458E-01	2.731E-02	0.102
	+	209.75		1.555E+00	1.036E+00	1.393E+00	1.207E-01	1.116
		228.18		2.266E-02	1.971E-01	3.304E-01	2.913E-02	0.069
AM-246		277.60		2.700E-01	1.696E-01	3.024E-01	2.697E-02	0.893
		798.80		-5.565E-03	1.991E-01	2.756E-01	2.790E-02	-0.020
		1036.00		-2.776E-03	3.632E-01	5.970E-01	5.180E-02	-0.005
		1062.04		-3.378E-02	3.361E-01	5.459E-01	4.707E-02	-0.062
		1078.86	*	-9.049E-02	1.947E-01	3.018E-01	2.589E-02	-0.300
CM-247		278.00		6.851E-01	6.986E-01	1.210E+00	1.080E-01	0.566
		287.40		5.640E-01	1.138E+00	1.920E+00	1.714E-01	0.294
		402.60	*	3.831E-03	4.201E-02	6.703E-02	5.438E-03	0.057
CF-249		252.85		5.160E-01	7.844E-01	1.346E+00	1.202E-01	0.383
		333.44		-1.221E-02	1.849E-01	2.638E-01	2.311E-02	-0.046
		387.95	*	1.641E-02	4.437E-02	7.260E-02	5.824E-03	0.226
CF-251		176.60	*	-5.307E-02	1.055E-01	1.748E-01	1.446E-02	-0.304
		227.00		-1.728E-01	3.223E-01	5.196E-01	4.576E-02	-0.333
		285.00		-9.676E-01	1.681E+00	2.638E+00	2.354E-01	-0.367

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]G246440004      *
* Acquisition date   : 19-FEB-2010 17:58:33 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 02:00:26.15  Half life ratio         : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library     : SOLID       *
* Sample ID          : G246440004    Analyst initials        : MXR1         *
* Batch Number       : 950788        Sample Quantity         : 1.3153E+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	3.691E+01	3.913E+00	8.112E-01	0.000E+00
CD-109	4.374E+00	8.543E-01	7.246E-01	0.000E+00
SN-126	4.286E-01	8.370E-02	7.087E-02	0.000E+00
TL-208	6.066E-01	1.225E-01	6.731E-02	0.000E+00
BI-210	1.461E+00	6.587E-01	6.480E-01	0.000E+00
PB-210	1.461E+00	6.587E-01	6.480E-01	0.000E+00
PO-210	1.461E+00	6.562E-01	6.480E-01	0.000E+00
BI-211	4.043E+00	5.591E-01	3.138E-01	0.000E+00
PB-212	1.830E+00	2.105E-01	8.825E-02	0.000E+00
PO-212	1.830E+00	2.105E-01	8.825E-02	0.000E+00
BI-214	1.243E+00	2.526E-01	1.358E-01	0.000E+00
PB-214	1.406E+00	2.074E-01	1.064E-01	0.000E+00
PO-214	1.406E+00	2.074E-01	1.064E-01	0.000E+00
PO-216	1.830E+00	2.105E-01	8.825E-02	0.000E+00
PO-218	1.406E+00	2.074E-01	1.064E-01	0.000E+00
RA-224	4.857E+00	1.531E+00	1.007E+00	0.000E+00
RA-226	1.243E+00	2.526E-01	1.358E-01	0.000E+00
AC-228	1.996E+00	4.038E-01	2.381E-01	0.000E+00
RA-228	1.996E+00	4.038E-01	2.381E-01	0.000E+00
TH-228	1.862E+00	2.141E-01	8.978E-02	0.000E+00
TH-230	1.243E+00	2.526E-01	1.358E-01	0.000E+00
TH-232	1.996E+00	4.038E-01	2.381E-01	0.000E+00
TH-234	1.763E+00	9.600E-01	7.942E-01	0.000E+00
U-234	1.243E+00	2.526E-01	1.358E-01	0.000E+00
NP-237	1.258E+00	3.538E-01	2.073E-01	0.000E+00
U-238	1.763E+00	9.600E-01	7.942E-01	0.000E+00
AM-243	3.458E-01	4.995E-02	4.700E-02	0.000E+00
ANH-511	1.218E-01	7.439E-02	5.594E-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	1.192E-01	3.483E-01	6.243E-01	0.000E+00	NOT IDENT.
NA-22	-2.934E-03	6.110E-02	1.002E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	9.299E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-5.945E-03	3.569E-02	5.624E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.559E-02	4.040E-02	0.000E+00	FAIL ABUN
SC-46	-6.585E-03	4.924E-02	8.291E-02	0.000E+00	FAIL ABUN
V-48	-3.854E-02	1.019E-01	1.661E-01	0.000E+00	NOT IDENT.
CR-51	2.423E-01	4.028E-01	7.100E-01	0.000E+00	NOT IDENT.
MN-52	-1.295E-01	3.851E-01	6.193E-01	0.000E+00	NOT IDENT.
MN-54	1.529E-03	4.542E-02	7.896E-02	0.000E+00	NOT IDENT.
CO-56	-1.102E-02	4.692E-02	7.919E-02	0.000E+00	NOT IDENT.
CO-57	-1.010E-02	2.006E-02	3.276E-02	0.000E+00	NOT IDENT.
CO-58	-3.529E-02	5.025E-02	8.130E-02	0.000E+00	NOT IDENT.
FE-59	1.526E-02	1.305E-01	2.217E-01	0.000E+00	NOT IDENT.
CO-60	-1.506E-02	5.096E-02	8.411E-02	0.000E+00	NOT IDENT.
ZN-65	1.200E-01	1.287E-01	2.130E-01	0.000E+00	NOT IDENT.
GE-68	-3.251E-01	1.644E+00	2.706E+00	0.000E+00	NOT IDENT.
AS-73	2.926E-01	1.771E-01	3.383E-01	0.000E+00	NOT IDENT.
AS-74	3.907E-02	1.193E-01	2.089E-01	0.000E+00	NOT IDENT.
SE-75	-2.922E-02	3.921E-02	6.434E-02	0.000E+00	NOT IDENT.
BR-77	2.310E+00	1.981E+01	3.463E+01	0.000E+00	FAIL ABUN
SR-82	7.876E-02	4.771E-01	8.032E-01	0.000E+00	NOT IDENT.
RB-83	1.491E-02	7.152E-02	1.261E-01	0.000E+00	NOT IDENT.
RB-84	1.518E-02	8.475E-02	1.488E-01	0.000E+00	NOT IDENT.
KR-85	7.383E+00	7.817E+00	1.317E+01	0.000E+00	NOT IDENT.
SR-85	3.871E-02	4.099E-02	6.904E-02	0.000E+00	NOT IDENT.
RB-86	3.600E-01	1.071E+00	1.871E+00	0.000E+00	NOT IDENT.
Y-88	-3.656E-02	4.270E-02	5.185E-02	0.000E+00	NOT IDENT.
ZR-88	-1.997E-02	3.515E-02	5.554E-02	0.000E+00	NOT IDENT.
Y-91	-1.397E+01	2.903E+01	4.592E+01	0.000E+00	NOT IDENT.
NB-94	3.536E-02	4.407E-02	7.862E-02	0.000E+00	NOT IDENT.
NB-95	5.948E-02	5.854E-02	1.052E-01	0.000E+00	NOT IDENT.
NB-95M	2.071E-02	1.177E-01	1.870E-01	0.000E+00	NOT IDENT.
ZR-95	3.812E-02	9.474E-02	1.632E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.793E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.799E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.642E+01	2.588E+01	4.548E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.182E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.196E-02	2.740E-02	5.052E-02	0.000E+00	FAIL ABUN
RH-102	1.425E-02	3.182E-02	5.744E-02	0.000E+00	NOT IDENT.
RU-103	6.050E-03	4.536E-02	7.971E-02	0.000E+00	FAIL ABUN
RH-106	-1.478E-01	3.708E-01	6.035E-01	0.000E+00	FAIL ABUN
RU-106	-1.478E-01	3.705E-01	6.035E-01	0.000E+00	FAIL ABUN
AG-108M	-2.753E-02	3.323E-02	5.469E-02	0.000E+00	NOT IDENT.
AG-110M	-9.592E-03	4.151E-02	6.835E-02	0.000E+00	NOT IDENT.
IN-111	6.916E-01	1.707E+00	2.750E+00	0.000E+00	NOT IDENT.
IN-113M	-7.039E-03	4.911E-02	8.051E-02	0.000E+00	NOT IDENT.
SN-113	-7.039E-03	4.911E-02	8.051E-02	0.000E+00	NOT IDENT.
IN-114M	-8.437E-02	1.692E-01	2.627E-01	0.000E+00	NOT IDENT.
CD-115	1.024E+00	2.312E+01	4.010E+01	0.000E+00	NOT IDENT.
SN-117M	1.988E-02	4.712E-02	8.711E-02	0.000E+00	NOT IDENT.
SB-122	2.825E+00	3.944E+00	7.166E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	6.681E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.035E-02	2.242E-02	4.151E-02	0.000E+00	NOT IDENT.
I-124	-1.002E+00	1.266E+00	1.692E+00	0.000E+00	NOT IDENT.
SB-124	-8.584E-02	1.213E-01	1.736E-01	0.000E+00	FAIL ABUN
SB-125	-2.811E-02	8.872E-02	1.528E-01	0.000E+00	FAIL ABUN
TE-125M	-4.992E+00	6.781E+00	1.103E+01	0.000E+00	NOT IDENT.
I-126	2.616E-02	2.635E-01	4.472E-01	0.000E+00	NOT IDENT.
SB-126	1.727E-01	2.148E-01	3.476E-01	0.000E+00	FAIL ABUN
SB-127	-1.206E-01	2.661E+00	4.445E+00	0.000E+00	NOT IDENT.
XE-127	2.246E-03	3.913E-02	6.971E-02	0.000E+00	NOT IDENT.
I-131	-5.874E-02	1.402E-01	2.261E-01	0.000E+00	NOT IDENT.
TE-132	1.045E-01	9.195E-01	1.625E+00	0.000E+00	NOT IDENT.
BA-133	4.068E-02	4.514E-02	7.353E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.702E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	9.655E-02	7.376E-02	1.165E-01	0.000E+00	FAIL ABUN
CS-135	1.171E-01	1.566E-01	2.560E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.756E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.580E-01	1.629E-01	2.438E-01	0.000E+00	FAIL ABUN
BA-137M	2.534E-02	4.510E-02	7.959E-02	0.000E+00	NOT IDENT.
CS-137	2.679E-02	4.767E-02	8.413E-02	0.000E+00	NOT IDENT.
CE-139	-4.482E-02	2.365E-02	3.840E-02	0.000E+00	NOT IDENT.
BA-140	1.154E-01	2.900E-01	5.146E-01	0.000E+00	NOT IDENT.
LA-140	-9.249E-02	1.104E-01	1.507E-01	0.000E+00	NOT IDENT.
CE-141	-5.578E-02	5.779E-02	9.001E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	4.726E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-1.698E-03	1.639E-01	2.731E-01	0.000E+00	NOT IDENT.
PM-144	-3.172E-02	4.796E-02	7.541E-02	0.000E+00	NOT IDENT.
PR-144	-2.152E+00	3.253E+00	5.116E+00	0.000E+00	NOT IDENT.
PM-146	-1.299E-02	4.670E-02	8.023E-02	0.000E+00	NOT IDENT.
ND-147	1.475E-01	7.098E-01	1.246E+00	0.000E+00	FAIL ABUN
PM-149	-1.197E+02	1.658E+02	2.687E+02	0.000E+00	NOT IDENT.
EU-152	4.552E-02	9.837E-02	1.711E-01	0.000E+00	FAIL ABUN
GD-153	-1.148E-02	5.246E-02	8.871E-02	0.000E+00	FAIL ABUN
EU-154	-1.511E-02	1.722E-01	2.809E-01	0.000E+00	NOT IDENT.
EU-155	8.624E-02	7.695E-02	1.376E-01	0.000E+00	FAIL ABUN
TB-160	5.993E-02	1.723E-01	3.073E-01	0.000E+00	FAIL ABUN
HO-166M	3.031E-03	7.547E-02	1.265E-01	0.000E+00	FAIL ABUN
TM-171	7.279E+00	1.207E+01	2.035E+01	0.000E+00	NOT IDENT.
LU-176	-3.931E-04	2.332E-02	3.968E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.810E+00	2.445E+00	0.000E+00	FAIL ABUN
LU-177M	1.170E-01	1.969E-01	3.088E-01	0.000E+00	FAIL ABUN
HF-181	3.484E-03	4.352E-02	7.643E-02	0.000E+00	NOT IDENT.
W-181	-6.634E-02	1.523E-01	2.456E-01	0.000E+00	NOT IDENT.
TA-182	-2.621E-02	3.083E-01	5.071E-01	0.000E+00	NOT IDENT.
RE-183	9.520E-03	8.752E-02	1.594E-01	0.000E+00	FAIL ABUN
RE-184	1.387E-01	2.067E-01	3.733E-01	0.000E+00	NOT IDENT.
OS-185	2.916E-02	5.313E-02	9.412E-02	0.000E+00	NOT IDENT.
RE-188	7.468E-02	1.391E-01	2.585E-01	0.000E+00	NOT IDENT.
W-188	-4.947E+00	7.707E+00	1.107E+01	0.000E+00	FAIL ABUN
IR-192	-1.509E-02	3.436E-02	5.643E-02	0.000E+00	FAIL ABUN
AU-195	2.017E-01	1.568E-01	2.819E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.810E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	7.940E+00	8.730E+00	1.640E+01	0.000E+00	NOT IDENT.
TL-202	-1.053E-02	9.134E-02	1.597E-01	0.000E+00	NOT IDENT.
HG-203	-2.375E-02	3.900E-02	6.438E-02	0.000E+00	NOT IDENT.
BI-207	8.489E-02	7.633E-02	1.416E-01	0.000E+00	FAIL ABUN
TL-207	-5.971E-01	6.945E-01	1.093E+00	0.000E+00	FAIL ABUN
PO-209	-1.350E+01	9.526E+00	1.372E+01	0.000E+00	NOT IDENT.
PB-211	-5.207E-01	1.224E+00	1.650E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.869E-01	8.865E-01	0.000E+00	FAIL ABUN
PO-215	-5.971E-01	6.945E-01	1.093E+00	0.000E+00	FAIL ABUN
RN-219	7.264E-02	4.637E-01	7.765E-01	0.000E+00	FAIL ABUN
RN-220	-3.056E+01	3.031E+01	4.718E+01	0.000E+00	NOT IDENT.
RA-223	-5.971E-01	6.945E-01	1.093E+00	0.000E+00	FAIL ABUN
AC-227	1.345E-01	3.366E-01	5.977E-01	0.000E+00	FAIL ABUN
TH-227	1.345E-01	3.369E-01	5.977E-01	0.000E+00	FAIL ABUN
TH-229	-2.695E-01	4.196E-01	7.238E-01	0.000E+00	FAIL ABUN
PA-231	9.308E-01	1.412E+00	2.519E+00	0.000E+00	FAIL ABUN
TH-231	-5.971E-01	6.945E-01	1.093E+00	0.000E+00	FAIL ABUN
U-231	-8.921E-01	1.032E+00	1.546E+00	0.000E+00	FAIL ABUN
PA-233	1.872E-02	5.812E-02	1.012E-01	0.000E+00	FAIL ABUN
PA-234	1.407E-02	3.894E-01	6.679E-01	0.000E+00	FAIL ABUN
PA-234M	2.650E+00	5.622E+00	1.002E+01	0.000E+00	NOT IDENT.
U-235	1.032E-01	1.823E-01	3.092E-01	0.000E+00	FAIL ABUN
NP-236	1.205E-02	6.194E-02	1.133E-01	0.000E+00	NOT IDENT.
NP-239	2.436E-02	1.465E-01	2.494E-01	0.000E+00	FAIL ABUN
AM-241	-4.435E-03	4.992E-02	8.248E-02	0.000E+00	NOT IDENT.
CM-243	-7.361E-02	6.861E-02	1.100E-01	0.000E+00	FAIL ABUN
AM-246	-9.049E-02	1.908E-01	3.037E-01	0.000E+00	NOT IDENT.
CM-247	3.831E-03	4.117E-02	6.860E-02	0.000E+00	NOT IDENT.
CF-249	1.641E-02	4.348E-02	7.435E-02	0.000E+00	NOT IDENT.
CF-251	-5.307E-02	1.033E-01	1.813E-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]G246440004.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:58:33
Sample ID          : G246440004          Sample quantity   : 1.31530E+02 GRAM
Detector name      : GAM21              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:26.15  0.4%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 950788             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	994	10.67*	7.206E-01	3.691E+01	3.691E+01	10.82
CD-109	88.03	452	3.72*	8.135E+00	4.263E+00	4.374E+00	19.93
SN-126	64.28	192	9.60	8.178E+00	6.977E-01	6.977E-01	54.73
	86.94	452	8.90	8.135E+00	1.782E+00	1.782E+00	45.09
	87.57	452	37.00*	8.135E+00	4.286E-01	4.286E-01	19.93
TL-208	277.35	-----	6.80	3.801E+00	-----	Line Not Found	-----
	510.84	87	21.60	2.037E+00	5.637E-01	5.637E-01	62.90
	583.14	318	84.20*	1.778E+00	6.066E-01	6.066E-01	20.61
	860.37	40	12.46	1.202E+00	7.637E-01	7.637E-01	78.60
BI-210	46.50	152	4.05*	7.359E+00	1.459E+00	1.461E+00	46.00
PB-210	46.50	152	4.05*	7.359E+00	1.459E+00	1.461E+00	46.00
PO-210	46.50	152	4.05*	7.359E+00	1.459E+00	1.461E+00	45.83
BI-211	72.87	-----	1.27	8.278E+00	-----	Line Not Found	-----
	351.07	550	12.94*	2.998E+00	4.043E+00	4.043E+00	14.11
PB-212	74.81	662	10.70	8.275E+00	2.133E+00	2.133E+00	17.45
	77.11	1165	18.00	8.264E+00	2.235E+00	2.235E+00	11.27
	87.30	452	8.00	8.135E+00	1.982E+00	1.982E+00	22.30
	238.63	1255	44.60*	4.388E+00	1.830E+00	1.830E+00	11.74
	300.09	63	3.41	3.521E+00	1.496E+00	1.496E+00	57.57
PO-212	74.81	662	10.70	8.275E+00	2.133E+00	2.133E+00	17.45
	77.11	1165	18.00	8.264E+00	2.235E+00	2.235E+00	11.27
	87.30	452	8.00	8.135E+00	1.982E+00	1.982E+00	22.30
	115.19	-----	0.60	7.423E+00	-----	Line Not Found	-----
	238.63	1255	44.60*	4.388E+00	1.830E+00	1.830E+00	11.74
	300.09	63	3.41	3.521E+00	1.496E+00	1.496E+00	57.57
BI-214	609.31	343	46.30*	1.699E+00	1.243E+00	1.243E+00	20.73
	1120.29	104	15.10	9.300E-01	2.121E+00	2.121E+00	35.61
	1764.49	42	15.80	5.984E-01	1.259E+00	1.259E+00	50.91
PB-214	74.81	662	6.21	8.275E+00	3.675E+00	3.675E+00	16.50
	77.11	1165	10.50	8.264E+00	3.832E+00	3.832E+00	13.61
	87.30	452	4.67	8.135E+00	3.395E+00	3.395E+00	21.37
	241.98	292	7.49	4.340E+00	2.561E+00	2.561E+00	32.65

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	277	19.20	3.576E+00	1.152E+00	1.152E+00	26.15
	351.92	550	37.20*	2.998E+00	1.406E+00	1.406E+00	15.05
	74.81	662	6.21	8.275E+00	3.675E+00	3.675E+00	16.50
	77.11	1165	10.50	8.264E+00	3.832E+00	3.832E+00	13.61
	87.30	452	4.67	8.135E+00	3.395E+00	3.395E+00	21.37
PO-216	241.98	292	7.49	4.340E+00	2.561E+00	2.561E+00	32.65
	295.21	277	19.20	3.576E+00	1.152E+00	1.152E+00	26.15
	351.92	550	37.20*	2.998E+00	1.406E+00	1.406E+00	15.05
	74.81	662	10.70	8.275E+00	2.133E+00	2.133E+00	17.45
	77.11	1165	18.00	8.264E+00	2.235E+00	2.235E+00	11.27
PO-218	87.30	452	8.00	8.135E+00	1.982E+00	1.982E+00	22.30
	238.63	1255	44.60*	4.388E+00	1.830E+00	1.830E+00	11.74
	300.09	63	3.41	3.521E+00	1.496E+00	1.496E+00	57.57
	74.81	662	6.21	8.275E+00	3.675E+00	3.675E+00	16.50
	77.11	1165	10.50	8.264E+00	3.832E+00	3.832E+00	13.61
RA-224	87.30	452	4.67	8.135E+00	3.395E+00	3.395E+00	21.37
	241.98	292	7.49	4.340E+00	2.561E+00	2.561E+00	32.65
	295.21	277	19.20	3.576E+00	1.152E+00	1.152E+00	26.15
	351.92	550	37.20*	2.998E+00	1.406E+00	1.406E+00	15.05
	240.98	292	3.95*	4.340E+00	4.857E+00	4.857E+00	32.16
RA-226	609.31	343	46.30*	1.699E+00	1.243E+00	1.243E+00	20.73
	1120.29	104	15.10	9.300E-01	2.121E+00	2.121E+00	35.61
	1764.49	42	15.80	5.984E-01	1.259E+00	1.259E+00	50.91
	338.32	240	11.40	3.121E+00	1.928E+00	1.928E+00	47.26
	911.07	220	27.70*	1.136E+00	1.996E+00	1.996E+00	20.64
AC-228	969.11	106	16.60	1.070E+00	1.706E+00	1.706E+00	35.23
	338.32	240	11.40	3.121E+00	1.928E+00	1.928E+00	47.26
	911.07	220	27.70*	1.136E+00	1.996E+00	1.996E+00	20.64
	969.11	106	16.60	1.070E+00	1.706E+00	1.706E+00	35.23
	74.81	662	10.70	8.275E+00	2.133E+00	2.170E+00	14.78
TH-228	77.11	1165	18.00	8.264E+00	2.235E+00	2.274E+00	11.27
	87.30	452	8.00	8.135E+00	1.982E+00	2.016E+00	19.93
	238.63	1255	44.60*	4.388E+00	1.830E+00	1.862E+00	11.74
	300.09	63	3.41	3.521E+00	1.496E+00	1.522E+00	81.97
	609.31	343	46.30*	1.699E+00	1.243E+00	1.243E+00	20.73
TH-230	1120.29	104	15.10	9.300E-01	2.121E+00	2.121E+00	35.61
	1764.49	42	15.80	5.984E-01	1.259E+00	1.259E+00	50.91
	338.32	240	11.40	3.121E+00	1.928E+00	1.928E+00	24.61
	911.07	220	27.70*	1.136E+00	1.996E+00	1.996E+00	20.64
	969.11	106	16.60	1.070E+00	1.706E+00	1.706E+00	35.23
TH-234	63.29	192	3.80*	8.178E+00	1.763E+00	1.763E+00	55.58
	92.38	414	5.41	8.021E+00	2.721E+00	2.721E+00	26.70
	609.31	343	46.30*	1.699E+00	1.243E+00	1.243E+00	20.73
	1120.29	104	15.10	9.300E-01	2.121E+00	2.121E+00	35.61
	1764.49	42	15.80	5.984E-01	1.259E+00	1.259E+00	50.91
NP-237	86.50	452	12.60*	8.135E+00	1.258E+00	1.258E+00	28.69
	95.87	---	2.60	7.953E+00	---	Line Not Found	---
	63.29	192	3.80*	8.178E+00	1.763E+00	1.763E+00	55.58
	92.38	414	5.41	8.021E+00	2.721E+00	2.721E+00	21.45

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	662	66.00*	8.275E+00	3.458E-01	3.458E-01	14.74
	86.72	452	0.34	8.135E+00	4.719E+01	4.719E+01	19.93
	117.66	-----	0.55	7.349E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.613E+00	-----	Line Not Found	-----
ANH-511	511.00	87	100.00*	2.037E+00	1.218E-01	1.218E-01	62.35

Flag: "*" = Keyline

Total number of lines in spectrum 34
Number of unidentified lines 1
Number of lines tentatively identified by NID 33 97.06%

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	3.691E+01	3.691E+01	0.399E+01	10.82	
CD-109	464.00D	1.03	4.263E+00	4.374E+00	0.872E+00	19.93	
SN-126	1.00E+05Y	1.00	4.286E-01	4.286E-01	0.854E-01	19.93	
TL-208	1.41E+10Y	1.00	6.066E-01	6.066E-01	1.250E-01	20.61	
BI-210	22.26Y	1.00	1.459E+00	1.461E+00	0.672E+00	46.00	
PB-210	22.26Y	1.00	1.459E+00	1.461E+00	0.672E+00	46.00	
PO-210	22.26Y	1.00	1.459E+00	1.461E+00	0.670E+00	45.83	
BI-211	7.04E+08Y	1.00	4.043E+00	4.043E+00	0.571E+00	14.11	
PB-212	1.41E+10Y	1.00	1.830E+00	1.830E+00	0.215E+00	11.74	
PO-212	1.41E+10Y	1.00	1.830E+00	1.830E+00	0.215E+00	11.74	
BI-214	1600.00Y	1.00	1.243E+00	1.243E+00	0.258E+00	20.73	
PB-214	1600.00Y	1.00	1.406E+00	1.406E+00	0.212E+00	15.05	
PO-214	1600.00Y	1.00	1.406E+00	1.406E+00	0.212E+00	15.05	
PO-216	1.41E+10Y	1.00	1.830E+00	1.830E+00	0.215E+00	11.74	
PO-218	1600.00Y	1.00	1.406E+00	1.406E+00	0.212E+00	15.05	
RA-224	1.41E+10Y	1.00	4.857E+00	4.857E+00	1.562E+00	32.16	
RA-226	1600.00Y	1.00	1.243E+00	1.243E+00	0.258E+00	20.73	
AC-228	1.41E+10Y	1.00	1.996E+00	1.996E+00	0.412E+00	20.64	
RA-228	1.41E+10Y	1.00	1.996E+00	1.996E+00	0.412E+00	20.64	
TH-228	1.91Y	1.02	1.830E+00	1.862E+00	0.218E+00	11.74	
TH-230	4.47E+09Y	1.00	1.243E+00	1.243E+00	0.258E+00	20.73	
TH-232	1.41E+10Y	1.00	1.996E+00	1.996E+00	0.412E+00	20.64	
TH-234	4.47E+09Y	1.00	1.763E+00	1.763E+00	0.980E+00	55.58	
U-234	4.47E+09Y	1.00	1.243E+00	1.243E+00	0.258E+00	20.73	
NP-237	2.14E+06Y	1.00	1.258E+00	1.258E+00	0.361E+00	28.69	
U-238	4.47E+09Y	1.00	1.763E+00	1.763E+00	0.980E+00	55.58	
AM-243	7380.00Y	1.00	3.458E-01	3.458E-01	0.510E-01	14.74	
ANH-511	1.00E+09Y	1.00	1.218E-01	1.218E-01	0.759E-01	62.35	

Total Activity : 8.323E+01 8.338E+01

Grand Total Activity : 8.323E+01 8.338E+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
5	84.11	135	414	1.13	168.16	165	25	1.87E-02	52.7	8.19E+00	T
5	89.91	223	280	0.83	179.76	165	25	3.10E-02	26.3	8.08E+00	T
0	128.67	108	328	0.98	257.24	254	8	1.50E-02	61.2	7.02E+00	T
0	185.99	233	393	1.13	371.83	367	12	3.24E-02	37.0	5.44E+00	T
0	209.14	88	256	0.63	418.11	414	8	1.23E-02	66.0	4.94E+00	T
3	269.93	81	141	1.34	539.66	536	10	1.13E-02	56.0	3.90E+00	T
3	271.00	37	120	1.11	541.80	536	10	5.08E-03	****	3.89E+00	T
0	409.74	32	106	1.13	819.21	813	11	4.39E-03	****	2.56E+00	T
0	462.86	65	97	1.41	925.43	920	12	8.99E-03	65.6	2.26E+00	T
0	727.58	108	61	2.03	1454.86	1447	19	1.51E-02	41.8	1.42E+00	T
0	794.55	33	41	1.50	1588.82	1584	9	4.62E-03	77.3	1.30E+00	T
0	964.68	34	41	1.36	1929.17	1923	10	4.69E-03	74.0	1.07E+00	T
0	1629.14	14	6	1.38	3258.95	3251	12	1.91E-03	89.7	6.48E-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]G246440004.CNF;1  *
* Acquisition date   : 19-FEB-2010 17:58:33  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 02:00:26.15           Half life ratio  : 8.00000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00.  Nuclide Library : SOLID          *
* Sample ID          : G246440004             Analyst initials: MXR1          *
* Batch Number       : 950788                 Sample Quantity : 1.31530E+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	3.691E+01	3.993E+00	8.102E-01	6.917E-02	45.550
CD-109	4.374E+00	8.718E-01	6.907E-01	6.499E-02	6.333
SN-126	4.286E-01	8.541E-02	6.755E-02	6.332E-03	6.344
TL-208	6.066E-01	1.250E-01	6.618E-02	7.209E-03	9.166
BI-210	1.461E+00	6.721E-01	6.116E-01	5.832E-02	2.389
PB-210	1.461E+00	6.721E-01	6.116E-01	5.832E-02	2.389
PO-210	1.461E+00	6.696E-01	6.116E-01	5.308E-02	2.389
BI-211	4.043E+00	5.705E-01	3.059E-01	2.762E-02	13.215
PB-212	1.830E+00	2.148E-01	8.549E-02	8.501E-03	21.407
PO-212	1.830E+00	2.148E-01	8.549E-02	8.501E-03	21.407
BI-214	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
PB-214	1.406E+00	2.116E-01	1.038E-01	1.081E-02	13.553
PO-214	1.406E+00	2.116E-01	1.038E-01	1.081E-02	13.553
PO-216	1.830E+00	2.148E-01	8.549E-02	8.501E-03	21.407
PO-218	1.406E+00	2.116E-01	1.038E-01	1.081E-02	13.553
RA-224	4.857E+00	1.562E+00	9.757E-01	8.670E-02	4.978
RA-226	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
AC-228	1.996E+00	4.120E-01	2.358E-01	2.677E-02	8.463

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.996E+00	4.120E-01	2.358E-01	2.677E-02	8.463
TH-228	1.862E+00	2.185E-01	8.697E-02	8.648E-03	21.407
TH-230	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
TH-232	1.996E+00	4.120E-01	2.358E-01	2.677E-02	8.463
TH-234	1.763E+00	9.796E-01	7.532E-01	1.330E-01	2.340
U-234	1.243E+00	2.577E-01	1.336E-01	1.579E-02	9.306
NP-237	1.258E+00	3.610E-01	1.976E-01	4.471E-02	6.370
U-238	1.763E+00	9.796E-01	7.532E-01	1.330E-01	2.340
AM-243	3.458E-01	5.097E-02	4.469E-02	3.788E-03	7.737
ANH-511	1.218E-01	7.591E-02	5.488E-02	5.261E-03	2.218

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.192E-01		3.554E-01	6.117E-01	5.994E-02	0.195
NA-22	-2.934E-03		6.235E-02	9.981E-02	8.187E-03	-0.029
NA-24	-5.663E-02		4.745E+00	Half-Life too short		
AL-26	-5.945E-03		3.642E-02	5.639E-02	4.667E-03	-0.105
TI-44	4.126E-01	+	4.652E-02	3.844E-02	3.348E-03	10.732
SC-46	-6.585E-03		5.025E-02	8.211E-02	7.302E-03	-0.080
V-48	-3.854E-02		1.040E-01	1.648E-01	1.442E-02	-0.234
CR-51	2.423E-01		4.110E-01	6.912E-01	6.425E-02	0.351
MN-52	-1.295E-01		3.929E-01	6.184E-01	5.107E-02	-0.209
MN-54	1.529E-03		4.634E-02	7.812E-02	7.571E-03	0.020
CO-56	-1.102E-02		4.788E-02	7.836E-02	7.469E-03	-0.141
CO-57	-1.010E-02		2.047E-02	3.139E-02	3.606E-03	-0.322
CO-58	-3.529E-02		5.128E-02	8.039E-02	8.045E-03	-0.439
FE-59	1.526E-02		1.332E-01	2.204E-01	2.034E-02	0.069
CO-60	-1.506E-02		5.200E-02	8.388E-02	6.808E-03	-0.179
ZN-65	1.200E-01		1.313E-01	2.117E-01	1.795E-02	0.567
GE-68	-3.251E-01		1.678E+00	2.688E+00	2.308E-01	-0.121
AS-73	2.926E-01		1.808E-01	3.200E-01	2.591E-02	0.914
AS-74	3.907E-02		1.217E-01	2.054E-01	2.156E-02	0.190
SE-75	-2.922E-02		4.001E-02	6.243E-02	5.605E-03	-0.468
BR-77	2.310E+00		2.021E+01	3.399E+01	3.297E+00	0.068
SR-82	7.876E-02		4.869E-01	7.936E-01	8.215E-02	0.099
RB-83	1.491E-02		7.298E-02	1.237E-01	1.200E-02	0.121
RB-84	1.518E-02		8.648E-02	1.474E-01	1.329E-02	0.103
KR-85	7.383E+00		7.976E+00	1.292E+01	1.243E+00	0.571
SR-85	3.871E-02		4.182E-02	6.774E-02	6.518E-03	0.571
RB-86	3.600E-01		1.093E+00	1.859E+00	1.596E-01	0.194
Y-88	-3.656E-02		4.357E-02	5.200E-02	4.293E-03	-0.703
ZR-88	-1.997E-02		3.586E-02	5.425E-02	4.322E-03	-0.368
Y-91	-1.397E+01		2.963E+01	4.571E+01	3.766E+00	-0.306
NB-94	3.536E-02		4.497E-02	7.755E-02	8.445E-03	0.456
NB-95	5.948E-02		5.973E-02	1.039E-01	1.086E-02	0.573
NB-95M	2.071E-02		1.201E-01	1.812E-01	1.825E-02	0.114

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	3.812E-02		9.667E-02	1.612E-01	1.815E-02	0.236
NB-97	-5.660E-01		4.997E-01	Half-Life too short		
ZR-97	2.247E-01		9.177E+00	Half-Life too short		
MO-99	1.642E+01		2.641E+01	4.490E+01	7.377E+00	0.366
TC-99M	1.536E+12		6.033E+12	Half-Life too short		
RH-101	2.196E-02		2.796E-02	4.879E-02	4.167E-03	0.450
RH-102	1.425E-02		3.247E-02	5.628E-02	5.141E-03	0.253
RU-103	6.050E-03		4.628E-02	7.816E-02	1.146E-02	0.077
RH-106	-1.478E-01		3.784E-01	5.940E-01	8.795E-02	-0.249
RU-106	-1.478E-01		3.781E-01	5.940E-01	6.373E-02	-0.249
AG-108M	-2.753E-02		3.390E-02	5.351E-02	4.771E-03	-0.514
AG-110M	-9.592E-03		4.236E-02	6.734E-02	7.554E-03	-0.142
IN-111	6.916E-01		1.742E+00	2.666E+00	2.373E-01	0.259
IN-113M	-7.039E-03		5.011E-02	7.863E-02	6.476E-03	-0.090
SN-113	-7.039E-03		5.011E-02	7.863E-02	6.476E-03	-0.090
IN-114M	-8.437E-02		1.726E-01	2.535E-01	2.142E-02	-0.333
CD-115	1.024E+00		2.360E+01	3.936E+01	3.851E+00	0.026
SN-117M	1.988E-02		4.808E-02	8.383E-02	7.379E-03	0.237
SB-122	2.825E+00		4.025E+00	7.042E+00	7.169E-01	0.401
I-123	3.082E+01		3.409E+01	Half-Life too short		
TE-123M	1.035E-02		2.288E-02	3.995E-02	3.521E-03	0.259
I-124	-1.002E+00		1.292E+00	1.665E+00	1.758E-01	-0.602
SB-124	-8.584E-02		1.238E-01	1.739E-01	1.514E-02	-0.494
SB-125	-2.811E-02		9.053E-02	1.494E-01	1.293E-02	-0.188
TE-125M	-4.992E+00		6.919E+00	1.055E+01	1.269E+00	-0.473
I-126	2.616E-02		2.689E-01	4.407E-01	4.862E-02	0.059
SB-126	1.727E-01		2.192E-01	3.430E-01	3.701E-02	0.504
SB-127	-1.206E-01		2.715E+00	4.383E+00	6.052E-01	-0.028
XE-127	2.246E-03		3.993E-02	6.735E-02	5.788E-03	0.033
I-131	-5.874E-02		1.431E-01	2.206E-01	1.965E-02	-0.266
TE-132	1.045E-01		9.382E-01	1.573E+00	2.553E-01	0.066
BA-133	4.068E-02		4.606E-02	7.170E-02	9.423E-03	0.567
I-133	-2.992E-03		1.889E-02	Half-Life too short		
CS-134	9.655E-02	+	7.526E-02	1.151E-01	1.176E-02	0.838
CS-135	1.171E-01		1.598E-01	2.485E-01	2.545E-02	0.471
I-135	1.469E+12		8.961E+11	Half-Life too short		
CS-136	-1.580E-01		1.662E-01	2.422E-01	2.184E-02	-0.653
BA-137M	2.534E-02		4.602E-02	7.842E-02	8.661E-03	0.323
CS-137	2.679E-02		4.865E-02	8.290E-02	9.166E-03	0.323
CE-139	-4.482E-02		2.413E-02	3.698E-02	3.006E-03	-1.212
BA-140	1.154E-01		2.959E-01	5.053E-01	1.693E-01	0.228
LA-140	-9.249E-02		1.126E-01	1.508E-01	1.261E-02	-0.613
CE-141	-5.578E-02		5.897E-02	8.650E-02	8.673E-03	-0.645
CE-143	9.943E-04		2.411E-04	Half-Life too short		
CE-144	-1.698E-03		1.673E-01	2.621E-01	4.414E-02	-0.006
PM-144	-3.172E-02		4.893E-02	7.437E-02	8.123E-03	-0.427
PR-144	-2.152E+00		3.320E+00	5.045E+00	5.509E-01	-0.427
PM-146	-1.299E-02		4.765E-02	7.856E-02	8.571E-03	-0.165

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	1.475E-01		7.243E-01	1.224E+00	1.918E-01	0.121
PM-149	-1.197E+02		1.692E+02	2.611E+02	4.104E+01	-0.459
EU-152	4.552E-02		1.004E-01	1.667E-01	1.529E-02	0.273
GD-153	-1.148E-02		5.353E-02	8.470E-02	8.367E-03	-0.136
EU-154	-1.511E-02		1.757E-01	2.799E-01	3.076E-02	-0.054
EU-155	8.624E-02		7.852E-02	1.315E-01	1.372E-02	0.656
TB-160	5.993E-02		1.758E-01	3.043E-01	2.754E-02	0.197
HO-166M	3.031E-03		7.701E-02	1.248E-01	1.353E-02	0.024
TM-171	7.279E+00		1.231E+01	1.931E+01	1.556E+00	0.377
LU-176	-3.931E-04		2.379E-02	3.860E-02	3.437E-03	-0.010
LU-177	2.773E+00	+	1.847E+00	2.364E+00	2.045E-01	1.173
LU-177M	1.170E-01		2.010E-01	3.019E-01	2.499E-02	0.388
HF-181	3.484E-03		4.440E-02	7.491E-02	6.911E-03	0.047
W-181	-6.634E-02		1.554E-01	2.330E-01	1.862E-02	-0.285
TA-182	-2.621E-02		3.146E-01	5.049E-01	4.157E-02	-0.052
RE-183	9.520E-03		8.930E-02	1.534E-01	1.298E-02	0.062
RE-184	1.387E-01		2.109E-01	3.619E-01	3.230E-02	0.383
OS-185	2.916E-02		5.422E-02	9.271E-02	1.013E-02	0.315
RE-188	7.468E-02		1.420E-01	2.487E-01	2.266E-02	0.300
W-188	-4.947E+00		7.864E+00	1.076E+01	9.609E-01	-0.460
IR-192	-1.509E-02		3.506E-02	5.492E-02	4.881E-03	-0.275
AU-195	2.017E-01		1.600E-01	2.692E-01	2.681E-02	0.749
TL-200	3.114E-04		9.236E-04	Half-Life too short		
TL-201	7.940E+00		8.908E+00	1.579E+01	1.286E+00	0.503
TL-202	-1.053E-02		9.321E-02	1.562E-01	1.352E-02	-0.067
HG-203	-2.375E-02		3.980E-02	6.253E-02	5.723E-03	-0.380
BI-207	8.489E-02		7.789E-02	1.407E-01	1.212E-02	0.604
TL-207	-5.971E-01		7.087E-01	1.064E+00	1.895E-01	-0.561
PO-209	-1.350E+01		9.721E+00	1.359E+01	1.192E+00	-0.994
PB-211	-5.207E-01		1.249E+00	1.612E+00	1.009E+00	-0.323
BI-212	1.848E+00	+	8.029E-01	8.749E-01	1.040E-01	2.112
PO-215	-5.971E-01		7.087E-01	1.064E+00	1.895E-01	-0.561
RN-219	7.264E-02		4.732E-01	7.588E-01	1.118E-01	0.096
RN-220	-3.056E+01		3.093E+01	4.635E+01	4.648E+00	-0.659
RA-223	-5.971E-01		7.087E-01	1.064E+00	1.895E-01	-0.561
AC-227	1.345E-01		3.435E-01	5.797E-01	9.000E-02	0.232
TH-227	1.345E-01		3.437E-01	5.797E-01	1.056E-01	0.232
TH-229	-2.695E-01		4.282E-01	6.987E-01	5.932E-02	-0.386
PA-231	9.308E-01		1.441E+00	2.447E+00	3.759E-01	0.380
TH-231	-5.971E-01		7.087E-01	1.064E+00	1.895E-01	-0.561
U-231	-8.921E-01		1.053E+00	1.475E+00	1.445E-01	-0.605
PA-233	1.872E-02		5.931E-02	9.849E-02	8.988E-03	0.190
PA-234	1.407E-02		3.973E-01	6.621E-01	1.247E-01	0.021
PA-234M	2.650E+00		5.737E+00	9.941E+00	1.000E+00	0.267
U-235	1.032E-01		1.860E-01	2.971E-01	5.418E-02	0.347
NP-236	1.205E-02		6.320E-02	1.091E-01	9.430E-03	0.110
NP-239	2.436E-02		1.494E-01	2.389E-01	2.655E-02	0.102
AM-241	-4.435E-03		5.094E-02	7.814E-02	6.628E-03	-0.057

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-7.361E-02		7.001E-02	1.051E-01	1.077E-02	-0.700
AM-246	-9.049E-02		1.947E-01	3.018E-01	2.589E-02	-0.300
CM-247	3.831E-03		4.201E-02	6.703E-02	5.438E-03	0.057
CF-249	1.641E-02		4.437E-02	7.260E-02	5.824E-03	0.226
CF-251	-5.307E-02		1.055E-01	1.748E-01	1.446E-02	-0.304

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]G246440004          *
* Acquisition date   : 19-FEB-2010 17:58:33 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 02:00:26.15           Half life ratio : 8.000      *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G246440004           Analyst initials: MXR1          *
* Batch Number      : 950788              Sample Quantity : 1.3153E+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	3.691E+01	3.913E+00	4.058E-01	1.997E+00
CD-109	4.374E+00	8.543E-01	3.625E-01	4.359E-01
SN-126	4.286E-01	8.370E-02	3.546E-02	4.271E-02
TL-208	6.066E-01	1.225E-01	3.367E-02	6.250E-02
BI-210	1.461E+00	6.587E-01	3.242E-01	3.360E-01
PB-210	1.461E+00	6.587E-01	3.242E-01	3.360E-01
PO-210	1.461E+00	6.562E-01	3.242E-01	3.348E-01
BI-211	4.043E+00	5.591E-01	1.570E-01	2.853E-01
PB-212	1.830E+00	2.105E-01	4.415E-02	1.074E-01
PO-212	1.830E+00	2.105E-01	4.415E-02	1.074E-01
BI-214	1.243E+00	2.526E-01	6.792E-02	1.289E-01
PB-214	1.406E+00	2.074E-01	5.325E-02	1.058E-01
PO-214	1.406E+00	2.074E-01	5.325E-02	1.058E-01
PO-216	1.830E+00	2.105E-01	4.415E-02	1.074E-01
PO-218	1.406E+00	2.074E-01	5.325E-02	1.058E-01
RA-224	4.857E+00	1.531E+00	5.038E-01	7.811E-01
RA-226	1.243E+00	2.526E-01	6.792E-02	1.289E-01
AC-228	1.996E+00	4.038E-01	1.191E-01	2.060E-01
RA-228	1.996E+00	4.038E-01	1.191E-01	2.060E-01
TH-228	1.862E+00	2.141E-01	4.492E-02	1.092E-01
TH-230	1.243E+00	2.526E-01	6.792E-02	1.289E-01
TH-232	1.996E+00	4.038E-01	1.191E-01	2.060E-01
TH-234	1.763E+00	9.600E-01	3.973E-01	4.898E-01
U-234	1.243E+00	2.526E-01	6.792E-02	1.289E-01
NP-237	1.258E+00	3.538E-01	1.037E-01	1.805E-01
U-238	1.763E+00	9.600E-01	3.973E-01	4.898E-01
AM-243	3.458E-01	4.995E-02	2.352E-02	2.549E-02
ANH-511	1.218E-01	7.439E-02	2.799E-02	3.795E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	1.192E-01	3.483E-01	3.123E-01	1.777E-01	NOT IDENT.
NA-22	-2.934E-03	6.110E-02	5.011E-02	3.118E-02	NOT IDENT.
NA-24	-5.663E+04	9.299E+06	0.000E+00	4.745E+06	SHORT HLIF
AL-26	-5.945E-03	3.569E-02	2.814E-02	1.821E-02	NOT IDENT.
TI-44	4.126E-01	4.559E-02	2.021E-02	2.326E-02	FAIL ABUN
SC-46	-6.585E-03	4.924E-02	4.148E-02	2.512E-02	FAIL ABUN
V-48	-3.854E-02	1.019E-01	8.312E-02	5.198E-02	NOT IDENT.
CR-51	2.423E-01	4.028E-01	3.552E-01	2.055E-01	NOT IDENT.
MN-52	-1.295E-01	3.851E-01	3.099E-01	1.965E-01	NOT IDENT.
MN-54	1.529E-03	4.542E-02	3.951E-02	2.317E-02	NOT IDENT.
CO-56	-1.102E-02	4.692E-02	3.962E-02	2.394E-02	NOT IDENT.
CO-57	-1.010E-02	2.006E-02	1.639E-02	1.024E-02	NOT IDENT.
CO-58	-3.529E-02	5.025E-02	4.067E-02	2.564E-02	NOT IDENT.
FE-59	1.526E-02	1.305E-01	1.109E-01	6.658E-02	NOT IDENT.
CO-60	-1.506E-02	5.096E-02	4.208E-02	2.600E-02	NOT IDENT.
ZN-65	1.200E-01	1.287E-01	1.065E-01	6.566E-02	NOT IDENT.
GE-68	-3.251E-01	1.644E+00	1.354E+00	8.390E-01	NOT IDENT.
AS-73	2.926E-01	1.771E-01	1.692E-01	9.038E-02	NOT IDENT.
AS-74	3.907E-02	1.193E-01	1.045E-01	6.085E-02	NOT IDENT.
SE-75	-2.922E-02	3.921E-02	3.219E-02	2.000E-02	NOT IDENT.
BR-77	2.310E+00	1.981E+01	1.733E+01	1.011E+01	FAIL ABUN
SR-82	7.876E-02	4.771E-01	4.019E-01	2.434E-01	NOT IDENT.
RB-83	1.491E-02	7.152E-02	6.306E-02	3.649E-02	NOT IDENT.
RB-84	1.518E-02	8.475E-02	7.445E-02	4.324E-02	NOT IDENT.
KR-85	7.383E+00	7.817E+00	6.588E+00	3.988E+00	NOT IDENT.
SR-85	3.871E-02	4.099E-02	3.454E-02	2.091E-02	NOT IDENT.
RB-86	3.600E-01	1.071E+00	9.361E-01	5.465E-01	NOT IDENT.
Y-88	-3.656E-02	4.270E-02	2.594E-02	2.179E-02	NOT IDENT.
ZR-88	-1.997E-02	3.515E-02	2.779E-02	1.793E-02	NOT IDENT.
Y-91	-1.397E+01	2.903E+01	2.297E+01	1.481E+01	NOT IDENT.
NB-94	3.536E-02	4.407E-02	3.933E-02	2.249E-02	NOT IDENT.
NB-95	5.948E-02	5.854E-02	5.261E-02	2.987E-02	NOT IDENT.
NB-95M	2.071E-02	1.177E-01	9.358E-02	6.006E-02	NOT IDENT.
ZR-95	3.812E-02	9.474E-02	8.166E-02	4.833E-02	NOT IDENT.
NB-97	-5.660E+05	9.793E+05	0.000E+00	4.997E+05	SHORT HLIF
ZR-97	2.247E+05	1.799E+07	0.000E+00	9.177E+06	SHORT HLIF
MO-99	1.642E+01	2.588E+01	2.275E+01	1.320E+01	NOT IDENT.
TC-99M	1.536E+18	1.182E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.196E-02	2.740E-02	2.528E-02	1.398E-02	FAIL ABUN
RH-102	1.425E-02	3.182E-02	2.874E-02	1.624E-02	NOT IDENT.
RU-103	6.050E-03	4.536E-02	3.988E-02	2.314E-02	FAIL ABUN
RH-106	-1.478E-01	3.708E-01	3.019E-01	1.892E-01	FAIL ABUN
RU-106	-1.478E-01	3.705E-01	3.019E-01	1.890E-01	FAIL ABUN
AG-108M	-2.753E-02	3.323E-02	2.736E-02	1.695E-02	NOT IDENT.
AG-110M	-9.592E-03	4.151E-02	3.420E-02	2.118E-02	NOT IDENT.
IN-111	6.916E-01	1.707E+00	1.376E+00	8.711E-01	NOT IDENT.
IN-113M	-7.039E-03	4.911E-02	4.028E-02	2.505E-02	NOT IDENT.
SN-113	-7.039E-03	4.911E-02	4.028E-02	2.505E-02	NOT IDENT.
IN-114M	-8.437E-02	1.692E-01	1.314E-01	8.630E-02	NOT IDENT.
CD-115	1.024E+00	2.312E+01	2.006E+01	1.180E+01	NOT IDENT.
SN-117M	1.988E-02	4.712E-02	4.358E-02	2.404E-02	NOT IDENT.
SB-122	2.825E+00	3.944E+00	3.585E+00	2.012E+00	NOT IDENT.
I-123	3.082E+07	6.681E+07	0.000E+00	3.409E+07	SHORT HLIF
TE-123M	1.035E-02	2.242E-02	2.077E-02	1.144E-02	NOT IDENT.
I-124	-1.002E+00	1.266E+00	8.467E-01	6.461E-01	NOT IDENT.
SB-124	-8.584E-02	1.213E-01	8.686E-02	6.189E-02	FAIL ABUN
SB-125	-2.811E-02	8.872E-02	7.643E-02	4.526E-02	FAIL ABUN
TE-125M	-4.992E+00	6.781E+00	5.517E+00	3.460E+00	NOT IDENT.
I-126	2.616E-02	2.635E-01	2.238E-01	1.344E-01	NOT IDENT.
SB-126	1.727E-01	2.148E-01	1.739E-01	1.096E-01	FAIL ABUN
SB-127	-1.206E-01	2.661E+00	2.224E+00	1.358E+00	NOT IDENT.
XE-127	2.246E-03	3.913E-02	3.488E-02	1.997E-02	NOT IDENT.
I-131	-5.874E-02	1.402E-01	1.131E-01	7.153E-02	NOT IDENT.
TE-132	1.045E-01	9.195E-01	8.128E-01	4.691E-01	NOT IDENT.
BA-133	4.068E-02	4.514E-02	3.679E-02	2.303E-02	NOT IDENT.
I-133	-2.992E+03	3.702E+04	0.000E+00	1.889E+04	SHORT HLIF
CS-134	9.655E-02	7.376E-02	5.828E-02	3.763E-02	FAIL ABUN
CS-135	1.171E-01	1.566E-01	1.281E-01	7.988E-02	NOT IDENT.
I-135	1.469E+18	1.756E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.580E-01	1.629E-01	1.220E-01	8.309E-02	FAIL ABUN
BA-137M	2.534E-02	4.510E-02	3.982E-02	2.301E-02	NOT IDENT.
CS-137	2.679E-02	4.767E-02	4.209E-02	2.432E-02	NOT IDENT.
CE-139	-4.482E-02	2.365E-02	1.921E-02	1.206E-02	NOT IDENT.
BA-140	1.154E-01	2.900E-01	2.575E-01	1.480E-01	NOT IDENT.
LA-140	-9.249E-02	1.104E-01	7.541E-02	5.632E-02	NOT IDENT.
CE-141	-5.578E-02	5.779E-02	4.503E-02	2.949E-02	NOT IDENT.
CE-143	9.943E+02	4.726E+02	0.000E+00	2.411E+02	SHORT HLIF

CE-144	-1.698E-03	1.639E-01	1.366E-01	8.363E-02	NOT IDENT.
PM-144	-3.172E-02	4.796E-02	3.773E-02	2.447E-02	NOT IDENT.
PR-144	-2.152E+00	3.253E+00	2.559E+00	1.660E+00	NOT IDENT.
PM-146	-1.299E-02	4.670E-02	4.014E-02	2.382E-02	NOT IDENT.
ND-147	1.475E-01	7.098E-01	6.236E-01	3.621E-01	FAIL ABUN
PM-149	-1.197E+02	1.658E+02	1.344E+02	8.458E+01	NOT IDENT.
EU-152	4.552E-02	9.837E-02	8.559E-02	5.019E-02	FAIL ABUN
GD-153	-1.148E-02	5.246E-02	4.438E-02	2.676E-02	FAIL ABUN
EU-154	-1.511E-02	1.722E-01	1.405E-01	8.785E-02	NOT IDENT.
EU-155	8.624E-02	7.695E-02	6.884E-02	3.926E-02	FAIL ABUN
TB-160	5.993E-02	1.723E-01	1.538E-01	8.790E-02	FAIL ABUN
HO-166M	3.031E-03	7.547E-02	6.330E-02	3.850E-02	FAIL ABUN
TM-171	7.279E+00	1.207E+01	1.018E+01	6.156E+00	NOT IDENT.
LU-176	-3.931E-04	2.332E-02	1.985E-02	1.190E-02	FAIL ABUN
LU-177	2.773E+00	1.810E+00	1.223E+00	9.234E-01	FAIL ABUN
LU-177M	1.170E-01	1.969E-01	1.545E-01	1.005E-01	FAIL ABUN
HF-181	3.484E-03	4.352E-02	3.824E-02	2.220E-02	NOT IDENT.
W-181	-6.634E-02	1.523E-01	1.229E-01	7.772E-02	NOT IDENT.
TA-182	-2.621E-02	3.083E-01	2.537E-01	1.573E-01	NOT IDENT.
RE-183	9.520E-03	8.752E-02	7.974E-02	4.465E-02	FAIL ABUN
RE-184	1.387E-01	2.067E-01	1.867E-01	1.054E-01	NOT IDENT.
OS-185	2.916E-02	5.313E-02	4.709E-02	2.711E-02	NOT IDENT.
RE-188	7.468E-02	1.391E-01	1.293E-01	7.098E-02	NOT IDENT.
W-188	-4.947E+00	7.707E+00	5.540E+00	3.932E+00	FAIL ABUN
IR-192	-1.509E-02	3.436E-02	2.823E-02	1.753E-02	FAIL ABUN
AU-195	2.017E-01	1.568E-01	1.410E-01	8.001E-02	FAIL ABUN
TL-200	3.114E+02	1.810E+03	0.000E+00	9.236E+02	SHORT HLIF
TL-201	7.940E+00	8.730E+00	8.203E+00	4.454E+00	NOT IDENT.
TL-202	-1.053E-02	9.134E-02	7.987E-02	4.660E-02	NOT IDENT.
HG-203	-2.375E-02	3.900E-02	3.221E-02	1.990E-02	NOT IDENT.
BI-207	8.489E-02	7.633E-02	7.084E-02	3.894E-02	FAIL ABUN
TL-207	-5.971E-01	6.945E-01	5.468E-01	3.543E-01	FAIL ABUN
PO-209	-1.350E+01	9.526E+00	6.865E+00	4.860E+00	NOT IDENT.
PB-211	-5.207E-01	1.224E+00	8.255E-01	6.244E-01	NOT IDENT.
BI-212	1.848E+00	7.869E-01	4.435E-01	4.015E-01	FAIL ABUN
PO-215	-5.971E-01	6.945E-01	5.468E-01	3.543E-01	FAIL ABUN
RN-219	7.264E-02	4.637E-01	3.885E-01	2.366E-01	FAIL ABUN
RN-220	-3.056E+01	3.031E+01	2.361E+01	1.546E+01	NOT IDENT.
RA-223	-5.971E-01	6.945E-01	5.468E-01	3.543E-01	FAIL ABUN
AC-227	1.345E-01	3.366E-01	2.990E-01	1.718E-01	FAIL ABUN
TH-227	1.345E-01	3.369E-01	2.990E-01	1.719E-01	FAIL ABUN
TH-229	-2.695E-01	4.196E-01	3.621E-01	2.141E-01	FAIL ABUN
PA-231	9.308E-01	1.412E+00	1.260E+00	7.206E-01	FAIL ABUN
TH-231	-5.971E-01	6.945E-01	5.468E-01	3.543E-01	FAIL ABUN
U-231	-8.921E-01	1.032E+00	7.733E-01	5.267E-01	FAIL ABUN
PA-233	1.872E-02	5.812E-02	5.064E-02	2.965E-02	FAIL ABUN
PA-234	1.407E-02	3.894E-01	3.341E-01	1.987E-01	FAIL ABUN
PA-234M	2.650E+00	5.622E+00	5.012E+00	2.868E+00	NOT IDENT.
U-235	1.032E-01	1.823E-01	1.547E-01	9.301E-02	FAIL ABUN
NP-236	1.205E-02	6.194E-02	5.670E-02	3.160E-02	NOT IDENT.
NP-239	2.436E-02	1.465E-01	1.248E-01	7.472E-02	FAIL ABUN
AM-241	-4.435E-03	4.992E-02	4.126E-02	2.547E-02	NOT IDENT.
CM-243	-7.361E-02	6.861E-02	5.503E-02	3.500E-02	FAIL ABUN
AM-246	-9.049E-02	1.908E-01	1.519E-01	9.733E-02	NOT IDENT.
CM-247	3.831E-03	4.117E-02	3.432E-02	2.100E-02	NOT IDENT.
CF-249	1.641E-02	4.348E-02	3.720E-02	2.219E-02	NOT IDENT.
CF-251	-5.307E-02	1.033E-01	9.070E-02	5.273E-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	187.5455
46.50	187.5455
46.50	187.5455
48.70	199.3503
49.72	206.4561
51.35	266.8673
52.39	223.6346
52.97	222.3777
53.15	222.5627
53.44	208.8738
54.07	212.2834
56.28	264.4568
56.28	264.4600
57.37	0.0000
57.53	247.8705
57.53	247.8735
57.60	247.9462
57.98	262.6287
57.98	262.6287
59.32	296.0452
59.32	296.0452
59.40	296.1455
59.54	296.3225
59.72	296.5479
60.01	286.6730
61.10	289.2712
61.14	289.3192
61.30	302.3787
63.00	310.9766
63.29	311.3434
63.29	311.3434
63.58	311.7084
64.28	312.5879
65.12	348.9192
65.20	349.0306
65.20	349.0306
66.05	358.0709
66.72	314.2953
66.83	328.9058
66.91	329.0075
67.20	329.3762
67.20	329.3762
67.75	338.6576
67.85	326.9032
68.90	369.9906
68.90	369.9906
69.30	357.6031
69.67	358.1044
70.82	348.6266
70.82	348.6266
70.83	348.6399
72.80	336.0411
72.87	336.1249
72.87	336.1249
74.67	338.3149
74.81	338.4851
74.81	338.4851
74.81	338.4851
74.81	338.4851
74.81	338.4851
74.81	338.4851
74.97	338.6782
75.28	339.0517
75.70	339.5547
77.11	341.2391
77.11	341.2391

77.11	341.2391
77.11	341.2391
77.11	341.2391
77.11	341.2391
77.11	341.2391
78.38	342.7457
79.62	344.2014
79.80	297.8701
79.80	297.8701
80.11	298.1843
80.18	298.2546
80.30	304.5916
80.30	304.5916
80.57	304.8698
81.00	313.6172
81.07	313.6909
81.07	313.6909
81.07	313.6909
81.07	313.6909
82.60	306.9424
83.37	231.3105
83.78	231.6241
83.78	231.6241
83.78	231.6241
83.78	231.6241
84.21	231.9495
84.90	232.4705
85.43	232.8684
86.29	233.5108
86.50	233.6676
86.54	233.6980
86.59	233.7351
86.72	233.8312
86.79	233.8818
86.94	233.9964
87.30	234.2628
87.30	234.2628
87.30	234.2628
87.30	234.2628
87.30	234.2628
87.30	234.2628
87.30	234.2628
87.57	234.4635
87.88	234.6928
88.03	234.8041
88.36	235.0469
88.47	235.1278
89.95	236.2137
91.11	237.0601
92.29	237.9132
92.38	237.9790
92.38	237.9790
93.35	238.6754
94.00	200.5478
94.67	216.8472
94.67	216.8503
94.90	224.2316
94.90	224.2316
94.90	224.2316
94.90	224.2316
95.87	243.7371
95.87	243.7371
96.73	238.5361
97.43	230.6412
98.44	213.7752
98.44	213.7759
98.88	204.1683
99.55	224.3561
99.55	224.3561
99.86	220.1523
100.00	226.8464
100.10	226.9140
103.18	239.9958
103.76	244.8346
105.00	169.7371
105.31	198.9395
108.00	193.6391
109.28	223.6730

111.00	213.3431
111.00	213.3431
111.76	202.3970
112.95	218.9912
115.19	229.4312
116.30	186.3645
117.00	209.7418
117.00	209.7418
117.66	205.4716
121.11	194.4290
121.62	207.4937
121.78	206.4084
122.06	215.8851
122.32	219.5236
122.32	219.5236
122.32	219.5236
122.32	219.5236
123.07	216.4144
127.23	198.4874
129.76	212.3412
131.20	201.9179
133.02	201.1611
133.54	197.8031
135.34	186.5695
136.00	191.6656
136.25	194.1846
136.48	194.2854
140.51	213.0596
140.51	0.0000
142.18	216.2751
142.65	226.2761
143.76	213.3289
144.24	231.9559
144.24	231.9559
144.24	231.9559
144.24	231.9559
145.22	244.7388
145.44	244.8511
147.16	179.0574
152.43	224.7089
152.70	204.8474
153.22	197.5603
154.21	199.6262
154.21	199.6262
154.21	199.6262
154.21	199.6262
155.03	197.4469
156.02	228.0169
158.56	177.7758
159.00	0.0000
159.00	180.4580
160.31	184.3034
161.27	217.6830
162.32	185.8729
162.64	158.8123
163.35	161.5804
163.89	160.0459
165.85	217.8981
167.43	155.9860
171.28	218.4024
171.86	180.6129
172.10	183.2852
176.55	193.4957
176.60	193.5138
181.06	188.4708
184.41	175.0003
185.71	173.6234
186.00	173.7112
190.27	182.1295
192.34	169.3279
193.63	184.9587
197.04	195.9433
198.01	160.0804
198.60	158.4229
200.40	167.0626
201.83	187.4712
202.84	156.7848
205.31	150.9999

208.36	171.9626
208.81	172.0844
209.75	174.1825
209.75	174.1825
210.97	182.8253
215.65	171.1317
216.55	162.0524
218.09	151.2307
222.10	129.6066
223.80	145.9416
226.40	143.6674
227.00	145.6862
227.08	145.7034
227.20	145.7285
228.16	141.1956
228.18	141.2002
228.18	141.2002
231.56	0.0000
235.69	150.8782
236.00	156.6958
236.00	156.6958
238.63	158.7225
238.63	158.7225
238.63	158.7225
238.63	158.7225
239.00	158.8048
240.98	159.2462
241.98	159.4678
241.98	159.4678
241.98	159.4678
244.69	126.5984
245.39	122.3509
247.94	123.7534
248.90	123.9149
249.79	126.9954
252.40	115.6785
252.85	111.8256
252.85	111.8256
254.15	0.0000
256.20	115.2814
256.20	115.2814
260.50	122.8723
260.90	106.0835
262.80	103.3631
264.65	124.5321
268.24	112.5961
268.79	118.6856
269.46	105.2542
269.46	105.2542
269.46	105.2542
269.46	105.2542
271.23	105.4892
273.65	120.9277
276.40	91.0089
277.35	92.1275
277.60	96.2080
277.60	96.2080
278.00	107.3996
278.60	111.5352
279.20	131.9122
279.53	144.1465
280.46	137.2000
281.68	109.9226
283.67	101.0081
284.30	106.1899
285.00	123.6538
285.90	120.7200
286.10	120.7488
286.10	120.7488
287.40	98.3906
288.45	0.0000
290.67	118.8415
290.80	118.8579
291.72	109.7176
293.26	0.0000
293.70	103.7797
295.21	94.6535
295.21	94.6535

295.21	94.6535
295.96	94.7373
296.50	80.8104
297.23	105.7665
298.57	105.9325
299.80	123.2446
299.80	123.2446
300.09	118.6039
300.09	118.6039
300.09	118.6039
300.09	118.6039
300.12	118.6085
301.29	117.2058
302.84	98.6298
303.76	105.0024
303.91	108.1557
304.40	109.1578
304.40	109.1578
304.84	116.1173
306.84	100.6543
308.46	85.0836
311.98	85.4231
316.51	107.0536
318.01	104.0472
319.02	106.2887
319.41	108.4601
320.08	102.1563
323.87	129.2936
323.87	129.2936
323.87	129.2936
323.87	129.2936
325.23	147.6750
328.77	113.8672
333.44	97.1613
334.20	102.1020
334.20	102.1020
334.30	102.1135
338.28	92.2338
338.28	92.2338
338.28	92.2338
338.28	92.2338
338.32	92.2372
338.32	92.2372
338.32	92.2372
340.50	97.8864
340.57	97.8937
344.27	90.6259
345.85	91.8682
350.59	0.0000
351.07	80.2641
351.92	75.9320
351.92	75.9320
351.92	75.9320
355.39	0.0000
356.01	66.3000
364.48	88.0328
366.43	79.2683
367.43	82.6990
367.94	0.0000
369.80	97.4520
374.96	87.8071
383.85	105.5805
387.95	85.4721
388.63	93.5096
391.69	90.3440
391.69	90.3440
392.90	100.7492
398.62	98.9756
400.65	78.4050
401.10	71.5159
401.81	90.0288
402.60	88.9388
404.84	97.2190
410.95	66.3307
411.60	76.8483
413.65	61.2404
414.70	75.8915
415.30	61.0787

415.76	70.1184
417.63	0.0000
418.52	83.4671
423.70	75.9009
427.08	81.4321
427.89	70.8594
432.53	78.2542
433.93	81.9080
439.47	95.7083
439.56	95.7148
439.89	95.7426
443.98	64.6441
444.90	71.8811
445.03	71.8896
445.03	71.8896
445.03	71.8896
445.03	71.8896
453.90	78.7508
463.38	65.6730
468.07	64.4531
473.00	64.3369
475.06	66.2816
475.35	67.2178
476.78	62.6833
477.59	62.7228
477.96	61.8178
482.03	56.4596
484.57	63.0621
487.03	64.1105
490.36	0.0000
492.35	55.0415
497.08	62.7276
507.63	0.0000
510.53	0.0000
510.84	70.9385
511.00	70.9476
511.85	70.9917
511.85	70.9917
513.99	50.0559
513.99	50.0559
520.41	51.4325
520.65	52.3950
527.90	60.3276
528.96	0.0000
529.64	63.2789
529.87	0.0000
531.02	58.5427
537.32	44.3435
543.00	63.8771
546.56	0.0000
549.76	74.8710
552.65	40.9208
555.20	64.4149
563.23	52.0101
563.90	51.0510
568.70	52.2010
569.32	51.2367
569.50	46.3158
569.67	46.3216
573.80	65.2266
574.00	67.2114
574.64	60.3187
578.91	52.3569
579.30	0.0000
583.14	55.6838
585.48	58.9561
591.81	66.9980
592.07	66.0081
593.00	63.0461
595.88	60.1556
600.56	54.3016
602.52	0.0000
602.71	72.5010
602.71	72.5010
603.60	67.7065
604.41	67.7414
604.70	70.9801
609.31	62.6925

609.31	62.6925
609.31	62.6925
609.31	62.6925
610.33	67.9937
612.46	59.9787
614.37	51.9359
618.01	57.9498
621.84	58.0872
621.84	58.0872
631.29	55.3497
633.02	59.5134
633.10	59.5151
634.78	62.6587
635.90	59.6178
636.97	55.5408
645.85	45.4985
646.12	50.6763
656.30	53.0638
657.75	56.2330
657.90	0.0000
661.65	56.3615
661.65	56.3615
664.57	0.0000
666.33	64.8873
666.33	64.8873
675.00	66.2646
677.61	52.6703
685.20	63.4772
692.80	62.6875
695.00	63.8287
696.49	79.8523
696.49	79.8523
697.00	80.9402
697.49	83.0940
698.33	72.4741
698.50	72.4803
699.00	67.1701
702.63	55.5547
706.10	54.5906
706.58	0.0000
706.67	61.0322
709.31	50.3979
711.68	53.6835
713.82	48.3728
717.42	48.4676
720.50	39.7020
721.93	0.0000
722.20	60.4707
722.78	69.1309
722.78	69.1309
722.89	69.1357
722.95	69.1387
723.30	67.4216
724.18	44.9693
727.18	43.3093
733.00	39.9692
735.90	62.6572
739.58	46.8672
742.81	66.5996
744.21	49.1666
747.13	50.3364
751.79	49.3616
752.31	50.4725
753.82	50.5118
755.35	46.1567
756.15	49.4742
756.87	49.4927
763.93	75.0619
765.79	53.0361
766.42	45.3155
766.84	49.7475
776.49	41.1056
778.00	51.1422
778.57	43.3727
778.89	44.4922
783.80	45.7171
785.46	56.9159
792.07	46.5791

795.84	52.0499
796.30	44.8816
798.80	44.9365
801.93	42.3057
805.60	43.2844
810.29	49.7095
810.76	55.1457
815.85	44.4074
817.79	43.5410
818.51	52.6305
819.60	43.5797
826.30	46.4528
828.27	0.0000
831.60	43.8316
831.96	44.7520
834.83	48.4712
836.80	0.0000
846.75	42.3063
848.13	38.6531
856.28	0.0000
856.80	40.0410
860.37	37.0225
867.32	41.7832
867.82	44.5793
871.10	43.7160
873.19	34.4481
874.81	45.6540
875.33	0.0000
876.40	44.7539
879.36	36.4121
880.27	35.4923
880.51	35.4970
881.50	34.5782
883.24	47.6992
884.67	45.8585
889.25	39.3883
896.60	56.4536
898.02	42.3666
899.00	41.4434
903.28	48.7566
911.07	31.2485
911.07	31.2485
911.07	31.2485
919.63	39.9205
920.93	36.1390
925.00	31.4394
925.24	34.3011
926.50	32.4129
935.52	38.2813
937.48	48.8497
944.10	44.1852
946.00	42.2974
949.00	31.7641
962.29	38.7178
964.01	43.5883
966.15	14.5422
968.20	37.1953
969.11	25.8848
969.11	25.8848
969.11	25.8848
977.42	43.8311
980.50	38.0355
983.50	44.9174
989.30	27.4060
996.32	40.2443
1001.03	34.4207
1001.68	35.4129
1004.76	44.3210
1021.30	0.0000
1024.50	0.0000
1034.80	38.8724
1036.00	32.9065
1037.82	42.9097
1038.57	47.9133
1038.76	0.0000
1045.16	31.0227
1046.59	46.0606
1048.07	51.0971

1050.47	46.1303
1050.47	46.1303
1062.04	49.3565
1063.62	38.3006
1076.63	33.4254
1077.35	41.5385
1078.86	45.6174
1085.78	35.5725
1099.22	43.9238
1112.02	42.5189
1112.84	34.2204
1115.52	30.8291
1120.29	45.2934
1120.29	45.2934
1120.29	45.2934
1120.29	45.2934
1120.51	45.2977
1121.28	48.0566
1124.00	0.0000
1129.67	52.6784
1131.51	0.0000
1147.95	0.0000
1167.94	47.1182
1173.22	45.1080
1175.09	36.7397
1177.93	61.9932
1189.05	51.6845
1204.90	63.6328
1205.75	0.0000
1213.00	55.3008
1221.42	65.0567
1230.97	75.9645
1235.34	62.1461
1236.41	0.0000
1238.25	71.8582
1246.25	56.9931
1260.41	0.0000
1271.85	28.1950
1274.45	39.0727
1274.54	37.9873
1291.56	32.7393
1298.22	0.0000
1312.09	26.3625
1325.50	23.9000
1325.50	23.9000
1332.49	28.5592
1333.61	31.3327
1360.21	25.0873
1362.66	0.0000
1365.15	18.6108
1368.21	14.9023
1368.53	0.0000
1376.25	16.8062
1384.27	10.2955
1394.10	15.9576
1395.20	17.8411
1407.95	16.9658
1434.06	19.9456
1436.60	16.1589
1457.56	0.0000
1460.81	22.0145
1489.15	8.6840
1509.49	6.7926
1596.49	15.8952
1620.62	8.9978
1678.03	0.0000
1691.02	18.3208
1691.02	18.3208
1706.46	0.0000
1750.46	0.0000
1764.49	10.6590
1764.49	10.6590
1764.49	10.6590
1764.49	10.6590
1770.23	39.4333
1771.40	13.4941
1791.20	0.0000
1808.65	7.3307

1836.01

10.5391

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440004

Total Uranium Activity	5.2915E+00	ug/g
Total Uranium Counting Unc.	2.8572E+00	ug/g
Total Uranium Tpu	1.4578E-06	ug/g
Total Uranium Mda	1.1843E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 950788                SAMPLE ID   : G246440004                *
*  ANALYST       : MXR1                  DETECTOR    : GAM21                  *
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00          *
*  ANALYSIS DATE: 19-FEB-2010 17:58:33.75  SAMPLE ALQT: 131.530 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.067E+01
GROSS GAMMA ERROR (pCi/GRAM ) : 1.498E+00
GROSS GAMMA MDA (pCi/GRAM ) : 3.914E+00
GROSS GAMMA DLC (pCi/GRAM ) : 1.893E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 20:00:50.81

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                   *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440005.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:59:07
Sample ID          : G246440005          Sample quantity   : 1.32620E+02 GRAM
Detector name      : GAM22              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:02.42  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity        : 5.00000
Batch ID           : 950788             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	63.30*	102	674	1.12	126.85	123	8	1.42E-02	46.5	
2	3	74.76*	604	747	1.35	149.76	143	17	8.39E-02	9.2	2.09E+00
3	3	77.08*	872	527	1.05	154.39	143	17	1.21E-01	5.6	
4	0	86.78	201	753	1.01	173.77	172	7	2.79E-02	23.6	
5	4	89.87	162	286	0.82	179.94	178	15	2.24E-02	15.3	2.93E+00
6	4	92.77*	458	683	1.32	185.73	178	15	6.36E-02	11.6	
7	0	185.92*	300	489	1.48	371.85	367	10	4.17E-02	15.7	
8	0	209.22	150	517	1.09	418.42	415	9	2.09E-02	28.5	
9	4	238.69*	1896	369	1.20	477.30	472	17	2.63E-01	2.9	8.57E-01
10	4	241.65	439	482	1.76	483.22	472	17	6.10E-02	13.1	
11	0	270.19	182	512	1.94	540.24	534	14	2.52E-02	27.4	
12	0	295.05*	667	337	1.34	589.92	582	14	9.26E-02	7.1	
13	0	300.34	222	264	1.35	600.50	596	12	3.08E-02	16.1	
14	0	327.87	110	322	1.97	655.51	650	11	1.52E-02	33.1	
15	0	338.54*	471	343	1.46	676.84	671	14	6.54E-02	9.7	
16	0	351.86*	1032	420	1.48	703.45	697	14	1.43E-01	5.3	
17	0	462.96	175	251	1.97	925.49	917	16	2.42E-02	21.7	
18	0	510.86*	226	237	2.22	1021.23	1014	16	3.13E-02	19.3	
19	0	583.26*	650	212	1.48	1165.93	1159	13	9.02E-02	6.2	
20	0	609.41*	743	190	1.70	1218.20	1213	13	1.03E-01	5.5	
21	0	727.57	217	178	2.02	1454.39	1446	18	3.02E-02	16.0	
22	0	767.57	89	134	3.26	1534.37	1529	13	1.24E-02	28.7	
23	0	860.53*	113	116	1.53	1720.22	1713	15	1.57E-02	23.2	
24	0	910.96*	460	190	1.80	1821.04	1812	19	6.38E-02	8.7	
25	3	964.64	94	111	3.10	1928.36	1921	22	1.30E-02	27.9	1.88E+00
26	3	969.14*	290	71	1.92	1937.37	1921	22	4.03E-02	8.4	
27	0	1120.61*	188	162	1.94	2240.24	2230	18	2.61E-02	17.9	
28	0	1381.00	70	150	4.08	2761.01	2742	38	9.74E-03	58.2	
29	0	1460.73*	2801	63	2.80	2920.49	2907	28	3.89E-01	2.1	
30	0	1567.13	19	38	10.51	3133.32	3115	25	2.57E-03	92.1	
31	0	1590.00	41	64	1.58	3179.09	3165	18	5.73E-03	47.8	
32	0	1730.01	52	20	2.50	3459.19	3449	16	7.16E-03	23.9	
33	0	1764.69*	150	19	2.65	3528.57	3519	19	2.09E-02	11.8	

Flag: "*" = Peak area was modified by background subtraction

```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440005.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 17:59:07
Sample ID        : G246440005             Sample quantity  : 132.62 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA22                Detector geometry: CAN
Elapsed live time : 0 02:00:00.00          Elapsed real time: 0 02:00:02.42   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	*	3.892E+01	3.913E+00	4.771E-01	4.371E-02	81.579
CD-109	+	88.03	*	2.107E+00	1.012E+00	1.186E+00	1.125E-01	1.777
SN-126	+	64.28		6.961E-01	6.557E-01	7.233E-01	1.050E-01	0.962
	+	86.94		8.581E-01	5.389E-01	5.332E-01	2.214E-01	1.609
	+	87.57	*	2.064E-01	9.916E-02	1.309E-01	1.236E-02	1.576
TL-208		277.35		3.058E-01	3.989E-01	6.066E-01	1.000E-01	0.504
	+	510.84		6.878E-01	2.804E-01	2.003E-01	2.610E-02	3.434
	+	583.14	*	5.556E-01	9.145E-02	5.197E-02	5.635E-03	10.691
	+	860.37		8.793E-01	4.215E-01	4.097E-01	4.774E-02	2.146
BI-211		72.87		8.927E+00	2.832E+00	4.890E+00	3.914E-01	1.826
	+	351.07	*	4.180E+00	6.573E-01	3.006E-01	3.508E-02	13.902
PB-212	+	74.81		2.593E+00	5.735E-01	4.643E-01	5.761E-02	5.586
	+	77.11		2.123E+00	2.984E-01	2.644E-01	2.211E-02	8.031
	+	87.30		9.546E-01	4.685E-01	6.071E-01	8.336E-02	1.573
	+	238.63	*	1.793E+00	2.589E-01	8.684E-02	1.147E-02	20.650
	+	300.09		3.116E+00	1.102E+00	9.238E-01	1.347E-01	3.373
PO-212	+	74.81		2.593E+00	5.735E-01	4.643E-01	5.761E-02	5.586
	+	77.11		2.123E+00	2.984E-01	2.644E-01	2.211E-02	8.031
	+	87.30		9.546E-01	4.685E-01	6.071E-01	8.336E-02	1.573
		115.19		1.011E+00	3.512E+00	5.647E+00	4.678E-01	0.179
	+	238.63	*	1.793E+00	2.589E-01	8.684E-02	1.147E-02	20.650
	+	300.09		3.116E+00	1.102E+00	9.238E-01	1.347E-01	3.373
BI-214	+	609.31	*	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445
	+	1120.29		1.500E+00	5.612E-01	4.355E-01	4.812E-02	3.443
	+	1764.49		1.569E+00	3.925E-01	2.507E-01	2.089E-02	6.256
PB-214	+	74.81		4.469E+00	9.548E-01	8.000E-01	8.818E-02	5.586
	+	77.11		3.639E+00	5.818E-01	4.532E-01	5.127E-02	8.031
	+	87.30		1.635E+00	7.957E-01	1.040E+00	1.265E-01	1.573
	+	241.98		2.490E+00	7.349E-01	5.222E-01	7.181E-02	4.769
	+	295.21		1.646E+00	3.388E-01	1.976E-01	2.941E-02	8.331
	+	351.92	*	1.454E+00	2.409E-01	1.048E-01	1.336E-02	13.877
PO-214	+	74.81		4.469E+00	9.548E-01	8.000E-01	8.818E-02	5.586
	+	77.11		3.639E+00	5.818E-01	4.532E-01	5.127E-02	8.031
	+	87.30		1.635E+00	7.957E-01	1.040E+00	1.265E-01	1.573

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	241.98		2.490E+00	7.349E-01	5.222E-01	7.181E-02	4.769
	+	295.21		1.646E+00	3.388E-01	1.976E-01	2.941E-02	8.331
	+	351.92	*	1.454E+00	2.409E-01	1.048E-01	1.336E-02	13.877
	+	74.81		2.593E+00	5.735E-01	4.643E-01	5.761E-02	5.586
	+	77.11		2.123E+00	2.984E-01	2.644E-01	2.211E-02	8.031
	+	87.30		9.546E-01	4.685E-01	6.071E-01	8.336E-02	1.573
PO-218	+	238.63	*	1.793E+00	2.589E-01	8.684E-02	1.147E-02	20.650
	+	300.09		3.116E+00	1.102E+00	9.238E-01	1.347E-01	3.373
	+	74.81		4.469E+00	9.548E-01	8.000E-01	8.818E-02	5.586
	+	77.11		3.639E+00	5.818E-01	4.532E-01	5.127E-02	8.031
	+	87.30		1.635E+00	7.957E-01	1.040E+00	1.265E-01	1.573
	+	241.98		2.490E+00	7.349E-01	5.222E-01	7.181E-02	4.769
RA-224	+	295.21		1.646E+00	3.388E-01	1.976E-01	2.941E-02	8.331
	+	351.92	*	1.454E+00	2.409E-01	1.048E-01	1.336E-02	13.877
	+	240.98	*	4.722E+00	1.368E+00	9.872E-01	1.236E-01	4.783
RA-226	+	609.31	*	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445
	+	1120.29		1.500E+00	5.612E-01	4.355E-01	4.812E-02	3.443
	+	1764.49		1.569E+00	3.925E-01	2.507E-01	2.089E-02	6.256
AC-228	+	338.32		2.116E+00	9.795E-01	3.275E-01	1.378E-01	6.459
	+	911.07	*	1.684E+00	3.696E-01	1.925E-01	2.550E-02	8.750
	+	969.11		1.866E+00	5.495E-01	3.164E-01	7.642E-02	5.896
RA-228	+	338.32		2.116E+00	9.795E-01	3.275E-01	1.378E-01	6.459
	+	911.07	*	1.684E+00	3.696E-01	1.925E-01	2.550E-02	8.750
	+	969.11		1.866E+00	5.495E-01	3.164E-01	7.642E-02	5.896
TH-228	+	74.81		2.638E+00	5.296E-01	4.723E-01	3.892E-02	5.586
	+	77.11		2.160E+00	3.035E-01	2.689E-01	2.249E-02	8.031
	+	87.30		9.712E-01	4.666E-01	6.176E-01	5.812E-02	1.573
TH-230	+	238.63	*	1.824E+00	2.633E-01	8.834E-02	1.167E-02	20.650
	+	300.09		3.170E+00	2.163E+00	9.398E-01	5.653E-01	3.373
	+	609.31	*	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445
TH-232	+	1120.29		1.499E+00	5.612E-01	4.355E-01	4.812E-02	3.443
	+	1764.49		1.569E+00	3.925E-01	2.507E-01	2.089E-02	6.256
	+	338.32		2.116E+00	4.804E-01	3.275E-01	3.895E-02	6.459
TH-234	+	911.07	*	1.684E+00	3.696E-01	1.925E-01	2.550E-02	8.750
	+	969.11		1.866E+00	5.495E-01	3.164E-01	7.642E-02	5.896
	+	63.29	*	1.759E+00	1.665E+00	1.837E+00	3.198E-01	0.957
U-234	+	92.38		3.048E+00	8.986E-01	7.054E-01	1.293E-01	4.320
	+	609.31	*	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445
	+	1120.29		1.499E+00	5.612E-01	4.355E-01	4.812E-02	3.443
NP-237	+	1764.49		1.569E+00	3.925E-01	2.507E-01	2.089E-02	6.256
	+	86.50	*	6.061E-01	3.169E-01	3.724E-01	8.431E-02	1.628
	+	95.87		-8.117E-01	1.018E+00	1.383E+00	3.419E-01	-0.587
U-238	+	63.29	*	1.759E+00	1.665E+00	1.837E+00	3.198E-01	0.957
	+	92.38		3.048E+00	7.568E-01	7.054E-01	6.428E-02	4.320
AM-243	+	74.67	*	4.204E-01	8.426E-02	7.548E-02	6.152E-03	5.570
	+	86.72		2.273E+01	1.092E+01	1.393E+01	1.302E+00	1.631
	+	117.66		-1.842E+00	3.796E+00	5.923E+00	4.893E-01	-0.311
ANH-511	+	142.18		4.761E+00	1.779E+01	2.932E+01	2.589E+00	0.162
	+	511.00	*	1.486E-01	5.928E-02	4.327E-02	4.336E-03	3.433

---- 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	*	-1.175E-01	3.010E-01	4.757E-01	4.964E-02	-0.247
NA-22		1274.54	*	9.332E-03	4.236E-02	7.105E-02	6.123E-03	0.131
NA-24		1368.53	*	-3.687E+00	4.236E-02	Half-Life too short		
AL-26		1129.67		-9.701E-01	1.788E+00	2.517E+00	2.192E-01	-0.385
		1808.65	*	1.173E-02	2.337E-02	4.107E-02	3.359E-03	0.286
TI-44		67.85		-3.716E-03	4.203E-02	6.594E-02	5.033E-03	-0.056
	+	78.38	*	3.918E-01	5.507E-02	6.792E-02	5.759E-03	5.769
SC-46		889.25	*	-1.698E-02	3.598E-02	5.783E-02	6.473E-03	-0.294
	+	1120.51		2.613E-01	9.623E-02	1.202E-01	1.063E-02	2.173
V-48		944.10		-1.070E+00	8.868E-01	1.332E+00	1.445E-01	-0.803
		983.50	*	2.936E-02	6.803E-02	1.148E-01	1.204E-02	0.256
		1312.09		-2.598E-02	7.430E-02	1.191E-01	1.049E-02	-0.218
CR-51		320.08	*	-3.849E-01	3.657E-01	5.620E-01	7.278E-02	-0.685
MN-52		744.21		-1.144E-02	2.903E-01	4.702E-01	5.109E-02	-0.024
		848.13		-1.281E+00	7.936E+00	1.310E+01	1.458E+00	-0.098
		935.52		5.134E-01	3.104E-01	5.528E-01	6.035E-02	0.929
		1246.25		-3.346E+00	9.277E+00	1.507E+01	1.274E+00	-0.222
		1333.61		-2.360E+00	5.832E+00	9.289E+00	8.284E-01	-0.254
		1434.06	*	6.427E-03	2.440E-01	4.001E-01	3.576E-02	0.016
MN-54		834.83	*	6.174E-03	3.436E-02	5.788E-02	6.429E-03	0.107
CO-56		846.75	*	-1.864E-02	3.656E-02	5.901E-02	6.569E-03	-0.316
		977.42		-1.886E+00	2.990E+00	4.375E+00	4.615E-01	-0.431
		1037.82		-9.164E-02	2.945E-01	4.711E-01	4.857E-02	-0.195
		1175.09		4.109E-01	2.071E+00	3.494E+00	2.813E-01	0.118
		1238.25		1.678E-01	8.789E-02	1.573E-01	1.363E-02	1.067
		1360.21		-1.123E-01	9.078E-01	1.477E+00	1.319E-01	-0.076
		1771.40		-2.056E-02	2.254E-01	3.085E-01	2.564E-02	-0.067
CO-57		122.06	*	-9.418E-03	2.592E-02	4.052E-02	3.342E-03	-0.232
		136.48		-1.192E-01	1.952E-01	3.233E-01	3.000E-02	-0.369
CO-58		810.76	*	-2.226E-02	3.506E-02	5.629E-02	6.233E-03	-0.395
FE-59		142.65		1.191E+00	2.838E+00	4.695E+00	4.155E-01	0.254
		192.34		1.024E-01	9.485E-01	1.570E+00	2.331E-01	0.065
		1099.22	*	-9.165E-02	8.782E-02	1.317E-01	1.291E-02	-0.696
		1291.56		-5.691E-02	1.113E-01	1.767E-01	1.742E-02	-0.322
CO-60		1173.22		2.761E-02	4.071E-02	7.046E-02	5.667E-03	0.392
		1332.49	*	-1.814E-02	3.563E-02	5.628E-02	5.019E-03	-0.322
ZN-65		1115.52	*	6.935E-02	1.011E-01	1.475E-01	1.316E-02	0.470
GE-68		1077.35	*	6.089E-01	1.191E+00	2.000E+00	1.885E-01	0.305
AS-73		53.44	*	2.219E-01	7.180E-01	1.213E+00	9.165E-02	0.183
AS-74		595.88	*	-1.219E-02	9.022E-02	1.485E-01	1.539E-02	-0.082
		634.78		1.497E-01	3.496E-01	5.890E-01	6.173E-02	0.254
SE-75		66.05		2.668E+00	4.702E+00	7.065E+00	6.740E-01	0.378
		96.73		-1.006E+00	8.554E-01	1.148E+00	1.580E-01	-0.876
		121.11		-4.458E-03	1.381E-01	2.188E-01	2.391E-02	-0.020
		136.00		-2.856E-02	3.690E-02	6.078E-02	5.274E-03	-0.470
		198.60		-3.773E-01	1.870E+00	2.994E+00	3.499E-01	-0.126
		264.65	*	1.877E-02	4.717E-02	6.765E-02	9.105E-03	0.277
		279.53		5.513E-02	1.073E-01	1.749E-01	2.482E-02	0.315
		303.91		2.300E-01	2.068E+00	3.045E+00	4.640E-01	0.076

----- 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		-4.917E-02	2.371E-01	3.854E-01	4.511E-02	-0.128
		87.88		8.451E+02	4.060E+02	5.845E+02	5.540E+01	1.446
		200.40		2.101E+02	3.007E+02	5.042E+02	5.544E+01	0.417
	+	239.00		5.363E+02	7.359E+01	6.575E+01	8.181E+00	8.158
		249.79		-7.477E+01	1.197E+02	1.877E+02	2.414E+01	-0.398
		281.68		5.938E+01	1.605E+02	2.604E+02	3.627E+01	0.228
		297.23		8.424E+02	1.809E+02	2.141E+02	2.879E+01	3.934
		303.76		5.491E+01	3.249E+02	4.800E+02	6.349E+01	0.114
		439.47		-5.978E+01	2.393E+02	3.845E+02	3.701E+01	-0.155
		484.57		8.469E+01	3.886E+02	6.343E+02	6.271E+01	0.134
		520.65	*	7.163E-01	1.664E+01	2.739E+01	2.757E+00	0.026
		574.64		-3.704E+02	3.650E+02	5.407E+02	5.564E+01	-0.685
		578.91		1.474E+01	1.636E+02	2.357E+02	2.429E+01	0.063
		585.48		4.250E+03	6.330E+02	9.121E+02	9.422E+01	4.660
		755.35		1.774E+02	2.978E+02	4.980E+02	5.429E+01	0.356
		817.79		-1.240E+01	2.185E+02	3.641E+02	4.031E+01	-0.034
SR-82		698.33		-4.562E+00	3.397E+01	5.508E+01	5.893E+00	-0.083
		776.49	*	-3.948E-01	4.008E-01	5.701E-01	6.252E-02	-0.692
		1395.20		-9.753E+00	1.318E+01	1.652E+01	1.477E+00	-0.590
RB-83		520.41	*	9.911E-04	5.999E-02	9.862E-02	9.925E-03	0.010
		529.64		-2.871E-02	9.239E-02	1.522E-01	1.538E-02	-0.189
		552.65		1.007E-02	1.724E-01	2.886E-01	2.945E-02	0.035
RB-84		881.50	*	4.668E-02	6.766E-02	1.165E-01	1.303E-02	0.401
KR-85		513.99	*	2.858E+01	8.237E+00	1.322E+01	1.327E+00	2.161
SR-85		513.99	*	1.498E-01	4.319E-02	6.934E-02	6.958E-03	2.161
RB-86		1076.63	*	4.844E-01	8.244E-01	1.389E+00	1.311E-01	0.349
Y-88		898.02		1.043E-02	3.893E-02	6.551E-02	7.361E-03	0.159
		1836.01	*	-7.528E-04	2.770E-02	4.531E-02	3.663E-03	-0.017
ZR-88		392.90	*	-2.931E-02	2.849E-02	4.433E-02	4.127E-03	-0.661
Y-91		1204.90	*	-1.293E+00	1.888E+01	3.131E+01	2.574E+00	-0.041
NB-94		702.63	*	-4.267E-03	3.184E-02	5.160E-02	5.529E-03	-0.083
		871.10		-2.095E-02	3.033E-02	4.805E-02	5.367E-03	-0.436
NB-95		765.79	*	8.959E-02	4.889E-02	7.568E-02	8.276E-03	1.184
NB-95M		235.69	*	1.265E-01	1.480E-01	2.169E-01	2.867E-02	0.583
ZR-95		724.18		2.118E-01	1.097E-01	1.705E-01	1.944E-02	1.242
		756.15	*	5.344E-02	6.994E-02	1.178E-01	1.368E-02	0.454
NB-97		657.90	*	-4.518E-01	6.994E-02	Half-Life	too short	
		1024.50		-1.144E+01	6.994E-02	Half-Life	too short	
ZR-97		254.15		1.130E+01	6.994E-02	Half-Life	too short	
		355.39		1.893E+01	6.994E-02	Half-Life	too short	
		507.63	*	6.139E+01	6.994E-02	Half-Life	too short	
		602.52		2.446E+01	6.994E-02	Half-Life	too short	
		1021.30		4.184E+01	6.994E-02	Half-Life	too short	
		1147.95		-3.445E+01	6.994E-02	Half-Life	too short	
		1362.66		-1.119E+01	6.994E-02	Half-Life	too short	
		1750.46		2.752E+00	6.994E-02	Half-Life	too short	
		140.51		1.229E+01	4.329E+01	7.341E+01	2.036E+01	0.167
		181.06		1.385E+01	3.061E+01	4.533E+01	8.678E+00	0.306
MO-99		366.43		-6.256E+00	1.333E+02	2.200E+02	2.334E+01	-0.028

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	739.58	*		-2.787E-01	1.799E+01	2.920E+01	4.833E+00	-0.010
	778.00			-5.979E+01	5.439E+01	8.113E+01	8.901E+00	-0.737
TC-99M	140.51	*		3.783E+12	5.439E+01	Half-Life	too short	
RH-101	127.23			1.907E-03	3.328E-02	5.270E-02	4.405E-03	0.036
	198.01	*		-1.617E-02	3.398E-02	5.387E-02	5.877E-03	-0.300
	325.23			2.215E-01	2.302E-01	3.504E-01	4.356E-02	0.632
RH-102	418.52			-4.677E-03	2.655E-01	4.338E-01	4.117E-02	-0.011
	475.06	*		1.178E-02	2.656E-02	4.390E-02	4.318E-03	0.268
	631.29			-3.560E-02	5.039E-02	7.963E-02	8.339E-03	-0.447
	697.49			-1.744E-02	7.224E-02	1.164E-01	1.245E-02	-0.150
+	766.84			2.349E-01	1.370E-01	1.854E-01	2.028E-02	1.267
	1046.59			5.237E-02	1.141E-01	1.880E-01	1.843E-02	0.279
	1112.84			7.082E-02	2.502E-01	3.540E-01	3.168E-02	0.200
RU-103	497.08	*		2.306E-02	4.054E-02	6.696E-02	1.005E-02	0.344
+	610.33			1.336E+01	2.777E+00	2.574E+00	4.550E-01	5.191
RH-106	511.85	+		7.450E-01	2.973E-01	3.914E-01	3.923E-02	1.904
	621.84	*		-1.015E-01	2.949E-01	4.774E-01	6.971E-02	-0.213
	1050.47			1.528E+00	2.210E+00	3.754E+00	3.664E-01	0.407
RU-106	511.85	+		7.450E-01	2.973E-01	3.914E-01	3.923E-02	1.904
	621.84	*		-1.015E-01	2.947E-01	4.774E-01	4.986E-02	-0.213
	1050.47			1.528E+00	2.210E+00	3.754E+00	3.664E-01	0.407
AG-108M	433.93	*		2.833E-02	3.013E-02	5.116E-02	5.065E-03	0.554
	614.37			9.931E-03	3.966E-02	5.742E-02	6.147E-03	0.173
	722.95			4.486E-02	4.193E-02	6.329E-02	7.003E-03	0.709
AG-110M	657.75	*		-2.050E-02	3.338E-02	5.292E-02	5.687E-03	-0.387
	677.61			2.395E-01	2.835E-01	4.842E-01	5.235E-02	0.495
	706.67			-6.214E-02	1.934E-01	3.096E-01	3.382E-02	-0.201
	763.93			1.961E-01	1.767E-01	2.651E-01	2.948E-02	0.740
	884.67			1.381E-02	4.628E-02	7.811E-02	8.907E-03	0.177
	937.48			5.952E-02	1.017E-01	1.734E-01	1.934E-02	0.343
	1384.27			8.638E-02	1.490E-01	2.558E-01	2.346E-02	0.338
IN-111	171.28			1.060E+00	1.603E+00	2.719E+00	2.713E-01	0.390
	245.39	*		7.765E-02	1.866E+00	2.644E+00	3.354E-01	0.029
IN-113M	391.69	*		-4.751E-02	4.041E-02	6.223E-02	5.943E-03	-0.763
SN-113	391.69	*		-4.751E-02	4.041E-02	6.223E-02	5.943E-03	-0.763
IN-114M	190.27	*		2.618E-02	2.013E-01	2.934E-01	3.120E-02	0.089
CD-115	260.90			-9.925E+01	2.486E+02	3.929E+02	5.220E+01	-0.253
	492.35			-1.346E-01	6.522E+01	1.051E+02	1.043E+01	-0.001
	527.90	*		-2.553E+01	1.833E+01	2.814E+01	2.842E+00	-0.907
SN-117M	156.02			1.649E+00	2.362E+00	4.033E+00	3.781E-01	0.409
	158.56	*		3.755E-02	5.873E-02	1.000E-01	9.483E-03	0.376
SB-122	563.90	*		-2.004E-01	3.117E+00	5.175E+00	5.304E-01	-0.039
	692.80			-7.057E+01	6.770E+01	1.032E+02	1.102E+01	-0.684
I-123	159.00	*		6.239E+01	6.770E+01	Half-Life	too short	
	528.96			-5.169E+03	6.770E+01	Half-Life	too short	
TE-123M	159.00	*		2.093E-02	2.722E-02	4.650E-02	4.440E-03	0.450
I-124	602.71	*		5.011E-01	1.012E+00	1.490E+00	1.547E-01	0.336
	722.78			6.673E+00	6.235E+00	9.416E+00	1.016E+00	0.709
	1325.50			1.767E+01	4.469E+01	7.584E+01	6.735E+00	0.233

---- Non-Identified Nuclides ----

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SB-124		1376.25		6.497E+01	4.306E+01	7.748E+01	6.925E+00	0.839
		1509.49		2.664E+01	2.026E+01	3.662E+01	3.255E+00	0.727
		1691.02		-2.646E+00	4.422E+00	6.748E+00	5.771E-01	-0.392
		602.71		2.096E-02	4.231E-02	6.230E-02	6.472E-03	0.336
		645.85		6.313E-02	4.535E-01	7.520E-01	8.225E-02	0.084
		709.31		-3.248E-01	2.606E+00	4.220E+00	4.534E-01	-0.077
		713.82		-5.102E-01	1.570E+00	2.433E+00	3.322E-01	-0.210
		722.78		4.046E-01	3.781E-01	5.708E-01	6.246E-02	0.709
	+	968.20		1.969E+01	3.923E+00	6.818E+00	7.249E-01	2.887
		1045.16		-1.976E-01	2.438E+00	3.960E+00	3.890E-01	-0.050
		1325.50		1.144E+00	2.894E+00	4.911E+00	4.361E-01	0.233
		1368.21		-2.061E-01	1.946E+00	2.677E+00	3.662E-01	-0.077
SB-125		1436.60		-1.001E+00	3.123E+00	4.933E+00	4.409E-01	-0.203
		1691.02	*	-3.784E-02	6.324E-02	9.650E-02	8.584E-03	-0.392
		427.89	*	-3.730E-02	8.210E-02	1.307E-01	1.268E-02	-0.285
	+	463.38		1.055E+00	4.706E-01	5.096E-01	5.285E-02	2.070
		600.56		-8.160E-02	1.664E-01	2.685E-01	2.930E-02	-0.304
TE-125M		635.90		1.525E-01	2.394E-01	4.076E-01	4.509E-02	0.374
I-126		109.28	*	2.026E+00	9.560E+00	1.539E+01	1.559E+00	0.132
		388.63		1.128E-01	2.041E-01	3.441E-01	3.258E-02	0.328
SB-126		666.33	*	-1.438E-01	1.891E-01	2.964E-01	3.131E-02	-0.485
		753.82		1.312E+00	1.595E+00	2.694E+00	2.936E-01	0.487
		223.80		3.649E+00	4.417E+00	7.376E+00	8.752E-01	0.495
		278.60		2.027E+00	2.727E+00	4.472E+00	6.251E-01	0.453
	+	296.50		1.846E+01	3.621E+00	3.713E+00	5.001E-01	4.972
		414.70		-3.363E-03	7.943E-02	1.297E-01	1.228E-02	-0.026
		415.30		-1.086E-01	6.590E+00	1.078E+01	1.020E+00	-0.010
		555.20		-2.889E+00	3.858E+00	6.157E+00	6.289E-01	-0.469
		573.80		-5.270E-02	1.049E+00	1.703E+00	1.752E-01	-0.031
		593.00		-5.688E-01	9.385E-01	1.503E+00	1.556E-01	-0.378
		656.30		-3.778E+00	3.549E+00	5.452E+00	5.743E-01	-0.693
		666.33		-6.038E-02	7.940E-02	1.245E-01	1.315E-02	-0.485
SB-127		675.00		2.418E-02	2.075E+00	3.402E+00	3.607E-01	0.007
		695.00		-6.864E-03	7.852E-02	1.277E-01	1.364E-02	-0.054
		697.00		-2.793E-03	2.799E-01	4.571E-01	4.888E-02	-0.006
		720.50	*	-2.289E-02	1.704E-01	2.348E-01	2.532E-02	-0.097
		856.80		3.094E-01	5.601E-01	8.333E-01	9.290E-02	0.371
		989.30		-1.498E+00	1.264E+00	1.886E+00	1.967E-01	-0.794
		1034.80		3.195E+00	9.137E+00	1.527E+01	1.518E+00	0.209
		1213.00		-6.607E-01	5.257E+00	8.686E+00	7.181E-01	-0.076
		61.10		9.896E+00	7.781E+01	1.164E+02	1.258E+01	0.085
		252.40		2.805E+00	6.366E+00	1.026E+01	4.445E+00	0.273
		290.80		-1.395E+01	3.278E+01	4.695E+01	7.450E+00	-0.297
		411.60		-1.620E+00	1.729E+01	2.819E+01	4.695E+00	-0.057
		444.90		3.729E+00	1.222E+01	2.019E+01	2.791E+00	0.185
		473.00		4.358E-01	2.317E+00	3.783E+00	5.387E-01	0.115
		543.00		-1.136E+01	2.070E+01	3.344E+01	5.302E+00	-0.340
		603.60		1.470E+01	1.781E+01	2.667E+01	3.821E+00	0.551
		685.20	*	-3.907E-01	1.787E+00	2.886E+00	3.912E-01	-0.135

---- 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		-1.889E+00	2.098E+01	3.410E+01	5.961E+00	-0.055
		722.20		3.543E+01	4.406E+01	6.526E+01	8.800E+00	0.543
		783.80		7.909E+00	5.081E+00	8.718E+00	1.280E+00	0.907
		57.60		-6.184E+00	5.332E+00	8.506E+00	6.110E-01	-0.727
		145.22		7.936E-02	6.957E-01	1.175E+00	1.051E-01	0.068
		172.10		1.090E-02	1.181E-01	1.970E-01	1.971E-02	0.055
		202.84	*	-3.930E-02	4.821E-02	7.670E-02	8.502E-03	-0.512
I-131		374.96		1.278E-01	1.926E-01	3.266E-01	3.325E-02	0.391
		80.18		9.542E-01	5.210E+00	7.653E+00	6.675E-01	0.125
		284.30		-2.111E+00	1.783E+00	2.658E+00	3.760E-01	-0.794
		364.48	*	5.813E-02	1.297E-01	2.186E-01	2.425E-02	0.266
TE-132		636.97		5.687E-01	1.632E+00	2.740E+00	2.986E-01	0.208
		722.89		9.080E+00	8.484E+00	1.281E+01	1.390E+00	0.709
		49.72		-2.597E+01	2.565E+01	4.130E+01	4.539E+00	-0.629
		111.76		-2.874E+01	4.753E+01	7.322E+01	8.220E+00	-0.393
BA-133		116.30		-5.072E+00	4.314E+01	6.835E+01	7.643E+00	-0.074
		228.16	*	-1.015E+00	1.102E+00	1.708E+00	3.105E-01	-0.594
		53.15		6.034E-01	3.064E+00	5.160E+00	3.916E-01	0.117
		79.62		3.402E-01	1.196E+00	1.765E+00	2.684E-01	0.193
		81.00		-6.437E-02	9.526E-02	1.341E-01	2.138E-02	-0.480
		276.40		3.528E-01	4.131E-01	5.975E-01	1.081E-01	0.590
		302.84		6.086E-02	1.429E-01	2.137E-01	3.563E-02	0.285
I-133		356.01	*	3.595E-03	4.629E-02	6.694E-02	1.000E-02	0.054
		383.85		-3.046E-01	2.749E-01	4.241E-01	5.675E-02	-0.718
	+	510.53		8.319E+00	2.749E-01	Half-Life	too short	
		529.87	*	1.127E-02	2.749E-01	Half-Life	too short	
		706.58		-5.910E-01	2.749E-01	Half-Life	too short	
		856.28		1.944E+00	2.749E-01	Half-Life	too short	
		875.33		9.247E-02	2.749E-01	Half-Life	too short	
CS-134		1236.41		6.266E+00	2.749E-01	Half-Life	too short	
		1298.22		1.124E-01	2.749E-01	Half-Life	too short	
		475.35		5.424E-01	1.730E+00	2.841E+00	2.795E-01	0.191
		563.23		2.586E-01	3.121E-01	5.401E-01	5.572E-02	0.479
		569.32		2.978E-02	1.781E-01	2.945E-01	3.054E-02	0.101
		604.70		9.252E-03	3.622E-02	5.248E-02	5.464E-03	0.176
		795.84	*	8.162E-02	4.545E-02	7.913E-02	8.759E-03	1.031
CS-135		801.93		-3.159E-01	3.543E-01	5.338E-01	5.911E-02	-0.592
		1038.57		-1.450E+00	3.589E+00	5.701E+00	5.644E-01	-0.254
		1167.94		3.990E-02	2.327E+00	3.887E+00	3.159E-01	0.010
		1365.15		6.101E-01	1.158E+00	1.858E+00	1.731E-01	0.328
		268.24	*	2.734E-01	1.776E-01	2.633E-01	3.809E-02	1.038
		288.45		9.697E+12	1.776E-01	Half-Life	too short	
		417.63		1.672E+12	1.776E-01	Half-Life	too short	
I-135		546.56		9.251E+11	1.776E-01	Half-Life	too short	
		836.80		4.116E+12	1.776E-01	Half-Life	too short	
		1038.76		-2.884E+12	1.776E-01	Half-Life	too short	
		1124.00		3.731E+13	1.776E-01	Half-Life	too short	
		1131.51		-1.223E+12	1.776E-01	Half-Life	too short	
		1260.41	*	5.956E+11	1.776E-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		2.904E+14	1.776E-01	Half-Life	too short	
		1678.03		1.558E+12	1.776E-01	Half-Life	too short	
		1706.46		-9.965E+11	1.776E-01	Half-Life	too short	
		1791.20		-1.396E+12	1.776E-01	Half-Life	too short	
		66.91		1.482E-01	8.521E-01	1.261E+00	1.876E-01	0.118
	+	86.29		3.014E+00	1.476E+00	2.059E+00	2.741E-01	1.464
		153.22		-1.300E-02	6.880E-01	1.153E+00	1.178E-01	-0.011
		163.89		-1.195E-01	1.127E+00	1.875E+00	1.997E-01	-0.064
		176.55		9.489E-02	3.902E-01	6.527E-01	6.908E-02	0.145
		273.65		-7.433E-01	5.923E-01	7.563E-01	1.070E-01	-0.983
		340.57		8.387E-01	1.862E-01	2.840E-01	3.403E-02	2.953
		818.51		-1.194E-02	7.274E-02	1.204E-01	1.334E-02	-0.099
		1048.07	*	5.995E-02	1.198E-01	1.979E-01	2.001E-02	0.303
		1235.34		7.077E-01	6.312E-01	1.097E+00	1.282E-01	0.645
BA-137M		661.65	*	1.943E-02	3.385E-02	5.712E-02	6.023E-03	0.340
CS-137		661.65	*	2.053E-02	3.579E-02	6.038E-02	6.375E-03	0.340
CE-139		165.85	*	2.720E-02	2.898E-02	4.953E-02	4.857E-03	0.549
BA-140		162.64		-6.020E-01	7.939E-01	1.290E+00	1.304E-01	-0.467
		304.84		1.761E-01	1.385E+00	2.040E+00	6.070E-01	0.086
		423.70		-6.404E-01	1.921E+00	3.067E+00	1.002E+00	-0.209
LA-140		537.32	*	3.900E-02	2.567E-01	4.322E-01	1.451E-01	0.090
	+	328.77		6.875E-01	4.629E-01	5.719E-01	7.225E-02	1.202
		432.53		1.528E+00	2.084E+00	3.513E+00	3.500E-01	0.435
		487.03		6.907E-02	1.394E-01	2.306E-01	2.390E-02	0.300
		751.79		-1.109E+00	1.852E+00	2.891E+00	3.363E-01	-0.384
		815.85		-4.482E-02	3.127E-01	5.183E-01	6.146E-02	-0.086
		867.82		1.362E+00	1.514E+00	2.324E+00	2.678E-01	0.586
		919.63		-2.573E+00	3.280E+00	4.250E+00	5.393E-01	-0.606
		925.24		-1.362E-01	1.097E+00	1.797E+00	2.054E-01	-0.076
		1596.49	*	6.628E-02	9.960E-02	1.534E-01	1.345E-02	0.432
CE-141		145.44	*	8.543E-03	6.349E-02	1.073E-01	9.766E-03	0.080
CE-143		57.37		-2.880E-03	6.349E-02	Half-Life	too short	
		231.56		2.819E-03	6.349E-02	Half-Life	too short	
		293.26	*	2.848E-03	6.349E-02	Half-Life	too short	
	+	350.59		9.707E-02	6.349E-02	Half-Life	too short	
		490.36		-6.175E-03	6.349E-02	Half-Life	too short	
		664.57		2.849E-03	6.349E-02	Half-Life	too short	
		721.93		3.039E-03	6.349E-02	Half-Life	too short	
CE-144		80.11		3.715E-01	2.006E+00	2.947E+00	2.548E-01	0.126
		133.54	*	-8.013E-02	1.901E-01	3.171E-01	4.923E-02	-0.253
PM-144		476.78		-2.758E-02	6.229E-02	9.814E-02	1.036E-02	-0.281
		618.01		-1.638E-02	3.106E-02	4.731E-02	5.030E-03	-0.346
		696.49	*	2.790E-03	3.175E-02	5.212E-02	5.575E-03	0.054
		778.57		-2.414E+00	2.170E+00	3.235E+00	3.551E-01	-0.746
PR-144		696.49	*	1.893E-01	2.154E+00	3.536E+00	3.781E-01	0.054
		1489.15		-9.258E+00	1.017E+01	1.482E+01	1.320E+00	-0.625
PM-146		453.90	*	3.594E-02	4.247E-02	6.786E-02	7.886E-03	0.530
		633.02		-2.340E-01	1.236E+00	2.011E+00	7.610E-01	-0.116
		735.90		1.114E-02	1.522E-01	2.130E-01	6.251E-02	0.052

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	+	747.13	-2.307E-02	8.525E-02	1.360E-01	2.111E-02	-0.170
		91.11	6.337E-01	2.043E-01	5.679E-01	5.612E-02	1.116
		319.41	-3.362E+00	3.489E+00	5.563E+00	7.042E-01	-0.604
		439.89	3.078E+00	5.891E+00	9.838E+00	9.474E-01	0.313
PM-149	*	531.02	3.532E-01	5.581E-01	9.599E-01	1.522E-01	0.368
		285.90	-8.567E+01	1.761E+02	2.739E+02	5.184E+01	-0.313
		121.78	-8.520E-03	7.417E-02	1.171E-01	1.124E-02	-0.073
		244.69	2.814E-01	3.507E-01	5.150E-01	6.521E-02	0.546
EU-152	*	344.27	-7.392E-02	1.140E-01	1.357E-01	1.631E-02	-0.545
		443.98	3.611E-01	8.253E-01	1.373E+00	1.325E-01	0.263
		778.89	-2.121E-01	2.463E-01	3.746E-01	4.111E-02	-0.566
		867.32	4.637E-01	8.228E-01	1.229E+00	1.373E-01	0.377
	+	964.01	6.944E-01	3.949E-01	5.249E-01	5.602E-02	1.323
		1085.78	1.853E-01	3.795E-01	6.359E-01	5.925E-02	0.291
		1112.02	-4.334E-02	3.634E-01	4.955E-01	4.440E-02	-0.087
		1407.95	3.150E-02	1.834E-01	3.045E-01	2.723E-02	0.103
GD-153		69.67	-7.803E-01	1.607E+00	2.321E+00	1.801E-01	-0.336
		83.37	8.388E+00	1.509E+01	2.223E+01	1.996E+00	0.377
		97.43	-7.385E-02	8.868E-02	1.223E-01	1.076E-02	-0.604
		103.18	-1.567E-01	1.078E-01	1.631E-01	1.393E-02	-0.961
EU-154		123.07	-7.287E-03	5.274E-02	8.314E-02	9.222E-03	-0.088
		247.94	-1.597E-01	3.529E-01	5.377E-01	7.991E-02	-0.297
		591.81	-5.259E-01	5.781E-01	8.831E-01	1.148E-01	-0.595
		723.30	1.401E-01	1.848E-01	2.724E-01	3.142E-02	0.514
		756.87	7.189E-01	7.512E-01	1.272E+00	1.745E-01	0.565
		873.19	-2.762E-01	2.657E-01	4.070E-01	5.762E-02	-0.679
		996.32	-1.680E-01	3.342E-01	5.277E-01	9.852E-02	-0.318
		1004.76	-1.361E-01	2.019E-01	3.155E-01	4.073E-02	-0.431
EU-155	*	1274.45	2.125E-02	1.179E-01	1.972E-01	2.229E-02	0.108
		48.70	-1.736E+00	2.027E+00	3.298E+00	2.686E-01	-0.526
		60.01	4.030E+00	4.579E+00	7.062E+00	5.015E-01	0.571
		86.54	2.488E-01	1.196E-01	1.712E-01	1.610E-02	1.453
TB-160	+	105.31	9.196E-02	1.095E-01	1.799E-01	1.544E-02	0.511
		86.79	6.777E-01	3.256E-01	4.656E-01	4.354E-02	1.456
		197.04	-3.568E-01	5.887E-01	9.288E-01	1.010E-01	-0.384
		215.65	-3.879E-01	7.553E-01	1.166E+00	1.348E-01	-0.333
		298.57	4.203E-01	1.608E-01	1.938E-01	2.598E-02	2.168
		879.36	1.296E-01	1.338E-01	2.332E-01	2.607E-02	0.556
		962.29	1.024E+00	6.046E-01	9.450E-01	1.010E-01	1.084
		966.15	1.592E+00	3.004E-01	5.058E-01	5.387E-02	3.147
HO-166M		1177.93	-2.131E-01	3.374E-01	5.411E-01	4.366E-02	-0.394
		1271.85	-2.595E-01	7.074E-01	1.143E+00	9.827E-02	-0.227
		80.57	1.202E-02	2.545E-01	3.717E-01	3.230E-02	0.032
		184.41	6.366E-02	4.116E-02	6.390E-02	6.663E-03	0.996
		280.46	-7.654E-02	8.522E-02	1.300E-01	1.816E-02	-0.589
		410.95	1.095E-01	2.356E-01	3.933E-01	3.712E-02	0.279
		711.68	3.579E-03	5.704E-02	9.067E-02	9.748E-03	0.039
		752.31	1.566E-01	2.598E-01	4.351E-01	4.739E-02	0.360
		810.29	-2.341E-02	5.147E-02	8.368E-02	9.252E-03	-0.280

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Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		51.35		1.674E+01	2.549E+01	4.362E+01	3.402E+00	0.384
		52.39		4.695E+00	1.358E+01	2.299E+01	1.764E+00	0.204
		59.40		1.691E+01	2.434E+01	3.734E+01	2.639E+00	0.453
LU-176		66.72	*	4.274E+00	2.773E+01	4.102E+01	3.099E+00	0.104
		88.36		7.577E-01	2.656E-01	3.388E-01	3.204E-02	2.237
		201.83		-2.564E-02	2.826E-02	4.478E-02	4.947E-03	-0.573
		306.84	*	7.768E-03	2.504E-02	3.723E-02	4.884E-03	0.209
		401.10		1.568E+00	6.067E+00	1.008E+01	9.441E-01	0.156
LU-177		112.95		-9.859E-01	2.055E+00	3.181E+00	2.644E-01	-0.310
LU-177M	+	208.36	*	3.208E+00	1.865E+00	2.495E+00	2.817E-01	1.286
		52.97		1.953E-01	1.410E+00	2.370E+00	1.803E-01	0.082
		54.07		2.965E-01	7.367E-01	1.247E+00	9.341E-02	0.238
		61.30		5.250E-01	1.392E+00	2.102E+00	1.512E-01	0.250
		121.62		-2.099E-02	3.845E-01	6.084E-01	5.012E-02	-0.034
		147.16		6.133E-02	6.253E-01	1.055E+00	9.511E-02	0.058
		171.86		5.015E-02	4.614E-01	7.701E-01	7.701E-02	0.065
		218.09		1.902E-01	8.039E-01	1.324E+00	1.542E-01	0.144
	+	268.79		2.597E+00	1.469E+00	1.424E+00	1.936E-01	1.823
		319.02		-3.640E-02	2.345E-01	3.899E-01	4.941E-02	-0.093
		367.43		-1.900E-01	8.496E-01	1.391E+00	1.468E-01	-0.137
		413.65	*	-2.030E-01	1.737E-01	2.674E-01	2.529E-02	-0.759
		56.28		-2.871E-01	8.261E-01	1.362E+00	9.918E-02	-0.211
		57.53		-4.780E-01	4.444E-01	7.114E-01	5.113E-02	-0.672
		65.20		3.525E-01	9.345E-01	1.396E+00	1.041E-01	0.252
		133.02		-2.939E-02	6.302E-02	1.051E-01	8.963E-03	-0.280
		136.25		-3.222E-01	4.408E-01	7.272E-01	6.273E-02	-0.443
HF-181		345.85		-1.257E-01	2.629E-01	2.841E-01	3.286E-02	-0.442
		482.03	*	-4.752E-03	4.035E-02	6.472E-02	6.389E-03	-0.073
		56.28		-1.103E-01	3.161E-01	5.210E-01	3.795E-02	-0.212
W-181		57.53		-1.831E-01	1.702E-01	2.724E-01	1.958E-02	-0.672
		65.20	*	1.339E-01	3.551E-01	5.305E-01	3.955E-02	0.252
TA-182		67.75		-2.642E-02	1.033E-01	1.599E-01	1.220E-02	-0.165
		100.10		2.022E-01	1.728E-01	2.874E-01	2.490E-02	0.703
		152.43		-1.201E-01	3.161E-01	5.237E-01	4.831E-02	-0.229
		222.10		-1.715E-01	3.424E-01	5.472E-01	6.457E-02	-0.313
		1001.68		9.407E-01	1.973E+00	3.203E+00	3.301E-01	0.294
	+	1121.28		7.182E-01	2.645E-01	3.267E-01	2.885E-02	2.198
		1189.05		9.695E-02	2.920E-01	4.953E-01	4.028E-02	0.196
		1221.42	*	1.248E-01	1.820E-01	3.134E-01	2.606E-02	0.398
		1230.97		-6.832E-01	4.719E-01	7.170E-01	6.001E-02	-0.953
		57.98		-1.286E-01	1.712E-01	2.775E-01	1.986E-02	-0.463
RE-183		59.32		6.590E-02	1.019E-01	1.560E-01	1.104E-02	0.422
		67.20		1.312E-01	1.952E-01	2.942E-01	2.232E-02	0.446
		162.32	*	-7.555E-02	1.051E-01	1.711E-01	1.650E-02	-0.442
	+	208.81		2.363E+00	1.374E+00	1.837E+00	2.077E-01	1.286
		291.72		-5.413E-01	1.008E+00	1.435E+00	1.955E-01	-0.377
RE-184		57.98		-4.682E-01	6.230E-01	1.010E+00	7.229E-02	-0.463
		59.32		2.396E-01	3.706E-01	5.674E-01	4.013E-02	0.422
		67.20		4.774E-01	7.102E-01	1.070E+00	8.122E-02	0.446

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
OS-185		161.27		-2.610E-01	3.384E-01	5.499E-01	5.280E-02	-0.475
		216.55		-1.572E-01	2.527E-01	4.024E-01	4.665E-02	-0.391
		252.85	*	1.735E-01	2.308E-01	3.816E-01	4.952E-02	0.455
		318.01		1.456E-01	4.128E-01	7.000E-01	8.898E-02	0.208
		792.07		5.331E-01	1.014E+00	1.679E+00	1.849E-01	0.317
		903.28		4.816E-01	1.084E+00	1.592E+00	1.777E-01	0.303
		920.93		-1.824E-01	4.292E-01	6.239E-01	6.884E-02	-0.292
		59.72		2.032E-01	2.757E-01	4.232E-01	2.996E-02	0.480
		61.14		2.020E-02	1.531E-01	2.291E-01	1.645E-02	0.088
		69.30		-2.547E-01	2.919E-01	4.143E-01	3.205E-02	-0.615
		592.07		-1.895E+00	2.324E+00	3.673E+00	3.802E-01	-0.516
		646.12	*	9.765E-03	3.776E-02	6.303E-02	6.625E-03	0.155
		717.42		-1.055E-01	8.363E-01	1.321E+00	1.423E-01	-0.080
		874.81		-1.915E-01	5.314E-01	8.623E-01	9.637E-02	-0.222
RE-188		880.27		7.885E-01	7.397E-01	1.295E+00	1.448E-01	0.609
		155.03	*	1.250E-01	1.652E-01	2.826E-01	2.638E-02	0.442
		477.96		-1.537E+00	2.847E+00	4.456E+00	4.390E-01	-0.345
W-188	+	633.10		-2.527E-01	2.541E+00	4.165E+00	4.364E-01	-0.061
		63.58		7.220E+01	6.741E+01	8.372E+01	6.152E+00	0.862
IR-192		227.08		-1.095E+01	1.299E+01	2.040E+01	2.446E+00	-0.537
	*	290.67		-3.399E+00	7.892E+00	1.131E+01	1.545E+00	-0.301
	+	295.96		1.280E+00	2.515E-01	2.601E-01	3.519E-02	4.922
		308.46		6.540E-03	8.849E-02	1.452E-01	1.900E-02	0.045
	*	316.51		3.722E-02	3.243E-02	5.618E-02	7.180E-03	0.663
AU-195		468.07		-3.073E-02	7.133E-02	9.501E-02	9.828E-03	-0.323
		604.41		3.930E-02	4.988E-01	7.141E-01	1.018E-01	0.055
		612.46		5.585E+00	1.128E+00	1.725E+00	1.984E-01	3.237
		65.12		-2.934E-03	1.666E-01	2.452E-01	1.827E-02	-0.012
		66.83		1.528E-02	9.223E-02	1.365E-01	1.032E-02	0.112
	+	75.70		1.372E+00	2.749E-01	4.168E-01	3.434E-02	3.291
	*	98.88		2.117E-01	2.324E-01	3.670E-01	3.201E-02	0.577
TL-200		129.76		3.857E+00	2.760E+00	4.830E+00	4.070E-01	0.799
	*	367.94		-4.775E-04	2.760E+00	Half-Life	too short	
		579.30		1.631E-02	2.760E+00	Half-Life	too short	
		828.27		1.935E-03	2.760E+00	Half-Life	too short	
TL-201		1205.75		2.303E-03	2.760E+00	Half-Life	too short	
		68.90		-9.387E+00	7.678E+00	1.072E+01	8.263E-01	-0.875
		70.82		2.258E-01	4.151E+00	6.123E+00	4.804E-01	0.037
		80.30		1.089E+00	7.667E+00	1.124E+01	9.739E-01	0.097
		135.34		-2.020E+01	3.799E+01	6.316E+01	5.429E+00	-0.320
TL-202	*	167.43		1.295E+00	1.081E+01	1.809E+01	1.783E+00	0.072
		68.90		-5.862E-01	4.795E-01	6.696E-01	5.160E-02	-0.875
		70.82		1.406E-02	2.585E-01	3.813E-01	2.992E-02	0.037
		80.30		6.786E-02	4.776E-01	7.004E-01	6.068E-02	0.097
HG-203	*	439.56		6.610E-03	6.935E-02	1.135E-01	1.092E-02	0.058
		70.83		5.709E-02	1.025E+00	1.512E+00	1.985E-01	0.038
		72.87		1.833E+00	6.096E-01	1.004E+00	1.286E-01	1.826
		82.60		-1.324E-01	1.141E+00	1.641E+00	2.283E-01	-0.081
	*	279.20		2.702E-02	4.120E-02	6.740E-02	9.540E-03	0.401

---- 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		4.702E-01	1.630E-01	2.813E-01	2.250E-02	1.672
	+	74.97		7.548E-01	1.513E-01	2.079E-01	1.700E-02	3.631
		84.90		3.239E-01	1.919E-01	2.915E-01	2.664E-02	1.111
		569.67		9.507E-03	2.764E-02	4.609E-02	4.734E-03	0.206
		1063.62	*	1.629E-03	4.981E-02	8.135E-02	7.810E-03	0.020
		1770.23		6.607E-01	4.904E-01	8.262E-01	6.868E-02	0.800
TL-207		81.07		-1.424E-01	2.093E-01	2.958E-01	2.585E-02	-0.481
		83.78		1.404E-01	1.268E-01	1.900E-01	1.714E-02	0.739
		94.90		4.626E-01	2.409E-01	3.689E-01	3.298E-02	1.254
		122.32		-5.475E-01	1.785E+00	2.798E+00	2.490E-01	-0.196
		144.24		-2.342E-01	6.865E-01	1.109E+00	1.098E-01	-0.211
		154.21		7.506E-02	3.719E-01	6.271E-01	6.335E-02	0.120
	+	269.46		6.024E-01	3.409E-01	3.455E-01	4.745E-02	1.744
		323.87	*	6.071E-01	6.591E-01	9.950E-01	1.978E-01	0.610
	+	338.28		8.834E+00	2.151E+00	2.311E+00	3.418E-01	3.823
		445.03		4.448E-01	1.931E+00	3.178E+00	4.084E-01	0.140
PO-209		260.50		-7.206E+00	9.497E+00	1.473E+01	1.954E+00	-0.489
		262.80		-2.411E+00	2.630E+01	4.063E+01	5.428E+00	-0.059
		896.60	*	2.744E-01	6.929E+00	1.151E+01	1.289E+00	0.024
BI-210		46.50	*	1.964E+00	2.957E+00	4.974E+00	4.621E-01	0.395
PB-210		46.50	*	1.964E+00	2.957E+00	4.974E+00	4.621E-01	0.395
PO-210		46.50	*	1.964E+00	2.956E+00	4.974E+00	4.182E-01	0.395
PB-211		404.84	*	-8.130E-01	1.026E+00	1.400E+00	8.787E-01	-0.581
		427.08		5.730E-01	1.860E+00	3.026E+00	1.885E+00	0.189
		831.96		-6.120E-02	1.110E+00	1.847E+00	1.165E+00	-0.033
BI-212	+	727.18	*	1.561E+00	5.321E-01	6.068E-01	7.248E-02	2.572
		785.46		2.172E+00	1.709E+00	2.929E+00	3.219E-01	0.741
		1620.62		6.012E-01	1.085E+00	1.901E+00	1.658E-01	0.316
PO-215		81.07		-1.424E-01	2.093E-01	2.958E-01	2.585E-02	-0.481
		83.78		1.404E-01	1.268E-01	1.900E-01	1.714E-02	0.739
		94.90		4.626E-01	2.409E-01	3.689E-01	3.298E-02	1.254
		122.32		-5.475E-01	1.785E+00	2.798E+00	2.490E-01	-0.196
		144.24		-2.342E-01	6.865E-01	1.109E+00	1.098E-01	-0.211
		154.21		7.506E-02	3.719E-01	6.271E-01	6.335E-02	0.120
	+	269.46		6.024E-01	3.409E-01	3.455E-01	4.745E-02	1.744
		323.87	*	6.071E-01	6.591E-01	9.950E-01	1.978E-01	0.610
	+	338.28		8.834E+00	2.151E+00	2.311E+00	3.418E-01	3.823
		445.03		4.448E-01	1.931E+00	3.178E+00	4.084E-01	0.140
RN-219	+	271.23		7.728E-01	4.393E-01	4.450E-01	6.592E-02	1.737
		401.81	*	1.417E-01	3.790E-01	6.316E-01	9.772E-02	0.224
RN-220		549.76	*	1.168E+01	2.267E+01	3.881E+01	3.956E+00	0.301
RA-223		81.07		-1.424E-01	2.093E-01	2.958E-01	2.585E-02	-0.481
		83.78		1.404E-01	1.268E-01	1.900E-01	1.714E-02	0.739
		94.90		4.626E-01	2.409E-01	3.689E-01	3.298E-02	1.254
		122.32		-5.475E-01	1.785E+00	2.798E+00	2.490E-01	-0.196
		144.24		-2.342E-01	6.865E-01	1.109E+00	1.098E-01	-0.211
		154.21		7.506E-02	3.719E-01	6.271E-01	6.335E-02	0.120
	+	269.46		6.024E-01	3.409E-01	3.455E-01	4.745E-02	1.744
		323.87	*	6.071E-01	6.591E-01	9.950E-01	1.978E-01	0.610

----- 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		8.834E+00	2.151E+00	2.311E+00	3.418E-01	3.823
		445.03		4.448E-01	1.931E+00	3.178E+00	4.084E-01	0.140
		79.80		4.577E-01	1.519E+00	2.240E+00	4.815E-01	0.204
		236.00		1.004E+00	3.265E-01	4.671E-01	7.046E-02	2.149
		256.20	*	2.332E-02	3.880E-01	6.267E-01	1.144E-01	0.037
TH-227		286.10		1.051E-01	1.471E+00	2.356E+00	4.016E-01	0.045
	+	299.80		5.775E+00	2.197E+00	2.427E+00	4.914E-01	2.380
		304.40		1.449E-01	1.819E+00	2.673E+00	5.607E-01	0.054
		334.20		-2.101E-01	2.994E+00	3.395E+00	7.185E-01	-0.062
		79.80		4.577E-01	1.519E+00	2.240E+00	4.877E-01	0.204
TH-229	+	94.00		1.178E+01	3.755E+00	3.655E+00	8.016E-01	3.222
		236.00		1.004E+00	3.223E-01	4.671E-01	6.611E-02	2.149
		256.20	*	2.332E-02	3.880E-01	6.267E-01	1.290E-01	0.037
		286.10		1.051E-01	1.475E+00	2.356E+00	2.379E+00	0.045
	+	299.80		5.775E+00	2.197E+00	2.427E+00	4.914E-01	2.380
PA-231		304.40		1.449E-01	1.819E+00	2.673E+00	5.607E-01	0.054
		334.20		-2.101E-01	2.994E+00	3.395E+00	7.185E-01	-0.062
	+	85.43		4.629E-01	2.224E-01	3.042E-01	2.798E-02	1.522
	+	88.47		2.198E-01	7.043E-02	1.939E-01	1.832E-02	1.133
		100.00		1.299E-01	1.796E-01	2.952E-01	2.560E-02	0.440
TH-231		193.63	*	3.227E-02	5.036E-01	8.319E-01	8.945E-02	0.039
		210.97		1.808E+00	8.872E-01	1.351E+00	1.539E-01	1.338
		283.67	*	-1.319E+00	1.517E+00	2.298E+00	4.292E-01	-0.574
	+	301.29		2.310E+00	8.300E-01	9.738E-01	1.548E-01	2.372
		81.07		-1.424E-01	2.093E-01	2.958E-01	2.585E-02	-0.481
U-231		83.78		1.404E-01	1.268E-01	1.900E-01	1.714E-02	0.739
		94.90		4.626E-01	2.409E-01	3.689E-01	3.298E-02	1.254
		122.32		-5.475E-01	1.785E+00	2.798E+00	2.490E-01	-0.196
		144.24		-2.342E-01	6.865E-01	1.109E+00	1.098E-01	-0.211
		154.21		7.506E-02	3.719E-01	6.271E-01	6.335E-02	0.120
PA-233	+	269.46		6.024E-01	3.409E-01	3.455E-01	4.745E-02	1.744
		323.87	*	6.071E-01	6.591E-01	9.950E-01	1.978E-01	0.610
	+	338.28		8.834E+00	2.151E+00	2.311E+00	3.418E-01	3.823
		445.03		4.448E-01	1.931E+00	3.178E+00	4.084E-01	0.140
		84.21		8.380E+00	7.770E+00	1.163E+01	1.054E+00	0.721
PA-234	+	92.29		1.654E+01	4.106E+00	5.681E+00	5.181E-01	2.911
		95.87	*	-1.308E+00	1.613E+00	2.228E+00	1.978E-01	-0.587
		108.00		-1.412E-01	2.968E+00	4.740E+00	3.984E-01	-0.030
	+	75.28		2.202E+01	5.225E+00	6.288E+00	9.505E-01	3.503
	+	86.59		4.041E+00	2.196E+00	2.782E+00	7.528E-01	1.452
PA-234	+	300.12		1.610E+00	5.943E-01	6.820E-01	1.230E-01	2.361
		311.98	*	-2.204E-02	5.818E-02	9.593E-02	1.257E-02	-0.230
		340.50		3.848E+00	1.187E+00	1.252E+00	3.150E-01	3.073
		398.62		-7.856E-02	1.932E+00	3.167E+00	8.511E-01	-0.025
		415.76		5.290E-01	1.545E+00	2.561E+00	5.611E-01	0.207
PA-234	+	63.00		2.050E+00	1.932E+00	2.429E+00	3.597E-01	0.844
		94.67		4.832E-01	1.839E-01	2.773E-01	3.504E-02	1.742
		98.44		5.805E-02	1.042E-01	1.458E-01	8.136E-02	0.398
		99.86		3.801E-01	4.565E-01	7.527E-01	6.530E-02	0.505

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		111.00		2.168E-02	1.835E-01	2.940E-01	3.497E-02	0.074
		131.20		-6.542E-02	1.005E-01	1.669E-01	1.413E-02	-0.392
		152.70		-7.279E-02	3.014E-01	5.013E-01	8.706E-02	-0.145
	+	186.00		5.588E+00	2.497E+00	2.433E+00	7.733E-01	2.296
		226.40		-1.583E-01	4.009E-01	6.422E-01	1.001E-01	-0.246
		227.20		-2.925E-01	4.271E-01	6.755E-01	8.102E-02	-0.433
		248.90		-3.864E-01	7.913E-01	1.244E+00	3.028E-01	-0.311
	+	293.70		7.900E+00	1.951E+00	1.588E+00	3.210E-01	4.976
		369.80		-3.033E-01	7.801E-01	1.262E+00	2.846E-01	-0.240
		568.70		-6.841E-02	9.141E-01	1.494E+00	1.534E-01	-0.046
		569.50		7.781E-02	2.448E-01	4.078E-01	4.188E-02	0.191
		574.00		-4.833E-01	1.344E+00	2.143E+00	2.205E-01	-0.226
		699.00		4.628E-01	6.692E-01	1.122E+00	2.257E-01	0.412
		706.10		1.780E-01	9.597E-01	1.577E+00	7.102E-01	0.113
		733.00		1.247E-01	3.726E-01	5.328E-01	1.233E-01	0.234
		742.81		7.868E-01	1.347E+00	2.086E+00	1.409E+00	0.377
		796.30		1.724E+00	9.786E-01	1.530E+00	4.269E-01	1.127
		805.60		-1.922E-01	9.367E-01	1.450E+00	4.556E-01	-0.133
		819.60		-3.698E-01	1.095E+00	1.777E+00	6.871E-01	-0.208
		826.30		7.599E-02	7.422E-01	1.246E+00	5.640E-01	0.061
		831.60		-9.057E-02	5.735E-01	9.477E-01	2.905E-01	-0.096
		876.40		-1.875E-01	7.874E-01	1.249E+00	1.287E+00	-0.150
		880.51		2.993E-01	2.619E-01	4.599E-01	5.144E-02	0.651
		883.24		5.357E-02	2.737E-01	4.555E-01	3.079E-01	0.118
		899.00		-9.573E-02	7.903E-01	1.298E+00	5.751E-01	-0.074
		925.00		-1.499E-02	1.009E+00	1.666E+00	1.832E-01	-0.009
		926.50		-9.051E-03	1.575E-01	2.593E-01	6.789E-02	-0.035
		946.00	*	-1.566E-01	2.773E-01	4.380E-01	8.705E-02	-0.358
		949.00		2.856E-01	4.037E-01	6.927E-01	7.484E-02	0.412
		980.50		5.232E-01	6.497E-01	1.120E+00	1.178E-01	0.467
		1394.10		-7.173E-01	1.390E+00	1.690E+00	1.101E+00	-0.425
PA-234M	+	766.42		2.467E+01	1.896E+01	1.976E+01	1.011E+01	1.249
		1001.03	*	3.372E+00	4.394E+00	7.242E+00	8.299E-01	0.466
U-235	+	89.95		2.206E+00	9.628E-01	1.748E+00	5.428E-01	1.262
	+	93.35		3.664E+00	1.335E+00	1.244E+00	3.504E-01	2.944
		105.00		8.678E-01	1.089E+00	1.741E+00	5.190E-01	0.498
		143.76	*	-4.904E-02	2.124E-01	3.446E-01	6.078E-02	-0.142
		163.35		-3.087E-01	4.510E-01	7.297E-01	1.429E-01	-0.423
	+	185.71		2.069E-01	6.852E-02	9.030E-02	9.456E-03	2.292
		205.31		1.749E-01	5.702E-01	8.305E-01	1.691E-01	0.211
NP-236		94.67		3.693E-01	1.357E-01	2.106E-01	1.886E-02	1.754
		98.44		4.384E-02	7.499E-02	1.102E-01	9.635E-03	0.398
		111.00		1.640E-02	1.388E-01	2.224E-01	1.856E-02	0.074
		160.31	*	-2.429E-02	7.523E-02	1.244E-01	1.189E-02	-0.195
NP-239		99.55		1.208E-01	1.537E-01	2.531E-01	2.200E-02	0.477
		117.00	*	-8.726E-03	1.890E-01	3.001E-01	2.481E-02	-0.029
	+	209.75		1.825E+00	1.061E+00	1.412E+00	1.601E-01	1.293
		228.18		-2.098E-01	2.272E-01	3.551E-01	4.271E-02	-0.591
		277.60		1.822E-01	1.847E-01	2.948E-01	4.109E-02	0.618

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		334.30		-8.210E-01	1.582E+00	1.922E+00	2.318E-01	-0.427
AM-241		59.54	*	1.101E-01	1.415E-01	2.176E-01	1.701E-02	0.506
CM-243		99.55		1.244E-01	1.582E-01	2.605E-01	2.264E-02	0.477
		103.76	*	-1.182E-02	9.507E-02	1.519E-01	1.295E-02	-0.078
		117.00		-8.978E-03	1.945E-01	3.088E-01	2.552E-02	-0.029
	+	209.75		1.800E+00	1.046E+00	1.392E+00	1.579E-01	1.293
		228.18		-2.120E-01	2.296E-01	3.588E-01	4.317E-02	-0.591
		277.60		1.837E-01	1.862E-01	2.973E-01	4.144E-02	0.618
AM-246		798.80		-2.177E-01	1.369E-01	1.955E-01	2.156E-02	-1.113
		1036.00		-1.952E-02	2.795E-01	4.547E-01	4.515E-02	-0.043
		1062.04		-7.065E-02	2.190E-01	3.494E-01	3.362E-02	-0.202
		1078.86	*	-4.210E-02	1.367E-01	2.180E-01	2.051E-02	-0.193
CM-247		278.00		5.411E-01	7.653E-01	1.212E+00	1.692E-01	0.446
		287.40		1.026E+00	1.287E+00	1.963E+00	2.701E-01	0.523
		402.60	*	-1.257E-02	3.417E-02	5.508E-02	5.167E-03	-0.228
CF-249		252.85		6.455E-01	8.584E-01	1.420E+00	1.842E-01	0.455
		333.44		1.256E-02	2.620E-01	2.561E-01	3.098E-02	0.049
		387.95	*	2.574E-02	3.596E-02	6.100E-02	5.798E-03	0.422
CF-251		176.60	*	2.924E-02	1.203E-01	2.012E-01	2.044E-02	0.145
		227.00		-3.270E-01	3.816E-01	5.986E-01	7.175E-02	-0.546
		285.00		-1.838E+00	1.754E+00	2.642E+00	3.655E-01	-0.696

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]G246440005      *
* Acquisition date   : 19-FEB-2010 17:59:07 Detector SN#      :              *
* Detector ID        : GAM22                      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 02:00:02.42           Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID            *
* Sample ID          : G246440005           Analyst initials: MXR1            *
* Batch Number       : 950788              Sample Quantity : 1.3262E+02 GRAM    *
* Recovery           : 1.00000             Carrier Weight  : 0.00000          *
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                                    *
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	3.892E+01	3.835E+00	4.778E-01	0.000E+00
CD-109	2.107E+00	9.919E-01	1.246E+00	0.000E+00
SN-126	2.064E-01	9.718E-02	1.376E-01	0.000E+00
TL-208	5.556E-01	8.962E-02	5.289E-02	0.000E+00
BI-211	4.180E+00	6.441E-01	3.087E-01	0.000E+00
PB-212	1.793E+00	2.537E-01	8.975E-02	0.000E+00
PO-212	1.793E+00	2.537E-01	8.975E-02	0.000E+00
BI-214	1.192E+00	1.864E-01	1.161E-01	0.000E+00
PB-214	1.454E+00	2.361E-01	1.076E-01	0.000E+00
PO-214	1.454E+00	2.361E-01	1.076E-01	0.000E+00
PO-216	1.793E+00	2.537E-01	8.975E-02	0.000E+00
PO-218	1.454E+00	2.361E-01	1.076E-01	0.000E+00
RA-224	4.722E+00	1.341E+00	1.020E+00	0.000E+00
RA-226	1.192E+00	1.864E-01	1.161E-01	0.000E+00
AC-228	1.684E+00	3.622E-01	1.944E-01	0.000E+00
RA-228	1.684E+00	3.622E-01	1.944E-01	0.000E+00
TH-228	1.824E+00	2.581E-01	9.131E-02	0.000E+00
TH-230	1.192E+00	1.864E-01	1.161E-01	0.000E+00
TH-232	1.684E+00	3.622E-01	1.944E-01	0.000E+00
TH-234	1.759E+00	1.632E+00	1.941E+00	0.000E+00
U-234	1.192E+00	1.864E-01	1.161E-01	0.000E+00
NP-237	6.061E-01	3.106E-01	3.914E-01	0.000E+00
U-238	1.759E+00	1.632E+00	1.941E+00	0.000E+00
AM-243	4.204E-01	8.258E-02	7.952E-02	0.000E+00
ANH-511	1.486E-01	5.810E-02	4.414E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.175E-01	2.950E-01	4.858E-01	0.000E+00 NOT IDENT.
NA-22	9.332E-03	4.151E-02	7.133E-02	0.000E+00 NOT IDENT.

NA-24	0.000E+00	8.582E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.173E-02	2.290E-02	4.097E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.397E-02	7.150E-02	0.000E+00	FAIL ABUN
SC-46	-1.698E-02	3.526E-02	5.843E-02	0.000E+00	FAIL ABUN
V-48	2.936E-02	6.667E-02	1.158E-01	0.000E+00	NOT IDENT.
CR-51	-3.849E-01	3.584E-01	5.780E-01	0.000E+00	NOT IDENT.
MN-52	6.427E-03	2.391E-01	4.008E-01	0.000E+00	NOT IDENT.
MN-54	6.174E-03	3.367E-02	5.854E-02	0.000E+00	NOT IDENT.
CO-56	-1.864E-02	3.583E-02	5.968E-02	0.000E+00	NOT IDENT.
CO-57	-9.418E-03	2.540E-02	4.235E-02	0.000E+00	NOT IDENT.
CO-58	-2.226E-02	3.436E-02	5.697E-02	0.000E+00	NOT IDENT.
FE-59	-9.165E-02	8.607E-02	1.326E-01	0.000E+00	NOT IDENT.
CO-60	-1.814E-02	3.492E-02	5.646E-02	0.000E+00	NOT IDENT.
ZN-65	6.935E-02	9.909E-02	1.485E-01	0.000E+00	NOT IDENT.
GE-68	6.089E-01	1.167E+00	2.014E+00	0.000E+00	NOT IDENT.
AS-73	2.219E-01	7.036E-01	1.285E+00	0.000E+00	NOT IDENT.
AS-74	-1.219E-02	8.841E-02	1.511E-01	0.000E+00	NOT IDENT.
SE-75	1.877E-02	4.622E-02	6.979E-02	0.000E+00	NOT IDENT.
BR-77	7.163E-01	1.631E+01	2.794E+01	0.000E+00	FAIL ABUN
SR-82	-3.948E-01	3.928E-01	5.774E-01	0.000E+00	NOT IDENT.
RB-83	9.911E-04	5.879E-02	1.006E-01	0.000E+00	NOT IDENT.
RB-84	4.668E-02	6.631E-02	1.178E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.072E+00	1.349E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.233E-02	7.073E-02	0.000E+00	NOT IDENT.
RB-86	4.844E-01	8.079E-01	1.399E+00	0.000E+00	NOT IDENT.
Y-88	-7.528E-04	2.714E-02	4.519E-02	0.000E+00	NOT IDENT.
ZR-88	-2.931E-02	2.792E-02	4.543E-02	0.000E+00	NOT IDENT.
Y-91	-1.293E+00	1.850E+01	3.147E+01	0.000E+00	NOT IDENT.
NB-94	-4.267E-03	3.120E-02	5.235E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.791E-02	7.667E-02	0.000E+00	NOT IDENT.
NB-95M	1.265E-01	1.451E-01	2.242E-01	0.000E+00	NOT IDENT.
ZR-95	5.344E-02	6.854E-02	1.194E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.403E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.660E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.787E-01	1.763E+01	2.959E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.307E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.617E-02	3.330E-02	5.585E-02	0.000E+00	NOT IDENT.
RH-102	1.178E-02	2.603E-02	4.485E-02	0.000E+00	FAIL ABUN
RU-103	2.306E-02	3.973E-02	6.834E-02	0.000E+00	FAIL ABUN
RH-106	-1.015E-01	2.890E-01	4.854E-01	0.000E+00	FAIL ABUN
RU-106	-1.015E-01	2.888E-01	4.854E-01	0.000E+00	FAIL ABUN
AG-108M	2.833E-02	2.952E-02	5.234E-02	0.000E+00	NOT IDENT.
AG-110M	-2.050E-02	3.271E-02	5.375E-02	0.000E+00	NOT IDENT.
IN-111	7.765E-02	1.829E+00	2.731E+00	0.000E+00	NOT IDENT.
IN-113M	-4.751E-02	3.960E-02	6.378E-02	0.000E+00	NOT IDENT.
SN-113	-4.751E-02	3.960E-02	6.378E-02	0.000E+00	NOT IDENT.
IN-114M	2.618E-02	1.973E-01	3.044E-01	0.000E+00	NOT IDENT.
CD-115	-2.553E+01	1.797E+01	2.869E+01	0.000E+00	NOT IDENT.
SN-117M	3.755E-02	5.755E-02	1.041E-01	0.000E+00	NOT IDENT.
SB-122	-2.004E-01	3.054E+00	5.270E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.950E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.093E-02	2.667E-02	4.838E-02	0.000E+00	NOT IDENT.
I-124	5.011E-01	9.913E-01	1.515E+00	0.000E+00	NOT IDENT.
SB-124	-3.784E-02	6.198E-02	9.639E-02	0.000E+00	FAIL ABUN
SB-125	-3.730E-02	8.046E-02	1.338E-01	0.000E+00	FAIL ABUN
TE-125M	2.026E+00	9.369E+00	1.611E+01	0.000E+00	NOT IDENT.
I-126	-1.438E-01	1.853E-01	3.010E-01	0.000E+00	NOT IDENT.
SB-126	-2.289E-02	1.670E-01	2.381E-01	0.000E+00	FAIL ABUN
SB-127	-3.907E-01	1.752E+00	2.929E+00	0.000E+00	NOT IDENT.
XE-127	-3.930E-02	4.725E-02	7.949E-02	0.000E+00	NOT IDENT.
I-131	5.813E-02	1.271E-01	2.243E-01	0.000E+00	NOT IDENT.
TE-132	-1.015E+00	1.080E+00	1.767E+00	0.000E+00	NOT IDENT.
BA-133	3.595E-03	4.536E-02	6.871E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.750E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.454E-02	8.011E-02	0.000E+00	NOT IDENT.
CS-135	0.000E+00	1.740E-01	2.716E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.136E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.995E-02	1.175E-01	1.993E-01	0.000E+00	FAIL ABUN
BA-137M	1.943E-02	3.318E-02	5.801E-02	0.000E+00	NOT IDENT.
CS-137	2.053E-02	3.507E-02	6.132E-02	0.000E+00	NOT IDENT.
CE-139	2.720E-02	2.840E-02	5.150E-02	0.000E+00	NOT IDENT.
BA-140	3.900E-02	2.516E-01	4.406E-01	0.000E+00	NOT IDENT.
LA-140	6.628E-02	9.760E-02	1.534E-01	0.000E+00	FAIL ABUN
CE-141	8.543E-03	6.222E-02	1.118E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.499E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-8.013E-02	1.863E-01	3.309E-01	0.000E+00	NOT IDENT.
PM-144	2.790E-03	3.112E-02	5.289E-02	0.000E+00	NOT IDENT.
PR-144	1.893E-01	2.111E+00	3.588E+00	0.000E+00	NOT IDENT.

PM-146	3.594E-02	4.162E-02	6.937E-02	0.000E+00	NOT IDENT.
ND-147	3.532E-01	5.470E-01	9.786E-01	0.000E+00	FAIL ABUN
PM-149	-8.567E+01	1.726E+02	2.822E+02	0.000E+00	NOT IDENT.
EU-152	-7.392E-02	1.117E-01	1.394E-01	0.000E+00	FAIL ABUN
GD-153	-7.385E-02	8.690E-02	1.283E-01	0.000E+00	NOT IDENT.
EU-154	2.125E-02	1.155E-01	1.980E-01	0.000E+00	NOT IDENT.
EU-155	9.196E-02	1.073E-01	1.884E-01	0.000E+00	FAIL ABUN
TB-160	1.296E-01	1.311E-01	2.356E-01	0.000E+00	FAIL ABUN
HO-166M	3.579E-03	5.590E-02	9.197E-02	0.000E+00	NOT IDENT.
TM-171	4.274E+00	2.717E+01	4.330E+01	0.000E+00	NOT IDENT.
LU-176	7.768E-03	2.453E-02	3.831E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	1.827E+00	2.585E+00	0.000E+00	FAIL ABUN
LU-177M	-2.030E-01	1.702E-01	2.737E-01	0.000E+00	FAIL ABUN
HF-181	-4.752E-03	3.954E-02	6.609E-02	0.000E+00	NOT IDENT.
W-181	1.339E-01	3.480E-01	5.602E-01	0.000E+00	NOT IDENT.
TA-182	1.248E-01	1.784E-01	3.149E-01	0.000E+00	FAIL ABUN
RE-183	-7.555E-02	1.030E-01	1.779E-01	0.000E+00	FAIL ABUN
RE-184	1.735E-01	2.261E-01	3.940E-01	0.000E+00	NOT IDENT.
OS-185	9.765E-03	3.700E-02	6.404E-02	0.000E+00	NOT IDENT.
RE-188	1.250E-01	1.619E-01	2.942E-01	0.000E+00	NOT IDENT.
W-188	-3.399E+00	7.734E+00	1.165E+01	0.000E+00	FAIL ABUN
IR-192	3.722E-02	3.178E-02	5.779E-02	0.000E+00	FAIL ABUN
AU-195	2.117E-01	2.277E-01	3.849E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.617E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.295E+00	1.060E+01	1.881E+01	0.000E+00	NOT IDENT.
TL-202	6.610E-03	6.796E-02	1.161E-01	0.000E+00	NOT IDENT.
HG-203	2.702E-02	4.037E-02	6.948E-02	0.000E+00	NOT IDENT.
BI-207	1.629E-03	4.881E-02	8.193E-02	0.000E+00	FAIL ABUN
TL-207	6.071E-01	6.459E-01	1.023E+00	0.000E+00	FAIL ABUN
PO-209	2.744E-01	6.790E+00	1.163E+01	0.000E+00	NOT IDENT.
BI-210	1.964E+00	2.898E+00	5.280E+00	0.000E+00	NOT IDENT.
PB-210	1.964E+00	2.898E+00	5.280E+00	0.000E+00	NOT IDENT.
PO-210	1.964E+00	2.897E+00	5.280E+00	0.000E+00	NOT IDENT.
PB-211	-8.130E-01	1.006E+00	1.434E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.215E-01	6.152E-01	0.000E+00	FAIL ABUN
PO-215	6.071E-01	6.459E-01	1.023E+00	0.000E+00	FAIL ABUN
RN-219	1.417E-01	3.714E-01	6.471E-01	0.000E+00	FAIL ABUN
RN-220	1.168E+01	2.222E+01	3.955E+01	0.000E+00	NOT IDENT.
RA-223	6.071E-01	6.459E-01	1.023E+00	0.000E+00	FAIL ABUN
AC-227	2.332E-02	3.802E-01	6.469E-01	0.000E+00	FAIL ABUN
TH-227	2.332E-02	3.802E-01	6.469E-01	0.000E+00	FAIL ABUN
TH-229	3.227E-02	4.936E-01	8.628E-01	0.000E+00	FAIL ABUN
PA-231	-1.319E+00	1.487E+00	2.369E+00	0.000E+00	FAIL ABUN
TH-231	6.071E-01	6.459E-01	1.023E+00	0.000E+00	FAIL ABUN
U-231	-1.308E+00	1.580E+00	2.338E+00	0.000E+00	FAIL ABUN
PA-233	-2.204E-02	5.702E-02	9.869E-02	0.000E+00	FAIL ABUN
PA-234	-1.566E-01	2.718E-01	4.420E-01	0.000E+00	FAIL ABUN
PA-234M	3.372E+00	4.307E+00	7.301E+00	0.000E+00	FAIL ABUN
U-235	-4.904E-02	2.082E-01	3.591E-01	0.000E+00	FAIL ABUN
NP-236	-2.429E-02	7.372E-02	1.294E-01	0.000E+00	NOT IDENT.
NP-239	-8.726E-03	1.852E-01	3.139E-01	0.000E+00	FAIL ABUN
AM-241	1.101E-01	1.387E-01	2.301E-01	0.000E+00	NOT IDENT.
CM-243	-1.182E-02	9.317E-02	1.591E-01	0.000E+00	FAIL ABUN
AM-246	-4.210E-02	1.340E-01	2.195E-01	0.000E+00	NOT IDENT.
CM-247	-1.257E-02	3.349E-02	5.642E-02	0.000E+00	NOT IDENT.
CF-249	2.574E-02	3.524E-02	6.253E-02	0.000E+00	NOT IDENT.
CF-251	2.924E-02	1.179E-01	2.090E-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]G246440005.CNF;1
Sample date       : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:59:07
Sample ID        : G246440005           Sample quantity  : 1.32620E+02 GRAM
Detector name    : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:02.42  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : MXR1
Abundance limit  : 75.00000             Sensitivity       : 5.00000
Batch ID        : 950788                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	2801	10.67*	1.909E+00	3.892E+01	3.892E+01	10.05
CD-109	88.03	201	3.72*	7.445E+00	2.053E+00	2.107E+00	48.04
SN-126	64.28	102	9.60	4.335E+00	6.961E-01	6.961E-01	94.20
	86.94	201	8.90	7.445E+00	8.581E-01	8.581E-01	62.80
	87.57	201	37.00*	7.445E+00	2.064E-01	2.064E-01	48.04
TL-208	277.35	-----	6.80	6.182E+00	-----	Line Not Found	-----
	510.84	226	21.60	4.298E+00	6.878E-01	6.878E-01	40.76
	583.14	650	84.20*	3.930E+00	5.556E-01	5.556E-01	16.46
	860.37	113	12.46	2.923E+00	8.793E-01	8.793E-01	47.93
BI-211	72.87	-----	1.27	5.897E+00	-----	Line Not Found	-----
	351.07	1032	12.94*	5.402E+00	4.180E+00	4.180E+00	15.73
PB-212	74.81	604	10.70	6.159E+00	2.593E+00	2.593E+00	22.11
	77.11	872	18.00	6.458E+00	2.123E+00	2.123E+00	14.05
	87.30	201	8.00	7.445E+00	9.546E-01	9.546E-01	49.07
	238.63	1896	44.60*	6.709E+00	1.793E+00	1.793E+00	14.44
	300.09	222	3.41	5.913E+00	3.116E+00	3.116E+00	35.35
PO-212	74.81	604	10.70	6.159E+00	2.593E+00	2.593E+00	22.11
	77.11	872	18.00	6.458E+00	2.123E+00	2.123E+00	14.05
	87.30	201	8.00	7.445E+00	9.546E-01	9.546E-01	49.07
	115.19	-----	0.60	8.535E+00	-----	Line Not Found	-----
	238.63	1896	44.60*	6.709E+00	1.793E+00	1.793E+00	14.44
	300.09	222	3.41	5.913E+00	3.116E+00	3.116E+00	35.35
BI-214	609.31	743	46.30*	3.811E+00	1.192E+00	1.192E+00	15.96
	1120.29	188	15.10	2.345E+00	1.499E+00	1.500E+00	37.42
	1764.49	150	15.80	1.716E+00	1.569E+00	1.569E+00	25.02
PB-214	74.81	604	6.21	6.159E+00	4.468E+00	4.469E+00	21.37
	77.11	872	10.50	6.458E+00	3.639E+00	3.639E+00	15.99
	87.30	201	4.67	7.445E+00	1.635E+00	1.635E+00	48.66
	241.98	439	7.49	6.665E+00	2.490E+00	2.490E+00	29.51
	295.21	667	19.20	5.972E+00	1.646E+00	1.646E+00	20.59
	351.92	1032	37.20*	5.402E+00	1.454E+00	1.454E+00	16.57
PO-214	74.81	604	6.21	6.159E+00	4.468E+00	4.469E+00	21.37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	872	10.50	6.458E+00	3.639E+00	3.639E+00	15.99
	87.30	201	4.67	7.445E+00	1.635E+00	1.635E+00	48.66
	241.98	439	7.49	6.665E+00	2.490E+00	2.490E+00	29.51
	295.21	667	19.20	5.972E+00	1.646E+00	1.646E+00	20.59
	351.92	1032	37.20*	5.402E+00	1.454E+00	1.454E+00	16.57
PO-216	74.81	604	10.70	6.159E+00	2.593E+00	2.593E+00	22.11
	77.11	872	18.00	6.458E+00	2.123E+00	2.123E+00	14.05
	87.30	201	8.00	7.445E+00	9.546E-01	9.546E-01	49.07
	238.63	1896	44.60*	6.709E+00	1.793E+00	1.793E+00	14.44
	300.09	222	3.41	5.913E+00	3.116E+00	3.116E+00	35.35
PO-218	74.81	604	6.21	6.159E+00	4.468E+00	4.469E+00	21.37
	77.11	872	10.50	6.458E+00	3.639E+00	3.639E+00	15.99
	87.30	201	4.67	7.445E+00	1.635E+00	1.635E+00	48.66
	241.98	439	7.49	6.665E+00	2.490E+00	2.490E+00	29.51
	295.21	667	19.20	5.972E+00	1.646E+00	1.646E+00	20.59
	351.92	1032	37.20*	5.402E+00	1.454E+00	1.454E+00	16.57
RA-224	240.98	439	3.95*	6.665E+00	4.722E+00	4.722E+00	28.97
RA-226	609.31	743	46.30*	3.811E+00	1.192E+00	1.192E+00	15.96
	1120.29	188	15.10	2.345E+00	1.499E+00	1.500E+00	37.42
	1764.49	150	15.80	1.716E+00	1.569E+00	1.569E+00	25.02
AC-228	338.32	471	11.40	5.524E+00	2.116E+00	2.116E+00	46.30
	911.07	460	27.70*	2.789E+00	1.684E+00	1.684E+00	21.95
	969.11	290	16.60	2.649E+00	1.866E+00	1.866E+00	29.45
RA-228	338.32	471	11.40	5.524E+00	2.116E+00	2.116E+00	46.30
	911.07	460	27.70*	2.789E+00	1.684E+00	1.684E+00	21.95
	969.11	290	16.60	2.649E+00	1.866E+00	1.866E+00	29.45
TH-228	74.81	604	10.70	6.159E+00	2.593E+00	2.638E+00	20.07
	77.11	872	18.00	6.458E+00	2.123E+00	2.160E+00	14.05
	87.30	201	8.00	7.445E+00	9.546E-01	9.712E-01	48.04
	238.63	1896	44.60*	6.709E+00	1.793E+00	1.824E+00	14.44
	300.09	222	3.41	5.913E+00	3.116E+00	3.170E+00	68.23
TH-230	609.31	743	46.30*	3.811E+00	1.192E+00	1.192E+00	15.96
	1120.29	188	15.10	2.345E+00	1.499E+00	1.499E+00	37.42
	1764.49	150	15.80	1.716E+00	1.569E+00	1.569E+00	25.02
TH-232	338.32	471	11.40	5.524E+00	2.116E+00	2.116E+00	22.71
	911.07	460	27.70*	2.789E+00	1.684E+00	1.684E+00	21.95
	969.11	290	16.60	2.649E+00	1.866E+00	1.866E+00	29.45
TH-234	63.29	102	3.80*	4.335E+00	1.759E+00	1.759E+00	94.70
	92.38	458	5.41	7.864E+00	3.048E+00	3.048E+00	29.48
U-234	609.31	743	46.30*	3.811E+00	1.192E+00	1.192E+00	15.96
	1120.29	188	15.10	2.345E+00	1.499E+00	1.499E+00	37.42
	1764.49	150	15.80	1.716E+00	1.569E+00	1.569E+00	25.02
NP-237	86.50	201	12.60*	7.445E+00	6.061E-01	6.061E-01	52.29
	95.87	-----	2.60	8.032E+00	-----	Line Not Found	-----
U-238	63.29	102	3.80*	4.335E+00	1.759E+00	1.759E+00	94.70
	92.38	458	5.41	7.864E+00	3.048E+00	3.048E+00	24.83
AM-243	74.67	604	66.00*	6.159E+00	4.204E-01	4.204E-01	20.04
	86.72	201	0.34	7.445E+00	2.273E+01	2.273E+01	48.04
	117.66	-----	0.55	8.550E+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	8.387E+00	-----	Line Not Found	-----
ANH-511	511.00	226	100.00*	4.298E+00	1.486E-01	1.486E-01	39.90

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G246440005

Page : 4
Acquisition date : 19-FEB-2010 17:59:07

Total number of lines in spectrum 33
Number of unidentified lines 4
Number of lines tentatively identified by NID 29 87.88%

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	3.892E+01	3.892E+01	0.391E+01	10.05	
CD-109	464.00D	1.03	2.053E+00	2.107E+00	1.012E+00	48.04	
SN-126	1.00E+05Y	1.00	2.064E-01	2.064E-01	0.992E-01	48.04	
TL-208	1.41E+10Y	1.00	5.556E-01	5.556E-01	0.915E-01	16.46	
BI-211	7.04E+08Y	1.00	4.180E+00	4.180E+00	0.657E+00	15.73	
PB-212	1.41E+10Y	1.00	1.793E+00	1.793E+00	0.259E+00	14.44	
PO-212	1.41E+10Y	1.00	1.793E+00	1.793E+00	0.259E+00	14.44	
BI-214	1600.00Y	1.00	1.192E+00	1.192E+00	0.190E+00	15.96	
PB-214	1600.00Y	1.00	1.454E+00	1.454E+00	0.241E+00	16.57	
PO-214	1600.00Y	1.00	1.454E+00	1.454E+00	0.241E+00	16.57	
PO-216	1.41E+10Y	1.00	1.793E+00	1.793E+00	0.259E+00	14.44	
PO-218	1600.00Y	1.00	1.454E+00	1.454E+00	0.241E+00	16.57	
RA-224	1.41E+10Y	1.00	4.722E+00	4.722E+00	1.368E+00	28.97	
RA-226	1600.00Y	1.00	1.192E+00	1.192E+00	0.190E+00	15.96	
AC-228	1.41E+10Y	1.00	1.684E+00	1.684E+00	0.370E+00	21.95	
RA-228	1.41E+10Y	1.00	1.684E+00	1.684E+00	0.370E+00	21.95	
TH-228	1.91Y	1.02	1.793E+00	1.824E+00	0.263E+00	14.44	
TH-230	4.47E+09Y	1.00	1.192E+00	1.192E+00	0.190E+00	15.96	
TH-232	1.41E+10Y	1.00	1.684E+00	1.684E+00	0.370E+00	21.95	
TH-234	4.47E+09Y	1.00	1.759E+00	1.759E+00	1.665E+00	94.70	
U-234	4.47E+09Y	1.00	1.192E+00	1.192E+00	0.190E+00	15.96	
NP-237	2.14E+06Y	1.00	6.061E-01	6.061E-01	3.169E-01	52.29	
U-238	4.47E+09Y	1.00	1.759E+00	1.759E+00	1.665E+00	94.70	
AM-243	7380.00Y	1.00	4.204E-01	4.204E-01	0.843E-01	20.04	
ANH-511	1.00E+09Y	1.00	1.486E-01	1.486E-01	0.593E-01	39.90	

Total Activity : 7.669E+01 7.677E+01

Grand Total Activity : 7.669E+01 7.677E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440005

Page : 5
Acquisition date : 19-FEB-2010 17:59:07

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.87	162	286	0.82	179.94	178	15	2.24E-02	30.7	7.68E+00	T
0	185.92	300	489	1.48	371.85	367	10	4.17E-02	31.4	7.61E+00	T
0	209.22	150	517	1.09	418.42	415	9	2.09E-02	57.0	7.19E+00	T
0	270.19	182	512	1.94	540.24	534	14	2.52E-02	54.9	6.27E+00	T
0	327.87	110	322	1.97	655.51	650	11	1.52E-02	66.1	5.63E+00	T
0	462.96	175	251	1.97	925.49	917	16	2.42E-02	43.4	4.58E+00	T
0	727.57	217	178	2.02	1454.39	1446	18	3.02E-02	31.9	3.34E+00	T
0	767.57	89	134	3.26	1534.37	1529	13	1.24E-02	57.3	3.20E+00	T
3	964.64	94	111	3.10	1928.36	1921	22	1.30E-02	55.9	2.66E+00	T
0	1381.00	70	150	4.08	2761.01	2742	38	9.74E-03	****	1.99E+00	
0	1567.13	19	38	10.51	3133.32	3115	25	2.57E-03	****	1.82E+00	
0	1590.00	41	64	1.58	3179.09	3165	18	5.73E-03	95.6	1.81E+00	
0	1730.01	52	20	2.50	3459.19	3449	16	7.16E-03	47.8	1.73E+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]G246440005.CNF;1
* Acquisition date   : 19-FEB-2010 17:59:07   Detector SN#      :
* Detector ID        : GAM22                      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 02:00:02.42           Half life ratio   : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246440005             Analyst initials  : MXR1
* Batch Number       : 950788                 Sample Quantity   : 1.32620E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28.08MS 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	3.892E+01	3.913E+00	4.771E-01	4.371E-02	81.579
CD-109	2.107E+00	1.012E+00	1.186E+00	1.125E-01	1.777
SN-126	2.064E-01	9.916E-02	1.309E-01	1.236E-02	1.576
TL-208	5.556E-01	9.145E-02	5.197E-02	5.635E-03	10.691
BI-211	4.180E+00	6.573E-01	3.006E-01	3.508E-02	13.902
PB-212	1.793E+00	2.589E-01	8.684E-02	1.147E-02	20.650
PO-212	1.793E+00	2.589E-01	8.684E-02	1.147E-02	20.650
BI-214	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445
PB-214	1.454E+00	2.409E-01	1.048E-01	1.336E-02	13.877
PO-214	1.454E+00	2.409E-01	1.048E-01	1.336E-02	13.877
PO-216	1.793E+00	2.589E-01	8.684E-02	1.147E-02	20.650
PO-218	1.454E+00	2.409E-01	1.048E-01	1.336E-02	13.877
RA-224	4.722E+00	1.368E+00	9.872E-01	1.236E-01	4.783
RA-226	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445
AC-228	1.684E+00	3.696E-01	1.925E-01	2.550E-02	8.750
RA-228	1.684E+00	3.696E-01	1.925E-01	2.550E-02	8.750
TH-228	1.824E+00	2.633E-01	8.834E-02	1.167E-02	20.650
TH-230	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.684E+00	3.696E-01	1.925E-01	2.550E-02	8.750
TH-234	1.759E+00	1.665E+00	1.837E+00	3.198E-01	0.957
U-234	1.192E+00	1.902E-01	1.141E-01	1.327E-02	10.445
NP-237	6.061E-01	3.169E-01	3.724E-01	8.431E-02	1.628
U-238	1.759E+00	1.665E+00	1.837E+00	3.198E-01	0.957
AM-243	4.204E-01	8.426E-02	7.548E-02	6.152E-03	5.570
ANH-511	1.486E-01	5.928E-02	4.327E-02	4.336E-03	3.433

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.175E-01		3.010E-01	4.757E-01	4.964E-02	-0.247
NA-22	9.332E-03		4.236E-02	7.105E-02	6.123E-03	0.131
NA-24	-3.687E+00		4.379E+00	Half-Life too short		
AL-26	1.173E-02		2.337E-02	4.107E-02	3.359E-03	0.286
TI-44	3.918E-01	+	5.507E-02	6.792E-02	5.759E-03	5.769
SC-46	-1.698E-02		3.598E-02	5.783E-02	6.473E-03	-0.294
V-48	2.936E-02		6.803E-02	1.148E-01	1.204E-02	0.256
CR-51	-3.849E-01		3.657E-01	5.620E-01	7.278E-02	-0.685
MN-52	6.427E-03		2.440E-01	4.001E-01	3.576E-02	0.016
MN-54	6.174E-03		3.436E-02	5.788E-02	6.429E-03	0.107
CO-56	-1.864E-02		3.656E-02	5.901E-02	6.569E-03	-0.316
CO-57	-9.418E-03		2.592E-02	4.052E-02	3.342E-03	-0.232
CO-58	-2.226E-02		3.506E-02	5.629E-02	6.233E-03	-0.395
FE-59	-9.165E-02		8.782E-02	1.317E-01	1.291E-02	-0.696
CO-60	-1.814E-02		3.563E-02	5.628E-02	5.019E-03	-0.322
ZN-65	6.935E-02		1.011E-01	1.475E-01	1.316E-02	0.470
GE-68	6.089E-01		1.191E+00	2.000E+00	1.885E-01	0.305
AS-73	2.219E-01		7.180E-01	1.213E+00	9.165E-02	0.183
AS-74	-1.219E-02		9.022E-02	1.485E-01	1.539E-02	-0.082
SE-75	1.877E-02		4.717E-02	6.765E-02	9.105E-03	0.277
BR-77	7.163E-01		1.664E+01	2.739E+01	2.757E+00	0.026
SR-82	-3.948E-01		4.008E-01	5.701E-01	6.252E-02	-0.692
RB-83	9.911E-04		5.999E-02	9.862E-02	9.925E-03	0.010
RB-84	4.668E-02		6.766E-02	1.165E-01	1.303E-02	0.401
KR-85	2.858E+01		8.237E+00	1.322E+01	1.327E+00	2.161
SR-85	1.498E-01		4.319E-02	6.934E-02	6.958E-03	2.161
RB-86	4.844E-01		8.244E-01	1.389E+00	1.311E-01	0.349
Y-88	-7.528E-04		2.770E-02	4.531E-02	3.663E-03	-0.017
ZR-88	-2.931E-02		2.849E-02	4.433E-02	4.127E-03	-0.661
Y-91	-1.293E+00		1.888E+01	3.131E+01	2.574E+00	-0.041
NB-94	-4.267E-03		3.184E-02	5.160E-02	5.529E-03	-0.083
NB-95	8.959E-02		4.889E-02	7.568E-02	8.276E-03	1.184
NB-95M	1.265E-01		1.480E-01	2.169E-01	2.867E-02	0.583
ZR-95	5.344E-02		6.994E-02	1.178E-01	1.368E-02	0.454
NB-97	-4.518E-01		3.777E-01	Half-Life too short		
ZR-97	6.139E+01		8.470E+00	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	-2.787E-01		1.799E+01	2.920E+01	4.833E+00	-0.010
TC-99M	3.783E+12		6.670E+12	Half-Life too short		
RH-101	-1.617E-02		3.398E-02	5.387E-02	5.877E-03	-0.300
RH-102	1.178E-02		2.656E-02	4.390E-02	4.318E-03	0.268
RU-103	2.306E-02		4.054E-02	6.696E-02	1.005E-02	0.344
RH-106	-1.015E-01		2.949E-01	4.774E-01	6.971E-02	-0.213
RU-106	-1.015E-01		2.947E-01	4.774E-01	4.986E-02	-0.213
AG-108M	2.833E-02		3.013E-02	5.116E-02	5.065E-03	0.554
AG-110M	-2.050E-02		3.338E-02	5.292E-02	5.687E-03	-0.387
IN-111	7.765E-02		1.866E+00	2.644E+00	3.354E-01	0.029
IN-113M	-4.751E-02		4.041E-02	6.223E-02	5.943E-03	-0.763
SN-113	-4.751E-02		4.041E-02	6.223E-02	5.943E-03	-0.763
IN-114M	2.618E-02		2.013E-01	2.934E-01	3.120E-02	0.089
CD-115	-2.553E+01		1.833E+01	2.814E+01	2.842E+00	-0.907
SN-117M	3.755E-02		5.873E-02	1.000E-01	9.483E-03	0.376
SB-122	-2.004E-01		3.117E+00	5.175E+00	5.304E-01	-0.039
I-123	6.239E+01		4.056E+01	Half-Life too short		
TE-123M	2.093E-02		2.722E-02	4.650E-02	4.440E-03	0.450
I-124	5.011E-01		1.012E+00	1.490E+00	1.547E-01	0.336
SB-124	-3.784E-02		6.324E-02	9.650E-02	8.584E-03	-0.392
SB-125	-3.730E-02		8.210E-02	1.307E-01	1.268E-02	-0.285
TE-125M	2.026E+00		9.560E+00	1.539E+01	1.559E+00	0.132
I-126	-1.438E-01		1.891E-01	2.964E-01	3.131E-02	-0.485
SB-126	-2.289E-02		1.704E-01	2.348E-01	2.532E-02	-0.097
SB-127	-3.907E-01		1.787E+00	2.886E+00	3.912E-01	-0.135
XE-127	-3.930E-02		4.821E-02	7.670E-02	8.502E-03	-0.512
I-131	5.813E-02		1.297E-01	2.186E-01	2.425E-02	0.266
TE-132	-1.015E+00		1.102E+00	1.708E+00	3.105E-01	-0.594
BA-133	3.595E-03		4.629E-02	6.694E-02	1.000E-02	0.054
I-133	1.127E-02		1.403E-02	Half-Life too short		
CS-134	8.162E-02		4.545E-02	7.913E-02	8.759E-03	1.031
CS-135	2.734E-01		1.776E-01	2.633E-01	3.809E-02	1.038
I-135	5.956E+11		5.796E+11	Half-Life too short		
CS-136	5.995E-02		1.198E-01	1.979E-01	2.001E-02	0.303
BA-137M	1.943E-02		3.385E-02	5.712E-02	6.023E-03	0.340
CS-137	2.053E-02		3.579E-02	6.038E-02	6.375E-03	0.340
CE-139	2.720E-02		2.898E-02	4.953E-02	4.857E-03	0.549
BA-140	3.900E-02		2.567E-01	4.322E-01	1.451E-01	0.090
LA-140	6.628E-02		9.960E-02	1.534E-01	1.345E-02	0.432
CE-141	8.543E-03		6.349E-02	1.073E-01	9.766E-03	0.080
CE-143	2.848E-03		4.336E-04	Half-Life too short		
CE-144	-8.013E-02		1.901E-01	3.171E-01	4.923E-02	-0.253
PM-144	2.790E-03		3.175E-02	5.212E-02	5.575E-03	0.054
PR-144	1.893E-01		2.154E+00	3.536E+00	3.781E-01	0.054
PM-146	3.594E-02		4.247E-02	6.786E-02	7.886E-03	0.530
ND-147	3.532E-01		5.581E-01	9.599E-01	1.522E-01	0.368
PM-149	-8.567E+01		1.761E+02	2.739E+02	5.184E+01	-0.313
EU-152	-7.392E-02		1.140E-01	1.357E-01	1.631E-02	-0.545

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-7.385E-02		8.868E-02	1.223E-01	1.076E-02	-0.604
EU-154	2.125E-02		1.179E-01	1.972E-01	2.229E-02	0.108
EU-155	9.196E-02		1.095E-01	1.799E-01	1.544E-02	0.511
TB-160	1.296E-01		1.338E-01	2.332E-01	2.607E-02	0.556
HO-166M	3.579E-03		5.704E-02	9.067E-02	9.748E-03	0.039
TM-171	4.274E+00		2.773E+01	4.102E+01	3.099E+00	0.104
LU-176	7.768E-03		2.504E-02	3.723E-02	4.884E-03	0.209
LU-177	3.208E+00	+	1.865E+00	2.495E+00	2.817E-01	1.286
LU-177M	-2.030E-01		1.737E-01	2.674E-01	2.529E-02	-0.759
HF-181	-4.752E-03		4.035E-02	6.472E-02	6.389E-03	-0.073
W-181	1.339E-01		3.551E-01	5.305E-01	3.955E-02	0.252
TA-182	1.248E-01		1.820E-01	3.134E-01	2.606E-02	0.398
RE-183	-7.555E-02		1.051E-01	1.711E-01	1.650E-02	-0.442
RE-184	1.735E-01		2.308E-01	3.816E-01	4.952E-02	0.455
OS-185	9.765E-03		3.776E-02	6.303E-02	6.625E-03	0.155
RE-188	1.250E-01		1.652E-01	2.826E-01	2.638E-02	0.442
W-188	-3.399E+00		7.892E+00	1.131E+01	1.545E+00	-0.301
IR-192	3.722E-02		3.243E-02	5.618E-02	7.180E-03	0.663
AU-195	2.117E-01		2.324E-01	3.670E-01	3.201E-02	0.577
TL-200	-4.775E-04		8.251E-04	Half-Life too short		
TL-201	1.295E+00		1.081E+01	1.809E+01	1.783E+00	0.072
TL-202	6.610E-03		6.935E-02	1.135E-01	1.092E-02	0.058
HG-203	2.702E-02		4.120E-02	6.740E-02	9.540E-03	0.401
BI-207	1.629E-03		4.981E-02	8.135E-02	7.810E-03	0.020
TL-207	6.071E-01		6.591E-01	9.950E-01	1.978E-01	0.610
PO-209	2.744E-01		6.929E+00	1.151E+01	1.289E+00	0.024
BI-210	1.964E+00		2.957E+00	4.974E+00	4.621E-01	0.395
PB-210	1.964E+00		2.957E+00	4.974E+00	4.621E-01	0.395
PO-210	1.964E+00		2.956E+00	4.974E+00	4.182E-01	0.395
PB-211	-8.130E-01		1.026E+00	1.400E+00	8.787E-01	-0.581
BI-212	1.561E+00	+	5.321E-01	6.068E-01	7.248E-02	2.572
PO-215	6.071E-01		6.591E-01	9.950E-01	1.978E-01	0.610
RN-219	1.417E-01		3.790E-01	6.316E-01	9.772E-02	0.224
RN-220	1.168E+01		2.267E+01	3.881E+01	3.956E+00	0.301
RA-223	6.071E-01		6.591E-01	9.950E-01	1.978E-01	0.610
AC-227	2.332E-02		3.880E-01	6.267E-01	1.144E-01	0.037
TH-227	2.332E-02		3.880E-01	6.267E-01	1.290E-01	0.037
TH-229	3.227E-02		5.036E-01	8.319E-01	8.945E-02	0.039
PA-231	-1.319E+00		1.517E+00	2.298E+00	4.292E-01	-0.574
TH-231	6.071E-01		6.591E-01	9.950E-01	1.978E-01	0.610
U-231	-1.308E+00		1.613E+00	2.228E+00	1.978E-01	-0.587
PA-233	-2.204E-02		5.818E-02	9.593E-02	1.257E-02	-0.230
PA-234	-1.566E-01		2.773E-01	4.380E-01	8.705E-02	-0.358
PA-234M	3.372E+00		4.394E+00	7.242E+00	8.299E-01	0.466
U-235	-4.904E-02		2.124E-01	3.446E-01	6.078E-02	-0.142
NP-236	-2.429E-02		7.523E-02	1.244E-01	1.189E-02	-0.195
NP-239	-8.726E-03		1.890E-01	3.001E-01	2.481E-02	-0.029
AM-241	1.101E-01		1.415E-01	2.176E-01	1.701E-02	0.506

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.182E-02		9.507E-02	1.519E-01	1.295E-02	-0.078
AM-246	-4.210E-02		1.367E-01	2.180E-01	2.051E-02	-0.193
CM-247	-1.257E-02		3.417E-02	5.508E-02	5.167E-03	-0.228
CF-249	2.574E-02		3.596E-02	6.100E-02	5.798E-03	0.422
CF-251	2.924E-02		1.203E-01	2.012E-01	2.044E-02	0.145

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]G246440005
* Acquisition date   : 19-FEB-2010 17:59:07 Detector SN#
* Detector ID        : GAM22                      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 02:00:02.42             Half life ratio  : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246440005             Analyst initials: MXR1
* Batch Number       : 950788                 Sample Quantity : 1.3262E+02 GRAM
* Recovery           : 1.00000                Carrier Weight  : 0.00000
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME  : 2-DEC-2009 16:47:28 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	3.892E+01	3.835E+00	2.391E-01	1.957E+00
CD-109	2.107E+00	9.919E-01	6.232E-01	5.061E-01
SN-126	2.064E-01	9.718E-02	6.884E-02	4.958E-02
TL-208	5.556E-01	8.962E-02	2.646E-02	4.573E-02
BI-211	4.180E+00	6.441E-01	1.544E-01	3.286E-01
PB-212	1.793E+00	2.537E-01	4.490E-02	1.294E-01
PO-212	1.793E+00	2.537E-01	4.490E-02	1.294E-01
BI-214	1.192E+00	1.864E-01	5.806E-02	9.510E-02
PB-214	1.454E+00	2.361E-01	5.382E-02	1.204E-01
PO-214	1.454E+00	2.361E-01	5.382E-02	1.204E-01
PO-216	1.793E+00	2.537E-01	4.490E-02	1.294E-01
PO-218	1.454E+00	2.361E-01	5.382E-02	1.204E-01
RA-224	4.722E+00	1.341E+00	5.104E-01	6.840E-01
RA-226	1.192E+00	1.864E-01	5.806E-02	9.510E-02
AC-228	1.684E+00	3.622E-01	9.724E-02	1.848E-01
RA-228	1.684E+00	3.622E-01	9.724E-02	1.848E-01
TH-228	1.824E+00	2.581E-01	4.568E-02	1.317E-01
TH-230	1.192E+00	1.864E-01	5.806E-02	9.509E-02
TH-232	1.684E+00	3.622E-01	9.724E-02	1.848E-01
TH-234	1.759E+00	1.632E+00	9.709E-01	8.326E-01
U-234	1.192E+00	1.864E-01	5.806E-02	9.509E-02
NP-237	6.061E-01	3.106E-01	1.958E-01	1.585E-01
U-238	1.759E+00	1.632E+00	9.709E-01	8.326E-01
AM-243	4.204E-01	8.258E-02	3.979E-02	4.213E-02
ANH-511	1.486E-01	5.810E-02	2.209E-02	2.964E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.175E-01	2.950E-01	2.431E-01	1.505E-01 NOT IDENT.
NA-22	9.332E-03	4.151E-02	3.569E-02	2.118E-02 NOT IDENT.

NA-24	-3.687E+06	8.582E+06	0.000E+00	4.379E+06	SHORT HLIF
AL-26	1.173E-02	2.290E-02	2.050E-02	1.169E-02	NOT IDENT.
TI-44	3.918E-01	5.397E-02	3.577E-02	2.753E-02	FAIL ABUN
SC-46	-1.698E-02	3.526E-02	2.923E-02	1.799E-02	FAIL ABUN
V-48	2.936E-02	6.667E-02	5.795E-02	3.401E-02	NOT IDENT.
CR-51	-3.849E-01	3.584E-01	2.892E-01	1.829E-01	NOT IDENT.
MN-52	6.427E-03	2.391E-01	2.005E-01	1.220E-01	NOT IDENT.
MN-54	6.174E-03	3.367E-02	2.929E-02	1.718E-02	NOT IDENT.
CO-56	-1.864E-02	3.583E-02	2.986E-02	1.828E-02	NOT IDENT.
CO-57	-9.418E-03	2.540E-02	2.119E-02	1.296E-02	NOT IDENT.
CO-58	-2.226E-02	3.436E-02	2.850E-02	1.753E-02	NOT IDENT.
FE-59	-9.165E-02	8.607E-02	6.633E-02	4.391E-02	NOT IDENT.
CO-60	-1.814E-02	3.492E-02	2.825E-02	1.782E-02	NOT IDENT.
ZN-65	6.935E-02	9.909E-02	7.428E-02	5.056E-02	NOT IDENT.
GE-68	6.089E-01	1.167E+00	1.007E+00	5.956E-01	NOT IDENT.
AS-73	2.219E-01	7.036E-01	6.428E-01	3.590E-01	NOT IDENT.
AS-74	-1.219E-02	8.841E-02	7.559E-02	4.511E-02	NOT IDENT.
SE-75	1.877E-02	4.622E-02	3.492E-02	2.358E-02	NOT IDENT.
BR-77	7.163E-01	1.631E+01	1.398E+01	8.319E+00	FAIL ABUN
SR-82	-3.948E-01	3.928E-01	2.889E-01	2.004E-01	NOT IDENT.
RB-83	9.911E-04	5.879E-02	5.032E-02	2.999E-02	NOT IDENT.
RB-84	4.668E-02	6.631E-02	5.891E-02	3.383E-02	NOT IDENT.
KR-85	2.858E+01	8.072E+00	6.749E+00	4.118E+00	NOT IDENT.
SR-85	1.498E-01	4.233E-02	3.539E-02	2.159E-02	NOT IDENT.
RB-86	4.844E-01	8.079E-01	7.000E-01	4.122E-01	NOT IDENT.
Y-88	-7.528E-04	2.714E-02	2.261E-02	1.385E-02	NOT IDENT.
ZR-88	-2.931E-02	2.792E-02	2.273E-02	1.425E-02	NOT IDENT.
Y-91	-1.293E+00	1.850E+01	1.574E+01	9.441E+00	NOT IDENT.
NB-94	4.267E-03	3.120E-02	2.619E-02	1.592E-02	NOT IDENT.
NB-95	8.959E-02	4.791E-02	3.836E-02	2.445E-02	NOT IDENT.
NB-95M	1.265E-01	1.451E-01	1.122E-01	7.401E-02	NOT IDENT.
ZR-95	5.344E-02	6.854E-02	5.972E-02	3.497E-02	NOT IDENT.
NB-97	-4.518E+05	7.403E+05	0.000E+00	3.777E+05	SHORT HLIF
ZR-97	6.139E+07	1.660E+07	0.000E+00	8.470E+06	SHORT HLIF
MO-99	-2.787E-01	1.763E+01	1.481E+01	8.995E+00	NOT IDENT.
TC-99M	3.783E+18	1.307E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.617E-02	3.330E-02	2.794E-02	1.699E-02	NOT IDENT.
RH-102	1.178E-02	2.603E-02	2.244E-02	1.328E-02	FAIL ABUN
RU-103	2.306E-02	3.973E-02	3.419E-02	2.027E-02	FAIL ABUN
RH-106	-1.015E-01	2.890E-01	2.428E-01	1.475E-01	FAIL ABUN
RU-106	-1.015E-01	2.888E-01	2.428E-01	1.474E-01	FAIL ABUN
AG-108M	2.833E-02	2.952E-02	2.619E-02	1.506E-02	NOT IDENT.
AG-110M	-2.050E-02	3.271E-02	2.689E-02	1.669E-02	NOT IDENT.
IN-111	7.765E-02	1.829E+00	1.366E+00	9.330E-01	NOT IDENT.
IN-113M	-4.751E-02	3.960E-02	3.191E-02	2.021E-02	NOT IDENT.
SN-113	-4.751E-02	3.960E-02	3.191E-02	2.021E-02	NOT IDENT.
IN-114M	2.618E-02	1.973E-01	1.523E-01	1.006E-01	NOT IDENT.
CD-115	-2.553E+01	1.797E+01	1.435E+01	9.166E+00	NOT IDENT.
SN-117M	3.755E-02	5.755E-02	5.206E-02	2.936E-02	NOT IDENT.
SB-122	-2.004E-01	3.054E+00	2.637E+00	1.558E+00	NOT IDENT.
I-123	6.239E+07	7.950E+07	0.000E+00	4.056E+07	SHORT HLIF
TE-123M	2.093E-02	2.667E-02	2.421E-02	1.361E-02	NOT IDENT.
I-124	5.011E-01	9.913E-01	7.581E-01	5.058E-01	NOT IDENT.
SB-124	-3.784E-02	6.198E-02	4.823E-02	3.162E-02	FAIL ABUN
SB-125	-3.730E-02	8.046E-02	6.693E-02	4.105E-02	FAIL ABUN
TE-125M	2.026E+00	9.369E+00	8.060E+00	4.780E+00	NOT IDENT.
I-126	-1.438E-01	1.853E-01	1.506E-01	9.454E-02	NOT IDENT.
SB-126	-2.289E-02	1.670E-01	1.191E-01	8.519E-02	FAIL ABUN
SB-127	-3.907E-01	1.752E+00	1.466E+00	8.937E-01	NOT IDENT.
XE-127	-3.930E-02	4.725E-02	3.977E-02	2.411E-02	NOT IDENT.
I-131	5.813E-02	1.271E-01	1.122E-01	6.485E-02	NOT IDENT.
TE-132	-1.015E+00	1.080E+00	8.838E-01	5.509E-01	NOT IDENT.
BA-133	3.595E-03	4.536E-02	3.438E-02	2.314E-02	NOT IDENT.
I-133	1.127E+04	2.750E+04	0.000E+00	1.403E+04	SHORT HLIF
CS-134	8.162E-02	4.454E-02	4.008E-02	2.273E-02	NOT IDENT.
CS-135	2.734E-01	1.740E-01	1.359E-01	8.878E-02	NOT IDENT.
I-135	5.956E+17	1.136E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.995E-02	1.175E-01	9.973E-02	5.992E-02	FAIL ABUN
BA-137M	1.943E-02	3.318E-02	2.902E-02	1.693E-02	NOT IDENT.
CS-137	2.053E-02	3.507E-02	3.068E-02	1.789E-02	NOT IDENT.
CE-139	2.720E-02	2.840E-02	2.577E-02	1.449E-02	NOT IDENT.
BA-140	3.900E-02	2.516E-01	2.204E-01	1.284E-01	NOT IDENT.
LA-140	6.628E-02	9.760E-02	7.673E-02	4.980E-02	FAIL ABUN
CE-141	8.543E-03	6.222E-02	5.593E-02	3.175E-02	NOT IDENT.
CE-143	2.848E+03	8.499E+02	0.000E+00	4.336E+02	SHORT HLIF
CE-144	-8.013E-02	1.863E-01	1.656E-01	9.506E-02	NOT IDENT.
PM-144	2.790E-03	3.112E-02	2.646E-02	1.588E-02	NOT IDENT.
PR-144	1.893E-01	2.111E+00	1.795E+00	1.077E+00	NOT IDENT.

PM-146	3.594E-02	4.162E-02	3.470E-02	2.123E-02	NOT IDENT.
ND-147	3.532E-01	5.470E-01	4.896E-01	2.791E-01	FAIL ABUN
PM-149	-8.567E+01	1.726E+02	1.412E+02	8.804E+01	NOT IDENT.
EU-152	-7.392E-02	1.117E-01	6.973E-02	5.700E-02	FAIL ABUN
GD-153	-7.385E-02	8.690E-02	6.419E-02	4.434E-02	NOT IDENT.
EU-154	2.125E-02	1.155E-01	9.907E-02	5.894E-02	NOT IDENT.
EU-155	9.196E-02	1.073E-01	9.427E-02	5.475E-02	FAIL ABUN
TB-160	1.296E-01	1.311E-01	1.179E-01	6.688E-02	FAIL ABUN
HO-166M	3.579E-03	5.590E-02	4.601E-02	2.852E-02	NOT IDENT.
TM-171	4.274E+00	2.717E+01	2.166E+01	1.386E+01	NOT IDENT.
LU-176	7.768E-03	2.453E-02	1.917E-02	1.252E-02	NOT IDENT.
LU-177	3.208E+00	1.827E+00	1.293E+00	9.323E-01	FAIL ABUN
LU-177M	-2.030E-01	1.702E-01	1.370E-01	8.685E-02	FAIL ABUN
HF-181	-4.752E-03	3.954E-02	3.306E-02	2.017E-02	NOT IDENT.
W-181	1.339E-01	3.480E-01	2.802E-01	1.775E-01	NOT IDENT.
TA-182	1.248E-01	1.784E-01	1.575E-01	9.100E-02	FAIL ABUN
RE-183	-7.555E-02	1.030E-01	8.902E-02	5.255E-02	FAIL ABUN
RE-184	1.735E-01	2.261E-01	1.971E-01	1.154E-01	NOT IDENT.
OS-185	9.765E-03	3.700E-02	3.204E-02	1.888E-02	NOT IDENT.
RE-188	1.250E-01	1.619E-01	1.472E-01	8.262E-02	NOT IDENT.
W-188	-3.399E+00	7.734E+00	5.828E+00	3.946E+00	FAIL ABUN
IR-192	3.722E-02	3.178E-02	2.891E-02	1.621E-02	FAIL ABUN
AU-195	2.117E-01	2.277E-01	1.926E-01	1.162E-01	FAIL ABUN
TL-200	-4.775E+02	1.617E+03	0.000E+00	8.251E+02	SHORT HLIF
TL-201	1.295E+00	1.060E+01	9.409E+00	5.407E+00	NOT IDENT.
TL-202	6.610E-03	6.796E-02	5.806E-02	3.467E-02	NOT IDENT.
HG-203	2.702E-02	4.037E-02	3.476E-02	2.060E-02	NOT IDENT.
BI-207	1.629E-03	4.881E-02	4.099E-02	2.490E-02	FAIL ABUN
TL-207	6.071E-01	6.459E-01	5.118E-01	3.295E-01	FAIL ABUN
PO-209	2.744E-01	6.790E+00	5.818E+00	3.464E+00	NOT IDENT.
BI-210	1.964E+00	2.898E+00	2.642E+00	1.479E+00	NOT IDENT.
PB-210	1.964E+00	2.898E+00	2.642E+00	1.479E+00	NOT IDENT.
PO-210	1.964E+00	2.897E+00	2.642E+00	1.478E+00	NOT IDENT.
PB-211	-8.130E-01	1.006E+00	7.173E-01	5.131E-01	NOT IDENT.
BI-212	1.561E+00	5.215E-01	3.078E-01	2.661E-01	FAIL ABUN
PO-215	6.071E-01	6.459E-01	5.118E-01	3.295E-01	FAIL ABUN
RN-219	1.417E-01	3.714E-01	3.237E-01	1.895E-01	FAIL ABUN
RN-220	1.168E+01	2.222E+01	1.978E+01	1.134E+01	NOT IDENT.
RA-223	6.071E-01	6.459E-01	5.118E-01	3.295E-01	FAIL ABUN
AC-227	2.332E-02	3.802E-01	3.237E-01	1.940E-01	FAIL ABUN
TH-227	2.332E-02	3.802E-01	3.237E-01	1.940E-01	FAIL ABUN
TH-229	3.227E-02	4.936E-01	4.317E-01	2.518E-01	FAIL ABUN
PA-231	-1.319E+00	1.487E+00	1.185E+00	7.585E-01	FAIL ABUN
TH-231	6.071E-01	6.459E-01	5.118E-01	3.295E-01	FAIL ABUN
U-231	-1.308E+00	1.580E+00	1.170E+00	8.063E-01	FAIL ABUN
PA-233	-2.204E-02	5.702E-02	4.938E-02	2.909E-02	FAIL ABUN
PA-234	-1.566E-01	2.718E-01	2.211E-01	1.387E-01	FAIL ABUN
PA-234M	3.372E+00	4.307E+00	3.653E+00	2.197E+00	FAIL ABUN
U-235	-4.904E-02	2.082E-01	1.797E-01	1.062E-01	FAIL ABUN
NP-236	-2.429E-02	7.372E-02	6.476E-02	3.761E-02	NOT IDENT.
NP-239	-8.726E-03	1.852E-01	1.570E-01	9.451E-02	FAIL ABUN
AM-241	1.101E-01	1.387E-01	1.151E-01	7.075E-02	NOT IDENT.
CM-243	-1.182E-02	9.317E-02	7.961E-02	4.754E-02	FAIL ABUN
AM-246	-4.210E-02	1.340E-01	1.098E-01	6.837E-02	NOT IDENT.
CM-247	-1.257E-02	3.349E-02	2.823E-02	1.709E-02	NOT IDENT.
CF-249	2.574E-02	3.524E-02	3.128E-02	1.798E-02	NOT IDENT.
CF-251	2.924E-02	1.179E-01	1.045E-01	6.013E-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	338.6898
46.50	338.6898
46.50	338.6898
48.70	402.4197
49.72	412.5504
51.35	360.1640
52.39	399.8503
52.97	410.1604
53.15	403.0337
53.44	396.0813
54.07	401.8237
56.28	430.0907
56.28	430.0953
57.37	0.0000
57.53	458.8544
57.53	458.8581
57.60	464.6761
57.98	456.8458
57.98	456.8458
59.32	415.3860
59.32	415.3860
59.40	415.5176
59.54	415.7488
59.72	427.5236
60.01	428.0146
61.10	473.1228
61.14	473.1960
61.30	473.4907
63.00	527.9404
63.29	528.5239
63.29	528.5239
63.58	529.1046
64.28	566.5181
65.12	541.9350
65.20	511.3290
65.20	511.3290
66.05	512.9373
66.72	543.6635
66.83	543.8831
66.91	544.0436
67.20	506.2437
67.20	506.2437
67.75	561.9693
67.85	562.1737
68.90	625.1788
68.90	625.1788
69.30	594.8395
69.67	582.2222
70.82	553.1793
70.82	553.1793
70.83	553.1990
72.80	537.9111
72.87	538.0420
72.87	538.0420
74.67	541.3325
74.81	541.5861
74.81	541.5861
74.81	541.5861
74.81	541.5861
74.81	541.5861
74.81	541.5861
74.81	541.5861
74.97	541.8778
75.28	542.4394
75.70	543.1973
77.11	545.7300
77.11	545.7300

77.11	545.7300
77.11	545.7300
77.11	545.7300
77.11	545.7300
77.11	545.7300
78.38	549.0151
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79.80	509.9322
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80.30	533.8909
80.30	533.8909
80.57	534.3477
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81.07	587.7864
81.07	587.7864
81.07	587.7864
82.60	576.6221
83.37	576.4370
83.78	550.6522
83.78	550.6522
83.78	550.6522
83.78	550.6522
84.21	559.1920
84.90	536.8926
85.43	561.2760
86.29	699.4885
86.50	699.9298
86.54	700.0147
86.59	700.1199
86.72	700.3950
86.79	722.5769
86.94	722.9061
87.30	763.0999
87.30	763.0999
87.30	763.0999
87.30	763.0999
87.30	763.0999
87.30	763.0999
87.30	763.0999
87.57	763.7128
87.88	606.4805
88.03	606.7500
88.36	607.3418
88.47	607.5410
89.95	765.9075
91.11	514.9858
92.29	516.7354
92.38	516.8685
92.38	516.8685
93.35	518.2953
94.00	519.2490
94.67	481.5681
94.67	481.5750
94.90	481.8852
94.90	481.8852
94.90	481.8852
94.90	481.8852
95.87	541.3668
95.87	541.3668
96.73	560.4787
97.43	566.4247
98.44	483.3592
98.44	483.3614
98.88	478.3992
99.55	485.3626
99.55	485.3626
99.86	474.8747
100.00	475.0543
100.10	444.6708
103.18	571.3843
103.76	496.3206
105.00	486.8837
105.31	498.3232
108.00	529.5805
109.28	504.5044

111.00	493.2231
111.00	493.2231
111.76	515.4902
112.95	505.7371
115.19	467.7256
116.30	480.3307
117.00	470.8964
117.00	470.8964
117.66	485.3061
121.11	463.9811
121.62	472.5785
121.78	472.7520
122.06	488.0201
122.32	488.3112
122.32	488.3112
122.32	488.3112
122.32	488.3112
123.07	484.5398
127.23	526.3804
129.76	475.1746
131.20	525.1332
133.02	482.9779
133.54	473.7782
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136.25	484.5374
136.48	480.3183
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140.51	0.0000
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142.65	495.5291
143.76	512.9310
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144.24	512.5229
144.24	512.5229
144.24	512.5229
145.22	509.0012
145.44	509.2280
147.16	489.1185
152.43	469.3508
152.70	467.7544
153.22	467.3017
154.21	462.6506
154.21	462.6506
154.21	462.6506
154.21	462.6506
155.03	445.8037
156.02	436.4526
158.56	448.7934
159.00	0.0000
159.00	429.5919
160.31	464.2729
161.27	475.3935
162.32	467.8734
162.64	472.8422
163.35	479.0939
163.89	455.1163
165.85	433.1490
167.43	447.6344
171.28	413.5470
171.86	432.0905
172.10	432.2737
176.55	428.8980
176.60	428.9354
181.06	413.9836
184.41	480.2386
185.71	423.8480
186.00	424.0533
190.27	429.7750
192.34	444.2425
193.63	464.9476
197.04	476.4200
198.01	475.1513
198.60	464.6205
200.40	439.9329
201.83	485.0007
202.84	483.7468
205.31	441.6544

208.36	506.8521
208.81	478.0282
209.75	451.3182
209.75	451.3182
210.97	425.9259
215.65	418.5886
216.55	407.7229
218.09	374.7549
222.10	422.3617
223.80	375.7673
226.40	431.1761
227.00	439.8591
227.08	439.9075
227.20	431.6606
228.16	447.8631
228.18	447.8762
228.18	447.8762
231.56	0.0000
235.69	469.7942
236.00	483.4717
236.00	483.4717
238.63	389.8863
238.63	389.8863
238.63	389.8863
238.63	389.8863
239.00	390.0806
240.98	391.1166
241.98	391.6402
241.98	391.6402
241.98	391.6402
244.69	325.5161
245.39	324.1110
247.94	336.1993
248.90	349.1656
249.79	356.0023
252.40	334.6111
252.85	326.1910
252.85	326.1910
254.15	0.0000
256.20	371.9182
256.20	371.9182
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260.90	349.1149
262.80	317.7050
264.65	288.4640
268.24	309.0527
268.79	289.9343
269.46	298.9651
269.46	298.9651
269.46	298.9651
269.46	298.9651
271.23	299.6084
273.65	415.3751
276.40	320.9834
277.35	329.9268
277.60	324.7366
277.60	324.7366
278.00	333.7767
278.60	325.6013
279.20	320.2734
279.53	320.3965
280.46	366.4101
281.68	302.2492
283.67	336.4893
284.30	343.4497
285.00	348.2094
285.90	327.2792
286.10	299.3280
286.10	299.3280
287.40	282.9348
288.45	0.0000
290.67	326.0739
290.80	326.1225
291.72	336.9980
293.26	0.0000
293.70	295.5352
295.21	296.0417
295.21	296.0417

295.21	296.0417
295.96	199.5442
296.50	199.6650
297.23	199.8289
298.57	200.1296
299.80	200.4036
299.80	200.4036
300.09	200.4707
300.09	200.4707
300.09	200.4707
300.09	200.4707
300.12	200.4761
301.29	250.9207
302.84	265.0640
303.76	257.7085
303.91	257.7498
304.40	254.8388
304.40	254.8388
304.84	250.3810
306.84	257.0518
308.46	259.5500
311.98	282.4897
316.51	244.9025
318.01	263.8787
319.02	268.8102
319.41	296.8390
320.08	290.7341
323.87	229.0505
323.87	229.0505
323.87	229.0505
323.87	229.0505
325.23	257.4600
328.77	305.3897
333.44	278.5323
334.20	277.1735
334.20	277.1735
334.30	304.7649
338.28	245.7433
338.28	245.7433
338.28	245.7433
338.28	245.7433
338.32	245.7560
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338.32	245.7560
340.50	218.7162
340.57	218.7302
344.27	260.1058
345.85	264.4983
350.59	0.0000
351.07	255.6094
351.92	255.8204
351.92	255.8204
351.92	255.8204
355.39	0.0000
356.01	262.3082
364.48	238.4832
366.43	241.8484
367.43	249.8844
367.94	0.0000
369.80	244.5679
374.96	231.9841
383.85	253.6969
387.95	212.8584
388.63	211.9938
391.69	246.5055
391.69	246.5055
392.90	250.7671
398.62	236.9737
400.65	237.3943
401.10	223.4011
401.81	226.5601
402.60	245.8616
404.84	276.6256
410.95	250.6815
411.60	263.0058
413.65	283.8089
414.70	236.2112
415.30	233.2742

415.76	223.1758
417.63	0.0000
418.52	223.6944
423.70	213.3828
427.08	194.4356
427.89	210.0064
432.53	186.0073
433.93	189.3241
439.47	203.6874
439.56	192.2695
439.89	181.9257
443.98	172.0939
444.90	170.1332
445.03	170.1511
445.03	170.1511
445.03	170.1511
445.03	170.1511
453.90	185.2776
463.38	186.3855
468.07	196.6235
473.00	200.5624
475.06	181.6418
475.35	182.7521
476.78	203.2759
477.59	198.0462
477.96	198.1027
482.03	192.2611
484.57	182.9409
487.03	172.4922
490.36	0.0000
492.35	189.4046
497.08	190.0583
507.63	0.0000
510.53	0.0000
510.84	199.6224
511.00	199.6446
511.85	199.7634
511.85	199.7634
513.99	159.3938
513.99	159.3938
520.41	161.6182
520.65	161.6468
527.90	196.0974
528.96	0.0000
529.64	175.0303
529.87	0.0000
531.02	157.5869
537.32	173.1603
543.00	171.0226
546.56	0.0000
549.76	157.7153
552.65	160.8413
555.20	176.1875
563.23	155.3315
563.90	176.2482
568.70	176.7969
569.32	166.4052
569.50	161.6716
569.67	161.6888
573.80	173.7347
574.00	181.0402
574.64	196.9392
578.91	178.7787
579.30	0.0000
583.14	170.7608
585.48	161.4067
591.81	192.5651
592.07	189.0854
593.00	182.4401
595.88	182.7669
600.56	210.4527
602.52	0.0000
602.71	189.7827
602.71	189.7827
603.60	178.2263
604.41	206.6465
604.70	203.3475
609.31	234.0088

609.31	234.0088
609.31	234.0088
609.31	234.0088
610.33	197.3595
612.46	170.8194
614.37	172.6917
618.01	188.1953
621.84	179.7869
621.84	179.7869
631.29	180.7959
633.02	160.2136
633.10	158.2422
634.78	153.4485
635.90	141.6617
636.97	145.7170
645.85	149.4598
646.12	143.5049
656.30	195.4681
657.75	193.6243
657.90	0.0000
661.65	173.9433
661.65	173.9433
664.57	0.0000
666.33	192.5505
666.33	192.5505
675.00	165.1224
677.61	144.0570
685.20	155.8700
692.80	179.0232
695.00	164.8979
696.49	170.1574
696.49	170.1574
697.00	175.3314
697.49	185.6325
698.33	184.6912
698.50	184.7095
699.00	164.2285
702.63	186.1481
706.10	164.8568
706.58	0.0000
706.67	175.2157
709.31	166.1721
711.68	153.9806
713.82	157.2603
717.42	152.6600
720.50	156.6303
721.93	0.0000
722.20	135.3909
722.78	131.8693
722.78	131.8693
722.89	131.8770
722.95	131.8796
723.30	153.2955
724.18	156.9311
727.18	144.8228
733.00	127.1968
735.90	134.5668
739.58	144.7074
742.81	134.4453
744.21	154.5097
747.13	156.8453
751.79	174.1006
752.31	147.7616
753.82	149.9852
755.35	153.2719
756.15	149.1039
756.87	147.0427
763.93	141.9545
765.79	149.3714
766.42	154.8837
766.84	174.9643
776.49	169.2104
778.00	165.6998
778.57	168.9551
778.89	161.4943
783.80	128.6499
785.46	142.7033
792.07	175.4525

795.84	132.6369
796.30	125.1168
798.80	190.0615
801.93	146.0056
805.60	124.4379
810.29	137.7460
810.76	141.5007
815.85	126.9095
817.79	129.8277
818.51	129.8713
819.60	133.6760
826.30	134.0974
828.27	0.0000
831.60	152.2875
831.96	151.3727
834.83	154.3992
836.80	0.0000
846.75	146.7262
848.13	136.3987
856.28	0.0000
856.80	133.1323
860.37	128.5824
867.32	107.0098
867.82	96.9988
871.10	133.0298
873.19	136.9851
874.81	129.4135
875.33	0.0000
876.40	133.3425
879.36	119.1087
880.27	116.2734
880.51	113.4030
881.50	120.1826
883.24	134.7070
884.67	128.0529
889.25	132.1693
896.60	133.5600
898.02	128.7997
899.00	140.4789
903.28	129.0919
911.07	127.5756
911.07	127.5756
911.07	127.5756
919.63	129.9965
920.93	116.3770
925.00	109.7188
925.24	112.6697
926.50	121.5522
935.52	106.2692
937.48	118.1731
944.10	138.2471
946.00	134.4039
949.00	111.8117
962.29	139.2847
964.01	142.8644
966.15	131.5304
968.20	131.6386
969.11	111.7363
969.11	111.7363
969.11	111.7363
977.42	135.0408
980.50	100.2215
983.50	103.3521
989.30	128.7344
996.32	129.0938
1001.03	108.1140
1001.68	115.2167
1004.76	142.6769
1021.30	0.0000
1024.50	0.0000
1034.80	111.5851
1036.00	122.9004
1037.82	126.0587
1038.57	126.0973
1038.76	0.0000
1045.16	132.5768
1046.59	120.3094
1048.07	119.3499

1050.47	117.3955
1050.47	117.3955
1062.04	134.4524
1063.62	127.2899
1076.63	120.6243
1077.35	118.5764
1078.86	134.2550
1085.78	118.9422
1099.22	139.4478
1112.02	143.7744
1112.84	130.9106
1115.52	134.7274
1120.29	137.3315
1120.29	137.3315
1120.29	137.3315
1120.29	137.3315
1120.51	137.3451
1121.28	133.1543
1124.00	0.0000
1129.67	143.9370
1131.51	0.0000
1147.95	0.0000
1167.94	140.0376
1173.22	122.3987
1175.09	130.9573
1177.93	148.0595
1189.05	141.0425
1204.90	167.4868
1205.75	0.0000
1213.00	178.4341
1221.42	137.7861
1230.97	204.4457
1235.34	161.4836
1236.41	0.0000
1238.25	147.2055
1246.25	160.1235
1260.41	0.0000
1271.85	130.3196
1274.45	119.7193
1274.54	119.7231
1291.56	99.8148
1298.22	0.0000
1312.09	82.7260
1325.50	78.1224
1325.50	78.1224
1332.49	88.1988
1333.61	83.2720
1360.21	71.9495
1362.66	0.0000
1365.15	58.7114
1368.21	73.0112
1368.53	0.0000
1376.25	65.2638
1384.27	65.4185
1394.10	77.1583
1395.20	82.5664
1407.95	83.0986
1434.06	46.9658
1436.60	52.1097
1457.56	0.0000
1460.81	54.5236
1489.15	54.9522
1509.49	44.8319
1596.49	46.0885
1620.62	40.0768
1678.03	0.0000
1691.02	35.9311
1691.02	35.9311
1706.46	0.0000
1750.46	0.0000
1764.49	26.6858
1764.49	26.6858
1764.49	26.6858
1764.49	26.6858
1770.23	26.7217
1771.40	30.2929
1791.20	0.0000
1808.65	20.9698

1836.01

27.1304

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440005

Total Uranium Activity	5.2089E+00	ug/g
Total Uranium Counting Unc.	4.8560E+00	ug/g
Total Uranium Tpu	2.4775E-06	ug/g
Total Uranium Mda	2.8898E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 950788                      SAMPLE ID : G246440005
*  ANALYST       : MXR1                        DETECTOR  : GAM22
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00    COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 17:59:07.41    SAMPLE ALQT: 132.620 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.096E+01
GROSS GAMMA ERROR (pCi/GRAM ) : 1.411E+00
GROSS GAMMA MDA (pCi/GRAM ) : 2.642E+00
GROSS GAMMA DLC (pCi/GRAM ) : 1.286E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 20:02:50.38

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440006.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 18:02:13
Sample ID          : G246440006          Sample quantity  : 1.26870E+02 GRAM
Detector name      : GAM17              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:09.80  0.1%
Energy tolerance   : 1.50000 keV        Analyst Initials : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 950788             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	46.73*	125	406	0.97	93.08	89	8	1.74E-02	30.8	
2	0	63.32*	189	707	0.84	126.27	121	10	2.62E-02	27.9	
3	3	74.86*	556	430	0.94	149.37	145	16	7.72E-02	7.3	2.44E+00
4	3	77.11*	895	364	0.94	153.86	145	16	1.24E-01	4.9	
5	5	87.18*	333	402	1.19	174.01	163	29	4.62E-02	11.4	3.58E+00
6	5	89.92	194	303	0.98	179.51	163	29	2.69E-02	16.0	
7	5	92.77*	398	357	1.29	185.20	163	29	5.53E-02	10.7	
8	0	128.85	109	415	0.97	257.39	252	11	1.52E-02	37.2	
9	0	185.71*	204	291	1.31	371.14	365	11	2.83E-02	18.2	
10	0	209.26	114	256	1.06	418.26	413	10	1.59E-02	27.9	
11	0	238.46*	863	387	1.11	476.70	471	10	1.20E-01	5.6	
12	0	241.57	184	206	1.12	482.91	481	7	2.56E-02	15.5	
13	0	269.99	114	125	1.21	539.78	536	9	1.58E-02	20.0	
14	0	295.08*	265	147	1.07	589.97	586	9	3.68E-02	10.5	
15	0	327.71	83	128	1.16	655.27	652	10	1.15E-02	27.6	
16	0	338.37	158	188	1.18	676.59	671	11	2.19E-02	18.8	
17	0	351.76*	546	135	1.26	703.40	697	12	7.59E-02	6.1	
18	0	462.82	65	78	1.09	925.61	921	11	9.00E-03	29.1	
19	0	510.64*	80	109	1.86	1021.30	1014	14	1.11E-02	34.8	
20	0	582.96*	319	74	1.23	1166.03	1161	12	4.43E-02	7.9	
21	0	609.02*	340	94	1.33	1218.17	1212	14	4.72E-02	8.3	
22	0	727.28*	80	101	1.59	1454.82	1447	17	1.11E-02	31.2	
23	0	768.06	54	41	1.11	1536.44	1532	10	7.44E-03	26.5	
24	0	911.12*	164	107	1.99	1822.74	1813	21	2.28E-02	17.6	
25	0	968.42	133	37	1.22	1937.43	1933	10	1.85E-02	12.3	
26	0	1120.81	78	88	2.38	2242.43	2237	20	1.09E-02	31.8	
27	0	1459.75*	927	20	1.91	2920.86	2913	16	1.29E-01	3.5	
28	0	1586.80	25	8	0.92	3175.20	3166	15	3.49E-03	31.1	
29	0	1763.48*	62	6	1.27	3528.90	3523	12	8.64E-03	15.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 20:02:52

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440006.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 18:02:13
Sample ID        : G246440006             Sample quantity  : 126.87 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA17               Detector geometry: CAN
Elapsed live time : 0 02:00:00.00         Elapsed real time: 0 02:00:09.80   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	*	3.304E+01	3.722E+00	6.709E-01	5.956E-02	49.257
CD-109	+	88.03	*	4.069E+00	1.007E+00	9.481E-01	9.255E-02	4.291
SN-126	+	64.28		8.594E-01	4.987E-01	4.124E-01	6.583E-02	2.084
	+	86.94		1.657E+00	7.858E-01	3.849E-01	1.602E-01	4.306
	+	87.57	*	3.986E-01	9.865E-02	9.276E-02	9.052E-03	4.298
TL-208		277.35		2.853E-01	4.230E-01	7.392E-01	9.411E-02	0.386
	+	510.84		5.335E-01	3.766E-01	2.476E-01	3.024E-02	2.155
	+	583.14	*	6.193E-01	1.146E-01	6.731E-02	6.366E-03	9.201
		860.37		1.555E-01	4.003E-01	6.870E-01	6.464E-02	0.226
BI-210	+	46.50	*	1.452E+00	9.072E-01	8.892E-01	9.646E-02	1.632
PB-210	+	46.50	*	1.452E+00	9.072E-01	8.892E-01	9.646E-02	1.632
PO-210	+	46.50	*	1.452E+00	9.054E-01	8.892E-01	8.983E-02	1.632
BI-211		72.87		2.078E+00	2.221E+00	3.470E+00	3.393E-01	0.599
	+	351.07	*	4.295E+00	6.612E-01	3.521E-01	3.286E-02	12.197
PB-212	+	74.81		2.261E+00	4.495E-01	3.808E-01	5.146E-02	5.939
	+	77.11		2.170E+00	3.001E-01	2.274E-01	2.216E-02	9.543
	+	87.30		1.844E+00	4.921E-01	4.287E-01	5.989E-02	4.301
	+	238.63	*	1.423E+00	2.139E-01	1.214E-01	1.224E-02	11.719
		300.09		8.460E-01	9.897E-01	1.561E+00	1.700E-01	0.542
PO-212	+	74.81		2.261E+00	4.495E-01	3.808E-01	5.146E-02	5.939
	+	77.11		2.170E+00	3.001E-01	2.274E-01	2.216E-02	9.543
	+	87.30		1.844E+00	4.921E-01	4.287E-01	5.989E-02	4.301
		115.19		-9.195E-01	3.498E+00	5.729E+00	6.450E-01	-0.160
	+	238.63	*	1.423E+00	2.139E-01	1.214E-01	1.224E-02	11.719
		300.09		8.460E-01	9.897E-01	1.561E+00	1.700E-01	0.542
BI-214	+	609.31	*	1.250E+00	2.432E-01	1.298E-01	1.320E-02	9.637
	+	1120.29		1.568E+00	1.010E+00	6.975E-01	7.456E-02	2.249
	+	1764.49		1.735E+00	5.567E-01	5.424E-01	4.586E-02	3.198
PB-214	+	74.81		3.896E+00	7.420E-01	6.561E-01	8.039E-02	5.939
	+	77.11		3.720E+00	5.874E-01	3.898E-01	4.823E-02	9.543
	+	87.30		3.158E+00	8.186E-01	7.343E-01	9.131E-02	4.301
	+	241.98		1.826E+00	5.968E-01	6.913E-01	7.359E-02	2.642
	+	295.21		1.205E+00	2.856E-01	2.438E-01	2.708E-02	4.943
	+	351.92	*	1.494E+00	2.429E-01	1.228E-01	1.312E-02	12.167

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.896E+00	7.420E-01	6.561E-01	8.039E-02	5.939
	+	77.11		3.720E+00	5.874E-01	3.898E-01	4.823E-02	9.543
	+	87.30		3.158E+00	8.186E-01	7.343E-01	9.131E-02	4.301
	+	241.98		1.826E+00	5.968E-01	6.913E-01	7.359E-02	2.642
	+	295.21		1.205E+00	2.856E-01	2.438E-01	2.708E-02	4.943
PO-216	+	351.92	*	1.494E+00	2.429E-01	1.228E-01	1.312E-02	12.167
	+	74.81		2.261E+00	4.495E-01	3.808E-01	5.146E-02	5.939
	+	77.11		2.170E+00	3.001E-01	2.274E-01	2.216E-02	9.543
	+	87.30		1.844E+00	4.921E-01	4.287E-01	5.989E-02	4.301
	+	238.63	*	1.423E+00	2.139E-01	1.214E-01	1.224E-02	11.719
PO-218		300.09		8.460E-01	9.897E-01	1.561E+00	1.700E-01	0.542
	+	74.81		3.896E+00	7.420E-01	6.561E-01	8.039E-02	5.939
	+	77.11		3.720E+00	5.874E-01	3.898E-01	4.823E-02	9.543
	+	87.30		3.158E+00	8.186E-01	7.343E-01	9.131E-02	4.301
	+	241.98		1.826E+00	5.968E-01	6.913E-01	7.359E-02	2.642
RA-224	+	295.21		1.205E+00	2.856E-01	2.438E-01	2.708E-02	4.943
	+	351.92	*	1.494E+00	2.429E-01	1.228E-01	1.312E-02	12.167
	+	240.98	*	3.462E+00	1.115E+00	1.567E+00	1.417E-01	2.210
	+	609.31	*	1.250E+00	2.432E-01	1.298E-01	1.320E-02	9.637
	+	1120.29		1.568E+00	1.010E+00	6.975E-01	7.456E-02	2.249
AC-228	+	1764.49		1.735E+00	5.567E-01	5.424E-01	4.586E-02	3.198
	+	338.32		1.359E+00	7.589E-01	4.252E-01	1.758E-01	3.196
	+	911.07	*	1.485E+00	5.491E-01	2.944E-01	3.340E-02	5.045
	+	969.11		2.128E+00	7.233E-01	4.602E-01	1.076E-01	4.625
	+	338.32		1.359E+00	7.589E-01	4.252E-01	1.758E-01	3.196
RA-228	+	911.07	*	1.485E+00	5.491E-01	2.944E-01	3.340E-02	5.045
	+	969.11		2.128E+00	7.233E-01	4.602E-01	1.076E-01	4.625
	+	74.81		2.300E+00	4.044E-01	3.874E-01	3.806E-02	5.939
	+	77.11		2.207E+00	3.053E-01	2.313E-01	2.255E-02	9.543
	+	87.30		1.876E+00	4.641E-01	4.361E-01	4.255E-02	4.301
TH-228	+	238.63	*	1.447E+00	2.177E-01	1.235E-01	1.245E-02	11.719
		300.09		8.607E-01	1.125E+00	1.589E+00	9.430E-01	0.542
	+	609.31	*	1.250E+00	2.432E-01	1.297E-01	1.320E-02	9.637
	+	1120.29		1.568E+00	1.010E+00	6.974E-01	7.456E-02	2.249
	+	1764.49		1.734E+00	5.567E-01	5.424E-01	4.586E-02	3.198
TH-232	+	338.32		1.359E+00	5.246E-01	4.252E-01	3.831E-02	3.196
	+	911.07	*	1.485E+00	5.491E-01	2.944E-01	3.340E-02	5.045
	+	969.11		2.128E+00	7.233E-01	4.602E-01	1.076E-01	4.625
	+	63.29	*	2.171E+00	1.277E+00	1.028E+00	1.919E-01	2.112
	+	92.38		3.303E+00	9.395E-01	6.443E-01	1.209E-01	5.127
U-234	+	609.31	*	1.250E+00	2.432E-01	1.297E-01	1.320E-02	9.637
	+	1120.29		1.568E+00	1.010E+00	6.974E-01	7.456E-02	2.249
	+	1764.49		1.734E+00	5.567E-01	5.424E-01	4.586E-02	3.198
	+	86.50	*	1.171E+00	3.772E-01	2.715E-01	6.197E-02	4.311
		95.87		-9.582E-01	9.247E-01	1.258E+00	3.171E-01	-0.762
U-238	+	63.29	*	2.171E+00	1.277E+00	1.028E+00	1.919E-01	2.112
	+	92.38		3.303E+00	7.791E-01	6.443E-01	6.421E-02	5.127
	+	74.67	*	3.666E-01	6.432E-02	6.171E-02	6.025E-03	5.940
	+	86.72		4.390E+01	1.086E+01	1.019E+01	9.938E-01	4.309

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-1.163E+00	3.845E+00	6.279E+00	7.170E-01	-0.185
		142.18		-5.003E+00	1.957E+01	3.175E+01	3.274E+00	-0.158
ANH-511	+	511.00	*	1.152E-01	8.079E-02	5.349E-02	4.777E-03	2.154

---- 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	*	-5.394E-03	3.891E-01	6.371E-01	6.062E-02	-0.008
NA-22		1274.54	*	-4.209E-02	6.312E-02	9.283E-02	7.820E-03	-0.453
NA-24		1368.53	*	2.941E+00	6.312E-02	Half-Life too short		
AL-26		1129.67		2.233E-01	2.805E+00	3.979E+00	3.325E-01	0.056
		1808.65	*	1.415E-02	3.794E-02	6.729E-02	5.640E-03	0.210
TI-44		67.85		-3.017E-03	2.733E-02	4.412E-02	4.345E-03	-0.068
	+	78.38	*	4.004E-01	5.539E-02	6.219E-02	6.060E-03	6.439
SC-46		889.25	*	-1.584E-03	5.408E-02	8.925E-02	7.814E-03	-0.018
	+	1120.51		2.732E-01	1.751E-01	1.734E-01	1.455E-02	1.575
V-48		944.10		-9.324E-01	1.340E+00	2.037E+00	1.782E-01	-0.458
		983.50	*	-7.954E-02	1.088E-01	1.640E-01	1.430E-02	-0.485
		1312.09		-6.055E-02	1.215E-01	1.916E-01	1.626E-02	-0.316
CR-51		320.08	*	-7.627E-02	4.343E-01	7.228E-01	6.902E-02	-0.106
MN-52		744.21		3.521E-01	3.777E-01	6.858E-01	5.961E-02	0.513
		848.13		-1.098E+01	1.197E+01	1.796E+01	1.579E+00	-0.612
		935.52		2.109E-01	4.810E-01	8.249E-01	7.219E-02	0.256
		1246.25		5.651E+00	1.328E+01	2.234E+01	1.866E+00	0.253
		1333.61		3.028E+00	8.810E+00	1.537E+01	1.311E+00	0.197
		1434.06	*	1.024E-01	3.664E-01	6.376E-01	5.497E-02	0.161
MN-54		834.83	*	-2.871E-02	5.388E-02	8.535E-02	7.505E-03	-0.336
CO-56		846.75	*	1.690E-02	5.449E-02	9.315E-02	8.189E-03	0.181
		977.42		6.113E-01	4.048E+00	6.757E+00	5.898E-01	0.090
		1037.82		-9.402E-02	4.678E-01	7.487E-01	6.808E-02	-0.126
		1175.09		3.354E+00	3.309E+00	5.874E+00	4.801E-01	0.571
		1238.25		1.301E-01	1.321E-01	2.310E-01	1.985E-02	0.563
		1360.21		8.864E-01	1.257E+00	2.303E+00	1.970E-01	0.385
		1771.40		-1.264E-02	3.278E-01	5.317E-01	4.490E-02	-0.024
CO-57		122.06	*	3.891E-04	2.539E-02	4.201E-02	4.922E-03	0.009
		136.48		2.595E-02	2.242E-01	3.706E-01	4.172E-02	0.070
CO-58		810.76	*	-4.679E-02	5.117E-02	7.690E-02	6.772E-03	-0.608
FE-59		142.65		-1.004E-01	3.119E+00	5.111E+00	5.253E-01	-0.020
		192.34		1.617E+00	1.104E+00	1.880E+00	2.525E-01	0.860
		1099.22	*	1.696E-02	1.306E-01	2.155E-01	1.977E-02	0.079
		1291.56		1.969E-03	1.731E-01	2.783E-01	2.681E-02	0.007
CO-60		1173.22		1.082E-02	6.920E-02	1.128E-01	9.216E-03	0.096
		1332.49	*	4.513E-02	5.213E-02	9.617E-02	8.197E-03	0.469
ZN-65		1115.52	*	-4.668E-02	1.557E-01	2.091E-01	1.760E-02	-0.223
GE-68		1077.35	*	7.949E-01	1.571E+00	2.712E+00	2.315E-01	0.293
AS-73		53.44	*	3.039E-01	2.479E-01	4.384E-01	4.386E-02	0.693
AS-74		595.88	*	1.314E-01	1.380E-01	2.394E-01	2.109E-02	0.549
		634.78		-8.296E-02	5.196E-01	8.213E-01	7.074E-02	-0.101

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05	-1.330E+00	2.841E+00	4.244E+00	4.882E-01	-0.313
		96.73	-9.915E-01	7.751E-01	1.058E+00	1.552E-01	-0.937
		121.11	5.601E-02	1.370E-01	2.305E-01	3.154E-02	0.243
		136.00	2.293E-02	4.150E-02	6.986E-02	7.554E-03	0.328
		198.60	1.113E+00	1.962E+00	3.253E+00	3.134E-01	0.342
		264.65	* 8.728E-03	5.340E-02	8.133E-02	7.472E-03	0.107
		279.53	-6.176E-02	1.220E-01	2.011E-01	1.908E-02	-0.307
		303.91	-4.123E-01	2.403E+00	4.016E+00	4.776E-01	-0.103
		400.65	9.060E-03	2.984E-01	4.961E-01	5.461E-02	0.018
BR-77	+	87.88	1.633E+03	4.041E+02	5.710E+02	5.573E+01	2.860
	+	200.40	2.798E+02	3.270E+02	5.494E+02	4.790E+01	0.509
		239.00	4.258E+02	6.112E+01	8.025E+01	7.248E+00	5.306
		249.79	-8.415E+01	1.389E+02	2.116E+02	1.923E+01	-0.398
		281.68	-1.118E+02	1.808E+02	2.953E+02	2.712E+01	-0.379
		297.23	-1.845E+01	1.419E+02	2.098E+02	1.926E+01	-0.088
		303.76	-7.171E+01	3.764E+02	6.283E+02	5.761E+01	-0.114
		439.47	4.221E+02	3.078E+02	5.569E+02	4.854E+01	0.758
		484.57	1.020E+02	4.980E+02	8.298E+02	7.372E+01	0.123
		520.65	* 1.056E+01	2.500E+01	4.212E+01	3.765E+00	0.251
		574.64	-5.070E+01	4.978E+02	7.978E+02	7.084E+01	-0.064
		578.91	-1.154E+02	2.105E+02	2.735E+02	2.425E+01	-0.422
		585.48	1.164E+03	4.872E+02	8.420E+02	7.449E+01	1.383
		755.35	3.004E+02	4.343E+02	7.671E+02	6.685E+01	0.392
		817.79	-4.617E+00	3.267E+02	5.434E+02	4.776E+01	-0.008
SR-82		698.33	-4.031E+01	4.696E+01	7.324E+01	6.272E+00	-0.550
		776.49	* -5.494E-01	5.605E-01	8.511E-01	7.448E-02	-0.646
		1395.20	-3.891E+00	1.442E+01	2.306E+01	1.981E+00	-0.169
RB-83		520.41	* 3.281E-02	8.975E-02	1.506E-01	1.346E-02	0.218
		529.64	-1.132E-02	1.274E-01	2.056E-01	1.838E-02	-0.055
		552.65	1.991E-02	2.390E-01	3.909E-01	3.488E-02	0.051
RB-84		881.50	* 6.401E-02	1.056E-01	1.844E-01	1.616E-02	0.347
KR-85		513.99	* 2.614E+00	9.266E+00	1.366E+01	1.221E+00	0.191
SR-85		513.99	* 1.371E-02	4.859E-02	7.165E-02	6.401E-03	0.191
RB-86		1076.63	* -8.030E-02	1.123E+00	1.815E+00	1.549E-01	-0.044
Y-88		898.02	-1.527E-02	5.719E-02	9.197E-02	8.078E-03	-0.166
		1836.01	* 4.676E-03	4.553E-02	7.596E-02	6.334E-03	0.062
ZR-88		392.90	* -2.004E-02	3.606E-02	5.742E-02	4.837E-03	-0.349
Y-91		1204.90	* 9.546E+00	2.798E+01	4.669E+01	3.853E+00	0.204
NB-94		702.63	* 2.350E-02	4.416E-02	7.675E-02	6.584E-03	0.306
		871.10	2.254E-02	4.590E-02	7.971E-02	6.995E-03	0.283
NB-95		765.79	* 7.966E-02	6.788E-02	1.112E-01	9.710E-03	0.717
NB-95M		235.69	* 5.227E-02	1.588E-01	2.305E-01	2.353E-02	0.227
ZR-95		724.18	1.866E-01	1.417E-01	2.365E-01	2.220E-02	0.789
		756.15	* 3.627E-02	1.011E-01	1.744E-01	1.671E-02	0.208
NB-97		657.90	* -1.824E+00	1.011E-01	Half-Life	too short	
		1024.50	-1.012E+02	1.011E-01	Half-Life	too short	
ZR-97		254.15	-4.622E+01	1.011E-01	Half-Life	too short	
		355.39	-1.783E+01	1.011E-01	Half-Life	too short	
		507.63	* 3.386E+01	1.011E-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			1.094E+01	1.011E-01	Half-Life	too short	
	1021.30			1.233E+01	1.011E-01	Half-Life	too short	
	1147.95			4.784E+01	1.011E-01	Half-Life	too short	
	1362.66			7.296E+00	1.011E-01	Half-Life	too short	
	1750.46			1.228E+01	1.011E-01	Half-Life	too short	
MO-99	140.51			7.247E+00	4.849E+01	8.008E+01	2.267E+01	0.090
	181.06			3.229E+01	3.315E+01	5.047E+01	9.205E+00	0.640
	366.43			1.596E+01	1.494E+02	2.513E+02	2.200E+01	0.063
	739.58	*		6.937E+00	2.382E+01	4.105E+01	6.248E+00	0.169
	778.00			4.082E+01	8.238E+01	1.433E+02	1.254E+01	0.285
TC-99M	140.51	*		2.243E+12	8.238E+01	Half-Life	too short	
RH-101	127.23			2.926E-02	3.487E-02	5.393E-02	6.134E-03	0.543
	198.01	*		-1.109E-02	3.592E-02	5.691E-02	4.948E-03	-0.195
	325.23			-1.013E-01	2.679E-01	3.833E-01	3.484E-02	-0.264
RH-102	418.52			-2.906E-01	3.277E-01	5.024E-01	4.320E-02	-0.578
	475.06	*		-2.479E-02	3.352E-02	5.122E-02	4.537E-03	-0.484
	631.29			6.524E-02	7.430E-02	1.285E-01	1.109E-02	0.508
	697.49			4.752E-02	1.009E-01	1.762E-01	1.508E-02	0.270
	766.84	+		3.393E-01	1.822E-01	2.840E-01	2.481E-02	1.194
	1046.59			1.614E-02	1.765E-01	2.841E-01	2.448E-02	0.057
	1112.84			-6.249E-02	3.426E-01	5.308E-01	4.469E-02	-0.118
RU-103	497.08	*		2.512E-02	5.104E-02	8.668E-02	1.243E-02	0.290
	610.33	+		1.402E+01	3.304E+00	3.714E+00	6.221E-01	3.775
RH-106	511.85	+		5.780E-01	4.051E-01	5.052E-01	4.512E-02	1.144
	621.84	*		1.915E-01	4.420E-01	7.369E-01	9.876E-02	0.260
	1050.47			-1.761E+00	3.380E+00	5.207E+00	4.481E-01	-0.338
RU-106	511.85	+		5.780E-01	4.051E-01	5.052E-01	4.512E-02	1.144
	621.84	*		1.915E-01	4.416E-01	7.369E-01	6.402E-02	0.260
	1050.47			-1.761E+00	3.380E+00	5.207E+00	4.481E-01	-0.338
AG-108M	433.93	*		1.325E-02	3.652E-02	6.199E-02	5.595E-03	0.214
	614.37			-9.732E-04	5.481E-02	7.682E-02	6.961E-03	-0.013
	722.95			1.140E-02	5.854E-02	8.780E-02	7.881E-03	0.130
AG-110M	657.75	*		-7.903E-02	4.653E-02	5.996E-02	5.226E-03	-1.318
	677.61			1.166E-01	3.986E-01	6.555E-01	5.726E-02	0.178
	706.67			-1.429E-01	2.591E-01	4.143E-01	3.658E-02	-0.345
	763.93			5.904E-02	2.491E-01	3.733E-01	3.349E-02	0.158
	884.67			5.228E-02	7.028E-02	1.243E-01	1.123E-02	0.421
	937.48			-1.398E-01	1.633E-01	2.452E-01	2.221E-02	-0.570
	1384.27			3.843E-02	2.050E-01	3.515E-01	3.102E-02	0.109
IN-111	171.28			-7.557E-01	1.785E+00	2.833E+00	2.379E-01	-0.267
	245.39	*		8.772E-01	2.195E+00	3.206E+00	2.907E-01	0.274
IN-113M	391.69	*		1.447E-02	5.149E-02	8.722E-02	7.578E-03	0.166
SN-113	391.69	*		1.447E-02	5.149E-02	8.722E-02	7.578E-03	0.166
IN-114M	190.27	*		-1.918E-01	2.387E-01	3.237E-01	2.788E-02	-0.592
CD-115	260.90			-2.573E+02	3.039E+02	4.536E+02	4.145E+01	-0.567
	492.35			1.017E+01	7.856E+01	1.300E+02	1.158E+01	0.078
	527.90	*		8.276E+00	2.364E+01	3.975E+01	3.554E+00	0.208
SN-117M	156.02			-9.307E-01	2.728E+00	4.379E+00	4.031E-01	-0.213
	158.56	*		-1.362E-02	6.458E-02	1.042E-01	9.370E-03	-0.131

---- 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	*		5.223E+00	4.704E+00	8.278E+00	7.371E-01	0.631
	692.80			-4.534E+01	9.821E+01	1.592E+02	1.360E+01	-0.285
I-123	159.00	*		6.831E+00	9.821E+01	Half-Life	too short	
	528.96			-4.938E+03	9.821E+01	Half-Life	too short	
TE-123M	159.00	*		2.286E-03	2.988E-02	4.894E-02	4.405E-03	0.047
I-124	602.71	*		-2.265E-02	1.448E+00	2.034E+00	1.786E-01	-0.011
	722.78			3.080E+00	8.475E+00	1.298E+01	1.121E+00	0.237
	1325.50			-1.159E+01	6.281E+01	1.027E+02	8.742E+00	-0.113
	1376.25			9.860E+01	6.395E+01	1.236E+02	1.060E+01	0.798
	1509.49			6.760E+00	2.725E+01	4.701E+01	4.065E+00	0.144
	1691.02			-5.046E-01	5.845E+00	9.383E+00	8.026E-01	-0.054
SB-124	602.71			-9.471E-04	6.054E-02	8.504E-02	7.469E-03	-0.011
	645.85			-5.962E-01	6.961E-01	1.016E+00	9.210E-02	-0.587
	709.31			-2.409E-01	3.491E+00	5.840E+00	5.022E-01	-0.041
	713.82			-9.962E-01	1.945E+00	3.102E+00	3.733E-01	-0.321
	722.78			1.867E-01	5.137E-01	7.867E-01	6.942E-02	0.237
	+ 968.20			2.246E+01	5.876E+00	1.032E+01	9.019E-01	2.175
	1045.16			-1.085E+00	3.935E+00	6.099E+00	5.257E-01	-0.178
	1325.50			-7.504E-01	4.066E+00	6.648E+00	5.658E-01	-0.113
	1368.21			-3.408E-01	2.444E+00	4.008E+00	5.388E-01	-0.085
	1436.60			-1.630E+00	4.349E+00	6.744E+00	5.816E-01	-0.242
	1691.02	*		-7.214E-03	8.356E-02	1.341E-01	1.193E-02	-0.054
SB-125	427.89	*		9.453E-02	1.061E-01	1.864E-01	1.644E-02	0.507
	+ 463.38			8.295E-01	4.887E-01	6.594E-01	6.251E-02	1.258
	600.56			4.497E-02	2.482E-01	4.060E-01	3.823E-02	0.111
	635.90			-4.004E-01	3.627E-01	5.133E-01	4.775E-02	-0.780
TE-125M	109.28	*		-2.127E+00	9.398E+00	1.546E+01	1.901E+00	-0.138
I-126	388.63			1.662E-01	2.712E-01	4.634E-01	3.921E-02	0.359
	666.33	*		-2.689E-01	2.968E-01	4.339E-01	3.663E-02	-0.620
	753.82			1.289E+00	2.198E+00	3.863E+00	3.365E-01	0.334
SB-126	223.80			-2.501E+00	4.947E+00	7.665E+00	6.841E-01	-0.326
	278.60			2.276E+00	3.098E+00	5.440E+00	4.994E-01	0.418
	+ 296.50			1.352E+01	3.091E+00	4.421E+00	4.059E-01	3.057
	414.70			6.125E-02	9.905E-02	1.710E-01	1.466E-02	0.358
	415.30			-9.131E-02	8.129E+00	1.344E+01	1.153E+00	-0.007
	555.20			-1.265E+00	5.467E+00	8.670E+00	7.734E-01	-0.146
	573.80			4.174E-01	1.533E+00	2.538E+00	2.254E-01	0.164
	593.00			-2.111E-01	1.374E+00	2.186E+00	1.928E-01	-0.097
	656.30			-4.341E-01	4.259E+00	6.739E+00	5.704E-01	-0.064
	666.33			-1.129E-01	1.246E-01	1.822E-01	1.538E-02	-0.620
	675.00			-7.070E-01	2.813E+00	4.372E+00	3.707E-01	-0.162
	695.00			4.930E-02	1.117E-01	1.950E-01	1.667E-02	0.253
	697.00			2.407E-01	4.051E-01	7.130E-01	6.103E-02	0.338
	720.50	*		8.614E-02	2.110E-01	3.262E-01	2.816E-02	0.264
	856.80			-4.652E-01	7.713E-01	1.208E+00	1.062E-01	-0.385
	989.30			7.033E-01	2.024E+00	3.439E+00	2.997E-01	0.204
	1034.80			-7.729E+00	1.507E+01	2.331E+01	2.014E+00	-0.332
	1213.00			-3.152E+00	7.936E+00	1.229E+01	1.017E+00	-0.256
SB-127	61.10			1.617E+01	3.890E+01	6.070E+01	7.816E+00	0.266

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		252.40		4.673E+00	7.118E+00	1.136E+01	4.806E+00	0.411
		290.80		-4.775E+00	3.807E+01	5.632E+01	6.892E+00	-0.085
		411.60		5.933E+00	2.175E+01	3.665E+01	5.924E+00	0.162
		444.90		-2.560E+00	1.707E+01	2.779E+01	3.669E+00	-0.092
		473.00		-4.065E-01	2.769E+00	4.483E+00	6.093E-01	-0.091
		543.00		-2.669E+01	3.109E+01	4.608E+01	6.955E+00	-0.579
		603.60		-2.542E+00	2.530E+01	3.516E+01	4.643E+00	-0.072
		685.20	*	-1.176E-01	2.424E+00	3.847E+00	4.599E-01	-0.031
		698.50		-2.438E+01	2.919E+01	4.530E+01	7.366E+00	-0.538
		722.20		1.070E+01	5.989E+01	8.971E+01	1.061E+01	0.119
		783.80		2.212E+00	7.256E+00	1.243E+01	1.629E+00	0.178
XE-127		57.60		-3.735E-01	2.345E+00	3.930E+00	3.947E-01	-0.095
		145.22		3.228E-01	8.077E-01	1.346E+00	1.357E-01	0.240
		172.10		-5.160E-02	1.307E-01	2.078E-01	1.747E-02	-0.248
		202.84	*	-5.867E-02	5.465E-02	8.237E-02	7.201E-03	-0.712
		374.96		-1.976E-02	2.276E-01	3.768E-01	3.259E-02	-0.052
I-131		80.18		-1.081E+00	5.453E+00	6.477E+00	6.350E-01	-0.167
		284.30		-7.434E-01	2.020E+00	3.352E+00	3.225E-01	-0.222
		364.48	*	-1.663E-01	1.545E-01	2.362E-01	2.185E-02	-0.704
		636.97		2.702E-01	2.338E+00	3.797E+00	3.454E-01	0.071
		722.89		4.353E+00	1.154E+01	1.771E+01	1.542E+00	0.246
TE-132		49.72		5.169E-01	6.859E+00	1.065E+01	1.335E+00	0.049
		111.76		-2.512E+00	4.723E+01	7.672E+01	1.025E+01	-0.033
		116.30		1.441E+01	4.286E+01	7.201E+01	9.795E+00	0.200
		228.16	*	3.494E-01	1.156E+00	1.879E+00	3.064E-01	0.186
BA-133		53.15		1.125E+00	1.023E+00	1.805E+00	1.806E-01	0.623
		79.62		5.503E-01	1.201E+00	1.496E+00	2.377E-01	0.368
		81.00		-6.944E-02	9.733E-02	1.100E-01	1.817E-02	-0.631
		276.40		4.356E-01	4.233E-01	7.464E-01	1.104E-01	0.584
		302.84		-2.236E-01	1.702E-01	2.616E-01	3.571E-02	-0.855
		356.01	*	-2.954E-02	5.261E-02	7.283E-02	9.730E-03	-0.406
		383.85		-1.767E-01	3.392E-01	5.417E-01	6.794E-02	-0.326
I-133	+	510.53		6.465E+00	3.392E-01	Half-Life	too short	
		529.87	*	2.972E-03	3.392E-01	Half-Life	too short	
		706.58		-1.523E+00	3.392E-01	Half-Life	too short	
		856.28		-2.663E+00	3.392E-01	Half-Life	too short	
		875.33		-4.947E-01	3.392E-01	Half-Life	too short	
		1236.41		4.966E+00	3.392E-01	Half-Life	too short	
		1298.22		-3.423E-03	3.392E-01	Half-Life	too short	
CS-134		475.35		-1.411E+00	2.144E+00	3.300E+00	2.923E-01	-0.427
		563.23		3.994E-01	4.734E-01	8.185E-01	7.354E-02	0.488
		569.32		-2.443E-02	2.695E-01	4.330E-01	3.899E-02	-0.056
		604.70		-4.268E-02	5.201E-02	6.554E-02	5.764E-03	-0.651
		795.84	*	3.021E-02	5.878E-02	1.026E-01	9.066E-03	0.294
		801.93		-2.425E-01	5.354E-01	8.512E-01	7.514E-02	-0.285
		1038.57		-4.725E-01	5.619E+00	9.104E+00	7.860E-01	-0.052
		1167.94		1.522E+00	3.639E+00	6.138E+00	5.029E-01	0.248
		1365.15		-4.247E-01	1.649E+00	2.657E+00	2.381E-01	-0.160
CS-135		268.24	*	1.973E-01	1.922E-01	2.927E-01	3.054E-02	0.674

---- 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			3.528E+12	1.922E-01	Half-Life	too short	
	417.63			-8.187E+12	1.922E-01	Half-Life	too short	
	546.56			3.992E+11	1.922E-01	Half-Life	too short	
	836.80			5.904E+12	1.922E-01	Half-Life	too short	
	1038.76			-3.472E+10	1.922E-01	Half-Life	too short	
	1124.00			-3.723E+12	1.922E-01	Half-Life	too short	
	1131.51			-1.211E+12	1.922E-01	Half-Life	too short	
	1260.41	*		-1.063E+12	1.922E-01	Half-Life	too short	
	1457.56			2.486E+14	1.922E-01	Half-Life	too short	
	1678.03			1.893E+12	1.922E-01	Half-Life	too short	
	1706.46			1.700E+12	1.922E-01	Half-Life	too short	
	1791.20			-8.735E+11	1.922E-01	Half-Life	too short	
CS-136	66.91			-3.316E-01	5.384E-01	7.962E-01	1.287E-01	-0.416
	86.29	+		5.821E+00	1.544E+00	2.022E+00	2.758E-01	2.878
	153.22			2.343E-01	7.724E-01	1.280E+00	1.329E-01	0.183
	163.89			5.514E-01	1.277E+00	2.123E+00	2.031E-01	0.260
	176.55			5.351E-01	4.416E-01	7.563E-01	6.783E-02	0.707
	273.65			-5.020E-01	6.776E-01	8.871E-01	8.613E-02	-0.566
	340.57			1.671E-01	1.664E-01	2.661E-01	2.458E-02	0.628
	818.51			2.615E-02	1.069E-01	1.823E-01	1.605E-02	0.143
	1048.07	*		2.994E-02	1.735E-01	2.884E-01	2.590E-02	0.104
	1235.34			2.224E-01	9.649E-01	1.587E+00	1.847E-01	0.140
BA-137M	661.65	*		9.479E-02	5.120E-02	9.362E-02	7.887E-03	1.013
CS-137	661.65	*		1.002E-01	5.413E-02	9.897E-02	8.353E-03	1.013
CE-139	165.85	*		-6.251E-03	3.256E-02	5.248E-02	4.376E-03	-0.119
BA-140	162.64			3.095E-01	8.887E-01	1.473E+00	1.345E-01	0.210
	304.84			7.988E-01	1.568E+00	2.697E+00	7.606E-01	0.296
LA-140	423.70			-1.584E+00	2.542E+00	3.912E+00	1.268E+00	-0.405
	537.32	*		2.269E-01	3.454E-01	5.822E-01	1.934E-01	0.390
	328.77	+		9.852E-01	5.526E-01	7.344E-01	7.000E-02	1.341
	432.53			8.828E-01	2.588E+00	4.387E+00	3.990E-01	0.201
	487.03			4.723E-03	1.785E-01	2.929E-01	2.756E-02	0.016
	751.79			-5.788E-01	2.508E+00	4.115E+00	3.959E-01	-0.141
	815.85			2.709E-01	4.715E-01	8.278E-01	8.082E-02	0.327
	867.82			-1.451E-01	2.056E+00	3.385E+00	3.123E-01	-0.043
	919.63			-1.787E+00	5.205E+00	7.073E+00	7.606E-01	-0.253
	925.24			-1.944E-01	1.809E+00	2.952E+00	2.741E-01	-0.066
	1596.49	*		-9.530E-02	1.126E-01	1.523E-01	1.315E-02	-0.626
CE-141	145.44	*		7.100E-02	7.212E-02	1.227E-01	1.252E-02	0.579
CE-143	57.37			3.655E-05	7.212E-02	Half-Life	too short	
	231.56			-1.655E-03	7.212E-02	Half-Life	too short	
	293.26	*		1.402E-03	7.212E-02	Half-Life	too short	
	350.59	+		9.987E-02	7.212E-02	Half-Life	too short	
	490.36			3.621E-03	7.212E-02	Half-Life	too short	
	664.57			-1.096E-03	7.212E-02	Half-Life	too short	
	721.93			2.167E-04	7.212E-02	Half-Life	too short	
CE-144	80.11			-3.755E-01	2.098E+00	2.496E+00	2.431E-01	-0.150
	133.54	*		1.684E-02	2.418E-01	3.576E-01	6.066E-02	0.047
PM-144	476.78			-3.956E-02	8.038E-02	1.261E-01	1.217E-02	-0.314

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144		618.01		-1.651E-02	4.372E-02	6.785E-02	6.070E-03	-0.243
		696.49	*	3.601E-02	4.685E-02	8.339E-02	7.139E-03	0.432
		778.57		1.290E+00	3.198E+00	5.527E+00	4.841E-01	0.233
		696.49	*	2.443E+00	3.178E+00	5.657E+00	4.841E-01	0.432
PM-146		1489.15		-1.466E+01	1.575E+01	2.171E+01	1.877E+00	-0.675
		453.90	*	-1.173E-02	4.914E-02	7.918E-02	8.594E-03	-0.148
		633.02		5.232E-01	1.874E+00	3.072E+00	1.148E+00	0.170
		735.90		-2.627E-02	2.031E-01	3.177E-01	9.091E-02	-0.083
ND-147		747.13		-1.105E-02	1.120E-01	1.860E-01	2.620E-02	-0.059
	+	91.11		9.199E-01	3.103E-01	5.182E-01	5.457E-02	1.775
		319.41		-1.929E+00	4.240E+00	6.928E+00	6.319E-01	-0.278
		439.89		9.275E+00	7.780E+00	1.392E+01	1.213E+00	0.666
PM-149		531.02	*	1.218E-01	7.376E-01	1.219E+00	1.845E-01	0.100
		285.90	*	1.329E+02	1.975E+02	3.450E+02	5.476E+01	0.385
EU-152		121.78		1.267E-02	7.363E-02	1.227E-01	1.556E-02	0.103
		244.69		1.900E-01	4.047E-01	5.941E-01	5.385E-02	0.320
		344.27	*	-1.002E-02	1.102E-01	1.774E-01	1.678E-02	-0.056
		443.98		-1.036E+00	1.163E+00	1.774E+00	1.550E-01	-0.584
GD-153		778.89		1.170E-01	3.648E-01	6.265E-01	5.485E-02	0.187
		867.32		-2.145E-01	1.112E+00	1.808E+00	1.587E-01	-0.119
		964.01		4.348E-01	4.991E-01	7.813E-01	6.828E-02	0.556
		1085.78		5.018E-01	5.312E-01	9.522E-01	8.103E-02	0.527
EU-154		1112.02		1.188E-02	4.656E-01	7.587E-01	6.390E-02	0.016
		1407.95		7.733E-02	2.185E-01	3.836E-01	3.300E-02	0.202
		69.67		3.139E-01	1.036E+00	1.696E+00	1.665E-01	0.185
		83.37		2.370E+01	1.174E+01	1.992E+01	1.940E+00	1.190
EU-155		97.43	*	-1.832E-02	7.880E-02	1.166E-01	1.192E-02	-0.157
		103.18		-5.100E-02	9.749E-02	1.585E-01	1.671E-02	-0.322
		123.07		-1.911E-02	5.348E-02	8.257E-02	1.140E-02	-0.231
		247.94		-1.581E-01	4.112E-01	6.367E-01	7.530E-02	-0.248
TB-160		591.81		-6.277E-01	7.924E-01	1.174E+00	1.389E-01	-0.534
		723.30		7.640E-02	2.473E-01	3.758E-01	3.588E-02	0.203
		756.87		6.994E-01	1.060E+00	1.868E+00	2.250E-01	0.374
		873.19		-1.861E-01	4.079E-01	6.434E-01	7.948E-02	-0.289
EU-155		996.32		-4.505E-01	5.166E-01	7.555E-01	1.345E-01	-0.596
		1004.76		-2.670E-01	2.844E-01	4.124E-01	4.823E-02	-0.647
		1274.45	*	-1.766E-01	1.824E-01	2.563E-01	2.859E-02	-0.689
		48.70		-1.033E-01	4.954E-01	7.584E-01	7.618E-02	-0.136
TB-160		60.01		-5.183E-01	2.292E+00	3.456E+00	3.477E-01	-0.150
	+	86.54		4.805E-01	1.190E-01	1.709E-01	1.680E-02	2.812
		105.31	*	5.156E-02	1.027E-01	1.743E-01	1.873E-02	0.296
	+	86.79		1.309E+00	3.239E-01	4.661E-01	4.547E-02	2.808
TB-160		197.04		-2.890E-01	6.165E-01	9.675E-01	8.402E-02	-0.299
		215.65		2.314E-01	8.030E-01	1.309E+00	1.160E-01	0.177
		298.57		1.309E-01	1.436E-01	2.279E-01	2.091E-02	0.574
		879.36	*	-3.029E-03	1.997E-01	3.303E-01	2.896E-02	-0.009
TB-160		962.29		3.943E-01	8.927E-01	1.402E+00	1.225E-01	0.281
		966.15		1.268E+00	4.489E-01	7.731E-01	6.755E-02	1.640
		1177.93		2.063E-01	5.319E-01	8.940E-01	7.315E-02	0.231

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		1271.85		1.241E-01	1.007E+00	1.642E+00	1.381E-01	0.076
		80.57		-1.199E-01	2.675E-01	3.112E-01	3.031E-02	-0.385
	+	184.41		1.740E-01	6.500E-02	7.133E-02	6.098E-03	2.440
		280.46		-5.248E-02	9.484E-02	1.558E-01	1.431E-02	-0.337
		410.95		2.397E-01	2.901E-01	5.064E-01	4.330E-02	0.473
	*	711.68		4.971E-02	7.018E-02	1.256E-01	1.081E-02	0.396
		752.31		-1.038E-01	3.584E-01	5.849E-01	5.094E-02	-0.178
TM-171		810.29		-4.776E-02	7.523E-02	1.171E-01	1.028E-02	-0.408
		51.35		-6.325E+00	7.514E+00	1.242E+01	1.244E+00	-0.509
		52.39		2.227E+00	4.287E+00	7.457E+00	7.461E-01	0.299
		59.40		-2.755E-01	1.187E+01	1.808E+01	1.822E+00	-0.015
	*	66.72		-1.313E+01	1.742E+01	2.566E+01	2.533E+00	-0.512
LU-176	+	88.36		9.455E-01	2.340E-01	3.232E-01	3.160E-02	2.926
		201.83		-3.910E-02	3.267E-02	4.890E-02	4.270E-03	-0.800
	*	306.84		1.551E-03	2.681E-02	4.538E-02	4.157E-03	0.034
LU-177		401.10		2.084E+00	7.722E+00	1.305E+01	1.107E+00	0.160
		112.95		-7.636E-01	2.024E+00	3.232E+00	3.593E-01	-0.236
LU-177M	+	208.36	*	4.145E+00	2.342E+00	2.851E+00	2.507E-01	1.454
		52.97		5.043E-01	4.612E-01	8.139E-01	8.142E-02	0.620
HF-181		54.07		4.345E-01	2.650E-01	4.720E-01	4.723E-02	0.921
		61.30		4.072E-01	7.073E-01	1.111E+00	1.112E-01	0.367
		121.62		9.130E-02	3.821E-01	6.384E-01	7.456E-02	0.143
		147.16		-1.866E-01	7.169E-01	1.160E+00	1.152E-01	-0.161
		171.86		-1.548E-01	5.085E-01	8.123E-01	6.826E-02	-0.191
		218.09		-4.416E-01	9.401E-01	1.463E+00	1.300E-01	-0.302
	+	268.79		2.930E+00	1.200E+00	1.604E+00	1.470E-01	1.826
		319.02		-4.370E-02	2.927E-01	4.880E-01	4.451E-02	-0.090
		367.43		-6.735E-01	9.347E-01	1.468E+00	1.283E-01	-0.459
	*	413.65		1.028E-01	2.136E-01	3.652E-01	3.129E-02	0.282
		56.28		-1.447E-01	3.295E-01	5.530E-01	5.543E-02	-0.262
		57.53		-1.374E-04	1.923E-01	3.280E-01	3.294E-02	0.000
		65.20		-4.127E-02	5.497E-01	8.376E-01	8.295E-02	-0.049
		133.02		-1.597E-02	8.032E-02	1.169E-01	1.283E-02	-0.137
		136.25		3.025E-01	4.970E-01	8.382E-01	9.009E-02	0.361
W-181		345.85		2.866E-02	2.466E-01	3.676E-01	3.291E-02	0.078
	*	482.03		9.765E-03	5.297E-02	8.810E-02	7.822E-03	0.111
		56.28		-5.541E-02	1.261E-01	2.116E-01	2.122E-02	-0.262
		57.53		-2.235E-05	7.365E-02	1.256E-01	1.261E-02	0.000
	*	65.20		-1.568E-02	2.089E-01	3.182E-01	3.152E-02	-0.049
TA-182		67.75		-1.256E-02	7.020E-02	1.063E-01	1.047E-02	-0.118
		100.10		9.075E-02	1.640E-01	2.795E-01	2.897E-02	0.325
		152.43		-2.093E-01	3.560E-01	5.644E-01	5.365E-02	-0.371
		222.10		2.162E-01	3.809E-01	6.291E-01	5.607E-02	0.344
		1001.68		3.285E+00	2.607E+00	4.821E+00	4.194E-01	0.681
	+	1121.28		7.511E-01	4.812E-01	4.628E-01	3.882E-02	1.623
		1189.05		2.428E-01	4.891E-01	8.264E-01	6.786E-02	0.294
RE-183		1221.42	*	-1.958E-01	3.019E-01	4.549E-01	3.773E-02	-0.430
		1230.97		-4.360E-01	7.076E-01	1.068E+00	8.885E-02	-0.408
		57.98		-1.096E-02	7.985E-02	1.282E-01	1.289E-02	-0.085

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184		59.32		-1.437E-03	4.958E-02	7.546E-02	7.603E-03	-0.019
		67.20		-6.410E-02	1.266E-01	1.888E-01	1.862E-02	-0.339
		162.32	*	2.958E-02	1.181E-01	1.948E-01	1.687E-02	0.152
	+	208.81		3.053E+00	1.725E+00	2.098E+00	1.846E-01	1.455
		291.72		-2.423E-01	1.139E+00	1.672E+00	1.535E-01	-0.145
		57.98		-3.990E-02	2.906E-01	4.667E-01	4.690E-02	-0.085
		59.32		-5.227E-03	1.803E-01	2.744E-01	2.765E-02	-0.019
		67.20		-2.332E-01	4.606E-01	6.870E-01	6.774E-02	-0.339
		161.27		-1.099E-01	3.774E-01	6.060E-01	5.303E-02	-0.181
		216.55		1.727E-01	2.828E-01	4.689E-01	4.158E-02	0.368
OS-185		252.85	*	1.066E-01	2.512E-01	4.100E-01	3.733E-02	0.260
		318.01		-3.175E-02	5.042E-01	8.455E-01	7.714E-02	-0.038
		792.07		6.686E-01	1.192E+00	2.095E+00	1.837E-01	0.319
		903.28		-3.614E-02	1.607E+00	2.296E+00	2.008E-01	-0.016
		920.93		3.666E-02	6.450E-01	1.011E+00	8.850E-02	0.036
		59.72		-2.794E-03	1.346E-01	2.048E-01	2.063E-02	-0.014
		61.14		3.231E-02	7.664E-02	1.197E-01	1.199E-02	0.270
		69.30		6.985E-02	1.796E-01	3.078E-01	3.023E-02	0.227
		592.07		-2.558E+00	3.391E+00	5.073E+00	4.477E-01	-0.504
		646.12	*	-4.433E-02	5.867E-02	8.674E-02	7.406E-03	-0.511
RE-188		717.42		-4.159E-01	1.055E+00	1.705E+00	1.470E-01	-0.244
		874.81		-6.905E-01	8.312E-01	1.257E+00	1.103E-01	-0.549
		880.27		-7.959E-01	1.139E+00	1.753E+00	1.537E-01	-0.454
		155.03	*	2.967E-01	1.869E-01	3.246E-01	3.016E-02	0.914
		477.96		7.830E-01	3.671E+00	6.124E+00	5.430E-01	0.128
		633.10		1.026E+00	3.843E+00	6.324E+00	5.453E-01	0.162
	+	63.58		8.915E+01	5.052E+01	5.551E+01	5.521E+00	1.606
		227.08		7.423E+00	1.384E+01	2.282E+01	2.043E+00	0.325
		290.67	*	-1.150E+00	9.170E+00	1.357E+01	1.246E+00	-0.085
	+	295.96		9.374E-01	2.146E-01	3.267E-01	3.019E-02	2.869
IR-192		308.46		-6.165E-02	1.065E-01	1.729E-01	1.591E-02	-0.357
		316.51	*	1.328E-02	3.852E-02	6.620E-02	6.057E-03	0.201
		468.07		-7.000E-03	8.745E-02	1.247E-01	1.177E-02	-0.056
		604.41		-6.359E-01	7.156E-01	8.881E-01	1.165E-01	-0.716
		612.46		4.502E-01	1.022E+00	1.513E+00	1.514E-01	0.297
		65.12		8.647E-03	9.662E-02	1.483E-01	1.469E-02	0.058
		66.83		-3.700E-02	5.793E-02	8.585E-02	8.471E-03	-0.431
	+	75.70		1.196E+00	2.098E-01	3.562E-01	3.475E-02	3.358
		98.88	*	4.497E-01	2.092E-01	3.701E-01	3.812E-02	1.215
	+	129.76		7.236E+00	5.448E+00	5.574E+00	6.244E-01	1.298
TL-200		367.94	*	-2.159E-04	5.448E+00	Half-Life	too short	
		579.30		-6.268E-03	5.448E+00	Half-Life	too short	
		828.27		1.223E-02	5.448E+00	Half-Life	too short	
		1205.75		-1.192E-03	5.448E+00	Half-Life	too short	
TL-201		68.90		3.773E+00	4.565E+00	7.908E+00	7.773E-01	0.477
		70.82		1.946E-01	3.008E+00	4.594E+00	4.503E-01	0.042
		80.30		-1.926E+00	8.044E+00	9.524E+00	9.276E-01	-0.202
		135.34		7.058E+00	4.361E+01	7.226E+01	7.813E+00	0.098
		167.43	*	1.928E+00	1.211E+01	1.986E+01	1.658E+00	0.097

---- 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		2.356E-01	2.850E-01	4.937E-01	4.853E-02	0.477
		70.82		1.212E-02	1.873E-01	2.860E-01	2.803E-02	0.042
		80.30		-1.199E-01	5.009E-01	5.931E-01	5.777E-02	-0.202
		439.56	*	1.231E-01	9.019E-02	1.631E-01	1.422E-02	0.755
HG-203		70.83		4.308E-02	7.424E-01	1.133E+00	1.630E-01	0.038
		72.87		4.266E-01	4.580E-01	7.124E-01	9.963E-02	0.599
		82.60		-2.896E-01	1.180E+00	1.394E+00	2.017E-01	-0.208
		279.20	*	-1.072E-02	4.722E-02	7.912E-02	7.446E-03	-0.135
BI-207		72.80		1.063E-01	1.289E-01	2.007E-01	1.963E-02	0.530
	+	74.97		6.581E-01	1.155E-01	1.711E-01	1.670E-02	3.847
		84.90		4.323E-01	1.590E-01	2.711E-01	2.642E-02	1.595
		569.67		6.414E-03	4.135E-02	6.779E-02	6.028E-03	0.095
		1063.62	*	1.276E-02	7.154E-02	1.168E-01	1.002E-02	0.109
		1770.23		-1.126E+00	8.679E-01	1.093E+00	9.232E-02	-1.030
TL-207		81.07		-1.570E-01	2.139E-01	2.425E-01	2.362E-02	-0.647
		83.78		2.420E-01	1.020E-01	1.736E-01	1.691E-02	1.394
		94.90		3.689E-01	2.090E-01	3.377E-01	3.408E-02	1.092
		122.32		-2.514E-01	1.735E+00	2.848E+00	3.466E-01	-0.088
		144.24		1.892E-01	7.689E-01	1.274E+00	1.406E-01	0.149
		154.21		3.858E-01	4.204E-01	7.138E-01	7.249E-02	0.540
	+	269.46		6.796E-01	2.787E-01	3.915E-01	3.653E-02	1.736
		323.87	*	-2.221E-01	8.258E-01	1.171E+00	2.102E-01	-0.190
	+	338.28		5.674E+00	2.247E+00	2.841E+00	3.576E-01	1.998
		445.03		-6.973E-02	2.734E+00	4.495E+00	5.473E-01	-0.016
PO-209		260.50		-2.525E+00	1.127E+01	1.760E+01	1.608E+00	-0.143
		262.80		3.301E+01	3.039E+01	5.129E+01	4.690E+00	0.644
		896.60	*	-1.022E+00	9.890E+00	1.618E+01	1.415E+00	-0.063
PB-211		404.84	*	6.295E-01	1.143E+00	1.852E+00	1.161E+00	0.340
		427.08		1.186E+00	2.423E+00	3.965E+00	2.464E+00	0.299
		831.96		-1.467E+00	1.837E+00	2.403E+00	1.506E+00	-0.611
BI-212	+	727.18	*	1.374E+00	8.673E-01	9.082E-01	9.113E-02	1.512
		785.46		-4.749E-01	2.278E+00	3.733E+00	3.271E-01	-0.127
		1620.62		-5.818E-01	1.402E+00	2.096E+00	1.806E-01	-0.278
PO-215		81.07		-1.570E-01	2.139E-01	2.425E-01	2.362E-02	-0.647
		83.78		2.420E-01	1.020E-01	1.736E-01	1.691E-02	1.394
		94.90		3.689E-01	2.090E-01	3.377E-01	3.408E-02	1.092
		122.32		-2.514E-01	1.735E+00	2.848E+00	3.466E-01	-0.088
		144.24		1.892E-01	7.689E-01	1.274E+00	1.406E-01	0.149
		154.21		3.858E-01	4.204E-01	7.138E-01	7.249E-02	0.540
	+	269.46		6.796E-01	2.787E-01	3.915E-01	3.653E-02	1.736
		323.87	*	-2.221E-01	8.258E-01	1.171E+00	2.102E-01	-0.190
	+	338.28		5.674E+00	2.247E+00	2.841E+00	3.576E-01	1.998
		445.03		-6.973E-02	2.734E+00	4.495E+00	5.473E-01	-0.016
RN-219	+	271.23		8.719E-01	3.606E-01	4.927E-01	5.308E-02	1.770
		401.81	*	1.434E-01	4.850E-01	8.202E-01	1.226E-01	0.175
RN-220		549.76	*	-2.487E+01	3.223E+01	4.834E+01	4.316E+00	-0.515
RA-223		81.07		-1.570E-01	2.139E-01	2.425E-01	2.362E-02	-0.647
		83.78		2.420E-01	1.020E-01	1.736E-01	1.691E-02	1.394
		94.90		3.689E-01	2.090E-01	3.377E-01	3.408E-02	1.092

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		-2.514E-01	1.735E+00	2.848E+00	3.466E-01	-0.088
		144.24		1.892E-01	7.689E-01	1.274E+00	1.406E-01	0.149
		154.21		3.858E-01	4.204E-01	7.138E-01	7.249E-02	0.540
	+	269.46		6.796E-01	2.787E-01	3.915E-01	3.653E-02	1.736
		323.87	*	-2.221E-01	8.258E-01	1.171E+00	2.102E-01	-0.190
	+	338.28		5.674E+00	2.247E+00	2.841E+00	3.576E-01	1.998
		445.03		-6.973E-02	2.734E+00	4.495E+00	5.473E-01	-0.016
		79.80		7.068E-01	1.532E+00	1.903E+00	4.183E-01	0.371
		236.00		2.954E-01	2.975E-01	4.479E-01	5.610E-02	0.659
		256.20	*	-3.002E-01	4.613E-01	6.824E-01	1.067E-01	-0.440
		286.10		1.205E+00	1.693E+00	2.965E+00	4.026E-01	0.406
		299.80		1.801E+00	1.873E+00	2.945E+00	5.234E-01	0.611
		304.40		1.340E-01	2.082E+00	3.527E+00	6.594E-01	0.038
		334.20		-2.597E+00	3.364E+00	4.241E+00	8.311E-01	-0.612
TH-227		79.80		7.068E-01	1.532E+00	1.903E+00	4.234E-01	0.371
	+	94.00		1.276E+01	3.947E+00	3.632E+00	8.128E-01	3.514
		236.00		2.954E-01	2.971E-01	4.479E-01	5.100E-02	0.659
		256.20	*	-3.002E-01	4.621E-01	6.824E-01	1.249E-01	-0.440
		286.10		1.205E+00	2.074E+00	2.965E+00	2.978E+00	0.406
		299.80		1.801E+00	1.873E+00	2.945E+00	5.234E-01	0.611
		304.40		1.340E-01	2.082E+00	3.527E+00	6.594E-01	0.038
		334.20		-2.597E+00	3.364E+00	4.241E+00	8.311E-01	-0.612
		85.43		5.004E-01	1.616E-01	2.757E-01	2.688E-02	1.815
	+	88.47		5.443E-01	1.347E-01	1.838E-01	1.798E-02	2.962
TH-229		100.00		1.208E-01	1.691E-01	2.895E-01	2.999E-02	0.417
		193.63	*	3.216E-01	5.720E-01	9.485E-01	8.204E-02	0.339
		210.97		7.349E-01	8.743E-01	1.325E+00	1.169E-01	0.554
		283.67	*	-3.915E-01	1.698E+00	2.840E+00	4.405E-01	-0.138
		301.29		3.723E-01	6.530E-01	1.133E+00	1.432E-01	0.329
		81.07		-1.570E-01	2.139E-01	2.425E-01	2.362E-02	-0.647
PA-231		83.78		2.420E-01	1.020E-01	1.736E-01	1.691E-02	1.394
		94.90		3.689E-01	2.090E-01	3.377E-01	3.408E-02	1.092
		122.32		-2.514E-01	1.735E+00	2.848E+00	3.466E-01	-0.088
		144.24		1.892E-01	7.689E-01	1.274E+00	1.406E-01	0.149
		154.21		3.858E-01	4.204E-01	7.138E-01	7.249E-02	0.540
	+	269.46		6.796E-01	2.787E-01	3.915E-01	3.653E-02	1.736
TH-231		323.87	*	-2.221E-01	8.258E-01	1.171E+00	2.102E-01	-0.190
	+	338.28		5.674E+00	2.247E+00	2.841E+00	3.576E-01	1.998
		445.03		-6.973E-02	2.734E+00	4.495E+00	5.473E-01	-0.016
		84.21		1.552E+01	6.292E+00	1.072E+01	1.044E+00	1.448
	+	92.29		1.793E+01	4.229E+00	5.625E+00	5.604E-01	3.187
		95.87	*	-1.544E+00	1.447E+00	2.028E+00	2.057E-01	-0.762
U-231		108.00		6.873E-01	2.882E+00	4.838E+00	5.233E-01	0.142
	+	75.28		1.920E+01	4.159E+00	5.227E+00	8.371E-01	3.674
	+	86.59		7.804E+00	2.767E+00	2.778E+00	7.556E-01	2.810
		300.12		4.339E-01	5.132E-01	8.063E-01	1.226E-01	0.538
		311.98	*	-1.049E-03	6.865E-02	1.156E-01	1.084E-02	-0.009
		340.50		8.807E-01	7.578E-01	1.185E+00	2.841E-01	0.743
		398.62		-3.818E-01	2.378E+00	3.896E+00	1.036E+00	-0.098
PA-233								

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76	-6.856E-01	1.898E+00	3.045E+00	6.558E-01	-0.225
		63.00	2.531E+00	1.471E+00	1.574E+00	2.564E-01	1.607
		94.67	4.242E-01	1.631E-01	2.607E-01	3.509E-02	1.627
		98.44	1.275E-01	1.115E-01	1.457E-01	8.167E-02	0.875
		99.86	3.785E-01	4.314E-01	7.423E-01	7.684E-02	0.510
		111.00	3.118E-02	1.836E-01	3.010E-01	4.179E-02	0.104
		131.20	9.228E-02	1.230E-01	1.887E-01	2.095E-02	0.489
		152.70	-1.256E-02	3.390E-01	5.533E-01	9.682E-02	-0.023
		186.00	6.265E+00	3.001E+00	2.902E+00	9.054E-01	2.159
		226.40	-1.144E-01	4.358E-01	6.852E-01	9.193E-02	-0.167
		227.20	2.904E-01	4.555E-01	7.552E-01	6.761E-02	0.385
		248.90	-7.402E-02	8.927E-01	1.411E+00	3.188E-01	-0.052
		293.70	5.784E+00	1.582E+00	1.863E+00	3.277E-01	3.104
		369.80	-1.048E-01	9.288E-01	1.536E+00	3.350E-01	-0.068
		568.70	-3.190E-01	1.338E+00	2.122E+00	1.887E-01	-0.150
		569.50	-4.325E-02	3.740E-01	5.995E-01	5.331E-02	-0.072
		574.00	6.124E-01	1.932E+00	3.211E+00	2.852E-01	0.191
		699.00	-6.683E-01	9.466E-01	1.488E+00	2.835E-01	-0.449
		706.10	-6.627E-01	1.332E+00	2.089E+00	9.315E-01	-0.317
		733.00	6.804E-01	5.635E-01	9.143E-01	2.031E-01	0.744
		742.81	9.078E-01	1.801E+00	2.982E+00	2.005E+00	0.304
		796.30	8.762E-01	1.132E+00	1.983E+00	5.373E-01	0.442
		805.60	1.146E+00	1.335E+00	2.323E+00	7.131E-01	0.493
		819.60	-5.209E-01	1.587E+00	2.502E+00	9.525E-01	-0.208
		826.30	-3.455E-01	1.087E+00	1.684E+00	7.542E-01	-0.205
		831.60	-8.371E-01	8.747E-01	1.258E+00	3.760E-01	-0.666
		876.40	-5.012E-01	1.266E+00	1.833E+00	1.884E+00	-0.273
		880.51	-3.645E-01	4.127E-01	6.226E-01	5.457E-02	-0.585
		883.24	3.725E-01	4.778E-01	7.310E-01	4.916E-01	0.510
		899.00	-1.193E-01	1.158E+00	1.893E+00	8.280E-01	-0.063
		925.00	1.025E-02	1.642E+00	2.712E+00	2.373E-01	0.004
		926.50	-1.623E-02	2.551E-01	4.182E-01	1.059E-01	-0.039
		946.00	* -1.284E-01	4.176E-01	6.645E-01	1.251E-01	-0.193
		949.00	4.747E-01	6.136E-01	1.086E+00	9.500E-02	0.437
		980.50	4.623E-01	9.667E-01	1.669E+00	1.456E-01	0.277
		1394.10	3.380E-02	1.396E+00	2.339E+00	1.522E+00	0.014
PA-234M	+	766.42	2.917E+01	2.295E+01	3.011E+01	1.528E+01	0.969
		1001.03	* 6.104E+00	5.844E+00	1.060E+01	1.064E+00	0.576
U-235	+	89.95	3.202E+00	1.433E+00	1.662E+00	5.191E-01	1.926
		93.35	3.971E+00	1.414E+00	1.266E+00	3.606E-01	3.137
		105.00	4.222E-01	1.008E+00	1.694E+00	5.163E-01	0.249
		143.76	* 1.079E-01	2.335E-01	3.892E-01	7.135E-02	0.277
		163.35	2.769E-01	5.005E-01	8.332E-01	1.588E-01	0.332
		185.71	2.321E-01	8.667E-02	1.072E-01	9.180E-03	2.165
NP-236	+	205.31	4.698E-01	6.508E-01	9.698E-01	1.857E-01	0.484
		94.67	3.250E-01	1.205E-01	1.981E-01	1.997E-02	1.640
		98.44	9.628E-02	6.542E-02	1.101E-01	1.132E-02	0.874
		111.00	2.358E-02	1.389E-01	2.277E-01	2.504E-02	0.104
		160.31	* -2.667E-02	8.255E-02	1.323E-01	1.169E-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		1.890E-01	1.441E-01	2.509E-01	2.593E-02	0.753
		117.00	*	-5.402E-02	1.885E-01	3.080E-01	3.504E-02	-0.175
	+	209.75		2.358E+00	1.332E+00	1.572E+00	1.385E-01	1.499
		228.18		7.363E-02	2.399E-01	3.904E-01	3.498E-02	0.189
		277.60		1.486E-01	2.011E-01	3.532E-01	3.242E-02	0.421
		334.30		-1.500E+00	1.888E+00	2.397E+00	2.166E-01	-0.626
AM-241		59.54	*	-9.066E-04	6.928E-02	1.055E-01	1.120E-02	-0.009
CM-243		99.55		1.945E-01	1.483E-01	2.582E-01	2.669E-02	0.753
		103.76	*	1.008E-02	8.863E-02	1.484E-01	1.568E-02	0.068
		117.00		-5.558E-02	1.939E-01	3.169E-01	3.605E-02	-0.175
	+	209.75		2.325E+00	1.313E+00	1.550E+00	1.365E-01	1.499
		228.18		7.441E-02	2.424E-01	3.946E-01	3.535E-02	0.189
		277.60		1.499E-01	2.028E-01	3.561E-01	3.269E-02	0.421
AM-246		798.80		-1.289E-01	1.888E-01	2.946E-01	2.586E-02	-0.438
		1036.00		1.406E-01	4.290E-01	7.250E-01	6.263E-02	0.194
		1062.04		-2.409E-01	3.229E-01	4.713E-01	4.042E-02	-0.511
		1078.86	*	-2.900E-02	1.878E-01	3.004E-01	2.563E-02	-0.097
		278.00		5.724E-01	8.394E-01	1.470E+00	1.350E-01	0.389
CM-247		287.40		6.981E-02	1.391E+00	2.362E+00	2.170E-01	0.030
		402.60	*	3.204E-04	4.387E-02	7.280E-02	6.184E-03	0.004
CF-249		252.85		3.965E-01	9.342E-01	1.525E+00	1.389E-01	0.260
		333.44		-2.112E-01	3.248E-01	3.148E-01	2.847E-02	-0.671
		387.95	*	8.688E-03	4.616E-02	7.677E-02	6.504E-03	0.113
CF-251		176.60	*	1.602E-01	1.357E-01	2.323E-01	1.966E-02	0.689
		227.00		1.497E-01	4.099E-01	6.694E-01	5.991E-02	0.224
		285.00		6.093E-01	1.928E+00	3.322E+00	3.051E-01	0.183

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]G246440006      *
* Acquisition date   : 19-FEB-2010 18:02:13 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 02:00:09.80 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G246440006 Analyst initials: MXR1                  *
* Batch Number      : 950788 Sample Quantity : 1.2687E+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	3.304E+01	3.647E+00	6.707E-01	0.000E+00
CD-109	4.069E+00	9.867E-01	9.877E-01	0.000E+00
SN-126	3.986E-01	9.667E-02	9.664E-02	0.000E+00
TL-208	6.193E-01	1.123E-01	6.823E-02	0.000E+00
BI-210	1.452E+00	8.891E-01	9.346E-01	0.000E+00
PB-210	1.452E+00	8.891E-01	9.346E-01	0.000E+00
PO-210	1.452E+00	8.873E-01	9.346E-01	0.000E+00
BI-211	4.295E+00	6.480E-01	3.596E-01	0.000E+00
PB-212	1.423E+00	2.097E-01	1.247E-01	0.000E+00
PO-212	1.423E+00	2.097E-01	1.247E-01	0.000E+00
BI-214	1.250E+00	2.383E-01	1.314E-01	0.000E+00
PB-214	1.494E+00	2.380E-01	1.254E-01	0.000E+00
PO-214	1.494E+00	2.380E-01	1.254E-01	0.000E+00
PO-216	1.423E+00	2.097E-01	1.247E-01	0.000E+00
PO-218	1.494E+00	2.380E-01	1.254E-01	0.000E+00
RA-224	3.462E+00	1.093E+00	1.609E+00	0.000E+00
RA-226	1.250E+00	2.383E-01	1.314E-01	0.000E+00
AC-228	1.485E+00	5.381E-01	2.965E-01	0.000E+00
RA-228	1.485E+00	5.381E-01	2.965E-01	0.000E+00
TH-228	1.447E+00	2.133E-01	1.268E-01	0.000E+00
TH-230	1.250E+00	2.383E-01	1.314E-01	0.000E+00
TH-232	1.485E+00	5.381E-01	2.965E-01	0.000E+00
TH-234	2.171E+00	1.252E+00	1.076E+00	0.000E+00
U-234	1.250E+00	2.383E-01	1.314E-01	0.000E+00
NP-237	1.171E+00	3.696E-01	2.829E-01	0.000E+00
U-238	2.171E+00	1.252E+00	1.076E+00	0.000E+00
AM-243	3.666E-01	6.303E-02	6.444E-02	0.000E+00
ANH-511	1.152E-01	7.917E-02	5.433E-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	-5.394E-03	3.813E-01	6.477E-01	0.000E+00	NOT IDENT.
NA-22	-4.209E-02	6.186E-02	9.299E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.016E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.415E-02	3.718E-02	6.705E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.428E-02	6.489E-02	0.000E+00	FAIL ABUN
SC-46	-1.584E-03	5.300E-02	8.990E-02	0.000E+00	FAIL ABUN
V-48	-7.954E-02	1.066E-01	1.649E-01	0.000E+00	NOT IDENT.
CR-51	-7.627E-02	4.256E-01	7.391E-01	0.000E+00	NOT IDENT.
MN-52	1.024E-01	3.590E-01	6.376E-01	0.000E+00	NOT IDENT.
MN-54	-2.871E-02	5.280E-02	8.606E-02	0.000E+00	NOT IDENT.
CO-56	1.690E-02	5.340E-02	9.390E-02	0.000E+00	NOT IDENT.
CO-57	3.891E-04	2.488E-02	4.356E-02	0.000E+00	NOT IDENT.
CO-58	-4.679E-02	5.015E-02	7.757E-02	0.000E+00	NOT IDENT.
FE-59	1.696E-02	1.280E-01	2.163E-01	0.000E+00	NOT IDENT.
CO-60	4.513E-02	5.108E-02	9.628E-02	0.000E+00	NOT IDENT.
ZN-65	-4.668E-02	1.526E-01	2.099E-01	0.000E+00	NOT IDENT.
GE-68	7.949E-01	1.540E+00	2.724E+00	0.000E+00	NOT IDENT.
AS-73	3.039E-01	2.429E-01	4.599E-01	0.000E+00	NOT IDENT.
AS-74	1.314E-01	1.353E-01	2.425E-01	0.000E+00	NOT IDENT.
SE-75	8.728E-03	5.233E-02	8.340E-02	0.000E+00	NOT IDENT.
BR-77	1.056E+01	2.450E+01	4.277E+01	0.000E+00	FAIL ABUN
SR-82	-5.494E-01	5.492E-01	8.590E-01	0.000E+00	NOT IDENT.
RB-83	3.281E-02	8.795E-02	1.529E-01	0.000E+00	NOT IDENT.
RB-84	6.401E-02	1.035E-01	1.858E-01	0.000E+00	NOT IDENT.
KR-85	2.614E+00	9.081E+00	1.388E+01	0.000E+00	NOT IDENT.
SR-85	1.371E-02	4.762E-02	7.276E-02	0.000E+00	NOT IDENT.
RB-86	-8.030E-02	1.100E+00	1.823E+00	0.000E+00	NOT IDENT.
Y-88	4.676E-03	4.462E-02	7.567E-02	0.000E+00	NOT IDENT.
ZR-88	-2.004E-02	3.534E-02	5.854E-02	0.000E+00	NOT IDENT.
Y-91	9.546E+00	2.742E+01	4.681E+01	0.000E+00	NOT IDENT.
NB-94	2.350E-02	4.328E-02	7.758E-02	0.000E+00	NOT IDENT.
NB-95	7.966E-02	6.652E-02	1.122E-01	0.000E+00	NOT IDENT.
NB-95M	5.227E-02	1.556E-01	2.368E-01	0.000E+00	NOT IDENT.
ZR-95	3.627E-02	9.911E-02	1.761E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.040E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.000E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.937E+00	2.334E+01	4.146E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.471E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.109E-02	3.520E-02	5.860E-02	0.000E+00	NOT IDENT.
RH-102	-2.479E-02	3.285E-02	5.208E-02	0.000E+00	FAIL ABUN
RU-103	2.512E-02	5.002E-02	8.807E-02	0.000E+00	FAIL ABUN
RH-106	1.915E-01	4.332E-01	7.462E-01	0.000E+00	FAIL ABUN
RU-106	1.915E-01	4.327E-01	7.462E-01	0.000E+00	FAIL ABUN
AG-108M	1.325E-02	3.579E-02	6.311E-02	0.000E+00	NOT IDENT.
AG-110M	-7.903E-02	4.560E-02	6.067E-02	0.000E+00	NOT IDENT.
IN-111	8.772E-01	2.151E+00	3.291E+00	0.000E+00	NOT IDENT.
IN-113M	1.447E-02	5.046E-02	8.893E-02	0.000E+00	NOT IDENT.
SN-113	1.447E-02	5.046E-02	8.893E-02	0.000E+00	NOT IDENT.
IN-114M	-1.918E-01	2.340E-01	3.335E-01	0.000E+00	NOT IDENT.
CD-115	8.276E+00	2.317E+01	4.035E+01	0.000E+00	NOT IDENT.
SN-117M	-1.362E-02	6.329E-02	1.077E-01	0.000E+00	NOT IDENT.
SB-122	5.223E+00	4.610E+00	8.395E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.752E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.286E-03	2.929E-02	5.055E-02	0.000E+00	NOT IDENT.
I-124	-2.265E-02	1.419E+00	2.061E+00	0.000E+00	NOT IDENT.
SB-124	-7.214E-03	8.189E-02	1.338E-01	0.000E+00	FAIL ABUN
SB-125	9.453E-02	1.039E-01	1.898E-01	0.000E+00	FAIL ABUN
TE-125M	-2.127E+00	9.210E+00	1.606E+01	0.000E+00	NOT IDENT.
I-126	-2.689E-01	2.909E-01	4.389E-01	0.000E+00	NOT IDENT.
SB-126	8.614E-02	2.068E-01	3.296E-01	0.000E+00	FAIL ABUN
SB-127	-1.176E-01	2.375E+00	3.890E+00	0.000E+00	NOT IDENT.
XE-127	-5.867E-02	5.355E-02	8.480E-02	0.000E+00	NOT IDENT.
I-131	-1.663E-01	1.514E-01	2.411E-01	0.000E+00	NOT IDENT.
TE-132	3.494E-01	1.133E+00	1.931E+00	0.000E+00	NOT IDENT.
BA-133	-2.954E-02	5.155E-02	7.436E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.865E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.021E-02	5.760E-02	1.035E-01	0.000E+00	NOT IDENT.
CS-135	1.973E-01	1.883E-01	3.001E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.721E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.994E-02	1.700E-01	2.898E-01	0.000E+00	FAIL ABUN
BA-137M	0.000E+00	5.018E-02	9.472E-02	0.000E+00	NOT IDENT.
CS-137	0.000E+00	5.305E-02	1.001E-01	0.000E+00	NOT IDENT.
CE-139	-6.251E-03	3.191E-02	5.418E-02	0.000E+00	NOT IDENT.
BA-140	2.269E-01	3.385E-01	5.909E-01	0.000E+00	NOT IDENT.
LA-140	-9.530E-02	1.104E-01	1.521E-01	0.000E+00	FAIL ABUN
CE-141	7.100E-02	7.068E-02	1.269E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.103E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	1.684E-02	2.370E-01	3.703E-01	0.000E+00	NOT IDENT.
PM-144	3.601E-02	4.591E-02	8.430E-02	0.000E+00	NOT IDENT.
PR-144	2.443E+00	3.115E+00	5.719E+00	0.000E+00	NOT IDENT.
PM-146	-1.173E-02	4.815E-02	8.055E-02	0.000E+00	NOT IDENT.
ND-147	1.218E-01	7.229E-01	1.237E+00	0.000E+00	FAIL ABUN
PM-149	1.329E+02	1.936E+02	3.534E+02	0.000E+00	NOT IDENT.
EU-152	-1.002E-02	1.080E-01	1.812E-01	0.000E+00	NOT IDENT.
GD-153	-1.832E-02	7.722E-02	1.213E-01	0.000E+00	NOT IDENT.
EU-154	-1.766E-01	1.787E-01	2.568E-01	0.000E+00	NOT IDENT.
EU-155	5.156E-02	1.007E-01	1.811E-01	0.000E+00	FAIL ABUN
TB-160	-3.029E-03	1.957E-01	3.328E-01	0.000E+00	FAIL ABUN
HO-166M	4.971E-02	6.878E-02	1.269E-01	0.000E+00	FAIL ABUN
TM-171	-1.313E+01	1.707E+01	2.683E+01	0.000E+00	NOT IDENT.
LU-176	1.551E-03	2.627E-02	4.644E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.295E+00	2.933E+00	0.000E+00	FAIL ABUN
LU-177M	1.028E-01	2.094E-01	3.720E-01	0.000E+00	FAIL ABUN
HF-181	9.765E-03	5.192E-02	8.956E-02	0.000E+00	NOT IDENT.
W-181	-1.568E-02	2.047E-01	3.329E-01	0.000E+00	NOT IDENT.
TA-182	-1.958E-01	2.959E-01	4.560E-01	0.000E+00	FAIL ABUN
RE-183	2.958E-02	1.158E-01	2.012E-01	0.000E+00	FAIL ABUN
RE-184	1.066E-01	2.461E-01	4.208E-01	0.000E+00	NOT IDENT.
OS-185	-4.433E-02	5.749E-02	8.779E-02	0.000E+00	NOT IDENT.
RE-188	2.967E-01	1.832E-01	3.355E-01	0.000E+00	NOT IDENT.
W-188	-1.150E+00	8.986E+00	1.389E+01	0.000E+00	FAIL ABUN
IR-192	1.328E-02	3.775E-02	6.771E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	2.050E-01	3.849E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.842E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.928E+00	1.187E+01	2.050E+01	0.000E+00	NOT IDENT.
TL-202	1.231E-01	8.838E-02	1.660E-01	0.000E+00	NOT IDENT.
HG-203	-1.072E-02	4.627E-02	8.108E-02	0.000E+00	NOT IDENT.
BI-207	1.276E-02	7.011E-02	1.174E-01	0.000E+00	FAIL ABUN
TL-207	-2.221E-01	8.093E-01	1.198E+00	0.000E+00	FAIL ABUN
PO-209	-1.022E+00	9.692E+00	1.630E+01	0.000E+00	NOT IDENT.
PB-211	6.295E-01	1.120E+00	1.888E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	8.499E-01	9.175E-01	0.000E+00	FAIL ABUN
PO-215	-2.221E-01	8.093E-01	1.198E+00	0.000E+00	FAIL ABUN
RN-219	1.434E-01	4.753E-01	8.360E-01	0.000E+00	FAIL ABUN
RN-220	-2.487E+01	3.159E+01	4.904E+01	0.000E+00	NOT IDENT.
RA-223	-2.221E-01	8.093E-01	1.198E+00	0.000E+00	FAIL ABUN
AC-227	-3.002E-01	4.520E-01	7.001E-01	0.000E+00	NOT IDENT.
TH-227	-3.002E-01	4.529E-01	7.001E-01	0.000E+00	FAIL ABUN
TH-229	3.216E-01	5.606E-01	9.771E-01	0.000E+00	FAIL ABUN
PA-231	-3.915E-01	1.664E+00	2.909E+00	0.000E+00	NOT IDENT.
TH-231	-2.221E-01	8.093E-01	1.198E+00	0.000E+00	FAIL ABUN
U-231	-1.544E+00	1.418E+00	2.110E+00	0.000E+00	FAIL ABUN
PA-233	-1.049E-03	6.727E-02	1.182E-01	0.000E+00	FAIL ABUN
PA-234	-1.284E-01	4.092E-01	6.687E-01	0.000E+00	FAIL ABUN
PA-234M	6.104E+00	5.727E+00	1.066E+01	0.000E+00	NOT IDENT.
U-235	1.079E-01	2.288E-01	4.026E-01	0.000E+00	FAIL ABUN
NP-236	-2.667E-02	8.089E-02	1.367E-01	0.000E+00	NOT IDENT.
NP-239	-5.402E-02	1.847E-01	3.196E-01	0.000E+00	FAIL ABUN
AM-241	-9.066E-04	6.790E-02	1.105E-01	0.000E+00	NOT IDENT.
CM-243	1.008E-02	8.685E-02	1.542E-01	0.000E+00	FAIL ABUN
AM-246	-2.900E-02	1.840E-01	3.017E-01	0.000E+00	NOT IDENT.
CM-247	3.204E-04	4.300E-02	7.420E-02	0.000E+00	NOT IDENT.
CF-249	8.688E-03	4.524E-02	7.828E-02	0.000E+00	NOT IDENT.
CF-251	1.602E-01	1.330E-01	2.397E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 20:02:51.18

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440006.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 18:02:13
Sample ID          : G246440006          Sample quantity   : 1.26870E+02 GRAM
Detector name      : GAM17              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time : 0 02:00:09.80  0.1%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity        : 5.00000
Batch ID           : 950788             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	927	10.67*	7.782E-01	3.304E+01	3.304E+01	11.26
CD-109	88.03	333	3.72*	6.676E+00	3.965E+00	4.069E+00	24.75
SN-126	64.28	189	9.60	6.777E+00	8.594E-01	8.594E-01	58.03
	86.94	333	8.90	6.676E+00	1.657E+00	1.657E+00	47.42
	87.57	333	37.00*	6.676E+00	3.986E-01	3.986E-01	24.75
TL-208	277.35	-----	6.80	3.568E+00	-----	Line Not Found	-----
	510.84	80	21.60	2.057E+00	5.335E-01	5.335E-01	70.59
	583.14	319	84.20*	1.812E+00	6.193E-01	6.193E-01	18.50
	860.37	-----	12.46	1.247E+00	-----	Line Not Found	-----
BI-210	46.50	125	4.05*	6.324E+00	1.449E+00	1.452E+00	62.50
PB-210	46.50	125	4.05*	6.324E+00	1.449E+00	1.452E+00	62.50
PO-210	46.50	125	4.05*	6.324E+00	1.449E+00	1.452E+00	62.38
BI-211	72.87	-----	1.27	6.803E+00	-----	Line Not Found	-----
	351.07	546	12.94*	2.908E+00	4.295E+00	4.295E+00	15.39
PB-212	74.81	556	10.70	6.795E+00	2.261E+00	2.261E+00	19.88
	77.11	895	18.00	6.782E+00	2.170E+00	2.170E+00	13.83
	87.30	333	8.00	6.676E+00	1.844E+00	1.844E+00	26.69
	238.63	863	44.60*	4.024E+00	1.423E+00	1.423E+00	15.04
	300.09	-----	3.41	3.340E+00	-----	Line Not Found	-----
PO-212	74.81	556	10.70	6.795E+00	2.261E+00	2.261E+00	19.88
	77.11	895	18.00	6.782E+00	2.170E+00	2.170E+00	13.83
	87.30	333	8.00	6.676E+00	1.844E+00	1.844E+00	26.69
	115.19	-----	0.60	6.177E+00	-----	Line Not Found	-----
	238.63	863	44.60*	4.024E+00	1.423E+00	1.423E+00	15.04
	300.09	-----	3.41	3.340E+00	-----	Line Not Found	-----
BI-214	609.31	340	46.30*	1.737E+00	1.250E+00	1.250E+00	19.45
	1120.29	78	15.10	9.765E-01	1.568E+00	1.568E+00	64.41
	1764.49	62	15.80	6.717E-01	1.734E+00	1.735E+00	32.09
PB-214	74.81	556	6.21	6.795E+00	3.896E+00	3.896E+00	19.04
	77.11	895	10.50	6.782E+00	3.720E+00	3.720E+00	15.79
	87.30	333	4.67	6.676E+00	3.158E+00	3.158E+00	25.92
	241.98	184	7.49	3.984E+00	1.826E+00	1.826E+00	32.68

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	265	19.20	3.388E+00	1.205E+00	1.205E+00	23.71
	351.92	546	37.20*	2.908E+00	1.494E+00	1.494E+00	16.25
	74.81	556	6.21	6.795E+00	3.896E+00	3.896E+00	19.04
	77.11	895	10.50	6.782E+00	3.720E+00	3.720E+00	15.79
	87.30	333	4.67	6.676E+00	3.158E+00	3.158E+00	25.92
	241.98	184	7.49	3.984E+00	1.826E+00	1.826E+00	32.68
PO-216	295.21	265	19.20	3.388E+00	1.205E+00	1.205E+00	23.71
	351.92	546	37.20*	2.908E+00	1.494E+00	1.494E+00	16.25
	74.81	556	10.70	6.795E+00	2.261E+00	2.261E+00	19.88
	77.11	895	18.00	6.782E+00	2.170E+00	2.170E+00	13.83
	87.30	333	8.00	6.676E+00	1.844E+00	1.844E+00	26.69
	238.63	863	44.60*	4.024E+00	1.423E+00	1.423E+00	15.04
PO-218	300.09	-----	3.41	3.340E+00	-----	Line Not Found	-----
	74.81	556	6.21	6.795E+00	3.896E+00	3.896E+00	19.04
	77.11	895	10.50	6.782E+00	3.720E+00	3.720E+00	15.79
	87.30	333	4.67	6.676E+00	3.158E+00	3.158E+00	25.92
	241.98	184	7.49	3.984E+00	1.826E+00	1.826E+00	32.68
	295.21	265	19.20	3.388E+00	1.205E+00	1.205E+00	23.71
RA-224	351.92	546	37.20*	2.908E+00	1.494E+00	1.494E+00	16.25
	240.98	184	3.95*	3.984E+00	3.462E+00	3.462E+00	32.20
RA-226	609.31	340	46.30*	1.737E+00	1.250E+00	1.250E+00	19.45
	1120.29	78	15.10	9.765E-01	1.568E+00	1.568E+00	64.41
AC-228	1764.49	62	15.80	6.717E-01	1.734E+00	1.735E+00	32.09
	338.32	158	11.40	3.010E+00	1.359E+00	1.359E+00	55.85
	911.07	164	27.70*	1.181E+00	1.485E+00	1.485E+00	36.96
RA-228	969.11	133	16.60	1.116E+00	2.128E+00	2.128E+00	33.98
	338.32	158	11.40	3.010E+00	1.359E+00	1.359E+00	55.85
	911.07	164	27.70*	1.181E+00	1.485E+00	1.485E+00	36.96
TH-228	969.11	133	16.60	1.116E+00	2.128E+00	2.128E+00	33.98
	74.81	556	10.70	6.795E+00	2.261E+00	2.300E+00	17.58
	77.11	895	18.00	6.782E+00	2.170E+00	2.207E+00	13.83
	87.30	333	8.00	6.676E+00	1.844E+00	1.876E+00	24.75
TH-230	238.63	863	44.60*	4.024E+00	1.423E+00	1.447E+00	15.04
	300.09	-----	3.41	3.340E+00	-----	Line Not Found	-----
	609.31	340	46.30*	1.737E+00	1.250E+00	1.250E+00	19.45
	1120.29	78	15.10	9.765E-01	1.568E+00	1.568E+00	64.41
TH-232	1764.49	62	15.80	6.717E-01	1.734E+00	1.734E+00	32.09
	338.32	158	11.40	3.010E+00	1.359E+00	1.359E+00	38.61
	911.07	164	27.70*	1.181E+00	1.485E+00	1.485E+00	36.96
TH-234	969.11	133	16.60	1.116E+00	2.128E+00	2.128E+00	33.98
	63.29	189	3.80*	6.777E+00	2.171E+00	2.171E+00	58.83
	92.38	398	5.41	6.594E+00	3.303E+00	3.303E+00	28.44
U-234	609.31	340	46.30*	1.737E+00	1.250E+00	1.250E+00	19.45
	1120.29	78	15.10	9.765E-01	1.568E+00	1.568E+00	64.41
	1764.49	62	15.80	6.717E-01	1.734E+00	1.734E+00	32.09
NP-237	86.50	333	12.60*	6.676E+00	1.171E+00	1.171E+00	32.22
	95.87	-----	2.60	6.543E+00	-----	Line Not Found	-----
U-238	63.29	189	3.80*	6.777E+00	2.171E+00	2.171E+00	58.83
	92.38	398	5.41	6.594E+00	3.303E+00	3.303E+00	23.59

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	556	66.00*	6.795E+00	3.666E-01	3.666E-01	17.55
	86.72	333	0.34	6.676E+00	4.390E+01	4.390E+01	24.75
	117.66	-----	0.55	6.127E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.624E+00	-----	Line Not Found	-----
ANH-511	511.00	80	100.00*	2.057E+00	1.152E-01	1.152E-01	70.10

Flag: "*" = Keyline

Total number of lines in spectrum 29
Number of unidentified lines 1
Number of lines tentatively identified by NID 28 96.55%

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	3.304E+01	3.304E+01	0.372E+01	11.26	
CD-109	464.00D	1.03	3.965E+00	4.069E+00	1.007E+00	24.75	
SN-126	1.00E+05Y	1.00	3.986E-01	3.986E-01	0.986E-01	24.75	
TL-208	1.41E+10Y	1.00	6.193E-01	6.193E-01	1.146E-01	18.50	
BI-210	22.26Y	1.00	1.449E+00	1.452E+00	0.907E+00	62.50	
PB-210	22.26Y	1.00	1.449E+00	1.452E+00	0.907E+00	62.50	
PO-210	22.26Y	1.00	1.449E+00	1.452E+00	0.905E+00	62.38	
BI-211	7.04E+08Y	1.00	4.295E+00	4.295E+00	0.661E+00	15.39	
PB-212	1.41E+10Y	1.00	1.423E+00	1.423E+00	0.214E+00	15.04	
PO-212	1.41E+10Y	1.00	1.423E+00	1.423E+00	0.214E+00	15.04	
BI-214	1600.00Y	1.00	1.250E+00	1.250E+00	0.243E+00	19.45	
PB-214	1600.00Y	1.00	1.494E+00	1.494E+00	0.243E+00	16.25	
PO-214	1600.00Y	1.00	1.494E+00	1.494E+00	0.243E+00	16.25	
PO-216	1.41E+10Y	1.00	1.423E+00	1.423E+00	0.214E+00	15.04	
PO-218	1600.00Y	1.00	1.494E+00	1.494E+00	0.243E+00	16.25	
RA-224	1.41E+10Y	1.00	3.462E+00	3.462E+00	1.115E+00	32.20	
RA-226	1600.00Y	1.00	1.250E+00	1.250E+00	0.243E+00	19.45	
AC-228	1.41E+10Y	1.00	1.485E+00	1.485E+00	0.549E+00	36.96	
RA-228	1.41E+10Y	1.00	1.485E+00	1.485E+00	0.549E+00	36.96	
TH-228	1.91Y	1.02	1.423E+00	1.447E+00	0.218E+00	15.04	
TH-230	4.47E+09Y	1.00	1.250E+00	1.250E+00	0.243E+00	19.45	
TH-232	1.41E+10Y	1.00	1.485E+00	1.485E+00	0.549E+00	36.96	
TH-234	4.47E+09Y	1.00	2.171E+00	2.171E+00	1.277E+00	58.83	
U-234	4.47E+09Y	1.00	1.250E+00	1.250E+00	0.243E+00	19.45	
NP-237	2.14E+06Y	1.00	1.171E+00	1.171E+00	0.377E+00	32.22	
U-238	4.47E+09Y	1.00	2.171E+00	2.171E+00	1.277E+00	58.83	
AM-243	7380.00Y	1.00	3.666E-01	3.666E-01	0.643E-01	17.55	
ANH-511	1.00E+09Y	1.00	1.152E-01	1.152E-01	0.808E-01	70.10	

Total Activity : 7.576E+01 7.589E+01

Grand Total Activity : 7.576E+01 7.589E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440006

Page : 5
Acquisition date : 19-FEB-2010 18:02:13

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.92	194	303	0.98	179.51	163	29	2.69E-02	32.1	6.64E+00	T
0	128.85	109	415	0.97	257.39	252	11	1.52E-02	74.4	5.90E+00	T
0	185.71	204	291	1.31	371.14	365	11	2.83E-02	36.4	4.81E+00	T
0	209.26	114	256	1.06	418.26	413	10	1.59E-02	55.8	4.43E+00	T
0	269.99	114	125	1.21	539.78	536	9	1.58E-02	39.9	3.65E+00	T
0	327.71	83	128	1.16	655.27	652	10	1.15E-02	55.3	3.10E+00	T
0	462.82	65	78	1.09	925.61	921	11	9.00E-03	58.2	2.26E+00	T
0	727.28	80	101	1.59	1454.82	1447	17	1.11E-02	62.3	1.46E+00	T
0	768.06	54	41	1.11	1536.44	1532	10	7.44E-03	53.0	1.39E+00	T
0	1586.80	25	8	0.92	3175.20	3166	15	3.49E-03	62.2	7.28E-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]G246440006.CNF;1
* Acquisition date   : 19-FEB-2010 18:02:13   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 02:00:09.80          Half life ratio     : 8.00000
*****
*                               SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246440006             Analyst initials  : MXR1
* Batch Number       : 950788                 Sample Quantity   : 1.26870E+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	3.304E+01	3.722E+00	6.709E-01	5.956E-02	49.257
CD-109	4.069E+00	1.007E+00	9.481E-01	9.255E-02	4.291
SN-126	3.986E-01	9.865E-02	9.276E-02	9.052E-03	4.298
TL-208	6.193E-01	1.146E-01	6.731E-02	6.366E-03	9.201
BI-210	1.452E+00	9.072E-01	8.892E-01	9.646E-02	1.632
PB-210	1.452E+00	9.072E-01	8.892E-01	9.646E-02	1.632
PO-210	1.452E+00	9.054E-01	8.892E-01	8.983E-02	1.632
BI-211	4.295E+00	6.612E-01	3.521E-01	3.286E-02	12.197
PB-212	1.423E+00	2.139E-01	1.214E-01	1.224E-02	11.719
PO-212	1.423E+00	2.139E-01	1.214E-01	1.224E-02	11.719
BI-214	1.250E+00	2.432E-01	1.298E-01	1.320E-02	9.637
PB-214	1.494E+00	2.429E-01	1.228E-01	1.312E-02	12.167
PO-214	1.494E+00	2.429E-01	1.228E-01	1.312E-02	12.167
PO-216	1.423E+00	2.139E-01	1.214E-01	1.224E-02	11.719
PO-218	1.494E+00	2.429E-01	1.228E-01	1.312E-02	12.167
RA-224	3.462E+00	1.115E+00	1.567E+00	1.417E-01	2.210
RA-226	1.250E+00	2.432E-01	1.298E-01	1.320E-02	9.637
AC-228	1.485E+00	5.491E-01	2.944E-01	3.340E-02	5.045

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.485E+00	5.491E-01	2.944E-01	3.340E-02	5.045
TH-228	1.447E+00	2.177E-01	1.235E-01	1.245E-02	11.719
TH-230	1.250E+00	2.432E-01	1.297E-01	1.320E-02	9.637
TH-232	1.485E+00	5.491E-01	2.944E-01	3.340E-02	5.045
TH-234	2.171E+00	1.277E+00	1.028E+00	1.919E-01	2.112
U-234	1.250E+00	2.432E-01	1.297E-01	1.320E-02	9.637
NP-237	1.171E+00	3.772E-01	2.715E-01	6.197E-02	4.311
U-238	2.171E+00	1.277E+00	1.028E+00	1.919E-01	2.112
AM-243	3.666E-01	6.432E-02	6.171E-02	6.025E-03	5.940
ANH-511	1.152E-01	8.079E-02	5.349E-02	4.777E-03	2.154

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-5.394E-03		3.891E-01	6.371E-01	6.062E-02	-0.008
NA-22	-4.209E-02		6.312E-02	9.283E-02	7.820E-03	-0.453
NA-24	2.941E+00		5.184E+00	Half-Life	too short	
AL-26	1.415E-02		3.794E-02	6.729E-02	5.640E-03	0.210
TI-44	4.004E-01	+	5.539E-02	6.219E-02	6.060E-03	6.439
SC-46	-1.584E-03		5.408E-02	8.925E-02	7.814E-03	-0.018
V-48	-7.954E-02		1.088E-01	1.640E-01	1.430E-02	-0.485
CR-51	-7.627E-02		4.343E-01	7.228E-01	6.902E-02	-0.106
MN-52	1.024E-01		3.664E-01	6.376E-01	5.497E-02	0.161
MN-54	-2.871E-02		5.388E-02	8.535E-02	7.505E-03	-0.336
CO-56	1.690E-02		5.449E-02	9.315E-02	8.189E-03	0.181
CO-57	3.891E-04		2.539E-02	4.201E-02	4.922E-03	0.009
CO-58	-4.679E-02		5.117E-02	7.690E-02	6.772E-03	-0.608
FE-59	1.696E-02		1.306E-01	2.155E-01	1.977E-02	0.079
CO-60	4.513E-02		5.213E-02	9.617E-02	8.197E-03	0.469
ZN-65	-4.668E-02		1.557E-01	2.091E-01	1.760E-02	-0.223
GE-68	7.949E-01		1.571E+00	2.712E+00	2.315E-01	0.293
AS-73	3.039E-01		2.479E-01	4.384E-01	4.386E-02	0.693
AS-74	1.314E-01		1.380E-01	2.394E-01	2.109E-02	0.549
SE-75	8.728E-03		5.340E-02	8.133E-02	7.472E-03	0.107
BR-77	1.056E+01		2.500E+01	4.212E+01	3.765E+00	0.251
SR-82	-5.494E-01		5.605E-01	8.511E-01	7.448E-02	-0.646
RB-83	3.281E-02		8.975E-02	1.506E-01	1.346E-02	0.218
RB-84	6.401E-02		1.056E-01	1.844E-01	1.616E-02	0.347
KR-85	2.614E+00		9.266E+00	1.366E+01	1.221E+00	0.191
SR-85	1.371E-02		4.859E-02	7.165E-02	6.401E-03	0.191
RB-86	-8.030E-02		1.123E+00	1.815E+00	1.549E-01	-0.044
Y-88	4.676E-03		4.553E-02	7.596E-02	6.334E-03	0.062
ZR-88	-2.004E-02		3.606E-02	5.742E-02	4.837E-03	-0.349
Y-91	9.546E+00		2.798E+01	4.669E+01	3.853E+00	0.204
NB-94	2.350E-02		4.416E-02	7.675E-02	6.584E-03	0.306
NB-95	7.966E-02		6.788E-02	1.112E-01	9.710E-03	0.717
NB-95M	5.227E-02		1.588E-01	2.305E-01	2.353E-02	0.227

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	3.627E-02		1.011E-01	1.744E-01	1.671E-02	0.208
NB-97	-1.824E+00		5.305E-01	Half-Life too short		
ZR-97	3.386E+01		1.021E+01	Half-Life too short		
MO-99	6.937E+00		2.382E+01	4.105E+01	6.248E+00	0.169
TC-99M	2.243E+12		7.507E+12	Half-Life too short		
RH-101	-1.109E-02		3.592E-02	5.691E-02	4.948E-03	-0.195
RH-102	-2.479E-02		3.352E-02	5.122E-02	4.537E-03	-0.484
RU-103	2.512E-02		5.104E-02	8.668E-02	1.243E-02	0.290
RH-106	1.915E-01		4.420E-01	7.369E-01	9.876E-02	0.260
RU-106	1.915E-01		4.416E-01	7.369E-01	6.402E-02	0.260
AG-108M	1.325E-02		3.652E-02	6.199E-02	5.595E-03	0.214
AG-110M	-7.903E-02		4.653E-02	5.996E-02	5.226E-03	-1.318
IN-111	8.772E-01		2.195E+00	3.206E+00	2.907E-01	0.274
IN-113M	1.447E-02		5.149E-02	8.722E-02	7.578E-03	0.166
SN-113	1.447E-02		5.149E-02	8.722E-02	7.578E-03	0.166
IN-114M	-1.918E-01		2.387E-01	3.237E-01	2.788E-02	-0.592
CD-115	8.276E+00		2.364E+01	3.975E+01	3.554E+00	0.208
SN-117M	-1.362E-02		6.458E-02	1.042E-01	9.370E-03	-0.131
SB-122	5.223E+00		4.704E+00	8.278E+00	7.371E-01	0.631
I-123	6.831E+00		4.465E+01	Half-Life too short		
TE-123M	2.286E-03		2.988E-02	4.894E-02	4.405E-03	0.047
I-124	-2.265E-02		1.448E+00	2.034E+00	1.786E-01	-0.011
SB-124	-7.214E-03		8.356E-02	1.341E-01	1.193E-02	-0.054
SB-125	9.453E-02		1.061E-01	1.864E-01	1.644E-02	0.507
TE-125M	-2.127E+00		9.398E+00	1.546E+01	1.901E+00	-0.138
I-126	-2.689E-01		2.968E-01	4.339E-01	3.663E-02	-0.620
SB-126	8.614E-02		2.110E-01	3.262E-01	2.816E-02	0.264
SB-127	-1.176E-01		2.424E+00	3.847E+00	4.599E-01	-0.031
XE-127	-5.867E-02		5.465E-02	8.237E-02	7.201E-03	-0.712
I-131	-1.663E-01		1.545E-01	2.362E-01	2.185E-02	-0.704
TE-132	3.494E-01		1.156E+00	1.879E+00	3.064E-01	0.186
BA-133	-2.954E-02		5.261E-02	7.283E-02	9.730E-03	-0.406
I-133	2.972E-03		1.972E-02	Half-Life too short		
CS-134	3.021E-02		5.878E-02	1.026E-01	9.066E-03	0.294
CS-135	1.973E-01		1.922E-01	2.927E-01	3.054E-02	0.674
I-135	-1.063E+12		8.779E+11	Half-Life too short		
CS-136	2.994E-02		1.735E-01	2.884E-01	2.590E-02	0.104
BA-137M	9.479E-02		5.120E-02	9.362E-02	7.887E-03	1.013
CS-137	1.002E-01		5.413E-02	9.897E-02	8.353E-03	1.013
CE-139	-6.251E-03		3.256E-02	5.248E-02	4.376E-03	-0.119
BA-140	2.269E-01		3.454E-01	5.822E-01	1.934E-01	0.390
LA-140	-9.530E-02		1.126E-01	1.523E-01	1.315E-02	-0.626
CE-141	7.100E-02		7.212E-02	1.227E-01	1.252E-02	0.579
CE-143	1.402E-03		3.114E-04	Half-Life too short		
CE-144	1.684E-02		2.418E-01	3.576E-01	6.066E-02	0.047
PM-144	3.601E-02		4.685E-02	8.339E-02	7.139E-03	0.432
PR-144	2.443E+00		3.178E+00	5.657E+00	4.841E-01	0.432
PM-146	-1.173E-02		4.914E-02	7.918E-02	8.594E-03	-0.148

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	1.218E-01		7.376E-01	1.219E+00	1.845E-01	0.100
PM-149	1.329E+02		1.975E+02	3.450E+02	5.476E+01	0.385
EU-152	-1.002E-02		1.102E-01	1.774E-01	1.678E-02	-0.056
GD-153	-1.832E-02		7.880E-02	1.166E-01	1.192E-02	-0.157
EU-154	-1.766E-01		1.824E-01	2.563E-01	2.859E-02	-0.689
EU-155	5.156E-02		1.027E-01	1.743E-01	1.873E-02	0.296
TB-160	-3.029E-03		1.997E-01	3.303E-01	2.896E-02	-0.009
HO-166M	4.971E-02		7.018E-02	1.256E-01	1.081E-02	0.396
TM-171	-1.313E+01		1.742E+01	2.566E+01	2.533E+00	-0.512
LU-176	1.551E-03		2.681E-02	4.538E-02	4.157E-03	0.034
LU-177	4.145E+00	+	2.342E+00	2.851E+00	2.507E-01	1.454
LU-177M	1.028E-01		2.136E-01	3.652E-01	3.129E-02	0.282
HF-181	9.765E-03		5.297E-02	8.810E-02	7.822E-03	0.111
W-181	-1.568E-02		2.089E-01	3.182E-01	3.152E-02	-0.049
TA-182	-1.958E-01		3.019E-01	4.549E-01	3.773E-02	-0.430
RE-183	2.958E-02		1.181E-01	1.948E-01	1.687E-02	0.152
RE-184	1.066E-01		2.512E-01	4.100E-01	3.733E-02	0.260
OS-185	-4.433E-02		5.867E-02	8.674E-02	7.406E-03	-0.511
RE-188	2.967E-01		1.869E-01	3.246E-01	3.016E-02	0.914
W-188	-1.150E+00		9.170E+00	1.357E+01	1.246E+00	-0.085
IR-192	1.328E-02		3.852E-02	6.620E-02	6.057E-03	0.201
AU-195	4.497E-01		2.092E-01	3.701E-01	3.812E-02	1.215
TL-200	-2.159E-04		9.397E-04	Half-Life too short		
TL-201	1.928E+00		1.211E+01	1.986E+01	1.658E+00	0.097
TL-202	1.231E-01		9.019E-02	1.631E-01	1.422E-02	0.755
HG-203	-1.072E-02		4.722E-02	7.912E-02	7.446E-03	-0.135
BI-207	1.276E-02		7.154E-02	1.168E-01	1.002E-02	0.109
TL-207	-2.221E-01		8.258E-01	1.171E+00	2.102E-01	-0.190
PO-209	-1.022E+00		9.890E+00	1.618E+01	1.415E+00	-0.063
PB-211	6.295E-01		1.143E+00	1.852E+00	1.161E+00	0.340
BI-212	1.374E+00	+	8.673E-01	9.082E-01	9.113E-02	1.512
PO-215	-2.221E-01		8.258E-01	1.171E+00	2.102E-01	-0.190
RN-219	1.434E-01		4.850E-01	8.202E-01	1.226E-01	0.175
RN-220	-2.487E+01		3.223E+01	4.834E+01	4.316E+00	-0.515
RA-223	-2.221E-01		8.258E-01	1.171E+00	2.102E-01	-0.190
AC-227	-3.002E-01		4.613E-01	6.824E-01	1.067E-01	-0.440
TH-227	-3.002E-01		4.621E-01	6.824E-01	1.249E-01	-0.440
TH-229	3.216E-01		5.720E-01	9.485E-01	8.204E-02	0.339
PA-231	-3.915E-01		1.698E+00	2.840E+00	4.405E-01	-0.138
TH-231	-2.221E-01		8.258E-01	1.171E+00	2.102E-01	-0.190
U-231	-1.544E+00		1.447E+00	2.028E+00	2.057E-01	-0.762
PA-233	-1.049E-03		6.865E-02	1.156E-01	1.084E-02	-0.009
PA-234	-1.284E-01		4.176E-01	6.645E-01	1.251E-01	-0.193
PA-234M	6.104E+00		5.844E+00	1.060E+01	1.064E+00	0.576
U-235	1.079E-01		2.335E-01	3.892E-01	7.135E-02	0.277
NP-236	-2.667E-02		8.255E-02	1.323E-01	1.169E-02	-0.202
NP-239	-5.402E-02		1.885E-01	3.080E-01	3.504E-02	-0.175
AM-241	-9.066E-04		6.928E-02	1.055E-01	1.120E-02	-0.009

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.008E-02		8.863E-02	1.484E-01	1.568E-02	0.068
AM-246	-2.900E-02		1.878E-01	3.004E-01	2.563E-02	-0.097
CM-247	3.204E-04		4.387E-02	7.280E-02	6.184E-03	0.004
CF-249	8.688E-03		4.616E-02	7.677E-02	6.504E-03	0.113
CF-251	1.602E-01		1.357E-01	2.323E-01	1.966E-02	0.689

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]G246440006          *
* Acquisition date   : 19-FEB-2010 18:02:13 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 02:00:09.80 Half life ratio : 8.000    *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246440006 Analyst initials: MXR1          *
* Batch Number       : 950788 Sample Quantity : 1.2687E+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	3.304E+01	3.647E+00	3.355E-01	1.861E+00
CD-109	4.069E+00	9.867E-01	4.941E-01	5.034E-01
SN-126	3.986E-01	9.667E-02	4.835E-02	4.932E-02
TL-208	6.193E-01	1.123E-01	3.413E-02	5.728E-02
BI-210	1.452E+00	8.891E-01	4.676E-01	4.536E-01
PB-210	1.452E+00	8.891E-01	4.676E-01	4.536E-01
PO-210	1.452E+00	8.873E-01	4.676E-01	4.527E-01
BI-211	4.295E+00	6.480E-01	1.799E-01	3.306E-01
PB-212	1.423E+00	2.097E-01	6.238E-02	1.070E-01
PO-212	1.423E+00	2.097E-01	6.238E-02	1.070E-01
BI-214	1.250E+00	2.383E-01	6.576E-02	1.216E-01
PB-214	1.494E+00	2.380E-01	6.274E-02	1.214E-01
PO-214	1.494E+00	2.380E-01	6.274E-02	1.214E-01
PO-216	1.423E+00	2.097E-01	6.238E-02	1.070E-01
PO-218	1.494E+00	2.380E-01	6.274E-02	1.214E-01
RA-224	3.462E+00	1.093E+00	8.049E-01	5.574E-01
RA-226	1.250E+00	2.383E-01	6.576E-02	1.216E-01
AC-228	1.485E+00	5.381E-01	1.483E-01	2.745E-01
RA-228	1.485E+00	5.381E-01	1.483E-01	2.745E-01
TH-228	1.447E+00	2.133E-01	6.346E-02	1.088E-01
TH-230	1.250E+00	2.383E-01	6.575E-02	1.216E-01
TH-232	1.485E+00	5.381E-01	1.483E-01	2.745E-01
TH-234	2.171E+00	1.252E+00	5.383E-01	6.386E-01
U-234	1.250E+00	2.383E-01	6.575E-02	1.216E-01
NP-237	1.171E+00	3.696E-01	1.415E-01	1.886E-01
U-238	2.171E+00	1.252E+00	5.383E-01	6.386E-01
AM-243	3.666E-01	6.303E-02	3.224E-02	3.216E-02
ANH-511	1.152E-01	7.917E-02	2.718E-02	4.039E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-5.394E-03	3.813E-01	3.240E-01	1.945E-01	NOT IDENT.
NA-22	-4.209E-02	6.186E-02	4.652E-02	3.156E-02	NOT IDENT.
NA-24	2.941E+06	1.016E+07	0.000E+00	5.184E+06	SHORT HLIF
AL-26	1.415E-02	3.718E-02	3.355E-02	1.897E-02	NOT IDENT.
TI-44	4.004E-01	5.428E-02	3.246E-02	2.770E-02	FAIL ABUN
SC-46	-1.584E-03	5.300E-02	4.498E-02	2.704E-02	FAIL ABUN
V-48	-7.954E-02	1.066E-01	8.250E-02	5.441E-02	NOT IDENT.
CR-51	-7.627E-02	4.256E-01	3.698E-01	2.172E-01	NOT IDENT.
MN-52	1.024E-01	3.590E-01	3.190E-01	1.832E-01	NOT IDENT.
MN-54	-2.871E-02	5.280E-02	4.305E-02	2.694E-02	NOT IDENT.
CO-56	1.690E-02	5.340E-02	4.698E-02	2.725E-02	NOT IDENT.
CO-57	3.891E-04	2.488E-02	2.179E-02	1.270E-02	NOT IDENT.
CO-58	-4.679E-02	5.015E-02	3.881E-02	2.558E-02	NOT IDENT.
FE-59	1.696E-02	1.280E-01	1.082E-01	6.529E-02	NOT IDENT.
CO-60	4.513E-02	5.108E-02	4.817E-02	2.606E-02	NOT IDENT.
ZN-65	-4.668E-02	1.526E-01	1.050E-01	7.786E-02	NOT IDENT.
GE-68	7.949E-01	1.540E+00	1.363E+00	7.857E-01	NOT IDENT.
AS-73	3.039E-01	2.429E-01	2.301E-01	1.239E-01	NOT IDENT.
AS-74	1.314E-01	1.353E-01	1.213E-01	6.902E-02	NOT IDENT.
SE-75	8.728E-03	5.233E-02	4.172E-02	2.670E-02	NOT IDENT.
BR-77	1.056E+01	2.450E+01	2.140E+01	1.250E+01	FAIL ABUN
SR-82	-5.494E-01	5.492E-01	4.297E-01	2.802E-01	NOT IDENT.
RB-83	3.281E-02	8.795E-02	7.651E-02	4.487E-02	NOT IDENT.
RB-84	6.401E-02	1.035E-01	9.293E-02	5.278E-02	NOT IDENT.
KR-85	2.614E+00	9.081E+00	6.942E+00	4.633E+00	NOT IDENT.
SR-85	1.371E-02	4.762E-02	3.640E-02	2.429E-02	NOT IDENT.
RB-86	-8.030E-02	1.100E+00	9.119E-01	5.615E-01	NOT IDENT.
Y-88	4.676E-03	4.462E-02	3.786E-02	2.277E-02	NOT IDENT.
ZR-88	-2.004E-02	3.534E-02	2.929E-02	1.803E-02	NOT IDENT.
Y-91	9.546E+00	2.742E+01	2.342E+01	1.399E+01	NOT IDENT.
NB-94	2.350E-02	4.328E-02	3.881E-02	2.208E-02	NOT IDENT.
NB-95	7.966E-02	6.652E-02	5.615E-02	3.394E-02	NOT IDENT.
NB-95M	5.227E-02	1.556E-01	1.185E-01	7.938E-02	NOT IDENT.
ZR-95	3.627E-02	9.911E-02	8.808E-02	5.057E-02	NOT IDENT.
NB-97	-1.824E+06	1.040E+06	0.000E+00	5.305E+05	SHORT HLIF
ZR-97	3.386E+07	2.000E+07	0.000E+00	1.021E+07	SHORT HLIF
MO-99	6.937E+00	2.334E+01	2.074E+01	1.191E+01	NOT IDENT.
TC-99M	2.243E+18	1.471E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.109E-02	3.520E-02	2.932E-02	1.796E-02	NOT IDENT.
RH-102	-2.479E-02	3.285E-02	2.606E-02	1.676E-02	FAIL ABUN
RU-103	2.512E-02	5.002E-02	4.406E-02	2.552E-02	FAIL ABUN
RH-106	1.915E-01	4.332E-01	3.733E-01	2.210E-01	FAIL ABUN
RU-106	1.915E-01	4.327E-01	3.733E-01	2.208E-01	FAIL ABUN
AG-108M	1.325E-02	3.579E-02	3.157E-02	1.826E-02	NOT IDENT.
AG-110M	-7.903E-02	4.560E-02	3.035E-02	2.327E-02	NOT IDENT.
IN-111	8.772E-01	2.151E+00	1.646E+00	1.097E+00	NOT IDENT.
IN-113M	1.447E-02	5.046E-02	4.449E-02	2.574E-02	NOT IDENT.
SN-113	1.447E-02	5.046E-02	4.449E-02	2.574E-02	NOT IDENT.
IN-114M	-1.918E-01	2.340E-01	1.669E-01	1.194E-01	NOT IDENT.
CD-115	8.276E+00	2.317E+01	2.019E+01	1.182E+01	NOT IDENT.
SN-117M	-1.362E-02	6.329E-02	5.388E-02	3.229E-02	NOT IDENT.
SB-122	5.223E+00	4.610E+00	4.200E+00	2.352E+00	NOT IDENT.
I-123	6.831E+06	8.752E+07	0.000E+00	4.465E+07	SHORT HLIF
TE-123M	2.286E-03	2.929E-02	2.529E-02	1.494E-02	NOT IDENT.
I-124	-2.265E-02	1.419E+00	1.031E+00	7.240E-01	NOT IDENT.
SB-124	-7.214E-03	8.189E-02	6.693E-02	4.178E-02	FAIL ABUN
SB-125	9.453E-02	1.039E-01	9.497E-02	5.303E-02	FAIL ABUN
TE-125M	-2.127E+00	9.210E+00	8.035E+00	4.699E+00	NOT IDENT.
I-126	-2.689E-01	2.909E-01	2.196E-01	1.484E-01	NOT IDENT.
SB-126	8.614E-02	2.068E-01	1.649E-01	1.055E-01	FAIL ABUN
SB-127	-1.176E-01	2.375E+00	1.946E+00	1.212E+00	NOT IDENT.
XE-127	-5.867E-02	5.355E-02	4.242E-02	2.732E-02	NOT IDENT.
I-131	-1.663E-01	1.514E-01	1.206E-01	7.723E-02	NOT IDENT.
TE-132	3.494E-01	1.133E+00	9.659E-01	5.778E-01	NOT IDENT.
BA-133	-2.954E-02	5.155E-02	3.720E-02	2.630E-02	NOT IDENT.
I-133	2.972E+03	3.865E+04	0.000E+00	1.972E+04	SHORT HLIF
CS-134	3.021E-02	5.760E-02	5.179E-02	2.939E-02	NOT IDENT.
CS-135	1.973E-01	1.883E-01	1.501E-01	9.608E-02	NOT IDENT.
I-135	-1.063E+18	1.721E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.994E-02	1.700E-01	1.450E-01	8.674E-02	FAIL ABUN
BA-137M	9.479E-02	5.018E-02	4.739E-02	2.560E-02	NOT IDENT.
CS-137	1.002E-01	5.305E-02	5.009E-02	2.706E-02	NOT IDENT.
CE-139	-6.251E-03	3.191E-02	2.711E-02	1.628E-02	NOT IDENT.
BA-140	2.269E-01	3.385E-01	2.956E-01	1.727E-01	NOT IDENT.
LA-140	-9.530E-02	1.104E-01	7.608E-02	5.632E-02	FAIL ABUN
CE-141	7.100E-02	7.068E-02	6.351E-02	3.606E-02	NOT IDENT.
CE-143	1.402E+03	6.103E+02	0.000E+00	3.114E+02	SHORT HLIF

CE-144	1.684E-02	2.370E-01	1.853E-01	1.209E-01	NOT IDENT.
PM-144	3.601E-02	4.591E-02	4.218E-02	2.342E-02	NOT IDENT.
PR-144	2.443E+00	3.115E+00	2.861E+00	1.589E+00	NOT IDENT.
PM-146	-1.173E-02	4.815E-02	4.030E-02	2.457E-02	NOT IDENT.
ND-147	1.218E-01	7.229E-01	6.190E-01	3.688E-01	FAIL ABUN
PM-149	1.329E+02	1.936E+02	1.768E+02	9.877E+01	NOT IDENT.
EU-152	-1.002E-02	1.080E-01	9.068E-02	5.511E-02	NOT IDENT.
GD-153	-1.832E-02	7.722E-02	6.068E-02	3.940E-02	NOT IDENT.
EU-154	-1.766E-01	1.787E-01	1.285E-01	9.118E-02	NOT IDENT.
EU-155	5.156E-02	1.007E-01	9.063E-02	5.137E-02	FAIL ABUN
TB-160	-3.029E-03	1.957E-01	1.665E-01	9.985E-02	FAIL ABUN
HO-166M	4.971E-02	6.878E-02	6.350E-02	3.509E-02	FAIL ABUN
TM-171	-1.313E+01	1.707E+01	1.342E+01	8.709E+00	NOT IDENT.
LU-176	1.551E-03	2.627E-02	2.323E-02	1.340E-02	FAIL ABUN
LU-177	4.145E+00	2.295E+00	1.467E+00	1.171E+00	FAIL ABUN
LU-177M	1.028E-01	2.094E-01	1.861E-01	1.068E-01	FAIL ABUN
HF-181	9.765E-03	5.192E-02	4.480E-02	2.649E-02	NOT IDENT.
W-181	-1.568E-02	2.047E-01	1.665E-01	1.044E-01	NOT IDENT.
TA-182	-1.958E-01	2.959E-01	2.281E-01	1.510E-01	FAIL ABUN
RE-183	2.958E-02	1.158E-01	1.007E-01	5.906E-02	FAIL ABUN
RE-184	1.066E-01	2.461E-01	2.105E-01	1.256E-01	NOT IDENT.
OS-185	-4.433E-02	5.749E-02	4.392E-02	2.933E-02	NOT IDENT.
RE-188	2.967E-01	1.832E-01	1.678E-01	9.345E-02	NOT IDENT.
W-188	-1.150E+00	8.986E+00	6.950E+00	4.585E+00	FAIL ABUN
IR-192	1.328E-02	3.775E-02	3.388E-02	1.926E-02	FAIL ABUN
AU-195	4.497E-01	2.050E-01	1.926E-01	1.046E-01	FAIL ABUN
TL-200	-2.159E+02	1.842E+03	0.000E+00	9.397E+02	SHORT HLIF
TL-201	1.928E+00	1.187E+01	1.026E+01	6.055E+00	NOT IDENT.
TL-202	1.231E-01	8.838E-02	8.306E-02	4.509E-02	NOT IDENT.
HG-203	-1.072E-02	4.627E-02	4.056E-02	2.361E-02	NOT IDENT.
BI-207	1.276E-02	7.011E-02	5.871E-02	3.577E-02	FAIL ABUN
TL-207	-2.221E-01	8.093E-01	5.992E-01	4.129E-01	FAIL ABUN
PO-209	-1.022E+00	9.692E+00	8.154E+00	4.945E+00	NOT IDENT.
PB-211	6.295E-01	1.120E+00	9.445E-01	5.716E-01	NOT IDENT.
BI-212	1.374E+00	8.499E-01	4.590E-01	4.336E-01	FAIL ABUN
PO-215	-2.221E-01	8.093E-01	5.992E-01	4.129E-01	FAIL ABUN
RN-219	1.434E-01	4.753E-01	4.182E-01	2.425E-01	FAIL ABUN
RN-220	-2.487E+01	3.159E+01	2.454E+01	1.612E+01	NOT IDENT.
RA-223	-2.221E-01	8.093E-01	5.992E-01	4.129E-01	FAIL ABUN
AC-227	-3.002E-01	4.520E-01	3.502E-01	2.306E-01	NOT IDENT.
TH-227	-3.002E-01	4.529E-01	3.502E-01	2.311E-01	FAIL ABUN
TH-229	3.216E-01	5.606E-01	4.888E-01	2.860E-01	FAIL ABUN
PA-231	-3.915E-01	1.664E+00	1.455E+00	8.492E-01	NOT IDENT.
TH-231	-2.221E-01	8.093E-01	5.992E-01	4.129E-01	FAIL ABUN
U-231	-1.544E+00	1.418E+00	1.056E+00	7.235E-01	FAIL ABUN
PA-233	-1.049E-03	6.727E-02	5.915E-02	3.432E-02	FAIL ABUN
PA-234	-1.284E-01	4.092E-01	3.345E-01	2.088E-01	FAIL ABUN
PA-234M	6.104E+00	5.727E+00	5.333E+00	2.922E+00	NOT IDENT.
U-235	1.079E-01	2.288E-01	2.014E-01	1.167E-01	FAIL ABUN
NP-236	-2.667E-02	8.089E-02	6.838E-02	4.127E-02	NOT IDENT.
NP-239	-5.402E-02	1.847E-01	1.599E-01	9.423E-02	FAIL ABUN
AM-241	-9.066E-04	6.790E-02	5.529E-02	3.464E-02	NOT IDENT.
CM-243	1.008E-02	8.685E-02	7.714E-02	4.431E-02	FAIL ABUN
AM-246	-2.900E-02	1.840E-01	1.509E-01	9.388E-02	NOT IDENT.
CM-247	3.204E-04	4.300E-02	3.712E-02	2.194E-02	NOT IDENT.
CF-249	8.688E-03	4.524E-02	3.916E-02	2.308E-02	NOT IDENT.
CF-251	1.602E-01	1.330E-01	1.199E-01	6.787E-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	272.1458
46.50	272.1458
46.50	272.1458
48.70	271.4230
49.72	269.7107
51.35	321.6238
52.39	304.7891
52.97	285.7793
53.15	285.9216
53.44	287.0012
54.07	277.2927
56.28	322.5961
56.28	322.5980
57.37	0.0000
57.53	325.3879
57.53	325.3899
57.60	325.4477
57.98	323.8824
57.98	323.8824
59.32	336.4000
59.32	336.4000
59.40	336.4694
59.54	336.5914
59.72	336.7471
60.01	353.8480
61.10	330.1378
61.14	330.1707
61.30	336.8065
63.00	370.0241
63.29	370.2900
63.29	370.2900
63.58	370.5558
64.28	381.2382
65.12	389.8980
65.20	389.9734
65.20	389.9734
66.05	402.6172
66.72	434.8924
66.83	429.7354
66.91	429.8175
67.20	427.4772
67.20	427.4772
67.75	412.1803
67.85	408.0517
68.90	390.3380
68.90	390.3380
69.30	409.2673
69.67	403.4299
70.82	420.4686
70.82	420.4686
70.83	420.4783
72.80	403.6582
72.87	403.7204
72.87	403.7204
74.67	404.8148
74.81	404.9391
74.81	404.9391
74.81	404.9391
74.81	404.9391
74.81	404.9391
74.81	404.9391
74.81	404.9391
74.97	405.0840
75.28	405.3601
75.70	405.7375
77.11	406.9893
77.11	406.9893

77.11	406.9893
77.11	406.9893
77.11	406.9893
77.11	406.9893
77.11	406.9893
78.38	408.1076
79.62	317.4760
79.80	317.5974
79.80	317.5974
80.11	366.6996
80.18	366.7552
80.30	366.8479
80.30	366.8479
80.57	367.0560
81.00	367.3897
81.07	367.4432
81.07	367.4432
81.07	367.4432
81.07	367.4432
82.60	368.6195
83.37	274.5787
83.78	274.8131
83.78	274.8131
83.78	274.8131
83.78	274.8131
84.21	275.0552
84.90	275.4428
85.43	275.7400
86.29	276.2210
86.50	276.3375
86.54	276.3589
86.59	276.3880
86.72	276.4600
86.79	276.4968
86.94	276.5811
87.30	276.7817
87.30	276.7817
87.30	276.7817
87.30	276.7817
87.30	276.7817
87.30	276.7817
87.57	276.9303
87.88	277.1019
88.03	277.1847
88.36	277.3654
88.47	277.4267
89.95	278.2371
91.11	278.8668
92.29	279.5041
92.38	279.5531
92.38	279.5531
93.35	280.0740
94.00	280.4202
94.67	233.5123
94.67	233.5149
94.90	233.6168
94.90	233.6168
94.90	233.6168
94.90	233.6168
95.87	297.1093
95.87	297.1093
96.73	307.4157
97.43	282.5152
98.44	234.3199
98.44	234.3199
98.88	217.0348
99.55	240.8190
99.55	240.8190
99.86	252.2505
100.00	252.3146
100.10	253.3040
103.18	267.0228
103.76	246.4451
105.00	252.6870
105.31	252.8250
108.00	270.2483
109.28	275.6309

111.00	249.5647
111.00	249.5647
111.76	263.3415
112.95	259.0545
115.19	251.3235
116.30	234.3526
117.00	245.2868
117.00	245.2868
117.66	253.3163
121.11	217.6430
121.62	225.6353
121.78	225.6929
122.06	226.7702
122.32	226.8634
122.32	226.8634
122.32	226.8634
122.32	226.8634
123.07	227.9168
127.23	205.4575
129.76	232.4708
131.20	230.5015
133.02	250.5183
133.54	240.2668
135.34	237.4189
136.00	220.6763
136.25	220.7572
136.48	240.8161
140.51	250.2741
140.51	0.0000
142.18	275.0578
142.65	271.2083
143.76	254.4712
144.24	268.7898
144.24	268.7898
144.24	268.7898
144.24	268.7898
145.22	257.0205
145.44	230.7809
147.16	253.6596
152.43	230.9796
152.70	220.8406
153.22	214.8578
154.21	203.8766
154.21	203.8766
154.21	203.8766
154.21	203.8766
155.03	187.6912
156.02	236.2095
158.56	215.3697
159.00	0.0000
159.00	202.0911
160.31	208.6372
161.27	214.0689
162.32	202.9724
162.64	200.9841
163.35	197.0218
163.89	203.3851
165.85	218.4637
167.43	202.2254
171.28	202.1647
171.86	196.0205
172.10	199.2252
176.55	172.9120
176.60	172.9237
181.06	160.6097
184.41	196.9125
185.71	197.2155
186.00	197.2833
190.27	231.4951
192.34	171.8896
193.63	195.8152
197.04	200.8964
198.01	202.1991
198.60	180.6924
200.40	169.1333
201.83	231.3004
202.84	220.6890
205.31	188.0428

208.36	183.7483
208.81	183.8389
209.75	136.3770
209.75	136.3770
210.97	156.3000
215.65	157.6340
216.55	151.1649
218.09	180.1450
222.10	155.3766
223.80	173.4370
226.40	166.0987
227.00	150.5841
227.08	145.0188
227.20	141.6903
228.16	148.5291
228.18	148.5318
228.18	148.5318
231.56	0.0000
235.69	183.9774
236.00	184.0356
236.00	184.0356
238.63	250.5336
238.63	250.5336
238.63	250.5336
238.63	250.5336
239.00	321.7470
240.98	322.3732
241.98	224.1821
241.98	224.1821
241.98	224.1821
244.69	143.0381
245.39	139.7263
247.94	154.8732
248.90	136.7786
249.79	152.8656
252.40	117.7924
252.85	121.2750
252.85	121.2750
254.15	0.0000
256.20	159.5310
256.20	159.5310
260.50	152.1040
260.90	168.2986
262.80	118.9387
264.65	134.6396
268.24	116.6284
268.79	120.1688
269.46	120.2404
269.46	120.2404
269.46	120.2404
269.46	120.2404
271.23	141.3767
273.65	171.4193
276.40	142.0293
277.35	146.5353
277.60	141.3025
277.60	141.3025
278.00	143.9855
278.60	139.6685
279.20	156.4426
279.53	156.4861
280.46	156.6137
281.68	144.4509
283.67	141.1694
284.30	146.5443
285.00	128.9664
285.90	121.9945
286.10	121.1314
286.10	121.1314
287.40	139.8557
288.45	0.0000
290.67	133.5002
290.80	133.5140
291.72	130.7766
293.26	0.0000
293.70	133.8444
295.21	132.7668
295.21	132.7668

295.21	132.7668
295.96	165.4841
296.50	178.4027
297.23	195.6498
298.57	128.6741
299.80	135.9595
299.80	135.9595
300.09	134.5627
300.09	134.5627
300.09	134.5627
300.09	134.5627
300.12	134.5650
301.29	139.7111
302.84	169.4817
303.76	138.2019
303.91	138.2184
304.40	128.3980
304.40	128.3980
304.84	114.0725
306.84	115.1602
308.46	124.3192
311.98	110.2200
316.51	106.9951
318.01	117.1090
319.02	119.9291
319.41	123.6007
320.08	117.2999
323.87	106.5255
323.87	106.5255
323.87	106.5255
323.87	106.5255
325.23	115.4044
328.77	119.9341
333.44	150.6870
334.20	147.0972
334.20	147.0972
334.30	147.1094
338.28	112.5116
338.28	112.5116
338.28	112.5116
338.28	112.5116
338.32	112.5153
338.32	112.5153
338.32	112.5153
340.50	94.5953
340.57	94.6000
344.27	104.8163
345.85	100.9126
350.59	0.0000
351.07	93.1107
351.92	93.1686
351.92	93.1686
351.92	93.1686
355.39	0.0000
356.01	100.1761
364.48	107.1864
366.43	78.1481
367.43	86.6838
367.94	0.0000
369.80	89.6612
374.96	90.9360
383.85	98.1719
387.95	86.9788
388.63	85.1065
391.69	88.1592
391.69	88.1592
392.90	100.6998
398.62	91.4601
400.65	91.5848
401.10	88.7193
401.81	91.6558
402.60	97.4955
404.84	84.1060
410.95	85.4152
411.60	97.1039
413.65	89.4563
414.70	80.7596
415.30	86.6316

415.76	89.5784
417.63	0.0000
418.52	93.6401
423.70	92.9735
427.08	70.6157
427.89	68.6894
432.53	69.8755
433.93	68.9522
439.47	59.3069
439.56	59.3097
439.89	63.2773
443.98	95.1563
444.90	82.3174
445.03	82.3237
445.03	82.3237
445.03	82.3237
445.03	82.3237
453.90	73.7956
463.38	76.2227
468.07	70.8039
473.00	67.5807
475.06	76.7503
475.35	72.7240
476.78	78.8498
477.59	71.8071
477.96	67.7760
482.03	70.9784
484.57	66.0057
487.03	66.0989
490.36	0.0000
492.35	59.1602
497.08	64.4323
507.63	0.0000
510.53	0.0000
510.84	63.8992
511.00	63.9049
511.85	69.2974
511.85	69.2974
513.99	69.3784
513.99	69.3784
520.41	69.4168
520.65	69.4250
527.90	52.0142
528.96	0.0000
529.64	58.3105
529.87	0.0000
531.02	51.0591
537.32	51.2311
543.00	78.6507
546.56	0.0000
549.76	72.6155
552.65	57.9692
555.20	64.3788
563.23	63.5852
563.90	60.4268
568.70	79.7035
569.32	80.7917
569.50	81.8618
569.67	75.4895
573.80	68.1895
574.00	66.0642
574.64	69.2847
578.91	61.5287
579.30	0.0000
583.14	55.6642
585.48	53.1571
591.81	72.0299
592.07	76.3389
593.00	68.8438
595.88	64.6326
600.56	78.8167
602.52	0.0000
602.71	76.0891
602.71	76.0891
603.60	74.3913
604.41	88.2664
604.70	88.2788
609.31	57.4657

609.31	57.4657
609.31	57.4657
609.31	57.4657
610.33	57.4932
612.46	62.5482
614.37	62.6045
618.01	74.0367
621.84	64.3548
621.84	64.3548
631.29	54.7806
633.02	60.3073
633.10	60.3107
634.78	64.7473
635.90	73.5655
636.97	53.8285
645.85	71.6988
646.12	70.6035
656.30	45.4406
657.75	78.7418
657.90	0.0000
661.65	49.9947
661.65	49.9947
664.57	0.0000
666.33	86.8407
666.33	86.8407
675.00	54.7646
677.61	51.4706
685.20	48.2753
692.80	70.2876
695.00	57.7281
696.49	61.3743
696.49	61.3743
697.00	62.2920
697.49	61.4009
698.33	75.8769
698.50	75.8830
699.00	75.8974
702.63	52.4875
706.10	64.3489
706.58	0.0000
706.67	63.4580
709.31	56.2677
711.68	40.8812
713.82	52.7395
717.42	50.9988
720.50	42.5537
721.93	0.0000
722.20	51.7097
722.78	50.2009
722.78	50.2009
722.89	50.2036
722.95	54.7676
723.30	54.7764
724.18	50.2305
727.18	66.7533
733.00	42.7770
735.90	56.2121
739.58	44.1188
742.81	45.0977
744.21	38.6777
747.13	49.7878
751.79	58.1966
752.31	59.1328
753.82	51.7727
755.35	56.4295
756.15	59.2250
756.87	53.6882
763.93	58.7921
765.79	55.7388
766.42	51.1073
766.84	51.1154
776.49	71.8378
778.00	56.9448
778.57	56.0229
778.89	56.0303
783.80	58.0100
785.46	57.1115
792.07	41.3016

795.84	47.0032
796.30	41.3703
798.80	64.9385
801.93	53.7103
805.60	40.5750
810.29	52.9375
810.76	55.7835
815.85	41.6818
817.79	48.3491
818.51	43.6214
819.60	43.6394
826.30	44.7005
828.27	0.0000
831.60	63.8496
831.96	60.9984
834.83	70.6053
836.80	0.0000
846.75	47.9175
848.13	59.4479
856.28	0.0000
856.80	67.3340
860.37	52.0106
867.32	49.2456
867.82	46.3570
871.10	41.5775
873.19	52.2532
874.81	58.0928
875.33	0.0000
876.40	53.2826
879.36	50.4296
880.27	60.1473
880.51	64.0326
881.50	46.5855
883.24	41.7591
884.67	42.7518
889.25	46.7145
896.60	45.8606
898.02	49.7885
899.00	49.8059
903.28	50.5327
911.07	49.0356
911.07	49.0356
911.07	49.0356
919.63	54.0990
920.93	43.0525
925.00	47.3016
925.24	50.2616
926.50	52.2560
935.52	49.4507
937.48	62.3494
944.10	51.5785
946.00	49.6265
949.00	38.7477
962.29	58.4513
964.01	59.9121
966.15	63.2854
968.20	73.9928
969.11	38.3418
969.11	38.3418
969.11	38.3418
977.42	41.1211
980.50	36.1433
983.50	52.2577
989.30	43.2950
996.32	54.4944
1001.03	30.3208
1001.68	28.3056
1004.76	50.5957
1021.30	0.0000
1024.50	0.0000
1034.80	56.1870
1036.00	42.9228
1037.82	51.1279
1038.57	48.0717
1038.76	0.0000
1045.16	49.1953
1046.59	44.0897
1048.07	45.1365

1050.47	53.3838
1050.47	53.3838
1062.04	48.4228
1063.62	37.1074
1076.63	39.3248
1077.35	31.0532
1078.86	40.3863
1085.78	31.1323
1099.22	42.7177
1112.02	51.2490
1112.84	54.6319
1115.52	59.3284
1120.29	55.9167
1120.29	55.9167
1120.29	55.9167
1120.29	55.9167
1120.51	63.9577
1121.28	63.9726
1124.00	0.0000
1129.67	47.3093
1131.51	0.0000
1147.95	0.0000
1167.94	46.7693
1173.22	52.1630
1175.09	40.4733
1177.93	46.9025
1189.05	55.6029
1204.90	50.4768
1205.75	0.0000
1213.00	63.5085
1221.42	67.9680
1230.97	65.9831
1235.34	61.7287
1236.41	0.0000
1238.25	52.0242
1246.25	42.3611
1260.41	0.0000
1271.85	36.0889
1274.45	51.4338
1274.54	45.9642
1291.56	32.9780
1298.22	0.0000
1312.09	37.7585
1325.50	27.7234
1325.50	27.7234
1332.49	21.2920
1333.61	25.9287
1360.21	16.7805
1362.66	0.0000
1365.15	26.1349
1368.21	26.1543
1368.53	0.0000
1376.25	20.5910
1384.27	20.6322
1394.10	17.8612
1395.20	21.6280
1407.95	16.9783
1434.06	15.1875
1436.60	17.0962
1457.56	0.0000
1460.81	16.3756
1489.15	21.1549
1509.49	15.4570
1596.49	17.7305
1620.62	12.8725
1678.03	0.0000
1691.02	8.0404
1691.02	8.0404
1706.46	0.0000
1750.46	0.0000
1764.49	17.4895
1764.49	17.4895
1764.49	17.4895
1764.49	17.4895
1770.23	30.6421
1771.40	12.2598
1791.20	0.0000
1808.65	7.2042

1836.01

9.3124

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440006

Total Uranium Activity	6.5092E+00	ug/g
Total Uranium Counting Unc.	3.7253E+00	ug/g
Total Uranium Tpu	1.9007E-06	ug/g
Total Uranium Mda	1.6042E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 950788                          SAMPLE ID   : G246440006
*  ANALYST       : MXR1                             DETECTOR    : GAM17
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 18:02:13.16          SAMPLE ALQT  : 126.870 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.808E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.399E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 3.564E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.727E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 20:30:45.57

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440007.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 18:30:21
Sample ID          : G246440007      Sample quantity   : 1.39290E+02 GRAM
Detector name      : GAM18            Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00   Elapsed real time: 0 02:00:01.89  0.0%
Energy tolerance    : 1.50000 keV     Analyst Initials : MXR1
Abundance limit     : 75.00000         Sensitivity       : 5.00000
Batch ID           : 950788            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	63.43*	137	608	0.98	125.99	121	10	1.91E-02	35.3	
2	2	74.97	430	527	1.18	149.05	143	15	5.97E-02	10.2	1.70E+00
3	2	77.28	746	498	1.13	153.67	143	15	1.04E-01	6.4	
4	3	87.43	331	473	1.32	173.96	164	28	4.60E-02	12.6	4.23E+00
5	3	90.11	186	460	1.27	179.34	164	28	2.58E-02	21.7	
6	3	92.93*	382	447	1.37	184.96	164	28	5.31E-02	11.8	
7	0	186.09*	237	544	1.01	371.22	366	11	3.29E-02	20.7	
8	0	209.52*	134	439	1.05	418.05	414	10	1.85E-02	31.1	
9	4	238.72*	1869	283	1.18	476.44	469	19	2.60E-01	2.8	9.99E-01
10	4	241.59	433	398	1.80	482.18	469	19	6.02E-02	12.5	
11	0	270.08	165	321	1.28	539.13	533	12	2.29E-02	23.1	
12	0	295.33*	532	333	1.35	589.62	582	13	7.39E-02	8.5	
13	0	300.05	124	209	1.57	599.05	595	9	1.72E-02	22.9	
14	0	327.76*	93	380	1.34	654.47	648	15	1.29E-02	47.3	
15	0	338.19	385	374	1.39	675.32	669	14	5.34E-02	11.8	
16	0	351.94*	945	223	1.49	702.80	697	11	1.31E-01	4.6	
17	0	462.97	86	190	1.11	924.80	920	11	1.19E-02	33.2	
18	0	510.70*	156	249	2.04	1020.23	1013	18	2.16E-02	28.0	
19	0	582.93*	597	221	1.64	1164.66	1157	15	8.29E-02	6.9	
20	0	609.20*	657	200	1.50	1217.17	1211	13	9.12E-02	6.0	
21	0	661.14*	38	86	0.69	1321.03	1318	8	5.23E-03	46.9	
22	0	726.89*	126	165	1.36	1452.50	1447	15	1.75E-02	24.1	
23	0	767.86	52	86	1.47	1534.42	1531	8	7.19E-03	34.0	
24	0	794.43*	102	102	1.60	1587.56	1581	14	1.42E-02	23.7	
25	0	860.03*	95	97	1.58	1718.72	1710	15	1.31E-02	25.6	
26	0	910.75*	479	106	1.53	1820.14	1812	15	6.66E-02	6.7	
27	0	968.68*	239	153	1.74	1935.99	1929	13	3.31E-02	12.8	
28	0	1120.59*	90	174	1.22	2239.75	2236	16	1.24E-02	37.6	
29	0	1377.26	54	42	1.89	2753.02	2744	17	7.51E-03	30.8	
30	0	1460.06	2746	63	2.21	2918.60	2907	22	3.81E-01	2.0	
31	0	1763.69*	134	22	2.07	3525.84	3516	17	1.87E-02	12.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 20:30:47

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440007.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 18:30:21
Sample ID        : G246440007             Sample quantity  : 139.29 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA18                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00           Elapsed real time: 0 02:00:01.89   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	*	3.663E+01	3.157E+00	4.605E-01	3.494E-02	79.551
CD-109	+	88.03	*	3.812E+00	1.019E+00	1.035E+00	9.565E-02	3.684
SN-126	+	64.28		1.241E+00	8.954E-01	8.343E-01	1.233E-01	1.488
	+	86.94		1.552E+00	7.527E-01	4.280E-01	1.775E-01	3.628
	+	87.57	*	3.734E-01	9.984E-02	1.020E-01	9.400E-03	3.660
BA-137M	+	661.65	*	3.145E-02	2.961E-02	4.672E-02	3.561E-03	0.673
CS-137	+	661.65	*	3.325E-02	3.130E-02	4.939E-02	3.774E-03	0.673
TL-208		277.35		4.094E-01	3.108E-01	5.291E-01	5.556E-02	0.774
	+	510.84		4.511E-01	2.568E-01	1.589E-01	1.690E-02	2.839
	+	583.14	*	4.855E-01	7.699E-02	4.536E-02	3.556E-03	10.704
	+	860.37		7.019E-01	3.676E-01	3.635E-01	4.065E-02	1.931
BI-211		72.87		3.852E+00	3.178E+00	4.923E+00	4.065E-01	0.782
	+	351.07	*	3.610E+00	4.025E-01	2.514E-01	1.614E-02	14.360
PB-212	+	74.81		2.194E+00	5.242E-01	4.978E-01	6.240E-02	4.408
	+	77.11		2.125E+00	3.266E-01	2.785E-01	2.361E-02	7.629
	+	87.30		1.727E+00	4.930E-01	4.737E-01	6.433E-02	3.646
	+	238.63	*	1.663E+00	1.510E-01	7.446E-02	5.320E-03	22.328
	+	300.09		1.637E+00	7.607E-01	9.058E-01	7.437E-02	1.808
PO-212	+	74.81		2.194E+00	5.242E-01	4.978E-01	6.240E-02	4.408
	+	77.11		2.125E+00	3.266E-01	2.785E-01	2.361E-02	7.629
	+	87.30		1.727E+00	4.930E-01	4.737E-01	6.433E-02	3.646
		115.19		2.223E+00	3.098E+00	5.123E+00	3.227E-01	0.434
	+	238.63	*	1.663E+00	1.510E-01	7.446E-02	5.320E-03	22.328
	+	300.09		1.637E+00	7.607E-01	9.058E-01	7.437E-02	1.808
BI-214	+	609.31	*	1.003E+00	1.504E-01	9.098E-02	8.127E-03	11.026
	+	1120.29		6.854E-01	5.193E-01	3.984E-01	3.815E-02	1.720
	+	1764.49		1.353E+00	3.400E-01	1.972E-01	1.199E-02	6.859
PB-214	+	74.81		3.781E+00	8.772E-01	8.578E-01	9.576E-02	4.408
	+	77.11		3.643E+00	6.250E-01	4.775E-01	5.441E-02	7.629
	+	87.30		2.959E+00	8.233E-01	8.114E-01	9.734E-02	3.646
	+	241.98		2.309E+00	6.062E-01	4.476E-01	3.539E-02	5.158
	+	295.21		1.237E+00	2.341E-01	1.620E-01	1.375E-02	7.631
	+	351.92	*	1.256E+00	1.546E-01	8.762E-02	7.248E-03	14.333
PO-214	+	74.81		3.781E+00	8.772E-01	8.578E-01	9.576E-02	4.408

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		3.643E+00	6.250E-01	4.775E-01	5.441E-02	7.629
	+	87.30		2.959E+00	8.233E-01	8.114E-01	9.734E-02	3.646
	+	241.98		2.309E+00	6.062E-01	4.476E-01	3.539E-02	5.158
	+	295.21		1.237E+00	2.341E-01	1.620E-01	1.375E-02	7.631
	+	351.92	*	1.256E+00	1.546E-01	8.762E-02	7.248E-03	14.333
PO-216	+	74.81		2.194E+00	5.242E-01	4.978E-01	6.240E-02	4.408
	+	77.11		2.125E+00	3.266E-01	2.785E-01	2.361E-02	7.629
	+	87.30		1.727E+00	4.930E-01	4.737E-01	6.433E-02	3.646
	+	238.63	*	1.663E+00	1.510E-01	7.446E-02	5.320E-03	22.328
	+	300.09		1.637E+00	7.607E-01	9.058E-01	7.437E-02	1.808
PO-218	+	74.81		3.781E+00	8.772E-01	8.578E-01	9.576E-02	4.408
	+	77.11		3.643E+00	6.250E-01	4.775E-01	5.441E-02	7.629
	+	87.30		2.959E+00	8.233E-01	8.114E-01	9.734E-02	3.646
	+	241.98		2.309E+00	6.062E-01	4.476E-01	3.539E-02	5.158
	+	295.21		1.237E+00	2.341E-01	1.620E-01	1.375E-02	7.631
	+	351.92	*	1.256E+00	1.546E-01	8.762E-02	7.248E-03	14.333
RA-224	+	240.98	*	4.378E+00	1.123E+00	8.464E-01	4.715E-02	5.173
RA-226	+	609.31	*	1.003E+00	1.504E-01	9.098E-02	8.127E-03	11.026
	+	1120.29		6.854E-01	5.193E-01	3.984E-01	3.815E-02	1.720
	+	1764.49		1.353E+00	3.400E-01	1.972E-01	1.199E-02	6.859
AC-228	+	338.32		1.629E+00	7.673E-01	2.881E-01	1.175E-01	5.655
	+	911.07	*	1.677E+00	3.152E-01	1.387E-01	1.838E-02	12.093
	+	969.11		1.468E+00	5.143E-01	2.983E-01	7.143E-02	4.921
RA-228	+	338.32		1.629E+00	7.673E-01	2.881E-01	1.175E-01	5.655
	+	911.07	*	1.677E+00	3.152E-01	1.387E-01	1.838E-02	12.093
	+	969.11		1.468E+00	5.143E-01	2.983E-01	7.143E-02	4.921
TH-228	+	74.81		2.233E+00	4.915E-01	5.065E-01	4.268E-02	4.408
	+	77.11		2.162E+00	3.323E-01	2.833E-01	2.402E-02	7.629
	+	87.30		1.757E+00	4.698E-01	4.819E-01	4.429E-02	3.646
	+	238.63	*	1.692E+00	1.536E-01	7.576E-02	5.412E-03	22.328
	+	300.09		1.666E+00	1.243E+00	9.215E-01	5.430E-01	1.808
TH-230	+	609.31	*	1.003E+00	1.504E-01	9.097E-02	8.127E-03	11.026
	+	1120.29		6.854E-01	5.193E-01	3.984E-01	3.814E-02	1.720
	+	1764.49		1.353E+00	3.400E-01	1.972E-01	1.199E-02	6.859
TH-232	+	338.32		1.629E+00	3.956E-01	2.881E-01	1.667E-02	5.655
	+	911.07	*	1.677E+00	3.152E-01	1.387E-01	1.838E-02	12.093
	+	969.11		1.468E+00	5.143E-01	2.983E-01	7.143E-02	4.921
TH-234	+	63.29	*	3.136E+00	2.282E+00	2.067E+00	3.643E-01	1.518
	+	92.38		2.736E+00	8.112E-01	6.577E-01	1.186E-01	4.160
U-234	+	609.31	*	1.003E+00	1.504E-01	9.097E-02	8.127E-03	11.026
	+	1120.29		6.854E-01	5.193E-01	3.984E-01	3.814E-02	1.720
	+	1764.49		1.353E+00	3.400E-01	1.972E-01	1.199E-02	6.859
NP-237	+	86.50	*	1.097E+00	3.703E-01	3.043E-01	6.865E-02	3.604
	+	95.87		3.520E-01	9.335E-01	1.377E+00	3.363E-01	0.256
U-238	+	63.29	*	3.136E+00	2.282E+00	2.067E+00	3.643E-01	1.518
	+	92.38		2.736E+00	6.848E-01	6.577E-01	5.590E-02	4.160
AM-243	+	74.67	*	3.558E-01	7.821E-02	8.103E-02	6.762E-03	4.391
	+	86.72		4.112E+01	1.099E+01	1.137E+01	1.040E+00	3.616
		117.66		-1.497E+00	3.367E+00	5.320E+00	3.272E-01	-0.281

Sample ID : G246440007

Acquisition date : 19-FEB-2010 18:30:21

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	142.18			-6.672E+00	1.510E+01	2.354E+01	1.297E+00	-0.283
ANH-511	+	511.00	*	9.744E-02	5.486E-02	3.433E-02	2.267E-03	2.838

---- 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	*	3.010E-01	2.659E-01	4.628E-01	3.354E-02	0.650
NA-22		1274.54	*	-1.416E-02	3.613E-02	5.760E-02	3.919E-03	-0.246
NA-24		1368.53	*	-3.434E+00	3.613E-02	Half-Life too short		
AL-26		1129.67		-2.528E-01	1.672E+00	2.341E+00	1.563E-01	-0.108
		1808.65	*	-6.846E-03	2.146E-02	3.346E-02	1.953E-03	-0.205
TI-44		67.85		-2.324E-02	5.021E-02	7.362E-02	5.920E-03	-0.316
	+	78.38	*	3.922E-01	6.028E-02	7.404E-02	6.331E-03	5.296
SC-46		889.25	*	-4.918E-04	3.262E-02	5.326E-02	5.941E-03	-0.009
	+	1120.51		1.194E-01	9.015E-02	1.013E-01	6.995E-03	1.180
V-48		944.10		8.347E-01	7.516E-01	1.313E+00	1.389E-01	0.636
		983.50	*	9.253E-03	5.620E-02	9.220E-02	9.120E-03	0.100
		1312.09		-5.920E-02	7.138E-02	1.085E-01	7.902E-03	-0.546
CR-51		320.08	*	1.388E-01	3.137E-01	5.163E-01	3.324E-02	0.269
MN-52		744.21		3.946E-02	2.306E-01	3.871E-01	3.414E-02	0.102
		848.13		1.628E+00	6.705E+00	1.119E+01	1.171E+00	0.145
		935.52		6.601E-02	2.666E-01	4.410E-01	4.730E-02	0.150
		1246.25		3.608E+00	7.756E+00	1.314E+01	8.451E-01	0.275
		1333.61		1.694E+00	5.113E+00	8.601E+00	6.498E-01	0.197
		1434.06	*	9.796E-02	2.442E-01	4.123E-01	3.038E-02	0.238
MN-54		834.83	*	-2.661E-03	3.122E-02	5.106E-02	5.230E-03	-0.052
CO-56		846.75	*	-5.578E-03	3.100E-02	5.025E-02	5.246E-03	-0.111
		977.42		-1.375E+00	2.319E+00	3.477E+00	3.478E-01	-0.395
		1037.82		-2.846E-01	2.436E-01	3.711E-01	3.438E-02	-0.767
		1175.09		5.979E-01	1.873E+00	3.162E+00	1.755E-01	0.189
		1238.25		9.955E-02	8.241E-02	1.436E-01	9.574E-03	0.693
		1360.21		-5.996E-01	8.918E-01	1.320E+00	9.922E-02	-0.454
		1771.40		-1.184E+00	3.064E-01	2.944E-01	1.779E-02	-4.024
CO-57		122.06	*	-5.868E-03	2.214E-02	3.515E-02	2.082E-03	-0.167
		136.48		1.948E-02	1.821E-01	2.912E-01	1.906E-02	0.067
CO-58		810.76	*	-3.161E-02	3.184E-02	4.869E-02	4.807E-03	-0.649
FE-59		142.65		-4.993E-01	2.491E+00	3.850E+00	2.118E-01	-0.130
		192.34		5.543E-03	8.198E-01	1.327E+00	1.539E-01	0.004
		1099.22	*	1.396E-02	7.743E-02	1.304E-01	1.073E-02	0.107
		1291.56		6.088E-02	1.001E-01	1.717E-01	1.443E-02	0.355
CO-60		1173.22		1.185E-02	3.745E-02	6.319E-02	3.492E-03	0.188
		1332.49	*	-3.575E-03	3.072E-02	5.045E-02	3.812E-03	-0.071
ZN-65		1115.52	*	-1.004E-01	9.758E-02	1.262E-01	8.891E-03	-0.795
GE-68		1077.35	*	2.206E-01	9.837E-01	1.666E+00	1.323E-01	0.132
AS-73		53.44	*	2.397E-01	9.958E-01	1.689E+00	1.339E-01	0.142
AS-74		595.88	*	2.950E-03	7.703E-02	1.249E-01	8.977E-03	0.024
		634.78		4.743E-02	2.942E-01	4.786E-01	3.563E-02	0.099
SE-75		66.05		-1.446E+00	5.316E+00	7.876E+00	7.800E-01	-0.184

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error (pCi/GRAM)	MDA (pCi/GRAM)	MDA error	Act/MDA
		96.73	-8.058E-01	7.841E-01	1.071E+00	1.413E-01	-0.752
		121.11	-5.861E-02	1.216E-01	1.913E-01	1.785E-02	-0.306
		136.00	2.064E-02	3.429E-02	5.589E-02	3.183E-03	0.369
		198.60	1.057E-01	1.466E+00	2.418E+00	1.641E-01	0.044
		264.65	* -7.350E-03	4.096E-02	5.801E-02	3.317E-03	-0.127
		279.53	4.401E-03	9.113E-02	1.487E-01	9.185E-03	0.030
		303.91	1.052E+00	1.857E+00	2.723E+00	2.590E-01	0.386
		400.65	1.739E-01	2.011E-01	3.491E-01	3.181E-02	0.498
BR-77	+	87.88	1.539E+03	4.113E+02	5.578E+02	5.154E+01	2.758
		200.40	-1.078E+02	2.382E+02	3.906E+02	2.104E+01	-0.276
	+	239.00	5.004E+02	3.953E+01	6.023E+01	3.350E+00	8.309
		249.79	-1.033E-01	9.676E+01	1.589E+02	8.906E+00	-0.001
		281.68	-1.563E+02	1.413E+02	2.180E+02	1.244E+01	-0.717
		297.23	6.194E+02	1.310E+02	1.860E+02	1.068E+01	3.330
		303.76	1.817E+02	2.933E+02	4.318E+02	2.484E+01	0.421
		439.47	1.454E+02	2.002E+02	3.450E+02	2.103E+01	0.421
		484.57	-1.966E+02	3.194E+02	5.064E+02	3.250E+01	-0.388
		520.65	* -6.602E+00	1.570E+01	2.433E+01	1.623E+00	-0.271
		574.64	3.427E+01	3.268E+02	5.032E+02	3.543E+01	0.068
		578.91	9.086E+01	1.460E+02	2.150E+02	1.520E+01	0.423
		585.48	2.773E+03	4.231E+02	7.315E+02	5.204E+01	3.791
		755.35	1.768E+02	2.377E+02	4.116E+02	3.699E+01	0.430
		817.79	6.860E+01	1.982E+02	3.337E+02	3.326E+01	0.206
SR-82		698.33	8.094E+00	2.906E+01	4.926E+01	4.010E+00	0.164
		776.49	* -4.128E-02	3.268E-01	5.366E-01	4.997E-02	-0.077
		1395.20	-6.106E+00	9.563E+00	1.457E+01	1.086E+00	-0.419
RB-83		520.41	* -2.748E-02	5.613E-02	8.656E-02	5.773E-03	-0.317
		529.64	-3.285E-02	8.108E-02	1.292E-01	8.698E-03	-0.254
		552.65	-1.156E-02	1.490E-01	2.415E-01	1.664E-02	-0.048
RB-84		881.50	* -2.402E-03	5.917E-02	9.651E-02	1.064E-02	-0.025
KR-85		513.99	* 1.246E+01	6.353E+00	1.022E+01	6.768E-01	1.220
SR-85		513.99	* 6.535E-02	3.332E-02	5.358E-02	3.550E-03	1.220
RB-86		1076.63	* 2.801E-01	6.658E-01	1.142E+00	9.088E-02	0.245
Y-88		898.02	-1.450E-02	3.300E-02	5.210E-02	5.906E-03	-0.278
		1836.01	* -2.050E-02	2.578E-02	3.706E-02	2.111E-03	-0.553
ZR-88		392.90	* -1.788E-04	2.420E-02	4.053E-02	2.331E-03	-0.004
Y-91		1204.90	* -3.854E+00	1.568E+01	2.549E+01	1.507E+00	-0.151
NB-94		702.63	* 8.930E-03	2.706E-02	4.596E-02	3.771E-03	0.194
		871.10	-2.294E-03	2.631E-02	4.280E-02	4.642E-03	-0.054
NB-95		765.79	* 5.589E-02	4.054E-02	6.364E-02	5.822E-03	0.878
NB-95M		235.69	* 2.120E-01	1.166E-01	1.825E-01	1.339E-02	1.162
ZR-95		724.18	1.666E-01	8.836E-02	1.433E-01	1.328E-02	1.163
		756.15	* 4.181E-02	5.589E-02	9.671E-02	9.516E-03	0.432
NB-97		657.90	* 3.880E-01	5.589E-02	Half-Life	too short	
		1024.50	-1.002E+01	5.589E-02	Half-Life	too short	
ZR-97		254.15	1.042E+01	5.589E-02	Half-Life	too short	
		355.39	7.874E+00	5.589E-02	Half-Life	too short	
		507.63	* 2.846E+01	5.589E-02	Half-Life	too short	
		602.52	3.529E+01	5.589E-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
	1021.30			2.856E+01	5.589E-02	Half-Life too short		
	1147.95			-1.346E+01	5.589E-02	Half-Life too short		
	1362.66			-6.865E+00	5.589E-02	Half-Life too short		
	1750.46			-1.464E+01	5.589E-02	Half-Life too short		
MO-99	140.51			-1.720E+01	3.992E+01	6.124E+01	1.647E+01	-0.281
	181.06			-2.702E+01	2.585E+01	3.557E+01	6.039E+00	-0.760
	366.43			-3.741E+01	1.108E+02	1.836E+02	1.061E+01	-0.204
	739.58	*		3.176E+00	1.482E+01	2.496E+01	3.808E+00	0.127
	778.00			7.762E+00	4.510E+01	7.542E+01	7.042E+00	0.103
TC-99M	140.51	*		-5.592E+12	4.510E+01	Half-Life too short		
RH-101	127.23			1.051E-02	2.915E-02	4.669E-02	2.697E-03	0.225
	198.01	*		7.091E-03	2.685E-02	4.462E-02	2.398E-03	0.159
	325.23			-4.350E-02	2.080E-01	2.879E-01	1.663E-02	-0.151
RH-102	418.52			-9.768E-03	2.187E-01	3.638E-01	2.162E-02	-0.027
	475.06	*		-1.014E-02	2.286E-02	3.679E-02	2.336E-03	-0.276
	631.29			-7.404E-04	4.095E-02	6.584E-02	4.886E-03	-0.011
	697.49			3.679E-02	6.084E-02	1.048E-01	8.523E-03	0.351
	+ 766.84			1.298E-01	8.910E-02	1.579E-01	1.447E-02	0.822
	1046.59			7.189E-02	9.528E-02	1.665E-01	1.437E-02	0.432
	1112.84			-7.559E-02	2.126E-01	3.237E-01	2.298E-02	-0.234
RU-103	497.08	*		-4.690E-03	3.173E-02	5.169E-02	6.711E-03	-0.091
	+ 610.33			1.125E+01	2.256E+00	2.299E+00	3.686E-01	4.895
RH-106	+ 511.85			4.887E-01	2.751E-01	3.386E-01	2.238E-02	1.443
	621.84	*		-1.118E-01	2.355E-01	3.662E-01	4.607E-02	-0.305
	1050.47			-1.039E+00	1.877E+00	3.020E+00	2.581E-01	-0.344
RU-106	+ 511.85			4.887E-01	2.751E-01	3.386E-01	2.238E-02	1.443
	621.84	*		-1.118E-01	2.352E-01	3.662E-01	2.695E-02	-0.305
	1050.47			-1.039E+00	1.877E+00	3.020E+00	2.581E-01	-0.344
AG-108M	433.93	*		-2.205E-02	2.405E-02	3.784E-02	2.472E-03	-0.583
	614.37			1.228E-02	3.428E-02	4.919E-02	3.791E-03	0.250
	722.95			1.901E-02	3.503E-02	5.261E-02	4.652E-03	0.361
AG-110M	657.75	*		1.430E-02	2.727E-02	4.142E-02	3.267E-03	0.345
	677.61			1.187E-01	2.379E-01	4.095E-01	3.322E-02	0.290
	706.67			1.724E-02	1.607E-01	2.697E-01	2.295E-02	0.064
	763.93			1.293E-01	1.448E-01	2.218E-01	2.074E-02	0.583
	884.67			-4.223E-03	4.057E-02	6.585E-02	7.436E-03	-0.064
	937.48			-1.514E-01	8.909E-02	1.232E-01	1.348E-02	-1.229
	1384.27			3.201E-02	1.393E-01	1.997E-01	1.548E-02	0.160
IN-111	171.28			7.793E-03	1.351E+00	2.277E+00	1.198E-01	0.003
	245.39	*		-3.616E-01	1.703E+00	2.278E+00	1.273E-01	-0.159
IN-113M	391.69	*		2.224E-02	3.481E-02	6.005E-02	3.684E-03	0.370
SN-113	391.69	*		2.224E-02	3.481E-02	6.005E-02	3.684E-03	0.370
IN-114M	190.27	*		-3.802E-02	1.717E-01	2.504E-01	1.337E-02	-0.152
CD-115	260.90			1.058E+02	2.033E+02	3.402E+02	1.921E+01	0.311
	492.35			1.098E+01	5.479E+01	9.071E+01	5.872E+00	0.121
	527.90	*		-2.066E+00	1.603E+01	2.601E+01	1.748E+00	-0.079
SN-117M	156.02			-1.112E+00	2.014E+00	3.351E+00	1.790E-01	-0.332
	158.56	*		4.425E-02	4.887E-02	8.520E-02	4.528E-03	0.519
SB-122	563.90	*		2.824E+00	2.762E+00	4.752E+00	3.311E-01	0.594

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-123	692.80			-4.631E+01	5.748E+01	9.122E+01	7.354E+00	-0.508
	159.00	*		3.136E+01	5.748E+01	Half-Life	too short	
	528.96			-3.634E+02	5.748E+01	Half-Life	too short	
TE-123M	159.00	*		1.024E-02	2.332E-02	4.007E-02	2.162E-03	0.255
I-124	602.71	*		4.760E-01	8.899E-01	1.294E+00	9.359E-02	0.368
	722.78			2.391E+00	5.203E+00	7.764E+00	6.598E-01	0.308
	1325.50			-9.670E+00	4.411E+01	6.887E+01	5.139E+00	-0.140
+	1376.25			8.035E+01	4.981E+01	6.479E+01	4.852E+00	1.240
	1509.49			2.354E+01	1.802E+01	3.339E+01	2.392E+00	0.705
	1691.02			-1.028E+00	3.879E+00	6.168E+00	3.978E-01	-0.167
SB-124	602.71			1.984E-02	3.709E-02	5.395E-02	3.902E-03	0.368
	645.85			1.302E-01	3.971E-01	6.517E-01	5.283E-02	0.200
	709.31			-5.639E-01	2.186E+00	3.589E+00	2.979E-01	-0.157
	713.82			4.528E-01	1.269E+00	2.158E+00	2.559E-01	0.210
	722.78			1.445E-01	3.144E-01	4.691E-01	4.076E-02	0.308
	968.20	+		1.549E+01	4.263E+00	6.000E+00	6.101E-01	2.582
	1045.16			2.077E+00	2.074E+00	3.674E+00	3.181E-01	0.565
	1325.50			-6.240E-01	2.846E+00	4.444E+00	3.317E-01	-0.140
	1368.21			-8.585E-01	1.894E+00	2.469E+00	3.157E-01	-0.348
	1436.60			-7.394E-02	3.061E+00	4.955E+00	3.648E-01	-0.015
	1691.02	*		-1.465E-02	5.529E-02	8.790E-02	6.065E-03	-0.167
SB-125	427.89	*		-4.607E-02	6.679E-02	1.068E-01	6.671E-03	-0.432
	463.38	+		4.903E-01	3.271E-01	4.242E-01	3.041E-02	1.156
	600.56			1.717E-02	1.462E-01	2.380E-01	1.895E-02	0.072
	635.90			5.507E-02	2.079E-01	3.404E-01	2.808E-02	0.162
	109.28	*		-1.367E+00	8.688E+00	1.385E+01	1.219E+00	-0.099
TE-125M	388.63			1.260E-01	1.735E-01	3.009E-01	1.729E-02	0.419
I-126	666.33	*		1.940E-01	1.692E-01	2.677E-01	2.058E-02	0.725
	753.82			5.733E-01	1.255E+00	2.140E+00	1.918E-01	0.268
	223.80			1.500E+00	3.416E+00	5.755E+00	3.163E-01	0.261
SB-126	278.60			2.498E+00	2.293E+00	3.897E+00	2.221E-01	0.641
	296.50	+		1.389E+01	2.482E+00	3.298E+00	1.893E-01	4.210
	414.70			1.585E-02	6.689E-02	1.129E-01	6.675E-03	0.140
	415.30			9.154E-01	5.447E+00	9.162E+00	5.423E-01	0.100
	555.20			-7.434E-01	3.268E+00	5.241E+00	3.621E-01	-0.142
	573.80			3.125E-01	9.454E-01	1.525E+00	1.073E-01	0.205
	593.00			3.278E-02	7.781E-01	1.263E+00	9.051E-02	0.026
	656.30			1.655E-01	3.031E+00	4.416E+00	3.350E-01	0.037
	666.33			8.147E-02	7.105E-02	1.124E-01	8.644E-03	0.725
	675.00			8.737E-01	1.636E+00	2.826E+00	2.207E-01	0.309
	695.00			9.194E-03	6.694E-02	1.127E-01	9.123E-03	0.082
	697.00			9.025E-02	2.404E-01	4.097E-01	3.327E-02	0.220
	720.50	*		-1.724E-02	1.413E-01	2.005E-01	1.697E-02	-0.086
	856.80			4.781E-01	4.644E-01	7.155E-01	7.589E-02	0.668
	989.30			3.038E-01	1.090E+00	1.802E+00	1.762E-01	0.169
	1034.80			-1.146E+00	7.881E+00	1.255E+01	1.114E+00	-0.091
	1213.00			4.129E+00	4.449E+00	7.729E+00	4.647E-01	0.534
	61.10			4.919E+01	8.927E+01	1.372E+02	1.534E+01	0.359
SB-127	252.40			-3.256E+00	5.220E+00	8.032E+00	3.350E+00	-0.405

----- Non-Identified Nuclides -----

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		290.80		-2.703E+01	2.841E+01	3.756E+01	3.725E+00	-0.720
		411.60		1.055E+01	1.481E+01	2.538E+01	3.790E+00	0.416
		444.90		2.795E-01	1.088E+01	1.807E+01	2.105E+00	0.015
		473.00		-6.727E-01	1.872E+00	3.024E+00	3.663E-01	-0.222
		543.00		3.660E+00	1.876E+01	3.096E+01	4.321E+00	0.118
		603.60		1.230E+00	1.650E+01	2.314E+01	2.832E+00	0.053
		685.20	*	3.537E-01	1.544E+00	2.616E+00	3.027E-01	0.135
		698.50		4.827E+00	1.797E+01	3.042E+01	4.882E+00	0.159
		722.20		9.069E+00	3.589E+01	5.266E+01	6.177E+00	0.172
		783.80		3.935E+00	4.278E+00	7.401E+00	1.004E+00	0.532
XE-127		57.60		-1.016E+00	6.768E+00	1.128E+01	8.692E-01	-0.090
		145.22		8.581E-01	6.367E-01	1.040E+00	5.687E-02	0.825
		172.10		1.915E-03	9.869E-02	1.664E-01	8.762E-03	0.012
		202.84	*	-2.517E-02	3.749E-02	6.085E-02	3.285E-03	-0.414
		374.96		-1.804E-02	1.609E-01	2.692E-01	1.552E-02	-0.067
I-131		80.18		-4.867E-01	6.581E+00	7.626E+00	6.660E-01	-0.064
		284.30		-1.466E-01	1.460E+00	2.362E+00	1.510E-01	-0.062
		364.48	*	-1.070E-02	1.073E-01	1.800E-01	1.166E-02	-0.059
		636.97		-6.562E-01	1.453E+00	2.263E+00	1.817E-01	-0.290
		722.89		3.641E+00	7.090E+00	1.062E+01	9.108E-01	0.343
TE-132		49.72		-9.082E+00	3.898E+01	6.520E+01	7.064E+00	-0.139
		111.76		1.877E+00	4.153E+01	6.713E+01	6.691E+00	0.028
		116.30		6.488E+00	3.823E+01	6.193E+01	6.056E+00	0.105
		228.16	*	2.186E-01	8.494E-01	1.418E+00	2.085E-01	0.154
BA-133		53.15		-6.107E-01	4.287E+00	7.175E+00	5.693E-01	-0.085
		79.62		1.790E-01	1.342E+00	1.819E+00	2.770E-01	0.098
		81.00		2.732E-02	1.122E-01	1.330E-01	2.118E-02	0.205
		276.40		3.945E-01	3.189E-01	5.236E-01	6.763E-02	0.753
		302.84		5.148E-02	1.276E-01	1.851E-01	2.153E-02	0.278
		356.01	*	-6.256E-03	3.827E-02	5.255E-02	6.070E-03	-0.119
		383.85		-5.787E-02	2.197E-01	3.637E-01	3.945E-02	-0.159
I-133	+	510.53		5.552E+00	2.197E-01	Half-Life	too short	
		529.87	*	-1.149E-02	2.197E-01	Half-Life	too short	
		706.58		2.585E-01	2.197E-01	Half-Life	too short	
		856.28		1.415E+00	2.197E-01	Half-Life	too short	
		875.33		8.780E-02	2.197E-01	Half-Life	too short	
		1236.41		5.361E+00	2.197E-01	Half-Life	too short	
		1298.22		-7.898E-01	2.197E-01	Half-Life	too short	
CS-134		475.35		-7.602E-01	1.508E+00	2.418E+00	1.536E-01	-0.314
		563.23		2.396E-01	2.846E-01	4.846E-01	3.424E-02	0.494
		569.32		-4.536E-02	1.549E-01	2.445E-01	1.748E-02	-0.186
		604.70		1.083E-03	3.234E-02	4.519E-02	3.285E-03	0.024
	+	795.84	*	1.169E-01	5.654E-02	7.347E-02	7.106E-03	1.591
		801.93		-1.490E-01	3.773E-01	5.335E-01	5.204E-02	-0.279
		1038.57		-2.536E+00	3.031E+00	4.763E+00	4.191E-01	-0.533
		1167.94		-8.378E-03	2.122E+00	3.512E+00	1.991E-01	-0.002
		1365.15		6.340E-01	1.039E+00	1.784E+00	1.419E-01	0.355
CS-135		268.24	*	1.348E-01	1.425E-01	2.147E-01	1.623E-02	0.628
I-135		288.45		-3.562E+12	1.425E-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
		417.63		-1.996E+11	1.425E-01	Half-Life	too short	
		546.56		5.153E+11	1.425E-01	Half-Life	too short	
		836.80		5.975E+11	1.425E-01	Half-Life	too short	
		1038.76		-3.019E+12	1.425E-01	Half-Life	too short	
		1124.00		-1.340E+12	1.425E-01	Half-Life	too short	
		1131.51		-1.115E+09	1.425E-01	Half-Life	too short	
		1260.41	*	4.372E+11	1.425E-01	Half-Life	too short	
		1457.56		3.315E+14	1.425E-01	Half-Life	too short	
		1678.03		-3.344E+11	1.425E-01	Half-Life	too short	
		1706.46		1.171E+11	1.425E-01	Half-Life	too short	
		1791.20		-1.382E+12	1.425E-01	Half-Life	too short	
CS-136		66.91		-4.219E-01	9.457E-01	1.386E+00	2.094E-01	-0.304
	+	86.29		5.459E+00	1.549E+00	1.987E+00	2.619E-01	2.748
		153.22		5.111E-01	5.965E-01	1.039E+00	7.154E-02	0.492
		163.89		-1.223E-01	9.594E-01	1.599E+00	1.092E-01	-0.076
		176.55		1.435E-01	3.189E-01	5.451E-01	3.305E-02	0.263
		273.65		-3.780E-01	4.683E-01	6.348E-01	4.137E-02	-0.596
		340.57		5.077E-01	1.476E-01	2.410E-01	1.484E-02	2.107
		818.51		3.571E-02	6.553E-02	1.116E-01	1.115E-02	0.320
		1048.07	*	-1.136E-02	1.005E-01	1.668E-01	1.495E-02	-0.068
		1235.34		8.618E-01	6.159E-01	1.074E+00	1.105E-01	0.802
CE-139		165.85	*	-2.182E-03	2.385E-02	4.017E-02	2.108E-03	-0.054
BA-140		162.64		-1.556E-01	6.865E-01	1.141E+00	6.916E-02	-0.136
		304.84		8.956E-01	1.291E+00	1.877E+00	5.122E-01	0.477
		423.70		3.321E-01	1.595E+00	2.680E+00	8.526E-01	0.124
		537.32	*	-9.780E-02	2.208E-01	3.466E-01	1.134E-01	-0.282
LA-140	+	328.77		5.486E-01	5.206E-01	4.930E-01	3.195E-02	1.113
		432.53		8.161E-01	1.676E+00	2.860E+00	1.896E-01	0.285
		487.03		-3.472E-02	1.145E-01	1.851E-01	1.320E-02	-0.188
		751.79		-5.170E-01	1.459E+00	2.365E+00	2.323E-01	-0.219
		815.85		4.635E-02	2.857E-01	4.757E-01	5.141E-02	0.097
		867.82		4.288E-01	1.273E+00	1.986E+00	2.216E-01	0.216
		919.63		9.099E-01	2.490E+00	4.074E+00	5.147E-01	0.223
		925.24		-3.113E-01	1.030E+00	1.640E+00	1.857E-01	-0.190
		1596.49	*	2.743E-02	6.705E-02	1.165E-01	7.990E-03	0.236
CE-141		145.44	*	9.367E-02	5.663E-02	9.515E-02	5.432E-03	0.984
CE-143		57.37		-5.111E-04	5.663E-02	Half-Life	too short	
		231.56		1.365E-04	5.663E-02	Half-Life	too short	
		293.26	*	2.078E-03	5.663E-02	Half-Life	too short	
	+	350.59		8.478E-02	5.663E-02	Half-Life	too short	
		490.36		1.071E-03	5.663E-02	Half-Life	too short	
		664.57		6.319E-03	5.663E-02	Half-Life	too short	
		721.93		8.327E-04	5.663E-02	Half-Life	too short	
CE-144		80.11		-1.959E-01	2.530E+00	2.931E+00	2.538E-01	-0.067
		133.54	*	-3.493E-02	1.778E-01	2.812E-01	3.976E-02	-0.124
PM-144		476.78		4.146E-02	5.522E-02	9.447E-02	7.011E-03	0.439
		618.01		-1.237E-02	2.474E-02	3.855E-02	2.935E-03	-0.321
		696.49	*	-4.456E-04	2.729E-02	4.554E-02	3.697E-03	-0.010
		778.57		-5.665E-01	1.826E+00	2.960E+00	2.767E-01	-0.191

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	696.49	*		-3.023E-02	1.851E+00	3.089E+00	2.507E-01	-0.010
	1489.15			-7.066E+00	9.276E+00	1.359E+01	9.819E-01	-0.520
PM-146	453.90	*		3.160E-02	3.358E-02	5.817E-02	5.175E-03	0.543
	633.02			1.682E-02	1.070E+00	1.724E+00	6.400E-01	0.010
	735.90			6.836E-02	1.154E-01	1.839E-01	5.265E-02	0.372
	747.13			2.750E-02	6.700E-02	1.140E-01	1.618E-02	0.241
ND-147	91.11	+		7.940E-01	3.535E-01	5.030E-01	4.731E-02	1.579
	319.41			7.873E-01	2.996E+00	4.890E+00	2.825E-01	0.161
	439.89			2.990E+00	4.947E+00	8.477E+00	5.173E-01	0.353
	531.02	*		-3.132E-02	4.832E-01	7.866E-01	1.098E-01	-0.040
PM-149	285.90	*		8.654E+01	1.454E+02	2.419E+02	3.422E+01	0.358
EU-152	121.78			-2.470E-02	6.416E-02	1.013E-01	7.809E-03	-0.244
	244.69			6.376E-02	3.132E-01	4.310E-01	2.407E-02	0.148
	344.27	*		-3.147E-02	9.252E-02	1.260E-01	8.220E-03	-0.250
	443.98			-1.463E-01	7.196E-01	1.181E+00	7.235E-02	-0.124
	778.89			-3.763E-02	2.075E-01	3.393E-01	3.172E-02	-0.111
	867.32			3.635E-01	6.997E-01	1.074E+00	1.158E-01	0.339
	964.01			9.140E-01	2.872E-01	4.816E-01	4.933E-02	1.898
	1085.78			-3.157E-01	3.139E-01	4.845E-01	3.754E-02	-0.652
	1112.02			-9.275E-04	2.856E-01	4.663E-01	3.320E-02	-0.002
	1407.95			3.365E-02	1.562E-01	2.588E-01	1.922E-02	0.130
GD-153	69.67			1.748E-01	1.748E+00	2.590E+00	2.102E-01	0.067
	83.37			7.811E+00	1.431E+01	2.129E+01	1.891E+00	0.367
	97.43	*		-1.445E-02	7.723E-02	1.111E-01	8.690E-03	-0.130
	103.18			-7.941E-02	9.420E-02	1.476E-01	1.064E-02	-0.538
EU-154	123.07			-1.636E-02	4.578E-02	7.233E-02	6.841E-03	-0.226
	247.94			3.772E-02	2.932E-01	4.682E-01	4.410E-02	0.081
	591.81			-3.079E-01	4.852E-01	7.517E-01	7.995E-02	-0.410
	723.30			1.118E-01	1.485E-01	2.265E-01	2.135E-02	0.494
	756.87			3.010E-01	6.038E-01	1.030E+00	1.263E-01	0.292
	873.19			-1.162E-01	2.323E-01	3.654E-01	5.090E-02	-0.318
	996.32			-1.229E-01	3.074E-01	4.815E-01	8.804E-02	-0.255
	1004.76			-3.958E-02	1.733E-01	2.752E-01	3.383E-02	-0.144
	1274.45	*		-5.187E-02	1.016E-01	1.604E-01	1.602E-02	-0.323
EU-155	48.70			-1.190E+00	3.164E+00	5.268E+00	3.996E-01	-0.226
	60.01			-2.452E+00	5.453E+00	7.996E+00	6.102E-01	-0.307
	86.54	+		4.501E-01	1.205E-01	1.648E-01	1.518E-02	2.731
	105.31	*		1.072E-01	9.727E-02	1.634E-01	1.168E-02	0.656
TB-160	86.79	+		1.226E+00	3.279E-01	4.488E-01	4.106E-02	2.733
	197.04			2.717E-01	4.701E-01	7.897E-01	4.241E-02	0.344
	215.65			4.368E-02	6.427E-01	9.921E-01	5.416E-02	0.044
	298.57	+		2.432E-01	1.121E-01	1.619E-01	9.302E-03	1.502
	879.36	*		1.820E-02	1.137E-01	1.881E-01	2.067E-02	0.097
	962.29			6.758E-01	5.241E-01	8.031E-01	8.251E-02	0.841
	966.15			1.362E+00	2.874E-01	4.647E-01	4.743E-02	2.932
	1177.93			-3.135E-02	2.980E-01	4.897E-01	2.734E-02	-0.064
	1271.85			1.611E-01	5.875E-01	9.841E-01	6.650E-02	0.164
HO-166M	80.57			6.557E-02	3.154E-01	3.729E-01	3.240E-02	0.176
	184.41			1.212E-01	3.204E-02	5.399E-02	2.868E-03	2.245

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		280.46		-8.194E-02	7.120E-02	1.097E-01	6.258E-03	-0.747
		410.95		2.925E-01	2.020E-01	3.574E-01	2.104E-02	0.819
		711.68	*	1.251E-02	4.496E-02	7.622E-02	6.353E-03	0.164
		752.31		7.761E-02	2.049E-01	3.480E-01	3.112E-02	0.223
		810.29		-3.687E-02	4.627E-02	7.188E-02	7.078E-03	-0.513
		51.35		-2.837E+00	3.803E+01	6.392E+01	5.066E+00	-0.044
		52.39		-3.142E+00	1.924E+01	3.219E+01	2.557E+00	-0.098
		59.40		-6.959E+00	2.974E+01	4.414E+01	3.352E+00	-0.158
		66.72	*	-1.398E+01	3.072E+01	4.510E+01	3.606E+00	-0.310
		88.36		8.857E-01	2.368E-01	3.212E-01	2.949E-02	2.758
LU-176	+	201.83		-2.341E-02	2.238E-02	3.578E-02	1.930E-03	-0.654
		306.84	*	1.495E-03	1.983E-02	3.217E-02	1.852E-03	0.046
		401.10		4.686E+00	5.302E+00	9.219E+00	5.359E-01	0.508
		112.95		-1.390E+00	1.811E+00	2.831E+00	1.825E-01	-0.491
LU-177		208.36	*	2.697E+00	1.685E+00	2.043E+00	1.108E-01	1.320
	+	52.97		-3.388E-01	1.963E+00	3.282E+00	2.606E-01	-0.103
LU-177M		54.07		1.608E-01	1.015E+00	1.715E+00	1.356E-01	0.094
		61.30		9.620E-01	1.576E+00	2.431E+00	1.878E-01	0.396
HF-181		121.62		-1.221E-01	3.322E-01	5.252E-01	3.115E-02	-0.232
		147.16		-5.812E-01	5.861E-01	8.906E-01	4.846E-02	-0.653
		171.86		-4.990E-02	3.866E-01	6.487E-01	3.415E-02	-0.077
		218.09		2.859E-02	6.636E-01	1.102E+00	6.030E-02	0.026
	+	268.79		2.214E+00	1.032E+00	1.171E+00	6.637E-02	1.892
		319.02		-6.485E-02	2.090E-01	3.313E-01	1.913E-02	-0.196
		367.43		-4.160E-01	7.007E-01	1.146E+00	6.618E-02	-0.363
		413.65	*	-1.713E-01	1.457E-01	2.289E-01	1.352E-02	-0.748
		56.28		2.228E-01	1.090E+00	1.842E+00	1.435E-01	0.121
		57.53		-1.255E-01	5.693E-01	9.463E-01	7.297E-02	-0.133
W-181		65.20		2.356E-01	1.081E+00	1.638E+00	1.299E-01	0.144
		133.02		-4.663E-02	5.910E-02	9.119E-02	5.158E-03	-0.511
		136.25		1.584E-01	4.095E-01	6.622E-01	3.708E-02	0.239
		345.85		-1.662E-01	2.051E-01	2.471E-01	1.430E-02	-0.673
		482.03	*	-1.984E-02	3.433E-02	5.470E-02	3.501E-03	-0.363
		56.28		8.505E-02	4.170E-01	7.047E-01	5.489E-02	0.121
		57.53		-4.785E-02	2.180E-01	3.623E-01	2.794E-02	-0.132
		65.20	*	8.951E-02	4.107E-01	6.222E-01	4.935E-02	0.144
		67.75		-5.619E-02	1.221E-01	1.791E-01	1.440E-02	-0.314
		100.10		2.038E-01	1.590E-01	2.693E-01	2.025E-02	0.757
TA-182		152.43		1.150E-01	2.939E-01	4.717E-01	2.537E-02	0.244
		222.10		6.953E-02	2.714E-01	4.540E-01	2.492E-02	0.153
		1001.68		8.977E-01	1.726E+00	2.831E+00	2.703E-01	0.317
	+	1121.28		3.283E-01	2.478E-01	2.766E-01	1.906E-02	1.187
RE-183		1189.05		1.165E-01	2.513E-01	4.275E-01	2.444E-02	0.273
		1221.42	*	-8.942E-02	1.669E-01	2.661E-01	1.628E-02	-0.336
		1230.97		-1.898E-01	4.547E-01	7.322E-01	4.567E-02	-0.259
		57.98		-3.997E-02	2.266E-01	3.599E-01	2.765E-02	-0.111
		59.32		-2.850E-02	1.249E-01	1.855E-01	1.409E-02	-0.154
		67.20		-9.306E-02	2.207E-01	3.243E-01	2.600E-02	-0.287
		162.32	*	-2.357E-02	9.090E-02	1.509E-01	7.965E-03	-0.156

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184	+	208.81		1.982E+00	1.239E+00	1.512E+00	8.204E-02	1.311
		291.72		-4.562E-01	8.559E-01	1.171E+00	6.709E-02	-0.390
		57.98		-1.455E-01	8.246E-01	1.310E+00	1.006E-01	-0.111
		59.32		-1.036E-01	4.542E-01	6.744E-01	5.123E-02	-0.154
		67.20		-3.386E-01	8.028E-01	1.180E+00	9.457E-02	-0.287
		161.27		-1.945E-01	2.885E-01	4.767E-01	2.521E-02	-0.408
		216.55		1.114E-02	2.098E-01	3.489E-01	1.906E-02	0.032
		252.85	*	-7.340E-02	1.825E-01	2.939E-01	1.651E-02	-0.250
		318.01		-6.782E-02	3.601E-01	5.746E-01	3.317E-02	-0.118
		792.07		9.084E-01	9.967E-01	1.513E+00	1.446E-01	0.600
OS-185		903.28		-1.784E-01	9.157E-01	1.254E+00	1.408E-01	-0.142
		920.93		2.653E-01	3.596E-01	6.147E-01	6.736E-02	0.432
		59.72		-1.386E-01	3.318E-01	4.875E-01	3.708E-02	-0.284
		61.14		9.814E-02	1.748E-01	2.691E-01	2.076E-02	0.365
		69.30		-1.502E-01	3.259E-01	4.711E-01	3.816E-02	-0.319
		592.07		-3.369E-01	1.954E+00	3.127E+00	2.239E-01	-0.108
		646.12	*	1.045E-02	3.375E-02	5.533E-02	4.161E-03	0.189
		717.42		-2.199E-01	6.861E-01	1.120E+00	9.430E-02	-0.196
		874.81		2.664E-02	4.665E-01	7.666E-01	8.362E-02	0.035
		880.27		2.782E-02	6.354E-01	1.043E+00	1.147E-01	0.027
RE-188		155.03	*	3.363E-03	1.429E-01	2.426E-01	1.298E-02	0.014
		477.96		2.951E+00	2.498E+00	4.364E+00	2.781E-01	0.676
W-188		633.10		6.860E-01	2.172E+00	3.570E+00	2.654E-01	0.192
	+	63.58		1.288E+02	9.149E+01	9.745E+01	7.657E+00	1.322
IR-192		227.08		-5.667E+00	1.034E+01	1.672E+01	9.215E-01	-0.339
	*	290.67		-6.212E+00	6.811E+00	9.061E+00	5.190E-01	-0.686
TL-200	+	295.96		9.621E-01	1.722E-01	2.338E-01	1.363E-02	4.116
		308.46		-5.715E-02	7.923E-02	1.233E-01	7.182E-03	-0.464
AU-195	*	316.51		1.144E-02	2.723E-02	4.483E-02	2.600E-03	0.255
		468.07		-1.765E-02	5.781E-02	8.070E-02	5.751E-03	-0.219
TL-201		604.41		4.032E-02	4.419E-01	6.204E-01	7.538E-02	0.065
		612.46		2.085E+00	7.414E-01	1.205E+00	1.057E-01	1.730
TL-202		65.12		4.452E-02	1.898E-01	2.877E-01	2.281E-02	0.155
		66.83		-4.745E-02	1.022E-01	1.499E-01	1.199E-02	-0.317
TL-200	+	75.70		1.161E+00	2.552E-01	4.186E-01	3.515E-02	2.773
	*	98.88		1.353E-01	2.106E-01	3.346E-01	2.560E-02	0.404
TL-201		129.76		2.833E+00	2.596E+00	4.256E+00	2.435E-01	0.666
	*	367.94		-1.028E-03	2.596E+00	Half-Life	too short	
TL-202		579.30		1.348E-02	2.596E+00	Half-Life	too short	
		828.27		3.209E-03	2.596E+00	Half-Life	too short	
TL-201		1205.75		-6.010E-03	2.596E+00	Half-Life	too short	
		68.90		2.781E-01	7.745E+00	1.216E+01	9.832E-01	0.023
TL-202		70.82		2.874E-01	4.582E+00	6.773E+00	5.530E-01	0.042
		80.30		1.856E+00	9.535E+00	1.127E+01	9.770E-01	0.165
TL-202		135.34		2.959E+01	3.548E+01	5.835E+01	3.276E+00	0.507
	*	167.43		1.656E+00	9.087E+00	1.544E+01	8.104E-01	0.107
TL-202		68.90		1.730E-02	4.819E-01	7.567E-01	6.117E-02	0.023
		70.82		1.783E-02	2.843E-01	4.202E-01	3.431E-02	0.042
TL-202		80.30		1.152E-01	5.918E-01	6.994E-01	6.064E-02	0.165

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203		439.56	*	4.035E-02	5.830E-02	1.003E-01	6.116E-03	0.402
		70.83		7.471E-02	1.126E+00	1.665E+00	2.218E-01	0.045
		72.87		7.911E-01	6.574E-01	1.011E+00	1.311E-01	0.782
		82.60		-7.123E-02	1.067E+00	1.564E+00	2.170E-01	-0.046
BI-207		279.20	*	1.524E-02	3.506E-02	5.811E-02	3.524E-03	0.262
		72.80		1.957E-01	1.846E-01	2.848E-01	2.350E-02	0.687
	+	74.97		6.387E-01	1.404E-01	2.123E-01	1.775E-02	3.008
		84.90		2.805E-01	1.644E-01	2.770E-01	2.493E-02	1.012
TL-207		569.67		-6.422E-03	2.432E-02	3.845E-02	2.695E-03	-0.167
		1063.62	*	1.132E-02	4.257E-02	7.230E-02	5.969E-03	0.156
		1770.23		2.148E-01	3.570E-01	5.631E-01	3.406E-02	0.382
		81.07		5.320E-02	2.472E-01	2.923E-01	2.550E-02	0.182
		83.78		1.642E-01	1.092E-01	1.836E-01	1.636E-02	0.894
		94.90		7.142E-01	2.316E-01	3.719E-01	3.027E-02	1.921
		122.32		-2.741E-01	1.527E+00	2.432E+00	1.651E-01	-0.113
		144.24		2.898E-01	6.062E-01	9.612E-01	6.707E-02	0.301
		154.21		8.081E-02	3.200E-01	5.476E-01	3.643E-02	0.148
	+	269.46		5.136E-01	2.394E-01	2.818E-01	1.674E-02	1.822
		323.87	*	-9.391E-03	5.897E-01	8.272E-01	1.366E-01	-0.011
	+	338.28		6.804E+00	1.757E+00	2.044E+00	2.151E-01	3.330
PO-209		445.03		7.014E-01	1.691E+00	2.866E+00	2.998E-01	0.245
		260.50		3.641E+00	7.716E+00	1.288E+01	7.272E-01	0.283
		262.80		-1.222E+01	2.252E+01	3.463E+01	1.957E+00	-0.353
		896.60	*	2.355E+00	5.809E+00	9.750E+00	1.100E+00	0.242
BI-210		46.50	*	1.949E+00	4.726E+00	8.118E+00	6.281E-01	0.240
PB-210		46.50	*	1.949E+00	4.726E+00	8.118E+00	6.281E-01	0.240
PO-210		46.50	*	1.949E+00	4.726E+00	8.118E+00	5.400E-01	0.240
PB-211		404.84	*	-4.848E-01	8.342E-01	1.263E+00	7.874E-01	-0.384
BI-212		427.08		-9.000E-01	1.618E+00	2.448E+00	1.513E+00	-0.368
		831.96		-1.568E-01	1.002E+00	1.624E+00	1.022E+00	-0.097
	+	727.18	*	8.628E-01	4.251E-01	5.164E-01	5.143E-02	1.671
		785.46		2.529E+00	1.422E+00	2.524E+00	2.386E-01	1.002
PO-215		1620.62		8.109E-01	1.013E+00	1.801E+00	1.218E-01	0.450
		81.07		5.320E-02	2.472E-01	2.923E-01	2.550E-02	0.182
		83.78		1.642E-01	1.092E-01	1.836E-01	1.636E-02	0.894
		94.90		7.142E-01	2.316E-01	3.719E-01	3.027E-02	1.921
		122.32		-2.741E-01	1.527E+00	2.432E+00	1.651E-01	-0.113
		144.24		2.898E-01	6.062E-01	9.612E-01	6.707E-02	0.301
		154.21		8.081E-02	3.200E-01	5.476E-01	3.643E-02	0.148
	+	269.46		5.136E-01	2.394E-01	2.818E-01	1.674E-02	1.822
		323.87	*	-9.391E-03	5.897E-01	8.272E-01	1.366E-01	-0.011
	+	338.28		6.804E+00	1.757E+00	2.044E+00	2.151E-01	3.330
		445.03		7.014E-01	1.691E+00	2.866E+00	2.998E-01	0.245
	+	271.23		6.589E-01	3.092E-01	3.529E-01	2.829E-02	1.867
RN-219		401.81	*	8.808E-02	3.299E-01	5.582E-01	7.600E-02	0.158
RN-220		549.76	*	-1.443E+00	1.985E+01	3.220E+01	2.213E+00	-0.045
RA-223		81.07		5.320E-02	2.472E-01	2.923E-01	2.550E-02	0.182
		83.78		1.642E-01	1.092E-01	1.836E-01	1.636E-02	0.894
		94.90		7.142E-01	2.316E-01	3.719E-01	3.027E-02	1.921

---- 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		-2.741E-01	1.527E+00	2.432E+00	1.651E-01	-0.113
		144.24		2.898E-01	6.062E-01	9.612E-01	6.707E-02	0.301
		154.21		8.081E-02	3.200E-01	5.476E-01	3.643E-02	0.148
	+	269.46		5.136E-01	2.394E-01	2.818E-01	1.674E-02	1.822
		323.87	*	-9.391E-03	5.897E-01	8.272E-01	1.366E-01	-0.011
	+	338.28		6.804E+00	1.757E+00	2.044E+00	2.151E-01	3.330
		445.03		7.014E-01	1.691E+00	2.866E+00	2.998E-01	0.245
		79.80		-1.810E-01	1.952E+00	2.260E+00	4.860E-01	-0.080
		236.00		6.744E-01	2.381E-01	3.732E-01	3.850E-02	1.807
		256.20	*	-5.379E-02	3.006E-01	4.886E-01	6.787E-02	-0.110
		286.10		7.054E-01	1.237E+00	2.059E+00	2.371E-01	0.343
	+	299.80		3.034E+00	1.473E+00	2.033E+00	3.307E-01	1.493
TH-227		304.40		1.173E+00	1.639E+00	2.413E+00	4.170E-01	0.486
		334.20		3.615E-01	2.705E+00	2.756E+00	5.050E-01	0.131
		79.80		-1.810E-01	1.952E+00	2.260E+00	4.923E-01	-0.080
	+	94.00		1.057E+01	3.387E+00	3.636E+00	7.867E-01	2.908
		236.00		6.744E-01	2.355E-01	3.732E-01	3.321E-02	1.807
		256.20	*	-5.379E-02	3.006E-01	4.886E-01	8.229E-02	-0.110
		286.10		7.054E-01	1.422E+00	2.059E+00	2.062E+00	0.343
	+	299.80		3.034E+00	1.473E+00	2.033E+00	3.307E-01	1.493
		304.40		1.173E+00	1.639E+00	2.413E+00	4.170E-01	0.486
		334.20		3.615E-01	2.705E+00	2.756E+00	5.050E-01	0.131
		85.43		3.507E-01	1.645E-01	2.789E-01	2.521E-02	1.257
	+	88.47		5.099E-01	1.363E-01	1.843E-01	1.688E-02	2.767
TH-229		100.00		2.113E-01	1.630E-01	2.763E-01	2.080E-02	0.765
		193.63	*	1.205E-01	4.103E-01	6.932E-01	3.712E-02	0.174
	+	210.97		1.520E+00	9.497E-01	1.117E+00	6.070E-02	1.361
		283.67	*	-4.663E-01	1.253E+00	2.001E+00	2.749E-01	-0.233
	+	301.29		1.214E+00	5.693E-01	8.015E-01	8.355E-02	1.514
		81.07		5.320E-02	2.472E-01	2.923E-01	2.550E-02	0.182
		83.78		1.642E-01	1.092E-01	1.836E-01	1.636E-02	0.894
		94.90		7.142E-01	2.316E-01	3.719E-01	3.027E-02	1.921
		122.32		-2.741E-01	1.527E+00	2.432E+00	1.651E-01	-0.113
		144.24		2.898E-01	6.062E-01	9.612E-01	6.707E-02	0.301
		154.21		8.081E-02	3.200E-01	5.476E-01	3.643E-02	0.148
	+	269.46		5.136E-01	2.394E-01	2.818E-01	1.674E-02	1.822
U-231		323.87	*	-9.391E-03	5.897E-01	8.272E-01	1.366E-01	-0.011
	+	338.28		6.804E+00	1.757E+00	2.044E+00	2.151E-01	3.330
		445.03		7.014E-01	1.691E+00	2.866E+00	2.998E-01	0.245
		84.21		1.163E+01	6.738E+00	1.137E+01	1.017E+00	1.023
	+	92.29		1.490E+01	3.729E+00	5.261E+00	4.479E-01	2.832
		95.87	*	5.691E-01	1.504E+00	2.226E+00	1.784E-01	0.256
		108.00		-2.012E+00	2.737E+00	4.270E+00	2.904E-01	-0.471
	+	75.28		1.864E+01	4.731E+00	6.300E+00	9.583E-01	2.958
	+	86.59		7.311E+00	2.696E+00	2.680E+00	7.234E-01	2.728
	+	300.12		8.460E-01	4.032E-01	5.672E-01	7.609E-02	1.491
		311.98	*	2.125E-02	5.017E-02	8.268E-02	5.065E-03	0.257
		340.50		2.395E+00	8.373E-01	1.065E+00	2.446E-01	2.249
		398.62		-2.273E+00	1.729E+00	2.531E+00	6.545E-01	-0.898

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error (pCi/GRAM)	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76	-1.573E-01	1.279E+00	2.120E+00	4.371E-01	-0.074
		63.00	3.656E+00	2.639E+00	2.822E+00	4.254E-01	1.295
		94.67	6.546E-01	1.826E-01	2.797E-01	3.382E-02	2.341
		98.44	5.840E-02	9.579E-02	1.350E-01	7.514E-02	0.433
		99.86	5.435E-01	4.132E-01	7.008E-01	5.287E-02	0.776
		111.00	2.500E-02	1.646E-01	2.673E-01	2.868E-02	0.094
		131.20	-5.822E-02	9.374E-02	1.460E-01	8.309E-03	-0.399
		152.70	1.284E-01	2.832E-01	4.544E-01	7.115E-02	0.283
		186.00	4.174E+00	2.149E+00	2.137E+00	6.512E-01	1.953
		226.40	-3.790E-01	3.178E-01	4.952E-01	5.653E-02	-0.765
		227.20	-1.443E-01	3.420E-01	5.558E-01	3.063E-02	-0.260
		248.90	2.060E-01	6.454E-01	1.072E+00	2.298E-01	0.192
		293.70	5.063E+00	1.089E+00	1.348E+00	2.165E-01	3.755
		369.80	1.141E-01	6.554E-01	1.112E+00	2.314E-01	0.103
		568.70	-5.264E-01	8.000E-01	1.233E+00	8.635E-02	-0.427
		569.50	-6.951E-02	2.151E-01	3.388E-01	2.373E-02	-0.205
		574.00	6.556E-01	1.195E+00	1.952E+00	1.374E-01	0.336
		699.00	3.359E-01	5.705E-01	9.772E-01	1.844E-01	0.344
		706.10	3.103E-02	8.108E-01	1.356E+00	6.036E-01	0.023
		733.00	9.044E-03	3.098E-01	4.448E-01	9.879E-02	0.020
		742.81	-1.486E-01	1.022E+00	1.674E+00	1.126E+00	-0.089
		796.30	1.037E+00	9.484E-01	1.400E+00	3.835E-01	0.741
		805.60	2.452E-02	8.023E-01	1.326E+00	4.108E-01	0.018
		819.60	2.400E-01	9.832E-01	1.638E+00	6.284E-01	0.147
		826.30	-3.782E-02	6.577E-01	1.078E+00	4.855E-01	-0.035
		831.60	4.910E-02	5.045E-01	8.344E-01	2.531E-01	0.059
		876.40	-8.520E-02	6.597E-01	1.060E+00	1.092E+00	-0.080
		880.51	1.763E-03	2.266E-01	3.709E-01	4.082E-02	0.005
		883.24	4.595E-02	2.348E-01	3.858E-01	2.607E-01	0.119
		899.00	-5.661E-01	7.057E-01	1.009E+00	4.472E-01	-0.561
		925.00	-1.910E-01	9.541E-01	1.531E+00	1.668E-01	-0.125
		926.50	-1.083E-01	1.470E-01	2.221E-01	5.803E-02	-0.487
		946.00	6.917E-02	2.345E-01	3.887E-01	7.668E-02	0.178
		949.00	-5.957E-02	3.319E-01	5.315E-01	5.582E-02	-0.112
		980.50	6.458E-02	5.266E-01	8.613E-01	8.567E-02	0.075
		1394.10	-7.356E-01	1.104E+00	1.505E+00	9.774E-01	-0.489
PA-234M	+	766.42	1.363E+01	1.158E+01	1.663E+01	8.456E+00	0.819
		1001.03	5.777E+00	3.833E+00	6.624E+00	7.146E-01	0.872
U-235	+	89.95	2.760E+00	1.473E+00	1.626E+00	5.032E-01	1.697
	+	93.35	3.289E+00	1.203E+00	1.181E+00	3.300E-01	2.786
		105.00	8.329E-01	9.806E-01	1.588E+00	4.672E-01	0.525
		143.76	-1.874E-02	1.893E-01	2.938E-01	4.759E-02	-0.064
		163.35	5.639E-02	3.793E-01	6.380E-01	1.137E-01	0.088
	+	185.71	1.546E-01	6.466E-02	7.860E-02	4.181E-03	1.967
		205.31	3.470E-01	4.521E-01	6.790E-01	1.213E-01	0.511
NP-236		94.67	4.996E-01	1.314E-01	2.124E-01	1.736E-02	2.352
		98.44	4.414E-02	6.820E-02	1.021E-01	7.860E-03	0.432
		111.00	1.891E-02	1.245E-01	2.022E-01	1.330E-02	0.094
		160.31	7.670E-03	6.388E-02	1.086E-01	5.753E-03	0.071

----- 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		1.141E-01	1.393E-01	2.329E-01	1.765E-02	0.490
		117.00	*	-2.057E-02	1.683E-01	2.695E-01	1.668E-02	-0.076
	+	209.75		1.531E+00	9.567E-01	1.176E+00	6.388E-02	1.302
		228.18		4.406E-02	1.755E-01	2.931E-01	1.617E-02	0.150
		277.60		1.685E-01	1.477E-01	2.515E-01	1.433E-02	0.670
AM-241		334.30		2.239E-01	1.533E+00	1.564E+00	9.048E-02	0.143
		59.54	*	-4.196E-02	1.719E-01	2.549E-01	2.114E-02	-0.165
		99.55		1.174E-01	1.434E-01	2.397E-01	1.816E-02	0.490
		103.76	*	-2.880E-02	8.651E-02	1.385E-01	9.912E-03	-0.208
		117.00		-2.116E-02	1.732E-01	2.774E-01	1.717E-02	-0.076
CM-243	+	209.75		1.509E+00	9.432E-01	1.160E+00	6.298E-02	1.302
		228.18		4.453E-02	1.774E-01	2.962E-01	1.634E-02	0.150
		277.60		1.699E-01	1.489E-01	2.536E-01	1.445E-02	0.670
		798.80		-6.727E-02	1.268E-01	1.704E-01	1.646E-02	-0.395
		1036.00		-1.748E-01	2.267E-01	3.575E-01	3.165E-02	-0.489
AM-246		1062.04		4.305E-03	1.836E-01	3.071E-01	2.546E-02	0.014
		1078.86	*	5.078E-02	1.100E-01	1.891E-01	1.496E-02	0.268
		278.00		4.596E-01	6.179E-01	1.037E+00	5.907E-02	0.443
		287.40		1.908E-01	1.024E+00	1.621E+00	9.274E-02	0.118
		402.60	*	2.162E-02	2.975E-02	5.135E-02	2.991E-03	0.421
CF-249		252.85		-2.730E-01	6.788E-01	1.093E+00	6.140E-02	-0.250
		333.44		5.320E-03	2.041E-01	2.050E-01	1.186E-02	0.026
		387.95	*	-2.082E-03	3.010E-02	5.031E-02	2.892E-03	-0.041
CF-251		176.60	*	4.417E-02	9.817E-02	1.678E-01	8.861E-03	0.263
		227.00		-1.805E-01	3.032E-01	4.891E-01	2.696E-02	-0.369
		285.00		5.160E-01	1.406E+00	2.324E+00	1.328E-01	0.222

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]G246440007
* Acquisition date   : 19-FEB-2010 18:30:21 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 02:00:01.89                      Half life ratio  : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246440007           Analyst initials: MXR1
* Batch Number       : 950788              Sample Quantity : 1.3929E+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	3.663E+01	3.094E+00	4.621E-01	0.000E+00
CD-109	3.812E+00	9.987E-01	1.098E+00	0.000E+00
SN-126	3.734E-01	9.784E-02	1.083E-01	0.000E+00
BA-137M	3.145E-02	2.902E-02	4.766E-02	0.000E+00
CS-137	3.325E-02	3.068E-02	5.038E-02	0.000E+00
TL-208	4.855E-01	7.545E-02	4.639E-02	0.000E+00
BI-211	3.610E+00	3.944E-01	2.598E-01	0.000E+00
PB-212	1.663E+00	1.480E-01	7.752E-02	0.000E+00
PO-212	1.663E+00	1.480E-01	7.752E-02	0.000E+00
BI-214	1.003E+00	1.474E-01	9.296E-02	0.000E+00
PB-214	1.256E+00	1.515E-01	9.052E-02	0.000E+00
PO-214	1.256E+00	1.515E-01	9.052E-02	0.000E+00
PO-216	1.663E+00	1.480E-01	7.752E-02	0.000E+00
PO-218	1.256E+00	1.515E-01	9.052E-02	0.000E+00
RA-224	4.378E+00	1.100E+00	8.809E-01	0.000E+00
RA-226	1.003E+00	1.474E-01	9.296E-02	0.000E+00
AC-228	1.677E+00	3.089E-01	1.406E-01	0.000E+00
RA-228	1.677E+00	3.089E-01	1.406E-01	0.000E+00
TH-228	1.692E+00	1.506E-01	7.886E-02	0.000E+00
TH-230	1.003E+00	1.474E-01	9.296E-02	0.000E+00
TH-232	1.677E+00	3.089E-01	1.406E-01	0.000E+00
TH-234	3.136E+00	2.237E+00	2.206E+00	0.000E+00
U-234	1.003E+00	1.474E-01	9.296E-02	0.000E+00
NP-237	1.097E+00	3.629E-01	3.230E-01	0.000E+00
U-238	3.136E+00	2.237E+00	2.206E+00	0.000E+00
AM-243	3.558E-01	7.665E-02	8.624E-02	0.000E+00
ANH-511	9.744E-02	5.376E-02	3.521E-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	3.010E-01	2.605E-01	4.752E-01	0.000E+00	NOT IDENT.
NA-22	-1.416E-02	3.541E-02	5.797E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.141E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-6.846E-03	2.103E-02	3.343E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.908E-02	7.874E-02	0.000E+00	FAIL ABUN
SC-46	-4.918E-04	3.197E-02	5.400E-02	0.000E+00	FAIL ABUN
V-48	9.253E-03	5.508E-02	9.330E-02	0.000E+00	NOT IDENT.
CR-51	1.388E-01	3.074E-01	5.344E-01	0.000E+00	NOT IDENT.
MN-52	9.796E-02	2.393E-01	4.139E-01	0.000E+00	NOT IDENT.
MN-54	-2.661E-03	3.060E-02	5.184E-02	0.000E+00	NOT IDENT.
CO-56	-5.578E-03	3.038E-02	5.101E-02	0.000E+00	NOT IDENT.
CO-57	-5.868E-03	2.170E-02	3.707E-02	0.000E+00	NOT IDENT.
CO-58	-3.161E-02	3.120E-02	4.947E-02	0.000E+00	NOT IDENT.
FE-59	1.396E-02	7.588E-02	1.317E-01	0.000E+00	NOT IDENT.
CO-60	-3.575E-03	3.010E-02	5.073E-02	0.000E+00	NOT IDENT.
ZN-65	-1.004E-01	9.563E-02	1.274E-01	0.000E+00	NOT IDENT.
GE-68	2.206E-01	9.641E-01	1.682E+00	0.000E+00	NOT IDENT.
AS-73	2.397E-01	9.759E-01	1.809E+00	0.000E+00	NOT IDENT.
AS-74	2.950E-03	7.549E-02	1.277E-01	0.000E+00	NOT IDENT.
SE-75	-7.350E-03	4.015E-02	6.026E-02	0.000E+00	NOT IDENT.
BR-77	-6.602E+00	1.538E+01	2.494E+01	0.000E+00	FAIL ABUN
SR-82	-4.128E-02	3.203E-01	5.456E-01	0.000E+00	NOT IDENT.
RB-83	-2.748E-02	5.501E-02	8.873E-02	0.000E+00	NOT IDENT.
RB-84	-2.402E-03	5.798E-02	9.787E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.226E+00	1.048E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.265E-02	5.494E-02	0.000E+00	NOT IDENT.
RB-86	2.801E-01	6.524E-01	1.153E+00	0.000E+00	NOT IDENT.
Y-88	-2.050E-02	2.526E-02	3.701E-02	0.000E+00	NOT IDENT.
ZR-88	-1.788E-04	2.371E-02	4.178E-02	0.000E+00	NOT IDENT.
Y-91	-3.854E+00	1.537E+01	2.568E+01	0.000E+00	NOT IDENT.
NB-94	8.930E-03	2.652E-02	4.683E-02	0.000E+00	NOT IDENT.
NB-95	5.589E-02	3.973E-02	6.473E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.142E-01	1.900E-01	0.000E+00	NOT IDENT.
ZR-95	4.181E-02	5.477E-02	9.838E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	6.209E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.339E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.176E+00	1.452E+01	2.540E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.275E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.091E-03	2.632E-02	4.661E-02	0.000E+00	NOT IDENT.
RH-102	-1.014E-02	2.241E-02	3.778E-02	0.000E+00	FAIL ABUN
RU-103	-4.690E-03	3.109E-02	5.303E-02	0.000E+00	FAIL ABUN
RH-106	-1.118E-01	2.308E-01	3.740E-01	0.000E+00	FAIL ABUN
RU-106	-1.118E-01	2.305E-01	3.740E-01	0.000E+00	FAIL ABUN
AG-108M	-2.205E-02	2.357E-02	3.893E-02	0.000E+00	NOT IDENT.
AG-110M	1.430E-02	2.672E-02	4.226E-02	0.000E+00	NOT IDENT.
IN-111	-3.616E-01	1.669E+00	2.370E+00	0.000E+00	NOT IDENT.
IN-113M	2.224E-02	3.411E-02	6.191E-02	0.000E+00	NOT IDENT.
SN-113	2.224E-02	3.411E-02	6.191E-02	0.000E+00	NOT IDENT.
IN-114M	-3.802E-02	1.682E-01	2.618E-01	0.000E+00	NOT IDENT.
CD-115	-2.066E+00	1.571E+01	2.665E+01	0.000E+00	NOT IDENT.
SN-117M	4.425E-02	4.789E-02	8.940E-02	0.000E+00	NOT IDENT.
SB-122	2.824E+00	2.707E+00	4.863E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.001E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.024E-02	2.286E-02	4.204E-02	0.000E+00	NOT IDENT.
I-124	4.760E-01	8.721E-01	1.323E+00	0.000E+00	FAIL ABUN
SB-124	-1.465E-02	5.419E-02	8.795E-02	0.000E+00	FAIL ABUN
SB-125	-4.607E-02	6.546E-02	1.099E-01	0.000E+00	FAIL ABUN
TE-125M	-1.367E+00	8.515E+00	1.464E+01	0.000E+00	NOT IDENT.
I-126	1.940E-01	1.658E-01	2.731E-01	0.000E+00	NOT IDENT.
SB-126	-1.724E-02	1.385E-01	2.042E-01	0.000E+00	FAIL ABUN
SB-127	3.537E-01	1.513E+00	2.667E+00	0.000E+00	NOT IDENT.
XE-127	-2.517E-02	3.674E-02	6.354E-02	0.000E+00	NOT IDENT.
I-131	-1.070E-02	1.052E-01	1.858E-01	0.000E+00	NOT IDENT.
TE-132	2.186E-01	8.324E-01	1.477E+00	0.000E+00	NOT IDENT.
BA-133	-6.256E-03	3.751E-02	5.428E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.512E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.541E-02	7.467E-02	0.000E+00	FAIL ABUN
CS-135	1.348E-01	1.396E-01	2.230E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.073E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.136E-02	9.846E-02	1.686E-01	0.000E+00	FAIL ABUN
CE-139	-2.182E-03	2.337E-02	4.211E-02	0.000E+00	NOT IDENT.
BA-140	-9.780E-02	2.164E-01	3.551E-01	0.000E+00	NOT IDENT.
LA-140	2.743E-02	6.571E-02	1.167E-01	0.000E+00	FAIL ABUN
CE-141	9.367E-02	5.550E-02	1.000E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.981E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.493E-02	1.742E-01	2.960E-01	0.000E+00	NOT IDENT.
PM-144	-4.456E-04	2.674E-02	4.640E-02	0.000E+00	NOT IDENT.
PR-144	-3.023E-02	1.814E+00	3.148E+00	0.000E+00	NOT IDENT.

PM-146	3.160E-02	3.290E-02	5.979E-02	0.000E+00	NOT IDENT.
ND-147	-3.132E-02	4.735E-01	8.060E-01	0.000E+00	FAIL ABUN
PM-149	8.654E+01	1.425E+02	2.509E+02	0.000E+00	NOT IDENT.
EU-152	-3.147E-02	9.067E-02	1.302E-01	0.000E+00	NOT IDENT.
GD-153	-1.445E-02	7.568E-02	1.177E-01	0.000E+00	NOT IDENT.
EU-154	-5.187E-02	9.955E-02	1.614E-01	0.000E+00	NOT IDENT.
EU-155	1.072E-01	9.533E-02	1.728E-01	0.000E+00	FAIL ABUN
TB-160	1.820E-02	1.115E-01	1.908E-01	0.000E+00	FAIL ABUN
HO-166M	1.251E-02	4.406E-02	7.764E-02	0.000E+00	NOT IDENT.
TM-171	-1.398E+01	3.011E+01	4.810E+01	0.000E+00	NOT IDENT.
LU-176	1.495E-03	1.944E-02	3.332E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.651E+00	2.132E+00	0.000E+00	FAIL ABUN
LU-177M	-1.713E-01	1.428E-01	2.357E-01	0.000E+00	FAIL ABUN
HF-181	-1.984E-02	3.365E-02	5.615E-02	0.000E+00	NOT IDENT.
W-181	8.951E-02	4.024E-01	6.639E-01	0.000E+00	NOT IDENT.
TA-182	-8.942E-02	1.636E-01	2.680E-01	0.000E+00	FAIL ABUN
RE-183	-2.357E-02	8.908E-02	1.583E-01	0.000E+00	FAIL ABUN
RE-184	-7.340E-02	1.789E-01	3.056E-01	0.000E+00	NOT IDENT.
OS-185	1.045E-02	3.308E-02	5.647E-02	0.000E+00	NOT IDENT.
RE-188	3.363E-03	1.400E-01	2.547E-01	0.000E+00	NOT IDENT.
W-188	-6.212E+00	6.675E+00	9.396E+00	0.000E+00	FAIL ABUN
IR-192	1.144E-02	2.668E-02	4.641E-02	0.000E+00	FAIL ABUN
AU-195	1.353E-01	2.064E-01	3.543E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.371E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.656E+00	8.905E+00	1.618E+01	0.000E+00	NOT IDENT.
TL-202	4.035E-02	5.713E-02	1.032E-01	0.000E+00	NOT IDENT.
HG-203	1.524E-02	3.436E-02	6.031E-02	0.000E+00	NOT IDENT.
BI-207	1.132E-02	4.172E-02	7.304E-02	0.000E+00	FAIL ABUN
TL-207	-9.391E-03	5.779E-01	8.560E-01	0.000E+00	FAIL ABUN
PO-209	2.355E+00	5.693E+00	9.885E+00	0.000E+00	NOT IDENT.
BI-210	1.949E+00	4.632E+00	8.717E+00	0.000E+00	NOT IDENT.
PB-210	1.949E+00	4.632E+00	8.717E+00	0.000E+00	NOT IDENT.
PO-210	1.949E+00	4.631E+00	8.717E+00	0.000E+00	NOT IDENT.
PB-211	-4.848E-01	8.175E-01	1.301E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.166E-01	5.257E-01	0.000E+00	FAIL ABUN
PO-215	-9.391E-03	5.779E-01	8.560E-01	0.000E+00	FAIL ABUN
RN-219	8.808E-02	3.233E-01	5.752E-01	0.000E+00	FAIL ABUN
RN-220	-1.443E+00	1.945E+01	3.297E+01	0.000E+00	NOT IDENT.
RA-223	-9.391E-03	5.779E-01	8.560E-01	0.000E+00	FAIL ABUN
AC-227	-5.379E-02	2.946E-01	5.079E-01	0.000E+00	FAIL ABUN
TH-227	-5.379E-02	2.946E-01	5.079E-01	0.000E+00	FAIL ABUN
TH-229	1.205E-01	4.021E-01	7.246E-01	0.000E+00	FAIL ABUN
PA-231	-4.663E-01	1.228E+00	2.076E+00	0.000E+00	FAIL ABUN
TH-231	-9.391E-03	5.779E-01	8.560E-01	0.000E+00	FAIL ABUN
U-231	5.691E-01	1.474E+00	2.358E+00	0.000E+00	FAIL ABUN
PA-233	2.125E-02	4.917E-02	8.562E-02	0.000E+00	FAIL ABUN
PA-234	6.917E-02	2.298E-01	3.936E-01	0.000E+00	FAIL ABUN
PA-234M	5.777E+00	3.756E+00	6.700E+00	0.000E+00	FAIL ABUN
U-235	-1.874E-02	1.855E-01	3.089E-01	0.000E+00	FAIL ABUN
NP-236	7.670E-03	6.261E-02	1.139E-01	0.000E+00	NOT IDENT.
NP-239	-2.057E-02	1.650E-01	2.845E-01	0.000E+00	FAIL ABUN
AM-241	-4.196E-02	1.685E-01	2.725E-01	0.000E+00	NOT IDENT.
CM-243	-2.880E-02	8.478E-02	1.465E-01	0.000E+00	FAIL ABUN
AM-246	5.078E-02	1.078E-01	1.910E-01	0.000E+00	NOT IDENT.
CM-247	2.162E-02	2.915E-02	5.291E-02	0.000E+00	NOT IDENT.
CF-249	-2.082E-03	2.950E-02	5.188E-02	0.000E+00	NOT IDENT.
CF-251	4.417E-02	9.621E-02	1.757E-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]G246440007.CNF;1
Sample date       : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 18:30:21
Sample ID        : G246440007          Sample quantity  : 1.39290E+02 GRAM
Detector name    : GAM18              Detector geometry: CAN
Elapsed live time: 0 02:00:00.00      Elapsed real time: 0 02:00:01.89  0.0%
Energy tolerance : 1.50000 keV        Analyst Initials : MXR1
Abundance limit  : 75.00000           Sensitivity      : 5.00000
Batch ID        : 950788              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	2746	10.67*	1.893E+00	3.663E+01	3.663E+01	8.62
CD-109	88.03	331	3.72*	6.460E+00	3.714E+00	3.812E+00	26.74
SN-126	64.28	137	9.60	3.104E+00	1.241E+00	1.241E+00	72.13
	86.94	331	8.90	6.460E+00	1.552E+00	1.552E+00	48.49
	87.57	331	37.00*	6.460E+00	3.734E-01	3.734E-01	26.74
BA-137M	661.65	38	89.98*	3.589E+00	3.142E-02	3.145E-02	94.15
CS-137	661.65	38	85.12*	3.589E+00	3.321E-02	3.325E-02	94.15
TL-208	277.35	-----	6.80	6.258E+00	-----	Line Not Found	-----
	510.84	156	21.60	4.311E+00	4.511E-01	4.511E-01	56.91
	583.14	597	84.20*	3.934E+00	4.855E-01	4.855E-01	15.86
	860.37	95	12.46	2.916E+00	7.019E-01	7.019E-01	52.37
BI-211	72.87	-----	1.27	4.622E+00	-----	Line Not Found	-----
	351.07	945	12.94*	5.451E+00	3.610E+00	3.610E+00	11.15
PB-212	74.81	430	10.70	4.932E+00	2.194E+00	2.194E+00	23.89
	77.11	746	18.00	5.257E+00	2.125E+00	2.125E+00	15.37
	87.30	331	8.00	6.460E+00	1.727E+00	1.727E+00	28.54
	238.63	1869	44.60*	6.792E+00	1.663E+00	1.663E+00	9.08
	300.09	124	3.41	5.985E+00	1.637E+00	1.637E+00	46.46
PO-212	74.81	430	10.70	4.932E+00	2.194E+00	2.194E+00	23.89
	77.11	746	18.00	5.257E+00	2.125E+00	2.125E+00	15.37
	87.30	331	8.00	6.460E+00	1.727E+00	1.727E+00	28.54
	115.19	-----	0.60	8.058E+00	-----	Line Not Found	-----
	238.63	1869	44.60*	6.792E+00	1.663E+00	1.663E+00	9.08
	300.09	124	3.41	5.985E+00	1.637E+00	1.637E+00	46.46
BI-214	609.31	657	46.30*	3.812E+00	1.003E+00	1.003E+00	15.00
	1120.29	90	15.10	2.333E+00	6.854E-01	6.854E-01	75.77
	1764.49	134	15.80	1.695E+00	1.353E+00	1.353E+00	25.14
PB-214	74.81	430	6.21	4.932E+00	3.781E+00	3.781E+00	23.20
	77.11	746	10.50	5.257E+00	3.643E+00	3.643E+00	17.16
	87.30	331	4.67	6.460E+00	2.959E+00	2.959E+00	27.82
	241.98	433	7.49	6.749E+00	2.309E+00	2.309E+00	26.25
	295.21	532	19.20	6.040E+00	1.237E+00	1.237E+00	18.93

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	945	37.20*	5.451E+00	1.256E+00	1.256E+00	12.31
	74.81	430	6.21	4.932E+00	3.781E+00	3.781E+00	23.20
	77.11	746	10.50	5.257E+00	3.643E+00	3.643E+00	17.16
	87.30	331	4.67	6.460E+00	2.959E+00	2.959E+00	27.82
	241.98	433	7.49	6.749E+00	2.309E+00	2.309E+00	26.25
PO-216	295.21	532	19.20	6.040E+00	1.237E+00	1.237E+00	18.93
	351.92	945	37.20*	5.451E+00	1.256E+00	1.256E+00	12.31
	74.81	430	10.70	4.932E+00	2.194E+00	2.194E+00	23.89
	77.11	746	18.00	5.257E+00	2.125E+00	2.125E+00	15.37
	87.30	331	8.00	6.460E+00	1.727E+00	1.727E+00	28.54
PO-218	238.63	1869	44.60*	6.792E+00	1.663E+00	1.663E+00	9.08
	300.09	124	3.41	5.985E+00	1.637E+00	1.637E+00	46.46
	74.81	430	6.21	4.932E+00	3.781E+00	3.781E+00	23.20
	77.11	746	10.50	5.257E+00	3.643E+00	3.643E+00	17.16
	87.30	331	4.67	6.460E+00	2.959E+00	2.959E+00	27.82
RA-224	241.98	433	7.49	6.749E+00	2.309E+00	2.309E+00	26.25
	295.21	532	19.20	6.040E+00	1.237E+00	1.237E+00	18.93
	351.92	945	37.20*	5.451E+00	1.256E+00	1.256E+00	12.31
	240.98	433	3.95*	6.749E+00	4.378E+00	4.378E+00	25.65
	609.31	657	46.30*	3.812E+00	1.003E+00	1.003E+00	15.00
AC-228	1120.29	90	15.10	2.333E+00	6.854E-01	6.854E-01	75.77
	1764.49	134	15.80	1.695E+00	1.353E+00	1.353E+00	25.14
	338.32	385	11.40	5.581E+00	1.629E+00	1.629E+00	47.09
	911.07	479	27.70*	2.780E+00	1.677E+00	1.677E+00	18.79
	969.11	239	16.60	2.639E+00	1.468E+00	1.468E+00	35.04
RA-228	338.32	385	11.40	5.581E+00	1.629E+00	1.629E+00	47.09
	911.07	479	27.70*	2.780E+00	1.677E+00	1.677E+00	18.79
	969.11	239	16.60	2.639E+00	1.468E+00	1.468E+00	35.04
	74.81	430	10.70	4.932E+00	2.194E+00	2.233E+00	22.01
	77.11	746	18.00	5.257E+00	2.125E+00	2.162E+00	15.37
TH-228	87.30	331	8.00	6.460E+00	1.727E+00	1.757E+00	26.74
	238.63	1869	44.60*	6.792E+00	1.663E+00	1.692E+00	9.08
	300.09	124	3.41	5.985E+00	1.637E+00	1.666E+00	74.59
	609.31	657	46.30*	3.812E+00	1.003E+00	1.003E+00	15.00
	1120.29	90	15.10	2.333E+00	6.854E-01	6.854E-01	75.77
TH-230	1764.49	134	15.80	1.695E+00	1.353E+00	1.353E+00	25.14
	338.32	385	11.40	5.581E+00	1.629E+00	1.629E+00	24.28
	911.07	479	27.70*	2.780E+00	1.677E+00	1.677E+00	18.79
	969.11	239	16.60	2.639E+00	1.468E+00	1.468E+00	35.04
	63.29	137	3.80*	3.104E+00	3.136E+00	3.136E+00	72.78
TH-232	92.38	382	5.41	6.956E+00	2.736E+00	2.736E+00	29.65
	609.31	657	46.30*	3.812E+00	1.003E+00	1.003E+00	15.00
	1120.29	90	15.10	2.333E+00	6.854E-01	6.854E-01	75.77
	1764.49	134	15.80	1.695E+00	1.353E+00	1.353E+00	25.14
	86.50	331	12.60*	6.460E+00	1.097E+00	1.097E+00	33.77
NP-237	95.87	---	2.60	7.180E+00	-----	Line Not Found	-----
	63.29	137	3.80*	3.104E+00	3.136E+00	3.136E+00	72.78
	92.38	382	5.41	6.956E+00	2.736E+00	2.736E+00	25.03
	74.67	430	66.00*	4.932E+00	3.558E-01	3.558E-01	21.98

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	331	0.34	6.460E+00	4.112E+01	4.112E+01	26.74
	117.66	-----	0.55	8.112E+00	-----	Line Not Found	-----
	142.18	-----	0.13	8.232E+00	-----	Line Not Found	-----
ANH-511	511.00	156	100.00*	4.311E+00	9.744E-02	9.744E-02	56.30

Flag: "*" = Keyline

Total number of lines in spectrum 31
Number of unidentified lines 0
Number of lines tentatively identified by NID 31 100.00%

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	3.663E+01	3.663E+01	0.316E+01	8.62	
CD-109	464.00D	1.03	3.714E+00	3.812E+00	1.019E+00	26.74	
SN-126	1.00E+05Y	1.00	3.734E-01	3.734E-01	0.998E-01	26.74	
BA-137M	30.17Y	1.00	3.142E-02	3.145E-02	2.961E-02	94.15	
CS-137	30.17Y	1.00	3.321E-02	3.325E-02	3.130E-02	94.15	
TL-208	1.41E+10Y	1.00	4.855E-01	4.855E-01	0.770E-01	15.86	
BI-211	7.04E+08Y	1.00	3.610E+00	3.610E+00	0.402E+00	11.15	
PB-212	1.41E+10Y	1.00	1.663E+00	1.663E+00	0.151E+00	9.08	
PO-212	1.41E+10Y	1.00	1.663E+00	1.663E+00	0.151E+00	9.08	
BI-214	1600.00Y	1.00	1.003E+00	1.003E+00	0.150E+00	15.00	
PB-214	1600.00Y	1.00	1.256E+00	1.256E+00	0.155E+00	12.31	
PO-214	1600.00Y	1.00	1.256E+00	1.256E+00	0.155E+00	12.31	
PO-216	1.41E+10Y	1.00	1.663E+00	1.663E+00	0.151E+00	9.08	
PO-218	1600.00Y	1.00	1.256E+00	1.256E+00	0.155E+00	12.31	
RA-224	1.41E+10Y	1.00	4.378E+00	4.378E+00	1.123E+00	25.65	
RA-226	1600.00Y	1.00	1.003E+00	1.003E+00	0.150E+00	15.00	
AC-228	1.41E+10Y	1.00	1.677E+00	1.677E+00	0.315E+00	18.79	
RA-228	1.41E+10Y	1.00	1.677E+00	1.677E+00	0.315E+00	18.79	
TH-228	1.91Y	1.02	1.663E+00	1.692E+00	0.154E+00	9.08	
TH-230	4.47E+09Y	1.00	1.003E+00	1.003E+00	0.150E+00	15.00	
TH-232	1.41E+10Y	1.00	1.677E+00	1.677E+00	0.315E+00	18.79	
TH-234	4.47E+09Y	1.00	3.136E+00	3.136E+00	2.282E+00	72.78	
U-234	4.47E+09Y	1.00	1.003E+00	1.003E+00	0.150E+00	15.00	
NP-237	2.14E+06Y	1.00	1.097E+00	1.097E+00	0.370E+00	33.77	
U-238	4.47E+09Y	1.00	3.136E+00	3.136E+00	2.282E+00	72.78	
AM-243	7380.00Y	1.00	3.558E-01	3.558E-01	0.782E-01	21.98	
ANH-511	1.00E+09Y	1.00	9.744E-02	9.744E-02	5.486E-02	56.30	
Total Activity :			7.654E+01	7.667E+01			

Grand Total Activity : 7.654E+01 7.667E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440007

Page : 5
Acquisition date : 19-FEB-2010 18:30:21

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.11	186	460	1.27	179.34	164	28	2.58E-02	43.5	6.72E+00	T
0	186.09	237	544	1.01	371.22	366	11	3.29E-02	41.5	7.65E+00	T
0	209.52	134	439	1.05	418.05	414	10	1.85E-02	62.3	7.25E+00	T
0	270.08	165	321	1.28	539.13	533	12	2.29E-02	46.2	6.35E+00	T
0	327.76	93	380	1.34	654.47	648	15	1.29E-02	94.7	5.69E+00	T
0	462.97	86	190	1.11	924.80	920	11	1.19E-02	66.3	4.60E+00	T
0	726.89	126	165	1.36	1452.50	1447	15	1.75E-02	48.2	3.34E+00	T
0	767.86	52	86	1.47	1534.42	1531	8	7.19E-03	68.1	3.20E+00	T
0	794.43	102	102	1.60	1587.56	1581	14	1.42E-02	47.4	3.11E+00	T
0	1377.26	54	42	1.89	2753.02	2744	17	7.51E-03	61.5	1.98E+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]G246440007.CNF;1
* Acquisition date   : 19-FEB-2010 18:30:21   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 02:00:01.89           Half life ratio     : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246440007             Analyst initials  : MXR1
* Batch Number       : 950788                 Sample Quantity   : 1.39290E+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	3.663E+01	3.157E+00	4.605E-01	3.494E-02	79.551
CD-109	3.812E+00	1.019E+00	1.035E+00	9.565E-02	3.684
SN-126	3.734E-01	9.984E-02	1.020E-01	9.400E-03	3.660
BA-137M	3.145E-02	2.961E-02	4.672E-02	3.561E-03	0.673
CS-137	3.325E-02	3.130E-02	4.939E-02	3.774E-03	0.673
TL-208	4.855E-01	7.699E-02	4.536E-02	3.556E-03	10.704
BI-211	3.610E+00	4.025E-01	2.514E-01	1.614E-02	14.360
PB-212	1.663E+00	1.510E-01	7.446E-02	5.320E-03	22.328
PO-212	1.663E+00	1.510E-01	7.446E-02	5.320E-03	22.328
BI-214	1.003E+00	1.504E-01	9.098E-02	8.127E-03	11.026
PB-214	1.256E+00	1.546E-01	8.762E-02	7.248E-03	14.333
PO-214	1.256E+00	1.546E-01	8.762E-02	7.248E-03	14.333
PO-216	1.663E+00	1.510E-01	7.446E-02	5.320E-03	22.328
PO-218	1.256E+00	1.546E-01	8.762E-02	7.248E-03	14.333
RA-224	4.378E+00	1.123E+00	8.464E-01	4.715E-02	5.173
RA-226	1.003E+00	1.504E-01	9.098E-02	8.127E-03	11.026
AC-228	1.677E+00	3.152E-01	1.387E-01	1.838E-02	12.093
RA-228	1.677E+00	3.152E-01	1.387E-01	1.838E-02	12.093

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.692E+00	1.536E-01	7.576E-02	5.412E-03	22.328
TH-230	1.003E+00	1.504E-01	9.097E-02	8.127E-03	11.026
TH-232	1.677E+00	3.152E-01	1.387E-01	1.838E-02	12.093
TH-234	3.136E+00	2.282E+00	2.067E+00	3.643E-01	1.518
U-234	1.003E+00	1.504E-01	9.097E-02	8.127E-03	11.026
NP-237	1.097E+00	3.703E-01	3.043E-01	6.865E-02	3.604
U-238	3.136E+00	2.282E+00	2.067E+00	3.643E-01	1.518
AM-243	3.558E-01	7.821E-02	8.103E-02	6.762E-03	4.391
ANH-511	9.744E-02	5.486E-02	3.433E-02	2.267E-03	2.838

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.010E-01		2.659E-01	4.628E-01	3.354E-02	0.650
NA-22	-1.416E-02		3.613E-02	5.760E-02	3.919E-03	-0.246
NA-24	-3.434E+00		4.153E+00	Half-Life	too short	
AL-26	-6.846E-03		2.146E-02	3.346E-02	1.953E-03	-0.205
TI-44	3.922E-01	+	6.028E-02	7.404E-02	6.331E-03	5.296
SC-46	-4.918E-04		3.262E-02	5.326E-02	5.941E-03	-0.009
V-48	9.253E-03		5.620E-02	9.220E-02	9.120E-03	0.100
CR-51	1.388E-01		3.137E-01	5.163E-01	3.324E-02	0.269
MN-52	9.796E-02		2.442E-01	4.123E-01	3.038E-02	0.238
MN-54	-2.661E-03		3.122E-02	5.106E-02	5.230E-03	-0.052
CO-56	-5.578E-03		3.100E-02	5.025E-02	5.246E-03	-0.111
CO-57	-5.868E-03		2.214E-02	3.515E-02	2.082E-03	-0.167
CO-58	-3.161E-02		3.184E-02	4.869E-02	4.807E-03	-0.649
FE-59	1.396E-02		7.743E-02	1.304E-01	1.073E-02	0.107
CO-60	-3.575E-03		3.072E-02	5.045E-02	3.812E-03	-0.071
ZN-65	-1.004E-01		9.758E-02	1.262E-01	8.891E-03	-0.795
GE-68	2.206E-01		9.837E-01	1.666E+00	1.323E-01	0.132
AS-73	2.397E-01		9.958E-01	1.689E+00	1.339E-01	0.142
AS-74	2.950E-03		7.703E-02	1.249E-01	8.977E-03	0.024
SE-75	-7.350E-03		4.096E-02	5.801E-02	3.317E-03	-0.127
BR-77	-6.602E+00		1.570E+01	2.433E+01	1.623E+00	-0.271
SR-82	-4.128E-02		3.268E-01	5.366E-01	4.997E-02	-0.077
RB-83	-2.748E-02		5.613E-02	8.656E-02	5.773E-03	-0.317
RB-84	-2.402E-03		5.917E-02	9.651E-02	1.064E-02	-0.025
KR-85	1.246E+01		6.353E+00	1.022E+01	6.768E-01	1.220
SR-85	6.535E-02		3.332E-02	5.358E-02	3.550E-03	1.220
RB-86	2.801E-01		6.658E-01	1.142E+00	9.088E-02	0.245
Y-88	-2.050E-02		2.578E-02	3.706E-02	2.111E-03	-0.553
ZR-88	-1.788E-04		2.420E-02	4.053E-02	2.331E-03	-0.004
Y-91	-3.854E+00		1.568E+01	2.549E+01	1.507E+00	-0.151
NB-94	8.930E-03		2.706E-02	4.596E-02	3.771E-03	0.194
NB-95	5.589E-02		4.054E-02	6.364E-02	5.822E-03	0.878
NB-95M	2.120E-01		1.166E-01	1.825E-01	1.339E-02	1.162
ZR-95	4.181E-02		5.589E-02	9.671E-02	9.516E-03	0.432

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	3.880E-01		3.168E-01	Half-Life too short		
ZR-97	2.846E+01		6.834E+00	Half-Life too short		
MO-99	3.176E+00		1.482E+01	2.496E+01	3.808E+00	0.127
TC-99M	-5.592E+12		6.506E+12	Half-Life too short		
RH-101	7.091E-03		2.685E-02	4.462E-02	2.398E-03	0.159
RH-102	-1.014E-02		2.286E-02	3.679E-02	2.336E-03	-0.276
RU-103	-4.690E-03		3.173E-02	5.169E-02	6.711E-03	-0.091
RH-106	-1.118E-01		2.355E-01	3.662E-01	4.607E-02	-0.305
RU-106	-1.118E-01		2.352E-01	3.662E-01	2.695E-02	-0.305
AG-108M	-2.205E-02		2.405E-02	3.784E-02	2.472E-03	-0.583
AG-110M	1.430E-02		2.727E-02	4.142E-02	3.267E-03	0.345
IN-111	-3.616E-01		1.703E+00	2.278E+00	1.273E-01	-0.159
IN-113M	2.224E-02		3.481E-02	6.005E-02	3.684E-03	0.370
SN-113	2.224E-02		3.481E-02	6.005E-02	3.684E-03	0.370
IN-114M	-3.802E-02		1.717E-01	2.504E-01	1.337E-02	-0.152
CD-115	-2.066E+00		1.603E+01	2.601E+01	1.748E+00	-0.079
SN-117M	4.425E-02		4.887E-02	8.520E-02	4.528E-03	0.519
SB-122	2.824E+00		2.762E+00	4.752E+00	3.311E-01	0.594
I-123	3.136E+01		3.572E+01	Half-Life too short		
TE-123M	1.024E-02		2.332E-02	4.007E-02	2.162E-03	0.255
I-124	4.760E-01		8.899E-01	1.294E+00	9.359E-02	0.368
SB-124	-1.465E-02		5.529E-02	8.790E-02	6.065E-03	-0.167
SB-125	-4.607E-02		6.679E-02	1.068E-01	6.671E-03	-0.432
TE-125M	-1.367E+00		8.688E+00	1.385E+01	1.219E+00	-0.099
I-126	1.940E-01		1.692E-01	2.677E-01	2.058E-02	0.725
SB-126	-1.724E-02		1.413E-01	2.005E-01	1.697E-02	-0.086
SB-127	3.537E-01		1.544E+00	2.616E+00	3.027E-01	0.135
XE-127	-2.517E-02		3.749E-02	6.085E-02	3.285E-03	-0.414
I-131	-1.070E-02		1.073E-01	1.800E-01	1.166E-02	-0.059
TE-132	2.186E-01		8.494E-01	1.418E+00	2.085E-01	0.154
BA-133	-6.256E-03		3.827E-02	5.255E-02	6.070E-03	-0.119
I-133	-1.149E-02		1.281E-02	Half-Life too short		
CS-134	1.169E-01	+	5.654E-02	7.347E-02	7.106E-03	1.591
CS-135	1.348E-01		1.425E-01	2.147E-01	1.623E-02	0.628
I-135	4.372E+11		5.474E+11	Half-Life too short		
CS-136	-1.136E-02		1.005E-01	1.668E-01	1.495E-02	-0.068
CE-139	-2.182E-03		2.385E-02	4.017E-02	2.108E-03	-0.054
BA-140	-9.780E-02		2.208E-01	3.466E-01	1.134E-01	-0.282
LA-140	2.743E-02		6.705E-02	1.165E-01	7.990E-03	0.236
CE-141	9.367E-02		5.663E-02	9.515E-02	5.432E-03	0.984
CE-143	2.078E-03		3.051E-04	Half-Life too short		
CE-144	-3.493E-02		1.778E-01	2.812E-01	3.976E-02	-0.124
PM-144	-4.456E-04		2.729E-02	4.554E-02	3.697E-03	-0.010
PR-144	-3.023E-02		1.851E+00	3.089E+00	2.507E-01	-0.010
PM-146	3.160E-02		3.358E-02	5.817E-02	5.175E-03	0.543
ND-147	-3.132E-02		4.832E-01	7.866E-01	1.098E-01	-0.040
PM-149	8.654E+01		1.454E+02	2.419E+02	3.422E+01	0.358
EU-152	-3.147E-02		9.252E-02	1.260E-01	8.220E-03	-0.250

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.445E-02		7.723E-02	1.111E-01	8.690E-03	-0.130
EU-154	-5.187E-02		1.016E-01	1.604E-01	1.602E-02	-0.323
EU-155	1.072E-01		9.727E-02	1.634E-01	1.168E-02	0.656
TB-160	1.820E-02		1.137E-01	1.881E-01	2.067E-02	0.097
HO-166M	1.251E-02		4.496E-02	7.622E-02	6.353E-03	0.164
TM-171	-1.398E+01		3.072E+01	4.510E+01	3.606E+00	-0.310
LU-176	1.495E-03		1.983E-02	3.217E-02	1.852E-03	0.046
LU-177	2.697E+00	+	1.685E+00	2.043E+00	1.108E-01	1.320
LU-177M	-1.713E-01		1.457E-01	2.289E-01	1.352E-02	-0.748
HF-181	-1.984E-02		3.433E-02	5.470E-02	3.501E-03	-0.363
W-181	8.951E-02		4.107E-01	6.222E-01	4.935E-02	0.144
TA-182	-8.942E-02		1.669E-01	2.661E-01	1.628E-02	-0.336
RE-183	-2.357E-02		9.090E-02	1.509E-01	7.965E-03	-0.156
RE-184	-7.340E-02		1.825E-01	2.939E-01	1.651E-02	-0.250
OS-185	1.045E-02		3.375E-02	5.533E-02	4.161E-03	0.189
RE-188	3.363E-03		1.429E-01	2.426E-01	1.298E-02	0.014
W-188	-6.212E+00		6.811E+00	9.061E+00	5.190E-01	-0.686
IR-192	1.144E-02		2.723E-02	4.483E-02	2.600E-03	0.255
AU-195	1.353E-01		2.106E-01	3.346E-01	2.560E-02	0.404
TL-200	-1.028E-03		6.994E-04	Half-Life	too short	
TL-201	1.656E+00		9.087E+00	1.544E+01	8.104E-01	0.107
TL-202	4.035E-02		5.830E-02	1.003E-01	6.116E-03	0.402
HG-203	1.524E-02		3.506E-02	5.811E-02	3.524E-03	0.262
BI-207	1.132E-02		4.257E-02	7.230E-02	5.969E-03	0.156
TL-207	-9.391E-03		5.897E-01	8.272E-01	1.366E-01	-0.011
PO-209	2.355E+00		5.809E+00	9.750E+00	1.100E+00	0.242
BI-210	1.949E+00		4.726E+00	8.118E+00	6.281E-01	0.240
PB-210	1.949E+00		4.726E+00	8.118E+00	6.281E-01	0.240
PO-210	1.949E+00		4.726E+00	8.118E+00	5.400E-01	0.240
PB-211	-4.848E-01		8.342E-01	1.263E+00	7.874E-01	-0.384
BI-212	8.628E-01	+	4.251E-01	5.164E-01	5.143E-02	1.671
PO-215	-9.391E-03		5.897E-01	8.272E-01	1.366E-01	-0.011
RN-219	8.808E-02		3.299E-01	5.582E-01	7.600E-02	0.158
RN-220	-1.443E+00		1.985E+01	3.220E+01	2.213E+00	-0.045
RA-223	-9.391E-03		5.897E-01	8.272E-01	1.366E-01	-0.011
AC-227	-5.379E-02		3.006E-01	4.886E-01	6.787E-02	-0.110
TH-227	-5.379E-02		3.006E-01	4.886E-01	8.229E-02	-0.110
TH-229	1.205E-01		4.103E-01	6.932E-01	3.712E-02	0.174
PA-231	-4.663E-01		1.253E+00	2.001E+00	2.749E-01	-0.233
TH-231	-9.391E-03		5.897E-01	8.272E-01	1.366E-01	-0.011
U-231	5.691E-01		1.504E+00	2.226E+00	1.784E-01	0.256
PA-233	2.125E-02		5.017E-02	8.268E-02	5.065E-03	0.257
PA-234	6.917E-02		2.345E-01	3.887E-01	7.668E-02	0.178
PA-234M	5.777E+00		3.833E+00	6.624E+00	7.146E-01	0.872
U-235	-1.874E-02		1.893E-01	2.938E-01	4.759E-02	-0.064
NP-236	7.670E-03		6.388E-02	1.086E-01	5.753E-03	0.071
NP-239	-2.057E-02		1.683E-01	2.695E-01	1.668E-02	-0.076
AM-241	-4.196E-02		1.719E-01	2.549E-01	2.114E-02	-0.165

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-2.880E-02		8.651E-02	1.385E-01	9.912E-03	-0.208
AM-246	5.078E-02		1.100E-01	1.891E-01	1.496E-02	0.268
CM-247	2.162E-02		2.975E-02	5.135E-02	2.991E-03	0.421
CF-249	-2.082E-03		3.010E-02	5.031E-02	2.892E-03	-0.041
CF-251	4.417E-02		9.817E-02	1.678E-01	8.861E-03	0.263

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]G246440007          *
* Acquisition date   : 19-FEB-2010 18:30:21 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 02:00:01.89 Half life ratio : 8.000     *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID      *
* Sample ID          : G246440007 Analyst initials: MXR1           *
* Batch Number       : 950788 Sample Quantity : 1.3929E+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	3.663E+01	3.094E+00	2.312E-01	1.579E+00
CD-109	3.812E+00	9.987E-01	5.493E-01	5.095E-01
SN-126	3.734E-01	9.784E-02	5.416E-02	4.992E-02
BA-137M	3.145E-02	2.902E-02	2.384E-02	1.481E-02
CS-137	3.325E-02	3.068E-02	2.520E-02	1.565E-02
TL-208	4.855E-01	7.545E-02	2.321E-02	3.849E-02
BI-211	3.610E+00	3.944E-01	1.300E-01	2.012E-01
PB-212	1.663E+00	1.480E-01	3.878E-02	7.551E-02
PO-212	1.663E+00	1.480E-01	3.878E-02	7.551E-02
BI-214	1.003E+00	1.474E-01	4.651E-02	7.522E-02
PB-214	1.256E+00	1.515E-01	4.529E-02	7.729E-02
PO-214	1.256E+00	1.515E-01	4.529E-02	7.729E-02
PO-216	1.663E+00	1.480E-01	3.878E-02	7.551E-02
PO-218	1.256E+00	1.515E-01	4.529E-02	7.729E-02
RA-224	4.378E+00	1.100E+00	4.407E-01	5.615E-01
RA-226	1.003E+00	1.474E-01	4.651E-02	7.522E-02
AC-228	1.677E+00	3.089E-01	7.032E-02	1.576E-01
RA-228	1.677E+00	3.089E-01	7.032E-02	1.576E-01
TH-228	1.692E+00	1.506E-01	3.945E-02	7.682E-02
TH-230	1.003E+00	1.474E-01	4.651E-02	7.521E-02
TH-232	1.677E+00	3.089E-01	7.032E-02	1.576E-01
TH-234	3.136E+00	2.237E+00	1.104E+00	1.141E+00
U-234	1.003E+00	1.474E-01	4.651E-02	7.521E-02
NP-237	1.097E+00	3.629E-01	1.616E-01	1.852E-01
U-238	3.136E+00	2.237E+00	1.104E+00	1.141E+00
AM-243	3.558E-01	7.665E-02	4.315E-02	3.911E-02
ANH-511	9.744E-02	5.376E-02	1.761E-02	2.743E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	3.010E-01	2.605E-01	2.378E-01	1.329E-01	NOT IDENT.
NA-22	-1.416E-02	3.541E-02	2.900E-02	1.806E-02	NOT IDENT.
NA-24	-3.434E+06	8.141E+06	0.000E+00	4.153E+06	SHORT HLIF
AL-26	-6.846E-03	2.103E-02	1.672E-02	1.073E-02	NOT IDENT.
TI-44	3.922E-01	5.908E-02	3.939E-02	3.014E-02	FAIL ABUN
SC-46	-4.918E-04	3.197E-02	2.702E-02	1.631E-02	FAIL ABUN
V-48	9.253E-03	5.508E-02	4.668E-02	2.810E-02	NOT IDENT.
CR-51	1.388E-01	3.074E-01	2.673E-01	1.569E-01	NOT IDENT.
MN-52	9.796E-02	2.393E-01	2.071E-01	1.221E-01	NOT IDENT.
MN-54	-2.661E-03	3.060E-02	2.594E-02	1.561E-02	NOT IDENT.
CO-56	-5.578E-03	3.038E-02	2.552E-02	1.550E-02	NOT IDENT.
CO-57	-5.868E-03	2.170E-02	1.854E-02	1.107E-02	NOT IDENT.
CO-58	-3.161E-02	3.120E-02	2.475E-02	1.592E-02	NOT IDENT.
FE-59	1.396E-02	7.588E-02	6.587E-02	3.872E-02	NOT IDENT.
CO-60	-3.575E-03	3.010E-02	2.538E-02	1.536E-02	NOT IDENT.
ZN-65	-1.004E-01	9.563E-02	6.373E-02	4.879E-02	NOT IDENT.
GE-68	2.206E-01	9.641E-01	8.416E-01	4.919E-01	NOT IDENT.
AS-73	2.397E-01	9.759E-01	9.051E-01	4.979E-01	NOT IDENT.
AS-74	2.950E-03	7.549E-02	6.390E-02	3.851E-02	NOT IDENT.
SE-75	-7.350E-03	4.015E-02	3.015E-02	2.048E-02	NOT IDENT.
BR-77	-6.602E+00	1.538E+01	1.248E+01	7.849E+00	FAIL ABUN
SR-82	-4.128E-02	3.203E-01	2.730E-01	1.634E-01	NOT IDENT.
RB-83	-2.748E-02	5.501E-02	4.439E-02	2.807E-02	NOT IDENT.
RB-84	-2.402E-03	5.798E-02	4.896E-02	2.958E-02	NOT IDENT.
KR-85	1.246E+01	6.226E+00	5.241E+00	3.176E+00	NOT IDENT.
SR-85	6.535E-02	3.265E-02	2.749E-02	1.666E-02	NOT IDENT.
RB-86	2.801E-01	6.524E-01	5.768E-01	3.329E-01	NOT IDENT.
Y-88	-2.050E-02	2.526E-02	1.852E-02	1.289E-02	NOT IDENT.
ZR-88	-1.788E-04	2.371E-02	2.090E-02	1.210E-02	NOT IDENT.
Y-91	-3.854E+00	1.537E+01	1.285E+01	7.842E+00	NOT IDENT.
NB-94	8.930E-03	2.652E-02	2.343E-02	1.353E-02	NOT IDENT.
NB-95	5.589E-02	3.973E-02	3.238E-02	2.027E-02	NOT IDENT.
NB-95M	2.120E-01	1.142E-01	9.507E-02	5.829E-02	NOT IDENT.
ZR-95	4.181E-02	5.477E-02	4.922E-02	2.794E-02	NOT IDENT.
NB-97	3.880E+05	6.209E+05	0.000E+00	3.168E+05	SHORT HLIF
ZR-97	2.846E+07	1.339E+07	0.000E+00	6.834E+06	SHORT HLIF
MO-99	3.176E+00	1.452E+01	1.271E+01	7.411E+00	NOT IDENT.
TC-99M	-5.592E+18	1.275E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.091E-03	2.632E-02	2.332E-02	1.343E-02	NOT IDENT.
RH-102	-1.014E-02	2.241E-02	1.890E-02	1.143E-02	FAIL ABUN
RU-103	-4.690E-03	3.109E-02	2.653E-02	1.586E-02	FAIL ABUN
RH-106	-1.118E-01	2.308E-01	1.871E-01	1.178E-01	FAIL ABUN
RU-106	-1.118E-01	2.305E-01	1.871E-01	1.176E-01	FAIL ABUN
AG-108M	-2.205E-02	2.357E-02	1.947E-02	1.202E-02	NOT IDENT.
AG-110M	1.430E-02	2.672E-02	2.114E-02	1.363E-02	NOT IDENT.
IN-111	-3.616E-01	1.669E+00	1.186E+00	8.515E-01	NOT IDENT.
IN-113M	2.224E-02	3.411E-02	3.097E-02	1.740E-02	NOT IDENT.
SN-113	2.224E-02	3.411E-02	3.097E-02	1.740E-02	NOT IDENT.
IN-114M	-3.802E-02	1.682E-01	1.310E-01	8.584E-02	NOT IDENT.
CD-115	-2.066E+00	1.571E+01	1.333E+01	8.015E+00	NOT IDENT.
SN-117M	4.425E-02	4.789E-02	4.473E-02	2.444E-02	NOT IDENT.
SB-122	2.824E+00	2.707E+00	2.433E+00	1.381E+00	NOT IDENT.
I-123	3.136E+07	7.001E+07	0.000E+00	3.572E+07	SHORT HLIF
TE-123M	1.024E-02	2.286E-02	2.103E-02	1.166E-02	NOT IDENT.
I-124	4.760E-01	8.721E-01	6.618E-01	4.449E-01	FAIL ABUN
SB-124	-1.465E-02	5.419E-02	4.400E-02	2.765E-02	FAIL ABUN
SB-125	-4.607E-02	6.546E-02	5.497E-02	3.340E-02	FAIL ABUN
TE-125M	-1.367E+00	8.515E+00	7.325E+00	4.344E+00	NOT IDENT.
I-126	1.940E-01	1.658E-01	1.366E-01	8.460E-02	NOT IDENT.
SB-126	-1.724E-02	1.385E-01	1.021E-01	7.065E-02	FAIL ABUN
SB-127	3.537E-01	1.513E+00	1.334E+00	7.720E-01	NOT IDENT.
XE-127	-2.517E-02	3.674E-02	3.179E-02	1.875E-02	NOT IDENT.
I-131	-1.070E-02	1.052E-01	9.296E-02	5.365E-02	NOT IDENT.
TE-132	2.186E-01	8.324E-01	7.389E-01	4.247E-01	NOT IDENT.
BA-133	-6.256E-03	3.751E-02	2.715E-02	1.914E-02	NOT IDENT.
I-133	-1.149E+04	2.512E+04	0.000E+00	1.281E+04	SHORT HLIF
CS-134	1.169E-01	5.541E-02	3.736E-02	2.827E-02	FAIL ABUN
CS-135	1.348E-01	1.396E-01	1.116E-01	7.125E-02	NOT IDENT.
I-135	4.372E+17	1.073E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.136E-02	9.846E-02	8.433E-02	5.023E-02	FAIL ABUN
CE-139	-2.182E-03	2.337E-02	2.107E-02	1.193E-02	NOT IDENT.
BA-140	-9.780E-02	2.164E-01	1.776E-01	1.104E-01	NOT IDENT.
LA-140	2.743E-02	6.571E-02	5.836E-02	3.352E-02	FAIL ABUN
CE-141	9.367E-02	5.550E-02	5.003E-02	2.832E-02	NOT IDENT.
CE-143	2.078E+03	5.981E+02	0.000E+00	3.051E+02	SHORT HLIF
CE-144	-3.493E-02	1.742E-01	1.481E-01	8.890E-02	NOT IDENT.
PM-144	-4.456E-04	2.674E-02	2.322E-02	1.364E-02	NOT IDENT.
PR-144	-3.023E-02	1.814E+00	1.575E+00	9.255E-01	NOT IDENT.

PM-146	3.160E-02	3.290E-02	2.991E-02	1.679E-02	NOT IDENT.
ND-147	-3.132E-02	4.735E-01	4.032E-01	2.416E-01	FAIL ABUN
PM-149	8.654E+01	1.425E+02	1.255E+02	7.269E+01	NOT IDENT.
EU-152	-3.147E-02	9.067E-02	6.513E-02	4.626E-02	NOT IDENT.
GD-153	-1.445E-02	7.568E-02	5.889E-02	3.861E-02	NOT IDENT.
EU-154	-5.187E-02	9.955E-02	8.074E-02	5.079E-02	NOT IDENT.
EU-155	1.072E-01	9.533E-02	8.645E-02	4.864E-02	FAIL ABUN
TB-160	1.820E-02	1.115E-01	9.546E-02	5.687E-02	FAIL ABUN
HO-166M	1.251E-02	4.406E-02	3.884E-02	2.248E-02	NOT IDENT.
TM-171	-1.398E+01	3.011E+01	2.406E+01	1.536E+01	NOT IDENT.
LU-176	1.495E-03	1.944E-02	1.667E-02	9.916E-03	FAIL ABUN
LU-177	2.697E+00	1.651E+00	1.067E+00	8.425E-01	FAIL ABUN
LU-177M	-1.713E-01	1.428E-01	1.179E-01	7.286E-02	FAIL ABUN
HF-181	-1.984E-02	3.365E-02	2.809E-02	1.717E-02	NOT IDENT.
W-181	8.951E-02	4.024E-01	3.322E-01	2.053E-01	NOT IDENT.
TA-182	-8.942E-02	1.636E-01	1.341E-01	8.347E-02	FAIL ABUN
RE-183	-2.357E-02	8.908E-02	7.918E-02	4.545E-02	FAIL ABUN
RE-184	-7.340E-02	1.789E-01	1.529E-01	9.125E-02	NOT IDENT.
OS-185	1.045E-02	3.308E-02	2.825E-02	1.688E-02	NOT IDENT.
RE-188	3.363E-03	1.400E-01	1.274E-01	7.144E-02	NOT IDENT.
W-188	-6.212E+00	6.675E+00	4.701E+00	3.405E+00	FAIL ABUN
IR-192	1.144E-02	2.668E-02	2.322E-02	1.361E-02	FAIL ABUN
AU-195	1.353E-01	2.064E-01	1.773E-01	1.053E-01	FAIL ABUN
TL-200	-1.028E+03	1.371E+03	0.000E+00	6.994E+02	SHORT HLIF
TL-201	1.656E+00	8.905E+00	8.095E+00	4.543E+00	NOT IDENT.
TL-202	4.035E-02	5.713E-02	5.162E-02	2.915E-02	NOT IDENT.
HG-203	1.524E-02	3.436E-02	3.017E-02	1.753E-02	NOT IDENT.
BI-207	1.132E-02	4.172E-02	3.654E-02	2.129E-02	FAIL ABUN
TL-207	-9.391E-03	5.779E-01	4.283E-01	2.948E-01	FAIL ABUN
PO-209	2.355E+00	5.693E+00	4.945E+00	2.905E+00	NOT IDENT.
BI-210	1.949E+00	4.632E+00	4.361E+00	2.363E+00	NOT IDENT.
PB-210	1.949E+00	4.632E+00	4.361E+00	2.363E+00	NOT IDENT.
PO-210	1.949E+00	4.631E+00	4.361E+00	2.363E+00	NOT IDENT.
PB-211	-4.848E-01	8.175E-01	6.510E-01	4.171E-01	NOT IDENT.
BI-212	8.628E-01	4.166E-01	2.630E-01	2.125E-01	FAIL ABUN
PO-215	-9.391E-03	5.779E-01	4.283E-01	2.948E-01	FAIL ABUN
RN-219	8.808E-02	3.233E-01	2.878E-01	1.650E-01	FAIL ABUN
RN-220	-1.443E+00	1.945E+01	1.650E+01	9.925E+00	NOT IDENT.
RA-223	-9.391E-03	5.779E-01	4.283E-01	2.948E-01	FAIL ABUN
AC-227	-5.379E-02	2.946E-01	2.541E-01	1.503E-01	FAIL ABUN
TH-227	-5.379E-02	2.946E-01	2.541E-01	1.503E-01	FAIL ABUN
TH-229	1.205E-01	4.021E-01	3.625E-01	2.052E-01	FAIL ABUN
PA-231	-4.663E-01	1.228E+00	1.038E+00	6.266E-01	FAIL ABUN
TH-231	-9.391E-03	5.779E-01	4.283E-01	2.948E-01	FAIL ABUN
U-231	5.691E-01	1.474E+00	1.180E+00	7.519E-01	FAIL ABUN
PA-233	2.125E-02	4.917E-02	4.284E-02	2.508E-02	FAIL ABUN
PA-234	6.917E-02	2.298E-01	1.969E-01	1.173E-01	FAIL ABUN
PA-234M	5.777E+00	3.756E+00	3.352E+00	1.916E+00	FAIL ABUN
U-235	-1.874E-02	1.855E-01	1.545E-01	9.467E-02	FAIL ABUN
NP-236	7.670E-03	6.261E-02	5.700E-02	3.194E-02	NOT IDENT.
NP-239	-2.057E-02	1.650E-01	1.423E-01	8.416E-02	FAIL ABUN
AM-241	-4.196E-02	1.685E-01	1.363E-01	8.595E-02	NOT IDENT.
CM-243	-2.880E-02	8.478E-02	7.328E-02	4.326E-02	FAIL ABUN
AM-246	5.078E-02	1.078E-01	9.557E-02	5.501E-02	NOT IDENT.
CM-247	2.162E-02	2.915E-02	2.647E-02	1.487E-02	NOT IDENT.
CF-249	-2.082E-03	2.950E-02	2.596E-02	1.505E-02	NOT IDENT.
CF-251	4.417E-02	9.621E-02	8.790E-02	4.909E-02	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON , SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.50	295.9381
46.50	295.9381
46.50	295.9381
48.70	323.6620
49.72	322.2980
51.35	325.2795
52.39	332.9428
52.97	332.7737
53.15	333.0018
53.44	317.8851
54.07	330.5113
56.28	331.3861
56.28	331.3898
57.37	0.0000
57.53	343.9923
57.53	343.9942
57.60	339.4537
57.98	343.4372
57.98	343.4372
59.32	336.4203
59.32	336.4203
59.40	336.5150
59.54	336.6805
59.72	343.8824
60.01	344.2315
61.10	318.8490
61.14	318.8932
61.30	319.0689
63.00	372.2894
63.29	372.6531
63.29	372.6531
63.58	373.0157
64.28	430.2097
65.12	394.3893
65.20	394.4934
65.20	394.4934
66.05	402.7351
66.72	409.3358
66.83	410.9159
66.91	411.0210
67.20	414.2733
67.20	414.2733
67.75	426.4934
67.85	422.3222
68.90	415.0876
68.90	415.0876
69.30	456.0196
69.67	418.9902
70.82	427.7423
70.82	427.7423
70.83	427.7559
72.80	447.8590
72.87	447.9550
72.87	447.9550
74.67	435.2312
74.81	435.4134
74.81	435.4134
74.81	435.4134
74.81	435.4134
74.81	435.4134
74.81	435.4134
74.81	435.4134
74.97	435.6205
75.28	436.0234
75.70	436.5666
77.11	438.3773
77.11	438.3773

77.11	438.3773
77.11	438.3773
77.11	438.3773
77.11	438.3773
77.11	438.3773
78.38	415.2768
79.62	412.7881
79.80	413.9925
79.80	413.9925
80.11	414.3573
80.18	414.4400
80.30	393.7018
80.30	393.7018
80.57	394.0040
81.00	382.5273
81.07	382.6035
81.07	382.6035
81.07	382.6035
81.07	382.6035
82.60	417.2630
83.37	407.6206
83.78	376.4630
83.78	376.4630
83.78	376.4630
83.78	376.4630
84.21	376.9073
84.90	377.6169
85.43	378.1605
86.29	379.0398
86.50	379.2534
86.54	379.2935
86.59	379.3449
86.72	379.4766
86.79	379.5452
86.94	379.6997
87.30	380.0659
87.30	380.0659
87.30	380.0659
87.30	380.0659
87.30	380.0659
87.30	380.0659
87.30	380.0659
87.57	380.3387
87.88	380.6515
88.03	380.8041
88.36	381.1360
88.47	381.2466
89.95	382.7305
91.11	383.8844
92.29	385.0517
92.38	385.1414
92.38	385.1414
93.35	386.0931
94.00	386.7302
94.67	347.0896
94.67	347.0947
94.90	347.2947
94.90	347.2947
94.90	347.2947
94.90	347.2947
95.87	396.3169
95.87	396.3169
96.73	431.4325
97.43	382.2480
98.44	364.4251
98.44	364.4251
98.88	367.0082
99.55	364.8872
99.55	364.8872
99.86	342.1418
100.00	342.2583
100.10	342.3431
103.18	407.0858
103.76	396.0247
105.00	370.6947
105.31	365.6641
108.00	441.5175
109.28	405.3670

111.00	390.8305
111.00	390.8305
111.76	391.4915
112.95	418.4033
115.19	353.2711
116.30	370.4148
117.00	380.7635
117.00	380.7635
117.66	388.9290
121.11	381.8976
121.62	372.4176
121.78	372.5417
122.06	367.2610
122.32	367.4581
122.32	367.4581
122.32	367.4581
122.32	367.4581
123.07	384.5589
127.23	401.1702
129.76	381.9833
131.20	421.1564
133.02	401.3018
133.54	379.2004
135.34	344.3909
136.00	355.0004
136.25	361.9564
136.48	372.3004
140.51	388.8282
140.51	0.0000
142.18	399.1894
142.65	394.9580
143.76	402.6481
144.24	375.4459
144.24	375.4459
144.24	375.4459
144.24	375.4459
145.22	339.3112
145.44	339.4493
147.16	437.4631
152.43	369.3464
152.70	376.5146
153.22	362.2753
154.21	378.6790
154.21	378.6790
154.21	378.6790
154.21	378.6790
155.03	391.5090
156.02	386.9034
158.56	337.3684
159.00	0.0000
159.00	361.4822
160.31	364.0557
161.27	388.6000
162.32	365.2881
162.64	367.2610
163.35	348.1091
163.89	352.8778
165.85	358.4929
167.43	351.3561
171.28	346.3359
171.86	350.2692
172.10	344.0807
176.55	319.2292
176.60	319.2533
181.06	361.9521
184.41	318.1465
185.71	348.6562
186.00	348.8091
190.27	369.9832
192.34	359.8264
193.63	349.0414
197.04	326.3828
198.01	329.6543
198.60	327.1129
200.40	343.9753
201.83	361.6690
202.84	340.4333
205.31	296.0634

208.36	359.8309
208.81	361.5783
209.75	334.1652
209.75	334.1652
210.97	304.5025
215.65	313.1065
216.55	313.1626
218.09	301.2550
222.10	293.1454
223.80	269.4744
226.40	332.8543
227.00	323.3432
227.08	323.3760
227.20	320.4952
228.16	290.5625
228.18	290.5693
228.18	290.5693
231.56	0.0000
235.69	314.4793
236.00	350.9616
236.00	350.9616
238.63	324.1559
238.63	324.1559
238.63	324.1559
238.63	324.1559
239.00	324.3031
240.98	325.0940
241.98	325.4931
241.98	325.4931
241.98	325.4931
244.69	274.8368
245.39	273.4706
247.94	261.2494
248.90	256.9609
249.79	258.2392
252.40	276.1762
252.85	264.2208
252.85	264.2208
254.15	0.0000
256.20	266.2757
256.20	266.2757
260.50	255.3968
260.90	250.4256
262.80	283.3291
264.65	268.2697
268.24	254.5807
268.79	253.0961
269.46	252.8730
269.46	252.8730
269.46	252.8730
269.46	252.8730
271.23	273.5636
273.65	309.0020
276.40	261.6397
277.35	258.2098
277.60	258.2782
277.60	258.2782
278.00	272.9203
278.60	260.6400
279.20	277.4338
279.53	281.6893
280.46	311.1131
281.68	304.2305
283.67	266.2527
284.30	254.9386
285.00	239.4478
285.90	235.4919
286.10	235.5400
286.10	235.5400
287.40	243.2078
288.45	0.0000
290.67	265.9307
290.80	265.9692
291.72	257.8028
293.26	0.0000
293.70	224.5674
295.21	224.9246
295.21	224.9246

295.21	224.9246
295.96	198.8665
296.50	198.9783
297.23	199.1275
298.57	199.4058
299.80	229.3945
299.80	229.3945
300.09	217.5656
300.09	217.5656
300.09	217.5656
300.09	217.5656
300.12	217.5719
301.29	256.9728
302.84	223.2917
303.76	209.8537
303.91	209.8838
304.40	203.1600
304.40	203.1600
304.84	210.0850
306.84	226.7672
308.46	245.3531
311.98	204.2871
316.51	196.5659
318.01	220.6534
319.02	226.2849
319.41	207.9580
320.08	210.2604
323.87	215.8254
323.87	215.8254
323.87	215.8254
323.87	215.8254
325.23	245.7345
328.77	200.0110
333.44	201.9996
334.20	193.3540
334.20	193.3540
334.30	193.3728
338.28	213.9459
338.28	213.9459
338.28	213.9459
338.28	213.9459
338.32	213.9547
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338.32	213.9547
340.50	229.8613
340.57	229.8772
344.27	232.4387
345.85	242.1032
350.59	0.0000
351.07	200.8548
351.92	201.0114
351.92	201.0114
351.92	201.0114
355.39	0.0000
356.01	191.8868
364.48	199.6581
366.43	198.1907
367.43	205.6107
367.94	0.0000
369.80	191.5124
374.96	203.3078
383.85	179.1277
387.95	188.0401
388.63	173.3905
391.69	180.3036
391.69	180.3036
392.90	193.4424
398.62	222.2507
400.65	176.0432
401.10	184.4963
401.81	201.3833
402.60	194.0479
404.84	240.1971
410.95	190.6569
411.60	202.9720
413.65	236.2439
414.70	188.3984
415.30	180.9492

415.76	186.6716
417.63	0.0000
418.52	176.6821
423.70	162.2204
427.08	172.1555
427.89	166.5533
432.53	142.3121
433.93	171.1491
439.47	145.9437
439.56	145.9530
439.89	145.9901
443.98	162.8152
444.90	160.0344
445.03	147.5165
445.03	147.5165
445.03	147.5165
445.03	147.5165
453.90	147.5153
463.38	159.6089
468.07	156.8789
473.00	159.3976
475.06	171.4533
475.35	175.4317
476.78	162.7824
477.59	150.0425
477.96	145.1445
482.03	169.3238
484.57	154.7432
487.03	147.0587
490.36	0.0000
492.35	139.6189
497.08	146.0731
507.63	0.0000
510.53	0.0000
510.84	139.3510
511.00	139.3653
511.85	139.4445
511.85	139.4445
513.99	143.3510
513.99	143.3510
520.41	155.8115
520.65	155.8377
527.90	139.8932
528.96	0.0000
529.64	144.1395
529.87	0.0000
531.02	136.0815
537.32	141.7701
543.00	136.0928
546.56	0.0000
549.76	136.6729
552.65	128.6197
555.20	126.7448
563.23	135.7256
563.90	125.3350
568.70	155.0351
569.32	142.5178
569.50	144.6271
569.67	144.6440
573.80	140.1009
574.00	134.2790
574.64	144.5529
578.91	140.5306
579.30	0.0000
583.14	143.7031
585.48	125.2091
591.81	147.6264
592.07	132.7789
593.00	123.2840
595.88	137.3333
600.56	161.1896
602.52	0.0000
602.71	153.1980
602.71	153.1980
603.60	174.6622
604.41	171.1797
604.70	174.7738
609.31	164.1500

609.31	164.1500
609.31	164.1500
609.31	164.1500
610.33	168.1833
612.46	141.5160
614.37	134.4971
618.01	139.0876
621.84	123.1790
621.84	123.1790
631.29	117.3155
633.02	123.9499
633.10	115.2569
634.78	117.5423
635.90	117.6135
636.97	132.9401
645.85	117.1619
646.12	119.3704
656.30	110.1172
657.75	97.6080
657.90	0.0000
661.65	144.4852
661.65	144.4852
664.57	0.0000
666.33	105.9634
666.33	105.9634
675.00	109.3622
677.61	121.5759
685.20	125.7852
692.80	145.9199
695.00	133.9112
696.49	146.1960
696.49	146.1960
697.00	141.5471
697.49	136.8958
698.33	148.2086
698.50	148.2214
699.00	138.8765
702.63	146.6531
706.10	138.4346
706.58	0.0000
706.67	132.8243
709.31	136.7724
711.68	116.1583
713.82	118.1742
717.42	126.9118
720.50	125.2083
721.93	0.0000
722.20	110.6660
722.78	113.9551
722.78	113.9551
722.89	113.9600
722.95	113.9624
723.30	113.9844
724.18	117.2913
727.18	103.7332
733.00	106.3482
735.90	94.3006
739.58	108.1928
742.81	115.0757
744.21	108.4342
747.13	101.8615
751.79	122.3129
752.31	107.8939
753.82	110.8634
755.35	107.0864
756.15	108.0921
756.87	115.8521
763.93	112.9191
765.79	126.3150
766.42	149.6275
766.84	155.1986
776.49	132.5164
778.00	114.0817
778.57	128.7424
778.89	123.8839
783.80	116.3441
785.46	97.1318
792.07	137.9575

795.84	119.6565
796.30	136.5378
798.80	128.2553
801.93	130.1282
805.60	121.4560
810.29	123.6903
810.76	129.6567
815.85	108.1263
817.79	106.2359
818.51	101.3027
819.60	107.3145
826.30	114.6093
828.27	0.0000
831.60	121.8685
831.96	131.8792
834.83	140.0456
836.80	0.0000
846.75	108.5955
848.13	97.5940
856.28	0.0000
856.80	90.0225
860.37	110.9665
867.32	89.7730
867.82	91.9911
871.10	99.5691
873.19	106.7752
874.81	100.7422
875.33	0.0000
876.40	102.8453
879.36	102.9727
880.27	106.0715
880.51	107.1021
881.50	108.1674
883.24	105.1814
884.67	110.3533
889.25	109.5405
896.60	94.4688
898.02	107.8818
899.00	115.1195
903.28	105.9061
911.07	72.5994
911.07	72.5994
911.07	72.5994
919.63	91.5870
920.93	88.1474
925.00	106.9878
925.24	108.0371
926.50	118.4856
935.52	104.3070
937.48	125.2661
944.10	76.4026
946.00	92.1698
949.00	91.2303
962.29	117.4498
964.01	84.9826
966.15	130.2941
968.20	161.6349
969.11	108.7019
969.11	108.7019
969.11	108.7019
977.42	94.8380
980.50	77.4838
983.50	77.5714
989.30	85.1969
996.32	115.3191
1001.03	74.8763
1001.68	94.1517
1004.76	107.1147
1021.30	0.0000
1024.50	0.0000
1034.80	94.2217
1036.00	102.1582
1037.82	110.5872
1038.57	109.6867
1038.76	0.0000
1045.16	93.1780
1046.59	99.7527
1048.07	113.7963

1050.47	114.8277
1050.47	114.8277
1062.04	104.0509
1063.62	103.1710
1076.63	91.3976
1077.35	96.1302
1078.86	89.5827
1085.78	113.4291
1099.22	108.2587
1112.02	134.5574
1112.84	142.0692
1115.52	172.1277
1120.29	125.5371
1120.29	125.5371
1120.29	125.5371
1120.29	125.5371
1120.51	118.8505
1121.28	122.2296
1124.00	0.0000
1129.67	122.5771
1131.51	0.0000
1147.95	0.0000
1167.94	125.3512
1173.22	116.8066
1175.09	112.9819
1177.93	116.9866
1189.05	109.5781
1204.90	126.8494
1205.75	0.0000
1213.00	119.2908
1221.42	144.3145
1230.97	186.3870
1235.34	158.8449
1236.41	0.0000
1238.25	155.0098
1246.25	107.5819
1260.41	0.0000
1271.85	88.3468
1274.45	104.4897
1274.54	101.4791
1291.56	72.7107
1298.22	0.0000
1312.09	87.3797
1325.50	78.5415
1325.50	78.5415
1332.49	62.3488
1333.61	60.3231
1360.21	67.9980
1362.66	0.0000
1365.15	57.7773
1368.21	77.7039
1368.53	0.0000
1376.25	60.0289
1384.27	47.1980
1394.10	69.6920
1395.20	65.5510
1407.95	63.6934
1434.06	46.2727
1436.60	50.5145
1457.56	0.0000
1460.81	55.0813
1489.15	48.0259
1509.49	39.4301
1596.49	31.6707
1620.62	27.9973
1678.03	0.0000
1691.02	27.4907
1691.02	27.4907
1706.46	0.0000
1750.46	0.0000
1764.49	17.7517
1764.49	17.7517
1764.49	17.7517
1764.49	17.7517
1770.23	17.7745
1771.40	127.0116
1791.20	0.0000
1808.65	24.2021

1836.01

30.4349

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440007

Total Uranium Activity	9.3213E+00	ug/g
Total Uranium Counting Unc.	6.6546E+00	ug/g
Total Uranium Tpu	3.3952E-06	ug/g
Total Uranium Mda	3.2847E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                          *
*                               GROSS GAMMA REPORT                            *
*
*****
*
*  BATCH ID      : 950788                SAMPLE ID   : G246440007                *
*  ANALYST       : MXR1                  DETECTOR    : GAM18                    *
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00          *
*  ANALYSIS DATE: 19-FEB-2010 18:30:21.47  SAMPLE ALQT: 139.290 GRAM          *
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.583E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.228E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 1.875E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 9.086E-01

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:26:30.22

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440008.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:26:02
Sample ID          : G246440008          Sample quantity  : 1.40800E+02 GRAM
Detector name      : GAM01              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.26  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 950788             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	63.20*	103	423	1.28	127.13	123	8	1.43E-02	37.3	
2	2	74.81*	424	437	1.30	150.33	144	21	5.88E-02	10.2	4.06E+00
3	2	77.14	682	362	1.23	154.99	144	21	9.47E-02	6.4	
4	4	84.14*	134	381	1.60	168.98	165	31	1.86E-02	27.1	7.35E-01
5	4	87.23	225	328	1.18	175.16	165	31	3.13E-02	15.0	
6	4	89.98	205	370	1.35	180.65	165	31	2.85E-02	18.1	
7	4	92.85*	373	453	1.62	186.39	165	31	5.18E-02	12.8	
8	0	128.87	50	327	1.17	258.40	257	7	6.90E-03	61.8	
9	0	186.14*	253	347	1.47	372.88	368	10	3.51E-02	16.0	
10	0	209.29	110	280	1.14	419.15	415	9	1.53E-02	29.2	
11	3	239.02*	1252	223	1.26	478.57	474	16	1.74E-01	3.6	1.75E+00
12	3	242.09	285	232	1.71	484.72	474	16	3.95E-02	13.2	
13	0	295.69*	388	186	1.27	591.84	588	10	5.39E-02	8.4	
14	0	300.87	108	172	2.09	602.21	598	10	1.51E-02	24.6	
15	0	338.67*	265	202	1.27	677.75	671	14	3.68E-02	13.1	
16	0	352.30*	589	163	1.48	705.01	700	12	8.18E-02	6.1	
17	0	463.53	58	165	1.35	927.33	920	14	8.11E-03	48.4	
18	0	511.07*	117	192	1.54	1022.35	1014	17	1.63E-02	30.9	
19	0	583.61*	341	125	1.28	1167.34	1161	12	4.74E-02	8.7	
20	0	609.55*	378	75	1.58	1219.20	1213	12	5.25E-02	7.1	
21	0	662.13	39	69	1.28	1324.28	1320	8	5.40E-03	40.5	
22	0	727.71*	93	74	1.42	1455.36	1450	12	1.29E-02	21.8	
23	0	860.72	54	38	1.95	1721.21	1716	10	7.56E-03	25.1	
24	0	911.66*	191	100	1.84	1823.02	1814	16	2.66E-02	13.9	
25	0	969.12*	168	48	1.46	1937.86	1933	10	2.33E-02	11.3	
26	0	1120.81*	74	57	1.57	2241.01	2235	13	1.03E-02	24.7	
27	0	1461.07*	1225	42	2.28	2921.03	2912	21	1.70E-01	3.2	
28	0	1729.15	32	9	1.12	3456.76	3448	17	4.37E-03	27.7	
29	0	1765.00*	67	10	2.07	3528.39	3521	14	9.31E-03	16.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 21:26:32

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440008.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 19:26:02
Sample ID         : G246440008           Sample quantity  : 140.80 GRAM
Sample type       : SOLID                Sample geometry   :
Detector name     : GAMMA1              Detector geometry: CAN
Elapsed live time : 0 02:00:00.00        Elapsed real time: 0 02:00:01.26   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	*	3.238E+01	3.536E+00	5.152E-01	4.580E-02	62.853
CD-109	+	88.03	*	3.190E+00	1.002E+00	1.257E+00	1.190E-01	2.537
SN-126	+	64.28		1.034E+00	7.863E-01	8.678E-01	1.277E-01	1.192
	+	86.94		1.299E+00	6.654E-01	5.186E-01	2.153E-01	2.505
	+	87.57	*	3.125E-01	9.815E-02	1.238E-01	1.166E-02	2.524
BA-137M	+	661.65	*	5.993E-02	4.883E-02	6.592E-02	5.400E-03	0.909
CS-137	+	661.65	*	6.335E-02	5.162E-02	6.969E-02	5.720E-03	0.909
TL-208		277.35		4.649E-01	4.217E-01	7.245E-01	9.208E-02	0.642
	+	510.84		6.059E-01	3.811E-01	2.419E-01	2.875E-02	2.505
	+	583.14	*	5.044E-01	9.868E-02	6.117E-02	5.555E-03	8.246
	+	860.37		7.649E-01	3.902E-01	4.747E-01	4.549E-02	1.611
BI-211		72.87		8.130E+00	3.652E+00	5.698E+00	4.673E-01	1.427
	+	351.07	*	3.762E+00	5.714E-01	3.750E-01	3.411E-02	10.031
PB-212	+	74.81		2.544E+00	6.100E-01	5.371E-01	6.723E-02	4.736
	+	77.11		2.305E+00	3.548E-01	3.031E-01	2.572E-02	7.606
	+	87.30		1.445E+00	4.764E-01	5.745E-01	7.881E-02	2.516
	+	238.63	*	1.722E+00	2.136E-01	9.695E-02	9.816E-03	17.765
	+	300.09		2.325E+00	1.170E+00	1.194E+00	1.291E-01	1.947
PO-212	+	74.81		2.544E+00	6.100E-01	5.371E-01	6.723E-02	4.736
	+	77.11		2.305E+00	3.548E-01	3.031E-01	2.572E-02	7.606
	+	87.30		1.445E+00	4.764E-01	5.745E-01	7.881E-02	2.516
	+	115.19		-1.394E+00	3.920E+00	6.133E+00	5.329E-01	-0.227
	+	238.63	*	1.722E+00	2.136E-01	9.695E-02	9.816E-03	17.765
	+	300.09		2.325E+00	1.170E+00	1.194E+00	1.291E-01	1.947
BI-214	+	609.31	*	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
	+	1120.29		1.095E+00	5.543E-01	4.867E-01	5.207E-02	2.250
	+	1764.49		1.370E+00	4.766E-01	2.732E-01	2.291E-02	5.016
PB-214	+	74.81		4.383E+00	1.021E+00	9.255E-01	1.031E-01	4.736
	+	77.11		3.952E+00	6.787E-01	5.196E-01	5.926E-02	7.606
	+	87.30		2.476E+00	8.007E-01	9.842E-01	1.196E-01	2.516
	+	241.98		2.353E+00	6.702E-01	5.840E-01	6.239E-02	4.029
	+	295.21		1.457E+00	2.930E-01	2.414E-01	2.666E-02	6.037
	+	351.92	*	1.308E+00	2.102E-01	1.215E-01	1.273E-02	10.772
PO-214	+	74.81		4.383E+00	1.021E+00	9.255E-01	1.031E-01	4.736

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		3.952E+00	6.787E-01	5.196E-01	5.926E-02	7.606
	+	87.30		2.476E+00	8.007E-01	9.842E-01	1.196E-01	2.516
	+	241.98		2.353E+00	6.702E-01	5.840E-01	6.239E-02	4.029
	+	295.21		1.457E+00	2.930E-01	2.414E-01	2.666E-02	6.037
	+	351.92	*	1.308E+00	2.102E-01	1.215E-01	1.273E-02	10.772
	+	74.81		2.544E+00	6.100E-01	5.371E-01	6.723E-02	4.736
	+	77.11		2.305E+00	3.548E-01	3.031E-01	2.572E-02	7.606
	+	87.30		1.445E+00	4.764E-01	5.745E-01	7.881E-02	2.516
PO-218	+	238.63	*	1.722E+00	2.136E-01	9.695E-02	9.816E-03	17.765
	+	300.09		2.325E+00	1.170E+00	1.194E+00	1.291E-01	1.947
	+	74.81		4.383E+00	1.021E+00	9.255E-01	1.031E-01	4.736
	+	77.11		3.952E+00	6.787E-01	5.196E-01	5.926E-02	7.606
	+	87.30		2.476E+00	8.007E-01	9.842E-01	1.196E-01	2.516
	+	241.98		2.353E+00	6.702E-01	5.840E-01	6.239E-02	4.029
	+	295.21		1.457E+00	2.930E-01	2.414E-01	2.666E-02	6.037
	+	351.92	*	1.308E+00	2.102E-01	1.215E-01	1.273E-02	10.772
RA-224	+	240.98	*	4.462E+00	1.246E+00	1.104E+00	1.003E-01	4.043
RA-226	+	609.31	*	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
AC-228	+	1120.29		1.095E+00	5.543E-01	4.867E-01	5.207E-02	2.250
	+	1764.49		1.370E+00	4.766E-01	2.732E-01	2.291E-02	5.016
	+	338.32		1.865E+00	9.125E-01	3.940E-01	1.627E-01	4.733
	+	911.07	*	1.277E+00	3.850E-01	2.592E-01	3.001E-02	4.924
	+	969.11		1.978E+00	6.432E-01	5.370E-01	1.260E-01	3.684
	+	338.32		1.865E+00	9.125E-01	3.940E-01	1.627E-01	4.733
	+	911.07	*	1.277E+00	3.850E-01	2.592E-01	3.001E-02	4.924
	+	969.11		1.978E+00	6.432E-01	5.370E-01	1.260E-01	3.684
TH-228	+	74.81		2.588E+00	5.722E-01	5.465E-01	4.590E-02	4.736
TH-230	+	77.11		2.345E+00	3.610E-01	3.084E-01	2.617E-02	7.606
	+	87.30		1.471E+00	4.618E-01	5.845E-01	5.489E-02	2.516
	+	238.63	*	1.752E+00	2.174E-01	9.864E-02	9.987E-03	17.765
	+	300.09		2.365E+00	1.823E+00	1.215E+00	7.209E-01	1.947
	+	609.31	*	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
	+	1120.29		1.095E+00	5.543E-01	4.867E-01	5.207E-02	2.250
	+	1764.49		1.370E+00	4.766E-01	2.732E-01	2.291E-02	5.016
	+	338.32		1.865E+00	5.162E-01	3.940E-01	3.468E-02	4.733
TH-232	+	911.07	*	1.277E+00	3.850E-01	2.592E-01	3.001E-02	4.924
TH-234	+	969.11		1.978E+00	6.432E-01	5.370E-01	1.260E-01	3.684
	+	63.29	*	2.613E+00	2.002E+00	2.195E+00	3.858E-01	1.191
	+	92.38		3.338E+00	1.051E+00	8.080E-01	1.481E-01	4.131
	+	609.31	*	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
	+	1120.29		1.095E+00	5.543E-01	4.867E-01	5.207E-02	2.250
	+	1764.49		1.370E+00	4.766E-01	2.732E-01	2.291E-02	5.016
	+	86.50	*	9.177E-01	3.449E-01	3.682E-01	8.336E-02	2.492
	+	95.87		-1.229E+00	1.175E+00	1.519E+00	3.761E-01	-0.809
U-238	+	63.29	*	2.613E+00	2.002E+00	2.195E+00	3.858E-01	1.191
AM-243	+	92.38		3.338E+00	9.074E-01	8.080E-01	7.378E-02	4.131
	+	74.67	*	4.124E-01	9.107E-02	8.738E-02	7.266E-03	4.720
	+	86.72		3.442E+01	1.081E+01	1.377E+01	1.285E+00	2.499
		117.66		-3.340E-01	4.121E+00	6.521E+00	5.685E-01	-0.051

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		142.18		2.797E+00	1.844E+01	3.142E+01	2.687E+00	0.089
ANH-511	+	511.00	*	1.309E-01	8.159E-02	5.227E-02	4.430E-03	2.504

---- 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	*	-2.169E-01	3.574E-01	5.443E-01	4.952E-02	-0.399
NA-22		1274.54	*	5.668E-03	4.969E-02	8.424E-02	7.074E-03	0.067
NA-24		1368.53	*	3.063E+00	4.969E-02	Half-Life too short		
AL-26		1129.67		2.113E-01	1.923E+00	3.127E+00	2.612E-01	0.068
		1808.65	*	6.214E-04	3.041E-02	4.971E-02	4.119E-03	0.012
TI-44		67.85		2.934E-02	5.172E-02	8.149E-02	6.462E-03	0.360
	+	78.38	*	4.254E-01	6.548E-02	8.419E-02	7.225E-03	5.053
SC-46		889.25	*	1.938E-02	4.306E-02	7.340E-02	6.636E-03	0.264
	+	1120.51		1.909E-01	9.580E-02	1.359E-01	1.142E-02	1.405
V-48		944.10		-6.661E-01	1.217E+00	1.880E+00	1.693E-01	-0.354
		983.50	*	1.988E-02	8.302E-02	1.382E-01	1.234E-02	0.144
		1312.09		-5.578E-02	9.231E-02	1.425E-01	1.208E-02	-0.392
CR-51		320.08	*	7.747E-03	4.302E-01	7.055E-01	6.636E-02	0.011
MN-52		744.21		1.666E-01	3.463E-01	5.944E-01	5.099E-02	0.280
		848.13		-7.160E+00	9.233E+00	1.390E+01	1.243E+00	-0.515
		935.52		2.942E-02	4.024E-01	6.599E-01	5.952E-02	0.045
		1246.25		5.019E+00	1.043E+01	1.816E+01	1.509E+00	0.276
		1333.61		-3.723E+00	7.395E+00	1.157E+01	9.862E-01	-0.322
		1434.06	*	1.012E-01	3.045E-01	5.288E-01	4.565E-02	0.191
MN-54		834.83	*	1.858E-02	4.529E-02	7.603E-02	6.767E-03	0.244
CO-56		846.75	*	-2.226E-02	4.239E-02	6.584E-02	5.883E-03	-0.338
		977.42		-6.308E-02	3.171E+00	5.140E+00	4.596E-01	-0.012
		1037.82		1.570E-01	3.561E-01	6.014E-01	5.544E-02	0.261
		1175.09		-8.371E-02	2.505E+00	4.192E+00	3.396E-01	-0.020
		1238.25		1.702E-01	1.094E-01	2.011E-01	1.720E-02	0.846
		1360.21		-8.896E-02	9.334E-01	1.529E+00	1.309E-01	-0.058
		1771.40		-9.135E-01	3.686E-01	3.183E-01	2.665E-02	-2.870
CO-57		122.06	*	-4.978E-03	2.739E-02	4.308E-02	3.792E-03	-0.116
		136.48		9.633E-03	2.235E-01	3.800E-01	3.511E-02	0.025
CO-58		810.76	*	-1.244E-02	4.218E-02	6.739E-02	5.961E-03	-0.185
FE-59		142.65		7.102E-01	3.065E+00	5.146E+00	4.400E-01	0.138
		192.34		-6.863E-01	1.031E+00	1.675E+00	2.262E-01	-0.410
		1099.22	*	9.571E-02	1.077E-01	1.880E-01	1.733E-02	0.509
		1291.56		-3.581E-02	1.342E-01	2.173E-01	2.090E-02	-0.165
CO-60		1173.22		-3.922E-03	4.942E-02	8.239E-02	6.668E-03	-0.048
		1332.49	*	1.603E-03	4.194E-02	7.012E-02	5.977E-03	0.023
ZN-65		1115.52	*	-6.500E-03	1.152E-01	1.584E-01	1.337E-02	-0.041
GE-68		1077.35	*	7.356E-01	1.257E+00	2.161E+00	1.861E-01	0.340
AS-73		53.44	*	1.409E-01	9.693E-01	1.588E+00	1.286E-01	0.089
AS-74		595.88	*	-1.746E-02	9.864E-02	1.629E-01	1.372E-02	-0.107
		634.78		1.600E-02	4.011E-01	6.716E-01	5.579E-02	0.024
SE-75		66.05		-5.729E+00	5.991E+00	8.194E+00	8.034E-01	-0.699

----- Non-Identified Nuclides -----

	Line Energy Nuclide Ided (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	96.73	-9.855E-01	9.589E-01	1.273E+00	1.759E-01	-0.774
	121.11	-1.550E-02	1.483E-01	2.342E-01	2.656E-02	-0.066
	136.00	6.647E-03	4.242E-02	7.240E-02	6.266E-03	0.092
	198.60	-1.440E+00	1.971E+00	3.156E+00	3.070E-01	-0.456
	264.65 *	1.088E-02	4.487E-02	7.511E-02	6.900E-03	0.145
	279.53	1.626E-01	1.261E-01	2.188E-01	2.067E-02	0.743
	303.91	-9.246E-01	2.642E+00	3.700E+00	4.372E-01	-0.250
	400.65	9.593E-03	2.821E-01	4.579E-01	4.907E-02	0.021
BR-77	+ 87.88	1.302E+03	4.090E+02	6.399E+02	6.048E+01	2.035
	+ 200.40	6.937E+01	3.304E+02	5.573E+02	4.916E+01	0.124
	+ 239.00	5.243E+02	6.064E+01	7.590E+01	6.891E+00	6.908
	249.79	-9.666E+00	1.356E+02	2.200E+02	2.006E+01	-0.044
	281.68	-1.888E+02	1.949E+02	3.031E+02	2.771E+01	-0.623
	297.23	8.211E+02	1.903E+02	2.685E+02	2.443E+01	3.057
	303.76	-1.239E+02	4.221E+02	5.942E+02	5.388E+01	-0.208
	439.47	-1.432E+02	3.217E+02	5.024E+02	4.165E+01	-0.285
	484.57	-7.477E+00	5.152E+02	8.247E+02	6.954E+01	-0.009
	520.65 *	-5.104E+00	2.092E+01	3.267E+01	2.772E+00	-0.156
	574.64	7.296E+01	3.999E+02	6.802E+02	5.757E+01	0.107
	578.91	1.311E+01	1.935E+02	2.846E+02	2.407E+01	0.046
	585.48	3.376E+03	6.008E+02	1.072E+03	9.058E+01	3.148
	755.35	1.924E+02	3.476E+02	5.993E+02	5.169E+01	0.321
	817.79	-2.018E+02	2.693E+02	4.090E+02	3.619E+01	-0.493
SR-82	698.33	-1.703E+01	3.763E+01	6.010E+01	5.033E+00	-0.283
	776.49 *	-3.011E-02	4.492E-01	7.365E-01	6.412E-02	-0.041
	1395.20	-4.138E+00	1.220E+01	1.927E+01	1.657E+00	-0.215
RB-83	520.41 *	-9.987E-03	7.486E-02	1.181E-01	1.002E-02	-0.085
	529.64	5.070E-02	1.106E-01	1.922E-01	1.632E-02	0.264
	552.65	2.012E-01	2.291E-01	4.061E-01	3.446E-02	0.496
RB-84	881.50 *	6.733E-02	8.682E-02	1.512E-01	1.364E-02	0.445
KR-85	513.99 *	1.691E+01	9.446E+00	1.515E+01	1.284E+00	1.116
SR-85	513.99 *	8.872E-02	4.956E-02	7.949E-02	6.739E-03	1.116
RB-86	1076.63 *	-1.136E-01	9.045E-01	1.439E+00	1.239E-01	-0.079
Y-88	898.02	-4.397E-02	4.697E-02	6.924E-02	6.300E-03	-0.635
	1836.01 *	-5.945E-02	4.317E-02	4.917E-02	4.044E-03	-1.209
ZR-88	392.90 *	-5.470E-03	3.377E-02	5.414E-02	4.360E-03	-0.101
Y-91	1204.90 *	-3.736E+00	2.272E+01	3.757E+01	3.078E+00	-0.099
NB-94	702.63 *	-9.792E-03	3.694E-02	6.002E-02	5.039E-03	-0.163
	871.10	-1.765E-02	3.841E-02	6.004E-02	5.402E-03	-0.294
NB-95	765.79 *	1.516E-02	5.170E-02	8.709E-02	7.546E-03	0.174
NB-95M	235.69 *	1.426E-01	1.456E-01	2.243E-01	2.300E-02	0.636
ZR-95	724.18	6.013E-02	1.072E-01	1.643E-01	1.519E-02	0.366
	756.15 *	7.285E-02	7.911E-02	1.400E-01	1.330E-02	0.520
NB-97	657.90 *	3.181E-01	7.911E-02	Half-Life too short		
	1024.50	3.124E+01	7.911E-02	Half-Life too short		
ZR-97	254.15	-1.037E+01	7.911E-02	Half-Life too short		
	355.39	2.746E+01	7.911E-02	Half-Life too short		
	507.63 *	1.685E+01	7.911E-02	Half-Life too short		
	602.52	4.859E+01	7.911E-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
	1021.30			-7.312E+00	7.911E-02	Half-Life	too short	
	1147.95			2.560E+01	7.911E-02	Half-Life	too short	
	1362.66			-2.346E+01	7.911E-02	Half-Life	too short	
	1750.46			5.590E+00	7.911E-02	Half-Life	too short	
MO-99	140.51			-2.373E+01	4.868E+01	8.041E+01	2.225E+01	-0.295
	181.06			-3.035E+00	3.415E+01	5.033E+01	9.211E+00	-0.060
	366.43			3.677E+01	1.668E+02	2.750E+02	2.326E+01	0.134
	739.58	*		-1.889E+01	2.273E+01	3.463E+01	5.247E+00	-0.546
	778.00			-3.382E+00	6.575E+01	1.079E+02	9.403E+00	-0.031
TC-99M	140.51	*		-8.500E+12	6.575E+01	Half-Life	too short	
RH-101	127.23			2.398E-02	3.919E-02	5.695E-02	4.954E-03	0.421
	198.01	*		-2.866E-02	3.562E-02	5.687E-02	5.005E-03	-0.504
	325.23			-4.464E-01	2.607E-01	3.816E-01	3.405E-02	-1.170
RH-102	418.52			1.739E-01	3.312E-01	5.528E-01	4.530E-02	0.315
	475.06	*		-1.531E-02	3.025E-02	4.643E-02	3.905E-03	-0.330
	631.29			4.125E-03	5.309E-02	8.921E-02	7.423E-03	0.046
	697.49			-5.265E-02	8.141E-02	1.278E-01	1.070E-02	-0.412
	766.84			1.480E-01	1.313E-01	2.323E-01	2.014E-02	0.637
	1046.59			2.697E-03	1.340E-01	2.171E-01	1.897E-02	0.012
	1112.84			-2.370E-01	2.835E-01	3.854E-01	3.254E-02	-0.615
RU-103	497.08	*		2.641E-02	4.618E-02	7.697E-02	1.082E-02	0.343
+	610.33			1.183E+01	2.580E+00	3.068E+00	5.082E-01	3.857
RH-106	511.85	+		6.564E-01	4.092E-01	4.801E-01	4.070E-02	1.367
	621.84	*		1.177E-01	3.415E-01	5.847E-01	7.711E-02	0.201
	1050.47			8.544E-01	2.876E+00	4.774E+00	4.163E-01	0.179
RU-106	511.85	+		6.564E-01	4.092E-01	4.801E-01	4.070E-02	1.367
	621.84	*		1.177E-01	3.413E-01	5.847E-01	4.884E-02	0.201
	1050.47			8.544E-01	2.876E+00	4.774E+00	4.163E-01	0.179
AG-108M	433.93	*		-1.922E-02	3.744E-02	5.813E-02	5.013E-03	-0.331
	614.37			-1.472E-03	4.417E-02	6.400E-02	5.584E-03	-0.023
	722.95			-1.282E-02	4.773E-02	6.624E-02	5.849E-03	-0.193
AG-110M	657.75	*		1.350E-02	4.343E-02	6.497E-02	5.508E-03	0.208
	677.61			1.419E-03	3.421E-01	5.690E-01	4.851E-02	0.002
	706.67			4.695E-02	2.423E-01	4.074E-01	3.527E-02	0.115
	763.93			-1.753E-01	1.958E-01	2.998E-01	2.668E-02	-0.585
	884.67			-3.298E-02	5.734E-02	8.849E-02	8.225E-03	-0.373
	937.48			-1.362E-01	1.315E-01	1.916E-01	1.785E-02	-0.711
	1384.27			1.979E-02	1.723E-01	2.902E-01	2.564E-02	0.068
IN-111	171.28			-1.178E+00	1.780E+00	2.914E+00	2.494E-01	-0.404
	245.39	*		1.056E-01	1.995E+00	2.920E+00	2.659E-01	0.036
IN-113M	391.69	*		4.019E-03	4.906E-02	7.997E-02	6.661E-03	0.050
SN-113	391.69	*		4.019E-03	4.906E-02	7.997E-02	6.661E-03	0.050
IN-114M	190.27	*		1.736E-01	2.145E-01	3.306E-01	2.887E-02	0.525
CD-115	260.90			-3.332E+01	2.638E+02	4.336E+02	3.965E+01	-0.077
	492.35			-5.102E+01	8.004E+01	1.214E+02	1.026E+01	-0.420
	527.90	*		-1.256E+01	2.253E+01	3.645E+01	3.094E+00	-0.344
SN-117M	156.02			-2.200E-01	2.580E+00	4.345E+00	3.700E-01	-0.051
	158.56	*		-2.050E-02	6.194E-02	1.032E-01	8.786E-03	-0.199
SB-122	563.90	*		3.213E+00	3.918E+00	6.929E+00	5.874E-01	0.464

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-123		692.80		4.631E+01	8.207E+01	1.420E+02	1.186E+01	0.326
		159.00	*	-2.712E+01	8.207E+01	Half-Life	too short	
		528.96		1.284E+03	8.207E+01	Half-Life	too short	
TE-123M		159.00	*	-8.431E-03	2.906E-02	4.850E-02	4.155E-03	-0.174
I-124		602.71	*	5.970E-01	9.779E-01	1.581E+00	1.329E-01	0.378
		722.78		-2.112E+00	7.157E+00	9.898E+00	8.400E-01	-0.213
		1325.50		-4.530E+01	5.516E+01	8.258E+01	7.027E+00	-0.549
SB-124		1376.25		4.870E+01	5.480E+01	9.875E+01	8.474E+00	0.493
		1509.49		7.762E+00	2.280E+01	3.951E+01	3.421E+00	0.196
		1691.02		-4.477E+00	5.050E+00	6.390E+00	5.444E-01	-0.701
		602.71		2.474E-02	4.052E-02	6.549E-02	5.508E-03	0.378
		645.85		-9.223E-02	5.316E-01	8.736E-01	7.689E-02	-0.106
		709.31		9.357E-01	3.274E+00	5.541E+00	4.669E-01	0.169
		713.82		-1.345E+00	1.807E+00	2.796E+00	3.331E-01	-0.481
		722.78		-1.269E-01	4.299E-01	5.945E-01	5.158E-02	-0.213
	+	968.20		2.089E+01	5.059E+00	8.957E+00	8.027E-01	2.332
		1045.16		-1.311E+00	2.997E+00	4.630E+00	4.047E-01	-0.283
		1325.50		-2.906E+00	3.539E+00	5.298E+00	4.508E-01	-0.549
		1368.21		9.093E-01	1.702E+00	3.033E+00	4.078E-01	0.300
SB-125		1436.60		6.125E-01	3.788E+00	6.423E+00	5.546E-01	0.095
		1691.02	*	-6.344E-02	7.156E-02	9.053E-02	8.026E-03	-0.701
		427.89	*	8.597E-02	1.044E-01	1.773E-01	1.492E-02	0.485
	+	463.38		5.873E-01	5.711E-01	5.970E-01	5.414E-02	0.984
		600.56		6.591E-02	1.671E-01	2.883E-01	2.614E-02	0.229
TE-125M		635.90		5.199E-02	2.883E-01	4.878E-01	4.402E-02	0.107
		109.28	*	-1.886E+00	1.047E+01	1.654E+01	1.716E+00	-0.114
		388.63		2.289E-01	2.437E-01	4.186E-01	3.390E-02	0.547
I-126		666.33	*	1.808E-01	2.523E-01	3.920E-01	3.220E-02	0.461
		753.82		2.930E-01	1.852E+00	3.099E+00	2.671E-01	0.095
SB-126		223.80		1.111E+00	5.118E+00	8.599E+00	7.736E-01	0.129
		278.60		7.065E+00	3.165E+00	5.644E+00	5.162E-01	1.252
	+	296.50		1.640E+01	3.134E+00	4.551E+00	4.141E-01	3.604
		414.70		-7.059E-02	9.932E-02	1.528E-01	1.249E-02	-0.462
		415.30		-3.346E+00	7.995E+00	1.255E+01	1.026E+00	-0.267
		555.20		-9.566E-01	5.184E+00	8.610E+00	7.306E-01	-0.111
		573.80		-5.635E-01	1.193E+00	1.929E+00	1.633E-01	-0.292
		593.00		7.319E-01	1.057E+00	1.860E+00	1.568E-01	0.393
		656.30		6.151E-01	4.397E+00	6.756E+00	5.551E-01	0.091
		666.33		7.593E-02	1.060E-01	1.646E-01	1.352E-02	0.461
		675.00		1.272E+00	2.409E+00	4.167E+00	3.442E-01	0.305
		695.00		2.499E-02	9.262E-02	1.570E-01	1.312E-02	0.159
SB-127		697.00		-1.908E-01	3.171E-01	4.996E-01	4.180E-02	-0.382
		720.50	*	-1.626E-01	1.769E-01	2.492E-01	2.112E-02	-0.653
		856.80		6.635E-02	5.850E-01	8.436E-01	7.560E-02	0.079
		989.30		-1.374E-01	1.576E+00	2.534E+00	2.259E-01	-0.054
		1034.80		-6.767E+00	1.188E+01	1.809E+01	1.588E+00	-0.374
		1213.00		-6.775E+00	6.514E+00	9.821E+00	8.070E-01	-0.690
		61.10		1.299E+02	9.872E+01	1.514E+02	1.685E+01	0.858
		252.40		1.745E+00	6.943E+00	1.158E+01	4.900E+00	0.151

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	290.80			-7.011E+00	3.859E+01	5.497E+01	6.710E+00	-0.128
	411.60			1.216E+01	2.155E+01	3.590E+01	5.734E+00	0.339
	444.90			-8.885E+00	1.666E+01	2.574E+01	3.331E+00	-0.345
	473.00			7.668E-01	2.563E+00	4.208E+00	5.605E-01	0.182
	543.00			-1.327E+01	2.719E+01	4.412E+01	6.553E+00	-0.301
	603.60			6.095E+00	1.834E+01	2.768E+01	3.592E+00	0.220
	685.20	*		4.390E-01	2.224E+00	3.751E+00	4.436E-01	0.117
	698.50			-1.524E+01	2.374E+01	3.713E+01	6.005E+00	-0.410
	722.20			-2.816E+01	5.230E+01	6.996E+01	8.213E+00	-0.403
	783.80			-5.096E-01	6.093E+00	9.972E+00	1.307E+00	-0.051
XE-127	57.60			-2.473E+00	6.981E+00	1.117E+01	8.579E-01	-0.221
	145.22			3.644E-01	7.619E-01	1.287E+00	1.099E-01	0.283
	172.10			-6.822E-02	1.312E-01	2.161E-01	1.851E-02	-0.316
	202.84	*		1.124E-03	5.299E-02	8.870E-02	7.841E-03	0.013
	374.96			-1.903E-01	2.206E-01	3.365E-01	2.803E-02	-0.566
I-131	80.18			3.561E+00	6.228E+00	9.174E+00	8.071E-01	0.388
	284.30			-7.811E-01	1.974E+00	3.130E+00	2.997E-01	-0.250
	364.48	*		3.786E-02	1.532E-01	2.532E-01	2.272E-02	0.150
	636.97			5.674E-01	1.979E+00	3.375E+00	2.975E-01	0.168
	722.89			-2.697E+00	9.704E+00	1.345E+01	1.151E+00	-0.200
TE-132	49.72			-2.688E+00	3.683E+01	5.991E+01	6.804E+00	-0.045
	111.76			3.101E+01	5.201E+01	8.462E+01	9.727E+00	0.366
	116.30			-2.450E+01	4.798E+01	7.440E+01	8.572E+00	-0.329
	228.16	*		-7.517E-03	1.185E+00	1.972E+00	3.225E-01	-0.004
BA-133	53.15			2.741E-02	4.141E+00	6.746E+00	5.481E-01	0.004
	79.62			1.767E+00	1.504E+00	2.245E+00	3.426E-01	0.787
	81.00			1.371E-01	1.308E-01	1.580E-01	2.524E-02	0.868
	276.40			-3.273E-02	4.151E-01	6.823E-01	1.008E-01	-0.048
	302.84			1.399E-01	1.794E-01	2.715E-01	3.689E-02	0.515
	356.01	*		3.382E-02	4.860E-02	7.349E-02	9.692E-03	0.460
	383.85			-1.675E-01	3.414E-01	5.358E-01	6.595E-02	-0.313
I-133	510.53	+		7.691E+00	3.414E-01	Half-Life	too short	
	529.87	*		1.778E-02	3.414E-01	Half-Life	too short	
	706.58			6.269E-01	3.414E-01	Half-Life	too short	
	856.28			2.021E-01	3.414E-01	Half-Life	too short	
	875.33			4.929E-01	3.414E-01	Half-Life	too short	
	1236.41			5.534E+00	3.414E-01	Half-Life	too short	
	1298.22			-3.176E-02	3.414E-01	Half-Life	too short	
CS-134	475.35			-1.239E+00	1.999E+00	3.038E+00	2.555E-01	-0.408
	563.23			1.960E-01	3.893E-01	6.758E-01	5.786E-02	0.290
	569.32			3.068E-02	2.098E-01	3.559E-01	3.058E-02	0.086
	604.70			-1.697E-02	3.749E-02	5.174E-02	4.360E-03	-0.328
	795.84	*		1.162E-01	5.469E-02	1.026E-01	9.066E-03	1.133
	801.93			5.139E-02	4.327E-01	7.194E-01	6.363E-02	0.071
	1038.57			9.609E-01	4.401E+00	7.276E+00	6.377E-01	0.132
	1167.94			1.649E+00	2.954E+00	5.176E+00	4.207E-01	0.319
	1365.15			-9.977E-01	1.174E+00	1.687E+00	1.512E-01	-0.592
CS-135	268.24	*		-7.192E-02	1.757E-01	2.845E-01	2.966E-02	-0.253
I-135	288.45			-3.051E+12	1.757E-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
	417.63			9.217E+12	1.757E-01	Half-Life	too short	
	546.56			-1.865E+12	1.757E-01	Half-Life	too short	
	836.80			2.360E+12	1.757E-01	Half-Life	too short	
	1038.76			4.855E+11	1.757E-01	Half-Life	too short	
	1124.00			1.100E+13	1.757E-01	Half-Life	too short	
	1131.51			2.452E+12	1.757E-01	Half-Life	too short	
	1260.41	*		5.883E+10	1.757E-01	Half-Life	too short	
	1457.56			1.039E+14	1.757E-01	Half-Life	too short	
	1678.03			3.931E+12	1.757E-01	Half-Life	too short	
	1706.46			2.811E+12	1.757E-01	Half-Life	too short	
	1791.20			6.363E+11	1.757E-01	Half-Life	too short	
CS-136	66.91			3.894E-01	1.021E+00	1.499E+00	2.255E-01	0.260
	86.29	+		4.578E+00	1.502E+00	2.254E+00	3.000E-01	2.031
	153.22			8.051E-01	7.739E-01	1.350E+00	1.289E-01	0.596
	163.89			-3.556E-01	1.248E+00	2.048E+00	1.959E-01	-0.174
	176.55			1.362E-01	4.387E-01	7.462E-01	6.796E-02	0.182
	273.65			-1.034E+00	5.883E-01	8.759E-01	8.487E-02	-1.180
	340.57			6.254E-01	1.970E-01	3.281E-01	2.962E-02	1.906
	818.51			-5.517E-03	8.739E-02	1.427E-01	1.265E-02	-0.039
	1048.07	*		-9.196E-04	1.464E-01	2.365E-01	2.150E-02	-0.004
	1235.34			-1.509E-01	8.138E-01	1.343E+00	1.559E-01	-0.112
CE-139	165.85	*		-9.941E-03	3.023E-02	5.028E-02	4.282E-03	-0.198
BA-140	162.64			1.725E-01	8.739E-01	1.462E+00	1.319E-01	0.118
	304.84			2.023E-01	1.730E+00	2.513E+00	7.077E-01	0.080
	423.70			-4.793E-01	2.469E+00	3.926E+00	1.269E+00	-0.122
	537.32	*		1.625E-01	3.473E-01	5.874E-01	1.945E-01	0.277
LA-140	328.77			3.030E-01	3.899E-01	6.612E-01	6.191E-02	0.458
	432.53			-2.190E+00	2.698E+00	4.093E+00	3.560E-01	-0.535
	487.03			2.439E-01	1.773E-01	3.101E-01	2.785E-02	0.787
	751.79			-8.264E-01	2.137E+00	3.371E+00	3.213E-01	-0.245
	815.85			-1.268E-01	3.871E-01	6.160E-01	6.045E-02	-0.206
	867.82			1.070E-01	1.681E+00	2.697E+00	2.542E-01	0.040
	919.63			3.758E-02	3.449E+00	5.480E+00	6.022E-01	0.007
	925.24			3.274E-01	1.349E+00	2.253E+00	2.152E-01	0.145
	1596.49	*		-4.362E-02	1.132E-01	1.753E-01	1.513E-02	-0.249
CE-141	145.44	*		4.802E-02	6.728E-02	1.166E-01	1.014E-02	0.412
CE-143	57.37			-1.573E-03	6.728E-02	Half-Life	too short	
	231.56			-5.008E-03	6.728E-02	Half-Life	too short	
	293.26	*		1.239E-03	6.728E-02	Half-Life	too short	
	350.59			5.901E-02	6.728E-02	Half-Life	too short	
	490.36			-1.589E-03	6.728E-02	Half-Life	too short	
	664.57			1.663E-03	6.728E-02	Half-Life	too short	
	721.93			-2.872E-03	6.728E-02	Half-Life	too short	
CE-144	80.11			1.375E+00	2.387E+00	3.517E+00	3.067E-01	0.391
	133.54	*		6.248E-02	2.591E-01	3.684E-01	5.734E-02	0.170
PM-144	476.78			-3.187E-02	7.303E-02	1.130E-01	1.044E-02	-0.282
	618.01			4.035E-03	3.370E-02	5.683E-02	4.894E-03	0.071
	696.49	*		-1.924E-02	3.663E-02	5.815E-02	4.867E-03	-0.331
	778.57			-3.653E-02	2.473E+00	4.072E+00	3.550E-01	-0.009

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144		696.49	*	-1.305E+00	2.485E+00	3.945E+00	3.300E-01	-0.331
		1489.15		3.895E+00	1.274E+01	2.200E+01	1.904E+00	0.177
PM-146		453.90	*	-2.977E-02	4.656E-02	7.098E-02	7.455E-03	-0.419
		633.02		-2.517E-01	1.389E+00	2.278E+00	8.496E-01	-0.111
		735.90		3.707E-02	1.569E-01	2.643E-01	7.553E-02	0.140
		747.13		-6.909E-02	1.003E-01	1.551E-01	2.175E-02	-0.445
ND-147	+	91.11		1.091E+00	4.099E-01	6.528E-01	6.454E-02	1.671
		319.41		-6.550E-01	4.223E+00	6.859E+00	6.154E-01	-0.095
		439.89		-3.080E+00	8.001E+00	1.255E+01	1.041E+00	-0.245
		531.02	*	1.518E-01	6.617E-01	1.133E+00	1.685E-01	0.134
PM-149		285.90	*	6.709E+01	1.949E+02	3.211E+02	5.086E+01	0.209
EU-152		121.78		-7.404E-03	7.933E-02	1.253E-01	1.262E-02	-0.059
		244.69		3.870E-01	3.713E-01	5.770E-01	5.252E-02	0.671
		344.27	*	-2.289E-02	1.204E-01	1.693E-01	1.566E-02	-0.135
		443.98		1.969E-01	1.095E+00	1.785E+00	1.483E-01	0.110
		778.89		-3.233E-02	2.819E-01	4.600E-01	4.009E-02	-0.070
		867.32		-5.852E-02	9.306E-01	1.425E+00	1.281E-01	-0.041
		964.01		5.150E-01	4.080E-01	6.479E-01	5.812E-02	0.795
		1085.78		3.988E-01	4.344E-01	7.649E-01	6.558E-02	0.521
		1112.02		-3.068E-01	3.772E-01	5.561E-01	4.697E-02	-0.552
		1407.95		2.636E-01	2.217E-01	4.133E-01	3.560E-02	0.638
GD-153		69.67		1.263E+00	1.927E+00	2.864E+00	2.297E-01	0.441
	+	83.37		3.429E+01	1.885E+01	2.573E+01	2.317E+00	1.333
		97.43	*	-5.057E-02	9.722E-02	1.339E-01	1.189E-02	-0.378
		103.18		-7.097E-02	1.167E-01	1.812E-01	1.580E-02	-0.392
EU-154		123.07		-1.073E-02	5.494E-02	8.631E-02	9.910E-03	-0.124
		247.94		-2.197E-01	3.866E-01	5.986E-01	7.093E-02	-0.367
		591.81		-8.610E-02	6.372E-01	1.057E+00	1.219E-01	-0.081
		723.30		1.882E-02	1.927E-01	2.803E-01	2.637E-02	0.067
		756.87		5.064E-01	8.474E-01	1.464E+00	1.755E-01	0.346
		873.19		2.154E-02	3.460E-01	5.695E-01	7.128E-02	0.038
		996.32		-3.364E-01	4.269E-01	6.302E-01	1.128E-01	-0.534
		1004.76		-3.345E-01	2.539E-01	3.511E-01	4.153E-02	-0.953
		1274.45	*	1.245E-02	1.383E-01	2.339E-01	2.605E-02	0.053
EU-155		48.70		2.667E-01	2.983E+00	4.888E+00	4.183E-01	0.055
		60.01		-3.599E+00	5.971E+00	8.351E+00	6.313E-01	-0.431
	+	86.54		3.767E-01	1.184E-01	1.833E-01	1.722E-02	2.055
		105.31	*	6.262E-02	1.185E-01	1.928E-01	1.696E-02	0.325
TB-160	+	86.79		1.027E+00	3.225E-01	5.007E-01	4.676E-02	2.051
		197.04		-2.498E-01	6.060E-01	9.848E-01	8.658E-02	-0.254
		215.65		-1.305E-01	7.916E-01	1.311E+00	1.172E-01	-0.100
		298.57		2.501E-01	1.804E-01	2.198E-01	1.998E-02	1.138
		879.36	*	6.727E-02	1.733E-01	2.928E-01	2.640E-02	0.230
		962.29		6.109E-02	7.115E-01	1.098E+00	9.855E-02	0.056
		966.15		8.176E-01	3.196E-01	5.455E-01	4.891E-02	1.499
		1177.93		-2.735E-01	3.983E-01	6.254E-01	5.071E-02	-0.437
		1271.85		3.479E-01	7.952E-01	1.384E+00	1.160E-01	0.251
HO-166M		80.57		4.482E-01	3.610E-01	4.455E-01	3.902E-02	1.006
		184.41		1.458E-01	4.297E-02	7.094E-02	6.156E-03	2.056

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		280.46		-1.788E-02	9.628E-02	1.573E-01	1.438E-02	-0.114
		410.95		2.835E-01	2.891E-01	4.936E-01	4.025E-02	0.574
		711.68	*	1.461E-02	6.854E-02	1.155E-01	9.740E-03	0.127
		752.31		-6.298E-02	3.040E-01	4.874E-01	4.197E-02	-0.129
		810.29		-1.541E-02	6.074E-02	9.741E-02	8.596E-03	-0.158
TM-171		51.35		-2.055E+00	3.581E+01	5.824E+01	4.847E+00	-0.035
		52.39		-1.080E+01	1.874E+01	2.975E+01	2.442E+00	-0.363
		59.40		-2.145E+01	3.217E+01	4.481E+01	3.377E+00	-0.479
		66.72	*	-8.884E+00	3.392E+01	4.830E+01	3.804E+00	-0.184
LU-176	+	88.36		7.412E-01	2.328E-01	3.716E-01	3.505E-02	1.995
		201.83		-1.128E-03	3.093E-02	5.167E-02	4.564E-03	-0.022
		306.84	*	1.026E-02	2.909E-02	4.525E-02	4.095E-03	0.227
		401.10		-2.355E+00	7.181E+00	1.136E+01	9.207E-01	-0.207
LU-177		112.95		1.359E+00	2.252E+00	3.667E+00	3.180E-01	0.371
	+	208.36	*	3.348E+00	1.976E+00	2.630E+00	2.337E-01	1.273
LU-177M		52.97		-1.631E-02	1.894E+00	3.085E+00	2.512E-01	-0.005
		54.07		-2.142E-02	1.002E+00	1.630E+00	1.308E-01	-0.013
		61.30		2.568E+00	1.734E+00	2.691E+00	2.052E-01	0.954
		121.62		-4.596E-02	4.118E-01	6.499E-01	5.709E-02	-0.071
		147.16		-7.477E-01	6.709E-01	1.084E+00	9.246E-02	-0.690
		171.86		-3.337E-01	5.092E-01	8.338E-01	7.141E-02	-0.400
		218.09		4.803E-01	9.245E-01	1.573E+00	1.409E-01	0.305
		268.79		6.015E-01	8.948E-01	1.521E+00	1.392E-01	0.395
		319.02		-8.186E-02	2.883E-01	4.647E-01	4.170E-02	-0.176
		367.43		1.542E-01	1.019E+00	1.673E+00	1.413E-01	0.092
		413.65	*	-3.158E-01	2.138E-01	3.098E-01	2.531E-02	-1.020
HF-181		56.28		8.081E-01	1.089E+00	1.823E+00	1.422E-01	0.443
		57.53		-1.895E-01	5.851E-01	9.377E-01	7.206E-02	-0.202
		65.20		3.791E-01	1.172E+00	1.719E+00	1.342E-01	0.221
		133.02		-3.416E-02	8.884E-02	1.219E-01	1.051E-02	-0.280
		136.25		4.011E-02	5.055E-01	8.605E-01	7.394E-02	0.047
		345.85		6.033E-02	2.337E-01	3.594E-01	3.134E-02	0.168
		482.03	*	-4.128E-02	5.220E-02	7.855E-02	6.619E-03	-0.525
W-181		56.28		3.090E-01	4.164E-01	6.972E-01	5.438E-02	0.443
		57.53		-7.233E-02	2.239E-01	3.589E-01	2.758E-02	-0.202
		65.20	*	1.439E-01	4.449E-01	6.528E-01	5.096E-02	0.221
TA-182		67.75		9.330E-02	1.244E-01	1.973E-01	1.564E-02	0.473
		100.10		-1.456E-02	2.093E-01	3.170E-01	2.787E-02	-0.046
		152.43		3.478E-01	3.526E-01	6.152E-01	5.241E-02	0.565
		222.10		2.280E-01	3.894E-01	6.634E-01	5.961E-02	0.344
		1001.68		1.115E+00	2.493E+00	4.230E+00	3.757E-01	0.264
	+	1121.28		5.247E-01	2.633E-01	3.710E-01	3.116E-02	1.414
		1189.05		-1.269E-01	3.644E-01	5.934E-01	4.833E-02	-0.214
		1221.42	*	-2.705E-01	2.348E-01	3.538E-01	2.916E-02	-0.764
		1230.97		-4.341E-01	5.636E-01	8.829E-01	7.302E-02	-0.492
RE-183		57.98		-7.750E-02	2.326E-01	3.541E-01	2.708E-02	-0.219
		59.32		-9.082E-02	1.350E-01	1.880E-01	1.418E-02	-0.483
		67.20		7.349E-02	2.427E-01	3.554E-01	2.807E-02	0.207
		162.32	*	2.130E-02	1.158E-01	1.937E-01	1.649E-02	0.110

---- Non-Identified Nuclides ----

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RE-184	+	208.81		2.453E+00	1.447E+00	1.940E+00	1.725E-01	1.264
		291.72		9.428E-01	1.119E+00	1.712E+00	1.561E-01	0.551
		57.98		-2.820E-01	8.464E-01	1.288E+00	9.852E-02	-0.219
		59.32		-3.302E-01	4.909E-01	6.834E-01	5.155E-02	-0.483
		67.20		2.673E-01	8.829E-01	1.293E+00	1.021E-01	0.207
		161.27		1.128E-01	3.641E-01	6.214E-01	5.290E-02	0.182
		216.55		-9.311E-02	2.866E-01	4.712E-01	4.217E-02	-0.198
		252.85	*	-1.784E-02	2.527E-01	4.172E-01	3.808E-02	-0.043
		318.01		-1.209E-01	4.947E-01	7.992E-01	7.177E-02	-0.151
		792.07		-1.353E+00	1.165E+00	1.723E+00	1.510E-01	-0.785
OS-185		903.28		2.924E-01	1.337E+00	2.027E+00	1.835E-01	0.144
		920.93		2.793E-01	4.823E-01	8.312E-01	7.512E-02	0.336
		59.72		-2.111E-01	3.582E-01	5.012E-01	3.780E-02	-0.421
		61.14		2.594E-01	1.914E-01	2.957E-01	2.253E-02	0.878
		69.30		1.613E-01	3.518E-01	5.183E-01	4.147E-02	0.311
		592.07		4.474E-01	2.629E+00	4.462E+00	3.763E-01	0.100
		646.12	*	4.190E-03	4.494E-02	7.549E-02	6.237E-03	0.056
		717.42		8.159E-01	8.847E-01	1.580E+00	1.337E-01	0.517
		874.81		2.666E-01	6.997E-01	1.183E+00	1.065E-01	0.225
		880.27		3.781E-01	9.478E-01	1.603E+00	1.446E-01	0.236
RE-188		155.03	*	1.365E-01	1.809E-01	3.134E-01	2.669E-02	0.435
		477.96		-1.551E+00	3.397E+00	5.244E+00	4.414E-01	-0.296
		633.10		-7.885E-01	2.898E+00	4.727E+00	3.930E-01	-0.167
W-188	+	63.58		1.073E+02	8.049E+01	1.044E+02	8.073E+00	1.028
		227.08		-6.609E+00	1.421E+01	2.315E+01	2.087E+00	-0.286
IR-192		290.67	*	-2.504E+00	9.166E+00	1.296E+01	1.182E+00	-0.193
	+	295.96		1.134E+00	2.171E-01	3.171E-01	2.905E-02	3.577
		308.46		1.521E-02	1.070E-01	1.770E-01	1.608E-02	0.086
		316.51	*	-6.573E-03	3.746E-02	6.077E-02	5.475E-03	-0.108
		468.07		-1.360E-03	8.189E-02	1.145E-01	1.033E-02	-0.012
AU-195		604.41		-5.599E-02	4.973E-01	7.146E-01	9.202E-02	-0.078
		612.46		1.747E+00	9.222E-01	1.548E+00	1.500E-01	1.129
		65.12		8.515E-02	2.060E-01	3.035E-01	2.368E-02	0.281
		66.83		3.467E-02	1.099E-01	1.611E-01	1.269E-02	0.215
	+	75.70		1.346E+00	2.972E-01	5.045E-01	4.231E-02	2.667
TL-200		98.88	*	2.105E-01	2.763E-01	4.073E-01	3.596E-02	0.517
	+	129.76		2.898E+00	3.592E+00	5.282E+00	4.576E-01	0.549
		367.94	*	8.413E-04	3.592E+00	Half-Life	too short	
		579.30		-3.609E-03	3.592E+00	Half-Life	too short	
		828.27		1.618E-02	3.592E+00	Half-Life	too short	
TL-201		1205.75		-1.444E-03	3.592E+00	Half-Life	too short	
		68.90		2.882E+00	9.286E+00	1.359E+01	1.085E+00	0.212
		70.82		-2.533E+00	5.244E+00	7.364E+00	5.952E-01	-0.344
		80.30		1.397E+01	1.102E+01	1.362E+01	1.190E+00	1.026
TL-202		135.34		-1.662E+00	4.761E+01	7.509E+01	6.459E+00	-0.022
		167.43	*	-5.846E+00	1.169E+01	1.930E+01	1.645E+00	-0.303
		68.90		1.781E-01	5.740E-01	8.400E-01	6.704E-02	0.212
		70.82		-1.561E-01	3.232E-01	4.540E-01	3.669E-02	-0.344
		80.30		8.614E-01	6.793E-01	8.398E-01	7.337E-02	1.026

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203		439.56	*	-4.037E-02	9.310E-02	1.455E-01	1.206E-02	-0.277
		70.83		-6.106E-01	1.280E+00	1.796E+00	2.383E-01	-0.340
		72.87		1.671E+00	7.689E-01	1.171E+00	1.514E-01	1.427
		82.60		2.054E+00	1.548E+00	1.899E+00	2.648E-01	1.082
BI-207		279.20	*	7.876E-02	4.843E-02	8.490E-02	7.960E-03	0.928
		72.80		4.047E-01	2.103E-01	3.257E-01	2.670E-02	1.243
	+	74.97		7.403E-01	1.635E-01	2.468E-01	2.057E-02	3.000
	+	84.90		4.407E-01	2.423E-01	3.266E-01	2.988E-02	1.349
TL-207		569.67		3.295E-03	3.238E-02	5.476E-02	4.638E-03	0.060
		1063.62	*	-1.598E-02	6.208E-02	9.766E-02	8.466E-03	-0.164
		1770.23		-1.992E-01	5.613E-01	6.952E-01	5.822E-02	-0.287
		81.07		2.997E-01	2.856E-01	3.482E-01	3.064E-02	0.861
PO-209	+	83.78		2.906E-01	1.598E-01	2.181E-01	1.972E-02	1.332
		94.90		3.384E-01	2.810E-01	4.216E-01	3.790E-02	0.803
		122.32		-3.155E-01	1.866E+00	2.937E+00	2.763E-01	-0.107
		144.24		7.879E-01	7.332E-01	1.259E+00	1.205E-01	0.626
BI-210		154.21		2.686E-01	4.106E-01	7.091E-01	6.656E-02	0.379
		269.46		2.379E-01	2.156E-01	3.715E-01	3.462E-02	0.640
		323.87	*	3.693E-01	7.274E-01	1.220E+00	2.178E-01	0.303
	+	338.28		7.788E+00	2.262E+00	2.645E+00	3.291E-01	2.944
PB-210		445.03		-6.438E-01	2.547E+00	4.024E+00	4.777E-01	-0.160
		260.50		1.797E-01	9.890E+00	1.638E+01	1.498E+00	0.011
		262.80		-4.193E+01	2.788E+01	4.192E+01	3.834E+00	-1.000
		896.60	*	-1.011E+00	8.025E+00	1.295E+01	1.172E+00	-0.078
PO-210		46.50	*	2.097E+00	4.415E+00	7.219E+00	6.815E-01	0.290
PB-211		46.50	*	2.097E+00	4.415E+00	7.219E+00	6.815E-01	0.290
BI-212		404.84	*	-7.181E-01	1.137E+00	1.613E+00	1.010E+00	-0.445
		427.08		1.179E+00	2.436E+00	3.878E+00	2.408E+00	0.304
		831.96		-2.160E+00	1.975E+00	2.050E+00	1.285E+00	-1.054
	+	727.18	*	1.186E+00	5.305E-01	7.582E-01	7.513E-02	1.565
PO-215		785.46		1.434E+00	1.984E+00	3.425E+00	2.993E-01	0.419
		1620.62		8.450E-01	1.318E+00	2.443E+00	2.103E-01	0.346
		81.07		2.997E-01	2.856E-01	3.482E-01	3.064E-02	0.861
	+	83.78		2.906E-01	1.598E-01	2.181E-01	1.972E-02	1.332
RN-219		94.90		3.384E-01	2.810E-01	4.216E-01	3.790E-02	0.803
		122.32		-3.155E-01	1.866E+00	2.937E+00	2.763E-01	-0.107
		144.24		7.879E-01	7.332E-01	1.259E+00	1.205E-01	0.626
		154.21		2.686E-01	4.106E-01	7.091E-01	6.656E-02	0.379
RA-223		269.46		2.379E-01	2.156E-01	3.715E-01	3.462E-02	0.640
		323.87	*	3.693E-01	7.274E-01	1.220E+00	2.178E-01	0.303
	+	338.28		7.788E+00	2.262E+00	2.645E+00	3.291E-01	2.944
		445.03		-6.438E-01	2.547E+00	4.024E+00	4.777E-01	-0.160
RN-220		271.23		5.786E-01	2.763E-01	4.869E-01	5.238E-02	1.189
RA-223		401.81	*	-1.144E-01	4.448E-01	7.071E-01	1.042E-01	-0.162
RA-223		549.76	*	2.281E+00	2.812E+01	4.757E+01	4.038E+00	0.048
		81.07		2.997E-01	2.856E-01	3.482E-01	3.064E-02	0.861
	+	83.78		2.906E-01	1.598E-01	2.181E-01	1.972E-02	1.332
		94.90		3.384E-01	2.810E-01	4.216E-01	3.790E-02	0.803

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32	-3.155E-01	1.866E+00	2.937E+00	2.763E-01	-0.107
		144.24	7.879E-01	7.332E-01	1.259E+00	1.205E-01	0.626
		154.21	2.686E-01	4.106E-01	7.091E-01	6.656E-02	0.379
		269.46	2.379E-01	2.156E-01	3.715E-01	3.462E-02	0.640
		323.87 *	3.693E-01	7.274E-01	1.220E+00	2.178E-01	0.303
	+	338.28	7.788E+00	2.262E+00	2.645E+00	3.291E-01	2.944
		445.03	-6.438E-01	2.547E+00	4.024E+00	4.777E-01	-0.160
		79.80	1.808E+00	1.902E+00	2.797E+00	6.022E-01	0.647
		236.00	2.596E-01	2.732E-01	4.183E-01	5.254E-02	0.621
		256.20 *	2.039E-02	4.135E-01	6.862E-01	1.073E-01	0.030
		286.10	5.637E-01	1.642E+00	2.706E+00	3.665E-01	0.208
	+	299.80	4.308E+00	2.251E+00	2.819E+00	4.996E-01	1.528
TH-227		304.40	-1.092E+00	2.344E+00	3.243E+00	6.048E-01	-0.337
		334.20	1.072E+00	2.837E+00	4.173E+00	8.141E-01	0.257
		79.80	1.808E+00	1.903E+00	2.797E+00	6.099E-01	0.647
	+	94.00	1.290E+01	4.353E+00	4.217E+00	9.254E-01	3.059
		236.00	2.596E-01	2.728E-01	4.183E-01	4.780E-02	0.621
		256.20 *	2.039E-02	4.135E-01	6.862E-01	1.257E-01	0.030
		286.10	5.637E-01	1.735E+00	2.706E+00	2.717E+00	0.208
	+	299.80	4.308E+00	2.251E+00	2.819E+00	4.996E-01	1.528
		304.40	-1.092E+00	2.344E+00	3.243E+00	6.048E-01	-0.337
		334.20	1.072E+00	2.837E+00	4.173E+00	8.141E-01	0.257
	+	85.43	4.350E-01	2.392E-01	3.311E-01	3.047E-02	1.314
	+	88.47	4.267E-01	1.340E-01	2.143E-01	2.020E-02	1.991
PA-231		100.00	4.871E-02	2.272E-01	3.266E-01	2.872E-02	0.149
		193.63 *	-2.411E-01	5.362E-01	8.815E-01	7.723E-02	-0.274
		210.97	1.377E+00	8.811E-01	1.397E+00	1.244E-01	0.986
		283.67 *	-1.356E+00	1.701E+00	2.652E+00	4.107E-01	-0.511
	+	301.29	1.723E+00	8.745E-01	1.151E+00	1.448E-01	1.497
		81.07	2.997E-01	2.856E-01	3.482E-01	3.064E-02	0.861
	+	83.78	2.906E-01	1.598E-01	2.181E-01	1.972E-02	1.332
		94.90	3.384E-01	2.810E-01	4.216E-01	3.790E-02	0.803
		122.32	-3.155E-01	1.866E+00	2.937E+00	2.763E-01	-0.107
		144.24	7.879E-01	7.332E-01	1.259E+00	1.205E-01	0.626
		154.21	2.686E-01	4.106E-01	7.091E-01	6.656E-02	0.379
		269.46	2.379E-01	2.156E-01	3.715E-01	3.462E-02	0.640
U-231		323.87 *	3.693E-01	7.274E-01	1.220E+00	2.178E-01	0.303
	+	338.28	7.788E+00	2.262E+00	2.645E+00	3.291E-01	2.944
		445.03	-6.438E-01	2.547E+00	4.024E+00	4.777E-01	-0.160
	+	84.21	1.797E+01	9.879E+00	1.344E+01	1.221E+00	1.337
	+	92.29	1.829E+01	4.973E+00	6.528E+00	5.965E-01	2.802
		95.87 *	-2.000E+00	1.856E+00	2.473E+00	2.212E-01	-0.809
		108.00	-2.995E+00	3.275E+00	5.000E+00	4.335E-01	-0.599
	+	75.28	2.160E+01	5.503E+00	7.496E+00	1.140E+00	2.882
	+	86.59	6.118E+00	2.471E+00	2.978E+00	8.056E-01	2.054
	+	300.12	1.201E+00	6.179E-01	7.889E-01	1.195E-01	1.522
		311.98 *	-7.746E-03	6.698E-02	1.091E-01	1.010E-02	-0.071
		340.50	2.859E+00	1.069E+00	1.439E+00	3.438E-01	1.987
PA-233		398.62	-2.301E-01	2.251E+00	3.620E+00	9.578E-01	-0.064

---- 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		-1.706E+00	1.952E+00	2.916E+00	6.234E-01	-0.585
		63.00		3.046E+00	2.317E+00	3.076E+00	4.617E-01	0.990
		94.67		4.309E-01	2.124E-01	3.212E-01	4.070E-02	1.342
		98.44		5.039E-02	1.147E-01	1.617E-01	9.029E-02	0.312
		99.86		1.734E-01	5.770E-01	8.331E-01	7.331E-02	0.208
		111.00		4.592E-02	2.044E-01	3.282E-01	3.978E-02	0.140
		131.20		3.109E-02	1.341E-01	1.907E-01	1.649E-02	0.163
		152.70		3.763E-01	3.404E-01	5.881E-01	9.995E-02	0.640
		186.00		6.526E+00	2.918E+00	2.922E+00	9.126E-01	2.233
		226.40		-8.993E-02	4.385E-01	7.232E-01	9.736E-02	-0.124
		227.20		-2.134E-01	4.697E-01	7.658E-01	6.905E-02	-0.279
		248.90		-1.522E-01	8.795E-01	1.418E+00	3.207E-01	-0.107
		293.70		3.968E+00	1.155E+00	1.647E+00	2.891E-01	2.409
		369.80		-6.342E-01	9.434E-01	1.450E+00	3.147E-01	-0.437
		568.70		6.561E-02	1.070E+00	1.805E+00	1.529E-01	0.036
		569.50		4.055E-02	2.881E-01	4.886E-01	4.139E-02	0.083
		574.00		-2.589E-01	1.499E+00	2.483E+00	2.102E-01	-0.104
		699.00		-5.707E-01	7.552E-01	1.162E+00	2.205E-01	-0.491
	706.10		6.281E-01	1.225E+00	2.054E+00	9.149E-01	0.306	
	733.00		-2.336E-01	4.682E-01	6.263E-01	1.388E-01	-0.373	
	742.81		1.147E+00	1.678E+00	2.618E+00	1.759E+00	0.438	
	796.30		2.051E+00	1.190E+00	1.982E+00	5.372E-01	1.035	
	805.60		-9.895E-03	1.051E+00	1.728E+00	5.305E-01	-0.006	
	819.60		1.883E-01	1.312E+00	2.181E+00	8.306E-01	0.086	
	826.30		4.187E-01	9.243E-01	1.548E+00	6.934E-01	0.270	
	831.60		-7.872E-01	7.586E-01	1.069E+00	3.199E-01	-0.736	
	876.40		-1.303E-01	1.018E+00	1.632E+00	1.679E+00	-0.080	
	880.51		1.397E-01	3.350E-01	5.676E-01	5.120E-02	0.246	
	883.24		1.565E-01	3.492E-01	5.675E-01	3.818E-01	0.276	
	899.00		-3.135E-01	9.175E-01	1.431E+00	6.267E-01	-0.219	
	925.00		3.019E-01	1.245E+00	2.079E+00	1.878E-01	0.145	
	926.50		-3.510E-02	1.928E-01	3.082E-01	7.835E-02	-0.114	
	946.00	*	2.035E-02	3.699E-01	6.051E-01	1.146E-01	0.034	
	949.00		3.003E-01	5.526E-01	9.406E-01	8.464E-02	0.319	
	980.50		2.966E-01	7.906E-01	1.333E+00	1.191E-01	0.223	
	PA-234M		1394.10		1.289E-01	1.201E+00	2.018E+00	1.314E+00
		766.42		1.299E+01	1.487E+01	2.350E+01	1.193E+01	0.553
		1001.03	*	4.470E+00	5.497E+00	9.595E+00	9.781E-01	0.466
U-235	+	89.95		3.783E+00	1.805E+00	1.988E+00	6.173E-01	1.903
		93.35		4.013E+00	1.528E+00	1.397E+00	3.935E-01	2.873
		105.00		9.709E-01	1.184E+00	1.895E+00	5.660E-01	0.512
	*	143.76		2.998E-01	2.313E-01	3.920E-01	6.849E-02	0.765
		163.35		1.721E-01	4.869E-01	8.175E-01	1.556E-01	0.211
NP-236	+	185.71		2.417E-01	8.015E-02	1.085E-01	9.425E-03	2.228
		205.31		-1.731E-02	6.316E-01	9.282E-01	1.781E-01	-0.019
		94.67		3.300E-01	1.586E-01	2.439E-01	2.196E-02	1.353
		98.44		3.808E-02	8.415E-02	1.223E-01	1.081E-02	0.311
		111.00		3.473E-02	1.546E-01	2.483E-01	2.151E-02	0.140
	160.31	*	8.199E-03	8.080E-02	1.369E-01	1.165E-02	0.060	

---- 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		2.102E-01	1.882E-01	2.820E-01	2.484E-02	0.745
		117.00	*	-9.206E-02	2.077E-01	3.233E-01	2.816E-02	-0.285
	+	209.75		1.893E+00	1.117E+00	1.478E+00	1.315E-01	1.281
		228.18		-2.873E-03	2.431E-01	4.043E-01	3.648E-02	-0.007
		277.60		2.919E-01	2.006E-01	3.504E-01	3.205E-02	0.833
		334.30		5.140E-01	1.599E+00	2.348E+00	2.076E-01	0.219
AM-241		59.54	*	-1.156E-01	1.860E-01	2.597E-01	2.140E-02	-0.445
CM-243		99.55		2.164E-01	1.937E-01	2.902E-01	2.557E-02	0.745
		103.76	*	5.120E-02	1.049E-01	1.706E-01	1.486E-02	0.300
		117.00		-9.472E-02	2.137E-01	3.326E-01	2.897E-02	-0.285
	+	209.75		1.867E+00	1.101E+00	1.457E+00	1.296E-01	1.281
		228.18		-2.904E-03	2.456E-01	4.086E-01	3.687E-02	-0.007
		277.60		2.943E-01	2.022E-01	3.534E-01	3.232E-02	0.833
AM-246		798.80		-1.839E-01	1.672E-01	2.488E-01	2.186E-02	-0.739
		1036.00		1.179E-01	3.478E-01	5.812E-01	5.099E-02	0.203
		1062.04		4.633E-03	2.600E-01	4.207E-01	3.649E-02	0.011
		1078.86	*	1.188E-01	1.354E-01	2.404E-01	2.069E-02	0.494
CM-247		278.00		1.536E+00	8.491E-01	1.497E+00	1.369E-01	1.026
		287.40		-2.689E-01	1.306E+00	2.126E+00	1.941E-01	-0.126
		402.60	*	-4.077E-04	3.997E-02	6.467E-02	5.244E-03	-0.006
CF-249		252.85		-6.636E-02	9.398E-01	1.552E+00	1.416E-01	-0.043
		333.44		-1.013E-01	2.240E-01	3.095E-01	2.740E-02	-0.327
		387.95	*	2.954E-03	4.411E-02	7.188E-02	5.830E-03	0.041
CF-251		176.60	*	3.986E-02	1.347E-01	2.290E-01	1.971E-02	0.174
		227.00		-2.634E-01	4.212E-01	6.812E-01	6.142E-02	-0.387
		285.00		9.187E-01	1.906E+00	3.165E+00	2.891E-01	0.290

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]G246440008      *
* Acquisition date   : 19-FEB-2010 19:26:02 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 02:00:01.26 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246440008 Analyst initials: MXR1                 *
* Batch Number       : 950788 Sample Quantity : 1.4080E+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	3.238E+01	3.465E+00	5.173E-01	0.000E+00
CD-109	3.190E+00	9.818E-01	1.337E+00	0.000E+00
SN-126	3.125E-01	9.619E-02	1.317E-01	0.000E+00
BA-137M	5.993E-02	4.786E-02	6.731E-02	0.000E+00
CS-137	6.335E-02	5.059E-02	7.116E-02	0.000E+00
TL-208	5.044E-01	9.671E-02	6.263E-02	0.000E+00
BI-211	3.762E+00	5.600E-01	3.880E-01	0.000E+00
PB-212	1.722E+00	2.094E-01	1.011E-01	0.000E+00
PO-212	1.722E+00	2.094E-01	1.011E-01	0.000E+00
BI-214	1.054E+00	1.785E-01	1.166E-01	0.000E+00
PB-214	1.308E+00	2.060E-01	1.257E-01	0.000E+00
PO-214	1.308E+00	2.060E-01	1.257E-01	0.000E+00
PO-216	1.722E+00	2.094E-01	1.011E-01	0.000E+00
PO-218	1.308E+00	2.060E-01	1.257E-01	0.000E+00
RA-224	4.462E+00	1.221E+00	1.151E+00	0.000E+00
RA-226	1.054E+00	1.785E-01	1.166E-01	0.000E+00
AC-228	1.277E+00	3.773E-01	2.629E-01	0.000E+00
RA-228	1.277E+00	3.773E-01	2.629E-01	0.000E+00
TH-228	1.752E+00	2.130E-01	1.029E-01	0.000E+00
TH-230	1.054E+00	1.785E-01	1.166E-01	0.000E+00
TH-232	1.277E+00	3.773E-01	2.629E-01	0.000E+00
TH-234	2.613E+00	1.962E+00	2.349E+00	0.000E+00
U-234	1.054E+00	1.785E-01	1.166E-01	0.000E+00
NP-237	9.177E-01	3.380E-01	3.917E-01	0.000E+00
U-238	2.613E+00	1.962E+00	2.349E+00	0.000E+00
AM-243	4.124E-01	8.925E-02	9.321E-02	0.000E+00
ANH-511	1.309E-01	7.996E-02	5.366E-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	-2.169E-01	3.502E-01	5.596E-01	0.000E+00	NOT IDENT.
NA-22	5.668E-03	4.870E-02	8.483E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.954E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	6.214E-04	2.980E-02	4.968E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.417E-02	8.973E-02	0.000E+00	FAIL ABUN
SC-46	1.938E-02	4.220E-02	7.449E-02	0.000E+00	FAIL ABUN
V-48	1.988E-02	8.136E-02	1.399E-01	0.000E+00	NOT IDENT.
CR-51	7.747E-03	4.216E-01	7.313E-01	0.000E+00	NOT IDENT.
MN-52	1.012E-01	2.984E-01	5.312E-01	0.000E+00	NOT IDENT.
MN-54	1.858E-02	4.438E-02	7.725E-02	0.000E+00	NOT IDENT.
CO-56	-2.226E-02	4.154E-02	6.688E-02	0.000E+00	NOT IDENT.
CO-57	-4.978E-03	2.684E-02	4.552E-02	0.000E+00	NOT IDENT.
CO-58	-1.244E-02	4.133E-02	6.851E-02	0.000E+00	NOT IDENT.
FE-59	9.571E-02	1.055E-01	1.900E-01	0.000E+00	NOT IDENT.
CO-60	1.603E-03	4.110E-02	7.054E-02	0.000E+00	NOT IDENT.
ZN-65	-6.500E-03	1.129E-01	1.600E-01	0.000E+00	NOT IDENT.
GE-68	7.356E-01	1.232E+00	2.184E+00	0.000E+00	NOT IDENT.
AS-73	1.409E-01	9.499E-01	1.705E+00	0.000E+00	NOT IDENT.
AS-74	-1.746E-02	9.666E-02	1.667E-01	0.000E+00	NOT IDENT.
SE-75	1.088E-02	4.397E-02	7.816E-02	0.000E+00	NOT IDENT.
BR-77	-5.104E+00	2.050E+01	3.353E+01	0.000E+00	FAIL ABUN
SR-82	-3.011E-02	4.403E-01	7.496E-01	0.000E+00	NOT IDENT.
RB-83	-9.987E-03	7.337E-02	1.212E-01	0.000E+00	NOT IDENT.
RB-84	6.733E-02	8.509E-02	1.535E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.257E+00	1.555E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.857E-02	8.159E-02	0.000E+00	NOT IDENT.
RB-86	-1.136E-01	8.864E-01	1.454E+00	0.000E+00	NOT IDENT.
Y-88	-5.945E-02	4.231E-02	4.912E-02	0.000E+00	NOT IDENT.
ZR-88	-5.470E-03	3.309E-02	5.589E-02	0.000E+00	NOT IDENT.
Y-91	-3.736E+00	2.226E+01	3.787E+01	0.000E+00	NOT IDENT.
NB-94	-9.792E-03	3.621E-02	6.121E-02	0.000E+00	NOT IDENT.
NB-95	1.516E-02	5.066E-02	8.865E-02	0.000E+00	NOT IDENT.
NB-95M	1.426E-01	1.427E-01	2.339E-01	0.000E+00	NOT IDENT.
ZR-95	7.285E-02	7.753E-02	1.425E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.021E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.830E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.889E+01	2.227E+01	3.528E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.715E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.866E-02	3.491E-02	5.952E-02	0.000E+00	NOT IDENT.
RH-102	-1.531E-02	2.964E-02	4.774E-02	0.000E+00	NOT IDENT.
RU-103	2.641E-02	4.526E-02	7.906E-02	0.000E+00	FAIL ABUN
RH-106	1.177E-01	3.347E-01	5.979E-01	0.000E+00	FAIL ABUN
RU-106	1.177E-01	3.344E-01	5.979E-01	0.000E+00	FAIL ABUN
AG-108M	-1.922E-02	3.669E-02	5.988E-02	0.000E+00	NOT IDENT.
AG-110M	1.350E-02	4.256E-02	6.635E-02	0.000E+00	NOT IDENT.
IN-111	1.056E-01	1.955E+00	3.043E+00	0.000E+00	NOT IDENT.
IN-113M	4.019E-03	4.808E-02	8.255E-02	0.000E+00	NOT IDENT.
SN-113	4.019E-03	4.808E-02	8.255E-02	0.000E+00	NOT IDENT.
IN-114M	1.736E-01	2.102E-01	3.463E-01	0.000E+00	NOT IDENT.
CD-115	-1.256E+01	2.208E+01	3.739E+01	0.000E+00	NOT IDENT.
SN-117M	-2.050E-02	6.070E-02	1.085E-01	0.000E+00	NOT IDENT.
SB-122	3.213E+00	3.840E+00	7.099E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.159E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-8.431E-03	2.848E-02	5.098E-02	0.000E+00	NOT IDENT.
I-124	5.970E-01	9.583E-01	1.617E+00	0.000E+00	NOT IDENT.
SB-124	-6.344E-02	7.013E-02	9.061E-02	0.000E+00	FAIL ABUN
SB-125	8.597E-02	1.023E-01	1.827E-01	0.000E+00	FAIL ABUN
TE-125M	-1.886E+00	1.026E+01	1.752E+01	0.000E+00	NOT IDENT.
I-126	1.808E-01	2.473E-01	4.002E-01	0.000E+00	NOT IDENT.
SB-126	-1.626E-01	1.734E-01	2.540E-01	0.000E+00	FAIL ABUN
SB-127	4.390E-01	2.179E+00	3.827E+00	0.000E+00	NOT IDENT.
XE-127	1.124E-03	5.193E-02	9.279E-02	0.000E+00	NOT IDENT.
I-131	3.786E-02	1.501E-01	2.617E-01	0.000E+00	NOT IDENT.
TE-132	-7.517E-03	1.161E+00	2.058E+00	0.000E+00	NOT IDENT.
BA-133	3.382E-02	4.763E-02	7.601E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.539E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.360E-02	1.043E-01	0.000E+00	NOT IDENT.
CS-135	-7.192E-02	1.722E-01	2.959E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.470E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.196E-04	1.434E-01	2.391E-01	0.000E+00	FAIL ABUN
CE-139	-9.941E-03	2.963E-02	5.281E-02	0.000E+00	NOT IDENT.
BA-140	1.625E-01	3.403E-01	6.024E-01	0.000E+00	NOT IDENT.
LA-140	-4.362E-02	1.110E-01	1.757E-01	0.000E+00	NOT IDENT.
CE-141	4.802E-02	6.594E-02	1.228E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.721E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	6.248E-02	2.540E-01	3.886E-01	0.000E+00	NOT IDENT.
PM-144	-1.924E-02	3.589E-02	5.932E-02	0.000E+00	NOT IDENT.
PR-144	-1.305E+00	2.435E+00	4.024E+00	0.000E+00	NOT IDENT.

PM-146	-2.977E-02	4.563E-02	7.304E-02	0.000E+00	NOT IDENT.
ND-147	1.518E-01	6.484E-01	1.162E+00	0.000E+00	FAIL ABUN
PM-149	6.709E+01	1.910E+02	3.336E+02	0.000E+00	NOT IDENT.
EU-152	-2.289E-02	1.180E-01	1.753E-01	0.000E+00	NOT IDENT.
GD-153	-5.057E-02	9.528E-02	1.421E-01	0.000E+00	FAIL ABUN
EU-154	1.245E-02	1.355E-01	2.356E-01	0.000E+00	NOT IDENT.
EU-155	6.262E-02	1.161E-01	2.043E-01	0.000E+00	FAIL ABUN
TB-160	6.727E-02	1.699E-01	2.972E-01	0.000E+00	FAIL ABUN
HO-166M	1.461E-02	6.717E-02	1.177E-01	0.000E+00	NOT IDENT.
TM-171	-8.884E+00	3.324E+01	5.163E+01	0.000E+00	NOT IDENT.
LU-176	1.026E-02	2.851E-02	4.694E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.936E+00	2.750E+00	0.000E+00	FAIL ABUN
LU-177M	-3.158E-01	2.095E-01	3.194E-01	0.000E+00	NOT IDENT.
HF-181	-4.128E-02	5.115E-02	8.074E-02	0.000E+00	NOT IDENT.
W-181	1.439E-01	4.360E-01	6.982E-01	0.000E+00	NOT IDENT.
TA-182	-2.705E-01	2.301E-01	3.566E-01	0.000E+00	FAIL ABUN
RE-183	2.130E-02	1.135E-01	2.035E-01	0.000E+00	FAIL ABUN
RE-184	-1.784E-02	2.477E-01	4.345E-01	0.000E+00	NOT IDENT.
OS-185	4.190E-03	4.404E-02	7.712E-02	0.000E+00	NOT IDENT.
RE-188	1.365E-01	1.773E-01	3.296E-01	0.000E+00	NOT IDENT.
W-188	-2.504E+00	8.983E+00	1.346E+01	0.000E+00	FAIL ABUN
IR-192	-6.573E-03	3.671E-02	6.301E-02	0.000E+00	FAIL ABUN
AU-195	2.105E-01	2.708E-01	4.322E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.994E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-5.846E+00	1.146E+01	2.026E+01	0.000E+00	NOT IDENT.
TL-202	-4.037E-02	9.123E-02	1.498E-01	0.000E+00	NOT IDENT.
HG-203	7.876E-02	4.746E-02	8.825E-02	0.000E+00	NOT IDENT.
BI-207	-1.598E-02	6.084E-02	9.873E-02	0.000E+00	FAIL ABUN
TL-207	3.693E-01	7.129E-01	1.264E+00	0.000E+00	FAIL ABUN
PO-209	-1.011E+00	7.865E+00	1.313E+01	0.000E+00	NOT IDENT.
BI-210	2.097E+00	4.327E+00	7.771E+00	0.000E+00	NOT IDENT.
PB-210	2.097E+00	4.327E+00	7.771E+00	0.000E+00	NOT IDENT.
PO-210	2.097E+00	4.326E+00	7.771E+00	0.000E+00	NOT IDENT.
PB-211	-7.181E-01	1.114E+00	1.664E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.199E-01	7.726E-01	0.000E+00	FAIL ABUN
PO-215	3.693E-01	7.129E-01	1.264E+00	0.000E+00	FAIL ABUN
RN-219	-1.144E-01	4.359E-01	7.296E-01	0.000E+00	NOT IDENT.
RN-220	2.281E+00	2.755E+01	4.876E+01	0.000E+00	NOT IDENT.
RA-223	3.693E-01	7.129E-01	1.264E+00	0.000E+00	FAIL ABUN
AC-227	2.039E-02	4.052E-01	7.145E-01	0.000E+00	FAIL ABUN
TH-227	2.039E-02	4.052E-01	7.145E-01	0.000E+00	FAIL ABUN
TH-229	-2.411E-01	5.255E-01	9.230E-01	0.000E+00	FAIL ABUN
PA-231	-1.356E+00	1.667E+00	2.756E+00	0.000E+00	FAIL ABUN
TH-231	3.693E-01	7.129E-01	1.264E+00	0.000E+00	FAIL ABUN
U-231	-2.000E+00	1.819E+00	2.625E+00	0.000E+00	FAIL ABUN
PA-233	-7.746E-03	6.564E-02	1.132E-01	0.000E+00	FAIL ABUN
PA-234	2.035E-02	3.625E-01	6.132E-01	0.000E+00	FAIL ABUN
PA-234M	4.470E+00	5.387E+00	9.713E+00	0.000E+00	NOT IDENT.
U-235	2.998E-01	2.266E-01	4.129E-01	0.000E+00	FAIL ABUN
NP-236	8.199E-03	7.919E-02	1.439E-01	0.000E+00	NOT IDENT.
NP-239	-9.206E-02	2.036E-01	3.419E-01	0.000E+00	FAIL ABUN
AM-241	-1.156E-01	1.823E-01	2.782E-01	0.000E+00	NOT IDENT.
CM-243	5.120E-02	1.028E-01	1.808E-01	0.000E+00	FAIL ABUN
AM-246	1.188E-01	1.327E-01	2.430E-01	0.000E+00	NOT IDENT.
CM-247	-4.077E-04	3.917E-02	6.672E-02	0.000E+00	NOT IDENT.
CF-249	2.954E-03	4.323E-02	7.421E-02	0.000E+00	NOT IDENT.
CF-251	3.986E-02	1.320E-01	2.402E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:26:31.15

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440008.CNF;1
Sample date       : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:26:02
Sample ID        : G246440008           Sample quantity  : 1.40800E+02 GRAM
Detector name    : GAM01                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:01.26  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials  : MXR1
Abundance limit  : 75.00000             Sensitivity       : 5.00000
Batch ID        : 950788                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	1225	10.67*	9.455E-01	3.238E+01	3.238E+01	10.92
CD-109	88.03	225	3.72*	5.189E+00	3.108E+00	3.190E+00	31.41
SN-126	64.28	103	9.60	2.765E+00	1.034E+00	1.034E+00	76.02
	86.94	225	8.90	5.189E+00	1.299E+00	1.299E+00	51.21
	87.57	225	37.00*	5.189E+00	3.125E-01	3.125E-01	31.41
BA-137M	661.65	39	89.98*	1.923E+00	5.986E-02	5.993E-02	81.49
CS-137	661.65	39	85.12*	1.923E+00	6.328E-02	6.335E-02	81.49
TL-208	277.35	-----	6.80	3.885E+00	-----	Line Not Found	-----
	510.84	117	21.60	2.393E+00	6.059E-01	6.059E-01	62.89
	583.14	341	84.20*	2.142E+00	5.044E-01	5.044E-01	19.56
	860.37	54	12.46	1.522E+00	7.649E-01	7.649E-01	51.01
BI-211	72.87	-----	1.27	3.944E+00	-----	Line Not Found	-----
	351.07	589	12.94*	3.225E+00	3.762E+00	3.762E+00	15.19
PB-212	74.81	424	10.70	4.150E+00	2.544E+00	2.544E+00	23.98
	77.11	682	18.00	4.383E+00	2.305E+00	2.305E+00	15.39
	87.30	225	8.00	5.189E+00	1.445E+00	1.445E+00	32.96
	238.63	1252	44.60*	4.345E+00	1.722E+00	1.722E+00	12.40
	300.09	108	3.41	3.649E+00	2.325E+00	2.325E+00	50.34
PO-212	74.81	424	10.70	4.150E+00	2.544E+00	2.544E+00	23.98
	77.11	682	18.00	4.383E+00	2.305E+00	2.305E+00	15.39
	87.30	225	8.00	5.189E+00	1.445E+00	1.445E+00	32.96
	115.19	-----	0.60	6.043E+00	-----	Line Not Found	-----
	238.63	1252	44.60*	4.345E+00	1.722E+00	1.722E+00	12.40
	300.09	108	3.41	3.649E+00	2.325E+00	2.325E+00	50.34
BI-214	609.31	378	46.30*	2.065E+00	1.054E+00	1.054E+00	17.27
	1120.29	74	15.10	1.193E+00	1.095E+00	1.095E+00	50.62
	1764.49	67	15.80	8.255E-01	1.370E+00	1.370E+00	34.78
PB-214	74.81	424	6.21	4.150E+00	4.383E+00	4.383E+00	23.29
	77.11	682	10.50	4.383E+00	3.952E+00	3.952E+00	17.17
	87.30	225	4.67	5.189E+00	2.476E+00	2.476E+00	32.34
	241.98	285	7.49	4.304E+00	2.353E+00	2.353E+00	28.48
	295.21	388	19.20	3.698E+00	1.457E+00	1.457E+00	20.11

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	589	37.20*	3.225E+00	1.308E+00	1.308E+00	16.06
	74.81	424	6.21	4.150E+00	4.383E+00	4.383E+00	23.29
	77.11	682	10.50	4.383E+00	3.952E+00	3.952E+00	17.17
	87.30	225	4.67	5.189E+00	2.476E+00	2.476E+00	32.34
	241.98	285	7.49	4.304E+00	2.353E+00	2.353E+00	28.48
PO-216	295.21	388	19.20	3.698E+00	1.457E+00	1.457E+00	20.11
	351.92	589	37.20*	3.225E+00	1.308E+00	1.308E+00	16.06
	74.81	424	10.70	4.150E+00	2.544E+00	2.544E+00	23.98
	77.11	682	18.00	4.383E+00	2.305E+00	2.305E+00	15.39
	87.30	225	8.00	5.189E+00	1.445E+00	1.445E+00	32.96
PO-218	238.63	1252	44.60*	4.345E+00	1.722E+00	1.722E+00	12.40
	300.09	108	3.41	3.649E+00	2.325E+00	2.325E+00	50.34
	74.81	424	6.21	4.150E+00	4.383E+00	4.383E+00	23.29
	77.11	682	10.50	4.383E+00	3.952E+00	3.952E+00	17.17
	87.30	225	4.67	5.189E+00	2.476E+00	2.476E+00	32.34
RA-224	241.98	285	7.49	4.304E+00	2.353E+00	2.353E+00	28.48
	295.21	388	19.20	3.698E+00	1.457E+00	1.457E+00	20.11
	351.92	589	37.20*	3.225E+00	1.308E+00	1.308E+00	16.06
	240.98	285	3.95*	4.304E+00	4.462E+00	4.462E+00	27.92
	609.31	378	46.30*	2.065E+00	1.054E+00	1.054E+00	17.27
AC-228	1120.29	74	15.10	1.193E+00	1.095E+00	1.095E+00	50.62
	1764.49	67	15.80	8.255E-01	1.370E+00	1.370E+00	34.78
	338.32	265	11.40	3.327E+00	1.865E+00	1.865E+00	48.93
	911.07	191	27.70*	1.444E+00	1.277E+00	1.277E+00	30.16
	969.11	168	16.60	1.364E+00	1.978E+00	1.978E+00	32.51
RA-228	338.32	265	11.40	3.327E+00	1.865E+00	1.865E+00	48.93
	911.07	191	27.70*	1.444E+00	1.277E+00	1.277E+00	30.16
	969.11	168	16.60	1.364E+00	1.978E+00	1.978E+00	32.51
	74.81	424	10.70	4.150E+00	2.544E+00	2.588E+00	22.11
	77.11	682	18.00	4.383E+00	2.305E+00	2.345E+00	15.39
TH-228	87.30	225	8.00	5.189E+00	1.445E+00	1.471E+00	31.41
	238.63	1252	44.60*	4.345E+00	1.722E+00	1.752E+00	12.40
	300.09	108	3.41	3.649E+00	2.325E+00	2.365E+00	77.07
	609.31	378	46.30*	2.065E+00	1.054E+00	1.054E+00	17.27
	1120.29	74	15.10	1.193E+00	1.095E+00	1.095E+00	50.62
TH-230	1764.49	67	15.80	8.255E-01	1.370E+00	1.370E+00	34.78
	338.32	265	11.40	3.327E+00	1.865E+00	1.865E+00	27.68
	911.07	191	27.70*	1.444E+00	1.277E+00	1.277E+00	30.16
	969.11	168	16.60	1.364E+00	1.978E+00	1.978E+00	32.51
	63.29	103	3.80*	2.765E+00	2.613E+00	2.613E+00	76.63
TH-234	92.38	373	5.41	5.503E+00	3.338E+00	3.338E+00	31.49
	609.31	378	46.30*	2.065E+00	1.054E+00	1.054E+00	17.27
	1120.29	74	15.10	1.193E+00	1.095E+00	1.095E+00	50.62
	1764.49	67	15.80	8.255E-01	1.370E+00	1.370E+00	34.78
	86.50	225	12.60*	5.189E+00	9.177E-01	9.177E-01	37.58
NP-237	95.87	-----	2.60	5.636E+00	-----	Line Not Found	-----
	63.29	103	3.80*	2.765E+00	2.613E+00	2.613E+00	76.63
	92.38	373	5.41	5.503E+00	3.338E+00	3.338E+00	27.19
	74.67	424	66.00*	4.150E+00	4.124E-01	4.124E-01	22.08

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	225	0.34	5.189E+00	3.442E+01	3.442E+01	31.41
	117.66	-----	0.55	6.054E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.887E+00	-----	Line Not Found	-----
ANH-511	511.00	117	100.00*	2.393E+00	1.309E-01	1.309E-01	62.34

Flag: "*" = Keyline

Total number of lines in spectrum 29
Number of unidentified lines 1
Number of lines tentatively identified by NID 28 96.55%

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	3.238E+01	3.238E+01	0.354E+01	10.92	
CD-109	464.00D	1.03	3.108E+00	3.190E+00	1.002E+00	31.41	
SN-126	1.00E+05Y	1.00	3.125E-01	3.125E-01	0.982E-01	31.41	
BA-137M	30.17Y	1.00	5.986E-02	5.993E-02	4.883E-02	81.49	
CS-137	30.17Y	1.00	6.328E-02	6.335E-02	5.162E-02	81.49	
TL-208	1.41E+10Y	1.00	5.044E-01	5.044E-01	0.987E-01	19.56	
BI-211	7.04E+08Y	1.00	3.762E+00	3.762E+00	0.571E+00	15.19	
PB-212	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.214E+00	12.40	
PO-212	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.214E+00	12.40	
BI-214	1600.00Y	1.00	1.054E+00	1.054E+00	0.182E+00	17.27	
PB-214	1600.00Y	1.00	1.308E+00	1.308E+00	0.210E+00	16.06	
PO-214	1600.00Y	1.00	1.308E+00	1.308E+00	0.210E+00	16.06	
PO-216	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.214E+00	12.40	
PO-218	1600.00Y	1.00	1.308E+00	1.308E+00	0.210E+00	16.06	
RA-224	1.41E+10Y	1.00	4.462E+00	4.462E+00	1.246E+00	27.92	
RA-226	1600.00Y	1.00	1.054E+00	1.054E+00	0.182E+00	17.27	
AC-228	1.41E+10Y	1.00	1.277E+00	1.277E+00	0.385E+00	30.16	
RA-228	1.41E+10Y	1.00	1.277E+00	1.277E+00	0.385E+00	30.16	
TH-228	1.91Y	1.02	1.722E+00	1.752E+00	0.217E+00	12.40	
TH-230	4.47E+09Y	1.00	1.054E+00	1.054E+00	0.182E+00	17.27	
TH-232	1.41E+10Y	1.00	1.277E+00	1.277E+00	0.385E+00	30.16	
TH-234	4.47E+09Y	1.00	2.613E+00	2.613E+00	2.002E+00	76.63	
U-234	4.47E+09Y	1.00	1.054E+00	1.054E+00	0.182E+00	17.27	
NP-237	2.14E+06Y	1.00	9.177E-01	9.177E-01	3.449E-01	37.58	
U-238	4.47E+09Y	1.00	2.613E+00	2.613E+00	2.002E+00	76.63	
AM-243	7380.00Y	1.00	4.124E-01	4.124E-01	0.911E-01	22.08	
ANH-511	1.00E+09Y	1.00	1.309E-01	1.309E-01	0.816E-01	62.34	

Total Activity : 7.020E+01 7.032E+01

Grand Total Activity : 7.020E+01 7.032E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440008

Page : 5
Acquisition date : 19-FEB-2010 19:26:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	84.14	134	381	1.60	168.98	165	31	1.86E-02	54.2	4.98E+00	T
4	89.98	205	370	1.35	180.65	165	31	2.85E-02	36.2	5.35E+00	T
0	128.87	50	327	1.17	258.40	257	7	6.90E-03	****	6.03E+00	T
0	186.14	253	347	1.47	372.88	368	10	3.51E-02	32.0	5.16E+00	T
0	209.29	110	280	1.14	419.15	415	9	1.53E-02	58.3	4.78E+00	T
0	463.53	58	165	1.35	927.33	920	14	8.11E-03	96.8	2.59E+00	T
0	727.71	93	74	1.42	1455.36	1450	12	1.29E-02	43.6	1.77E+00	T
0	1729.15	32	9	1.12	3456.76	3448	17	4.37E-03	55.4	8.36E-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]G246440008.CNF;1
* Acquisition date   : 19-FEB-2010 19:26:02  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 02:00:01.26          Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G246440008             Analyst initials: MXR1
* Batch Number       : 950788                 Sample Quantity  : 1.40800E+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	3.238E+01	3.536E+00	5.152E-01	4.580E-02	62.853
CD-109	3.190E+00	1.002E+00	1.257E+00	1.190E-01	2.537
SN-126	3.125E-01	9.815E-02	1.238E-01	1.166E-02	2.524
BA-137M	5.993E-02	4.883E-02	6.592E-02	5.400E-03	0.909
CS-137	6.335E-02	5.162E-02	6.969E-02	5.720E-03	0.909
TL-208	5.044E-01	9.868E-02	6.117E-02	5.555E-03	8.246
BI-211	3.762E+00	5.714E-01	3.750E-01	3.411E-02	10.031
PB-212	1.722E+00	2.136E-01	9.695E-02	9.816E-03	17.765
PO-212	1.722E+00	2.136E-01	9.695E-02	9.816E-03	17.765
BI-214	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
PB-214	1.308E+00	2.102E-01	1.215E-01	1.273E-02	10.772
PO-214	1.308E+00	2.102E-01	1.215E-01	1.273E-02	10.772
PO-216	1.722E+00	2.136E-01	9.695E-02	9.816E-03	17.765
PO-218	1.308E+00	2.102E-01	1.215E-01	1.273E-02	10.772
RA-224	4.462E+00	1.246E+00	1.104E+00	1.003E-01	4.043
RA-226	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
AC-228	1.277E+00	3.850E-01	2.592E-01	3.001E-02	4.924
RA-228	1.277E+00	3.850E-01	2.592E-01	3.001E-02	4.924

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.752E+00	2.174E-01	9.864E-02	9.987E-03	17.765
TH-230	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
TH-232	1.277E+00	3.850E-01	2.592E-01	3.001E-02	4.924
TH-234	2.613E+00	2.002E+00	2.195E+00	3.858E-01	1.191
U-234	1.054E+00	1.821E-01	1.140E-01	1.125E-02	9.246
NP-237	9.177E-01	3.449E-01	3.682E-01	8.336E-02	2.492
U-238	2.613E+00	2.002E+00	2.195E+00	3.858E-01	1.191
AM-243	4.124E-01	9.107E-02	8.738E-02	7.266E-03	4.720
ANH-511	1.309E-01	8.159E-02	5.227E-02	4.430E-03	2.504

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.169E-01		3.574E-01	5.443E-01	4.952E-02	-0.399
NA-22	5.668E-03		4.969E-02	8.424E-02	7.074E-03	0.067
NA-24	3.063E+00		4.058E+00	Half-Life too short		
AL-26	6.214E-04		3.041E-02	4.971E-02	4.119E-03	0.012
TI-44	4.254E-01	+	6.548E-02	8.419E-02	7.225E-03	5.053
SC-46	1.938E-02		4.306E-02	7.340E-02	6.636E-03	0.264
V-48	1.988E-02		8.302E-02	1.382E-01	1.234E-02	0.144
CR-51	7.747E-03		4.302E-01	7.055E-01	6.636E-02	0.011
MN-52	1.012E-01		3.045E-01	5.288E-01	4.565E-02	0.191
MN-54	1.858E-02		4.529E-02	7.603E-02	6.767E-03	0.244
CO-56	-2.226E-02		4.239E-02	6.584E-02	5.883E-03	-0.338
CO-57	-4.978E-03		2.739E-02	4.308E-02	3.792E-03	-0.116
CO-58	-1.244E-02		4.218E-02	6.739E-02	5.961E-03	-0.185
FE-59	9.571E-02		1.077E-01	1.880E-01	1.733E-02	0.509
CO-60	1.603E-03		4.194E-02	7.012E-02	5.977E-03	0.023
ZN-65	-6.500E-03		1.152E-01	1.584E-01	1.337E-02	-0.041
GE-68	7.356E-01		1.257E+00	2.161E+00	1.861E-01	0.340
AS-73	1.409E-01		9.693E-01	1.588E+00	1.286E-01	0.089
AS-74	-1.746E-02		9.864E-02	1.629E-01	1.372E-02	-0.107
SE-75	1.088E-02		4.487E-02	7.511E-02	6.900E-03	0.145
BR-77	-5.104E+00		2.092E+01	3.267E+01	2.772E+00	-0.156
SR-82	-3.011E-02		4.492E-01	7.365E-01	6.412E-02	-0.041
RB-83	-9.987E-03		7.486E-02	1.181E-01	1.002E-02	-0.085
RB-84	6.733E-02		8.682E-02	1.512E-01	1.364E-02	0.445
KR-85	1.691E+01		9.446E+00	1.515E+01	1.284E+00	1.116
SR-85	8.872E-02		4.956E-02	7.949E-02	6.739E-03	1.116
RB-86	-1.136E-01		9.045E-01	1.439E+00	1.239E-01	-0.079
Y-88	-5.945E-02		4.317E-02	4.917E-02	4.044E-03	-1.209
ZR-88	-5.470E-03		3.377E-02	5.414E-02	4.360E-03	-0.101
Y-91	-3.736E+00		2.272E+01	3.757E+01	3.078E+00	-0.099
NB-94	-9.792E-03		3.694E-02	6.002E-02	5.039E-03	-0.163
NB-95	1.516E-02		5.170E-02	8.709E-02	7.546E-03	0.174
NB-95M	1.426E-01		1.456E-01	2.243E-01	2.300E-02	0.636
ZR-95	7.285E-02		7.911E-02	1.400E-01	1.330E-02	0.520

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	3.181E-01		5.208E-01	Half-Life too short		
ZR-97	1.685E+01		9.337E+00	Half-Life too short		
MO-99	-1.889E+01		2.273E+01	3.463E+01	5.247E+00	-0.546
TC-99M	-8.500E+12		8.751E+12	Half-Life too short		
RH-101	-2.866E-02		3.562E-02	5.687E-02	5.005E-03	-0.504
RH-102	-1.531E-02		3.025E-02	4.643E-02	3.905E-03	-0.330
RU-103	2.641E-02		4.618E-02	7.697E-02	1.082E-02	0.343
RH-106	1.177E-01		3.415E-01	5.847E-01	7.711E-02	0.201
RU-106	1.177E-01		3.413E-01	5.847E-01	4.884E-02	0.201
AG-108M	-1.922E-02		3.744E-02	5.813E-02	5.013E-03	-0.331
AG-110M	1.350E-02		4.343E-02	6.497E-02	5.508E-03	0.208
IN-111	1.056E-01		1.995E+00	2.920E+00	2.659E-01	0.036
IN-113M	4.019E-03		4.906E-02	7.997E-02	6.661E-03	0.050
SN-113	4.019E-03		4.906E-02	7.997E-02	6.661E-03	0.050
IN-114M	1.736E-01		2.145E-01	3.306E-01	2.887E-02	0.525
CD-115	-1.256E+01		2.253E+01	3.645E+01	3.094E+00	-0.344
SN-117M	-2.050E-02		6.194E-02	1.032E-01	8.786E-03	-0.199
SB-122	3.213E+00		3.918E+00	6.929E+00	5.874E-01	0.464
I-123	-2.712E+01		4.673E+01	Half-Life too short		
TE-123M	-8.431E-03		2.906E-02	4.850E-02	4.155E-03	-0.174
I-124	5.970E-01		9.779E-01	1.581E+00	1.329E-01	0.378
SB-124	-6.344E-02		7.156E-02	9.053E-02	8.026E-03	-0.701
SB-125	8.597E-02		1.044E-01	1.773E-01	1.492E-02	0.485
TE-125M	-1.886E+00		1.047E+01	1.654E+01	1.716E+00	-0.114
I-126	1.808E-01		2.523E-01	3.920E-01	3.220E-02	0.461
SB-126	-1.626E-01		1.769E-01	2.492E-01	2.112E-02	-0.653
SB-127	4.390E-01		2.224E+00	3.751E+00	4.436E-01	0.117
XE-127	1.124E-03		5.299E-02	8.870E-02	7.841E-03	0.013
I-131	3.786E-02		1.532E-01	2.532E-01	2.272E-02	0.150
TE-132	-7.517E-03		1.185E+00	1.972E+00	3.225E-01	-0.004
BA-133	3.382E-02		4.860E-02	7.349E-02	9.692E-03	0.460
I-133	1.778E-02		1.806E-02	Half-Life too short		
CS-134	1.162E-01		5.469E-02	1.026E-01	9.066E-03	1.133
CS-135	-7.192E-02		1.757E-01	2.845E-01	2.966E-02	-0.253
I-135	5.883E+10		7.501E+11	Half-Life too short		
CS-136	-9.196E-04		1.464E-01	2.365E-01	2.150E-02	-0.004
CE-139	-9.941E-03		3.023E-02	5.028E-02	4.282E-03	-0.198
BA-140	1.625E-01		3.473E-01	5.874E-01	1.945E-01	0.277
LA-140	-4.362E-02		1.132E-01	1.753E-01	1.513E-02	-0.249
CE-141	4.802E-02		6.728E-02	1.166E-01	1.014E-02	0.412
CE-143	1.239E-03		2.919E-04	Half-Life too short		
CE-144	6.248E-02		2.591E-01	3.684E-01	5.734E-02	0.170
PM-144	-1.924E-02		3.663E-02	5.815E-02	4.867E-03	-0.331
PR-144	-1.305E+00		2.485E+00	3.945E+00	3.300E-01	-0.331
PM-146	-2.977E-02		4.656E-02	7.098E-02	7.455E-03	-0.419
ND-147	1.518E-01		6.617E-01	1.133E+00	1.685E-01	0.134
PM-149	6.709E+01		1.949E+02	3.211E+02	5.086E+01	0.209
EU-152	-2.289E-02		1.204E-01	1.693E-01	1.566E-02	-0.135

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-5.057E-02		9.722E-02	1.339E-01	1.189E-02	-0.378
EU-154	1.245E-02		1.383E-01	2.339E-01	2.605E-02	0.053
EU-155	6.262E-02		1.185E-01	1.928E-01	1.696E-02	0.325
TB-160	6.727E-02		1.733E-01	2.928E-01	2.640E-02	0.230
HO-166M	1.461E-02		6.854E-02	1.155E-01	9.740E-03	0.127
TM-171	-8.884E+00		3.392E+01	4.830E+01	3.804E+00	-0.184
LU-176	1.026E-02		2.909E-02	4.525E-02	4.095E-03	0.227
LU-177	3.348E+00	+	1.976E+00	2.630E+00	2.337E-01	1.273
LU-177M	-3.158E-01		2.138E-01	3.098E-01	2.531E-02	-1.020
HF-181	-4.128E-02		5.220E-02	7.855E-02	6.619E-03	-0.525
W-181	1.439E-01		4.449E-01	6.528E-01	5.096E-02	0.221
TA-182	-2.705E-01		2.348E-01	3.538E-01	2.916E-02	-0.764
RE-183	2.130E-02		1.158E-01	1.937E-01	1.649E-02	0.110
RE-184	-1.784E-02		2.527E-01	4.172E-01	3.808E-02	-0.043
OS-185	4.190E-03		4.494E-02	7.549E-02	6.237E-03	0.056
RE-188	1.365E-01		1.809E-01	3.134E-01	2.669E-02	0.435
W-188	-2.504E+00		9.166E+00	1.296E+01	1.182E+00	-0.193
IR-192	-6.573E-03		3.746E-02	6.077E-02	5.475E-03	-0.108
AU-195	2.105E-01		2.763E-01	4.073E-01	3.596E-02	0.517
TL-200	8.413E-04		1.018E-03	Half-Life	too short	
TL-201	-5.846E+00		1.169E+01	1.930E+01	1.645E+00	-0.303
TL-202	-4.037E-02		9.310E-02	1.455E-01	1.206E-02	-0.277
HG-203	7.876E-02		4.843E-02	8.490E-02	7.960E-03	0.928
BI-207	-1.598E-02		6.208E-02	9.766E-02	8.466E-03	-0.164
TL-207	3.693E-01		7.274E-01	1.220E+00	2.178E-01	0.303
PO-209	-1.011E+00		8.025E+00	1.295E+01	1.172E+00	-0.078
BI-210	2.097E+00		4.415E+00	7.219E+00	6.815E-01	0.290
PB-210	2.097E+00		4.415E+00	7.219E+00	6.815E-01	0.290
PO-210	2.097E+00		4.414E+00	7.219E+00	6.189E-01	0.290
PB-211	-7.181E-01		1.137E+00	1.613E+00	1.010E+00	-0.445
BI-212	1.186E+00	+	5.305E-01	7.582E-01	7.513E-02	1.565
PO-215	3.693E-01		7.274E-01	1.220E+00	2.178E-01	0.303
RN-219	-1.144E-01		4.448E-01	7.071E-01	1.042E-01	-0.162
RN-220	2.281E+00		2.812E+01	4.757E+01	4.038E+00	0.048
RA-223	3.693E-01		7.274E-01	1.220E+00	2.178E-01	0.303
AC-227	2.039E-02		4.135E-01	6.862E-01	1.073E-01	0.030
TH-227	2.039E-02		4.135E-01	6.862E-01	1.257E-01	0.030
TH-229	-2.411E-01		5.362E-01	8.815E-01	7.723E-02	-0.274
PA-231	-1.356E+00		1.701E+00	2.652E+00	4.107E-01	-0.511
TH-231	3.693E-01		7.274E-01	1.220E+00	2.178E-01	0.303
U-231	-2.000E+00		1.856E+00	2.473E+00	2.212E-01	-0.809
PA-233	-7.746E-03		6.698E-02	1.091E-01	1.010E-02	-0.071
PA-234	2.035E-02		3.699E-01	6.051E-01	1.146E-01	0.034
PA-234M	4.470E+00		5.497E+00	9.595E+00	9.781E-01	0.466
U-235	2.998E-01		2.313E-01	3.920E-01	6.849E-02	0.765
NP-236	8.199E-03		8.080E-02	1.369E-01	1.165E-02	0.060
NP-239	-9.206E-02		2.077E-01	3.233E-01	2.816E-02	-0.285
AM-241	-1.156E-01		1.860E-01	2.597E-01	2.140E-02	-0.445

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	5.120E-02		1.049E-01	1.706E-01	1.486E-02	0.300
AM-246	1.188E-01		1.354E-01	2.404E-01	2.069E-02	0.494
CM-247	-4.077E-04		3.997E-02	6.467E-02	5.244E-03	-0.006
CF-249	2.954E-03		4.411E-02	7.188E-02	5.830E-03	0.041
CF-251	3.986E-02		1.347E-01	2.290E-01	1.971E-02	0.174

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]G246440008          *
* Acquisition date   : 19-FEB-2010 19:26:02 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 02:00:01.26             Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID            *
* Sample ID          : G246440008              Analyst initials: MXR1         *
* Batch Number       : 950788                  Sample Quantity : 1.4080E+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	3.238E+01	3.465E+00	2.588E-01	1.768E+00
CD-109	3.190E+00	9.818E-01	6.690E-01	5.009E-01
SN-126	3.125E-01	9.619E-02	6.589E-02	4.908E-02
BA-137M	5.993E-02	4.786E-02	3.368E-02	2.442E-02
CS-137	6.335E-02	5.059E-02	3.560E-02	2.581E-02
TL-208	5.044E-01	9.671E-02	3.133E-02	4.934E-02
BI-211	3.762E+00	5.600E-01	1.941E-01	2.857E-01
PB-212	1.722E+00	2.094E-01	5.058E-02	1.068E-01
PO-212	1.722E+00	2.094E-01	5.058E-02	1.068E-01
BI-214	1.054E+00	1.785E-01	5.835E-02	9.105E-02
PB-214	1.308E+00	2.060E-01	6.287E-02	1.051E-01
PO-214	1.308E+00	2.060E-01	6.287E-02	1.051E-01
PO-216	1.722E+00	2.094E-01	5.058E-02	1.068E-01
PO-218	1.308E+00	2.060E-01	6.287E-02	1.051E-01
RA-224	4.462E+00	1.221E+00	5.756E-01	6.230E-01
RA-226	1.054E+00	1.785E-01	5.835E-02	9.105E-02
AC-228	1.277E+00	3.773E-01	1.315E-01	1.925E-01
RA-228	1.277E+00	3.773E-01	1.315E-01	1.925E-01
TH-228	1.752E+00	2.130E-01	5.146E-02	1.087E-01
TH-230	1.054E+00	1.785E-01	5.834E-02	9.105E-02
TH-232	1.277E+00	3.773E-01	1.315E-01	1.925E-01
TH-234	2.613E+00	1.962E+00	1.175E+00	1.001E+00
U-234	1.054E+00	1.785E-01	5.834E-02	9.105E-02
NP-237	9.177E-01	3.380E-01	1.960E-01	1.724E-01
U-238	2.613E+00	1.962E+00	1.175E+00	1.001E+00
AM-243	4.124E-01	8.925E-02	4.663E-02	4.553E-02
ANH-511	1.309E-01	7.996E-02	2.685E-02	4.080E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-2.169E-01	3.502E-01	2.800E-01	1.787E-01	NOT IDENT.
NA-22	5.668E-03	4.870E-02	4.244E-02	2.485E-02	NOT IDENT.
NA-24	3.063E+06	7.954E+06	0.000E+00	4.058E+06	SHORT HLIF
AL-26	6.214E-04	2.980E-02	2.485E-02	1.520E-02	NOT IDENT.
TI-44	4.254E-01	6.417E-02	4.489E-02	3.274E-02	FAIL ABUN
SC-46	1.938E-02	4.220E-02	3.727E-02	2.153E-02	FAIL ABUN
V-48	1.988E-02	8.136E-02	6.999E-02	4.151E-02	NOT IDENT.
CR-51	7.747E-03	4.216E-01	3.659E-01	2.151E-01	NOT IDENT.
MN-52	1.012E-01	2.984E-01	2.657E-01	1.522E-01	NOT IDENT.
MN-54	1.858E-02	4.438E-02	3.865E-02	2.264E-02	NOT IDENT.
CO-56	-2.226E-02	4.154E-02	3.346E-02	2.120E-02	NOT IDENT.
CO-57	-4.978E-03	2.684E-02	2.277E-02	1.370E-02	NOT IDENT.
CO-58	-1.244E-02	4.133E-02	3.428E-02	2.109E-02	NOT IDENT.
FE-59	9.571E-02	1.055E-01	9.503E-02	5.383E-02	NOT IDENT.
CO-60	1.603E-03	4.110E-02	3.529E-02	2.097E-02	NOT IDENT.
ZN-65	-6.500E-03	1.129E-01	8.005E-02	5.760E-02	NOT IDENT.
GE-68	7.356E-01	1.232E+00	1.092E+00	6.287E-01	NOT IDENT.
AS-73	1.409E-01	9.499E-01	8.532E-01	4.847E-01	NOT IDENT.
AS-74	-1.746E-02	9.666E-02	8.340E-02	4.932E-02	NOT IDENT.
SE-75	1.088E-02	4.397E-02	3.910E-02	2.243E-02	NOT IDENT.
BR-77	-5.104E+00	2.050E+01	1.677E+01	1.046E+01	FAIL ABUN
SR-82	-3.011E-02	4.403E-01	3.750E-01	2.246E-01	NOT IDENT.
RB-83	-9.987E-03	7.337E-02	6.063E-02	3.743E-02	NOT IDENT.
RB-84	6.733E-02	8.509E-02	7.679E-02	4.341E-02	NOT IDENT.
KR-85	1.691E+01	9.257E+00	7.780E+00	4.723E+00	NOT IDENT.
SR-85	8.872E-02	4.857E-02	4.082E-02	2.478E-02	NOT IDENT.
RB-86	-1.136E-01	8.864E-01	7.275E-01	4.523E-01	NOT IDENT.
Y-88	-5.945E-02	4.231E-02	2.457E-02	2.159E-02	NOT IDENT.
ZR-88	-5.470E-03	3.309E-02	2.796E-02	1.688E-02	NOT IDENT.
Y-91	-3.736E+00	2.226E+01	1.895E+01	1.136E+01	NOT IDENT.
NB-94	-9.792E-03	3.621E-02	3.063E-02	1.847E-02	NOT IDENT.
NB-95	1.516E-02	5.066E-02	4.435E-02	2.585E-02	NOT IDENT.
NB-95M	1.426E-01	1.427E-01	1.170E-01	7.282E-02	NOT IDENT.
ZR-95	7.285E-02	7.753E-02	7.131E-02	3.955E-02	NOT IDENT.
NB-97	3.181E+05	1.021E+06	0.000E+00	5.208E+05	SHORT HLIF
ZR-97	1.685E+07	1.830E+07	0.000E+00	9.337E+06	SHORT HLIF
MO-99	-1.889E+01	2.227E+01	1.765E+01	1.136E+01	NOT IDENT.
TC-99M	-8.500E+18	1.715E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.866E-02	3.491E-02	2.978E-02	1.781E-02	NOT IDENT.
RH-102	-1.531E-02	2.964E-02	2.389E-02	1.512E-02	NOT IDENT.
RU-103	2.641E-02	4.526E-02	3.955E-02	2.309E-02	FAIL ABUN
RH-106	1.177E-01	3.347E-01	2.991E-01	1.707E-01	FAIL ABUN
RU-106	1.177E-01	3.344E-01	2.991E-01	1.706E-01	FAIL ABUN
AG-108M	-1.922E-02	3.669E-02	2.996E-02	1.872E-02	NOT IDENT.
AG-110M	1.350E-02	4.256E-02	3.319E-02	2.171E-02	NOT IDENT.
IN-111	1.056E-01	1.955E+00	1.523E+00	9.977E-01	NOT IDENT.
IN-113M	4.019E-03	4.808E-02	4.130E-02	2.453E-02	NOT IDENT.
SN-113	4.019E-03	4.808E-02	4.130E-02	2.453E-02	NOT IDENT.
IN-114M	1.736E-01	2.102E-01	1.732E-01	1.072E-01	NOT IDENT.
CD-115	-1.256E+01	2.208E+01	1.871E+01	1.127E+01	NOT IDENT.
SN-117M	-2.050E-02	6.070E-02	5.428E-02	3.097E-02	NOT IDENT.
SB-122	3.213E+00	3.840E+00	3.552E+00	1.959E+00	NOT IDENT.
I-123	-2.712E+07	9.159E+07	0.000E+00	4.673E+07	SHORT HLIF
TE-123M	-8.431E-03	2.848E-02	2.551E-02	1.453E-02	NOT IDENT.
I-124	5.970E-01	9.583E-01	8.091E-01	4.889E-01	NOT IDENT.
SB-124	-6.344E-02	7.013E-02	4.533E-02	3.578E-02	FAIL ABUN
SB-125	8.597E-02	1.023E-01	9.141E-02	5.219E-02	FAIL ABUN
TE-125M	-1.886E+00	1.026E+01	8.764E+00	5.234E+00	NOT IDENT.
I-126	1.808E-01	2.473E-01	2.002E-01	1.261E-01	NOT IDENT.
SB-126	-1.626E-01	1.734E-01	1.271E-01	8.845E-02	FAIL ABUN
SB-127	4.390E-01	2.179E+00	1.915E+00	1.112E+00	NOT IDENT.
XE-127	1.124E-03	5.193E-02	4.642E-02	2.650E-02	NOT IDENT.
I-131	3.786E-02	1.501E-01	1.309E-01	7.660E-02	NOT IDENT.
TE-132	-7.517E-03	1.161E+00	1.029E+00	5.925E-01	NOT IDENT.
BA-133	3.382E-02	4.763E-02	3.803E-02	2.430E-02	NOT IDENT.
I-133	1.778E+04	3.539E+04	0.000E+00	1.806E+04	SHORT HLIF
CS-134	1.162E-01	5.360E-02	5.220E-02	2.735E-02	NOT IDENT.
CS-135	-7.192E-02	1.722E-01	1.480E-01	8.786E-02	NOT IDENT.
I-135	5.883E+16	1.470E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.196E-04	1.434E-01	1.196E-01	7.319E-02	FAIL ABUN
CE-139	-9.941E-03	2.963E-02	2.642E-02	1.512E-02	NOT IDENT.
BA-140	1.625E-01	3.403E-01	3.014E-01	1.736E-01	NOT IDENT.
LA-140	-4.362E-02	1.110E-01	8.789E-02	5.661E-02	NOT IDENT.
CE-141	4.802E-02	6.594E-02	6.145E-02	3.364E-02	NOT IDENT.
CE-143	1.239E+03	5.721E+02	0.000E+00	2.919E+02	SHORT HLIF
CE-144	6.248E-02	2.540E-01	1.944E-01	1.296E-01	NOT IDENT.
PM-144	-1.924E-02	3.589E-02	2.968E-02	1.831E-02	NOT IDENT.
PR-144	-1.305E+00	2.435E+00	2.013E+00	1.242E+00	NOT IDENT.

PM-146	-2.977E-02	4.563E-02	3.654E-02	2.328E-02	NOT IDENT.
ND-147	1.518E-01	6.484E-01	5.814E-01	3.308E-01	FAIL ABUN
PM-149	6.709E+01	1.910E+02	1.669E+02	9.743E+01	NOT IDENT.
EU-152	-2.289E-02	1.180E-01	8.768E-02	6.021E-02	NOT IDENT.
GD-153	-5.057E-02	9.528E-02	7.111E-02	4.861E-02	FAIL ABUN
EU-154	1.245E-02	1.355E-01	1.179E-01	6.915E-02	NOT IDENT.
EU-155	6.262E-02	1.161E-01	1.022E-01	5.923E-02	FAIL ABUN
TB-160	6.727E-02	1.699E-01	1.487E-01	8.666E-02	FAIL ABUN
HO-166M	1.461E-02	6.717E-02	5.889E-02	3.427E-02	NOT IDENT.
TM-171	-8.884E+00	3.324E+01	2.583E+01	1.696E+01	NOT IDENT.
LU-176	1.026E-02	2.851E-02	2.348E-02	1.455E-02	FAIL ABUN
LU-177	3.348E+00	1.936E+00	1.376E+00	9.878E-01	FAIL ABUN
LU-177M	-3.158E-01	2.095E-01	1.598E-01	1.069E-01	NOT IDENT.
HF-181	-4.128E-02	5.115E-02	4.040E-02	2.610E-02	NOT IDENT.
W-181	1.439E-01	4.360E-01	3.493E-01	2.224E-01	NOT IDENT.
TA-182	-2.705E-01	2.301E-01	1.784E-01	1.174E-01	FAIL ABUN
RE-183	2.130E-02	1.135E-01	1.018E-01	5.791E-02	FAIL ABUN
RE-184	-1.784E-02	2.477E-01	2.174E-01	1.264E-01	NOT IDENT.
OS-185	4.190E-03	4.404E-02	3.858E-02	2.247E-02	NOT IDENT.
RE-188	1.365E-01	1.773E-01	1.649E-01	9.044E-02	NOT IDENT.
W-188	-2.504E+00	8.983E+00	6.736E+00	4.583E+00	FAIL ABUN
IR-192	-6.573E-03	3.671E-02	3.152E-02	1.873E-02	FAIL ABUN
AU-195	2.105E-01	2.708E-01	2.162E-01	1.381E-01	FAIL ABUN
TL-200	8.413E+02	1.994E+03	0.000E+00	1.018E+03	SHORT HLIF
TL-201	-5.846E+00	1.146E+01	1.014E+01	5.846E+00	NOT IDENT.
TL-202	-4.037E-02	9.123E-02	7.496E-02	4.655E-02	NOT IDENT.
HG-203	7.876E-02	4.746E-02	4.415E-02	2.421E-02	NOT IDENT.
BI-207	-1.598E-02	6.084E-02	4.939E-02	3.104E-02	FAIL ABUN
TL-207	3.693E-01	7.129E-01	6.323E-01	3.637E-01	FAIL ABUN
PO-209	-1.011E+00	7.865E+00	6.571E+00	4.013E+00	NOT IDENT.
BI-210	2.097E+00	4.327E+00	3.888E+00	2.207E+00	NOT IDENT.
PB-210	2.097E+00	4.327E+00	3.888E+00	2.207E+00	NOT IDENT.
PO-210	2.097E+00	4.326E+00	3.888E+00	2.207E+00	NOT IDENT.
PB-211	-7.181E-01	1.114E+00	8.326E-01	5.685E-01	NOT IDENT.
BI-212	1.186E+00	5.199E-01	3.865E-01	2.653E-01	FAIL ABUN
PO-215	3.693E-01	7.129E-01	6.323E-01	3.637E-01	FAIL ABUN
RN-219	-1.144E-01	4.359E-01	3.650E-01	2.224E-01	NOT IDENT.
RN-220	2.281E+00	2.755E+01	2.439E+01	1.406E+01	NOT IDENT.
RA-223	3.693E-01	7.129E-01	6.323E-01	3.637E-01	FAIL ABUN
AC-227	2.039E-02	4.052E-01	3.575E-01	2.067E-01	FAIL ABUN
TH-227	2.039E-02	4.052E-01	3.575E-01	2.067E-01	FAIL ABUN
TH-229	-2.411E-01	5.255E-01	4.618E-01	2.681E-01	FAIL ABUN
PA-231	-1.356E+00	1.667E+00	1.379E+00	8.504E-01	FAIL ABUN
TH-231	3.693E-01	7.129E-01	6.323E-01	3.637E-01	FAIL ABUN
U-231	-2.000E+00	1.819E+00	1.313E+00	9.279E-01	FAIL ABUN
PA-233	-7.746E-03	6.564E-02	5.662E-02	3.349E-02	FAIL ABUN
PA-234	2.035E-02	3.625E-01	3.068E-01	1.849E-01	FAIL ABUN
PA-234M	4.470E+00	5.387E+00	4.859E+00	2.748E+00	NOT IDENT.
U-235	2.998E-01	2.266E-01	2.066E-01	1.156E-01	FAIL ABUN
NP-236	8.199E-03	7.919E-02	7.199E-02	4.040E-02	NOT IDENT.
NP-239	-9.206E-02	2.036E-01	1.710E-01	1.039E-01	FAIL ABUN
AM-241	-1.156E-01	1.823E-01	1.392E-01	9.300E-02	NOT IDENT.
CM-243	5.120E-02	1.028E-01	9.047E-02	5.244E-02	FAIL ABUN
AM-246	1.188E-01	1.327E-01	1.216E-01	6.772E-02	NOT IDENT.
CM-247	-4.077E-04	3.917E-02	3.338E-02	1.998E-02	NOT IDENT.
CF-249	2.954E-03	4.323E-02	3.713E-02	2.206E-02	NOT IDENT.
CF-251	3.986E-02	1.320E-01	1.202E-01	6.735E-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	260.0016
46.50	260.0016
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49.72	278.2363
51.35	276.0520
52.39	305.6322
52.97	283.1628
53.15	283.2621
53.44	278.2323
54.07	296.2437
56.28	273.4897
56.28	273.4910
57.37	0.0000
57.53	311.8017
57.53	311.8028
57.60	311.8422
57.98	307.8740
57.98	307.8740
59.32	330.6821
59.32	330.6821
59.40	330.7301
59.54	329.2397
59.72	329.3482
60.01	337.4053
61.10	284.3591
61.14	284.3794
61.30	284.4615
63.00	348.7288
63.29	348.9071
63.29	348.9071
63.58	374.4734
64.28	381.2874
65.12	375.4799
65.20	375.5322
65.20	375.5322
66.05	427.0759
66.72	395.6568
66.83	362.2229
66.91	362.2714
67.20	381.6101
67.20	381.6101
67.75	366.9427
67.85	377.2359
68.90	385.9085
68.90	385.9085
69.30	376.5518
69.67	367.1649
70.82	420.8727
70.82	420.8727
70.83	420.8787
72.80	377.1079
72.87	377.1508
72.87	377.1508
74.67	370.1577
74.81	370.2416
74.81	370.2416
74.81	370.2416
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74.81	370.2416
74.81	370.2416
74.97	370.3342
75.28	370.5176
75.70	370.7622
77.11	371.5834
77.11	371.5834

77.11	371.5834
77.11	371.5834
77.11	371.5834
77.11	371.5834
77.11	371.5834
78.38	372.3172
79.62	373.0265
79.80	373.1296
79.80	373.1296
80.11	373.3061
80.18	373.3445
80.30	313.0796
80.30	313.0796
80.57	313.2085
81.00	313.4121
81.07	313.4458
81.07	313.4458
81.07	313.4458
81.07	313.4458
82.60	314.1672
83.37	314.5269
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83.78	368.8110
83.78	368.8110
84.21	369.0462
84.90	369.4204
85.43	369.7088
86.29	370.1723
86.50	370.2856
86.54	370.3062
86.59	370.3337
86.72	370.4041
86.79	370.4401
86.94	370.5208
87.30	370.7148
87.30	370.7148
87.30	370.7148
87.30	370.7148
87.30	370.7148
87.30	370.7148
87.57	370.8589
87.88	371.0237
88.03	371.1044
88.36	371.2795
88.47	371.3379
89.95	372.1224
91.11	372.7318
92.29	373.3463
92.38	373.3944
92.38	373.3944
93.35	373.8974
94.00	374.2321
94.67	374.5754
94.67	374.5771
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94.90	374.6956
94.90	374.6956
94.90	374.6956
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95.87	390.1994
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98.44	322.9502
98.88	314.7686
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99.55	294.9402
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100.00	343.7432
100.10	356.8709
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103.76	320.1640
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105.31	329.8083
108.00	373.8599
109.28	347.3097

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111.00	340.1199
111.76	326.8213
112.95	328.4368
115.19	343.0097
116.30	335.4828
117.00	330.0537
117.00	330.0537
117.66	315.4568
121.11	304.1230
121.62	307.7499
121.78	305.5107
122.06	305.6102
122.32	299.9572
122.32	299.9572
122.32	299.9572
122.32	299.9572
123.07	299.0685
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136.48	340.6777
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142.65	341.1731
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144.24	300.2393
144.24	300.2393
144.24	300.2393
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145.44	302.3837
147.16	342.7822
152.43	289.4209
152.70	286.8279
153.22	295.8901
154.21	299.7550
154.21	299.7550
154.21	299.7550
154.21	299.7550
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156.02	304.7646
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162.64	275.2674
163.35	269.1552
163.89	290.0093
165.85	286.0454
167.43	292.8018
171.28	299.3092
171.86	304.0078
172.10	304.0768
176.55	288.9258
176.60	288.9379
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184.41	252.6166
185.71	294.0796
186.00	294.1553
190.27	245.0668
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193.63	290.5707
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198.60	287.1626
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201.83	290.7409
202.84	290.9885
205.31	291.5883

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208.81	292.4310
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209.75	240.1270
210.97	225.3442
215.65	248.8173
216.55	265.9757
218.09	245.5273
222.10	254.8350
223.80	267.5054
226.40	259.4929
227.00	271.9763
227.08	263.4344
227.20	263.4598
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228.18	246.5254
228.18	246.5254
231.56	0.0000
235.69	222.0967
236.00	240.5347
236.00	240.5347
238.63	230.2643
238.63	230.2643
238.63	230.2643
238.63	230.2643
239.00	230.3284
240.98	230.6689
241.98	230.8411
241.98	230.8411
241.98	230.8411
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245.39	178.9674
247.94	203.1512
248.90	191.4152
249.79	190.5717
252.40	196.7476
252.85	205.5367
252.85	205.5367
254.15	0.0000
256.20	205.0598
256.20	205.0598
260.50	180.3423
260.90	180.3931
262.80	208.9485
264.65	165.2247
268.24	231.3042
268.79	208.8431
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269.46	213.8453
269.46	213.8453
269.46	213.8453
271.23	179.7301
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277.60	179.5256
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278.60	163.8546
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295.21	191.6104

295.21	191.6104
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300.09	144.1604
300.12	144.1626
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303.91	181.4428
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304.40	183.1041
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323.87	154.4423
323.87	154.4423
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334.20	153.7689
334.30	153.7781
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338.28	145.5318
338.28	145.5318
338.28	145.5318
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351.92	138.4247
351.92	138.4247
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391.69	122.4889
392.90	123.6252
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404.84	141.4140
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415.30	131.4870

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433.93	125.1687
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439.56	132.0097
439.89	133.1124
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445.03	112.8328
445.03	112.8328
445.03	112.8328
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476.78	100.2241
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511.85	101.8189
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513.99	93.1785
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569.50	86.2133
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602.71	62.3989
603.60	66.6259
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604.70	82.1569
609.31	77.3343

609.31	77.3343
609.31	77.3343
609.31	77.3343
610.33	74.5684
612.46	74.6289
614.37	76.2395
618.01	76.6588
621.84	73.9612
621.84	73.9612
631.29	62.0120
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636.97	70.6183
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661.65	84.5674
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695.00	71.1563
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722.89	67.9612
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756.15	56.9408
756.87	61.8649
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778.89	64.2875
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801.93	62.7693
805.60	58.8516
810.29	56.9402
810.76	59.9458
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826.30	55.2148
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836.80	0.0000
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875.33	0.0000
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884.67	66.4076
889.25	48.0821
896.60	54.3366
898.02	66.6663
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903.28	66.0341
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911.07	70.0055
911.07	70.0055
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935.52	66.3453
937.48	73.6417
944.10	72.7395
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949.00	61.3926
962.29	83.5488
964.01	67.9152
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969.11	96.2608
969.11	96.2608
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983.50	45.1679
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1001.68	48.5549
1004.76	73.9478
1021.30	0.0000
1024.50	0.0000
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1036.00	51.1242
1037.82	46.8854
1038.57	50.0936
1038.76	0.0000
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1046.59	55.5369
1048.07	59.8309

1050.47	59.8691
1050.47	59.8691
1062.04	52.5386
1063.62	60.0687
1076.63	46.2775
1077.35	35.5217
1078.86	29.0738
1085.78	38.8318
1099.22	44.3733
1112.02	69.4844
1112.84	69.2285
1115.52	56.1421
1120.29	50.0430
1120.29	50.0430
1120.29	50.0430
1120.29	50.0430
1120.51	50.0475
1121.28	50.0564
1124.00	0.0000
1129.67	53.4287
1131.51	0.0000
1147.95	0.0000
1167.94	59.6071
1173.22	58.7630
1175.09	57.8705
1177.93	63.4241
1189.05	70.9624
1204.90	72.1475
1205.75	0.0000
1213.00	85.2580
1221.42	86.3474
1230.97	83.7451
1235.34	92.2123
1236.41	0.0000
1238.25	63.3792
1246.25	50.4207
1260.41	0.0000
1271.85	41.3180
1274.45	46.0412
1274.54	46.0412
1291.56	41.4989
1298.22	0.0000
1312.09	39.7886
1325.50	42.7533
1325.50	42.7533
1332.49	32.3509
1333.61	39.9731
1360.21	22.0136
1362.66	0.0000
1365.15	27.7846
1368.21	18.2153
1368.53	0.0000
1376.25	35.5321
1384.27	26.9336
1394.10	23.1328
1395.20	27.9580
1407.95	25.1314
1434.06	18.4635
1436.60	19.4450
1457.56	0.0000
1460.81	17.5847
1489.15	18.6660
1509.49	18.7395
1596.49	27.0714
1620.62	12.0854
1678.03	0.0000
1691.02	14.2791
1691.02	14.2791
1706.46	0.0000
1750.46	0.0000
1764.49	8.2640
1764.49	8.2640
1764.49	8.2640
1764.49	8.2640
1770.23	14.1808
1771.40	45.5057
1791.20	0.0000
1808.65	10.4077

1836.01

24.0463

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440008

Total Uranium Activity	7.9124E+00	ug/g
Total Uranium Counting Unc.	5.8386E+00	ug/g
Total Uranium Tpu	2.9789E-06	ug/g
Total Uranium Mda	3.4972E+00	ug/g

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*****
*
*               GEL Laboratories LLC                      *
*               2040 SAVAGE ROAD                          *
*               CHARLESTON ,SC 29417                      *
*               GROSS GAMMA REPORT                        *
*
*****
*
*  BATCH ID      : 950788                                *
*  ANALYST       : MXR1                                  *
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00                *
*  ANALYSIS DATE : 19-FEB-2010 19:26:02.16                *
*  SAMPLE ID     : G246440008                             *
*  DETECTOR      : GAM01                                  *
*  COUNT TIME    : 0 02:00:00.00                         *
*  SAMPLE ALQT   : 140.800 GRAM                          *
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.486E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.344E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.852E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.380E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:50:36.56

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440009.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:50:03
Sample ID          : G246440009          Sample quantity  : 1.36190E+02 GRAM
Detector name      : GAM02              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:03.28  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 950788             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	63.01*	99	451	1.00	125.22	122	8	1.37E-02	40.6	
2	3	74.55	391	445	1.03	148.31	144	13	5.44E-02	9.9	5.69E-01
3	3	76.86	600	410	0.97	152.93	144	13	8.33E-02	6.8	
4	3	87.04*	206	433	1.10	173.30	161	30	2.86E-02	18.2	2.81E+00
5	3	89.72	214	417	1.24	178.66	161	30	2.97E-02	17.3	
6	3	92.39*	237	394	1.16	184.01	161	30	3.30E-02	17.5	
7	0	128.98	78	307	1.28	257.22	254	6	1.08E-02	37.3	
8	0	185.54*	237	430	1.33	370.40	365	12	3.30E-02	19.7	
9	0	209.41	150	472	1.27	418.16	411	14	2.08E-02	31.9	
10	4	238.40*	1300	237	1.10	476.18	471	19	1.81E-01	3.4	3.15E+00
11	4	241.47	344	255	1.72	482.31	471	19	4.78E-02	12.6	
12	0	269.82	123	230	1.09	539.05	534	10	1.71E-02	24.8	
13	5	294.95*	362	149	1.18	589.33	581	25	5.03E-02	7.8	1.66E+00
14	5	300.03	132	220	2.01	599.51	581	25	1.84E-02	25.0	
15	0	327.61	66	172	1.24	654.69	651	9	9.10E-03	38.1	
16	0	338.21*	283	212	1.31	675.91	670	14	3.93E-02	12.7	
17	0	351.60*	619	249	1.23	702.70	696	14	8.60E-02	6.8	
18	0	463.29	35	137	1.07	926.20	921	10	4.88E-03	64.6	
19	0	510.73*	127	191	2.05	1021.14	1016	16	1.77E-02	28.3	
20	0	582.83*	411	123	1.27	1165.42	1159	13	5.71E-02	7.6	
21	0	608.92*	371	201	1.80	1217.64	1212	15	5.16E-02	10.0	
22	0	661.61	33	67	1.32	1323.08	1318	9	4.60E-03	47.9	
23	0	727.43	81	136	1.60	1454.81	1448	16	1.12E-02	33.8	
24	0	860.16	62	70	1.74	1720.44	1713	15	8.57E-03	32.4	
25	0	910.59*	298	56	1.66	1821.37	1813	15	4.14E-02	8.1	
26	0	968.85*	129	125	1.52	1937.96	1931	13	1.79E-02	20.4	
27	0	1000.74*	37	49	1.19	2001.80	1995	14	5.11E-03	46.8	
28	0	1120.54*	72	89	1.49	2241.57	2234	14	9.96E-03	31.0	
29	0	1460.29*	1433	23	2.13	2921.58	2910	23	1.99E-01	2.8	
30	0	1589.89	29	26	0.56	3181.00	3173	20	4.05E-03	46.0	
31	0	1764.33*	76	9	2.03	3530.17	3524	14	1.06E-02	15.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 21:50:39

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440009.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 19:50:03
Sample ID        : G246440009             Sample quantity  : 136.19 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA2                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00          Elapsed real time: 0 02:00:03.28   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	*	3.601E+01	3.974E+00	5.219E-01	4.961E-02	69.006
CD-109	+	88.03	*	2.996E+00	1.132E+00	1.233E+00	1.238E-01	2.431
SN-126	+	64.28		1.118E+00	9.226E-01	8.466E-01	1.256E-01	1.321
	+	86.94		1.220E+00	6.754E-01	5.089E-01	2.120E-01	2.398
	+	87.57	*	2.935E-01	1.109E-01	1.215E-01	1.214E-02	2.417
BA-137M	+	661.65	*	4.909E-02	4.722E-02	6.314E-02	5.440E-03	0.777
CS-137	+	661.65	*	5.189E-02	4.992E-02	6.675E-02	5.762E-03	0.777
TL-208		277.35		4.777E-01	4.092E-01	7.125E-01	1.083E-01	0.670
	+	510.84		6.406E-01	3.720E-01	2.323E-01	3.009E-02	2.757
	+	583.14	*	5.871E-01	1.071E-01	6.132E-02	6.143E-03	9.574
	+	860.37		8.267E-01	5.421E-01	4.966E-01	5.235E-02	1.665
BI-211		72.87		8.034E+00	3.617E+00	5.895E+00	5.074E-01	1.363
	+	351.07	*	3.934E+00	7.023E-01	3.358E-01	3.874E-02	11.716
PB-212	+	74.81		2.491E+00	5.855E-01	5.742E-01	7.353E-02	4.338
	+	77.11		2.132E+00	3.477E-01	3.221E-01	2.880E-02	6.620
	+	87.30		1.358E+00	5.304E-01	5.636E-01	7.956E-02	2.409
	+	238.63	*	1.803E+00	2.584E-01	9.550E-02	1.202E-02	18.877
	+	300.09		2.838E+00	1.472E+00	1.248E+00	1.687E-01	2.273
PO-212	+	74.81		2.491E+00	5.855E-01	5.742E-01	7.353E-02	4.338
	+	77.11		2.132E+00	3.477E-01	3.221E-01	2.880E-02	6.620
	+	87.30		1.358E+00	5.304E-01	5.636E-01	7.956E-02	2.409
		115.19		-2.361E+00	3.777E+00	6.079E+00	5.111E-01	-0.388
	+	238.63	*	1.803E+00	2.584E-01	9.550E-02	1.202E-02	18.877
	+	300.09		2.838E+00	1.472E+00	1.248E+00	1.687E-01	2.273
BI-214	+	609.31	*	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
	+	1120.29		1.009E+00	6.349E-01	5.639E-01	6.139E-02	1.789
	+	1764.49		1.480E+00	4.724E-01	3.312E-01	2.807E-02	4.469
PB-214	+	74.81		4.292E+00	9.787E-01	9.893E-01	1.135E-01	4.338
	+	77.11		3.655E+00	6.580E-01	5.521E-01	6.486E-02	6.620
	+	87.30		2.326E+00	8.965E-01	9.655E-01	1.216E-01	2.409
	+	241.98		2.867E+00	8.160E-01	5.755E-01	7.529E-02	4.981
	+	295.21		1.364E+00	2.838E-01	2.186E-01	3.003E-02	6.242
	+	351.92	*	1.368E+00	2.545E-01	1.170E-01	1.480E-02	11.691
PO-214	+	74.81		4.292E+00	9.787E-01	9.893E-01	1.135E-01	4.338

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		3.655E+00	6.580E-01	5.521E-01	6.486E-02	6.620
	+	87.30		2.326E+00	8.965E-01	9.655E-01	1.216E-01	2.409
	+	241.98		2.867E+00	8.160E-01	5.755E-01	7.529E-02	4.981
	+	295.21		1.364E+00	2.838E-01	2.186E-01	3.003E-02	6.242
	+	351.92	*	1.368E+00	2.545E-01	1.170E-01	1.480E-02	11.691
	+	74.81		2.491E+00	5.855E-01	5.742E-01	7.353E-02	4.338
	+	77.11		2.132E+00	3.477E-01	3.221E-01	2.880E-02	6.620
	+	87.30		1.358E+00	5.304E-01	5.636E-01	7.956E-02	2.409
PO-218	+	238.63	*	1.803E+00	2.584E-01	9.550E-02	1.202E-02	18.877
	+	300.09		2.838E+00	1.472E+00	1.248E+00	1.687E-01	2.273
	+	74.81		4.292E+00	9.787E-01	9.893E-01	1.135E-01	4.338
	+	77.11		3.655E+00	6.580E-01	5.521E-01	6.486E-02	6.620
	+	87.30		2.326E+00	8.965E-01	9.655E-01	1.216E-01	2.409
	+	241.98		2.867E+00	8.160E-01	5.755E-01	7.529E-02	4.981
	+	295.21		1.364E+00	2.838E-01	2.186E-01	3.003E-02	6.242
	+	351.92	*	1.368E+00	2.545E-01	1.170E-01	1.480E-02	11.691
RA-224	+	240.98	*	5.436E+00	1.517E+00	1.087E+00	1.283E-01	4.999
RA-226	+	609.31	*	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
AC-228	+	1120.29		1.009E+00	6.349E-01	5.639E-01	6.139E-02	1.789
	+	1764.49		1.480E+00	4.724E-01	3.312E-01	2.807E-02	4.469
	+	338.32		1.985E+00	9.736E-01	3.880E-01	1.628E-01	5.116
	+	911.07	*	1.891E+00	3.867E-01	2.221E-01	2.769E-02	8.516
	+	969.11		1.439E+00	6.788E-01	3.572E-01	8.511E-02	4.028
	+	338.32		1.985E+00	9.736E-01	3.880E-01	1.628E-01	5.116
	+	911.07	*	1.891E+00	3.867E-01	2.221E-01	2.769E-02	8.516
	+	969.11		1.439E+00	6.788E-01	3.572E-01	8.511E-02	4.028
TH-228	+	74.81		2.534E+00	5.473E-01	5.842E-01	5.156E-02	4.338
TH-230	+	77.11		2.169E+00	3.538E-01	3.277E-01	2.930E-02	6.620
	+	87.30		1.381E+00	5.217E-01	5.734E-01	5.713E-02	2.409
	+	238.63	*	1.834E+00	2.629E-01	9.716E-02	1.223E-02	18.877
	+	300.09		2.887E+00	2.254E+00	1.270E+00	7.609E-01	2.273
	+	609.31	*	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
	+	1120.29		1.009E+00	6.349E-01	5.639E-01	6.139E-02	1.789
	+	1764.49		1.480E+00	4.724E-01	3.312E-01	2.807E-02	4.469
	+	338.32		1.985E+00	5.536E-01	3.880E-01	4.460E-02	5.116
TH-232	+	911.07	*	1.891E+00	3.867E-01	2.221E-01	2.769E-02	8.516
TH-234	+	969.11		1.439E+00	6.788E-01	3.572E-01	8.511E-02	4.028
	+	63.29	*	2.825E+00	2.347E+00	2.271E+00	4.010E-01	1.244
	+	92.38		2.169E+00	8.579E-01	7.894E-01	1.463E-01	2.747
	+	609.31	*	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
	+	1120.29		1.009E+00	6.349E-01	5.639E-01	6.139E-02	1.789
	+	1764.49		1.480E+00	4.724E-01	3.312E-01	2.807E-02	4.469
	+	86.50	*	8.620E-01	3.710E-01	3.616E-01	8.271E-02	2.384
	+	95.87		-1.936E-01	1.051E+00	1.557E+00	3.868E-01	-0.124
U-238	+	63.29	*	2.825E+00	2.347E+00	2.271E+00	4.010E-01	1.244
AM-243	+	92.38		2.169E+00	7.856E-01	7.894E-01	7.516E-02	2.747
	+	74.67	*	4.038E-01	8.709E-02	9.344E-02	8.171E-03	4.322
	+	86.72		3.233E+01	1.221E+01	1.352E+01	1.338E+00	2.391
		117.66		-2.691E-01	3.879E+00	6.381E+00	5.346E-01	-0.042

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	142.18			6.965E+00	1.975E+01	3.204E+01	2.899E+00	0.217
ANH-511	+	511.00	*	1.384E-01	7.952E-02	5.020E-02	4.976E-03	2.757

---- 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	*	6.704E-02	3.543E-01	5.799E-01	6.149E-02	0.116
NA-22		1274.54	*	2.856E-02	5.427E-02	9.325E-02	8.268E-03	0.306
NA-24		1368.53	*	2.292E+00	5.427E-02	Half-Life too short		
AL-26		1129.67		1.270E+00	2.082E+00	3.620E+00	3.093E-01	0.351
		1808.65	*	2.930E-02	3.108E-02	6.001E-02	4.968E-03	0.488
TI-44		67.85		-1.476E-02	4.715E-02	7.542E-02	6.222E-03	-0.196
		78.38	*	1.207E-01	5.165E-02	7.010E-02	6.346E-03	1.721
SC-46		889.25	*	8.641E-03	4.334E-02	7.163E-02	7.282E-03	0.121
	+	1120.51		1.758E-01	1.101E-01	1.440E-01	1.244E-02	1.221
V-48		944.10		7.133E-01	1.128E+00	1.923E+00	1.925E-01	0.371
		983.50	*	3.214E-02	8.607E-02	1.434E-01	1.403E-02	0.224
		1312.09		-4.226E-02	1.055E-01	1.657E-01	1.517E-02	-0.255
CR-51		320.08	*	-8.735E-02	4.271E-01	7.023E-01	8.568E-02	-0.124
MN-52		744.21		2.646E-01	3.645E-01	6.316E-01	5.818E-02	0.419
		848.13		3.856E+00	9.330E+00	1.577E+01	1.563E+00	0.245
		935.52		3.289E-01	3.867E-01	6.689E-01	6.724E-02	0.492
		1246.25		-3.901E+00	1.179E+01	1.890E+01	1.631E+00	-0.206
		1333.61		-3.446E+00	7.641E+00	1.185E+01	1.105E+00	-0.291
		1434.06	*	1.217E-01	3.152E-01	5.415E-01	5.037E-02	0.225
MN-54		834.83	*	-4.295E-03	4.086E-02	6.604E-02	6.488E-03	-0.065
CO-56		846.75	*	-1.202E-02	4.247E-02	6.731E-02	6.664E-03	-0.179
		977.42		1.267E+00	3.303E+00	5.511E+00	5.411E-01	0.230
		1037.82		6.279E-02	3.655E-01	6.208E-01	6.094E-02	0.101
		1175.09		1.498E+00	2.623E+00	4.544E+00	3.666E-01	0.330
		1238.25		1.550E-01	1.172E-01	2.087E-01	1.841E-02	0.742
		1360.21		-1.196E+00	1.166E+00	1.644E+00	1.533E-01	-0.727
		1771.40		-7.508E-01	3.295E-01	3.215E-01	2.715E-02	-2.335
CO-57		122.06	*	2.000E-02	2.591E-02	4.392E-02	3.671E-03	0.455
		136.48		-7.011E-02	2.226E-01	3.593E-01	3.393E-02	-0.195
CO-58		810.76	*	-4.643E-03	4.161E-02	6.734E-02	6.522E-03	-0.069
FE-59		142.65		2.041E+00	3.174E+00	5.198E+00	4.714E-01	0.393
		192.34		-2.827E-01	1.081E+00	1.708E+00	2.550E-01	-0.165
		1099.22	*	-5.707E-02	1.073E-01	1.703E-01	1.624E-02	-0.335
		1291.56		-1.037E-02	1.443E-01	2.353E-01	2.380E-02	-0.044
CO-60		1173.22		3.414E-03	5.290E-02	8.812E-02	7.097E-03	0.039
		1332.49	*	-9.782E-03	4.689E-02	7.505E-02	6.993E-03	-0.130
ZN-65		1115.52	*	-1.044E-02	1.263E-01	1.793E-01	1.560E-02	-0.058
GE-68		1077.35	*	-9.168E-01	1.553E+00	2.466E+00	2.234E-01	-0.372
AS-73		53.44	*	-3.707E-01	1.150E+00	1.909E+00	1.580E-01	-0.194
AS-74		595.88	*	9.142E-03	1.062E-01	1.792E-01	1.673E-02	0.051
		634.78		-1.636E-01	4.377E-01	7.102E-01	6.349E-02	-0.230
SE-75		66.05		1.019E+00	5.306E+00	8.187E+00	8.209E-01	0.124

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		96.73		-1.277E-01	8.599E-01	1.276E+00	1.781E-01	-0.100
		121.11		5.172E-02	1.405E-01	2.347E-01	2.586E-02	0.220
		136.00		1.540E-02	4.172E-02	6.925E-02	6.129E-03	0.222
		198.60		-6.758E-01	2.033E+00	3.179E+00	3.722E-01	-0.213
		264.65	*	-2.361E-02	5.377E-02	7.742E-02	9.464E-03	-0.305
		279.53		-6.358E-02	1.190E-01	1.942E-01	2.451E-02	-0.327
		303.91		-9.390E-01	2.382E+00	3.384E+00	4.837E-01	-0.278
		400.65		-9.451E-02	2.839E-01	4.542E-01	5.560E-02	-0.208
BR-77	+	87.88		1.229E+03	4.642E+02	6.424E+02	6.444E+01	1.913
		200.40		-7.316E+01	3.438E+02	5.433E+02	5.970E+01	-0.135
	+	239.00		5.515E+02	7.507E+01	7.897E+01	9.291E+00	6.983
		249.79		-9.712E+01	1.332E+02	2.168E+02	2.592E+01	-0.448
		281.68		-6.024E+01	1.801E+02	2.968E+02	3.674E+01	-0.203
		297.23		2.377E+02	1.128E+02	2.002E+02	2.445E+01	1.187
		303.76		-1.413E+02	3.818E+02	5.439E+02	6.596E+01	-0.260
		439.47		5.091E+01	3.059E+02	5.025E+02	5.062E+01	0.101
		484.57		4.155E+01	4.831E+02	7.838E+02	7.844E+01	0.053
		520.65	*	3.986E+00	2.282E+01	3.704E+01	3.655E+00	0.108
		574.64		1.620E+02	4.022E+02	6.795E+02	6.469E+01	0.238
		578.91		9.541E+01	1.961E+02	3.003E+02	2.848E+01	0.318
		585.48		1.692E+03	4.619E+02	8.192E+02	7.724E+01	2.065
		755.35		3.828E+02	3.369E+02	6.017E+02	5.590E+01	0.636
		817.79		-9.777E+01	2.738E+02	4.323E+02	4.199E+01	-0.226
SR-82		698.33		-1.985E+01	4.187E+01	6.693E+01	5.947E+00	-0.297
		776.49	*	-4.341E-01	4.585E-01	6.897E-01	6.508E-02	-0.629
		1395.20		4.376E-01	1.239E+01	2.030E+01	1.893E+00	0.022
RB-83		520.41	*	-8.265E-03	8.124E-02	1.292E-01	1.275E-02	-0.064
		529.64		-7.572E-02	1.172E-01	1.772E-01	1.740E-02	-0.427
		552.65		-1.462E-01	2.115E-01	3.384E-01	3.276E-02	-0.432
RB-84		881.50	*	-2.742E-02	8.370E-02	1.317E-01	1.332E-02	-0.208
KR-85		513.99	*	1.143E+01	8.985E+00	1.398E+01	1.384E+00	0.818
SR-85		513.99	*	6.000E-02	4.715E-02	7.335E-02	7.261E-03	0.818
RB-86		1076.63	*	-7.761E-01	1.079E+00	1.693E+00	1.535E-01	-0.458
Y-88		898.02		-2.628E-02	4.955E-02	7.517E-02	7.709E-03	-0.350
		1836.01	*	3.373E-03	3.605E-02	6.063E-02	4.945E-03	0.056
ZR-88		392.90	*	-1.798E-03	3.633E-02	5.936E-02	5.940E-03	-0.030
Y-91		1204.90	*	4.153E+00	2.375E+01	3.977E+01	3.303E+00	0.104
NB-94		702.63	*	1.438E-02	3.732E-02	6.344E-02	5.656E-03	0.227
		871.10		-3.722E-02	3.836E-02	5.616E-02	5.646E-03	-0.663
NB-95		765.79	*	2.983E-02	5.612E-02	9.521E-02	8.914E-03	0.313
NB-95M		235.69	*	1.020E-01	1.525E-01	2.361E-01	2.987E-02	0.432
ZR-95		724.18		6.941E-02	1.259E-01	1.899E-01	1.857E-02	0.366
		756.15	*	8.764E-02	7.816E-02	1.393E-01	1.408E-02	0.629
NB-97		657.90	*	1.197E-01	7.816E-02	Half-Life	too short	
		1024.50		-3.262E+01	7.816E-02	Half-Life	too short	
ZR-97		254.15		5.494E+01	7.816E-02	Half-Life	too short	
		355.39		2.205E+01	7.816E-02	Half-Life	too short	
		507.63	*	1.392E+01	7.816E-02	Half-Life	too short	
		602.52		-6.964E+01	7.816E-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
	1021.30			-3.150E+01	7.816E-02	Half-Life	too short	
	1147.95			1.674E+01	7.816E-02	Half-Life	too short	
	1362.66			-7.418E+01	7.816E-02	Half-Life	too short	
	1750.46			-5.687E+01	7.816E-02	Half-Life	too short	
MO-99	140.51			-2.363E+01	4.991E+01	7.926E+01	2.204E+01	-0.298
	181.06			-1.700E+01	3.636E+01	5.036E+01	9.712E+00	-0.338
	366.43			-1.287E+01	1.521E+02	2.491E+02	2.687E+01	-0.052
	739.58	*		-3.487E-01	2.279E+01	3.751E+01	5.818E+00	-0.009
	778.00			-2.169E+01	6.564E+01	1.047E+02	9.889E+00	-0.207
TC-99M	140.51	*		-8.826E+12	6.564E+01	Half-Life	too short	
RH-101	127.23			1.981E-02	3.781E-02	5.699E-02	4.837E-03	0.348
	198.01	*		7.061E-03	3.550E-02	5.695E-02	6.229E-03	0.124
	325.23			-2.887E-03	2.658E-01	3.880E-01	4.565E-02	-0.007
RH-102	418.52			-3.455E-02	3.104E-01	5.023E-01	5.054E-02	-0.069
	475.06	*		-7.997E-03	3.058E-02	4.836E-02	4.851E-03	-0.165
	631.29			1.590E-02	5.892E-02	1.003E-01	9.003E-03	0.159
	697.49			-2.184E-02	8.649E-02	1.406E-01	1.248E-02	-0.155
	766.84			1.739E-01	1.459E-01	2.553E-01	2.392E-02	0.681
	1046.59			-2.120E-02	1.312E-01	2.165E-01	2.018E-02	-0.098
	1112.84			4.959E-02	3.157E-01	4.607E-01	4.017E-02	0.108
RU-103	497.08	*		2.528E-02	4.499E-02	7.391E-02	1.110E-02	0.342
+	610.33			1.121E+01	2.952E+00	3.112E+00	5.289E-01	3.603
RH-106	511.85	+		6.940E-01	3.989E-01	4.771E-01	4.727E-02	1.455
	621.84	*		1.974E-01	3.403E-01	5.907E-01	8.069E-02	0.334
	1050.47			8.557E-01	2.546E+00	4.381E+00	4.071E-01	0.195
RU-106	511.85	+		6.940E-01	3.989E-01	4.771E-01	4.727E-02	1.455
	621.84	*		1.974E-01	3.397E-01	5.907E-01	5.364E-02	0.334
	1050.47			8.557E-01	2.546E+00	4.381E+00	4.070E-01	0.195
AG-108M	433.93	*		-1.877E-02	3.572E-02	5.545E-02	5.749E-03	-0.338
	614.37			1.140E-02	4.983E-02	7.406E-02	7.019E-03	0.154
	722.95			5.909E-03	4.916E-02	7.135E-02	6.695E-03	0.083
AG-110M	657.75	*		4.467E-03	3.950E-02	5.785E-02	5.160E-03	0.077
	677.61			1.719E-01	3.111E-01	5.389E-01	4.835E-02	0.319
	706.67			-2.633E-02	2.324E-01	3.812E-01	3.497E-02	-0.069
	763.93			-3.058E-01	2.050E-01	2.962E-01	2.836E-02	-1.032
	884.67			-1.840E-02	5.422E-02	8.502E-02	8.821E-03	-0.216
	937.48			-5.273E-02	1.319E-01	2.050E-01	2.114E-02	-0.257
	1384.27			-4.927E-02	1.866E-01	2.946E-01	2.813E-02	-0.167
IN-111	171.28			1.070E+00	1.815E+00	3.001E+00	3.111E-01	0.357
	245.39	*		-4.660E-01	2.037E+00	2.998E+00	3.561E-01	-0.155
IN-113M	391.69	*		-3.608E-04	5.160E-02	8.454E-02	8.651E-03	-0.004
SN-113	391.69	*		-3.608E-04	5.160E-02	8.454E-02	8.651E-03	-0.004
IN-114M	190.27	*		2.445E-01	2.236E-01	3.380E-01	3.640E-02	0.723
CD-115	260.90			1.565E+02	2.749E+02	4.746E+02	5.760E+01	0.330
	492.35			-6.249E+01	7.643E+01	1.145E+02	1.143E+01	-0.546
	527.90	*		2.032E-01	2.373E+01	3.802E+01	3.737E+00	0.005
SN-117M	156.02			2.356E-02	2.730E+00	4.432E+00	4.306E-01	0.005
	158.56	*		-2.632E-02	6.554E-02	1.043E-01	1.028E-02	-0.252
SB-122	563.90	*		1.226E+00	4.042E+00	6.935E+00	6.659E-01	0.177

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-123	692.80			4.670E+01	8.361E+01	1.440E+02	1.274E+01	0.324
	159.00	*		-3.784E+01	8.361E+01	Half-Life	too short	
	528.96			-5.232E+03	8.361E+01	Half-Life	too short	
TE-123M	159.00	*		-1.152E-02	3.037E-02	4.836E-02	4.797E-03	-0.238
I-124	602.71	*		-1.338E+00	1.241E+00	1.608E+00	1.491E-01	-0.832
	722.78			1.184E+00	7.429E+00	1.083E+01	9.811E-01	0.109
	1325.50			1.874E+01	5.953E+01	1.008E+02	9.332E+00	0.186
SB-124	1376.25			8.701E+01	5.777E+01	1.068E+02	9.958E+00	0.815
	1509.49			2.232E+01	2.554E+01	4.602E+01	4.242E+00	0.485
	1691.02			-6.316E+00	5.297E+00	6.475E+00	5.672E-01	-0.975
	602.71			-5.531E-02	5.129E-02	6.646E-02	6.165E-03	-0.832
	645.85			3.739E-01	5.646E-01	9.838E-01	9.167E-02	0.380
	709.31			-3.813E-01	3.189E+00	5.226E+00	4.685E-01	-0.073
	713.82			6.738E-01	1.889E+00	3.203E+00	3.943E-01	0.210
	722.78			7.091E-02	4.451E-01	6.487E-01	5.993E-02	0.109
	+	968.20		1.519E+01	6.365E+00	8.477E+00	8.370E-01	1.792
	1045.16			-9.891E-01	2.950E+00	4.796E+00	4.477E-01	-0.206
	1325.50			1.199E+00	3.809E+00	6.447E+00	5.971E-01	0.186
	1368.21			-1.873E-01	2.287E+00	3.703E+00	5.161E-01	-0.051
	1436.60			-1.548E+00	4.093E+00	6.280E+00	5.841E-01	-0.246
SB-125	1691.02	*		-8.925E-02	7.489E-02	9.150E-02	8.322E-03	-0.975
	427.89	*		4.819E-02	1.016E-01	1.704E-01	1.740E-02	0.283
	+	463.38		3.466E-01	4.493E-01	5.668E-01	6.030E-02	0.612
	600.56			3.343E-02	1.893E-01	3.210E-01	3.174E-02	0.104
TE-125M	635.90			-1.765E-01	3.179E-01	5.090E-01	4.887E-02	-0.347
	109.28	*		7.138E+00	9.842E+00	1.671E+01	1.714E+00	0.427
	388.63			2.449E-01	2.516E-01	4.349E-01	4.395E-02	0.563
I-126	666.33	*		5.810E-02	2.375E-01	3.521E-01	3.046E-02	0.165
	753.82			-2.797E-01	1.784E+00	2.896E+00	2.687E-01	-0.097
	223.80			4.009E+00	5.117E+00	8.390E+00	9.629E-01	0.478
SB-126	278.60			1.959E+00	3.007E+00	5.183E+00	6.424E-01	0.378
	296.50			1.193E+01	2.518E+00	4.134E+00	5.052E-01	2.886
	414.70			1.324E-02	8.893E-02	1.466E-01	1.474E-02	0.090
	415.30			1.205E+00	7.391E+00	1.219E+01	1.226E+00	0.099
	555.20			1.394E+00	4.508E+00	7.765E+00	7.504E-01	0.180
	573.80			4.240E-01	1.168E+00	2.014E+00	1.918E-01	0.211
	593.00			6.047E-02	1.070E+00	1.802E+00	1.687E-01	0.034
	656.30			-5.648E-01	4.342E+00	6.180E+00	5.366E-01	-0.091
	666.33			2.440E-02	9.974E-02	1.479E-01	1.279E-02	0.165
	675.00			-4.509E-01	2.429E+00	3.912E+00	3.409E-01	-0.115
	695.00			4.956E-02	9.922E-02	1.700E-01	1.506E-02	0.292
	697.00			-1.508E-01	3.501E-01	5.616E-01	4.984E-02	-0.269
	720.50	*		2.156E-02	2.055E-01	2.977E-01	2.693E-02	0.072
	856.80			2.455E-01	6.797E-01	9.979E-01	9.944E-02	0.246
	989.30			-5.847E-01	1.599E+00	2.471E+00	2.408E-01	-0.237
	1034.80			2.832E+00	1.166E+01	1.991E+01	1.875E+00	0.142
	1213.00			3.466E+00	6.568E+00	1.126E+01	9.426E-01	0.308
SB-127	61.10			-5.303E+01	1.067E+02	1.596E+02	1.785E+01	-0.332
	252.40			-1.737E+00	6.878E+00	1.142E+01	4.914E+00	-0.152

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error (pCi/GRAM)	MDA (pCi/GRAM)	MDA error	Act/MDA
	290.80		-2.594E+01	3.872E+01	5.412E+01	7.971E+00	-0.479
	411.60		-2.546E+01	2.090E+01	3.071E+01	5.228E+00	-0.829
	444.90		-8.451E+00	1.597E+01	2.487E+01	3.517E+00	-0.340
	473.00		-9.794E-01	2.707E+00	4.248E+00	6.122E-01	-0.231
	543.00		-2.464E+00	2.707E+01	4.291E+01	6.696E+00	-0.057
	603.60		-6.697E+00	2.161E+01	3.053E+01	4.138E+00	-0.219
	685.20	*	1.382E+00	2.142E+00	3.718E+00	4.526E-01	0.372
	698.50		-8.593E+00	2.588E+01	4.177E+01	6.871E+00	-0.206
	722.20		1.876E+01	5.287E+01	7.866E+01	9.569E+00	0.239
	783.80		2.582E+00	6.175E+00	1.044E+01	1.422E+00	0.247
XE-127	57.60		-7.535E-01	7.754E+00	1.319E+01	1.015E+00	-0.057
	145.22		-1.747E-02	7.690E-01	1.252E+00	1.150E-01	-0.014
	172.10		5.716E-02	1.284E-01	2.111E-01	2.192E-02	0.271
	202.84	*	1.854E-02	5.645E-02	8.709E-02	9.616E-03	0.213
	374.96		-2.260E-01	2.299E-01	3.529E-01	3.719E-02	-0.640
I-131	80.18		8.092E-01	7.349E+00	8.922E+00	8.284E-01	0.091
	284.30		-9.905E-01	1.939E+00	3.160E+00	4.009E-01	-0.313
	364.48	*	-1.816E-02	1.419E-01	2.318E-01	2.603E-02	-0.078
	636.97		9.526E-01	2.138E+00	3.672E+00	3.451E-01	0.259
	722.89		1.289E+00	1.002E+01	1.456E+01	1.329E+00	0.089
TE-132	49.72		2.311E+01	4.751E+01	7.544E+01	8.740E+00	0.306
	111.76		-1.813E+01	5.057E+01	8.246E+01	9.362E+00	-0.220
	116.30		-1.166E+01	4.572E+01	7.468E+01	8.435E+00	-0.156
	228.16	*	-2.917E-01	1.242E+00	1.939E+00	3.468E-01	-0.150
BA-133	53.15		1.277E+00	4.802E+00	8.147E+00	6.779E-01	0.157
	79.62		-4.968E-01	1.761E+00	2.075E+00	3.225E-01	-0.239
	81.00		-6.494E-02	1.322E-01	1.527E-01	2.482E-02	-0.425
	276.40		4.392E-01	4.014E-01	6.960E-01	1.180E-01	0.631
	302.84		2.694E-02	1.609E-01	2.395E-01	3.783E-02	0.113
	356.01	*	1.447E-02	5.113E-02	7.579E-02	1.131E-02	0.191
	383.85		5.746E-02	3.326E-01	5.515E-01	7.598E-02	0.104
I-133	510.53	+	8.241E+00	3.326E-01	Half-Life	too short	
	529.87	*	-3.659E-02	3.326E-01	Half-Life	too short	
	706.58		-3.028E-01	3.326E-01	Half-Life	too short	
	856.28		1.100E+00	3.326E-01	Half-Life	too short	
	875.33		4.044E-01	3.326E-01	Half-Life	too short	
	1236.41		6.310E+00	3.326E-01	Half-Life	too short	
	1298.22		-5.945E-02	3.326E-01	Half-Life	too short	
CS-134	475.35		-1.067E+00	2.076E+00	3.217E+00	3.227E-01	-0.332
	563.23		3.321E-01	3.918E-01	6.934E-01	6.712E-02	0.479
	569.32		-3.273E-02	2.013E-01	3.348E-01	3.237E-02	-0.098
	604.70		-7.211E-03	4.295E-02	6.161E-02	5.714E-03	-0.117
	795.84	*	5.294E-02	5.377E-02	9.420E-02	9.065E-03	0.562
	801.93		1.823E-01	4.707E-01	7.931E-01	7.654E-02	0.230
	1038.57		-2.199E+00	4.663E+00	7.499E+00	7.040E-01	-0.293
	1167.94		4.255E-01	2.952E+00	4.951E+00	4.018E-01	0.086
	1365.15		3.700E-02	1.447E+00	2.373E+00	2.299E-01	0.016
CS-135	268.24	*	3.127E-01	1.952E-01	3.115E-01	4.121E-02	1.004
I-135	288.45		-1.505E+12	1.952E-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
		417.63		-1.527E+12	1.952E-01	Half-Life	too short	
		546.56		4.544E+11	1.952E-01	Half-Life	too short	
		836.80		8.256E+11	1.952E-01	Half-Life	too short	
		1038.76		-2.907E+12	1.952E-01	Half-Life	too short	
		1124.00		-3.078E+12	1.952E-01	Half-Life	too short	
		1131.51		3.796E+11	1.952E-01	Half-Life	too short	
		1260.41	*	-6.286E+11	1.952E-01	Half-Life	too short	
		1457.56		2.872E+14	1.952E-01	Half-Life	too short	
		1678.03		1.331E+11	1.952E-01	Half-Life	too short	
		1706.46		-3.267E+12	1.952E-01	Half-Life	too short	
		1791.20		2.203E+12	1.952E-01	Half-Life	too short	
CS-136		66.91		-3.151E-01	9.674E-01	1.452E+00	2.207E-01	-0.217
	+	86.29		4.304E+00	1.676E+00	2.270E+00	3.112E-01	1.896
		153.22		5.123E-02	8.066E-01	1.314E+00	1.379E-01	0.039
		163.89		1.446E-01	1.338E+00	2.128E+00	2.350E-01	0.068
		176.55		4.468E-04	4.408E-01	7.097E-01	7.730E-02	0.001
		273.65		-7.521E-01	6.243E-01	8.400E-01	1.069E-01	-0.895
		340.57		2.041E-01	1.576E-01	2.500E-01	2.909E-02	0.816
		818.51		1.584E-03	9.227E-02	1.510E-01	1.469E-02	0.010
		1048.07	*	3.620E-02	1.367E-01	2.338E-01	2.257E-02	0.155
		1235.34		5.025E-01	8.372E-01	1.434E+00	1.692E-01	0.350
CE-139		165.85	*	6.955E-03	3.212E-02	5.241E-02	5.376E-03	0.133
BA-140		162.64		2.745E-01	9.333E-01	1.496E+00	1.572E-01	0.184
		304.84		-8.206E-01	1.671E+00	2.334E+00	6.836E-01	-0.352
		423.70		-2.152E+00	2.483E+00	3.640E+00	1.195E+00	-0.591
		537.32	*	-2.288E-01	3.185E-01	4.626E-01	1.548E-01	-0.495
LA-140	+	328.77		6.396E-01	4.933E-01	6.655E-01	8.025E-02	0.961
		432.53		6.411E-01	2.507E+00	4.148E+00	4.328E-01	0.155
		487.03		-1.038E-01	1.712E-01	2.626E-01	2.747E-02	-0.395
		751.79		-9.404E-01	2.062E+00	3.258E+00	3.299E-01	-0.289
		815.85		-1.006E-02	3.927E-01	6.403E-01	6.782E-02	-0.016
		867.82		1.441E+00	1.795E+00	2.974E+00	3.102E-01	0.484
		919.63		9.303E-01	3.527E+00	5.844E+00	6.955E-01	0.159
		925.24		-2.008E-01	1.390E+00	2.213E+00	2.339E-01	-0.091
		1596.49	*	-5.570E-02	1.206E-01	1.553E-01	1.405E-02	-0.359
CE-141		145.44	*	-1.182E-02	6.977E-02	1.129E-01	1.055E-02	-0.105
CE-143		57.37		-2.728E-04	6.977E-02	Half-Life	too short	
		231.56		2.516E-04	6.977E-02	Half-Life	too short	
		293.26	*	2.655E-03	6.977E-02	Half-Life	too short	
	+	350.59		9.498E-02	6.977E-02	Half-Life	too short	
		490.36		3.855E-03	6.977E-02	Half-Life	too short	
		664.57		1.658E-03	6.977E-02	Half-Life	too short	
		721.93		1.983E-03	6.977E-02	Half-Life	too short	
CE-144		80.11		3.367E-01	2.813E+00	3.418E+00	3.148E-01	0.099
		133.54	*	-3.337E-02	2.160E-01	3.514E-01	5.486E-02	-0.095
PM-144		476.78		-1.754E-02	7.262E-02	1.150E-01	1.234E-02	-0.152
		618.01		-2.285E-04	3.721E-02	6.059E-02	5.664E-03	-0.004
		696.49	*	-1.381E-02	3.956E-02	6.385E-02	5.666E-03	-0.216
		778.57		-1.295E+00	2.543E+00	3.988E+00	3.770E-01	-0.325

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144		696.49	*	-9.371E-01	2.684E+00	4.331E+00	3.843E-01	-0.216
		1489.15		-1.019E+01	1.254E+01	1.743E+01	1.612E+00	-0.585
PM-146		453.90	*	6.879E-02	4.816E-02	8.446E-02	1.007E-02	0.814
		633.02		-8.858E-01	1.564E+00	2.442E+00	9.146E-01	-0.363
		735.90		-9.873E-02	1.774E-01	2.575E-01	7.408E-02	-0.383
		747.13		1.599E-02	1.035E-01	1.724E-01	2.487E-02	0.093
ND-147	+	91.11		1.254E+00	4.566E-01	6.630E-01	6.827E-02	1.892
		319.41		-7.374E-01	4.113E+00	6.773E+00	8.044E-01	-0.109
		439.89		1.073E+00	7.609E+00	1.248E+01	1.257E+00	0.086
		531.02	*	-4.498E-01	6.884E-01	1.034E+00	1.621E-01	-0.435
PM-149		285.90	*	2.039E+02	1.974E+02	3.419E+02	6.115E+01	0.596
EU-152		121.78		6.558E-02	7.522E-02	1.278E-01	1.239E-02	0.513
		244.69		-1.446E-01	3.802E-01	5.542E-01	6.577E-02	-0.261
		344.27	*	2.360E-03	1.148E-01	1.558E-01	1.832E-02	0.015
		443.98		-3.612E-01	1.055E+00	1.671E+00	1.683E-01	-0.216
		778.89		-1.719E-02	2.849E-01	4.650E-01	4.395E-02	-0.037
		867.32		7.902E-01	9.698E-01	1.562E+00	1.567E-01	0.506
		964.01		3.714E-01	3.980E-01	6.075E-01	6.013E-02	0.611
		1085.78		-5.197E-01	4.511E-01	6.690E-01	6.009E-02	-0.777
		1112.02		1.734E-01	4.100E-01	6.585E-01	5.746E-02	0.263
		1407.95		5.673E-02	2.106E-01	3.544E-01	3.302E-02	0.160
GD-153		69.67		-1.496E+00	1.739E+00	2.710E+00	2.270E-01	-0.552
		83.37		1.610E+01	1.486E+01	2.541E+01	2.422E+00	0.634
		97.43	*	-3.131E-03	9.105E-02	1.348E-01	1.225E-02	-0.023
		103.18		-7.042E-02	1.089E-01	1.762E-01	1.542E-02	-0.400
EU-154		123.07		-4.027E-02	5.368E-02	8.527E-02	9.532E-03	-0.472
		247.94		1.526E-01	3.971E-01	6.374E-01	9.004E-02	0.239
		591.81		-3.274E-01	6.382E-01	1.028E+00	1.258E-01	-0.319
		723.30		-7.674E-02	2.163E-01	2.970E-01	2.950E-02	-0.258
		756.87		8.500E-01	8.256E-01	1.460E+00	1.821E-01	0.582
		873.19		-2.698E-01	3.491E-01	5.236E-01	6.966E-02	-0.515
		996.32		-9.159E-02	4.711E-01	6.323E-01	1.158E-01	-0.145
		1004.76		-1.611E-01	2.313E-01	2.978E-01	3.697E-02	-0.541
		1274.45	*	8.455E-02	1.520E-01	2.615E-01	3.006E-02	0.323
EU-155		48.70		-2.316E+00	4.031E+00	6.064E+00	5.369E-01	-0.382
		60.01		3.558E+00	6.287E+00	9.911E+00	7.478E-01	0.359
	+	86.54		3.538E-01	1.337E-01	1.883E-01	1.874E-02	1.879
		105.31	*	1.154E-01	1.127E-01	1.934E-01	1.695E-02	0.597
TB-160	+	86.79		9.646E-01	3.643E-01	5.161E-01	5.112E-02	1.869
		197.04		-4.165E-02	6.219E-01	9.857E-01	1.076E-01	-0.042
		215.65		4.907E-01	8.940E-01	1.388E+00	1.570E-01	0.353
	+	298.57		4.218E-01	2.173E-01	2.265E-01	2.762E-02	1.862
		879.36	*	4.937E-02	1.647E-01	2.744E-01	2.773E-02	0.180
		962.29		4.180E-02	7.665E-01	1.070E+00	1.061E-01	0.039
		966.15		1.303E+00	3.516E-01	6.083E-01	6.014E-02	2.141
		1177.93		-2.887E-01	4.452E-01	6.974E-01	5.642E-02	-0.414
		1271.85		-4.027E-01	9.297E-01	1.470E+00	1.299E-01	-0.274
HO-166M		80.57		-1.174E-01	3.668E-01	4.309E-01	3.987E-02	-0.273
	+	184.41		1.716E-01	7.015E-02	7.775E-02	8.276E-03	2.207

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		280.46		-4.323E-02	9.184E-02	1.504E-01	1.863E-02	-0.288
		410.95		1.404E-01	2.705E-01	4.553E-01	4.575E-02	0.308
		711.68	*	-3.354E-03	6.953E-02	1.145E-01	1.029E-02	-0.029
		752.31		-1.491E-01	2.935E-01	4.615E-01	4.278E-02	-0.323
		810.29		-2.327E-02	6.294E-02	9.937E-02	9.602E-03	-0.234
		51.35		-1.016E+01	4.201E+01	7.140E+01	6.129E+00	-0.142
		52.39		1.074E+01	2.157E+01	3.691E+01	3.113E+00	0.291
		59.40		3.320E+01	3.436E+01	5.510E+01	4.124E+00	0.603
		66.72	*	-2.412E+00	3.104E+01	4.723E+01	3.859E+00	-0.051
		88.36		6.962E-01	2.629E-01	3.596E-01	3.594E-02	1.936
LU-176	+	201.83		-8.271E-03	3.159E-02	4.977E-02	5.485E-03	-0.166
		306.84	*	5.546E-04	2.619E-02	4.229E-02	5.109E-03	0.013
		401.10		-2.078E+00	7.257E+00	1.165E+01	1.168E+00	-0.178
		112.95		1.990E+00	2.159E+00	3.682E+00	3.110E-01	0.541
LU-177	+	208.36	*	4.621E+00	2.996E+00	2.641E+00	2.947E-01	1.750
		52.97		5.335E-01	2.201E+00	3.731E+00	3.115E-01	0.143
LU-177M		54.07		-8.251E-01	1.141E+00	1.860E+00	1.522E-01	-0.444
		61.30		-9.250E-01	1.862E+00	2.787E+00	2.147E-01	-0.332
HF-181		121.62		4.173E-01	3.881E-01	6.643E-01	5.547E-02	0.628
		147.16		-5.339E-01	6.869E-01	1.079E+00	1.000E-01	-0.495
		171.86		1.127E-01	5.125E-01	8.348E-01	8.664E-02	0.135
		218.09		-1.139E-01	9.696E-01	1.530E+00	1.738E-01	-0.074
	+	268.79		2.640E+00	1.347E+00	1.674E+00	2.051E-01	1.577
		319.02		-7.451E-02	2.785E-01	4.562E-01	5.421E-02	-0.163
		367.43		6.184E-01	9.863E-01	1.682E+00	1.810E-01	0.368
		413.65	*	1.276E-03	1.839E-01	3.003E-01	3.020E-02	0.004
		56.28		-2.992E-02	1.207E+00	2.062E+00	1.622E-01	-0.015
		57.53		-3.524E-02	6.507E-01	1.109E+00	8.541E-02	-0.032
W-181		65.20		-1.391E-01	1.094E+00	1.663E+00	1.340E-01	-0.084
		133.02		-4.088E-02	7.569E-02	1.151E-01	9.990E-03	-0.355
		136.25		-8.458E-02	5.055E-01	8.212E-01	7.228E-02	-0.103
		345.85		-1.430E-01	2.453E-01	3.113E-01	3.525E-02	-0.459
		482.03	*	1.545E-02	4.870E-02	8.032E-02	8.044E-03	0.192
		56.28		-1.120E-02	4.617E-01	7.884E-01	6.201E-02	-0.014
TA-182		57.53		-1.317E-02	2.490E-01	4.244E-01	3.269E-02	-0.031
		65.20	*	-5.282E-02	4.154E-01	6.315E-01	5.088E-02	-0.084
		67.75		-4.480E-02	1.146E-01	1.827E-01	1.506E-02	-0.245
RE-183		100.10		1.553E-02	1.801E-01	3.008E-01	2.681E-02	0.052
		152.43		2.986E-01	3.639E-01	6.095E-01	5.810E-02	0.490
		222.10		2.384E-03	3.984E-01	6.317E-01	7.228E-02	0.004
	+	1001.68		3.746E+00	3.522E+00	4.223E+00	4.079E-01	0.887
	+	1121.28		4.833E-01	3.025E-01	3.885E-01	3.353E-02	1.244
		1189.05		-4.197E-01	3.774E-01	5.643E-01	4.615E-02	-0.744
RE-183		1221.42	*	1.055E-01	2.479E-01	4.219E-01	3.558E-02	0.250
		1230.97		-4.010E-01	5.970E-01	9.332E-01	7.943E-02	-0.430
		57.98		-2.415E-02	2.452E-01	4.171E-01	3.189E-02	-0.058
		59.32		1.084E-01	1.460E-01	2.320E-01	1.738E-02	0.467
		67.20		-6.113E-02	2.235E-01	3.366E-01	2.762E-02	-0.182
		162.32	*	1.251E-02	1.231E-01	1.957E-01	1.968E-02	0.064

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184	+	208.81		3.379E+00	2.191E+00	1.957E+00	2.186E-01	1.727
		291.72		1.191E-01	1.128E+00	1.675E+00	2.057E-01	0.071
		57.98		-8.785E-02	8.919E-01	1.517E+00	1.160E-01	-0.058
		59.32		3.940E-01	5.308E-01	8.433E-01	6.319E-02	0.467
		67.20		-2.223E-01	8.128E-01	1.224E+00	1.004E-01	-0.182
		161.27		-3.956E-01	3.856E-01	5.927E-01	5.927E-02	-0.667
		216.55		2.830E-01	2.975E-01	4.917E-01	5.570E-02	0.576
		252.85	*	-1.768E-02	2.505E-01	4.219E-01	5.066E-02	-0.042
		318.01		-1.229E-01	4.802E-01	7.873E-01	9.369E-02	-0.156
		792.07		-1.152E+00	1.194E+00	1.787E+00	1.705E-01	-0.645
OS-185		903.28		1.321E+00	1.243E+00	1.969E+00	2.008E-01	0.671
		920.93		2.066E-01	5.019E-01	8.429E-01	8.532E-02	0.245
		59.72		4.335E-01	3.764E-01	6.083E-01	4.565E-02	0.713
		61.14		-1.029E-01	2.070E-01	3.099E-01	2.381E-02	-0.332
		69.30		-2.542E-01	2.984E-01	4.887E-01	4.082E-02	-0.520
		592.07		-1.599E+00	2.671E+00	4.275E+00	4.007E-01	-0.374
		646.12	*	1.247E-02	4.869E-02	8.259E-02	7.275E-03	0.151
		717.42		-7.430E-01	1.031E+00	1.604E+00	1.447E-01	-0.463
		874.81		7.783E-02	6.645E-01	1.091E+00	1.099E-01	0.071
		880.27		5.684E-01	8.749E-01	1.502E+00	1.519E-01	0.378
RE-188		155.03	*	-7.462E-02	1.909E-01	3.046E-01	2.944E-02	-0.245
		477.96		3.513E-01	3.408E+00	5.542E+00	5.556E-01	0.063
		633.10		-1.868E+00	3.158E+00	5.032E+00	4.508E-01	-0.371
W-188	+	63.58		1.161E+02	9.466E+01	1.154E+02	9.143E+00	1.006
		227.08		5.887E+00	1.432E+01	2.312E+01	2.668E+00	0.255
IR-192		290.67	*	-6.053E+00	9.200E+00	1.289E+01	1.584E+00	-0.470
	+	295.96		1.062E+00	2.110E-01	3.084E-01	3.785E-02	3.443
		308.46		1.020E-02	1.040E-01	1.743E-01	2.106E-02	0.059
		316.51	*	-1.314E-02	3.792E-02	6.186E-02	7.386E-03	-0.212
		468.07		-1.446E-02	8.272E-02	1.147E-01	1.214E-02	-0.126
		604.41		-8.859E-02	5.923E-01	8.511E-01	1.145E-01	-0.104
		612.46		4.862E-01	9.475E-01	1.440E+00	1.496E-01	0.338
AU-195		65.12		-2.209E-02	1.919E-01	2.919E-01	2.350E-02	-0.076
		66.83		-7.141E-03	1.031E-01	1.570E-01	1.284E-02	-0.045
	+	75.70		1.318E+00	2.842E-01	4.892E-01	4.318E-02	2.693
		98.88	*	6.121E-02	2.375E-01	3.923E-01	3.526E-02	0.156
TL-200	+	129.76		4.572E+00	3.431E+00	5.418E+00	4.642E-01	0.844
		367.94	*	1.116E-03	3.431E+00	Half-Life	too short	
		579.30		1.060E-02	3.431E+00	Half-Life	too short	
		828.27		4.990E-03	3.431E+00	Half-Life	too short	
TL-201		1205.75		-3.168E-04	3.431E+00	Half-Life	too short	
		68.90		-5.234E+00	7.848E+00	1.296E+01	1.079E+00	-0.404
		70.82		3.037E+00	4.919E+00	7.693E+00	6.507E-01	0.395
		80.30		1.018E+00	1.093E+01	1.326E+01	1.223E+00	0.077
		135.34		1.173E+01	4.399E+01	7.276E+01	6.378E+00	0.161
TL-202		167.43	*	-7.930E+00	1.253E+01	1.962E+01	2.019E+00	-0.404
		68.90		-3.226E-01	4.837E-01	7.988E-01	6.648E-02	-0.404
		70.82		1.866E-01	3.023E-01	4.728E-01	4.000E-02	0.395
		80.30		6.259E-02	6.723E-01	8.151E-01	7.522E-02	0.077

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203		439.56	*	6.386E-03	8.874E-02	1.449E-01	1.459E-02	0.044
		70.83		7.374E-01	1.197E+00	1.868E+00	2.523E-01	0.395
		72.87		1.651E+00	7.616E-01	1.212E+00	1.599E-01	1.363
		82.60		6.313E-01	1.124E+00	1.894E+00	2.705E-01	0.333
BI-207		279.20	*	-1.569E-02	4.522E-02	7.458E-02	9.377E-03	-0.210
		72.80		3.992E-01	2.081E-01	3.371E-01	2.900E-02	1.184
	+	74.97		7.249E-01	1.564E-01	2.473E-01	2.168E-02	2.932
		84.90		1.967E-01	1.864E-01	3.183E-01	3.085E-02	0.618
TL-207		569.67		-5.159E-03	3.100E-02	5.154E-02	4.926E-03	-0.100
		1063.62	*	3.221E-02	6.379E-02	1.107E-01	1.016E-02	0.291
		1770.23		-5.998E-02	4.576E-01	6.196E-01	5.236E-02	-0.097
		81.07		-1.598E-01	2.524E-01	3.359E-01	3.125E-02	-0.476
		83.78		1.479E-01	1.257E-01	2.153E-01	2.061E-02	0.687
		94.90		1.211E-01	2.582E-01	3.827E-01	3.554E-02	0.316
		122.32		2.274E-01	1.804E+00	2.985E+00	2.687E-01	0.076
		144.24		7.296E-02	7.687E-01	1.234E+00	1.248E-01	0.059
		154.21		-2.017E-01	4.303E-01	6.842E-01	7.115E-02	-0.295
	+	269.46		6.121E-01	3.126E-01	3.998E-01	4.954E-02	1.531
		323.87	*	-9.265E-02	7.854E-01	1.137E+00	2.210E-01	-0.082
	+	338.28		8.288E+00	2.424E+00	2.701E+00	3.909E-01	3.069
PO-209		445.03		-1.214E+00	2.505E+00	3.917E+00	5.156E-01	-0.310
		260.50		2.955E+00	1.022E+01	1.745E+01	2.117E+00	0.169
		262.80		-1.129E+01	2.828E+01	4.669E+01	5.681E+00	-0.242
		896.60	*	3.848E+00	8.337E+00	1.388E+01	1.417E+00	0.277
BI-210		46.50	*	5.541E-01	6.454E+00	9.810E+00	9.400E-01	0.056
PB-210		46.50	*	5.541E-01	6.454E+00	9.810E+00	9.400E-01	0.056
PO-210		46.50	*	5.541E-01	6.454E+00	9.810E+00	8.563E-01	0.056
PB-211		404.84	*	-6.481E-01	1.109E+00	1.619E+00	1.018E+00	-0.400
BI-212		427.08		1.599E+00	2.463E+00	3.839E+00	2.394E+00	0.416
		831.96		-1.060E-01	1.325E+00	2.144E+00	1.348E+00	-0.049
	+	727.18	*	9.860E-01	6.747E-01	7.499E-01	7.812E-02	1.315
		785.46		1.107E+00	1.996E+00	3.408E+00	3.237E-01	0.325
PO-215		1620.62		2.095E+00	1.343E+00	2.693E+00	2.418E-01	0.778
		81.07		-1.598E-01	2.524E-01	3.359E-01	3.125E-02	-0.476
		83.78		1.479E-01	1.257E-01	2.153E-01	2.061E-02	0.687
		94.90		1.211E-01	2.582E-01	3.827E-01	3.554E-02	0.316
		122.32		2.274E-01	1.804E+00	2.985E+00	2.687E-01	0.076
		144.24		7.296E-02	7.687E-01	1.234E+00	1.248E-01	0.059
		154.21		-2.017E-01	4.303E-01	6.842E-01	7.115E-02	-0.295
	+	269.46		6.121E-01	3.126E-01	3.998E-01	4.954E-02	1.531
		323.87	*	-9.265E-02	7.854E-01	1.137E+00	2.210E-01	-0.082
	+	338.28		8.288E+00	2.424E+00	2.701E+00	3.909E-01	3.069
		445.03		-1.214E+00	2.505E+00	3.917E+00	5.156E-01	-0.310
	+	271.23		7.854E-01	4.032E-01	4.840E-01	6.550E-02	1.623
RN-219		401.81	*	-9.587E-02	4.459E-01	7.189E-01	1.141E-01	-0.133
RN-220		549.76	*	1.002E+01	2.833E+01	4.648E+01	4.509E+00	0.216
RA-223		81.07		-1.598E-01	2.524E-01	3.359E-01	3.125E-02	-0.476
		83.78		1.479E-01	1.257E-01	2.153E-01	2.061E-02	0.687
		94.90		1.211E-01	2.582E-01	3.827E-01	3.554E-02	0.316

---- 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		2.274E-01	1.804E+00	2.985E+00	2.687E-01	0.076
		144.24		7.296E-02	7.687E-01	1.234E+00	1.248E-01	0.059
		154.21		-2.017E-01	4.303E-01	6.842E-01	7.115E-02	-0.295
	+	269.46		6.121E-01	3.126E-01	3.998E-01	4.954E-02	1.531
		323.87	*	-9.265E-02	7.854E-01	1.137E+00	2.210E-01	-0.082
	+	338.28		8.288E+00	2.424E+00	2.701E+00	3.909E-01	3.069
		445.03		-1.214E+00	2.505E+00	3.917E+00	5.156E-01	-0.310
		79.80		-5.853E-01	2.233E+00	2.634E+00	5.724E-01	-0.222
		236.00		7.583E-01	3.156E-01	4.975E-01	7.257E-02	1.524
		256.20	*	1.552E-02	4.135E-01	6.993E-01	1.225E-01	0.022
		286.10		1.745E+00	1.653E+00	2.873E+00	4.563E-01	0.607
	+	299.80		5.259E+00	2.826E+00	2.986E+00	5.821E-01	1.761
TH-227		304.40		-4.853E-01	2.051E+00	2.951E+00	5.992E-01	-0.164
		334.20		-9.336E-01	2.868E+00	4.066E+00	8.498E-01	-0.230
		79.80		-5.853E-01	2.233E+00	2.634E+00	5.796E-01	-0.222
		94.00		6.797E+00	2.611E+00	3.794E+00	8.379E-01	1.791
		236.00		7.583E-01	3.131E-01	4.975E-01	6.777E-02	1.524
		256.20	*	1.552E-02	4.135E-01	6.993E-01	1.394E-01	0.022
		286.10		1.745E+00	2.397E+00	2.873E+00	2.895E+00	0.607
	+	299.80		5.259E+00	2.826E+00	2.986E+00	5.821E-01	1.761
		304.40		-4.853E-01	2.051E+00	2.951E+00	5.992E-01	-0.164
		334.20		-9.336E-01	2.868E+00	4.066E+00	8.498E-01	-0.230
		85.43		3.288E-01	1.863E-01	3.213E-01	3.133E-02	1.023
	+	88.47		4.019E-01	1.445E-01	2.064E-01	2.060E-02	1.947
TH-229		100.00		3.346E-02	1.850E-01	3.099E-01	2.765E-02	0.108
		193.63	*	-2.245E-01	5.490E-01	8.605E-01	9.331E-02	-0.261
		210.97		1.462E+00	8.890E-01	1.368E+00	1.535E-01	1.069
	PA-231	283.67	*	-1.025E+00	1.633E+00	2.635E+00	4.632E-01	-0.389
	+	301.29		2.104E+00	1.099E+00	1.143E+00	1.709E-01	1.840
	TH-231	81.07		-1.598E-01	2.524E-01	3.359E-01	3.125E-02	-0.476
		83.78		1.479E-01	1.257E-01	2.153E-01	2.061E-02	0.687
		94.90		1.211E-01	2.582E-01	3.827E-01	3.554E-02	0.316
		122.32		2.274E-01	1.804E+00	2.985E+00	2.687E-01	0.076
		144.24		7.296E-02	7.687E-01	1.234E+00	1.248E-01	0.059
		154.21		-2.017E-01	4.303E-01	6.842E-01	7.115E-02	-0.295
	+	269.46		6.121E-01	3.126E-01	3.998E-01	4.954E-02	1.531
U-231		323.87	*	-9.265E-02	7.854E-01	1.137E+00	2.210E-01	-0.082
	+	338.28		8.288E+00	2.424E+00	2.701E+00	3.909E-01	3.069
		445.03		-1.214E+00	2.505E+00	3.917E+00	5.156E-01	-0.310
		84.21		9.838E+00	7.777E+00	1.334E+01	1.283E+00	0.737
	+	92.29		1.192E+01	4.317E+00	6.752E+00	6.435E-01	1.765
		95.87	*	-3.159E-01	1.714E+00	2.541E+00	2.339E-01	-0.124
		108.00		-1.886E+00	3.102E+00	5.015E+00	4.297E-01	-0.376
	PA-233	75.28		2.115E+01	5.294E+00	7.404E+00	1.144E+00	2.857
	+	86.59		5.747E+00	2.615E+00	3.063E+00	8.347E-01	1.876
	+	300.12		1.466E+00	7.761E-01	8.271E-01	1.421E-01	1.773
		311.98	*	5.493E-02	7.088E-02	1.223E-01	1.489E-02	0.449
		340.50		8.591E-01	7.192E-01	1.095E+00	2.737E-01	0.785
		398.62		-1.386E+00	2.329E+00	3.616E+00	9.805E-01	-0.383

---- 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		2.357E-01	1.719E+00	2.830E+00	6.273E-01	0.083
		63.00		3.293E+00	2.719E+00	3.426E+00	5.174E-01	0.961
		94.67		2.370E-01	1.880E-01	2.857E-01	3.683E-02	0.830
		98.44		4.374E-02	1.018E-01	1.580E-01	8.825E-02	0.277
		99.86		1.433E-01	4.708E-01	7.925E-01	7.076E-02	0.181
		111.00		-1.827E-01	1.972E-01	3.128E-01	3.752E-02	-0.584
		131.20		4.570E-02	1.218E-01	1.820E-01	1.568E-02	0.251
		152.70		2.219E-01	3.492E-01	5.787E-01	1.015E-01	0.383
		186.00		6.178E+00	3.133E+00	2.924E+00	9.311E-01	2.113
		226.40		8.037E-02	4.497E-01	7.181E-01	1.096E-01	0.112
		227.20		1.518E-01	4.709E-01	7.574E-01	8.742E-02	0.200
		248.90		7.051E-01	8.725E-01	1.501E+00	3.586E-01	0.470
		293.70		6.548E+00	1.629E+00	1.867E+00	3.617E-01	3.507
		369.80		3.213E-01	9.470E-01	1.585E+00	3.595E-01	0.203
		568.70		-3.075E-01	1.039E+00	1.711E+00	1.637E-01	-0.180
		569.50		-5.678E-02	2.771E-01	4.594E-01	4.392E-02	-0.124
		574.00		5.143E-01	1.480E+00	2.550E+00	2.429E-01	0.202
		699.00		-1.891E-01	8.082E-01	1.314E+00	2.524E-01	-0.144
		706.10		-4.105E-01	1.185E+00	1.886E+00	8.422E-01	-0.218
		733.00		-1.729E-01	4.861E-01	6.644E-01	1.488E-01	-0.260
		742.81		7.099E-01	1.636E+00	2.667E+00	1.795E+00	0.266
		796.30		6.164E-01	1.077E+00	1.817E+00	4.973E-01	0.339
		805.60		3.699E-02	1.230E+00	1.945E+00	6.018E-01	0.019
		819.60		4.274E-01	1.337E+00	2.231E+00	8.542E-01	0.192
		826.30		-2.286E-01	9.003E-01	1.426E+00	6.414E-01	-0.160
		831.60		1.867E-01	6.719E-01	1.119E+00	3.381E-01	0.167
		876.40		7.613E-01	1.239E+00	1.667E+00	1.716E+00	0.457
		880.51		1.370E-01	3.157E-01	5.323E-01	5.383E-02	0.257
		883.24		-1.856E-01	3.422E-01	4.878E-01	3.289E-01	-0.381
		899.00		-8.588E-01	1.050E+00	1.458E+00	6.423E-01	-0.589
		925.00		-1.566E-01	1.283E+00	2.049E+00	2.070E-01	-0.076
		926.50		-8.209E-02	1.921E-01	2.952E-01	7.621E-02	-0.278
		946.00	*	2.261E-01	3.529E-01	5.979E-01	1.162E-01	0.378
		949.00		3.965E-01	5.107E-01	8.796E-01	8.781E-02	0.451
		980.50		-2.493E-01	8.350E-01	1.302E+00	1.276E-01	-0.191
		1394.10		5.827E-01	1.316E+00	2.181E+00	1.422E+00	0.267
PA-234M		766.42		1.675E+01	1.716E+01	2.615E+01	1.330E+01	0.640
	+	1001.03	*	8.392E+00	7.901E+00	9.807E+00	1.067E+00	0.856
U-235	+	89.95		4.034E+00	1.879E+00	2.016E+00	6.290E-01	2.001
	+	93.35		2.607E+00	1.173E+00	1.392E+00	3.936E-01	1.873
		105.00		1.550E+00	1.179E+00	1.896E+00	5.660E-01	0.818
		143.76	*	8.880E-02	2.391E-01	3.873E-01	6.877E-02	0.229
		163.35		7.328E-02	5.237E-01	8.337E-01	1.651E-01	0.088
	+	185.71		2.288E-01	9.353E-02	1.085E-01	1.158E-02	2.108
		205.31		1.375E-01	6.310E-01	9.056E-01	1.840E-01	0.152
NP-236		94.67		1.814E-01	1.417E-01	2.169E-01	2.018E-02	0.836
		98.44		3.310E-02	7.478E-02	1.195E-01	1.077E-02	0.277
		111.00		-1.382E-01	1.487E-01	2.366E-01	2.008E-02	-0.584
		160.31	*	-8.537E-02	8.481E-02	1.305E-01	1.298E-02	-0.654

---- 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		6.024E-02	1.624E-01	2.690E-01	2.407E-02	0.224
		117.00	*	1.187E-02	1.955E-01	3.234E-01	2.711E-02	0.037
	+	209.75		2.608E+00	1.691E+00	1.554E+00	1.739E-01	1.678
		228.18		-6.030E-02	2.537E-01	3.963E-01	4.581E-02	-0.152
		277.60		2.193E-01	1.979E-01	3.456E-01	4.279E-02	0.635
AM-241		334.30		-5.760E-01	1.620E+00	2.296E+00	2.659E-01	-0.251
		59.54	*	2.337E-01	1.964E-01	3.176E-01	2.602E-02	0.736
		99.55		6.200E-02	1.671E-01	2.769E-01	2.478E-02	0.224
		103.76	*	2.854E-02	9.834E-02	1.651E-01	1.441E-02	0.173
		117.00		1.221E-02	2.011E-01	3.327E-01	2.790E-02	0.037
CM-243	+	209.75		2.572E+00	1.668E+00	1.532E+00	1.714E-01	1.678
		228.18		-6.094E-02	2.563E-01	4.005E-01	4.630E-02	-0.152
		277.60		2.212E-01	1.995E-01	3.485E-01	4.314E-02	0.635
		798.80		-1.236E-01	1.691E-01	2.604E-01	2.496E-02	-0.475
		1036.00		1.406E-01	3.459E-01	5.982E-01	5.628E-02	0.235
AM-246		1062.04		2.553E-01	2.763E-01	4.933E-01	4.535E-02	0.518
		1078.86	*	3.206E-02	1.731E-01	2.931E-01	2.651E-02	0.109
		278.00		7.577E-01	8.206E-01	1.426E+00	1.766E-01	0.531
		287.40		4.033E-01	1.439E+00	2.274E+00	2.803E-01	0.177
		402.60	*	3.752E-02	3.948E-02	6.815E-02	6.837E-03	0.551
CF-249		252.85		-6.576E-02	9.317E-01	1.569E+00	1.884E-01	-0.042
		333.44		7.749E-02	2.413E-01	3.067E-01	3.559E-02	0.253
		387.95	*	3.388E-02	4.372E-02	7.485E-02	7.581E-03	0.453
CF-251		176.60	*	-1.290E-03	1.352E-01	2.177E-01	2.280E-02	-0.006
		227.00		1.992E-01	4.215E-01	6.825E-01	7.875E-02	0.292
		285.00		-4.606E-02	1.890E+00	3.165E+00	3.908E-01	-0.015

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]G246440009          *
* Acquisition date   : 19-FEB-2010 19:50:03 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 02:00:03.28                      Half life ratio  : 8.000    *
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID              *
* Sample ID          : G246440009                      Analyst initials: MXR1        *
* Batch Number       : 950788                          Sample Quantity : 1.3619E+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	3.601E+01	3.894E+00	5.232E-01	0.000E+00
CD-109	2.996E+00	1.109E+00	1.302E+00	0.000E+00
SN-126	2.935E-01	1.086E-01	1.283E-01	0.000E+00
BA-137M	4.909E-02	4.627E-02	6.428E-02	0.000E+00
CS-137	5.189E-02	4.892E-02	6.795E-02	0.000E+00
TL-208	5.871E-01	1.049E-01	6.257E-02	0.000E+00
BI-211	3.934E+00	6.882E-01	3.459E-01	0.000E+00
PB-212	1.803E+00	2.532E-01	9.909E-02	0.000E+00
PO-212	1.803E+00	2.532E-01	9.909E-02	0.000E+00
BI-214	9.989E-01	2.223E-01	1.353E-01	0.000E+00
PB-214	1.368E+00	2.494E-01	1.206E-01	0.000E+00
PO-214	1.368E+00	2.494E-01	1.206E-01	0.000E+00
PO-216	1.803E+00	2.532E-01	9.909E-02	0.000E+00
PO-218	1.368E+00	2.494E-01	1.206E-01	0.000E+00
RA-224	5.436E+00	1.487E+00	1.128E+00	0.000E+00
RA-226	9.989E-01	2.223E-01	1.353E-01	0.000E+00
AC-228	1.891E+00	3.790E-01	2.247E-01	0.000E+00
RA-228	1.891E+00	3.790E-01	2.247E-01	0.000E+00
TH-228	1.834E+00	2.576E-01	1.008E-01	0.000E+00
TH-230	9.989E-01	2.223E-01	1.353E-01	0.000E+00
TH-232	1.891E+00	3.790E-01	2.247E-01	0.000E+00
TH-234	2.825E+00	2.300E+00	2.413E+00	0.000E+00
U-234	9.989E-01	2.223E-01	1.353E-01	0.000E+00
NP-237	8.620E-01	3.636E-01	3.820E-01	0.000E+00
U-238	2.825E+00	2.300E+00	2.413E+00	0.000E+00
AM-243	4.038E-01	8.535E-02	9.899E-02	0.000E+00
ANH-511	1.384E-01	7.793E-02	5.135E-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	6.704E-02	3.472E-01	5.940E-01	0.000E+00	NOT IDENT.
NA-22	2.856E-02	5.318E-02	9.374E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.063E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.930E-02	3.046E-02	5.992E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.062E-02	7.420E-02	0.000E+00	NOT IDENT.
SC-46	8.641E-03	4.247E-02	7.251E-02	0.000E+00	FAIL ABUN
V-48	3.214E-02	8.435E-02	1.449E-01	0.000E+00	NOT IDENT.
CR-51	-8.735E-02	4.186E-01	7.247E-01	0.000E+00	NOT IDENT.
MN-52	1.217E-01	3.089E-01	5.431E-01	0.000E+00	NOT IDENT.
MN-54	-4.295E-03	4.004E-02	6.693E-02	0.000E+00	NOT IDENT.
CO-56	-1.202E-02	4.162E-02	6.820E-02	0.000E+00	NOT IDENT.
CO-57	2.000E-02	2.539E-02	4.612E-02	0.000E+00	NOT IDENT.
CO-58	-4.643E-03	4.078E-02	6.828E-02	0.000E+00	NOT IDENT.
FE-59	-5.707E-02	1.052E-01	1.717E-01	0.000E+00	NOT IDENT.
CO-60	-9.782E-03	4.596E-02	7.538E-02	0.000E+00	NOT IDENT.
ZN-65	-1.044E-02	1.238E-01	1.807E-01	0.000E+00	NOT IDENT.
GE-68	-9.168E-01	1.522E+00	2.487E+00	0.000E+00	NOT IDENT.
AS-73	-3.707E-01	1.127E+00	2.034E+00	0.000E+00	NOT IDENT.
AS-74	9.142E-03	1.041E-01	1.828E-01	0.000E+00	NOT IDENT.
SE-75	-2.361E-02	5.270E-02	8.018E-02	0.000E+00	NOT IDENT.
BR-77	3.986E+00	2.236E+01	3.788E+01	0.000E+00	FAIL ABUN
SR-82	-4.341E-01	4.493E-01	7.000E-01	0.000E+00	NOT IDENT.
RB-83	-8.265E-03	7.962E-02	1.321E-01	0.000E+00	NOT IDENT.
RB-84	-2.742E-02	8.202E-02	1.333E-01	0.000E+00	NOT IDENT.
KR-85	1.143E+01	8.805E+00	1.430E+01	0.000E+00	NOT IDENT.
SR-85	6.000E-02	4.621E-02	7.502E-02	0.000E+00	NOT IDENT.
RB-86	-7.761E-01	1.057E+00	1.708E+00	0.000E+00	NOT IDENT.
Y-88	3.373E-03	3.533E-02	6.051E-02	0.000E+00	NOT IDENT.
ZR-88	-1.798E-03	3.561E-02	6.102E-02	0.000E+00	NOT IDENT.
Y-91	4.153E+00	2.327E+01	4.003E+01	0.000E+00	NOT IDENT.
NB-94	1.438E-02	3.657E-02	6.451E-02	0.000E+00	NOT IDENT.
NB-95	2.983E-02	5.500E-02	9.665E-02	0.000E+00	NOT IDENT.
NB-95M	1.020E-01	1.494E-01	2.450E-01	0.000E+00	NOT IDENT.
ZR-95	8.764E-02	7.660E-02	1.414E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.450E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.934E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.487E-01	2.234E+01	3.811E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.833E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.061E-03	3.479E-02	5.928E-02	0.000E+00	NOT IDENT.
RH-102	-7.997E-03	2.997E-02	4.954E-02	0.000E+00	NOT IDENT.
RU-103	2.528E-02	4.409E-02	7.565E-02	0.000E+00	FAIL ABUN
RH-106	1.974E-01	3.335E-01	6.020E-01	0.000E+00	FAIL ABUN
RU-106	1.974E-01	3.329E-01	6.020E-01	0.000E+00	FAIL ABUN
AG-108M	-1.877E-02	3.501E-02	5.690E-02	0.000E+00	NOT IDENT.
AG-110M	4.467E-03	3.871E-02	5.890E-02	0.000E+00	NOT IDENT.
IN-111	-4.660E-01	1.996E+00	3.108E+00	0.000E+00	NOT IDENT.
IN-113M	-3.608E-04	5.057E-02	8.692E-02	0.000E+00	NOT IDENT.
SN-113	-3.608E-04	5.057E-02	8.692E-02	0.000E+00	NOT IDENT.
IN-114M	2.445E-01	2.191E-01	3.521E-01	0.000E+00	NOT IDENT.
CD-115	2.032E-01	2.326E+01	3.887E+01	0.000E+00	NOT IDENT.
SN-117M	-2.632E-02	6.423E-02	1.090E-01	0.000E+00	NOT IDENT.
SB-122	1.226E+00	3.961E+00	7.082E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.774E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.152E-02	2.976E-02	5.054E-02	0.000E+00	NOT IDENT.
I-124	-1.338E+00	1.216E+00	1.640E+00	0.000E+00	NOT IDENT.
SB-124	-8.925E-02	7.339E-02	9.147E-02	0.000E+00	FAIL ABUN
SB-125	4.819E-02	9.957E-02	1.749E-01	0.000E+00	FAIL ABUN
TE-125M	7.138E+00	9.645E+00	1.758E+01	0.000E+00	NOT IDENT.
I-126	5.810E-02	2.327E-01	3.584E-01	0.000E+00	NOT IDENT.
SB-126	2.156E-02	2.014E-01	3.026E-01	0.000E+00	NOT IDENT.
SB-127	1.382E+00	2.099E+00	3.782E+00	0.000E+00	NOT IDENT.
XE-127	1.854E-02	5.532E-02	9.062E-02	0.000E+00	NOT IDENT.
I-131	-1.816E-02	1.390E-01	2.386E-01	0.000E+00	NOT IDENT.
TE-132	-2.917E-01	1.217E+00	2.013E+00	0.000E+00	NOT IDENT.
BA-133	1.447E-02	5.010E-02	7.805E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.832E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.294E-02	5.269E-02	9.556E-02	0.000E+00	NOT IDENT.
CS-135	3.127E-01	1.913E-01	3.225E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.613E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.620E-02	1.340E-01	2.359E-01	0.000E+00	FAIL ABUN
CE-139	6.955E-03	3.148E-02	5.473E-02	0.000E+00	NOT IDENT.
BA-140	-2.288E-01	3.121E-01	4.728E-01	0.000E+00	NOT IDENT.
LA-140	-5.570E-02	1.182E-01	1.554E-01	0.000E+00	FAIL ABUN
CE-141	-1.182E-02	6.837E-02	1.182E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.304E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.337E-02	2.116E-01	3.684E-01	0.000E+00	NOT IDENT.
PM-144	-1.381E-02	3.877E-02	6.493E-02	0.000E+00	NOT IDENT.
PR-144	-9.371E-01	2.630E+00	4.405E+00	0.000E+00	NOT IDENT.

PM-146	6.879E-02	4.720E-02	8.660E-02	0.000E+00	NOT IDENT.
ND-147	-4.498E-01	6.746E-01	1.057E+00	0.000E+00	FAIL ABUN
PM-149	2.039E+02	1.935E+02	3.536E+02	0.000E+00	NOT IDENT.
EU-152	2.360E-03	1.125E-01	1.606E-01	0.000E+00	NOT IDENT.
GD-153	-3.131E-03	8.923E-02	1.421E-01	0.000E+00	NOT IDENT.
EU-154	8.455E-02	1.489E-01	2.629E-01	0.000E+00	NOT IDENT.
EU-155	1.154E-01	1.104E-01	2.036E-01	0.000E+00	FAIL ABUN
TB-160	4.937E-02	1.614E-01	2.779E-01	0.000E+00	FAIL ABUN
HO-166M	-3.354E-03	6.814E-02	1.164E-01	0.000E+00	FAIL ABUN
TM-171	-2.412E+00	3.042E+01	5.014E+01	0.000E+00	NOT IDENT.
LU-176	5.546E-04	2.566E-02	4.368E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.936E+00	2.747E+00	0.000E+00	FAIL ABUN
LU-177M	1.276E-03	1.802E-01	3.085E-01	0.000E+00	FAIL ABUN
HF-181	1.545E-02	4.772E-02	8.225E-02	0.000E+00	NOT IDENT.
W-181	-5.282E-02	4.071E-01	6.706E-01	0.000E+00	NOT IDENT.
TA-182	1.055E-01	2.429E-01	4.244E-01	0.000E+00	FAIL ABUN
RE-183	1.251E-02	1.206E-01	2.044E-01	0.000E+00	FAIL ABUN
RE-184	-1.768E-02	2.455E-01	4.373E-01	0.000E+00	NOT IDENT.
OS-185	1.247E-02	4.772E-02	8.412E-02	0.000E+00	NOT IDENT.
RE-188	-7.462E-02	1.871E-01	3.185E-01	0.000E+00	NOT IDENT.
W-188	-6.053E+00	9.016E+00	1.333E+01	0.000E+00	FAIL ABUN
IR-192	-1.314E-02	3.716E-02	6.385E-02	0.000E+00	FAIL ABUN
AU-195	6.121E-02	2.328E-01	4.135E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.917E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.930E+00	1.227E+01	2.049E+01	0.000E+00	NOT IDENT.
TL-202	6.386E-03	8.697E-02	1.486E-01	0.000E+00	NOT IDENT.
HG-203	-1.569E-02	4.432E-02	7.716E-02	0.000E+00	NOT IDENT.
BI-207	3.221E-02	6.251E-02	1.117E-01	0.000E+00	FAIL ABUN
TL-207	-9.265E-02	7.697E-01	1.173E+00	0.000E+00	FAIL ABUN
PO-209	3.848E+00	8.170E+00	1.404E+01	0.000E+00	NOT IDENT.
BI-210	5.541E-01	6.325E+00	1.048E+01	0.000E+00	NOT IDENT.
PB-210	5.541E-01	6.325E+00	1.048E+01	0.000E+00	NOT IDENT.
PO-210	5.541E-01	6.325E+00	1.048E+01	0.000E+00	NOT IDENT.
PB-211	-6.481E-01	1.087E+00	1.664E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.613E-01	7.620E-01	0.000E+00	FAIL ABUN
PO-215	-9.265E-02	7.697E-01	1.173E+00	0.000E+00	FAIL ABUN
RN-219	-9.587E-02	4.370E-01	7.387E-01	0.000E+00	FAIL ABUN
RN-220	1.002E+01	2.777E+01	4.749E+01	0.000E+00	NOT IDENT.
RA-223	-9.265E-02	7.697E-01	1.173E+00	0.000E+00	FAIL ABUN
AC-227	1.552E-02	4.053E-01	7.246E-01	0.000E+00	FAIL ABUN
TH-227	1.552E-02	4.053E-01	7.246E-01	0.000E+00	FAIL ABUN
TH-229	-2.245E-01	5.380E-01	8.963E-01	0.000E+00	FAIL ABUN
PA-231	-1.025E+00	1.600E+00	2.725E+00	0.000E+00	FAIL ABUN
TH-231	-9.265E-02	7.697E-01	1.173E+00	0.000E+00	FAIL ABUN
U-231	-3.159E-01	1.680E+00	2.680E+00	0.000E+00	FAIL ABUN
PA-233	5.493E-02	6.947E-02	1.262E-01	0.000E+00	FAIL ABUN
PA-234	2.261E-01	3.458E-01	6.045E-01	0.000E+00	FAIL ABUN
PA-234M	8.392E+00	7.743E+00	9.904E+00	0.000E+00	FAIL ABUN
U-235	8.880E-02	2.343E-01	4.055E-01	0.000E+00	FAIL ABUN
NP-236	-8.537E-02	8.311E-02	1.364E-01	0.000E+00	NOT IDENT.
NP-239	1.187E-02	1.916E-01	3.398E-01	0.000E+00	FAIL ABUN
AM-241	2.337E-01	1.925E-01	3.378E-01	0.000E+00	NOT IDENT.
CM-243	2.854E-02	9.637E-02	1.739E-01	0.000E+00	FAIL ABUN
AM-246	3.206E-02	1.696E-01	2.956E-01	0.000E+00	NOT IDENT.
CM-247	3.752E-02	3.869E-02	7.003E-02	0.000E+00	NOT IDENT.
CF-249	3.388E-02	4.284E-02	7.697E-02	0.000E+00	NOT IDENT.
CF-251	-1.290E-03	1.325E-01	2.271E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440009.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:50:03
Sample ID          : G246440009          Sample quantity   : 1.36190E+02 GRAM
Detector name      : GAM02              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:03.28  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 950788             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	1433	10.67*	1.028E+00	3.601E+01	3.601E+01	11.03
CD-109	88.03	206	3.72*	5.233E+00	2.920E+00	2.996E+00	37.77
SN-126	64.28	99	9.60	2.539E+00	1.118E+00	1.118E+00	82.50
	86.94	206	8.90	5.233E+00	1.220E+00	1.220E+00	55.34
	87.57	206	37.00*	5.233E+00	2.935E-01	2.935E-01	37.77
BA-137M	661.65	33	89.98*	2.070E+00	4.903E-02	4.909E-02	96.19
CS-137	661.65	33	85.12*	2.070E+00	5.183E-02	5.189E-02	96.20
TL-208	277.35	-----	6.80	3.991E+00	-----	Line Not Found	-----
	510.84	127	21.60	2.539E+00	6.406E-01	6.406E-01	58.07
	583.14	411	84.20*	2.292E+00	5.871E-01	5.871E-01	18.24
	860.37	62	12.46	1.652E+00	8.267E-01	8.267E-01	65.58
BI-211	72.87	-----	1.27	3.848E+00	-----	Line Not Found	-----
	351.07	619	12.94*	3.352E+00	3.934E+00	3.934E+00	17.85
PB-212	74.81	391	10.70	4.048E+00	2.491E+00	2.491E+00	23.51
	77.11	600	18.00	4.307E+00	2.132E+00	2.132E+00	16.31
	87.30	206	8.00	5.233E+00	1.358E+00	1.358E+00	39.07
	238.63	1300	44.60*	4.457E+00	1.803E+00	1.803E+00	14.33
	300.09	132	3.41	3.767E+00	2.838E+00	2.838E+00	51.86
PO-212	74.81	391	10.70	4.048E+00	2.491E+00	2.491E+00	23.51
	77.11	600	18.00	4.307E+00	2.132E+00	2.132E+00	16.31
	87.30	206	8.00	5.233E+00	1.358E+00	1.358E+00	39.07
	115.19	-----	0.60	6.220E+00	-----	Line Not Found	-----
	238.63	1300	44.60*	4.457E+00	1.803E+00	1.803E+00	14.33
	300.09	132	3.41	3.767E+00	2.838E+00	2.838E+00	51.86
BI-214	609.31	371	46.30*	2.214E+00	9.989E-01	9.989E-01	22.71
	1120.29	72	15.10	1.297E+00	1.009E+00	1.009E+00	62.95
	1764.49	76	15.80	9.004E-01	1.480E+00	1.480E+00	31.91
PB-214	74.81	391	6.21	4.048E+00	4.292E+00	4.292E+00	22.80
	77.11	600	10.50	4.307E+00	3.655E+00	3.655E+00	18.00
	87.30	206	4.67	5.233E+00	2.326E+00	2.326E+00	38.55
	241.98	344	7.49	4.416E+00	2.867E+00	2.867E+00	28.46
	295.21	362	19.20	3.814E+00	1.364E+00	1.364E+00	20.81

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	619	37.20*	3.352E+00	1.368E+00	1.368E+00	18.60
	74.81	391	6.21	4.048E+00	4.292E+00	4.292E+00	22.80
	77.11	600	10.50	4.307E+00	3.655E+00	3.655E+00	18.00
	87.30	206	4.67	5.233E+00	2.326E+00	2.326E+00	38.55
	241.98	344	7.49	4.416E+00	2.867E+00	2.867E+00	28.46
PO-216	295.21	362	19.20	3.814E+00	1.364E+00	1.364E+00	20.81
	351.92	619	37.20*	3.352E+00	1.368E+00	1.368E+00	18.60
	74.81	391	10.70	4.048E+00	2.491E+00	2.491E+00	23.51
	77.11	600	18.00	4.307E+00	2.132E+00	2.132E+00	16.31
	87.30	206	8.00	5.233E+00	1.358E+00	1.358E+00	39.07
PO-218	238.63	1300	44.60*	4.457E+00	1.803E+00	1.803E+00	14.33
	300.09	132	3.41	3.767E+00	2.838E+00	2.838E+00	51.86
	74.81	391	6.21	4.048E+00	4.292E+00	4.292E+00	22.80
	77.11	600	10.50	4.307E+00	3.655E+00	3.655E+00	18.00
	87.30	206	4.67	5.233E+00	2.326E+00	2.326E+00	38.55
RA-224	241.98	344	7.49	4.416E+00	2.867E+00	2.867E+00	28.46
	295.21	362	19.20	3.814E+00	1.364E+00	1.364E+00	20.81
	351.92	619	37.20*	3.352E+00	1.368E+00	1.368E+00	18.60
	240.98	344	3.95*	4.416E+00	5.436E+00	5.436E+00	27.90
	609.31	371	46.30*	2.214E+00	9.989E-01	9.989E-01	22.71
AC-228	1120.29	72	15.10	1.297E+00	1.009E+00	1.009E+00	62.95
	1764.49	76	15.80	9.004E-01	1.480E+00	1.480E+00	31.91
	338.32	283	11.40	3.449E+00	1.985E+00	1.985E+00	49.05
	911.07	298	27.70*	1.570E+00	1.891E+00	1.891E+00	20.44
	969.11	129	16.60	1.483E+00	1.439E+00	1.439E+00	47.17
RA-228	338.32	283	11.40	3.449E+00	1.985E+00	1.985E+00	49.05
	911.07	298	27.70*	1.570E+00	1.891E+00	1.891E+00	20.44
	969.11	129	16.60	1.483E+00	1.439E+00	1.439E+00	47.17
	74.81	391	10.70	4.048E+00	2.491E+00	2.534E+00	21.60
	77.11	600	18.00	4.307E+00	2.132E+00	2.169E+00	16.31
TH-228	87.30	206	8.00	5.233E+00	1.358E+00	1.381E+00	37.77
	238.63	1300	44.60*	4.457E+00	1.803E+00	1.834E+00	14.33
	300.09	132	3.41	3.767E+00	2.838E+00	2.887E+00	78.07
	609.31	371	46.30*	2.214E+00	9.989E-01	9.989E-01	22.71
	1120.29	72	15.10	1.297E+00	1.009E+00	1.009E+00	62.95
TH-230	1764.49	76	15.80	9.004E-01	1.480E+00	1.480E+00	31.91
	338.32	283	11.40	3.449E+00	1.985E+00	1.985E+00	27.89
	911.07	298	27.70*	1.570E+00	1.891E+00	1.891E+00	20.44
	969.11	129	16.60	1.483E+00	1.439E+00	1.439E+00	47.17
	63.29	99	3.80*	2.539E+00	2.825E+00	2.825E+00	83.07
TH-232	92.38	237	5.41	5.578E+00	2.169E+00	2.169E+00	39.56
	609.31	371	46.30*	2.214E+00	9.989E-01	9.989E-01	22.71
	1120.29	72	15.10	1.297E+00	1.009E+00	1.009E+00	62.95
	1764.49	76	15.80	9.004E-01	1.480E+00	1.480E+00	31.91
	86.50	206	12.60*	5.233E+00	8.620E-01	8.620E-01	43.04
NP-237	95.87	---	2.60	5.755E+00	-----	Line Not Found	-----
	63.29	99	3.80*	2.539E+00	2.825E+00	2.825E+00	83.07
	92.38	237	5.41	5.578E+00	2.169E+00	2.169E+00	36.23
	74.67	391	66.00*	4.048E+00	4.038E-01	4.038E-01	21.57

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	206	0.34	5.233E+00	3.233E+01	3.233E+01	37.77
	117.66	-----	0.55	6.232E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.053E+00	-----	Line Not Found	-----
ANH-511	511.00	127	100.00*	2.539E+00	1.384E-01	1.384E-01	57.47

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G246440009

Page : 4
Acquisition date : 19-FEB-2010 19:50:03

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	3.601E+01	3.601E+01	0.397E+01	11.03	
CD-109	464.00D	1.03	2.920E+00	2.996E+00	1.132E+00	37.77	
SN-126	1.00E+05Y	1.00	2.935E-01	2.935E-01	1.109E-01	37.77	
BA-137M	30.17Y	1.00	4.903E-02	4.909E-02	4.722E-02	96.19	
CS-137	30.17Y	1.00	5.183E-02	5.189E-02	4.992E-02	96.20	
TL-208	1.41E+10Y	1.00	5.871E-01	5.871E-01	1.071E-01	18.24	
BI-211	7.04E+08Y	1.00	3.934E+00	3.934E+00	0.702E+00	17.85	
PB-212	1.41E+10Y	1.00	1.803E+00	1.803E+00	0.258E+00	14.33	
PO-212	1.41E+10Y	1.00	1.803E+00	1.803E+00	0.258E+00	14.33	
BI-214	1600.00Y	1.00	9.989E-01	9.989E-01	2.268E-01	22.71	
PB-214	1600.00Y	1.00	1.368E+00	1.368E+00	0.255E+00	18.60	
PO-214	1600.00Y	1.00	1.368E+00	1.368E+00	0.255E+00	18.60	
PO-216	1.41E+10Y	1.00	1.803E+00	1.803E+00	0.258E+00	14.33	
PO-218	1600.00Y	1.00	1.368E+00	1.368E+00	0.255E+00	18.60	
RA-224	1.41E+10Y	1.00	5.436E+00	5.436E+00	1.517E+00	27.90	
RA-226	1600.00Y	1.00	9.989E-01	9.989E-01	2.268E-01	22.71	
AC-228	1.41E+10Y	1.00	1.891E+00	1.891E+00	0.387E+00	20.44	
RA-228	1.41E+10Y	1.00	1.891E+00	1.891E+00	0.387E+00	20.44	
TH-228	1.91Y	1.02	1.803E+00	1.834E+00	0.263E+00	14.33	
TH-230	4.47E+09Y	1.00	9.989E-01	9.989E-01	2.268E-01	22.71	
TH-232	1.41E+10Y	1.00	1.891E+00	1.891E+00	0.387E+00	20.44	
TH-234	4.47E+09Y	1.00	2.825E+00	2.825E+00	2.347E+00	83.07	
U-234	4.47E+09Y	1.00	9.989E-01	9.989E-01	2.268E-01	22.71	
NP-237	2.14E+06Y	1.00	8.620E-01	8.620E-01	3.710E-01	43.04	
U-238	4.47E+09Y	1.00	2.825E+00	2.825E+00	2.347E+00	83.07	
AM-243	7380.00Y	1.00	4.038E-01	4.038E-01	0.871E-01	21.57	
ANH-511	1.00E+09Y	1.00	1.384E-01	1.384E-01	0.795E-01	57.47	
Total Activity :			7.732E+01	7.743E+01			

Grand Total Activity : 7.732E+01 7.743E+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
3	89.72	214	417	1.24	178.66	161	30	2.97E-02	34.6	5.42E+00	T
0	128.98	78	307	1.28	257.22	254	6	1.08E-02	74.5	6.20E+00	T
0	185.54	237	430	1.33	370.40	365	12	3.30E-02	39.5	5.29E+00	T
0	209.41	150	472	1.27	418.16	411	14	2.08E-02	63.9	4.89E+00	T
0	269.82	123	230	1.09	539.05	534	10	1.71E-02	49.5	4.07E+00	T
0	327.61	66	172	1.24	654.69	651	9	9.10E-03	76.2	3.53E+00	T
0	463.29	35	137	1.07	926.20	921	10	4.88E-03	****	2.73E+00	T
0	727.43	81	136	1.60	1454.81	1448	16	1.12E-02	67.6	1.91E+00	T
0	1000.74	37	49	1.19	2001.80	1995	14	5.11E-03	93.5	1.44E+00	T
0	1589.89	29	26	0.56	3181.00	3173	20	4.05E-03	92.0	9.63E-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]G246440009.CNF;1
* Acquisition date   : 19-FEB-2010 19:50:03  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 02:00:03.28          Half life ratio  : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G246440009            Analyst initials: MXR1
* Batch Number       : 950788                Sample Quantity  : 1.36190E+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	3.601E+01	3.974E+00	5.219E-01	4.961E-02	69.006
CD-109	2.996E+00	1.132E+00	1.233E+00	1.238E-01	2.431
SN-126	2.935E-01	1.109E-01	1.215E-01	1.214E-02	2.417
BA-137M	4.909E-02	4.722E-02	6.314E-02	5.440E-03	0.777
CS-137	5.189E-02	4.992E-02	6.675E-02	5.762E-03	0.777
TL-208	5.871E-01	1.071E-01	6.132E-02	6.143E-03	9.574
BI-211	3.934E+00	7.023E-01	3.358E-01	3.874E-02	11.716
PB-212	1.803E+00	2.584E-01	9.550E-02	1.202E-02	18.877
PO-212	1.803E+00	2.584E-01	9.550E-02	1.202E-02	18.877
BI-214	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
PB-214	1.368E+00	2.545E-01	1.170E-01	1.480E-02	11.691
PO-214	1.368E+00	2.545E-01	1.170E-01	1.480E-02	11.691
PO-216	1.803E+00	2.584E-01	9.550E-02	1.202E-02	18.877
PO-218	1.368E+00	2.545E-01	1.170E-01	1.480E-02	11.691
RA-224	5.436E+00	1.517E+00	1.087E+00	1.283E-01	4.999
RA-226	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
AC-228	1.891E+00	3.867E-01	2.221E-01	2.769E-02	8.516
RA-228	1.891E+00	3.867E-01	2.221E-01	2.769E-02	8.516

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.834E+00	2.629E-01	9.716E-02	1.223E-02	18.877
TH-230	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
TH-232	1.891E+00	3.867E-01	2.221E-01	2.769E-02	8.516
TH-234	2.825E+00	2.347E+00	2.271E+00	4.010E-01	1.244
U-234	9.989E-01	2.268E-01	1.327E-01	1.402E-02	7.530
NP-237	8.620E-01	3.710E-01	3.616E-01	8.271E-02	2.384
U-238	2.825E+00	2.347E+00	2.271E+00	4.010E-01	1.244
AM-243	4.038E-01	8.709E-02	9.344E-02	8.171E-03	4.322
ANH-511	1.384E-01	7.952E-02	5.020E-02	4.976E-03	2.757

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	6.704E-02		3.543E-01	5.799E-01	6.149E-02	0.116
NA-22	2.856E-02		5.427E-02	9.325E-02	8.268E-03	0.306
NA-24	2.292E+00		5.425E+00	Half-Life	too short	
AL-26	2.930E-02		3.108E-02	6.001E-02	4.968E-03	0.488
TI-44	1.207E-01		5.165E-02	7.010E-02	6.346E-03	1.721
SC-46	8.641E-03		4.334E-02	7.163E-02	7.282E-03	0.121
V-48	3.214E-02		8.607E-02	1.434E-01	1.403E-02	0.224
CR-51	-8.735E-02		4.271E-01	7.023E-01	8.568E-02	-0.124
MN-52	1.217E-01		3.152E-01	5.415E-01	5.037E-02	0.225
MN-54	-4.295E-03		4.086E-02	6.604E-02	6.488E-03	-0.065
CO-56	-1.202E-02		4.247E-02	6.731E-02	6.664E-03	-0.179
CO-57	2.000E-02		2.591E-02	4.392E-02	3.671E-03	0.455
CO-58	-4.643E-03		4.161E-02	6.734E-02	6.522E-03	-0.069
FE-59	-5.707E-02		1.073E-01	1.703E-01	1.624E-02	-0.335
CO-60	-9.782E-03		4.689E-02	7.505E-02	6.993E-03	-0.130
ZN-65	-1.044E-02		1.263E-01	1.793E-01	1.560E-02	-0.058
GE-68	-9.168E-01		1.553E+00	2.466E+00	2.234E-01	-0.372
AS-73	-3.707E-01		1.150E+00	1.909E+00	1.580E-01	-0.194
AS-74	9.142E-03		1.062E-01	1.792E-01	1.673E-02	0.051
SE-75	-2.361E-02		5.377E-02	7.742E-02	9.464E-03	-0.305
BR-77	3.986E+00		2.282E+01	3.704E+01	3.655E+00	0.108
SR-82	-4.341E-01		4.585E-01	6.897E-01	6.508E-02	-0.629
RB-83	-8.265E-03		8.124E-02	1.292E-01	1.275E-02	-0.064
RB-84	-2.742E-02		8.370E-02	1.317E-01	1.332E-02	-0.208
KR-85	1.143E+01		8.985E+00	1.398E+01	1.384E+00	0.818
SR-85	6.000E-02		4.715E-02	7.335E-02	7.261E-03	0.818
RB-86	-7.761E-01		1.079E+00	1.693E+00	1.535E-01	-0.458
Y-88	3.373E-03		3.605E-02	6.063E-02	4.945E-03	0.056
ZR-88	-1.798E-03		3.633E-02	5.936E-02	5.940E-03	-0.030
Y-91	4.153E+00		2.375E+01	3.977E+01	3.303E+00	0.104
NB-94	1.438E-02		3.732E-02	6.344E-02	5.656E-03	0.227
NB-95	2.983E-02		5.612E-02	9.521E-02	8.914E-03	0.313
NB-95M	1.020E-01		1.525E-01	2.361E-01	2.987E-02	0.432
ZR-95	8.764E-02		7.816E-02	1.393E-01	1.408E-02	0.629

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.197E-01		4.821E-01	Half-Life too short		
ZR-97	1.392E+01		9.868E+00	Half-Life too short		
MO-99	-3.487E-01		2.279E+01	3.751E+01	5.818E+00	-0.009
TC-99M	-8.826E+12		9.355E+12	Half-Life too short		
RH-101	7.061E-03		3.550E-02	5.695E-02	6.229E-03	0.124
RH-102	-7.997E-03		3.058E-02	4.836E-02	4.851E-03	-0.165
RU-103	2.528E-02		4.499E-02	7.391E-02	1.110E-02	0.342
RH-106	1.974E-01		3.403E-01	5.907E-01	8.069E-02	0.334
RU-106	1.974E-01		3.397E-01	5.907E-01	5.364E-02	0.334
AG-108M	-1.877E-02		3.572E-02	5.545E-02	5.749E-03	-0.338
AG-110M	4.467E-03		3.950E-02	5.785E-02	5.160E-03	0.077
IN-111	-4.660E-01		2.037E+00	2.998E+00	3.561E-01	-0.155
IN-113M	-3.608E-04		5.160E-02	8.454E-02	8.651E-03	-0.004
SN-113	-3.608E-04		5.160E-02	8.454E-02	8.651E-03	-0.004
IN-114M	2.445E-01		2.236E-01	3.380E-01	3.640E-02	0.723
CD-115	2.032E-01		2.373E+01	3.802E+01	3.737E+00	0.005
SN-117M	-2.632E-02		6.554E-02	1.043E-01	1.028E-02	-0.252
SB-122	1.226E+00		4.042E+00	6.935E+00	6.659E-01	0.177
I-123	-3.784E+01		4.987E+01	Half-Life too short		
TE-123M	-1.152E-02		3.037E-02	4.836E-02	4.797E-03	-0.238
I-124	-1.338E+00		1.241E+00	1.608E+00	1.491E-01	-0.832
SB-124	-8.925E-02		7.489E-02	9.150E-02	8.322E-03	-0.975
SB-125	4.819E-02		1.016E-01	1.704E-01	1.740E-02	0.283
TE-125M	7.138E+00		9.842E+00	1.671E+01	1.714E+00	0.427
I-126	5.810E-02		2.375E-01	3.521E-01	3.046E-02	0.165
SB-126	2.156E-02		2.055E-01	2.977E-01	2.693E-02	0.072
SB-127	1.382E+00		2.142E+00	3.718E+00	4.526E-01	0.372
XE-127	1.854E-02		5.645E-02	8.709E-02	9.616E-03	0.213
I-131	-1.816E-02		1.419E-01	2.318E-01	2.603E-02	-0.078
TE-132	-2.917E-01		1.242E+00	1.939E+00	3.468E-01	-0.150
BA-133	1.447E-02		5.113E-02	7.579E-02	1.131E-02	0.191
I-133	-3.659E-02		1.955E-02	Half-Life too short		
CS-134	5.294E-02		5.377E-02	9.420E-02	9.065E-03	0.562
CS-135	3.127E-01		1.952E-01	3.115E-01	4.121E-02	1.004
I-135	-6.286E+11		8.231E+11	Half-Life too short		
CS-136	3.620E-02		1.367E-01	2.338E-01	2.257E-02	0.155
CE-139	6.955E-03		3.212E-02	5.241E-02	5.376E-03	0.133
BA-140	-2.288E-01		3.185E-01	4.626E-01	1.548E-01	-0.495
LA-140	-5.570E-02		1.206E-01	1.553E-01	1.405E-02	-0.359
CE-141	-1.182E-02		6.977E-02	1.129E-01	1.055E-02	-0.105
CE-143	2.655E-03		4.237E-04	Half-Life too short		
CE-144	-3.337E-02		2.160E-01	3.514E-01	5.486E-02	-0.095
PM-144	-1.381E-02		3.956E-02	6.385E-02	5.666E-03	-0.216
PR-144	-9.371E-01		2.684E+00	4.331E+00	3.843E-01	-0.216
PM-146	6.879E-02		4.816E-02	8.446E-02	1.007E-02	0.814
ND-147	-4.498E-01		6.884E-01	1.034E+00	1.621E-01	-0.435
PM-149	2.039E+02		1.974E+02	3.419E+02	6.115E+01	0.596
EU-152	2.360E-03		1.148E-01	1.558E-01	1.832E-02	0.015

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-3.131E-03		9.105E-02	1.348E-01	1.225E-02	-0.023
EU-154	8.455E-02		1.520E-01	2.615E-01	3.006E-02	0.323
EU-155	1.154E-01		1.127E-01	1.934E-01	1.695E-02	0.597
TB-160	4.937E-02		1.647E-01	2.744E-01	2.773E-02	0.180
HO-166M	-3.354E-03		6.953E-02	1.145E-01	1.029E-02	-0.029
TM-171	-2.412E+00		3.104E+01	4.723E+01	3.859E+00	-0.051
LU-176	5.546E-04		2.619E-02	4.229E-02	5.109E-03	0.013
LU-177	4.621E+00	+	2.996E+00	2.641E+00	2.947E-01	1.750
LU-177M	1.276E-03		1.839E-01	3.003E-01	3.020E-02	0.004
HF-181	1.545E-02		4.870E-02	8.032E-02	8.044E-03	0.192
W-181	-5.282E-02		4.154E-01	6.315E-01	5.088E-02	-0.084
TA-182	1.055E-01		2.479E-01	4.219E-01	3.558E-02	0.250
RE-183	1.251E-02		1.231E-01	1.957E-01	1.968E-02	0.064
RE-184	-1.768E-02		2.505E-01	4.219E-01	5.066E-02	-0.042
OS-185	1.247E-02		4.869E-02	8.259E-02	7.275E-03	0.151
RE-188	-7.462E-02		1.909E-01	3.046E-01	2.944E-02	-0.245
W-188	-6.053E+00		9.200E+00	1.289E+01	1.584E+00	-0.470
IR-192	-1.314E-02		3.792E-02	6.186E-02	7.386E-03	-0.212
AU-195	6.121E-02		2.375E-01	3.923E-01	3.526E-02	0.156
TL-200	1.116E-03		9.781E-04	Half-Life too short		
TL-201	-7.930E+00		1.253E+01	1.962E+01	2.019E+00	-0.404
TL-202	6.386E-03		8.874E-02	1.449E-01	1.459E-02	0.044
HG-203	-1.569E-02		4.522E-02	7.458E-02	9.377E-03	-0.210
BI-207	3.221E-02		6.379E-02	1.107E-01	1.016E-02	0.291
TL-207	-9.265E-02		7.854E-01	1.137E+00	2.210E-01	-0.082
PO-209	3.848E+00		8.337E+00	1.388E+01	1.417E+00	0.277
BI-210	5.541E-01		6.454E+00	9.810E+00	9.400E-01	0.056
PB-210	5.541E-01		6.454E+00	9.810E+00	9.400E-01	0.056
PO-210	5.541E-01		6.454E+00	9.810E+00	8.563E-01	0.056
PB-211	-6.481E-01		1.109E+00	1.619E+00	1.018E+00	-0.400
BI-212	9.860E-01	+	6.747E-01	7.499E-01	7.812E-02	1.315
PO-215	-9.265E-02		7.854E-01	1.137E+00	2.210E-01	-0.082
RN-219	-9.587E-02		4.459E-01	7.189E-01	1.141E-01	-0.133
RN-220	1.002E+01		2.833E+01	4.648E+01	4.509E+00	0.216
RA-223	-9.265E-02		7.854E-01	1.137E+00	2.210E-01	-0.082
AC-227	1.552E-02		4.135E-01	6.993E-01	1.225E-01	0.022
TH-227	1.552E-02		4.135E-01	6.993E-01	1.394E-01	0.022
TH-229	-2.245E-01		5.490E-01	8.605E-01	9.331E-02	-0.261
PA-231	-1.025E+00		1.633E+00	2.635E+00	4.632E-01	-0.389
TH-231	-9.265E-02		7.854E-01	1.137E+00	2.210E-01	-0.082
U-231	-3.159E-01		1.714E+00	2.541E+00	2.339E-01	-0.124
PA-233	5.493E-02		7.088E-02	1.223E-01	1.489E-02	0.449
PA-234	2.261E-01		3.529E-01	5.979E-01	1.162E-01	0.378
PA-234M	8.392E+00	+	7.901E+00	9.807E+00	1.067E+00	0.856
U-235	8.880E-02		2.391E-01	3.873E-01	6.877E-02	0.229
NP-236	-8.537E-02		8.481E-02	1.305E-01	1.298E-02	-0.654
NP-239	1.187E-02		1.955E-01	3.234E-01	2.711E-02	0.037
AM-241	2.337E-01		1.964E-01	3.176E-01	2.602E-02	0.736

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.854E-02		9.834E-02	1.651E-01	1.441E-02	0.173
AM-246	3.206E-02		1.731E-01	2.931E-01	2.651E-02	0.109
CM-247	3.752E-02		3.948E-02	6.815E-02	6.837E-03	0.551
CF-249	3.388E-02		4.372E-02	7.485E-02	7.581E-03	0.453
CF-251	-1.290E-03		1.352E-01	2.177E-01	2.280E-02	-0.006

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]G246440009          *
* Acquisition date   : 19-FEB-2010 19:50:03 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 02:00:03.28 Half life ratio : 8.000           *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246440009 Analyst initials: MXR1                *
* Batch Number       : 950788 Sample Quantity : 1.3619E+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	3.601E+01	3.894E+00	2.618E-01	1.987E+00
CD-109	2.996E+00	1.109E+00	6.515E-01	5.658E-01
SN-126	2.935E-01	1.086E-01	6.419E-02	5.543E-02
BA-137M	4.909E-02	4.627E-02	3.216E-02	2.361E-02
CS-137	5.189E-02	4.892E-02	3.400E-02	2.496E-02
TL-208	5.871E-01	1.049E-01	3.131E-02	5.353E-02
BI-211	3.934E+00	6.882E-01	1.730E-01	3.511E-01
PB-212	1.803E+00	2.532E-01	4.957E-02	1.292E-01
PO-212	1.803E+00	2.532E-01	4.957E-02	1.292E-01
BI-214	9.989E-01	2.223E-01	6.767E-02	1.134E-01
PB-214	1.368E+00	2.494E-01	6.032E-02	1.273E-01
PO-214	1.368E+00	2.494E-01	6.032E-02	1.273E-01
PO-216	1.803E+00	2.532E-01	4.957E-02	1.292E-01
PO-218	1.368E+00	2.494E-01	6.032E-02	1.273E-01
RA-224	5.436E+00	1.487E+00	5.643E-01	7.584E-01
RA-226	9.989E-01	2.223E-01	6.767E-02	1.134E-01
AC-228	1.891E+00	3.790E-01	1.124E-01	1.934E-01
RA-228	1.891E+00	3.790E-01	1.124E-01	1.934E-01
TH-228	1.834E+00	2.576E-01	5.044E-02	1.314E-01
TH-230	9.989E-01	2.223E-01	6.767E-02	1.134E-01
TH-232	1.891E+00	3.790E-01	1.124E-01	1.934E-01
TH-234	2.825E+00	2.300E+00	1.207E+00	1.173E+00
U-234	9.989E-01	2.223E-01	6.767E-02	1.134E-01
NP-237	8.620E-01	3.636E-01	1.911E-01	1.855E-01
U-238	2.825E+00	2.300E+00	1.207E+00	1.173E+00
AM-243	4.038E-01	8.535E-02	4.952E-02	4.355E-02
ANH-511	1.384E-01	7.793E-02	2.569E-02	3.976E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	6.704E-02	3.472E-01	2.972E-01	1.772E-01	NOT IDENT.
NA-22	2.856E-02	5.318E-02	4.690E-02	2.713E-02	NOT IDENT.
NA-24	2.292E+06	1.063E+07	0.000E+00	5.425E+06	SHORT HLIF
AL-26	2.930E-02	3.046E-02	2.998E-02	1.554E-02	NOT IDENT.
TI-44	1.207E-01	5.062E-02	3.712E-02	2.583E-02	NOT IDENT.
SC-46	8.641E-03	4.247E-02	3.627E-02	2.167E-02	FAIL ABUN
V-48	3.214E-02	8.435E-02	7.249E-02	4.304E-02	NOT IDENT.
CR-51	-8.735E-02	4.186E-01	3.626E-01	2.136E-01	NOT IDENT.
MN-52	1.217E-01	3.089E-01	2.717E-01	1.576E-01	NOT IDENT.
MN-54	-4.295E-03	4.004E-02	3.349E-02	2.043E-02	NOT IDENT.
CO-56	-1.202E-02	4.162E-02	3.412E-02	2.124E-02	NOT IDENT.
CO-57	2.000E-02	2.539E-02	2.307E-02	1.296E-02	NOT IDENT.
CO-58	-4.643E-03	4.078E-02	3.416E-02	2.081E-02	NOT IDENT.
FE-59	-5.707E-02	1.052E-01	8.588E-02	5.365E-02	NOT IDENT.
CO-60	-9.782E-03	4.596E-02	3.771E-02	2.345E-02	NOT IDENT.
ZN-65	-1.044E-02	1.238E-01	9.041E-02	6.314E-02	NOT IDENT.
GE-68	-9.168E-01	1.522E+00	1.244E+00	7.766E-01	NOT IDENT.
AS-73	-3.707E-01	1.127E+00	1.018E+00	5.751E-01	NOT IDENT.
AS-74	9.142E-03	1.041E-01	9.143E-02	5.311E-02	NOT IDENT.
SE-75	-2.361E-02	5.270E-02	4.011E-02	2.689E-02	NOT IDENT.
BR-77	3.986E+00	2.236E+01	1.895E+01	1.141E+01	FAIL ABUN
SR-82	-4.341E-01	4.493E-01	3.502E-01	2.293E-01	NOT IDENT.
RB-83	-8.265E-03	7.962E-02	6.611E-02	4.062E-02	NOT IDENT.
RB-84	-2.742E-02	8.202E-02	6.669E-02	4.185E-02	NOT IDENT.
KR-85	1.143E+01	8.805E+00	7.152E+00	4.493E+00	NOT IDENT.
SR-85	6.000E-02	4.621E-02	3.753E-02	2.358E-02	NOT IDENT.
RB-86	-7.761E-01	1.057E+00	8.544E-01	5.393E-01	NOT IDENT.
Y-88	3.373E-03	3.533E-02	3.027E-02	1.803E-02	NOT IDENT.
ZR-88	-1.798E-03	3.561E-02	3.053E-02	1.817E-02	NOT IDENT.
Y-91	4.153E+00	2.327E+01	2.002E+01	1.187E+01	NOT IDENT.
NB-94	1.438E-02	3.657E-02	3.227E-02	1.866E-02	NOT IDENT.
NB-95	2.983E-02	5.500E-02	4.836E-02	2.806E-02	NOT IDENT.
NB-95M	1.020E-01	1.494E-01	1.226E-01	7.624E-02	NOT IDENT.
ZR-95	8.764E-02	7.660E-02	7.075E-02	3.908E-02	NOT IDENT.
NB-97	1.197E+05	9.450E+05	0.000E+00	4.821E+05	SHORT HLIF
ZR-97	1.392E+07	1.934E+07	0.000E+00	9.868E+06	SHORT HLIF
MO-99	-3.487E-01	2.234E+01	1.907E+01	1.140E+01	NOT IDENT.
TC-99M	-8.826E+18	1.833E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.061E-03	3.479E-02	2.966E-02	1.775E-02	NOT IDENT.
RH-102	-7.997E-03	2.997E-02	2.478E-02	1.529E-02	NOT IDENT.
RU-103	2.528E-02	4.409E-02	3.785E-02	2.250E-02	FAIL ABUN
RH-106	1.974E-01	3.335E-01	3.012E-01	1.701E-01	FAIL ABUN
RU-106	1.974E-01	3.329E-01	3.012E-01	1.698E-01	FAIL ABUN
AG-108M	-1.877E-02	3.501E-02	2.847E-02	1.786E-02	NOT IDENT.
AG-110M	4.467E-03	3.871E-02	2.947E-02	1.975E-02	NOT IDENT.
IN-111	-4.660E-01	1.996E+00	1.555E+00	1.018E+00	NOT IDENT.
IN-113M	-3.608E-04	5.057E-02	4.349E-02	2.580E-02	NOT IDENT.
SN-113	-3.608E-04	5.057E-02	4.349E-02	2.580E-02	NOT IDENT.
IN-114M	2.445E-01	2.191E-01	1.762E-01	1.118E-01	NOT IDENT.
CD-115	2.032E-01	2.326E+01	1.944E+01	1.187E+01	NOT IDENT.
SN-117M	-2.632E-02	6.423E-02	5.455E-02	3.277E-02	NOT IDENT.
SB-122	1.226E+00	3.961E+00	3.543E+00	2.021E+00	NOT IDENT.
I-123	-3.784E+07	9.774E+07	0.000E+00	4.987E+07	SHORT HLIF
TE-123M	-1.152E-02	2.976E-02	2.529E-02	1.518E-02	NOT IDENT.
I-124	-1.338E+00	1.216E+00	8.205E-01	6.205E-01	NOT IDENT.
SB-124	-8.925E-02	7.339E-02	4.576E-02	3.744E-02	FAIL ABUN
SB-125	4.819E-02	9.957E-02	8.751E-02	5.080E-02	FAIL ABUN
TE-125M	7.138E+00	9.645E+00	8.795E+00	4.921E+00	NOT IDENT.
I-126	5.810E-02	2.327E-01	1.793E-01	1.187E-01	NOT IDENT.
SB-126	2.156E-02	2.014E-01	1.514E-01	1.028E-01	NOT IDENT.
SB-127	1.382E+00	2.099E+00	1.892E+00	1.071E+00	NOT IDENT.
XE-127	1.854E-02	5.532E-02	4.534E-02	2.823E-02	NOT IDENT.
I-131	-1.816E-02	1.390E-01	1.194E-01	7.093E-02	NOT IDENT.
TE-132	-2.917E-01	1.217E+00	1.007E+00	6.208E-01	NOT IDENT.
BA-133	1.447E-02	5.010E-02	3.905E-02	2.556E-02	NOT IDENT.
I-133	-3.659E+04	3.832E+04	0.000E+00	1.955E+04	SHORT HLIF
CS-134	5.294E-02	5.269E-02	4.781E-02	2.688E-02	NOT IDENT.
CS-135	3.127E-01	1.913E-01	1.614E-01	9.759E-02	NOT IDENT.
I-135	-6.286E+17	1.613E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.620E-02	1.340E-01	1.180E-01	6.834E-02	FAIL ABUN
CE-139	6.955E-03	3.148E-02	2.738E-02	1.606E-02	NOT IDENT.
BA-140	-2.288E-01	3.121E-01	2.366E-01	1.592E-01	NOT IDENT.
LA-140	-5.570E-02	1.182E-01	7.777E-02	6.029E-02	FAIL ABUN
CE-141	-1.182E-02	6.837E-02	5.913E-02	3.488E-02	NOT IDENT.
CE-143	2.655E+03	8.304E+02	0.000E+00	4.237E+02	SHORT HLIF
CE-144	-3.337E-02	2.116E-01	1.843E-01	1.080E-01	NOT IDENT.
PM-144	-1.381E-02	3.877E-02	3.249E-02	1.978E-02	NOT IDENT.
PR-144	-9.371E-01	2.630E+00	2.204E+00	1.342E+00	NOT IDENT.

PM-146	6.879E-02	4.720E-02	4.332E-02	2.408E-02	NOT IDENT.
ND-147	-4.498E-01	6.746E-01	5.290E-01	3.442E-01	FAIL ABUN
PM-149	2.039E+02	1.935E+02	1.769E+02	9.872E+01	NOT IDENT.
EU-152	2.360E-03	1.125E-01	8.033E-02	5.742E-02	NOT IDENT.
GD-153	-3.131E-03	8.923E-02	7.110E-02	4.553E-02	NOT IDENT.
EU-154	8.455E-02	1.489E-01	1.315E-01	7.599E-02	NOT IDENT.
EU-155	1.154E-01	1.104E-01	1.019E-01	5.634E-02	FAIL ABUN
TB-160	4.937E-02	1.614E-01	1.390E-01	8.235E-02	FAIL ABUN
HO-166M	-3.354E-03	6.814E-02	5.825E-02	3.476E-02	FAIL ABUN
TM-171	-2.412E+00	3.042E+01	2.508E+01	1.552E+01	NOT IDENT.
LU-176	5.546E-04	2.566E-02	2.185E-02	1.309E-02	FAIL ABUN
LU-177	4.621E+00	2.936E+00	1.374E+00	1.498E+00	FAIL ABUN
LU-177M	1.276E-03	1.802E-01	1.543E-01	9.196E-02	FAIL ABUN
HF-181	1.545E-02	4.772E-02	4.115E-02	2.435E-02	NOT IDENT.
W-181	-5.282E-02	4.071E-01	3.355E-01	2.077E-01	NOT IDENT.
TA-182	1.055E-01	2.429E-01	2.123E-01	1.239E-01	FAIL ABUN
RE-183	1.251E-02	1.206E-01	1.023E-01	6.154E-02	FAIL ABUN
RE-184	-1.768E-02	2.455E-01	2.188E-01	1.253E-01	NOT IDENT.
OS-185	1.247E-02	4.772E-02	4.208E-02	2.435E-02	NOT IDENT.
RE-188	-7.462E-02	1.871E-01	1.594E-01	9.545E-02	NOT IDENT.
W-188	-6.053E+00	9.016E+00	6.667E+00	4.600E+00	FAIL ABUN
IR-192	-1.314E-02	3.716E-02	3.194E-02	1.896E-02	FAIL ABUN
AU-195	6.121E-02	2.328E-01	2.069E-01	1.188E-01	FAIL ABUN
TL-200	1.116E+03	1.917E+03	0.000E+00	9.781E+02	SHORT HLIF
TL-201	-7.930E+00	1.227E+01	1.025E+01	6.263E+00	NOT IDENT.
TL-202	6.386E-03	8.697E-02	7.435E-02	4.437E-02	NOT IDENT.
HG-203	-1.569E-02	4.432E-02	3.860E-02	2.261E-02	NOT IDENT.
BI-207	3.221E-02	6.251E-02	5.586E-02	3.189E-02	FAIL ABUN
TL-207	-9.265E-02	7.697E-01	5.867E-01	3.927E-01	FAIL ABUN
PO-209	3.848E+00	8.170E+00	7.026E+00	4.168E+00	NOT IDENT.
BI-210	5.541E-01	6.325E+00	5.242E+00	3.227E+00	NOT IDENT.
PB-210	5.541E-01	6.325E+00	5.242E+00	3.227E+00	NOT IDENT.
PO-210	5.541E-01	6.325E+00	5.242E+00	3.227E+00	NOT IDENT.
PO-211	-6.481E-01	1.087E+00	8.323E-01	5.546E-01	NOT IDENT.
BI-212	9.860E-01	6.613E-01	3.812E-01	3.374E-01	FAIL ABUN
PO-215	-9.265E-02	7.697E-01	5.867E-01	3.927E-01	FAIL ABUN
RN-219	-9.587E-02	4.370E-01	3.696E-01	2.229E-01	FAIL ABUN
RN-220	1.002E+01	2.777E+01	2.376E+01	1.417E+01	NOT IDENT.
RA-223	-9.265E-02	7.697E-01	5.867E-01	3.927E-01	FAIL ABUN
AC-227	1.552E-02	4.053E-01	3.625E-01	2.068E-01	FAIL ABUN
TH-227	1.552E-02	4.053E-01	3.625E-01	2.068E-01	FAIL ABUN
TH-229	-2.245E-01	5.380E-01	4.484E-01	2.745E-01	FAIL ABUN
PA-231	-1.025E+00	1.600E+00	1.363E+00	8.165E-01	FAIL ABUN
TH-231	-9.265E-02	7.697E-01	5.867E-01	3.927E-01	FAIL ABUN
U-231	-3.159E-01	1.680E+00	1.341E+00	8.571E-01	FAIL ABUN
PA-233	5.493E-02	6.947E-02	6.316E-02	3.544E-02	FAIL ABUN
PA-234	2.261E-01	3.458E-01	3.024E-01	1.764E-01	FAIL ABUN
PA-234M	8.392E+00	7.743E+00	4.955E+00	3.951E+00	FAIL ABUN
U-235	8.880E-02	2.343E-01	2.029E-01	1.195E-01	FAIL ABUN
NP-236	-8.537E-02	8.311E-02	6.824E-02	4.240E-02	NOT IDENT.
NP-239	1.187E-02	1.916E-01	1.700E-01	9.774E-02	FAIL ABUN
AM-241	2.337E-01	1.925E-01	1.690E-01	9.820E-02	NOT IDENT.
CM-243	2.854E-02	9.637E-02	8.701E-02	4.917E-02	FAIL ABUN
AM-246	3.206E-02	1.696E-01	1.479E-01	8.654E-02	NOT IDENT.
CM-247	3.752E-02	3.869E-02	3.504E-02	1.974E-02	NOT IDENT.
CF-249	3.388E-02	4.284E-02	3.851E-02	2.186E-02	NOT IDENT.
CF-251	-1.290E-03	1.325E-01	1.136E-01	6.762E-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	262.7797
46.50	262.7797
46.50	262.7797
48.70	283.5014
49.72	235.8455
51.35	269.3741
52.39	245.1341
52.97	252.3376
53.15	252.4879
53.44	280.5309
54.07	284.4886
56.28	283.9734
56.28	283.9760
57.37	0.0000
57.53	305.5868
57.53	305.5887
57.60	305.6542
57.98	302.5983
57.98	302.5983
59.32	297.4201
59.32	297.4201
59.40	284.6147
59.54	271.8529
59.72	272.0027
60.01	296.7581
61.10	337.8711
61.14	337.9119
61.30	338.0742
63.00	301.1673
63.29	301.4246
63.29	301.4246
63.58	301.6814
64.28	296.6364
65.12	313.0785
65.20	313.1510
65.20	313.1510
66.05	294.2136
66.72	309.2479
66.83	309.3465
66.91	322.5831
67.20	318.8953
67.20	318.8953
67.75	319.9161
67.85	315.7823
68.90	348.6607
68.90	348.6607
69.30	354.3484
69.67	363.0285
70.82	334.0890
70.82	334.0890
70.83	334.0986
72.80	362.6407
72.87	362.7069
72.87	362.7069
74.67	381.9218
74.81	382.0605
74.81	382.0605
74.81	382.0605
74.81	382.0605
74.81	382.0605
74.81	382.0605
74.97	382.2209
75.28	382.5307
75.70	382.9489
77.11	384.3464
77.11	384.3464

77.11	384.3464
77.11	384.3464
77.11	384.3464
77.11	384.3464
77.11	384.3464
78.38	377.4460
79.62	378.6295
79.80	378.7992
79.80	378.7992
80.11	351.8210
80.18	351.8821
80.30	351.9884
80.30	351.9884
80.57	379.5288
81.00	379.9339
81.07	382.7335
81.07	382.7335
81.07	382.7335
81.07	382.7335
82.60	337.5274
83.37	338.1581
83.78	338.4977
83.78	338.4977
83.78	338.4977
83.78	338.4977
84.21	338.8487
84.90	339.4118
85.43	339.8434
86.29	340.5379
86.50	340.7086
86.54	340.7406
86.59	340.7800
86.72	340.8851
86.79	340.9395
86.94	341.0615
87.30	341.3524
87.30	341.3524
87.30	341.3524
87.30	341.3524
87.30	341.3524
87.30	341.3524
87.30	341.3524
87.57	341.5682
87.88	341.8160
88.03	341.9361
88.36	342.1989
88.47	342.2871
89.95	343.4620
91.11	344.3760
92.29	345.3013
92.38	345.3707
92.38	345.3707
93.35	346.1252
94.00	346.6301
94.67	311.8637
94.67	311.8671
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94.90	327.5580
94.90	327.5580
94.90	327.5580
95.87	340.9950
95.87	340.9950
96.73	324.6292
97.43	312.3451
98.44	291.4016
98.44	291.4016
98.88	301.9324
99.55	290.9574
99.55	290.9574
99.86	306.3740
100.00	306.4657
100.10	307.4865
103.18	338.2324
103.76	305.0670
105.00	283.7286
105.31	303.1584
108.00	351.2759
109.28	303.6725

111.00	365.0723
111.00	365.0723
111.76	353.9217
112.95	311.7506
115.19	347.4641
116.30	318.6969
117.00	301.3946
117.00	301.3946
117.66	298.8143
121.11	279.9145
121.62	261.3025
121.78	268.3369
122.06	268.4756
122.32	292.4807
122.32	292.4807
122.32	292.4807
122.32	292.4807
123.07	316.7950
127.23	316.1872
129.76	322.1521
131.20	300.2267
133.02	330.9953
133.54	313.6332
135.34	300.3536
136.00	296.6185
136.25	319.1786
136.48	319.3043
140.51	347.1597
140.51	0.0000
142.18	307.9575
142.65	306.1332
143.76	314.9563
144.24	317.2683
144.24	317.2683
144.24	317.2683
144.24	317.2683
145.22	320.8827
145.44	320.9994
147.16	320.8566
152.43	285.8635
152.70	294.3662
153.22	320.8169
154.21	328.6621
154.21	328.6621
154.21	328.6621
154.21	328.6621
155.03	326.9796
156.02	307.4757
158.56	301.2759
159.00	0.0000
159.00	293.0163
160.31	310.5584
161.27	316.3158
162.32	268.9746
162.64	266.9760
163.35	274.7129
163.89	277.0673
165.85	278.9427
167.43	303.1575
171.28	249.9197
171.86	258.7549
172.10	241.5866
176.55	269.1712
176.60	269.1889
181.06	296.5361
184.41	281.9957
185.71	282.4924
186.00	282.6048
190.27	235.5688
192.34	280.5767
193.63	271.0549
197.04	253.2967
198.01	242.4429
198.60	273.9327
200.40	275.6890
201.83	275.0692
202.84	259.0102
205.31	258.8062

208.36	225.2677
208.81	225.3953
209.75	225.6564
209.75	225.6564
210.97	202.7155
215.65	238.4875
216.55	224.1108
218.09	254.3118
222.10	249.7760
223.80	222.5967
226.40	233.6879
227.00	218.8023
227.08	218.8235
227.20	218.8523
228.16	242.2813
228.18	242.2877
228.18	242.2877
231.56	0.0000
235.69	259.5826
236.00	259.6752
236.00	259.6752
238.63	219.0908
238.63	219.0908
238.63	219.0908
238.63	219.0908
239.00	219.1801
240.98	219.6664
241.98	219.9096
241.98	219.9096
241.98	219.9096
244.69	216.8484
245.39	195.7403
247.94	184.9072
248.90	183.3210
249.79	216.4552
252.40	206.3459
252.85	206.4464
252.85	206.4464
254.15	0.0000
256.20	209.8773
256.20	209.8773
260.50	191.0090
260.90	182.9775
262.80	200.4998
264.65	201.2480
268.24	178.7434
268.79	190.4745
269.46	184.6037
269.46	184.6037
269.46	184.6037
269.46	184.6037
271.23	192.4055
273.65	235.2542
276.40	179.4912
277.35	180.5783
277.60	185.2078
277.60	185.2078
278.00	189.8679
278.60	188.1461
279.20	203.8704
279.53	208.5313
280.46	204.1244
281.68	186.8804
283.67	190.0131
284.30	190.1326
285.00	183.7962
285.90	156.2249
286.10	156.2559
286.10	156.2559
287.40	178.9814
288.45	0.0000
290.67	197.6264
290.80	197.6524
291.72	175.5135
293.26	0.0000
293.70	155.5432
295.21	155.7675
295.21	155.7675

295.21	155.7675
295.96	155.8796
296.50	155.9586
297.23	156.0656
298.57	156.2644
299.80	156.4453
299.80	156.4453
300.09	156.4886
300.09	156.4886
300.09	156.4886
300.09	156.4886
300.12	156.4911
301.29	138.0898
302.84	147.3086
303.76	153.4532
303.91	153.4731
304.40	143.0056
304.40	143.0056
304.84	161.1348
306.84	148.7187
308.46	156.7648
311.98	153.4793
316.51	163.6252
318.01	157.1775
319.02	159.2254
319.41	161.1890
320.08	164.1475
323.87	154.7450
323.87	154.7450
323.87	154.7450
323.87	154.7450
325.23	157.9979
328.77	192.3431
333.44	151.9245
334.20	174.6976
334.20	174.6976
334.30	174.7141
338.28	141.5689
338.28	141.5689
338.28	141.5689
338.28	141.5689
338.32	141.5734
338.32	141.5734
338.32	141.5734
340.50	125.9040
340.57	119.6940
344.27	118.9005
345.85	136.6248
350.59	0.0000
351.07	129.3796
351.92	129.4702
351.92	129.4702
351.92	129.4702
355.39	0.0000
356.01	127.5453
364.48	118.9142
366.43	121.0860
367.43	120.1895
367.94	0.0000
369.80	132.3587
374.96	153.8849
383.85	131.8136
387.95	119.1091
388.63	115.1315
391.69	142.7319
391.69	142.7319
392.90	146.9160
398.62	139.4103
400.65	134.5278
401.10	131.5136
401.81	129.5444
402.60	107.1661
404.84	143.1253
410.95	124.2597
411.60	157.1976
413.65	112.1568
414.70	110.1837
415.30	109.2009

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417.63	0.0000
418.52	118.7499
423.70	135.7754
427.08	105.9735
427.89	110.1924
432.53	106.3813
433.93	111.7054
439.47	115.2821
439.56	118.4340
439.89	118.4607
443.98	116.6943
444.90	117.8191
445.03	117.8293
445.03	117.8293
445.03	117.8293
445.03	117.8293
453.90	86.7909
463.38	103.9606
468.07	104.2838
473.00	106.1233
475.06	97.6789
475.35	108.4329
476.78	102.0870
477.59	95.6897
477.96	98.9390
482.03	98.1205
484.57	101.5216
487.03	109.2528
490.36	0.0000
492.35	102.0251
497.08	77.2922
507.63	0.0000
510.53	0.0000
510.84	98.8172
511.00	98.8261
511.85	98.8783
511.85	98.8783
513.99	96.8066
513.99	96.8066
520.41	104.9152
520.65	99.4098
527.90	92.0781
528.96	0.0000
529.64	98.8376
529.87	0.0000
531.02	93.3618
537.32	93.7104
543.00	90.6652
546.56	0.0000
549.76	82.0314
552.65	99.0537
555.20	77.5554
563.23	86.9695
563.90	99.6929
568.70	95.4177
569.32	89.9967
569.50	90.0064
569.67	88.1975
573.80	76.5536
574.00	76.5618
574.64	74.9676
578.91	86.8243
579.30	0.0000
583.14	85.1963
585.48	70.3233
591.81	89.2822
592.07	92.0581
593.00	80.1309
595.88	89.4811
600.56	92.4805
602.52	0.0000
602.71	121.9074
602.71	121.9074
603.60	108.0705
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609.31	112.4272

609.31	112.4272
609.31	112.4272
609.31	112.4272
610.33	112.4892
612.46	108.5832
614.37	100.9277
618.01	97.4921
621.84	75.7595
621.84	75.7595
631.29	79.8929
633.02	95.0155
633.10	95.0204
634.78	96.0434
635.90	105.5195
636.97	86.7262
645.85	75.7559
646.12	85.2363
656.30	72.9812
657.75	68.2705
657.90	0.0000
661.65	83.9932
661.65	83.9932
664.57	0.0000
666.33	73.3462
666.33	73.3462
675.00	76.8613
677.61	62.5292
685.20	67.5886
692.80	77.5254
695.00	85.3682
696.49	99.9900
696.49	99.9900
697.00	102.9282
697.49	96.1528
698.33	104.9361
698.50	101.0572
699.00	97.1948
702.63	84.7039
706.10	94.5939
706.58	0.0000
706.67	88.7672
709.31	88.8783
711.68	89.9538
713.82	80.2563
717.42	94.1156
720.50	80.1793
721.93	0.0000
722.20	72.0532
722.78	73.7109
722.78	73.7109
722.89	73.7146
722.95	73.7164
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724.18	88.5103
727.18	76.8155
733.00	85.5770
735.90	84.0433
739.58	79.2305
742.81	76.3721
744.21	74.4342
747.13	77.5144
751.79	76.6804
752.31	77.6934
753.82	74.7565
755.35	56.8525
756.15	57.8711
756.87	57.8896
763.93	124.1514
765.79	99.2006
766.42	96.2227
766.84	100.2490
776.49	89.5997
778.00	77.5696
778.57	79.6037
778.89	70.5452
783.80	77.7651
785.46	73.7771
792.07	91.2173

795.84	71.0613
796.30	80.2132
798.80	98.5938
801.93	77.3508
805.60	72.3746
810.29	67.4099
810.76	61.2935
815.85	63.4728
817.79	66.5980
818.51	65.5922
819.60	58.4445
826.30	66.8329
828.27	0.0000
831.60	62.8571
831.96	70.0802
834.83	73.2586
836.80	0.0000
846.75	63.2458
848.13	53.9449
856.28	0.0000
856.80	64.1960
860.37	63.5928
867.32	49.2825
867.82	50.9721
871.10	73.2864
873.19	76.4896
874.81	60.8122
875.33	0.0000
876.40	56.6525
879.36	63.0205
880.27	53.5874
880.51	57.7957
881.50	68.3293
883.24	67.3250
884.67	62.0998
889.25	55.8829
896.60	52.8699
898.02	70.8849
899.00	78.3197
903.28	47.7048
911.07	56.7083
911.07	56.7083
911.07	56.7083
919.63	57.6031
920.93	53.3618
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946.00	57.0940
949.00	53.9221
962.29	88.5015
964.01	74.0973
966.15	65.1123
968.20	95.5689
969.11	47.0753
969.11	47.0753
969.11	47.0753
977.42	51.2112
980.50	62.1754
983.50	51.3225
989.30	60.1818
996.32	58.5039
1001.03	39.5552
1001.68	31.1383
1004.76	50.2946
1021.30	0.0000
1024.50	0.0000
1034.80	62.0682
1036.00	59.3125
1037.82	62.1309
1038.57	75.1333
1038.76	0.0000
1045.16	69.7235
1046.59	65.1066
1048.07	58.6267

1050.47	54.9476
1050.47	54.9476
1062.04	58.9010
1063.62	65.4797
1076.63	84.5508
1077.35	80.8140
1078.86	68.6306
1085.78	73.4995
1099.22	69.0880
1112.02	68.4258
1112.84	73.3322
1115.52	79.9189
1120.29	74.3215
1120.29	74.3215
1120.29	74.3215
1120.29	74.3215
1120.51	74.3279
1121.28	60.4579
1124.00	0.0000
1129.67	67.8539
1131.51	0.0000
1147.95	0.0000
1167.94	69.6357
1173.22	70.7188
1175.09	61.0646
1177.93	83.4315
1189.05	90.5289
1204.90	80.2016
1205.75	0.0000
1213.00	78.4342
1221.42	81.5815
1230.97	98.5677
1235.34	92.7722
1236.41	0.0000
1238.25	80.0079
1246.25	80.1958
1260.41	0.0000
1271.85	71.8125
1274.45	56.8933
1274.54	56.8956
1291.56	49.1475
1298.22	0.0000
1312.09	52.4570
1325.50	41.5138
1325.50	41.5138
1332.49	45.6519
1333.61	44.6517
1360.21	43.9536
1362.66	0.0000
1365.15	35.8232
1368.21	43.0237
1368.53	0.0000
1376.25	35.9300
1384.27	37.0356
1394.10	24.7549
1395.20	27.8569
1407.95	32.0911
1434.06	20.8447
1436.60	28.1591
1457.56	0.0000
1460.81	19.9386
1489.15	26.4221
1509.49	21.2443
1596.49	26.0313
1620.62	10.2845
1678.03	0.0000
1691.02	19.0004
1691.02	19.0004
1706.46	0.0000
1750.46	0.0000
1764.49	13.5156
1764.49	13.5156
1764.49	13.5156
1764.49	13.5156
1770.23	10.1492
1771.40	41.5738
1791.20	0.0000
1808.65	7.7960

1836.01

12.7411

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440009

Total Uranium Activity	8.4456E+00	ug/g
Total Uranium Counting Unc.	6.8425E+00	ug/g
Total Uranium Tpu	3.4911E-06	ug/g
Total Uranium Mda	3.5927E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 950788                          SAMPLE ID   : G246440009
*  ANALYST       : MXR1                             DETECTOR    : GAM02
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 19:50:03.67          SAMPLE ALQT  : 136.190 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.012E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.565E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.958E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.430E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:51:29.99

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440010.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:50:32
Sample ID          : G246440010      Sample quantity   : 1.30510E+02 GRAM
Detector name      : GAM04           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.32  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000         Sensitivity      : 5.00000
Batch ID           : 950788           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	63.51*	135	437	1.86	127.06	123	10	1.87E-02	30.5	
2	3	73.00*	46	262	0.89	146.04	143	17	6.36E-03	56.6	1.39E+00
3	3	74.75*	285	306	0.98	149.54	143	17	3.96E-02	11.8	
4	3	77.06*	569	346	1.23	154.16	143	17	7.90E-02	7.2	
5	0	87.13*	208	410	1.15	174.31	171	7	2.89E-02	17.7	
6	2	89.90	113	220	0.98	179.84	178	13	1.57E-02	20.8	5.54E+00
7	2	92.68*	259	370	1.15	185.40	178	13	3.60E-02	14.3	
8	0	185.98*	248	271	1.32	372.01	368	9	3.44E-02	13.9	
9	0	208.97	90	316	1.40	418.00	415	9	1.26E-02	36.9	
10	5	238.59*	1281	158	1.05	477.25	470	24	1.78E-01	3.2	6.05E-01
11	5	241.41	308	277	1.86	482.89	470	24	4.27E-02	16.1	
12	0	270.23	101	183	1.68	540.53	537	9	1.41E-02	25.9	
13	0	295.21	394	173	1.11	590.50	585	11	5.47E-02	8.2	
14	0	299.91	114	120	1.20	599.90	596	8	1.58E-02	19.1	
15	0	328.13	79	133	0.92	656.33	653	8	1.09E-02	28.0	
16	0	338.42	227	175	1.13	676.92	672	9	3.15E-02	12.4	
17	0	351.90*	620	222	1.25	703.89	697	14	8.61E-02	6.5	
18	0	463.10	115	138	1.78	926.29	919	15	1.59E-02	24.3	
19	0	510.71*	72	149	1.80	1021.52	1015	13	9.97E-03	41.6	
20	0	583.18*	352	133	1.49	1166.45	1162	10	4.89E-02	8.2	
21	0	609.27*	445	74	1.41	1218.64	1212	15	6.18E-02	6.5	
22	0	727.70*	108	84	1.61	1455.48	1448	15	1.50E-02	21.4	
23	0	795.90	66	64	1.87	1591.87	1585	14	9.21E-03	28.7	
24	0	862.42	66	102	2.86	1724.92	1714	20	9.10E-03	40.2	
25	0	911.44*	262	110	1.76	1822.94	1814	19	3.64E-02	11.5	
26	1	965.00	54	42	1.87	1930.05	1920	25	7.52E-03	27.4	1.98E+00
27	1	969.03	185	45	1.69	1938.10	1920	25	2.57E-02	9.7	
28	0	1120.57*	74	70	0.86	2241.15	2234	13	1.02E-02	26.6	
29	0	1377.78	36	19	1.90	2755.48	2750	14	4.97E-03	33.2	
30	0	1460.88*	1376	46	2.22	2921.65	2912	20	1.91E-01	3.0	
31	0	1508.87	18	10	1.50	3017.59	3010	13	2.56E-03	41.9	
32	0	1590.19	49	10	4.70	3180.20	3170	20	6.86E-03	21.1	
33	0	1764.88*	67	0	1.48	3529.47	3522	14	9.37E-03	12.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 21:51:33

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440010.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 19:50:32
Sample ID         : G246440010           Sample quantity  : 130.51 GRAM
Sample type       : SOLID                 Sample geometry   :
Detector name     : GAMMA4               Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.32   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
K-40	+	1460.81	*	3.451E+01	3.194E+00	6.411E-01	4.556E-02	53.824
CD-109	+	88.03	*	3.300E+00	1.235E+00	1.291E+00	1.552E-01	2.556
SN-126	+	64.28		1.927E+00	1.221E+00	1.040E+00	1.791E-01	1.853
	+	86.94		1.344E+00	7.406E-01	5.737E-01	2.419E-01	2.343
	+	87.57	*	3.233E-01	1.210E-01	1.274E-01	1.528E-02	2.537
TL-208		277.35		2.518E-01	3.492E-01	6.086E-01	6.725E-02	0.414
	+	510.84		3.500E-01	2.931E-01	2.171E-01	2.178E-02	1.612
	+	583.14	*	4.901E-01	8.652E-02	6.525E-02	4.106E-03	7.511
		860.37		6.018E-01	3.587E-01	6.552E-01	5.465E-02	0.919
BI-211	+	72.87		3.051E+00	3.472E+00	5.419E+00	6.213E-01	0.563
	+	351.07	*	3.801E+00	5.601E-01	3.015E-01	2.037E-02	12.605
PB-212	+	74.81		2.110E+00	5.882E-01	5.996E-01	8.863E-02	3.519
	+	77.11		2.316E+00	4.278E-01	3.310E-01	3.797E-02	6.999
	+	87.30		1.495E+00	5.792E-01	6.343E-01	9.893E-02	2.357
	+	238.63	*	1.712E+00	1.767E-01	8.732E-02	7.012E-03	19.611
	+	300.09		2.355E+00	9.229E-01	1.145E+00	1.008E-01	2.056
PO-212	+	74.81		2.110E+00	5.882E-01	5.996E-01	8.863E-02	3.519
	+	77.11		2.316E+00	4.278E-01	3.310E-01	3.797E-02	6.999
	+	87.30		1.495E+00	5.792E-01	6.343E-01	9.893E-02	2.357
		115.19		-3.667E-01	3.462E+00	5.679E+00	4.274E-01	-0.065
	+	238.63	*	1.712E+00	1.767E-01	8.732E-02	7.012E-03	19.611
	+	300.09		2.355E+00	9.229E-01	1.145E+00	1.008E-01	2.056
BI-214	+	609.31	*	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192
	+	1120.29		1.035E+00	5.601E-01	5.005E-01	4.663E-02	2.069
	+	1764.49		1.289E+00	3.359E-01	2.866E-01	1.747E-02	4.497
PB-214	+	74.81		3.636E+00	9.920E-01	1.033E+00	1.409E-01	3.519
	+	77.11		3.971E+00	7.934E-01	5.674E-01	7.814E-02	6.999
	+	87.30		2.561E+00	9.788E-01	1.087E+00	1.547E-01	2.357
	+	241.98		2.470E+00	8.216E-01	5.260E-01	4.583E-02	4.695
	+	295.21		1.429E+00	2.678E-01	2.005E-01	1.821E-02	7.125
	+	351.92	*	1.322E+00	2.067E-01	1.051E-01	8.967E-03	12.579
PO-214	+	74.81		3.636E+00	9.920E-01	1.033E+00	1.409E-01	3.519
	+	77.11		3.971E+00	7.934E-01	5.674E-01	7.814E-02	6.999
	+	87.30		2.561E+00	9.788E-01	1.087E+00	1.547E-01	2.357

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	241.98		2.470E+00	8.216E-01	5.260E-01	4.583E-02	4.695
	+	295.21		1.429E+00	2.678E-01	2.005E-01	1.821E-02	7.125
	+	351.92	*	1.322E+00	2.067E-01	1.051E-01	8.967E-03	12.579
	+	74.81		2.110E+00	5.882E-01	5.996E-01	8.863E-02	3.519
	+	77.11		2.316E+00	4.278E-01	3.310E-01	3.797E-02	6.999
	+	87.30		1.495E+00	5.792E-01	6.343E-01	9.893E-02	2.357
PO-218	+	238.63	*	1.712E+00	1.767E-01	8.732E-02	7.012E-03	19.611
	+	300.09		2.355E+00	9.229E-01	1.145E+00	1.008E-01	2.056
	+	74.81		3.636E+00	9.920E-01	1.033E+00	1.409E-01	3.519
	+	77.11		3.971E+00	7.934E-01	5.674E-01	7.814E-02	6.999
	+	87.30		2.561E+00	9.788E-01	1.087E+00	1.547E-01	2.357
	+	241.98		2.470E+00	8.216E-01	5.260E-01	4.583E-02	4.695
RA-224	+	295.21		1.429E+00	2.678E-01	2.005E-01	1.821E-02	7.125
	+	351.92	*	1.322E+00	2.067E-01	1.051E-01	8.967E-03	12.579
	+	240.98	*	4.683E+00	1.536E+00	9.940E-01	6.626E-02	4.711
RA-226	+	609.31	*	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192
	+	1120.29		1.035E+00	5.601E-01	5.005E-01	4.663E-02	2.069
	+	1764.49		1.289E+00	3.359E-01	2.866E-01	1.747E-02	4.497
AC-228	+	338.32		1.532E+00	7.330E-01	3.711E-01	1.516E-01	4.129
	+	911.07	*	1.649E+00	4.185E-01	1.939E-01	2.114E-02	8.504
	+	969.11		2.059E+00	6.208E-01	3.694E-01	8.518E-02	5.575
RA-228	+	338.32		1.532E+00	7.330E-01	3.711E-01	1.516E-01	4.129
	+	911.07	*	1.649E+00	4.185E-01	1.939E-01	2.114E-02	8.504
	+	969.11		2.059E+00	6.208E-01	3.694E-01	8.518E-02	5.575
TH-228	+	74.81		2.147E+00	5.643E-01	6.100E-01	7.019E-02	3.519
	+	77.11		2.357E+00	4.353E-01	3.367E-01	3.863E-02	6.999
	+	87.30		1.521E+00	5.693E-01	6.453E-01	7.725E-02	2.357
TH-230	+	238.63	*	1.742E+00	1.798E-01	8.884E-02	7.135E-03	19.611
	+	300.09		2.396E+00	1.684E+00	1.165E+00	6.875E-01	2.056
	+	609.31	*	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192
TH-232	+	1120.29		1.035E+00	5.601E-01	5.005E-01	4.663E-02	2.069
	+	1764.49		1.289E+00	3.359E-01	2.865E-01	1.747E-02	4.497
	+	338.32		1.532E+00	3.935E-01	3.711E-01	2.333E-02	4.129
TH-234	+	911.07	*	1.649E+00	4.185E-01	1.939E-01	2.114E-02	8.504
	+	969.11		2.059E+00	6.208E-01	3.694E-01	8.518E-02	5.575
	+	63.29	*	4.868E+00	3.121E+00	2.796E+00	5.532E-01	1.741
U-234	+	92.38		2.523E+00	8.673E-01	7.423E-01	1.429E-01	3.399
	+	609.31	*	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192
	+	1120.29		1.035E+00	5.601E-01	5.005E-01	4.663E-02	2.069
NP-237	+	1764.49		1.289E+00	3.359E-01	2.865E-01	1.747E-02	4.497
	+	86.50	*	9.493E-01	4.057E-01	4.115E-01	9.805E-02	2.307
	+	95.87		-1.343E+00	1.088E+00	1.428E+00	3.597E-01	-0.940
U-238	+	63.29	*	4.868E+00	3.121E+00	2.796E+00	5.532E-01	1.741
	+	92.38		2.523E+00	7.690E-01	7.423E-01	8.060E-02	3.399
AM-243	+	74.67	*	3.421E-01	8.983E-02	9.767E-02	1.119E-02	3.502
	+	86.72		3.560E+01	1.332E+01	1.525E+01	1.819E+00	2.334
	+	117.66		-1.179E+00	3.649E+00	5.920E+00	4.322E-01	-0.199
ANH-511	+	142.18		1.730E+00	1.769E+01	2.879E+01	1.883E+00	0.060
	+	511.00	*	7.560E-02	6.299E-02	4.690E-02	2.623E-03	1.612

----- 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	*	3.593E-01	3.547E-01	6.168E-01	4.086E-02	0.582
NA-22		1274.54	*	9.236E-03	5.272E-02	8.952E-02	5.853E-03	0.103
NA-24		1368.53	*	-5.050E+00	5.272E-02	Half-Life too short		
AL-26		1129.67		-5.773E-01	1.833E+00	2.886E+00	1.862E-01	-0.200
		1808.65	*	-2.496E-03	2.477E-02	3.916E-02	2.322E-03	-0.064
TI-44		67.85		1.137E-03	6.275E-02	9.517E-02	1.107E-02	0.012
	+	78.38	*	4.275E-01	7.896E-02	8.137E-02	9.357E-03	5.254
SC-46		889.25	*	-4.049E-02	3.828E-02	5.556E-02	4.494E-03	-0.729
	+	1120.51		1.805E-01	9.691E-02	1.327E-01	8.690E-03	1.361
V-48		944.10		-3.952E-01	1.091E+00	1.727E+00	1.381E-01	-0.229
		983.50	*	-4.820E-02	8.211E-02	1.259E-01	9.755E-03	-0.383
		1312.09		6.161E-02	9.047E-02	1.619E-01	1.091E-02	0.381
CR-51		320.08	*	-1.498E-01	3.934E-01	6.443E-01	4.537E-02	-0.233
MN-52		744.21		-4.102E-02	3.132E-01	5.171E-01	3.069E-02	-0.079
		848.13		5.243E+00	9.366E+00	1.621E+01	1.206E+00	0.323
		935.52		1.697E-01	3.655E-01	6.236E-01	5.015E-02	0.272
		1246.25		-3.375E+00	1.127E+01	1.844E+01	1.174E+00	-0.183
		1333.61		-2.596E+00	6.832E+00	1.087E+01	7.448E-01	-0.239
		1434.06	*	1.067E-01	2.697E-01	4.747E-01	3.240E-02	0.225
MN-54		834.83	*	-1.801E-03	3.594E-02	5.921E-02	4.285E-03	-0.030
CO-56		846.75	*	7.952E-03	4.287E-02	7.199E-02	5.341E-03	0.110
		977.42		-9.102E-02	3.191E+00	5.200E+00	4.050E-01	-0.018
		1037.82		1.729E-01	3.513E-01	5.976E-01	4.704E-02	0.289
		1175.09		-1.590E+00	2.550E+00	3.846E+00	2.291E-01	-0.413
		1238.25		2.790E-02	1.070E-01	1.827E-01	1.216E-02	0.153
		1360.21		-1.800E-03	9.709E-01	1.616E+00	1.107E-01	-0.001
		1771.40		-6.950E-01	3.248E-01	3.169E-01	1.924E-02	-2.193
CO-57		122.06	*	-1.682E-02	2.460E-02	3.915E-02	2.718E-03	-0.430
		136.48		1.076E-01	1.988E-01	3.325E-01	2.473E-02	0.324
CO-58		810.76	*	-3.926E-02	4.075E-02	6.141E-02	4.239E-03	-0.639
FE-59		142.65		6.388E-01	2.844E+00	4.653E+00	3.041E-01	0.137
		192.34		-7.481E-02	9.682E-01	1.548E+00	1.882E-01	-0.048
		1099.22	*	-1.025E-01	1.122E-01	1.652E-01	1.262E-02	-0.620
		1291.56		1.463E-01	1.297E-01	2.405E-01	1.943E-02	0.608
CO-60		1173.22		-5.491E-03	5.189E-02	8.269E-02	4.918E-03	-0.066
		1332.49	*	1.081E-02	4.025E-02	6.918E-02	4.741E-03	0.156
ZN-65		1115.52	*	1.424E-02	1.161E-01	1.645E-01	1.088E-02	0.087
GE-68		1077.35	*	7.054E-01	1.466E+00	2.480E+00	1.732E-01	0.284
AS-73		53.44	*	-2.934E-01	1.511E+00	2.547E+00	3.331E-01	-0.115
AS-74		595.88	*	-4.033E-02	9.871E-02	1.526E-01	8.055E-03	-0.264
		634.78		-1.159E-01	4.027E-01	6.260E-01	3.167E-02	-0.185
SE-75		66.05		-3.901E+00	6.899E+00	1.014E+01	1.330E+00	-0.385
		96.73		-6.954E-01	8.630E-01	1.218E+00	1.767E-01	-0.571
		121.11		4.729E-04	1.314E-01	2.161E-01	2.169E-02	0.002
		136.00		8.279E-03	3.796E-02	6.265E-02	4.199E-03	0.132
		198.60		3.461E-02	1.856E+00	2.923E+00	2.256E-01	0.012
		264.65	*	1.213E-02	4.214E-02	7.015E-02	4.719E-03	0.173
		279.53		-5.271E-02	1.042E-01	1.711E-01	1.208E-02	-0.308
		303.91		1.657E+00	2.032E+00	3.202E+00	3.205E-01	0.517

---- 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		9.454E-02	2.463E-01	4.166E-01	3.751E-02	0.227
		87.88		1.354E+03	5.067E+02	6.847E+02	8.228E+01	1.977
		200.40		5.472E+01	2.993E+02	4.835E+02	3.155E+01	0.113
	+	239.00		5.238E+02	4.869E+01	7.484E+01	4.987E+00	6.999
		249.79		-1.265E+02	1.348E+02	2.007E+02	1.340E+01	-0.630
		281.68		-3.808E+01	1.580E+02	2.629E+02	1.746E+01	-0.145
		297.23		3.785E+02	1.383E+02	1.965E+02	1.293E+01	1.926
		303.76		2.940E+02	3.226E+02	5.131E+02	3.359E+01	0.573
		439.47		1.067E+02	2.788E+02	4.691E+02	2.661E+01	0.227
		484.57		-3.105E+02	4.273E+02	6.397E+02	3.609E+01	-0.485
		520.65	*	8.260E+00	1.883E+01	3.162E+01	1.761E+00	0.261
		574.64		-1.022E+02	4.082E+02	6.430E+02	3.459E+01	-0.159
		578.91		-3.647E+01	2.093E+02	2.883E+02	1.546E+01	-0.126
		585.48		2.053E+03	5.005E+02	8.965E+02	4.779E+01	2.290
		755.35		2.612E+02	3.203E+02	5.680E+02	3.458E+01	0.460
		817.79		2.335E+00	2.690E+02	4.461E+02	3.114E+01	0.005
	SR-82	698.33		-9.854E+00	3.514E+01	5.763E+01	3.073E+00	-0.171
		776.49	*	-5.149E-01	3.928E-01	5.713E-01	3.646E-02	-0.901
RB-83		1395.20		-8.076E+00	1.072E+01	1.570E+01	1.075E+00	-0.514
	*	520.41		3.406E-02	6.690E-02	1.129E-01	6.290E-03	0.302
		529.64		8.114E-02	1.006E-01	1.737E-01	9.631E-03	0.467
RB-84		552.65		-9.399E-02	2.046E-01	3.172E-01	1.735E-02	-0.296
	*	881.50		-6.394E-02	7.224E-02	1.078E-01	8.587E-03	-0.593
KR-85		513.99	*	9.207E+00	7.554E+00	1.203E+01	6.721E-01	0.765
SR-85		513.99	*	4.831E-02	3.964E-02	6.315E-02	3.527E-03	0.765
RB-86		1076.63	*	2.329E-01	1.040E+00	1.719E+00	1.202E-01	0.135
Y-88		898.02		3.466E-02	4.524E-02	7.930E-02	6.561E-03	0.437
	*	1836.01		3.738E-03	3.741E-02	6.184E-02	3.609E-03	0.060
ZR-88		392.90	*	-7.597E-04	2.928E-02	4.829E-02	2.718E-03	-0.016
Y-91		1204.90	*	1.031E+01	2.232E+01	3.731E+01	2.287E+00	0.276
NB-94		702.63	*	4.012E-02	3.186E-02	5.840E-02	3.146E-03	0.687
		871.10		-1.390E-02	3.717E-02	5.535E-02	4.316E-03	-0.251
NB-95		765.79	*	-7.188E-04	4.459E-02	7.418E-02	4.623E-03	-0.010
NB-95M		235.69	*	7.055E-02	1.347E-01	1.967E-01	1.614E-02	0.359
ZR-95		724.18		3.130E-02	1.064E-01	1.598E-01	1.079E-02	0.196
	*	756.15		3.764E-02	7.227E-02	1.255E-01	9.141E-03	0.300
NB-97		657.90	*	-1.351E+00	7.227E-02	Half-Life	too short	
		1024.50		1.370E+01	7.227E-02	Half-Life	too short	
ZR-97		254.15		5.014E+01	7.227E-02	Half-Life	too short	
		355.39		-1.330E+00	7.227E-02	Half-Life	too short	
	*	507.63		1.668E+01	7.227E-02	Half-Life	too short	
		602.52		3.044E+01	7.227E-02	Half-Life	too short	
		1021.30		-3.615E+01	7.227E-02	Half-Life	too short	
		1147.95		-2.965E+01	7.227E-02	Half-Life	too short	
		1362.66		-4.075E+00	7.227E-02	Half-Life	too short	
MO-99		1750.46		2.436E+01	7.227E-02	Half-Life	too short	
		140.51		1.111E+01	4.509E+01	7.420E+01	2.013E+01	0.150
		181.06		7.343E+00	3.102E+01	4.809E+01	8.349E+00	0.153
		366.43		-9.988E+01	1.412E+02	2.231E+02	1.334E+01	-0.448

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	739.58	*		5.846E+00	2.025E+01	3.458E+01	4.776E+00	0.169
	778.00			-6.079E+01	5.710E+01	8.530E+01	5.464E+00	-0.713
TC-99M	140.51	*		4.151E+12	5.710E+01	Half-Life too short		
RH-101	127.23			1.554E-02	3.218E-02	5.379E-02	3.653E-03	0.289
	198.01	*		-2.267E-04	3.392E-02	5.338E-02	3.476E-03	-0.004
	325.23			1.163E-01	2.508E-01	3.819E-01	2.444E-02	0.304
RH-102	418.52			-2.349E-01	2.956E-01	4.597E-01	2.603E-02	-0.511
	475.06	*		-2.512E-02	3.158E-02	4.854E-02	2.744E-03	-0.518
	631.29			-1.853E-02	5.971E-02	9.282E-02	4.716E-03	-0.200
	697.49			9.774E-03	7.547E-02	1.278E-01	6.801E-03	0.076
	766.84			1.394E-01	1.130E-01	2.042E-01	1.275E-02	0.683
	1046.59			7.231E-02	1.245E-01	2.135E-01	1.550E-02	0.339
	1112.84			-2.601E-01	3.020E-01	3.956E-01	2.623E-02	-0.657
RU-103	497.08	*		-1.704E-02	4.463E-02	7.040E-02	8.845E-03	-0.242
	610.33	+		1.311E+01	2.615E+00	2.961E+00	4.502E-01	4.427
RH-106	511.85	+		3.792E-01	3.159E-01	4.095E-01	2.289E-02	0.926
	621.84	*		-1.858E-01	3.230E-01	4.879E-01	5.574E-02	-0.381
	1050.47			-3.350E-01	2.694E+00	4.326E+00	3.127E-01	-0.077
RU-106	511.85	+		3.792E-01	3.159E-01	4.095E-01	2.289E-02	0.926
	621.84	*		-1.858E-01	3.224E-01	4.879E-01	2.506E-02	-0.381
	1050.47			-3.350E-01	2.694E+00	4.326E+00	3.127E-01	-0.077
AG-108M	433.93	*		-2.108E-02	3.106E-02	4.830E-02	2.985E-03	-0.436
	614.37			3.116E-02	3.826E-02	5.905E-02	3.381E-03	0.528
	722.95			-1.486E-02	4.574E-02	6.397E-02	3.937E-03	-0.232
AG-110M	657.75	*		-5.492E-02	3.721E-02	5.557E-02	2.969E-03	-0.988
	677.61			-4.136E-02	3.191E-01	5.309E-01	2.906E-02	-0.078
	706.67			7.603E-03	2.040E-01	3.428E-01	1.991E-02	0.022
	763.93			-1.383E-01	1.750E-01	2.731E-01	1.786E-02	-0.506
	884.67			5.914E-02	4.753E-02	8.731E-02	7.257E-03	0.677
	937.48			-1.285E-01	1.221E-01	1.792E-01	1.499E-02	-0.717
	1384.27			2.656E-02	1.820E-01	2.679E-01	1.916E-02	0.099
IN-111	171.28			5.361E-01	1.677E+00	2.750E+00	1.753E-01	0.195
	245.39	*		-1.332E+00	2.089E+00	2.785E+00	1.858E-01	-0.478
IN-113M	391.69	*		-2.763E-02	4.303E-02	6.793E-02	4.093E-03	-0.407
SN-113	391.69	*		-2.763E-02	4.303E-02	6.793E-02	4.093E-03	-0.407
IN-114M	190.27	*		-6.015E-02	2.054E-01	2.878E-01	1.863E-02	-0.209
CD-115	260.90			4.556E+01	2.397E+02	4.099E+02	2.737E+01	0.111
	492.35			-7.323E+00	6.933E+01	1.118E+02	6.296E+00	-0.065
	527.90	*		-5.097E+00	2.122E+01	3.366E+01	1.868E+00	-0.151
SN-117M	156.02			-2.071E+00	2.492E+00	3.885E+00	2.492E-01	-0.533
	158.56	*		2.172E-02	5.911E-02	9.747E-02	6.235E-03	0.223
SB-122	563.90	*		-1.603E+00	3.816E+00	5.938E+00	3.221E-01	-0.270
	692.80			-5.801E+01	7.838E+01	1.240E+02	6.522E+00	-0.468
I-123	159.00	*		1.508E+01	7.838E+01	Half-Life too short		
	528.96			3.306E+03	7.838E+01	Half-Life too short		
TE-123M	159.00	*		4.589E-03	2.779E-02	4.541E-02	2.935E-03	0.101
I-124	602.71	*		5.221E-01	1.125E+00	1.653E+00	8.670E-02	0.316
	722.78			-2.531E+00	6.871E+00	9.555E+00	5.398E-01	-0.265
	1325.50			-6.472E+01	5.774E+01	8.418E+01	5.735E+00	-0.769

----- 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		8.040E+01	5.928E+01	1.008E+02	6.909E+00	0.797
	+	1509.49		3.098E+01	2.603E+01	4.181E+01	2.819E+00	0.741
		1691.02		1.722E+00	4.139E+00	7.450E+00	4.722E-01	0.231
		602.71		2.158E-02	4.649E-02	6.832E-02	3.585E-03	0.316
		645.85		-6.702E-02	4.708E-01	7.845E-01	4.578E-02	-0.085
		709.31		1.257E+00	2.809E+00	4.866E+00	2.663E-01	0.258
		713.82		-1.119E+00	1.524E+00	2.346E+00	2.361E-01	-0.477
		722.78		-1.516E-01	4.116E-01	5.724E-01	3.394E-02	-0.265
	+	968.20		2.175E+01	4.554E+00	8.504E+00	6.674E-01	2.557
		1045.16		1.282E+00	2.765E+00	4.693E+00	3.414E-01	0.273
SB-125		1325.50		-4.141E+00	3.694E+00	5.386E+00	3.670E-01	-0.769
		1368.21		-9.956E-01	1.777E+00	2.721E+00	3.379E-01	-0.366
		1436.60		-6.206E-01	3.898E+00	6.312E+00	4.306E-01	-0.098
		1691.02	*	2.433E-02	5.848E-02	1.053E-01	7.153E-03	0.231
		427.89	*	-1.266E-02	8.986E-02	1.461E-01	8.650E-03	-0.087
	+	463.38		1.093E+00	5.356E-01	5.935E-01	3.945E-02	1.841
		600.56		-2.332E-02	1.914E-01	3.038E-01	1.897E-02	-0.077
		635.90		-8.398E-02	2.819E-01	4.377E-01	2.699E-02	-0.192
		109.28	*	3.179E+00	9.483E+00	1.565E+01	1.554E+00	0.203
		388.63		4.501E-02	2.193E-01	3.675E-01	2.085E-02	0.122
TE-125M I-126		666.33	*	6.186E-02	2.026E-01	3.485E-01	1.719E-02	0.178
		753.82		-4.086E-02	1.702E+00	2.832E+00	1.718E-01	-0.014
		223.80		-9.432E-01	4.620E+00	7.267E+00	4.813E-01	-0.130
		278.60		3.226E+00	2.572E+00	4.596E+00	3.056E-01	0.702
	+	296.50		1.609E+01	2.844E+00	4.022E+00	2.648E-01	4.002
		414.70		5.700E-02	8.449E-02	1.451E-01	8.213E-03	0.393
		415.30		5.628E+00	7.263E+00	1.253E+01	7.093E-01	0.449
		555.20		3.879E-01	4.590E+00	7.454E+00	4.069E-01	0.052
		573.80		-5.078E-01	1.199E+00	1.859E+00	1.001E-01	-0.273
		593.00		-6.266E-01	1.013E+00	1.530E+00	8.102E-02	-0.409
SB-126		656.30		3.880E-01	3.853E+00	6.538E+00	3.213E-01	0.059
		666.33		2.598E-02	8.509E-02	1.463E-01	7.219E-03	0.178
		675.00		1.025E+00	2.253E+00	3.916E+00	1.974E-01	0.262
		695.00		4.030E-02	8.212E-02	1.431E-01	7.568E-03	0.282
		697.00		9.005E-02	3.047E-01	5.222E-01	2.776E-02	0.172
		720.50	*	1.828E-01	1.594E-01	2.649E-01	1.488E-02	0.690
		856.80		1.484E-01	6.263E-01	9.235E-01	6.995E-02	0.161
		989.30		2.865E-01	1.490E+00	2.480E+00	1.911E-01	0.116
		1034.80		5.001E+00	1.169E+01	1.974E+01	1.453E+00	0.253
		1213.00		3.662E-01	6.200E+00	1.000E+01	6.178E-01	0.037
SB-127		61.10		-8.991E+00	1.256E+02	1.905E+02	2.773E+01	-0.047
		252.40		3.428E+00	6.441E+00	1.093E+01	4.574E+00	0.314
		290.80		-7.863E+00	3.297E+01	4.803E+01	5.030E+00	-0.164
		411.60		-1.452E+01	1.926E+01	3.001E+01	4.459E+00	-0.484
		444.90		-5.793E+00	1.477E+01	2.349E+01	2.685E+00	-0.247
		473.00		9.887E-01	2.571E+00	4.306E+00	5.075E-01	0.230
		543.00		-1.348E+01	2.514E+01	3.869E+01	5.175E+00	-0.349
		603.60		4.629E+00	1.992E+01	2.857E+01	3.198E+00	0.162
		685.20	*	-8.623E-01	2.102E+00	3.417E+00	3.377E-01	-0.252

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
XE-127		698.50		-2.196E+00	2.170E+01	3.609E+01	5.354E+00	-0.061
		722.20		1.676E+01	4.578E+01	6.953E+01	6.876E+00	0.241
		783.80		5.710E+00	5.672E+00	1.009E+01	1.184E+00	0.566
		57.60		3.370E+00	9.739E+00	1.673E+01	2.095E+00	0.201
		145.22		-3.731E-02	7.021E-01	1.141E+00	7.427E-02	-0.033
		172.10		2.900E-02	1.222E-01	1.995E-01	1.272E-02	0.145
I-131		202.84	*	-4.212E-02	4.786E-02	7.294E-02	4.767E-03	-0.578
		374.96		-2.578E-02	2.020E-01	3.321E-01	1.948E-02	-0.078
		80.18		-1.542E+00	6.019E+00	8.922E+00	1.036E+00	-0.173
		284.30		1.101E-01	1.726E+00	2.919E+00	2.110E-01	0.038
		364.48	*	-1.272E-01	1.322E-01	2.048E-01	1.368E-02	-0.621
		636.97		4.537E-01	1.863E+00	3.041E+00	1.780E-01	0.149
TE-132		722.89		-3.238E+00	9.305E+00	1.297E+01	7.473E-01	-0.250
		49.72		-3.122E+01	6.640E+01	1.106E+02	1.599E+01	-0.282
		111.76		-1.745E+01	4.660E+01	7.564E+01	8.251E+00	-0.231
		116.30		9.463E+00	4.235E+01	7.042E+01	7.460E+00	0.134
BA-133		228.16	*	-8.963E-01	1.147E+00	1.732E+00	2.629E-01	-0.517
		53.15		-1.434E+00	6.525E+00	1.098E+01	1.438E+00	-0.131
		79.62		1.830E-01	1.401E+00	2.121E+00	3.616E-01	0.086
		81.00		-1.196E-01	1.113E-01	1.549E-01	2.736E-02	-0.772
		276.40		1.640E-01	3.511E-01	5.875E-01	7.854E-02	0.279
		302.84		7.891E-02	1.385E-01	2.142E-01	2.580E-02	0.368
I-133		356.01	*	-1.293E-02	4.356E-02	6.185E-02	7.245E-03	-0.209
		383.85		-3.135E-02	2.752E-01	4.517E-01	4.897E-02	-0.069
	+	510.53		4.503E+00	2.752E-01	Half-Life	too short	
		529.87	*	3.931E-02	2.752E-01	Half-Life	too short	
		706.58		1.413E-01	2.752E-01	Half-Life	too short	
		856.28		-2.703E-01	2.752E-01	Half-Life	too short	
		875.33		3.824E-01	2.752E-01	Half-Life	too short	
		1236.41		4.966E+00	2.752E-01	Half-Life	too short	
		1298.22		-1.411E-01	2.752E-01	Half-Life	too short	
		475.35		-1.315E+00	2.068E+00	3.218E+00	1.820E-01	-0.409
CS-134		563.23		1.008E-01	3.715E-01	6.114E-01	3.398E-02	0.165
		569.32		2.747E-01	1.971E-01	3.455E-01	1.930E-02	0.795
		604.70		1.797E-02	3.770E-02	5.555E-02	2.927E-03	0.323
	+	795.84	*	1.346E-01	7.781E-02	9.585E-02	6.460E-03	1.404
		801.93		-4.791E-02	4.712E-01	6.491E-01	4.420E-02	-0.074
		1038.57		1.385E-01	4.353E+00	7.101E+00	5.205E-01	0.020
CS-135		1167.94		-4.565E-01	3.182E+00	5.061E+00	3.042E-01	-0.090
		1365.15		-8.890E-03	1.130E+00	1.878E+00	1.379E-01	-0.005
		268.24	*	9.541E-02	1.658E-01	2.571E-01	2.143E-02	0.371
		288.45		-1.031E+11	1.658E-01	Half-Life	too short	
		417.63		-3.709E+12	1.658E-01	Half-Life	too short	
		546.56		7.408E+11	1.658E-01	Half-Life	too short	
		836.80		-2.403E+12	1.658E-01	Half-Life	too short	
		1038.76		-9.181E+11	1.658E-01	Half-Life	too short	
		1124.00		8.309E+12	1.658E-01	Half-Life	too short	
		1131.51		1.221E+12	1.658E-01	Half-Life	too short	
I-135		1260.41	*	-7.002E+11	1.658E-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		1.382E+14	1.658E-01	Half-Life	too short	
		1678.03		-9.661E+11	1.658E-01	Half-Life	too short	
		1706.46		-4.563E+12	1.658E-01	Half-Life	too short	
		1791.20		2.371E+12	1.658E-01	Half-Life	too short	
		66.91		-7.371E-01	1.213E+00	1.771E+00	3.070E-01	-0.416
	+	86.29		4.739E+00	1.830E+00	2.460E+00	3.750E-01	1.926
		153.22		8.878E-01	7.127E-01	1.216E+00	9.421E-02	0.730
		163.89		1.101E+00	1.213E+00	2.037E+00	1.571E-01	0.540
		176.55		1.628E-01	4.128E-01	6.777E-01	4.784E-02	0.240
		273.65		-4.158E-01	5.331E-01	7.491E-01	5.531E-02	-0.555
		340.57		2.443E-01	1.607E-01	2.602E-01	1.720E-02	0.939
		818.51		2.290E-02	9.111E-02	1.541E-01	1.079E-02	0.149
		1048.07	*	4.110E-02	1.380E-01	2.304E-01	1.770E-02	0.178
		1235.34		9.178E-01	7.587E-01	1.369E+00	1.409E-01	0.670
BA-137M		661.65	*	-6.801E-03	4.000E-02	6.622E-02	3.229E-03	-0.103
CS-137		661.65	*	-7.190E-03	4.229E-02	7.000E-02	3.434E-03	-0.103
CE-139		165.85	*	-1.317E-02	2.998E-02	4.750E-02	3.018E-03	-0.277
BA-140		162.64		6.576E-01	8.634E-01	1.443E+00	1.015E-01	0.456
		304.84		-1.484E-01	1.359E+00	2.100E+00	5.766E-01	-0.071
		423.70		-6.581E-01	2.082E+00	3.328E+00	1.057E+00	-0.198
LA-140		537.32	*	1.239E-01	2.683E-01	4.466E-01	1.450E-01	0.277
	+	328.77		7.409E-01	4.175E-01	6.233E-01	4.371E-02	1.189
		432.53		7.889E-01	2.211E+00	3.723E+00	2.341E-01	0.212
		487.03		8.874E-02	1.466E-01	2.450E-01	1.574E-02	0.362
		751.79		-1.084E+00	1.966E+00	3.126E+00	2.280E-01	-0.347
		815.85		1.094E-02	3.730E-01	6.199E-01	5.052E-02	0.018
		867.82		-8.008E-01	1.829E+00	2.453E+00	2.024E-01	-0.326
		919.63		-1.584E+00	3.358E+00	4.403E+00	4.514E-01	-0.360
		925.24		5.777E-01	1.238E+00	2.126E+00	1.844E-01	0.272
		1596.49	*	8.472E-03	8.283E-02	1.205E-01	7.933E-03	0.070
CE-141		145.44	*	-2.792E-02	6.447E-02	1.030E-01	6.914E-03	-0.271
CE-143		57.37		-2.294E-04	6.447E-02	Half-Life	too short	
		231.56		-9.247E-05	6.447E-02	Half-Life	too short	
		293.26	*	1.575E-03	6.447E-02	Half-Life	too short	
	+	350.59		9.180E-02	6.447E-02	Half-Life	too short	
		490.36		-8.659E-03	6.447E-02	Half-Life	too short	
		664.57		-1.799E-03	6.447E-02	Half-Life	too short	
		721.93		1.891E-03	6.447E-02	Half-Life	too short	
CE-144		80.11		-5.436E-01	2.306E+00	3.422E+00	3.954E-01	-0.159
		133.54	*	5.085E-02	1.966E-01	3.251E-01	4.738E-02	0.156
PM-144		476.78		5.100E-02	7.300E-02	1.246E-01	8.496E-03	0.409
		618.01		1.184E-02	3.208E-02	5.298E-02	2.940E-03	0.223
		696.49	*	-5.724E-04	3.488E-02	5.843E-02	3.106E-03	-0.010
		778.57		-1.618E+00	2.171E+00	3.356E+00	2.153E-01	-0.482
PR-144		696.49	*	-3.883E-02	2.367E+00	3.964E+00	2.104E-01	-0.010
		1489.15		-6.302E+00	1.006E+01	1.456E+01	9.855E-01	-0.433
PM-146		453.90	*	7.916E-03	4.435E-02	7.347E-02	6.271E-03	0.108
		633.02		-5.556E-01	1.450E+00	2.211E+00	8.118E-01	-0.251
		735.90		-2.986E-02	1.537E-01	2.455E-01	6.845E-02	-0.122

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error (pCi/GRAM)	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	+	747.13		5.869E-02	9.163E-02	1.603E-01	0.366
		91.11		6.616E-01	2.860E-01	5.985E-01	1.106
		319.41		-1.129E+00	3.847E+00	6.335E+00	-0.178
		439.89		4.020E+00	6.790E+00	1.158E+01	0.347
PM-149	*	531.02		-1.894E-01	6.230E-01	9.808E-01	-0.193
		285.90		-5.689E+01	1.760E+02	2.911E+02	-0.195
		121.78		-4.592E-02	7.117E-02	1.134E-01	-0.405
		244.69		-1.781E-01	3.280E-01	5.020E-01	-0.355
EU-152	*	344.27		-9.055E-03	9.565E-02	1.585E-01	-0.057
		443.98		-1.262E-01	9.778E-01	1.588E+00	-0.080
		778.89		-1.242E-01	2.470E-01	3.913E-01	-0.317
		867.32		-2.969E-01	9.775E-01	1.339E+00	-0.222
	+	964.01		6.932E-01	3.833E-01	6.124E-01	1.132
		1085.78		3.488E-02	4.588E-01	7.488E-01	0.047
		1112.02		5.552E-02	3.833E-01	6.113E-01	0.091
		1407.95		1.204E-01	2.079E-01	3.674E-01	0.328
GD-153		69.67		-3.583E-01	2.236E+00	3.345E+00	-0.107
		83.37		1.035E+01	1.664E+01	2.549E+01	0.406
		97.43		-4.361E-02	8.827E-02	1.276E-01	-0.342
		103.18		-7.611E-02	1.033E-01	1.653E-01	-0.460
EU-154		123.07		-3.581E-02	5.075E-02	8.058E-02	-0.444
		247.94		8.680E-02	4.143E-01	5.906E-01	0.147
		591.81		-2.857E-01	5.849E-01	8.943E-01	-0.319
		723.30		-2.233E-02	1.901E-01	2.727E-01	-0.082
		756.87		4.694E-01	7.700E-01	1.345E+00	0.349
		873.19		1.731E-01	2.986E-01	5.182E-01	0.334
		996.32		1.663E-02	4.186E-01	6.855E-01	0.024
		1004.76		-1.770E-01	2.292E-01	3.433E-01	-0.515
EU-155	*	1274.45		7.648E-02	1.430E-01	2.499E-01	0.306
		48.70		-7.305E+00	5.634E+00	8.956E+00	-0.816
		60.01		1.977E+00	7.558E+00	1.168E+01	0.169
		86.54		3.897E-01	1.459E-01	2.041E-01	1.909
TB-160	+	105.31		7.705E-02	1.019E-01	1.737E-01	0.444
		86.79		1.062E+00	3.976E-01	5.588E-01	1.901
		197.04		2.072E-01	5.890E-01	9.432E-01	0.220
		215.65		5.152E-01	7.381E-01	1.219E+00	0.423
	+	298.57		3.500E-01	1.356E-01	2.065E-01	1.695
		879.36		-1.029E-01	1.408E-01	2.144E-01	-0.480
		962.29		5.630E-01	5.424E-01	9.645E-01	0.584
		966.15		4.860E-01	2.688E-01	5.448E-01	0.892
HO-166M	+	1177.93		-2.637E-01	4.134E-01	6.228E-01	-0.423
		1271.85		1.704E-01	8.573E-01	1.459E+00	0.117
		80.57		-2.328E-01	2.975E-01	4.267E-01	-0.545
		184.41		7.260E-02	3.864E-02	6.129E-02	1.185
		280.46		-6.709E-02	7.996E-02	1.287E-01	-0.521
		410.95		-3.267E-02	2.617E-01	4.279E-01	-0.076
		711.68		3.848E-02	5.679E-02	1.003E-01	0.384
		752.31		-2.359E-01	2.874E-01	4.464E-01	-0.528
		810.29		-5.118E-02	5.916E-02	9.002E-02	-0.568

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		51.35	2.403E+01	6.075E+01	1.050E+02	1.360E+01	0.229
		52.39	-2.609E+00	3.022E+01	5.122E+01	6.699E+00	-0.051
		59.40	1.781E+01	4.243E+01	6.608E+01	8.058E+00	0.270
LU-176	+	66.72	* -1.755E+01	3.888E+01	5.750E+01	6.723E+00	-0.305
		88.36	7.667E-01	2.870E-01	3.762E-01	4.484E-02	2.038
		201.83	-2.247E-02	2.795E-02	4.280E-02	2.795E-03	-0.525
		306.84	* -1.888E-02	2.297E-02	3.662E-02	2.391E-03	-0.516
		401.10	1.982E+00	6.496E+00	1.093E+01	6.166E-01	0.181
LU-177	+	112.95	8.321E-01	1.969E+00	3.304E+00	2.558E-01	0.252
		208.36	* 2.686E+00	1.988E+00	2.499E+00	1.640E-01	1.075
LU-177M	+	52.97	7.148E-01	2.966E+00	5.093E+00	6.668E-01	0.140
		54.07	6.014E-01	1.506E+00	2.598E+00	3.388E-01	0.231
		61.30	-8.220E-02	2.190E+00	3.327E+00	4.014E-01	-0.025
		121.62	-7.883E-02	3.620E-01	5.892E-01	4.103E-02	-0.134
		147.16	-4.259E-01	6.441E-01	1.017E+00	6.598E-02	-0.419
		171.86	1.438E-01	4.779E-01	7.826E-01	4.991E-02	0.184
		218.09	4.213E-01	8.649E-01	1.412E+00	9.322E-02	0.298
		268.79	2.096E+00	1.095E+00	1.385E+00	9.236E-02	1.513
		319.02	-6.735E-02	2.582E-01	4.259E-01	2.746E-02	-0.158
		367.43	-2.356E-01	8.861E-01	1.445E+00	8.618E-02	-0.163
		413.65	* 1.628E-02	1.878E-01	3.108E-01	1.759E-02	0.052
		56.28	-7.632E-01	1.560E+00	2.586E+00	3.296E-01	-0.295
		57.53	1.349E-01	8.212E-01	1.401E+00	1.756E-01	0.096
		65.20	-6.687E-02	1.391E+00	2.106E+00	2.483E-01	-0.032
		133.02	7.500E-03	6.557E-02	1.078E-01	7.198E-03	0.070
HF-181		136.25	2.345E-01	4.467E-01	7.471E-01	4.946E-02	0.314
		345.85	-1.324E-02	2.159E-01	3.147E-01	1.955E-02	-0.042
		482.03	* -1.576E-02	4.386E-02	6.947E-02	3.922E-03	-0.227
		56.28	-2.914E-01	5.963E-01	9.886E-01	1.260E-01	-0.295
		57.53	5.121E-02	3.142E-01	5.363E-01	6.721E-02	0.095
W-181		65.20	* -2.539E-02	5.281E-01	7.996E-01	9.425E-02	-0.032
		67.75	6.178E-03	1.522E-01	2.311E-01	2.689E-02	0.027
TA-182		100.10	7.683E-02	1.761E-01	2.971E-01	2.781E-02	0.259
		152.43	7.314E-02	3.307E-01	5.428E-01	3.496E-02	0.135
		222.10	-2.391E-01	3.597E-01	5.514E-01	3.649E-02	-0.434
		1001.68	8.949E-01	2.294E+00	3.871E+00	2.949E-01	0.231
		1121.28	4.961E-01	2.663E-01	3.568E-01	2.334E-02	1.390
RE-183		1189.05	-1.422E-01	3.600E-01	5.571E-01	3.364E-02	-0.255
		1221.42	* 1.294E-01	2.218E-01	3.887E-01	2.419E-02	0.333
		1230.97	9.041E-02	5.286E-01	8.987E-01	5.642E-02	0.101
		57.98	1.489E-01	3.067E-01	5.293E-01	6.591E-02	0.281
		59.32	7.553E-02	1.785E-01	2.781E-01	3.395E-02	0.272
RE-184		67.20	-1.280E-01	2.812E-01	4.159E-01	4.850E-02	-0.308
		162.32	* 9.264E-02	1.138E-01	1.906E-01	1.214E-02	0.486
		208.81	1.965E+00	1.454E+00	1.855E+00	1.218E-01	1.059
		291.72	-6.079E-01	1.008E+00	1.426E+00	9.420E-02	-0.426
		57.98	5.416E-01	1.116E+00	1.926E+00	2.398E-01	0.281
RE-184		59.32	2.746E-01	6.489E-01	1.011E+00	1.234E-01	0.272
		67.20	-4.657E-01	1.023E+00	1.512E+00	1.764E-01	-0.308

---- 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		3.832E-02	3.596E-01	5.855E-01	3.735E-02	0.065
		216.55		-5.827E-02	2.726E-01	4.295E-01	2.834E-02	-0.136
		252.85	*	2.565E-01	2.237E-01	3.989E-01	2.664E-02	0.643
		318.01		-1.229E-01	4.573E-01	7.542E-01	4.869E-02	-0.163
		792.07		-7.236E-01	1.163E+00	1.547E+00	1.022E-01	-0.468
		903.28		-6.056E-01	1.247E+00	1.660E+00	1.362E-01	-0.365
		920.93		-3.421E-01	4.466E-01	6.471E-01	5.254E-02	-0.529
		59.72		2.791E-01	4.617E-01	7.253E-01	8.823E-02	0.385
		61.14		-1.578E-02	2.437E-01	3.697E-01	4.465E-02	-0.043
		69.30		2.315E-01	4.018E-01	6.219E-01	7.190E-02	0.372
		592.07		-1.493E+00	2.438E+00	3.684E+00	1.952E-01	-0.405
		646.12	*	-1.337E-02	4.013E-02	6.580E-02	3.280E-03	-0.203
		717.42		-6.780E-01	7.912E-01	1.214E+00	6.773E-02	-0.558
		874.81		4.219E-01	6.086E-01	1.066E+00	8.375E-02	0.396
RE-188		880.27		-8.102E-01	7.742E-01	1.131E+00	8.985E-02	-0.716
		155.03	*	3.588E-02	1.718E-01	2.815E-01	1.807E-02	0.127
		477.96		4.790E+00	3.359E+00	5.985E+00	3.382E-01	0.800
W-188	+	633.10		-1.128E+00	2.966E+00	4.571E+00	2.317E-01	-0.247
		63.58		2.000E+02	1.243E+02	1.308E+02	1.556E+01	1.529
IR-192		227.08		6.665E+00	1.327E+01	2.163E+01	1.435E+00	0.308
	*	290.67		-1.278E+00	7.869E+00	1.154E+01	7.625E-01	-0.111
	+	295.96		1.112E+00	1.969E-01	2.910E-01	1.940E-02	3.822
		308.46		-2.835E-03	9.117E-02	1.526E-01	1.004E-02	-0.019
	*	316.51		7.485E-03	3.565E-02	6.037E-02	3.920E-03	0.124
AU-195		468.07		-2.065E-02	7.582E-02	1.053E-01	6.912E-03	-0.196
		604.41		9.435E-02	5.315E-01	7.577E-01	8.389E-02	0.125
		612.46		7.123E-01	7.876E-01	1.212E+00	8.624E-02	0.588
		65.12		-2.996E-03	2.444E-01	3.708E-01	4.372E-02	-0.008
		66.83		-5.547E-02	1.291E-01	1.911E-01	2.233E-02	-0.290
	+	75.70		1.116E+00	2.932E-01	5.060E-01	5.797E-02	2.206
	*	98.88		2.851E-01	2.275E-01	3.938E-01	3.765E-02	0.724
TL-200		129.76		2.632E-02	2.876E+00	4.715E+00	3.176E-01	0.006
	*	367.94		1.587E-03	2.876E+00	Half-Life	too short	
		579.30		-2.819E-03	2.876E+00	Half-Life	too short	
		828.27		-7.719E-03	2.876E+00	Half-Life	too short	
TL-201		1205.75		1.130E-02	2.876E+00	Half-Life	too short	
		68.90		3.906E+00	1.156E+01	1.639E+01	1.898E+00	0.238
		70.82		-1.913E+00	5.816E+00	8.617E+00	9.917E-01	-0.222
		80.30		-2.619E+00	8.943E+00	1.323E+01	1.529E+00	-0.198
TL-202		135.34		2.810E+00	4.017E+01	6.589E+01	4.372E+00	0.043
	*	167.43		-7.522E+00	1.120E+01	1.751E+01	1.113E+00	-0.430
		68.90		2.407E-01	7.124E-01	1.010E+00	1.170E-01	0.238
		70.82		-1.176E-01	3.575E-01	5.296E-01	6.095E-02	-0.222
		80.30		-1.610E-01	5.498E-01	8.131E-01	9.400E-02	-0.198
HG-203	*	439.56		3.122E-02	8.034E-02	1.352E-01	7.669E-03	0.231
		70.83		-4.671E-01	1.413E+00	2.092E+00	3.263E-01	-0.223
	+	72.87		6.270E-01	7.164E-01	1.241E+00	1.887E-01	0.505
		82.60		-5.001E-01	1.299E+00	1.894E+00	2.998E-01	-0.264
	*	279.20		1.011E-02	3.927E-02	6.711E-02	4.673E-03	0.151

---- 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		1.779E-01	2.025E-01	3.510E-01	4.024E-02	0.507
	+	74.97		6.141E-01	1.613E-01	2.505E-01	2.869E-02	2.452
		84.90		2.000E-01	2.120E-01	3.281E-01	3.872E-02	0.610
		569.67		2.747E-02	3.188E-02	5.378E-02	2.905E-03	0.511
		1063.62	*	-2.114E-02	5.218E-02	8.084E-02	5.749E-03	-0.262
TL-207		1770.23		2.974E-01	3.617E-01	6.600E-01	4.010E-02	0.451
		81.07		-2.586E-01	2.430E-01	3.420E-01	3.964E-02	-0.756
		83.78		1.137E-01	1.404E-01	2.166E-01	2.540E-02	0.525
		94.90		2.137E-01	2.464E-01	3.824E-01	3.940E-02	0.559
		122.32		-9.088E-01	1.685E+00	2.700E+00	2.077E-01	-0.337
		144.24		1.344E-01	6.844E-01	1.118E+00	8.740E-02	0.120
		154.21		3.417E-01	3.854E-01	6.491E-01	4.894E-02	0.526
	+	269.46		4.860E-01	2.540E-01	3.418E-01	2.357E-02	1.422
		323.87	*	4.457E-01	7.421E-01	1.137E+00	1.904E-01	0.392
	+	338.28		6.399E+00	1.737E+00	2.538E+00	2.743E-01	2.521
PO-209		445.03		-1.096E+00	2.298E+00	3.632E+00	3.704E-01	-0.302
		260.50		4.528E+00	9.037E+00	1.568E+01	1.047E+00	0.289
		262.80		-2.760E+01	2.543E+01	4.055E+01	2.707E+00	-0.681
		896.60	*	1.004E+01	7.733E+00	1.413E+01	1.160E+00	0.711
		46.50	*	7.301E+00	9.268E+00	1.606E+01	1.400E+00	0.455
PB-210		46.50	*	7.301E+00	9.268E+00	1.606E+01	1.400E+00	0.455
PO-210		46.50	*	7.301E+00	9.264E+00	1.606E+01	1.248E+00	0.455
PB-211		404.84	*	-2.413E-01	9.750E-01	1.563E+00	9.744E-01	-0.154
		427.08		1.172E+00	2.043E+00	3.278E+00	2.026E+00	0.358
		831.96		-5.161E-01	1.208E+00	1.847E+00	1.154E+00	-0.279
BI-212	+	727.18	*	1.292E+00	5.610E-01	7.182E-01	5.490E-02	1.800
		785.46		1.667E+00	1.809E+00	3.219E+00	2.096E-01	0.518
		1620.62		4.126E-01	1.381E+00	2.422E+00	1.581E-01	0.170
PO-215		81.07		-2.586E-01	2.430E-01	3.420E-01	3.964E-02	-0.756
		83.78		1.137E-01	1.404E-01	2.166E-01	2.540E-02	0.525
		94.90		2.137E-01	2.464E-01	3.824E-01	3.940E-02	0.559
		122.32		-9.088E-01	1.685E+00	2.700E+00	2.077E-01	-0.337
		144.24		1.344E-01	6.844E-01	1.118E+00	8.740E-02	0.120
		154.21		3.417E-01	3.854E-01	6.491E-01	4.894E-02	0.526
	+	269.46		4.860E-01	2.540E-01	3.418E-01	2.357E-02	1.422
		323.87	*	4.457E-01	7.421E-01	1.137E+00	1.904E-01	0.392
	+	338.28		6.399E+00	1.737E+00	2.538E+00	2.743E-01	2.521
		445.03		-1.096E+00	2.298E+00	3.632E+00	3.704E-01	-0.302
RN-219	+	271.23		6.236E-01	3.276E-01	4.464E-01	3.903E-02	1.397
		401.81	*	4.705E-02	4.060E-01	6.747E-01	9.135E-02	0.070
RN-220		549.76	*	2.107E+00	2.572E+01	4.181E+01	2.290E+00	0.050
RA-223		81.07		-2.586E-01	2.430E-01	3.420E-01	3.964E-02	-0.756
		83.78		1.137E-01	1.404E-01	2.166E-01	2.540E-02	0.525
		94.90		2.137E-01	2.464E-01	3.824E-01	3.940E-02	0.559
		122.32		-9.088E-01	1.685E+00	2.700E+00	2.077E-01	-0.337
		144.24		1.344E-01	6.844E-01	1.118E+00	8.740E-02	0.120
		154.21		3.417E-01	3.854E-01	6.491E-01	4.894E-02	0.526
	+	269.46		4.860E-01	2.540E-01	3.418E-01	2.357E-02	1.422
		323.87	*	4.457E-01	7.421E-01	1.137E+00	1.904E-01	0.392

---- 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		6.399E+00	1.737E+00	2.538E+00	2.743E-01	2.521
		445.03		-1.096E+00	2.298E+00	3.632E+00	3.704E-01	-0.302
		79.80		9.556E-02	1.767E+00	2.665E+00	6.084E-01	0.036
		236.00		1.633E-01	2.490E-01	3.657E-01	4.004E-02	0.446
		256.20	*	-6.393E-01	3.775E-01	5.666E-01	8.130E-02	-1.128
		286.10		2.090E-01	1.463E+00	2.483E+00	2.978E-01	0.084
TH-227	+	299.80		4.364E+00	1.817E+00	2.667E+00	4.420E-01	1.636
		304.40		1.060E-01	1.880E+00	2.795E+00	4.908E-01	0.038
		334.20		-1.783E+00	2.557E+00	3.513E+00	6.500E-01	-0.508
		79.80		9.556E-02	1.767E+00	2.665E+00	6.153E-01	0.036
	+	94.00		9.750E+00	3.554E+00	3.696E+00	8.347E-01	2.638
		236.00		1.633E-01	2.488E-01	3.657E-01	3.521E-02	0.446
TH-229		256.20	*	-6.393E-01	3.824E-01	5.666E-01	9.758E-02	-1.128
		286.10		2.090E-01	1.478E+00	2.483E+00	2.488E+00	0.084
	+	299.80		4.364E+00	1.817E+00	2.667E+00	4.420E-01	1.636
		304.40		1.060E-01	1.880E+00	2.795E+00	4.908E-01	0.038
		334.20		-1.783E+00	2.557E+00	3.513E+00	6.500E-01	-0.508
		85.43		2.617E-01	2.166E-01	3.373E-01	3.992E-02	0.776
PA-231	+	88.47		4.414E-01	1.652E-01	2.140E-01	2.544E-02	2.062
		100.00		9.094E-02	1.810E-01	3.061E-01	2.871E-02	0.297
		193.63	*	-5.113E-02	5.111E-01	8.158E-01	5.294E-02	-0.063
		210.97		1.072E+00	8.375E-01	1.283E+00	8.437E-02	0.835
		283.67	*	-4.786E-03	1.426E+00	2.403E+00	3.401E-01	-0.002
	+	301.29		1.745E+00	6.933E-01	1.051E+00	1.145E-01	1.660
TH-231		81.07		-2.586E-01	2.430E-01	3.420E-01	3.964E-02	-0.756
		83.78		1.137E-01	1.404E-01	2.166E-01	2.540E-02	0.525
		94.90		2.137E-01	2.464E-01	3.824E-01	3.940E-02	0.559
		122.32		-9.088E-01	1.685E+00	2.700E+00	2.077E-01	-0.337
		144.24		1.344E-01	6.844E-01	1.118E+00	8.740E-02	0.120
		154.21		3.417E-01	3.854E-01	6.491E-01	4.894E-02	0.526
U-231	+	269.46		4.860E-01	2.540E-01	3.418E-01	2.357E-02	1.422
		323.87	*	4.457E-01	7.421E-01	1.137E+00	1.904E-01	0.392
	+	338.28		6.399E+00	1.737E+00	2.538E+00	2.743E-01	2.521
		445.03		-1.096E+00	2.298E+00	3.632E+00	3.704E-01	-0.302
		84.21		9.284E+00	8.690E+00	1.351E+01	1.589E+00	0.687
	+	92.29		1.387E+01	4.226E+00	6.069E+00	6.603E-01	2.285
PA-233		95.87	*	-2.191E+00	1.702E+00	2.330E+00	2.356E-01	-0.940
		108.00		-1.022E+00	2.863E+00	4.658E+00	3.856E-01	-0.219
	+	75.28		1.792E+01	5.227E+00	7.501E+00	1.283E+00	2.389
	+	86.59		6.329E+00	2.862E+00	3.318E+00	9.310E-01	1.907
	+	300.12		1.217E+00	4.940E-01	7.460E-01	1.028E-01	1.631
		311.98	*	2.418E-02	6.577E-02	1.123E-01	7.660E-03	0.215
PA-234		340.50		1.295E+00	7.633E-01	1.163E+00	2.684E-01	1.114
		398.62		-1.153E+00	2.017E+00	3.161E+00	8.162E-01	-0.365
		415.76		4.174E-01	1.714E+00	2.861E+00	5.879E-01	0.146
	+	63.00		5.674E+00	3.601E+00	3.795E+00	6.667E-01	1.495
		94.67		3.601E-01	1.815E-01	2.878E-01	3.932E-02	1.251
		98.44		8.971E-02	1.035E-01	1.562E-01	8.740E-02	0.574
		99.86		2.720E-01	4.605E-01	7.813E-01	7.344E-02	0.348

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		111.00		-3.409E-02	1.851E-01	2.989E-01	3.472E-02	-0.114
		131.20		2.104E-02	1.040E-01	1.718E-01	1.152E-02	0.123
		152.70		1.925E-01	3.167E-01	5.260E-01	8.445E-02	0.366
	+	186.00		6.251E+00	2.588E+00	2.531E+00	7.766E-01	2.470
		226.40		2.973E-01	4.114E-01	6.760E-01	8.111E-02	0.440
		227.20		2.057E-01	4.377E-01	7.124E-01	4.726E-02	0.289
		248.90		4.932E-01	9.205E-01	1.337E+00	2.906E-01	0.369
		293.70		4.402E+00	1.124E+00	1.617E+00	2.650E-01	2.722
		369.80		7.690E-01	8.491E-01	1.462E+00	3.049E-01	0.526
		568.70		1.581E+00	9.959E-01	1.798E+00	9.718E-02	0.879
		569.50		2.628E-01	2.808E-01	4.763E-01	2.573E-02	0.552
		574.00		-1.843E-01	1.516E+00	2.415E+00	1.300E-01	-0.076
		699.00		2.860E-01	6.882E-01	1.188E+00	2.119E-01	0.241
		706.10		-2.276E-01	1.040E+00	1.705E+00	7.516E-01	-0.134
		733.00		-2.684E-01	4.175E-01	5.513E-01	1.172E-01	-0.487
		742.81		-2.593E-01	1.355E+00	2.207E+00	1.477E+00	-0.118
	+	796.30		2.610E+00	1.651E+00	1.872E+00	4.959E-01	1.394
		805.60		2.344E-01	9.888E-01	1.671E+00	5.044E-01	0.140
		819.60		6.138E-01	1.364E+00	2.312E+00	8.714E-01	0.265
		826.30		-1.766E-02	8.356E-01	1.381E+00	6.142E-01	-0.013
		831.60		-1.776E-01	6.083E-01	9.759E-01	2.875E-01	-0.182
		876.40		3.770E-01	9.044E-01	1.408E+00	1.446E+00	0.268
		880.51		-2.816E-01	2.760E-01	4.048E-01	3.217E-02	-0.696
		883.24		2.927E-01	3.292E-01	4.835E-01	3.246E-01	0.605
		899.00		-2.001E-01	9.246E-01	1.485E+00	6.480E-01	-0.135
		925.00		6.474E-01	1.128E+00	1.959E+00	1.586E-01	0.330
		926.50		3.320E-03	1.691E-01	2.781E-01	6.981E-02	0.012
		946.00	*	2.569E-01	3.314E-01	5.752E-01	1.063E-01	0.447
		949.00		3.879E-02	5.024E-01	8.287E-01	6.601E-02	0.047
		980.50		-1.224E-01	7.711E-01	1.240E+00	9.630E-02	-0.099
PA-234M		1394.10		5.614E-03	1.046E+00	1.739E+00	1.128E+00	0.003
		766.42		1.318E+01	1.311E+01	2.045E+01	1.031E+01	0.644
U-235	+	1001.03	*	-3.938E-02	5.204E+00	8.483E+00	7.734E-01	-0.005
	+	89.95		2.292E+00	1.198E+00	1.926E+00	6.118E-01	1.190
	+	93.35		3.033E+00	1.228E+00	1.303E+00	3.741E-01	2.328
		105.00		7.885E-01	1.028E+00	1.712E+00	5.109E-01	0.461
		143.76	*	6.686E-02	2.107E-01	3.455E-01	5.727E-02	0.194
		163.35		2.798E-01	4.798E-01	7.926E-01	1.440E-01	0.353
	+	185.71		2.315E-01	6.607E-02	9.299E-02	5.996E-03	2.490
		205.31		6.910E-01	5.687E-01	8.538E-01	1.557E-01	0.809
NP-236		94.67		2.749E-01	1.356E-01	2.185E-01	2.262E-02	1.258
		98.44		6.776E-02	6.870E-02	1.181E-01	1.138E-02	0.574
		111.00		-2.579E-02	1.400E-01	2.261E-01	1.796E-02	-0.114
		160.31	*	-8.462E-02	8.117E-02	1.251E-01	7.985E-03	-0.677
NP-239		99.55		1.503E-01	1.547E-01	2.657E-01	2.511E-02	0.566
		117.00	*	-8.498E-02	1.843E-01	2.972E-01	2.187E-02	-0.286
	+	209.75		1.516E+00	1.122E+00	1.424E+00	9.354E-02	1.065
		228.18		-1.839E-01	2.332E-01	3.540E-01	2.350E-02	-0.519
		277.60		1.434E-01	1.682E-01	2.953E-01	1.964E-02	0.486

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		334.30		-9.879E-01	1.439E+00	1.995E+00	1.262E-01	-0.495
AM-241		59.54	*	1.446E-01	2.429E-01	3.813E-01	4.814E-02	0.379
CM-243		99.55		1.546E-01	1.592E-01	2.734E-01	2.584E-02	0.566
		103.76	*	-5.714E-02	9.341E-02	1.504E-01	1.326E-02	-0.380
		117.00		-8.744E-02	1.896E-01	3.058E-01	2.250E-02	-0.286
	+	209.75		1.495E+00	1.107E+00	1.404E+00	9.222E-02	1.065
		228.18		-1.858E-01	2.356E-01	3.578E-01	2.375E-02	-0.519
		277.60		1.446E-01	1.696E-01	2.978E-01	1.981E-02	0.486
AM-246		798.80		3.760E-02	1.531E-01	2.275E-01	1.525E-02	0.165
		1036.00		5.098E-02	3.519E-01	5.798E-01	4.263E-02	0.088
		1062.04		-7.835E-02	2.395E-01	3.753E-01	2.675E-02	-0.209
		1078.86	*	-5.023E-02	1.720E-01	2.712E-01	1.891E-02	-0.185
CM-247		278.00		7.133E-01	7.054E-01	1.246E+00	8.289E-02	0.572
		287.40		6.478E-01	1.183E+00	2.048E+00	1.356E-01	0.316
		402.60	*	4.641E-03	3.675E-02	6.111E-02	3.449E-03	0.076
CF-249		252.85		9.536E-01	8.320E-01	1.483E+00	9.906E-02	0.643
		333.44		-1.235E-01	2.204E-01	2.558E-01	1.619E-02	-0.483
		387.95	*	1.566E-02	3.826E-02	6.493E-02	3.689E-03	0.241
CF-251		176.60	*	5.359E-02	1.269E-01	2.085E-01	1.335E-02	0.257
		227.00		2.880E-01	3.856E-01	6.362E-01	4.220E-02	0.453
		285.00		6.313E-01	1.679E+00	2.884E+00	1.912E-01	0.219

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]G246440010
* Acquisition date   : 19-FEB-2010 19:50:32 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 02:00:01.32             Half life ratio  : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246440010             Analyst initials: MXR1
* Batch Number       : 950788                  Sample Quantity : 1.3051E+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

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.451E+01	3.130E+00	6.417E-01	0.000E+00
CD-109	3.300E+00	1.210E+00	1.352E+00	0.000E+00
SN-126	3.233E-01	1.186E-01	1.335E-01	0.000E+00
TL-208	4.901E-01	8.479E-02	6.631E-02	0.000E+00
BI-211	3.801E+00	5.489E-01	3.090E-01	0.000E+00
PB-212	1.712E+00	1.732E-01	9.003E-02	0.000E+00
PO-212	1.712E+00	1.732E-01	9.003E-02	0.000E+00
BI-214	1.168E+00	1.700E-01	1.059E-01	0.000E+00
PB-214	1.322E+00	2.026E-01	1.077E-01	0.000E+00
PO-214	1.322E+00	2.026E-01	1.077E-01	0.000E+00
PO-216	1.712E+00	1.732E-01	9.003E-02	0.000E+00
PO-218	1.322E+00	2.026E-01	1.077E-01	0.000E+00
RA-224	4.683E+00	1.505E+00	1.025E+00	0.000E+00
RA-226	1.168E+00	1.700E-01	1.059E-01	0.000E+00
AC-228	1.649E+00	4.101E-01	1.956E-01	0.000E+00
RA-228	1.649E+00	4.101E-01	1.956E-01	0.000E+00
TH-228	1.742E+00	1.762E-01	9.160E-02	0.000E+00
TH-230	1.168E+00	1.700E-01	1.059E-01	0.000E+00
TH-232	1.649E+00	4.101E-01	1.956E-01	0.000E+00
TH-234	4.868E+00	3.058E+00	2.944E+00	0.000E+00
U-234	1.168E+00	1.700E-01	1.059E-01	0.000E+00
NP-237	9.493E-01	3.976E-01	4.312E-01	0.000E+00
U-238	4.868E+00	3.058E+00	2.944E+00	0.000E+00
AM-243	3.421E-01	8.804E-02	1.026E-01	0.000E+00
ANH-511	7.560E-02	6.173E-02	4.777E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	3.593E-01	3.476E-01	6.289E-01	0.000E+00 NOT IDENT.
NA-22	9.236E-03	5.167E-02	8.980E-02	0.000E+00 NOT IDENT.

NA-24	0.000E+00	8.412E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.496E-03	2.427E-02	3.905E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.738E-02	8.538E-02	0.000E+00	FAIL ABUN
SC-46	-4.049E-02	3.751E-02	5.607E-02	0.000E+00	FAIL ABUN
V-48	-4.820E-02	8.047E-02	1.269E-01	0.000E+00	NOT IDENT.
CR-51	-1.498E-01	3.856E-01	6.612E-01	0.000E+00	NOT IDENT.
MN-52	1.067E-01	2.643E-01	4.753E-01	0.000E+00	NOT IDENT.
MN-54	-1.801E-03	3.523E-02	5.982E-02	0.000E+00	NOT IDENT.
CO-56	7.952E-03	4.202E-02	7.271E-02	0.000E+00	NOT IDENT.
CO-57	-1.682E-02	2.411E-02	4.080E-02	0.000E+00	NOT IDENT.
CO-58	-3.926E-02	3.994E-02	6.207E-02	0.000E+00	NOT IDENT.
FE-59	-1.025E-01	1.099E-01	1.661E-01	0.000E+00	NOT IDENT.
CO-60	1.081E-02	3.945E-02	6.935E-02	0.000E+00	NOT IDENT.
ZN-65	1.424E-02	1.138E-01	1.654E-01	0.000E+00	NOT IDENT.
GE-68	7.054E-01	1.437E+00	2.495E+00	0.000E+00	NOT IDENT.
AS-73	-2.934E-01	1.481E+00	2.688E+00	0.000E+00	NOT IDENT.
AS-74	-4.033E-02	9.674E-02	1.550E-01	0.000E+00	NOT IDENT.
SE-75	1.213E-02	4.130E-02	7.221E-02	0.000E+00	NOT IDENT.
BR-77	8.260E+00	1.845E+01	3.219E+01	0.000E+00	FAIL ABUN
SR-82	-5.149E-01	3.849E-01	5.778E-01	0.000E+00	NOT IDENT.
RB-83	3.406E-02	6.556E-02	1.150E-01	0.000E+00	NOT IDENT.
RB-84	-6.394E-02	7.080E-02	1.088E-01	0.000E+00	NOT IDENT.
KR-85	9.207E+00	7.403E+00	1.226E+01	0.000E+00	NOT IDENT.
SR-85	4.831E-02	3.885E-02	6.431E-02	0.000E+00	NOT IDENT.
RB-86	2.329E-01	1.019E+00	1.730E+00	0.000E+00	NOT IDENT.
Y-88	3.738E-03	3.666E-02	6.165E-02	0.000E+00	NOT IDENT.
ZR-88	-7.597E-04	2.870E-02	4.940E-02	0.000E+00	NOT IDENT.
Y-91	1.031E+01	2.187E+01	3.747E+01	0.000E+00	NOT IDENT.
NB-94	4.012E-02	3.123E-02	5.917E-02	0.000E+00	NOT IDENT.
NB-95	-7.188E-04	4.370E-02	7.505E-02	0.000E+00	NOT IDENT.
NB-95M	7.055E-02	1.320E-01	2.028E-01	0.000E+00	NOT IDENT.
ZR-95	3.764E-02	7.082E-02	1.270E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.885E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.713E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.846E+00	1.984E+01	3.501E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.653E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.267E-04	3.324E-02	5.520E-02	0.000E+00	NOT IDENT.
RH-102	-2.512E-02	3.095E-02	4.950E-02	0.000E+00	NOT IDENT.
RU-103	-1.704E-02	4.373E-02	7.173E-02	0.000E+00	FAIL ABUN
RH-106	-1.858E-01	3.165E-01	4.953E-01	0.000E+00	FAIL ABUN
RU-106	-1.858E-01	3.160E-01	4.953E-01	0.000E+00	FAIL ABUN
AG-108M	-2.108E-02	3.044E-02	4.933E-02	0.000E+00	NOT IDENT.
AG-110M	-5.492E-02	3.646E-02	5.637E-02	0.000E+00	NOT IDENT.
IN-111	-1.332E+00	2.048E+00	2.870E+00	0.000E+00	NOT IDENT.
IN-113M	-2.763E-02	4.217E-02	6.949E-02	0.000E+00	NOT IDENT.
SN-113	-2.763E-02	4.217E-02	6.949E-02	0.000E+00	NOT IDENT.
IN-114M	-6.015E-02	2.013E-01	2.978E-01	0.000E+00	NOT IDENT.
CD-115	-5.097E+00	2.080E+01	3.427E+01	0.000E+00	NOT IDENT.
SN-117M	2.172E-02	5.793E-02	1.012E-01	0.000E+00	NOT IDENT.
SB-122	-1.603E+00	3.740E+00	6.038E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.950E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	4.589E-03	2.724E-02	4.713E-02	0.000E+00	NOT IDENT.
I-124	5.221E-01	1.102E+00	1.679E+00	0.000E+00	FAIL ABUN
SB-124	2.433E-02	5.731E-02	1.051E-01	0.000E+00	FAIL ABUN
SB-125	-1.266E-02	8.806E-02	1.493E-01	0.000E+00	FAIL ABUN
TE-125M	3.179E+00	9.293E+00	1.634E+01	0.000E+00	NOT IDENT.
I-126	6.186E-02	1.985E-01	3.534E-01	0.000E+00	NOT IDENT.
SB-126	1.828E-01	1.563E-01	2.683E-01	0.000E+00	FAIL ABUN
SB-127	-8.623E-01	2.060E+00	3.464E+00	0.000E+00	NOT IDENT.
XE-127	-4.212E-02	4.690E-02	7.540E-02	0.000E+00	NOT IDENT.
I-131	-1.272E-01	1.296E-01	2.098E-01	0.000E+00	NOT IDENT.
TE-132	-8.963E-01	1.124E+00	1.788E+00	0.000E+00	NOT IDENT.
BA-133	-1.293E-02	4.269E-02	6.336E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.250E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.625E-02	9.691E-02	0.000E+00	FAIL ABUN
CS-135	9.541E-02	1.625E-01	2.646E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.490E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.110E-02	1.352E-01	2.319E-01	0.000E+00	FAIL ABUN
BA-137M	-6.801E-03	3.920E-02	6.716E-02	0.000E+00	NOT IDENT.
CS-137	-7.190E-03	4.144E-02	7.099E-02	0.000E+00	NOT IDENT.
CE-139	-1.317E-02	2.938E-02	4.927E-02	0.000E+00	NOT IDENT.
BA-140	1.239E-01	2.629E-01	4.545E-01	0.000E+00	NOT IDENT.
LA-140	8.472E-03	8.117E-02	1.204E-01	0.000E+00	FAIL ABUN
CE-141	-2.792E-02	6.318E-02	1.070E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.821E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	5.085E-02	1.926E-01	3.383E-01	0.000E+00	NOT IDENT.
PM-144	-5.724E-04	3.419E-02	5.921E-02	0.000E+00	NOT IDENT.
PR-144	-3.883E-02	2.319E+00	4.017E+00	0.000E+00	NOT IDENT.

PM-146	7.916E-03	4.346E-02	7.497E-02	0.000E+00	NOT IDENT.
ND-147	-1.894E-01	6.105E-01	9.983E-01	0.000E+00	FAIL ABUN
PM-149	-5.689E+01	1.724E+02	2.993E+02	0.000E+00	NOT IDENT.
EU-152	-9.055E-03	9.374E-02	1.625E-01	0.000E+00	FAIL ABUN
GD-153	-4.361E-02	8.650E-02	1.335E-01	0.000E+00	NOT IDENT.
EU-154	7.648E-02	1.401E-01	2.507E-01	0.000E+00	NOT IDENT.
EU-155	7.705E-02	9.985E-02	1.815E-01	0.000E+00	FAIL ABUN
TB-160	-1.029E-01	1.380E-01	2.164E-01	0.000E+00	FAIL ABUN
HO-166M	3.848E-02	5.565E-02	1.016E-01	0.000E+00	NOT IDENT.
TM-171	-1.755E+01	3.810E+01	6.049E+01	0.000E+00	NOT IDENT.
LU-176	-1.888E-02	2.251E-02	3.760E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.949E+00	2.582E+00	0.000E+00	FAIL ABUN
LU-177M	1.628E-02	1.840E-01	3.177E-01	0.000E+00	FAIL ABUN
HF-181	-1.576E-02	4.299E-02	7.082E-02	0.000E+00	NOT IDENT.
W-181	-2.539E-02	5.175E-01	8.414E-01	0.000E+00	NOT IDENT.
TA-182	1.294E-01	2.173E-01	3.902E-01	0.000E+00	FAIL ABUN
RE-183	9.264E-02	1.115E-01	1.977E-01	0.000E+00	FAIL ABUN
RE-184	2.565E-01	2.193E-01	4.109E-01	0.000E+00	NOT IDENT.
OS-185	-1.337E-02	3.933E-02	6.676E-02	0.000E+00	NOT IDENT.
RE-188	3.588E-02	1.683E-01	2.922E-01	0.000E+00	NOT IDENT.
W-188	-1.278E+00	7.712E+00	1.186E+01	0.000E+00	FAIL ABUN
IR-192	7.485E-03	3.493E-02	6.197E-02	0.000E+00	FAIL ABUN
AU-195	2.851E-01	2.230E-01	4.117E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.761E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.522E+00	1.098E+01	1.816E+01	0.000E+00	NOT IDENT.
TL-202	3.122E-02	7.874E-02	1.380E-01	0.000E+00	NOT IDENT.
HG-203	1.011E-02	3.848E-02	6.903E-02	0.000E+00	FAIL ABUN
BI-207	-2.114E-02	5.114E-02	8.134E-02	0.000E+00	FAIL ABUN
TL-207	4.457E-01	7.272E-01	1.167E+00	0.000E+00	FAIL ABUN
PO-209	1.004E+01	7.578E+00	1.426E+01	0.000E+00	NOT IDENT.
BI-210	7.301E+00	9.083E+00	1.699E+01	0.000E+00	NOT IDENT.
PB-210	7.301E+00	9.083E+00	1.699E+01	0.000E+00	NOT IDENT.
PO-210	7.301E+00	9.078E+00	1.699E+01	0.000E+00	NOT IDENT.
PB-211	-2.413E-01	9.555E-01	1.598E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.498E-01	7.272E-01	0.000E+00	FAIL ABUN
PO-215	4.457E-01	7.272E-01	1.167E+00	0.000E+00	FAIL ABUN
RN-219	4.705E-02	3.978E-01	6.899E-01	0.000E+00	FAIL ABUN
RN-220	2.107E+00	2.521E+01	4.253E+01	0.000E+00	NOT IDENT.
RA-223	4.457E-01	7.272E-01	1.167E+00	0.000E+00	FAIL ABUN
AC-227	-6.393E-01	3.700E-01	5.836E-01	0.000E+00	FAIL ABUN
TH-227	-6.393E-01	3.748E-01	5.836E-01	0.000E+00	FAIL ABUN
TH-229	-5.113E-02	5.009E-01	8.440E-01	0.000E+00	FAIL ABUN
PA-231	-4.786E-03	1.397E+00	2.471E+00	0.000E+00	FAIL ABUN
TH-231	4.457E-01	7.272E-01	1.167E+00	0.000E+00	FAIL ABUN
U-231	-2.191E+00	1.667E+00	2.437E+00	0.000E+00	FAIL ABUN
PA-233	2.418E-02	6.445E-02	1.153E-01	0.000E+00	FAIL ABUN
PA-234	2.569E-01	3.248E-01	5.799E-01	0.000E+00	FAIL ABUN
PA-234M	-3.938E-02	5.100E+00	8.544E+00	0.000E+00	NOT IDENT.
U-235	6.686E-02	2.065E-01	3.591E-01	0.000E+00	FAIL ABUN
NP-236	-8.462E-02	7.954E-02	1.298E-01	0.000E+00	NOT IDENT.
NP-239	-8.498E-02	1.806E-01	3.099E-01	0.000E+00	FAIL ABUN
AM-241	1.446E-01	2.380E-01	4.018E-01	0.000E+00	NOT IDENT.
CM-243	-5.714E-02	9.154E-02	1.571E-01	0.000E+00	FAIL ABUN
AM-246	-5.023E-02	1.685E-01	2.729E-01	0.000E+00	NOT IDENT.
CM-247	4.641E-03	3.602E-02	6.249E-02	0.000E+00	NOT IDENT.
CF-249	1.566E-02	3.749E-02	6.643E-02	0.000E+00	NOT IDENT.
CF-251	5.359E-02	1.243E-01	2.161E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:51:31.41

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440010.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:50:32
Sample ID          : G246440010           Sample quantity  : 1.30510E+02 GRAM
Detector name      : GAM04                 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00         Elapsed real time: 0 02:00:01.32  0.0%
Energy tolerance   : 1.50000 keV           Analyst Initials : MXR1
Abundance limit    : 75.00000              Sensitivity       : 5.00000
Batch ID           : 950788                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	1376	10.67*	1.075E+00	3.451E+01	3.451E+01	9.26
CD-109	88.03	208	3.72*	5.007E+00	3.215E+00	3.300E+00	37.43
SN-126	64.28	135	9.60	2.098E+00	1.927E+00	1.927E+00	63.38
	86.94	208	8.90	5.007E+00	1.344E+00	1.344E+00	55.11
	87.57	208	37.00*	5.007E+00	3.233E-01	3.233E-01	37.43
TL-208	277.35	-----	6.80	4.326E+00	-----	Line Not Found	-----
	510.84	72	21.60	2.731E+00	3.500E-01	3.500E-01	83.74
	583.14	352	84.20*	2.455E+00	4.901E-01	4.901E-01	17.66
	860.37	-----	12.46	1.744E+00	-----	Line Not Found	-----
BI-211	72.87	46	1.27	3.401E+00	3.051E+00	3.051E+00	113.81
	351.07	620	12.94*	3.626E+00	3.801E+00	3.801E+00	14.73
PB-212	74.81	285	10.70	3.631E+00	2.110E+00	2.110E+00	27.87
	77.11	569	18.00	3.922E+00	2.316E+00	2.316E+00	18.47
	87.30	208	8.00	5.007E+00	1.495E+00	1.495E+00	38.74
	238.63	1281	44.60*	4.826E+00	1.712E+00	1.712E+00	10.32
	300.09	114	3.41	4.084E+00	2.355E+00	2.355E+00	39.20
PO-212	74.81	285	10.70	3.631E+00	2.110E+00	2.110E+00	27.87
	77.11	569	18.00	3.922E+00	2.316E+00	2.316E+00	18.47
	87.30	208	8.00	5.007E+00	1.495E+00	1.495E+00	38.74
	115.19	-----	0.60	6.408E+00	-----	Line Not Found	-----
	238.63	1281	44.60*	4.826E+00	1.712E+00	1.712E+00	10.32
	300.09	114	3.41	4.084E+00	2.355E+00	2.355E+00	39.20
BI-214	609.31	445	46.30*	2.368E+00	1.168E+00	1.168E+00	14.85
	1120.29	74	15.10	1.357E+00	1.035E+00	1.035E+00	54.09
	1764.49	67	15.80	9.528E-01	1.289E+00	1.289E+00	26.07
PB-214	74.81	285	6.21	3.631E+00	3.636E+00	3.636E+00	27.29
	77.11	569	10.50	3.922E+00	3.971E+00	3.971E+00	19.98
	87.30	208	4.67	5.007E+00	2.561E+00	2.561E+00	38.21
	241.98	308	7.49	4.786E+00	2.470E+00	2.470E+00	33.27
	295.21	394	19.20	4.132E+00	1.429E+00	1.429E+00	18.74
	351.92	620	37.20*	3.626E+00	1.322E+00	1.322E+00	15.63
PO-214	74.81	285	6.21	3.631E+00	3.636E+00	3.636E+00	27.29

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	569	10.50	3.922E+00	3.971E+00	3.971E+00	19.98
	87.30	208	4.67	5.007E+00	2.561E+00	2.561E+00	38.21
	241.98	308	7.49	4.786E+00	2.470E+00	2.470E+00	33.27
	295.21	394	19.20	4.132E+00	1.429E+00	1.429E+00	18.74
	351.92	620	37.20*	3.626E+00	1.322E+00	1.322E+00	15.63
PO-216	74.81	285	10.70	3.631E+00	2.110E+00	2.110E+00	27.87
	77.11	569	18.00	3.922E+00	2.316E+00	2.316E+00	18.47
	87.30	208	8.00	5.007E+00	1.495E+00	1.495E+00	38.74
	238.63	1281	44.60*	4.826E+00	1.712E+00	1.712E+00	10.32
	300.09	114	3.41	4.084E+00	2.355E+00	2.355E+00	39.20
PO-218	74.81	285	6.21	3.631E+00	3.636E+00	3.636E+00	27.29
	77.11	569	10.50	3.922E+00	3.971E+00	3.971E+00	19.98
	87.30	208	4.67	5.007E+00	2.561E+00	2.561E+00	38.21
	241.98	308	7.49	4.786E+00	2.470E+00	2.470E+00	33.27
	295.21	394	19.20	4.132E+00	1.429E+00	1.429E+00	18.74
	351.92	620	37.20*	3.626E+00	1.322E+00	1.322E+00	15.63
RA-224	240.98	308	3.95*	4.786E+00	4.683E+00	4.683E+00	32.79
RA-226	609.31	445	46.30*	2.368E+00	1.168E+00	1.168E+00	14.85
	1120.29	74	15.10	1.357E+00	1.035E+00	1.035E+00	54.09
	1764.49	67	15.80	9.528E-01	1.289E+00	1.289E+00	26.07
AC-228	338.32	227	11.40	3.733E+00	1.532E+00	1.532E+00	47.83
	911.07	262	27.70*	1.652E+00	1.649E+00	1.649E+00	25.38
	969.11	185	16.60	1.559E+00	2.059E+00	2.059E+00	30.15
RA-228	338.32	227	11.40	3.733E+00	1.532E+00	1.532E+00	47.83
	911.07	262	27.70*	1.652E+00	1.649E+00	1.649E+00	25.38
	969.11	185	16.60	1.559E+00	2.059E+00	2.059E+00	30.15
TH-228	74.81	285	10.70	3.631E+00	2.110E+00	2.147E+00	26.28
	77.11	569	18.00	3.922E+00	2.316E+00	2.357E+00	18.47
	87.30	208	8.00	5.007E+00	1.495E+00	1.521E+00	37.43
	238.63	1281	44.60*	4.826E+00	1.712E+00	1.742E+00	10.32
	300.09	114	3.41	4.084E+00	2.355E+00	2.396E+00	70.30
TH-230	609.31	445	46.30*	2.368E+00	1.168E+00	1.168E+00	14.85
	1120.29	74	15.10	1.357E+00	1.035E+00	1.035E+00	54.09
	1764.49	67	15.80	9.528E-01	1.289E+00	1.289E+00	26.07
TH-232	338.32	227	11.40	3.733E+00	1.532E+00	1.532E+00	25.68
	911.07	262	27.70*	1.652E+00	1.649E+00	1.649E+00	25.38
	969.11	185	16.60	1.559E+00	2.059E+00	2.059E+00	30.15
TH-234	63.29	135	3.80*	2.098E+00	4.868E+00	4.868E+00	64.11
	92.38	259	5.41	5.461E+00	2.523E+00	2.523E+00	34.37
U-234	609.31	445	46.30*	2.368E+00	1.168E+00	1.168E+00	14.85
	1120.29	74	15.10	1.357E+00	1.035E+00	1.035E+00	54.09
	1764.49	67	15.80	9.528E-01	1.289E+00	1.289E+00	26.07
NP-237	86.50	208	12.60*	5.007E+00	9.493E-01	9.493E-01	42.74
	95.87	-----	2.60	5.678E+00	-----	Line Not Found	-----
U-238	63.29	135	3.80*	2.098E+00	4.868E+00	4.868E+00	64.11
	92.38	259	5.41	5.461E+00	2.523E+00	2.523E+00	30.48
AM-243	74.67	285	66.00*	3.631E+00	3.421E-01	3.421E-01	26.26
	86.72	208	0.34	5.007E+00	3.560E+01	3.560E+01	37.43
	117.66	-----	0.55	6.445E+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	6.417E+00	-----	Line Not Found	-----
ANH-511	511.00	72	100.00*	2.731E+00	7.560E-02	7.560E-02	83.32

Flag: "*" = Keyline

Total number of lines in spectrum 33
Number of unidentified lines 3
Number of lines tentatively identified by NID 30 90.91%

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	3.451E+01	3.451E+01	0.319E+01	9.26	
CD-109	464.00D	1.03	3.215E+00	3.300E+00	1.235E+00	37.43	
SN-126	1.00E+05Y	1.00	3.233E-01	3.233E-01	1.210E-01	37.43	
TL-208	1.41E+10Y	1.00	4.901E-01	4.901E-01	0.865E-01	17.66	
BI-211	7.04E+08Y	1.00	3.801E+00	3.801E+00	0.560E+00	14.73	
PB-212	1.41E+10Y	1.00	1.712E+00	1.712E+00	0.177E+00	10.32	
PO-212	1.41E+10Y	1.00	1.712E+00	1.712E+00	0.177E+00	10.32	
BI-214	1600.00Y	1.00	1.168E+00	1.168E+00	0.173E+00	14.85	
PB-214	1600.00Y	1.00	1.322E+00	1.322E+00	0.207E+00	15.63	
PO-214	1600.00Y	1.00	1.322E+00	1.322E+00	0.207E+00	15.63	
PO-216	1.41E+10Y	1.00	1.712E+00	1.712E+00	0.177E+00	10.32	
PO-218	1600.00Y	1.00	1.322E+00	1.322E+00	0.207E+00	15.63	
RA-224	1.41E+10Y	1.00	4.683E+00	4.683E+00	1.536E+00	32.79	
RA-226	1600.00Y	1.00	1.168E+00	1.168E+00	0.173E+00	14.85	
AC-228	1.41E+10Y	1.00	1.649E+00	1.649E+00	0.419E+00	25.38	
RA-228	1.41E+10Y	1.00	1.649E+00	1.649E+00	0.419E+00	25.38	
TH-228	1.91Y	1.02	1.712E+00	1.742E+00	0.180E+00	10.32	
TH-230	4.47E+09Y	1.00	1.168E+00	1.168E+00	0.173E+00	14.85	
TH-232	1.41E+10Y	1.00	1.649E+00	1.649E+00	0.419E+00	25.38	
TH-234	4.47E+09Y	1.00	4.868E+00	4.868E+00	3.121E+00	64.11	
U-234	4.47E+09Y	1.00	1.168E+00	1.168E+00	0.173E+00	14.85	
NP-237	2.14E+06Y	1.00	9.493E-01	9.493E-01	4.057E-01	42.74	
U-238	4.47E+09Y	1.00	4.868E+00	4.868E+00	3.121E+00	64.11	
AM-243	7380.00Y	1.00	3.421E-01	3.421E-01	0.898E-01	26.26	
ANH-511	1.00E+09Y	1.00	7.560E-02	7.560E-02	6.299E-02	83.32	
Total Activity :			7.856E+01	7.867E+01			

Grand Total Activity : 7.856E+01 7.867E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440010

Page : 5
Acquisition date : 19-FEB-2010 19:50:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.90	113	220	0.98	179.84	178	13	1.57E-02	41.5	5.25E+00	T
0	185.98	248	271	1.32	372.01	368	9	3.44E-02	27.8	5.70E+00	T
0	208.97	90	316	1.40	418.00	415	9	1.26E-02	73.7	5.29E+00	T
0	270.23	101	183	1.68	540.53	537	9	1.41E-02	51.8	4.41E+00	T
0	328.13	79	133	0.92	656.33	653	8	1.09E-02	55.9	3.82E+00	T
0	463.10	115	138	1.78	926.29	919	15	1.59E-02	48.6	2.95E+00	T
0	727.70	108	84	1.61	1455.48	1448	15	1.50E-02	42.7	2.03E+00	T
0	795.90	66	64	1.87	1591.87	1585	14	9.21E-03	57.4	1.87E+00	T
0	862.42	66	102	2.86	1724.92	1714	20	9.10E-03	80.3	1.74E+00	
1	965.00	54	42	1.87	1930.05	1920	25	7.52E-03	54.7	1.56E+00	T
0	1377.78	36	19	1.90	2755.48	2750	14	4.97E-03	66.3	1.13E+00	
0	1508.87	18	10	1.50	3017.59	3010	13	2.56E-03	83.8	1.05E+00	T
0	1590.19	49	10	4.70	3180.20	3170	20	6.86E-03	42.3	1.01E+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]G246440010.CNF;1
* Acquisition date   : 19-FEB-2010 19:50:32   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 02:00:01.32           Half life ratio  : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library : SOLID
* Sample ID          : G246440010             Analyst initials: MXR1
* Batch Number       : 950788                 Sample Quantity  : 1.30510E+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

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.451E+01	3.194E+00	6.411E-01	4.556E-02	53.824
CD-109	3.300E+00	1.235E+00	1.291E+00	1.552E-01	2.556
SN-126	3.233E-01	1.210E-01	1.274E-01	1.528E-02	2.537
TL-208	4.901E-01	8.652E-02	6.525E-02	4.106E-03	7.511
BI-211	3.801E+00	5.601E-01	3.015E-01	2.037E-02	12.605
PB-212	1.712E+00	1.767E-01	8.732E-02	7.012E-03	19.611
PO-212	1.712E+00	1.767E-01	8.732E-02	7.012E-03	19.611
BI-214	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192
PB-214	1.322E+00	2.067E-01	1.051E-01	8.967E-03	12.579
PO-214	1.322E+00	2.067E-01	1.051E-01	8.967E-03	12.579
PO-216	1.712E+00	1.767E-01	8.732E-02	7.012E-03	19.611
PO-218	1.322E+00	2.067E-01	1.051E-01	8.967E-03	12.579
RA-224	4.683E+00	1.536E+00	9.940E-01	6.626E-02	4.711
RA-226	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192
AC-228	1.649E+00	4.185E-01	1.939E-01	2.114E-02	8.504
RA-228	1.649E+00	4.185E-01	1.939E-01	2.114E-02	8.504
TH-228	1.742E+00	1.798E-01	8.884E-02	7.135E-03	19.611
TH-230	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.649E+00	4.185E-01	1.939E-01	2.114E-02	8.504
TH-234	4.868E+00	3.121E+00	2.796E+00	5.532E-01	1.741
U-234	1.168E+00	1.734E-01	1.043E-01	7.666E-03	11.192
NP-237	9.493E-01	4.057E-01	4.115E-01	9.805E-02	2.307
U-238	4.868E+00	3.121E+00	2.796E+00	5.532E-01	1.741
AM-243	3.421E-01	8.983E-02	9.767E-02	1.119E-02	3.502
ANH-511	7.560E-02	6.299E-02	4.690E-02	2.623E-03	1.612

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.593E-01		3.547E-01	6.168E-01	4.086E-02	0.582
NA-22	9.236E-03		5.272E-02	8.952E-02	5.853E-03	0.103
NA-24	-5.050E+00		4.292E+00	Half-Life too short		
AL-26	-2.496E-03		2.477E-02	3.916E-02	2.322E-03	-0.064
TI-44	4.275E-01	+	7.896E-02	8.137E-02	9.357E-03	5.254
SC-46	-4.049E-02		3.828E-02	5.556E-02	4.494E-03	-0.729
V-48	-4.820E-02		8.211E-02	1.259E-01	9.755E-03	-0.383
CR-51	-1.498E-01		3.934E-01	6.443E-01	4.537E-02	-0.233
MN-52	1.067E-01		2.697E-01	4.747E-01	3.240E-02	0.225
MN-54	-1.801E-03		3.594E-02	5.921E-02	4.285E-03	-0.030
CO-56	7.952E-03		4.287E-02	7.199E-02	5.341E-03	0.110
CO-57	-1.682E-02		2.460E-02	3.915E-02	2.718E-03	-0.430
CO-58	-3.926E-02		4.075E-02	6.141E-02	4.239E-03	-0.639
FE-59	-1.025E-01		1.122E-01	1.652E-01	1.262E-02	-0.620
CO-60	1.081E-02		4.025E-02	6.918E-02	4.741E-03	0.156
ZN-65	1.424E-02		1.161E-01	1.645E-01	1.088E-02	0.087
GE-68	7.054E-01		1.466E+00	2.480E+00	1.732E-01	0.284
AS-73	-2.934E-01		1.511E+00	2.547E+00	3.331E-01	-0.115
AS-74	-4.033E-02		9.871E-02	1.526E-01	8.055E-03	-0.264
SE-75	1.213E-02		4.214E-02	7.015E-02	4.719E-03	0.173
BR-77	8.260E+00		1.883E+01	3.162E+01	1.761E+00	0.261
SR-82	-5.149E-01		3.928E-01	5.713E-01	3.646E-02	-0.901
RB-83	3.406E-02		6.690E-02	1.129E-01	6.290E-03	0.302
RB-84	-6.394E-02		7.224E-02	1.078E-01	8.587E-03	-0.593
KR-85	9.207E+00		7.554E+00	1.203E+01	6.721E-01	0.765
SR-85	4.831E-02		3.964E-02	6.315E-02	3.527E-03	0.765
RB-86	2.329E-01		1.040E+00	1.719E+00	1.202E-01	0.135
Y-88	3.738E-03		3.741E-02	6.184E-02	3.609E-03	0.060
ZR-88	-7.597E-04		2.928E-02	4.829E-02	2.718E-03	-0.016
Y-91	1.031E+01		2.232E+01	3.731E+01	2.287E+00	0.276
NB-94	4.012E-02		3.186E-02	5.840E-02	3.146E-03	0.687
NB-95	-7.188E-04		4.459E-02	7.418E-02	4.623E-03	-0.010
NB-95M	7.055E-02		1.347E-01	1.967E-01	1.614E-02	0.359
ZR-95	3.764E-02		7.227E-02	1.255E-01	9.141E-03	0.300
NB-97	-1.351E+00		4.533E-01	Half-Life too short		
ZR-97	1.668E+01		8.740E+00	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	5.846E+00		2.025E+01	3.458E+01	4.776E+00	0.169
TC-99M	4.151E+12		8.436E+12	Half-Life too short		
RH-101	-2.267E-04		3.392E-02	5.338E-02	3.476E-03	-0.004
RH-102	-2.512E-02		3.158E-02	4.854E-02	2.744E-03	-0.518
RU-103	-1.704E-02		4.463E-02	7.040E-02	8.845E-03	-0.242
RH-106	-1.858E-01		3.230E-01	4.879E-01	5.574E-02	-0.381
RU-106	-1.858E-01		3.224E-01	4.879E-01	2.506E-02	-0.381
AG-108M	-2.108E-02		3.106E-02	4.830E-02	2.985E-03	-0.436
AG-110M	-5.492E-02		3.721E-02	5.557E-02	2.969E-03	-0.988
IN-111	-1.332E+00		2.089E+00	2.785E+00	1.858E-01	-0.478
IN-113M	-2.763E-02		4.303E-02	6.793E-02	4.093E-03	-0.407
SN-113	-2.763E-02		4.303E-02	6.793E-02	4.093E-03	-0.407
IN-114M	-6.015E-02		2.054E-01	2.878E-01	1.863E-02	-0.209
CD-115	-5.097E+00		2.122E+01	3.366E+01	1.868E+00	-0.151
SN-117M	2.172E-02		5.911E-02	9.747E-02	6.235E-03	0.223
SB-122	-1.603E+00		3.816E+00	5.938E+00	3.221E-01	-0.270
I-123	1.508E+01		4.566E+01	Half-Life too short		
TE-123M	4.589E-03		2.779E-02	4.541E-02	2.935E-03	0.101
I-124	5.221E-01		1.125E+00	1.653E+00	8.670E-02	0.316
SB-124	2.433E-02		5.848E-02	1.053E-01	7.153E-03	0.231
SB-125	-1.266E-02		8.986E-02	1.461E-01	8.650E-03	-0.087
TE-125M	3.179E+00		9.483E+00	1.565E+01	1.554E+00	0.203
I-126	6.186E-02		2.026E-01	3.485E-01	1.719E-02	0.178
SB-126	1.828E-01		1.594E-01	2.649E-01	1.488E-02	0.690
SB-127	-8.623E-01		2.102E+00	3.417E+00	3.377E-01	-0.252
XE-127	-4.212E-02		4.786E-02	7.294E-02	4.767E-03	-0.578
I-131	-1.272E-01		1.322E-01	2.048E-01	1.368E-02	-0.621
TE-132	-8.963E-01		1.147E+00	1.732E+00	2.629E-01	-0.517
BA-133	-1.293E-02		4.356E-02	6.185E-02	7.245E-03	-0.209
I-133	3.931E-02		1.658E-02	Half-Life too short		
CS-134	1.346E-01	+	7.781E-02	9.585E-02	6.460E-03	1.404
CS-135	9.541E-02		1.658E-01	2.571E-01	2.143E-02	0.371
I-135	-7.002E+11		7.604E+11	Half-Life too short		
CS-136	4.110E-02		1.380E-01	2.304E-01	1.770E-02	0.178
BA-137M	-6.801E-03		4.000E-02	6.622E-02	3.229E-03	-0.103
CS-137	-7.190E-03		4.229E-02	7.000E-02	3.434E-03	-0.103
CE-139	-1.317E-02		2.998E-02	4.750E-02	3.018E-03	-0.277
BA-140	1.239E-01		2.683E-01	4.466E-01	1.450E-01	0.277
LA-140	8.472E-03		8.283E-02	1.205E-01	7.933E-03	0.070
CE-141	-2.792E-02		6.447E-02	1.030E-01	6.914E-03	-0.271
CE-143	1.575E-03		2.970E-04	Half-Life too short		
CE-144	5.085E-02		1.966E-01	3.251E-01	4.738E-02	0.156
PM-144	-5.724E-04		3.488E-02	5.843E-02	3.106E-03	-0.010
PR-144	-3.883E-02		2.367E+00	3.964E+00	2.104E-01	-0.010
PM-146	7.916E-03		4.435E-02	7.347E-02	6.271E-03	0.108
ND-147	-1.894E-01		6.230E-01	9.808E-01	1.316E-01	-0.193
PM-149	-5.689E+01		1.760E+02	2.911E+02	4.233E+01	-0.195
EU-152	-9.055E-03		9.565E-02	1.585E-01	1.097E-02	-0.057

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-4.361E-02		8.827E-02	1.276E-01	1.253E-02	-0.342
EU-154	7.648E-02		1.430E-01	2.499E-01	2.451E-02	0.306
EU-155	7.705E-02		1.019E-01	1.737E-01	1.514E-02	0.444
TB-160	-1.029E-01		1.408E-01	2.144E-01	1.700E-02	-0.480
HO-166M	3.848E-02		5.679E-02	1.003E-01	5.519E-03	0.384
TM-171	-1.755E+01		3.888E+01	5.750E+01	6.723E+00	-0.305
LU-176	-1.888E-02		2.297E-02	3.662E-02	2.391E-03	-0.516
LU-177	2.686E+00	+	1.988E+00	2.499E+00	1.640E-01	1.075
LU-177M	1.628E-02		1.878E-01	3.108E-01	1.759E-02	0.052
HF-181	-1.576E-02		4.386E-02	6.947E-02	3.922E-03	-0.227
W-181	-2.539E-02		5.281E-01	7.996E-01	9.425E-02	-0.032
TA-182	1.294E-01		2.218E-01	3.887E-01	2.419E-02	0.333
RE-183	9.264E-02		1.138E-01	1.906E-01	1.214E-02	0.486
RE-184	2.565E-01		2.237E-01	3.989E-01	2.664E-02	0.643
OS-185	-1.337E-02		4.013E-02	6.580E-02	3.280E-03	-0.203
RE-188	3.588E-02		1.718E-01	2.815E-01	1.807E-02	0.127
W-188	-1.278E+00		7.869E+00	1.154E+01	7.625E-01	-0.111
IR-192	7.485E-03		3.565E-02	6.037E-02	3.920E-03	0.124
AU-195	2.851E-01		2.275E-01	3.938E-01	3.765E-02	0.724
TL-200	1.587E-03		8.984E-04	Half-Life too short		
TL-201	-7.522E+00		1.120E+01	1.751E+01	1.113E+00	-0.430
TL-202	3.122E-02		8.034E-02	1.352E-01	7.669E-03	0.231
HG-203	1.011E-02		3.927E-02	6.711E-02	4.673E-03	0.151
BI-207	-2.114E-02		5.218E-02	8.084E-02	5.749E-03	-0.262
TL-207	4.457E-01		7.421E-01	1.137E+00	1.904E-01	0.392
PO-209	1.004E+01		7.733E+00	1.413E+01	1.160E+00	0.711
BI-210	7.301E+00		9.268E+00	1.606E+01	1.400E+00	0.455
PB-210	7.301E+00		9.268E+00	1.606E+01	1.400E+00	0.455
PO-210	7.301E+00		9.264E+00	1.606E+01	1.248E+00	0.455
PB-211	-2.413E-01		9.750E-01	1.563E+00	9.744E-01	-0.154
BI-212	1.292E+00	+	5.610E-01	7.182E-01	5.490E-02	1.800
PO-215	4.457E-01		7.421E-01	1.137E+00	1.904E-01	0.392
RN-219	4.705E-02		4.060E-01	6.747E-01	9.135E-02	0.070
RN-220	2.107E+00		2.572E+01	4.181E+01	2.290E+00	0.050
RA-223	4.457E-01		7.421E-01	1.137E+00	1.904E-01	0.392
AC-227	-6.393E-01		3.775E-01	5.666E-01	8.130E-02	-1.128
TH-227	-6.393E-01		3.824E-01	5.666E-01	9.758E-02	-1.128
TH-229	-5.113E-02		5.111E-01	8.158E-01	5.294E-02	-0.063
PA-231	-4.786E-03		1.426E+00	2.403E+00	3.401E-01	-0.002
TH-231	4.457E-01		7.421E-01	1.137E+00	1.904E-01	0.392
U-231	-2.191E+00		1.702E+00	2.330E+00	2.356E-01	-0.940
PA-233	2.418E-02		6.577E-02	1.123E-01	7.660E-03	0.215
PA-234	2.569E-01		3.314E-01	5.752E-01	1.063E-01	0.447
PA-234M	-3.938E-02		5.204E+00	8.483E+00	7.734E-01	-0.005
U-235	6.686E-02		2.107E-01	3.455E-01	5.727E-02	0.194
NP-236	-8.462E-02		8.117E-02	1.251E-01	7.985E-03	-0.677
NP-239	-8.498E-02		1.843E-01	2.972E-01	2.187E-02	-0.286
AM-241	1.446E-01		2.429E-01	3.813E-01	4.814E-02	0.379

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-5.714E-02		9.341E-02	1.504E-01	1.326E-02	-0.380
AM-246	-5.023E-02		1.720E-01	2.712E-01	1.891E-02	-0.185
CM-247	4.641E-03		3.675E-02	6.111E-02	3.449E-03	0.076
CF-249	1.566E-02		3.826E-02	6.493E-02	3.689E-03	0.241
CF-251	5.359E-02		1.269E-01	2.085E-01	1.335E-02	0.257

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]G246440010             *
* Acquisition date   : 19-FEB-2010 19:50:32 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 02:00:01.32             Half life ratio : 8.000         *
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID             *
* Sample ID          : G246440010                 Analyst initials: MXR1         *
* Batch Number       : 950788                     Sample Quantity : 1.3051E+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

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.451E+01	3.130E+00	3.210E-01	1.597E+00
CD-109	3.300E+00	1.210E+00	6.765E-01	6.175E-01
SN-126	3.233E-01	1.186E-01	6.679E-02	6.050E-02
TL-208	4.901E-01	8.479E-02	3.318E-02	4.326E-02
BI-211	3.801E+00	5.489E-01	1.546E-01	2.800E-01
PB-212	1.712E+00	1.732E-01	4.504E-02	8.836E-02
PO-212	1.712E+00	1.732E-01	4.504E-02	8.836E-02
BI-214	1.168E+00	1.700E-01	5.301E-02	8.672E-02
PB-214	1.322E+00	2.026E-01	5.389E-02	1.033E-01
PO-214	1.322E+00	2.026E-01	5.389E-02	1.033E-01
PO-216	1.712E+00	1.732E-01	4.504E-02	8.836E-02
PO-218	1.322E+00	2.026E-01	5.389E-02	1.033E-01
RA-224	4.683E+00	1.505E+00	5.127E-01	7.678E-01
RA-226	1.168E+00	1.700E-01	5.301E-02	8.672E-02
AC-228	1.649E+00	4.101E-01	9.787E-02	2.093E-01
RA-228	1.649E+00	4.101E-01	9.787E-02	2.093E-01
TH-228	1.742E+00	1.762E-01	4.583E-02	8.990E-02
TH-230	1.168E+00	1.700E-01	5.301E-02	8.672E-02
TH-232	1.649E+00	4.101E-01	9.787E-02	2.093E-01
TH-234	4.868E+00	3.058E+00	1.473E+00	1.560E+00
U-234	1.168E+00	1.700E-01	5.301E-02	8.672E-02
NP-237	9.493E-01	3.976E-01	2.157E-01	2.029E-01
U-238	4.868E+00	3.058E+00	1.473E+00	1.560E+00
AM-243	3.421E-01	8.804E-02	5.131E-02	4.492E-02
ANH-511	7.560E-02	6.173E-02	2.390E-02	3.149E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.593E-01	3.476E-01	3.146E-01	1.774E-01 NOT IDENT.
NA-22	9.236E-03	5.167E-02	4.493E-02	2.636E-02 NOT IDENT.

NA-24	-5.050E+06	8.412E+06	0.000E+00	4.292E+06	SHORT HLIF
AL-26	-2.496E-03	2.427E-02	1.953E-02	1.238E-02	NOT IDENT.
TI-44	4.275E-01	7.738E-02	4.272E-02	3.948E-02	FAIL ABUN
SC-46	-4.049E-02	3.751E-02	2.805E-02	1.914E-02	FAIL ABUN
V-48	-4.820E-02	8.047E-02	6.347E-02	4.106E-02	NOT IDENT.
CR-51	-1.498E-01	3.856E-01	3.308E-01	1.967E-01	NOT IDENT.
MN-52	1.067E-01	2.643E-01	2.378E-01	1.348E-01	NOT IDENT.
MN-54	-1.801E-03	3.523E-02	2.993E-02	1.797E-02	NOT IDENT.
CO-56	7.952E-03	4.202E-02	3.638E-02	2.144E-02	NOT IDENT.
CO-57	-1.682E-02	2.411E-02	2.041E-02	1.230E-02	NOT IDENT.
CO-58	-3.926E-02	3.994E-02	3.105E-02	2.038E-02	NOT IDENT.
FE-59	-1.025E-01	1.099E-01	8.311E-02	5.608E-02	NOT IDENT.
CO-60	1.081E-02	3.945E-02	3.470E-02	2.013E-02	NOT IDENT.
ZN-65	1.424E-02	1.138E-01	8.273E-02	5.804E-02	NOT IDENT.
GE-68	7.054E-01	1.437E+00	1.248E+00	7.330E-01	NOT IDENT.
AS-73	-2.934E-01	1.481E+00	1.345E+00	7.557E-01	NOT IDENT.
AS-74	-4.033E-02	9.674E-02	7.754E-02	4.936E-02	NOT IDENT.
SE-75	1.213E-02	4.130E-02	3.613E-02	2.107E-02	NOT IDENT.
BR-77	8.260E+00	1.845E+01	1.610E+01	9.413E+00	FAIL ABUN
SR-82	-5.149E-01	3.849E-01	2.891E-01	1.964E-01	NOT IDENT.
RB-83	3.406E-02	6.556E-02	5.753E-02	3.345E-02	NOT IDENT.
RB-84	-6.394E-02	7.080E-02	5.445E-02	3.612E-02	NOT IDENT.
KR-85	9.207E+00	7.403E+00	6.131E+00	3.777E+00	NOT IDENT.
SR-85	4.831E-02	3.885E-02	3.217E-02	1.982E-02	NOT IDENT.
RB-86	2.329E-01	1.019E+00	8.654E-01	5.199E-01	NOT IDENT.
Y-88	3.738E-03	3.666E-02	3.084E-02	1.871E-02	NOT IDENT.
ZR-88	-7.597E-04	2.870E-02	2.471E-02	1.464E-02	NOT IDENT.
Y-91	1.031E+01	2.187E+01	1.874E+01	1.116E+01	NOT IDENT.
NB-94	4.012E-02	3.123E-02	2.960E-02	1.593E-02	NOT IDENT.
NB-95	-7.188E-04	4.370E-02	3.755E-02	2.230E-02	NOT IDENT.
NB-95M	7.055E-02	1.320E-01	1.015E-01	6.736E-02	NOT IDENT.
ZR-95	3.764E-02	7.082E-02	6.355E-02	3.613E-02	NOT IDENT.
NB-97	-1.351E+06	8.885E+05	0.000E+00	4.533E+05	SHORT HLIF
ZR-97	1.668E+07	1.713E+07	0.000E+00	8.740E+06	SHORT HLIF
MO-99	5.846E+00	1.984E+01	1.752E+01	1.012E+01	NOT IDENT.
TC-99M	4.151E+18	1.653E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.267E-04	3.324E-02	2.762E-02	1.696E-02	NOT IDENT.
RH-102	-2.512E-02	3.095E-02	2.476E-02	1.579E-02	NOT IDENT.
RU-103	-1.704E-02	4.373E-02	3.589E-02	2.231E-02	FAIL ABUN
RU-106	-1.858E-01	3.165E-01	2.478E-01	1.615E-01	FAIL ABUN
RU-106	-1.858E-01	3.160E-01	2.478E-01	1.612E-01	FAIL ABUN
AG-108M	-2.108E-02	3.044E-02	2.468E-02	1.553E-02	NOT IDENT.
AG-110M	-5.492E-02	3.646E-02	2.820E-02	1.860E-02	NOT IDENT.
IN-111	-1.332E+00	2.048E+00	1.436E+00	1.045E+00	NOT IDENT.
IN-113M	-2.763E-02	4.217E-02	3.476E-02	2.152E-02	NOT IDENT.
SN-113	-2.763E-02	4.217E-02	3.476E-02	2.152E-02	NOT IDENT.
IN-114M	-6.015E-02	2.013E-01	1.490E-01	1.027E-01	NOT IDENT.
CD-115	-5.097E+00	2.080E+01	1.714E+01	1.061E+01	NOT IDENT.
SN-117M	2.172E-02	5.793E-02	5.061E-02	2.956E-02	NOT IDENT.
SB-122	-1.603E+00	3.740E+00	3.021E+00	1.908E+00	NOT IDENT.
I-123	1.508E+07	8.950E+07	0.000E+00	4.566E+07	SHORT HLIF
TE-123M	4.589E-03	2.724E-02	2.358E-02	1.390E-02	NOT IDENT.
I-124	5.221E-01	1.102E+00	8.401E-01	5.624E-01	FAIL ABUN
SB-124	2.433E-02	5.731E-02	5.258E-02	2.924E-02	FAIL ABUN
SB-125	-1.266E-02	8.806E-02	7.468E-02	4.493E-02	FAIL ABUN
TE-125M	3.179E+00	9.293E+00	8.175E+00	4.741E+00	NOT IDENT.
I-126	6.186E-02	1.985E-01	1.768E-01	1.013E-01	NOT IDENT.
SB-126	1.828E-01	1.563E-01	1.342E-01	7.972E-02	FAIL ABUN
SB-127	-8.623E-01	2.060E+00	1.733E+00	1.051E+00	NOT IDENT.
XE-127	-4.212E-02	4.690E-02	3.772E-02	2.393E-02	NOT IDENT.
I-131	-1.272E-01	1.296E-01	1.049E-01	6.612E-02	NOT IDENT.
TE-132	-8.963E-01	1.124E+00	8.944E-01	5.737E-01	NOT IDENT.
BA-133	-1.293E-02	4.269E-02	3.170E-02	2.178E-02	NOT IDENT.
I-133	3.931E+04	3.250E+04	0.000E+00	1.658E+04	SHORT HLIF
CS-134	1.346E-01	7.625E-02	4.849E-02	3.890E-02	FAIL ABUN
CS-135	9.541E-02	1.625E-01	1.324E-01	8.291E-02	NOT IDENT.
I-135	-7.002E+17	1.490E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.110E-02	1.352E-01	1.160E-01	6.899E-02	FAIL ABUN
BA-137M	-6.801E-03	3.920E-02	3.360E-02	2.000E-02	NOT IDENT.
CS-137	-7.190E-03	4.144E-02	3.552E-02	2.114E-02	NOT IDENT.
CE-139	-1.317E-02	2.938E-02	2.465E-02	1.499E-02	NOT IDENT.
BA-140	1.239E-01	2.629E-01	2.274E-01	1.341E-01	NOT IDENT.
LA-140	8.472E-03	8.117E-02	6.022E-02	4.141E-02	FAIL ABUN
CE-141	-2.792E-02	6.318E-02	5.356E-02	3.224E-02	NOT IDENT.
CE-143	1.575E+03	5.821E+02	0.000E+00	2.970E+02	SHORT HLIF
CE-144	5.085E-02	1.926E-01	1.692E-01	9.828E-02	NOT IDENT.
PM-144	-5.724E-04	3.419E-02	2.962E-02	1.744E-02	NOT IDENT.
PR-144	-3.883E-02	2.319E+00	2.010E+00	1.183E+00	NOT IDENT.

PM-146	7.916E-03	4.346E-02	3.751E-02	2.217E-02	NOT IDENT.
ND-147	-1.894E-01	6.105E-01	4.995E-01	3.115E-01	FAIL ABUN
PM-149	-5.689E+01	1.724E+02	1.497E+02	8.798E+01	NOT IDENT.
EU-152	-9.055E-03	9.374E-02	8.128E-02	4.782E-02	FAIL ABUN
GD-153	-4.361E-02	8.650E-02	6.678E-02	4.414E-02	NOT IDENT.
EU-154	7.648E-02	1.401E-01	1.254E-01	7.149E-02	NOT IDENT.
EU-155	7.705E-02	9.985E-02	9.078E-02	5.094E-02	FAIL ABUN
TB-160	-1.029E-01	1.380E-01	1.082E-01	7.040E-02	FAIL ABUN
HO-166M	3.848E-02	5.565E-02	5.082E-02	2.839E-02	NOT IDENT.
TM-171	-1.755E+01	3.810E+01	3.026E+01	1.944E+01	NOT IDENT.
LU-176	-1.888E-02	2.251E-02	1.881E-02	1.148E-02	FAIL ABUN
LU-177	2.686E+00	1.949E+00	1.292E+00	9.942E-01	FAIL ABUN
LU-177M	1.628E-02	1.840E-01	1.589E-01	9.389E-02	FAIL ABUN
HF-181	-1.576E-02	4.299E-02	3.543E-02	2.193E-02	NOT IDENT.
W-181	-2.539E-02	5.175E-01	4.210E-01	2.640E-01	NOT IDENT.
TA-182	1.294E-01	2.173E-01	1.952E-01	1.109E-01	FAIL ABUN
RE-183	9.264E-02	1.115E-01	9.892E-02	5.688E-02	FAIL ABUN
RE-184	2.565E-01	2.193E-01	2.056E-01	1.119E-01	NOT IDENT.
OS-185	-1.337E-02	3.933E-02	3.340E-02	2.007E-02	NOT IDENT.
RE-188	3.588E-02	1.683E-01	1.462E-01	8.588E-02	NOT IDENT.
W-188	-1.278E+00	7.712E+00	5.933E+00	3.935E+00	FAIL ABUN
IR-192	7.485E-03	3.493E-02	3.100E-02	1.782E-02	FAIL ABUN
AU-195	2.851E-01	2.230E-01	2.060E-01	1.138E-01	FAIL ABUN
TL-200	1.587E+03	1.761E+03	0.000E+00	8.984E+02	SHORT HLIF
TL-201	-7.522E+00	1.098E+01	9.084E+00	5.600E+00	NOT IDENT.
TL-202	3.122E-02	7.874E-02	6.906E-02	4.017E-02	NOT IDENT.
HG-203	1.011E-02	3.848E-02	3.453E-02	1.963E-02	FAIL ABUN
BI-207	-2.114E-02	5.114E-02	4.069E-02	2.609E-02	FAIL ABUN
TL-207	4.457E-01	7.272E-01	5.838E-01	3.710E-01	FAIL ABUN
PO-209	1.004E+01	7.578E+00	7.133E+00	3.867E+00	NOT IDENT.
BI-210	7.301E+00	9.083E+00	8.500E+00	4.634E+00	NOT IDENT.
PB-210	7.301E+00	9.083E+00	8.500E+00	4.634E+00	NOT IDENT.
PO-210	7.301E+00	9.078E+00	8.500E+00	4.632E+00	NOT IDENT.
PB-211	-2.413E-01	9.555E-01	7.997E-01	4.875E-01	NOT IDENT.
BI-212	1.292E+00	5.498E-01	3.638E-01	2.805E-01	FAIL ABUN
PO-215	4.457E-01	7.272E-01	5.838E-01	3.710E-01	FAIL ABUN
RN-219	4.705E-02	3.978E-01	3.451E-01	2.030E-01	FAIL ABUN
RN-220	2.107E+00	2.521E+01	2.128E+01	1.286E+01	NOT IDENT.
RA-223	4.457E-01	7.272E-01	5.838E-01	3.710E-01	FAIL ABUN
AC-227	-6.393E-01	3.700E-01	2.920E-01	1.888E-01	FAIL ABUN
TH-227	-6.393E-01	3.748E-01	2.920E-01	1.912E-01	FAIL ABUN
TH-229	-5.113E-02	5.009E-01	4.223E-01	2.556E-01	FAIL ABUN
PA-231	-4.786E-03	1.397E+00	1.236E+00	7.130E-01	FAIL ABUN
TH-231	4.457E-01	7.272E-01	5.838E-01	3.710E-01	FAIL ABUN
U-231	-2.191E+00	1.667E+00	1.219E+00	8.508E-01	FAIL ABUN
PA-233	2.418E-02	6.445E-02	5.770E-02	3.288E-02	FAIL ABUN
PA-234	2.569E-01	3.248E-01	2.901E-01	1.657E-01	FAIL ABUN
PA-234M	-3.938E-02	5.100E+00	4.275E+00	2.602E+00	NOT IDENT.
U-235	6.686E-02	2.065E-01	1.797E-01	1.054E-01	FAIL ABUN
NP-236	-8.462E-02	7.954E-02	6.493E-02	4.058E-02	NOT IDENT.
NP-239	-8.498E-02	1.806E-01	1.550E-01	9.214E-02	FAIL ABUN
AM-241	1.446E-01	2.380E-01	2.010E-01	1.214E-01	NOT IDENT.
CM-243	-5.714E-02	9.154E-02	7.859E-02	4.670E-02	FAIL ABUN
AM-246	-5.023E-02	1.685E-01	1.365E-01	8.598E-02	NOT IDENT.
CM-247	4.641E-03	3.602E-02	3.126E-02	1.838E-02	NOT IDENT.
CF-249	1.566E-02	3.749E-02	3.323E-02	1.913E-02	NOT IDENT.
CF-251	5.359E-02	1.243E-01	1.081E-01	6.344E-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	196.2981
46.50	196.2981
46.50	196.2981
48.70	249.1192
49.72	224.8697
51.35	207.7368
52.39	226.5709
52.97	207.8060
53.15	223.5678
53.44	221.1338
54.07	211.0496
56.28	235.1134
56.28	235.1154
57.37	0.0000
57.53	236.7699
57.53	236.7712
57.60	229.7709
57.98	224.7109
57.98	224.7109
59.32	237.4271
59.32	237.4271
59.40	237.4756
59.54	229.5973
59.72	225.7197
60.01	233.8588
61.10	250.4929
61.14	250.5180
61.30	250.6191
63.00	269.5290
63.29	269.7214
63.29	269.7214
63.58	269.9134
64.28	270.3742
65.12	305.4629
65.20	305.5218
65.20	305.5218
66.05	323.6774
66.72	312.0347
66.83	312.1175
66.91	322.9888
67.20	323.2094
67.20	323.2094
67.75	310.0879
67.85	310.1613
68.90	291.4604
68.90	291.4604
69.30	282.6707
69.67	311.4786
70.82	313.6617
70.82	313.6617
70.83	313.6688
72.80	303.1969
72.87	303.2441
72.87	303.2441
74.67	304.4566
74.81	304.5511
74.81	304.5511
74.81	304.5511
74.81	304.5511
74.81	304.5511
74.81	304.5511
74.97	304.6575
75.28	304.8652
75.70	305.1456
77.11	306.0794
77.11	306.0794

77.11	306.0794
77.11	306.0794
77.11	306.0794
77.11	306.0794
77.11	306.0794
78.38	281.4915
79.62	283.6237
79.80	283.7311
79.80	283.7311
80.11	295.0503
80.18	295.0931
80.30	295.1667
80.30	295.1667
80.57	316.2313
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81.07	338.8730
81.07	338.8730
81.07	338.8730
81.07	338.8730
82.60	328.7583
83.37	301.2513
83.78	298.7008
83.78	298.7008
83.78	298.7008
83.78	298.7008
84.21	294.7517
84.90	306.4095
85.43	327.8411
86.29	367.8736
86.50	368.0269
86.54	368.0568
86.59	368.0926
86.72	362.5454
86.79	362.5945
86.94	362.7043
87.30	362.9651
87.30	362.9651
87.30	362.9651
87.30	362.9651
87.30	362.9651
87.30	362.9651
87.30	362.9651
87.57	316.5278
87.88	316.7209
88.03	316.8149
88.36	317.0217
88.47	317.0901
89.95	380.4736
91.11	266.0761
92.29	266.6796
92.38	266.7253
92.38	266.7253
93.35	267.2175
94.00	243.2246
94.67	247.8256
94.67	247.8283
94.90	276.5982
94.90	276.5982
94.90	276.5982
94.90	276.5982
95.87	317.3014
95.87	317.3014
96.73	301.9904
97.43	295.1802
98.44	252.9312
98.44	252.9312
98.88	250.2471
99.55	250.5526
99.55	250.5526
99.86	258.4064
100.00	258.4718
100.10	258.5209
103.18	284.1954
103.76	274.7781
105.00	236.4543
105.31	235.6093
108.00	278.7682
109.28	258.7927

111.00	276.2621
111.00	276.2621
111.76	289.4107
112.95	260.3973
115.19	273.2429
116.30	255.8873
117.00	273.0586
117.00	273.0586
117.66	264.4049
121.11	249.8779
121.62	254.0814
121.78	272.1549
122.06	272.2753
122.32	267.3802
122.32	267.3802
122.32	267.3802
122.32	267.3802
123.07	281.7318
127.23	286.5820
129.76	301.8711
131.20	280.1918
133.02	264.6655
133.54	254.6845
135.34	259.4467
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136.25	239.3368
136.48	241.4628
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140.51	0.0000
142.18	280.5885
142.65	283.8707
143.76	272.9429
144.24	277.2665
144.24	277.2665
144.24	277.2665
144.24	277.2665
145.22	277.6482
145.44	290.1685
147.16	291.9022
152.43	260.5300
152.70	253.2994
153.22	232.5282
154.21	245.4210
154.21	245.4210
154.21	245.4210
154.21	245.4210
155.03	264.5918
156.02	287.0188
158.56	241.5677
159.00	0.0000
159.00	246.9849
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162.32	256.5342
162.64	260.8820
163.35	261.1223
163.89	250.6804
165.85	271.5419
167.43	259.2826
171.28	232.6596
171.86	237.1191
172.10	237.1888
176.55	242.8047
176.60	242.8207
181.06	251.2911
184.41	227.1285
185.71	228.0218
186.00	228.0984
190.27	241.8470
192.34	238.5755
193.63	246.6338
197.04	231.0068
198.01	239.0054
198.60	233.6252
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201.83	243.3564
202.84	245.8530
205.31	197.4379

208.36	261.8860
208.81	268.7305
209.75	229.7742
209.75	229.7742
210.97	207.0670
215.65	190.6150
216.55	229.1803
218.09	206.9361
222.10	233.9147
223.80	217.2610
226.40	199.5916
227.00	192.8653
227.08	202.0113
227.20	202.0365
228.16	233.0818
228.18	233.0859
228.18	233.0859
231.56	0.0000
235.69	195.1257
236.00	202.0935
236.00	202.0935
238.63	197.4213
238.63	197.4213
238.63	197.4213
238.63	197.4213
239.00	197.4926
240.98	197.8736
241.98	198.0667
241.98	198.0667
241.98	198.0667
244.69	198.5850
245.39	202.2035
247.94	176.4865
248.90	160.9059
249.79	212.3889
252.40	173.7213
252.85	154.4847
252.85	154.4847
254.15	0.0000
256.20	213.9608
256.20	213.9608
260.50	158.2365
260.90	158.2938
262.80	189.5750
264.65	151.1021
268.24	162.3776
268.79	171.0088
269.46	175.3891
269.46	175.3891
269.46	175.3891
269.46	175.3891
271.23	154.2428
273.65	186.0625
276.40	154.7444
277.35	153.4632
277.60	150.8042
277.60	150.8042
278.00	150.8555
278.60	137.4586
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279.53	175.3352
280.46	176.3779
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284.30	155.2950
285.00	150.8698
285.90	163.6446
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286.10	152.8210
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290.80	152.5243
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293.26	0.0000
293.70	148.5300
295.21	141.4268
295.21	141.4268

295.21	141.4268
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297.23	109.5355
298.57	109.6564
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299.80	139.0396
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300.09	142.0022
300.09	142.0022
300.09	142.0022
300.12	142.0046
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303.91	105.7342
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304.40	127.8131
304.84	127.3700
306.84	147.2046
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311.98	152.4342
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318.01	155.9542
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319.41	156.1260
320.08	155.2782
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323.87	138.7666
323.87	138.7666
323.87	138.7666
325.23	146.3827
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334.20	156.4215
334.30	156.4316
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338.28	139.5540
338.28	139.5540
338.28	139.5540
338.32	139.5585
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338.32	139.5585
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344.27	136.3931
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350.59	0.0000
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351.92	112.4003
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351.92	112.4003
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356.01	108.5315
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366.43	123.2070
367.43	119.4420
367.94	0.0000
369.80	103.2399
374.96	119.1075
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387.95	104.5461
388.63	106.5484
391.69	117.5446
391.69	117.5446
392.90	103.9151
398.62	115.1397
400.65	100.5136
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402.60	114.4565
404.84	130.4370
410.95	137.9035
411.60	142.9255
413.65	126.2190
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433.93	101.6812
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439.56	101.0269
439.89	95.9959
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444.90	108.4547
445.03	108.4629
445.03	108.4629
445.03	108.4629
453.90	99.8767
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473.00	93.7993
475.06	120.7437
475.35	118.6990
476.78	98.1369
477.59	91.9822
477.96	84.7664
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511.85	89.3508
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513.99	74.2650
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520.65	69.8773
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528.96	0.0000
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529.87	0.0000
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543.00	89.9985
546.56	0.0000
549.76	76.3389
552.65	87.2218
555.20	80.8662
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569.32	57.5595
569.50	68.4256
569.67	70.6038
573.80	88.1661
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579.30	0.0000
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592.07	74.6884
593.00	76.9214
595.88	80.3294
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602.71	81.2592
603.60	83.0624
604.41	83.0945
604.70	76.0332
609.31	73.0999

609.31	73.0999
609.31	73.0999
609.31	73.0999
610.33	73.1362
612.46	67.4426
614.37	51.5161
618.01	68.9553
621.84	79.1058
621.84	79.1058
631.29	86.1715
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633.10	78.4039
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636.97	65.0801
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646.12	68.5095
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661.65	87.1477
664.57	0.0000
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666.33	74.5948
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677.61	79.5404
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696.49	79.2739
696.49	79.2739
697.00	74.6818
697.49	73.7754
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698.50	73.8066
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722.78	73.0168
722.78	73.0168
722.89	73.0187
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727.18	62.5671
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735.90	69.7699
739.58	62.8877
742.81	66.7306
744.21	67.7092
747.13	58.3748
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752.31	83.0285
753.82	70.8051
755.35	58.5685
756.15	59.5332
756.87	58.6048
763.93	91.0008
765.79	79.6852
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778.00	70.5385
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778.89	61.0281
783.80	61.1453
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792.07	75.0803

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805.60	56.8458
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828.27	0.0000
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836.80	0.0000
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860.37	67.8511
867.32	59.1504
867.82	59.1606
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879.36	58.4152
880.27	60.4147
880.51	60.4207
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883.24	33.7095
884.67	34.7189
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898.02	51.8261
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903.28	66.5658
911.07	44.0526
911.07	44.0526
911.07	44.0526
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920.93	52.4619
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925.24	42.2553
926.50	46.2999
935.52	57.5483
937.48	72.7400
944.10	64.8031
946.00	50.6592
949.00	62.8810
962.29	50.9351
964.01	50.9644
966.15	50.9998
968.20	51.0352
969.11	51.0498
969.11	51.0498
969.11	51.0498
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980.50	54.3159
983.50	58.4723
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1001.03	64.9934
1001.68	58.8160
1004.76	64.0389
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1024.50	0.0000
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1036.00	61.5438
1037.82	51.1414
1038.57	57.4170
1038.76	0.0000
1045.16	50.2125
1046.59	48.1405
1048.07	56.5392

1050.47	63.9160
1050.47	63.9160
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1076.63	64.4283
1077.35	57.0480
1078.86	69.7576
1085.78	59.3113
1099.22	75.4999
1112.02	65.2290
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1120.29	58.8484
1120.29	58.8484
1120.29	58.8484
1120.51	58.8538
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1124.00	0.0000
1129.67	56.8637
1131.51	0.0000
1147.95	0.0000
1167.94	80.2690
1173.22	66.2660
1175.09	67.3887
1177.93	68.5310
1189.05	70.9255
1204.90	63.5649
1205.75	0.0000
1213.00	71.3953
1221.42	65.1382
1230.97	70.8277
1235.34	69.0674
1236.41	0.0000
1238.25	87.5549
1246.25	75.7372
1260.41	0.0000
1271.85	56.7234
1274.45	52.1104
1274.54	59.5547
1291.56	29.9102
1298.22	0.0000
1312.09	31.0087
1325.50	53.7437
1325.50	53.7437
1332.49	31.1705
1333.61	36.8481
1360.21	25.6805
1362.66	0.0000
1365.15	22.8555
1368.21	30.4974
1368.53	0.0000
1376.25	31.1030
1384.27	24.6041
1394.10	20.1412
1395.20	26.8630
1407.95	29.8332
1434.06	15.4941
1436.60	25.1928
1457.56	0.0000
1460.81	30.2104
1489.15	17.6572
1509.49	15.2051
1596.49	10.3351
1620.62	15.1508
1678.03	0.0000
1691.02	6.1509
1691.02	6.1509
1706.46	0.0000
1750.46	0.0000
1764.49	10.4057
1764.49	10.4057
1764.49	10.4057
1764.49	10.4057
1770.23	3.5717
1771.40	39.5957
1791.20	0.0000
1808.65	8.3971

1836.01

13.7183

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440010

Total Uranium Activity	1.4513E+01	ug/g
Total Uranium Counting Unc.	9.0991E+00	ug/g
Total Uranium Tpu	4.6424E-06	ug/g
Total Uranium Mda	4.3820E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 950788                          SAMPLE ID   : G246440010
*  ANALYST       : MXR1                             DETECTOR    : GAM04
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 19:50:32.22         SAMPLE ALQT  : 130.510 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.018E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.462E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.138E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.513E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:52:19.87

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                          *
*                               Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440011.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:50:58
Sample ID          : G246440011 Sample quantity : 1.31760E+02 GRAM
Detector name      : GAM07 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.44 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 950788 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	46.59*	43	466	0.99	92.85	89	8	5.93E-03	91.7	
2	0	63.49*	171	590	0.96	126.63	123	8	2.37E-02	26.4	
3	2	74.77*	534	546	1.22	149.19	143	16	7.41E-02	8.8	3.56E+00
4	2	77.16*	840	461	1.06	153.98	143	16	1.17E-01	5.5	
5	3	84.34*	141	389	1.37	168.32	165	27	1.96E-02	23.4	2.90E+00
6	3	87.16	391	483	1.37	173.97	165	27	5.43E-02	10.8	
7	3	89.84*	300	450	1.34	179.33	165	27	4.17E-02	14.1	
8	3	92.78*	558	405	1.39	185.21	165	27	7.75E-02	8.2	
9	0	129.02	49	361	0.96	257.67	255	7	6.81E-03	65.6	
10	0	154.23	66	366	1.12	308.08	305	8	9.23E-03	51.4	
11	0	186.01*	266	427	1.20	371.64	366	11	3.69E-02	16.6	
12	0	209.55	253	358	1.75	418.71	413	14	3.51E-02	17.1	
13	4	238.76*	1423	238	1.12	477.11	472	17	1.98E-01	3.3	1.52E+00
14	4	241.75	310	272	1.66	483.09	472	17	4.30E-02	14.1	
15	0	270.29	106	283	1.09	540.17	534	12	1.47E-02	33.3	
16	0	277.07	69	235	1.12	553.72	549	11	9.55E-03	44.9	
17	0	295.30	406	178	1.27	590.17	586	9	5.65E-02	7.7	
18	0	300.07*	61	187	1.26	599.71	596	9	8.43E-03	43.3	
19	0	328.41	54	226	0.93	656.37	651	11	7.43E-03	56.0	
20	0	338.30	308	202	1.24	676.15	671	11	4.27E-02	10.6	
21	0	352.02*	608	206	1.20	703.60	699	10	8.45E-02	6.1	
22	0	409.24	55	120	1.02	818.01	815	9	7.59E-03	38.5	
23	0	462.81*	89	129	1.27	925.13	919	12	1.24E-02	27.8	
24	0	511.02*	212	158	1.86	1021.54	1013	18	2.95E-02	17.1	
25	0	583.36*	434	60	1.44	1166.21	1162	10	6.03E-02	6.0	
26	0	609.54*	534	135	1.33	1218.56	1211	16	7.41E-02	6.6	
27	0	661.66	57	101	1.91	1322.79	1318	11	7.95E-03	36.5	
28	0	728.03*	80	87	1.48	1455.50	1449	13	1.11E-02	26.9	
29	0	773.17	13	112	6.11	1545.78	1536	14	1.82E-03	183.1	
30	0	795.81	29	81	1.36	1591.05	1584	11	4.07E-03	62.6	
31	0	861.24*	49	66	1.16	1721.89	1716	11	6.78E-03	35.8	
32	0	911.40*	271	80	1.74	1822.20	1817	11	3.76E-02	8.9	
33	0	965.14	54	58	1.65	1929.66	1923	11	7.54E-03	30.3	
34	0	969.28*	208	35	1.75	1937.94	1933	11	2.89E-02	9.0	
35	0	1120.69*	90	71	1.24	2240.74	2235	11	1.26E-02	21.6	
36	0	1401.50	26	12	1.36	2802.31	2796	12	3.61E-03	33.1	
37	0	1409.03	29	20	1.76	2817.37	2809	13	3.96E-03	37.0	
38	0	1461.17*	1576	48	1.96	2921.64	2914	19	2.19E-01	2.8	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1730.01	21	9	0.75	3459.29	3450	17	2.85E-03	39.4	
40	0	1765.12*	71	7	2.38	3529.51	3522	14	9.87E-03	15.0	

Flag: "*" = Peak area was modified by background subtraction

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440011.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 2-FEB-2010 12:00:00 Acquisition date : 19-FEB-2010 19:50:58
 Sample ID : G246440011 Sample quantity : 131.76 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA7 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.44 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	*	3.728E+01	3.804E+00	5.990E-01	5.144E-02	62.227
CD-109	+	88.03	*	4.496E+00	1.054E+00	1.069E+00	1.007E-01	4.206
SN-126	+	64.28		1.049E+00	5.739E-01	5.898E-01	8.555E-02	1.779
	+	86.94		1.831E+00	8.561E-01	4.377E-01	1.817E-01	4.184
	+	87.57	*	4.404E-01	1.033E-01	1.049E-01	9.834E-03	4.197
BA-137M	+	661.65	*	8.135E-02	5.987E-02	6.646E-02	5.882E-03	1.224
CS-137	+	661.65	*	8.599E-02	6.329E-02	7.026E-02	6.229E-03	1.224
RE-188	+	155.03	*	2.320E-01	2.393E-01	2.871E-01	2.316E-02	0.808
		477.96		-1.233E-01	3.029E+00	4.839E+00	4.251E-01	-0.025
		633.10		-1.854E+00	2.626E+00	4.092E+00	3.650E-01	-0.453
TL-208	+	277.35		6.541E-01	5.931E-01	6.274E-01	7.682E-02	1.043
	+	510.84		1.017E+00	3.700E-01	2.123E-01	2.586E-02	4.790
	+	583.14	*	5.935E-01	9.065E-02	6.079E-02	5.815E-03	9.763
	+	860.37		6.265E-01	4.523E-01	4.511E-01	4.411E-02	1.389
BI-210	+	46.50	*	1.443E+00	2.651E+00	2.866E+00	2.688E-01	0.504
PB-210	+	46.50	*	1.443E+00	2.651E+00	2.866E+00	2.688E-01	0.504
PO-210	+	46.50	*	1.443E+00	2.651E+00	2.866E+00	2.438E-01	0.504
BI-211		72.87		5.506E+00	2.932E+00	4.569E+00	3.606E-01	1.205
	+	351.07	*	3.639E+00	5.526E-01	3.653E-01	3.277E-02	9.962
PB-212	+	74.81		2.341E+00	5.040E-01	4.550E-01	5.612E-02	5.146
	+	77.11		2.123E+00	2.904E-01	2.631E-01	2.171E-02	8.069
	+	87.30		2.037E+00	5.193E-01	4.860E-01	6.650E-02	4.191
	+	238.63	*	1.852E+00	2.143E-01	9.445E-02	9.034E-03	19.606
	+	300.09		1.222E+00	1.065E+00	1.254E+00	1.300E-01	0.975
PO-212	+	74.81		2.341E+00	5.040E-01	4.550E-01	5.612E-02	5.146
	+	77.11		2.123E+00	2.904E-01	2.631E-01	2.171E-02	8.069
	+	87.30		2.037E+00	5.193E-01	4.860E-01	6.650E-02	4.191
		115.19		2.511E+00	3.509E+00	5.810E+00	5.004E-01	0.432
	+	238.63	*	1.852E+00	2.143E-01	9.445E-02	9.034E-03	19.606
	+	300.09		1.222E+00	1.065E+00	1.254E+00	1.300E-01	0.975
BI-214	+	609.31	*	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
	+	1120.29		1.207E+00	5.365E-01	5.245E-01	5.632E-02	2.301
	+	1764.49		1.303E+00	4.062E-01	3.085E-01	2.537E-02	4.224
PB-214	+	74.81		4.034E+00	8.374E-01	7.839E-01	8.576E-02	5.146

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	77.11		3.639E+00	5.698E-01	4.510E-01	5.065E-02	8.069
	+	87.30		3.490E+00	8.613E-01	8.326E-01	1.008E-01	4.191
	+	241.98		2.422E+00	7.252E-01	5.690E-01	5.775E-02	4.257
	+	295.21		1.436E+00	2.687E-01	2.252E-01	2.384E-02	6.374
	+	351.92	*	1.266E+00	2.033E-01	1.301E-01	1.350E-02	9.731
	+	74.81		4.034E+00	8.374E-01	7.839E-01	8.576E-02	5.146
	+	77.11		3.639E+00	5.698E-01	4.510E-01	5.065E-02	8.069
	+	87.30		3.490E+00	8.613E-01	8.326E-01	1.008E-01	4.191
PO-216	+	241.98		2.422E+00	7.252E-01	5.690E-01	5.775E-02	4.257
	+	295.21		1.436E+00	2.687E-01	2.252E-01	2.384E-02	6.374
	+	351.92	*	1.266E+00	2.033E-01	1.301E-01	1.350E-02	9.731
	+	74.81		2.341E+00	5.040E-01	4.550E-01	5.612E-02	5.146
	+	77.11		2.123E+00	2.904E-01	2.631E-01	2.171E-02	8.069
	+	87.30		2.037E+00	5.193E-01	4.860E-01	6.650E-02	4.191
	+	238.63	*	1.852E+00	2.143E-01	9.445E-02	9.034E-03	19.606
	+	300.09		1.222E+00	1.065E+00	1.254E+00	1.300E-01	0.975
PO-218	+	74.81		4.034E+00	8.374E-01	7.839E-01	8.576E-02	5.146
	+	77.11		3.639E+00	5.698E-01	4.510E-01	5.065E-02	8.069
	+	87.30		3.490E+00	8.613E-01	8.326E-01	1.008E-01	4.191
	+	241.98		2.422E+00	7.252E-01	5.690E-01	5.775E-02	4.257
	+	295.21		1.436E+00	2.687E-01	2.252E-01	2.384E-02	6.374
	+	351.92	*	1.266E+00	2.033E-01	1.301E-01	1.350E-02	9.731
	+	240.98	*	4.593E+00	1.351E+00	1.075E+00	9.092E-02	4.272
	+	609.31	*	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
RA-224	+	1120.29		1.207E+00	5.365E-01	5.245E-01	5.632E-02	2.301
	+	1764.49		1.303E+00	4.062E-01	3.085E-01	2.537E-02	4.224
	+	338.32		2.028E+00	9.401E-01	3.971E-01	1.638E-01	5.106
	+	911.07	*	1.644E+00	3.506E-01	2.462E-01	2.868E-02	6.679
	+	969.11		2.222E+00	6.578E-01	4.106E-01	9.648E-02	5.410
	+	338.32		2.028E+00	9.401E-01	3.971E-01	1.638E-01	5.106
	+	911.07	*	1.644E+00	3.506E-01	2.462E-01	2.868E-02	6.679
	+	969.11		2.222E+00	6.578E-01	4.106E-01	9.648E-02	5.410
TH-228	+	74.81		2.382E+00	4.627E-01	4.629E-01	3.762E-02	5.146
	+	77.11		2.160E+00	2.954E-01	2.676E-01	2.209E-02	8.069
	+	87.30		2.072E+00	4.859E-01	4.945E-01	4.617E-02	4.191
	+	238.63	*	1.884E+00	2.181E-01	9.610E-02	9.192E-03	19.606
	+	300.09		1.243E+00	1.304E+00	1.275E+00	7.559E-01	0.975
	+	609.31	*	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
	+	1120.29		1.207E+00	5.365E-01	5.245E-01	5.632E-02	2.301
	+	1764.49		1.303E+00	4.061E-01	3.085E-01	2.537E-02	4.224
TH-232	+	338.32		2.028E+00	4.632E-01	3.971E-01	3.399E-02	5.106
	+	911.07	*	1.644E+00	3.506E-01	2.462E-01	2.868E-02	6.679
	+	969.11		2.222E+00	6.578E-01	4.106E-01	9.648E-02	5.410
	+	63.29	*	2.650E+00	1.472E+00	1.537E+00	2.675E-01	1.724
	+	92.38		4.188E+00	1.029E+00	7.046E-01	1.293E-01	5.943
	+	609.31	*	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
	+	1120.29		1.207E+00	5.365E-01	5.245E-01	5.632E-02	2.301
	+	1764.49		1.303E+00	4.061E-01	3.085E-01	2.537E-02	4.224
NP-237	+	86.50	*	1.293E+00	4.040E-01	3.099E-01	7.006E-02	4.174

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		95.87		-7.562E-01	9.802E-01	1.328E+00	3.290E-01	-0.569
U-238	+	63.29	*	2.650E+00	1.472E+00	1.537E+00	2.675E-01	1.724
	+	92.38		4.188E+00	7.846E-01	7.046E-01	6.454E-02	5.943
AM-243	+	74.67	*	3.795E-01	7.361E-02	7.389E-02	5.940E-03	5.136
	+	86.72		4.850E+01	1.137E+01	1.161E+01	1.076E+00	4.179
		117.66		-1.910E+00	3.823E+00	6.025E+00	5.182E-01	-0.317
		142.18		4.694E-01	1.804E+01	2.883E+01	2.379E+00	0.016
ANH-511	+	511.00	*	2.196E-01	7.780E-02	4.587E-02	4.075E-03	4.788

---- 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	*	-1.204E-01	3.285E-01	5.107E-01	4.820E-02	-0.236
NA-22		1274.54	*	-1.805E-02	5.006E-02	7.997E-02	6.565E-03	-0.226
NA-24		1368.53	*	6.349E-01	5.006E-02	Half-Life too short		
AL-26		1129.67		-8.259E-01	1.947E+00	3.136E+00	2.634E-01	-0.263
		1808.65	*	-6.140E-03	2.541E-02	4.161E-02	3.393E-03	-0.148
TI-44		67.85		-2.805E-02	4.071E-02	5.804E-02	4.379E-03	-0.483
	+	78.38	*	3.918E-01	5.359E-02	7.084E-02	5.930E-03	5.531
SC-46		889.25	*	-5.709E-03	4.377E-02	7.020E-02	6.433E-03	-0.081
	+	1120.51		2.104E-01	9.249E-02	1.452E-01	1.227E-02	1.449
V-48		944.10		-3.818E-01	1.043E+00	1.622E+00	1.475E-01	-0.235
		983.50	*	-6.424E-02	8.417E-02	1.246E-01	1.122E-02	-0.515
		1312.09		2.015E-02	9.475E-02	1.596E-01	1.309E-02	0.126
CR-51		320.08	*	2.817E-01	4.146E-01	7.054E-01	6.374E-02	0.399
MN-52		744.21		-1.795E-02	3.079E-01	5.039E-01	4.574E-02	-0.036
		848.13		-4.920E+00	9.399E+00	1.455E+01	1.336E+00	-0.338
		935.52		1.952E-01	3.600E-01	6.101E-01	5.555E-02	0.320
		1246.25		-1.687E+00	1.114E+01	1.822E+01	1.492E+00	-0.093
		1333.61		-1.941E+00	7.184E+00	1.152E+01	9.437E-01	-0.169
		1434.06	*	1.728E-01	3.005E-01	5.307E-01	4.413E-02	0.326
MN-54		834.83	*	1.377E-02	3.895E-02	6.540E-02	6.003E-03	0.210
CO-56		846.75	*	-7.050E-03	4.034E-02	6.464E-02	5.934E-03	-0.109
		977.42		2.002E+00	3.300E+00	5.611E+00	5.060E-01	0.357
		1037.82		6.642E-02	3.359E-01	5.732E-01	5.318E-02	0.116
		1175.09		1.354E+00	2.588E+00	4.475E+00	3.643E-01	0.303
		1238.25		9.528E-02	1.092E-01	1.908E-01	1.612E-02	0.499
		1360.21		-2.292E-01	1.070E+00	1.713E+00	1.410E-01	-0.134
		1771.40		-8.305E-01	3.732E-01	4.317E-01	3.546E-02	-1.924
CO-57		122.06	*	3.752E-03	2.632E-02	4.257E-02	3.662E-03	0.088
		136.48		-4.012E-02	2.106E-01	3.340E-01	3.007E-02	-0.120
CO-58		810.76	*	6.984E-03	4.127E-02	6.848E-02	6.292E-03	0.102
FE-59		142.65		2.574E+00	2.921E+00	4.779E+00	3.941E-01	0.539
		192.34		-2.954E-01	9.414E-01	1.570E+00	2.061E-01	-0.188
		1099.22	*	-1.601E-02	1.153E-01	1.907E-01	1.767E-02	-0.084
		1291.56		-2.209E-02	1.410E-01	2.292E-01	2.158E-02	-0.096
CO-60		1173.22		-1.928E-02	5.257E-02	8.490E-02	6.909E-03	-0.227
		1332.49	*	-2.121E-02	4.451E-02	6.975E-02	5.714E-03	-0.304

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZN-65	1115.52	*		-7.637E-02	1.202E-01	1.600E-01	1.357E-02	-0.477
GE-68	1077.35	*		5.716E-01	1.365E+00	2.362E+00	2.047E-01	0.242
AS-73	53.44	*		2.034E-01	5.338E-01	8.983E-01	6.745E-02	0.226
AS-74	595.88	*		-9.542E-03	9.978E-02	1.655E-01	1.484E-02	-0.058
	634.78			4.800E-02	3.643E-01	6.125E-01	5.460E-02	0.078
SE-75	66.05			-1.731E+00	4.070E+00	5.877E+00	5.575E-01	-0.294
	96.73			-7.609E-01	7.855E-01	1.069E+00	1.481E-01	-0.712
	121.11			9.163E-03	1.417E-01	2.286E-01	2.561E-02	0.040
	136.00			-2.745E-02	4.044E-02	6.268E-02	5.269E-03	-0.438
	198.60			1.048E+00	1.800E+00	3.045E+00	2.799E-01	0.344
	264.65	*		2.319E-02	4.691E-02	7.103E-02	6.065E-03	0.326
	279.53			4.408E-02	1.248E-01	1.862E-01	1.642E-02	0.237
	303.91			1.478E+00	2.351E+00	3.558E+00	4.068E-01	0.415
	400.65			-1.339E-01	2.804E-01	4.403E-01	4.814E-02	-0.304
BR-77	87.88	+		1.845E+03	4.325E+02	6.038E+02	5.680E+01	3.055
	200.40			-5.491E+01	2.975E+02	4.980E+02	4.094E+01	-0.110
	239.00	+		5.666E+02	6.046E+01	7.750E+01	6.549E+00	7.310
	249.79			3.944E+01	1.239E+02	2.097E+02	1.779E+01	0.188
	281.68			3.399E+01	1.998E+02	2.943E+02	2.501E+01	0.115
	297.23			5.240E+02	1.743E+02	2.336E+02	1.997E+01	2.243
	303.76			2.369E+02	3.763E+02	5.702E+02	4.882E+01	0.415
	439.47			1.845E+01	2.917E+02	4.724E+02	4.069E+01	0.039
	484.57			-2.116E+02	4.810E+02	7.448E+02	6.559E+01	-0.284
	520.65	*		-1.396E+00	1.867E+01	3.129E+01	2.787E+00	-0.045
	574.64			-1.166E+02	4.022E+02	6.596E+02	5.915E+01	-0.177
	578.91			-5.978E+00	1.784E+02	2.588E+02	2.321E+01	-0.023
	585.48			3.135E+03	5.731E+02	1.004E+03	9.006E+01	3.122
	755.35			3.084E+02	3.638E+02	6.328E+02	5.757E+01	0.487
	817.79			-5.448E+01	2.595E+02	4.156E+02	3.812E+01	-0.131
SR-82	698.33			-2.637E+01	3.763E+01	5.870E+01	5.263E+00	-0.449
	776.49	*		-1.984E-01	4.685E-01	6.280E-01	5.735E-02	-0.316
	1395.20			6.362E+00	1.150E+01	1.813E+01	1.500E+00	0.351
RB-83	520.41	*		1.013E-04	6.633E-02	1.118E-01	9.958E-03	0.001
	529.64			4.883E-02	1.053E-01	1.827E-01	1.631E-02	0.267
	552.65			-1.204E-01	1.991E-01	3.190E-01	2.857E-02	-0.377
RB-84	881.50	*		-1.525E-02	7.621E-02	1.214E-01	1.113E-02	-0.126
KR-85	513.99	*		1.520E+01	8.213E+00	1.376E+01	1.223E+00	1.105
SR-85	513.99	*		7.977E-02	4.310E-02	7.220E-02	6.420E-03	1.105
RB-86	1076.63	*		-3.600E-01	9.346E-01	1.512E+00	1.311E-01	-0.238
Y-88	898.02			-2.294E-02	4.543E-02	6.941E-02	6.383E-03	-0.331
	1836.01	*		2.559E-02	3.426E-02	6.440E-02	5.227E-03	0.397
ZR-88	392.90	*		2.543E-03	3.241E-02	5.290E-02	4.406E-03	0.048
Y-91	1204.90	*		-1.366E+01	2.187E+01	3.446E+01	2.814E+00	-0.397
NB-94	702.63	*		1.821E-02	3.331E-02	5.729E-02	5.144E-03	0.318
	871.10			7.378E-04	3.663E-02	5.968E-02	5.475E-03	0.012
NB-95	765.79	*		3.115E-02	4.971E-02	7.557E-02	6.889E-03	0.412
NB-95M	235.69	*		1.004E-01	1.457E-01	2.225E-01	2.160E-02	0.451
ZR-95	724.18			-6.838E-02	1.148E-01	1.526E-01	1.487E-02	-0.448
	756.15	*		1.217E-01	8.113E-02	1.466E-01	1.456E-02	0.831

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	657.90	*		4.266E-01	8.113E-02	Half-Life	too short	
	1024.50			-4.071E+01	8.113E-02	Half-Life	too short	
ZR-97	254.15			-3.286E+01	8.113E-02	Half-Life	too short	
	355.39			1.744E+00	8.113E-02	Half-Life	too short	
	507.63	*		2.881E+01	8.113E-02	Half-Life	too short	
	602.52			4.859E+00	8.113E-02	Half-Life	too short	
	1021.30			5.472E+01	8.113E-02	Half-Life	too short	
	1147.95			-3.361E+01	8.113E-02	Half-Life	too short	
	1362.66			-1.283E+01	8.113E-02	Half-Life	too short	
	1750.46			-1.924E+00	8.113E-02	Half-Life	too short	
MO-99	140.51			-2.273E+01	4.794E+01	7.311E+01	2.017E+01	-0.311
	181.06			-9.850E+00	3.304E+01	4.862E+01	8.765E+00	-0.203
	366.43			-1.083E+01	1.587E+02	2.579E+02	2.184E+01	-0.042
	739.58	*		1.786E+00	2.239E+01	3.708E+01	5.726E+00	0.048
	778.00			-4.959E+01	7.379E+01	9.583E+01	8.754E+00	-0.518
TC-99M	140.51	*		-8.502E+12	7.379E+01	Half-Life	too short	
RH-101	127.23			-1.785E-02	3.727E-02	5.182E-02	4.401E-03	-0.345
	198.01	*		8.981E-03	3.243E-02	5.427E-02	4.451E-03	0.165
	325.23			6.249E-02	2.518E-01	3.698E-01	3.171E-02	0.169
RH-102	418.52			8.427E-02	3.030E-01	4.989E-01	4.239E-02	0.169
	475.06	*		2.294E-02	2.863E-02	4.866E-02	4.269E-03	0.471
	631.29			5.218E-03	4.995E-02	8.385E-02	7.481E-03	0.062
	697.49			-5.860E-02	8.124E-02	1.266E-01	1.135E-02	-0.463
	766.84			7.906E-02	1.367E-01	2.056E-01	1.874E-02	0.385
	1046.59			4.965E-02	1.258E-01	2.157E-01	1.897E-02	0.230
	1112.84			2.137E-01	2.639E-01	4.403E-01	3.738E-02	0.485
RU-103	497.08	*		1.086E-02	4.216E-02	6.876E-02	9.834E-03	0.158
	610.33			1.543E+01	3.307E+00	3.334E+00	5.620E-01	4.630
RH-106	511.85	+		1.102E+00	3.902E-01	4.786E-01	4.254E-02	2.302
	621.84	*		-1.043E-01	3.254E-01	5.285E-01	7.169E-02	-0.197
	1050.47			-6.126E-01	2.514E+00	4.129E+00	3.625E-01	-0.148
RU-106	511.85	+		1.102E+00	3.902E-01	4.786E-01	4.254E-02	2.302
	621.84	*		-1.043E-01	3.253E-01	5.285E-01	4.723E-02	-0.197
	1050.47			-6.126E-01	2.514E+00	4.129E+00	3.625E-01	-0.148
AG-108M	433.93	*		2.191E-03	3.350E-02	5.430E-02	4.847E-03	0.040
	614.37			-3.084E-03	4.313E-02	6.201E-02	5.751E-03	-0.050
	722.95			-1.891E-02	5.123E-02	7.016E-02	6.563E-03	-0.270
AG-110M	657.75	*		1.451E-02	4.302E-02	6.411E-02	5.841E-03	0.226
	677.61			-2.955E-01	3.274E-01	5.017E-01	4.585E-02	-0.589
	706.67			-5.804E-02	2.217E-01	3.587E-01	3.306E-02	-0.162
	763.93			2.968E-02	1.750E-01	2.752E-01	2.572E-02	0.108
	884.67			-1.635E-02	5.140E-02	8.083E-02	7.621E-03	-0.202
	937.48			2.136E-02	1.184E-01	1.947E-01	1.830E-02	0.110
	1384.27			-1.009E-01	1.860E-01	2.857E-01	2.433E-02	-0.353
IN-111	171.28			-5.054E-01	1.748E+00	2.723E+00	2.167E-01	-0.186
	245.39	*		-5.697E-01	1.989E+00	2.865E+00	2.427E-01	-0.199
IN-113M	391.69	*		-5.589E-02	4.695E-02	6.976E-02	5.997E-03	-0.801
SN-113	391.69	*		-5.589E-02	4.695E-02	6.976E-02	5.997E-03	-0.801
IN-114M	190.27	*		-1.000E-01	1.994E-01	2.889E-01	2.351E-02	-0.346

---- Non-Identified Nuclides ----

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CD-115	260.90			-2.047E+02	2.496E+02	3.965E+02	3.369E+01	-0.516
	492.35			-6.489E+01	7.556E+01	1.122E+02	9.910E+00	-0.578
	527.90	*		-1.837E+00	2.141E+01	3.583E+01	3.197E+00	-0.051
SN-117M	156.02			6.407E-01	3.035E+00	4.336E+00	3.493E-01	0.148
	158.56	*		8.701E-03	7.250E-02	1.030E-01	8.257E-03	0.084
SB-122	563.90	*		2.679E+00	3.747E+00	6.567E+00	5.887E-01	0.408
	692.80			4.740E+01	8.312E+01	1.429E+02	1.279E+01	0.332
I-123	159.00	*		5.354E+01	8.312E+01	Half-Life	too short	
	528.96			5.475E+02	8.312E+01	Half-Life	too short	
TE-123M	159.00	*		1.629E-02	3.296E-02	4.783E-02	3.859E-03	0.341
I-124	602.71	*		3.731E-01	1.096E+00	1.644E+00	1.473E-01	0.227
	722.78			-3.021E+00	7.708E+00	1.053E+01	9.508E-01	-0.287
	1325.50			5.833E+00	5.590E+01	9.309E+01	7.628E+00	0.063
	1376.25			6.359E+01	5.111E+01	9.376E+01	7.739E+00	0.678
	1509.49			-1.294E+01	2.412E+01	3.609E+01	3.017E+00	-0.358
	1691.02			2.454E+00	4.746E+00	8.498E+00	7.061E-01	0.289
SB-124	602.71			1.542E-02	4.529E-02	6.794E-02	6.088E-03	0.227
	645.85			-2.414E-02	5.137E-01	8.504E-01	7.988E-02	-0.028
	709.31			1.695E+00	2.921E+00	5.031E+00	4.526E-01	0.337
	713.82			3.327E-01	1.796E+00	3.004E+00	3.701E-01	0.111
	722.78			-1.810E-01	4.618E-01	6.307E-01	5.808E-02	-0.287
+	968.20			2.346E+01	4.730E+00	8.384E+00	7.579E-01	2.798
	1045.16			-3.469E-02	2.823E+00	4.659E+00	4.100E-01	-0.007
	1325.50			3.732E-01	3.577E+00	5.956E+00	4.881E-01	0.063
	1368.21			2.076E-01	1.645E+00	2.751E+00	3.641E-01	0.075
	1436.60			-1.991E+00	3.538E+00	5.259E+00	4.374E-01	-0.379
	1691.02	*		3.467E-02	6.706E-02	1.201E-01	1.040E-02	0.289
SB-125	427.89	*		1.195E-02	9.379E-02	1.528E-01	1.333E-02	0.078
+	463.38			8.341E-01	4.702E-01	5.928E-01	5.568E-02	1.407
	600.56			1.255E-01	1.805E-01	3.150E-01	3.016E-02	0.398
	635.90			-5.986E-02	2.542E-01	4.145E-01	3.974E-02	-0.144
TE-125M	109.28	*		6.248E-02	9.255E+00	1.496E+01	1.552E+00	0.004
I-126	388.63			3.946E-02	2.281E-01	3.749E-01	3.128E-02	0.105
	666.33	*		9.826E-02	2.530E-01	3.782E-01	3.353E-02	0.260
	753.82			6.902E-01	1.893E+00	3.194E+00	2.905E-01	0.216
SB-126	223.80			1.493E+00	4.624E+00	7.857E+00	6.585E-01	0.190
	278.60			1.985E+00	3.252E+00	4.924E+00	4.179E-01	0.403
+	296.50			1.617E+01	2.853E+00	4.274E+00	3.653E-01	3.783
	414.70			-3.965E-03	9.892E-02	1.394E-01	1.181E-02	-0.028
	415.30			-4.840E+00	8.119E+00	1.152E+01	9.764E-01	-0.420
	555.20			2.640E+00	4.373E+00	7.645E+00	6.849E-01	0.345
	573.80			-7.670E-01	1.188E+00	1.895E+00	1.700E-01	-0.405
	593.00			2.023E-01	1.029E+00	1.744E+00	1.564E-01	0.116
	656.30			3.457E+00	4.313E+00	6.743E+00	5.977E-01	0.513
	666.33			4.127E-02	1.063E-01	1.589E-01	1.408E-02	0.260
	675.00			-1.063E+00	2.363E+00	3.775E+00	3.357E-01	-0.282
	695.00			9.956E-02	9.329E-02	1.653E-01	1.480E-02	0.602
	697.00			-1.671E-01	3.154E-01	4.994E-01	4.476E-02	-0.335
	720.50	*		5.499E-02	1.872E-01	2.984E-01	2.694E-02	0.184

----- Non-Identified Nuclides -----

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SB-127		856.80		-1.122E-01	6.408E-01	8.805E-01	8.083E-02	-0.127
		989.30		-1.340E-01	1.449E+00	2.310E+00	2.076E-01	-0.058
		1034.80		-1.272E+00	1.057E+01	1.757E+01	1.553E+00	-0.072
		1213.00		4.122E+00	6.102E+00	1.061E+01	8.673E-01	0.388
		61.10		-1.157E+01	6.778E+01	9.961E+01	1.083E+01	-0.116
		252.40		-9.212E-01	6.312E+00	1.042E+01	4.398E+00	-0.088
		290.80		6.427E+00	3.573E+01	5.257E+01	6.191E+00	0.122
		411.60		1.347E+01	2.106E+01	3.139E+01	5.064E+00	0.429
		444.90		1.030E+01	1.431E+01	2.418E+01	3.181E+00	0.426
		473.00		-4.047E-02	2.557E+00	4.097E+00	5.554E-01	-0.010
		543.00		-5.900E+00	2.436E+01	4.022E+01	6.081E+00	-0.147
		603.60		-4.984E+00	2.007E+01	2.838E+01	3.788E+00	-0.176
		685.20	*	-2.097E+00	2.138E+00	3.233E+00	3.969E-01	-0.649
		698.50		-1.474E+01	2.328E+01	3.635E+01	5.996E+00	-0.405
XE-127		722.20		-2.401E+01	5.503E+01	7.473E+01	9.076E+00	-0.321
		783.80		5.282E+00	6.072E+00	1.053E+01	1.409E+00	0.502
		57.60		3.717E-01	4.338E+00	7.210E+00	5.226E-01	0.052
		145.22		6.226E-01	7.636E-01	1.245E+00	1.022E-01	0.500
		172.10		-8.514E-02	1.270E-01	1.938E-01	1.544E-02	-0.439
I-131		202.84	*	-2.565E-02	4.780E-02	7.597E-02	6.261E-03	-0.338
		374.96		-3.518E-02	1.995E-01	3.210E-01	2.705E-02	-0.110
		80.18		5.011E+00	6.313E+00	7.688E+00	6.628E-01	0.652
		284.30		-2.107E-01	1.905E+00	3.138E+00	2.817E-01	-0.067
TE-132		364.48	*	1.315E-01	1.456E-01	2.497E-01	2.240E-02	0.527
		636.97		2.831E-01	1.753E+00	2.953E+00	2.774E-01	0.096
		722.89		-3.936E+00	1.043E+01	1.428E+01	1.299E+00	-0.276
		49.72		-3.794E+00	1.937E+01	2.864E+01	3.139E+00	-0.132
BA-133		111.76		-2.821E+01	4.739E+01	7.453E+01	8.556E+00	-0.378
		116.30		-5.660E+00	4.365E+01	6.996E+01	8.015E+00	-0.081
		228.16	*	-2.840E-01	1.089E+00	1.803E+00	2.890E-01	-0.158
		53.15		5.407E-01	2.268E+00	3.799E+00	2.862E-01	0.142
I-133		79.62		6.322E-01	1.296E+00	1.767E+00	2.677E-01	0.358
		81.00		5.377E-02	1.125E-01	1.340E-01	2.129E-02	0.401
	+	276.40		6.467E-01	5.884E-01	6.707E-01	9.638E-02	0.964
		302.84		9.685E-02	1.584E-01	2.393E-01	3.171E-02	0.405
CS-134		356.01	*	-2.454E-02	5.220E-02	7.245E-02	9.515E-03	-0.339
		383.85		-3.642E-02	3.351E-01	5.416E-01	6.736E-02	-0.067
	+	510.53		1.309E+01	3.351E-01	Half-Life	too short	
		529.87	*	1.774E-02	3.351E-01	Half-Life	too short	
		706.58		-6.501E-01	3.351E-01	Half-Life	too short	
		856.28		-5.764E-01	3.351E-01	Half-Life	too short	
		875.33		-6.206E-01	3.351E-01	Half-Life	too short	
		1236.41		4.194E+00	3.351E-01	Half-Life	too short	
		1298.22		-5.835E-01	3.351E-01	Half-Life	too short	
		475.35		1.154E+00	1.880E+00	3.155E+00	2.768E-01	0.366
		563.23		1.926E-01	3.740E-01	6.477E-01	5.857E-02	0.297
		569.32		7.150E-02	2.007E-01	3.420E-01	3.105E-02	0.209
		604.70		-3.578E-02	4.101E-02	5.411E-02	4.858E-03	-0.661
	+	795.84	*	5.788E-02	7.266E-02	9.216E-02	8.491E-03	0.628

----- 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		801.93		-4.418E-01	4.837E-01	6.931E-01	6.380E-02	-0.637
		1038.57		1.624E+00	4.064E+00	7.050E+00	6.222E-01	0.230
		1167.94		1.547E+00	2.900E+00	5.016E+00	4.098E-01	0.308
		1365.15		7.003E-02	1.162E+00	1.925E+00	1.665E-01	0.036
		268.24	*	1.416E-01	1.754E-01	2.693E-01	2.656E-02	0.526
		288.45		-8.100E+12	1.754E-01	Half-Life	too short	
		417.63		7.475E+12	1.754E-01	Half-Life	too short	
		546.56		5.639E+12	1.754E-01	Half-Life	too short	
		836.80		1.205E+12	1.754E-01	Half-Life	too short	
		1038.76		2.034E+12	1.754E-01	Half-Life	too short	
		1124.00		1.806E+12	1.754E-01	Half-Life	too short	
		1131.51		-8.836E+11	1.754E-01	Half-Life	too short	
		1260.41	*	-1.295E+12	1.754E-01	Half-Life	too short	
		1457.56		1.178E+14	1.754E-01	Half-Life	too short	
		1678.03		-8.238E+11	1.754E-01	Half-Life	too short	
CS-136		1706.46		-4.167E+11	1.754E-01	Half-Life	too short	
		1791.20		1.565E+12	1.754E-01	Half-Life	too short	
		66.91		-2.986E-02	7.296E-01	1.072E+00	1.590E-01	-0.028
	+	86.29		6.457E+00	1.634E+00	2.088E+00	2.768E-01	3.093
	+	153.22		9.790E-01	1.011E+00	1.329E+00	1.219E-01	0.737
		163.89		-6.431E-01	1.241E+00	1.888E+00	1.710E-01	-0.341
		176.55		2.704E-01	4.053E-01	7.039E-01	6.015E-02	0.384
		273.65		1.096E-01	7.529E-01	8.094E-01	7.343E-02	0.135
		340.57		4.189E-01	1.907E-01	3.065E-01	2.701E-02	1.367
		818.51		7.955E-03	8.410E-02	1.386E-01	1.272E-02	0.057
		1048.07	*	2.853E-02	1.335E-01	2.256E-01	2.065E-02	0.126
		1235.34		-3.178E-01	7.731E-01	1.242E+00	1.433E-01	-0.256
		165.85	*	3.504E-03	3.034E-02	4.831E-02	3.821E-03	0.073
		162.64		-8.279E-02	8.688E-01	1.351E+00	1.148E-01	-0.061
		304.84		-5.991E-02	1.626E+00	2.347E+00	6.572E-01	-0.026
CE-139 BA-140		423.70		-4.865E-01	2.164E+00	3.432E+00	1.112E+00	-0.142
		537.32	*	9.844E-02	2.814E-01	4.819E-01	1.601E-01	0.204
	+	328.77		4.913E-01	5.525E-01	6.345E-01	5.748E-02	0.774
		432.53		-2.194E+00	2.447E+00	3.681E+00	3.312E-01	-0.596
		487.03		1.460E-01	1.722E-01	2.912E-01	2.719E-02	0.501
		751.79		-1.092E-01	2.140E+00	3.503E+00	3.493E-01	-0.031
		815.85		-1.845E-01	3.707E-01	5.765E-01	5.828E-02	-0.320
		867.82		4.857E-01	1.837E+00	2.889E+00	2.775E-01	0.168
		919.63		3.944E-01	3.344E+00	5.475E+00	6.058E-01	0.072
		925.24		-6.468E-01	1.417E+00	2.192E+00	2.112E-01	-0.295
		1596.49	*	1.138E-01	1.034E-01	1.924E-01	1.610E-02	0.591
		145.44	*	5.708E-02	6.809E-02	1.121E-01	9.384E-03	0.509
		57.37		-7.549E-04	6.809E-02	Half-Life	too short	
		231.56		-2.649E-03	6.809E-02	Half-Life	too short	
		293.26	*	1.832E-03	6.809E-02	Half-Life	too short	
CE-141 CE-143	+	350.59		8.789E-02	6.809E-02	Half-Life	too short	
		490.36		1.190E-03	6.809E-02	Half-Life	too short	
		664.57		3.125E-03	6.809E-02	Half-Life	too short	
		721.93		-9.711E-04	6.809E-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
CE-144		80.11		1.884E+00	2.413E+00	2.936E+00	2.508E-01	0.642
		133.54	*	6.182E-02	2.346E-01	3.390E-01	5.233E-02	0.182
PM-144		476.78		-5.417E-02	6.915E-02	1.036E-01	9.923E-03	-0.523
		618.01		1.776E-02	3.316E-02	5.604E-02	5.141E-03	0.317
		696.49	*	-3.019E-02	3.701E-02	5.723E-02	5.131E-03	-0.528
		778.57		7.164E-01	2.585E+00	3.961E+00	3.620E-01	0.181
PR-144		696.49	*	-2.048E+00	2.511E+00	3.883E+00	3.479E-01	-0.528
		1489.15		-4.893E-01	1.173E+01	1.902E+01	1.589E+00	-0.026
PM-146		453.90	*	5.224E-02	4.482E-02	7.750E-02	8.351E-03	0.674
		633.02		-8.261E-01	1.313E+00	2.004E+00	7.503E-01	-0.412
		735.90		2.354E-01	1.762E-01	2.917E-01	8.383E-02	0.807
		747.13		-8.119E-02	9.435E-02	1.423E-01	2.039E-02	-0.571
ND-147	+	91.11		1.320E+00	3.947E-01	5.874E-01	5.814E-02	2.247
		319.41		1.855E+00	3.994E+00	6.730E+00	5.773E-01	0.276
		439.89		-9.866E-02	7.069E+00	1.138E+01	9.811E-01	-0.009
		531.02	*	-1.838E-02	6.433E-01	1.081E+00	1.635E-01	-0.017
PM-149		285.90	*	2.070E+01	1.857E+02	3.091E+02	4.789E+01	0.067
EU-152		121.78		4.388E-02	7.546E-02	1.240E-01	1.229E-02	0.354
		244.69		3.799E-02	3.554E-01	5.260E-01	4.454E-02	0.072
		344.27	*	5.581E-02	1.095E-01	1.716E-01	1.556E-02	0.325
		443.98		-1.185E-01	9.687E-01	1.546E+00	1.335E-01	-0.077
		778.89		1.045E-01	2.990E-01	4.615E-01	4.216E-02	0.227
		867.32		3.452E-01	1.007E+00	1.540E+00	1.413E-01	0.224
	+	964.01		6.675E-01	4.093E-01	6.061E-01	5.485E-02	1.101
		1085.78		-2.586E-01	4.768E-01	7.629E-01	6.581E-02	-0.339
		1112.02		3.309E-01	3.607E-01	6.325E-01	5.374E-02	0.523
	+	1407.95		3.382E-01	2.520E-01	3.795E-01	3.146E-02	0.891
GD-153		69.67		8.009E-01	1.444E+00	2.175E+00	1.666E-01	0.368
	+	83.37		2.859E+01	1.360E+01	2.204E+01	1.959E+00	1.297
		97.43	*	1.015E-02	7.785E-02	1.136E-01	1.016E-02	0.089
		103.18		-8.209E-02	1.016E-01	1.589E-01	1.394E-02	-0.517
EU-154		123.07		-4.449E-03	5.383E-02	8.624E-02	9.771E-03	-0.052
		247.94		3.635E-02	3.657E-01	5.931E-01	6.743E-02	0.061
		591.81		3.188E-02	6.131E-01	1.029E+00	1.227E-01	0.031
		723.30		-5.215E-02	2.099E-01	2.915E-01	2.887E-02	-0.179
		756.87		1.174E+00	8.507E-01	1.523E+00	1.877E-01	0.771
		873.19		-2.386E-01	3.190E-01	4.789E-01	6.054E-02	-0.498
		996.32		-1.122E-01	4.147E-01	6.495E-01	1.165E-01	-0.173
		1004.76		-4.181E-02	2.485E-01	3.934E-01	4.674E-02	-0.106
		1274.45	*	-7.084E-02	1.413E-01	2.226E-01	2.447E-02	-0.318
EU-155		48.70		3.534E-01	1.459E+00	2.206E+00	1.786E-01	0.160
		60.01		1.824E+00	3.916E+00	5.920E+00	4.263E-01	0.308
	+	86.54		5.309E-01	1.247E-01	1.709E-01	1.594E-02	3.106
		105.31	*	1.263E-01	1.028E-01	1.734E-01	1.532E-02	0.728
TB-160	+	86.79		1.447E+00	3.394E-01	4.645E-01	4.309E-02	3.116
		197.04		1.372E-01	5.545E-01	9.451E-01	7.745E-02	0.145
		215.65		1.942E-01	7.922E-01	1.192E+00	9.929E-02	0.163
	+	298.57		1.816E-01	1.579E-01	2.027E-01	1.733E-02	0.896
		879.36	*	5.188E-02	1.461E-01	2.453E-01	2.250E-02	0.211

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		962.29		1.544E-01	6.676E-01	9.714E-01	8.794E-02	0.159
	+	966.15		4.680E-01	2.870E-01	5.193E-01	4.697E-02	0.901
		1177.93		-1.541E-01	4.203E-01	6.781E-01	5.521E-02	-0.227
		1271.85		-3.652E-01	8.589E-01	1.366E+00	1.120E-01	-0.267
		80.57		8.145E-02	3.186E-01	3.745E-01	3.216E-02	0.218
		184.41		1.024E-01	4.220E-02	6.903E-02	5.580E-03	1.484
		280.46		-2.397E-04	9.679E-02	1.409E-01	1.197E-02	-0.002
		410.95		5.177E-01	2.871E-01	4.649E-01	3.928E-02	1.114
TM-171		711.68	*	-2.085E-02	6.498E-02	1.045E-01	9.412E-03	-0.199
		752.31		-7.072E-02	3.175E-01	5.131E-01	4.665E-02	-0.138
		810.29		-3.120E-02	6.344E-02	9.912E-02	9.087E-03	-0.315
		51.35		-1.411E+01	1.935E+01	2.975E+01	2.298E+00	-0.474
		52.39		-2.091E+00	9.724E+00	1.604E+01	1.220E+00	-0.130
		59.40		1.090E+01	2.073E+01	3.144E+01	2.261E+00	0.347
LU-176		66.72	*	-1.119E-01	2.349E+01	3.457E+01	2.586E+00	-0.003
	+	88.36		1.045E+00	2.449E-01	3.465E-01	3.256E-02	3.015
		201.83		-2.596E-02	2.729E-02	4.403E-02	3.625E-03	-0.590
		306.84	*	-1.286E-02	2.529E-02	4.048E-02	3.467E-03	-0.318
LU-177		401.10		-5.688E+00	7.354E+00	1.132E+01	9.493E-01	-0.502
		112.95		-4.611E-01	2.036E+00	3.256E+00	2.810E-01	-0.142
	+	208.36	*	7.324E+00	2.580E+00	2.629E+00	2.178E-01	2.785
LU-177M		52.97		5.617E-01	1.022E+00	1.730E+00	1.307E-01	0.325
		54.07		4.884E-01	5.531E-01	9.446E-01	7.044E-02	0.517
		61.30		-3.117E-02	1.195E+00	1.767E+00	1.279E-01	-0.018
		121.62		2.340E-01	3.906E-01	6.427E-01	5.523E-02	0.364
		147.16		-4.312E-01	6.975E-01	1.081E+00	8.844E-02	-0.399
		171.86		-3.025E-01	4.963E-01	7.603E-01	6.055E-02	-0.398
		218.09		-3.347E-02	8.217E-01	1.378E+00	1.150E-01	-0.024
		268.79		1.647E+00	9.301E-01	1.495E+00	1.271E-01	1.102
		319.02		1.211E-01	2.731E-01	4.597E-01	3.942E-02	0.264
		367.43		-1.886E-01	9.884E-01	1.593E+00	1.349E-01	-0.118
HF-181		413.65	*	-1.342E-02	2.029E-01	2.851E-01	2.414E-02	-0.047
		56.28		-4.943E-01	6.695E-01	1.080E+00	7.899E-02	-0.457
		57.53		2.407E-02	3.623E-01	6.017E-01	4.363E-02	0.040
		65.20		9.793E-02	8.234E-01	1.220E+00	9.024E-02	0.080
		133.02		2.214E-02	7.764E-02	1.124E-01	9.431E-03	0.197
		136.25		-1.326E-01	4.773E-01	7.540E-01	6.290E-02	-0.176
		345.85		-3.019E-01	2.226E-01	3.185E-01	2.721E-02	-0.948
		482.03	*	1.594E-02	4.389E-02	7.230E-02	6.361E-03	0.220
W-181		56.28		-1.884E-01	2.560E-01	4.132E-01	3.021E-02	-0.456
		57.53		9.131E-03	1.386E-01	2.302E-01	1.670E-02	0.040
		65.20	*	3.718E-02	3.126E-01	4.630E-01	3.426E-02	0.080
TA-182		67.75		-7.061E-02	9.831E-02	1.400E-01	1.055E-02	-0.504
		100.10		1.269E-01	1.673E-01	2.789E-01	2.469E-02	0.455
		152.43		1.143E-01	4.205E-01	6.032E-01	4.890E-02	0.190
		222.10		1.462E-01	3.517E-01	6.001E-01	5.023E-02	0.244
		1001.68		1.909E+00	2.439E+00	4.183E+00	3.744E-01	0.456
	+	1121.28		5.782E-01	2.542E-01	4.090E-01	3.454E-02	1.414
		1189.05		2.987E-02	3.589E-01	6.002E-01	4.894E-02	0.050

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183	1221.42	*		-3.586E-03	2.206E-01	3.653E-01	2.988E-02	-0.010
	1230.97			1.390E-01	5.330E-01	9.005E-01	7.370E-02	0.154
	57.98			-3.528E-02	1.429E-01	2.347E-01	1.698E-02	-0.150
	59.32			5.198E-02	8.650E-02	1.316E-01	9.464E-03	0.395
	67.20			-4.237E-02	1.725E-01	2.510E-01	1.884E-02	-0.169
RE-184	162.32	*		-7.020E-04	1.155E-01	1.805E-01	1.437E-02	-0.004
	208.81	+		5.356E+00	1.887E+00	1.950E+00	1.616E-01	2.746
	291.72			6.479E-01	1.041E+00	1.580E+00	1.348E-01	0.410
	57.98			-1.284E-01	5.198E-01	8.539E-01	6.177E-02	-0.150
	59.32			1.890E-01	3.144E-01	4.783E-01	3.440E-02	0.395
OS-185	67.20			-1.541E-01	6.272E-01	9.129E-01	6.853E-02	-0.169
	161.27			-3.380E-01	3.683E-01	5.575E-01	4.448E-02	-0.606
	216.55			-1.374E-01	2.735E-01	4.147E-01	3.458E-02	-0.331
	252.85	*		-2.193E-02	2.264E-01	3.755E-01	3.187E-02	-0.058
	318.01			-1.025E-01	4.703E-01	7.642E-01	6.553E-02	-0.134
	792.07			-2.530E-01	1.275E+00	1.766E+00	1.616E-01	-0.143
	903.28			-3.381E-01	1.103E+00	1.737E+00	1.590E-01	-0.195
	920.93			-3.775E-02	4.869E-01	7.824E-01	7.143E-02	-0.048
	59.72			2.229E-01	2.308E-01	3.561E-01	2.562E-02	0.626
	61.14			-1.867E-02	1.318E-01	1.939E-01	1.403E-02	-0.096
	69.30			1.090E-01	2.600E-01	3.897E-01	2.975E-02	0.280
	592.07			1.037E+00	2.486E+00	4.282E+00	3.839E-01	0.242
	646.12	*		-1.045E-02	4.318E-02	7.035E-02	6.255E-03	-0.149
	717.42			5.704E-01	9.886E-01	1.698E+00	1.532E-01	0.336
	874.81			-4.176E-01	6.188E-01	9.369E-01	8.594E-02	-0.446
W-188	880.27			3.525E-01	8.172E-01	1.381E+00	1.266E-01	0.255
	63.58	+		1.089E+02	5.800E+01	7.543E+01	5.525E+00	1.444
	227.08			-4.427E-01	1.280E+01	2.142E+01	1.799E+00	-0.021
IR-192	290.67	*		1.268E+00	8.483E+00	1.246E+01	1.062E+00	0.102
	295.96	+		1.117E+00	1.975E-01	3.042E-01	2.618E-02	3.674
	308.46			1.095E-01	9.596E-02	1.675E-01	1.442E-02	0.654
	316.51	*		-1.315E-02	3.569E-02	5.746E-02	4.939E-03	-0.229
	468.07			-3.751E-03	7.608E-02	1.060E-01	9.915E-03	-0.035
AU-195	604.41			-5.067E-01	5.664E-01	7.420E-01	9.827E-02	-0.683
	612.46			2.333E+00	9.547E-01	1.615E+00	1.646E-01	1.444
	65.12			3.838E-02	1.447E-01	2.157E-01	1.595E-02	0.178
	66.83			1.988E-03	7.828E-02	1.154E-01	8.635E-03	0.017
	75.70	+		1.239E+00	2.402E-01	4.076E-01	3.313E-02	3.038
TL-200	98.88	*		1.433E-01	2.195E-01	3.486E-01	3.101E-02	0.411
	129.76	+		2.643E+00	3.475E+00	5.120E+00	4.325E-01	0.516
	367.94	*		-1.308E-05	3.475E+00	Half-Life too short		
TL-201	579.30			-2.691E-03	3.475E+00	Half-Life too short		
	828.27			7.750E-03	3.475E+00	Half-Life too short		
	1205.75			-6.272E-03	3.475E+00	Half-Life too short		
	68.90			-2.512E+00	6.401E+00	9.901E+00	7.534E-01	-0.254
	70.82			2.332E+00	3.927E+00	5.918E+00	4.580E-01	0.394
	80.30			7.684E+00	9.417E+00	1.148E+01	9.829E-01	0.669
	135.34			-3.000E+01	4.242E+01	6.566E+01	5.486E+00	-0.457
	167.43	*		9.305E+00	1.159E+01	1.901E+01	1.506E+00	0.490

---- 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		-1.548E-01	3.945E-01	6.102E-01	4.643E-02	-0.254
		70.82		1.433E-01	2.414E-01	3.637E-01	2.815E-02	0.394
		80.30		4.724E-01	5.789E-01	7.058E-01	6.043E-02	0.669
		439.56	*	2.892E-03	8.386E-02	1.355E-01	1.167E-02	0.021
HG-203		70.83		5.707E-01	9.558E-01	1.438E+00	1.878E-01	0.397
		72.87		1.132E+00	6.132E-01	9.392E-01	1.197E-01	1.205
		82.60		1.202E+00	1.077E+00	1.632E+00	2.262E-01	0.737
		279.20	*	1.991E-02	4.873E-02	7.291E-02	6.369E-03	0.273
BI-207		72.80		2.937E-01	1.701E-01	2.642E-01	2.084E-02	1.112
	+	74.97		6.814E-01	1.321E-01	2.000E-01	1.613E-02	3.407
	+	84.90		3.674E-01	1.748E-01	2.825E-01	2.558E-02	1.301
		569.67		1.193E-02	3.130E-02	5.341E-02	4.790E-03	0.223
		1063.62	*	-3.253E-02	5.142E-02	8.082E-02	7.051E-03	-0.402
		1770.23		4.499E-01	5.148E-01	8.927E-01	7.334E-02	0.504
TL-207		81.07		1.186E-01	2.478E-01	2.957E-01	2.555E-02	0.401
	+	83.78		2.422E-01	1.152E-01	1.885E-01	1.683E-02	1.285
		94.90		5.460E-01	2.344E-01	3.673E-01	3.321E-02	1.487
		122.32		-1.688E-02	1.809E+00	2.907E+00	2.681E-01	-0.006
		144.24		4.805E-02	7.261E-01	1.152E+00	1.070E-01	0.042
	+	154.21		5.243E-01	5.413E-01	7.146E-01	6.425E-02	0.734
	+	269.46		4.927E-01	3.309E-01	3.626E-01	3.147E-02	1.359
		323.87	*	-1.869E-01	7.831E-01	1.107E+00	1.957E-01	-0.169
	+	338.28		8.467E+00	2.072E+00	2.730E+00	3.350E-01	3.102
		445.03		1.591E+00	2.236E+00	3.779E+00	4.573E-01	0.421
PO-209		260.50		-4.687E+00	9.253E+00	1.498E+01	1.273E+00	-0.313
		262.80		-1.081E+01	2.540E+01	4.127E+01	3.507E+00	-0.262
		896.60	*	-2.803E+00	8.354E+00	1.302E+01	1.192E+00	-0.215
PB-211		404.84	*	6.217E-01	1.217E+00	1.708E+00	1.070E+00	0.364
		427.08		-2.764E-01	2.089E+00	3.330E+00	2.069E+00	-0.083
		831.96		-6.916E-01	1.373E+00	2.028E+00	1.272E+00	-0.341
BI-212	+	727.18	*	9.368E-01	5.138E-01	6.742E-01	6.994E-02	1.389
		785.46		2.140E+00	2.018E+00	3.546E+00	3.242E-01	0.604
		1620.62		1.424E+00	1.489E+00	2.711E+00	2.266E-01	0.525
PO-215		81.07		1.186E-01	2.478E-01	2.957E-01	2.555E-02	0.401
	+	83.78		2.422E-01	1.152E-01	1.885E-01	1.683E-02	1.285
		94.90		5.460E-01	2.344E-01	3.673E-01	3.321E-02	1.487
		122.32		-1.688E-02	1.809E+00	2.907E+00	2.681E-01	-0.006
		144.24		4.805E-02	7.261E-01	1.152E+00	1.070E-01	0.042
	+	154.21		5.243E-01	5.413E-01	7.146E-01	6.425E-02	0.734
	+	269.46		4.927E-01	3.309E-01	3.626E-01	3.147E-02	1.359
		323.87	*	-1.869E-01	7.831E-01	1.107E+00	1.957E-01	-0.169
	+	338.28		8.467E+00	2.072E+00	2.730E+00	3.350E-01	3.102
		445.03		1.591E+00	2.236E+00	3.779E+00	4.573E-01	0.421
RN-219	+	271.23		6.321E-01	4.259E-01	4.711E-01	4.810E-02	1.342
		401.81	*	-3.481E-01	4.588E-01	7.039E-01	1.048E-01	-0.494
RN-220		549.76	*	-1.946E+01	2.633E+01	4.179E+01	3.742E+00	-0.466
RA-223		81.07		1.186E-01	2.478E-01	2.957E-01	2.555E-02	0.401
	+	83.78		2.422E-01	1.152E-01	1.885E-01	1.683E-02	1.285
		94.90		5.460E-01	2.344E-01	3.673E-01	3.321E-02	1.487

----- 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		-1.688E-02	1.809E+00	2.907E+00	2.681E-01	-0.006
		144.24		4.805E-02	7.261E-01	1.152E+00	1.070E-01	0.042
	+	154.21		5.243E-01	5.413E-01	7.146E-01	6.425E-02	0.734
	+	269.46		4.927E-01	3.309E-01	3.626E-01	3.147E-02	1.359
		323.87	*	-1.869E-01	7.831E-01	1.107E+00	1.957E-01	-0.169
	+	338.28		8.467E+00	2.072E+00	2.730E+00	3.350E-01	3.102
		445.03		1.591E+00	2.236E+00	3.779E+00	4.573E-01	0.421
		79.80		8.911E-01	1.654E+00	2.251E+00	4.831E-01	0.396
		236.00		3.504E-01	2.720E-01	4.234E-01	5.131E-02	0.828
		256.20	*	-3.526E-02	3.710E-01	6.150E-01	9.395E-02	-0.057
		286.10		6.556E-01	1.534E+00	2.591E+00	3.403E-01	0.253
	+	299.80		2.264E+00	1.999E+00	2.616E+00	4.567E-01	0.865
TH-227		304.40		1.145E-01	2.121E+00	3.083E+00	5.675E-01	0.037
		334.20		2.488E-01	3.170E+00	3.868E+00	7.500E-01	0.064
		79.80		8.911E-01	1.654E+00	2.251E+00	4.893E-01	0.396
	+	94.00		1.618E+01	4.435E+00	3.920E+00	8.609E-01	4.129
		236.00		3.504E-01	2.713E-01	4.234E-01	4.631E-02	0.828
		256.20	*	-3.526E-02	3.711E-01	6.150E-01	1.107E-01	-0.057
		286.10		6.556E-01	1.667E+00	2.591E+00	2.601E+00	0.253
	+	299.80		2.264E+00	1.999E+00	2.616E+00	4.567E-01	0.865
		304.40		1.145E-01	2.121E+00	3.083E+00	5.675E-01	0.037
		334.20		2.488E-01	3.170E+00	3.868E+00	7.500E-01	0.064
	+	85.43		3.626E-01	1.725E-01	2.965E-01	2.703E-02	1.223
	+	88.47		6.013E-01	1.410E-01	1.992E-01	1.871E-02	3.018
TH-229		100.00		1.734E-01	1.701E-01	2.859E-01	2.532E-02	0.606
		193.63	*	-2.535E-02	4.958E-01	8.360E-01	6.826E-02	-0.030
	+	210.97		4.103E+00	1.446E+00	1.391E+00	1.155E-01	2.950
	PA-231	283.67	*	4.380E-01	1.636E+00	2.655E+00	4.014E-01	0.165
	+	301.29		9.057E-01	7.915E-01	1.045E+00	1.274E-01	0.867
	TH-231	81.07		1.186E-01	2.478E-01	2.957E-01	2.555E-02	0.401
	+	83.78		2.422E-01	1.152E-01	1.885E-01	1.683E-02	1.285
		94.90		5.460E-01	2.344E-01	3.673E-01	3.321E-02	1.487
		122.32		-1.688E-02	1.809E+00	2.907E+00	2.681E-01	-0.006
		144.24		4.805E-02	7.261E-01	1.152E+00	1.070E-01	0.042
	+	154.21		5.243E-01	5.413E-01	7.146E-01	6.425E-02	0.734
	+	269.46		4.927E-01	3.309E-01	3.626E-01	3.147E-02	1.359
U-231		323.87	*	-1.869E-01	7.831E-01	1.107E+00	1.957E-01	-0.169
	+	338.28		8.467E+00	2.072E+00	2.730E+00	3.350E-01	3.102
		445.03		1.591E+00	2.236E+00	3.779E+00	4.573E-01	0.421
	+	84.21		1.502E+01	7.145E+00	1.165E+01	1.046E+00	1.289
	+	92.29		2.301E+01	4.312E+00	6.047E+00	5.542E-01	3.806
		95.87	*	-1.234E+00	1.574E+00	2.167E+00	1.951E-01	-0.569
		108.00		-2.620E+00	2.905E+00	4.513E+00	3.920E-01	-0.581
	PA-233	75.28		1.988E+01	4.608E+00	6.076E+00	9.148E-01	3.272
	+	86.59		8.622E+00	2.980E+00	2.774E+00	7.499E-01	3.108
	+	300.12		6.313E-01	5.542E-01	7.302E-01	1.083E-01	0.865
		311.98	*	-3.908E-02	6.257E-02	9.908E-02	8.738E-03	-0.394
		340.50		2.031E+00	9.493E-01	1.353E+00	3.223E-01	1.501
		398.62		-1.223E+00	2.311E+00	3.587E+00	9.524E-01	-0.341

---- 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		-1.321E+00	1.841E+00	2.686E+00	5.773E-01	-0.492
		63.00		3.089E+00	1.693E+00	2.163E+00	3.202E-01	1.429
		94.67		6.467E-01	1.867E-01	2.834E-01	3.601E-02	2.282
		98.44		4.678E-02	9.685E-02	1.387E-01	7.741E-02	0.337
		99.86		4.524E-01	4.311E-01	7.251E-01	6.427E-02	0.624
		111.00		1.265E-01	1.803E-01	2.983E-01	3.612E-02	0.424
		131.20		-7.546E-04	1.231E-01	1.755E-01	1.478E-02	-0.004
		152.70		1.254E-01	4.045E-01	5.806E-01	9.749E-02	0.216
		186.00		6.518E+00	2.965E+00	2.733E+00	8.494E-01	2.385
		226.40		1.323E-01	3.993E-01	6.782E-01	8.855E-02	0.195
		227.20		4.100E-03	4.205E-01	7.051E-01	5.922E-02	0.006
		248.90		2.071E-01	8.073E-01	1.361E+00	3.043E-01	0.152
		293.70		4.699E+00	1.233E+00	1.692E+00	2.921E-01	2.776
		369.80		1.495E-02	8.937E-01	1.458E+00	3.167E-01	0.010
		568.70		5.304E-02	1.041E+00	1.738E+00	1.559E-01	0.031
		569.50		1.024E-01	2.774E-01	4.731E-01	4.242E-02	0.216
		574.00		-8.614E-01	1.509E+00	2.420E+00	2.171E-01	-0.356
		699.00		-2.333E-01	7.350E-01	1.183E+00	2.275E-01	-0.197
		706.10		2.954E-01	1.064E+00	1.781E+00	7.956E-01	0.166
		733.00		-5.585E-01	5.028E-01	6.033E-01	1.349E-01	-0.926
		742.81		4.003E-02	1.398E+00	2.305E+00	1.551E+00	0.017
		796.30		1.123E+00	1.438E+00	1.777E+00	4.839E-01	0.632
		805.60		7.891E-01	1.135E+00	1.916E+00	5.902E-01	0.412
		819.60		7.537E-01	1.251E+00	2.103E+00	8.024E-01	0.358
		826.30		3.571E-02	8.794E-01	1.441E+00	6.461E-01	0.025
		831.60		-2.728E-01	6.908E-01	1.082E+00	3.246E-01	-0.252
		876.40		-3.195E-02	8.651E-01	1.400E+00	1.440E+00	-0.023
		880.51		1.669E-01	2.920E-01	4.991E-01	4.577E-02	0.334
		883.24		-1.747E-01	3.262E-01	4.668E-01	3.142E-01	-0.374
		899.00		-5.139E-01	9.070E-01	1.344E+00	5.889E-01	-0.382
		925.00		-5.685E-01	1.319E+00	2.047E+00	1.867E-01	-0.278
		926.50		-2.880E-02	1.946E-01	3.104E-01	7.901E-02	-0.093
		946.00	*	7.906E-02	3.125E-01	5.168E-01	9.811E-02	0.153
		949.00		2.157E-02	4.986E-01	8.085E-01	7.342E-02	0.027
		980.50		-1.363E-01	8.149E-01	1.292E+00	1.164E-01	-0.106
		1394.10		7.395E-02	1.283E+00	1.827E+00	1.188E+00	0.040
PA-234M	+	766.42		7.385E+00	1.439E+01	2.085E+01	1.060E+01	0.354
		1001.03	*	5.226E+00	5.351E+00	9.307E+00	9.543E-01	0.562
U-235	+	89.95		4.572E+00	1.918E+00	1.829E+00	5.680E-01	2.499
		93.35		5.035E+00	1.641E+00	1.321E+00	3.723E-01	3.811
		105.00		1.224E+00	1.064E+00	1.696E+00	5.068E-01	0.722
		143.76	*	-1.957E-02	2.231E-01	3.517E-01	6.091E-02	-0.056
		163.35		-1.628E-01	4.847E-01	7.436E-01	1.397E-01	-0.219
NP-236	+	185.71		2.414E-01	8.252E-02	1.012E-01	8.192E-03	2.386
		205.31		5.253E-01	5.376E-01	8.314E-01	1.573E-01	0.632
		94.67		4.939E-01	1.349E-01	2.153E-01	1.949E-02	2.294
		98.44		3.534E-02	7.057E-02	1.048E-01	9.336E-03	0.337
		111.00		9.570E-02	1.362E-01	2.256E-01	1.951E-02	0.424
		160.31	*	-6.919E-03	8.305E-02	1.313E-01	1.049E-02	-0.053

---- 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		1.544E-01	1.439E-01	2.422E-01	2.149E-02	0.637
		117.00	*	-2.265E-02	1.891E-01	3.031E-01	2.608E-02	-0.075
	+	209.75		4.134E+00	1.456E+00	1.510E+00	1.252E-01	2.737
		228.18		-5.806E-02	2.225E-01	3.685E-01	3.097E-02	-0.158
	+	277.60		3.155E-01	2.847E-01	3.212E-01	2.727E-02	0.982
AM-241		334.30		1.631E-01	1.797E+00	2.196E+00	1.881E-01	0.074
		59.54	*	1.060E-01	1.192E-01	1.833E-01	1.453E-02	0.578
CM-243		99.55		1.589E-01	1.481E-01	2.493E-01	2.211E-02	0.637
		103.76	*	-3.626E-02	9.330E-02	1.487E-01	1.303E-02	-0.244
		117.00		-2.331E-02	1.945E-01	3.119E-01	2.683E-02	-0.075
	+	209.75		4.076E+00	1.436E+00	1.489E+00	1.235E-01	2.737
		228.18		-5.867E-02	2.249E-01	3.724E-01	3.130E-02	-0.158
AM-246	+	277.60		3.181E-01	2.870E-01	3.239E-01	2.750E-02	0.982
		798.80		1.386E-02	1.624E-01	2.324E-01	2.128E-02	0.060
		1036.00		5.646E-02	3.148E-01	5.366E-01	4.741E-02	0.105
		1062.04		6.193E-02	2.227E-01	3.827E-01	3.342E-02	0.162
		1078.86	*	1.496E-01	1.652E-01	2.948E-01	2.552E-02	0.508
CM-247	+	278.00		1.308E+00	1.181E+00	1.317E+00	1.118E-01	0.993
		287.40		-7.827E-01	1.254E+00	2.004E+00	1.708E-01	-0.390
		402.60	*	3.719E-03	4.023E-02	6.561E-02	5.508E-03	0.057
CF-249		252.85		-8.153E-02	8.419E-01	1.396E+00	1.185E-01	-0.058
		333.44		1.756E-01	2.553E-01	2.904E-01	2.488E-02	0.605
		387.95	*	2.582E-02	3.894E-02	6.598E-02	5.507E-03	0.391
CF-251		176.60	*	8.060E-02	1.243E-01	2.157E-01	1.728E-02	0.374
		227.00		3.034E-03	3.765E-01	6.313E-01	5.301E-02	0.005
		285.00		4.909E-01	1.813E+00	3.041E+00	2.588E-01	0.161

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]G246440011      *
* Acquisition date   : 19-FEB-2010 19:50:58 Detector SN#      :             *
* Detector ID        : GAM07                      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 02:00:01.44             Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID            *
* Sample ID          : G246440011             Analyst initials: MXR1          *
* Batch Number       : 950788                 Sample Quantity : 1.3176E+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)	
K-40	3.728E+01	3.728E+00	5.998E-01	0.000E+00
CD-109	4.496E+00	1.033E+00	1.122E+00	0.000E+00
SN-126	4.404E-01	1.012E-01	1.101E-01	0.000E+00
BA-137M	8.135E-02	5.867E-02	6.746E-02	0.000E+00
CS-137	8.599E-02	6.203E-02	7.131E-02	0.000E+00
RE-188	2.320E-01	2.345E-01	2.985E-01	0.000E+00
TL-208	5.935E-01	8.884E-02	6.183E-02	0.000E+00
BI-210	1.443E+00	2.598E+00	3.038E+00	0.000E+00
PB-210	1.443E+00	2.598E+00	3.038E+00	0.000E+00
PO-210	1.443E+00	2.598E+00	3.038E+00	0.000E+00
BI-211	3.639E+00	5.416E-01	3.748E-01	0.000E+00
PB-212	1.852E+00	2.101E-01	9.753E-02	0.000E+00
PO-212	1.852E+00	2.101E-01	9.753E-02	0.000E+00
BI-214	1.375E+00	2.262E-01	1.083E-01	0.000E+00
PB-214	1.266E+00	1.992E-01	1.335E-01	0.000E+00
PO-214	1.266E+00	1.992E-01	1.335E-01	0.000E+00
PO-216	1.852E+00	2.101E-01	9.753E-02	0.000E+00
PO-218	1.266E+00	1.992E-01	1.335E-01	0.000E+00
RA-224	4.593E+00	1.324E+00	1.110E+00	0.000E+00
RA-226	1.375E+00	2.262E-01	1.083E-01	0.000E+00
AC-228	1.644E+00	3.436E-01	2.485E-01	0.000E+00
RA-228	1.644E+00	3.436E-01	2.485E-01	0.000E+00
TH-228	1.884E+00	2.137E-01	9.923E-02	0.000E+00
TH-230	1.375E+00	2.262E-01	1.083E-01	0.000E+00
TH-232	1.644E+00	3.436E-01	2.485E-01	0.000E+00
TH-234	2.650E+00	1.443E+00	1.622E+00	0.000E+00
U-234	1.375E+00	2.262E-01	1.083E-01	0.000E+00
NP-237	1.293E+00	3.959E-01	3.253E-01	0.000E+00
U-238	2.650E+00	1.443E+00	1.622E+00	0.000E+00
AM-243	3.795E-01	7.213E-02	7.775E-02	0.000E+00
ANH-511	2.196E-01	7.624E-02	4.676E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.204E-01	3.219E-01	5.213E-01	0.000E+00	NOT IDENT.
NA-22	-1.805E-02	4.906E-02	8.026E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.638E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-6.140E-03	2.491E-02	4.150E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.252E-02	7.447E-02	0.000E+00	FAIL ABUN
SC-46	-5.709E-03	4.289E-02	7.089E-02	0.000E+00	FAIL ABUN
V-48	-6.424E-02	8.249E-02	1.257E-01	0.000E+00	NOT IDENT.
CR-51	2.817E-01	4.063E-01	7.248E-01	0.000E+00	NOT IDENT.
MN-52	1.728E-01	2.945E-01	5.315E-01	0.000E+00	NOT IDENT.
MN-54	1.377E-02	3.817E-02	6.612E-02	0.000E+00	NOT IDENT.
CO-56	-7.050E-03	3.954E-02	6.533E-02	0.000E+00	NOT IDENT.
CO-57	3.752E-03	2.579E-02	4.444E-02	0.000E+00	NOT IDENT.
CO-58	6.984E-03	4.045E-02	6.927E-02	0.000E+00	NOT IDENT.
FE-59	-1.601E-02	1.130E-01	1.919E-01	0.000E+00	NOT IDENT.
CO-60	-2.121E-02	4.362E-02	6.995E-02	0.000E+00	NOT IDENT.
ZN-65	-7.637E-02	1.178E-01	1.609E-01	0.000E+00	NOT IDENT.
GE-68	5.716E-01	1.337E+00	2.378E+00	0.000E+00	NOT IDENT.
AS-73	2.034E-01	5.231E-01	9.501E-01	0.000E+00	NOT IDENT.
AS-74	-9.542E-03	9.779E-02	1.683E-01	0.000E+00	NOT IDENT.
SE-75	2.319E-02	4.597E-02	7.321E-02	0.000E+00	NOT IDENT.
BR-77	-1.396E+00	1.829E+01	3.189E+01	0.000E+00	FAIL ABUN
SR-82	-1.984E-01	4.591E-01	6.357E-01	0.000E+00	NOT IDENT.
RB-83	1.013E-04	6.500E-02	1.139E-01	0.000E+00	NOT IDENT.
RB-84	-1.525E-02	7.469E-02	1.226E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.049E+00	1.402E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.224E-02	7.360E-02	0.000E+00	NOT IDENT.
RB-86	-3.600E-01	9.159E-01	1.522E+00	0.000E+00	NOT IDENT.
Y-88	2.559E-02	3.358E-02	6.422E-02	0.000E+00	NOT IDENT.
ZR-88	2.543E-03	3.176E-02	5.417E-02	0.000E+00	NOT IDENT.
Y-91	-1.366E+01	2.144E+01	3.461E+01	0.000E+00	NOT IDENT.
NB-94	1.821E-02	3.264E-02	5.809E-02	0.000E+00	NOT IDENT.
NB-95	3.115E-02	4.871E-02	7.652E-02	0.000E+00	NOT IDENT.
NB-95M	1.004E-01	1.428E-01	2.298E-01	0.000E+00	NOT IDENT.
ZR-95	1.217E-01	7.951E-02	1.485E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.034E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.846E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.786E+00	2.194E+01	3.756E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.764E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.981E-03	3.178E-02	5.620E-02	0.000E+00	NOT IDENT.
RH-102	2.294E-02	2.806E-02	4.967E-02	0.000E+00	NOT IDENT.
RU-103	1.086E-02	4.132E-02	7.013E-02	0.000E+00	FAIL ABUN
RH-106	-1.043E-01	3.189E-01	5.370E-01	0.000E+00	FAIL ABUN
RU-106	-1.043E-01	3.188E-01	5.370E-01	0.000E+00	FAIL ABUN
AG-108M	2.191E-03	3.283E-02	5.551E-02	0.000E+00	NOT IDENT.
AG-110M	1.451E-02	4.216E-02	6.508E-02	0.000E+00	NOT IDENT.
IN-111	-5.697E-01	1.949E+00	2.957E+00	0.000E+00	NOT IDENT.
IN-113M	-5.589E-02	4.601E-02	7.144E-02	0.000E+00	NOT IDENT.
SN-113	-5.589E-02	4.601E-02	7.144E-02	0.000E+00	NOT IDENT.
IN-114M	-1.000E-01	1.954E-01	2.994E-01	0.000E+00	NOT IDENT.
CD-115	-1.837E+00	2.098E+01	3.651E+01	0.000E+00	NOT IDENT.
SN-117M	8.701E-03	7.105E-02	1.070E-01	0.000E+00	NOT IDENT.
SB-122	2.679E+00	3.672E+00	6.683E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.062E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.629E-02	3.230E-02	4.972E-02	0.000E+00	NOT IDENT.
I-124	3.731E-01	1.074E+00	1.671E+00	0.000E+00	NOT IDENT.
SB-124	3.467E-02	6.572E-02	1.199E-01	0.000E+00	FAIL ABUN
SB-125	1.195E-02	9.191E-02	1.563E-01	0.000E+00	FAIL ABUN
TE-125M	6.248E-02	9.070E+00	1.565E+01	0.000E+00	NOT IDENT.
I-126	9.826E-02	2.480E-01	3.839E-01	0.000E+00	NOT IDENT.
SB-126	5.499E-02	1.834E-01	3.025E-01	0.000E+00	FAIL ABUN
SB-127	-2.097E+00	2.095E+00	3.280E+00	0.000E+00	NOT IDENT.
XE-127	-2.565E-02	4.685E-02	7.865E-02	0.000E+00	NOT IDENT.
I-131	1.315E-01	1.427E-01	2.560E-01	0.000E+00	NOT IDENT.
TE-132	-2.840E-01	1.068E+00	1.863E+00	0.000E+00	NOT IDENT.
BA-133	-2.454E-02	5.115E-02	7.432E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	3.437E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.788E-02	7.121E-02	9.324E-02	0.000E+00	FAIL ABUN
CS-135	1.416E-01	1.719E-01	2.776E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.722E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.853E-02	1.308E-01	2.272E-01	0.000E+00	FAIL ABUN
CE-139	3.504E-03	2.973E-02	5.018E-02	0.000E+00	NOT IDENT.
BA-140	9.844E-02	2.758E-01	4.909E-01	0.000E+00	NOT IDENT.
LA-140	1.138E-01	1.013E-01	1.924E-01	0.000E+00	FAIL ABUN
CE-141	5.708E-02	6.673E-02	1.167E-01	0.000E+00	NOT IDENT.

CE-143	0.000E+00	6.493E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	6.182E-02	2.299E-01	3.533E-01	0.000E+00	NOT IDENT.
PM-144	-3.019E-02	3.627E-02	5.804E-02	0.000E+00	NOT IDENT.
PR-144	-2.048E+00	2.461E+00	3.938E+00	0.000E+00	NOT IDENT.
PM-146	5.224E-02	4.393E-02	7.917E-02	0.000E+00	NOT IDENT.
ND-147	-1.838E-02	6.304E-01	1.101E+00	0.000E+00	FAIL ABUN
PM-149	2.070E+01	1.820E+02	3.182E+02	0.000E+00	NOT IDENT.
EU-152	5.581E-02	1.073E-01	1.761E-01	0.000E+00	FAIL ABUN
GD-153	1.015E-02	7.629E-02	1.190E-01	0.000E+00	FAIL ABUN
EU-154	-7.084E-02	1.385E-01	2.234E-01	0.000E+00	NOT IDENT.
EU-155	1.263E-01	1.007E-01	1.814E-01	0.000E+00	FAIL ABUN
TB-160	5.188E-02	1.432E-01	2.478E-01	0.000E+00	FAIL ABUN
HO-166M	-2.085E-02	6.368E-02	1.060E-01	0.000E+00	NOT IDENT.
TM-171	-1.119E-01	2.302E+01	3.644E+01	0.000E+00	NOT IDENT.
LU-176	-1.286E-02	2.478E-02	4.162E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.529E+00	2.721E+00	0.000E+00	FAIL ABUN
LU-177M	-1.342E-02	1.988E-01	2.917E-01	0.000E+00	NOT IDENT.
HF-181	1.594E-02	4.302E-02	7.378E-02	0.000E+00	NOT IDENT.
W-181	3.718E-02	3.063E-01	4.882E-01	0.000E+00	NOT IDENT.
TA-182	-3.586E-03	2.162E-01	3.669E-01	0.000E+00	FAIL ABUN
RE-183	-7.020E-04	1.132E-01	1.875E-01	0.000E+00	FAIL ABUN
RE-184	-2.193E-02	2.219E-01	3.874E-01	0.000E+00	NOT IDENT.
OS-185	-1.045E-02	4.232E-02	7.144E-02	0.000E+00	NOT IDENT.
W-188	1.268E+00	8.313E+00	1.282E+01	0.000E+00	FAIL ABUN
IR-192	-1.315E-02	3.497E-02	5.905E-02	0.000E+00	FAIL ABUN
AU-195	1.433E-01	2.151E-01	3.652E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.936E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	9.305E+00	1.136E+01	1.974E+01	0.000E+00	NOT IDENT.
TL-202	2.892E-03	8.218E-02	1.385E-01	0.000E+00	NOT IDENT.
HG-203	1.991E-02	4.775E-02	7.509E-02	0.000E+00	NOT IDENT.
BI-207	-3.253E-02	5.039E-02	8.136E-02	0.000E+00	FAIL ABUN
TL-207	-1.869E-01	7.674E-01	1.137E+00	0.000E+00	FAIL ABUN
PO-209	-2.803E+00	8.187E+00	1.315E+01	0.000E+00	NOT IDENT.
PB-211	6.217E-01	1.192E+00	1.749E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.036E-01	6.833E-01	0.000E+00	FAIL ABUN
PO-215	-1.869E-01	7.674E-01	1.137E+00	0.000E+00	FAIL ABUN
RN-219	-3.481E-01	4.496E-01	7.205E-01	0.000E+00	FAIL ABUN
RN-220	-1.946E+01	2.581E+01	4.256E+01	0.000E+00	NOT IDENT.
RA-223	-1.869E-01	7.674E-01	1.137E+00	0.000E+00	FAIL ABUN
AC-227	-3.526E-02	3.636E-01	6.342E-01	0.000E+00	FAIL ABUN
TH-227	-3.526E-02	3.636E-01	6.342E-01	0.000E+00	FAIL ABUN
TH-229	-2.535E-02	4.859E-01	8.662E-01	0.000E+00	FAIL ABUN
PA-231	4.380E-01	1.603E+00	2.733E+00	0.000E+00	FAIL ABUN
TH-231	-1.869E-01	7.674E-01	1.137E+00	0.000E+00	FAIL ABUN
U-231	-1.234E+00	1.543E+00	2.271E+00	0.000E+00	FAIL ABUN
PA-233	-3.908E-02	6.131E-02	1.018E-01	0.000E+00	FAIL ABUN
PA-234	7.906E-02	3.062E-01	5.214E-01	0.000E+00	FAIL ABUN
PA-234M	5.226E+00	5.244E+00	9.380E+00	0.000E+00	NOT IDENT.
U-235	-1.957E-02	2.187E-01	3.661E-01	0.000E+00	FAIL ABUN
NP-236	-6.919E-03	8.139E-02	1.364E-01	0.000E+00	NOT IDENT.
NP-239	-2.265E-02	1.853E-01	3.166E-01	0.000E+00	FAIL ABUN
AM-241	1.060E-01	1.168E-01	1.935E-01	0.000E+00	NOT IDENT.
CM-243	-3.626E-02	9.144E-02	1.557E-01	0.000E+00	FAIL ABUN
AM-246	1.496E-01	1.619E-01	2.967E-01	0.000E+00	NOT IDENT.
CM-247	3.719E-03	3.943E-02	6.716E-02	0.000E+00	FAIL ABUN
CF-249	2.582E-02	3.816E-02	6.758E-02	0.000E+00	NOT IDENT.
CF-251	8.060E-02	1.218E-01	2.239E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:52:20.77

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440011.CNF;1
Sample date       : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:50:58
Sample ID        : G246440011      Sample quantity   : 1.31760E+02 GRAM
Detector name    : GAM07           Detector geometry: CAN
Elapsed live time: 0 02:00:00.00    Elapsed real time: 0 02:00:01.44  0.0%
Energy tolerance : 1.50000 keV     Analyst Initials : MXR1
Abundance limit  : 75.00000        Sensitivity     : 5.00000
Batch ID         : 950788          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	1576	10.67*	1.129E+00	3.728E+01	3.728E+01	10.21
CD-109	88.03	391	3.72*	6.833E+00	4.381E+00	4.496E+00	23.45
SN-126	64.28	171	9.60	4.824E+00	1.049E+00	1.049E+00	54.70
	86.94	391	8.90	6.833E+00	1.831E+00	1.831E+00	46.75
	87.57	391	37.00*	6.833E+00	4.404E-01	4.404E-01	23.45
BA-137M	661.65	57	89.98*	2.232E+00	8.126E-02	8.135E-02	73.60
CS-137	661.65	57	85.12*	2.232E+00	8.590E-02	8.599E-02	73.60
RE-188	155.03	66	15.00*	6.472E+00	1.950E-01	2.320E-01	103.16
	477.96	-----	1.04	2.905E+00	-----	Line Not Found	-----
	633.10	-----	1.26	2.315E+00	-----	Line Not Found	-----
TL-208	277.35	69	6.80	4.405E+00	6.541E-01	6.541E-01	90.68
	510.84	212	21.60	2.755E+00	1.017E+00	1.017E+00	36.39
	583.14	434	84.20*	2.476E+00	5.935E-01	5.935E-01	15.28
	860.37	49	12.46	1.782E+00	6.265E-01	6.265E-01	72.21
BI-210	46.50	43	4.05*	2.085E+00	1.441E+00	1.443E+00	183.69
PB-210	46.50	43	4.05*	2.085E+00	1.441E+00	1.443E+00	183.69
PO-210	46.50	43	4.05*	2.085E+00	1.441E+00	1.443E+00	183.64
BI-211	72.87	-----	1.27	5.899E+00	-----	Line Not Found	-----
	351.07	608	12.94*	3.680E+00	3.639E+00	3.639E+00	15.19
PB-212	74.81	534	10.70	6.069E+00	2.341E+00	2.341E+00	21.53
	77.11	840	18.00	6.262E+00	2.123E+00	2.123E+00	13.68
	87.30	391	8.00	6.833E+00	2.037E+00	2.037E+00	25.49
	238.63	1423	44.60*	4.908E+00	1.852E+00	1.852E+00	11.57
	300.09	61	3.41	4.151E+00	1.222E+00	1.222E+00	87.15
PO-212	74.81	534	10.70	6.069E+00	2.341E+00	2.341E+00	21.53
	77.11	840	18.00	6.262E+00	2.123E+00	2.123E+00	13.68
	87.30	391	8.00	6.833E+00	2.037E+00	2.037E+00	25.49
	115.19	-----	0.60	7.150E+00	-----	Line Not Found	-----
	238.63	1423	44.60*	4.908E+00	1.852E+00	1.852E+00	11.57
	300.09	61	3.41	4.151E+00	1.222E+00	1.222E+00	87.15
BI-214	609.31	534	46.30*	2.389E+00	1.375E+00	1.375E+00	16.79
	1120.29	90	15.10	1.414E+00	1.207E+00	1.207E+00	44.46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	1764.49	71	15.80	9.831E-01	1.303E+00	1.303E+00	31.17
	74.81	534	6.21	6.069E+00	4.034E+00	4.034E+00	20.76
	77.11	840	10.50	6.262E+00	3.639E+00	3.639E+00	15.66
	87.30	391	4.67	6.833E+00	3.490E+00	3.490E+00	24.68
	241.98	310	7.49	4.865E+00	2.422E+00	2.422E+00	29.94
	295.21	406	19.20	4.201E+00	1.435E+00	1.436E+00	18.72
PO-214	351.92	608	37.20*	3.680E+00	1.266E+00	1.266E+00	16.06
	74.81	534	6.21	6.069E+00	4.034E+00	4.034E+00	20.76
	77.11	840	10.50	6.262E+00	3.639E+00	3.639E+00	15.66
	87.30	391	4.67	6.833E+00	3.490E+00	3.490E+00	24.68
	241.98	310	7.49	4.865E+00	2.422E+00	2.422E+00	29.94
	295.21	406	19.20	4.201E+00	1.435E+00	1.436E+00	18.72
PO-216	351.92	608	37.20*	3.680E+00	1.266E+00	1.266E+00	16.06
	74.81	534	10.70	6.069E+00	2.341E+00	2.341E+00	21.53
	77.11	840	18.00	6.262E+00	2.123E+00	2.123E+00	13.68
	87.30	391	8.00	6.833E+00	2.037E+00	2.037E+00	25.49
	238.63	1423	44.60*	4.908E+00	1.852E+00	1.852E+00	11.57
	300.09	61	3.41	4.151E+00	1.222E+00	1.222E+00	87.15
PO-218	74.81	534	6.21	6.069E+00	4.034E+00	4.034E+00	20.76
	77.11	840	10.50	6.262E+00	3.639E+00	3.639E+00	15.66
	87.30	391	4.67	6.833E+00	3.490E+00	3.490E+00	24.68
	241.98	310	7.49	4.865E+00	2.422E+00	2.422E+00	29.94
	295.21	406	19.20	4.201E+00	1.435E+00	1.436E+00	18.72
	351.92	608	37.20*	3.680E+00	1.266E+00	1.266E+00	16.06
RA-224	240.98	310	3.95*	4.865E+00	4.593E+00	4.593E+00	29.41
RA-226	609.31	534	46.30*	2.389E+00	1.375E+00	1.375E+00	16.79
AC-228	1120.29	90	15.10	1.414E+00	1.207E+00	1.207E+00	44.46
	1764.49	71	15.80	9.831E-01	1.303E+00	1.303E+00	31.17
	338.32	308	11.40	3.793E+00	2.028E+00	2.028E+00	46.37
	911.07	271	27.70*	1.695E+00	1.644E+00	1.644E+00	21.32
	969.11	208	16.60	1.606E+00	2.222E+00	2.222E+00	29.61
	338.32	308	11.40	3.793E+00	2.028E+00	2.028E+00	46.37
RA-228	911.07	271	27.70*	1.695E+00	1.644E+00	1.644E+00	21.32
	969.11	208	16.60	1.606E+00	2.222E+00	2.222E+00	29.61
	74.81	534	10.70	6.069E+00	2.341E+00	2.382E+00	19.43
	77.11	840	18.00	6.262E+00	2.123E+00	2.160E+00	13.68
	87.30	391	8.00	6.833E+00	2.037E+00	2.072E+00	23.45
	238.63	1423	44.60*	4.908E+00	1.852E+00	1.884E+00	11.57
TH-228	300.09	61	3.41	4.151E+00	1.222E+00	1.243E+00	104.89
	609.31	534	46.30*	2.389E+00	1.375E+00	1.375E+00	16.79
	1120.29	90	15.10	1.414E+00	1.207E+00	1.207E+00	44.46
	1764.49	71	15.80	9.831E-01	1.303E+00	1.303E+00	31.17
	338.32	308	11.40	3.793E+00	2.028E+00	2.028E+00	22.84
	911.07	271	27.70*	1.695E+00	1.644E+00	1.644E+00	21.32
TH-232	969.11	208	16.60	1.606E+00	2.222E+00	2.222E+00	29.61
	63.29	171	3.80*	4.824E+00	2.650E+00	2.650E+00	55.55
	92.38	558	5.41	7.018E+00	4.188E+00	4.188E+00	24.57
	609.31	534	46.30*	2.389E+00	1.375E+00	1.375E+00	16.79
	1120.29	90	15.10	1.414E+00	1.207E+00	1.207E+00	44.46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	71	15.80	9.831E-01	1.303E+00	1.303E+00	31.17
NP-237	86.50	391	12.60*	6.833E+00	1.293E+00	1.293E+00	31.23
	95.87	-----	2.60	7.087E+00	-----	Line Not Found	-----
U-238	63.29	171	3.80*	4.824E+00	2.650E+00	2.650E+00	55.55
	92.38	558	5.41	7.018E+00	4.188E+00	4.188E+00	18.74
AM-243	74.67	534	66.00*	6.069E+00	3.795E-01	3.795E-01	19.39
	86.72	391	0.34	6.833E+00	4.850E+01	4.850E+01	23.45
	117.66	-----	0.55	7.126E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.723E+00	-----	Line Not Found	-----
ANH-511	511.00	212	100.00*	2.755E+00	2.196E-01	2.196E-01	35.42

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G246440011

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Acquisition date : 19-FEB-2010 19:50:58

Total number of lines in spectrum 40
Number of unidentified lines 4
Number of lines tentatively identified by NID 36 90.00%

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	3.728E+01	3.728E+01	0.380E+01	10.21	
CD-109	464.00D	1.03	4.381E+00	4.496E+00	1.054E+00	23.45	
SN-126	1.00E+05Y	1.00	4.404E-01	4.404E-01	1.033E-01	23.45	
BA-137M	30.17Y	1.00	8.126E-02	8.135E-02	5.987E-02	73.60	
CS-137	30.17Y	1.00	8.590E-02	8.599E-02	6.329E-02	73.60	
RE-188	69.40D	1.19	1.950E-01	2.320E-01	2.393E-01	103.16	
TL-208	1.41E+10Y	1.00	5.935E-01	5.935E-01	0.907E-01	15.28	
BI-210	22.26Y	1.00	1.441E+00	1.443E+00	2.651E+00	183.69	
PB-210	22.26Y	1.00	1.441E+00	1.443E+00	2.651E+00	183.69	
PO-210	22.26Y	1.00	1.441E+00	1.443E+00	2.651E+00	183.64	
BI-211	7.04E+08Y	1.00	3.639E+00	3.639E+00	0.553E+00	15.19	
PB-212	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.214E+00	11.57	
PO-212	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.214E+00	11.57	
BI-214	1600.00Y	1.00	1.375E+00	1.375E+00	0.231E+00	16.79	
PB-214	1600.00Y	1.00	1.266E+00	1.266E+00	0.203E+00	16.06	
PO-214	1600.00Y	1.00	1.266E+00	1.266E+00	0.203E+00	16.06	
PO-216	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.214E+00	11.57	
PO-218	1600.00Y	1.00	1.266E+00	1.266E+00	0.203E+00	16.06	
RA-224	1.41E+10Y	1.00	4.593E+00	4.593E+00	1.351E+00	29.41	
RA-226	1600.00Y	1.00	1.375E+00	1.375E+00	0.231E+00	16.79	
AC-228	1.41E+10Y	1.00	1.644E+00	1.644E+00	0.351E+00	21.32	
RA-228	1.41E+10Y	1.00	1.644E+00	1.644E+00	0.351E+00	21.32	
TH-228	1.91Y	1.02	1.852E+00	1.884E+00	0.218E+00	11.57	
TH-230	4.47E+09Y	1.00	1.375E+00	1.375E+00	0.231E+00	16.79	
TH-232	1.41E+10Y	1.00	1.644E+00	1.644E+00	0.351E+00	21.32	
TH-234	4.47E+09Y	1.00	2.650E+00	2.650E+00	1.472E+00	55.55	
U-234	4.47E+09Y	1.00	1.375E+00	1.375E+00	0.231E+00	16.79	
NP-237	2.14E+06Y	1.00	1.293E+00	1.293E+00	0.404E+00	31.23	
U-238	4.47E+09Y	1.00	2.650E+00	2.650E+00	1.472E+00	55.55	
AM-243	7380.00Y	1.00	3.795E-01	3.795E-01	0.736E-01	19.39	
ANH-511	1.00E+09Y	1.00	2.196E-01	2.196E-01	0.778E-01	35.42	
Total Activity :			8.444E+01	8.463E+01			

Grand Total Activity : 8.444E+01 8.463E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440011

Page : 5
Acquisition date : 19-FEB-2010 19:50:58

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	84.34	141	389	1.37	168.32	165	27	1.96E-02	46.7	6.71E+00	T
3	89.84	300	450	1.34	179.33	165	27	4.17E-02	28.2	6.93E+00	T
0	129.02	49	361	0.96	257.67	255	7	6.81E-03	****	6.97E+00	T
0	186.01	266	427	1.20	371.64	366	11	3.69E-02	33.2	5.81E+00	T
0	209.55	253	358	1.75	418.71	413	14	3.51E-02	34.2	5.38E+00	T
0	270.29	106	283	1.09	540.17	534	12	1.47E-02	66.6	4.49E+00	T
0	328.41	54	226	0.93	656.37	651	11	7.43E-03	****	3.88E+00	T
0	409.24	55	120	1.02	818.01	815	9	7.59E-03	77.1	3.28E+00	
0	462.81	89	129	1.27	925.13	919	12	1.24E-02	55.6	2.98E+00	T
0	728.03	80	87	1.48	1455.50	1449	13	1.11E-02	53.9	2.06E+00	T
0	773.17	13	112	6.11	1545.78	1536	14	1.82E-03	****	1.96E+00	
0	795.81	29	81	1.36	1591.05	1584	11	4.07E-03	****	1.91E+00	T
0	965.14	54	58	1.65	1929.66	1923	11	7.54E-03	60.7	1.61E+00	T
0	1401.50	26	12	1.36	2802.31	2796	12	3.61E-03	66.2	1.17E+00	
0	1409.03	29	20	1.76	2817.37	2809	13	3.96E-03	74.1	1.16E+00	T
0	1730.01	21	9	0.75	3459.29	3450	17	2.85E-03	78.7	9.96E-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]G246440011.CNF;1
* Acquisition date   : 19-FEB-2010 19:50:58   Detector SN#      :
* Detector ID        : GAM07                   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 02:00:01.44           Half life ratio   : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246440011             Analyst initials  : MXR1
* Batch Number       : 950788                 Sample Quantity   : 1.31760E+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
K-40	3.728E+01	3.804E+00	5.990E-01	5.144E-02	62.227
CD-109	4.496E+00	1.054E+00	1.069E+00	1.007E-01	4.206
SN-126	4.404E-01	1.033E-01	1.049E-01	9.834E-03	4.197
BA-137M	8.135E-02	5.987E-02	6.646E-02	5.882E-03	1.224
CS-137	8.599E-02	6.329E-02	7.026E-02	6.229E-03	1.224
RE-188	2.320E-01	2.393E-01	2.871E-01	2.316E-02	0.808
TL-208	5.935E-01	9.065E-02	6.079E-02	5.815E-03	9.763
BI-210	1.443E+00	2.651E+00	2.866E+00	2.688E-01	0.504
PB-210	1.443E+00	2.651E+00	2.866E+00	2.688E-01	0.504
PO-210	1.443E+00	2.651E+00	2.866E+00	2.438E-01	0.504
BI-211	3.639E+00	5.526E-01	3.653E-01	3.277E-02	9.962
PB-212	1.852E+00	2.143E-01	9.445E-02	9.034E-03	19.606
PO-212	1.852E+00	2.143E-01	9.445E-02	9.034E-03	19.606
BI-214	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
PB-214	1.266E+00	2.033E-01	1.301E-01	1.350E-02	9.731
PO-214	1.266E+00	2.033E-01	1.301E-01	1.350E-02	9.731
PO-216	1.852E+00	2.143E-01	9.445E-02	9.034E-03	19.606
PO-218	1.266E+00	2.033E-01	1.301E-01	1.350E-02	9.731

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224	4.593E+00	1.351E+00	1.075E+00	9.092E-02	4.272
RA-226	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
AC-228	1.644E+00	3.506E-01	2.462E-01	2.868E-02	6.679
RA-228	1.644E+00	3.506E-01	2.462E-01	2.868E-02	6.679
TH-228	1.884E+00	2.181E-01	9.610E-02	9.192E-03	19.606
TH-230	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
TH-232	1.644E+00	3.506E-01	2.462E-01	2.868E-02	6.679
TH-234	2.650E+00	1.472E+00	1.537E+00	2.675E-01	1.724
U-234	1.375E+00	2.308E-01	1.066E-01	1.102E-02	12.902
NP-237	1.293E+00	4.040E-01	3.099E-01	7.006E-02	4.174
U-238	2.650E+00	1.472E+00	1.537E+00	2.675E-01	1.724
AM-243	3.795E-01	7.361E-02	7.389E-02	5.940E-03	5.136
ANH-511	2.196E-01	7.780E-02	4.587E-02	4.075E-03	4.788

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.204E-01		3.285E-01	5.107E-01	4.820E-02	-0.236
NA-22	-1.805E-02		5.006E-02	7.997E-02	6.565E-03	-0.226
NA-24	6.349E-01		3.897E+00	Half-Life	too short	
AL-26	-6.140E-03		2.541E-02	4.161E-02	3.393E-03	-0.148
TI-44	3.918E-01	+	5.359E-02	7.084E-02	5.930E-03	5.531
SC-46	-5.709E-03		4.377E-02	7.020E-02	6.433E-03	-0.081
V-48	-6.424E-02		8.417E-02	1.246E-01	1.122E-02	-0.515
CR-51	2.817E-01		4.146E-01	7.054E-01	6.374E-02	0.399
MN-52	1.728E-01		3.005E-01	5.307E-01	4.413E-02	0.326
MN-54	1.377E-02		3.895E-02	6.540E-02	6.003E-03	0.210
CO-56	-7.050E-03		4.034E-02	6.464E-02	5.934E-03	-0.109
CO-57	3.752E-03		2.632E-02	4.257E-02	3.662E-03	0.088
CO-58	6.984E-03		4.127E-02	6.848E-02	6.292E-03	0.102
FE-59	-1.601E-02		1.153E-01	1.907E-01	1.767E-02	-0.084
CO-60	-2.121E-02		4.451E-02	6.975E-02	5.714E-03	-0.304
ZN-65	-7.637E-02		1.202E-01	1.600E-01	1.357E-02	-0.477
GE-68	5.716E-01		1.365E+00	2.362E+00	2.047E-01	0.242
AS-73	2.034E-01		5.338E-01	8.983E-01	6.745E-02	0.226
AS-74	-9.542E-03		9.978E-02	1.655E-01	1.484E-02	-0.058
SE-75	2.319E-02		4.691E-02	7.103E-02	6.065E-03	0.326
BR-77	-1.396E+00		1.867E+01	3.129E+01	2.787E+00	-0.045
SR-82	-1.984E-01		4.685E-01	6.280E-01	5.735E-02	-0.316
RB-83	1.013E-04		6.633E-02	1.118E-01	9.958E-03	0.001
RB-84	-1.525E-02		7.621E-02	1.214E-01	1.113E-02	-0.126
KR-85	1.520E+01		8.213E+00	1.376E+01	1.223E+00	1.105
SR-85	7.977E-02		4.310E-02	7.220E-02	6.420E-03	1.105
RB-86	-3.600E-01		9.346E-01	1.512E+00	1.311E-01	-0.238
Y-88	2.559E-02		3.426E-02	6.440E-02	5.227E-03	0.397
ZR-88	2.543E-03		3.241E-02	5.290E-02	4.406E-03	0.048
Y-91	-1.366E+01		2.187E+01	3.446E+01	2.814E+00	-0.397

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	1.821E-02		3.331E-02	5.729E-02	5.144E-03	0.318
NB-95	3.115E-02		4.971E-02	7.557E-02	6.889E-03	0.412
NB-95M	1.004E-01		1.457E-01	2.225E-01	2.160E-02	0.451
ZR-95	1.217E-01		8.113E-02	1.466E-01	1.456E-02	0.831
NB-97	4.266E-01		5.275E-01	Half-Life too short		
ZR-97	2.881E+01		9.418E+00	Half-Life too short		
MO-99	1.786E+00		2.239E+01	3.708E+01	5.726E+00	0.048
TC-99M	-8.502E+12		9.000E+12	Half-Life too short		
RH-101	8.981E-03		3.243E-02	5.427E-02	4.451E-03	0.165
RH-102	2.294E-02		2.863E-02	4.866E-02	4.269E-03	0.471
RU-103	1.086E-02		4.216E-02	6.876E-02	9.834E-03	0.158
RH-106	-1.043E-01		3.254E-01	5.285E-01	7.169E-02	-0.197
RU-106	-1.043E-01		3.253E-01	5.285E-01	4.723E-02	-0.197
AG-108M	2.191E-03		3.350E-02	5.430E-02	4.847E-03	0.040
AG-110M	1.451E-02		4.302E-02	6.411E-02	5.841E-03	0.226
IN-111	-5.697E-01		1.989E+00	2.865E+00	2.427E-01	-0.199
IN-113M	-5.589E-02		4.695E-02	6.976E-02	5.997E-03	-0.801
SN-113	-5.589E-02		4.695E-02	6.976E-02	5.997E-03	-0.801
IN-114M	-1.000E-01		1.994E-01	2.889E-01	2.351E-02	-0.346
CD-115	-1.837E+00		2.141E+01	3.583E+01	3.197E+00	-0.051
SN-117M	8.701E-03		7.250E-02	1.030E-01	8.257E-03	0.084
SB-122	2.679E+00		3.747E+00	6.567E+00	5.887E-01	0.408
I-123	5.354E+01		5.417E+01	Half-Life too short		
TE-123M	1.629E-02		3.296E-02	4.783E-02	3.859E-03	0.341
I-124	3.731E-01		1.096E+00	1.644E+00	1.473E-01	0.227
SB-124	3.467E-02		6.706E-02	1.201E-01	1.040E-02	0.289
SB-125	1.195E-02		9.379E-02	1.528E-01	1.333E-02	0.078
TE-125M	6.248E-02		9.255E+00	1.496E+01	1.552E+00	0.004
I-126	9.826E-02		2.530E-01	3.782E-01	3.353E-02	0.260
SB-126	5.499E-02		1.872E-01	2.984E-01	2.694E-02	0.184
SB-127	-2.097E+00		2.138E+00	3.233E+00	3.969E-01	-0.649
XE-127	-2.565E-02		4.780E-02	7.597E-02	6.261E-03	-0.338
I-131	1.315E-01		1.456E-01	2.497E-01	2.240E-02	0.527
TE-132	-2.840E-01		1.089E+00	1.803E+00	2.890E-01	-0.158
BA-133	-2.454E-02		5.220E-02	7.245E-02	9.515E-03	-0.339
I-133	1.774E-02		1.753E-02	Half-Life too short		
CS-134	5.788E-02	+	7.266E-02	9.216E-02	8.491E-03	0.628
CS-135	1.416E-01		1.754E-01	2.693E-01	2.656E-02	0.526
I-135	-1.295E+12		8.787E+11	Half-Life too short		
CS-136	2.853E-02		1.335E-01	2.256E-01	2.065E-02	0.126
CE-139	3.504E-03		3.034E-02	4.831E-02	3.821E-03	0.073
BA-140	9.844E-02		2.814E-01	4.819E-01	1.601E-01	0.204
LA-140	1.138E-01		1.034E-01	1.924E-01	1.610E-02	0.591
CE-141	5.708E-02		6.809E-02	1.121E-01	9.384E-03	0.509
CE-143	1.832E-03		3.313E-04	Half-Life too short		
CE-144	6.182E-02		2.346E-01	3.390E-01	5.233E-02	0.182
PM-144	-3.019E-02		3.701E-02	5.723E-02	5.131E-03	-0.528
PR-144	-2.048E+00		2.511E+00	3.883E+00	3.479E-01	-0.528

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	5.224E-02		4.482E-02	7.750E-02	8.351E-03	0.674
ND-147	-1.838E-02		6.433E-01	1.081E+00	1.635E-01	-0.017
PM-149	2.070E+01		1.857E+02	3.091E+02	4.789E+01	0.067
EU-152	5.581E-02		1.095E-01	1.716E-01	1.556E-02	0.325
GD-153	1.015E-02		7.785E-02	1.136E-01	1.016E-02	0.089
EU-154	-7.084E-02		1.413E-01	2.226E-01	2.447E-02	-0.318
EU-155	1.263E-01		1.028E-01	1.734E-01	1.532E-02	0.728
TB-160	5.188E-02		1.461E-01	2.453E-01	2.250E-02	0.211
HO-166M	-2.085E-02		6.498E-02	1.045E-01	9.412E-03	-0.199
TM-171	-1.119E-01		2.349E+01	3.457E+01	2.586E+00	-0.003
LU-176	-1.286E-02		2.529E-02	4.048E-02	3.467E-03	-0.318
LU-177	7.324E+00	+	2.580E+00	2.629E+00	2.178E-01	2.785
LU-177M	-1.342E-02		2.029E-01	2.851E-01	2.414E-02	-0.047
HF-181	1.594E-02		4.389E-02	7.230E-02	6.361E-03	0.220
W-181	3.718E-02		3.126E-01	4.630E-01	3.426E-02	0.080
TA-182	-3.586E-03		2.206E-01	3.653E-01	2.988E-02	-0.010
RE-183	-7.020E-04		1.155E-01	1.805E-01	1.437E-02	-0.004
RE-184	-2.193E-02		2.264E-01	3.755E-01	3.187E-02	-0.058
OS-185	-1.045E-02		4.318E-02	7.035E-02	6.255E-03	-0.149
W-188	1.268E+00		8.483E+00	1.246E+01	1.062E+00	0.102
IR-192	-1.315E-02		3.569E-02	5.746E-02	4.939E-03	-0.229
AU-195	1.433E-01		2.195E-01	3.486E-01	3.101E-02	0.411
TL-200	-1.308E-05		9.877E-04	Half-Life	too short	
TL-201	9.305E+00		1.159E+01	1.901E+01	1.506E+00	0.490
TL-202	2.892E-03		8.386E-02	1.355E-01	1.167E-02	0.021
HG-203	1.991E-02		4.873E-02	7.291E-02	6.369E-03	0.273
BI-207	-3.253E-02		5.142E-02	8.082E-02	7.051E-03	-0.402
TL-207	-1.869E-01		7.831E-01	1.107E+00	1.957E-01	-0.169
PO-209	-2.803E+00		8.354E+00	1.302E+01	1.192E+00	-0.215
PB-211	6.217E-01		1.217E+00	1.708E+00	1.070E+00	0.364
BI-212	9.368E-01	+	5.138E-01	6.742E-01	6.994E-02	1.389
PO-215	-1.869E-01		7.831E-01	1.107E+00	1.957E-01	-0.169
RN-219	-3.481E-01		4.588E-01	7.039E-01	1.048E-01	-0.494
RN-220	-1.946E+01		2.633E+01	4.179E+01	3.742E+00	-0.466
RA-223	-1.869E-01		7.831E-01	1.107E+00	1.957E-01	-0.169
AC-227	-3.526E-02		3.710E-01	6.150E-01	9.395E-02	-0.057
TH-227	-3.526E-02		3.711E-01	6.150E-01	1.107E-01	-0.057
TH-229	-2.535E-02		4.958E-01	8.360E-01	6.826E-02	-0.030
PA-231	4.380E-01		1.636E+00	2.655E+00	4.014E-01	0.165
TH-231	-1.869E-01		7.831E-01	1.107E+00	1.957E-01	-0.169
U-231	-1.234E+00		1.574E+00	2.167E+00	1.951E-01	-0.569
PA-233	-3.908E-02		6.257E-02	9.908E-02	8.738E-03	-0.394
PA-234	7.906E-02		3.125E-01	5.168E-01	9.811E-02	0.153
PA-234M	5.226E+00		5.351E+00	9.307E+00	9.543E-01	0.562
U-235	-1.957E-02		2.231E-01	3.517E-01	6.091E-02	-0.056
NP-236	-6.919E-03		8.305E-02	1.313E-01	1.049E-02	-0.053
NP-239	-2.265E-02		1.891E-01	3.031E-01	2.608E-02	-0.075
AM-241	1.060E-01		1.192E-01	1.833E-01	1.453E-02	0.578

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.626E-02		9.330E-02	1.487E-01	1.303E-02	-0.244
AM-246	1.496E-01		1.652E-01	2.948E-01	2.552E-02	0.508
CM-247	3.719E-03		4.023E-02	6.561E-02	5.508E-03	0.057
CF-249	2.582E-02		3.894E-02	6.598E-02	5.507E-03	0.391
CF-251	8.060E-02		1.243E-01	2.157E-01	1.728E-02	0.374

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]G246440011            *
* Acquisition date   : 19-FEB-2010 19:50:58 Detector SN#      :              *
* Detector ID        : GAM07 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 02:00:01.44 Half life ratio : 8.000    *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246440011 Analyst initials: MXR1         *
* Batch Number       : 950788 Sample Quantity : 1.3176E+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
K-40	3.728E+01	3.728E+00	3.001E-01	1.902E+00
CD-109	4.496E+00	1.033E+00	5.612E-01	5.271E-01
SN-126	4.404E-01	1.012E-01	5.510E-02	5.164E-02
BA-137M	8.135E-02	5.867E-02	3.375E-02	2.994E-02
CS-137	8.599E-02	6.203E-02	3.568E-02	3.165E-02
RE-188	2.320E-01	2.345E-01	1.493E-01	1.197E-01
TL-208	5.935E-01	8.884E-02	3.094E-02	4.533E-02
BI-210	1.443E+00	2.598E+00	1.520E+00	1.326E+00
PB-210	1.443E+00	2.598E+00	1.520E+00	1.326E+00
PO-210	1.443E+00	2.598E+00	1.520E+00	1.325E+00
BI-211	3.639E+00	5.416E-01	1.875E-01	2.763E-01
PB-212	1.852E+00	2.101E-01	4.879E-02	1.072E-01
PO-212	1.852E+00	2.101E-01	4.879E-02	1.072E-01
BI-214	1.375E+00	2.262E-01	5.419E-02	1.154E-01
PB-214	1.266E+00	1.992E-01	6.677E-02	1.016E-01
PO-214	1.266E+00	1.992E-01	6.677E-02	1.016E-01
PO-216	1.852E+00	2.101E-01	4.879E-02	1.072E-01
PO-218	1.266E+00	1.992E-01	6.677E-02	1.016E-01
RA-224	4.593E+00	1.324E+00	5.553E-01	6.753E-01
RA-226	1.375E+00	2.262E-01	5.419E-02	1.154E-01
AC-228	1.644E+00	3.436E-01	1.243E-01	1.753E-01
RA-228	1.644E+00	3.436E-01	1.243E-01	1.753E-01
TH-228	1.884E+00	2.137E-01	4.964E-02	1.090E-01
TH-230	1.375E+00	2.262E-01	5.419E-02	1.154E-01
TH-232	1.644E+00	3.436E-01	1.243E-01	1.753E-01
TH-234	2.650E+00	1.443E+00	8.114E-01	7.361E-01
U-234	1.375E+00	2.262E-01	5.419E-02	1.154E-01
NP-237	1.293E+00	3.959E-01	1.627E-01	2.020E-01
U-238	2.650E+00	1.443E+00	8.114E-01	7.361E-01
AM-243	3.795E-01	7.213E-02	3.890E-02	3.680E-02
ANH-511	2.196E-01	7.624E-02	2.340E-02	3.890E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.204E-01	3.219E-01	2.608E-01	1.642E-01 NOT IDENT.
NA-22	-1.805E-02	4.906E-02	4.016E-02	2.503E-02 NOT IDENT.
NA-24	6.349E+05	7.638E+06	0.000E+00	3.897E+06 SHORT HLIF
AL-26	-6.140E-03	2.491E-02	2.076E-02	1.271E-02 NOT IDENT.
TI-44	3.918E-01	5.252E-02	3.726E-02	2.680E-02 FAIL ABUN
SC-46	-5.709E-03	4.289E-02	3.547E-02	2.188E-02 FAIL ABUN
V-48	-6.424E-02	8.249E-02	6.286E-02	4.209E-02 NOT IDENT.
CR-51	2.817E-01	4.063E-01	3.626E-01	2.073E-01 NOT IDENT.
MN-52	1.728E-01	2.945E-01	2.659E-01	1.502E-01 NOT IDENT.
MN-54	1.377E-02	3.817E-02	3.308E-02	1.947E-02 NOT IDENT.
CO-56	-7.050E-03	3.954E-02	3.268E-02	2.017E-02 NOT IDENT.
CO-57	3.752E-03	2.579E-02	2.223E-02	1.316E-02 NOT IDENT.
CO-58	6.984E-03	4.045E-02	3.466E-02	2.064E-02 NOT IDENT.
FE-59	-1.601E-02	1.130E-01	9.598E-02	5.764E-02 NOT IDENT.
CO-60	-2.121E-02	4.362E-02	3.500E-02	2.226E-02 NOT IDENT.
ZN-65	-7.637E-02	1.178E-01	8.050E-02	6.008E-02 NOT IDENT.
GE-68	5.716E-01	1.337E+00	1.189E+00	6.823E-01 NOT IDENT.
AS-73	2.034E-01	5.231E-01	4.753E-01	2.669E-01 NOT IDENT.
AS-74	-9.542E-03	9.779E-02	8.421E-02	4.989E-02 NOT IDENT.
SE-75	2.319E-02	4.597E-02	3.663E-02	2.345E-02 NOT IDENT.
BR-77	-1.396E+00	1.829E+01	1.595E+01	9.333E+00 FAIL ABUN
SR-82	-1.984E-01	4.591E-01	3.180E-01	2.343E-01 NOT IDENT.
RB-83	1.013E-04	6.500E-02	5.700E-02	3.316E-02 NOT IDENT.
RB-84	-1.525E-02	7.469E-02	6.134E-02	3.811E-02 NOT IDENT.
KR-85	1.520E+01	8.049E+00	7.016E+00	4.107E+00 NOT IDENT.
SR-85	7.977E-02	4.224E-02	3.682E-02	2.155E-02 NOT IDENT.
RB-86	-3.600E-01	9.159E-01	7.616E-01	4.673E-01 NOT IDENT.
Y-88	2.559E-02	3.358E-02	3.213E-02	1.713E-02 NOT IDENT.
ZR-88	2.543E-03	3.176E-02	2.710E-02	1.621E-02 NOT IDENT.
Y-91	-1.366E+01	2.144E+01	1.732E+01	1.094E+01 NOT IDENT.
NB-94	1.821E-02	3.264E-02	2.906E-02	1.665E-02 NOT IDENT.
NB-95	3.115E-02	4.871E-02	3.828E-02	2.485E-02 NOT IDENT.
NB-95M	1.004E-01	1.428E-01	1.150E-01	7.287E-02 NOT IDENT.
ZR-95	1.217E-01	7.951E-02	7.427E-02	4.057E-02 NOT IDENT.
NB-97	4.266E+05	1.034E+06	0.000E+00	5.275E+05 SHORT HLIF
ZR-97	2.881E+07	1.846E+07	0.000E+00	9.418E+06 SHORT HLIF
MO-99	1.786E+00	2.194E+01	1.879E+01	1.120E+01 NOT IDENT.
TC-99M	-8.502E+18	1.764E+19	0.000E+00	0.000E+00 SHORT HLIF
RH-101	8.981E-03	3.178E-02	2.812E-02	1.621E-02 NOT IDENT.
RH-102	2.294E-02	2.806E-02	2.485E-02	1.432E-02 NOT IDENT.
RU-103	1.086E-02	4.132E-02	3.509E-02	2.108E-02 FAIL ABUN
RH-106	-1.043E-01	3.189E-01	2.687E-01	1.627E-01 FAIL ABUN
RU-106	-1.043E-01	3.188E-01	2.687E-01	1.626E-01 FAIL ABUN
AG-108M	2.191E-03	3.283E-02	2.777E-02	1.675E-02 NOT IDENT.
AG-110M	1.451E-02	4.216E-02	3.256E-02	2.151E-02 NOT IDENT.
IN-111	-5.697E-01	1.949E+00	1.479E+00	9.944E-01 NOT IDENT.
IN-113M	-5.589E-02	4.601E-02	3.574E-02	2.348E-02 NOT IDENT.
SN-113	-5.589E-02	4.601E-02	3.574E-02	2.348E-02 NOT IDENT.
IN-114M	-1.000E-01	1.954E-01	1.498E-01	9.972E-02 NOT IDENT.
CD-115	-1.837E+00	2.098E+01	1.827E+01	1.070E+01 NOT IDENT.
SN-117M	8.701E-03	7.105E-02	5.355E-02	3.625E-02 NOT IDENT.
SB-122	2.679E+00	3.672E+00	3.344E+00	1.874E+00 NOT IDENT.
I-123	5.354E+07	1.062E+08	0.000E+00	5.417E+07 SHORT HLIF
TE-123M	1.629E-02	3.230E-02	2.487E-02	1.648E-02 NOT IDENT.
I-124	3.731E-01	1.074E+00	8.362E-01	5.479E-01 NOT IDENT.
SB-124	3.467E-02	6.572E-02	5.999E-02	3.353E-02 FAIL ABUN
SB-125	1.195E-02	9.191E-02	7.818E-02	4.690E-02 FAIL ABUN
TE-125M	6.248E-02	9.070E+00	7.828E+00	4.628E+00 NOT IDENT.
I-126	9.826E-02	2.480E-01	1.920E-01	1.265E-01 NOT IDENT.
SB-126	5.499E-02	1.834E-01	1.513E-01	9.358E-02 FAIL ABUN
SB-127	-2.097E+00	2.095E+00	1.641E+00	1.069E+00 NOT IDENT.
XE-127	-2.565E-02	4.685E-02	3.935E-02	2.390E-02 NOT IDENT.
I-131	1.315E-01	1.427E-01	1.281E-01	7.278E-02 NOT IDENT.
TE-132	-2.840E-01	1.068E+00	9.321E-01	5.447E-01 NOT IDENT.
BA-133	-2.454E-02	5.115E-02	3.718E-02	2.610E-02 FAIL ABUN
I-133	1.774E+04	3.437E+04	0.000E+00	1.753E+04 SHORT HLIF
CS-134	5.788E-02	7.121E-02	4.665E-02	3.633E-02 FAIL ABUN
CS-135	1.416E-01	1.719E-01	1.389E-01	8.771E-02 NOT IDENT.
I-135	-1.295E+18	1.722E+18	0.000E+00	0.000E+00 SHORT HLIF
CS-136	2.853E-02	1.308E-01	1.137E-01	6.675E-02 FAIL ABUN
CE-139	3.504E-03	2.973E-02	2.510E-02	1.517E-02 NOT IDENT.
BA-140	9.844E-02	2.758E-01	2.456E-01	1.407E-01 NOT IDENT.
LA-140	1.138E-01	1.013E-01	9.624E-02	5.168E-02 FAIL ABUN
CE-141	5.708E-02	6.673E-02	5.838E-02	3.404E-02 NOT IDENT.

CE-143	1.832E+03	6.493E+02	0.000E+00	3.313E+02	SHORT HLIF
CE-144	6.182E-02	2.299E-01	1.768E-01	1.173E-01	NOT IDENT.
PM-144	-3.019E-02	3.627E-02	2.904E-02	1.851E-02	NOT IDENT.
PR-144	-2.048E+00	2.461E+00	1.970E+00	1.255E+00	NOT IDENT.
PM-146	5.224E-02	4.393E-02	3.961E-02	2.241E-02	NOT IDENT.
ND-147	-1.838E-02	6.304E-01	5.508E-01	3.216E-01	FAIL ABUN
PM-149	2.070E+01	1.820E+02	1.592E+02	9.284E+01	NOT IDENT.
EU-152	5.581E-02	1.073E-01	8.813E-02	5.475E-02	FAIL ABUN
GD-153	1.015E-02	7.629E-02	5.955E-02	3.893E-02	FAIL ABUN
EU-154	-7.084E-02	1.385E-01	1.118E-01	7.066E-02	NOT IDENT.
EU-155	1.263E-01	1.007E-01	9.077E-02	5.138E-02	FAIL ABUN
TB-160	5.188E-02	1.432E-01	1.240E-01	7.307E-02	FAIL ABUN
HO-166M	-2.085E-02	6.368E-02	5.302E-02	3.249E-02	NOT IDENT.
TM-171	-1.119E-01	2.302E+01	1.823E+01	1.175E+01	NOT IDENT.
LU-176	-1.286E-02	2.478E-02	2.082E-02	1.264E-02	FAIL ABUN
LU-177	7.324E+00	2.529E+00	1.361E+00	1.290E+00	FAIL ABUN
LU-177M	-1.342E-02	1.988E-01	1.459E-01	1.014E-01	NOT IDENT.
HF-181	1.594E-02	4.302E-02	3.691E-02	2.195E-02	NOT IDENT.
W-181	3.718E-02	3.063E-01	2.442E-01	1.563E-01	NOT IDENT.
TA-182	-3.586E-03	2.162E-01	1.836E-01	1.103E-01	FAIL ABUN
RE-183	-7.020E-04	1.132E-01	9.382E-02	5.775E-02	FAIL ABUN
RE-184	-2.193E-02	2.219E-01	1.938E-01	1.132E-01	NOT IDENT.
OS-185	-1.045E-02	4.232E-02	3.574E-02	2.159E-02	NOT IDENT.
W-188	1.268E+00	8.313E+00	6.413E+00	4.241E+00	FAIL ABUN
IR-192	-1.315E-02	3.497E-02	2.954E-02	1.784E-02	FAIL ABUN
AU-195	1.433E-01	2.151E-01	1.827E-01	1.098E-01	FAIL ABUN
TL-200	-1.308E+01	1.936E+03	0.000E+00	9.877E+02	SHORT HLIF
TL-201	9.305E+00	1.136E+01	9.875E+00	5.796E+00	NOT IDENT.
TL-202	2.892E-03	8.218E-02	6.930E-02	4.193E-02	NOT IDENT.
HG-203	1.991E-02	4.775E-02	3.757E-02	2.436E-02	NOT IDENT.
BI-207	-3.253E-02	5.039E-02	4.071E-02	2.571E-02	FAIL ABUN
TL-207	-1.869E-01	7.674E-01	5.688E-01	3.915E-01	FAIL ABUN
PO-209	-2.803E+00	8.187E+00	6.578E+00	4.177E+00	NOT IDENT.
PB-211	6.217E-01	1.192E+00	8.748E-01	6.083E-01	NOT IDENT.
BI-212	9.368E-01	5.036E-01	3.418E-01	2.569E-01	FAIL ABUN
PO-215	-1.869E-01	7.674E-01	5.688E-01	3.915E-01	FAIL ABUN
RN-219	-3.481E-01	4.496E-01	3.605E-01	2.294E-01	FAIL ABUN
RN-220	-1.946E+01	2.581E+01	2.129E+01	1.317E+01	NOT IDENT.
RA-223	-1.869E-01	7.674E-01	5.688E-01	3.915E-01	FAIL ABUN
AC-227	-3.526E-02	3.636E-01	3.173E-01	1.855E-01	FAIL ABUN
TH-227	-3.526E-02	3.636E-01	3.173E-01	1.855E-01	FAIL ABUN
TH-229	-2.535E-02	4.859E-01	4.333E-01	2.479E-01	FAIL ABUN
PA-231	4.380E-01	1.603E+00	1.367E+00	8.178E-01	FAIL ABUN
TH-231	-1.869E-01	7.674E-01	5.688E-01	3.915E-01	FAIL ABUN
U-231	-1.234E+00	1.543E+00	1.136E+00	7.870E-01	FAIL ABUN
PA-233	-3.908E-02	6.131E-02	5.095E-02	3.128E-02	FAIL ABUN
PA-234	7.906E-02	3.062E-01	2.608E-01	1.562E-01	FAIL ABUN
PA-234M	5.226E+00	5.244E+00	4.693E+00	2.676E+00	NOT IDENT.
U-235	-1.957E-02	2.187E-01	1.832E-01	1.116E-01	FAIL ABUN
NP-236	-6.919E-03	8.139E-02	6.825E-02	4.152E-02	NOT IDENT.
NP-239	-2.265E-02	1.853E-01	1.584E-01	9.453E-02	FAIL ABUN
AM-241	1.060E-01	1.168E-01	9.683E-02	5.959E-02	NOT IDENT.
CM-243	-3.626E-02	9.144E-02	7.788E-02	4.665E-02	FAIL ABUN
AM-246	1.496E-01	1.619E-01	1.484E-01	8.258E-02	NOT IDENT.
CM-247	3.719E-03	3.943E-02	3.360E-02	2.012E-02	FAIL ABUN
CF-249	2.582E-02	3.816E-02	3.381E-02	1.947E-02	NOT IDENT.
CF-251	8.060E-02	1.218E-01	1.120E-01	6.214E-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	327.6315
46.50	327.6315
46.50	327.6315
48.70	332.4278
49.72	351.8448
51.35	386.8165
52.39	375.7995
52.97	357.2003
53.15	373.6498
53.44	364.3348
54.07	354.3466
56.28	431.5898
56.28	431.5921
57.37	0.0000
57.53	404.8120
57.53	404.8142
57.60	404.8801
57.98	433.3632
57.98	433.3632
59.32	402.6471
59.32	402.6471
59.40	408.5583
59.54	389.7179
59.72	389.8829
60.01	423.7549
61.10	452.6627
61.14	452.7039
61.30	452.8713
63.00	447.2752
63.29	447.5686
63.29	447.5686
63.58	447.8615
64.28	444.1376
65.12	464.1862
65.20	464.2683
65.20	464.2683
66.05	460.6939
66.72	437.6318
66.83	437.7398
66.91	443.7528
67.20	460.3668
67.20	460.3668
67.75	502.5465
67.85	502.6548
68.90	490.0768
68.90	490.0768
69.30	463.9422
69.67	462.8170
70.82	472.9175
70.82	472.9175
70.83	472.9272
72.80	522.9558
72.87	523.0328
72.87	523.0328
74.67	497.8073
74.81	497.9482
74.81	497.9482
74.81	497.9482
74.81	497.9482
74.81	497.9482
74.81	497.9482
74.97	498.1094
75.28	498.4216
75.70	498.8420
77.11	500.2494
77.11	500.2494

77.11	500.2494
77.11	500.2494
77.11	500.2494
77.11	500.2494
77.11	500.2494
78.38	493.9072
79.62	430.6142
79.80	430.7652
79.80	430.7652
80.11	408.6595
80.18	408.7147
80.30	408.8088
80.30	408.8088
80.57	451.7550
81.00	421.5806
81.07	421.6374
81.07	421.6374
81.07	421.6374
81.07	421.6374
82.60	422.8714
83.37	477.1868
83.78	509.8061
83.78	509.8061
83.78	509.8061
83.78	509.8061
84.21	400.5936
84.90	401.1087
85.43	401.5045
86.29	402.1448
86.50	402.2999
86.54	402.3298
86.59	402.3676
86.72	402.4630
86.79	402.5127
86.94	402.6261
87.30	402.8906
87.30	402.8906
87.30	402.8906
87.30	402.8906
87.30	402.8906
87.30	402.8906
87.57	403.0895
87.88	403.3182
88.03	403.4276
88.36	403.6702
88.47	403.7517
89.95	404.8296
91.11	405.6708
92.29	406.5180
92.38	406.5836
92.38	406.5836
93.35	407.2757
94.00	407.7391
94.67	302.2428
94.67	302.2457
94.90	321.1665
94.90	321.1665
94.90	321.1665
94.90	321.1665
95.87	381.3375
95.87	381.3375
96.73	370.8998
97.43	322.5631
98.44	329.4215
98.44	329.4215
98.88	330.6119
99.55	311.6139
99.55	311.6139
99.86	311.7765
100.00	311.8488
100.10	324.5477
103.18	373.8631
103.76	363.6176
105.00	308.0512
105.31	308.2061
108.00	382.1176
109.28	347.5970

111.00	326.0151
111.00	326.0151
111.76	376.8633
112.95	363.5742
115.19	318.4115
116.30	337.3271
117.00	334.4373
117.00	334.4373
117.66	348.8530
121.11	337.5757
121.62	321.4829
121.78	321.5579
122.06	338.0471
122.32	341.4474
122.32	341.4474
122.32	341.4474
122.32	341.4474
123.07	348.3741
127.23	369.1398
129.76	353.9224
131.20	351.3223
133.02	320.6428
133.54	317.5474
135.34	334.4424
136.00	335.8546
136.25	319.2811
136.48	314.9290
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140.51	0.0000
142.18	333.0343
142.65	299.5819
143.76	337.0972
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144.24	335.0621
144.24	335.0621
144.24	335.0621
145.22	303.9670
145.44	309.6827
147.16	358.9016
152.43	349.3846
152.70	356.3231
153.22	383.8520
154.21	331.3742
154.21	331.3742
154.21	331.3742
154.21	331.3742
155.03	311.1935
156.02	323.5604
158.56	305.6822
159.00	0.0000
159.00	278.3535
160.31	305.1867
161.27	313.5818
162.32	281.7759
162.64	281.8831
163.35	286.7284
163.89	293.8295
165.85	273.7251
167.43	251.0939
171.28	273.1459
171.86	282.6348
172.10	282.7139
176.55	269.2457
176.60	269.2621
181.06	301.8178
184.41	291.6162
185.71	274.6652
186.00	274.7527
190.27	267.8357
192.34	270.3934
193.63	271.6592
197.04	263.6718
198.01	250.4725
198.60	245.2359
200.40	260.9960
201.83	274.9030
202.84	261.9131
205.31	211.3008

208.36	242.2621
208.81	242.3721
209.75	242.6002
209.75	242.6002
210.97	242.8976
215.65	210.5771
216.55	239.0604
218.09	230.8705
222.10	238.2084
223.80	243.2038
226.40	230.8788
227.00	232.8585
227.08	232.8777
227.20	229.2059
228.16	238.6646
228.18	238.6705
228.18	238.6705
231.56	0.0000
235.69	260.8466
236.00	260.9213
236.00	260.9213
238.63	243.8034
238.63	243.8034
238.63	243.8034
238.63	243.8034
239.00	243.8870
240.98	244.3271
241.98	244.5491
241.98	244.5491
241.98	244.5491
244.69	199.8750
245.39	206.0168
247.94	193.7831
248.90	191.3889
249.79	187.7665
252.40	191.9821
252.85	187.3275
252.85	187.3275
254.15	0.0000
256.20	189.7751
256.20	189.7751
260.50	188.5768
260.90	193.4069
262.80	180.3598
264.65	154.4565
268.24	179.4676
268.79	174.9466
269.46	175.4855
269.46	175.4855
269.46	175.4855
269.46	175.4855
271.23	181.9693
273.65	181.0521
276.40	200.7700
277.35	200.9255
277.60	200.9668
277.60	200.9668
278.00	201.0334
278.60	191.8488
279.20	188.8468
279.53	181.1558
280.46	185.9414
281.68	187.6770
283.67	181.9890
284.30	196.2361
285.00	181.7669
285.90	177.0345
286.10	165.3879
286.10	165.3879
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288.45	0.0000
290.67	173.4131
290.80	173.4321
291.72	156.3599
293.26	0.0000
293.70	186.3588
295.21	188.1475
295.21	188.1475

295.21	188.1475
295.96	160.8044
296.50	172.6431
297.23	172.7424
298.57	172.9224
299.80	153.4197
299.80	153.4197
300.09	179.4220
300.09	179.4220
300.09	179.4220
300.09	179.4220
300.12	179.4275
301.29	168.5616
302.84	149.8361
303.76	148.3644
303.91	148.3805
304.40	164.2291
304.40	164.2291
304.84	164.2850
306.84	174.0288
308.46	128.7027
311.98	156.8404
316.51	161.3573
318.01	166.5235
319.02	156.6694
319.41	156.7149
320.08	154.7942
323.87	171.4508
323.87	171.4508
323.87	171.4508
323.87	171.4508
325.23	152.3734
328.77	172.8687
333.44	133.1138
334.20	161.4380
334.20	161.4380
334.30	161.4502
338.28	167.9808
338.28	167.9808
338.28	167.9808
338.28	167.9808
338.32	167.9858
338.32	167.9858
338.32	167.9858
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340.57	180.0092
344.27	144.9807
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351.92	180.8297
351.92	180.8297
351.92	180.8297
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356.01	139.3328
364.48	120.5563
366.43	145.4772
367.43	148.6714
367.94	0.0000
369.80	136.4976
374.96	118.2861
383.85	146.1075
387.95	105.6851
388.63	117.2466
391.69	147.8934
391.69	147.8934
392.90	127.0134
398.62	150.6501
400.65	146.6228
401.10	156.1592
401.81	158.3405
402.60	139.4081
404.84	131.9887
410.95	98.5165
411.60	112.1500
413.65	115.6930
414.70	117.4701
415.30	134.8269

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423.70	113.4030
427.08	111.4886
427.89	108.3250
432.53	127.9827
433.93	107.6370
439.47	116.6270
439.56	116.6320
439.89	114.4948
443.98	105.0222
444.90	86.6626
445.03	86.6699
445.03	86.6699
445.03	86.6699
445.03	86.6699
453.90	87.1118
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468.07	94.8335
473.00	99.0555
475.06	79.3345
475.35	82.6538
476.78	108.0847
477.59	97.0986
477.96	87.1862
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484.57	117.4061
487.03	98.7086
490.36	0.0000
492.35	109.0014
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507.63	0.0000
510.53	0.0000
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511.00	90.9841
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511.85	91.0243
513.99	88.5000
513.99	88.5000
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520.65	83.9884
527.90	92.4574
528.96	0.0000
529.64	82.5598
529.87	0.0000
531.02	91.6965
537.32	79.2367
543.00	91.3330
546.56	0.0000
549.76	100.8047
552.65	94.5231
555.20	75.3455
563.23	91.3212
563.90	86.7366
568.70	93.4102
569.32	84.1883
569.50	84.1950
569.67	84.2017
573.80	100.1294
574.00	99.2101
574.64	95.5315
578.91	83.6433
579.30	0.0000
583.14	91.5705
585.48	74.5801
591.81	82.2809
592.07	73.8735
593.00	78.5839
595.88	88.0562
600.56	83.5527
602.52	0.0000
602.71	87.7074
602.71	87.7074
603.60	100.2786
604.41	114.4219
604.70	114.4368
609.31	79.1745

609.31	79.1745
609.31	79.1745
609.31	79.1745
610.33	79.2114
612.46	84.9507
614.37	85.0254
618.01	76.7526
621.84	87.2068
621.84	87.2068
631.29	63.7760
633.02	73.3511
633.10	73.3530
634.78	66.7341
635.90	70.5818
636.97	65.8448
645.85	76.6387
646.12	78.5626
656.30	67.3613
657.75	85.0553
657.90	0.0000
661.65	101.2727
661.65	101.2727
664.57	0.0000
666.33	88.5895
666.33	88.5895
675.00	88.2673
677.61	94.1890
685.20	93.5133
692.80	83.0576
695.00	73.3539
696.49	100.7997
696.49	100.7997
697.00	92.0103
697.49	97.9028
698.33	94.9989
698.50	92.0677
699.00	88.1675
702.63	70.6395
706.10	75.6502
706.58	0.0000
706.67	89.4248
709.31	71.8130
711.68	88.6223
713.82	80.8148
717.42	76.9831
720.50	82.7604
721.93	0.0000
722.20	93.9401
722.78	92.3125
722.78	92.3125
722.89	92.3171
722.95	92.3193
723.30	87.3866
724.18	92.3649
727.18	72.3281
733.00	102.6169
735.90	59.6528
739.58	81.6416
742.81	70.7799
744.21	65.8308
747.13	80.8833
751.79	84.0308
752.31	94.0528
753.82	84.0964
755.35	78.1352
756.15	63.1292
756.87	62.1438
763.93	71.6083
765.79	68.7254
766.42	82.1552
766.84	87.1978
776.49	70.6870
778.00	82.5140
778.57	64.9669
778.89	64.9747
783.80	74.9304
785.46	74.9774
792.07	86.3344

795.84	76.2836
796.30	69.5145
798.80	66.1838
801.93	84.0992
805.60	68.3904
810.29	75.6639
810.76	62.3820
815.85	66.5964
817.79	63.5666
818.51	58.4556
819.60	50.2717
826.30	66.8472
828.27	0.0000
831.60	80.3670
831.96	79.3480
834.83	67.0503
836.80	0.0000
846.75	61.1174
848.13	70.4736
856.28	0.0000
856.80	67.5692
860.37	57.2451
867.32	64.0891
867.82	65.2176
871.10	62.6799
873.19	70.0425
874.81	65.8978
875.33	0.0000
876.40	58.6072
879.36	53.4280
880.27	53.4454
880.51	52.4011
881.50	60.8065
883.24	67.1359
884.67	60.8717
889.25	66.2208
896.60	68.4928
898.02	65.3619
899.00	66.4392
903.28	70.7573
911.07	76.2346
911.07	76.2346
911.07	76.2346
919.63	58.3999
920.93	60.5486
925.00	70.2023
925.24	69.1450
926.50	65.9810
935.52	57.6360
937.48	58.7396
944.10	62.0767
946.00	53.5474
949.00	65.3903
962.29	66.3850
964.01	57.4453
966.15	21.5566
968.20	21.5703
969.11	68.3261
969.11	68.3261
969.11	68.3261
977.42	54.0820
980.50	63.8787
983.50	66.1052
989.30	52.1109
996.32	68.5448
1001.03	54.4788
1001.68	59.9387
1004.76	71.9941
1021.30	0.0000
1024.50	0.0000
1034.80	60.5430
1036.00	56.8939
1037.82	57.8423
1038.57	54.1818
1038.76	0.0000
1045.16	63.4886
1046.59	56.1525
1048.07	58.9401

1050.47	66.3545
1050.47	66.3545
1062.04	48.0856
1063.62	58.2832
1076.63	67.7900
1077.35	58.5165
1078.86	60.4006
1085.78	82.8689
1099.22	83.1876
1112.02	59.3542
1112.84	58.7985
1115.52	86.9251
1120.29	71.4603
1120.29	71.4603
1120.29	71.4603
1120.29	71.4603
1120.51	71.4634
1121.28	87.0645
1124.00	0.0000
1129.67	79.1875
1131.51	0.0000
1147.95	0.0000
1167.94	70.4981
1173.22	83.9538
1175.09	67.7701
1177.93	80.2402
1189.05	77.6052
1204.90	86.5906
1205.75	0.0000
1213.00	74.2397
1221.42	78.2710
1230.97	77.4967
1235.34	103.7695
1236.41	0.0000
1238.25	90.2565
1246.25	78.7753
1260.41	0.0000
1271.85	69.5006
1274.45	67.5878
1274.54	64.6492
1291.56	54.1048
1298.22	0.0000
1312.09	42.5153
1325.50	43.6473
1325.50	43.6473
1332.49	46.7036
1333.61	40.7514
1360.21	36.0117
1362.66	0.0000
1365.15	26.0391
1368.21	24.0537
1368.53	0.0000
1376.25	34.1411
1384.27	44.2668
1394.10	24.2012
1395.20	17.2907
1407.95	22.5451
1434.06	20.3548
1436.60	25.4578
1457.56	0.0000
1460.81	29.6938
1489.15	21.6392
1509.49	27.9470
1596.49	16.8717
1620.62	20.1365
1678.03	0.0000
1691.02	8.6003
1691.02	8.6003
1706.46	0.0000
1750.46	0.0000
1764.49	13.0874
1764.49	13.0874
1764.49	13.0874
1764.49	13.0874
1770.23	9.8262
1771.40	56.1642
1791.20	0.0000
1808.65	7.5416

1836.01

9.4754

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440011

Total Uranium Activity	7.8759E+00	ug/g
Total Uranium Counting Unc.	4.2936E+00	ug/g
Total Uranium Tpu	2.1906E-06	ug/g
Total Uranium Mda	2.4154E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 950788                          SAMPLE ID   : G246440011
*  ANALYST       : MXR1                             DETECTOR    : GAM07
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 19:50:58.99          SAMPLE ALQT  : 131.760 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.115E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.930E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 4.420E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.150E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:53:10.49

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440012.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:51:26
Sample ID          : G246440012      Sample quantity   : 1.22740E+02 GRAM
Detector name      : GAM10            Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00   Elapsed real time: 0 02:00:01.10  0.0%
Energy tolerance    : 1.50000 keV     Analyst Initials  : MXR1
Abundance limit     : 75.00000        Sensitivity       : 5.00000
Batch ID           : 950788           Detector SN#      :
Matrix Spike ID    :                  LCS ID           : 1032-A
*****
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.94*	123	476	1.66	126.04	122	9	1.71E-02	33.7	
2	1	74.53*	320	404	0.95	149.20	144	15	4.44E-02	11.5	7.19E-01
3	1	76.84	502	319	0.88	153.81	144	15	6.97E-02	7.0	
4	0	86.87	223	391	1.32	173.86	171	7	3.10E-02	16.2	
5	0	89.80	78	344	0.90	179.71	177	6	1.08E-02	39.6	
6	0	92.68*	267	500	1.39	185.47	182	10	3.71E-02	17.5	
7	0	185.49*	216	355	1.33	370.93	366	11	3.01E-02	18.6	
8	0	209.15*	114	264	1.06	418.21	414	9	1.58E-02	27.7	
9	5	238.34*	1225	200	1.12	476.54	469	26	1.70E-01	3.5	1.02E+00
10	5	241.31*	305	292	1.87	482.48	469	26	4.23E-02	15.1	
11	0	269.74	112	145	1.24	539.30	536	8	1.55E-02	20.9	
12	0	277.27*	62	161	1.25	554.35	550	9	8.55E-03	40.2	
13	3	294.91*	371	147	1.04	589.60	585	23	5.15E-02	7.3	1.46E+00
14	3	300.10*	94	191	1.70	599.97	585	23	1.31E-02	31.0	
15	0	327.33	49	180	0.98	654.39	651	9	6.87E-03	50.7	
16	0	337.99	256	201	1.26	675.70	671	10	3.56E-02	12.1	
17	0	351.56*	607	219	1.40	702.83	697	14	8.44E-02	6.7	
18	0	463.27	48	146	1.14	926.12	919	11	6.60E-03	51.7	
19	0	510.51*	148	105	1.83	1020.53	1014	16	2.06E-02	20.2	
20	0	582.91*	384	66	1.56	1165.27	1160	13	5.33E-02	6.9	
21	0	608.90*	406	87	1.40	1217.23	1211	11	5.64E-02	6.8	
22	0	726.71*	98	84	1.57	1452.75	1445	14	1.37E-02	22.6	
23	0	860.49	74	77	1.57	1720.23	1712	17	1.02E-02	29.7	
24	0	910.67*	255	74	1.55	1820.57	1813	17	3.55E-02	10.2	
25	0	968.05*	164	148	1.32	1935.32	1926	15	2.27E-02	18.1	
26	0	1119.98*	84	73	1.31	2239.16	2234	12	1.16E-02	23.6	
27	0	1376.45*	21	23	1.16	2752.16	2745	13	2.92E-03	54.4	
28	0	1460.00*	1467	28	1.96	2919.30	2910	18	2.04E-01	2.8	
29	0	1619.65	21	6	1.48	3238.73	3233	11	2.85E-03	31.3	
30	0	1728.52*	22	10	1.97	3456.58	3450	14	3.09E-03	38.7	
31	0	1763.71*	62	13	2.48	3526.99	3520	13	8.57E-03	18.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 21:53:13

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440012.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 19:51:26
Sample ID         : G246440012           Sample quantity  : 122.74 GRAM
Sample type       : SOLID                 Sample geometry   :
Detector name     : GAMMA10              Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.10   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	*	3.795E+01	3.884E+00	5.507E-01	4.743E-02	68.915
CD-109	+	88.03	*	3.589E+00	1.228E+00	1.247E+00	1.413E-01	2.879
SN-126	+	64.28		1.756E+00	1.223E+00	1.079E+00	1.846E-01	1.626
	+	86.94		1.462E+00	7.744E-01	6.316E-01	2.652E-01	2.314
	+	87.57	*	3.516E-01	1.203E-01	1.230E-01	1.392E-02	2.858
TL-208	+	277.35		6.005E-01	4.875E-01	6.027E-01	6.573E-02	0.996
	+	510.84		7.164E-01	2.990E-01	2.034E-01	2.138E-02	3.522
	+	583.14	*	5.303E-01	8.180E-02	5.993E-02	4.027E-03	8.848
	+	860.37		9.812E-01	5.898E-01	4.584E-01	4.476E-02	2.140
BI-211		72.87		1.079E+01	4.397E+00	6.971E+00	7.666E-01	1.549
	+	351.07	*	3.691E+00	5.603E-01	3.156E-01	2.301E-02	11.695
BI-212	+	727.18	*	1.179E+00	5.421E-01	4.793E-01	3.834E-02	2.460
		785.46		-2.701E-01	1.849E+00	3.013E+00	2.232E-01	-0.090
	+	1620.62		2.223E+00	1.401E+00	1.775E+00	1.353E-01	1.253
PB-212	+	74.81		2.370E+00	6.443E-01	6.475E-01	9.321E-02	3.660
	+	77.11		2.054E+00	3.648E-01	3.588E-01	3.923E-02	5.726
	+	87.30		1.626E+00	5.797E-01	5.714E-01	8.621E-02	2.846
	+	238.63	*	1.641E+00	1.695E-01	8.950E-02	6.789E-03	18.336
	+	300.09		1.940E+00	1.216E+00	1.219E+00	1.072E-01	1.590
PO-212	+	74.81		2.370E+00	6.443E-01	6.475E-01	9.321E-02	3.660
	+	77.11		2.054E+00	3.648E-01	3.588E-01	3.923E-02	5.726
	+	87.30		1.626E+00	5.797E-01	5.714E-01	8.621E-02	2.846
		115.19		-7.072E-01	3.760E+00	6.058E+00	4.335E-01	-0.117
	+	238.63	*	1.641E+00	1.695E-01	8.950E-02	6.789E-03	18.336
	+	300.09		1.940E+00	1.216E+00	1.219E+00	1.072E-01	1.590
BI-214	+	609.31	*	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
	+	1120.29		1.200E+00	5.771E-01	5.578E-01	5.452E-02	2.150
	+	1764.49		1.223E+00	4.658E-01	3.517E-01	2.349E-02	3.479
PB-214	+	74.81		4.084E+00	1.086E+00	1.116E+00	1.475E-01	3.660
	+	77.11		3.522E+00	6.805E-01	6.151E-01	8.197E-02	5.726
	+	87.30		2.786E+00	9.770E-01	9.788E-01	1.339E-01	2.846
	+	241.98		2.452E+00	7.663E-01	5.388E-01	4.483E-02	4.551
	+	295.21		1.338E+00	2.287E-01	2.137E-01	1.929E-02	6.264
	+	351.92	*	1.284E+00	2.061E-01	1.100E-01	9.866E-03	11.671

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.084E+00	1.086E+00	1.116E+00	1.475E-01	3.660
	+	77.11		3.522E+00	6.805E-01	6.151E-01	8.197E-02	5.726
	+	87.30		2.786E+00	9.770E-01	9.788E-01	1.339E-01	2.846
	+	241.98		2.452E+00	7.663E-01	5.388E-01	4.483E-02	4.551
	+	295.21		1.338E+00	2.287E-01	2.137E-01	1.929E-02	6.264
PO-216	+	351.92	*	1.284E+00	2.061E-01	1.100E-01	9.866E-03	11.671
	+	74.81		2.370E+00	6.443E-01	6.475E-01	9.321E-02	3.660
	+	77.11		2.054E+00	3.648E-01	3.588E-01	3.923E-02	5.726
	+	87.30		1.626E+00	5.797E-01	5.714E-01	8.621E-02	2.846
	+	238.63	*	1.641E+00	1.695E-01	8.950E-02	6.789E-03	18.336
PO-218	+	300.09		1.940E+00	1.216E+00	1.219E+00	1.072E-01	1.590
	+	74.81		4.084E+00	1.086E+00	1.116E+00	1.475E-01	3.660
	+	77.11		3.522E+00	6.805E-01	6.151E-01	8.197E-02	5.726
	+	87.30		2.786E+00	9.770E-01	9.788E-01	1.339E-01	2.846
	+	241.98		2.452E+00	7.663E-01	5.388E-01	4.483E-02	4.551
RA-224	+	295.21		1.338E+00	2.287E-01	2.137E-01	1.929E-02	6.264
	+	351.92	*	1.284E+00	2.061E-01	1.100E-01	9.866E-03	11.671
	+	240.98	*	4.650E+00	1.429E+00	1.018E+00	6.251E-02	4.566
	+	609.31	*	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
	+	1120.29		1.200E+00	5.771E-01	5.578E-01	5.452E-02	2.150
AC-228	+	1764.49		1.223E+00	4.658E-01	3.517E-01	2.349E-02	3.479
	+	338.32		1.716E+00	8.153E-01	3.863E-01	1.580E-01	4.442
	+	911.07	*	1.620E+00	3.861E-01	2.180E-01	2.691E-02	7.430
	+	969.11		1.841E+00	7.959E-01	3.665E-01	8.664E-02	5.023
	+	338.32		1.716E+00	8.153E-01	3.863E-01	1.580E-01	4.442
RA-228	+	911.07	*	1.620E+00	3.861E-01	2.180E-01	2.691E-02	7.430
	+	969.11		1.841E+00	7.959E-01	3.665E-01	8.664E-02	5.023
	+	74.81		2.411E+00	6.162E-01	6.588E-01	7.251E-02	3.660
	+	77.11		2.090E+00	3.712E-01	3.650E-01	3.991E-02	5.726
	+	87.30		1.654E+00	5.661E-01	5.813E-01	6.568E-02	2.846
TH-228	+	238.63	*	1.670E+00	1.724E-01	9.105E-02	6.907E-03	18.336
	+	300.09		1.973E+00	1.690E+00	1.241E+00	7.322E-01	1.590
	+	609.31	*	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
	+	1120.29		1.200E+00	5.771E-01	5.578E-01	5.451E-02	2.150
	+	1764.49		1.223E+00	4.658E-01	3.517E-01	2.349E-02	3.479
TH-232	+	338.32		1.716E+00	4.303E-01	3.863E-01	2.590E-02	4.442
	+	911.07	*	1.620E+00	3.861E-01	2.180E-01	2.691E-02	7.430
	+	969.11		1.841E+00	7.959E-01	3.665E-01	8.664E-02	5.023
	+	63.29	*	4.435E+00	3.119E+00	2.905E+00	5.725E-01	1.527
	+	92.38		2.644E+00	1.054E+00	7.889E-01	1.493E-01	3.351
U-234	+	609.31	*	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
	+	1120.29		1.200E+00	5.771E-01	5.578E-01	5.451E-02	2.150
	+	1764.49		1.223E+00	4.658E-01	3.517E-01	2.349E-02	3.479
	+	86.50	*	1.032E+00	4.125E-01	4.502E-01	1.058E-01	2.293
	+	95.87		-8.659E-01	1.120E+00	1.537E+00	3.839E-01	-0.564
U-238	+	63.29	*	4.435E+00	3.119E+00	2.905E+00	5.725E-01	1.527
	+	92.38		2.644E+00	9.661E-01	7.889E-01	8.106E-02	3.351
	+	74.67	*	3.842E-01	9.810E-02	1.055E-01	1.155E-02	3.644
	+	86.72		3.872E+01	1.325E+01	1.679E+01	1.891E+00	2.306
	+							

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-2.259E+00	3.972E+00	6.280E+00	4.357E-01	-0.360
		142.18		1.115E+01	1.819E+01	2.944E+01	1.757E+00	0.379
ANH-511	+	511.00	*	1.547E-01	6.329E-02	4.395E-02	2.815E-03	3.521

---- 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	*	2.639E-02	3.441E-01	5.588E-01	4.156E-02	0.047
NA-22		1274.54	*	-2.138E-02	5.042E-02	8.043E-02	6.230E-03	-0.266
NA-24		1368.53	*	4.546E+00	5.042E-02	Half-Life too short		
AL-26		1129.67		-2.774E-01	1.748E+00	2.893E+00	2.029E-01	-0.096
		1808.65	*	7.065E-03	3.276E-02	5.524E-02	3.502E-03	0.128
TI-44		67.85		5.829E-02	6.163E-02	1.009E-01	1.140E-02	0.577
		78.38	*	1.453E-01	5.124E-02	8.083E-02	8.845E-03	1.797
SC-46		889.25	*	-8.415E-03	3.988E-02	6.377E-02	6.311E-03	-0.132
	+	1120.51		2.091E-01	9.965E-02	1.488E-01	1.069E-02	1.406
V-48		944.10		5.143E-01	1.078E+00	1.832E+00	1.775E-01	0.281
		983.50	*	-4.038E-02	8.918E-02	1.381E-01	1.277E-02	-0.292
		1312.09		-7.468E-02	1.086E-01	1.675E-01	1.399E-02	-0.446
CR-51		320.08	*	-8.386E-02	3.767E-01	6.155E-01	4.446E-02	-0.136
MN-52		744.21		-1.884E-02	3.342E-01	5.510E-01	3.594E-02	-0.034
		848.13		2.560E+00	9.826E+00	1.648E+01	1.461E+00	0.155
		935.52		2.775E-01	3.654E-01	6.344E-01	6.202E-02	0.437
		1246.25		3.895E+00	1.085E+01	1.862E+01	1.356E+00	0.209
		1333.61		1.153E+00	7.221E+00	1.219E+01	1.059E+00	0.095
		1434.06	*	4.687E-02	3.291E-01	5.532E-01	4.675E-02	0.085
MN-54		834.83	*	-2.833E-02	4.114E-02	6.354E-02	5.428E-03	-0.446
CO-56		846.75	*	-3.424E-02	4.486E-02	6.845E-02	6.045E-03	-0.500
		977.42		-1.457E-01	3.420E+00	5.527E+00	5.151E-01	-0.026
		1037.82		-1.548E-01	3.283E-01	5.019E-01	4.513E-02	-0.308
		1175.09		1.336E+00	2.711E+00	4.710E+00	2.918E-01	0.284
		1238.25		1.499E-01	1.150E-01	2.081E-01	1.551E-02	0.720
		1360.21		4.824E-02	1.196E+00	1.989E+00	1.718E-01	0.024
		1771.40		-3.463E-01	2.828E-01	3.424E-01	2.269E-02	-1.012
CO-57		122.06	*	-4.540E-03	2.684E-02	4.317E-02	2.847E-03	-0.105
		136.48		4.443E-02	2.191E-01	3.563E-01	2.492E-02	0.125
CO-58		810.76	*	-3.797E-02	4.016E-02	5.983E-02	4.787E-03	-0.635
FE-59		142.65		1.417E+00	2.917E+00	4.696E+00	2.798E-01	0.302
		192.34		-5.301E-01	1.008E+00	1.549E+00	1.822E-01	-0.342
		1099.22	*	-7.936E-02	1.132E-01	1.692E-01	1.412E-02	-0.469
		1291.56		-1.257E-01	1.461E-01	2.204E-01	2.040E-02	-0.570
CO-60		1173.22		7.681E-03	5.409E-02	9.156E-02	5.646E-03	0.084
		1332.49	*	4.615E-03	4.246E-02	7.128E-02	6.194E-03	0.065
ZN-65		1115.52	*	-2.220E-02	1.216E-01	1.639E-01	1.194E-02	-0.135
GE-68		1077.35	*	1.341E-01	1.413E+00	2.298E+00	1.820E-01	0.058
AS-73		53.44	*	2.676E+00	1.645E+00	2.862E+00	3.788E-01	0.935
AS-74		595.88	*	-9.033E-03	9.573E-02	1.599E-01	9.133E-03	-0.057
		634.78		2.375E-02	3.941E-01	6.631E-01	3.500E-02	0.036

---- 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		-4.999E+00	7.214E+00	1.032E+01	1.330E+00	-0.484
		96.73		-9.505E-01	9.435E-01	1.283E+00	1.816E-01	-0.741
		121.11		4.893E-02	1.419E-01	2.335E-01	2.287E-02	0.210
		136.00		2.373E-02	4.109E-02	6.789E-02	4.216E-03	0.350
		198.60		5.261E-01	1.829E+00	2.933E+00	2.078E-01	0.179
		264.65	*	1.242E-02	4.607E-02	7.280E-02	4.644E-03	0.171
		279.53		2.577E-02	1.167E-01	1.742E-01	1.194E-02	0.148
		303.91		5.573E-01	2.224E+00	3.313E+00	3.321E-01	0.168
		400.65		-9.222E-02	2.736E-01	4.372E-01	4.270E-02	-0.211
BR-77	+	87.88		1.473E+03	5.039E+02	7.051E+02	7.994E+01	2.089
		200.40		8.152E+01	3.190E+02	5.104E+02	2.944E+01	0.160
	+	239.00		5.021E+02	4.672E+01	7.474E+01	4.575E+00	6.718
		249.79		-9.207E+01	1.404E+02	1.980E+02	1.230E+01	-0.465
		281.68		-2.988E+01	1.895E+02	2.750E+02	1.771E+01	-0.109
		297.23		1.580E+02	1.035E+02	1.838E+02	1.200E+01	0.860
		303.76		9.304E+01	3.565E+02	5.317E+02	3.490E+01	0.175
		439.47		1.361E+02	2.694E+02	4.532E+02	3.047E+01	0.300
		484.57		-3.783E+02	4.616E+02	6.969E+02	4.566E+01	-0.543
		520.65	*	6.065E+00	1.925E+01	3.172E+01	2.012E+00	0.191
		574.64		-1.432E+02	4.042E+02	6.647E+02	3.934E+01	-0.215
		578.91		-7.976E+01	1.889E+02	2.656E+02	1.561E+01	-0.300
		585.48		1.010E+03	3.983E+02	6.993E+02	4.067E+01	1.444
		755.35		-5.351E+00	3.469E+02	5.733E+02	3.873E+01	-0.009
		817.79		1.052E+02	2.666E+02	4.537E+02	3.693E+01	0.232
SR-82		698.33		5.815E+00	3.830E+01	6.444E+01	3.615E+00	0.090
		776.49	*	-1.969E-01	4.105E-01	6.488E-01	4.677E-02	-0.304
		1395.20		-1.543E+01	1.287E+01	1.754E+01	1.501E+00	-0.880
RB-83		520.41	*	2.015E-02	6.789E-02	1.117E-01	7.089E-03	0.180
		529.64		3.137E-02	1.064E-01	1.748E-01	1.098E-02	0.180
		552.65		-1.810E-01	2.109E-01	3.118E-01	1.905E-02	-0.580
RB-84		881.50	*	2.774E-02	7.768E-02	1.313E-01	1.273E-02	0.211
KR-85		513.99	*	9.030E+00	7.296E+00	1.158E+01	7.398E-01	0.780
SR-85		513.99	*	4.739E-02	3.829E-02	6.078E-02	3.882E-03	0.780
RB-86		1076.63	*	-2.170E-01	1.014E+00	1.598E+00	1.268E-01	-0.136
Y-88		898.02		1.914E-02	4.214E-02	7.187E-02	7.301E-03	0.266
		1836.01	*	-1.154E-02	3.140E-02	4.585E-02	2.813E-03	-0.252
ZR-88		392.90	*	-3.672E-02	3.254E-02	4.909E-02	3.336E-03	-0.748
Y-91		1204.90	*	-8.534E+00	2.305E+01	3.738E+01	2.483E+00	-0.228
NB-94		702.63	*	1.505E-02	3.451E-02	5.925E-02	3.373E-03	0.254
		871.10		-6.677E-03	3.793E-02	6.110E-02	5.764E-03	-0.109
NB-95		765.79	*	4.122E-02	4.993E-02	8.634E-02	6.025E-03	0.477
NB-95M		235.69	*	2.574E-01	1.446E-01	2.339E-01	1.814E-02	1.101
ZR-95		724.18		9.132E-02	1.189E-01	1.843E-01	1.314E-02	0.495
		756.15	*	1.338E-02	7.857E-02	1.317E-01	1.035E-02	0.102
NB-97		657.90	*	-3.166E-01	7.857E-02	Half-Life too short		
		1024.50		-1.017E+02	7.857E-02	Half-Life too short		
ZR-97		254.15		-1.893E+01	7.857E-02	Half-Life too short		
		355.39		-3.960E+00	7.857E-02	Half-Life too short		
		507.63	*	3.084E+01	7.857E-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			1.148E+00	7.857E-02	Half-Life	too short	
	1021.30			6.385E+01	7.857E-02	Half-Life	too short	
	1147.95			2.279E+01	7.857E-02	Half-Life	too short	
	1362.66			-6.784E+01	7.857E-02	Half-Life	too short	
	1750.46			4.102E+00	7.857E-02	Half-Life	too short	
MO-99	140.51			-4.542E+01	4.942E+01	7.381E+01	1.993E+01	-0.615
	181.06			1.053E+01	3.180E+01	4.584E+01	7.825E+00	0.230
	366.43			-4.095E+00	1.453E+02	2.382E+02	1.613E+01	-0.017
	739.58	*		9.308E+00	2.217E+01	3.786E+01	5.322E+00	0.246
	778.00			-3.551E+01	5.825E+01	9.066E+01	6.567E+00	-0.392
TC-99M	140.51	*		-1.700E+13	5.825E+01	Half-Life	too short	
RH-101	127.23			-1.579E-03	3.406E-02	5.497E-02	3.513E-03	-0.029
	198.01	*		-1.417E-02	3.378E-02	5.224E-02	3.001E-03	-0.271
	325.23			1.123E-01	2.496E-01	3.754E-01	2.499E-02	0.299
RH-102	418.52			-2.625E-02	2.943E-01	4.766E-01	3.226E-02	-0.055
	475.06	*		-3.014E-02	3.134E-02	4.689E-02	3.093E-03	-0.643
	631.29			-3.200E-02	5.829E-02	9.372E-02	4.986E-03	-0.341
	697.49			4.365E-03	8.482E-02	1.381E-01	7.727E-03	0.032
	766.84			1.475E-01	1.271E-01	2.237E-01	1.566E-02	0.659
	1046.59			-3.922E-02	1.319E-01	2.066E-01	1.736E-02	-0.190
	1112.84			-1.814E-02	2.777E-01	4.164E-01	3.048E-02	-0.044
RU-103	497.08	*		-8.964E-03	4.256E-02	6.737E-02	8.740E-03	-0.133
+	610.33			1.190E+01	2.435E+00	2.906E+00	4.455E-01	4.095
RH-106	511.85	+		7.761E-01	3.174E-01	4.175E-01	2.672E-02	1.859
	621.84	*		-2.512E-01	3.417E-01	5.297E-01	6.123E-02	-0.474
	1050.47			1.360E+00	2.430E+00	4.147E+00	3.459E-01	0.328
RU-106	511.85	+		7.761E-01	3.174E-01	4.175E-01	2.672E-02	1.859
	621.84	*		-2.512E-01	3.407E-01	5.297E-01	2.877E-02	-0.474
	1050.47			1.360E+00	2.430E+00	4.147E+00	3.459E-01	0.328
AG-108M	433.93	*		-1.607E-02	3.225E-02	5.043E-02	3.616E-03	-0.319
	614.37			-2.191E-02	3.878E-02	5.579E-02	3.365E-03	-0.393
	722.95			-6.833E-03	4.858E-02	6.887E-02	4.519E-03	-0.099
AG-110M	657.75	*		-1.340E-02	3.787E-02	6.166E-02	3.340E-03	-0.217
	677.61			1.213E-01	3.122E-01	5.362E-01	3.010E-02	0.226
	706.67			-2.051E-01	2.116E-01	3.232E-01	1.978E-02	-0.635
	763.93			-1.319E-01	1.886E-01	2.952E-01	2.137E-02	-0.447
	884.67			1.414E-02	5.296E-02	8.877E-02	8.898E-03	0.159
	937.48			-8.626E-02	1.219E-01	1.842E-01	1.848E-02	-0.468
	1384.27			-1.281E-02	1.655E-01	2.577E-01	2.275E-02	-0.050
IN-111	171.28			2.057E-01	1.835E+00	2.939E+00	1.617E-01	0.070
	245.39	*		-1.352E+00	1.751E+00	2.829E+00	1.747E-01	-0.478
IN-113M	391.69	*		-4.467E-02	4.722E-02	7.233E-02	5.158E-03	-0.618
SN-113	391.69	*		-4.467E-02	4.722E-02	7.233E-02	5.158E-03	-0.618
IN-114M	190.27	*		7.384E-02	2.098E-01	3.022E-01	1.714E-02	0.244
CD-115	260.90			-2.365E+02	2.562E+02	4.084E+02	2.571E+01	-0.579
	492.35			8.237E+00	7.897E+01	1.282E+02	8.351E+00	0.064
	527.90	*		9.287E+00	2.116E+01	3.517E+01	2.214E+00	0.264
SN-117M	156.02			-2.014E-01	2.669E+00	4.260E+00	2.412E-01	-0.047
	158.56	*		1.278E-02	6.457E-02	1.042E-01	5.845E-03	0.123

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SB-122	563.90	*		5.342E-01	4.112E+00	6.628E+00	3.986E-01	0.081
	692.80			-4.082E+01	8.214E+01	1.316E+02	7.247E+00	-0.310
I-123	159.00	*		2.221E+01	8.214E+01	Half-Life too short		
	528.96			-1.343E+03	8.214E+01	Half-Life too short		
TE-123M	159.00	*		6.754E-03	3.028E-02	4.893E-02	2.779E-03	0.138
I-124	602.71	*		8.681E-02	1.122E+00	1.654E+00	9.333E-02	0.052
	722.78			-1.030E+00	7.320E+00	1.038E+01	6.319E-01	-0.099
	1325.50			8.037E+00	5.583E+01	9.406E+01	8.064E+00	0.085
+	1376.25			6.069E+01	6.621E+01	9.375E+01	8.068E+00	0.647
	1509.49			1.840E+01	2.385E+01	4.327E+01	3.537E+00	0.425
	1691.02			1.705E-01	5.510E+00	9.012E+00	6.482E-01	0.019
SB-124	602.71			3.587E-03	4.635E-02	6.836E-02	3.858E-03	0.052
	645.85			-2.499E-02	4.847E-01	8.073E-01	4.818E-02	-0.031
	709.31			1.857E-02	2.931E+00	4.874E+00	2.838E-01	0.004
	713.82			-4.404E-01	1.822E+00	2.971E+00	3.052E-01	-0.148
	722.78			-6.169E-02	4.385E-01	6.217E-01	3.947E-02	-0.099
+	968.20			1.944E+01	7.271E+00	8.774E+00	8.271E-01	2.216
	1045.16			-7.154E-01	2.894E+00	4.556E+00	3.836E-01	-0.157
	1325.50			5.142E-01	3.572E+00	6.018E+00	5.159E-01	0.085
	1368.21			7.901E-01	2.252E+00	3.521E+00	4.746E-01	0.224
	1436.60			-2.326E+00	4.493E+00	6.885E+00	5.813E-01	-0.338
	1691.02	*		2.410E-03	7.785E-02	1.273E-01	9.675E-03	0.019
SB-125	427.89	*		-2.340E-02	9.046E-02	1.444E-01	1.005E-02	-0.162
+	463.38			4.491E-01	4.652E-01	5.646E-01	4.235E-02	0.795
	600.56			-2.396E-02	1.766E-01	2.940E-01	1.938E-02	-0.081
	635.90			-7.778E-02	2.782E-01	4.561E-01	2.892E-02	-0.171
TE-125M	109.28	*		-3.250E+00	1.001E+01	1.606E+01	1.543E+00	-0.202
I-126	388.63	*		3.996E-01	2.430E-01	4.340E-01	2.949E-02	0.921
	666.33	*		-1.324E-01	2.163E-01	3.447E-01	1.729E-02	-0.384
	753.82			1.861E-01	1.886E+00	3.145E+00	2.114E-01	0.059
SB-126	223.80			3.738E+00	4.658E+00	8.117E+00	4.860E-01	0.460
+	278.60			4.493E+00	3.626E+00	4.706E+00	3.020E-01	0.955
	296.50			1.089E+01	2.095E+00	3.930E+00	2.564E-01	2.771
	414.70			1.762E-02	8.290E-02	1.371E-01	9.291E-03	0.129
	415.30			-9.563E-01	6.985E+00	1.128E+01	7.639E-01	-0.085
	555.20			2.516E+00	4.806E+00	7.996E+00	4.868E-01	0.315
	573.80			-4.280E-01	1.170E+00	1.922E+00	1.139E-01	-0.223
	593.00			-9.225E-02	1.020E+00	1.705E+00	9.791E-02	-0.054
	656.30			-1.419E+00	3.970E+00	6.456E+00	3.232E-01	-0.220
	666.33			-5.563E-02	9.084E-02	1.448E-01	7.262E-03	-0.384
	675.00			-9.128E-01	2.282E+00	3.684E+00	1.906E-01	-0.248
	695.00			-1.141E-02	9.317E-02	1.537E-01	8.524E-03	-0.074
	697.00			8.982E-02	3.360E-01	5.557E-01	3.104E-02	0.162
	720.50	*		-7.134E-02	1.979E-01	2.734E-01	1.652E-02	-0.261
	856.80			1.994E-01	5.668E-01	8.445E-01	7.665E-02	0.236
	989.30			1.738E+00	1.738E+00	3.050E+00	2.799E-01	0.570
	1034.80			-2.055E+00	9.861E+00	1.548E+01	1.327E+00	-0.133
	1213.00			-1.605E+00	6.770E+00	1.111E+01	7.519E-01	-0.144
SB-127	61.10			6.887E+01	1.393E+02	2.128E+02	3.106E+01	0.324

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	252.40			1.481E+00	6.197E+00	1.047E+01	4.378E+00	0.141
	290.80			1.707E+01	3.628E+01	5.487E+01	5.706E+00	0.311
	411.60			-2.706E+01	1.977E+01	2.862E+01	4.385E+00	-0.945
	444.90			1.401E+01	1.447E+01	2.496E+01	2.990E+00	0.561
	473.00			7.133E-01	2.650E+00	4.363E+00	5.354E-01	0.163
	543.00			-2.918E+01	2.623E+01	3.751E+01	5.127E+00	-0.778
	603.60			8.323E+00	1.962E+01	2.988E+01	3.401E+00	0.279
	685.20	*		-2.063E+00	2.024E+00	3.065E+00	3.061E-01	-0.673
	698.50			-2.898E+00	2.430E+01	4.009E+01	5.988E+00	-0.072
	722.20			-2.537E+01	5.283E+01	7.185E+01	7.289E+00	-0.353
	783.80			1.573E+00	5.491E+00	9.273E+00	1.135E+00	0.170
XE-127	57.60			-1.578E+00	1.039E+01	1.724E+01	2.192E+00	-0.092
	145.22			-4.448E-02	7.198E-01	1.153E+00	6.802E-02	-0.039
	172.10			7.765E-03	1.323E-01	2.114E-01	1.164E-02	0.037
	202.84	*		-9.779E-05	4.806E-02	8.157E-02	4.723E-03	-0.001
	374.96			2.182E-01	2.047E-01	3.575E-01	2.425E-02	0.610
I-131	80.18			-2.217E+00	6.949E+00	1.009E+01	1.113E+00	-0.220
	284.30			-7.319E-01	1.849E+00	3.019E+00	2.133E-01	-0.242
	364.48	*		1.391E-02	1.387E-01	2.295E-01	1.692E-02	0.061
	636.97			7.699E-01	1.857E+00	3.207E+00	1.935E-01	0.240
	722.89			-1.392E+00	9.899E+00	1.403E+01	8.690E-01	-0.099
TE-132	49.72			9.689E+00	6.594E+01	1.113E+02	1.640E+01	0.087
	111.76			-5.635E+00	5.047E+01	8.172E+01	8.690E+00	-0.069
	116.30			4.857E+00	4.517E+01	7.369E+01	7.620E+00	0.066
	228.16	*		-1.139E-01	1.119E+00	1.880E+00	2.805E-01	-0.061
BA-133	53.15			9.307E+00	7.023E+00	1.218E+01	1.613E+00	0.764
	79.62			-5.550E-01	1.611E+00	2.335E+00	3.890E-01	-0.238
	81.00			-1.079E-01	1.256E-01	1.755E-01	3.033E-02	-0.615
	276.40	+		5.937E-01	4.840E-01	6.405E-01	8.483E-02	0.927
	302.84			8.979E-02	1.515E-01	2.310E-01	2.785E-02	0.389
	356.01	*		1.367E-02	4.531E-02	6.719E-02	8.107E-03	0.204
	383.85			-3.549E-01	3.031E-01	4.524E-01	5.172E-02	-0.784
I-133	510.53	+		9.222E+00	3.031E-01	Half-Life	too short	
	529.87	*		1.352E-03	3.031E-01	Half-Life	too short	
	706.58			-2.235E+00	3.031E-01	Half-Life	too short	
	856.28			-2.137E-01	3.031E-01	Half-Life	too short	
	875.33			-1.643E-01	3.031E-01	Half-Life	too short	
	1236.41			8.692E+00	3.031E-01	Half-Life	too short	
	1298.22			1.690E+00	3.031E-01	Half-Life	too short	
CS-134	475.35			-1.624E+00	2.021E+00	3.062E+00	2.020E-01	-0.530
	563.23			-1.695E-01	4.161E-01	6.438E-01	3.951E-02	-0.263
	569.32			1.150E-01	2.160E-01	3.532E-01	2.167E-02	0.326
	604.70			2.446E-02	3.866E-02	5.997E-02	3.391E-03	0.408
	795.84	*		8.462E-02	5.219E-02	9.559E-02	7.369E-03	0.885
	801.93			-2.015E-01	4.200E-01	6.625E-01	5.187E-02	-0.304
	1038.57			-2.171E-01	4.050E+00	6.503E+00	5.538E-01	-0.033
	1167.94			-2.789E-01	2.756E+00	4.575E+00	2.870E-01	-0.061
	1365.15			-2.904E-01	1.395E+00	2.249E+00	2.029E-01	-0.129
CS-135	268.24	*		3.323E-01	1.752E-01	2.873E-01	2.321E-02	1.157

----- 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		1.707E+12	1.752E-01	Half-Life	too short	
		417.63		6.441E+11	1.752E-01	Half-Life	too short	
		546.56		1.456E+12	1.752E-01	Half-Life	too short	
		836.80		3.085E+12	1.752E-01	Half-Life	too short	
		1038.76		3.895E+11	1.752E-01	Half-Life	too short	
		1124.00		1.073E+13	1.752E-01	Half-Life	too short	
		1131.51		-8.829E+11	1.752E-01	Half-Life	too short	
		1260.41	*	-1.351E+12	1.752E-01	Half-Life	too short	
		1457.56		3.332E+14	1.752E-01	Half-Life	too short	
		1678.03		-1.907E+12	1.752E-01	Half-Life	too short	
		1706.46		-2.401E+12	1.752E-01	Half-Life	too short	
		1791.20		-2.080E+12	1.752E-01	Half-Life	too short	
CS-136		66.91		3.442E-01	1.250E+00	1.884E+00	3.226E-01	0.183
	+	86.29		5.155E+00	1.831E+00	2.537E+00	3.738E-01	2.032
		153.22		-2.691E-02	7.418E-01	1.187E+00	8.500E-02	-0.023
		163.89		1.194E+00	1.243E+00	2.068E+00	1.451E-01	0.577
		176.55		1.655E-01	4.181E-01	6.779E-01	4.268E-02	0.244
		273.65		1.592E-01	7.302E-01	8.017E-01	5.722E-02	0.199
		340.57		1.468E-01	1.676E-01	2.576E-01	1.812E-02	0.570
		818.51		4.504E-02	8.652E-02	1.488E-01	1.216E-02	0.303
		1048.07	*	9.525E-03	1.349E-01	2.192E-01	1.919E-02	0.043
		1235.34		1.039E+00	8.316E-01	1.489E+00	1.609E-01	0.698
BA-137M		661.65	*	3.652E-02	3.937E-02	6.977E-02	3.442E-03	0.524
CS-137		661.65	*	3.861E-02	4.162E-02	7.375E-02	3.660E-03	0.524
CE-139		165.85	*	-3.572E-02	3.220E-02	4.862E-02	2.656E-03	-0.735
BA-140		162.64		2.645E-01	8.986E-01	1.455E+00	9.135E-02	0.182
		304.84		-6.315E-01	1.555E+00	2.182E+00	5.992E-01	-0.289
LA-140		423.70		-8.828E-01	2.230E+00	3.502E+00	1.120E+00	-0.252
		537.32	*	1.659E-01	3.175E-01	5.217E-01	1.701E-01	0.318
	+	328.77		4.615E-01	4.694E-01	6.265E-01	4.564E-02	0.737
		432.53		1.028E+00	2.145E+00	3.613E+00	2.626E-01	0.285
		487.03		1.280E-01	1.621E-01	2.761E-01	1.995E-02	0.463
		751.79		2.863E+00	2.087E+00	3.794E+00	2.972E-01	0.755
		815.85		6.720E-02	3.665E-01	6.132E-01	5.608E-02	0.110
		867.82		2.983E-01	1.977E+00	2.856E+00	2.791E-01	0.104
		919.63		-3.757E+00	3.504E+00	4.613E+00	5.413E-01	-0.814
		925.24		7.620E-01	1.386E+00	2.373E+00	2.456E-01	0.321
		1596.49	*	-1.602E-02	1.073E-01	1.713E-01	1.329E-02	-0.094
CE-141		145.44	*	-5.549E-02	6.753E-02	1.043E-01	6.384E-03	-0.532
CE-143		57.37		-3.012E-03	6.753E-02	Half-Life	too short	
		231.56		-1.697E-03	6.753E-02	Half-Life	too short	
		293.26	*	2.831E-03	6.753E-02	Half-Life	too short	
	+	350.59		8.917E-02	6.753E-02	Half-Life	too short	
		490.36		6.723E-04	6.753E-02	Half-Life	too short	
		664.57		-1.409E-03	6.753E-02	Half-Life	too short	
CE-144		721.93		-2.064E-03	6.753E-02	Half-Life	too short	
		80.11		-8.980E-01	2.659E+00	3.857E+00	4.232E-01	-0.233
PM-144		133.54	*	-1.873E-01	2.188E-01	3.370E-01	4.842E-02	-0.556
		476.78		-9.434E-03	7.117E-02	1.138E-01	8.667E-03	-0.083

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144		618.01		-7.101E-03	3.085E-02	5.084E-02	2.971E-03	-0.140
		696.49	*	5.656E-03	3.817E-02	6.258E-02	3.493E-03	0.090
		778.57		-2.048E-01	2.233E+00	3.657E+00	2.655E-01	-0.056
		696.49	*	3.837E-01	2.589E+00	4.246E+00	2.367E-01	0.090
PM-146		1489.15		6.826E+00	1.124E+01	2.030E+01	1.677E+00	0.336
		453.90	*	8.473E-03	4.242E-02	6.977E-02	6.444E-03	0.121
		633.02		4.371E-01	1.426E+00	2.428E+00	8.924E-01	0.180
		735.90		-5.476E-02	1.617E-01	2.597E-01	7.271E-02	-0.211
ND-147	+	747.13		-1.168E-01	9.865E-02	1.450E-01	1.869E-02	-0.806
		91.11		4.618E-01	3.694E-01	6.573E-01	7.328E-02	0.703
		319.41		-3.774E-01	3.616E+00	5.951E+00	3.950E-01	-0.063
		439.89		-7.358E-01	6.818E+00	1.099E+01	7.388E-01	-0.067
PM-149		531.02	*	4.662E-02	6.488E-01	1.046E+00	1.437E-01	0.045
		285.90	*	3.671E+01	1.876E+02	3.157E+02	4.567E+01	0.116
EU-152		121.78		-7.624E-03	7.699E-02	1.242E-01	1.024E-02	-0.061
		244.69		-1.546E-01	3.164E-01	5.193E-01	3.204E-02	-0.298
		344.27	*	-5.876E-02	1.023E-01	1.567E-01	1.154E-02	-0.375
		443.98		1.680E-01	9.376E-01	1.542E+00	1.035E-01	0.109
		778.89		-3.528E-02	2.557E-01	4.169E-01	3.027E-02	-0.085
		867.32		2.486E-01	1.038E+00	1.517E+00	1.416E-01	0.164
		964.01		8.096E-01	3.755E-01	6.404E-01	6.067E-02	1.264
		1085.78		-1.906E-01	4.732E-01	7.265E-01	5.655E-02	-0.262
GD-153		1112.02		-1.757E-01	3.904E-01	5.810E-01	4.261E-02	-0.302
		1407.95		3.124E-01	2.015E-01	3.900E-01	3.325E-02	0.801
		69.67		-1.374E+00	2.364E+00	3.405E+00	3.798E-01	-0.403
		83.37		1.156E+01	1.897E+01	2.847E+01	3.156E+00	0.406
EU-154		97.43	*	-7.421E-02	9.676E-02	1.346E-01	1.253E-02	-0.551
		103.18		-3.104E-02	1.124E-01	1.813E-01	1.532E-02	-0.171
		123.07		3.015E-02	5.379E-02	8.913E-02	8.808E-03	0.338
		247.94		2.032E-02	3.895E-01	5.790E-01	5.666E-02	0.035
		591.81		1.272E-02	6.065E-01	1.022E+00	9.962E-02	0.012
		723.30		-1.535E-02	2.062E-01	2.947E-01	2.159E-02	-0.052
		756.87		-2.114E-01	8.282E-01	1.341E+00	1.440E-01	-0.158
		873.19		4.418E-02	3.223E-01	5.342E-01	6.874E-02	0.083
EU-155		996.32		-3.789E-01	4.397E-01	6.454E-01	1.162E-01	-0.587
		1004.76		-9.644E-02	2.471E-01	3.849E-01	4.583E-02	-0.251
		1274.45	*	-5.779E-02	1.409E-01	2.250E-01	2.397E-02	-0.257
		48.70		1.017E+00	5.519E+00	9.331E+00	1.121E+00	0.109
TB-160		60.01		2.822E+00	8.281E+00	1.259E+01	1.551E+00	0.224
	+	86.54		4.238E-01	1.451E-01	2.100E-01	2.377E-02	2.018
		105.31	*	2.583E-02	1.161E-01	1.911E-01	1.585E-02	0.135
	+	86.79		1.155E+00	3.953E-01	5.728E-01	6.453E-02	2.017
		197.04		-2.645E-01	5.813E-01	8.974E-01	5.147E-02	-0.295
		215.65		7.774E-01	7.718E-01	1.357E+00	8.020E-02	0.573
		298.57		1.491E-01	1.198E-01	2.072E-01	1.354E-02	0.720
		879.36	*	-9.466E-02	1.532E-01	2.353E-01	2.269E-02	-0.402
		962.29		1.115E+00	6.637E-01	1.122E+00	1.065E-01	0.994
		966.15		1.512E+00	3.498E-01	6.489E-01	6.132E-02	2.329
		1177.93		-3.571E-01	4.392E-01	6.854E-01	4.274E-02	-0.521

----- 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		2.080E-01	8.322E-01	1.417E+00	1.090E-01	0.147
		80.57		-2.033E-01	3.426E-01	4.899E-01	5.381E-02	-0.415
	+	184.41		1.536E-01	5.782E-02	6.946E-02	3.901E-03	2.211
		280.46		3.220E-03	8.952E-02	1.319E-01	8.479E-03	0.024
		410.95		2.768E-02	2.537E-01	4.167E-01	2.826E-02	0.066
		711.68	*	5.784E-02	6.369E-02	1.129E-01	6.623E-03	0.512
TM-171		752.31		2.369E-01	3.000E-01	5.258E-01	3.519E-02	0.451
		810.29		-5.848E-02	5.943E-02	8.818E-02	7.025E-03	-0.663
		51.35		-9.986E+01	6.445E+01	9.874E+01	1.299E+01	-1.011
		52.39		8.862E+00	3.117E+01	5.274E+01	6.986E+00	0.168
		59.40		6.444E+00	4.549E+01	6.854E+01	8.515E+00	0.094
		66.72	*	-2.543E+01	4.189E+01	6.032E+01	6.871E+00	-0.422
LU-176	+	88.36		2.769E-01	2.213E-01	3.870E-01	4.353E-02	0.715
		201.83		-1.025E-02	2.785E-02	4.656E-02	2.692E-03	-0.220
		306.84	*	-2.250E-02	2.642E-02	3.814E-02	2.509E-03	-0.590
		401.10		-3.421E+00	7.134E+00	1.129E+01	7.670E-01	-0.303
LU-177		112.95		1.503E+00	2.125E+00	3.553E+00	2.616E-01	0.423
	+	208.36	*	3.421E+00	1.904E+00	2.484E+00	1.452E-01	1.377
LU-177M		52.97		3.698E+00	3.219E+00	5.568E+00	7.377E-01	0.664
		54.07		2.526E+00	1.676E+00	2.908E+00	3.835E-01	0.869
		61.30		1.798E+00	2.452E+00	3.781E+00	4.575E-01	0.476
		121.62		-5.220E-02	3.995E-01	6.438E-01	4.259E-02	-0.081
		147.16		2.933E-01	6.504E-01	1.066E+00	6.239E-02	0.275
		171.86		-8.438E-02	5.212E-01	8.240E-01	4.536E-02	-0.102
		218.09		-3.299E-01	8.655E-01	1.440E+00	8.545E-02	-0.229
	+	268.79		2.309E+00	9.779E-01	1.514E+00	9.618E-02	1.525
		319.02		-3.957E-02	2.458E-01	4.031E-01	2.674E-02	-0.098
		367.43		8.612E-02	9.121E-01	1.507E+00	1.021E-01	0.057
		413.65	*	-9.881E-02	1.765E-01	2.764E-01	1.873E-02	-0.358
		56.28		-1.571E+00	1.745E+00	2.793E+00	3.609E-01	-0.562
		57.53		-4.482E-01	8.847E-01	1.444E+00	1.838E-01	-0.310
		65.20		-6.122E-01	1.438E+00	2.094E+00	2.419E-01	-0.292
HF-181		133.02		8.960E-03	7.076E-02	1.148E-01	7.130E-03	0.078
		136.25		9.829E-02	4.977E-01	8.091E-01	4.952E-02	0.121
		345.85		8.458E-02	2.203E-01	3.291E-01	2.213E-02	0.257
		482.03	*	-1.636E-02	4.571E-02	7.174E-02	4.709E-03	-0.228
		56.28		-6.016E-01	6.672E-01	1.068E+00	1.379E-01	-0.563
		57.53		-1.717E-01	3.385E-01	5.527E-01	7.033E-02	-0.311
		65.20	*	-2.324E-01	5.460E-01	7.948E-01	9.184E-02	-0.292
		67.75		1.318E-01	1.489E-01	2.435E-01	2.751E-02	0.541
		100.10		2.249E-02	1.909E-01	3.135E-01	2.786E-02	0.072
		152.43		-9.722E-02	3.382E-01	5.347E-01	3.068E-02	-0.182
W-181		222.10		1.545E-01	3.516E-01	6.049E-01	3.612E-02	0.255
		1001.68		1.973E+00	2.407E+00	4.127E+00	3.723E-01	0.478
	+	1121.28		5.748E-01	2.739E-01	4.062E-01	2.912E-02	1.415
		1189.05		1.708E-01	4.023E-01	6.930E-01	4.437E-02	0.246
		1221.42	*	-1.059E-01	2.429E-01	3.919E-01	2.702E-02	-0.270
		1230.97		-5.011E-01	5.789E-01	8.993E-01	6.335E-02	-0.557
RE-183		57.98		1.436E-01	3.418E-01	5.541E-01	7.011E-02	0.259

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184		59.32		1.974E-02	1.910E-01	2.872E-01	3.572E-02	0.069
		67.20		2.230E-01	2.898E-01	4.460E-01	5.061E-02	0.500
		162.32	*	4.912E-02	1.187E-01	1.932E-01	1.069E-02	0.254
	+	208.81		2.502E+00	1.392E+00	1.845E+00	1.079E-01	1.356
		291.72		4.543E-02	1.102E+00	1.619E+00	1.052E-01	0.028
		57.98		5.226E-01	1.243E+00	2.016E+00	2.550E-01	0.259
		59.32		7.176E-02	6.943E-01	1.044E+00	1.298E-01	0.069
		67.20		8.111E-01	1.054E+00	1.622E+00	1.841E-01	0.500
		161.27		-1.142E-01	3.816E-01	6.015E-01	3.340E-02	-0.190
		216.55		2.645E-01	2.735E-01	4.799E-01	2.841E-02	0.551
		252.85	*	1.096E-01	2.216E-01	3.810E-01	2.376E-02	0.288
		318.01		-1.510E-01	4.194E-01	6.792E-01	4.502E-02	-0.222
OS-185		792.07		-3.943E-01	1.138E+00	1.827E+00	1.380E-01	-0.216
		903.28		3.515E-01	1.129E+00	1.665E+00	1.678E-01	0.211
		920.93		-2.355E-01	4.629E-01	7.132E-01	7.074E-02	-0.330
		59.72		1.548E-01	5.045E-01	7.660E-01	9.474E-02	0.202
		61.14		1.464E-01	2.705E-01	4.143E-01	5.023E-02	0.353
		69.30		1.093E-02	4.209E-01	6.263E-01	7.000E-02	0.017
		592.07		-5.306E-02	2.507E+00	4.212E+00	2.422E-01	-0.013
		646.12	*	8.720E-04	4.170E-02	6.987E-02	3.589E-03	0.012
		717.42		2.758E-01	9.722E-01	1.649E+00	9.865E-02	0.167
		874.81		1.459E-01	6.322E-01	1.057E+00	1.007E-01	0.138
		880.27		-6.914E-01	8.438E-01	1.265E+00	1.222E-01	-0.547
		155.03	*	8.902E-02	1.798E-01	2.943E-01	1.672E-02	0.302
RE-188		477.96		1.622E+00	3.233E+00	5.411E+00	3.562E-01	0.300
		633.10		9.777E-01	2.933E+00	5.033E+00	2.667E-01	0.194
W-188	+	63.58		1.822E+02	1.249E+02	1.370E+02	1.611E+01	1.330
		227.08		3.924E+00	1.323E+01	2.260E+01	1.360E+00	0.174
IR-192	+	290.67	*	3.513E-03	8.830E+00	1.294E+01	8.400E-01	0.000
		295.96		1.042E+00	1.660E-01	2.985E-01	1.971E-02	3.490
AU-195		308.46		4.348E-02	9.585E-02	1.631E-01	1.084E-02	0.267
		316.51	*	-1.670E-02	3.364E-02	5.405E-02	3.594E-03	-0.309
		468.07		-1.153E-02	8.634E-02	1.204E-01	8.931E-03	-0.096
		604.41		3.370E-01	5.336E-01	8.261E-01	9.303E-02	0.408
		612.46		6.580E-01	6.945E-01	1.121E+00	8.263E-02	0.587
		65.12		-9.039E-02	2.528E-01	3.695E-01	4.273E-02	-0.245
		66.83		2.586E-02	1.345E-01	2.021E-01	2.300E-02	0.128
	+	75.70		1.828E+00	3.247E-01	5.697E-01	6.232E-02	3.209
		98.88	*	2.579E-01	2.453E-01	4.123E-01	3.742E-02	0.626
		129.76		3.134E+00	3.099E+00	5.201E+00	3.281E-01	0.602
		367.94	*	1.322E-03	3.099E+00	Half-Life	too short	
		579.30		-5.192E-03	3.099E+00	Half-Life	too short	
TL-200		828.27		9.798E-03	3.099E+00	Half-Life	too short	
		1205.75		-1.790E-03	3.099E+00	Half-Life	too short	
TL-201		68.90		-4.521E-01	1.054E+01	1.665E+01	1.866E+00	-0.027
		70.82		-4.559E+00	6.319E+00	9.026E+00	1.001E+00	-0.505
		80.30		-6.229E+00	1.051E+01	1.503E+01	1.649E+00	-0.415
		135.34		-1.956E+01	4.431E+01	7.003E+01	4.303E+00	-0.279
		167.43	*	-1.045E+00	1.195E+01	1.898E+01	1.038E+00	-0.055

---- 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		-2.786E-02	6.493E-01	1.026E+00	1.150E-01	-0.027
		70.82		-2.802E-01	3.884E-01	5.547E-01	6.149E-02	-0.505
		80.30		-3.829E-01	6.458E-01	9.237E-01	1.014E-01	-0.415
		439.56	*	4.728E-04	7.970E-02	1.295E-01	8.705E-03	0.004
HG-203		70.83		-1.098E+00	1.539E+00	2.193E+00	3.352E-01	-0.501
		72.87		2.219E+00	9.307E-01	1.433E+00	2.130E-01	1.549
		82.60		2.147E-01	1.372E+00	2.146E+00	3.302E-01	0.100
		279.20	*	2.477E-02	4.505E-02	6.880E-02	4.643E-03	0.360
BI-207		72.80		5.533E-01	2.525E-01	3.995E-01	4.394E-02	1.385
	+	74.97		6.898E-01	1.761E-01	2.801E-01	3.066E-02	2.463
		84.90		2.411E-01	2.361E-01	3.592E-01	4.008E-02	0.671
		569.67		1.218E-02	3.321E-02	5.365E-02	3.199E-03	0.227
		1063.62	*	6.413E-02	6.516E-02	1.137E-01	9.259E-03	0.564
		1770.23		-1.441E+00	6.684E-01	6.404E-01	4.249E-02	-2.249
TL-207		81.07		-2.409E-01	2.750E-01	3.865E-01	4.251E-02	-0.623
		83.78		1.405E-01	1.571E-01	2.383E-01	2.645E-02	0.590
		94.90		2.599E-01	2.617E-01	4.016E-01	3.921E-02	0.647
		122.32		-1.606E-01	1.841E+00	2.971E+00	2.193E-01	-0.054
		144.24		1.561E-01	7.136E-01	1.135E+00	8.320E-02	0.138
		154.21		2.776E-01	3.997E-01	6.601E-01	4.574E-02	0.421
	+	269.46		5.355E-01	2.270E-01	3.537E-01	2.334E-02	1.514
		323.87	*	-3.582E-02	7.410E-01	1.073E+00	1.806E-01	-0.033
	+	338.28		7.166E+00	1.904E+00	2.648E+00	2.928E-01	2.706
		445.03		2.108E+00	2.255E+00	3.888E+00	4.202E-01	0.542
PO-209		260.50		-4.196E+00	9.372E+00	1.534E+01	9.654E-01	-0.274
		262.80		6.698E+00	2.599E+01	4.408E+01	2.781E+00	0.152
		896.60	*	4.710E+00	7.379E+00	1.280E+01	1.291E+00	0.368
BI-210		46.50	*	2.965E+00	9.046E+00	1.539E+01	1.510E+00	0.193
PB-210		46.50	*	2.965E+00	9.046E+00	1.539E+01	1.510E+00	0.193
PO-210		46.50	*	2.965E+00	9.045E+00	1.539E+01	1.382E+00	0.193
PB-211		404.84	*	-5.741E-01	1.060E+00	1.570E+00	9.800E-01	-0.366
		427.08		-3.627E-01	2.005E+00	3.199E+00	1.980E+00	-0.113
		831.96		-7.277E-01	1.404E+00	2.079E+00	1.303E+00	-0.350
PO-215		81.07		-2.409E-01	2.750E-01	3.865E-01	4.251E-02	-0.623
		83.78		1.405E-01	1.571E-01	2.383E-01	2.645E-02	0.590
		94.90		2.599E-01	2.617E-01	4.016E-01	3.921E-02	0.647
		122.32		-1.606E-01	1.841E+00	2.971E+00	2.193E-01	-0.054
		144.24		1.561E-01	7.136E-01	1.135E+00	8.320E-02	0.138
		154.21		2.776E-01	3.997E-01	6.601E-01	4.574E-02	0.421
	+	269.46		5.355E-01	2.270E-01	3.537E-01	2.334E-02	1.514
		323.87	*	-3.582E-02	7.410E-01	1.073E+00	1.806E-01	-0.033
	+	338.28		7.166E+00	1.904E+00	2.648E+00	2.928E-01	2.706
		445.03		2.108E+00	2.255E+00	3.888E+00	4.202E-01	0.542
RN-219	+	271.23		6.871E-01	2.935E-01	4.450E-01	3.792E-02	1.544
		401.81	*	-1.264E-01	4.263E-01	6.823E-01	9.591E-02	-0.185
RN-220		549.76	*	-7.396E+00	2.622E+01	4.089E+01	2.508E+00	-0.181
RA-223		81.07		-2.409E-01	2.750E-01	3.865E-01	4.251E-02	-0.623
		83.78		1.405E-01	1.571E-01	2.383E-01	2.645E-02	0.590
		94.90		2.599E-01	2.617E-01	4.016E-01	3.921E-02	0.647

----- 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		-1.606E-01	1.841E+00	2.971E+00	2.193E-01	-0.054
		144.24		1.561E-01	7.136E-01	1.135E+00	8.320E-02	0.138
		154.21		2.776E-01	3.997E-01	6.601E-01	4.574E-02	0.421
	+	269.46		5.355E-01	2.270E-01	3.537E-01	2.334E-02	1.514
		323.87	*	-3.582E-02	7.410E-01	1.073E+00	1.806E-01	-0.033
	+	338.28		7.166E+00	1.904E+00	2.648E+00	2.928E-01	2.706
		445.03		2.108E+00	2.255E+00	3.888E+00	4.202E-01	0.542
		79.80		-8.411E-01	2.056E+00	2.962E+00	6.678E-01	-0.284
		236.00		9.029E-01	2.914E-01	4.762E-01	5.057E-02	1.896
		256.20	*	5.561E-02	3.697E-01	6.245E-01	8.842E-02	0.089
		286.10		5.320E-01	1.568E+00	2.657E+00	3.164E-01	0.200
	+	299.80		3.595E+00	2.309E+00	2.751E+00	4.557E-01	1.307
TH-227		304.40		-2.318E-01	1.985E+00	2.871E+00	5.044E-01	-0.081
		334.20		-1.066E+00	2.693E+00	3.774E+00	7.033E-01	-0.282
		79.80		-8.411E-01	2.057E+00	2.962E+00	6.756E-01	-0.284
	+	94.00		1.022E+01	4.256E+00	3.909E+00	8.731E-01	2.613
		236.00		9.029E-01	2.876E-01	4.762E-01	4.405E-02	1.896
		256.20	*	5.561E-02	3.698E-01	6.245E-01	1.066E-01	0.089
		286.10		5.320E-01	1.655E+00	2.657E+00	2.663E+00	0.200
	+	299.80		3.595E+00	2.309E+00	2.751E+00	4.557E-01	1.307
		304.40		-2.318E-01	1.985E+00	2.871E+00	5.044E-01	-0.081
		334.20		-1.066E+00	2.693E+00	3.774E+00	7.033E-01	-0.282
	+	85.43		7.884E-01	2.698E-01	3.730E-01	4.172E-02	2.114
	+	88.47		1.594E-01	1.274E-01	2.210E-01	2.479E-02	0.721
TH-229		100.00		3.717E-02	1.962E-01	3.231E-01	2.877E-02	0.115
		193.63	*	1.714E-01	5.125E-01	8.250E-01	4.705E-02	0.208
		210.97		9.195E-02	8.300E-01	1.250E+00	7.334E-02	0.074
	+	283.67	*	1.352E-01	1.534E+00	2.570E+00	3.615E-01	0.053
	+	301.29		1.438E+00	9.061E-01	1.068E+00	1.162E-01	1.347
	TH-231	81.07		-2.409E-01	2.750E-01	3.865E-01	4.251E-02	-0.623
		83.78		1.405E-01	1.571E-01	2.383E-01	2.645E-02	0.590
		94.90		2.599E-01	2.617E-01	4.016E-01	3.921E-02	0.647
		122.32		-1.606E-01	1.841E+00	2.971E+00	2.193E-01	-0.054
		144.24		1.561E-01	7.136E-01	1.135E+00	8.320E-02	0.138
		154.21		2.776E-01	3.997E-01	6.601E-01	4.574E-02	0.421
	+	269.46		5.355E-01	2.270E-01	3.537E-01	2.334E-02	1.514
U-231		323.87	*	-3.582E-02	7.410E-01	1.073E+00	1.806E-01	-0.033
	+	338.28		7.166E+00	1.904E+00	2.648E+00	2.928E-01	2.706
		445.03		2.108E+00	2.255E+00	3.888E+00	4.202E-01	0.542
		84.21		8.430E+00	9.635E+00	1.460E+01	1.624E+00	0.577
	+	92.29		1.453E+01	5.310E+00	6.493E+00	6.685E-01	2.238
		95.87	*	-1.413E+00	1.798E+00	2.508E+00	2.403E-01	-0.564
		108.00		-7.997E-01	3.151E+00	5.079E+00	3.998E-01	-0.157
	PA-233	75.28		2.013E+01	5.739E+00	8.525E+00	1.429E+00	2.361
	+	86.59		6.883E+00	2.933E+00	3.416E+00	9.488E-01	2.015
	+	300.12		1.002E+00	6.372E-01	7.688E-01	1.059E-01	1.303
		311.98	*	4.410E-02	6.442E-02	1.108E-01	7.665E-03	0.398
		340.50		7.914E-01	7.522E-01	1.138E+00	2.642E-01	0.695
		398.62		1.711E+00	2.198E+00	3.693E+00	9.639E-01	0.463

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error (pCi/GRAM)	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		1.446E-01	1.636E+00	2.683E+00	0.054
		63.00		5.170E+00	3.605E+00	4.038E+00	1.280
		94.67		4.010E-01	1.923E-01	3.011E-01	1.331
		98.44		9.458E-02	1.143E-01	1.637E-01	0.578
		99.86		1.423E-01	4.989E-01	8.250E-01	0.173
		111.00		-1.642E-02	1.942E-01	3.149E-01	-0.052
		131.20		6.806E-03	1.138E-01	1.842E-01	0.037
		152.70		-1.275E-02	3.206E-01	5.130E-01	-0.025
	+	186.00		5.529E+00	2.662E+00	2.629E+00	8.025E-01
		226.40		8.296E-02	4.196E-01	7.138E-01	0.116
		227.20		4.277E-02	4.396E-01	7.450E-01	0.057
		248.90		-7.862E-01	9.450E-01	1.296E+00	-0.607
	+	293.70		6.424E+00	1.404E+00	1.850E+00	3.025E-01
		369.80		-1.147E-01	8.244E-01	1.341E+00	-0.086
		568.70		-5.468E-01	1.120E+00	1.691E+00	-0.323
		569.50		1.327E-01	2.964E-01	4.818E-01	0.276
		574.00		-4.513E-01	1.492E+00	2.462E+00	-0.183
		699.00		2.931E-02	7.619E-01	1.271E+00	0.023
		706.10		-1.096E+00	1.190E+00	1.664E+00	-0.659
		733.00		1.627E-01	4.487E-01	6.706E-01	0.243
		742.81		9.578E-01	1.570E+00	2.500E+00	0.383
		796.30		1.233E+00	1.056E+00	1.805E+00	0.683
		805.60		1.324E+00	1.120E+00	1.901E+00	0.697
		819.60		6.487E-01	1.292E+00	2.182E+00	0.297
		826.30		1.358E-01	8.820E-01	1.466E+00	0.093
		831.60		-2.599E-01	6.918E-01	1.093E+00	-0.238
		876.40		-4.454E-03	8.847E-01	1.447E+00	-0.003
		880.51		-2.326E-01	3.013E-01	4.543E-01	-0.512
		883.24		-1.005E-01	3.142E-01	4.861E-01	-0.207
		899.00		5.857E-02	8.481E-01	1.394E+00	0.042
		925.00		1.009E+00	1.237E+00	2.168E+00	0.465
		926.50		5.370E-03	1.944E-01	3.177E-01	0.017
		946.00	*	2.036E-01	3.438E-01	5.857E-01	0.348
		949.00		3.448E-01	4.964E-01	8.571E-01	0.402
		980.50		5.137E-01	8.360E-01	1.432E+00	0.359
PA-234M		1394.10		-7.505E-01	1.386E+00	1.976E+00	-0.380
		766.42		1.697E+01	1.559E+01	2.322E+01	0.731
		1001.03	*	3.553E+00	5.397E+00	9.137E+00	0.389
U-235	+	89.95		1.600E+00	1.363E+00	1.991E+00	0.804
		93.35		3.179E+00	1.438E+00	1.380E+00	2.303
		105.00		2.580E-01	1.141E+00	1.875E+00	0.138
		143.76	*	-4.409E-03	2.218E-01	3.493E-01	-0.013
		163.35		3.833E-01	4.965E-01	8.134E-01	0.471
		185.71		2.048E-01	7.710E-02	9.763E-02	2.098
NP-236	+	205.31		1.882E-01	5.727E-01	8.683E-01	0.217
		94.67		3.059E-01	1.434E-01	2.286E-01	1.338
		98.44		7.145E-02	7.688E-02	1.237E-01	0.577
		111.00		-1.242E-02	1.469E-01	2.382E-01	-0.052
		160.31	*	-8.498E-02	8.617E-02	1.314E-01	-0.647

---- 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		1.518E-01	1.657E-01	2.803E-01	2.514E-02	0.542
		117.00	*	-1.520E-01	1.983E-01	3.106E-01	2.172E-02	-0.490
	+	209.75		1.931E+00	1.075E+00	1.437E+00	8.417E-02	1.343
		228.18		-2.155E-02	2.288E-01	3.845E-01	2.317E-02	-0.056
	+	277.60		2.896E-01	2.337E-01	3.129E-01	2.006E-02	0.926
AM-241		334.30		-5.816E-01	1.523E+00	2.143E+00	1.434E-01	-0.271
		59.54	*	5.484E-02	2.632E-01	3.978E-01	5.109E-02	0.138
CM-243		99.55		1.562E-01	1.706E-01	2.884E-01	2.587E-02	0.542
		103.76	*	4.760E-02	1.018E-01	1.694E-01	1.419E-02	0.281
		117.00		-1.564E-01	2.041E-01	3.196E-01	2.235E-02	-0.490
	+	209.75		1.904E+00	1.059E+00	1.417E+00	8.299E-02	1.343
		228.18		-2.178E-02	2.312E-01	3.886E-01	2.342E-02	-0.056
AM-246	+	277.60		2.920E-01	2.357E-01	3.155E-01	2.023E-02	0.926
		798.80		-2.936E-01	1.602E-01	2.205E-01	1.699E-02	-1.331
		1036.00		-4.130E-01	3.280E-01	4.506E-01	3.854E-02	-0.917
		1062.04		1.675E-01	2.720E-01	4.630E-01	3.780E-02	0.362
		1078.86	*	6.076E-03	1.660E-01	2.683E-01	2.119E-02	0.023
CM-247	+	278.00		1.201E+00	9.693E-01	1.285E+00	8.240E-02	0.935
		287.40		-2.433E-02	1.271E+00	2.117E+00	1.370E-01	-0.011
		402.60	*	2.749E-03	3.799E-02	6.234E-02	4.233E-03	0.044
CF-249		252.85		4.074E-01	8.242E-01	1.417E+00	8.833E-02	0.288
		333.44		-4.706E-02	2.121E-01	2.808E-01	1.878E-02	-0.168
		387.95	*	7.297E-02	4.112E-02	7.405E-02	5.032E-03	0.985
CF-251		176.60	*	2.336E-02	1.295E-01	2.078E-01	1.152E-02	0.112
		227.00		8.873E-02	3.914E-01	6.669E-01	4.012E-02	0.133
		285.00		4.697E-01	1.778E+00	3.004E+00	1.940E-01	0.156

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]G246440012      *
* Acquisition date   : 19-FEB-2010 19:51:26 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 02:00:01.10 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G246440012 Analyst initials: MXR1                  *
* Batch Number      : 950788 Sample Quantity : 1.2274E+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	3.795E+01	3.806E+00	5.498E-01	0.000E+00
CD-109	3.589E+00	1.203E+00	1.290E+00	0.000E+00
SN-126	3.516E-01	1.179E-01	1.273E-01	0.000E+00
TL-208	5.303E-01	8.016E-02	6.057E-02	0.000E+00
BI-211	3.691E+00	5.490E-01	3.211E-01	0.000E+00
BI-212	1.179E+00	5.313E-01	4.830E-01	0.000E+00
PB-212	1.641E+00	1.661E-01	9.149E-02	0.000E+00
PO-212	1.641E+00	1.661E-01	9.149E-02	0.000E+00
BI-214	1.060E+00	1.615E-01	1.103E-01	0.000E+00
PB-214	1.284E+00	2.020E-01	1.119E-01	0.000E+00
PO-214	1.284E+00	2.020E-01	1.119E-01	0.000E+00
PO-216	1.641E+00	1.661E-01	9.149E-02	0.000E+00
PO-218	1.284E+00	2.020E-01	1.119E-01	0.000E+00
RA-224	4.650E+00	1.401E+00	1.041E+00	0.000E+00
RA-226	1.060E+00	1.615E-01	1.103E-01	0.000E+00
AC-228	1.620E+00	3.784E-01	2.190E-01	0.000E+00
RA-228	1.620E+00	3.784E-01	2.190E-01	0.000E+00
TH-228	1.670E+00	1.690E-01	9.308E-02	0.000E+00
TH-230	1.060E+00	1.615E-01	1.103E-01	0.000E+00
TH-232	1.620E+00	3.784E-01	2.190E-01	0.000E+00
TH-234	4.435E+00	3.057E+00	3.019E+00	0.000E+00
U-234	1.060E+00	1.615E-01	1.103E-01	0.000E+00
NP-237	1.032E+00	4.043E-01	4.662E-01	0.000E+00
U-238	4.435E+00	3.057E+00	3.019E+00	0.000E+00
AM-243	3.842E-01	9.613E-02	1.094E-01	0.000E+00
ANH-511	1.547E-01	6.202E-02	4.449E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	2.639E-02	3.372E-01	5.662E-01	0.000E+00 NOT IDENT.

NA-22	-2.138E-02	4.941E-02	8.045E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.062E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	7.065E-03	3.210E-02	5.499E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.021E-02	8.380E-02	0.000E+00	NOT IDENT.
SC-46	-8.415E-03	3.908E-02	6.409E-02	0.000E+00	FAIL ABUN
V-48	-4.038E-02	8.740E-02	1.387E-01	0.000E+00	NOT IDENT.
CR-51	-8.386E-02	3.692E-01	6.269E-01	0.000E+00	NOT IDENT.
MN-52	4.687E-02	3.226E-01	5.524E-01	0.000E+00	NOT IDENT.
MN-54	-2.833E-02	4.032E-02	6.391E-02	0.000E+00	NOT IDENT.
CO-56	-3.424E-02	4.396E-02	6.884E-02	0.000E+00	NOT IDENT.
CO-57	-4.540E-03	2.630E-02	4.450E-02	0.000E+00	NOT IDENT.
CO-58	-3.797E-02	3.935E-02	6.020E-02	0.000E+00	NOT IDENT.
FE-59	-7.936E-02	1.110E-01	1.696E-01	0.000E+00	NOT IDENT.
CO-60	4.615E-03	4.161E-02	7.125E-02	0.000E+00	NOT IDENT.
ZN-65	-2.220E-02	1.191E-01	1.642E-01	0.000E+00	NOT IDENT.
GE-68	1.341E-01	1.385E+00	2.303E+00	0.000E+00	NOT IDENT.
AS-73	2.676E+00	1.612E+00	2.982E+00	0.000E+00	NOT IDENT.
AS-74	-9.033E-03	9.382E-02	1.615E-01	0.000E+00	NOT IDENT.
SE-75	1.242E-02	4.515E-02	7.433E-02	0.000E+00	NOT IDENT.
BR-77	6.065E+00	1.887E+01	3.210E+01	0.000E+00	FAIL ABUN
SR-82	-1.969E-01	4.023E-01	6.532E-01	0.000E+00	NOT IDENT.
RB-83	2.015E-02	6.653E-02	1.131E-01	0.000E+00	NOT IDENT.
RB-84	2.774E-02	7.613E-02	1.319E-01	0.000E+00	NOT IDENT.
KR-85	9.030E+00	7.151E+00	1.172E+01	0.000E+00	NOT IDENT.
SR-85	4.739E-02	3.752E-02	6.152E-02	0.000E+00	NOT IDENT.
RB-86	-2.170E-01	9.934E-01	1.602E+00	0.000E+00	NOT IDENT.
Y-88	-1.154E-02	3.077E-02	4.564E-02	0.000E+00	NOT IDENT.
ZR-88	-3.672E-02	3.189E-02	4.986E-02	0.000E+00	NOT IDENT.
Y-91	-8.534E+00	2.259E+01	3.742E+01	0.000E+00	NOT IDENT.
NB-94	1.505E-02	3.382E-02	5.973E-02	0.000E+00	NOT IDENT.
NB-95	4.122E-02	4.893E-02	8.695E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.417E-01	2.391E-01	0.000E+00	NOT IDENT.
ZR-95	1.338E-02	7.700E-02	1.327E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.069E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.791E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.308E+00	2.173E+01	3.814E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.838E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.417E-02	3.310E-02	5.353E-02	0.000E+00	NOT IDENT.
RH-102	-3.014E-02	3.071E-02	4.752E-02	0.000E+00	NOT IDENT.
RU-103	-8.964E-03	4.171E-02	6.822E-02	0.000E+00	FAIL ABUN
RH-106	-2.512E-01	3.348E-01	5.348E-01	0.000E+00	FAIL ABUN
RU-106	-2.512E-01	3.339E-01	5.348E-01	0.000E+00	FAIL ABUN
AG-108M	-1.607E-02	3.160E-02	5.116E-02	0.000E+00	NOT IDENT.
AG-110M	-1.340E-02	3.712E-02	6.221E-02	0.000E+00	NOT IDENT.
IN-111	-1.352E+00	1.716E+00	2.891E+00	0.000E+00	NOT IDENT.
IN-113M	-4.467E-02	4.628E-02	7.348E-02	0.000E+00	NOT IDENT.
SN-113	-4.467E-02	4.628E-02	7.348E-02	0.000E+00	NOT IDENT.
IN-114M	7.384E-02	2.056E-01	3.098E-01	0.000E+00	NOT IDENT.
CD-115	9.287E+00	2.073E+01	3.559E+01	0.000E+00	NOT IDENT.
SN-117M	1.278E-02	6.328E-02	1.071E-01	0.000E+00	NOT IDENT.
SB-122	5.342E-01	4.030E+00	6.701E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.759E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	6.754E-03	2.968E-02	5.028E-02	0.000E+00	NOT IDENT.
I-124	8.681E-02	1.099E+00	1.671E+00	0.000E+00	FAIL ABUN
SB-124	2.410E-03	7.630E-02	1.269E-01	0.000E+00	FAIL ABUN
SB-125	-2.340E-02	8.865E-02	1.465E-01	0.000E+00	FAIL ABUN
TE-125M	-3.250E+00	9.807E+00	1.658E+01	0.000E+00	NOT IDENT.
I-126	-1.324E-01	2.120E-01	3.477E-01	0.000E+00	NOT IDENT.
SB-126	-7.134E-02	1.939E-01	2.756E-01	0.000E+00	FAIL ABUN
SB-127	-2.063E+00	1.983E+00	3.091E+00	0.000E+00	NOT IDENT.
XE-127	-9.779E-05	4.710E-02	8.356E-02	0.000E+00	NOT IDENT.
I-131	1.391E-02	1.360E-01	2.333E-01	0.000E+00	NOT IDENT.
TE-132	-1.139E-01	1.097E+00	1.923E+00	0.000E+00	NOT IDENT.
BA-133	1.367E-02	4.440E-02	6.834E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	3.553E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.462E-02	5.114E-02	9.621E-02	0.000E+00	NOT IDENT.
CS-135	0.000E+00	1.717E-01	2.932E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.583E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	9.525E-03	1.322E-01	2.198E-01	0.000E+00	FAIL ABUN
BA-137M	3.652E-02	3.859E-02	7.039E-02	0.000E+00	NOT IDENT.
CS-137	3.861E-02	4.079E-02	7.441E-02	0.000E+00	NOT IDENT.
CE-139	-3.572E-02	3.156E-02	4.993E-02	0.000E+00	NOT IDENT.
BA-140	1.659E-01	3.111E-01	5.278E-01	0.000E+00	NOT IDENT.
LA-140	-1.602E-02	1.052E-01	1.708E-01	0.000E+00	FAIL ABUN
CE-141	-5.549E-02	6.618E-02	1.073E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.371E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.873E-01	2.144E-01	3.471E-01	0.000E+00	NOT IDENT.
PM-144	5.656E-03	3.740E-02	6.310E-02	0.000E+00	NOT IDENT.

PR-144	3.837E-01	2.537E+00	4.281E+00	0.000E+00	NOT IDENT.
PM-146	8.473E-03	4.157E-02	7.074E-02	0.000E+00	NOT IDENT.
ND-147	4.662E-02	6.358E-01	1.059E+00	0.000E+00	FAIL ABUN
PM-149	3.671E+01	1.838E+02	3.220E+02	0.000E+00	NOT IDENT.
EU-152	-5.876E-02	1.002E-01	1.594E-01	0.000E+00	NOT IDENT.
GD-153	-7.421E-02	9.483E-02	1.391E-01	0.000E+00	NOT IDENT.
EU-154	-5.779E-02	1.381E-01	2.251E-01	0.000E+00	NOT IDENT.
EU-155	2.583E-02	1.138E-01	1.974E-01	0.000E+00	FAIL ABUN
TB-160	-9.466E-02	1.502E-01	2.366E-01	0.000E+00	FAIL ABUN
HO-166M	5.784E-02	6.241E-02	1.138E-01	0.000E+00	FAIL ABUN
TM-171	-2.543E+01	4.105E+01	6.265E+01	0.000E+00	NOT IDENT.
LU-176	-2.250E-02	2.590E-02	3.886E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.866E+00	2.544E+00	0.000E+00	FAIL ABUN
LU-177M	-9.881E-02	1.730E-01	2.806E-01	0.000E+00	FAIL ABUN
HF-181	-1.636E-02	4.480E-02	7.268E-02	0.000E+00	NOT IDENT.
W-181	-2.324E-01	5.351E-01	8.259E-01	0.000E+00	NOT IDENT.
TA-182	-1.059E-01	2.381E-01	3.922E-01	0.000E+00	FAIL ABUN
RE-183	4.912E-02	1.164E-01	1.985E-01	0.000E+00	FAIL ABUN
RE-184	1.096E-01	2.172E-01	3.892E-01	0.000E+00	NOT IDENT.
OS-185	8.720E-04	4.086E-02	7.052E-02	0.000E+00	NOT IDENT.
RE-188	8.902E-02	1.762E-01	3.025E-01	0.000E+00	NOT IDENT.
W-188	3.513E-03	8.654E+00	1.319E+01	0.000E+00	FAIL ABUN
IR-192	-1.670E-02	3.297E-02	5.506E-02	0.000E+00	FAIL ABUN
AU-195	2.579E-01	2.404E-01	4.262E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.778E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.045E+00	1.171E+01	1.949E+01	0.000E+00	NOT IDENT.
TL-202	4.728E-04	7.810E-02	1.313E-01	0.000E+00	NOT IDENT.
HG-203	2.477E-02	4.415E-02	7.019E-02	0.000E+00	NOT IDENT.
BI-207	6.413E-02	6.385E-02	1.140E-01	0.000E+00	FAIL ABUN
TL-207	-3.582E-02	7.262E-01	1.093E+00	0.000E+00	FAIL ABUN
PO-209	4.710E+00	7.231E+00	1.286E+01	0.000E+00	NOT IDENT.
BI-210	2.965E+00	8.865E+00	1.606E+01	0.000E+00	NOT IDENT.
PB-210	2.965E+00	8.865E+00	1.606E+01	0.000E+00	NOT IDENT.
PO-210	2.965E+00	8.864E+00	1.606E+01	0.000E+00	NOT IDENT.
PB-211	-5.741E-01	1.039E+00	1.594E+00	0.000E+00	NOT IDENT.
PO-215	-3.582E-02	7.262E-01	1.093E+00	0.000E+00	FAIL ABUN
RN-219	-1.264E-01	4.178E-01	6.928E-01	0.000E+00	FAIL ABUN
RN-220	-7.396E+00	2.569E+01	4.136E+01	0.000E+00	NOT IDENT.
RA-223	-3.582E-02	7.262E-01	1.093E+00	0.000E+00	FAIL ABUN
AC-227	5.561E-02	3.623E-01	6.379E-01	0.000E+00	FAIL ABUN
TH-227	5.561E-02	3.624E-01	6.379E-01	0.000E+00	FAIL ABUN
TH-229	1.714E-01	5.023E-01	8.456E-01	0.000E+00	FAIL ABUN
PA-231	1.352E-01	1.503E+00	2.622E+00	0.000E+00	FAIL ABUN
TH-231	-3.582E-02	7.262E-01	1.093E+00	0.000E+00	FAIL ABUN
U-231	-1.413E+00	1.762E+00	2.593E+00	0.000E+00	FAIL ABUN
PA-233	4.410E-02	6.314E-02	1.128E-01	0.000E+00	FAIL ABUN
PA-234	2.036E-01	3.369E-01	5.881E-01	0.000E+00	FAIL ABUN
PA-234M	3.553E+00	5.289E+00	9.168E+00	0.000E+00	NOT IDENT.
U-235	-4.409E-03	2.173E-01	3.594E-01	0.000E+00	FAIL ABUN
NP-236	-8.498E-02	8.445E-02	1.350E-01	0.000E+00	NOT IDENT.
NP-239	-1.520E-01	1.944E-01	3.204E-01	0.000E+00	FAIL ABUN
AM-241	5.484E-02	2.580E-01	4.138E-01	0.000E+00	NOT IDENT.
CM-243	4.760E-02	9.980E-02	1.750E-01	0.000E+00	FAIL ABUN
AM-246	6.076E-03	1.627E-01	2.690E-01	0.000E+00	NOT IDENT.
CM-247	2.749E-03	3.723E-02	6.330E-02	0.000E+00	FAIL ABUN
CF-249	7.297E-02	4.030E-02	7.524E-02	0.000E+00	NOT IDENT.
CF-251	2.336E-02	1.269E-01	2.133E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:53:11.87

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440012.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:51:26
Sample ID          : G246440012          Sample quantity  : 1.22740E+02 GRAM
Detector name      : GAM10              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.10  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity        : 5.00000
Batch ID           : 950788              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	1467	10.67*	1.108E+00	3.795E+01	3.795E+01	10.23
CD-109	88.03	223	3.72*	5.241E+00	3.497E+00	3.589E+00	34.22
SN-126	64.28	123	9.60	2.228E+00	1.756E+00	1.756E+00	69.66
	86.94	223	8.90	5.241E+00	1.462E+00	1.462E+00	52.98
	87.57	223	37.00*	5.241E+00	3.516E-01	3.516E-01	34.22
TL-208	277.35	62	6.80	4.610E+00	6.005E-01	6.005E-01	81.18
	510.84	148	21.60	2.931E+00	7.164E-01	7.164E-01	41.74
	583.14	384	84.20*	2.628E+00	5.303E-01	5.303E-01	15.42
	860.37	74	12.46	1.841E+00	9.812E-01	9.812E-01	60.11
BI-211	72.87	-----	1.27	3.633E+00	-----	Line Not Found	-----
	351.07	607	12.94*	3.890E+00	3.691E+00	3.691E+00	15.18
BI-212	727.18	98	11.80*	2.163E+00	1.179E+00	1.179E+00	45.97
	785.46	-----	1.97	2.010E+00	-----	Line Not Found	-----
	1620.62	21	2.75	1.026E+00	2.223E+00	2.223E+00	63.03
PB-212	74.81	320	10.70	3.854E+00	2.370E+00	2.370E+00	27.19
	77.11	502	18.00	4.150E+00	2.054E+00	2.054E+00	17.76
	87.30	223	8.00	5.241E+00	1.626E+00	1.626E+00	35.65
	238.63	1225	44.60*	5.118E+00	1.641E+00	1.641E+00	10.33
	300.09	94	3.41	4.359E+00	1.940E+00	1.940E+00	62.69
PO-212	74.81	320	10.70	3.854E+00	2.370E+00	2.370E+00	27.19
	77.11	502	18.00	4.150E+00	2.054E+00	2.054E+00	17.76
	87.30	223	8.00	5.241E+00	1.626E+00	1.626E+00	35.65
	115.19	-----	0.60	6.657E+00	-----	Line Not Found	-----
	238.63	1225	44.60*	5.118E+00	1.641E+00	1.641E+00	10.33
	300.09	94	3.41	4.359E+00	1.940E+00	1.940E+00	62.69
BI-214	609.31	406	46.30*	2.532E+00	1.060E+00	1.060E+00	15.54
	1120.29	84	15.10	1.415E+00	1.200E+00	1.200E+00	48.11
	1764.49	62	15.80	9.767E-01	1.223E+00	1.223E+00	38.07
PB-214	74.81	320	6.21	3.854E+00	4.084E+00	4.084E+00	26.58
	77.11	502	10.50	4.150E+00	3.522E+00	3.522E+00	19.32
	87.30	223	4.67	5.241E+00	2.786E+00	2.786E+00	35.07
	241.98	305	7.49	5.075E+00	2.452E+00	2.452E+00	31.25

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	371	19.20	4.414E+00	1.338E+00	1.338E+00	17.08
	351.92	607	37.20*	3.890E+00	1.284E+00	1.284E+00	16.05
	74.81	320	6.21	3.854E+00	4.084E+00	4.084E+00	26.58
	77.11	502	10.50	4.150E+00	3.522E+00	3.522E+00	19.32
	87.30	223	4.67	5.241E+00	2.786E+00	2.786E+00	35.07
PO-216	241.98	305	7.49	5.075E+00	2.452E+00	2.452E+00	31.25
	295.21	371	19.20	4.414E+00	1.338E+00	1.338E+00	17.08
	351.92	607	37.20*	3.890E+00	1.284E+00	1.284E+00	16.05
	74.81	320	10.70	3.854E+00	2.370E+00	2.370E+00	27.19
	77.11	502	18.00	4.150E+00	2.054E+00	2.054E+00	17.76
PO-218	87.30	223	8.00	5.241E+00	1.626E+00	1.626E+00	35.65
	238.63	1225	44.60*	5.118E+00	1.641E+00	1.641E+00	10.33
	300.09	94	3.41	4.359E+00	1.940E+00	1.940E+00	62.69
	74.81	320	6.21	3.854E+00	4.084E+00	4.084E+00	26.58
	77.11	502	10.50	4.150E+00	3.522E+00	3.522E+00	19.32
RA-224	87.30	223	4.67	5.241E+00	2.786E+00	2.786E+00	35.07
	241.98	305	7.49	5.075E+00	2.452E+00	2.452E+00	31.25
	295.21	371	19.20	4.414E+00	1.338E+00	1.338E+00	17.08
	351.92	607	37.20*	3.890E+00	1.284E+00	1.284E+00	16.05
	240.98	305	3.95*	5.075E+00	4.650E+00	4.650E+00	30.74
RA-226	609.31	406	46.30*	2.532E+00	1.060E+00	1.060E+00	15.54
	1120.29	84	15.10	1.415E+00	1.200E+00	1.200E+00	48.11
	1764.49	62	15.80	9.767E-01	1.223E+00	1.223E+00	38.07
	338.32	256	11.40	4.003E+00	1.716E+00	1.716E+00	47.51
	911.07	255	27.70*	1.741E+00	1.620E+00	1.620E+00	23.84
RA-228	969.11	164	16.60	1.638E+00	1.841E+00	1.841E+00	43.23
	338.32	256	11.40	4.003E+00	1.716E+00	1.716E+00	47.51
	911.07	255	27.70*	1.741E+00	1.620E+00	1.620E+00	23.84
	969.11	164	16.60	1.638E+00	1.841E+00	1.841E+00	43.23
	74.81	320	10.70	3.854E+00	2.370E+00	2.370E+00	25.55
TH-228	77.11	502	18.00	4.150E+00	2.054E+00	2.090E+00	17.76
	87.30	223	8.00	5.241E+00	1.626E+00	1.654E+00	34.22
	238.63	1225	44.60*	5.118E+00	1.641E+00	1.670E+00	10.33
	300.09	94	3.41	4.359E+00	1.940E+00	1.973E+00	85.65
	609.31	406	46.30*	2.532E+00	1.060E+00	1.060E+00	15.54
TH-230	1120.29	84	15.10	1.415E+00	1.200E+00	1.200E+00	48.11
	1764.49	62	15.80	9.767E-01	1.223E+00	1.223E+00	38.07
	338.32	256	11.40	4.003E+00	1.716E+00	1.716E+00	25.08
	911.07	255	27.70*	1.741E+00	1.620E+00	1.620E+00	23.84
	969.11	164	16.60	1.638E+00	1.841E+00	1.841E+00	43.23
TH-232	63.29	123	3.80*	2.228E+00	4.435E+00	4.435E+00	70.33
	92.38	267	5.41	5.718E+00	2.644E+00	2.644E+00	39.85
	609.31	406	46.30*	2.532E+00	1.060E+00	1.060E+00	15.54
	1120.29	84	15.10	1.415E+00	1.200E+00	1.200E+00	48.11
	1764.49	62	15.80	9.767E-01	1.223E+00	1.223E+00	38.07
TH-234	86.50	223	12.60*	5.241E+00	1.032E+00	1.032E+00	39.96
	95.87	---	2.60	5.933E+00	---	Line Not Found	---
	63.29	123	3.80*	2.228E+00	4.435E+00	4.435E+00	70.33
	92.38	267	5.41	5.718E+00	2.644E+00	2.644E+00	36.54

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	320	66.00*	3.854E+00	3.842E-01	3.842E-01	25.53
	86.72	223	0.34	5.241E+00	3.872E+01	3.872E+01	34.22
	117.66	-----	0.55	6.694E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.676E+00	-----	Line Not Found	-----
ANH-511	511.00	148	100.00*	2.931E+00	1.547E-01	1.547E-01	40.90

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G246440012

Page : 4
Acquisition date : 19-FEB-2010 19:51:26

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	3.795E+01	3.795E+01	0.388E+01	10.23	
CD-109	464.00D	1.03	3.497E+00	3.589E+00	1.228E+00	34.22	
SN-126	1.00E+05Y	1.00	3.516E-01	3.516E-01	1.203E-01	34.22	
TL-208	1.41E+10Y	1.00	5.303E-01	5.303E-01	0.818E-01	15.42	
BI-211	7.04E+08Y	1.00	3.691E+00	3.691E+00	0.560E+00	15.18	
BI-212	1.41E+10Y	1.00	1.179E+00	1.179E+00	0.542E+00	45.97	
PB-212	1.41E+10Y	1.00	1.641E+00	1.641E+00	0.169E+00	10.33	
PO-212	1.41E+10Y	1.00	1.641E+00	1.641E+00	0.169E+00	10.33	
BI-214	1600.00Y	1.00	1.060E+00	1.060E+00	0.165E+00	15.54	
PB-214	1600.00Y	1.00	1.284E+00	1.284E+00	0.206E+00	16.05	
PO-214	1600.00Y	1.00	1.284E+00	1.284E+00	0.206E+00	16.05	
PO-216	1.41E+10Y	1.00	1.641E+00	1.641E+00	0.169E+00	10.33	
PO-218	1600.00Y	1.00	1.284E+00	1.284E+00	0.206E+00	16.05	
RA-224	1.41E+10Y	1.00	4.650E+00	4.650E+00	1.429E+00	30.74	
RA-226	1600.00Y	1.00	1.060E+00	1.060E+00	0.165E+00	15.54	
AC-228	1.41E+10Y	1.00	1.620E+00	1.620E+00	0.386E+00	23.84	
RA-228	1.41E+10Y	1.00	1.620E+00	1.620E+00	0.386E+00	23.84	
TH-228	1.91Y	1.02	1.641E+00	1.670E+00	0.172E+00	10.33	
TH-230	4.47E+09Y	1.00	1.060E+00	1.060E+00	0.165E+00	15.54	
TH-232	1.41E+10Y	1.00	1.620E+00	1.620E+00	0.386E+00	23.84	
TH-234	4.47E+09Y	1.00	4.435E+00	4.435E+00	3.119E+00	70.33	
U-234	4.47E+09Y	1.00	1.060E+00	1.060E+00	0.165E+00	15.54	
NP-237	2.14E+06Y	1.00	1.032E+00	1.032E+00	0.413E+00	39.96	
U-238	4.47E+09Y	1.00	4.435E+00	4.435E+00	3.119E+00	70.33	
AM-243	7380.00Y	1.00	3.842E-01	3.842E-01	0.981E-01	25.53	
ANH-511	1.00E+09Y	1.00	1.547E-01	1.547E-01	0.633E-01	40.90	
Total Activity :			8.181E+01	8.193E+01			

Grand Total Activity : 8.181E+01 8.193E+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
0	89.80	78	344	0.90	179.71	177	6	1.08E-02	79.2	5.50E+00	T
0	185.49	216	355	1.33	370.93	366	11	3.01E-02	37.2	5.99E+00	T
0	209.15	114	264	1.06	418.21	414	9	1.58E-02	55.3	5.57E+00	T
0	269.74	112	145	1.24	539.30	536	8	1.55E-02	41.9	4.70E+00	T
0	327.33	49	180	0.98	654.39	651	9	6.87E-03	****	4.10E+00	T
0	463.27	48	146	1.14	926.12	919	11	6.60E-03	****	3.16E+00	T
0	1376.45	21	23	1.16	2752.16	2745	13	2.92E-03	****	1.16E+00	T
0	1728.52	22	10	1.97	3456.58	3450	14	3.09E-03	77.5	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]G246440012.CNF;1
* Acquisition date   : 19-FEB-2010 19:51:26   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 02:00:01.10          Half life ratio  : 8.00000
*****
*                               SAMPLE DATA                                *
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library : SOLID
* Sample ID          : G246440012             Analyst initials: MXR1
* Batch Number       : 950788                 Sample Quantity  : 1.22740E+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	3.795E+01	3.884E+00	5.507E-01	4.743E-02	68.915
CD-109	3.589E+00	1.228E+00	1.247E+00	1.413E-01	2.879
SN-126	3.516E-01	1.203E-01	1.230E-01	1.392E-02	2.858
TL-208	5.303E-01	8.180E-02	5.993E-02	4.027E-03	8.848
BI-211	3.691E+00	5.603E-01	3.156E-01	2.301E-02	11.695
BI-212	1.179E+00	5.421E-01	4.793E-01	3.834E-02	2.460
PB-212	1.641E+00	1.695E-01	8.950E-02	6.789E-03	18.336
PO-212	1.641E+00	1.695E-01	8.950E-02	6.789E-03	18.336
BI-214	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
PB-214	1.284E+00	2.061E-01	1.100E-01	9.866E-03	11.671
PO-214	1.284E+00	2.061E-01	1.100E-01	9.866E-03	11.671
PO-216	1.641E+00	1.695E-01	8.950E-02	6.789E-03	18.336
PO-218	1.284E+00	2.061E-01	1.100E-01	9.866E-03	11.671
RA-224	4.650E+00	1.429E+00	1.018E+00	6.251E-02	4.566
RA-226	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
AC-228	1.620E+00	3.861E-01	2.180E-01	2.691E-02	7.430
RA-228	1.620E+00	3.861E-01	2.180E-01	2.691E-02	7.430
TH-228	1.670E+00	1.724E-01	9.105E-02	6.907E-03	18.336

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
TH-232	1.620E+00	3.861E-01	2.180E-01	2.691E-02	7.430
TH-234	4.435E+00	3.119E+00	2.905E+00	5.725E-01	1.527
U-234	1.060E+00	1.647E-01	1.092E-01	8.310E-03	9.707
NP-237	1.032E+00	4.125E-01	4.502E-01	1.058E-01	2.293
U-238	4.435E+00	3.119E+00	2.905E+00	5.725E-01	1.527
AM-243	3.842E-01	9.810E-02	1.055E-01	1.155E-02	3.644
ANH-511	1.547E-01	6.329E-02	4.395E-02	2.815E-03	3.521

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.639E-02		3.441E-01	5.588E-01	4.156E-02	0.047
NA-22	-2.138E-02		5.042E-02	8.043E-02	6.230E-03	-0.266
NA-24	4.546E+00		5.418E+00	Half-Life too short		
AL-26	7.065E-03		3.276E-02	5.524E-02	3.502E-03	0.128
TI-44	1.453E-01		5.124E-02	8.083E-02	8.845E-03	1.797
SC-46	-8.415E-03		3.988E-02	6.377E-02	6.311E-03	-0.132
V-48	-4.038E-02		8.918E-02	1.381E-01	1.277E-02	-0.292
CR-51	-8.386E-02		3.767E-01	6.155E-01	4.446E-02	-0.136
MN-52	4.687E-02		3.291E-01	5.532E-01	4.675E-02	0.085
MN-54	-2.833E-02		4.114E-02	6.354E-02	5.428E-03	-0.446
CO-56	-3.424E-02		4.486E-02	6.845E-02	6.045E-03	-0.500
CO-57	-4.540E-03		2.684E-02	4.317E-02	2.847E-03	-0.105
CO-58	-3.797E-02		4.016E-02	5.983E-02	4.787E-03	-0.635
FE-59	-7.936E-02		1.132E-01	1.692E-01	1.412E-02	-0.469
CO-60	4.615E-03		4.246E-02	7.128E-02	6.194E-03	0.065
ZN-65	-2.220E-02		1.216E-01	1.639E-01	1.194E-02	-0.135
GE-68	1.341E-01		1.413E+00	2.298E+00	1.820E-01	0.058
AS-73	2.676E+00		1.645E+00	2.862E+00	3.788E-01	0.935
AS-74	-9.033E-03		9.573E-02	1.599E-01	9.133E-03	-0.057
SE-75	1.242E-02		4.607E-02	7.280E-02	4.644E-03	0.171
BR-77	6.065E+00		1.925E+01	3.172E+01	2.012E+00	0.191
SR-82	-1.969E-01		4.105E-01	6.488E-01	4.677E-02	-0.304
RB-83	2.015E-02		6.789E-02	1.117E-01	7.089E-03	0.180
RB-84	2.774E-02		7.768E-02	1.313E-01	1.273E-02	0.211
KR-85	9.030E+00		7.296E+00	1.158E+01	7.398E-01	0.780
SR-85	4.739E-02		3.829E-02	6.078E-02	3.882E-03	0.780
RB-86	-2.170E-01		1.014E+00	1.598E+00	1.268E-01	-0.136
Y-88	-1.154E-02		3.140E-02	4.585E-02	2.813E-03	-0.252
ZR-88	-3.672E-02		3.254E-02	4.909E-02	3.336E-03	-0.748
Y-91	-8.534E+00		2.305E+01	3.738E+01	2.483E+00	-0.228
NB-94	1.505E-02		3.451E-02	5.925E-02	3.373E-03	0.254
NB-95	4.122E-02		4.993E-02	8.634E-02	6.025E-03	0.477
NB-95M	2.574E-01		1.446E-01	2.339E-01	1.814E-02	1.101
ZR-95	1.338E-02		7.857E-02	1.317E-01	1.035E-02	0.102
NB-97	-3.166E-01		4.627E-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
ZR-97	3.084E+01		9.138E+00	Half-Life too short		
MO-99	9.308E+00		2.217E+01	3.786E+01	5.322E+00	0.246
TC-99M	-1.700E+13		9.377E+12	Half-Life too short		
RH-101	-1.417E-02		3.378E-02	5.224E-02	3.001E-03	-0.271
RH-102	-3.014E-02		3.134E-02	4.689E-02	3.093E-03	-0.643
RU-103	-8.964E-03		4.256E-02	6.737E-02	8.740E-03	-0.133
RH-106	-2.512E-01		3.417E-01	5.297E-01	6.123E-02	-0.474
RU-106	-2.512E-01		3.407E-01	5.297E-01	2.877E-02	-0.474
AG-108M	-1.607E-02		3.225E-02	5.043E-02	3.616E-03	-0.319
AG-110M	-1.340E-02		3.787E-02	6.166E-02	3.340E-03	-0.217
IN-111	-1.352E+00		1.751E+00	2.829E+00	1.747E-01	-0.478
IN-113M	-4.467E-02		4.722E-02	7.233E-02	5.158E-03	-0.618
SN-113	-4.467E-02		4.722E-02	7.233E-02	5.158E-03	-0.618
IN-114M	7.384E-02		2.098E-01	3.022E-01	1.714E-02	0.244
CD-115	9.287E+00		2.116E+01	3.517E+01	2.214E+00	0.264
SN-117M	1.278E-02		6.457E-02	1.042E-01	5.845E-03	0.123
SB-122	5.342E-01		4.112E+00	6.628E+00	3.986E-01	0.081
I-123	2.221E+01		4.979E+01	Half-Life too short		
TE-123M	6.754E-03		3.028E-02	4.893E-02	2.779E-03	0.138
I-124	8.681E-02		1.122E+00	1.654E+00	9.333E-02	0.052
SB-124	2.410E-03		7.785E-02	1.273E-01	9.675E-03	0.019
SB-125	-2.340E-02		9.046E-02	1.444E-01	1.005E-02	-0.162
TE-125M	-3.250E+00		1.001E+01	1.606E+01	1.543E+00	-0.202
I-126	-1.324E-01		2.163E-01	3.447E-01	1.729E-02	-0.384
SB-126	-7.134E-02		1.979E-01	2.734E-01	1.652E-02	-0.261
SB-127	-2.063E+00		2.024E+00	3.065E+00	3.061E-01	-0.673
XE-127	-9.779E-05		4.806E-02	8.157E-02	4.723E-03	-0.001
I-131	1.391E-02		1.387E-01	2.295E-01	1.692E-02	0.061
TE-132	-1.139E-01		1.119E+00	1.880E+00	2.805E-01	-0.061
BA-133	1.367E-02		4.531E-02	6.719E-02	8.107E-03	0.204
I-133	1.352E-03		1.813E-02	Half-Life too short		
CS-134	8.462E-02		5.219E-02	9.559E-02	7.369E-03	0.885
CS-135	3.323E-01		1.752E-01	2.873E-01	2.321E-02	1.157
I-135	-1.351E+12		8.079E+11	Half-Life too short		
CS-136	9.525E-03		1.349E-01	2.192E-01	1.919E-02	0.043
BA-137M	3.652E-02		3.937E-02	6.977E-02	3.442E-03	0.524
CS-137	3.861E-02		4.162E-02	7.375E-02	3.660E-03	0.524
CE-139	-3.572E-02		3.220E-02	4.862E-02	2.656E-03	-0.735
BA-140	1.659E-01		3.175E-01	5.217E-01	1.701E-01	0.318
LA-140	-1.602E-02		1.073E-01	1.713E-01	1.329E-02	-0.094
CE-141	-5.549E-02		6.753E-02	1.043E-01	6.384E-03	-0.532
CE-143	2.831E-03		4.271E-04	Half-Life too short		
CE-144	-1.873E-01		2.188E-01	3.370E-01	4.842E-02	-0.556
PM-144	5.656E-03		3.817E-02	6.258E-02	3.493E-03	0.090
PR-144	3.837E-01		2.589E+00	4.246E+00	2.367E-01	0.090
PM-146	8.473E-03		4.242E-02	6.977E-02	6.444E-03	0.121
ND-147	4.662E-02		6.488E-01	1.046E+00	1.437E-01	0.045
PM-149	3.671E+01		1.876E+02	3.157E+02	4.567E+01	0.116

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-5.876E-02		1.023E-01	1.567E-01	1.154E-02	-0.375
GD-153	-7.421E-02		9.676E-02	1.346E-01	1.253E-02	-0.551
EU-154	-5.779E-02		1.409E-01	2.250E-01	2.397E-02	-0.257
EU-155	2.583E-02		1.161E-01	1.911E-01	1.585E-02	0.135
TB-160	-9.466E-02		1.532E-01	2.353E-01	2.269E-02	-0.402
HO-166M	5.784E-02		6.369E-02	1.129E-01	6.623E-03	0.512
TM-171	-2.543E+01		4.189E+01	6.032E+01	6.871E+00	-0.422
LU-176	-2.250E-02		2.642E-02	3.814E-02	2.509E-03	-0.590
LU-177	3.421E+00	+	1.904E+00	2.484E+00	1.452E-01	1.377
LU-177M	-9.881E-02		1.765E-01	2.764E-01	1.873E-02	-0.358
HF-181	-1.636E-02		4.571E-02	7.174E-02	4.709E-03	-0.228
W-181	-2.324E-01		5.460E-01	7.948E-01	9.184E-02	-0.292
TA-182	-1.059E-01		2.429E-01	3.919E-01	2.702E-02	-0.270
RE-183	4.912E-02		1.187E-01	1.932E-01	1.069E-02	0.254
RE-184	1.096E-01		2.216E-01	3.810E-01	2.376E-02	0.288
OS-185	8.720E-04		4.170E-02	6.987E-02	3.589E-03	0.012
RE-188	8.902E-02		1.798E-01	2.943E-01	1.672E-02	0.302
W-188	3.513E-03		8.830E+00	1.294E+01	8.400E-01	0.000
IR-192	-1.670E-02		3.364E-02	5.405E-02	3.594E-03	-0.309
AU-195	2.579E-01		2.453E-01	4.123E-01	3.742E-02	0.626
TL-200	1.322E-03		9.070E-04	Half-Life	too short	
TL-201	-1.045E+00		1.195E+01	1.898E+01	1.038E+00	-0.055
TL-202	4.728E-04		7.970E-02	1.295E-01	8.705E-03	0.004
HG-203	2.477E-02		4.505E-02	6.880E-02	4.643E-03	0.360
BI-207	6.413E-02		6.516E-02	1.137E-01	9.259E-03	0.564
TL-207	-3.582E-02		7.410E-01	1.073E+00	1.806E-01	-0.033
PO-209	4.710E+00		7.379E+00	1.280E+01	1.291E+00	0.368
BI-210	2.965E+00		9.046E+00	1.539E+01	1.510E+00	0.193
PB-210	2.965E+00		9.046E+00	1.539E+01	1.510E+00	0.193
PO-210	2.965E+00		9.045E+00	1.539E+01	1.382E+00	0.193
PB-211	-5.741E-01		1.060E+00	1.570E+00	9.800E-01	-0.366
PO-215	-3.582E-02		7.410E-01	1.073E+00	1.806E-01	-0.033
RN-219	-1.264E-01		4.263E-01	6.823E-01	9.591E-02	-0.185
RN-220	-7.396E+00		2.622E+01	4.089E+01	2.508E+00	-0.181
RA-223	-3.582E-02		7.410E-01	1.073E+00	1.806E-01	-0.033
AC-227	5.561E-02		3.697E-01	6.245E-01	8.842E-02	0.089
TH-227	5.561E-02		3.698E-01	6.245E-01	1.066E-01	0.089
TH-229	1.714E-01		5.125E-01	8.250E-01	4.705E-02	0.208
PA-231	1.352E-01		1.534E+00	2.570E+00	3.615E-01	0.053
TH-231	-3.582E-02		7.410E-01	1.073E+00	1.806E-01	-0.033
U-231	-1.413E+00		1.798E+00	2.508E+00	2.403E-01	-0.564
PA-233	4.410E-02		6.442E-02	1.108E-01	7.665E-03	0.398
PA-234	2.036E-01		3.438E-01	5.857E-01	1.129E-01	0.348
PA-234M	3.553E+00		5.397E+00	9.137E+00	9.430E-01	0.389
U-235	-4.409E-03		2.218E-01	3.493E-01	5.711E-02	-0.013
NP-236	-8.498E-02		8.617E-02	1.314E-01	7.320E-03	-0.647
NP-239	-1.520E-01		1.983E-01	3.106E-01	2.172E-02	-0.490
AM-241	5.484E-02		2.632E-01	3.978E-01	5.109E-02	0.138

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.760E-02		1.018E-01	1.694E-01	1.419E-02	0.281
AM-246	6.076E-03		1.660E-01	2.683E-01	2.119E-02	0.023
CM-247	2.749E-03		3.799E-02	6.234E-02	4.233E-03	0.044
CF-249	7.297E-02		4.112E-02	7.405E-02	5.032E-03	0.985
CF-251	2.336E-02		1.295E-01	2.078E-01	1.152E-02	0.112

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]G246440012            *
* Acquisition date   : 19-FEB-2010 19:51:26 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 02:00:01.10 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G246440012 Analyst initials: MXR1                 *
* Batch Number      : 950788 Sample Quantity : 1.2274E+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	3.795E+01	3.806E+00	2.751E-01	1.942E+00
CD-109	3.589E+00	1.203E+00	6.456E-01	6.140E-01
SN-126	3.516E-01	1.179E-01	6.371E-02	6.015E-02
TL-208	5.303E-01	8.016E-02	3.030E-02	4.090E-02
BI-211	3.691E+00	5.490E-01	1.606E-01	2.801E-01
BI-212	1.179E+00	5.313E-01	2.416E-01	2.711E-01
PB-212	1.641E+00	1.661E-01	4.577E-02	8.475E-02
PO-212	1.641E+00	1.661E-01	4.577E-02	8.475E-02
BI-214	1.060E+00	1.615E-01	5.518E-02	8.237E-02
PB-214	1.284E+00	2.020E-01	5.599E-02	1.030E-01
PO-214	1.284E+00	2.020E-01	5.599E-02	1.030E-01
PO-216	1.641E+00	1.661E-01	4.577E-02	8.475E-02
PO-218	1.284E+00	2.020E-01	5.599E-02	1.030E-01
RA-224	4.650E+00	1.401E+00	5.208E-01	7.147E-01
RA-226	1.060E+00	1.615E-01	5.518E-02	8.237E-02
AC-228	1.620E+00	3.784E-01	1.096E-01	1.931E-01
RA-228	1.620E+00	3.784E-01	1.096E-01	1.931E-01
TH-228	1.670E+00	1.690E-01	4.657E-02	8.622E-02
TH-230	1.060E+00	1.615E-01	5.518E-02	8.237E-02
TH-232	1.620E+00	3.784E-01	1.096E-01	1.931E-01
TH-234	4.435E+00	3.057E+00	1.510E+00	1.560E+00
U-234	1.060E+00	1.615E-01	5.518E-02	8.237E-02
NP-237	1.032E+00	4.043E-01	2.332E-01	2.063E-01
U-238	4.435E+00	3.057E+00	1.510E+00	1.560E+00
AM-243	3.842E-01	9.613E-02	5.473E-02	4.905E-02
ANH-511	1.547E-01	6.202E-02	2.226E-02	3.164E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	2.639E-02	3.372E-01	2.833E-01	1.720E-01 NOT IDENT.

NA-22	-2.138E-02	4.941E-02	4.025E-02	2.521E-02	NOT IDENT.
NA-24	4.546E+06	1.062E+07	0.000E+00	5.418E+06	SHORT HLIF
AL-26	7.065E-03	3.210E-02	2.751E-02	1.638E-02	NOT IDENT.
TI-44	1.453E-01	5.021E-02	4.193E-02	2.562E-02	NOT IDENT.
SC-46	-8.415E-03	3.908E-02	3.206E-02	1.994E-02	FAIL ABUN
V-48	-4.038E-02	8.740E-02	6.937E-02	4.459E-02	NOT IDENT.
CR-51	-8.386E-02	3.692E-01	3.136E-01	1.883E-01	NOT IDENT.
MN-52	4.687E-02	3.226E-01	2.764E-01	1.646E-01	NOT IDENT.
MN-54	-2.833E-02	4.032E-02	3.197E-02	2.057E-02	NOT IDENT.
CO-56	-3.424E-02	4.396E-02	3.444E-02	2.243E-02	NOT IDENT.
CO-57	-4.540E-03	2.630E-02	2.227E-02	1.342E-02	NOT IDENT.
CO-58	-3.797E-02	3.935E-02	3.012E-02	2.008E-02	NOT IDENT.
FE-59	-7.936E-02	1.110E-01	8.483E-02	5.661E-02	NOT IDENT.
CO-60	4.615E-03	4.161E-02	3.565E-02	2.123E-02	NOT IDENT.
ZN-65	-2.220E-02	1.191E-01	8.217E-02	6.078E-02	NOT IDENT.
GE-68	1.341E-01	1.385E+00	1.152E+00	7.066E-01	NOT IDENT.
AS-73	2.676E+00	1.612E+00	1.492E+00	8.226E-01	NOT IDENT.
AS-74	-9.033E-03	9.382E-02	8.081E-02	4.787E-02	NOT IDENT.
SE-75	1.242E-02	4.515E-02	3.719E-02	2.303E-02	NOT IDENT.
BR-77	6.065E+00	1.887E+01	1.606E+01	9.625E+00	FAIL ABUN
SR-82	-1.969E-01	4.023E-01	3.268E-01	2.052E-01	NOT IDENT.
RB-83	2.015E-02	6.653E-02	5.656E-02	3.394E-02	NOT IDENT.
RB-84	2.774E-02	7.613E-02	6.600E-02	3.884E-02	NOT IDENT.
KR-85	9.030E+00	7.151E+00	5.865E+00	3.648E+00	NOT IDENT.
SR-85	4.739E-02	3.752E-02	3.078E-02	1.915E-02	NOT IDENT.
RB-86	-2.170E-01	9.934E-01	8.015E-01	5.068E-01	NOT IDENT.
Y-88	-1.154E-02	3.077E-02	2.283E-02	1.570E-02	NOT IDENT.
ZR-88	-3.672E-02	3.189E-02	2.495E-02	1.627E-02	NOT IDENT.
Y-91	-8.534E+00	2.259E+01	1.872E+01	1.152E+01	NOT IDENT.
NB-94	1.505E-02	3.382E-02	2.988E-02	1.725E-02	NOT IDENT.
NB-95	4.122E-02	4.893E-02	4.350E-02	2.496E-02	NOT IDENT.
NB-95M	2.574E-01	1.417E-01	1.196E-01	7.229E-02	NOT IDENT.
ZR-95	1.338E-02	7.700E-02	6.638E-02	3.929E-02	NOT IDENT.
NB-97	-3.166E+05	9.069E+05	0.000E+00	4.627E+05	SHORT HLIF
ZR-97	3.084E+07	1.791E+07	0.000E+00	9.138E+06	SHORT HLIF
MO-99	9.308E+00	2.173E+01	1.908E+01	1.108E+01	NOT IDENT.
TC-99M	-1.700E+19	1.838E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.417E-02	3.310E-02	2.678E-02	1.689E-02	NOT IDENT.
RH-102	-3.014E-02	3.071E-02	2.377E-02	1.567E-02	NOT IDENT.
RU-103	-8.964E-03	4.171E-02	3.413E-02	2.128E-02	FAIL ABUN
RH-106	-2.512E-01	3.348E-01	2.676E-01	1.708E-01	FAIL ABUN
RU-106	-2.512E-01	3.339E-01	2.676E-01	1.704E-01	FAIL ABUN
AG-108M	-1.607E-02	3.160E-02	2.559E-02	1.612E-02	NOT IDENT.
AG-110M	-1.340E-02	3.712E-02	3.112E-02	1.894E-02	NOT IDENT.
IN-111	-1.352E+00	1.716E+00	1.446E+00	8.754E-01	NOT IDENT.
IN-113M	-4.467E-02	4.628E-02	3.676E-02	2.361E-02	NOT IDENT.
SN-113	-4.467E-02	4.628E-02	3.676E-02	2.361E-02	NOT IDENT.
IN-114M	7.384E-02	2.056E-01	1.550E-01	1.049E-01	NOT IDENT.
CD-115	9.287E+00	2.073E+01	1.780E+01	1.058E+01	NOT IDENT.
SN-117M	1.278E-02	6.328E-02	5.358E-02	3.228E-02	NOT IDENT.
SB-122	5.342E-01	4.030E+00	3.353E+00	2.056E+00	NOT IDENT.
I-123	2.221E+07	9.759E+07	0.000E+00	4.979E+07	SHORT HLIF
TE-123M	6.754E-03	2.968E-02	2.515E-02	1.514E-02	NOT IDENT.
I-124	8.681E-02	1.099E+00	8.360E-01	5.608E-01	FAIL ABUN
SB-124	2.410E-03	7.630E-02	6.348E-02	3.893E-02	FAIL ABUN
SB-125	-2.340E-02	8.865E-02	7.328E-02	4.523E-02	FAIL ABUN
TE-125M	-3.250E+00	9.807E+00	8.297E+00	5.004E+00	NOT IDENT.
I-126	-1.324E-01	2.120E-01	1.740E-01	1.081E-01	NOT IDENT.
SB-126	-7.134E-02	1.939E-01	1.379E-01	9.893E-02	FAIL ABUN
SB-127	-2.063E+00	1.983E+00	1.546E+00	1.012E+00	NOT IDENT.
XE-127	-9.779E-05	4.710E-02	4.180E-02	2.403E-02	NOT IDENT.
I-131	1.391E-02	1.360E-01	1.167E-01	6.937E-02	NOT IDENT.
TE-132	-1.139E-01	1.097E+00	9.621E-01	5.596E-01	NOT IDENT.
BA-133	1.367E-02	4.440E-02	3.419E-02	2.265E-02	FAIL ABUN
I-133	1.352E+03	3.553E+04	0.000E+00	1.813E+04	SHORT HLIF
CS-134	8.462E-02	5.114E-02	4.814E-02	2.609E-02	NOT IDENT.
CS-135	3.323E-01	1.717E-01	1.467E-01	8.762E-02	NOT IDENT.
I-135	-1.351E+18	1.583E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	9.525E-03	1.322E-01	1.100E-01	6.743E-02	FAIL ABUN
BA-137M	3.652E-02	3.859E-02	3.522E-02	1.969E-02	NOT IDENT.
CS-137	3.861E-02	4.079E-02	3.723E-02	2.081E-02	NOT IDENT.
CE-139	-3.572E-02	3.156E-02	2.498E-02	1.610E-02	NOT IDENT.
BA-140	1.659E-01	3.111E-01	2.640E-01	1.587E-01	NOT IDENT.
LA-140	-1.602E-02	1.052E-01	8.544E-02	5.366E-02	FAIL ABUN
CE-141	-5.549E-02	6.618E-02	5.369E-02	3.377E-02	NOT IDENT.
CE-143	2.831E+03	8.371E+02	0.000E+00	4.271E+02	SHORT HLIF
CE-144	-1.873E-01	2.144E-01	1.736E-01	1.094E-01	NOT IDENT.
PM-144	5.656E-03	3.740E-02	3.157E-02	1.908E-02	NOT IDENT.

PR-144	3.837E-01	2.537E+00	2.142E+00	1.295E+00	NOT IDENT.
PM-146	8.473E-03	4.157E-02	3.539E-02	2.121E-02	NOT IDENT.
ND-147	4.662E-02	6.358E-01	5.296E-01	3.244E-01	FAIL ABUN
PM-149	3.671E+01	1.838E+02	1.611E+02	9.378E+01	NOT IDENT.
EU-152	-5.876E-02	1.002E-01	7.976E-02	5.114E-02	NOT IDENT.
GD-153	-7.421E-02	9.483E-02	6.961E-02	4.838E-02	NOT IDENT.
EU-154	-5.779E-02	1.381E-01	1.126E-01	7.046E-02	NOT IDENT.
EU-155	2.583E-02	1.138E-01	9.875E-02	5.806E-02	FAIL ABUN
TB-160	-9.466E-02	1.502E-01	1.183E-01	7.662E-02	FAIL ABUN
HO-166M	5.784E-02	6.241E-02	5.691E-02	3.184E-02	FAIL ABUN
TM-171	-2.543E+01	4.105E+01	3.135E+01	2.094E+01	NOT IDENT.
LU-176	-2.250E-02	2.590E-02	1.944E-02	1.321E-02	FAIL ABUN
LU-177	3.421E+00	1.866E+00	1.273E+00	9.518E-01	FAIL ABUN
LU-177M	-9.881E-02	1.730E-01	1.404E-01	8.826E-02	FAIL ABUN
HF-181	-1.636E-02	4.480E-02	3.636E-02	2.285E-02	NOT IDENT.
W-181	-2.324E-01	5.351E-01	4.132E-01	2.730E-01	NOT IDENT.
TA-182	-1.059E-01	2.381E-01	1.962E-01	1.215E-01	FAIL ABUN
RE-183	4.912E-02	1.164E-01	9.931E-02	5.936E-02	FAIL ABUN
RE-184	1.096E-01	2.172E-01	1.947E-01	1.108E-01	NOT IDENT.
OS-185	8.720E-04	4.086E-02	3.528E-02	2.085E-02	NOT IDENT.
RE-188	8.902E-02	1.762E-01	1.513E-01	8.989E-02	NOT IDENT.
W-188	3.513E-03	8.654E+00	6.601E+00	4.415E+00	FAIL ABUN
IR-192	-1.670E-02	3.297E-02	2.755E-02	1.682E-02	FAIL ABUN
AU-195	2.579E-01	2.404E-01	2.132E-01	1.227E-01	FAIL ABUN
TL-200	1.322E+03	1.778E+03	0.000E+00	9.070E+02	SHORT HLIF
TL-201	-1.045E+00	1.171E+01	9.751E+00	5.973E+00	NOT IDENT.
TL-202	4.728E-04	7.810E-02	6.571E-02	3.985E-02	NOT IDENT.
HG-203	2.477E-02	4.415E-02	3.512E-02	2.252E-02	NOT IDENT.
BI-207	6.413E-02	6.385E-02	5.705E-02	3.258E-02	FAIL ABUN
TL-207	-3.582E-02	7.262E-01	5.467E-01	3.705E-01	FAIL ABUN
PO-209	4.710E+00	7.231E+00	6.433E+00	3.689E+00	NOT IDENT.
BI-210	2.965E+00	8.865E+00	8.035E+00	4.523E+00	NOT IDENT.
PB-210	2.965E+00	8.865E+00	8.035E+00	4.523E+00	NOT IDENT.
PO-210	2.965E+00	8.864E+00	8.035E+00	4.522E+00	NOT IDENT.
PB-211	-5.741E-01	1.039E+00	7.973E-01	5.300E-01	NOT IDENT.
PO-215	-3.582E-02	7.262E-01	5.467E-01	3.705E-01	FAIL ABUN
RN-219	-1.264E-01	4.178E-01	3.466E-01	2.131E-01	FAIL ABUN
RN-220	-7.396E+00	2.569E+01	2.069E+01	1.311E+01	NOT IDENT.
RA-223	-3.582E-02	7.262E-01	5.467E-01	3.705E-01	FAIL ABUN
AC-227	5.561E-02	3.623E-01	3.191E-01	1.849E-01	FAIL ABUN
TH-227	5.561E-02	3.624E-01	3.191E-01	1.849E-01	FAIL ABUN
TH-229	1.714E-01	5.023E-01	4.231E-01	2.563E-01	FAIL ABUN
PA-231	1.352E-01	1.503E+00	1.312E+00	7.671E-01	FAIL ABUN
TH-231	-3.582E-02	7.262E-01	5.467E-01	3.705E-01	FAIL ABUN
U-231	-1.413E+00	1.762E+00	1.297E+00	8.989E-01	FAIL ABUN
PA-233	4.410E-02	6.314E-02	5.646E-02	3.221E-02	FAIL ABUN
PA-234	2.036E-01	3.369E-01	2.942E-01	1.719E-01	FAIL ABUN
PA-234M	3.553E+00	5.289E+00	4.587E+00	2.699E+00	NOT IDENT.
U-235	-4.409E-03	2.173E-01	1.798E-01	1.109E-01	FAIL ABUN
NP-236	-8.498E-02	8.445E-02	6.753E-02	4.308E-02	NOT IDENT.
NP-239	-1.520E-01	1.944E-01	1.603E-01	9.917E-02	FAIL ABUN
AM-241	5.484E-02	2.580E-01	2.070E-01	1.316E-01	NOT IDENT.
CM-243	4.760E-02	9.980E-02	8.753E-02	5.092E-02	FAIL ABUN
AM-246	6.076E-03	1.627E-01	1.346E-01	8.302E-02	NOT IDENT.
CM-247	2.749E-03	3.723E-02	3.167E-02	1.900E-02	FAIL ABUN
CF-249	7.297E-02	4.030E-02	3.764E-02	2.056E-02	NOT IDENT.
CF-251	2.336E-02	1.269E-01	1.067E-01	6.474E-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	268.5602
46.50	268.5602
46.50	268.5602
48.70	258.2251
49.72	250.6345
51.35	310.9309
52.39	268.1549
52.97	252.7546
53.15	248.2218
53.44	239.1003
54.07	258.1166
56.28	329.8013
56.28	329.8040
57.37	0.0000
57.53	315.7699
57.53	315.7712
57.60	298.9038
57.98	279.9846
57.98	279.9846
59.32	298.7173
59.32	298.7173
59.40	298.7737
59.54	298.8727
59.72	296.1657
60.01	296.3674
61.10	308.4955
61.14	308.5237
61.30	308.6379
63.00	312.2242
63.29	312.4298
63.29	312.4298
63.58	312.6350
64.28	310.7422
65.12	341.4550
65.20	341.5154
65.20	341.5154
66.05	360.8489
66.72	368.5781
66.83	328.3449
66.91	328.4023
67.20	315.6396
67.20	315.6396
67.75	313.9970
67.85	314.0650
68.90	361.0680
68.90	361.0680
69.30	353.2706
69.67	383.9803
70.82	403.7970
70.82	403.7970
70.83	403.8055
72.80	348.5897
72.87	348.6407
72.87	348.6407
74.67	359.2047
74.81	359.3076
74.81	359.3076
74.81	359.3076
74.81	359.3076
74.81	359.3076
74.81	359.3076
74.81	359.3076
74.97	359.4236
75.28	359.6501
75.70	359.9552
77.11	360.9753
77.11	360.9753

77.11	360.9753
77.11	360.9753
77.11	360.9753
77.11	360.9753
77.11	360.9753
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80.30	395.3300
80.30	395.3300
80.57	395.5378
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81.07	409.2664
81.07	409.2664
81.07	409.2664
81.07	409.2664
82.60	374.7758
83.37	369.3662
83.78	348.7881
83.78	348.7881
83.78	348.7881
83.78	348.7881
84.21	347.5784
84.90	354.0046
85.43	372.2975
86.29	431.2969
86.50	431.4661
86.54	431.4968
86.59	431.5364
86.72	430.1431
86.79	430.1956
86.94	430.3161
87.30	288.0688
87.30	288.0688
87.30	288.0688
87.30	288.0688
87.30	288.0688
87.30	288.0688
87.57	288.2109
87.88	288.3750
88.03	288.4541
88.36	288.6284
88.47	288.6855
89.95	419.1167
91.11	253.8073
92.29	292.1888
92.38	292.2359
92.38	292.2359
93.35	288.1862
94.00	288.5153
94.67	258.4448
94.67	258.4474
94.90	288.9690
94.90	288.9690
94.90	288.9690
94.90	288.9690
95.87	321.4469
95.87	321.4469
96.73	321.9250
97.43	319.2547
98.44	255.8439
98.44	255.8439
98.88	261.3438
99.55	271.8596
99.55	271.8596
99.86	292.4529
100.00	292.5228
100.10	292.5737
103.18	302.2978
103.76	277.8854
105.00	301.1369
105.31	301.2899
108.00	310.8871
109.28	303.2132

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111.00	298.8284
111.76	308.5667
112.95	274.6726
115.19	300.7728
116.30	272.9373
117.00	299.4987
117.00	299.4987
117.66	295.5897
121.11	262.2222
121.62	284.6413
121.78	282.5916
122.06	288.0011
122.32	284.9327
122.32	284.9327
122.32	284.9327
122.32	284.9327
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133.02	286.0858
133.54	316.4274
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142.65	265.8648
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144.24	275.1559
144.24	275.1559
144.24	275.1559
145.22	272.2298
145.44	305.1165
147.16	253.1873
152.43	265.9326
152.70	259.4003
153.22	267.3019
154.21	252.1489
154.21	252.1489
154.21	252.1489
154.21	252.1489
155.03	264.5863
156.02	290.4057
158.56	274.6388
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159.00	273.6745
160.31	317.5693
161.27	292.2820
162.32	272.5491
162.64	277.1230
163.35	256.1108
163.89	246.2042
165.85	308.4770
167.43	264.1025
171.28	267.5556
171.86	276.7739
172.10	266.6812
176.55	235.1092
176.60	244.2086
181.06	215.7608
184.41	240.6293
185.71	246.7106
186.00	246.7894
190.27	226.6055
192.34	254.2721
193.63	226.8463
197.04	249.7376
198.01	253.4795
198.60	229.2041
200.40	234.2976
201.83	257.4115
202.84	254.1748
205.31	233.3808

208.36	267.9529
208.81	238.0936
209.75	234.4365
209.75	234.4365
210.97	247.4503
215.65	224.6332
216.55	228.3887
218.09	250.0941
222.10	225.1623
223.80	222.8466
226.40	245.8332
227.00	234.3030
227.08	228.9342
227.20	236.1446
228.16	236.3593
228.18	236.3633
228.18	236.3633
231.56	0.0000
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236.00	218.7307
236.00	218.7307
238.63	206.0114
238.63	206.0114
238.63	206.0114
238.63	206.0114
239.00	206.0807
240.98	206.4548
241.98	206.6436
241.98	206.6436
241.98	206.6436
244.69	207.1527
245.39	207.2826
247.94	175.7241
248.90	209.5844
249.79	196.5508
252.40	169.0719
252.85	160.8662
252.85	160.8662
254.15	0.0000
256.20	176.0898
256.20	176.0898
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260.90	198.1009
262.80	168.7532
264.65	163.4504
268.24	150.5334
268.79	167.0074
269.46	179.0361
269.46	179.0361
269.46	179.0361
269.46	179.0361
271.23	184.9059
273.65	164.6938
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277.35	176.4623
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277.60	159.2252
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278.60	148.8335
279.20	153.4184
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280.46	153.5777
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284.30	184.0771
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285.90	172.9726
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286.10	169.2191
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290.80	168.5271
291.72	180.8068
293.26	0.0000
293.70	171.9608
295.21	161.8808
295.21	161.8808

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295.96	161.9768
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297.23	162.1376
298.57	162.3088
299.80	162.4644
299.80	162.4644
300.09	162.5008
300.09	162.5008
300.09	162.5008
300.09	162.5008
300.12	162.5034
301.29	162.6512
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303.76	134.9713
303.91	134.9885
304.40	142.7105
304.40	142.7105
304.84	150.4357
306.84	163.9896
308.46	137.5755
311.98	138.9089
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318.01	131.7874
319.02	132.8567
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323.87	147.9319
323.87	147.9319
323.87	147.9319
325.23	143.4041
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334.20	167.8772
334.30	167.8876
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338.28	153.4173
338.28	153.4173
338.28	153.4173
338.32	153.4221
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338.32	153.4221
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344.27	152.3764
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350.59	0.0000
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351.92	125.1079
351.92	125.1079
351.92	125.1079
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356.01	108.3335
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367.43	120.4156
367.94	0.0000
369.80	116.5859
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391.69	144.7713
391.69	144.7713
392.90	144.8818
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402.60	123.1879
404.84	144.9480
410.95	125.8925
411.60	155.8800
413.65	120.9330
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427.89	105.2998
432.53	81.5456
433.93	106.7237
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439.56	104.9789
439.89	107.0988
443.98	93.6730
444.90	84.2444
445.03	84.2517
445.03	84.2517
445.03	84.2517
445.03	84.2517
453.90	91.0338
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475.35	115.7075
476.78	105.0760
477.59	99.7590
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497.08	92.1452
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510.53	0.0000
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511.00	81.9048
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511.85	81.9403
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513.99	68.2505
520.41	74.6240
520.65	74.6323
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529.87	0.0000
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537.32	86.3361
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546.56	0.0000
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552.65	97.0334
555.20	82.6380
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563.90	102.0556
568.70	100.0435
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569.50	80.9648
569.67	80.9714
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574.00	92.8584
574.64	96.4959
578.91	97.8967
579.30	0.0000
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593.00	80.0508
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602.71	94.4203
602.71	94.4203
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604.41	86.8754
604.70	86.8870
609.31	80.9600

609.31	80.9600
609.31	80.9600
609.31	80.9600
610.33	62.6578
612.46	56.5990
614.37	80.0519
618.01	78.2120
621.84	92.1729
621.84	92.1729
631.29	94.4123
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633.10	75.9621
634.78	77.8723
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661.65	82.5387
664.57	0.0000
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666.33	96.7989
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696.49	85.6538
697.00	84.7216
697.49	87.5932
698.33	84.7673
698.50	91.4414
699.00	87.6493
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706.58	0.0000
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717.42	75.8273
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722.78	78.5543
722.89	78.5583
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739.58	72.6233
742.81	63.9891
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747.13	88.3762
751.79	58.3755
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753.82	83.7366
755.35	78.9137
756.15	74.0666
756.87	77.9863
763.93	101.6564
765.79	75.3175
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766.84	76.3261
776.49	70.7133
778.00	66.8230
778.57	59.9575
778.89	59.9635
783.80	64.9994
785.46	73.9087
792.07	89.8958

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798.80	104.9752
801.93	73.3695
805.60	50.6327
810.29	68.6210
810.76	67.6381
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817.79	56.8414
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819.60	52.8874
826.30	62.0166
828.27	0.0000
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831.96	78.1790
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836.80	0.0000
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848.13	63.5076
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856.80	45.4999
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867.82	60.8994
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876.40	57.0076
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880.27	66.2568
880.51	66.2616
881.50	53.0271
883.24	61.2217
884.67	54.1050
889.25	52.1443
896.60	43.0490
898.02	46.1459
899.00	51.2903
903.28	46.2272
911.07	54.5864
911.07	54.5864
911.07	54.5864
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920.93	54.7649
925.00	44.4918
925.24	50.7035
926.50	59.0053
935.52	51.9116
937.48	66.4891
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946.00	55.2139
949.00	52.1387
962.29	45.3783
964.01	50.6426
966.15	69.2001
968.20	57.7043
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969.11	48.9749
969.11	48.9749
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980.50	52.6611
983.50	64.3076
989.30	54.9187
996.32	75.1480
1001.03	54.0580
1001.68	51.9477
1004.76	66.8529
1021.30	0.0000
1024.50	0.0000
1034.80	39.6214
1036.00	59.9895
1037.82	51.4477
1038.57	48.2432
1038.76	0.0000
1045.16	60.1535
1046.59	61.2555
1048.07	53.7549

1050.47	43.0352
1050.47	43.0352
1062.04	55.0566
1063.62	56.1615
1076.63	62.8796
1077.35	54.2188
1078.86	58.5826
1085.78	63.0467
1099.22	70.9287
1112.02	70.5774
1112.84	62.9861
1115.52	67.6015
1120.29	70.2531
1120.29	70.2531
1120.29	70.2531
1120.29	70.2531
1120.51	58.5495
1121.28	49.4121
1124.00	0.0000
1129.67	54.1133
1131.51	0.0000
1147.95	0.0000
1167.94	62.1010
1173.22	71.4731
1175.09	65.0069
1177.93	81.7874
1189.05	80.1666
1204.90	80.5060
1205.75	0.0000
1213.00	91.9348
1221.42	87.4373
1230.97	93.3080
1235.34	76.4319
1236.41	0.0000
1238.25	75.5436
1246.25	58.6674
1260.41	0.0000
1271.85	49.5265
1274.45	57.1851
1274.54	57.1851
1291.56	56.4744
1298.22	0.0000
1312.09	56.7625
1325.50	36.6795
1325.50	36.6795
1332.49	33.8407
1333.61	33.8507
1360.21	36.0154
1362.66	0.0000
1365.15	34.1085
1368.21	29.2578
1368.53	0.0000
1376.25	18.4252
1384.27	24.6699
1394.10	33.3622
1395.20	38.2780
1407.95	17.7195
1434.06	23.7686
1436.60	33.6915
1457.56	0.0000
1460.81	20.9248
1489.15	13.0354
1509.49	18.1304
1596.49	23.6036
1620.62	12.3770
1678.03	0.0000
1691.02	12.5552
1691.02	12.5552
1706.46	0.0000
1750.46	0.0000
1764.49	14.5569
1764.49	14.5569
1764.49	14.5569
1764.49	14.5569
1770.23	40.3796
1771.40	24.4459
1791.20	0.0000
1808.65	11.7748

1836.01

10.7593

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440012

Total Uranium Activity	1.3193E+01	ug/g
Total Uranium Counting Unc.	9.0945E+00	ug/g
Total Uranium Tpu	4.6401E-06	ug/g
Total Uranium Mda	4.4945E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 950788                          SAMPLE ID   : G246440012
*  ANALYST       : MXR1                             DETECTOR    : GAM10
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 19:51:26.89          SAMPLE ALQT  : 122.740 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.011E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.491E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.233E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.564E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:53:58.79

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440013.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:51:52
Sample ID          : G246440013      Sample quantity   : 1.42350E+02 GRAM
Detector name      : GAM11           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.86  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 950788          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	46.48*	31	373	0.66	91.82	89	7	4.29E-03	108.4	
2	0	63.11*	148	491	0.81	125.09	122	7	2.05E-02	26.9	
3	3	74.76	513	488	0.92	148.42	144	14	7.13E-02	8.1	1.13E+00
4	3	77.08*	706	392	0.88	153.07	144	14	9.81E-02	5.8	
5	6	87.21	363	472	1.32	173.33	164	27	5.04E-02	11.5	3.78E+00
6	6	89.86	253	445	1.27	178.64	164	27	3.52E-02	16.2	
7	6	92.64*	547	466	1.42	184.20	164	27	7.60E-02	9.0	
8	0	128.78	126	354	0.97	256.53	253	8	1.74E-02	27.5	
9	0	185.94*	189	406	1.04	370.94	366	10	2.63E-02	21.9	
10	0	209.77	195	328	1.01	418.65	413	12	2.70E-02	20.0	
11	5	238.63*	1419	169	0.93	476.39	471	17	1.97E-01	3.1	1.28E+00
12	5	241.52	319	231	1.53	482.17	471	17	4.43E-02	10.9	
13	0	269.98	105	181	1.17	539.15	535	8	1.46E-02	24.1	
14	0	277.68	61	171	1.19	554.55	551	8	8.43E-03	39.7	
15	0	294.99	465	194	1.06	589.20	583	12	6.46E-02	7.6	
16	0	300.11	72	192	0.76	599.44	595	9	1.00E-02	36.6	
17	0	327.77	69	112	0.93	654.80	651	7	9.61E-03	28.1	
18	0	338.11*	256	203	0.90	675.51	670	11	3.56E-02	12.7	
19	0	351.93*	698	184	1.17	703.16	696	11	9.70E-02	5.4	
20	0	463.44	143	125	1.63	926.32	919	16	1.99E-02	19.3	
21	0	510.83*	139	135	1.75	1021.15	1015	15	1.94E-02	22.7	
22	0	583.11*	518	87	1.25	1165.80	1159	13	7.19E-02	5.8	
23	0	609.45*	474	115	1.23	1218.51	1212	14	6.59E-02	6.7	
24	0	662.14	49	80	1.33	1323.94	1319	8	6.85E-03	34.5	
25	0	727.12	119	86	1.35	1453.98	1447	14	1.66E-02	19.0	
26	0	795.79	66	36	1.61	1591.38	1587	10	9.13E-03	21.3	
27	0	861.48	56	83	1.33	1722.83	1715	14	7.82E-03	37.0	
28	0	911.53*	257	76	1.39	1822.98	1818	10	3.58E-02	9.1	
29	0	965.41*	33	52	1.21	1930.79	1926	9	4.58E-03	45.3	
30	0	969.23	194	23	1.60	1938.43	1934	10	2.70E-02	8.5	
31	0	1120.71	95	114	1.56	2241.50	2236	15	1.32E-02	26.4	
32	0	1238.93	115	62	3.41	2478.03	2470	19	1.59E-02	18.9	
33	0	1461.20*	1523	13	1.96	2922.69	2914	19	2.11E-01	2.6	
34	0	1590.90	36	36	4.92	3182.15	3172	21	4.98E-03	45.4	
35	0	1621.33	15	6	1.35	3243.00	3236	12	2.08E-03	41.6	
36	0	1631.40	21	14	0.71	3263.14	3256	14	2.92E-03	43.6	
37	0	1765.02*	104	3	2.12	3530.43	3524	12	1.45E-02	10.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 21:54:01

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440013.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 19:51:52
Sample ID         : G246440013           Sample quantity  : 142.35 GRAM
Sample type       : SOLID                 Sample geometry   :
Detector name     : GAMMA11              Detector geometry: CAN
Elapsed live time : 0 02:00:00.00         Elapsed real time: 0 02:00:01.86   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	*	3.071E+01	3.113E+00	4.912E-01	4.247E-02	62.525
CD-109	+	88.03	*	3.887E+00	9.679E-01	8.335E-01	7.904E-02	4.663
SN-126	+	64.28		9.539E-01	5.321E-01	5.447E-01	7.901E-02	1.751
	+	86.94		1.583E+00	7.520E-01	3.421E-01	1.420E-01	4.627
	+	87.57	*	3.808E-01	9.482E-02	8.192E-02	7.727E-03	4.649
BA-137M	+	661.65	*	6.023E-02	4.192E-02	5.247E-02	4.965E-03	1.148
CS-137	+	661.65	*	6.367E-02	4.431E-02	5.547E-02	5.257E-03	1.148
TL-208	+	277.35		5.038E-01	4.097E-01	4.920E-01	8.723E-02	1.024
	+	510.84		5.762E-01	2.728E-01	1.806E-01	2.448E-02	3.190
	+	583.14	*	6.091E-01	9.677E-02	4.344E-02	4.692E-03	14.021
	+	860.37		6.190E-01	4.621E-01	3.958E-01	4.122E-02	1.564
BI-210	+	46.50	*	1.335E+00	2.898E+00	3.265E+00	3.040E-01	0.409
PB-210	+	46.50	*	1.335E+00	2.898E+00	3.265E+00	3.040E-01	0.409
PO-210	+	46.50	*	1.335E+00	2.898E+00	3.265E+00	2.752E-01	0.409
BI-211		72.87		8.956E-01	2.405E+00	3.548E+00	2.818E-01	0.252
	+	351.07	*	3.628E+00	6.153E-01	2.718E-01	3.586E-02	13.346
BI-212	+	727.18	*	1.199E+00	4.731E-01	3.562E-01	3.893E-02	3.367
		785.46		1.804E+00	1.631E+00	2.818E+00	2.760E-01	0.640
	+	1620.62		1.269E+00	1.062E+00	1.272E+00	1.068E-01	0.998
PB-212	+	74.81		2.187E+00	4.441E-01	3.749E-01	4.638E-02	5.834
	+	77.11		1.719E+00	2.441E-01	2.149E-01	1.786E-02	7.998
	+	87.30		1.761E+00	4.726E-01	3.796E-01	5.210E-02	4.640
	+	238.63	*	1.611E+00	2.465E-01	7.736E-02	1.083E-02	20.822
	+	300.09		1.261E+00	9.453E-01	9.395E-01	1.506E-01	1.342
PO-212	+	74.81		2.187E+00	4.441E-01	3.749E-01	4.638E-02	5.834
	+	77.11		1.719E+00	2.441E-01	2.149E-01	1.786E-02	7.998
	+	87.30		1.761E+00	4.726E-01	3.796E-01	5.210E-02	4.640
		115.19		-1.474E+00	2.683E+00	4.469E+00	3.786E-01	-0.330
	+	238.63	*	1.611E+00	2.465E-01	7.736E-02	1.083E-02	20.822
	+	300.09		1.261E+00	9.453E-01	9.395E-01	1.506E-01	1.342
BI-214	+	609.31	*	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
	+	1120.29		1.087E+00	5.850E-01	4.237E-01	4.576E-02	2.565
	+	1764.49		1.622E+00	3.667E-01	2.030E-01	1.673E-02	7.989
PB-214	+	74.81		3.769E+00	7.345E-01	6.460E-01	7.093E-02	5.834

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	77.11		2.946E+00	4.749E-01	3.684E-01	4.153E-02	7.998
	+	87.30		3.017E+00	7.865E-01	6.503E-01	7.905E-02	4.640
	+	241.98		2.172E+00	5.688E-01	4.661E-01	6.790E-02	4.660
	+	295.21		1.430E+00	3.184E-01	1.593E-01	2.598E-02	8.975
	+	351.92	*	1.262E+00	2.239E-01	9.016E-02	1.276E-02	13.996
	+	74.81		3.769E+00	7.345E-01	6.460E-01	7.093E-02	5.834
	+	77.11		2.946E+00	4.749E-01	3.684E-01	4.153E-02	7.998
	+	87.30		3.017E+00	7.865E-01	6.503E-01	7.905E-02	4.640
PO-216	+	241.98		2.172E+00	5.688E-01	4.661E-01	6.790E-02	4.660
	+	295.21		1.430E+00	3.184E-01	1.593E-01	2.598E-02	8.975
	+	351.92	*	1.262E+00	2.239E-01	9.016E-02	1.276E-02	13.996
	+	74.81		2.187E+00	4.441E-01	3.749E-01	4.638E-02	5.834
	+	77.11		1.719E+00	2.441E-01	2.149E-01	1.786E-02	7.998
	+	87.30		1.761E+00	4.726E-01	3.796E-01	5.210E-02	4.640
	+	238.63	*	1.611E+00	2.465E-01	7.736E-02	1.083E-02	20.822
	+	300.09		1.261E+00	9.453E-01	9.395E-01	1.506E-01	1.342
PO-218	+	74.81		3.769E+00	7.345E-01	6.460E-01	7.093E-02	5.834
	+	77.11		2.946E+00	4.749E-01	3.684E-01	4.153E-02	7.998
	+	87.30		3.017E+00	7.865E-01	6.503E-01	7.905E-02	4.640
	+	241.98		2.172E+00	5.688E-01	4.661E-01	6.790E-02	4.660
	+	295.21		1.430E+00	3.184E-01	1.593E-01	2.598E-02	8.975
	+	351.92	*	1.262E+00	2.239E-01	9.016E-02	1.276E-02	13.996
	+	240.98	*	4.118E+00	1.053E+00	8.807E-01	1.179E-01	4.676
	+	609.31	*	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
RA-224	+	1120.29		1.087E+00	5.850E-01	4.237E-01	4.576E-02	2.565
	+	1764.49		1.622E+00	3.667E-01	2.030E-01	1.673E-02	7.989
	+	338.32		1.468E+00	7.278E-01	3.193E-01	1.359E-01	4.597
	+	911.07	*	1.337E+00	2.918E-01	1.816E-01	2.211E-02	7.362
	+	969.11		1.776E+00	5.181E-01	3.022E-01	7.162E-02	5.875
	+	338.32		1.468E+00	7.278E-01	3.193E-01	1.359E-01	4.597
	+	911.07	*	1.337E+00	2.918E-01	1.816E-01	2.211E-02	7.362
	+	969.11		1.776E+00	5.181E-01	3.022E-01	7.162E-02	5.875
TH-228	+	74.81		2.225E+00	4.019E-01	3.814E-01	3.121E-02	5.834
	+	77.11		1.749E+00	2.483E-01	2.186E-01	1.817E-02	7.998
	+	87.30		1.792E+00	4.462E-01	3.862E-01	3.630E-02	4.640
	+	238.63	*	1.639E+00	2.508E-01	7.871E-02	1.102E-02	20.822
	+	300.09		1.283E+00	1.219E+00	9.558E-01	5.784E-01	1.342
	+	609.31	*	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
	+	1120.29		1.087E+00	5.850E-01	4.237E-01	4.576E-02	2.565
	+	1764.49		1.622E+00	3.667E-01	2.030E-01	1.673E-02	7.989
TH-232	+	338.32		1.468E+00	4.229E-01	3.193E-01	4.306E-02	4.597
	+	911.07	*	1.337E+00	2.918E-01	1.816E-01	2.211E-02	7.362
	+	969.11		1.776E+00	5.181E-01	3.022E-01	7.162E-02	5.875
	+	63.29	*	2.410E+00	1.364E+00	1.341E+00	2.333E-01	1.797
	+	92.38		3.781E+00	9.693E-01	5.447E-01	9.992E-02	6.942
	+	609.31	*	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
	+	1120.29		1.087E+00	5.850E-01	4.237E-01	4.576E-02	2.565
	+	1764.49		1.622E+00	3.667E-01	2.030E-01	1.673E-02	7.989
NP-237	+	86.50	*	1.118E+00	3.616E-01	2.425E-01	5.488E-02	4.612

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		95.87		-5.180E-02	7.545E-01	1.071E+00	2.651E-01	-0.048
U-238	+	63.29	*	2.410E+00	1.364E+00	1.341E+00	2.333E-01	1.797
	+	92.38		3.781E+00	7.604E-01	5.447E-01	4.987E-02	6.942
AM-243	+	74.67	*	3.546E-01	6.392E-02	6.093E-02	4.930E-03	5.820
	+	86.72		4.193E+01	1.044E+01	9.077E+00	8.469E-01	4.620
		117.66		-1.651E-01	2.813E+00	4.776E+00	4.040E-01	-0.035
		142.18		-8.168E+00	1.337E+01	2.193E+01	1.955E+00	-0.372
ANH-511	+	511.00	*	1.245E-01	5.801E-02	3.902E-02	4.172E-03	3.189

---- 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	*	7.015E-02	2.594E-01	4.413E-01	4.995E-02	0.159
NA-22		1274.54	*	1.476E-02	4.144E-02	6.738E-02	5.533E-03	0.219
NA-24		1368.53	*	5.303E+00	4.144E-02	Half-Life too short		
AL-26		1129.67		-1.055E-01	1.481E+00	2.276E+00	1.922E-01	-0.046
		1808.65	*	4.938E-03	2.225E-02	3.844E-02	3.138E-03	0.128
TI-44		67.85		-8.522E-03	3.252E-02	5.085E-02	3.853E-03	-0.168
	+	78.38	*	3.172E-01	4.505E-02	5.137E-02	4.330E-03	6.175
SC-46		889.25	*	1.109E-04	3.539E-02	5.939E-02	5.850E-03	0.002
	+	1120.51		1.895E-01	1.012E-01	1.202E-01	1.025E-02	1.576
V-48		944.10		5.310E-01	8.307E-01	1.464E+00	1.416E-01	0.363
		983.50	*	5.253E-02	6.361E-02	1.138E-01	1.079E-02	0.462
		1312.09		-6.707E-03	8.329E-02	1.339E-01	1.104E-02	-0.050
CR-51		320.08	*	1.588E-02	3.077E-01	4.939E-01	7.167E-02	0.032
MN-52		744.21		-1.514E-02	2.659E-01	4.259E-01	4.138E-02	-0.036
		848.13		-1.415E+00	7.580E+00	1.256E+01	1.238E+00	-0.113
		935.52		5.399E-01	2.874E-01	5.465E-01	5.306E-02	0.988
		1246.25		-1.862E-01	9.614E+00	1.350E+01	1.102E+00	-0.014
		1333.61		-4.662E+00	5.848E+00	8.465E+00	6.996E-01	-0.551
		1434.06	*	5.809E-02	2.429E-01	4.056E-01	3.398E-02	0.143
MN-54		834.83	*	-1.409E-02	3.082E-02	4.997E-02	4.920E-03	-0.282
CO-56		846.75	*	-2.166E-02	3.389E-02	5.382E-02	5.302E-03	-0.402
		977.42		-6.528E-01	2.629E+00	4.276E+00	4.069E-01	-0.153
		1037.82		-5.684E-04	3.029E-01	5.016E-01	4.813E-02	-0.001
		1175.09		4.260E-01	2.215E+00	3.682E+00	2.960E-01	0.116
	+	1238.25		3.746E-01	1.452E-01	1.738E-01	1.462E-02	2.155
		1360.21		4.289E-01	8.773E-01	1.507E+00	1.251E-01	0.285
		1771.40		-8.854E-01	3.168E-01	2.886E-01	2.375E-02	-3.067
CO-57		122.06	*	-3.762E-04	1.876E-02	3.183E-02	2.693E-03	-0.012
		136.48		1.016E-01	1.581E-01	2.735E-01	2.569E-02	0.371
CO-58		810.76	*	-5.332E-02	3.520E-02	4.641E-02	4.570E-03	-1.149
FE-59		142.65		4.982E-01	2.202E+00	3.673E+00	3.281E-01	0.136
		192.34		-2.518E-01	7.717E-01	1.256E+00	1.885E-01	-0.200
		1099.22	*	-1.563E-02	7.479E-02	1.205E-01	1.133E-02	-0.130
		1291.56		-8.746E-04	1.147E-01	1.861E-01	1.756E-02	-0.005
CO-60		1173.22		2.182E-02	4.497E-02	7.639E-02	6.137E-03	0.286
		1332.49	*	-2.117E-02	3.325E-02	4.917E-02	4.063E-03	-0.431

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZN-65	1115.52	*		-1.367E-02	8.971E-02	1.253E-01	1.075E-02	-0.109
GE-68	1077.35	*		1.899E-01	1.019E+00	1.714E+00	1.522E-01	0.111
AS-73	53.44	*		-7.479E-02	5.395E-01	8.572E-01	6.437E-02	-0.087
AS-74	595.88	*		3.485E-03	8.818E-02	1.451E-01	1.476E-02	0.024
	634.78			9.184E-04	3.110E-01	5.079E-01	4.968E-02	0.002
SE-75	66.05			1.022E+00	3.584E+00	5.291E+00	5.028E-01	0.193
	96.73			-6.314E-01	6.652E-01	8.841E-01	1.222E-01	-0.714
	121.11			6.894E-02	1.017E-01	1.770E-01	1.963E-02	0.389
	136.00			1.998E-02	3.061E-02	5.295E-02	4.662E-03	0.377
	198.60			4.412E-01	1.534E+00	2.486E+00	2.974E-01	0.177
	264.65	*		-2.021E-02	3.865E-02	5.738E-02	8.435E-03	-0.352
	279.53			8.240E-02	9.595E-02	1.465E-01	2.294E-02	0.562
	303.91			-1.626E+00	1.971E+00	2.584E+00	4.295E-01	-0.629
	400.65			4.718E-02	2.121E-01	3.632E-01	4.646E-02	0.130
BR-77	87.88	+		1.595E+03	3.972E+02	4.974E+02	4.710E+01	3.207
	200.40			-5.304E+01	2.611E+02	4.271E+02	4.830E+01	-0.124
	239.00	+		4.929E+02	7.213E+01	6.561E+01	8.718E+00	7.512
	249.79			-8.553E+00	1.021E+02	1.653E+02	2.292E+01	-0.052
	281.68			1.124E+01	1.447E+02	2.095E+02	3.231E+01	0.054
	297.23			1.614E+02	1.161E+02	1.495E+02	2.243E+01	1.079
	303.76			-2.670E+02	3.168E+02	4.156E+02	6.151E+01	-0.642
	439.47			1.930E+02	2.272E+02	4.006E+02	4.321E+01	0.482
	484.57			4.031E+01	3.264E+02	5.494E+02	5.915E+01	0.073
	520.65	*		6.370E+00	1.632E+01	2.783E+01	2.966E+00	0.229
	574.64			-1.878E+02	3.372E+02	5.295E+02	5.476E+01	-0.355
	578.91			1.002E+02	1.438E+02	2.233E+02	2.302E+01	0.449
	585.48			1.492E+03	4.049E+02	7.008E+02	7.187E+01	2.128
	755.35			2.529E+02	2.806E+02	4.851E+02	4.725E+01	0.521
	817.79			-1.988E+00	2.127E+02	3.394E+02	3.338E+01	-0.006
SR-82	698.33			-2.973E+01	3.140E+01	4.643E+01	4.453E+00	-0.640
	776.49	*		-1.472E-01	3.704E-01	5.726E-01	5.600E-02	-0.257
	1395.20			-5.540E+00	8.887E+00	1.280E+01	1.068E+00	-0.433
RB-83	520.41	*		1.531E-02	5.806E-02	9.814E-02	1.046E-02	0.156
	529.64			-1.008E-02	8.432E-02	1.383E-01	1.468E-02	-0.073
	552.65			-7.608E-02	1.657E-01	2.630E-01	2.759E-02	-0.289
RB-84	881.50	*		2.026E-04	6.560E-02	1.102E-01	1.085E-02	0.002
KR-85	513.99	*		5.971E+00	6.347E+00	1.006E+01	1.074E+00	0.594
SR-85	513.99	*		3.133E-02	3.331E-02	5.277E-02	5.637E-03	0.594
RB-86	1076.63	*		2.550E-01	6.743E-01	1.156E+00	1.027E-01	0.221
Y-88	898.02			-2.132E-02	3.773E-02	6.010E-02	5.938E-03	-0.355
	1836.01	*		5.913E-03	2.273E-02	3.975E-02	3.227E-03	0.149
ZR-88	392.90	*		3.522E-03	2.431E-02	4.151E-02	4.427E-03	0.085
Y-91	1204.90	*		1.004E+01	1.917E+01	3.259E+01	2.638E+00	0.308
NB-94	702.63	*		3.577E-02	2.860E-02	5.071E-02	4.871E-03	0.705
	871.10			7.013E-04	2.978E-02	5.016E-02	4.943E-03	0.014
NB-95	765.79	*		-3.173E-02	3.853E-02	5.720E-02	5.583E-03	-0.555
NB-95M	235.69	*		3.797E-02	1.113E-01	1.659E-01	2.317E-02	0.229
ZR-95	724.18			-5.331E-03	8.305E-02	1.161E-01	1.200E-02	-0.046
	756.15	*		4.297E-02	6.475E-02	1.100E-01	1.157E-02	0.391

---- Non-Identified Nuclides ----

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NB-97	657.90	*		-4.405E-01	6.475E-02	Half-Life too short		
	1024.50			-2.473E+01	6.475E-02	Half-Life too short		
ZR-97	254.15			2.806E+01	6.475E-02	Half-Life too short		
	355.39			2.771E+01	6.475E-02	Half-Life too short		
	507.63	*		1.452E+01	6.475E-02	Half-Life too short		
	602.52			-5.657E+00	6.475E-02	Half-Life too short		
	1021.30			2.026E+01	6.475E-02	Half-Life too short		
	1147.95			-1.660E+01	6.475E-02	Half-Life too short		
	1362.66			-4.712E+00	6.475E-02	Half-Life too short		
	1750.46			2.099E+01	6.475E-02	Half-Life too short		
MO-99	140.51			-1.380E+01	3.476E+01	5.642E+01	1.567E+01	-0.245
	181.06			-1.275E+01	2.503E+01	3.590E+01	6.887E+00	-0.355
	366.43			5.052E+01	1.281E+02	2.082E+02	2.523E+01	0.243
	739.58	*		-7.002E-01	1.747E+01	2.804E+01	4.438E+00	-0.025
	778.00			-3.638E+01	5.102E+01	7.586E+01	7.422E+00	-0.480
TC-99M	140.51	*		-5.169E+12	5.102E+01	Half-Life too short		
RH-101	127.23			1.194E-02	2.674E-02	4.171E-02	3.563E-03	0.286
	198.01	*		-1.050E-02	2.733E-02	4.285E-02	4.795E-03	-0.245
	325.23			-6.921E-02	2.127E-01	2.932E-01	4.115E-02	-0.236
RH-102	418.52			2.064E-01	2.263E-01	4.019E-01	4.321E-02	0.514
	475.06	*		-1.184E-02	2.313E-02	3.709E-02	3.999E-03	-0.319
	631.29			9.631E-03	4.242E-02	7.071E-02	6.944E-03	0.136
	697.49			-6.197E-02	6.913E-02	1.031E-01	9.884E-03	-0.601
	766.84			9.616E-02	9.871E-02	1.701E-01	1.661E-02	0.565
	1046.59			-1.071E-01	9.834E-02	1.439E-01	1.310E-02	-0.744
	1112.84			-1.640E-01	1.977E-01	2.879E-01	2.474E-02	-0.570
RU-103	497.08	*		1.859E-02	3.274E-02	5.663E-02	8.802E-03	0.328
	610.33	+		1.180E+01	2.598E+00	2.673E+00	4.667E-01	4.415
RH-106	511.85	+		6.242E-01	2.909E-01	3.640E-01	3.891E-02	1.715
	621.84	*		-1.563E-01	2.637E-01	4.073E-01	5.797E-02	-0.384
	1050.47			-3.443E-01	1.986E+00	3.231E+00	2.932E-01	-0.107
RU-106	511.85	+		6.242E-01	2.909E-01	3.640E-01	3.891E-02	1.715
	621.84	*		-1.563E-01	2.633E-01	4.073E-01	4.041E-02	-0.384
	1050.47			-3.443E-01	1.986E+00	3.231E+00	2.932E-01	-0.107
AG-108M	433.93	*		3.991E-03	2.609E-02	4.430E-02	4.897E-03	0.090
	614.37			1.103E-02	3.501E-02	5.201E-02	5.351E-03	0.212
	722.95			-3.869E-02	4.057E-02	4.984E-02	4.967E-03	-0.776
AG-110M	657.75	*		-1.679E-02	3.504E-02	4.701E-02	4.581E-03	-0.357
	677.61			-1.079E-01	2.652E-01	4.147E-01	4.040E-02	-0.260
	706.67			4.261E-02	1.765E-01	2.915E-01	2.866E-02	0.146
	763.93			-1.002E-01	1.362E-01	2.027E-01	2.021E-02	-0.494
	884.67			-5.901E-04	4.398E-02	7.374E-02	7.444E-03	-0.008
	937.48			-3.308E-02	9.829E-02	1.593E-01	1.589E-02	-0.208
	1384.27			-2.469E-02	1.404E-01	2.211E-01	1.897E-02	-0.112
IN-111	171.28			8.510E-01	1.346E+00	2.301E+00	2.290E-01	0.370
	245.39	*		5.393E-01	1.636E+00	2.434E+00	3.318E-01	0.222
IN-113M	391.69	*		-1.283E-02	3.574E-02	5.911E-02	6.429E-03	-0.217
SN-113	391.69	*		-1.283E-02	3.574E-02	5.911E-02	6.429E-03	-0.217
IN-114M	190.27	*		3.954E-02	1.626E-01	2.449E-01	2.649E-02	0.162

---- Non-Identified Nuclides ----

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CD-115	260.90			2.542E+01	2.057E+02	3.361E+02	4.863E+01	0.076
	492.35			1.340E+01	5.703E+01	9.662E+01	1.039E+01	0.139
	527.90	*		-4.688E+00	1.705E+01	2.760E+01	2.932E+00	-0.170
SN-117M	156.02			-2.408E+00	2.018E+00	3.191E+00	2.988E-01	-0.755
	158.56	*		5.006E-02	4.667E-02	8.135E-02	7.688E-03	0.615
SB-122	563.90	*		1.880E+00	3.009E+00	5.185E+00	5.401E-01	0.363
	692.80			4.840E+00	6.839E+01	1.115E+02	1.067E+01	0.043
I-123	159.00	*		4.301E+01	6.839E+01	Half-Life too short		
	528.96			-6.140E+02	6.839E+01	Half-Life too short		
TE-123M	159.00	*		1.307E-02	2.239E-02	3.835E-02	3.649E-03	0.341
I-124	602.71	*		-1.127E-01	8.459E-01	1.266E+00	1.280E-01	-0.089
	722.78			-5.904E+00	6.107E+00	7.489E+00	7.236E-01	-0.788
	1325.50			-6.529E+00	4.659E+01	7.425E+01	6.131E+00	-0.088
SB-124	1376.25			4.173E+01	3.784E+01	6.895E+01	5.738E+00	0.605
	1509.49			9.992E+00	1.882E+01	3.366E+01	2.833E+00	0.297
	1691.02			1.822E+00	3.912E+00	7.086E+00	5.908E-01	0.257
	602.71			-4.656E-03	3.496E-02	5.233E-02	5.290E-03	-0.089
	645.85			3.453E-01	4.184E-01	7.284E-01	7.372E-02	0.474
	709.31			-4.705E-01	2.371E+00	3.766E+00	3.624E-01	-0.125
	713.82			-8.306E-03	1.425E+00	2.303E+00	2.944E-01	-0.004
	722.78			-3.537E-01	3.659E-01	4.486E-01	4.409E-02	-0.788
	968.20	+		1.875E+01	3.660E+00	6.559E+00	6.272E-01	2.859
	1045.16			1.449E-01	2.121E+00	3.534E+00	3.221E-01	0.041
	1325.50			-4.177E-01	2.980E+00	4.750E+00	3.922E-01	-0.088
	1368.21			1.180E+00	1.469E+00	2.623E+00	3.483E-01	0.450
	1436.60			7.415E-02	2.927E+00	4.727E+00	3.961E-01	0.016
SB-125	1691.02	*		2.574E-02	5.528E-02	1.001E-01	8.700E-03	0.257
	427.89	*		3.597E-02	7.663E-02	1.326E-01	1.446E-02	0.271
	463.38	+		1.160E+00	4.665E-01	4.876E-01	5.528E-02	2.379
	600.56			-1.235E-02	1.515E-01	2.468E-01	2.634E-02	-0.050
	635.90			-1.180E-02	2.270E-01	3.688E-01	3.831E-02	-0.032
	109.28	*		2.412E+00	6.906E+00	1.195E+01	1.227E+00	0.202
TE-125M	388.63			3.913E-05	1.822E-01	3.087E-01	3.349E-02	0.000
I-126	666.33	*		1.323E-01	1.984E-01	3.030E-01	2.872E-02	0.437
	753.82			6.252E-01	1.428E+00	2.387E+00	2.324E-01	0.262
	223.80			-9.592E-01	3.818E+00	6.180E+00	7.719E-01	-0.155
SB-126	278.60	+		3.769E+00	3.047E+00	4.019E+00	6.209E-01	0.938
	296.50			1.106E+01	2.646E+00	3.425E+00	5.145E-01	3.230
	414.70			-4.690E-02	7.036E-02	1.133E-01	1.217E-02	-0.414
	415.30			-3.881E+00	5.679E+00	9.122E+00	9.799E-01	-0.425
	555.20			2.119E+00	3.807E+00	6.535E+00	6.845E-01	0.324
	573.80			-6.777E-01	1.023E+00	1.593E+00	1.648E-01	-0.425
	593.00			-3.103E-01	9.301E-01	1.486E+00	1.515E-01	-0.209
	656.30			2.421E-01	3.432E+00	5.204E+00	4.959E-01	0.047
	666.33			5.558E-02	8.334E-02	1.273E-01	1.206E-02	0.437
	675.00			1.719E+00	1.918E+00	3.339E+00	3.176E-01	0.515
	695.00			9.173E-02	7.739E-02	1.364E-01	1.307E-02	0.672
	697.00			-1.553E-02	2.657E-01	4.283E-01	4.105E-02	-0.036
	720.50	*		9.619E-02	1.563E-01	2.363E-01	2.282E-02	0.407

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SB-127		856.80		-1.849E-01	5.029E-01	7.027E-01	6.925E-02	-0.263
		989.30		6.349E-01	1.157E+00	2.023E+00	1.912E-01	0.314
		1034.80		6.853E+00	9.363E+00	1.645E+01	1.510E+00	0.417
		1213.00		-1.296E+00	5.288E+00	8.467E+00	6.866E-01	-0.153
		61.10		4.531E+01	5.809E+01	8.845E+01	9.594E+00	0.512
		252.40		-4.918E-02	5.387E+00	8.756E+00	3.821E+00	-0.006
		290.80		-2.069E+00	2.661E+01	3.790E+01	6.527E+00	-0.055
		411.60		6.219E+00	1.504E+01	2.593E+01	4.521E+00	0.240
		444.90		-6.810E+00	1.155E+01	1.850E+01	2.712E+00	-0.368
		473.00		-5.071E-01	2.011E+00	3.257E+00	4.865E-01	-0.156
		543.00		5.489E-01	2.140E+01	3.544E+01	5.712E+00	0.015
		603.60		-9.394E+00	1.643E+01	2.202E+01	3.113E+00	-0.427
		685.20	*	-1.449E+00	1.731E+00	2.576E+00	3.281E-01	-0.562
		698.50		-1.802E+01	1.978E+01	2.911E+01	4.902E+00	-0.619
XE-127		722.20		-5.137E+01	4.442E+01	5.259E+01	6.637E+00	-0.977
		783.80		1.681E+00	4.935E+00	8.063E+00	1.116E+00	0.209
		57.60		9.288E-02	4.091E+00	6.526E+00	4.698E-01	0.014
		145.22		-1.959E-01	5.760E-01	9.380E-01	8.449E-02	-0.209
I-131		172.10		-3.582E-02	9.818E-02	1.608E-01	1.606E-02	-0.223
		202.84	*	-2.483E-03	3.943E-02	6.486E-02	7.413E-03	-0.038
		374.96		1.827E-01	1.768E-01	2.981E-01	3.472E-02	0.613
		80.18		1.991E+00	4.959E+00	6.420E+00	5.573E-01	0.310
TE-132		284.30		1.390E-01	1.456E+00	2.363E+00	3.692E-01	0.059
		364.48	*	-7.689E-02	1.227E-01	1.847E-01	2.321E-02	-0.416
		636.97		6.515E-01	1.513E+00	2.561E+00	2.612E-01	0.254
		722.89		-7.919E+00	8.262E+00	1.015E+01	9.869E-01	-0.780
BA-133		49.72		3.215E+00	1.937E+01	2.895E+01	3.175E+00	0.111
		111.76		4.828E+00	3.495E+01	5.993E+01	6.820E+00	0.081
		116.30		1.566E+01	3.211E+01	5.565E+01	6.316E+00	0.281
		228.16	*	6.004E-01	9.595E-01	1.591E+00	2.968E-01	0.377
I-133		53.15		2.080E+00	2.210E+00	3.683E+00	2.776E-01	0.565
		79.62		2.770E-01	9.949E-01	1.455E+00	2.210E-01	0.190
		81.00		5.421E-02	8.519E-02	1.116E-01	1.776E-02	0.486
	+	276.40		4.981E-01	4.067E-01	5.335E-01	1.025E-01	0.934
CS-134		302.84		-9.479E-03	1.314E-01	1.852E-01	3.324E-02	-0.051
		356.01	*	2.391E-02	3.872E-02	5.759E-02	9.289E-03	0.415
		383.85		-1.687E-01	2.428E-01	3.920E-01	5.660E-02	-0.430
	+	510.53		7.419E+00	2.428E-01	Half-Life	too short	
		529.87	*	-4.376E-03	2.428E-01	Half-Life	too short	
		706.58		5.508E-01	2.428E-01	Half-Life	too short	
		856.28		-5.824E-01	2.428E-01	Half-Life	too short	
		875.33		1.756E-01	2.428E-01	Half-Life	too short	
		1236.41		6.071E+00	2.428E-01	Half-Life	too short	
		1298.22		6.196E-01	2.428E-01	Half-Life	too short	
		475.35		-3.981E-01	1.482E+00	2.423E+00	2.613E-01	-0.164
		563.23		1.203E-01	2.995E-01	5.083E-01	5.332E-02	0.237
		569.32		1.015E-02	1.693E-01	2.742E-01	2.873E-02	0.037
		604.70		5.985E-03	2.880E-02	4.238E-02	4.284E-03	0.141
	+	795.84	*	1.112E-01	4.861E-02	7.858E-02	7.752E-03	1.415

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-135 I-135		801.93		3.547E-02	3.527E-01	5.272E-01	5.198E-02	0.067
		1038.57		-1.380E+00	3.728E+00	5.972E+00	5.469E-01	-0.231
		1167.94		4.017E-01	2.474E+00	4.109E+00	3.323E-01	0.098
		1365.15		-3.450E-01	1.106E+00	1.711E+00	1.492E-01	-0.202
		268.24	*	1.042E-01	1.416E-01	2.145E-01	3.366E-02	0.486
		288.45		1.789E+12	1.416E-01	Half-Life	too short	
		417.63		6.466E+12	1.416E-01	Half-Life	too short	
		546.56		-4.490E+11	1.416E-01	Half-Life	too short	
		836.80		7.044E+11	1.416E-01	Half-Life	too short	
		1038.76		-2.229E+12	1.416E-01	Half-Life	too short	
		1124.00		1.204E+13	1.416E-01	Half-Life	too short	
		1131.51		-1.262E+10	1.416E-01	Half-Life	too short	
		1260.41	*	1.572E+12	1.416E-01	Half-Life	too short	
		1457.56		5.109E+13	1.416E-01	Half-Life	too short	
		1678.03		-2.061E+11	1.416E-01	Half-Life	too short	
CS-136		1706.46		-2.229E+11	1.416E-01	Half-Life	too short	
		1791.20		2.498E+10	1.416E-01	Half-Life	too short	
		66.91		-3.339E-01	6.693E-01	9.457E-01	1.404E-01	-0.353
	+	86.29		5.583E+00	1.489E+00	1.683E+00	2.239E-01	3.317
		153.22		5.124E-01	5.957E-01	1.029E+00	1.052E-01	0.498
		163.89		4.139E-01	9.526E-01	1.619E+00	1.714E-01	0.256
		176.55		1.115E-01	3.205E-01	5.412E-01	5.743E-02	0.206
		273.65		2.189E-01	5.574E-01	6.619E-01	1.026E-01	0.331
		340.57		6.450E-03	1.415E-01	2.008E-01	2.721E-02	0.032
		818.51		-2.715E-02	6.823E-02	1.041E-01	1.025E-02	-0.261
CE-139 BA-140		1048.07	*	1.055E-02	1.030E-01	1.721E-01	1.625E-02	0.061
		1235.34		5.972E-01	6.485E-01	1.010E+00	1.163E-01	0.591
		165.85	*	-1.110E-02	2.347E-02	3.834E-02	3.726E-03	-0.290
		162.64		3.778E-01	6.613E-01	1.131E+00	1.136E-01	0.334
		304.84		-4.713E-01	1.198E+00	1.760E+00	5.365E-01	-0.268
LA-140		423.70		9.138E-01	1.708E+00	2.932E+00	9.690E-01	0.312
		537.32	*	6.126E-02	2.378E-01	3.998E-01	1.347E-01	0.153
	+	328.77		5.520E-01	3.195E-01	4.916E-01	6.979E-02	1.123
		432.53		1.527E-01	1.848E+00	3.123E+00	3.472E-01	0.049
		487.03		-1.035E-01	1.177E-01	1.813E-01	2.029E-02	-0.571
		751.79		-1.877E+00	1.755E+00	2.525E+00	2.665E-01	-0.744
		815.85		3.207E-01	3.043E-01	5.344E-01	5.725E-02	0.600
		867.82		-9.426E-01	1.510E+00	2.146E+00	2.202E-01	-0.439
		919.63		1.570E+00	2.812E+00	4.914E+00	5.700E-01	0.320
		925.24		6.929E-01	1.083E+00	1.909E+00	1.953E-01	0.363
CE-141 CE-143		1596.49	*	7.309E-04	7.649E-02	1.101E-01	9.262E-03	0.007
		145.44	*	-2.848E-02	5.180E-02	8.345E-02	7.649E-03	-0.341
		57.37		3.268E-04	5.180E-02	Half-Life	too short	
		231.56		-6.316E-04	5.180E-02	Half-Life	too short	
		293.26	*	1.080E-03	5.180E-02	Half-Life	too short	
	+	350.59		8.765E-02	5.180E-02	Half-Life	too short	
		490.36		3.031E-03	5.180E-02	Half-Life	too short	
		664.57		2.722E-03	5.180E-02	Half-Life	too short	
		721.93		-2.176E-03	5.180E-02	Half-Life	too short	
						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
CE-144		80.11		7.922E-01	1.898E+00	2.459E+00	2.115E-01	0.322
		133.54	*	-7.757E-02	1.622E-01	2.555E-01	3.986E-02	-0.304
PM-144		476.78		3.009E-02	5.432E-02	9.406E-02	1.076E-02	0.320
		618.01		1.013E-03	2.603E-02	4.272E-02	4.344E-03	0.024
		696.49	*	5.460E-03	3.005E-02	4.941E-02	4.737E-03	0.110
		778.57		-8.121E-01	1.956E+00	3.008E+00	2.944E-01	-0.270
PR-144		696.49	*	3.704E-01	2.039E+00	3.352E+00	3.213E-01	0.110
		1489.15		-2.618E+00	8.348E+00	1.324E+01	1.114E+00	-0.198
PM-146		453.90	*	3.539E-02	3.399E-02	6.058E-02	7.595E-03	0.584
		633.02		-3.043E-01	1.097E+00	1.735E+00	6.535E-01	-0.175
		735.90		9.458E-03	1.248E-01	2.026E-01	5.865E-02	0.047
		747.13		-4.005E-02	7.960E-02	1.207E-01	1.779E-02	-0.332
ND-147	+	91.11		1.031E+00	3.489E-01	4.526E-01	4.486E-02	2.278
		319.41		2.959E-02	2.992E+00	4.789E+00	6.827E-01	0.006
		439.89		4.907E+00	5.597E+00	9.880E+00	1.066E+00	0.497
		531.02	*	-1.170E-01	5.047E-01	8.193E-01	1.326E-01	-0.143
PM-149		285.90	*	1.006E+02	1.530E+02	2.543E+02	5.099E+01	0.396
EU-152		121.78		-3.547E-03	5.458E-02	9.247E-02	9.045E-03	-0.038
		244.69		1.633E-01	2.862E-01	4.326E-01	5.880E-02	0.377
		344.27	*	-3.169E-02	8.445E-02	1.307E-01	1.772E-02	-0.243
		443.98		-1.323E-01	7.419E-01	1.229E+00	1.326E-01	-0.108
		778.89		-7.104E-02	2.268E-01	3.527E-01	3.451E-02	-0.201
		867.32		-2.540E-01	8.430E-01	1.189E+00	1.171E-01	-0.214
	+	964.01		3.473E-01	3.161E-01	4.995E-01	4.787E-02	0.695
		1085.78		-1.437E-01	3.414E-01	5.393E-01	4.754E-02	-0.266
		1112.02		-3.235E-01	2.742E-01	3.958E-01	3.404E-02	-0.817
		1407.95		6.833E-02	1.551E-01	2.647E-01	2.212E-02	0.258
GD-153		69.67		1.111E-01	1.178E+00	1.868E+00	1.439E-01	0.059
		83.37		4.594E+00	1.238E+01	1.802E+01	1.612E+00	0.255
		97.43	*	-8.685E-03	6.807E-02	9.621E-02	8.547E-03	-0.090
		103.18		-3.702E-02	7.565E-02	1.270E-01	1.102E-02	-0.291
EU-154		123.07		-1.516E-02	3.851E-02	6.427E-02	7.229E-03	-0.236
		247.94		-1.011E-01	2.979E-01	4.752E-01	7.467E-02	-0.213
		591.81		2.949E-01	5.104E-01	8.747E-01	1.127E-01	0.337
		723.30		-1.442E-01	1.668E-01	2.075E-01	2.175E-02	-0.695
		756.87		5.322E-01	6.911E-01	1.181E+00	1.512E-01	0.451
		873.19		-1.755E-01	2.702E-01	4.274E-01	5.618E-02	-0.411
		996.32		-2.914E-01	3.113E-01	4.618E-01	8.388E-02	-0.631
		1004.76		-9.289E-02	2.081E-01	3.323E-01	4.055E-02	-0.280
		1274.45	*	4.118E-02	1.157E-01	1.880E-01	2.067E-02	0.219
EU-155		48.70		7.519E-01	1.479E+00	2.258E+00	1.826E-01	0.333
		60.01		-1.036E+00	3.483E+00	5.021E+00	3.582E-01	-0.206
	+	86.54		4.590E-01	1.144E-01	1.435E-01	1.347E-02	3.199
		105.31	*	8.157E-02	8.054E-02	1.423E-01	1.242E-02	0.573
TB-160	+	86.79		1.251E+00	3.116E-01	4.000E-01	3.736E-02	3.128
		197.04		-7.091E-01	4.828E-01	7.064E-01	7.873E-02	-1.004
		215.65		-1.399E-01	6.364E-01	9.843E-01	1.188E-01	-0.142
		298.57		1.366E-01	1.302E-01	1.635E-01	2.447E-02	0.835
		879.36	*	-4.052E-02	1.292E-01	2.112E-01	2.081E-02	-0.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		962.29		-2.466E-01	5.291E-01	7.224E-01	6.929E-02	-0.341
	+	966.15		2.435E-01	2.216E-01	3.695E-01	3.538E-02	0.659
		1177.93		-2.583E-01	3.498E-01	5.344E-01	4.298E-02	-0.483
		1271.85		-1.414E-01	6.890E-01	1.098E+00	8.999E-02	-0.129
		80.57		6.740E-02	2.417E-01	3.103E-01	2.684E-02	0.217
		184.41		4.586E-02	3.228E-02	5.284E-02	5.572E-03	0.868
		280.46		3.247E-02	7.166E-02	1.069E-01	1.651E-02	0.304
		410.95		1.187E-01	2.023E-01	3.526E-01	3.783E-02	0.337
TM-171		711.68	*	1.648E-02	5.060E-02	8.417E-02	8.106E-03	0.196
		752.31		-2.588E-01	2.457E-01	3.541E-01	3.447E-02	-0.731
		810.29		-7.292E-02	5.082E-02	6.763E-02	6.646E-03	-1.078
		51.35		-1.551E+01	1.898E+01	2.915E+01	2.254E+00	-0.532
		52.39		1.019E+01	9.576E+00	1.605E+01	1.222E+00	0.635
		59.40		1.890E+00	1.837E+01	2.710E+01	1.928E+00	0.070
		66.72	*	-1.150E+01	2.163E+01	3.057E+01	2.294E+00	-0.376
	+	88.36		9.032E-01	2.249E-01	2.684E-01	2.538E-02	3.365
LU-176		201.83		1.414E-02	2.315E-02	3.918E-02	4.458E-03	0.361
		306.84	*	1.061E-02	1.958E-02	3.244E-02	4.769E-03	0.327
		401.10		-1.256E-01	5.570E+00	9.402E+00	1.006E+00	-0.013
LU-177		112.95		1.030E+00	1.496E+00	2.614E+00	2.220E-01	0.394
	+	208.36	*	4.931E+00	2.059E+00	2.043E+00	2.391E-01	2.414
LU-177M		52.97		1.027E+00	1.012E+00	1.691E+00	1.278E-01	0.607
		54.07		-4.516E-01	5.537E-01	8.493E-01	6.328E-02	-0.532
HF-181		61.30		7.565E-01	1.015E+00	1.545E+00	1.112E-01	0.490
		121.62		8.934E-03	2.837E-01	4.825E-01	4.077E-02	0.019
		147.16		2.434E-02	4.938E-01	8.320E-01	7.545E-02	0.029
		171.86		-1.051E-01	3.844E-01	6.327E-01	6.311E-02	-0.166
		218.09		4.428E-01	7.011E-01	1.183E+00	1.443E-01	0.374
	+	268.79		1.847E+00	9.332E-01	1.203E+00	1.793E-01	1.535
		319.02		-2.754E-02	2.059E-01	3.261E-01	4.654E-02	-0.084
		367.43		6.913E-01	7.745E-01	1.298E+00	1.565E-01	0.533
		413.65	*	-1.665E-02	1.448E-01	2.425E-01	2.604E-02	-0.069
		56.28		4.323E-01	6.316E-01	1.038E+00	7.555E-02	0.416
		57.53		9.664E-03	3.422E-01	5.461E-01	3.933E-02	0.018
		65.20		-3.109E-01	7.247E-01	1.031E+00	7.643E-02	-0.302
		133.02		-2.082E-02	5.903E-02	8.807E-02	7.636E-03	-0.236
		136.25		2.820E-01	3.609E-01	6.272E-01	5.489E-02	0.450
		345.85		-1.798E-01	1.980E-01	2.541E-01	3.340E-02	-0.707
W-181		482.03	*	9.732E-03	3.376E-02	5.751E-02	6.194E-03	0.169
		56.28		1.654E-01	2.415E-01	3.969E-01	2.889E-02	0.417
		57.53		3.719E-03	1.309E-01	2.089E-01	1.505E-02	0.018
TA-182		65.20	*	-1.180E-01	2.751E-01	3.914E-01	2.901E-02	-0.302
		67.75		-1.918E-02	7.869E-02	1.231E-01	9.322E-03	-0.156
		100.10		1.876E-02	1.301E-01	2.244E-01	1.969E-02	0.084
		152.43		9.262E-02	2.699E-01	4.590E-01	4.241E-02	0.202
		222.10		2.552E-02	2.846E-01	4.689E-01	5.816E-02	0.054
		1001.68		-4.439E-02	2.017E+00	3.279E+00	3.077E-01	-0.014
	+	1121.28		5.208E-01	2.782E-01	3.331E-01	2.838E-02	1.564
		1189.05		-7.925E-02	2.920E-01	4.665E-01	3.762E-02	-0.170

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Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183	1221.42	*		-1.796E-02	2.059E-01	3.340E-01	2.713E-02	-0.054
	1230.97			-4.136E-01	5.106E-01	6.865E-01	5.588E-02	-0.603
	57.98			-4.367E-02	1.318E-01	2.067E-01	1.484E-02	-0.211
	59.32			9.312E-03	7.708E-02	1.138E-01	8.101E-03	0.082
	67.20			-3.928E-02	1.421E-01	2.212E-01	1.666E-02	-0.178
RE-184	162.32	*		1.600E-02	8.808E-02	1.484E-01	1.422E-02	0.108
	208.81	+		3.606E+00	1.506E+00	1.522E+00	1.785E-01	2.369
	291.72			7.707E-02	8.157E-01	1.179E+00	1.788E-01	0.065
	57.98			-1.589E-01	4.795E-01	7.521E-01	5.398E-02	-0.211
	59.32			3.385E-02	2.802E-01	4.138E-01	2.945E-02	0.082
OS-185	67.20			-1.429E-01	5.169E-01	8.043E-01	6.060E-02	-0.178
	161.27			-2.481E-01	2.847E-01	4.568E-01	4.361E-02	-0.543
	216.55			1.053E-01	2.172E-01	3.645E-01	4.417E-02	0.289
	252.85	*		6.950E-02	1.949E-01	3.227E-01	4.528E-02	0.215
	318.01			-1.900E-01	3.470E-01	5.308E-01	7.595E-02	-0.358
RE-188	792.07			9.435E-02	9.449E-01	1.338E+00	1.312E-01	0.071
	903.28			2.515E-01	9.123E-01	1.562E+00	1.535E-01	0.161
	920.93			1.185E-01	4.016E-01	6.886E-01	6.725E-02	0.172
	59.72			-1.307E-02	2.069E-01	3.023E-01	2.153E-02	-0.043
	61.14			8.685E-02	1.126E-01	1.716E-01	1.234E-02	0.506
W-188	69.30			7.608E-02	2.126E-01	3.406E-01	2.614E-02	0.223
	592.07			5.514E-01	2.156E+00	3.611E+00	3.684E-01	0.153
	646.12	*		2.198E-02	3.571E-02	6.120E-02	5.907E-03	0.359
	717.42			5.228E-02	8.011E-01	1.302E+00	1.256E-01	0.040
	874.81			7.089E-02	5.374E-01	9.125E-01	8.992E-02	0.078
IR-192	880.27			-5.808E-01	7.173E-01	1.117E+00	1.101E-01	-0.520
	155.03	*		4.526E-02	1.383E-01	2.349E-01	2.191E-02	0.193
	477.96			2.451E+00	2.442E+00	4.348E+00	4.686E-01	0.564
	633.10			-5.643E-01	2.259E+00	3.602E+00	3.530E-01	-0.157
	63.58	+		9.902E+01	5.383E+01	6.939E+01	5.080E+00	1.427
AU-195	227.08			9.275E+00	1.146E+01	1.919E+01	2.429E+00	0.483
	290.67	*		-5.428E-01	6.324E+00	9.001E+00	1.367E+00	-0.060
	295.96	+		1.113E+00	2.382E-01	2.568E-01	3.871E-02	4.335
	308.46			-5.986E-02	8.089E-02	1.224E-01	1.796E-02	-0.489
	316.51	*		-1.572E-02	2.758E-02	4.215E-02	6.059E-03	-0.373
TL-200	468.07			1.722E-02	5.648E-02	8.578E-02	9.684E-03	0.201
	604.41			4.241E-02	4.074E-01	5.922E-01	8.312E-02	0.072
	612.46			4.031E-01	6.596E-01	1.007E+00	1.121E-01	0.400
	65.12			-7.325E-02	1.277E-01	1.802E-01	1.335E-02	-0.406
	66.83	+		-3.695E-02	7.199E-02	1.019E-01	7.652E-03	-0.363
TL-201	75.70			1.157E+00	2.086E-01	3.186E-01	2.607E-02	3.632
	98.88	*		2.604E-01	1.648E-01	2.960E-01	2.612E-02	0.880
	129.76	+		5.991E+00	3.334E+00	4.042E+00	3.474E-01	1.482
	367.94	*		5.579E-04	3.334E+00	Half-Life too short		
	579.30			6.326E-03	3.334E+00	Half-Life too short		
TL-201	828.27			1.540E-02	3.334E+00	Half-Life too short		
	1205.75			7.212E-03	3.334E+00	Half-Life too short		
	68.90			1.058E+00	5.563E+00	8.858E+00	6.774E-01	0.120
	70.82			1.166E+00	3.423E+00	5.055E+00	3.935E-01	0.231

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		80.30		2.762E+00	7.383E+00	9.542E+00	8.225E-01	0.289
		135.34		1.630E+01	3.186E+01	5.487E+01	4.789E+00	0.297
		167.43	*	-2.117E+00	8.924E+00	1.473E+01	1.441E+00	-0.144
		68.90		6.523E-02	3.428E-01	5.458E-01	4.174E-02	0.120
		70.82		7.164E-02	2.103E-01	3.106E-01	2.418E-02	0.231
HG-203		80.30		1.698E-01	4.539E-01	5.866E-01	5.056E-02	0.289
		439.56	*	5.726E-02	6.555E-02	1.157E-01	1.248E-02	0.495
		70.83		2.860E-01	8.317E-01	1.228E+00	1.607E-01	0.233
		72.87		1.841E-01	4.947E-01	7.294E-01	9.315E-02	0.252
BI-207		82.60		-6.431E-01	9.390E-01	1.297E+00	1.803E-01	-0.496
		279.20	*	4.363E-02	3.751E-02	5.807E-02	9.070E-03	0.751
		72.80		4.101E-02	1.400E-01	2.059E-01	1.634E-02	0.199
	+	74.97		6.366E-01	1.148E-01	1.705E-01	1.384E-02	3.733
		84.90		2.650E-01	1.382E-01	2.277E-01	2.076E-02	1.164
TL-207		569.67		5.059E-03	2.662E-02	4.355E-02	4.519E-03	0.116
		1063.62	*	1.273E-02	4.705E-02	7.964E-02	7.154E-03	0.160
		1770.23		1.020E-01	3.642E-01	5.630E-01	4.634E-02	0.181
		81.07		1.227E-01	1.874E-01	2.465E-01	2.144E-02	0.498
		83.78		2.191E-01	9.421E-02	1.565E-01	1.407E-02	1.400
PO-209		94.90		2.528E-01	1.804E-01	2.765E-01	2.491E-02	0.914
		122.32		-4.437E-01	1.306E+00	2.186E+00	1.988E-01	-0.203
		144.24		4.378E-01	5.444E-01	9.256E-01	9.223E-02	0.473
		154.21		3.473E-01	3.177E-01	5.527E-01	5.582E-02	0.628
	+	269.46		4.283E-01	2.165E-01	2.998E-01	4.510E-02	1.429
PB-211		323.87	*	5.660E-02	6.090E-01	8.724E-01	1.825E-01	0.065
	+	338.28		6.130E+00	1.846E+00	2.183E+00	3.514E-01	2.808
		445.03		-1.155E+00	1.801E+00	2.872E+00	3.940E-01	-0.402
		260.50		3.501E+00	7.504E+00	1.249E+01	1.804E+00	0.280
		262.80		5.862E+00	2.128E+01	3.505E+01	5.108E+00	0.167
PO-215		896.60	*	-4.143E+00	6.607E+00	1.045E+01	1.029E+00	-0.396
		404.84	*	3.389E-01	8.184E-01	1.368E+00	8.614E-01	0.248
		427.08		1.162E+00	1.861E+00	3.005E+00	1.878E+00	0.386
		831.96		-9.885E-01	1.269E+00	1.612E+00	1.013E+00	-0.613
		81.07		1.227E-01	1.874E-01	2.465E-01	2.144E-02	0.498
RN-219		83.78		2.191E-01	9.421E-02	1.565E-01	1.407E-02	1.400
		94.90		2.528E-01	1.804E-01	2.765E-01	2.491E-02	0.914
		122.32		-4.437E-01	1.306E+00	2.186E+00	1.988E-01	-0.203
		144.24		4.378E-01	5.444E-01	9.256E-01	9.223E-02	0.473
		154.21		3.473E-01	3.177E-01	5.527E-01	5.582E-02	0.628
RN-220	+	269.46		4.283E-01	2.165E-01	2.998E-01	4.510E-02	1.429
		323.87	*	5.660E-02	6.090E-01	8.724E-01	1.825E-01	0.065
	+	338.28		6.130E+00	1.846E+00	2.183E+00	3.514E-01	2.808
		445.03		-1.155E+00	1.801E+00	2.872E+00	3.940E-01	-0.402
	+	271.23		5.495E-01	2.794E-01	3.888E-01	6.247E-02	1.413
RA-223		401.81	*	1.422E-01	3.464E-01	5.981E-01	9.754E-02	0.238
		549.76	*	-1.096E+01	2.114E+01	3.338E+01	3.508E+00	-0.328
		81.07		1.227E-01	1.874E-01	2.465E-01	2.144E-02	0.498
		83.78		2.191E-01	9.421E-02	1.565E-01	1.407E-02	1.400
		94.90		2.528E-01	1.804E-01	2.765E-01	2.491E-02	0.914

---- 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		-4.437E-01	1.306E+00	2.186E+00	1.988E-01	-0.203
		144.24		4.378E-01	5.444E-01	9.256E-01	9.223E-02	0.473
		154.21		3.473E-01	3.177E-01	5.527E-01	5.582E-02	0.628
	+	269.46		4.283E-01	2.165E-01	2.998E-01	4.510E-02	1.429
		323.87	*	5.660E-02	6.090E-01	8.724E-01	1.825E-01	0.065
	+	338.28		6.130E+00	1.846E+00	2.183E+00	3.514E-01	2.808
		445.03		-1.155E+00	1.801E+00	2.872E+00	3.940E-01	-0.402
		79.80		5.109E-01	1.271E+00	1.865E+00	4.006E-01	0.274
		236.00		1.506E-01	1.973E-01	3.005E-01	4.733E-02	0.501
		256.20	*	1.728E-03	3.123E-01	5.076E-01	9.674E-02	0.003
		286.10		8.336E-01	1.289E+00	2.144E+00	3.921E-01	0.389
	+	299.80		2.337E+00	1.782E+00	2.172E+00	4.629E-01	1.076
TH-227		304.40		-1.076E+00	1.703E+00	2.272E+00	4.998E-01	-0.474
		334.20		9.667E-01	2.115E+00	3.103E+00	6.864E-01	0.311
		79.80		5.109E-01	1.271E+00	1.865E+00	4.057E-01	0.274
	+	94.00		1.461E+01	4.144E+00	2.941E+00	6.458E-01	4.968
		236.00		1.506E-01	1.971E-01	3.005E-01	4.465E-02	0.501
		256.20	*	1.728E-03	3.123E-01	5.076E-01	1.081E-01	0.003
		286.10		8.336E-01	1.533E+00	2.144E+00	2.169E+00	0.389
	+	299.80		2.337E+00	1.782E+00	2.172E+00	4.629E-01	1.076
		304.40		-1.076E+00	1.703E+00	2.272E+00	4.998E-01	-0.474
		334.20		9.667E-01	2.115E+00	3.103E+00	6.864E-01	0.311
		85.43		2.831E-01	1.371E-01	2.263E-01	2.077E-02	1.251
	+	88.47		5.199E-01	1.295E-01	1.530E-01	1.446E-02	3.397
TH-229		100.00		8.227E-02	1.322E-01	2.317E-01	2.034E-02	0.355
		193.63	*	1.065E-01	3.957E-01	6.627E-01	7.277E-02	0.161
	+	210.97		2.763E+00	1.154E+00	1.046E+00	1.238E-01	2.641
		283.67	*	-1.336E+00	1.280E+00	1.882E+00	3.729E-01	-0.710
	+	301.29		9.349E-01	7.033E-01	8.708E-01	1.501E-01	1.074
		81.07		1.227E-01	1.874E-01	2.465E-01	2.144E-02	0.498
		83.78		2.191E-01	9.421E-02	1.565E-01	1.407E-02	1.400
		94.90		2.528E-01	1.804E-01	2.765E-01	2.491E-02	0.914
		122.32		-4.437E-01	1.306E+00	2.186E+00	1.988E-01	-0.203
		144.24		4.378E-01	5.444E-01	9.256E-01	9.223E-02	0.473
		154.21		3.473E-01	3.177E-01	5.527E-01	5.582E-02	0.628
	+	269.46		4.283E-01	2.165E-01	2.998E-01	4.510E-02	1.429
U-231		323.87	*	5.660E-02	6.090E-01	8.724E-01	1.825E-01	0.065
	+	338.28		6.130E+00	1.846E+00	2.183E+00	3.514E-01	2.808
		445.03		-1.155E+00	1.801E+00	2.872E+00	3.940E-01	-0.402
		84.21		1.398E+01	5.846E+00	9.718E+00	8.784E-01	1.438
	+	92.29		2.078E+01	4.180E+00	5.231E+00	4.793E-01	3.973
		95.87	*	-8.453E-02	1.231E+00	1.748E+00	1.566E-01	-0.048
		108.00		-1.985E-01	2.140E+00	3.644E+00	3.120E-01	-0.054
	+	75.28		1.857E+01	4.096E+00	5.033E+00	7.593E-01	3.691
	+	86.59		7.455E+00	2.651E+00	2.348E+00	6.350E-01	3.176
	+	300.12		6.516E-01	4.933E-01	6.141E-01	1.180E-01	1.061
		311.98	*	1.782E-02	5.079E-02	8.322E-02	1.221E-02	0.214
		340.50		1.339E-01	6.166E-01	8.860E-01	2.299E-01	0.151
		398.62		3.233E-01	1.622E+00	2.774E+00	7.592E-01	0.117

---- 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		-5.085E-01	1.353E+00	2.218E+00	4.988E-01	-0.229
		63.00		2.809E+00	1.569E+00	2.026E+00	2.999E-01	1.386
		94.67		2.639E-01	1.350E-01	2.079E-01	2.637E-02	1.269
		98.44		7.989E-02	8.171E-02	1.179E-01	6.582E-02	0.677
		99.86		2.621E-01	3.374E-01	5.938E-01	5.216E-02	0.441
		111.00		-1.282E-01	1.333E-01	2.173E-01	2.611E-02	-0.590
		131.20		2.863E-02	8.574E-02	1.329E-01	1.146E-02	0.215
		152.70		1.289E-01	2.613E-01	4.455E-01	7.739E-02	0.289
	+	186.00		4.059E+00	2.198E+00	2.247E+00	7.150E-01	1.806
		226.40		1.188E-01	3.525E-01	5.799E-01	9.340E-02	0.205
		227.20		3.802E-01	3.765E-01	6.344E-01	8.036E-02	0.599
		248.90		-2.222E-01	6.735E-01	1.072E+00	2.668E-01	-0.207
	+	293.70		6.863E+00	1.792E+00	1.346E+00	2.866E-01	5.098
		369.80		7.105E-02	7.505E-01	1.179E+00	2.746E-01	0.060
		568.70		-5.320E-01	8.573E-01	1.310E+00	1.361E-01	-0.406
		569.50		3.889E-02	2.357E-01	3.849E-01	3.995E-02	0.101
		574.00		-5.428E-01	1.276E+00	2.028E+00	2.098E-01	-0.268
		699.00		-5.244E-01	6.388E-01	9.487E-01	1.854E-01	-0.553
		706.10		1.502E-01	8.799E-01	1.441E+00	6.454E-01	0.104
		733.00		1.748E-01	3.588E-01	5.337E-01	1.208E-01	0.328
	+	742.81		9.519E-01	1.312E+00	1.985E+00	1.337E+00	0.480
		796.30		2.157E+00	1.093E+00	1.508E+00	4.141E-01	1.430
		805.60		4.480E-01	8.525E-01	1.416E+00	4.390E-01	0.316
		819.60		-1.292E+00	1.176E+00	1.479E+00	5.667E-01	-0.874
		826.30		1.066E-02	7.520E-01	1.202E+00	5.407E-01	0.009
		831.60		-4.262E-01	5.940E-01	8.601E-01	2.599E-01	-0.496
		876.40		4.804E-01	8.954E-01	1.320E+00	1.358E+00	0.364
		880.51		-2.176E-01	2.542E-01	3.941E-01	3.883E-02	-0.552
		883.24		4.769E-02	2.523E-01	4.268E-01	2.877E-01	0.112
		899.00		-1.904E-01	7.639E-01	1.246E+00	5.480E-01	-0.153
		925.00		5.485E-01	1.005E+00	1.760E+00	1.716E-01	0.312
		926.50		5.138E-02	1.444E-01	2.484E-01	6.380E-02	0.207
	*	946.00		-1.934E-01	2.583E-01	3.962E-01	7.633E-02	-0.488
		949.00		1.041E-01	3.860E-01	6.592E-01	6.362E-02	0.158
		980.50		-3.105E-01	6.455E-01	1.025E+00	9.742E-02	-0.303
		1394.10		-5.276E-01	9.483E-01	1.279E+00	8.322E-01	-0.412
PA-234M		766.42		7.640E+00	1.047E+01	1.665E+01	8.480E+00	0.459
		1001.03	*	2.183E+00	4.536E+00	7.665E+00	8.154E-01	0.285
U-235	+	89.95		3.572E+00	1.601E+00	1.479E+00	4.594E-01	2.415
		93.35		4.546E+00	1.518E+00	1.096E+00	3.089E-01	4.146
		105.00		7.265E-01	8.041E-01	1.371E+00	4.091E-01	0.530
		143.76	*	1.304E-01	1.675E-01	2.828E-01	4.999E-02	0.461
	+	163.35		4.157E-01	3.808E-01	6.507E-01	1.272E-01	0.639
		185.71		1.503E-01	6.777E-02	8.340E-02	8.844E-03	1.802
NP-236		205.31		-4.440E-01	4.740E-01	6.443E-01	1.325E-01	-0.689
		94.67		2.015E-01	1.009E-01	1.579E-01	1.424E-02	1.277
		98.44		6.038E-02	5.203E-02	8.914E-02	7.880E-03	0.677
		111.00		-9.694E-02	1.005E-01	1.644E-01	1.400E-02	-0.590
		160.31	*	-1.495E-02	6.243E-02	1.034E-01	9.834E-03	-0.145

---- 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		1.272E-01	1.145E-01	2.033E-01	1.789E-02	0.625
		117.00	*	2.324E-02	1.400E-01	2.399E-01	2.030E-02	0.097
	+	209.75		2.783E+00	1.162E+00	1.182E+00	1.391E-01	2.355
		228.18		1.314E-01	1.950E-01	3.250E-01	4.134E-02	0.404
	+	277.60		2.430E-01	1.964E-01	2.647E-01	4.074E-02	0.918
AM-241		334.30		5.861E-01	1.197E+00	1.766E+00	2.412E-01	0.332
		59.54	*	2.115E-02	1.057E-01	1.568E-01	1.232E-02	0.135
		99.55		1.309E-01	1.179E-01	2.093E-01	1.841E-02	0.625
		103.76	*	-1.733E-02	7.013E-02	1.189E-01	1.030E-02	-0.146
		117.00		2.391E-02	1.441E-01	2.468E-01	2.088E-02	0.097
CM-243	+	209.75		2.744E+00	1.146E+00	1.165E+00	1.372E-01	2.355
		228.18		1.328E-01	1.971E-01	3.285E-01	4.177E-02	0.404
	+	277.60		2.450E-01	1.980E-01	2.669E-01	4.108E-02	0.918
		798.80		-2.292E-02	1.261E-01	1.713E-01	1.681E-02	-0.134
		1036.00		1.686E-01	2.848E-01	4.947E-01	4.538E-02	0.341
AM-246		1062.04		-8.455E-02	2.012E-01	3.189E-01	2.868E-02	-0.265
		1078.86	*	-8.655E-02	1.206E-01	1.841E-01	1.633E-02	-0.470
	+	278.00		1.008E+00	8.145E-01	1.084E+00	1.672E-01	0.929
		287.40		3.132E-01	1.031E+00	1.691E+00	2.583E-01	0.185
		402.60	*	-3.256E-03	3.075E-02	5.162E-02	5.525E-03	-0.063
CF-249		252.85		2.584E-01	7.245E-01	1.200E+00	1.684E-01	0.215
		333.44		1.443E-01	1.497E-01	2.289E-01	3.134E-02	0.631
		387.95	*	1.430E-02	3.163E-02	5.499E-02	5.988E-03	0.260
CF-251		176.60	*	3.259E-02	9.828E-02	1.659E-01	1.690E-02	0.196
		227.00		2.671E-01	3.360E-01	5.624E-01	7.118E-02	0.475
		285.00		4.697E-01	1.422E+00	2.336E+00	3.584E-01	0.201

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]G246440013      *
* Acquisition date   : 19-FEB-2010 19:51:52 Detector SN#      :              *
* Detector ID        : GAM11 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 02:00:01.86 Half life ratio : 8.000    *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID      *
* Sample ID          : G246440013 Analyst initials: MXR1          *
* Batch Number       : 950788 Sample Quantity : 1.4235E+02 GRAM    *
* Recovery           : 1.00000 Carrier Weight : 0.00000          *
*****
*
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                             *
* CALIB. DATE/TIME   : 18-NOV-2009 15:33:22 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	3.071E+01	3.050E+00	4.934E-01	0.000E+00
CD-109	3.887E+00	9.486E-01	8.883E-01	0.000E+00
SN-126	3.808E-01	9.293E-02	8.731E-02	0.000E+00
BA-137M	6.023E-02	4.108E-02	5.364E-02	0.000E+00
CS-137	6.367E-02	4.343E-02	5.670E-02	0.000E+00
TL-208	6.091E-01	9.483E-02	4.453E-02	0.000E+00
BI-210	1.335E+00	2.840E+00	3.524E+00	0.000E+00
PB-210	1.335E+00	2.840E+00	3.524E+00	0.000E+00
PO-210	1.335E+00	2.840E+00	3.524E+00	0.000E+00
BI-211	3.628E+00	6.030E-01	2.816E-01	0.000E+00
BI-212	1.199E+00	4.637E-01	3.633E-01	0.000E+00
PB-212	1.611E+00	2.416E-01	8.080E-02	0.000E+00
PO-212	1.611E+00	2.416E-01	8.080E-02	0.000E+00
BI-214	1.051E+00	1.806E-01	9.021E-02	0.000E+00
PB-214	1.262E+00	2.194E-01	9.341E-02	0.000E+00
PO-214	1.262E+00	2.194E-01	9.341E-02	0.000E+00
PO-216	1.611E+00	2.416E-01	8.080E-02	0.000E+00
PO-218	1.262E+00	2.194E-01	9.341E-02	0.000E+00
RA-224	4.118E+00	1.032E+00	9.197E-01	0.000E+00
RA-226	1.051E+00	1.806E-01	9.021E-02	0.000E+00
AC-228	1.337E+00	2.860E-01	1.843E-01	0.000E+00
RA-228	1.337E+00	2.860E-01	1.843E-01	0.000E+00
TH-228	1.639E+00	2.458E-01	8.221E-02	0.000E+00
TH-230	1.051E+00	1.806E-01	9.021E-02	0.000E+00
TH-232	1.337E+00	2.860E-01	1.843E-01	0.000E+00
TH-234	2.410E+00	1.337E+00	1.438E+00	0.000E+00
U-234	1.051E+00	1.806E-01	9.021E-02	0.000E+00
NP-237	1.118E+00	3.544E-01	2.585E-01	0.000E+00
U-238	2.410E+00	1.337E+00	1.438E+00	0.000E+00
AM-243	3.546E-01	6.265E-02	6.515E-02	0.000E+00
ANH-511	1.245E-01	5.685E-02	4.011E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	7.015E-02	2.542E-01	4.543E-01	0.000E+00	NOT IDENT.
NA-22	1.476E-02	4.061E-02	6.789E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.822E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	4.938E-03	2.181E-02	3.843E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.415E-02	5.488E-02	0.000E+00	FAIL ABUN
SC-46	1.109E-04	3.468E-02	6.032E-02	0.000E+00	FAIL ABUN
V-48	5.253E-02	6.234E-02	1.153E-01	0.000E+00	NOT IDENT.
CR-51	1.588E-02	3.016E-01	5.127E-01	0.000E+00	NOT IDENT.
MN-52	5.809E-02	2.380E-01	4.076E-01	0.000E+00	NOT IDENT.
MN-54	-1.409E-02	3.021E-02	5.082E-02	0.000E+00	NOT IDENT.
CO-56	-2.166E-02	3.321E-02	5.471E-02	0.000E+00	FAIL ABUN
CO-57	-3.762E-04	1.838E-02	3.371E-02	0.000E+00	NOT IDENT.
CO-58	-5.332E-02	3.450E-02	4.723E-02	0.000E+00	NOT IDENT.
FE-59	-1.563E-02	7.329E-02	1.218E-01	0.000E+00	NOT IDENT.
CO-60	-2.117E-02	3.258E-02	4.949E-02	0.000E+00	NOT IDENT.
ZN-65	-1.367E-02	8.791E-02	1.266E-01	0.000E+00	NOT IDENT.
GE-68	1.899E-01	9.991E-01	1.734E+00	0.000E+00	NOT IDENT.
AS-73	-7.479E-02	5.287E-01	9.227E-01	0.000E+00	NOT IDENT.
AS-74	3.485E-03	8.641E-02	1.487E-01	0.000E+00	NOT IDENT.
SE-75	-2.021E-02	3.788E-02	5.981E-02	0.000E+00	NOT IDENT.
BR-77	6.370E+00	1.599E+01	2.860E+01	0.000E+00	FAIL ABUN
SR-82	-1.472E-01	3.630E-01	5.832E-01	0.000E+00	NOT IDENT.
RB-83	1.531E-02	5.690E-02	1.008E-01	0.000E+00	NOT IDENT.
RB-84	2.026E-04	6.429E-02	1.119E-01	0.000E+00	NOT IDENT.
KR-85	5.971E+00	6.220E+00	1.033E+01	0.000E+00	NOT IDENT.
SR-85	3.133E-02	3.264E-02	5.423E-02	0.000E+00	NOT IDENT.
RB-86	2.550E-01	6.608E-01	1.169E+00	0.000E+00	NOT IDENT.
Y-88	5.913E-03	2.228E-02	3.972E-02	0.000E+00	NOT IDENT.
ZR-88	3.522E-03	2.382E-02	4.291E-02	0.000E+00	NOT IDENT.
Y-91	1.004E+01	1.878E+01	3.288E+01	0.000E+00	NOT IDENT.
NB-94	3.577E-02	2.803E-02	5.177E-02	0.000E+00	NOT IDENT.
NB-95	-3.173E-02	3.776E-02	5.828E-02	0.000E+00	NOT IDENT.
NB-95M	3.797E-02	1.091E-01	1.734E-01	0.000E+00	NOT IDENT.
ZR-95	4.297E-02	6.346E-02	1.121E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.366E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.433E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.002E-01	1.712E+01	2.860E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.280E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.050E-02	2.678E-02	4.492E-02	0.000E+00	NOT IDENT.
RH-102	-1.184E-02	2.267E-02	3.818E-02	0.000E+00	NOT IDENT.
RU-103	1.859E-02	3.209E-02	5.825E-02	0.000E+00	FAIL ABUN
RH-106	-1.563E-01	2.585E-01	4.169E-01	0.000E+00	FAIL ABUN
RU-106	-1.563E-01	2.580E-01	4.169E-01	0.000E+00	FAIL ABUN
AG-108M	3.991E-03	2.557E-02	4.569E-02	0.000E+00	NOT IDENT.
AG-110M	-1.679E-02	3.434E-02	4.806E-02	0.000E+00	NOT IDENT.
IN-111	5.393E-01	1.603E+00	2.541E+00	0.000E+00	NOT IDENT.
IN-113M	-1.283E-02	3.503E-02	6.110E-02	0.000E+00	NOT IDENT.
SN-113	-1.283E-02	3.503E-02	6.110E-02	0.000E+00	NOT IDENT.
IN-114M	3.954E-02	1.594E-01	2.569E-01	0.000E+00	NOT IDENT.
CD-115	-4.688E+00	1.671E+01	2.835E+01	0.000E+00	NOT IDENT.
SN-117M	5.006E-02	4.574E-02	8.568E-02	0.000E+00	NOT IDENT.
SB-122	1.880E+00	2.949E+00	5.318E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.217E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.307E-02	2.194E-02	4.039E-02	0.000E+00	NOT IDENT.
I-124	-1.127E-01	8.290E-01	1.297E+00	0.000E+00	NOT IDENT.
SB-124	2.574E-02	5.417E-02	1.002E-01	0.000E+00	FAIL ABUN
SB-125	3.597E-02	7.510E-02	1.368E-01	0.000E+00	FAIL ABUN
TE-125M	2.412E+00	6.768E+00	1.268E+01	0.000E+00	NOT IDENT.
I-126	1.323E-01	1.945E-01	3.097E-01	0.000E+00	NOT IDENT.
SB-126	9.619E-02	1.531E-01	2.411E-01	0.000E+00	FAIL ABUN
SB-127	-1.449E+00	1.697E+00	2.631E+00	0.000E+00	NOT IDENT.
XE-127	-2.483E-03	3.864E-02	6.797E-02	0.000E+00	NOT IDENT.
I-131	-7.689E-02	1.203E-01	1.913E-01	0.000E+00	NOT IDENT.
TE-132	6.004E-01	9.404E-01	1.663E+00	0.000E+00	NOT IDENT.
BA-133	2.391E-02	3.794E-02	5.965E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.716E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.763E-02	8.000E-02	0.000E+00	FAIL ABUN
CS-135	1.042E-01	1.388E-01	2.235E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.248E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.055E-02	1.009E-01	1.741E-01	0.000E+00	FAIL ABUN
CE-139	-1.110E-02	2.300E-02	4.034E-02	0.000E+00	NOT IDENT.
BA-140	6.126E-02	2.330E-01	4.105E-01	0.000E+00	NOT IDENT.
LA-140	7.309E-04	7.496E-02	1.104E-01	0.000E+00	FAIL ABUN
CE-141	-2.848E-02	5.076E-02	8.805E-02	0.000E+00	NOT IDENT.

CE-143	0.000E+00	4.575E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-7.757E-02	1.589E-01	2.700E-01	0.000E+00	NOT IDENT.
PM-144	5.460E-03	2.945E-02	5.045E-02	0.000E+00	NOT IDENT.
PR-144	3.704E-01	1.998E+00	3.423E+00	0.000E+00	NOT IDENT.
PM-146	3.539E-02	3.331E-02	6.242E-02	0.000E+00	NOT IDENT.
ND-147	-1.170E-01	4.946E-01	8.414E-01	0.000E+00	FAIL ABUN
PM-149	1.006E+02	1.500E+02	2.646E+02	0.000E+00	NOT IDENT.
EU-152	-3.169E-02	8.276E-02	1.354E-01	0.000E+00	FAIL ABUN
GD-153	-8.685E-03	6.671E-02	1.023E-01	0.000E+00	NOT IDENT.
EU-154	4.118E-02	1.134E-01	1.894E-01	0.000E+00	NOT IDENT.
EU-155	8.157E-02	7.893E-02	1.511E-01	0.000E+00	FAIL ABUN
TB-160	-4.052E-02	1.266E-01	2.145E-01	0.000E+00	FAIL ABUN
HO-166M	1.648E-02	4.959E-02	8.590E-02	0.000E+00	NOT IDENT.
TM-171	-1.150E+01	2.119E+01	3.276E+01	0.000E+00	NOT IDENT.
LU-176	1.061E-02	1.918E-02	3.371E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.018E+00	2.140E+00	0.000E+00	FAIL ABUN
LU-177M	-1.665E-02	1.420E-01	2.504E-01	0.000E+00	FAIL ABUN
HF-181	9.732E-03	3.308E-02	5.919E-02	0.000E+00	NOT IDENT.
W-181	-1.180E-01	2.696E-01	4.196E-01	0.000E+00	NOT IDENT.
TA-182	-1.796E-02	2.018E-01	3.368E-01	0.000E+00	FAIL ABUN
RE-183	1.600E-02	8.631E-02	1.562E-01	0.000E+00	FAIL ABUN
RE-184	6.950E-02	1.910E-01	3.366E-01	0.000E+00	NOT IDENT.
OS-185	2.198E-02	3.500E-02	6.259E-02	0.000E+00	NOT IDENT.
RE-188	4.526E-02	1.356E-01	2.476E-01	0.000E+00	NOT IDENT.
W-188	-5.428E-01	6.198E+00	9.363E+00	0.000E+00	FAIL ABUN
IR-192	-1.572E-02	2.702E-02	4.376E-02	0.000E+00	FAIL ABUN
AU-195	2.604E-01	1.615E-01	3.148E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.638E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.117E+00	8.745E+00	1.550E+01	0.000E+00	NOT IDENT.
TL-202	5.726E-02	6.424E-02	1.193E-01	0.000E+00	NOT IDENT.
HG-203	4.363E-02	3.676E-02	6.045E-02	0.000E+00	NOT IDENT.
BI-207	1.273E-02	4.611E-02	8.056E-02	0.000E+00	FAIL ABUN
TL-207	5.660E-02	5.968E-01	9.054E-01	0.000E+00	FAIL ABUN
PO-209	-4.143E+00	6.475E+00	1.062E+01	0.000E+00	NOT IDENT.
PB-211	3.389E-01	8.020E-01	1.413E+00	0.000E+00	NOT IDENT.
PO-215	5.660E-02	5.968E-01	9.054E-01	0.000E+00	FAIL ABUN
RN-219	1.422E-01	3.395E-01	6.179E-01	0.000E+00	FAIL ABUN
RN-220	-1.096E+01	2.072E+01	3.426E+01	0.000E+00	NOT IDENT.
RA-223	5.660E-02	5.968E-01	9.054E-01	0.000E+00	FAIL ABUN
AC-227	1.728E-03	3.061E-01	5.294E-01	0.000E+00	FAIL ABUN
TH-227	1.728E-03	3.061E-01	5.294E-01	0.000E+00	FAIL ABUN
TH-229	1.065E-01	3.878E-01	6.952E-01	0.000E+00	FAIL ABUN
PA-231	-1.336E+00	1.254E+00	1.958E+00	0.000E+00	FAIL ABUN
TH-231	5.660E-02	5.968E-01	9.054E-01	0.000E+00	FAIL ABUN
U-231	-8.453E-02	1.207E+00	1.860E+00	0.000E+00	FAIL ABUN
PA-233	1.782E-02	4.978E-02	8.644E-02	0.000E+00	FAIL ABUN
PA-234	-1.934E-01	2.531E-01	4.018E-01	0.000E+00	FAIL ABUN
PA-234M	2.183E+00	4.445E+00	7.764E+00	0.000E+00	NOT IDENT.
U-235	1.304E-01	1.641E-01	2.984E-01	0.000E+00	FAIL ABUN
NP-236	-1.495E-02	6.118E-02	1.089E-01	0.000E+00	NOT IDENT.
NP-239	2.324E-02	1.372E-01	2.542E-01	0.000E+00	FAIL ABUN
AM-241	2.115E-02	1.036E-01	1.684E-01	0.000E+00	NOT IDENT.
CM-243	-1.733E-02	6.872E-02	1.263E-01	0.000E+00	FAIL ABUN
AM-246	-8.655E-02	1.182E-01	1.862E-01	0.000E+00	NOT IDENT.
CM-247	-3.256E-03	3.013E-02	5.333E-02	0.000E+00	FAIL ABUN
CF-249	1.430E-02	3.100E-02	5.686E-02	0.000E+00	NOT IDENT.
CF-251	3.259E-02	9.631E-02	1.743E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:53:59.70

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                          *
*                                     Charleston, SC 29414                      *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440013.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:51:52
Sample ID          : G246440013          Sample quantity  : 1.42350E+02 GRAM
Detector name      : GAM11              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.86  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials : MXR1
Abundance limit    : 75.00000           Sensitivity      : 5.00000
Batch ID           : 950788             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	1523	10.67*	1.225E+00	3.071E+01	3.071E+01	10.13
CD-109	88.03	363	3.72*	6.790E+00	3.787E+00	3.887E+00	24.90
SN-126	64.28	148	9.60	4.255E+00	9.539E-01	9.539E-01	55.78
	86.94	363	8.90	6.790E+00	1.583E+00	1.583E+00	47.50
	87.57	363	37.00*	6.790E+00	3.808E-01	3.808E-01	24.90
BA-137M	661.65	49	89.98*	2.402E+00	6.016E-02	6.023E-02	69.60
CS-137	661.65	49	85.12*	2.402E+00	6.360E-02	6.367E-02	69.60
TL-208	277.35	61	6.80	4.672E+00	5.038E-01	5.038E-01	81.32
	510.84	139	21.60	2.954E+00	5.762E-01	5.762E-01	47.35
	583.14	518	84.20*	2.662E+00	6.091E-01	6.091E-01	15.89
	860.37	56	12.46	1.925E+00	6.190E-01	6.190E-01	74.66
BI-210	46.50	31	4.05*	1.507E+00	1.333E+00	1.335E+00	217.08
PB-210	46.50	31	4.05*	1.507E+00	1.333E+00	1.335E+00	217.08
PO-210	46.50	31	4.05*	1.507E+00	1.333E+00	1.335E+00	217.05
BI-211	72.87	-----	1.27	5.576E+00	-----	Line Not Found	-----
	351.07	698	12.94*	3.921E+00	3.628E+00	3.628E+00	16.96
BI-212	727.18	119	11.80*	2.223E+00	1.199E+00	1.199E+00	39.45
	785.46	-----	1.97	2.083E+00	-----	Line Not Found	-----
	1620.62	15	2.75	1.133E+00	1.269E+00	1.269E+00	83.69
PB-212	74.81	513	10.70	5.784E+00	2.187E+00	2.187E+00	20.31
	77.11	706	18.00	6.020E+00	1.719E+00	1.719E+00	14.20
	87.30	363	8.00	6.790E+00	1.761E+00	1.761E+00	26.83
	238.63	1419	44.60*	5.210E+00	1.611E+00	1.611E+00	15.31
	300.09	72	3.41	4.413E+00	1.261E+00	1.261E+00	74.95
PO-212	74.81	513	10.70	5.784E+00	2.187E+00	2.187E+00	20.31
	77.11	706	18.00	6.020E+00	1.719E+00	1.719E+00	14.20
	87.30	363	8.00	6.790E+00	1.761E+00	1.761E+00	26.83
	115.19	-----	0.60	7.407E+00	-----	Line Not Found	-----
	238.63	1419	44.60*	5.210E+00	1.611E+00	1.611E+00	15.31
	300.09	72	3.41	4.413E+00	1.261E+00	1.261E+00	74.95
BI-214	609.31	474	46.30*	2.569E+00	1.051E+00	1.051E+00	17.53
	1120.29	95	15.10	1.531E+00	1.087E+00	1.087E+00	53.82

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	1764.49	104	15.80	1.071E+00	1.622E+00	1.622E+00	22.61
	74.81	513	6.21	5.784E+00	3.769E+00	3.769E+00	19.49
	77.11	706	10.50	6.020E+00	2.946E+00	2.946E+00	16.12
	87.30	363	4.67	6.790E+00	3.017E+00	3.017E+00	26.07
	241.98	319	7.49	5.166E+00	2.172E+00	2.172E+00	26.19
PO-214	295.21	465	19.20	4.470E+00	1.430E+00	1.430E+00	22.27
	351.92	698	37.20*	3.921E+00	1.262E+00	1.262E+00	17.75
	74.81	513	6.21	5.784E+00	3.769E+00	3.769E+00	19.49
	77.11	706	10.50	6.020E+00	2.946E+00	2.946E+00	16.12
	87.30	363	4.67	6.790E+00	3.017E+00	3.017E+00	26.07
PO-216	241.98	319	7.49	5.166E+00	2.172E+00	2.172E+00	26.19
	295.21	465	19.20	4.470E+00	1.430E+00	1.430E+00	22.27
	351.92	698	37.20*	3.921E+00	1.262E+00	1.262E+00	17.75
	74.81	513	10.70	5.784E+00	2.187E+00	2.187E+00	20.31
	77.11	706	18.00	6.020E+00	1.719E+00	1.719E+00	14.20
PO-218	87.30	363	8.00	6.790E+00	1.761E+00	1.761E+00	26.83
	238.63	1419	44.60*	5.210E+00	1.611E+00	1.611E+00	15.31
	300.09	72	3.41	4.413E+00	1.261E+00	1.261E+00	74.95
	74.81	513	6.21	5.784E+00	3.769E+00	3.769E+00	19.49
	77.11	706	10.50	6.020E+00	2.946E+00	2.946E+00	16.12
RA-224	87.30	363	4.67	6.790E+00	3.017E+00	3.017E+00	26.07
	241.98	319	7.49	5.166E+00	2.172E+00	2.172E+00	26.19
	295.21	465	19.20	4.470E+00	1.430E+00	1.430E+00	22.27
	351.92	698	37.20*	3.921E+00	1.262E+00	1.262E+00	17.75
	240.98	319	3.95*	5.166E+00	4.118E+00	4.118E+00	25.58
AC-228	609.31	474	46.30*	2.569E+00	1.051E+00	1.051E+00	17.53
	1120.29	95	15.10	1.531E+00	1.087E+00	1.087E+00	53.82
	1764.49	104	15.80	1.071E+00	1.622E+00	1.622E+00	22.61
	338.32	256	11.40	4.040E+00	1.468E+00	1.468E+00	49.58
	911.07	257	27.70*	1.833E+00	1.337E+00	1.337E+00	21.83
RA-228	969.11	194	16.60	1.738E+00	1.776E+00	1.776E+00	29.18
	338.32	256	11.40	4.040E+00	1.468E+00	1.468E+00	49.58
	911.07	257	27.70*	1.833E+00	1.337E+00	1.337E+00	21.83
	969.11	194	16.60	1.738E+00	1.776E+00	1.776E+00	29.18
	74.81	513	10.70	5.784E+00	2.187E+00	2.225E+00	18.06
TH-228	77.11	706	18.00	6.020E+00	1.719E+00	1.749E+00	14.20
	87.30	363	8.00	6.790E+00	1.761E+00	1.792E+00	24.90
	238.63	1419	44.60*	5.210E+00	1.611E+00	1.639E+00	15.31
	300.09	72	3.41	4.413E+00	1.261E+00	1.283E+00	94.99
	609.31	474	46.30*	2.569E+00	1.051E+00	1.051E+00	17.53
TH-230	1120.29	95	15.10	1.531E+00	1.087E+00	1.087E+00	53.82
	1764.49	104	15.80	1.071E+00	1.622E+00	1.622E+00	22.61
	338.32	256	11.40	4.040E+00	1.468E+00	1.468E+00	28.81
	911.07	257	27.70*	1.833E+00	1.337E+00	1.337E+00	21.83
	969.11	194	16.60	1.738E+00	1.776E+00	1.776E+00	29.18
TH-232	63.29	148	3.80*	4.255E+00	2.410E+00	2.410E+00	56.61
	92.38	547	5.41	7.053E+00	3.781E+00	3.781E+00	25.63
	609.31	474	46.30*	2.569E+00	1.051E+00	1.051E+00	17.53
	1120.29	95	15.10	1.531E+00	1.087E+00	1.087E+00	53.82

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	104	15.80	1.071E+00	1.622E+00	1.622E+00	22.61
NP-237	86.50	363	12.60*	6.790E+00	1.118E+00	1.118E+00	32.34
	95.87	-----	2.60	7.169E+00	-----	Line Not Found	-----
U-238	63.29	148	3.80*	4.255E+00	2.410E+00	2.410E+00	56.61
	92.38	547	5.41	7.053E+00	3.781E+00	3.781E+00	20.11
AM-243	74.67	513	66.00*	5.784E+00	3.546E-01	3.546E-01	18.03
	86.72	363	0.34	6.790E+00	4.193E+01	4.193E+01	24.90
	117.66	-----	0.55	7.397E+00	-----	Line Not Found	-----
	142.18	-----	0.13	7.065E+00	-----	Line Not Found	-----
ANH-511	511.00	139	100.00*	2.954E+00	1.245E-01	1.245E-01	46.61

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G246440013

Page : 4
Acquisition date : 19-FEB-2010 19:51:52

Total number of lines in spectrum 37
Number of unidentified lines 2
Number of lines tentatively identified by NID 35 94.59%

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	3.071E+01	3.071E+01	0.311E+01	10.13	
CD-109	464.00D	1.03	3.787E+00	3.887E+00	0.968E+00	24.90	
SN-126	1.00E+05Y	1.00	3.808E-01	3.808E-01	0.948E-01	24.90	
BA-137M	30.17Y	1.00	6.016E-02	6.023E-02	4.192E-02	69.60	
CS-137	30.17Y	1.00	6.360E-02	6.367E-02	4.431E-02	69.60	
TL-208	1.41E+10Y	1.00	6.091E-01	6.091E-01	0.968E-01	15.89	
BI-210	22.26Y	1.00	1.333E+00	1.335E+00	2.898E+00	217.08	
PB-210	22.26Y	1.00	1.333E+00	1.335E+00	2.898E+00	217.08	
PO-210	22.26Y	1.00	1.333E+00	1.335E+00	2.898E+00	217.05	
BI-211	7.04E+08Y	1.00	3.628E+00	3.628E+00	0.615E+00	16.96	
BI-212	1.41E+10Y	1.00	1.199E+00	1.199E+00	0.473E+00	39.45	
PB-212	1.41E+10Y	1.00	1.611E+00	1.611E+00	0.247E+00	15.31	
PO-212	1.41E+10Y	1.00	1.611E+00	1.611E+00	0.247E+00	15.31	
BI-214	1600.00Y	1.00	1.051E+00	1.051E+00	0.184E+00	17.53	
PB-214	1600.00Y	1.00	1.262E+00	1.262E+00	0.224E+00	17.75	
PO-214	1600.00Y	1.00	1.262E+00	1.262E+00	0.224E+00	17.75	
PO-216	1.41E+10Y	1.00	1.611E+00	1.611E+00	0.247E+00	15.31	
PO-218	1600.00Y	1.00	1.262E+00	1.262E+00	0.224E+00	17.75	
RA-224	1.41E+10Y	1.00	4.118E+00	4.118E+00	1.053E+00	25.58	
RA-226	1600.00Y	1.00	1.051E+00	1.051E+00	0.184E+00	17.53	
AC-228	1.41E+10Y	1.00	1.337E+00	1.337E+00	0.292E+00	21.83	
RA-228	1.41E+10Y	1.00	1.337E+00	1.337E+00	0.292E+00	21.83	
TH-228	1.91Y	1.02	1.611E+00	1.639E+00	0.251E+00	15.31	
TH-230	4.47E+09Y	1.00	1.051E+00	1.051E+00	0.184E+00	17.53	
TH-232	1.41E+10Y	1.00	1.337E+00	1.337E+00	0.292E+00	21.83	
TH-234	4.47E+09Y	1.00	2.410E+00	2.410E+00	1.364E+00	56.61	
U-234	4.47E+09Y	1.00	1.051E+00	1.051E+00	0.184E+00	17.53	
NP-237	2.14E+06Y	1.00	1.118E+00	1.118E+00	0.362E+00	32.34	
U-238	4.47E+09Y	1.00	2.410E+00	2.410E+00	1.364E+00	56.61	
AM-243	7380.00Y	1.00	3.546E-01	3.546E-01	0.639E-01	18.03	
ANH-511	1.00E+09Y	1.00	1.245E-01	1.245E-01	0.580E-01	46.61	

Total Activity : 7.342E+01 7.355E+01

Grand Total Activity : 7.342E+01 7.355E+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
6	89.86	253	445	1.27	178.64	164	27	3.52E-02	32.3	6.93E+00	T
0	128.78	126	354	0.97	256.53	253	8	1.74E-02	55.0	7.29E+00	T
0	185.94	189	406	1.04	370.94	366	10	2.63E-02	43.8	6.15E+00	T
0	209.77	195	328	1.01	418.65	413	12	2.70E-02	40.1	5.69E+00	T
0	269.98	105	181	1.17	539.15	535	8	1.46E-02	48.3	4.77E+00	T
0	327.77	69	112	0.93	654.80	651	7	9.61E-03	56.1	4.13E+00	T
0	463.44	143	125	1.63	926.32	919	16	1.99E-02	38.6	3.18E+00	T
0	795.79	66	36	1.61	1591.38	1587	10	9.13E-03	42.6	2.06E+00	T
0	965.41	33	52	1.21	1930.79	1926	9	4.58E-03	90.5	1.74E+00	T
0	1238.93	115	62	3.41	2478.03	2470	19	1.59E-02	37.8	1.40E+00	T
0	1590.90	36	36	4.92	3182.15	3172	21	4.98E-03	90.8	1.15E+00	
0	1631.40	21	14	0.71	3263.14	3256	14	2.92E-03	87.3	1.13E+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]G246440013.CNF;1      *
* Acquisition date   : 19-FEB-2010 19:51:52  Detector SN#      :                *
* Detector ID        : GAM11                  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 02:00:01.86          Half life ratio  : 8.00000          *
*****
*                                     SAMPLE DATA                               *
*
* Sample date        : 2-FEB-2010 12:00:00.  Nuclide Library : SOLID              *
* Sample ID          : G246440013            Analyst initials: MXR1              *
* Batch Number       : 950788                Sample Quantity : 1.42350E+02 GRAM    *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 18-NOV-2009 15:33:22.2MS 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	3.071E+01	3.113E+00	4.912E-01	4.247E-02	62.525
CD-109	3.887E+00	9.679E-01	8.335E-01	7.904E-02	4.663
SN-126	3.808E-01	9.482E-02	8.192E-02	7.727E-03	4.649
BA-137M	6.023E-02	4.192E-02	5.247E-02	4.965E-03	1.148
CS-137	6.367E-02	4.431E-02	5.547E-02	5.257E-03	1.148
TL-208	6.091E-01	9.677E-02	4.344E-02	4.692E-03	14.021
BI-210	1.335E+00	2.898E+00	3.265E+00	3.040E-01	0.409
PB-210	1.335E+00	2.898E+00	3.265E+00	3.040E-01	0.409
PO-210	1.335E+00	2.898E+00	3.265E+00	2.752E-01	0.409
BI-211	3.628E+00	6.153E-01	2.718E-01	3.586E-02	13.346
BI-212	1.199E+00	4.731E-01	3.562E-01	3.893E-02	3.367
PB-212	1.611E+00	2.465E-01	7.736E-02	1.083E-02	20.822
PO-212	1.611E+00	2.465E-01	7.736E-02	1.083E-02	20.822
BI-214	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
PB-214	1.262E+00	2.239E-01	9.016E-02	1.276E-02	13.996
PO-214	1.262E+00	2.239E-01	9.016E-02	1.276E-02	13.996
PO-216	1.611E+00	2.465E-01	7.736E-02	1.083E-02	20.822
PO-218	1.262E+00	2.239E-01	9.016E-02	1.276E-02	13.996

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224	4.118E+00	1.053E+00	8.807E-01	1.179E-01	4.676
RA-226	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
AC-228	1.337E+00	2.918E-01	1.816E-01	2.211E-02	7.362
RA-228	1.337E+00	2.918E-01	1.816E-01	2.211E-02	7.362
TH-228	1.639E+00	2.508E-01	7.871E-02	1.102E-02	20.822
TH-230	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
TH-232	1.337E+00	2.918E-01	1.816E-01	2.211E-02	7.362
TH-234	2.410E+00	1.364E+00	1.341E+00	2.333E-01	1.797
U-234	1.051E+00	1.843E-01	8.810E-02	9.959E-03	11.931
NP-237	1.118E+00	3.616E-01	2.425E-01	5.488E-02	4.612
U-238	2.410E+00	1.364E+00	1.341E+00	2.333E-01	1.797
AM-243	3.546E-01	6.392E-02	6.093E-02	4.930E-03	5.820
ANH-511	1.245E-01	5.801E-02	3.902E-02	4.172E-03	3.189

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.015E-02		2.594E-01	4.413E-01	4.995E-02	0.159
NA-22	1.476E-02		4.144E-02	6.738E-02	5.533E-03	0.219
NA-24	5.303E+00		3.481E+00	Half-Life too short		
AL-26	4.938E-03		2.225E-02	3.844E-02	3.138E-03	0.128
TI-44	3.172E-01	+	4.505E-02	5.137E-02	4.330E-03	6.175
SC-46	1.109E-04		3.539E-02	5.939E-02	5.850E-03	0.002
V-48	5.253E-02		6.361E-02	1.138E-01	1.079E-02	0.462
CR-51	1.588E-02		3.077E-01	4.939E-01	7.167E-02	0.032
MN-52	5.809E-02		2.429E-01	4.056E-01	3.398E-02	0.143
MN-54	-1.409E-02		3.082E-02	4.997E-02	4.920E-03	-0.282
CO-56	-2.166E-02		3.389E-02	5.382E-02	5.302E-03	-0.402
CO-57	-3.762E-04		1.876E-02	3.183E-02	2.693E-03	-0.012
CO-58	-5.332E-02		3.520E-02	4.641E-02	4.570E-03	-1.149
FE-59	-1.563E-02		7.479E-02	1.205E-01	1.133E-02	-0.130
CO-60	-2.117E-02		3.325E-02	4.917E-02	4.063E-03	-0.431
ZN-65	-1.367E-02		8.971E-02	1.253E-01	1.075E-02	-0.109
GE-68	1.899E-01		1.019E+00	1.714E+00	1.522E-01	0.111
AS-73	-7.479E-02		5.395E-01	8.572E-01	6.437E-02	-0.087
AS-74	3.485E-03		8.818E-02	1.451E-01	1.476E-02	0.024
SE-75	-2.021E-02		3.865E-02	5.738E-02	8.435E-03	-0.352
BR-77	6.370E+00		1.632E+01	2.783E+01	2.966E+00	0.229
SR-82	-1.472E-01		3.704E-01	5.726E-01	5.600E-02	-0.257
RB-83	1.531E-02		5.806E-02	9.814E-02	1.046E-02	0.156
RB-84	2.026E-04		6.560E-02	1.102E-01	1.085E-02	0.002
KR-85	5.971E+00		6.347E+00	1.006E+01	1.074E+00	0.594
SR-85	3.133E-02		3.331E-02	5.277E-02	5.637E-03	0.594
RB-86	2.550E-01		6.743E-01	1.156E+00	1.027E-01	0.221
Y-88	5.913E-03		2.273E-02	3.975E-02	3.227E-03	0.149
ZR-88	3.522E-03		2.431E-02	4.151E-02	4.427E-03	0.085
Y-91	1.004E+01		1.917E+01	3.259E+01	2.638E+00	0.308

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	3.577E-02		2.860E-02	5.071E-02	4.871E-03	0.705
NB-95	-3.173E-02		3.853E-02	5.720E-02	5.583E-03	-0.555
NB-95M	3.797E-02		1.113E-01	1.659E-01	2.317E-02	0.229
ZR-95	4.297E-02		6.475E-02	1.100E-01	1.157E-02	0.391
NB-97	-4.405E-01		4.269E-01	Half-Life too short		
ZR-97	1.452E+01		7.312E+00	Half-Life too short		
MO-99	-7.002E-01		1.747E+01	2.804E+01	4.438E+00	-0.025
TC-99M	-5.169E+12		6.528E+12	Half-Life too short		
RH-101	-1.050E-02		2.733E-02	4.285E-02	4.795E-03	-0.245
RH-102	-1.184E-02		2.313E-02	3.709E-02	3.999E-03	-0.319
RU-103	1.859E-02		3.274E-02	5.663E-02	8.802E-03	0.328
RH-106	-1.563E-01		2.637E-01	4.073E-01	5.797E-02	-0.384
RU-106	-1.563E-01		2.633E-01	4.073E-01	4.041E-02	-0.384
AG-108M	3.991E-03		2.609E-02	4.430E-02	4.897E-03	0.090
AG-110M	-1.679E-02		3.504E-02	4.701E-02	4.581E-03	-0.357
IN-111	5.393E-01		1.636E+00	2.434E+00	3.318E-01	0.222
IN-113M	-1.283E-02		3.574E-02	5.911E-02	6.429E-03	-0.217
SN-113	-1.283E-02		3.574E-02	5.911E-02	6.429E-03	-0.217
IN-114M	3.954E-02		1.626E-01	2.449E-01	2.649E-02	0.162
CD-115	-4.688E+00		1.705E+01	2.760E+01	2.932E+00	-0.170
SN-117M	5.006E-02		4.667E-02	8.135E-02	7.688E-03	0.615
SB-122	1.880E+00		3.009E+00	5.185E+00	5.401E-01	0.363
I-123	4.301E+01		3.682E+01	Half-Life too short		
TE-123M	1.307E-02		2.239E-02	3.835E-02	3.649E-03	0.341
I-124	-1.127E-01		8.459E-01	1.266E+00	1.280E-01	-0.089
SB-124	2.574E-02		5.528E-02	1.001E-01	8.700E-03	0.257
SB-125	3.597E-02		7.663E-02	1.326E-01	1.446E-02	0.271
TE-125M	2.412E+00		6.906E+00	1.195E+01	1.227E+00	0.202
I-126	1.323E-01		1.984E-01	3.030E-01	2.872E-02	0.437
SB-126	9.619E-02		1.563E-01	2.363E-01	2.282E-02	0.407
SB-127	-1.449E+00		1.731E+00	2.576E+00	3.281E-01	-0.562
XE-127	-2.483E-03		3.943E-02	6.486E-02	7.413E-03	-0.038
I-131	-7.689E-02		1.227E-01	1.847E-01	2.321E-02	-0.416
TE-132	6.004E-01		9.595E-01	1.591E+00	2.968E-01	0.377
BA-133	2.391E-02		3.872E-02	5.759E-02	9.289E-03	0.415
I-133	-4.376E-03		1.386E-02	Half-Life too short		
CS-134	1.112E-01	+	4.861E-02	7.858E-02	7.752E-03	1.415
CS-135	1.042E-01		1.416E-01	2.145E-01	3.366E-02	0.486
I-135	1.572E+12		6.366E+11	Half-Life too short		
CS-136	1.055E-02		1.030E-01	1.721E-01	1.625E-02	0.061
CE-139	-1.110E-02		2.347E-02	3.834E-02	3.726E-03	-0.290
BA-140	6.126E-02		2.378E-01	3.998E-01	1.347E-01	0.153
LA-140	7.309E-04		7.649E-02	1.101E-01	9.262E-03	0.007
CE-141	-2.848E-02		5.180E-02	8.345E-02	7.649E-03	-0.341
CE-143	1.080E-03		2.334E-04	Half-Life too short		
CE-144	-7.757E-02		1.622E-01	2.555E-01	3.986E-02	-0.304
PM-144	5.460E-03		3.005E-02	4.941E-02	4.737E-03	0.110
PR-144	3.704E-01		2.039E+00	3.352E+00	3.213E-01	0.110

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	3.539E-02		3.399E-02	6.058E-02	7.595E-03	0.584
ND-147	-1.170E-01		5.047E-01	8.193E-01	1.326E-01	-0.143
PM-149	1.006E+02		1.530E+02	2.543E+02	5.099E+01	0.396
EU-152	-3.169E-02		8.445E-02	1.307E-01	1.772E-02	-0.243
GD-153	-8.685E-03		6.807E-02	9.621E-02	8.547E-03	-0.090
EU-154	4.118E-02		1.157E-01	1.880E-01	2.067E-02	0.219
EU-155	8.157E-02		8.054E-02	1.423E-01	1.242E-02	0.573
TB-160	-4.052E-02		1.292E-01	2.112E-01	2.081E-02	-0.192
HO-166M	1.648E-02		5.060E-02	8.417E-02	8.106E-03	0.196
TM-171	-1.150E+01		2.163E+01	3.057E+01	2.294E+00	-0.376
LU-176	1.061E-02		1.958E-02	3.244E-02	4.769E-03	0.327
LU-177	4.931E+00	+	2.059E+00	2.043E+00	2.391E-01	2.414
LU-177M	-1.665E-02		1.448E-01	2.425E-01	2.604E-02	-0.069
HF-181	9.732E-03		3.376E-02	5.751E-02	6.194E-03	0.169
W-181	-1.180E-01		2.751E-01	3.914E-01	2.901E-02	-0.302
TA-182	-1.796E-02		2.059E-01	3.340E-01	2.713E-02	-0.054
RE-183	1.600E-02		8.808E-02	1.484E-01	1.422E-02	0.108
RE-184	6.950E-02		1.949E-01	3.227E-01	4.528E-02	0.215
OS-185	2.198E-02		3.571E-02	6.120E-02	5.907E-03	0.359
RE-188	4.526E-02		1.383E-01	2.349E-01	2.191E-02	0.193
W-188	-5.428E-01		6.324E+00	9.001E+00	1.367E+00	-0.060
IR-192	-1.572E-02		2.758E-02	4.215E-02	6.059E-03	-0.373
AU-195	2.604E-01		1.648E-01	2.960E-01	2.612E-02	0.880
TL-200	5.579E-04		8.359E-04	Half-Life	too short	
TL-201	-2.117E+00		8.924E+00	1.473E+01	1.441E+00	-0.144
TL-202	5.726E-02		6.555E-02	1.157E-01	1.248E-02	0.495
HG-203	4.363E-02		3.751E-02	5.807E-02	9.070E-03	0.751
BI-207	1.273E-02		4.705E-02	7.964E-02	7.154E-03	0.160
TL-207	5.660E-02		6.090E-01	8.724E-01	1.825E-01	0.065
PO-209	-4.143E+00		6.607E+00	1.045E+01	1.029E+00	-0.396
PB-211	3.389E-01		8.184E-01	1.368E+00	8.614E-01	0.248
PO-215	5.660E-02		6.090E-01	8.724E-01	1.825E-01	0.065
RN-219	1.422E-01		3.464E-01	5.981E-01	9.754E-02	0.238
RN-220	-1.096E+01		2.114E+01	3.338E+01	3.508E+00	-0.328
RA-223	5.660E-02		6.090E-01	8.724E-01	1.825E-01	0.065
AC-227	1.728E-03		3.123E-01	5.076E-01	9.674E-02	0.003
TH-227	1.728E-03		3.123E-01	5.076E-01	1.081E-01	0.003
TH-229	1.065E-01		3.957E-01	6.627E-01	7.277E-02	0.161
PA-231	-1.336E+00		1.280E+00	1.882E+00	3.729E-01	-0.710
TH-231	5.660E-02		6.090E-01	8.724E-01	1.825E-01	0.065
U-231	-8.453E-02		1.231E+00	1.748E+00	1.566E-01	-0.048
PA-233	1.782E-02		5.079E-02	8.322E-02	1.221E-02	0.214
PA-234	-1.934E-01		2.583E-01	3.962E-01	7.633E-02	-0.488
PA-234M	2.183E+00		4.536E+00	7.665E+00	8.154E-01	0.285
U-235	1.304E-01		1.675E-01	2.828E-01	4.999E-02	0.461
NP-236	-1.495E-02		6.243E-02	1.034E-01	9.834E-03	-0.145
NP-239	2.324E-02		1.400E-01	2.399E-01	2.030E-02	0.097
AM-241	2.115E-02		1.057E-01	1.568E-01	1.232E-02	0.135

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.733E-02		7.013E-02	1.189E-01	1.030E-02	-0.146
AM-246	-8.655E-02		1.206E-01	1.841E-01	1.633E-02	-0.470
CM-247	-3.256E-03		3.075E-02	5.162E-02	5.525E-03	-0.063
CF-249	1.430E-02		3.163E-02	5.499E-02	5.988E-03	0.260
CF-251	3.259E-02		9.828E-02	1.659E-01	1.690E-02	0.196

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]G246440013
* Acquisition date   : 19-FEB-2010 19:51:52 Detector SN#
* Detector ID        : GAM11 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 02:00:01.86 Half life ratio : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246440013 Analyst initials: MXR1
* Batch Number       : 950788 Sample Quantity : 1.4235E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 18-NOV-2009 15:33:22 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	3.071E+01	3.050E+00	2.469E-01	1.556E+00
CD-109	3.887E+00	9.486E-01	4.444E-01	4.840E-01
SN-126	3.808E-01	9.293E-02	4.368E-02	4.741E-02
BA-137M	6.023E-02	4.108E-02	2.683E-02	2.096E-02
CS-137	6.367E-02	4.343E-02	2.837E-02	2.216E-02
TL-208	6.091E-01	9.483E-02	2.228E-02	4.838E-02
BI-210	1.335E+00	2.840E+00	1.763E+00	1.449E+00
PB-210	1.335E+00	2.840E+00	1.763E+00	1.449E+00
PO-210	1.335E+00	2.840E+00	1.763E+00	1.449E+00
BI-211	3.628E+00	6.030E-01	1.409E-01	3.076E-01
BI-212	1.199E+00	4.637E-01	1.818E-01	2.366E-01
PB-212	1.611E+00	2.416E-01	4.042E-02	1.233E-01
PO-212	1.611E+00	2.416E-01	4.042E-02	1.233E-01
BI-214	1.051E+00	1.806E-01	4.513E-02	9.215E-02
PB-214	1.262E+00	2.194E-01	4.673E-02	1.120E-01
PO-214	1.262E+00	2.194E-01	4.673E-02	1.120E-01
PO-216	1.611E+00	2.416E-01	4.042E-02	1.233E-01
PO-218	1.262E+00	2.194E-01	4.673E-02	1.120E-01
RA-224	4.118E+00	1.032E+00	4.601E-01	5.267E-01
RA-226	1.051E+00	1.806E-01	4.513E-02	9.215E-02
AC-228	1.337E+00	2.860E-01	9.222E-02	1.459E-01
RA-228	1.337E+00	2.860E-01	9.222E-02	1.459E-01
TH-228	1.639E+00	2.458E-01	4.113E-02	1.254E-01
TH-230	1.051E+00	1.806E-01	4.513E-02	9.215E-02
TH-232	1.337E+00	2.860E-01	9.222E-02	1.459E-01
TH-234	2.410E+00	1.337E+00	7.196E-01	6.821E-01
U-234	1.051E+00	1.806E-01	4.513E-02	9.215E-02
NP-237	1.118E+00	3.544E-01	1.293E-01	1.808E-01
U-238	2.410E+00	1.337E+00	7.196E-01	6.821E-01
AM-243	3.546E-01	6.265E-02	3.259E-02	3.196E-02
ANH-511	1.245E-01	5.685E-02	2.007E-02	2.900E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	7.015E-02	2.542E-01	2.273E-01	1.297E-01 NOT IDENT.
NA-22	1.476E-02	4.061E-02	3.396E-02	2.072E-02 NOT IDENT.
NA-24	5.303E+06	6.822E+06	0.000E+00	3.481E+06 SHORT HLIF
AL-26	4.938E-03	2.181E-02	1.923E-02	1.113E-02 NOT IDENT.
TI-44	3.172E-01	4.415E-02	2.746E-02	2.252E-02 FAIL ABUN
SC-46	1.109E-04	3.468E-02	3.018E-02	1.769E-02 FAIL ABUN
V-48	5.253E-02	6.234E-02	5.768E-02	3.180E-02 NOT IDENT.
CR-51	1.588E-02	3.016E-01	2.565E-01	1.539E-01 NOT IDENT.
MN-52	5.809E-02	2.380E-01	2.039E-01	1.215E-01 NOT IDENT.
MN-54	-1.409E-02	3.021E-02	2.542E-02	1.541E-02 NOT IDENT.
CO-56	-2.166E-02	3.321E-02	2.737E-02	1.694E-02 FAIL ABUN
CO-57	-3.762E-04	1.838E-02	1.686E-02	9.379E-03 NOT IDENT.
CO-58	-5.332E-02	3.450E-02	2.363E-02	1.760E-02 NOT IDENT.
FE-59	-1.563E-02	7.329E-02	6.095E-02	3.739E-02 NOT IDENT.
CO-60	-2.117E-02	3.258E-02	2.476E-02	1.662E-02 NOT IDENT.
ZN-65	-1.367E-02	8.791E-02	6.334E-02	4.485E-02 NOT IDENT.
GE-68	1.899E-01	9.991E-01	8.674E-01	5.097E-01 NOT IDENT.
AS-73	-7.479E-02	5.287E-01	4.616E-01	2.698E-01 NOT IDENT.
AS-74	3.485E-03	8.641E-02	7.438E-02	4.409E-02 NOT IDENT.
SE-75	-2.021E-02	3.788E-02	2.992E-02	1.933E-02 NOT IDENT.
BR-77	6.370E+00	1.599E+01	1.431E+01	8.161E+00 FAIL ABUN
SR-82	-1.472E-01	3.630E-01	2.918E-01	1.852E-01 NOT IDENT.
RB-83	1.531E-02	5.690E-02	5.045E-02	2.903E-02 NOT IDENT.
RB-84	2.026E-04	6.429E-02	5.599E-02	3.280E-02 NOT IDENT.
KR-85	5.971E+00	6.220E+00	5.170E+00	3.173E+00 NOT IDENT.
SR-85	3.133E-02	3.264E-02	2.713E-02	1.665E-02 NOT IDENT.
RB-86	2.550E-01	6.608E-01	5.849E-01	3.371E-01 NOT IDENT.
Y-88	5.913E-03	2.228E-02	1.987E-02	1.136E-02 NOT IDENT.
ZR-88	3.522E-03	2.382E-02	2.147E-02	1.215E-02 NOT IDENT.
Y-91	1.004E+01	1.878E+01	1.645E+01	9.583E+00 NOT IDENT.
NB-94	3.577E-02	2.803E-02	2.590E-02	1.430E-02 NOT IDENT.
NB-95	-3.173E-02	3.776E-02	2.916E-02	1.927E-02 NOT IDENT.
NB-95M	3.797E-02	1.091E-01	8.673E-02	5.565E-02 NOT IDENT.
ZR-95	4.297E-02	6.346E-02	5.607E-02	3.238E-02 NOT IDENT.
NB-97	-4.405E+05	8.366E+05	0.000E+00	4.269E+05 SHORT HLIF
ZR-97	1.452E+07	1.433E+07	0.000E+00	7.312E+06 SHORT HLIF
MO-99	-7.002E-01	1.712E+01	1.431E+01	8.733E+00 NOT IDENT.
TC-99M	-5.169E+18	1.280E+19	0.000E+00	0.000E+00 SHORT HLIF
RH-101	-1.050E-02	2.678E-02	2.247E-02	1.367E-02 NOT IDENT.
RH-102	-1.184E-02	2.267E-02	1.910E-02	1.156E-02 NOT IDENT.
RU-103	1.859E-02	3.209E-02	2.914E-02	1.637E-02 FAIL ABUN
RH-106	-1.563E-01	2.585E-01	2.086E-01	1.319E-01 FAIL ABUN
RU-106	-1.563E-01	2.580E-01	2.086E-01	1.316E-01 FAIL ABUN
AG-108M	3.991E-03	2.557E-02	2.286E-02	1.304E-02 NOT IDENT.
AG-110M	-1.679E-02	3.434E-02	2.404E-02	1.752E-02 NOT IDENT.
IN-111	5.393E-01	1.603E+00	1.271E+00	8.179E-01 NOT IDENT.
IN-113M	-1.283E-02	3.503E-02	3.057E-02	1.787E-02 NOT IDENT.
SN-113	-1.283E-02	3.503E-02	3.057E-02	1.787E-02 NOT IDENT.
IN-114M	3.954E-02	1.594E-01	1.285E-01	8.131E-02 NOT IDENT.
CD-115	-4.688E+00	1.671E+01	1.418E+01	8.524E+00 NOT IDENT.
SN-117M	5.006E-02	4.574E-02	4.286E-02	2.334E-02 NOT IDENT.
SB-122	1.880E+00	2.949E+00	2.661E+00	1.505E+00 NOT IDENT.
I-123	4.301E+07	7.217E+07	0.000E+00	3.682E+07 SHORT HLIF
TE-123M	1.307E-02	2.194E-02	2.021E-02	1.119E-02 NOT IDENT.
I-124	-1.127E-01	8.290E-01	6.489E-01	4.230E-01 NOT IDENT.
SB-124	2.574E-02	5.417E-02	5.015E-02	2.764E-02 FAIL ABUN
SB-125	3.597E-02	7.510E-02	6.843E-02	3.831E-02 FAIL ABUN
TE-125M	2.412E+00	6.768E+00	6.342E+00	3.453E+00 NOT IDENT.
I-126	1.323E-01	1.945E-01	1.549E-01	9.921E-02 NOT IDENT.
SB-126	9.619E-02	1.531E-01	1.206E-01	7.813E-02 FAIL ABUN
SB-127	-1.449E+00	1.697E+00	1.316E+00	8.656E-01 NOT IDENT.
XE-127	-2.483E-03	3.864E-02	3.400E-02	1.971E-02 NOT IDENT.
I-131	-7.689E-02	1.203E-01	9.568E-02	6.136E-02 NOT IDENT.
TE-132	6.004E-01	9.404E-01	8.320E-01	4.798E-01 NOT IDENT.
BA-133	2.391E-02	3.794E-02	2.984E-02	1.936E-02 FAIL ABUN
I-133	-4.376E+03	2.716E+04	0.000E+00	1.386E+04 SHORT HLIF
CS-134	1.112E-01	4.763E-02	4.003E-02	2.430E-02 FAIL ABUN
CS-135	1.042E-01	1.388E-01	1.118E-01	7.081E-02 NOT IDENT.
I-135	1.572E+18	1.248E+18	0.000E+00	0.000E+00 SHORT HLIF
CS-136	1.055E-02	1.009E-01	8.711E-02	5.149E-02 FAIL ABUN
CE-139	-1.110E-02	2.300E-02	2.018E-02	1.173E-02 NOT IDENT.
BA-140	6.126E-02	2.330E-01	2.054E-01	1.189E-01 NOT IDENT.
LA-140	7.309E-04	7.496E-02	5.524E-02	3.824E-02 FAIL ABUN
CE-141	-2.848E-02	5.076E-02	4.405E-02	2.590E-02 NOT IDENT.

CE-143	1.080E+03	4.575E+02	0.000E+00	2.334E+02	SHORT HLIF
CE-144	-7.757E-02	1.589E-01	1.351E-01	8.110E-02	NOT IDENT.
PM-144	5.460E-03	2.945E-02	2.524E-02	1.503E-02	NOT IDENT.
PR-144	3.704E-01	1.998E+00	1.712E+00	1.019E+00	NOT IDENT.
PM-146	3.539E-02	3.331E-02	3.123E-02	1.700E-02	NOT IDENT.
ND-147	-1.170E-01	4.946E-01	4.210E-01	2.524E-01	FAIL ABUN
PM-149	1.006E+02	1.500E+02	1.324E+02	7.651E+01	NOT IDENT.
EU-152	-3.169E-02	8.276E-02	6.776E-02	4.223E-02	FAIL ABUN
GD-153	-8.685E-03	6.671E-02	5.119E-02	3.404E-02	NOT IDENT.
EU-154	4.118E-02	1.134E-01	9.476E-02	5.783E-02	NOT IDENT.
EU-155	8.157E-02	7.893E-02	7.561E-02	4.027E-02	FAIL ABUN
TB-160	-4.052E-02	1.266E-01	1.073E-01	6.459E-02	FAIL ABUN
HO-166M	1.648E-02	4.959E-02	4.297E-02	2.530E-02	NOT IDENT.
TM-171	-1.150E+01	2.119E+01	1.639E+01	1.081E+01	NOT IDENT.
LU-176	1.061E-02	1.918E-02	1.686E-02	9.788E-03	FAIL ABUN
LU-177	4.931E+00	2.018E+00	1.070E+00	1.030E+00	FAIL ABUN
LU-177M	-1.665E-02	1.420E-01	1.253E-01	7.242E-02	FAIL ABUN
HF-181	9.732E-03	3.308E-02	2.961E-02	1.688E-02	NOT IDENT.
W-181	-1.180E-01	2.696E-01	2.099E-01	1.376E-01	NOT IDENT.
TA-182	-1.796E-02	2.018E-01	1.685E-01	1.030E-01	FAIL ABUN
RE-183	1.600E-02	8.631E-02	7.816E-02	4.404E-02	FAIL ABUN
RE-184	6.950E-02	1.910E-01	1.684E-01	9.743E-02	NOT IDENT.
OS-185	2.198E-02	3.500E-02	3.131E-02	1.785E-02	NOT IDENT.
RE-188	4.526E-02	1.356E-01	1.239E-01	6.917E-02	NOT IDENT.
W-188	-5.428E-01	6.198E+00	4.684E+00	3.162E+00	FAIL ABUN
IR-192	-1.572E-02	2.702E-02	2.189E-02	1.379E-02	FAIL ABUN
AU-195	2.604E-01	1.615E-01	1.575E-01	8.242E-02	FAIL ABUN
TL-200	5.579E+02	1.638E+03	0.000E+00	8.359E+02	SHORT HLIF
TL-201	-2.117E+00	8.745E+00	7.755E+00	4.462E+00	NOT IDENT.
TL-202	5.726E-02	6.424E-02	5.969E-02	3.278E-02	NOT IDENT.
HG-203	4.363E-02	3.676E-02	3.024E-02	1.876E-02	NOT IDENT.
BI-207	1.273E-02	4.611E-02	4.030E-02	2.352E-02	FAIL ABUN
TL-207	5.660E-02	5.968E-01	4.529E-01	3.045E-01	FAIL ABUN
PO-209	-4.143E+00	6.475E+00	5.311E+00	3.304E+00	NOT IDENT.
PB-211	3.389E-01	8.020E-01	7.067E-01	4.092E-01	NOT IDENT.
PO-215	5.660E-02	5.968E-01	4.529E-01	3.045E-01	FAIL ABUN
RN-219	1.422E-01	3.395E-01	3.091E-01	1.732E-01	FAIL ABUN
RN-220	-1.096E+01	2.072E+01	1.714E+01	1.057E+01	NOT IDENT.
RA-223	5.660E-02	5.968E-01	4.529E-01	3.045E-01	FAIL ABUN
AC-227	1.728E-03	3.061E-01	2.648E-01	1.562E-01	FAIL ABUN
TH-227	1.728E-03	3.061E-01	2.648E-01	1.562E-01	FAIL ABUN
TH-229	1.065E-01	3.878E-01	3.478E-01	1.979E-01	FAIL ABUN
PA-231	-1.336E+00	1.254E+00	9.798E-01	6.398E-01	FAIL ABUN
TH-231	5.660E-02	5.968E-01	4.529E-01	3.045E-01	FAIL ABUN
U-231	-8.453E-02	1.207E+00	9.305E-01	6.156E-01	FAIL ABUN
PA-233	1.782E-02	4.978E-02	4.324E-02	2.540E-02	FAIL ABUN
PA-234	-1.934E-01	2.531E-01	2.010E-01	1.292E-01	FAIL ABUN
PA-234M	2.183E+00	4.445E+00	3.885E+00	2.268E+00	NOT IDENT.
U-235	1.304E-01	1.641E-01	1.493E-01	8.375E-02	FAIL ABUN
NP-236	-1.495E-02	6.118E-02	5.446E-02	3.121E-02	NOT IDENT.
NP-239	2.324E-02	1.372E-01	1.272E-01	7.001E-02	FAIL ABUN
AM-241	2.115E-02	1.036E-01	8.427E-02	5.287E-02	NOT IDENT.
CM-243	-1.733E-02	6.872E-02	6.321E-02	3.506E-02	FAIL ABUN
AM-246	-8.655E-02	1.182E-01	9.315E-02	6.030E-02	NOT IDENT.
CM-247	-3.256E-03	3.013E-02	2.668E-02	1.537E-02	FAIL ABUN
CF-249	1.430E-02	3.100E-02	2.844E-02	1.582E-02	NOT IDENT.
CF-251	3.259E-02	9.631E-02	8.722E-02	4.914E-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	264.2582
46.50	264.2582
46.50	264.2582
48.70	219.1780
49.72	233.1414
51.35	279.7598
52.39	224.1346
52.97	233.4542
53.15	233.5912
53.44	276.1193
54.07	293.4160
56.28	261.7721
56.28	261.7748
57.37	0.0000
57.53	281.9662
57.53	281.9681
57.60	282.0273
57.98	292.5221
57.98	292.5221
59.32	281.2421
59.32	281.2421
59.40	281.3102
59.54	275.3763
59.72	289.1502
60.01	304.5542
61.10	270.5816
61.14	270.6133
61.30	270.7409
63.00	316.4202
63.29	316.6855
63.29	316.6855
63.58	316.9509
64.28	357.4787
65.12	356.7958
65.20	349.1853
65.20	349.1853
66.05	323.8098
66.72	367.6696
66.83	367.7858
66.91	367.8657
67.20	355.0148
67.20	355.0148
67.75	369.4974
67.85	369.5993
68.90	361.3395
68.90	361.3395
69.30	358.2315
69.67	367.9390
70.82	362.4363
70.82	362.4363
70.83	362.4457
72.80	395.7521
72.87	395.8239
72.87	395.8239
74.67	358.6220
74.81	358.7514
74.81	358.7514
74.81	358.7514
74.81	358.7514
74.81	358.7514
74.81	358.7514
74.81	358.7514
74.97	358.8994
75.28	359.1860
75.70	359.5721
77.11	360.8597
77.11	360.8597

77.11	360.8597
77.11	360.8597
77.11	360.8597
77.11	360.8597
77.11	360.8597
78.38	355.2407
79.62	338.7570
79.80	338.9080
79.80	338.9080
80.11	345.5662
80.18	345.6255
80.30	345.7266
80.30	345.7266
80.57	348.3575
81.00	319.8648
81.07	319.9196
81.07	319.9196
81.07	319.9196
81.07	319.9196
82.60	397.5583
83.37	367.6519
83.78	280.8525
83.78	280.8525
83.78	280.8525
83.78	280.8525
84.21	281.1393
84.90	281.5995
85.43	281.9500
86.29	282.5181
86.50	282.6562
86.54	282.6827
86.59	282.7164
86.72	282.8013
86.79	282.8456
86.94	282.9447
87.30	283.1819
87.30	283.1819
87.30	283.1819
87.30	283.1819
87.30	283.1819
87.30	283.1819
87.57	283.3571
87.88	283.5607
88.03	283.6580
88.36	283.8740
88.47	283.9448
89.95	284.9041
91.11	285.6493
92.29	286.4033
92.38	286.4600
92.38	286.4600
93.35	287.0759
94.00	287.4866
94.67	248.1949
94.67	248.1979
94.90	248.3215
94.90	248.3215
94.90	248.3215
94.90	248.3215
95.87	268.7542
95.87	268.7542
96.73	309.1448
97.43	291.2964
98.44	257.2259
98.44	257.2274
98.88	246.2805
99.55	262.5131
99.55	262.5131
99.86	262.6856
100.00	262.7623
100.10	279.5599
103.18	279.6657
103.76	279.1567
105.00	256.1880
105.31	262.2720
108.00	272.1973
109.28	259.2430

111.00	282.3668
111.00	282.3668
111.76	270.7878
112.95	251.6568
115.19	288.9641
116.30	241.1662
117.00	251.0050
117.00	251.0050
117.66	257.3825
121.11	229.3772
121.62	250.5426
121.78	250.6155
122.06	245.5020
122.32	258.7290
122.32	258.7290
122.32	258.7290
122.32	258.7290
123.07	259.0813
127.23	257.9296
129.76	269.7062
131.20	241.0783
133.02	283.2543
133.54	264.2496
135.34	244.1320
136.00	246.1947
136.25	236.4463
136.48	234.7457
140.51	254.3634
140.51	0.0000
142.18	276.7646
142.65	250.7298
143.76	238.4855
144.24	242.3001
144.24	242.3001
144.24	242.3001
144.24	242.3001
145.22	267.2241
145.44	263.6798
147.16	247.0824
152.43	259.2458
152.70	263.9533
153.22	254.9621
154.21	244.2861
154.21	244.2861
154.21	244.2861
154.21	244.2861
155.03	255.6707
156.02	290.2609
158.56	207.8626
159.00	0.0000
159.00	230.2850
160.31	253.0659
161.27	272.0628
162.32	243.5591
162.64	231.5363
163.35	224.3018
163.89	241.3160
165.85	249.5130
167.43	236.9216
171.28	214.5998
171.86	240.3212
172.10	240.4039
176.55	217.1455
176.60	217.1617
181.06	227.1226
184.41	223.8224
185.71	241.0914
186.00	241.1830
190.27	216.8407
192.34	228.6172
193.63	210.4849
197.04	248.6050
198.01	221.4733
198.60	214.7739
200.40	252.6184
201.83	215.6539
202.84	229.7315
205.31	249.2314

208.36	196.5619
208.81	196.6707
209.75	196.8962
209.75	196.8962
210.97	197.1903
215.65	207.9189
216.55	199.5203
218.09	195.8688
222.10	201.8412
223.80	219.4326
226.40	216.0356
227.00	204.0057
227.08	204.0241
227.20	195.9312
228.16	201.2287
228.18	199.2001
228.18	199.2001
231.56	0.0000
235.69	201.4113
236.00	184.5630
236.00	184.5630
238.63	214.9253
238.63	214.9253
238.63	214.9253
238.63	214.9253
239.00	215.0125
240.98	215.4823
241.98	215.7205
241.98	215.7205
241.98	215.7205
244.69	158.3867
245.39	169.3844
247.94	179.7209
248.90	176.7859
249.79	166.5446
252.40	173.2713
252.85	164.9996
252.85	164.9996
254.15	0.0000
256.20	166.6310
256.20	166.6310
260.50	138.9556
260.90	149.5432
262.80	146.6723
264.65	169.9961
268.24	149.6088
268.79	152.8770
269.46	174.2300
269.46	174.2300
269.46	174.2300
269.46	174.2300
271.23	158.0441
273.65	147.2230
276.40	147.6273
277.35	162.7555
277.60	162.7957
277.60	162.7957
278.00	162.8607
278.60	144.7311
279.20	127.1165
279.53	127.1575
280.46	124.0511
281.68	127.4251
283.67	164.8411
284.30	140.1457
285.00	138.0833
285.90	138.2031
286.10	140.3890
286.10	140.3890
287.40	147.0539
288.45	0.0000
290.67	126.9047
290.80	126.9214
291.72	130.2881
293.26	0.0000
293.70	124.0056
295.21	124.1819
295.21	124.1819

295.21	124.1819
295.96	124.2700
296.50	130.8765
297.23	130.9668
298.57	131.1304
299.80	132.9203
299.80	132.9203
300.09	132.9574
300.09	132.9574
300.09	132.9574
300.09	132.9574
300.12	132.9598
301.29	110.0977
302.84	136.5847
303.76	154.8183
303.91	153.1912
304.40	143.3742
304.40	143.3742
304.84	134.5299
306.84	114.5138
308.46	143.3539
311.98	115.0492
316.51	123.2919
318.01	117.8935
319.02	119.1124
319.41	115.8130
320.08	114.7665
323.87	129.1245
323.87	129.1245
323.87	129.1245
323.87	129.1245
325.23	147.7454
328.77	127.9902
333.44	104.8331
334.20	123.5128
334.20	123.5128
334.30	123.5239
338.28	143.7483
338.28	143.7483
338.28	143.7483
338.28	143.7483
338.32	143.7535
338.32	143.7535
338.32	143.7535
340.50	161.5939
340.57	161.6055
344.27	138.7864
345.85	148.6498
350.59	0.0000
351.07	126.9843
351.92	115.0520
351.92	115.0520
351.92	115.0520
355.39	0.0000
356.01	98.2071
364.48	129.5228
366.43	111.1914
367.43	97.3694
367.94	0.0000
369.80	112.6496
374.96	96.7810
383.85	124.1581
387.95	103.3462
388.63	110.4698
391.69	114.2686
391.69	114.2686
392.90	101.9586
398.62	99.7244
400.65	111.4655
401.10	119.5319
401.81	114.2402
402.60	120.5578
404.84	117.1776
410.95	108.7146
411.60	110.5641
413.65	112.5278
414.70	121.6228
415.30	114.4639

415.76	113.6011
417.63	0.0000
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423.70	88.8574
427.08	97.2479
427.89	99.1222
432.53	93.9693
433.93	93.1472
439.47	89.8383
439.56	89.8428
439.89	89.8637
443.98	90.1150
444.90	99.3730
445.03	99.3812
445.03	99.3812
445.03	99.3812
445.03	99.3812
453.90	72.2062
463.38	74.5239
468.07	73.2584
473.00	84.3668
475.06	91.9886
475.35	85.4333
476.78	79.8743
477.59	79.9158
477.96	67.7098
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484.57	72.7174
487.03	86.0720
490.36	0.0000
492.35	77.8197
497.08	69.4834
507.63	0.0000
510.53	0.0000
510.84	88.3115
511.00	88.3199
511.85	88.3662
511.85	88.3662
513.99	80.0166
513.99	80.0166
520.41	80.1327
520.65	77.2485
527.90	78.5528
528.96	0.0000
529.64	75.7196
529.87	0.0000
531.02	75.7815
537.32	75.0872
543.00	88.0554
546.56	0.0000
549.76	82.5055
552.65	83.6252
555.20	74.8798
563.23	77.1978
563.90	73.2661
568.70	88.3563
569.32	79.4482
569.50	79.4556
569.67	79.4629
573.80	96.5708
574.00	90.6057
574.64	90.6390
578.91	63.8965
579.30	0.0000
583.14	63.0442
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591.81	67.3619
592.07	74.4110
593.00	90.5438
595.88	87.6611
600.56	86.8713
602.52	0.0000
602.71	82.2517
602.71	82.2517
603.60	92.2715
604.41	72.8789
604.70	68.0306
609.31	73.0679

609.31	73.0679
609.31	73.0679
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612.46	73.1887
614.37	70.0052
618.01	70.3413
621.84	77.6328
621.84	77.6328
631.29	58.5081
633.02	65.7520
633.10	65.7539
634.78	64.7823
635.90	70.9920
636.97	60.7357
645.85	55.8391
646.12	59.9824
656.30	70.6832
657.75	83.2153
657.90	0.0000
661.65	85.4609
661.65	85.4609
664.57	0.0000
666.33	68.5248
666.33	68.5248
675.00	59.7936
677.61	75.6233
685.20	79.0627
692.80	79.3488
695.00	63.5449
696.49	75.2468
696.49	75.2468
697.00	79.5067
697.49	94.3697
698.33	89.1039
698.50	89.1090
699.00	91.2516
702.63	58.4593
706.10	69.1994
706.58	0.0000
706.67	68.1523
709.31	70.3687
711.68	62.9756
713.82	68.3789
717.42	71.7048
720.50	58.3014
721.93	0.0000
722.20	87.5218
722.78	82.3945
722.78	82.3945
722.89	82.3992
722.95	82.4016
723.30	78.9794
724.18	60.1169
727.18	58.0490
733.00	58.6334
735.90	61.5175
739.58	65.9425
742.81	53.0479
744.21	63.9137
747.13	61.8271
751.79	84.7793
752.31	82.6263
753.82	60.9219
755.35	58.7856
756.15	62.0741
756.87	61.0039
763.93	73.2138
765.79	88.5839
766.42	65.6360
766.84	72.2117
776.49	76.9086
778.00	70.3633
778.57	65.9821
778.89	65.9912
783.80	67.2325
785.46	58.4556
792.07	60.1690

795.84	60.9300
796.30	47.8670
798.80	55.0159
801.93	54.7924
805.60	52.2812
810.29	72.4446
810.76	75.8027
815.85	42.4496
817.79	53.6631
818.51	54.7975
819.60	69.3678
826.30	63.9493
828.27	0.0000
831.60	78.7030
831.96	78.7158
834.83	70.2514
836.80	0.0000
846.75	67.8735
848.13	63.3845
856.28	0.0000
856.80	63.6033
860.37	60.0542
867.32	66.9095
867.82	69.0948
871.10	60.3072
873.19	72.2457
874.81	63.1394
875.33	0.0000
876.40	55.8546
879.36	68.7524
880.27	74.2784
880.51	74.2853
881.50	63.3045
883.24	57.8382
884.67	61.5448
889.25	61.6528
896.60	69.2102
898.02	70.1701
899.00	68.3488
903.28	63.8351
911.07	56.6007
911.07	56.6007
911.07	56.6007
919.63	54.9207
920.93	55.8779
925.00	49.4339
925.24	47.5734
926.50	47.5958
935.52	36.5177
937.48	64.6555
944.10	46.9653
946.00	62.9777
949.00	54.5775
962.29	74.0667
964.01	53.6134
966.15	9.4683
968.20	9.4753
969.11	50.5521
969.11	50.5521
969.11	50.5521
977.42	58.9409
980.50	61.8595
983.50	40.0138
989.30	42.0041
996.32	62.2054
1001.03	63.2656
1001.68	69.0328
1004.76	76.7852
1021.30	0.0000
1024.50	0.0000
1034.80	53.3350
1036.00	57.2369
1037.82	65.0371
1038.57	69.9082
1038.76	0.0000
1045.16	49.6304
1046.59	63.2830
1048.07	50.6518

1050.47	54.5918
1050.47	54.5918
1062.04	59.6954
1063.62	54.8297
1076.63	40.3153
1077.35	45.2431
1078.86	58.0580
1085.78	56.2151
1099.22	47.5453
1112.02	68.6260
1112.84	64.1140
1115.52	61.4017
1120.29	63.8219
1120.29	63.8219
1120.29	63.8219
1120.29	63.8219
1120.51	63.8250
1121.28	63.8406
1124.00	0.0000
1129.67	51.2575
1131.51	0.0000
1147.95	0.0000
1167.94	72.8684
1173.22	66.9023
1175.09	65.9268
1177.93	78.1655
1189.05	72.3174
1204.90	73.6840
1205.75	0.0000
1213.00	86.1697
1221.42	91.5248
1230.97	89.8661
1235.34	58.5122
1236.41	0.0000
1238.25	60.9734
1246.25	56.9712
1260.41	0.0000
1271.85	57.3901
1274.45	43.8580
1274.54	43.8580
1291.56	46.1678
1298.22	0.0000
1312.09	46.4320
1325.50	42.3672
1325.50	42.3672
1332.49	38.2025
1333.61	42.4609
1360.21	26.7285
1362.66	0.0000
1365.15	34.2578
1368.21	20.3573
1368.53	0.0000
1376.25	24.6958
1384.27	31.2033
1394.10	24.8115
1395.20	25.8984
1407.95	24.9013
1434.06	19.6198
1436.60	19.6321
1457.56	0.0000
1460.81	27.4353
1489.15	17.4986
1509.49	21.2892
1596.49	14.5804
1620.62	10.4535
1678.03	0.0000
1691.02	8.6895
1691.02	8.6895
1706.46	0.0000
1750.46	0.0000
1764.49	7.8483
1764.49	7.8483
1764.49	7.8483
1764.49	7.8483
1770.23	8.4194
1771.40	58.9502
1791.20	0.0000
1808.65	8.9121

1836.01

6.9709

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440013

Total Uranium Activity	7.2299E+00	ug/g
Total Uranium Counting Unc.	3.9780E+00	ug/g
Total Uranium Tpu	2.0296E-06	ug/g
Total Uranium Mda	2.1419E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*   BATCH ID      : 950788                      SAMPLE ID : G246440013
*   ANALYST       : MXR1                        DETECTOR  : GAM11
*   SAMPLE DATE   : 2-FEB-2010 12:00:00.00      COUNT TIME : 0 02:00:00.00
*   ANALYSIS DATE : 19-FEB-2010 19:51:52.22    SAMPLE ALQT: 142.350 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.713E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.387E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.231E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.563E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 21:54:47.41

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                   *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440014.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:52:18
Sample ID          : G246440014      Sample quantity   : 1.53010E+02 GRAM
Detector name      : GAM12           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.73  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 950788          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	63.02*	198	736	0.94	125.51	120	11	2.74E-02	27.9	
2	3	74.65*	490	540	1.21	148.80	143	16	6.80E-02	9.2	1.64E+00
3	3	76.98	714	461	0.95	153.46	143	16	9.91E-02	6.1	
4	0	86.98	242	426	0.93	173.46	171	6	3.36E-02	15.0	
5	5	89.70	199	197	1.19	178.90	177	14	2.76E-02	11.0	1.45E+00
6	5	92.61*	497	509	1.54	184.73	177	14	6.90E-02	9.9	
7	0	185.52*	274	401	1.17	370.65	365	11	3.81E-02	16.0	
8	0	208.67	138	413	1.15	416.97	413	11	1.92E-02	29.6	
9	5	238.40*	1505	189	1.10	476.45	471	19	2.09E-01	3.0	2.21E+00
10	5	241.29	363	230	1.76	482.23	471	19	5.04E-02	12.6	
11	0	269.66	152	248	1.58	539.00	535	11	2.12E-02	21.4	
12	0	294.88*	414	259	1.16	589.47	582	12	5.75E-02	9.3	
13	0	299.86	85	208	1.18	599.43	595	9	1.18E-02	32.6	
14	0	327.71	111	209	0.74	655.14	650	12	1.55E-02	27.7	
15	0	338.07*	287	238	1.12	675.87	670	13	3.99E-02	12.6	
16	0	351.58*	577	198	1.18	702.91	697	11	8.01E-02	6.4	
17	0	462.76	105	121	1.75	925.36	919	13	1.46E-02	23.6	
18	0	510.66*	81	209	1.64	1021.18	1014	16	1.13E-02	45.8	
19	0	582.55*	420	105	1.30	1164.99	1158	13	5.84E-02	7.2	
20	0	608.89*	494	126	1.52	1217.71	1210	17	6.86E-02	6.9	
21	0	726.80	100	112	1.76	1453.57	1446	16	1.39E-02	25.7	
22	0	767.85	57	69	1.02	1535.69	1530	9	7.98E-03	29.3	
23	0	785.75	30	69	1.47	1571.50	1567	11	4.13E-03	57.1	
24	0	794.73*	55	75	1.38	1589.46	1582	11	7.63E-03	33.9	
25	0	860.81	37	70	1.78	1721.63	1714	10	5.14E-03	45.4	
26	0	910.74*	337	73	1.65	1821.51	1815	15	4.68E-02	8.0	
27	0	933.90	21	55	1.27	1867.84	1861	10	2.87E-03	70.8	
28	0	968.51*	184	47	1.64	1937.06	1932	11	2.55E-02	10.6	
29	0	1119.48*	94	90	2.05	2239.02	2231	14	1.30E-02	24.3	
30	0	1459.89*	1593	14	2.03	2919.80	2910	18	2.21E-01	2.6	
31	0	1587.50	28	10	1.19	3174.97	3170	13	3.83E-03	30.3	
32	0	1661.19	22	7	1.29	3322.32	3314	14	3.06E-03	33.2	
33	0	1729.10*	17	9	1.36	3458.09	3451	12	2.38E-03	52.7	
34	0	1763.45*	83	7	2.21	3526.79	3520	12	1.15E-02	13.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 21:54:50

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246440014.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 2-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 19:52:18
Sample ID        : G246440014             Sample quantity  : 153.01 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA12                Detector geometry: CAN
Elapsed live time : 0 02:00:00.00          Elapsed real time: 0 02:00:01.73   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	*	3.218E+01	2.835E+00	3.091E-01	2.204E-02	104.119
CD-109	+	88.03	*	2.902E+00	8.979E-01	1.086E+00	8.308E-02	2.673
SN-126	+	64.28		1.593E+00	9.157E-01	7.084E-01	9.947E-02	2.248
	+	86.94		1.182E+00	6.019E-01	5.138E-01	2.115E-01	2.300
	+	87.57	*	2.843E-01	8.797E-02	1.069E-01	8.144E-03	2.660
CS-135	+	268.24	*	5.082E-01	2.210E-01	2.038E-01	1.532E-02	2.494
TL-208		277.35		2.015E-01	3.109E-01	5.352E-01	5.605E-02	0.377
	+	510.84		3.307E-01	3.049E-01	1.845E-01	1.905E-02	1.792
	+	583.14	*	4.888E-01	7.818E-02	5.535E-02	3.959E-03	8.830
	+	860.37		4.061E-01	3.703E-01	5.090E-01	4.448E-02	0.798
BI-211		72.87		4.479E+00	3.024E+00	4.805E+00	3.224E-01	0.932
	+	351.07	*	2.905E+00	4.157E-01	2.948E-01	1.853E-02	9.855
BI-212	+	727.18	*	1.000E+00	5.213E-01	4.144E-01	3.588E-02	2.414
	+	785.46		1.906E+00	2.181E+00	2.797E+00	2.090E-01	0.682
		1620.62		1.163E+00	1.224E+00	2.281E+00	1.469E-01	0.510
PB-212	+	74.81		2.453E+00	5.320E-01	4.794E-01	5.541E-02	5.116
	+	77.11		2.021E+00	2.833E-01	2.720E-01	1.883E-02	7.428
	+	87.30		1.315E+00	4.276E-01	5.418E-01	6.805E-02	2.427
	+	238.63	*	1.650E+00	1.539E-01	7.701E-02	5.468E-03	21.423
	+	300.09		1.436E+00	9.428E-01	1.037E+00	8.462E-02	1.385
PO-212	+	74.81		2.453E+00	5.320E-01	4.794E-01	5.541E-02	5.116
	+	77.11		2.021E+00	2.833E-01	2.720E-01	1.883E-02	7.428
	+	87.30		1.315E+00	4.276E-01	5.418E-01	6.805E-02	2.427
		115.19		-2.793E-02	3.039E+00	4.991E+00	3.166E-01	-0.006
	+	238.63	*	1.650E+00	1.539E-01	7.701E-02	5.468E-03	21.423
	+	300.09		1.436E+00	9.428E-01	1.037E+00	8.462E-02	1.385
BI-214	+	609.31	*	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
	+	1120.29		1.069E+00	5.280E-01	4.353E-01	3.954E-02	2.455
	+	1764.49		1.301E+00	3.534E-01	2.322E-01	1.376E-02	5.604
PB-214	+	74.81		4.226E+00	8.844E-01	8.260E-01	8.306E-02	5.116
	+	77.11		3.464E+00	5.528E-01	4.664E-01	4.801E-02	7.428
	+	87.30		2.252E+00	7.183E-01	9.282E-01	1.005E-01	2.427
	+	241.98		2.390E+00	6.321E-01	4.639E-01	3.650E-02	5.153
	+	295.21		1.229E+00	2.507E-01	1.881E-01	1.588E-02	6.535

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	351.92	*	1.011E+00	1.539E-01	1.007E-01	8.226E-03	10.036
	+	74.81		4.226E+00	8.844E-01	8.260E-01	8.306E-02	5.116
	+	77.11		3.464E+00	5.528E-01	4.664E-01	4.801E-02	7.428
	+	87.30		2.252E+00	7.183E-01	9.282E-01	1.005E-01	2.427
	+	241.98		2.390E+00	6.321E-01	4.639E-01	3.650E-02	5.153
PO-216	+	295.21		1.229E+00	2.507E-01	1.881E-01	1.588E-02	6.535
	+	351.92	*	1.011E+00	1.539E-01	1.007E-01	8.226E-03	10.036
	+	74.81		2.453E+00	5.320E-01	4.794E-01	5.541E-02	5.116
	+	77.11		2.021E+00	2.833E-01	2.720E-01	1.883E-02	7.428
	+	87.30		1.315E+00	4.276E-01	5.418E-01	6.805E-02	2.427
PO-218	+	238.63	*	1.650E+00	1.539E-01	7.701E-02	5.468E-03	21.423
	+	300.09		1.436E+00	9.428E-01	1.037E+00	8.462E-02	1.385
	+	74.81		4.226E+00	8.844E-01	8.260E-01	8.306E-02	5.116
	+	77.11		3.464E+00	5.528E-01	4.664E-01	4.801E-02	7.428
	+	87.30		2.252E+00	7.183E-01	9.282E-01	1.005E-01	2.427
RA-224	+	241.98		2.390E+00	6.321E-01	4.639E-01	3.650E-02	5.153
	+	295.21		1.229E+00	2.507E-01	1.881E-01	1.588E-02	6.535
	+	351.92	*	1.011E+00	1.539E-01	1.007E-01	8.226E-03	10.036
	+	240.98	*	4.532E+00	1.171E+00	8.766E-01	4.835E-02	5.171
	+	609.31	*	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
AC-228	+	1120.29		1.069E+00	5.280E-01	4.353E-01	3.954E-02	2.455
	+	1764.49		1.301E+00	3.534E-01	2.322E-01	1.376E-02	5.604
	+	338.32		1.593E+00	7.636E-01	3.069E-01	1.250E-01	5.191
	+	911.07	*	1.747E+00	3.385E-01	1.916E-01	2.104E-02	9.117
	+	969.11		1.681E+00	5.255E-01	3.141E-01	7.241E-02	5.353
RA-228	+	338.32		1.593E+00	7.636E-01	3.069E-01	1.250E-01	5.191
	+	911.07	*	1.747E+00	3.385E-01	1.916E-01	2.104E-02	9.117
	+	969.11		1.681E+00	5.255E-01	3.141E-01	7.241E-02	5.353
	+	74.81		2.495E+00	4.892E-01	4.877E-01	3.362E-02	5.116
	+	77.11		2.056E+00	2.883E-01	2.768E-01	1.916E-02	7.428
TH-228	+	87.30		1.338E+00	4.139E-01	5.512E-01	4.189E-02	2.427
	+	238.63	*	1.679E+00	1.565E-01	7.835E-02	5.564E-03	21.423
	+	300.09		1.461E+00	1.283E+00	1.055E+00	6.214E-01	1.385
	+	609.31	*	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
	+	1120.29		1.069E+00	5.280E-01	4.353E-01	3.954E-02	2.455
TH-230	+	1764.49		1.301E+00	3.534E-01	2.322E-01	1.376E-02	5.604
	+	338.32		1.593E+00	4.121E-01	3.069E-01	1.738E-02	5.191
	+	911.07	*	1.747E+00	3.385E-01	1.916E-01	2.104E-02	9.117
	+	969.11		1.681E+00	5.255E-01	3.141E-01	7.241E-02	5.353
	+	63.29	*	4.023E+00	2.346E+00	1.795E+00	3.057E-01	2.241
TH-234	+	92.38		3.775E+00	9.963E-01	5.957E-01	1.042E-01	6.337
	+	609.31	*	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
	+	1120.29		1.069E+00	5.280E-01	4.353E-01	3.954E-02	2.455
	+	1764.49		1.301E+00	3.534E-01	2.322E-01	1.376E-02	5.604
	+	86.50	*	8.348E-01	3.105E-01	3.727E-01	8.188E-02	2.240
NP-237	+	95.87		-6.934E-01	8.793E-01	1.228E+00	2.963E-01	-0.565
	+	63.29	*	4.023E+00	2.346E+00	1.795E+00	3.057E-01	2.241
	+	92.38		3.775E+00	7.954E-01	5.957E-01	4.337E-02	6.337
	+	74.67	*	3.976E-01	7.783E-02	7.795E-02	5.296E-03	5.101
	+							

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.72		3.131E+01	9.687E+00	1.405E+01	1.062E+00	2.227
		117.66		7.435E-01	3.297E+00	5.459E+00	3.439E-01	0.136
		142.18		-1.902E+00	1.579E+01	2.529E+01	1.431E+00	-0.075
ANH-511	+	511.00	*	7.143E-02	6.558E-02	3.987E-02	2.430E-03	1.791

---- 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	*	-6.738E-02	2.725E-01	4.298E-01	2.958E-02	-0.157
NA-22		1274.54	*	1.783E-02	4.408E-02	7.499E-02	4.829E-03	0.238
NA-24		1368.53	*	-3.642E+00	4.408E-02	Half-Life too short		
AL-26		1129.67		1.634E-01	1.663E+00	2.784E+00	1.697E-01	0.059
		1808.65	*	1.565E-03	2.356E-02	3.952E-02	2.267E-03	0.040
TI-44		67.85		-7.114E-03	4.453E-02	6.700E-02	4.361E-03	-0.106
	+	78.38	*	3.729E-01	5.229E-02	6.595E-02	4.613E-03	5.654
SC-46		889.25	*	-3.889E-03	3.622E-02	5.807E-02	4.813E-03	-0.067
	+	1120.51		1.863E-01	9.122E-02	1.242E-01	7.716E-03	1.501
V-48		944.10		-1.832E-01	9.521E-01	1.507E+00	1.210E-01	-0.122
		983.50	*	2.020E-03	7.368E-02	1.186E-01	9.139E-03	0.017
		1312.09		1.143E-01	8.188E-02	1.523E-01	1.034E-02	0.750
CR-51		320.08	*	2.534E-01	3.399E-01	5.852E-01	3.721E-02	0.433
MN-52		744.21		-2.972E-02	2.891E-01	4.715E-01	3.368E-02	-0.063
		848.13		3.957E+00	8.640E+00	1.458E+01	1.161E+00	0.271
		935.52		1.626E-01	3.964E-01	5.777E-01	4.677E-02	0.281
		1246.25		2.299E+00	9.043E+00	1.521E+01	9.372E-01	0.151
		1333.61		-3.617E-01	5.986E+00	9.442E+00	6.594E-01	-0.038
		1434.06	*	7.774E-03	2.577E-01	4.209E-01	2.891E-02	0.018
MN-54		834.83	*	-6.895E-03	3.746E-02	6.015E-02	4.728E-03	-0.115
CO-56		846.75	*	1.955E-03	3.933E-02	6.425E-02	5.111E-03	0.030
		977.42		1.401E+00	2.942E+00	4.929E+00	3.824E-01	0.284
		1037.82		1.265E-01	2.835E-01	4.923E-01	3.803E-02	0.257
		1175.09		-2.300E+00	2.335E+00	3.556E+00	1.960E-01	-0.647
		1238.25		1.787E-01	9.243E-02	1.707E-01	1.099E-02	1.047
		1360.21		9.889E-02	9.402E-01	1.556E+00	1.083E-01	0.064
		1771.40		-3.798E-01	2.386E-01	2.824E-01	1.666E-02	-1.345
CO-57		122.06	*	9.051E-03	2.292E-02	3.775E-02	2.360E-03	0.240
		136.48		3.209E-03	1.802E-01	2.935E-01	1.974E-02	0.011
CO-58		810.76	*	-2.184E-03	3.851E-02	6.259E-02	4.816E-03	-0.035
FE-59		142.65		1.496E-01	2.529E+00	4.081E+00	2.306E-01	0.037
		192.34		4.261E-01	8.624E-01	1.404E+00	1.622E-01	0.304
		1099.22	*	-6.993E-02	9.366E-02	1.461E-01	1.079E-02	-0.479
		1291.56		-3.154E-03	1.286E-01	2.107E-01	1.697E-02	-0.015
CO-60		1173.22		2.254E-02	4.433E-02	7.627E-02	4.192E-03	0.296
		1332.49	*	3.430E-03	3.355E-02	5.560E-02	3.883E-03	0.062
ZN-65		1115.52	*	-1.326E-02	1.077E-01	1.521E-01	9.569E-03	-0.087
GE-68		1077.35	*	1.412E-01	1.283E+00	2.157E+00	1.455E-01	0.065
AS-73		53.44	*	7.616E-02	7.276E-01	1.243E+00	8.024E-02	0.061
AS-74		595.88	*	5.059E-02	8.595E-02	1.496E-01	9.525E-03	0.338

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		634.78	-4.176E-01	3.406E-01	5.106E-01	3.291E-02	-0.818
		66.05	-2.999E+00	4.661E+00	6.848E+00	5.978E-01	-0.438
		96.73	-5.176E-01	7.394E-01	1.054E+00	1.335E-01	-0.491
		121.11	-2.631E-02	1.240E-01	1.993E-01	1.898E-02	-0.132
		136.00	9.585E-03	3.440E-02	5.664E-02	3.344E-03	0.169
		198.60	2.492E+00	1.560E+00	2.652E+00	1.782E-01	0.940
		264.65 *	5.323E-03	4.154E-02	6.200E-02	3.514E-03	0.086
		279.53	2.991E-03	8.953E-02	1.500E-01	9.193E-03	0.020
		303.91	7.394E-01	1.993E+00	2.993E+00	2.835E-01	0.247
		400.65	1.379E-01	2.227E-01	3.772E-01	3.371E-02	0.366
BR-77	+	87.88	1.191E+03	3.685E+02	5.846E+02	4.469E+01	2.037
		200.40	-1.082E+02	2.709E+02	4.221E+02	2.239E+01	-0.256
	+	239.00	5.049E+02	4.128E+01	6.599E+01	3.634E+00	7.651
		249.79	-8.465E+01	1.067E+02	1.731E+02	9.610E+00	-0.489
		281.68	-1.073E+01	1.357E+02	2.260E+02	1.277E+01	-0.047
		297.23	1.803E+02	1.353E+02	1.652E+02	9.376E+00	1.092
		303.76	8.390E+01	3.205E+02	4.779E+02	2.715E+01	0.176
		439.47	5.905E+01	2.592E+02	4.261E+02	2.454E+01	0.139
		484.57	1.794E+02	3.944E+02	6.549E+02	3.918E+01	0.274
		520.65 *	1.045E+01	1.746E+01	2.921E+01	1.791E+00	0.358
SR-82		574.64	4.855E+01	3.590E+02	5.757E+02	3.633E+01	0.084
		578.91	2.711E+01	1.572E+02	2.335E+02	1.476E+01	0.116
		585.48	9.674E+02	3.712E+02	6.411E+02	4.064E+01	1.509
		755.35	-4.884E+01	3.045E+02	4.939E+02	3.572E+01	-0.099
		817.79	5.801E+01	2.425E+02	4.036E+02	3.119E+01	0.144
		698.33	-1.754E+01	3.351E+01	5.324E+01	3.608E+00	-0.329
		776.49 *	-7.189E-01	4.105E-01	5.725E-01	4.236E-02	-1.256
		1395.20	2.575E+00	1.028E+01	1.730E+01	1.198E+00	0.149
		520.41 *	3.949E-02	6.145E-02	1.032E-01	6.325E-03	0.383
		529.64	-8.108E-03	9.700E-02	1.538E-01	9.486E-03	-0.053
RB-83		552.65	7.039E-02	1.749E-01	3.022E-01	1.887E-02	0.233
		881.50 *	-1.379E-04	7.176E-02	1.163E-01	9.570E-03	-0.001
		513.99 *	7.129E+00	6.859E+00	1.055E+01	6.444E-01	0.676
		513.99 *	3.741E-02	3.600E-02	5.538E-02	3.382E-03	0.676
		1076.63 *	-1.184E-01	8.657E-01	1.428E+00	9.642E-02	-0.083
		898.02	-2.114E-02	3.508E-02	5.306E-02	4.458E-03	-0.398
		1836.01 *	-2.977E-03	2.701E-02	4.359E-02	2.454E-03	-0.068
		392.90 *	-8.421E-03	3.018E-02	4.705E-02	2.581E-03	-0.179
		1204.90 *	6.573E+00	1.973E+01	3.339E+01	1.931E+00	0.197
		702.63 *	1.794E-02	3.035E-02	5.225E-02	3.559E-03	0.343
NB-94		871.10	-2.855E-02	3.218E-02	4.770E-02	3.886E-03	-0.599
		765.79 *	9.258E-02	4.947E-02	8.195E-02	5.995E-03	1.130
		235.69 *	4.081E-02	1.223E-01	1.858E-01	1.355E-02	0.220
		724.18	7.730E-02	1.134E-01	1.719E-01	1.355E-02	0.450
		756.15 *	1.193E-02	7.023E-02	1.168E-01	9.648E-03	0.102
		657.90 *	-6.955E-02	7.023E-02	Half-Life	too short	
		1024.50	-1.824E+00	7.023E-02	Half-Life	too short	
		254.15	-1.289E+01	7.023E-02	Half-Life	too short	
		355.39	7.058E+00	7.023E-02	Half-Life	too short	

Sample ID : G246440014

Acquisition date : 19-FEB-2010 19:52:18

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	507.63	*		1.953E+01	7.023E-02	Half-Life	too short	
	602.52			3.013E+01	7.023E-02	Half-Life	too short	
	1021.30			-5.296E+00	7.023E-02	Half-Life	too short	
	1147.95			6.712E+00	7.023E-02	Half-Life	too short	
	1362.66			-3.248E+01	7.023E-02	Half-Life	too short	
	1750.46			8.638E+00	7.023E-02	Half-Life	too short	
MO-99	140.51			-8.351E+00	4.133E+01	6.548E+01	1.763E+01	-0.128
	181.06			-1.514E+00	2.902E+01	4.117E+01	6.976E+00	-0.037
	366.43			3.769E+01	1.225E+02	2.050E+02	1.146E+01	0.184
	739.58	*		1.015E+01	1.872E+01	3.201E+01	4.603E+00	0.317
	778.00			-2.302E+01	5.550E+01	8.779E+01	6.507E+00	-0.262
TC-99M	140.51	*		-3.131E+12	5.550E+01	Half-Life	too short	
RH-101	127.23			-1.225E-02	2.874E-02	4.615E-02	2.801E-03	-0.265
	198.01	*		3.201E-02	2.874E-02	4.799E-02	2.539E-03	0.667
	325.23			1.488E-01	2.128E-01	3.255E-01	1.849E-02	0.457
RH-102	418.52			3.008E-02	2.550E-01	4.179E-01	2.358E-02	0.072
	475.06	*		6.210E-03	2.266E-02	3.732E-02	2.216E-03	0.166
	631.29			-8.354E-03	4.834E-02	7.951E-02	5.119E-03	-0.105
	697.49			-1.504E-02	7.028E-02	1.143E-01	7.741E-03	-0.132
	766.84	+		2.115E-01	1.248E-01	2.015E-01	1.476E-02	1.049
	1046.59			2.609E-02	9.805E-02	1.679E-01	1.189E-02	0.155
	1112.84			1.300E-01	2.407E-01	3.669E-01	2.316E-02	0.354
RU-103	497.08	*		1.593E-02	3.616E-02	5.994E-02	7.645E-03	0.266
	610.33	+		1.216E+01	2.545E+00	2.662E+00	4.166E-01	4.568
RH-106	511.85	+		3.583E-01	3.289E-01	3.737E-01	2.279E-02	0.959
	621.84	*		-9.271E-02	2.972E-01	4.845E-01	5.842E-02	-0.191
	1050.47			-2.921E-01	2.116E+00	3.495E+00	2.462E-01	-0.084
RU-106	511.85	+		3.583E-01	3.289E-01	3.737E-01	2.279E-02	0.959
	621.84	*		-9.271E-02	2.970E-01	4.845E-01	3.111E-02	-0.191
	1050.47			-2.921E-01	2.116E+00	3.495E+00	2.462E-01	-0.084
AG-108M	433.93	*		-1.083E-02	2.952E-02	4.667E-02	2.908E-03	-0.232
	614.37			-1.798E-03	3.798E-02	5.486E-02	3.761E-03	-0.033
	722.95			-1.463E-02	4.467E-02	6.154E-02	4.546E-03	-0.238
AG-110M	657.75	*		-1.453E-02	3.249E-02	5.219E-02	3.557E-03	-0.278
	677.61			-7.884E-02	2.898E-01	4.705E-01	3.257E-02	-0.168
	706.67			-3.012E-02	1.885E-01	3.076E-01	2.196E-02	-0.098
	763.93			-3.283E-03	1.824E-01	2.586E-01	1.961E-02	-0.013
	884.67			3.043E-02	4.746E-02	8.114E-02	6.931E-03	0.375
	937.48			1.910E-03	1.219E-01	1.698E-01	1.428E-02	0.011
	1384.27			-6.193E-03	1.310E-01	2.123E-01	1.536E-02	-0.029
IN-111	171.28			-5.634E-01	1.529E+00	2.413E+00	1.241E-01	-0.233
	245.39	*		-4.071E-01	1.603E+00	2.345E+00	1.298E-01	-0.174
IN-113M	391.69	*		-1.185E-02	4.183E-02	6.719E-02	3.955E-03	-0.176
SN-113	391.69	*		-1.185E-02	4.183E-02	6.719E-02	3.955E-03	-0.176
IN-114M	190.27	*		-1.317E-01	1.860E-01	2.518E-01	1.321E-02	-0.523
CD-115	260.90			8.865E+00	2.199E+02	3.702E+02	2.071E+01	0.024
	492.35			-2.487E+01	6.313E+01	9.822E+01	5.910E+00	-0.253
	527.90	*		4.828E+00	1.852E+01	3.021E+01	1.861E+00	0.160
SN-117M	156.02			1.213E+00	2.229E+00	3.680E+00	1.965E-01	0.329

---- Non-Identified Nuclides ----

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SB-122	158.56	*		2.560E-03	5.280E-02	8.536E-02	4.509E-03	0.030
	563.90	*		-2.920E-01	3.109E+00	5.190E+00	3.259E-01	-0.056
	692.80			5.632E+00	6.452E+01	1.075E+02	7.235E+00	0.052
I-123	159.00	*		-4.724E+01	6.452E+01	Half-Life too short		
	528.96			1.571E+02	6.452E+01	Half-Life too short		
TE-123M	159.00	*		-1.435E-02	2.510E-02	3.944E-02	2.113E-03	-0.364
I-124	602.71	*		6.437E-01	8.865E-01	1.384E+00	8.834E-02	0.465
	722.78			-2.503E+00	6.713E+00	9.200E+00	6.414E-01	-0.272
	1325.50			1.197E+01	4.548E+01	7.667E+01	5.303E+00	0.156
SB-124	1376.25			3.304E+01	4.240E+01	7.480E+01	5.195E+00	0.442
	1509.49			1.124E+01	1.960E+01	3.428E+01	2.307E+00	0.328
	1691.02			-3.709E+00	4.674E+00	6.619E+00	4.108E-01	-0.560
	602.71			2.660E-02	3.663E-02	5.720E-02	3.651E-03	0.465
	645.85			-4.113E-01	4.705E-01	7.294E-01	5.206E-02	-0.564
	709.31			-2.691E-01	2.415E+00	3.951E+00	2.712E-01	-0.068
	713.82			-4.866E-01	1.425E+00	2.282E+00	2.482E-01	-0.213
	722.78			-1.499E-01	4.021E-01	5.511E-01	3.968E-02	-0.272
	968.20	+		1.775E+01	3.997E+00	6.927E+00	5.428E-01	2.563
	1045.16			5.212E-01	2.156E+00	3.684E+00	2.616E-01	0.141
	1325.50			7.656E-01	2.909E+00	4.905E+00	3.392E-01	0.156
	1368.21			-8.069E-01	1.728E+00	2.657E+00	3.315E-01	-0.304
SB-125	1436.60			-2.341E-01	3.301E+00	5.312E+00	3.647E-01	-0.044
	1691.02			-5.240E-02	6.605E-02	9.351E-02	6.240E-03	-0.560
	427.89	*		2.282E-02	7.710E-02	1.278E-01	7.597E-03	0.179
	463.38	+		8.349E-01	3.977E-01	5.032E-01	3.439E-02	1.659
	600.56			-2.621E-02	1.634E-01	2.547E-01	1.837E-02	-0.103
TE-125M	635.90			-1.360E-01	2.339E-01	3.714E-01	2.730E-02	-0.366
	109.28	*		1.773E+00	8.702E+00	1.424E+01	1.229E+00	0.124
I-126	388.63			-1.747E-02	2.012E-01	3.271E-01	1.797E-02	-0.053
	666.33	*		2.439E-02	1.986E-01	3.322E-01	2.166E-02	0.073
SB-126	753.82			6.805E-01	1.562E+00	2.651E+00	1.914E-01	0.257
	223.80			1.038E+00	3.788E+00	6.497E+00	3.530E-01	0.160
	278.60			1.846E+00	2.271E+00	3.945E+00	2.227E-01	0.468
	296.50			9.893E+00	2.360E+00	3.408E+00	1.934E-01	2.903
	414.70			2.717E-02	7.274E-02	1.213E-01	6.815E-03	0.224
	415.30			-6.863E-01	6.092E+00	9.837E+00	5.531E-01	-0.070
	555.20			-2.106E+00	4.096E+00	6.653E+00	4.160E-01	-0.317
	573.80			3.101E-01	1.020E+00	1.747E+00	1.102E-01	0.178
	593.00			-5.134E-01	9.167E-01	1.472E+00	9.357E-02	-0.349
	656.30			-5.167E-01	3.409E+00	5.599E+00	3.626E-01	-0.092
	666.33			1.025E-02	8.340E-02	1.395E-01	9.096E-03	0.073
	675.00			8.422E-01	2.101E+00	3.581E+00	2.359E-01	0.235
	695.00			4.533E-02	7.713E-02	1.330E-01	8.980E-03	0.341
	697.00			3.260E-02	2.745E-01	4.578E-01	3.097E-02	0.071
	720.50	*		2.063E-02	1.729E-01	2.503E-01	1.740E-02	0.082
	856.80			4.887E-01	5.304E-01	8.296E-01	6.665E-02	0.589
	989.30			-1.255E+00	1.292E+00	1.850E+00	1.416E-01	-0.678
	1034.80			-4.538E+00	9.183E+00	1.469E+01	1.059E+00	-0.309
	1213.00			-4.121E+00	5.711E+00	8.844E+00	5.178E-01	-0.466

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127	61.10			3.217E+01	7.981E+01	1.237E+02	1.272E+01	0.260
	252.40			1.987E+00	5.559E+00	9.407E+00	3.923E+00	0.211
	290.80			1.287E+00	3.029E+01	4.461E+01	4.418E+00	0.029
	411.60			-9.563E+00	1.633E+01	2.550E+01	3.782E+00	-0.375
	444.90			-1.483E+00	1.231E+01	1.974E+01	2.268E+00	-0.075
	473.00			-3.051E+00	2.163E+00	3.036E+00	3.619E-01	-1.005
	543.00			1.139E+01	2.122E+01	3.695E+01	5.055E+00	0.308
	603.60			1.305E+01	1.580E+01	2.481E+01	2.922E+00	0.526
	685.20	*		1.105E+00	1.803E+00	3.117E+00	3.350E-01	0.355
	698.50			-1.015E+01	2.101E+01	3.340E+01	5.148E+00	-0.304
	722.20			-3.849E+00	4.496E+01	6.361E+01	6.807E+00	-0.061
	783.80			1.651E+00	6.244E+00	9.087E+00	1.117E+00	0.182
	57.60			-1.117E+00	5.652E+00	9.098E+00	5.749E-01	-0.123
	145.22			3.023E-01	6.245E-01	1.033E+00	5.769E-02	0.293
XE-127	172.10			-7.300E-02	1.129E-01	1.758E-01	9.049E-03	-0.415
	202.84	*		-2.731E-02	4.282E-02	6.584E-02	3.501E-03	-0.415
	374.96			-1.198E-01	1.840E-01	2.894E-01	1.608E-02	-0.414
	80.18			7.351E-01	5.184E+00	7.831E+00	5.631E-01	0.094
I-131	284.30			-1.454E+00	1.448E+00	2.281E+00	1.447E-01	-0.637
	364.48	*		-5.563E-03	1.166E-01	1.910E-01	1.207E-02	-0.029
	636.97			2.843E-02	1.623E+00	2.705E+00	1.921E-01	0.011
	722.89			-3.121E+00	9.094E+00	1.251E+01	8.831E-01	-0.250
TE-132	49.72			-3.065E+01	2.538E+01	4.101E+01	4.100E+00	-0.747
	111.76			-5.383E+00	4.202E+01	6.823E+01	6.766E+00	-0.079
	116.30			1.062E+01	3.804E+01	6.314E+01	6.223E+00	0.168
	228.16	*		-7.323E-01	9.192E-01	1.494E+00	2.195E-01	-0.490
BA-133	53.15			1.269E+00	3.067E+00	5.296E+00	3.424E-01	0.240
	79.62			2.853E-01	1.208E+00	1.832E+00	2.638E-01	0.156
	81.00			-4.665E-02	9.371E-02	1.372E-01	2.076E-02	-0.340
	276.40			3.328E-01	3.150E-01	5.334E-01	6.877E-02	0.624
	302.84			-2.956E-02	1.394E-01	2.009E-01	2.330E-02	-0.147
	356.01	*		1.599E-02	4.045E-02	6.030E-02	6.918E-03	0.265
I-133	383.85			1.387E-01	2.659E-01	4.483E-01	4.808E-02	0.309
	510.53	+		4.259E+00	2.659E-01	Half-Life	too short	
	529.87	*		-2.157E-03	2.659E-01	Half-Life	too short	
	706.58			-3.918E-01	2.659E-01	Half-Life	too short	
	856.28			2.256E+00	2.659E-01	Half-Life	too short	
	875.33			6.112E-02	2.659E-01	Half-Life	too short	
	1236.41			5.039E+00	2.659E-01	Half-Life	too short	
	1298.22			-6.440E-02	2.659E-01	Half-Life	too short	
	475.35			4.159E-01	1.483E+00	2.443E+00	1.451E-01	0.170
	563.23			3.497E-02	3.108E-01	5.264E-01	3.363E-02	0.066
CS-134	569.32			2.575E-02	1.755E-01	2.925E-01	1.888E-02	0.088
	604.70			-6.684E-03	3.234E-02	4.602E-02	2.952E-03	-0.145
	795.84	+	*	9.260E-02	6.317E-02	8.973E-02	6.842E-03	1.032
	801.93			-2.993E-01	3.632E-01	5.507E-01	4.216E-02	-0.543
	1038.57			1.437E+00	3.432E+00	5.950E+00	4.266E-01	0.242
	1167.94			-1.523E-01	2.468E+00	4.069E+00	2.267E-01	-0.037
	1365.15			1.044E+00	1.105E+00	2.005E+00	1.491E-01	0.521

----- 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		4.896E+12	1.105E+00	Half-Life	too short	
		417.63		-1.801E+12	1.105E+00	Half-Life	too short	
		546.56		-1.805E+12	1.105E+00	Half-Life	too short	
		836.80		6.950E+12	1.105E+00	Half-Life	too short	
		1038.76		1.427E+12	1.105E+00	Half-Life	too short	
		1124.00		-7.257E+12	1.105E+00	Half-Life	too short	
		1131.51		1.908E+11	1.105E+00	Half-Life	too short	
		1260.41	*	-1.192E+11	1.105E+00	Half-Life	too short	
		1457.56		3.133E+14	1.105E+00	Half-Life	too short	
		1678.03		1.776E+11	1.105E+00	Half-Life	too short	
		1706.46		-3.247E+12	1.105E+00	Half-Life	too short	
		1791.20		1.282E+10	1.105E+00	Half-Life	too short	
CS-136		66.91		-3.557E-01	8.380E-01	1.242E+00	1.783E-01	-0.286
	+	86.29		4.168E+00	1.350E+00	2.086E+00	2.533E-01	1.999
		153.22		4.136E-01	6.495E-01	1.077E+00	7.441E-02	0.384
		163.89		7.705E-01	1.050E+00	1.742E+00	1.177E-01	0.442
		176.55		-2.039E-02	3.662E-01	5.853E-01	3.493E-02	-0.035
		273.65		-4.055E-01	4.829E-01	6.712E-01	4.344E-02	-0.604
		340.57		1.874E-01	1.330E-01	2.121E-01	1.281E-02	0.883
		818.51		-3.174E-03	7.791E-02	1.267E-01	9.809E-03	-0.025
		1048.07	*	-3.262E-02	1.084E-01	1.763E-01	1.325E-02	-0.185
		1235.34		4.573E-01	6.750E-01	1.161E+00	1.178E-01	0.394
BA-137M		661.65	*	3.122E-02	3.492E-02	6.124E-02	3.970E-03	0.510
CS-137		661.65	*	3.300E-02	3.691E-02	6.473E-02	4.211E-03	0.510
CE-139		165.85	*	-4.997E-03	2.665E-02	4.251E-02	2.178E-03	-0.118
BA-140		162.64		2.407E-01	7.449E-01	1.216E+00	7.285E-02	0.198
		304.84		9.731E-01	1.318E+00	2.087E+00	5.691E-01	0.466
		423.70		-1.610E+00	1.899E+00	2.785E+00	8.845E-01	-0.578
LA-140		537.32	*	-2.424E-01	2.590E-01	3.870E-01	1.261E-01	-0.626
	+	328.77		8.601E-01	4.790E-01	5.395E-01	3.446E-02	1.594
		432.53		-7.016E-02	2.108E+00	3.411E+00	2.161E-01	-0.021
		487.03		-5.866E-02	1.415E-01	2.202E-01	1.484E-02	-0.266
		751.79		-2.939E-04	1.816E+00	2.985E+00	2.472E-01	0.000
		815.85		-8.540E-02	3.422E-01	5.463E-01	4.812E-02	-0.156
		867.82		4.575E-01	1.523E+00	2.536E+00	2.182E-01	0.180
		919.63		1.850E+00	2.997E+00	4.988E+00	5.147E-01	0.371
		925.24		1.542E+00	1.307E+00	2.263E+00	1.978E-01	0.681
		1596.49	*	-1.013E-01	8.498E-02	9.576E-02	6.236E-03	-1.058
CE-141		145.44	*	2.553E-02	5.678E-02	9.376E-02	5.459E-03	0.272
CE-143		57.37		-8.006E-04	5.678E-02	Half-Life	too short	
		231.56		3.991E-03	5.678E-02	Half-Life	too short	
		293.26	*	2.142E-03	5.678E-02	Half-Life	too short	
	+	350.59		7.021E-02	5.678E-02	Half-Life	too short	
		490.36		-8.386E-05	5.678E-02	Half-Life	too short	
		664.57		-2.993E-03	5.678E-02	Half-Life	too short	
		721.93		-1.317E-04	5.678E-02	Half-Life	too short	
CE-144		80.11		3.030E-01	1.984E+00	2.999E+00	2.128E-01	0.101
		133.54	*	-5.310E-02	1.808E-01	2.907E-01	4.139E-02	-0.183
PM-144		476.78		-1.198E-02	5.547E-02	8.775E-02	6.201E-03	-0.137

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		-3.542E-03	2.898E-02	4.666E-02	3.141E-03	-0.076
		696.49	*	1.364E-02	3.120E-02	5.321E-02	3.601E-03	0.256
		778.57		3.230E-01	2.214E+00	3.575E+00	2.653E-01	0.090
PR-144		696.49	*	9.256E-01	2.117E+00	3.610E+00	2.441E-01	0.256
		1489.15		-6.521E+00	1.081E+01	1.585E+01	1.073E+00	-0.411
PM-146		453.90	*	1.500E-02	3.816E-02	6.336E-02	5.477E-03	0.237
		633.02		3.129E-02	1.176E+00	1.963E+00	7.251E-01	0.016
		735.90		-4.653E-02	1.370E-01	2.183E-01	6.152E-02	-0.213
		747.13		-1.742E-03	8.562E-02	1.405E-01	1.854E-02	-0.012
ND-147	+	91.11		8.985E-01	2.105E-01	5.613E-01	4.602E-02	1.601
		319.41		2.397E+00	3.214E+00	5.541E+00	3.151E-01	0.433
		439.89		-1.285E+00	6.358E+00	1.016E+01	5.860E-01	-0.126
		531.02	*	3.169E-01	5.712E-01	9.495E-01	1.299E-01	0.334
PM-149		285.90	*	4.932E+01	1.464E+02	2.487E+02	3.513E+01	0.198
EU-152		121.78		-1.734E-02	6.706E-02	1.076E-01	8.559E-03	-0.161
		244.69		-9.246E-02	2.870E-01	4.178E-01	2.312E-02	-0.221
		344.27	*	-2.309E-02	9.627E-02	1.367E-01	8.759E-03	-0.169
		443.98		-3.854E-01	8.309E-01	1.299E+00	7.514E-02	-0.297
		778.89		1.555E-01	2.559E-01	4.176E-01	3.098E-02	0.372
		867.32		2.734E-01	8.314E-01	1.386E+00	1.125E-01	0.197
		964.01		6.444E-01	3.086E-01	5.220E-01	4.109E-02	1.235
		1085.78		-3.486E-01	3.706E-01	5.644E-01	3.750E-02	-0.618
		1112.02		5.300E-01	3.212E-01	5.488E-01	3.470E-02	0.966
		1407.95		3.619E-03	1.672E-01	2.731E-01	1.887E-02	0.013
GD-153		69.67		6.057E-01	1.576E+00	2.423E+00	1.593E-01	0.250
		83.37		1.201E+01	1.462E+01	2.234E+01	1.633E+00	0.538
		97.43	*	-3.461E-02	7.740E-02	1.119E-01	7.782E-03	-0.309
		103.18		-8.737E-02	9.612E-02	1.531E-01	1.023E-02	-0.571
EU-154		123.07		5.374E-02	4.508E-02	7.687E-02	7.428E-03	0.699
		247.94		3.885E-02	3.197E-01	5.041E-01	4.733E-02	0.077
		591.81		-1.260E-01	5.420E-01	8.922E-01	9.024E-02	-0.141
		723.30		-1.008E-01	1.944E-01	2.623E-01	2.118E-02	-0.384
		756.87		6.178E-01	7.081E-01	1.237E+00	1.364E-01	0.500
		873.19		1.229E-01	2.633E-01	4.455E-01	5.314E-02	0.276
		996.32		-1.196E-01	3.432E-01	5.585E-01	9.656E-02	-0.214
		1004.76		-1.193E-01	2.032E-01	3.239E-01	3.512E-02	-0.368
		1274.45	*	5.267E-02	1.233E-01	2.101E-01	2.047E-02	0.251
EU-155		48.70		-7.421E-01	1.969E+00	3.314E+00	2.165E-01	-0.224
		60.01		1.828E+00	4.587E+00	7.120E+00	4.474E-01	0.257
	+	86.54		3.427E-01	1.061E-01	1.715E-01	1.311E-02	1.998
		105.31	*	8.268E-02	9.946E-02	1.688E-01	1.138E-02	0.490
TB-160	+	86.79		9.342E-01	2.891E-01	4.625E-01	3.497E-02	2.020
		197.04		-2.047E-01	5.238E-01	8.184E-01	4.325E-02	-0.250
		215.65		1.886E-01	6.674E-01	1.070E+00	5.769E-02	0.176
	+	298.57		2.134E-01	1.396E-01	1.847E-01	1.048E-02	1.156
		879.36	*	-5.645E-02	1.357E-01	2.115E-01	1.736E-02	-0.267
		962.29		4.171E-01	6.215E-01	9.247E-01	7.292E-02	0.451
		966.15		1.137E+00	2.994E-01	5.234E-01	4.110E-02	2.173
		1177.93		-4.559E-02	3.762E-01	6.169E-01	3.417E-02	-0.074

---- 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			-3.903E-01	7.350E-01	1.150E+00	7.359E-02	-0.340
	80.57			2.706E-02	2.521E-01	3.801E-01	2.709E-02	0.071
	+	184.41		1.592E-01	5.157E-02	6.330E-02	3.300E-03	2.516
	280.46			-4.798E-02	6.887E-02	1.109E-01	6.267E-03	-0.432
	410.95			9.206E-02	2.163E-01	3.615E-01	2.023E-02	0.255
	711.68	*		-1.348E-02	5.146E-02	8.307E-02	5.718E-03	-0.162
TM-171	752.31			1.409E-01	2.484E-01	4.262E-01	3.072E-02	0.331
	810.29			-7.820E-03	5.480E-02	8.837E-02	6.776E-03	-0.088
	51.35			-5.953E+00	2.545E+01	4.299E+01	2.802E+00	-0.138
	52.39			9.115E+00	1.335E+01	2.326E+01	1.510E+00	0.392
	59.40			1.620E+01	2.445E+01	3.841E+01	2.409E+00	0.422
LU-176	66.72	*		-1.470E+01	2.723E+01	4.021E+01	2.602E+00	-0.366
	+	88.36		5.387E-01	1.247E-01	3.242E-01	2.471E-02	1.661
	201.83			-2.229E-02	2.496E-02	3.786E-02	2.011E-03	-0.589
	306.84	*		-5.361E-03	2.161E-02	3.546E-02	2.015E-03	-0.151
LU-177	401.10			4.384E+00	5.700E+00	9.747E+00	5.397E-01	0.450
	112.95			-1.286E+00	1.807E+00	2.861E+00	1.828E-01	-0.450
	+	208.36	*	3.387E+00	2.015E+00	2.248E+00	1.202E-01	1.507
LU-177M	52.97			5.795E-01	1.401E+00	2.420E+00	1.566E-01	0.239
	54.07			3.163E-02	7.472E-01	1.273E+00	8.191E-02	0.025
	61.30			9.159E-01	1.409E+00	2.206E+00	1.394E-01	0.415
	121.62			-1.200E-01	3.460E-01	5.530E-01	3.453E-02	-0.217
	147.16			-1.472E-01	5.639E-01	9.033E-01	5.005E-02	-0.163
	171.86			-3.101E-01	4.393E-01	6.822E-01	3.511E-02	-0.455
	218.09			-7.935E-01	7.540E-01	1.123E+00	6.070E-02	-0.706
	+	268.79		2.578E+00	1.114E+00	1.330E+00	7.474E-02	1.938
	319.02			1.952E-01	2.170E-01	3.772E-01	2.144E-02	0.518
	367.43			-2.339E-02	7.651E-01	1.254E+00	7.004E-02	-0.019
	413.65	*		3.870E-02	1.520E-01	2.515E-01	1.412E-02	0.154
	56.28			-1.211E-01	8.586E-01	1.451E+00	9.229E-02	-0.083
HF-181	57.53			-1.045E-01	4.725E-01	7.598E-01	4.803E-02	-0.137
	65.20			-2.739E-02	9.341E-01	1.414E+00	9.083E-02	-0.019
	133.02			-2.508E-02	6.001E-02	9.609E-02	5.667E-03	-0.261
	136.25			1.469E-01	4.050E-01	6.690E-01	3.888E-02	0.220
	345.85			4.279E-02	1.938E-01	2.854E-01	1.612E-02	0.150
	482.03	*		2.783E-02	3.893E-02	6.586E-02	3.932E-03	0.423
W-181	56.28			-4.673E-02	3.283E-01	5.548E-01	3.528E-02	-0.084
	57.53			-4.009E-02	1.808E-01	2.907E-01	1.838E-02	-0.138
	65.20	*		-1.040E-02	3.546E-01	5.367E-01	3.448E-02	-0.019
TA-182	67.75			-3.844E-02	1.089E-01	1.621E-01	1.055E-02	-0.237
	100.10			-2.702E-02	1.598E-01	2.627E-01	1.790E-02	-0.103
	152.43			1.724E-01	2.974E-01	4.924E-01	2.669E-02	0.350
	222.10			1.178E-02	2.847E-01	4.840E-01	2.625E-02	0.024
	1001.68			-9.318E-01	1.980E+00	3.266E+00	2.462E-01	-0.285
	1121.28			5.058E-01	1.910E-01	3.315E-01	2.056E-02	1.526
RE-183	1189.05			8.682E-02	3.200E-01	5.399E-01	3.044E-02	0.161
	1221.42	*		-3.251E-02	2.042E-01	3.330E-01	1.975E-02	-0.098
	1230.97			-1.986E-01	4.846E-01	7.742E-01	4.661E-02	-0.256
	57.98			-3.163E-02	1.933E-01	2.929E-01	1.848E-02	-0.108

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184		59.32		3.755E-02	1.039E-01	1.610E-01	1.010E-02	0.233
		67.20		-4.391E-03	1.919E-01	2.901E-01	1.882E-02	-0.015
		162.32	*	-1.049E-02	9.897E-02	1.587E-01	8.249E-03	-0.066
	+	208.81		2.477E+00	1.474E+00	1.641E+00	8.783E-02	1.509
		291.72		2.654E-02	9.151E-01	1.346E+00	7.631E-02	0.020
		57.98		-1.150E-01	7.031E-01	1.066E+00	6.722E-02	-0.108
		59.32		1.365E-01	3.775E-01	5.854E-01	3.673E-02	0.233
		67.20		-1.597E-02	6.980E-01	1.055E+00	6.844E-02	-0.015
		161.27		-7.076E-02	3.146E-01	5.018E-01	2.621E-02	-0.141
		216.55		3.720E-03	2.319E-01	3.670E-01	1.980E-02	0.010
		252.85	*	1.135E-01	1.995E-01	3.443E-01	1.916E-02	0.330
		318.01		-1.710E-01	3.849E-01	6.223E-01	3.537E-02	-0.275
OS-185		792.07		7.994E-01	1.748E+00	1.797E+00	1.352E-01	0.445
		903.28		4.731E-01	1.044E+00	1.606E+00	1.337E-01	0.295
		920.93		-7.404E-02	4.416E-01	7.022E-01	5.760E-02	-0.105
		59.72		1.729E-01	2.726E-01	4.277E-01	2.684E-02	0.404
		61.14		6.540E-02	1.550E-01	2.404E-01	1.518E-02	0.272
		69.30		3.474E-02	2.846E-01	4.330E-01	2.841E-02	0.080
		592.07		-4.218E-01	2.255E+00	3.726E+00	2.368E-01	-0.113
		646.12	*	-2.481E-02	3.952E-02	6.258E-02	4.044E-03	-0.396
		717.42		6.654E-01	8.032E-01	1.408E+00	9.755E-02	0.473
		874.81		2.518E-01	5.307E-01	8.986E-01	7.346E-02	0.280
		880.27		-1.261E-02	7.485E-01	1.212E+00	9.958E-02	-0.010
		155.03	*	7.463E-02	1.549E-01	2.551E-01	1.368E-02	0.293
RE-188		477.96		-2.281E-01	2.561E+00	4.092E+00	2.436E-01	-0.056
		633.10		1.238E-03	2.423E+00	4.037E+00	2.601E-01	0.000
W-188	+	63.58		1.653E+02	9.278E+01	9.088E+01	5.797E+00	1.819
IR-192		227.08		-5.602E+00	1.059E+01	1.753E+01	9.554E-01	-0.320
	+	290.67	*	5.189E-01	7.151E+00	1.056E+01	5.982E-01	0.049
		295.96		9.568E-01	1.860E-01	2.543E-01	1.467E-02	3.762
		308.46		-3.591E-02	8.533E-02	1.386E-01	7.973E-03	-0.259
		316.51	*	-3.172E-02	2.990E-02	4.653E-02	2.659E-03	-0.682
		468.07		3.286E-02	6.354E-02	9.430E-02	6.392E-03	0.348
		604.41		-7.006E-03	4.397E-01	6.382E-01	7.442E-02	-0.011
		612.46		7.527E-01	7.021E-01	1.120E+00	9.011E-02	0.672
AU-195		65.12		-1.071E-03	1.643E-01	2.489E-01	1.598E-02	-0.004
		66.83		-4.695E-02	9.059E-02	1.339E-01	8.673E-03	-0.351
	+	75.70		1.298E+00	2.540E-01	4.175E-01	2.859E-02	3.108
		98.88	*	2.099E-01	1.998E-01	3.402E-01	2.340E-02	0.617
TL-200		129.76		2.582E+00	2.643E+00	4.464E+00	2.675E-01	0.578
		367.94	*	1.292E-04	2.643E+00	Half-Life	too short	
		579.30		1.279E-02	2.643E+00	Half-Life	too short	
		828.27		3.480E-02	2.643E+00	Half-Life	too short	
TL-201		1205.75		1.781E-03	2.643E+00	Half-Life	too short	
		68.90		-1.258E+00	7.105E+00	1.136E+01	7.436E-01	-0.111
		70.82		-1.407E-01	4.259E+00	6.429E+00	4.256E-01	-0.022
		80.30		9.493E-01	7.717E+00	1.165E+01	8.282E-01	0.081
		135.34		6.850E+00	3.640E+01	5.972E+01	3.485E+00	0.115
		167.43	*	5.307E-01	1.019E+01	1.642E+01	8.416E-01	0.032

---- 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		-7.750E-02	4.378E-01	7.000E-01	4.582E-02	-0.111
		70.82		-8.647E-03	2.617E-01	3.950E-01	2.615E-02	-0.022
		80.30		5.835E-02	4.744E-01	7.160E-01	5.091E-02	0.081
		439.56	*	1.291E-02	7.438E-02	1.218E-01	7.018E-03	0.106
HG-203		70.83		-3.192E-02	1.034E+00	1.561E+00	1.941E-01	-0.020
		72.87		9.207E-01	6.284E-01	9.878E-01	1.189E-01	0.932
		82.60		2.929E-01	1.028E+00	1.656E+00	2.142E-01	0.177
		279.20	*	1.635E-02	3.355E-02	5.747E-02	3.456E-03	0.285
BI-207		72.80		2.157E-01	1.750E-01	2.761E-01	1.852E-02	0.781
	+	74.97		7.138E-01	1.397E-01	2.059E-01	1.402E-02	3.466
		84.90		2.182E-01	1.860E-01	2.873E-01	2.132E-02	0.760
		569.67		2.502E-03	2.758E-02	4.581E-02	2.884E-03	0.055
		1063.62	*	1.084E-03	5.290E-02	8.848E-02	6.104E-03	0.012
		1770.23		-1.616E+00	6.138E-01	6.216E-01	3.669E-02	-2.600
TL-207		81.07		-1.033E-01	2.062E-01	3.025E-01	2.165E-02	-0.342
		83.78		1.284E-01	1.229E-01	1.892E-01	1.389E-02	0.679
		94.90		1.866E-01	2.061E-01	3.196E-01	2.271E-02	0.584
		122.32		8.635E-01	1.586E+00	2.626E+00	1.859E-01	0.329
		144.24		2.976E-01	6.108E-01	1.001E+00	7.090E-02	0.297
		154.21		-2.072E-01	3.584E-01	5.647E-01	3.766E-02	-0.367
	+	269.46		5.979E-01	2.585E-01	3.207E-01	1.889E-02	1.864
		323.87	*	-6.307E-01	6.543E-01	8.678E-01	1.430E-01	-0.727
	+	338.28		6.652E+00	1.818E+00	2.220E+00	2.321E-01	2.997
		445.03		-9.299E-02	1.935E+00	3.121E+00	3.203E-01	-0.030
PO-209		260.50		-2.205E-01	8.180E+00	1.373E+01	7.678E-01	-0.016
		262.80		4.074E+00	2.247E+01	3.805E+01	2.131E+00	0.107
		896.60	*	-2.344E+00	6.285E+00	9.774E+00	8.157E-01	-0.240
BI-210		46.50	*	5.532E-01	2.884E+00	4.903E+00	3.693E-01	0.113
PB-210		46.50	*	5.532E-01	2.884E+00	4.903E+00	3.693E-01	0.113
PO-210		46.50	*	5.532E-01	2.884E+00	4.903E+00	3.144E-01	0.113
PB-211		404.84	*	-1.042E+00	1.062E+00	1.261E+00	7.859E-01	-0.826
		427.08		-2.406E-01	1.714E+00	2.744E+00	1.696E+00	-0.088
		831.96		-1.580E+00	1.595E+00	1.834E+00	1.148E+00	-0.861
PO-215		81.07		-1.033E-01	2.062E-01	3.025E-01	2.165E-02	-0.342
		83.78		1.284E-01	1.229E-01	1.892E-01	1.389E-02	0.679
		94.90		1.866E-01	2.061E-01	3.196E-01	2.271E-02	0.584
		122.32		8.635E-01	1.586E+00	2.626E+00	1.859E-01	0.329
		144.24		2.976E-01	6.108E-01	1.001E+00	7.090E-02	0.297
		154.21		-2.072E-01	3.584E-01	5.647E-01	3.766E-02	-0.367
	+	269.46		5.979E-01	2.585E-01	3.207E-01	1.889E-02	1.864
		323.87	*	-6.307E-01	6.543E-01	8.678E-01	1.430E-01	-0.727
	+	338.28		6.652E+00	1.818E+00	2.220E+00	2.321E-01	2.997
		445.03		-9.299E-02	1.935E+00	3.121E+00	3.203E-01	-0.030
RN-219		271.23		5.157E-01	2.436E-01	3.991E-01	3.185E-02	1.292
		401.81	*	1.681E-01	3.571E-01	5.988E-01	8.082E-02	0.281
RN-220		549.76	*	6.394E+00	2.201E+01	3.780E+01	2.357E+00	0.169
RA-223		81.07		-1.033E-01	2.062E-01	3.025E-01	2.165E-02	-0.342
		83.78		1.284E-01	1.229E-01	1.892E-01	1.389E-02	0.679
		94.90		1.866E-01	2.061E-01	3.196E-01	2.271E-02	0.584

---- 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		8.635E-01	1.586E+00	2.626E+00	1.859E-01	0.329
		144.24		2.976E-01	6.108E-01	1.001E+00	7.090E-02	0.297
		154.21		-2.072E-01	3.584E-01	5.647E-01	3.766E-02	-0.367
	+	269.46		5.979E-01	2.585E-01	3.207E-01	1.889E-02	1.864
		323.87	*	-6.307E-01	6.543E-01	8.678E-01	1.430E-01	-0.727
	+	338.28		6.652E+00	1.818E+00	2.220E+00	2.321E-01	2.997
		445.03		-9.299E-02	1.935E+00	3.121E+00	3.203E-01	-0.030
		79.80		3.270E-01	1.530E+00	2.318E+00	4.852E-01	0.141
		236.00		5.580E-01	2.446E-01	3.949E-01	4.062E-02	1.413
		256.20	*	-2.055E-01	3.253E-01	5.290E-01	7.337E-02	-0.389
TH-227		286.10		3.092E-01	1.253E+00	2.118E+00	2.434E-01	0.146
	+	299.80		2.661E+00	1.787E+00	2.349E+00	3.816E-01	1.133
		304.40		7.328E-01	1.772E+00	2.664E+00	4.598E-01	0.275
		334.20		6.544E-01	2.468E+00	3.107E+00	5.684E-01	0.211
		79.80		3.101E-01	1.530E+00	2.318E+00	4.917E-01	0.141
	+	94.00		1.459E+01	4.238E+00	3.364E+00	7.146E-01	4.336
		236.00		5.580E-01	2.429E-01	3.949E-01	3.500E-02	1.413
		256.20	*	-2.055E-01	3.259E-01	5.290E-01	8.900E-02	-0.389
		286.10		3.092E-01	1.290E+00	2.118E+00	2.122E+00	0.146
	+	299.80		2.661E+00	1.787E+00	2.349E+00	3.816E-01	1.133
TH-229		304.40		7.328E-01	1.772E+00	2.664E+00	4.598E-01	0.275
		334.20		6.544E-01	2.468E+00	3.107E+00	5.684E-01	0.211
		85.43		2.132E-01	1.896E-01	2.921E-01	2.179E-02	0.730
	+	88.47		3.101E-01	7.179E-02	1.854E-01	1.411E-02	1.672
		100.00		-6.736E-02	1.664E-01	2.690E-01	1.835E-02	-0.250
		193.63	*	2.186E-01	4.588E-01	7.465E-01	3.930E-02	0.293
		210.97		5.959E-01	7.520E-01	1.109E+00	5.948E-02	0.537
	PA-231	283.67	*	-1.457E+00	1.244E+00	1.919E+00	2.633E-01	-0.759
	+	301.29		1.065E+00	7.022E-01	9.012E-01	9.360E-02	1.181
	TH-231	81.07		-1.033E-01	2.062E-01	3.025E-01	2.165E-02	-0.342
U-231		83.78		1.284E-01	1.229E-01	1.892E-01	1.389E-02	0.679
		94.90		1.866E-01	2.061E-01	3.196E-01	2.271E-02	0.584
		122.32		8.635E-01	1.586E+00	2.626E+00	1.859E-01	0.329
		144.24		2.976E-01	6.108E-01	1.001E+00	7.090E-02	0.297
		154.21		-2.072E-01	3.584E-01	5.647E-01	3.766E-02	-0.367
	+	269.46		5.979E-01	2.585E-01	3.207E-01	1.889E-02	1.864
		323.87	*	-6.307E-01	6.543E-01	8.678E-01	1.430E-01	-0.727
	+	338.28		6.652E+00	1.818E+00	2.220E+00	2.321E-01	2.997
		445.03		-9.299E-02	1.935E+00	3.121E+00	3.203E-01	-0.030
	+	84.21		6.260E+00	7.698E+00	1.175E+01	8.659E-01	0.533
PA-233		92.29		2.075E+01	4.372E+00	5.837E+00	4.253E-01	3.555
		95.87	*	-1.132E+00	1.411E+00	2.005E+00	1.412E-01	-0.565
		108.00		-3.728E+00	2.804E+00	4.315E+00	2.812E-01	-0.864
	+	75.28		2.083E+01	4.860E+00	6.271E+00	9.040E-01	3.321
	+	86.59		5.566E+00	2.228E+00	2.785E+00	7.379E-01	1.998
	+	300.12		7.419E-01	4.934E-01	6.545E-01	8.761E-02	1.134
		311.98	*	2.393E-02	5.533E-02	9.396E-02	5.685E-03	0.255
		340.50		8.957E-01	6.118E-01	9.300E-01	2.133E-01	0.963
		398.62		-1.381E+00	1.895E+00	2.894E+00	7.464E-01	-0.477

----- 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		-5.456E-01	1.431E+00	2.260E+00	4.642E-01	-0.241
		63.00		4.690E+00	2.700E+00	2.626E+00	3.774E-01	1.786
		94.67		2.846E-01	1.556E-01	2.461E-01	2.808E-02	1.156
		98.44		8.310E-02	9.590E-02	1.376E-01	7.646E-02	0.604
		99.86		1.100E-02	4.152E-01	6.825E-01	4.660E-02	0.016
		111.00		6.292E-02	1.621E-01	2.706E-01	2.879E-02	0.233
		131.20		-5.683E-02	9.643E-02	1.535E-01	9.135E-03	-0.370
		152.70		2.319E-01	2.835E-01	4.704E-01	7.372E-02	0.493
		186.00		5.732E+00	2.530E+00	2.378E+00	7.241E-01	2.410
		226.40		4.721E-02	3.292E-01	5.613E-01	6.391E-02	0.084
		227.20		-3.931E-01	3.573E-01	5.759E-01	3.139E-02	-0.683
		248.90		-7.621E-02	6.920E-01	1.160E+00	2.485E-01	-0.066
		293.70		5.899E+00	1.447E+00	1.525E+00	2.446E-01	3.868
		369.80		-1.458E-01	7.011E-01	1.134E+00	2.354E-01	-0.129
		568.70		-1.908E-01	8.845E-01	1.438E+00	9.049E-02	-0.133
		569.50		4.814E-02	2.433E-01	4.069E-01	2.562E-02	0.118
		574.00		3.550E-01	1.292E+00	2.208E+00	1.393E-01	0.161
		699.00		-3.175E-01	6.657E-01	1.058E+00	1.938E-01	-0.300
		706.10		-9.139E-02	9.193E-01	1.505E+00	6.665E-01	-0.061
		733.00		-1.951E-01	3.979E-01	5.320E-01	1.151E-01	-0.367
		742.81		-2.102E-01	1.281E+00	2.067E+00	1.386E+00	-0.102
		796.30		1.439E+00	1.114E+00	1.693E+00	4.526E-01	0.850
		805.60		4.715E-01	9.001E-01	1.518E+00	4.612E-01	0.311
		819.60		8.810E-02	1.140E+00	1.872E+00	7.083E-01	0.047
		826.30		-1.835E-01	8.403E-01	1.339E+00	5.972E-01	-0.137
		831.60		-5.031E-01	6.552E-01	9.745E-01	2.887E-01	-0.516
		876.40		3.462E-03	7.730E-01	1.254E+00	1.289E+00	0.003
		880.51		-2.494E-02	2.687E-01	4.321E-01	3.551E-02	-0.058
		883.24		9.360E-02	2.794E-01	4.548E-01	3.055E-01	0.206
		899.00		-6.808E-01	7.932E-01	1.077E+00	4.703E-01	-0.632
		925.00		1.396E+00	1.173E+00	2.077E+00	1.698E-01	0.672
		926.50		3.022E-01	1.971E-01	3.148E-01	7.911E-02	0.960
		946.00	*	1.021E-01	2.902E-01	4.815E-01	8.905E-02	0.212
		949.00		-6.996E-02	4.331E-01	6.872E-01	5.493E-02	-0.102
		980.50		2.760E-01	7.317E-01	1.215E+00	9.391E-02	0.227
		1394.10		1.296E-01	1.012E+00	1.672E+00	1.085E+00	0.077
PA-234M	+	766.42		2.221E+01	1.719E+01	2.157E+01	1.090E+01	1.030
		1001.03	*	-3.016E+00	4.470E+00	7.244E+00	6.556E-01	-0.416
U-235	+	89.95		3.112E+00	1.170E+00	1.732E+00	5.292E-01	1.797
		93.35		4.538E+00	1.542E+00	1.232E+00	3.403E-01	3.684
		105.00		9.951E-01	1.011E+00	1.658E+00	4.861E-01	0.600
		143.76	*	-1.280E-02	1.889E-01	3.030E-01	4.921E-02	-0.042
NP-236	+	163.35		2.782E-01	4.171E-01	6.862E-01	1.221E-01	0.405
		185.71		2.123E-01	6.876E-02	8.861E-02	4.625E-03	2.396
		205.31		1.751E-01	5.043E-01	7.253E-01	1.294E-01	0.241
		94.67		2.183E-01	1.165E-01	1.869E-01	1.331E-02	1.168
		98.44		6.281E-02	6.369E-02	1.041E-01	7.179E-03	0.604
		111.00		4.759E-02	1.225E-01	2.047E-01	1.317E-02	0.233
		160.31	*	-2.892E-02	6.915E-02	1.094E-01	5.734E-03	-0.264

---- 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		1.844E-02	1.391E-01	2.297E-01	1.572E-02	0.080
		117.00	*	-6.582E-02	1.653E-01	2.668E-01	1.684E-02	-0.247
	+	209.75		1.912E+00	1.137E+00	1.239E+00	6.638E-02	1.543
		228.18		-1.806E-01	1.882E-01	3.053E-01	1.665E-02	-0.591
		277.60		7.592E-02	1.491E-01	2.554E-01	1.441E-02	0.297
		334.30		4.018E-01	1.398E+00	1.767E+00	1.002E-01	0.227
AM-241		59.54	*	9.175E-02	1.416E-01	2.222E-01	1.579E-02	0.413
CM-243		99.55		1.898E-02	1.432E-01	2.364E-01	1.618E-02	0.080
		103.76	*	1.801E-02	8.712E-02	1.450E-01	9.656E-03	0.124
		117.00		-6.772E-02	1.701E-01	2.745E-01	1.733E-02	-0.247
	+	209.75		1.885E+00	1.121E+00	1.222E+00	6.545E-02	1.543
		228.18		-1.825E-01	1.902E-01	3.085E-01	1.683E-02	-0.591
		277.60		7.655E-02	1.503E-01	2.575E-01	1.453E-02	0.297
AM-246		798.80		5.992E-02	1.341E-01	2.003E-01	1.517E-02	0.299
		1036.00		9.278E-02	2.656E-01	4.579E-01	3.296E-02	0.203
		1062.04		2.010E-03	2.235E-01	3.734E-01	2.583E-02	0.005
		1078.86	*	1.109E-01	1.410E-01	2.493E-01	1.677E-02	0.445
CM-247		278.00		2.304E-01	6.189E-01	1.054E+00	5.947E-02	0.219
		287.40		4.795E-01	1.041E+00	1.724E+00	9.764E-02	0.278
		402.60	*	4.596E-03	3.184E-02	5.241E-02	2.907E-03	0.088
CF-249		252.85		4.220E-01	7.419E-01	1.280E+00	7.126E-02	0.330
		333.44		7.422E-02	2.063E-01	2.280E-01	1.293E-02	0.326
		387.95	*	-2.672E-02	3.562E-02	5.547E-02	3.049E-03	-0.482
CF-251		176.60	*	-5.792E-03	1.124E-01	1.797E-01	9.293E-03	-0.032
		227.00		-1.496E-01	3.116E-01	5.169E-01	2.817E-02	-0.289
		285.00		-1.189E+00	1.402E+00	2.231E+00	1.262E-01	-0.533

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]G246440014      *
* Acquisition date   : 19-FEB-2010 19:52:18 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 02:00:01.73 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 2-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID        : G246440014 Analyst initials: MXR1                  *
* Batch Number     : 950788 Sample Quantity : 1.5301E+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	3.218E+01	2.778E+00	3.115E-01	0.000E+00
CD-109	2.902E+00	8.800E-01	1.175E+00	0.000E+00
SN-126	2.843E-01	8.621E-02	1.157E-01	0.000E+00
CS-135	5.082E-01	2.166E-01	2.146E-01	0.000E+00
TL-208	4.888E-01	7.662E-02	5.716E-02	0.000E+00
BI-211	2.905E+00	4.074E-01	3.084E-01	0.000E+00
BI-212	1.000E+00	5.108E-01	4.255E-01	0.000E+00
PB-212	1.650E+00	1.508E-01	8.135E-02	0.000E+00
PO-212	1.650E+00	1.508E-01	8.135E-02	0.000E+00
BI-214	1.083E+00	1.714E-01	1.009E-01	0.000E+00
PB-214	1.011E+00	1.508E-01	1.053E-01	0.000E+00
PO-214	1.011E+00	1.508E-01	1.053E-01	0.000E+00
PO-216	1.650E+00	1.508E-01	8.135E-02	0.000E+00
PO-218	1.011E+00	1.508E-01	1.053E-01	0.000E+00
RA-224	4.532E+00	1.148E+00	9.257E-01	0.000E+00
RA-226	1.083E+00	1.714E-01	1.009E-01	0.000E+00
AC-228	1.747E+00	3.317E-01	1.955E-01	0.000E+00
RA-228	1.747E+00	3.317E-01	1.955E-01	0.000E+00
TH-228	1.679E+00	1.534E-01	8.276E-02	0.000E+00
TH-230	1.083E+00	1.714E-01	1.008E-01	0.000E+00
TH-232	1.747E+00	3.317E-01	1.955E-01	0.000E+00
TH-234	4.023E+00	2.299E+00	1.958E+00	0.000E+00
U-234	1.083E+00	1.714E-01	1.008E-01	0.000E+00
NP-237	8.348E-01	3.043E-01	4.035E-01	0.000E+00
U-238	4.023E+00	2.299E+00	1.958E+00	0.000E+00
AM-243	3.976E-01	7.627E-02	8.467E-02	0.000E+00
ANH-511	7.143E-02	6.427E-02	4.132E-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	-6.738E-02	2.670E-01	4.461E-01	0.000E+00	NOT IDENT.
NA-22	1.783E-02	4.320E-02	7.586E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.107E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.565E-03	2.309E-02	3.959E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.124E-02	7.156E-02	0.000E+00	FAIL ABUN
SC-46	-3.889E-03	3.549E-02	5.930E-02	0.000E+00	FAIL ABUN
V-48	2.020E-03	7.221E-02	1.208E-01	0.000E+00	NOT IDENT.
CR-51	2.534E-01	3.331E-01	6.137E-01	0.000E+00	NOT IDENT.
MN-52	7.774E-03	2.525E-01	4.244E-01	0.000E+00	NOT IDENT.
MN-54	-6.895E-03	3.672E-02	6.153E-02	0.000E+00	NOT IDENT.
CO-56	1.955E-03	3.855E-02	6.571E-02	0.000E+00	NOT IDENT.
CO-57	9.051E-03	2.246E-02	4.053E-02	0.000E+00	NOT IDENT.
CO-58	-2.184E-03	3.774E-02	6.408E-02	0.000E+00	NOT IDENT.
FE-59	-6.993E-02	9.178E-02	1.484E-01	0.000E+00	NOT IDENT.
CO-60	3.430E-03	3.287E-02	5.617E-02	0.000E+00	NOT IDENT.
ZN-65	-1.326E-02	1.055E-01	1.544E-01	0.000E+00	NOT IDENT.
GE-68	1.412E-01	1.257E+00	2.192E+00	0.000E+00	NOT IDENT.
AS-73	7.616E-02	7.131E-01	1.361E+00	0.000E+00	NOT IDENT.
AS-74	5.059E-02	8.423E-02	1.544E-01	0.000E+00	NOT IDENT.
SE-75	5.323E-03	4.071E-02	6.532E-02	0.000E+00	NOT IDENT.
BR-77	1.045E+01	1.711E+01	3.025E+01	0.000E+00	FAIL ABUN
SR-82	-7.189E-01	4.023E-01	5.868E-01	0.000E+00	NOT IDENT.
RB-83	3.949E-02	6.022E-02	1.068E-01	0.000E+00	NOT IDENT.
RB-84	-1.379E-04	7.032E-02	1.188E-01	0.000E+00	NOT IDENT.
KR-85	7.129E+00	6.722E+00	1.093E+01	0.000E+00	NOT IDENT.
SR-85	3.741E-02	3.528E-02	5.737E-02	0.000E+00	NOT IDENT.
RB-86	-1.184E-01	8.484E-01	1.451E+00	0.000E+00	NOT IDENT.
Y-88	-2.977E-03	2.647E-02	4.365E-02	0.000E+00	NOT IDENT.
ZR-88	-8.421E-03	2.957E-02	4.908E-02	0.000E+00	NOT IDENT.
Y-91	6.573E+00	1.934E+01	3.383E+01	0.000E+00	NOT IDENT.
NB-94	1.794E-02	2.974E-02	5.369E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.848E-02	8.403E-02	0.000E+00	NOT IDENT.
NB-95M	4.081E-02	1.198E-01	1.963E-01	0.000E+00	NOT IDENT.
ZR-95	1.193E-02	6.883E-02	1.198E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.619E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.655E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.015E+01	1.835E+01	3.285E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.520E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.201E-02	2.816E-02	5.093E-02	0.000E+00	NOT IDENT.
RH-102	6.210E-03	2.220E-02	3.874E-02	0.000E+00	FAIL ABUN
RU-103	1.593E-02	3.543E-02	6.215E-02	0.000E+00	FAIL ABUN
RH-106	-9.271E-02	2.912E-01	4.995E-01	0.000E+00	FAIL ABUN
RU-106	-9.271E-02	2.911E-01	4.995E-01	0.000E+00	FAIL ABUN
AG-108M	-1.083E-02	2.893E-02	4.856E-02	0.000E+00	NOT IDENT.
AG-110M	-1.453E-02	3.184E-02	5.373E-02	0.000E+00	NOT IDENT.
IN-111	-4.071E-01	1.571E+00	2.475E+00	0.000E+00	NOT IDENT.
IN-113M	-1.185E-02	4.099E-02	7.009E-02	0.000E+00	NOT IDENT.
SN-113	-1.185E-02	4.099E-02	7.009E-02	0.000E+00	NOT IDENT.
IN-114M	-1.317E-01	1.823E-01	2.675E-01	0.000E+00	NOT IDENT.
CD-115	4.828E+00	1.815E+01	3.128E+01	0.000E+00	NOT IDENT.
SN-117M	2.560E-03	5.175E-02	9.107E-02	0.000E+00	NOT IDENT.
SB-122	-2.920E-01	3.046E+00	5.364E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.096E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.435E-02	2.460E-02	4.207E-02	0.000E+00	NOT IDENT.
I-124	6.437E-01	8.688E-01	1.428E+00	0.000E+00	NOT IDENT.
SB-124	-5.240E-02	6.473E-02	9.386E-02	0.000E+00	FAIL ABUN
SB-125	2.282E-02	7.556E-02	1.330E-01	0.000E+00	FAIL ABUN
TE-125M	1.773E+00	8.528E+00	1.533E+01	0.000E+00	NOT IDENT.
I-126	2.439E-02	1.946E-01	3.418E-01	0.000E+00	NOT IDENT.
SB-126	2.063E-02	1.694E-01	2.570E-01	0.000E+00	NOT IDENT.
SB-127	1.105E+00	1.767E+00	3.205E+00	0.000E+00	NOT IDENT.
XE-127	-2.731E-02	4.196E-02	6.982E-02	0.000E+00	NOT IDENT.
I-131	-5.563E-03	1.143E-01	1.996E-01	0.000E+00	NOT IDENT.
TE-132	-7.323E-01	9.009E-01	1.579E+00	0.000E+00	NOT IDENT.
BA-133	1.599E-02	3.964E-02	6.306E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.138E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.191E-02	9.191E-02	0.000E+00	FAIL ABUN
I-135	0.000E+00	1.357E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.262E-02	1.062E-01	1.793E-01	0.000E+00	FAIL ABUN
BA-137M	3.122E-02	3.422E-02	6.303E-02	0.000E+00	NOT IDENT.
CS-137	3.300E-02	3.617E-02	6.663E-02	0.000E+00	NOT IDENT.
CE-139	-4.997E-03	2.612E-02	4.531E-02	0.000E+00	NOT IDENT.
BA-140	-2.424E-01	2.538E-01	4.005E-01	0.000E+00	NOT IDENT.
LA-140	-1.013E-01	8.328E-02	9.627E-02	0.000E+00	FAIL ABUN
CE-141	2.553E-02	5.565E-02	1.002E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.577E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-5.310E-02	1.772E-01	3.115E-01	0.000E+00	NOT IDENT.
PM-144	1.364E-02	3.058E-02	5.469E-02	0.000E+00	NOT IDENT.

PR-144	9.256E-01	2.074E+00	3.711E+00	0.000E+00	NOT IDENT.
PM-146	1.500E-02	3.740E-02	6.585E-02	0.000E+00	NOT IDENT.
ND-147	3.169E-01	5.598E-01	9.829E-01	0.000E+00	FAIL ABUN
PM-149	4.932E+01	1.435E+02	2.615E+02	0.000E+00	NOT IDENT.
EU-152	-2.309E-02	9.434E-02	1.430E-01	0.000E+00	NOT IDENT.
GD-153	-3.461E-02	7.586E-02	1.208E-01	0.000E+00	NOT IDENT.
EU-154	5.267E-02	1.209E-01	2.125E-01	0.000E+00	NOT IDENT.
EU-155	8.268E-02	9.747E-02	1.819E-01	0.000E+00	FAIL ABUN
TB-160	-5.645E-02	1.330E-01	2.160E-01	0.000E+00	FAIL ABUN
HO-166M	-1.348E-02	5.043E-02	8.534E-02	0.000E+00	FAIL ABUN
TM-171	-1.470E+01	2.668E+01	4.380E+01	0.000E+00	NOT IDENT.
LU-176	-5.361E-03	2.118E-02	3.722E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.975E+00	2.382E+00	0.000E+00	FAIL ABUN
LU-177M	3.870E-02	1.490E-01	2.620E-01	0.000E+00	FAIL ABUN
HF-181	2.783E-02	3.816E-02	6.834E-02	0.000E+00	NOT IDENT.
W-181	-1.040E-02	3.475E-01	5.848E-01	0.000E+00	NOT IDENT.
TA-182	-3.251E-02	2.002E-01	3.372E-01	0.000E+00	NOT IDENT.
RE-183	-1.049E-02	9.699E-02	1.692E-01	0.000E+00	FAIL ABUN
RE-184	1.135E-01	1.955E-01	3.632E-01	0.000E+00	NOT IDENT.
OS-185	-2.481E-02	3.873E-02	6.446E-02	0.000E+00	NOT IDENT.
RE-188	7.463E-02	1.518E-01	2.724E-01	0.000E+00	NOT IDENT.
W-188	5.189E-01	7.008E+00	1.110E+01	0.000E+00	FAIL ABUN
IR-192	-3.172E-02	2.930E-02	4.880E-02	0.000E+00	FAIL ABUN
AU-195	2.099E-01	1.958E-01	3.671E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.531E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	5.307E-01	9.985E+00	1.749E+01	0.000E+00	NOT IDENT.
TL-202	1.291E-02	7.289E-02	1.267E-01	0.000E+00	NOT IDENT.
HG-203	1.635E-02	3.288E-02	6.047E-02	0.000E+00	NOT IDENT.
BI-207	1.084E-03	5.185E-02	8.993E-02	0.000E+00	FAIL ABUN
TL-207	-6.307E-01	6.412E-01	9.097E-01	0.000E+00	FAIL ABUN
PO-209	-2.344E+00	6.159E+00	9.980E+00	0.000E+00	NOT IDENT.
BI-210	5.532E-01	2.827E+00	5.384E+00	0.000E+00	NOT IDENT.
PB-210	5.532E-01	2.827E+00	5.384E+00	0.000E+00	NOT IDENT.
PO-210	5.532E-01	2.827E+00	5.384E+00	0.000E+00	NOT IDENT.
PB-211	-1.042E+00	1.041E+00	1.315E+00	0.000E+00	NOT IDENT.
PO-215	-6.307E-01	6.412E-01	9.097E-01	0.000E+00	FAIL ABUN
RN-219	1.681E-01	3.500E-01	6.243E-01	0.000E+00	NOT IDENT.
RN-220	6.394E+00	2.157E+01	3.909E+01	0.000E+00	NOT IDENT.
RA-223	-6.307E-01	6.412E-01	9.097E-01	0.000E+00	FAIL ABUN
AC-227	-2.055E-01	3.188E-01	5.578E-01	0.000E+00	FAIL ABUN
TH-227	-2.055E-01	3.194E-01	5.578E-01	0.000E+00	FAIL ABUN
TH-229	2.186E-01	4.496E-01	7.926E-01	0.000E+00	FAIL ABUN
PA-231	-1.457E+00	1.219E+00	2.018E+00	0.000E+00	FAIL ABUN
TH-231	-6.307E-01	6.412E-01	9.097E-01	0.000E+00	FAIL ABUN
U-231	-1.132E+00	1.383E+00	2.165E+00	0.000E+00	FAIL ABUN
PA-233	2.393E-02	5.423E-02	9.858E-02	0.000E+00	FAIL ABUN
PA-234	1.021E-01	2.844E-01	4.910E-01	0.000E+00	FAIL ABUN
PA-234M	-3.016E+00	4.380E+00	7.375E+00	0.000E+00	FAIL ABUN
U-235	-1.280E-02	1.851E-01	3.240E-01	0.000E+00	FAIL ABUN
NP-236	-2.892E-02	6.777E-02	1.166E-01	0.000E+00	NOT IDENT.
NP-239	-6.582E-02	1.620E-01	2.868E-01	0.000E+00	FAIL ABUN
AM-241	9.175E-02	1.387E-01	2.427E-01	0.000E+00	NOT IDENT.
CM-243	1.801E-02	8.537E-02	1.563E-01	0.000E+00	FAIL ABUN
AM-246	1.109E-01	1.382E-01	2.533E-01	0.000E+00	NOT IDENT.
CM-247	4.596E-03	3.120E-02	5.464E-02	0.000E+00	NOT IDENT.
CF-249	-2.672E-02	3.491E-02	5.788E-02	0.000E+00	NOT IDENT.
CF-251	-5.792E-03	1.102E-01	1.913E-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]G246440014.CNF;1
Sample date        : 2-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 19:52:18
Sample ID          : G246440014      Sample quantity   : 1.53010E+02 GRAM
Detector name      : GAM12           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.73  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 950788          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	1593	10.67*	1.138E+00	3.218E+01	3.218E+01	8.81
CD-109	88.03	242	3.72*	5.636E+00	2.828E+00	2.902E+00	30.94
SN-126	64.28	198	9.60	3.169E+00	1.593E+00	1.593E+00	57.49
	86.94	242	8.90	5.636E+00	1.182E+00	1.182E+00	50.93
	87.57	242	37.00*	5.636E+00	2.843E-01	2.843E-01	30.94
CS-135	268.24	152	16.00*	4.598E+00	5.082E-01	5.082E-01	43.49
TL-208	277.35	-----	6.80	4.505E+00	-----	Line Not Found	-----
	510.84	81	21.60	2.795E+00	3.307E-01	3.307E-01	92.19
	583.14	420	84.20*	2.507E+00	4.888E-01	4.888E-01	16.00
	860.37	37	12.46	1.794E+00	4.061E-01	4.061E-01	91.19
BI-211	72.87	-----	1.27	4.387E+00	-----	Line Not Found	-----
	351.07	577	12.94*	3.764E+00	2.905E+00	2.905E+00	14.31
BI-212	727.18	100	11.80*	2.078E+00	1.000E+00	1.000E+00	52.10
	785.46	30	1.97	1.943E+00	1.906E+00	1.906E+00	114.39
	1620.62	-----	2.75	1.050E+00	-----	Line Not Found	-----
PB-212	74.81	490	10.70	4.579E+00	2.453E+00	2.453E+00	21.69
	77.11	714	18.00	4.814E+00	2.021E+00	2.021E+00	14.02
	87.30	242	8.00	5.636E+00	1.315E+00	1.315E+00	32.52
	238.63	1505	44.60*	5.017E+00	1.650E+00	1.650E+00	9.33
	300.09	85	3.41	4.251E+00	1.436E+00	1.436E+00	65.66
PO-212	74.81	490	10.70	4.579E+00	2.453E+00	2.453E+00	21.69
	77.11	714	18.00	4.814E+00	2.021E+00	2.021E+00	14.02
	87.30	242	8.00	5.636E+00	1.315E+00	1.315E+00	32.52
	115.19	-----	0.60	6.604E+00	-----	Line Not Found	-----
	238.63	1505	44.60*	5.017E+00	1.650E+00	1.650E+00	9.33
	300.09	85	3.41	4.251E+00	1.436E+00	1.436E+00	65.66
BI-214	609.31	494	46.30*	2.416E+00	1.083E+00	1.083E+00	16.15
	1120.29	94	15.10	1.424E+00	1.069E+00	1.069E+00	49.40
	1764.49	83	15.80	9.905E-01	1.301E+00	1.301E+00	27.16
PB-214	74.81	490	6.21	4.579E+00	4.226E+00	4.226E+00	20.93
	77.11	714	10.50	4.814E+00	3.464E+00	3.464E+00	15.96
	87.30	242	4.67	5.636E+00	2.252E+00	2.252E+00	31.89

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	241.98	363	7.49	4.976E+00	2.390E+00	2.390E+00	26.44
	295.21	414	19.20	4.305E+00	1.229E+00	1.229E+00	20.39
	351.92	577	37.20*	3.764E+00	1.011E+00	1.011E+00	15.23
	74.81	490	6.21	4.579E+00	4.226E+00	4.226E+00	20.93
	77.11	714	10.50	4.814E+00	3.464E+00	3.464E+00	15.96
	87.30	242	4.67	5.636E+00	2.252E+00	2.252E+00	31.89
	241.98	363	7.49	4.976E+00	2.390E+00	2.390E+00	26.44
	295.21	414	19.20	4.305E+00	1.229E+00	1.229E+00	20.39
PO-216	351.92	577	37.20*	3.764E+00	1.011E+00	1.011E+00	15.23
	74.81	490	10.70	4.579E+00	2.453E+00	2.453E+00	21.69
	77.11	714	18.00	4.814E+00	2.021E+00	2.021E+00	14.02
	87.30	242	8.00	5.636E+00	1.315E+00	1.315E+00	32.52
	238.63	1505	44.60*	5.017E+00	1.650E+00	1.650E+00	9.33
	300.09	85	3.41	4.251E+00	1.436E+00	1.436E+00	65.66
	74.81	490	6.21	4.579E+00	4.226E+00	4.226E+00	20.93
	77.11	714	10.50	4.814E+00	3.464E+00	3.464E+00	15.96
PO-218	87.30	242	4.67	5.636E+00	2.252E+00	2.252E+00	31.89
	241.98	363	7.49	4.976E+00	2.390E+00	2.390E+00	26.44
	295.21	414	19.20	4.305E+00	1.229E+00	1.229E+00	20.39
	351.92	577	37.20*	3.764E+00	1.011E+00	1.011E+00	15.23
	240.98	363	3.95*	4.976E+00	4.532E+00	4.532E+00	25.84
	609.31	494	46.30*	2.416E+00	1.083E+00	1.083E+00	16.15
	1120.29	94	15.10	1.424E+00	1.069E+00	1.069E+00	49.40
	1764.49	83	15.80	9.905E-01	1.301E+00	1.301E+00	27.16
AC-228	338.32	287	11.40	3.880E+00	1.593E+00	1.593E+00	47.93
	911.07	337	27.70*	1.707E+00	1.747E+00	1.747E+00	19.38
	969.11	184	16.60	1.617E+00	1.681E+00	1.681E+00	31.26
	338.32	287	11.40	3.880E+00	1.593E+00	1.593E+00	47.93
RA-228	911.07	337	27.70*	1.707E+00	1.747E+00	1.747E+00	19.38
	969.11	184	16.60	1.617E+00	1.681E+00	1.681E+00	31.26
	74.81	490	10.70	4.579E+00	2.453E+00	2.495E+00	19.61
	77.11	714	18.00	4.814E+00	2.021E+00	2.056E+00	14.02
TH-228	87.30	242	8.00	5.636E+00	1.315E+00	1.338E+00	30.94
	238.63	1505	44.60*	5.017E+00	1.650E+00	1.679E+00	9.33
	300.09	85	3.41	4.251E+00	1.436E+00	1.461E+00	87.84
	609.31	494	46.30*	2.416E+00	1.083E+00	1.083E+00	16.15
	1120.29	94	15.10	1.424E+00	1.069E+00	1.069E+00	49.40
	1764.49	83	15.80	9.905E-01	1.301E+00	1.301E+00	27.16
	338.32	287	11.40	3.880E+00	1.593E+00	1.593E+00	25.87
	911.07	337	27.70*	1.707E+00	1.747E+00	1.747E+00	19.38
TH-232	969.11	184	16.60	1.617E+00	1.681E+00	1.681E+00	31.26
	63.29	198	3.80*	3.169E+00	4.023E+00	4.023E+00	58.30
	92.38	497	5.41	5.969E+00	3.775E+00	3.775E+00	26.39
	609.31	494	46.30*	2.416E+00	1.083E+00	1.083E+00	16.15
U-234	1120.29	94	15.10	1.424E+00	1.069E+00	1.069E+00	49.40
	1764.49	83	15.80	9.905E-01	1.301E+00	1.301E+00	27.16
	86.50	242	12.60*	5.636E+00	8.348E-01	8.348E-01	37.19
NP-237	95.87	-----	2.60	6.124E+00	-----	Line Not Found	-----
U-238	63.29	198	3.80*	3.169E+00	4.023E+00	4.023E+00	58.30

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	92.38	497	5.41	5.969E+00	3.775E+00	3.775E+00	21.07
AM-243	74.67	490	66.00*	4.579E+00	3.976E-01	3.976E-01	19.57
	86.72	242	0.34	5.636E+00	3.131E+01	3.131E+01	30.94
	117.66	-----	0.55	6.624E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.534E+00	-----	Line Not Found	-----
ANH-511	511.00	81	100.00*	2.795E+00	7.143E-02	7.143E-02	91.82

Flag: "*" = Keyline

Total number of lines in spectrum 34
Number of unidentified lines 4
Number of lines tentatively identified by NID 30 88.24%

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	3.218E+01	3.218E+01	0.283E+01	8.81	
CD-109	464.00D	1.03	2.828E+00	2.902E+00	0.898E+00	30.94	
SN-126	1.00E+05Y	1.00	2.843E-01	2.843E-01	0.880E-01	30.94	
CS-135	2.30E+06Y	1.00	5.082E-01	5.082E-01	2.210E-01	43.49	
TL-208	1.41E+10Y	1.00	4.888E-01	4.888E-01	0.782E-01	16.00	
BI-211	7.04E+08Y	1.00	2.905E+00	2.905E+00	0.416E+00	14.31	
BI-212	1.41E+10Y	1.00	1.000E+00	1.000E+00	0.521E+00	52.10	
PB-212	1.41E+10Y	1.00	1.650E+00	1.650E+00	0.154E+00	9.33	
PO-212	1.41E+10Y	1.00	1.650E+00	1.650E+00	0.154E+00	9.33	
BI-214	1600.00Y	1.00	1.083E+00	1.083E+00	0.175E+00	16.15	
PB-214	1600.00Y	1.00	1.011E+00	1.011E+00	0.154E+00	15.23	
PO-214	1600.00Y	1.00	1.011E+00	1.011E+00	0.154E+00	15.23	
PO-216	1.41E+10Y	1.00	1.650E+00	1.650E+00	0.154E+00	9.33	
PO-218	1600.00Y	1.00	1.011E+00	1.011E+00	0.154E+00	15.23	
RA-224	1.41E+10Y	1.00	4.532E+00	4.532E+00	1.171E+00	25.84	
RA-226	1600.00Y	1.00	1.083E+00	1.083E+00	0.175E+00	16.15	
AC-228	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.338E+00	19.38	
RA-228	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.338E+00	19.38	
TH-228	1.91Y	1.02	1.650E+00	1.679E+00	0.157E+00	9.33	
TH-230	4.47E+09Y	1.00	1.083E+00	1.083E+00	0.175E+00	16.15	
TH-232	1.41E+10Y	1.00	1.747E+00	1.747E+00	0.338E+00	19.38	
TH-234	4.47E+09Y	1.00	4.023E+00	4.023E+00	2.346E+00	58.30	
U-234	4.47E+09Y	1.00	1.083E+00	1.083E+00	0.175E+00	16.15	
NP-237	2.14E+06Y	1.00	8.348E-01	8.348E-01	3.105E-01	37.19	
U-238	4.47E+09Y	1.00	4.023E+00	4.023E+00	2.346E+00	58.30	
AM-243	7380.00Y	1.00	3.976E-01	3.976E-01	0.778E-01	19.57	
ANH-511	1.00E+09Y	1.00	7.143E-02	7.143E-02	6.558E-02	91.82	
Total Activity :			7.329E+01	7.339E+01			

Grand Total Activity : 7.329E+01 7.339E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246440014

Page : 5
Acquisition date : 19-FEB-2010 19:52:18

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.70	199	197	1.19	178.90	177	14	2.76E-02	21.9	5.81E+00	T
0	185.52	274	401	1.17	370.65	365	11	3.81E-02	32.0	5.86E+00	T
0	208.67	138	413	1.15	416.97	413	11	1.92E-02	59.3	5.48E+00	T
0	327.71	111	209	0.74	655.14	650	12	1.55E-02	55.3	3.97E+00	T
0	462.76	105	121	1.75	925.36	919	13	1.46E-02	47.1	3.03E+00	T
0	767.85	57	69	1.02	1535.69	1530	9	7.98E-03	58.6	1.98E+00	T
0	794.73	55	75	1.38	1589.46	1582	11	7.63E-03	67.8	1.92E+00	T
0	933.90	21	55	1.27	1867.84	1861	10	2.87E-03	****	1.67E+00	
0	1587.50	28	10	1.19	3174.97	3170	13	3.83E-03	60.6	1.07E+00	
0	1661.19	22	7	1.29	3322.32	3314	14	3.06E-03	66.5	1.03E+00	
0	1729.10	17	9	1.36	3458.09	3451	12	2.38E-03	****	1.00E+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]G246440014.CNF;1
* Acquisition date   : 19-FEB-2010 19:52:18   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 02:00:01.73          Half life ratio     : 8.00000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 2-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246440014             Analyst initials    : MXR1
* Batch Number       : 950788                 Sample Quantity     : 1.53010E+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	3.218E+01	2.835E+00	3.091E-01	2.204E-02	104.119
CD-109	2.902E+00	8.979E-01	1.086E+00	8.308E-02	2.673
SN-126	2.843E-01	8.797E-02	1.069E-01	8.144E-03	2.660
CS-135	5.082E-01	2.210E-01	2.038E-01	1.532E-02	2.494
TL-208	4.888E-01	7.818E-02	5.535E-02	3.959E-03	8.830
BI-211	2.905E+00	4.157E-01	2.948E-01	1.853E-02	9.855
BI-212	1.000E+00	5.213E-01	4.144E-01	3.588E-02	2.414
PB-212	1.650E+00	1.539E-01	7.701E-02	5.468E-03	21.423
PO-212	1.650E+00	1.539E-01	7.701E-02	5.468E-03	21.423
BI-214	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
PB-214	1.011E+00	1.539E-01	1.007E-01	8.226E-03	10.036
PO-214	1.011E+00	1.539E-01	1.007E-01	8.226E-03	10.036
PO-216	1.650E+00	1.539E-01	7.701E-02	5.468E-03	21.423
PO-218	1.011E+00	1.539E-01	1.007E-01	8.226E-03	10.036
RA-224	4.532E+00	1.171E+00	8.766E-01	4.835E-02	5.171
RA-226	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
AC-228	1.747E+00	3.385E-01	1.916E-01	2.104E-02	9.117
RA-228	1.747E+00	3.385E-01	1.916E-01	2.104E-02	9.117

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.679E+00	1.565E-01	7.835E-02	5.564E-03	21.423
TH-230	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
TH-232	1.747E+00	3.385E-01	1.916E-01	2.104E-02	9.117
TH-234	4.023E+00	2.346E+00	1.795E+00	3.057E-01	2.241
U-234	1.083E+00	1.749E-01	9.777E-02	8.049E-03	11.075
NP-237	8.348E-01	3.105E-01	3.727E-01	8.188E-02	2.240
U-238	4.023E+00	2.346E+00	1.795E+00	3.057E-01	2.241
AM-243	3.976E-01	7.783E-02	7.795E-02	5.296E-03	5.101
ANH-511	7.143E-02	6.558E-02	3.987E-02	2.430E-03	1.791

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-6.738E-02		2.725E-01	4.298E-01	2.958E-02	-0.157
NA-22	1.783E-02		4.408E-02	7.499E-02	4.829E-03	0.238
NA-24	-3.642E+00		4.136E+00	Half-Life	too short	
AL-26	1.565E-03		2.356E-02	3.952E-02	2.267E-03	0.040
TI-44	3.729E-01	+	5.229E-02	6.595E-02	4.613E-03	5.654
SC-46	-3.889E-03		3.622E-02	5.807E-02	4.813E-03	-0.067
V-48	2.020E-03		7.368E-02	1.186E-01	9.139E-03	0.017
CR-51	2.534E-01		3.399E-01	5.852E-01	3.721E-02	0.433
MN-52	7.774E-03		2.577E-01	4.209E-01	2.891E-02	0.018
MN-54	-6.895E-03		3.746E-02	6.015E-02	4.728E-03	-0.115
CO-56	1.955E-03		3.933E-02	6.425E-02	5.111E-03	0.030
CO-57	9.051E-03		2.292E-02	3.775E-02	2.360E-03	0.240
CO-58	-2.184E-03		3.851E-02	6.259E-02	4.816E-03	-0.035
FE-59	-6.993E-02		9.366E-02	1.461E-01	1.079E-02	-0.479
CO-60	3.430E-03		3.355E-02	5.560E-02	3.883E-03	0.062
ZN-65	-1.326E-02		1.077E-01	1.521E-01	9.569E-03	-0.087
GE-68	1.412E-01		1.283E+00	2.157E+00	1.455E-01	0.065
AS-73	7.616E-02		7.276E-01	1.243E+00	8.024E-02	0.061
AS-74	5.059E-02		8.595E-02	1.496E-01	9.525E-03	0.338
SE-75	5.323E-03		4.154E-02	6.200E-02	3.514E-03	0.086
BR-77	1.045E+01		1.746E+01	2.921E+01	1.791E+00	0.358
SR-82	-7.189E-01		4.105E-01	5.725E-01	4.236E-02	-1.256
RB-83	3.949E-02		6.145E-02	1.032E-01	6.325E-03	0.383
RB-84	-1.379E-04		7.176E-02	1.163E-01	9.570E-03	-0.001
KR-85	7.129E+00		6.859E+00	1.055E+01	6.444E-01	0.676
SR-85	3.741E-02		3.600E-02	5.538E-02	3.382E-03	0.676
RB-86	-1.184E-01		8.657E-01	1.428E+00	9.642E-02	-0.083
Y-88	-2.977E-03		2.701E-02	4.359E-02	2.454E-03	-0.068
ZR-88	-8.421E-03		3.018E-02	4.705E-02	2.581E-03	-0.179
Y-91	6.573E+00		1.973E+01	3.339E+01	1.931E+00	0.197
NB-94	1.794E-02		3.035E-02	5.225E-02	3.559E-03	0.343
NB-95	9.258E-02		4.947E-02	8.195E-02	5.995E-03	1.130
NB-95M	4.081E-02		1.223E-01	1.858E-01	1.355E-02	0.220
ZR-95	1.193E-02		7.023E-02	1.168E-01	9.648E-03	0.102

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-6.955E-02		3.887E-01	Half-Life too short		
ZR-97	1.953E+01		8.442E+00	Half-Life too short		
MO-99	1.015E+01		1.872E+01	3.201E+01	4.603E+00	0.317
TC-99M	-3.131E+12		7.754E+12	Half-Life too short		
RH-101	3.201E-02		2.874E-02	4.799E-02	2.539E-03	0.667
RH-102	6.210E-03		2.266E-02	3.732E-02	2.216E-03	0.166
RU-103	1.593E-02		3.616E-02	5.994E-02	7.645E-03	0.266
RH-106	-9.271E-02		2.972E-01	4.845E-01	5.842E-02	-0.191
RU-106	-9.271E-02		2.970E-01	4.845E-01	3.111E-02	-0.191
AG-108M	-1.083E-02		2.952E-02	4.667E-02	2.908E-03	-0.232
AG-110M	-1.453E-02		3.249E-02	5.219E-02	3.557E-03	-0.278
IN-111	-4.071E-01		1.603E+00	2.345E+00	1.298E-01	-0.174
IN-113M	-1.185E-02		4.183E-02	6.719E-02	3.955E-03	-0.176
SN-113	-1.185E-02		4.183E-02	6.719E-02	3.955E-03	-0.176
IN-114M	-1.317E-01		1.860E-01	2.518E-01	1.321E-02	-0.523
CD-115	4.828E+00		1.852E+01	3.021E+01	1.861E+00	0.160
SN-117M	2.560E-03		5.280E-02	8.536E-02	4.509E-03	0.030
SB-122	-2.920E-01		3.109E+00	5.190E+00	3.259E-01	-0.056
I-123	-4.724E+01		4.131E+01	Half-Life too short		
TE-123M	-1.435E-02		2.510E-02	3.944E-02	2.113E-03	-0.364
I-124	6.437E-01		8.865E-01	1.384E+00	8.834E-02	0.465
SB-124	-5.240E-02		6.605E-02	9.351E-02	6.240E-03	-0.560
SB-125	2.282E-02		7.710E-02	1.278E-01	7.597E-03	0.179
TE-125M	1.773E+00		8.702E+00	1.424E+01	1.229E+00	0.124
I-126	2.439E-02		1.986E-01	3.322E-01	2.166E-02	0.073
SB-126	2.063E-02		1.729E-01	2.503E-01	1.740E-02	0.082
SB-127	1.105E+00		1.803E+00	3.117E+00	3.350E-01	0.355
XE-127	-2.731E-02		4.282E-02	6.584E-02	3.501E-03	-0.415
I-131	-5.563E-03		1.166E-01	1.910E-01	1.207E-02	-0.029
TE-132	-7.323E-01		9.192E-01	1.494E+00	2.195E-01	-0.490
BA-133	1.599E-02		4.045E-02	6.030E-02	6.918E-03	0.265
I-133	-2.157E-03		1.601E-02	Half-Life too short		
CS-134	9.260E-02	+	6.317E-02	8.973E-02	6.842E-03	1.032
I-135	-1.192E+11		6.922E+11	Half-Life too short		
CS-136	-3.262E-02		1.084E-01	1.763E-01	1.325E-02	-0.185
BA-137M	3.122E-02		3.492E-02	6.124E-02	3.970E-03	0.510
CS-137	3.300E-02		3.691E-02	6.473E-02	4.211E-03	0.510
CE-139	-4.997E-03		2.665E-02	4.251E-02	2.178E-03	-0.118
BA-140	-2.424E-01		2.590E-01	3.870E-01	1.261E-01	-0.626
LA-140	-1.013E-01		8.498E-02	9.576E-02	6.236E-03	-1.058
CE-141	2.553E-02		5.678E-02	9.376E-02	5.459E-03	0.272
CE-143	2.142E-03		3.356E-04	Half-Life too short		
CE-144	-5.310E-02		1.808E-01	2.907E-01	4.139E-02	-0.183
PM-144	1.364E-02		3.120E-02	5.321E-02	3.601E-03	0.256
PR-144	9.256E-01		2.117E+00	3.610E+00	2.441E-01	0.256
PM-146	1.500E-02		3.816E-02	6.336E-02	5.477E-03	0.237
ND-147	3.169E-01		5.712E-01	9.495E-01	1.299E-01	0.334
PM-149	4.932E+01		1.464E+02	2.487E+02	3.513E+01	0.198

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-2.309E-02		9.627E-02	1.367E-01	8.759E-03	-0.169
GD-153	-3.461E-02		7.740E-02	1.119E-01	7.782E-03	-0.309
EU-154	5.267E-02		1.233E-01	2.101E-01	2.047E-02	0.251
EU-155	8.268E-02		9.946E-02	1.688E-01	1.138E-02	0.490
TB-160	-5.645E-02		1.357E-01	2.115E-01	1.736E-02	-0.267
HO-166M	-1.348E-02		5.146E-02	8.307E-02	5.718E-03	-0.162
TM-171	-1.470E+01		2.723E+01	4.021E+01	2.602E+00	-0.366
LU-176	-5.361E-03		2.161E-02	3.546E-02	2.015E-03	-0.151
LU-177	3.387E+00	+	2.015E+00	2.248E+00	1.202E-01	1.507
LU-177M	3.870E-02		1.520E-01	2.515E-01	1.412E-02	0.154
HF-181	2.783E-02		3.893E-02	6.586E-02	3.932E-03	0.423
W-181	-1.040E-02		3.546E-01	5.367E-01	3.448E-02	-0.019
TA-182	-3.251E-02		2.042E-01	3.330E-01	1.975E-02	-0.098
RE-183	-1.049E-02		9.897E-02	1.587E-01	8.249E-03	-0.066
RE-184	1.135E-01		1.995E-01	3.443E-01	1.916E-02	0.330
OS-185	-2.481E-02		3.952E-02	6.258E-02	4.044E-03	-0.396
RE-188	7.463E-02		1.549E-01	2.551E-01	1.368E-02	0.293
W-188	5.189E-01		7.151E+00	1.056E+01	5.982E-01	0.049
IR-192	-3.172E-02		2.990E-02	4.653E-02	2.659E-03	-0.682
AU-195	2.099E-01		1.998E-01	3.402E-01	2.340E-02	0.617
TL-200	1.292E-04		7.809E-04	Half-Life too short		
TL-201	5.307E-01		1.019E+01	1.642E+01	8.416E-01	0.032
TL-202	1.291E-02		7.438E-02	1.218E-01	7.018E-03	0.106
HG-203	1.635E-02		3.355E-02	5.747E-02	3.456E-03	0.285
BI-207	1.084E-03		5.290E-02	8.848E-02	6.104E-03	0.012
TL-207	-6.307E-01		6.543E-01	8.678E-01	1.430E-01	-0.727
PO-209	-2.344E+00		6.285E+00	9.774E+00	8.157E-01	-0.240
BI-210	5.532E-01		2.884E+00	4.903E+00	3.693E-01	0.113
PB-210	5.532E-01		2.884E+00	4.903E+00	3.693E-01	0.113
PO-210	5.532E-01		2.884E+00	4.903E+00	3.144E-01	0.113
PB-211	-1.042E+00		1.062E+00	1.261E+00	7.859E-01	-0.826
PO-215	-6.307E-01		6.543E-01	8.678E-01	1.430E-01	-0.727
RN-219	1.681E-01		3.571E-01	5.988E-01	8.082E-02	0.281
RN-220	6.394E+00		2.201E+01	3.780E+01	2.357E+00	0.169
RA-223	-6.307E-01		6.543E-01	8.678E-01	1.430E-01	-0.727
AC-227	-2.055E-01		3.253E-01	5.290E-01	7.337E-02	-0.389
TH-227	-2.055E-01		3.259E-01	5.290E-01	8.900E-02	-0.389
TH-229	2.186E-01		4.588E-01	7.465E-01	3.930E-02	0.293
PA-231	-1.457E+00		1.244E+00	1.919E+00	2.633E-01	-0.759
TH-231	-6.307E-01		6.543E-01	8.678E-01	1.430E-01	-0.727
U-231	-1.132E+00		1.411E+00	2.005E+00	1.412E-01	-0.565
PA-233	2.393E-02		5.533E-02	9.396E-02	5.685E-03	0.255
PA-234	1.021E-01		2.902E-01	4.815E-01	8.905E-02	0.212
PA-234M	-3.016E+00		4.470E+00	7.244E+00	6.556E-01	-0.416
U-235	-1.280E-02		1.889E-01	3.030E-01	4.921E-02	-0.042
NP-236	-2.892E-02		6.915E-02	1.094E-01	5.734E-03	-0.264
NP-239	-6.582E-02		1.653E-01	2.668E-01	1.684E-02	-0.247
AM-241	9.175E-02		1.416E-01	2.222E-01	1.579E-02	0.413

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.801E-02		8.712E-02	1.450E-01	9.656E-03	0.124
AM-246	1.109E-01		1.410E-01	2.493E-01	1.677E-02	0.445
CM-247	4.596E-03		3.184E-02	5.241E-02	2.907E-03	0.088
CF-249	-2.672E-02		3.562E-02	5.547E-02	3.049E-03	-0.482
CF-251	-5.792E-03		1.124E-01	1.797E-01	9.293E-03	-0.032

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]G246440014             *
* Acquisition date   : 19-FEB-2010 19:52:18 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 02:00:01.73 Half life ratio : 8.000     *
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 2-FEB-2010 12:00:00 Nuclide Library : SOLID             *
* Sample ID          : G246440014 Analyst initials: MXR1         *
* Batch Number       : 950788 Sample Quantity : 1.5301E+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	3.218E+01	2.778E+00	1.559E-01	1.417E+00
CD-109	2.902E+00	8.800E-01	5.878E-01	4.490E-01
SN-126	2.843E-01	8.621E-02	5.786E-02	4.398E-02
CS-135	5.082E-01	2.166E-01	1.074E-01	1.105E-01
TL-208	4.888E-01	7.662E-02	2.859E-02	3.909E-02
BI-211	2.905E+00	4.074E-01	1.543E-01	2.078E-01
BI-212	1.000E+00	5.108E-01	2.129E-01	2.606E-01
PB-212	1.650E+00	1.508E-01	4.070E-02	7.693E-02
PO-212	1.650E+00	1.508E-01	4.070E-02	7.693E-02
BI-214	1.083E+00	1.714E-01	5.046E-02	8.746E-02
PB-214	1.011E+00	1.508E-01	5.270E-02	7.696E-02
PO-214	1.011E+00	1.508E-01	5.270E-02	7.696E-02
PO-216	1.650E+00	1.508E-01	4.070E-02	7.693E-02
PO-218	1.011E+00	1.508E-01	5.270E-02	7.696E-02
RA-224	4.532E+00	1.148E+00	4.631E-01	5.856E-01
RA-226	1.083E+00	1.714E-01	5.046E-02	8.746E-02
AC-228	1.747E+00	3.317E-01	9.783E-02	1.692E-01
RA-228	1.747E+00	3.317E-01	9.783E-02	1.692E-01
TH-228	1.679E+00	1.534E-01	4.141E-02	7.827E-02
TH-230	1.083E+00	1.714E-01	5.045E-02	8.746E-02
TH-232	1.747E+00	3.317E-01	9.783E-02	1.692E-01
TH-234	4.023E+00	2.299E+00	9.794E-01	1.173E+00
U-234	1.083E+00	1.714E-01	5.045E-02	8.746E-02
NP-237	8.348E-01	3.043E-01	2.019E-01	1.552E-01
U-238	4.023E+00	2.299E+00	9.794E-01	1.173E+00
AM-243	3.976E-01	7.627E-02	4.236E-02	3.892E-02
ANH-511	7.143E-02	6.427E-02	2.067E-02	3.279E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-6.738E-02	2.670E-01	2.232E-01	1.362E-01	NOT IDENT.
NA-22	1.783E-02	4.320E-02	3.795E-02	2.204E-02	NOT IDENT.
NA-24	-3.642E+06	8.107E+06	0.000E+00	4.136E+06	SHORT HLIF
AL-26	1.565E-03	2.309E-02	1.981E-02	1.178E-02	NOT IDENT.
TI-44	3.729E-01	5.124E-02	3.580E-02	2.614E-02	FAIL ABUN
SC-46	-3.889E-03	3.549E-02	2.967E-02	1.811E-02	FAIL ABUN
V-48	2.020E-03	7.221E-02	6.045E-02	3.684E-02	NOT IDENT.
CR-51	2.534E-01	3.331E-01	3.070E-01	1.700E-01	NOT IDENT.
MN-52	7.774E-03	2.525E-01	2.123E-01	1.288E-01	NOT IDENT.
MN-54	-6.895E-03	3.672E-02	3.079E-02	1.873E-02	NOT IDENT.
CO-56	1.955E-03	3.855E-02	3.287E-02	1.967E-02	NOT IDENT.
CO-57	9.051E-03	2.246E-02	2.028E-02	1.146E-02	NOT IDENT.
CO-58	-2.184E-03	3.774E-02	3.206E-02	1.926E-02	NOT IDENT.
FE-59	-6.993E-02	9.178E-02	7.424E-02	4.683E-02	NOT IDENT.
CO-60	3.430E-03	3.287E-02	2.810E-02	1.677E-02	NOT IDENT.
ZN-65	-1.326E-02	1.055E-01	7.726E-02	5.385E-02	NOT IDENT.
GE-68	1.412E-01	1.257E+00	1.097E+00	6.413E-01	NOT IDENT.
AS-73	7.616E-02	7.131E-01	6.807E-01	3.638E-01	NOT IDENT.
AS-74	5.059E-02	8.423E-02	7.726E-02	4.297E-02	NOT IDENT.
SE-75	5.323E-03	4.071E-02	3.268E-02	2.077E-02	NOT IDENT.
BR-77	1.045E+01	1.711E+01	1.513E+01	8.728E+00	FAIL ABUN
SR-82	-7.189E-01	4.023E-01	2.936E-01	2.053E-01	NOT IDENT.
RB-83	3.949E-02	6.022E-02	5.345E-02	3.072E-02	NOT IDENT.
RB-84	-1.379E-04	7.032E-02	5.945E-02	3.588E-02	NOT IDENT.
KR-85	7.129E+00	6.722E+00	5.470E+00	3.430E+00	NOT IDENT.
SR-85	3.741E-02	3.528E-02	2.870E-02	1.800E-02	NOT IDENT.
RB-86	-1.184E-01	8.484E-01	7.261E-01	4.328E-01	NOT IDENT.
Y-88	-2.977E-03	2.647E-02	2.184E-02	1.350E-02	NOT IDENT.
ZR-88	-8.421E-03	2.957E-02	2.455E-02	1.509E-02	NOT IDENT.
Y-91	6.573E+00	1.934E+01	1.692E+01	9.866E+00	NOT IDENT.
NB-94	1.794E-02	2.974E-02	2.686E-02	1.517E-02	NOT IDENT.
NB-95	9.258E-02	4.848E-02	4.204E-02	2.473E-02	NOT IDENT.
NB-95M	4.081E-02	1.198E-01	9.823E-02	6.115E-02	NOT IDENT.
ZR-95	1.193E-02	6.883E-02	5.995E-02	3.512E-02	NOT IDENT.
NB-97	-6.955E+04	7.619E+05	0.000E+00	3.887E+05	SHORT HLIF
ZR-97	1.953E+07	1.655E+07	0.000E+00	8.442E+06	SHORT HLIF
MO-99	1.015E+01	1.835E+01	1.644E+01	9.361E+00	NOT IDENT.
TC-99M	-3.131E+18	1.520E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.201E-02	2.816E-02	2.548E-02	1.437E-02	NOT IDENT.
RH-102	6.210E-03	2.220E-02	1.938E-02	1.133E-02	FAIL ABUN
RU-103	1.593E-02	3.543E-02	3.109E-02	1.808E-02	FAIL ABUN
RH-106	-9.271E-02	2.912E-01	2.499E-01	1.486E-01	FAIL ABUN
RU-106	-9.271E-02	2.911E-01	2.499E-01	1.485E-01	FAIL ABUN
AG-108M	-1.083E-02	2.893E-02	2.429E-02	1.476E-02	NOT IDENT.
AG-110M	-1.453E-02	3.184E-02	2.688E-02	1.625E-02	NOT IDENT.
IN-111	-4.071E-01	1.571E+00	1.238E+00	8.016E-01	NOT IDENT.
IN-113M	-1.185E-02	4.099E-02	3.507E-02	2.091E-02	NOT IDENT.
SN-113	-1.185E-02	4.099E-02	3.507E-02	2.091E-02	NOT IDENT.
IN-114M	-1.317E-01	1.823E-01	1.338E-01	9.301E-02	NOT IDENT.
CD-115	4.828E+00	1.815E+01	1.565E+01	9.261E+00	NOT IDENT.
SN-117M	2.560E-03	5.175E-02	4.556E-02	2.640E-02	NOT IDENT.
SB-122	-2.920E-01	3.046E+00	2.684E+00	1.554E+00	NOT IDENT.
I-123	-4.724E+07	8.096E+07	0.000E+00	4.131E+07	SHORT HLIF
TE-123M	-1.435E-02	2.460E-02	2.105E-02	1.255E-02	NOT IDENT.
I-124	6.437E-01	8.688E-01	7.146E-01	4.433E-01	NOT IDENT.
SB-124	-5.240E-02	6.473E-02	4.696E-02	3.303E-02	FAIL ABUN
SB-125	2.282E-02	7.556E-02	6.655E-02	3.855E-02	FAIL ABUN
TE-125M	1.773E+00	8.528E+00	7.671E+00	4.351E+00	NOT IDENT.
I-126	2.439E-02	1.946E-01	1.710E-01	9.928E-02	NOT IDENT.
SB-126	2.063E-02	1.694E-01	1.286E-01	8.644E-02	NOT IDENT.
SB-127	1.105E+00	1.767E+00	1.603E+00	9.014E-01	NOT IDENT.
XE-127	-2.731E-02	4.196E-02	3.493E-02	2.141E-02	NOT IDENT.
I-131	-5.563E-03	1.143E-01	9.987E-02	5.831E-02	NOT IDENT.
TE-132	-7.323E-01	9.009E-01	7.902E-01	4.596E-01	NOT IDENT.
BA-133	1.599E-02	3.964E-02	3.155E-02	2.022E-02	NOT IDENT.
I-133	-2.157E+03	3.138E+04	0.000E+00	1.601E+04	SHORT HLIF
CS-134	9.260E-02	6.191E-02	4.598E-02	3.158E-02	FAIL ABUN
I-135	-1.192E+17	1.357E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.262E-02	1.062E-01	8.970E-02	5.420E-02	FAIL ABUN
BA-137M	3.122E-02	3.422E-02	3.153E-02	1.746E-02	NOT IDENT.
CS-137	3.300E-02	3.617E-02	3.333E-02	1.846E-02	NOT IDENT.
CE-139	-4.997E-03	2.612E-02	2.267E-02	1.332E-02	NOT IDENT.
BA-140	-2.424E-01	2.538E-01	2.004E-01	1.295E-01	NOT IDENT.
LA-140	-1.013E-01	8.328E-02	4.816E-02	4.249E-02	FAIL ABUN
CE-141	2.553E-02	5.565E-02	5.015E-02	2.839E-02	NOT IDENT.
CE-143	2.142E+03	6.577E+02	0.000E+00	3.356E+02	SHORT HLIF
CE-144	-5.310E-02	1.772E-01	1.558E-01	9.039E-02	NOT IDENT.
PM-144	1.364E-02	3.058E-02	2.736E-02	1.560E-02	NOT IDENT.

PR-144	9.256E-01	2.074E+00	1.856E+00	1.058E+00	NOT IDENT.
PM-146	1.500E-02	3.740E-02	3.294E-02	1.908E-02	NOT IDENT.
ND-147	3.169E-01	5.598E-01	4.917E-01	2.856E-01	FAIL ABUN
PM-149	4.932E+01	1.435E+02	1.308E+02	7.322E+01	NOT IDENT.
EU-152	-2.309E-02	9.434E-02	7.156E-02	4.813E-02	NOT IDENT.
GD-153	-3.461E-02	7.586E-02	6.044E-02	3.870E-02	NOT IDENT.
EU-154	5.267E-02	1.209E-01	1.063E-01	6.166E-02	NOT IDENT.
EU-155	8.268E-02	9.747E-02	9.101E-02	4.973E-02	FAIL ABUN
TB-160	-5.645E-02	1.330E-01	1.081E-01	6.783E-02	FAIL ABUN
HO-166M	-1.348E-02	5.043E-02	4.270E-02	2.573E-02	FAIL ABUN
TM-171	-1.470E+01	2.668E+01	2.191E+01	1.361E+01	NOT IDENT.
LU-176	-5.361E-03	2.118E-02	1.862E-02	1.081E-02	FAIL ABUN
LU-177	3.387E+00	1.975E+00	1.192E+00	1.008E+00	FAIL ABUN
LU-177M	3.870E-02	1.490E-01	1.311E-01	7.600E-02	FAIL ABUN
HF-181	2.783E-02	3.816E-02	3.419E-02	1.947E-02	NOT IDENT.
W-181	-1.040E-02	3.475E-01	2.926E-01	1.773E-01	NOT IDENT.
TA-182	-3.251E-02	2.002E-01	1.687E-01	1.021E-01	NOT IDENT.
RE-183	-1.049E-02	9.699E-02	8.465E-02	4.948E-02	FAIL ABUN
RE-184	1.135E-01	1.955E-01	1.817E-01	9.976E-02	NOT IDENT.
OS-185	-2.481E-02	3.873E-02	3.225E-02	1.976E-02	NOT IDENT.
RE-188	7.463E-02	1.518E-01	1.363E-01	7.744E-02	NOT IDENT.
W-188	5.189E-01	7.008E+00	5.551E+00	3.576E+00	FAIL ABUN
IR-192	-3.172E-02	2.930E-02	2.441E-02	1.495E-02	FAIL ABUN
AU-195	2.099E-01	1.958E-01	1.837E-01	9.988E-02	FAIL ABUN
TL-200	1.292E+02	1.531E+03	0.000E+00	7.809E+02	SHORT HLIF
TL-201	5.307E-01	9.985E+00	8.753E+00	5.095E+00	NOT IDENT.
TL-202	1.291E-02	7.289E-02	6.341E-02	3.719E-02	NOT IDENT.
HG-203	1.635E-02	3.288E-02	3.025E-02	1.677E-02	NOT IDENT.
BI-207	1.084E-03	5.185E-02	4.499E-02	2.645E-02	FAIL ABUN
TL-207	-6.307E-01	6.412E-01	4.551E-01	3.271E-01	FAIL ABUN
PO-209	-2.344E+00	6.159E+00	4.993E+00	3.142E+00	NOT IDENT.
BI-210	5.532E-01	2.827E+00	2.694E+00	1.442E+00	NOT IDENT.
PB-210	5.532E-01	2.827E+00	2.694E+00	1.442E+00	NOT IDENT.
PO-210	5.532E-01	2.827E+00	2.694E+00	1.442E+00	NOT IDENT.
PB-211	-1.042E+00	1.041E+00	6.577E-01	5.310E-01	NOT IDENT.
PO-215	-6.307E-01	6.412E-01	4.551E-01	3.271E-01	FAIL ABUN
RN-219	1.681E-01	3.500E-01	3.123E-01	1.786E-01	NOT IDENT.
RN-220	6.394E+00	2.157E+01	1.956E+01	1.100E+01	NOT IDENT.
RA-223	-6.307E-01	6.412E-01	4.551E-01	3.271E-01	FAIL ABUN
AC-227	-2.055E-01	3.188E-01	2.791E-01	1.627E-01	FAIL ABUN
TH-227	-2.055E-01	3.194E-01	2.791E-01	1.629E-01	FAIL ABUN
TH-229	2.186E-01	4.496E-01	3.965E-01	2.294E-01	FAIL ABUN
PA-231	-1.457E+00	1.219E+00	1.010E+00	6.219E-01	FAIL ABUN
TH-231	-6.307E-01	6.412E-01	4.551E-01	3.271E-01	FAIL ABUN
U-231	-1.132E+00	1.383E+00	1.083E+00	7.056E-01	FAIL ABUN
PA-233	2.393E-02	5.423E-02	4.932E-02	2.767E-02	FAIL ABUN
PA-234	1.021E-01	2.844E-01	2.456E-01	1.451E-01	FAIL ABUN
PA-234M	-3.016E+00	4.380E+00	3.690E+00	2.235E+00	FAIL ABUN
U-235	-1.280E-02	1.851E-01	1.621E-01	9.444E-02	FAIL ABUN
NP-236	-2.892E-02	6.777E-02	5.836E-02	3.457E-02	NOT IDENT.
NP-239	-6.582E-02	1.620E-01	1.435E-01	8.266E-02	FAIL ABUN
AM-241	9.175E-02	1.387E-01	1.214E-01	7.079E-02	NOT IDENT.
CM-243	1.801E-02	8.537E-02	7.819E-02	4.356E-02	FAIL ABUN
AM-246	1.109E-01	1.382E-01	1.267E-01	7.052E-02	NOT IDENT.
CM-247	4.596E-03	3.120E-02	2.734E-02	1.592E-02	NOT IDENT.
CF-249	-2.672E-02	3.491E-02	2.896E-02	1.781E-02	NOT IDENT.
CF-251	-5.792E-03	1.102E-01	9.568E-02	5.621E-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	282.8038
46.50	282.8038
46.50	282.8038
48.70	294.3164
49.72	315.8632
51.35	300.3426
52.39	288.3979
52.97	304.5025
53.15	304.6762
53.44	317.0844
54.07	325.5262
56.28	348.7293
56.28	348.7323
57.37	0.0000
57.53	342.1575
57.53	342.1595
57.60	342.2299
57.98	345.2552
57.98	345.2552
59.32	334.7224
59.32	334.7224
59.40	318.9207
59.54	319.0522
59.72	319.2204
60.01	338.0513
61.10	361.7299
61.14	361.7719
61.30	361.9379
63.00	367.2628
63.29	367.5625
63.29	367.5625
63.58	367.8627
64.28	395.8700
65.12	404.8637
65.20	402.2626
65.20	402.2626
66.05	418.0360
66.72	421.4995
66.83	421.6280
66.91	416.3141
67.20	393.6444
67.20	393.6444
67.75	429.4490
67.85	429.5675
68.90	431.5897
68.90	431.5897
69.30	414.9072
69.67	411.2294
70.82	437.0532
70.82	437.0532
70.83	437.0654
72.80	448.9040
72.87	448.9863
72.87	448.9863
74.67	426.6715
74.81	426.8225
74.81	426.8225
74.81	426.8225
74.81	426.8225
74.81	426.8225
74.81	426.8225
74.97	426.9936
75.28	427.3252
75.70	427.7736
77.11	429.2699
77.11	429.2699

77.11	429.2699
77.11	429.2699
77.11	429.2699
77.11	429.2699
77.11	429.2699
78.38	414.8291
79.62	411.8864
79.80	412.0642
79.80	412.0642
80.11	413.7704
80.18	413.8381
80.30	413.9578
80.30	413.9578
80.57	414.2243
81.00	452.4716
81.07	452.5480
81.07	452.5480
81.07	452.5480
81.07	452.5480
82.60	429.7174
83.37	424.0092
83.78	414.5478
83.78	414.5478
83.78	414.5478
83.78	414.5478
84.21	436.1320
84.90	421.2769
85.43	460.0067
86.29	524.7275
86.50	532.0730
86.54	532.1216
86.59	540.6967
86.72	540.8565
86.79	540.9408
86.94	509.8807
87.30	461.9656
87.30	461.9656
87.30	461.9656
87.30	461.9656
87.30	461.9656
87.30	461.9656
87.30	461.9656
87.57	386.8662
87.88	387.1360
88.03	387.2667
88.36	387.5531
88.47	387.6486
89.95	281.6845
91.11	282.4059
92.29	283.1334
92.38	283.1890
92.38	283.1890
93.35	283.7827
94.00	284.1795
94.67	312.0309
94.67	312.0342
94.90	312.1875
94.90	312.1875
94.90	312.1875
94.90	312.1875
95.87	338.8994
95.87	338.8994
96.73	348.2227
97.43	341.4665
98.44	299.3743
98.44	299.3758
98.88	295.3736
99.55	325.9438
99.55	325.9438
99.86	326.1516
100.00	347.6704
100.10	346.7708
103.18	375.4065
103.76	338.5530
105.00	330.5364
105.31	339.5988
108.00	399.7773
109.28	330.3375

111.00	316.4990
111.00	316.4990
111.76	322.9371
112.95	335.6514
115.19	302.9523
116.30	297.5447
117.00	315.0378
117.00	315.0378
117.66	297.2807
121.11	313.3378
121.62	323.7735
121.78	323.8659
122.06	298.6341
122.32	298.7717
122.32	298.7717
122.32	298.7717
122.32	298.7717
123.07	267.6244
127.23	349.5307
129.76	334.5810
131.20	362.2330
133.02	327.1126
133.54	319.1070
135.34	298.2401
136.00	293.3627
136.25	283.0788
136.48	294.6362
140.51	318.5809
140.51	0.0000
142.18	321.5359
142.65	321.7756
143.76	321.2918
144.24	304.6665
144.24	304.6665
144.24	304.6665
144.24	304.6665
145.22	296.6902
145.44	295.7369
147.16	306.0659
152.43	289.3352
152.70	280.9089
153.22	292.8866
154.21	340.4273
154.21	340.4273
154.21	340.4273
154.21	340.4273
155.03	297.9739
156.02	290.9010
158.56	281.2234
159.00	0.0000
159.00	302.9674
160.31	297.0690
161.27	298.5676
162.32	299.0225
162.64	287.2370
163.35	277.7656
163.89	272.5524
165.85	298.3636
167.43	287.0302
171.28	291.8764
171.86	309.6825
172.10	309.7858
176.55	284.0532
176.60	284.0728
181.06	281.8945
184.41	262.4865
185.71	262.9335
186.00	263.0339
190.27	292.0721
192.34	258.4287
193.63	272.4170
197.04	304.2453
198.01	242.0994
198.60	220.6655
200.40	270.1811
201.83	280.9366
202.84	277.8566
205.31	254.6099

208.36	261.3072
208.81	261.4481
209.75	261.7437
209.75	261.7437
210.97	254.6189
215.65	236.8732
216.55	235.9598
218.09	260.8366
222.10	231.6324
223.80	234.7189
226.40	229.2416
227.00	239.1016
227.08	239.1243
227.20	261.2177
228.16	252.6655
228.18	259.7398
228.18	259.7398
231.56	0.0000
235.69	273.6703
236.00	272.3382
236.00	272.3382
238.63	227.8992
238.63	227.8992
238.63	227.8992
238.63	227.8992
239.00	227.9887
240.98	228.4790
241.98	228.7241
241.98	228.7241
241.98	228.7241
244.69	195.7440
245.39	193.0094
247.94	196.1790
248.90	210.5341
249.79	223.3934
252.40	199.5160
252.85	195.0734
252.85	195.0734
254.15	0.0000
256.20	219.4212
256.20	219.4212
260.50	202.0989
260.90	198.5204
262.80	190.6550
264.65	182.1946
268.24	174.0010
268.79	168.1945
269.46	170.7050
269.46	170.7050
269.46	170.7050
269.46	170.7050
271.23	186.3483
273.65	222.3706
276.40	168.8155
277.35	181.3277
277.60	182.2995
277.60	182.2995
278.00	185.1627
278.60	168.5110
279.20	163.9526
279.53	178.9131
280.46	188.4010
281.68	165.2758
283.67	184.2997
284.30	178.7944
285.00	176.1037
285.90	153.7525
286.10	162.2218
286.10	162.2218
287.40	158.7985
288.45	0.0000
290.67	179.3047
290.80	182.3419
291.72	185.5150
293.26	0.0000
293.70	182.8323
295.21	185.3590
295.21	185.3590

295.21	185.3590
295.96	181.7021
296.50	181.7900
297.23	181.9131
298.57	182.1357
299.80	168.6653
299.80	168.6653
300.09	173.2711
300.09	173.2711
300.09	173.2711
300.09	173.2711
300.12	173.2739
301.29	174.9819
302.84	182.8447
303.76	161.6474
303.91	158.6178
304.40	158.6889
304.40	158.6889
304.84	152.6465
306.84	177.7694
308.46	178.0277
311.98	156.5010
316.51	174.4765
318.01	164.0883
319.02	133.3190
319.41	140.1280
320.08	147.9456
323.87	180.0549
323.87	180.0549
323.87	180.0549
323.87	180.0549
325.23	149.1867
328.77	150.0264
333.44	129.1016
334.20	138.3184
334.20	138.3184
334.30	138.3292
338.28	141.4072
338.28	141.4072
338.28	141.4072
338.28	141.4072
338.32	141.4138
338.32	141.4138
338.32	141.4138
340.50	136.9464
340.57	136.9528
344.27	156.3190
345.85	143.8715
350.59	0.0000
351.07	158.7720
351.92	152.5266
351.92	152.5266
351.92	152.5266
355.39	0.0000
356.01	124.3335
364.48	125.3700
366.43	117.5249
367.43	124.6528
367.94	0.0000
369.80	122.8675
374.96	150.6574
383.85	126.2270
387.95	150.1021
388.63	133.8324
391.69	151.5433
391.69	151.5433
392.90	144.5048
398.62	145.1115
400.65	114.4061
401.10	110.3193
401.81	118.6288
402.60	122.8241
404.84	158.1735
410.95	125.6398
411.60	144.3979
413.65	115.4782
414.70	111.3985
415.30	119.7782

415.76	123.9862
417.63	0.0000
418.52	121.0941
423.70	124.6762
427.08	106.0657
427.89	100.8721
432.53	121.2224
433.93	124.5017
439.47	127.0898
439.56	127.0972
439.89	133.4828
443.98	113.6663
444.90	103.1069
445.03	103.1158
445.03	103.1158
445.03	103.1158
445.03	103.1158
453.90	101.5855
463.38	93.6084
468.07	86.3367
473.00	115.8394
475.06	75.8821
475.35	75.8960
476.78	91.1585
477.59	92.2904
477.96	87.9684
482.03	90.3709
484.57	98.1491
487.03	111.4061
490.36	0.0000
492.35	100.8159
497.08	84.6241
507.63	0.0000
510.53	0.0000
510.84	95.3052
511.00	95.3144
511.85	95.3629
511.85	95.3629
513.99	88.8226
513.99	88.8226
520.41	81.3586
520.65	82.4867
527.90	81.7173
528.96	0.0000
529.64	95.2463
529.87	0.0000
531.02	81.8666
537.32	104.4510
543.00	84.9167
546.56	0.0000
549.76	84.3357
552.65	87.1969
555.20	109.1514
563.23	93.1945
563.90	94.1434
568.70	96.2252
569.32	91.6748
569.50	91.6846
569.67	94.4426
573.80	89.1424
574.00	89.1519
574.64	88.4931
578.91	87.5457
579.30	0.0000
583.14	104.6812
585.48	95.5631
591.81	92.7930
592.07	92.8076
593.00	96.5656
595.88	80.9041
600.56	96.7185
602.52	0.0000
602.71	74.6621
602.71	74.6621
603.60	73.1411
604.41	90.2970
604.70	94.9824
609.31	91.7769

609.31	91.7769
609.31	91.7769
609.31	91.7769
610.33	91.8248
612.46	81.2966
614.37	90.7666
618.01	89.8913
621.84	99.9107
621.84	99.9107
631.29	86.1856
633.02	76.7799
633.10	76.7839
634.78	97.7218
635.90	86.3856
636.97	79.7815
645.85	99.2164
646.12	95.4126
656.30	89.1787
657.75	98.8383
657.90	0.0000
661.65	92.2945
661.65	92.2945
664.57	0.0000
666.33	103.1024
666.33	103.1024
675.00	84.1814
677.61	93.0047
685.20	71.9495
692.80	74.1575
695.00	75.2104
696.49	82.1051
696.49	82.1051
697.00	87.0118
697.49	93.8766
698.33	100.7620
698.50	100.7695
699.00	100.7947
702.63	80.3784
706.10	83.4519
706.58	0.0000
706.67	87.4030
709.31	75.7085
711.68	75.7912
713.82	75.8645
717.42	66.1216
720.50	84.0018
721.93	0.0000
722.20	82.4178
722.78	95.6306
722.78	95.6306
722.89	95.6353
722.95	95.6377
723.30	105.5469
724.18	105.5885
727.18	79.2988
733.00	86.1313
735.90	82.5927
739.58	71.7645
742.81	82.8460
744.21	79.9004
747.13	81.0040
751.79	82.1702
752.31	69.1600
753.82	77.2293
755.35	88.3201
756.15	84.3343
756.87	66.2836
763.93	92.3425
765.79	77.2937
766.42	85.7180
766.84	105.9075
776.49	115.4584
778.00	83.1031
778.57	76.5904
778.89	67.1671
783.80	91.4348
785.46	88.1097
792.07	91.7534

795.84	73.1766
796.30	73.1906
798.80	57.9325
801.93	74.7270
805.60	61.5132
810.29	72.9310
810.76	77.0544
815.85	74.1270
817.79	70.0636
818.51	70.0835
819.60	67.0217
826.30	85.8146
828.27	0.0000
831.60	99.4664
831.96	108.8068
834.83	92.3332
836.80	0.0000
846.75	76.0939
848.13	68.8343
856.28	0.0000
856.80	52.3254
860.37	99.5575
867.32	72.5056
867.82	68.3151
871.10	75.7687
873.19	52.6599
874.81	53.7467
875.33	0.0000
876.40	63.2695
879.36	71.7868
880.27	66.5314
880.51	68.6499
881.50	70.7900
883.24	62.3778
884.67	59.2389
889.25	61.4622
896.60	56.3190
898.02	57.4132
899.00	67.0067
903.28	62.3966
911.07	63.0361
911.07	63.0361
911.07	63.0361
919.63	54.7810
920.93	68.6281
925.00	55.8441
925.24	56.0879
926.50	46.0505
935.52	73.6669
937.48	64.7300
944.10	68.1295
946.00	61.6827
949.00	69.3328
962.29	79.8216
964.01	52.6416
966.15	78.1142
968.20	111.2562
969.11	54.5557
969.11	54.5557
969.11	54.5557
977.42	60.1871
980.50	63.5380
983.50	60.3147
989.30	64.8323
996.32	70.6805
1001.03	71.7142
1001.68	68.0516
1004.76	76.4092
1021.30	0.0000
1024.50	0.0000
1034.80	66.0309
1036.00	53.0316
1037.82	53.0641
1038.57	52.1445
1038.76	0.0000
1045.16	50.3943
1046.59	50.4163
1048.07	61.6521

1050.47	62.6353
1050.47	62.6353
1062.04	69.4412
1063.62	74.1718
1076.63	75.4297
1077.35	74.5029
1078.86	61.3289
1085.78	72.8141
1099.22	81.6748
1112.02	42.5021
1112.84	60.4992
1115.52	88.3677
1120.29	67.1941
1120.29	67.1941
1120.29	67.1941
1120.29	67.1941
1120.51	68.8389
1121.28	77.0536
1124.00	0.0000
1129.67	71.9116
1131.51	0.0000
1147.95	0.0000
1167.94	76.6373
1173.22	69.9580
1175.09	94.3042
1177.93	83.6799
1189.05	81.0277
1204.90	82.3901
1205.75	0.0000
1213.00	105.1975
1221.42	92.6422
1230.97	95.8633
1235.34	91.0379
1236.41	0.0000
1238.25	71.3057
1246.25	65.5139
1260.41	0.0000
1271.85	69.9886
1274.45	59.0336
1274.54	59.0360
1291.56	59.3145
1298.22	0.0000
1312.09	31.3418
1325.50	37.5450
1325.50	37.5450
1332.49	33.5492
1333.61	35.5924
1360.21	34.8218
1362.66	0.0000
1365.15	24.6123
1368.21	41.0547
1368.53	0.0000
1376.25	35.9983
1384.27	26.7977
1394.10	26.8665
1395.20	27.9075
1407.95	33.1849
1434.06	24.0107
1436.60	26.1149
1457.56	0.0000
1460.81	10.8097
1489.15	28.5754
1509.49	21.2720
1596.49	27.3584
1620.62	19.6501
1678.03	0.0000
1691.02	19.9614
1691.02	19.9614
1706.46	0.0000
1750.46	0.0000
1764.49	10.1396
1764.49	10.1396
1764.49	10.1396
1764.49	10.1396
1770.23	58.0099
1771.40	30.9464
1791.20	0.0000
1808.65	10.7207

1836.01

11.7614

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246440014

Total Uranium Activity	1.1964E+01	ug/g
Total Uranium Counting Unc.	6.8391E+00	ug/g
Total Uranium Tpu	3.4893E-06	ug/g
Total Uranium Mda	2.9146E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 950788                          SAMPLE ID   : G246440014
*  ANALYST       : MXR1                             DETECTOR    : GAM12
*  SAMPLE DATE   : 2-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 19:52:18.96          SAMPLE ALQT  : 153.010 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.426E+00
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.303E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 3.208E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.556E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 20:01:39.13

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246444001.CNF;1
Sample date       : 3-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:59:40
Sample ID        : G246444001          Sample quantity   : 1.44980E+02 GRAM
Detector name    : GAM25              Detector geometry: CAN
Elapsed live time: 0 02:00:00.00      Elapsed real time: 0 02:00:02.34  0.0%
Energy tolerance : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit  : 75.00000           Sensitivity       : 5.00000
Batch ID        : 950788              Detector SN#      :
Matrix Spike ID  :                    LCS ID             : 1032-A
*****
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.62*	138	617	0.99	92.81	89	8	1.91E-02	33.7	
2	0	63.19*	513	854	0.68	125.95	122	8	7.13E-02	11.0	
3	2	73.18	78	654	0.93	145.92	143	18	1.08E-02	54.8	4.66E+00
4	2	74.84*	872	650	0.96	149.24	143	18	1.21E-01	5.8	
5	2	77.06*	1408	533	0.86	153.68	143	18	1.96E-01	3.7	
6	0	84.07*	160	533	1.07	167.69	165	6	2.22E-02	24.6	
7	3	87.17	435	629	1.09	173.90	171	11	6.05E-02	10.6	1.72E+00
8	3	89.85	323	491	1.03	179.26	171	11	4.49E-02	12.3	
9	0	92.88*	902	725	1.38	185.32	182	11	1.25E-01	6.9	
10	0	105.55	115	496	1.63	210.64	205	9	1.60E-02	36.1	
11	0	143.80*	91	448	1.53	287.14	283	9	1.26E-02	44.1	
12	0	185.76*	350	484	1.47	371.07	367	11	4.87E-02	13.6	
13	0	209.14	148	285	1.08	417.82	414	8	2.05E-02	21.5	
14	5	238.55*	1712	175	1.00	476.63	470	20	2.38E-01	2.7	2.83E+00
15	5	241.41	371	300	1.77	482.34	470	20	5.16E-02	13.5	
16	0	270.02	98	216	1.28	539.56	536	9	1.36E-02	28.9	
17	0	278.23	83	253	0.94	555.99	551	10	1.16E-02	37.7	
18	0	295.02*	446	347	1.10	589.57	584	13	6.19E-02	9.9	
19	0	300.61	107	246	1.01	600.74	596	11	1.49E-02	29.9	
20	0	328.06	105	252	1.24	655.64	649	12	1.46E-02	31.7	
21	0	338.16	319	193	1.01	675.83	671	10	4.43E-02	9.9	
22	0	351.72*	785	218	1.15	702.96	696	13	1.09E-01	5.3	
23	0	462.52	110	162	1.73	924.54	918	12	1.53E-02	24.9	
24	0	510.70*	171	189	1.88	1020.90	1015	16	2.37E-02	21.2	
25	0	582.95*	429	165	1.40	1165.40	1160	11	5.95E-02	7.6	
26	0	609.16*	557	92	1.24	1217.81	1212	13	7.74E-02	5.6	
27	0	661.24*	175	102	1.22	1321.97	1318	11	2.43E-02	14.0	
28	0	726.49	137	86	1.50	1452.46	1444	14	1.91E-02	16.8	
29	0	794.47	61	80	1.15	1588.42	1581	14	8.43E-03	33.9	
30	0	860.19	81	80	1.21	1719.86	1713	14	1.12E-02	26.1	
31	0	910.95*	328	75	1.43	1821.38	1814	15	4.56E-02	8.0	
32	0	969.40	112	147	1.34	1938.28	1930	12	1.55E-02	23.7	
33	0	1120.66*	100	95	1.68	2240.82	2232	17	1.40E-02	24.8	
34	0	1460.30*	1490	30	2.11	2920.13	2910	20	2.07E-01	2.8	
35	0	1729.50	29	15	1.57	3458.58	3451	12	4.00E-03	32.8	
36	0	1763.66*	94	5	2.16	3526.90	3517	16	1.31E-02	12.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 20:01:41

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246444001.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 3-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 17:59:40
Sample ID        : G246444001             Sample quantity  : 144.98 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA25                Detector geometry: CAN
Elapsed live time : 0 02:00:00.00          Elapsed real time: 0 02:00:02.34    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	*	3.261E+01	3.308E+00	4.907E-01	4.179E-02	66.449
CD-109	+	88.03	*	3.300E+00	7.840E-01	7.228E-01	7.767E-02	4.566
SN-126	+	64.28		1.415E+00	3.842E-01	2.930E-01	4.669E-02	4.830
	+	86.94		1.346E+00	6.315E-01	2.934E-01	1.228E-01	4.588
	+	87.57	*	3.238E-01	7.693E-02	7.078E-02	7.589E-03	4.575
BA-137M	+	661.65	*	2.254E-01	6.778E-02	5.622E-02	6.227E-03	4.009
CS-137	+	661.65	*	2.382E-01	7.166E-02	5.943E-02	6.591E-03	4.009
EU-155		48.70		-3.837E-02	3.286E-01	4.866E-01	4.632E-02	-0.079
		60.01		5.689E-01	1.623E+00	2.420E+00	2.381E-01	0.235
	+	86.54		3.902E-01	9.282E-02	9.095E-02	9.769E-03	4.290
	+	105.31	*	1.642E-01	1.202E-01	1.178E-01	1.393E-02	1.394
HG-203		70.83		2.034E-01	5.198E-01	7.662E-01	1.114E-01	0.266
	+	72.87		3.302E-01	3.647E-01	4.620E-01	6.565E-02	0.715
	+	82.60		1.565E+00	8.062E-01	9.832E-01	1.473E-01	1.592
	+	279.20	*	7.528E-02	5.735E-02	5.222E-02	5.927E-03	1.442
TL-208	+	277.35		6.716E-01	5.149E-01	5.051E-01	7.175E-02	1.330
	+	510.84		7.294E-01	3.240E-01	2.135E-01	2.827E-02	3.417
	+	583.14	*	5.279E-01	1.003E-01	6.103E-02	6.879E-03	8.650
	+	860.37		9.498E-01	5.051E-01	4.612E-01	4.822E-02	2.059
BI-210	+	46.50	*	9.596E-01	6.533E-01	5.973E-01	6.159E-02	1.607
PB-210	+	46.50	*	9.596E-01	6.533E-01	5.973E-01	6.159E-02	1.607
PO-210	+	46.50	*	9.596E-01	6.522E-01	5.973E-01	5.689E-02	1.607
BI-211	+	72.87		1.632E+00	1.795E+00	2.284E+00	2.305E-01	0.715
	+	351.07	*	4.039E+00	6.044E-01	2.719E-01	2.865E-02	14.852
PB-212	+	74.81		2.176E+00	3.916E-01	2.728E-01	3.766E-02	7.978
	+	77.11		2.098E+00	2.643E-01	1.635E-01	1.675E-02	12.836
	+	87.30		1.498E+00	3.860E-01	3.270E-01	4.790E-02	4.581
	+	238.63	*	1.861E+00	2.352E-01	7.179E-02	8.173E-03	25.923
	+	300.09		1.831E+00	1.120E+00	1.061E+00	1.322E-01	1.725
PO-212	+	74.81		2.176E+00	3.916E-01	2.728E-01	3.766E-02	7.978
	+	77.11		2.098E+00	2.643E-01	1.635E-01	1.675E-02	12.836
	+	87.30		1.498E+00	3.860E-01	3.270E-01	4.790E-02	4.581
		115.19		-2.271E+00	2.524E+00	4.108E+00	5.094E-01	-0.553
	+	238.63	*	1.861E+00	2.352E-01	7.179E-02	8.173E-03	25.923

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-214	+	300.09		1.831E+00	1.120E+00	1.061E+00	1.322E-01	1.725
	+	609.31	*	1.298E+00	2.142E-01	9.610E-02	1.160E-02	13.503
	+	1120.29		1.233E+00	6.265E-01	4.942E-01	5.363E-02	2.494
	+	1764.49		1.640E+00	4.149E-01	3.512E-01	2.894E-02	4.670
PB-214	+	74.81		3.750E+00	6.401E-01	4.701E-01	5.911E-02	7.978
	+	77.11		3.597E+00	5.296E-01	2.803E-01	3.579E-02	12.836
	+	87.30		2.566E+00	6.408E-01	5.601E-01	7.390E-02	4.581
	+	241.98		2.427E+00	7.165E-01	4.331E-01	5.166E-02	5.604
PO-214	+	295.21		1.334E+00	3.137E-01	1.898E-01	2.408E-02	7.029
	+	351.92	*	1.405E+00	2.227E-01	9.483E-02	1.114E-02	14.815
	+	74.81		3.750E+00	6.401E-01	4.701E-01	5.911E-02	7.978
	+	77.11		3.597E+00	5.296E-01	2.803E-01	3.579E-02	12.836
PO-216	+	87.30		2.566E+00	6.408E-01	5.601E-01	7.390E-02	4.581
	+	241.98		2.427E+00	7.165E-01	4.331E-01	5.166E-02	5.604
	+	295.21		1.334E+00	3.137E-01	1.898E-01	2.408E-02	7.029
	+	351.92	*	1.405E+00	2.227E-01	9.483E-02	1.114E-02	14.815
PO-218	+	74.81		2.176E+00	3.916E-01	2.728E-01	3.766E-02	7.978
	+	77.11		2.098E+00	2.643E-01	1.635E-01	1.675E-02	12.836
	+	87.30		1.498E+00	3.860E-01	3.270E-01	4.790E-02	4.581
	+	238.63	*	1.861E+00	2.352E-01	7.179E-02	8.173E-03	25.923
RA-224	+	300.09		1.831E+00	1.120E+00	1.061E+00	1.322E-01	1.725
	+	74.81		3.750E+00	6.401E-01	4.701E-01	5.911E-02	7.978
	+	77.11		3.597E+00	5.296E-01	2.803E-01	3.579E-02	12.836
	+	87.30		2.566E+00	6.408E-01	5.601E-01	7.390E-02	4.581
RA-226	+	241.98		2.427E+00	7.165E-01	4.331E-01	5.166E-02	5.604
	+	295.21		1.334E+00	3.137E-01	1.898E-01	2.408E-02	7.029
	+	351.92	*	1.405E+00	2.227E-01	9.483E-02	1.114E-02	14.815
	+	240.98	*	4.602E+00	1.334E+00	8.180E-01	8.596E-02	5.626
AC-228	+	609.31	*	1.298E+00	2.142E-01	9.610E-02	1.160E-02	13.503
	+	1120.29		1.233E+00	6.265E-01	4.942E-01	5.363E-02	2.494
	+	1764.49		1.640E+00	4.149E-01	3.512E-01	2.894E-02	4.670
	+	338.32		1.802E+00	8.318E-01	3.364E-01	1.402E-01	5.358
RA-228	+	911.07	*	1.828E+00	3.654E-01	1.988E-01	2.365E-02	9.195
	+	969.11		1.095E+00	5.804E-01	3.965E-01	9.358E-02	2.763
	+	338.32		1.802E+00	8.318E-01	3.364E-01	1.402E-01	5.358
	+	911.07	*	1.828E+00	3.654E-01	1.988E-01	2.365E-02	9.195
TH-228	+	969.11		1.095E+00	5.804E-01	3.965E-01	9.358E-02	2.763
	+	74.81		2.212E+00	3.411E-01	2.773E-01	2.834E-02	7.978
	+	77.11		2.133E+00	2.687E-01	1.661E-01	1.703E-02	12.836
	+	87.30		1.522E+00	3.616E-01	3.323E-01	3.558E-02	4.581
TH-230	+	238.63	*	1.891E+00	2.390E-01	7.296E-02	8.306E-03	25.923
	+	300.09		1.861E+00	1.573E+00	1.079E+00	6.436E-01	1.726
	+	609.31	*	1.298E+00	2.142E-01	9.609E-02	1.160E-02	13.503
	+	1120.29		1.232E+00	6.265E-01	4.941E-01	5.363E-02	2.494
TH-232	+	1764.49		1.640E+00	4.149E-01	3.512E-01	2.894E-02	4.670
	+	338.32		1.802E+00	4.037E-01	3.364E-01	3.507E-02	5.358
	+	911.07	*	1.828E+00	3.654E-01	1.988E-01	2.365E-02	9.195
	+	969.11		1.095E+00	5.804E-01	3.965E-01	9.358E-02	2.763
TH-234	+	63.29	*	3.576E+00	1.030E+00	7.078E-01	1.318E-01	5.052

Sample ID : G246444001

Acquisition date : 19-FEB-2010 17:59:40

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	92.38		4.673E+00	1.113E+00	4.536E-01	8.763E-02	10.302
	+	609.31	*	1.298E+00	2.142E-01	9.609E-02	1.160E-02	13.503
	+	1120.29		1.232E+00	6.265E-01	4.941E-01	5.363E-02	2.494
	+	1764.49		1.640E+00	4.149E-01	3.512E-01	2.894E-02	4.670
U-235	+	89.95		3.324E+00	1.332E+00	9.390E-01	2.963E-01	3.540
	+	93.35		5.618E+00	1.799E+00	5.479E-01	1.581E-01	10.255
	+	105.00		1.609E+00	1.264E+00	1.152E+00	3.559E-01	1.396
	+	143.76	*	2.951E-01	2.660E-01	2.567E-01	4.847E-02	1.149
		163.35		1.664E-01	3.907E-01	6.548E-01	1.267E-01	0.254
	+	185.71		2.617E-01	7.533E-02	5.766E-02	5.399E-03	4.539
NP-237		205.31		8.190E-01	4.906E-01	7.428E-01	1.459E-01	1.103
	+	86.50	*	9.509E-01	2.992E-01	2.216E-01	5.148E-02	4.290
		95.87		-3.034E-01	6.274E-01	9.409E-01	2.412E-01	-0.322
U-238	+	63.29	*	3.576E+00	1.030E+00	7.078E-01	1.318E-01	5.052
	+	92.38		4.673E+00	8.281E-01	4.536E-01	4.979E-02	10.302
AM-243	+	74.67	*	3.528E-01	5.426E-02	4.421E-02	4.490E-03	7.981
	+	86.72		3.566E+01	8.472E+00	7.765E+00	8.292E-01	4.592
		117.66		1.176E+00	2.690E+00	4.615E+00	5.803E-01	0.255
		142.18		4.812E+00	1.514E+01	2.308E+01	2.606E+00	0.208
ANH-511	+	511.00	*	1.576E-01	6.874E-02	4.613E-02	4.748E-03	3.415

---- 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	*	-3.782E-01	3.297E-01	4.913E-01	5.202E-02	-0.770
NA-22		1274.54	*	-4.098E-02	4.545E-02	6.799E-02	5.575E-03	-0.603
NA-24		1368.53	*	-2.301E+00	4.545E-02	Half-Life too short		
AL-26		1129.67		-3.454E-01	1.985E+00	3.104E+00	2.650E-01	-0.111
		1808.65	*	1.068E-02	2.840E-02	5.014E-02	4.109E-03	0.213
TI-44		67.85		1.453E-03	1.963E-02	3.112E-02	3.097E-03	0.047
	+	78.38	*	3.873E-01	4.878E-02	4.233E-02	4.359E-03	9.148
SC-46		889.25	*	-9.243E-03	3.956E-02	6.295E-02	6.028E-03	-0.147
	+	1120.51		2.130E-01	1.073E-01	1.289E-01	1.108E-02	1.652
V-48		944.10		-4.239E-01	9.444E-01	1.446E+00	1.356E-01	-0.293
		983.50	*	-2.178E-02	7.741E-02	1.213E-01	1.124E-02	-0.180
CR-51		1312.09		-1.725E-02	8.664E-02	1.391E-01	1.133E-02	-0.124
		320.08	*	4.509E-02	3.205E-01	5.441E-01	6.042E-02	0.083
MN-52		744.21		1.308E-01	2.833E-01	4.840E-01	5.229E-02	0.270
		848.13		-1.915E+00	7.872E+00	1.259E+01	1.262E+00	-0.152
		935.52		2.395E-01	3.077E-01	5.296E-01	4.979E-02	0.452
		1246.25		-4.902E+00	8.994E+00	1.414E+01	1.161E+00	-0.347
MN-54		1333.61		2.698E-01	5.699E+00	9.377E+00	7.617E-01	0.029
		1434.06	*	-2.797E-01	2.418E-01	3.151E-01	2.597E-02	-0.888
		834.83	*	-4.169E-03	3.834E-02	6.221E-02	6.313E-03	-0.067
		846.75	*	2.986E-02	4.020E-02	6.956E-02	6.979E-03	0.429
CO-56		977.42		2.616E-01	2.884E+00	4.690E+00	4.355E-01	0.056
		1037.82		-1.111E-01	2.905E-01	4.697E-01	4.457E-02	-0.237
		1175.09		1.355E+00	2.524E+00	4.345E+00	3.576E-01	0.312

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.25		1.848E-01	1.055E-01	1.910E-01	1.619E-02	0.967
		1360.21		-7.218E-01	1.033E+00	1.527E+00	1.246E-01	-0.473
		1771.40		-5.182E-01	3.001E-01	3.566E-01	2.936E-02	-1.453
CO-57		122.06	*	-7.323E-04	1.823E-02	3.072E-02	3.961E-03	-0.024
		136.48		1.421E-01	1.599E-01	2.752E-01	3.374E-02	0.516
CO-58		810.76	*	-2.074E-02	4.249E-02	6.695E-02	6.946E-03	-0.310
FE-59	+	142.65		3.874E+00	3.443E+00	3.786E+00	4.260E-01	1.023
		192.34		-4.700E-01	7.928E-01	1.256E+00	1.760E-01	-0.374
		1099.22	*	2.059E-02	8.903E-02	1.515E-01	1.427E-02	0.136
		1291.56		5.793E-02	1.406E-01	2.391E-01	2.246E-02	0.242
CO-60		1173.22		-6.961E-03	5.111E-02	8.386E-02	6.902E-03	-0.083
		1332.49	*	-2.862E-02	4.015E-02	6.022E-02	4.891E-03	-0.475
ZN-65		1115.52	*	-2.929E-02	1.070E-01	1.485E-01	1.283E-02	-0.197
GE-68		1077.35	*	-8.942E-03	1.245E+00	2.080E+00	1.841E-01	-0.004
AS-73		53.44	*	1.354E-01	1.746E-01	2.876E-01	2.761E-02	0.471
AS-74		595.88	*	1.478E-02	9.361E-02	1.513E-01	1.639E-02	0.098
		634.78		3.145E-01	3.355E-01	5.986E-01	6.584E-02	0.525
SE-75		66.05		-3.002E-01	2.115E+00	3.059E+00	3.526E-01	-0.098
		96.73		-2.718E-01	5.141E-01	7.720E-01	1.189E-01	-0.352
		121.11		-9.939E-04	9.726E-02	1.641E-01	2.412E-02	-0.006
		136.00		2.843E-02	3.023E-02	5.210E-02	6.181E-03	0.546
		198.60		1.271E+00	1.465E+00	2.444E+00	2.565E-01	0.520
		264.65	*	1.150E-02	3.849E-02	6.228E-02	6.826E-03	0.185
	+	279.53		1.992E-01	1.517E-01	1.551E-01	1.770E-02	1.284
		303.91		2.020E+00	1.952E+00	3.099E+00	4.125E-01	0.652
		400.65		2.100E-01	2.478E-01	4.273E-01	4.942E-02	0.491
BR-77	+	87.88		9.905E+02	2.353E+02	3.041E+02	3.266E+01	3.257
		200.40		-3.610E+01	1.791E+02	2.889E+02	2.798E+01	-0.125
	+	239.00		4.158E+02	4.913E+01	5.020E+01	5.257E+00	8.284
		249.79		-8.415E+00	8.269E+01	1.316E+02	1.404E+01	-0.064
		281.68		-3.561E+01	1.195E+02	1.639E+02	1.826E+01	-0.217
		297.23		2.775E+02	8.950E+01	1.264E+02	1.392E+01	2.196
		303.76		2.527E+02	2.301E+02	3.675E+02	4.023E+01	0.688
		439.47		1.646E+02	1.960E+02	3.369E+02	3.245E+01	0.488
		484.57		-2.983E+02	3.284E+02	4.997E+02	5.032E+01	-0.597
		520.65	*	-8.951E+00	1.359E+01	2.079E+01	2.156E+00	-0.430
		574.64		1.269E+02	2.697E+02	4.478E+02	4.803E+01	0.283
		578.91		-6.368E+01	1.374E+02	1.819E+02	1.956E+01	-0.350
		585.48		1.240E+03	3.467E+02	5.749E+02	6.200E+01	2.156
		755.35		6.355E+01	2.251E+02	3.799E+02	4.082E+01	0.167
		817.79		-1.938E+02	1.853E+02	2.737E+02	2.819E+01	-0.708
SR-82		698.33		-1.251E+01	3.560E+01	5.776E+01	6.351E+00	-0.217
		776.49	*	-1.043E-01	4.118E-01	6.654E-01	7.062E-02	-0.157
		1395.20		-8.998E-01	1.089E+01	1.755E+01	1.439E+00	-0.051
RB-83		520.41	*	-4.905E-02	6.551E-02	9.938E-02	1.030E-02	-0.494
		529.64		-4.331E-02	1.031E-01	1.609E-01	1.679E-02	-0.269
		552.65		2.747E-02	1.808E-01	2.942E-01	3.117E-02	0.093
RB-84		881.50	*	-4.373E-04	7.146E-02	1.163E-01	1.124E-02	-0.004
KR-85		513.99	*	9.189E+00	7.817E+00	1.214E+01	1.252E+00	0.757

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-85		513.99	*	4.768E-02	4.056E-02	6.297E-02	6.496E-03	0.757
RB-86		1076.63	*	8.315E-01	7.767E-01	1.412E+00	1.251E-01	0.589
Y-88		898.02		-2.801E-02	4.279E-02	6.525E-02	6.206E-03	-0.429
		1836.01	*	2.587E-02	3.126E-02	5.937E-02	4.852E-03	0.436
ZR-88		392.90	*	-6.254E-04	3.015E-02	4.991E-02	4.543E-03	-0.013
Y-91		1204.90	*	-1.068E+01	2.109E+01	3.350E+01	2.757E+00	-0.319
NB-94		702.63	*	1.143E-05	3.538E-02	5.885E-02	6.462E-03	0.000
		871.10		1.144E-02	3.407E-02	5.716E-02	5.591E-03	0.200
NB-95		765.79	*	9.149E-02	4.831E-02	8.744E-02	9.340E-03	1.046
NB-95M		235.69	*	8.328E-02	1.112E-01	1.666E-01	1.909E-02	0.500
ZR-95		724.18		1.172E-01	1.062E-01	1.684E-01	1.937E-02	0.696
		756.15	*	6.826E-02	7.004E-02	1.236E-01	1.416E-02	0.552
NB-97		657.90	*	1.372E-01	7.004E-02	Half-Life	too short	
		1024.50		2.809E+01	7.004E-02	Half-Life	too short	
ZR-97		254.15		3.150E+00	7.004E-02	Half-Life	too short	
		355.39		-3.792E-01	7.004E-02	Half-Life	too short	
		507.63	*	8.035E+00	7.004E-02	Half-Life	too short	
		602.52		-3.610E+00	7.004E-02	Half-Life	too short	
		1021.30		-1.447E+01	7.004E-02	Half-Life	too short	
		1147.95		-9.901E+00	7.004E-02	Half-Life	too short	
		1362.66		1.754E+01	7.004E-02	Half-Life	too short	
		1750.46		-9.180E+00	7.004E-02	Half-Life	too short	
MO-99		140.51		2.646E+00	2.857E+01	4.305E+01	1.235E+01	0.061
		181.06		5.836E+00	2.084E+01	3.083E+01	5.733E+00	0.189
		366.43		2.020E+01	9.787E+01	1.651E+02	1.618E+01	0.122
		739.58	*	-7.571E+00	1.590E+01	2.497E+01	4.130E+00	-0.303
		778.00		-3.419E+01	4.813E+01	7.477E+01	7.928E+00	-0.457
TC-99M		140.51	*	6.615E+10	4.813E+01	Half-Life	too short	
RH-101		127.23		1.156E-02	2.450E-02	4.183E-02	5.235E-03	0.276
		198.01	*	6.840E-03	2.713E-02	4.422E-02	4.261E-03	0.155
		325.23		-3.735E-02	2.188E-01	3.208E-01	3.417E-02	-0.116
RH-102		418.52		2.114E-01	2.564E-01	4.433E-01	4.168E-02	0.477
		475.06	*	1.034E-02	2.715E-02	4.539E-02	4.532E-03	0.228
		631.29		-2.087E-02	4.946E-02	8.033E-02	8.824E-03	-0.260
		697.49		-3.078E-03	7.742E-02	1.285E-01	1.413E-02	-0.024
		766.84		2.104E-01	1.258E-01	2.249E-01	2.401E-02	0.936
		1046.59		-1.492E-02	1.084E-01	1.795E-01	1.617E-02	-0.083
		1112.84		-6.576E-02	2.697E-01	3.756E-01	3.247E-02	-0.175
RU-103		497.08	*	5.167E-04	3.840E-02	6.240E-02	9.460E-03	0.008
	+	610.33		1.429E+01	3.031E+00	2.916E+00	5.240E-01	4.902
RH-106		511.85		7.886E-01	3.441E-01	4.190E-01	4.316E-02	1.882
		621.84	*	9.842E-02	2.991E-01	5.139E-01	7.691E-02	0.192
		1050.47		2.252E-01	2.268E+00	3.831E+00	3.444E-01	0.059
RU-106		511.85		7.886E-01	3.441E-01	4.190E-01	4.316E-02	1.882
		621.84	*	9.842E-02	2.989E-01	5.139E-01	5.627E-02	0.192
		1050.47		2.252E-01	2.268E+00	3.831E+00	3.444E-01	0.059
AG-108M		433.93	*	-2.542E-02	3.175E-02	4.934E-02	4.876E-03	-0.515
		614.37		-1.682E-02	3.790E-02	5.285E-02	5.913E-03	-0.318
		722.95		2.420E-02	4.338E-02	6.619E-02	7.396E-03	0.366

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M		657.75	*	-8.461E-03	3.955E-02	5.630E-02	6.345E-03	-0.150
		677.61		-5.505E-02	3.161E-01	5.211E-01	5.857E-02	-0.106
		706.67		1.343E-01	2.151E-01	3.717E-01	4.147E-02	0.361
		763.93		-1.896E-01	1.941E-01	2.982E-01	3.247E-02	-0.636
		884.67		-8.449E-03	4.856E-02	7.774E-02	7.680E-03	-0.109
		937.48		-4.459E-02	1.156E-01	1.804E-01	1.747E-02	-0.247
		1384.27		-1.715E-02	1.580E-01	2.541E-01	2.146E-02	-0.067
IN-111		171.28		9.464E-02	1.046E+00	1.730E+00	1.563E-01	0.055
		245.39	*	-3.492E-01	1.324E+00	1.851E+00	1.960E-01	-0.189
		391.69	*	-3.643E-02	4.380E-02	6.900E-02	6.444E-03	-0.528
IN-113M		391.69	*	-3.643E-02	4.380E-02	6.900E-02	6.444E-03	-0.528
IN-114M		190.27	*	-4.234E-02	1.687E-01	2.428E-01	2.298E-02	-0.174
CD-115		260.90		6.346E+00	1.596E+02	2.551E+02	2.771E+01	0.025
		492.35		2.151E+01	4.672E+01	7.841E+01	7.950E+00	0.274
		527.90	*	-1.615E+01	1.503E+01	2.209E+01	2.302E+00	-0.731
SN-117M		156.02		-8.522E-01	1.920E+00	3.127E+00	3.118E-01	-0.273
		158.56	*	1.629E-02	4.595E-02	7.721E-02	7.496E-03	0.211
SB-122		563.90	*	1.542E+00	2.730E+00	4.555E+00	4.857E-01	0.339
		692.80		-3.004E+01	5.756E+01	9.211E+01	1.014E+01	-0.326
I-123		159.00	*	7.340E+00	5.756E+01	Half-Life	too short	
		528.96		-1.554E+03	5.756E+01	Half-Life	too short	
TE-123M		159.00	*	8.689E-03	2.281E-02	3.835E-02	3.724E-03	0.227
I-124		602.71	*	-1.479E-01	7.756E-01	1.171E+00	1.273E-01	-0.126
		722.78		2.386E+00	5.473E+00	8.254E+00	9.001E-01	0.289
		1325.50		-6.258E+00	4.369E+01	7.045E+01	5.729E+00	-0.089
		1376.25		9.386E+01	4.033E+01	7.921E+01	6.480E+00	1.185
		1509.49		-3.279E+00	1.788E+01	2.809E+01	2.330E+00	-0.117
		1691.02		-9.478E-01	4.521E+00	7.239E+00	6.001E-01	-0.131
		602.71		-7.215E-03	3.785E-02	5.717E-02	6.214E-03	-0.126
		645.85		7.965E-02	4.625E-01	7.851E-01	8.983E-02	0.101
		709.31		-3.085E-01	2.820E+00	4.650E+00	5.095E-01	-0.066
		713.82		-8.279E-01	1.548E+00	2.454E+00	3.386E-01	-0.337
SB-124		722.78		1.688E-01	3.872E-01	5.839E-01	6.454E-02	0.289
	+	968.20		1.142E+01	5.523E+00	7.372E+00	6.867E-01	1.550
		1045.16		-9.689E-01	2.340E+00	3.772E+00	3.401E-01	-0.257
		1325.50		-4.728E-01	3.301E+00	5.323E+00	4.328E-01	-0.089
		1368.21		-1.277E+00	1.608E+00	2.308E+00	3.045E-01	-0.553
		1436.60		1.204E+00	3.057E+00	5.280E+00	4.353E-01	0.228
		1691.02	*	-1.581E-02	7.544E-02	1.208E-01	1.044E-02	-0.131
		427.89	*	5.252E-02	8.857E-02	1.507E-01	1.455E-02	0.349
	+	463.38		9.088E-01	4.616E-01	5.545E-01	5.804E-02	1.639
		600.56		1.024E-01	1.719E-01	2.862E-01	3.254E-02	0.358
SB-125		635.90		2.082E-01	2.445E-01	4.340E-01	5.015E-02	0.480
		109.28	*	5.868E+00	7.203E+00	1.130E+01	1.500E+00	0.519
		388.63		1.336E-01	2.049E-01	3.516E-01	3.228E-02	0.380
TE-125M		666.33	*	6.731E-02	2.089E-01	3.134E-01	3.470E-02	0.215
		753.82		-7.684E-01	1.569E+00	2.460E+00	2.645E-01	-0.312
		223.80		-8.876E-01	3.740E+00	5.968E+00	6.073E-01	-0.149
SB-126	+	278.60		4.731E+00	3.603E+00	4.201E+00	4.684E-01	1.126

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127	+	296.50		1.415E+01	3.208E+00	3.429E+00	3.781E-01	4.127
		414.70		-4.454E-02	7.298E-02	1.156E-01	1.082E-02	-0.385
		415.30		-2.569E+00	6.085E+00	9.764E+00	9.145E-01	-0.263
		555.20		-2.966E+00	3.843E+00	5.744E+00	6.093E-01	-0.516
		573.80		6.050E-01	1.043E+00	1.745E+00	1.870E-01	0.347
		593.00		-8.978E-01	9.754E-01	1.429E+00	1.547E-01	-0.628
		656.30		-1.312E-01	3.917E+00	5.684E+00	6.288E-01	-0.023
		666.33		2.820E-02	8.750E-02	1.313E-01	1.454E-02	0.215
		675.00		-2.181E-01	2.072E+00	3.433E+00	3.795E-01	-0.064
		695.00		-1.470E-02	8.047E-02	1.322E-01	1.455E-02	-0.111
		697.00		1.175E-01	2.843E-01	4.862E-01	5.348E-02	0.242
		720.50	*	4.867E-02	1.516E-01	2.267E-01	2.474E-02	0.215
		856.80		4.411E-01	5.616E-01	8.654E-01	8.596E-02	0.510
		989.30		-6.362E-01	1.385E+00	2.128E+00	1.967E-01	-0.299
		1034.80		-6.165E+00	9.075E+00	1.426E+01	1.293E+00	-0.432
		1213.00		1.705E+00	5.532E+00	9.340E+00	7.684E-01	0.183
		61.10		1.385E+01	2.401E+01	3.604E+01	4.486E+00	0.384
		252.40		-2.756E+00	4.929E+00	7.416E+00	3.160E+00	-0.372
		290.80		4.522E-01	2.444E+01	3.672E+01	4.936E+00	0.012
		411.60		-3.712E+00	1.414E+01	2.295E+01	3.756E+00	-0.162
		444.90		4.401E+00	1.129E+01	1.896E+01	2.574E+00	0.232
		473.00		2.791E-01	2.003E+00	3.297E+00	4.643E-01	0.085
		543.00		1.436E+01	1.936E+01	3.271E+01	5.188E+00	0.439
		603.60		-6.633E+00	1.438E+01	2.010E+01	2.900E+00	-0.330
		685.20	*	-1.025E+00	1.698E+00	2.698E+00	3.668E-01	-0.380
		698.50		-6.460E+00	1.887E+01	3.061E+01	5.342E+00	-0.211
		722.20		8.405E+00	3.839E+01	5.662E+01	7.533E+00	0.148
		783.80		5.043E+00	4.500E+00	7.932E+00	1.120E+00	0.636
XE-127		57.60		1.132E-01	1.671E+00	2.677E+00	2.610E-01	0.042
	+	145.22		9.964E-01	8.855E-01	9.373E-01	1.033E-01	1.063
		172.10		5.835E-02	9.684E-02	1.634E-01	1.480E-02	0.357
I-131		202.84	*	-5.360E-02	3.916E-02	5.899E-02	5.746E-03	-0.909
		374.96		-4.946E-02	1.723E-01	2.816E-01	2.696E-02	-0.176
		80.18		2.853E+00	3.014E+00	4.497E+00	4.689E-01	0.634
TE-132		284.30		-1.897E-01	1.497E+00	2.352E+00	2.701E-01	-0.081
		364.48	*	1.033E-02	1.095E-01	1.836E-01	1.885E-02	0.056
		636.97		-3.471E-01	1.533E+00	2.527E+00	2.879E-01	-0.137
BA-133		722.89		3.829E+00	8.088E+00	1.224E+01	1.341E+00	0.313
		49.72		-1.892E+00	3.733E+00	5.396E+00	6.408E-01	-0.351
		111.76		-5.497E+00	2.609E+01	4.391E+01	6.184E+00	-0.125
		116.30		2.607E+00	2.409E+01	4.093E+01	5.875E+00	0.064
		228.16	*	6.912E-01	7.717E-01	1.282E+00	2.164E-01	0.539
		53.15		4.851E-01	7.300E-01	1.199E+00	1.150E-01	0.405
		79.62		-9.268E-02	7.799E-01	1.117E+00	1.816E-01	-0.083
		81.00		4.837E-03	6.712E-02	8.470E-02	1.433E-02	0.057
		276.40		4.538E-01	3.907E-01	5.845E-01	9.389E-02	0.776
		302.84		1.295E-01	1.332E-01	2.103E-01	3.135E-02	0.616
		356.01	*	-1.688E-02	4.112E-02	5.831E-02	8.268E-03	-0.290
		383.85		-1.094E-01	2.876E-01	4.668E-01	6.114E-02	-0.234

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-133	+	510.53		3.966E+00	2.876E-01	Half-Life	too short	
		529.87	*	6.254E-03	2.876E-01	Half-Life	too short	
		706.58		3.975E-01	2.876E-01	Half-Life	too short	
		856.28		7.653E-01	2.876E-01	Half-Life	too short	
		875.33		2.644E-02	2.876E-01	Half-Life	too short	
		1236.41		2.540E+00	2.876E-01	Half-Life	too short	
		1298.22		-8.052E-02	2.876E-01	Half-Life	too short	
CS-134		475.35		-5.196E-01	1.797E+00	2.869E+00	2.865E-01	-0.181
		563.23		1.495E-01	3.559E-01	5.883E-01	6.310E-02	0.254
		569.32		-3.608E-02	1.906E-01	3.009E-01	3.247E-02	-0.120
		604.70		-3.787E-02	3.429E-02	4.420E-02	4.815E-03	-0.857
	+	795.84	*	1.096E-01	7.509E-02	8.704E-02	9.163E-03	1.259
		801.93		-1.002E-01	4.461E-01	6.879E-01	7.201E-02	-0.146
		1038.57		-2.984E-01	3.538E+00	5.886E+00	5.325E-01	-0.051
CS-135		1167.94		1.040E+00	2.787E+00	4.748E+00	3.926E-01	0.219
		1365.15		-5.331E-01	1.154E+00	1.766E+00	1.515E-01	-0.302
		268.24	*	9.818E-02	1.539E-01	2.269E-01	2.739E-02	0.433
	I-135	288.45		3.683E+10	1.539E-01	Half-Life	too short	
		417.63		5.801E+11	1.539E-01	Half-Life	too short	
		546.56		1.661E+11	1.539E-01	Half-Life	too short	
		836.80		2.319E+11	1.539E-01	Half-Life	too short	
CS-136		1038.76		-6.844E+10	1.539E-01	Half-Life	too short	
		1124.00		-3.422E+11	1.539E-01	Half-Life	too short	
		1131.51		5.511E+10	1.539E-01	Half-Life	too short	
		1260.41	*	1.708E+10	1.539E-01	Half-Life	too short	
		1457.56		1.689E+13	1.539E-01	Half-Life	too short	
		1678.03		9.242E+10	1.539E-01	Half-Life	too short	
		1706.46		1.535E+11	1.539E-01	Half-Life	too short	
CS-136		1791.20		-2.221E+10	1.539E-01	Half-Life	too short	
	+	66.91		2.338E-01	3.667E-01	5.445E-01	8.824E-02	0.429
		86.29		4.486E+00	1.148E+00	1.340E+00	1.916E-01	3.347
		153.22		3.961E-01	5.507E-01	9.374E-01	1.043E-01	0.423
		163.89		1.094E+00	9.291E-01	1.596E+00	1.615E-01	0.685
		176.55		-2.223E-02	3.101E-01	5.084E-01	4.894E-02	-0.044
		273.65		8.474E-02	5.532E-01	6.224E-01	7.171E-02	0.136
CE-139		340.57		1.063E-01	1.304E-01	2.029E-01	2.148E-02	0.524
		818.51		-7.092E-02	7.916E-02	1.190E-01	1.225E-02	-0.596
		1048.07	*	1.190E-02	1.082E-01	1.830E-01	1.712E-02	0.065
		1235.34		8.475E-01	7.629E-01	1.333E+00	1.541E-01	0.636
		165.85	*	-1.854E-03	2.482E-02	4.088E-02	3.645E-03	-0.045
	BA-140	162.64		-4.119E-02	6.501E-01	1.073E+00	1.045E-01	-0.038
		304.84		5.651E-01	1.241E+00	1.899E+00	5.474E-01	0.298
LA-140		423.70		-1.219E-01	1.838E+00	3.012E+00	9.836E-01	-0.040
	+	537.32	*	2.114E-02	2.595E-01	4.207E-01	1.417E-01	0.050
		328.77		7.791E-01	5.015E-01	5.481E-01	6.025E-02	1.421
		432.53		-1.061E+00	2.099E+00	3.335E+00	3.314E-01	-0.318
		487.03		4.948E-02	1.379E-01	2.298E-01	2.425E-02	0.215
		751.79		-3.050E+00	1.834E+00	2.513E+00	2.894E-01	-1.214
		815.85		-2.387E-02	3.457E-01	5.638E-01	6.291E-02	-0.042

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		867.82		-4.708E-01	1.552E+00	2.305E+00	2.356E-01	-0.204
		919.63		2.407E+00	2.969E+00	5.041E+00	5.705E-01	0.478
		925.24		-6.171E-01	1.307E+00	2.027E+00	2.011E-01	-0.304
CE-141		1596.49	*	5.403E-03	9.512E-02	1.600E-01	1.330E-02	0.034
CE-143		145.44	*	5.083E-02	5.324E-02	8.318E-02	9.250E-03	0.611
		57.37		-7.691E-05	5.324E-02	Half-Life	too short	
		231.56		-2.587E-03	5.324E-02	Half-Life	too short	
		293.26	*	9.789E-04	5.324E-02	Half-Life	too short	
	+	350.59		5.667E-02	5.324E-02	Half-Life	too short	
		490.36		-2.179E-03	5.324E-02	Half-Life	too short	
		664.57		7.828E-04	5.324E-02	Half-Life	too short	
		721.93		4.129E-04	5.324E-02	Half-Life	too short	
CE-144		80.11		1.158E+00	1.259E+00	1.877E+00	1.947E-01	0.617
		133.54	*	-1.231E-01	1.563E-01	2.516E-01	4.448E-02	-0.489
PM-144		476.78		-7.749E-02	6.793E-02	1.013E-01	1.084E-02	-0.765
		618.01		-1.034E-03	2.943E-02	4.939E-02	5.494E-03	-0.021
		696.49	*	1.097E-02	3.428E-02	5.829E-02	6.414E-03	0.188
		778.57		-2.268E+00	2.407E+00	3.651E+00	3.871E-01	-0.621
PR-144		696.49	*	7.436E-01	2.324E+00	3.952E+00	4.348E-01	0.188
		1489.15		-8.068E+00	1.136E+01	1.620E+01	1.342E+00	-0.498
PM-146		453.90	*	-2.764E-03	4.148E-02	6.760E-02	7.894E-03	-0.041
		633.02		3.087E-01	1.285E+00	2.186E+00	8.304E-01	0.141
		735.90		-1.567E-01	1.556E-01	2.256E-01	6.622E-02	-0.694
		747.13		2.690E-02	9.063E-02	1.532E-01	2.369E-02	0.176
ND-147	+	91.11		8.965E-01	2.438E-01	3.640E-01	4.178E-02	2.463
		319.41		3.686E-01	2.954E+00	5.012E+00	5.385E-01	0.074
		439.89		4.746E+00	6.157E+00	1.055E+01	1.017E+00	0.450
		531.02	*	5.526E-01	5.557E-01	9.538E-01	1.533E-01	0.579
PM-149		285.90	*	7.768E+01	1.177E+02	1.921E+02	3.276E+01	0.404
EU-152		121.78		-5.078E-03	5.273E-02	8.865E-02	1.222E-02	-0.057
		244.69		-4.676E-02	3.072E-01	4.333E-01	4.584E-02	-0.108
		344.27	*	4.187E-02	9.090E-02	1.455E-01	1.563E-02	0.288
		443.98		-9.084E-01	9.323E-01	1.425E+00	1.379E-01	-0.638
		778.89		-2.613E-01	2.773E-01	4.206E-01	4.458E-02	-0.621
		867.32		-2.527E-01	8.926E-01	1.274E+00	1.251E-01	-0.198
		964.01		5.893E-01	3.767E-01	6.010E-01	5.606E-02	0.981
		1085.78		3.358E-01	3.823E-01	6.846E-01	6.028E-02	0.491
		1112.02		-1.559E-01	3.773E-01	5.386E-01	4.659E-02	-0.289
		1407.95		5.359E-02	1.699E-01	2.879E-01	2.365E-02	0.186
GD-153		69.67		-3.281E-01	8.003E-01	1.142E+00	1.142E-01	-0.287
	+	83.37		2.077E+01	1.046E+01	1.442E+01	1.516E+00	1.440
		97.43	*	-9.711E-03	5.520E-02	8.348E-02	9.401E-03	-0.116
		103.18		-2.580E-02	7.275E-02	1.098E-01	1.274E-02	-0.235
EU-154		123.07		1.555E-02	3.827E-02	6.536E-02	9.679E-03	0.238
		247.94		1.340E-01	3.311E-01	5.159E-01	6.737E-02	0.260
		591.81		-5.471E-01	6.124E-01	8.979E-01	1.201E-01	-0.609
		723.30		1.352E-01	1.841E-01	2.852E-01	3.318E-02	0.474
		756.87		9.682E-01	7.693E-01	1.372E+00	1.863E-01	0.706
		873.19		-3.752E-02	3.118E-01	5.029E-01	6.573E-02	-0.075

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160	+	996.32		-3.456E-01	3.843E-01	5.556E-01	1.004E-01	-0.622
		1004.76		-1.063E-01	2.357E-01	3.631E-01	4.381E-02	-0.293
		1274.45	*	-1.248E-01	1.285E-01	1.903E-01	2.090E-02	-0.656
		86.79		1.053E+00	2.502E-01	3.304E-01	3.529E-02	3.188
		197.04		-2.430E-01	4.717E-01	7.421E-01	7.135E-02	-0.327
		215.65		-7.838E-02	6.216E-01	1.000E+00	1.001E-01	-0.078
		298.57		2.811E-01	1.289E-01	1.748E-01	1.923E-02	1.609
		879.36	*	1.296E-02	1.416E-01	2.325E-01	2.253E-02	0.056
		962.29		1.581E-01	7.135E-01	1.016E+00	9.480E-02	0.156
		966.15		1.030E+00	3.097E-01	5.292E-01	4.933E-02	1.946
HO-166M	+	1177.93		4.288E-02	4.100E-01	6.745E-01	5.552E-02	0.064
		1271.85		3.311E-01	6.901E-01	1.187E+00	9.726E-02	0.279
		80.57		1.020E-01	1.834E-01	2.377E-01	2.470E-02	0.429
		184.41		1.963E-01	5.650E-02	5.821E-02	5.434E-03	3.372
		280.46		3.958E-02	7.989E-02	1.167E-01	1.301E-02	0.339
		410.95		1.398E-01	2.334E-01	3.977E-01	3.705E-02	0.351
		711.68	*	-2.890E-02	5.663E-02	9.015E-02	9.870E-03	-0.321
		752.31		-2.887E-01	2.647E-01	3.884E-01	4.180E-02	-0.743
		810.29		-3.159E-02	6.280E-02	9.880E-02	1.024E-02	-0.320
		51.35		-3.379E+00	5.220E+00	8.162E+00	7.795E-01	-0.414
TM-171	+	52.39		3.586E+00	2.987E+00	4.988E+00	4.775E-01	0.719
		59.40		6.560E-01	8.570E+00	1.264E+01	1.243E+00	0.052
		66.72	*	1.412E+00	1.263E+01	1.845E+01	1.831E+00	0.077
		88.36		7.680E-01	1.825E-01	2.237E-01	2.408E-02	3.433
		201.83		-3.436E-02	2.305E-02	3.441E-02	3.344E-03	-0.999
		306.84	*	-1.725E-04	2.111E-02	3.454E-02	3.769E-03	-0.005
		401.10		1.780E+00	6.546E+00	1.099E+01	1.011E+00	0.162
		112.95		9.806E-01	1.258E+00	2.182E+00	2.672E-01	0.449
		208.36	*	3.175E+00	1.400E+00	1.955E+00	1.928E-01	1.624
		52.97		3.782E-01	3.228E-01	5.383E-01	5.160E-02	0.703
LU-177M	+	54.07		1.093E-01	1.860E-01	3.045E-01	2.929E-02	0.359
		61.30		1.763E-01	5.198E-01	7.735E-01	7.616E-02	0.228
		121.62		-4.854E-02	2.710E-01	4.542E-01	5.839E-02	-0.107
		147.16		-1.273E-01	5.364E-01	7.907E-01	8.570E-02	-0.161
		171.86		2.821E-01	3.818E-01	6.477E-01	5.860E-02	0.436
		218.09		3.623E-03	7.256E-01	1.174E+00	1.181E-01	0.003
		268.79		1.654E+00	9.719E-01	1.239E+00	1.362E-01	1.335
		319.02		-7.106E-02	2.188E-01	3.622E-01	3.893E-02	-0.196
		367.43		3.005E-02	7.960E-01	1.330E+00	1.300E-01	0.023
		413.65	*	-1.647E-01	1.631E-01	2.509E-01	2.346E-02	-0.656
HF-181	+	56.28		-1.081E-01	2.385E-01	3.747E-01	3.632E-02	-0.289
		57.53		-1.020E-02	1.401E-01	2.233E-01	2.176E-02	-0.046
		65.20		-1.343E-01	4.083E-01	5.863E-01	5.803E-02	-0.229
		133.02		-7.413E-03	4.968E-02	8.285E-02	9.995E-03	-0.089
		136.25		3.633E-01	3.554E-01	6.138E-01	7.243E-02	0.592
		345.85		4.231E-03	1.962E-01	2.899E-01	2.979E-02	0.015
		482.03	*	2.852E-02	4.446E-02	7.518E-02	7.554E-03	0.379
		56.28		-4.166E-02	9.227E-02	1.450E-01	1.405E-02	-0.287
		57.53		-4.002E-03	5.423E-02	8.642E-02	8.422E-03	-0.046
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---- 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	*		-5.157E-02	1.568E-01	2.251E-01	2.228E-02	-0.229
	67.75			2.545E-02	4.668E-02	7.475E-02	7.437E-03	0.341
	100.10			-2.357E-02	1.197E-01	1.942E-01	2.218E-02	-0.121
	152.43			1.019E-01	2.625E-01	4.427E-01	4.574E-02	0.230
	222.10			7.858E-02	3.027E-01	4.949E-01	5.019E-02	0.159
	1001.68			1.219E+00	2.149E+00	3.621E+00	3.332E-01	0.337
	+	1121.28		5.867E-01	2.957E-01	3.551E-01	3.051E-02	1.652
	1189.05			-1.585E-01	3.469E-01	5.532E-01	4.554E-02	-0.287
	1221.42	*		1.839E-01	2.132E-01	3.732E-01	3.069E-02	0.493
	1230.97			1.008E-01	5.555E-01	9.276E-01	7.625E-02	0.109
RE-183	57.98			1.103E-02	5.535E-02	8.905E-02	8.696E-03	0.124
	59.32			9.132E-03	3.520E-02	5.235E-02	5.146E-03	0.174
	67.20			7.302E-02	8.336E-02	1.347E-01	1.338E-02	0.542
	162.32	*		-2.683E-02	9.079E-02	1.484E-01	1.381E-02	-0.181
	+	208.81		2.568E+00	1.132E+00	1.584E+00	1.562E-01	1.622
RE-184	291.72			1.822E-03	8.834E-01	1.325E+00	1.467E-01	0.001
	57.98			4.039E-02	2.026E-01	3.260E-01	3.183E-02	0.124
	59.32			3.340E-02	1.288E-01	1.915E-01	1.882E-02	0.174
	67.20			2.672E-01	3.051E-01	4.929E-01	4.898E-02	0.542
	161.27			-3.039E-01	2.925E-01	4.614E-01	4.347E-02	-0.659
OS-185	216.55			-2.007E-02	2.249E-01	3.625E-01	3.635E-02	-0.055
	252.85	*		-8.411E-02	2.081E-01	3.251E-01	3.487E-02	-0.259
	318.01			-3.284E-01	3.786E-01	6.056E-01	6.518E-02	-0.542
	792.07			1.067E+00	1.075E+00	1.696E+00	1.781E-01	0.629
	903.28			1.550E-01	1.136E+00	1.697E+00	1.606E-01	0.091
	920.93			1.899E-01	4.483E-01	7.549E-01	7.121E-02	0.252
	59.72			7.811E-03	9.656E-02	1.425E-01	1.401E-02	0.055
	61.14			1.591E-02	5.693E-02	8.452E-02	8.322E-03	0.188
	69.30			-7.420E-02	1.316E-01	2.035E-01	2.033E-02	-0.365
	592.07			-2.439E+00	2.503E+00	3.646E+00	3.944E-01	-0.669
RE-188	646.12	*		1.106E-02	3.954E-02	6.761E-02	7.460E-03	0.164
	717.42			-7.777E-02	8.515E-01	1.366E+00	1.492E-01	-0.057
	874.81			1.514E-01	6.142E-01	1.022E+00	9.952E-02	0.148
	880.27			-1.922E-01	7.775E-01	1.237E+00	1.197E-01	-0.155
	155.03	*		-9.414E-03	1.374E-01	2.275E-01	2.291E-02	-0.041
W-188	477.96			-2.279E+00	3.100E+00	4.786E+00	4.792E-01	-0.476
	633.10			6.141E-01	2.614E+00	4.462E+00	4.905E-01	0.138
	+	63.58		1.453E+02	3.503E+01	4.279E+01	4.224E+00	3.397
IR-192	227.08			-1.850E+00	1.151E+01	1.841E+01	1.886E+00	-0.100
	290.67	*		-3.123E+00	7.154E+00	1.041E+01	1.153E+00	-0.300
	295.96			1.028E+00	2.333E-01	2.689E-01	2.979E-02	3.823
	308.46			-5.522E-02	8.206E-02	1.335E-01	1.458E-02	-0.414
	316.51	*		-1.002E-02	2.907E-02	4.810E-02	5.195E-03	-0.208
AU-195	468.07			7.778E-02	6.490E-02	1.071E-01	1.120E-02	0.727
	604.41			-4.728E-01	4.725E-01	6.152E-01	8.989E-02	-0.769
	612.46			6.222E-01	7.046E-01	1.117E+00	1.335E-01	0.557
	65.12			-2.270E-02	7.230E-02	1.039E-01	1.028E-02	-0.219
	66.83			2.516E-02	4.140E-02	6.161E-02	6.118E-03	0.408
	+	75.70		1.147E+00	1.764E-01	2.504E-01	2.552E-02	4.579

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200		98.88	*	2.472E-01	1.534E-01	2.580E-01	2.927E-02	0.958
		129.76		4.331E-01	2.186E+00	3.698E+00	4.556E-01	0.117
		367.94	*	2.115E-04	2.186E+00	Half-Life	too short	
		579.30		-4.452E-03	2.186E+00	Half-Life	too short	
		828.27		1.705E-03	2.186E+00	Half-Life	too short	
TL-201		1205.75		-2.540E+01	2.186E+00	Half-Life	too short	
		68.90		-1.907E+00	2.685E+00	4.127E+00	4.118E-01	-0.462
		70.82		6.664E-01	1.700E+00	2.508E+00	2.516E-01	0.266
		80.30		3.242E+00	4.391E+00	5.744E+00	5.961E-01	0.565
		135.34		2.540E+01	2.481E+01	4.286E+01	5.090E+00	0.593
TL-202		167.43	*	3.640E+00	7.147E+00	1.204E+01	1.077E+00	0.302
		68.90		-1.413E-01	1.989E-01	3.058E-01	3.051E-02	-0.462
		70.82		4.925E-02	1.256E-01	1.853E-01	1.859E-02	0.266
		80.30		2.397E-01	3.246E-01	4.246E-01	4.406E-02	0.565
		439.56	*	5.746E-02	7.273E-02	1.247E-01	1.201E-02	0.461
BI-207	+	72.80		9.519E-02	1.047E-01	1.373E-01	1.386E-02	0.693
	+	74.97		6.334E-01	9.741E-02	1.261E-01	1.282E-02	5.022
	+	84.90		2.677E-01	1.349E-01	1.913E-01	2.026E-02	1.399
		569.67		-1.252E-03	2.999E-02	4.792E-02	5.126E-03	-0.026
		1063.62	*	6.209E-02	5.893E-02	1.057E-01	9.431E-03	0.588
TL-207		1770.23		-2.911E+00	8.509E-01	7.508E-01	6.182E-02	-3.877
		81.07		3.035E-03	1.481E-01	1.863E-01	1.940E-02	0.016
	+	83.78		1.765E-01	8.895E-02	1.261E-01	1.329E-02	1.399
		94.90		1.801E-01	1.510E-01	2.429E-01	2.700E-02	0.742
		122.32		5.454E-02	1.261E+00	2.131E+00	2.836E-01	0.026
	+	144.24		9.562E-01	8.508E-01	9.729E-01	1.160E-01	0.983
		154.21		3.388E-02	3.143E-01	5.241E-01	5.710E-02	0.065
	+	269.46		3.853E-01	2.265E-01	2.964E-01	3.304E-02	1.300
		323.87	*	-2.744E-02	6.377E-01	9.440E-01	1.774E-01	-0.029
	+	338.28		7.526E+00	1.811E+00	2.367E+00	3.228E-01	3.179
PO-209		445.03		1.827E+00	2.110E+00	3.633E+00	4.677E-01	0.503
		260.50		-3.677E+00	8.513E+00	1.323E+01	1.437E+00	-0.278
		262.80		3.657E+00	2.329E+01	3.743E+01	4.078E+00	0.098
		896.60	*	-3.051E+00	7.378E+00	1.152E+01	1.093E+00	-0.265
		404.84	*	-9.536E-01	1.093E+00	1.423E+00	8.927E-01	-0.670
PB-211		427.08		-5.731E-01	2.012E+00	3.200E+00	1.993E+00	-0.179
		831.96		-1.313E+00	1.443E+00	1.747E+00	1.099E+00	-0.751
	+	727.18	*	1.468E+00	5.226E-01	6.711E-01	8.064E-02	2.187
		785.46		2.946E-01	1.676E+00	2.799E+00	2.953E-01	0.105
		1620.62		1.217E+00	1.162E+00	2.217E+00	1.843E-01	0.549
PO-215		81.07		3.035E-03	1.481E-01	1.863E-01	1.940E-02	0.016
	+	83.78		1.765E-01	8.895E-02	1.261E-01	1.329E-02	1.399
		94.90		1.801E-01	1.510E-01	2.429E-01	2.700E-02	0.742
		122.32		5.454E-02	1.261E+00	2.131E+00	2.836E-01	0.026
	+	144.24		9.562E-01	8.508E-01	9.729E-01	1.160E-01	0.983
		154.21		3.388E-02	3.143E-01	5.241E-01	5.710E-02	0.065
	+	269.46		3.853E-01	2.265E-01	2.964E-01	3.304E-02	1.300
		323.87	*	-2.744E-02	6.377E-01	9.440E-01	1.774E-01	-0.029
	+	338.28		7.526E+00	1.811E+00	2.367E+00	3.228E-01	3.179

---- 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		1.827E+00	2.110E+00	3.633E+00	4.677E-01	0.503
		271.23		4.944E-01	2.919E-01	3.694E-01	4.581E-02	1.338
		401.81	*	1.529E-01	3.926E-01	6.626E-01	1.019E-01	0.231
RN-220		549.76	*	1.450E+01	2.391E+01	4.024E+01	4.255E+00	0.360
RA-223	+	81.07		3.035E-03	1.481E-01	1.863E-01	1.940E-02	0.016
		83.78		1.765E-01	8.895E-02	1.261E-01	1.329E-02	1.399
		94.90		1.801E-01	1.510E-01	2.429E-01	2.700E-02	0.742
AC-227	+	122.32		5.454E-02	1.261E+00	2.131E+00	2.836E-01	0.026
		144.24		9.562E-01	8.508E-01	9.729E-01	1.160E-01	0.983
		154.21		3.388E-02	3.143E-01	5.241E-01	5.710E-02	0.065
	+	269.46		3.853E-01	2.265E-01	2.964E-01	3.304E-02	1.300
		323.87	*	-2.744E-02	6.377E-01	9.440E-01	1.774E-01	-0.029
		338.28		7.526E+00	1.811E+00	2.367E+00	3.228E-01	3.179
		445.03		1.827E+00	2.110E+00	3.633E+00	4.677E-01	0.503
		79.80		7.723E-01	9.741E-01	1.429E+00	3.182E-01	0.540
		236.00		2.858E-01	2.113E-01	3.232E-01	4.385E-02	0.884
	+	256.20	*	1.657E-01	3.401E-01	5.553E-01	9.251E-02	0.298
		286.10		9.694E-01	1.385E+00	2.267E+00	3.389E-01	0.428
		299.80		3.394E+00	2.130E+00	2.279E+00	4.278E-01	1.489
TH-227	+	304.40		1.652E+00	1.716E+00	2.693E+00	5.286E-01	0.614
		334.20		-1.608E+00	2.425E+00	3.126E+00	6.351E-01	-0.514
		79.80		7.723E-01	9.744E-01	1.429E+00	3.220E-01	0.540
	+	94.00		1.806E+01	4.825E+00	2.699E+00	6.170E-01	6.690
		236.00		2.858E-01	2.108E-01	3.232E-01	4.048E-02	0.884
		256.20	*	1.657E-01	3.405E-01	5.553E-01	1.066E-01	0.298
	+	286.10		9.694E-01	1.688E+00	2.267E+00	2.281E+00	0.428
		299.80		3.394E+00	2.130E+00	2.279E+00	4.278E-01	1.489
		304.40		1.652E+00	1.716E+00	2.693E+00	5.286E-01	0.614
	+	334.20		-1.608E+00	2.425E+00	3.126E+00	6.351E-01	-0.514
		85.43		2.642E-01	1.332E-01	1.875E-01	1.991E-02	1.409
		88.47		4.421E-01	1.050E-01	1.281E-01	1.380E-02	3.451
TH-229	+	100.00		-3.626E-02	1.264E-01	2.012E-01	2.297E-02	-0.180
		193.63	*	1.889E-01	4.082E-01	6.798E-01	6.485E-02	0.278
		210.97		4.459E-01	6.825E-01	1.025E+00	1.016E-01	0.435
PA-231	+	283.67	*	-7.582E-01	1.442E+00	2.082E+00	3.486E-01	-0.364
		301.29		1.358E+00	8.349E-01	9.263E-01	1.297E-01	1.466
TH-231	+	81.07		3.035E-03	1.481E-01	1.863E-01	1.940E-02	0.016
		83.78		1.765E-01	8.895E-02	1.261E-01	1.329E-02	1.399
		94.90		1.801E-01	1.510E-01	2.429E-01	2.700E-02	0.742
	+	122.32		5.454E-02	1.261E+00	2.131E+00	2.836E-01	0.026
		144.24		9.562E-01	8.508E-01	9.729E-01	1.160E-01	0.983
		154.21		3.388E-02	3.143E-01	5.241E-01	5.710E-02	0.065
	+	269.46		3.853E-01	2.265E-01	2.964E-01	3.304E-02	1.300
		323.87	*	-2.744E-02	6.377E-01	9.440E-01	1.774E-01	-0.029
		338.28		7.526E+00	1.811E+00	2.367E+00	3.228E-01	3.179
	+	445.03		1.827E+00	2.110E+00	3.633E+00	4.677E-01	0.503
		84.21		9.163E+00	4.618E+00	6.663E+00	7.034E-01	1.375
		92.29		2.150E+01	3.810E+00	3.953E+00	4.336E-01	5.440
U-231		95.87	*	-4.145E-01	8.517E-01	1.285E+00	1.436E-01	-0.322

---- 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		1.775E+00	1.791E+00	2.854E+00	3.401E-01	0.622
	+	75.28		1.848E+01	3.686E+00	3.702E+00	6.024E-01	4.993
	+	86.59		6.339E+00	2.205E+00	1.956E+00	5.388E-01	3.241
	+	300.12		9.462E-01	5.873E-01	6.394E-01	1.046E-01	1.480
		311.98	*	7.862E-03	5.484E-02	9.326E-02	1.030E-02	0.084
		340.50		5.620E-01	6.128E-01	9.395E-01	2.304E-01	0.598
PA-234		398.62		-7.320E-02	2.068E+00	3.417E+00	9.162E-01	-0.021
		415.76		-3.653E-01	1.502E+00	2.435E+00	5.325E-01	-0.150
	+	63.00		4.168E+00	1.139E+00	1.224E+00	1.985E-01	3.406
		94.67		2.276E-01	1.146E-01	1.839E-01	2.619E-02	1.238
		98.44		7.831E-02	7.758E-02	1.026E-01	5.772E-02	0.763
		99.86		-5.885E-02	3.208E-01	5.129E-01	5.850E-02	-0.115
		111.00		-2.040E-01	1.348E-01	2.079E-01	3.074E-02	-0.981
		131.20		-1.027E-01	8.152E-02	1.289E-01	1.573E-02	-0.797
		152.70		1.620E-01	2.521E-01	4.268E-01	7.665E-02	0.380
	+	186.00		7.066E+00	2.938E+00	2.468E+00	7.758E-01	2.863
		226.40		-1.373E-01	3.567E-01	5.641E-01	8.068E-02	-0.243
		227.20		-4.438E-02	3.826E-01	6.136E-01	6.285E-02	-0.072
		248.90		3.544E-01	7.160E-01	1.169E+00	2.719E-01	0.303
	+	293.70		6.404E+00	1.741E+00	1.555E+00	2.897E-01	4.119
		369.80		5.370E-02	7.461E-01	1.248E+00	2.775E-01	0.043
		568.70		-1.321E-01	9.623E-01	1.526E+00	1.632E-01	-0.087
		569.50		-2.994E-02	2.648E-01	4.208E-01	4.500E-02	-0.071
		574.00		7.133E-01	1.399E+00	2.328E+00	2.496E-01	0.306
		699.00		7.554E-02	7.196E-01	1.206E+00	2.443E-01	0.063
		706.10		-2.646E-01	1.115E+00	1.814E+00	8.181E-01	-0.146
		733.00		2.841E-01	3.964E-01	6.498E-01	1.505E-01	0.437
		742.81		4.019E-01	1.428E+00	2.369E+00	1.600E+00	0.170
		796.30		5.550E-01	1.113E+00	1.652E+00	4.576E-01	0.336
		805.60		7.217E-01	1.080E+00	1.825E+00	5.692E-01	0.396
		819.60		-2.508E-01	1.159E+00	1.856E+00	7.132E-01	-0.135
		826.30		3.752E-01	7.965E-01	1.329E+00	5.993E-01	0.282
		831.60		-7.159E-01	6.471E-01	8.933E-01	2.709E-01	-0.801
		876.40		-1.260E-01	8.768E-01	1.395E+00	1.435E+00	-0.090
		880.51		-8.272E-02	2.799E-01	4.432E-01	4.289E-02	-0.187
		883.24		-9.238E-02	2.879E-01	4.434E-01	2.987E-01	-0.208
		899.00		-2.818E-01	8.551E-01	1.333E+00	5.852E-01	-0.211
		925.00		-4.837E-01	1.277E+00	1.999E+00	1.884E-01	-0.242
		926.50		6.022E-02	1.832E-01	3.044E-01	7.782E-02	0.198
		946.00	*	3.947E-02	3.067E-01	4.973E-01	9.511E-02	0.079
		949.00		2.285E-01	4.715E-01	7.936E-01	7.436E-02	0.288
		980.50		-4.056E-01	7.245E-01	1.099E+00	1.020E-01	-0.369
PA-234M		1394.10		6.843E-01	1.131E+00	1.848E+00	1.202E+00	0.370
		766.42		2.913E+01	1.948E+01	2.364E+01	1.209E+01	1.232
NP-236		1001.03	*	2.545E+00	4.790E+00	8.048E+00	8.430E-01	0.316
		94.67		1.756E-01	8.569E-02	1.398E-01	1.552E-02	1.256
		98.44		5.917E-02	4.873E-02	7.755E-02	8.779E-03	0.763
		111.00		-1.543E-01	1.011E-01	1.573E-01	1.905E-02	-0.981
		160.31	*	-3.726E-02	6.508E-02	1.051E-01	1.001E-02	-0.354

----- 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		8.823E-02	1.019E-01	1.751E-01	1.994E-02	0.504
		117.00	*	3.013E-02	1.334E-01	2.275E-01	2.850E-02	0.132
	+	209.75		2.003E+00	8.831E-01	1.218E+00	1.204E-01	1.645
		228.18		1.806E-01	1.971E-01	3.300E-01	3.387E-02	0.547
	+	277.60		3.239E-01	2.467E-01	2.882E-01	3.209E-02	1.124
		334.30		-9.113E-01	1.365E+00	1.772E+00	1.860E-01	-0.514
AM-241		59.54	*	3.207E-03	5.003E-02	7.377E-02	7.664E-03	0.043
CM-243		99.55		9.080E-02	1.048E-01	1.802E-01	2.052E-02	0.504
		103.76	*	2.910E-02	6.764E-02	1.059E-01	1.233E-02	0.275
		117.00		3.100E-02	1.373E-01	2.340E-01	2.932E-02	0.132
	+	209.75		1.975E+00	8.707E-01	1.200E+00	1.187E-01	1.645
		228.18		1.825E-01	1.992E-01	3.335E-01	3.423E-02	0.547
	+	277.60		3.266E-01	2.487E-01	2.906E-01	3.236E-02	1.124
AM-246		798.80		2.044E-02	1.492E-01	2.160E-01	2.258E-02	0.095
		1036.00		-1.089E-01	2.796E-01	4.519E-01	4.094E-02	-0.241
		1062.04		1.286E-01	2.540E-01	4.406E-01	3.936E-02	0.292
		1078.86	*	-8.488E-02	1.409E-01	2.226E-01	1.969E-02	-0.381
	+	278.00		1.343E+00	1.023E+00	1.200E+00	1.337E-01	1.119
		287.40		3.700E-01	1.130E+00	1.819E+00	2.019E-01	0.203
		402.60	*	-1.126E-02	3.615E-02	5.872E-02	5.413E-03	-0.192
CF-249		252.85		-3.141E-01	7.774E-01	1.214E+00	1.302E-01	-0.259
		333.44		3.088E-02	1.859E-01	2.370E-01	2.492E-02	0.130
		387.95	*	1.954E-02	3.794E-02	6.466E-02	5.951E-03	0.302
CF-251		176.60	*	-9.197E-03	1.007E-01	1.649E-01	1.510E-02	-0.056
		227.00		-6.700E-02	3.408E-01	5.445E-01	5.575E-02	-0.123
		285.00		2.011E-01	1.608E+00	2.562E+00	2.849E-01	0.079

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]G246444001      *
* Acquisition date   : 19-FEB-2010 17:59:40 Detector SN#      :              *
* Detector ID        : GAM25                      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 02:00:02.34           Half life ratio  : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 3-FEB-2010 12:00:00 Nuclide Library : SOLID            *
* Sample ID          : G246444001           Analyst initials: MXR1            *
* Batch Number       : 950788                Sample Quantity : 1.4498E+02 GRAM    *
* Recovery           : 1.00000              Carrier Weight   : 0.00000        *
*****
*
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                                    *
* CALIB. DATE/TIME   : 7-OCT-2009 09:38:43 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	3.261E+01	3.242E+00	4.933E-01	0.000E+00
CD-109	3.300E+00	7.684E-01	7.733E-01	0.000E+00
SN-126	3.238E-01	7.539E-02	7.573E-02	0.000E+00
BA-137M	2.254E-01	6.643E-02	5.756E-02	0.000E+00
CS-137	2.382E-01	7.023E-02	6.085E-02	0.000E+00
EU-155	1.642E-01	1.178E-01	1.256E-01	0.000E+00
HG-203	7.528E-02	5.621E-02	5.451E-02	0.000E+00
TL-208	5.279E-01	9.830E-02	6.266E-02	0.000E+00
BI-210	9.596E-01	6.403E-01	6.474E-01	0.000E+00
PB-210	9.596E-01	6.403E-01	6.474E-01	0.000E+00
PO-210	9.596E-01	6.392E-01	6.474E-01	0.000E+00
BI-211	4.039E+00	5.923E-01	2.824E-01	0.000E+00
PB-212	1.861E+00	2.305E-01	7.519E-02	0.000E+00
PO-212	1.861E+00	2.305E-01	7.519E-02	0.000E+00
BI-214	1.298E+00	2.099E-01	9.858E-02	0.000E+00
PB-214	1.405E+00	2.182E-01	9.848E-02	0.000E+00
PO-214	1.405E+00	2.182E-01	9.848E-02	0.000E+00
PO-216	1.861E+00	2.305E-01	7.519E-02	0.000E+00
PO-218	1.405E+00	2.182E-01	9.848E-02	0.000E+00
RA-224	4.602E+00	1.307E+00	8.566E-01	0.000E+00
RA-226	1.298E+00	2.099E-01	9.858E-02	0.000E+00
AC-228	1.828E+00	3.581E-01	2.021E-01	0.000E+00
RA-228	1.828E+00	3.581E-01	2.021E-01	0.000E+00
TH-228	1.891E+00	2.342E-01	7.642E-02	0.000E+00
TH-230	1.298E+00	2.099E-01	9.858E-02	0.000E+00
TH-232	1.828E+00	3.581E-01	2.021E-01	0.000E+00
TH-234	3.576E+00	1.010E+00	7.624E-01	0.000E+00
U-234	1.298E+00	2.099E-01	9.858E-02	0.000E+00
U-235	2.951E-01	2.607E-01	2.718E-01	0.000E+00
NP-237	9.509E-01	2.932E-01	2.372E-01	0.000E+00
U-238	3.576E+00	1.010E+00	7.624E-01	0.000E+00
AM-243	3.528E-01	5.318E-02	4.745E-02	0.000E+00
ANH-511	1.576E-01	6.737E-02	4.751E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-3.782E-01	3.231E-01	5.068E-01	0.000E+00	NOT IDENT.
NA-22	-4.098E-02	4.454E-02	6.857E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.376E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.068E-02	2.783E-02	5.015E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.781E-02	4.540E-02	0.000E+00	FAIL ABUN
SC-46	-9.243E-03	3.876E-02	6.402E-02	0.000E+00	FAIL ABUN
V-48	-2.178E-02	7.586E-02	1.231E-01	0.000E+00	NOT IDENT.
CR-51	4.509E-02	3.141E-01	5.662E-01	0.000E+00	NOT IDENT.
MN-52	-2.797E-01	2.370E-01	3.169E-01	0.000E+00	NOT IDENT.
MN-54	-4.169E-03	3.757E-02	6.336E-02	0.000E+00	NOT IDENT.
CO-56	2.986E-02	3.939E-02	7.082E-02	0.000E+00	NOT IDENT.
CO-57	-7.323E-04	1.787E-02	3.264E-02	0.000E+00	NOT IDENT.
CO-58	-2.074E-02	4.164E-02	6.823E-02	0.000E+00	NOT IDENT.
FE-59	2.059E-02	8.725E-02	1.533E-01	0.000E+00	FAIL ABUN
CO-60	-2.862E-02	3.935E-02	6.067E-02	0.000E+00	NOT IDENT.
ZN-65	-2.929E-02	1.049E-01	1.503E-01	0.000E+00	NOT IDENT.
GE-68	-8.942E-03	1.221E+00	2.106E+00	0.000E+00	NOT IDENT.
AS-73	1.354E-01	1.711E-01	3.109E-01	0.000E+00	NOT IDENT.
AS-74	1.478E-02	9.174E-02	1.552E-01	0.000E+00	NOT IDENT.
SE-75	1.150E-02	3.772E-02	6.509E-02	0.000E+00	FAIL ABUN
BR-77	-8.951E+00	1.332E+01	2.140E+01	0.000E+00	FAIL ABUN
SR-82	-1.043E-01	4.035E-01	6.788E-01	0.000E+00	NOT IDENT.
RB-83	-4.905E-02	6.420E-02	1.023E-01	0.000E+00	NOT IDENT.
RB-84	-4.373E-04	7.004E-02	1.183E-01	0.000E+00	NOT IDENT.
KR-85	9.189E+00	7.661E+00	1.250E+01	0.000E+00	NOT IDENT.
SR-85	4.768E-02	3.975E-02	6.484E-02	0.000E+00	NOT IDENT.
RB-86	8.315E-01	7.612E-01	1.430E+00	0.000E+00	NOT IDENT.
Y-88	2.587E-02	3.063E-02	5.936E-02	0.000E+00	NOT IDENT.
ZR-88	-6.254E-04	2.955E-02	5.171E-02	0.000E+00	NOT IDENT.
Y-91	-1.068E+01	2.067E+01	3.383E+01	0.000E+00	NOT IDENT.
NB-94	1.143E-05	3.467E-02	6.017E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.734E-02	8.923E-02	0.000E+00	NOT IDENT.
NB-95M	8.328E-02	1.090E-01	1.745E-01	0.000E+00	NOT IDENT.
ZR-95	6.826E-02	6.864E-02	1.262E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.146E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.839E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.571E+00	1.558E+01	2.551E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.001E+17	0.000E+00	0.000E+00	SHORT HLIF
RH-101	6.840E-03	2.659E-02	4.650E-02	0.000E+00	NOT IDENT.
RH-102	1.034E-02	2.661E-02	4.683E-02	0.000E+00	NOT IDENT.
RU-103	5.167E-04	3.763E-02	6.430E-02	0.000E+00	FAIL ABUN
RH-106	9.842E-02	2.931E-01	5.269E-01	0.000E+00	FAIL ABUN
RU-106	9.842E-02	2.929E-01	5.269E-01	0.000E+00	FAIL ABUN
AG-108M	-2.542E-02	3.111E-02	5.101E-02	0.000E+00	NOT IDENT.
AG-110M	-8.461E-03	3.876E-02	5.766E-02	0.000E+00	NOT IDENT.
IN-111	-3.492E-01	1.297E+00	1.938E+00	0.000E+00	NOT IDENT.
IN-113M	-3.643E-02	4.293E-02	7.148E-02	0.000E+00	NOT IDENT.
SN-113	-3.643E-02	4.293E-02	7.148E-02	0.000E+00	NOT IDENT.
IN-114M	-4.234E-02	1.654E-01	2.555E-01	0.000E+00	NOT IDENT.
CD-115	-1.615E+01	1.473E+01	2.273E+01	0.000E+00	NOT IDENT.
SN-117M	1.629E-02	4.504E-02	8.158E-02	0.000E+00	NOT IDENT.
SB-122	1.542E+00	2.675E+00	4.681E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.889E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.689E-03	2.236E-02	4.052E-02	0.000E+00	NOT IDENT.
I-124	-1.479E-01	7.600E-01	1.202E+00	0.000E+00	NOT IDENT.
SB-124	-1.581E-02	7.393E-02	1.210E-01	0.000E+00	FAIL ABUN
SB-125	5.252E-02	8.680E-02	1.558E-01	0.000E+00	FAIL ABUN
TE-125M	5.868E+00	7.059E+00	1.203E+01	0.000E+00	NOT IDENT.
I-126	6.731E-02	2.047E-01	3.208E-01	0.000E+00	NOT IDENT.
SB-126	4.867E-02	1.486E-01	2.317E-01	0.000E+00	FAIL ABUN
SB-127	-1.025E+00	1.664E+00	2.761E+00	0.000E+00	NOT IDENT.
XE-127	-5.360E-02	3.838E-02	6.201E-02	0.000E+00	FAIL ABUN
I-131	1.033E-02	1.073E-01	1.905E-01	0.000E+00	NOT IDENT.
TE-132	6.912E-01	7.563E-01	1.344E+00	0.000E+00	NOT IDENT.
BA-133	-1.688E-02	4.030E-02	6.054E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.334E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.359E-02	8.875E-02	0.000E+00	FAIL ABUN
CS-135	9.818E-02	1.508E-01	2.370E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.030E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.190E-02	1.060E-01	1.854E-01	0.000E+00	FAIL ABUN
CE-139	-1.854E-03	2.432E-02	4.315E-02	0.000E+00	NOT IDENT.
BA-140	2.114E-02	2.543E-01	4.328E-01	0.000E+00	NOT IDENT.

LA-140	5.403E-03	9.322E-02	1.605E-01	0.000E+00	FAIL ABUN
CE-141	5.083E-02	5.217E-02	8.805E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	3.364E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.231E-01	1.531E-01	2.668E-01	0.000E+00	NOT IDENT.
PM-144	1.097E-02	3.359E-02	5.961E-02	0.000E+00	NOT IDENT.
PR-144	7.436E-01	2.278E+00	4.042E+00	0.000E+00	NOT IDENT.
PM-146	-2.764E-03	4.065E-02	6.981E-02	0.000E+00	NOT IDENT.
ND-147	5.526E-01	5.446E-01	9.815E-01	0.000E+00	FAIL ABUN
PM-149	7.768E+01	1.153E+02	2.004E+02	0.000E+00	NOT IDENT.
EU-152	4.187E-02	8.908E-02	1.512E-01	0.000E+00	NOT IDENT.
GD-153	-9.711E-03	5.409E-02	8.912E-02	0.000E+00	FAIL ABUN
EU-154	-1.248E-01	1.259E-01	1.919E-01	0.000E+00	NOT IDENT.
TB-160	1.296E-02	1.388E-01	2.365E-01	0.000E+00	FAIL ABUN
HO-166M	-2.890E-02	5.550E-02	9.215E-02	0.000E+00	FAIL ABUN
TM-171	1.412E+00	1.238E+01	1.985E+01	0.000E+00	NOT IDENT.
LU-176	-1.725E-04	2.069E-02	3.598E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.372E+00	2.054E+00	0.000E+00	FAIL ABUN
LU-177M	-1.647E-01	1.599E-01	2.597E-01	0.000E+00	FAIL ABUN
HF-181	2.852E-02	4.357E-02	7.753E-02	0.000E+00	NOT IDENT.
W-181	-5.157E-02	1.537E-01	2.424E-01	0.000E+00	NOT IDENT.
TA-182	1.839E-01	2.089E-01	3.768E-01	0.000E+00	FAIL ABUN
RE-183	-2.683E-02	8.898E-02	1.567E-01	0.000E+00	FAIL ABUN
RE-184	-8.411E-02	2.040E-01	3.401E-01	0.000E+00	NOT IDENT.
OS-185	1.106E-02	3.875E-02	6.926E-02	0.000E+00	NOT IDENT.
RE-188	-9.414E-03	1.347E-01	2.405E-01	0.000E+00	NOT IDENT.
W-188	-3.123E+00	7.011E+00	1.086E+01	0.000E+00	FAIL ABUN
IR-192	-1.002E-02	2.849E-02	5.007E-02	0.000E+00	FAIL ABUN
AU-195	2.472E-01	1.503E-01	2.753E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	8.028E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.640E+00	7.004E+00	1.270E+01	0.000E+00	NOT IDENT.
TL-202	5.746E-02	7.127E-02	1.289E-01	0.000E+00	NOT IDENT.
BI-207	6.209E-02	5.775E-02	1.070E-01	0.000E+00	FAIL ABUN
TL-207	-2.744E-02	6.249E-01	9.821E-01	0.000E+00	FAIL ABUN
PO-209	-3.051E+00	7.230E+00	1.171E+01	0.000E+00	NOT IDENT.
PB-211	-9.536E-01	1.071E+00	1.473E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.121E-01	6.857E-01	0.000E+00	FAIL ABUN
PO-215	-2.744E-02	6.249E-01	9.821E-01	0.000E+00	FAIL ABUN
RN-219	1.529E-01	3.848E-01	6.861E-01	0.000E+00	FAIL ABUN
RN-220	1.450E+01	2.343E+01	4.138E+01	0.000E+00	NOT IDENT.
RA-223	-2.744E-02	6.249E-01	9.821E-01	0.000E+00	FAIL ABUN
AC-227	1.657E-01	3.333E-01	5.807E-01	0.000E+00	FAIL ABUN
TH-227	1.657E-01	3.337E-01	5.807E-01	0.000E+00	FAIL ABUN
TH-229	1.889E-01	4.000E-01	7.152E-01	0.000E+00	FAIL ABUN
PA-231	-7.582E-01	1.413E+00	2.173E+00	0.000E+00	FAIL ABUN
TH-231	-2.744E-02	6.249E-01	9.821E-01	0.000E+00	FAIL ABUN
U-231	-4.145E-01	8.347E-01	1.373E+00	0.000E+00	FAIL ABUN
PA-233	7.862E-03	5.374E-02	9.711E-02	0.000E+00	FAIL ABUN
PA-234	3.947E-02	3.006E-01	5.051E-01	0.000E+00	FAIL ABUN
PA-234M	2.545E+00	4.694E+00	8.163E+00	0.000E+00	NOT IDENT.
NP-236	-3.726E-02	6.377E-02	1.111E-01	0.000E+00	NOT IDENT.
NP-239	3.013E-02	1.307E-01	2.419E-01	0.000E+00	FAIL ABUN
AM-241	3.207E-03	4.903E-02	7.956E-02	0.000E+00	NOT IDENT.
CM-243	2.910E-02	6.628E-02	1.129E-01	0.000E+00	FAIL ABUN
AM-246	-8.488E-02	1.381E-01	2.254E-01	0.000E+00	NOT IDENT.
CM-247	-1.126E-02	3.543E-02	6.080E-02	0.000E+00	FAIL ABUN
CF-249	1.954E-02	3.718E-02	6.701E-02	0.000E+00	NOT IDENT.
CF-251	-9.197E-03	9.866E-02	1.738E-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]G246444001.CNF;1
Sample date        : 3-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 17:59:40
Sample ID          : G246444001           Sample quantity  : 1.44980E+02 GRAM
Detector name      : GAM25                 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00         Elapsed real time: 0 02:00:02.34  0.0%
Energy tolerance   : 1.50000 keV           Analyst Initials : MXR1
Abundance limit    : 75.00000              Sensitivity        : 5.00000
Batch ID           : 950788                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	1490	10.67*	1.109E+00	3.261E+01	3.261E+01	10.15
CD-109	88.03	435	3.72*	9.406E+00	3.221E+00	3.300E+00	23.76
SN-126	64.28	513	9.60	9.778E+00	1.415E+00	1.415E+00	27.15
	86.94	435	8.90	9.406E+00	1.346E+00	1.346E+00	46.91
	87.57	435	37.00*	9.406E+00	3.238E-01	3.238E-01	23.76
BA-137M	661.65	175	89.98*	2.232E+00	2.251E-01	2.254E-01	30.07
CS-137	661.65	175	85.12*	2.232E+00	2.380E-01	2.382E-01	30.08
EU-155	48.70	-----	4.60	9.341E+00	-----	Line Not Found	-----
	60.01	-----	1.11	9.748E+00	-----	Line Not Found	-----
	86.54	435	30.90	9.406E+00	3.877E-01	3.902E-01	23.79
	105.31	115	20.70*	8.825E+00	1.632E-01	1.642E-01	73.20
HG-203	70.83	-----	4.75	9.750E+00	-----	Line Not Found	-----
	72.87	78	8.00	9.720E+00	2.591E-01	3.302E-01	110.43
	82.60	160	3.55	9.490E+00	1.228E+00	1.565E+00	51.52
	279.20	83	77.30*	4.726E+00	5.908E-02	7.528E-02	76.18
TL-208	277.35	83	6.80	4.726E+00	6.716E-01	6.716E-01	76.66
	510.84	171	21.60	2.809E+00	7.294E-01	7.294E-01	44.42
	583.14	429	84.20*	2.497E+00	5.279E-01	5.279E-01	19.00
	860.37	81	12.46	1.766E+00	9.498E-01	9.498E-01	53.18
BI-210	46.50	138	4.05*	9.197E+00	9.582E-01	9.596E-01	68.09
PB-210	46.50	138	4.05*	9.197E+00	9.582E-01	9.596E-01	68.09
PO-210	46.50	138	4.05*	9.197E+00	9.582E-01	9.596E-01	67.97
BI-211	72.87	78	1.27	9.720E+00	1.632E+00	1.632E+00	109.98
	351.07	785	12.94*	3.888E+00	4.039E+00	4.039E+00	14.96
PB-212	74.81	872	10.70	9.694E+00	2.176E+00	2.176E+00	18.00
	77.11	1408	18.00	9.653E+00	2.098E+00	2.098E+00	12.60
	87.30	435	8.00	9.406E+00	1.498E+00	1.498E+00	25.78
	238.63	1712	44.60*	5.340E+00	1.861E+00	1.861E+00	12.64
	300.09	107	3.41	4.436E+00	1.831E+00	1.831E+00	61.16
PO-212	74.81	872	10.70	9.694E+00	2.176E+00	2.176E+00	18.00
	77.11	1408	18.00	9.653E+00	2.098E+00	2.098E+00	12.60
	87.30	435	8.00	9.406E+00	1.498E+00	1.498E+00	25.78

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	115.19	-----	0.60	8.498E+00	-----	Line Not Found	-----
	238.63	1712	44.60*	5.340E+00	1.861E+00	1.861E+00	12.64
	300.09	107	3.41	4.436E+00	1.831E+00	1.831E+00	61.16
BI-214	609.31	557	46.30*	2.401E+00	1.298E+00	1.298E+00	16.51
	1120.29	100	15.10	1.397E+00	1.232E+00	1.233E+00	50.83
	1764.49	94	15.80	9.416E-01	1.640E+00	1.640E+00	25.29
PB-214	74.81	872	6.21	9.694E+00	3.750E+00	3.750E+00	17.07
	77.11	1408	10.50	9.653E+00	3.597E+00	3.597E+00	14.72
	87.30	435	4.67	9.406E+00	2.566E+00	2.566E+00	24.98
	241.98	371	7.49	5.291E+00	2.427E+00	2.427E+00	29.52
	295.21	446	19.20	4.505E+00	1.334E+00	1.334E+00	23.51
	351.92	785	37.20*	3.888E+00	1.405E+00	1.405E+00	15.85
PO-214	74.81	872	6.21	9.694E+00	3.750E+00	3.750E+00	17.07
	77.11	1408	10.50	9.653E+00	3.597E+00	3.597E+00	14.72
	87.30	435	4.67	9.406E+00	2.566E+00	2.566E+00	24.98
	241.98	371	7.49	5.291E+00	2.427E+00	2.427E+00	29.52
	295.21	446	19.20	4.505E+00	1.334E+00	1.334E+00	23.51
	351.92	785	37.20*	3.888E+00	1.405E+00	1.405E+00	15.85
PO-216	74.81	872	10.70	9.694E+00	2.176E+00	2.176E+00	18.00
	77.11	1408	18.00	9.653E+00	2.098E+00	2.098E+00	12.60
	87.30	435	8.00	9.406E+00	1.498E+00	1.498E+00	25.78
	238.63	1712	44.60*	5.340E+00	1.861E+00	1.861E+00	12.64
	300.09	107	3.41	4.436E+00	1.831E+00	1.831E+00	61.16
PO-218	74.81	872	6.21	9.694E+00	3.750E+00	3.750E+00	17.07
	77.11	1408	10.50	9.653E+00	3.597E+00	3.597E+00	14.72
	87.30	435	4.67	9.406E+00	2.566E+00	2.566E+00	24.98
	241.98	371	7.49	5.291E+00	2.427E+00	2.427E+00	29.52
	295.21	446	19.20	4.505E+00	1.334E+00	1.334E+00	23.51
	351.92	785	37.20*	3.888E+00	1.405E+00	1.405E+00	15.85
RA-224	240.98	371	3.95*	5.291E+00	4.602E+00	4.602E+00	28.98
RA-226	609.31	557	46.30*	2.401E+00	1.298E+00	1.298E+00	16.51
	1120.29	100	15.10	1.397E+00	1.232E+00	1.233E+00	50.83
	1764.49	94	15.80	9.416E-01	1.640E+00	1.640E+00	25.29
AC-228	338.32	319	11.40	4.020E+00	1.802E+00	1.802E+00	46.15
	911.07	328	27.70*	1.678E+00	1.828E+00	1.828E+00	19.99
	969.11	112	16.60	1.588E+00	1.095E+00	1.095E+00	52.99
RA-228	338.32	319	11.40	4.020E+00	1.802E+00	1.802E+00	46.15
	911.07	328	27.70*	1.678E+00	1.828E+00	1.828E+00	19.99
	969.11	112	16.60	1.588E+00	1.095E+00	1.095E+00	52.99
TH-228	74.81	872	10.70	9.694E+00	2.176E+00	2.212E+00	15.42
	77.11	1408	18.00	9.653E+00	2.098E+00	2.133E+00	12.60
	87.30	435	8.00	9.406E+00	1.498E+00	1.522E+00	23.76
	238.63	1712	44.60*	5.340E+00	1.861E+00	1.891E+00	12.64
	300.09	107	3.41	4.436E+00	1.831E+00	1.861E+00	84.54
TH-230	609.31	557	46.30*	2.401E+00	1.298E+00	1.298E+00	16.51
	1120.29	100	15.10	1.397E+00	1.232E+00	1.232E+00	50.83
	1764.49	94	15.80	9.416E-01	1.640E+00	1.640E+00	25.29
TH-232	338.32	319	11.40	4.020E+00	1.802E+00	1.802E+00	22.40
	911.07	328	27.70*	1.678E+00	1.828E+00	1.828E+00	19.99

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	112	16.60	1.588E+00	1.095E+00	1.095E+00	52.99
TH-234	63.29	513	3.80*	9.778E+00	3.576E+00	3.576E+00	28.81
	92.38	902	5.41	9.237E+00	4.673E+00	4.673E+00	23.81
U-234	609.31	557	46.30*	2.401E+00	1.298E+00	1.298E+00	16.51
	1120.29	100	15.10	1.397E+00	1.232E+00	1.232E+00	50.83
	1764.49	94	15.80	9.416E-01	1.640E+00	1.640E+00	25.29
U-235	89.95	323	2.70	9.328E+00	3.324E+00	3.324E+00	40.06
	93.35	902	4.50	9.237E+00	5.618E+00	5.618E+00	32.02
	105.00	115	2.10	8.825E+00	1.609E+00	1.609E+00	78.57
	143.76	91	10.50*	7.567E+00	2.951E-01	2.951E-01	90.17
	163.35	-----	4.70	6.998E+00	-----	Line Not Found	-----
	185.71	350	54.00	6.421E+00	2.617E-01	2.617E-01	28.78
	205.31	-----	4.70	5.979E+00	-----	Line Not Found	-----
NP-237	86.50	435	12.60*	9.406E+00	9.509E-01	9.509E-01	31.47
	95.87	-----	2.60	9.143E+00	-----	Line Not Found	-----
U-238	63.29	513	3.80*	9.778E+00	3.576E+00	3.576E+00	28.81
	92.38	902	5.41	9.237E+00	4.673E+00	4.673E+00	17.72
AM-243	74.67	872	66.00*	9.694E+00	3.528E-01	3.528E-01	15.38
	86.72	435	0.34	9.406E+00	3.566E+01	3.566E+01	23.76
	117.66	-----	0.55	8.415E+00	-----	Line Not Found	-----
	142.18	-----	0.13	7.617E+00	-----	Line Not Found	-----
ANH-511	511.00	171	100.00*	2.809E+00	1.576E-01	1.576E-01	43.63

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G246444001

Page : 4
Acquisition date : 19-FEB-2010 17:59:40

Total number of lines in spectrum 36
Number of unidentified lines 1
Number of lines tentatively identified by NID 35 97.22%

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	3.261E+01	3.261E+01	0.331E+01	10.15	
CD-109	464.00D	1.02	3.221E+00	3.300E+00	0.784E+00	23.76	
SN-126	1.00E+05Y	1.00	3.238E-01	3.238E-01	0.769E-01	23.76	
BA-137M	30.17Y	1.00	2.251E-01	2.254E-01	0.678E-01	30.07	
CS-137	30.17Y	1.00	2.380E-01	2.382E-01	0.717E-01	30.08	
EU-155	4.96Y	1.01	1.632E-01	1.642E-01	1.202E-01	73.20	
HG-203	46.60D	1.27	5.908E-02	7.528E-02	5.735E-02	76.18	
TL-208	1.41E+10Y	1.00	5.279E-01	5.279E-01	1.003E-01	19.00	
BI-210	22.26Y	1.00	9.582E-01	9.596E-01	6.533E-01	68.09	
PB-210	22.26Y	1.00	9.582E-01	9.596E-01	6.533E-01	68.09	
PO-210	22.26Y	1.00	9.582E-01	9.596E-01	6.522E-01	67.97	
BI-211	7.04E+08Y	1.00	4.039E+00	4.039E+00	0.604E+00	14.96	
PB-212	1.41E+10Y	1.00	1.861E+00	1.861E+00	0.235E+00	12.64	
PO-212	1.41E+10Y	1.00	1.861E+00	1.861E+00	0.235E+00	12.64	
BI-214	1600.00Y	1.00	1.298E+00	1.298E+00	0.214E+00	16.51	
PB-214	1600.00Y	1.00	1.405E+00	1.405E+00	0.223E+00	15.85	
PO-214	1600.00Y	1.00	1.405E+00	1.405E+00	0.223E+00	15.85	
PO-216	1.41E+10Y	1.00	1.861E+00	1.861E+00	0.235E+00	12.64	
PO-218	1600.00Y	1.00	1.405E+00	1.405E+00	0.223E+00	15.85	
RA-224	1.41E+10Y	1.00	4.602E+00	4.602E+00	1.334E+00	28.98	
RA-226	1600.00Y	1.00	1.298E+00	1.298E+00	0.214E+00	16.51	
AC-228	1.41E+10Y	1.00	1.828E+00	1.828E+00	0.365E+00	19.99	
RA-228	1.41E+10Y	1.00	1.828E+00	1.828E+00	0.365E+00	19.99	
TH-228	1.91Y	1.02	1.861E+00	1.891E+00	0.239E+00	12.64	
TH-230	4.47E+09Y	1.00	1.298E+00	1.298E+00	0.214E+00	16.51	
TH-232	1.41E+10Y	1.00	1.828E+00	1.828E+00	0.365E+00	19.99	
TH-234	4.47E+09Y	1.00	3.576E+00	3.576E+00	1.030E+00	28.81	
U-234	4.47E+09Y	1.00	1.298E+00	1.298E+00	0.214E+00	16.51	
U-235	7.04E+08Y	1.00	2.951E-01	2.951E-01	2.660E-01	90.17	
NP-237	2.14E+06Y	1.00	9.509E-01	9.509E-01	2.992E-01	31.47	
U-238	4.47E+09Y	1.00	3.576E+00	3.576E+00	1.030E+00	28.81	
AM-243	7380.00Y	1.00	3.528E-01	3.528E-01	0.543E-01	15.38	
ANH-511	1.00E+09Y	1.00	1.576E-01	1.576E-01	0.687E-01	43.63	

Total Activity : 8.012E+01 8.025E+01

Grand Total Activity : 8.012E+01 8.025E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246444001

Page : 5
Acquisition date : 19-FEB-2010 17:59:40

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.14	148	285	1.08	417.82	414	8	2.05E-02	43.0	5.90E+00	T
0	270.02	98	216	1.28	539.56	536	9	1.36E-02	57.7	4.84E+00	T
0	328.06	105	252	1.24	655.64	649	12	1.46E-02	63.4	4.12E+00	T
0	462.52	110	162	1.73	924.54	918	12	1.53E-02	49.7	3.07E+00	T
0	726.49	137	86	1.50	1452.46	1444	14	1.91E-02	33.5	2.05E+00	T
0	794.47	61	80	1.15	1588.42	1581	14	8.43E-03	67.7	1.90E+00	T
0	1729.50	29	15	1.57	3458.58	3451	12	4.00E-03	65.5	9.58E-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]G246444001.CNF;1
* Acquisition date   : 19-FEB-2010 17:59:40   Detector SN#      :
* Detector ID        : GAM25                  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 02:00:02.34          Half life ratio  : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 3-FEB-2010 12:00:00.   Nuclide Library : SOLID
* Sample ID          : G246444001             Analyst initials: MXR1
* Batch Number       : 950788                 Sample Quantity : 1.44980E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 7-OCT-2009 09:38:43.34MS 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	3.261E+01	3.308E+00	4.907E-01	4.179E-02	66.449
CD-109	3.300E+00	7.840E-01	7.228E-01	7.767E-02	4.566
SN-126	3.238E-01	7.693E-02	7.078E-02	7.589E-03	4.575
BA-137M	2.254E-01	6.778E-02	5.622E-02	6.227E-03	4.009
CS-137	2.382E-01	7.166E-02	5.943E-02	6.591E-03	4.009
EU-155	1.642E-01	1.202E-01	1.178E-01	1.393E-02	1.394
HG-203	7.528E-02	5.735E-02	5.222E-02	5.927E-03	1.442
TL-208	5.279E-01	1.003E-01	6.103E-02	6.879E-03	8.650
BI-210	9.596E-01	6.533E-01	5.973E-01	6.159E-02	1.607
PB-210	9.596E-01	6.533E-01	5.973E-01	6.159E-02	1.607
PO-210	9.596E-01	6.522E-01	5.973E-01	5.689E-02	1.607
BI-211	4.039E+00	6.044E-01	2.719E-01	2.865E-02	14.852
PB-212	1.861E+00	2.352E-01	7.179E-02	8.173E-03	25.923
PO-212	1.861E+00	2.352E-01	7.179E-02	8.173E-03	25.923
BI-214	1.298E+00	2.142E-01	9.610E-02	1.160E-02	13.503
PB-214	1.405E+00	2.227E-01	9.483E-02	1.114E-02	14.815
PO-214	1.405E+00	2.227E-01	9.483E-02	1.114E-02	14.815
PO-216	1.861E+00	2.352E-01	7.179E-02	8.173E-03	25.923

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-218	1.405E+00	2.227E-01	9.483E-02	1.114E-02	14.815
RA-224	4.602E+00	1.334E+00	8.180E-01	8.596E-02	5.626
RA-226	1.298E+00	2.142E-01	9.610E-02	1.160E-02	13.503
AC-228	1.828E+00	3.654E-01	1.988E-01	2.365E-02	9.195
RA-228	1.828E+00	3.654E-01	1.988E-01	2.365E-02	9.195
TH-228	1.891E+00	2.390E-01	7.296E-02	8.306E-03	25.923
TH-230	1.298E+00	2.142E-01	9.609E-02	1.160E-02	13.503
TH-232	1.828E+00	3.654E-01	1.988E-01	2.365E-02	9.195
TH-234	3.576E+00	1.030E+00	7.078E-01	1.318E-01	5.052
U-234	1.298E+00	2.142E-01	9.609E-02	1.160E-02	13.503
U-235	2.951E-01	2.660E-01	2.567E-01	4.847E-02	1.149
NP-237	9.509E-01	2.992E-01	2.216E-01	5.148E-02	4.290
U-238	3.576E+00	1.030E+00	7.078E-01	1.318E-01	5.052
AM-243	3.528E-01	5.426E-02	4.421E-02	4.490E-03	7.981
ANH-511	1.576E-01	6.874E-02	4.613E-02	4.748E-03	3.415

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.782E-01		3.297E-01	4.913E-01	5.202E-02	-0.770
NA-22	-4.098E-02		4.545E-02	6.799E-02	5.575E-03	-0.603
NA-24	-2.301E+00		1.212E+00	Half-Life too short		
AL-26	1.068E-02		2.840E-02	5.014E-02	4.109E-03	0.213
TI-44	3.873E-01	+	4.878E-02	4.233E-02	4.359E-03	9.148
SC-46	-9.243E-03		3.956E-02	6.295E-02	6.028E-03	-0.147
V-48	-2.178E-02		7.741E-02	1.213E-01	1.124E-02	-0.180
CR-51	4.509E-02		3.205E-01	5.441E-01	6.042E-02	0.083
MN-52	-2.797E-01		2.418E-01	3.151E-01	2.597E-02	-0.888
MN-54	-4.169E-03		3.834E-02	6.221E-02	6.313E-03	-0.067
CO-56	2.986E-02		4.020E-02	6.956E-02	6.979E-03	0.429
CO-57	-7.323E-04		1.823E-02	3.072E-02	3.961E-03	-0.024
CO-58	-2.074E-02		4.249E-02	6.695E-02	6.946E-03	-0.310
FE-59	2.059E-02		8.903E-02	1.515E-01	1.427E-02	0.136
CO-60	-2.862E-02		4.015E-02	6.022E-02	4.891E-03	-0.475
ZN-65	-2.929E-02		1.070E-01	1.485E-01	1.283E-02	-0.197
GE-68	-8.942E-03		1.245E+00	2.080E+00	1.841E-01	-0.004
AS-73	1.354E-01		1.746E-01	2.876E-01	2.761E-02	0.471
AS-74	1.478E-02		9.361E-02	1.513E-01	1.639E-02	0.098
SE-75	1.150E-02		3.849E-02	6.228E-02	6.826E-03	0.185
BR-77	-8.951E+00		1.359E+01	2.079E+01	2.156E+00	-0.430
SR-82	-1.043E-01		4.118E-01	6.654E-01	7.062E-02	-0.157
RB-83	-4.905E-02		6.551E-02	9.938E-02	1.030E-02	-0.494
RB-84	-4.373E-04		7.146E-02	1.163E-01	1.124E-02	-0.004
KR-85	9.189E+00		7.817E+00	1.214E+01	1.252E+00	0.757
SR-85	4.768E-02		4.056E-02	6.297E-02	6.496E-03	0.757
RB-86	8.315E-01		7.767E-01	1.412E+00	1.251E-01	0.589
Y-88	2.587E-02		3.126E-02	5.937E-02	4.852E-03	0.436

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88	-6.254E-04		3.015E-02	4.991E-02	4.543E-03	-0.013
Y-91	-1.068E+01		2.109E+01	3.350E+01	2.757E+00	-0.319
NB-94	1.143E-05		3.538E-02	5.885E-02	6.462E-03	0.000
NB-95	9.149E-02		4.831E-02	8.744E-02	9.340E-03	1.046
NB-95M	8.328E-02		1.112E-01	1.666E-01	1.909E-02	0.500
ZR-95	6.826E-02		7.004E-02	1.236E-01	1.416E-02	0.552
NB-97	1.372E-01		1.605E-01	Half-Life too short		
ZR-97	8.035E+00		2.979E+00	Half-Life too short		
MO-99	-7.571E+00		1.590E+01	2.497E+01	4.130E+00	-0.303
TC-99M	6.615E+10		3.572E+11	Half-Life too short		
RH-101	6.840E-03		2.713E-02	4.422E-02	4.261E-03	0.155
RH-102	1.034E-02		2.715E-02	4.539E-02	4.532E-03	0.228
RU-103	5.167E-04		3.840E-02	6.240E-02	9.460E-03	0.008
RH-106	9.842E-02		2.991E-01	5.139E-01	7.691E-02	0.192
RU-106	9.842E-02		2.989E-01	5.139E-01	5.627E-02	0.192
AG-108M	-2.542E-02		3.175E-02	4.934E-02	4.876E-03	-0.515
AG-110M	-8.461E-03		3.955E-02	5.630E-02	6.345E-03	-0.150
IN-111	-3.492E-01		1.324E+00	1.851E+00	1.960E-01	-0.189
IN-113M	-3.643E-02		4.380E-02	6.900E-02	6.444E-03	-0.528
SN-113	-3.643E-02		4.380E-02	6.900E-02	6.444E-03	-0.528
IN-114M	-4.234E-02		1.687E-01	2.428E-01	2.298E-02	-0.174
CD-115	-1.615E+01		1.503E+01	2.209E+01	2.302E+00	-0.731
SN-117M	1.629E-02		4.595E-02	7.721E-02	7.496E-03	0.211
SB-122	1.542E+00		2.730E+00	4.555E+00	4.857E-01	0.339
I-123	7.340E+00		9.636E+00	Half-Life too short		
TE-123M	8.689E-03		2.281E-02	3.835E-02	3.724E-03	0.227
I-124	-1.479E-01		7.756E-01	1.171E+00	1.273E-01	-0.126
SB-124	-1.581E-02		7.544E-02	1.208E-01	1.044E-02	-0.131
SB-125	5.252E-02		8.857E-02	1.507E-01	1.455E-02	0.349
TE-125M	5.868E+00		7.203E+00	1.130E+01	1.500E+00	0.519
I-126	6.731E-02		2.089E-01	3.134E-01	3.470E-02	0.215
SB-126	4.867E-02		1.516E-01	2.267E-01	2.474E-02	0.215
SB-127	-1.025E+00		1.698E+00	2.698E+00	3.668E-01	-0.380
XE-127	-5.360E-02		3.916E-02	5.899E-02	5.746E-03	-0.909
I-131	1.033E-02		1.095E-01	1.836E-01	1.885E-02	0.056
TE-132	6.912E-01		7.717E-01	1.282E+00	2.164E-01	0.539
BA-133	-1.688E-02		4.112E-02	5.831E-02	8.268E-03	-0.290
I-133	6.254E-03		6.804E-03	Half-Life too short		
CS-134	1.096E-01	+	7.509E-02	8.704E-02	9.163E-03	1.259
CS-135	9.818E-02		1.539E-01	2.269E-01	2.739E-02	0.433
I-135	1.708E+10		5.254E+10	Half-Life too short		
CS-136	1.190E-02		1.082E-01	1.830E-01	1.712E-02	0.065
CE-139	-1.854E-03		2.482E-02	4.088E-02	3.645E-03	-0.045
BA-140	2.114E-02		2.595E-01	4.207E-01	1.417E-01	0.050
LA-140	5.403E-03		9.512E-02	1.600E-01	1.330E-02	0.034
CE-141	5.083E-02		5.324E-02	8.318E-02	9.250E-03	0.611
CE-143	9.789E-04		1.716E-04	Half-Life too short		
CE-144	-1.231E-01		1.563E-01	2.516E-01	4.448E-02	-0.489

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-144	1.097E-02		3.428E-02	5.829E-02	6.414E-03	0.188
PR-144	7.436E-01		2.324E+00	3.952E+00	4.348E-01	0.188
PM-146	-2.764E-03		4.148E-02	6.760E-02	7.894E-03	-0.041
ND-147	5.526E-01		5.557E-01	9.538E-01	1.533E-01	0.579
PM-149	7.768E+01		1.177E+02	1.921E+02	3.276E+01	0.404
EU-152	4.187E-02		9.090E-02	1.455E-01	1.563E-02	0.288
GD-153	-9.711E-03		5.520E-02	8.348E-02	9.401E-03	-0.116
EU-154	-1.248E-01		1.285E-01	1.903E-01	2.090E-02	-0.656
TB-160	1.296E-02		1.416E-01	2.325E-01	2.253E-02	0.056
HO-166M	-2.890E-02		5.663E-02	9.015E-02	9.870E-03	-0.321
TM-171	1.412E+00		1.263E+01	1.845E+01	1.831E+00	0.077
LU-176	-1.725E-04		2.111E-02	3.454E-02	3.769E-03	-0.005
LU-177	3.175E+00	+	1.400E+00	1.955E+00	1.928E-01	1.624
LU-177M	-1.647E-01		1.631E-01	2.509E-01	2.346E-02	-0.656
HF-181	2.852E-02		4.446E-02	7.518E-02	7.554E-03	0.379
W-181	-5.157E-02		1.568E-01	2.251E-01	2.228E-02	-0.229
TA-182	1.839E-01		2.132E-01	3.732E-01	3.069E-02	0.493
RE-183	-2.683E-02		9.079E-02	1.484E-01	1.381E-02	-0.181
RE-184	-8.411E-02		2.081E-01	3.251E-01	3.487E-02	-0.259
OS-185	1.106E-02		3.954E-02	6.761E-02	7.460E-03	0.164
RE-188	-9.414E-03		1.374E-01	2.275E-01	2.291E-02	-0.041
W-188	-3.123E+00		7.154E+00	1.041E+01	1.153E+00	-0.300
IR-192	-1.002E-02		2.907E-02	4.810E-02	5.195E-03	-0.208
AU-195	2.472E-01		1.534E-01	2.580E-01	2.927E-02	0.958
TL-200	2.115E-04		4.096E-04	Half-Life too short		
TL-201	3.640E+00		7.147E+00	1.204E+01	1.077E+00	0.302
TL-202	5.746E-02		7.273E-02	1.247E-01	1.201E-02	0.461
BI-207	6.209E-02		5.893E-02	1.057E-01	9.431E-03	0.588
TL-207	-2.744E-02		6.377E-01	9.440E-01	1.774E-01	-0.029
PO-209	-3.051E+00		7.378E+00	1.152E+01	1.093E+00	-0.265
PB-211	-9.536E-01		1.093E+00	1.423E+00	8.927E-01	-0.670
BI-212	1.468E+00	+	5.226E-01	6.711E-01	8.064E-02	2.187
PO-215	-2.744E-02		6.377E-01	9.440E-01	1.774E-01	-0.029
RN-219	1.529E-01		3.926E-01	6.626E-01	1.019E-01	0.231
RN-220	1.450E+01		2.391E+01	4.024E+01	4.255E+00	0.360
RA-223	-2.744E-02		6.377E-01	9.440E-01	1.774E-01	-0.029
AC-227	1.657E-01		3.401E-01	5.553E-01	9.251E-02	0.298
TH-227	1.657E-01		3.405E-01	5.553E-01	1.066E-01	0.298
TH-229	1.889E-01		4.082E-01	6.798E-01	6.485E-02	0.278
PA-231	-7.582E-01		1.442E+00	2.082E+00	3.486E-01	-0.364
TH-231	-2.744E-02		6.377E-01	9.440E-01	1.774E-01	-0.029
U-231	-4.145E-01		8.517E-01	1.285E+00	1.436E-01	-0.322
PA-233	7.862E-03		5.484E-02	9.326E-02	1.030E-02	0.084
PA-234	3.947E-02		3.067E-01	4.973E-01	9.511E-02	0.079
PA-234M	2.545E+00		4.790E+00	8.048E+00	8.430E-01	0.316
NP-236	-3.726E-02		6.508E-02	1.051E-01	1.001E-02	-0.354
NP-239	3.013E-02		1.334E-01	2.275E-01	2.850E-02	0.132
AM-241	3.207E-03		5.003E-02	7.377E-02	7.664E-03	0.043

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.910E-02		6.764E-02	1.059E-01	1.233E-02	0.275
AM-246	-8.488E-02		1.409E-01	2.226E-01	1.969E-02	-0.381
CM-247	-1.126E-02		3.615E-02	5.872E-02	5.413E-03	-0.192
CF-249	1.954E-02		3.794E-02	6.466E-02	5.951E-03	0.302
CF-251	-9.197E-03		1.007E-01	1.649E-01	1.510E-02	-0.056

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]G246444001          *
* Acquisition date   : 19-FEB-2010 17:59:40 Detector SN#      :              *
* Detector ID        : GAM25                      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 02:00:02.34           Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 3-FEB-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID          : G246444001           Analyst initials: MXR1           *
* Batch Number       : 950788              Sample Quantity : 1.4498E+02 GRAM   *
* Recovery           : 1.00000             Carrier Weight  : 0.00000         *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME  : 7-OCT-2009 09:38:43 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	3.261E+01	3.242E+00	2.468E-01	1.654E+00
CD-109	3.300E+00	7.684E-01	3.869E-01	3.920E-01
SN-126	3.238E-01	7.539E-02	3.789E-02	3.847E-02
BA-137M	2.254E-01	6.643E-02	2.880E-02	3.389E-02
CS-137	2.382E-01	7.023E-02	3.044E-02	3.583E-02
EU-155	1.642E-01	1.178E-01	6.283E-02	6.011E-02
HG-203	7.528E-02	5.621E-02	2.727E-02	2.868E-02
TL-208	5.279E-01	9.830E-02	3.135E-02	5.015E-02
BI-210	9.596E-01	6.403E-01	3.239E-01	3.267E-01
PB-210	9.596E-01	6.403E-01	3.239E-01	3.267E-01
PO-210	9.596E-01	6.392E-01	3.239E-01	3.261E-01
BI-211	4.039E+00	5.923E-01	1.413E-01	3.022E-01
PB-212	1.861E+00	2.305E-01	3.762E-02	1.176E-01
PO-212	1.861E+00	2.305E-01	3.762E-02	1.176E-01
BI-214	1.298E+00	2.099E-01	4.932E-02	1.071E-01
PB-214	1.405E+00	2.182E-01	4.927E-02	1.113E-01
PO-214	1.405E+00	2.182E-01	4.927E-02	1.113E-01
PO-216	1.861E+00	2.305E-01	3.762E-02	1.176E-01
PO-218	1.405E+00	2.182E-01	4.927E-02	1.113E-01
RA-224	4.602E+00	1.307E+00	4.286E-01	6.669E-01
RA-226	1.298E+00	2.099E-01	4.932E-02	1.071E-01
AC-228	1.828E+00	3.581E-01	1.011E-01	1.827E-01
RA-228	1.828E+00	3.581E-01	1.011E-01	1.827E-01
TH-228	1.891E+00	2.342E-01	3.823E-02	1.195E-01
TH-230	1.298E+00	2.099E-01	4.932E-02	1.071E-01
TH-232	1.828E+00	3.581E-01	1.011E-01	1.827E-01
TH-234	3.576E+00	1.010E+00	3.814E-01	5.151E-01
U-234	1.298E+00	2.099E-01	4.932E-02	1.071E-01
U-235	2.951E-01	2.607E-01	1.360E-01	1.330E-01
NP-237	9.509E-01	2.932E-01	1.187E-01	1.496E-01
U-238	3.576E+00	1.010E+00	3.814E-01	5.151E-01
AM-243	3.528E-01	5.318E-02	2.374E-02	2.713E-02
ANH-511	1.576E-01	6.737E-02	2.377E-02	3.437E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-3.782E-01	3.231E-01	2.535E-01	1.648E-01 NOT IDENT.
NA-22	-4.098E-02	4.454E-02	3.431E-02	2.273E-02 NOT IDENT.
NA-24	-2.301E+06	2.376E+06	0.000E+00	1.212E+06 SHORT HLIF
AL-26	1.068E-02	2.783E-02	2.509E-02	1.420E-02 NOT IDENT.
TI-44	3.873E-01	4.781E-02	2.271E-02	2.439E-02 FAIL ABUN
SC-46	-9.243E-03	3.876E-02	3.203E-02	1.978E-02 FAIL ABUN
V-48	-2.178E-02	7.586E-02	6.157E-02	3.870E-02 NOT IDENT.
CR-51	4.509E-02	3.141E-01	2.833E-01	1.603E-01 NOT IDENT.
MN-52	-2.797E-01	2.370E-01	1.586E-01	1.209E-01 NOT IDENT.
MN-54	-4.169E-03	3.757E-02	3.170E-02	1.917E-02 NOT IDENT.
CO-56	2.986E-02	3.939E-02	3.543E-02	2.010E-02 NOT IDENT.
CO-57	-7.323E-04	1.787E-02	1.633E-02	9.117E-03 NOT IDENT.
CO-58	-2.074E-02	4.164E-02	3.413E-02	2.124E-02 NOT IDENT.
FE-59	2.059E-02	8.725E-02	7.669E-02	4.452E-02 FAIL ABUN
CO-60	-2.862E-02	3.935E-02	3.036E-02	2.007E-02 NOT IDENT.
ZN-65	-2.929E-02	1.049E-01	7.517E-02	5.350E-02 NOT IDENT.
GE-68	-8.942E-03	1.221E+00	1.054E+00	6.227E-01 NOT IDENT.
AS-73	1.354E-01	1.711E-01	1.555E-01	8.729E-02 NOT IDENT.
AS-74	1.478E-02	9.174E-02	7.767E-02	4.680E-02 NOT IDENT.
SE-75	1.150E-02	3.772E-02	3.256E-02	1.924E-02 FAIL ABUN
BR-77	-8.951E+00	1.332E+01	1.071E+01	6.797E+00 FAIL ABUN
SR-82	-1.043E-01	4.035E-01	3.396E-01	2.059E-01 NOT IDENT.
RB-83	-4.905E-02	6.420E-02	5.119E-02	3.276E-02 NOT IDENT.
RB-84	-4.373E-04	7.004E-02	5.919E-02	3.573E-02 NOT IDENT.
KR-85	9.189E+00	7.661E+00	6.252E+00	3.908E+00 NOT IDENT.
SR-85	4.768E-02	3.975E-02	3.244E-02	2.028E-02 NOT IDENT.
RB-86	8.315E-01	7.612E-01	7.153E-01	3.883E-01 NOT IDENT.
Y-88	2.587E-02	3.063E-02	2.970E-02	1.563E-02 NOT IDENT.
ZR-88	-6.254E-04	2.955E-02	2.587E-02	1.508E-02 NOT IDENT.
Y-91	-1.068E+01	2.067E+01	1.693E+01	1.055E+01 NOT IDENT.
NB-94	1.143E-05	3.467E-02	3.010E-02	1.769E-02 NOT IDENT.
NB-95	9.149E-02	4.734E-02	4.464E-02	2.415E-02 NOT IDENT.
NB-95M	8.328E-02	1.090E-01	8.730E-02	5.562E-02 NOT IDENT.
ZR-95	6.826E-02	6.864E-02	6.314E-02	3.502E-02 NOT IDENT.
NB-97	1.372E+05	3.146E+05	0.000E+00	1.605E+05 SHORT HLIF
ZR-97	8.035E+06	5.839E+06	0.000E+00	2.979E+06 SHORT HLIF
MO-99	-7.571E+00	1.558E+01	1.276E+01	7.950E+00 NOT IDENT.
TC-99M	6.615E+16	7.001E+17	0.000E+00	0.000E+00 SHORT HLIF
RH-101	6.840E-03	2.659E-02	2.326E-02	1.356E-02 NOT IDENT.
RH-102	1.034E-02	2.661E-02	2.343E-02	1.358E-02 NOT IDENT.
RU-103	5.167E-04	3.763E-02	3.217E-02	1.920E-02 FAIL ABUN
RH-106	9.842E-02	2.931E-01	2.636E-01	1.495E-01 FAIL ABUN
RU-106	9.842E-02	2.929E-01	2.636E-01	1.495E-01 FAIL ABUN
AG-108M	-2.542E-02	3.111E-02	2.552E-02	1.587E-02 NOT IDENT.
AG-110M	-8.461E-03	3.876E-02	2.885E-02	1.977E-02 NOT IDENT.
IN-111	-3.492E-01	1.297E+00	9.693E-01	6.618E-01 NOT IDENT.
IN-113M	-3.643E-02	4.293E-02	3.576E-02	2.190E-02 NOT IDENT.
SN-113	-3.643E-02	4.293E-02	3.576E-02	2.190E-02 NOT IDENT.
IN-114M	-4.234E-02	1.654E-01	1.278E-01	8.437E-02 NOT IDENT.
CD-115	-1.615E+01	1.473E+01	1.137E+01	7.517E+00 NOT IDENT.
SN-117M	1.629E-02	4.504E-02	4.081E-02	2.298E-02 NOT IDENT.
SB-122	1.542E+00	2.675E+00	2.342E+00	1.365E+00 NOT IDENT.
I-123	7.340E+06	1.889E+07	0.000E+00	9.636E+06 SHORT HLIF
TE-123M	8.689E-03	2.236E-02	2.027E-02	1.141E-02 NOT IDENT.
I-124	-1.479E-01	7.600E-01	6.014E-01	3.878E-01 NOT IDENT.
SB-124	-1.581E-02	7.393E-02	6.054E-02	3.772E-02 FAIL ABUN
SB-125	5.252E-02	8.680E-02	7.795E-02	4.429E-02 FAIL ABUN
TE-125M	5.868E+00	7.059E+00	6.018E+00	3.602E+00 NOT IDENT.
I-126	6.731E-02	2.047E-01	1.605E-01	1.044E-01 NOT IDENT.
SB-126	4.867E-02	1.486E-01	1.159E-01	7.579E-02 FAIL ABUN
SB-127	-1.025E+00	1.664E+00	1.381E+00	8.489E-01 NOT IDENT.
XE-127	-5.360E-02	3.838E-02	3.102E-02	1.958E-02 FAIL ABUN
I-131	1.033E-02	1.073E-01	9.530E-02	5.473E-02 NOT IDENT.
TE-132	6.912E-01	7.563E-01	6.726E-01	3.858E-01 NOT IDENT.
BA-133	-1.688E-02	4.030E-02	3.029E-02	2.056E-02 NOT IDENT.
I-133	6.254E+03	1.334E+04	0.000E+00	6.804E+03 SHORT HLIF
CS-134	1.096E-01	7.359E-02	4.440E-02	3.755E-02 FAIL ABUN
CS-135	9.818E-02	1.508E-01	1.186E-01	7.694E-02 NOT IDENT.
I-135	1.708E+16	1.030E+17	0.000E+00	0.000E+00 SHORT HLIF
CS-136	1.190E-02	1.060E-01	9.277E-02	5.409E-02 FAIL ABUN
CE-139	-1.854E-03	2.432E-02	2.159E-02	1.241E-02 NOT IDENT.
BA-140	2.114E-02	2.543E-01	2.165E-01	1.297E-01 NOT IDENT.

LA-140	5.403E-03	9.322E-02	8.029E-02	4.756E-02	FAIL ABUN
CE-141	5.083E-02	5.217E-02	4.405E-02	2.662E-02	NOT IDENT.
CE-143	9.789E+02	3.364E+02	0.000E+00	1.716E+02	SHORT HLIF
CE-144	-1.231E-01	1.531E-01	1.335E-01	7.813E-02	NOT IDENT.
PM-144	1.097E-02	3.359E-02	2.982E-02	1.714E-02	NOT IDENT.
PR-144	7.436E-01	2.278E+00	2.022E+00	1.162E+00	NOT IDENT.
PM-146	-2.764E-03	4.065E-02	3.492E-02	2.074E-02	NOT IDENT.
ND-147	5.526E-01	5.446E-01	4.910E-01	2.779E-01	FAIL ABUN
PM-149	7.768E+01	1.153E+02	1.003E+02	5.884E+01	NOT IDENT.
EU-152	4.187E-02	8.908E-02	7.565E-02	4.545E-02	NOT IDENT.
GD-153	-9.711E-03	5.409E-02	4.459E-02	2.760E-02	FAIL ABUN
EU-154	-1.248E-01	1.259E-01	9.600E-02	6.424E-02	NOT IDENT.
TB-160	1.296E-02	1.388E-01	1.183E-01	7.080E-02	FAIL ABUN
HO-166M	-2.890E-02	5.550E-02	4.610E-02	2.832E-02	FAIL ABUN
TM-171	1.412E+00	1.238E+01	9.932E+00	6.314E+00	NOT IDENT.
LU-176	-1.725E-04	2.069E-02	1.800E-02	1.056E-02	FAIL ABUN
LU-177	3.175E+00	1.372E+00	1.028E+00	6.999E-01	FAIL ABUN
LU-177M	-1.647E-01	1.599E-01	1.299E-01	8.157E-02	FAIL ABUN
HF-181	2.852E-02	4.357E-02	3.879E-02	2.223E-02	NOT IDENT.
W-181	-5.157E-02	1.537E-01	1.213E-01	7.840E-02	NOT IDENT.
TA-182	1.839E-01	2.089E-01	1.885E-01	1.066E-01	FAIL ABUN
RE-183	-2.683E-02	8.898E-02	7.840E-02	4.540E-02	FAIL ABUN
RE-184	-8.411E-02	2.040E-01	1.701E-01	1.041E-01	NOT IDENT.
OS-185	1.106E-02	3.875E-02	3.465E-02	1.977E-02	NOT IDENT.
RE-188	-9.414E-03	1.347E-01	1.203E-01	6.870E-02	NOT IDENT.
W-188	-3.123E+00	7.011E+00	5.432E+00	3.577E+00	FAIL ABUN
IR-192	-1.002E-02	2.849E-02	2.505E-02	1.454E-02	FAIL ABUN
AU-195	2.472E-01	1.503E-01	1.377E-01	7.670E-02	FAIL ABUN
TL-200	2.115E+02	8.028E+02	0.000E+00	4.096E+02	SHORT HLIF
TL-201	3.640E+00	7.004E+00	6.356E+00	3.573E+00	NOT IDENT.
TL-202	5.746E-02	7.127E-02	6.447E-02	3.636E-02	NOT IDENT.
BI-207	6.209E-02	5.775E-02	5.354E-02	2.946E-02	FAIL ABUN
TL-207	-2.744E-02	6.249E-01	4.913E-01	3.188E-01	FAIL ABUN
PO-209	-3.051E+00	7.230E+00	5.860E+00	3.689E+00	NOT IDENT.
PB-211	-9.536E-01	1.071E+00	7.368E-01	5.467E-01	NOT IDENT.
BI-212	1.468E+00	5.121E-01	3.430E-01	2.613E-01	FAIL ABUN
PO-215	-2.744E-02	6.249E-01	4.913E-01	3.188E-01	FAIL ABUN
RN-219	1.529E-01	3.848E-01	3.432E-01	1.963E-01	FAIL ABUN
RN-220	1.450E+01	2.343E+01	2.070E+01	1.196E+01	NOT IDENT.
RA-223	-2.744E-02	6.249E-01	4.913E-01	3.188E-01	FAIL ABUN
AC-227	1.657E-01	3.333E-01	2.905E-01	1.701E-01	FAIL ABUN
TH-227	1.657E-01	3.337E-01	2.905E-01	1.702E-01	FAIL ABUN
TH-229	1.889E-01	4.000E-01	3.578E-01	2.041E-01	FAIL ABUN
PA-231	-7.582E-01	1.413E+00	1.087E+00	7.210E-01	FAIL ABUN
TH-231	-2.744E-02	6.249E-01	4.913E-01	3.188E-01	FAIL ABUN
U-231	-4.145E-01	8.347E-01	6.868E-01	4.259E-01	FAIL ABUN
PA-233	7.862E-03	5.374E-02	4.858E-02	2.742E-02	FAIL ABUN
PA-234	3.947E-02	3.006E-01	2.527E-01	1.533E-01	FAIL ABUN
PA-234M	2.545E+00	4.694E+00	4.084E+00	2.395E+00	NOT IDENT.
NP-236	-3.726E-02	6.377E-02	5.557E-02	3.254E-02	NOT IDENT.
NP-239	3.013E-02	1.307E-01	1.210E-01	6.670E-02	FAIL ABUN
AM-241	3.207E-03	4.903E-02	3.980E-02	2.502E-02	NOT IDENT.
CM-243	2.910E-02	6.628E-02	5.649E-02	3.382E-02	FAIL ABUN
AM-246	-8.488E-02	1.381E-01	1.128E-01	7.045E-02	NOT IDENT.
CM-247	-1.126E-02	3.543E-02	3.042E-02	1.808E-02	FAIL ABUN
CF-249	1.954E-02	3.718E-02	3.352E-02	1.897E-02	NOT IDENT.
CF-251	-9.197E-03	9.866E-02	8.696E-02	5.034E-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	339.8526
46.50	339.8526
46.50	339.8526
48.70	304.1634
49.72	325.7164
51.35	372.3000
52.39	341.1512
52.97	346.3700
53.15	375.1519
53.44	374.5089
54.07	380.9955
56.28	419.9926
56.28	419.9984
57.37	0.0000
57.53	432.1464
57.53	432.1493
57.60	425.5641
57.98	425.0821
57.98	425.0821
59.32	442.3019
59.32	442.3019
59.40	454.4384
59.54	454.6834
59.72	454.9993
60.01	443.4798
61.10	448.3430
61.14	469.5482
61.30	469.8329
63.00	476.6282
63.29	477.1392
63.29	477.1392
63.58	477.6479
64.28	522.4072
65.12	543.9197
65.20	544.0777
65.20	544.0777
66.05	533.4440
66.72	525.4655
66.83	493.3040
66.91	493.4407
67.20	486.2306
67.20	486.2306
67.75	495.2890
67.85	533.7561
68.90	553.1797
68.90	553.1797
69.30	552.7818
69.67	546.4844
70.82	506.4280
70.82	506.4280
70.83	506.4445
72.80	548.7498
72.87	548.8775
72.87	548.8775
74.67	552.1414
74.81	552.3932
74.81	552.3932
74.81	552.3932
74.81	552.3932
74.81	552.3932
74.81	552.3932
74.97	552.6806
75.28	553.2376
75.70	553.9933
77.11	556.5050
77.11	556.5050

77.11	556.5050
77.11	556.5050
77.11	556.5050
77.11	556.5050
77.11	556.5050
78.38	558.7471
79.62	521.1112
79.80	461.8614
79.80	461.8614
80.11	462.3052
80.18	462.4044
80.30	466.6061
80.30	466.6061
80.57	466.9949
81.00	484.5734
81.07	484.6771
81.07	484.6771
81.07	484.6771
81.07	484.6771
82.60	469.9015
83.37	457.1595
83.78	420.2604
83.78	420.2604
83.78	420.2604
83.78	420.2604
84.21	420.8011
84.90	475.6013
85.43	476.3473
86.29	477.5521
86.50	477.8452
86.54	477.9014
86.59	477.9725
86.72	416.5354
86.79	416.6179
86.94	416.8036
87.30	417.2394
87.30	417.2394
87.30	417.2394
87.30	417.2394
87.30	417.2394
87.30	417.2394
87.57	417.5669
87.88	417.9408
88.03	418.1213
88.36	418.5184
88.47	418.6525
89.95	385.5984
91.11	386.8638
92.29	355.5883
92.38	355.6782
92.38	355.6782
93.35	356.6337
94.00	357.2729
94.67	357.9251
94.67	357.9294
94.90	358.1548
94.90	358.1548
94.90	358.1548
94.90	358.1548
95.87	373.0083
95.87	373.0083
96.73	358.6685
97.43	355.5286
98.44	305.5591
98.44	305.5591
98.88	296.7369
99.55	317.5228
99.55	317.5228
99.86	354.7558
100.00	354.8850
100.10	354.9825
103.18	314.5089
103.76	299.4855
105.00	315.9665
105.31	316.2141
108.00	287.0296
109.28	301.0222

111.00	375.8856
111.00	375.8856
111.76	340.5854
112.95	302.8232
115.19	349.5688
116.30	299.0162
117.00	302.1692
117.00	302.1692
117.66	298.1822
121.11	296.0580
121.62	303.5842
121.78	302.7957
122.06	301.1878
122.32	300.4638
122.32	300.4638
122.32	300.4638
122.32	300.4638
123.07	305.4738
127.23	334.6614
129.76	341.0667
131.20	366.8823
133.02	309.3672
133.54	331.8274
135.34	277.5635
136.00	285.3537
136.25	279.9392
136.48	284.7083
140.51	290.3294
140.51	0.0000
142.18	308.1893
142.65	318.3401
143.76	287.0420
144.24	287.3151
144.24	287.3151
144.24	287.3151
144.24	287.3151
145.22	264.7464
145.44	264.8606
147.16	282.8044
152.43	286.1523
152.70	278.6382
153.22	286.5782
154.21	305.3549
154.21	305.3549
154.21	305.3549
154.21	305.3549
155.03	306.7857
156.02	317.9486
158.56	279.7542
159.00	0.0000
159.00	282.8839
160.31	319.4919
161.27	329.7753
162.32	311.8815
162.64	303.2838
163.35	298.7877
163.89	269.7559
165.85	306.9854
167.43	260.6329
171.28	260.4022
171.86	242.8217
172.10	248.8705
176.55	263.7476
176.60	263.7690
181.06	268.7546
184.41	293.0045
185.71	275.8737
186.00	276.0010
190.27	272.7852
192.34	276.7511
193.63	240.3365
197.04	266.3906
198.01	243.0059
198.60	218.3836
200.40	241.8171
201.83	274.5864
202.84	280.2138
205.31	211.7223

208.36	310.3556
208.81	269.0495
209.75	228.9011
209.75	228.9011
210.97	232.4734
215.65	236.7039
216.55	245.5127
218.09	242.8553
222.10	243.1607
223.80	252.3267
226.40	261.8558
227.00	258.8379
227.08	258.8672
227.20	255.6723
228.16	221.4411
228.18	221.4473
228.18	221.4473
231.56	0.0000
235.69	207.8827
236.00	207.9679
236.00	207.9679
238.63	201.5738
238.63	201.5738
238.63	201.5738
238.63	201.5738
239.00	201.6711
240.98	202.1971
241.98	202.4610
241.98	202.4610
241.98	202.4610
244.69	205.3826
245.39	207.2258
247.94	195.5986
248.90	190.9525
249.79	214.5099
252.40	221.9094
252.85	214.2266
252.85	214.2266
254.15	0.0000
256.20	194.9570
256.20	194.9570
260.50	205.0092
260.90	184.8237
262.80	185.2541
264.65	180.0104
268.24	185.9067
268.79	189.4432
269.46	181.0553
269.46	181.0553
269.46	181.0553
269.46	181.0553
271.23	169.4553
273.65	168.2252
276.40	194.6015
277.35	182.7471
277.60	182.8021
277.60	182.8021
278.00	182.8862
278.60	183.0156
279.20	153.7700
279.53	150.3729
280.46	157.4560
281.68	171.5400
283.67	187.5597
284.30	186.5362
285.00	185.5273
285.90	165.9838
286.10	166.0216
286.10	166.0216
287.40	180.2216
288.45	0.0000
290.67	197.4585
290.80	180.6787
291.72	182.2666
293.26	0.0000
293.70	174.2388
295.21	185.7926
295.21	185.7926

295.21	185.7926
295.96	185.9473
296.50	186.0568
297.23	112.8535
298.57	113.0195
299.80	178.2457
299.80	178.2457
300.09	178.3011
300.09	178.3011
300.09	178.3011
300.09	178.3011
300.12	178.3072
301.29	164.3654
302.84	147.6109
303.76	143.4960
303.91	143.5181
304.40	137.9077
304.40	137.9077
304.84	147.9308
306.84	156.8010
308.46	174.0319
311.98	160.3505
316.51	157.5150
318.01	167.6798
319.02	159.7337
319.41	147.1591
320.08	149.9714
323.87	162.5313
323.87	162.5313
323.87	162.5313
323.87	162.5313
325.23	174.3838
328.77	169.1771
333.44	146.5308
334.20	175.9717
334.20	175.9717
334.30	175.9893
338.28	163.8031
338.28	163.8031
338.28	163.8031
338.28	163.8031
338.32	163.8086
338.32	163.8086
338.32	163.8086
340.50	157.8903
340.57	157.9008
344.27	143.1710
345.85	155.7517
350.59	0.0000
351.07	129.5171
351.92	129.6232
351.92	129.6232
351.92	129.6232
355.39	0.0000
356.01	139.3025
364.48	128.3363
366.43	128.5687
367.43	132.4719
367.94	0.0000
369.80	131.8120
374.96	129.5773
383.85	160.3899
387.95	142.6591
388.63	137.9225
391.69	172.1414
391.69	172.1414
392.90	155.8656
398.62	159.5582
400.65	134.4961
401.10	151.1236
401.81	140.4844
402.60	161.0799
404.84	176.0614
410.95	137.6459
411.60	148.5415
413.65	148.7950
414.70	137.0911
415.30	134.1987

415.76	129.3149
417.63	0.0000
418.52	105.8653
423.70	122.2155
427.08	138.4952
427.89	122.6340
432.53	136.1058
433.93	143.2706
439.47	118.7472
439.56	119.7626
439.89	119.7935
443.98	142.4006
444.90	113.1946
445.03	101.0773
445.03	101.0773
445.03	101.0773
445.03	101.0773
453.90	121.1154
463.38	104.9781
468.07	86.4212
473.00	115.6538
475.06	101.3526
475.35	113.7883
476.78	140.8331
477.59	141.9523
477.96	132.6641
482.03	116.4297
484.57	140.5989
487.03	100.1616
490.36	0.0000
492.35	89.0272
497.08	98.7878
507.63	0.0000
510.53	0.0000
510.84	115.6703
511.00	115.6836
511.85	115.7518
511.85	115.7518
513.99	105.5022
513.99	105.5022
520.41	105.7585
520.65	103.6368
527.90	114.8892
528.96	0.0000
529.64	105.3512
529.87	0.0000
531.02	74.2432
537.32	91.8481
543.00	82.4338
546.56	0.0000
549.76	77.3551
552.65	80.7749
555.20	91.8442
563.23	95.6182
563.90	93.4616
568.70	98.1586
569.32	99.2999
569.50	99.3137
569.67	99.3246
573.80	81.8792
574.00	81.8905
574.64	80.8173
578.91	110.1166
579.30	0.0000
583.14	113.5236
585.48	98.0842
591.81	97.3520
592.07	97.3652
593.00	97.4210
595.88	90.8630
600.56	86.6227
602.52	0.0000
602.71	92.6895
602.71	92.6895
603.60	97.6772
604.41	106.7456
604.70	106.7658
609.31	78.7121

609.31	78.7121
609.31	78.7121
609.31	78.7121
610.33	84.4945
612.46	77.0479
614.37	86.2120
618.01	87.3070
621.84	82.9464
621.84	82.9464
631.29	84.3251
633.02	78.9033
633.10	78.9075
634.78	65.2087
635.90	66.1693
636.97	80.0035
645.85	75.7919
646.12	75.8040
656.30	88.3273
657.75	96.1535
657.90	0.0000
661.65	87.6614
661.65	87.6614
664.57	0.0000
666.33	84.1487
666.33	84.1487
675.00	89.2504
677.61	97.8453
685.20	101.0857
692.80	99.6039
695.00	93.0713
696.49	90.2941
696.49	90.2941
697.00	89.3688
697.49	98.9016
698.33	104.6558
698.50	104.6638
699.00	97.0793
702.63	106.8019
706.10	109.8621
706.58	0.0000
706.67	89.8278
709.31	93.7819
711.68	84.3154
713.82	83.4508
717.42	74.7453
720.50	62.5657
721.93	0.0000
722.20	75.4666
722.78	72.2772
722.78	72.2772
722.89	72.2809
722.95	70.6764
723.30	70.6890
724.18	77.1504
727.18	106.2483
733.00	73.8690
735.90	96.0489
739.58	87.4819
742.81	82.7567
744.21	80.8662
747.13	76.1071
751.79	91.9323
752.31	79.2380
753.82	79.2993
755.35	74.4600
756.15	64.6884
756.87	62.7516
763.93	137.7476
765.79	83.7092
766.42	80.7788
766.84	97.5474
776.49	91.0769
778.00	98.0791
778.57	98.1057
778.89	98.1226
783.80	68.5502
785.46	72.5812
792.07	61.5086

795.84	79.9375
796.30	86.6180
798.80	66.7074
801.93	81.4206
805.60	75.2875
810.29	88.5328
810.76	89.5584
815.85	72.6240
817.79	81.7752
818.51	80.7930
819.60	63.6568
826.30	57.7723
828.27	0.0000
831.60	85.3453
831.96	85.3597
834.83	84.4529
836.80	0.0000
846.75	62.4044
848.13	73.7033
856.28	0.0000
856.80	59.9455
860.37	71.0198
867.32	66.3700
867.82	68.4141
871.10	61.0152
873.19	72.4558
874.81	67.3280
875.33	0.0000
876.40	71.5218
879.36	64.3492
880.27	66.4516
880.51	67.4962
881.50	64.4082
883.24	65.4963
884.67	63.4573
889.25	66.7094
896.60	67.9659
898.02	75.3311
899.00	70.1292
903.28	68.9086
911.07	58.9162
911.07	58.9162
911.07	58.9162
919.63	50.4472
920.93	55.9916
925.00	77.2524
925.24	78.3179
926.50	63.5347
935.52	62.7091
937.48	73.3967
944.10	62.9295
946.00	58.7087
949.00	64.1250
962.29	100.2878
964.01	78.8512
966.15	78.9193
968.20	128.1690
969.11	75.4209
969.11	75.4209
969.11	75.4209
977.42	55.1313
980.50	63.8571
983.50	67.1843
989.30	67.3372
996.32	75.1453
1001.03	56.7353
1001.68	57.8407
1004.76	79.7635
1021.30	0.0000
1024.50	0.0000
1034.80	65.3925
1036.00	58.9740
1037.82	58.0909
1038.57	53.4947
1038.76	0.0000
1045.16	60.0991
1046.59	58.2832
1048.07	55.5371

1050.47	60.2181
1050.47	60.2181
1062.04	71.6423
1063.62	66.0974
1076.63	43.9650
1077.35	62.6898
1078.86	68.3395
1085.78	47.8644
1099.22	56.5820
1112.02	80.9982
1112.84	74.7275
1115.52	78.0502
1120.29	75.0590
1120.29	75.0590
1120.29	75.0590
1120.29	75.0590
1120.51	75.0654
1121.28	75.0847
1124.00	0.0000
1129.67	84.6483
1131.51	0.0000
1147.95	0.0000
1167.94	79.1973
1173.22	89.9840
1175.09	77.4544
1177.93	80.4333
1189.05	88.5154
1204.90	94.8489
1205.75	0.0000
1213.00	86.2777
1221.42	74.7166
1230.97	101.5750
1235.34	105.6677
1236.41	0.0000
1238.25	85.9982
1246.25	83.2446
1260.41	0.0000
1271.85	44.9579
1274.45	69.9915
1274.54	67.9917
1291.56	58.3021
1298.22	0.0000
1312.09	49.5662
1325.50	46.7206
1325.50	46.7206
1332.49	48.8555
1333.61	38.6896
1360.21	34.8923
1362.66	0.0000
1365.15	33.9158
1368.21	33.9453
1368.53	0.0000
1376.25	23.7150
1384.27	34.1051
1394.10	20.7292
1395.20	31.1035
1407.95	27.0548
1434.06	31.4490
1436.60	16.7845
1457.56	0.0000
1460.81	23.2354
1489.15	27.6737
1509.49	26.7558
1596.49	28.1543
1620.62	13.2192
1678.03	0.0000
1691.02	18.2552
1691.02	18.2552
1706.46	0.0000
1750.46	0.0000
1764.49	18.8210
1764.49	18.8210
1764.49	18.8210
1764.49	18.8210
1770.23	88.1104
1771.40	39.1713
1791.20	0.0000
1808.65	10.8646

1836.01

7.9506

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246444001

Total Uranium Activity	1.0774E+01	ug/g
Total Uranium Counting Unc.	3.0059E+00	ug/g
Total Uranium Tpu	1.5336E-06	ug/g
Total Uranium Mda	1.1364E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 950788                      SAMPLE ID   : G246444001
*  ANALYST       : MXR1                        DETECTOR    : GAM25
*  SAMPLE DATE   : 3-FEB-2010 12:00:00.00    COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 17:59:40.38    SAMPLE ALQT  : 144.980 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.037E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.375E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.165E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.541E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 22:43:33.03

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037552.CNF;1
Sample date        : 11-FEB-2010 00:00:00 Acquisition date : 19-FEB-2010 20:41:37
Sample ID          : G1202037552      Sample quantity   : 1.58750E+02 GRAM
Detector name      : GAM21            Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time: 0 02:00:25.04 0.3%
Energy tolerance   : 1.50000 keV      Analyst Initials : MXR1
Abundance limit    : 75.00000         Sensitivity      : 5.00000
Batch ID           : 950788           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	351.44*	11	19	1.47	702.63	699	8	1.56E-03	83.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 22:43:35

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037552.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 11-FEB-2010 00:00:00 Acquisition date : 19-FEB-2010 20:41:37
Sample ID        : G1202037552 Sample quantity : 158.75 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:25.04 0.3%
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
BI-211	72.87			-3.997E-01	3.653E-01	5.082E-01	4.254E-02	-0.786
	351.07	*		6.844E-02	1.146E-01	1.293E-01	1.167E-02	0.529

---- 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	*		-8.595E-02	1.486E-01	2.270E-01	2.224E-02	-0.379
NA-22	1274.54	*		-1.292E-02	2.145E-02	2.772E-02	2.274E-03	-0.466
NA-24	1368.53	*		1.641E-05	2.145E-02	Half-Life too short		
AL-26	1129.67			-5.261E-01	7.022E-01	8.445E-01	7.109E-02	-0.623
	1808.65	*		7.548E-03	2.340E-02	4.224E-02	3.495E-03	0.179
K-40	1460.81	*		-1.061E-01	2.015E-01	3.199E-01	2.731E-02	-0.332
TI-44	67.85			1.088E-05	4.552E-03	7.504E-03	6.085E-04	0.001
	78.38	*		-7.217E-03	4.817E-03	6.367E-03	5.544E-04	-1.134
SC-46	889.25	*		-1.127E-02	2.025E-02	2.865E-02	2.548E-03	-0.393
	1120.51			-2.222E-02	2.404E-02	3.274E-02	2.766E-03	-0.679
V-48	944.10			1.194E-01	3.470E-01	6.192E-01	5.428E-02	0.193
	983.50	*		-1.536E-02	2.531E-02	3.472E-02	3.037E-03	-0.442
	1312.09			2.102E-02	3.052E-02	5.878E-02	4.789E-03	0.358
CR-51	320.08	*		-7.199E-02	1.390E-01	2.077E-01	1.931E-02	-0.347
MN-52	744.21			-5.288E-03	5.351E-02	8.399E-02	8.926E-03	-0.063
	848.13			-1.900E-02	1.478E+00	2.473E+00	2.352E-01	-0.008
	935.52			4.209E-02	5.055E-02	1.003E-01	8.791E-03	0.420
	1246.25			1.410E-01	1.253E+00	2.099E+00	1.725E-01	0.067
	1333.61			-5.333E-01	8.680E-01	1.061E+00	8.611E-02	-0.503
	1434.06	*		3.843E-02	6.563E-02	1.259E-01	1.040E-02	0.305
MN-54	834.83	*		-1.324E-02	1.943E-02	2.819E-02	2.733E-03	-0.469
CO-56	846.75	*		1.297E-02	1.722E-02	3.336E-02	3.180E-03	0.389
	977.42			1.394E+00	1.276E+00	2.635E+00	2.306E-01	0.529
	1037.82			1.821E-02	1.409E-01	2.394E-01	2.186E-02	0.076
	1175.09			9.494E-02	8.573E-01	1.439E+00	1.186E-01	0.066
	1238.25			3.686E-02	3.225E-02	6.746E-02	5.724E-03	0.546
	1360.21			1.642E-02	3.654E-01	6.223E-01	5.078E-02	0.026

---- 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			-3.293E-02	1.696E-01	2.573E-01	2.138E-02	-0.128
	122.06	*		4.395E-05	5.582E-03	8.827E-03	1.014E-03	0.005
	136.48			-6.695E-04	5.699E-02	8.904E-02	9.865E-03	-0.008
CO-58	810.76	*		1.783E-02	1.707E-02	3.452E-02	3.454E-03	0.517
FE-59	142.65			5.913E-01	6.270E-01	1.108E+00	1.119E-01	0.534
	192.34			-1.218E-01	2.675E-01	4.276E-01	5.700E-02	-0.285
	1099.22	*		-5.731E-03	3.408E-02	5.279E-02	4.871E-03	-0.109
CO-60	1291.56			-1.271E-02	5.871E-02	8.829E-02	8.294E-03	-0.144
	1173.22			-2.875E-03	2.142E-02	3.355E-02	2.765E-03	-0.086
	1332.49	*		-1.063E-02	1.608E-02	1.982E-02	1.609E-03	-0.536
ZN-65	1115.52	*		-7.743E-03	4.284E-02	6.592E-02	5.588E-03	-0.117
GE-68	1077.35	*		9.498E-02	5.589E-01	9.577E-01	8.220E-02	0.099
AS-73	53.44	*		1.054E-02	4.155E-02	7.194E-02	5.826E-03	0.146
AS-74	595.88	*		-2.301E-02	3.347E-02	4.699E-02	4.933E-03	-0.490
	634.78			-1.014E-01	1.411E-01	1.948E-01	2.111E-02	-0.521
	66.05			-1.299E-01	4.367E-01	6.913E-01	6.880E-02	-0.188
SE-75	96.73			2.618E-03	1.365E-01	2.202E-01	3.178E-02	0.012
	121.11			-1.197E-02	3.047E-02	4.501E-02	6.069E-03	-0.266
	136.00			3.589E-04	9.930E-03	1.563E-02	1.661E-03	0.023
	198.60			1.198E-01	5.806E-01	9.985E-01	9.482E-02	0.120
	264.65	*		6.464E-03	1.538E-02	2.670E-02	2.397E-03	0.242
	279.53			2.259E-02	3.767E-02	6.663E-02	6.150E-03	0.339
	303.91			-6.268E-01	7.065E-01	9.639E-01	1.128E-01	-0.650
	400.65			1.868E-02	1.079E-01	1.762E-01	1.886E-02	0.106
	87.88			3.197E-01	4.784E+00	7.627E+00	7.168E-01	0.042
BR-77	200.40			-3.669E+00	8.414E+00	1.345E+01	1.152E+00	-0.273
	239.00			-2.660E-02	5.979E-01	1.041E+00	9.242E-02	-0.026
	249.79			-3.275E+00	4.254E+00	6.355E+00	5.668E-01	-0.515
	281.68			1.981E+00	5.157E+00	8.897E+00	7.936E-01	0.223
	297.23			-1.010E+00	3.465E+00	5.426E+00	4.843E-01	-0.186
	303.76			-6.383E+00	9.650E+00	1.381E+01	1.231E+00	-0.462
	439.47			2.610E+00	9.645E+00	1.697E+01	1.468E+00	0.154
	484.57			-1.422E+00	1.739E+01	2.875E+01	2.662E+00	-0.049
	520.65	*		1.635E-01	8.034E-01	1.381E+00	1.340E-01	0.118
	574.64			-1.179E+01	1.808E+01	2.641E+01	2.718E+00	-0.446
	578.91			-4.209E+00	7.984E+00	1.206E+01	1.246E+00	-0.349
	585.48			-2.588E+01	1.749E+01	2.109E+01	2.192E+00	-1.227
	755.35			1.061E+01	1.066E+01	2.137E+01	2.252E+00	0.496
	817.79			-1.406E+00	9.172E+00	1.486E+01	1.472E+00	-0.095
	698.33			1.029E+01	1.542E+01	2.784E+01	3.038E+00	0.369
SR-82	776.49	*		1.169E-01	1.462E-01	2.771E-01	2.869E-02	0.422
	1395.20			-1.648E-01	3.613E+00	5.919E+00	4.860E-01	-0.028
	520.41	*		-3.824E-03	3.130E-02	5.100E-02	4.946E-03	-0.075
RB-83	529.64			-1.336E-02	4.114E-02	6.373E-02	6.249E-03	-0.210
	552.65			3.567E-02	8.939E-02	1.581E-01	1.590E-02	0.226
	881.50	*		-7.956E-03	3.172E-02	5.011E-02	4.519E-03	-0.159
KR-85	513.99	*		-1.237E+01	5.373E+00	6.411E+00	6.169E-01	-1.929
SR-85	513.99	*		-5.938E-02	2.580E-02	3.078E-02	2.962E-03	-1.929
RB-86	1076.63	*		1.062E-01	3.005E-01	5.359E-01	4.601E-02	0.198

---- 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			9.133E-03	2.104E-02	3.813E-02	3.351E-03	0.240
	1836.01	*		-9.983E-03	2.218E-02	2.841E-02	2.346E-03	-0.351
ZR-88	392.90	*		9.151E-03	1.141E-02	2.074E-02	1.653E-03	0.441
Y-91	1204.90	*		-2.266E+00	5.156E+00	6.646E+00	5.475E-01	-0.341
NB-94	702.63	*		7.580E-04	1.739E-02	2.835E-02	3.087E-03	0.027
	871.10			8.850E-03	2.033E-02	3.660E-02	3.360E-03	0.242
NB-95	765.79	*		-1.424E-03	1.407E-02	2.185E-02	2.283E-03	-0.065
NB-95M	235.69	*		-2.950E-02	4.145E-02	6.313E-02	6.361E-03	-0.467
ZR-95	724.18			2.723E-02	4.684E-02	8.337E-02	9.483E-03	0.327
	756.15	*		1.519E-02	2.952E-02	5.319E-02	5.989E-03	0.286
NB-97	657.90	*		-3.401E-05	2.952E-02	Half-Life	too short	
	1024.50			1.747E-03	2.952E-02	Half-Life	too short	
ZR-97	254.15			-2.432E-03	2.952E-02	Half-Life	too short	
	355.39			3.527E-04	2.952E-02	Half-Life	too short	
	507.63	*		-5.749E-03	2.952E-02	Half-Life	too short	
	602.52			3.888E-03	2.952E-02	Half-Life	too short	
	1021.30			3.546E-03	2.952E-02	Half-Life	too short	
	1147.95			4.886E-04	2.952E-02	Half-Life	too short	
	1362.66			2.668E-03	2.952E-02	Half-Life	too short	
	1750.46			-6.099E-05	2.952E-02	Half-Life	too short	
MO-99	140.51			-1.280E+00	1.584E+00	2.085E+00	5.889E-01	-0.614
	181.06			1.657E-01	9.184E-01	1.592E+00	2.889E-01	0.104
	366.43			-5.649E+00	7.754E+00	1.079E+01	9.052E-01	-0.523
	739.58	*		-1.122E-01	1.167E+00	1.834E+00	3.014E-01	-0.061
	778.00			-3.239E+00	3.861E+00	4.909E+00	5.075E-01	-0.660
TC-99M	140.51	*		-2.804E+02	3.861E+00	Half-Life	too short	
RH-101	127.23			3.238E-03	7.882E-03	1.313E-02	1.466E-03	0.247
	198.01	*		8.682E-03	1.135E-02	2.051E-02	1.751E-03	0.423
	325.23			-4.774E-02	9.158E-02	1.362E-01	1.201E-02	-0.351
RH-102	418.52			-8.244E-02	9.751E-02	1.371E-01	1.145E-02	-0.601
	475.06	*		2.508E-03	1.492E-02	2.562E-02	2.340E-03	0.098
	631.29			2.527E-03	2.299E-02	3.850E-02	4.161E-03	0.066
	697.49			1.113E-02	4.250E-02	7.194E-02	7.853E-03	0.155
	766.84			-1.942E-02	4.598E-02	6.536E-02	6.824E-03	-0.297
	1046.59			9.248E-04	6.009E-02	9.911E-02	8.579E-03	0.009
	1112.84			5.571E-02	8.646E-02	1.675E-01	1.420E-02	0.333
RU-103	497.08	*		-1.439E-02	1.737E-02	2.464E-02	3.612E-03	-0.584
	610.33			-1.475E-01	3.821E-01	5.948E-01	1.059E-01	-0.248
RH-106	511.85			-3.060E-01	1.525E-01	2.526E-01	2.424E-02	-1.212
	621.84	*		1.342E-02	1.367E-01	2.285E-01	3.383E-02	0.059
	1050.47			3.805E-01	1.152E+00	2.038E+00	1.763E-01	0.187
RU-106	511.85			-3.060E-01	1.525E-01	2.526E-01	2.424E-02	-1.212
	621.84	*		1.342E-02	1.367E-01	2.285E-01	2.451E-02	0.059
	1050.47			3.805E-01	1.152E+00	2.038E+00	1.763E-01	0.187
AG-108M	433.93	*		5.426E-04	1.369E-02	2.329E-02	2.076E-03	0.023
	614.37			4.989E-03	1.923E-02	3.294E-02	3.603E-03	0.151
	722.95			1.357E-02	2.498E-02	4.385E-02	4.844E-03	0.309
CD-109	88.03	*		-1.227E-02	1.335E-01	2.082E-01	1.959E-02	-0.059
AG-110M	657.75	*		-7.846E-03	1.768E-02	2.616E-02	2.935E-03	-0.300

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		677.61		3.073E-02	1.514E-01	2.557E-01	2.861E-02	0.120
		706.67		-1.521E-02	1.039E-01	1.628E-01	1.800E-02	-0.093
		763.93		-6.007E-03	6.341E-02	9.889E-02	1.055E-02	-0.061
		884.67		-5.530E-03	2.424E-02	3.840E-02	3.546E-03	-0.144
		937.48		-4.113E-02	5.454E-02	7.336E-02	6.656E-03	-0.561
		1384.27		-3.564E-02	7.532E-02	1.045E-01	8.828E-03	-0.341
IN-111		171.28		4.158E-03	5.967E-02	1.024E-01	8.399E-03	0.041
		245.39	*	4.752E-02	8.266E-02	1.460E-01	1.300E-02	0.325
IN-113M		391.69	*	-7.672E-03	1.728E-02	2.500E-02	2.059E-03	-0.307
SN-113		391.69	*	-7.672E-03	1.728E-02	2.500E-02	2.059E-03	-0.307
IN-114M		190.27	*	1.181E-02	5.132E-02	8.888E-02	7.510E-03	0.133
CD-115		260.90		-7.818E-01	6.531E+00	1.058E+01	9.456E-01	-0.074
		492.35		1.294E+00	2.287E+00	4.174E+00	3.906E-01	0.310
		527.90	*	8.843E-02	6.435E-01	1.098E+00	1.074E-01	0.081
SN-117M		156.02		3.871E-01	4.406E-01	8.219E-01	7.418E-02	0.471
		158.56	*	-4.610E-03	1.016E-02	1.644E-02	1.447E-03	-0.280
SB-122		563.90	*	-1.585E-01	1.905E-01	2.606E-01	2.653E-02	-0.608
		692.80		-5.533E-01	4.395E+00	6.930E+00	7.580E-01	-0.080
I-123		159.00	*	-3.044E-04	4.395E+00	Half-Life too short		
		528.96		-2.082E-02	4.395E+00	Half-Life too short		
TE-123M		159.00	*	-4.009E-03	7.294E-03	1.168E-02	1.030E-03	-0.343
I-124		602.71	*	4.714E-02	1.208E-01	2.109E-01	2.227E-02	0.224
		722.78		4.518E-01	9.162E-01	1.598E+00	1.722E-01	0.283
		1325.50		3.357E+00	6.593E+00	1.244E+01	1.011E+00	0.270
		1376.25		9.138E+00	6.020E+00	1.340E+01	1.097E+00	0.682
		1509.49		7.551E-02	3.177E+00	5.301E+00	4.413E-01	0.014
		1691.02		-7.355E-01	1.035E+00	1.242E+00	1.037E-01	-0.592
SB-124		602.71		7.192E-03	1.843E-02	3.218E-02	3.398E-03	0.224
		645.85		-1.555E-01	2.046E-01	2.682E-01	3.040E-02	-0.580
		709.31		1.137E+00	1.203E+00	2.313E+00	2.511E-01	0.491
		713.82		-2.477E-01	7.029E-01	1.036E+00	1.420E-01	-0.239
		722.78		9.992E-02	2.027E-01	3.535E-01	3.862E-02	0.283
		968.20		6.546E-02	1.014E+00	1.706E+00	1.494E-01	0.038
		1045.16		-4.794E-01	1.225E+00	1.820E+00	1.576E-01	-0.263
		1325.50		7.931E-01	1.557E+00	2.938E+00	2.388E-01	0.270
		1368.21		3.503E-01	6.776E-01	1.333E+00	1.758E-01	0.263
		1436.60		-5.192E-01	2.114E+00	3.264E+00	2.697E-01	-0.159
		1691.02	*	-3.837E-02	5.400E-02	6.479E-02	5.640E-03	-0.592
SB-125		427.89	*	-8.327E-03	3.371E-02	5.455E-02	4.722E-03	-0.153
		463.38		9.057E-02	1.084E-01	2.062E-01	1.986E-02	0.439
		600.56		6.201E-02	9.861E-02	1.769E-01	1.958E-02	0.351
		635.90		9.046E-02	1.262E-01	2.344E-01	2.674E-02	0.386
TE-125M		109.28	*	1.378E-01	1.839E+00	2.962E+00	3.558E-01	0.047
I-126		388.63		3.179E-03	5.911E-02	9.487E-02	7.597E-03	0.034
		666.33	*	-3.433E-02	6.556E-02	9.483E-02	1.046E-02	-0.362
		753.82		-4.817E-02	4.862E-01	7.612E-01	8.032E-02	-0.063
SB-126		223.80		-4.575E-01	9.194E-01	1.435E+00	1.261E-01	-0.319
		278.60		-1.081E-01	6.332E-01	1.013E+00	9.031E-02	-0.107
		296.50		6.799E-03	3.673E-01	6.001E-01	5.356E-02	0.011

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		414.70		-2.767E-03	2.012E-02	3.340E-02	2.770E-03	-0.083
		415.30		7.432E-02	1.642E+00	2.808E+00	2.331E-01	0.026
		555.20		-5.681E-01	1.395E+00	2.137E+00	2.156E-01	-0.266
		573.80		-1.854E-01	3.938E-01	5.971E-01	6.139E-02	-0.310
		593.00		-5.966E-02	2.911E-01	4.579E-01	4.793E-02	-0.130
		656.30		2.583E-01	1.143E+00	1.944E+00	2.139E-01	0.133
		666.33		-1.414E-02	2.700E-02	3.906E-02	4.310E-03	-0.362
		675.00		5.120E-01	6.549E-01	1.229E+00	1.353E-01	0.417
		695.00		-1.864E-02	3.000E-02	4.243E-02	4.636E-03	-0.439
		697.00		1.384E-02	1.029E-01	1.707E-01	1.863E-02	0.081
		720.50	*	-2.535E-02	6.550E-02	9.850E-02	1.063E-02	-0.257
		856.80		-2.965E-02	1.628E-01	2.622E-01	2.462E-02	-0.113
		989.30		-5.155E-02	4.926E-01	7.954E-01	6.955E-02	-0.065
		1034.80		-2.714E+00	2.795E+00	3.105E+00	2.695E-01	-0.874
		1213.00		1.410E-01	1.166E+00	1.965E+00	1.618E-01	0.072
SN-126		64.28		3.281E-03	4.539E-02	7.575E-02	1.122E-02	0.043
		86.94		-3.563E-03	5.586E-02	8.757E-02	3.635E-02	-0.041
SB-127		87.57	*	9.293E-04	1.347E-02	2.149E-02	2.015E-03	0.043
		61.10		6.083E-01	1.662E+00	2.872E+00	2.550E-01	0.212
		252.40		1.045E-01	5.612E-01	9.445E-01	3.939E-01	0.111
		290.80		4.594E-01	2.313E+00	3.891E+00	3.833E-01	0.118
		411.60		-5.206E-01	1.978E+00	2.990E+00	4.313E-01	-0.174
		444.90		1.891E-01	1.349E+00	2.326E+00	2.611E-01	0.081
		473.00		1.515E-01	2.836E-01	5.089E-01	6.049E-02	0.298
		543.00		1.622E+00	2.631E+00	4.784E+00	6.750E-01	0.339
		603.60		-1.384E-01	1.922E+00	3.115E+00	3.951E-01	-0.044
		685.20	*	-1.604E-01	2.108E-01	2.773E-01	3.312E-02	-0.578
		698.50		1.528E+00	2.611E+00	4.655E+00	7.536E-01	0.328
		722.20		1.518E+00	5.709E+00	9.624E+00	1.112E+00	0.158
XE-127		783.80		3.592E-01	6.057E-01	1.087E+00	1.343E-01	0.330
		57.60		7.501E-02	3.597E-01	6.162E-01	4.853E-02	0.122
		145.22		-1.315E-01	1.657E-01	2.243E-01	2.221E-02	-0.587
		172.10		1.754E-02	3.012E-02	5.449E-02	4.474E-03	0.322
		202.84	*	-5.292E-03	1.361E-02	2.188E-02	1.880E-03	-0.242
I-131		374.96		-5.310E-02	7.569E-02	1.050E-01	8.667E-03	-0.506
		80.18		5.155E-02	3.218E-01	5.370E-01	4.751E-02	0.096
		284.30		-2.656E-01	3.226E-01	4.591E-01	4.281E-02	-0.579
		364.48	*	1.988E-02	3.051E-02	5.351E-02	4.740E-03	0.371
		636.97		5.640E-01	4.236E-01	8.573E-01	9.613E-02	0.658
TE-132		722.89		1.286E+00	2.445E+00	4.284E+00	4.623E-01	0.300
		49.72		7.770E-02	2.208E-01	3.875E-01	3.574E-02	0.201
		111.76		-5.776E-01	1.793E+00	2.714E+00	3.103E-01	-0.213
		116.30		-8.140E-01	1.727E+00	2.538E+00	2.976E-01	-0.321
		228.16	*	-1.560E-02	5.998E-02	9.659E-02	1.439E-02	-0.161
BA-133		53.15		-5.876E-02	2.037E-01	3.277E-01	2.660E-02	-0.179
		79.62		1.897E-02	1.560E-01	2.589E-01	3.967E-02	0.073
		81.00		1.081E-03	1.333E-02	2.194E-02	3.516E-03	0.049
		276.40		8.517E-02	1.201E-01	2.160E-01	3.161E-02	0.394
		302.84		-5.775E-02	5.034E-02	6.411E-02	8.642E-03	-0.901

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-133	356.01	*		1.631E-03	2.115E-02	3.064E-02	4.027E-03	0.053
	383.85			1.378E-02	1.266E-01	1.994E-01	2.443E-02	0.069
	510.53			-6.466E-04	1.266E-01	Half-Life	too short	
	529.87	*		-1.985E-06	1.266E-01	Half-Life	too short	
	706.58			-2.298E-04	1.266E-01	Half-Life	too short	
	856.28			2.065E-04	1.266E-01	Half-Life	too short	
	875.33			4.600E-05	1.266E-01	Half-Life	too short	
CS-134	1236.41			1.090E-03	1.266E-01	Half-Life	too short	
	1298.22			6.156E-04	1.266E-01	Half-Life	too short	
	475.35			4.639E-01	9.399E-01	1.685E+00	1.540E-01	0.275
	563.23			-7.694E-02	1.639E-01	2.457E-01	2.516E-02	-0.313
	569.32			1.597E-02	9.773E-02	1.657E-01	1.712E-02	0.096
	604.70			-1.865E-02	1.759E-02	2.311E-02	2.448E-03	-0.807
	795.84	*		1.376E-02	2.014E-02	3.748E-02	3.826E-03	0.367
CS-135	801.93			1.906E-02	1.712E-01	2.958E-01	2.997E-02	0.064
	1038.57			4.799E-01	1.907E+00	3.326E+00	2.885E-01	0.144
	1167.94			6.543E-01	1.070E+00	2.022E+00	1.671E-01	0.324
	1365.15			-6.658E-02	5.888E-01	9.486E-01	8.141E-02	-0.070
	268.24	*		-2.049E-02	5.360E-02	8.317E-02	8.517E-03	-0.246
	288.45			-7.026E+02	5.360E-02	Half-Life	too short	
	417.63			-7.834E+02	5.360E-02	Half-Life	too short	
I-135	546.56			3.102E+02	5.360E-02	Half-Life	too short	
	836.80			-3.605E+01	5.360E-02	Half-Life	too short	
	1038.76			3.245E+02	5.360E-02	Half-Life	too short	
	1124.00			-5.855E+02	5.360E-02	Half-Life	too short	
	1131.51			5.323E+01	5.360E-02	Half-Life	too short	
	1260.41	*		-1.527E+02	5.360E-02	Half-Life	too short	
	1457.56			-7.669E+02	5.360E-02	Half-Life	too short	
CS-136	1678.03			6.364E+02	5.360E-02	Half-Life	too short	
	1706.46			-2.669E+03	5.360E-02	Half-Life	too short	
	1791.20			-3.289E+02	5.360E-02	Half-Life	too short	
	66.91			5.275E-02	5.131E-02	9.522E-02	1.441E-02	0.554
	86.29			-3.807E-02	1.316E-01	2.008E-01	2.670E-02	-0.190
	153.22			-6.298E-02	1.258E-01	2.039E-01	2.082E-02	-0.309
	163.89			-1.764E-01	2.059E-01	3.147E-01	2.952E-02	-0.560
BA-137M	176.55			2.154E-02	7.498E-02	1.315E-01	1.155E-02	0.164
	273.65			3.190E-02	1.059E-01	1.812E-01	1.717E-02	0.176
	340.57			-1.521E-02	3.422E-02	5.095E-02	4.556E-03	-0.299
	818.51			-2.709E-03	2.162E-02	3.522E-02	3.487E-03	-0.077
	1048.07	*		7.097E-03	4.012E-02	6.865E-02	6.188E-03	0.103
	1235.34			-9.174E-02	1.813E-01	2.494E-01	2.883E-02	-0.368
	661.65	*		1.193E-02	1.507E-02	2.860E-02	3.159E-03	0.417
CS-137	661.65	*		1.261E-02	1.593E-02	3.023E-02	3.343E-03	0.417
CE-139	165.85	*		6.230E-03	8.002E-03	1.477E-02	1.200E-03	0.422
BA-140	162.64			5.532E-02	1.440E-01	2.564E-01	2.293E-02	0.216
	304.84			-1.384E-01	2.846E-01	4.153E-01	1.168E-01	-0.333
	423.70			5.683E-02	5.399E-01	9.295E-01	3.008E-01	0.061
	537.32	*		3.991E-02	7.566E-02	1.365E-01	4.571E-02	0.292
LA-140	328.77			-4.607E-02	8.060E-02	1.178E-01	1.092E-02	-0.391

---- Non-Identified Nuclides ----

	Line Nuclide	Energy Ided (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		432.53	3.077E-01	6.151E-01	1.118E+00	1.003E-01	0.275
		487.03	3.334E-02	4.689E-02	8.659E-02	8.473E-03	0.385
		751.79	-2.077E-01	5.299E-01	7.572E-01	8.582E-02	-0.274
		815.85	-4.978E-02	9.448E-02	1.365E-01	1.475E-02	-0.365
		867.82	-2.242E-01	5.260E-01	8.005E-01	7.729E-02	-0.280
		919.63	-2.978E-01	1.051E+00	1.639E+00	1.764E-01	-0.182
		925.24	7.087E-02	4.329E-01	7.449E-01	6.925E-02	0.095
		1596.49	* 6.232E-03	3.634E-02	6.315E-02	5.281E-03	0.099
CE-141		145.44	* -1.178E-02	1.484E-02	2.007E-02	2.013E-03	-0.587
CE-143		57.37	8.317E-01	3.032E+00	5.237E+00	5.017E-01	0.159
		231.56	3.673E+00	3.650E+01	6.144E+01	1.950E+01	0.060
		293.26	* 2.322E-01	1.926E+00	3.196E+00	6.944E-01	0.073
	+	350.59	2.318E+01	3.943E+01	5.808E+01	1.807E+01	0.399
		490.36	-5.922E+01	6.138E+01	8.057E+01	2.569E+01	-0.735
		664.57	-4.452E+00	2.663E+01	4.171E+01	1.382E+01	-0.107
		721.93	1.482E+01	3.517E+01	6.037E+01	1.811E+01	0.246
CE-144		80.11	4.765E-02	2.510E-01	4.206E-01	3.711E-02	0.113
		133.54	* -1.441E-04	4.728E-02	7.409E-02	1.248E-02	-0.002
PM-144		476.78	-1.144E-02	3.158E-02	4.991E-02	4.951E-03	-0.229
		618.01	-2.702E-03	1.621E-02	2.572E-02	2.800E-03	-0.105
		696.49	* -5.255E-03	1.906E-02	2.924E-02	3.193E-03	-0.180
		778.57	-6.910E-01	1.198E+00	1.648E+00	1.703E-01	-0.419
PR-144		696.49	* -3.549E-01	1.287E+00	1.975E+00	2.156E-01	-0.180
		1489.15	-5.331E+00	8.031E+00	1.060E+01	8.810E-01	-0.503
PM-146		453.90	* 4.750E-03	1.962E-02	3.423E-02	3.735E-03	0.139
		633.02	-4.362E-01	6.474E-01	8.544E-01	3.242E-01	-0.511
		735.90	-3.158E-02	7.803E-02	1.132E-01	3.315E-02	-0.279
		747.13	9.231E-03	4.035E-02	6.851E-02	1.051E-02	0.135
ND-147		91.11	-4.635E-03	2.788E-02	4.395E-02	4.482E-03	-0.105
		319.41	2.642E-01	9.273E-01	1.562E+00	1.383E-01	0.169
		439.89	2.451E-01	1.605E+00	2.777E+00	2.404E-01	0.088
		531.02	* 2.201E-02	1.454E-01	2.490E-01	3.903E-02	0.088
PM-149		285.90	* 2.007E+00	4.542E+00	7.890E+00	1.239E+00	0.254
EU-152		121.78	-7.836E-03	1.696E-02	2.470E-02	3.081E-03	-0.317
		244.69	-7.429E-02	1.221E-01	1.870E-01	1.665E-02	-0.397
		344.27	* 2.032E-03	3.559E-02	5.780E-02	5.301E-03	0.035
		443.98	9.138E-02	4.122E-01	7.192E-01	6.267E-02	0.127
		778.89	-9.197E-02	1.376E-01	1.832E-01	1.892E-02	-0.502
		867.32	-4.159E-01	4.469E-01	5.907E-01	5.456E-02	-0.704
		964.01	4.579E-02	1.374E-01	2.434E-01	2.133E-02	0.188
		1085.78	9.684E-02	1.862E-01	3.448E-01	2.952E-02	0.281
		1112.02	5.505E-02	1.274E-01	2.339E-01	1.984E-02	0.235
		1407.95	-1.043E-02	8.922E-02	1.431E-01	1.177E-02	-0.073
GD-153		69.67	-4.784E-02	1.543E-01	2.418E-01	1.983E-02	-0.198
		83.37	9.661E-01	2.241E+00	3.832E+00	3.469E-01	0.252
		97.43	* -3.411E-03	1.545E-02	2.313E-02	2.285E-03	-0.147
		103.18	8.122E-03	1.951E-02	3.321E-02	3.391E-03	0.245
EU-154		123.07	-5.529E-04	1.152E-02	1.804E-02	2.456E-03	-0.031
		247.94	-4.115E-02	1.321E-01	2.098E-01	2.454E-02	-0.196

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		591.81		8.935E-02	2.925E-01	5.078E-01	6.645E-02	0.176
		723.30		7.737E-02	9.852E-02	1.798E-01	2.070E-02	0.430
		756.87		1.765E-01	3.436E-01	6.186E-01	8.298E-02	0.285
		873.19		2.310E-02	1.792E-01	3.067E-01	3.870E-02	0.075
		996.32		-2.632E-02	1.786E-01	2.841E-01	5.063E-02	-0.093
		1004.76		3.943E-02	9.203E-02	1.686E-01	1.976E-02	0.234
		1274.45	*	-5.569E-02	6.484E-02	7.557E-02	8.305E-03	-0.737
		48.70		-4.303E-02	9.483E-02	1.495E-01	1.265E-02	-0.288
		60.01		1.966E-01	4.160E-01	7.292E-01	5.695E-02	0.270
		86.54		4.545E-04	1.628E-02	2.586E-02	2.425E-03	0.018
TB-160		105.31	*	-1.209E-02	2.079E-02	2.990E-02	3.117E-03	-0.405
		86.79		-5.459E-03	4.154E-02	6.466E-02	6.021E-03	-0.084
		197.04		1.154E-01	1.815E-01	3.244E-01	2.767E-02	0.356
		215.65		1.392E-01	1.992E-01	3.628E-01	3.163E-02	0.384
		298.57		1.665E-02	4.136E-02	7.087E-02	6.324E-03	0.235
		879.36	*	1.060E-02	6.777E-02	1.170E-01	1.059E-02	0.091
		962.29		7.900E-02	2.601E-01	4.561E-01	3.997E-02	0.173
		966.15		-3.028E-03	8.603E-02	1.414E-01	1.239E-02	-0.021
		1177.93		-7.769E-02	1.355E-01	1.758E-01	1.449E-02	-0.442
		1271.85		3.492E-02	2.802E-01	4.703E-01	3.855E-02	0.074
HO-166M		80.57		-8.571E-03	3.509E-02	5.514E-02	4.883E-03	-0.155
		184.41		-2.555E-03	1.154E-02	1.789E-02	1.498E-03	-0.143
		280.46		1.551E-02	3.040E-02	5.325E-02	4.749E-03	0.291
		410.95		-2.074E-02	1.174E-01	1.800E-01	1.483E-02	-0.115
		711.68	*	-9.925E-03	2.918E-02	4.338E-02	4.703E-03	-0.229
		752.31		-6.779E-02	1.140E-01	1.498E-01	1.582E-02	-0.453
		810.29		2.702E-02	2.826E-02	5.614E-02	5.611E-03	0.481
		51.35		-9.260E-01	1.484E+00	2.269E+00	1.870E-01	-0.408
		52.39		-1.939E-01	7.608E-01	1.226E+00	1.001E-01	-0.158
		59.40		3.673E-01	2.094E+00	3.555E+00	2.773E-01	0.103
LU-176		66.72	*	1.375E+00	2.756E+00	4.832E+00	3.894E-01	0.284
		88.36		-3.040E-02	3.268E-02	4.492E-02	4.233E-03	-0.677
		201.83		-2.226E-03	9.271E-03	1.518E-02	1.303E-03	-0.147
		306.84	*	5.143E-03	8.435E-03	1.504E-02	1.340E-03	0.342
LU-177		401.10		1.007E-01	2.862E+00	4.564E+00	3.693E-01	0.022
		112.95		-6.687E-02	2.003E-01	3.028E-01	3.280E-02	-0.221
		208.36	*	-3.192E-02	1.646E-01	2.696E-01	2.332E-02	-0.118
LU-177M		52.97		-2.997E-02	8.815E-02	1.408E-01	1.144E-02	-0.213
		54.07		3.666E-02	4.574E-02	8.457E-02	6.816E-03	0.433
		61.30		1.479E-02	1.332E-01	2.237E-01	1.756E-02	0.066
		121.62		-6.640E-02	8.705E-02	1.197E-01	1.370E-02	-0.555
HF-181		147.16		4.404E-02	1.701E-01	2.748E-01	2.680E-02	0.160
		171.86		8.132E-02	1.299E-01	2.363E-01	1.939E-02	0.344
		218.09		-1.844E-01	2.276E-01	3.330E-01	2.910E-02	-0.554
		268.79		1.833E-02	2.477E-01	4.116E-01	3.678E-02	0.045
		319.02		1.522E-02	1.023E-01	1.693E-01	1.499E-02	0.090
		367.43		-2.837E-01	3.718E-01	5.088E-01	4.259E-02	-0.558
		413.65	*	6.965E-03	7.623E-02	1.224E-01	1.013E-02	0.057
		56.28		-1.484E-02	5.521E-02	8.858E-02	7.031E-03	-0.168

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	57.53			7.019E-03	3.077E-02	5.284E-02	4.163E-03	0.133
	65.20			-3.864E-02	7.967E-02	1.229E-01	9.826E-03	-0.314
	133.02			4.885E-03	1.346E-02	2.236E-02	2.411E-03	0.218
	136.25			-1.376E-02	1.130E-01	1.737E-01	1.834E-02	-0.079
	345.85			9.773E-03	7.026E-02	1.154E-01	9.977E-03	0.085
	482.03	*		9.501E-03	1.707E-02	3.109E-02	2.868E-03	0.306
W-181	56.28			-6.139E-03	2.311E-02	3.710E-02	2.945E-03	-0.165
	57.53			2.946E-03	1.288E-02	2.212E-02	1.743E-03	0.133
	65.20	*		-1.605E-02	3.309E-02	5.106E-02	4.081E-03	-0.314
TA-182	67.75			5.011E-03	9.955E-03	1.753E-02	1.421E-03	0.286
	100.10			-2.386E-02	3.158E-02	4.141E-02	4.153E-03	-0.576
	152.43			5.543E-03	9.655E-02	1.509E-01	1.408E-02	0.037
	222.10			7.536E-02	1.104E-01	1.985E-01	1.741E-02	0.380
	1001.68			-6.711E-01	9.140E-01	1.199E+00	1.047E-01	-0.560
	1121.28			-5.135E-02	6.614E-02	9.445E-02	7.979E-03	-0.544
	1189.05			7.549E-02	1.259E-01	2.371E-01	1.954E-02	0.318
	1221.42	*		3.365E-03	7.920E-02	1.297E-01	1.067E-02	0.026
	1230.97			-8.917E-02	1.773E-01	2.376E-01	1.955E-02	-0.375
RE-183	57.98			-6.096E-03	1.321E-02	2.055E-02	1.614E-03	-0.297
	59.32			9.084E-04	8.045E-03	1.356E-02	1.058E-03	0.067
	67.20			1.424E-02	1.663E-02	3.062E-02	2.474E-03	0.465
	162.32	*		1.494E-02	2.794E-02	5.048E-02	4.271E-03	0.296
	208.81			9.284E-02	2.605E-01	4.559E-01	3.945E-02	0.204
	291.72			-7.602E-03	3.113E-01	5.061E-01	4.518E-02	-0.015
RE-184	57.98			-2.329E-02	5.047E-02	7.850E-02	6.169E-03	-0.297
	59.32			3.468E-03	3.072E-02	5.178E-02	4.040E-03	0.067
	67.20			5.437E-02	6.352E-02	1.170E-01	9.451E-03	0.465
	161.27			5.033E-02	8.839E-02	1.608E-01	1.376E-02	0.313
	216.55			-2.522E-02	7.214E-02	1.147E-01	1.001E-02	-0.220
	252.85	*		3.147E-02	9.188E-02	1.576E-01	1.407E-02	0.200
	318.01			3.514E-02	1.788E-01	2.978E-01	2.639E-02	0.118
	792.07			-2.233E-01	4.648E-01	6.498E-01	6.626E-02	-0.344
	903.28			3.612E-01	4.694E-01	9.070E-01	7.938E-02	0.398
	920.93			4.994E-02	2.379E-01	4.130E-01	3.619E-02	0.121
OS-185	59.72			9.645E-03	2.323E-02	4.049E-02	3.159E-03	0.238
	61.14			5.034E-03	1.393E-02	2.406E-02	1.887E-03	0.209
	69.30			-9.721E-03	2.640E-02	4.097E-02	3.352E-03	-0.237
	592.07			6.563E-01	1.074E+00	1.970E+00	2.060E-01	0.333
	646.12	*		-9.504E-03	1.688E-02	2.342E-02	2.559E-03	-0.406
	717.42			2.051E-01	4.668E-01	8.153E-01	8.813E-02	0.252
	874.81			5.666E-02	3.504E-01	6.024E-01	5.494E-02	0.094
	880.27			-1.012E-01	3.997E-01	6.328E-01	5.718E-02	-0.160
RE-188	155.03	*		-1.170E-02	4.287E-02	7.132E-02	6.498E-03	-0.164
	477.96			-6.654E-01	1.446E+00	2.255E+00	2.068E-01	-0.295
	633.10			-8.099E-01	1.198E+00	1.642E+00	1.778E-01	-0.493
W-188	63.58			1.822E+00	4.455E+00	7.738E+00	6.135E-01	0.236
	227.08			4.000E-01	3.667E+00	6.199E+00	5.459E-01	0.065
	290.67	*		6.007E-01	2.341E+00	3.971E+00	3.546E-01	0.151
IR-192	295.96			-2.942E-02	4.156E-02	6.266E-02	5.630E-03	-0.469

----- Non-Identified Nuclides -----

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	308.46			1.044E-02	3.478E-02	5.898E-02	5.274E-03	0.177
	316.51	*		-2.141E-03	1.258E-02	1.983E-02	1.762E-03	-0.108
	468.07			-1.824E-02	2.818E-02	4.220E-02	4.066E-03	-0.432
	604.41			-2.384E-01	2.269E-01	2.968E-01	4.271E-02	-0.803
	612.46			-1.657E-01	3.172E-01	4.667E-01	5.464E-02	-0.355
AU-195	65.12			-7.675E-03	1.545E-02	2.380E-02	1.902E-03	-0.322
	66.83			9.060E-03	8.349E-03	1.569E-02	1.265E-03	0.577
	75.70			-1.600E-02	2.503E-02	3.874E-02	3.308E-03	-0.413
	98.88	*		-3.787E-03	4.153E-02	6.293E-02	6.267E-03	-0.060
	129.76			1.653E-01	6.464E-01	1.056E+00	1.162E-01	0.157
TL-200	367.94	*		-1.495E-06	6.464E-01	Half-Life	too short	
	579.30			-1.904E-05	6.464E-01	Half-Life	too short	
	828.27			2.406E-06	6.464E-01	Half-Life	too short	
	1205.75			-7.881E-06	6.464E-01	Half-Life	too short	
TL-201	68.90			-7.118E-02	1.107E-01	1.644E-01	1.342E-02	-0.433
	70.82			1.356E-02	6.265E-02	1.062E-01	8.771E-03	0.128
	80.30			5.719E-02	1.367E-01	2.371E-01	2.095E-02	0.241
	135.34			7.755E-01	1.519E+00	2.560E+00	2.720E-01	0.303
	167.43	*		3.793E-01	4.472E-01	8.334E-01	6.787E-02	0.455
TL-202	68.90			-1.866E-02	2.902E-02	4.310E-02	3.517E-03	-0.433
	70.82			3.545E-03	1.638E-02	2.776E-02	2.293E-03	0.128
	80.30			1.495E-02	3.574E-02	6.200E-02	5.479E-03	0.241
	439.56	*		4.523E-03	2.013E-02	3.519E-02	3.045E-03	0.129
HG-203	70.83			1.982E-02	9.220E-02	1.562E-01	2.090E-02	0.127
	72.87			-7.244E-02	6.660E-02	9.211E-02	1.201E-02	-0.786
	82.60			6.389E-03	1.586E-01	2.591E-01	3.623E-02	0.025
	279.20	*		7.308E-04	1.409E-02	2.323E-02	2.127E-03	0.031
BI-207	72.80			-2.366E-02	2.124E-02	2.944E-02	2.463E-03	-0.804
	74.97			-4.017E-03	1.471E-02	2.382E-02	2.023E-03	-0.169
	84.90			-2.628E-02	3.188E-02	4.632E-02	4.247E-03	-0.567
	569.67			2.506E-03	1.533E-02	2.598E-02	2.660E-03	0.096
	1063.62	*		6.363E-03	2.052E-02	3.682E-02	3.173E-03	0.173
	1770.23			-1.029E-01	3.833E-01	5.692E-01	4.729E-02	-0.181
TL-207	81.07			4.282E-03	2.973E-02	4.934E-02	4.386E-03	0.087
	83.78			1.419E-02	2.049E-02	3.587E-02	3.259E-03	0.396
	94.90			3.155E-03	4.023E-02	6.550E-02	6.382E-03	0.048
	122.32			-6.790E-02	4.117E-01	6.330E-01	7.566E-02	-0.107
	144.24			-4.967E-02	1.781E-01	2.652E-01	2.884E-02	-0.187
	154.21			-6.335E-02	1.073E-01	1.719E-01	1.717E-02	-0.369
	269.46			2.767E-02	5.930E-02	1.040E-01	9.469E-03	0.266
	323.87	*		1.046E-01	2.703E-01	4.604E-01	8.197E-02	0.227
	338.28			5.011E-01	3.596E-01	6.942E-01	8.595E-02	0.722
	445.03			1.134E-01	9.651E-01	1.658E+00	2.018E-01	0.068
TL-208	277.35			-2.785E-02	1.370E-01	2.182E-01	2.738E-02	-0.128
	510.84			-4.867E-02	1.424E-01	2.666E-01	3.386E-02	-0.183
	583.14	*		1.816E-02	1.990E-02	3.704E-02	4.035E-03	0.490
	860.37			5.235E-02	1.514E-01	2.699E-01	2.679E-02	0.194
PO-209	260.50			-3.999E-01	3.299E+00	5.343E+00	4.775E-01	-0.075
	262.80			3.937E+00	9.611E+00	1.667E+01	1.490E+00	0.236

---- Non-Identified Nuclides ----

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	896.60	*		-1.526E-01	3.876E+00	6.415E+00	5.626E-01	-0.024
BI-210	46.50	*		5.805E-02	1.069E-01	1.926E-01	1.837E-02	0.301
PB-210	46.50	*		5.805E-02	1.069E-01	1.926E-01	1.837E-02	0.301
PO-210	46.50	*		5.805E-02	1.068E-01	1.926E-01	1.672E-02	0.301
PB-211	404.84	*		-1.168E-01	4.222E-01	6.250E-01	3.912E-01	-0.187
	427.08			-6.999E-01	9.084E-01	1.139E+00	7.075E-01	-0.615
	831.96			4.445E-01	7.255E-01	1.252E+00	7.867E-01	0.355
BI-212	727.18	*		-2.110E-01	1.704E-01	2.004E-01	2.383E-02	-1.053
	785.46			1.508E-01	9.600E-01	1.585E+00	1.626E-01	0.095
	1620.62			2.944E-02	6.589E-01	1.103E+00	9.222E-02	0.027
PB-212	74.81			-1.380E-02	5.056E-02	8.187E-02	1.033E-02	-0.169
	77.11			-2.521E-02	2.826E-02	4.206E-02	3.628E-03	-0.599
	87.30			1.958E-03	6.104E-02	9.682E-02	1.326E-02	0.020
	238.63	*		-3.835E-03	2.250E-02	3.880E-02	3.858E-03	-0.099
	300.09			1.424E-01	3.065E-01	5.284E-01	5.641E-02	0.269
PO-212	74.81			-1.380E-02	5.056E-02	8.187E-02	1.033E-02	-0.169
	77.11			-2.521E-02	2.826E-02	4.206E-02	3.628E-03	-0.599
	87.30			1.958E-03	6.104E-02	9.682E-02	1.326E-02	0.020
	115.19			-1.463E-01	8.613E-01	1.333E+00	1.465E-01	-0.110
	238.63	*		-3.835E-03	2.250E-02	3.880E-02	3.858E-03	-0.099
	300.09			1.424E-01	3.065E-01	5.284E-01	5.641E-02	0.269
BI-214	609.31	*		-6.452E-03	3.881E-02	6.279E-02	7.420E-03	-0.103
	1120.29			-1.441E-01	1.465E-01	1.945E-01	2.088E-02	-0.741
	1764.49			-9.773E-02	2.166E-01	3.379E-01	2.809E-02	-0.289
PB-214	74.81			-2.377E-02	8.710E-02	1.411E-01	1.589E-02	-0.169
	77.11			-4.321E-02	4.856E-02	7.210E-02	8.298E-03	-0.599
	87.30			3.354E-03	1.046E-01	1.659E-01	2.010E-02	0.020
	241.98			-5.114E-02	1.340E-01	2.014E-01	2.117E-02	-0.254
	295.21			-5.042E-02	5.660E-02	8.265E-02	9.006E-03	-0.610
PO-214	351.92	*		2.381E-02	3.989E-02	6.499E-02	6.770E-03	0.366
	74.81			-2.377E-02	8.710E-02	1.411E-01	1.589E-02	-0.169
	77.11			-4.321E-02	4.856E-02	7.210E-02	8.298E-03	-0.599
	87.30			3.354E-03	1.046E-01	1.659E-01	2.010E-02	0.020
	241.98			-5.114E-02	1.340E-01	2.014E-01	2.117E-02	-0.254
	295.21			-5.042E-02	5.660E-02	8.265E-02	9.006E-03	-0.610
PO-215	351.92	*		2.381E-02	3.989E-02	6.499E-02	6.770E-03	0.366
	81.07			4.282E-03	2.973E-02	4.934E-02	4.386E-03	0.087
	83.78			1.419E-02	2.049E-02	3.587E-02	3.259E-03	0.396
	94.90			3.155E-03	4.023E-02	6.550E-02	6.382E-03	0.048
	122.32			-6.790E-02	4.117E-01	6.330E-01	7.566E-02	-0.107
	144.24			-4.967E-02	1.781E-01	2.652E-01	2.884E-02	-0.187
	154.21			-6.335E-02	1.073E-01	1.719E-01	1.717E-02	-0.369
	269.46			2.767E-02	5.930E-02	1.040E-01	9.469E-03	0.266
	323.87	*		1.046E-01	2.703E-01	4.604E-01	8.197E-02	0.227
	338.28			5.011E-01	3.596E-01	6.942E-01	8.595E-02	0.722
	445.03			1.134E-01	9.651E-01	1.658E+00	2.018E-01	0.068
PO-216	74.81			-1.380E-02	5.056E-02	8.187E-02	1.033E-02	-0.169
	77.11			-2.521E-02	2.826E-02	4.206E-02	3.628E-03	-0.599
	87.30			1.958E-03	6.104E-02	9.682E-02	1.326E-02	0.020

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-218	238.63	*		-3.835E-03	2.250E-02	3.880E-02	3.858E-03	-0.099
	300.09			1.424E-01	3.065E-01	5.284E-01	5.641E-02	0.269
	74.81			-2.377E-02	8.710E-02	1.411E-01	1.589E-02	-0.169
	77.11			-4.321E-02	4.856E-02	7.210E-02	8.298E-03	-0.599
	87.30			3.354E-03	1.046E-01	1.659E-01	2.010E-02	0.020
	241.98			-5.114E-02	1.340E-01	2.014E-01	2.117E-02	-0.254
RN-219	295.21			-5.042E-02	5.660E-02	8.265E-02	9.006E-03	-0.610
	351.92	*		2.381E-02	3.989E-02	6.499E-02	6.770E-03	0.366
	271.23			-2.002E-02	7.865E-02	1.242E-01	1.313E-02	-0.161
RN-220	401.81	*		-7.371E-02	1.859E-01	2.730E-01	4.022E-02	-0.270
	549.76	*		-4.695E+00	1.295E+01	2.005E+01	2.011E+00	-0.234
RA-223	81.07			4.282E-03	2.973E-02	4.934E-02	4.386E-03	0.087
	83.78			1.419E-02	2.049E-02	3.587E-02	3.259E-03	0.396
RA-224	94.90			3.155E-03	4.023E-02	6.550E-02	6.382E-03	0.048
	122.32			-6.790E-02	4.117E-01	6.330E-01	7.566E-02	-0.107
	144.24			-4.967E-02	1.781E-01	2.652E-01	2.884E-02	-0.187
	154.21			-6.335E-02	1.073E-01	1.719E-01	1.717E-02	-0.369
	269.46			2.767E-02	5.930E-02	1.040E-01	9.469E-03	0.266
	323.87	*		1.046E-01	2.703E-01	4.604E-01	8.197E-02	0.227
	338.28			5.011E-01	3.596E-01	6.942E-01	8.595E-02	0.722
	445.03			1.134E-01	9.651E-01	1.658E+00	2.018E-01	0.068
	240.98	*		-6.892E-02	2.695E-01	4.154E-01	3.692E-02	-0.166
	609.31	*		-6.452E-03	3.881E-02	6.279E-02	7.420E-03	-0.103
	1120.29			-1.441E-01	1.465E-01	1.945E-01	2.088E-02	-0.741
	1764.49			-9.773E-02	2.166E-01	3.379E-01	2.809E-02	-0.289
AC-227	79.80			1.934E-03	2.083E-01	3.401E-01	7.338E-02	0.006
	236.00			-7.391E-02	8.147E-02	1.202E-01	1.493E-02	-0.615
TH-227	256.20	*		3.587E-02	1.426E-01	2.425E-01	3.765E-02	0.148
	286.10			2.228E-01	5.379E-01	9.318E-01	1.249E-01	0.239
	299.80			4.117E-01	5.704E-01	1.007E+00	1.776E-01	0.409
	304.40			-5.693E-01	6.479E-01	8.730E-01	1.621E-01	-0.652
	334.20			-7.021E-01	9.302E-01	1.299E+00	2.528E-01	-0.541
	79.80			1.934E-03	2.083E-01	3.401E-01	7.431E-02	0.006
	94.00			-3.612E-01	3.950E-01	5.304E-01	1.179E-01	-0.681
	236.00			-7.391E-02	8.138E-02	1.202E-01	1.355E-02	-0.615
	256.20	*		3.587E-02	1.426E-01	2.425E-01	4.417E-02	0.148
	286.10			2.228E-01	5.818E-01	9.318E-01	9.355E-01	0.239
AC-228	299.80			4.117E-01	5.704E-01	1.007E+00	1.776E-01	0.409
	304.40			-5.693E-01	6.479E-01	8.730E-01	1.621E-01	-0.652
	334.20			-7.021E-01	9.302E-01	1.299E+00	2.528E-01	-0.541
	338.32			1.190E-01	9.788E-02	1.658E-01	6.844E-02	0.718
RA-228	911.07	*		3.355E-02	6.277E-02	1.164E-01	1.321E-02	0.288
	969.11			1.992E-02	9.608E-02	1.676E-01	3.920E-02	0.119
	338.32			1.190E-01	9.788E-02	1.658E-01	6.844E-02	0.718
TH-228	911.07	*		3.355E-02	6.277E-02	1.164E-01	1.321E-02	0.288
	969.11			1.992E-02	9.608E-02	1.676E-01	3.920E-02	0.119
	74.81			-1.392E-02	5.099E-02	8.259E-02	7.068E-03	-0.169
	77.11			-2.543E-02	2.851E-02	4.243E-02	3.660E-03	-0.599
	87.30			1.975E-03	6.158E-02	9.769E-02	9.136E-03	0.020

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-229	238.63	*		-3.869E-03	2.270E-02	3.915E-02	3.892E-03	-0.099
	300.09			1.436E-01	3.204E-01	5.331E-01	3.162E-01	0.269
	85.43			-3.308E-02	3.082E-02	4.280E-02	3.941E-03	-0.773
	88.47			-1.774E-02	1.880E-02	2.576E-02	2.429E-03	-0.689
	100.00			-2.520E-02	3.408E-02	4.490E-02	4.500E-03	-0.561
TH-230	193.63	*		-4.730E-02	1.578E-01	2.571E-01	2.183E-02	-0.184
	210.97			2.249E-01	2.359E-01	4.357E-01	3.780E-02	0.516
	609.31	*		-6.452E-03	3.881E-02	6.279E-02	7.420E-03	-0.103
	1120.29			-1.441E-01	1.465E-01	1.945E-01	2.088E-02	-0.741
	1764.49			-9.773E-02	2.166E-01	3.379E-01	2.809E-02	-0.289
PA-231	283.67	*		-5.479E-01	5.689E-01	7.806E-01	1.199E-01	-0.702
TH-231	301.29			7.544E-02	2.073E-01	3.546E-01	4.417E-02	0.213
	81.07			4.282E-03	2.973E-02	4.934E-02	4.386E-03	0.087
	83.78			1.419E-02	2.049E-02	3.587E-02	3.259E-03	0.396
	94.90			3.155E-03	4.023E-02	6.550E-02	6.382E-03	0.048
	122.32			-6.790E-02	4.117E-01	6.330E-01	7.566E-02	-0.107
U-231	144.24			-4.967E-02	1.781E-01	2.652E-01	2.884E-02	-0.187
	154.21			-6.335E-02	1.073E-01	1.719E-01	1.717E-02	-0.369
	269.46			2.767E-02	5.930E-02	1.040E-01	9.469E-03	0.266
	323.87	*		1.046E-01	2.703E-01	4.604E-01	8.197E-02	0.227
	338.28			5.011E-01	3.596E-01	6.942E-01	8.595E-02	0.722
TH-232	445.03			1.134E-01	9.651E-01	1.658E+00	2.018E-01	0.068
	84.21			2.001E-01	2.944E-01	5.172E-01	4.715E-02	0.387
	92.29			-4.736E-02	1.290E-01	1.916E-01	1.842E-02	-0.247
	95.87	*		-1.795E-02	7.403E-02	1.151E-01	1.127E-02	-0.156
	108.00			1.675E-02	1.411E-01	2.294E-01	2.410E-02	0.073
PA-233	338.32			1.190E-01	8.530E-02	1.658E-01	1.445E-02	0.718
	911.07	*		3.355E-02	6.277E-02	1.164E-01	1.321E-02	0.288
	969.11			1.992E-02	9.608E-02	1.676E-01	3.920E-02	0.119
	75.28			-1.175E-01	4.300E-01	6.957E-01	1.064E-01	-0.169
	86.59			7.422E-03	2.654E-01	4.215E-01	1.140E-01	0.018
PA-234	300.12			7.172E-02	1.583E-01	2.723E-01	4.098E-02	0.263
	311.98	*		-1.473E-02	2.342E-02	3.379E-02	3.084E-03	-0.436
	340.50			-1.374E-01	2.389E-01	3.446E-01	8.223E-02	-0.399
	398.62			-4.132E-02	8.827E-01	1.387E+00	3.669E-01	-0.030
	415.76			-1.521E-01	6.199E-01	1.007E+00	2.159E-01	-0.151
PA-234	63.00			6.871E-03	1.398E-01	2.329E-01	3.521E-02	0.029
	94.67			-2.364E-04	2.945E-02	4.737E-02	6.253E-03	-0.005
	98.44			4.004E-03	1.772E-02	2.808E-02	1.572E-02	0.143
	99.86			-6.171E-02	8.645E-02	1.147E-01	1.149E-02	-0.538
	111.00			-5.370E-03	4.229E-02	6.606E-02	9.018E-03	-0.081
	131.20			4.935E-03	2.363E-02	3.838E-02	4.185E-03	0.129
	152.70			1.288E-02	9.392E-02	1.485E-01	2.584E-02	0.087
	186.00			-8.415E-02	4.241E-01	6.590E-01	2.053E-01	-0.128
	226.40			7.494E-02	1.228E-01	2.199E-01	2.930E-02	0.341
	227.20			5.708E-03	1.307E-01	2.190E-01	1.929E-02	0.026
	248.90			-1.559E-01	3.277E-01	5.083E-01	1.145E-01	-0.307
	293.70			-2.098E-01	2.622E-01	3.852E-01	6.725E-02	-0.545
	369.80			-3.772E-02	3.459E-01	5.412E-01	1.173E-01	-0.070

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		568.70		2.888E-02	5.033E-01	8.386E-01	8.579E-02	0.034
		569.50		2.223E-02	1.360E-01	2.306E-01	2.361E-02	0.096
		574.00		-4.194E-01	7.956E-01	1.192E+00	1.226E-01	-0.352
		699.00		8.190E-02	4.182E-01	6.986E-01	1.412E-01	0.117
		706.10		-2.655E-01	5.268E-01	7.329E-01	3.304E-01	-0.362
		733.00		2.300E-03	2.075E-01	3.347E-01	7.729E-02	0.007
		742.81		-1.940E-01	6.834E-01	1.004E+00	6.776E-01	-0.193
		796.30		3.501E-01	3.976E-01	7.524E-01	2.075E-01	0.465
		805.60		-4.137E-01	4.350E-01	5.107E-01	1.587E-01	-0.810
		819.60		-8.047E-02	4.963E-01	7.985E-01	3.061E-01	-0.101
		826.30		-3.371E-01	4.923E-01	6.784E-01	3.052E-01	-0.497
		831.60		3.808E-01	3.600E-01	6.800E-01	2.053E-01	0.560
		876.40		1.338E-01	5.019E-01	8.484E-01	8.725E-01	0.158
		880.51		-3.044E-02	1.531E-01	2.455E-01	2.217E-02	-0.124
		883.24		-5.939E-03	1.419E-01	2.348E-01	1.580E-01	-0.025
		899.00		8.989E-02	4.205E-01	7.308E-01	3.197E-01	0.123
		925.00		1.374E-01	6.389E-01	1.110E+00	9.726E-02	0.124
		926.50		9.501E-03	8.335E-02	1.423E-01	3.605E-02	0.067
		946.00	*	-4.305E-02	1.695E-01	2.661E-01	5.011E-02	-0.162
		949.00		5.915E-02	2.441E-01	4.251E-01	3.727E-02	0.139
		980.50		-3.209E-01	3.362E-01	3.922E-01	3.432E-02	-0.818
		1394.10		-3.193E-01	4.607E-01	3.647E-01	2.372E-01	-0.876
PA-234M		766.42		-2.223E+00	4.941E+00	6.749E+00	3.447E+00	-0.329
		1001.03	*	-2.740E-01	1.933E+00	3.062E+00	3.081E-01	-0.089
TH-234		63.29	*	-5.115E-03	1.223E-01	2.013E-01	3.556E-02	-0.025
		92.38		-1.238E-02	9.331E-02	1.431E-01	2.658E-02	-0.087
U-234		609.31	*	-6.452E-03	3.881E-02	6.279E-02	7.420E-03	-0.103
		1120.29		-1.441E-01	1.465E-01	1.945E-01	2.088E-02	-0.741
		1764.49		-9.773E-02	2.166E-01	3.379E-01	2.809E-02	-0.289
U-235		89.95		-9.625E-03	1.630E-01	2.613E-01	8.129E-02	-0.037
		93.35		-1.483E-02	1.144E-01	1.756E-01	4.980E-02	-0.084
		105.00		-1.552E-01	2.133E-01	2.911E-01	8.842E-02	-0.533
		143.76	*	-1.026E-02	5.658E-02	8.571E-02	1.563E-02	-0.120
		163.35		-4.324E-02	1.274E-01	2.088E-01	3.961E-02	-0.207
		185.71		-4.534E-03	1.579E-02	2.437E-02	2.045E-03	-0.186
		205.31		2.531E-02	1.604E-01	2.742E-01	5.232E-02	0.092
NP-236		94.67		-1.508E-04	2.234E-02	3.594E-02	3.498E-03	-0.004
		98.44		3.036E-03	1.329E-02	2.123E-02	2.109E-03	0.143
		111.00		-4.062E-03	3.199E-02	4.997E-02	5.348E-03	-0.081
		160.31	*	2.579E-03	2.111E-02	3.662E-02	3.166E-03	0.070
NP-237		86.50	*	1.109E-03	3.979E-02	6.320E-02	1.430E-02	0.018
		95.87		-4.448E-02	1.837E-01	2.851E-01	7.148E-02	-0.156
U-238		63.29	*	-5.115E-03	1.223E-01	2.013E-01	3.556E-02	-0.025
		92.38		-1.238E-02	9.329E-02	1.431E-01	1.376E-02	-0.087
NP-239		99.55		-1.861E-02	2.969E-02	4.054E-02	4.052E-03	-0.459
		117.00	*	-1.911E-02	4.589E-02	6.809E-02	7.568E-03	-0.281
		209.75		1.147E-01	2.349E-01	4.154E-01	3.599E-02	0.276
		228.18		-1.911E-02	7.421E-02	1.196E-01	1.054E-02	-0.160
		277.60		-2.234E-02	6.617E-02	1.033E-01	9.216E-03	-0.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	334.30			-3.874E-01	5.122E-01	7.198E-01	6.300E-02	-0.538
AM-241	59.54	*		3.527E-03	1.249E-02	2.147E-02	1.822E-03	0.164
AM-243	74.67	*		1.620E-03	7.742E-03	1.323E-02	1.121E-03	0.122
	86.72			4.199E-02	1.494E+00	2.372E+00	2.208E-01	0.018
	117.66			-9.624E-02	9.401E-01	1.467E+00	1.637E-01	-0.066
	142.18			3.646E+00	4.304E+00	7.559E+00	7.661E-01	0.482
CM-243	99.55			-1.914E-02	3.054E-02	4.169E-02	4.168E-03	-0.459
	103.76	*		8.337E-03	1.761E-02	3.029E-02	3.103E-03	0.275
	117.00			-1.965E-02	4.719E-02	7.003E-02	7.783E-03	-0.281
	209.75			1.131E-01	2.314E-01	4.093E-01	3.546E-02	0.276
	228.18			-1.930E-02	7.496E-02	1.208E-01	1.065E-02	-0.160
	277.60			-2.251E-02	6.668E-02	1.041E-01	9.288E-03	-0.216
AM-246	798.80			-1.758E-02	7.207E-02	1.083E-01	1.097E-02	-0.162
	1036.00			-2.381E-02	1.322E-01	2.062E-01	1.789E-02	-0.115
	1062.04			2.785E-02	8.967E-02	1.610E-01	1.388E-02	0.173
	1078.86	*		-1.862E-02	6.658E-02	1.005E-01	8.624E-03	-0.185
CM-247	278.00			-1.812E-01	2.833E-01	4.226E-01	3.770E-02	-0.429
	287.40			1.085E-01	4.215E-01	7.157E-01	6.389E-02	0.152
	402.60	*		5.184E-04	1.584E-02	2.524E-02	2.048E-03	0.021
CF-249	252.85			1.212E-01	3.537E-01	6.068E-01	5.416E-02	0.200
	333.44			2.198E-02	6.783E-02	1.146E-01	1.004E-02	0.192
	387.95	*		1.662E-02	1.503E-02	2.863E-02	2.296E-03	0.581
CF-251	176.60	*		9.617E-03	3.585E-02	6.276E-02	5.192E-03	0.153
	227.00			1.813E-02	1.179E-01	2.004E-01	1.764E-02	0.090
	285.00			3.402E-01	6.381E-01	1.121E+00	1.000E-01	0.304
ANH-511	511.00	*		-1.200E-02	3.065E-02	5.729E-02	5.492E-03	-0.209

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]G1202037552      *
* Acquisition date   : 19-FEB-2010 20:41:37 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 02:00:25.04   Half life ratio  : 8.000              *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 11-FEB-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202037552     Analyst initials: MXR1              *
* Batch Number       : 950788          Sample Quantity  : 1.5875E+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)	
BI-211	6.844E-02	1.123E-01	1.360E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-8.595E-02	1.457E-01	2.367E-01	0.000E+00 NOT IDENT.
NA-22	-1.292E-02	2.102E-02	2.810E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	3.209E+02	0.000E+00	0.000E+00 SHORT HLIF
AL-26	7.548E-03	2.293E-02	4.237E-02	0.000E+00 NOT IDENT.
K-40	-1.061E-01	1.975E-01	3.230E-01	0.000E+00 NOT IDENT.
TI-44	-7.217E-03	4.720E-03	6.965E-03	0.000E+00 NOT IDENT.
SC-46	-1.127E-02	1.985E-02	2.935E-02	0.000E+00 NOT IDENT.
V-48	-1.536E-02	2.480E-02	3.546E-02	0.000E+00 NOT IDENT.
CR-51	-7.199E-02	1.362E-01	2.190E-01	0.000E+00 NOT IDENT.
MN-52	3.843E-02	6.432E-02	1.272E-01	0.000E+00 NOT IDENT.
MN-54	-1.324E-02	1.904E-02	2.893E-02	0.000E+00 NOT IDENT.
CO-56	1.297E-02	1.688E-02	3.422E-02	0.000E+00 NOT IDENT.
CO-57	4.395E-05	5.470E-03	9.548E-03	0.000E+00 NOT IDENT.
CO-58	1.783E-02	1.673E-02	3.545E-02	0.000E+00 NOT IDENT.
FE-59	-5.731E-03	3.340E-02	5.374E-02	0.000E+00 NOT IDENT.
CO-60	-1.063E-02	1.576E-02	2.007E-02	0.000E+00 NOT IDENT.
ZN-65	-7.743E-03	4.198E-02	6.708E-02	0.000E+00 NOT IDENT.
GE-68	9.498E-02	5.477E-01	9.755E-01	0.000E+00 NOT IDENT.
AS-73	1.054E-02	4.072E-02	7.946E-02	0.000E+00 NOT IDENT.
AS-74	-2.301E-02	3.280E-02	4.869E-02	0.000E+00 NOT IDENT.
SE-75	6.464E-03	1.507E-02	2.829E-02	0.000E+00 NOT IDENT.
BR-77	1.635E-01	7.873E-01	1.437E+00	0.000E+00 NOT IDENT.
SR-82	1.169E-01	1.433E-01	2.850E-01	0.000E+00 NOT IDENT.
RB-83	-3.824E-03	3.068E-02	5.305E-02	0.000E+00 NOT IDENT.
RB-84	-7.956E-03	3.109E-02	5.135E-02	0.000E+00 NOT IDENT.
KR-85	-1.237E+01	5.266E+00	6.671E+00	0.000E+00 NOT IDENT.

SR-85	-5.938E-02	2.528E-02	3.202E-02	0.000E+00	NOT IDENT.
RB-86	1.062E-01	2.945E-01	5.459E-01	0.000E+00	NOT IDENT.
Y-88	-9.983E-03	2.174E-02	2.849E-02	0.000E+00	NOT IDENT.
ZR-88	9.151E-03	1.119E-02	2.175E-02	0.000E+00	NOT IDENT.
Y-91	-2.266E+00	5.053E+00	6.747E+00	0.000E+00	NOT IDENT.
NB-94	7.580E-04	1.704E-02	2.924E-02	0.000E+00	NOT IDENT.
NB-95	-1.424E-03	1.379E-02	2.247E-02	0.000E+00	NOT IDENT.
NB-95M	-2.950E-02	4.062E-02	6.710E-02	0.000E+00	NOT IDENT.
ZR-95	1.519E-02	2.893E-02	5.474E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.027E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.806E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.122E-01	1.144E+00	1.889E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.353E+08	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.682E-03	1.113E-02	2.190E-02	0.000E+00	NOT IDENT.
RH-102	2.508E-03	1.463E-02	2.672E-02	0.000E+00	NOT IDENT.
RU-103	-1.439E-02	1.702E-02	2.566E-02	0.000E+00	NOT IDENT.
RH-106	1.342E-02	1.340E-01	2.364E-01	0.000E+00	NOT IDENT.
RU-106	1.342E-02	1.340E-01	2.364E-01	0.000E+00	NOT IDENT.
AG-108M	5.426E-04	1.341E-02	2.434E-02	0.000E+00	NOT IDENT.
CD-109	-1.227E-02	1.308E-01	2.271E-01	0.000E+00	NOT IDENT.
AG-110M	-7.846E-03	1.733E-02	2.703E-02	0.000E+00	NOT IDENT.
IN-111	4.752E-02	8.101E-02	1.551E-01	0.000E+00	NOT IDENT.
IN-113M	-7.672E-03	1.693E-02	2.621E-02	0.000E+00	NOT IDENT.
SN-113	-7.672E-03	1.693E-02	2.621E-02	0.000E+00	NOT IDENT.
IN-114M	1.181E-02	5.030E-02	9.502E-02	0.000E+00	NOT IDENT.
CD-115	8.843E-02	6.306E-01	1.141E+00	0.000E+00	NOT IDENT.
SN-117M	-4.610E-03	9.955E-03	1.766E-02	0.000E+00	NOT IDENT.
SB-122	-1.585E-01	1.867E-01	2.705E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.428E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-4.009E-03	7.148E-03	1.255E-02	0.000E+00	NOT IDENT.
I-124	4.714E-02	1.184E-01	2.184E-01	0.000E+00	NOT IDENT.
SB-124	-3.837E-02	5.292E-02	6.512E-02	0.000E+00	NOT IDENT.
SB-125	-8.327E-03	3.304E-02	5.705E-02	0.000E+00	NOT IDENT.
TE-125M	1.378E-01	1.802E+00	3.213E+00	0.000E+00	NOT IDENT.
I-126	-3.433E-02	6.425E-02	9.795E-02	0.000E+00	NOT IDENT.
SB-126	-2.535E-02	6.419E-02	1.015E-01	0.000E+00	NOT IDENT.
SN-126	9.293E-04	1.320E-02	2.344E-02	0.000E+00	NOT IDENT.
SB-127	-1.604E-01	2.066E-01	2.862E-01	0.000E+00	NOT IDENT.
XE-127	-5.292E-03	1.334E-02	2.335E-02	0.000E+00	NOT IDENT.
I-131	1.988E-02	2.990E-02	5.621E-02	0.000E+00	NOT IDENT.
TE-132	-1.560E-02	5.878E-02	1.028E-01	0.000E+00	NOT IDENT.
BA-133	1.631E-03	2.073E-02	3.221E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.635E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.376E-02	1.974E-02	3.851E-02	0.000E+00	NOT IDENT.
CS-135	-2.049E-02	5.253E-02	8.810E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.094E+08	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.097E-03	3.932E-02	6.999E-02	0.000E+00	NOT IDENT.
BA-137M	1.193E-02	1.477E-02	2.955E-02	0.000E+00	NOT IDENT.
CS-137	1.261E-02	1.561E-02	3.123E-02	0.000E+00	NOT IDENT.
CE-139	6.230E-03	7.842E-03	1.584E-02	0.000E+00	NOT IDENT.
BA-140	3.991E-02	7.415E-02	1.418E-01	0.000E+00	NOT IDENT.
LA-140	6.232E-03	3.561E-02	6.358E-02	0.000E+00	NOT IDENT.
CE-141	-1.178E-02	1.454E-02	2.161E-02	0.000E+00	NOT IDENT.
CE-143	2.322E-01	1.887E+00	3.377E+00	0.000E+00	FAIL ABUN
CE-144	-1.441E-04	4.633E-02	7.994E-02	0.000E+00	NOT IDENT.
PM-144	-5.255E-03	1.868E-02	3.016E-02	0.000E+00	NOT IDENT.
PR-144	-3.549E-01	1.262E+00	2.037E+00	0.000E+00	NOT IDENT.
PM-146	4.750E-03	1.923E-02	3.574E-02	0.000E+00	NOT IDENT.
ND-147	2.201E-02	1.424E-01	2.589E-01	0.000E+00	NOT IDENT.
PM-149	2.007E+00	4.452E+00	8.344E+00	0.000E+00	NOT IDENT.
EU-152	2.032E-03	3.488E-02	6.081E-02	0.000E+00	NOT IDENT.
GD-153	-3.411E-03	1.514E-02	2.517E-02	0.000E+00	NOT IDENT.
EU-154	-5.569E-02	6.355E-02	7.660E-02	0.000E+00	NOT IDENT.
EU-155	-1.209E-02	2.037E-02	3.246E-02	0.000E+00	NOT IDENT.
TB-160	1.060E-02	6.642E-02	1.199E-01	0.000E+00	NOT IDENT.
HO-166M	-9.925E-03	2.859E-02	4.472E-02	0.000E+00	NOT IDENT.
TM-171	1.375E+00	2.701E+00	5.307E+00	0.000E+00	NOT IDENT.
LU-176	5.143E-03	8.266E-03	1.588E-02	0.000E+00	NOT IDENT.
LU-177	-3.192E-02	1.613E-01	2.875E-01	0.000E+00	NOT IDENT.
LU-177M	6.965E-03	7.470E-02	1.281E-01	0.000E+00	NOT IDENT.
HF-181	9.501E-03	1.673E-02	3.241E-02	0.000E+00	NOT IDENT.
W-181	-1.605E-02	3.243E-02	5.611E-02	0.000E+00	NOT IDENT.
TA-182	3.365E-03	7.761E-02	1.316E-01	0.000E+00	NOT IDENT.
RE-183	1.494E-02	2.738E-02	5.419E-02	0.000E+00	NOT IDENT.
RE-184	3.147E-02	9.005E-02	1.672E-01	0.000E+00	NOT IDENT.
OS-185	-9.504E-03	1.654E-02	2.421E-02	0.000E+00	NOT IDENT.
RE-188	-1.170E-02	4.201E-02	7.666E-02	0.000E+00	NOT IDENT.
W-188	6.007E-01	2.294E+00	4.198E+00	0.000E+00	NOT IDENT.

IR-192	-2.141E-03	1.233E-02	2.091E-02	0.000E+00	NOT IDENT.
AU-195	-3.787E-03	4.070E-02	6.843E-02	0.000E+00	NOT IDENT.
TL-200	0.000E+00	3.301E+00	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.793E-01	4.383E-01	8.939E-01	0.000E+00	NOT IDENT.
TL-202	4.523E-03	1.972E-02	3.677E-02	0.000E+00	NOT IDENT.
HG-203	7.308E-04	1.381E-02	2.458E-02	0.000E+00	NOT IDENT.
BI-207	6.363E-03	2.011E-02	3.752E-02	0.000E+00	NOT IDENT.
TL-207	1.046E-01	2.649E-01	4.852E-01	0.000E+00	NOT IDENT.
TL-208	1.816E-02	1.950E-02	3.841E-02	0.000E+00	NOT IDENT.
PO-209	-1.526E-01	3.799E+00	6.569E+00	0.000E+00	NOT IDENT.
BI-210	5.805E-02	1.047E-01	2.135E-01	0.000E+00	NOT IDENT.
PB-210	5.805E-02	1.047E-01	2.135E-01	0.000E+00	NOT IDENT.
PO-210	5.805E-02	1.047E-01	2.135E-01	0.000E+00	NOT IDENT.
PB-211	-1.168E-01	4.137E-01	6.546E-01	0.000E+00	NOT IDENT.
BI-212	-2.110E-01	1.670E-01	2.065E-01	0.000E+00	NOT IDENT.
PB-212	-3.835E-03	2.205E-02	4.123E-02	0.000E+00	NOT IDENT.
PO-212	-3.835E-03	2.205E-02	4.123E-02	0.000E+00	NOT IDENT.
BI-214	-6.452E-03	3.803E-02	6.502E-02	0.000E+00	NOT IDENT.
PB-214	2.381E-02	3.909E-02	6.833E-02	0.000E+00	FAIL ABUN
PO-214	2.381E-02	3.909E-02	6.833E-02	0.000E+00	FAIL ABUN
PO-215	1.046E-01	2.649E-01	4.852E-01	0.000E+00	NOT IDENT.
PO-216	-3.835E-03	2.205E-02	4.123E-02	0.000E+00	NOT IDENT.
PO-218	2.381E-02	3.909E-02	6.833E-02	0.000E+00	FAIL ABUN
RN-219	-7.371E-02	1.822E-01	2.860E-01	0.000E+00	NOT IDENT.
RN-220	-4.695E+00	1.269E+01	2.082E+01	0.000E+00	NOT IDENT.
RA-223	1.046E-01	2.649E-01	4.852E-01	0.000E+00	NOT IDENT.
RA-224	-6.892E-02	2.641E-01	4.413E-01	0.000E+00	NOT IDENT.
RA-226	-6.452E-03	3.803E-02	6.502E-02	0.000E+00	NOT IDENT.
AC-227	3.587E-02	1.397E-01	2.572E-01	0.000E+00	NOT IDENT.
TH-227	3.587E-02	1.398E-01	2.572E-01	0.000E+00	NOT IDENT.
AC-228	3.355E-02	6.152E-02	1.192E-01	0.000E+00	NOT IDENT.
RA-228	3.355E-02	6.152E-02	1.192E-01	0.000E+00	NOT IDENT.
TH-228	-3.869E-03	2.224E-02	4.160E-02	0.000E+00	NOT IDENT.
TH-229	-4.730E-02	1.546E-01	2.747E-01	0.000E+00	NOT IDENT.
TH-230	-6.452E-03	3.803E-02	6.502E-02	0.000E+00	NOT IDENT.
PA-231	-5.479E-01	5.575E-01	8.256E-01	0.000E+00	NOT IDENT.
TH-231	1.046E-01	2.649E-01	4.852E-01	0.000E+00	NOT IDENT.
U-231	-1.795E-02	7.255E-02	1.253E-01	0.000E+00	NOT IDENT.
TH-232	3.355E-02	6.152E-02	1.192E-01	0.000E+00	NOT IDENT.
PA-233	-1.473E-02	2.295E-02	3.565E-02	0.000E+00	NOT IDENT.
PA-234	-4.305E-02	1.661E-01	2.721E-01	0.000E+00	NOT IDENT.
PA-234M	-2.740E-01	1.894E+00	3.126E+00	0.000E+00	NOT IDENT.
TH-234	-5.115E-03	1.198E-01	2.214E-01	0.000E+00	NOT IDENT.
U-234	-6.452E-03	3.803E-02	6.502E-02	0.000E+00	NOT IDENT.
U-235	-1.026E-02	5.545E-02	9.230E-02	0.000E+00	NOT IDENT.
NP-236	2.579E-03	2.069E-02	3.933E-02	0.000E+00	NOT IDENT.
NP-237	1.109E-03	3.900E-02	6.897E-02	0.000E+00	NOT IDENT.
U-238	-5.115E-03	1.198E-01	2.214E-01	0.000E+00	NOT IDENT.
NP-239	-1.911E-02	4.497E-02	7.373E-02	0.000E+00	NOT IDENT.
AM-241	3.527E-03	1.224E-02	2.365E-02	0.000E+00	NOT IDENT.
AM-243	1.620E-03	7.587E-03	1.449E-02	0.000E+00	NOT IDENT.
CM-243	8.337E-03	1.726E-02	3.290E-02	0.000E+00	NOT IDENT.
AM-246	-1.862E-02	6.525E-02	1.024E-01	0.000E+00	NOT IDENT.
CM-247	5.184E-04	1.553E-02	2.644E-02	0.000E+00	NOT IDENT.
CF-249	1.662E-02	1.473E-02	3.002E-02	0.000E+00	NOT IDENT.
CF-251	9.617E-03	3.514E-02	6.723E-02	0.000E+00	NOT IDENT.
ANH-511	-1.200E-02	3.004E-02	5.961E-02	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037552.CNF;1
Sample date        : 11-FEB-2010 00:00:00 Acquisition date : 19-FEB-2010 20:41:37
Sample ID          : G1202037552 Sample quantity : 1.58750E+02 GRAM
Detector name      : GAM21 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:25.04 0.3%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 950788 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
BI-211	72.87	-----	1.27	8.278E+00	-----	Line Not Found	-----
	351.07	11	12.94*	3.000E+00	6.844E-02	6.844E-02	167.47

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202037552

Page : 2
Acquisition date : 19-FEB-2010 20:41:37

Total number of lines in spectrum 1
Number of unidentified lines 0
Number of lines tentatively identified by NID 1 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BI-211	7.04E+08Y	1.00	6.844E-02	6.844E-02	11.46E-02	167.47	
Total Activity :			6.844E-02	6.844E-02			

Grand Total Activity : 6.844E-02 6.844E-02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202037552

Page : 3
Acquisition date : 19-FEB-2010 20:41:37

None

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037552.CNF;1 *
* Acquisition date   : 19-FEB-2010 20:41:37 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 02:00:25.04    Half life ratio   :    : 8.00000          *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 11-FEB-2010 00:00:00 Nuclide Library   : SOLID           *
* Sample ID          : G1202037552       Analyst initials:  : MXR1            *
* Batch Number       : 950788            Sample Quantity    : 1.58750E+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
BI-211	6.844E-02	1.146E-01	1.293E-01	1.167E-02	0.529

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-8.595E-02		1.486E-01	2.270E-01	2.224E-02	-0.379
NA-22	-1.292E-02		2.145E-02	2.772E-02	2.274E-03	-0.466
NA-24	1.641E-05		1.637E-04	Half-Life too short		
AL-26	7.548E-03		2.340E-02	4.224E-02	3.495E-03	0.179
K-40	-1.061E-01		2.015E-01	3.199E-01	2.731E-02	-0.332
TI-44	-7.217E-03		4.817E-03	6.367E-03	5.544E-04	-1.134
SC-46	-1.127E-02		2.025E-02	2.865E-02	2.548E-03	-0.393
V-48	-1.536E-02		2.531E-02	3.472E-02	3.037E-03	-0.442
CR-51	-7.199E-02		1.390E-01	2.077E-01	1.931E-02	-0.347
MN-52	3.843E-02		6.563E-02	1.259E-01	1.040E-02	0.305
MN-54	-1.324E-02		1.943E-02	2.819E-02	2.733E-03	-0.469

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-56	1.297E-02		1.722E-02	3.336E-02	3.180E-03	0.389
CO-57	4.395E-05		5.582E-03	8.827E-03	1.014E-03	0.005
CO-58	1.783E-02		1.707E-02	3.452E-02	3.454E-03	0.517
FE-59	-5.731E-03		3.408E-02	5.279E-02	4.871E-03	-0.109
CO-60	-1.063E-02		1.608E-02	1.982E-02	1.609E-03	-0.536
ZN-65	-7.743E-03		4.284E-02	6.592E-02	5.588E-03	-0.117
GE-68	9.498E-02		5.589E-01	9.577E-01	8.220E-02	0.099
AS-73	1.054E-02		4.155E-02	7.194E-02	5.826E-03	0.146
AS-74	-2.301E-02		3.347E-02	4.699E-02	4.933E-03	-0.490
SE-75	6.464E-03		1.538E-02	2.670E-02	2.397E-03	0.242
BR-77	1.635E-01		8.034E-01	1.381E+00	1.340E-01	0.118
SR-82	1.169E-01		1.462E-01	2.771E-01	2.869E-02	0.422
RB-83	-3.824E-03		3.130E-02	5.100E-02	4.946E-03	-0.075
RB-84	-7.956E-03		3.172E-02	5.011E-02	4.519E-03	-0.159
KR-85	-1.237E+01		5.373E+00	6.411E+00	6.169E-01	-1.929
SR-85	-5.938E-02		2.580E-02	3.078E-02	2.962E-03	-1.929
RB-86	1.062E-01		3.005E-01	5.359E-01	4.601E-02	0.198
Y-88	-9.983E-03		2.218E-02	2.841E-02	2.346E-03	-0.351
ZR-88	9.151E-03		1.141E-02	2.074E-02	1.653E-03	0.441
Y-91	-2.266E+00		5.156E+00	6.646E+00	5.475E-01	-0.341
NB-94	7.580E-04		1.739E-02	2.835E-02	3.087E-03	0.027
NB-95	-1.424E-03		1.407E-02	2.185E-02	2.283E-03	-0.065
NB-95M	-2.950E-02		4.145E-02	6.313E-02	6.361E-03	-0.467
ZR-95	1.519E-02		2.952E-02	5.319E-02	5.989E-03	0.286
NB-97	-3.401E-05		5.241E-05	Half-Life too short		
ZR-97	-5.749E-03		1.432E-03	Half-Life too short		
MO-99	-1.122E-01		1.167E+00	1.834E+00	3.014E-01	-0.061
TC-99M	-2.804E+02		1.711E+02	Half-Life too short		
RH-101	8.682E-03		1.135E-02	2.051E-02	1.751E-03	0.423
RH-102	2.508E-03		1.492E-02	2.562E-02	2.340E-03	0.098
RU-103	-1.439E-02		1.737E-02	2.464E-02	3.612E-03	-0.584
RH-106	1.342E-02		1.367E-01	2.285E-01	3.383E-02	0.059
RU-106	1.342E-02		1.367E-01	2.285E-01	2.451E-02	0.059
AG-108M	5.426E-04		1.369E-02	2.329E-02	2.076E-03	0.023
CD-109	-1.227E-02		1.335E-01	2.082E-01	1.959E-02	-0.059
AG-110M	-7.846E-03		1.768E-02	2.616E-02	2.935E-03	-0.300
IN-111	4.752E-02		8.266E-02	1.460E-01	1.300E-02	0.325
IN-113M	-7.672E-03		1.728E-02	2.500E-02	2.059E-03	-0.307
SN-113	-7.672E-03		1.728E-02	2.500E-02	2.059E-03	-0.307
IN-114M	1.181E-02		5.132E-02	8.888E-02	7.510E-03	0.133
CD-115	8.843E-02		6.435E-01	1.098E+00	1.074E-01	0.081
SN-117M	-4.610E-03		1.016E-02	1.644E-02	1.447E-03	-0.280
SB-122	-1.585E-01		1.905E-01	2.606E-01	2.653E-02	-0.608
I-123	-3.044E-04		2.769E-04	Half-Life too short		
TE-123M	-4.009E-03		7.294E-03	1.168E-02	1.030E-03	-0.343
I-124	4.714E-02		1.208E-01	2.109E-01	2.227E-02	0.224
SB-124	-3.837E-02		5.400E-02	6.479E-02	5.640E-03	-0.592
SB-125	-8.327E-03		3.371E-02	5.455E-02	4.722E-03	-0.153

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE-125M	1.378E-01		1.839E+00	2.962E+00	3.558E-01	0.047
I-126	-3.433E-02		6.556E-02	9.483E-02	1.046E-02	-0.362
SB-126	-2.535E-02		6.550E-02	9.850E-02	1.063E-02	-0.257
SN-126	9.293E-04		1.347E-02	2.149E-02	2.015E-03	0.043
SB-127	-1.604E-01		2.108E-01	2.773E-01	3.312E-02	-0.578
XE-127	-5.292E-03		1.361E-02	2.188E-02	1.880E-03	-0.242
I-131	1.988E-02		3.051E-02	5.351E-02	4.740E-03	0.371
TE-132	-1.560E-02		5.998E-02	9.659E-02	1.439E-02	-0.161
BA-133	1.631E-03		2.115E-02	3.064E-02	4.027E-03	0.053
I-133	-1.985E-06		8.341E-06	Half-Life too short		
CS-134	1.376E-02		2.014E-02	3.748E-02	3.826E-03	0.367
CS-135	-2.049E-02		5.360E-02	8.317E-02	8.517E-03	-0.246
I-135	-1.527E+02		2.089E+02	Half-Life too short		
CS-136	7.097E-03		4.012E-02	6.865E-02	6.188E-03	0.103
BA-137M	1.193E-02		1.507E-02	2.860E-02	3.159E-03	0.417
CS-137	1.261E-02		1.593E-02	3.023E-02	3.343E-03	0.417
CE-139	6.230E-03		8.002E-03	1.477E-02	1.200E-03	0.422
BA-140	3.991E-02		7.566E-02	1.365E-01	4.571E-02	0.292
LA-140	6.232E-03		3.634E-02	6.315E-02	5.281E-03	0.099
CE-141	-1.178E-02		1.484E-02	2.007E-02	2.013E-03	-0.587
CE-143	2.322E-01		1.926E+00	3.196E+00	6.944E-01	0.073
CE-144	-1.441E-04		4.728E-02	7.409E-02	1.248E-02	-0.002
PM-144	-5.255E-03		1.906E-02	2.924E-02	3.193E-03	-0.180
PR-144	-3.549E-01		1.287E+00	1.975E+00	2.156E-01	-0.180
PM-146	4.750E-03		1.962E-02	3.423E-02	3.735E-03	0.139
ND-147	2.201E-02		1.454E-01	2.490E-01	3.903E-02	0.088
PM-149	2.007E+00		4.542E+00	7.890E+00	1.239E+00	0.254
EU-152	2.032E-03		3.559E-02	5.780E-02	5.301E-03	0.035
GD-153	-3.411E-03		1.545E-02	2.313E-02	2.285E-03	-0.147
EU-154	-5.569E-02		6.484E-02	7.557E-02	8.305E-03	-0.737
EU-155	-1.209E-02		2.079E-02	2.990E-02	3.117E-03	-0.405
TB-160	1.060E-02		6.777E-02	1.170E-01	1.059E-02	0.091
HO-166M	-9.925E-03		2.918E-02	4.338E-02	4.703E-03	-0.229
TM-171	1.375E+00		2.756E+00	4.832E+00	3.894E-01	0.284
LU-176	5.143E-03		8.435E-03	1.504E-02	1.340E-03	0.342
LU-177	-3.192E-02		1.646E-01	2.696E-01	2.332E-02	-0.118
LU-177M	6.965E-03		7.623E-02	1.224E-01	1.013E-02	0.057
HF-181	9.501E-03		1.707E-02	3.109E-02	2.868E-03	0.306
W-181	-1.605E-02		3.309E-02	5.106E-02	4.081E-03	-0.314
TA-182	3.365E-03		7.920E-02	1.297E-01	1.067E-02	0.026
RE-183	1.494E-02		2.794E-02	5.048E-02	4.271E-03	0.296
RE-184	3.147E-02		9.188E-02	1.576E-01	1.407E-02	0.200
OS-185	-9.504E-03		1.688E-02	2.342E-02	2.559E-03	-0.406
RE-188	-1.170E-02		4.287E-02	7.132E-02	6.498E-03	-0.164
W-188	6.007E-01		2.341E+00	3.971E+00	3.546E-01	0.151
IR-192	-2.141E-03		1.258E-02	1.983E-02	1.762E-03	-0.108
AU-195	-3.787E-03		4.153E-02	6.293E-02	6.267E-03	-0.060
TL-200	-1.495E-06		1.684E-06	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
TL-201	3.793E-01		4.472E-01	8.334E-01	6.787E-02	0.455
TL-202	4.523E-03		2.013E-02	3.519E-02	3.045E-03	0.129
HG-203	7.308E-04		1.409E-02	2.323E-02	2.127E-03	0.031
BI-207	6.363E-03		2.052E-02	3.682E-02	3.173E-03	0.173
TL-207	1.046E-01		2.703E-01	4.604E-01	8.197E-02	0.227
TL-208	1.816E-02		1.990E-02	3.704E-02	4.035E-03	0.490
PO-209	-1.526E-01		3.876E+00	6.415E+00	5.626E-01	-0.024
BI-210	5.805E-02		1.069E-01	1.926E-01	1.837E-02	0.301
PB-210	5.805E-02		1.069E-01	1.926E-01	1.837E-02	0.301
PO-210	5.805E-02		1.068E-01	1.926E-01	1.672E-02	0.301
PB-211	-1.168E-01		4.222E-01	6.250E-01	3.912E-01	-0.187
BI-212	-2.110E-01		1.704E-01	2.004E-01	2.383E-02	-1.053
PB-212	-3.835E-03		2.250E-02	3.880E-02	3.858E-03	-0.099
PO-212	-3.835E-03		2.250E-02	3.880E-02	3.858E-03	-0.099
BI-214	-6.452E-03		3.881E-02	6.279E-02	7.420E-03	-0.103
PB-214	2.381E-02	+	3.989E-02	6.499E-02	6.770E-03	0.366
PO-214	2.381E-02	+	3.989E-02	6.499E-02	6.770E-03	0.366
PO-215	1.046E-01		2.703E-01	4.604E-01	8.197E-02	0.227
PO-216	-3.835E-03		2.250E-02	3.880E-02	3.858E-03	-0.099
PO-218	2.381E-02	+	3.989E-02	6.499E-02	6.770E-03	0.366
RN-219	-7.371E-02		1.859E-01	2.730E-01	4.022E-02	-0.270
RN-220	-4.695E+00		1.295E+01	2.005E+01	2.011E+00	-0.234
RA-223	1.046E-01		2.703E-01	4.604E-01	8.197E-02	0.227
RA-224	-6.892E-02		2.695E-01	4.154E-01	3.692E-02	-0.166
RA-226	-6.452E-03		3.881E-02	6.279E-02	7.420E-03	-0.103
AC-227	3.587E-02		1.426E-01	2.425E-01	3.765E-02	0.148
TH-227	3.587E-02		1.426E-01	2.425E-01	4.417E-02	0.148
AC-228	3.355E-02		6.277E-02	1.164E-01	1.321E-02	0.288
RA-228	3.355E-02		6.277E-02	1.164E-01	1.321E-02	0.288
TH-228	-3.869E-03		2.270E-02	3.915E-02	3.892E-03	-0.099
TH-229	-4.730E-02		1.578E-01	2.571E-01	2.183E-02	-0.184
TH-230	-6.452E-03		3.881E-02	6.279E-02	7.420E-03	-0.103
PA-231	-5.479E-01		5.689E-01	7.806E-01	1.199E-01	-0.702
TH-231	1.046E-01		2.703E-01	4.604E-01	8.197E-02	0.227
U-231	-1.795E-02		7.403E-02	1.151E-01	1.127E-02	-0.156
TH-232	3.355E-02		6.277E-02	1.164E-01	1.321E-02	0.288
PA-233	-1.473E-02		2.342E-02	3.379E-02	3.084E-03	-0.436
PA-234	-4.305E-02		1.695E-01	2.661E-01	5.011E-02	-0.162
PA-234M	-2.740E-01		1.933E+00	3.062E+00	3.081E-01	-0.089
TH-234	-5.115E-03		1.223E-01	2.013E-01	3.556E-02	-0.025
U-234	-6.452E-03		3.881E-02	6.279E-02	7.420E-03	-0.103
U-235	-1.026E-02		5.658E-02	8.571E-02	1.563E-02	-0.120
NP-236	2.579E-03		2.111E-02	3.662E-02	3.166E-03	0.070
NP-237	1.109E-03		3.979E-02	6.320E-02	1.430E-02	0.018
U-238	-5.115E-03		1.223E-01	2.013E-01	3.556E-02	-0.025
NP-239	-1.911E-02		4.589E-02	6.809E-02	7.568E-03	-0.281
AM-241	3.527E-03		1.249E-02	2.147E-02	1.822E-03	0.164
AM-243	1.620E-03		7.742E-03	1.323E-02	1.121E-03	0.122

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	8.337E-03		1.761E-02	3.029E-02	3.103E-03	0.275
AM-246	-1.862E-02		6.658E-02	1.005E-01	8.624E-03	-0.185
CM-247	5.184E-04		1.584E-02	2.524E-02	2.048E-03	0.021
CF-249	1.662E-02		1.503E-02	2.863E-02	2.296E-03	0.581
CF-251	9.617E-03		3.585E-02	6.276E-02	5.192E-03	0.153
ANH-511	-1.200E-02		3.065E-02	5.729E-02	5.492E-03	-0.209

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*                                     *                                       *
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202037552          *
* Acquisition date   : 19-FEB-2010 20:41:37 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 02:00:25.04 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date       : 11-FEB-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1202037552 Analyst initials: MXR1                 *
* Batch Number      : 950788 Sample Quantity : 1.5875E+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
BI-211	6.844E-02	1.123E-01	6.803E-02	5.731E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-8.595E-02	1.457E-01	1.184E-01	7.432E-02	NOT IDENT.
NA-22	-1.292E-02	2.102E-02	1.406E-02	1.073E-02	NOT IDENT.
NA-24	1.641E+01	3.209E+02	0.000E+00	1.637E+02	SHORT HLIF
AL-26	7.548E-03	2.293E-02	2.120E-02	1.170E-02	NOT IDENT.
K-40	-1.061E-01	1.975E-01	1.616E-01	1.008E-01	NOT IDENT.
TI-44	-7.217E-03	4.720E-03	3.485E-03	2.408E-03	NOT IDENT.
SC-46	-1.127E-02	1.985E-02	1.468E-02	1.013E-02	NOT IDENT.
V-48	-1.536E-02	2.480E-02	1.774E-02	1.265E-02	NOT IDENT.
CR-51	-7.199E-02	1.362E-01	1.095E-01	6.948E-02	NOT IDENT.
MN-52	3.843E-02	6.432E-02	6.363E-02	3.282E-02	NOT IDENT.
MN-54	-1.324E-02	1.904E-02	1.448E-02	9.716E-03	NOT IDENT.
CO-56	1.297E-02	1.688E-02	1.712E-02	8.611E-03	NOT IDENT.
CO-57	4.395E-05	5.470E-03	4.777E-03	2.791E-03	NOT IDENT.
CO-58	1.783E-02	1.673E-02	1.774E-02	8.536E-03	NOT IDENT.
FE-59	-5.731E-03	3.340E-02	2.689E-02	1.704E-02	NOT IDENT.
CO-60	-1.063E-02	1.576E-02	1.004E-02	8.039E-03	NOT IDENT.
ZN-65	-7.743E-03	4.198E-02	3.356E-02	2.142E-02	NOT IDENT.
GE-68	9.498E-02	5.477E-01	4.881E-01	2.794E-01	NOT IDENT.
AS-73	1.054E-02	4.072E-02	3.976E-02	2.078E-02	NOT IDENT.
AS-74	-2.301E-02	3.280E-02	2.436E-02	1.674E-02	NOT IDENT.
SE-75	6.464E-03	1.507E-02	1.415E-02	7.690E-03	NOT IDENT.
BR-77	1.635E-01	7.873E-01	7.188E-01	4.017E-01	NOT IDENT.
SR-82	1.169E-01	1.433E-01	1.426E-01	7.309E-02	NOT IDENT.
RB-83	-3.824E-03	3.068E-02	2.654E-02	1.565E-02	NOT IDENT.
RB-84	-7.956E-03	3.109E-02	2.569E-02	1.586E-02	NOT IDENT.
KR-85	-1.237E+01	5.266E+00	3.337E+00	2.687E+00	NOT IDENT.

SR-85	-5.938E-02	2.528E-02	1.602E-02	1.290E-02	NOT IDENT.
RB-86	1.062E-01	2.945E-01	2.731E-01	1.503E-01	NOT IDENT.
Y-88	-9.983E-03	2.174E-02	1.425E-02	1.109E-02	NOT IDENT.
ZR-88	9.151E-03	1.119E-02	1.088E-02	5.707E-03	NOT IDENT.
Y-91	-2.266E+00	5.053E+00	3.376E+00	2.578E+00	NOT IDENT.
NB-94	7.580E-04	1.704E-02	1.463E-02	8.693E-03	NOT IDENT.
NB-95	-1.424E-03	1.379E-02	1.124E-02	7.036E-03	NOT IDENT.
NB-95M	-2.950E-02	4.062E-02	3.357E-02	2.072E-02	NOT IDENT.
ZR-95	1.519E-02	2.893E-02	2.738E-02	1.476E-02	NOT IDENT.
NB-97	-3.401E+01	1.027E+02	0.000E+00	5.241E+01	SHORT HLIF
ZR-97	-5.749E+03	2.806E+03	0.000E+00	1.432E+03	SHORT HLIF
MO-99	-1.122E-01	1.144E+00	9.451E-01	5.836E-01	NOT IDENT.
TC-99M	-2.804E+08	3.353E+08	0.000E+00	1.711E+08	SHORT HLIF
RH-101	8.682E-03	1.113E-02	1.096E-02	5.677E-03	NOT IDENT.
RH-102	2.508E-03	1.463E-02	1.337E-02	7.462E-03	NOT IDENT.
RU-103	-1.439E-02	1.702E-02	1.284E-02	8.686E-03	NOT IDENT.
RH-106	1.342E-02	1.340E-01	1.183E-01	6.836E-02	NOT IDENT.
RU-106	1.342E-02	1.340E-01	1.183E-01	6.836E-02	NOT IDENT.
AG-108M	5.426E-04	1.341E-02	1.218E-02	6.843E-03	NOT IDENT.
CD-109	-1.227E-02	1.308E-01	1.136E-01	6.676E-02	NOT IDENT.
AG-110M	-7.846E-03	1.733E-02	1.353E-02	8.842E-03	NOT IDENT.
IN-111	4.752E-02	8.101E-02	7.758E-02	4.133E-02	NOT IDENT.
IN-113M	-7.672E-03	1.693E-02	1.311E-02	8.639E-03	NOT IDENT.
SN-113	-7.672E-03	1.693E-02	1.311E-02	8.639E-03	NOT IDENT.
IN-114M	1.181E-02	5.030E-02	4.754E-02	2.566E-02	NOT IDENT.
CD-115	8.843E-02	6.306E-01	5.710E-01	3.217E-01	NOT IDENT.
SN-117M	-4.610E-03	9.955E-03	8.836E-03	5.079E-03	NOT IDENT.
SB-122	-1.585E-01	1.867E-01	1.353E-01	9.527E-02	NOT IDENT.
I-123	-3.044E+02	5.428E+02	0.000E+00	2.769E+02	SHORT HLIF
TE-123M	-4.009E-03	7.148E-03	6.279E-03	3.647E-03	NOT IDENT.
I-124	4.714E-02	1.184E-01	1.093E-01	6.041E-02	NOT IDENT.
SB-124	-3.837E-02	5.292E-02	3.258E-02	2.700E-02	NOT IDENT.
SB-125	-8.327E-03	3.304E-02	2.854E-02	1.685E-02	NOT IDENT.
TE-125M	1.378E-01	1.802E+00	1.608E+00	9.194E-01	NOT IDENT.
I-126	-3.433E-02	6.425E-02	4.900E-02	3.278E-02	NOT IDENT.
SB-126	-2.535E-02	6.419E-02	5.079E-02	3.275E-02	NOT IDENT.
SN-126	9.293E-04	1.320E-02	1.173E-02	6.737E-03	NOT IDENT.
SB-127	-1.604E-01	2.066E-01	1.432E-01	1.054E-01	NOT IDENT.
XE-127	-5.292E-03	1.334E-02	1.168E-02	6.804E-03	NOT IDENT.
I-131	1.988E-02	2.990E-02	2.812E-02	1.526E-02	NOT IDENT.
TE-132	-1.560E-02	5.878E-02	5.141E-02	2.999E-02	NOT IDENT.
BA-133	1.631E-03	2.073E-02	1.611E-02	1.057E-02	NOT IDENT.
I-133	-1.985E+00	1.635E+01	0.000E+00	8.341E+00	SHORT HLIF
CS-134	1.376E-02	1.974E-02	1.927E-02	1.007E-02	NOT IDENT.
CS-135	-2.049E-02	5.253E-02	4.407E-02	2.680E-02	NOT IDENT.
I-135	-1.527E+08	4.094E+08	0.000E+00	2.089E+08	SHORT HLIF
CS-136	7.097E-03	3.932E-02	3.501E-02	2.006E-02	NOT IDENT.
BA-137M	1.193E-02	1.477E-02	1.478E-02	7.536E-03	NOT IDENT.
CS-137	1.261E-02	1.561E-02	1.563E-02	7.966E-03	NOT IDENT.
CE-139	6.230E-03	7.842E-03	7.926E-03	4.001E-03	NOT IDENT.
BA-140	3.991E-02	7.415E-02	7.095E-02	3.783E-02	NOT IDENT.
LA-140	6.232E-03	3.561E-02	3.181E-02	1.817E-02	NOT IDENT.
CE-141	-1.178E-02	1.454E-02	1.081E-02	7.420E-03	NOT IDENT.
CE-143	2.322E-01	1.887E+00	1.689E+00	9.628E-01	FAIL ABUN
CE-144	-1.441E-04	4.633E-02	4.000E-02	2.364E-02	NOT IDENT.
PM-144	-5.255E-03	1.868E-02	1.509E-02	9.531E-03	NOT IDENT.
PR-144	-3.549E-01	1.262E+00	1.019E+00	6.437E-01	NOT IDENT.
PM-146	4.750E-03	1.923E-02	1.788E-02	9.811E-03	NOT IDENT.
ND-147	2.201E-02	1.424E-01	1.295E-01	7.268E-02	NOT IDENT.
PM-149	2.007E+00	4.452E+00	4.174E+00	2.271E+00	NOT IDENT.
EU-152	2.032E-03	3.488E-02	3.042E-02	1.780E-02	NOT IDENT.
GD-153	-3.411E-03	1.514E-02	1.259E-02	7.723E-03	NOT IDENT.
EU-154	-5.569E-02	6.355E-02	3.832E-02	3.242E-02	NOT IDENT.
EU-155	-1.209E-02	2.037E-02	1.624E-02	1.039E-02	NOT IDENT.
TB-160	1.060E-02	6.642E-02	5.998E-02	3.389E-02	NOT IDENT.
HO-166M	-9.925E-03	2.859E-02	2.237E-02	1.459E-02	NOT IDENT.
TM-171	1.375E+00	2.701E+00	2.655E+00	1.378E+00	NOT IDENT.
LU-176	5.143E-03	8.266E-03	7.943E-03	4.217E-03	NOT IDENT.
LU-177	-3.192E-02	1.613E-01	1.438E-01	8.231E-02	NOT IDENT.
LU-177M	6.965E-03	7.470E-02	6.409E-02	3.811E-02	NOT IDENT.
HF-181	9.501E-03	1.673E-02	1.621E-02	8.535E-03	NOT IDENT.
W-181	-1.605E-02	3.243E-02	2.807E-02	1.654E-02	NOT IDENT.
TA-182	3.365E-03	7.761E-02	6.584E-02	3.960E-02	NOT IDENT.
RE-183	1.494E-02	2.738E-02	2.711E-02	1.397E-02	NOT IDENT.
RE-184	3.147E-02	9.005E-02	8.366E-02	4.594E-02	NOT IDENT.
OS-185	-9.504E-03	1.654E-02	1.211E-02	8.438E-03	NOT IDENT.
RE-188	-1.170E-02	4.201E-02	3.835E-02	2.143E-02	NOT IDENT.
W-188	6.007E-01	2.294E+00	2.100E+00	1.171E+00	NOT IDENT.

IR-192	-2.141E-03	1.233E-02	1.046E-02	6.290E-03	NOT IDENT.
AU-195	-3.787E-03	4.070E-02	3.424E-02	2.076E-02	NOT IDENT.
TL-200	-1.495E+00	3.301E+00	0.000E+00	1.684E+00	SHORT HLIF
TL-201	3.793E-01	4.383E-01	4.472E-01	2.236E-01	NOT IDENT.
TL-202	4.523E-03	1.972E-02	1.840E-02	1.006E-02	NOT IDENT.
HG-203	7.308E-04	1.381E-02	1.230E-02	7.044E-03	NOT IDENT.
BI-207	6.363E-03	2.011E-02	1.877E-02	1.026E-02	NOT IDENT.
TL-207	1.046E-01	2.649E-01	2.427E-01	1.352E-01	NOT IDENT.
TL-208	1.816E-02	1.950E-02	1.921E-02	9.950E-03	NOT IDENT.
PO-209	-1.526E-01	3.799E+00	3.287E+00	1.938E+00	NOT IDENT.
BI-210	5.805E-02	1.047E-01	1.068E-01	5.343E-02	NOT IDENT.
PB-210	5.805E-02	1.047E-01	1.068E-01	5.343E-02	NOT IDENT.
PO-210	5.805E-02	1.047E-01	1.068E-01	5.341E-02	NOT IDENT.
PB-211	-1.168E-01	4.137E-01	3.275E-01	2.111E-01	NOT IDENT.
BI-212	-2.110E-01	1.670E-01	1.033E-01	8.519E-02	NOT IDENT.
PB-212	-3.835E-03	2.205E-02	2.063E-02	1.125E-02	NOT IDENT.
PO-212	-3.835E-03	2.205E-02	2.063E-02	1.125E-02	NOT IDENT.
BI-214	-6.452E-03	3.803E-02	3.253E-02	1.940E-02	NOT IDENT.
PB-214	2.381E-02	3.909E-02	3.419E-02	1.995E-02	FAIL ABUN
PO-214	2.381E-02	3.909E-02	3.419E-02	1.995E-02	FAIL ABUN
PO-215	1.046E-01	2.649E-01	2.427E-01	1.352E-01	NOT IDENT.
PO-216	-3.835E-03	2.205E-02	2.063E-02	1.125E-02	NOT IDENT.
PO-218	2.381E-02	3.909E-02	3.419E-02	1.995E-02	FAIL ABUN
RN-219	-7.371E-02	1.822E-01	1.431E-01	9.294E-02	NOT IDENT.
RN-220	-4.695E+00	1.269E+01	1.042E+01	6.475E+00	NOT IDENT.
RA-223	1.046E-01	2.649E-01	2.427E-01	1.352E-01	NOT IDENT.
RA-224	-6.892E-02	2.641E-01	2.208E-01	1.347E-01	NOT IDENT.
RA-226	-6.452E-03	3.803E-02	3.253E-02	1.940E-02	NOT IDENT.
AC-227	3.587E-02	1.397E-01	1.287E-01	7.130E-02	NOT IDENT.
TH-227	3.587E-02	1.398E-01	1.287E-01	7.132E-02	NOT IDENT.
AC-228	3.355E-02	6.152E-02	5.962E-02	3.139E-02	NOT IDENT.
RA-228	3.355E-02	6.152E-02	5.962E-02	3.139E-02	NOT IDENT.
TH-228	-3.869E-03	2.224E-02	2.081E-02	1.135E-02	NOT IDENT.
TH-229	-4.730E-02	1.546E-01	1.374E-01	7.888E-02	NOT IDENT.
TH-230	-6.452E-03	3.803E-02	3.253E-02	1.940E-02	NOT IDENT.
PA-231	-5.479E-01	5.575E-01	4.130E-01	2.845E-01	NOT IDENT.
TH-231	1.046E-01	2.649E-01	2.427E-01	1.352E-01	NOT IDENT.
U-231	-1.795E-02	7.255E-02	6.267E-02	3.702E-02	NOT IDENT.
TH-232	3.355E-02	6.152E-02	5.962E-02	3.139E-02	NOT IDENT.
PA-233	-1.473E-02	2.295E-02	1.783E-02	1.171E-02	NOT IDENT.
PA-234	-4.305E-02	1.661E-01	1.361E-01	8.476E-02	NOT IDENT.
PA-234M	-2.740E-01	1.894E+00	1.564E+00	9.663E-01	NOT IDENT.
TH-234	-5.115E-03	1.198E-01	1.108E-01	6.113E-02	NOT IDENT.
U-234	-6.452E-03	3.803E-02	3.253E-02	1.940E-02	NOT IDENT.
U-235	-1.026E-02	5.545E-02	4.618E-02	2.829E-02	NOT IDENT.
NP-236	2.579E-03	2.069E-02	1.968E-02	1.055E-02	NOT IDENT.
NP-237	1.109E-03	3.900E-02	3.450E-02	1.990E-02	NOT IDENT.
U-238	-5.115E-03	1.198E-01	1.108E-01	6.113E-02	NOT IDENT.
NP-239	-1.911E-02	4.497E-02	3.689E-02	2.294E-02	NOT IDENT.
AM-241	3.527E-03	1.224E-02	1.183E-02	6.247E-03	NOT IDENT.
AM-243	1.620E-03	7.587E-03	7.251E-03	3.871E-03	NOT IDENT.
CM-243	8.337E-03	1.726E-02	1.646E-02	8.805E-03	NOT IDENT.
AM-246	-1.862E-02	6.525E-02	5.123E-02	3.329E-02	NOT IDENT.
CM-247	5.184E-04	1.553E-02	1.323E-02	7.921E-03	NOT IDENT.
CF-249	1.662E-02	1.473E-02	1.502E-02	7.517E-03	NOT IDENT.
CF-251	9.617E-03	3.514E-02	3.363E-02	1.793E-02	NOT IDENT.
ANH-511	-1.200E-02	3.004E-02	2.982E-02	1.532E-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	19.8365
46.50	19.8365
46.50	19.8365
48.70	28.2616
49.72	22.9056
51.35	29.5493
52.39	23.1986
52.97	28.8440
53.15	28.8680
53.44	20.5144
54.07	16.8330
56.28	26.4457
56.28	26.4460
57.37	21.8278
57.53	21.8430
57.53	21.8433
57.60	21.8497
57.98	28.5466
57.98	28.5466
59.32	27.7542
59.32	27.7542
59.40	27.7636
59.54	27.7802
59.72	27.8014
60.01	27.8354
61.10	30.8556
61.14	30.8607
61.30	34.7414
63.00	31.0977
63.29	33.0802
63.29	33.0802
63.58	27.2745
64.28	28.3283
65.12	32.3436
65.20	32.3540
65.20	32.3540
66.05	29.5113
66.72	24.6571
66.83	16.7742
66.91	16.7794
67.20	16.7982
67.20	16.7982
67.75	20.7948
67.85	26.7466
68.90	28.8434
68.90	28.8434
69.30	24.9027
69.67	24.9376
70.82	21.0378
70.82	21.0378
70.83	21.0386
72.80	41.3744
72.87	41.3848
72.87	41.3848
74.67	26.4150
74.81	35.5765
74.81	35.5765
74.81	35.5765
74.81	35.5765
74.81	35.5765
74.81	35.5765
74.97	35.5968
75.28	35.6361
75.70	35.6889
77.11	35.8660
77.11	35.8660

77.11	35.8660
77.11	35.8660
77.11	35.8660
77.11	35.8660
77.11	35.8660
78.38	33.9658
79.62	22.7400
79.80	25.8568
79.80	25.8568
80.11	21.7426
80.18	21.7477
80.30	17.6124
80.30	17.6124
80.57	27.9982
81.00	28.0386
81.07	28.0452
81.07	28.0452
81.07	28.0452
81.07	28.0452
82.60	35.4967
83.37	30.3530
83.78	31.4422
83.78	31.4422
83.78	31.4422
83.78	31.4422
84.21	27.2882
84.90	46.2837
85.43	46.3629
86.29	32.7549
86.50	27.4903
86.54	27.4939
86.59	27.4982
86.72	27.5096
86.79	29.6321
86.94	27.5290
87.30	25.4403
87.30	25.4403
87.30	25.4403
87.30	25.4403
87.30	25.4403
87.30	25.4403
87.30	25.4403
87.57	26.5230
87.88	26.5490
88.03	26.5615
88.36	36.1611
88.47	36.1735
89.95	27.7898
91.11	28.9621
92.29	26.9133
92.38	23.6902
92.38	23.6902
93.35	24.8395
94.00	35.7090
94.67	29.2744
94.67	29.2748
94.90	27.1248
94.90	27.1248
94.90	27.1248
94.90	27.1248
95.87	32.6434
95.87	32.6434
96.73	26.1808
97.43	24.0479
98.44	17.5405
98.44	17.5406
98.88	18.6605
99.55	21.9957
99.55	21.9957
99.86	20.9145
100.00	20.9227
100.10	20.9290
103.18	19.9996
103.76	17.8062
105.00	29.0340
105.31	26.8233
108.00	21.3904
109.28	25.9822

111.00	30.6397
111.00	30.6397
111.76	31.8377
112.95	33.0768
115.19	32.1204
116.30	32.2112
117.00	32.2680
117.00	32.2680
117.66	31.1670
121.11	27.9419
121.62	31.4738
121.78	27.9876
122.06	23.3389
122.32	26.8566
122.32	26.8566
122.32	26.8566
122.32	26.8566
123.07	23.3961
127.23	25.9924
129.76	23.7695
131.20	21.4637
133.02	20.3556
133.54	23.9761
135.34	22.8698
136.00	28.9307
136.25	32.5651
136.48	32.5820
140.51	32.8721
140.51	0.0000
142.18	19.5503
142.65	20.7929
143.76	31.8767
144.24	30.6820
144.24	30.6820
144.24	30.6820
144.24	30.6820
145.22	35.6655
145.44	35.6818
147.16	27.1673
152.43	33.7063
152.70	31.2267
153.22	37.5114
154.21	39.2570
154.21	39.2570
154.21	39.2570
154.21	39.2570
155.03	35.1389
156.02	25.1489
158.56	32.0165
159.00	0.0000
159.00	35.4170
160.31	29.5900
161.27	23.7164
162.32	27.1595
162.64	28.0257
163.35	34.0169
163.89	37.4576
165.85	25.6351
167.43	22.2837
171.28	29.3505
171.86	25.0611
172.10	26.8011
176.55	28.7629
176.60	28.7656
181.06	25.4809
184.41	29.1667
185.71	31.8900
186.00	30.1336
190.27	33.0333
192.34	38.5243
193.63	36.8122
197.04	36.1186
198.01	35.2719
198.60	38.0215
200.40	39.0418
201.83	38.2223
202.84	40.1077
205.31	32.0303

208.36	31.2659
208.81	25.7666
209.75	28.5696
209.75	28.5696
210.97	24.9307
215.65	19.5313
216.55	26.0774
218.09	28.0057
222.10	26.2970
223.80	33.8961
226.40	21.7391
227.00	25.5424
227.08	25.5454
227.20	25.5498
228.16	32.2191
228.18	32.2202
228.18	32.2202
231.56	30.4740
235.69	45.9819
236.00	46.9608
236.00	46.9608
238.63	29.8206
238.63	29.8206
238.63	29.8206
238.63	29.8206
239.00	30.7985
240.98	40.5354
241.98	35.7594
241.98	35.7594
241.98	35.7594
244.69	39.7742
245.39	27.1891
247.94	33.1308
248.90	40.0040
249.79	42.0062
252.40	33.3311
252.85	33.3515
252.85	33.3515
254.15	0.0000
256.20	28.5740
256.20	28.5740
260.50	25.7635
260.90	26.7687
262.80	23.8530
264.65	23.9102
268.24	28.0239
268.79	22.0345
269.46	19.0460
269.46	19.0460
269.46	19.0460
269.46	19.0460
271.23	25.1165
273.65	21.1624
276.40	17.1906
277.35	29.3593
277.60	30.3815
277.60	30.3815
278.00	34.4489
278.60	28.3908
279.20	28.4119
279.53	21.3174
280.46	21.3422
281.68	21.3738
283.67	31.6288
284.30	30.6317
285.00	20.4386
285.90	19.4380
286.10	19.4426
286.10	19.4426
287.40	19.4731
288.45	0.0000
290.67	19.5497
290.80	19.5524
291.72	23.6949
293.26	22.7059
293.70	24.7832
295.21	27.9305
295.21	27.9305

295.21	27.9305
295.96	27.9553
296.50	27.9728
297.23	34.2186
298.57	25.9638
299.80	23.9209
299.80	23.9209
300.09	26.0096
300.09	26.0096
300.09	26.0096
300.09	26.0096
300.12	26.0106
301.29	21.8784
302.84	28.1799
303.76	22.9856
303.91	26.1246
304.40	25.0938
304.40	25.0938
304.84	18.8298
306.84	14.6788
308.46	21.0083
311.98	24.2559
316.51	23.3186
318.01	23.3575
319.02	23.3835
319.41	23.3934
320.08	31.9238
323.87	22.4394
323.87	22.4394
323.87	22.4394
323.87	22.4394
325.23	29.9631
328.77	26.8555
333.44	21.5914
334.20	29.1720
334.20	29.1720
334.30	28.0947
338.28	10.8510
338.28	10.8510
338.28	10.8510
338.28	10.8510
338.32	10.8514
338.32	10.8514
338.32	10.8514
340.50	27.1907
340.57	25.0173
344.27	17.4701
345.85	20.7797
350.59	13.1877
351.07	20.8906
351.92	28.0618
351.92	28.0618
351.92	28.0618
355.39	0.0000
356.01	23.2050
364.48	18.9438
366.43	26.7949
367.43	24.5862
367.94	0.0000
369.80	19.0423
374.96	24.7661
383.85	14.7586
387.95	9.1170
388.63	17.1054
391.69	19.4411
391.69	19.4411
392.90	11.4488
398.62	18.4141
400.65	18.4482
401.10	18.4557
401.81	23.0843
402.60	18.4808
404.84	21.9900
410.95	24.4376
411.60	26.7805
413.65	18.6637
414.70	16.6378
415.30	14.8942

415.76	16.6531
417.63	0.0000
418.52	16.6934
423.70	15.8862
427.08	20.3580
427.89	15.0576
432.53	14.2280
433.93	16.9158
439.47	15.2060
439.56	15.2070
439.89	15.2114
443.98	16.1610
444.90	16.1732
445.03	16.1752
445.03	16.1752
445.03	16.1752
445.03	16.1752
453.90	17.1985
463.38	10.0334
468.07	21.9727
473.00	19.3011
475.06	21.1733
475.35	17.4950
476.78	21.2017
477.59	24.9046
477.96	23.9890
482.03	12.9579
484.57	18.5477
487.03	13.9371
490.36	24.2191
492.35	12.1278
497.08	22.4696
507.63	0.0000
510.53	0.0000
510.84	21.7545
511.00	21.7573
511.85	41.6485
511.85	41.6485
513.99	72.0502
513.99	72.0502
520.41	17.1442
520.65	15.2422
527.90	11.4910
528.96	0.0000
529.64	13.4228
529.87	0.0000
531.02	9.5972
537.32	8.6759
543.00	12.5818
546.56	0.0000
549.76	18.4747
552.65	12.6660
555.20	18.5437
563.23	16.6825
563.90	18.6533
568.70	16.7437
569.32	15.7651
569.50	15.7671
569.67	15.7690
573.80	21.7422
574.00	21.7449
574.64	22.7431
578.91	25.7818
579.30	0.0000
583.14	13.9210
585.48	21.9094
591.81	11.9996
592.07	9.0011
593.00	13.0095
595.88	17.0441
600.56	16.0894
602.52	0.0000
602.71	15.1044
602.71	15.1044
603.60	18.1357
604.41	25.2014
604.70	25.2060
609.31	9.1005

609.31	9.1005
609.31	9.1005
609.31	9.1005
610.33	11.1299
612.46	18.2368
614.37	14.2012
618.01	16.2666
621.84	10.1907
621.84	10.1907
631.29	9.2249
633.02	14.3653
633.10	14.3657
634.78	17.4622
635.90	8.2231
636.97	5.1427
645.85	13.4427
646.12	11.3763
656.30	11.4451
657.75	16.6616
657.90	0.0000
661.65	6.2624
661.65	6.2624
664.57	13.5915
666.33	16.7451
666.33	16.7451
675.00	7.3627
677.61	11.5875
685.20	14.8113
692.80	13.8125
695.00	19.1486
696.49	18.0999
696.49	18.0999
697.00	14.9100
697.49	14.9143
698.33	11.7238
698.50	11.7248
699.00	17.0591
702.63	13.8887
706.10	14.9857
706.58	0.0000
706.67	13.9196
709.31	6.4338
711.68	12.8840
713.82	11.8245
717.42	11.8476
720.50	22.6560
721.93	15.1155
722.20	16.1975
722.78	15.1224
722.78	15.1224
722.89	15.1234
722.95	15.1241
723.30	11.8852
724.18	11.8909
727.18	21.6547
733.00	14.1196
735.90	14.1414
739.58	10.8994
742.81	12.0098
744.21	10.9259
747.13	7.6599
751.79	9.8723
752.31	9.8751
753.82	9.8828
755.35	3.2969
756.15	6.5966
756.87	6.5990
763.93	7.7270
765.79	6.6295
766.42	11.0526
766.84	11.0550
776.49	5.5548
778.00	16.6768
778.57	14.4576
778.89	14.4600
783.80	8.9204
785.46	12.2760
792.07	12.3166

795.84	5.6088
796.30	4.4882
798.80	12.3575
801.93	8.1011
805.60	11.7229
810.29	5.4229
810.76	4.5201
815.85	9.0627
817.79	8.1639
818.51	7.2594
819.60	7.2633
826.30	17.3060
828.27	0.0000
831.60	7.3053
831.96	10.0464
834.83	16.4619
836.80	0.0000
846.75	5.5182
848.13	9.2031
856.28	0.0000
856.80	11.0883
860.37	10.1812
867.32	15.7848
867.82	13.0023
871.10	11.1615
873.19	13.0344
874.81	13.9757
875.33	0.0000
876.40	11.1885
879.36	9.3364
880.27	12.1421
880.51	12.1437
881.50	11.2146
883.24	9.3528
884.67	10.2948
889.25	11.2538
896.60	10.3498
898.02	8.4733
899.00	8.4771
903.28	5.6621
911.07	6.6285
911.07	6.6285
911.07	6.6285
919.63	11.4059
920.93	9.5103
925.00	9.5271
925.24	9.5281
926.50	7.6266
935.52	3.8281
937.48	12.4519
944.10	7.6844
946.00	12.4969
949.00	9.6255
962.29	10.6474
964.01	8.7177
966.15	9.6948
968.20	7.7625
969.11	5.8241
969.11	5.8241
969.11	5.8241
977.42	2.9221
980.50	10.7280
983.50	9.7646
989.30	10.7666
996.32	8.8341
1001.03	6.8841
1001.68	10.8206
1004.76	4.9246
1021.30	0.0000
1024.50	0.0000
1034.80	9.9673
1036.00	6.9802
1037.82	6.9853
1038.57	6.9874
1038.76	0.0000
1045.16	11.0081
1046.59	9.0119
1048.07	8.0152

1050.47	7.0198
1050.47	7.0198
1062.04	4.0291
1063.62	4.0316
1076.63	6.0773
1077.35	6.0788
1078.86	8.1098
1085.78	5.0818
1099.22	6.1289
1112.02	4.1053
1112.84	3.0798
1115.52	7.1935
1120.29	8.2352
1120.29	8.2352
1120.29	8.2352
1120.29	8.2352
1120.51	8.2359
1121.28	7.2085
1124.00	0.0000
1129.67	8.2633
1131.51	0.0000
1147.95	0.0000
1167.94	4.1883
1173.22	8.3922
1175.09	5.2485
1177.93	7.3551
1189.05	4.2191
1204.90	4.2422
1205.75	0.0000
1213.00	4.2539
1221.42	6.3990
1230.97	7.4895
1235.34	9.6434
1236.41	0.0000
1238.25	2.1450
1246.25	4.3014
1260.41	0.0000
1271.85	4.3377
1274.45	10.8535
1274.54	8.6828
1291.56	7.6392
1298.22	0.0000
1312.09	3.2953
1325.50	4.5962
1325.50	4.5962
1332.49	5.5276
1333.61	4.6077
1360.21	2.7875
1362.66	0.0000
1365.15	4.6527
1368.21	1.8628
1368.53	0.0000
1376.25	0.9337
1384.27	5.6157
1394.10	3.7547
1395.20	2.8170
1407.95	4.7127
1434.06	3.7992
1436.60	6.6536
1457.56	0.0000
1460.81	1.9143
1489.15	8.6840
1509.49	4.8519
1596.49	3.9738
1620.62	2.9993
1678.03	0.0000
1691.02	7.1248
1691.02	7.1248
1706.46	0.0000
1750.46	0.0000
1764.49	7.2541
1764.49	7.2541
1764.49	7.2541
1764.49	7.2541
1770.23	6.2263
1771.40	5.1900
1791.20	0.0000
1808.65	3.1417

1836.01

4.2157

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202037552

Total Uranium Activity	-1.9966E-02	ug/g
Total Uranium Counting Unc.	3.5736E-01	ug/g
Total Uranium Tpu	1.8232E-07	ug/g
Total Uranium Mda	3.3027E-01	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 950788                      SAMPLE ID   : G1202037552
*  ANALYST       : MXR1                        DETECTOR    : GAM21
*  SAMPLE DATE   : 11-FEB-2010 00:00:00.00    COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 20:41:37.43    SAMPLE ALQT  : 158.750 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 8.857E-03
GROSS GAMMA ERROR   (pCi/GRAM ) : 7.405E-03
GROSS GAMMA MDA     (pCi/GRAM ) : 1.846E-02
GROSS GAMMA DLC     (pCi/GRAM ) : 8.167E-03

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 22:44:21.56

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037553.CNF;1
Sample date        : 3-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 20:42:20
Sample ID          : G1202037553      Sample quantity   : 1.44980E+02 GRAM
Detector name      : GAM22            Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time: 0 02:00:02.53  0.0%
Energy tolerance   : 1.50000 keV      Analyst Initials  : MXR1
Abundance limit    : 75.00000         Sensitivity       : 5.00000
Batch ID           : 950788           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	63.02*	321	967	1.12	126.29	120	12	4.46E-02	20.5	
2	3	74.82*	572	764	1.17	149.87	143	16	7.95E-02	9.1	1.79E+00
3	3	77.11*	778	628	0.97	154.44	143	16	1.08E-01	6.4	
4	0	84.00*	149	634	1.73	168.21	165	7	2.07E-02	29.7	
5	0	86.78	182	736	1.06	173.77	172	7	2.53E-02	25.6	
6	4	89.98	236	343	1.07	180.17	178	14	3.27E-02	12.5	3.69E+00
7	4	92.75*	701	688	1.56	185.69	178	14	9.74E-02	8.2	
8	0	129.16	74	518	0.83	258.44	256	7	1.03E-02	52.0	
9	0	185.83*	371	520	1.33	371.67	367	9	5.15E-02	12.8	
10	0	209.84	229	660	1.47	419.65	413	13	3.17E-02	24.3	
11	3	238.70*	1930	373	1.21	477.32	472	26	2.68E-01	2.9	1.53E+00
12	3	241.66	458	482	1.89	483.24	472	26	6.36E-02	12.6	
13	0	270.36	108	395	1.24	540.59	536	10	1.50E-02	35.7	
14	0	278.08	90	406	1.34	556.01	550	11	1.25E-02	44.8	
15	0	295.24*	645	386	1.33	590.30	585	11	8.96E-02	7.2	
16	0	300.11	123	248	1.11	600.04	596	8	1.71E-02	24.0	
17	0	328.20	96	349	1.60	656.16	652	10	1.33E-02	38.2	
18	0	338.32*	398	303	1.38	676.39	671	10	5.53E-02	9.7	
19	0	352.02*	1066	372	1.32	703.77	697	15	1.48E-01	5.1	
20	0	409.76	98	182	1.71	819.17	815	10	1.36E-02	27.8	
21	0	463.51	107	243	0.92	926.59	922	13	1.49E-02	32.4	
22	0	510.85*	257	316	2.44	1021.20	1011	21	3.57E-02	20.4	
23	0	583.26*	684	232	1.59	1165.94	1159	16	9.50E-02	6.4	
24	0	609.21*	816	221	1.66	1217.80	1209	17	1.13E-01	5.6	
25	0	661.63	291	208	1.67	1322.59	1314	15	4.04E-02	12.3	
26	0	727.73	219	153	2.00	1454.73	1448	16	3.04E-02	14.3	
27	0	770.22	103	235	0.64	1539.67	1531	21	1.43E-02	39.2	
28	0	794.79*	70	147	2.08	1588.78	1583	13	9.69E-03	38.9	
29	0	860.12*	118	140	1.81	1719.39	1710	16	1.64E-02	24.7	
30	0	911.37*	444	198	2.00	1821.85	1814	19	6.16E-02	9.2	
31	2	965.10	104	71	2.63	1929.28	1924	19	1.44E-02	18.2	1.40E+00
32	2	968.96*	309	88	1.93	1937.00	1924	19	4.28E-02	8.7	
33	0	1120.15*	172	113	2.15	2239.33	2233	16	2.38E-02	16.3	
34	0	1460.75*	2702	117	2.66	2920.53	2907	28	3.75E-01	2.3	
35	0	1764.21*	157	9	2.93	3527.61	3516	21	2.18E-02	10.6	
36	0	1848.40	34	11	1.90	3696.07	3690	12	4.69E-03	24.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 22:44:24

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037553.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 3-FEB-2010 12:00:00   Acquisition date : 19-FEB-2010 20:42:20
Sample ID        : G1202037553           Sample quantity  : 144.98 GRAM
Sample type      : SOLID                  Sample geometry   :
Detector name    : GAMMA22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00          Elapsed real time: 0 02:00:02.53   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	*	3.435E+01	3.507E+00	4.239E-01	3.883E-02	81.022
CD-109	+	88.03	*	1.748E+00	9.088E-01	1.025E+00	9.728E-02	1.705
SN-126	+	64.28		2.021E+00	8.785E-01	6.391E-01	9.281E-02	3.162
	+	86.94		7.130E-01	4.696E-01	4.643E-01	1.928E-01	1.536
	+	87.57	*	1.715E-01	8.916E-02	1.205E-01	1.138E-02	1.423
BA-137M	+	661.65	*	2.332E-01	6.259E-02	4.849E-02	5.114E-03	4.810
CS-137	+	661.65	*	2.466E-01	6.618E-02	5.126E-02	5.413E-03	4.810
HG-203		70.83		-1.594E-02	9.838E-01	1.447E+00	1.900E-01	-0.011
		72.87		1.146E+00	5.463E-01	9.131E-01	1.170E-01	1.255
	+	82.60		1.930E+00	1.176E+00	1.500E+00	2.087E-01	1.287
	+	279.20	*	6.224E-02	5.649E-02	5.872E-02	8.311E-03	1.060
TL-208	+	277.35		5.543E-01	5.053E-01	5.269E-01	8.688E-02	1.052
	+	510.84		7.158E-01	3.060E-01	1.760E-01	2.294E-02	4.067
	+	583.14	*	5.351E-01	9.018E-02	4.713E-02	5.111E-03	11.354
	+	860.37		8.372E-01	4.245E-01	3.545E-01	4.130E-02	2.362
BI-211		72.87		5.654E+00	2.636E+00	4.507E+00	3.607E-01	1.255
	+	351.07	*	3.951E+00	6.093E-01	2.811E-01	3.280E-02	14.053
PB-212	+	74.81		2.245E+00	4.946E-01	4.568E-01	5.668E-02	4.914
	+	77.11		1.733E+00	2.644E-01	2.601E-01	2.175E-02	6.662
	+	87.30		7.932E-01	4.199E-01	5.587E-01	7.673E-02	1.420
	+	238.63	*	1.670E+00	2.406E-01	8.208E-02	1.085E-02	20.340
	+	300.09		1.585E+00	7.954E-01	1.091E+00	1.591E-01	1.453
PO-212	+	74.81		2.245E+00	4.946E-01	4.568E-01	5.668E-02	4.914
	+	77.11		1.733E+00	2.644E-01	2.601E-01	2.175E-02	6.662
	+	87.30		7.932E-01	4.199E-01	5.587E-01	7.673E-02	1.420
	+	115.19		9.041E-01	3.284E+00	5.277E+00	4.371E-01	0.171
	+	238.63	*	1.670E+00	2.406E-01	8.208E-02	1.085E-02	20.340
	+	300.09		1.585E+00	7.954E-01	1.091E+00	1.591E-01	1.453
BI-214	+	609.31	*	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
	+	1120.29		1.255E+00	4.309E-01	4.082E-01	4.510E-02	3.073
	+	1764.49		1.498E+00	3.410E-01	2.293E-01	1.911E-02	6.533
PB-214	+	74.81		3.868E+00	8.232E-01	7.870E-01	8.675E-02	4.914
	+	77.11		2.970E+00	5.066E-01	4.459E-01	5.044E-02	6.662
	+	87.30		1.359E+00	7.141E-01	9.572E-01	1.164E-01	1.420

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	241.98		2.376E+00	6.803E-01	4.935E-01	6.787E-02	4.815
	+	295.21		1.457E+00	3.017E-01	1.866E-01	2.778E-02	7.806
	+	351.92	*	1.374E+00	2.238E-01	9.798E-02	1.249E-02	14.027
	+	74.81		3.868E+00	8.232E-01	7.870E-01	8.675E-02	4.914
	+	77.11		2.970E+00	5.066E-01	4.459E-01	5.044E-02	6.662
	+	87.30		1.359E+00	7.141E-01	9.572E-01	1.164E-01	1.420
PO-216	+	241.98		2.376E+00	6.803E-01	4.935E-01	6.787E-02	4.815
	+	295.21		1.457E+00	3.017E-01	1.866E-01	2.778E-02	7.806
	+	351.92	*	1.374E+00	2.238E-01	9.798E-02	1.249E-02	14.027
	+	74.81		2.245E+00	4.946E-01	4.568E-01	5.668E-02	4.914
	+	77.11		1.733E+00	2.644E-01	2.601E-01	2.175E-02	6.662
	+	87.30		7.932E-01	4.199E-01	5.587E-01	7.673E-02	1.420
PO-218	+	238.63	*	1.670E+00	2.406E-01	8.208E-02	1.085E-02	20.340
	+	300.09		1.585E+00	7.954E-01	1.091E+00	1.591E-01	1.453
	+	74.81		3.868E+00	8.232E-01	7.870E-01	8.675E-02	4.914
	+	77.11		2.970E+00	5.066E-01	4.459E-01	5.044E-02	6.662
	+	87.30		1.359E+00	7.141E-01	9.572E-01	1.164E-01	1.420
	+	241.98		2.376E+00	6.803E-01	4.935E-01	6.787E-02	4.815
RA-224	+	295.21		1.457E+00	3.017E-01	1.866E-01	2.778E-02	7.806
	+	351.92	*	1.374E+00	2.238E-01	9.798E-02	1.249E-02	14.027
	+	240.98	*	4.506E+00	1.265E+00	9.332E-01	1.168E-01	4.829
RA-226	+	609.31	*	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
	+	1120.29		1.255E+00	4.309E-01	4.082E-01	4.510E-02	3.073
	+	1764.49		1.498E+00	3.410E-01	2.293E-01	1.911E-02	6.533
AC-228	+	338.32		1.637E+00	7.588E-01	3.207E-01	1.349E-01	5.105
	+	911.07	*	1.488E+00	3.380E-01	1.678E-01	2.223E-02	8.868
	+	969.11		1.817E+00	5.398E-01	2.939E-01	7.099E-02	6.180
RA-228	+	338.32		1.637E+00	7.588E-01	3.207E-01	1.349E-01	5.105
	+	911.07	*	1.488E+00	3.380E-01	1.678E-01	2.223E-02	8.868
	+	969.11		1.817E+00	5.398E-01	2.939E-01	7.099E-02	6.180
TH-228	+	74.81		2.281E+00	4.560E-01	4.643E-01	3.825E-02	4.914
	+	77.11		1.761E+00	2.687E-01	2.644E-01	2.211E-02	6.662
	+	87.30		8.062E-01	4.191E-01	5.679E-01	5.345E-02	1.420
	+	238.63	*	1.697E+00	2.446E-01	8.343E-02	1.102E-02	20.340
TH-230	+	300.09		1.611E+00	1.240E+00	1.109E+00	6.670E-01	1.453
	+	609.31	*	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
	+	1120.29		1.255E+00	4.309E-01	4.082E-01	4.510E-02	3.073
	+	1764.49		1.498E+00	3.410E-01	2.293E-01	1.911E-02	6.533
TH-232	+	338.32		1.637E+00	3.735E-01	3.207E-01	3.813E-02	5.105
	+	911.07	*	1.488E+00	3.380E-01	1.678E-01	2.223E-02	8.868
	+	969.11		1.817E+00	5.398E-01	2.939E-01	7.099E-02	6.180
TH-234	+	63.29	*	5.105E+00	2.273E+00	1.638E+00	2.852E-01	3.116
	+	92.38		4.269E+00	1.051E+00	6.219E-01	1.139E-01	6.865
U-234	+	609.31	*	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
	+	1120.29		1.255E+00	4.309E-01	4.082E-01	4.510E-02	3.073
	+	1764.49		1.498E+00	3.410E-01	2.293E-01	1.911E-02	6.533
NP-237	+	86.50	*	5.036E-01	2.817E-01	3.055E-01	6.917E-02	1.649
	+	95.87		-6.960E-01	9.471E-01	1.295E+00	3.202E-01	-0.537
U-238	+	63.29	*	5.105E+00	2.273E+00	1.638E+00	2.852E-01	3.116

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		4.269E+00	8.032E-01	6.219E-01	5.667E-02	6.865
AM-243	+	74.67	*	3.639E-01	7.262E-02	7.426E-02	6.053E-03	4.900
	+	86.72		1.889E+01	9.818E+00	1.143E+01	1.068E+00	1.652
		117.66		-1.734E+00	3.583E+00	5.594E+00	4.620E-01	-0.310
		142.18		-1.438E+01	1.632E+01	2.591E+01	2.288E+00	-0.555
ANH-511	+	511.00	*	1.546E-01	6.482E-02	3.803E-02	3.810E-03	4.066

---- 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	*	2.902E-01	2.885E-01	4.870E-01	5.083E-02	0.596
NA-22		1274.54	*	-4.621E-03	3.786E-02	6.217E-02	5.358E-03	-0.074
NA-24		1368.53	*	-4.602E+00	3.786E-02	Half-Life too short		
AL-26		1129.67		8.055E-01	1.665E+00	2.476E+00	2.156E-01	0.325
		1808.65	*	-3.173E-03	2.281E-02	3.681E-02	3.010E-03	-0.086
TI-44		67.85		-1.148E-02	4.185E-02	6.112E-02	4.665E-03	-0.188
	+	78.38	*	3.198E-01	4.879E-02	6.435E-02	5.456E-03	4.969
SC-46		889.25	*	3.168E-03	3.126E-02	5.219E-02	5.842E-03	0.061
	+	1120.51		2.170E-01	7.313E-02	1.024E-01	9.055E-03	2.118
V-48		944.10		-5.825E-01	7.962E-01	1.248E+00	1.353E-01	-0.467
		983.50	*	5.915E-03	6.356E-02	1.050E-01	1.101E-02	0.056
		1312.09		-3.172E-02	7.104E-02	1.133E-01	9.980E-03	-0.280
CR-51		320.08	*	1.471E-01	3.227E-01	5.488E-01	7.107E-02	0.268
MN-52		744.21		-6.640E-02	2.289E-01	3.648E-01	3.964E-02	-0.182
		848.13		-1.866E+00	6.219E+00	1.016E+01	1.132E+00	-0.184
		935.52		2.989E-01	2.603E-01	4.542E-01	4.959E-02	0.658
		1246.25		-6.706E+00	7.583E+00	1.191E+01	1.007E+00	-0.563
		1333.61		-1.831E+00	4.848E+00	7.743E+00	6.905E-01	-0.236
		1434.06	*	1.151E-01	2.288E-01	3.907E-01	3.491E-02	0.295
MN-54		834.83	*	3.157E-02	3.255E-02	5.668E-02	6.297E-03	0.557
CO-56		846.75	*	-4.647E-02	3.264E-02	4.889E-02	5.443E-03	-0.950
		977.42		-2.168E+00	2.635E+00	3.778E+00	3.985E-01	-0.574
		1037.82		-7.387E-02	2.690E-01	4.314E-01	4.449E-02	-0.171
		1175.09		-2.739E-01	1.931E+00	3.195E+00	2.573E-01	-0.086
		1238.25		1.283E-01	8.221E-02	1.452E-01	1.258E-02	0.883
		1360.21		2.104E-01	8.501E-01	1.425E+00	1.273E-01	0.148
		1771.40		1.477E-01	1.922E-01	3.074E-01	2.554E-02	0.480
CO-57		122.06	*	-1.704E-02	2.427E-02	3.745E-02	3.088E-03	-0.455
		136.48		-4.319E-02	1.794E-01	3.011E-01	2.793E-02	-0.143
CO-58		810.76	*	-3.214E-03	3.177E-02	5.284E-02	5.851E-03	-0.061
FE-59		142.65		-1.395E+00	2.546E+00	4.090E+00	3.619E-01	-0.341
		192.34		-4.089E-01	9.109E-01	1.478E+00	2.194E-01	-0.277
		1099.22	*	-5.860E-02	8.406E-02	1.302E-01	1.276E-02	-0.450
		1291.56		7.936E-02	1.017E-01	1.768E-01	1.742E-02	0.449
CO-60		1173.22		-2.689E-02	3.842E-02	6.142E-02	4.939E-03	-0.438
		1332.49	*	-3.538E-03	3.219E-02	5.258E-02	4.689E-03	-0.067
ZN-65		1115.52	*	1.190E-01	8.953E-02	1.371E-01	1.223E-02	0.868
GE-68		1077.35	*	1.039E-01	1.150E+00	1.882E+00	1.774E-01	0.055

---- 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	*	3.267E-01	6.565E-01	1.115E+00	8.428E-02	0.293
AS-74		595.88	*	5.111E-02	8.290E-02	1.413E-01	1.464E-02	0.362
		634.78		-6.110E-02	3.204E-01	5.225E-01	5.476E-02	-0.117
SE-75		66.05		-2.057E+00	4.270E+00	6.152E+00	5.869E-01	-0.334
		96.73		-2.655E-01	7.558E-01	1.067E+00	1.469E-01	-0.249
		121.11		4.226E-02	1.290E-01	2.069E-01	2.262E-02	0.204
		136.00		-2.303E-02	3.392E-02	5.609E-02	4.867E-03	-0.411
		198.60		-1.290E-01	1.731E+00	2.786E+00	3.256E-01	-0.046
		264.65	*	-3.854E-02	4.788E-02	6.370E-02	8.574E-03	-0.605
	+	279.53		1.645E-01	1.493E-01	1.658E-01	2.353E-02	0.992
		303.91		5.731E-01	2.045E+00	3.036E+00	4.626E-01	0.189
		400.65		-5.758E-02	2.306E-01	3.742E-01	4.380E-02	-0.154
BR-77	+	87.88		5.422E+02	2.818E+02	4.082E+02	3.870E+01	1.328
		200.40		-5.988E+01	2.174E+02	3.540E+02	3.893E+01	-0.169
	+	239.00		3.856E+02	5.281E+01	4.693E+01	5.839E+00	8.216
		249.79		-3.661E+01	1.001E+02	1.383E+02	1.778E+01	-0.265
		281.68		1.577E+01	1.307E+02	1.834E+02	2.555E+01	0.086
		297.23		5.841E+02	1.452E+02	1.658E+02	2.230E+01	3.522
		303.76		5.503E+01	2.482E+02	3.673E+02	4.859E+01	0.150
		439.47		8.484E+01	1.833E+02	3.046E+02	2.932E+01	0.279
		484.57		6.048E+00	2.811E+02	4.541E+02	4.489E+01	0.013
		520.65	*	3.785E+00	1.321E+01	2.092E+01	2.105E+00	0.181
		574.64		-1.232E+02	2.739E+02	4.234E+02	4.357E+01	-0.291
		578.91		-9.456E+01	1.293E+02	1.751E+02	1.804E+01	-0.540
		585.48		2.793E+03	4.270E+02	6.257E+02	6.463E+01	4.465
		755.35		2.148E+02	2.086E+02	3.557E+02	3.879E+01	0.604
		817.79		-2.423E+01	1.567E+02	2.596E+02	2.874E+01	-0.093
SR-82		698.33		1.001E+01	2.826E+01	4.706E+01	5.035E+00	0.213
		776.49	*	-1.744E-01	3.869E-01	5.117E-01	5.612E-02	-0.341
		1395.20		7.401E+00	9.270E+00	1.620E+01	1.449E+00	0.457
RB-83		520.41	*	1.468E-02	6.116E-02	9.664E-02	9.726E-03	0.152
		529.64		-1.988E-03	9.003E-02	1.507E-01	1.523E-02	-0.013
		552.65		-2.558E-02	1.601E-01	2.649E-01	2.703E-02	-0.097
RB-84		881.50	*	2.815E-02	5.536E-02	9.477E-02	1.060E-02	0.297
KR-85		513.99	*	2.246E+01	7.574E+00	1.199E+01	1.203E+00	1.874
SR-85		513.99	*	1.167E-01	3.934E-02	6.227E-02	6.248E-03	1.874
RB-86		1076.63	*	3.933E-01	7.560E-01	1.268E+00	1.196E-01	0.310
Y-88		898.02		-1.585E-02	3.593E-02	5.789E-02	6.505E-03	-0.274
		1836.01	*	6.914E-03	2.710E-02	4.591E-02	3.712E-03	0.151
ZR-88		392.90	*	-8.400E-03	2.687E-02	4.355E-02	4.055E-03	-0.193
Y-91		1204.90	*	3.887E+00	1.653E+01	2.786E+01	2.291E+00	0.140
NB-94		702.63	*	2.309E-03	2.862E-02	4.693E-02	5.029E-03	0.049
		871.10		2.712E-02	2.724E-02	4.775E-02	5.335E-03	0.568
NB-95		765.79	*	9.110E-02	4.474E-02	6.980E-02	7.633E-03	1.305
NB-95M		235.69	*	1.678E-01	1.340E-01	1.984E-01	2.623E-02	0.846
ZR-95		724.18		1.675E-01	9.218E-02	1.439E-01	1.640E-02	1.164
		756.15	*	5.887E-02	6.344E-02	1.076E-01	1.249E-02	0.547
NB-97		657.90	*	4.278E-01	6.344E-02	Half-Life too short		
		1024.50		1.768E+00	6.344E-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	254.15			1.322E+01	6.344E-02	Half-Life	too short	
	355.39			3.429E+00	6.344E-02	Half-Life	too short	
	507.63	*		2.128E+01	6.344E-02	Half-Life	too short	
	602.52			-1.135E+01	6.344E-02	Half-Life	too short	
	1021.30			-2.827E+01	6.344E-02	Half-Life	too short	
	1147.95			-1.205E+00	6.344E-02	Half-Life	too short	
	1362.66			1.314E+01	6.344E-02	Half-Life	too short	
	1750.46			7.335E+00	6.344E-02	Half-Life	too short	
MO-99	140.51			-1.064E+01	3.141E+01	5.224E+01	1.449E+01	-0.204
	181.06			9.884E+00	2.318E+01	3.428E+01	6.562E+00	0.288
	366.43			-5.394E+01	9.856E+01	1.588E+02	1.684E+01	-0.340
	739.58	*		-1.185E+01	1.339E+01	2.032E+01	3.364E+00	-0.583
	778.00			-4.190E+01	4.720E+01	5.955E+01	6.534E+00	-0.703
TC-99M	140.51	*		-3.534E+11	4.720E+01	Half-Life	too short	
RH-101	127.23			7.501E-03	3.384E-02	4.794E-02	4.007E-03	0.156
	198.01	*		-3.793E-03	3.193E-02	5.135E-02	5.602E-03	-0.074
	325.23			1.019E-01	2.233E-01	3.319E-01	4.126E-02	0.307
RH-102	418.52			7.594E-02	2.360E-01	3.918E-01	3.718E-02	0.194
	475.06	*		5.059E-03	2.634E-02	4.297E-02	4.226E-03	0.118
	631.29			1.871E-02	4.622E-02	7.779E-02	8.146E-03	0.241
	697.49			1.104E-03	6.132E-02	1.003E-01	1.073E-02	0.011
	766.84			1.604E-01	1.155E-01	1.742E-01	1.906E-02	0.921
	1046.59			2.875E-02	1.023E-01	1.668E-01	1.636E-02	0.172
	1112.84			-3.146E-02	2.347E-01	3.195E-01	2.859E-02	-0.098
RU-103	497.08	*		-1.454E-02	3.559E-02	5.590E-02	8.390E-03	-0.260
	610.33			1.322E+01	2.760E+00	2.356E+00	4.165E-01	5.610
RH-106	511.85	+		7.741E-01	3.245E-01	3.597E-01	3.605E-02	2.152
	621.84	*		-4.471E-02	2.537E-01	4.146E-01	6.054E-02	-0.108
	1050.47			-4.452E-01	1.981E+00	3.184E+00	3.108E-01	-0.140
RU-106	511.85	+		7.741E-01	3.245E-01	3.597E-01	3.605E-02	2.152
	621.84	*		-4.471E-02	2.536E-01	4.146E-01	4.330E-02	-0.108
	1050.47			-4.452E-01	1.981E+00	3.184E+00	3.108E-01	-0.140
AG-108M	433.93	*		-1.064E-02	2.852E-02	4.561E-02	4.515E-03	-0.233
	614.37			4.353E-03	3.518E-02	5.048E-02	5.403E-03	0.086
	722.95			5.323E-03	3.839E-02	5.415E-02	5.991E-03	0.098
AG-110M	657.75	*		3.656E-02	3.446E-02	5.222E-02	5.613E-03	0.700
	677.61			-2.660E-01	2.584E-01	3.952E-01	4.273E-02	-0.673
	706.67			1.440E-01	1.855E-01	3.137E-01	3.427E-02	0.459
	763.93			1.160E-01	1.648E-01	2.405E-01	2.676E-02	0.482
	884.67			-1.102E-02	3.896E-02	6.342E-02	7.233E-03	-0.174
	937.48			3.751E-02	9.587E-02	1.617E-01	1.803E-02	0.232
	1384.27			-2.005E-01	1.541E-01	2.254E-01	2.068E-02	-0.889
IN-111	171.28			5.750E-02	1.251E+00	2.085E+00	2.081E-01	0.028
	245.39	*		-1.601E+00	1.325E+00	2.018E+00	2.560E-01	-0.794
IN-113M	391.69	*		-2.703E-02	3.889E-02	6.180E-02	5.902E-03	-0.437
SN-113	391.69	*		-2.703E-02	3.889E-02	6.180E-02	5.902E-03	-0.437
IN-114M	190.27	*		1.205E-02	1.943E-01	2.823E-01	3.001E-02	0.043
CD-115	260.90			2.124E+02	1.739E+02	2.898E+02	3.850E+01	0.733
	492.35			5.917E+00	4.493E+01	7.291E+01	7.238E+00	0.081

---- 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	*	-3.247E+00	1.335E+01	2.210E+01	2.231E+00	-0.147	
		156.02		1.680E+00	2.176E+00	3.717E+00	3.485E-01	0.452	
		158.56	*	-1.748E-02	5.234E-02	8.664E-02	8.216E-03	-0.202	
SB-122		563.90	*	-6.314E-01	2.348E+00	3.858E+00	3.954E-01	-0.164	
		692.80		-1.690E+01	4.893E+01	7.834E+01	8.365E+00	-0.216	
I-123		159.00	*	1.394E+00	4.893E+01	Half-Life	too short		
		528.96		-4.190E+02	4.893E+01	Half-Life	too short		
TE-123M		159.00	*	1.431E-03	2.557E-02	4.284E-02	4.091E-03	0.033	
I-124		602.71	*	-3.986E-01	8.077E-01	1.108E+00	1.150E-01	-0.360	
		722.78		-5.515E-02	4.894E+00	6.815E+00	7.354E-01	-0.008	
		1325.50		-6.768E+00	3.450E+01	5.598E+01	4.971E+00	-0.121	
		1376.25		7.558E+01	3.621E+01	6.645E+01	5.939E+00	1.137	
		1509.49		1.807E+01	1.612E+01	2.873E+01	2.553E+00	0.629	
		1691.02		-7.063E-01	3.501E+00	5.651E+00	4.832E-01	-0.125	
	SB-124		602.71		-1.911E-02	3.874E-02	5.311E-02	5.517E-03	-0.360
			645.85		-1.033E-01	4.189E-01	6.795E-01	7.432E-02	-0.152
			709.31		1.175E+00	2.456E+00	4.104E+00	4.409E-01	0.286
			713.82		-1.197E+00	1.456E+00	2.178E+00	2.973E-01	-0.550
			722.78		-3.834E-03	3.402E-01	4.737E-01	5.183E-02	-0.008
		+	968.20		1.897E+01	3.854E+00	6.259E+00	6.655E-01	3.031
			1045.16		8.731E-01	2.152E+00	3.601E+00	3.538E-01	0.242
			1325.50		-5.025E-01	2.561E+00	4.156E+00	3.691E-01	-0.121
			1368.21		-2.321E+00	1.594E+00	2.242E+00	3.066E-01	-1.036
		1436.60		2.408E-01	3.237E+00	5.327E+00	4.761E-01	0.045	
SB-125		1691.02	*	-1.158E-02	5.741E-02	9.266E-02	8.242E-03	-0.125	
		427.89	*	1.032E-02	7.603E-02	1.249E-01	1.212E-02	0.083	
	+	463.38		5.922E-01	3.888E-01	4.607E-01	4.777E-02	1.286	
		600.56		-2.791E-03	1.689E-01	2.503E-01	2.732E-02	-0.011	
		635.90		-5.393E-02	2.317E-01	3.769E-01	4.170E-02	-0.143	
TE-125M		109.28	*	1.684E+00	8.817E+00	1.418E+01	1.436E+00	0.119	
I-126		388.63		-3.823E-02	1.895E-01	3.091E-01	2.927E-02	-0.124	
		666.33	*	-2.321E-02	1.886E-01	2.628E-01	2.777E-02	-0.088	
		753.82		9.580E-01	1.366E+00	2.297E+00	2.503E-01	0.417	
SB-126		223.80		-1.397E+00	3.936E+00	6.328E+00	7.508E-01	-0.221	
	+	278.60		3.929E+00	3.565E+00	4.202E+00	5.873E-01	0.935	
	+	296.50		1.555E+01	3.070E+00	3.511E+00	4.730E-01	4.428	
		414.70		-4.028E-02	7.880E-02	1.075E-01	1.017E-02	-0.375	
		415.30		-4.545E-01	6.412E+00	9.031E+00	8.551E-01	-0.050	
		555.20		2.611E-01	3.398E+00	5.692E+00	5.814E-01	0.046	
		573.80		3.182E-01	1.006E+00	1.662E+00	1.710E-01	0.191	
		593.00		-1.220E-01	8.710E-01	1.402E+00	1.452E-01	-0.087	
		656.30		7.907E-03	3.396E+00	4.790E+00	5.045E-01	0.002	
		666.33		-9.726E-03	7.904E-02	1.102E-01	1.164E-02	-0.088	
		675.00		5.040E-01	1.783E+00	2.967E+00	3.146E-01	0.170	
		695.00		-1.176E-02	6.674E-02	1.079E-01	1.153E-02	-0.109	
		697.00		-6.431E-02	2.309E-01	3.709E-01	3.967E-02	-0.173	
		720.50	*	5.460E-02	1.398E-01	2.016E-01	2.174E-02	0.271	
		856.80		6.030E-01	4.997E-01	7.744E-01	8.634E-02	0.779	
		989.30		6.673E-01	1.201E+00	2.034E+00	2.122E-01	0.328	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127	1034.80			7.926E-01	7.819E+00	1.287E+01	1.279E+00	0.062
	1213.00			4.900E-01	4.355E+00	7.287E+00	6.025E-01	0.067
	61.10			3.725E+01	5.689E+01	9.606E+01	1.009E+01	0.388
	252.40			-2.273E+00	5.552E+00	7.980E+00	3.450E+00	-0.285
	290.80			4.521E+00	2.508E+01	3.721E+01	5.827E+00	0.122
	411.60			1.968E+01	1.508E+01	2.267E+01	3.730E+00	0.868
	444.90			-6.183E-01	1.090E+01	1.768E+01	2.403E+00	-0.035
	473.00			1.019E+00	1.868E+00	3.093E+00	4.334E-01	0.329
	543.00			6.224E+00	1.667E+01	2.835E+01	4.435E+00	0.220
	603.60			-1.773E+00	1.374E+01	1.938E+01	2.731E+00	-0.091
	685.20	*		-9.269E-02	1.410E+00	2.298E+00	3.059E-01	-0.040
	698.50			5.539E+00	1.525E+01	2.537E+01	4.386E+00	0.218
	722.20			-1.392E+01	3.422E+01	4.589E+01	6.076E+00	-0.303
	783.80			5.314E+00	3.952E+00	6.750E+00	9.763E-01	0.787
XE-127	57.60			3.385E+00	5.322E+00	8.162E+00	5.862E-01	0.415
	145.22			4.738E-01	6.376E-01	1.094E+00	9.780E-02	0.433
	172.10			-1.074E-02	1.125E-01	1.866E-01	1.867E-02	-0.058
	202.84	*		-3.115E-02	4.766E-02	7.034E-02	7.798E-03	-0.443
I-131	374.96			-1.092E-02	1.747E-01	2.877E-01	2.929E-02	-0.038
	80.18			-4.637E+00	6.188E+00	6.778E+00	5.907E-01	-0.684
	284.30			8.125E-01	1.517E+00	2.391E+00	3.381E-01	0.340
	364.48	*		1.084E-02	1.067E-01	1.774E-01	1.967E-02	0.061
TE-132	636.97			3.096E-01	1.422E+00	2.370E+00	2.581E-01	0.131
	722.89			6.173E-01	7.180E+00	1.008E+01	1.093E+00	0.061
	49.72			-1.602E+01	1.915E+01	3.109E+01	3.336E+00	-0.515
	111.76			-1.933E+01	3.690E+01	5.710E+01	6.265E+00	-0.339
BA-133	116.30			-1.680E+01	3.375E+01	5.268E+01	5.756E+00	-0.319
	228.16	*		-2.098E-01	8.376E-01	1.350E+00	2.432E-01	-0.155
	53.15			2.023E+00	2.785E+00	4.765E+00	3.616E-01	0.425
	79.62			-7.219E-01	1.534E+00	1.711E+00	2.602E-01	-0.422
I-133	81.00			7.249E-02	1.079E-01	1.286E-01	2.050E-02	0.564
	276.40			2.558E-01	4.771E-01	5.773E-01	1.045E-01	0.443
	302.84			5.638E-02	1.405E-01	2.095E-01	3.494E-02	0.269
	356.01	*		2.351E-02	3.982E-02	5.926E-02	8.856E-03	0.397
CS-134	383.85			7.591E-02	2.659E-01	4.432E-01	5.931E-02	0.171
	510.53	+		4.260E+00	2.659E-01	Half-Life	too short	
	529.87	*		3.427E-03	2.659E-01	Half-Life	too short	
	706.58			7.497E-01	2.659E-01	Half-Life	too short	
	856.28			6.083E-01	2.659E-01	Half-Life	too short	
	875.33			-1.634E-01	2.659E-01	Half-Life	too short	
	1236.41			3.949E+00	2.659E-01	Half-Life	too short	
	1298.22			-4.929E-01	2.659E-01	Half-Life	too short	
	475.35			6.923E-01	1.715E+00	2.826E+00	2.779E-01	0.245
	563.23			-1.392E-01	2.938E-01	4.771E-01	4.922E-02	-0.292
	569.32			8.222E-02	1.768E-01	2.967E-01	3.076E-02	0.277
	604.70			2.548E-02	3.164E-02	4.751E-02	4.946E-03	0.536
	795.84	+	*	7.655E-02	6.013E-02	7.857E-02	8.697E-03	0.974
	801.93			-3.864E-01	4.063E-01	5.064E-01	5.607E-02	-0.763
	1038.57			-1.320E+00	3.309E+00	5.259E+00	5.206E-01	-0.251

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-135 I-135	1167.94			6.422E-01	2.034E+00	3.457E+00	2.809E-01	0.186
	1365.15			-4.324E-01	1.015E+00	1.606E+00	1.496E-01	-0.269
	268.24	*		2.772E-01	1.630E-01	2.424E-01	3.507E-02	1.143
	288.45			5.957E+10	1.630E-01	Half-Life	too short	
	417.63			-2.931E+10	1.630E-01	Half-Life	too short	
	546.56			1.842E+11	1.630E-01	Half-Life	too short	
	836.80			1.945E+11	1.630E-01	Half-Life	too short	
	1038.76			-2.095E+11	1.630E-01	Half-Life	too short	
	1124.00			2.289E+12	1.630E-01	Half-Life	too short	
	1131.51			-3.420E+09	1.630E-01	Half-Life	too short	
	1260.41	*		-2.113E+10	1.630E-01	Half-Life	too short	
	1457.56			2.871E+13	1.630E-01	Half-Life	too short	
	1678.03			-1.903E+11	1.630E-01	Half-Life	too short	
	1706.46			2.226E+11	1.630E-01	Half-Life	too short	
CS-136 +	1791.20			-1.465E+11	1.630E-01	Half-Life	too short	
	66.91			-4.899E-01	7.423E-01	1.057E+00	1.572E-01	-0.464
	86.29			2.390E+00	1.263E+00	1.794E+00	2.388E-01	1.333
	153.22			4.922E-01	6.424E-01	1.098E+00	1.121E-01	0.448
	163.89			-2.822E-03	1.018E+00	1.698E+00	1.808E-01	-0.002
	176.55			1.454E-01	3.555E-01	5.971E-01	6.319E-02	0.244
	273.65			-3.322E-01	7.137E-01	6.784E-01	9.598E-02	-0.490
	340.57			5.985E-01	1.605E-01	2.477E-01	2.968E-02	2.416
	818.51			-1.624E-02	6.454E-02	1.062E-01	1.177E-02	-0.153
	1048.07	*		6.712E-02	1.017E-01	1.694E-01	1.713E-02	0.396
	1235.34			1.004E+00	5.850E-01	1.029E+00	1.202E-01	0.976
	165.85	*		1.293E-02	2.700E-02	4.564E-02	4.476E-03	0.283
	162.64			-4.511E-01	7.194E-01	1.176E+00	1.189E-01	-0.384
	304.84			7.121E-01	1.349E+00	2.004E+00	5.963E-01	0.355
LA-140 +	423.70			-1.581E+00	1.743E+00	2.586E+00	8.449E-01	-0.611
	537.32	*		-7.650E-02	2.243E-01	3.663E-01	1.230E-01	-0.209
	328.77			5.231E-01	4.053E-01	5.211E-01	6.583E-02	1.004
	432.53			8.578E-01	1.904E+00	3.170E+00	3.157E-01	0.271
	487.03			5.117E-03	1.239E-01	2.003E-01	2.076E-02	0.026
	751.79			1.114E-01	1.591E+00	2.591E+00	3.015E-01	0.043
	815.85			-4.516E-02	2.702E-01	4.471E-01	5.302E-02	-0.101
	867.82			-1.574E+00	1.433E+00	1.899E+00	2.188E-01	-0.829
	919.63			-2.444E+00	2.851E+00	3.658E+00	4.642E-01	-0.668
	925.24			3.288E-01	9.657E-01	1.630E+00	1.863E-01	0.202
	1596.49	*		-1.237E-01	7.754E-02	1.077E-01	9.440E-03	-1.148
	145.44	*		4.293E-02	5.789E-02	9.927E-02	9.036E-03	0.432
	57.37			1.325E-03	5.789E-02	Half-Life	too short	
	231.56			-1.068E-03	5.789E-02	Half-Life	too short	
CE-141 CE-143 +	293.26	*		1.761E-03	5.789E-02	Half-Life	too short	
	350.59			5.869E-02	5.789E-02	Half-Life	too short	
	490.36			-1.922E-03	5.789E-02	Half-Life	too short	
	664.57			9.380E-03	5.789E-02	Half-Life	too short	
	721.93			-1.074E-03	5.789E-02	Half-Life	too short	
	80.11			-1.899E+00	2.567E+00	2.814E+00	2.432E-01	-0.675
	133.54	*		-1.629E-01	2.020E-01	2.895E-01	4.494E-02	-0.563

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-144		476.78		3.713E-02	5.967E-02	9.923E-02	1.048E-02	0.374
		618.01		3.507E-03	2.669E-02	4.242E-02	4.510E-03	0.083
		696.49	*	-1.550E-02	2.779E-02	4.384E-02	4.689E-03	-0.354
		778.57		-2.676E+00	2.416E+00	2.980E+00	3.270E-01	-0.898
PR-144		696.49	*	-1.051E+00	1.884E+00	2.973E+00	3.179E-01	-0.354
		1489.15		-5.836E+00	9.329E+00	1.413E+01	1.258E+00	-0.413
PM-146		453.90	*	2.276E-02	3.700E-02	6.176E-02	7.177E-03	0.369
		633.02		1.043E+00	1.208E+00	1.975E+00	7.474E-01	0.528
		735.90		1.195E-01	1.390E-01	2.023E-01	5.938E-02	0.590
		747.13		5.971E-02	7.431E-02	1.256E-01	1.950E-02	0.475
ND-147	+	91.11		7.986E-01	2.152E-01	5.224E-01	5.161E-02	1.529
		319.41		1.392E+00	3.025E+00	5.146E+00	6.514E-01	0.270
		439.89		5.101E+00	5.609E+00	9.485E+00	9.134E-01	0.538
		531.02	*	4.125E-01	5.070E-01	8.753E-01	1.388E-01	0.471
PM-149		285.90	*	-7.120E+01	1.218E+02	1.882E+02	3.561E+01	-0.378
EU-152		121.78		-2.719E-02	6.982E-02	1.091E-01	1.047E-02	-0.249
		244.69		-8.800E-02	3.053E-01	4.884E-01	6.184E-02	-0.180
		344.27	*	-6.299E-02	9.767E-02	1.352E-01	1.625E-02	-0.466
		443.98		-1.918E-01	8.652E-01	1.392E+00	1.344E-01	-0.138
		778.89		-3.099E-01	2.782E-01	3.429E-01	3.762E-02	-0.904
		867.32		-6.000E-01	8.085E-01	1.067E+00	1.192E-01	-0.562
	+	964.01		7.037E-01	2.674E-01	4.650E-01	4.962E-02	1.513
		1085.78		-3.522E-02	3.469E-01	5.605E-01	5.223E-02	-0.063
		1112.02		-5.709E-02	3.196E-01	4.504E-01	4.036E-02	-0.127
		1407.95		1.104E-01	1.633E-01	2.811E-01	2.513E-02	0.393
GD-153		69.67		7.304E-01	1.521E+00	2.281E+00	1.770E-01	0.320
	+	83.37		2.557E+01	1.534E+01	2.143E+01	1.924E+00	1.193
		97.43	*	8.045E-02	7.674E-02	1.148E-01	1.010E-02	0.701
		103.18		-6.329E-03	9.615E-02	1.540E-01	1.316E-02	-0.041
EU-154		123.07		-3.761E-02	4.895E-02	7.513E-02	8.334E-03	-0.501
		247.94		-1.217E-01	3.731E-01	5.167E-01	7.679E-02	-0.236
		591.81		-2.106E-01	5.978E-01	8.664E-01	1.126E-01	-0.243
		723.30		1.202E-01	1.593E-01	2.355E-01	2.716E-02	0.510
		756.87		4.680E-01	6.825E-01	1.144E+00	1.569E-01	0.409
		873.19		5.663E-02	2.396E-01	4.037E-01	5.716E-02	0.140
		996.32		-4.665E-01	3.480E-01	5.060E-01	9.448E-02	-0.922
		1004.76		9.278E-02	1.965E-01	3.303E-01	4.264E-02	0.281
		1274.45	*	-1.165E-02	1.058E-01	1.738E-01	1.965E-02	-0.067
EU-155		48.70		-1.578E+00	1.891E+00	3.082E+00	2.510E-01	-0.512
		60.01		3.728E+00	4.267E+00	6.575E+00	4.669E-01	0.567
	+	86.54		2.067E-01	1.075E-01	1.557E-01	1.464E-02	1.327
		105.31	*	3.531E-02	9.929E-02	1.609E-01	1.381E-02	0.219
TB-160	+	86.79		5.584E-01	2.903E-01	4.186E-01	3.915E-02	1.334
		197.04		-7.175E-03	5.467E-01	8.825E-01	9.597E-02	-0.008
		215.65		-3.718E-01	7.784E-01	1.087E+00	1.256E-01	-0.342
		298.57		1.729E-01	1.706E-01	1.833E-01	2.457E-02	0.943
		879.36	*	7.973E-03	1.119E-01	1.866E-01	2.086E-02	0.043
		962.29		8.052E-01	5.318E-01	8.264E-01	8.831E-02	0.974
	+	966.15		4.889E-01	1.858E-01	4.657E-01	4.961E-02	1.050

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		1177.93		1.554E-01	3.124E-01	5.352E-01	4.318E-02	0.290
		1271.85		1.766E-01	5.987E-01	1.010E+00	8.680E-02	0.175
		80.57		-2.362E-01	3.278E-01	3.596E-01	3.124E-02	-0.657
	+	184.41		1.754E-01	4.860E-02	6.368E-02	6.639E-03	2.755
		280.46		1.739E-02	8.637E-02	1.218E-01	1.701E-02	0.143
	+	410.95		4.588E-01	2.588E-01	3.705E-01	3.497E-02	1.239
TM-171		711.68	*	-2.322E-02	5.443E-02	8.422E-02	9.054E-03	-0.276
		752.31		6.517E-02	2.377E-01	3.914E-01	4.264E-02	0.166
		810.29		-7.727E-03	4.789E-02	7.936E-02	8.774E-03	-0.097
		51.35		-6.477E+00	2.351E+01	3.903E+01	3.045E+00	-0.166
		52.39		1.207E+01	1.227E+01	2.115E+01	1.623E+00	0.571
		59.40		1.076E+01	2.296E+01	3.488E+01	2.466E+00	0.308
LU-176		66.72	*	-1.904E+01	2.516E+01	3.580E+01	2.705E+00	-0.532
		88.36		8.296E-01	2.388E-01	3.097E-01	2.929E-02	2.679
		201.83		-2.777E-02	2.637E-02	4.153E-02	4.588E-03	-0.669
		306.84	*	-1.333E-02	2.204E-02	3.605E-02	4.729E-03	-0.370
		401.10		-4.095E-01	5.914E+00	9.677E+00	9.067E-01	-0.042
		112.95		-7.810E-01	1.759E+00	2.729E+00	2.269E-01	-0.286
LU-177	+	208.36	*	4.083E+00	2.038E+00	2.055E+00	2.319E-01	1.987
		52.97		1.074E+00	1.261E+00	2.165E+00	1.647E-01	0.496
		54.07		-6.205E-02	6.729E-01	1.121E+00	8.399E-02	-0.055
		61.30		1.243E+00	1.195E+00	2.039E+00	1.467E-01	0.610
		121.62		-1.190E-01	3.604E-01	5.647E-01	4.651E-02	-0.211
		147.16		-1.122E-01	5.950E-01	9.952E-01	8.974E-02	-0.113
LU-177M		171.86		-7.915E-03	4.463E-01	7.419E-01	7.420E-02	-0.011
		218.09		5.958E-01	7.770E-01	1.297E+00	1.511E-01	0.459
		268.79		1.381E+00	8.539E-01	1.268E+00	1.724E-01	1.089
		319.02		1.624E-01	2.191E-01	3.759E-01	4.763E-02	0.432
		367.43		-3.126E-01	7.699E-01	1.249E+00	1.318E-01	-0.250
		413.65	*	4.155E-02	1.668E-01	2.403E-01	2.272E-02	0.173
HF-181		56.28		-2.852E-01	7.588E-01	1.250E+00	9.103E-02	-0.228
		57.53		3.642E-01	4.425E-01	6.837E-01	4.914E-02	0.533
		65.20		2.819E-01	8.472E-01	1.264E+00	9.420E-02	0.223
		133.02		-1.496E-02	6.539E-02	9.688E-02	8.258E-03	-0.154
		136.25		-2.423E-01	4.018E-01	6.662E-01	5.747E-02	-0.364
		345.85		-1.767E-03	1.923E-01	2.775E-01	3.209E-02	-0.006
W-181		482.03	*	-1.068E-03	3.704E-02	5.971E-02	5.895E-03	-0.018
		56.28		-1.098E-01	2.931E-01	4.828E-01	3.517E-02	-0.227
		57.53		1.407E-01	1.711E-01	2.643E-01	1.900E-02	0.532
		65.20	*	1.081E-01	3.249E-01	4.847E-01	3.613E-02	0.223
		67.75		-5.177E-02	1.019E-01	1.466E-01	1.118E-02	-0.353
		100.10		-1.256E-02	1.633E-01	2.620E-01	2.270E-02	-0.048
TA-182		152.43		1.359E-01	3.060E-01	5.196E-01	4.794E-02	0.262
		222.10		-1.892E-01	3.203E-01	5.102E-01	6.020E-02	-0.371
		1001.68		3.076E+00	1.904E+00	3.258E+00	3.357E-01	0.944
	+	1121.28		5.976E-02	2.014E-01	2.803E-01	2.475E-02	2.132
		1189.05		-8.187E-02	2.545E-01	4.159E-01	3.382E-02	-0.197
		1221.42	*	-8.495E-02	1.777E-01	2.877E-01	2.392E-02	-0.295
		1230.97		-5.263E-01	4.664E-01	7.286E-01	6.097E-02	-0.722

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		57.98		1.116E-01	1.722E-01	2.642E-01	1.890E-02	0.423
		59.32		4.089E-02	9.538E-02	1.447E-01	1.024E-02	0.283
		67.20		-9.743E-02	1.805E-01	2.594E-01	1.968E-02	-0.376
		162.32	*	-2.182E-03	9.818E-02	1.639E-01	1.581E-02	-0.013
	+	208.81		3.267E+00	1.631E+00	1.646E+00	1.861E-01	1.985
RE-184		291.72		3.978E-01	8.785E-01	1.320E+00	1.798E-01	0.301
		57.98		4.084E-01	6.301E-01	9.664E-01	6.916E-02	0.423
		59.32		1.495E-01	3.487E-01	5.290E-01	3.741E-02	0.283
		67.20		-3.563E-01	6.602E-01	9.486E-01	7.198E-02	-0.376
		161.27		-1.677E-01	3.150E-01	5.170E-01	4.964E-02	-0.324
OS-185		216.55		-1.420E-01	2.532E-01	3.902E-01	4.523E-02	-0.364
		252.85	*	-4.555E-02	2.215E-01	3.416E-01	4.433E-02	-0.133
		318.01		-9.809E-03	3.830E-01	6.405E-01	8.141E-02	-0.015
		792.07		1.034E-01	1.049E+00	1.457E+00	1.604E-01	0.071
		903.28		-2.554E-02	9.934E-01	1.403E+00	1.566E-01	-0.018
RE-188		920.93		-2.330E-01	4.354E-01	5.816E-01	6.418E-02	-0.401
		59.72		1.757E-01	2.550E-01	3.905E-01	2.765E-02	0.450
		61.14		9.016E-02	1.305E-01	2.208E-01	1.586E-02	0.408
		69.30		1.343E-01	2.670E-01	4.010E-01	3.102E-02	0.335
		592.07		-6.784E-01	2.353E+00	3.550E+00	3.675E-01	-0.191
W-188		646.12	*	-5.162E-03	3.532E-02	5.763E-02	6.057E-03	-0.090
		717.42		-2.493E-01	7.363E-01	1.174E+00	1.265E-01	-0.212
		874.81		1.465E-01	4.696E-01	7.949E-01	8.884E-02	0.184
		880.27		2.889E-01	6.081E-01	1.039E+00	1.162E-01	0.278
		155.03	*	1.807E-01	1.594E-01	2.742E-01	2.559E-02	0.659
IR-192		477.96		2.128E+00	2.738E+00	4.583E+00	4.514E-01	0.464
		633.10		1.511E+00	2.370E+00	4.033E+00	4.225E-01	0.375
	+	63.58		2.078E+02	8.650E+01	8.313E+01	6.108E+00	2.499
		227.08		-2.569E+00	1.202E+01	1.941E+01	2.327E+00	-0.132
	*	290.67		1.233E+00	7.026E+00	1.042E+01	1.423E+00	0.118
AU-195		295.96		1.124E+00	2.222E-01	2.550E-01	3.449E-02	4.408
		308.46		-4.503E-03	8.564E-02	1.434E-01	1.878E-02	-0.031
		316.51	*	6.137E-03	2.963E-02	5.001E-02	6.392E-03	0.123
		468.07		-1.777E-02	6.567E-02	8.875E-02	9.181E-03	-0.200
		604.41		1.714E-01	4.350E-01	6.361E-01	9.067E-02	0.269
TL-200		612.46		4.694E+00	9.799E-01	1.516E+00	1.743E-01	3.097
		65.12		7.997E-02	1.501E-01	2.255E-01	1.680E-02	0.355
		66.83		-5.862E-02	8.356E-02	1.192E-01	9.015E-03	-0.492
	+	75.70		1.183E+00	2.361E-01	3.824E-01	3.150E-02	3.094
	*	98.88		2.112E-01	2.033E-01	3.370E-01	2.939E-02	0.627
TL-201		129.76		2.966E+00	3.094E+00	4.556E+00	3.839E-01	0.651
		367.94	*	-6.155E-04	3.094E+00	Half-Life	too short	
		579.30		5.671E-03	3.094E+00	Half-Life	too short	
		828.27		-6.948E-03	3.094E+00	Half-Life	too short	
		1205.75		5.679E-04	3.094E+00	Half-Life	too short	
TL-201		68.90		-1.225E+00	5.714E+00	8.357E+00	6.440E-01	-0.147
		70.82		-5.516E-02	3.300E+00	4.854E+00	3.808E-01	-0.011
		80.30		-5.960E+00	8.044E+00	8.815E+00	7.636E-01	-0.676
		135.34		-8.831E+00	2.884E+01	4.832E+01	4.154E+00	-0.183

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		167.43	*	7.947E-01	8.507E+00	1.422E+01	1.401E+00	0.056
		68.90		-8.900E-02	4.153E-01	6.074E-01	4.681E-02	-0.147
		70.82		-3.998E-03	2.392E-01	3.518E-01	2.760E-02	-0.011
		80.30		-4.321E-01	5.832E-01	6.391E-01	5.536E-02	-0.676
BI-207		439.56	*	4.870E-02	6.581E-02	1.106E-01	1.065E-02	0.440
		72.80		2.865E-01	1.522E-01	2.596E-01	2.076E-02	1.104
	+	74.97		6.533E-01	1.304E-01	1.906E-01	1.559E-02	3.427
	+	84.90		3.296E-01	1.977E-01	2.700E-01	2.468E-02	1.221
		569.67		6.796E-03	2.759E-02	4.586E-02	4.711E-03	0.148
		1063.62	*	5.055E-02	4.591E-02	7.950E-02	7.633E-03	0.636
TL-207		1770.23		4.480E-01	4.640E-01	7.436E-01	6.181E-02	0.602
		81.07		1.512E-01	2.368E-01	2.829E-01	2.472E-02	0.534
	+	83.78		2.173E-01	1.304E-01	1.828E-01	1.649E-02	1.188
		94.90		4.754E-01	2.276E-01	3.490E-01	3.120E-02	1.362
		122.32		-1.319E+00	1.670E+00	2.566E+00	2.283E-01	-0.514
		144.24		-5.585E-03	6.394E-01	1.045E+00	1.035E-01	-0.005
		154.21		4.033E-01	3.664E-01	6.295E-01	6.359E-02	0.641
	+	269.46		3.279E-01	2.388E-01	3.024E-01	4.153E-02	1.084
		323.87	*	6.051E-02	6.472E-01	9.456E-01	1.879E-01	0.064
	+	338.28		6.835E+00	1.672E+00	2.106E+00	3.116E-01	3.245
PO-209		445.03		-1.148E-01	2.030E+00	3.292E+00	4.230E-01	-0.035
		260.50		1.193E+01	8.806E+00	1.470E+01	1.951E+00	0.812
		262.80		-1.975E+00	2.482E+01	3.979E+01	5.317E+00	-0.050
		896.60	*	2.394E+00	6.339E+00	1.073E+01	1.202E+00	0.223
BI-210		46.50	*	2.044E+00	2.788E+00	4.701E+00	4.368E-01	0.435
PB-210		46.50	*	2.044E+00	2.788E+00	4.701E+00	4.368E-01	0.435
PO-210		46.50	*	2.044E+00	2.787E+00	4.701E+00	3.953E-01	0.435
PB-211		404.84	*	1.597E-01	9.365E-01	1.336E+00	8.389E-01	0.120
BI-212		427.08		-2.463E-01	1.706E+00	2.754E+00	1.715E+00	-0.089
		831.96		4.325E-02	1.028E+00	1.719E+00	1.084E+00	0.025
	+	727.18	*	1.439E+00	4.457E-01	5.498E-01	6.566E-02	2.618
		785.46		2.155E+00	1.589E+00	2.683E+00	2.949E-01	0.803
		1620.62		1.281E+00	9.921E-01	1.844E+00	1.607E-01	0.694
PO-215		81.07		1.512E-01	2.368E-01	2.829E-01	2.472E-02	0.534
	+	83.78		2.173E-01	1.304E-01	1.828E-01	1.649E-02	1.188
		94.90		4.754E-01	2.276E-01	3.490E-01	3.120E-02	1.362
		122.32		-1.319E+00	1.670E+00	2.566E+00	2.283E-01	-0.514
		144.24		-5.585E-03	6.394E-01	1.045E+00	1.035E-01	-0.005
		154.21		4.033E-01	3.664E-01	6.295E-01	6.359E-02	0.641
	+	269.46		3.279E-01	2.388E-01	3.024E-01	4.153E-02	1.084
		323.87	*	6.051E-02	6.472E-01	9.456E-01	1.879E-01	0.064
	+	338.28		6.835E+00	1.672E+00	2.106E+00	3.116E-01	3.245
		445.03		-1.148E-01	2.030E+00	3.292E+00	4.230E-01	-0.035
RN-219	+	271.23		4.207E-01	3.072E-01	3.914E-01	5.798E-02	1.075
		401.81	*	-4.837E-02	3.649E-01	5.953E-01	9.210E-02	-0.081
RN-220		549.76	*	-1.298E+01	2.129E+01	3.437E+01	3.503E+00	-0.378
RA-223		81.07		1.512E-01	2.368E-01	2.829E-01	2.472E-02	0.534
	+	83.78		2.173E-01	1.304E-01	1.828E-01	1.649E-02	1.188
		94.90		4.754E-01	2.276E-01	3.490E-01	3.120E-02	1.362

---- 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		-1.319E+00	1.670E+00	2.566E+00	2.283E-01	-0.514
		144.24		-5.585E-03	6.394E-01	1.045E+00	1.035E-01	-0.005
		154.21		4.033E-01	3.664E-01	6.295E-01	6.359E-02	0.641
	+	269.46		3.279E-01	2.388E-01	3.024E-01	4.153E-02	1.084
		323.87	*	6.051E-02	6.472E-01	9.456E-01	1.879E-01	0.064
	+	338.28		6.835E+00	1.672E+00	2.106E+00	3.116E-01	3.245
		445.03		-1.148E-01	2.030E+00	3.292E+00	4.230E-01	-0.035
		79.80		-1.010E+00	1.951E+00	2.160E+00	4.644E-01	-0.468
		236.00		9.910E-01	3.019E-01	4.282E-01	6.459E-02	2.315
		256.20	*	-2.788E-02	3.405E-01	5.470E-01	9.981E-02	-0.051
		286.10		-7.162E-01	1.372E+00	2.131E+00	3.631E-01	-0.336
	+	299.80		2.937E+00	1.531E+00	2.234E+00	4.524E-01	1.315
TH-227		304.40		1.473E+00	1.826E+00	2.750E+00	5.767E-01	0.536
		334.20		-2.936E-02	3.313E+00	3.216E+00	6.807E-01	-0.009
		79.80		-1.010E+00	1.951E+00	2.160E+00	4.703E-01	-0.468
	+	94.00		1.650E+01	4.530E+00	3.595E+00	7.884E-01	4.589
		236.00		9.910E-01	2.974E-01	4.282E-01	6.061E-02	2.315
		256.20	*	-2.788E-02	3.406E-01	5.470E-01	1.126E-01	-0.051
		286.10		-7.162E-01	1.546E+00	2.131E+00	2.151E+00	-0.336
	+	299.80		2.937E+00	1.531E+00	2.234E+00	4.524E-01	1.315
		304.40		1.473E+00	1.826E+00	2.750E+00	5.767E-01	0.536
		334.20		-2.936E-02	3.313E+00	3.216E+00	6.807E-01	-0.009
	+	85.43		3.846E-01	1.999E-01	2.736E-01	2.517E-02	1.406
		88.47		4.712E-01	1.370E-01	1.777E-01	1.678E-02	2.652
TH-229		100.00		5.522E-03	1.683E-01	2.709E-01	2.349E-02	0.020
		193.63	*	-6.799E-02	4.829E-01	7.924E-01	8.520E-02	-0.086
	+	210.97		2.527E+00	1.261E+00	1.218E+00	1.387E-01	2.074
		283.67	*	6.207E-01	1.447E+00	2.174E+00	4.059E-01	0.285
	+	301.29		1.175E+00	5.944E-01	8.945E-01	1.422E-01	1.313
	TH-231	81.07		1.512E-01	2.368E-01	2.829E-01	2.472E-02	0.534
	+	83.78		2.173E-01	1.304E-01	1.828E-01	1.649E-02	1.188
		94.90		4.754E-01	2.276E-01	3.490E-01	3.120E-02	1.362
		122.32		-1.319E+00	1.670E+00	2.566E+00	2.283E-01	-0.514
		144.24		-5.585E-03	6.394E-01	1.045E+00	1.035E-01	-0.005
		154.21		4.033E-01	3.664E-01	6.295E-01	6.359E-02	0.641
	+	269.46		3.279E-01	2.388E-01	3.024E-01	4.153E-02	1.084
U-231		323.87	*	6.051E-02	6.472E-01	9.456E-01	1.879E-01	0.064
	+	338.28		6.835E+00	1.672E+00	2.106E+00	3.116E-01	3.245
		445.03		-1.148E-01	2.030E+00	3.292E+00	4.230E-01	-0.035
	+	84.21		1.149E+01	6.895E+00	9.602E+00	8.704E-01	1.197
	+	92.29		2.001E+01	3.765E+00	4.817E+00	4.393E-01	4.154
		95.87	*	-9.687E-01	1.299E+00	1.802E+00	1.601E-01	-0.537
		108.00		-1.136E+00	2.371E+00	3.729E+00	3.134E-01	-0.305
	PA-233	75.28		1.906E+01	4.509E+00	5.768E+00	8.719E-01	3.305
	+	86.59		3.358E+00	1.943E+00	2.530E+00	6.844E-01	1.327
	+	300.12		8.188E-01	4.200E-01	6.201E-01	1.118E-01	1.320
		311.98	*	2.505E-02	5.493E-02	9.356E-02	1.226E-02	0.268
		340.50		2.912E+00	9.850E-01	1.144E+00	2.879E-01	2.545
		398.62		-2.913E-01	1.840E+00	2.998E+00	8.057E-01	-0.097

----- 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		-7.661E-01	1.633E+00	2.223E+00	4.871E-01	-0.345
		63.00		5.951E+00	2.594E+00	2.437E+00	3.610E-01	2.442
		94.67		5.168E-01	1.767E-01	2.647E-01	3.345E-02	1.952
		98.44		1.028E-01	1.030E-01	1.370E-01	7.645E-02	0.750
		99.86		3.363E-02	4.266E-01	6.880E-01	5.969E-02	0.049
		111.00		8.925E-03	1.723E-01	2.756E-01	3.278E-02	0.032
		131.20		1.018E-01	1.033E-01	1.603E-01	1.358E-02	0.635
		152.70		1.008E-01	2.965E-01	5.014E-01	8.707E-02	0.201
		186.00		6.316E+00	2.579E+00	2.428E+00	7.717E-01	2.601
		226.40		2.291E-02	3.699E-01	6.036E-01	9.411E-02	0.038
		227.20		-3.656E-02	4.001E-01	6.492E-01	7.786E-02	-0.056
		248.90		-2.173E-01	8.595E-01	1.194E+00	2.906E-01	-0.182
		293.70		6.399E+00	1.523E+00	1.514E+00	3.062E-01	4.227
		369.80		2.292E-01	7.285E-01	1.218E+00	2.748E-01	0.188
		568.70		4.414E-01	8.886E-01	1.493E+00	1.533E-01	0.296
		569.50		6.834E-02	2.452E-01	4.082E-01	4.192E-02	0.167
		574.00		2.515E-01	1.335E+00	2.193E+00	2.256E-01	0.115
		699.00		-1.767E-01	5.857E-01	9.385E-01	1.887E-01	-0.188
	706.10		5.594E-01	9.433E-01	1.531E+00	6.898E-01	0.365	
	733.00		3.206E-02	3.668E-01	5.142E-01	1.190E-01	0.062	
	742.81		-4.213E-01	1.143E+00	1.754E+00	1.184E+00	-0.240	
	796.30		2.539E+00	1.158E+00	1.534E+00	4.281E-01	1.655	
	805.60		-2.764E-02	8.711E-01	1.369E+00	4.302E-01	-0.020	
	819.60		9.936E-02	9.889E-01	1.662E+00	6.423E-01	0.060	
	826.30		-2.615E-01	6.960E-01	1.120E+00	5.072E-01	-0.233	
	831.60		-1.989E-01	5.354E-01	8.697E-01	2.666E-01	-0.229	
	876.40		-4.164E-01	7.950E-01	1.067E+00	1.100E+00	-0.390	
	880.51		1.099E-01	2.164E-01	3.706E-01	4.144E-02	0.297	
	883.24		7.211E-02	2.276E-01	3.767E-01	2.546E-01	0.191	
	899.00		-3.511E-01	7.202E-01	1.130E+00	5.003E-01	-0.311	
	925.00		4.660E-01	9.321E-01	1.588E+00	1.747E-01	0.294	
	926.50		-2.200E-02	1.457E-01	2.382E-01	6.235E-02	-0.092	
	946.00	*	-1.930E-01	2.607E-01	4.052E-01	8.054E-02	-0.476	
	949.00		4.212E-02	3.920E-01	6.502E-01	7.026E-02	0.065	
	980.50		-2.219E-01	6.039E-01	9.674E-01	1.017E-01	-0.229	
	1394.10		1.475E-01	9.821E-01	1.624E+00	1.058E+00	0.091	
PA-234M		766.42		2.210E+01	1.629E+01	1.847E+01	9.452E+00	1.197
		1001.03	*	5.376E+00	4.375E+00	7.361E+00	8.435E-01	0.730
U-235	+	89.95		2.940E+00	1.173E+00	1.630E+00	5.063E-01	1.804
		93.35		5.132E+00	1.675E+00	1.229E+00	3.461E-01	4.176
	+	105.00		4.693E-01	9.800E-01	1.580E+00	4.709E-01	0.297
		143.76	*	-3.565E-02	1.958E-01	3.183E-01	5.614E-02	-0.112
		163.35		-2.250E-01	4.209E-01	6.872E-01	1.346E-01	-0.327
		185.71		2.339E-01	6.479E-02	8.976E-02	9.399E-03	2.606
NP-236	+	205.31		2.869E-01	5.321E-01	7.797E-01	1.588E-01	0.368
		94.67		3.959E-01	1.296E-01	2.011E-01	1.801E-02	1.968
		98.44		7.772E-02	6.504E-02	1.036E-01	9.053E-03	0.750
	*	111.00		6.751E-03	1.304E-01	2.085E-01	1.739E-02	0.032
		160.31		-4.121E-02	7.070E-02	1.159E-01	1.108E-02	-0.356

---- 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		5.405E-02	1.412E-01	2.299E-01	1.998E-02	0.235
		117.00	*	-9.365E-02	1.793E-01	2.796E-01	2.311E-02	-0.335
	+	209.75		2.546E+00	1.271E+00	1.297E+00	1.471E-01	1.962
		228.18		-5.406E-02	2.100E-01	3.385E-01	4.072E-02	-0.160
	+	277.60		2.673E-01	2.426E-01	2.845E-01	3.966E-02	0.940
AM-241		334.30		2.996E-01	1.573E+00	1.826E+00	2.202E-01	0.164
		59.54	*	7.181E-02	1.334E-01	2.032E-01	1.589E-02	0.353
	CM-243	99.55		5.562E-02	1.453E-01	2.366E-01	2.056E-02	0.235
		103.76	*	-9.196E-04	8.909E-02	1.429E-01	1.218E-02	-0.006
		117.00		-9.635E-02	1.844E-01	2.877E-01	2.378E-02	-0.335
		209.75		2.510E+00	1.253E+00	1.279E+00	1.450E-01	1.962
AM-246		228.18		-5.463E-02	2.122E-01	3.421E-01	4.115E-02	-0.160
	+	277.60		2.695E-01	2.446E-01	2.869E-01	3.999E-02	0.940
		798.80		6.747E-02	1.399E-01	2.005E-01	2.211E-02	0.336
		1036.00		1.466E-02	2.457E-01	4.032E-01	4.004E-02	0.036
		1062.04		2.497E-02	1.986E-01	3.263E-01	3.139E-02	0.077
CM-247		1078.86	*	-7.037E-02	1.302E-01	2.044E-01	1.923E-02	-0.344
	+	278.00		1.109E+00	1.006E+00	1.177E+00	1.642E-01	0.942
		287.40		-2.197E-01	1.093E+00	1.729E+00	2.379E-01	-0.127
		402.60	*	3.632E-03	3.370E-02	5.409E-02	5.074E-03	0.067
	CF-249	252.85		-1.700E-01	8.270E-01	1.275E+00	1.655E-01	-0.133
		333.44		1.361E-01	2.310E-01	2.397E-01	2.900E-02	0.568
		387.95	*	3.328E-03	3.488E-02	5.766E-02	5.480E-03	0.058
CF-251		176.60	*	4.415E-02	1.147E-01	1.925E-01	1.956E-02	0.229
		227.00		-8.491E-02	3.559E-01	5.743E-01	6.884E-02	-0.148
		285.00		1.868E-01	1.554E+00	2.494E+00	3.450E-01	0.075

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]G1202037553      *
* Acquisition date   : 19-FEB-2010 20:42:20 Detector SN#      :              *
* Detector ID        : GAM22                      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 02:00:02.53           Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 3-FEB-2010 12:00:00 Nuclide Library : SOLID            *
* Sample ID          : G1202037553           Analyst initials: MXR1          *
* Batch Number       : 950788                Sample Quantity : 1.4498E+02 GRAM  *
* Recovery           : 1.00000               Carrier Weight  : 0.00000        *
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                                       *
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	3.435E+01	3.437E+00	4.262E-01	0.000E+00
CD-109	1.748E+00	8.906E-01	1.097E+00	0.000E+00
SN-126	1.715E-01	8.737E-02	1.289E-01	0.000E+00
BA-137M	2.332E-01	6.134E-02	4.965E-02	0.000E+00
CS-137	2.466E-01	6.486E-02	5.249E-02	0.000E+00
HG-203	6.224E-02	5.536E-02	6.129E-02	0.000E+00
TL-208	5.351E-01	8.838E-02	4.840E-02	0.000E+00
BI-211	3.951E+00	5.971E-01	2.920E-01	0.000E+00
PB-212	1.670E+00	2.358E-01	8.597E-02	0.000E+00
PO-212	1.670E+00	2.358E-01	8.597E-02	0.000E+00
BI-214	1.198E+00	1.888E-01	9.627E-02	0.000E+00
PB-214	1.374E+00	2.193E-01	1.017E-01	0.000E+00
PO-214	1.374E+00	2.193E-01	1.017E-01	0.000E+00
PO-216	1.670E+00	2.358E-01	8.597E-02	0.000E+00
PO-218	1.374E+00	2.193E-01	1.017E-01	0.000E+00
RA-224	4.506E+00	1.240E+00	9.772E-01	0.000E+00
RA-226	1.198E+00	1.888E-01	9.627E-02	0.000E+00
AC-228	1.488E+00	3.312E-01	1.705E-01	0.000E+00
RA-228	1.488E+00	3.312E-01	1.705E-01	0.000E+00
TH-228	1.697E+00	2.397E-01	8.738E-02	0.000E+00
TH-230	1.198E+00	1.888E-01	9.627E-02	0.000E+00
TH-232	1.488E+00	3.312E-01	1.705E-01	0.000E+00
TH-234	5.105E+00	2.228E+00	1.765E+00	0.000E+00
U-234	1.198E+00	1.888E-01	9.627E-02	0.000E+00
NP-237	5.036E-01	2.761E-01	3.270E-01	0.000E+00
U-238	5.105E+00	2.228E+00	1.765E+00	0.000E+00
AM-243	3.639E-01	7.117E-02	7.972E-02	0.000E+00
ANH-511	1.546E-01	6.352E-02	3.917E-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	2.902E-01	2.828E-01	5.023E-01	0.000E+00	NOT IDENT.
NA-22	-4.621E-03	3.711E-02	6.270E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.654E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-3.173E-03	2.235E-02	3.682E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.782E-02	6.901E-02	0.000E+00	FAIL ABUN
SC-46	3.168E-03	3.064E-02	5.307E-02	0.000E+00	FAIL ABUN
V-48	5.915E-03	6.229E-02	1.066E-01	0.000E+00	NOT IDENT.
CR-51	1.471E-01	3.163E-01	5.712E-01	0.000E+00	NOT IDENT.
MN-52	1.151E-01	2.242E-01	3.929E-01	0.000E+00	NOT IDENT.
MN-54	3.157E-02	3.190E-02	5.773E-02	0.000E+00	NOT IDENT.
CO-56	-4.647E-02	3.199E-02	4.978E-02	0.000E+00	NOT IDENT.
CO-57	-1.704E-02	2.378E-02	3.979E-02	0.000E+00	NOT IDENT.
CO-58	-3.214E-03	3.113E-02	5.385E-02	0.000E+00	NOT IDENT.
FE-59	-5.860E-02	8.238E-02	1.318E-01	0.000E+00	NOT IDENT.
CO-60	-3.538E-03	3.155E-02	5.298E-02	0.000E+00	NOT IDENT.
ZN-65	1.190E-01	8.774E-02	1.387E-01	0.000E+00	NOT IDENT.
GE-68	1.039E-01	1.127E+00	1.905E+00	0.000E+00	NOT IDENT.
AS-73	3.267E-01	6.434E-01	1.206E+00	0.000E+00	NOT IDENT.
AS-74	5.111E-02	8.124E-02	1.450E-01	0.000E+00	NOT IDENT.
SE-75	-3.854E-02	4.692E-02	6.657E-02	0.000E+00	FAIL ABUN
BR-77	3.785E+00	1.294E+01	2.153E+01	0.000E+00	FAIL ABUN
SR-82	-1.744E-01	3.791E-01	5.220E-01	0.000E+00	NOT IDENT.
RB-83	1.468E-02	5.994E-02	9.949E-02	0.000E+00	NOT IDENT.
RB-84	2.815E-02	5.425E-02	9.640E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.422E+00	1.234E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.856E-02	6.412E-02	0.000E+00	NOT IDENT.
RB-86	3.933E-01	7.408E-01	1.284E+00	0.000E+00	NOT IDENT.
Y-88	6.914E-03	2.656E-02	4.590E-02	0.000E+00	NOT IDENT.
ZR-88	-8.400E-03	2.634E-02	4.511E-02	0.000E+00	NOT IDENT.
Y-91	3.887E+00	1.620E+01	2.814E+01	0.000E+00	NOT IDENT.
NB-94	2.309E-03	2.805E-02	4.799E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.385E-02	7.123E-02	0.000E+00	NOT IDENT.
NB-95M	1.678E-01	1.314E-01	2.079E-01	0.000E+00	NOT IDENT.
ZR-95	5.887E-02	6.217E-02	1.098E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.245E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.672E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.185E+01	1.313E+01	2.076E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.023E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.793E-03	3.129E-02	5.400E-02	0.000E+00	NOT IDENT.
RH-102	5.059E-03	2.581E-02	4.433E-02	0.000E+00	NOT IDENT.
RU-103	-1.454E-02	3.488E-02	5.761E-02	0.000E+00	FAIL ABUN
RH-106	-4.471E-02	2.486E-01	4.251E-01	0.000E+00	FAIL ABUN
RU-106	-4.471E-02	2.486E-01	4.251E-01	0.000E+00	FAIL ABUN
AG-108M	-1.064E-02	2.795E-02	4.715E-02	0.000E+00	NOT IDENT.
AG-110M	3.656E-02	3.377E-02	5.348E-02	0.000E+00	NOT IDENT.
IN-111	-1.601E+00	1.298E+00	2.112E+00	0.000E+00	NOT IDENT.
IN-113M	-2.703E-02	3.811E-02	6.403E-02	0.000E+00	NOT IDENT.
SN-113	-2.703E-02	3.811E-02	6.403E-02	0.000E+00	NOT IDENT.
IN-114M	1.205E-02	1.904E-01	2.971E-01	0.000E+00	NOT IDENT.
CD-115	-3.247E+00	1.308E+01	2.274E+01	0.000E+00	NOT IDENT.
SN-117M	-1.748E-02	5.130E-02	9.155E-02	0.000E+00	NOT IDENT.
SB-122	-6.314E-01	2.301E+00	3.965E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.441E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.431E-03	2.506E-02	4.526E-02	0.000E+00	NOT IDENT.
I-124	-3.986E-01	7.916E-01	1.136E+00	0.000E+00	NOT IDENT.
SB-124	-1.158E-02	5.626E-02	9.283E-02	0.000E+00	FAIL ABUN
SB-125	1.032E-02	7.451E-02	1.292E-01	0.000E+00	FAIL ABUN
TE-125M	1.684E+00	8.640E+00	1.510E+01	0.000E+00	NOT IDENT.
I-126	-2.321E-02	1.848E-01	2.691E-01	0.000E+00	NOT IDENT.
SB-126	5.460E-02	1.370E-01	2.060E-01	0.000E+00	FAIL ABUN
SB-127	-9.269E-02	1.382E+00	2.351E+00	0.000E+00	NOT IDENT.
XE-127	-3.115E-02	4.670E-02	7.394E-02	0.000E+00	NOT IDENT.
I-131	1.084E-02	1.046E-01	1.841E-01	0.000E+00	NOT IDENT.
TE-132	-2.098E-01	8.209E-01	1.415E+00	0.000E+00	NOT IDENT.
BA-133	2.351E-02	3.902E-02	6.153E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.349E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.655E-02	5.893E-02	8.011E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.597E-01	2.533E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.044E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.712E-02	9.966E-02	1.716E-01	0.000E+00	FAIL ABUN
CE-139	1.293E-02	2.646E-02	4.818E-02	0.000E+00	NOT IDENT.
BA-140	-7.650E-02	2.198E-01	3.768E-01	0.000E+00	NOT IDENT.
LA-140	-1.237E-01	7.599E-02	1.080E-01	0.000E+00	FAIL ABUN
CE-141	4.293E-02	5.673E-02	1.051E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.187E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.629E-01	1.980E-01	3.070E-01	0.000E+00	NOT IDENT.
PM-144	-1.550E-02	2.723E-02	4.484E-02	0.000E+00	NOT IDENT.

PR-144	-1.051E+00	1.847E+00	3.040E+00	0.000E+00	NOT IDENT.
PM-146	2.276E-02	3.626E-02	6.378E-02	0.000E+00	NOT IDENT.
ND-147	4.125E-01	4.969E-01	9.007E-01	0.000E+00	FAIL ABUN
PM-149	-7.120E+01	1.193E+02	1.963E+02	0.000E+00	NOT IDENT.
EU-152	-6.299E-02	9.571E-02	1.405E-01	0.000E+00	FAIL ABUN
GD-153	8.045E-02	7.520E-02	1.226E-01	0.000E+00	FAIL ABUN
EU-154	-1.165E-02	1.037E-01	1.753E-01	0.000E+00	NOT IDENT.
EU-155	3.531E-02	9.730E-02	1.715E-01	0.000E+00	FAIL ABUN
TB-160	7.973E-03	1.096E-01	1.898E-01	0.000E+00	FAIL ABUN
HO-166M	-2.322E-02	5.334E-02	8.609E-02	0.000E+00	FAIL ABUN
TM-171	-1.904E+01	2.466E+01	3.852E+01	0.000E+00	NOT IDENT.
LU-176	-1.333E-02	2.160E-02	3.755E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	1.997E+00	2.158E+00	0.000E+00	FAIL ABUN
LU-177M	4.155E-02	1.635E-01	2.486E-01	0.000E+00	NOT IDENT.
HF-181	-1.068E-03	3.630E-02	6.158E-02	0.000E+00	NOT IDENT.
W-181	1.081E-01	3.184E-01	5.217E-01	0.000E+00	NOT IDENT.
TA-182	-8.495E-02	1.742E-01	2.904E-01	0.000E+00	FAIL ABUN
RE-183	-2.182E-03	9.621E-02	1.731E-01	0.000E+00	FAIL ABUN
RE-184	-4.555E-02	2.171E-01	3.574E-01	0.000E+00	NOT IDENT.
OS-185	-5.162E-03	3.462E-02	5.904E-02	0.000E+00	NOT IDENT.
RE-188	1.807E-01	1.562E-01	2.899E-01	0.000E+00	NOT IDENT.
W-188	1.233E+00	6.886E+00	1.087E+01	0.000E+00	FAIL ABUN
IR-192	6.137E-03	2.904E-02	5.206E-02	0.000E+00	FAIL ABUN
AU-195	2.112E-01	1.992E-01	3.596E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	8.532E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	7.947E-01	8.337E+00	1.501E+01	0.000E+00	NOT IDENT.
TL-202	4.870E-02	6.449E-02	1.143E-01	0.000E+00	NOT IDENT.
BI-207	5.055E-02	4.499E-02	8.052E-02	0.000E+00	FAIL ABUN
TL-207	6.051E-02	6.342E-01	9.838E-01	0.000E+00	FAIL ABUN
PO-209	2.394E+00	6.212E+00	1.091E+01	0.000E+00	NOT IDENT.
BI-210	2.044E+00	2.733E+00	5.096E+00	0.000E+00	NOT IDENT.
PB-210	2.044E+00	2.733E+00	5.096E+00	0.000E+00	NOT IDENT.
PO-210	2.044E+00	2.731E+00	5.096E+00	0.000E+00	NOT IDENT.
PB-211	1.597E-01	9.178E-01	1.384E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.368E-01	5.617E-01	0.000E+00	FAIL ABUN
PO-215	6.051E-02	6.342E-01	9.838E-01	0.000E+00	FAIL ABUN
RN-219	-4.837E-02	3.576E-01	6.164E-01	0.000E+00	FAIL ABUN
RN-220	-1.298E+01	2.087E+01	3.534E+01	0.000E+00	NOT IDENT.
RA-223	6.051E-02	6.342E-01	9.838E-01	0.000E+00	FAIL ABUN
AC-227	-2.788E-02	3.337E-01	5.720E-01	0.000E+00	FAIL ABUN
TH-227	-2.788E-02	3.337E-01	5.720E-01	0.000E+00	FAIL ABUN
TH-229	-6.799E-02	4.732E-01	8.337E-01	0.000E+00	FAIL ABUN
PA-231	6.207E-01	1.418E+00	2.268E+00	0.000E+00	FAIL ABUN
TH-231	6.051E-02	6.342E-01	9.838E-01	0.000E+00	FAIL ABUN
U-231	-9.687E-01	1.273E+00	1.925E+00	0.000E+00	FAIL ABUN
PA-233	2.505E-02	5.383E-02	9.742E-02	0.000E+00	FAIL ABUN
PA-234	-1.930E-01	2.555E-01	4.115E-01	0.000E+00	FAIL ABUN
PA-234M	5.376E+00	4.287E+00	7.466E+00	0.000E+00	NOT IDENT.
U-235	-3.565E-02	1.919E-01	3.370E-01	0.000E+00	FAIL ABUN
NP-236	-4.121E-02	6.929E-02	1.224E-01	0.000E+00	NOT IDENT.
NP-239	-9.365E-02	1.757E-01	2.974E-01	0.000E+00	FAIL ABUN
AM-241	7.181E-02	1.308E-01	2.192E-01	0.000E+00	NOT IDENT.
CM-243	-9.196E-04	8.730E-02	1.523E-01	0.000E+00	FAIL ABUN
AM-246	-7.037E-02	1.276E-01	2.070E-01	0.000E+00	NOT IDENT.
CM-247	3.632E-03	3.302E-02	5.600E-02	0.000E+00	FAIL ABUN
CF-249	3.328E-03	3.418E-02	5.975E-02	0.000E+00	NOT IDENT.
CF-251	4.415E-02	1.124E-01	2.030E-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]G1202037553.CNF;1
Sample date       : 3-FEB-2010 12:00:00. Acquisition date : 19-FEB-2010 20:42:20
Sample ID        : G1202037553      Sample quantity   : 1.44980E+02 GRAM
Detector name    : GAM22            Detector geometry: CAN
Elapsed live time: 0 02:00:00.00    Elapsed real time: 0 02:00:02.53  0.0%
Energy tolerance : 1.50000 keV      Analyst Initials  : MXR1
Abundance limit  : 75.00000          Sensitivity      : 5.00000
Batch ID        : 950788            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	2702	10.67*	1.909E+00	3.435E+01	3.435E+01	10.21
CD-109	88.03	182	3.72*	7.445E+00	1.706E+00	1.748E+00	51.99
SN-126	64.28	321	9.60	4.285E+00	2.021E+00	2.021E+00	43.47
	86.94	182	8.90	7.445E+00	7.130E-01	7.130E-01	65.87
	87.57	182	37.00*	7.445E+00	1.715E-01	1.715E-01	51.99
BA-137M	661.65	291	89.98*	3.590E+00	2.330E-01	2.332E-01	26.84
CS-137	661.65	291	85.12*	3.590E+00	2.463E-01	2.466E-01	26.84
HG-203	70.83	-----	4.75	5.596E+00	-----	Line Not Found	-----
	72.87	-----	8.00	5.897E+00	-----	Line Not Found	-----
	82.60	149	3.55	7.203E+00	1.512E+00	1.930E+00	60.94
	279.20	90	77.30*	6.173E+00	4.876E-02	6.224E-02	90.76
TL-208	277.35	90	6.80	6.173E+00	5.543E-01	5.543E-01	91.16
	510.84	257	21.60	4.299E+00	7.158E-01	7.158E-01	42.74
	583.14	684	84.20*	3.930E+00	5.351E-01	5.351E-01	16.85
	860.37	118	12.46	2.924E+00	8.372E-01	8.372E-01	50.70
BI-211	72.87	-----	1.27	5.897E+00	-----	Line Not Found	-----
	351.07	1066	12.94*	5.401E+00	3.951E+00	3.951E+00	15.42
PB-212	74.81	572	10.70	6.167E+00	2.245E+00	2.245E+00	22.04
	77.11	778	18.00	6.461E+00	1.733E+00	1.733E+00	15.26
	87.30	182	8.00	7.445E+00	7.932E-01	7.932E-01	52.94
	238.63	1930	44.60*	6.709E+00	1.670E+00	1.670E+00	14.41
	300.09	123	3.41	5.915E+00	1.585E+00	1.585E+00	50.19
PO-212	74.81	572	10.70	6.167E+00	2.245E+00	2.245E+00	22.04
	77.11	778	18.00	6.461E+00	1.733E+00	1.733E+00	15.26
	87.30	182	8.00	7.445E+00	7.932E-01	7.932E-01	52.94
	115.19	-----	0.60	8.535E+00	-----	Line Not Found	-----
	238.63	1930	44.60*	6.709E+00	1.670E+00	1.670E+00	14.41
	300.09	123	3.41	5.915E+00	1.585E+00	1.585E+00	50.19
BI-214	609.31	816	46.30*	3.811E+00	1.198E+00	1.198E+00	16.08
	1120.29	172	15.10	2.346E+00	1.255E+00	1.255E+00	34.35
	1764.49	157	15.80	1.716E+00	1.498E+00	1.498E+00	22.76
PB-214	74.81	572	6.21	6.167E+00	3.868E+00	3.868E+00	21.29

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	778	10.50	6.461E+00	2.970E+00	2.970E+00	17.06
	87.30	182	4.67	7.445E+00	1.359E+00	1.359E+00	52.55
	241.98	458	7.49	6.665E+00	2.376E+00	2.376E+00	28.63
	295.21	645	19.20	5.970E+00	1.457E+00	1.457E+00	20.71
	351.92	1066	37.20*	5.401E+00	1.374E+00	1.374E+00	16.28
PO-214	74.81	572	6.21	6.167E+00	3.868E+00	3.868E+00	21.29
	77.11	778	10.50	6.461E+00	2.970E+00	2.970E+00	17.06
	87.30	182	4.67	7.445E+00	1.359E+00	1.359E+00	52.55
	241.98	458	7.49	6.665E+00	2.376E+00	2.376E+00	28.63
	295.21	645	19.20	5.970E+00	1.457E+00	1.457E+00	20.71
	351.92	1066	37.20*	5.401E+00	1.374E+00	1.374E+00	16.28
PO-216	74.81	572	10.70	6.167E+00	2.245E+00	2.245E+00	22.04
	77.11	778	18.00	6.461E+00	1.733E+00	1.733E+00	15.26
	87.30	182	8.00	7.445E+00	7.932E-01	7.932E-01	52.94
	238.63	1930	44.60*	6.709E+00	1.670E+00	1.670E+00	14.41
	300.09	123	3.41	5.915E+00	1.585E+00	1.585E+00	50.19
PO-218	74.81	572	6.21	6.167E+00	3.868E+00	3.868E+00	21.29
	77.11	778	10.50	6.461E+00	2.970E+00	2.970E+00	17.06
	87.30	182	4.67	7.445E+00	1.359E+00	1.359E+00	52.55
	241.98	458	7.49	6.665E+00	2.376E+00	2.376E+00	28.63
	295.21	645	19.20	5.970E+00	1.457E+00	1.457E+00	20.71
	351.92	1066	37.20*	5.401E+00	1.374E+00	1.374E+00	16.28
RA-224	240.98	458	3.95*	6.665E+00	4.506E+00	4.506E+00	28.08
RA-226	609.31	816	46.30*	3.811E+00	1.198E+00	1.198E+00	16.08
	1120.29	172	15.10	2.346E+00	1.255E+00	1.255E+00	34.35
	1764.49	157	15.80	1.716E+00	1.498E+00	1.498E+00	22.76
AC-228	338.32	398	11.40	5.526E+00	1.637E+00	1.637E+00	46.36
	911.07	444	27.70*	2.788E+00	1.488E+00	1.488E+00	22.72
	969.11	309	16.60	2.649E+00	1.817E+00	1.817E+00	29.72
RA-228	338.32	398	11.40	5.526E+00	1.637E+00	1.637E+00	46.36
	911.07	444	27.70*	2.788E+00	1.488E+00	1.488E+00	22.72
	969.11	309	16.60	2.649E+00	1.817E+00	1.817E+00	29.72
TH-228	74.81	572	10.70	6.167E+00	2.245E+00	2.281E+00	19.99
	77.11	778	18.00	6.461E+00	1.733E+00	1.761E+00	15.26
	87.30	182	8.00	7.445E+00	7.932E-01	8.062E-01	51.99
	238.63	1930	44.60*	6.709E+00	1.670E+00	1.697E+00	14.41
	300.09	123	3.41	5.915E+00	1.585E+00	1.611E+00	76.97
TH-230	609.31	816	46.30*	3.811E+00	1.198E+00	1.198E+00	16.08
	1120.29	172	15.10	2.346E+00	1.255E+00	1.255E+00	34.35
	1764.49	157	15.80	1.716E+00	1.498E+00	1.498E+00	22.76
TH-232	338.32	398	11.40	5.526E+00	1.637E+00	1.637E+00	22.82
	911.07	444	27.70*	2.788E+00	1.488E+00	1.488E+00	22.72
	969.11	309	16.60	2.649E+00	1.817E+00	1.817E+00	29.72
TH-234	63.29	321	3.80*	4.285E+00	5.105E+00	5.105E+00	44.53
	92.38	701	5.41	7.863E+00	4.269E+00	4.269E+00	24.63
U-234	609.31	816	46.30*	3.811E+00	1.198E+00	1.198E+00	16.08
	1120.29	172	15.10	2.346E+00	1.255E+00	1.255E+00	34.35
	1764.49	157	15.80	1.716E+00	1.498E+00	1.498E+00	22.76
NP-237	86.50	182	12.60*	7.445E+00	5.036E-01	5.036E-01	55.93

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	95.87	-----	2.60	8.032E+00	-----	Line Not Found	-----
U-238	63.29	321	3.80*	4.285E+00	5.105E+00	5.105E+00	44.53
	92.38	701	5.41	7.863E+00	4.269E+00	4.269E+00	18.81
AM-243	74.67	572	66.00*	6.167E+00	3.639E-01	3.639E-01	19.96
	86.72	182	0.34	7.445E+00	1.889E+01	1.889E+01	51.99
	117.66	-----	0.55	8.550E+00	-----	Line Not Found	-----
	142.18	-----	0.13	8.387E+00	-----	Line Not Found	-----
ANH-511	511.00	257	100.00*	4.299E+00	1.546E-01	1.546E-01	41.92

Flag: "*" = Keyline

Total number of lines in spectrum 36
Number of unidentified lines 2
Number of lines tentatively identified by NID 34 94.44%

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	3.435E+01	3.435E+01	0.351E+01	10.21	
CD-109	464.00D	1.02	1.706E+00	1.748E+00	0.909E+00	51.99	
SN-126	1.00E+05Y	1.00	1.715E-01	1.715E-01	0.892E-01	51.99	
BA-137M	30.17Y	1.00	2.330E-01	2.332E-01	0.626E-01	26.84	
CS-137	30.17Y	1.00	2.463E-01	2.466E-01	0.662E-01	26.84	
HG-203	46.60D	1.28	4.876E-02	6.224E-02	5.649E-02	90.76	
TL-208	1.41E+10Y	1.00	5.351E-01	5.351E-01	0.902E-01	16.85	
BI-211	7.04E+08Y	1.00	3.951E+00	3.951E+00	0.609E+00	15.42	
PB-212	1.41E+10Y	1.00	1.670E+00	1.670E+00	0.241E+00	14.41	
PO-212	1.41E+10Y	1.00	1.670E+00	1.670E+00	0.241E+00	14.41	
BI-214	1600.00Y	1.00	1.198E+00	1.198E+00	0.193E+00	16.08	
PB-214	1600.00Y	1.00	1.374E+00	1.374E+00	0.224E+00	16.28	
PO-214	1600.00Y	1.00	1.374E+00	1.374E+00	0.224E+00	16.28	
PO-216	1.41E+10Y	1.00	1.670E+00	1.670E+00	0.241E+00	14.41	
PO-218	1600.00Y	1.00	1.374E+00	1.374E+00	0.224E+00	16.28	
RA-224	1.41E+10Y	1.00	4.506E+00	4.506E+00	1.265E+00	28.08	
RA-226	1600.00Y	1.00	1.198E+00	1.198E+00	0.193E+00	16.08	
AC-228	1.41E+10Y	1.00	1.488E+00	1.488E+00	0.338E+00	22.72	
RA-228	1.41E+10Y	1.00	1.488E+00	1.488E+00	0.338E+00	22.72	
TH-228	1.91Y	1.02	1.670E+00	1.697E+00	0.245E+00	14.41	
TH-230	4.47E+09Y	1.00	1.198E+00	1.198E+00	0.193E+00	16.08	
TH-232	1.41E+10Y	1.00	1.488E+00	1.488E+00	0.338E+00	22.72	
TH-234	4.47E+09Y	1.00	5.105E+00	5.105E+00	2.273E+00	44.53	
U-234	4.47E+09Y	1.00	1.198E+00	1.198E+00	0.193E+00	16.08	
NP-237	2.14E+06Y	1.00	5.036E-01	5.036E-01	2.817E-01	55.93	
U-238	4.47E+09Y	1.00	5.105E+00	5.105E+00	2.273E+00	44.53	
AM-243	7380.00Y	1.00	3.639E-01	3.639E-01	0.726E-01	19.96	
ANH-511	1.00E+09Y	1.00	1.546E-01	1.546E-01	0.648E-01	41.92	
Total Activity :			7.703E+01	7.712E+01			

Grand Total Activity : 7.703E+01 7.712E+01

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
4	89.98	236	343	1.07	180.17	178	14	3.27E-02	25.0	7.69E+00	T
0	129.16	74	518	0.83	258.44	256	7	1.03E-02	****	8.53E+00	T
0	185.83	371	520	1.33	371.67	367	9	5.15E-02	25.6	7.61E+00	T
0	209.84	229	660	1.47	419.65	413	13	3.17E-02	48.6	7.17E+00	T
0	270.36	108	395	1.24	540.59	536	10	1.50E-02	71.5	6.27E+00	T
0	328.20	96	349	1.60	656.16	652	10	1.33E-02	76.4	5.62E+00	T
0	409.76	98	182	1.71	819.17	815	10	1.36E-02	55.6	4.94E+00	T
0	463.51	107	243	0.92	926.59	922	13	1.49E-02	64.8	4.58E+00	T
0	727.73	219	153	2.00	1454.73	1448	16	3.04E-02	28.6	3.34E+00	T
0	770.22	103	235	0.64	1539.67	1531	21	1.43E-02	78.4	3.20E+00	
0	794.79	70	147	2.08	1588.78	1583	13	9.69E-03	77.8	3.12E+00	T
2	965.10	104	71	2.63	1929.28	1924	19	1.44E-02	36.5	2.66E+00	T
0	1848.40	34	11	1.90	3696.07	3690	12	4.69E-03	49.2	1.69E+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]G1202037553.CNF;1
* Acquisition date   : 19-FEB-2010 20:42:20  Detector SN#      :
* Detector ID        : GAM22                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 02:00:02.53        Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 3-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G1202037553          Analyst initials: MXR1
* Batch Number       : 950788              Sample Quantity : 1.44980E+02 GRAM
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28.08MS 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	3.435E+01	3.507E+00	4.239E-01	3.883E-02	81.022
CD-109	1.748E+00	9.088E-01	1.025E+00	9.728E-02	1.705
SN-126	1.715E-01	8.916E-02	1.205E-01	1.138E-02	1.423
BA-137M	2.332E-01	6.259E-02	4.849E-02	5.114E-03	4.810
CS-137	2.466E-01	6.618E-02	5.126E-02	5.413E-03	4.810
HG-203	6.224E-02	5.649E-02	5.872E-02	8.311E-03	1.060
TL-208	5.351E-01	9.018E-02	4.713E-02	5.111E-03	11.354
BI-211	3.951E+00	6.093E-01	2.811E-01	3.280E-02	14.053
PB-212	1.670E+00	2.406E-01	8.208E-02	1.085E-02	20.340
PO-212	1.670E+00	2.406E-01	8.208E-02	1.085E-02	20.340
BI-214	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
PB-214	1.374E+00	2.238E-01	9.798E-02	1.249E-02	14.027
PO-214	1.374E+00	2.238E-01	9.798E-02	1.249E-02	14.027
PO-216	1.670E+00	2.406E-01	8.208E-02	1.085E-02	20.340
PO-218	1.374E+00	2.238E-01	9.798E-02	1.249E-02	14.027
RA-224	4.506E+00	1.265E+00	9.332E-01	1.168E-01	4.829
RA-226	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
AC-228	1.488E+00	3.380E-01	1.678E-01	2.223E-02	8.868

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.488E+00	3.380E-01	1.678E-01	2.223E-02	8.868
TH-228	1.697E+00	2.446E-01	8.343E-02	1.102E-02	20.340
TH-230	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
TH-232	1.488E+00	3.380E-01	1.678E-01	2.223E-02	8.868
TH-234	5.105E+00	2.273E+00	1.638E+00	2.852E-01	3.116
U-234	1.198E+00	1.926E-01	9.384E-02	1.091E-02	12.761
NP-237	5.036E-01	2.817E-01	3.055E-01	6.917E-02	1.649
U-238	5.105E+00	2.273E+00	1.638E+00	2.852E-01	3.116
AM-243	3.639E-01	7.262E-02	7.426E-02	6.053E-03	4.900
ANH-511	1.546E-01	6.482E-02	3.803E-02	3.810E-03	4.066

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.902E-01		2.885E-01	4.870E-01	5.083E-02	0.596
NA-22	-4.621E-03		3.786E-02	6.217E-02	5.358E-03	-0.074
NA-24	-4.602E+00		1.354E+00	Half-Life too short		
AL-26	-3.173E-03		2.281E-02	3.681E-02	3.010E-03	-0.086
TI-44	3.198E-01	+	4.879E-02	6.435E-02	5.456E-03	4.969
SC-46	3.168E-03		3.126E-02	5.219E-02	5.842E-03	0.061
V-48	5.915E-03		6.356E-02	1.050E-01	1.101E-02	0.056
CR-51	1.471E-01		3.227E-01	5.488E-01	7.107E-02	0.268
MN-52	1.151E-01		2.288E-01	3.907E-01	3.491E-02	0.295
MN-54	3.157E-02		3.255E-02	5.668E-02	6.297E-03	0.557
CO-56	-4.647E-02		3.264E-02	4.889E-02	5.443E-03	-0.950
CO-57	-1.704E-02		2.427E-02	3.745E-02	3.088E-03	-0.455
CO-58	-3.214E-03		3.177E-02	5.284E-02	5.851E-03	-0.061
FE-59	-5.860E-02		8.406E-02	1.302E-01	1.276E-02	-0.450
CO-60	-3.538E-03		3.219E-02	5.258E-02	4.689E-03	-0.067
ZN-65	1.190E-01		8.953E-02	1.371E-01	1.223E-02	0.868
GE-68	1.039E-01		1.150E+00	1.882E+00	1.774E-01	0.055
AS-73	3.267E-01		6.565E-01	1.115E+00	8.428E-02	0.293
AS-74	5.111E-02		8.290E-02	1.413E-01	1.464E-02	0.362
SE-75	-3.854E-02		4.788E-02	6.370E-02	8.574E-03	-0.605
BR-77	3.785E+00		1.321E+01	2.092E+01	2.105E+00	0.181
SR-82	-1.744E-01		3.869E-01	5.117E-01	5.612E-02	-0.341
RB-83	1.468E-02		6.116E-02	9.664E-02	9.726E-03	0.152
RB-84	2.815E-02		5.536E-02	9.477E-02	1.060E-02	0.297
KR-85	2.246E+01		7.574E+00	1.199E+01	1.203E+00	1.874
SR-85	1.167E-01		3.934E-02	6.227E-02	6.248E-03	1.874
RB-86	3.933E-01		7.560E-01	1.268E+00	1.196E-01	0.310
Y-88	6.914E-03		2.710E-02	4.591E-02	3.712E-03	0.151
ZR-88	-8.400E-03		2.687E-02	4.355E-02	4.055E-03	-0.193
Y-91	3.887E+00		1.653E+01	2.786E+01	2.291E+00	0.140
NB-94	2.309E-03		2.862E-02	4.693E-02	5.029E-03	0.049
NB-95	9.110E-02		4.474E-02	6.980E-02	7.633E-03	1.305
NB-95M	1.678E-01		1.340E-01	1.984E-01	2.623E-02	0.846

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	5.887E-02		6.344E-02	1.076E-01	1.249E-02	0.547
NB-97	4.278E-01		1.655E-01	Half-Life	too short	
ZR-97	2.128E+01		3.404E+00	Half-Life	too short	
MO-99	-1.185E+01		1.339E+01	2.032E+01	3.364E+00	-0.583
TC-99M	-3.534E+11		5.221E+11	Half-Life	too short	
RH-101	-3.793E-03		3.193E-02	5.135E-02	5.602E-03	-0.074
RH-102	5.059E-03		2.634E-02	4.297E-02	4.226E-03	0.118
RU-103	-1.454E-02		3.559E-02	5.590E-02	8.390E-03	-0.260
RH-106	-4.471E-02		2.537E-01	4.146E-01	6.054E-02	-0.108
RU-106	-4.471E-02		2.536E-01	4.146E-01	4.330E-02	-0.108
AG-108M	-1.064E-02		2.852E-02	4.561E-02	4.515E-03	-0.233
AG-110M	3.656E-02		3.446E-02	5.222E-02	5.613E-03	0.700
IN-111	-1.601E+00		1.325E+00	2.018E+00	2.560E-01	-0.794
IN-113M	-2.703E-02		3.889E-02	6.180E-02	5.902E-03	-0.437
SN-113	-2.703E-02		3.889E-02	6.180E-02	5.902E-03	-0.437
IN-114M	1.205E-02		1.943E-01	2.823E-01	3.001E-02	0.043
CD-115	-3.247E+00		1.335E+01	2.210E+01	2.231E+00	-0.147
SN-117M	-1.748E-02		5.234E-02	8.664E-02	8.216E-03	-0.202
SB-122	-6.314E-01		2.348E+00	3.858E+00	3.954E-01	-0.164
I-123	1.394E+00		1.245E+01	Half-Life	too short	
TE-123M	1.431E-03		2.557E-02	4.284E-02	4.091E-03	0.033
I-124	-3.986E-01		8.077E-01	1.108E+00	1.150E-01	-0.360
SB-124	-1.158E-02		5.741E-02	9.266E-02	8.242E-03	-0.125
SB-125	1.032E-02		7.603E-02	1.249E-01	1.212E-02	0.083
TE-125M	1.684E+00		8.817E+00	1.418E+01	1.436E+00	0.119
I-126	-2.321E-02		1.886E-01	2.628E-01	2.777E-02	-0.088
SB-126	5.460E-02		1.398E-01	2.016E-01	2.174E-02	0.271
SB-127	-9.269E-02		1.410E+00	2.298E+00	3.059E-01	-0.040
XE-127	-3.115E-02		4.766E-02	7.034E-02	7.798E-03	-0.443
I-131	1.084E-02		1.067E-01	1.774E-01	1.967E-02	0.061
TE-132	-2.098E-01		8.376E-01	1.350E+00	2.432E-01	-0.155
BA-133	2.351E-02		3.982E-02	5.926E-02	8.856E-03	0.397
I-133	3.427E-03		6.882E-03	Half-Life	too short	
CS-134	7.655E-02	+	6.013E-02	7.857E-02	8.697E-03	0.974
CS-135	2.772E-01		1.630E-01	2.424E-01	3.507E-02	1.143
I-135	-2.113E+10		5.325E+10	Half-Life	too short	
CS-136	6.712E-02		1.017E-01	1.694E-01	1.713E-02	0.396
CE-139	1.293E-02		2.700E-02	4.564E-02	4.476E-03	0.283
BA-140	-7.650E-02		2.243E-01	3.663E-01	1.230E-01	-0.209
LA-140	-1.237E-01		7.754E-02	1.077E-01	9.440E-03	-1.148
CE-141	4.293E-02		5.789E-02	9.927E-02	9.036E-03	0.432
CE-143	1.761E-03		2.646E-04	Half-Life	too short	
CE-144	-1.629E-01		2.020E-01	2.895E-01	4.494E-02	-0.563
PM-144	-1.550E-02		2.779E-02	4.384E-02	4.689E-03	-0.354
PR-144	-1.051E+00		1.884E+00	2.973E+00	3.179E-01	-0.354
PM-146	2.276E-02		3.700E-02	6.176E-02	7.177E-03	0.369
ND-147	4.125E-01		5.070E-01	8.753E-01	1.388E-01	0.471
PM-149	-7.120E+01		1.218E+02	1.882E+02	3.561E+01	-0.378

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-6.299E-02		9.767E-02	1.352E-01	1.625E-02	-0.466
GD-153	8.045E-02		7.674E-02	1.148E-01	1.010E-02	0.701
EU-154	-1.165E-02		1.058E-01	1.738E-01	1.965E-02	-0.067
EU-155	3.531E-02		9.929E-02	1.609E-01	1.381E-02	0.219
TB-160	7.973E-03		1.119E-01	1.866E-01	2.086E-02	0.043
HO-166M	-2.322E-02		5.443E-02	8.422E-02	9.054E-03	-0.276
TM-171	-1.904E+01		2.516E+01	3.580E+01	2.705E+00	-0.532
LU-176	-1.333E-02		2.204E-02	3.605E-02	4.729E-03	-0.370
LU-177	4.083E+00	+	2.038E+00	2.055E+00	2.319E-01	1.987
LU-177M	4.155E-02		1.668E-01	2.403E-01	2.272E-02	0.173
HF-181	-1.068E-03		3.704E-02	5.971E-02	5.895E-03	-0.018
W-181	1.081E-01		3.249E-01	4.847E-01	3.613E-02	0.223
TA-182	-8.495E-02		1.777E-01	2.877E-01	2.392E-02	-0.295
RE-183	-2.182E-03		9.818E-02	1.639E-01	1.581E-02	-0.013
RE-184	-4.555E-02		2.215E-01	3.416E-01	4.433E-02	-0.133
OS-185	-5.162E-03		3.532E-02	5.763E-02	6.057E-03	-0.090
RE-188	1.807E-01		1.594E-01	2.742E-01	2.559E-02	0.659
W-188	1.233E+00		7.026E+00	1.042E+01	1.423E+00	0.118
IR-192	6.137E-03		2.963E-02	5.001E-02	6.392E-03	0.123
AU-195	2.112E-01		2.033E-01	3.370E-01	2.939E-02	0.627
TL-200	-6.155E-04		4.353E-04	Half-Life too short		
TL-201	7.947E-01		8.507E+00	1.422E+01	1.401E+00	0.056
TL-202	4.870E-02		6.581E-02	1.106E-01	1.065E-02	0.440
BI-207	5.055E-02		4.591E-02	7.950E-02	7.633E-03	0.636
TL-207	6.051E-02		6.472E-01	9.456E-01	1.879E-01	0.064
PO-209	2.394E+00		6.339E+00	1.073E+01	1.202E+00	0.223
BI-210	2.044E+00		2.788E+00	4.701E+00	4.368E-01	0.435
PB-210	2.044E+00		2.788E+00	4.701E+00	4.368E-01	0.435
PO-210	2.044E+00		2.787E+00	4.701E+00	3.953E-01	0.435
PB-211	1.597E-01		9.365E-01	1.336E+00	8.389E-01	0.120
BI-212	1.439E+00	+	4.457E-01	5.498E-01	6.566E-02	2.618
PO-215	6.051E-02		6.472E-01	9.456E-01	1.879E-01	0.064
RN-219	-4.837E-02		3.649E-01	5.953E-01	9.210E-02	-0.081
RN-220	-1.298E+01		2.129E+01	3.437E+01	3.503E+00	-0.378
RA-223	6.051E-02		6.472E-01	9.456E-01	1.879E-01	0.064
AC-227	-2.788E-02		3.405E-01	5.470E-01	9.981E-02	-0.051
TH-227	-2.788E-02		3.406E-01	5.470E-01	1.126E-01	-0.051
TH-229	-6.799E-02		4.829E-01	7.924E-01	8.520E-02	-0.086
PA-231	6.207E-01		1.447E+00	2.174E+00	4.059E-01	0.285
TH-231	6.051E-02		6.472E-01	9.456E-01	1.879E-01	0.064
U-231	-9.687E-01		1.299E+00	1.802E+00	1.601E-01	-0.537
PA-233	2.505E-02		5.493E-02	9.356E-02	1.226E-02	0.268
PA-234	-1.930E-01		2.607E-01	4.052E-01	8.054E-02	-0.476
PA-234M	5.376E+00		4.375E+00	7.361E+00	8.435E-01	0.730
U-235	-3.565E-02		1.958E-01	3.183E-01	5.614E-02	-0.112
NP-236	-4.121E-02		7.070E-02	1.159E-01	1.108E-02	-0.356
NP-239	-9.365E-02		1.793E-01	2.796E-01	2.311E-02	-0.335
AM-241	7.181E-02		1.334E-01	2.032E-01	1.589E-02	0.353

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-9.196E-04		8.909E-02	1.429E-01	1.218E-02	-0.006
AM-246	-7.037E-02		1.302E-01	2.044E-01	1.923E-02	-0.344
CM-247	3.632E-03		3.370E-02	5.409E-02	5.074E-03	0.067
CF-249	3.328E-03		3.488E-02	5.766E-02	5.480E-03	0.058
CF-251	4.415E-02		1.147E-01	1.925E-01	1.956E-02	0.229

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]G1202037553          *
* Acquisition date   : 19-FEB-2010 20:42:20 Detector SN# :                  *
* Detector ID        : GAM22 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 02:00:02.53 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 3-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202037553 Analyst initials: MXR1                 *
* Batch Number       : 950788 Sample Quantity : 1.4498E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	3.435E+01	3.437E+00	2.132E-01	1.754E+00
CD-109	1.748E+00	8.906E-01	5.487E-01	4.544E-01
SN-126	1.715E-01	8.737E-02	6.451E-02	4.458E-02
BA-137M	2.332E-01	6.134E-02	2.484E-02	3.130E-02
CS-137	2.466E-01	6.486E-02	2.626E-02	3.309E-02
HG-203	6.224E-02	5.536E-02	3.066E-02	2.824E-02
TL-208	5.351E-01	8.838E-02	2.421E-02	4.509E-02
BI-211	3.951E+00	5.971E-01	1.461E-01	3.046E-01
PB-212	1.670E+00	2.358E-01	4.301E-02	1.203E-01
PO-212	1.670E+00	2.358E-01	4.301E-02	1.203E-01
BI-214	1.198E+00	1.888E-01	4.816E-02	9.631E-02
PB-214	1.374E+00	2.193E-01	5.090E-02	1.119E-01
PO-214	1.374E+00	2.193E-01	5.090E-02	1.119E-01
PO-216	1.670E+00	2.358E-01	4.301E-02	1.203E-01
PO-218	1.374E+00	2.193E-01	5.090E-02	1.119E-01
RA-224	4.506E+00	1.240E+00	4.889E-01	6.325E-01
RA-226	1.198E+00	1.888E-01	4.816E-02	9.631E-02
AC-228	1.488E+00	3.312E-01	8.532E-02	1.690E-01
RA-228	1.488E+00	3.312E-01	8.532E-02	1.690E-01
TH-228	1.697E+00	2.397E-01	4.372E-02	1.223E-01
TH-230	1.198E+00	1.888E-01	4.816E-02	9.631E-02
TH-232	1.488E+00	3.312E-01	8.532E-02	1.690E-01
TH-234	5.105E+00	2.228E+00	8.829E-01	1.137E+00
U-234	1.198E+00	1.888E-01	4.816E-02	9.631E-02
NP-237	5.036E-01	2.761E-01	1.636E-01	1.408E-01
U-238	5.105E+00	2.228E+00	8.829E-01	1.137E+00
AM-243	3.639E-01	7.117E-02	3.988E-02	3.631E-02
ANH-511	1.546E-01	6.352E-02	1.960E-02	3.241E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	2.902E-01	2.828E-01	2.513E-01	1.443E-01	NOT IDENT.
NA-22	-4.621E-03	3.711E-02	3.137E-02	1.893E-02	NOT IDENT.
NA-24	-4.602E+06	2.654E+06	0.000E+00	1.354E+06	SHORT HLIF
AL-26	-3.173E-03	2.235E-02	1.842E-02	1.141E-02	NOT IDENT.
TI-44	3.198E-01	4.782E-02	3.453E-02	2.440E-02	FAIL ABUN
SC-46	3.168E-03	3.064E-02	2.655E-02	1.563E-02	FAIL ABUN
V-48	5.915E-03	6.229E-02	5.331E-02	3.178E-02	NOT IDENT.
CR-51	1.471E-01	3.163E-01	2.857E-01	1.614E-01	NOT IDENT.
MN-52	1.151E-01	2.242E-01	1.966E-01	1.144E-01	NOT IDENT.
MN-54	3.157E-02	3.190E-02	2.888E-02	1.628E-02	NOT IDENT.
CO-56	-4.647E-02	3.199E-02	2.490E-02	1.632E-02	NOT IDENT.
CO-57	-1.704E-02	2.378E-02	1.991E-02	1.213E-02	NOT IDENT.
CO-58	-3.214E-03	3.113E-02	2.694E-02	1.588E-02	NOT IDENT.
FE-59	-5.860E-02	8.238E-02	6.592E-02	4.203E-02	NOT IDENT.
CO-60	-3.538E-03	3.155E-02	2.650E-02	1.610E-02	NOT IDENT.
ZN-65	1.190E-01	8.774E-02	6.940E-02	4.477E-02	NOT IDENT.
GE-68	1.039E-01	1.127E+00	9.532E-01	5.749E-01	NOT IDENT.
AS-73	3.267E-01	6.434E-01	6.031E-01	3.282E-01	NOT IDENT.
AS-74	5.111E-02	8.124E-02	7.254E-02	4.145E-02	NOT IDENT.
SE-75	-3.854E-02	4.692E-02	3.331E-02	2.394E-02	FAIL ABUN
BR-77	3.785E+00	1.294E+01	1.077E+01	6.603E+00	FAIL ABUN
SR-82	-1.744E-01	3.791E-01	2.612E-01	1.934E-01	NOT IDENT.
RB-83	1.468E-02	5.994E-02	4.978E-02	3.058E-02	NOT IDENT.
RB-84	2.815E-02	5.425E-02	4.823E-02	2.768E-02	NOT IDENT.
KR-85	2.246E+01	7.422E+00	6.176E+00	3.787E+00	NOT IDENT.
SR-85	1.167E-01	3.856E-02	3.208E-02	1.967E-02	NOT IDENT.
RB-86	3.933E-01	7.408E-01	6.423E-01	3.780E-01	NOT IDENT.
Y-88	6.914E-03	2.656E-02	2.296E-02	1.355E-02	NOT IDENT.
ZR-88	-8.400E-03	2.634E-02	2.257E-02	1.344E-02	NOT IDENT.
Y-91	3.887E+00	1.620E+01	1.408E+01	8.267E+00	NOT IDENT.
NB-94	2.309E-03	2.805E-02	2.401E-02	1.431E-02	NOT IDENT.
NB-95	9.110E-02	4.385E-02	3.564E-02	2.237E-02	NOT IDENT.
NB-95M	1.678E-01	1.314E-01	1.040E-01	6.702E-02	NOT IDENT.
ZR-95	5.887E-02	6.217E-02	5.496E-02	3.172E-02	NOT IDENT.
NB-97	4.278E+05	3.245E+05	0.000E+00	1.655E+05	SHORT HLIF
ZR-97	2.128E+07	6.672E+06	0.000E+00	3.404E+06	SHORT HLIF
MO-99	-1.185E+01	1.313E+01	1.038E+01	6.697E+00	NOT IDENT.
TC-99M	-3.534E+17	1.023E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.793E-03	3.129E-02	2.702E-02	1.596E-02	NOT IDENT.
RH-102	5.059E-03	2.581E-02	2.218E-02	1.317E-02	NOT IDENT.
RU-103	-1.454E-02	3.488E-02	2.882E-02	1.780E-02	FAIL ABUN
RH-106	-4.471E-02	2.486E-01	2.127E-01	1.268E-01	FAIL ABUN
RU-106	-4.471E-02	2.486E-01	2.127E-01	1.268E-01	FAIL ABUN
AG-108M	-1.064E-02	2.795E-02	2.359E-02	1.426E-02	NOT IDENT.
AG-110M	3.656E-02	3.377E-02	2.675E-02	1.723E-02	NOT IDENT.
IN-111	-1.601E+00	1.298E+00	1.057E+00	6.624E-01	NOT IDENT.
IN-113M	-2.703E-02	3.811E-02	3.203E-02	1.944E-02	NOT IDENT.
SN-113	-2.703E-02	3.811E-02	3.203E-02	1.944E-02	NOT IDENT.
IN-114M	1.205E-02	1.904E-01	1.486E-01	9.714E-02	NOT IDENT.
CD-115	-3.247E+00	1.308E+01	1.138E+01	6.674E+00	NOT IDENT.
IN-117M	-1.748E-02	5.130E-02	4.580E-02	2.617E-02	NOT IDENT.
SB-122	-6.314E-01	2.301E+00	1.983E+00	1.174E+00	NOT IDENT.
I-123	1.394E+06	2.441E+07	0.000E+00	1.245E+07	SHORT HLIF
TE-123M	1.431E-03	2.506E-02	2.264E-02	1.278E-02	NOT IDENT.
I-124	-3.986E-01	7.916E-01	5.685E-01	4.039E-01	NOT IDENT.
SB-124	-1.158E-02	5.626E-02	4.644E-02	2.871E-02	FAIL ABUN
SB-125	1.032E-02	7.451E-02	6.462E-02	3.802E-02	FAIL ABUN
TE-125M	1.684E+00	8.640E+00	7.554E+00	4.408E+00	NOT IDENT.
I-126	-2.321E-02	1.848E-01	1.346E-01	9.430E-02	NOT IDENT.
SB-126	5.460E-02	1.370E-01	1.031E-01	6.991E-02	FAIL ABUN
SB-127	-9.269E-02	1.382E+00	1.176E+00	7.049E-01	NOT IDENT.
XE-127	-3.115E-02	4.670E-02	3.699E-02	2.383E-02	NOT IDENT.
I-131	1.084E-02	1.046E-01	9.211E-02	5.336E-02	NOT IDENT.
TE-132	-2.098E-01	8.209E-01	7.079E-01	4.188E-01	NOT IDENT.
BA-133	2.351E-02	3.902E-02	3.078E-02	1.991E-02	NOT IDENT.
I-133	3.427E+03	1.349E+04	0.000E+00	6.882E+03	SHORT HLIF
CS-134	7.655E-02	5.893E-02	4.008E-02	3.007E-02	FAIL ABUN
CS-135	2.772E-01	1.597E-01	1.267E-01	8.150E-02	NOT IDENT.
I-135	-2.113E+16	1.044E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.712E-02	9.966E-02	8.584E-02	5.085E-02	FAIL ABUN
CE-139	1.293E-02	2.646E-02	2.410E-02	1.350E-02	NOT IDENT.
BA-140	-7.650E-02	2.198E-01	1.885E-01	1.122E-01	NOT IDENT.
LA-140	-1.237E-01	7.599E-02	5.405E-02	3.877E-02	FAIL ABUN
CE-141	4.293E-02	5.673E-02	5.257E-02	2.894E-02	NOT IDENT.
CE-143	1.761E+03	5.187E+02	0.000E+00	2.646E+02	SHORT HLIF
CE-144	-1.629E-01	1.980E-01	1.536E-01	1.010E-01	NOT IDENT.
PM-144	-1.550E-02	2.723E-02	2.243E-02	1.389E-02	NOT IDENT.

PR-144	-1.051E+00	1.847E+00	1.521E+00	9.422E-01	NOT IDENT.
PM-146	2.276E-02	3.626E-02	3.191E-02	1.850E-02	NOT IDENT.
ND-147	4.125E-01	4.969E-01	4.506E-01	2.535E-01	FAIL ABUN
PM-149	-7.120E+01	1.193E+02	9.823E+01	6.088E+01	NOT IDENT.
EU-152	-6.299E-02	9.571E-02	7.029E-02	4.883E-02	FAIL ABUN
GD-153	8.045E-02	7.520E-02	6.133E-02	3.837E-02	FAIL ABUN
EU-154	-1.165E-02	1.037E-01	8.770E-02	5.289E-02	NOT IDENT.
EU-155	3.531E-02	9.730E-02	8.581E-02	4.965E-02	FAIL ABUN
TB-160	7.973E-03	1.096E-01	9.495E-02	5.593E-02	FAIL ABUN
HO-166M	-2.322E-02	5.334E-02	4.307E-02	2.721E-02	FAIL ABUN
TM-171	-1.904E+01	2.466E+01	1.927E+01	1.258E+01	NOT IDENT.
LU-176	-1.333E-02	2.160E-02	1.878E-02	1.102E-02	NOT IDENT.
LU-177	4.083E+00	1.997E+00	1.080E+00	1.019E+00	FAIL ABUN
LU-177M	4.155E-02	1.635E-01	1.244E-01	8.341E-02	NOT IDENT.
HF-181	-1.068E-03	3.630E-02	3.081E-02	1.852E-02	NOT IDENT.
W-181	1.081E-01	3.184E-01	2.610E-01	1.625E-01	NOT IDENT.
TA-182	-8.495E-02	1.742E-01	1.453E-01	8.886E-02	FAIL ABUN
RE-183	-2.182E-03	9.621E-02	8.658E-02	4.909E-02	FAIL ABUN
RE-184	-4.555E-02	2.171E-01	1.788E-01	1.108E-01	NOT IDENT.
OS-185	-5.162E-03	3.462E-02	2.954E-02	1.766E-02	NOT IDENT.
RE-188	1.807E-01	1.562E-01	1.450E-01	7.969E-02	NOT IDENT.
W-188	1.233E+00	6.886E+00	5.437E+00	3.513E+00	FAIL ABUN
IR-192	6.137E-03	2.904E-02	2.604E-02	1.482E-02	FAIL ABUN
AU-195	2.112E-01	1.992E-01	1.799E-01	1.016E-01	FAIL ABUN
TL-200	-6.155E+02	8.532E+02	0.000E+00	4.353E+02	SHORT HLIF
TL-201	7.947E-01	8.337E+00	7.507E+00	4.254E+00	NOT IDENT.
TL-202	4.870E-02	6.449E-02	5.719E-02	3.290E-02	NOT IDENT.
BI-207	5.055E-02	4.499E-02	4.029E-02	2.295E-02	FAIL ABUN
TL-207	6.051E-02	6.342E-01	4.922E-01	3.236E-01	FAIL ABUN
PO-209	2.394E+00	6.212E+00	5.458E+00	3.169E+00	NOT IDENT.
BI-210	2.044E+00	2.733E+00	2.549E+00	1.394E+00	NOT IDENT.
PB-210	2.044E+00	2.733E+00	2.549E+00	1.394E+00	NOT IDENT.
PO-210	2.044E+00	2.731E+00	2.549E+00	1.394E+00	NOT IDENT.
PB-211	1.597E-01	9.178E-01	6.922E-01	4.683E-01	NOT IDENT.
BI-212	1.439E+00	4.368E-01	2.810E-01	2.229E-01	FAIL ABUN
PO-215	6.051E-02	6.342E-01	4.922E-01	3.236E-01	FAIL ABUN
RN-219	-4.837E-02	3.576E-01	3.084E-01	1.825E-01	FAIL ABUN
RN-220	-1.298E+01	2.087E+01	1.768E+01	1.065E+01	NOT IDENT.
RA-223	6.051E-02	6.342E-01	4.922E-01	3.236E-01	FAIL ABUN
AC-227	-2.788E-02	3.337E-01	2.862E-01	1.703E-01	FAIL ABUN
TH-227	-2.788E-02	3.337E-01	2.862E-01	1.703E-01	FAIL ABUN
TH-229	-6.799E-02	4.732E-01	4.171E-01	2.414E-01	FAIL ABUN
PA-231	6.207E-01	1.418E+00	1.135E+00	7.233E-01	FAIL ABUN
TH-231	6.051E-02	6.342E-01	4.922E-01	3.236E-01	FAIL ABUN
U-231	-9.687E-01	1.273E+00	9.630E-01	6.495E-01	FAIL ABUN
PA-233	2.505E-02	5.383E-02	4.874E-02	2.747E-02	FAIL ABUN
PA-234	-1.930E-01	2.555E-01	2.059E-01	1.303E-01	FAIL ABUN
PA-234M	5.376E+00	4.287E+00	3.735E+00	2.187E+00	NOT IDENT.
U-235	-3.565E-02	1.919E-01	1.686E-01	9.789E-02	FAIL ABUN
NP-236	-4.121E-02	6.929E-02	6.124E-02	3.535E-02	NOT IDENT.
NP-239	-9.365E-02	1.757E-01	1.488E-01	8.963E-02	FAIL ABUN
AM-241	7.181E-02	1.308E-01	1.097E-01	6.672E-02	NOT IDENT.
CM-243	-9.196E-04	8.730E-02	7.620E-02	4.454E-02	FAIL ABUN
AM-246	-7.037E-02	1.276E-01	1.035E-01	6.509E-02	NOT IDENT.
CM-247	3.632E-03	3.302E-02	2.802E-02	1.685E-02	FAIL ABUN
CF-249	3.328E-03	3.418E-02	2.989E-02	1.744E-02	NOT IDENT.
CF-251	4.415E-02	1.124E-01	1.015E-01	5.734E-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	360.3660
46.50	360.3660
46.50	360.3660
48.70	417.9325
49.72	397.8819
51.35	394.3334
52.39	370.1630
52.97	372.9577
53.15	381.6255
53.44	396.0813
54.07	418.6442
56.28	447.0680
56.28	447.0728
57.37	0.0000
57.53	398.1795
57.53	398.1827
57.60	411.0961
57.98	413.1558
57.98	413.1558
59.32	449.7628
59.32	449.7628
59.40	449.9053
59.54	450.1556
59.72	444.7393
60.01	445.2501
61.10	498.1253
61.14	498.2023
61.30	498.5126
63.00	501.7855
63.29	502.3401
63.29	502.3401
63.58	502.8921
64.28	528.5556
65.12	511.1765
65.20	518.6546
65.20	518.6546
66.05	542.3319
66.72	561.3436
66.83	561.5704
66.91	561.7361
67.20	565.2809
67.20	565.2809
67.75	591.5466
67.85	591.7618
68.90	593.9941
68.90	593.9941
69.30	562.1233
69.67	595.6238
70.82	627.9332
70.82	627.9332
70.83	627.9556
72.80	622.2106
72.87	622.3620
72.87	622.3620
74.67	626.1682
74.81	626.4615
74.81	626.4615
74.81	626.4615
74.81	626.4615
74.81	626.4615
74.81	626.4615
74.97	626.7990
75.28	627.4485
75.70	628.3252
77.11	631.2548
77.11	631.2548

77.11	631.2548
77.11	631.2548
77.11	631.2548
77.11	631.2548
77.11	631.2548
78.38	621.0925
79.62	643.5928
79.80	643.9628
79.80	643.9628
80.11	675.4427
80.18	675.5931
80.30	675.8504
80.30	675.8504
80.57	676.4285
81.00	525.7974
81.07	525.9142
81.07	525.9142
81.07	525.9142
81.07	525.9142
82.60	599.9356
83.37	576.4370
83.78	574.0510
83.78	574.0510
83.78	574.0510
83.78	574.0510
84.21	559.1920
84.90	560.3719
85.43	561.2760
86.29	562.7346
86.50	563.0896
86.54	563.1579
86.59	563.2426
86.72	563.4638
86.79	654.8845
86.94	655.1829
87.30	772.5598
87.30	772.5598
87.30	772.5598
87.30	772.5598
87.30	772.5598
87.30	772.5598
87.57	773.1803
87.88	543.3054
88.03	543.5469
88.36	544.0770
88.47	544.2555
89.95	546.6228
91.11	478.3150
92.29	479.9400
92.38	480.0636
92.38	480.0636
93.35	481.3889
94.00	482.2746
94.67	507.3376
94.67	507.3448
94.90	507.6717
94.90	507.6717
94.90	507.6717
94.90	507.6717
95.87	560.7590
95.87	560.7590
96.73	518.3618
97.43	457.6842
98.44	472.6178
98.44	472.6201
98.88	480.1372
99.55	503.8629
99.55	503.8629
99.86	522.7979
100.00	522.9956
100.10	526.4117
103.18	512.0482
103.76	517.2300
105.00	500.1322
105.31	507.1627
108.00	554.0569
109.28	524.5953

111.00	522.3680
111.00	522.3680
111.76	540.1978
112.95	531.6434
115.19	489.2432
116.30	522.3455
117.00	519.8058
117.00	519.8058
117.66	516.0649
121.11	477.7627
121.62	508.2231
121.78	508.4097
122.06	522.5498
122.32	522.8616
122.32	522.8616
122.32	522.8616
122.32	522.8616
123.07	514.5352
127.23	508.3297
129.76	495.3761
131.20	466.6284
133.02	491.1160
133.54	504.4188
135.34	480.9366
136.00	491.4018
136.25	491.6629
136.48	476.7538
140.51	514.9271
140.51	0.0000
142.18	536.5359
142.65	521.7047
143.76	520.1681
144.24	522.4836
144.24	522.4836
144.24	522.4836
144.24	522.4836
145.22	505.3719
145.44	502.8740
147.16	542.8578
152.43	503.4018
152.70	520.2386
153.22	505.0913
154.21	500.5122
154.21	500.5122
154.21	500.5122
154.21	500.5122
155.03	490.1991
156.02	482.7852
158.56	499.0731
159.00	0.0000
159.00	483.6403
160.31	496.9682
161.27	489.4307
162.32	476.3120
162.64	506.6167
163.35	496.9424
163.89	483.3260
165.85	471.8399
167.43	496.8458
171.28	487.8711
171.86	491.2287
172.10	491.4370
176.55	461.5942
176.60	461.6345
181.06	444.9937
184.41	500.5084
185.71	503.9299
186.00	503.3923
190.27	492.7457
192.34	519.2701
193.63	517.3779
197.04	484.3769
198.01	494.0776
198.60	478.5791
200.40	493.9246
201.83	507.0462
202.84	495.1212
205.31	449.7138

208.36	443.2932
208.81	443.5940
209.75	444.2189
209.75	444.2189
210.97	401.5408
215.65	441.9734
216.55	456.6028
218.09	403.5032
222.10	448.1784
223.80	431.6665
226.40	427.0202
227.00	442.9786
227.08	443.0274
227.20	437.9014
228.16	442.6554
228.18	442.6683
228.18	442.6683
231.56	0.0000
235.69	451.2718
236.00	464.9414
236.00	464.9414
238.63	416.3014
238.63	416.3014
238.63	416.3014
238.63	416.3014
239.00	416.5088
240.98	417.6150
241.98	418.1741
241.98	418.1741
241.98	418.1741
244.69	419.6771
245.39	420.0649
247.94	364.5623
248.90	371.8721
249.79	374.0169
252.40	381.5930
252.85	365.4078
252.85	365.4078
254.15	0.0000
256.20	345.9705
256.20	345.9705
260.50	307.6312
260.90	304.5239
262.80	363.0247
264.65	384.6187
268.24	303.7848
268.79	333.8638
269.46	349.9650
269.46	349.9650
269.46	349.9650
269.46	349.9650
271.23	373.0418
273.65	393.2807
276.40	375.3672
277.35	338.4338
277.60	338.5316
277.60	338.5316
278.00	338.6945
278.60	309.3767
279.20	330.9492
279.53	331.0764
280.46	320.7480
281.68	312.2870
283.67	287.6741
284.30	288.9516
285.00	305.6629
285.90	327.2792
286.10	322.8706
286.10	322.8706
287.40	313.2492
288.45	0.0000
290.67	302.0316
290.80	302.0766
291.72	290.3599
293.26	0.0000
293.70	315.1371
295.21	315.6771
295.21	315.6771

295.21	315.6771
295.96	344.6672
296.50	344.8760
297.23	345.1589
298.57	345.6785
299.80	344.6334
299.80	344.6334
300.09	334.1179
300.09	334.1179
300.09	334.1179
300.09	334.1179
300.12	335.6455
301.29	302.6256
302.84	307.7180
303.76	300.4058
303.91	300.4539
304.40	282.3064
304.40	282.3064
304.84	296.1823
306.84	336.0034
308.46	314.5256
311.98	279.7202
316.51	277.3707
318.01	283.3909
319.02	258.5787
319.41	267.0620
320.08	266.3166
323.87	292.9353
323.87	292.9353
323.87	292.9353
323.87	292.9353
325.23	305.8313
328.77	297.5592
333.44	250.2070
334.20	292.9220
334.20	292.9220
334.30	280.3522
338.28	281.4821
338.28	281.4821
338.28	281.4821
338.28	281.4821
338.32	281.4965
338.32	281.4965
338.32	281.4965
340.50	275.7726
340.57	275.7903
344.27	299.0819
345.85	274.0585
350.59	0.0000
351.07	267.1406
351.92	267.3612
351.92	267.3612
351.92	267.3612
355.39	0.0000
356.01	220.4677
364.48	232.6428
366.43	257.4516
367.43	250.8605
367.94	0.0000
369.80	239.6765
374.96	253.6097
383.85	255.6789
387.95	255.6290
388.63	258.7717
391.69	265.4675
391.69	265.4675
392.90	255.7625
398.62	259.0645
400.65	271.5952
401.10	261.6409
401.81	263.8166
402.60	259.7445
404.84	247.3477
410.95	230.0451
411.60	208.1706
413.65	211.9242
414.70	237.5688
415.30	219.0129

415.76	237.7824
417.63	0.0000
418.52	204.2871
423.70	225.6934
427.08	210.8958
427.89	203.8298
432.53	211.8417
433.93	232.7756
439.47	223.4326
439.56	214.0947
439.89	212.0733
443.98	241.9744
444.90	231.7152
445.03	231.7396
445.03	231.7396
445.03	231.7396
445.03	231.7396
453.90	194.4758
463.38	210.0367
468.07	200.1662
473.00	205.8965
475.06	220.1072
475.35	213.7451
476.78	201.1361
477.59	191.6231
477.96	194.8902
482.03	197.6315
484.57	195.8544
487.03	188.6633
490.36	0.0000
492.35	183.9930
497.08	199.8327
507.63	0.0000
510.53	0.0000
510.84	184.2668
511.00	184.2873
511.85	184.3970
511.85	184.3970
513.99	179.5470
513.99	179.5470
520.41	179.1296
520.65	179.1613
527.90	195.1724
528.96	0.0000
529.64	195.4042
529.87	0.0000
531.02	169.6376
537.32	181.5390
543.00	165.4153
546.56	0.0000
549.76	187.7563
552.65	172.1284
555.20	165.8236
563.23	191.3230
563.90	192.3569
568.70	189.1537
569.32	193.0301
569.50	198.7609
569.67	198.7822
573.80	202.8639
574.00	201.8494
574.64	211.8241
578.91	237.8249
579.30	0.0000
583.14	167.8828
585.48	159.7597
591.81	196.7742
592.07	191.6580
593.00	189.5481
595.88	181.7999
600.56	199.2997
602.52	0.0000
602.71	211.4245
602.71	211.4245
603.60	193.2173
604.41	184.9819
604.70	175.0122
609.31	189.1571

609.31	189.1571
609.31	189.1571
609.31	189.1571
610.33	172.2714
612.46	164.1206
614.37	164.3086
618.01	156.4374
621.84	157.1908
621.84	157.1908
631.29	162.0247
633.02	144.3901
633.10	153.2971
634.78	177.2083
635.90	176.3341
636.97	156.6210
645.85	162.4130
646.12	159.4499
656.30	158.0929
657.75	153.0650
657.90	0.0000
661.65	168.9160
661.65	168.9160
664.57	0.0000
666.33	174.5484
666.33	174.5484
675.00	156.0052
677.61	176.5205
685.20	156.8887
692.80	165.7244
695.00	158.7527
696.49	167.0823
696.49	167.0823
697.00	162.0021
697.49	155.8903
698.33	151.8572
698.50	151.8722
699.00	170.3871
702.63	175.8636
706.10	170.0085
706.58	0.0000
706.67	171.0929
709.31	168.2363
711.68	177.7494
713.82	172.7794
717.42	153.4139
720.50	131.7118
721.93	0.0000
722.20	153.2055
722.78	147.9074
722.78	147.9074
722.89	147.9161
722.95	147.9190
723.30	135.4704
724.18	135.5314
727.18	144.6739
733.00	152.2778
735.90	114.8304
739.58	161.4851
742.81	144.9489
744.21	147.1521
747.13	123.1604
751.79	158.2733
752.31	154.0943
753.82	146.8165
755.35	141.6444
756.15	145.9315
756.87	151.2742
763.93	156.5139
765.79	147.5498
766.42	160.3502
766.84	176.7868
776.49	151.9964
778.00	164.9362
778.57	179.6484
778.89	179.6758
783.80	134.0103
785.46	139.2894
792.07	173.4535

795.84	118.3103
796.30	120.1861
798.80	144.3974
801.93	165.0095
805.60	127.2238
810.29	137.7460
810.76	133.1224
815.85	125.0431
817.79	135.4318
818.51	135.4773
819.60	125.2628
826.30	145.3503
828.27	0.0000
831.60	160.7479
831.96	153.2531
834.83	149.6919
836.80	0.0000
846.75	154.2991
848.13	126.9266
856.28	0.0000
856.80	128.1399
860.37	115.0098
867.32	142.1223
867.82	153.1169
871.10	101.4472
873.19	115.9105
874.81	112.1583
875.33	0.0000
876.40	128.5460
879.36	115.2665
880.27	103.7813
880.51	101.8705
881.50	101.9148
883.24	105.8412
884.67	117.4620
889.25	112.8745
896.60	127.7530
898.02	144.2944
899.00	139.5100
903.28	137.5848
911.07	115.8893
911.07	115.8893
911.07	115.8893
919.63	129.9965
920.93	126.6455
925.00	103.8410
925.24	107.7710
926.50	125.4732
935.52	122.9967
937.48	129.9904
944.10	137.2596
946.00	143.2982
949.00	137.5383
962.29	134.0615
964.01	144.6066
966.15	135.5162
968.20	135.6277
969.11	115.2281
969.11	115.2281
969.11	115.2281
977.42	129.9449
980.50	122.2702
983.50	122.4170
989.30	124.7114
996.32	172.4612
1001.03	122.2597
1001.68	108.1420
1004.76	141.6650
1021.30	0.0000
1024.50	0.0000
1034.80	111.5851
1036.00	111.6345
1037.82	127.0836
1038.57	128.1477
1038.76	0.0000
1045.16	118.1887
1046.59	118.2528
1048.07	109.0611

1050.47	127.6934
1050.47	127.6934
1062.04	125.1442
1063.62	110.7319
1076.63	131.0229
1077.35	140.4194
1078.86	148.8253
1085.78	128.3323
1099.22	150.9810
1112.02	144.1840
1112.84	143.8173
1115.52	116.2716
1120.29	144.1981
1120.29	144.1981
1120.29	144.1981
1120.29	144.1981
1120.51	150.0232
1121.28	151.6479
1124.00	0.0000
1129.67	125.3060
1131.51	0.0000
1147.95	0.0000
1167.94	123.1203
1173.22	154.4106
1175.09	144.1472
1177.93	134.8568
1189.05	140.0959
1204.90	151.3091
1205.75	0.0000
1213.00	157.4419
1221.42	181.8011
1230.97	233.2408
1235.34	166.2897
1236.41	0.0000
1238.25	166.4481
1246.25	167.8403
1260.41	0.0000
1271.85	104.0612
1274.45	119.7193
1274.54	119.7231
1291.56	84.1576
1298.22	0.0000
1312.09	98.4833
1325.50	82.0780
1325.50	82.0780
1332.49	81.2618
1333.61	85.2546
1360.21	71.9495
1362.66	0.0000
1365.15	74.0565
1368.21	97.1628
1368.53	0.0000
1376.25	66.2679
1384.27	109.7019
1394.10	64.5977
1395.20	55.5304
1407.95	71.9512
1434.06	56.1548
1436.60	63.3491
1457.56	0.0000
1460.81	51.4374
1489.15	52.8786
1509.49	47.9597
1596.49	73.9692
1620.62	32.4431
1678.03	0.0000
1691.02	33.0177
1691.02	33.0177
1706.46	0.0000
1750.46	0.0000
1764.49	26.6858
1764.49	26.6858
1764.49	26.6858
1764.49	26.6858
1770.23	32.0660
1771.40	21.3832
1791.20	0.0000
1808.65	28.9583

1836.01

29.1400

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202037553

Total Uranium Activity	1.5171E+01	ug/g
Total Uranium Counting Unc.	6.6285E+00	ug/g
Total Uranium Tpu	3.3819E-06	ug/g
Total Uranium Mda	2.6279E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417              *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 950788                      SAMPLE ID   : G1202037553
*  ANALYST       : MXR1                        DETECTOR    : GAM22
*  SAMPLE DATE   : 3-FEB-2010 12:00:00.00      COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 19-FEB-2010 20:42:20.81     SAMPLE ALQT  : 144.980 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.034E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.359E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.332E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.135E+00

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VAX/VMS Nuclide Identification Report Generated 19-FEB-2010 22:36:01.46

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037554.CNF;1
Sample date        : 11-FEB-2010 00:00:00 Acquisition date : 19-FEB-2010 21:35:28
Sample ID          : G1202037554      Sample quantity   : 1.55440E+02 GRAM
Detector name      : GAM14             Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00     Elapsed real time: 0 01:00:01.58  0.0%
Energy tolerance   : 1.50000 keV       Analyst Initials : MXR1
Abundance limit    : 75.00000          Sensitivity      : 5.00000
Batch ID           : 950788             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	59.62*	3942	1271	1.23	118.80	113	13	1.09E+00	2.5	2.62E+00
2	1	74.60*	181	475	1.51	148.72	145	23	5.03E-02	21.2	
3	1	77.16*	313	542	1.26	153.85	145	23	8.69E-02	14.1	
4	0	88.08	1604	714	1.30	175.67	171	12	4.45E-01	4.2	
5	0	93.05*	96	377	2.26	185.58	182	9	2.65E-02	39.1	
6	0	122.16	305	402	1.33	243.76	239	12	8.47E-02	14.3	
7	0	186.25*	100	384	1.06	371.81	366	12	2.78E-02	40.9	
8	0	238.35*	391	482	1.26	475.94	472	10	1.09E-01	11.7	
9	0	295.07*	165	280	1.17	589.28	583	13	4.58E-02	22.4	
10	0	351.79*	260	254	1.61	702.64	696	15	7.23E-02	14.8	
11	0	509.72*	42	179	2.65	1018.29	1012	13	1.17E-02	71.4	
12	0	582.61*	171	117	1.93	1164.02	1158	11	4.75E-02	13.6	
13	0	608.82*	192	155	1.66	1216.42	1210	15	5.33E-02	16.0	
14	0	661.51	2562	149	1.64	1321.74	1313	18	7.12E-01	2.3	
15	0	860.44	34	90	1.01	1719.53	1713	10	9.44E-03	54.9	
16	0	911.41	105	88	1.95	1821.47	1817	10	2.92E-02	19.3	
17	0	969.10	84	59	1.58	1936.85	1933	8	2.35E-02	19.2	
18	0	1173.26	1869	66	2.05	2345.23	2338	18	5.19E-01	2.5	
19	0	1332.49	1817	25	1.94	2663.82	2653	20	5.05E-01	2.4	
20	0	1460.54*	32	9	1.58	2920.06	2911	18	8.91E-03	29.2	
21	0	1764.52*	27	5	1.99	3528.51	3523	10	7.44E-03	26.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 19-FEB-2010 22:36:03

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037554.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 11-FEB-2010 00:00:00 Acquisition date : 19-FEB-2010 21:35:28
Sample ID        : G1202037554 Sample quantity : 155.44 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA14 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.58 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	*	1.198E+00	7.061E-01	6.091E-01	4.423E-02	1.967
CO-57	+	122.06	*	2.301E-01	6.798E-02	6.320E-02	4.496E-03	3.640
		136.48		6.088E-02	3.264E-01	5.281E-01	3.877E-02	0.115
CO-60	+	1173.22		6.196E+00	4.627E-01	1.111E-01	6.121E-03	55.760
	+	1332.49	*	6.739E+00	5.821E-01	1.079E-01	7.692E-03	62.436
CD-109	+	88.03	*	2.973E+01	3.615E+00	2.206E+00	1.929E-01	13.478
SN-126		64.28		-6.404E-01	7.559E-01	1.040E+00	1.482E-01	-0.616
	+	86.94		1.226E+01	5.180E+00	9.790E-01	4.049E-01	12.527
	+	87.57	*	2.950E+00	3.587E-01	2.290E-01	1.992E-02	12.883
BA-137M	+	661.65	*	5.573E+00	4.168E-01	1.053E-01	6.264E-03	52.903
CS-137	+	661.65	*	5.891E+00	4.418E-01	1.114E-01	6.648E-03	52.903
TL-208		277.35		2.313E-01	6.262E-01	1.060E+00	1.121E-01	0.218
	+	510.84		3.034E-01	4.344E-01	4.050E-01	4.129E-02	0.749
	+	583.14	*	3.554E-01	9.951E-02	1.081E-01	7.396E-03	3.286
	+	860.37		6.778E-01	7.476E-01	9.629E-01	9.059E-02	0.704
BI-211		72.87		1.022E+01	5.191E+00	7.900E+00	5.822E-01	1.293
	+	351.07	*	2.326E+00	7.023E-01	5.676E-01	3.596E-02	4.097
PB-212	+	74.81		1.349E+00	5.939E-01	8.665E-01	1.039E-01	1.557
	+	77.11		1.330E+00	3.884E-01	4.973E-01	3.829E-02	2.675
	+	87.30		1.364E+01	2.148E+00	1.061E+00	1.405E-01	12.857
	+	238.63	*	7.596E-01	1.858E-01	1.693E-01	1.233E-02	4.486
		300.09		2.020E+00	1.396E+00	2.203E+00	1.822E-01	0.917
PO-212	+	74.81		1.349E+00	5.939E-01	8.665E-01	1.039E-01	1.557
	+	77.11		1.330E+00	3.884E-01	4.973E-01	3.829E-02	2.675
	+	87.30		1.364E+01	2.148E+00	1.061E+00	1.405E-01	12.857
		115.19		9.462E-01	5.367E+00	8.713E+00	6.341E-01	0.109
	+	238.63	*	7.596E-01	1.858E-01	1.693E-01	1.233E-02	4.486
		300.09		2.020E+00	1.396E+00	2.203E+00	1.822E-01	0.917
BI-214	+	609.31	*	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
		1120.29		3.613E-01	5.990E-01	1.030E+00	9.546E-02	0.351
	+	1764.49		7.735E-01	4.048E-01	4.596E-01	2.757E-02	1.683
PB-214	+	74.81		2.324E+00	1.015E+00	1.493E+00	1.575E-01	1.557
	+	77.11		2.281E+00	6.882E-01	8.525E-01	9.235E-02	2.675
	+	87.30		2.337E+01	3.365E+00	1.818E+00	2.109E-01	12.857

----- Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214		241.98		1.192E+00	6.651E-01	1.050E+00	8.433E-02	1.135
	+	295.21		8.675E-01	3.957E-01	3.886E-01	3.322E-02	2.232
	+	351.92	*	8.090E-01	2.479E-01	1.979E-01	1.624E-02	4.089
	+	74.81		2.324E+00	1.015E+00	1.493E+00	1.575E-01	1.557
	+	77.11		2.281E+00	6.882E-01	8.525E-01	9.235E-02	2.675
PO-216	+	87.30		2.337E+01	3.365E+00	1.818E+00	2.109E-01	12.857
		241.98		1.192E+00	6.651E-01	1.050E+00	8.433E-02	1.135
	+	295.21		8.675E-01	3.957E-01	3.886E-01	3.322E-02	2.232
	+	351.92	*	8.090E-01	2.479E-01	1.979E-01	1.624E-02	4.089
	+	74.81		1.349E+00	5.939E-01	8.665E-01	1.039E-01	1.557
PO-218	+	77.11		1.330E+00	3.884E-01	4.973E-01	3.829E-02	2.675
	+	87.30		1.364E+01	2.148E+00	1.061E+00	1.405E-01	12.857
	+	238.63	*	7.596E-01	1.858E-01	1.693E-01	1.233E-02	4.486
	+	300.09		2.020E+00	1.396E+00	2.203E+00	1.822E-01	0.917
	+	74.81		2.324E+00	1.015E+00	1.493E+00	1.575E-01	1.557
RA-226	+	77.11		2.281E+00	6.882E-01	8.525E-01	9.235E-02	2.675
	+	87.30		2.337E+01	3.365E+00	1.818E+00	2.109E-01	12.857
		241.98		1.192E+00	6.651E-01	1.050E+00	8.433E-02	1.135
	+	295.21		8.675E-01	3.957E-01	3.886E-01	3.322E-02	2.232
	+	351.92	*	8.090E-01	2.479E-01	1.979E-01	1.624E-02	4.089
AC-228	+	609.31	*	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
	+	1120.29		3.613E-01	5.990E-01	1.030E+00	9.546E-02	0.351
	+	1764.49		7.735E-01	4.048E-01	4.596E-01	2.757E-02	1.683
	+	338.32		8.341E-01	5.523E-01	7.798E-01	3.178E-01	1.070
	+	911.07	*	9.947E-01	4.012E-01	5.048E-01	5.929E-02	1.970
TH-228	+	969.11		1.411E+00	6.342E-01	8.874E-01	2.072E-01	1.589
	+	338.32		8.341E-01	5.523E-01	7.798E-01	3.178E-01	1.070
	+	911.07	*	9.947E-01	4.012E-01	5.048E-01	5.929E-02	1.970
	+	969.11		1.411E+00	6.342E-01	8.874E-01	2.072E-01	1.589
	+	74.81		1.361E+00	5.858E-01	8.742E-01	6.642E-02	1.557
TH-230	+	77.11		1.342E+00	3.919E-01	5.017E-01	3.863E-02	2.675
	+	87.30		1.376E+01	1.674E+00	1.071E+00	9.285E-02	12.857
	+	238.63	*	7.664E-01	1.874E-01	1.708E-01	1.244E-02	4.486
	+	300.09		2.038E+00	1.843E+00	2.223E+00	1.310E+00	0.917
	+	609.31	*	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
TH-232	+	1120.29		3.613E-01	5.990E-01	1.030E+00	9.546E-02	0.351
	+	1764.49		7.735E-01	4.048E-01	4.596E-01	2.757E-02	1.683
	+	338.32		8.341E-01	4.379E-01	7.798E-01	4.480E-02	1.070
	+	911.07	*	9.947E-01	4.012E-01	5.048E-01	5.929E-02	1.970
	+	969.11		1.411E+00	6.342E-01	8.874E-01	2.072E-01	1.589
U-234	+	609.31	*	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
	+	1120.29		3.613E-01	5.990E-01	1.030E+00	9.546E-02	0.351
	+	1764.49		7.735E-01	4.048E-01	4.596E-01	2.757E-02	1.683
	+	59.54	*	1.308E+01	1.171E+00	4.403E-01	3.269E-02	29.702
	+	74.67	*	2.187E-01	9.409E-02	1.408E-01	1.057E-02	1.553
ANH-511	+	86.72		3.248E+02	3.950E+01	2.598E+01	2.237E+00	12.506
		117.66		-2.346E+00	6.800E+00	9.369E+00	6.754E-01	-0.250
		142.18		1.197E+01	2.645E+01	4.305E+01	2.707E+00	0.278
	+	511.00	*	6.554E-02	9.367E-02	8.751E-02	5.141E-03	0.749

----- 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	*	-2.502E-01	6.304E-01	1.012E+00	6.819E-02	-0.247
NA-22		1274.54	*	-7.151E-03	4.949E-02	7.973E-02	5.208E-03	-0.090
NA-24		1368.53	*	1.143E-04	4.949E-02	Half-Life too short		
AL-26		1129.67		-4.174E-01	3.031E+00	4.960E+00	3.132E-01	-0.084
		1808.65	*	2.518E-02	4.020E-02	7.429E-02	4.307E-03	0.339
TI-44		67.85		-2.469E-02	6.389E-02	1.027E-01	7.226E-03	-0.240
	+	78.38	*	2.455E-01	7.166E-02	1.028E-01	8.030E-03	2.387
SC-46		889.25	*	4.349E-02	8.401E-02	1.448E-01	1.338E-02	0.300
		1120.51		8.134E-02	9.576E-02	1.674E-01	1.084E-02	0.486
V-48		944.10		9.670E-02	1.661E+00	2.781E+00	2.485E-01	0.035
		983.50	*	-6.196E-02	1.176E-01	1.886E-01	1.602E-02	-0.328
		1312.09		2.781E-03	7.194E-02	1.189E-01	8.218E-03	0.023
CR-51		320.08	*	1.577E-01	5.721E-01	9.570E-01	6.184E-02	0.165
MN-52		744.21		1.749E-01	2.069E-01	3.536E-01	2.496E-02	0.495
		848.13		2.083E+00	6.631E+00	1.133E+01	9.734E-01	0.184
		935.52		6.235E-02	2.801E-01	4.734E-01	4.273E-02	0.132
		1246.25		1.677E+00	3.331E+00	5.884E+00	3.666E-01	0.285
	+	1333.61		4.004E+02	3.459E+01	4.351E+01	3.101E+00	9.202
		1434.06	*	-9.171E-02	1.093E-01	1.414E-01	9.907E-03	-0.649
MN-54		834.83	*	-2.632E-02	7.273E-02	1.192E-01	9.996E-03	-0.221
CO-56		846.75	*	5.246E-02	7.940E-02	1.382E-01	1.185E-02	0.380
		977.42		4.886E+00	6.119E+00	1.070E+01	9.161E-01	0.457
		1037.82		-3.669E-01	6.442E-01	1.027E+00	8.509E-02	-0.357
		1175.09		2.633E+02	1.968E+01	3.036E+01	1.678E+00	8.672
		1238.25		7.396E-02	8.724E-02	1.583E-01	1.028E-02	0.467
		1360.21		-2.707E-01	9.584E-01	1.481E+00	1.052E-01	-0.183
		1771.40		-1.173E-01	3.187E-01	4.732E-01	2.824E-02	-0.248
CO-58		810.76	*	-3.365E-02	7.462E-02	1.155E-01	9.291E-03	-0.291
FE-59		142.65		-2.230E+00	3.822E+00	5.949E+00	3.730E-01	-0.375
		192.34		-9.036E-02	1.543E+00	2.257E+00	2.635E-01	-0.040
		1099.22	*	-6.581E-02	1.745E-01	2.813E-01	2.165E-02	-0.234
		1291.56		8.569E-02	1.284E-01	2.309E-01	1.880E-02	0.371
ZN-65		1115.52	*	-8.702E-02	1.834E-01	2.937E-01	1.931E-02	-0.296
GE-68		1077.35	*	8.037E-01	2.748E+00	4.646E+00	3.340E-01	0.173
AS-73		53.44	*	1.552E-01	1.679E+00	2.410E+00	1.571E-01	0.064
AS-74		595.88	*	-2.060E-02	1.333E-01	2.145E-01	1.283E-02	-0.096
		634.78		-2.817E-01	5.489E-01	8.583E-01	5.127E-02	-0.328
SE-75		66.05		-5.420E+00	7.151E+00	9.818E+00	8.928E-01	-0.552
		96.73		-5.310E-01	1.225E+00	1.686E+00	2.240E-01	-0.315
	+	121.11		1.212E+00	3.686E-01	4.413E-01	4.465E-02	2.747
		136.00		-4.707E-03	6.017E-02	9.630E-02	6.361E-03	-0.049
		198.60		1.374E-01	2.788E+00	4.693E+00	3.249E-01	0.029
		264.65	*	-6.164E-02	7.090E-02	1.137E-01	6.675E-03	-0.542
		279.53		5.299E-03	1.730E-01	2.889E-01	1.820E-02	0.018
		303.91		-3.604E+00	3.507E+00	5.528E+00	5.284E-01	-0.652
		400.65		9.161E-02	4.770E-01	7.939E-01	7.070E-02	0.115
BR-77	+	87.88		1.051E+03	1.278E+02	1.407E+02	1.229E+01	7.472
		200.40		-1.316E+00	4.247E+01	7.137E+01	3.969E+00	-0.018
	+	239.00		1.978E+01	4.755E+00	6.974E+00	4.004E-01	2.836

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	249.79		1.853E+00	1.749E+01	2.939E+01	1.697E+00	0.063
	281.68		-1.501E+01	2.451E+01	3.971E+01	2.316E+00	-0.378
	297.23		1.967E+01	1.781E+01	2.732E+01	1.594E+00	0.720
	303.76		-5.684E+01	5.015E+01	7.887E+01	4.596E+00	-0.721
	439.47		-1.617E-01	4.627E+01	7.605E+01	4.300E+00	-0.002
	484.57		7.087E+01	7.400E+01	1.273E+02	7.394E+00	0.557
	520.65	*	-7.347E-01	3.097E+00	4.984E+00	2.938E-01	-0.147
	574.64		1.924E+01	6.544E+01	1.057E+02	6.311E+00	0.182
	578.91		-3.177E+00	2.994E+01	4.168E+01	2.490E+00	-0.076
	585.48		1.512E+02	6.279E+01	1.037E+02	6.198E+00	1.458
	755.35		-2.511E+01	5.436E+01	8.453E+01	6.098E+00	-0.297
	817.79		5.025E+00	4.389E+01	7.422E+01	6.033E+00	0.068
SR-82	698.33		-3.656E+01	5.273E+01	8.076E+01	5.191E+00	-0.453
	776.49	*	-4.804E-01	6.264E-01	9.459E-01	7.112E-02	-0.508
	1395.20		7.069E+00	9.796E+00	1.820E+01	1.286E+00	0.388
RB-83	520.41	*	-3.384E-02	1.198E-01	1.922E-01	1.133E-02	-0.176
	529.64		-8.249E-02	1.740E-01	2.747E-01	1.624E-02	-0.300
	552.65		-1.350E-01	3.334E-01	5.282E-01	3.142E-02	-0.256
RB-84	881.50	*	4.351E-02	1.382E-01	2.357E-01	2.149E-02	0.185
KR-85	513.99	*	1.189E+00	1.442E+01	2.053E+01	1.208E+00	0.058
SR-85	513.99	*	5.709E-03	6.925E-02	9.859E-02	5.799E-03	0.058
RB-86	1076.63	*	7.427E-01	1.382E+00	2.373E+00	1.709E-01	0.313
Y-88	898.02		-2.269E-03	8.428E-02	1.407E-01	1.325E-02	-0.016
	1836.01	*	-6.751E-03	5.234E-02	8.222E-02	4.670E-03	-0.082
ZR-88	392.90	*	1.066E-02	5.379E-02	8.965E-02	4.881E-03	0.119
Y-91	1204.90	*	-6.293E+00	2.231E+01	3.563E+01	2.073E+00	-0.177
NB-94	702.63	*	4.864E-02	6.216E-02	1.057E-01	6.855E-03	0.460
	871.10		-7.171E-02	7.481E-02	1.171E-01	1.048E-02	-0.613
NB-95	765.79	*	3.068E-02	7.031E-02	1.167E-01	8.597E-03	0.263
NB-95M	235.69	*	4.541E-01	2.285E-01	3.621E-01	2.706E-02	1.254
ZR-95	724.18		9.720E-03	1.616E-01	2.617E-01	2.016E-02	0.037
	756.15	*	1.992E-02	1.303E-01	2.121E-01	1.750E-02	0.094
NB-97	657.90	*	2.925E-03	1.303E-01	Half-Life	too short	
	1024.50		-1.179E-02	1.303E-01	Half-Life	too short	
ZR-97	254.15		-3.026E-03	1.303E-01	Half-Life	too short	
	355.39		1.523E-03	1.303E-01	Half-Life	too short	
	507.63	*	1.300E-02	1.303E-01	Half-Life	too short	
	602.52		-1.570E-02	1.303E-01	Half-Life	too short	
	1021.30		-1.536E-02	1.303E-01	Half-Life	too short	
	1147.95		1.745E-03	1.303E-01	Half-Life	too short	
	1362.66		-3.632E-03	1.303E-01	Half-Life	too short	
	1750.46		-4.655E-03	1.303E-01	Half-Life	too short	
MO-99	140.51		-4.341E+00	8.648E+00	1.341E+01	3.631E+00	-0.324
	181.06		-2.706E-02	6.005E+00	8.826E+00	1.503E+00	-0.003
	366.43		7.600E+00	3.180E+01	5.323E+01	2.987E+00	0.143
	739.58	*	-2.920E+00	4.647E+00	7.097E+00	1.016E+00	-0.411
	778.00		-8.605E+00	1.383E+01	2.114E+01	1.594E+00	-0.407
TC-99M	140.51	*	-9.928E+02	1.383E+01	Half-Life	too short	
RH-101	127.23		5.211E-03	5.641E-02	7.959E-02	5.476E-03	0.065

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-102	198.01	*		2.641E-02	5.226E-02	8.940E-02	4.960E-03	0.295
	325.23			8.393E-03	3.864E-01	6.421E-01	3.716E-02	0.013
	418.52			-1.170E-01	5.505E-01	8.966E-01	4.991E-02	-0.130
	475.06	*		5.119E-03	6.247E-02	1.028E-01	5.943E-03	0.050
	631.29			3.189E-02	1.024E-01	1.696E-01	1.013E-02	0.188
	697.49			-9.027E-02	1.401E-01	2.154E-01	1.382E-02	-0.419
	766.84			7.603E-02	1.945E-01	3.217E-01	2.374E-02	0.236
RU-103	1046.59			-2.042E-02	2.553E-01	4.219E-01	3.229E-02	-0.048
	1112.84			-3.775E-01	4.668E-01	7.274E-01	4.806E-02	-0.519
	497.08	*		9.770E-03	7.540E-02	1.243E-01	1.574E-02	0.079
	610.33			5.906E+00	1.970E+00	3.019E+00	4.676E-01	1.956
RH-106	511.85			9.308E-02	3.474E-01	5.572E-01	3.275E-02	0.167
	621.84	*		-1.873E-01	5.862E-01	9.293E-01	1.099E-01	-0.202
RU-106	1050.47			-1.240E+00	4.800E+00	7.825E+00	5.944E-01	-0.158
	511.85			9.308E-02	3.474E-01	5.572E-01	3.275E-02	0.167
	621.84	*		-1.873E-01	5.859E-01	9.293E-01	5.557E-02	-0.202
AG-108M	1050.47			-1.240E+00	4.800E+00	7.825E+00	5.944E-01	-0.158
	433.93	*		-1.941E-03	6.735E-02	1.106E-01	6.794E-03	-0.018
	614.37			-7.998E-03	8.107E-02	1.125E-01	7.270E-03	-0.071
AG-110M	722.95			-1.722E-01	8.316E-02	1.123E-01	8.069E-03	-1.534
	657.75	*		2.812E-01	9.253E-02	1.559E-01	9.848E-03	1.804
	677.61			2.264E-01	5.794E-01	9.622E-01	6.243E-02	0.235
	706.67			-1.229E-02	3.703E-01	5.963E-01	4.084E-02	-0.021
	763.93			-2.588E-01	3.032E-01	4.550E-01	3.468E-02	-0.569
	884.67			-1.111E-01	1.091E-01	1.699E-01	1.602E-02	-0.654
	937.48			-1.876E-01	2.629E-01	4.194E-01	3.903E-02	-0.447
IN-111	1384.27			-1.694E-02	1.812E-01	2.919E-01	2.152E-02	-0.058
	171.28			-7.583E-02	3.629E-01	5.743E-01	3.097E-02	-0.132
	245.39	*		-9.230E-01	4.119E-01	5.721E-01	3.297E-02	-1.613
IN-113M	391.69	*		1.481E-02	7.959E-02	1.326E-01	7.758E-03	0.112
SN-113	391.69	*		1.481E-02	7.959E-02	1.326E-01	7.758E-03	0.112
IN-114M	190.27	*		-4.314E-02	2.990E-01	4.354E-01	2.396E-02	-0.099
CD-115	260.90			1.387E+01	3.113E+01	5.299E+01	3.075E+00	0.262
	492.35			2.193E-01	1.051E+01	1.723E+01	1.004E+00	0.013
	527.90	*		-6.423E-01	2.738E+00	4.401E+00	2.601E-01	-0.146
SN-117M	156.02			5.030E-01	2.589E+00	4.178E+00	2.405E-01	0.120
	158.56	*		-1.647E-02	6.410E-02	1.014E-01	5.736E-03	-0.162
SB-122	563.90	*		-7.191E-01	8.330E-01	1.284E+00	7.653E-02	-0.560
	692.80			7.421E+00	1.598E+01	2.667E+01	1.694E+00	0.278
I-123	159.00	*		-7.989E-05	1.598E+01	Half-Life too short		
	528.96			-2.929E-01	1.598E+01	Half-Life too short		
TE-123M	159.00	*		-1.030E-03	4.392E-02	7.020E-02	4.015E-03	-0.015
I-124	602.71	*		-2.292E-01	4.787E-01	6.392E-01	3.824E-02	-0.359
	722.78			-6.395E+00	3.084E+00	4.168E+00	2.818E-01	-1.534
	1325.50			2.095E+01	1.932E+01	3.267E+01	2.304E+00	0.641
	1376.25			-6.987E-01	1.199E+01	1.945E+01	1.378E+00	-0.036
	1509.49			-2.775E+00	7.547E+00	1.152E+01	7.905E-01	-0.241
	1691.02			-2.499E-01	1.648E+00	2.570E+00	1.620E-01	-0.097
	602.71			-3.488E-02	7.286E-02	9.727E-02	5.821E-03	-0.359

---- Non-Identified Nuclides ----

	Line Nuclide	Energy Ided (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		645.85	7.381E-02	8.936E-01	1.456E+00	9.741E-02	0.051
		709.31	-1.750E+00	4.661E+00	7.306E+00	4.804E-01	-0.240
		713.82	-1.303E+00	3.005E+00	4.694E+00	5.026E-01	-0.278
		722.78	-1.411E+00	6.808E-01	9.196E-01	6.433E-02	-1.534
	+	968.20	1.351E+01	5.322E+00	1.034E+01	8.963E-01	1.307
		1045.16	4.531E+00	4.932E+00	8.677E+00	6.659E-01	0.522
		1325.50	4.937E+00	4.551E+00	7.699E+00	5.429E-01	0.641
		1368.21	5.756E-01	1.557E+00	2.748E+00	3.450E-01	0.209
		1436.60	3.206E-01	3.184E+00	5.336E+00	3.737E-01	0.060
		1691.02 *	-1.300E-02	8.576E-02	1.338E-01	9.042E-03	-0.097
SB-125		427.89 *	-4.087E-02	1.828E-01	2.973E-01	1.743E-02	-0.137
		463.38	2.097E-01	5.960E-01	9.939E-01	6.671E-02	0.211
		600.56	-9.290E-02	3.196E-01	4.941E-01	3.393E-02	-0.188
		635.90	-2.161E-01	5.281E-01	8.318E-01	5.772E-02	-0.260
TE-125M		109.28 *	4.282E+00	1.264E+01	2.068E+01	1.938E+00	0.207
I-126		388.63	-1.386E-01	2.730E-01	4.390E-01	2.398E-02	-0.316
		666.33 *	3.300E-01	2.473E-01	3.931E-01	2.361E-02	0.840
		753.82	-8.738E-02	2.110E+00	3.386E+00	2.436E-01	-0.026
SB-126		223.80	2.330E-01	4.609E+00	7.748E+00	4.400E-01	0.030
		278.60	1.492E+00	2.866E+00	4.885E+00	2.848E-01	0.305
	+	296.50	6.094E+00	2.753E+00	3.316E+00	1.934E-01	1.838
		414.70	6.122E-02	1.017E-01	1.725E-01	9.572E-03	0.355
		415.30	6.619E-01	8.471E+00	1.401E+01	7.778E-01	0.047
		555.20	-1.384E+00	5.044E+00	8.068E+00	4.801E-01	-0.172
		573.80	-5.496E-01	1.425E+00	2.263E+00	1.351E-01	-0.243
		593.00	5.402E-01	1.204E+00	2.016E+00	1.206E-01	0.268
		656.30	2.274E+00	5.221E+00	7.600E+00	4.524E-01	0.299
		666.33	1.359E-01	1.019E-01	1.619E-01	9.725E-03	0.840
		675.00	4.852E-01	2.571E+00	4.216E+00	2.580E-01	0.115
		695.00	-4.568E-03	9.886E-02	1.592E-01	1.016E-02	-0.029
		697.00	-1.245E-01	3.455E-01	5.432E-01	3.482E-02	-0.229
		720.50 *	-6.282E-02	1.902E-01	2.992E-01	2.013E-02	-0.210
		856.80	1.993E-01	7.566E-01	1.121E+00	9.785E-02	0.178
		989.30	-5.176E-01	1.926E+00	3.147E+00	2.650E-01	-0.164
		1034.80	3.901E+00	1.337E+01	2.266E+01	1.772E+00	0.172
		1213.00	3.862E+00	4.180E+00	7.560E+00	4.458E-01	0.511
SB-127	+	61.10	1.648E+03	1.531E+02	1.158E+02	9.131E+00	14.232
		252.40	1.208E+00	2.410E+00	4.028E+00	1.658E+00	0.300
		290.80	-1.162E+00	1.304E+01	1.876E+01	1.345E+00	-0.062
		411.60	-3.251E+00	7.612E+00	1.225E+01	1.601E+00	-0.265
		444.90	-4.376E+00	6.417E+00	1.015E+01	9.194E-01	-0.431
		473.00	4.870E-01	1.186E+00	1.982E+00	1.898E-01	0.246
		543.00	1.547E-01	1.007E+01	1.644E+01	1.912E+00	0.009
		603.60	-1.645E+00	7.378E+00	1.012E+01	9.330E-01	-0.163
		685.20 *	-4.207E-01	8.271E-01	1.285E+00	1.008E-01	-0.327
		698.50	-5.886E+00	9.134E+00	1.400E+01	1.902E+00	-0.420
		722.20	-3.562E+01	1.918E+01	2.638E+01	2.093E+00	-1.350
		783.80	1.102E+00	2.343E+00	3.887E+00	3.986E-01	0.284
XE-127		57.60	2.507E+02	2.335E+01	3.087E+01	2.033E+00	8.123

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131		145.22		3.353E-02	9.328E-01	1.498E+00	9.245E-02	0.022
		172.10		8.769E-02	1.742E-01	2.842E-01	1.534E-02	0.309
		202.84	*	-1.187E-02	6.629E-02	1.107E-01	6.173E-03	-0.107
		374.96		-3.490E-01	3.282E-01	5.122E-01	2.847E-02	-0.681
		80.18		-5.051E+00	4.402E+00	6.600E+00	5.272E-01	-0.765
		284.30		3.192E-01	1.443E+00	2.429E+00	1.562E-01	0.131
		364.48	*	-1.165E-02	1.228E-01	2.021E-01	1.267E-02	-0.058
TE-132		636.97		1.092E-01	1.706E+00	2.778E+00	1.834E-01	0.039
		722.89		-1.694E+01	8.171E+00	1.104E+01	7.493E-01	-1.534
		49.72		4.726E+00	8.421E+00	1.396E+01	1.050E+00	0.339
		111.76		2.566E-01	1.170E+01	1.889E+01	1.576E+00	0.014
BA-133		116.30		-2.324E-01	1.218E+01	1.810E+01	1.488E+00	-0.013
		228.16	*	-2.064E-01	2.983E-01	4.841E-01	6.435E-02	-0.426
		53.15		-2.683E+00	7.308E+00	1.093E+01	7.119E-01	-0.246
		79.62		-4.286E-01	2.160E+00	3.361E+00	4.988E-01	-0.128
I-133		81.00		-2.030E-01	1.626E-01	2.391E-01	3.723E-02	-0.849
		276.40		2.840E-01	6.102E-01	1.036E+00	1.345E-01	0.274
		302.84		-2.691E-01	2.512E-01	3.817E-01	4.455E-02	-0.705
		356.01	*	-7.264E-03	8.980E-02	1.282E-01	1.474E-02	-0.057
		383.85		-3.366E-02	5.760E-01	9.485E-01	1.016E-01	-0.035
	+	510.53		4.542E-03	5.760E-01	Half-Life	too short	
		529.87	*	-2.515E-05	5.760E-01	Half-Life	too short	
CS-134		706.58		-9.514E-04	5.760E-01	Half-Life	too short	
		856.28		-1.639E-03	5.760E-01	Half-Life	too short	
		875.33		9.261E-05	5.760E-01	Half-Life	too short	
		1236.41		6.124E-04	5.760E-01	Half-Life	too short	
		1298.22		-2.883E-04	5.760E-01	Half-Life	too short	
		475.35		9.282E-01	4.055E+00	6.724E+00	3.887E-01	0.138
		563.23		-7.997E-01	6.984E-01	1.053E+00	6.399E-02	-0.760
CS-135		569.32		4.113E-01	3.966E-01	6.828E-01	4.188E-02	0.602
		604.70		2.079E-02	6.458E-02	9.348E-02	5.621E-03	0.222
		795.84	*	1.223E-01	9.404E-02	1.636E-01	1.288E-02	0.748
		801.93		-2.935E-01	7.683E-01	1.209E+00	9.606E-02	-0.243
		1038.57		-4.586E+00	8.523E+00	1.363E+01	1.059E+00	-0.337
		1167.94		-2.330E+00	4.896E+00	6.522E+00	3.658E-01	-0.357
		1365.15		-1.040E+00	1.232E+00	1.629E+00	1.234E-01	-0.638
I-135		268.24	*	1.379E-01	2.609E-01	4.449E-01	3.413E-02	0.310
I-135		288.45		1.843E+03	2.609E-01	Half-Life	too short	
		417.63		-4.934E+03	2.609E-01	Half-Life	too short	
		546.56		1.417E+03	2.609E-01	Half-Life	too short	
		836.80		2.136E+03	2.609E-01	Half-Life	too short	
		1038.76		-2.838E+03	2.609E-01	Half-Life	too short	
		1124.00		-8.797E+03	2.609E-01	Half-Life	too short	
		1131.51		-1.324E+03	2.609E-01	Half-Life	too short	
		1260.41	*	-6.407E+02	2.609E-01	Half-Life	too short	
		1457.56		3.417E+03	2.609E-01	Half-Life	too short	
		1678.03		1.974E+03	2.609E-01	Half-Life	too short	
		1706.46		4.198E+03	2.609E-01	Half-Life	too short	
		1791.20		-5.215E+02	2.609E-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	66.91			-2.581E-01	7.919E-01	1.228E+00	1.791E-01	-0.210
	86.29			2.130E+01	3.574E+00	3.469E+00	4.444E-01	6.140
	153.22			7.555E-01	7.351E-01	1.225E+00	8.907E-02	0.617
	163.89			-4.676E-01	1.223E+00	1.921E+00	1.338E-01	-0.243
	176.55			-3.172E-01	4.278E-01	6.589E-01	4.071E-02	-0.481
	273.65			-7.194E-01	5.550E-01	8.719E-01	5.781E-02	-0.825
	340.57			4.162E-02	1.625E-01	2.723E-01	1.661E-02	0.153
	818.51			-1.742E-02	1.085E-01	1.803E-01	1.468E-02	-0.097
	1048.07	*		-1.413E-01	1.667E-01	2.595E-01	2.086E-02	-0.545
	1235.34			-1.924E-01	4.639E-01	7.249E-01	7.374E-02	-0.265
CE-139	165.85	*		-2.168E-02	4.593E-02	7.184E-02	3.857E-03	-0.302
BA-140	162.64			-5.807E-02	8.456E-01	1.348E+00	8.430E-02	-0.043
	304.84			-1.840E+00	1.640E+00	2.452E+00	6.694E-01	-0.750
LA-140	423.70			7.309E-01	2.644E+00	4.396E+00	1.396E+00	0.166
	537.32	*		1.469E-01	3.504E-01	5.814E-01	1.892E-01	0.253
	328.77			2.925E-01	3.676E-01	6.310E-01	4.087E-02	0.464
	432.53			7.862E-01	2.974E+00	4.955E+00	3.097E-01	0.159
	487.03			-1.205E-01	1.956E-01	3.090E-01	2.033E-02	-0.390
	751.79			2.228E+00	2.293E+00	3.946E+00	3.255E-01	0.565
	815.85			1.040E-01	4.554E-01	7.758E-01	7.099E-02	0.134
	867.82			9.014E-01	2.087E+00	3.588E+00	3.352E-01	0.251
	919.63			-2.073E+00	4.791E+00	7.607E+00	8.450E-01	-0.273
	925.24			1.288E+00	1.905E+00	3.302E+00	3.183E-01	0.390
CE-141	1596.49	*		-2.522E-02	8.815E-02	1.362E-01	9.026E-03	-0.185
	145.44	*		-1.650E-03	8.312E-02	1.332E-01	8.497E-03	-0.012
CE-143	57.37			1.518E+03	1.837E+02	2.343E+02	2.002E+01	6.481
	231.56			-5.543E+01	1.829E+02	2.935E+02	9.104E+01	-0.189
+	293.26	*		2.997E+01	1.274E+01	1.857E+01	3.835E+00	1.614
	350.59			7.942E+02	3.369E+02	2.825E+02	8.602E+01	2.812
	490.36			-1.296E+02	2.431E+02	3.802E+02	1.180E+02	-0.341
	664.57			2.431E+03	8.028E+02	4.523E+02	1.439E+02	5.374
	721.93			-2.120E+02	1.317E+02	1.629E+02	4.690E+01	-1.301
	80.11			-3.874E+00	3.418E+00	5.128E+00	4.082E-01	-0.755
	133.54	*		-3.325E-01	3.249E-01	4.936E-01	7.185E-02	-0.674
	476.78			1.184E-01	1.424E-01	2.427E-01	1.681E-02	0.488
	618.01			-1.728E-02	5.823E-02	9.256E-02	5.847E-03	-0.187
	696.49	*		-2.464E-02	6.265E-02	9.827E-02	6.294E-03	-0.251
PR-144	778.57			-4.148E+00	4.510E+00	6.720E+00	5.074E-01	-0.617
	696.49	*		-1.664E+00	4.232E+00	6.638E+00	4.250E-01	-0.251
PM-146	1489.15			-1.268E+01	1.524E+01	2.062E+01	1.424E+00	-0.615
	453.90	*		-6.233E-02	9.697E-02	1.541E-01	1.319E-02	-0.404
ND-147	633.02			1.430E+00	2.687E+00	4.429E+00	1.632E+00	0.323
	735.90			7.820E-02	2.669E-01	4.385E-01	1.234E-01	0.178
	747.13			-2.555E-01	1.830E-01	2.579E-01	3.393E-02	-0.991
	91.11			9.997E-01	3.720E-01	4.679E-01	4.300E-02	2.137
PM-149	319.41			1.409E+00	4.012E+00	6.735E+00	3.908E-01	0.209
	439.89			2.761E+00	7.671E+00	1.284E+01	7.266E-01	0.215
	531.02	*		-5.200E-01	6.699E-01	1.029E+00	1.397E-01	-0.505
	285.90	*		1.155E-01	2.166E+01	3.611E+01	5.117E+00	0.003

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	+	121.78	6.779E-01	2.031E-01	2.497E-01	2.160E-02	2.715
		244.69	-8.890E-01	6.002E-01	8.372E-01	4.823E-02	-1.062
		344.27 *	5.900E-02	1.806E-01	2.876E-01	1.861E-02	0.205
		443.98	-1.769E+00	1.903E+00	2.968E+00	1.683E-01	-0.596
		778.89	-2.674E-01	5.153E-01	7.945E-01	6.001E-02	-0.337
		867.32	4.458E-01	1.783E+00	2.971E+00	2.642E-01	0.150
		964.01	4.817E-01	6.990E-01	1.062E+00	9.261E-02	0.454
		1085.78	-3.092E-01	8.657E-01	1.399E+00	9.873E-02	-0.221
		1112.02	-3.588E-01	6.689E-01	1.066E+00	7.056E-02	-0.337
		1407.95	1.714E-01	2.428E-01	4.388E-01	3.093E-02	0.391
GD-153		69.67	2.251E+00	2.536E+00	3.748E+00	2.680E-01	0.601
		83.37	-3.297E+01	3.825E+01	3.646E+01	3.014E+00	-0.904
		97.43 *	6.808E-02	1.240E-01	1.806E-01	1.448E-02	0.377
EU-154	+	103.18	-1.233E-01	1.478E-01	2.296E-01	1.771E-02	-0.537
		123.07	4.757E-01	1.449E-01	1.760E-01	1.800E-02	2.703
		247.94	-2.551E-01	5.757E-01	9.436E-01	8.986E-02	-0.270
		591.81	2.990E-02	1.160E+00	1.889E+00	1.867E-01	0.016
		723.30	-4.917E-01	3.324E-01	4.733E-01	3.735E-02	-1.039
		756.87	5.522E-01	1.531E+00	2.525E+00	2.783E-01	0.219
		873.19	-1.203E-01	6.483E-01	1.072E+00	1.341E-01	-0.112
		996.32	1.303E-01	8.104E-01	1.363E+00	2.402E-01	0.096
		1004.76	-3.794E-01	4.818E-01	7.574E-01	8.597E-02	-0.501
		1274.45 *	-2.004E-02	1.387E-01	2.234E-01	2.190E-02	-0.090
EU-155		48.70	7.373E-02	3.809E+00	6.235E+00	3.996E-01	0.012
	+	60.01	4.244E+02	3.524E+01	3.367E+01	2.238E+00	12.607
		86.54	3.078E+00	4.017E-01	4.620E-01	4.010E-02	6.662
TB-160		105.31 *	-4.026E-02	1.532E-01	2.445E-01	1.892E-02	-0.165
	+	86.79	8.939E+00	1.087E+00	1.194E+00	1.029E-01	7.486
		197.04	2.167E-01	8.442E-01	1.432E+00	7.936E-02	0.151
		215.65	-3.747E-01	1.184E+00	1.965E+00	1.108E-01	-0.191
		298.57	8.444E-02	2.016E-01	3.003E-01	1.752E-02	0.281
		879.36 *	1.518E-01	3.063E-01	5.271E-01	4.788E-02	0.288
		962.29	-8.231E-01	1.194E+00	1.752E+00	1.531E-01	-0.470
		966.15	5.980E-01	4.848E-01	7.609E-01	6.616E-02	0.786
		1177.93	1.260E+00	6.617E-01	1.141E+00	6.336E-02	1.104
		1271.85	-1.143E-01	7.936E-01	1.280E+00	8.309E-02	-0.089
HO-166M		80.57	-5.346E-01	4.441E-01	6.641E-01	5.315E-02	-0.805
		184.41	5.300E-02	5.953E-02	9.261E-02	5.065E-03	0.572
		280.46	-1.059E-01	1.427E-01	2.298E-01	1.340E-02	-0.461
		410.95	-2.386E-01	4.704E-01	7.552E-01	4.178E-02	-0.316
		711.68 *	-1.935E-02	1.117E-01	1.779E-01	1.176E-02	-0.109
		752.31	7.306E-01	5.173E-01	9.142E-01	6.556E-02	0.799
		810.29	-4.731E-02	1.172E-01	1.819E-01	1.458E-02	-0.260
TM-171		51.35	1.964E+01	5.366E+01	8.849E+01	5.738E+00	0.222
		52.39	2.554E+00	2.894E+01	4.741E+01	3.083E+00	0.054
	+	59.40	2.224E+03	1.847E+02	1.834E+02	1.215E+01	12.125
LU-176		66.72 *	-8.078E+00	3.933E+01	6.133E+01	4.276E+00	-0.132
	+	88.36	6.997E+00	8.507E-01	9.312E-01	8.113E-02	7.514
		201.83	-1.899E-02	4.567E-02	7.560E-02	4.210E-03	-0.251

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	306.84	*		-8.551E-03	4.383E-02	7.225E-02	4.207E-03	-0.118
	401.10			2.382E+00	1.298E+01	2.159E+01	1.185E+00	0.110
	112.95			-3.811E-01	1.287E+00	2.049E+00	1.505E-01	-0.186
	208.36	*		1.697E-01	8.990E-01	1.521E+00	8.526E-02	0.112
LU-177M	52.97			-5.105E-01	3.195E+00	4.807E+00	3.130E-01	-0.106
	54.07			-1.417E-01	1.831E+00	2.614E+00	1.707E-01	-0.054
	61.30			9.337E+01	7.434E+00	8.441E+00	5.658E-01	11.062
	121.62	+		3.387E+00	1.001E+00	1.242E+00	8.834E-02	2.727
HF-181	147.16			-1.384E-01	9.797E-01	1.561E+00	9.516E-02	-0.089
	171.86			3.729E-01	7.691E-01	1.253E+00	6.764E-02	0.297
	218.09			1.931E+00	1.370E+00	2.412E+00	1.364E-01	0.800
	268.79			1.069E+00	1.275E+00	2.201E+00	1.281E-01	0.486
	319.02			-1.361E-02	4.548E-01	7.503E-01	4.354E-02	-0.018
	367.43			-1.164E+00	1.611E+00	2.563E+00	1.437E-01	-0.454
	413.65	*		2.564E-01	3.261E-01	5.577E-01	3.092E-02	0.460
	56.28			4.465E+00	2.008E+00	3.031E+00	1.989E-01	1.473
	57.53			1.945E+01	1.885E+00	2.557E+00	1.683E-01	7.608
	65.20			-1.097E+00	1.312E+00	1.796E+00	1.237E-01	-0.611
	133.02			-1.021E-01	9.537E-02	1.460E-01	9.699E-03	-0.700
	136.25			-7.384E-02	6.606E-01	1.056E+00	6.881E-02	-0.070
W-181	345.85			-1.141E-01	3.547E-01	4.983E-01	2.848E-02	-0.229
	482.03	*		1.547E-03	8.007E-02	1.313E-01	7.618E-03	0.012
	56.28			1.870E+00	8.400E-01	1.268E+00	8.319E-02	1.475
	57.53			8.117E+00	7.877E-01	1.069E+00	7.040E-02	7.592
TA-182	65.20	*		-4.556E-01	5.446E-01	7.458E-01	5.139E-02	-0.611
	67.75			-6.321E-02	1.466E-01	2.353E-01	1.654E-02	-0.269
	100.10			1.390E-01	2.448E-01	4.046E-01	3.183E-02	0.344
	152.43			2.808E-01	5.037E-01	8.256E-01	4.867E-02	0.340
RE-183	222.10			-5.427E-01	5.517E-01	8.887E-01	5.041E-02	-0.611
	1001.68			5.575E-01	4.272E+00	7.165E+00	5.923E-01	0.078
	1121.28			1.496E-01	2.717E-01	4.662E-01	3.013E-02	0.321
	1189.05			1.584E-01	4.045E-01	6.948E-01	3.934E-02	0.228
	1221.42	*		-6.682E-02	2.097E-01	3.317E-01	1.984E-02	-0.201
	1230.97			1.831E-01	4.780E-01	8.263E-01	5.022E-02	0.222
	57.98			1.280E+01	1.052E+00	1.229E+00	8.101E-02	10.419
	59.32	+		8.620E+00	7.158E-01	7.144E-01	4.732E-02	12.065
	67.20			-1.106E-01	2.558E-01	4.097E-01	2.868E-02	-0.270
	162.32	*		2.743E-02	1.615E-01	2.601E-01	1.433E-02	0.105
	208.81			4.106E-01	1.453E+00	2.467E+00	1.383E-01	0.166
	291.72			1.175E-01	1.632E+00	2.374E+00	1.385E-01	0.049
RE-184	57.98			4.891E+01	4.021E+00	4.694E+00	3.095E-01	10.419
	59.32	+		3.291E+01	2.732E+00	2.727E+00	1.806E-01	12.065
	67.20			-4.223E-01	9.769E-01	1.565E+00	1.095E-01	-0.270
	161.27			3.611E-01	5.426E-01	8.924E-01	4.953E-02	0.405
	216.55			1.429E-01	4.353E-01	7.397E-01	4.176E-02	0.193
	252.85	*		8.827E-02	3.834E-01	6.473E-01	3.744E-02	0.136
	318.01			-7.393E-02	7.780E-01	1.287E+00	7.469E-02	-0.057
	792.07			-1.989E+00	2.003E+00	2.977E+00	2.306E-01	-0.668
	903.28			-6.620E-01	2.184E+00	3.501E+00	3.268E-01	-0.189

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
OS-185	+	920.93		-6.396E-01	1.038E+00	1.666E+00	1.528E-01	-0.384
		59.72		2.388E+01	1.983E+00	1.931E+00	1.281E-01	12.372
		61.14		1.125E+01	8.779E-01	9.559E-01	6.401E-02	11.772
		69.30		1.464E-01	4.230E-01	6.450E-01	4.597E-02	0.227
	*	592.07		1.013E+00	4.468E+00	7.374E+00	4.409E-01	0.137
		646.12		-5.949E-03	7.901E-02	1.274E-01	7.595E-03	-0.047
		717.42		1.843E+00	1.660E+00	2.876E+00	1.923E-01	0.641
		874.81		-3.070E-02	1.255E+00	2.098E+00	1.891E-01	-0.015
RE-188	*	880.27		5.554E-02	1.716E+00	2.879E+00	2.619E-01	0.019
		155.03		1.942E-02	2.551E-01	4.098E-01	2.374E-02	0.047
		477.96		-5.452E+00	6.248E+00	9.767E+00	5.653E-01	-0.558
		633.10		2.461E+00	4.999E+00	8.373E+00	5.002E-01	0.294
W-188		63.58		-2.718E+01	7.210E+01	1.022E+02	6.960E+00	-0.266
		227.08		-6.454E+00	1.958E+01	3.240E+01	1.845E+00	-0.199
IR-192	+	290.67		-1.235E+00	1.304E+01	1.875E+01	1.094E+00	-0.066
		295.96		6.239E-01	2.820E-01	3.412E-01	2.021E-02	1.829
		308.46		1.348E-01	1.567E-01	2.706E-01	1.593E-02	0.498
		316.51		-1.291E-02	5.773E-02	9.491E-02	5.540E-03	-0.136
	*	468.07		-5.671E-02	1.325E-01	2.126E-01	1.413E-02	-0.267
		604.41		-4.947E-03	8.455E-01	1.186E+00	1.357E-01	-0.004
		612.46		1.164E-01	1.466E+00	2.070E+00	1.596E-01	0.056
		65.12		-2.147E-01	2.553E-01	3.495E-01	2.406E-02	-0.614
AU-195	+	66.83		-2.142E-02	1.280E-01	1.998E-01	1.395E-02	-0.107
		75.70		6.912E-01	2.974E-01	5.399E-01	4.095E-02	1.280
		98.88		3.084E-01	3.392E-01	5.283E-01	4.193E-02	0.584
		129.76		1.048E+00	4.296E+00	6.975E+00	4.726E-01	0.150
TL-200	*	367.94		-1.057E-05	4.296E+00	Half-Life	too short	
		579.30		4.177E-05	4.296E+00	Half-Life	too short	
		828.27		5.142E-05	4.296E+00	Half-Life	too short	
		1205.75		-2.960E-05	4.296E+00	Half-Life	too short	
TL-201		68.90		2.395E-01	1.729E+00	2.616E+00	1.858E-01	0.092
		70.82		3.647E-01	1.049E+00	1.516E+00	1.096E-01	0.241
		80.30		-2.323E+00	1.984E+00	2.971E+00	2.371E-01	-0.782
		135.34		4.667E+00	9.683E+00	1.585E+01	1.039E+00	0.294
TL-202	*	167.43		1.489E+00	2.679E+00	4.384E+00	2.355E-01	0.340
		68.90		6.261E-02	4.519E-01	6.837E-01	4.855E-02	0.092
		70.82		9.507E-02	2.736E-01	3.953E-01	2.856E-02	0.241
		80.30		-6.058E-01	5.172E-01	7.748E-01	6.181E-02	-0.782
HG-203	*	439.56		-1.689E-03	9.693E-02	1.592E-01	9.003E-03	-0.011
		70.83		5.323E-01	1.540E+00	2.223E+00	2.838E-01	0.239
		72.87		1.852E+00	9.591E-01	1.432E+00	1.779E-01	1.293
		82.60		-4.672E+00	2.855E+00	2.482E+00	3.346E-01	-1.883
BI-207	+	279.20		1.312E-02	6.128E-02	1.031E-01	6.381E-03	0.127
		72.80		5.840E-01	3.011E-01	4.578E-01	3.372E-02	1.276
		74.97		3.924E-01	1.688E-01	2.909E-01	2.190E-02	1.349
		84.90		-4.133E-01	5.301E-01	5.104E-01	4.298E-02	-0.810
		569.67		5.309E-02	6.191E-02	1.057E-01	6.304E-03	0.502
		1063.62		-7.967E-02	1.136E-01	1.790E-01	1.325E-02	-0.445
		1770.23		-1.476E+00	8.690E-01	9.243E-01	5.521E-02	-1.597

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-207		81.07		-4.561E-01	3.542E-01	5.276E-01	4.246E-02	-0.865
		83.78		-5.248E-01	3.510E-01	3.166E-01	2.631E-02	-1.658
		94.90		3.475E-01	3.723E-01	5.507E-01	4.506E-02	0.631
	+	122.32		1.616E+01	4.805E+00	6.006E+00	4.714E-01	2.690
		144.24		-5.284E-01	1.047E+00	1.633E+00	1.235E-01	-0.324
		154.21		2.985E-01	6.205E-01	1.013E+00	7.129E-02	0.295
		269.46		2.237E-01	3.063E-01	5.266E-01	3.202E-02	0.425
		323.87	*	-1.123E+00	1.190E+00	1.865E+00	3.079E-01	-0.602
		338.28		3.306E+00	1.856E+00	3.253E+00	3.417E-01	1.016
		445.03		-3.072E+00	4.601E+00	7.278E+00	7.423E-01	-0.422
PO-209		260.50		4.056E+00	1.597E+01	2.697E+01	1.565E+00	0.150
		262.80		2.778E+01	4.398E+01	7.544E+01	4.381E+00	0.368
		896.60	*	-6.021E+00	1.595E+01	2.601E+01	2.434E+00	-0.232
BI-210		46.50	*	-2.852E+00	4.853E+00	7.864E+00	5.831E-01	-0.363
PB-210		46.50	*	-2.852E+00	4.853E+00	7.864E+00	5.831E-01	-0.363
PO-210		46.50	*	-2.852E+00	4.852E+00	7.864E+00	4.935E-01	-0.363
PB-211		404.84	*	3.728E-01	1.814E+00	2.995E+00	1.866E+00	0.124
		427.08		-3.926E-01	4.114E+00	6.727E+00	4.157E+00	-0.058
		831.96		-1.431E-01	2.400E+00	4.009E+00	2.511E+00	-0.036
BI-212		727.18	*	9.743E-01	5.449E-01	9.770E-01	8.311E-02	0.997
		785.46		3.284E+00	3.418E+00	5.857E+00	4.480E-01	0.561
		1620.62		1.185E+00	1.810E+00	3.270E+00	2.142E-01	0.362
PO-215		81.07		-4.561E-01	3.542E-01	5.276E-01	4.246E-02	-0.865
		83.78		-5.248E-01	3.510E-01	3.166E-01	2.631E-02	-1.658
		94.90		3.475E-01	3.723E-01	5.507E-01	4.506E-02	0.631
	+	122.32		1.616E+01	4.805E+00	6.006E+00	4.714E-01	2.690
		144.24		-5.284E-01	1.047E+00	1.633E+00	1.235E-01	-0.324
		154.21		2.985E-01	6.205E-01	1.013E+00	7.129E-02	0.295
		269.46		2.237E-01	3.063E-01	5.266E-01	3.202E-02	0.425
		323.87	*	-1.123E+00	1.190E+00	1.865E+00	3.079E-01	-0.602
		338.28		3.306E+00	1.856E+00	3.253E+00	3.417E-01	1.016
		445.03		-3.072E+00	4.601E+00	7.278E+00	7.423E-01	-0.422
RN-219		271.23		5.934E-01	4.025E-01	7.075E-01	5.745E-02	0.839
		401.81	*	1.420E-01	7.922E-01	1.318E+00	1.776E-01	0.108
RN-220		549.76	*	-7.327E+00	4.655E+01	7.510E+01	4.464E+00	-0.098
RA-223		81.07		-4.561E-01	3.542E-01	5.276E-01	4.246E-02	-0.865
		83.78		-5.248E-01	3.510E-01	3.166E-01	2.631E-02	-1.658
		94.90		3.475E-01	3.723E-01	5.507E-01	4.506E-02	0.631
	+	122.32		1.616E+01	4.805E+00	6.006E+00	4.714E-01	2.690
		144.24		-5.284E-01	1.047E+00	1.633E+00	1.235E-01	-0.324
		154.21		2.985E-01	6.205E-01	1.013E+00	7.129E-02	0.295
		269.46		2.237E-01	3.063E-01	5.266E-01	3.202E-02	0.425
		323.87	*	-1.123E+00	1.190E+00	1.865E+00	3.079E-01	-0.602
		338.28		3.306E+00	1.856E+00	3.253E+00	3.417E-01	1.016
		445.03		-3.072E+00	4.601E+00	7.278E+00	7.423E-01	-0.422
RA-224		240.98	*	6.566E+00	1.450E+00	2.463E+00	1.416E-01	2.666
AC-227		79.80		-1.446E+00	2.735E+00	4.184E+00	8.886E-01	-0.346
		236.00		1.667E+00	4.999E-01	7.942E-01	8.271E-02	2.099
		256.20	*	-5.144E-02	6.432E-01	1.071E+00	1.495E-01	-0.048

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-227		286.10	-2.628E-01	2.584E+00	4.287E+00	4.963E-01	-0.061
		299.80	3.167E+00	2.651E+00	4.073E+00	6.638E-01	0.777
		304.40	-2.875E+00	3.224E+00	5.075E+00	8.784E-01	-0.566
		334.20	-8.031E+00	4.558E+00	6.556E+00	1.201E+00	-1.225
		79.80	-1.446E+00	2.736E+00	4.184E+00	9.003E-01	-0.346
	+	94.00	4.500E+00	3.648E+00	4.832E+00	1.045E+00	0.931
		236.00	1.667E+00	4.922E-01	7.942E-01	7.158E-02	2.099
		256.20	* -5.144E-02	6.432E-01	1.071E+00	1.810E-01	-0.048
		286.10	-2.628E-01	2.598E+00	4.287E+00	4.294E+00	-0.061
		299.80	3.167E+00	2.651E+00	4.073E+00	6.638E-01	0.777
TH-229		304.40	-2.875E+00	3.224E+00	5.075E+00	8.784E-01	-0.566
		334.20	-8.031E+00	4.558E+00	6.556E+00	1.201E+00	-1.225
		85.43	6.824E-01	5.405E-01	5.924E-01	5.021E-02	1.152
	+	88.47	4.028E+00	4.897E-01	5.351E-01	4.657E-02	7.526
		100.00	1.584E-01	2.642E-01	4.371E-01	3.442E-02	0.362
		193.63	* -5.018E-01	8.323E-01	1.332E+00	7.355E-02	-0.377
PA-231		210.97	1.024E+00	1.215E+00	2.102E+00	1.181E-01	0.487
		283.67	* 1.668E-01	2.554E+00	4.270E+00	5.890E-01	0.039
		301.29	1.204E+00	1.059E+00	1.633E+00	1.710E-01	0.737
TH-231		81.07	-4.561E-01	3.542E-01	5.276E-01	4.246E-02	-0.865
		83.78	-5.248E-01	3.510E-01	3.166E-01	2.631E-02	-1.658
		94.90	3.475E-01	3.723E-01	5.507E-01	4.506E-02	0.631
	+	122.32	1.616E+01	4.805E+00	6.006E+00	4.714E-01	2.690
		144.24	-5.284E-01	1.047E+00	1.633E+00	1.235E-01	-0.324
		154.21	2.985E-01	6.205E-01	1.013E+00	7.129E-02	0.295
		269.46	2.237E-01	3.063E-01	5.266E-01	3.202E-02	0.425
		323.87	* -1.123E+00	1.190E+00	1.865E+00	3.079E-01	-0.602
		338.28	3.306E+00	1.856E+00	3.253E+00	3.417E-01	1.016
		445.03	-3.072E+00	4.601E+00	7.278E+00	7.423E-01	-0.422
U-231		84.21	-7.570E+00	5.381E+00	4.896E+00	4.089E-01	-1.546
	+	92.29	1.587E+00	1.247E+00	1.789E+00	1.498E-01	0.887
		95.87	* -1.977E-01	6.404E-01	8.899E-01	7.224E-02	-0.222
		108.00	4.816E-01	1.057E+00	1.738E+00	1.306E-01	0.277
PA-233	+	75.28	1.146E+01	5.139E+00	8.758E+00	1.294E+00	1.308
	+	86.59	5.775E+01	1.626E+01	7.564E+00	2.028E+00	7.634
		300.12	1.047E+00	7.298E-01	1.139E+00	1.532E-01	0.919
		311.98	* 2.634E-02	1.134E-01	1.904E-01	1.176E-02	0.138
		340.50	3.644E-01	1.101E+00	1.847E+00	4.238E-01	0.197
PA-234		398.62	-1.516E-01	3.981E+00	6.554E+00	1.690E+00	-0.023
		415.76	3.079E-01	3.207E+00	5.307E+00	1.089E+00	0.058
		63.00	4.295E-01	2.251E+00	3.278E+00	4.772E-01	0.131
		94.67	3.050E-01	2.729E-01	4.044E-01	4.899E-02	0.754
		98.44	1.176E-01	1.621E-01	2.191E-01	1.220E-01	0.537
		99.86	4.592E-01	6.690E-01	1.110E+00	8.752E-02	0.414
		111.00	4.910E-02	2.745E-01	4.459E-01	5.019E-02	0.110
		131.20	8.571E-02	1.632E-01	2.678E-01	1.799E-02	0.320
		152.70	3.659E-01	5.100E-01	8.364E-01	1.325E-01	0.437
	+	186.00	3.699E+00	3.229E+00	3.476E+00	1.060E+00	1.064
		226.40	5.937E-01	6.468E-01	1.118E+00	1.286E-01	0.531

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		227.20		-2.709E-01	7.023E-01	1.159E+00	6.602E-02	-0.234
		248.90		3.070E-01	1.320E+00	2.228E+00	4.786E-01	0.138
	+	293.70		4.164E+00	1.982E+00	2.224E+00	3.580E-01	1.872
		369.80		7.794E-01	1.528E+00	2.578E+00	5.353E-01	0.302
		568.70		2.359E+00	2.009E+00	3.484E+00	2.079E-01	0.677
		569.50		5.084E-01	5.518E-01	9.446E-01	5.636E-02	0.538
		574.00		-5.550E-01	2.868E+00	4.611E+00	2.753E-01	-0.120
		699.00		-3.766E-01	1.332E+00	2.105E+00	3.831E-01	-0.179
		706.10		-6.433E-01	1.932E+00	3.008E+00	1.331E+00	-0.214
		733.00		-2.066E-01	6.803E-01	1.068E+00	2.306E-01	-0.193
		742.81		2.289E+00	3.003E+00	4.429E+00	2.969E+00	0.517
		796.30		2.246E+00	1.917E+00	3.170E+00	8.497E-01	0.709
		805.60		-3.526E-02	1.888E+00	3.026E+00	9.218E-01	-0.012
		819.60		-4.342E-01	2.533E+00	4.196E+00	1.591E+00	-0.103
		826.30		-9.026E-01	1.733E+00	2.731E+00	1.220E+00	-0.330
		831.60		6.754E-02	1.241E+00	2.089E+00	6.218E-01	0.032
		876.40		1.455E-01	1.938E+00	3.232E+00	3.324E+00	0.045
		880.51		-8.834E-03	6.479E-01	1.084E+00	9.866E-02	-0.008
		883.24		1.971E-01	6.690E-01	1.117E+00	7.517E-01	0.176
		899.00		-7.079E-01	1.783E+00	2.857E+00	1.253E+00	-0.248
		925.00		1.207E+00	2.811E+00	4.809E+00	4.391E-01	0.251
		926.50		3.654E-01	4.336E-01	7.421E-01	1.889E-01	0.492
		946.00	*	1.106E-01	7.302E-01	1.229E+00	2.322E-01	0.090
		949.00		-1.090E+00	1.116E+00	1.750E+00	1.555E-01	-0.623
		980.50		-4.233E-01	1.619E+00	2.650E+00	2.260E-01	-0.160
PA-234M		1394.10		6.002E-01	1.352E+00	2.304E+00	1.495E+00	0.261
		766.42		1.128E+01	2.100E+01	3.384E+01	1.710E+01	0.333
		1001.03	*	8.583E-01	1.009E+01	1.688E+01	1.632E+00	0.051
TH-234		63.29	*	-6.670E-02	1.900E+00	2.740E+00	4.709E-01	-0.024
	+	92.38		1.164E+00	9.334E-01	1.311E+00	2.354E-01	0.888
U-235		89.95		2.928E+01	9.399E+00	4.441E+00	1.370E+00	6.593
	+	93.35		1.400E+00	1.162E+00	1.518E+00	4.239E-01	0.922
		105.00		-3.141E-01	1.503E+00	2.401E+00	7.100E-01	-0.131
		143.76	*	-5.935E-02	3.208E-01	5.079E-01	8.361E-02	-0.117
		163.35		-4.248E-01	7.479E-01	1.159E+00	2.073E-01	-0.366
	+	185.71		1.370E-01	1.123E-01	1.283E-01	7.024E-03	1.068
		205.31		-6.563E-01	8.346E-01	1.348E+00	2.415E-01	-0.487
NP-236		94.67		2.331E-01	2.060E-01	3.069E-01	2.517E-02	0.759
		98.44		8.889E-02	1.124E-01	1.656E-01	1.318E-02	0.537
		111.00		3.714E-02	2.076E-01	3.373E-01	2.498E-02	0.110
		160.31	*	2.487E-02	1.255E-01	2.026E-01	1.132E-02	0.123
NP-237		86.50	*	7.433E+00	1.815E+00	1.125E+00	2.514E-01	6.609
		95.87		-4.884E-01	1.586E+00	2.199E+00	5.379E-01	-0.222
U-238		63.29	*	-6.670E-02	1.900E+00	2.740E+00	4.709E-01	-0.024
	+	92.38		1.164E+00	9.149E-01	1.311E+00	1.096E-01	0.888
NP-239		99.55		2.411E-01	2.301E-01	3.748E-01	2.960E-02	0.643
		117.00	*	-3.542E-02	3.355E-01	4.691E-01	3.390E-02	-0.076
		209.75		2.074E-01	1.233E+00	2.085E+00	1.170E-01	0.099
		228.18		-2.548E-01	3.665E-01	5.969E-01	3.402E-02	-0.427

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243		277.60		2.395E-01	2.972E-01	5.123E-01	2.986E-02	0.467
		334.30		-4.562E+00	2.458E+00	3.713E+00	2.139E-01	-1.229
		99.55		2.480E-01	2.366E-01	3.855E-01	3.045E-02	0.643
		103.76	*	-9.917E-02	1.386E-01	2.166E-01	1.665E-02	-0.458
		117.00		-3.642E-02	3.451E-01	4.824E-01	3.486E-02	-0.076
		209.75		2.043E-01	1.215E+00	2.054E+00	1.153E-01	0.099
AM-246		228.18		-2.574E-01	3.702E-01	6.029E-01	3.436E-02	-0.427
		277.60		2.413E-01	2.995E-01	5.163E-01	3.010E-02	0.467
		798.80		-1.990E-01	2.907E-01	4.430E-01	3.476E-02	-0.449
		1036.00		1.357E-01	6.520E-01	1.099E+00	8.576E-02	0.124
CM-247		1062.04		-2.287E-02	4.808E-01	7.954E-01	5.905E-02	-0.029
		1078.86	*	1.843E-01	3.266E-01	5.609E-01	4.019E-02	0.329
		278.00		8.297E-01	1.229E+00	2.107E+00	1.228E-01	0.394
		287.40		-6.325E-01	2.186E+00	3.385E+00	1.975E-01	-0.187
CF-249		402.60	*	1.802E-02	7.148E-02	1.193E-01	6.553E-03	0.151
		252.85		3.398E-01	1.476E+00	2.492E+00	1.441E-01	0.136
		333.44		-4.579E-01	3.164E-01	4.886E-01	2.816E-02	-0.937
CF-251		387.95	*	-2.188E-02	7.399E-02	1.203E-01	6.578E-03	-0.182
		176.60	*	-1.568E-01	2.047E-01	3.149E-01	1.708E-02	-0.498
		227.00		-1.821E-01	6.263E-01	1.038E+00	5.911E-02	-0.175
		285.00		-1.171E+00	2.934E+00	4.800E+00	2.800E-01	-0.244

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]G1202037554      *
* Acquisition date   : 19-FEB-2010 21:35:28 Detector SN#      :              *
* Detector ID        : GAM14                      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 01:00:01.58             Half life ratio : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 11-FEB-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202037554             Analyst initials: MXR1          *
* Batch Number       : 950788                  Sample Quantity : 1.5544E+02 GRAM    *
* Recovery           : 1.00000                  Carrier Weight  : 0.00000        *
*****
*
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                                         *
* CALIB. DATE/TIME   : 6-MAR-2009 11:43:06 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	1.198E+00	6.920E-01	6.143E-01	0.000E+00
CO-57	2.301E-01	6.662E-02	6.807E-02	0.000E+00
CO-60	6.739E+00	5.705E-01	1.091E-01	0.000E+00
CD-109	2.973E+01	3.543E+00	2.395E+00	0.000E+00
SN-126	2.950E+00	3.515E-01	2.486E-01	0.000E+00
BA-137M	5.573E+00	4.085E-01	1.086E-01	0.000E+00
CS-137	5.891E+00	4.329E-01	1.148E-01	0.000E+00
TL-208	3.554E-01	9.752E-02	1.119E-01	0.000E+00
BI-211	2.326E+00	6.882E-01	5.951E-01	0.000E+00
PB-212	7.596E-01	1.820E-01	1.793E-01	0.000E+00
PO-212	7.596E-01	1.820E-01	1.793E-01	0.000E+00
BI-214	7.534E-01	2.428E-01	2.028E-01	0.000E+00
PB-214	8.090E-01	2.430E-01	2.074E-01	0.000E+00
PO-214	8.090E-01	2.430E-01	2.074E-01	0.000E+00
PO-216	7.596E-01	1.820E-01	1.793E-01	0.000E+00
PO-218	8.090E-01	2.430E-01	2.074E-01	0.000E+00
RA-226	7.534E-01	2.428E-01	2.028E-01	0.000E+00
AC-228	9.947E-01	3.932E-01	5.159E-01	0.000E+00
RA-228	9.947E-01	3.932E-01	5.159E-01	0.000E+00
TH-228	7.664E-01	1.837E-01	1.809E-01	0.000E+00
TH-230	7.534E-01	2.428E-01	2.028E-01	0.000E+00
TH-232	9.947E-01	3.932E-01	5.159E-01	0.000E+00
U-234	7.534E-01	2.428E-01	2.028E-01	0.000E+00
AM-241	1.308E+01	1.147E+00	4.826E-01	0.000E+00
AM-243	2.187E-01	9.221E-02	1.535E-01	0.000E+00
ANH-511	6.554E-02	9.180E-02	9.084E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-2.502E-01	6.178E-01	1.052E+00	0.000E+00 NOT IDENT.

NA-22	-7.151E-03	4.850E-02	8.071E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.854E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.518E-02	3.940E-02	7.447E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.023E-02	1.120E-01	0.000E+00	FAIL ABUN
SC-46	4.349E-02	8.233E-02	1.481E-01	0.000E+00	NOT IDENT.
V-48	-6.196E-02	1.152E-01	1.924E-01	0.000E+00	NOT IDENT.
CR-51	1.577E-01	5.607E-01	1.006E+00	0.000E+00	NOT IDENT.
MN-52	-9.171E-02	1.071E-01	1.426E-01	0.000E+00	FAIL ABUN
MN-54	-2.632E-02	7.128E-02	1.221E-01	0.000E+00	NOT IDENT.
CO-56	5.246E-02	7.781E-02	1.415E-01	0.000E+00	NOT IDENT.
CO-58	-3.365E-02	7.312E-02	1.184E-01	0.000E+00	NOT IDENT.
FE-59	-6.581E-02	1.710E-01	2.860E-01	0.000E+00	NOT IDENT.
ZN-65	-8.702E-02	1.797E-01	2.985E-01	0.000E+00	NOT IDENT.
GE-68	8.037E-01	2.693E+00	4.726E+00	0.000E+00	NOT IDENT.
AS-73	1.552E-01	1.645E+00	2.648E+00	0.000E+00	NOT IDENT.
AS-74	-2.060E-02	1.306E-01	2.217E-01	0.000E+00	NOT IDENT.
SE-75	-6.164E-02	6.949E-02	1.201E-01	0.000E+00	FAIL ABUN
BR-77	-7.347E-01	3.035E+00	5.171E+00	0.000E+00	FAIL ABUN
SR-82	-4.804E-01	6.139E-01	9.709E-01	0.000E+00	NOT IDENT.
RB-83	-3.384E-02	1.174E-01	1.994E-01	0.000E+00	NOT IDENT.
RB-84	4.351E-02	1.354E-01	2.411E-01	0.000E+00	NOT IDENT.
KR-85	1.189E+00	1.413E+01	2.131E+01	0.000E+00	NOT IDENT.
SR-85	5.709E-03	6.786E-02	1.023E-01	0.000E+00	NOT IDENT.
RB-86	7.427E-01	1.354E+00	2.414E+00	0.000E+00	NOT IDENT.
Y-88	-6.751E-03	5.129E-02	8.239E-02	0.000E+00	NOT IDENT.
ZR-88	1.066E-02	5.271E-02	9.371E-02	0.000E+00	NOT IDENT.
Y-91	-6.293E+00	2.186E+01	3.613E+01	0.000E+00	NOT IDENT.
NB-94	4.864E-02	6.092E-02	1.088E-01	0.000E+00	NOT IDENT.
NB-95	3.068E-02	6.890E-02	1.199E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.239E-01	3.836E-01	0.000E+00	NOT IDENT.
ZR-95	1.992E-02	1.277E-01	2.179E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	6.203E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.972E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.920E+00	4.554E+00	7.294E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.928E+09	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.641E-02	5.122E-02	9.513E-02	0.000E+00	NOT IDENT.
RH-102	5.119E-03	6.122E-02	1.070E-01	0.000E+00	NOT IDENT.
RU-103	9.770E-03	7.389E-02	1.291E-01	0.000E+00	NOT IDENT.
RH-106	-1.873E-01	5.745E-01	9.596E-01	0.000E+00	NOT IDENT.
RU-106	-1.873E-01	5.741E-01	9.596E-01	0.000E+00	NOT IDENT.
AG-108M	-1.941E-03	6.600E-02	1.153E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	9.068E-02	1.607E-01	0.000E+00	NOT IDENT.
IN-111	-9.230E-01	4.036E-01	6.054E-01	0.000E+00	NOT IDENT.
IN-113M	1.481E-02	7.800E-02	1.386E-01	0.000E+00	NOT IDENT.
SN-113	1.481E-02	7.800E-02	1.386E-01	0.000E+00	NOT IDENT.
IN-114M	-4.314E-02	2.930E-01	4.638E-01	0.000E+00	NOT IDENT.
CD-115	-6.423E-01	2.684E+00	4.565E+00	0.000E+00	NOT IDENT.
SN-117M	-1.647E-02	6.282E-02	1.085E-01	0.000E+00	NOT IDENT.
SB-122	-7.191E-01	8.163E-01	1.329E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.338E+03	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.030E-03	4.304E-02	7.511E-02	0.000E+00	NOT IDENT.
I-124	-2.292E-01	4.691E-01	6.606E-01	0.000E+00	NOT IDENT.
SB-124	-1.300E-02	8.405E-02	1.343E-01	0.000E+00	FAIL ABUN
SB-125	-4.087E-02	1.791E-01	3.101E-01	0.000E+00	NOT IDENT.
TE-125M	4.282E+00	1.239E+01	2.234E+01	0.000E+00	NOT IDENT.
I-126	3.300E-01	2.424E-01	4.051E-01	0.000E+00	NOT IDENT.
SB-126	-6.282E-02	1.864E-01	3.077E-01	0.000E+00	FAIL ABUN
SB-127	-4.207E-01	8.105E-01	1.324E+00	0.000E+00	FAIL ABUN
XE-127	-1.187E-02	6.497E-02	1.178E-01	0.000E+00	NOT IDENT.
I-131	-1.165E-02	1.203E-01	2.117E-01	0.000E+00	NOT IDENT.
TE-132	-2.064E-01	2.923E-01	5.133E-01	0.000E+00	NOT IDENT.
BA-133	-7.264E-03	8.800E-02	1.344E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	6.985E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.223E-01	9.216E-02	1.678E-01	0.000E+00	NOT IDENT.
CS-135	1.379E-01	2.557E-01	4.698E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.036E+09	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.413E-01	1.634E-01	2.642E-01	0.000E+00	NOT IDENT.
CE-139	-2.168E-02	4.501E-02	7.679E-02	0.000E+00	NOT IDENT.
BA-140	1.469E-01	3.434E-01	6.027E-01	0.000E+00	NOT IDENT.
LA-140	-2.522E-02	8.639E-02	1.370E-01	0.000E+00	NOT IDENT.
CE-141	-1.650E-03	8.146E-02	1.428E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.248E+01	1.956E+01	0.000E+00	FAIL ABUN
CE-144	-3.325E-01	3.184E-01	5.304E-01	0.000E+00	NOT IDENT.
PM-144	-2.464E-02	6.140E-02	1.012E-01	0.000E+00	NOT IDENT.
PR-144	-1.664E+00	4.147E+00	6.833E+00	0.000E+00	NOT IDENT.
PM-146	-6.233E-02	9.503E-02	1.605E-01	0.000E+00	NOT IDENT.
ND-147	-5.200E-01	6.565E-01	1.068E+00	0.000E+00	NOT IDENT.
PM-149	1.155E-01	2.123E+01	3.806E+01	0.000E+00	NOT IDENT.

EU-152	5.900E-02	1.770E-01	3.017E-01	0.000E+00	FAIL ABUN
GD-153	6.808E-02	1.215E-01	1.956E-01	0.000E+00	NOT IDENT.
EU-154	-2.004E-02	1.359E-01	2.262E-01	0.000E+00	FAIL ABUN
EU-155	-4.026E-02	1.501E-01	2.643E-01	0.000E+00	FAIL ABUN
TB-160	1.518E-01	3.002E-01	5.392E-01	0.000E+00	FAIL ABUN
HO-166M	-1.935E-02	1.095E-01	1.831E-01	0.000E+00	NOT IDENT.
TM-171	-8.078E+00	3.855E+01	6.704E+01	0.000E+00	FAIL ABUN
LU-176	-8.551E-03	4.296E-02	7.601E-02	0.000E+00	FAIL ABUN
LU-177	1.697E-01	8.811E-01	1.617E+00	0.000E+00	NOT IDENT.
LU-177M	2.564E-01	3.195E-01	5.822E-01	0.000E+00	FAIL ABUN
HF-181	1.547E-03	7.847E-02	1.366E-01	0.000E+00	NOT IDENT.
W-181	-4.556E-01	5.337E-01	8.157E-01	0.000E+00	NOT IDENT.
TA-182	-6.682E-02	2.055E-01	3.362E-01	0.000E+00	NOT IDENT.
RE-183	2.743E-02	1.582E-01	2.781E-01	0.000E+00	FAIL ABUN
RE-184	8.827E-02	3.758E-01	6.844E-01	0.000E+00	FAIL ABUN
OS-185	-5.949E-03	7.743E-02	1.314E-01	0.000E+00	FAIL ABUN
RE-188	1.942E-02	2.500E-01	4.387E-01	0.000E+00	NOT IDENT.
W-188	-1.235E+00	1.278E+01	1.975E+01	0.000E+00	NOT IDENT.
IR-192	-1.291E-02	5.657E-02	9.978E-02	0.000E+00	FAIL ABUN
AU-195	3.084E-01	3.324E-01	5.720E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.515E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.489E+00	2.626E+00	4.684E+00	0.000E+00	NOT IDENT.
TL-202	-1.689E-03	9.500E-02	1.659E-01	0.000E+00	NOT IDENT.
HG-203	1.312E-02	6.005E-02	1.088E-01	0.000E+00	NOT IDENT.
BI-207	-7.967E-02	1.113E-01	1.821E-01	0.000E+00	FAIL ABUN
TL-207	-1.123E+00	1.166E+00	1.959E+00	0.000E+00	FAIL ABUN
PO-209	-6.021E+00	1.563E+01	2.659E+01	0.000E+00	NOT IDENT.
BI-210	-2.852E+00	4.756E+00	8.671E+00	0.000E+00	NOT IDENT.
PB-210	-2.852E+00	4.756E+00	8.671E+00	0.000E+00	NOT IDENT.
PO-210	-2.852E+00	4.755E+00	8.671E+00	0.000E+00	NOT IDENT.
PB-211	3.728E-01	1.777E+00	3.128E+00	0.000E+00	NOT IDENT.
BI-212	9.743E-01	5.340E-01	1.005E+00	0.000E+00	NOT IDENT.
PO-215	-1.123E+00	1.166E+00	1.959E+00	0.000E+00	FAIL ABUN
RN-219	1.420E-01	7.764E-01	1.376E+00	0.000E+00	NOT IDENT.
RN-220	-7.327E+00	4.562E+01	7.781E+01	0.000E+00	NOT IDENT.
RA-223	-1.123E+00	1.166E+00	1.959E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.421E+00	2.608E+00	0.000E+00	NOT IDENT.
AC-227	-5.144E-02	6.303E-01	1.133E+00	0.000E+00	NOT IDENT.
TH-227	-5.144E-02	6.303E-01	1.133E+00	0.000E+00	FAIL ABUN
TH-229	-5.018E-01	8.157E-01	1.418E+00	0.000E+00	FAIL ABUN
PA-231	1.668E-01	2.503E+00	4.502E+00	0.000E+00	NOT IDENT.
TH-231	-1.123E+00	1.166E+00	1.959E+00	0.000E+00	FAIL ABUN
U-231	-1.977E-01	6.276E-01	9.642E-01	0.000E+00	FAIL ABUN
PA-233	2.634E-02	1.111E-01	2.002E-01	0.000E+00	FAIL ABUN
PA-234	1.106E-01	7.156E-01	1.254E+00	0.000E+00	FAIL ABUN
PA-234M	8.583E-01	9.884E+00	1.720E+01	0.000E+00	NOT IDENT.
TH-234	-6.670E-02	1.862E+00	2.998E+00	0.000E+00	FAIL ABUN
U-235	-5.935E-02	3.144E-01	5.448E-01	0.000E+00	FAIL ABUN
NP-236	2.487E-02	1.230E-01	2.167E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	1.779E+00	1.222E+00	0.000E+00	NOT IDENT.
U-238	-6.670E-02	1.862E+00	2.998E+00	0.000E+00	FAIL ABUN
NP-239	-3.542E-02	3.288E-01	5.057E-01	0.000E+00	NOT IDENT.
CM-243	-9.917E-02	1.358E-01	2.342E-01	0.000E+00	NOT IDENT.
AM-246	1.843E-01	3.201E-01	5.706E-01	0.000E+00	NOT IDENT.
CM-247	1.802E-02	7.005E-02	1.246E-01	0.000E+00	NOT IDENT.
CF-249	-2.188E-02	7.251E-02	1.258E-01	0.000E+00	NOT IDENT.
CF-251	-1.568E-01	2.006E-01	3.361E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037554.CNF;1
Sample date       : 11-FEB-2010 00:00:00 Acquisition date : 19-FEB-2010 21:35:28
Sample ID        : G1202037554 Sample quantity   : 1.55440E+02 GRAM
Detector name    : GAM14 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.58 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity        : 5.00000
Batch ID        : 950788 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	32	10.67*	1.211E+00	1.198E+00	1.198E+00	58.93
CO-57	122.06	305	85.51*	7.661E+00	2.249E-01	2.301E-01	29.55
	136.48	-----	10.60	7.493E+00	-----	Line Not Found	-----
CO-60	1173.22	1869	100.00	1.461E+00	6.176E+00	6.196E+00	7.47
	1332.49	1817	100.00*	1.307E+00	6.718E+00	6.739E+00	8.64
CD-109	88.03	1604	3.72*	7.096E+00	2.934E+01	2.973E+01	12.16
SN-126	64.28	-----	9.60	4.774E+00	-----	Line Not Found	-----
	86.94	1604	8.90	7.096E+00	1.226E+01	1.226E+01	42.24
	87.57	1604	37.00*	7.096E+00	2.950E+00	2.950E+00	12.16
BA-137M	661.65	2562	89.98*	2.469E+00	5.570E+00	5.573E+00	7.48
CS-137	661.65	2562	85.12*	2.469E+00	5.888E+00	5.891E+00	7.50
TL-208	277.35	-----	6.80	5.002E+00	-----	Line Not Found	-----
	510.84	42	21.60	3.094E+00	3.034E-01	3.034E-01	143.16
	583.14	171	84.20*	2.760E+00	3.554E-01	3.554E-01	28.00
	860.37	34	12.46	1.944E+00	6.778E-01	6.778E-01	110.29
BI-211	72.87	-----	1.27	5.875E+00	-----	Line Not Found	-----
	351.07	260	12.94*	4.178E+00	2.326E+00	2.326E+00	30.20
PB-212	74.81	181	10.70	6.059E+00	1.349E+00	1.349E+00	44.03
	77.11	313	18.00	6.310E+00	1.330E+00	1.330E+00	29.19
	87.30	1604	8.00	7.096E+00	1.364E+01	1.364E+01	15.74
	238.63	391	44.60*	5.572E+00	7.596E-01	7.596E-01	24.45
	300.09	-----	3.41	4.718E+00	-----	Line Not Found	-----
PO-212	74.81	181	10.70	6.059E+00	1.349E+00	1.349E+00	44.03
	77.11	313	18.00	6.310E+00	1.330E+00	1.330E+00	29.19
	87.30	1604	8.00	7.096E+00	1.364E+01	1.364E+01	15.74
	115.19	-----	0.60	7.689E+00	-----	Line Not Found	-----
	238.63	391	44.60*	5.572E+00	7.596E-01	7.596E-01	24.45
	300.09	-----	3.41	4.718E+00	-----	Line Not Found	-----
BI-214	609.31	192	46.30*	2.657E+00	7.534E-01	7.534E-01	32.88
	1120.29	-----	15.10	1.524E+00	-----	Line Not Found	-----
	1764.49	27	15.80	1.059E+00	7.735E-01	7.735E-01	52.34
PB-214	74.81	181	6.21	6.059E+00	2.324E+00	2.324E+00	43.66

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	313	10.50	6.310E+00	2.281E+00	2.281E+00	30.17
	87.30	1604	4.67	7.096E+00	2.337E+01	2.337E+01	14.40
	241.98	-----	7.49	5.514E+00	-----	Line Not Found	-----
	295.21	165	19.20	4.778E+00	8.675E-01	8.675E-01	45.61
	351.92	260	37.20*	4.178E+00	8.089E-01	8.090E-01	30.65
PO-214	74.81	181	6.21	6.059E+00	2.324E+00	2.324E+00	43.66
	77.11	313	10.50	6.310E+00	2.281E+00	2.281E+00	30.17
	87.30	1604	4.67	7.096E+00	2.337E+01	2.337E+01	14.40
	241.98	-----	7.49	5.514E+00	-----	Line Not Found	-----
	295.21	165	19.20	4.778E+00	8.675E-01	8.675E-01	45.61
	351.92	260	37.20*	4.178E+00	8.089E-01	8.090E-01	30.65
PO-216	74.81	181	10.70	6.059E+00	1.349E+00	1.349E+00	44.03
	77.11	313	18.00	6.310E+00	1.330E+00	1.330E+00	29.19
	87.30	1604	8.00	7.096E+00	1.364E+01	1.364E+01	15.74
	238.63	391	44.60*	5.572E+00	7.596E-01	7.596E-01	24.45
	300.09	-----	3.41	4.718E+00	-----	Line Not Found	-----
PO-218	74.81	181	6.21	6.059E+00	2.324E+00	2.324E+00	43.66
	77.11	313	10.50	6.310E+00	2.281E+00	2.281E+00	30.17
	87.30	1604	4.67	7.096E+00	2.337E+01	2.337E+01	14.40
	241.98	-----	7.49	5.514E+00	-----	Line Not Found	-----
	295.21	165	19.20	4.778E+00	8.675E-01	8.675E-01	45.61
	351.92	260	37.20*	4.178E+00	8.089E-01	8.090E-01	30.65
RA-226	609.31	192	46.30*	2.657E+00	7.534E-01	7.534E-01	32.88
	1120.29	-----	15.10	1.524E+00	-----	Line Not Found	-----
	1764.49	27	15.80	1.059E+00	7.735E-01	7.735E-01	52.34
AC-228	338.32	-----	11.40	4.307E+00	-----	Line Not Found	-----
	911.07	105	27.70*	1.843E+00	9.947E-01	9.947E-01	40.34
	969.11	84	16.60	1.741E+00	1.411E+00	1.411E+00	44.96
RA-228	338.32	-----	11.40	4.307E+00	-----	Line Not Found	-----
	911.07	105	27.70*	1.843E+00	9.947E-01	9.947E-01	40.34
	969.11	84	16.60	1.741E+00	1.411E+00	1.411E+00	44.96
TH-228	74.81	181	10.70	6.059E+00	1.349E+00	1.361E+00	43.04
	77.11	313	18.00	6.310E+00	1.330E+00	1.342E+00	29.19
	87.30	1604	8.00	7.096E+00	1.364E+01	1.376E+01	12.16
	238.63	391	44.60*	5.572E+00	7.596E-01	7.664E-01	24.45
	300.09	-----	3.41	4.718E+00	-----	Line Not Found	-----
TH-230	609.31	192	46.30*	2.657E+00	7.534E-01	7.534E-01	32.88
	1120.29	-----	15.10	1.524E+00	-----	Line Not Found	-----
	1764.49	27	15.80	1.059E+00	7.735E-01	7.735E-01	52.34
TH-232	338.32	-----	11.40	4.307E+00	-----	Line Not Found	-----
	911.07	105	27.70*	1.843E+00	9.947E-01	9.947E-01	40.34
	969.11	84	16.60	1.741E+00	1.411E+00	1.411E+00	44.96
U-234	609.31	192	46.30*	2.657E+00	7.534E-01	7.534E-01	32.88
	1120.29	-----	15.10	1.524E+00	-----	Line Not Found	-----
	1764.49	27	15.80	1.059E+00	7.735E-01	7.735E-01	52.34
AM-241	59.54	3942	35.90*	4.055E+00	1.308E+01	1.308E+01	8.95
AM-243	74.67	181	66.00*	6.059E+00	2.187E-01	2.187E-01	43.02
	86.72	1604	0.34	7.096E+00	3.248E+02	3.248E+02	12.16
	117.66	-----	0.55	7.685E+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	7.399E+00	-----	Line Not Found	-----
ANH-511	511.00	42	100.00*	3.094E+00	6.554E-02	6.554E-02	142.92

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202037554

Page : 4
Acquisition date : 19-FEB-2010 21:35:28

Total number of lines in spectrum 21
Number of unidentified lines 0
Number of lines tentatively identified by NID 21 100.00%

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	1.198E+00	1.198E+00	0.706E+00	58.93	
CO-57	270.90D	1.02	2.249E-01	2.301E-01	0.680E-01	29.55	
CO-60	5.27Y	1.00	6.718E+00	6.739E+00	0.582E+00	8.64	
CD-109	464.00D	1.01	2.934E+01	2.973E+01	0.362E+01	12.16	
SN-126	1.00E+05Y	1.00	2.950E+00	2.950E+00	0.359E+00	12.16	
BA-137M	30.17Y	1.00	5.570E+00	5.573E+00	0.417E+00	7.48	
CS-137	30.17Y	1.00	5.888E+00	5.891E+00	0.442E+00	7.50	
TL-208	1.41E+10Y	1.00	3.554E-01	3.554E-01	0.995E-01	28.00	
BI-211	7.04E+08Y	1.00	2.326E+00	2.326E+00	0.702E+00	30.20	
PB-212	1.41E+10Y	1.00	7.596E-01	7.596E-01	1.858E-01	24.45	
PO-212	1.41E+10Y	1.00	7.596E-01	7.596E-01	1.858E-01	24.45	
BI-214	1600.00Y	1.00	7.534E-01	7.534E-01	2.477E-01	32.88	
PB-214	1600.00Y	1.00	8.089E-01	8.090E-01	2.479E-01	30.65	
PO-214	1600.00Y	1.00	8.089E-01	8.090E-01	2.479E-01	30.65	
PO-216	1.41E+10Y	1.00	7.596E-01	7.596E-01	1.858E-01	24.45	
PO-218	1600.00Y	1.00	8.089E-01	8.090E-01	2.479E-01	30.65	
RA-226	1600.00Y	1.00	7.534E-01	7.534E-01	2.477E-01	32.88	
AC-228	1.41E+10Y	1.00	9.947E-01	9.947E-01	4.012E-01	40.34	
RA-228	1.41E+10Y	1.00	9.947E-01	9.947E-01	4.012E-01	40.34	
TH-228	1.91Y	1.01	7.596E-01	7.664E-01	1.874E-01	24.45	
TH-230	4.47E+09Y	1.00	7.534E-01	7.534E-01	2.477E-01	32.88	
TH-232	1.41E+10Y	1.00	9.947E-01	9.947E-01	4.012E-01	40.34	
U-234	4.47E+09Y	1.00	7.534E-01	7.534E-01	2.477E-01	32.88	
AM-241	432.20Y	1.00	1.308E+01	1.308E+01	0.117E+01	8.95	
AM-243	7380.00Y	1.00	2.187E-01	2.187E-01	0.941E-01	43.02	
ANH-511	1.00E+09Y	1.00	6.554E-02	6.554E-02	9.367E-02	142.92	
Total Activity :			7.939E+01	7.983E+01			

Grand Total Activity : 7.939E+01 7.983E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202037554

Page : 5
Acquisition date : 19-FEB-2010 21:35:28

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	93.05	96	377	2.26	185.58	182	9	2.65E-02	78.1	7.32E+00	T
0	186.25	100	384	1.06	371.81	366	12	2.78E-02	81.8	6.52E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202037554.CNF;1
* Acquisition date   : 19-FEB-2010 21:35:28   Detector SN#      :
* Detector ID        : GAM14                   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 01:00:01.58           Half life ratio     : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 11-FEB-2010 00:00:00   Nuclide Library   : SOLID
* Sample ID          : G1202037554           Analyst initials  : MXR1
* Batch Number       : 950788                Sample Quantity   : 1.55440E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 6-MAR-2009 11:43:06.61MS 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	1.198E+00	7.061E-01	6.091E-01	4.423E-02	1.967
CO-57	2.301E-01	6.798E-02	6.320E-02	4.496E-03	3.640
CO-60	6.739E+00	5.821E-01	1.079E-01	7.692E-03	62.436
CD-109	2.973E+01	3.615E+00	2.206E+00	1.929E-01	13.478
SN-126	2.950E+00	3.587E-01	2.290E-01	1.992E-02	12.883
BA-137M	5.573E+00	4.168E-01	1.053E-01	6.264E-03	52.903
CS-137	5.891E+00	4.418E-01	1.114E-01	6.648E-03	52.903
TL-208	3.554E-01	9.951E-02	1.081E-01	7.396E-03	3.286
BI-211	2.326E+00	7.023E-01	5.676E-01	3.596E-02	4.097
PB-212	7.596E-01	1.858E-01	1.693E-01	1.233E-02	4.486
PO-212	7.596E-01	1.858E-01	1.693E-01	1.233E-02	4.486
BI-214	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
PB-214	8.090E-01	2.479E-01	1.979E-01	1.624E-02	4.089
PO-214	8.090E-01	2.479E-01	1.979E-01	1.624E-02	4.089
PO-216	7.596E-01	1.858E-01	1.693E-01	1.233E-02	4.486
PO-218	8.090E-01	2.479E-01	1.979E-01	1.624E-02	4.089
RA-226	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
AC-228	9.947E-01	4.012E-01	5.048E-01	5.929E-02	1.970

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	9.947E-01	4.012E-01	5.048E-01	5.929E-02	1.970
TH-228	7.664E-01	1.874E-01	1.708E-01	1.244E-02	4.486
TH-230	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
TH-232	9.947E-01	4.012E-01	5.048E-01	5.929E-02	1.970
U-234	7.534E-01	2.477E-01	1.963E-01	1.554E-02	3.838
AM-241	1.308E+01	1.171E+00	4.403E-01	3.269E-02	29.702
AM-243	2.187E-01	9.409E-02	1.408E-01	1.057E-02	1.553
ANH-511	6.554E-02	9.367E-02	8.751E-02	5.141E-03	0.749

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.502E-01		6.304E-01	1.012E+00	6.819E-02	-0.247
NA-22	-7.151E-03		4.949E-02	7.973E-02	5.208E-03	-0.090
NA-24	1.143E-04		3.497E-04	Half-Life	too short	
AL-26	2.518E-02		4.020E-02	7.429E-02	4.307E-03	0.339
TI-44	2.455E-01	+	7.166E-02	1.028E-01	8.030E-03	2.387
SC-46	4.349E-02		8.401E-02	1.448E-01	1.338E-02	0.300
V-48	-6.196E-02		1.176E-01	1.886E-01	1.602E-02	-0.328
CR-51	1.577E-01		5.721E-01	9.570E-01	6.184E-02	0.165
MN-52	-9.171E-02		1.093E-01	1.414E-01	9.907E-03	-0.649
MN-54	-2.632E-02		7.273E-02	1.192E-01	9.996E-03	-0.221
CO-56	5.246E-02		7.940E-02	1.382E-01	1.185E-02	0.380
CO-58	-3.365E-02		7.462E-02	1.155E-01	9.291E-03	-0.291
FE-59	-6.581E-02		1.745E-01	2.813E-01	2.165E-02	-0.234
ZN-65	-8.702E-02		1.834E-01	2.937E-01	1.931E-02	-0.296
GE-68	8.037E-01		2.748E+00	4.646E+00	3.340E-01	0.173
AS-73	1.552E-01		1.679E+00	2.410E+00	1.571E-01	0.064
AS-74	-2.060E-02		1.333E-01	2.145E-01	1.283E-02	-0.096
SE-75	-6.164E-02		7.090E-02	1.137E-01	6.675E-03	-0.542
BR-77	-7.347E-01		3.097E+00	4.984E+00	2.938E-01	-0.147
SR-82	-4.804E-01		6.264E-01	9.459E-01	7.112E-02	-0.508
RB-83	-3.384E-02		1.198E-01	1.922E-01	1.133E-02	-0.176
RB-84	4.351E-02		1.382E-01	2.357E-01	2.149E-02	0.185
KR-85	1.189E+00		1.442E+01	2.053E+01	1.208E+00	0.058
SR-85	5.709E-03		6.925E-02	9.859E-02	5.799E-03	0.058
RB-86	7.427E-01		1.382E+00	2.373E+00	1.709E-01	0.313
Y-88	-6.751E-03		5.234E-02	8.222E-02	4.670E-03	-0.082
ZR-88	1.066E-02		5.379E-02	8.965E-02	4.881E-03	0.119
Y-91	-6.293E+00		2.231E+01	3.563E+01	2.073E+00	-0.177
NB-94	4.864E-02		6.216E-02	1.057E-01	6.855E-03	0.460
NB-95	3.068E-02		7.031E-02	1.167E-01	8.597E-03	0.263
NB-95M	4.541E-01		2.285E-01	3.621E-01	2.706E-02	1.254
ZR-95	1.992E-02		1.303E-01	2.121E-01	1.750E-02	0.094
NB-97	2.925E-03		3.165E-04	Half-Life	too short	
ZR-97	1.300E-02		4.068E-03	Half-Life	too short	
MO-99	-2.920E+00		4.647E+00	7.097E+00	1.016E+00	-0.411

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TC-99M	-9.928E+02		9.837E+02	Half-Life too short		
RH-101	2.641E-02		5.226E-02	8.940E-02	4.960E-03	0.295
RH-102	5.119E-03		6.247E-02	1.028E-01	5.943E-03	0.050
RU-103	9.770E-03		7.540E-02	1.243E-01	1.574E-02	0.079
RH-106	-1.873E-01		5.862E-01	9.293E-01	1.099E-01	-0.202
RU-106	-1.873E-01		5.859E-01	9.293E-01	5.557E-02	-0.202
AG-108M	-1.941E-03		6.735E-02	1.106E-01	6.794E-03	-0.018
AG-110M	2.812E-01		9.253E-02	1.559E-01	9.848E-03	1.804
IN-111	-9.230E-01		4.119E-01	5.721E-01	3.297E-02	-1.613
IN-113M	1.481E-02		7.959E-02	1.326E-01	7.758E-03	0.112
SN-113	1.481E-02		7.959E-02	1.326E-01	7.758E-03	0.112
IN-114M	-4.314E-02		2.990E-01	4.354E-01	2.396E-02	-0.099
CD-115	-6.423E-01		2.738E+00	4.401E+00	2.601E-01	-0.146
SN-117M	-1.647E-02		6.410E-02	1.014E-01	5.736E-03	-0.162
SB-122	-7.191E-01		8.330E-01	1.284E+00	7.653E-02	-0.560
I-123	-7.989E-05		1.703E-03	Half-Life too short		
TE-123M	-1.030E-03		4.392E-02	7.020E-02	4.015E-03	-0.015
I-124	-2.292E-01		4.787E-01	6.392E-01	3.824E-02	-0.359
SB-124	-1.300E-02		8.576E-02	1.338E-01	9.042E-03	-0.097
SB-125	-4.087E-02		1.828E-01	2.973E-01	1.743E-02	-0.137
TE-125M	4.282E+00		1.264E+01	2.068E+01	1.938E+00	0.207
I-126	3.300E-01		2.473E-01	3.931E-01	2.361E-02	0.840
SB-126	-6.282E-02		1.902E-01	2.992E-01	2.013E-02	-0.210
SB-127	-4.207E-01		8.271E-01	1.285E+00	1.008E-01	-0.327
XE-127	-1.187E-02		6.629E-02	1.107E-01	6.173E-03	-0.107
I-131	-1.165E-02		1.228E-01	2.021E-01	1.267E-02	-0.058
TE-132	-2.064E-01		2.983E-01	4.841E-01	6.435E-02	-0.426
BA-133	-7.264E-03		8.980E-02	1.282E-01	1.474E-02	-0.057
I-133	-2.515E-05		3.564E-05	Half-Life too short		
CS-134	1.223E-01		9.404E-02	1.636E-01	1.288E-02	0.748
CS-135	1.379E-01		2.609E-01	4.449E-01	3.413E-02	0.310
I-135	-6.407E+02		5.288E+02	Half-Life too short		
CS-136	-1.413E-01		1.667E-01	2.595E-01	2.086E-02	-0.545
CE-139	-2.168E-02		4.593E-02	7.184E-02	3.857E-03	-0.302
BA-140	1.469E-01		3.504E-01	5.814E-01	1.892E-01	0.253
LA-140	-2.522E-02		8.815E-02	1.362E-01	9.026E-03	-0.185
CE-141	-1.650E-03		8.312E-02	1.332E-01	8.497E-03	-0.012
CE-143	2.997E+01		1.274E+01	1.857E+01	3.835E+00	1.614
CE-144	-3.325E-01		3.249E-01	4.936E-01	7.185E-02	-0.674
PM-144	-2.464E-02		6.265E-02	9.827E-02	6.294E-03	-0.251
PR-144	-1.664E+00		4.232E+00	6.638E+00	4.250E-01	-0.251
PM-146	-6.233E-02		9.697E-02	1.541E-01	1.319E-02	-0.404
ND-147	-5.200E-01		6.699E-01	1.029E+00	1.397E-01	-0.505
PM-149	1.155E-01		2.166E+01	3.611E+01	5.117E+00	0.003
EU-152	5.900E-02		1.806E-01	2.876E-01	1.861E-02	0.205
GD-153	6.808E-02		1.240E-01	1.806E-01	1.448E-02	0.377
EU-154	-2.004E-02		1.387E-01	2.234E-01	2.190E-02	-0.090
EU-155	-4.026E-02		1.532E-01	2.445E-01	1.892E-02	-0.165

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160	1.518E-01		3.063E-01	5.271E-01	4.788E-02	0.288
HO-166M	-1.935E-02		1.117E-01	1.779E-01	1.176E-02	-0.109
TM-171	-8.078E+00		3.933E+01	6.133E+01	4.276E+00	-0.132
LU-176	-8.551E-03		4.383E-02	7.225E-02	4.207E-03	-0.118
LU-177	1.697E-01		8.990E-01	1.521E+00	8.526E-02	0.112
LU-177M	2.564E-01		3.261E-01	5.577E-01	3.092E-02	0.460
HF-181	1.547E-03		8.007E-02	1.313E-01	7.618E-03	0.012
W-181	-4.556E-01		5.446E-01	7.458E-01	5.139E-02	-0.611
TA-182	-6.682E-02		2.097E-01	3.317E-01	1.984E-02	-0.201
RE-183	2.743E-02		1.615E-01	2.601E-01	1.433E-02	0.105
RE-184	8.827E-02		3.834E-01	6.473E-01	3.744E-02	0.136
OS-185	-5.949E-03		7.901E-02	1.274E-01	7.595E-03	-0.047
RE-188	1.942E-02		2.551E-01	4.098E-01	2.374E-02	0.047
W-188	-1.235E+00		1.304E+01	1.875E+01	1.094E+00	-0.066
IR-192	-1.291E-02		5.773E-02	9.491E-02	5.540E-03	-0.136
AU-195	3.084E-01		3.392E-01	5.283E-01	4.193E-02	0.584
TL-200	-1.057E-05		7.732E-06	Half-Life too short		
TL-201	1.489E+00		2.679E+00	4.384E+00	2.355E-01	0.340
TL-202	-1.689E-03		9.693E-02	1.592E-01	9.003E-03	-0.011
HG-203	1.312E-02		6.128E-02	1.031E-01	6.381E-03	0.127
BI-207	-7.967E-02		1.136E-01	1.790E-01	1.325E-02	-0.445
TL-207	-1.123E+00		1.190E+00	1.865E+00	3.079E-01	-0.602
PO-209	-6.021E+00		1.595E+01	2.601E+01	2.434E+00	-0.232
BI-210	-2.852E+00		4.853E+00	7.864E+00	5.831E-01	-0.363
PB-210	-2.852E+00		4.853E+00	7.864E+00	5.831E-01	-0.363
PO-210	-2.852E+00		4.852E+00	7.864E+00	4.935E-01	-0.363
PB-211	3.728E-01		1.814E+00	2.995E+00	1.866E+00	0.124
BI-212	9.743E-01		5.449E-01	9.770E-01	8.311E-02	0.997
PO-215	-1.123E+00		1.190E+00	1.865E+00	3.079E-01	-0.602
RN-219	1.420E-01		7.922E-01	1.318E+00	1.776E-01	0.108
RN-220	-7.327E+00		4.655E+01	7.510E+01	4.464E+00	-0.098
RA-223	-1.123E+00		1.190E+00	1.865E+00	3.079E-01	-0.602
RA-224	6.566E+00		1.450E+00	2.463E+00	1.416E-01	2.666
AC-227	-5.144E-02		6.432E-01	1.071E+00	1.495E-01	-0.048
TH-227	-5.144E-02		6.432E-01	1.071E+00	1.810E-01	-0.048
TH-229	-5.018E-01		8.323E-01	1.332E+00	7.355E-02	-0.377
PA-231	1.668E-01		2.554E+00	4.270E+00	5.890E-01	0.039
TH-231	-1.123E+00		1.190E+00	1.865E+00	3.079E-01	-0.602
U-231	-1.977E-01		6.404E-01	8.899E-01	7.224E-02	-0.222
PA-233	2.634E-02		1.134E-01	1.904E-01	1.176E-02	0.138
PA-234	1.106E-01		7.302E-01	1.229E+00	2.322E-01	0.090
PA-234M	8.583E-01		1.009E+01	1.688E+01	1.632E+00	0.051
TH-234	-6.670E-02		1.900E+00	2.740E+00	4.709E-01	-0.024
U-235	-5.935E-02		3.208E-01	5.079E-01	8.361E-02	-0.117
NP-236	2.487E-02		1.255E-01	2.026E-01	1.132E-02	0.123
NP-237	7.433E+00		1.815E+00	1.125E+00	2.514E-01	6.609
U-238	-6.670E-02		1.900E+00	2.740E+00	4.709E-01	-0.024
NP-239	-3.542E-02		3.355E-01	4.691E-01	3.390E-02	-0.076

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-9.917E-02		1.386E-01	2.166E-01	1.665E-02	-0.458
AM-246	1.843E-01		3.266E-01	5.609E-01	4.019E-02	0.329
CM-247	1.802E-02		7.148E-02	1.193E-01	6.553E-03	0.151
CF-249	-2.188E-02		7.399E-02	1.203E-01	6.578E-03	-0.182
CF-251	-1.568E-01		2.047E-01	3.149E-01	1.708E-02	-0.498

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]G1202037554          *
* Acquisition date   : 19-FEB-2010 21:35:28 Detector SN# :                  *
* Detector ID       : GAM14 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 01:00:01.58 Half life ratio : 8.000                *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 11-FEB-2010 00:00:00 Nuclide Library : SOLID           *
* Sample ID        : G1202037554 Analyst initials: MXR1                   *
* Batch Number     : 950788 Sample Quantity : 1.5544E+02 GRAM              *
* Recovery         : 1.00000 Carrier Weight  : 0.00000                    *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME : 6-MAR-2009 11:43:06 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	1.198E+00	6.920E-01	3.073E-01	3.530E-01
CO-57	2.301E-01	6.662E-02	3.405E-02	3.399E-02
CO-60	6.739E+00	5.705E-01	5.460E-02	2.911E-01
CD-109	2.973E+01	3.543E+00	1.198E+00	1.808E+00
SN-126	2.950E+00	3.515E-01	1.244E-01	1.793E-01
BA-137M	5.573E+00	4.085E-01	5.433E-02	2.084E-01
CS-137	5.891E+00	4.329E-01	5.743E-02	2.209E-01
TL-208	3.554E-01	9.752E-02	5.596E-02	4.975E-02
BI-211	2.326E+00	6.882E-01	2.977E-01	3.511E-01
PB-212	7.596E-01	1.820E-01	8.971E-02	9.288E-02
PO-212	7.596E-01	1.820E-01	8.971E-02	9.288E-02
BI-214	7.534E-01	2.428E-01	1.015E-01	1.239E-01
PB-214	8.090E-01	2.430E-01	1.038E-01	1.240E-01
PO-214	8.090E-01	2.430E-01	1.038E-01	1.240E-01
PO-216	7.596E-01	1.820E-01	8.971E-02	9.288E-02
PO-218	8.090E-01	2.430E-01	1.038E-01	1.240E-01
RA-226	7.534E-01	2.428E-01	1.015E-01	1.239E-01
AC-228	9.947E-01	3.932E-01	2.581E-01	2.006E-01
RA-228	9.947E-01	3.932E-01	2.581E-01	2.006E-01
TH-228	7.664E-01	1.837E-01	9.050E-02	9.371E-02
TH-230	7.534E-01	2.428E-01	1.015E-01	1.239E-01
TH-232	9.947E-01	3.932E-01	2.581E-01	2.006E-01
U-234	7.534E-01	2.428E-01	1.015E-01	1.239E-01
AM-241	1.308E+01	1.147E+00	2.415E-01	5.854E-01
AM-243	2.187E-01	9.221E-02	7.678E-02	4.705E-02
ANH-511	6.554E-02	9.180E-02	4.545E-02	4.683E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.502E-01	6.178E-01	5.264E-01	3.152E-01 NOT IDENT.

NA-22	-7.151E-03	4.850E-02	4.038E-02	2.474E-02	NOT IDENT.
NA-24	1.143E+02	6.854E+02	0.000E+00	3.497E+02	SHORT HLIF
AL-26	2.518E-02	3.940E-02	3.726E-02	2.010E-02	NOT IDENT.
TI-44	2.455E-01	7.023E-02	5.602E-02	3.583E-02	FAIL ABUN
SC-46	4.349E-02	8.233E-02	7.407E-02	4.201E-02	NOT IDENT.
V-48	-6.196E-02	1.152E-01	9.623E-02	5.879E-02	NOT IDENT.
CR-51	1.577E-01	5.607E-01	5.032E-01	2.861E-01	NOT IDENT.
MN-52	-9.171E-02	1.071E-01	7.136E-02	5.466E-02	FAIL ABUN
MN-54	-2.632E-02	7.128E-02	6.107E-02	3.637E-02	NOT IDENT.
CO-56	5.246E-02	7.781E-02	7.081E-02	3.970E-02	NOT IDENT.
CO-58	-3.365E-02	7.312E-02	5.922E-02	3.731E-02	NOT IDENT.
FE-59	-6.581E-02	1.710E-01	1.431E-01	8.724E-02	NOT IDENT.
ZN-65	-8.702E-02	1.797E-01	1.493E-01	9.169E-02	NOT IDENT.
GE-68	8.037E-01	2.693E+00	2.364E+00	1.374E+00	NOT IDENT.
AS-73	1.552E-01	1.645E+00	1.325E+00	8.394E-01	NOT IDENT.
AS-74	-2.060E-02	1.306E-01	1.109E-01	6.666E-02	NOT IDENT.
SE-75	-6.164E-02	6.949E-02	6.008E-02	3.545E-02	FAIL ABUN
BR-77	-7.347E-01	3.035E+00	2.587E+00	1.549E+00	FAIL ABUN
SR-82	-4.804E-01	6.139E-01	4.857E-01	3.132E-01	NOT IDENT.
RB-83	-3.384E-02	1.174E-01	9.975E-02	5.989E-02	NOT IDENT.
RB-84	4.351E-02	1.354E-01	1.206E-01	6.910E-02	NOT IDENT.
KR-85	1.189E+00	1.413E+01	1.066E+01	7.211E+00	NOT IDENT.
SR-85	5.709E-03	6.786E-02	5.119E-02	3.462E-02	NOT IDENT.
RB-86	7.427E-01	1.354E+00	1.208E+00	6.910E-01	NOT IDENT.
Y-88	-6.751E-03	5.129E-02	4.122E-02	2.617E-02	NOT IDENT.
ZR-88	1.066E-02	5.271E-02	4.688E-02	2.689E-02	NOT IDENT.
Y-91	-6.293E+00	2.186E+01	1.808E+01	1.115E+01	NOT IDENT.
NB-94	4.864E-02	6.092E-02	5.443E-02	3.108E-02	NOT IDENT.
NB-95	3.068E-02	6.890E-02	5.997E-02	3.515E-02	NOT IDENT.
NB-95M	4.541E-01	2.239E-01	1.919E-01	1.143E-01	NOT IDENT.
ZR-95	1.992E-02	1.277E-01	1.090E-01	6.517E-02	NOT IDENT.
NB-97	2.925E+03	6.203E+02	0.000E+00	3.165E+02	SHORT HLIF
ZR-97	1.300E+04	7.972E+03	0.000E+00	4.068E+03	SHORT HLIF
MO-99	-2.920E+00	4.554E+00	3.649E+00	2.324E+00	NOT IDENT.
TC-99M	-9.928E+08	1.928E+09	0.000E+00	9.837E+08	SHORT HLIF
RH-101	2.641E-02	5.122E-02	4.759E-02	2.613E-02	NOT IDENT.
RH-102	5.119E-03	6.122E-02	5.351E-02	3.124E-02	NOT IDENT.
RU-103	9.770E-03	7.389E-02	6.458E-02	3.770E-02	NOT IDENT.
RH-106	-1.873E-01	5.745E-01	4.801E-01	2.931E-01	NOT IDENT.
RU-106	-1.873E-01	5.741E-01	4.801E-01	2.929E-01	NOT IDENT.
AG-108M	-1.941E-03	6.600E-02	5.769E-02	3.367E-02	NOT IDENT.
AG-110M	2.812E-01	9.068E-02	8.041E-02	4.626E-02	NOT IDENT.
IN-111	-9.230E-01	4.036E-01	3.029E-01	2.059E-01	NOT IDENT.
IN-113M	1.481E-02	7.800E-02	6.934E-02	3.979E-02	NOT IDENT.
SN-113	1.481E-02	7.800E-02	6.934E-02	3.979E-02	NOT IDENT.
IN-114M	-4.314E-02	2.930E-01	2.320E-01	1.495E-01	NOT IDENT.
CD-115	-6.423E-01	2.684E+00	2.284E+00	1.369E+00	NOT IDENT.
SN-117M	-1.647E-02	6.282E-02	5.428E-02	3.205E-02	NOT IDENT.
SB-122	-7.191E-01	8.163E-01	6.650E-01	4.165E-01	NOT IDENT.
I-123	-7.989E+01	3.338E+03	0.000E+00	1.703E+03	SHORT HLIF
TE-123M	-1.030E-03	4.304E-02	3.758E-02	2.196E-02	NOT IDENT.
I-124	-2.292E-01	4.691E-01	3.305E-01	2.394E-01	NOT IDENT.
SB-124	-1.300E-02	8.405E-02	6.721E-02	4.288E-02	FAIL ABUN
SB-125	-4.087E-02	1.791E-01	1.551E-01	9.139E-02	NOT IDENT.
TE-125M	4.282E+00	1.239E+01	1.117E+01	6.322E+00	NOT IDENT.
I-126	3.300E-01	2.424E-01	2.027E-01	1.237E-01	NOT IDENT.
SB-126	-6.282E-02	1.864E-01	1.540E-01	9.511E-02	FAIL ABUN
SB-127	-4.207E-01	8.105E-01	6.622E-01	4.135E-01	FAIL ABUN
XE-127	-1.187E-02	6.497E-02	5.892E-02	3.315E-02	NOT IDENT.
I-131	-1.165E-02	1.203E-01	1.059E-01	6.138E-02	NOT IDENT.
TE-132	-2.064E-01	2.923E-01	2.568E-01	1.491E-01	NOT IDENT.
BA-133	-7.264E-03	8.800E-02	6.724E-02	4.490E-02	NOT IDENT.
I-133	-2.515E+01	6.985E+01	0.000E+00	3.564E+01	SHORT HLIF
CS-134	1.223E-01	9.216E-02	8.395E-02	4.702E-02	NOT IDENT.
CS-135	1.379E-01	2.557E-01	2.350E-01	1.305E-01	NOT IDENT.
I-135	-6.407E+08	1.036E+09	0.000E+00	5.288E+08	SHORT HLIF
CS-136	-1.413E-01	1.634E-01	1.322E-01	8.335E-02	NOT IDENT.
CE-139	-2.168E-02	4.501E-02	3.842E-02	2.297E-02	NOT IDENT.
BA-140	1.469E-01	3.434E-01	3.015E-01	1.752E-01	NOT IDENT.
LA-140	-2.522E-02	8.639E-02	6.853E-02	4.408E-02	NOT IDENT.
CE-141	-1.650E-03	8.146E-02	7.144E-02	4.156E-02	NOT IDENT.
CE-143	2.997E+01	1.248E+01	9.787E+00	6.369E+00	FAIL ABUN
CE-144	-3.325E-01	3.184E-01	2.654E-01	1.624E-01	NOT IDENT.
PM-144	-2.464E-02	6.140E-02	5.061E-02	3.133E-02	NOT IDENT.
PR-144	-1.664E+00	4.147E+00	3.419E+00	2.116E+00	NOT IDENT.
PM-146	-6.233E-02	9.503E-02	8.028E-02	4.848E-02	NOT IDENT.
ND-147	-5.200E-01	6.565E-01	5.341E-01	3.349E-01	NOT IDENT.
PM-149	1.155E-01	2.123E+01	1.904E+01	1.083E+01	NOT IDENT.

EU-152	5.900E-02	1.770E-01	1.509E-01	9.029E-02	FAIL ABUN
GD-153	6.808E-02	1.215E-01	9.783E-02	6.198E-02	NOT IDENT.
EU-154	-2.004E-02	1.359E-01	1.132E-01	6.934E-02	FAIL ABUN
EU-155	-4.026E-02	1.501E-01	1.322E-01	7.659E-02	FAIL ABUN
TB-160	1.518E-01	3.002E-01	2.698E-01	1.531E-01	FAIL ABUN
HO-166M	-1.935E-02	1.095E-01	9.158E-02	5.585E-02	NOT IDENT.
TM-171	-8.078E+00	3.855E+01	3.354E+01	1.967E+01	FAIL ABUN
LU-176	-8.551E-03	4.296E-02	3.803E-02	2.192E-02	FAIL ABUN
LU-177	1.697E-01	8.811E-01	8.088E-01	4.495E-01	NOT IDENT.
LU-177M	2.564E-01	3.195E-01	2.912E-01	1.630E-01	FAIL ABUN
HF-181	1.547E-03	7.847E-02	6.832E-02	4.004E-02	NOT IDENT.
W-181	-4.556E-01	5.337E-01	4.081E-01	2.723E-01	NOT IDENT.
TA-182	-6.682E-02	2.055E-01	1.682E-01	1.049E-01	NOT IDENT.
RE-183	2.743E-02	1.582E-01	1.392E-01	8.073E-02	FAIL ABUN
RE-184	8.827E-02	3.758E-01	3.424E-01	1.917E-01	FAIL ABUN
OS-185	-5.949E-03	7.743E-02	6.573E-02	3.951E-02	FAIL ABUN
RE-188	1.942E-02	2.500E-01	2.195E-01	1.276E-01	NOT IDENT.
W-188	-1.235E+00	1.278E+01	9.883E+00	6.519E+00	NOT IDENT.
IR-192	-1.291E-02	5.657E-02	4.992E-02	2.886E-02	FAIL ABUN
AU-195	3.084E-01	3.324E-01	2.862E-01	1.696E-01	FAIL ABUN
TL-200	-1.057E+01	1.515E+01	0.000E+00	7.732E+00	SHORT HLIF
TL-201	1.489E+00	2.626E+00	2.344E+00	1.340E+00	NOT IDENT.
TL-202	-1.689E-03	9.500E-02	8.302E-02	4.847E-02	NOT IDENT.
HG-203	1.312E-02	6.005E-02	5.442E-02	3.064E-02	NOT IDENT.
BI-207	-7.967E-02	1.113E-01	9.111E-02	5.679E-02	FAIL ABUN
TL-207	-1.123E+00	1.166E+00	9.800E-01	5.950E-01	FAIL ABUN
PO-209	-6.021E+00	1.563E+01	1.330E+01	7.975E+00	NOT IDENT.
BI-210	-2.852E+00	4.756E+00	4.338E+00	2.427E+00	NOT IDENT.
PB-210	-2.852E+00	4.756E+00	4.338E+00	2.427E+00	NOT IDENT.
PO-210	-2.852E+00	4.755E+00	4.338E+00	2.426E+00	NOT IDENT.
PB-211	3.728E-01	1.777E+00	1.565E+00	9.068E-01	NOT IDENT.
BI-212	9.743E-01	5.340E-01	5.026E-01	2.725E-01	NOT IDENT.
PO-215	-1.123E+00	1.166E+00	9.800E-01	5.950E-01	FAIL ABUN
RN-219	1.420E-01	7.764E-01	6.886E-01	3.961E-01	NOT IDENT.
RN-220	-7.327E+00	4.562E+01	3.893E+01	2.328E+01	NOT IDENT.
RA-223	-1.123E+00	1.166E+00	9.800E-01	5.950E-01	FAIL ABUN
RA-224	6.566E+00	1.421E+00	1.305E+00	7.250E-01	NOT IDENT.
AC-227	-5.144E-02	6.303E-01	5.666E-01	3.216E-01	NOT IDENT.
TH-227	-5.144E-02	6.303E-01	5.666E-01	3.216E-01	FAIL ABUN
TH-229	-5.018E-01	8.157E-01	7.093E-01	4.162E-01	FAIL ABUN
PA-231	1.668E-01	2.503E+00	2.252E+00	1.277E+00	NOT IDENT.
TH-231	-1.123E+00	1.166E+00	9.800E-01	5.950E-01	FAIL ABUN
U-231	-1.977E-01	6.276E-01	4.824E-01	3.202E-01	FAIL ABUN
PA-233	2.634E-02	1.111E-01	1.002E-01	5.668E-02	FAIL ABUN
PA-234	1.106E-01	7.156E-01	6.275E-01	3.651E-01	FAIL ABUN
PA-234M	8.583E-01	9.884E+00	8.606E+00	5.043E+00	NOT IDENT.
TH-234	-6.670E-02	1.862E+00	1.500E+00	9.499E-01	FAIL ABUN
U-235	-5.935E-02	3.144E-01	2.726E-01	1.604E-01	FAIL ABUN
NP-236	2.487E-02	1.230E-01	1.084E-01	6.277E-02	NOT IDENT.
NP-237	7.433E+00	1.779E+00	6.112E-01	9.077E-01	NOT IDENT.
U-238	-6.670E-02	1.862E+00	1.500E+00	9.499E-01	FAIL ABUN
NP-239	-3.542E-02	3.288E-01	2.530E-01	1.678E-01	NOT IDENT.
CM-243	-9.917E-02	1.358E-01	1.172E-01	6.930E-02	NOT IDENT.
AM-246	1.843E-01	3.201E-01	2.854E-01	1.633E-01	NOT IDENT.
CM-247	1.802E-02	7.005E-02	6.235E-02	3.574E-02	NOT IDENT.
CF-249	-2.188E-02	7.251E-02	6.294E-02	3.700E-02	NOT IDENT.
CF-251	-1.568E-01	2.006E-01	1.681E-01	1.023E-01	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON , SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
46.50	687.8816
46.50	687.8816
46.50	687.8816
48.70	779.3140
49.72	790.4338
51.35	869.5608
52.39	940.1412
52.97	962.2464
53.15	982.9156
53.44	940.6240
54.07	997.0324
56.28	991.2051
56.28	991.2079
57.37	1030.2140
57.53	1061.6616
57.53	1061.6636
57.60	1061.7404
57.98	1062.1675
57.98	1062.1675
59.32	809.0836
59.32	809.0836
59.40	809.1509
59.54	809.2692
59.72	809.4205
60.01	809.6630
61.10	472.5075
61.14	472.5267
61.30	472.6044
63.00	438.6584
63.29	438.7866
63.29	438.7866
63.58	460.4456
64.28	487.2874
65.12	507.5993
65.20	507.6399
65.20	507.6399
66.05	498.1023
66.72	483.0002
66.83	483.0534
66.91	494.9603
67.20	497.6232
67.20	497.6232
67.75	514.5191
67.85	514.5682
68.90	502.2555
68.90	502.2555
69.30	492.7312
69.67	464.8592
70.82	513.7363
70.82	513.7363
70.83	513.7400
72.80	524.7148
72.87	524.7484
72.87	524.7484
74.67	630.1227
74.81	630.2031
74.81	630.2031
74.81	630.2031
74.81	630.2031
74.81	630.2031
74.81	630.2031
74.81	630.2031
74.97	630.2950
75.28	630.4730
75.70	630.7131
77.11	631.5173
77.11	631.5173

77.11	631.5173
77.11	631.5173
77.11	631.5173
77.11	631.5173
77.11	631.5173
78.38	632.2341
79.62	632.9302
79.80	633.0314
79.80	633.0314
80.11	633.2037
80.18	633.2427
80.30	633.3093
80.30	633.3093
80.57	633.4587
81.00	633.6976
81.07	633.7367
81.07	633.7367
81.07	633.7367
81.07	633.7367
82.60	741.7480
83.37	653.6745
83.78	742.5000
83.78	742.5000
83.78	742.5000
83.78	742.5000
84.21	742.7739
84.90	743.2117
85.43	743.5447
86.29	596.1132
86.50	596.2186
86.54	596.2401
86.59	596.2637
86.72	744.3557
86.79	744.3960
86.94	744.4927
87.30	710.8649
87.30	710.8649
87.30	710.8649
87.30	710.8649
87.30	710.8649
87.30	710.8649
87.57	711.0264
87.88	654.0601
88.03	654.1402
88.36	654.3217
88.47	654.3807
89.95	296.8463
91.11	297.1283
92.29	297.4135
92.38	297.4359
92.38	297.4359
93.35	358.9035
94.00	314.8433
94.67	362.6876
94.67	362.6889
94.90	352.5368
94.90	352.5368
94.90	352.5368
94.90	352.5368
95.87	376.6712
95.87	376.6712
96.73	354.7565
97.43	303.7560
98.44	298.8725
98.44	298.8725
98.88	296.1277
99.55	285.7006
99.55	285.7006
99.86	298.1340
100.00	300.3044
100.10	300.3280
103.18	324.6064
103.76	320.4626
105.00	303.5980
105.31	306.8873
108.00	294.6014
109.28	305.6426

111.00	314.6476
111.00	314.6476
111.76	320.2122
112.95	334.5162
115.19	313.4373
116.30	325.9440
117.00	323.7974
117.00	323.7974
117.66	336.0744
121.11	347.3035
121.62	333.5297
121.78	324.6622
122.06	324.7250
122.32	324.7831
122.32	324.7831
122.32	324.7831
122.32	324.7831
123.07	324.9508
127.23	327.8319
129.76	327.5139
131.20	311.4361
133.02	369.7958
133.54	361.1641
135.34	314.4734
136.00	331.0498
136.25	335.4883
136.48	323.4778
140.51	340.8032
140.51	0.0000
142.18	283.9354
142.65	331.3568
143.76	308.4546
144.24	319.5660
144.24	319.5660
144.24	319.5660
144.24	319.5660
145.22	305.4266
145.44	304.3661
147.16	316.8338
152.43	295.7061
152.70	295.7550
153.22	282.5502
154.21	301.5674
154.21	301.5674
154.21	301.5674
154.21	301.5674
155.03	317.2463
156.02	306.3349
158.56	321.2466
159.00	0.0000
159.00	313.5473
160.31	298.2101
161.27	282.7928
162.32	294.1057
162.64	305.3025
163.35	316.5771
163.89	315.5595
165.85	314.8016
167.43	284.9198
171.28	324.7344
171.86	296.8371
172.10	296.8776
176.55	316.7100
176.60	316.7186
181.06	291.2250
184.41	303.7870
185.71	297.9809
186.00	298.0272
190.27	315.3008
192.34	306.5836
193.63	331.4766
197.04	308.8534
198.01	299.9195
198.60	318.1937
200.40	318.4885
201.83	324.1851
202.84	317.0636
205.31	340.2692

208.36	317.0378
208.81	316.1959
209.75	324.5724
209.75	324.5724
210.97	299.1539
215.65	331.0254
216.55	311.9060
218.09	268.0736
222.10	324.7087
223.80	284.4671
226.40	254.4038
227.00	295.0449
227.08	295.0566
227.20	295.0723
228.16	298.8971
228.18	298.9011
228.18	298.9011
231.56	288.4949
235.69	302.4259
236.00	297.8401
236.00	297.8401
238.63	350.4275
238.63	350.4275
238.63	350.4275
238.63	350.4275
239.00	356.9780
240.98	276.8724
241.98	270.8099
241.98	270.8099
241.98	270.8099
244.69	308.1088
245.39	326.6406
247.94	243.9251
248.90	231.9223
249.79	238.5375
252.40	238.8156
252.85	251.9269
252.85	251.9269
254.15	0.0000
256.20	256.9741
256.20	256.9741
260.50	235.9270
260.90	231.2881
262.80	220.2322
264.65	258.8646
268.24	240.4781
268.79	232.0811
269.46	233.0873
269.46	233.0873
269.46	233.0873
269.46	233.0873
271.23	221.9760
273.65	300.3553
276.40	233.7775
277.35	241.4125
277.60	223.5212
277.60	223.5212
278.00	224.5021
278.60	227.3879
279.20	230.2780
279.53	233.1394
280.46	254.0034
281.68	246.5768
283.67	221.2517
284.30	212.7969
285.00	231.7810
285.90	221.4574
286.10	227.1533
286.10	227.1533
287.40	228.4601
288.45	0.0000
290.67	221.2594
290.80	221.2708
291.72	215.0290
293.26	205.6720
293.70	212.0385
295.21	251.7532
295.21	251.7532

295.21	251.7532
295.96	261.3306
296.50	253.4668
297.23	258.2956
298.57	221.9714
299.80	185.5952
299.80	185.5952
300.09	176.0978
300.09	176.0978
300.09	176.0978
300.09	176.0978
300.12	176.1000
301.29	193.6432
302.84	246.7029
303.76	254.5267
303.91	251.6798
304.40	240.2890
304.40	240.2890
304.84	248.9122
306.84	230.9753
308.46	195.7860
311.98	215.1865
316.51	222.2720
318.01	220.4850
319.02	219.6102
319.41	208.1340
320.08	211.0652
323.87	245.9625
323.87	245.9625
323.87	245.9625
323.87	245.9625
325.23	221.0970
328.77	210.8062
333.44	279.6418
334.20	296.1208
334.20	296.1208
334.30	296.1321
338.28	209.6281
338.28	209.6281
338.28	209.6281
338.28	209.6281
338.32	205.7691
338.32	205.7691
338.32	205.7691
340.50	236.8742
340.57	236.8802
344.27	193.6353
345.85	209.8932
350.59	190.8497
351.07	187.3245
351.92	187.3834
351.92	187.3834
351.92	187.3834
355.39	0.0000
356.01	204.1886
364.48	193.1056
366.43	183.4813
367.43	205.0243
367.94	0.0000
369.80	171.9738
374.96	219.2723
383.85	207.1828
387.95	198.6243
388.63	205.5558
391.69	187.0637
391.69	187.0637
392.90	183.2005
398.62	198.3575
400.65	200.4675
401.10	202.4725
401.81	198.5685
402.60	199.6106
404.84	200.7475
410.95	214.0356
411.60	209.1275
413.65	176.5377
414.70	179.5749
415.30	189.5335

415.76	192.5412
417.63	0.0000
418.52	192.7141
423.70	183.0881
427.08	198.2275
427.89	199.2773
432.53	190.5920
433.93	202.6555
439.47	188.0115
439.56	188.0184
439.89	173.0338
443.98	201.2993
444.90	201.3558
445.03	201.3656
445.03	201.3656
445.03	201.3656
445.03	201.3656
453.90	241.0986
463.38	217.6216
468.07	210.8701
473.00	196.0271
475.06	198.1725
475.35	193.1334
476.78	180.0642
477.59	202.3682
477.96	217.5720
482.03	183.3862
484.57	149.0510
487.03	176.5552
490.36	164.5412
492.35	166.6706
497.08	171.9893
507.63	0.0000
510.53	0.0000
510.84	144.7475
511.00	144.7544
511.85	146.4924
511.85	146.4924
513.99	144.8772
513.99	144.8772
520.41	133.1897
520.65	133.1992
527.90	121.1517
528.96	0.0000
529.64	121.2093
529.87	0.0000
531.02	128.4485
537.32	125.5861
543.00	128.8757
546.56	0.0000
549.76	118.7875
552.65	119.9139
555.20	121.0333
563.23	161.7281
563.90	164.8654
568.70	130.8173
569.32	134.9924
569.50	137.0757
569.67	137.0821
573.80	144.5111
574.00	138.2797
574.64	124.7842
578.91	131.8682
579.30	0.0000
583.14	125.0654
585.48	118.1893
591.81	121.1713
592.07	114.9119
593.00	109.7142
595.88	124.4358
600.56	118.6541
602.52	0.0000
602.71	122.2123
602.71	122.2123
603.60	113.5093
604.41	113.5331
604.70	104.8071
609.31	115.4248

609.31	115.4248
609.31	115.4248
609.31	115.4248
610.33	129.4488
612.46	140.0195
614.37	120.8258
618.01	118.8348
621.84	117.8980
621.84	117.8980
631.29	107.6254
633.02	106.6147
633.10	106.6171
634.78	127.7826
635.90	124.6490
636.97	110.9473
645.85	112.2498
646.12	117.5527
656.30	109.7059
657.75	118.5940
657.90	0.0000
661.65	108.4323
661.65	108.4323
664.57	106.3794
666.33	72.7243
666.33	72.7243
675.00	99.1803
677.61	104.5796
685.20	111.1830
692.80	97.4584
695.00	103.9387
696.49	113.6213
696.49	113.6213
697.00	111.4902
697.49	116.8636
698.33	119.0323
698.50	119.0378
699.00	115.8337
702.63	97.6828
706.10	109.5778
706.58	0.0000
706.67	102.0717
709.31	104.2845
711.68	103.2656
713.82	120.5367
717.42	92.6306
720.50	108.8635
721.93	145.5601
722.20	147.7265
722.78	154.2138
722.78	154.2138
722.89	154.2207
722.95	154.2207
723.30	134.8206
724.18	108.9572
727.18	77.7252
733.00	97.2839
735.90	84.3680
739.58	109.3369
742.81	85.5827
744.21	84.5260
747.13	125.7875
751.79	82.4978
752.31	77.0790
753.82	110.7706
755.35	118.4124
756.15	103.2220
756.87	102.1516
763.93	116.4618
765.79	91.4648
766.42	92.5662
766.84	98.0200
776.49	112.4148
778.00	109.1772
778.57	116.8327
778.89	107.0152
783.80	102.7551
785.46	89.6695
792.07	133.6013

795.84	94.2536
796.30	94.2641
798.80	125.0215
801.93	97.6697
805.60	90.0579
810.29	101.1416
810.76	105.5484
815.85	98.1399
817.79	104.6044
818.51	108.2915
819.60	110.1514
826.30	116.7396
828.27	0.0000
831.60	107.6666
831.96	109.5167
834.83	118.7880
836.80	0.0000
846.75	106.1583
848.13	109.8823
856.28	0.0000
856.80	99.9009
860.37	107.9078
867.32	105.1703
867.82	101.9792
871.10	128.9494
873.19	116.0100
874.81	120.6901
875.33	0.0000
876.40	123.5158
879.36	119.8719
880.27	125.4694
880.51	125.4749
881.50	114.3441
883.24	119.0339
884.67	133.9512
889.25	111.7285
896.60	114.6894
898.02	107.2580
899.00	111.0105
903.28	123.2424
911.07	131.8461
911.07	131.8461
911.07	131.8461
919.63	134.8770
920.93	136.7829
925.00	122.8285
925.24	115.3325
926.50	119.1116
935.52	133.4110
937.48	148.5011
944.10	133.6306
946.00	131.7969
949.00	160.1290
962.29	152.3496
964.01	116.5932
966.15	124.7383
968.20	103.0435
969.11	130.4812
969.11	130.4812
969.11	130.4812
977.42	93.7511
980.50	110.8610
983.50	110.9229
989.30	105.3475
996.32	107.3859
1001.03	111.2823
1001.68	105.5880
1004.76	126.5870
1021.30	0.0000
1024.50	0.0000
1034.80	92.8241
1036.00	97.6296
1037.82	110.1101
1038.57	112.0393
1038.76	0.0000
1045.16	85.3279
1046.59	108.3652
1048.07	110.3113

1050.47	98.8424
1050.47	98.8424
1062.04	95.1973
1063.62	110.6154
1076.63	95.4430
1077.35	102.2044
1078.86	103.1947
1085.78	105.2522
1099.22	101.6248
1112.02	108.6367
1112.84	110.5906
1115.52	111.6121
1120.29	94.2174
1120.29	94.2174
1120.29	94.2174
1120.29	94.2174
1120.51	87.4219
1121.28	94.2332
1124.00	0.0000
1129.67	72.9645
1131.51	0.0000
1147.95	0.0000
1167.94	70.4941
1173.22	51.9368
1175.09	51.9541
1177.93	45.3930
1189.05	40.2826
1204.90	42.3561
1205.75	0.0000
1213.00	31.5612
1221.42	33.5794
1230.97	25.7175
1235.34	37.6134
1236.41	0.0000
1238.25	23.7666
1246.25	18.8392
1260.41	0.0000
1271.85	26.8792
1274.45	24.8983
1274.54	24.8983
1291.56	17.9736
1298.22	0.0000
1312.09	21.0350
1325.50	18.9270
1325.50	18.9270
1332.49	39.1857
1333.61	39.1936
1360.21	14.1253
1362.66	0.0000
1365.15	16.1549
1368.21	9.0912
1368.53	0.0000
1376.25	17.1930
1384.27	16.2005
1394.10	11.1540
1395.20	9.1274
1407.95	16.2565
1434.06	14.2780
1436.60	8.1618
1457.56	0.0000
1460.81	12.2847
1489.15	19.5280
1509.49	20.6136
1596.49	19.8141
1620.62	12.5542
1678.03	0.0000
1691.02	9.5013
1691.02	9.5013
1706.46	0.0000
1750.46	0.0000
1764.49	11.7202
1764.49	11.7202
1764.49	11.7202
1764.49	11.7202
1770.23	30.9199
1771.40	13.8628
1791.20	0.0000
1808.65	6.4275

1836.01

13.9717

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202037554

Total Uranium Activity	-2.2591E-01	ug/g
Total Uranium Counting Unc.	5.5409E+00	ug/g
Total Uranium Tpu	2.8270E-06	ug/g
Total Uranium Mda	4.4644E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417              *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 950788          SAMPLE ID   : G1202037554
*  ANALYST       : MXR1            DETECTOR    : GAM14
*  SAMPLE DATE   : 11-FEB-2010 00:00:00.00  COUNT TIME : 0 01:00:00.00
*  ANALYSIS DATE: 19-FEB-2010 21:35:28.93  SAMPLE ALQT: 155.440 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.677E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 2.566E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 5.674E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.786E+00

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Radiochemistry Batch Checklist, Rev10

Batch# 953105

Product: H3

Date: 3-1-10

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.	✓		
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: J.M. [Signature]

Secondary Review Performed By: [Signature]

3/1/10

LANL 3-6-10

Tritium Que Sheet

Batch #: 953105 Analyst: KKK2 First Client Due Date 06-MAR-10 Internal Due Date: 23-FEB-10
 Spike Isotope: Hydrogen-3 Spike Code: Expiration Date: Vol:
 LCS Isotope: Hydrogen-3 LCS Code: 013A-K Expiration Date: 3/27/10 Vol: 0.1

Prep Date: 2/23/10 Initials: KKJ Pipet ID: 29709168 Witness: AW 2/24/10

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total Moisture Dist Vol (mL)
246440001-1	RE15-10-8354	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	12	1		414.54	323.34	91.20
246440002-1	RE15-10-8356	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	13	2		423.81	361.93	61.88
246440003-1	RE15-10-8353	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	14	3		420.88	366.59	54.29
246440004-1	RE15-10-8352	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	15	4		185.56	142.88	42.68
246440005-1	RE15-10-8355	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	16	5		513.01	448.37	64.64
246440006-1	RE15-10-8351	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	17	6		496.10	421.19	74.91
246440007-1	RE15-10-8350	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	18	7		250.07	269.55	80.52
246440008-1	RE15-10-8357	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	19	8		493.66	444.53	29.13
246440009-1	RE15-10-8338	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	20	9		396.67	308.21	88.46
246440010-1	RE15-10-8336	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	21	10		343.74	283.59	60.15
246440011-1	RE15-10-8339	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	22	11		461.95	434.69	27.26
246440012-1	RE15-10-8337	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	23	12		500.25	443.22	57.03
246440013-1	RE15-10-8375	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	24	13		401.35	322.28	79.07
246440014-1	RE15-10-8374	SAMPLE		.25 pCi/mL SOIL		LANL010	02-FEB-10	10	25	14		409.26	383.48	25.78
246477002-1	WSTCB-10-10161	SAMPLE		.25 pCi/mL SOIL		LANL010	03-FEB-10	10	26	15		462.52	403.78	58.74
246554002-1	RE15-10-8174	SAMPLE		.25 pCi/mL SOIL		LANL010	04-FEB-10	10	27	17		449.79	417.85	31.94
246554003-1	RE15-10-8176	SAMPLE		.25 pCi/mL SOIL		LANL010	04-FEB-10	10	28	18		529.27	497.51	31.76
246554004-1	RE15-10-8178	SAMPLE		.25 pCi/mL SOIL		LANL010	04-FEB-10	10	29	19		503.90	491.81	12.09
246554005-1	RE15-10-8177	SAMPLE		.25 pCi/mL SOIL		LANL010	04-FEB-10	10	30	20		456.49	441.88	14.61
1202042922-1	MB for batch 953105	MB		.25 pCi/mL SOIL		QC ACCOUNT		10	31			20.00	0	20.00
1202042923-1	RE15-10-8354(246440001DUP)	DUP		.25 pCi/mL SOIL		QC ACCOUNT	02-FEB-10	10	32	1		414.54	323.34	91.20
1202042924-1	LCS for batch 953105	LCS		.25 pCi/mL SOIL		QC ACCOUNT		10	33	23		20.00	0	20.00

Bkg Rack #: 11
 dailies ✓

Bkg prepared with ~~dist~~ 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) 2700082, Wallac (White) 4140299, Purple 7069123, Silver 7060656, Orange DG606095168

GEL Laboratories LLC, Radiochemistry Division

DATE	2/23/2010	INITIALS	KXK2	BATCH NUMBER	953105				
Sample #	Flask Wt. (g)	Sample Wet (g)	Flask & Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	Flask & Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
246440001	200	414.54	614.54	0.220	91.20	323.34	523.34	10	
246440002	200	423.81	623.81	0.146	61.88	361.93	561.93	10	
246440003	200	420.88	620.88	0.129	54.29	366.59	566.59	10	
246440004	200	185.56	385.56	0.230	42.68	142.88	342.88	10	
246440005	200	513.01	713.01	0.126	64.64	448.37	648.37	10	
246440006	200	496.10	696.10	0.151	74.91	421.19	621.19	10	
246440007	200	350.07	550.07	0.230	80.52	269.55	469.55	10	
246440008	200	493.66	693.66	0.059	29.13	464.53	664.53	10	
246440009	200	396.67	596.67	0.223	88.46	308.21	508.21	10	
246440010	200	343.74	543.74	0.175	60.15	283.59	483.59	10	
246440011	200	461.95	661.95	0.059	27.26	434.69	634.69	10	
246440012	200	500.25	700.25	0.114	57.03	443.22	643.22	10	
246440013	200	401.35	601.35	0.197	79.07	322.28	522.28	10	
246440014	200	409.26	609.26	0.063	25.78	383.48	583.48	10	
246477002	200	462.52	662.52	0.127	58.74	403.78	603.78	10	
246554001	200	468.60	668.60	0.008	3.75	464.94	664.94	10	
246554002	200	449.79	649.79	0.071	31.94	417.85	617.85	10	
246554003	200	529.27	729.27	0.060	31.76	497.51	697.51	10	
246554004	200	503.90	703.90	0.024	12.09	491.81	691.81	10	
246554005	200	456.49	656.49	0.032	14.61	441.88	641.88	10	
246554006	200	446.50	646.50	0.013	5.81	440.78	640.78	10	
MB	200	20.00	220.00	1.000	20.00	0.00	200.00	10	
DUP	200	414.54	614.54	0.220	91.20	323.34	523.34	10	
LCS	200	20.00	220.00	1.000	20.00	0.00	200.00	10	

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version : 1.2.6

Spike S/N :
Spike Exp Date :
Spike Activity (dpm/ml):
Spike Volume Added:

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2463.64
LCS Volume Added: 0.10

Batch : 953105
Analyst : KKK2
Prep Date : 2/23/2010

Procedure Code : LSC_VH3S
Permanence : Tritium
Required MDC : 250 pCi/L
Half-life of Tritium : 12.32 years

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL
Eoscient Ultra

Sample Characteristics									
Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot In Vial L	Sample Aliquot Sidev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	246440001.1	414.54	0.0912	0.0100	2.5729E-05	323.34	22.00%	1	2/2/2010 12:00
2	246440002.1	423.81	0.0619	0.0100	2.5729E-05	381.83	14.60%	2	2/2/2010 12:00
3	246440003.1	420.88	0.0543	0.0100	2.5729E-05	386.59	12.90%	3	2/2/2010 12:00
4	246440004.1	185.56	0.0427	0.0100	2.5729E-05	142.88	23.00%	4	2/2/2010 12:00
5	246440005.1	513.01	0.0646	0.0100	2.5729E-05	448.37	12.60%	5	2/2/2010 12:00
6	246440006.1	498.10	0.0749	0.0100	2.5729E-05	421.19	15.10%	6	2/2/2010 12:00
7	246440007.1	350.07	0.0805	0.0100	2.5729E-05	269.55	23.00%	7	2/2/2010 12:00
8	246440008.1	493.66	0.0291	0.0100	2.5729E-05	494.53	5.90%	8	2/2/2010 12:00
9	246440009.1	396.67	0.0885	0.0100	2.5729E-05	308.21	22.30%	9	2/2/2010 12:00
10	246440010.1	343.74	0.0602	0.0100	2.5729E-05	283.59	17.50%	10	2/2/2010 12:00
11	246440011.1	461.95	0.0273	0.0100	2.5729E-05	434.69	5.90%	11	2/2/2010 12:00
12	246440012.1	500.25	0.0570	0.0100	2.5729E-05	443.22	11.40%	12	2/2/2010 12:00
13	246440013.1	401.35	0.0791	0.0100	2.5729E-05	322.28	19.70%	13	2/2/2010 12:00
14	246440014.1	409.26	0.0258	0.0100	2.5729E-05	383.48	6.30%	14	2/2/2010 12:00
15	246477002.1	462.52	0.0587	0.0100	2.5729E-05	403.78	12.70%	15	2/3/2010 12:00
16	246554002.1	449.79	0.0319	0.0100	2.5729E-05	417.85	7.10%	17	2/4/2010 12:00
17	246554003.1	529.27	0.0318	0.0100	2.5729E-05	497.51	6.00%	18	2/4/2010 12:00
18	246554004.1	503.90	0.0121	0.0100	2.5729E-05	491.81	2.40%	19	2/4/2010 12:00
19	246554005.1	456.49	0.0146	0.0100	2.5729E-05	441.88	3.20%	20	2/4/2010 12:00
20	1202042822.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	22	2/23/2010 0:00
21	1202042823.1	414.54	0.0912	0.0100	2.5729E-05	323.34	22.00%	1	2/2/2010 12:00
22	1202042824.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	23	2/23/2010 0:00

Count raw Data				Background			Calibration Data			Detector			Backgrounds		
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	12	35.0297	760.76	2.92	1.16	35	2/27/2010 2:53	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2723	0.00792	11	2/27/2010 2:15
2	13	35.0287	757.9	3.41	1.16	35	2/27/2010 3:31	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2677	0.00792	11	2/27/2010 2:15
3	14	35.0296	760.15	2.8	1.16	35	2/27/2010 4:08	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2713	0.00792	11	2/27/2010 2:15
4	15	35.0297	760.57	1.76	1.16	35	2/27/2010 4:46	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2720	0.00792	11	2/27/2010 2:15
5	16	35.0297	757.14	3.59	1.16	35	2/27/2010 5:23	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2664	0.00792	11	2/27/2010 2:15
6	17	35.0296	760.43	1.66	1.16	35	2/27/2010 6:01	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2718	0.00792	11	2/27/2010 2:15
7	18	35.0297	762.88	4.58	1.16	35	2/27/2010 6:38	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2758	0.00792	11	2/27/2010 2:15
8	19	35.0297	760.05	5.49	1.16	35	2/27/2010 7:16	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2712	0.00792	11	2/27/2010 2:15
9	20	35.0297	757.57	1.54	1.16	35	2/27/2010 7:53	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2671	0.00792	11	2/27/2010 2:15
10	21	35.0297	759.31	2.19	1.16	35	2/27/2010 8:31	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2700	0.00792	11	2/27/2010 2:15
11	22	35.0297	762.72	7.24	1.16	35	2/27/2010 9:09	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2755	0.00792	11	2/27/2010 2:15
12	23	35.0296	760.14	2.39	1.16	35	2/27/2010 9:46	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2713	0.00792	11	2/27/2010 2:15
13	24	35.0296	762.89	8.16	1.16	35	2/27/2010 10:24	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2758	0.00792	11	2/27/2010 2:15
14	25	35.0296	761.15	12.76	1.16	35	2/27/2010 11:02	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2730	0.00792	11	2/27/2010 2:15
15	26	35.0296	758.7	4.85	1.16	35	2/27/2010 11:39	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2690	0.00792	11	2/27/2010 2:15
16	27	35.0296	760.78	112.96	1.16	35	2/27/2010 12:17	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2724	0.00792	11	2/27/2010 2:15
17	28	2.91297	760.86	3550.47	1.16	35	2/27/2010 12:55	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2725	0.00792	11	2/27/2010 2:15
18	29	0.84628	757.04	12377.5	1.16	35	2/27/2010 13:00	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2682	0.00792	11	2/27/2010 2:15
19	30	0.46295	757.96	23033	1.16	35	2/27/2010 13:03	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2678	0.00792	11	2/27/2010 2:15
20	31	35.013	761.97	1.19	1.16	35	2/27/2010 13:06	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2743	0.00792	11	2/27/2010 2:15
21	32	35.0296	756.79	2.36	1.16	35	2/27/2010 13:44	0.996	LSCORANGE	7/23/2009	7/31/2010	0.2691	0.00792	11	2/27/2010 2:15
22	33	15.0296	760.4	39.36	1.16	35	2/27/2010 14:21	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2717	0.00792	11	2/27/2010 2:15

Notes:

- 1 - Results are decay corrected to Sample Date/Time
 2 - Reference date for Spike Activity (dpm/mi) is the batch Prep Date
 3 - Spike Nominals are decay corrected to Sample Date/Time

Pos.	Results		Critical Level	Required MDC	MDC	Sample Act. Conc.	Sample Act. Error	Net Count Rate	Net Count Rate Error	1 SIGMA		Sample QC	Sample Type	RPD	RER	Nominal	Recovery
	PCV/L	Level				PCV/L		CPM	CPM	Counting Uncertainty	Total Prop. Uncertainty						
1	99.5821	70.2917	250	154.8033	292.2289	0.194	1.760	0.341	56.6682	60.2105		SAMPLE					
2	101.2981	71.5174	250	157.5026	380.1037	0.161	2.250	0.361	61.0182	66.5136		SAMPLE					
3	99.8267	70.5491	250	155.3703	273.3022	0.205	1.640	0.336	56.0311	59.1761		SAMPLE					
4	99.6762	70.3723	250	154.9807	98.0757	0.489	0.590	0.288	47.9113	48.3958		SAMPLE					
5	101.7737	71.8531	250	158.2420	412.4383	0.152	2.430	0.368	62.5004	68.7855		SAMPLE					
6	99.7605	70.4318	250	155.1119	83.1853	0.588	0.500	0.284	47.2045	47.5587		SAMPLE					
7	96.3210	69.4155	250	152.8736	560.7773	0.119	3.420	0.405	66.3747	77.0132		SAMPLE					
8	99.8886	70.5928	250	155.4865	722.0320	0.101	4.330	0.436	72.6543	88.3601		SAMPLE					
9	101.5063	71.8643	250	157.8262	64.3272	0.731	0.380	0.278	46.9675	47.2106		SAMPLE					
10	100.4360	70.9037	250	156.1622	172.5221	0.300	1.030	0.308	51.7979	53.1733		SAMPLE					
11	98.4203	69.4858	250	153.0281	997.9447	0.061	6.080	0.490	80.3757	106.2596		SAMPLE					
12	99.9363	70.5559	250	155.3851	204.9964	0.259	1.230	0.318	53.0564	54.9438		SAMPLE					
13	98.3234	69.4172	250	152.8773	818.8697	0.092	5.000	0.457	74.9571	94.2294		SAMPLE					
14	96.3365	70.1324	250	154.4526	1921.6974	0.055	11.800	0.630	104.4309	169.7828		SAMPLE					
15	100.7946	71.1619	250	156.7197	820.2712	0.113	3.690	0.414	89.6265	81.9397		SAMPLE					
16	99.5256	70.2659	250	154.7465	18558.4325	0.018	111.800	1.805	299.5820	1326.6788		SAMPLE					
17	253.8889	178.2336	250	529.3241	588630.9216	0.013	3548.310	34.913	5791.9888	41417.5953		SAMPLE					
18	468.7281	330.8247	250	1263.7349	2101380.9954	0.013	12376.340	120.937	20533.7140	147787.9982		SAMPLE					
19	626.7883	442.5179	250	1979.0908	3899486.7228	0.013	23031.840	223.053	37659.2678	273429.1040		SAMPLE					
20	98.5572	69.5822	250	153.2459	4.9303	8.635	0.030	0.259	42.5719	42.5733		MB					
21	100.7564	71.1349	250	156.6603	201.8377	0.284	1.200	0.317	53.2653	55.0655		DUP		36.7%	0.3929		
22	128.3634	90.8256	250	214.3628	6398.7864	0.044	38.200	1.628	270.1395	517.4530		LCS				5548.7462	114.2%

REGISTRY

SAT 27 FEB 2010 2:14

*** DIRECTORY PATH :S:\LSC\O\DA\953105A0 ***

PARAMETER GROUP: 8
ID: H-3 (3)

00A PROGRAM MODE 6 ->

ORDER	POS	ID	CTIME	COUNTS	CUCNTS	MCW	REP	STD	STMS	STIME
1	11	BKG	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
2	12	246440001	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
3	13	246440002	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
4	14	246440003	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
5	15	246440004	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
6	16	246440005	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
7	17	246440006	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
8	18	246440007	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
9	19	246440008	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
10	20	246440009	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
11	21	246440010	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
12	22	246440011	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
13	23	246440012	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
14	24	246440013	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
15	25	246440014	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
16	26	246477002	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
17	27	246554002	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
18	28	246554003	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
19	29	246554004	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
20	30	246554005	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
21	31	1202042922	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
22	32	1202042923	35:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
23	33	1202042924	15:00	1.0E04	NO LIM	1	1	Y	1/10	1:00

NUMBER OF CYCLES 1
COINCIDENCE BIAS (L/H) L

MCA INPUT TRIGG. INHIBIT
1 LRSUM DCOS G
2 GSUM G

MEMORY SPLIT
L*R
L*R

WINDOW	CHANNELS	MCA	HALF
1	50- 175	1	2
2	5- 320	1	2
3	1- 1024	1	2
4	50- 320	1	1
5	50- 270	1	1
6	60- 220	1	1
7	1- 1024	2	1
8	1- 1024	2	2

SELECTED PRINTOUT FOR TERMINAL 1 (A)

SELECTED PRINTOUT FOR TERMINAL 2 (B)

1.	2.	3.	4.	5.	6.	7.
POS	ID	CTIME	SQP	CPM1	CPM2	CPM3
SEND SPECTRA 12						
RESOLUTION OF SPECTRA 1024						

LISTING
INSTRUMENT NUMBER

Y
1

REGISTRY

POS	ID	CTIME	SQP	CPM1	CPM2	CPM3
Q011101N.001	27 FEB 2010	2:51				
11	BKG	35:01.780	757.99	1.16	2.30	6.95
Q021201N.001	27 FEB 2010	3:29				
12	246440001	35:01.780	760.76	2.92	4.44	9.29
Q031301N.001	27 FEB 2010	4:07				
13	246440002	35:01.780	757.90	3.41	4.90	10.46
Q041401N.001	27 FEB 2010	4:44				
14	246440003	35:01.773	760.15	2.80	4.17	10.13
Q051501N.001	27 FEB 2010	5:22				
15	246440004	35:01.780	760.57	1.75	3.00	8.18
Q061601N.001	27 FEB 2010	5:59				
16	246440005	35:01.780	757.14	3.59	5.11	10.34
Q071701N.001	27 FEB 2010	6:37				
17	246440006	35:01.773	760.43	1.66	2.74	7.12
Q081801N.001	27 FEB 2010	7:14				
18	246440007	35:01.779	762.89	4.58	6.34	11.83
Q091901N.001	27 FEB 2010	7:52				
19	246440008	35:01.779	760.05	5.49	6.92	11.74
Q102001N.001	27 FEB 2010	8:29				
20	246440009	35:01.779	757.57	1.54	2.71	7.27
Q112101N.001	27 FEB 2010	9:07				
21	246440010	35:01.779	759.31	2.19	3.56	8.35
Q122201N.001	27 FEB 2010	9:45				
22	246440011	35:01.779	762.72	7.24	9.23	14.08
Q132301N.001	27 FEB 2010	10:22				
23	246440012	35:01.778	760.14	2.39	3.97	9.02
Q142401N.001	27 FEB 2010	11:00				
24	246440013	35:01.778	762.89	6.16	8.09	12.50
Q152501N.001	27 FEB 2010	11:38				
25	246440014	35:01.778	761.15	12.76	15.31	20.22
Q162601N.001	27 FEB 2010	12:15				
26	246477002	35:01.778	758.70	4.85	6.51	11.51
Q172701N.001	27 FEB 2010	12:53				
27	246554002	35:01.778	760.78	112.96	124.94	129.59
Q182801N.001	27 FEB 2010	12:58				
28	246554003	2:54.778	760.86	3550.47	3848.59	3853.16
Q192901N.001	27 FEB 2010	13:01				
29	246554004	0:50.777	757.04	12377.50	13406.20	13413.50
Q203001N.001	27 FEB 2010	13:04				
30	246554005	0:27.777	757.96	23033.00	24978.70	24978.70
Q213101N.001	27 FEB 2010	13:42				
31	1202042922	35:00.777	761.97	1.19	2.86	7.89
Q223201N.001	27 FEB 2010	14:20				
32	1202042923	35:01.776	758.79	2.36	4.09	9.67
Q233301N.001	27 FEB 2010	14:37				
33	1202042924	15:01.776	760.40	39.36	43.79	48.14

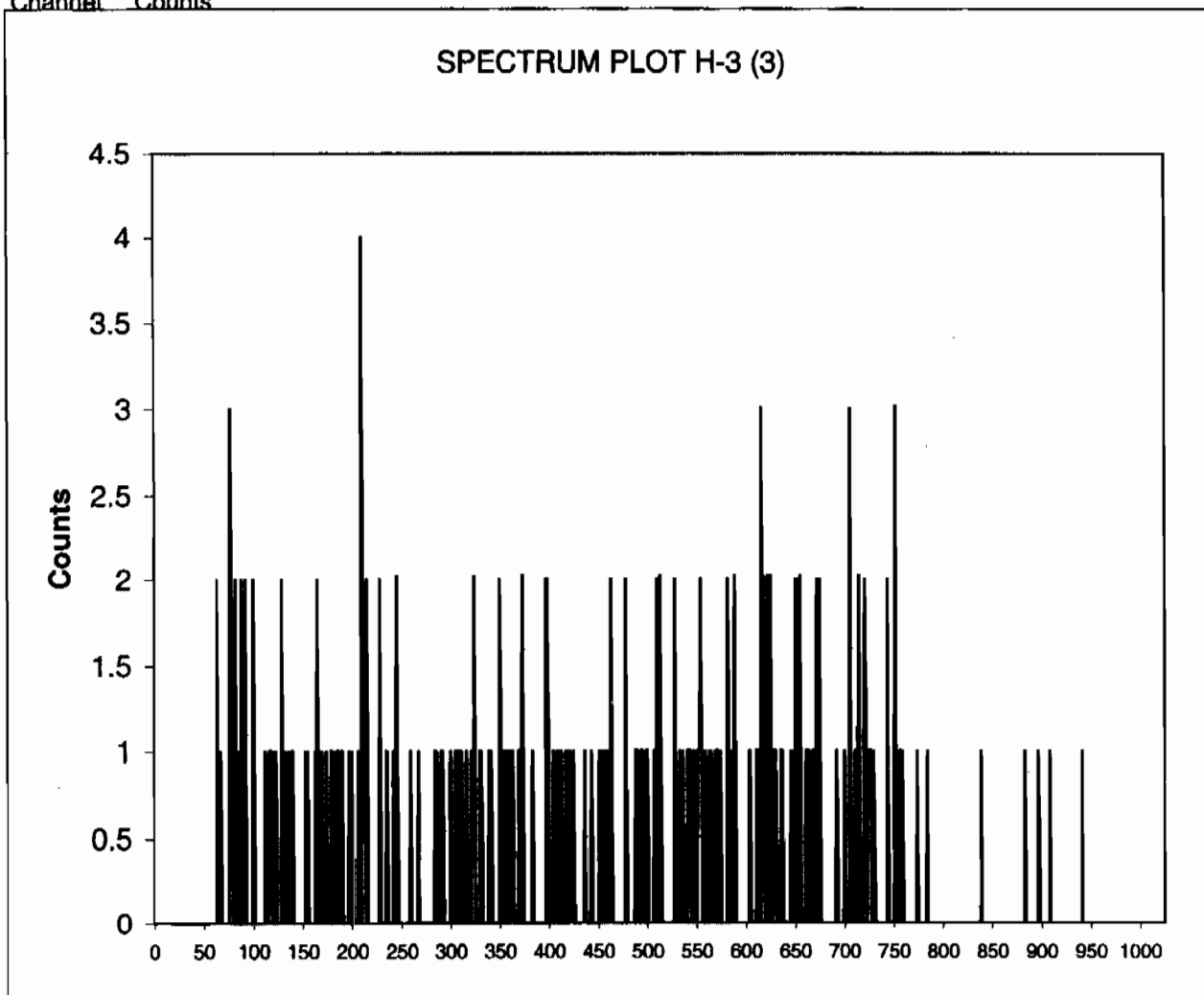
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ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 1, BKG, 35.02967:
Quench: 757.99
Start, End, X-Axis 50-175

Channel Counts



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32	0
33	0
34	0
35	0

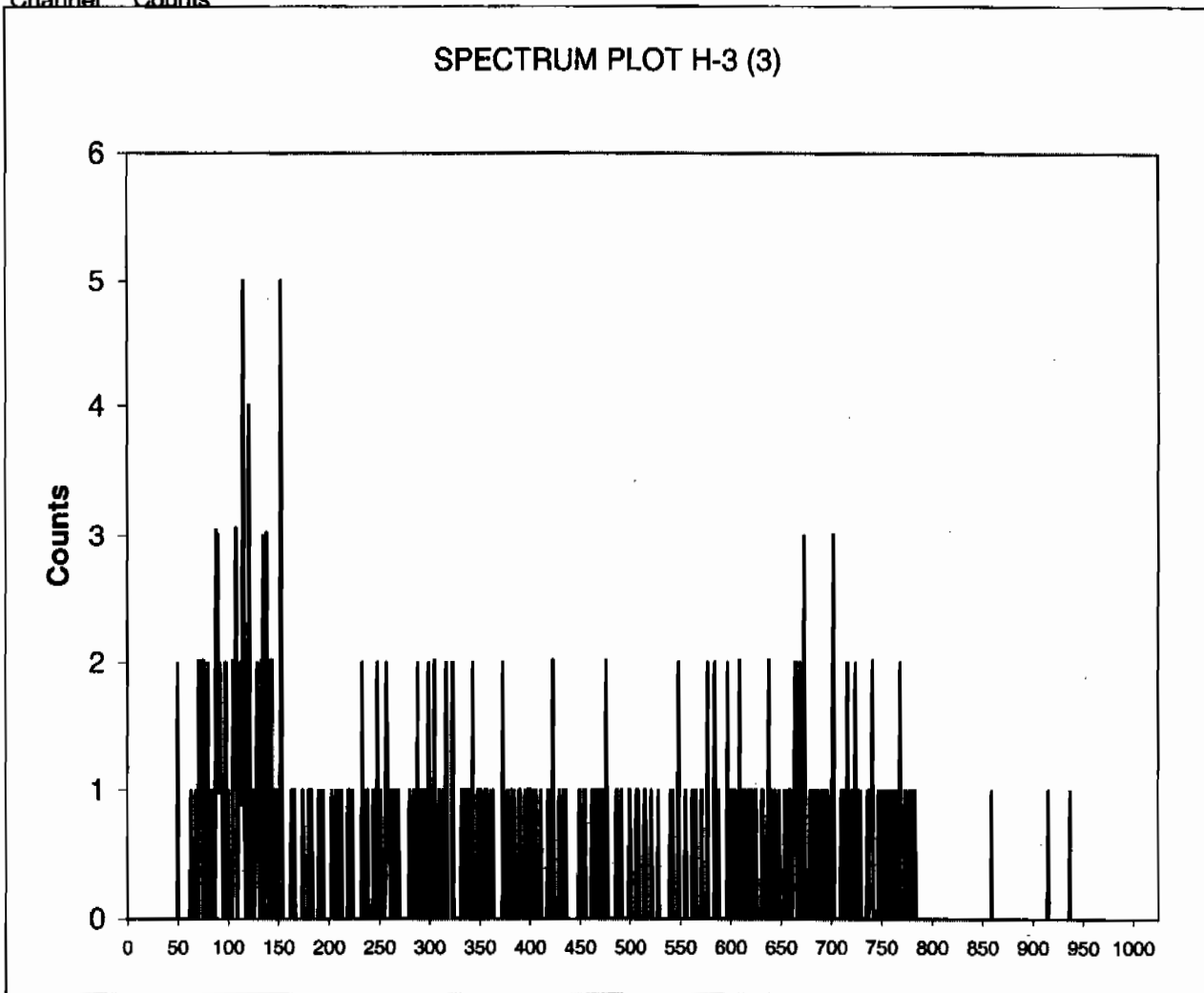
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ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 2, 246440001, 35.02967:
Quench: 760.76
Start, End, X-Axis 50-175

Channel Counts



30	0
31	0
32	0
33	0
34	0
35	0

Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
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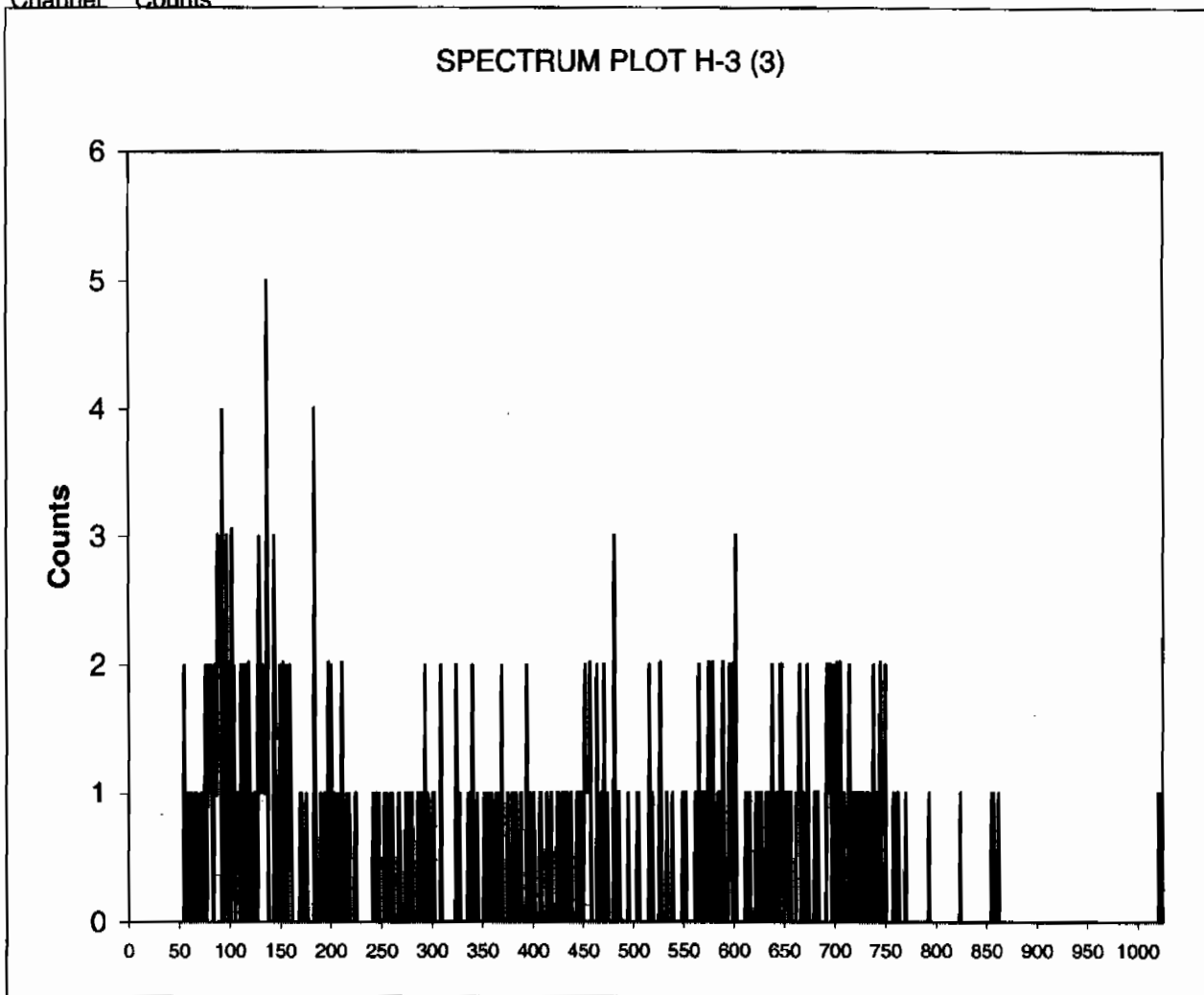
ID:
Comments:

H-3 (3)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

3, 246440002, 35.02967:
757.9
50-175

Channel Counts



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31	0
32	0
33	0
34	0
35	0

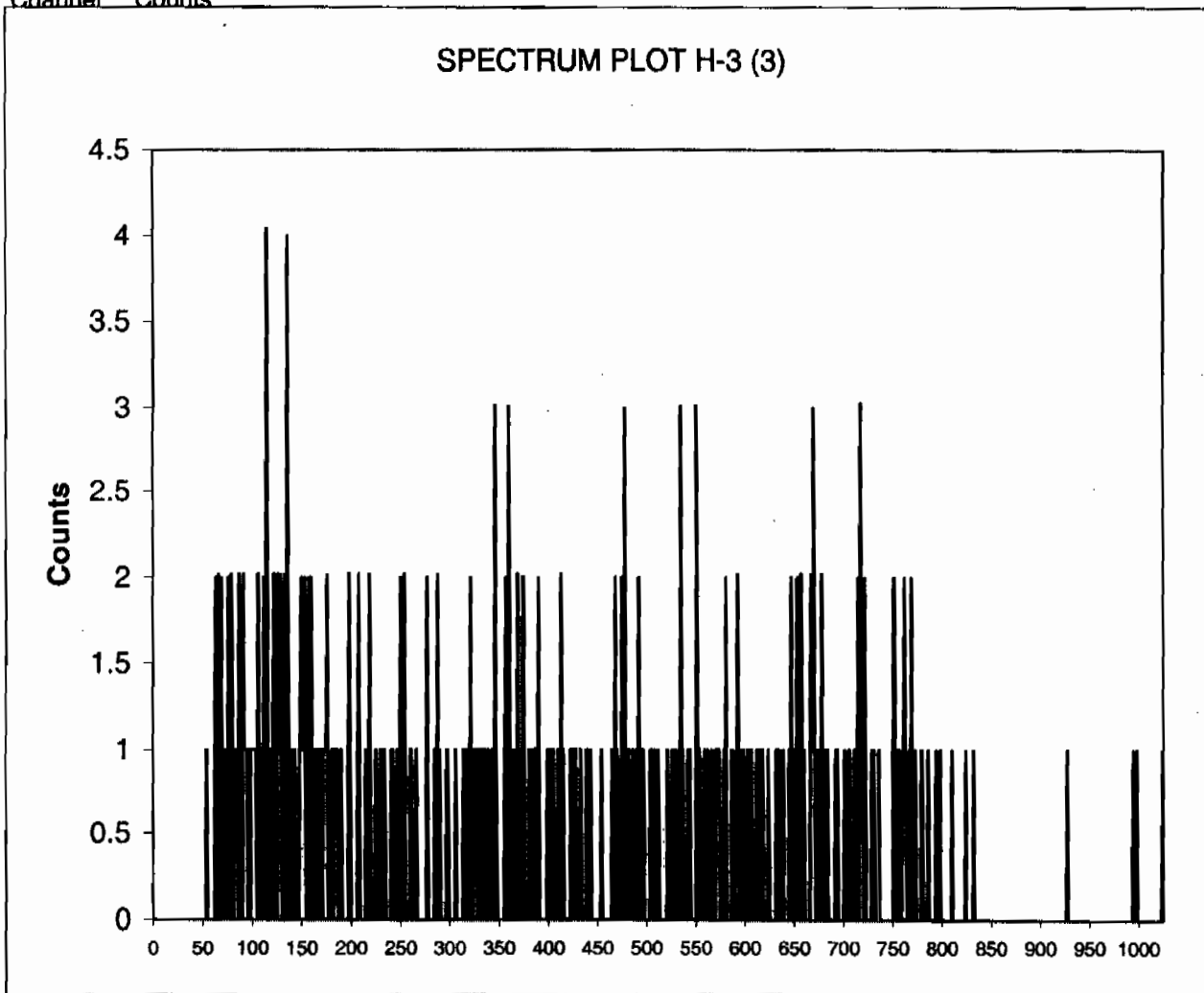
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
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s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 4, 246440003, 35.02955:
Quench: 760.15
Start, End, X-Axis 50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

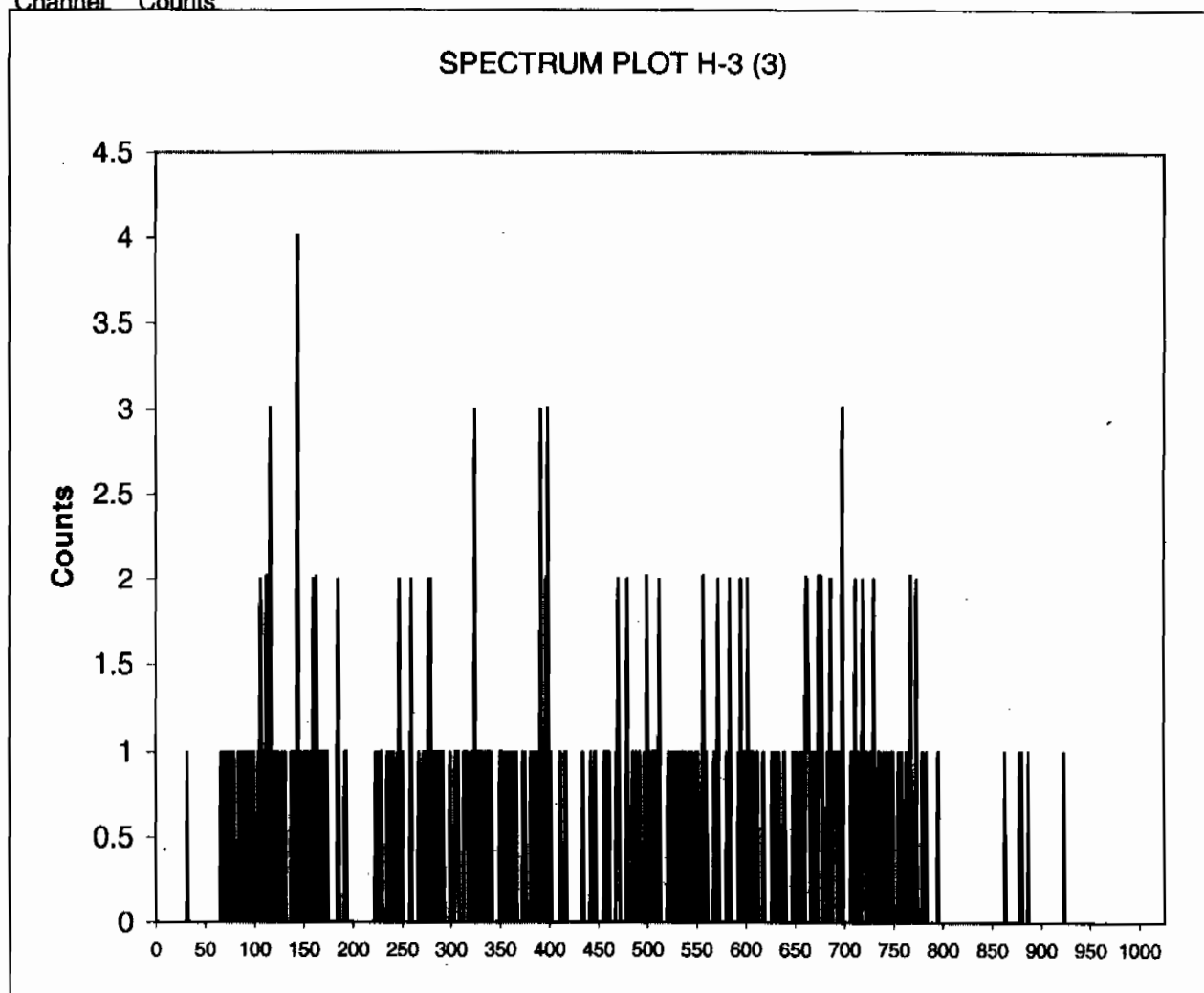
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Data Capture Date:
FileName:
File Info:

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ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 5, 246440004, 35.02967:
Quench: 760.57
Start, End, X-Axis 50-175

Channel Counts



31	0
32	1
33	0
34	0
35	0

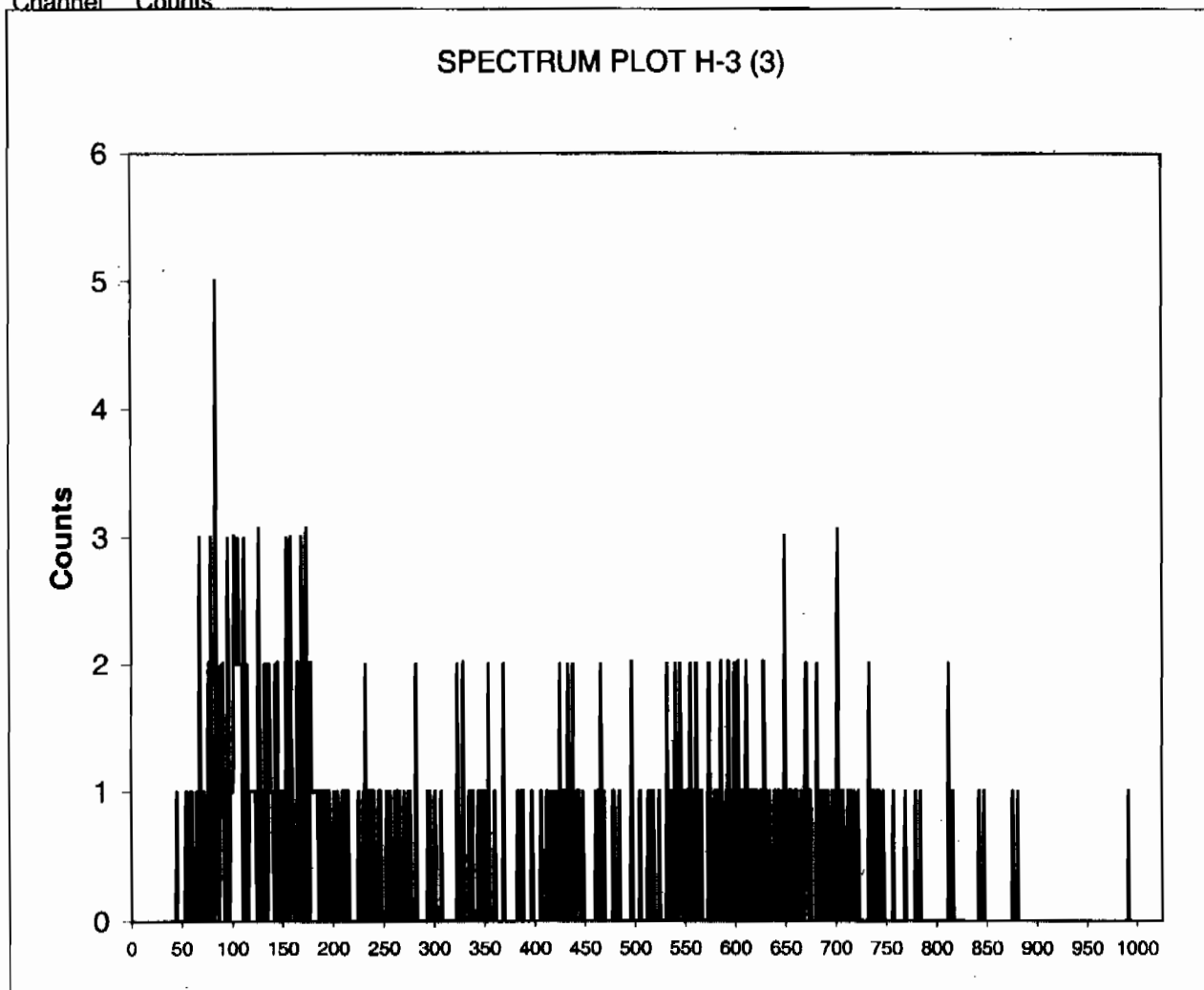
Instrument Type:
Data Capture Date:
FileName:
File Info:

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ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 6, 246440005, 35.02967:
Quench: 757.14
Start, End, X-Axis 50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

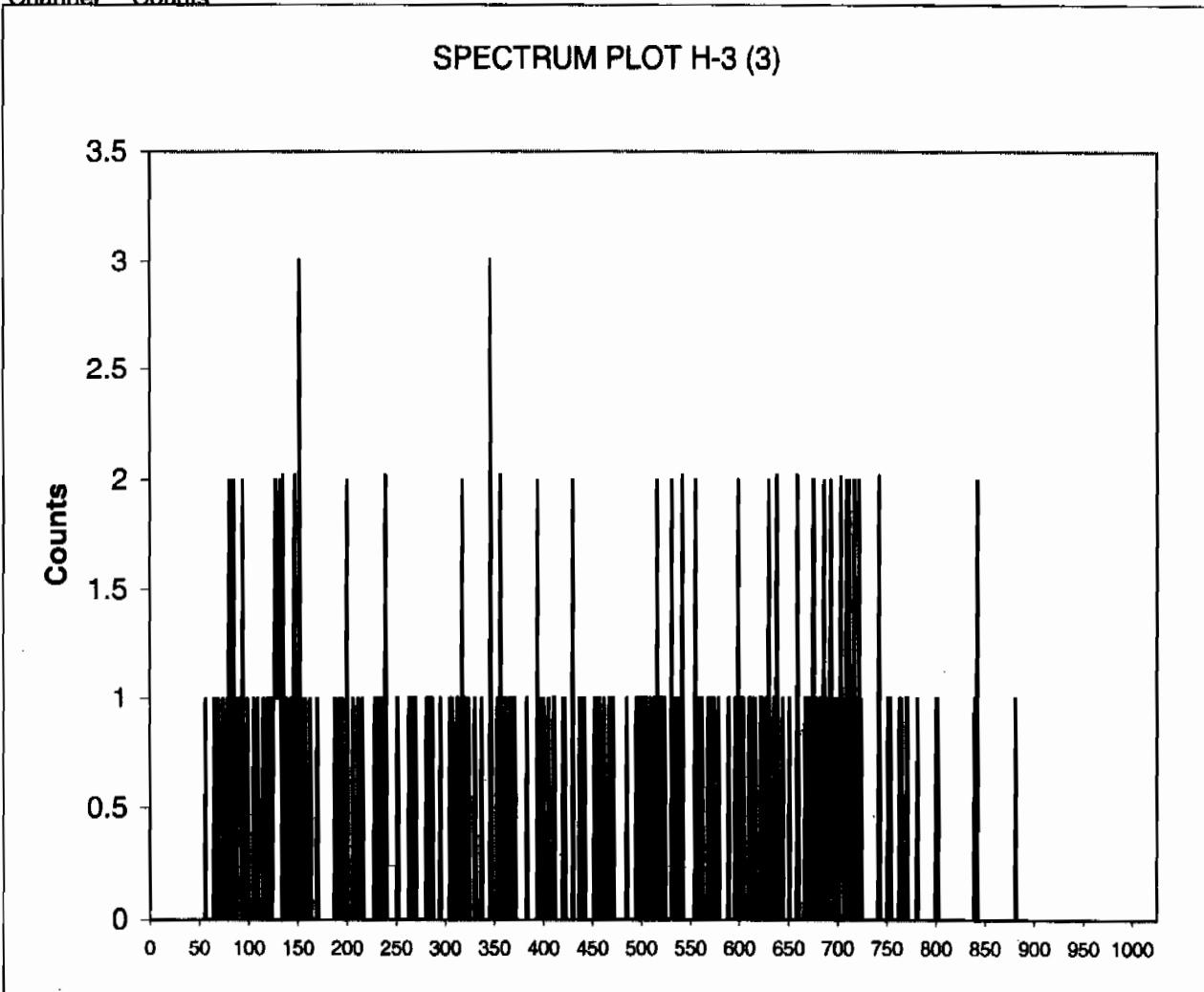
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ071701N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 7, 246440006, 35.02955:
Quench: 760.43
Start, End, X-Axis 50-175

Channel Counts



31 0
32 0
33 0
34 0
35 0

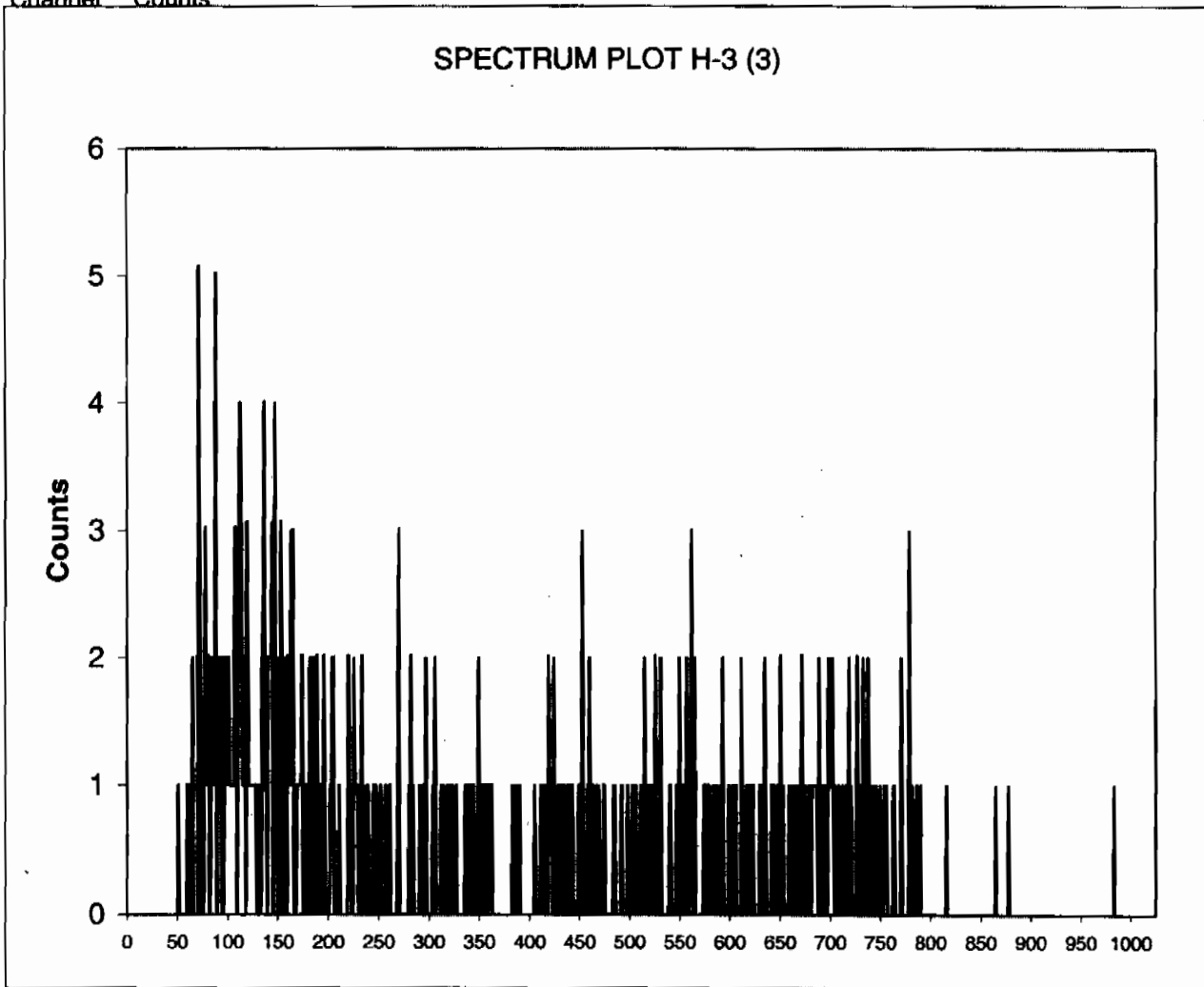
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\lsc\files\orange\953105A0\SQ081801N.001.xls
s:\lsc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 8, 246440007, 35.02965:
Quench: 762.89
Start, End, X-Axis 50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

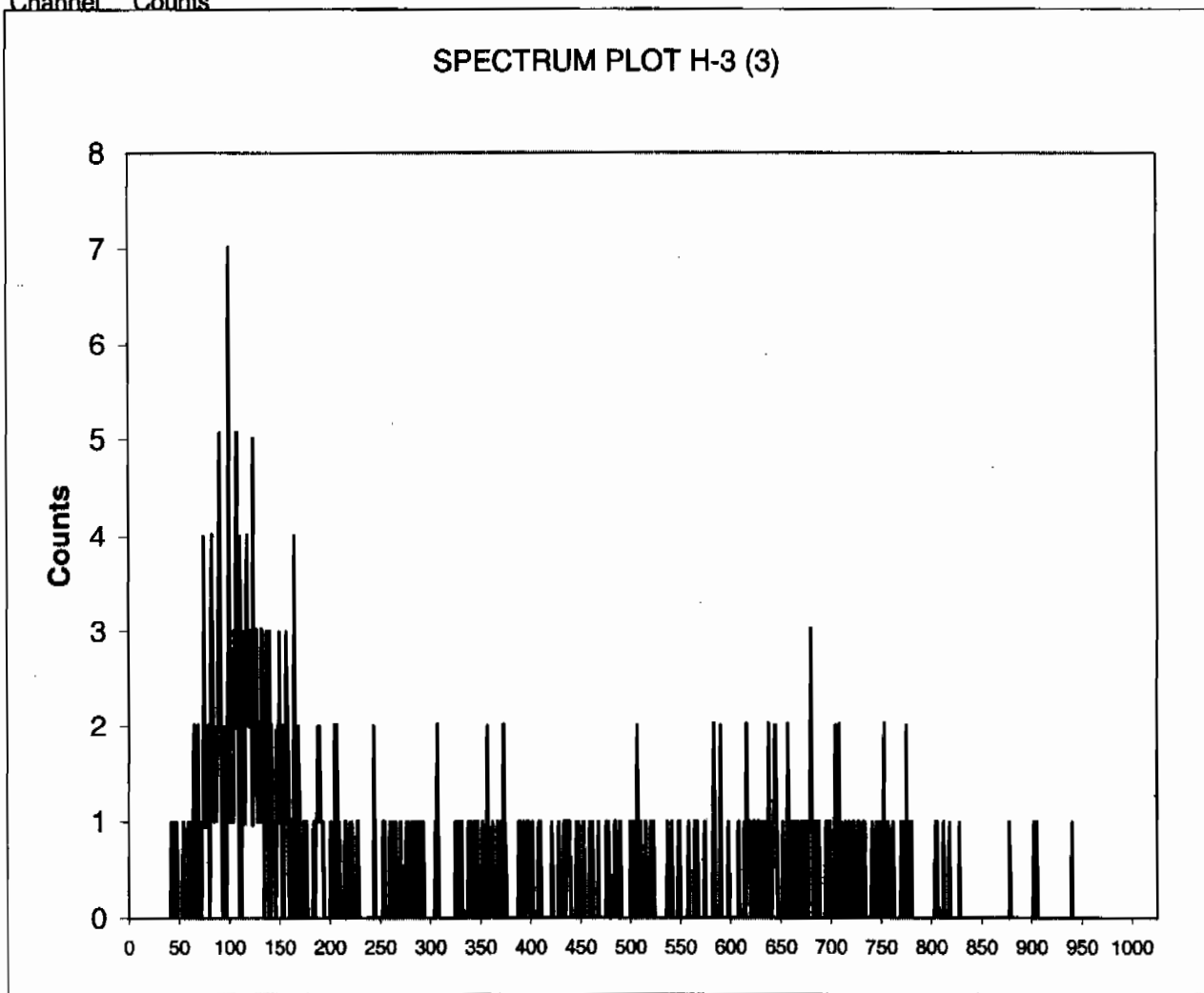
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ091901N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 9, 246440008, 35.02965:
Quench: 760.05
Start, End, X-Axis 50-175

Channel Counts



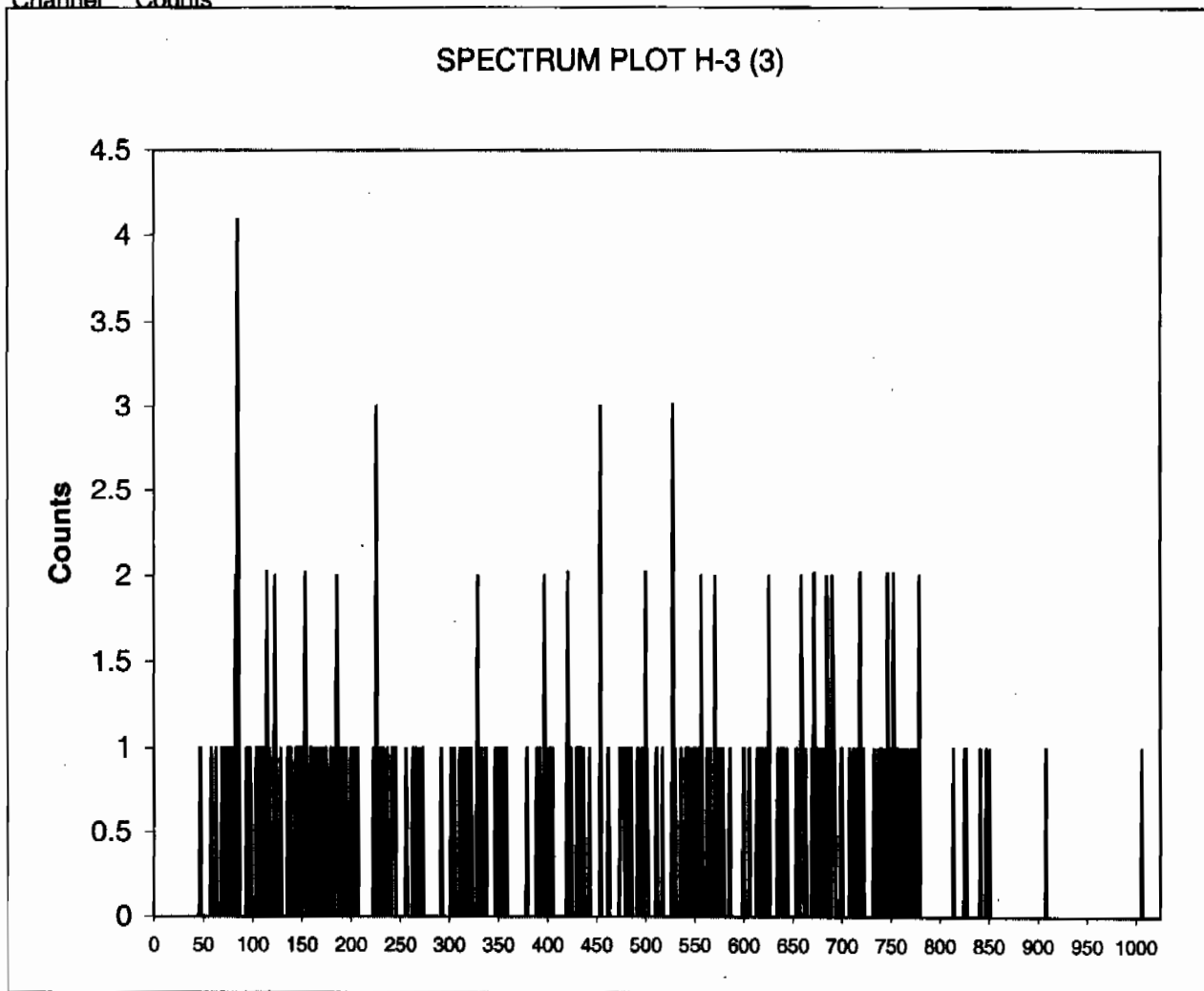
31	0
32	0
33	0
34	0
35	0

Instrument Type: Quantulus
Data Capture Date: SAT 27 FEB 2010 2:14
FileName: s:\sc\files\orange\953105A0\SQ102001N.001.xls
File Info: s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 10, 246440009, 35.02965:
Quench: 757.57
Start, End, X-Axis 50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

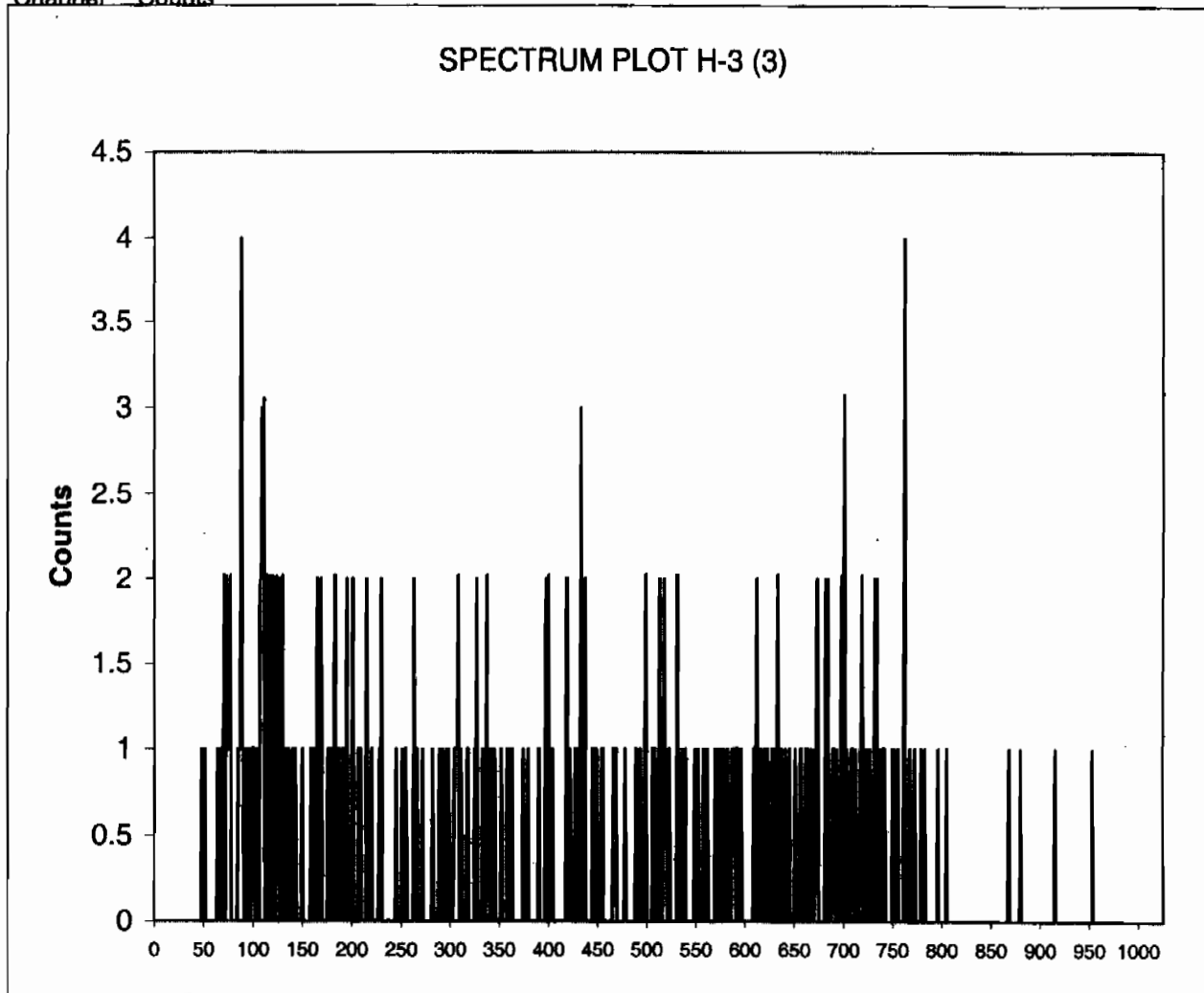
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ112101N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 11, 246440010, 35.02965:
Quench: 759.31
Start, End, X-Axis 50-175

Channel Counts



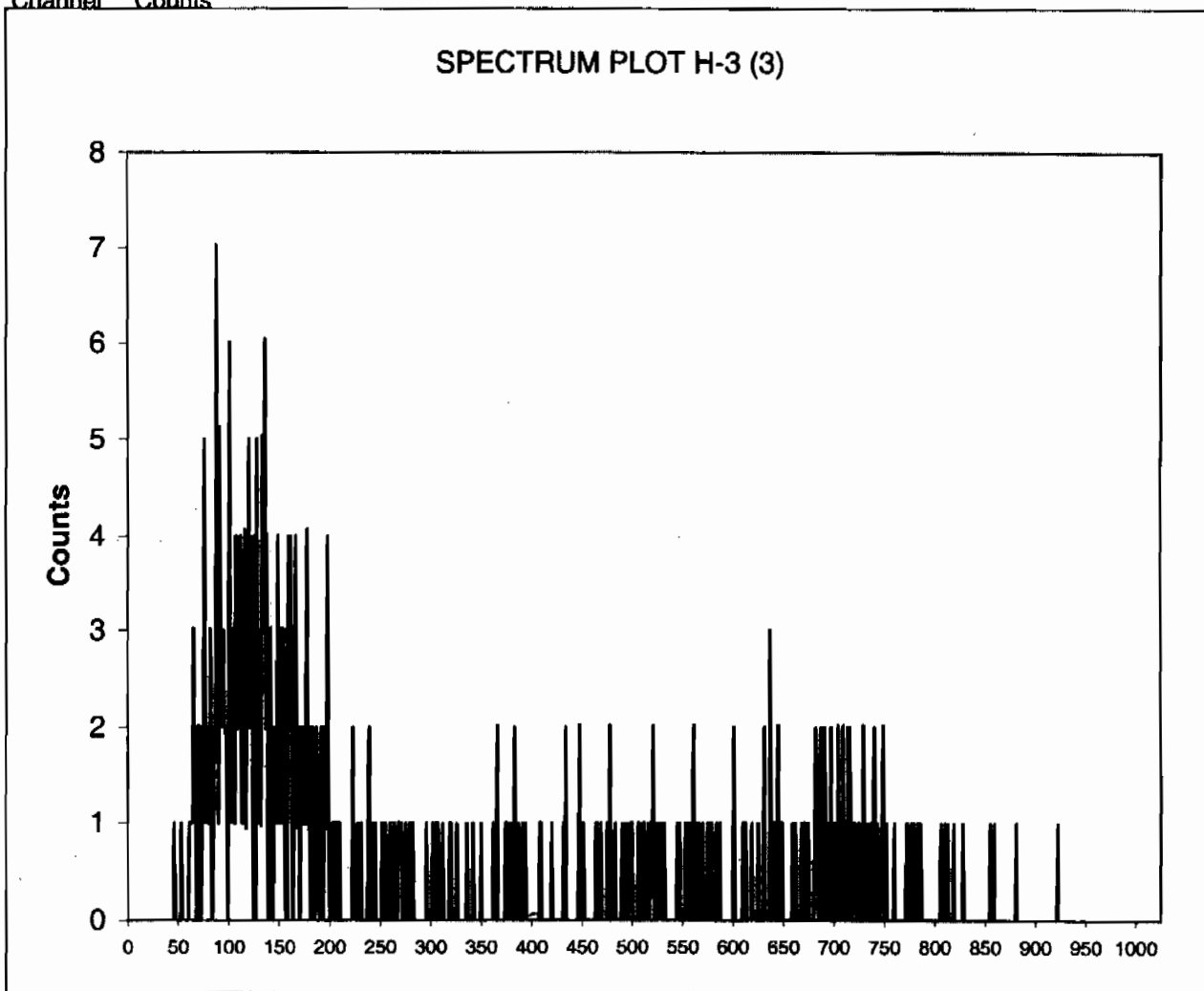
31	0
32	0
33	0
34	0
35	0

Instrument Type: Quantulus
Data Capture Date: SAT 27 FEB 2010 2:14
FileName: s:\sc\files\orange\953105A0\SQ122201N.001.xls
File Info: s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 12, 246440011, 35.02965:
Quench: 762.72
Start, End, X-Axis 50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ132301N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

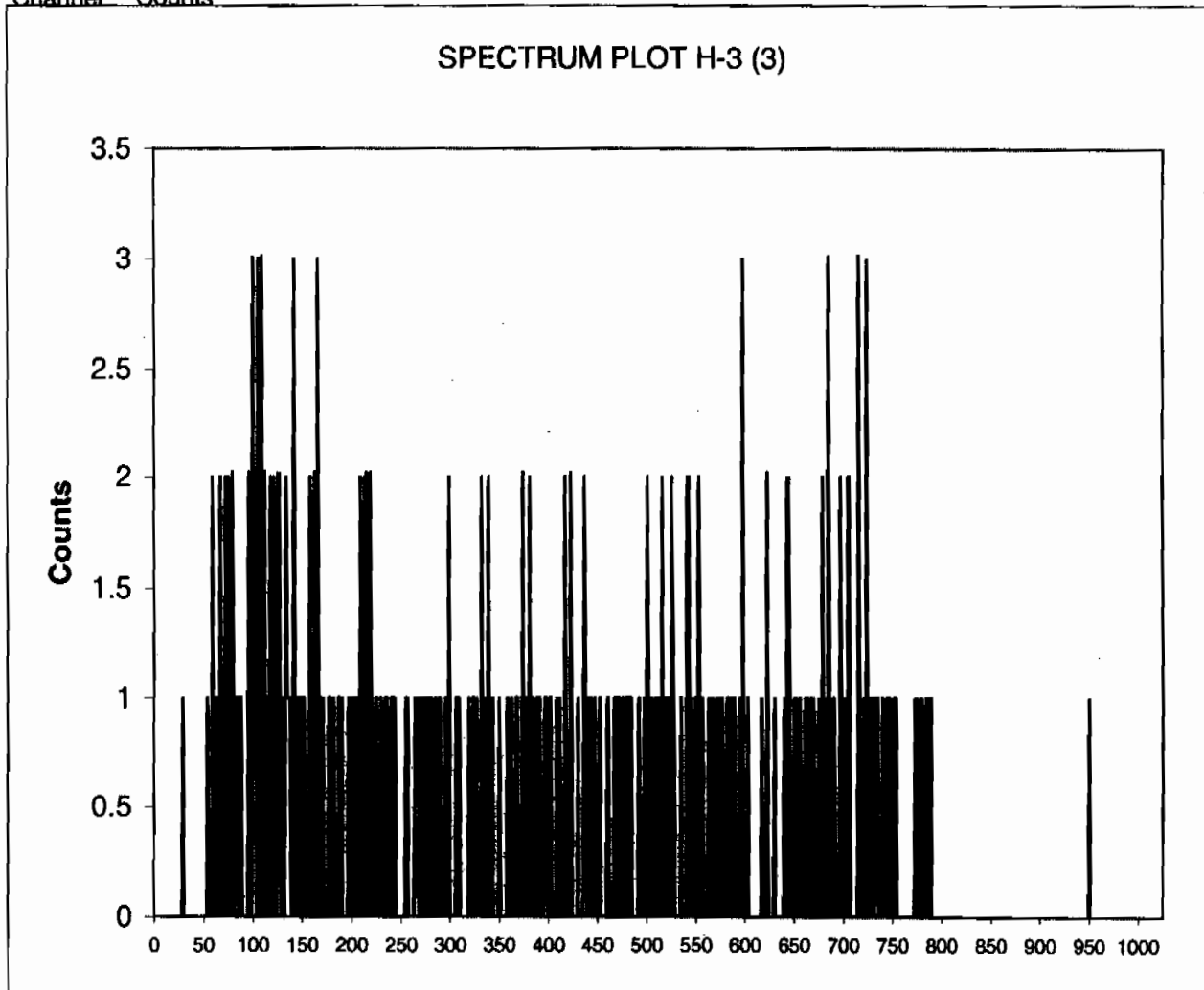
ID:
Comments:

H-3 (3)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

13, 246440012, 35.02963:
760.14
50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

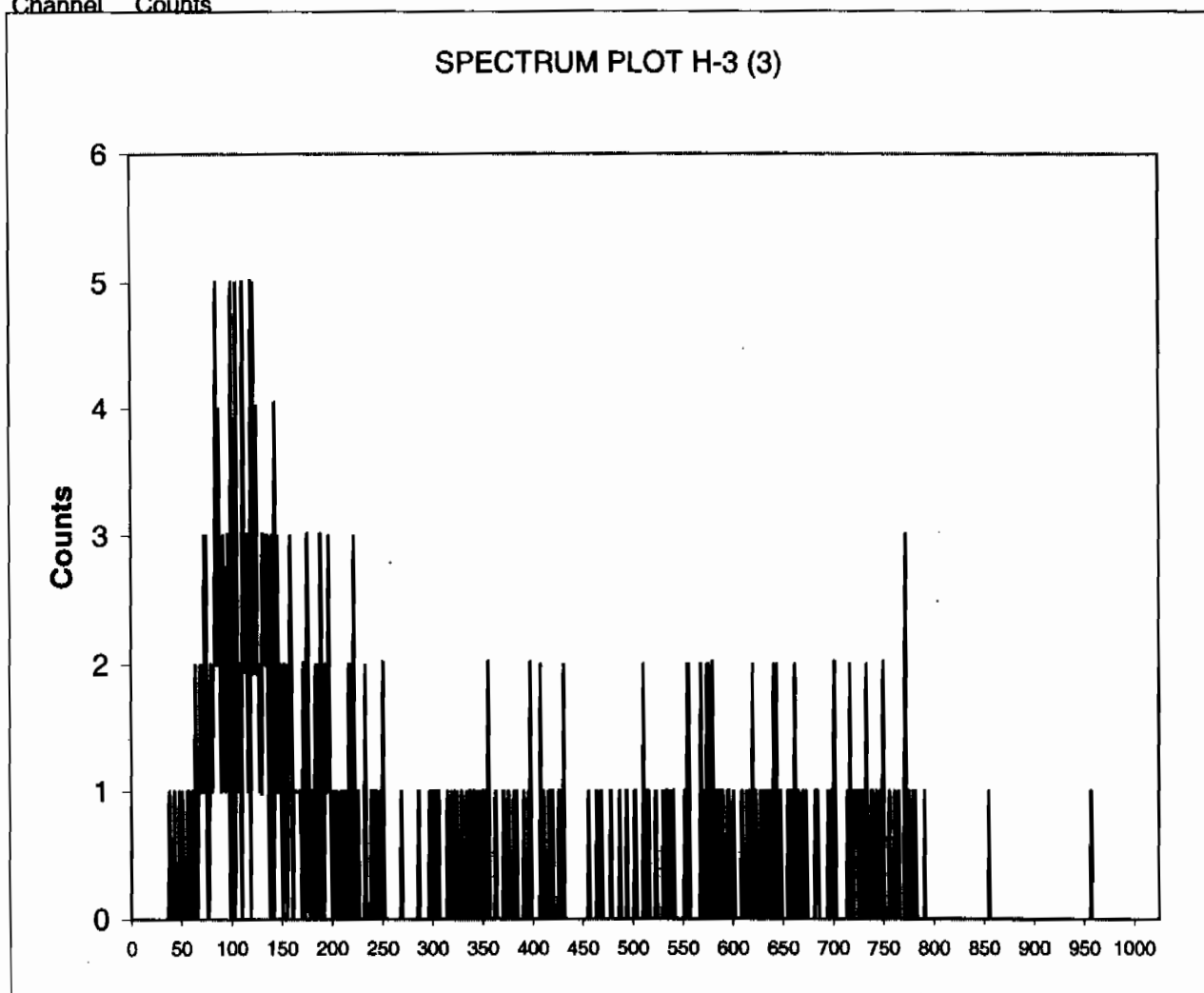
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ142401N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 14, 246440013, 35.02963:
Quench: 762.89
Start, End, X-Axis 50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\lsc\files\orange\953105A0\SQ152501N.001.xls
s:\lsc\files\orange\953105A0\U953105A0.xls

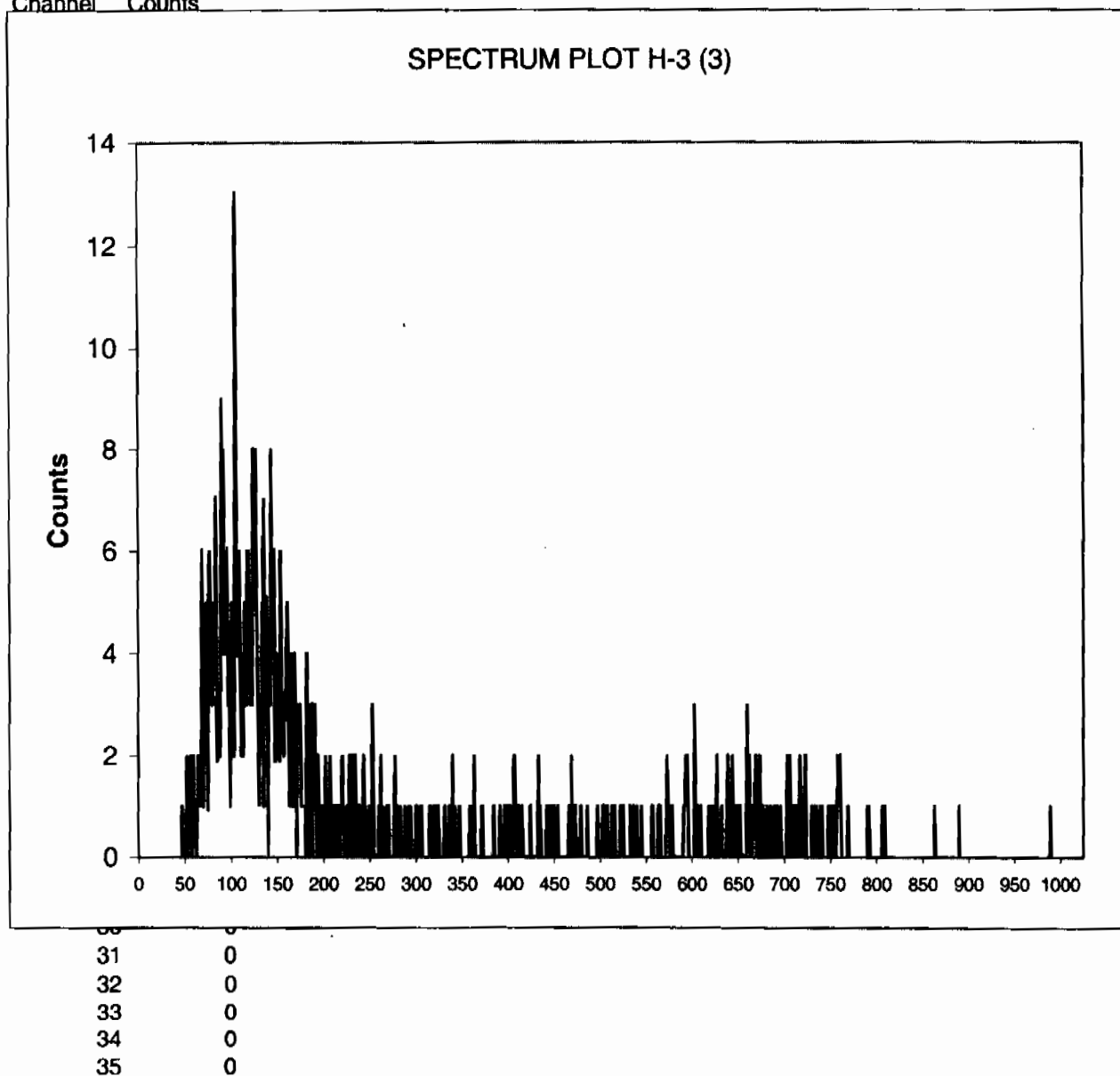
ID:
Comments:

H-3 (3)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

15, 246440014, 35.02963:
761.15
50-175

Channel Counts



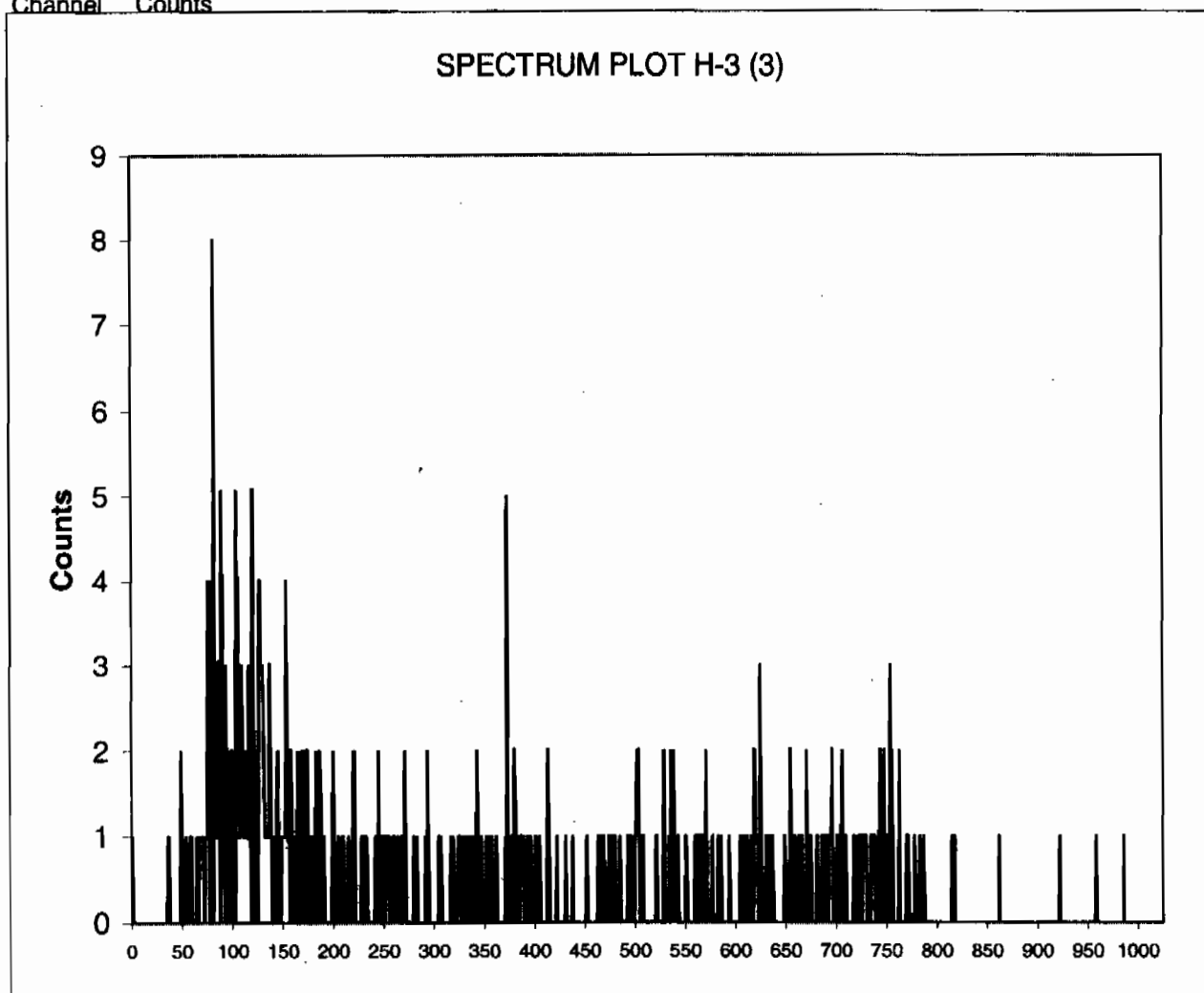
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ162601N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 16, 246477002, 35.02963:
Quench: 758.7
Start, End, X-Axis 50-175

Channel Counts



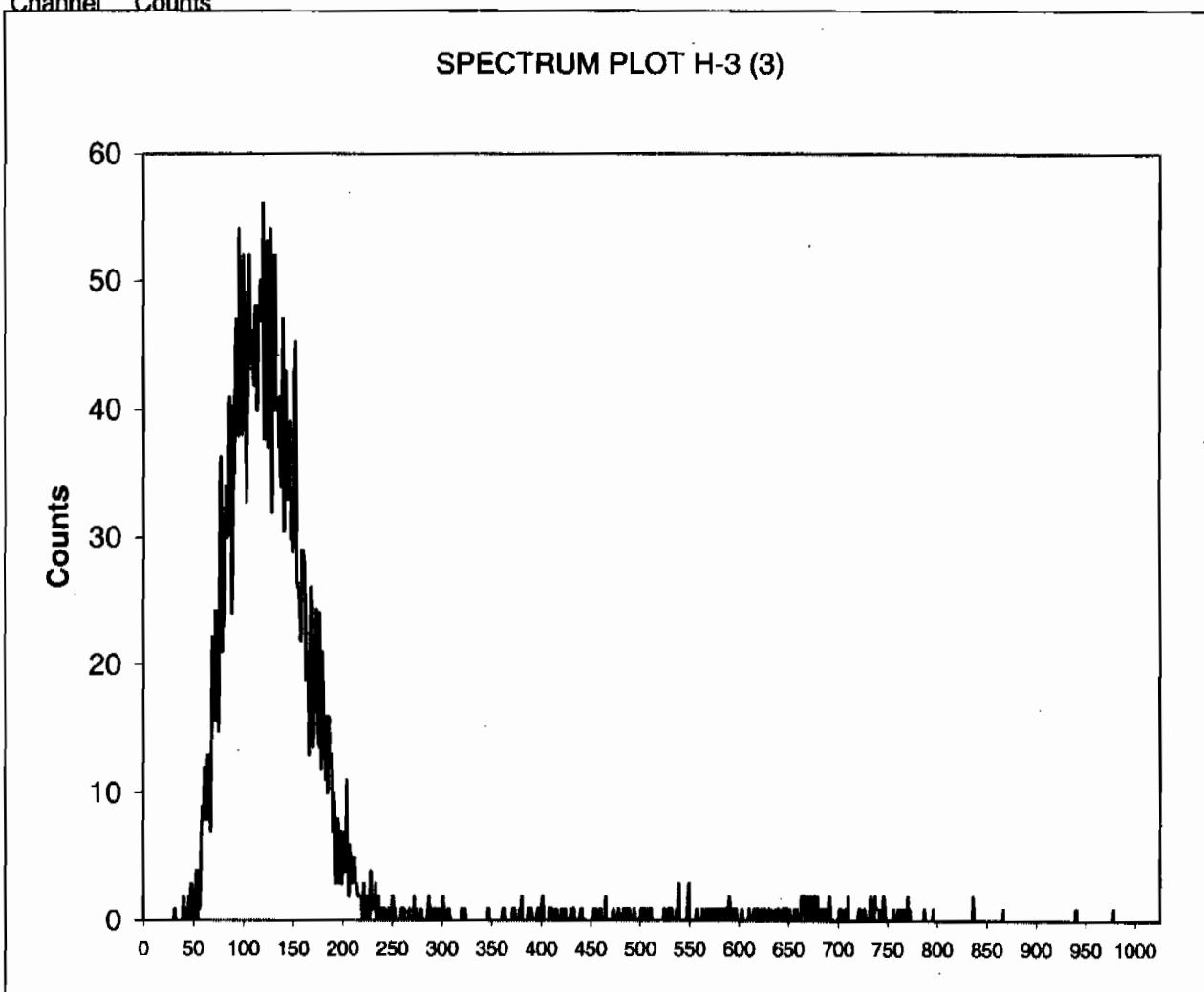
31	0
32	0
33	0
34	0
35	0

Instrument Type: Quantulus
Data Capture Date: SAT 27 FEB 2010 2:14
FileName: s:\sc\files\orange\953105A0\SQ172701N.001.xls
File Info: s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 17, 246554002, 35.02963:
Quench: 760.78
Start, End, X-Axis 50-175

Channel Counts



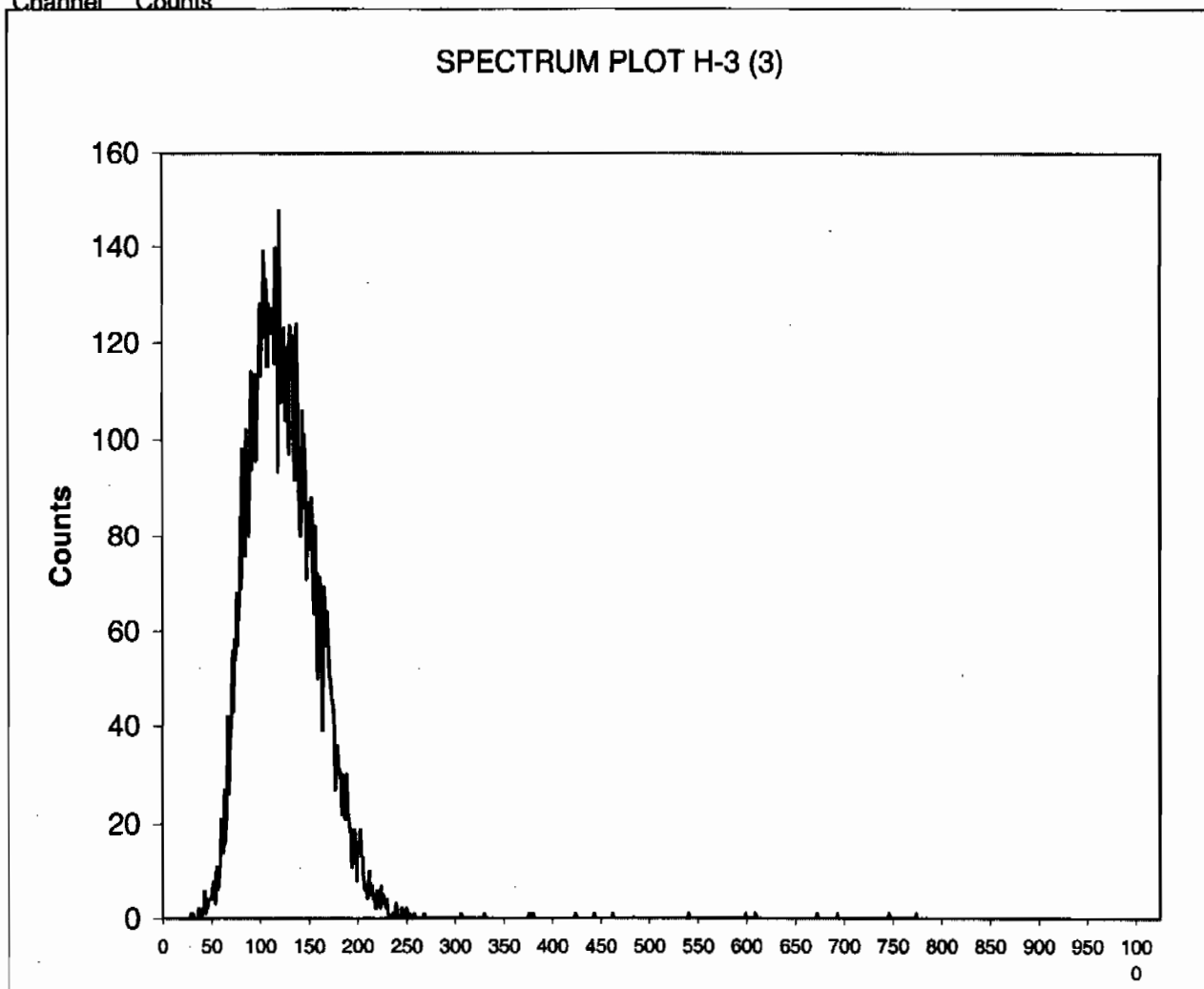
31	1
32	0
33	0
34	0
35	0

Instrument Type: Quantulus
Data Capture Date: SAT 27 FEB 2010 2:14
FileName: s:\sc\files\orange\953105A0\SQ182801N.001.xls
File Info: s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 18, 246554003, 2.912967:
Quench: 760.86
Start, End, X-Axis 50-175

Channel Counts



31	1
32	0
33	0
34	0
35	0

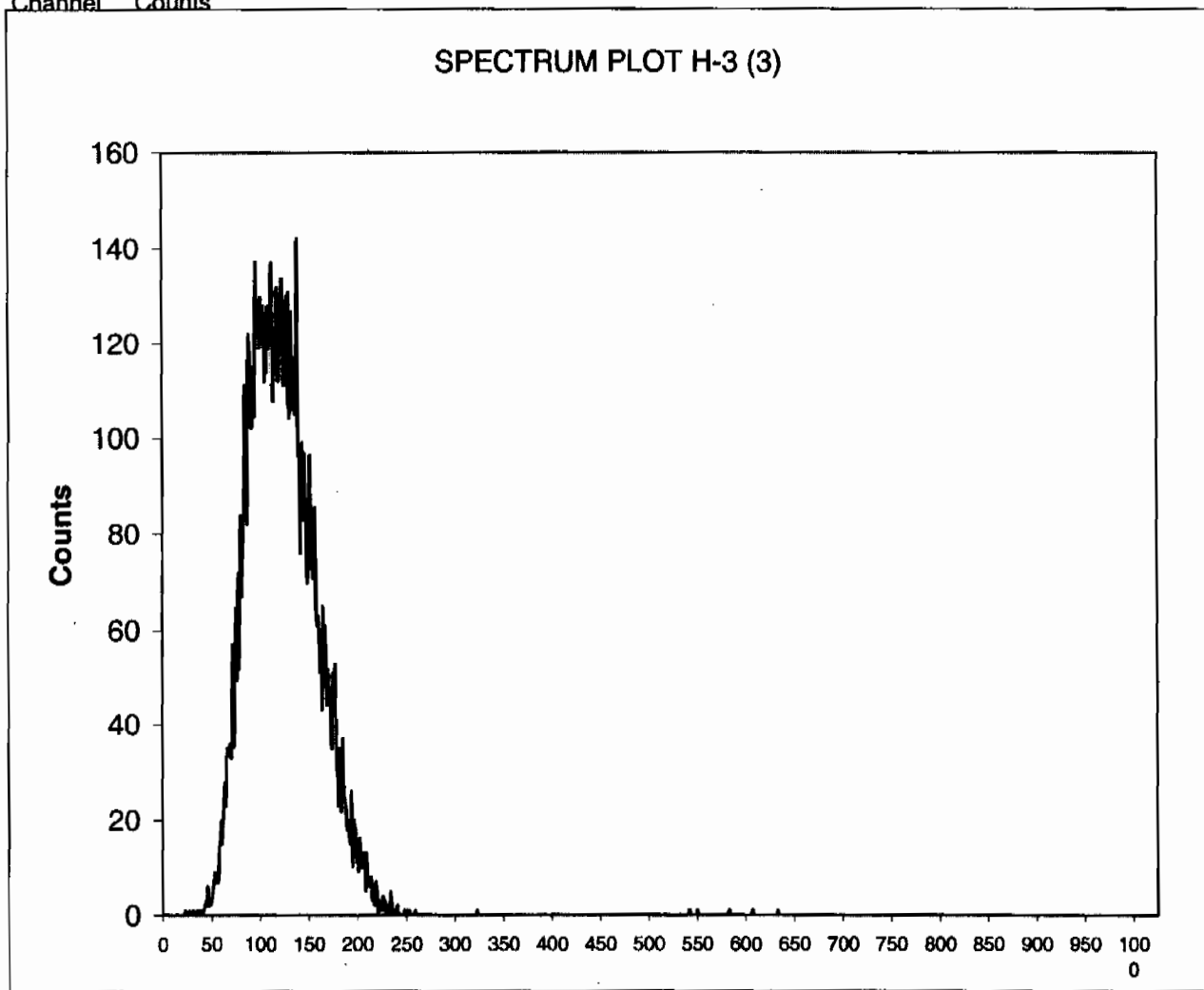
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ192901N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 19, 246554004, .8462833:
Quench: 757.04
Start, End, X-Axis 50-175

Channel Counts



31	1
32	0
33	0
34	0
35	1

Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ203001N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

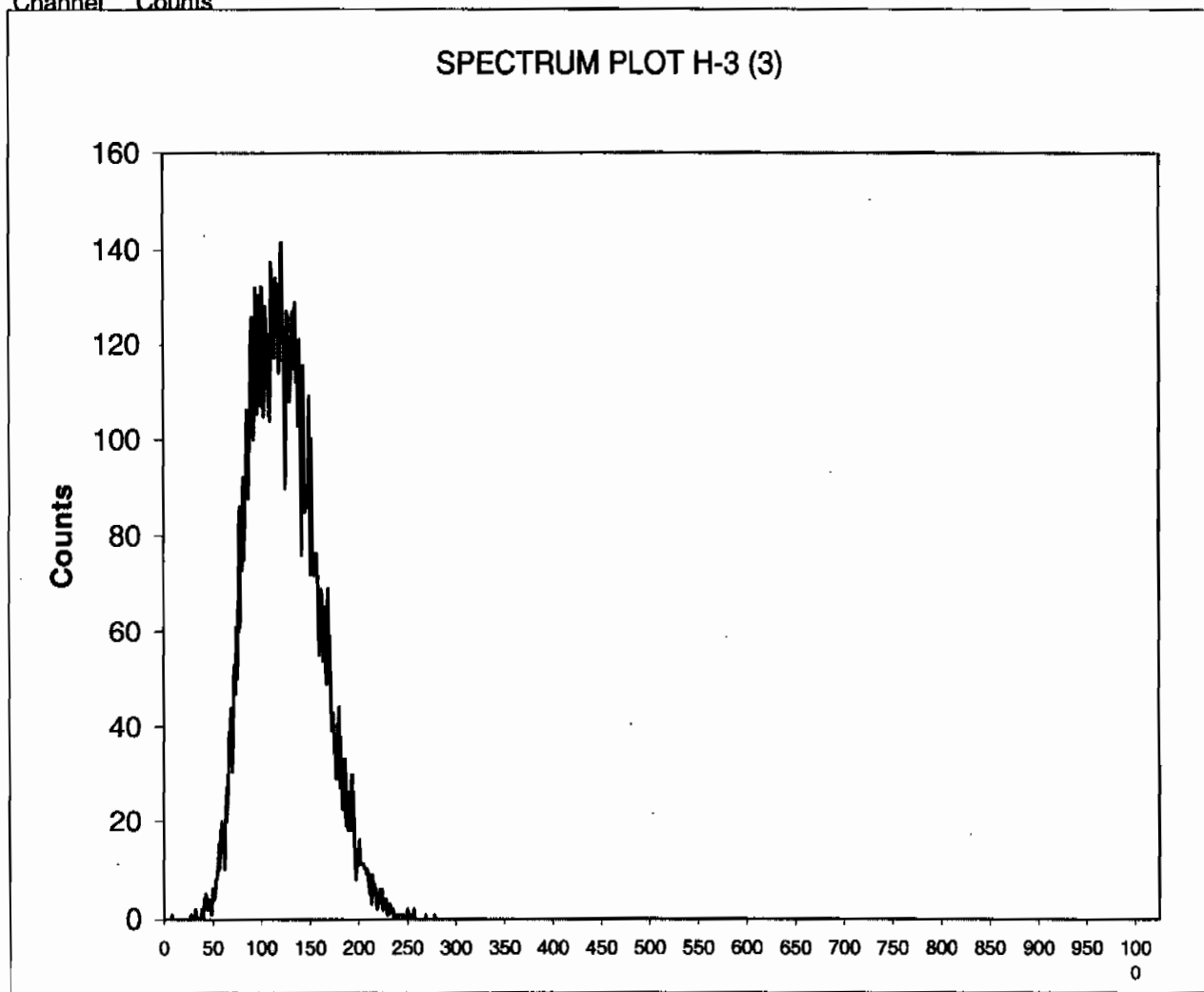
ID:
Comments:

H-3 (3)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

20, 246554005, .46295:
757.96
50-175

Channel Counts



31	0
32	2
33	1
34	0
35	0

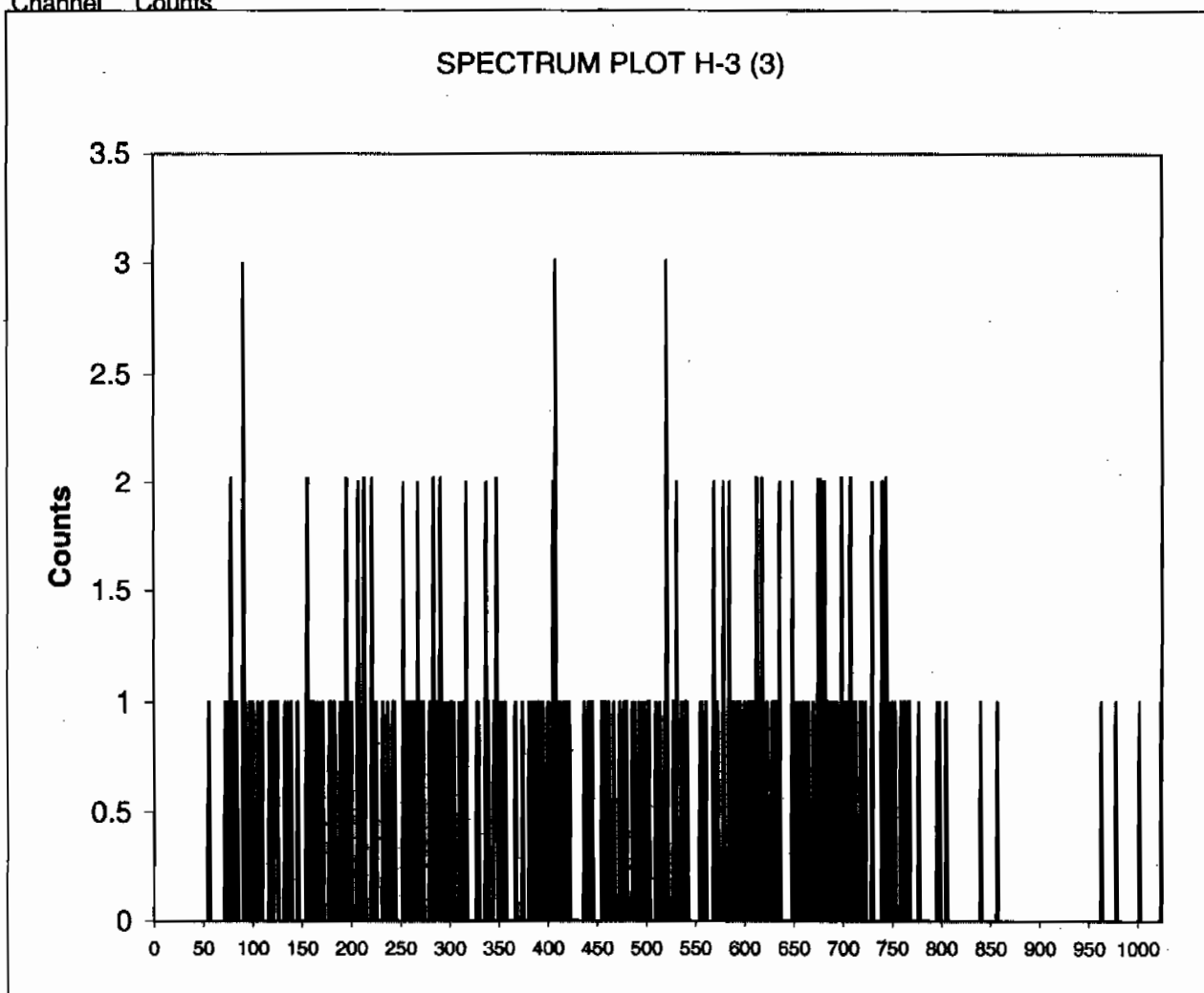
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ213101N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 21, 1202042922, 35.01295:
Quench: 761.97
Start, End, X-Axis 50-175

Channel Counts



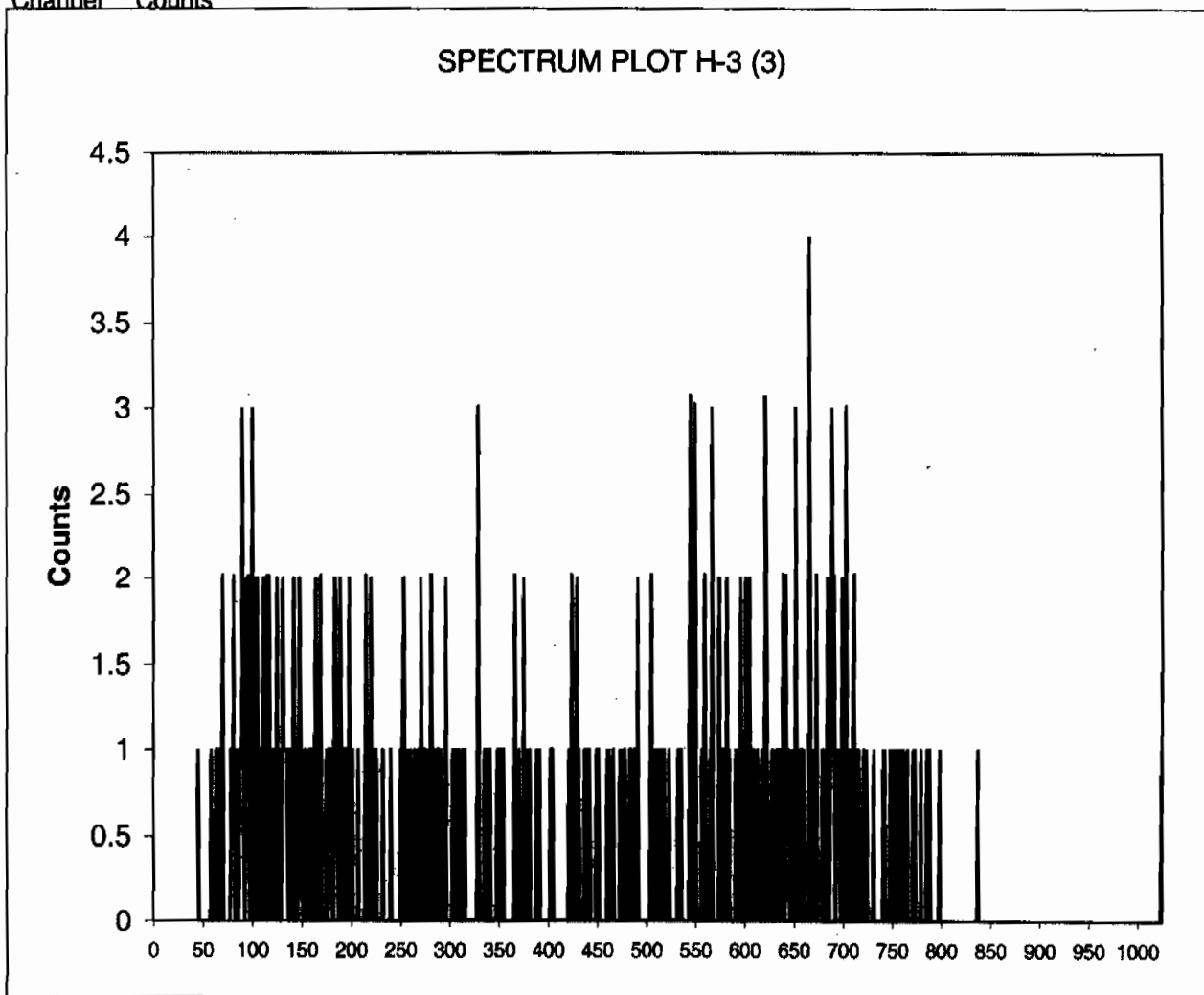
31	0
32	0
33	0
34	0
35	0

Instrument Type: Quantulus
Data Capture Date: SAT 27 FEB 2010 2:14
FileName: s:\sc\files\orange\953105A0\SQ223201N.001.xls
File Info: s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 22, 1202042923, 35.0296:
Quench: 758.79
Start, End, X-Axis: 50-175

Channel Counts



31 0
32 0
33 0
34 0
35 0

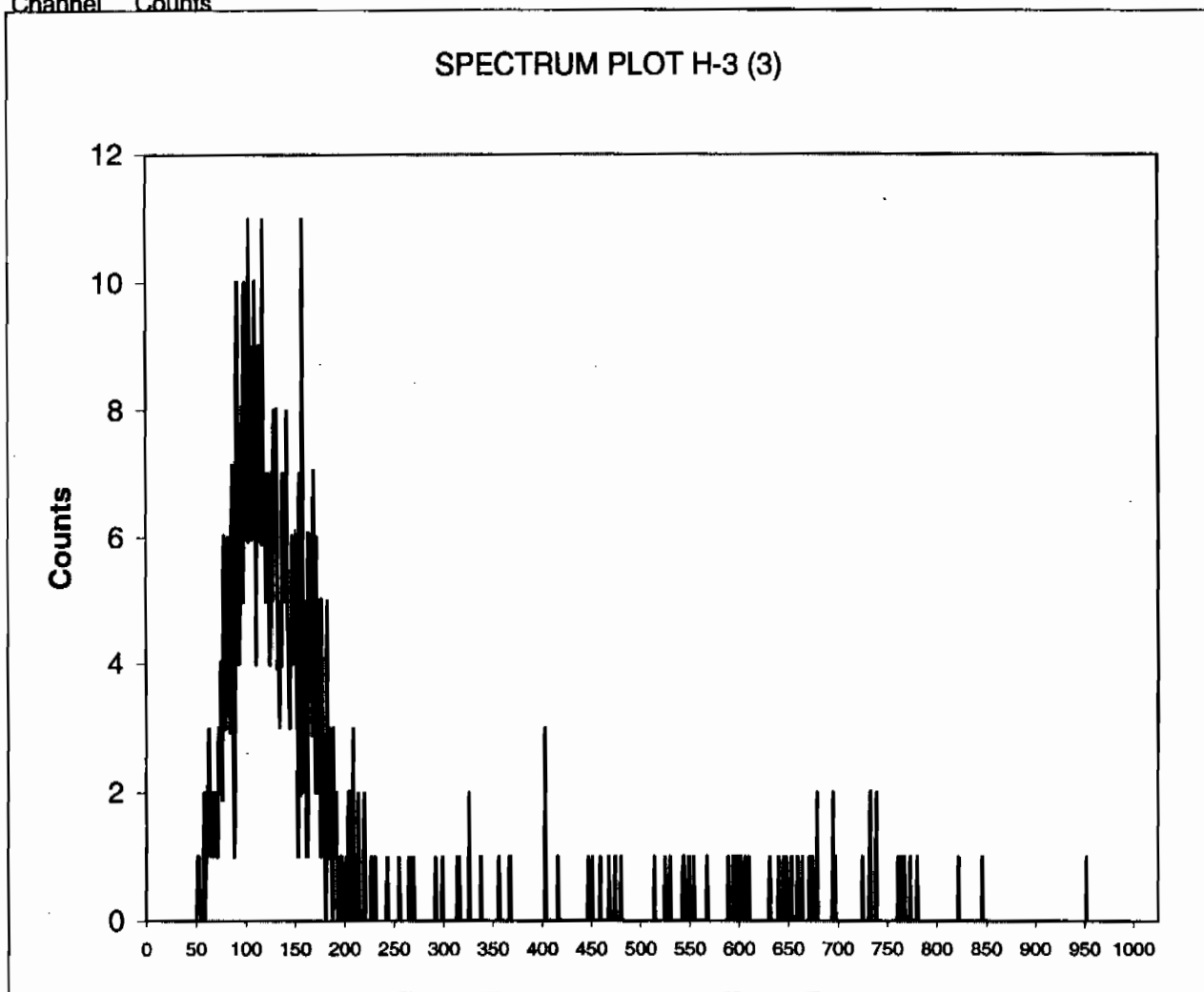
Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
SAT 27 FEB 2010 2:14
s:\sc\files\orange\953105A0\SQ233301N.001.xls
s:\sc\files\orange\953105A0\U953105A0.xls

ID: H-3 (3)
Comments: ORANGE

Sample, Rack-Pos, Time: 23, 1202042924, 15.0296:
Quench: 760.4
Start, End, X-Axis 50-175

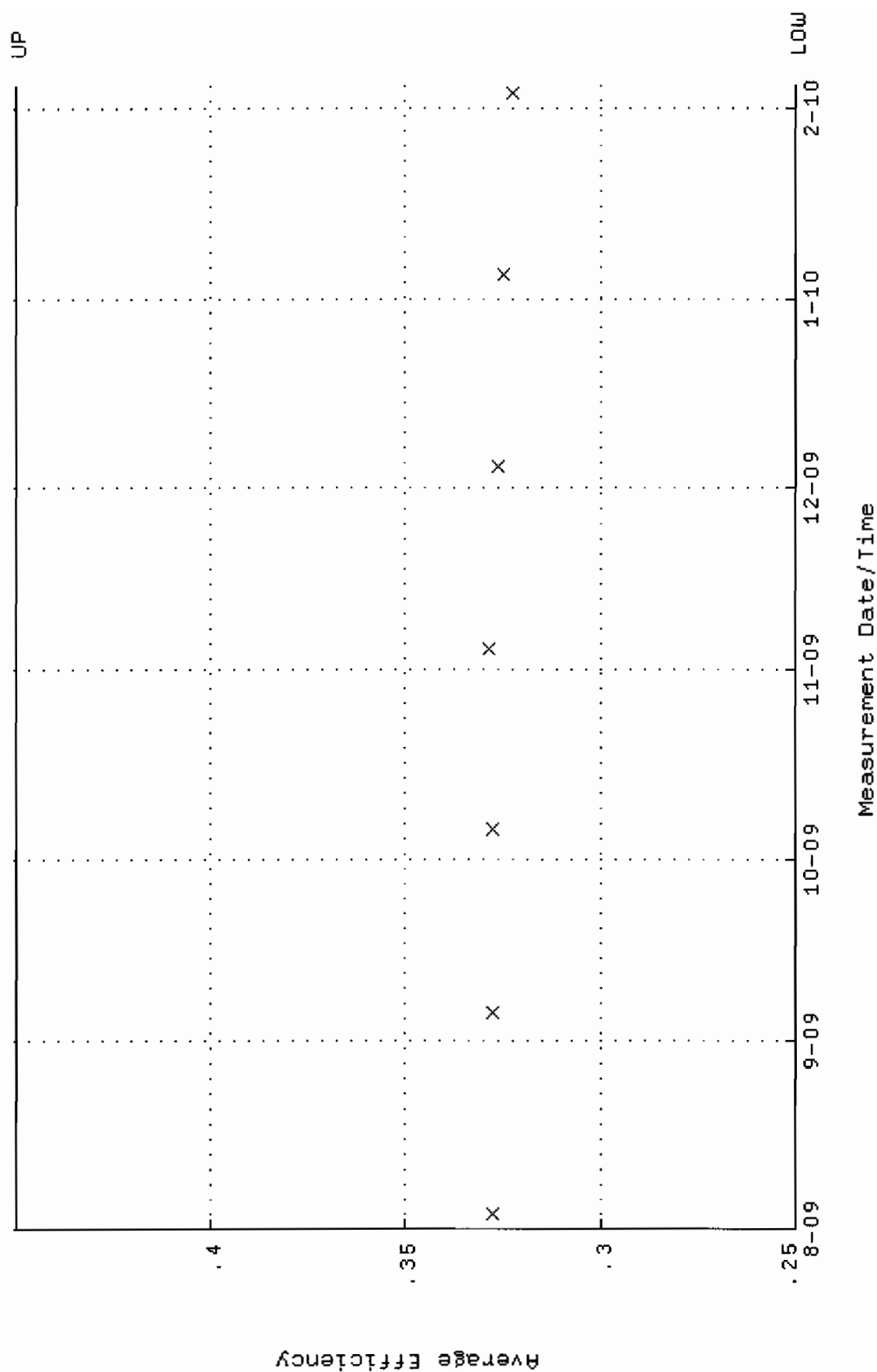
Channel Counts



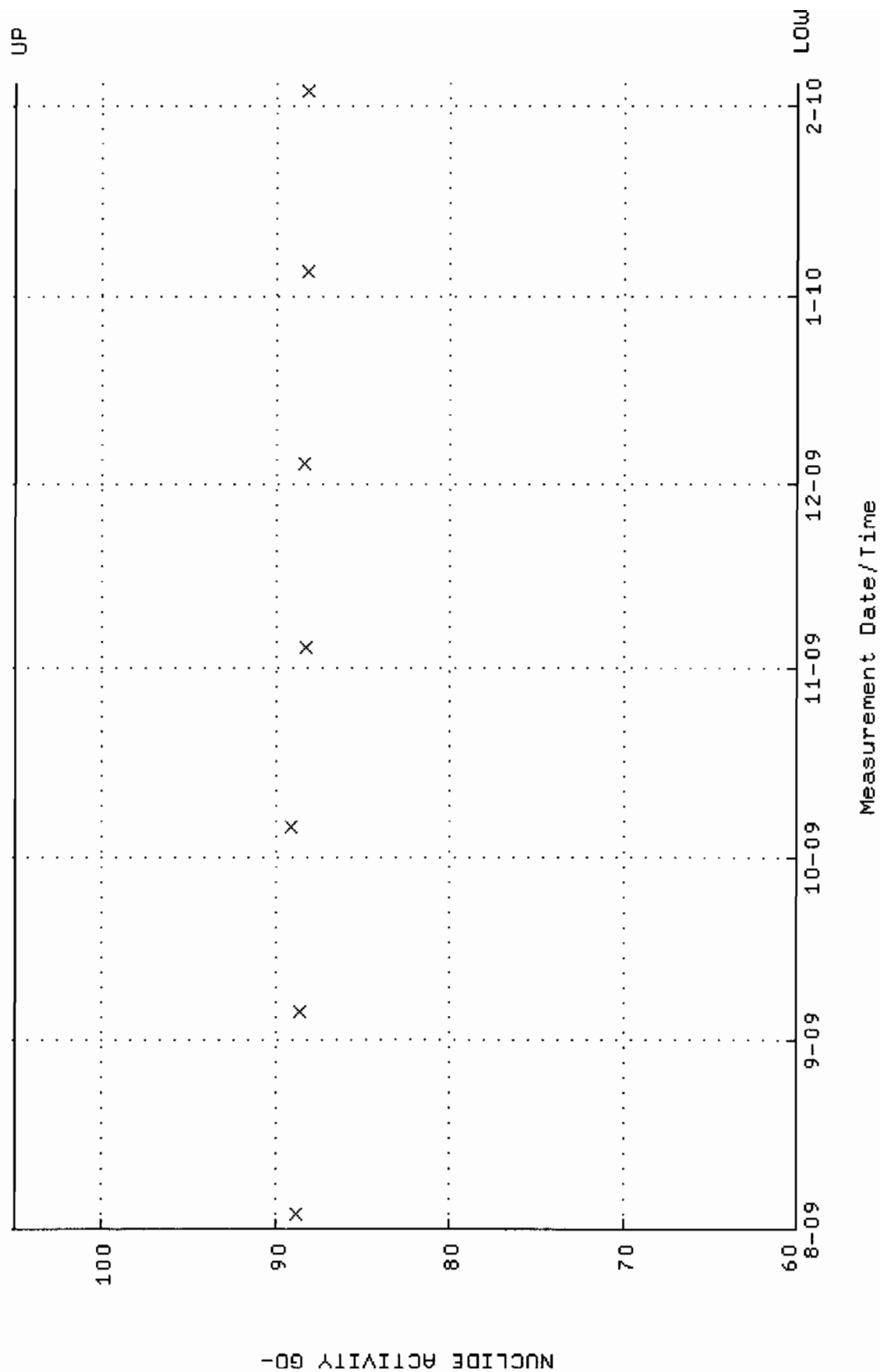
31	0
32	0
33	0
34	0
35	0

BACKGROUND AND EFFICIENCY DATA

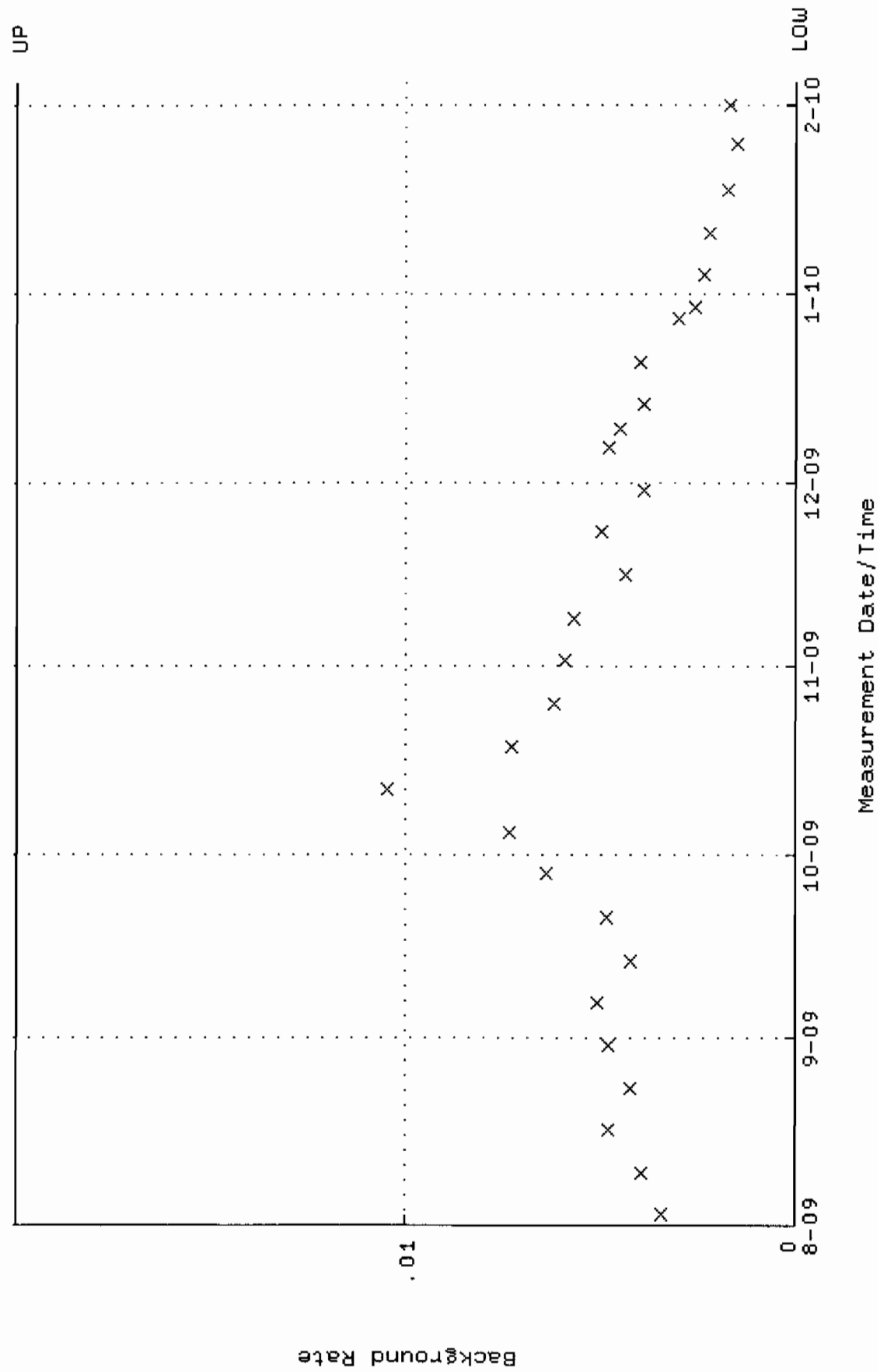
QA filename : DKA100:[ENV_ALPHA.QA.W]W025.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



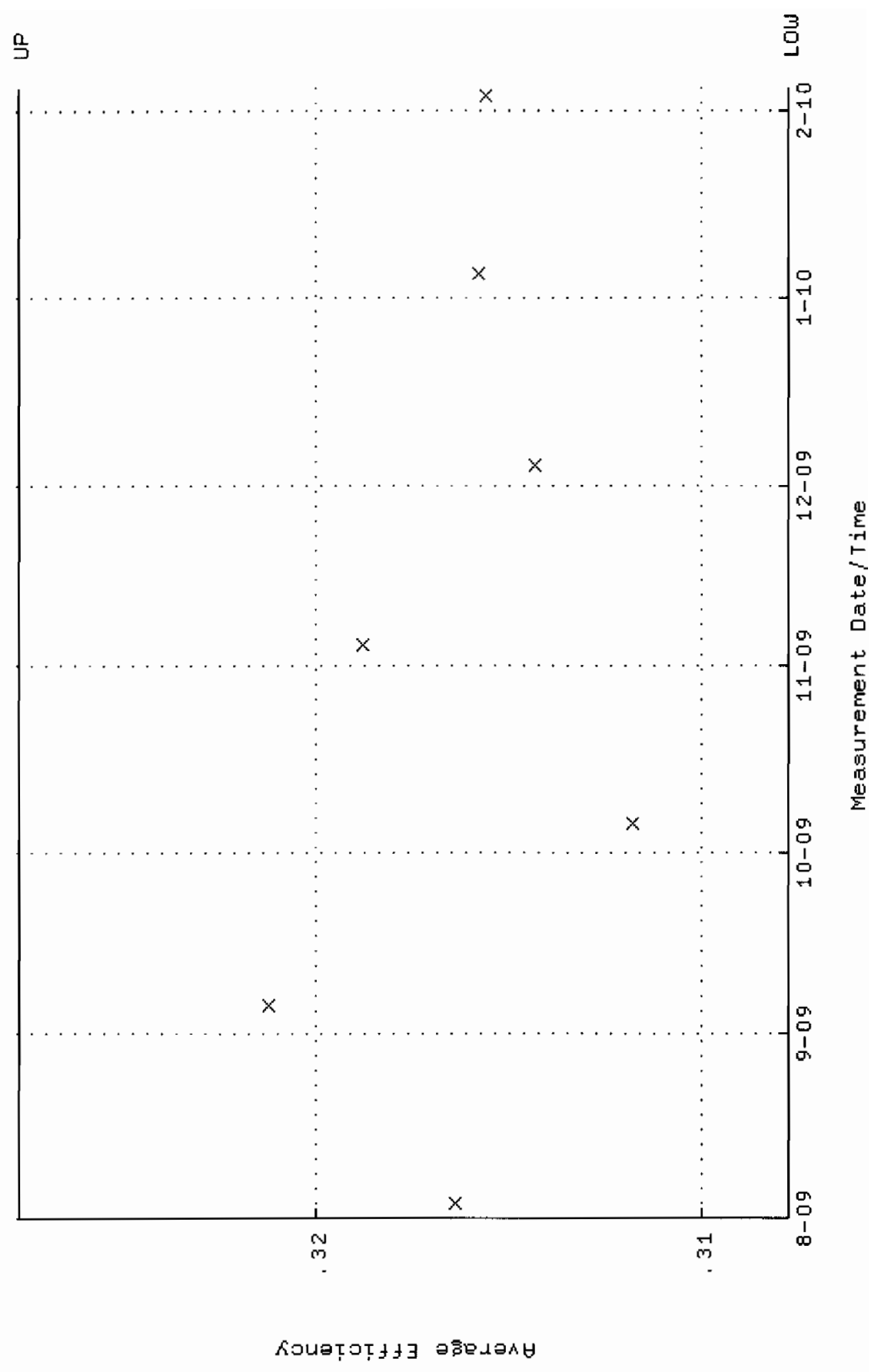
QA filename : DKA100:[ENV_ALPHA.QA.W]W025.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



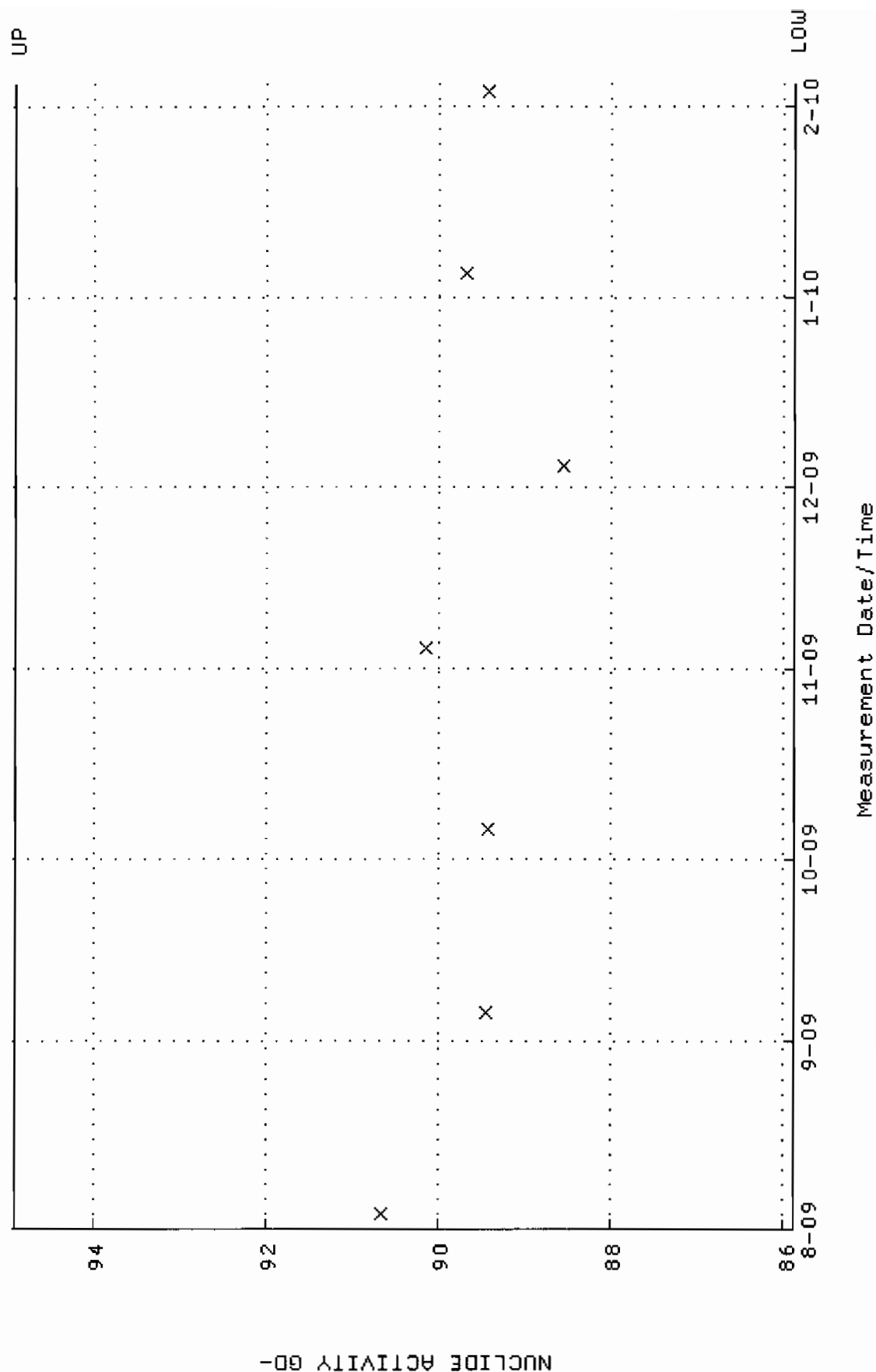
QA filename : DKA100:[ENV_ALPHA.QA.B]B025.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:35 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



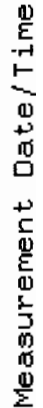
QA filename : DKA100:[ENV_ALPHA.QA.W]W026.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
Lower/Upper Lmts: 0.307728 through 0.327728



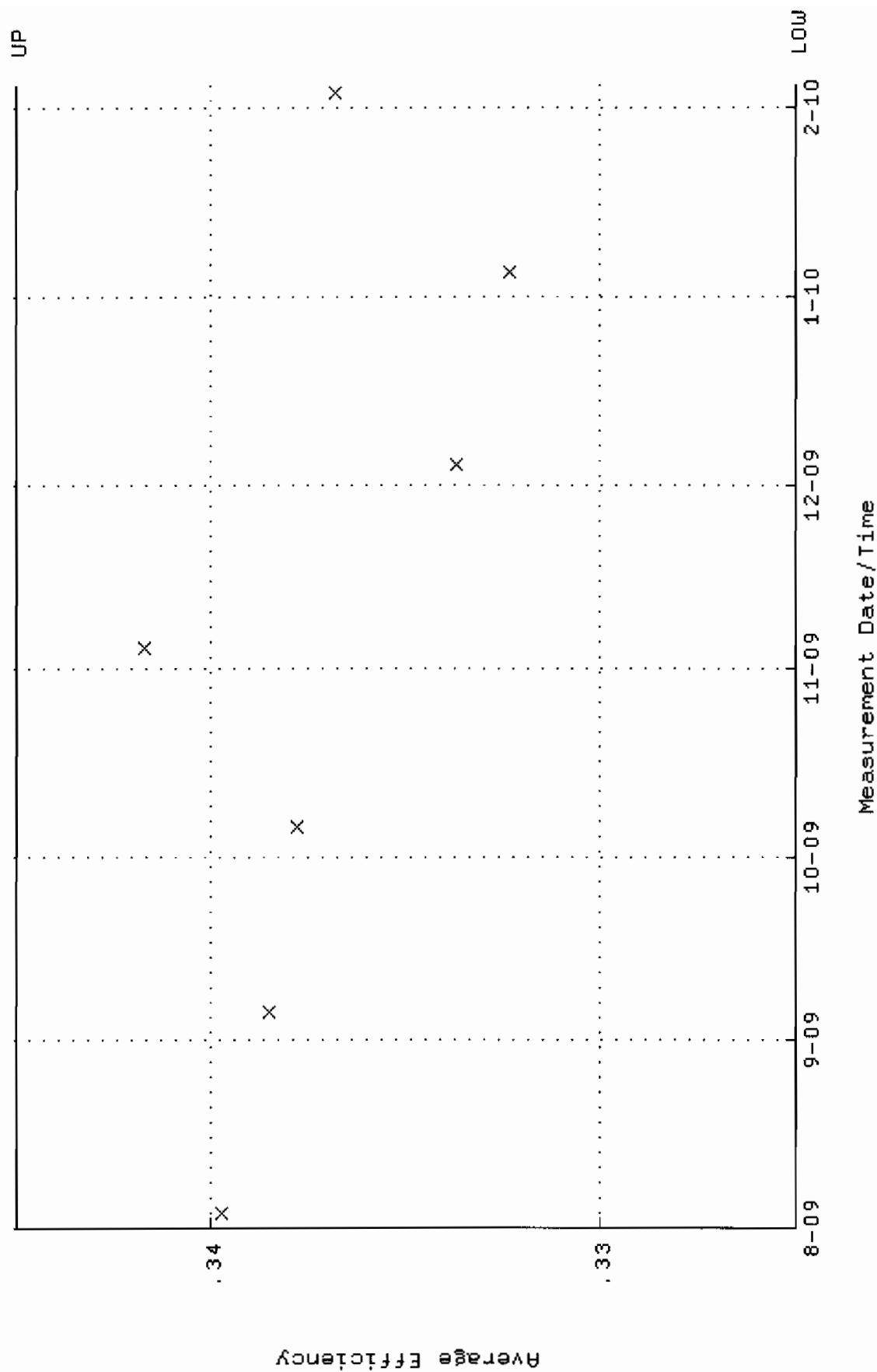
QA filename : DKA100:[ENV_ALPHA.QA.W]W026.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.8763 through 94.9159



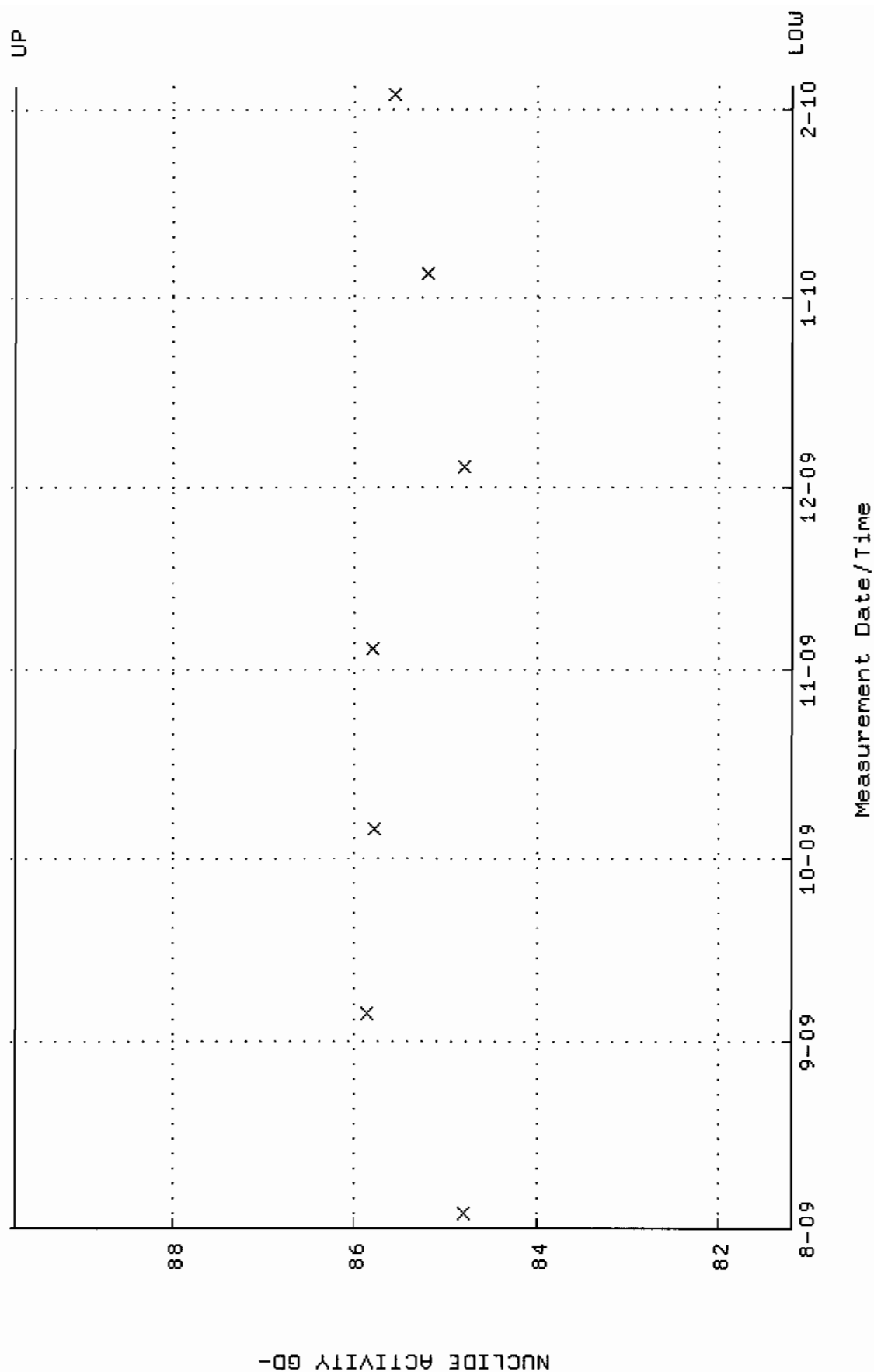
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



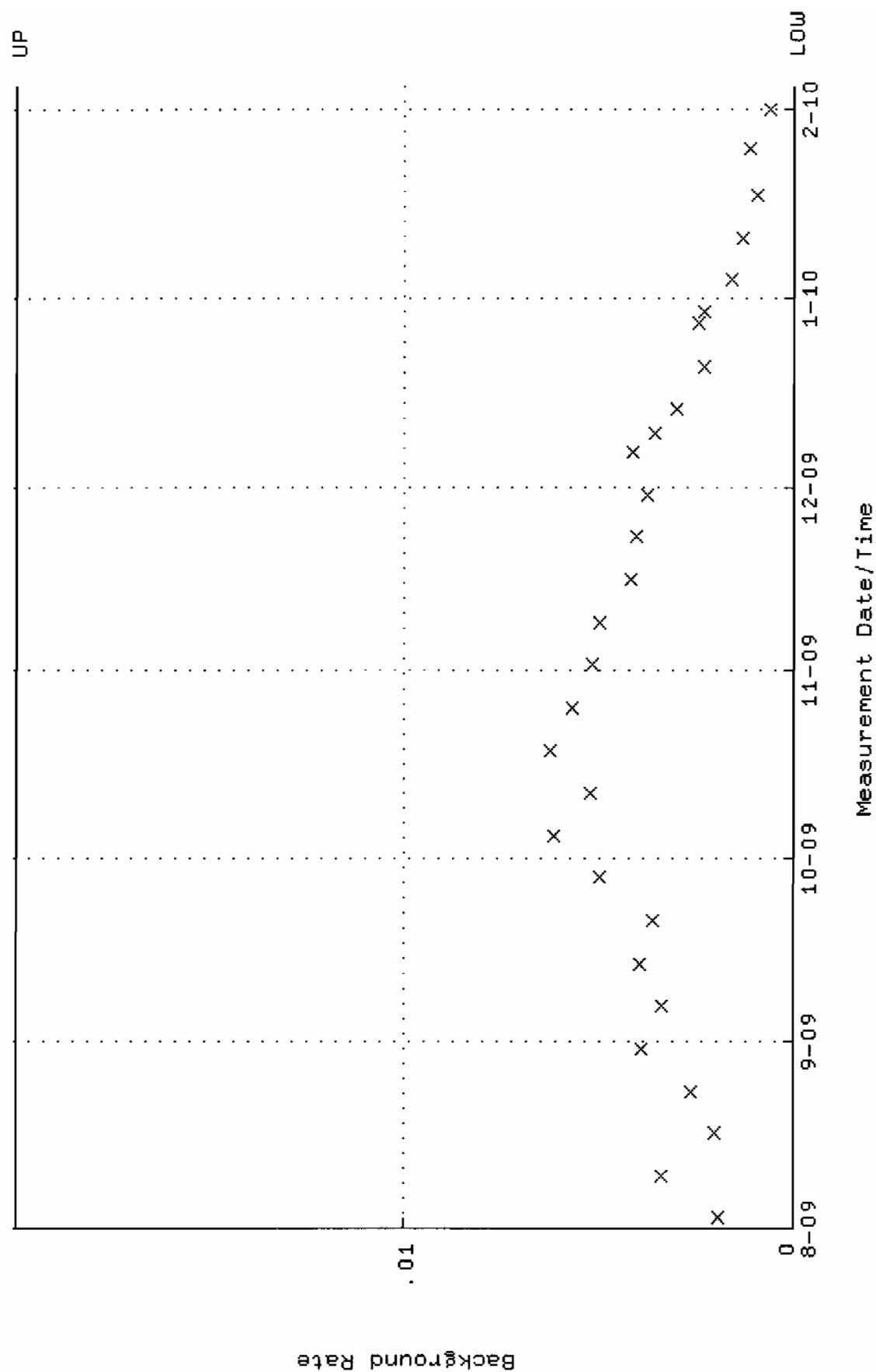
QA filename : DKA100:[ENV_ALPHA.QA.W]W027.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.324980 through 0.344980



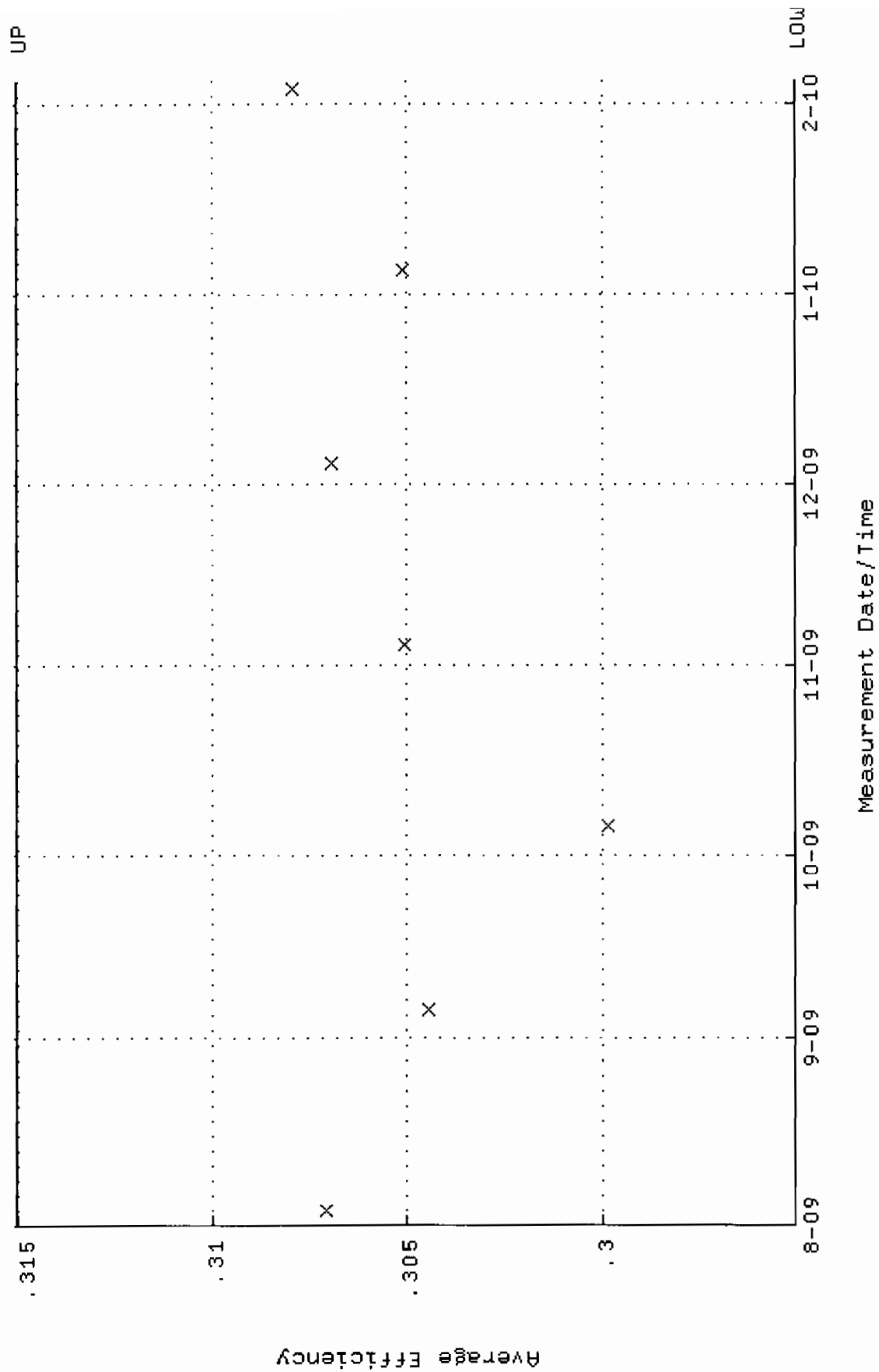
QA filename : DKA100:[ENV_ALPHA.QA.W]W027.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 81.2030 through 89.7506



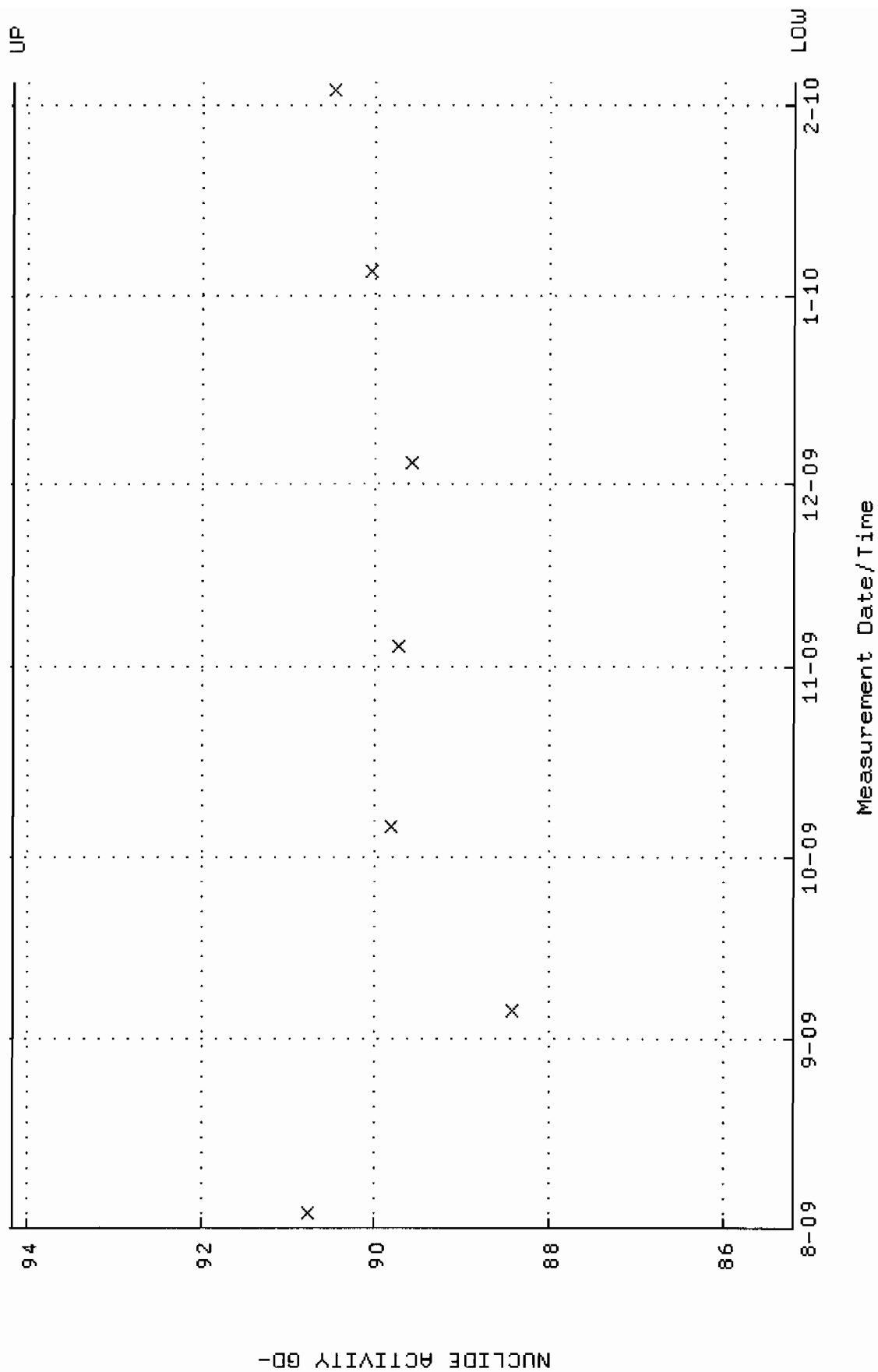
QA filename : DKA100:[ENV-ALPHA.QA.B]B027.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:35 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



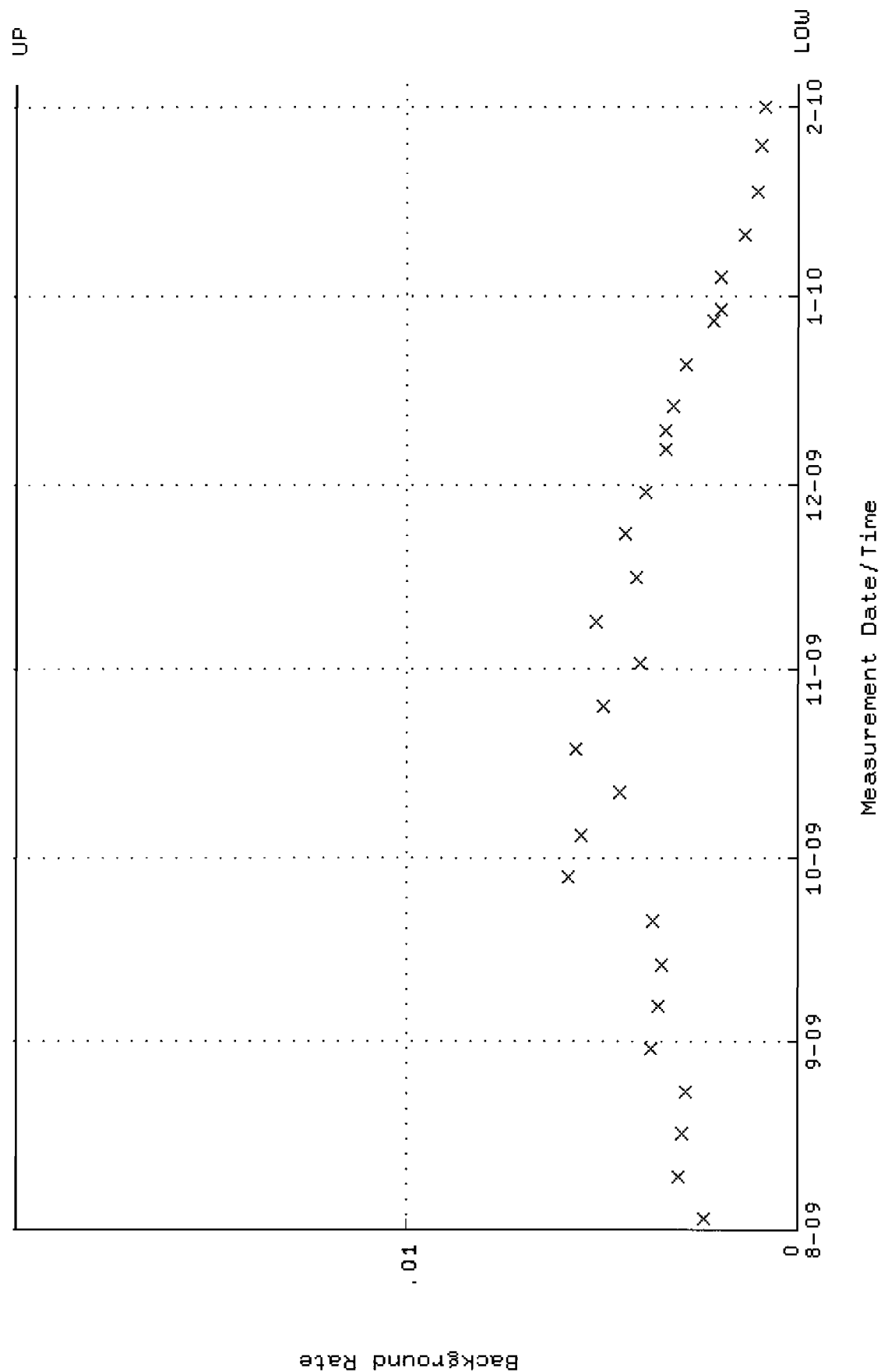
QA filename : DKA100:[ENV_ALPHA.QA.W]W028.QAF; 4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.295040 through 0.315040



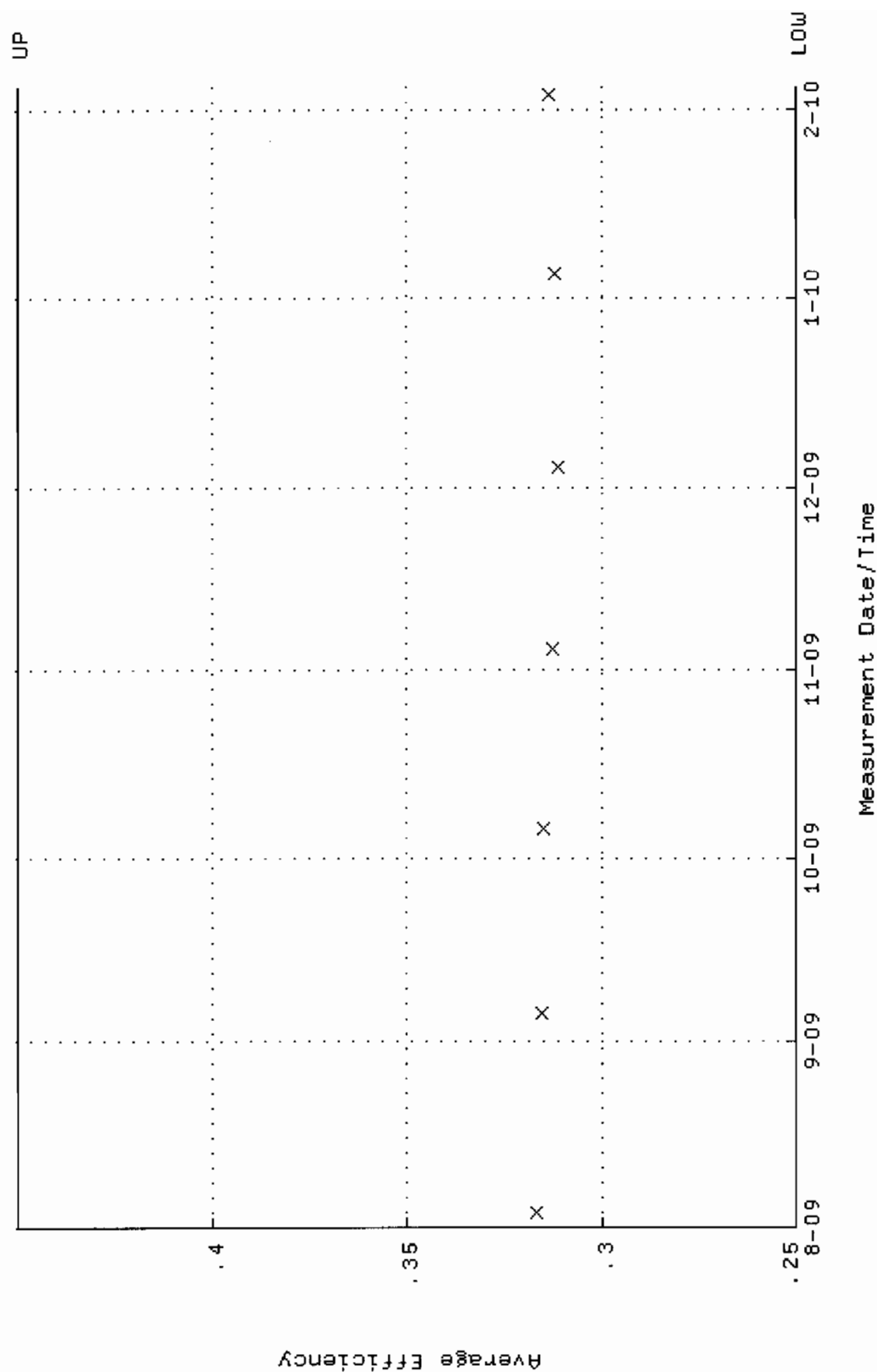
QA filename : DKA100:[ENV_ALPHA.QA.W]W028.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.1965 through 94.1645



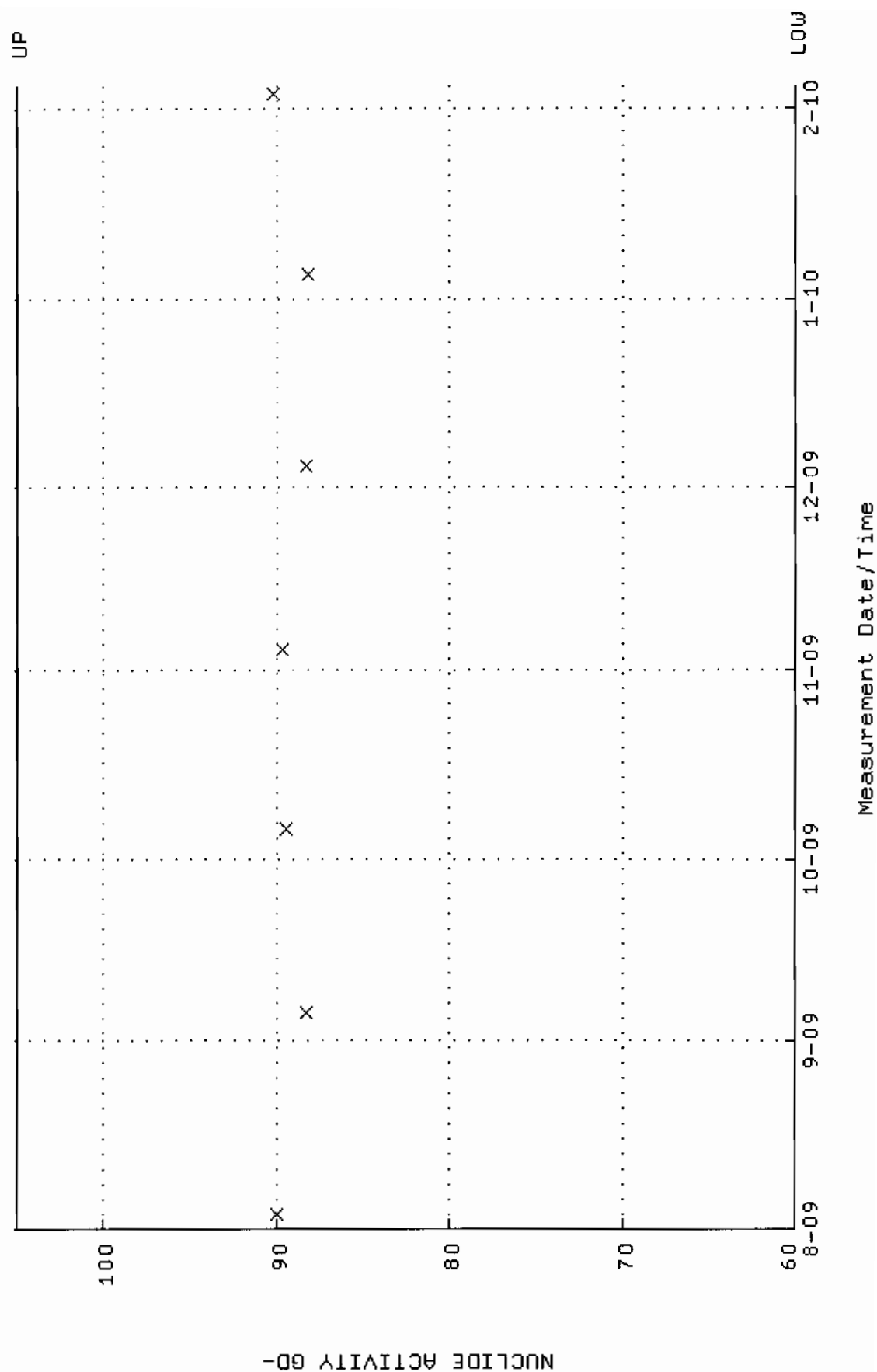
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QA filename      : DKA100:[ENV_ALPHA.QA.B]B028.QAF;1
Parameter Name   : BACKRATE (Background Rate)
Start/End Dates  : 2-AUG-2009 17:38:35 through 4-FEB-
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02
```



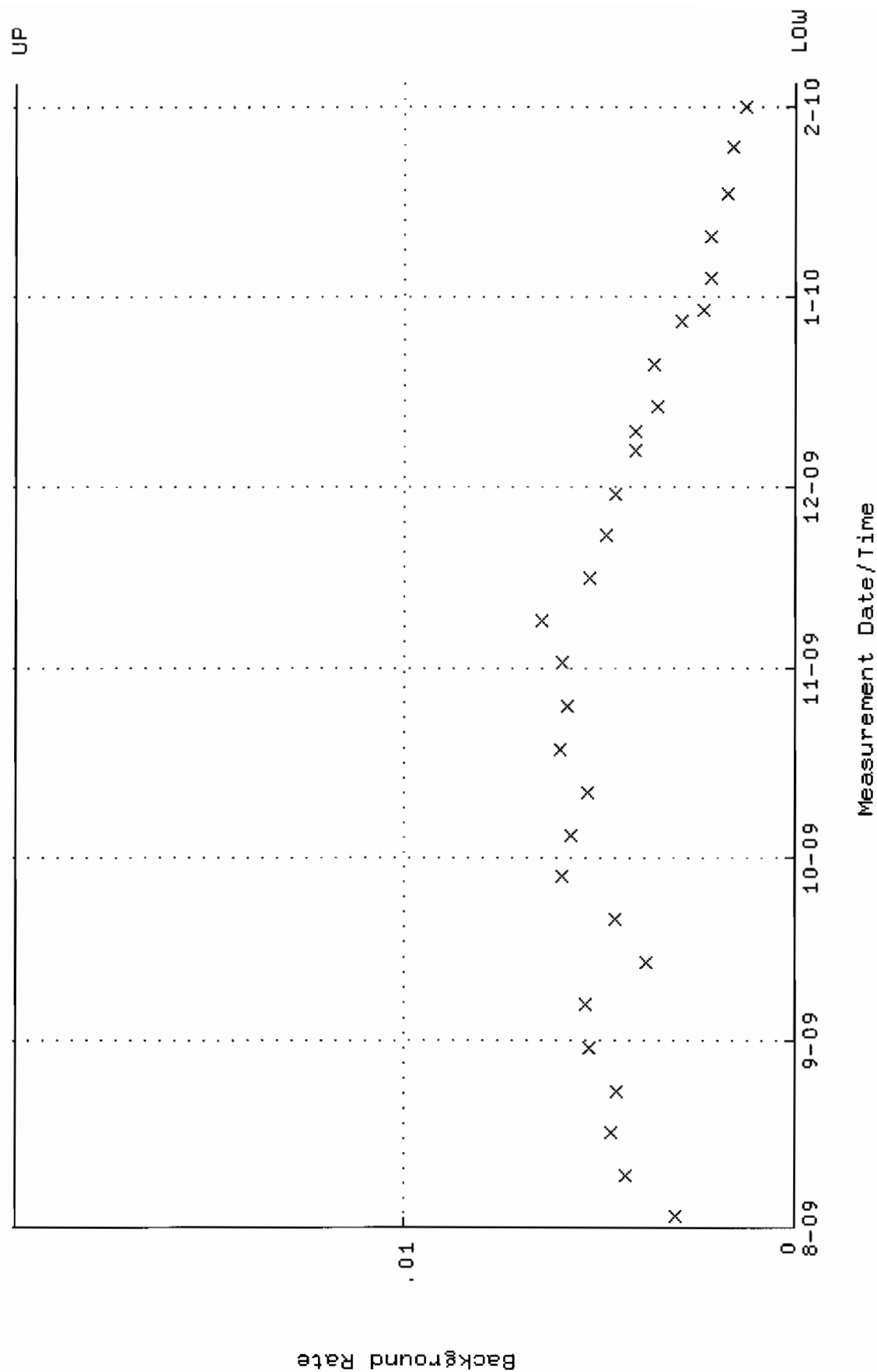
QA filename : DKA100:[ENV_ALPHA.QA.W]W029.QAF;6
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



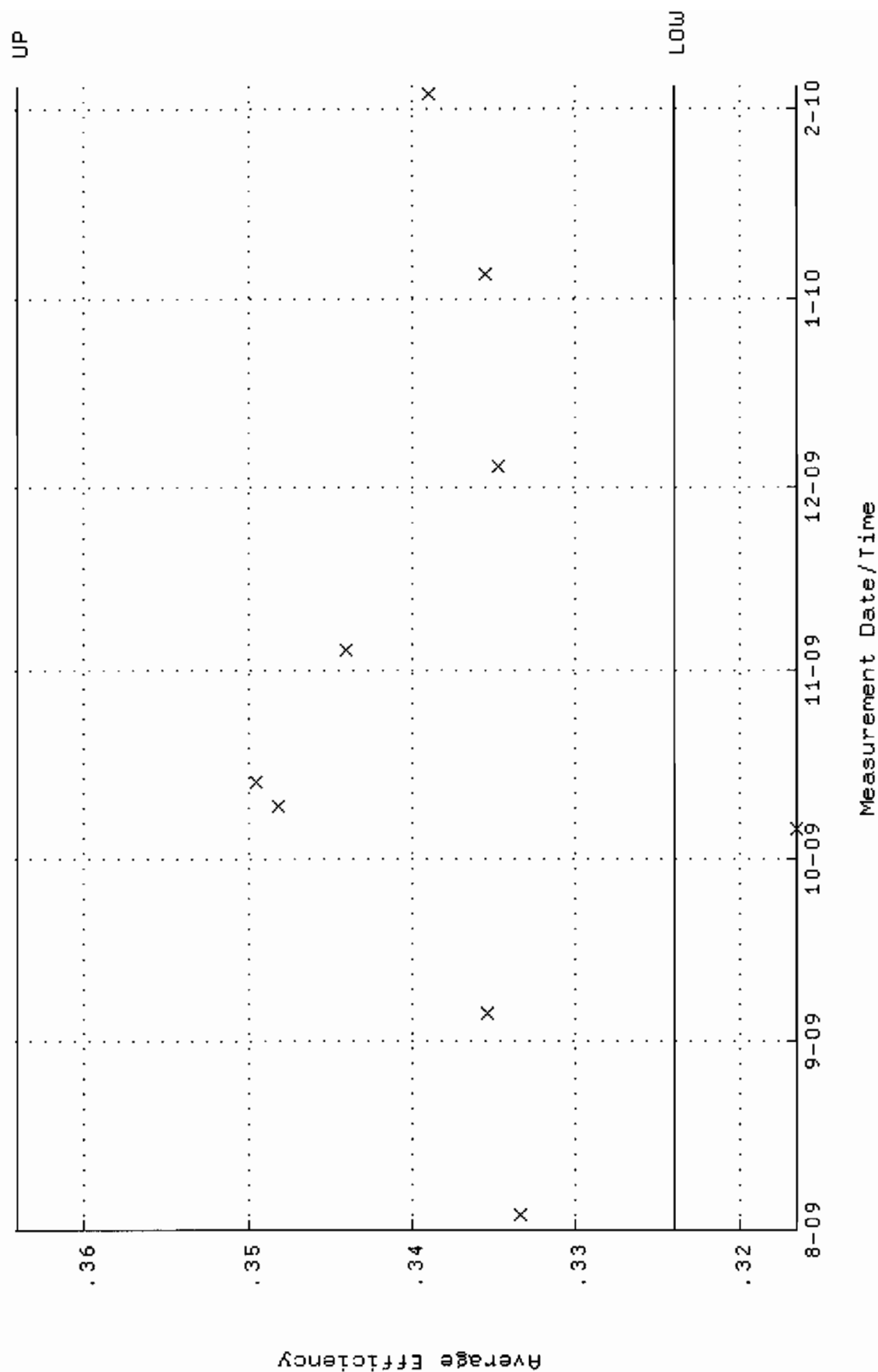
QA filename : DKA100:[ENV_ALPHA.QA.W]W029.QAF;6
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:40 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



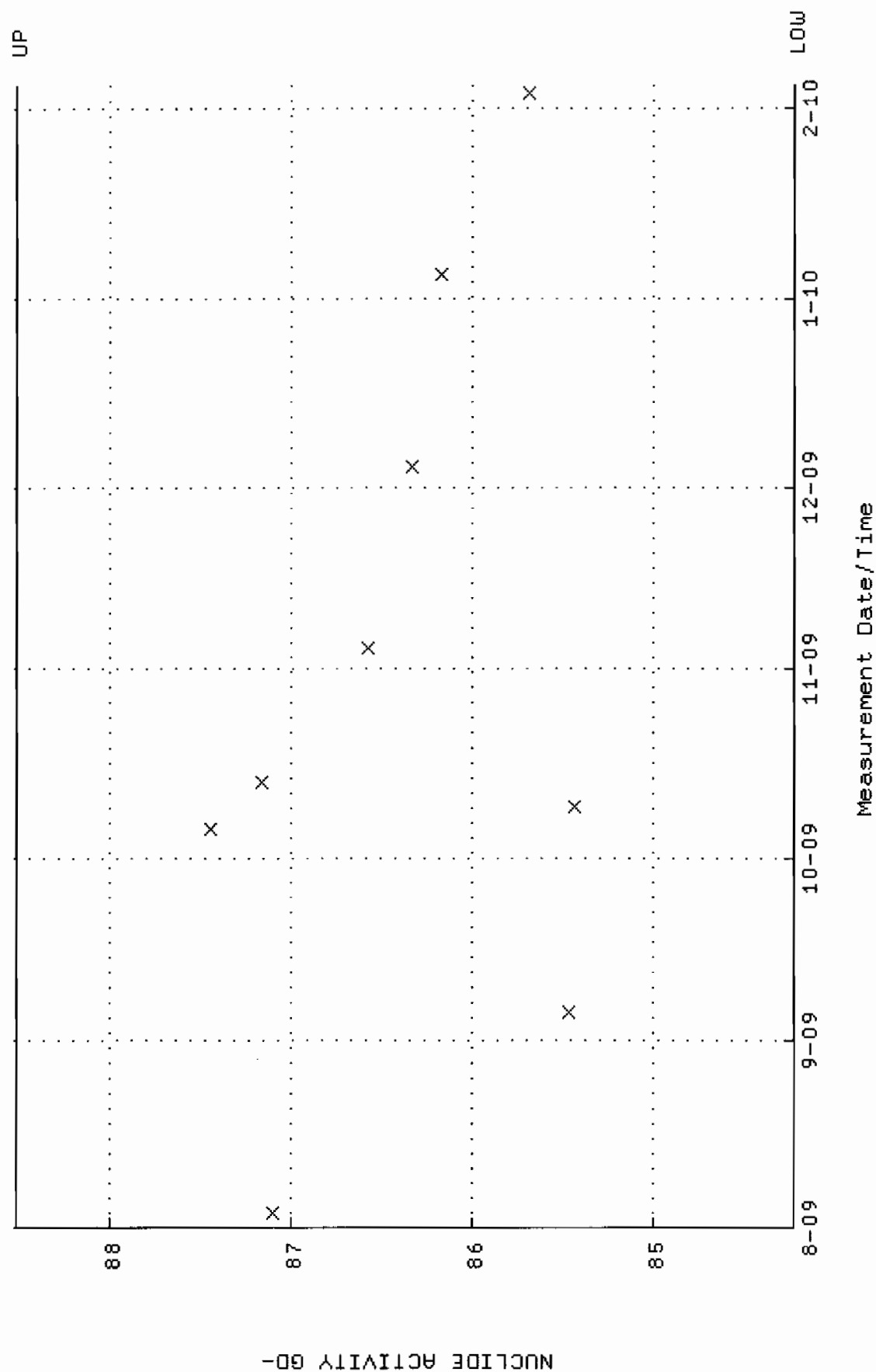
QA filename : OKA100:[ENV-ALPHA.QA.B]B029.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:35 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



QA filename : DKA100:[ENV_ALPHA.QA.W]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



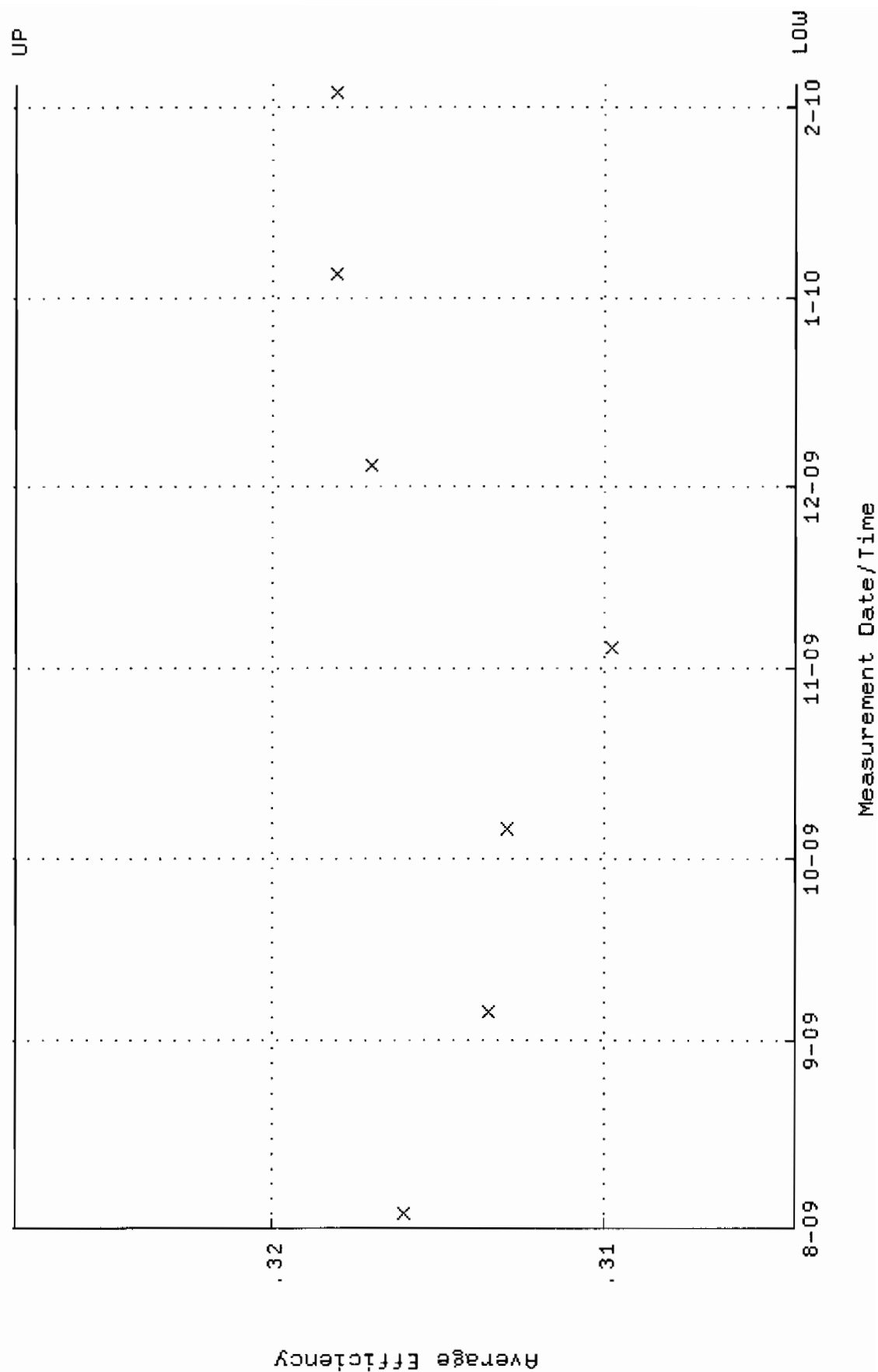
QA filename : DKA100:[ENV_ALPHA.QA.W]W031.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.2165 through 88.5165



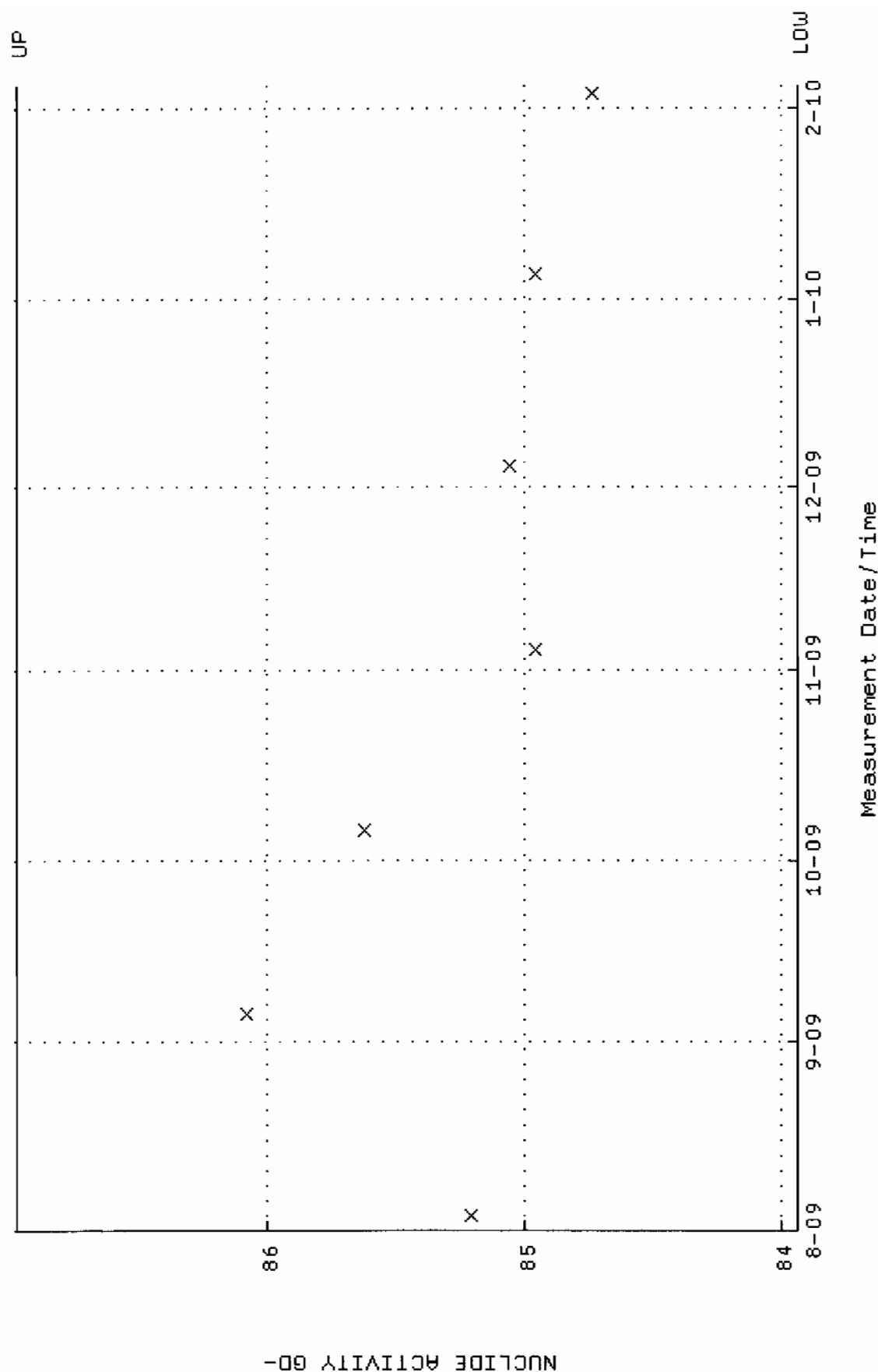
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.304222 through 0.327748



QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 83.9373 through 86.9661

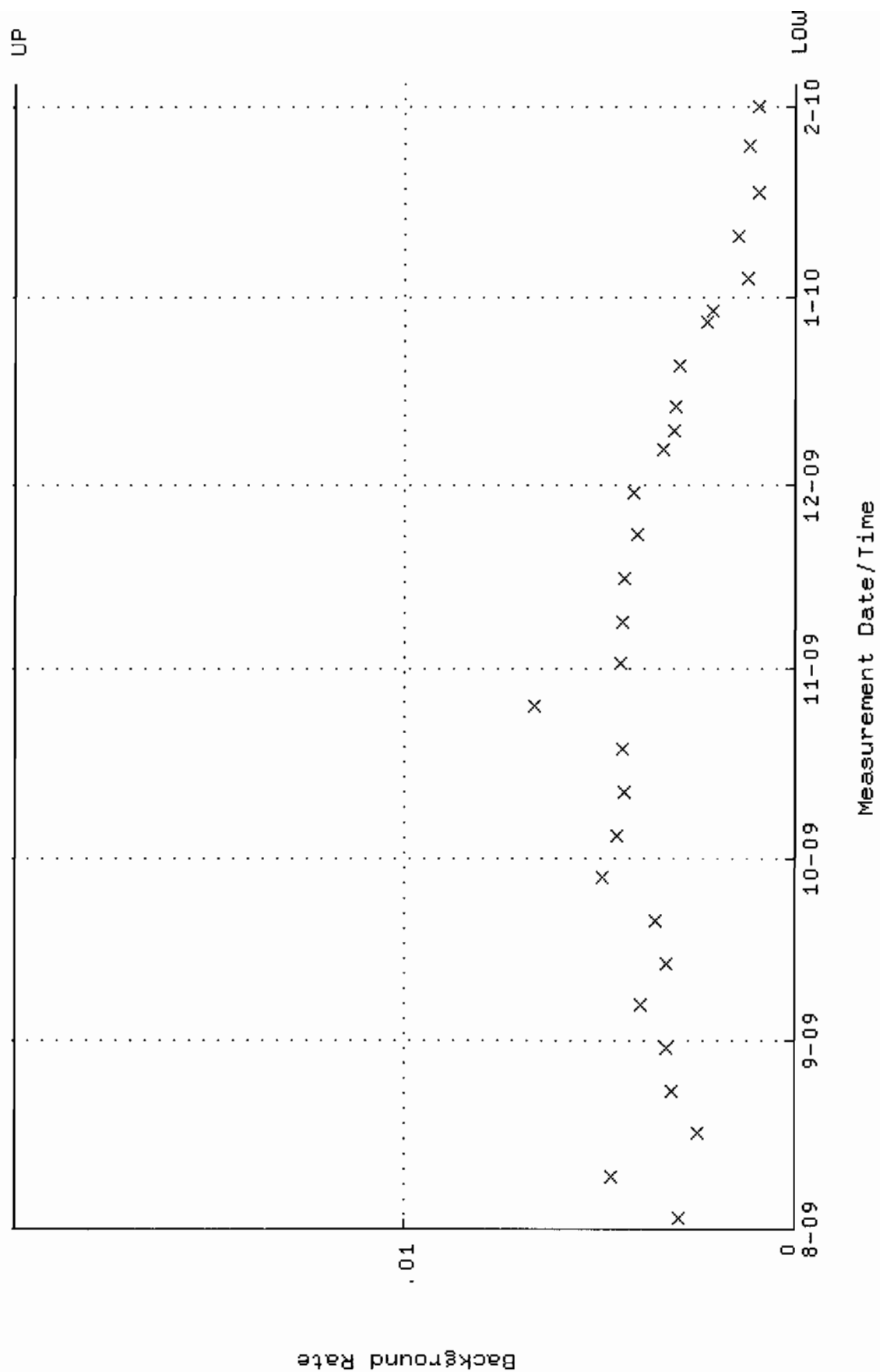


QA filename : DKA100:[ENV_ALPHA.QA.B]B033.QAF;1

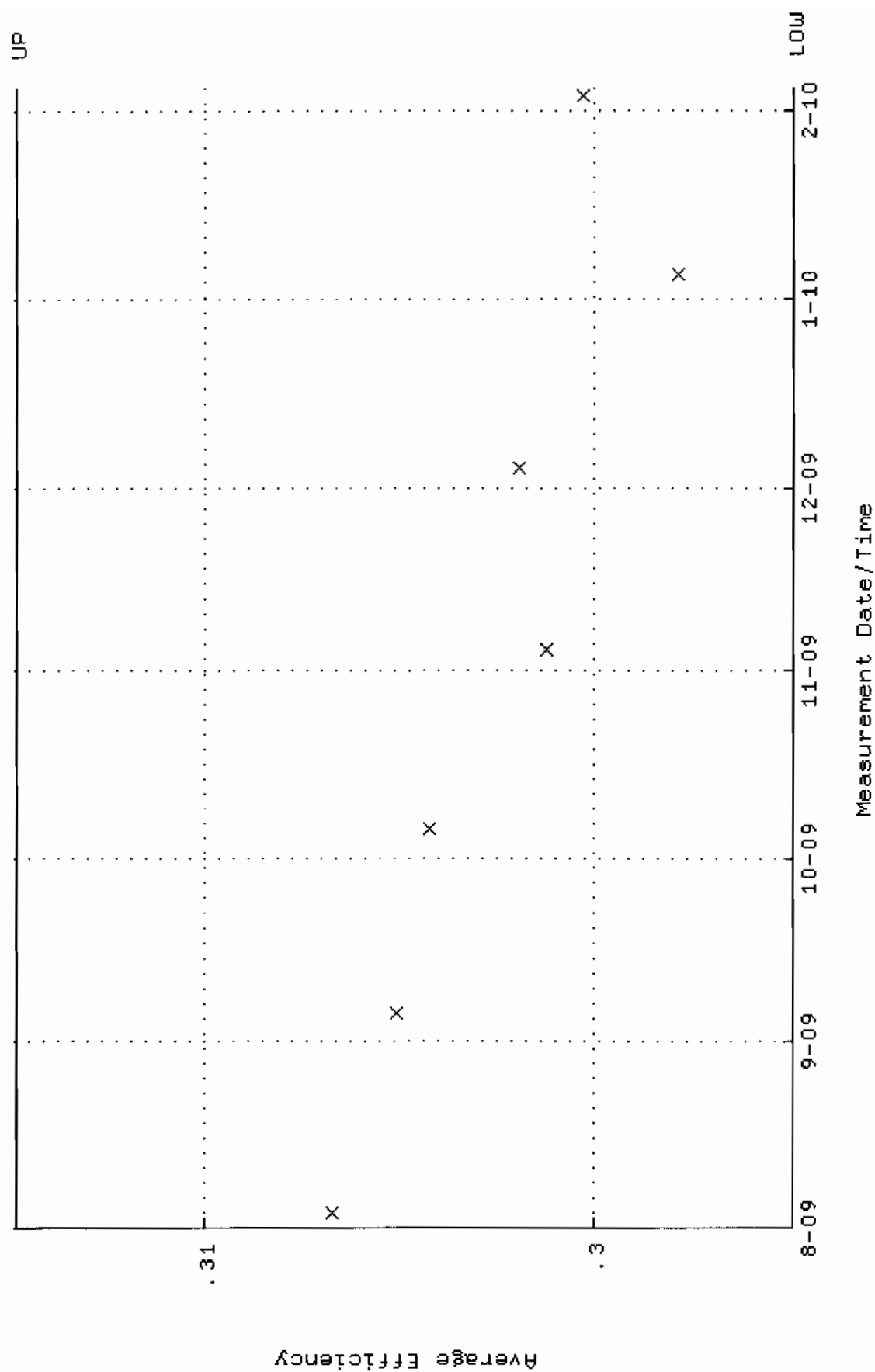
Parameter Name : BACKRATE (Background Rate)

Start/End Dates : 2-AUG-2009 17:38:35 through 4-FEB-2010 12:00:00

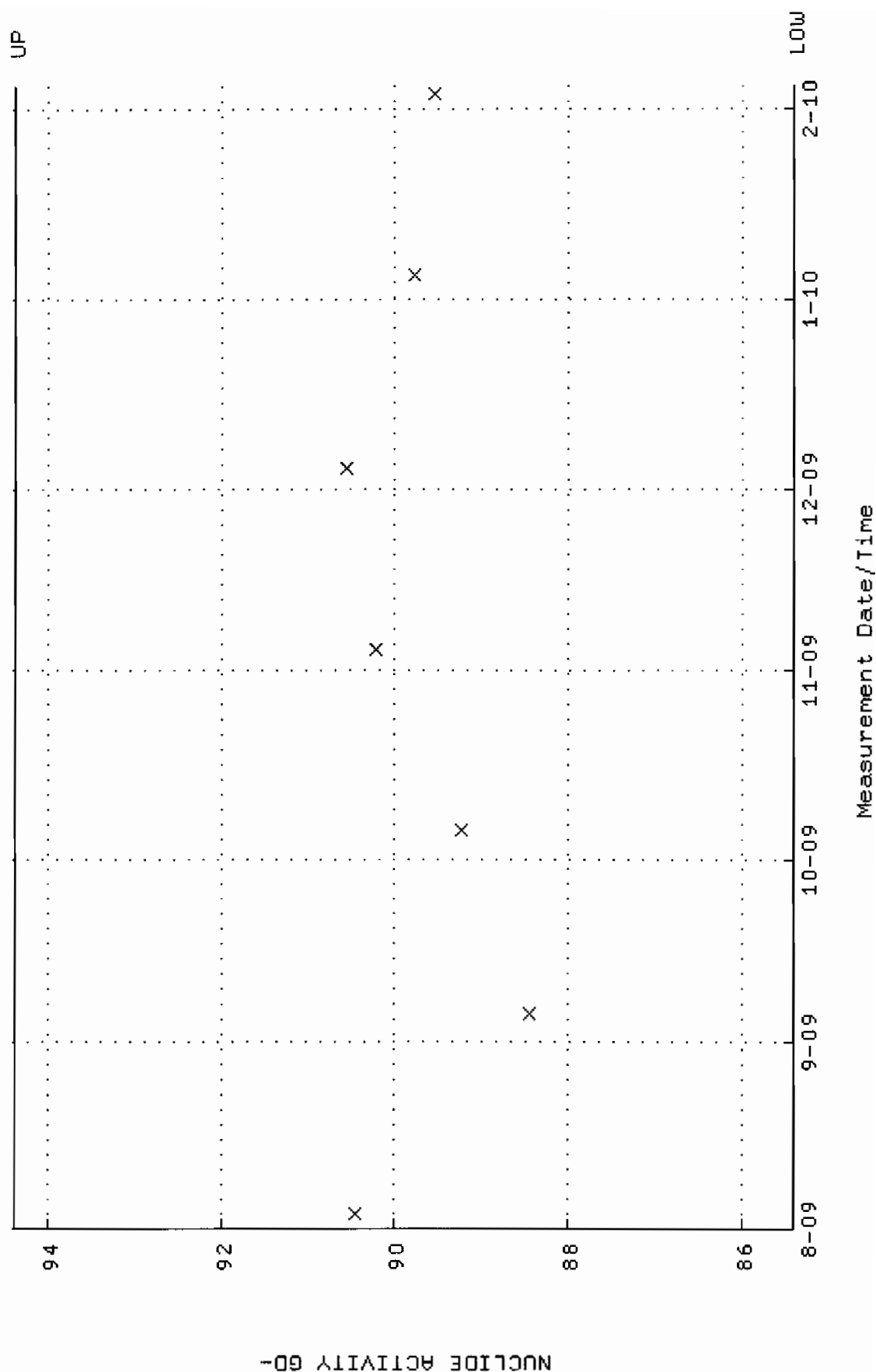
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



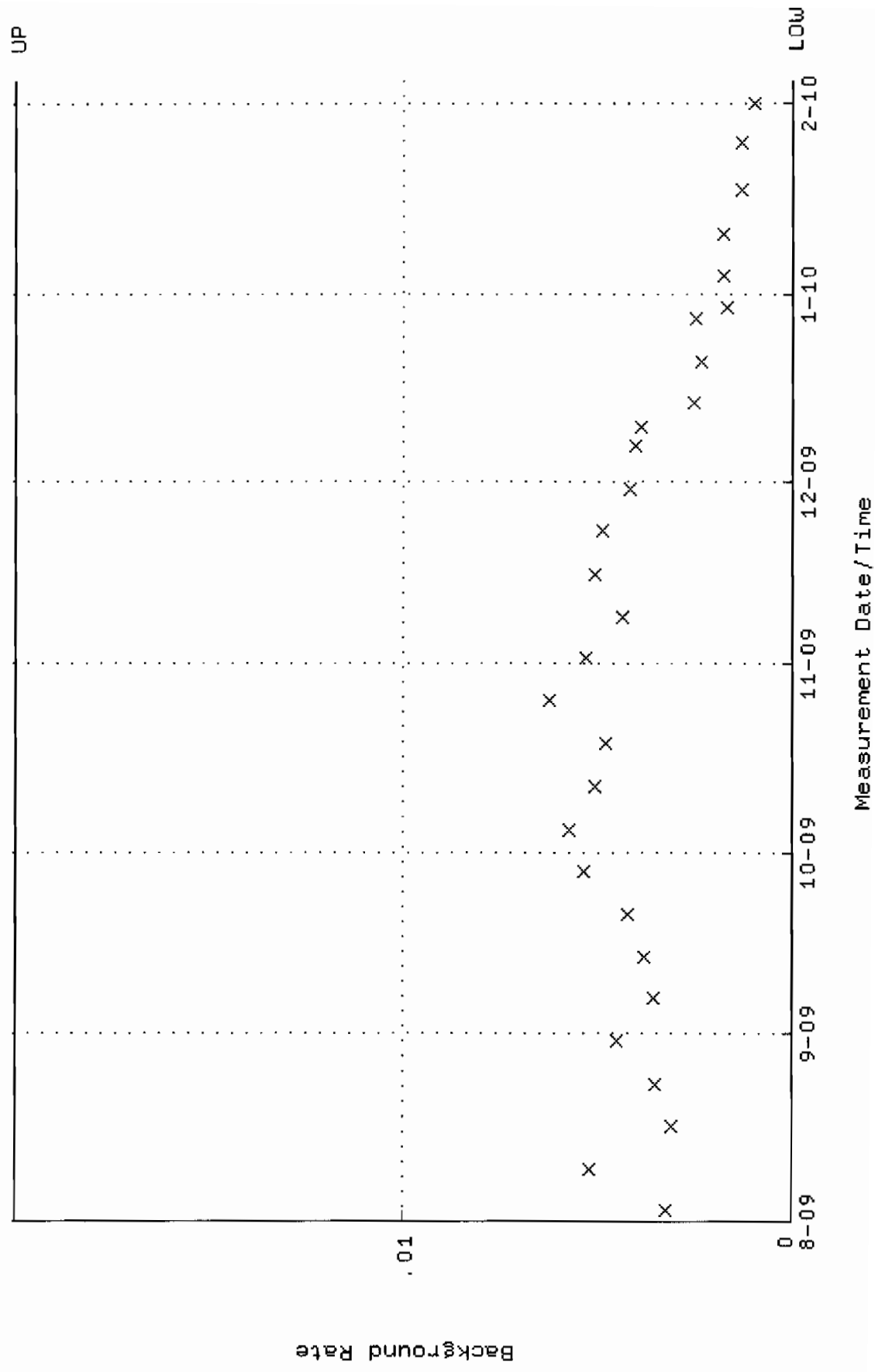
QA filename : DKA100:[ENV_ALPHA.QA.W]W035.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.294859 through 0.314859



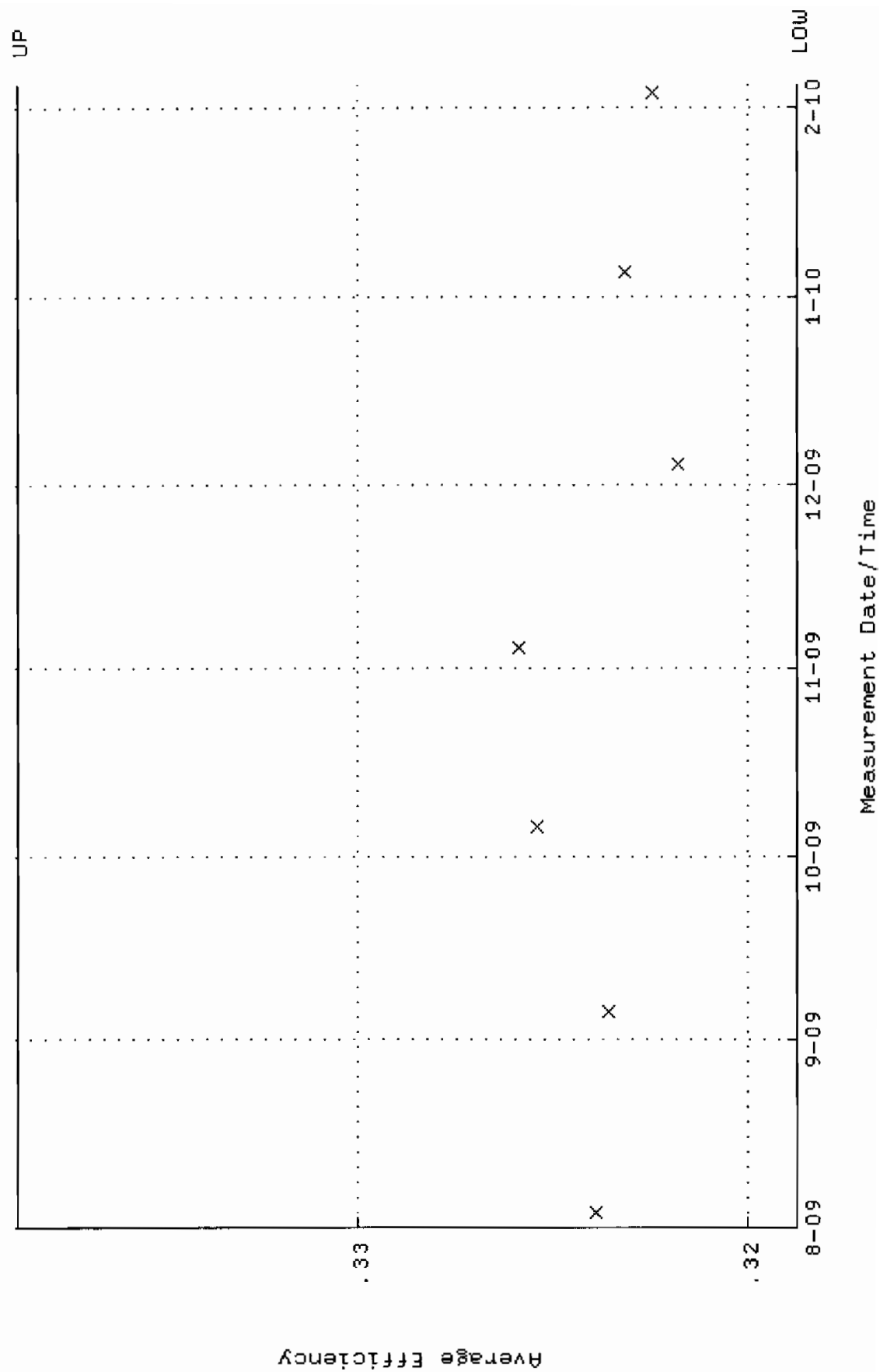
QA filename : DKA100:[ENV_ALPHA.QA.W]W035.QAF;3
 Parameter Name : NLAOTVY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.3984 through 94.3878



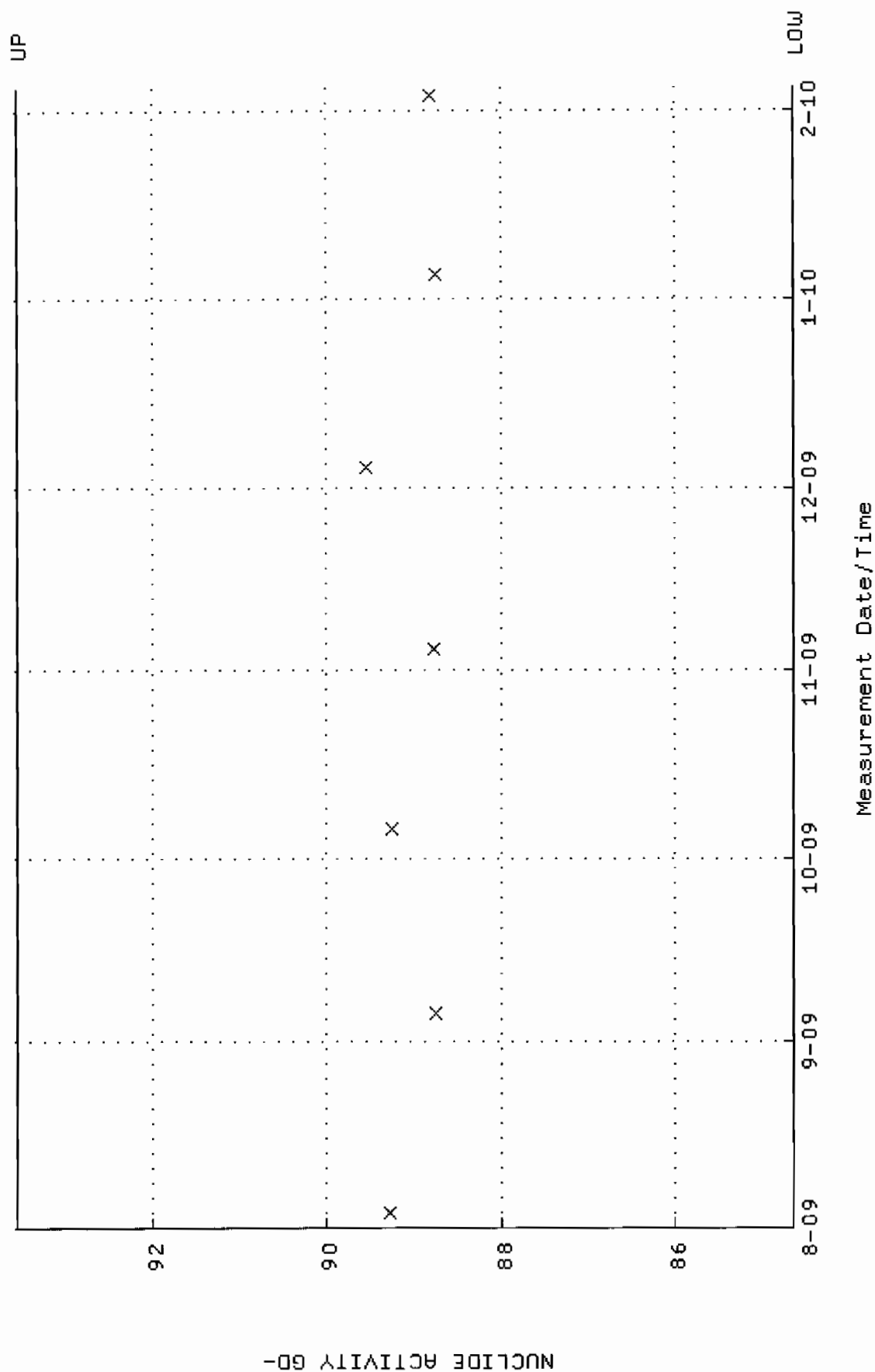
QA filename : DKA100:[ENV_ALPHA.QA.B]B035.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:35 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



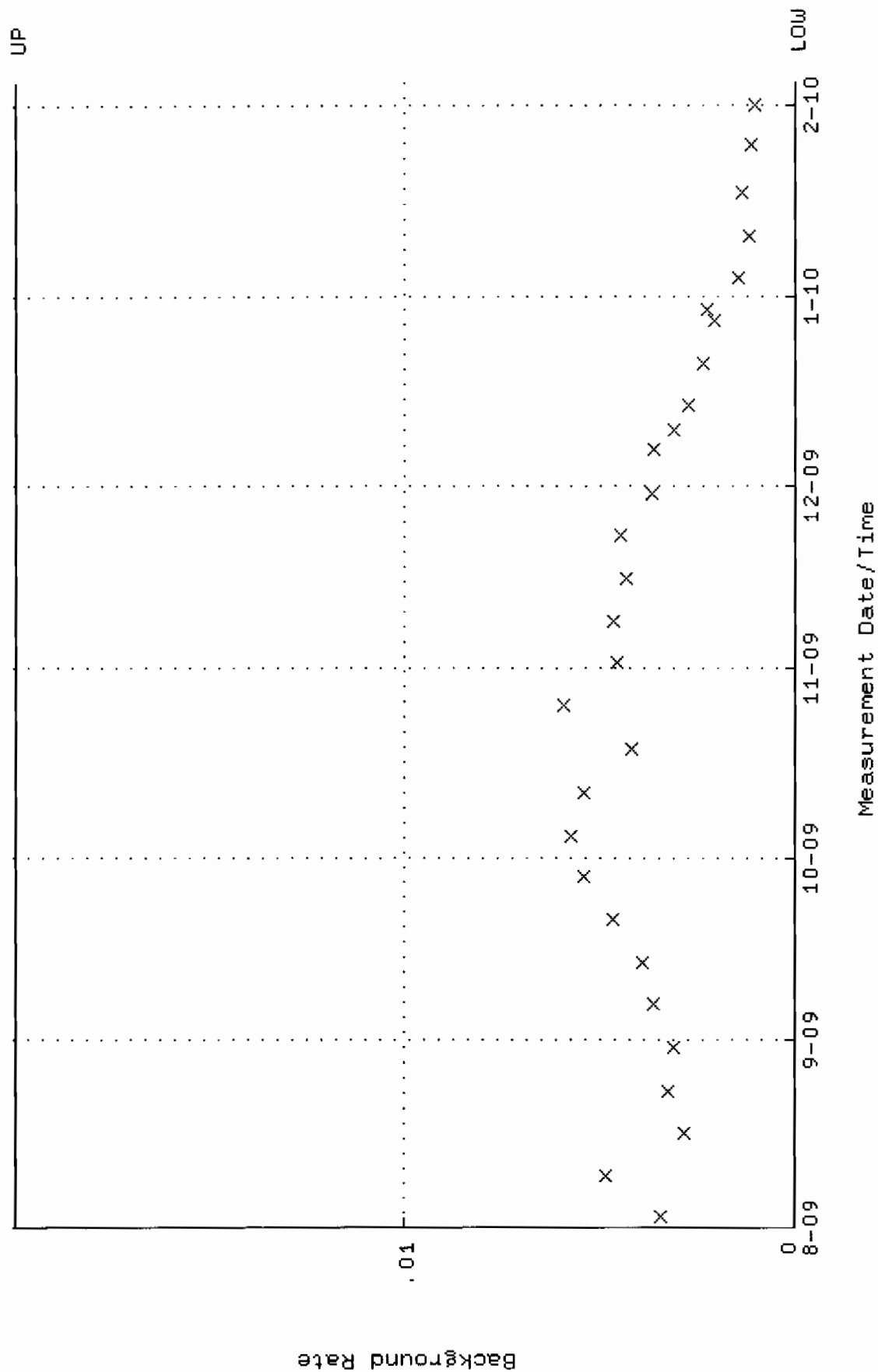
QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.318717 through 0.338717



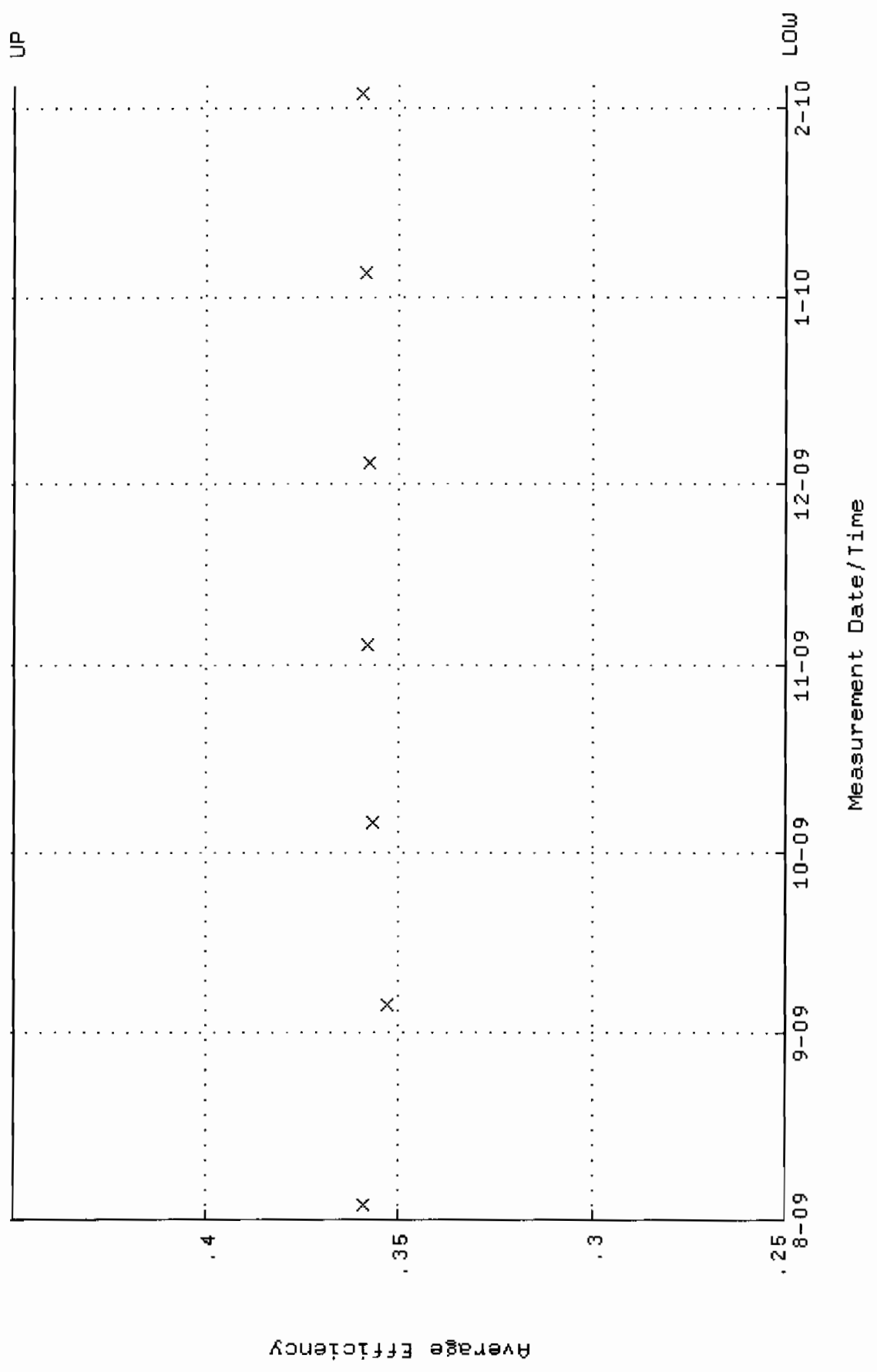
QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:41 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.6422 through 93.5518



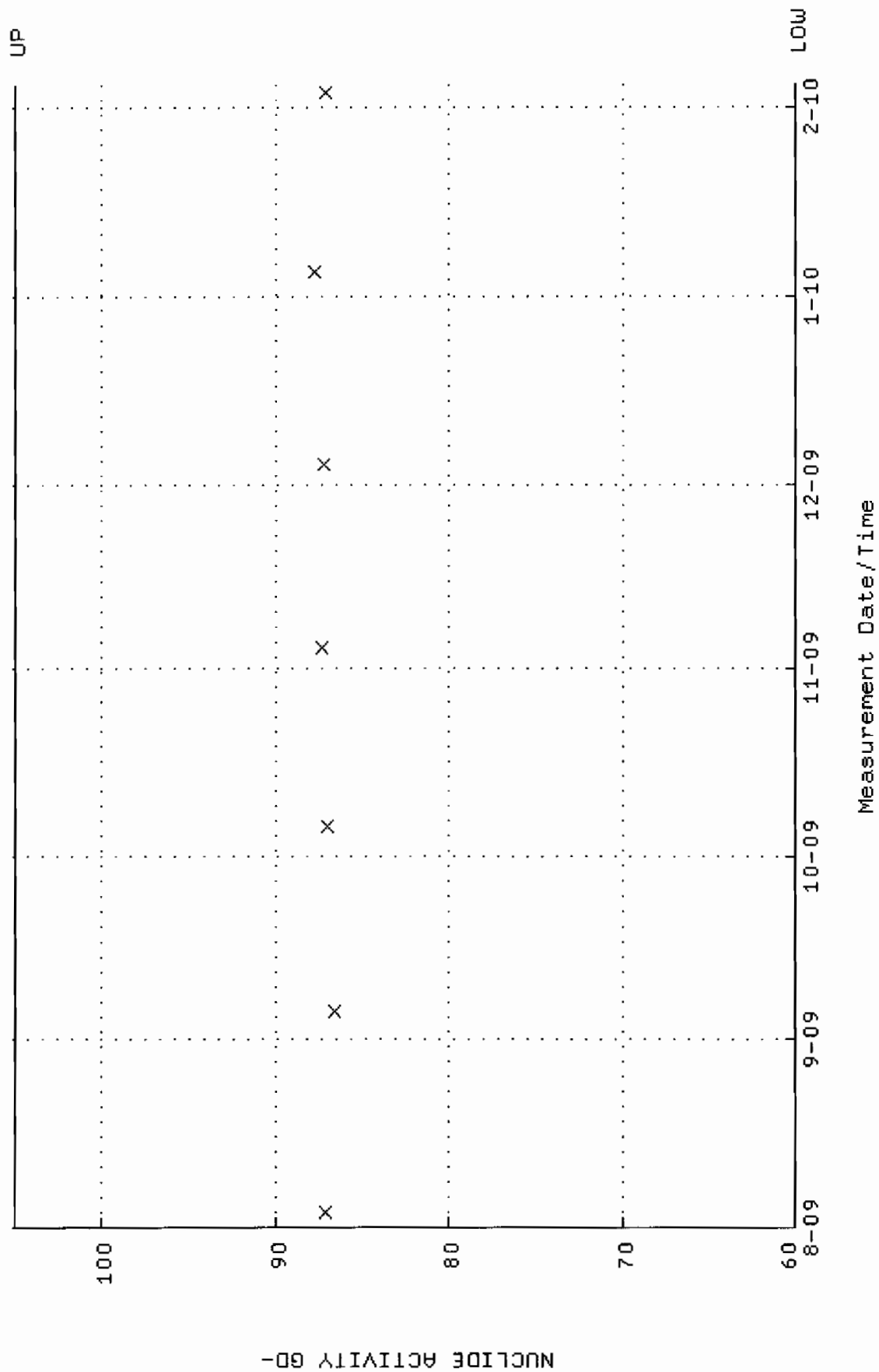
QA filename : DKA100:[ENV_ALPHA.QA.B]B036.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:35 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



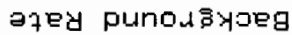
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



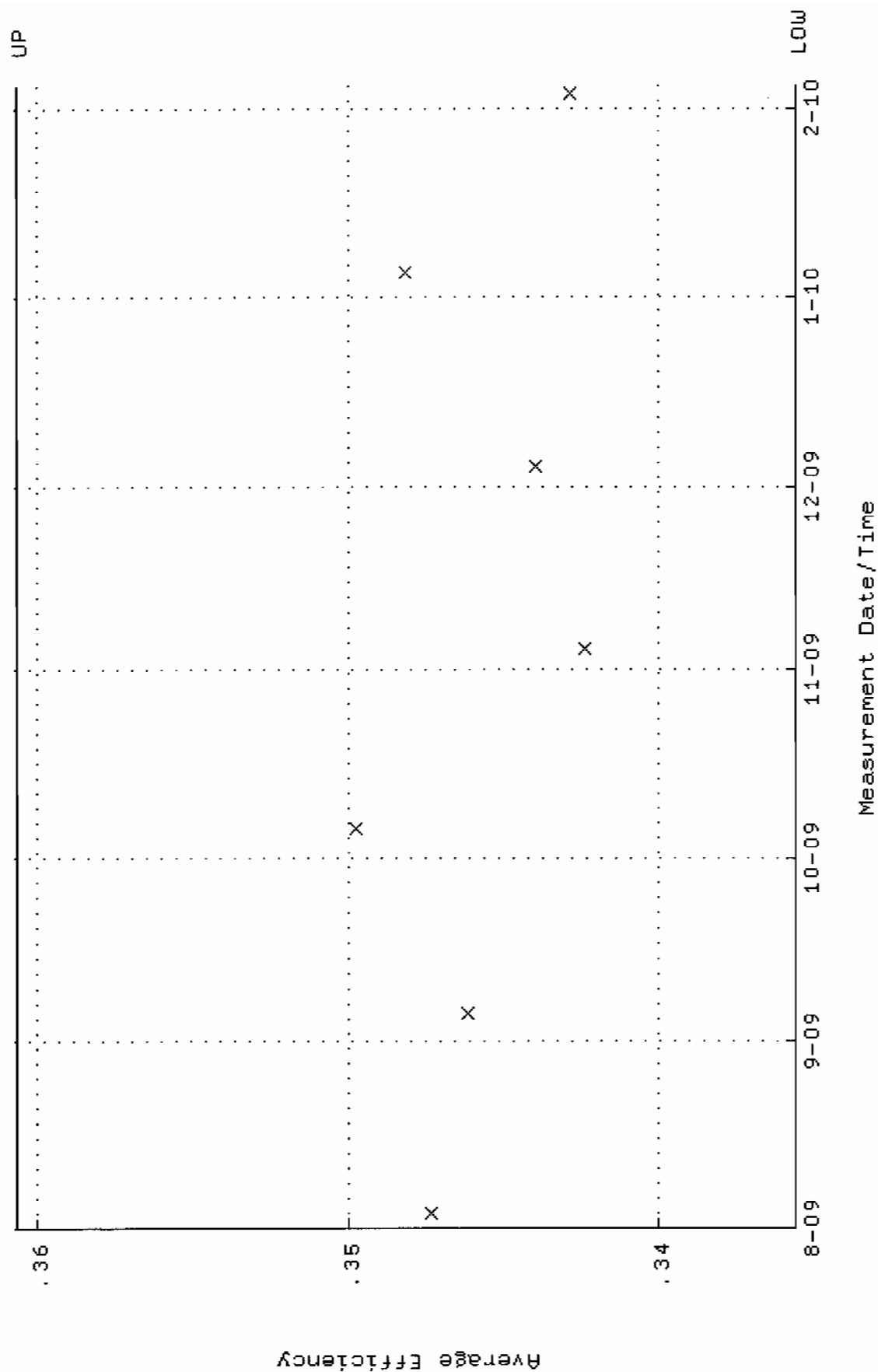
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:43 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



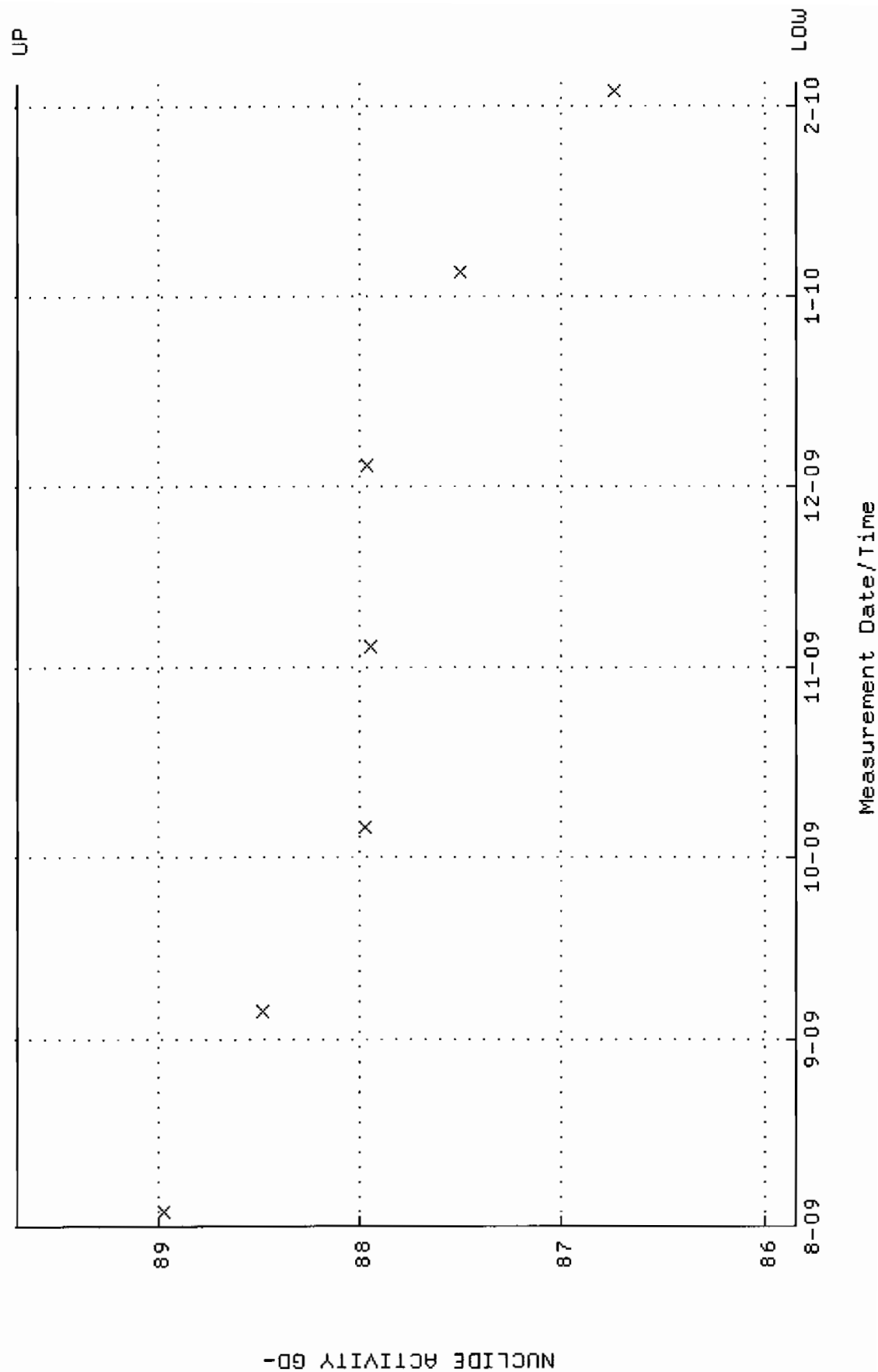
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



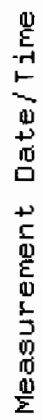
QA filename : DKA100:[ENV_ALPHA.QA.W]W044.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.335557 through 0.360677



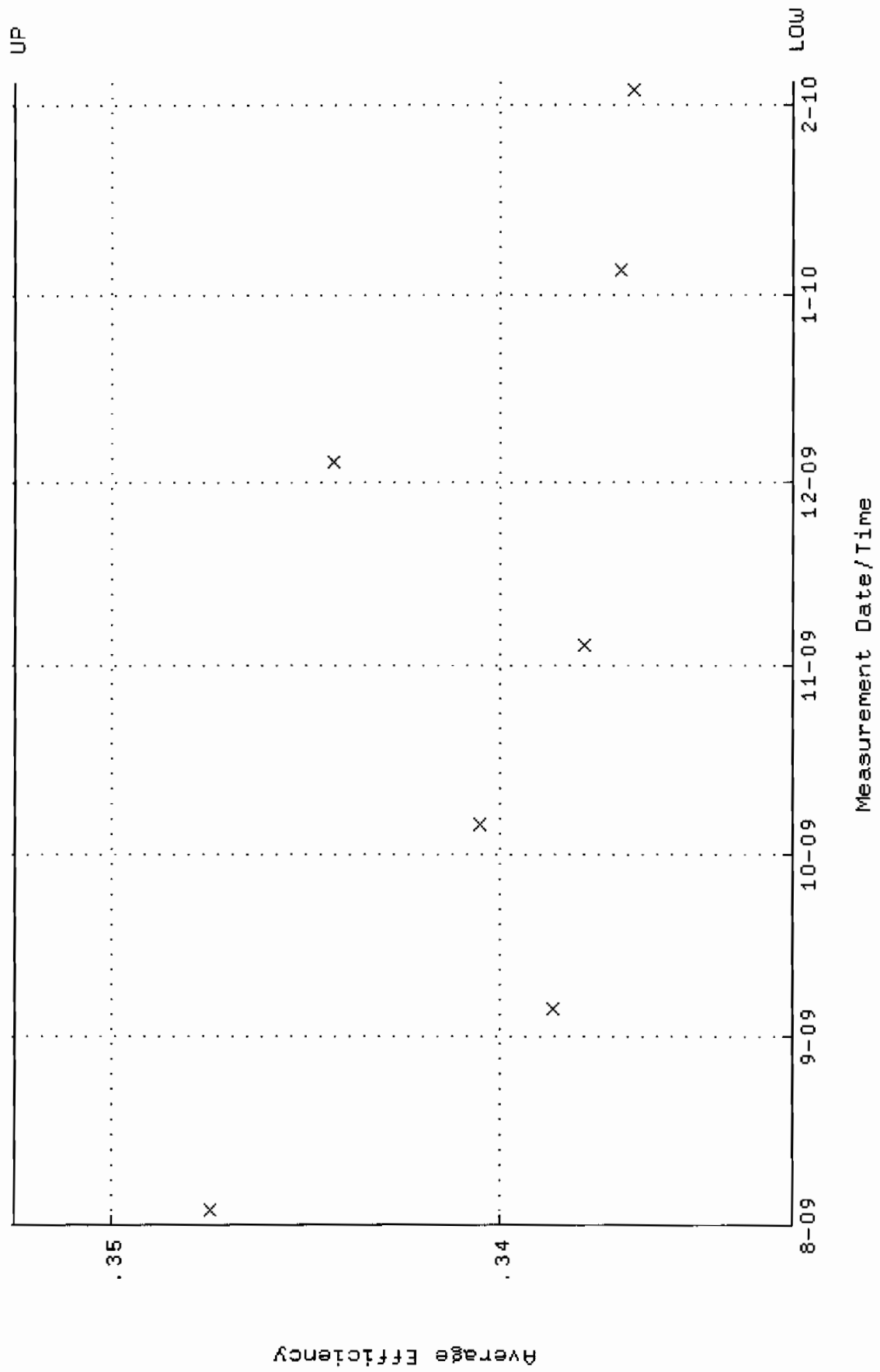
QA filename : DKA100:[ENV_ALPHA.QA.W]W044.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.8425 through 89.6949



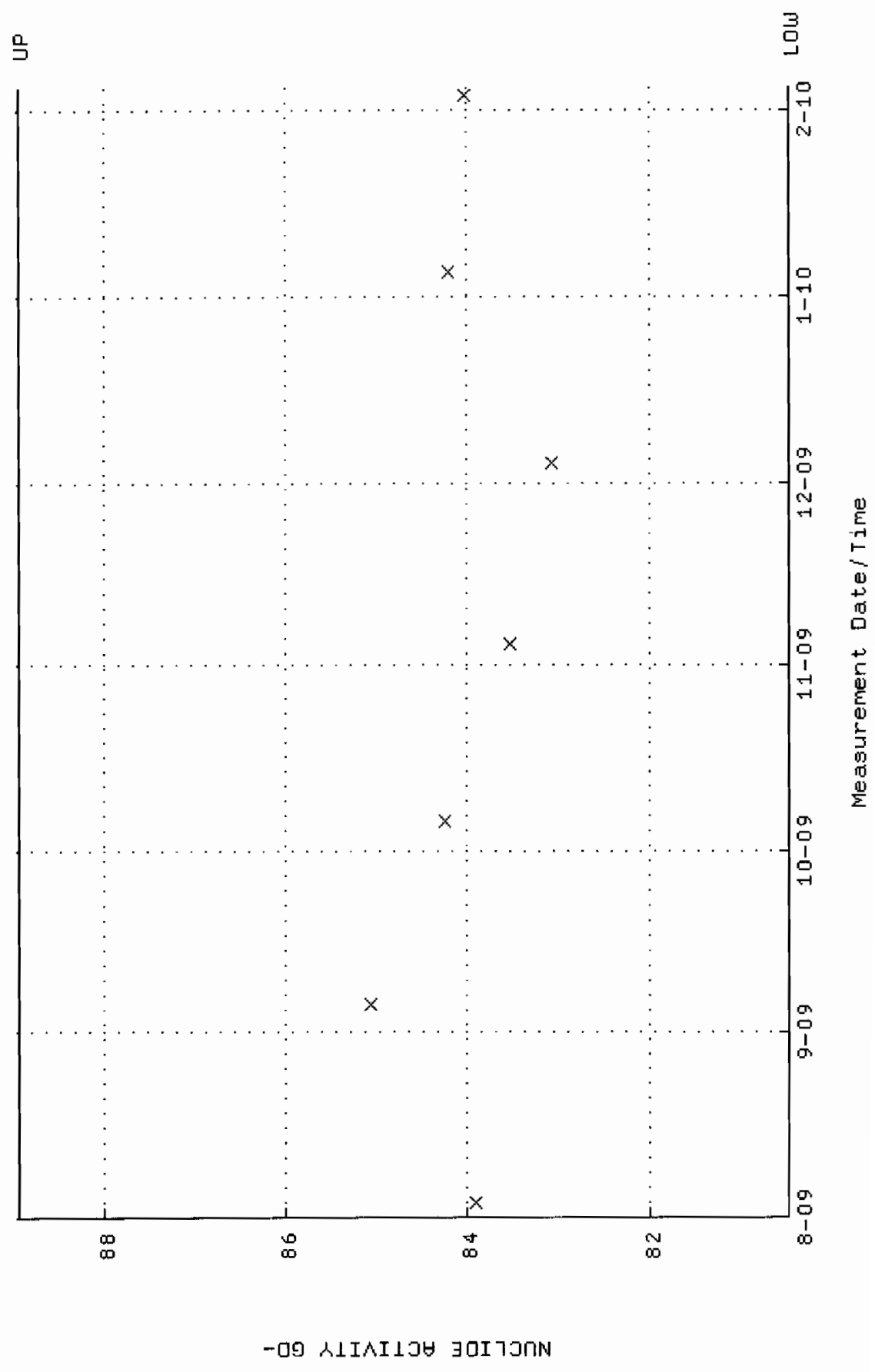
Lower/Upper Lmts: 0.00000E+00 through 2.00000E-02



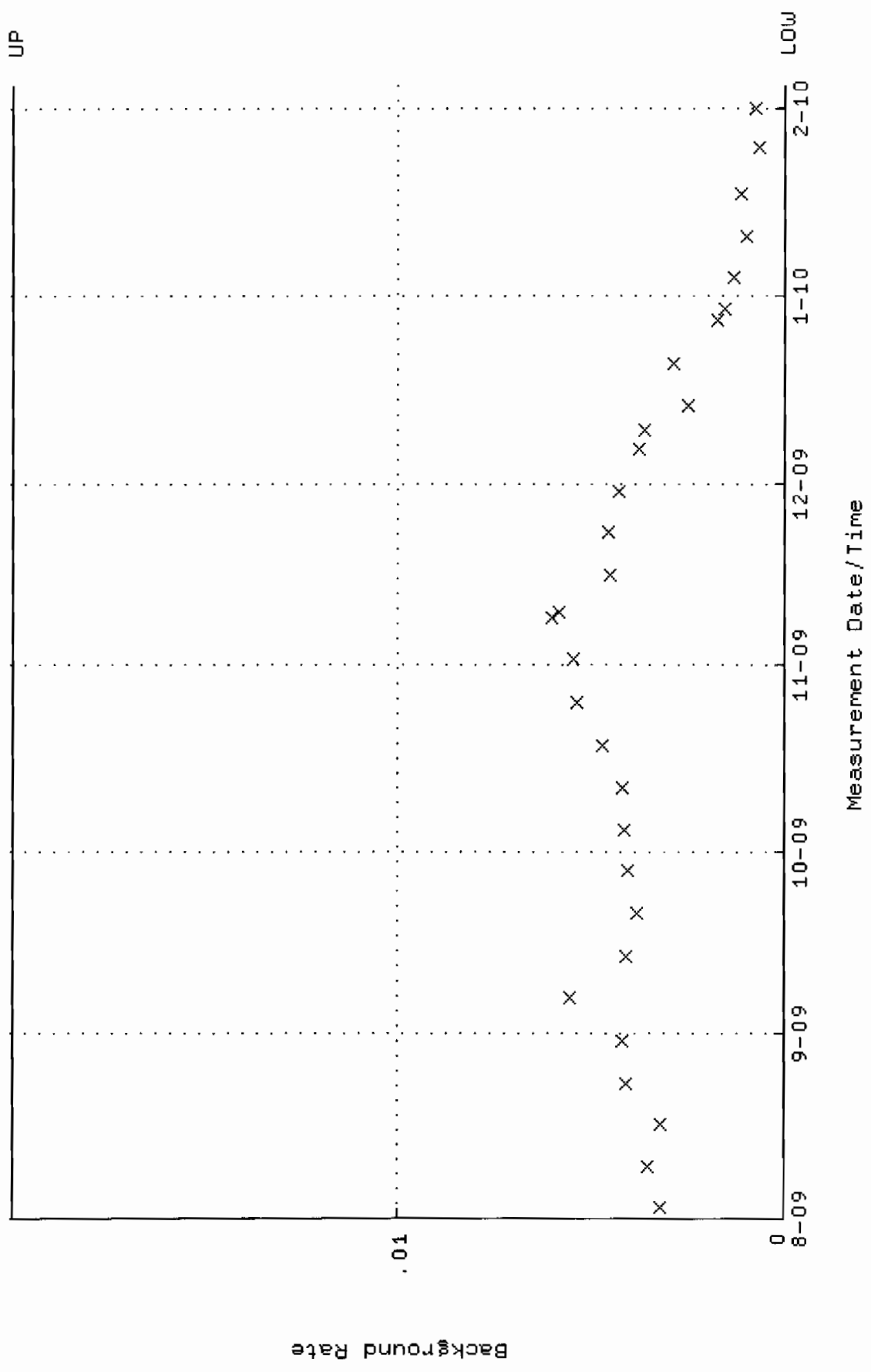
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.332472 through 0.352472



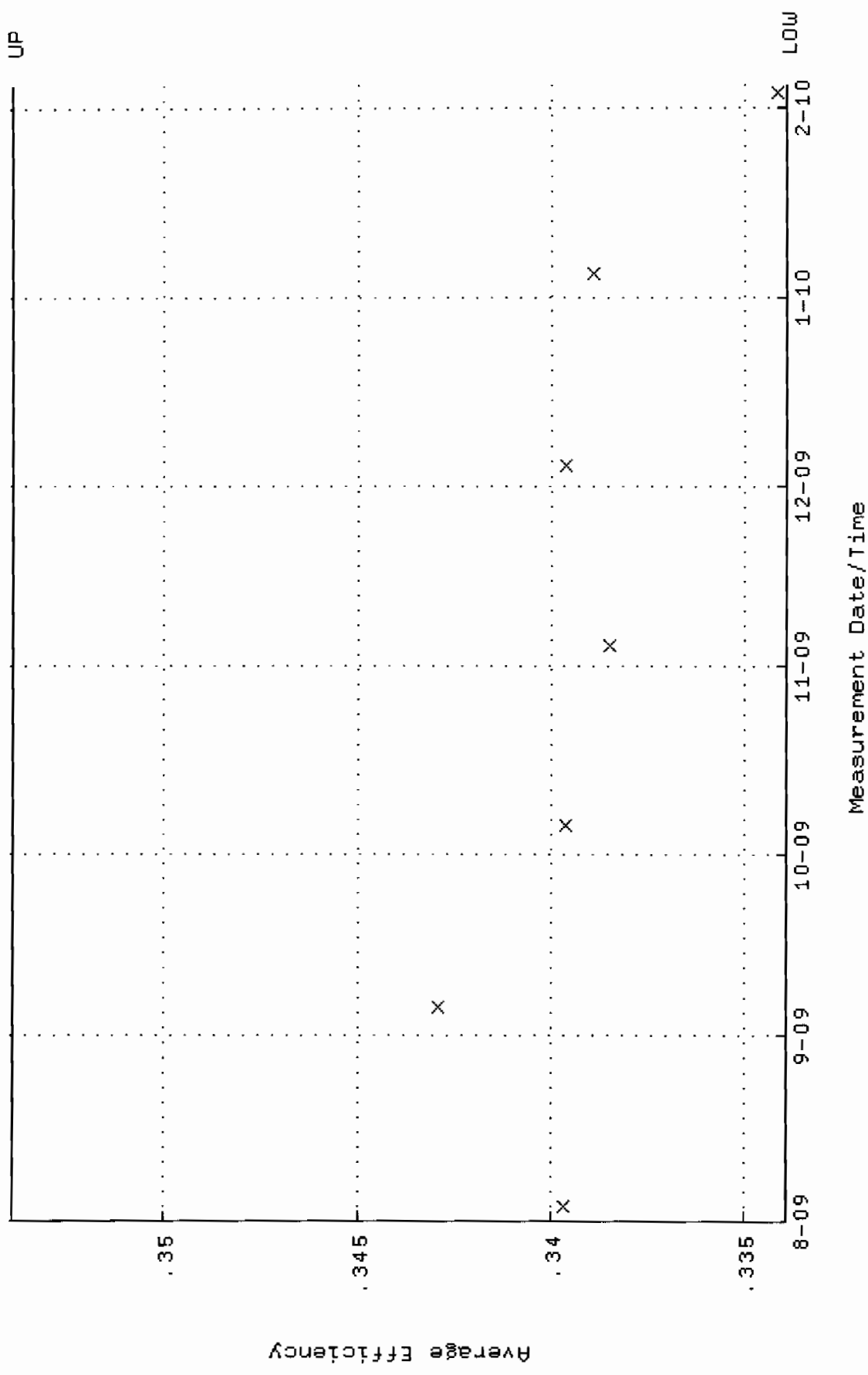
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 80.4622 through 88.9320



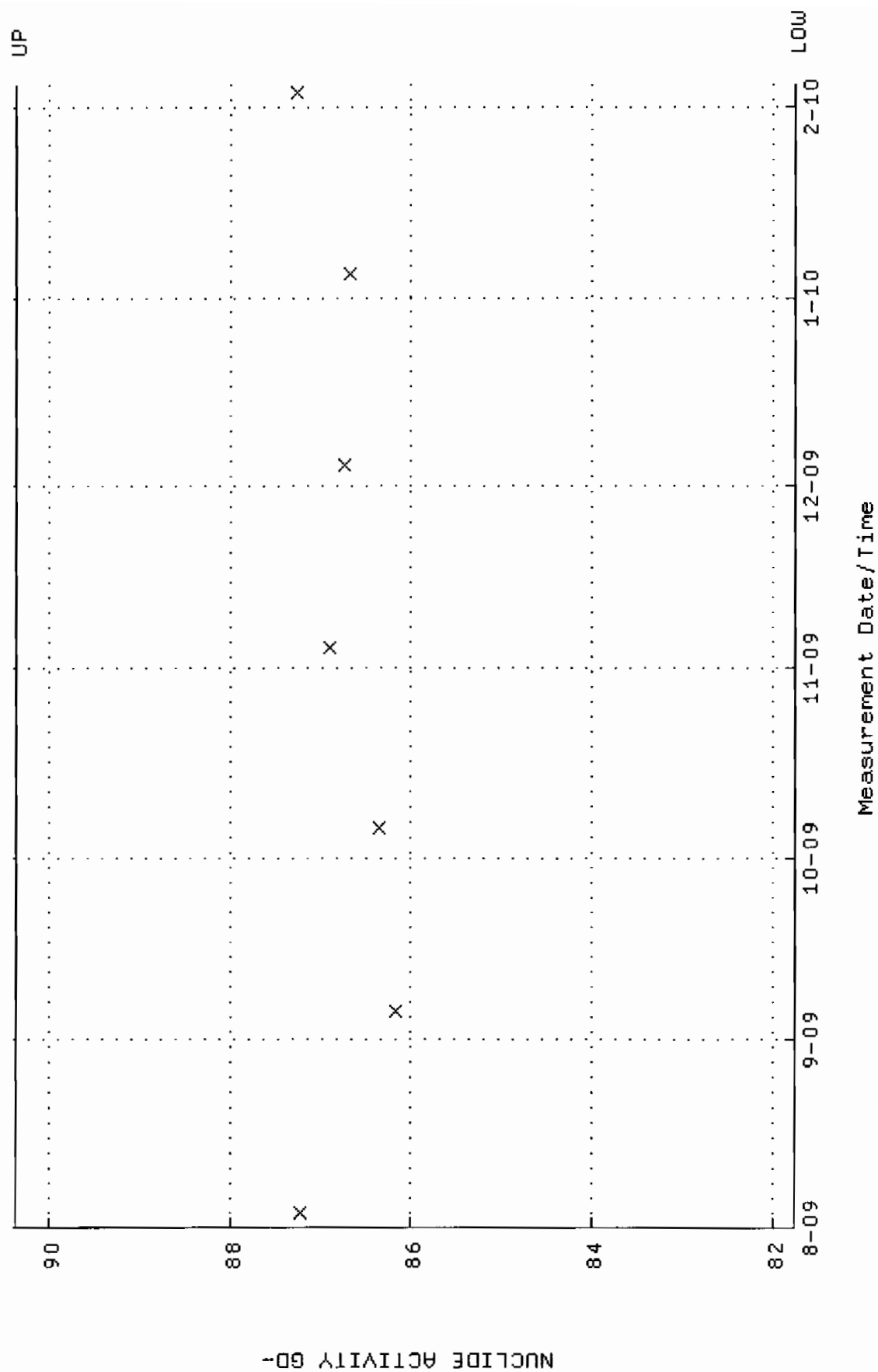
QA filename : DKA100:[ENV_ALPHA.QA.B]B045.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:37 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



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



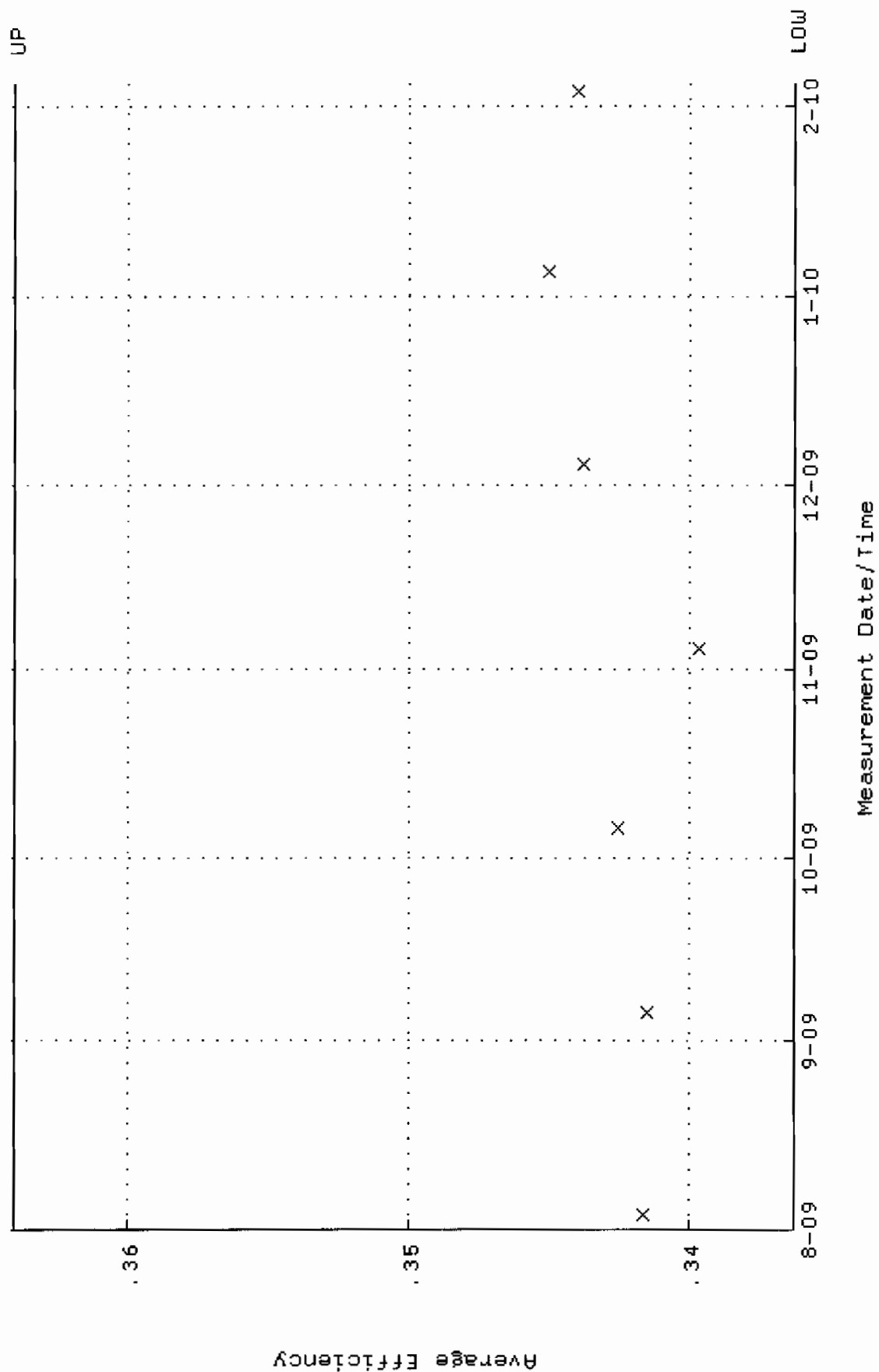
QA filename : DKA100:[ENV_ALPHA.QA.W]W046.QAF;4
 Parameter Name : NLAIVITY-G0148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 81.7568 through 90.3628



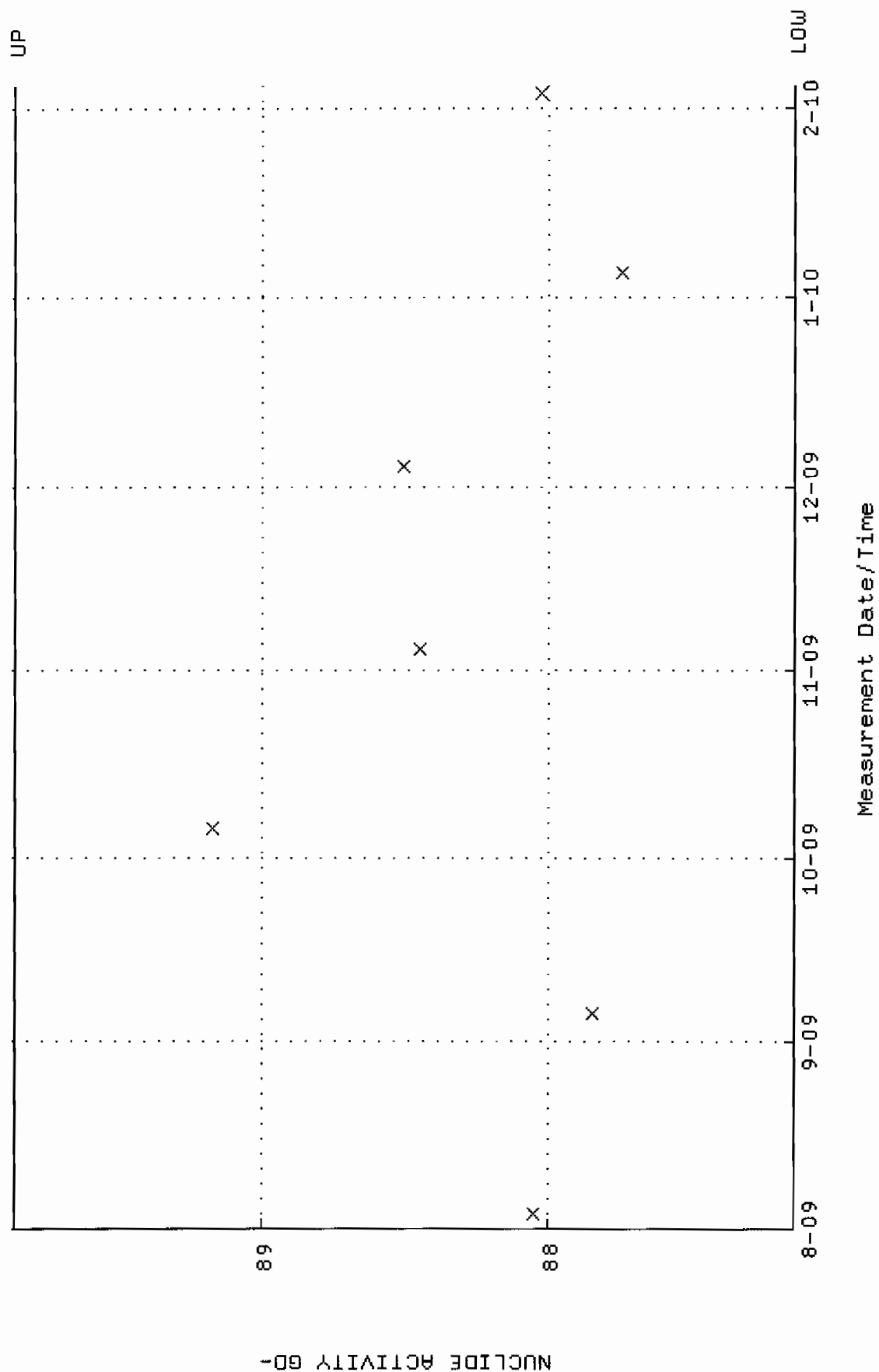
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



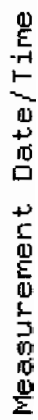
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.336276 through 0.364038



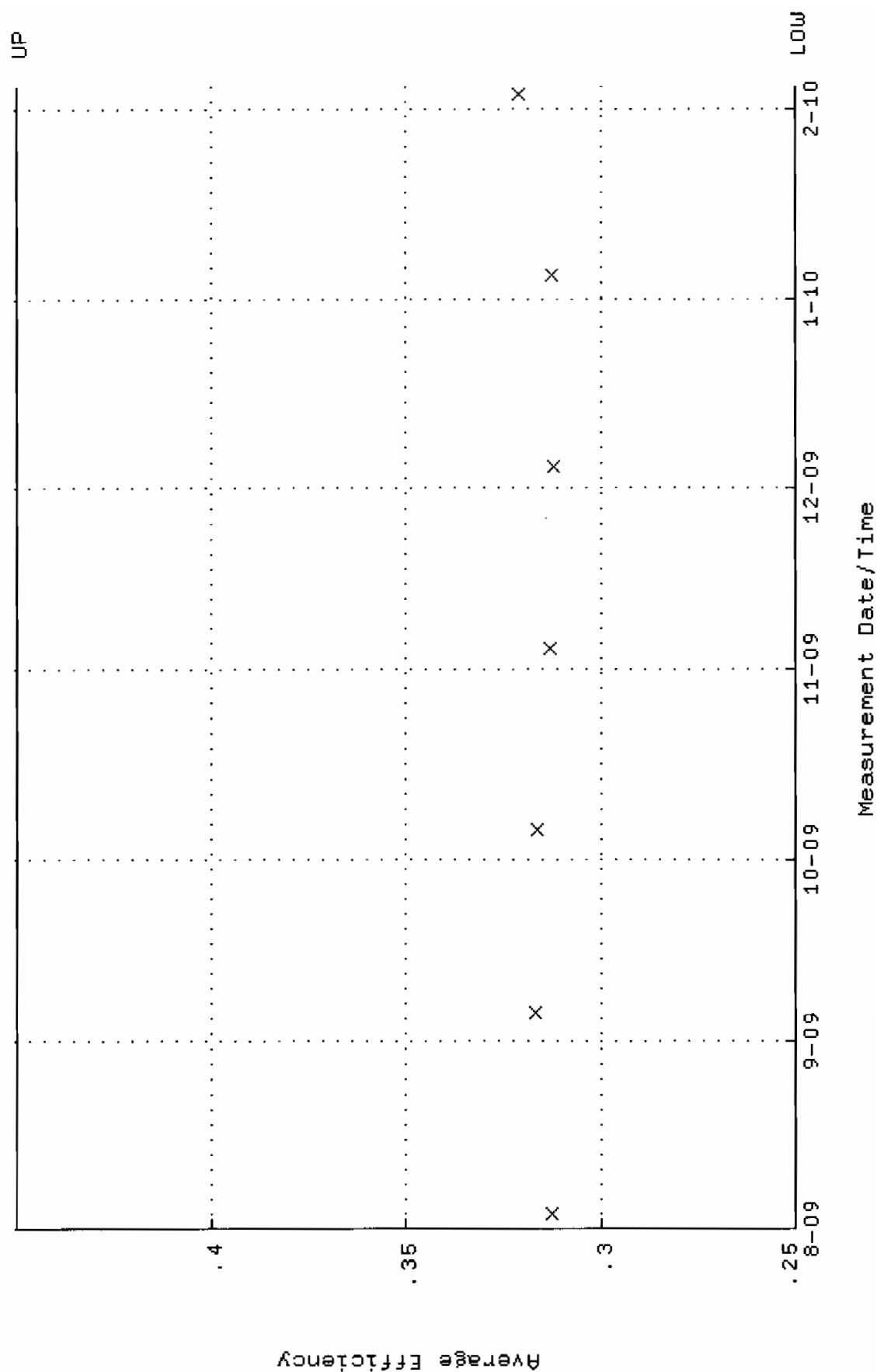
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.1403 through 89.8631



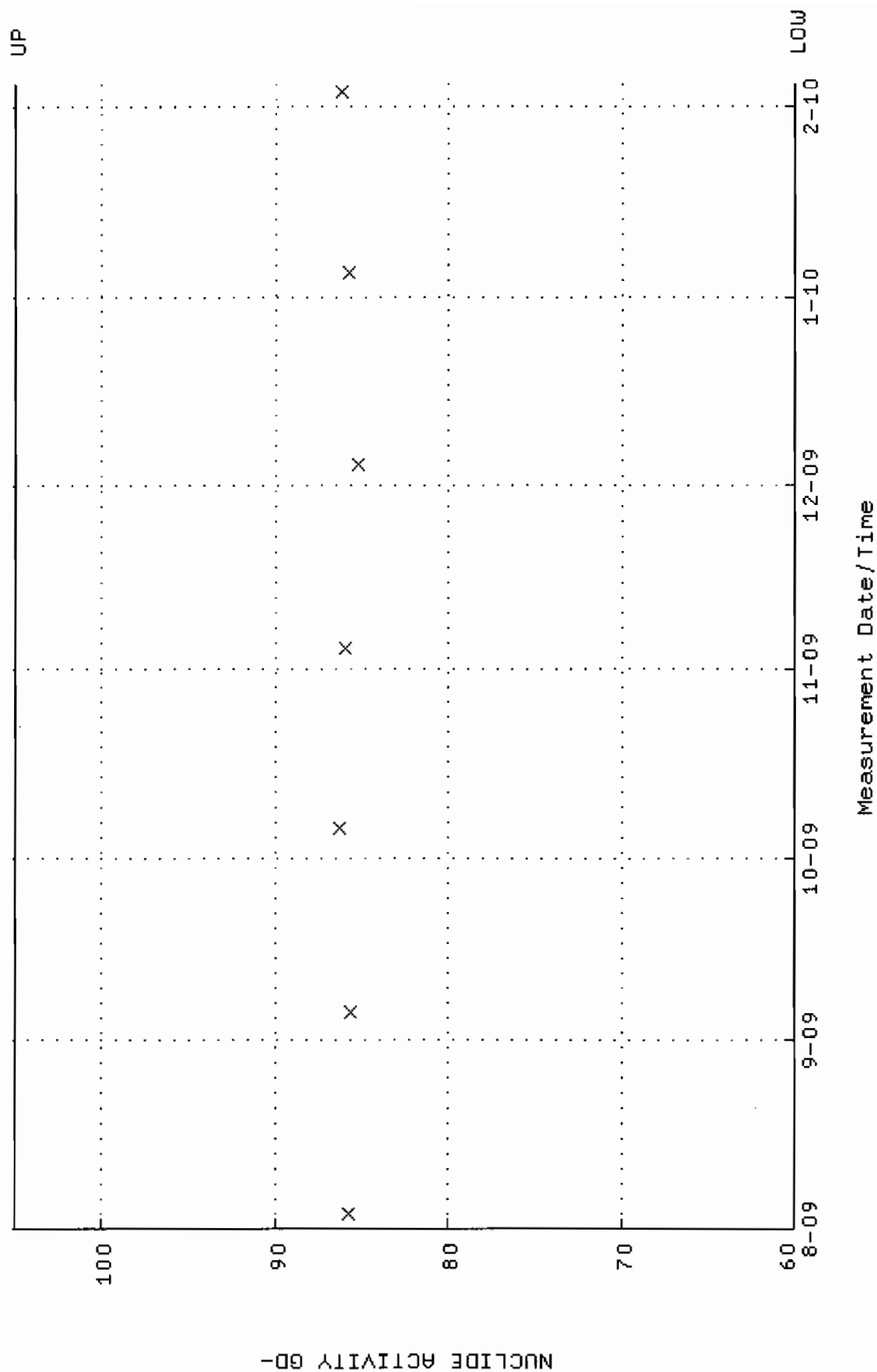
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



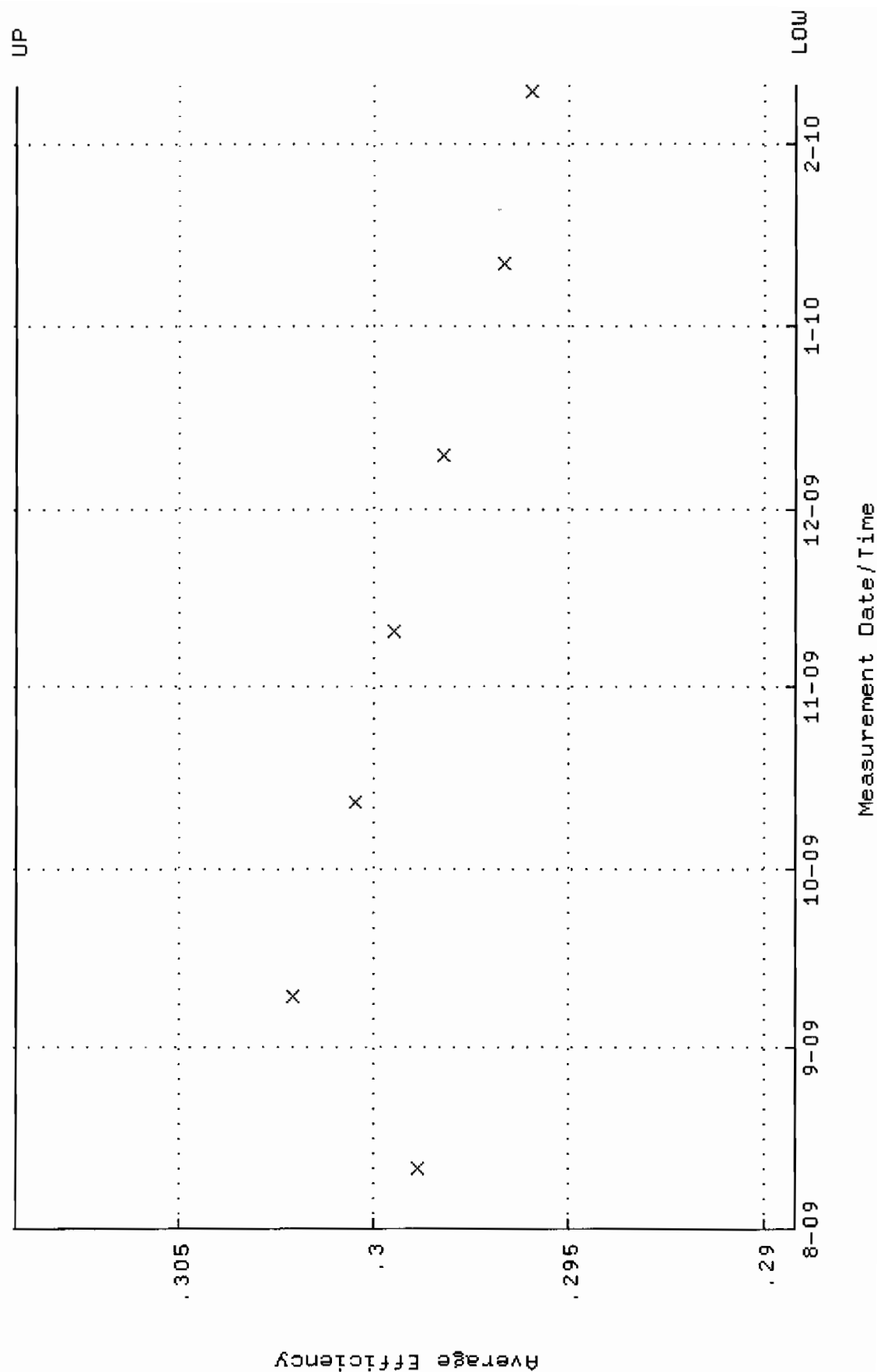
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



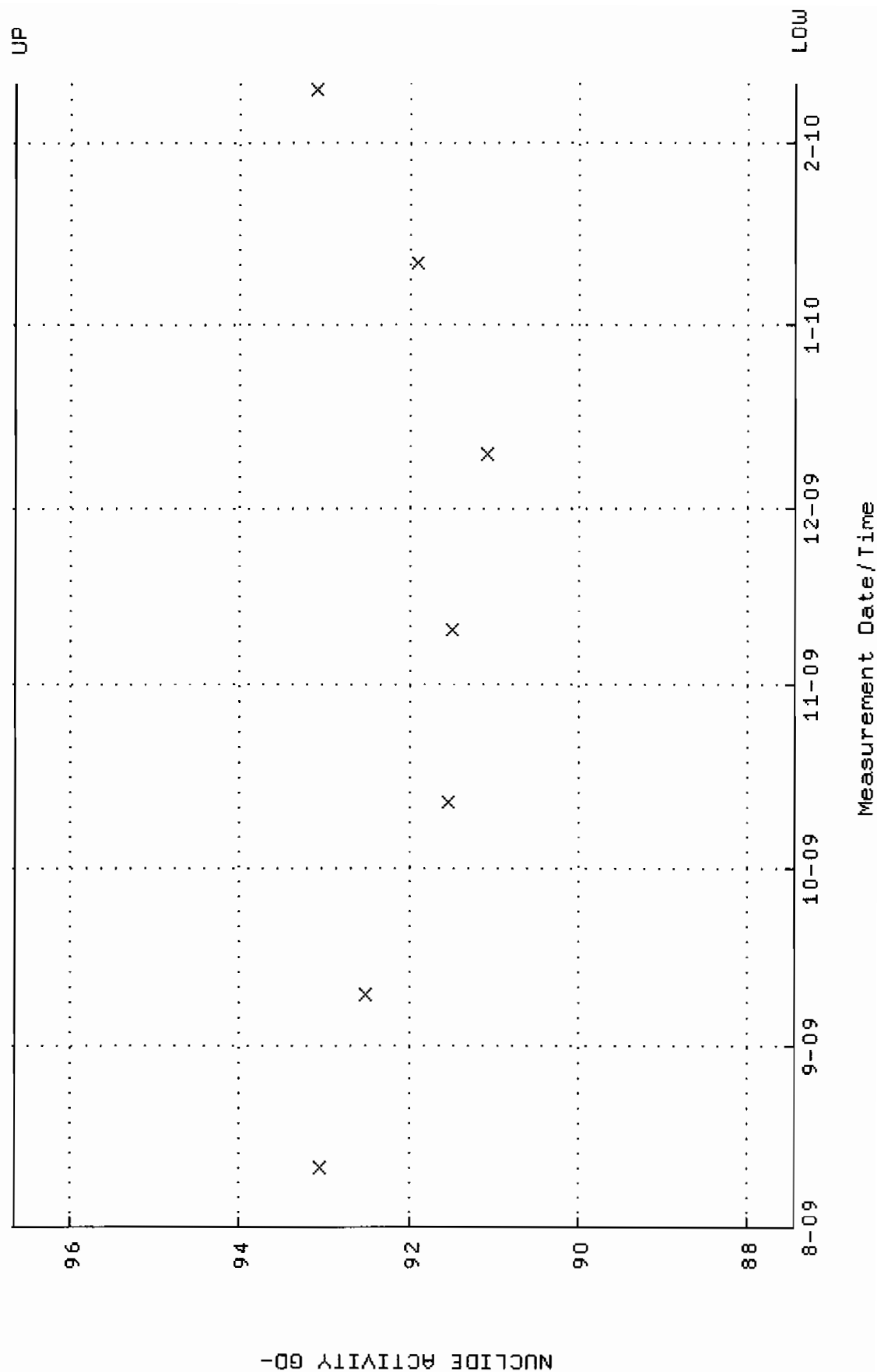
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 10:53:44 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.0000



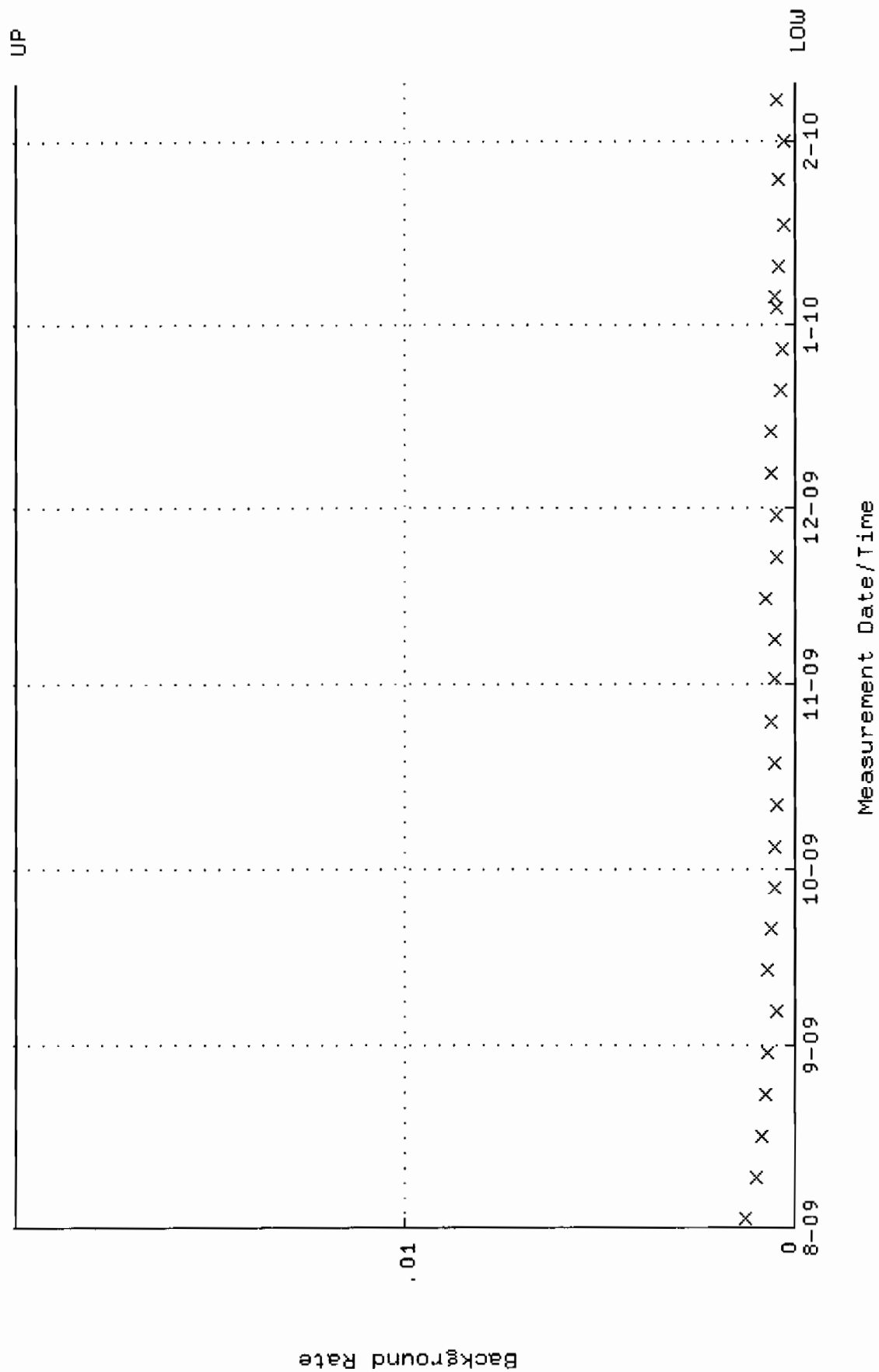
QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.289178 through 0.309178



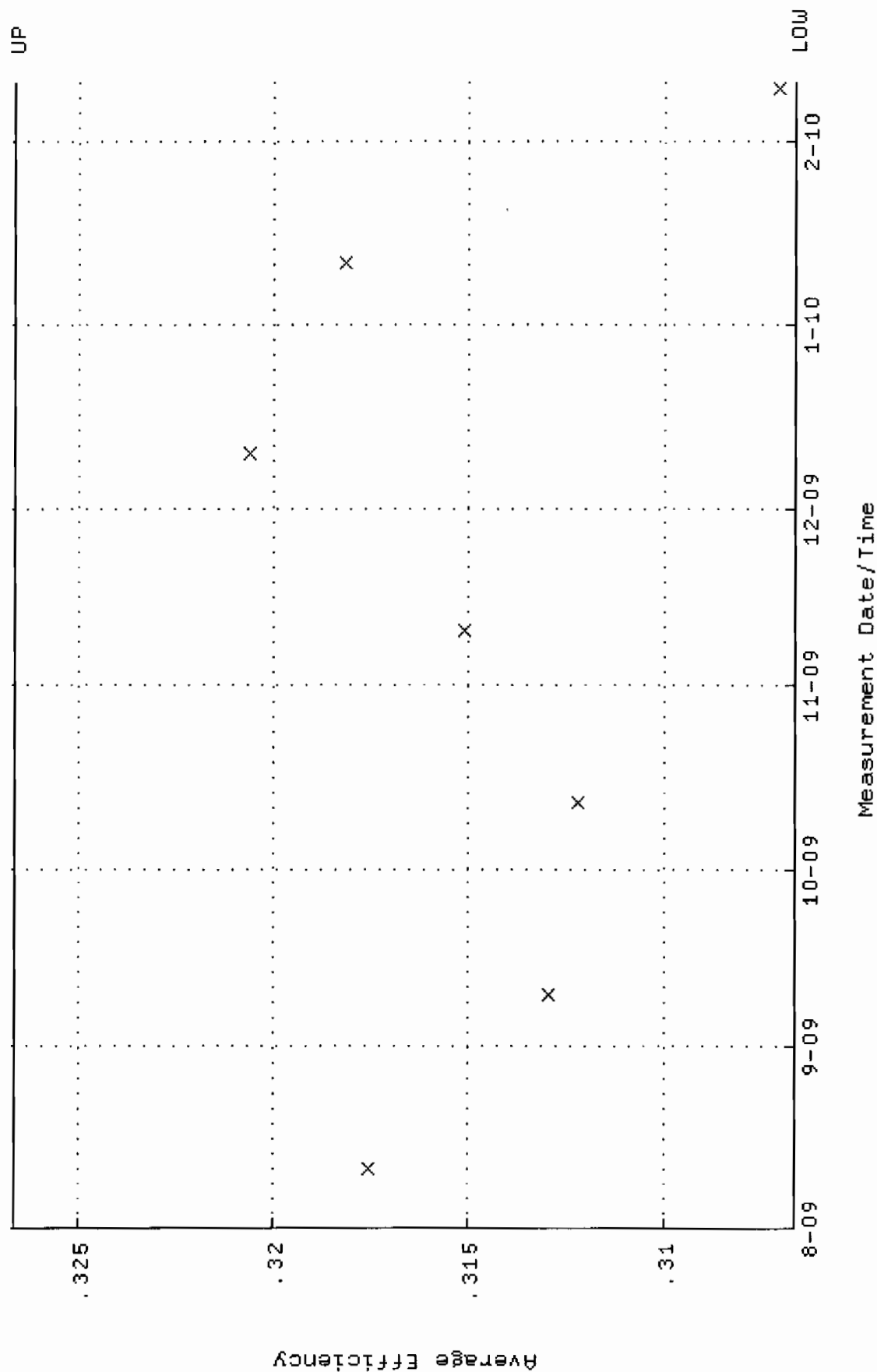
QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.4419 through 96.6463



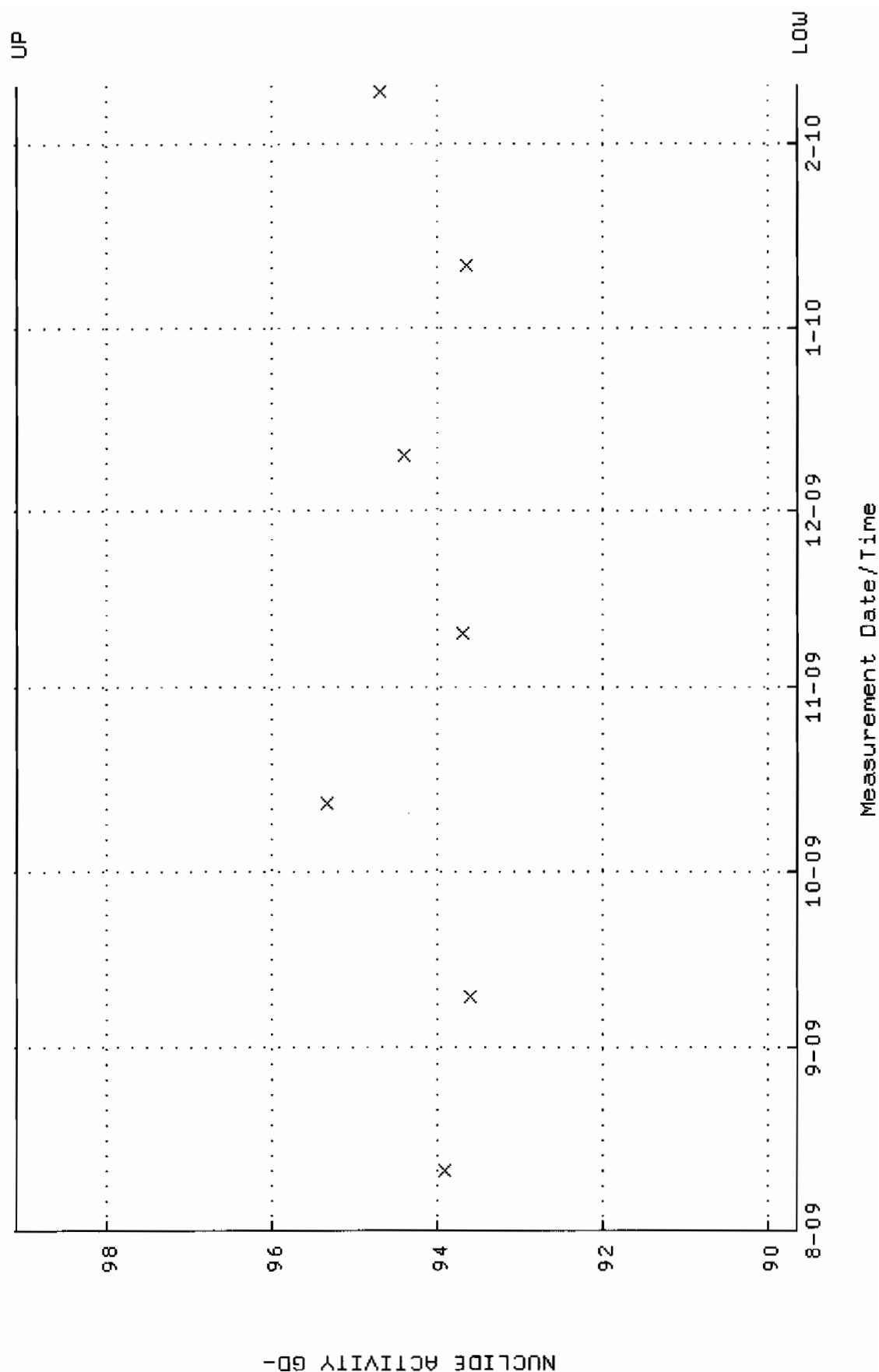
QA filename : DKA100:[ENV_ALPHA.QA.B]B068.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



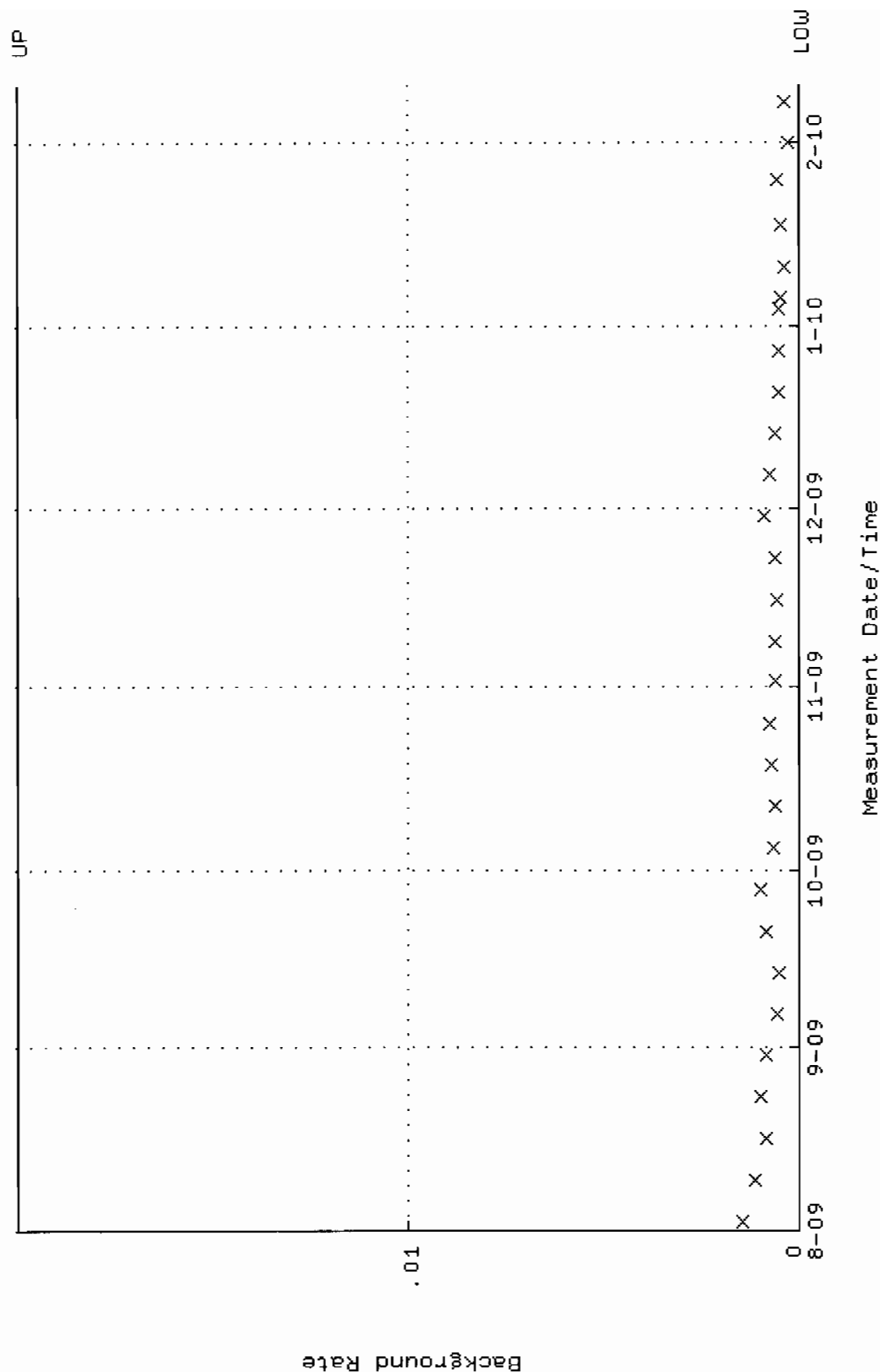
QA filename : DKA100:[ENV_ALPHA,QA.W]W069.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.306636 through 0.326636



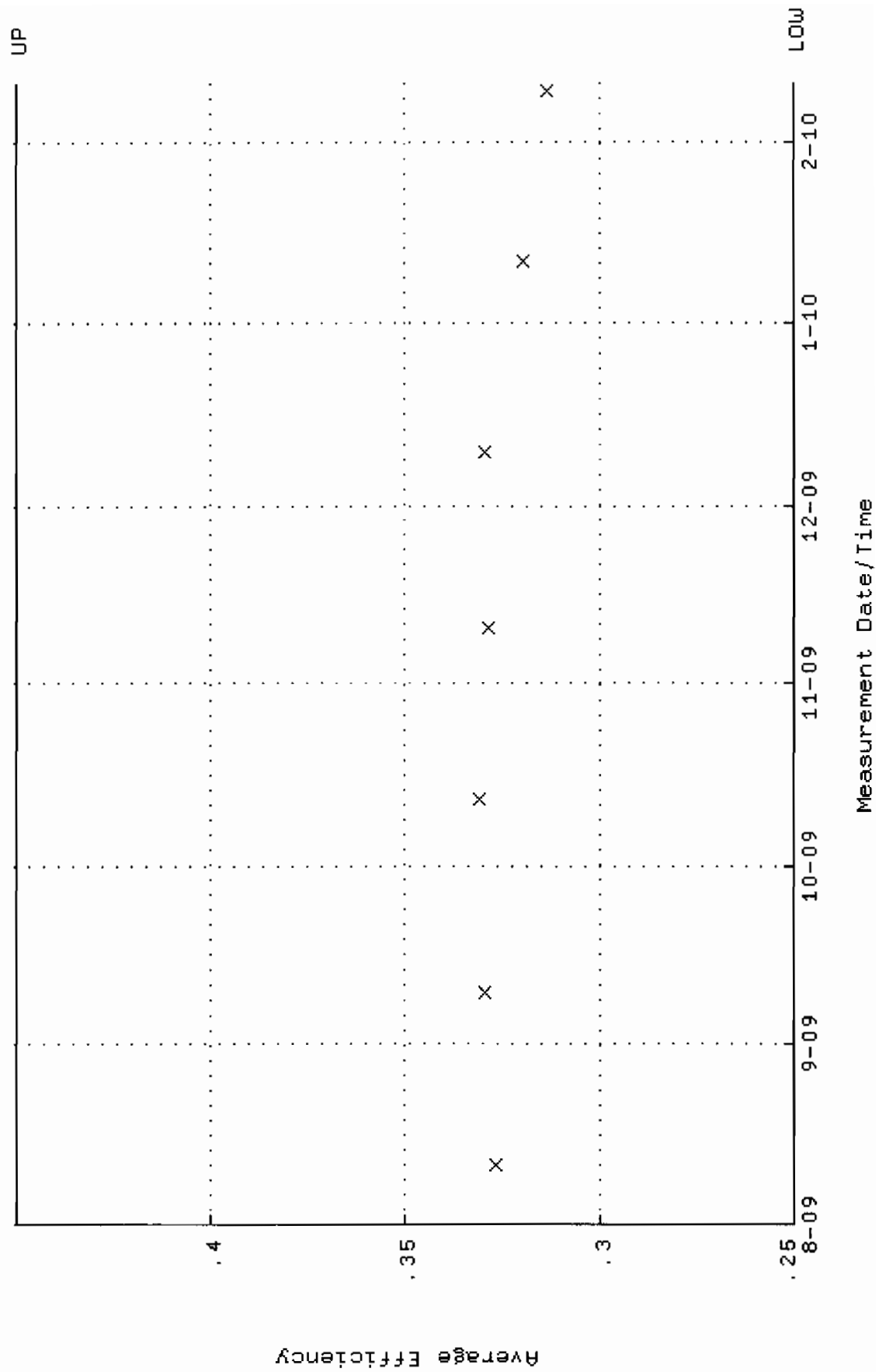
QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.6479 through 99.0845



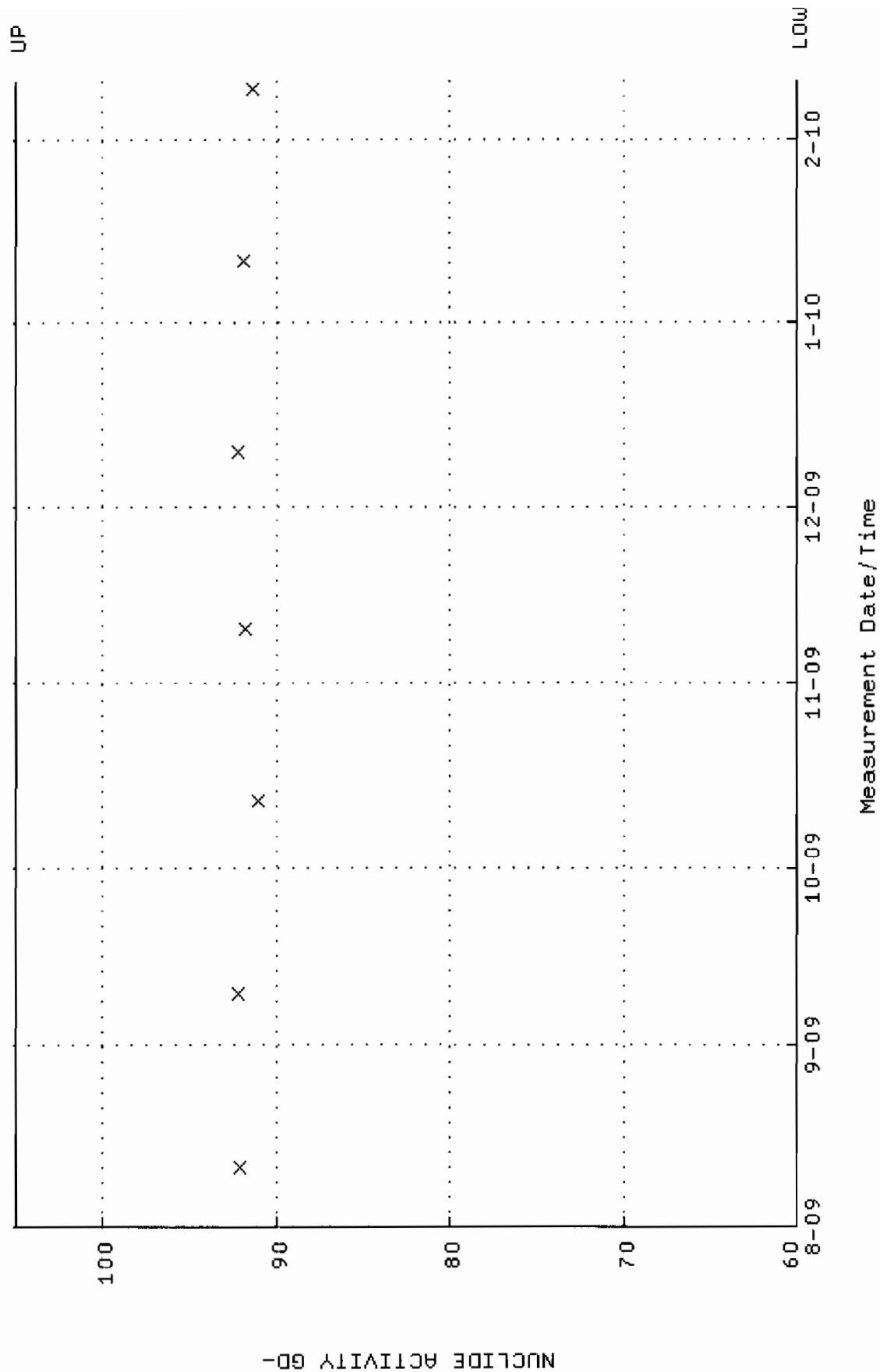
QA filename : DKA100:[ENV_ALPHA.QA.B]B069.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



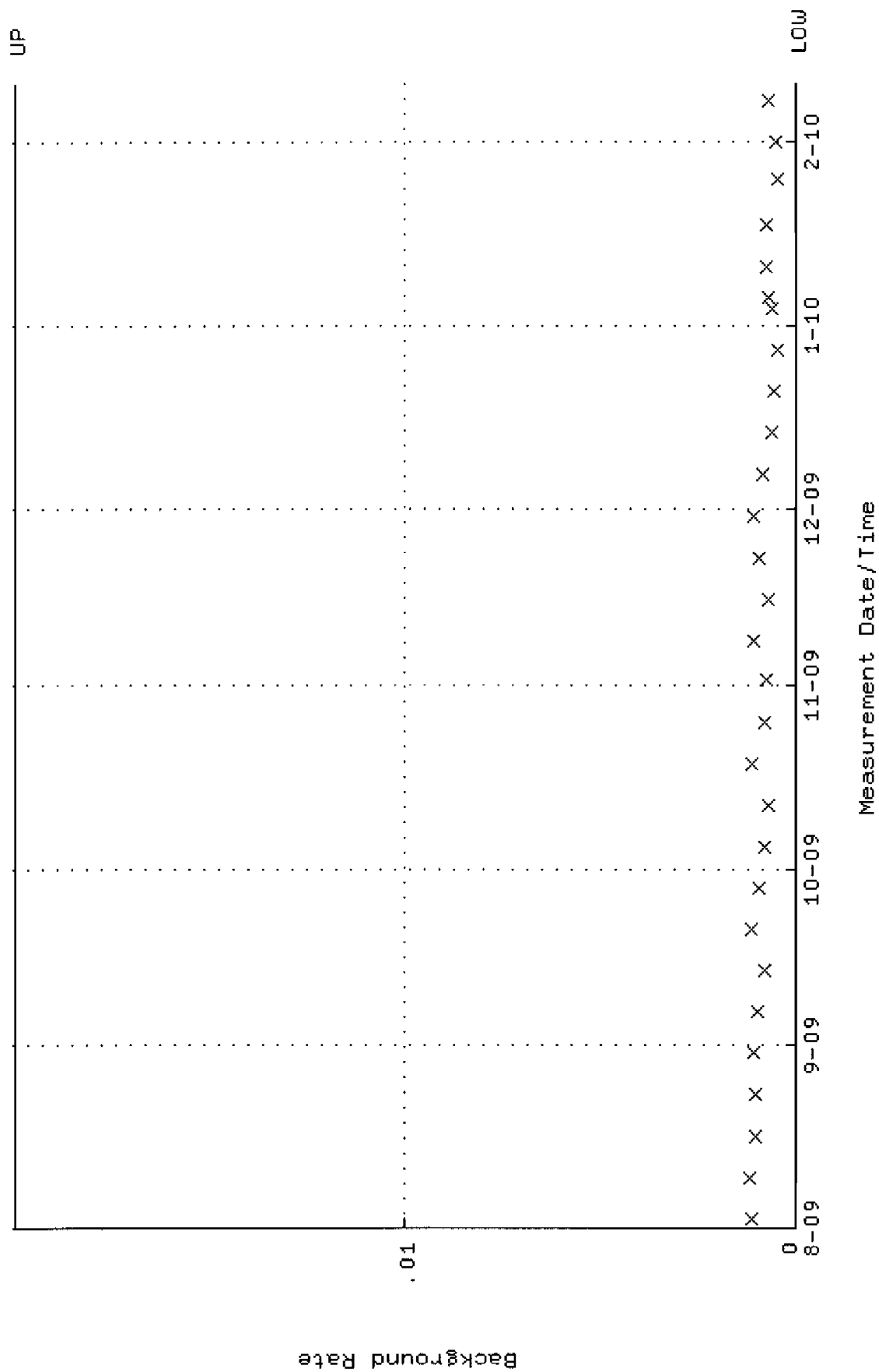
QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



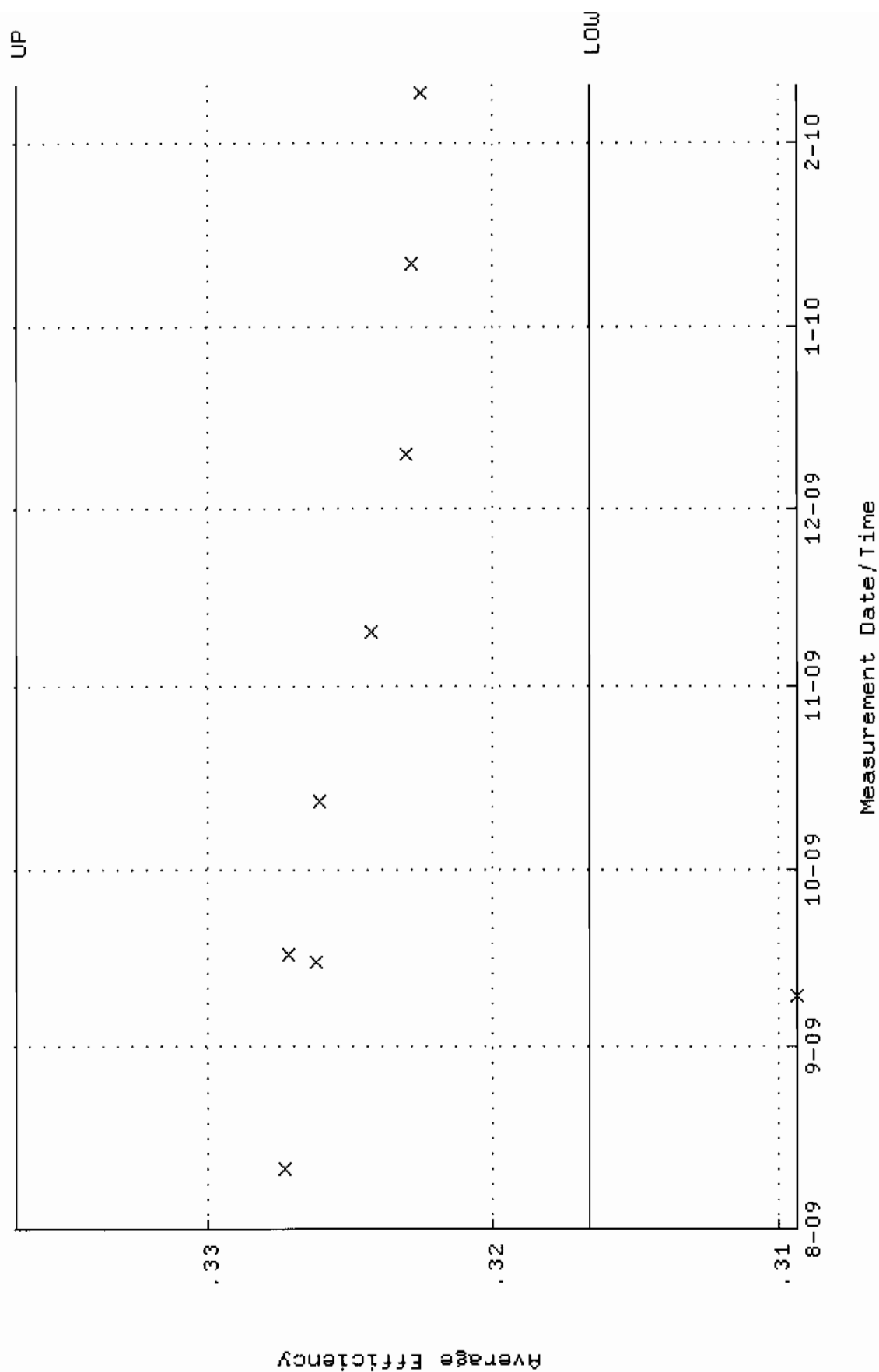
QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.0000



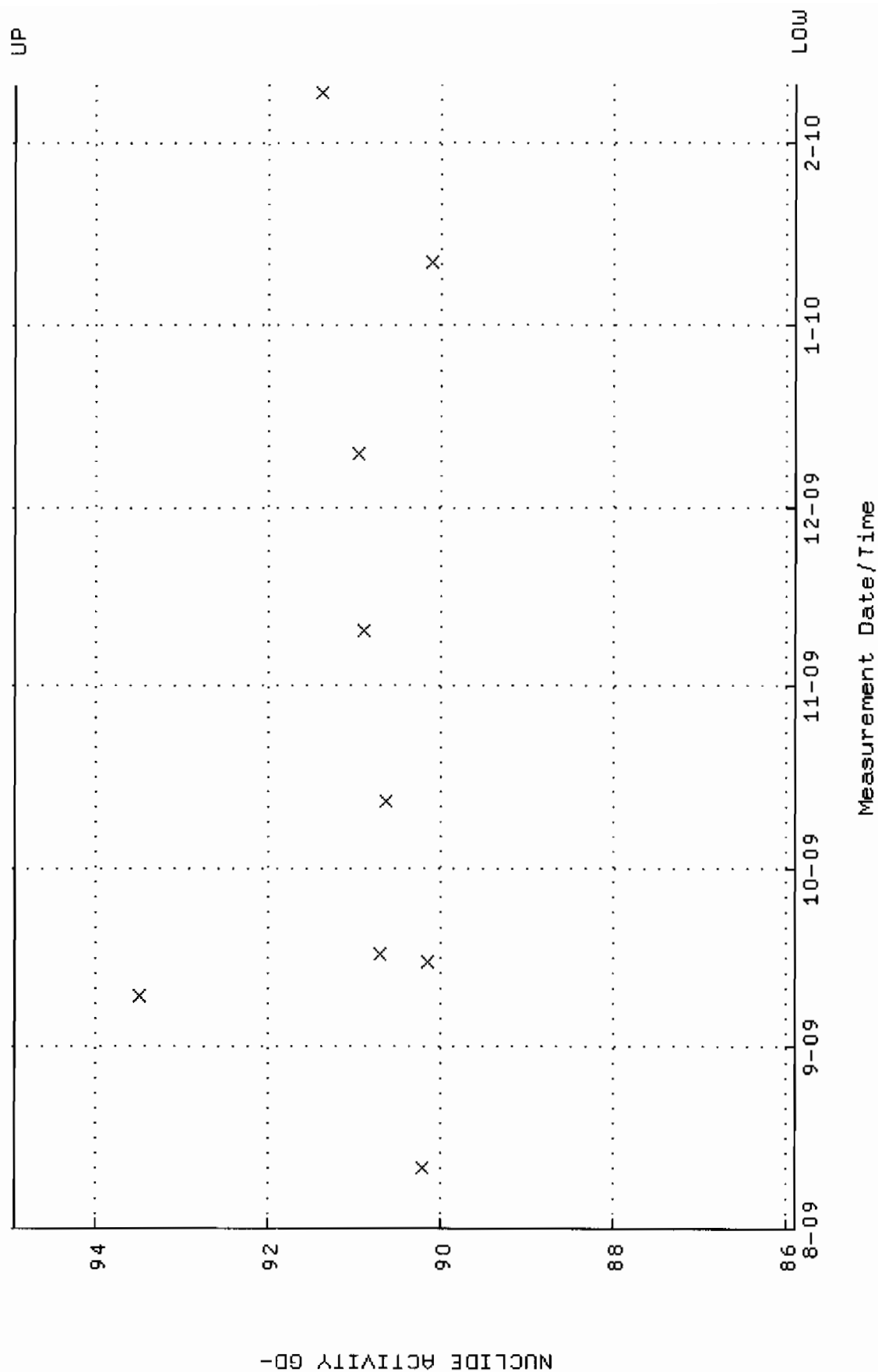
QA filename : DKA100:[ENV_ALPHA.QA.B]B077.QAF;3
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:40 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



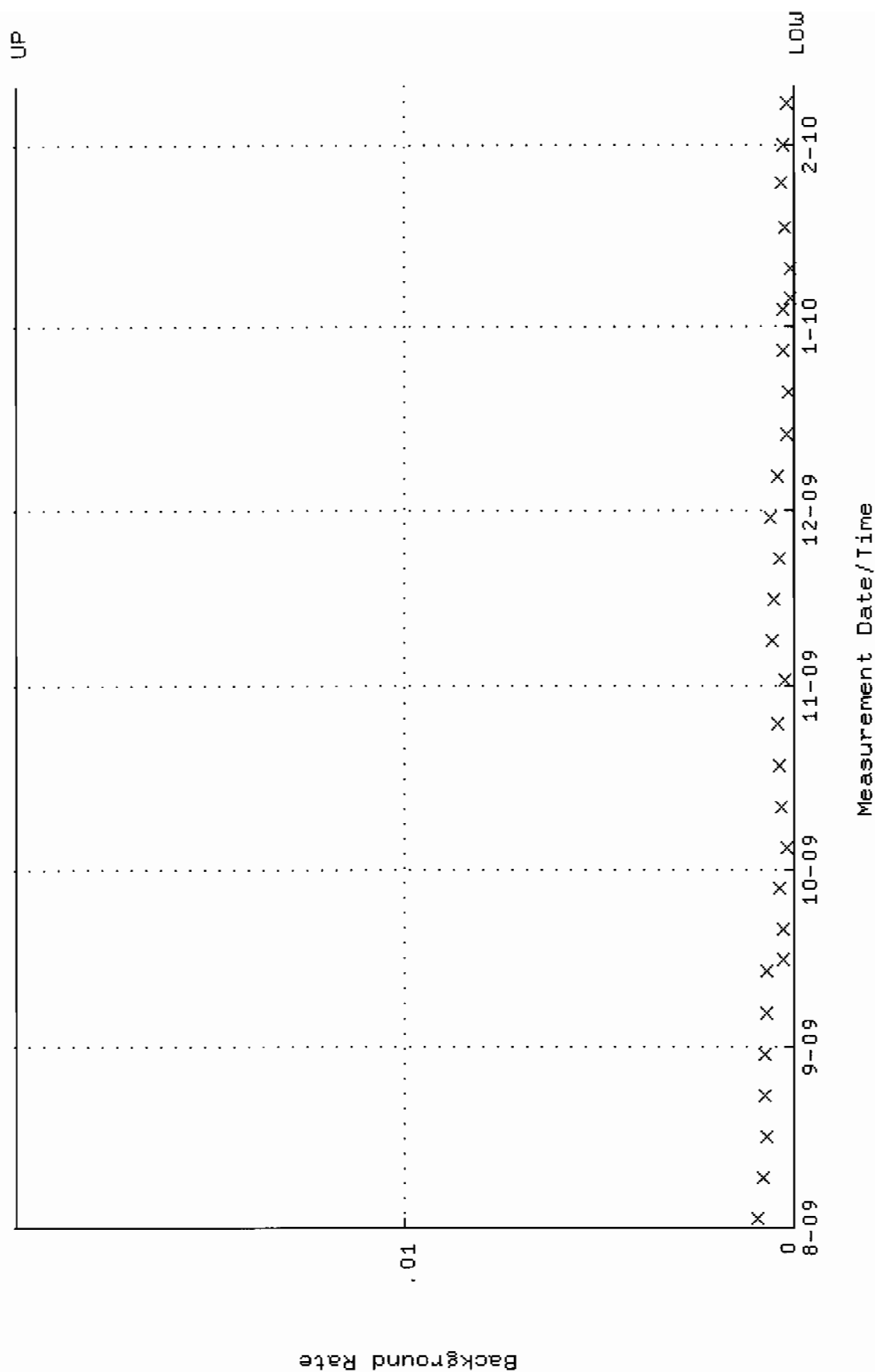
QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.316654 through 0.336654



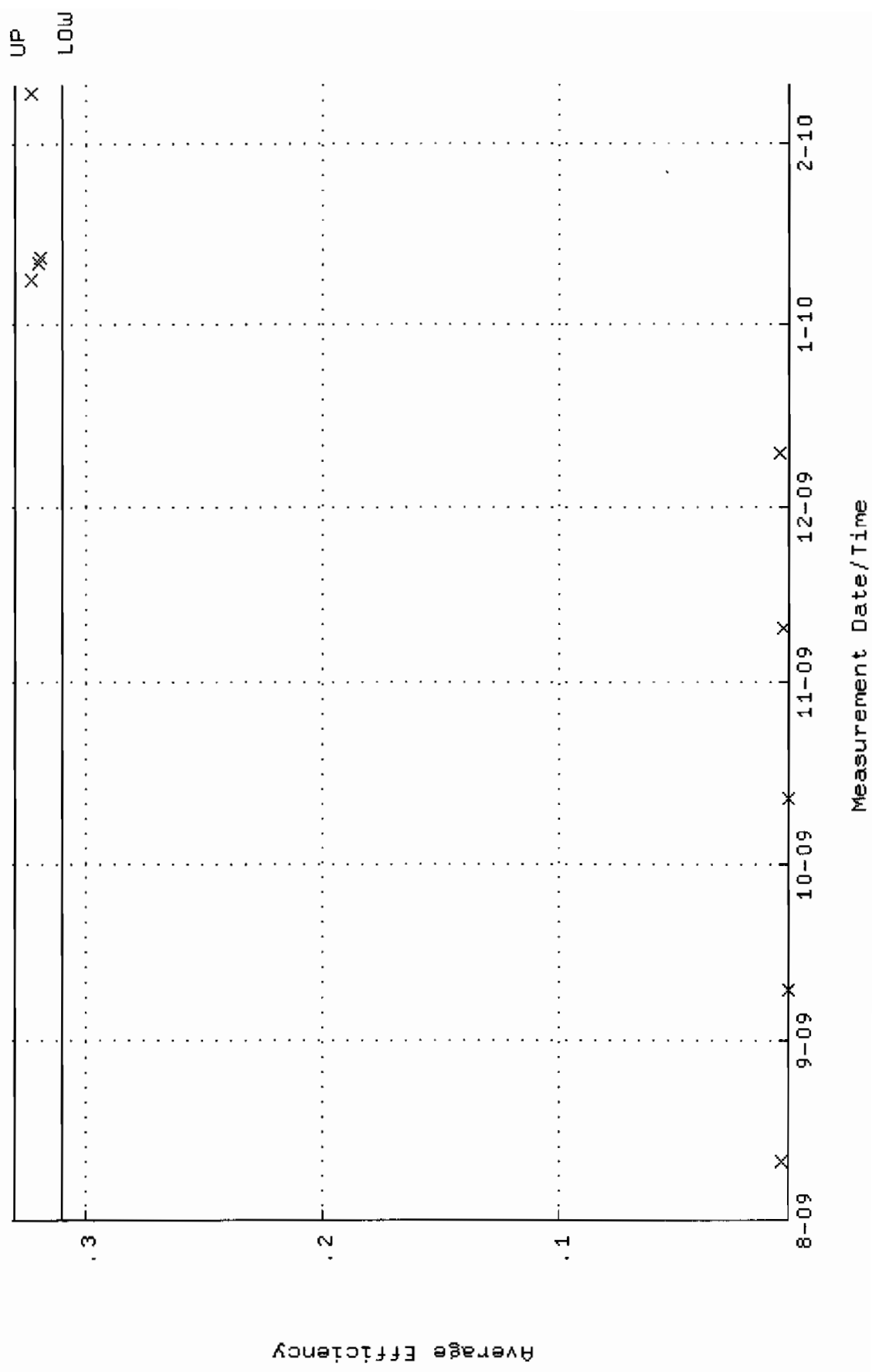
QA filename : OKA100:[ENV_ALPHA.QA.W]W079.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GO-148)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.8913 through 94.9325



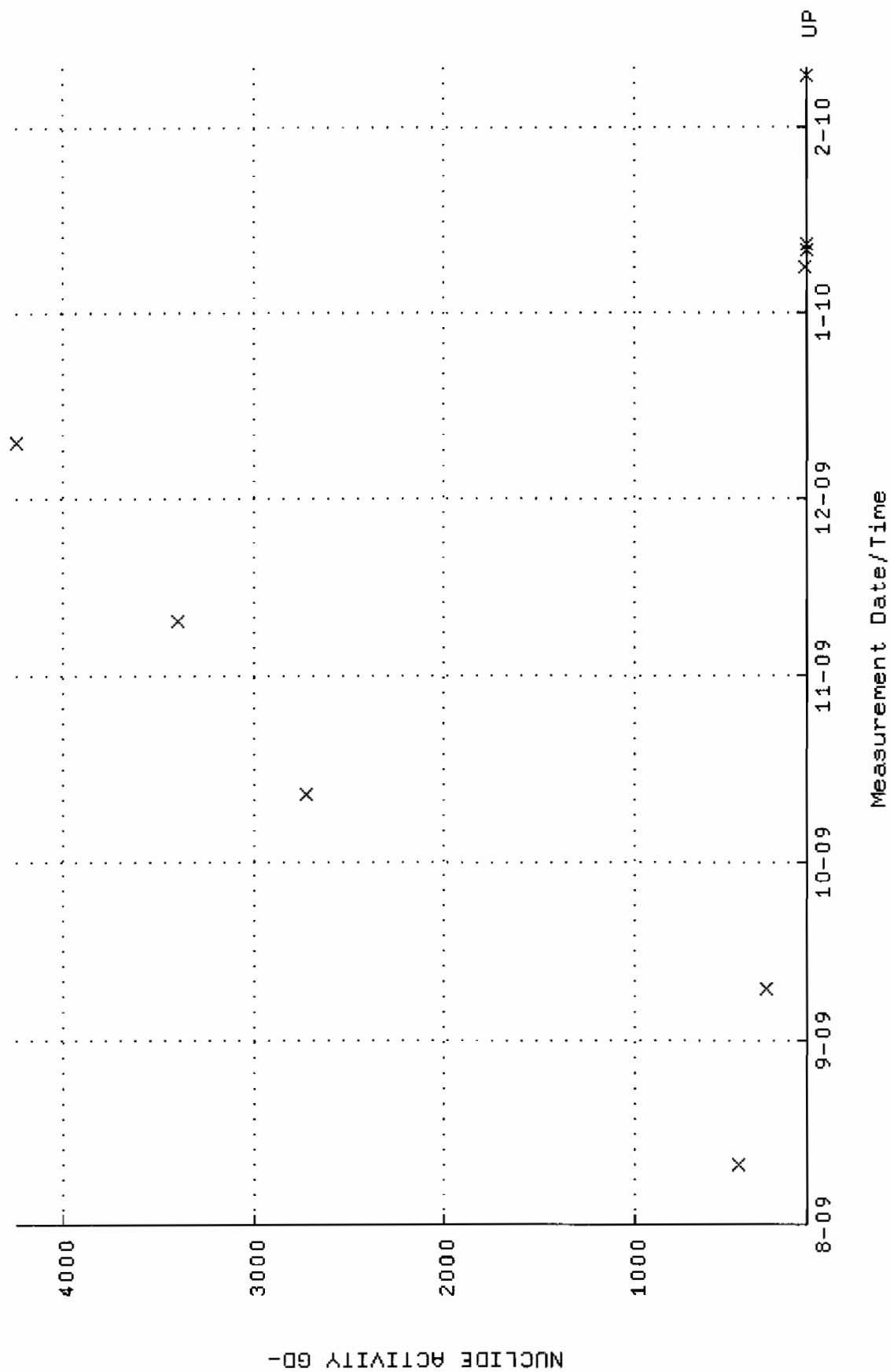
QA filename : DKA100:[ENV_ALPHA.QA.B]B079.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:40 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



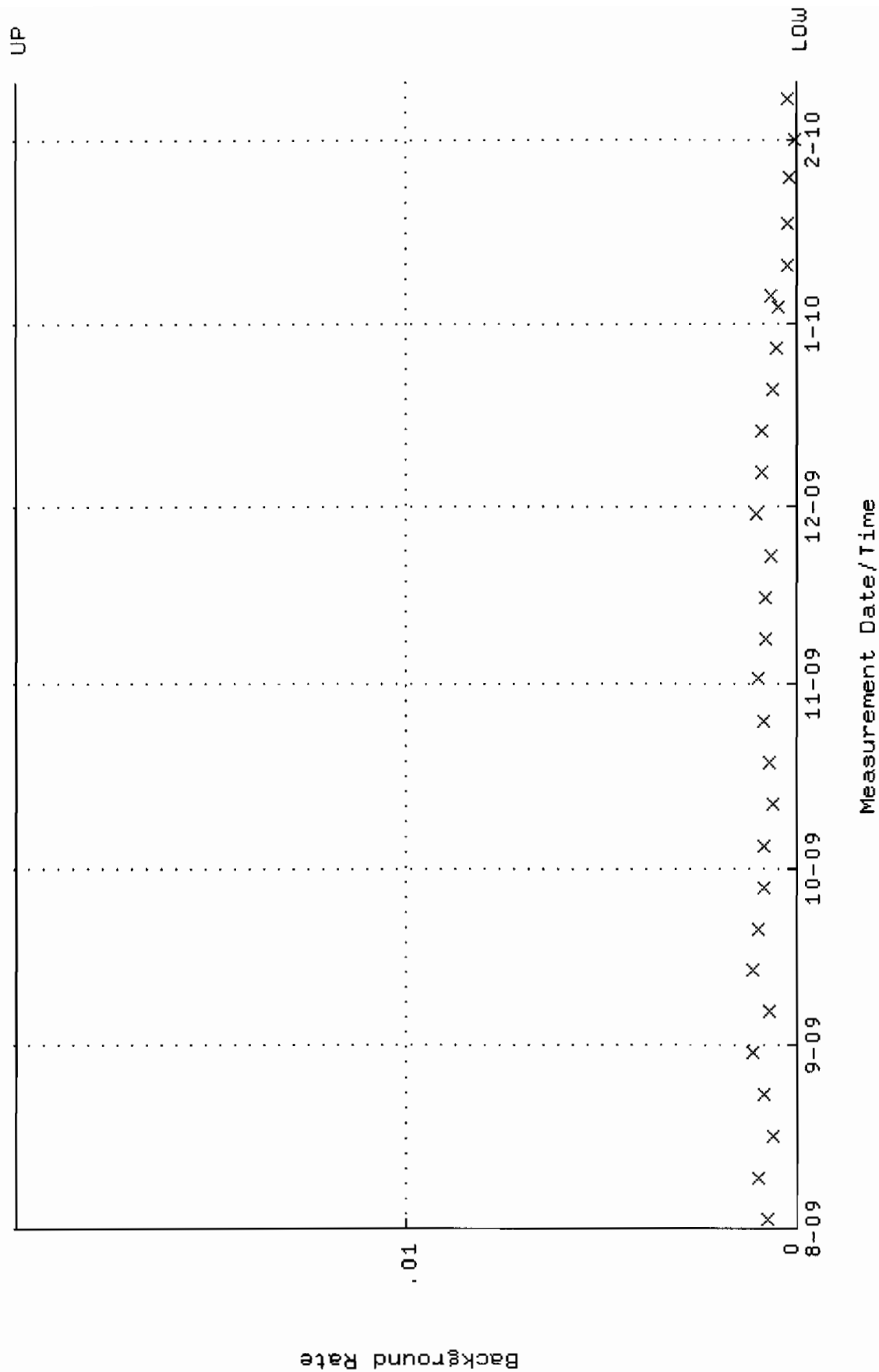
QA filename : DKA100:[ENV_ALPHA.QA.W]W081.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.310202 through 0.330202



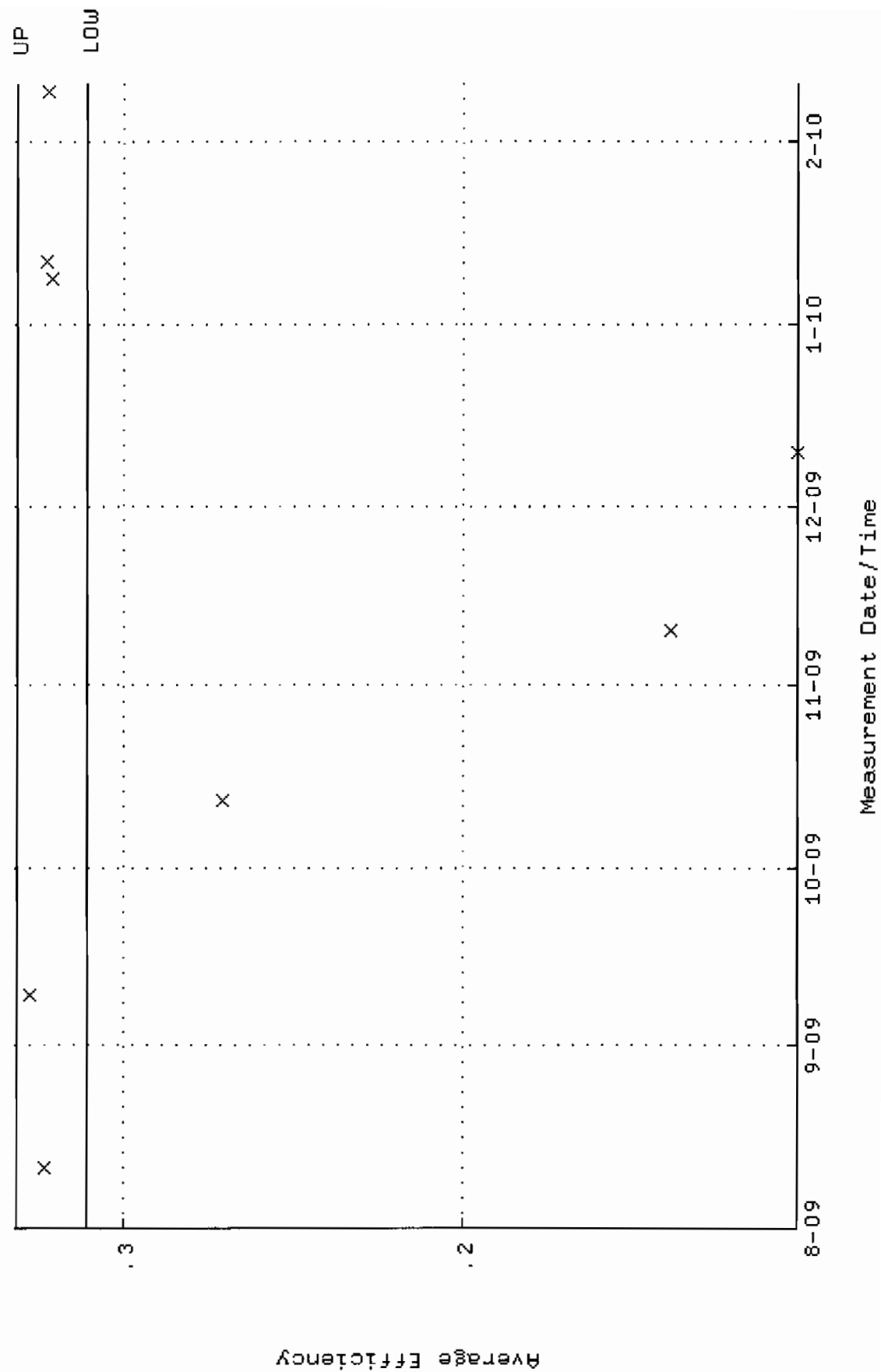
QA filename : DKA100:[ENV_ALPHA.QA.W]W081.QAF;5
 Parameter Name : NACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.2016 through 98.5912



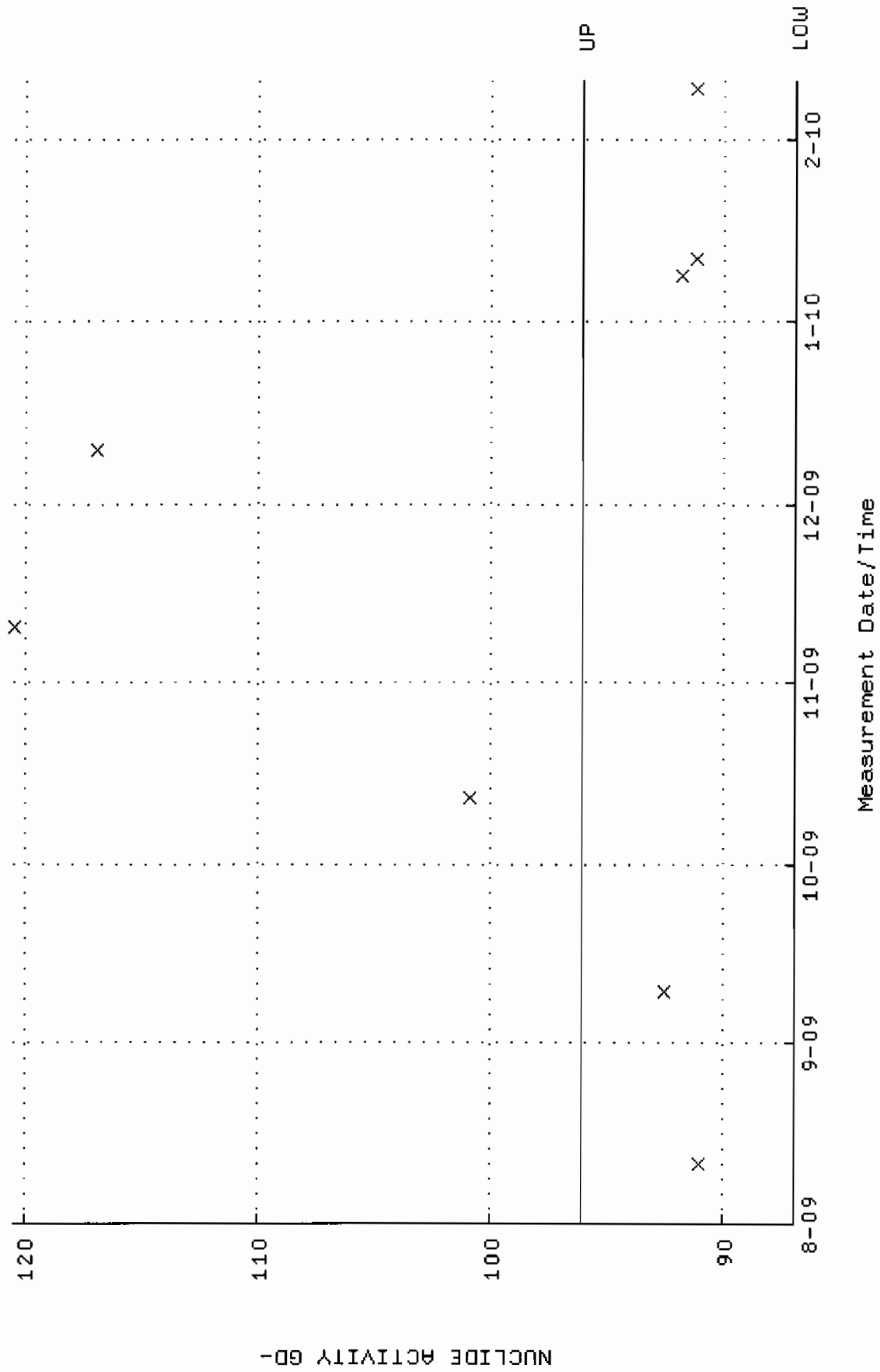
QA filename : DKA100:[ENV_ALPHA.QA.8]B081.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:40 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



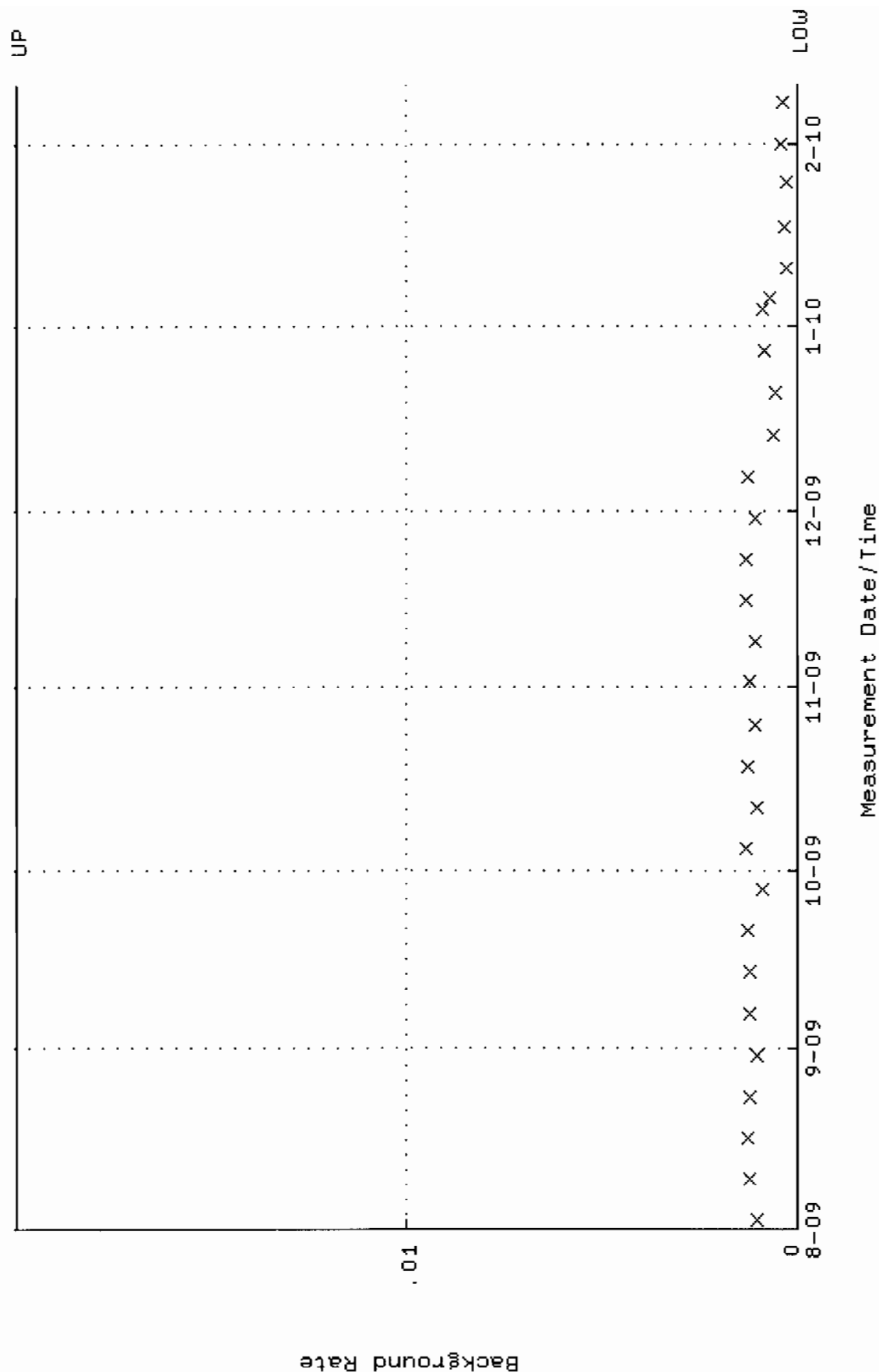
QA filename : DKA100:[ENV_ALPHA.QA.W]W082.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.311357 through 0.331357



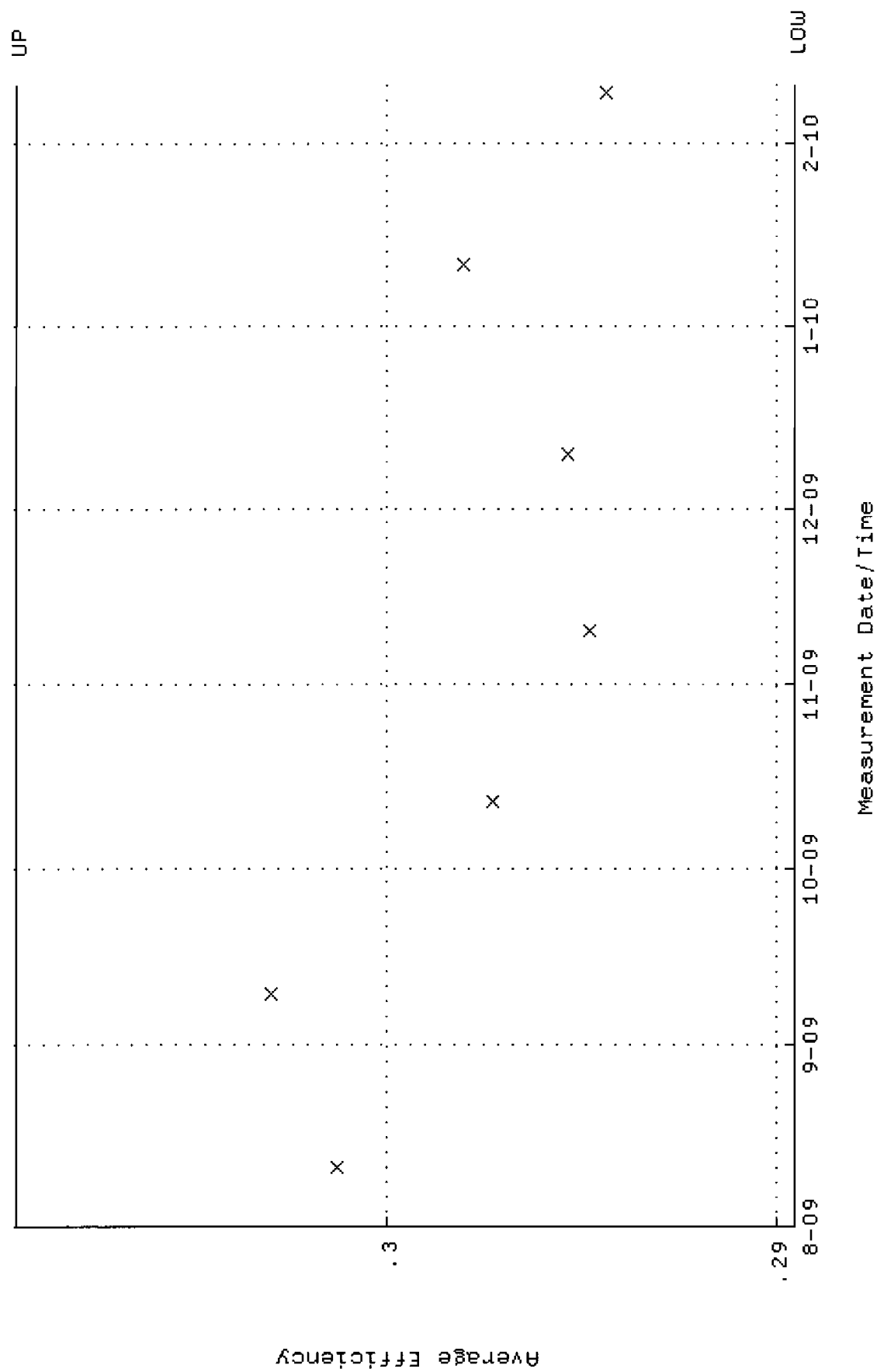
QA filename : DKA100:[ENV_ALPHA.QA.W]W082.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:12 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.9094 through 96.0578



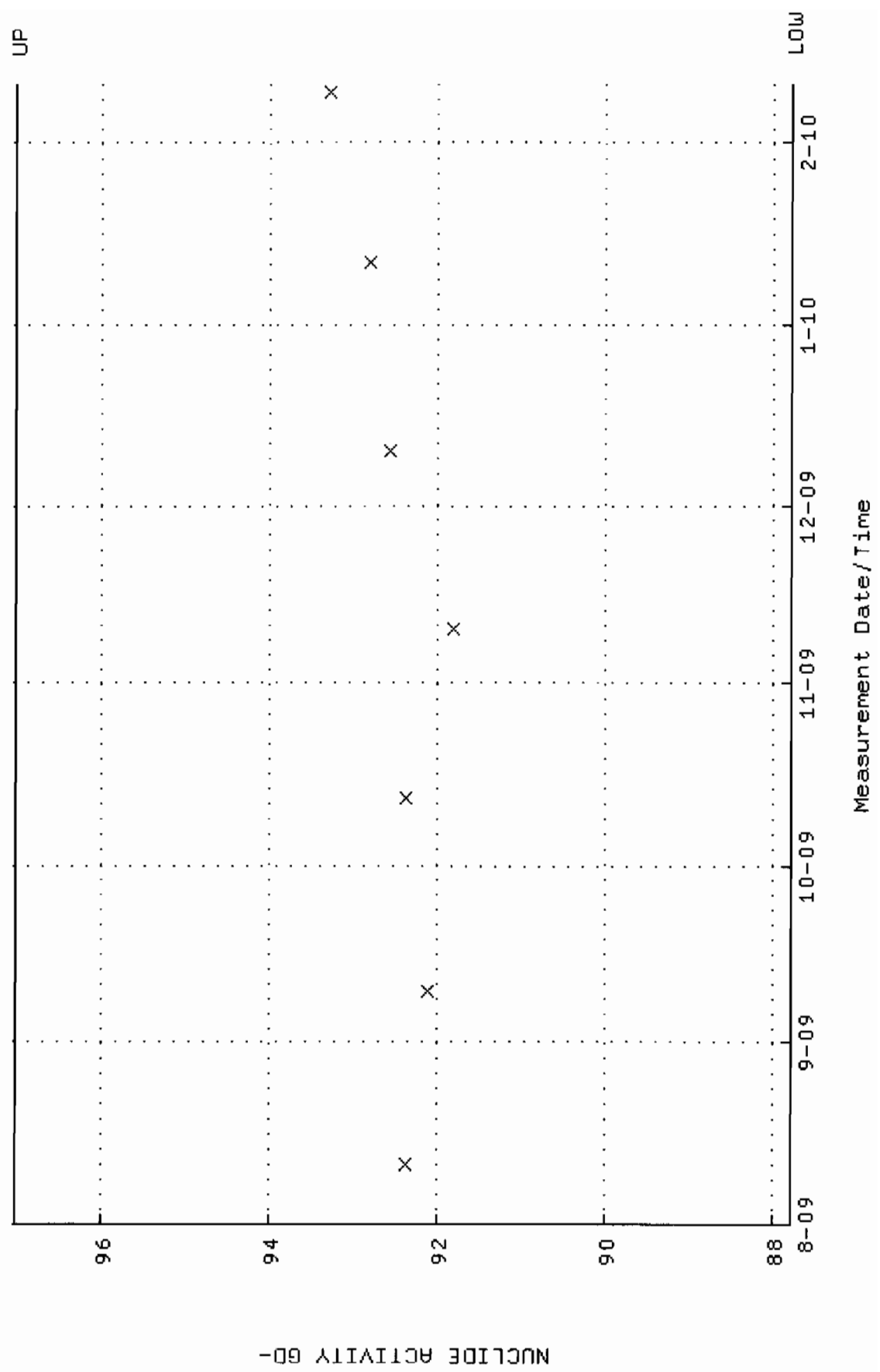
QA filename : DKA100:[ENV_ALPHA.QA.B]B082.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:40 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



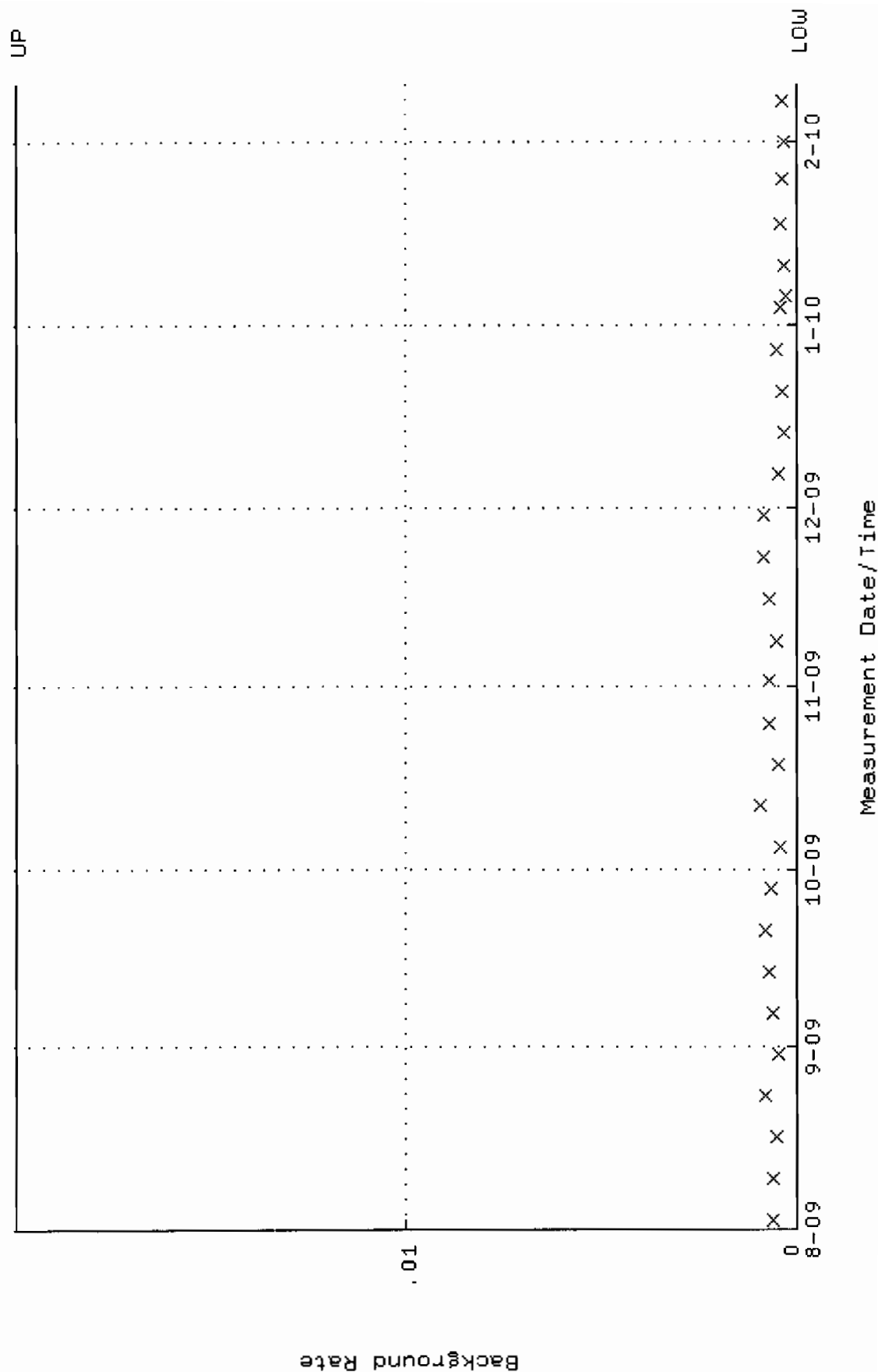
QA filename : DKA100:[ENV_ALPHA.QA.W]W086.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.289508 through 0.309508



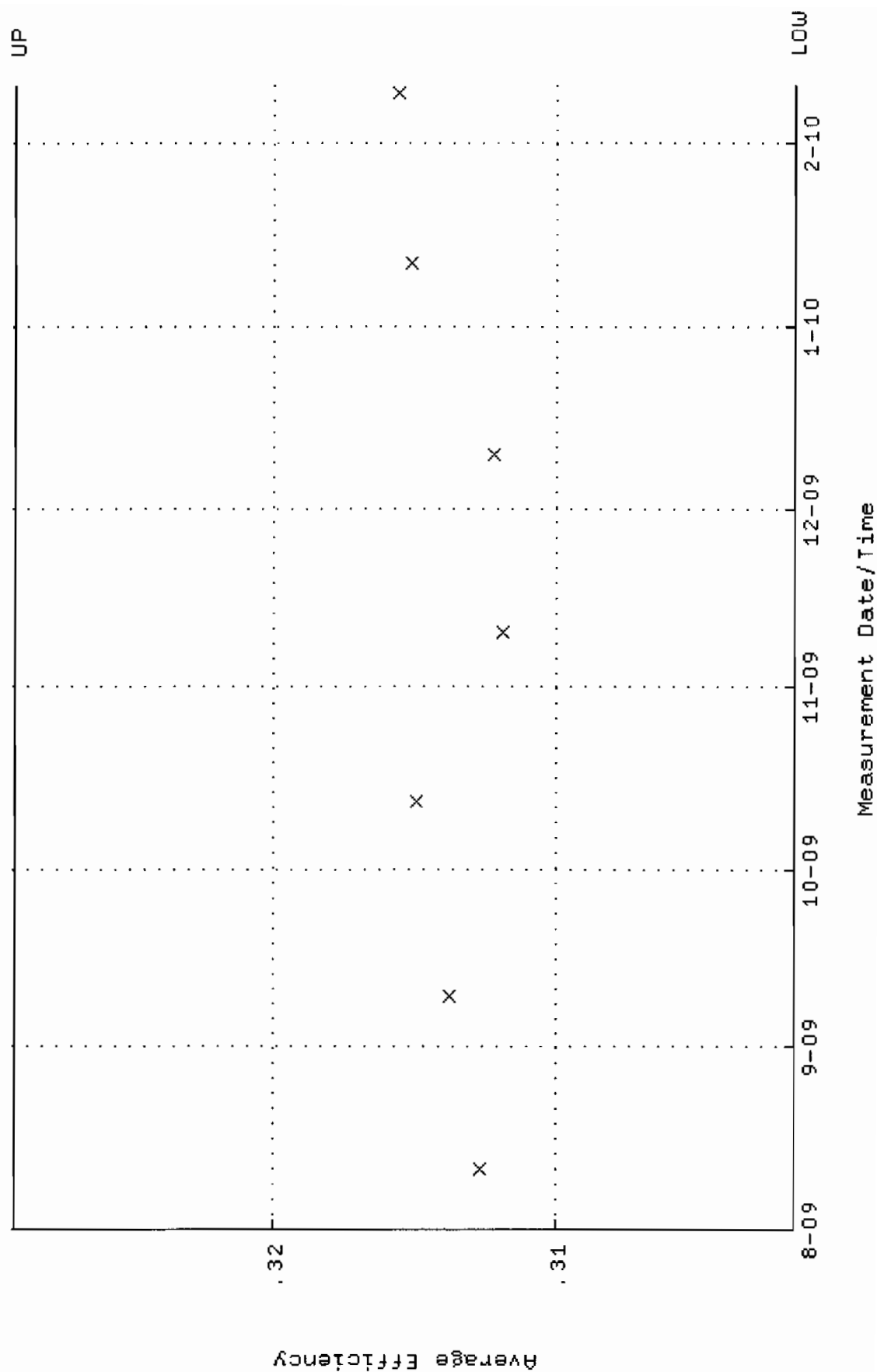
QA filename : DKA100:[ENV_ALPHA.QA.W]W086.QAF;4
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.7898 through 97.0308



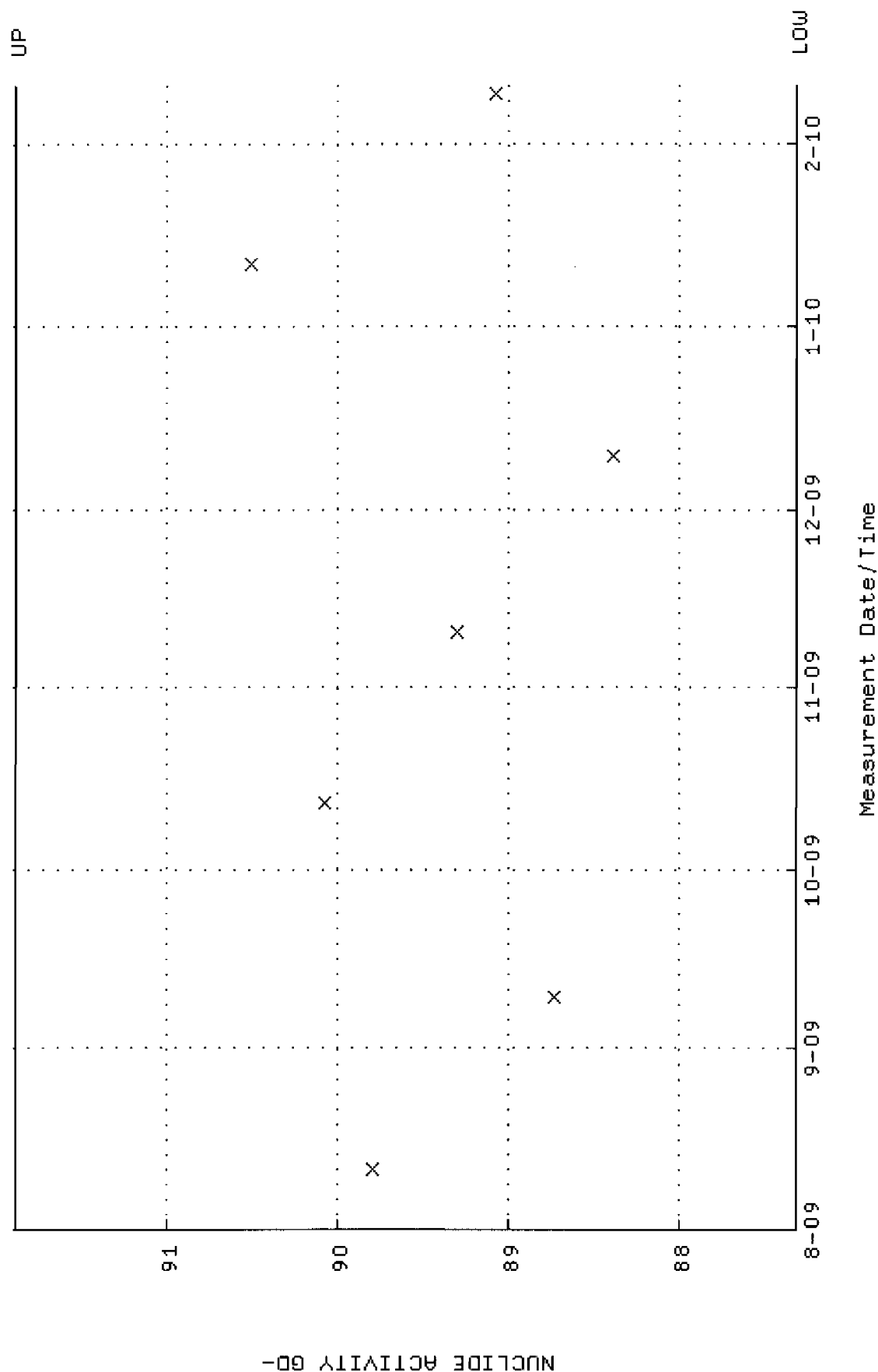
QA filename : DKA100:[ENV_ALPHA.QA.B]B086.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:41 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



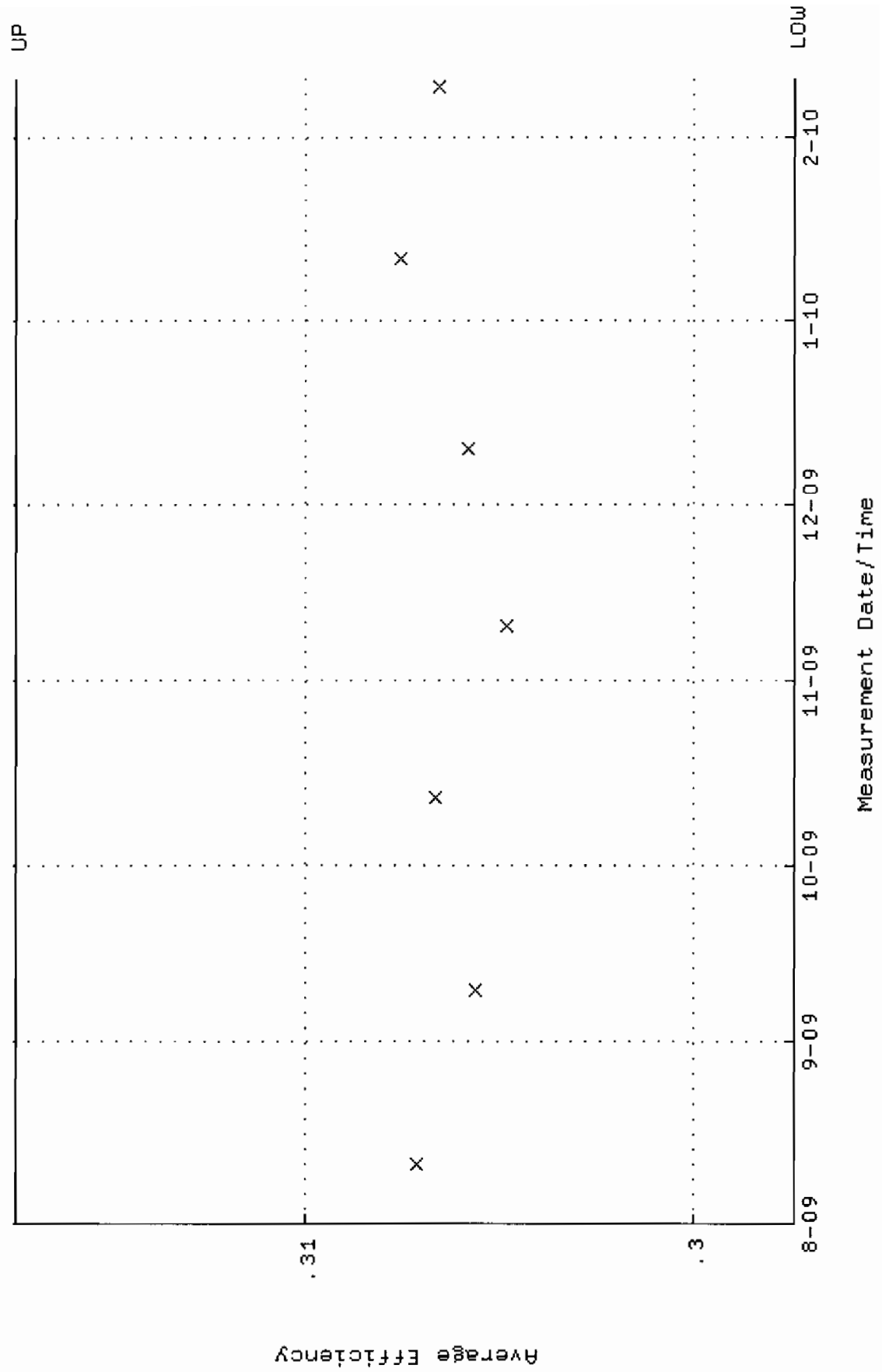
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.301529 through 0.329133



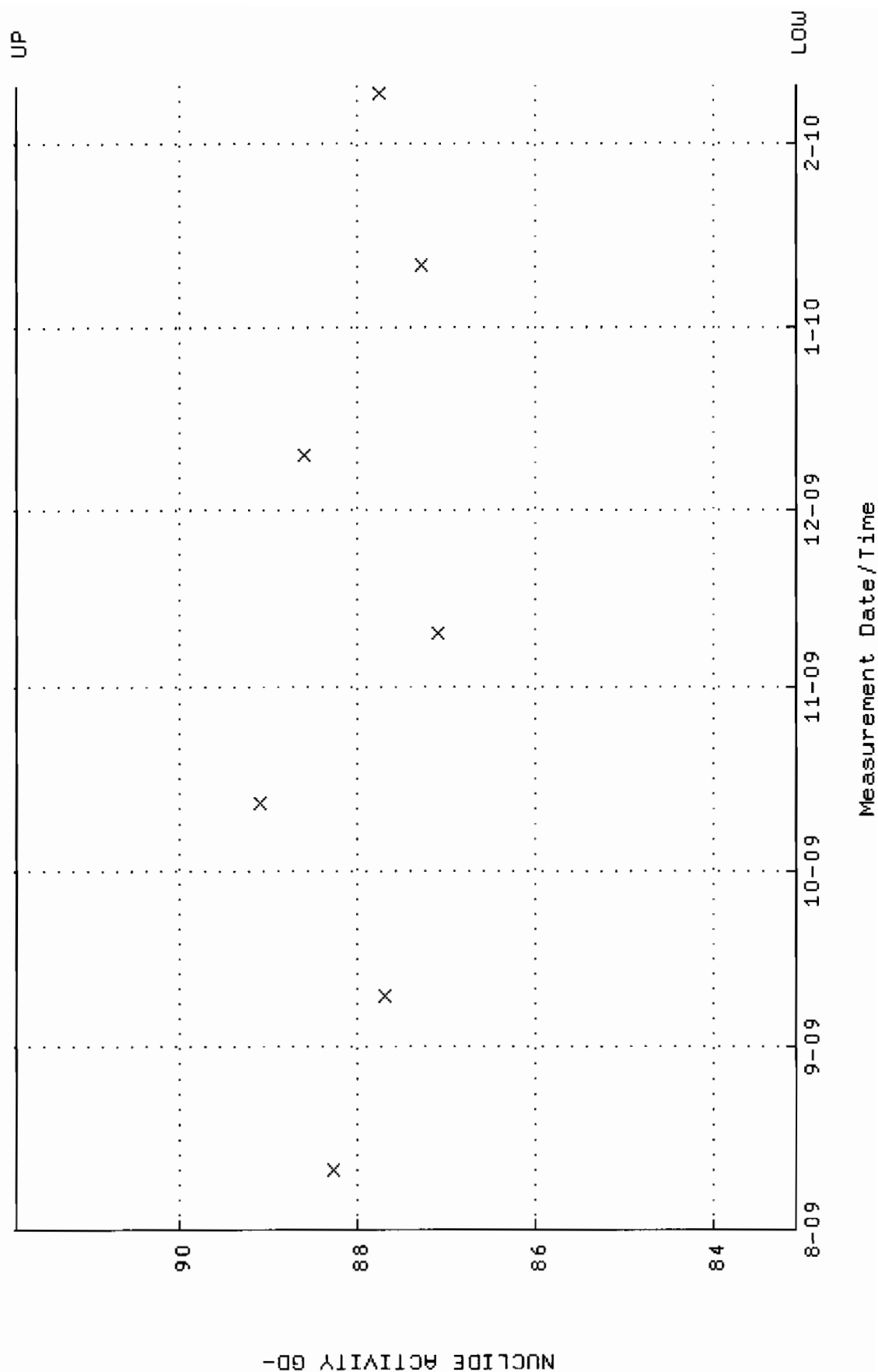
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.3140 through 91.8878



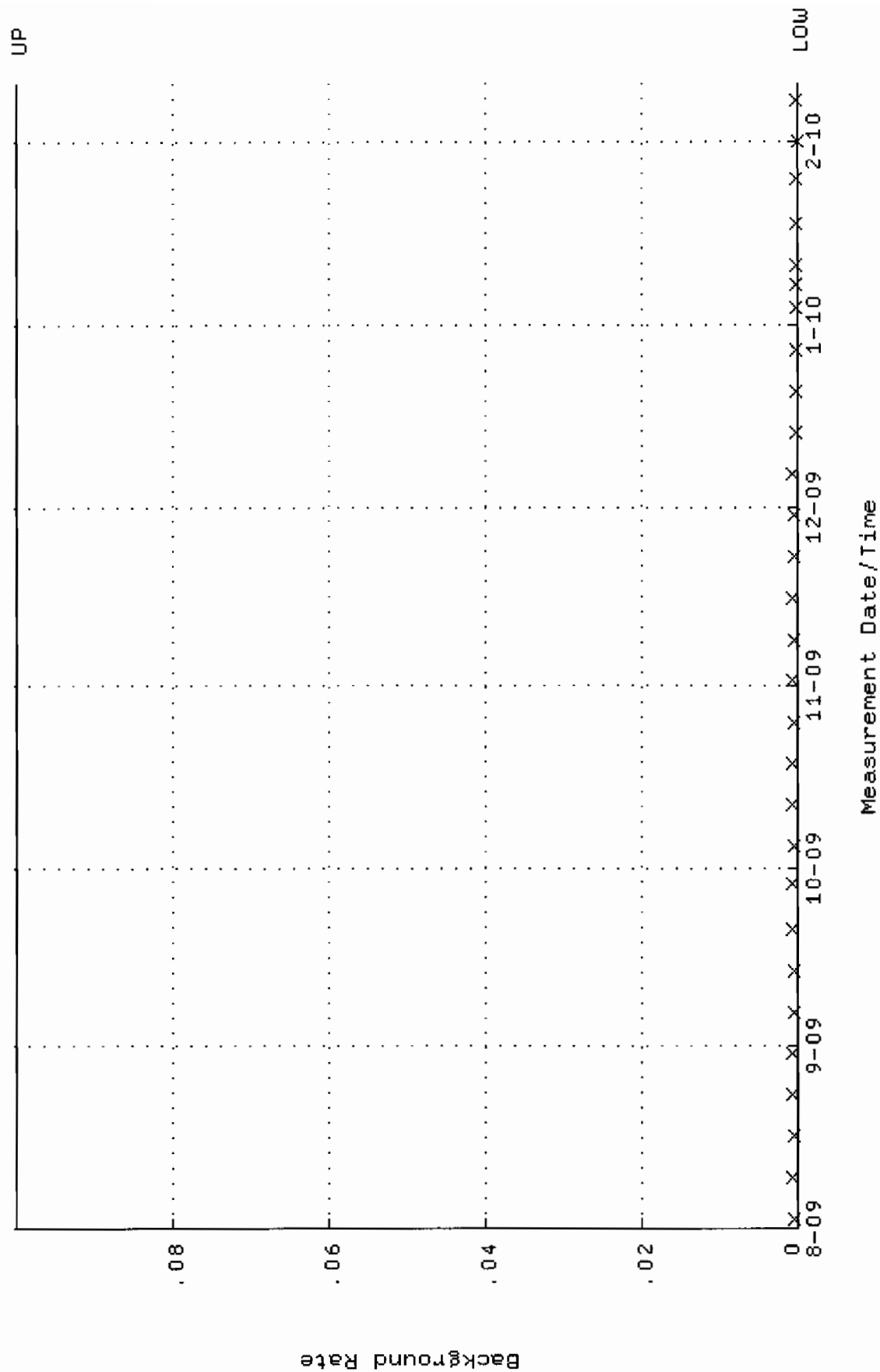
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.297429 through 0.317429



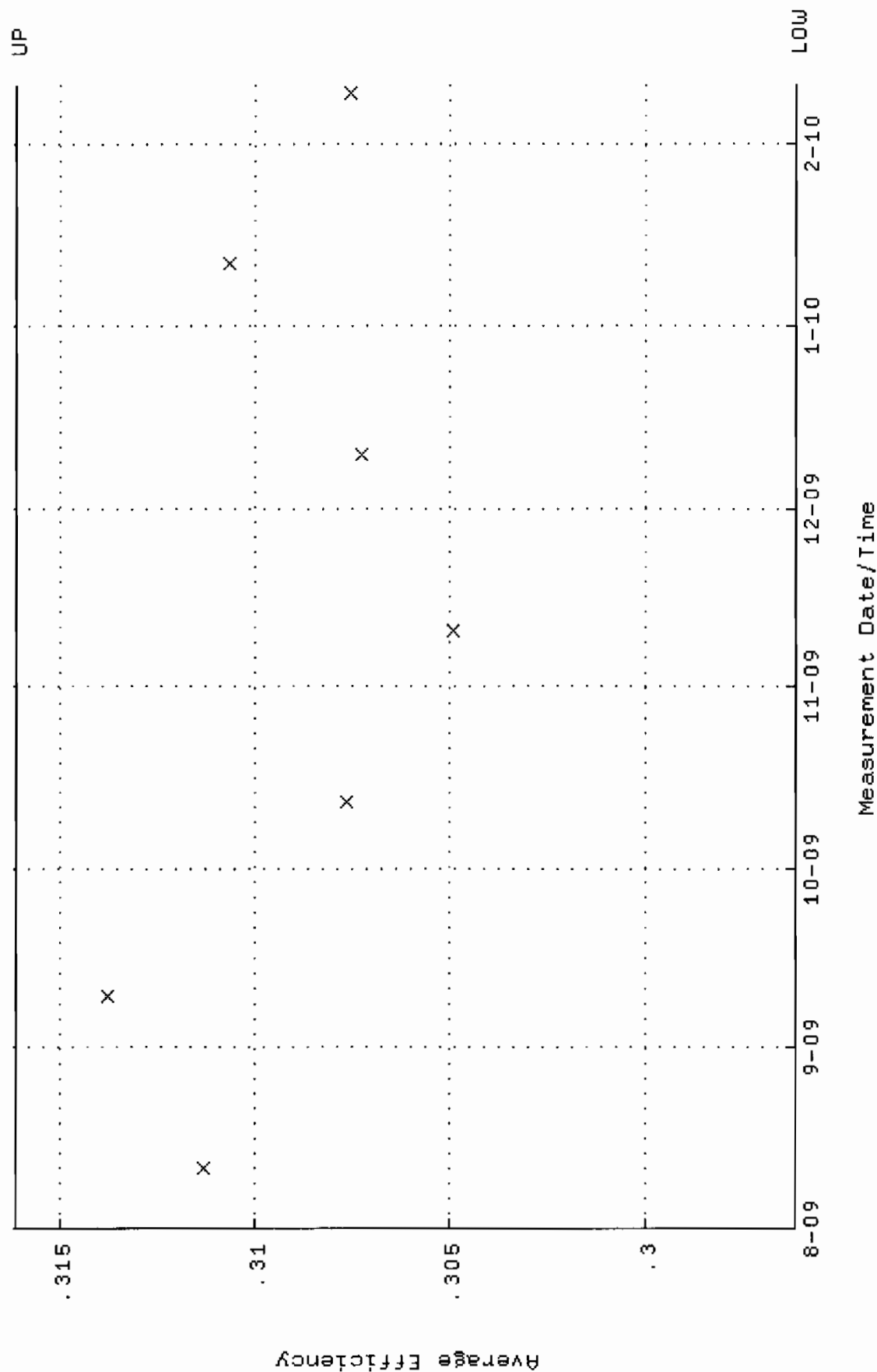
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 83.0827 through 91.8283



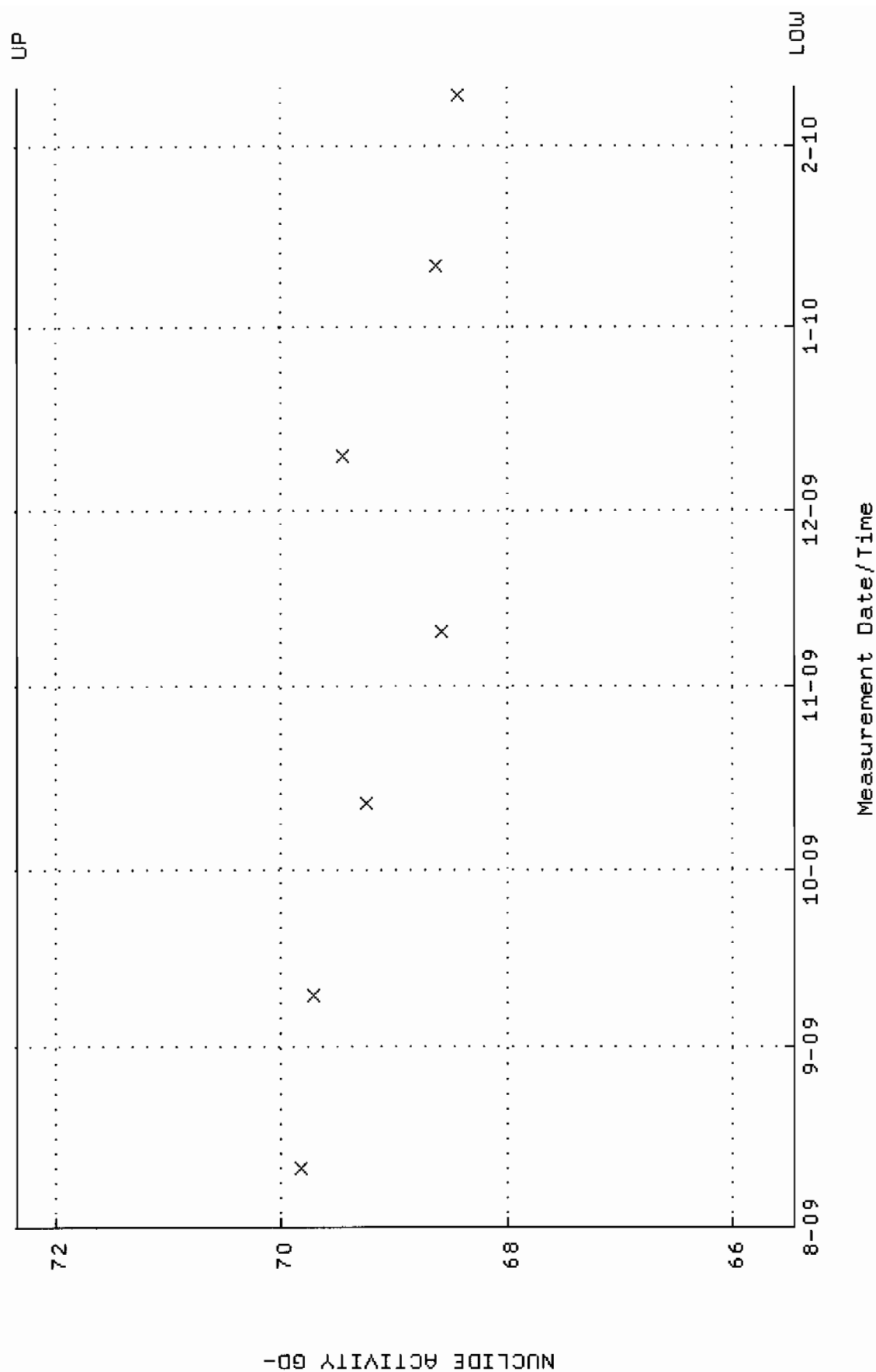
QA filename : DKA100:[ENV_ALPHA.QA.B]B094.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



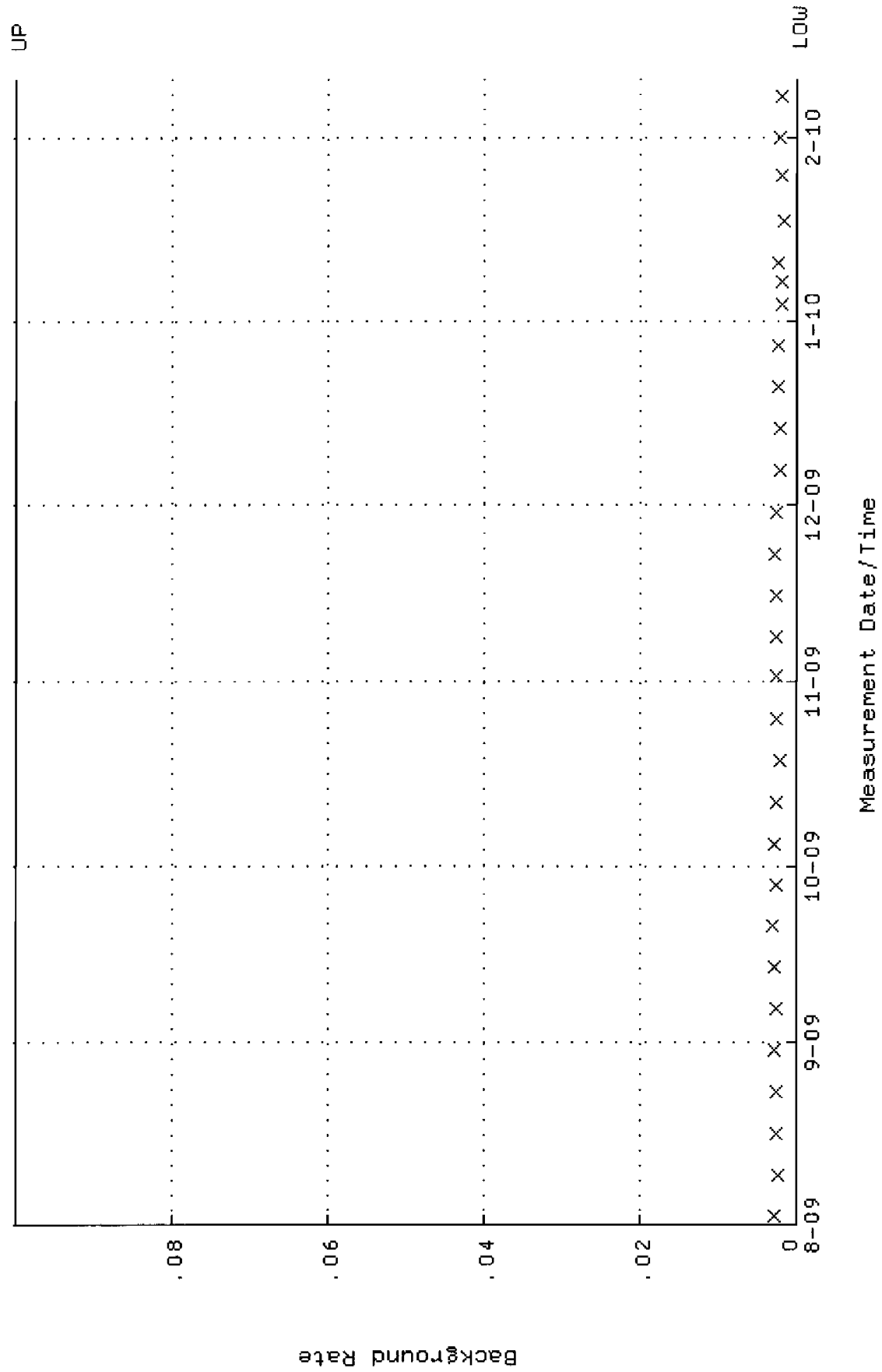
QA filename : DKA100:[ENV_ALPHA.QA.W]W095.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.296122 through 0.316122



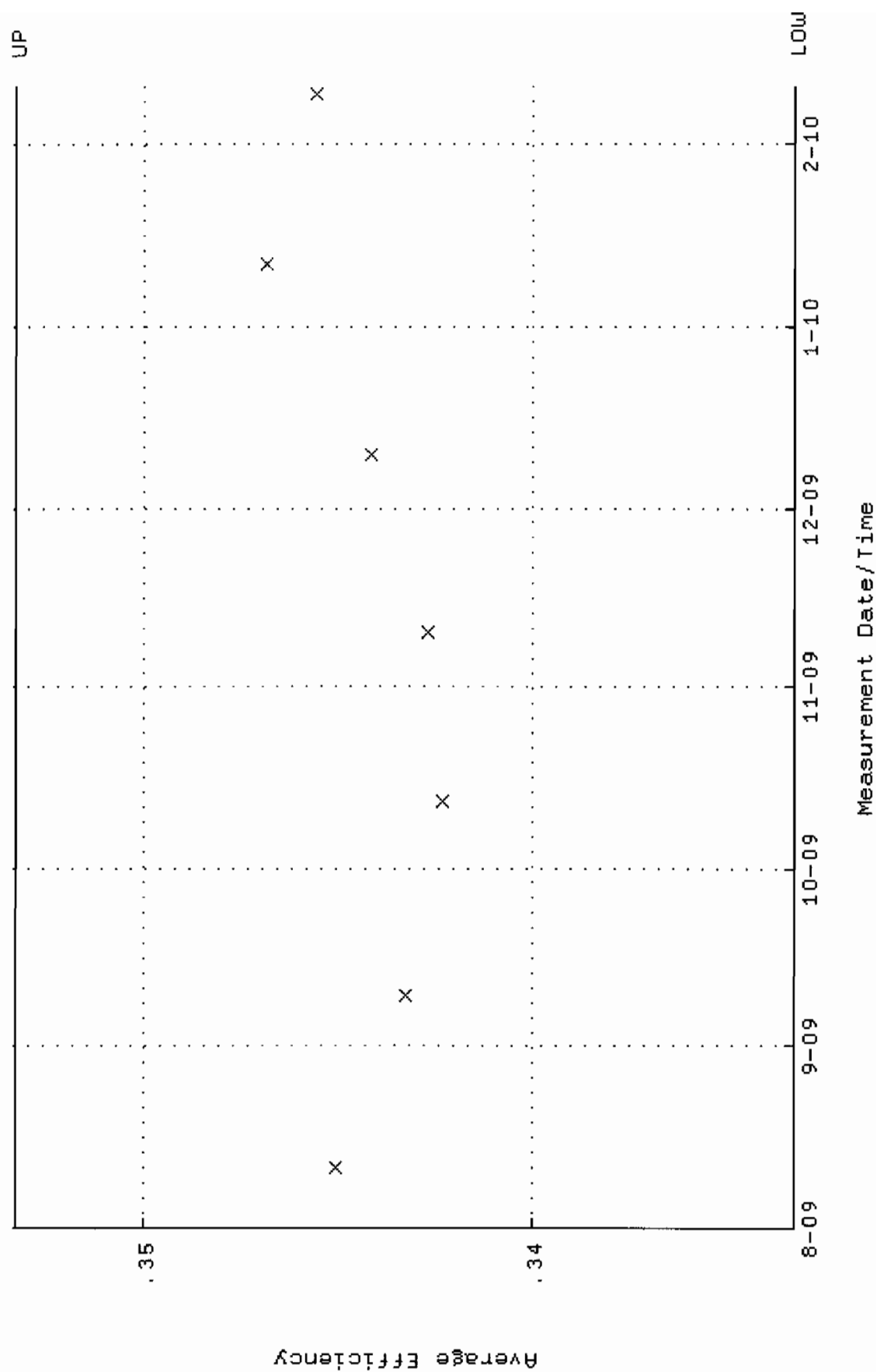
QA filename : DKA100:[ENV_ALPHA.QA.W]W095.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 65.4492 through 72.3386



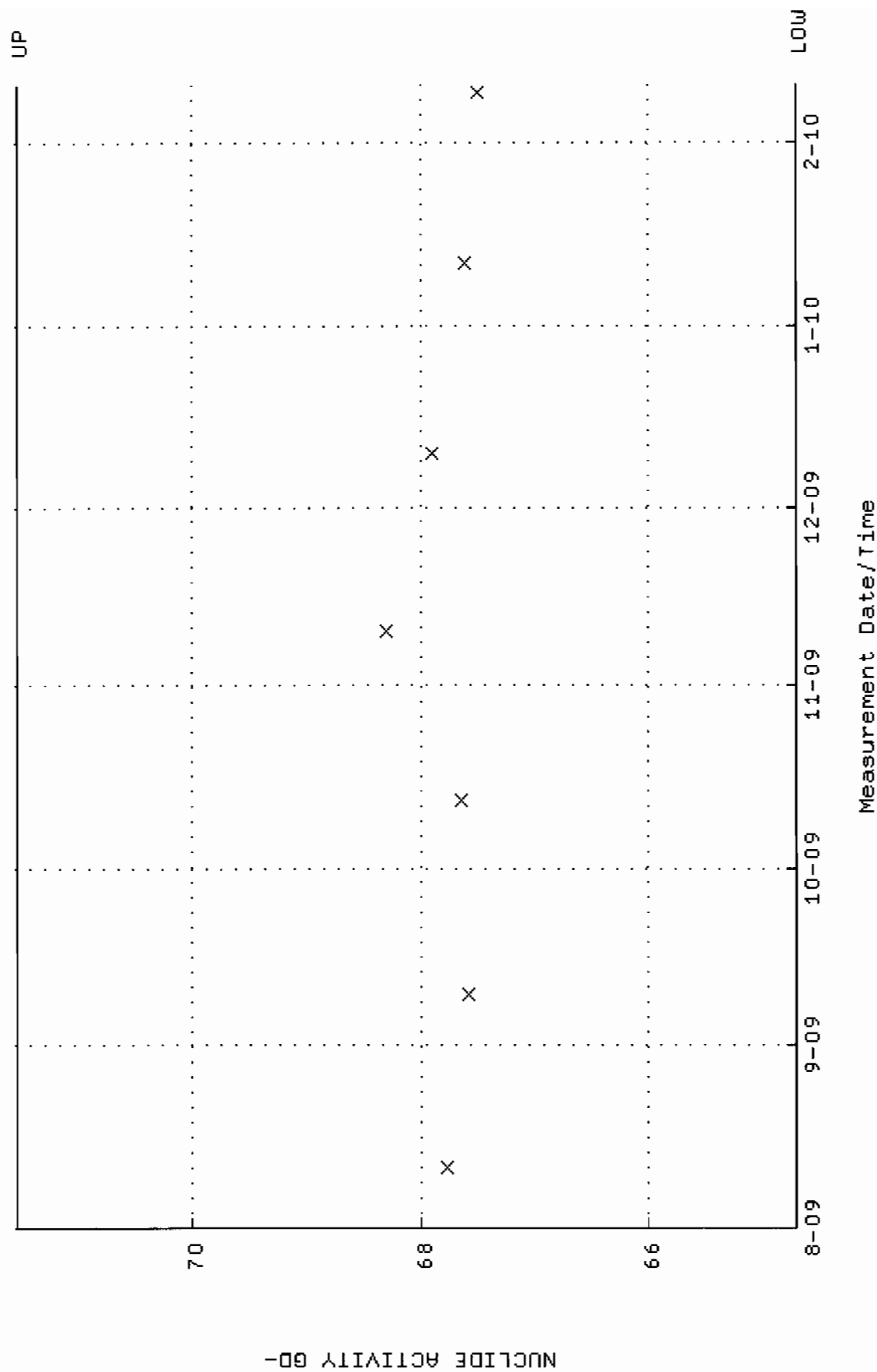
QA filename : OKA100:[ENV_ALPHA.QA.B]B095.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:43 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



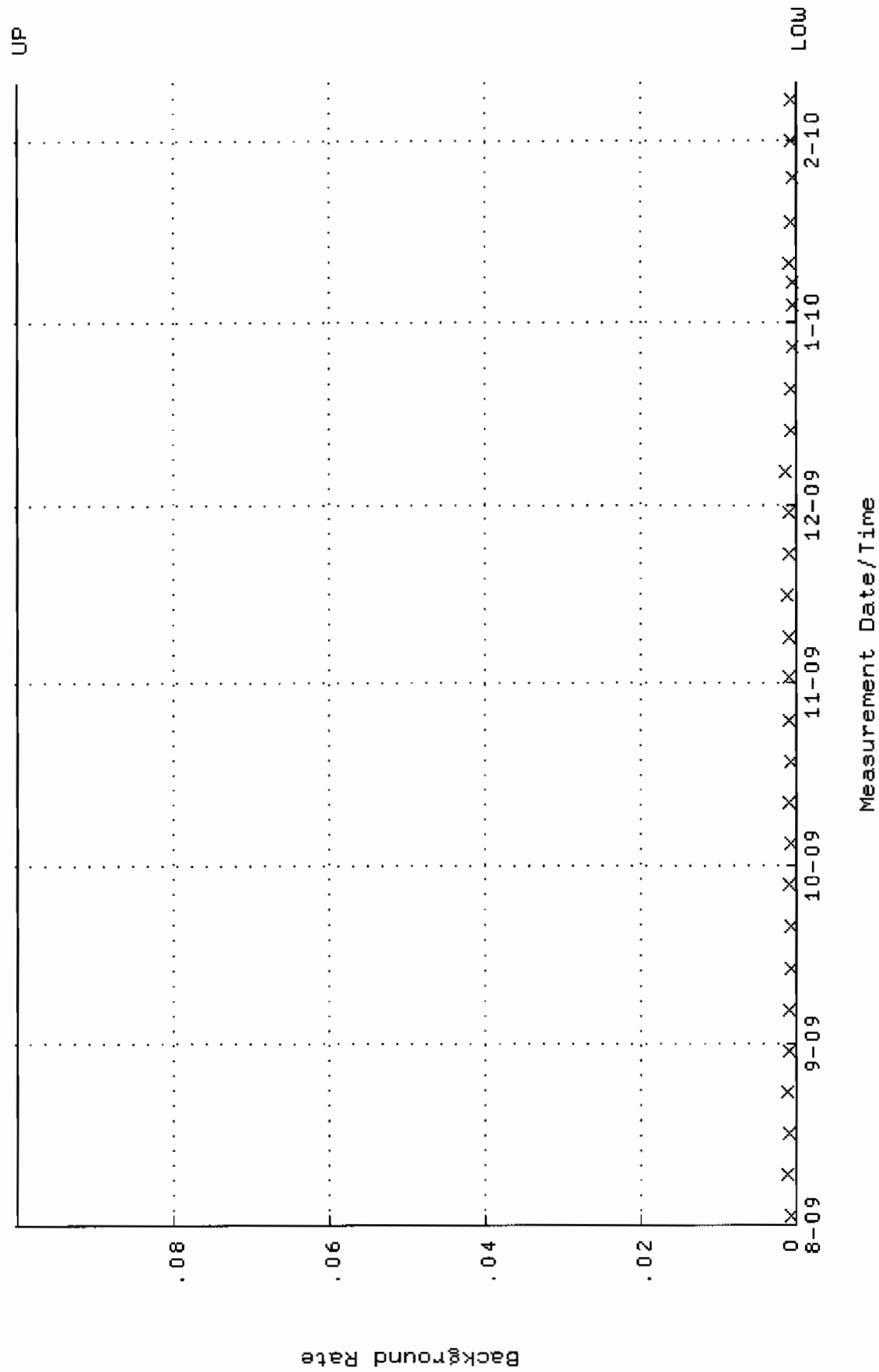
QA filename : DKA100:[ENV_ALPHA.QA.W]W097.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.333275 through 0.353275



QA filename : DKA100:[ENV_ALPHA.QA.W]W097.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 64.7068 through 71.5180



QA filename : DKA100:[ENV_ALPHA.QA.B]B097.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-AUG-2009 17:38:43 through 10-FEB-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

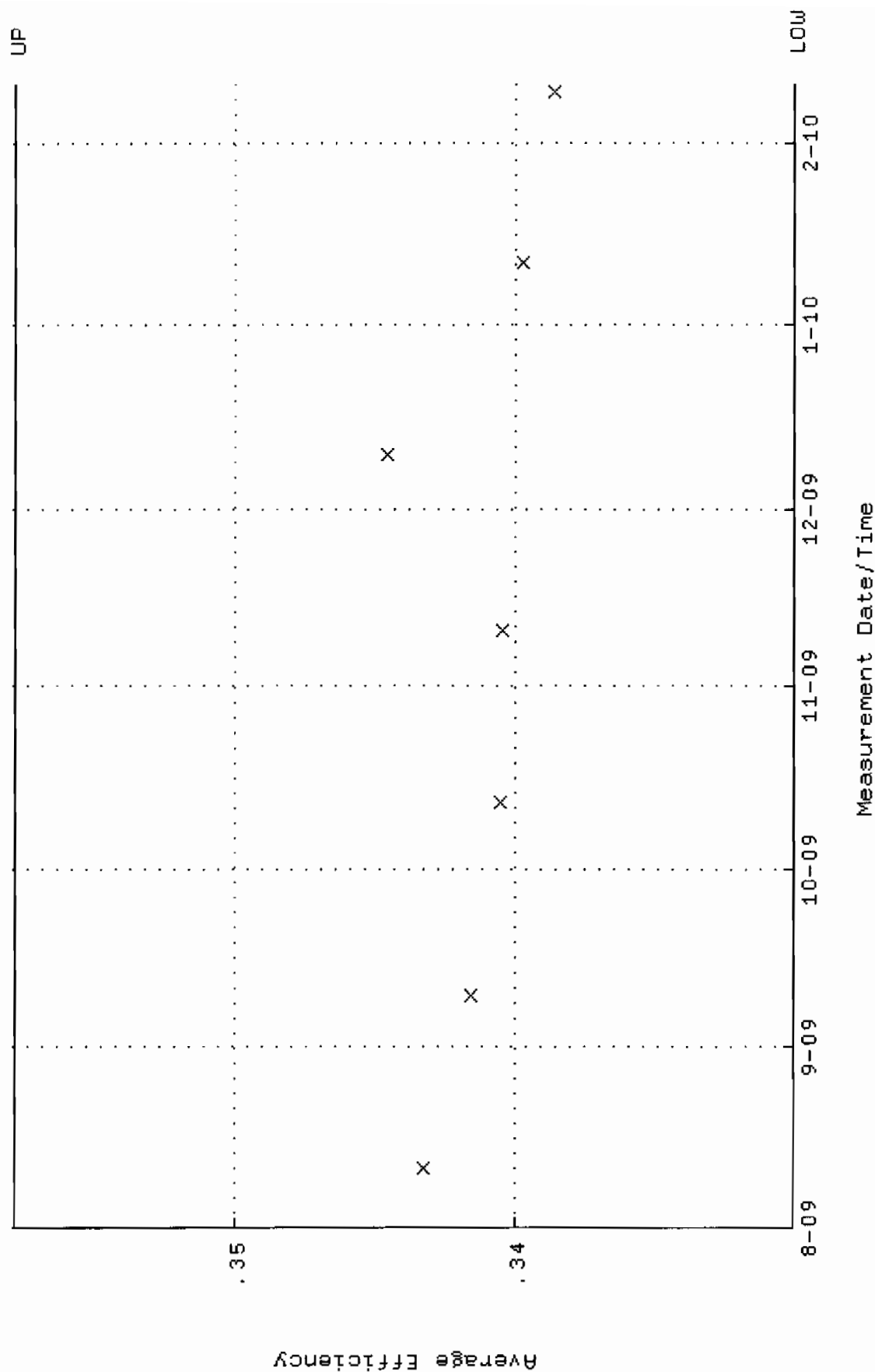


QA filename : DKA100:[ENV_ALPHA.QA.W]W099.QAF;2

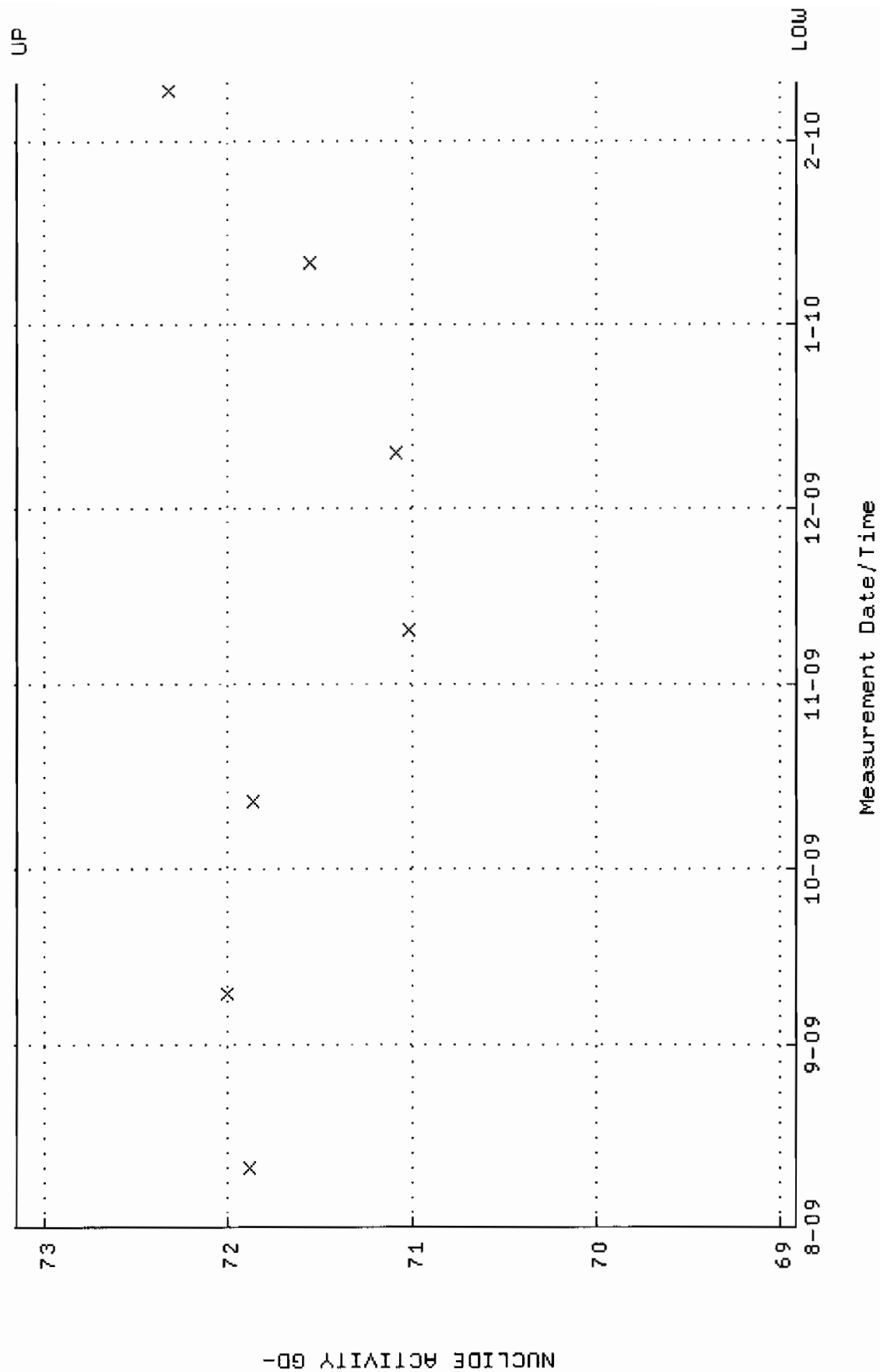
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00

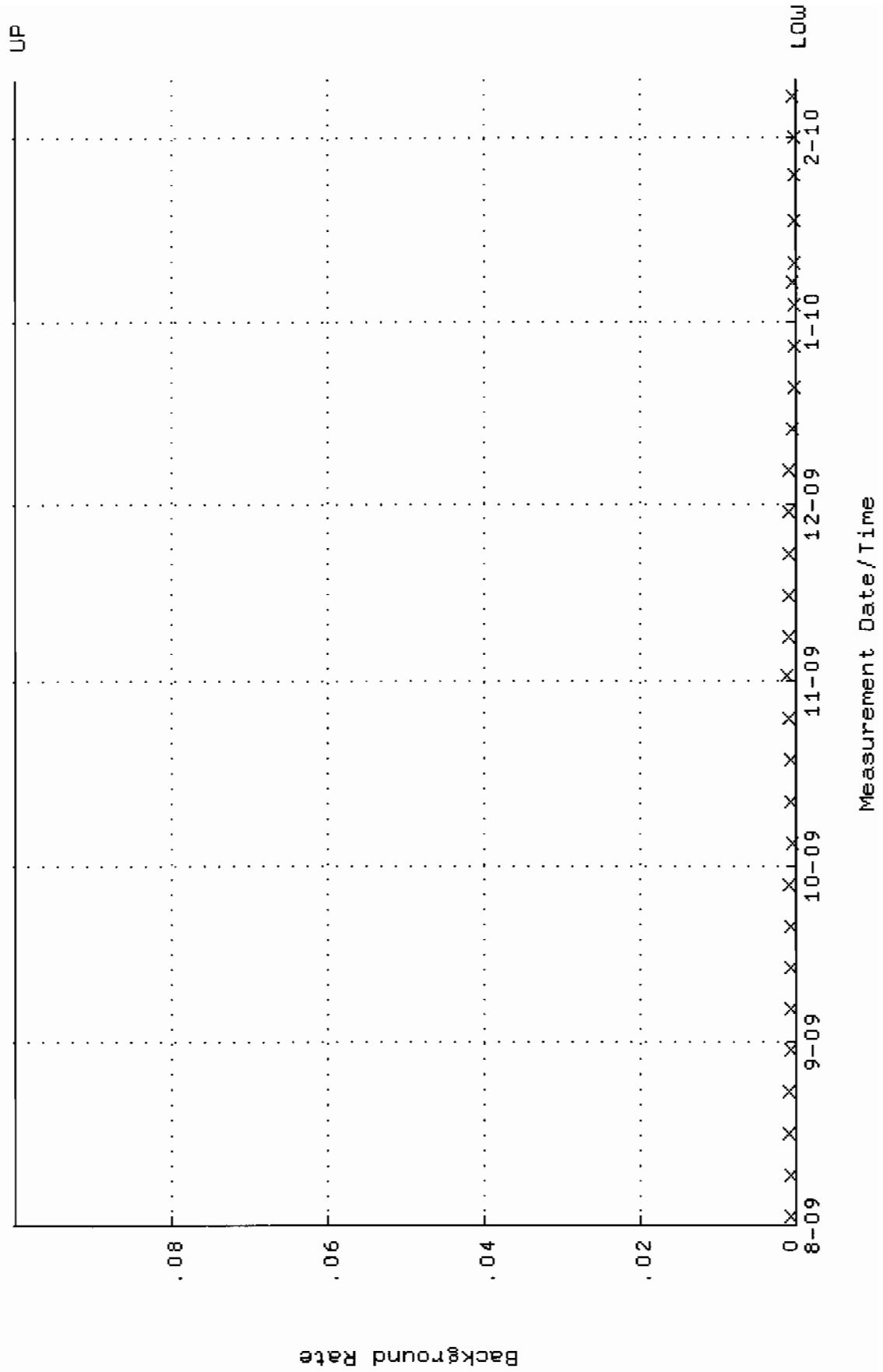
Lower/Upper Lmts: 0.330127 through 0.357809



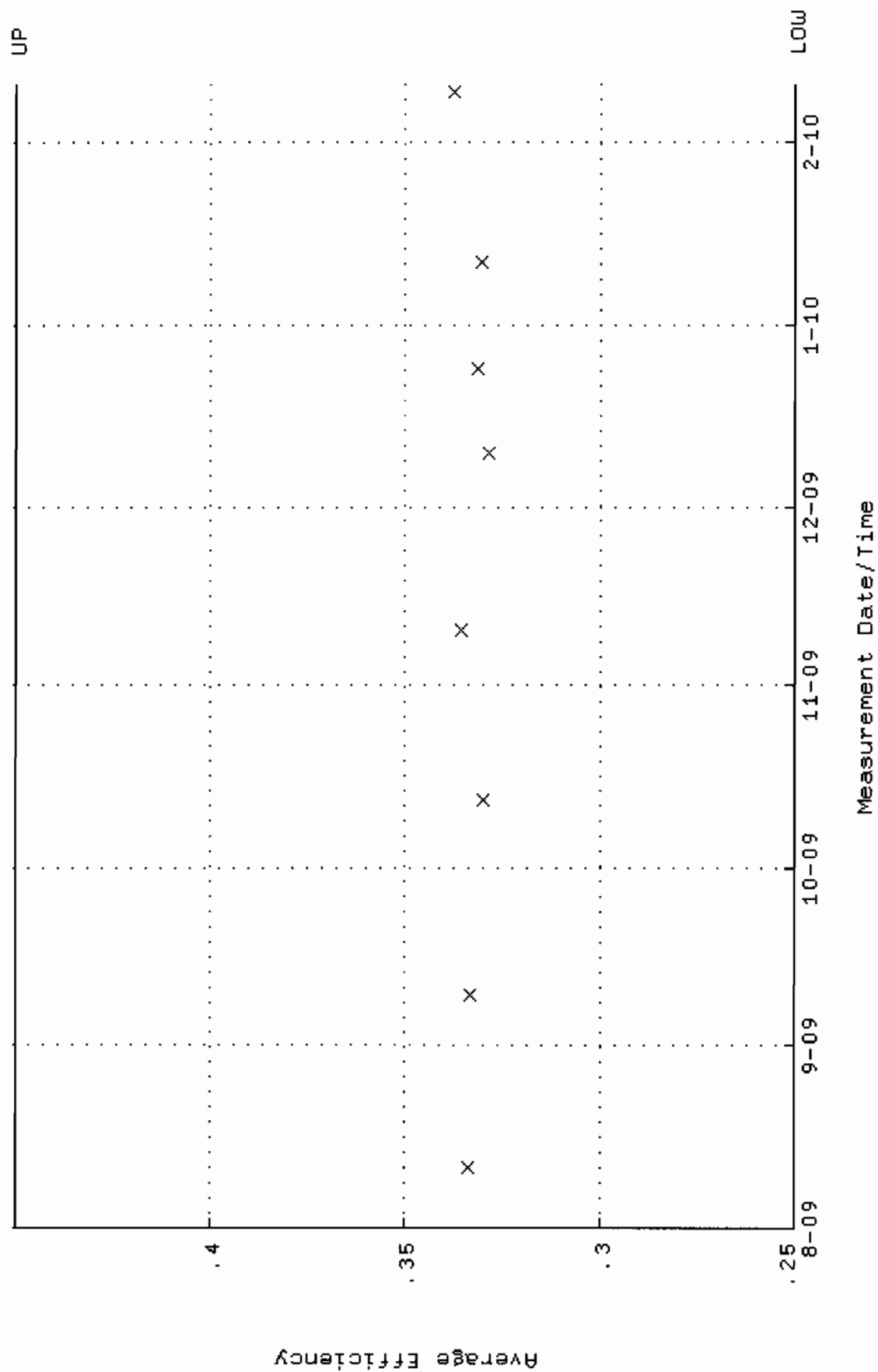
QA filename : DKA100:[ENV_ALPHA.QA.W]W099.QAF;2
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 68.9116 through 73.1498



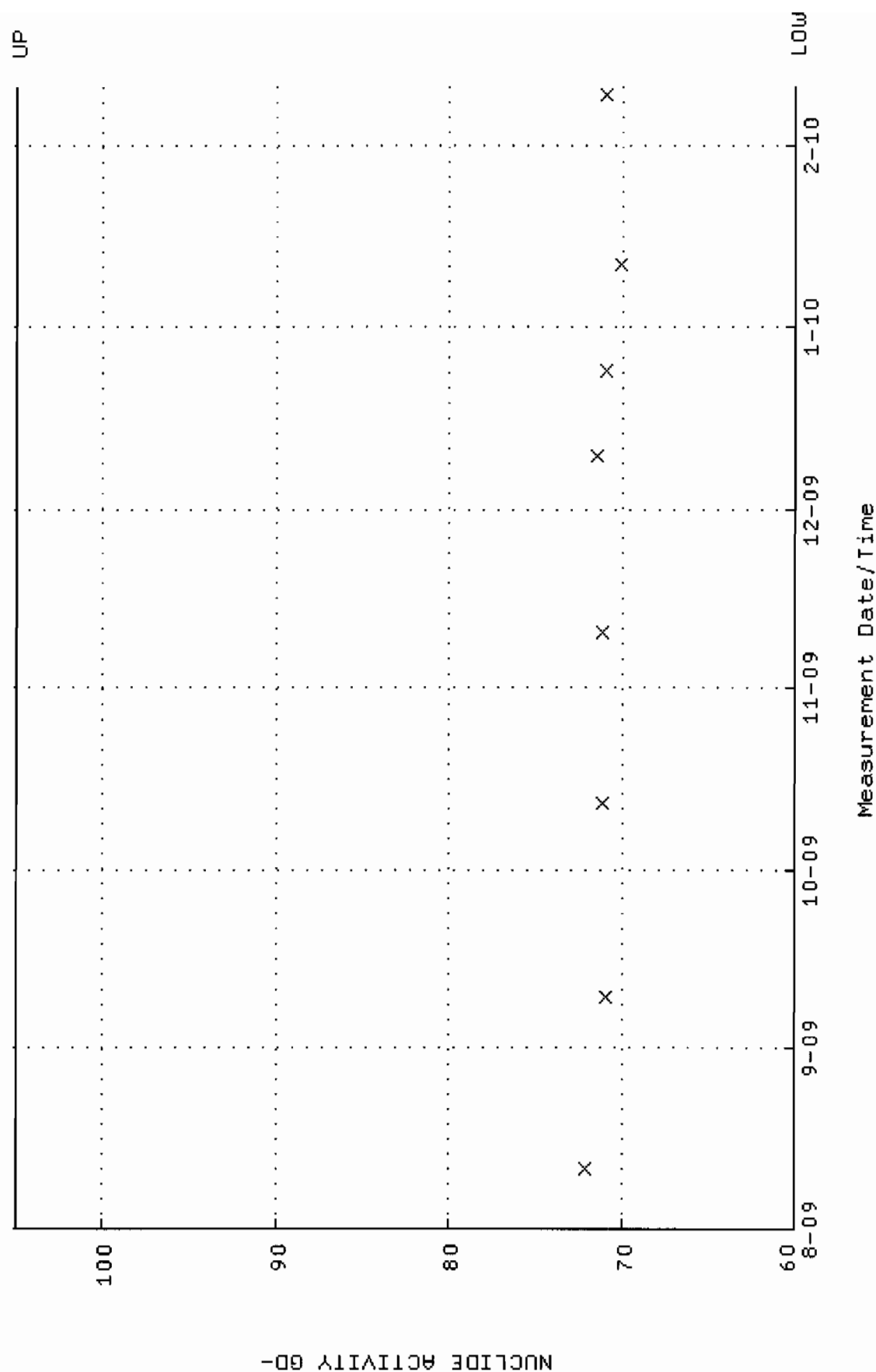
QA filename : DKA100:[ENV_ALPHA.QA.B]B099.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-AUG-2009 17:38:43 through 10-FEB-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



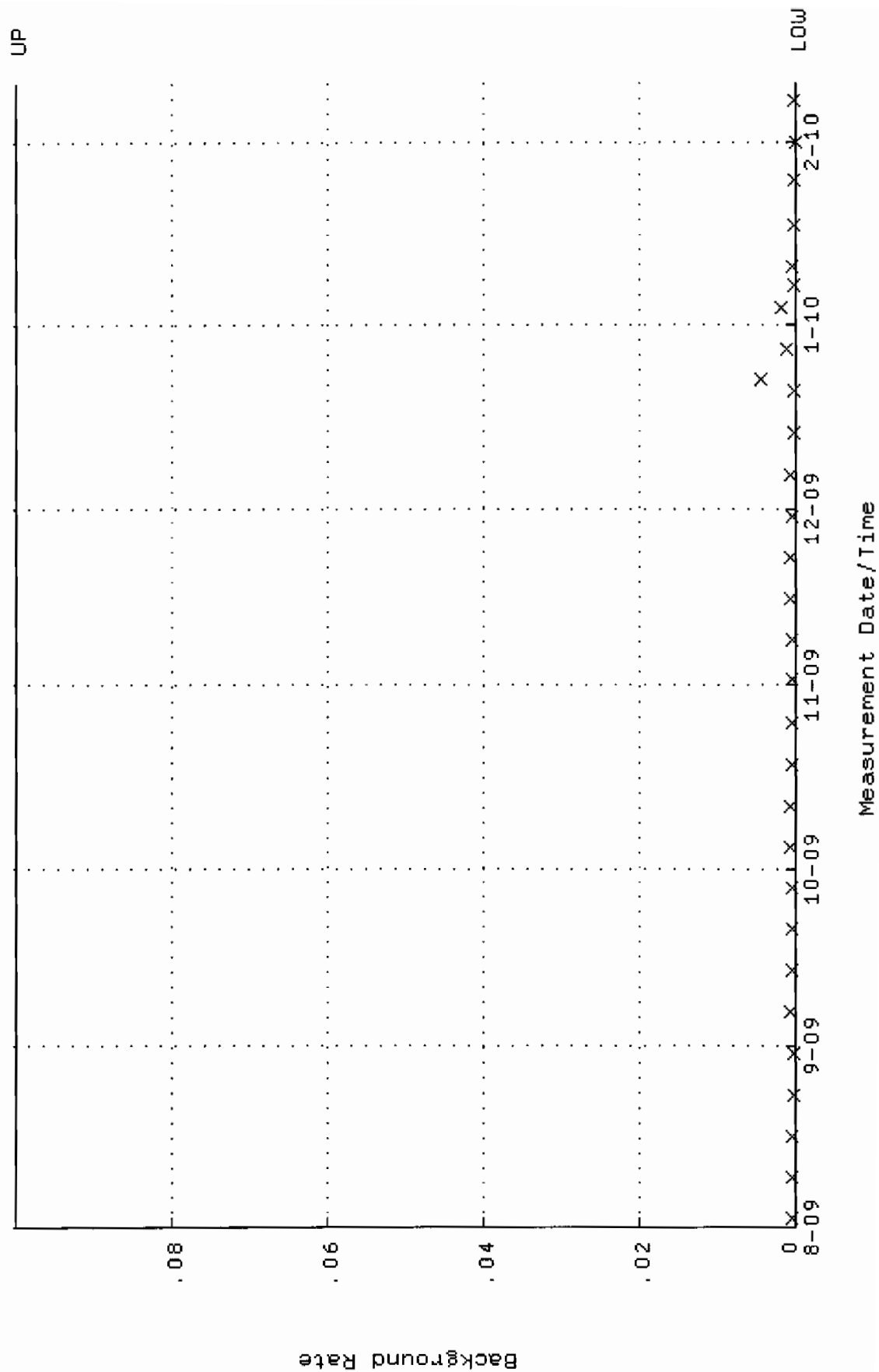
QA filename : DKA100:[ENV_ALPHA.QA.W]W101.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:17 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



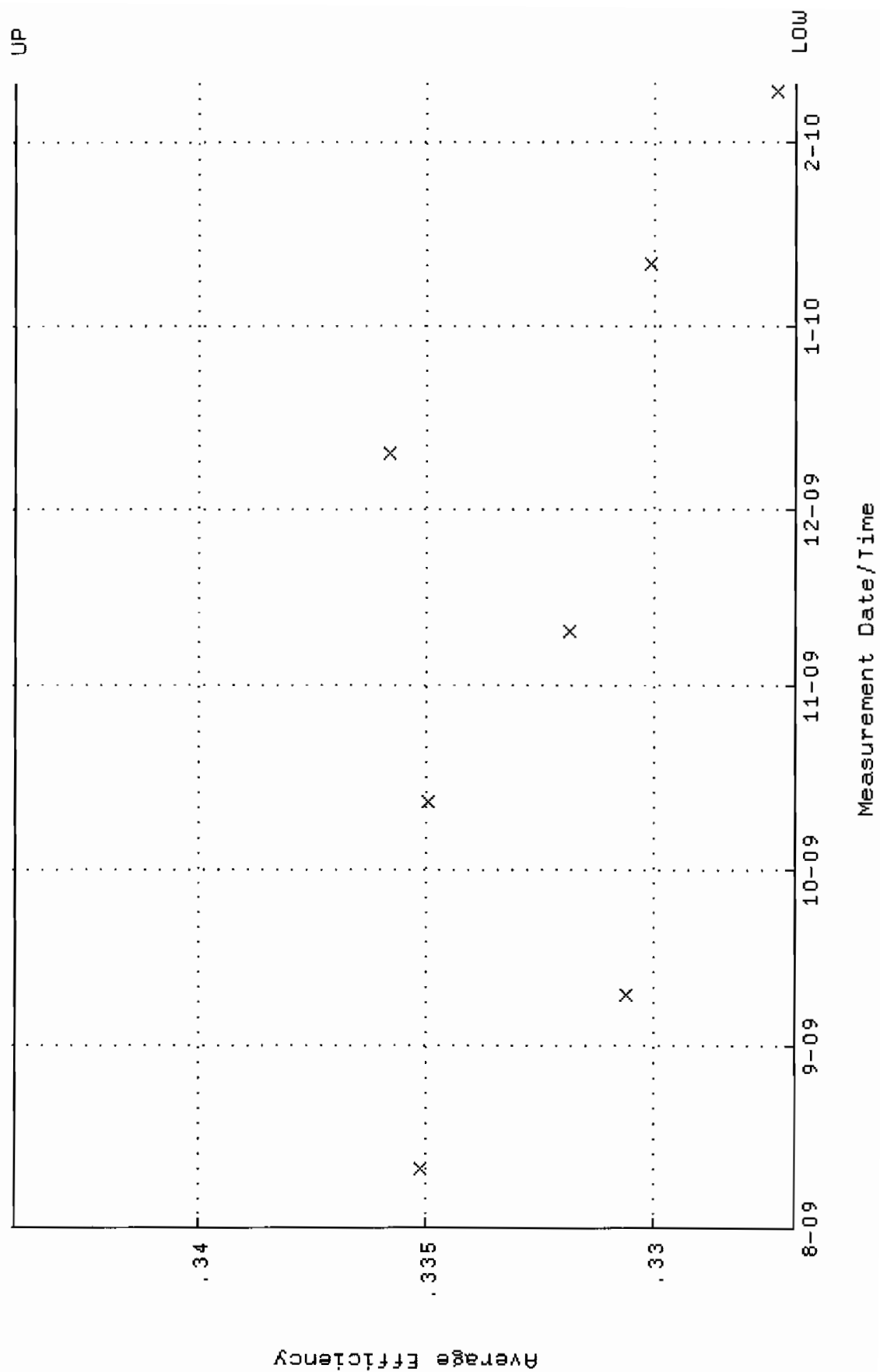
QA filename : DKA100:[ENV_ALPHA.QA.W]W101.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:17 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



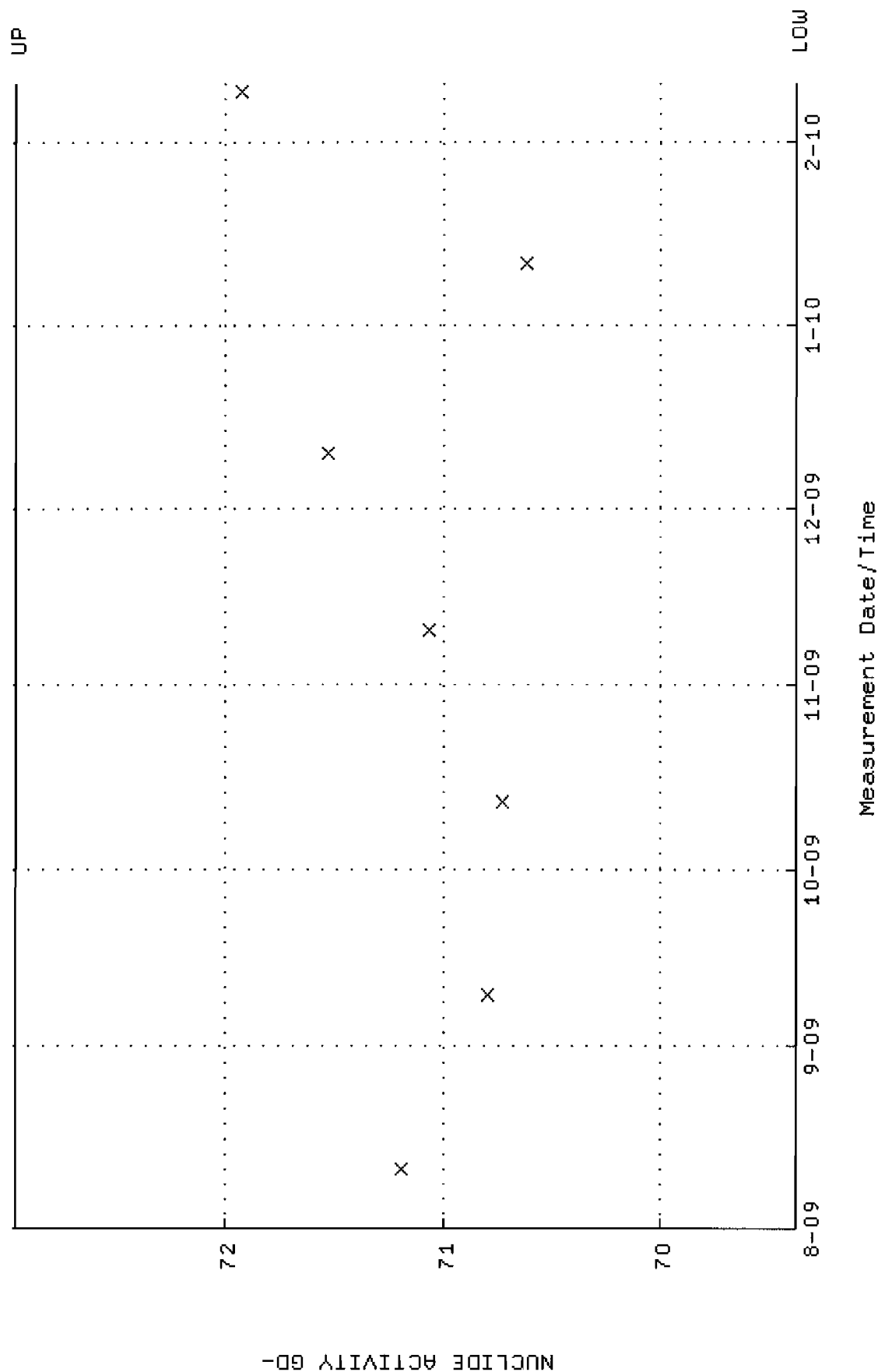
QA filename : DKA100:[ENV_ALPHA.QA.B]B101.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:43 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



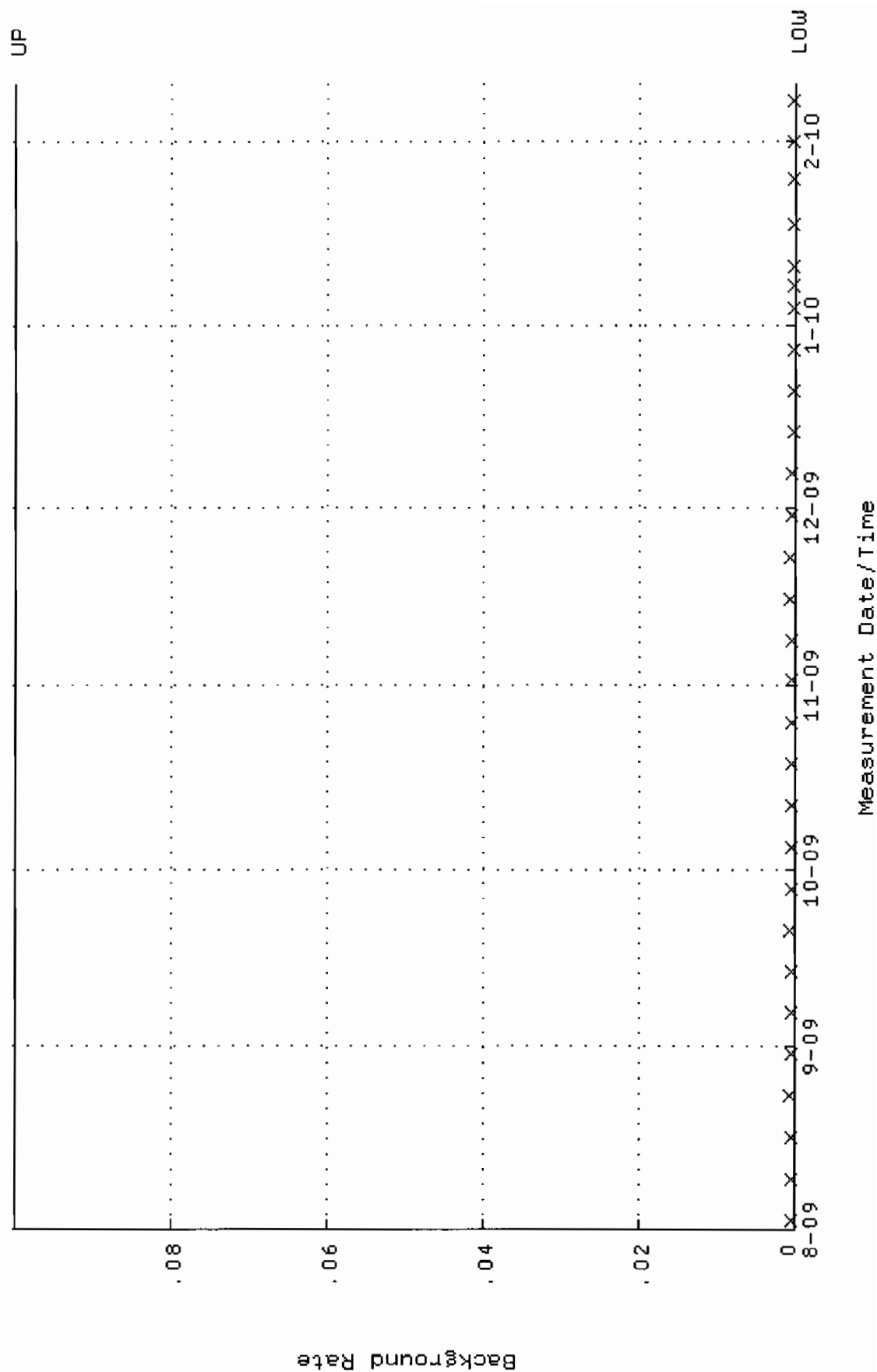
QA filename : DKA100:[ENV_ALPHA.QA.W]W102.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:17 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.326915 through 0.344021



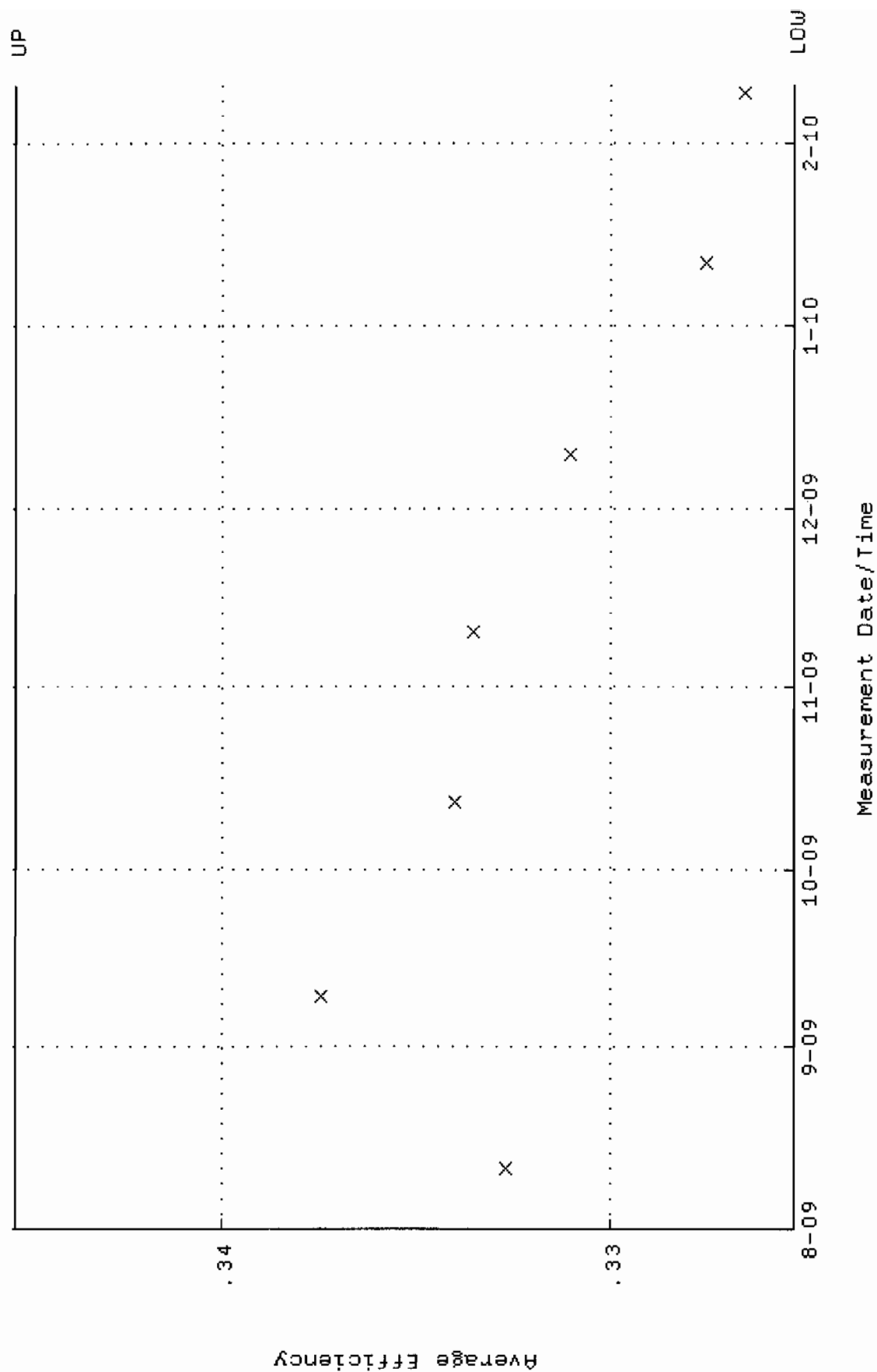
QA filename : DKA100:[ENV_ALPHA.QA.W]W102.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:17 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 69.3731 through 72.9663



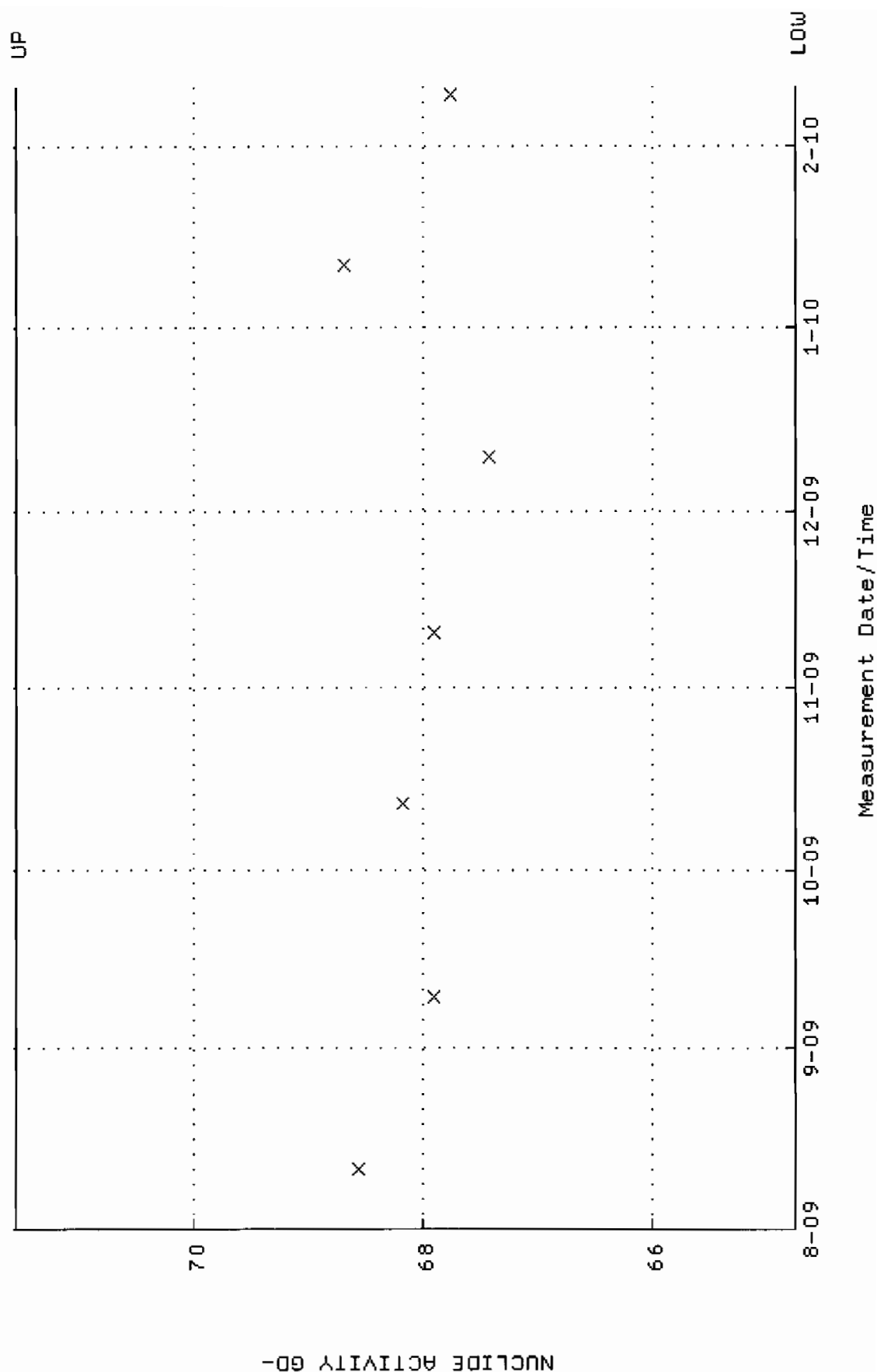
QA filename : DKA100:[ENV_ALPHA.QA.B]B102.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:43 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



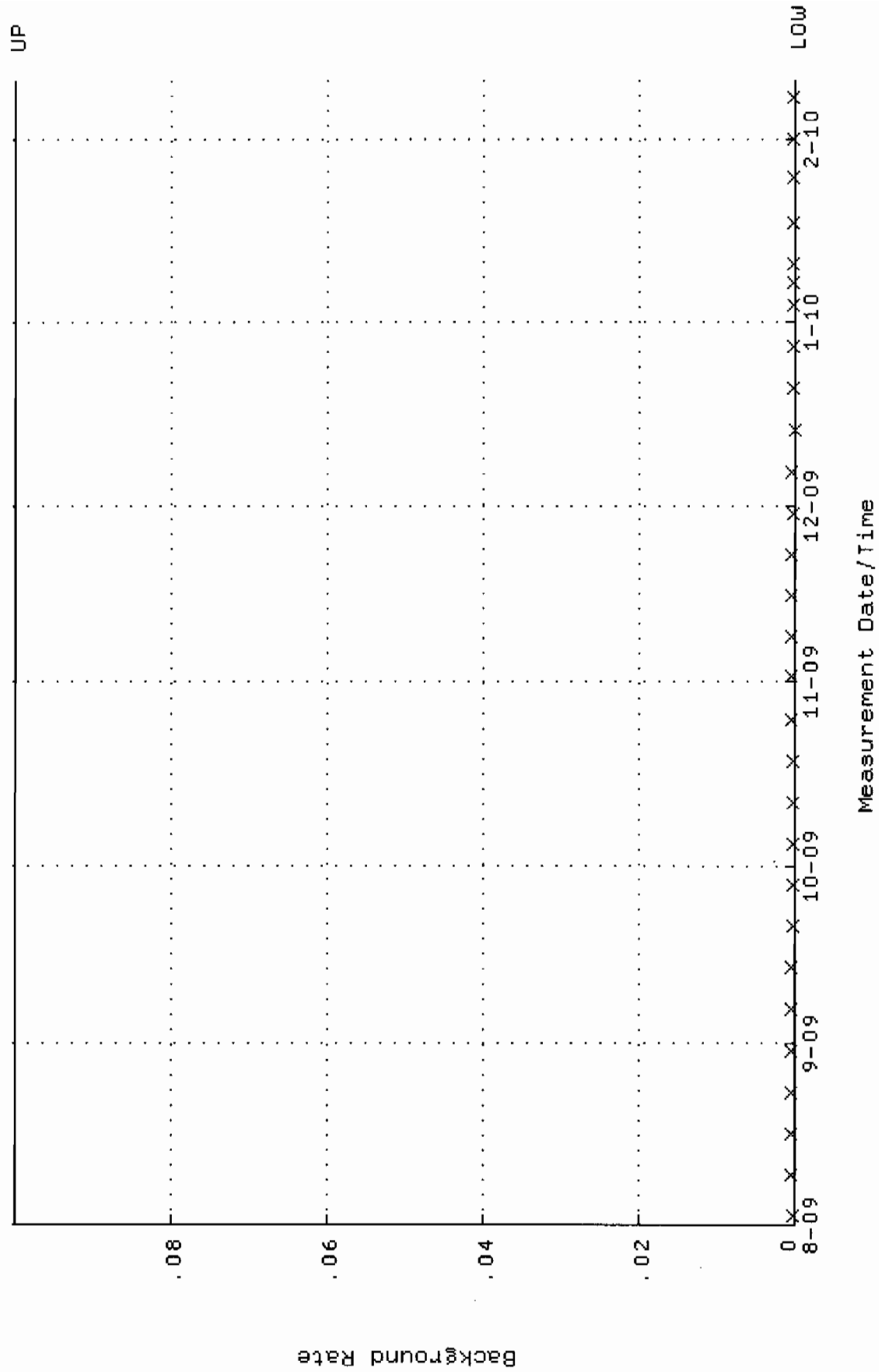
QA filename : DKA100:[ENV_ALPHA.QA.W]W103.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:17 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.325314 through 0.345314



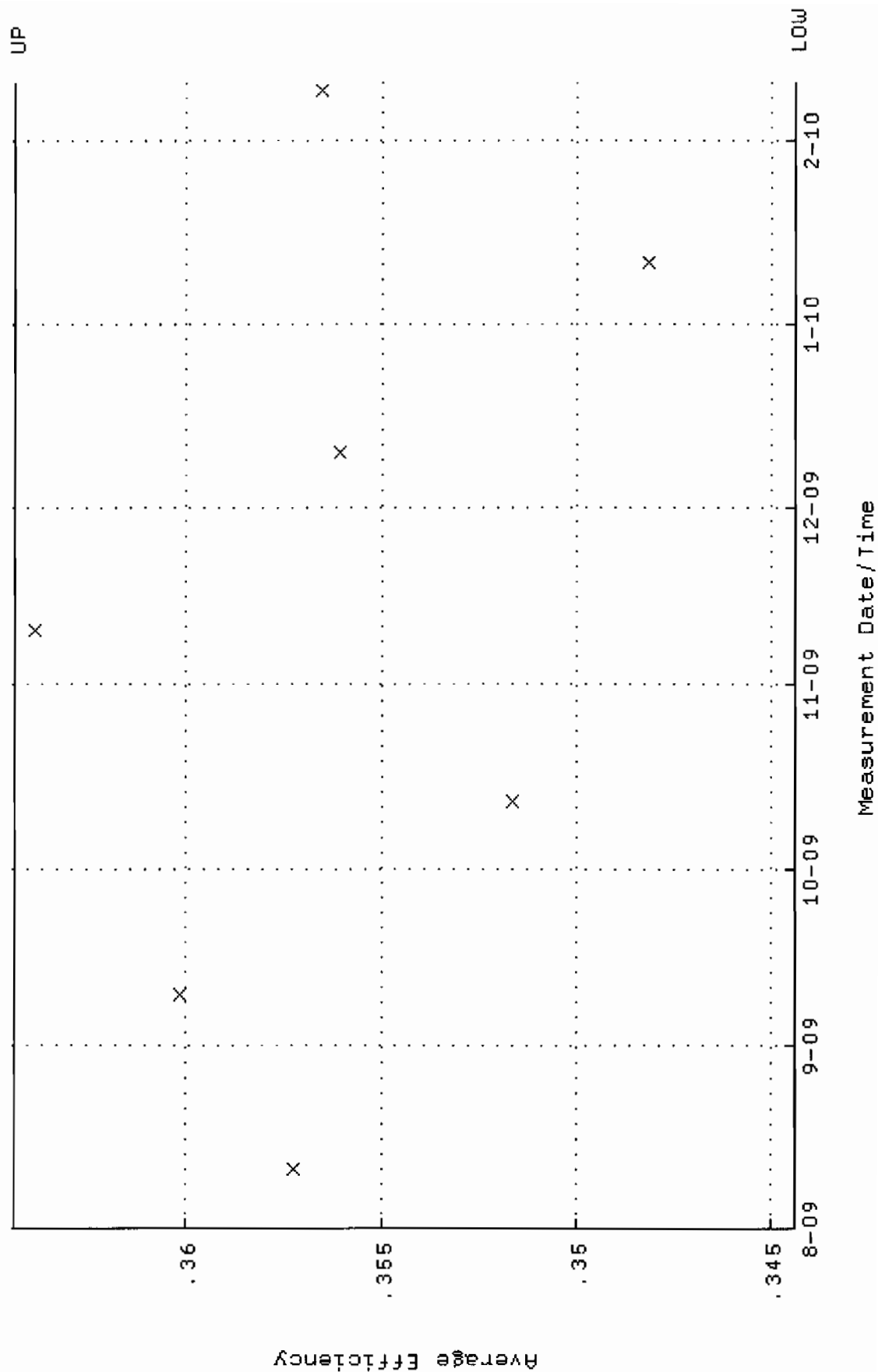
QA filename : DKA100:[ENV_ALPHA.QA.W]W103.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:17 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 64.7479 through 71.5635



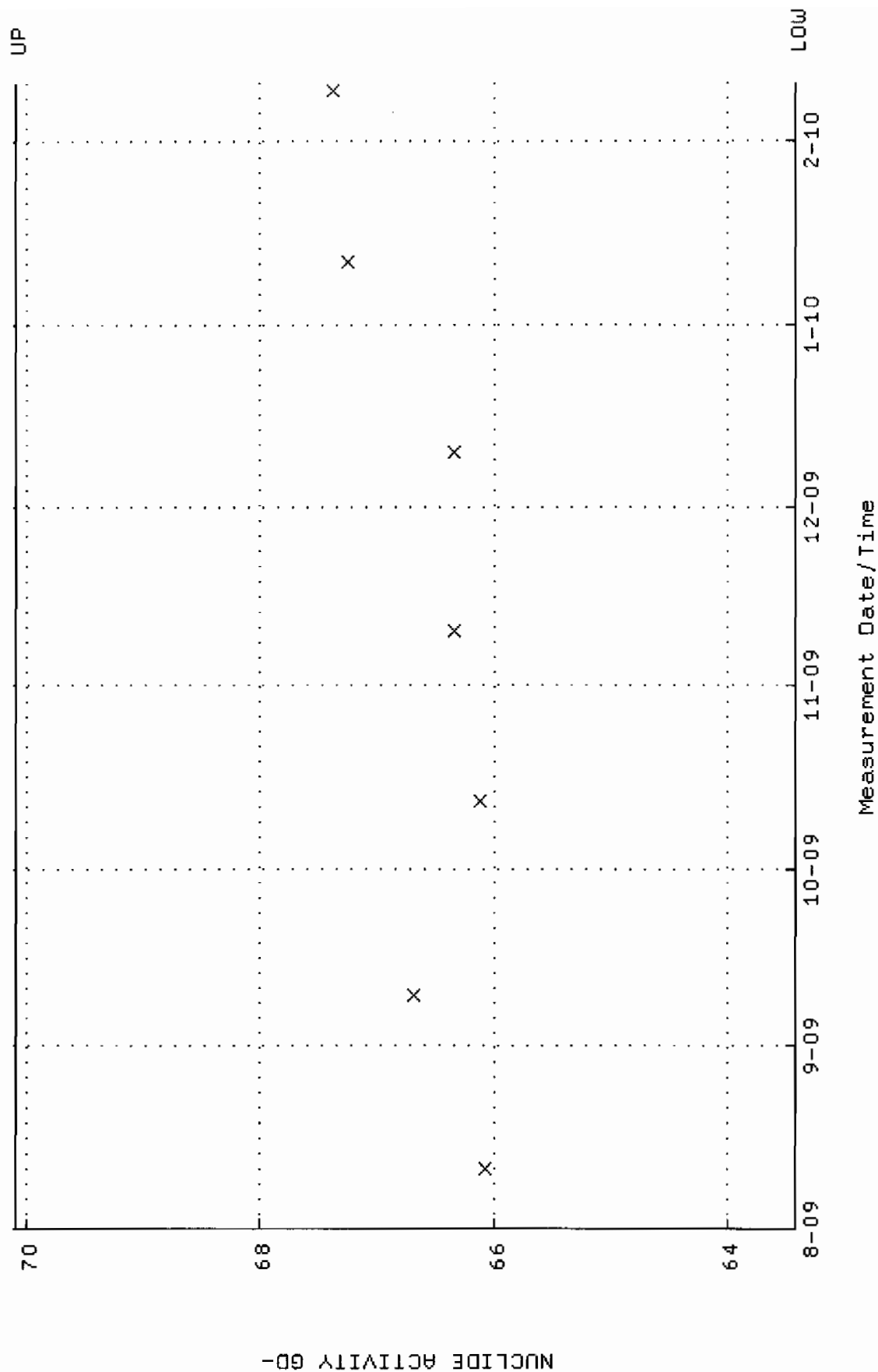
QA filename : DKA100:[ENV_ALPHA.QA.B]B103.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:43 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



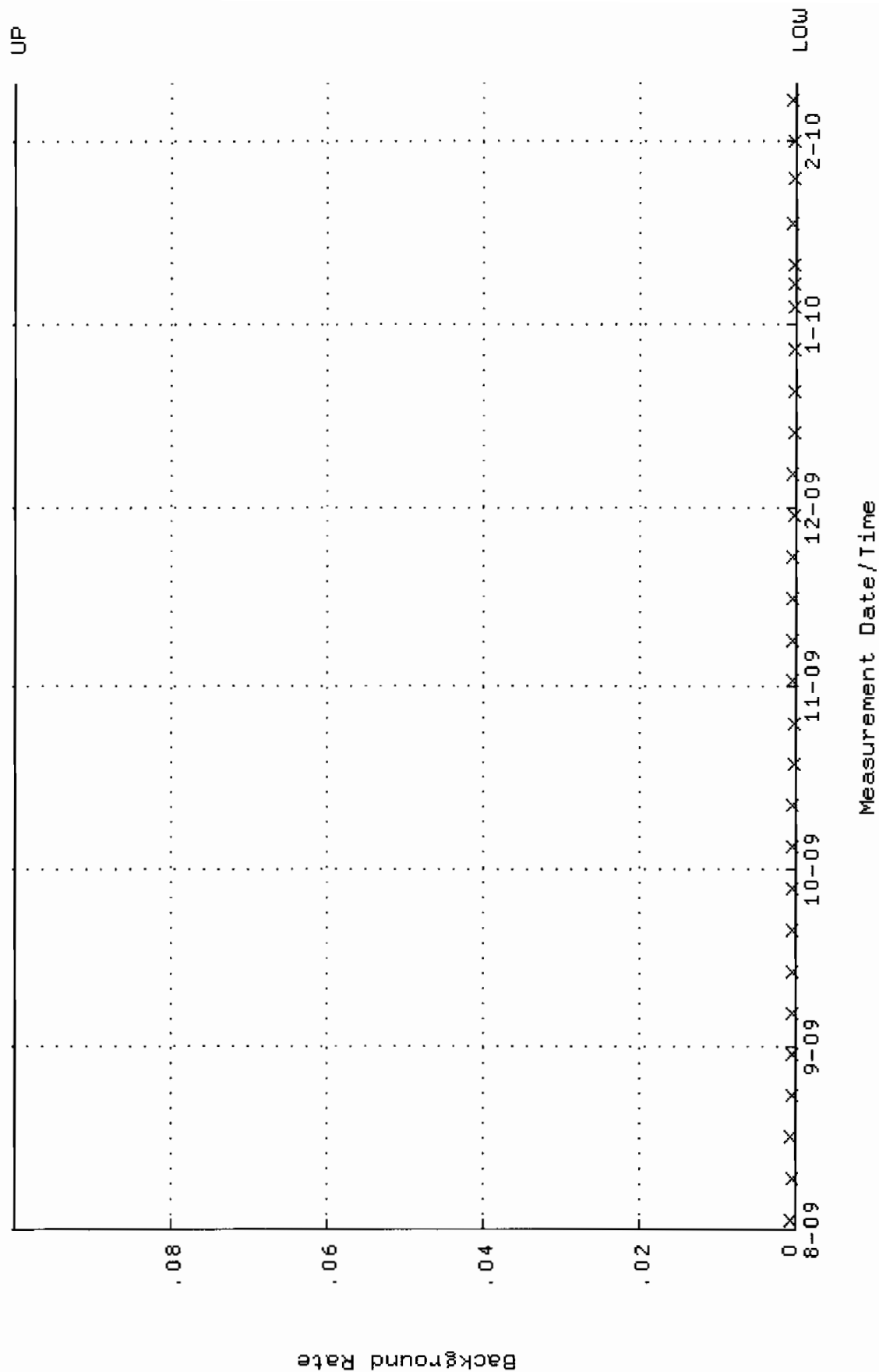
QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.344397 through 0.364397



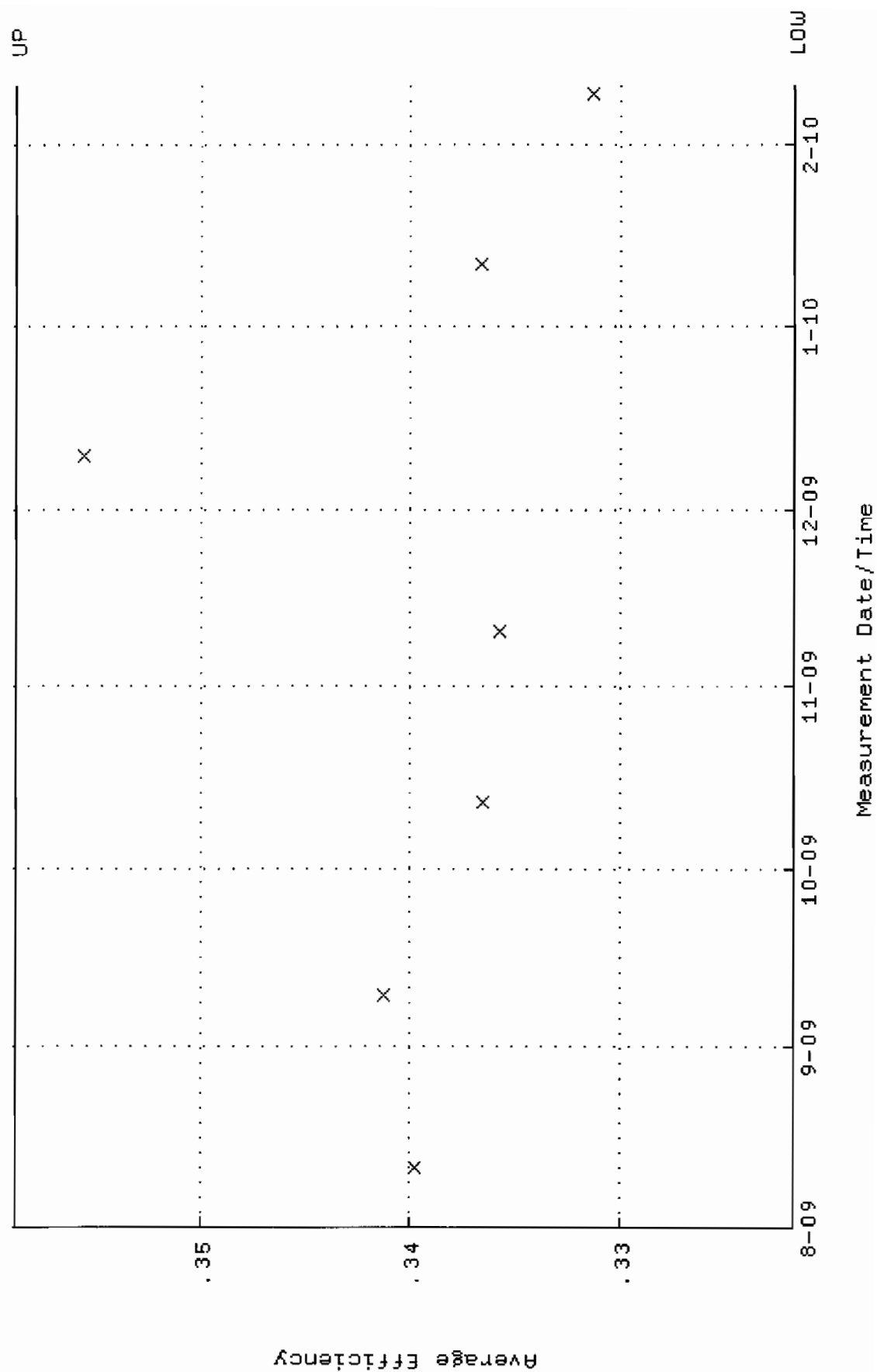
QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 63.4194 through 70.0952



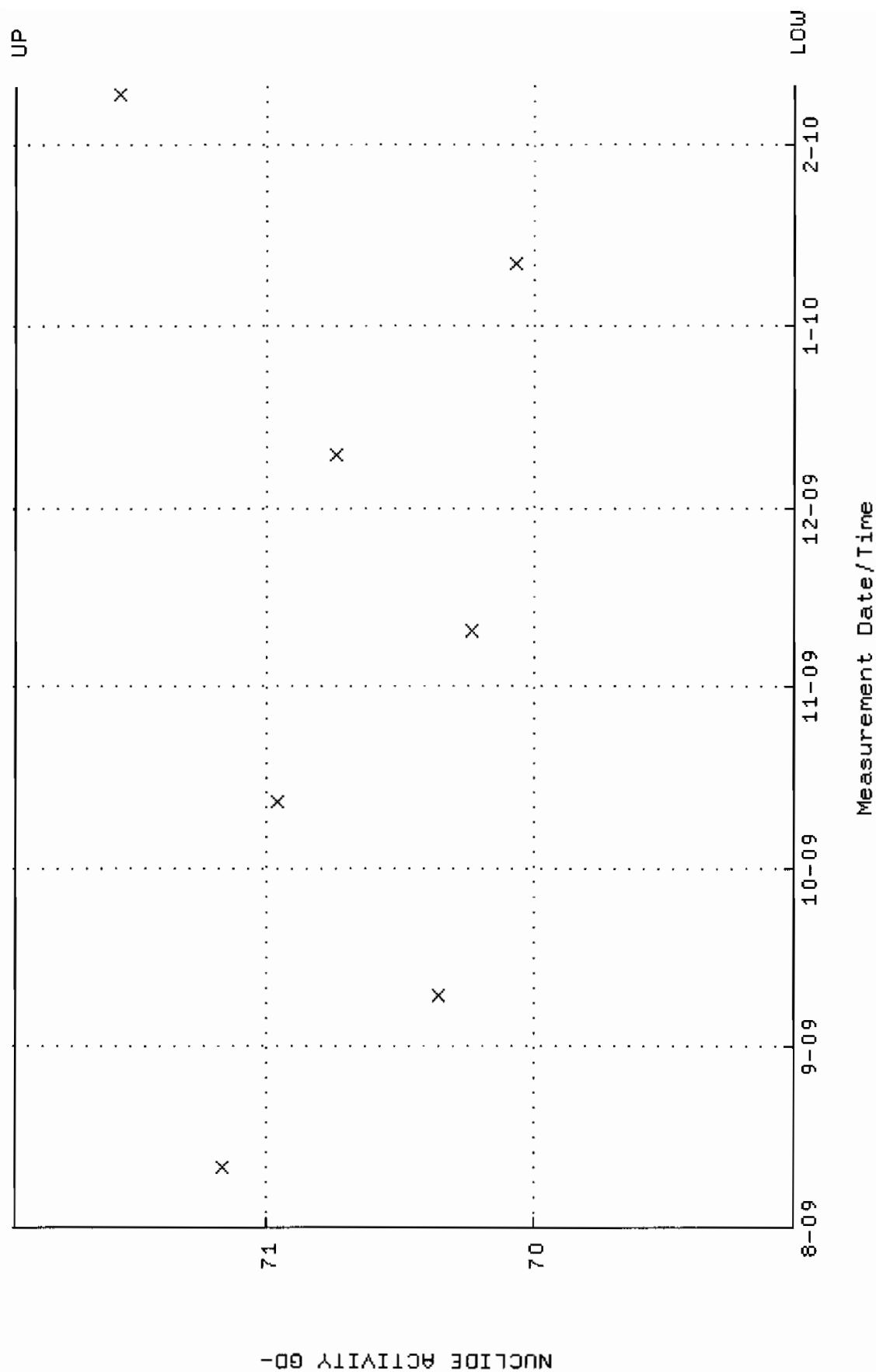
QA filename : DKA100:[ENV_ALPHA.QA.B]B109.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:44 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



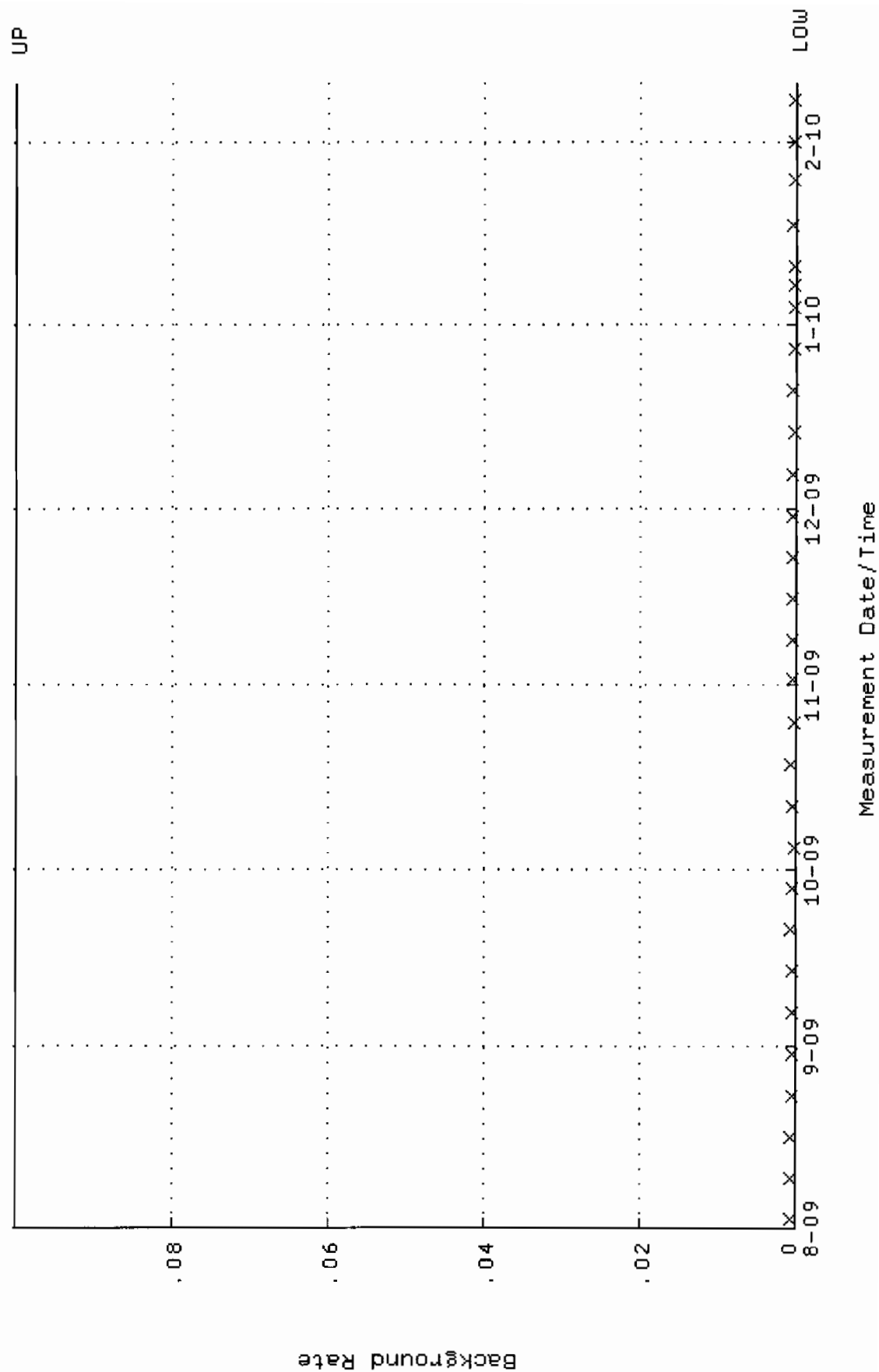
QA filename : DKA100:[ENV_ALPHA.QA.W]W111.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.321662 through 0.358794



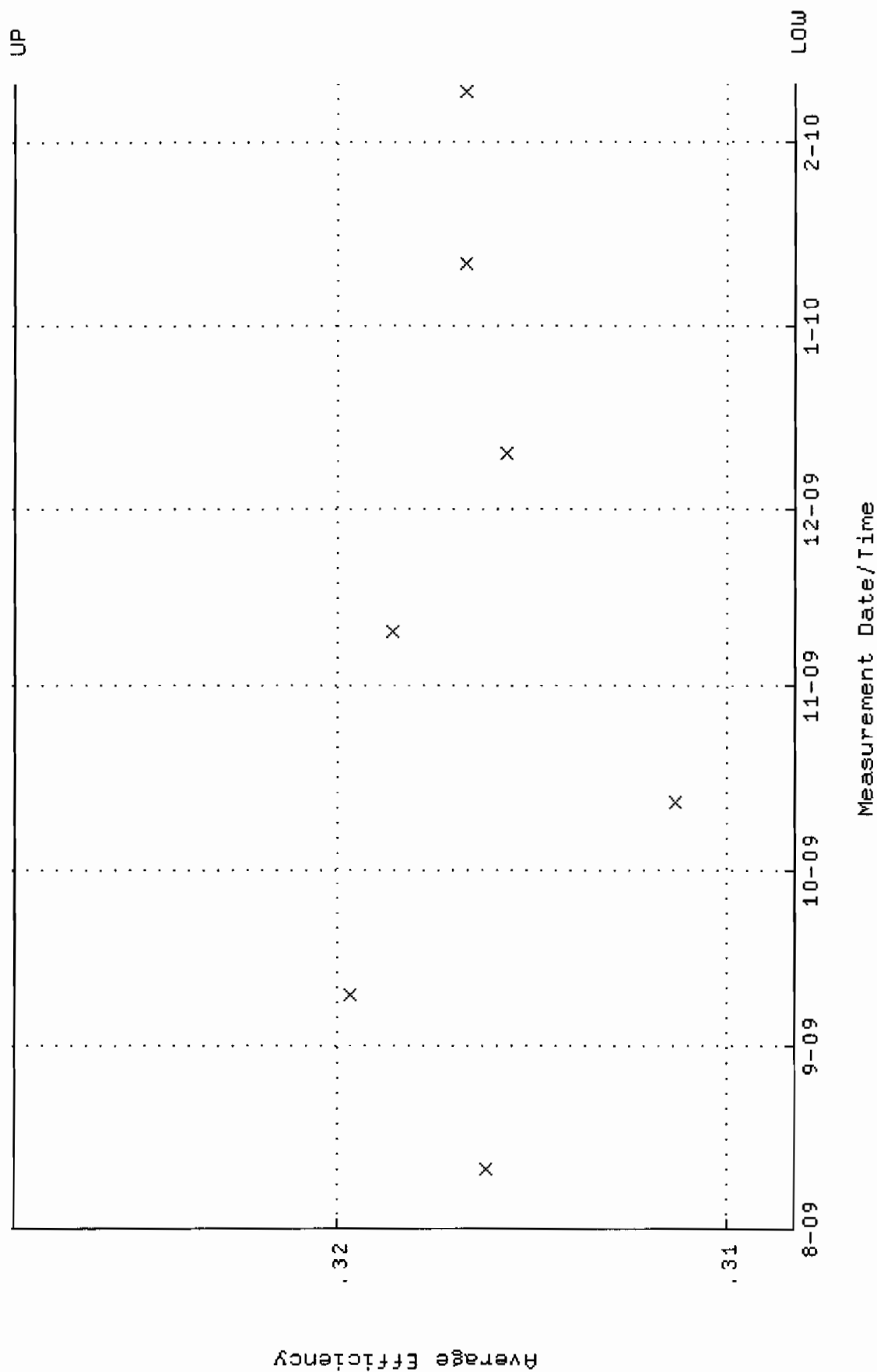
QA filename : DKA100:[ENV_ALPHA.QA.W]W111.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 69.0200 through 71.9448



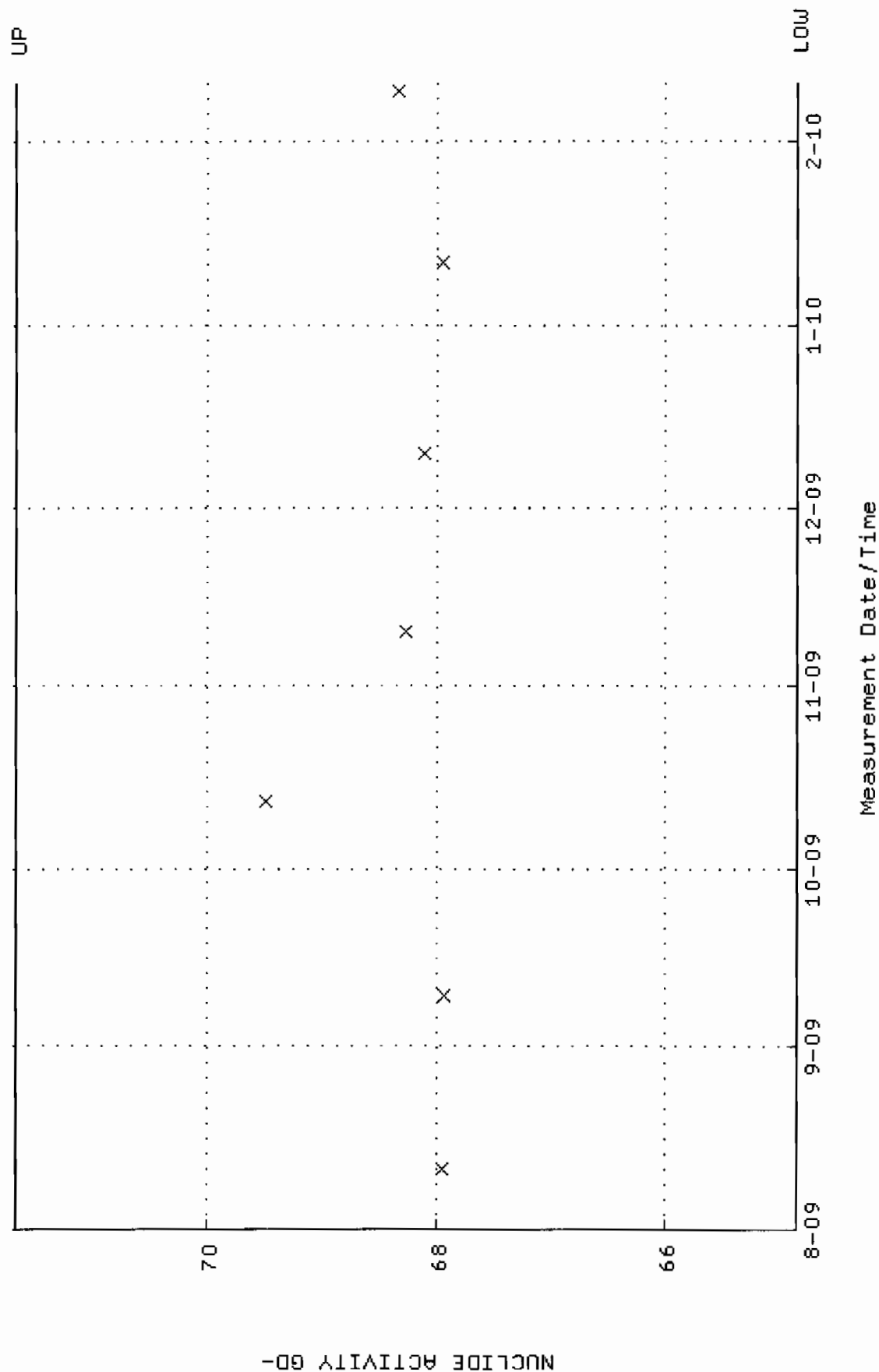
QA filename : DKA100:[ENV_ALPHA.QA.B]B111.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:44 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



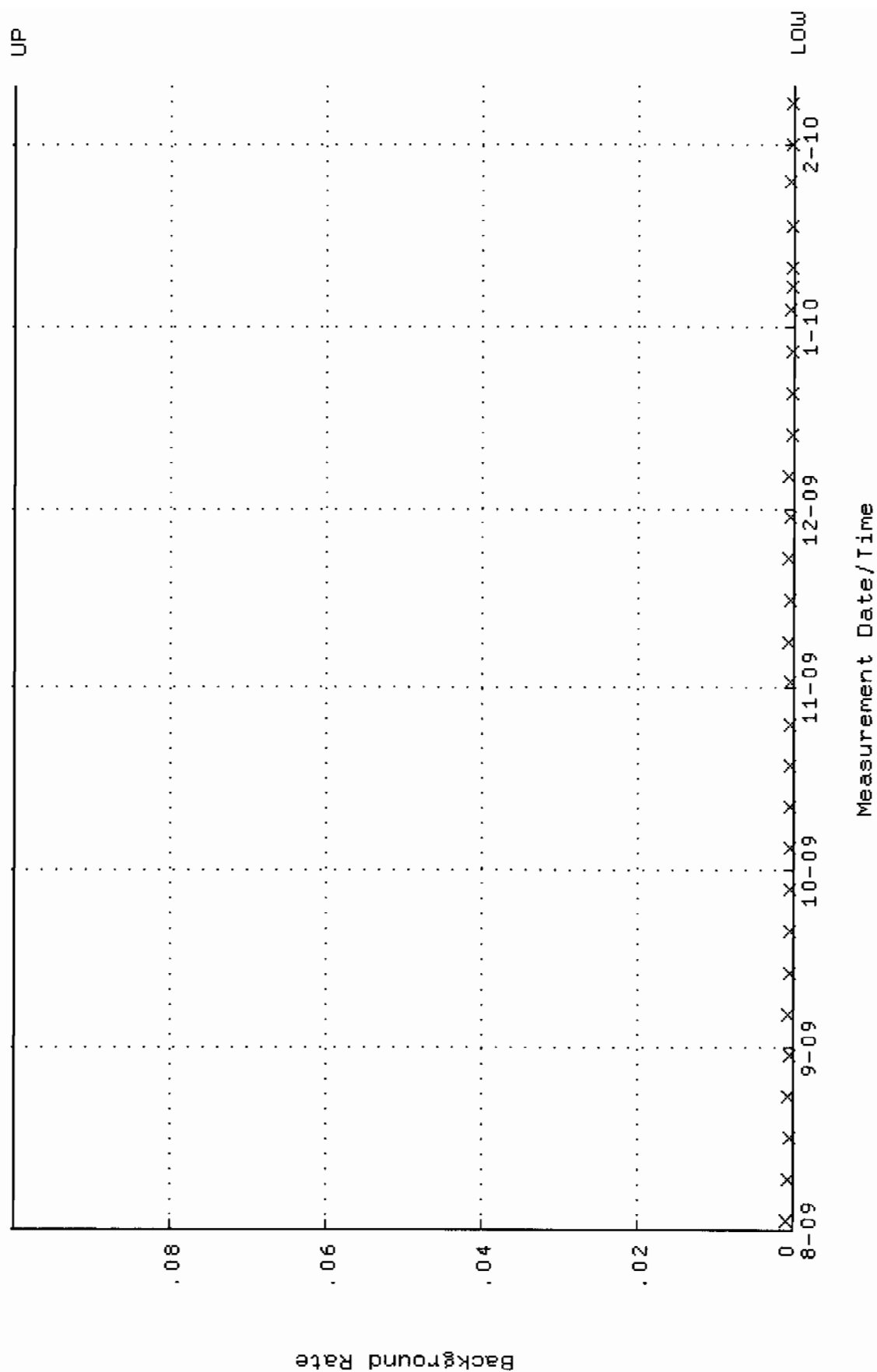
QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.308263 through 0.328263



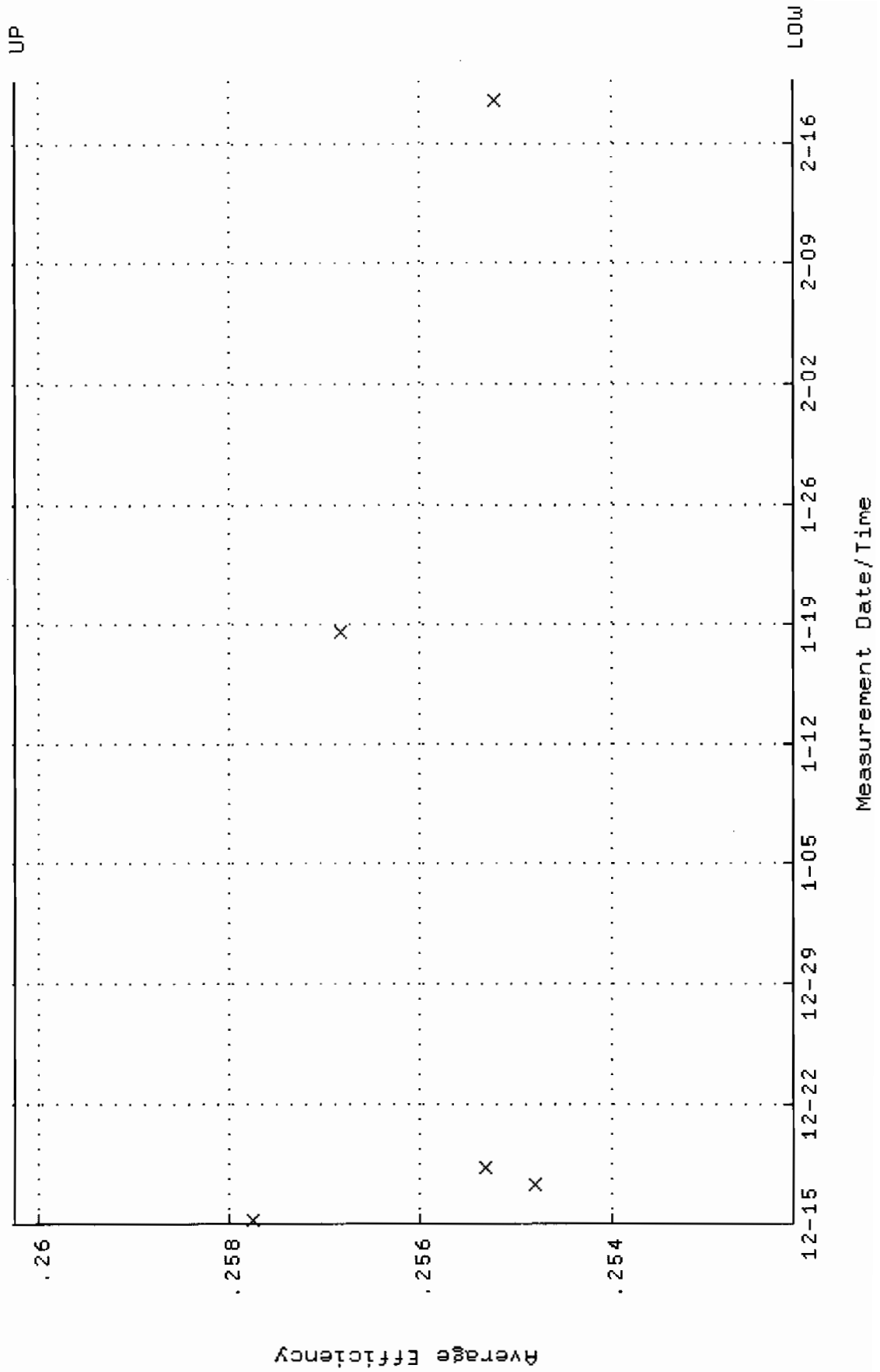
QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 64.8451 through 71.6709



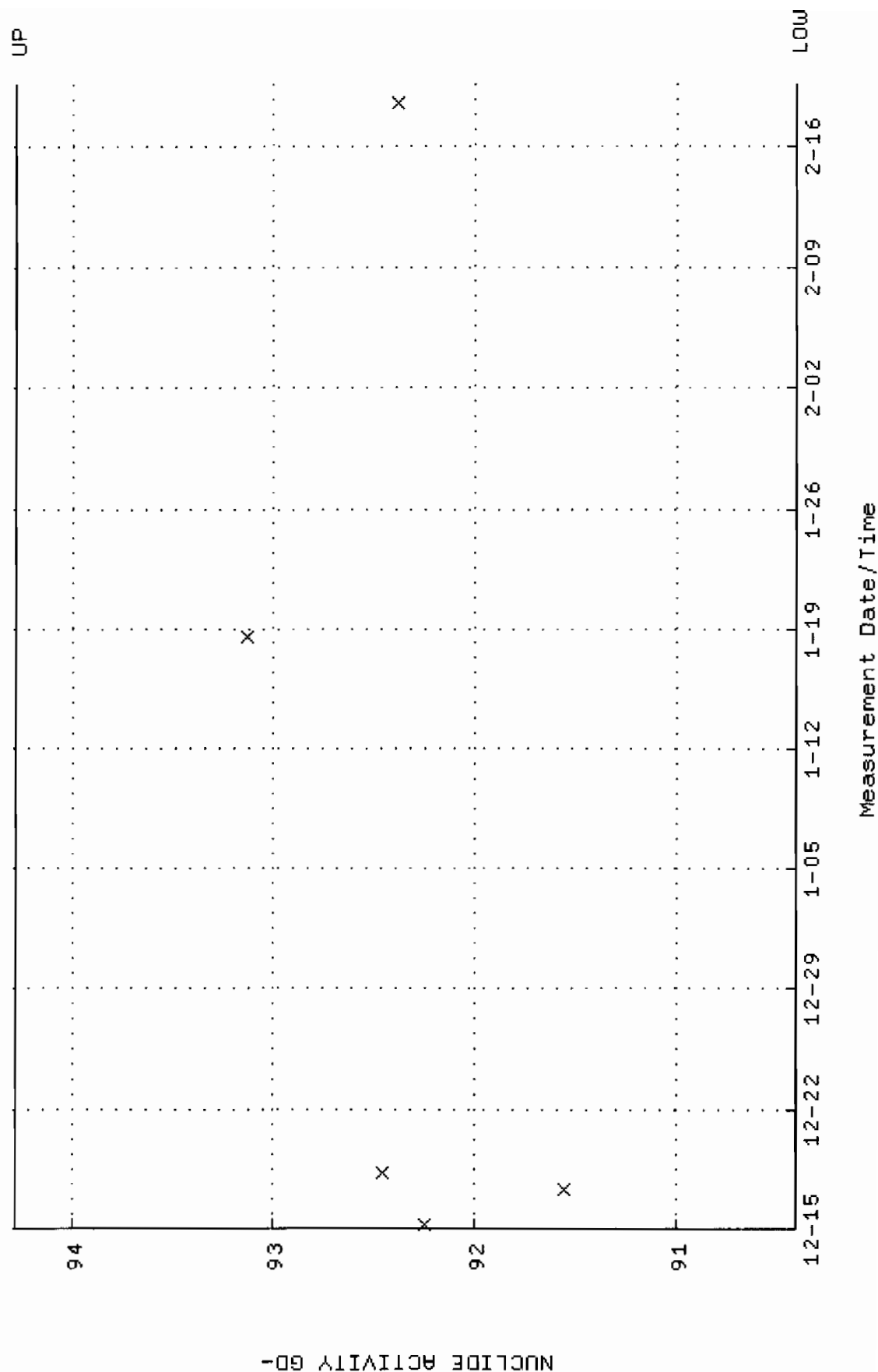
QA filename : DKA100:[ENV_ALPHA.QA.B]B112.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:44 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



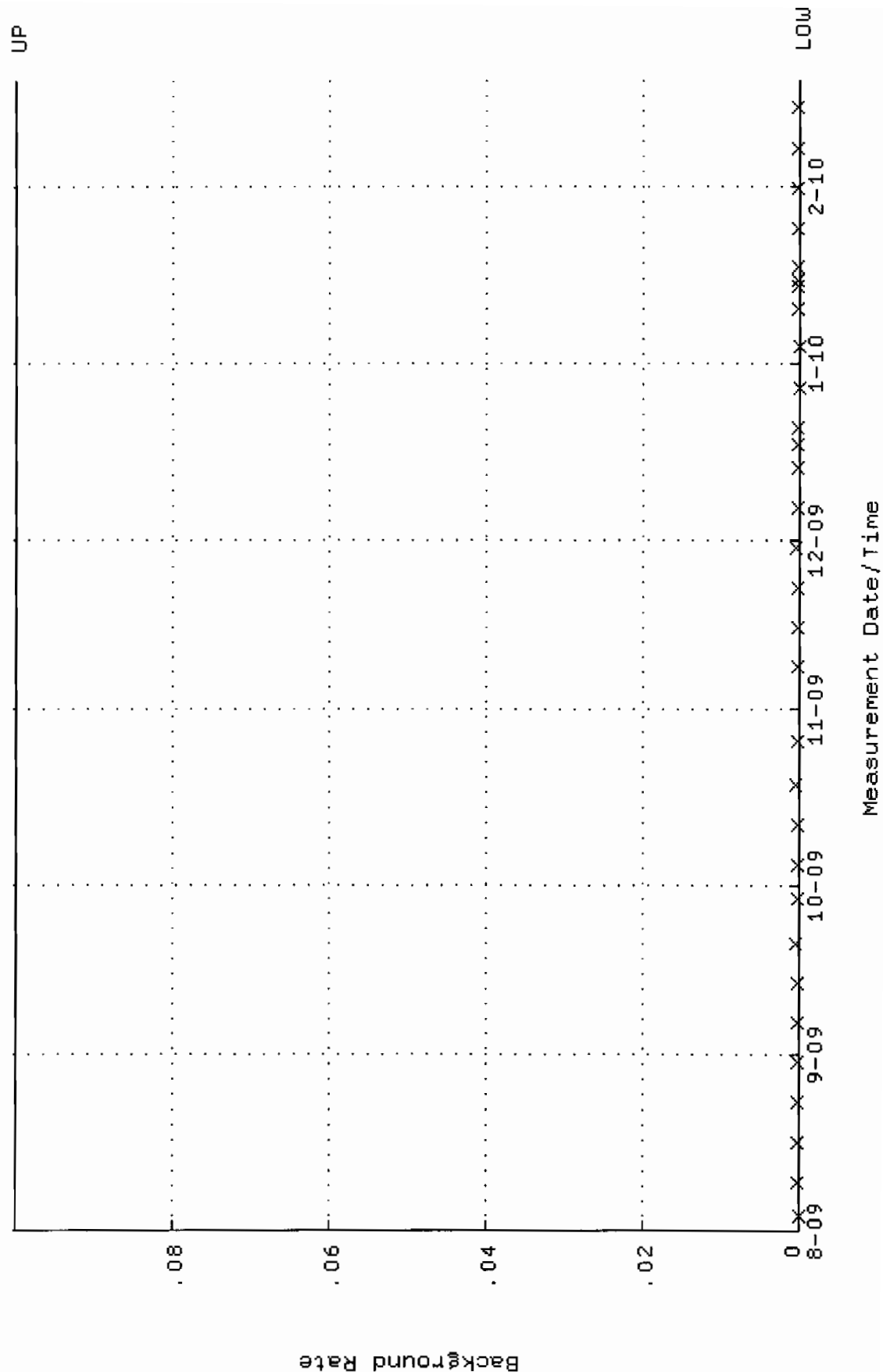
QA filename : DKA100:[ENV_ALPHA.QA.W]W119.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 15-DEC-2009 06:21:52 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.252093 through 0.260243



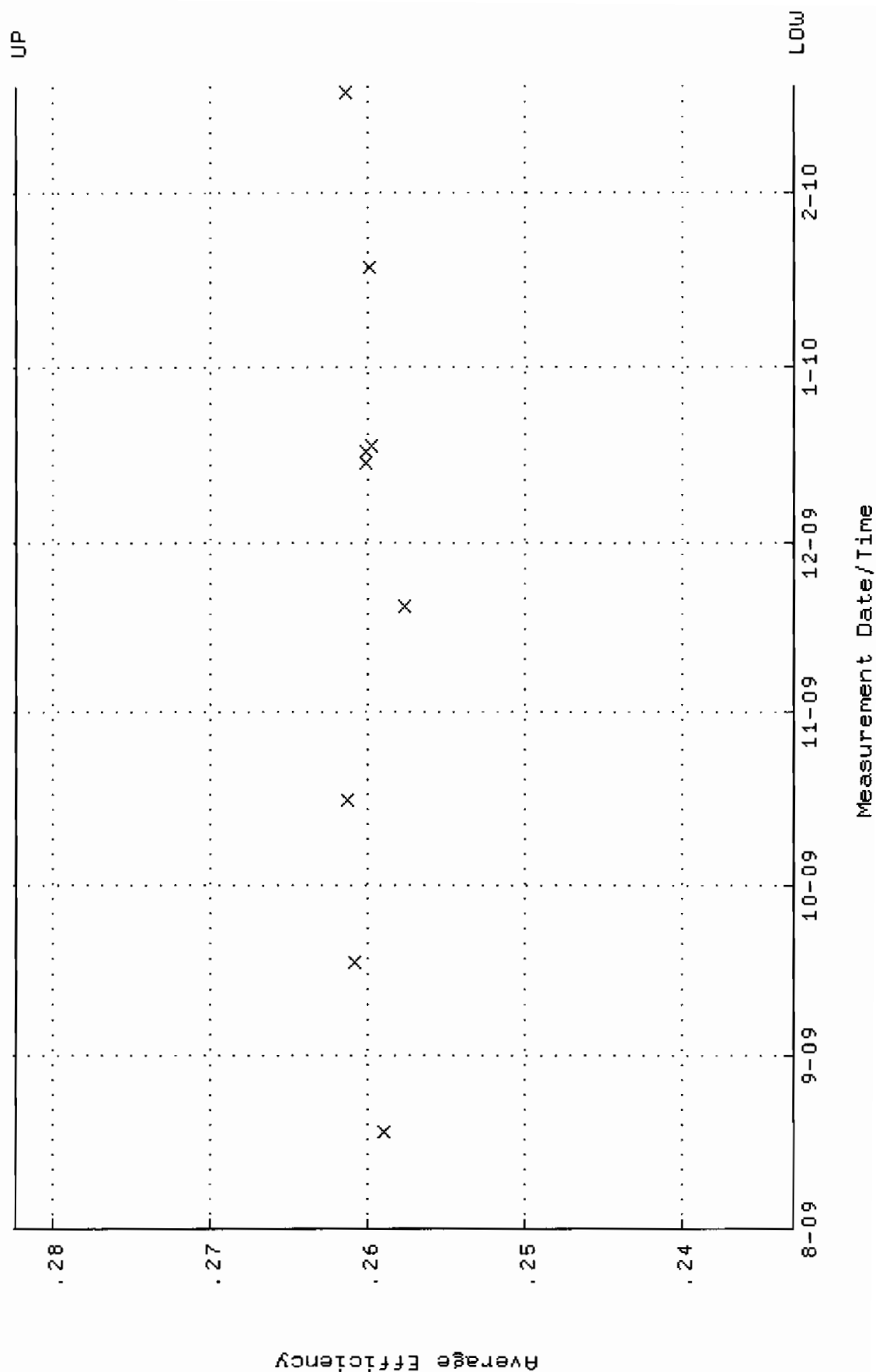
QA filename : DKA100:[ENV_ALPHA.QA.W]W119.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 15-DEC-2009 06:21:52 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 90.4107 through 94.2781



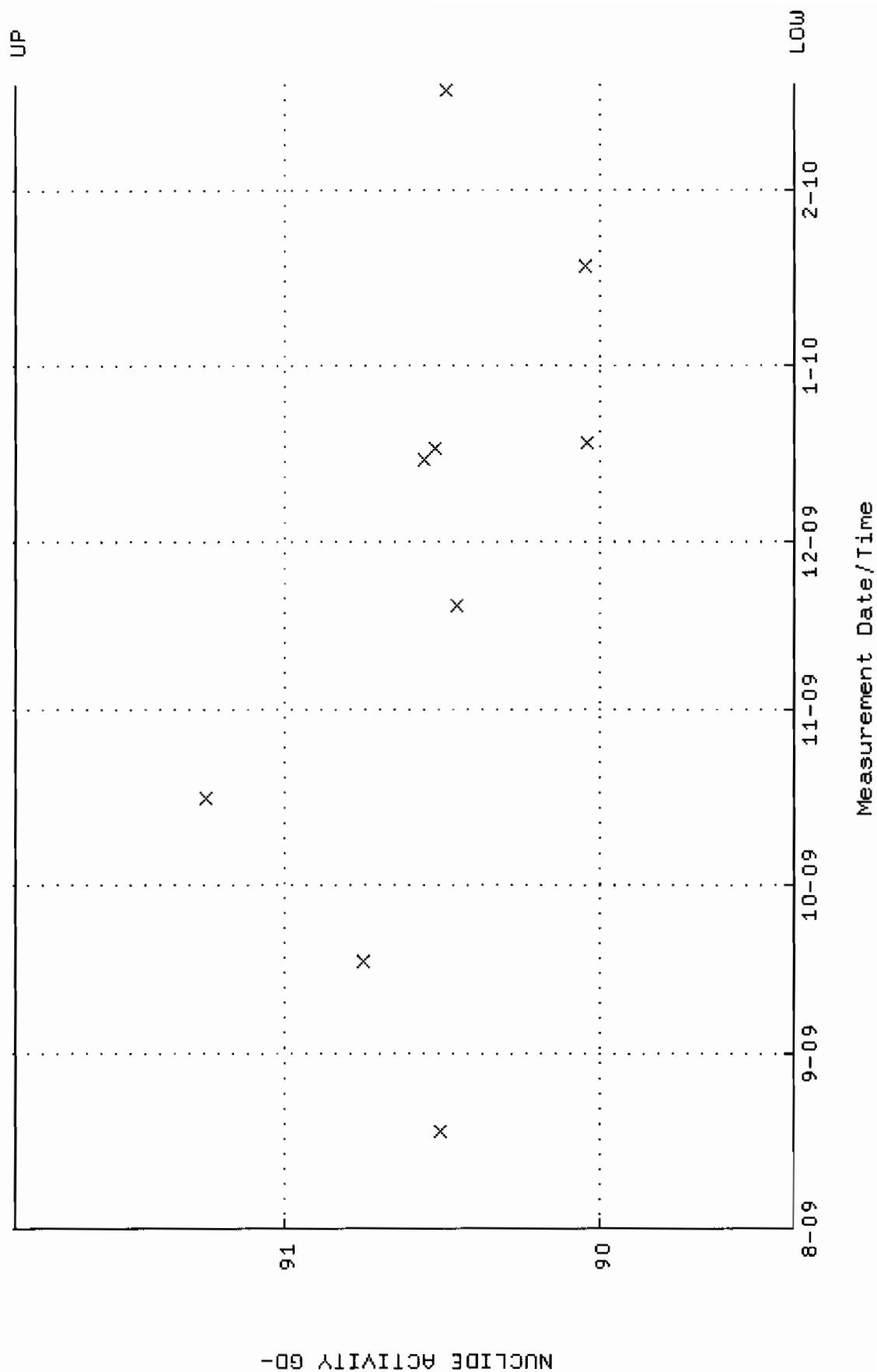
QA filename : DKA100:[ENV_ALPHA.QA.B]B119.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 3-AUG-2009 15:38:13 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



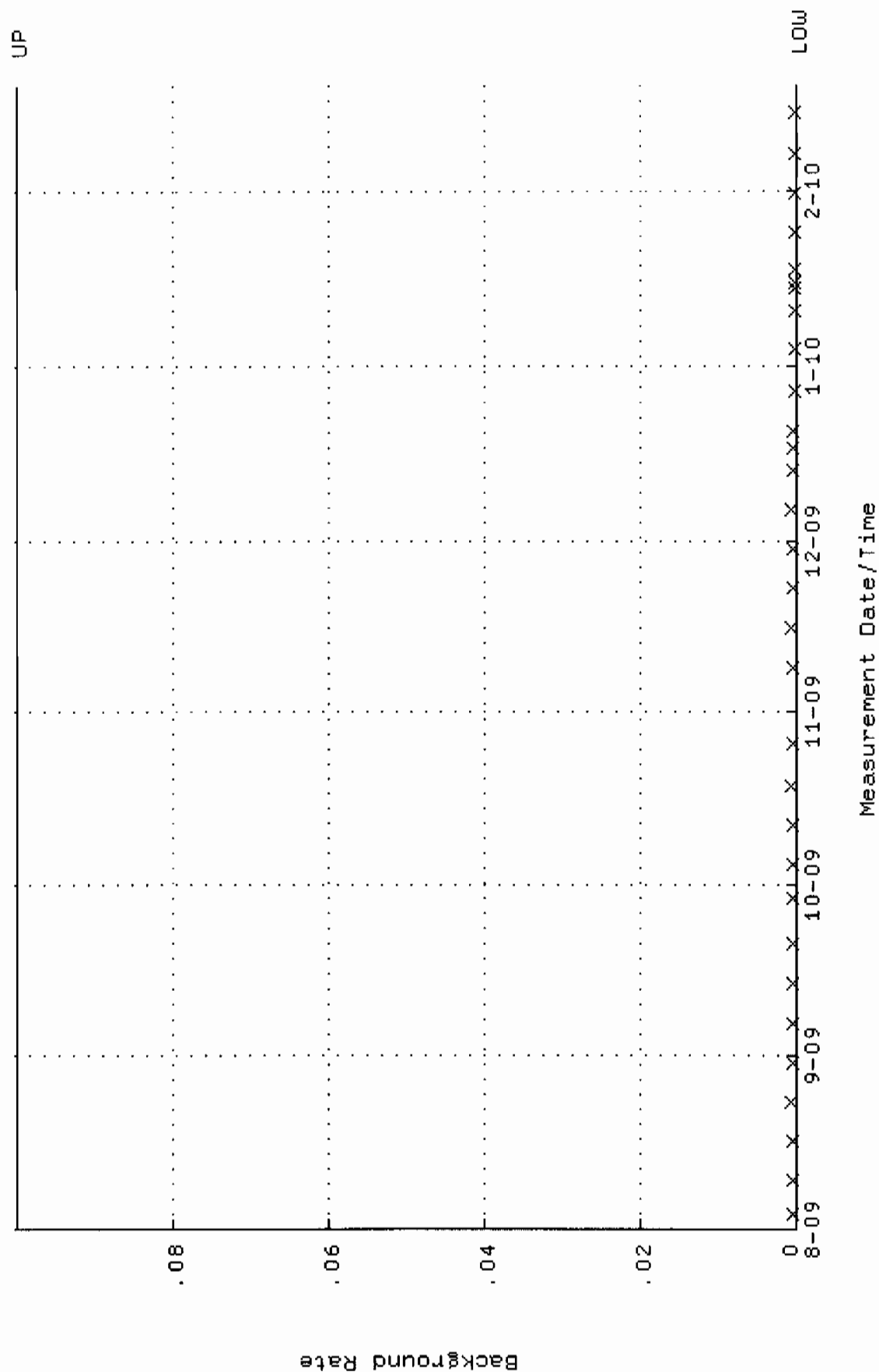
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 18-AUG-2009 08:35:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.232847 through 0.282381



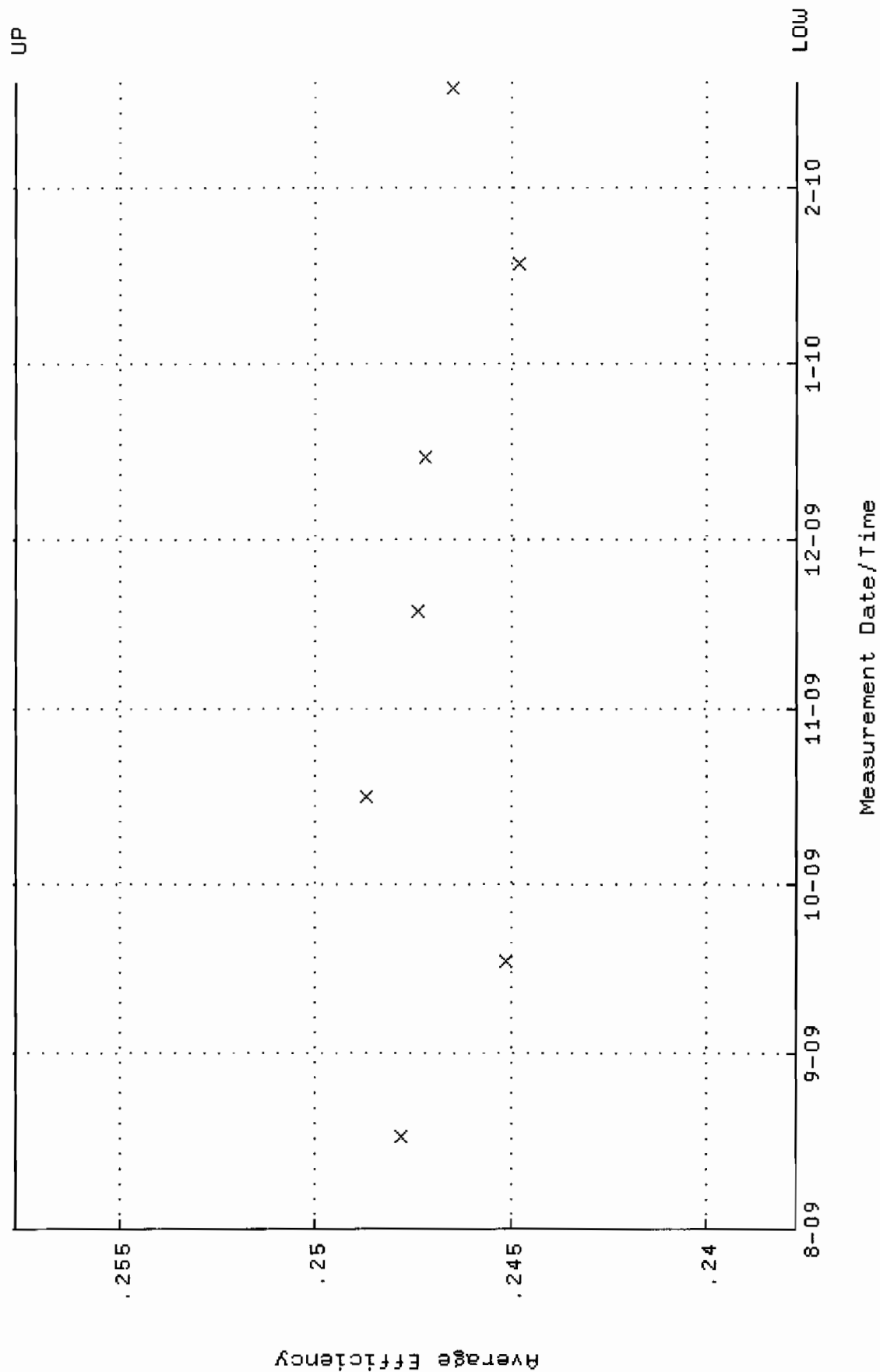
QA filename : DKA100:[ENV_ALPHA.QA.W]w120.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 18-AUG-2009 08:35:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.3881 through 91.8481



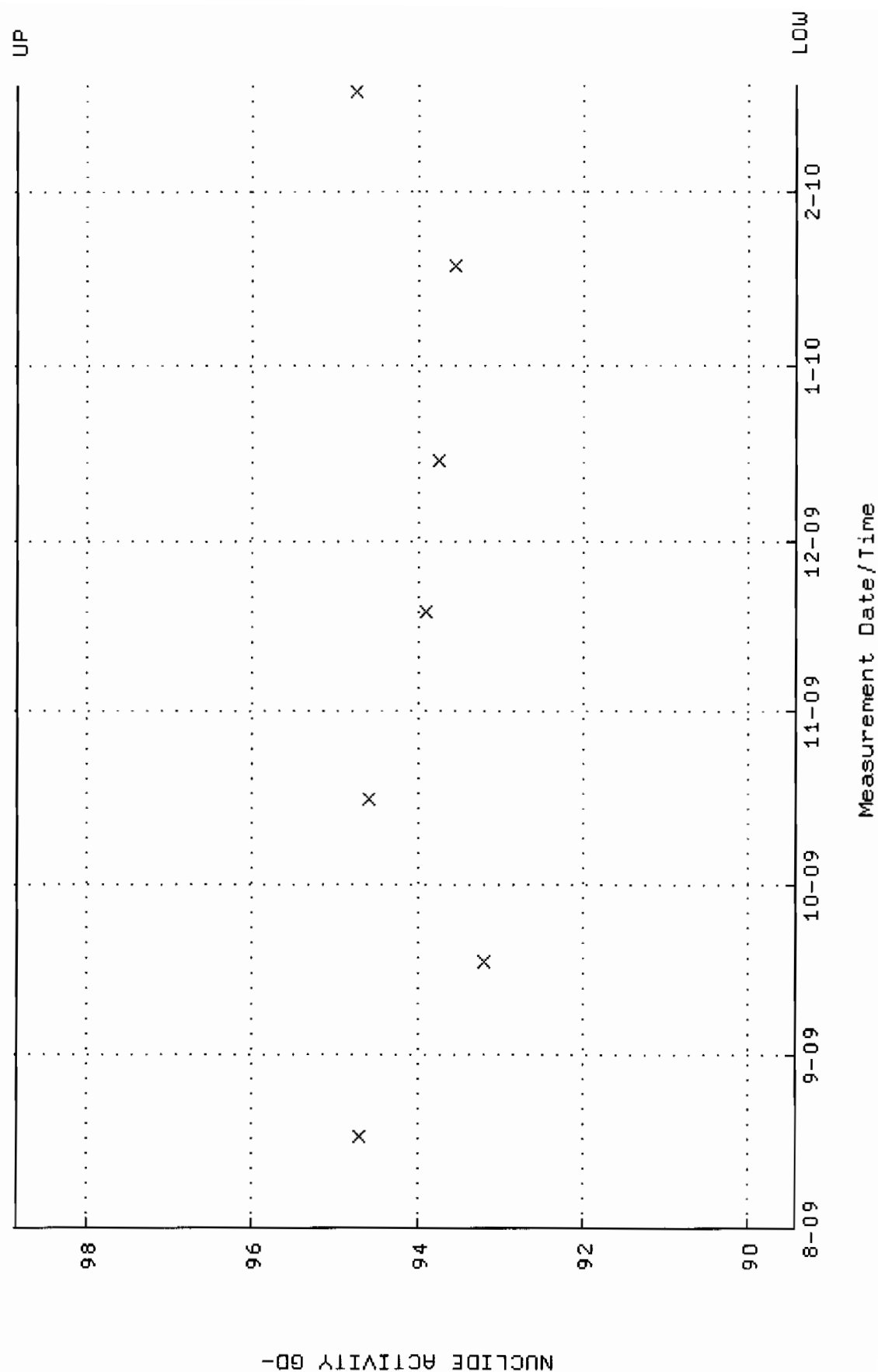
QA filename : DKA100:[ENV_ALPHA.QA.B]B120.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 3-AUG-2009 15:38:20 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



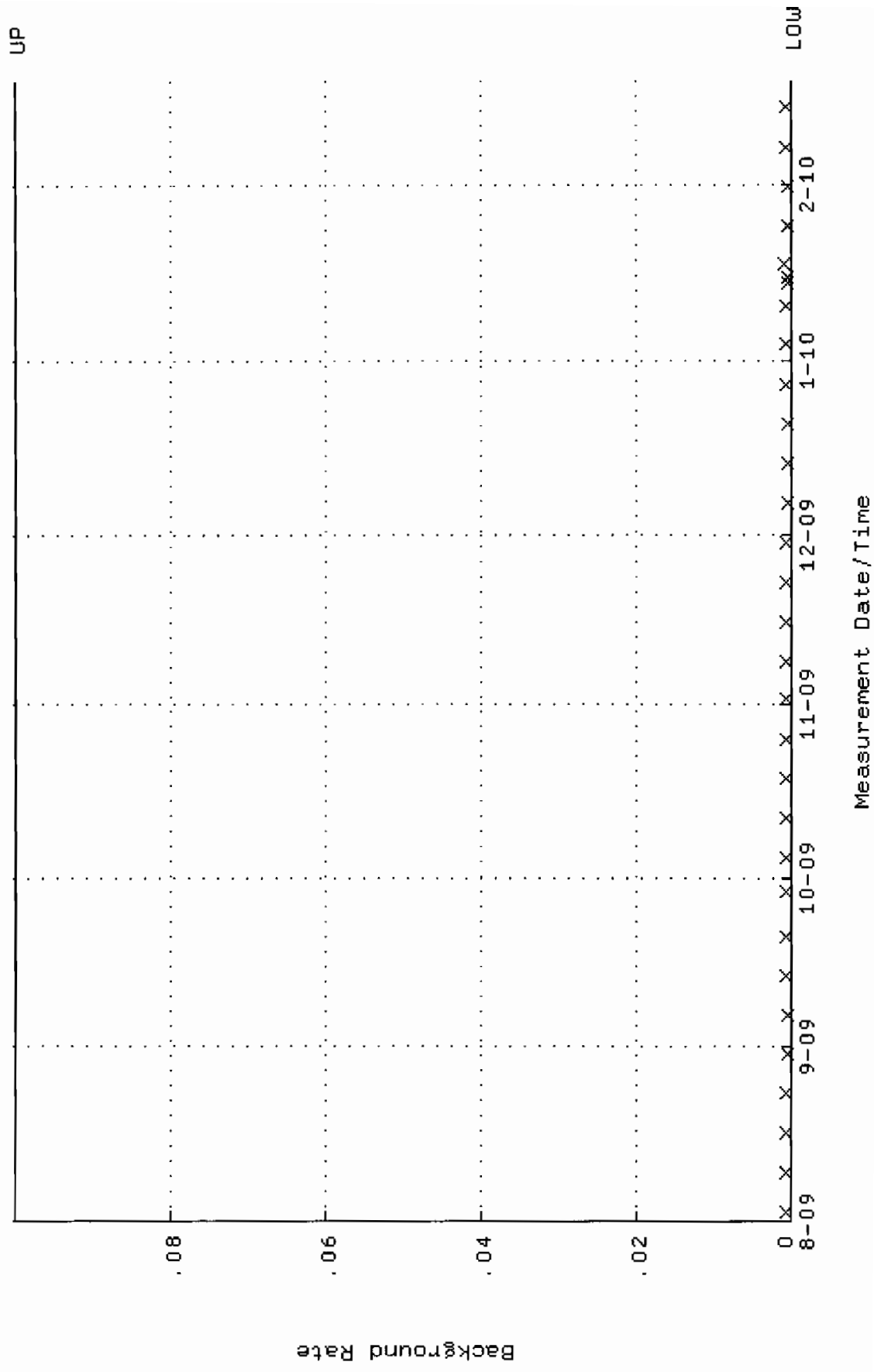
QA filename : DKA100:[ENV_ALPHA.QA.W]w121.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:25 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.237686 through 0.257686



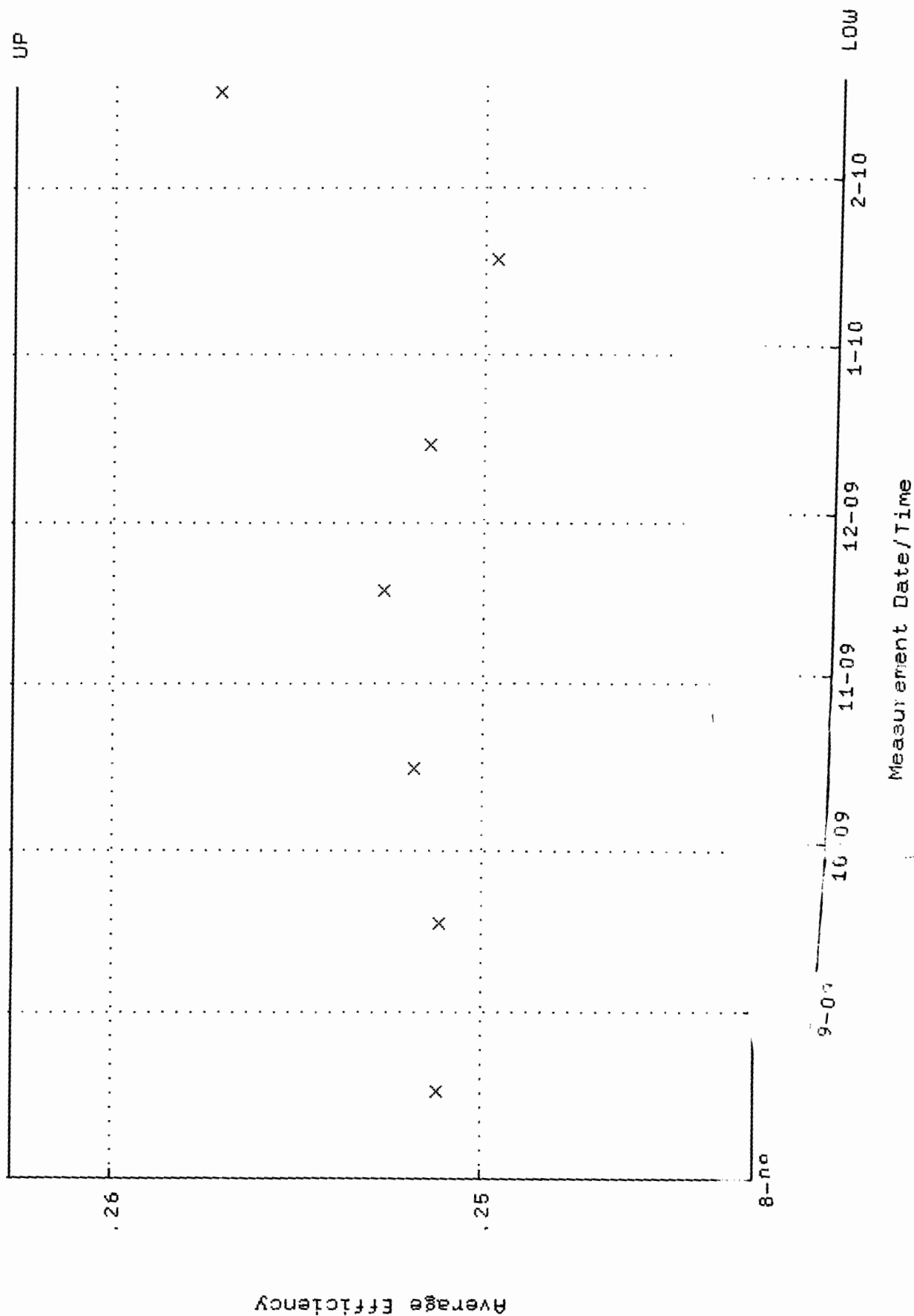
QA filename : DKA100:[ENV_ALPHA.QA.W]W121.QAF;1
 Parameter Name : NLACTVY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:25 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.4263 through 98.8395



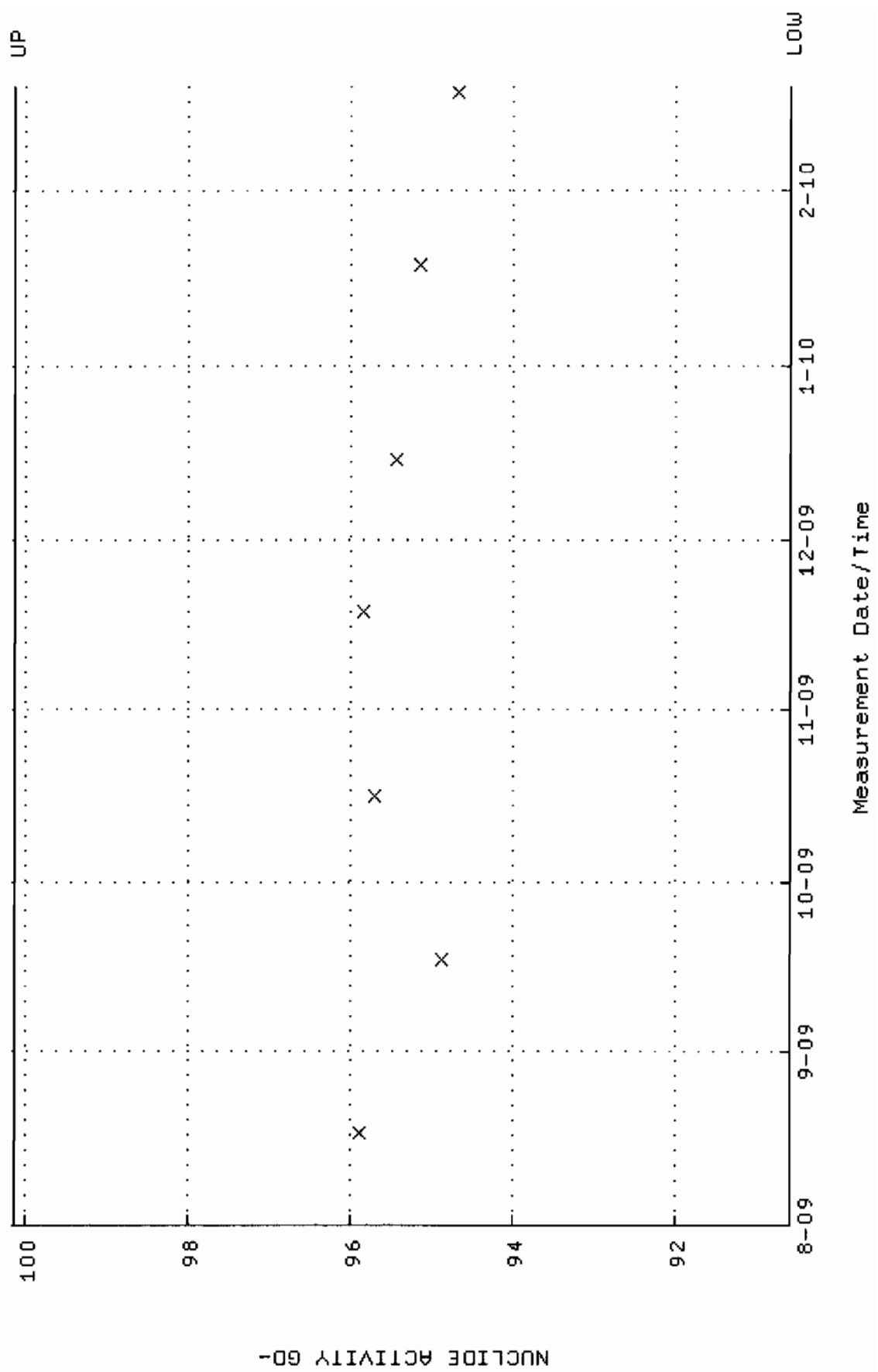
QA filename : DKA100:[ENV_ALPHA.QA.B]B121.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:33 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



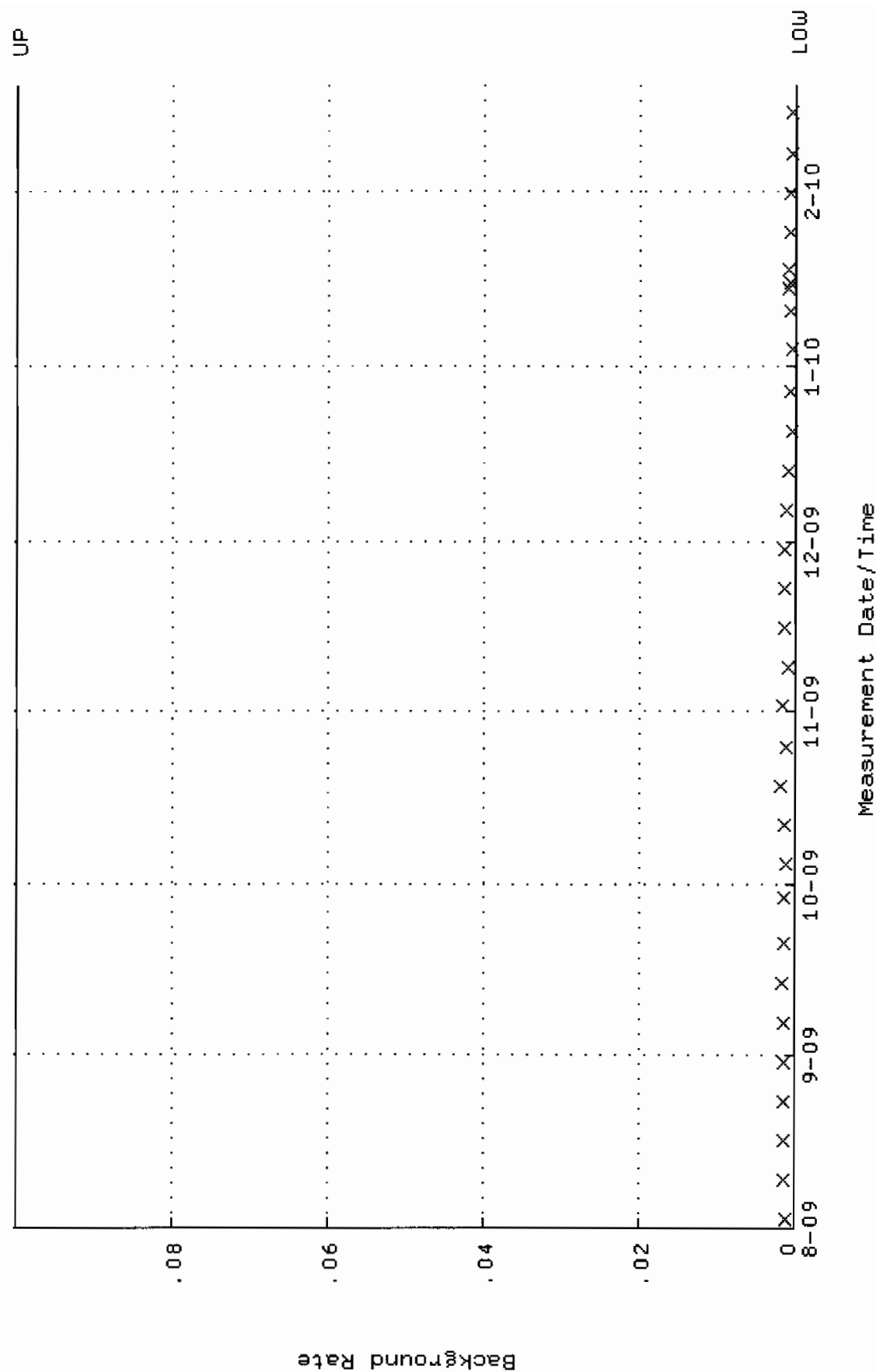
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:30 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.242659 through 0.262659



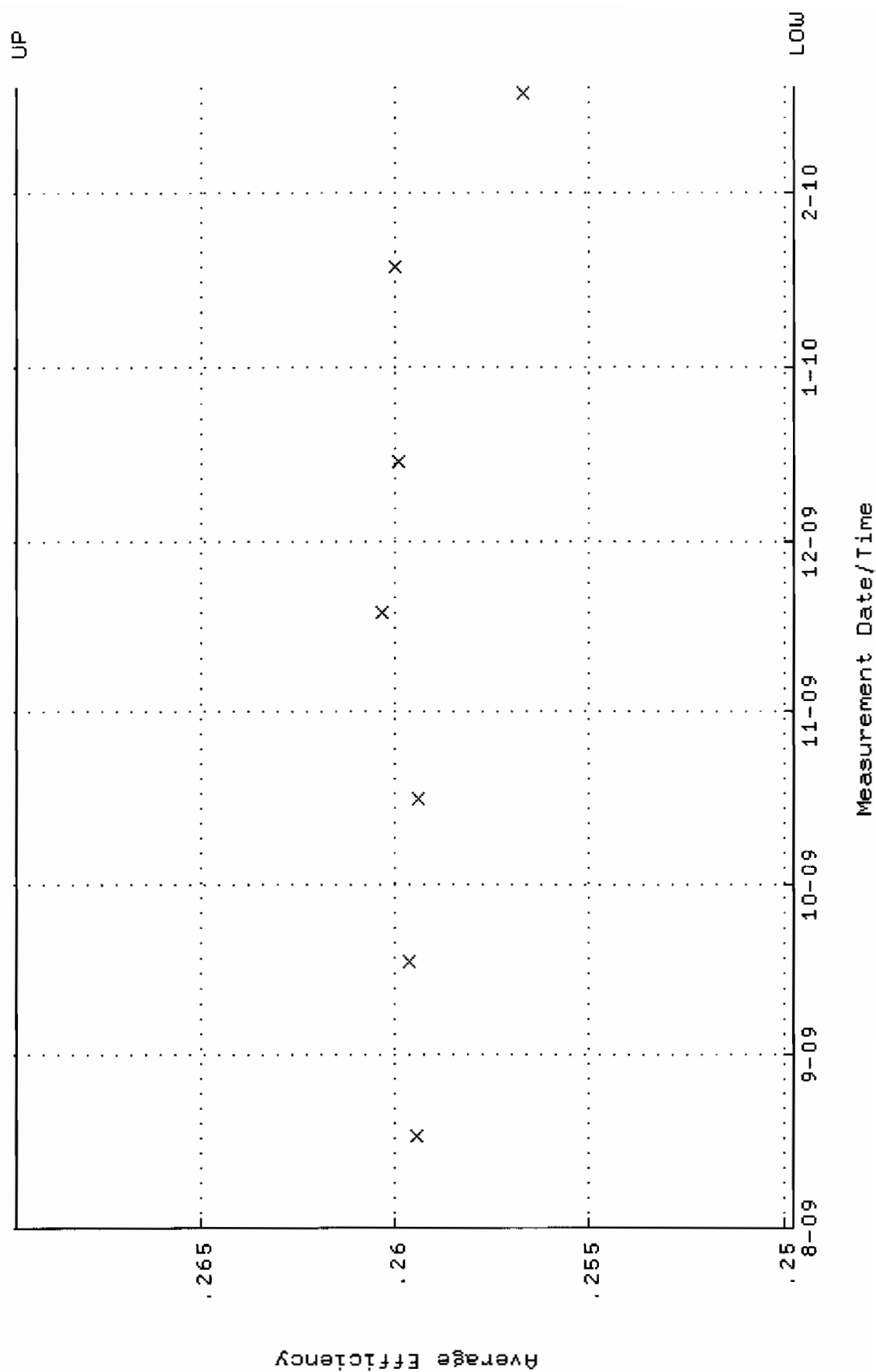
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:30 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 90.5949 through 100.131



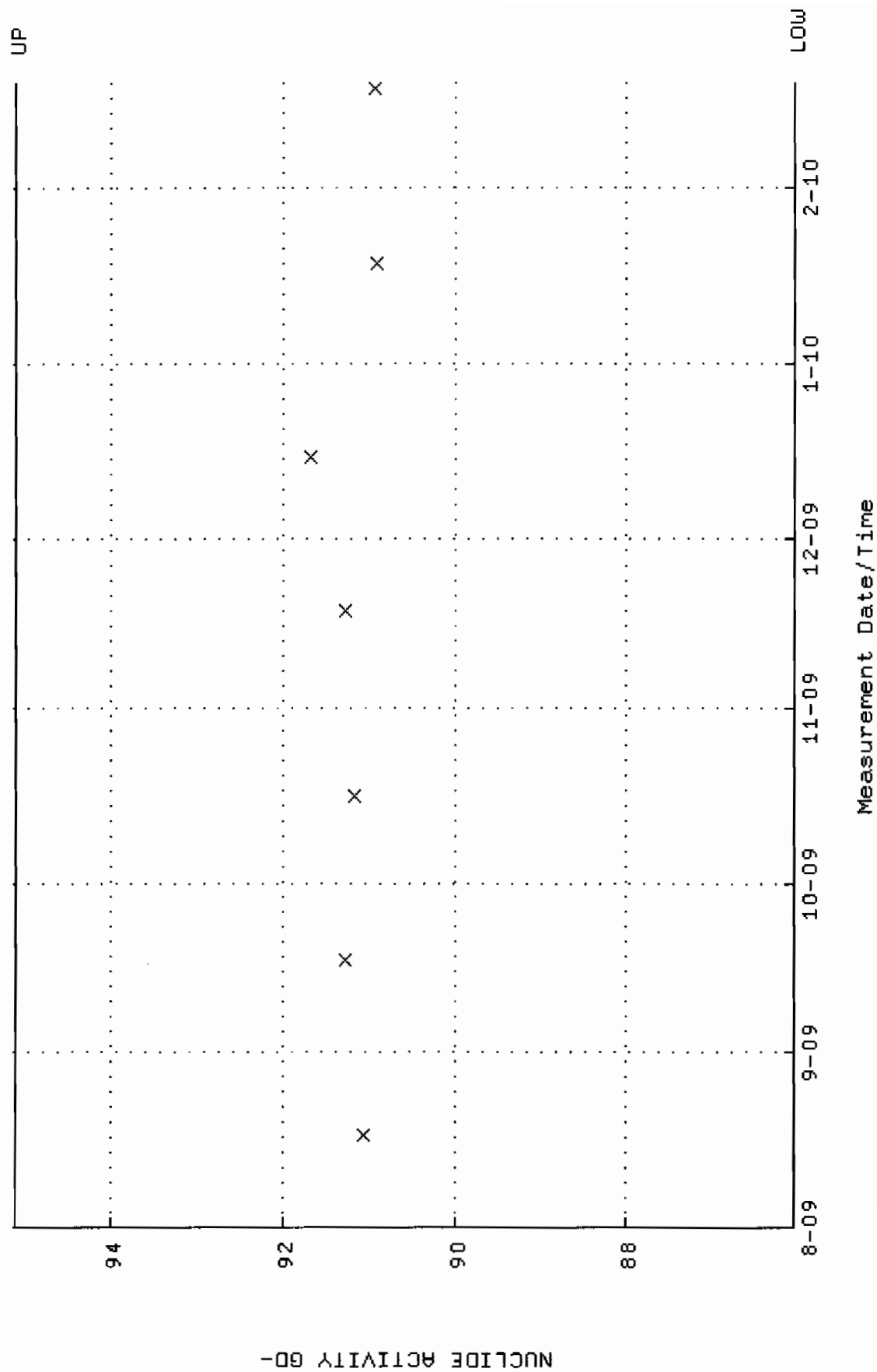
QA filename : DKA100:[ENV_ALPHA.QA.B]B122.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:37 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



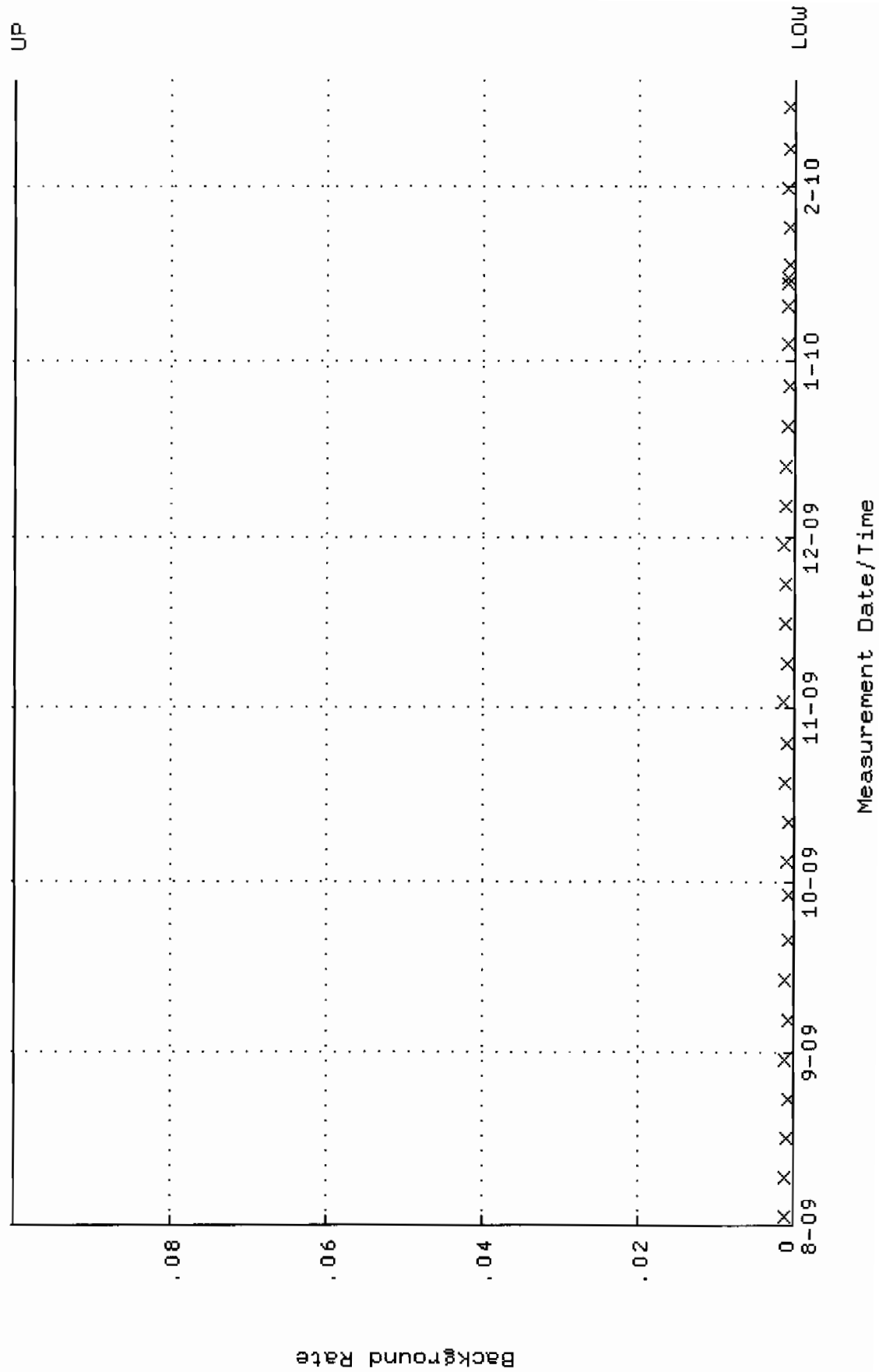
QA filename : DKA100:[ENV_ALPHA.QA.W]w123.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:34 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.249752 through 0.269752



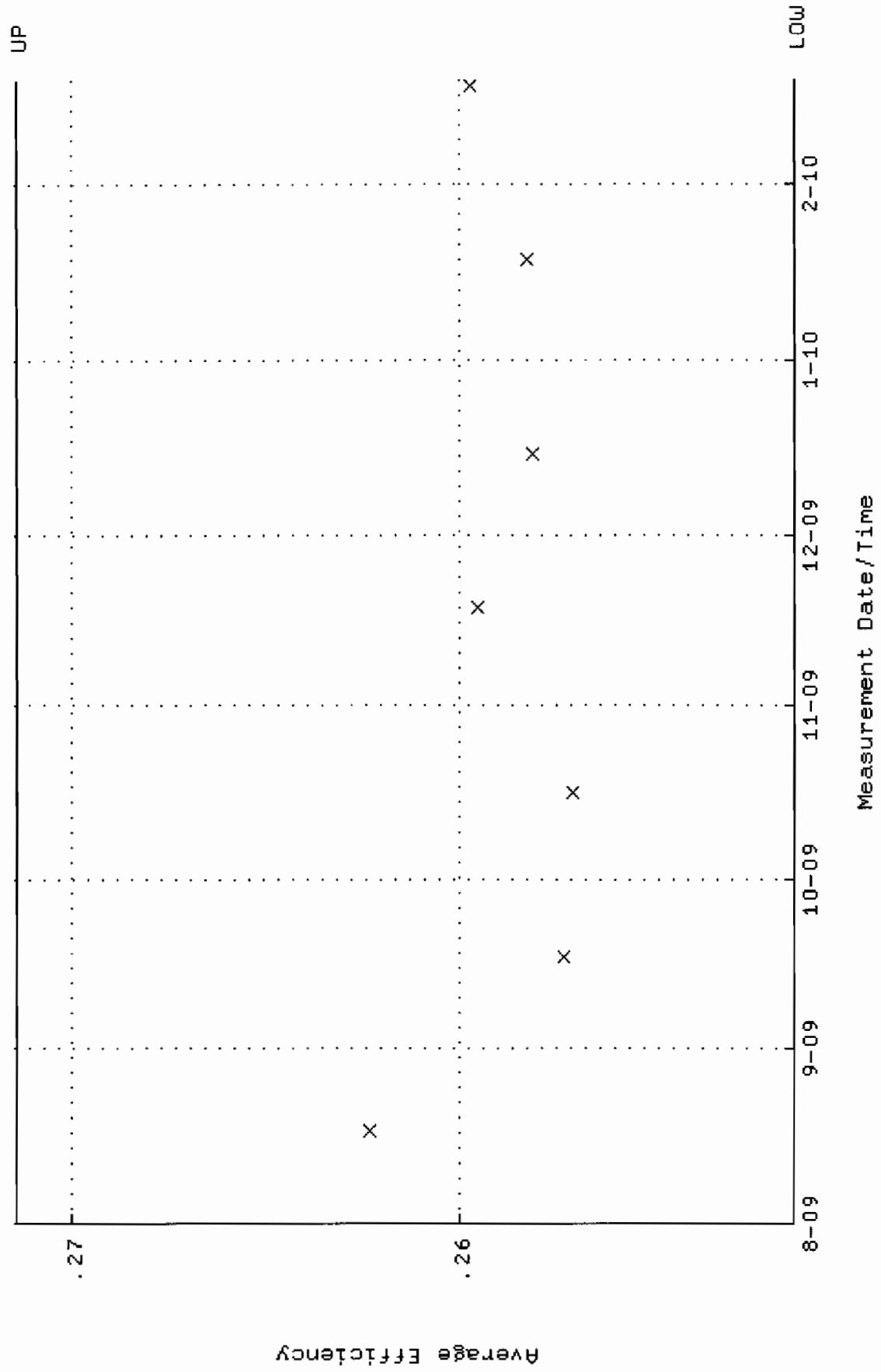
QA filename : DKA100:[ENV_ALPHA.QA.w]w123.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:34 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.0496 through 95.1074



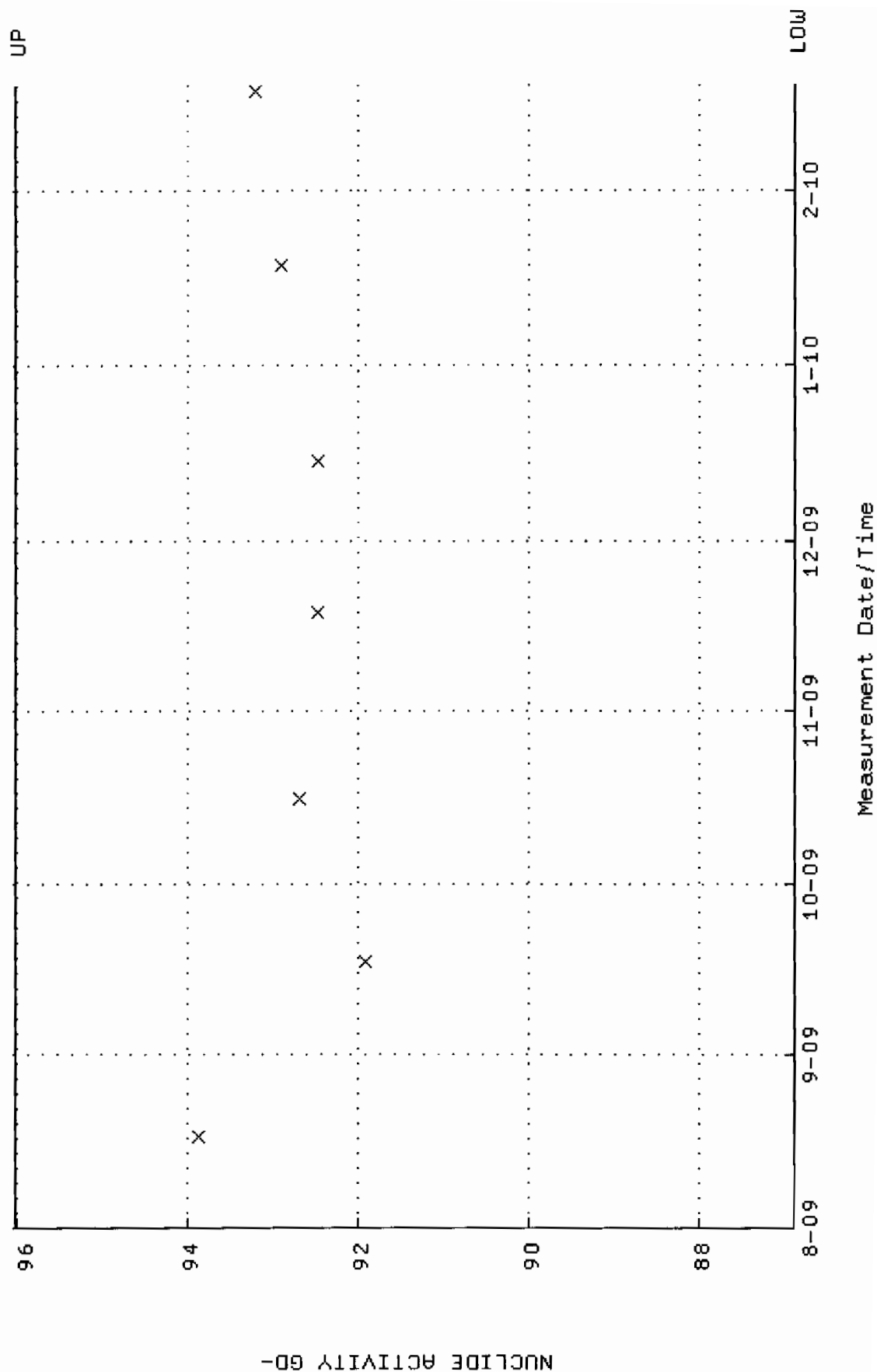
QA filename : DKA100:[ENV_ALPHA.QA.B]B123.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:42 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



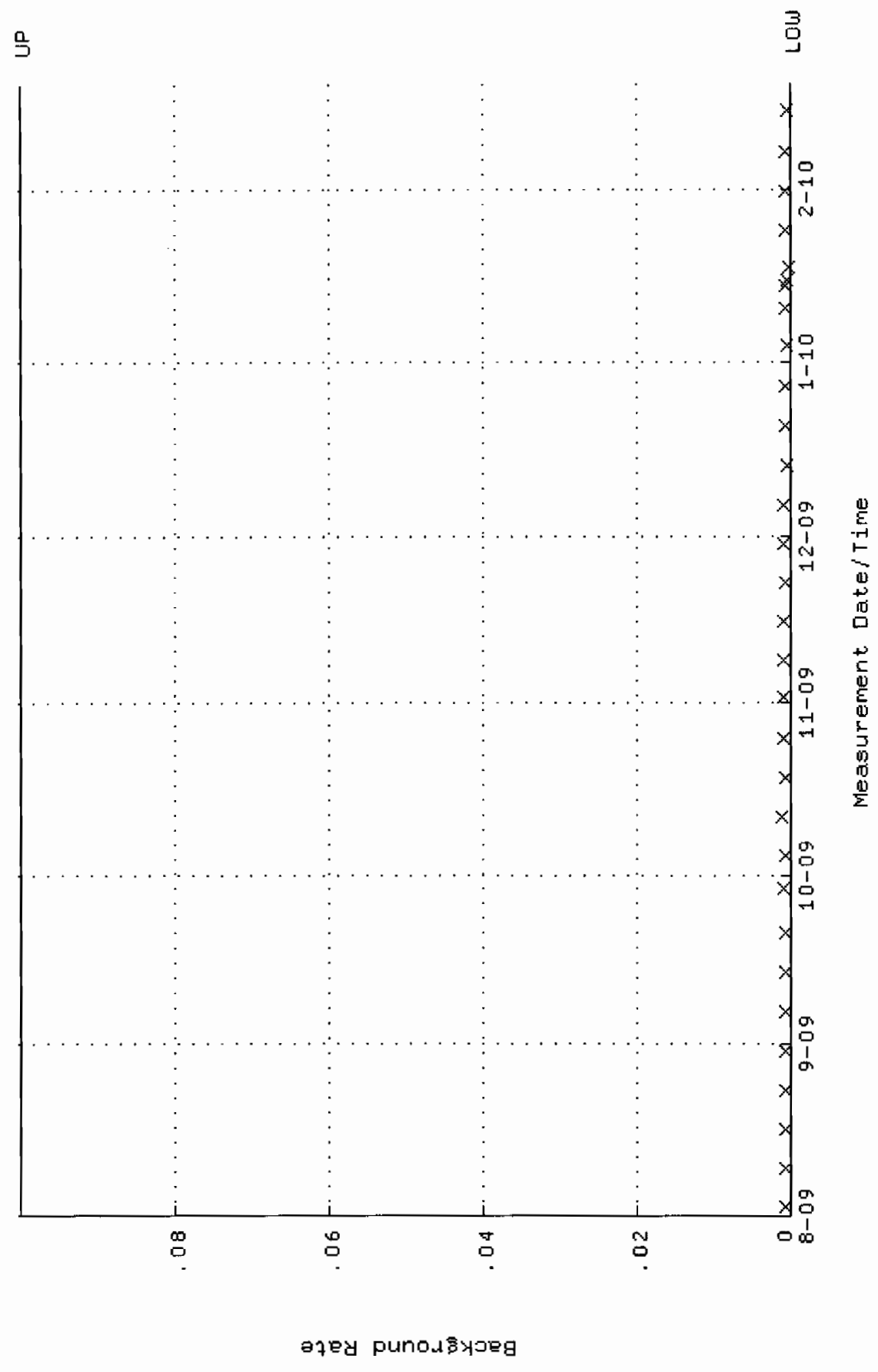
QA filename : DKA100:[ENV_ALPHA.QA.W]w124.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:39 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.251398 through 0.271398



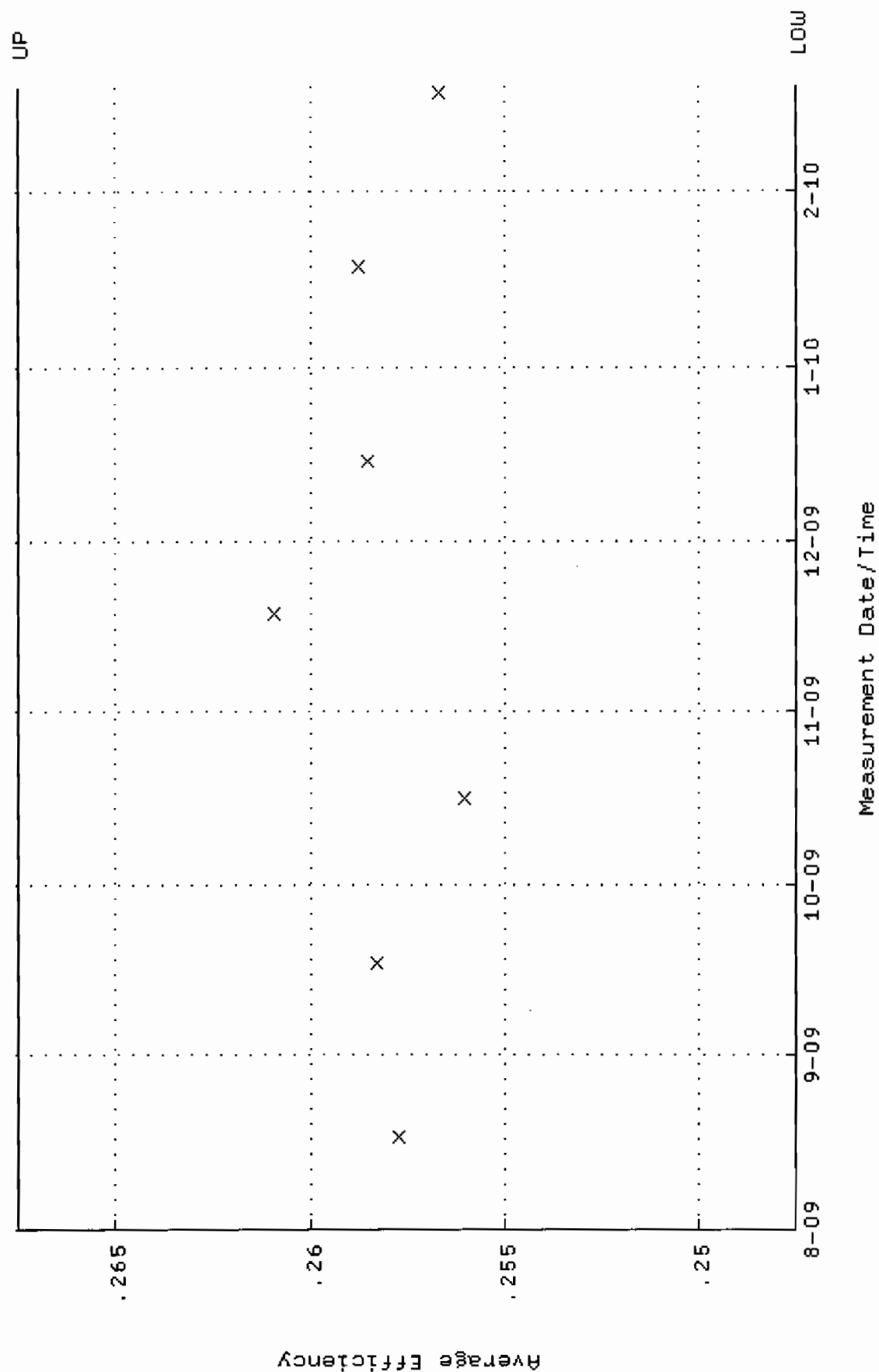
QA filename : DKA100:[ENV_ALPHA.QA.W]w124.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:39 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.8862 through 96.0322



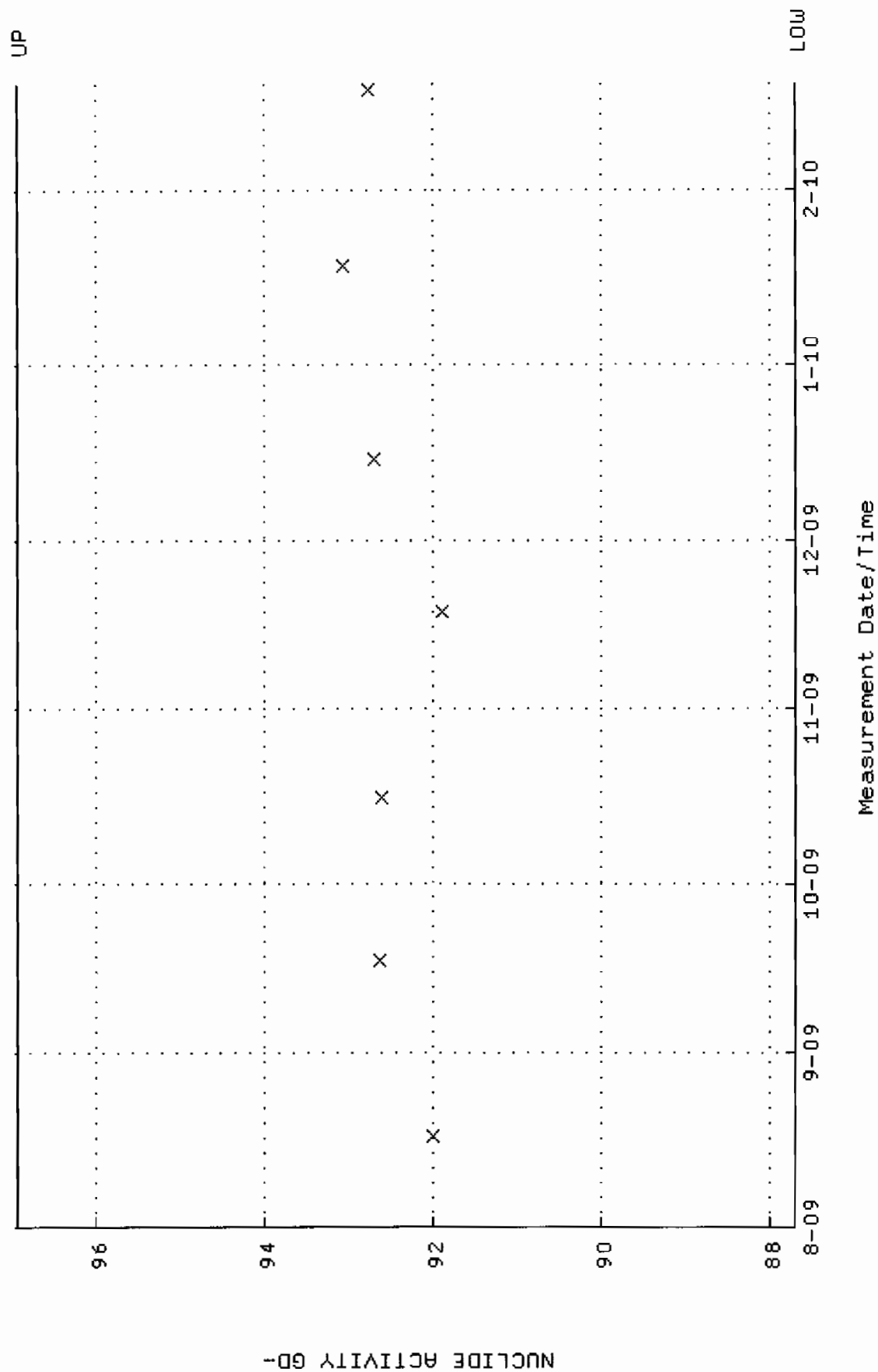
QA filename : DKA100:[ENV_ALPHA.QA.B]B124.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:47 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



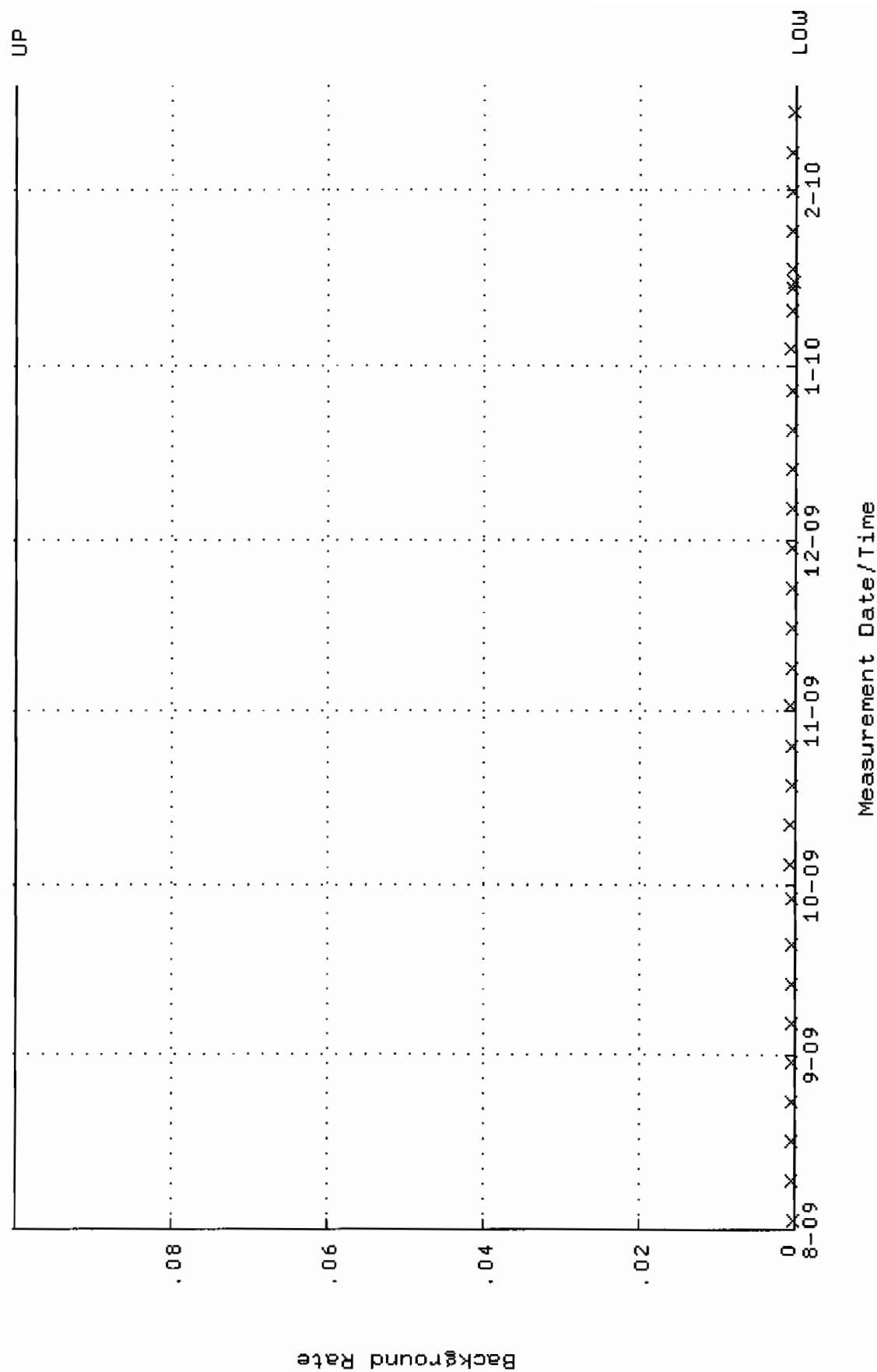
QA filename : DKA100:[ENV_ALPHA.QA.w]w125.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:44 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.247512 through 0.267512



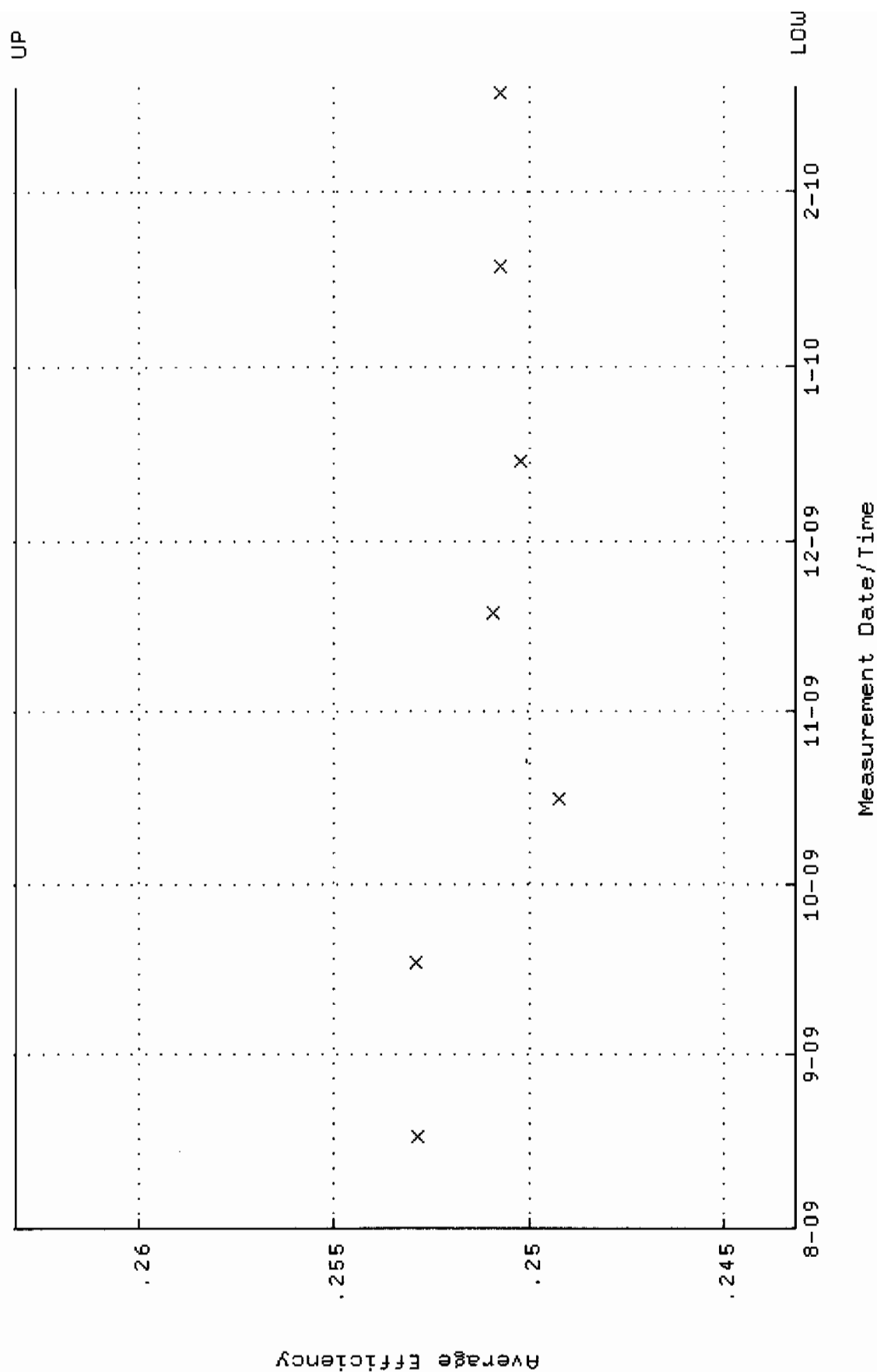
QA filename : DKA100:[ENV_ALPHA.QA.W]U125.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:44 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.6956 through 96.9268



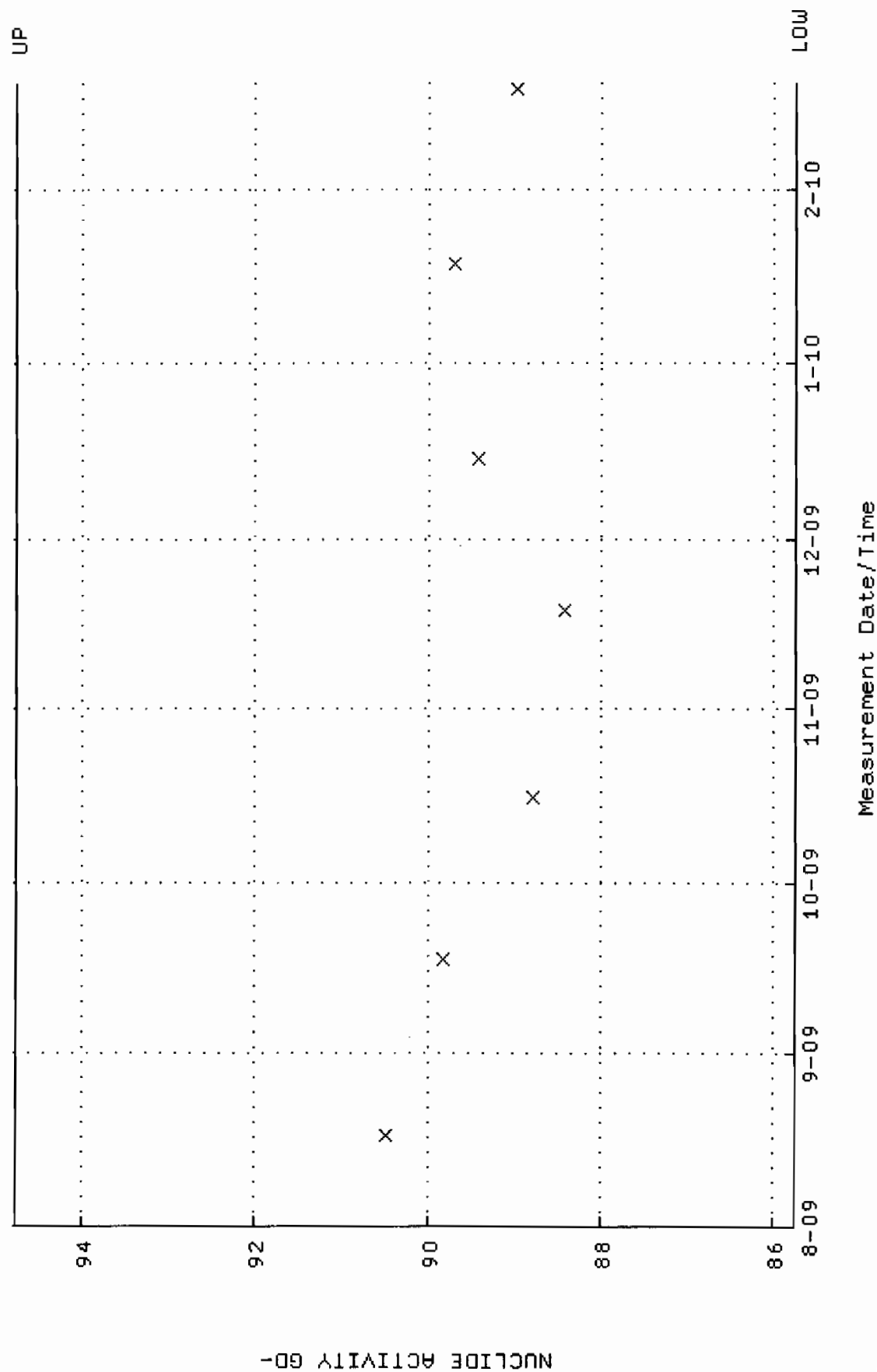
QA filename : DKA100:[ENV_ALPHA.QA.B]B125.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:51 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



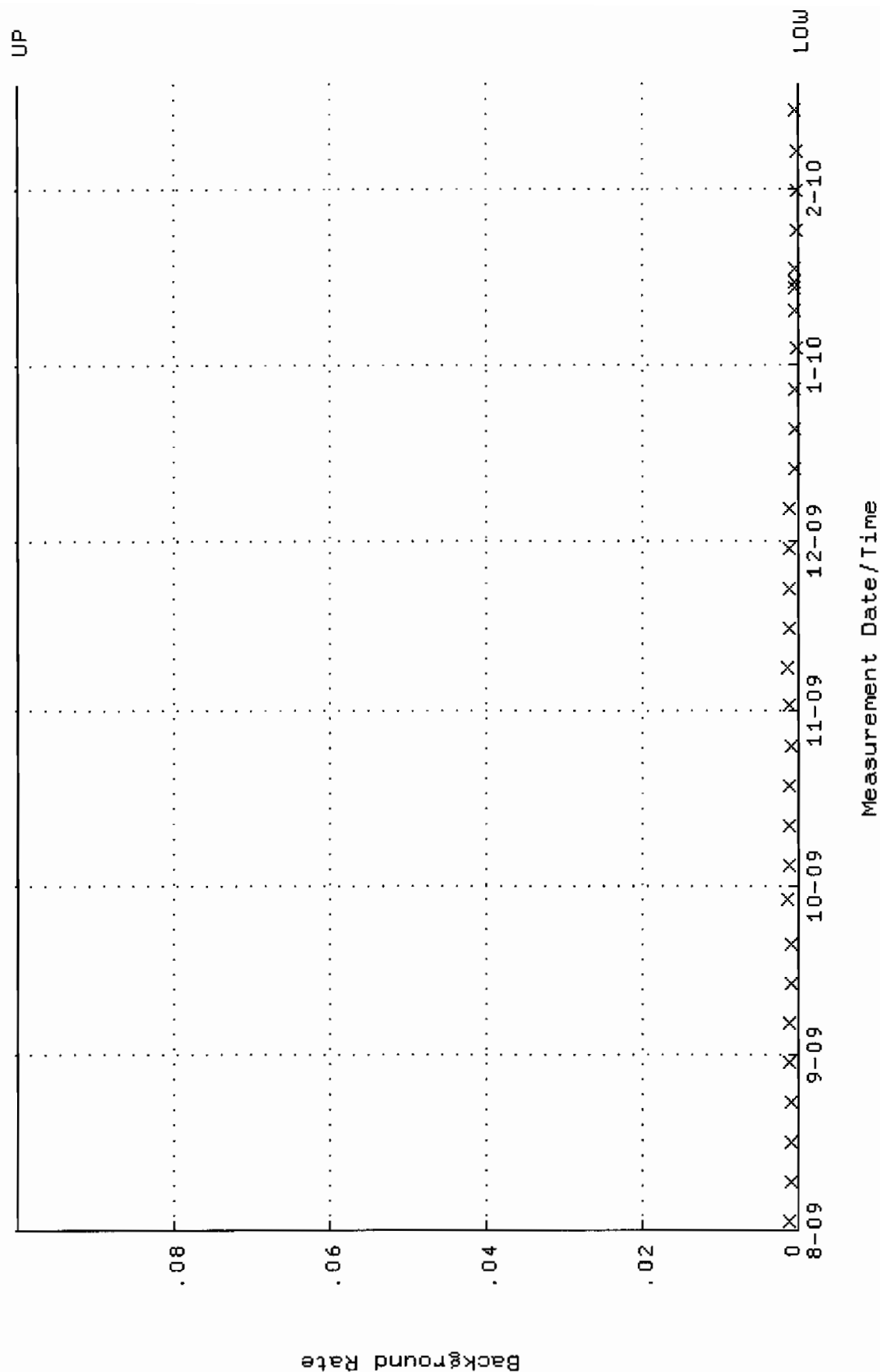
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:49 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.243156 through 0.263156



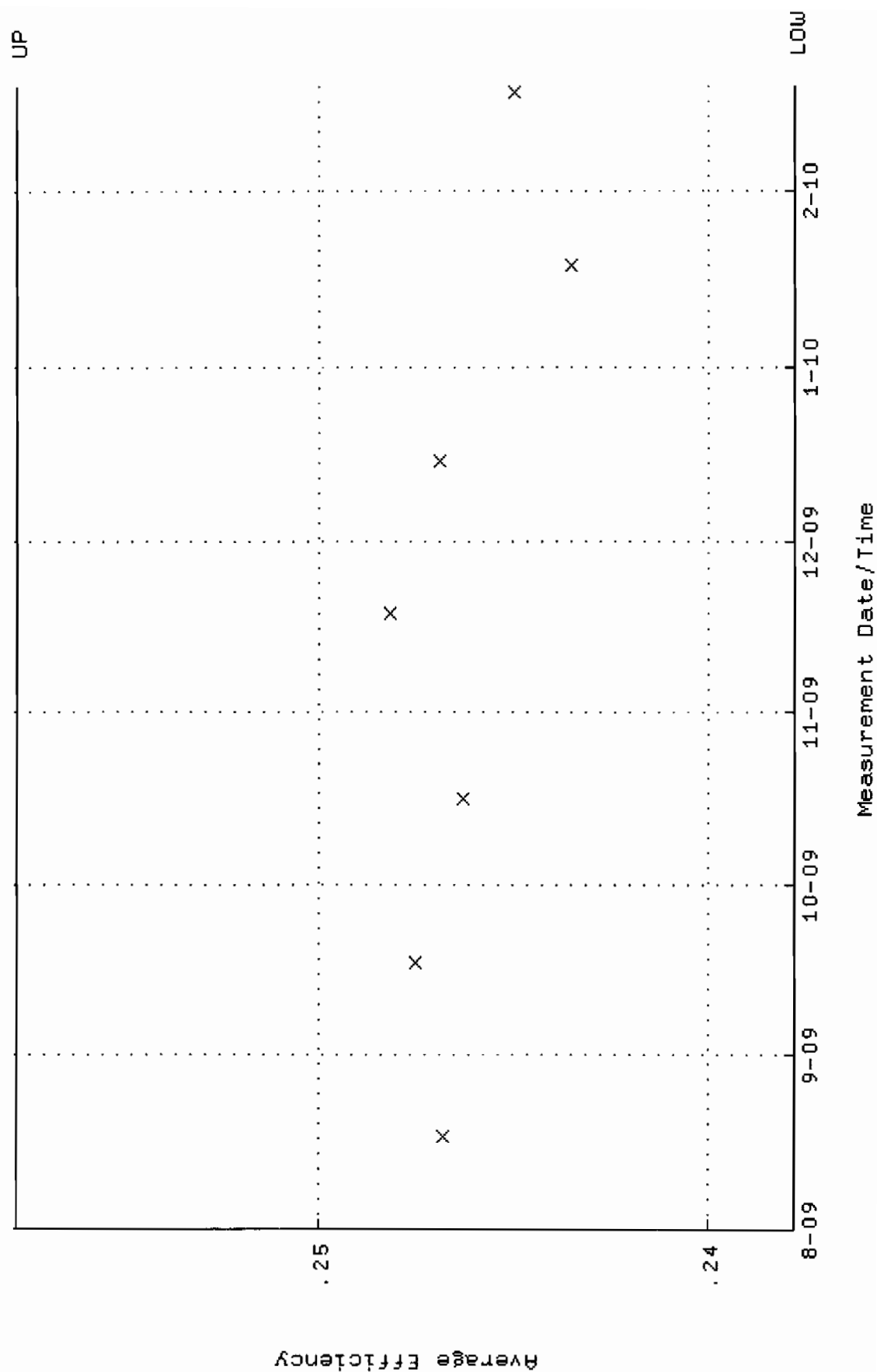
QA filename : DKA100:[ENV_ALPHA.QA.W]w126.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:49 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.7449 through 94.7707



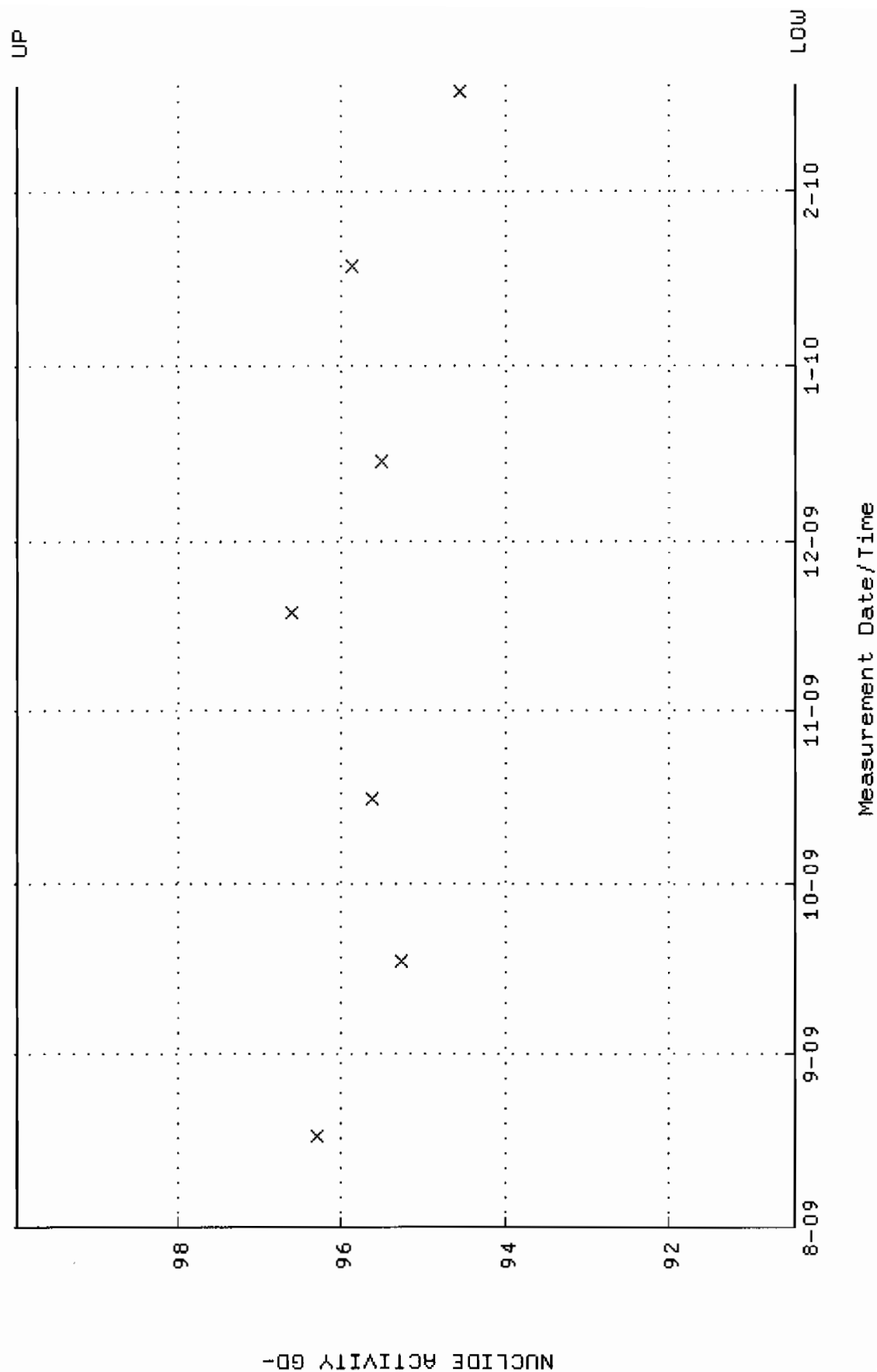
QA filename : DKA100:[ENV_ALPHA.QA.B]B126.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:55 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



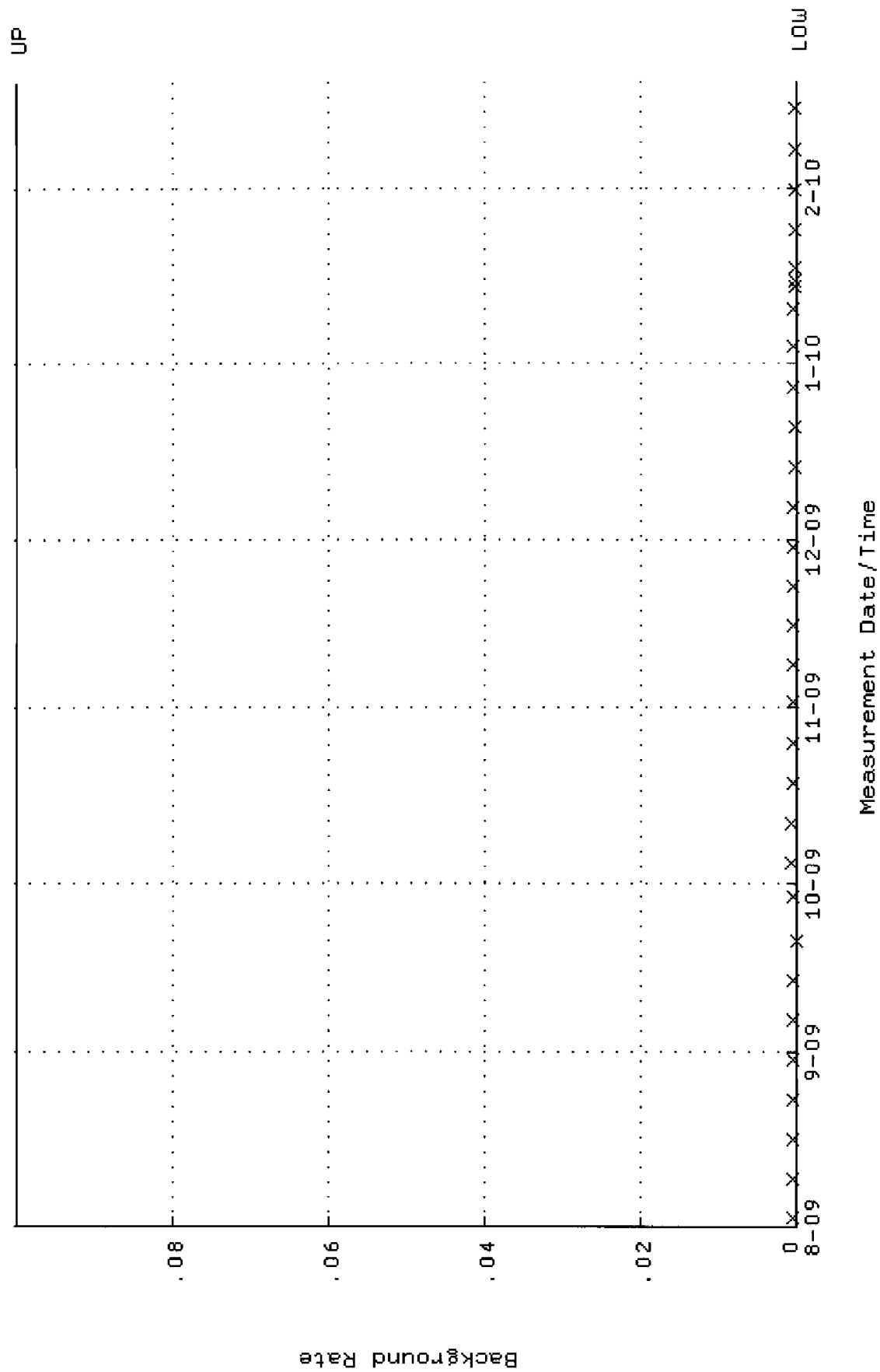
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:53 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.237773 through 0.257773



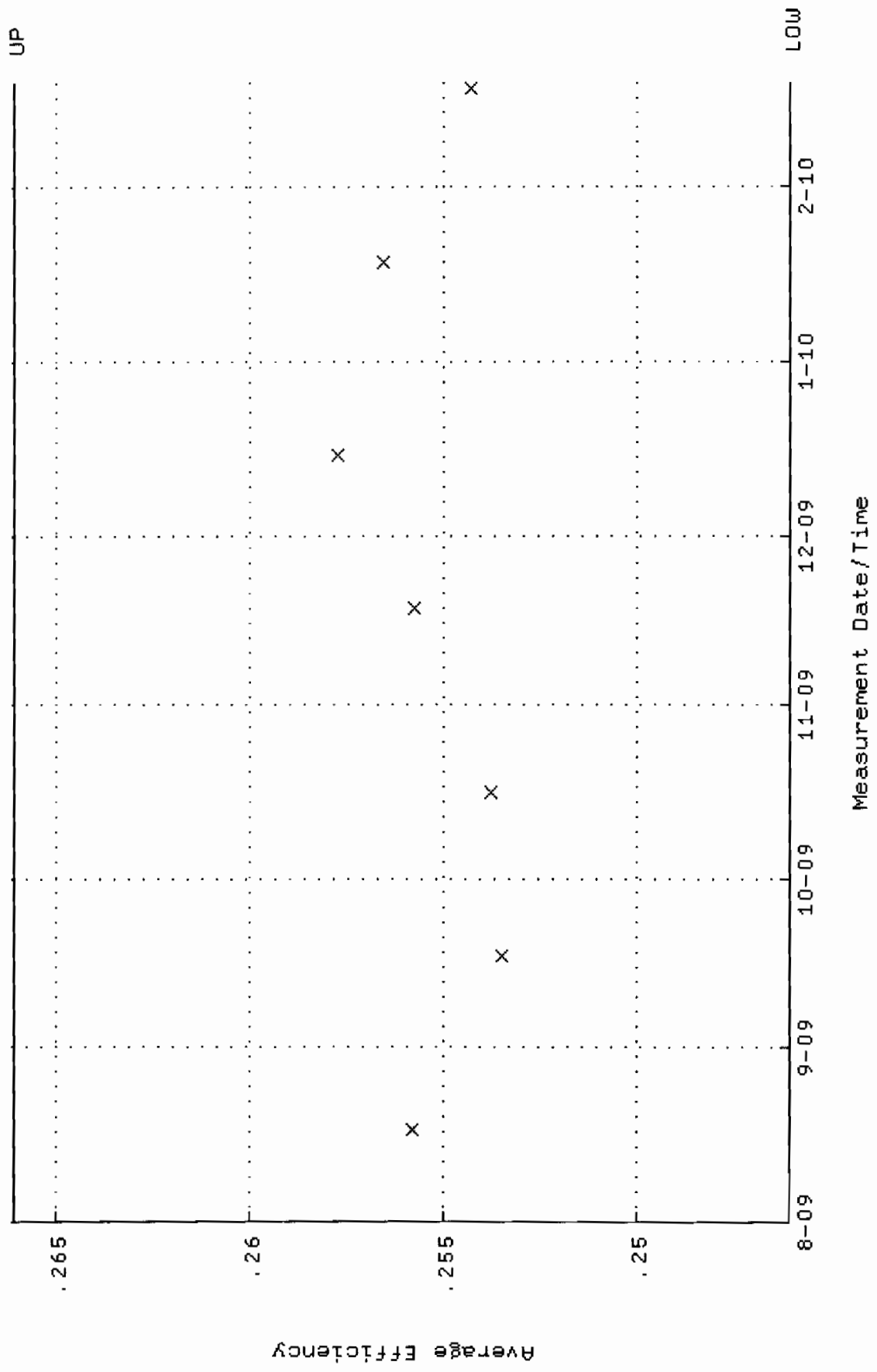
QA filename : DKA100:[ENV_ALPHA.QA.W]U127.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:53 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 90.4503 through 99.9713



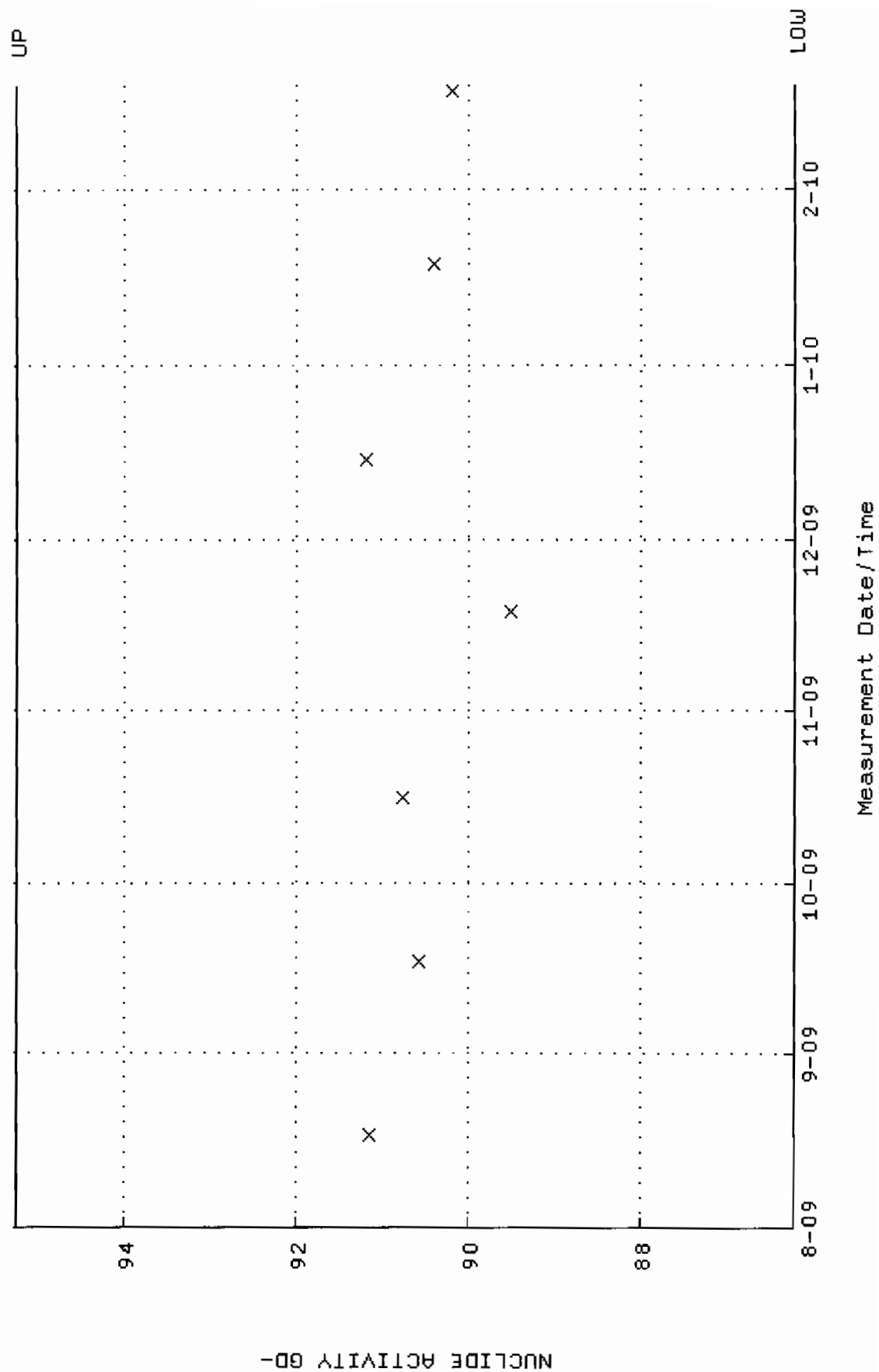
QA filename : DKA100:[ENV_ALPHA.QA.B]B127.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:00 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



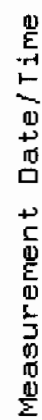
QA filename : DKA100:[ENV_ALPHA.QA.W]W128.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:41:59 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.246062 through 0.266062



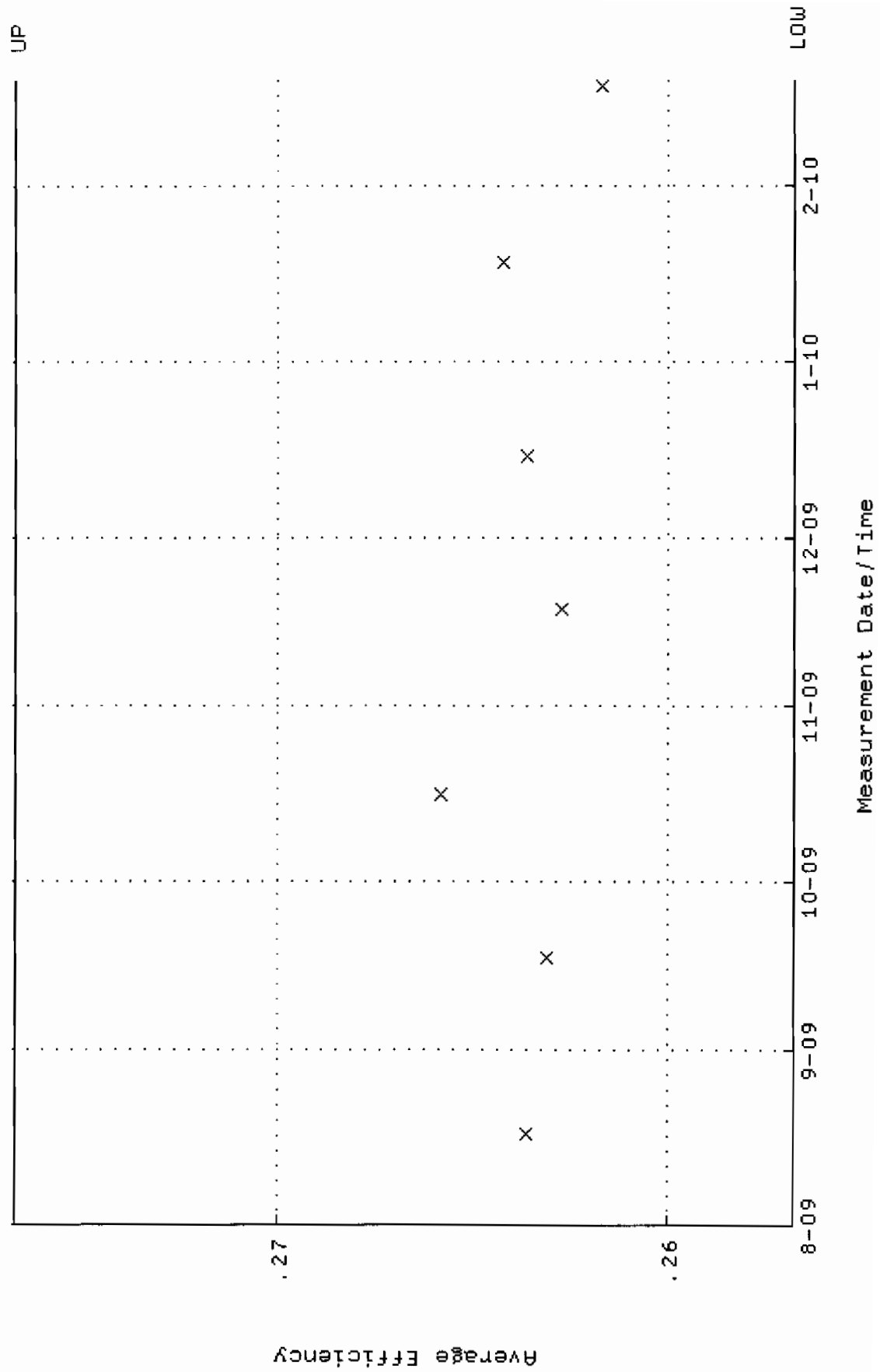
QA filename : DKA100:[ENV_ALPHA.QA.W]W128.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:59 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.1964 through 95.2697



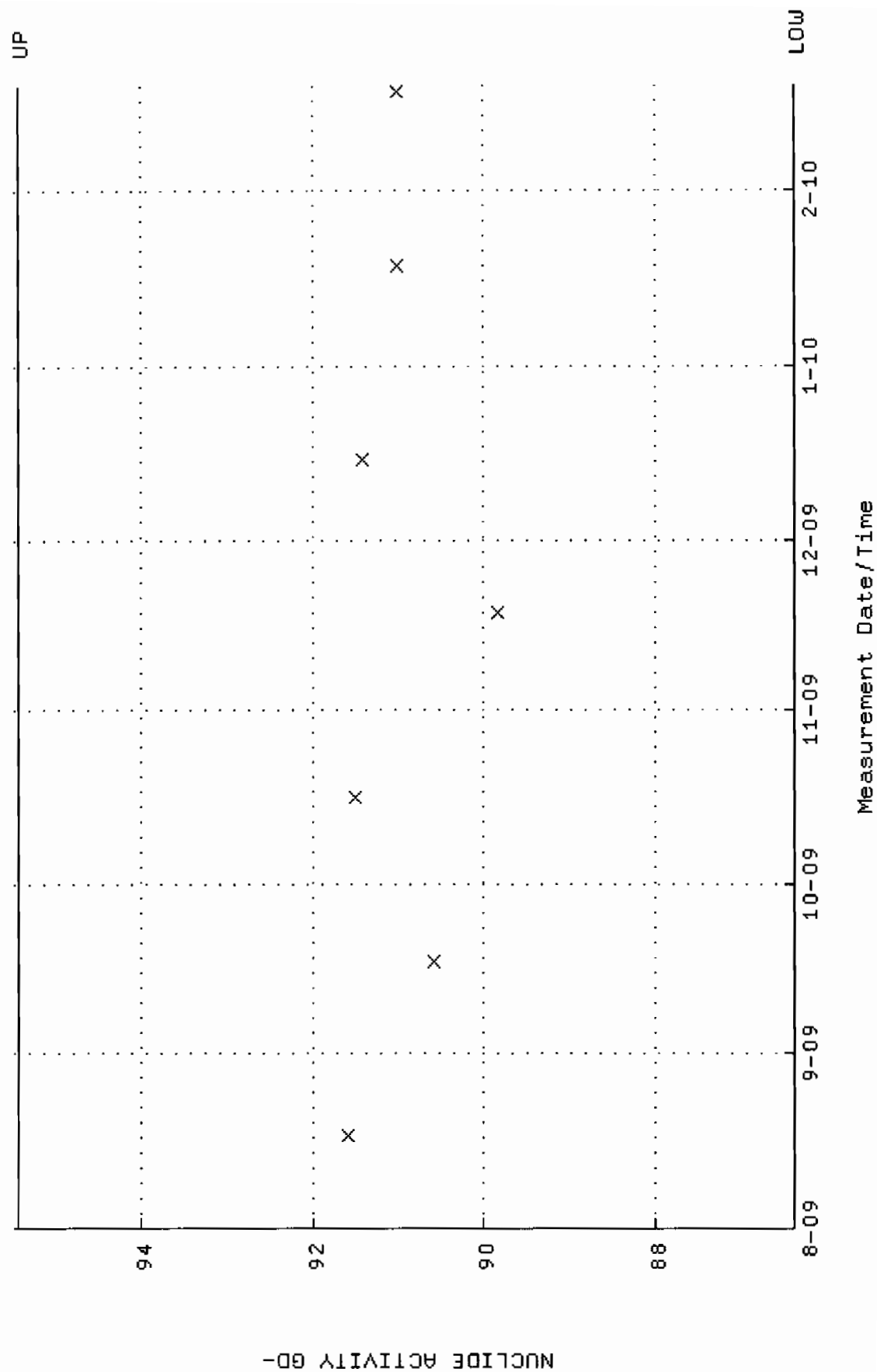
Lower/Upper Lmts: 0.000000E+00 through 0.100000



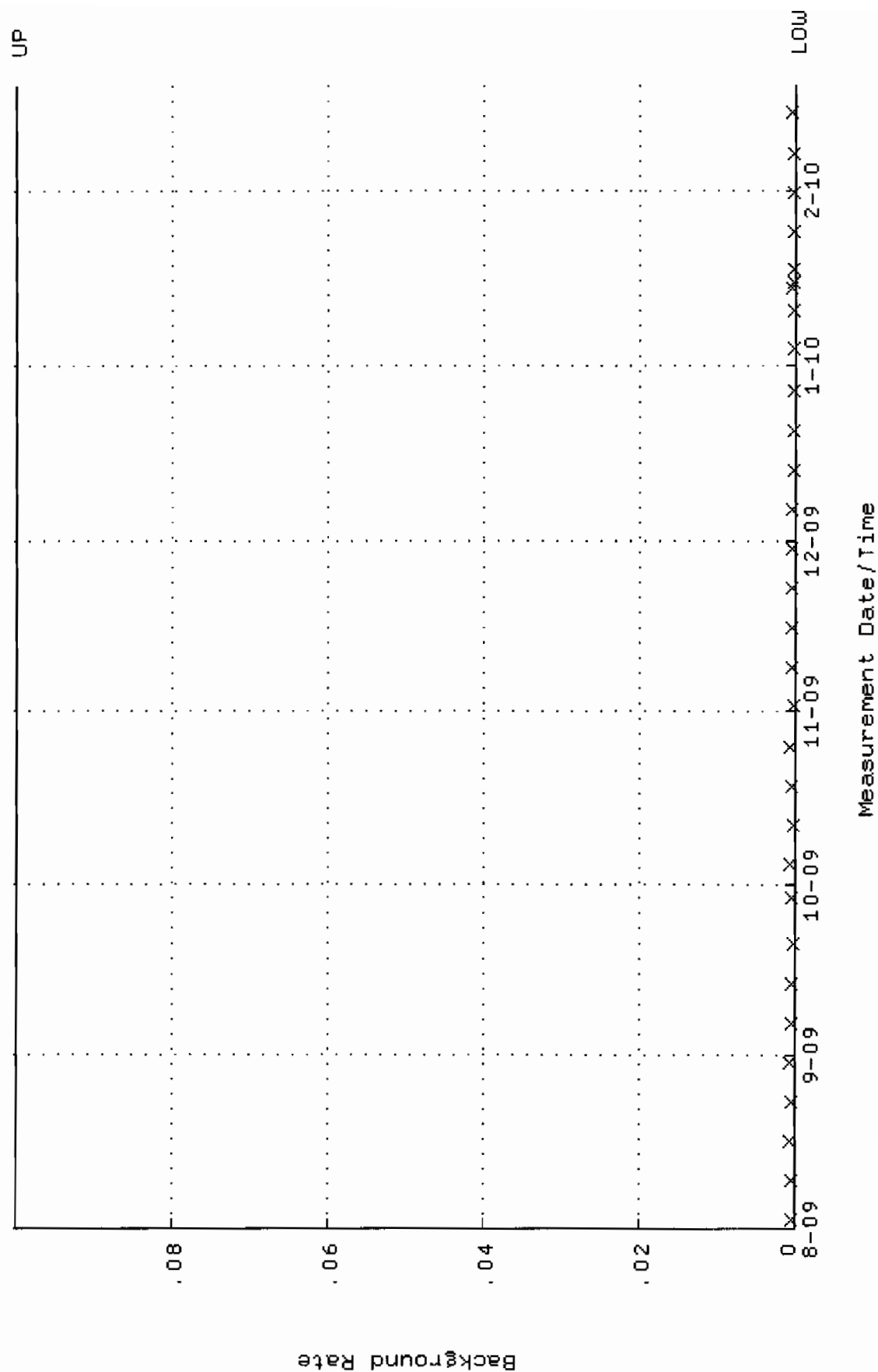
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:42:03 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.256741 through 0.276741



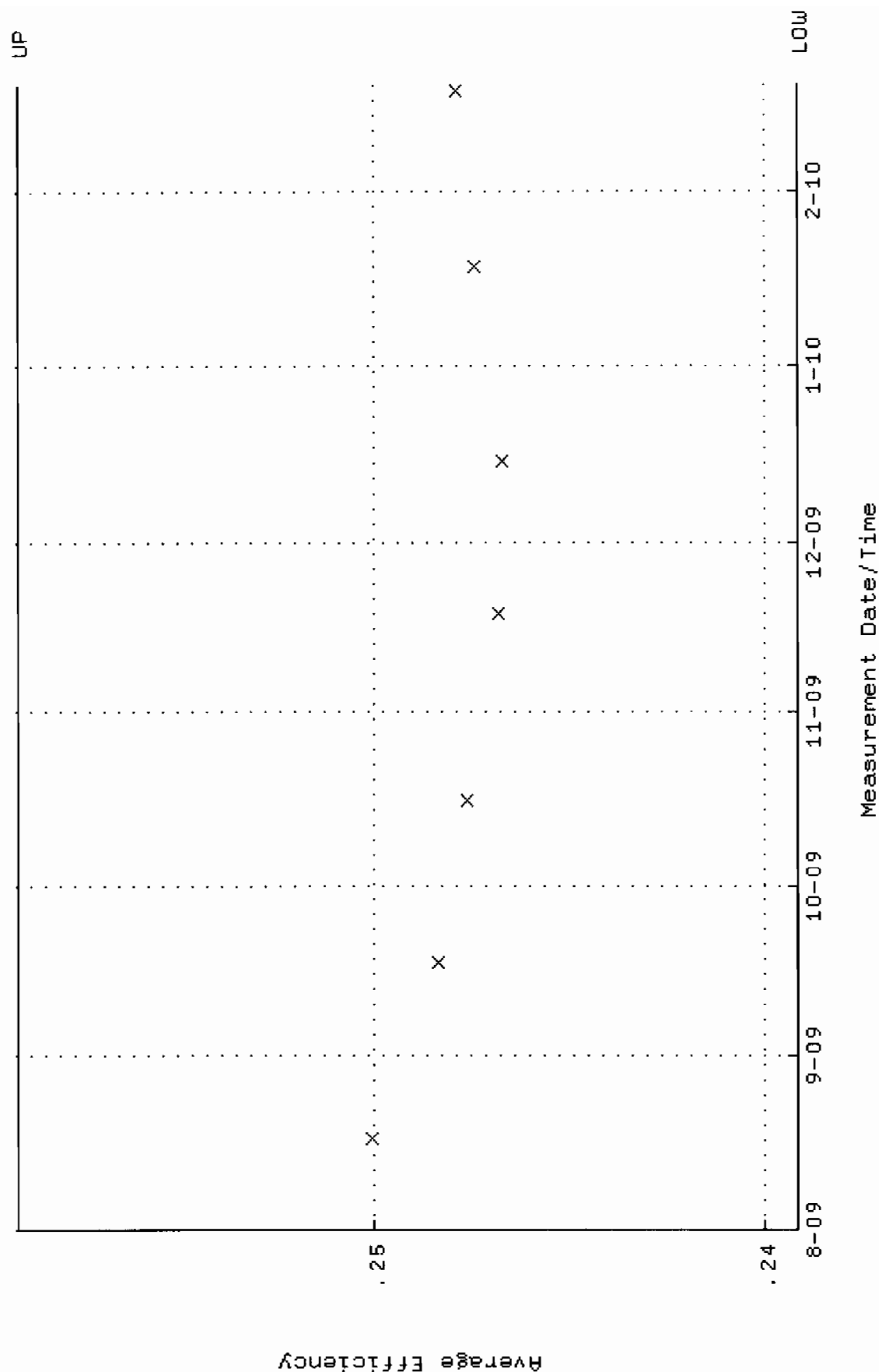
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:42:03 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.3646 through 95.4556



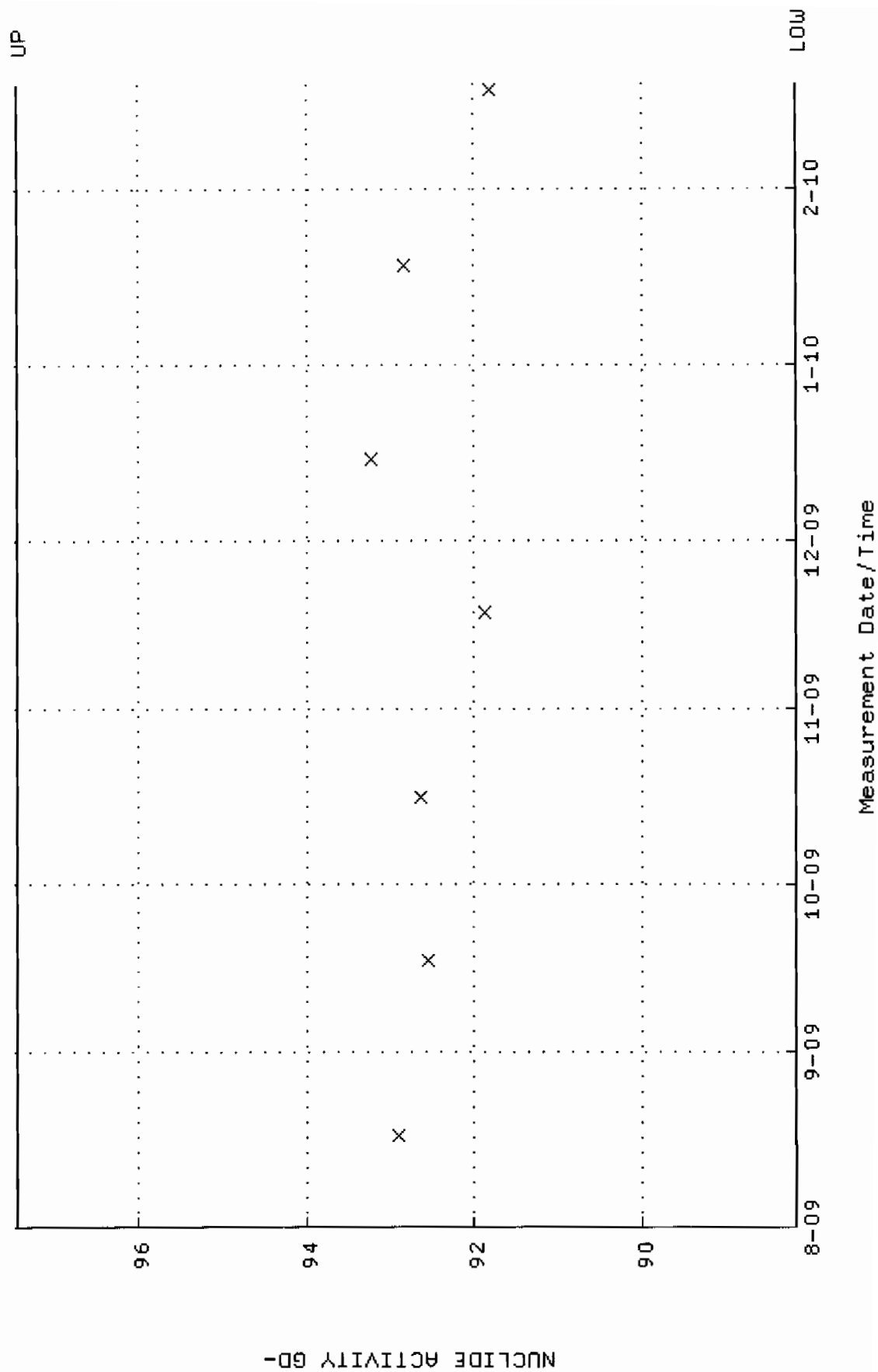
QA filename : DKA100:[ENV_ALPHA.QA.B]B129.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:09 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



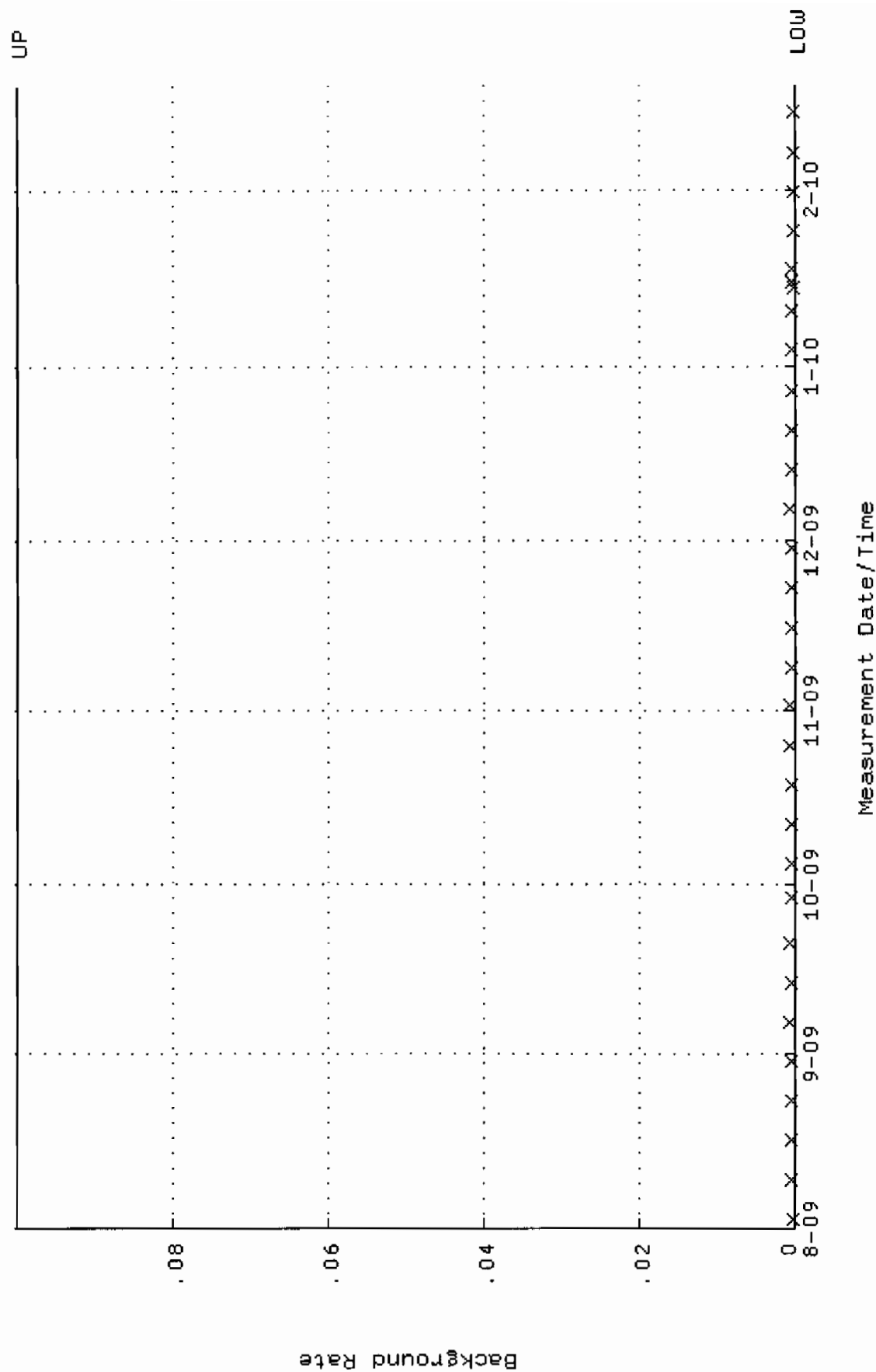
QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:42:09 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.239131 through 0.259131



QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
 Parameter Name : NLAIVITY-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



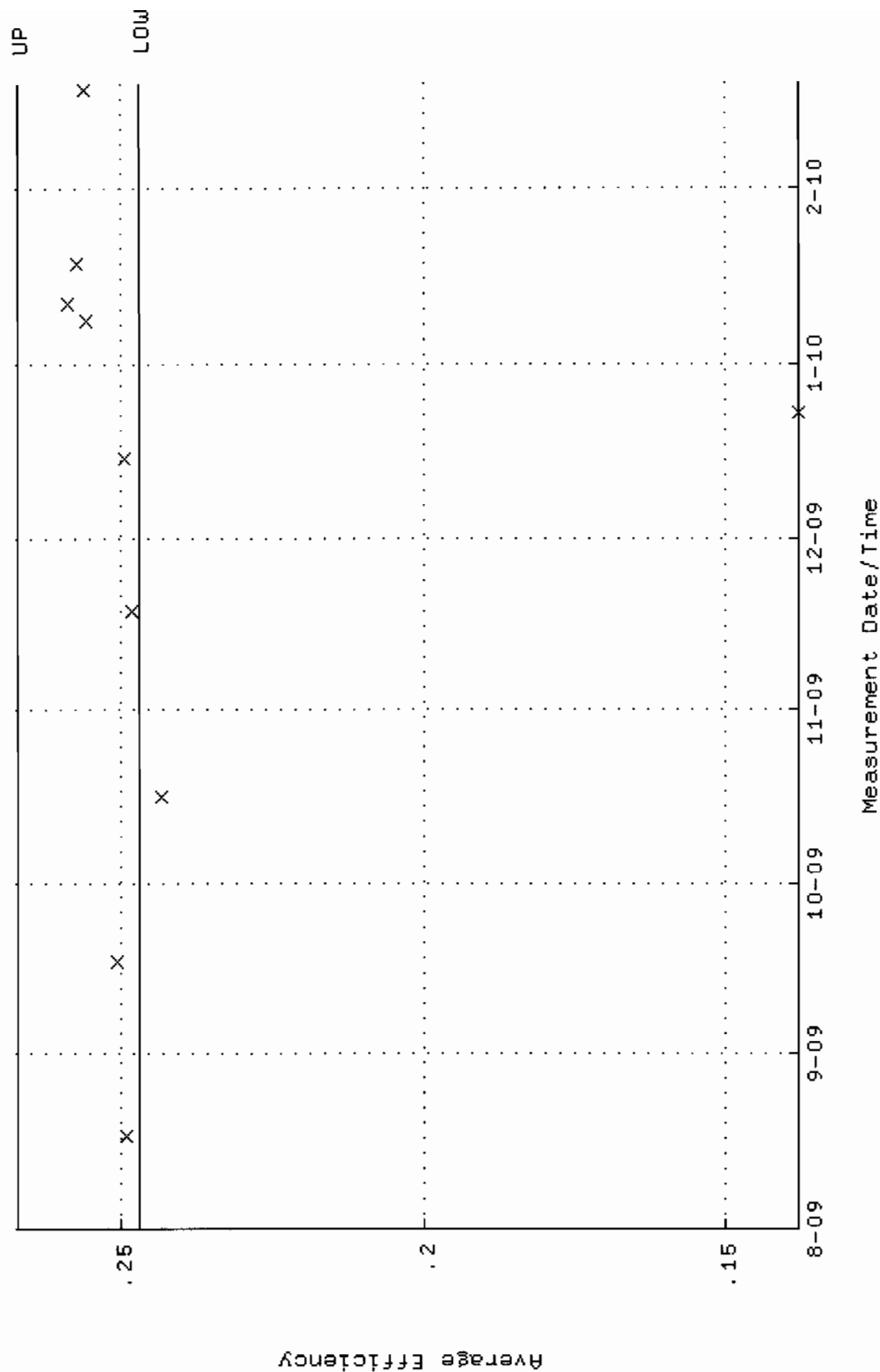
QA filename : DKA100:[ENV_ALPHA.QA.B]B130.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:13 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



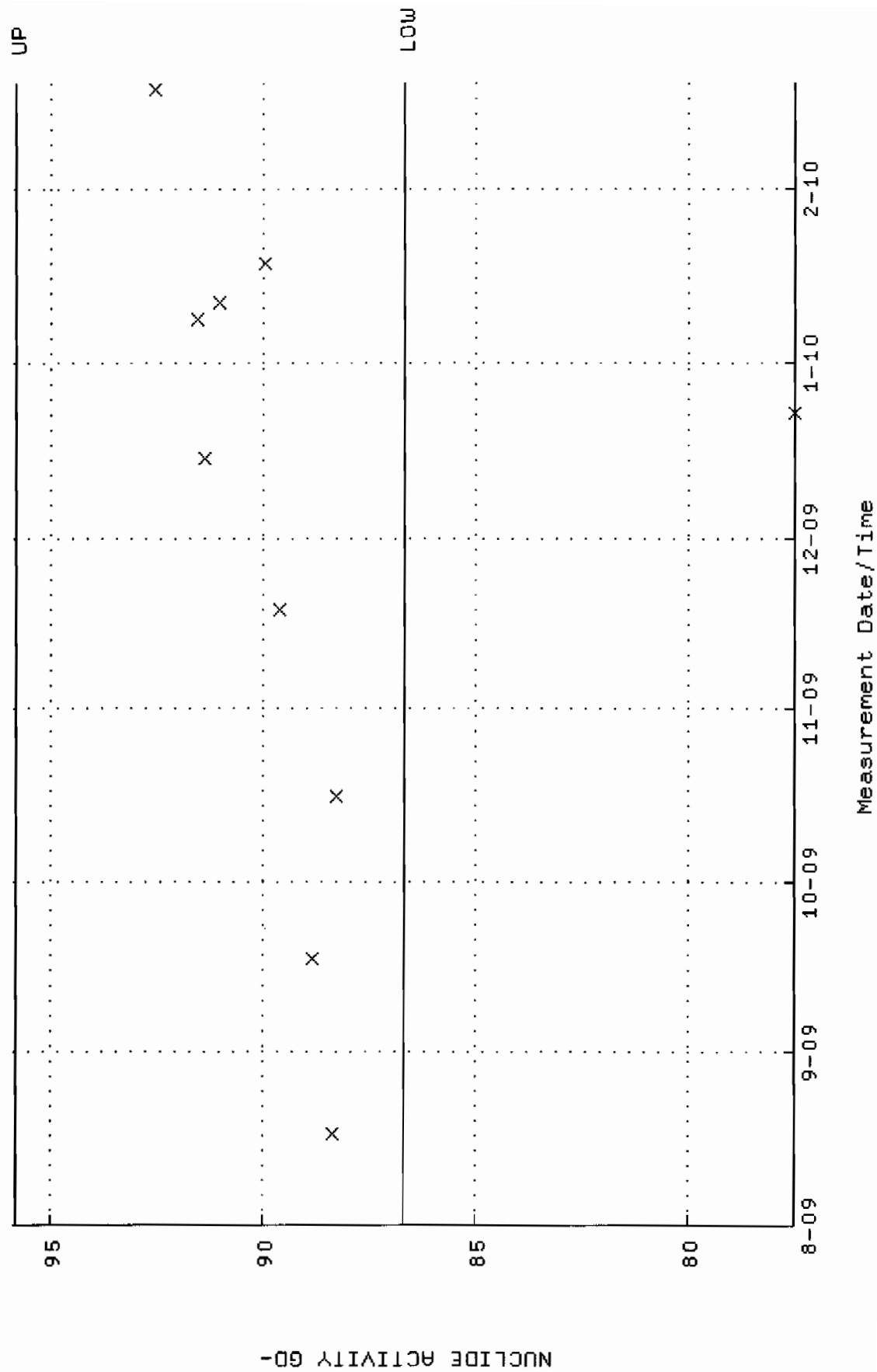
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QA filename      : DKA100:[ENV_ALPHA.QA.W]w131.QAF;1
Parameter Name   : AVRGEFF (Average Efficiency)
Start/End Dates  : 17-AUG-2009 09:42:13 through 19-F
Lower/Upper Lmts: 0.246955 through 0.266955

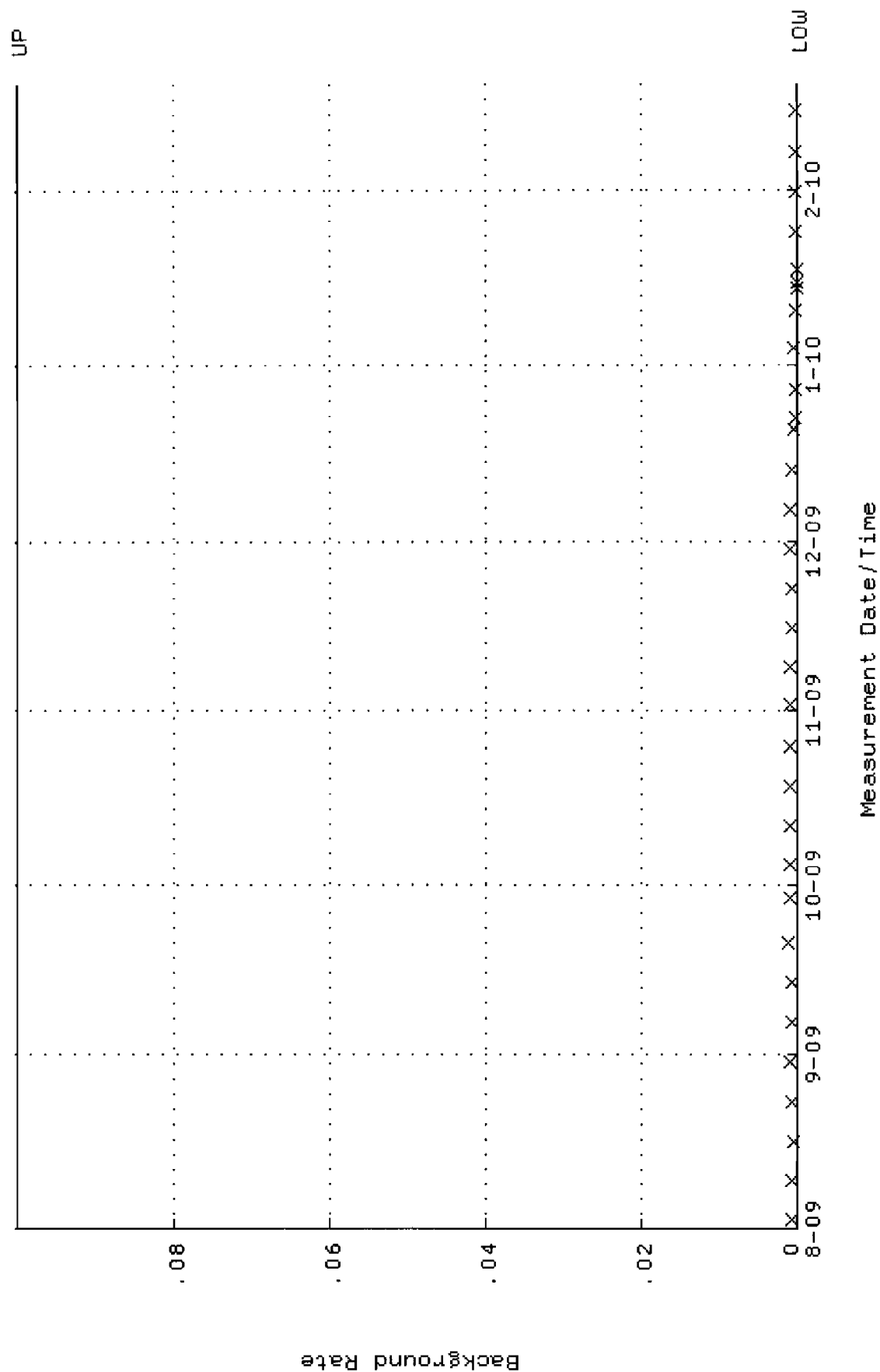
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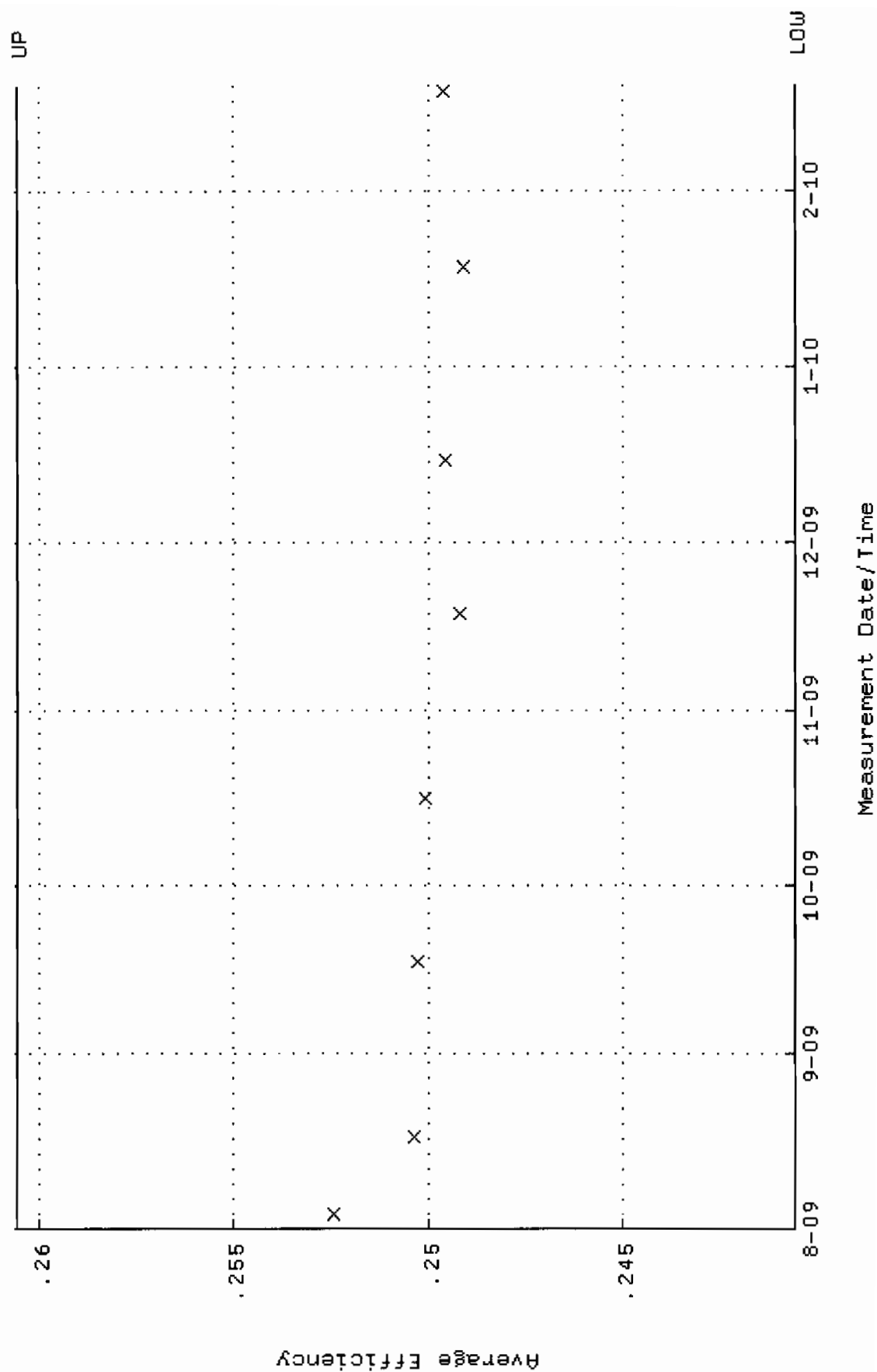
QA filename : DKA100:[ENV_ALPHA.QA.W]w131.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:42:13 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.7058 through 95.8328



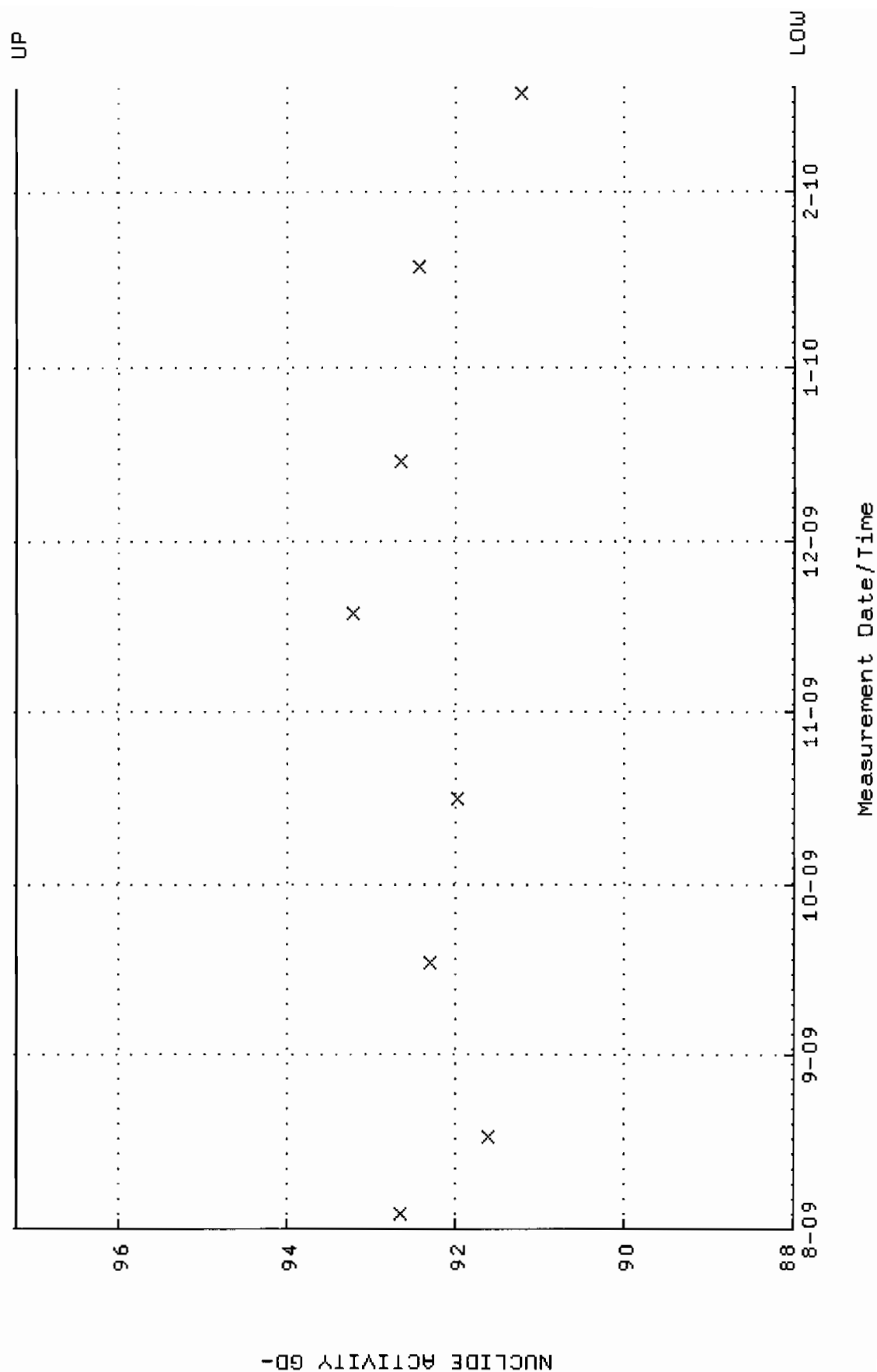
QA filename : DKA100:[ENV_ALPHA.QA.B]B131.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:18 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



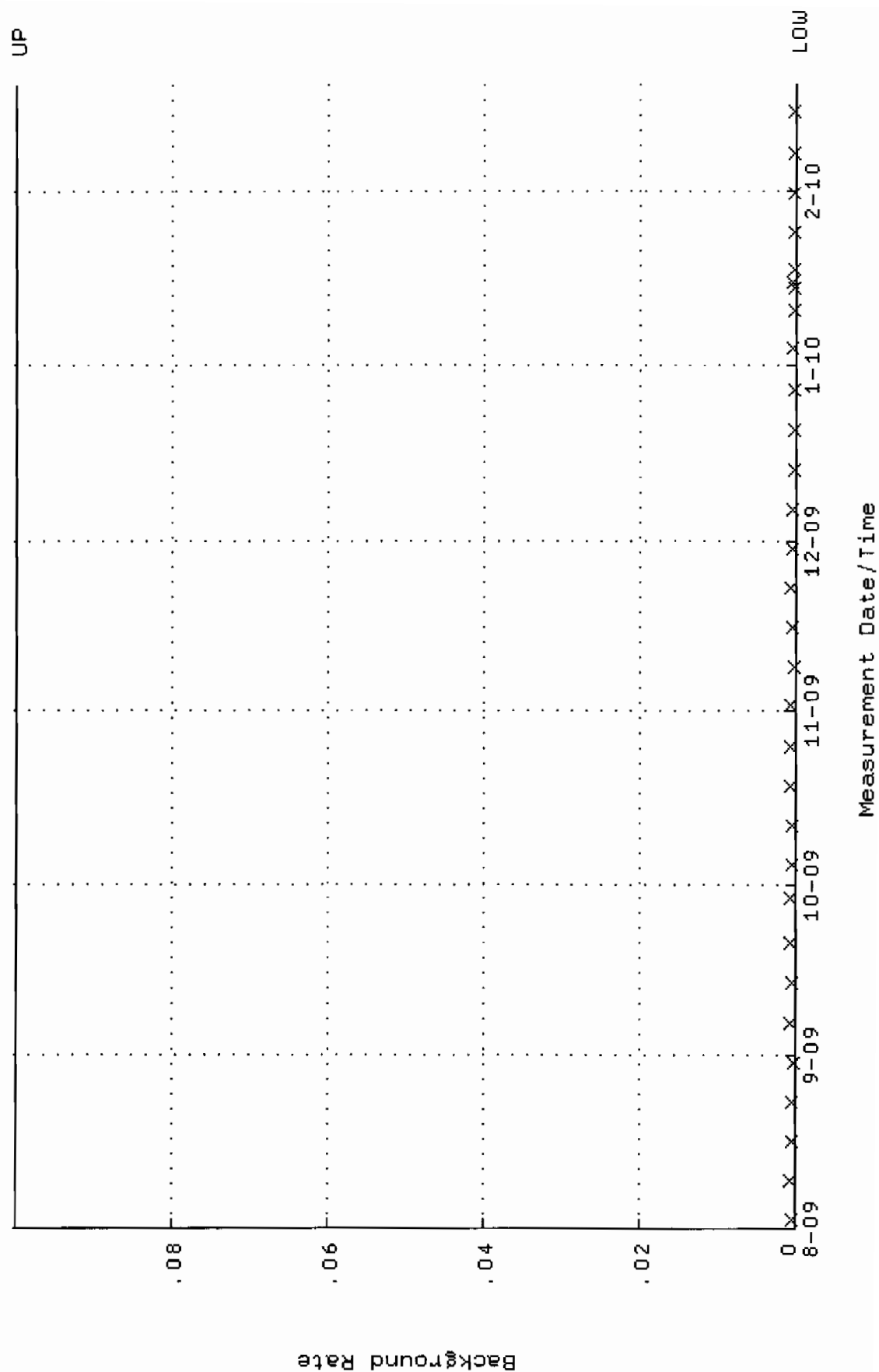
QA filename : DKA100:[ENV_ALPHA,QA,W]W132.QAF;1
 Parameter Name : AVREFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 15:01:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.240573 through 0.260573



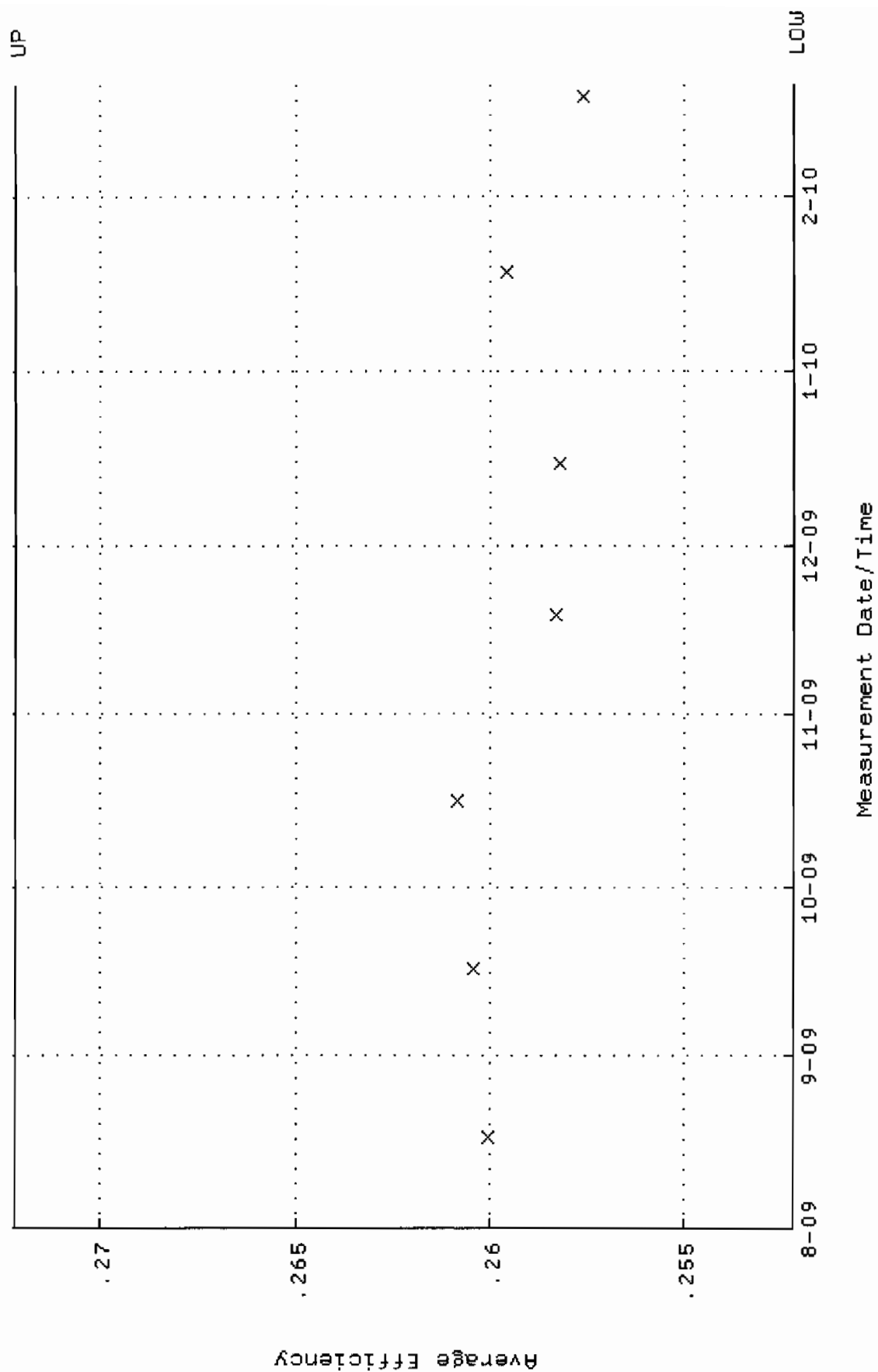
QA filename : DKA100:[ENV_ALPHA.QA.W]w132.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 15:01:01 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.9674 through 97.2272



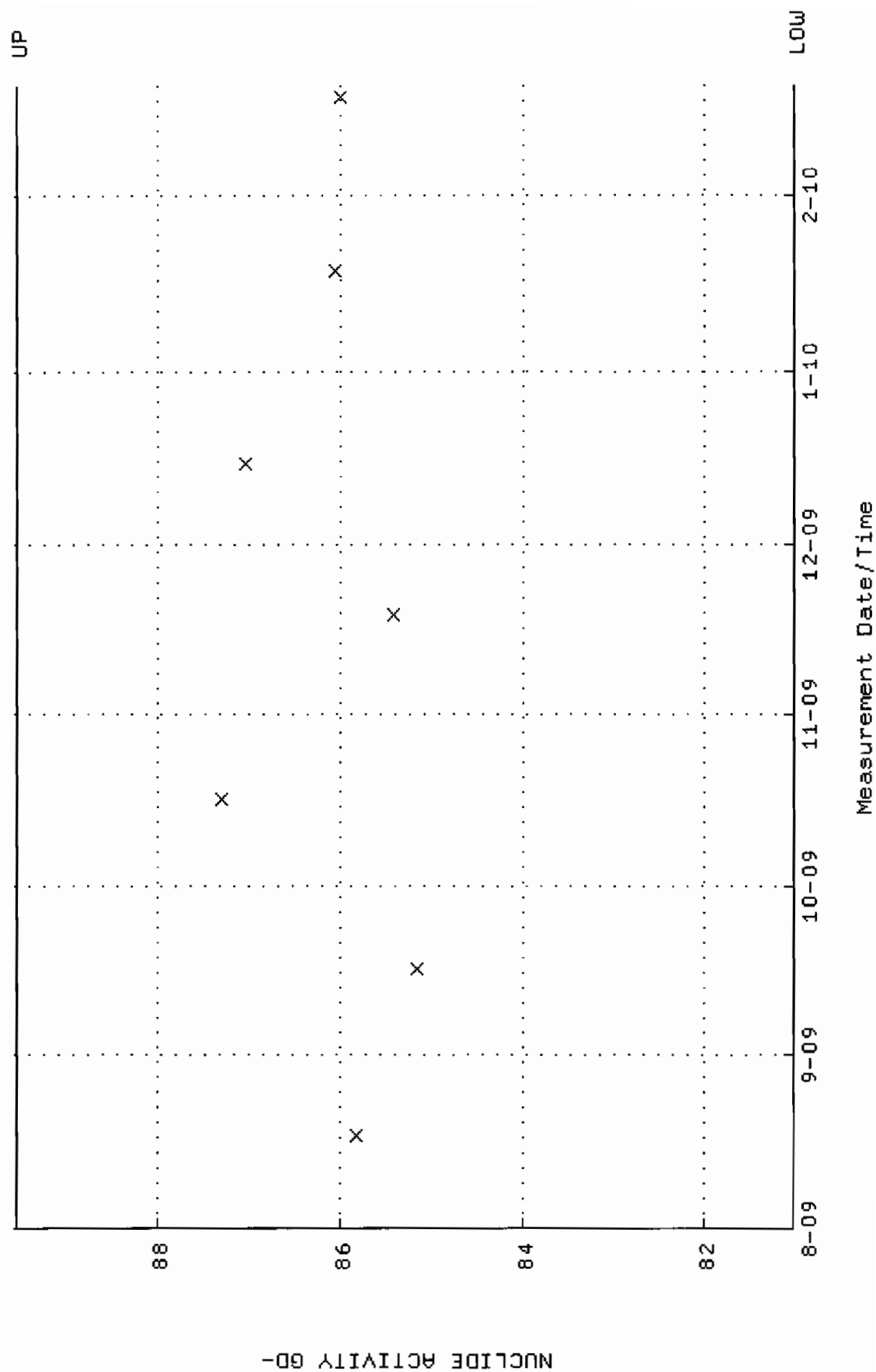
QA filename : DKA100:[ENV_ALPHA,QA,B]B132.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:22 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



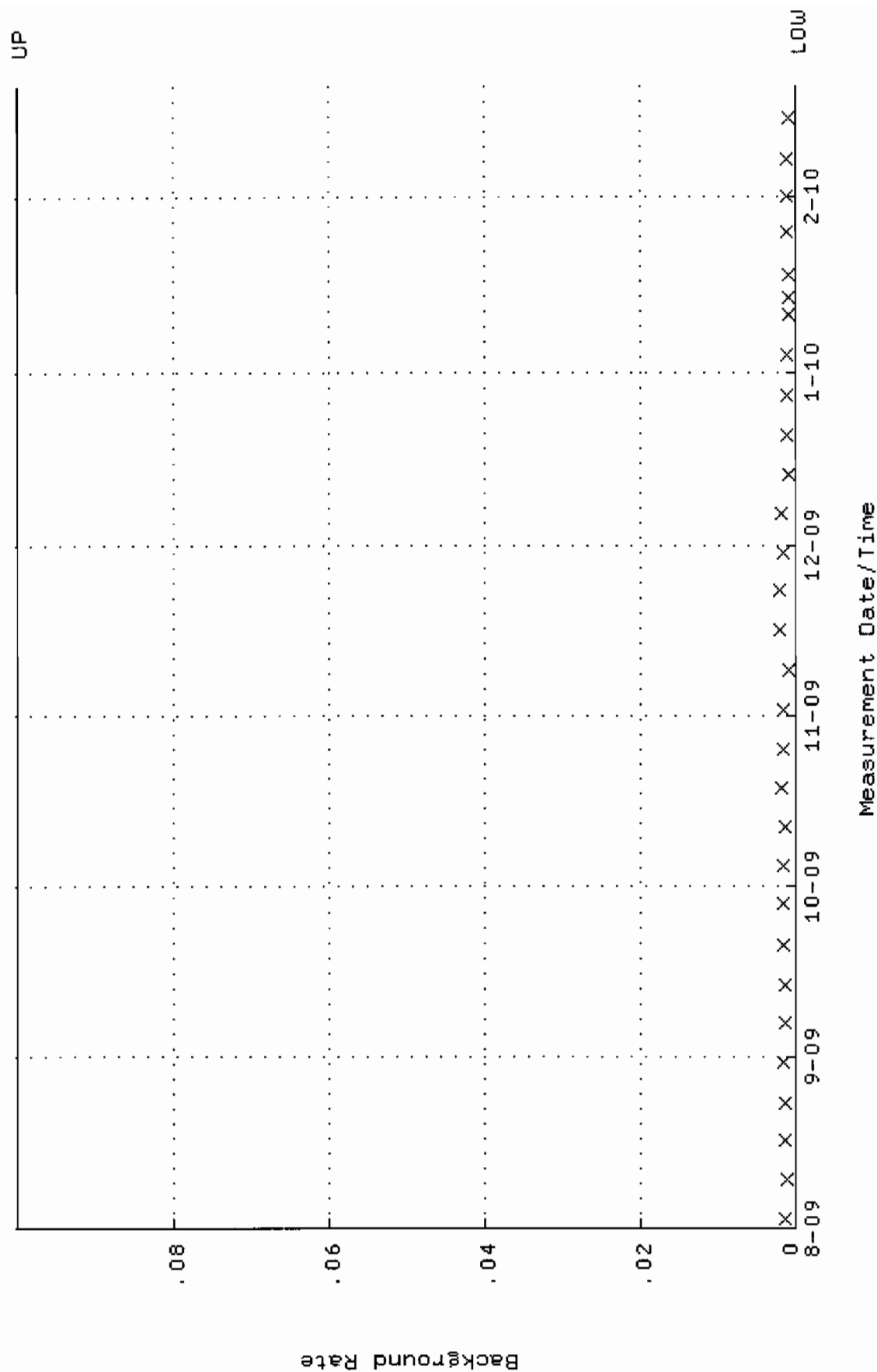
QA filename : DKA100:[ENV_ALPHA.QA.W]w142.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:21 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.252182 through 0.272182



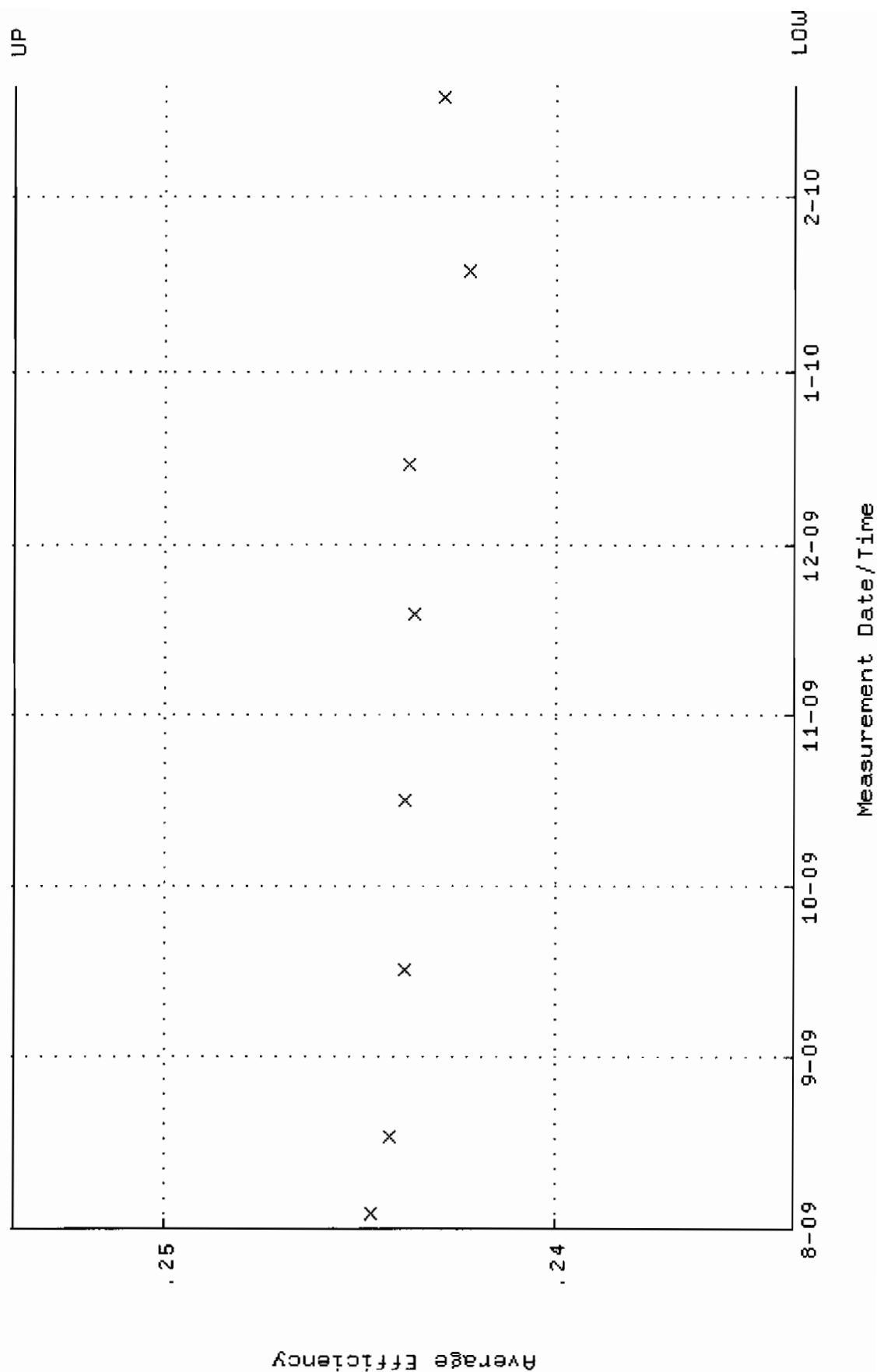
QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:21 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 81.0245 through 89.5533



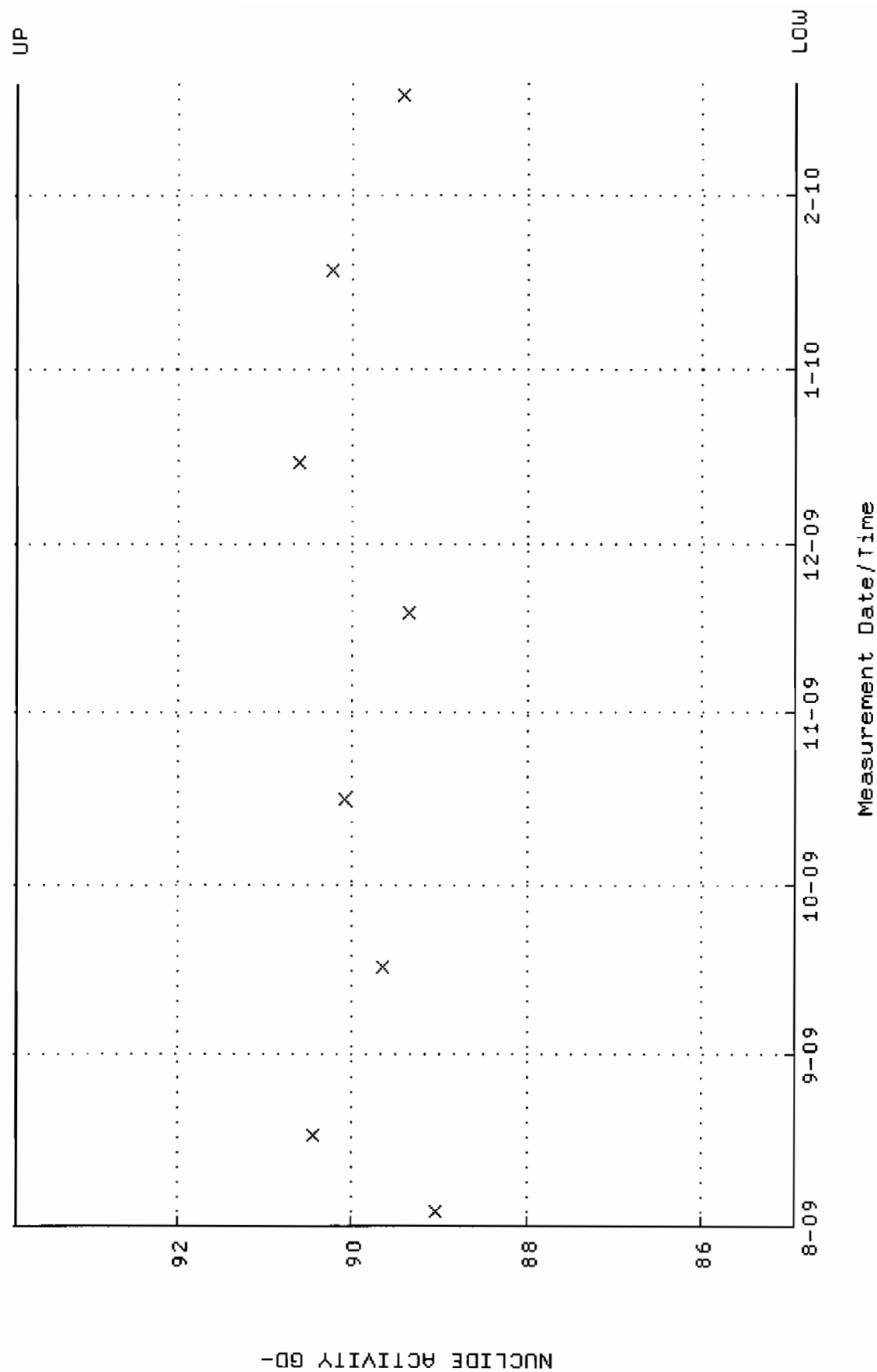
QA filename : DKA100:[ENV_ALPHA.QA.B]B142.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:04 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



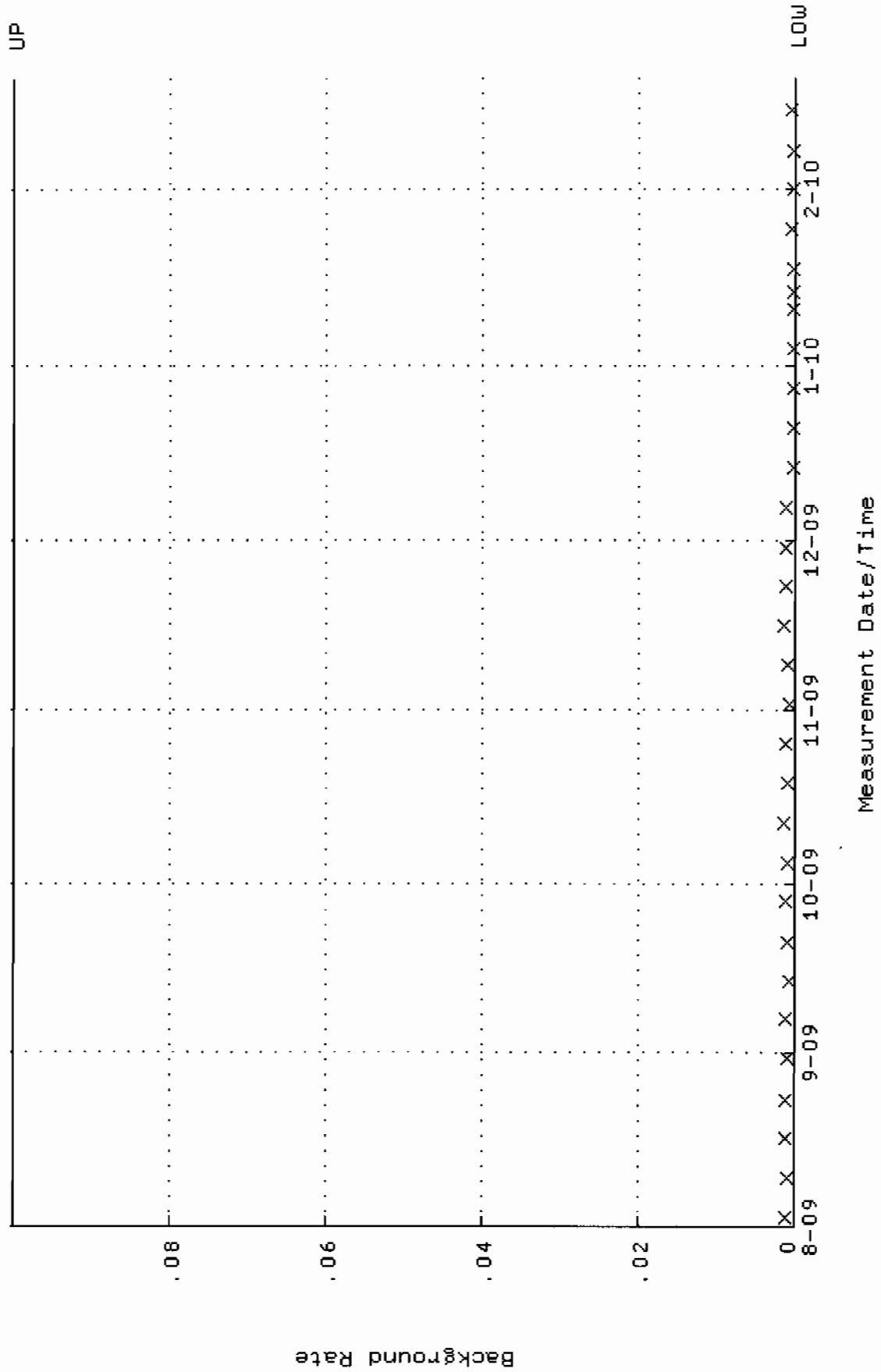
QA filename : DKA100:[ENV_ALPHA.QA.W]U143.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 15:01:06 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.233879 through 0.253879



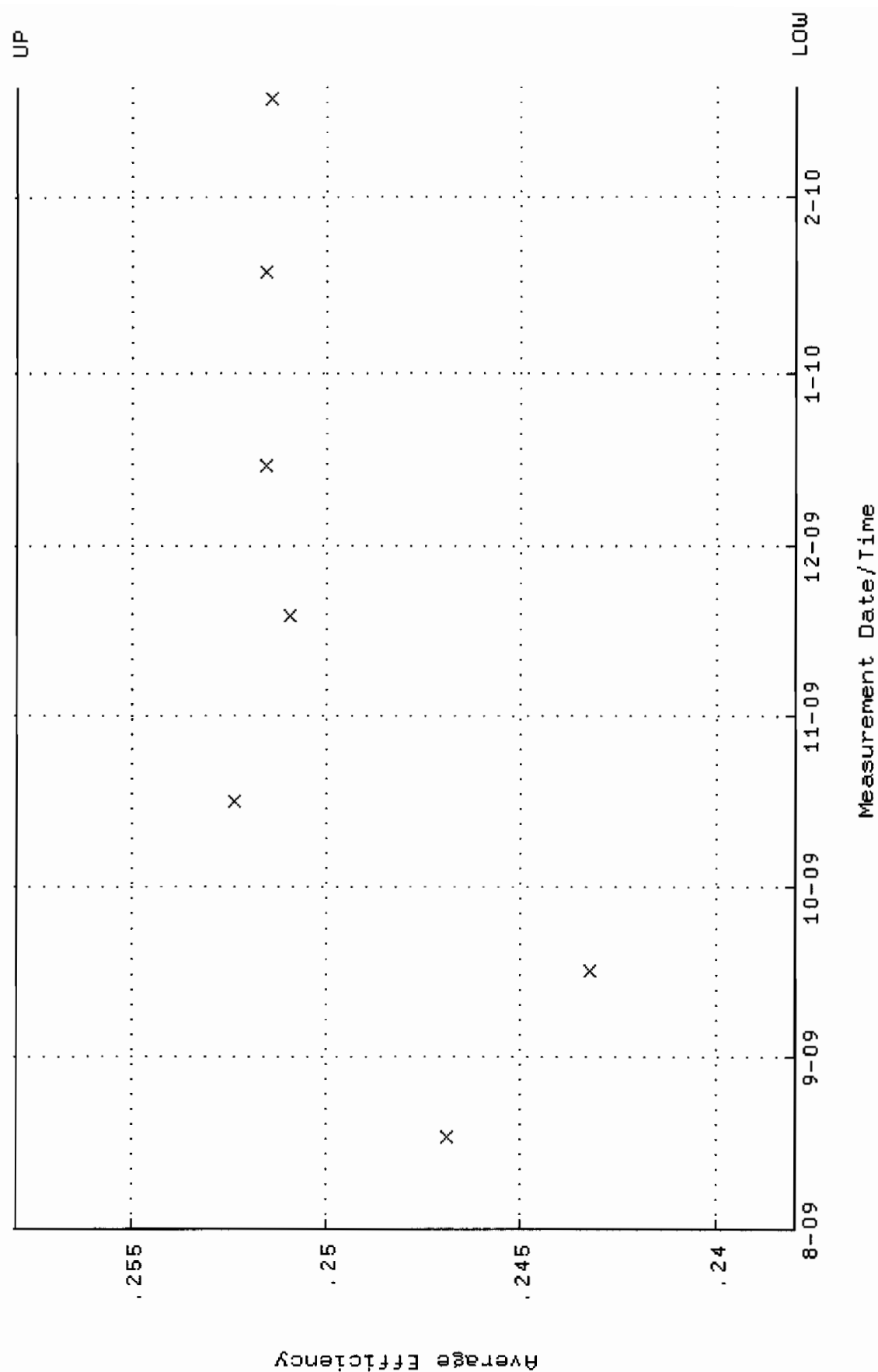
QA filename : DKA100:[ENV_ALPHA.QA.W]u143.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 3-AUG-2009 15:01:06 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.9200 through 93.8590



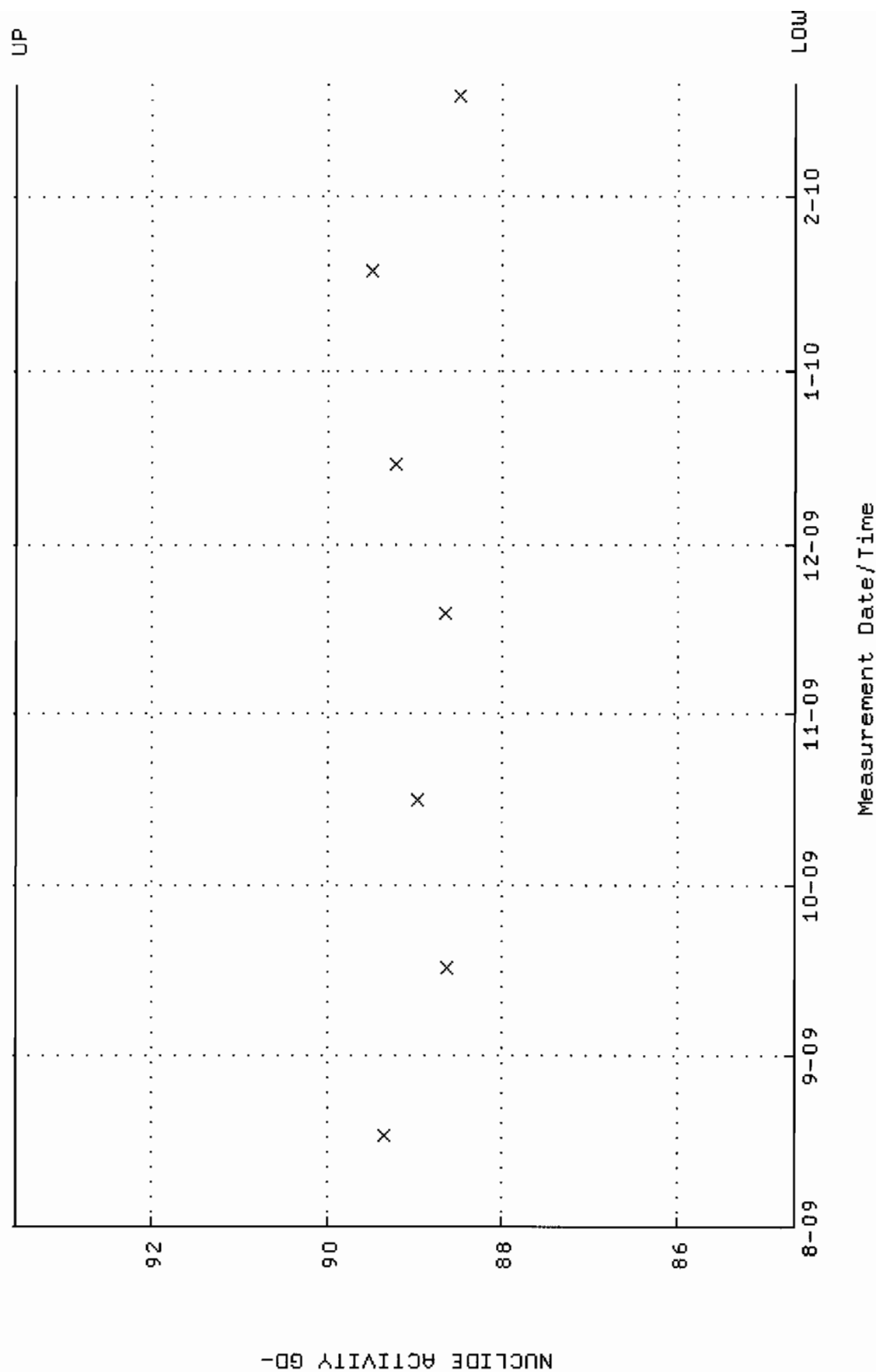
QA filename : DKA100:[ENV_ALPHA.QA.B]B143.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:08 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



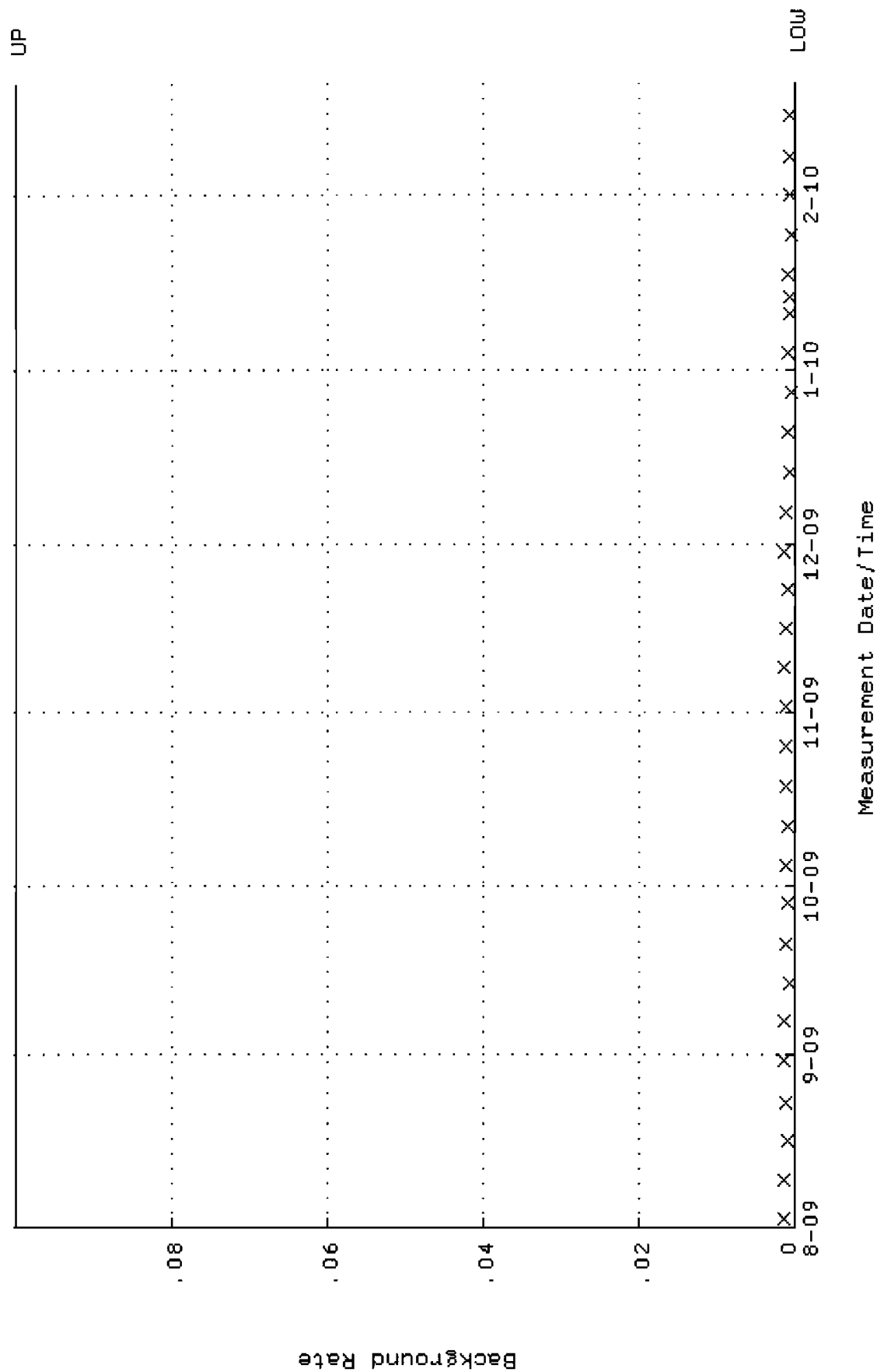
QA filename : DKA100:[ENV_ALPHA.QA.W]u144.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:42 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.237963 through 0.257963



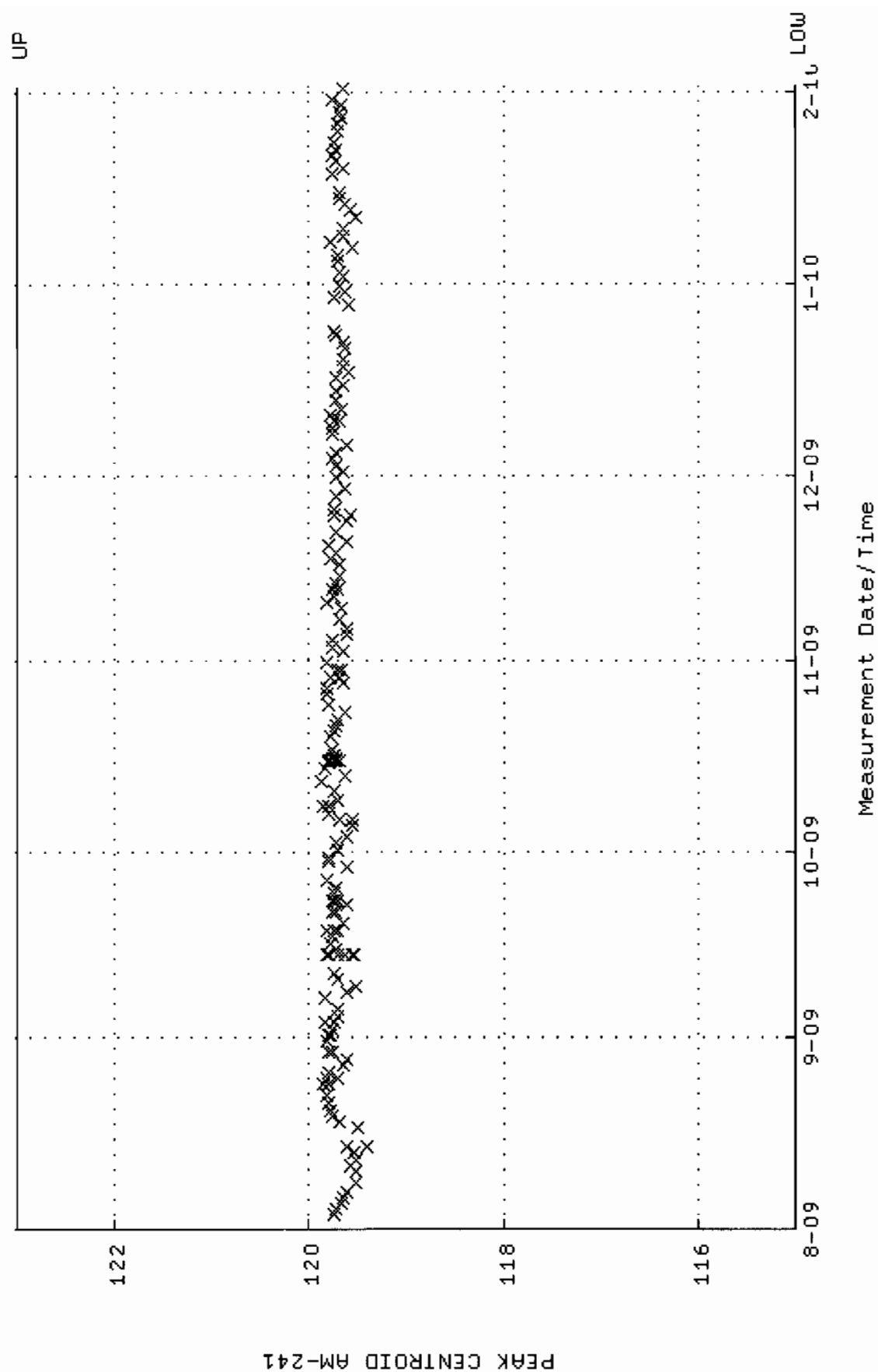
QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:42 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.6507 through 93.5613



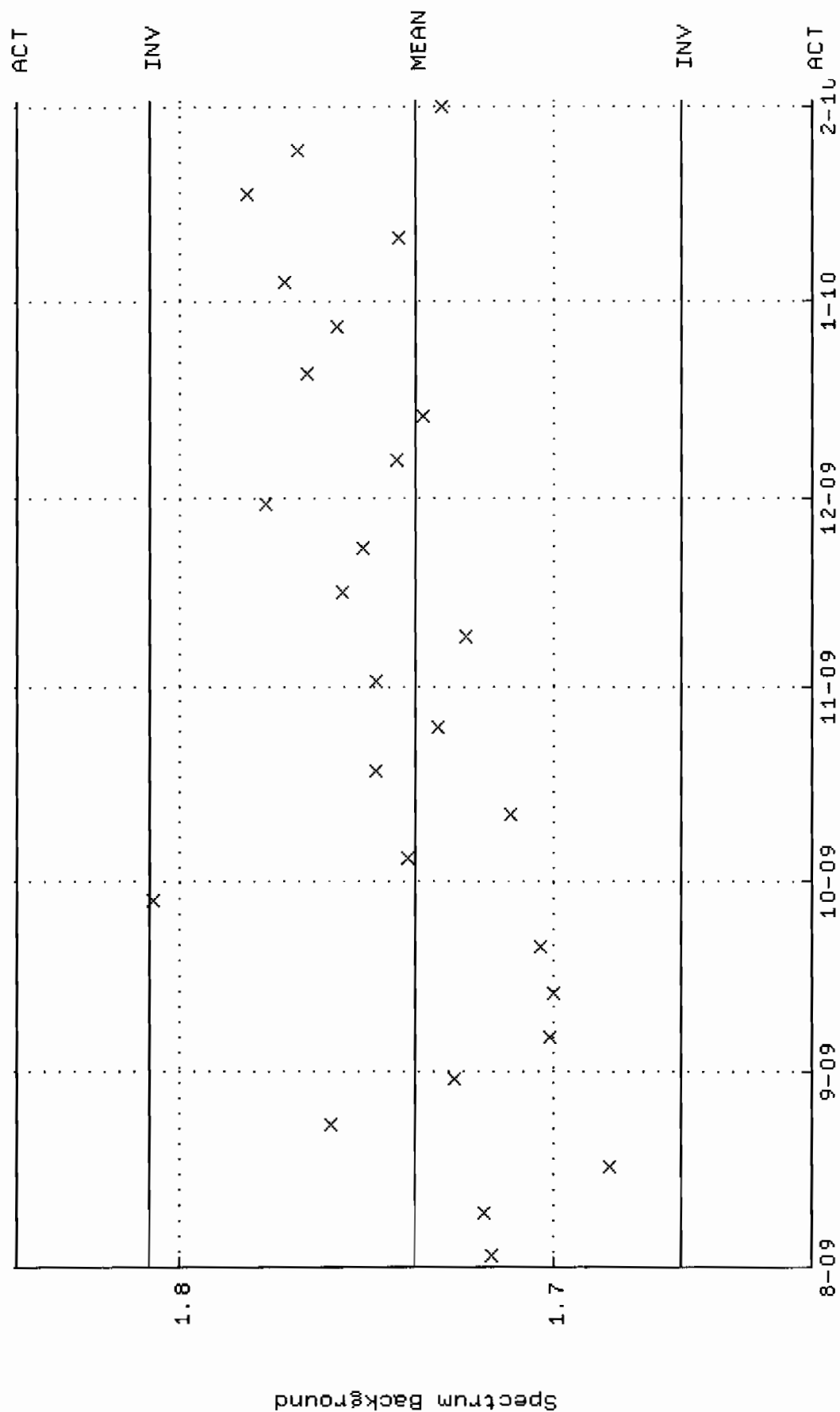
QA filename : DKA100:[ENV-ALPHA.QA.B]B144.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:12 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



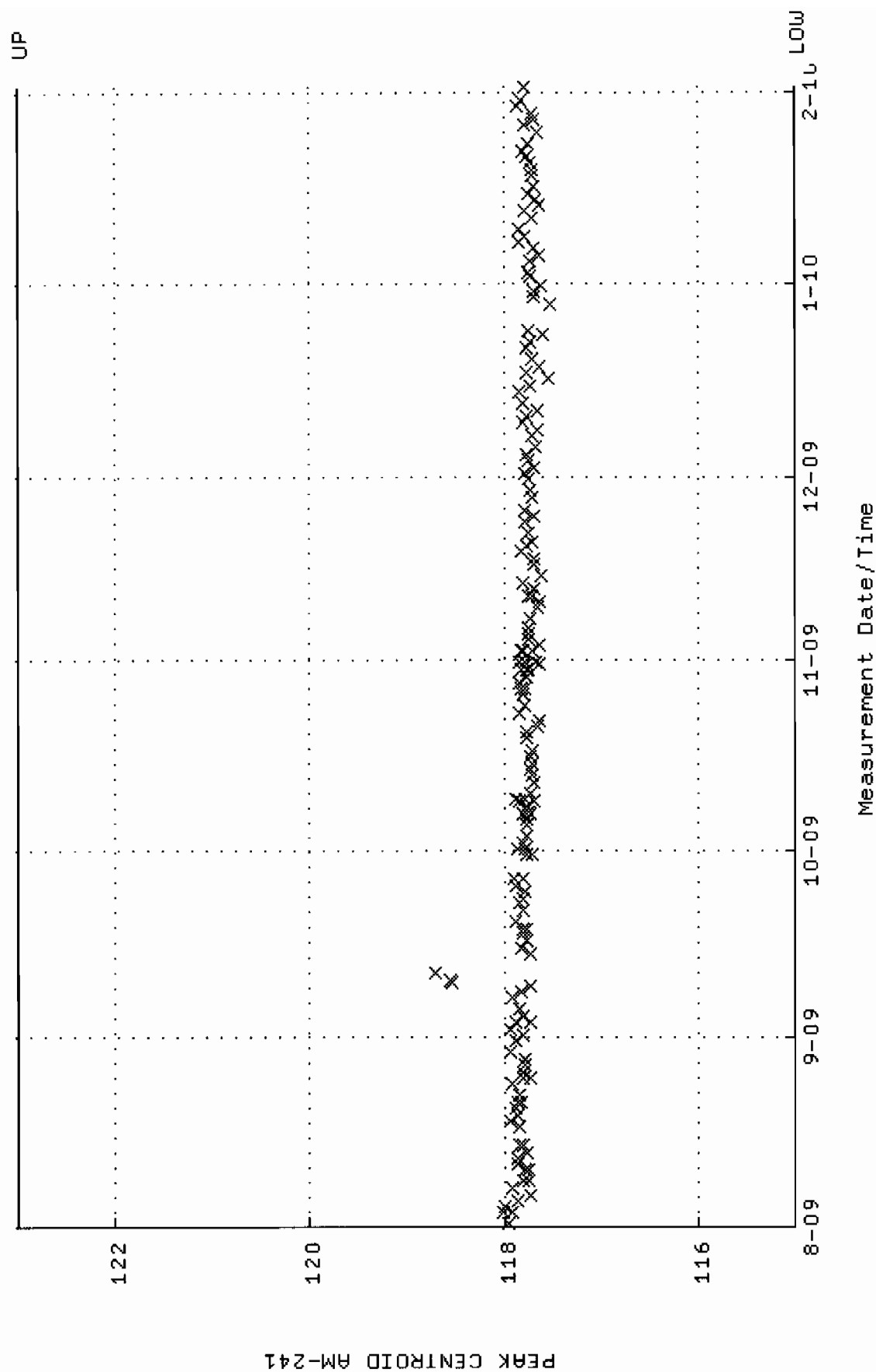
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:08:48 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



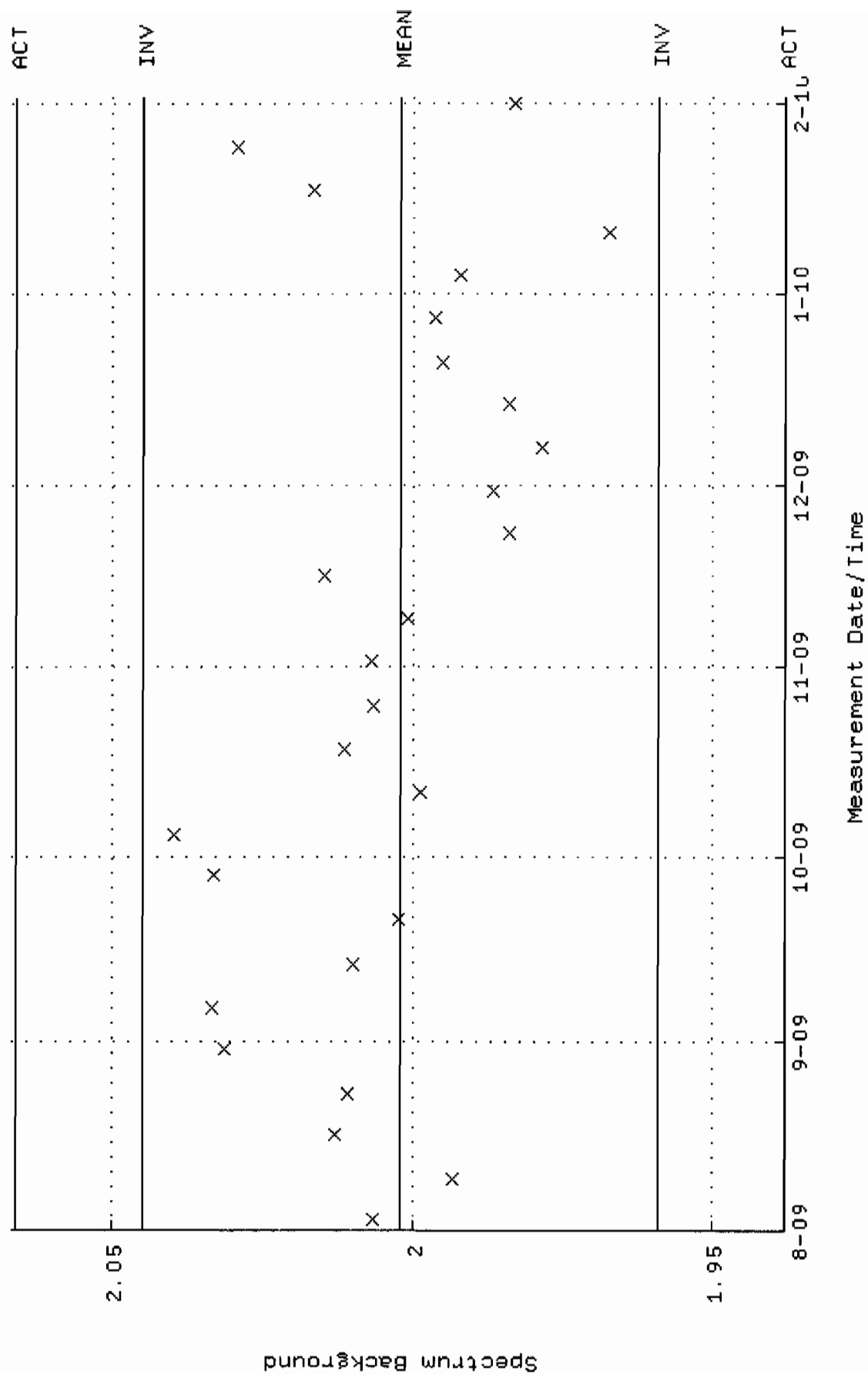
QA filename : DKA100:[CANNBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:21:01 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.73723 +- 3.552524E-02 (2.04 %)



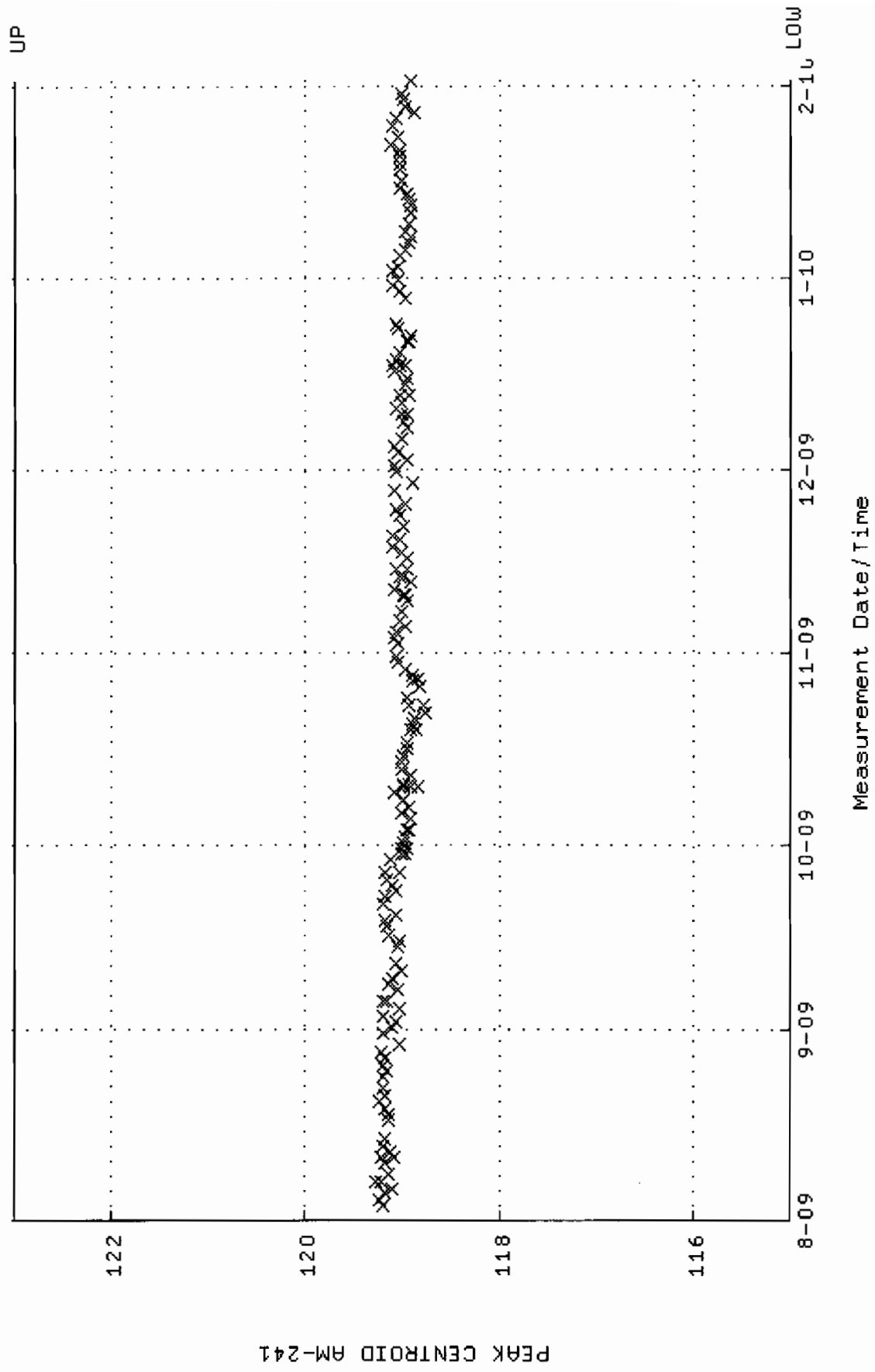
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM02-CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 1-AUG-2009 13:19:33 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



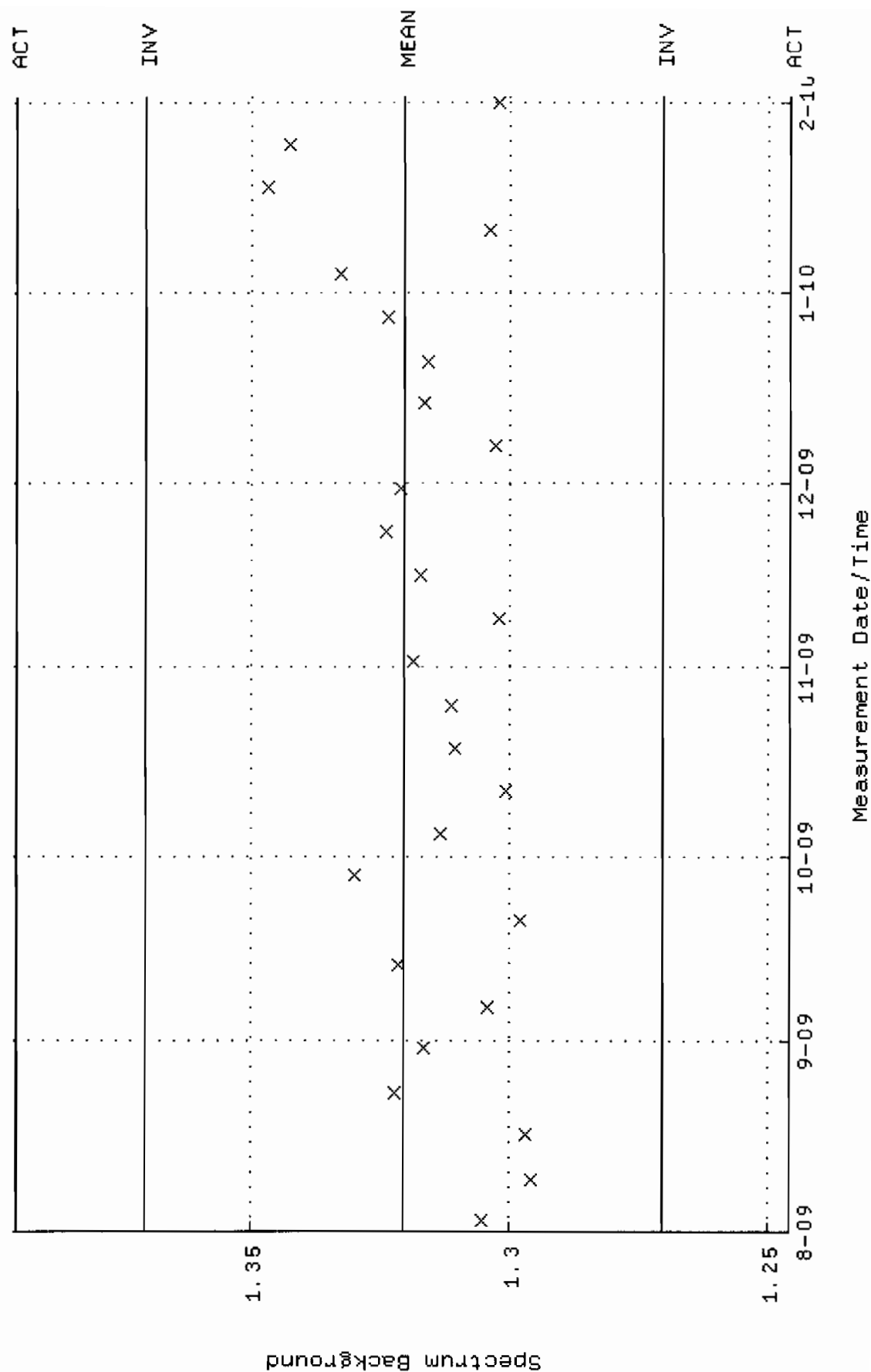
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:22:27 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 2.00226 +- 2.139827E-02 (1.07 %)



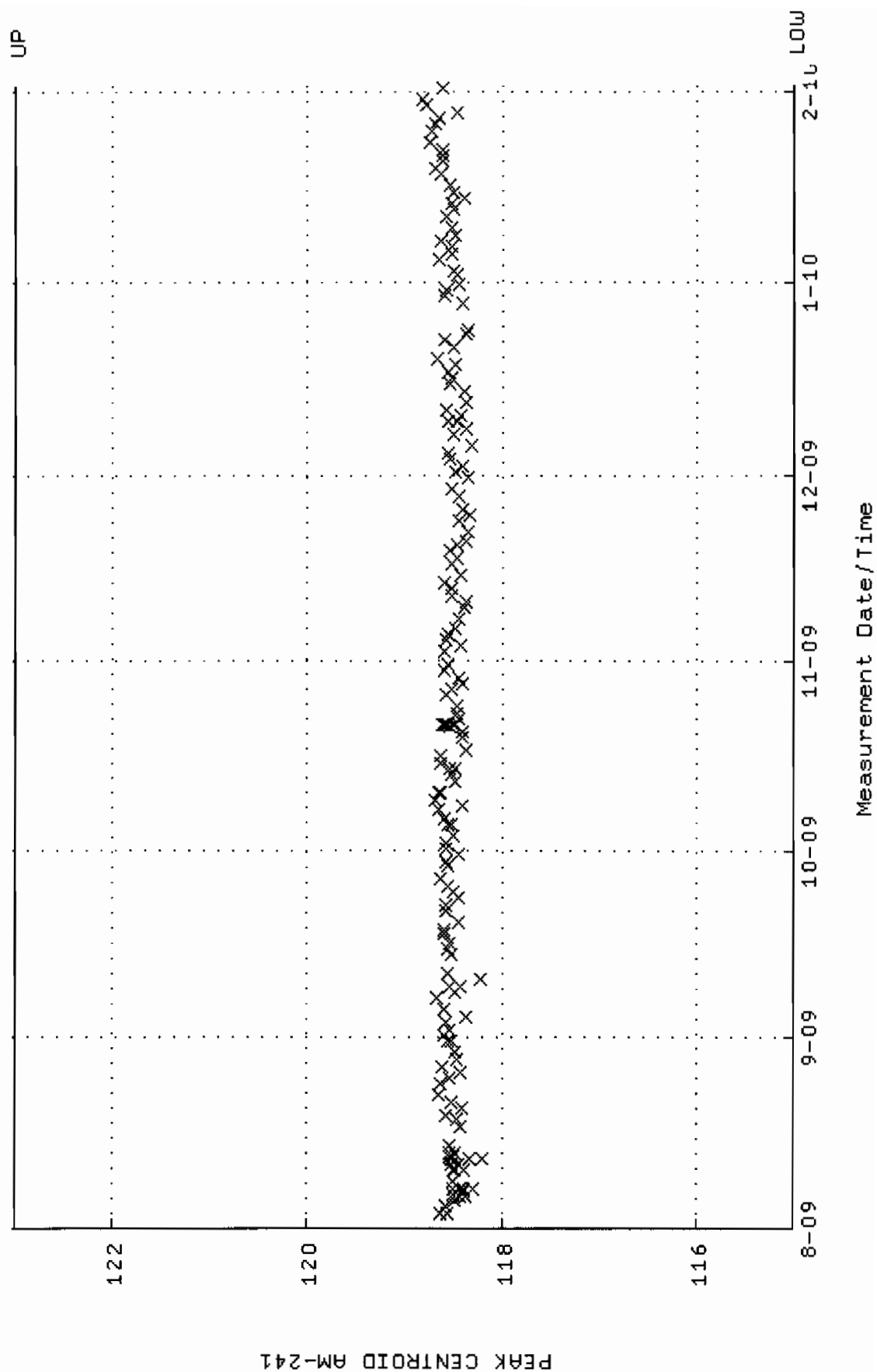
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM04_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-AUG-2009 09:11:46 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



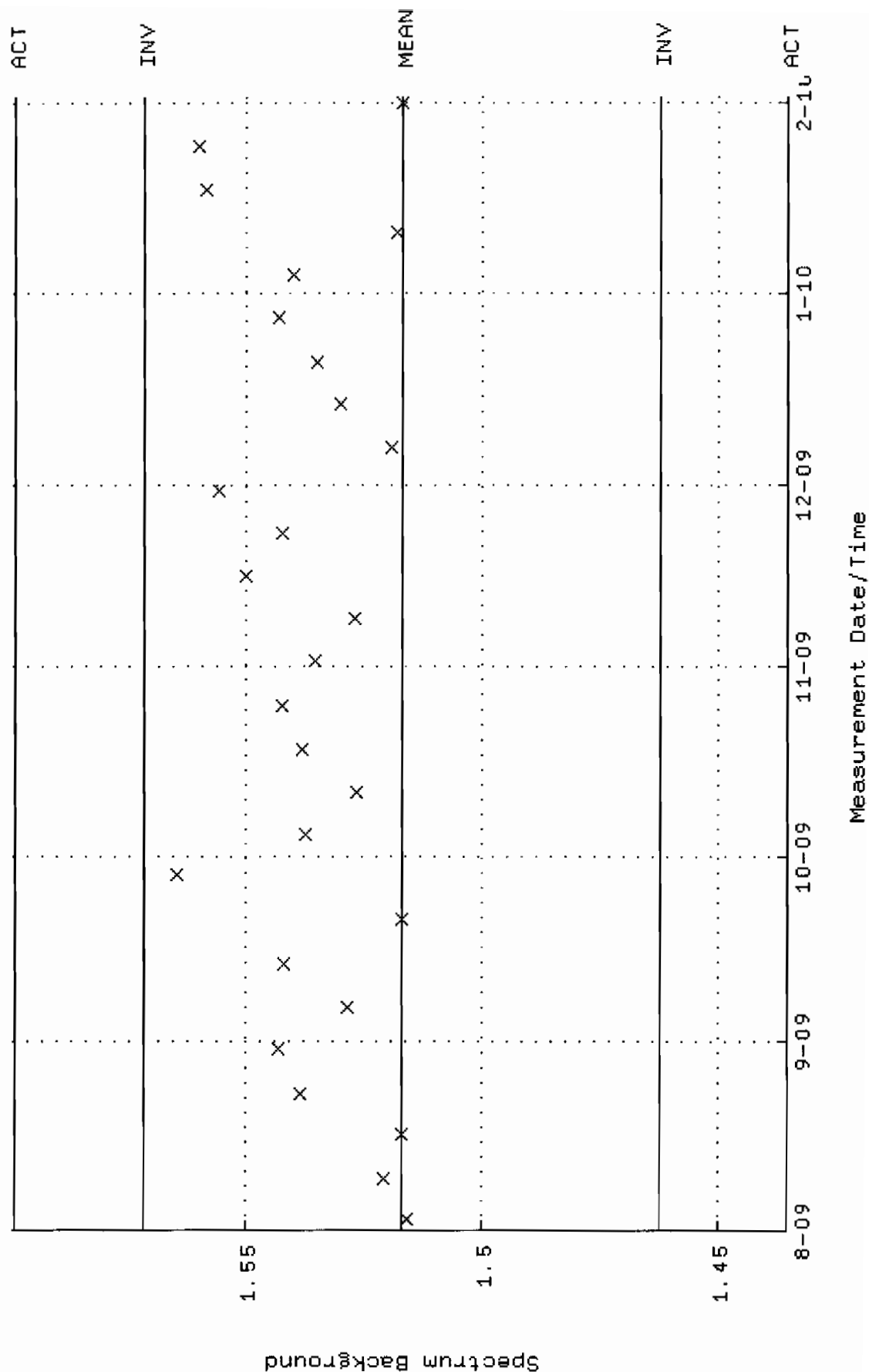
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM04.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:22:48 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.32050 +- 2.495234E-02 (1.89 %)



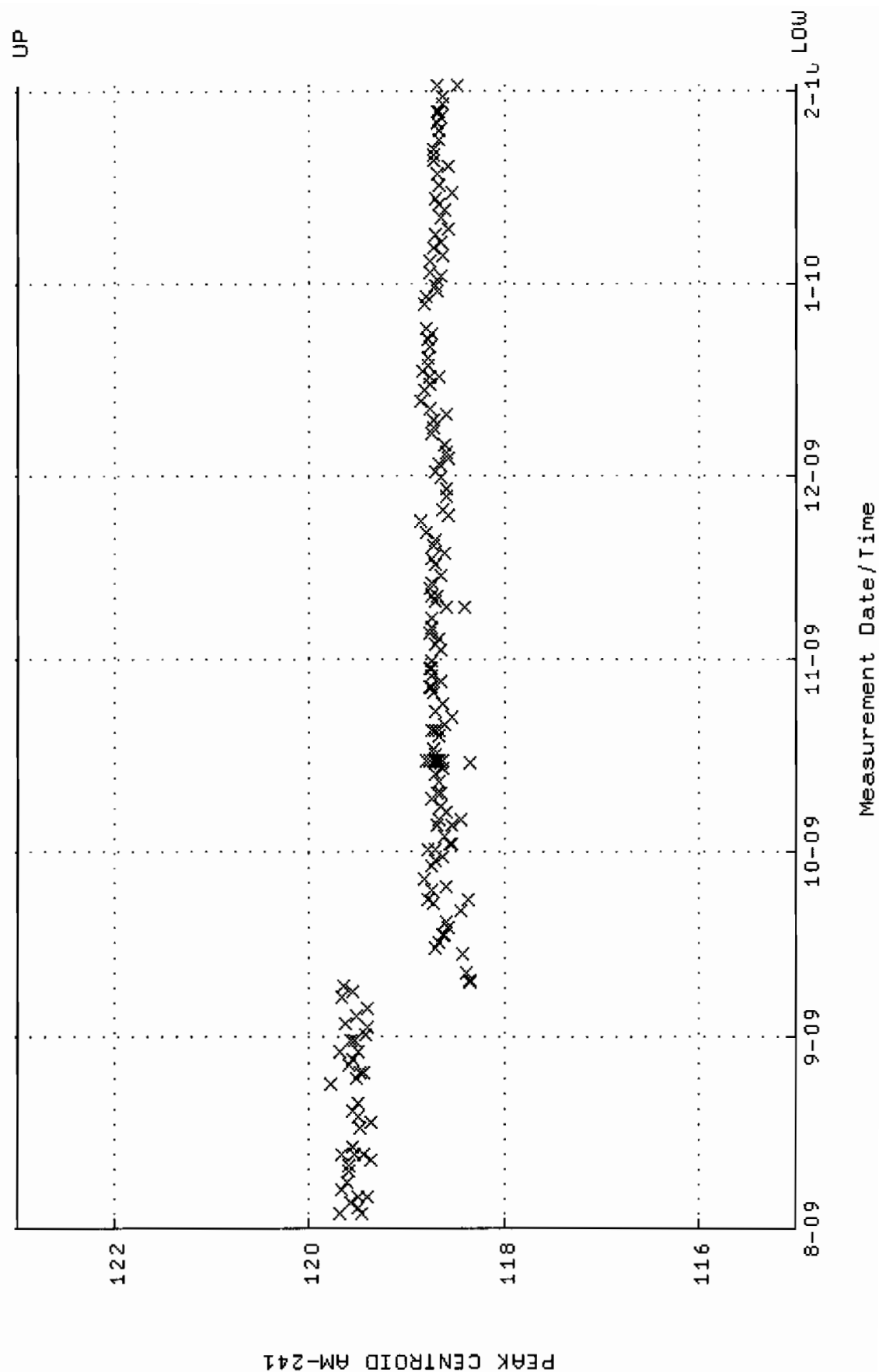
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_JAR.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:13:52 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



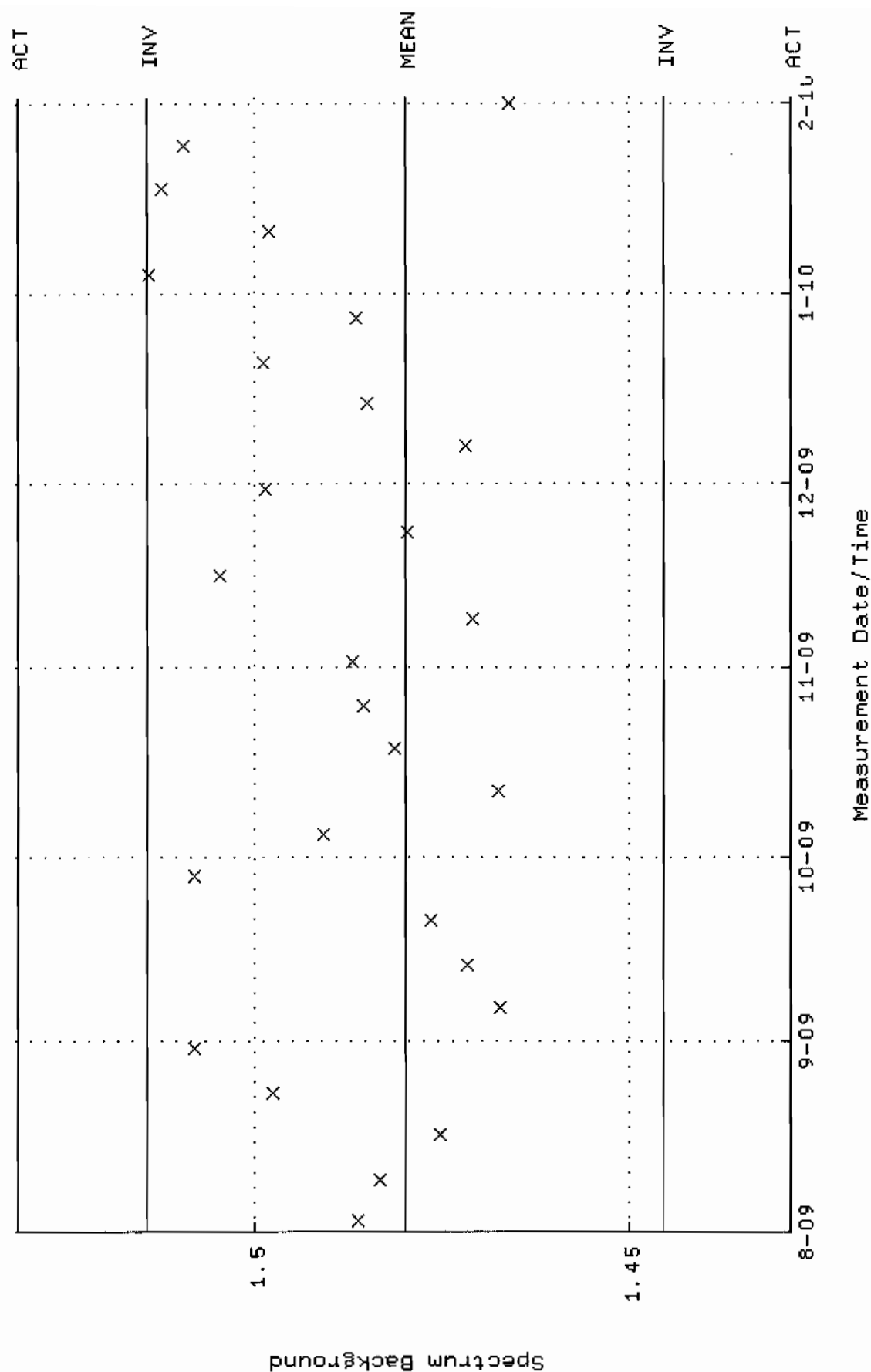
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM07.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:26 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.51715 +- 2.726376E-02 (1.80 %)



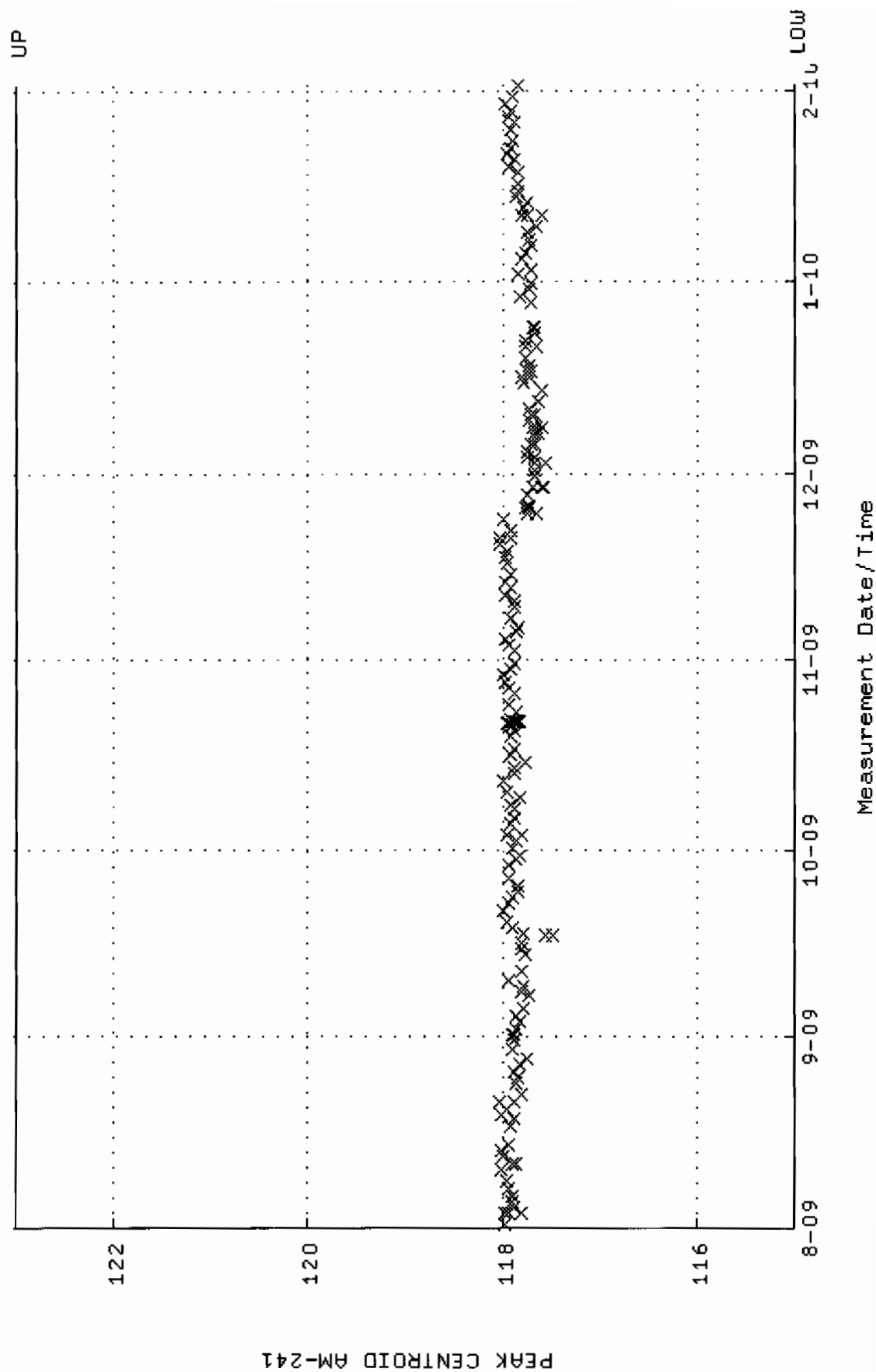
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:36:50 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



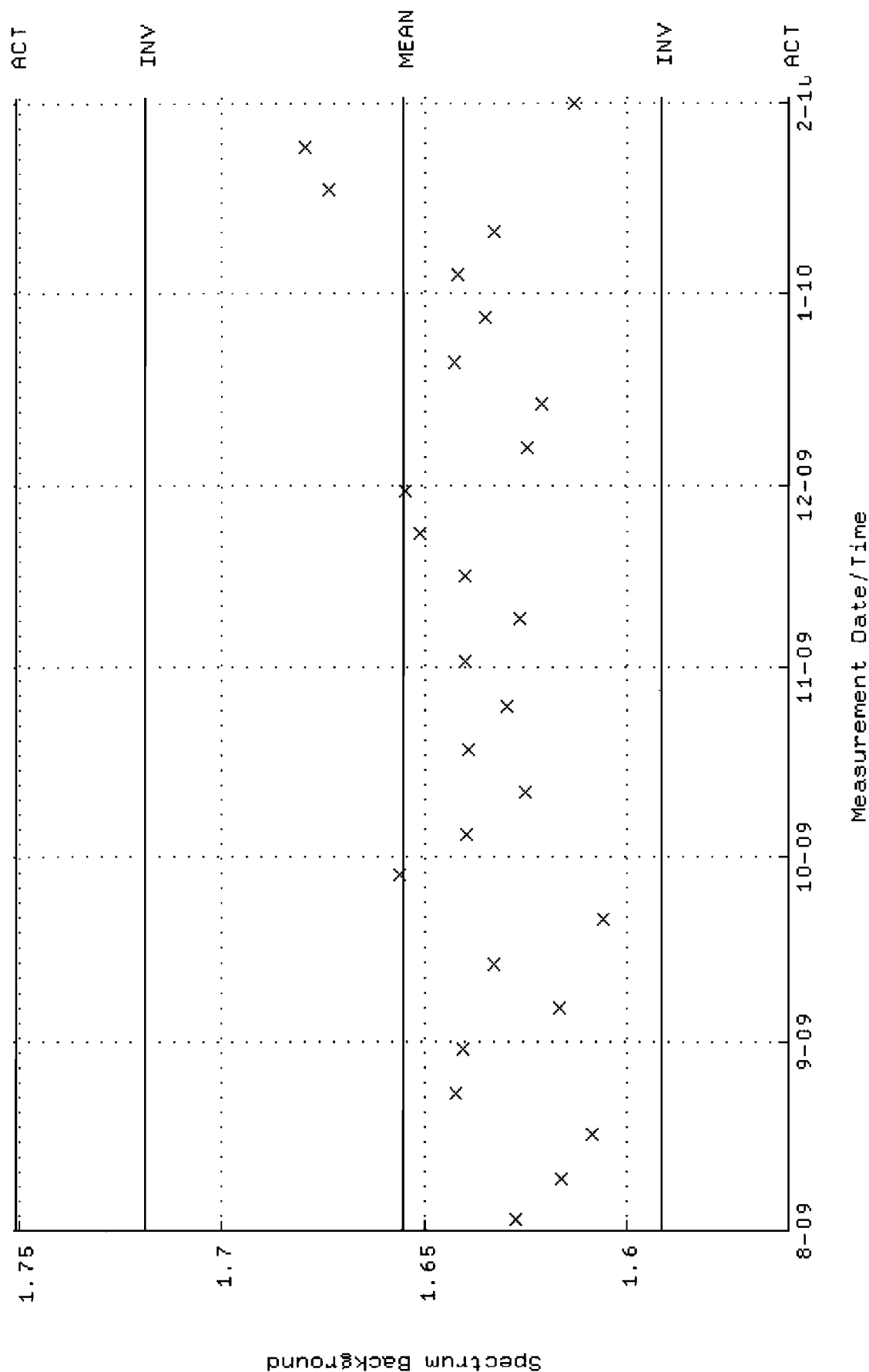
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:43 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48000 +- 1.723892E-02 (1.16 %)



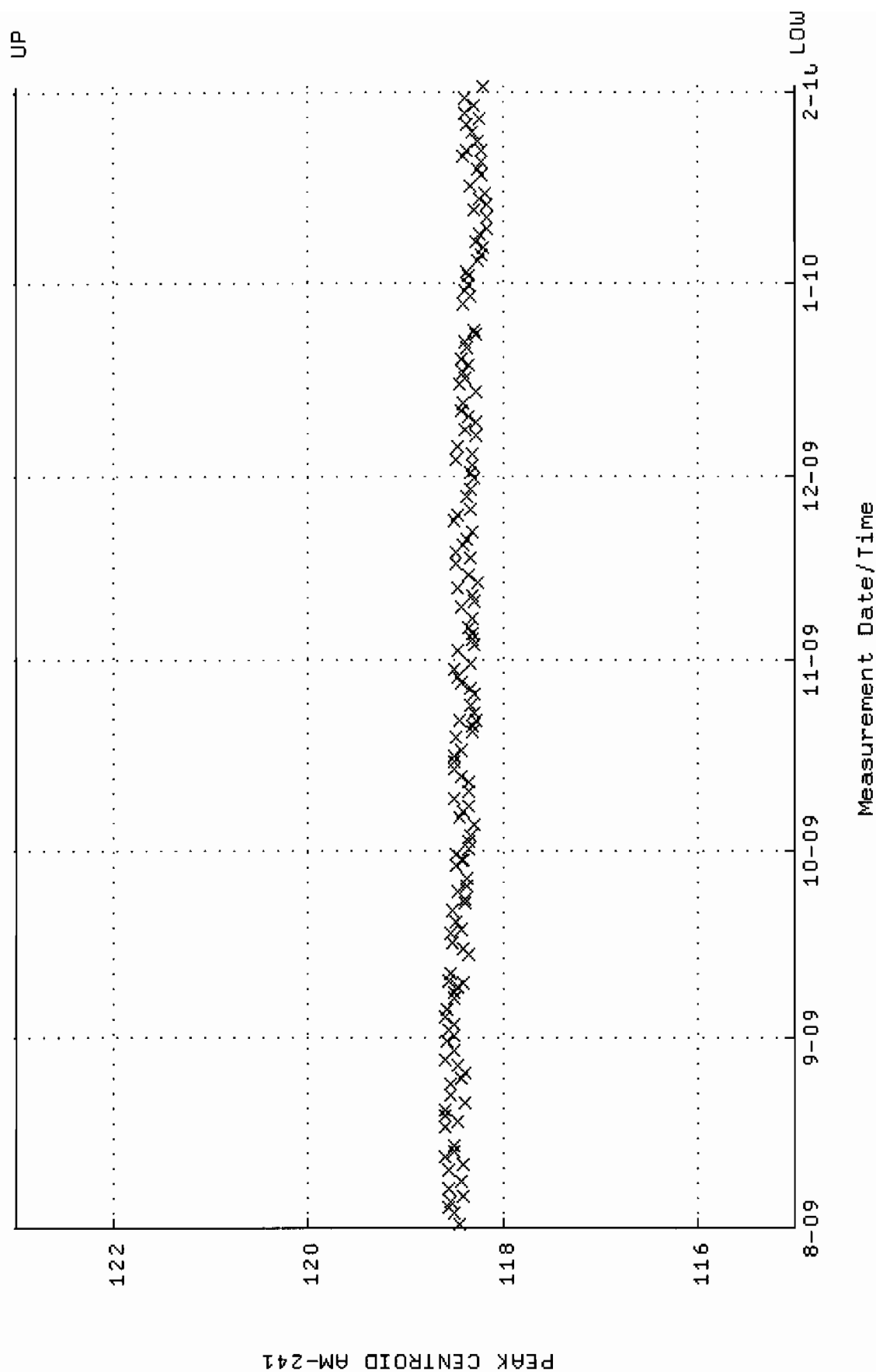
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_JAR.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 1-AUG-2009 13:27:21 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



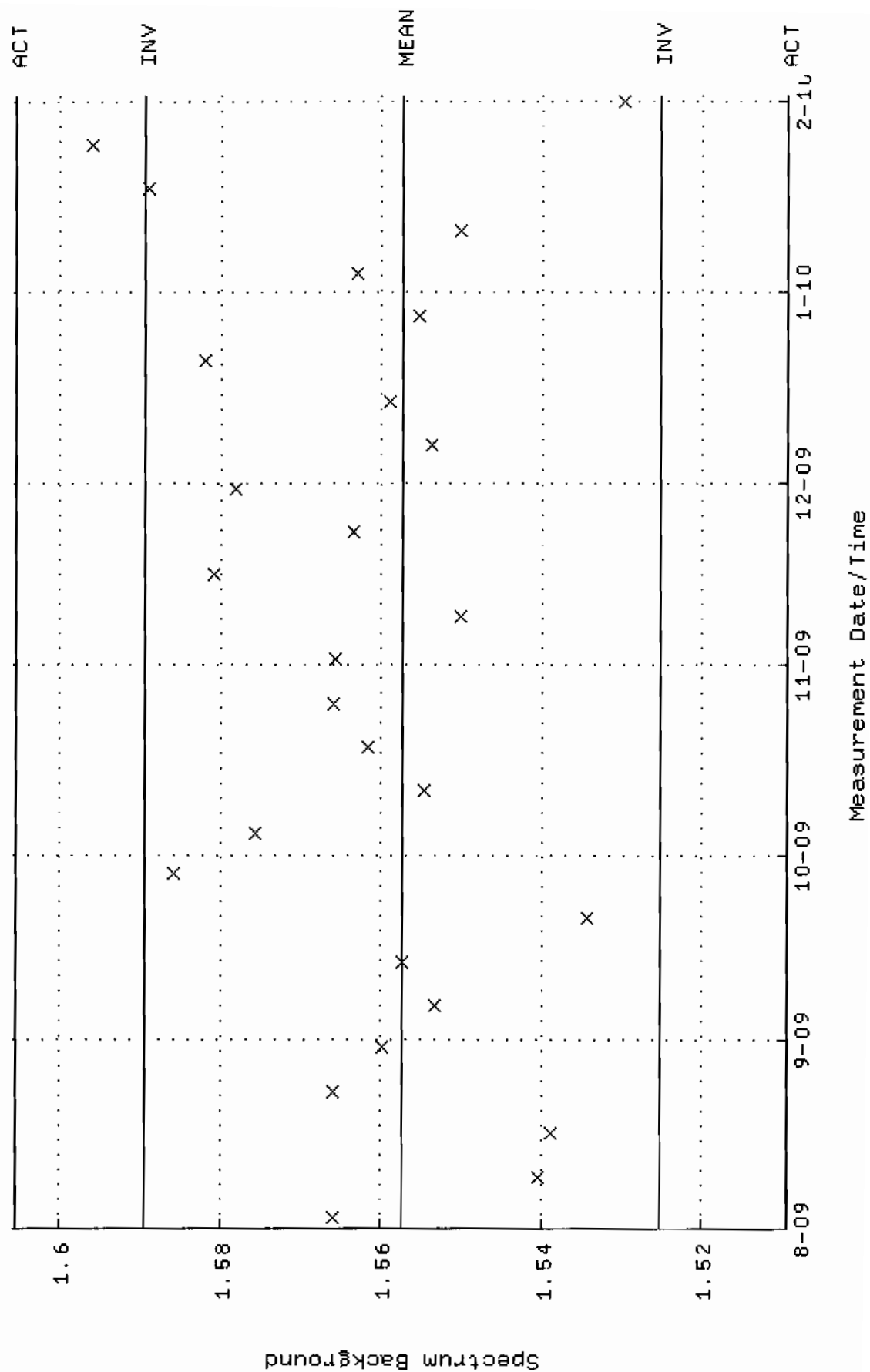
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM11.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:55 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.65552 +- 3.175806E-02 (1.92 %)



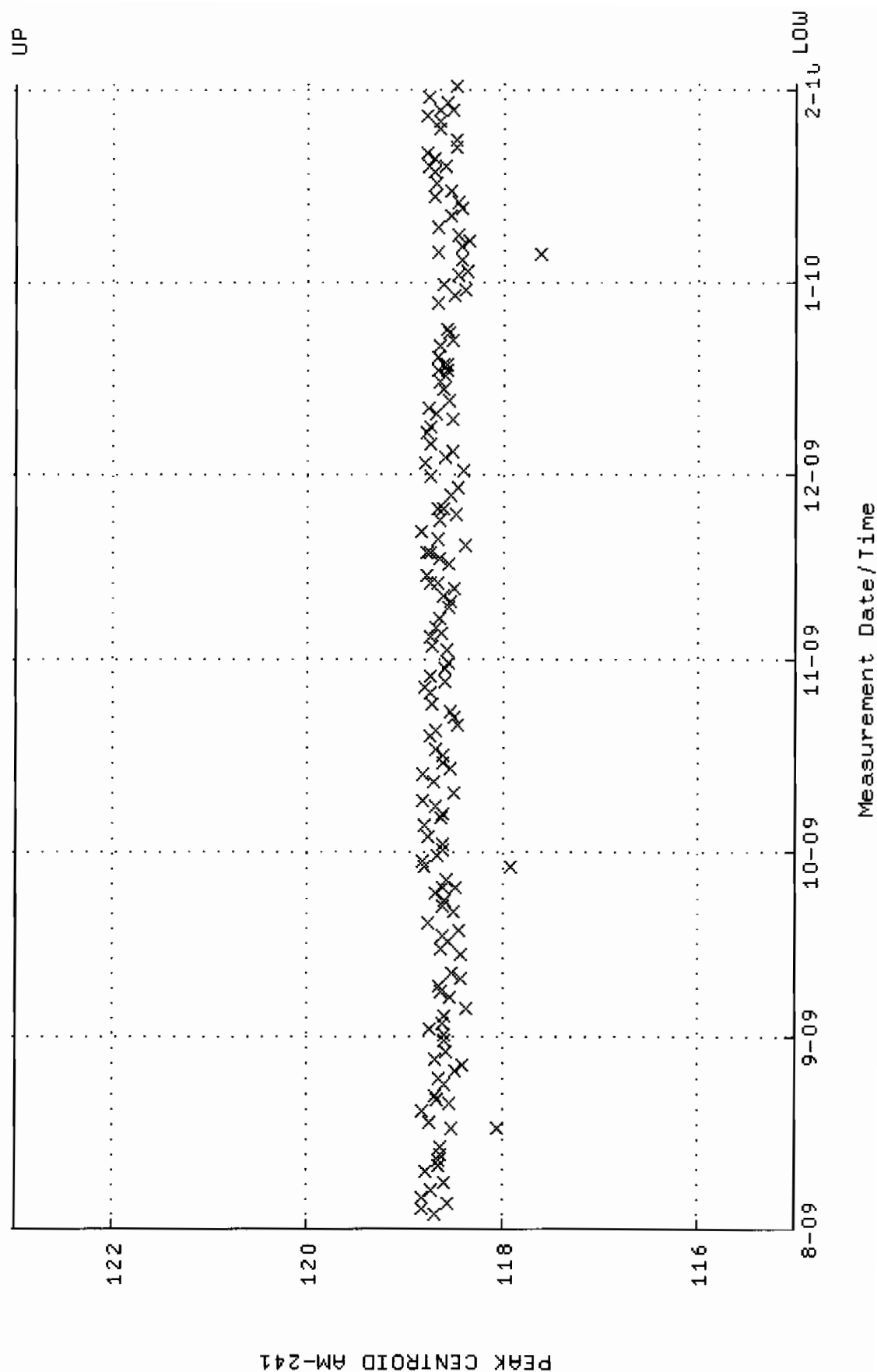
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM12-CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 1-AUG-2009 13:58:23 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



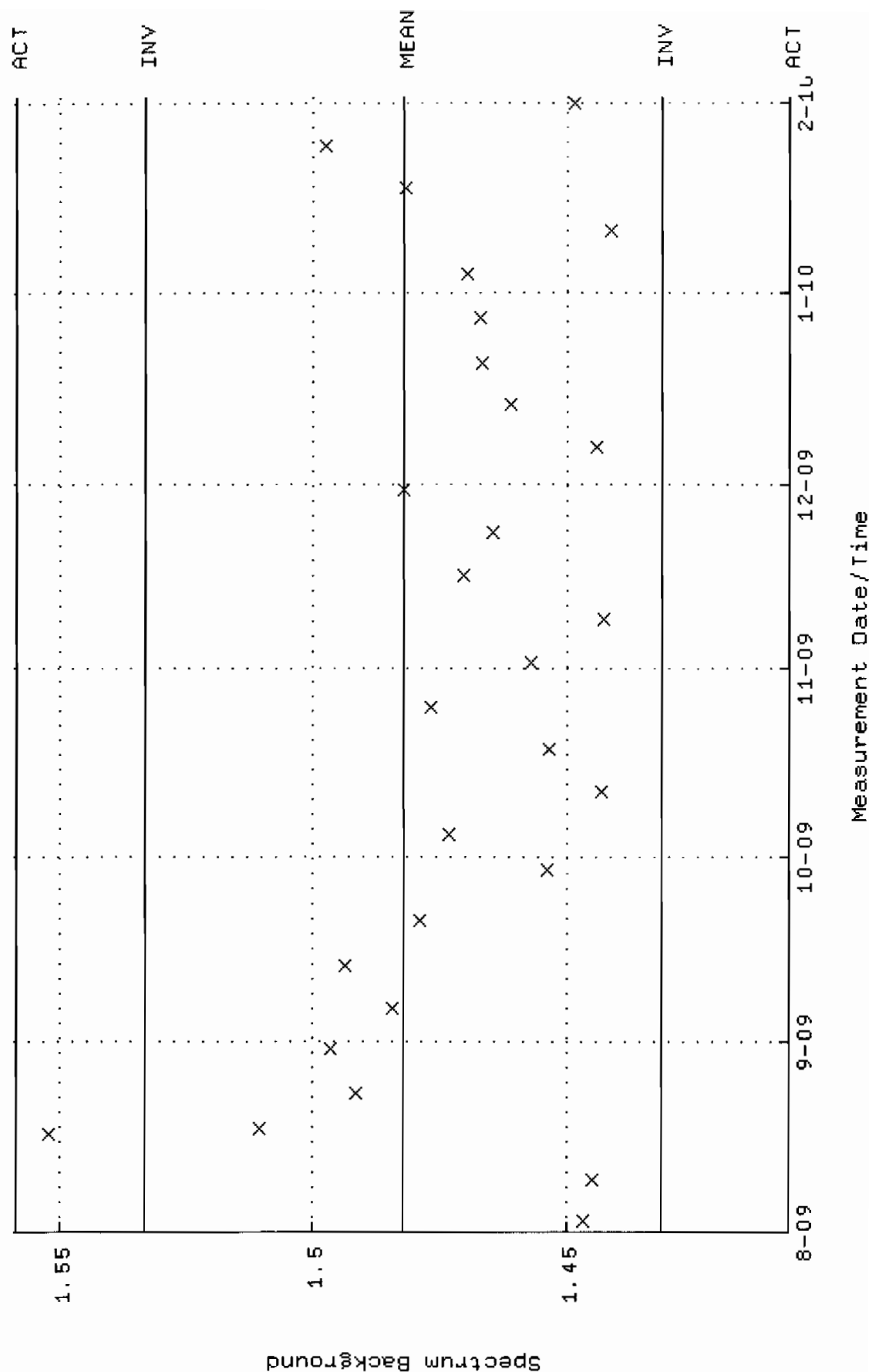
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:08 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.55746 +- 1.601675E-02 (1.03 %)



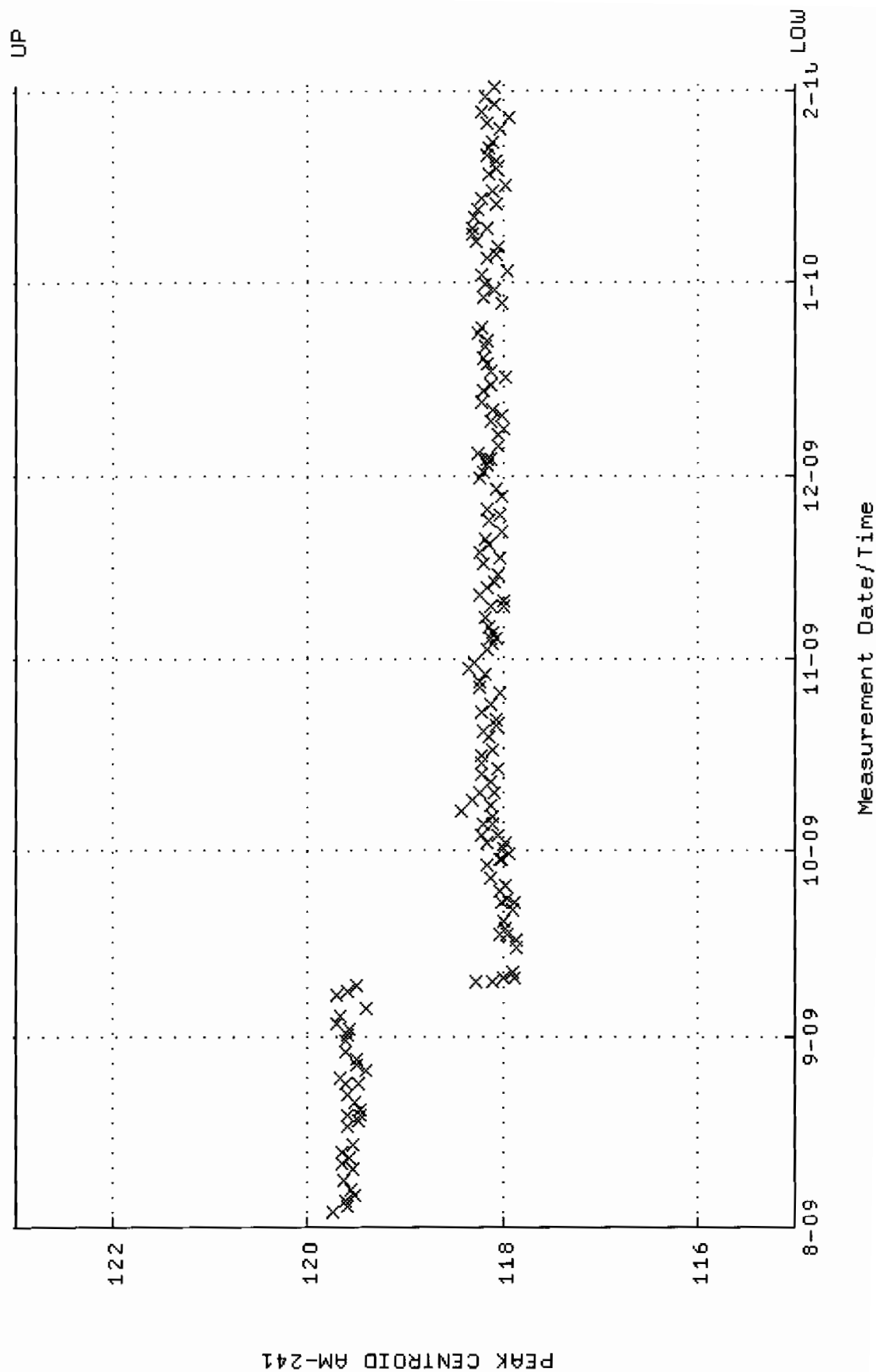
QA filename : DKA100:[CANBERRA,GAMMA,SCUSR.QA]QCC_GAM14_2LMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:15:54 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



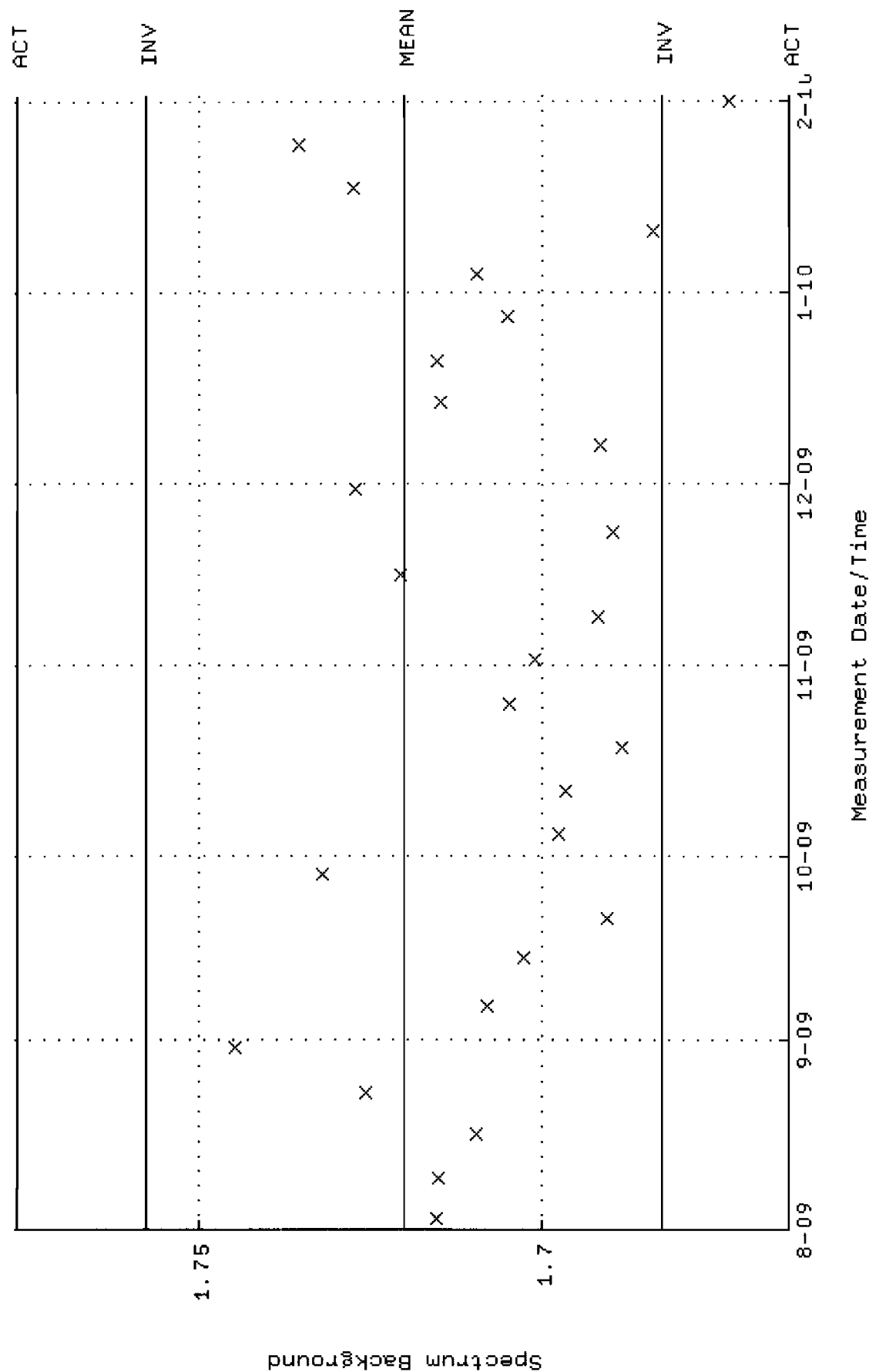
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM14.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:33 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48240 +- 2.535500E-02 (1.71 %)



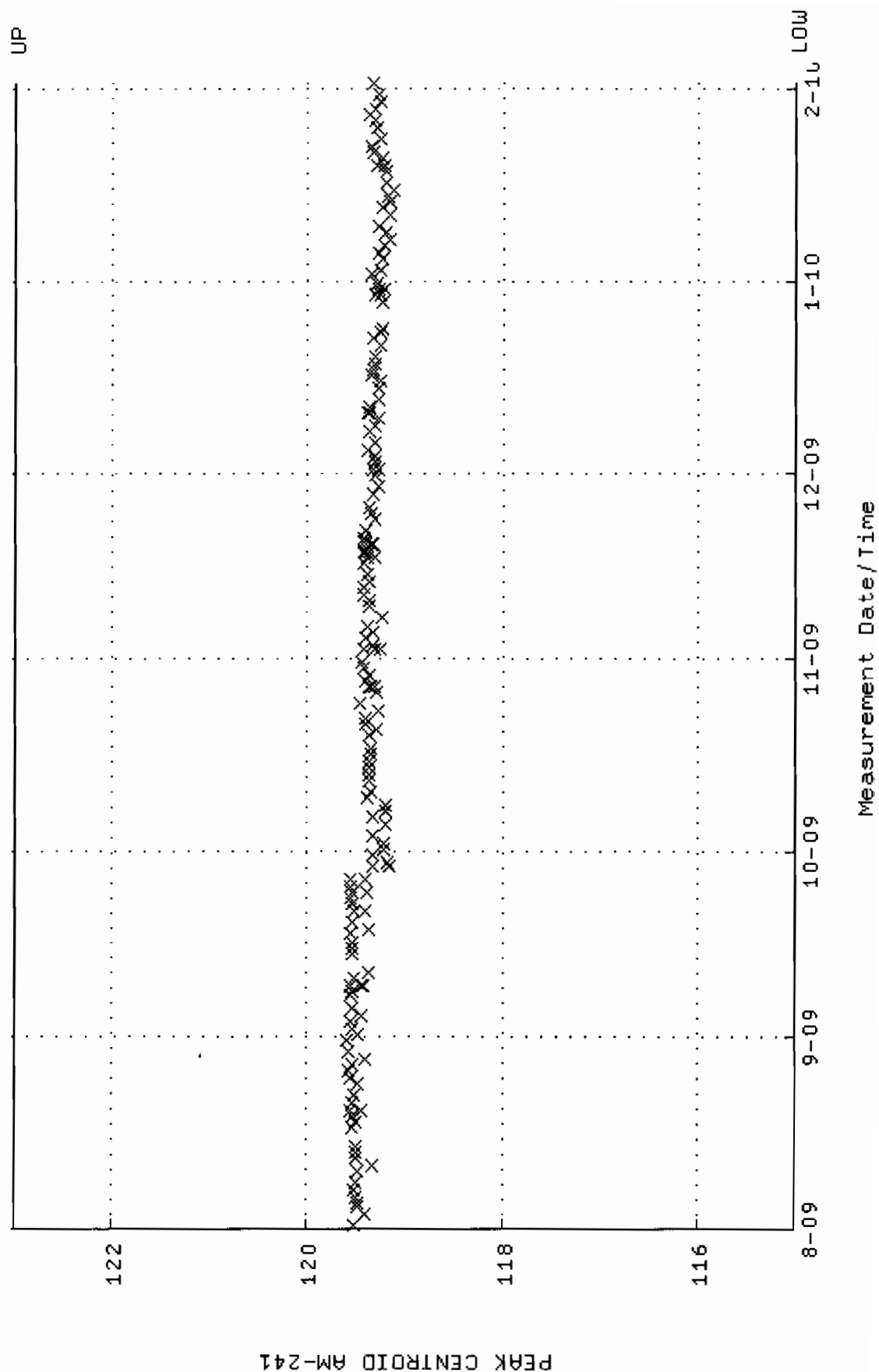
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM15-CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:53:43 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



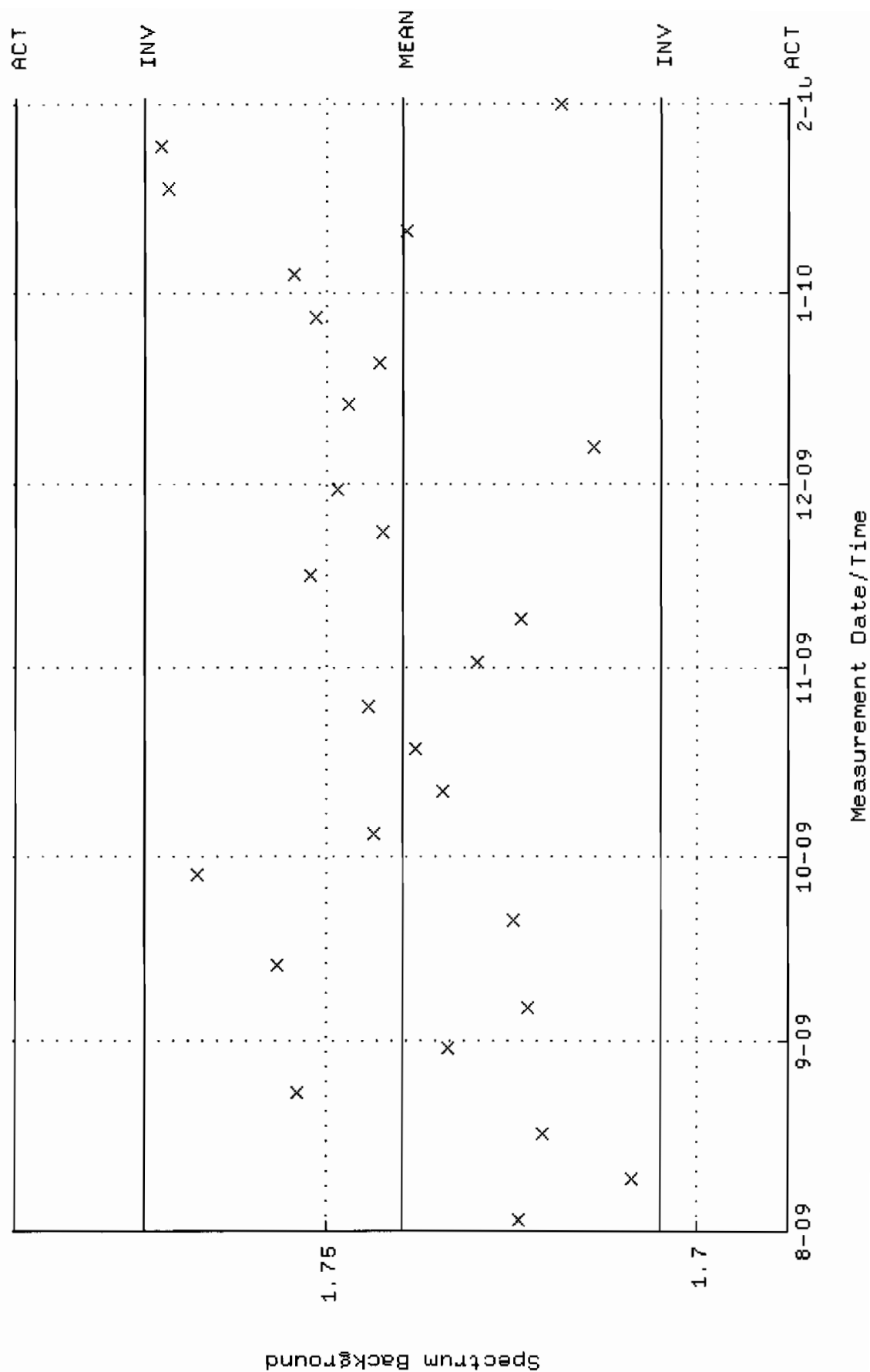
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM15.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:46 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.72024 +- 1.875820E-02 (1.09 %)



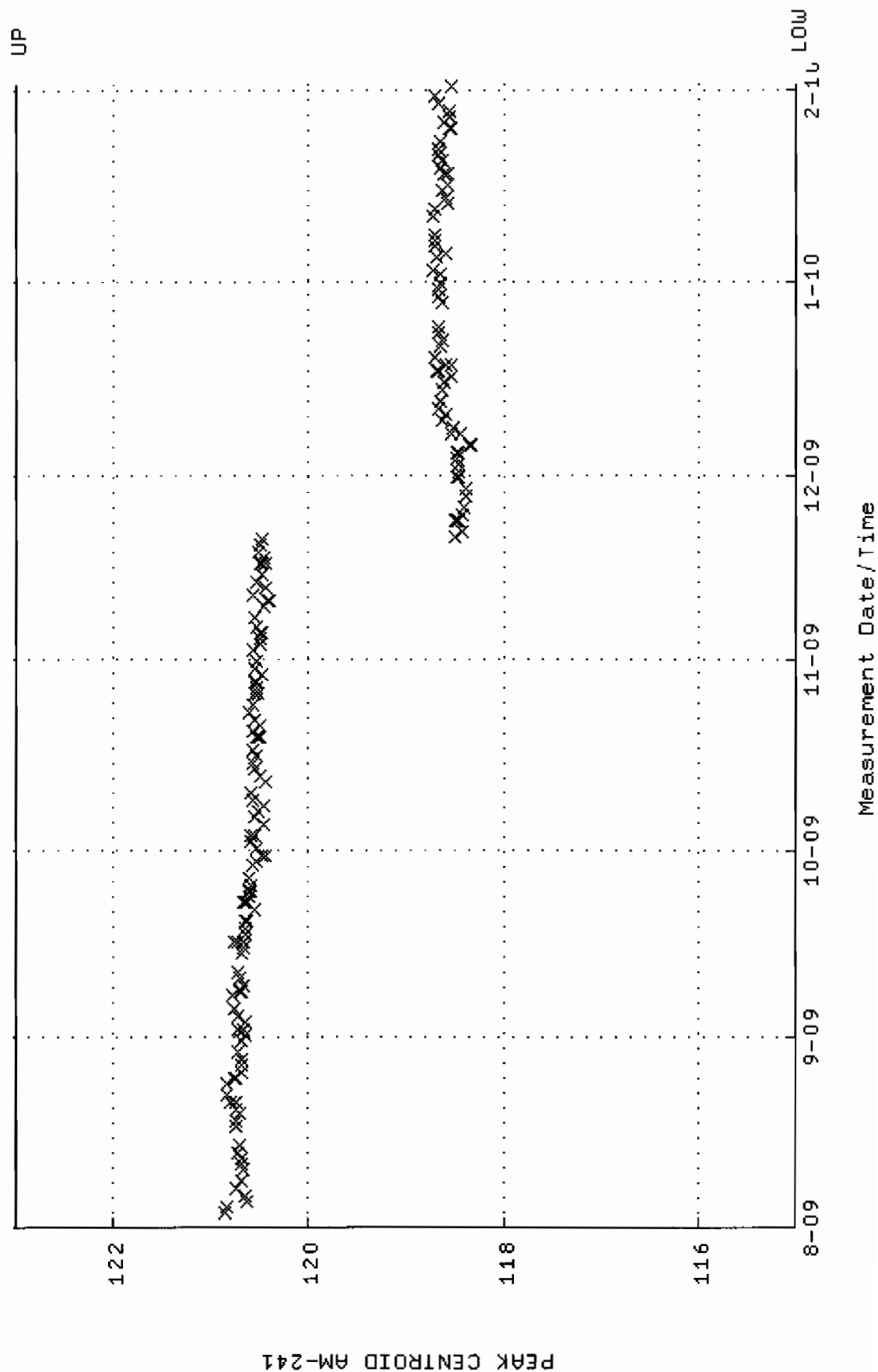
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 1-AUG-2009 13:27:30 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



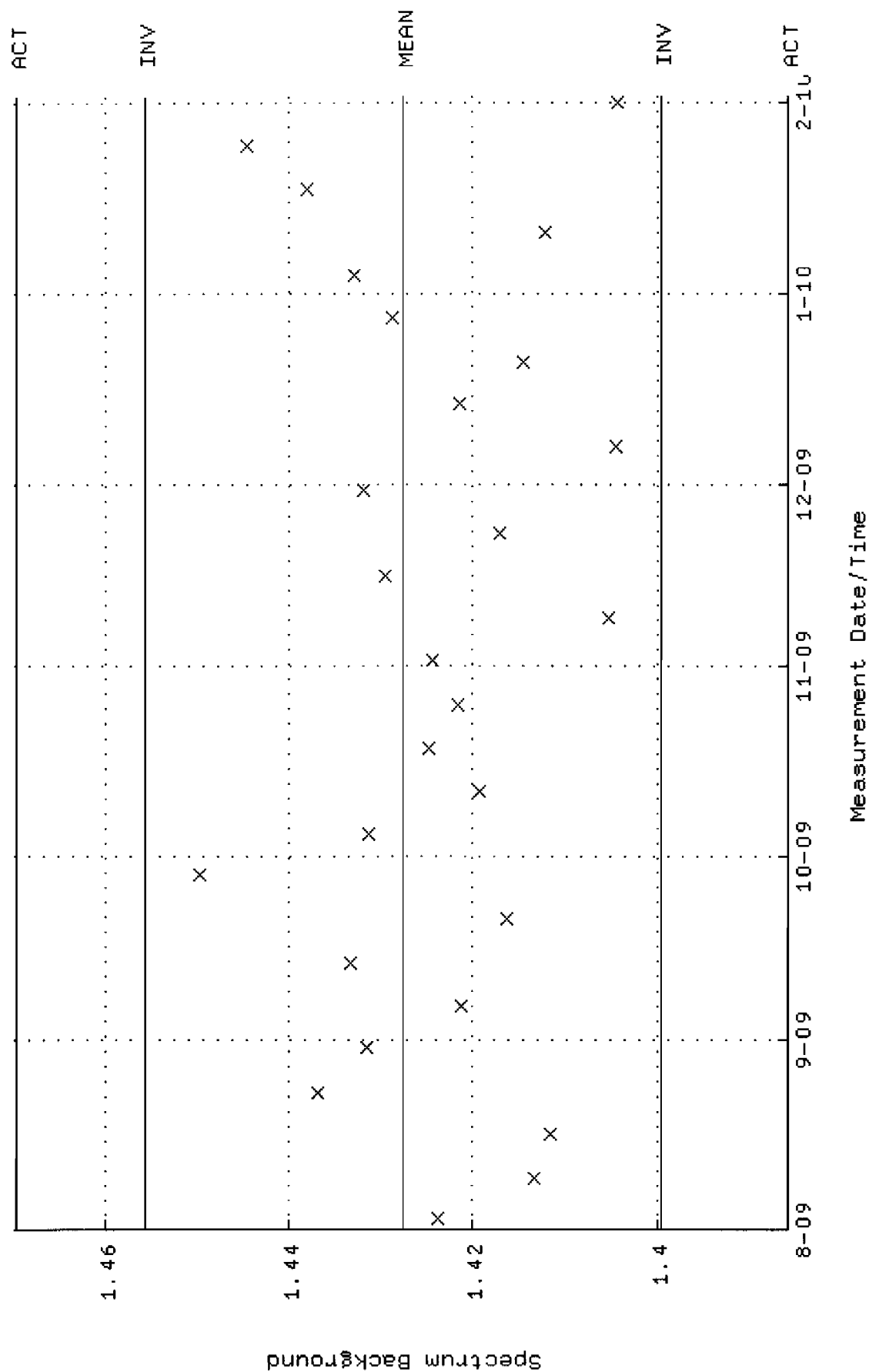
QA filename : DKA100:[CANBERRA,GAMMA,SCUSR,QA]LBC_GAM16.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:58 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.73980 +- 1.729897E-02 (0.99 %)



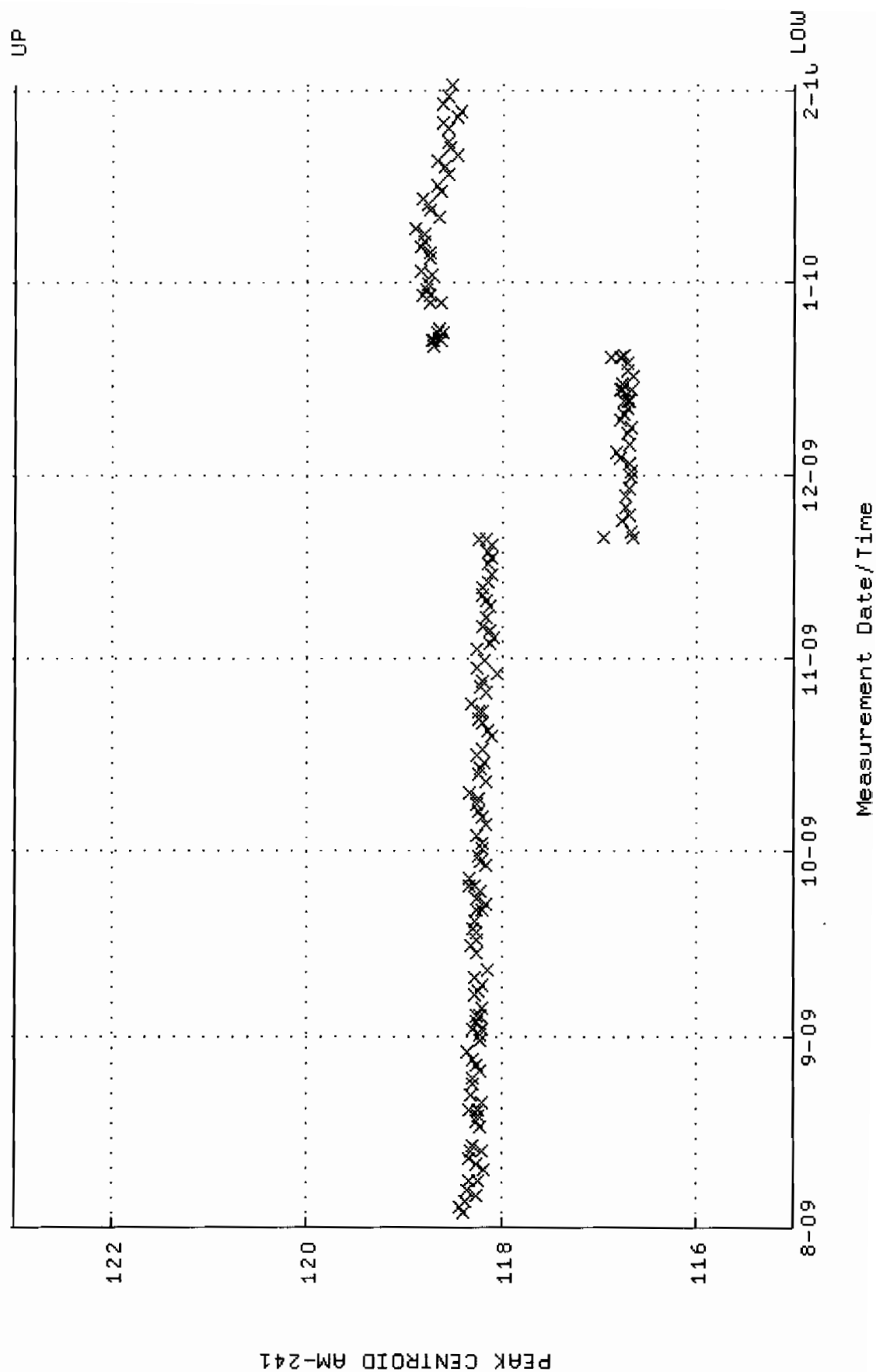
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:55:06 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



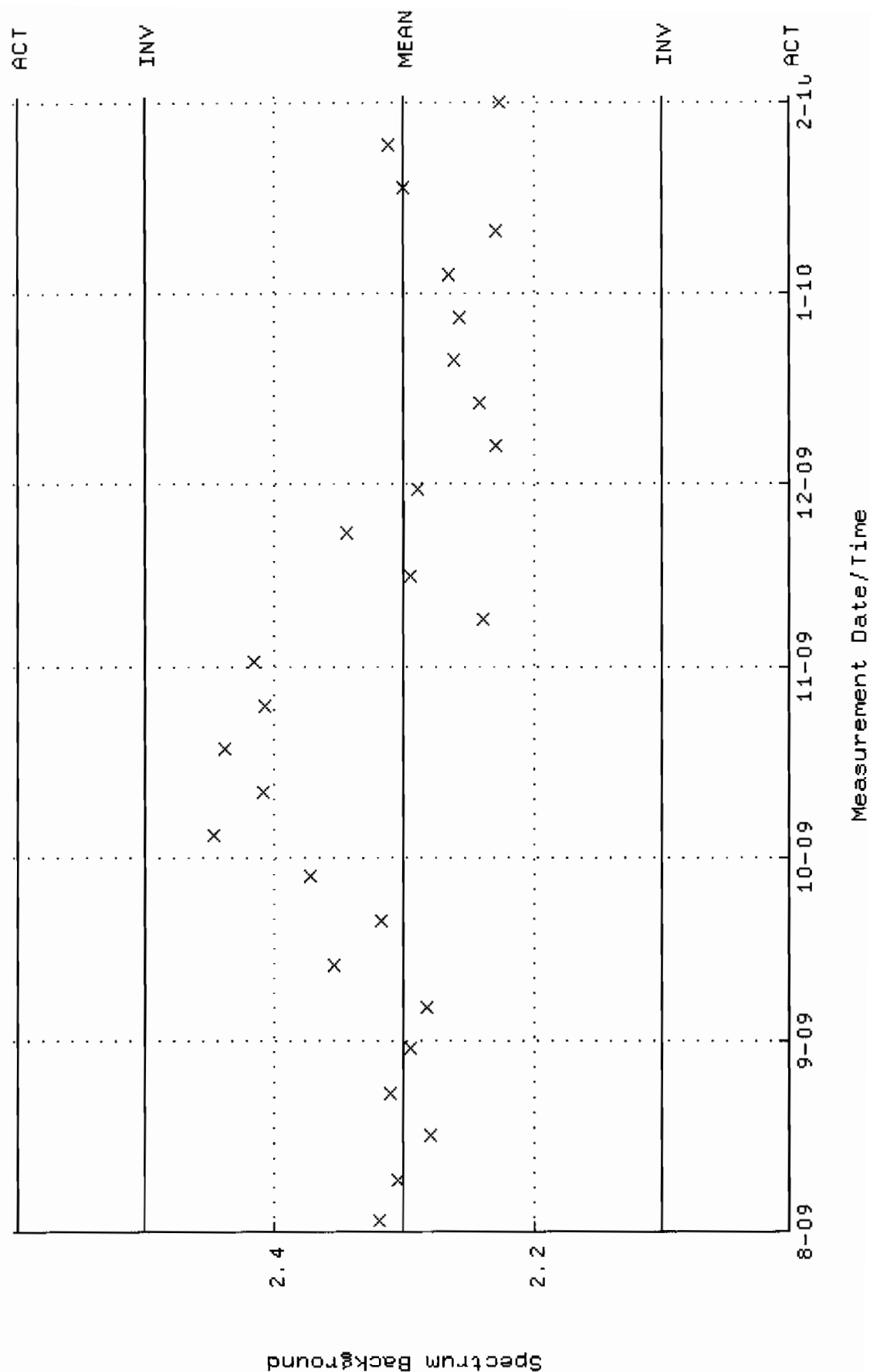
QA filename : DKA100: [CANBERRA.GAMMA.SCUSR.QA]LBC-GAM17.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:10 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.42766 +- 1.396974E-02 (0.98 %)



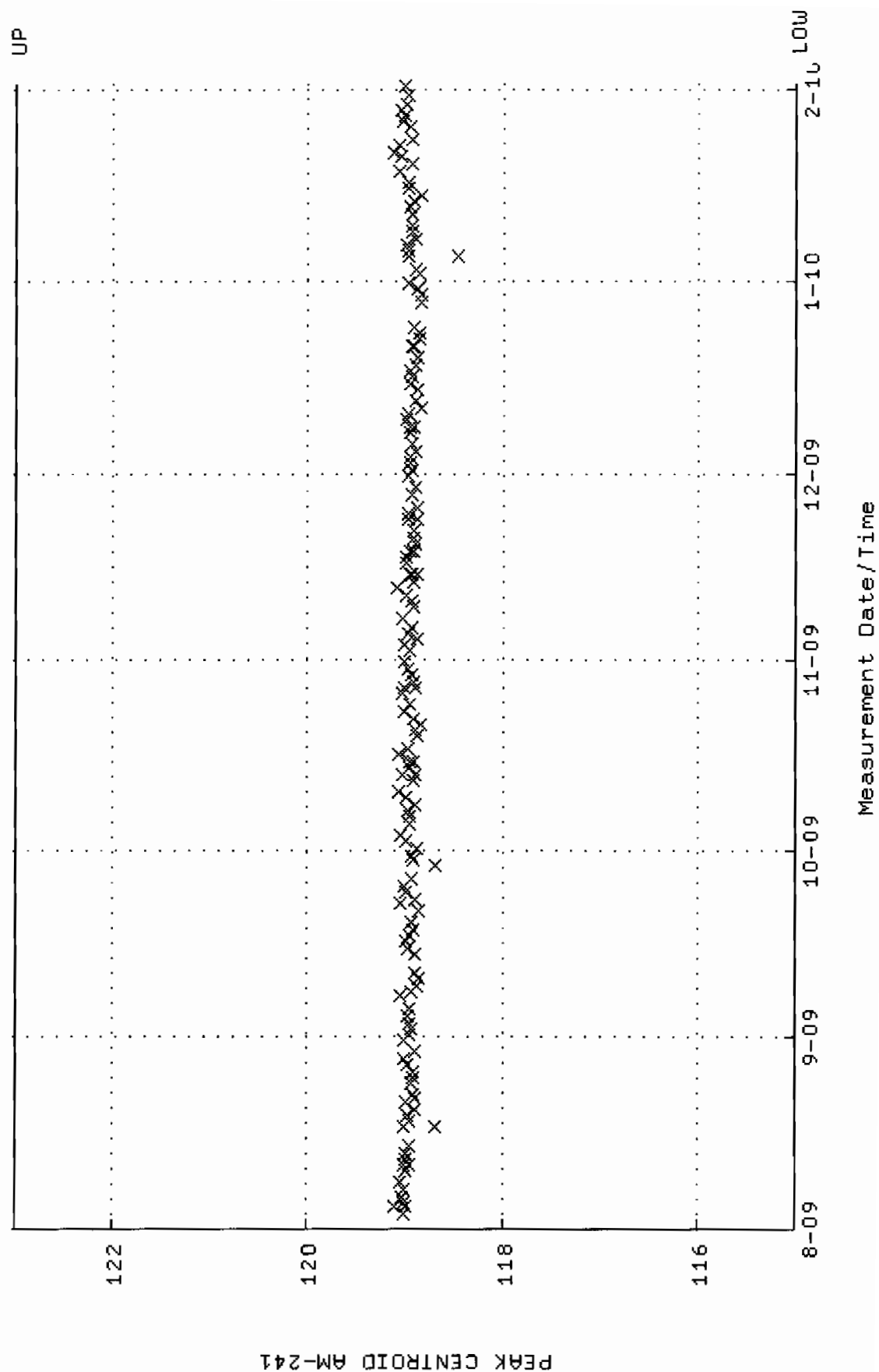
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 10:02:47 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



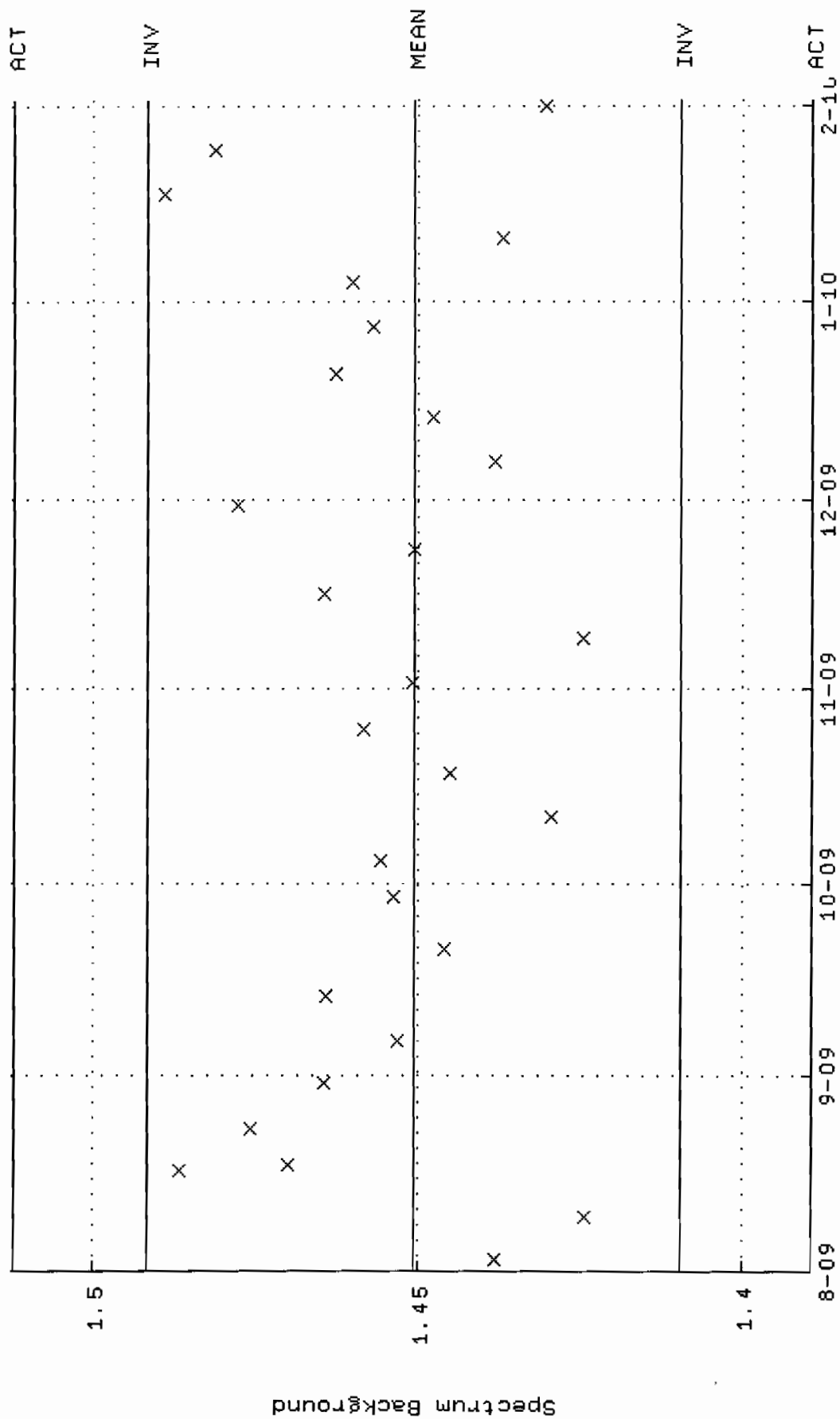
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM18.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:23 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 2.30164 +- 9.930626E-02 (4.31 %)



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



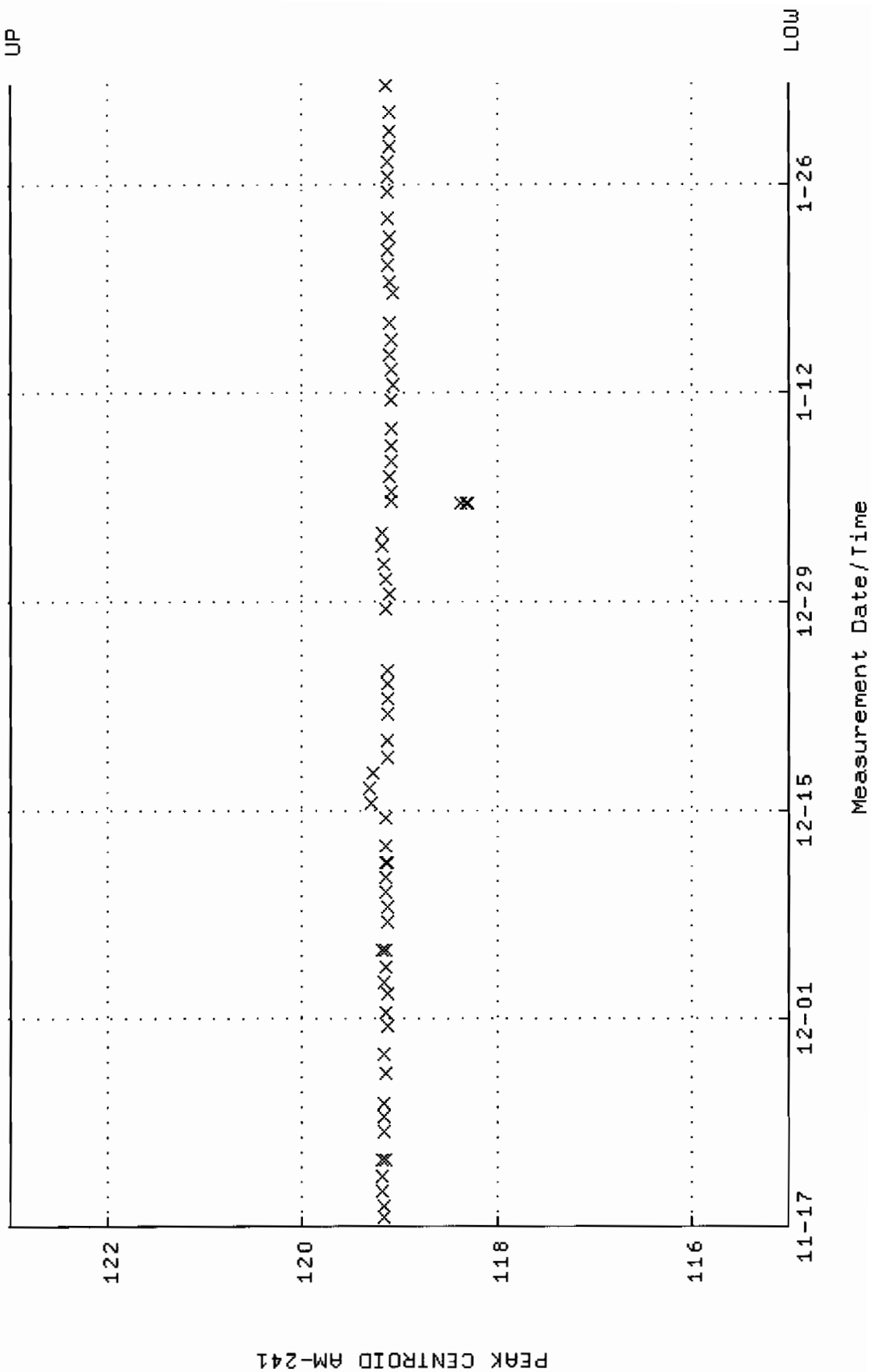
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM19.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:41 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.45067 +- 2.046038E-02 (1.41 %)



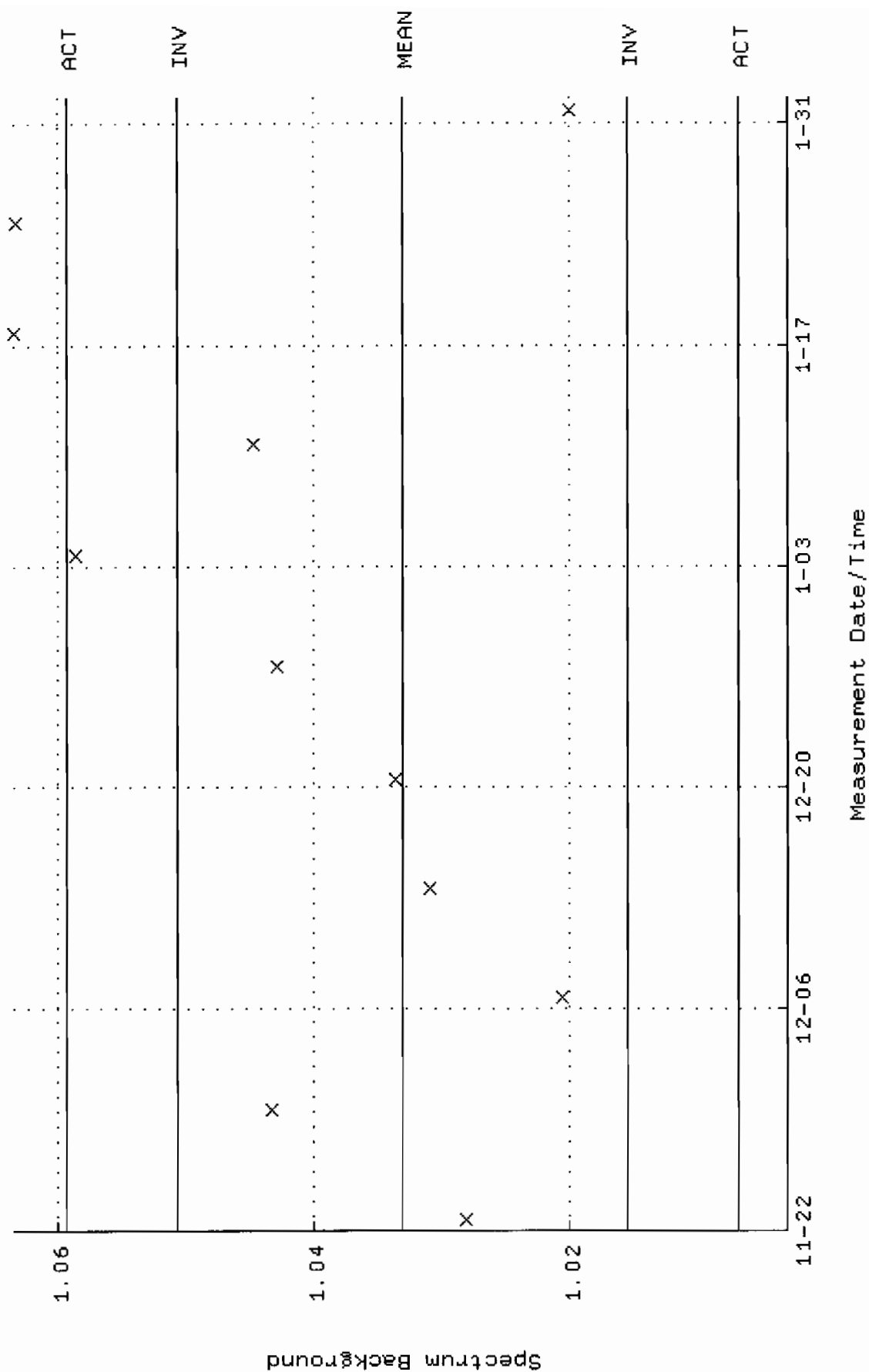
```

QA filename      : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_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

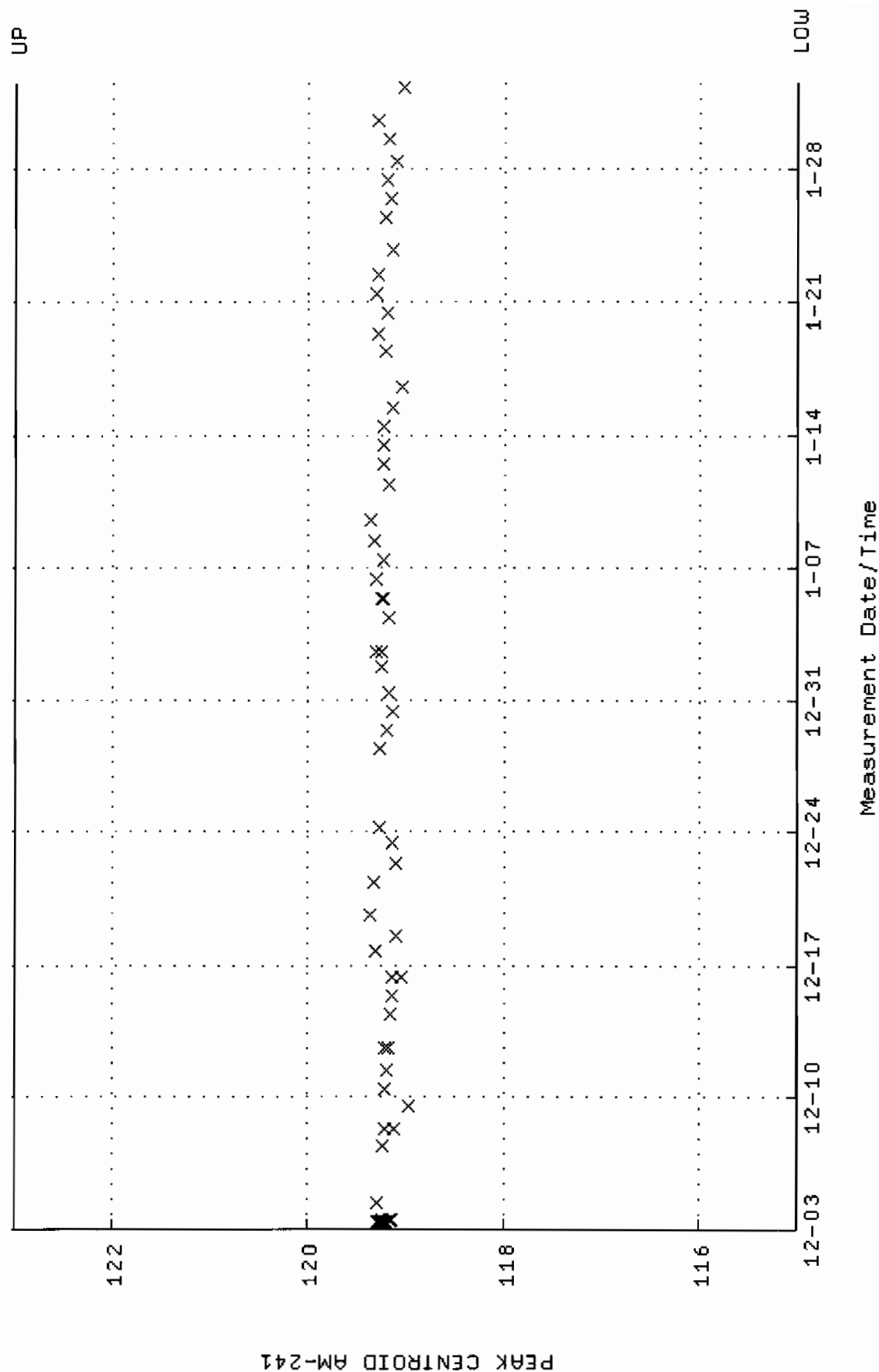
```



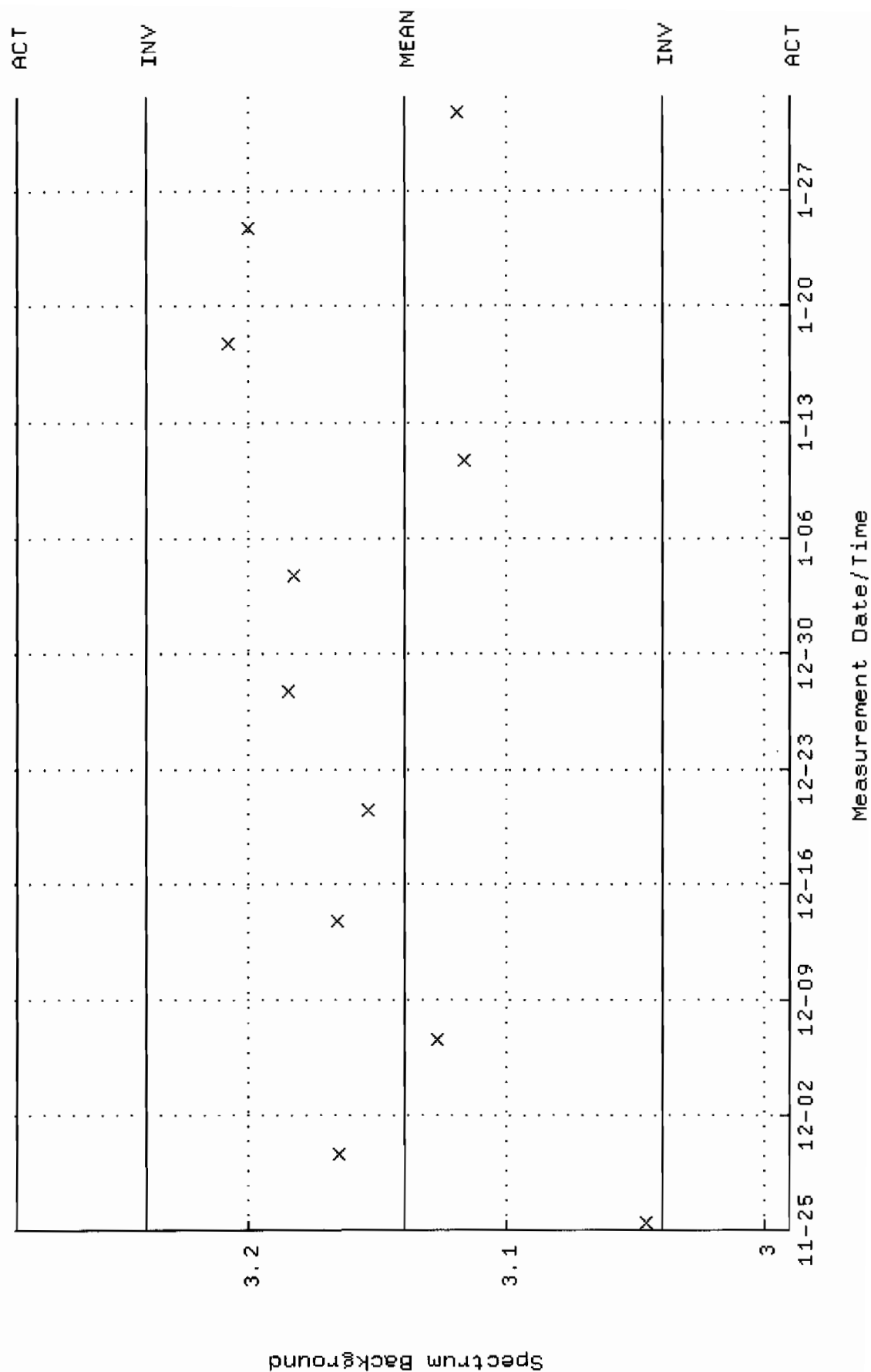
QA filename : DKA100:[CANBERRA,GAMMA,SCUSR,QA]LBC_GAM21.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 22-NOV-2009 17:05:16 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.03312 +- 8.784250E-03 (0.85 %)



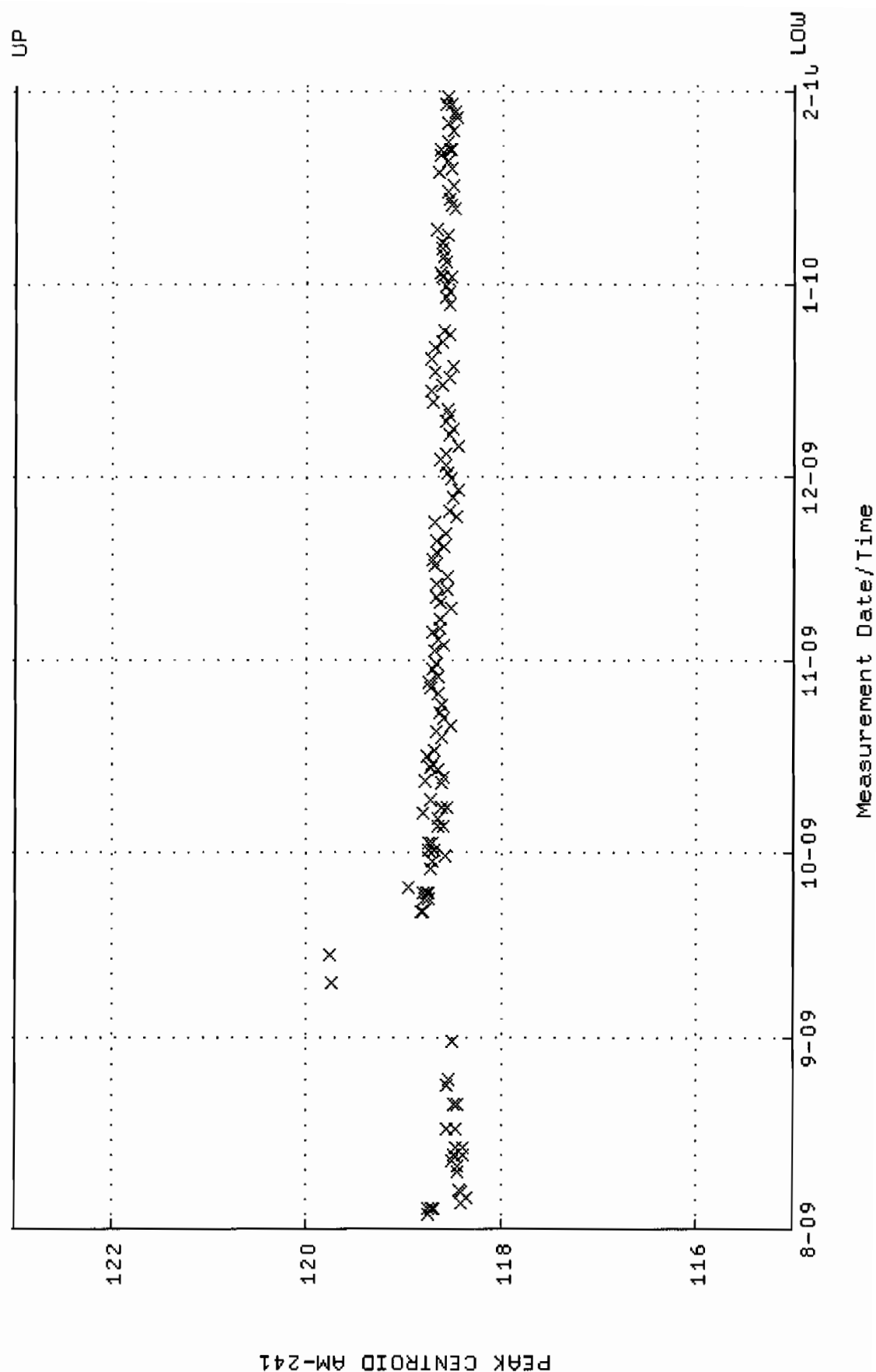
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-DEC-2009 09:11:39 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



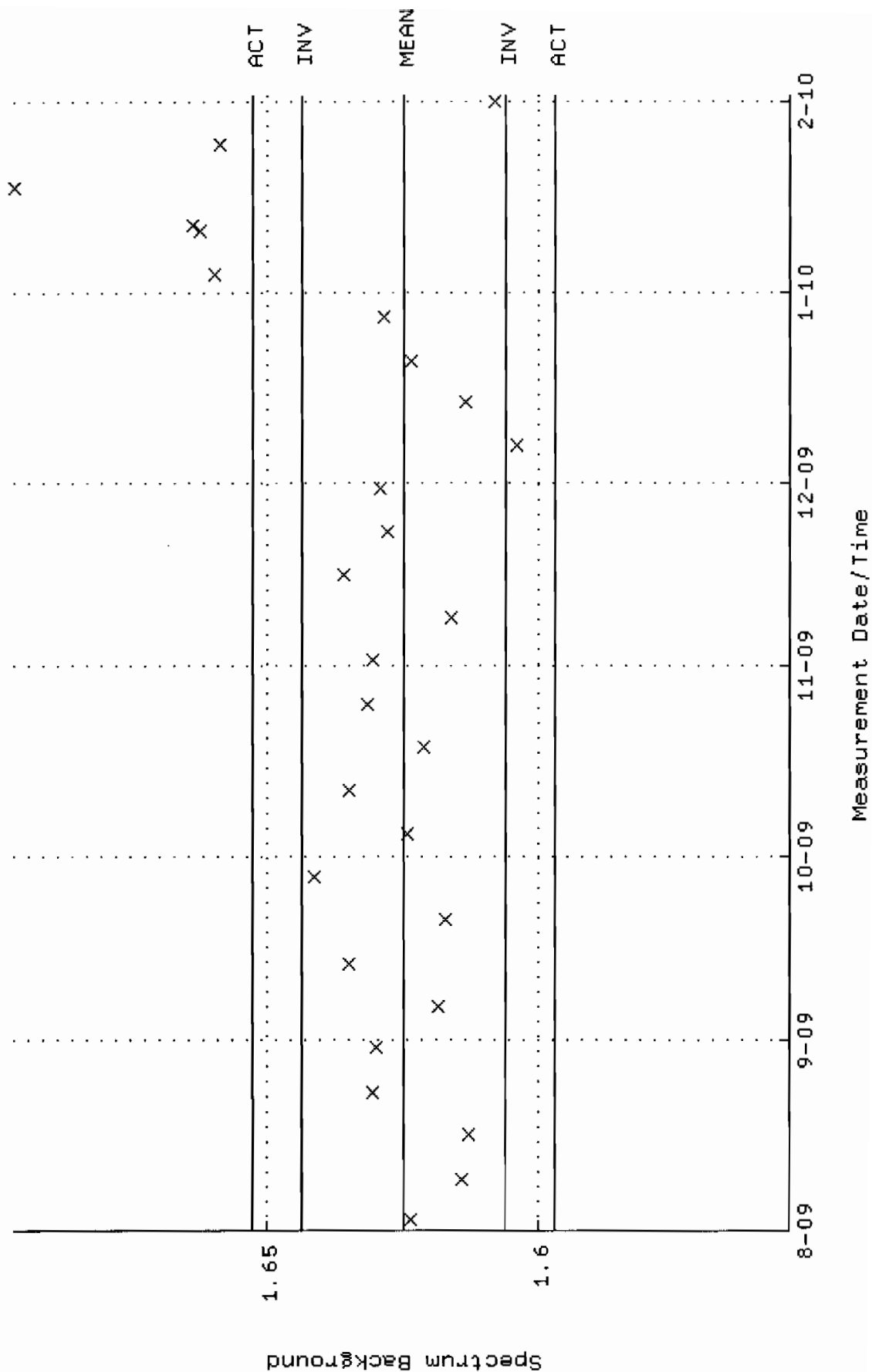
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM22.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 25-NOV-2009 10:28:37 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 3.13961 +- 4.985064E-02 (1.59 %)

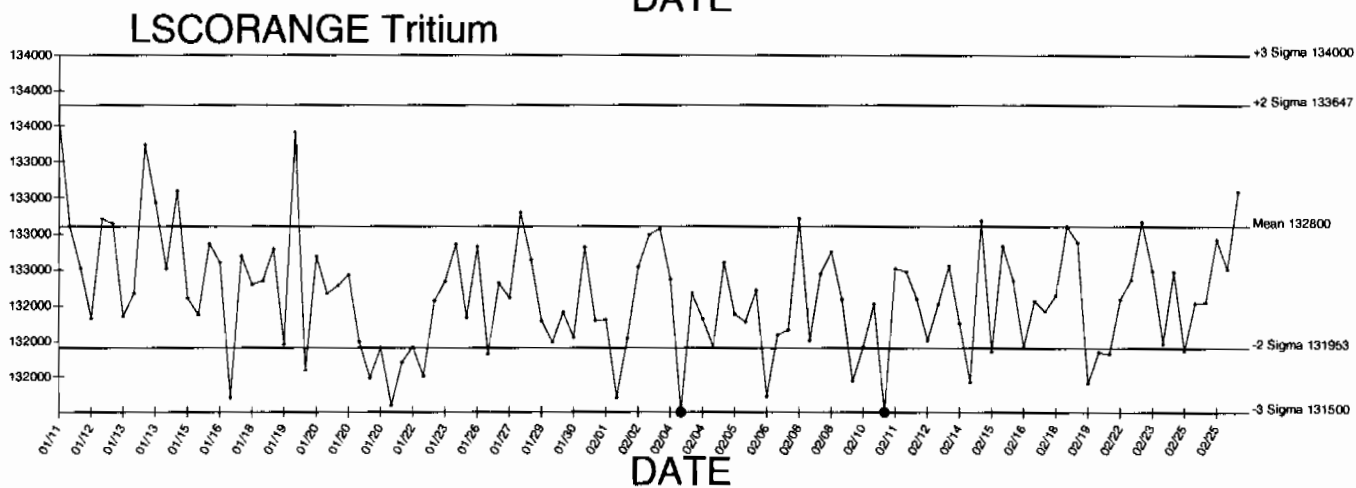
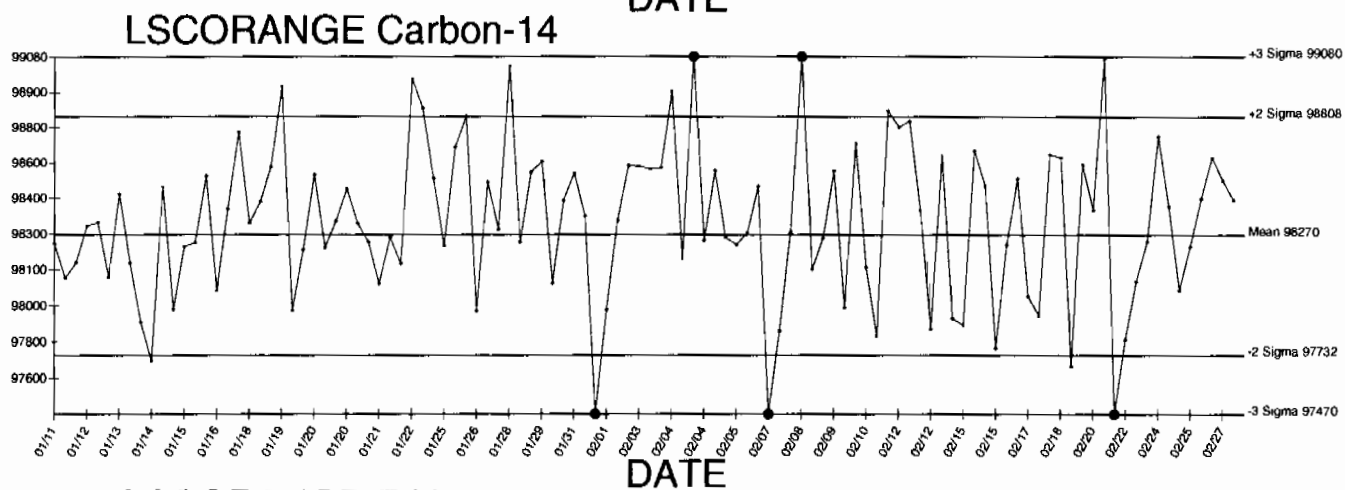
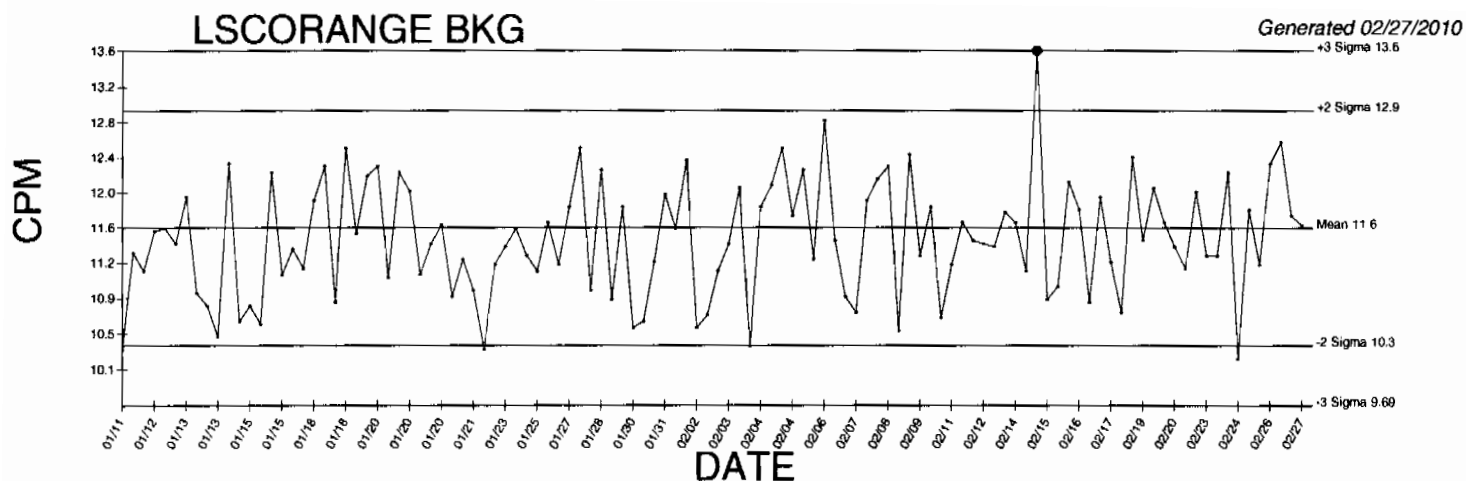


QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM25_2LMB.QAF;1
 Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 10:11:17 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM25.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:26:41 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.62502 +- 9.370414E-03 (0.58 %)





● 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
Page 1189 of 1224
W.F. Case

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
4/9/2009

Mean Value (Counting) =
Stddev =

2709.776428
31.53347278

Certificate Value =
Lower Limit =
Upper Limit =
Rule 1 Pass/Fail
Two sigma =
10 % of Mean =
Rule 2 (Pass/Fail)

2581.86 dpm/mL
2846.709482 dpm/mL
2772.843373 dpm/mL
Fail
63.06694556 dpm/mL
270.9776428 dpm/mL
Pass

*exception taken due to full recovery of standard

Detector CPM
1097.2000
1073.2000
1085.2000

NET CPM
1043.2000
1019.2000
1031.2000

Detector Eff Mass. Used (mL)
0.380548
0.380548
0.380548

Source DPM/mL
2741.3099
2678.242955
2709.776428
Average =
2709.776428

104.954429
0.01163693
Rule 3 (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 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 signatures and dates:
Amanda J. Dehn 4/9/09
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. Analytics 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:

J.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

Calibration 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		A Solution Material Info	
Parent Code:	1032	Isotope:	Mixed Gamma
Prepared By:	Daniel Roy	Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL	Prep Date:	11/30/2006
Reference Date:	10/01/2006	Verification Date:	12/02/2009
Ampoule Mass (g):	5.31725 g	Expiration Date:	12/02/2010
Uncertainty:	+/- 2.81 %	Primary Code:	1032-A
LogBook No:	RC-S-045-073	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

Mean Value (Counting) = 2485.67
Stdev = 64.065
Pass
Rule 3 (Pass/Fail)

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

Cs-137

Isotope	Result	pCi/L - Ver-Tab-1
Mixed Gamma N1	854.2	pCi/L
Mixed Gamma N2	907.6	pCi/L
Mixed Gamma N3	898.9	pCi/L

Mean Value (Counting) = 886.90
Stdev = 28.651

95.01 Pass
Rule 3 (Pass/Fail)

Certificate Value =
Lower Limit =
Upper Limit =
Rule 1 (Pass/Fail)
Two sigma =
10 % of Mean =
Rule 2 (Pass/Fail)

933.44144
829.597644
944.202356
Pass
57.30235597
88.69000000
Pass

11.8 mcp
12/2/09

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.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)

Isotope	Result	pCi/L - Ver-Jae-5
Mixed Gamma N1	1572	pCi/L - Ver-Jae-2
Mixed Gamma N2	1495	pCi/L - Ver-Jae-3
Mixed Gamma N3	1501	

Mean Value (Counting) = 1522.67 Pass
Stdev = 42.829 Rule 3 (Pass/Fail)

Certificate Value = 1545.8378 pCi/L
Lower Limit = 1437.008431 pCi/L
Upper Limit = 1608.324902 pCi/L
Rule 1 (Pass/Fail) Pass
Two sigma = 85.65823564
10 % of Mean = 152.26666667
Rule 2 (Pass/Fail) Pass

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 *fit c held 12/1/04*

angela d. johnson 12/13/04

TRM

Invoice:

5 boxes 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
Th-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	122 ± 4	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
 Lott & Shale 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.

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	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info	
Isotope:	Americium-243
Prepared By:	Angela Johnson
Prep Date:	01/05/1994
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	445-96-2-A
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



NATIONAL PHYSICAL LABORATORY

Teddington Middlesex UK TW11 0LW Telephone +44 20 8977 3222

Certificate of Calibration



0478

PLUTONIUM-236 SOLUTION
R37-02

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

FOR: GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29407
USA

FOR THE ATTENTION OF: Mr Tim Winters

NPL PRODUCT CODE: R37-02

IDENTIFICATION: A09881

DESCRIPTION: An aqueous solution of ^{236}Pu also containing 2 mol dm^{-3} of nitric acid. The solution is contained in a flame sealed ampoule of type Q and nominal volume 5 ml (squat) as defined in BS 795:1983.

DATE(S) OF CALIBRATION: 26 June 2009 to 1 July 2009

INTENDED USE: Calibration of instruments for response to ^{236}Pu

STORAGE: The material may be stored at room temperature in a suitably sealed container. Flame-sealed glass ampoules are recommended for long-term storage. Regulatory conditions may apply to the manner in which this material is stored.

MEASUREMENTS

The samples were prepared by gravimetric dilution of a ^{236}Pu solution, which had been previously standardised using liquid scintillation counting. The accuracy of the dilution factor was checked using liquid scintillation counting.

Reference: 2009100356

Date of Issue: 4 November 2009

Checked by: *Ch Ali*
Page 12 of 1224

Signed: *Arvic Harms*

Name: Dr Arvic Harms

Page 1 of 3

(Authorised Signatory)
for Managing Director

RESULTS

Principal radionuclide:	^{236}Pu
Reference time:	2009-07-01 12:00 UTC
Activity concentration of principal radionuclide:	170.8 Bq g^{-1}
Expanded uncertainty:	$\pm 0.6 \text{ Bq g}^{-1} (\pm 0.36 \%)$
Contaminants present:	$^{226}\text{Ra}, ^{232}\text{U}, ^{228}\text{Th}, ^{237}\text{Np}$
Activity concentration of ^{226}Ra :	11.0 mBq g^{-1}
Expanded uncertainty:	$\pm 4.0 \text{ mBq g}^{-1} (\pm 36 \%)$
Activity concentration of ^{232}U :	0.67 Bq g^{-1}
Expanded uncertainty:	$\pm 0.12 \text{ Bq g}^{-1} (\pm 18 \%)$
Activity concentration of ^{228}Th :	11.38 mBq g^{-1}
Expanded uncertainty:	$\pm 0.46 \text{ mBq g}^{-1} (\pm 4 \%)$
Activity concentration of ^{237}Np :	5.00 mBq g^{-1}
Expanded uncertainty:	$\pm 0.34 \text{ mBq g}^{-1} (\pm 8 \%)$
Sample Mass:	$4.97 \text{ g} \pm 0.02 \text{ g}$

UNCERTAINTIES

The reported uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95 %. The uncertainty evaluations have been carried out in accordance with UKAS requirements.

NOTES

- [1]. The reported reference time is stated consistent with the format given in ISO 8601:2004. UTC is the abbreviation for Universal Time, Coordinated. The date is stated in the format YYYY-MM-DD such that 2008-09-01 represents 1 September 2008.
- [2]. The recommended half life of ^{236}Pu is 1044 (6) days and is taken from the evaluations published in *Nuclear Data Sheets*.
- [3]. The recommended half life of ^{226}Ra is $5.844 (50) \times 10^5$ days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.
- [4]. The recommended half life of ^{232}U is 25800 (800) days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.
- [5]. The recommended half life of ^{237}Np is $7.83 (6) \times 10^8$ days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.
- [6]. The recommended half life of ^{228}Th is 698.60 (46) days and is taken from the evaluations of the *Decay Data Evaluation Project*, see for example www.nucleide.org/DDEP.htm.

UNCERTAINTIES

The reported uncertainties are based on standard uncertainties multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95 %. The uncertainty evaluations have been carried out in accordance with UKAS requirements.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1430
Prepared By:	Ashley Drochter
Carrier Conc:	2 M HNO3
Reference Date:	07/01/2009
Ampoule Mass (g):	4.97 g
Uncertainty:	+/- .36 %
LogBook No:	RC-S-051-149

A Solution Material Info	
Isotope:	Plutonium-236
Prepared By:	Ashley Drochter
Prep Date:	01/27/2010
Verification Date:	01/27/2010
Expiration Date:	01/27/2011
Primary Code:	1430-A
Dilution(mL):	100 mL
Mass of Parent(g):	4.8051 g
Density(g/mL):	1.0610
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(4.8051 \text{ g}) * (170.8 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (100 \text{ mL}) = 492.4266 \text{ dpm/mL}$
$(4.8051 \text{ g}) * (170.8 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (1.0610 \text{ g/mL}) / (100 \text{ mL}) = 464.1156 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/27/2010	Bethany Fiem	33.0429	200	1430-B	76.6786262 dpm/mL	01/27/2010	01/27/2011
03/01/2010	Ashley Drochter	15.2331	200	1430-C	35.3496 dpm/mL	03/01/2010	03/01/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Plutonium-236 Standard 1430-B

	Isotope	Value	Uncertainty
A. Drochter	1430-B	3.080	0.4720
1/29/2010	1430-B	3.000	0.4660
	1430-B	2.960	0.4740
Mean Value (Counting) =	3.013	100.4268	% of Known Value
Stdev =	0.061101009		
Target =	3.00		
Lower Limit =	2.891131315		
Upper Limit =	3.135535352		
Rule 1 Pass/Fail	Pass	Pass	Pass
Two sigma =	0.122202019		
10 % of Mean =	0.301333333		
Rule 2 (Pass/Fail)	Pass		

The analyst prepared three standard verification sources for standard 1430-B 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. After approximately ten minutes, 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-236 were calculated by comparison to Pu-239 certified values.

Signature 1/28/10
2/1/10



Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analytiscinc.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 4.18, 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: WLS

W. Mao, Radiochemist

QA Approved: DM Montgomery

D. M. Montgomery, QA Manager

Date: 12-11-08

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	1283	Isotope:	Uranium-232
Prepared By:	Daniel Roy	Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3	Prep Date:	12/16/2008
Reference Date:	12/09/2008	Verification Date:	12/30/2008
Ampoule Mass (g):	5.20453 g	Expiration Date:	12/30/2009
Uncertainty:	+/- 5 %	Primary Code:	1283-A
LogBook No:	RC-S-051-002	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

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

RUNLOGS

Instrument Run Log

Instrument Type: **GAMMA SPECTROMETER**

Batch ID: **950788**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246440001	SAMPLE	MXR1	GAM15	19-FEB-10 17:57	DONE	CAN	03-FEB-10 00:00
246440002	SAMPLE	MXR1	GAM16	19-FEB-10 17:57	DONE	CAN	16-NOV-09 00:00
246440003	SAMPLE	MXR1	GAM19	19-FEB-10 17:58	DONE	CAN	12-MAR-09 00:00
246440004	SAMPLE	MXR1	GAM21	19-FEB-10 17:58	DONE	CAN	28-JUL-09 00:00
246440005	SAMPLE	MXR1	GAM22	19-FEB-10 17:59	DONE	CAN	02-DEC-09 00:00
246444001	SAMPLE	MXR1	GAM25	19-FEB-10 17:59	DONE	CAN	07-OCT-09 00:00
246440006	SAMPLE	MXR1	GAM17	19-FEB-10 18:02	DONE	CAN	06-JAN-10 00:00
246440007	SAMPLE	MXR1	GAM18	19-FEB-10 18:30	DONE	CAN	23-APR-09 00:00
246440008	SAMPLE	MXR1	GAM01	19-FEB-10 19:26	DONE	CAN	12-JAN-10 00:00
246440009	SAMPLE	MXR1	GAM02	19-FEB-10 19:50	DONE	CAN	29-OCT-09 00:00
246440010	SAMPLE	MXR1	GAM04	19-FEB-10 19:50	DONE	CAN	05-MAY-09 00:00
246440011	SAMPLE	MXR1	GAM07	19-FEB-10 19:50	DONE	CAN	20-JUL-09 00:00
246440012	SAMPLE	MXR1	GAM10	19-FEB-10 19:51	DONE	CAN	16-MAR-09 00:00
246440013	SAMPLE	MXR1	GAM11	19-FEB-10 19:51	DONE	CAN	18-NOV-09 00:00
246440014	SAMPLE	MXR1	GAM12	19-FEB-10 19:52	DONE	CAN	10-FEB-09 00:00
246444002	SAMPLE	MXR1	GAM16	19-FEB-10 20:39	DONE	CAN	16-NOV-09 00:00
246444003	SAMPLE	MXR1	GAM17	19-FEB-10 20:39	DONE	CAN	06-JAN-10 00:00
246444004	SAMPLE	MXR1	GAM18	19-FEB-10 20:40	DONE	CAN	23-APR-09 00:00
246444005	SAMPLE	MXR1	GAM19	19-FEB-10 20:40	DONE	CAN	12-MAR-09 00:00
1202037552	MB	MXR1	GAM21	19-FEB-10 20:41	DONE	CAN	28-JUL-09 00:00
1202037553	DUP	MXR1	GAM22	19-FEB-10 20:42	DONE	CAN	02-DEC-09 00:00
1202037554	LCS	MXR1	GAM14	19-FEB-10 21:35	DONE	CAN	06-MAR-09 00:00

Instrument Run Log

Instrument Type: LSC

Batch ID:953105

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246440001	SAMPLE	KXK2	LSCORANGE	27-FEB-10 02:53	DONE		
246440002	SAMPLE	KXK2	LSCORANGE	27-FEB-10 03:31	DONE		
246440003	SAMPLE	KXK2	LSCORANGE	27-FEB-10 04:08	DONE		
246440004	SAMPLE	KXK2	LSCORANGE	27-FEB-10 04:46	DONE		
246440005	SAMPLE	KXK2	LSCORANGE	27-FEB-10 05:23	DONE		
246440006	SAMPLE	KXK2	LSCORANGE	27-FEB-10 06:01	DONE		
246440007	SAMPLE	KXK2	LSCORANGE	27-FEB-10 06:38	DONE		
246440008	SAMPLE	KXK2	LSCORANGE	27-FEB-10 07:16	DONE		
246440009	SAMPLE	KXK2	LSCORANGE	27-FEB-10 07:53	DONE		
246440010	SAMPLE	KXK2	LSCORANGE	27-FEB-10 08:31	DONE		
246440011	SAMPLE	KXK2	LSCORANGE	27-FEB-10 09:09	DONE		
246440012	SAMPLE	KXK2	LSCORANGE	27-FEB-10 09:46	DONE		
246440013	SAMPLE	KXK2	LSCORANGE	27-FEB-10 10:24	DONE		
246440014	SAMPLE	KXK2	LSCORANGE	27-FEB-10 11:02	DONE		
246477002	SAMPLE	KXK2	LSCORANGE	27-FEB-10 11:39	DONE		
246554002	SAMPLE	KXK2	LSCORANGE	27-FEB-10 12:17	DONE		
246554003	SAMPLE	KXK2	LSCORANGE	27-FEB-10 12:55	DONE		
246554004	SAMPLE	KXK2	LSCORANGE	27-FEB-10 13:00	DONE		
246554005	SAMPLE	KXK2	LSCORANGE	27-FEB-10 13:03	DONE		
1202042922	MB	KXK2	LSCORANGE	27-FEB-10 13:06	DONE		
1202042923	DUP	KXK2	LSCORANGE	27-FEB-10 13:44	DONE		
1202042924	LCS	KXK2	LSCORANGE	27-FEB-10 14:21	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID:953491

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246325001	SAMPLE	MXE1	1031	27-FEB-10 19:45	DONE		
246440001	SAMPLE	MXE1	1033	27-FEB-10 19:45	DONE		
246440002	SAMPLE	MXE1	1035	27-FEB-10 19:45	DONE		
246440003	SAMPLE	MXE1	1036	27-FEB-10 19:45	DONE		
246440004	SAMPLE	MXE1	1043	27-FEB-10 19:45	DUSE		
246440005	SAMPLE	MXE1	1044	27-FEB-10 19:45	DONE		
246440006	SAMPLE	MXE1	1045	27-FEB-10 19:45	DONE		
246440007	SAMPLE	MXE1	1046	27-FEB-10 19:45	DONE		
246440008	SAMPLE	MXE1	1047	27-FEB-10 19:45	DONE		
246440009	SAMPLE	MXE1	1048	27-FEB-10 19:45	DONE		
246440010	SAMPLE	MXE1	1095	27-FEB-10 19:46	DONE		
246440011	SAMPLE	MXE1	1097	27-FEB-10 19:46	DONE		
246440012	SAMPLE	MXE1	1099	27-FEB-10 19:46	DONE		
246440013	SAMPLE	MXE1	1101	27-FEB-10 19:46	DONE		
246440014	SAMPLE	MXE1	1102	27-FEB-10 19:46	DONE		
246444001	SAMPLE	MXE1	1103	27-FEB-10 19:46	DONE		
246444002	SAMPLE	MXE1	1105	27-FEB-10 19:46	DONE		
246444003	SAMPLE	MXE1	1106	27-FEB-10 19:46	DONE		
246444004	SAMPLE	MXE1	1107	27-FEB-10 19:46	DONE		
246444005	SAMPLE	MXE1	1108	27-FEB-10 19:46	DONE		
1202052623	MB	MXE1	1109	27-FEB-10 19:46	DONE		
1202052624	DUP	MXE1	1111	27-FEB-10 19:46	DONE		
1202052625	LCS	MXE1	1112	27-FEB-10 19:46	DONE		
246440004	SAMPLE	MXE1	1099	01-MAR-10 18:21	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID:953494

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246325001	SAMPLE	MXE1	1065	27-FEB-10 19:45	DONE		
246440001	SAMPLE	MXE1	1066	27-FEB-10 19:45	DUSE		
246440002	SAMPLE	MXE1	1067	27-FEB-10 19:45	DUSE		
246440003	SAMPLE	MXE1	1068	27-FEB-10 19:45	DONE		
246440004	SAMPLE	MXE1	1069	27-FEB-10 19:45	DONE		
246440005	SAMPLE	MXE1	1070	27-FEB-10 19:45	DUSE		
246440006	SAMPLE	MXE1	1077	27-FEB-10 19:45	DONE		
246440007	SAMPLE	MXE1	1079	27-FEB-10 19:45	DONE		
246440008	SAMPLE	MXE1	1080	27-FEB-10 19:45	DUSE		
246440009	SAMPLE	MXE1	1081	27-FEB-10 19:45	DONE		
246440010	SAMPLE	MXE1	1082	27-FEB-10 19:45	DONE		
246444003	SAMPLE	MXE1	1089	27-FEB-10 19:46	DONE		
246444004	SAMPLE	MXE1	1090	27-FEB-10 19:46	DUSE		
246444005	SAMPLE	MXE1	1091	27-FEB-10 19:46	DONE		
1202044064	MB	MXE1	1092	27-FEB-10 19:46	DONE		
1202044065	DUP	MXE1	1093	27-FEB-10 19:46	DUSE		
1202044066	LCS	MXE1	1094	27-FEB-10 19:46	DONE		
246440011	SAMPLE	MXE1	1083	27-FEB-10 20:33	DUSE		
246440012	SAMPLE	MXE1	1084	27-FEB-10 20:33	DUSE		
246440013	SAMPLE	MXE1	1085	27-FEB-10 20:33	DUSE		
246440014	SAMPLE	MXE1	1086	27-FEB-10 20:33	DONE		
246444001	SAMPLE	MXE1	1087	27-FEB-10 20:33	DUSE		
246444002	SAMPLE	MXE1	1088	27-FEB-10 20:33	DONE		
246440001	SAMPLE	MXE1	1025	01-MAR-10 18:20	DONE		
246440002	SAMPLE	MXE1	1026	01-MAR-10 18:20	DONE		
246440005	SAMPLE	MXE1	1027	01-MAR-10 18:20	DONE		
246440008	SAMPLE	MXE1	1028	01-MAR-10 18:20	DONE		
246440011	SAMPLE	MXE1	1029	01-MAR-10 18:20	DONE		
246440012	SAMPLE	MXE1	1030	01-MAR-10 18:20	DUSE		
246440013	SAMPLE	MXE1	1031	01-MAR-10 18:20	DONE		
246444001	SAMPLE	MXE1	1033	01-MAR-10 18:20	DONE		
246444004	SAMPLE	MXE1	1035	01-MAR-10 18:20	DONE		
1202044065	DUP	MXE1	1036	01-MAR-10 18:20	DONE		
246440012	SAMPLE	MXE1	1037	03-MAR-10 07:24	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 953497

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246325001	SAMPLE	MXE1	1118	27-FEB-10 20:03	DONE		
246440001	SAMPLE	MXE1	1119	27-FEB-10 20:03	DONE		
246440002	SAMPLE	MXE1	1120	27-FEB-10 20:03	DONE		
246440003	SAMPLE	MXE1	1121	27-FEB-10 20:03	DONE		
246440004	SAMPLE	MXE1	1122	27-FEB-10 20:03	DONE		
246440005	SAMPLE	MXE1	1123	27-FEB-10 20:03	DONE		
246440006	SAMPLE	MXE1	1124	27-FEB-10 20:03	DONE		
246440007	SAMPLE	MXE1	1125	27-FEB-10 20:04	DONE		
246440008	SAMPLE	MXE1	1126	27-FEB-10 20:04	DONE		
246440009	SAMPLE	MXE1	1127	27-FEB-10 20:04	DONE		
246440010	SAMPLE	MXE1	1128	27-FEB-10 20:04	DONE		
246440011	SAMPLE	MXE1	1129	27-FEB-10 20:04	DONE		
246440012	SAMPLE	MXE1	1130	27-FEB-10 20:04	DONE		
246440013	SAMPLE	MXE1	1131	27-FEB-10 20:04	DONE		
246440014	SAMPLE	MXE1	1132	27-FEB-10 20:04	DONE		
246444001	SAMPLE	MXE1	1133	27-FEB-10 20:04	DONE		
246444002	SAMPLE	MXE1	1138	27-FEB-10 20:04	DONE		
246444003	SAMPLE	MXE1	1139	27-FEB-10 20:04	DONE		
246444004	SAMPLE	MXE1	1140	27-FEB-10 20:04	DONE		
246444005	SAMPLE	MXE1	1141	27-FEB-10 20:04	DONE		
1202044075	MB	MXE1	1142	27-FEB-10 20:04	DONE		
1202044076	DUP	MXE1	1143	27-FEB-10 20:04	DONE		
1202044077	LCS	MXE1	1144	27-FEB-10 20:04	DONE		