

Wednesday, February 10, 2010

Page 1 of 3
REQUEST NUMBER: 10-1760

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: 10-1760

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 2/10/2010

TURNAROUND/REPORT DUE: 3/12/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY METHOD CODE

CNTNR SAMPLE ID

SAMPLE MATRIX

DATE SAMPLED

SPECIAL INSTRUCTIONS

EPA.901.1	1	RE15-10-8340	R	2/9/2010	
	1	RE15-10-8341	R	2/9/2010	
	1	RE15-10-8364	R	2/9/2010	
	1	RE15-10-8365	R	2/9/2010	
	1	RE15-10-8366	R	2/9/2010	
	1	RE15-10-8367	R	2/9/2010	
	1	RE15-10-8368	R	2/9/2010	
	1	RE15-10-8376	R	2/9/2010	
EPA.906.0	1	RE15-10-8340	R	2/9/2010	

Wednesday, February 10, 2010

REQUEST NUMBER: 10-1760

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA:906.0		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
		1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
HASL-300:AM-241		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
		1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
HASL-300:ISOPU		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
		1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
HASL-300:ISOU		1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	

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REQUEST NUMBER: 10-1760

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
HASL-300:ISOU						
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	

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Wednesday, February 10, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1760

LOS ALAMOS

REQUEST NUMBER: 10-1760

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/12/2010

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
RE15-10-8366	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8366	1	POLY	H3	Ice	R
RE15-10-8367	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8367	1	POLY	H3	Ice	R
RE15-10-8364	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8364	1	POLY	H3	Ice	R
RE15-10-8365	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8365	1	POLY	H3	Ice	R
RE15-10-8368	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8368	1	POLY	H3	Ice	R
RE15-10-8340	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8340	1	POLY	H3	Ice	R
RE15-10-8341	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8341	1	POLY	H3	Ice	R
RE15-10-8376	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8376	1	POLY	H3	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

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

SAMPLE ID: RE15-10-8340

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA: OBT3		27m 2/9/10 ATK SED	
TIME COLLECTED (HH:MM)		0930		SUB-MEDIA: TUFF 1		NA	
PRS ID: 15-009(c)		OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID: 15-610840		↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE: GENERIC		↓		FIELD PREP: NA		↓	
TOP DEPTH: 0		0.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH: 0		1.0		SCREEN/PORT DESC:		NA	
FIELD MATRIX: R		SED		EXCAVATED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA			
BOREHOLE: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> 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+NO3+pH	500 ML POLY	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown moist silty sand, full fragments

FTB: RE15-10-8384

FD: RE15-10-8376

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-14 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha \leq 11 dpm
 Beta/Gamma \leq 1790 dpm

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

77m 2/9/10

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Riley Evans

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A Lopez	02/09/10	(Printed Name) Sheri Sherwood	2/9/10
(Signature) Larry A. Lopez	14:30	(Signature) Sheri Sherwood	1430
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: RE15-10-8341

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA:	OBT3		ok
TIME COLLECTED (HH:MM)		0958		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610840	↓		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	ok		EXCAVATED: YES/NO/NA	NO		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA	NO		
BOREHOLE: YES/NO/NA	NO			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+NO3+pH	500 ML POLY	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Pinkish gray tuff

SAMPLE COMMENTS:

Tuff at 1.0 ft

LOCATION DESC:

9c-14 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 16 dpm
Beta/Gamma \leq 2250 dpm

77m 2/9/10
PID $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm}$

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

Riley Gwos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A Lopez	02/09/10	(Printed Name) Jennifer Greenwood	2/9/10
(Signature) Larry A. Lopez	15:24	(Signature) Jennifer Greenwood	15:24
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: RE15-10-8364

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA:	QBT3		SED
TIME COLLECTED (HH:MM)		1010		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610852	↓		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	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, tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-15 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha \leq 11 dpm
 Beta/Gamma \leq 2210 dpm

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

73m 2/9/10

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Riley Gans

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) LARRY A. LOPEZ	02/09/10	(Printed Name) Sherry Herwood	2/9/10
(Signature) Larry A. Lopez	15:24	(Signature) Sherry Herwood	1524
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: RE15-10-8365

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA: OBT3		SED	
TIME COLLECTED (HH:MM)		1031		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-009(c)	ok		SAMPLE TECH CODE: HA		ok	
LOCATION ID:	15-610852	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	1.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	1.7		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:

Brown silty sand, Tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

qc-15 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 16 dpm
Beta/Gamma \leq 2030 dpm

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

COLLECTED BY (PRINT)

Th. McFarland

REVIEWED BY (PRINT)

Riley Evans

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A. Lopez	02/09/10	(Printed Name) Sherri Sherwood	2/9/10
(Signature) Larry A. Lopez	15:24	(Signature) Sherri Sherwood	1524
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: RE15-10-8366

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1041		SUB-MEDIA:		TUFF 1	
PRS ID: 15-009(c)		OK		SAMPLE TECH CODE:		HA	
LOCATION ID: 15-610853		↓		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		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	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, tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-16 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

73m 2/9/10

Alpha ≤ 11 dpm

Beta/Gamma ≤ 2030 dpm

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

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Riley Evans

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) LARRY A. LOPEZ	02/09/10	(Printed Name) JENNIFER WOOD	2/9/10
(Signature) Larry A. Lopez	1524	(Signature) Jennifer Wood	1524
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: RE15-10-8367

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA:	QBT3		SED
TIME COLLECTED (HH:MM)		1050		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610853	↓		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	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, few tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-16 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 11 dpm
Beta/Gamma = 1949 dpm

72m 2/9/10
PID $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm}$

COLLECTED BY (PRINT)

TLMCFarland

REVIEWED BY (PRINT)

Riley Wans

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Lacey A. Lopez	02/09/10	(Printed Name) Sherrif Newwood	2/9/10
(Signature) Lacey A. Lopez	15:24	(Signature) Sherrif Newwood	15:24
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: RE15-10-8368

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA: QBT3		SED	
TIME COLLECTED (HH:MM)		1113		SUB-MEDIA: TUFF 1		NA	
PRS ID: 15-009(c)		OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID: 15-610854		↓		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 <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA			
BOREHOLE: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> 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, tuff fragments, roots

FR: RE 15-10-8380

SAMPLE COMMENTS:

NA

LOCATION DESC:

9c-17 drainage

FIELD SCREENING/MEASUREMENT RESULTS: HE positive

Alpha = 22 dpm
Beta/Gamma = 2172 dpm

PID $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm}$ 72m 2/9/10

COLLECTED BY (PRINT)

J. McFarland

REVIEWED BY (PRINT)

Riley VAS

RELINQUISHED BY (Printed Name) Larry A. Lopez (Signature) Larry A. Lopez	Date/Time 02/09/10 14:30	RECEIVED BY (Printed Name) Sherif Sherwood (Signature) Sherif Sherwood	Date/Time 2/9/10 1430
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: RE15-10-8376

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA: OBT3		13m 2/9/10 AHH SED	
TIME COLLECTED(HH:MM)		0930		SUB-MEDIA: TUFF 1		NA	
PRS ID: 15-009(c)		ok		SAMPLE TECH CODE: HA		ok	
LOCATION ID: UNK		15-610840		FIELD QC TYPE: ED		↓	
LOCATION TYPE: GENERIC		ok		FIELD PREP: NA		↓	
TOP DEPTH: 0		0.0		SAMPLE USAGE: QC		↓	
BOTTOM DEPTH: 0		1.0		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: QC Sample of RE 15-10-8340

Brown moist silty sand, tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC: 9C-14 drainage

FIELD SCREENING/MEASUREMENT RESULTS: HE negative

Alpha ≤ 11 dpm
Beta/Gamma ≤ 1790 dpm

PID $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm}$ 73m 2/9/10

COLLECTED BY (PRINT)

JLMcFarland

REVIEWED BY (PRINT)

Riley Evans

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Lesley A. Lopez	02/09/10	(Printed Name) Sherrigherwood	2/9/10
(Signature) Lesley A. Lopez	1524	(Signature) Sherrigherwood	1524
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: RE15-10-8380

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010		MEDIA:	NA		
TIME COLLECTED (HH:MM)		12:10		SUB-MEDIA:	OTHER		
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	DC		
LOCATION ID:	UNK	15-910854		FIELD QC TYPE:	FR		
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		SW-846:6850	250 ML POLY	Ice	Y	
1		TCN	500 ML POLY	Sodium Hydroxide	Y	

SAMPLE DESC: QC Sample of RE 15-10-8368

SAMPLE COMMENTS:

Rinsate

LOCATION DESC:

NA

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT)

TL McFarlane

REVIEWED BY (PRINT)

Riley Evans

RELINQUISHED BY (Printed Name) Larry A. Lopez (Signature) Larry A. Lopez	Date/Time 02/09/10 15:24	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	Date/Time 2/9/10 1524
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	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: RE15-10-8384

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/09/2010	MEDIA:	FILL		ok	
TIME COLLECTED(HH:MM)		0913	SUB-MEDIA:	SOIL			
PRS ID:	15-009(c)	ok	SAMPLE TECH CODE:	DC			
LOCATION ID:	UNK	15-610840	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 12	Normal	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	y	

SAMPLE DESC: QC Sample of RE15-10-8340

FTB

SAMPLE COMMENTS:

NA

LOCATION DESC:

NA

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT)

JLMcFarland

REVIEWED BY (PRINT)

Riley Evans

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) LARRY A. Lopez	02/09/10	(Printed Name) Sherrif Sherwood	2/9/10
(Signature) Larry A. Lopez	1524	(Signature) Sherrif Sherwood	1524
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

Rad Screening Data Release Form

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

RE15-10-8368
RE15-10-8340
RE15-10-8376
RE15-10-8341
RE15-10-8364
RE15-10-8366
RE15-10-8365
RE15-10-8367

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):

RE15-10-8380 (FR)
RE15-10-8384 (FTB)

Reason: FR - Field Rinse
FTB - Field Trip Blank

.....

Print Last Name Lopez

Signature

Randy A. Lopez

Date

02/09/10

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Data Validation Cover Sheet**Section I.**REQUEST NUMBER: 10-1760 VALIDATION DATE: 03/27/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Susan Ball ORGANIZATION: Analytical Quality Associates, Inc.

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 |
| <input type="checkbox"/> GENERAL CHEMISTRY | <input checked="" type="checkbox"/> RADIOCHEMISTRY | <input type="checkbox"/> LCMSMS HIGH EXPLOSIVES | PESTICIDES/POLYCHLORINATED BIPHENYLS |
| <input type="checkbox"/> OTHER (DESCRIBE): _____ | | | |


Section II. Completeness Check

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

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

- The gamma spec results that were rejected by the laboratory due to high counting uncertainty, interference, and low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.
- An MS was not analyzed for tritium. However, an LCS was analyzed and met acceptance criteria, thus, no sample results were qualified.
- It should be noted that the parent matrix QC samples for Am-241, isotopic plutonium, one of the isotopic uranium batches, and gamma spec were from other LANL RNs. No sample results were qualified.


Reviewed by: ETMLevel: 1Date: 3/29/10VALIDATOR'S SIGNATURE: [Signature]DATE: 03/27/10

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

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

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

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. The tracer is < the Lower Acceptance Level (LAL) but $\geq 10\%R$. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
<input 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 (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: March 10, 2010

Client Sample ID: RE15-10-8366
Sample ID: 246875001
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 18%

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	0.00871		0.0373	+/-0.00483	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>													
Plutonium-238	U	0.00731		0.0357	+/-0.00676	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.0036		0.0271	+/-0.00641	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>													
Uranium-233/234		2.75		0.0905	+/-0.219	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236		0.173		0.0577	+/-0.0303	0.100	pCi/g						
Uranium-238		3.93		0.0618	+/-0.303	0.100	pCi/g						
Rad Gamma Spec Analysis													
<i>GAMMA SPEC "Dry Weight Corrected"</i>													
Americium-241	U	0.0472		0.153	+/-0.0465	0.200	pCi/g		MXR1	02/23/10	2320	952643	4
Bismuth-211	UI	3.54	R,R5a	0.204	+/-0.240		pCi/g						
Bismuth-214		1.10		0.0653	+/-0.0782	0.200	pCi/g						
Cadmium-109	UI	2.60	R,R5a	0.773	+/-0.336		pCi/g						
Cerium-139	U	0.0195		0.033	+/-0.0104	0.050	pCi/g						
Cesium-134	UI	0.112	R,R5a	0.0542	+/-0.0211	0.100	pCi/g						
Cesium-137		0.196		0.0385	+/-0.0224	0.100	pCi/g						
Cobalt-60	U	0.0152		0.0363	+/-0.0105	0.100	pCi/g						
Europium-152	U	-0.0408		0.0953	+/-0.0346	0.200	pCi/g						
Lanthanum-140	U	-0.0808		0.0729	+/-0.0247		pCi/g						
Lead-212		1.65		0.0594	+/-0.114	0.100	pCi/g						
Lead-214		1.23		0.0705	+/-0.0893	0.100	pCi/g						
Mercury-203	U	0.039		0.0446	+/-0.0148	0.100	pCi/g						
Potassium-40		34.5		0.332	+/-1.67	1.00	pCi/g						
Radium-223	U	-0.0331		0.688	+/-0.228		pCi/g						
Radium-224	UI	4.00	R,R5a	0.675	+/-0.443		pCi/g						
Radium-226		1.10		0.0653	+/-0.0782		pCi/g						
Radium-228		1.68		0.132	+/-0.140	0.500	pCi/g						
Ruthenium-106	U	0.0234		0.310	+/-0.091	0.800	pCi/g						
Sodium-22	U	0.00109		0.0426	+/-0.0127	0.080	pCi/g						
Strontium-85	UI	0.129	R,R5a	0.0452	+/-0.0145		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 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8366
246875001

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		0.494	0.0336	+/-0.0348	0.080	pCi/g						
Thorium-227	U	-0.0112	0.407	+/-0.121		pCi/g						
Thorium-231	U	-0.0331	0.688	+/-0.228		pCi/g						
Thorium-234		3.58	1.25	+/-0.677	2.00	pCi/g						
Tin-113	U	-0.0132	0.0435	+/-0.013	0.100	pCi/g						
Uranium-235		0.290	0.222	+/-0.0993	0.500	pCi/g						
Yttrium-88	U	0.00651	0.029	+/-0.00997	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	48.9	159	+/-47.1	250	pCi/L		KXK2	02/16/10	2231	953115	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"	74.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	94.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.0	(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

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 10, 2010

Client Sample ID: RE15-10-8367
Sample ID: 246875002
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 19.3%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.000973	0.0397	+/-0.00281	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0168	0.038	+/-0.0115	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.00127	0.0288	+/-0.00435	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.82	0.0957	+/-0.156	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236		0.117	0.061	+/-0.0258	0.100	pCi/g						
Uranium-238		3.43	0.0653	+/-0.273	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.073	0.263	+/-0.0842	0.200	pCi/g		MXR1	02/23/10	2321	952643	4
Bismuth-211	UI	3.67	R,R5a	0.274	+/-0.208	pCi/g						
Bismuth-214		1.04		0.0935	+/-0.0761	pCi/g						
Cadmium-109	UI	3.55	R,R5a	1.10	+/-0.424	pCi/g						
Cerium-139	U	-0.00615		0.0417	+/-0.0126	pCi/g						
Cesium-134	UI	0.0848	R,R5a	0.0752	+/-0.0228	pCi/g						
Cesium-137		0.0812		0.0531	+/-0.0265	pCi/g						
Cobalt-60	U	-0.0041		0.057	+/-0.0177	pCi/g						
Europium-152	U	-0.0893		0.127	+/-0.0457	pCi/g						
Lanthanum-140	U	0.0419		0.100	+/-0.0312	pCi/g						
Lead-212		1.60		0.0741	+/-0.0714	pCi/g						
Lead-214		1.28		0.0863	+/-0.0796	pCi/g						
Mercury-203	U	-0.0201		0.0538	+/-0.016	pCi/g						
Potassium-40		34.5		0.448	+/-1.51	pCi/g						
Radium-223	U	-1.12		0.888	+/-0.296	pCi/g						
Radium-224	UI	4.07	R,R5a	0.843	+/-0.525	pCi/g						
Radium-226		1.04		0.0935	+/-0.0761	pCi/g						
Radium-228		1.58		0.186	+/-0.147	pCi/g						
Ruthenium-106	U	-0.132		0.439	+/-0.138	pCi/g						
Sodium-22	U	-0.0442		0.0601	+/-0.0201	pCi/g						
Strontium-85	U	0.0523		0.0538	+/-0.017	pCi/g						
Thallium-208		0.528		0.0472	+/-0.0389	pCi/g						

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

Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8367
246875002

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	-0.00668	0.513	+/-0.157		pCi/g						
Thorium-231	U	-1.12	0.888	+/-0.296		pCi/g						
Thorium-234		4.54	2.05	+/-1.13	2.00	pCi/g						
Tin-113	U	-0.00643	0.0624	+/-0.0186	0.100	pCi/g						
Uranium-235	U	0.0629	0.305	+/-0.0927	0.500	pCi/g						
Yttrium-88	U	-0.00153	0.0446	+/-0.0137	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium	U	70.6	160	+/-48.4	250	pCi/L		KXK2	02/16/10	2318	953115	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"	71.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	90.1	(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 :

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

Report Date: March 10, 2010

Client Sample ID: RE15-10-8364
Sample ID: 246875003
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 23.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00118	0.0424	+/-0.003	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00969	0.0403	+/-0.00574	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.00549	0.0305	+/-0.00621	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.61	0.0934	+/-0.138	0.100	pCi/g		MXE1	03/05/10	1829	957004	3
Uranium-235/236		0.119	0.0595	+/-0.0248	0.100	pCi/g						
Uranium-238		2.93	0.0638	+/-0.233	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.100	0.143	+/-0.0448	0.200	pCi/g		MXR1	02/23/10	2349	952643	4
Bismuth-211	UI	4.20	R,R5a	0.233	+/-0.259	pCi/g						
Bismuth-214		1.24		0.0802	+/-0.087	0.200	pCi/g					
Cadmium-109	UI	4.85	R,R5a	0.730	+/-0.446	pCi/g						
Cerium-139	U	0.00308		0.034	+/-0.0103	0.050	pCi/g					
Cesium-134	UI	0.126	R,R5a	0.067	+/-0.0261	0.100	pCi/g					
Cesium-137		0.167		0.0442	+/-0.0211	0.100	pCi/g					
Cobalt-60	U	-0.00748		0.0451	+/-0.0143	0.100	pCi/g					
Europium-152	U	-0.0748		0.103	+/-0.0337	0.200	pCi/g					
Lanthanum-140	U	-0.0121		0.0843	+/-0.0305	pCi/g						
Lead-212		1.77		0.0614	+/-0.103	0.100	pCi/g					
Lead-214		1.46		0.0767	+/-0.0979	0.100	pCi/g					
Mercury-203	U	0.0344		0.0419	+/-0.0174	0.100	pCi/g					
Potassium-40		36.6		0.331	+/-1.73	1.00	pCi/g					
Radium-223	U	-0.365		0.732	+/-0.258	pCi/g						
Radium-224	UI	4.61	R,R5a	0.699	+/-0.499	pCi/g						
Radium-226		1.24		0.0802	+/-0.087	pCi/g						
Radium-228		1.71		0.146	+/-0.141	0.500	pCi/g					
Ruthenium-106	U	-0.105		0.341	+/-0.109	0.800	pCi/g					
Sodium-22	U	-0.0131		0.0493	+/-0.0158	0.080	pCi/g					
Strontium-85	UI	0.0826	R,R5a	0.0478	+/-0.0145	pCi/g						
Thallium-208		0.601		0.0399	+/-0.0432	0.080	pCi/g					

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

Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8364
246875003

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	0.229	0.459	+/-0.132		pCi/g						
Thorium-231	U	-0.365	0.732	+/-0.258		pCi/g						
Thorium-234		2.97	1.21	+/-0.633	2.00	pCi/g						
Tin-113	U	-0.0161	0.0516	+/-0.0158	0.100	pCi/g						
Uranium-235	U	0.0615	0.250	+/-0.0771	0.500	pCi/g						
Yttrium-88	U	-0.0108	0.0375	+/-0.0122	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	-26.5	161	+/-44.6	250	pCi/L		KXK2	02/17/10	0006	953115	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"	69.6	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	86.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	96.6	(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
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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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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8365
Sample ID: 246875004
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 16.9%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
<i>AM241 "Dry Weight Corrected"</i>													
Americium-241	U	-0.000368		0.041	+/-0.00325	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>													
Plutonium-238	U	0.0116		0.0375	+/-0.00595	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.0232		0.0285	+/-0.00784	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>													
Uranium-233/234		1.12		0.0966	+/-0.102	0.100	pCi/g		MXE1	03/09/10	1723	962636	3
Uranium-235/236		0.0932		0.059	+/-0.0218	0.100	pCi/g						
Uranium-238		1.66		0.0679	+/-0.142	0.100	pCi/g						
Rad Gamma Spec Analysis													
<i>GAMMA SPEC "Dry Weight Corrected"</i>													
Americium-241	U	0.0649		0.423	+/-0.119	0.200	pCi/g		MXR1	02/24/10	0851	952643	5
Bismuth-211	UI	4.18	R,R5a	0.360	+/-0.279		pCi/g						
Bismuth-214		1.12		0.120	+/-0.0953	0.200	pCi/g						
Cadmium-109	UI	2.35	R,R5a	1.49	+/-0.575		pCi/g						
Cerium-139	U	-0.00937		0.0524	+/-0.016	0.050	pCi/g						
Cesium-134	U	0.0789		0.111	+/-0.0415	0.100	pCi/g						
Cesium-137	U	0.0523		0.0783	+/-0.0272	0.100	pCi/g						
Cobalt-60	U	-0.00838		0.0766	+/-0.0234	0.100	pCi/g						
Europium-152	U	-0.019		0.172	+/-0.0555	0.200	pCi/g						
Lanthanum-140	U	0.0536		0.133	+/-0.0398		pCi/g						
Lead-212		1.90		0.094	+/-0.098	0.100	pCi/g						
Lead-214		1.45		0.125	+/-0.104	0.100	pCi/g						
Mercury-203	U	0.0254		0.0741	+/-0.0209	0.100	pCi/g						
Potassium-40		37.3		0.548	+/-1.69	1.00	pCi/g						
Radium-223	U	0.141		1.19	+/-0.393		pCi/g						
Radium-224	UI	5.27	R,R5a	1.07	+/-0.736		pCi/g						
Radium-226		1.12		0.120	+/-0.0953		pCi/g						
Radium-228		1.86		0.245	+/-0.205	0.500	pCi/g						
Ruthenium-106	U	-0.208		0.554	+/-0.181	0.800	pCi/g						
Sodium-22	U	0.00201		0.0839	+/-0.025	0.080	pCi/g						
Strontium-85	U	0.0614		0.073	+/-0.0226		pCi/g						
Thallium-208		0.601		0.0618	+/-0.050	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8365
246875004

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	0.069	0.713	+/-0.205		pCi/g						
Thorium-231	U	0.141	1.19	+/-0.393		pCi/g						
Thorium-234	U	0.767	3.25	+/-0.927	2.00	pCi/g						
Tin-113	U	-0.0287	0.0736	+/-0.0229	0.100	pCi/g						
Uranium-235	U	0.166	0.374	+/-0.109	0.500	pCi/g						
Yttrium-88	U	-0.0115	0.0622	+/-0.0204	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		288	236	+/-78.5	250	pCi/L		KXK2	02/19/10	0624	953115	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, U-02-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"	69.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	83.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.7	(50%-105%)

Notes:

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

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

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

Report Date: March 10, 2010

Client Sample ID: RE15-10-8368
Sample ID: 246875005
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 24.6%

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	0.0109	0.0403	+/-0.00789	0.050	pCi/g		MXE1	03/06/10 1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>											
Plutonium-238	U	0.00111	0.0327	+/-0.00252	0.050	pCi/g		MXE1	03/06/10 1201	957001	2
Plutonium-239/240	U	0.0045	0.0248	+/-0.00319	0.050	pCi/g					
<i>ISOU "Dry Weight Corrected"</i>											
Uranium-233/234		1.99	0.0961	+/-0.166	0.100	pCi/g		MXE1	03/05/10 1807	957004	3
Uranium-235/236		0.104	0.0613	+/-0.0233	0.100	pCi/g					
Uranium-238		3.45	0.0656	+/-0.270	0.100	pCi/g					
Rad Gamma Spec Analysis											
<i>GAMMA SPEC "Dry Weight Corrected"</i>											
Americium-241	U	0.0685	0.182	+/-0.0556	0.200	pCi/g		MXR1	02/24/10 0852	952643	4
Bismuth-211	UI	3.89	R,R5a	0.324	+/-0.273	pCi/g					
Bismuth-214		1.17		0.112	+/-0.102	0.200	pCi/g				
Cadmium-109	UI	2.55	R,R5a	1.14	+/-0.467	pCi/g					
Cerium-139	U	0.0147		0.0496	+/-0.0145	0.050	pCi/g				
Cesium-134	UI	0.0961	R,R5a	0.0891	+/-0.0304	0.100	pCi/g				
Cesium-137		0.118		0.0607	+/-0.0321	0.100	pCi/g				
Cobalt-60	U	0.0173		0.0665	+/-0.0191	0.100	pCi/g				
Europium-152	U	0.0131		0.157	+/-0.0474	0.200	pCi/g				
Lanthanum-140	U	-0.0292		0.122	+/-0.0397	pCi/g					
Lead-212		1.65		0.0897	+/-0.0949	0.100	pCi/g				
Lead-214		1.35		0.109	+/-0.101	0.100	pCi/g				
Mercury-203	U	0.0588		0.0716	+/-0.0195	0.100	pCi/g				
Potassium-40		30.9		0.489	+/-1.58	1.00	pCi/g				
Radium-223	U	-0.665		1.05	+/-0.331	pCi/g					
Radium-224	UI	4.92	R,R5a	1.02	+/-0.834	pCi/g					
Radium-226		1.17		0.112	+/-0.102	pCi/g					
Radium-228		1.65		0.203	+/-0.158	0.500	pCi/g				
Ruthenium-106	U	-0.318		0.491	+/-0.156	0.800	pCi/g				
Sodium-22	U	-0.0164		0.0702	+/-0.0218	0.080	pCi/g				
Strontium-85	UI	0.0981	R,R5a	0.0717	+/-0.0204	pCi/g					
Thallium-208		0.575		0.0596	+/-0.0475	0.080	pCi/g				

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8368
246875005

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	0.0915	0.626	+/-0.178		pCi/g					
Thorium-231	U	-0.665	1.05	+/-0.331		pCi/g					
Thorium-234		5.09	1.56	+/-0.864	2.00	pCi/g					
Tin-113	U	-0.0306	0.0663	+/-0.0208	0.100	pCi/g					
Uranium-235	U	0.264	0.365	+/-0.107	0.500	pCi/g					
Yttrium-88	U	0.0283	0.0622	+/-0.0164	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium		329	126	+/-54.3	250	pCi/L		KXK2	02/18/10	0222 953115	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"	74.9	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.7	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Certificate of Analysis

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

Report Date: March 10, 2010

Client Sample ID: RE15-10-8340
Sample ID: 246875006
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 24.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	-0.00192	0.0423	+/-0.00696	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.015	0.0364	+/-0.00619	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.0025	0.0276	+/-0.00251	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.32	0.112	+/-0.122	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236	U	0.0549	0.0715	+/-0.0194	0.100	pCi/g						
Uranium-238		1.15	0.0765	+/-0.110	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.176	0.261	+/-0.0845	0.200	pCi/g		MXR1	02/24/10	0852	952643	4
Bismuth-211	UI	5.42	R,R5a	0.354	+/-0.328	pCi/g						
Bismuth-214		1.66		0.125	+/-0.120	pCi/g						
Cadmium-109	UI	4.75	R,R5a	1.36	+/-0.623	pCi/g						
Cerium-139	U	-0.00687	0.0582	+/-0.0179	0.050	pCi/g						
Cesium-134	U	0.0688	0.0966	+/-0.0339	0.100	pCi/g						
Cesium-137	U	0.00604	0.0735	+/-0.0223	0.100	pCi/g						
Cobalt-60	U	-0.0276	0.0682	+/-0.0223	0.100	pCi/g						
Europium-152	U	0.0601	0.181	+/-0.0753	0.200	pCi/g						
Lanthanum-140	U	-0.0538	0.176	+/-0.0574		pCi/g						
Lead-212		2.34	0.104	+/-0.107	0.100	pCi/g						
Lead-214		1.89	0.124	+/-0.124	0.100	pCi/g						
Mercury-203	U	0.0477	0.0814	+/-0.023	0.100	pCi/g						
Potassium-40		37.8	0.660	+/-1.72	1.00	pCi/g						
Radium-223	U	0.143	1.33	+/-0.447		pCi/g						
Radium-224	UI	6.57	R,R5a	1.18	+/-0.858	pCi/g						
Radium-226		1.66	0.125	+/-0.120		pCi/g						
Radium-228		2.33	0.234	+/-0.230	0.500	pCi/g						
Ruthenium-106	U	0.189	0.645	+/-0.191	0.800	pCi/g						
Sodium-22	U	-0.0192	0.0755	+/-0.0239	0.080	pCi/g						
Strontium-85	UI	0.102	R,R5a	0.0832	+/-0.0255	pCi/g						
Thallium-208		0.812	0.0695	+/-0.0582	0.080	pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8340
246875006

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	0.136	0.752	+/-0.218		pCi/g						
Thorium-231	U	0.143	1.33	+/-0.447		pCi/g						
Thorium-234	UI	2.34	R,R5a	2.20	+/-1.13	2.00	pCi/g					
Tin-113	U	0.00775	0.084	+/-0.0249	0.100	pCi/g						
Uranium-235	U	0.148	0.425	+/-0.128	0.500	pCi/g						
Yttrium-88	U	0.00354	0.0569	+/-0.0174	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium	U	15.0	162	+/-46.5	250	pCi/L	KXK2	02/17/10	0228	953115	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"	76.6	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	89.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	73.8	(50%-105%)

Notes:

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

The Qualifiers in this report are defined as follows :

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

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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 10, 2010

Client Sample ID: RE15-10-8341
Sample ID: 246875007
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 7.56%

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	-0.00574	0.0367	+/-0.00345	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0146	0.0353	+/-0.00601	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.00486	0.0268	+/-0.00345	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.17	0.108	+/-0.109	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236	U	0.0581	0.0687	+/-0.018	0.100	pCi/g						
Uranium-238		1.15	0.0736	+/-0.108	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.0945	0.631	+/-0.188	0.200	pCi/g		MXR1	02/24/10	0853	952643	4
Bismuth-211	UI	6.06	R,R5a	0.463	+/-0.447	pCi/g						
Bismuth-214		1.66		0.163	+/-0.144	pCi/g						
Cadmium-109	UI	3.72	R,R5a	2.05	+/-0.798	pCi/g						
Cerium-139	U	0.0216		0.0777	+/-0.0234	pCi/g						
Cesium-134	UI	0.176	R,R5a	0.127	+/-0.048	pCi/g						
Cesium-137	U	-0.0236		0.0833	+/-0.0256	pCi/g						
Cobalt-60	U	-0.0253		0.0866	+/-0.0286	pCi/g						
Europium-152	U	-0.0625		0.231	+/-0.0875	pCi/g						
Lanthanum-140	U	-0.116		0.184	+/-0.0643	pCi/g						
Lead-212		2.49		0.133	+/-0.171	pCi/g						
Lead-214		2.11		0.162	+/-0.165	pCi/g						
Mercury-203	UI	0.129	R,R5a	0.114	+/-0.0318	pCi/g						
Potassium-40		40.4		0.794	+/-2.33	pCi/g						
Radium-223	U	-0.265		1.63	+/-0.570	pCi/g						
Radium-224	UI	6.87	R,R5a	1.51	+/-1.08	pCi/g						
Radium-226		1.66		0.163	+/-0.144	pCi/g						
Radium-228		2.32		0.293	+/-0.240	pCi/g						
Ruthenium-106	U	0.202		0.788	+/-0.237	pCi/g						
Sodium-22	U	-0.108		0.0957	+/-0.0355	pCi/g						
Strontium-85	UI	0.106	R,R5a	0.0985	+/-0.0307	pCi/g						
Thallium-208		0.744		0.0824	+/-0.0664	pCi/g						

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Certificate of Analysis

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

Report Date: March 10, 2010

Client Sample ID: RE15-10-8341
Sample ID: 246875007
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	-0.303	0.960	+/-0.292		pCi/g						
Thorium-231	U	-0.265	1.63	+/-0.570		pCi/g						
Thorium-234	U	1.19	4.78	+/-1.43	2.00	pCi/g						
Tin-113	U	-0.0415	0.111	+/-0.0347	0.100	pCi/g						
Uranium-235	U	0.299	0.546	+/-0.165	0.500	pCi/g						
Yttrium-88	U	0.0303	0.0755	+/-0.0201	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		2120	127	+/-176	250	pCi/L		KXK2	02/18/10	0309	953115	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"	87.8	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	81.8	(50%-105%)

Notes:

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

The Qualifiers in this report are defined as follows :

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

SEB
3/27/10

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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 10, 2010

Client Sample ID: RE15-10-8376
Sample ID: 246875008
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 24.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0187	0.0417	+/-0.00913	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00254	0.037	+/-0.00255	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	-0.00128	0.028	+/-0.00285	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.14	0.106	+/-0.108	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236	U	0.0362	0.0674	+/-0.0139	0.100	pCi/g						
Uranium-238		1.20	0.0721	+/-0.112	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.080	0.243	+/-0.0759	0.200	pCi/g		MXR1	02/24/10	0854	952643	4
Bismuth-211	UI	5.42	R,R5a	0.315	+/-0.387	pCi/g						
Bismuth-214		1.65		0.113	+/-0.122	0.200	pCi/g					
Cadmium-109	UI	4.76	R,R5a	1.25	+/-0.558	pCi/g						
Cerium-139	U	-0.00543		0.0506	+/-0.0147	0.050	pCi/g					
Cesium-134	UI	0.117	R,R5a	0.0873	+/-0.0285	0.100	pCi/g					
Cesium-137	U	0.00572		0.0604	+/-0.018	0.100	pCi/g					
Cobalt-60	U	-0.00139		0.0595	+/-0.0181	0.100	pCi/g					
Europium-152	U	0.0464		0.164	+/-0.0571	0.200	pCi/g					
Lanthanum-140	U	-0.0994		0.125	+/-0.0421	pCi/g						
Lead-212		2.44		0.0928	+/-0.172	0.100	pCi/g					
Lead-214		1.89		0.110	+/-0.143	0.100	pCi/g					
Mercury-203	U	0.0429		0.0717	+/-0.024	0.100	pCi/g					
Potassium-40		39.2		0.466	+/-1.97	1.00	pCi/g					
Radium-223	U	0.0633		1.11	+/-0.370	pCi/g						
Radium-224	UI	6.49	R,R5a	1.06	+/-0.759	pCi/g						
Radium-226		1.65		0.113	+/-0.122	pCi/g						
Radium-228		2.02		0.215	+/-0.201	0.500	pCi/g					
Ruthenium-106	U	-0.153		0.493	+/-0.151	0.800	pCi/g					
Sodium-22	U	-0.0188		0.0646	+/-0.0201	0.080	pCi/g					
Strontium-85	UI	0.161	R,R5a	0.0734	+/-0.0226	pCi/g						
Thallium-208		0.756		0.0554	+/-0.0561	0.080	pCi/g					

SEB
3/27/10

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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 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8376
246875008

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	0.0454	0.664	+/-0.199		pCi/g						
Thorium-231	U	0.0633	1.11	+/-0.370		pCi/g						
Thorium-234		2.26	2.06	+/-0.976	2.00	pCi/g						
Tin-113	U	-0.00281	0.0717	+/-0.0214	0.100	pCi/g						
Uranium-235	U	-0.0757	0.363	+/-0.109	0.500	pCi/g						
Yttrium-88	U	-0.0204	0.0404	+/-0.0138	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	-36.1	160	+/-43.9	250	pCi/L		KXK2	02/17/10	0404	953115	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"	74.8	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	74.6	(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
- F Estimated Value
- H Analytical holding time was exceeded

Wednesday, February 10, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1760

LOS ALAMOS

REQUEST NUMBER: 10-1760

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/12/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

246875

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8366	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8366	1	POLY	H3	Ice	R
RE15-10-8367	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8367	1	POLY	H3	Ice	R
RE15-10-8364	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8364	1	POLY	H3	Ice	R
RE15-10-8365	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8365	1	POLY	H3	Ice	R
RE15-10-8368	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8368	1	POLY	H3	Ice	R
RE15-10-8340	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8340	1	POLY	H3	Ice	R
RE15-10-8341	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8341	1	POLY	H3	Ice	R
RE15-10-8376	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8376	1	POLY	H3	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Wednesday, February 10, 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: 10-1760
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 2/10/2010
TURNAROUND/REPORT DUE: 3/12/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature: 

PRIORITY	METHOD CODE	CNTR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-901.1	1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	EPA-906.0	1	RE15-10-8340	R	2/9/2010	

Wednesday, February 10, 2010

REQUEST NUMBER: 10-1760

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-906.0	1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	HASL-300:AM-241	1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8385	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	HASL-300:ISOPU	1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8385	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	HASL-300:ISOU	1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8384	R	2/9/2010	
		1	RE15-10-8385	R	2/9/2010	

REQUEST NUMBER: 10-1760

Wednesday, February 10, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
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	HASL-300/SOU	1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	

Final Page of REQUEST NUMBER 10-1760



February 17, 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: 246875
SDG: 10-1760

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on February 11, 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: 10-1760
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 246875
SDG: 10-1760

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Case Narrative

**Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 246875
SDG # : 10-1760**

February 17, 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 11, 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 8,10-13,15C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

<u>Laboratory ID</u>	<u>Client ID</u>
246875001	RE15-10-8366
246875002	RE15-10-8367
246875003	RE15-10-8364
246875004	RE15-10-8365
246875005	RE15-10-8368
246875006	RE15-10-8340
246875007	RE15-10-8341
246875008	RE15-10-8376

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.



Valerie Davis
Project Manager

List of current GEL Certifications as of 17 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

Wednesday, February 10, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1760

LOS ALAMOS

REQUEST NUMBER: 10-1760

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/12/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

246875

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8366	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8366	1	POLY	H3	Ice	R
RE15-10-8367	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8367	1	POLY	H3	Ice	R
RE15-10-8364	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8364	1	POLY	H3	Ice	R
RE15-10-8365	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8365	1	POLY	H3	Ice	R
RE15-10-8368	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8368	1	POLY	H3	Ice	R
RE15-10-8340	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8340	1	POLY	H3	Ice	R
RE15-10-8341	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8341	1	POLY	H3	Ice	R
RE15-10-8376	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-8376	1	POLY	H3	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Wednesday, February 10, 2010

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

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

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 2/10/2010

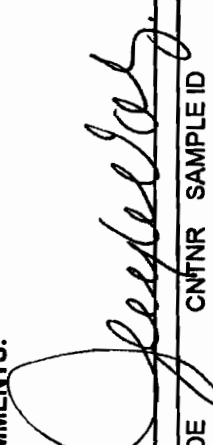
TURNAROUND/REPORT DUE: 3/12/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



These Samples are on:
LANL Request Number: 10-1760
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA:901.1						
		1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	EPA:906.0	1	RE15-10-8340	R	2/9/2010	

Wednesday, February 10, 2010

Page 2 of 3

REQUEST NUMBER: 10-1760

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
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		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	HASL-300:AM-241	1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	HASL-300:ISOPU	1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	
		1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	
	HASL-300:ISOU	1	RE15-10-8340	R	2/9/2010	
		1	RE15-10-8341	R	2/9/2010	
		1	RE15-10-8364	R	2/9/2010	
		1	RE15-10-8365	R	2/9/2010	
		1	RE15-10-8366	R	2/9/2010	

REQUEST NUMBER: 10-1760

Wednesday, February 10, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	RE15-10-8367	R	2/9/2010	
		1	RE15-10-8368	R	2/9/2010	
		1	RE15-10-8376	R	2/9/2010	

Final Page of REQUEST NUMBER 10-1760



Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL			SDG/ARCOC/Work Order: 10-1760		
Received By: Patricia Dover-Dent			Date Received: February 11, 2009		
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.		
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 40 CPM		
Classified Radioactive II by RSO?		X			
COC/Samples marked containing PCBs?		X			
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:		
Samples identified as Foreign Soil?		X			

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within $0 \leq 6$ deg. C?	X			Preservation Method: ice bags blue ice dry ice none other (describe) 1-6 8, 10-13,15
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: time written on containers, not on COC
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#S

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7209 7850 0095 1C	7209 7850 0030 2C	7209 7850 0051 8C
7209 7850 0007 1C	7209 7849 9992 4C	7209 7849 9878 12C
7209 7850 0084 1C	7209 7849 9926 3C	7209 7849 9867 11C
7209 7849 9981 2C	7209 7850 0073 6C	7209 7849 9904 15C
7209 7849 9937 1C	7209 7850 0040 5C	7209 7849 9889 13C
7209 7849 9915 2C	7209 7849 9970 6C	
7209 7850 0062 2C	7209 7849 9960 6C	

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

SHIP DATE: 10FEB10
ACTWGT: 48.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

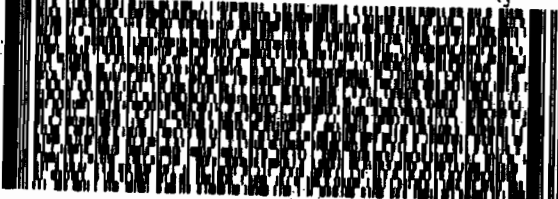
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(843) 556-8171

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ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

SHIP DATE: 10FEB10
ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

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GENERAL ENGINEERING LAB
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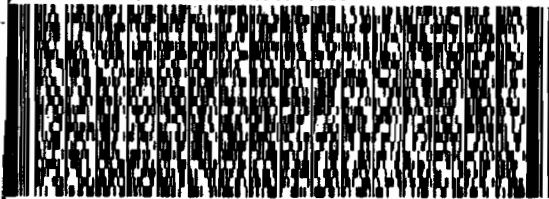
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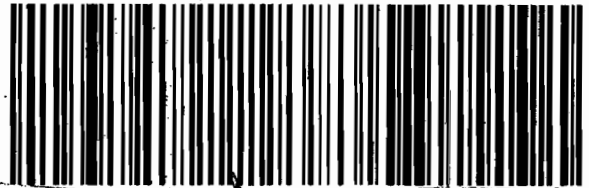
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ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

SHIP DATE: 10FEB10
ACTWGT: 51.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

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VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

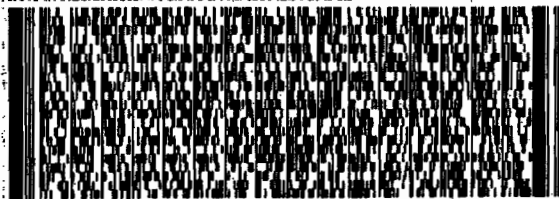
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ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

SHIP DATE: 10FEB10
ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

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VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

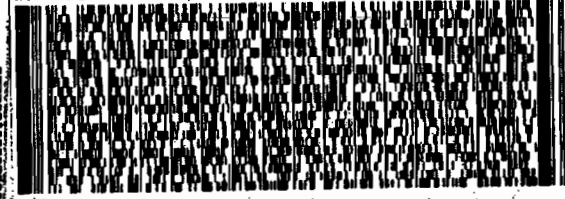
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Mstr# 7209 7850 0051 0201

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ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 55.0 LB MAN
CAD: 0014176/CAFE2449

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ORIGIN ID: SHFM (000) 000-9900
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP UN:
ACTWGT:
CAD: P

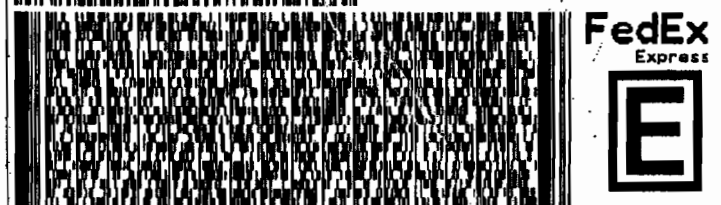
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° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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(843) 556-8171
REF: 6B010AMR3A0532VA00

° VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR3A0532VA00

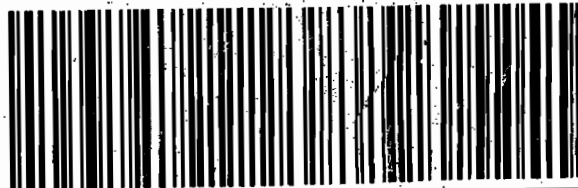


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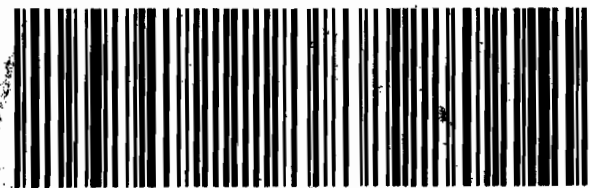


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JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87645
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 43.0 LB MAN
CAD: 0014176/CAFE2449

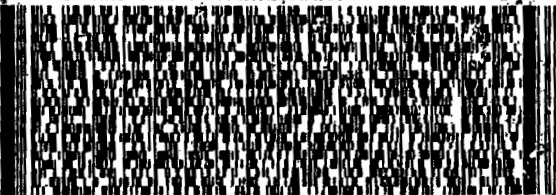
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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 6B010AMR1A015AGWLO

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JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87645
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 55.0 LB MAN
CAD: 0014176/CAFE2449

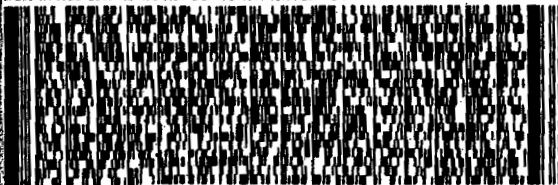
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GENERAL ENGINEERING LAB
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REF: 6B010AME6L11550000

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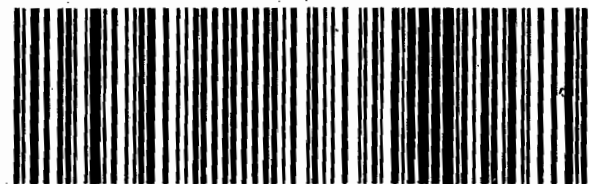
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PRIORITY OVERNIGHT

29407
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155148-434 NRT V3 09-09



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87645
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 73.0 LB MAN
CAD: 0014176/CAFE2449

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

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REF: 6B010AMR3A0532VA00

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PRIORITY OVERNIGHT

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1 of 2
TRKH# 7209 7850 0051
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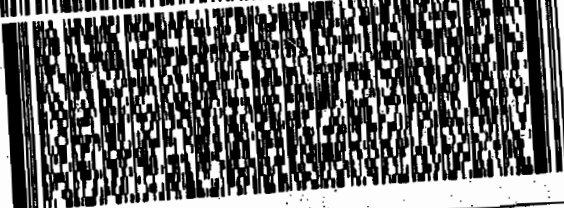
LOS ALAMOS, NM 87645
UNITED STATES US

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

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(843) 556-8171
REF: 6B010AMR2A0515BYDO

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1 of 2
TRKH# 7209 7849 9890
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Page 14 of 872

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 58.0 LB MAN
CAD: 0014176/CAFE2449

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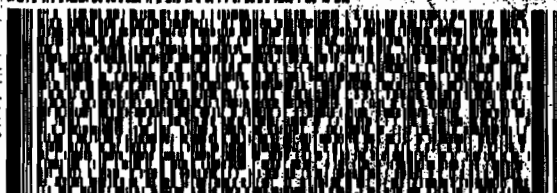
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

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ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 61.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR2A0515BYDO

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XX CHSA

109-09



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 61.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

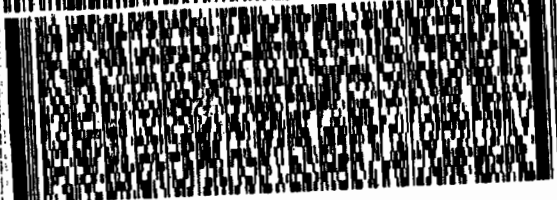
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6B010AMR3A0560B800

2 of 2



FedEx
Express



J09280911 102227

MPS#
0263

7209 7849 9867

Mstr# 7209 7849 9856 0201

THU - 11FEB A1
PRIORITY OVERNIGHT

29407

SC-US
CHS

XX CHSA

158148-434 NRT V3 09-09



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 10FEB10
ACTWGT: 62.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

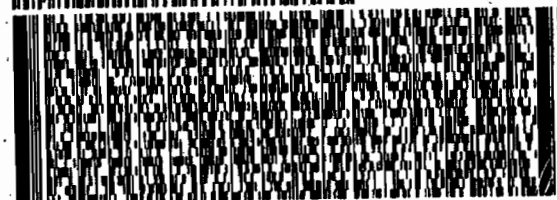
CHARLESTON SC 29407

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REF: 6B010AMR2A0515BYDO

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2 of 2



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Mstr# 7209 7849 9889

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PRIORITY OVERNIGHT

XX CHSA

2040

Data Review Qualifier Flag Definition Sheet

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1760**

Method/Analysis Information

Product: AM241
Analytical Method: DOE EML HASL-300, Am-05-RC Modified
Prep Method: Dry Soil Prep
Analytical Batch Number: 956999
Prep Batch Number: 952625

Sample ID	Client ID
246875001	RE15-10-8366
246875002	RE15-10-8367
246875003	RE15-10-8364
246875004	RE15-10-8365
246875005	RE15-10-8368
246875006	RE15-10-8340
246875007	RE15-10-8341
246875008	RE15-10-8376
1202051945	Method Blank (MB)
1202051946	246874001(RE46-10-12720) Sample Duplicate (DUP)
1202051947	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 1202051945 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 246874001 (RE46-10-12720). The QC was from LANL work order 246874.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The Am-241 blank, 1202051945 (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

Sample 1202051945 (MB) was recounted due to high MDA. Sample 1202051947 (LCS) was recounted due to a peak shift.

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

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: ISOPU
Analytical Method: DOE EML HASL-300, Pu-11-RC Modified
Prep Method: Dry Soil Prep
Analytical Batch Number: 957001
Prep Batch Number: 952625

Sample ID	Client ID
246875001	RE15-10-8366
246875002	RE15-10-8367
246875003	RE15-10-8364
246875004	RE15-10-8365
246875005	RE15-10-8368
246875006	RE15-10-8340
246875007	RE15-10-8341
246875008	RE15-10-8376
1202051955	Method Blank (MB)
1202051956	246874001(RE46-10-12720) Sample Duplicate (DUP)
1202051957	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 1202051955 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 246874001 (RE46-10-12720). The QC was from LANL work order 246874.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The Pu-238 blank, 1202051955 (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

Manual integration of alpha spectroscopy spectra 1202051957 (LCS) 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 blank 1202051955 (MB) result is greater than the decision level but less than the MDC.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: ISOU
Analytical Method: DOE EML HASL-300, U-02-RC Modified
Prep Method: Dry Soil Prep
Analytical Batch Number: 957004
Prep Batch Number: 952625

Sample ID	Client ID
246875001	RE15-10-8366
246875002	RE15-10-8367
246875003	RE15-10-8364
246875005	RE15-10-8368
246875006	RE15-10-8340
246875007	RE15-10-8341
246875008	RE15-10-8376
1202051962	Method Blank (MB)
1202051963	246874001(RE46-10-12720) Sample Duplicate (DUP)
1202051964	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 1202051962 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 246874001 (RE46-10-12720). The QC was from LANL work order 246874.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time

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

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

Data Exception (DER) Documentation

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	ISOU
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	962636
Prep Batch Number:	952625

Sample ID	Client ID
246875004	RE15-10-8365
1202065198	Method Blank (MB)
1202065199	246875004(RE15-10-8365) Sample Duplicate (DUP)
1202065200	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 1202065198 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 246875004 (RE15-10-8365). The QC was from LANL work order 246875.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The U-233/234 and U-238 blank, 1202065198 (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

Sample 246875004 (RE15-10-8365) was reprepiped due to high 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.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	GAMMA SPEC
Analytical Method:	DOE HASL 300, 4.5.2.3/Ga-01-R
Prep Method:	Dry Soil Prep
Analytical Batch Number:	952643
Prep Batch Number:	952625

Sample ID	Client ID
246875001	RE15-10-8366
246875002	RE15-10-8367
246875003	RE15-10-8364
246875004	RE15-10-8365
246875005	RE15-10-8368
246875006	RE15-10-8340
246875007	RE15-10-8341
246875008	RE15-10-8376
1202041820	Method Blank (MB)
1202041821	246874001(RE46-10-12720) Sample Duplicate (DUP)
1202041822	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, May 2009, June 2009, July 2009, August 2009, November 2009, December 2009 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: 246874001 (RE46-10-12720). The QC was from LANL work order 246874.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is greater than 1.65 times the CSU but less than the MDC Bi-211, Th-234, and Sn-113.

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 greater than the decision level but less than the MDC for Bi-211, Th-234, and Sn-113.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to high counting uncertainty.	Thorium-234	246875006	RE15-10-8340
UI	Data rejected due to interference.	Bismuth-211	246875001	RE15-10-8366
			246875002	RE15-10-8367
			246875003	RE15-10-8364
			246875004	RE15-10-8365
			246875005	RE15-10-8368
			246875006	RE15-10-8340
			246875007	RE15-10-8341
			246875008	RE15-10-8376
			1202041821	RE46-10-12720(246874001DUP)
		Cadmium-109	246875001	RE15-10-8366
			246875002	RE15-10-8367
			246875003	RE15-10-8364
			246875004	RE15-10-8365
			246875005	RE15-10-8368
			246875006	RE15-10-8340
			246875007	RE15-10-8341
			246875008	RE15-10-8376
			1202041821	RE46-10-12720(246874001DUP)

		Radium-224	246875001	RE15-10-8366
			246875002	RE15-10-8367
			246875003	RE15-10-8364
			246875004	RE15-10-8365
			246875005	RE15-10-8368
			246875006	RE15-10-8340
			246875007	RE15-10-8341
			246875008	RE15-10-8376
			1202041821	RE46-10-12720(246874001DUP)
UI	Data rejected due to low abundance.	Cesium-134	246875001	RE15-10-8366
			246875002	RE15-10-8367
			246875003	RE15-10-8364
			246875005	RE15-10-8368
			246875007	RE15-10-8341
			246875008	RE15-10-8376
		Mercury-203	246875007	RE15-10-8341
		Strontium-85	246875001	RE15-10-8366
			246875003	RE15-10-8364
			246875005	RE15-10-8368
			246875006	RE15-10-8340
			246875007	RE15-10-8341
			246875008	RE15-10-8376

Method/Analysis Information

Product: H3
Analytical Method: GL-RAD-A-002
Analytical Batch Number: 953115

Sample ID	Client ID
246875001	RE15-10-8366
246875002	RE15-10-8367
246875003	RE15-10-8364
246875004	RE15-10-8365
246875005	RE15-10-8368
246875006	RE15-10-8340
246875007	RE15-10-8341
246875008	RE15-10-8376
1202042948	Method Blank (MB)
1202042949	246875001(RE15-10-8366) Sample Duplicate (DUP)
1202042950	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: 246875001 (RE15-10-8366). The QC was from LANL work order 246875.

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 246875004 (RE15-10-8365) was recounted due to the quench number being outside the calibration range. Recount is being reported. Samples, 246875004 (RE15-10-8365), 246875005 (RE15-10-8368) and 246875007 (RE15-10-8341), were recounted to verify sample activity.

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: _____

 3/10/12

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: 10-1760 GEL Work Order: 246875

The Qualifiers in this report are defined as follows:

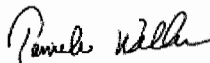
- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.

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

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

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

Reviewed by



GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: March 10, 2010

Client Sample ID: RE15-10-8366
Sample ID: 246875001
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 18%

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	0.00871	0.0373	+/-0.00483	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00731	0.0357	+/-0.00676	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.0036	0.0271	+/-0.00641	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		2.75	0.0905	+/-0.219	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236		0.173	0.0577	+/-0.0303	0.100	pCi/g						
Uranium-238		3.93	0.0618	+/-0.303	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0472	0.153	+/-0.0465	0.200	pCi/g		MXR1	02/23/10	2320	952643	4
Bismuth-211	UI	3.54	0.204	+/-0.240		pCi/g						
Bismuth-214		1.10	0.0653	+/-0.0782	0.200	pCi/g						
Cadmium-109	UI	2.60	0.773	+/-0.336		pCi/g						
Cerium-139	U	0.0195	0.033	+/-0.0104	0.050	pCi/g						
Cesium-134	UI	0.112	0.0542	+/-0.0211	0.100	pCi/g						
Cesium-137		0.196	0.0385	+/-0.0224	0.100	pCi/g						
Cobalt-60	U	0.0152	0.0363	+/-0.0105	0.100	pCi/g						
Europium-152	U	-0.0408	0.0953	+/-0.0346	0.200	pCi/g						
Lanthanum-140	U	-0.0808	0.0729	+/-0.0247		pCi/g						
Lead-212		1.65	0.0594	+/-0.114	0.100	pCi/g						
Lead-214		1.23	0.0705	+/-0.0893	0.100	pCi/g						
Mercury-203	U	0.039	0.0446	+/-0.0148	0.100	pCi/g						
Potassium-40		34.5	0.332	+/-1.67	1.00	pCi/g						
Radium-223	U	-0.0331	0.688	+/-0.228		pCi/g						
Radium-224	UI	4.00	0.675	+/-0.443		pCi/g						
Radium-226		1.10	0.0653	+/-0.0782		pCi/g						
Radium-228		1.68	0.132	+/-0.140	0.500	pCi/g						
Ruthenium-106	U	0.0234	0.310	+/-0.091	0.800	pCi/g						
Sodium-22	U	0.00109	0.0426	+/-0.0127	0.080	pCi/g						
Strontium-85	UI	0.129	0.0452	+/-0.0145		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8366
246875001

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		0.494	0.0336	+/-0.0348	0.080	pCi/g						
Thorium-227	U	-0.0112	0.407	+/-0.121		pCi/g						
Thorium-231	U	-0.0331	0.688	+/-0.228		pCi/g						
Thorium-234		3.58	1.25	+/-0.677	2.00	pCi/g						
Tin-113	U	-0.0132	0.0435	+/-0.013	0.100	pCi/g						
Uranium-235		0.290	0.222	+/-0.0993	0.500	pCi/g						
Yttrium-88	U	0.00651	0.029	+/-0.00997	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	48.9	159	+/-47.1	250	pCi/L		KXK2	02/16/10	2231	953115	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"	74.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	94.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.0	(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

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

Report Date: March 10, 2010

Client Sample ID: RE15-10-8366
Sample ID: 246875001
Project: LANL01004
Client ID: LANL010

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

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 10, 2010

Client Sample ID: RE15-10-8367
Sample ID: 246875002
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 19.3%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.000973	0.0397	+/-0.00281	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0168	0.038	+/-0.0115	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.00127	0.0288	+/-0.00435	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.82	0.0957	+/-0.156	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236		0.117	0.061	+/-0.0258	0.100	pCi/g						
Uranium-238		3.43	0.0653	+/-0.273	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.073	0.263	+/-0.0842	0.200	pCi/g		MXR1	02/23/10	2321	952643	4
Bismuth-211	UI	3.67	0.274	+/-0.208		pCi/g						
Bismuth-214		1.04	0.0935	+/-0.0761	0.200	pCi/g						
Cadmium-109	UI	3.55	1.10	+/-0.424		pCi/g						
Cerium-139	U	-0.00615	0.0417	+/-0.0126	0.050	pCi/g						
Cesium-134	UI	0.0848	0.0752	+/-0.0228	0.100	pCi/g						
Cesium-137		0.0812	0.0531	+/-0.0265	0.100	pCi/g						
Cobalt-60	U	-0.0041	0.057	+/-0.0177	0.100	pCi/g						
Europium-152	U	-0.0893	0.127	+/-0.0457	0.200	pCi/g						
Lanthanum-140	U	0.0419	0.100	+/-0.0312		pCi/g						
Lead-212		1.60	0.0741	+/-0.0714	0.100	pCi/g						
Lead-214		1.28	0.0863	+/-0.0796	0.100	pCi/g						
Mercury-203	U	-0.0201	0.0538	+/-0.016	0.100	pCi/g						
Potassium-40		34.5	0.448	+/-1.51	1.00	pCi/g						
Radium-223	U	-1.12	0.888	+/-0.296		pCi/g						
Radium-224	UI	4.07	0.843	+/-0.525		pCi/g						
Radium-226		1.04	0.0935	+/-0.0761		pCi/g						
Radium-228		1.58	0.186	+/-0.147	0.500	pCi/g						
Ruthenium-106	U	-0.132	0.439	+/-0.138	0.800	pCi/g						
Sodium-22	U	-0.0442	0.0601	+/-0.0201	0.080	pCi/g						
Strontium-85	U	0.0523	0.0538	+/-0.017		pCi/g						
Thallium-208		0.528	0.0472	+/-0.0389	0.080	pCi/g						

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Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8367
246875002

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	-0.00668	0.513	+/-0.157		pCi/g						
Thorium-231	U	-1.12	0.888	+/-0.296		pCi/g						
Thorium-234		4.54	2.05	+/-1.13	2.00	pCi/g						
Tin-113	U	-0.00643	0.0624	+/-0.0186	0.100	pCi/g						
Uranium-235	U	0.0629	0.305	+/-0.0927	0.500	pCi/g						
Yttrium-88	U	-0.00153	0.0446	+/-0.0137	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	70.6	160	+/-48.4	250	pCi/L		KXK2	02/16/10	2318	953115	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"	71.7	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	90.1	(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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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8367
Sample ID: 246875002
Project: LANL01004
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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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8364
Sample ID: 246875003
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 23.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00118	0.0424	+/-0.003	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00969	0.0403	+/-0.00574	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.00549	0.0305	+/-0.00621	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.61	0.0934	+/-0.138	0.100	pCi/g		MXE1	03/05/10	1829	957004	3
Uranium-235/236		0.119	0.0595	+/-0.0248	0.100	pCi/g						
Uranium-238		2.93	0.0638	+/-0.233	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.100	0.143	+/-0.0448	0.200	pCi/g		MXR1	02/23/10	2349	952643	4
Bismuth-211	UI	4.20	0.233	+/-0.259		pCi/g						
Bismuth-214		1.24	0.0802	+/-0.087	0.200	pCi/g						
Cadmium-109	UI	4.85	0.730	+/-0.446		pCi/g						
Cerium-139	U	0.00308	0.034	+/-0.0103	0.050	pCi/g						
Cesium-134	UI	0.126	0.067	+/-0.0261	0.100	pCi/g						
Cesium-137		0.167	0.0442	+/-0.0211	0.100	pCi/g						
Cobalt-60	U	-0.00748	0.0451	+/-0.0143	0.100	pCi/g						
Europium-152	U	-0.0748	0.103	+/-0.0337	0.200	pCi/g						
Lanthanum-140	U	-0.0121	0.0843	+/-0.0305		pCi/g						
Lead-212		1.77	0.0614	+/-0.103	0.100	pCi/g						
Lead-214		1.46	0.0767	+/-0.0979	0.100	pCi/g						
Mercury-203	U	0.0344	0.0419	+/-0.0174	0.100	pCi/g						
Potassium-40		36.6	0.331	+/-1.73	1.00	pCi/g						
Radium-223	U	-0.365	0.732	+/-0.258		pCi/g						
Radium-224	UI	4.61	0.699	+/-0.499		pCi/g						
Radium-226		1.24	0.0802	+/-0.087		pCi/g						
Radium-228		1.71	0.146	+/-0.141	0.500	pCi/g						
Ruthenium-106	U	-0.105	0.341	+/-0.109	0.800	pCi/g						
Sodium-22	U	-0.0131	0.0493	+/-0.0158	0.080	pCi/g						
Strontium-85	UI	0.0826	0.0478	+/-0.0145		pCi/g						
Thallium-208		0.601	0.0399	+/-0.0432	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8364
Sample ID: 246875003
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	0.229	0.459	+/-0.132		pCi/g						
Thorium-231	U	-0.365	0.732	+/-0.258		pCi/g						
Thorium-234		2.97	1.21	+/-0.633	2.00	pCi/g						
Tin-113	U	-0.0161	0.0516	+/-0.0158	0.100	pCi/g						
Uranium-235	U	0.0615	0.250	+/-0.0771	0.500	pCi/g						
Yttrium-88	U	-0.0108	0.0375	+/-0.0122	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	-26.5	161	+/-44.6	250	pCi/L		KXK2	02/17/10	0006	953115	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"	69.6	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	86.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	96.6	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Report Date: March 10, 2010

Client Sample ID: RE15-10-8364
Sample ID: 246875003

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 10, 2010

Client Sample ID: RE15-10-8365
Sample ID: 246875004
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 16.9%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	-0.000368	0.041	+/-0.00325	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0116	0.0375	+/-0.00595	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.0232	0.0285	+/-0.00784	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.12	0.0966	+/-0.102	0.100	pCi/g		MXE1	03/09/10	1723	962636	3
Uranium-235/236		0.0932	0.059	+/-0.0218	0.100	pCi/g						
Uranium-238		1.66	0.0679	+/-0.142	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0649	0.423	+/-0.119	0.200	pCi/g		MXR1	02/24/10	0851	952643	5
Bismuth-211	UI	4.18	0.360	+/-0.279		pCi/g						
Bismuth-214		1.12	0.120	+/-0.0953	0.200	pCi/g						
Cadmium-109	UI	2.35	1.49	+/-0.575		pCi/g						
Cerium-139	U	-0.00937	0.0524	+/-0.016	0.050	pCi/g						
Cesium-134	U	0.0789	0.111	+/-0.0415	0.100	pCi/g						
Cesium-137	U	0.0523	0.0783	+/-0.0272	0.100	pCi/g						
Cobalt-60	U	-0.00838	0.0766	+/-0.0234	0.100	pCi/g						
Europium-152	U	-0.019	0.172	+/-0.0555	0.200	pCi/g						
Lanthanum-140	U	0.0536	0.133	+/-0.0398		pCi/g						
Lead-212		1.90	0.094	+/-0.098	0.100	pCi/g						
Lead-214		1.45	0.125	+/-0.104	0.100	pCi/g						
Mercury-203	U	0.0254	0.0741	+/-0.0209	0.100	pCi/g						
Potassium-40		37.3	0.548	+/-1.69	1.00	pCi/g						
Radium-223	U	0.141	1.19	+/-0.393		pCi/g						
Radium-224	UI	5.27	1.07	+/-0.736		pCi/g						
Radium-226		1.12	0.120	+/-0.0953		pCi/g						
Radium-228		1.86	0.245	+/-0.205	0.500	pCi/g						
Ruthenium-106	U	-0.208	0.554	+/-0.181	0.800	pCi/g						
Sodium-22	U	0.00201	0.0839	+/-0.025	0.080	pCi/g						
Strontium-85	U	0.0614	0.073	+/-0.0226		pCi/g						
Thallium-208		0.601	0.0618	+/-0.050	0.080	pCi/g						

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Report Date: March 10, 2010

Client Sample ID:
Sample ID:

RE15-10-8365
246875004

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	0.069	0.713	+/-0.205		pCi/g						
Thorium-231	U	0.141	1.19	+/-0.393		pCi/g						
Thorium-234	U	0.767	3.25	+/-0.927	2.00	pCi/g						
Tin-113	U	-0.0287	0.0736	+/-0.0229	0.100	pCi/g						
Uranium-235	U	0.166	0.374	+/-0.109	0.500	pCi/g						
Yttrium-88	U	-0.0115	0.0622	+/-0.0204	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		288	236	+/-78.5	250	pCi/L		KXK2	02/19/10	0624	953115	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, U-02-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"	69.4	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	83.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.7	(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 10, 2010

Client Sample ID: RE15-10-8365 Project: LANL01004
Sample ID: 246875004 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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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 10, 2010

Client Sample ID: RE15-10-8368
Sample ID: 246875005
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 24.6%

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	0.0109	0.0403	+/-0.00789	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00111	0.0327	+/-0.00252	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.0045	0.0248	+/-0.00319	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.99	0.0961	+/-0.166	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236		0.104	0.0613	+/-0.0233	0.100	pCi/g						
Uranium-238		3.45	0.0656	+/-0.270	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0685	0.182	+/-0.0556	0.200	pCi/g		MXR1	02/24/10	0852	952643	4
Bismuth-211	UI	3.89	0.324	+/-0.273		pCi/g						
Bismuth-214		1.17	0.112	+/-0.102	0.200	pCi/g						
Cadmium-109	UI	2.55	1.14	+/-0.467		pCi/g						
Cerium-139	U	0.0147	0.0496	+/-0.0145	0.050	pCi/g						
Cesium-134	UI	0.0961	0.0891	+/-0.0304	0.100	pCi/g						
Cesium-137		0.118	0.0607	+/-0.0321	0.100	pCi/g						
Cobalt-60	U	0.0173	0.0665	+/-0.0191	0.100	pCi/g						
Europium-152	U	0.0131	0.157	+/-0.0474	0.200	pCi/g						
Lanthanum-140	U	-0.0292	0.122	+/-0.0397		pCi/g						
Lead-212		1.65	0.0897	+/-0.0949	0.100	pCi/g						
Lead-214		1.35	0.109	+/-0.101	0.100	pCi/g						
Mercury-203	U	0.0588	0.0716	+/-0.0195	0.100	pCi/g						
Potassium-40		30.9	0.489	+/-1.58	1.00	pCi/g						
Radium-223	U	-0.665	1.05	+/-0.331		pCi/g						
Radium-224	UI	4.92	1.02	+/-0.834		pCi/g						
Radium-226		1.17	0.112	+/-0.102		pCi/g						
Radium-228		1.65	0.203	+/-0.158	0.500	pCi/g						
Ruthenium-106	U	-0.318	0.491	+/-0.156	0.800	pCi/g						
Sodium-22	U	-0.0164	0.0702	+/-0.0218	0.080	pCi/g						
Strontium-85	UI	0.0981	0.0717	+/-0.0204		pCi/g						
Thallium-208		0.575	0.0596	+/-0.0475	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8368
Sample ID: 246875005
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	0.0915	0.626	+/-0.178		pCi/g						
Thorium-231	U	-0.665	1.05	+/-0.331		pCi/g						
Thorium-234		5.09	1.56	+/-0.864	2.00	pCi/g						
Tin-113	U	-0.0306	0.0663	+/-0.0208	0.100	pCi/g						
Uranium-235	U	0.264	0.365	+/-0.107	0.500	pCi/g						
Yttrium-88	U	0.0283	0.0622	+/-0.0164	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		329	126	+/-54.3	250	pCi/L		KXK2	02/18/10	0222	953115	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"	74.9	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.7	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8368 Project: LANL01004
Sample ID: 246875005 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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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8340
Sample ID: 246875006
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 24.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	-0.00192	0.0423	+/-0.00696	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.015	0.0364	+/-0.00619	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.0025	0.0276	+/-0.00251	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.32	0.112	+/-0.122	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236	U	0.0549	0.0715	+/-0.0194	0.100	pCi/g						
Uranium-238		1.15	0.0765	+/-0.110	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.176	0.261	+/-0.0845	0.200	pCi/g		MXR1	02/24/10	0852	952643	4
Bismuth-211	UI	5.42	0.354	+/-0.328		pCi/g						
Bismuth-214		1.66	0.125	+/-0.120	0.200	pCi/g						
Cadmium-109	UI	4.75	1.36	+/-0.623		pCi/g						
Cerium-139	U	-0.00687	0.0582	+/-0.0179	0.050	pCi/g						
Cesium-134	U	0.0688	0.0966	+/-0.0339	0.100	pCi/g						
Cesium-137	U	0.00604	0.0735	+/-0.0223	0.100	pCi/g						
Cobalt-60	U	-0.0276	0.0682	+/-0.0223	0.100	pCi/g						
Europium-152	U	0.0601	0.181	+/-0.0753	0.200	pCi/g						
Lanthanum-140	U	-0.0538	0.176	+/-0.0574		pCi/g						
Lead-212		2.34	0.104	+/-0.107	0.100	pCi/g						
Lead-214		1.89	0.124	+/-0.124	0.100	pCi/g						
Mercury-203	U	0.0477	0.0814	+/-0.023	0.100	pCi/g						
Potassium-40		37.8	0.660	+/-1.72	1.00	pCi/g						
Radium-223	U	0.143	1.33	+/-0.447		pCi/g						
Radium-224	UI	6.57	1.18	+/-0.858		pCi/g						
Radium-226		1.66	0.125	+/-0.120		pCi/g						
Radium-228		2.33	0.234	+/-0.230	0.500	pCi/g						
Ruthenium-106	U	0.189	0.645	+/-0.191	0.800	pCi/g						
Sodium-22	U	-0.0192	0.0755	+/-0.0239	0.080	pCi/g						
Strontium-85	UI	0.102	0.0832	+/-0.0255		pCi/g						
Thallium-208		0.812	0.0695	+/-0.0582	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8340
Sample ID: 246875006
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	0.136	0.752	+/-0.218		pCi/g						
Thorium-231	U	0.143	1.33	+/-0.447		pCi/g						
Thorium-234	UI	2.34	2.20	+/-1.13	2.00	pCi/g						
Tin-113	U	0.00775	0.084	+/-0.0249	0.100	pCi/g						
Uranium-235	U	0.148	0.425	+/-0.128	0.500	pCi/g						
Yttrium-88	U	0.00354	0.0569	+/-0.0174	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium	U	15.0	162	+/-46.5	250	pCi/L		KXK2	02/17/10	0228	953115	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"	76.6	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	89.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	73.8	(50%-105%)

Notes:

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

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

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Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8340
Sample ID: 246875006
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 10, 2010

Client Sample ID: RE15-10-8341
Sample ID: 246875007
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 7.56%

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	-0.00574	0.0367	+/-0.00345	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0146	0.0353	+/-0.00601	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	0.00486	0.0268	+/-0.00345	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.17	0.108	+/-0.109	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236	U	0.0581	0.0687	+/-0.018	0.100	pCi/g						
Uranium-238		1.15	0.0736	+/-0.108	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	-0.0945	0.631	+/-0.188	0.200	pCi/g		MXR1	02/24/10	0853	952643	4
Bismuth-211	UI	6.06	0.463	+/-0.447		pCi/g						
Bismuth-214		1.66	0.163	+/-0.144	0.200	pCi/g						
Cadmium-109	UI	3.72	2.05	+/-0.798		pCi/g						
Cerium-139	U	0.0216	0.0777	+/-0.0234	0.050	pCi/g						
Cesium-134	UI	0.176	0.127	+/-0.048	0.100	pCi/g						
Cesium-137	U	-0.0236	0.0833	+/-0.0256	0.100	pCi/g						
Cobalt-60	U	-0.0253	0.0866	+/-0.0286	0.100	pCi/g						
Europium-152	U	-0.0625	0.231	+/-0.0875	0.200	pCi/g						
Lanthanum-140	U	-0.116	0.184	+/-0.0643		pCi/g						
Lead-212		2.49	0.133	+/-0.171	0.100	pCi/g						
Lead-214		2.11	0.162	+/-0.165	0.100	pCi/g						
Mercury-203	UI	0.129	0.114	+/-0.0318	0.100	pCi/g						
Potassium-40		40.4	0.794	+/-2.33	1.00	pCi/g						
Radium-223	U	-0.265	1.63	+/-0.570		pCi/g						
Radium-224	UI	6.87	1.51	+/-1.08		pCi/g						
Radium-226		1.66	0.163	+/-0.144		pCi/g						
Radium-228		2.32	0.293	+/-0.240	0.500	pCi/g						
Ruthenium-106	U	0.202	0.788	+/-0.237	0.800	pCi/g						
Sodium-22	U	-0.108	0.0957	+/-0.0355	0.080	pCi/g						
Strontium-85	UI	0.106	0.0985	+/-0.0307		pCi/g						
Thallium-208		0.744	0.0824	+/-0.0664	0.080	pCi/g						

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Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8341
Sample ID: 246875007
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	-0.303	0.960	+/-0.292		pCi/g					
Thorium-231	U	-0.265	1.63	+/-0.570		pCi/g					
Thorium-234	U	1.19	4.78	+/-1.43	2.00	pCi/g					
Tin-113	U	-0.0415	0.111	+/-0.0347	0.100	pCi/g					
Uranium-235	U	0.299	0.546	+/-0.165	0.500	pCi/g					
Yttrium-88	U	0.0303	0.0755	+/-0.0201	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		2120	127	+/-176	250	pCi/L		KXK2	02/18/10	0309 953115	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"	87.8	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	81.8	(50%-105%)

Notes:

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

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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: March 10, 2010

Client Sample ID: RE15-10-8341
Sample ID: 246875007
Project: LANL01004
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 10, 2010

Client Sample ID: RE15-10-8376
Sample ID: 246875008
Matrix: R
Collect Date: 09-FEB-10
Receive Date: 11-FEB-10
Collector: Client
Moisture: 24.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0187	0.0417	+/-0.00913	0.050	pCi/g		MXE1	03/06/10	1201	956999	1
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00254	0.037	+/-0.00255	0.050	pCi/g		MXE1	03/06/10	1201	957001	2
Plutonium-239/240	U	-0.00128	0.028	+/-0.00285	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.14	0.106	+/-0.108	0.100	pCi/g		MXE1	03/05/10	1807	957004	3
Uranium-235/236	U	0.0362	0.0674	+/-0.0139	0.100	pCi/g						
Uranium-238		1.20	0.0721	+/-0.112	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.080	0.243	+/-0.0759	0.200	pCi/g		MXR1	02/24/10	0854	952643	4
Bismuth-211	UI	5.42	0.315	+/-0.387		pCi/g						
Bismuth-214		1.65	0.113	+/-0.122	0.200	pCi/g						
Cadmium-109	UI	4.76	1.25	+/-0.558		pCi/g						
Cerium-139	U	-0.00543	0.0506	+/-0.0147	0.050	pCi/g						
Cesium-134	UI	0.117	0.0873	+/-0.0285	0.100	pCi/g						
Cesium-137	U	0.00572	0.0604	+/-0.018	0.100	pCi/g						
Cobalt-60	U	-0.00139	0.0595	+/-0.0181	0.100	pCi/g						
Europium-152	U	0.0464	0.164	+/-0.0571	0.200	pCi/g						
Lanthanum-140	U	-0.0994	0.125	+/-0.0421		pCi/g						
Lead-212		2.44	0.0928	+/-0.172	0.100	pCi/g						
Lead-214		1.89	0.110	+/-0.143	0.100	pCi/g						
Mercury-203	U	0.0429	0.0717	+/-0.024	0.100	pCi/g						
Potassium-40		39.2	0.466	+/-1.97	1.00	pCi/g						
Radium-223	U	0.0633	1.11	+/-0.370		pCi/g						
Radium-224	UI	6.49	1.06	+/-0.759		pCi/g						
Radium-226		1.65	0.113	+/-0.122		pCi/g						
Radium-228		2.02	0.215	+/-0.201	0.500	pCi/g						
Ruthenium-106	U	-0.153	0.493	+/-0.151	0.800	pCi/g						
Sodium-22	U	-0.0188	0.0646	+/-0.0201	0.080	pCi/g						
Strontium-85	UI	0.161	0.0734	+/-0.0226		pCi/g						
Thallium-208		0.756	0.0554	+/-0.0561	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 10, 2010

Client Sample ID: RE15-10-8376
Sample ID: 246875008
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	0.0454	0.664	+/-0.199		pCi/g					
Thorium-231	U	0.0633	1.11	+/-0.370		pCi/g					
Thorium-234		2.26	2.06	+/-0.976	2.00	pCi/g					
Tin-113	U	-0.00281	0.0717	+/-0.0214	0.100	pCi/g					
Uranium-235	U	-0.0757	0.363	+/-0.109	0.500	pCi/g					
Yttrium-88	U	-0.0204	0.0404	+/-0.0138	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
<i>H3 "As Received"</i>											
Tritium	U	-36.1	160	+/-43.9	250	pCi/L		KXK2	02/17/10	0404 953115	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"	74.8	(50%-105%)
Plutonium-236 Tracer	ISOPU "Dry Weight Corrected"	91.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	74.6	(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
- F Estimated Value
- H Analytical holding time was exceeded

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
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Report Date: March 10, 2010

Client Sample ID: RE15-10-8376
Sample ID: 246875008
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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.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

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QC Summary

Report Date: March 10, 2010

Page 1 of 7

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez
Workorder: 246875

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	956999										
QC1202051946	246874001	DUP									
Americium-241		U	0.00282	U	-0.00463	pCi/g	0.304	(0-1)	MXE1	03/06/1012:01	
		TPU:	+/-0.00885		+/-0.00343						
		Yield:	59.8		82.9						
QC1202051947	LCS										
Americium-241	33.2				29.3	pCi/g	88.4	(75%-125%)		03/08/1019:08	
		TPU:			+/-2.07						
		Yield:			92.0						
QC1202051945	MB										
Americium-241		U	0.00453		pCi/g					03/08/1019:08	
		TPU:	+/-0.0025								
		Yield:	83.0								
Batch	957001										
QC1202051956	246874001	DUP									
Plutonium-238		U	0.0101	U	0.0111	pCi/g	0.0317	(0-1)	MXE1	03/06/1012:01	
		TPU:	+/-0.00928		+/-0.00633						
		Yield:	85.6		92.3						
Plutonium-239/240		U	0.0205	U	0.0122	pCi/g	0.280	(0-1)			
		TPU:	+/-0.00797		+/-0.00681						
		Yield:	85.6		92.3						
QC1202051957	LCS										
Plutonium-238					7.62	pCi/g		(75%-125%)			
		TPU:			+/-0.654						
		Yield:			87.7						
Plutonium-239/240	41.8				37.7	pCi/g	90.2	(75%-125%)			
		TPU:			+/-2.48						
		Yield:			87.7						
QC1202051955	MB										
Plutonium-238		U	0.028		pCi/g						
		TPU:	+/-0.0134								
		Yield:	92.6								
Plutonium-239/240		U	0.00155		pCi/g						
		TPU:	+/-0.00352								
		Yield:	92.6								
Batch	957004										
QC1202051963	246874001	DUP									
Uranium-233/234			0.902		0.862	pCi/g	0.118	(0-1)	MXE1	03/05/1012:23	
		TPU:	+/-0.0881		+/-0.0804						
		Yield:	82.4		88.0						
Uranium-235/236		U	0.0491	U	0.0428	pCi/g	0.0988	(0-1)			
		TPU:	+/-0.0174		+/-0.0144						
		Yield:	82.4		88.0						
Uranium-238			1.10		0.929	pCi/g	0.463	(0-1)			
		TPU:	+/-0.103		+/-0.0857						

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QC Summary

Workorder: 246875

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Parmname		NOM	Sample	Qual	QC	Units	RER	REC %	Range	Anlst	Date	Time
Rad Alpha Spec												
Batch	957004											
			Yield:	82.4	88.0							
QC1202051964	LCS				6.50	pCi/g					03/05/10	12:23
Uranium-233/234			TPU:		+/-0.576							
			Yield:		88.8							
Uranium-235/236					0.460	pCi/g						
			TPU:		+/-0.0938							
			Yield:		88.8							
Uranium-238		5.75			6.41	pCi/g		112	(75%-125%)			
			TPU:		+/-0.569							
			Yield:		88.8							
QC1202051962	MB											
Uranium-233/234				U	0.00715	pCi/g					03/05/10	12:23
			TPU:		+/-0.00484							
			Yield:		102							
Uranium-235/236				U	-0.00162	pCi/g						
			TPU:		+/-0.0023							
			Yield:		102							
Uranium-238				U	0.00657	pCi/g						
			TPU:		+/-0.00438							
			Yield:		102							
Batch	962636											
QC1202065199	246875004	DUP										
Uranium-233/234					1.12	0.986	pCi/g	0.331	(0-1)	MXE1	03/09/10	17:23
			TPU:		+/-0.102	+/-0.095						
			Yield:		95.7	84.6						
Uranium-235/236				U	0.0932	0.0627	pCi/g	0.384	(0-1)			
			TPU:		+/-0.0218	+/-0.018						
			Yield:		95.7	84.6						
Uranium-238					1.66	1.64	pCi/g	0.0426	(0-1)			
			TPU:		+/-0.142	+/-0.144						
			Yield:		95.7	84.6						
QC1202065200	LCS											
Uranium-233/234					4.40	pCi/g					03/09/10	17:24
			TPU:		+/-0.433							
			Yield:		89.1							
Uranium-235/236				U	0.253	pCi/g						
			TPU:		+/-0.0756							
			Yield:		89.1							
Uranium-238		5.75			4.32	pCi/g		75.1	(75%-125%)			
			TPU:		+/-0.427							
			Yield:		89.1							
QC1202065198	MB											
Uranium-233/234				U	0.00867	pCi/g					03/09/10	17:23
			TPU:		+/-0.00398							
			Yield:		98.3							
Uranium-235/236				U	0.00221	pCi/g						
			TPU:		+/-0.00383							
			Yield:		98.3							
Uranium-238				U	0.0125	pCi/g						

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QC Summary

Workorder: 246875

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch	962636									
		TPU:		+/-0.00481						
		Yield:		98.3						
Rad Gamma Spec										
Batch	952643									
	QC1202041821 246874001 DUP									
Americium-241		U	-0.177	U	0.131	pCi/g	0.649	(0-1)	MXR1	02/24/1009:12
		TPU:	+/-0.176		+/-0.0617					
Bismuth-211		UI	5.36	UI	4.52	pCi/g	0.544	(0-1)		
		TPU:	+/-0.425		+/-0.345					
Bismuth-214			1.25		1.27	pCi/g	0.0398	(0-1)		
		TPU:	+/-0.118		+/-0.109					
Cadmium-109		U	0.571	UI	4.64	pCi/g	1.51	(0-1)		
		TPU:	+/-0.784		+/-0.565					
Cerium-139		U	-0.00636	U	-0.00241	pCi/g	0.0495	(0-1)		
		TPU:	+/-0.0228		+/-0.0171					
Cesium-134		U	0.0857	U	0.0665	pCi/g	0.161	(0-1)		
		TPU:	+/-0.0324		+/-0.0272					
Cesium-137			0.180		0.251	pCi/g	0.388	(0-1)		
		TPU:	+/-0.0481		+/-0.0438					
Cobalt-60		U	0.0526	U	-0.0261	pCi/g	0.808	(0-1)		
		TPU:	+/-0.0277		+/-0.021					
Europium-152		U	-0.0135	U	0.0592	pCi/g	0.232	(0-1)		
		TPU:	+/-0.103		+/-0.0533					
Lanthanum-140		U	-0.0501	U	0.0549	pCi/g	0.505	(0-1)		
		TPU:	+/-0.0597		+/-0.0442					
Lead-212			2.07		2.02	pCi/g	0.0845	(0-1)		
		TPU:	+/-0.147		+/-0.125					
Lead-214			1.86		1.57	pCi/g	0.517	(0-1)		
		TPU:	+/-0.156		+/-0.127					
Mercury-203		U	0.0204	U	-0.000527	pCi/g	0.207	(0-1)		
		TPU:	+/-0.0298		+/-0.0206					
Potassium-40			35.6		34.5	pCi/g	0.143	(0-1)		
		TPU:	+/-2.08		+/-1.79					
Radium-223		U	-1.25	U	0.241	pCi/g	0.842	(0-1)		
		TPU:	+/-0.507		+/-0.377					
Radium-224		UI	5.17	UI	4.92	pCi/g	0.070	(0-1)		
		TPU:	+/-1.06		+/-0.703					
Radium-226			1.25		1.27	pCi/g	0.0398	(0-1)		
		TPU:	+/-0.118		+/-0.109					
Radium-228			1.78		1.92	pCi/g	0.138	(0-1)		
		TPU:	+/-0.250		+/-0.225					
Ruthenium-106		U	0.160	U	-0.28	pCi/g	0.527	(0-1)		
		TPU:	+/-0.226		+/-0.193					
Sodium-22		U	-0.084	U	0.0279	pCi/g	0.943	(0-1)		
		TPU:	+/-0.0351		+/-0.0243					
Strontium-85		UI	0.123	U	0.0654	pCi/g	0.536	(0-1)		
		TPU:	+/-0.0308		+/-0.0226					
Thallium-208			0.516		0.584	pCi/g	0.307	(0-1)		
		TPU:	+/-0.0562		+/-0.0543					
Thorium-227		U	-0.281	U	-0.231	pCi/g	0.0545	(0-1)		

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QC Summary

Workorder: 246875

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	952643										
Thorium-231		TPU:	+/-0.262	+/-0.195							
		U	-1.25	0.241	pCi/g	0.842		(0-1)			
Thorium-234		TPU:	+/-0.507	+/-0.377							
		U	2.15	1.17	pCi/g	0.251		(0-1)			
Tin-113		TPU:	+/-1.37	+/-0.589							
		U	0.030	-0.00646	pCi/g	0.327		(0-1)			
Uranium-235		TPU:	+/-0.0313	+/-0.0244							
		U	0.0634	-0.157	pCi/g	0.404		(0-1)			
Yttrium-88		TPU:	+/-0.157	+/-0.115							
		U	-0.0359	0.00998	pCi/g	0.624		(0-1)			
		TPU:	+/-0.0209	+/-0.0159							
QC1202041822	LCS										
Americium-241	16.3			16.0	pCi/g		98	(75%-125%)		02/24/1009:10	
		TPU:		+/-1.18							
Bismuth-211				2.49	pCi/g						
		TPU:		+/-0.330							
Bismuth-214				0.959	pCi/g						
		TPU:		+/-0.121							
Cadmium-109				33.9	pCi/g						
		TPU:		+/-2.25							
Cerium-139			U	-0.00838	pCi/g						
		TPU:		+/-0.0237							
Cesium-134			U	0.0539	pCi/g						
		TPU:		+/-0.0451							
Cesium-137	5.69			5.80	pCi/g		102	(75%-125%)			
		TPU:		+/-0.195							
Cobalt-60	6.53			6.76	pCi/g		103	(75%-125%)			
		TPU:		+/-0.343							
Europium-152			U	0.0782	pCi/g						
		TPU:		+/-0.0908							
Lanthanum-140			U	-0.0324	pCi/g						
		TPU:		+/-0.0395							
Lead-212				1.46	pCi/g						
		TPU:		+/-0.0942							
Lead-214				0.868	pCi/g						
		TPU:		+/-0.117							
Mercury-203			U	1.54E-05	pCi/g						
		TPU:		+/-0.0311							
Potassium-40			U	0.476	pCi/g						
		TPU:		+/-0.286							
Radium-223			U	-1.12	pCi/g						
		TPU:		+/-0.593							
Radium-224				4.92	pCi/g						
		TPU:		+/-1.18							
Radium-226				0.959	pCi/g						
		TPU:		+/-0.121							
Radium-228				1.56	pCi/g						
		TPU:		+/-0.296							
Ruthenium-106			U	-0.262	pCi/g						
		TPU:		+/-0.302							
Sodium-22			U	0.0268	pCi/g						

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QC Summary

Workorder: 246875

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	952643										
Strontium-85		TPU:		+/-0.0311							
			U	0.0286	pCi/g						
Thallium-208		TPU:		+/-0.0339							
				0.450	pCi/g						
Thorium-227		TPU:		+/-0.0751							
			U	-0.0542	pCi/g						
Thorium-231		TPU:		+/-0.325							
			U	-1.12	pCi/g						
Thorium-234		TPU:		+/-0.593							
			U	-0.67	pCi/g						
Tin-113		TPU:		+/-1.62							
			U	0.012	pCi/g						
Uranium-235		TPU:		+/-0.0412							
			U	-0.0956	pCi/g						
Yttrium-88		TPU:		+/-0.168							
			U	0.00555	pCi/g						
		TPU:		+/-0.030							
QC1202041820	MB										
Americium-241			U	-0.028	pCi/g					02/24/1009:11	
		TPU:		+/-0.0202							
Bismuth-211			U	0.0966	pCi/g						
		TPU:		+/-0.0524							
Bismuth-214			U	-0.0419	pCi/g						
		TPU:		+/-0.020							
Cadmium-109			U	-0.0273	pCi/g						
		TPU:		+/-0.128							
Cerium-139			U	-0.00278	pCi/g						
		TPU:		+/-0.00568							
Cesium-134			U	0.00608	pCi/g						
		TPU:		+/-0.00973							
Cesium-137			U	-0.0175	pCi/g						
		TPU:		+/-0.00799							
Cobalt-60			U	-0.00484	pCi/g						
		TPU:		+/-0.00937							
Europium-152			U	-0.0176	pCi/g						
		TPU:		+/-0.0225							
Lanthanum-140			U	-0.00391	pCi/g						
		TPU:		+/-0.0135							
Lead-212			U	-0.00165	pCi/g						
		TPU:		+/-0.0136							
Lead-214			U	0.0186	pCi/g						
		TPU:		+/-0.0189							
Mercury-203			U	0.000256	pCi/g						
		TPU:		+/-0.00763							
Potassium-40			U	0.00678	pCi/g						
		TPU:		+/-0.108							
Radium-223			U	0.133	pCi/g						
		TPU:		+/-0.144							
Radium-224			U	-0.326	pCi/g						
		TPU:		+/-0.144							
Radium-226			U	-0.0419	pCi/g						

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QC Summary

Workorder: 246875

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	952643										
		TPU:		+/-0.020							
Radium-228			U	-0.00475	pCi/g						
		TPU:		+/-0.0336							
Ruthenium-106			U	-0.074	pCi/g						
		TPU:		+/-0.0725							
Sodium-22			U	0.00314	pCi/g						
		TPU:		+/-0.00759							
Strontium-85			U	-0.0362	pCi/g						
		TPU:		+/-0.0131							
Thallium-208			U	-0.00494	pCi/g						
		TPU:		+/-0.00926							
Thorium-227			U	-0.0245	pCi/g						
		TPU:		+/-0.082							
Thorium-231			U	0.133	pCi/g						
		TPU:		+/-0.144							
Thorium-234			U	0.787	pCi/g						
		TPU:		+/-0.331							
Tin-113			U	0.0261	pCi/g						
		TPU:		+/-0.00912							
Uranium-235			U	0.0695	pCi/g						
		TPU:		+/-0.0427							
Yttrium-88			U	0.00505	pCi/g						
		TPU:		+/-0.00725							
Rad Liquid Scintillation											
Batch	953115										
QC1202042949	246875001	DUP									
Tritium		U	48.9	U	116	pCi/L	0.346	(0-1)	KXK2	02/17/1005:39	
		TPU:	+/-47.1		+/-50.4						
QC1202042950	LCS										
Tritium		5550			6040	pCi/L		109 (80%-120%)		02/17/1006:26	
		TPU:			+/-497						
QC1202042948	MB										
Tritium				U	-90.5	pCi/L				02/17/1004:51	
		TPU:			+/-42.5						

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

GEL LABORATORIES LLC

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

QC Summary

Workorder: 246875

Page 7 of 7

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

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

** Indicates analyte is a surrogate compound.

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

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

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

RAW DATA

Radiochemistry Batch Checklist, Rev10

Batch#

956999

Product:

Am

Date:

3/9/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD.	✓		
(If rad samples, < 5% of lowest activity)	✓		Case narrative
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 REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

L. Denise Green 3/9/10

Secondary Review Performed By:

S. J. 3/10/10

3/11
CARUL

Am/Cm Que Sheet

24-FEB-10

Batch #: 956999 Analyst: MXE1 First Client Due Date: 11-MAR-10 Internal Due Date: 28-FEB-10 Comments:
 Tracer(s): Am241/Cm244 Tracer Code: 445-96-2-55 Expiration Date: 5/8/09 Vol: 0.1
 LCS Isotope(s): Am241/Cm244 LCS Code(s): / / / Vol(s): / / /
 Spike Isotope(s): Am241/Cm244 Spike Code(s): / / / Vol(s): / / /
 Prep Date: 3/1/10 Initials: WU Balance ID: 504102172 Witness: JEH 3-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry	Am/Cm Det #
										Aliquot (g) / (l)	
246874001-1	RE46-10-12720	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	1	1	1.265		37
246874002-1	RE46-10-12718	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	2	2	1.250		33
246874003-1	RE46-10-12719	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	3	3	1.255		34
246874004-1	RE46-10-12721	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	4	4	1.256		40
246874005-1	RE46-10-12722	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	5	5	1.264		41
246874006-1	RE46-10-12723	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	6	6	1.251		42
246874007-1	RE46-10-12714	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	7	7	1.257		31
246874008-1	RE46-10-12727	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	8	8	1.203		33
246874009-1	RE46-10-12716	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	9	9	1.250		35
246874010-1	RE46-10-12717	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	10	10	1.256		36
246875001-1	RE15-10-8366	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	11	11	1.251		43
246875002-1	RE15-10-8367	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	12	12	1.250		44
246875003-1	RE15-10-8364	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	13	13	1.201		45
246875004-1	RE15-10-8365	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	14	14	1.208		46
246875005-1	RE15-10-8368	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	15	15	1.260		48
246875006-1	RE15-10-8340	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	16	16	1.267		65
246875007-1	RE15-10-8341	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	17	17	1.258		66
246875008-1	RE15-10-8376	SAMPLE	.05 pCi/g	SOIL	LANL010	09-FEB-10	18	18	1.253		67
1202051945-1	MB for batch 956999	MB	.05 pCi/g	SOIL	QC ACCOUNT	09-FEB-10	19	19	1	211	68
1202051946-1	RE46-10-12720(246874001DUP)	DUP	.05 pCi/g	SOIL	QC ACCOUNT	09-FEB-10	20	20	1.258		69
1202051947-1	LCS for batch 956999	LCS	.05 pCi/g	SOIL	QC ACCOUNT	09-FEB-10	21	21	0.103		212 76

SRM 0244-B exp 4/30/20

Choose SOP Used: GL-RAD-A-011
 GL-RAD-A-036

Solid Sample Dissolution by: KEACH or DIGESTION
 Circle One

Data Reviewed By: [Signature] 3/9/10

Blank Correction Report

Batch ID 956999

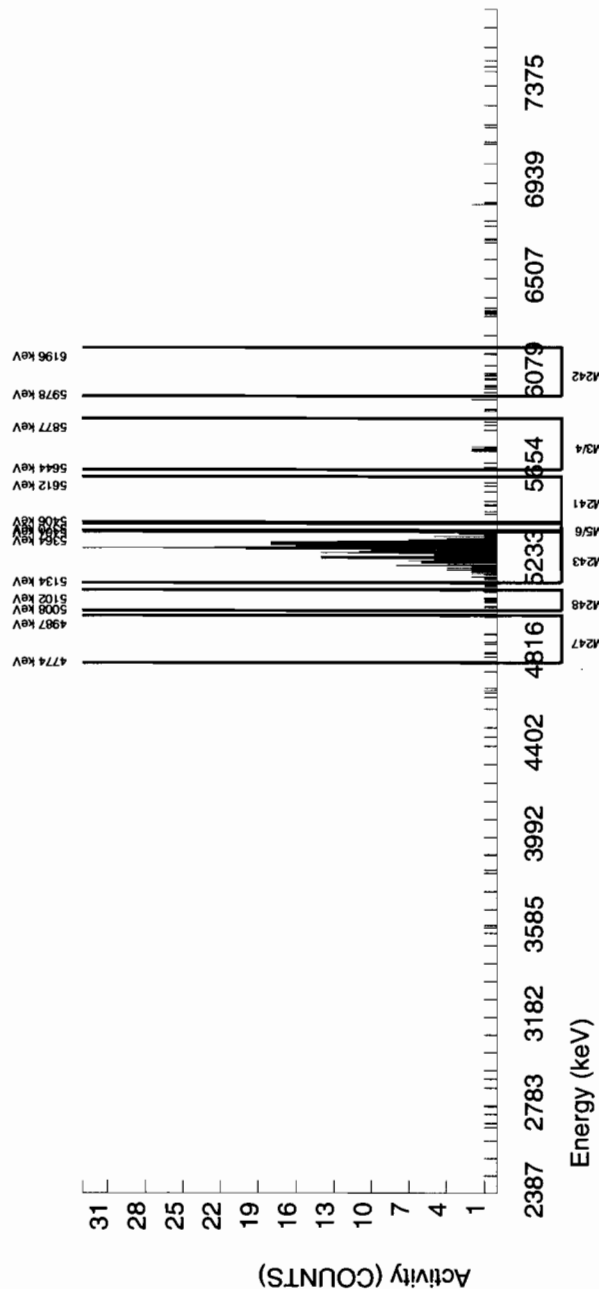
GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202051946	DUP	Americium-241	1.26 g	-0.00463	0.00343	0.0387	.003595238	pCi/g	YES
1202051947	LCS	Americium-241	0.103 g	29.3	2.07	0.191	.043980583	pCi/g	NO
1202051945	MB	Americium-241	1.00 g	0.00453	0.0025	0.0213	.00453	pCi/g	YES
246874001	RE46-10-12720	Americium-241	1.27 g	0.00282	0.00885	0.0451	.003566929	pCi/g	YES
246874002	RE46-10-12718	Americium-241	1.25 g	-0.00602	0.00583	0.0384	.003624	pCi/g	YES
246874003	RE46-10-12719	Americium-241	1.26 g	0.00196	0.0079	0.0371	.003595238	pCi/g	YES
246874004	RE46-10-12721	Americium-241	1.26 g	0.000797	0.00357	0.0374	.003595238	pCi/g	YES
246874005	RE46-10-12722	Americium-241	1.25 g	0.0023	0.00349	0.0391	.003624	pCi/g	YES
246874006	RE46-10-12723	Americium-241	1.25 g	0.00151	0.00473	0.0477	.003624	pCi/g	YES
246874007	RE46-10-12714	Americium-241	1.26 g	-0.000377	0.00326	0.0412	.003595238	pCi/g	YES
246874008	RE46-10-12727	Americium-241	1.26 g	0.00107	0.00288	0.0408	.003595238	pCi/g	YES
246874009	RE46-10-12716	Americium-241	1.25 g	-0.00485	0.00369	0.0424	.003624	pCi/g	YES
246874010	RE46-10-12717	Americium-241	1.26 g	-0.00455	0.00381	0.0379	.003595238	pCi/g	YES
246875001	RE15-10-8366	Americium-241	1.25 g	0.00871	0.00483	0.0373	.003624	pCi/g	YES
246875002	RE15-10-8367	Americium-241	1.25 g	0.000973	0.00281	0.0397	.003624	pCi/g	YES
246875003	RE15-10-8364	Americium-241	1.26 g	0.00118	0.003	0.0424	.003595238	pCi/g	YES
246875004	RE15-10-8365	Americium-241	1.27 g	-0.000368	0.00325	0.041	.003566929	pCi/g	YES
246875005	RE15-10-8368	Americium-241	1.26 g	0.0109	0.00789	0.0403	.003595238	pCi/g	YES
246875006	RE15-10-8340	Americium-241	1.27 g	-0.00192	0.00696	0.0423	.003566929	pCi/g	YES
246875007	RE15-10-8341	Americium-241	1.26 g	-0.00574	0.00345	0.0367	.003595238	pCi/g	YES
246875008	RE15-10-8376	Americium-241	1.25 g	0.0187	0.00913	0.0417	.003624	pCi/g	NO

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 956999 SAMPLE ID : S0246874001_AM SAMPLE QTY : 1.265 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 59.837				CHAMBER : 037 DETECTOR S/N : 45-149BB5 AVERAGE %EFFICIENCY : 37.0710 COUNT DATE : 6-MAR-2010 12:01:12 ELAPSED LIVE TIME(SEC) : 30299.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B037.CNF;1121 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W037.CNF;309 CAL DATE : 5-MAR-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 1.7452E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5506.331	137.846	6.000	0.888	4.545	2.8409	99.94000	2.82E-03	8.85E-03	1.82E-02	4.51E-02	8.84E-03
AM243	5270.000	5280.983	32.479	327.000	325.990	1.010	1.0050	99.78000	1.04E+00	9.74E-02	6.46E-03	2.16E-02	5.77E-02
CM-242	6102.000	6065.905	182.154	12.000	10.990	1.010	4.3413	100.00000	3.90E-02	1.29E-02	2.78E-02	6.43E-02	1.25E-02
CM-3/4	5795.020	5742.161	24.000	14.000	9.960	4.040	5.1799	100.00000	3.17E-02	1.30E-02	3.32E-02	7.51E-02	1.28E-02
CM-5/6	5386.000	5374.758	0.000	7.000	5.990	1.010	14.2480	86.09000	2.21E-02	1.03E-02	1.06E-01	2.22E-01	1.01E-02
CM-247	4946.000	4876.275	172.308	6.000	3.980	2.020	13.7917	79.30000	1.60E-02	1.07E-02	1.12E-01	2.34E-01	1.06E-02
CM-248	5078.600	5062.749	0.000	9.000	8.495	0.505	19.5080	91.00000	2.97E-02	1.09E-02	1.38E-01	2.85E-01	1.06E-02

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG 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 : 956999 SAMPLE ID : S0246875001_AM SAMPLE QTY : 1.251 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 74.358				CHAMBER : 043 DETECTOR S/N : 76543 AVERAGE %EFFICIENCY : 36.4208 COUNT DATE : 6-MAR-2010 12:01:13 ELAPSED LIVE TIME(SEC) : 30299.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B043.CNF;1111 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W043.CNF;288 CAL DATE : 5-MAR-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.1687E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5525.915	122.962	4.000	3.307	0.000	2.8409	99.94000	8.71E-03	4.83E-03	1.51E-02	3.73E-02	4.79E-03
AM243	5270.000	5281.243	33.215	398.000	398.000	0.000	0.0000	99.78000	1.05E+00	9.19E-02	0.00E+00	7.15E-03	5.26E-02
CM-242	6102.000	6062.211	4.918	5.000	4.495	0.505	4.3413	100.0000	1.32E-02	6.80E-03	2.31E-02	5.33E-02	6.73E-03
CM-3/4	5795.020	5764.637	49.185	3.000	0.980	2.020	5.1799	100.0000	2.59E-03	5.30E-03	2.75E-02	6.22E-02	5.29E-03
CM-5/6	5386.000	5384.027	19.059	3.000	3.000	0.000	14.2480	86.09000	9.17E-03	5.34E-03	8.79E-02	1.84E-01	5.30E-03
CM-247	4946.000	4838.692	113.125	2.000	2.000	0.000	13.7917	79.30000	6.64E-03	4.72E-03	9.24E-02	1.94E-01	4.70E-03
CM-248	5078.600	5080.575	4.918	3.000	3.000	0.000	19.5080	91.00000	8.68E-03	5.05E-03	1.14E-01	2.36E-01	5.01E-03

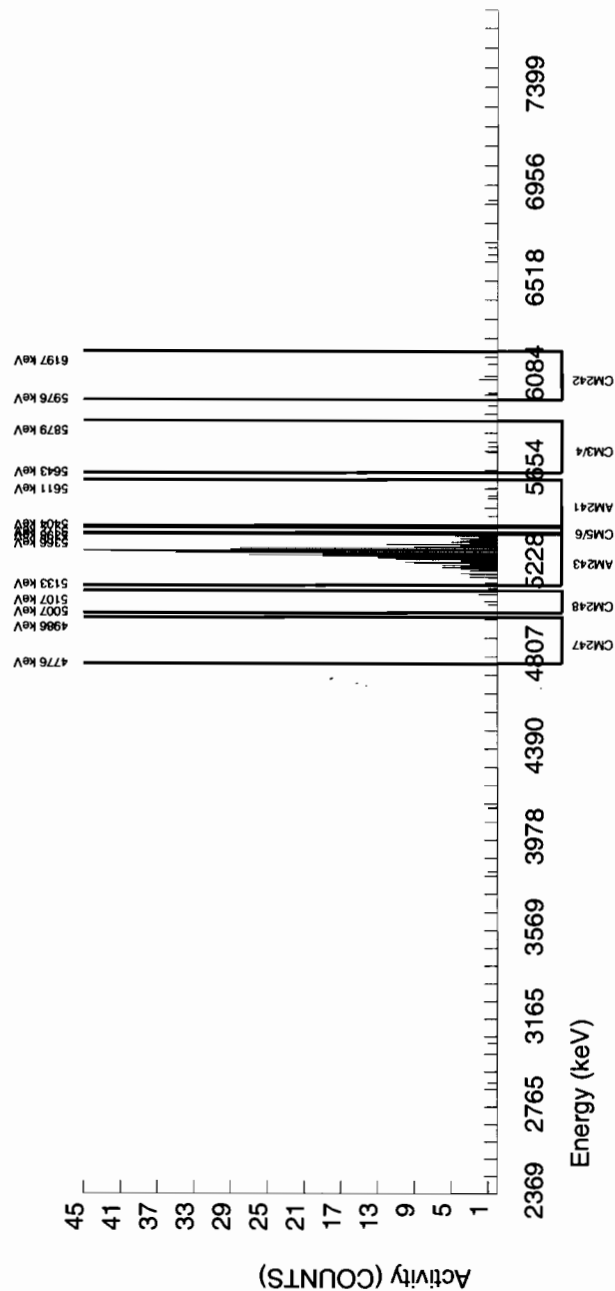
NOTES:

* BKG Sg calculated via blank population.

(Sg updated 10-FEB-2010)

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

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



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

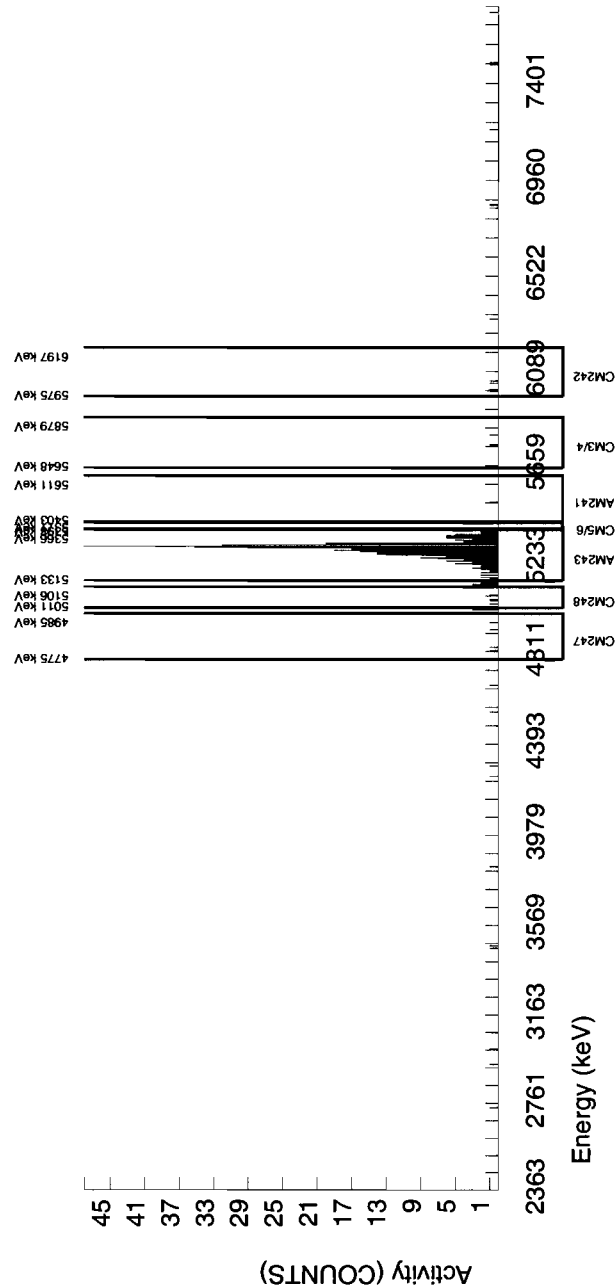
<p>BATCH NUMBER : 956999 SAMPLE ID : S0246875002_AM SAMPLE QTY : 1.250 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 71.688</p>	<p>CHAMBER : 044 DETECTOR S/N : 79459 AVERAGE %EFFICIENCY : 35.5933 COUNT DATE : 6-MAR-2010 12:01:13 ELAPSED LIVE TIME(SEC) : 30299.99</p>	<p>LIB FILE : ENV_ALPHA_AM BKG FILE : B044.CNF;1121 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W044.CNF;309 CAL DATE : 5-MAR-2010</p>
<p>TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.0908E+00 dpm</p>	<p>MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G</p>	<p>LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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
AM-241	5479.150	5498.804	4.954	1.000	0.348	0.000	2.8409	99.94000	9.73E-04	2.81E-03	1.60E-02	3.97E-02	2.80E-03
AM243	5270.000	5280.582	20.211	376.000	374.990	1.010	1.0050	99.78000	1.05E+00	9.39E-02	5.68E-03	1.90E-02	5.44E-02
CM-242	6102.000	6026.643	49.536	4.000	3.495	0.505	4.3413	100.0000	1.09E-02	6.48E-03	2.45E-02	5.66E-02	6.43E-03
CM-3/4	5795.020	5773.144	48.917	3.000	1.485	1.515	5.1799	100.0000	4.16E-03	5.45E-03	2.92E-02	6.60E-02	5.44E-03
CM-5/6	5386.000	5384.382	0.000	1.000	1.000	0.000	14.2480	86.09000	3.25E-03	3.26E-03	9.34E-02	1.96E-01	3.25E-03
CM-247	4946.000	4880.879	123.840	4.000	3.495	0.505	13.7917	79.30000	1.23E-02	7.33E-03	9.82E-02	2.06E-01	7.27E-03
CM-248	5078.600	5052.053	44.582	4.000	4.000	0.000	19.5080	91.00000	1.23E-02	6.21E-03	1.21E-01	2.50E-01	6.15E-03

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of AM243 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
AM-241

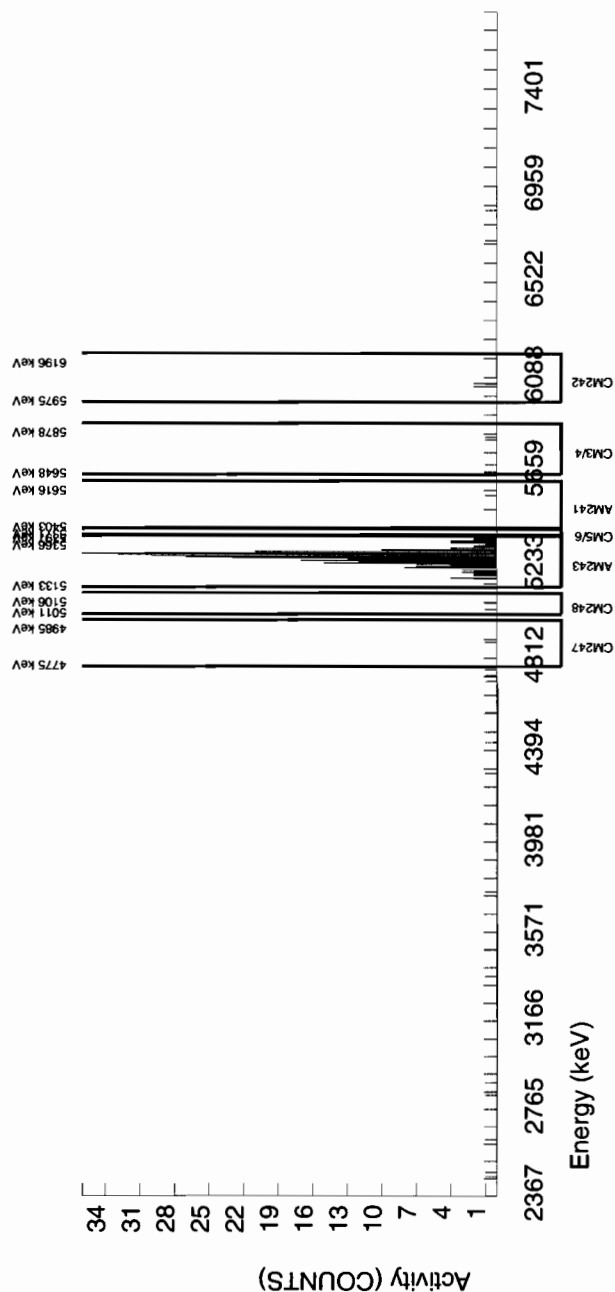


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 956999 SAMPLE ID : S0246875003_AM SAMPLE QTY : 1.261 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 69.609				CHAMBER : 045 DETECTOR S/N : 78783 AVERAGE %EFFICIENCY : 33.9687 COUNT DATE : 6-MAR-2010 12:01:13 ELAPSED LIVE TIME(SEC) : 30299.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B045.CNF:1110 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W045.CNF:300 CAL DATE : 5-MAR-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.0302E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5557.140	4.942	1.000	0.395	0.000	2.8409	99.94000	1.18E-03	3.00E-03	1.72E-02	4.24E-02	2.99E-03
AM243	5270.000	5277.154	33.409	348.000	347.495	0.505	0.7106	99.78000	1.04E+00	9.55E-02	4.30E-03	1.67E-02	5.60E-02
CM-242	6102.000	6030.762	81.382	8.000	7.495	0.505	4.3413	100.0000	2.50E-02	9.77E-03	2.62E-02	6.05E-02	9.59E-03
CM-3/4	5795.020	5744.127	0.000	5.000	3.990	1.010	5.1799	100.0000	1.20E-02	7.10E-03	3.13E-02	7.07E-02	7.04E-03
CM-5/6	5386.000	5372.690	0.000	3.000	3.000	0.000	14.2480	86.09000	1.04E-02	6.07E-03	9.99E-02	2.09E-01	6.02E-03
CM-247	4946.000	4890.343	4.942	1.000	0.495	0.505	13.7917	79.30000	1.87E-03	4.24E-03	1.05E-01	2.20E-01	4.23E-03
CM-248	5078.600	5041.174	44.474	3.000	3.000	0.000	19.5080	91.00000	9.86E-03	5.74E-03	1.29E-01	2.68E-01	5.69E-03

NOTES:

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

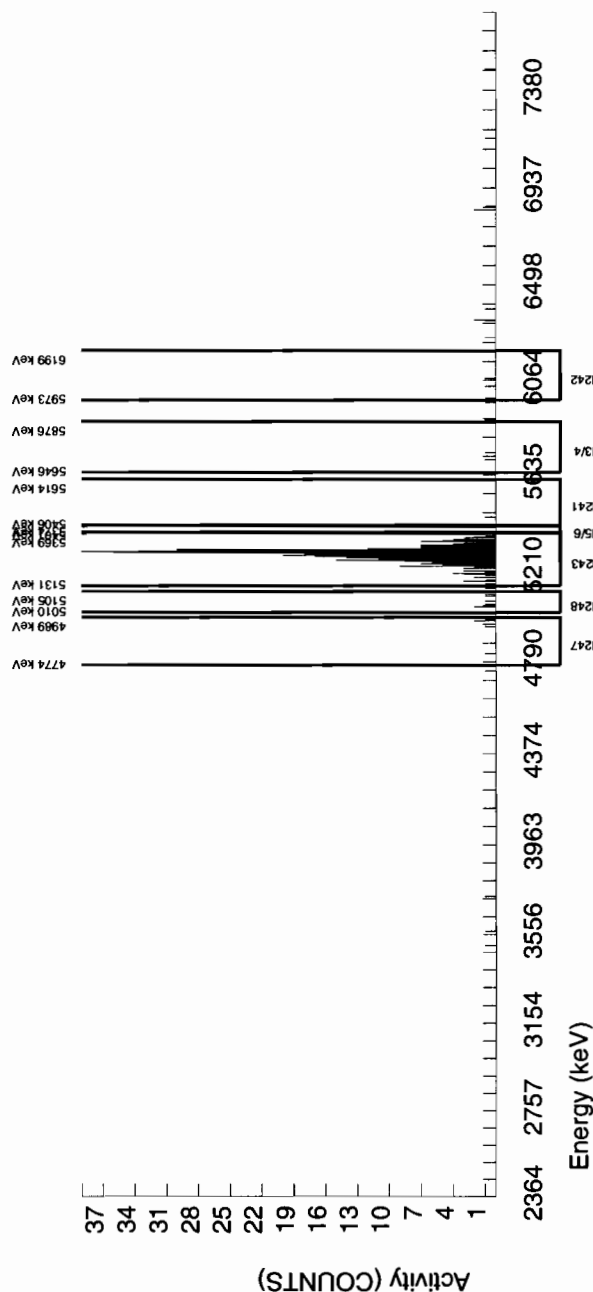
BATCH NUMBER : 956999 SAMPLE ID : S0246875004_AM SAMPLE QTY : 1.268 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 69.403				CHAMBER : 046 DETECTOR S/N : 76544 AVERAGE %EFFICIENCY : 35.0500 COUNT DATE : 6-MAR-2010 12:01:13 ELAPSED LIVE TIME(SEC) : 30299.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B046.CNF,1121 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W046.CNF,291 CAL DATE : 5-MAR-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.0242E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5448.443	4.882	1.000	-0.127	0.505	2.8409	99.94000	-3.68E-04	3.25E-03	1.66E-02	4.10E-02	3.24E-03
AM243	5270.000	5278.016	28.013	358.000	357.495	0.505	0.7106	99.78000	1.04E+00	9.40E-02	4.16E-03	1.62E-02	5.49E-02
CM-242	6102.000	6046.750	87.878	4.000	3.495	0.505	4.3413	100.0000	1.13E-02	6.71E-03	2.53E-02	5.85E-02	6.65E-03
CM-3/4	5795.020	5725.742	34.175	2.000	0.485	1.515	5.1799	100.0000	1.41E-03	4.83E-03	3.02E-02	6.83E-02	4.82E-03
CM-5/6	5386.000	5387.377	0.000	1.000	0.495	0.505	14.2480	86.09000	1.66E-03	3.77E-03	9.66E-02	2.02E-01	3.76E-03
CM-247	4946.000	4944.718	7.171	5.000	4.495	0.505	13.7917	79.30000	1.64E-02	8.45E-03	1.01E-01	2.13E-01	8.36E-03
CM-248	5078.600	5064.164	4.882	6.000	6.000	0.000	19.5080	91.00000	1.91E-02	7.91E-03	1.25E-01	2.59E-01	7.78E-03

NOTES:

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

* BKG 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

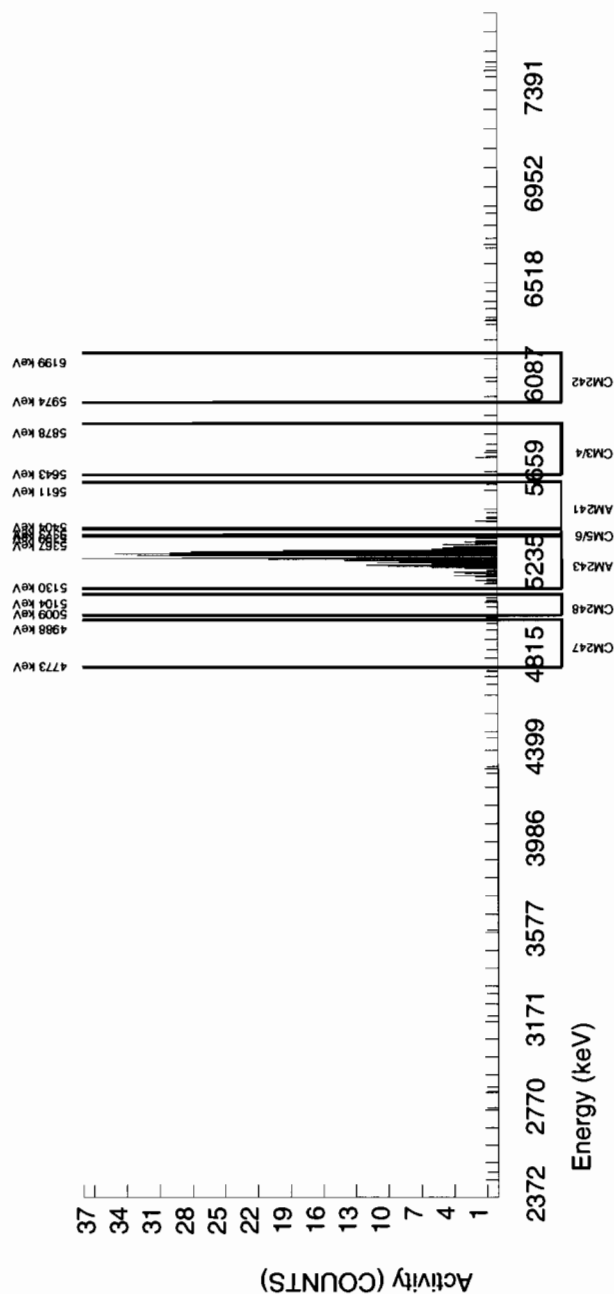
BATCH NUMBER : 956999 SAMPLE ID : S0246875005_AM SAMPLE QTY : 1.260 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 74.935				CHAMBER : 048 DETECTOR S/N : 42483 AVERAGE %EFFICIENCY : 33.2770 COUNT DATE : 6-MAR-2010 12:01:13 ELAPSED LIVE TIME(SEC) : 30299.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B048.CNF;1117 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W048.CNF;318 CAL DATE : 5-MAR-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.1855E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5473.274	7.275	7.000	3.837	2.525	2.8409	99.94000	1.09E-02	7.89E-03	1.63E-02	4.03E-02	7.85E-03
AM243	5270.000	5277.661	40.028	370.000	366.465	3.535	1.8802	99.78000	1.04E+00	9.43E-02	1.08E-02	2.93E-02	5.49E-02
CM-242	6102.000	6083.893	19.812	2.000	0.485	1.515	4.3413	100.0000	1.54E-03	5.27E-03	2.49E-02	5.74E-02	5.27E-03
CM-3/4	5795.020	5747.878	7.275	6.000	-0.565	6.565	5.1799	100.0000	-1.61E-03	8.69E-03	2.97E-02	6.70E-02	8.69E-03
CM-5/6	5386.000	5377.965	0.000	2.000	2.000	0.000	14.2480	86.09000	6.60E-03	4.69E-03	9.48E-02	1.99E-01	4.66E-03
CM-247	4946.000	4926.906	118.873	3.000	1.485	1.515	13.7917	79.30000	5.32E-03	6.96E-03	9.96E-02	2.09E-01	6.95E-03
CM-248	5078.600	5062.357	4.953	7.000	5.990	1.010	19.5080	91.00000	1.87E-02	8.66E-03	1.23E-01	2.54E-01	8.55E-03

NOTES:

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

* BKG 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

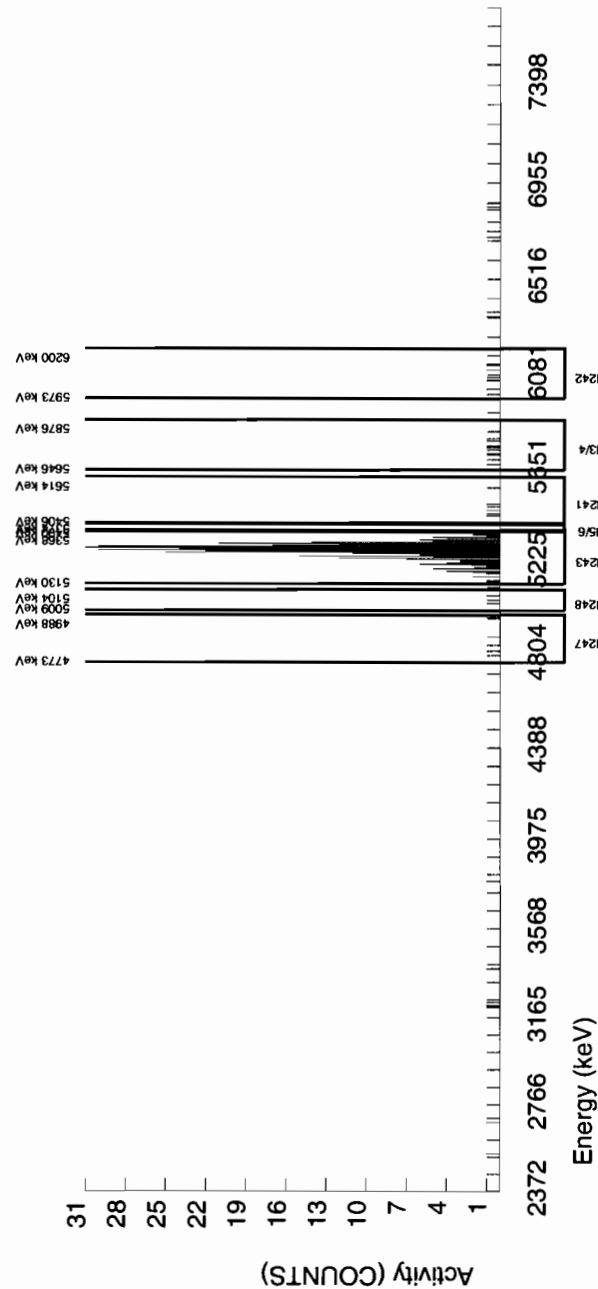
BATCH NUMBER : 956999 SAMPLE ID : S0246875006_AM SAMPLE QTY : 1.267 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 76.607		CHAMBER : 065 DETECTOR S/N : 68551 AVERAGE %EFFICIENCY : 30.8199 COUNT DATE : 6-MAR-2010 12:01:14 ELAPSED LIVE TIME(SEC) : 30299.99	LIB FILE : ENV_ALPHA_AM BKG FILE : B065.CNF;1949 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W065.CNF;307 CAL DATE : 9-FEB-2010
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.2343E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5465.534	53.890	4.000	-0.644	4.040	2.8409	99.94000	-1.92E-03	6.96E-03	1.71E-02	4.23E-02	6.96E-03
AM243	5270.000	5285.872	46.071	349.000	346.980	2.020	1.4213	99.78000	1.04E+00	9.42E-02	8.57E-03	2.52E-02	5.59E-02
CM-242	6102.000	6073.608	132.276	8.000	4.970	3.030	4.3413	100.0000	1.65E-02	1.03E-02	2.61E-02	6.03E-02	1.03E-02
CM-3/4	5795.020	5734.664	127.376	11.000	4.940	6.060	5.1799	100.0000	1.48E-02	1.13E-02	3.12E-02	7.04E-02	1.12E-02
CM-5/6	5386.000	5380.887	7.196	3.000	1.990	1.010	14.2480	86.09000	6.89E-03	6.51E-03	9.96E-02	2.09E-01	6.49E-03
CM-247	4946.000	4887.051	0.000	5.000	3.990	1.010	13.7917	79.30000	1.50E-02	8.89E-03	1.05E-01	2.19E-01	8.83E-03
CM-248	5078.600	5064.274	39.193	2.000	2.000	0.000	19.5080	91.00000	6.55E-03	4.66E-03	1.29E-01	2.67E-01	4.63E-03

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG 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 : 956999 SAMPLE ID : S0246875007_AM SAMPLE QTY : 1.258 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 87.770</p>	<p>CHAMBER : 066 DETECTOR S/N : 46-089C1 AVERAGE %EFFICIENCY : 31.2039 COUNT DATE : 6-MAR-2010 12:01:14 ELAPSED LIVE TIME(SEC) : 30299.99</p>	<p>LIB FILE : ENV_ALPHA_AM BKG FILE : B066.CNF:1110 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W066.CNF:308 CAL DATE : 9-FEB-2010</p>
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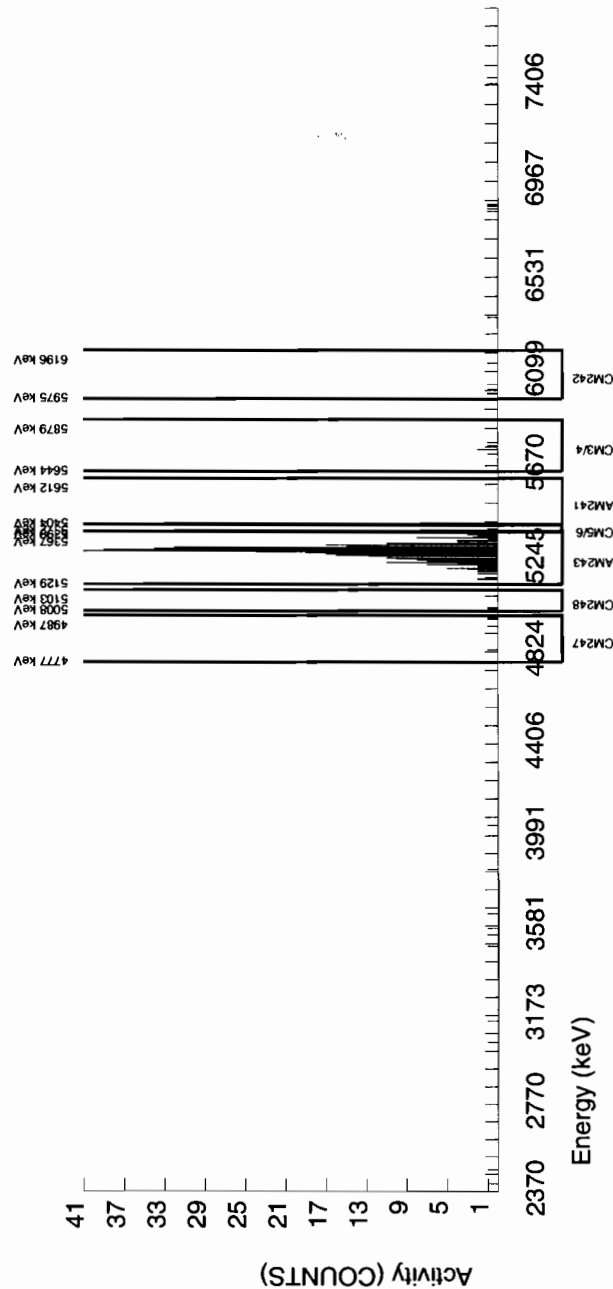
<p>TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.5599E+00 dpm</p>	<p>MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G</p>	<p>LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G</p>
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NUCLIDE ACTIVITY 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	5507.767	0.000	0.000	-2.215	1.515	2.8409	99.94000	-5.74E-03	3.45E-03	1.49E-02	3.67E-02	3.44E-03
AM243	5270.000	5281.849	26.811	403.000	402.495	0.505	0.7106	99.78000	1.04E+00	8.99E-02	3.72E-03	1.45E-02	5.21E-02
CM-242	6102.000	6043.992	133.791	5.000	3.990	1.010	4.3413	100.0000	1.15E-02	6.83E-03	2.27E-02	5.24E-02	6.78E-03
CM-3/4	5795.020	5755.669	4.978	5.000	2.980	2.020	5.1799	100.0000	7.74E-03	6.39E-03	2.71E-02	6.11E-02	6.37E-03
CM-5/6	5386.000	5380.289	0.000	6.000	6.000	0.000	14.2480	86.09000	1.80E-02	7.47E-03	8.65E-02	1.81E-01	7.37E-03
CM-247	4946.000	4903.525	0.000	5.000	1.970	3.030	13.7917	79.30000	6.43E-03	8.35E-03	9.09E-02	1.91E-01	8.34E-03
CM-248	5078.600	5035.065	0.000	5.000	4.495	0.505	19.5080	91.00000	1.28E-02	6.58E-03	1.12E-01	2.32E-01	6.52E-03

NOTES:

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

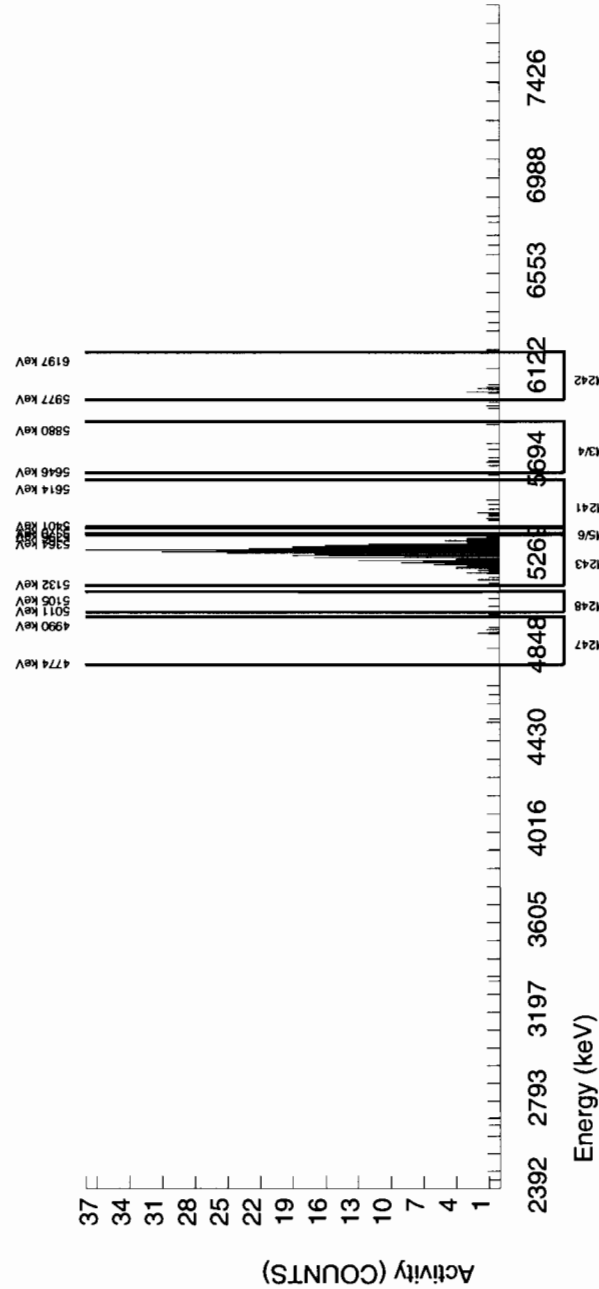
BATCH NUMBER : 956999 SAMPLE ID : S0246875008_AM SAMPLE QTY : 1.253 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 74.810				CHAMBER : 067 DETECTOR S/N : 46-089B4 AVERAGE %EFFICIENCY : 32.3338 COUNT DATE : 6-MAR-2010 12:01:14 ELAPSED LIVE TIME(SEC) : 30299.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B067.CNF;1108 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W067.CNF;289 CAL DATE : 9-FEB-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.1819E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5464.987	7.324	9.000	6.361	2.020	2.8409	99.94000	1.87E-02	9.13E-03	1.69E-02	4.17E-02	9.03E-03
AM243	5270.000	5286.609	33.543	357.000	355.485	1.515	1.2309	99.78000	1.05E+00	9.43E-02	7.33E-03	2.26E-02	5.58E-02
CM-242	6102.000	6028.416	19.884	8.000	7.495	0.505	4.3413	100.0000	2.46E-02	9.60E-03	2.58E-02	5.95E-02	9.43E-03
CM-3/4	5795.020	5716.293	74.799	4.000	-0.040	4.040	5.1799	100.0000	-1.18E-04	7.26E-03	3.08E-02	6.95E-02	7.25E-03
CM-5/6	5386.000	5370.625	0.000	5.000	5.000	0.000	14.2480	86.09000	1.71E-02	7.74E-03	9.83E-02	2.06E-01	7.64E-03
CM-247	4946.000	4937.056	9.973	6.000	3.980	2.020	13.7917	79.30000	1.48E-02	9.89E-03	1.03E-01	2.17E-01	9.83E-03
CM-248	5078.600	5083.021	0.000	4.000	4.000	0.000	19.5080	91.00000	1.29E-02	6.54E-03	1.27E-01	2.63E-01	6.47E-03

NOTES:

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

* BKG 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 :	956999
SAMPLE ID :	S1202051945_AM
SAMPLE QTY :	1.000 G
SAMPLE DATE :	1-MAR-2010 00:00:00.
ANALYST :	MXE1
% YIELD :	82.985

CHAMBER : 211
DETECTOR S/N : 79190
AVERAGE %EFFICIENCY : 39.8764
COUNT DATE : 8-MAR-2010 19:08:35
ELAPSED LIVE TIME(SEC) : 60000.00

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LIB FILE      : ENV_ALPHA_AM
BKG FILE      : B211.CNF;87
BKG DATE      : 7-MAR-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE      : W211.CNF;31
CAL DATE      : 28-FEB-2010
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TRACER	:	445-96-2-SS
ID	:	AM243
NUCLIDE	:	2.9165E+00 dpm
NOMINAL	:	2.4203E+00 dpm
RESULTS	:	

MS/MSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.315E+01 pCi/G

LCS/LCSD	
ID	: 0244-B
NUCLIDE	: AM-241
NOMINAL	: 3.3151E

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	5467.016	4.937	5.000	3.324	0.000	2.7707	99.94000	4.53E-03	2.50E-03	8.78E-03	2.12E-02	2.48E-03
AM243	5270.000	5283.581	36.797	963.000	963.000	0.000	0.0000	99.78000	1.31E+00	9.00E-02	0.00E+00	3.70E-03	4.23E-02
CM-242	6102.000	6067.012	4.937	12.000	11.000	1.000	4.0092	100.0000	1.55E-02	5.17E-03	1.27E-02	2.91E-02	5.08E-03
CM-3/4	5795.020	5748.164	69.113	9.000	9.000	0.000	4.8510	100.0000	1.23E-02	4.15E-03	1.54E-02	3.44E-02	4.09E-03
CM-5/6	5386.000	5378.207	16.644	21.000	21.000	0.000	6.1294	86.09000	3.32E-02	7.52E-03	2.25E-02	4.94E-02	7.25E-03
CM-247	4946.000	4898.550	0.000	11.000	10.000	1.000	6.3427	79.30000	1.72E-02	6.04E-03	2.53E-02	5.53E-02	5.95E-03
CM-248	5078.600	5066.150	29.620	16.000	16.000	0.000	11.0244	91.00000	2.39E-02	6.16E-03	3.84E-02	8.08E-02	5.98E-03

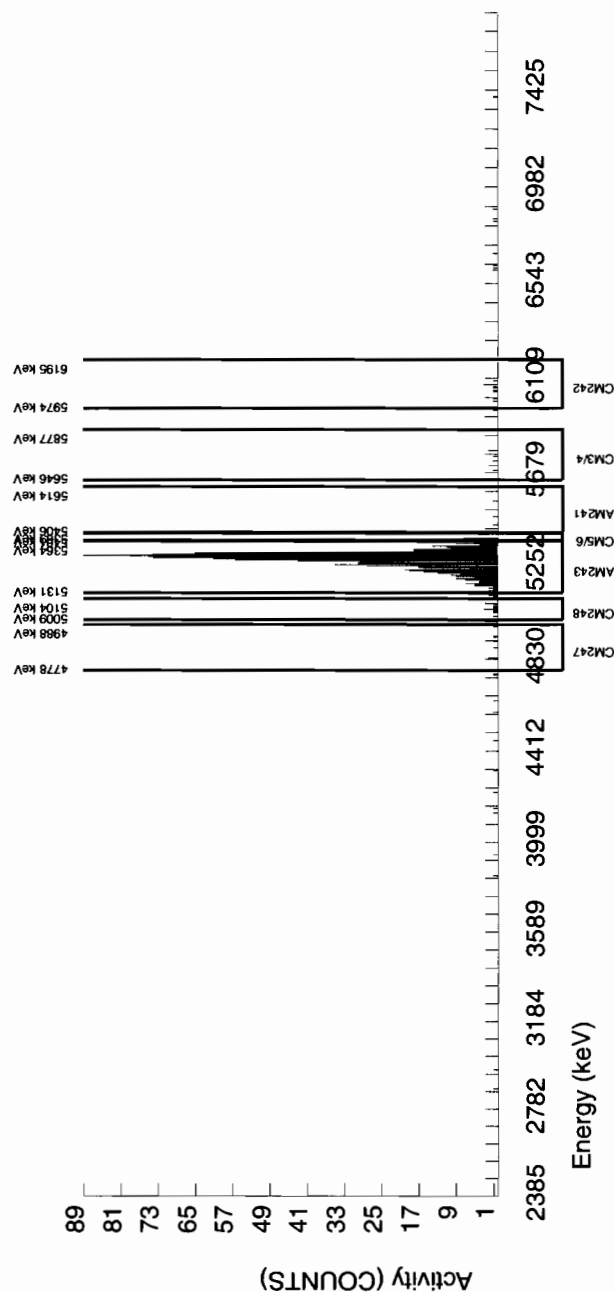
NOTES:

* BKG Sq calculated via blank population.

Price of Sg calculated via B1
(Sg updated 8-MAR-2010)

* BKG 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 : 956999 SAMPLE ID : S1202051946_AM SAMPLE QTY : 1.258 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 82.881				CHAMBER : 069 DETECTOR S/N : 78795 AVERAGE %EFFICIENCY : 30.7054 COUNT DATE : 6-MAR-2010 12:01:14 ELAPSED LIVE TIME(SEC) : 30299.99				LIB FILE : ENV_ALPHA_AM BKG FILE : B069.CNF;1103 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W069.CNF;287 CAL DATE : 9-FEB-2010					
TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.4173E+00 dpm				MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+01 pCi/G				LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3154E+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	5509.147	0.000	0.000	-1.661	1.010	2.7707	99.94000	-4.63E-03	3.43E-03	1.56E-02	3.87E-02	3.43E-03
AM-243	5270.000	5285.253	36.309	374.000	374.000	0.000	0.0000	99.78000	1.04E+00	9.21E-02	0.00E+00	7.57E-03	5.40E-02
CM-242	6102.000	6016.520	29.599	2.000	0.990	1.010	4.0092	100.0000	3.08E-03	4.93E-03	2.25E-02	5.26E-02	4.92E-03
CM-3/4	5795.020	5756.729	107.912	4.000	3.495	0.505	4.8510	100.0000	9.76E-03	5.80E-03	2.73E-02	6.21E-02	5.76E-03
CM-5/6	5386.000	5378.566	0.000	2.000	2.000	0.000	6.1294	86.09000	6.47E-03	4.60E-03	4.00E-02	8.88E-02	4.58E-03
CM-247	4946.000	4815.541	4.933	1.000	-2.030	3.030	6.3427	79.30000	-7.13E-03	5.59E-03	4.50E-02	9.95E-02	5.59E-03
CM-248	5078.600	5026.129	4.933	1.000	-0.010	1.010	11.0244	91.00000	-3.06E-05	3.77E-03	6.81E-02	1.45E-01	3.76E-03

NOTES:

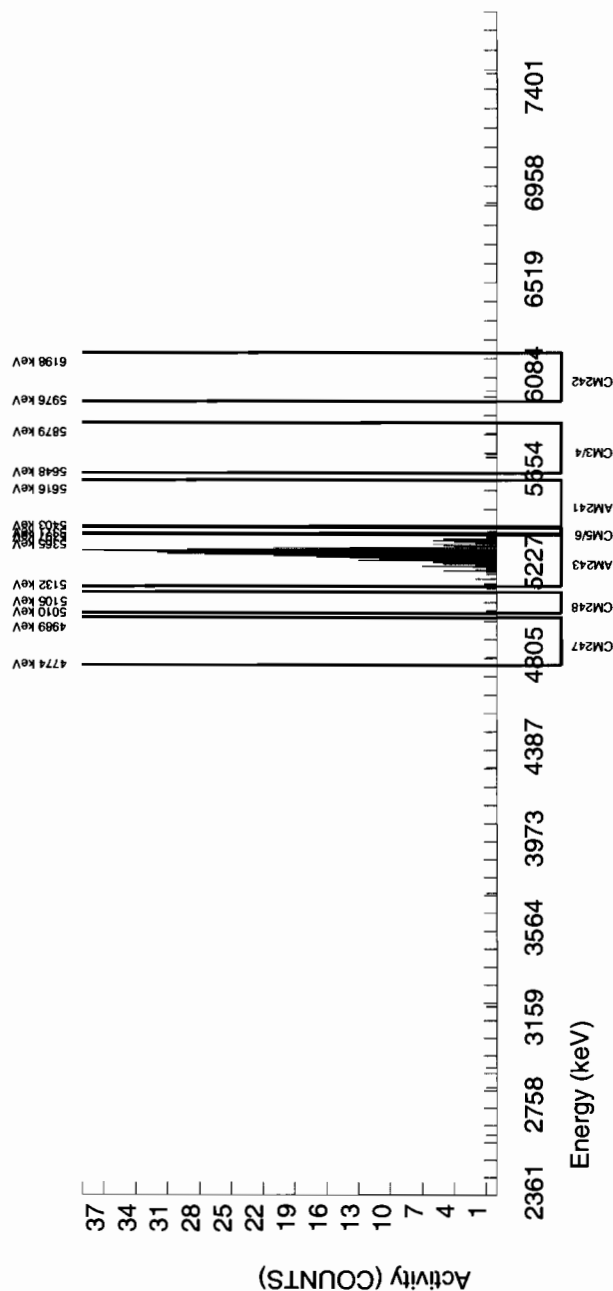
* BKG Sg calculated via blank population.

(Sg updated 8-MAR-2010)

* BKG 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

<p>BATCH NUMBER : 956999 SAMPLE ID : S1202051947_AM SAMPLE QTY : 0.103 G SAMPLE DATE : 1-MAR-2010 00:00:00. ANALYST : MXE1 % YIELD : 92.040</p>	<p>CHAMBER : 212 DETECTOR S/N : 79191 AVERAGE %EFFICIENCY : 38.7906 COUNT DATE : 8-MAR-2010 19:08:37 ELAPSED LIVE TIME(SEC) : 60000.00</p>	<p>LIB FILE : ENV_ALPHA_AM BKG FILE : B212.CNF;87 BKG DATE : 7-MAR-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W212.CNF;30 CAL DATE : 28-FEB-2010</p>
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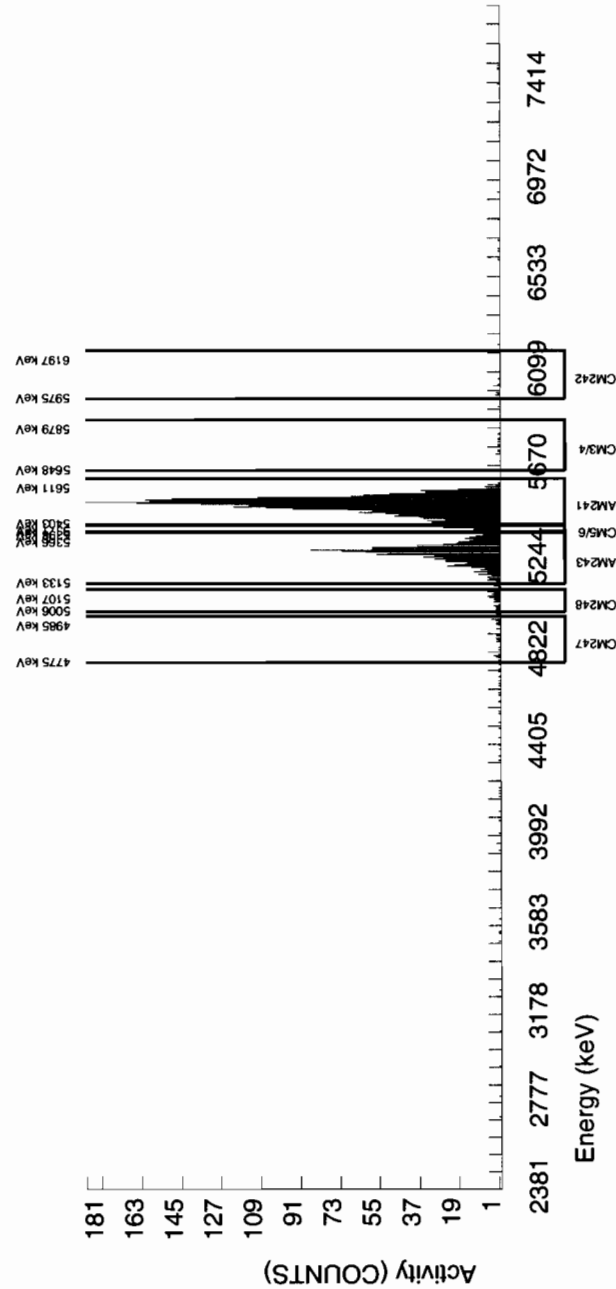
<p>TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9165E+00 dpm RESULTS : 2.6844E+00 dpm</p>	<p>MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3151E+01 pCi/G</p>	<p>LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3151E+01 pCi/G</p>
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NUCLIDE ACTIVITY 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	5498.534	51.164	2392.000	2390.192	0.000	2.7707	99.94000	2.93E+01	2.07E+00	7.90E-02	1.91E-01	5.99E-01
AM243	5270.000	5276.887	40.322	1039.000	1039.000	0.000	0.0000	99.78000	1.28E+01	9.47E-01	0.00E+00	3.33E-02	3.96E-01
CM-242	6102.000	6025.046	44.316	10.000	10.000	0.000	4.0092	100.0000	1.27E-01	4.10E-02	1.14E-01	2.62E-01	4.01E-02
CM-3/4	5795.020	5767.078	4.931	10.000	10.000	0.000	4.8510	100.0000	1.23E-01	3.96E-02	1.38E-01	3.10E-01	3.88E-02
CM-5/6	5386.000	5386.908	0.000	98.000	98.000	0.000	6.1294	86.09000	1.39E+00	1.69E-01	2.03E-01	4.44E-01	1.41E-01
CM-247	4946.000	4889.323	159.994	39.000	39.000	0.000	6.3427	79.30000	6.02E-01	1.05E-01	2.28E-01	4.98E-01	9.65E-02
CM-248	5078.600	5061.935	89.965	53.000	52.000	1.000	11.0244	91.00000	7.00E-01	1.10E-01	3.45E-01	7.27E-01	9.89E-02

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 8-MAR-2010)
- * BKG 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#

957001

Product:

PU

Date:

3/9/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10° MDA/ MDC, error is 150% or less of sample activity. If greater 10° MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5° MDA/ MDC, then RPD is 100% or less. If greater 5° MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		Case 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.			N/A
Aux data is correct.			N/A
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)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (if REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By:

Denise Green 3/9/10

Secondary Review Performed By:

3/10/10

Plutonium Que Sheet

24-FEB-10

Batch #: 957001 Analyst: MXE1 First Client Due Date: 11-MAR-10 Internal Due Date: 28-FEB-10
 Tracer Isotope(s): Pu-239/Pu-238 Tracer Code: 1430-B Expiration Date: 1/27/11 Vol: 0.1
 LCS Isotope(s): Pu-239/Pu-238 LCS Code: / Expiration Date: / Vol: /
 Spike Isotope(s): Pu-239/Pu-238 Spike Code: / Expiration Date: / Vol: /
 Prep Date: 3/1/10 Initials: ME Pipet ID: 7611058 Balance ID: 50410272 Witness: JEH 3-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Weight (g)	Aliquot (g)	Pu Det #
246874001-1	RE46-10-12720	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	1	1	1.269		71
246874002-1	RE46-10-12718	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	2	2	1.260		72
246874003-1	RE46-10-12719	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	3	3	1.266		73
246874004-1	RE46-10-12721	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	4	4	1.260		74
246874005-1	RE46-10-12722	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	5	5	1.251		75
246874006-1	RE46-10-12723	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	6	6	1.251		76
246874007-1	RE46-10-12714	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	7	7	1.257		83
246874008-1	RE46-10-12727	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	8	8	1.263		84
246874009-1	RE46-10-12716	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	9	9	1.260		85
246874010-1	RE46-10-12717	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	10	10	1.256		86
246875001-1	RE15-10-8366	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	11	11	1.251		87
246875002-1	RE15-10-8367	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	12	12	1.260		88
246875003-1	RE15-10-8364	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	13	13	1.261		89
246875004-1	RE15-10-8365	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	14	14	1.268		90
246875005-1	RE15-10-8368	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	15	15	1.260		91
246875006-1	RE15-10-8340	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	16	16	1.267		92
246875007-1	RE15-10-8341	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	17	17	1.268		93
246875008-1	RE15-10-8376	SAMPLE	.05 pCi/g		SOIL	LANL010	09-FEB-10	18	18	1.263		94
1202051955-1	MB for batch 957001	MB	.05 pCi/g		SOIL	QC ACCOUNT		19	19			95
1202051956-1	RE46-10-12720(246874001DUP)	DUP	.05 pCi/g		SOIL	QC ACCOUNT	09-FEB-10	20	20	1.258		97
1202051957-1	LCS for batch 957001	LCS	.05 pCi/g		SOIL	QC ACCOUNT		21	21	0.100		99

SRM # 0244-B exp 4/30/20

Solid Sample Dissolution by: LEACH or DIGESTION
 Circle One

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

Data Reviewed By: JES

3/9/10

Blank Correction Report

Batch ID 957001

GEL Sample ID	Client sample ID	Parameter	Allquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202051956	DUP	Plutonium-238	1.26 g	0.0111	0.00633	0.0324	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0122	0.00681	0.0245	.001230159	pCi/g	NO
1202051957	LCS	Plutonium-238	0.103 g	7.62	0.654	0.368	.271844660	pCi/g	NO
		Plutonium-239/240	0.103 g	37.7	2.48	0.312	.015048544	pCi/g	NO
1202051955	MB	Plutonium-238	1.00 g	0.028	0.0134	0.0456	.028	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00155	0.00352	0.0346	.00155	pCi/g	YES
246874001	RE46-10-12720	Plutonium-238	1.27 g	0.0101	0.00928	0.0373	.022047244	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0205	0.00797	0.0283	.001220472	pCi/g	NO
246874002	RE46-10-12718	Plutonium-238	1.25 g	0.0175	0.00625	0.0308	.0224	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0197	0.00664	0.026	.00124	pCi/g	NO
246874003	RE46-10-12719	Plutonium-238	1.26 g	0.0105	0.00529	0.0382	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00783	0.00646	0.029	.001230159	pCi/g	NO
246874004	RE46-10-12721	Plutonium-238	1.26 g	0.015	0.00689	0.0398	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	-0.00282	0.00514	0.0301	.001230159	pCi/g	YES
246874005	RE46-10-12722	Plutonium-238	1.25 g	0.0167	0.007	0.0375	.0224	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00508	0.00659	0.0284	.00124	pCi/g	YES
246874006	RE46-10-12723	Plutonium-238	1.25 g	0.00401	0.00403	0.039	.0224	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0134	0.00603	0.0296	.00124	pCi/g	NO
246874007	RE46-10-12714	Plutonium-238	1.26 g	0.00894	0.00717	0.0328	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0124	0.0069	0.0249	.001230159	pCi/g	NO
246874008	RE46-10-12727	Plutonium-238	1.26 g	0.0221	0.00746	0.0357	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00982	0.00494	0.0271	.001230159	pCi/g	NO
246874009	RE46-10-12716	Plutonium-238	1.25 g	0.00513	0.00484	0.0375	.0224	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00771	0.00549	0.0284	.00124	pCi/g	NO
246874010	RE46-10-12717	Plutonium-238	1.26 g	0.0109	0.00644	0.0397	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0013	0.00565	0.0301	.001230159	pCi/g	YES
246875001	RE15-10-8366	Plutonium-238	1.25 g	0.00731	0.00676	0.0357	.0224	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0036	0.00641	0.0271	.00124	pCi/g	YES
246875002	RE15-10-8367	Plutonium-238	1.25 g	0.0168	0.0115	0.036	.0224	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00127	0.00435	0.0288	.00124	pCi/g	YES
246875003	RE15-10-8364	Plutonium-238	1.26 g	0.00969	0.00574	0.0403	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00549	0.00621	0.0305	.001230159	pCi/g	YES
246875004	RE15-10-8365	Plutonium-238	1.27 g	0.0116	0.00595	0.0375	.022047244	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0232	0.00784	0.0285	.001220472	pCi/g	NO
246875005	RE15-10-8368	Plutonium-238	1.26 g	0.00111	0.00252	0.0327	.022222222	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0045	0.00319	0.0248	.001230159	pCi/g	YES
246875006	RE15-10-8340	Plutonium-238	1.27 g	0.015	0.00619	0.0364	.022047244	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0025	0.00251	0.0276	.001220472	pCi/g	YES
246875007	RE15-10-8341	Plutonium-238	1.26 g	0.0146	0.00601	0.0353	.022222222	pCi/g	YES

Blank Correction Report

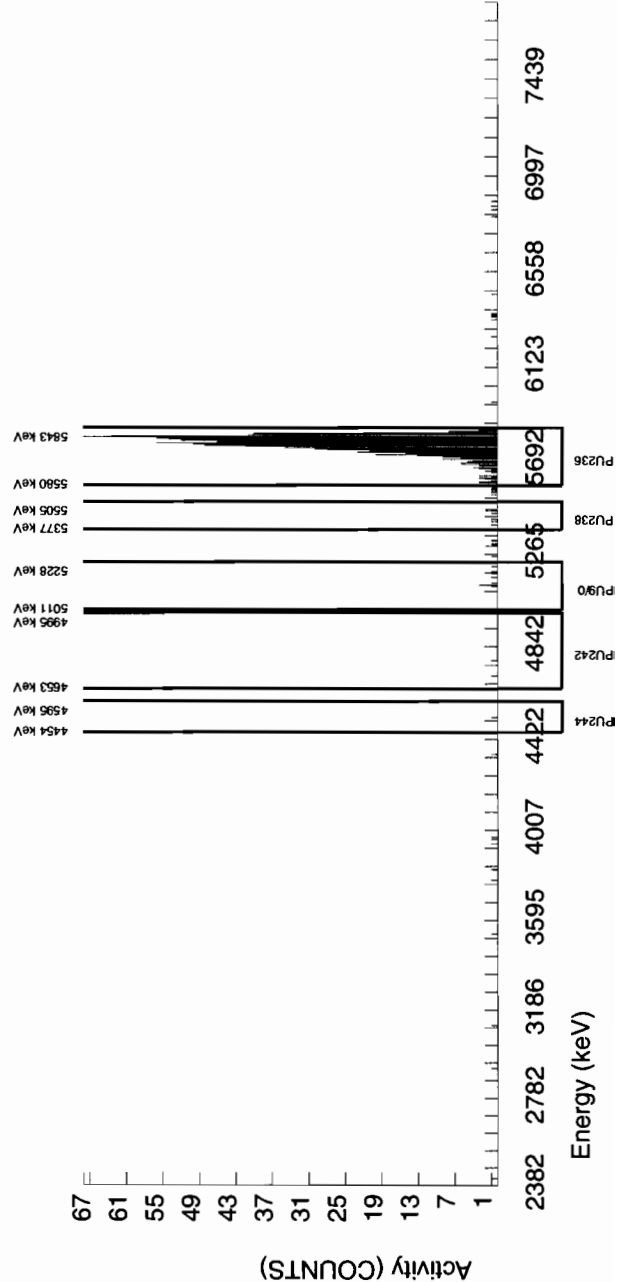
GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
246875007	RE15-10-8341	Plutonium-239/240	1.26 g	0.00486	0.00345	0.0268	.001230159	pCi/g	YES
246875008	RE15-10-8376	Plutonium-238	1.25 g	0.00254	0.00255	0.037	.0224	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00128	0.00285	0.028	.00124	pCi/g	YES

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S0246874001_PU SAMPLE QTY : 1.265 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 85.606				CHAMBER : 071 DETECTOR S/N : 64259 AVERAGE %EFFICIENCY : 32.1673 COUNT DATE : 6-MAR-2010 12:01:15 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B071.CNF;1106 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W071.CNF;286 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 5.6604E+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	5772.925	62.370	908.000	903.960	4.040	2.0100	100.0000	2.35E+00	1.44E-01	1.04E-02	2.77E-02	7.86E-02
PU-238	5499.000	5447.914	9.340	10.000	3.940	6.060	2.9312	99.90000	1.01E-02	9.28E-03	1.52E-02	3.73E-02	9.27E-03
PU-9/0	5155.000	5154.298	6.175	9.000	7.990	1.010	2.0604	99.90000	2.05E-02	7.97E-03	1.07E-02	2.83E-02	7.90E-03
PU242	4890.000	4749.724	69.739	2.000	-1.030	3.030	*****	100.0000	-2.64E-03	4.81E-03	6.63E-01	1.33E+00	4.81E-03
PU-244	4589.000	4526.798	4.981	1.000	-0.010	1.010	3.7241	99.90000	-2.56E-05	3.15E-03	1.93E-02	4.55E-02	3.15E-03

NOTES:

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

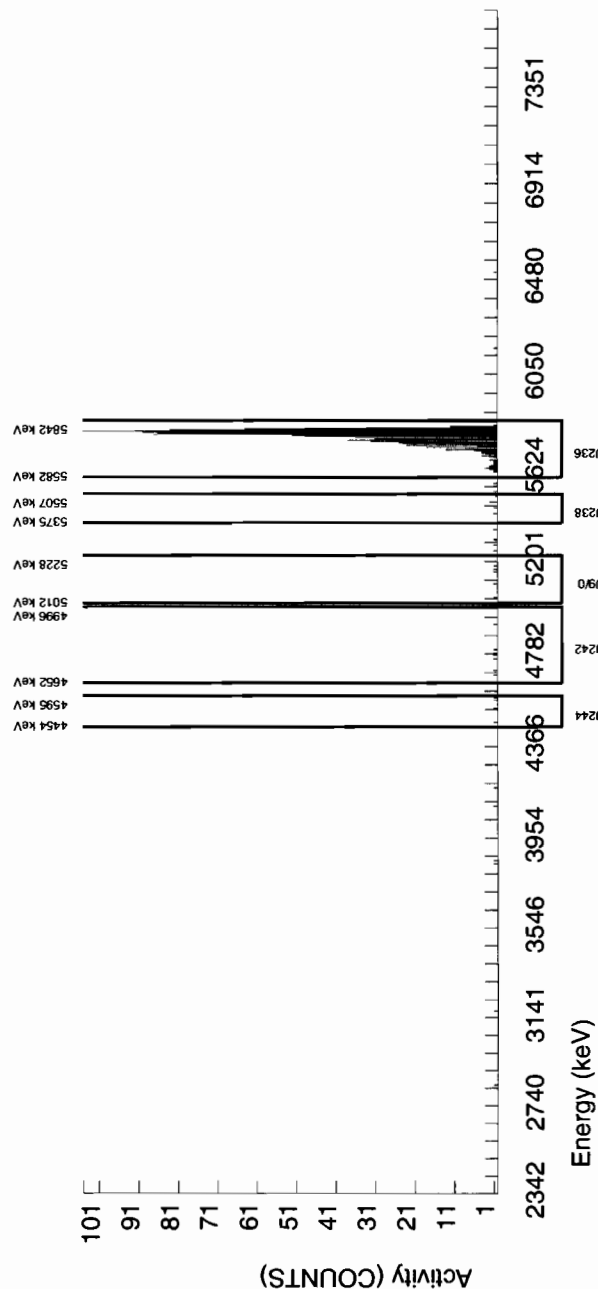


LIB FILE : ENV_ALPHA_PU
BKG FILE : B087.CNF;1035
BKG DATE : 28-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W087.CNF;276
CAL DATE : 9-FEB-2010

LCS/LCSD
ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 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
PU-236	5749.000	5777.081	31.490	954.000	952.990	1.010	1.0050	100.0000	2.38E+00	1.44E-01	4.98E-03	1.66E-02	7.72E-02
PU-238	5499.000	5451.830	4.948	6.000	2.970	3.030	2.9312	99.90000	7.31E-03	6.76E-03	1.45E-02	3.57E-02	6.75E-03
PU-9/0	5155.000	5132.870	138.549	5.000	1.465	3.535	2.0604	99.90000	3.60E-03	6.41E-03	1.02E-02	2.71E-02	6.40E-03
PU242	4890.000	4809.434	0.000	8.000	4.465	3.535	*****	100.0000	1.10E-02	7.70E-03	6.36E-01	1.28E+00	7.68E-03
PU-244	4589.000	4547.810	108.860	4.000	2.990	1.010	3.7241	99.90000	7.35E-03	5.23E-03	1.85E-02	4.36E-02	5.22E-03

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



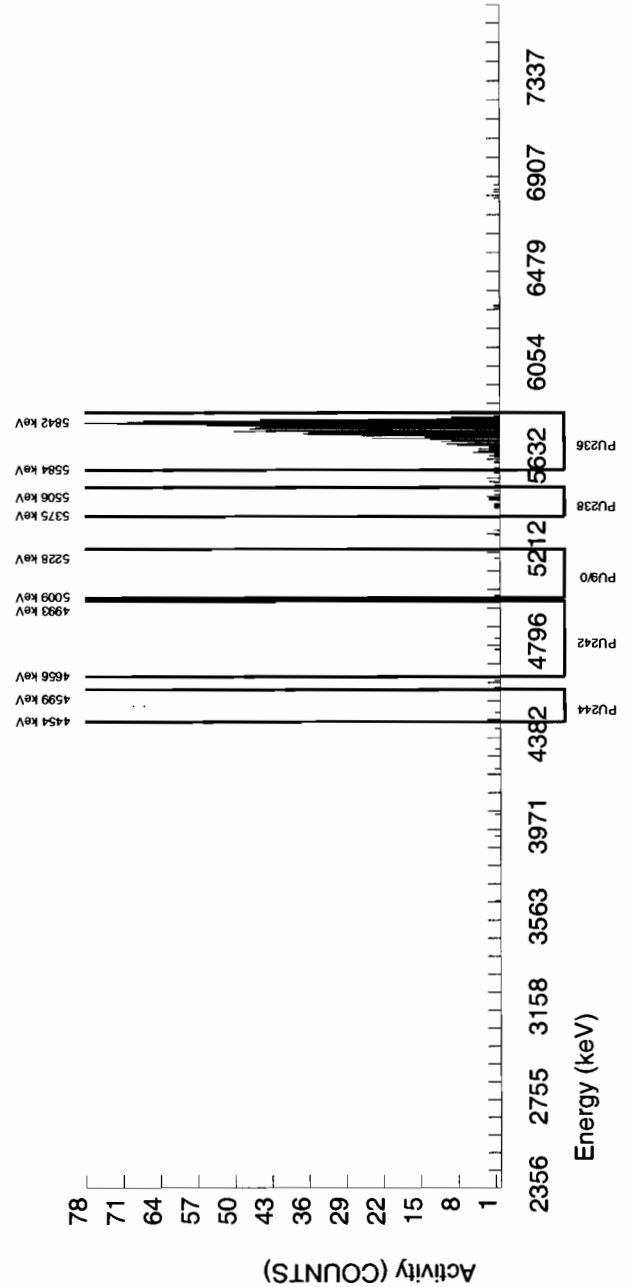
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S0246875002_PU SAMPLE QTY : 1.250 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 90.086		CHAMBER : 088 DETECTOR S/N : 33452 AVERAGE %EFFICIENCY : 30.3479 COUNT DATE : 6-MAR-2010 12:01:17 ELAPSED LIVE TIME(SEC) : 30300.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B088.CNF;1023 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W088.CNF;286 CAL DATE : 9-FEB-2010
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 5.9566E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
PU-236	5749.000	5774.690	54.602
PU-238	5499.000	5441.351	84.639
PU-9/0	5155.000	5108.076	164.299
PU242	4890.000	4763.524	0.000
PU-244	4589.000	4500.881	4.979
	GROSS AREA		
	902.000		
	15.000		
	2.000		
	4.000		
	1.000		
	NET AREA		
	897.455		
	6.415		
	0.485		
	1.980		
	0.495		
	BKG AREA		
	4.545		
	8.585		
	1.515		
	2.020		
	0.505		
	BKG Sg		
	2.1319		
	2.9312		
	2.0604		

	3.7241		
	%ABUN		
	100.0000		
	99.90000		
	99.90000		
	100.0000		
	99.90000		
	ACTIVITY pCi/G		
	2.38E+00		
	1.68E-02		
	1.27E-03		
	5.17E-03		
	1.29E-03		
	TPU 1-SIGMA		
	1.47E-01		
	1.15E-02		
	4.35E-03		
	5.85E-03		
	2.93E-03		
	DLC pCi/G		
	1.12E-02		
	1.55E-02		
	1.09E-02		
	6.76E-01		
	1.96E-02		
	MDC pCi/G		
	2.95E-02		
	3.80E-02		
	2.88E-02		
	1.36E+00		
	4.64E-02		
	UNC pCi/G		
	7.98E-02		
	1.15E-02		
	4.34E-03		
	5.85E-03		
	2.93E-03		

NOTES:

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

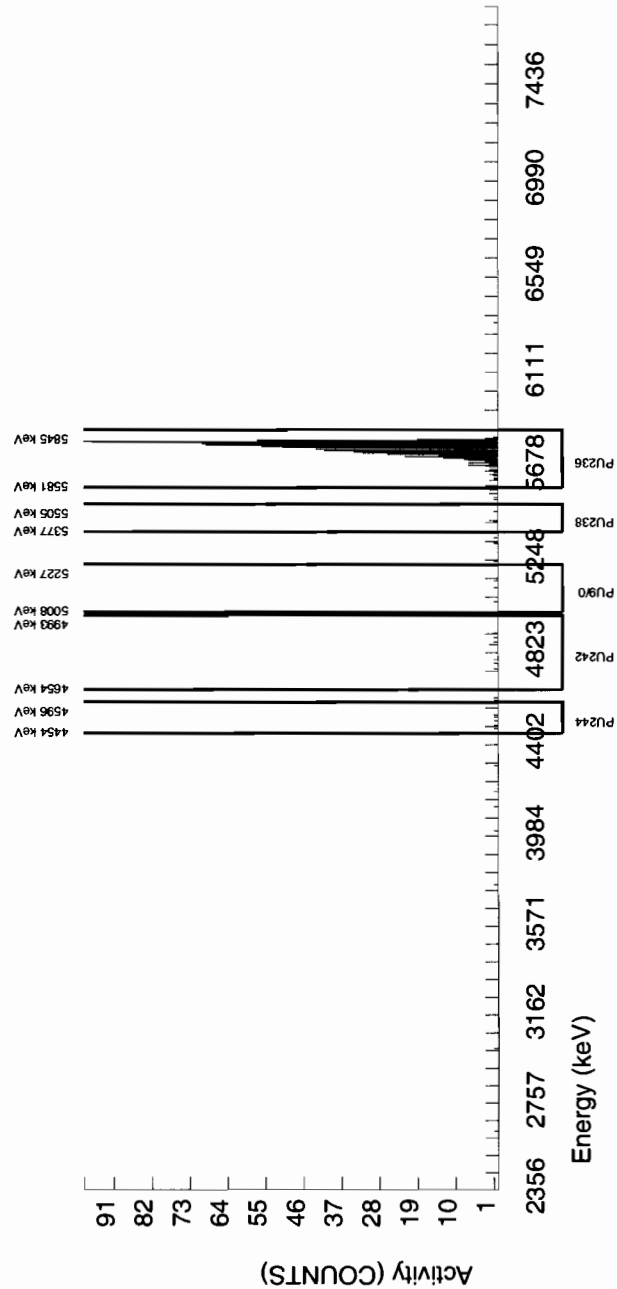


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S0246875003_PU SAMPLE QTY : 1.261 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 86.648				CHAMBER : 089 DETECTOR S/N : 78262 AVERAGE %EFFICIENCY : 29.4965 COUNT DATE : 6-MAR-2010 12:01:18 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B089.CNF;723 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W089.CNF;195 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 5.7293E+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	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	5768.729	30.479	840.000	838.990	1.010	1.0050	100.0000	2.36E+00	1.48E-01	5.61E-03	1.87E-02	8.16E-02
PU-238	5499.000	5444.997	7.326	4.000	3.495	0.505	2.9312	99.900000	9.69E-03	5.74E-03	1.64E-02	4.03E-02	5.72E-03
PU-9/0	5155.000	5128.201	104.752	4.000	1.980	2.020	2.0604	99.900000	5.49E-03	6.21E-03	1.15E-02	3.05E-02	6.21E-03
PU242	4890.000	4844.052	4.988	8.000	5.980	2.020	*****	100.0000	1.66E-02	8.36E-03	7.17E-01	1.44E+00	8.31E-03
PU-244	4589.000	4503.883	0.000	6.000	5.495	0.505	3.7241	99.900000	1.52E-02	6.97E-03	2.08E-02	4.91E-02	6.93E-03

NOTES:

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

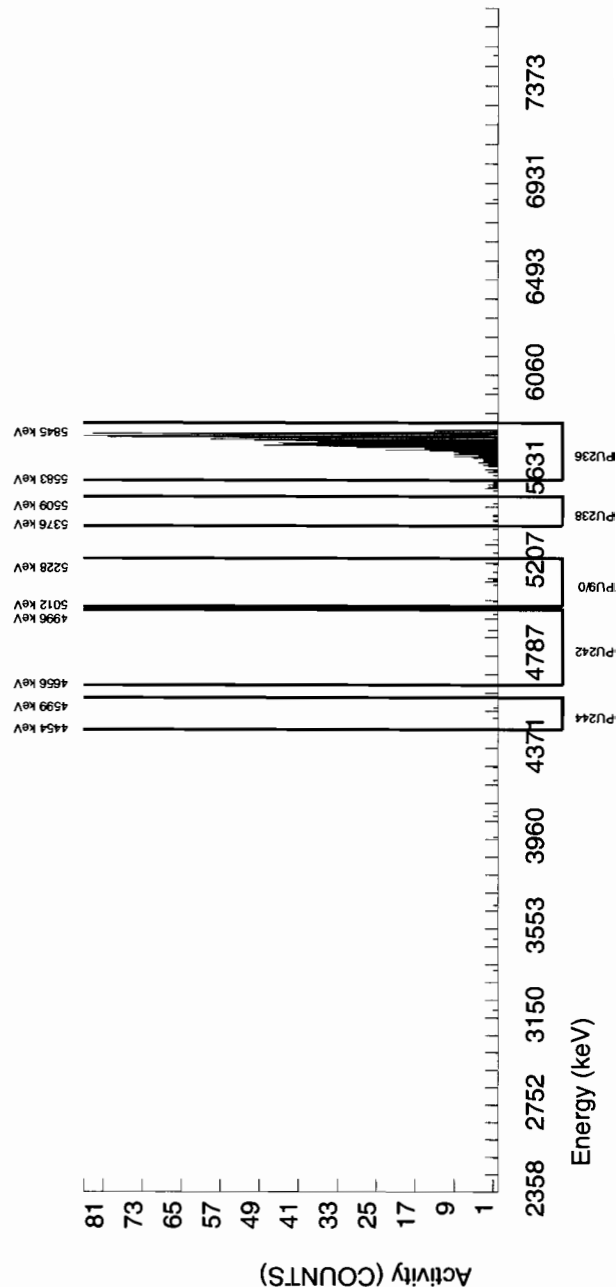


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S0246875004_PU SAMPLE QTY : 1.268 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 83.825				CHAMBER : 090 DETECTOR S/N : 78263 AVERAGE %EFFICIENCY : 32.5428 COUNT DATE : 6-MAR-2010 12:01:18 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B090.CNF;731 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W090.CNF;201 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 5.5426E+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	5768.639	55.962	897.000	895.485	1.515	1.2309	100.0000	2.35E+00	1.48E-01	6.41E-03	1.98E-02	7.86E-02
PU-238	5499.000	5429.137	77.691	5.000	4.495	0.505	2.9312	99.90000	1.16E-02	5.95E-03	1.53E-02	3.75E-02	5.92E-03
PU-9/0	5155.000	5134.784	7.188	9.000	9.000	0.000	2.0604	99.90000	2.32E-02	7.84E-03	1.07E-02	2.85E-02	7.74E-03
PU242	4890.000	4938.562	4.894	4.000	3.495	0.505	*****	100.0000	9.01E-03	5.34E-03	6.68E-01	1.34E+00	5.32E-03
PU-244	4589.000	4534.273	48.939	2.000	2.000	0.000	3.7241	99.90000	5.16E-03	3.66E-03	1.94E-02	4.58E-02	3.65E-03

NOTES:

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

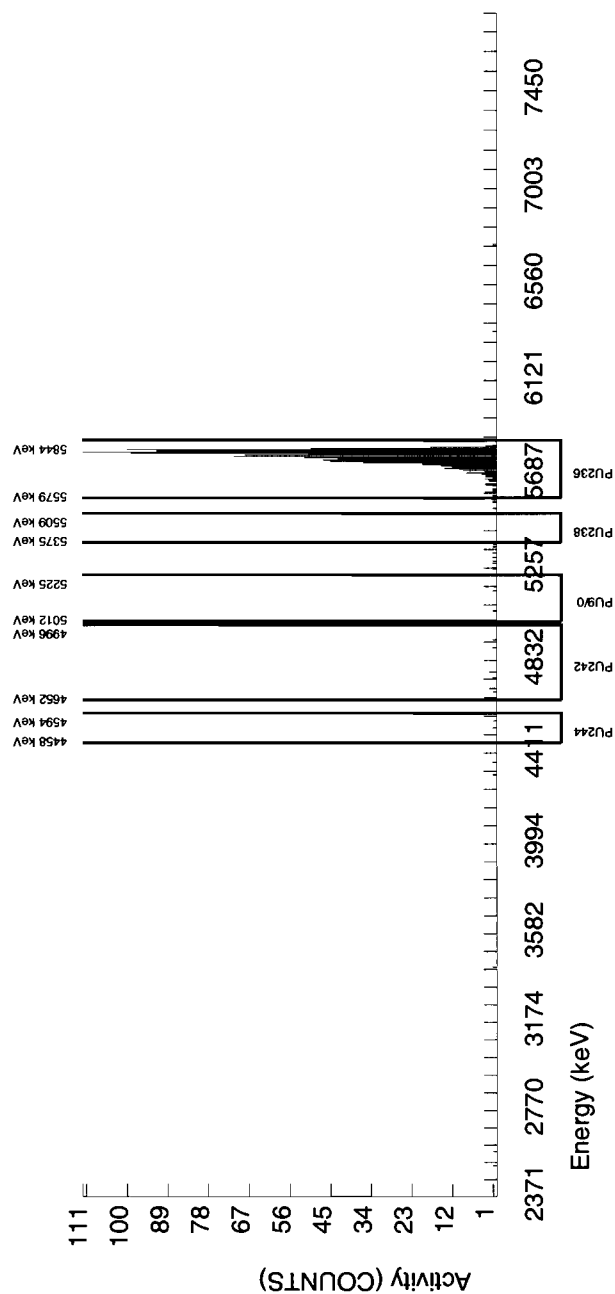


BATCH NUMBER : 957001 SAMPLE ID : S0246875005_PU SAMPLE QTY : 1.260 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 91.387				CHAMBER : 091 DETECTOR S/N : 78259 AVERAGE %EFFICIENCY : 34.5001 COUNT DATE : 6-MAR-2010 12:01:18 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B091.CNF;729 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W091.CNF;192 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 6.0426E+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	5774.115	37.943	1037.000	1034.980	2.020	1.4213	100.0000	2.36E+00	1.43E-01	6.44E-03	1.90E-02	7.36E-02
PU-238	5499.000	5442.201	0.000	1.000	0.495	0.505	2.9312	99.90000	1.11E-03	2.52E-03	1.33E-02	3.27E-02	2.52E-03
PU-9/0	5155.000	5110.605	89.329	2.000	2.000	0.000	2.0604	99.90000	4.50E-03	3.19E-03	9.35E-03	2.48E-02	3.18E-03
PU242	4890.000	4783.616	74.441	8.000	7.495	0.505	*****	100.0000	1.68E-02	6.51E-03	5.82E-01	1.17E+00	6.45E-03
PU-244	4589.000	4547.136	34.739	2.000	2.000	0.000	3.7241	99.90000	4.50E-03	3.19E-03	1.69E-02	3.99E-02	3.18E-03

NOTES:

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

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



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

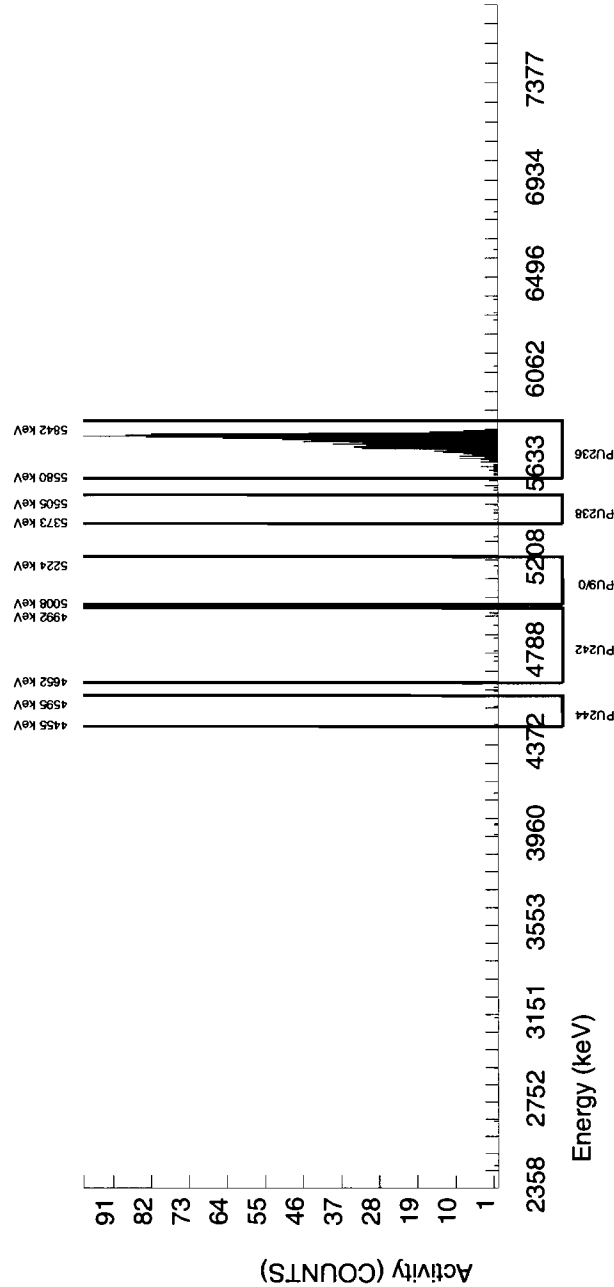
BATCH NUMBER : 957001 SAMPLE ID : S0246875006_PU SAMPLE QTY : 1.267 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 89.212		CHAMBER : 092 DETECTOR S/N : 79457 AVERAGE %EFFICIENCY : 31.5514 COUNT DATE : 6-MAR-2010 12:01:18 ELAPSED LIVE TIME(SEC) : 30300.00	LIB FILE : ENV_ALPHA_PU BKG FILE : B092.CNF;732 BKG DATE : 28-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 : 6.6121E+00 dpm RESULTS : 5.8988E+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	5756.273	29.965	924.000	924.000	0.000	0.0000	100.0000	2.35E+00	1.47E-01	0.00E+00	6.78E-03	7.73E-02
PU-238	5499.000	5423.828	78.322	6.000	6.000	0.000	2.9312	99.900000	1.50E-02	6.19E-03	1.48E-02	3.64E-02	6.14E-03
PU-9/0	5155.000	5187.305	4.895	1.000	1.000	0.000	2.0604	99.900000	2.50E-03	2.51E-03	1.04E-02	2.76E-02	2.50E-03
PU242	4890.000	4857.093	7.190	10.000	8.485	1.515	*****	100.0000	2.12E-02	8.28E-03	6.48E-01	1.30E+00	8.21E-03
PU-244	4589.000	4505.030	0.000	6.000	4.990	1.010	3.7241	99.900000	1.25E-02	6.42E-03	1.88E-02	4.44E-02	6.39E-03

NOTES:

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

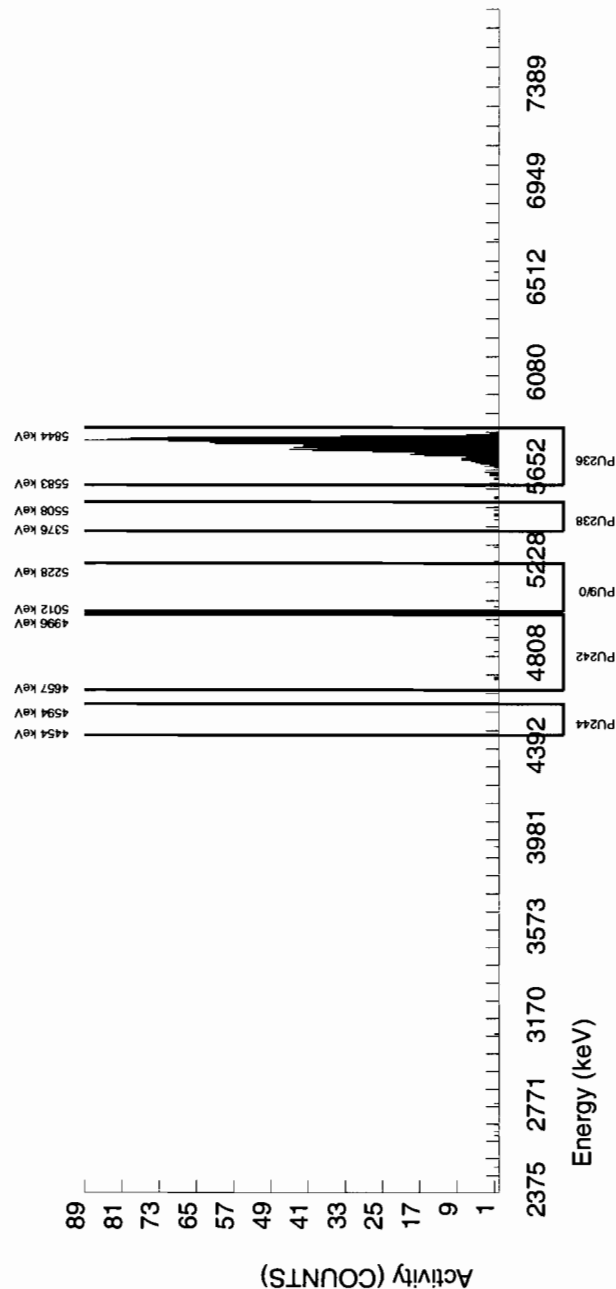


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S0246875007_PU SAMPLE QTY : 1.258 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 91.888				CHAMBER : 093 DETECTOR S/N : 33206 AVERAGE %EFFICIENCY : 31.7762 COUNT DATE : 6-MAR-2010 12:01:18 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B093.CNF:720 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W093.CNF:201 CAL DATE : 9-FEB-2010			
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 6.0758E+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	UNC
PU-236	5749.000	5770.456	57.611	959.000	958.495	0.505	0.7106	100.0000	2.37E+00	1.47E-01	7.65E-02
PU-238	5499.000	5461.485	58.951	6.000	6.000	0.000	2.9312	99.900000	1.46E-02	6.01E-03	5.96E-03
PU-9/0	5155.000	5080.484	83.514	2.000	2.000	0.000	2.0604	99.900000	4.86E-03	3.45E-03	3.44E-03
PU242	4890.000	4802.812	235.191	6.000	3.980	2.020	*****	100.0000	9.66E-03	6.45E-03	6.43E-03
PU-244	4589.000	4524.355	0.000	0.000	0.000	0.000	3.7241	99.900000	0.00E+00	2.43E-03	2.43E-03

NOTES:

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

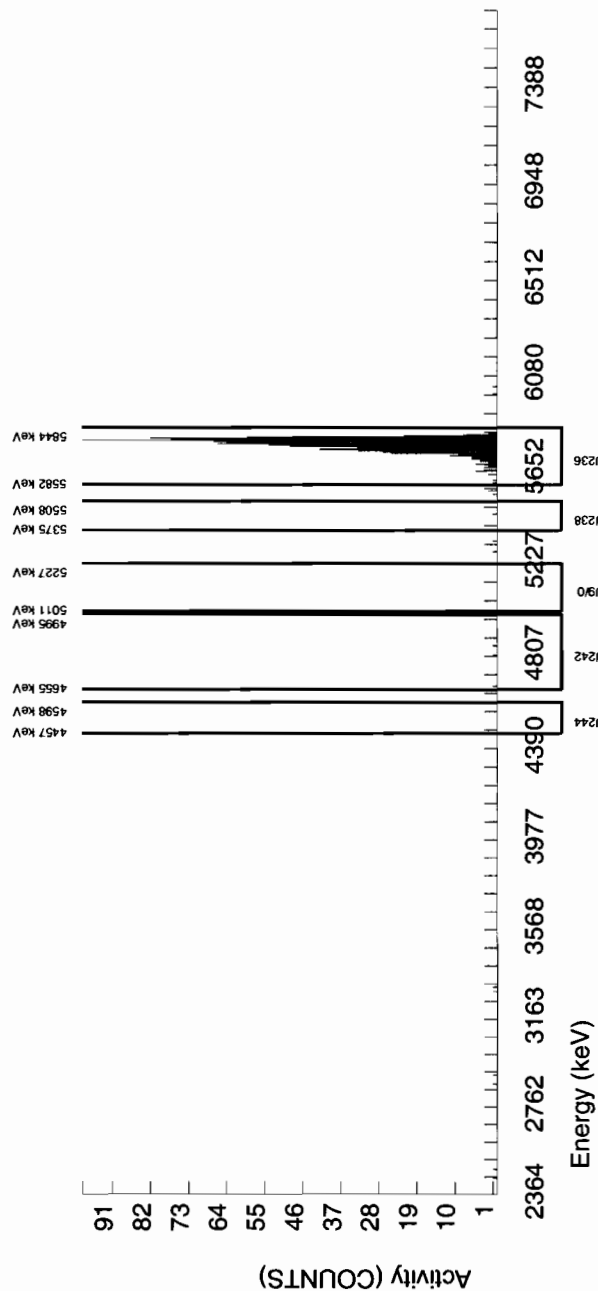


BATCH NUMBER : 957001 SAMPLE ID : S0246875008_PU SAMPLE QTY : 1.253 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 91.427				CHAMBER : 094 DETECTOR S/N : 78267 AVERAGE %EFFICIENCY : 30.6536 COUNT DATE : 6-MAR-2010 12:01:18 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B094.CNF;721 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W094.CNF;193 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 6.0452E+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	5771.327	40.748	921.000	919.990	1.010	1.0050	100.0000	2.38E+00	1.49E-01	5.15E-03	1.72E-02	7.84E-02
PU-238	5499.000	5454.896	4.943	1.000	1.000	0.000	2.9312	99.90000	2.54E-03	2.55E-03	1.50E-02	3.70E-02	2.54E-03
PU-9/0	5155.000	5119.081	0.000	0.000	-0.505	0.505	2.0604	99.90000	-1.28E-03	2.85E-03	1.06E-02	2.80E-02	2.85E-03
PU242	4890.000	4783.953	177.961	3.000	1.990	1.010	*****	100.0000	5.05E-03	4.77E-03	6.58E-01	1.32E+00	4.76E-03
PU-244	4589.000	4527.501	0.000	0.000	-0.505	0.505	3.7241	99.90000	-1.28E-03	2.85E-03	1.91E-02	4.51E-02	2.85E-03

NOTES:

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

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

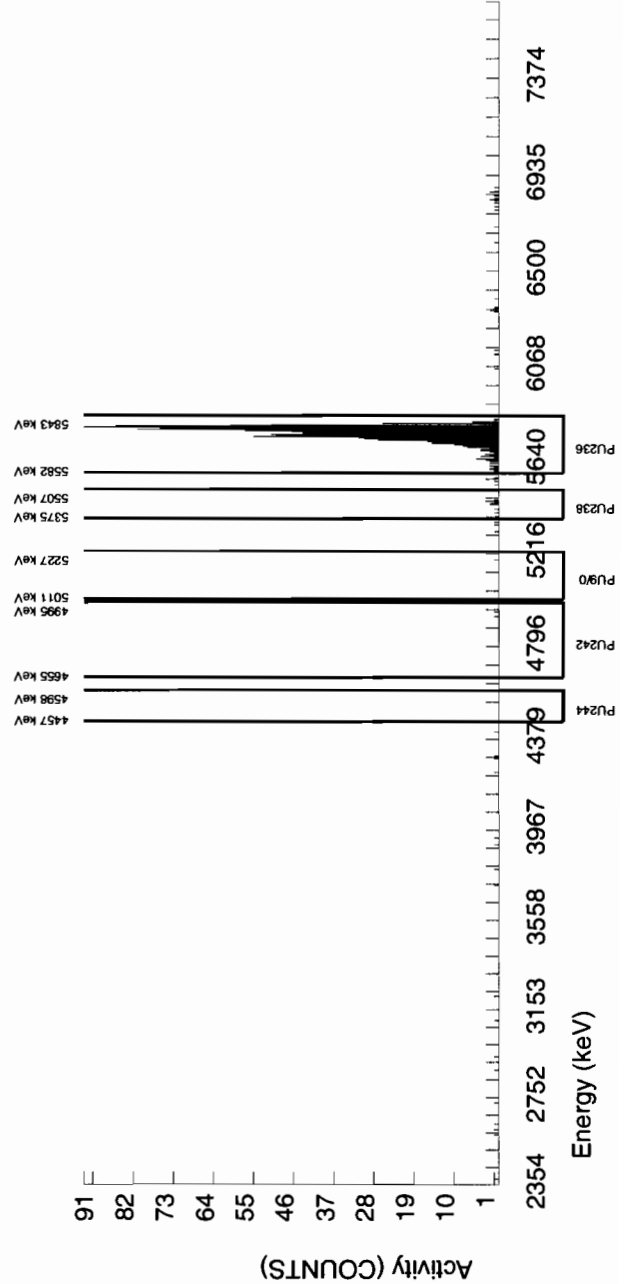


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S1202051955_PU SAMPLE QTY : 1.000 G SAMPLE DATE : 1-MAR-2010 00:00:00. ANALYST : MXE1 % YIELD : 92.615				CHAMBER : 095 DETECTOR S/N : 64279 AVERAGE %EFFICIENCY : 30.7522 COUNT DATE : 6-MAR-2010 12:01:19 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B095.CNF:686 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W095.CNF:209 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.5249E+00 dpm RESULTS : 6.0430E+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	5769.291	53.303	941.000	934.940	6.060	2.4617	100.0000	2.94E+00	1.79E-01	1.56E-02	3.96E-02	9.66E-02
PU-238	5499.000	5435.117	0.000	15.000	8.940	6.060	2.9312	99.90000	2.80E-02	1.34E-02	1.85E-02	4.56E-02	1.33E-02
PU-9/0	5155.000	5195.052	4.944	1.000	0.495	0.505	2.0604	99.90000	1.55E-03	3.52E-03	1.30E-02	3.46E-02	3.51E-03
PU242	4890.000	4849.983	0.000	3.000	0.475	2.525	*****	100.0000	1.49E-03	6.48E-03	8.11E-01	1.63E+00	6.48E-03
PU-244	4589.000	4527.397	0.000	0.000	0.000	0.000	3.7241	99.90000	0.00E+00	3.14E-03	2.36E-02	5.56E-02	3.13E-03

NOTES:

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

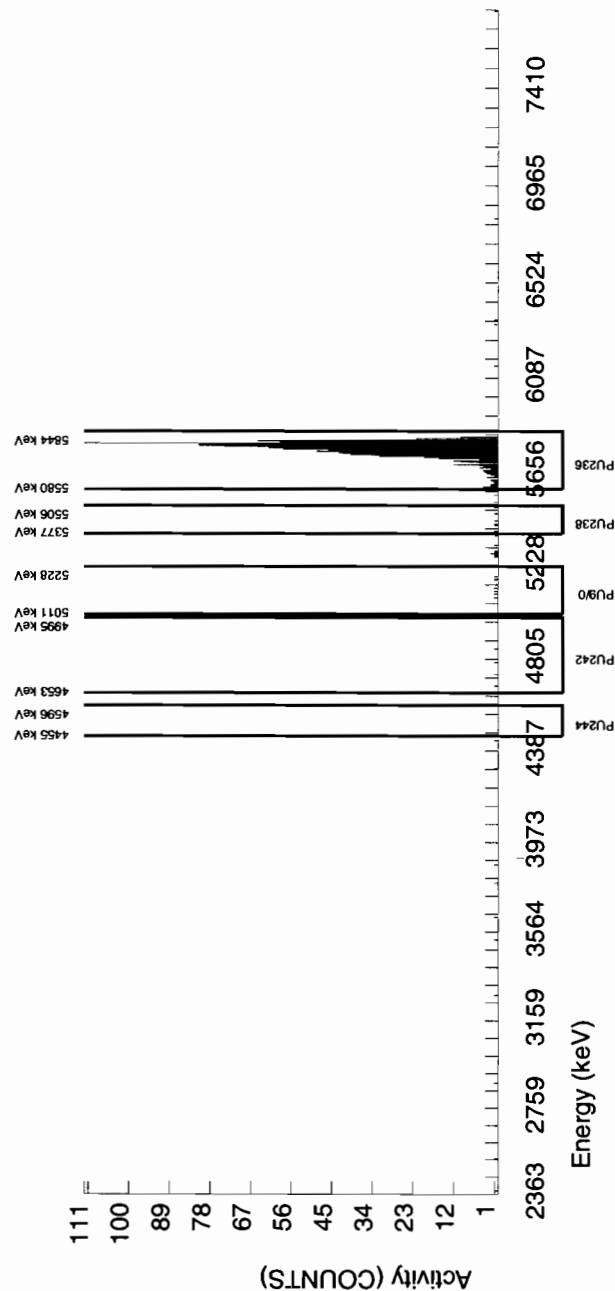


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S1202051956_PU SAMPLE QTY : 1.258 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 92.260				CHAMBER : 097 DETECTOR S/N : 67599 AVERAGE %EFFICIENCY : 34.5530 COUNT DATE : 6-MAR-2010 12:01:19 ELAPSED LIVE TIME(SEC) : 30300.00				LIB FILE : ENV_ALPHA_PU BKG FILE : B097.CNF;680 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W097.CNF;193 CAL DATE : 9-FEB-2010					
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.6121E+00 dpm RESULTS : 6.1004E+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	5768.861	36.808	1049.000	1046.475	2.525	1.5890	100.0000	2.37E+00	1.39E-01	7.13E-03	2.03E-02	7.33E-02
PU-238	5499.000	5436.798	103.308	7.000	4.980	2.020	2.9312	99.900000	1.11E-02	6.33E-03	1.32E-02	3.24E-02	6.31E-03
PU-9/0	5155.000	5140.696	93.469	8.000	5.475	2.525	2.0604	99.900000	1.22E-02	6.81E-03	9.26E-03	2.45E-02	6.78E-03
PU242	4890.000	4771.283	162.341	4.000	2.990	1.010	*****	100.0000	6.65E-03	4.74E-03	5.76E-01	1.16E+00	4.72E-03
PU-244	4589.000	4525.179	0.000	0.000	0.000	0.000	3.7241	99.900000	0.00E+00	2.23E-03	1.67E-02	3.95E-02	2.23E-03

NOTES:

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

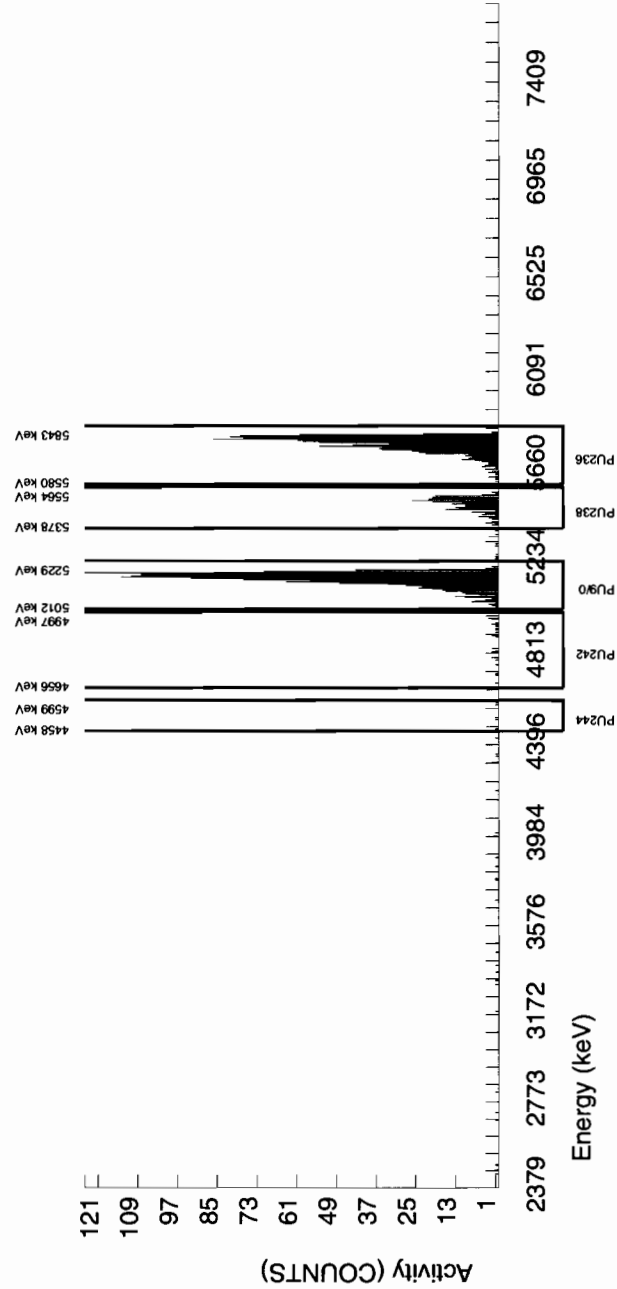


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957001 SAMPLE ID : S1202051957_PU SAMPLE QTY : 0.103 G SAMPLE DATE : 1-MAR-2010 00:00:00. ANALYST : MXE1 % YIELD : 87.701		CHAMBER : 099 DETECTOR S/N : 70317 AVERAGE %EFFICIENCY : 33.8661 COUNT DATE : 6-MAR-2010 12:01:19 ELAPSED LIVE TIME(SEC) : 30300.00	LIB FILE : ENV_ALPHA_PU 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
TRACER ID : 1430-B NUCLIDE : PU-236 NOMINAL : 6.5249E+00 dpm RESULTS : 5.7224E+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	FWHM
PU-236	5749.000	5768.270	53.256
PU-238	5499.000	5493.938	61.902
PU-9/0	5155.000	5152.679	45.446
PU242	4890.000	4875.943	0.000
PU-244	4589.000	4524.875	0.000
	GROSS AREA	NET AREA	BKG AREA
	976.000	974.990	1.010
	261.000	261.000	0.000
	1291.000	1290.495	0.505
	32.000	32.000	0.000
	6.000	4.990	1.010
	BKG Sg	%ABUN	ACTIVITY pCi/G
	1.0050	100.0000	2.85E+01
	2.4495	99.90000	7.62E+00
	1.9732	99.90000	3.77E+01
	*****	100.0000	9.33E-01
	6.4609	99.90000	1.46E-01
			TPU 1-SIGMA
			1.93E+00
			6.54E-01
			2.48E+00
			1.74E-01
			7.50E-02
			DLC pCi/G
			5.91E-02
			1.44E-01
			1.16E-01
			7.33E+00
			3.81E-01
			MDC pCi/G
			1.97E-01
			3.68E-01
			3.12E-01
			1.47E+01
			8.40E-01
			UNC pCi/G
			9.15E-01
			4.72E-01
			1.05E+00
			1.65E-01
			7.45E-02

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 8-MAR-2010)
- * BKG Sg of PU-236 calculated as sqrt(BKG AREA).



Radiochemistry Batch Checklist, Rev10

Batch: 957004 Product: () Date: 3/8/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10" MDA/ MDC, error is 150% or less of sample activity. If greater 10" MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method 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.			MA
Aux data is correct.	✓		
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly stated.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			MA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			MA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			MA
Allquot Correction completed if required.			MA
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: Denise Green 3/8/10Secondary Review Performed By: Leggett 3/8/103/11
LANL

Uranium Que Sheet

24-FEB-10

Batch #: 957004 Analyst: MXE1 First Client Due Date: 11-MAR-10 Internal Due Date: 28-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: 2/1/10 Initials: MK Pipet ID: 241058 Balance ID: 1645040212
 Witness: JEH 3-1-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Allquot (g)/ (l)	U Det #
246874001-1	RE46-10-12720	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	1	1	0.549	126
246874002-1	RE46-10-12718	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	2	2	0.524	127
246874003-1	RE46-10-12719	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	3	3	0.508	128
246874004-1	RE46-10-12721	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	4	4	0.511	131
246874005-1	RE46-10-12722	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	5	5	0.500	132
246874006-1	RE46-10-12723	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	6	6	0.511	133
246874007-1	RE46-10-12714	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	7	7	0.540	138
246874008-1	RE46-10-12727	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	8	8	0.520	141
246874009-1	RE46-10-12716	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	9	9	0.558	142
246874010-1	RE46-10-12717	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	10	10	0.545	145
246875001-1	RE15-10-8366	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	11	11	0.540	146
246875002-1	RE15-10-8367	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	12	12	0.503	147
246875003-1	RE15-10-8364	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	13	13	0.613	148
246875004-1	RE15-10-8365	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	14	14	0.534	149
246875005-1	RE15-10-8368	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	15	15	0.508	150
246875006-1	RE15-10-8340	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	16	16	0.590	153
246875007-1	RE15-10-8341	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	17	17	0.504	154
246875008-1	RE15-10-8376	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	18	18	0.556	155
1202051962-1	MB for batch 957004	MB		.1 pCi/g	SOIL	QC ACCOUNT		19	19	1	5
1202051963-1	RE46-10-12720(246874001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT		20	20	0.507	6
1202051964-1	LCS for batch 957004	LCS		.1 pCi/g	SOIL	QC ACCOUNT		21	21	0.114	8

* 0244-A exp 10/3/20

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION
 Circle One

Data Reviewed By: DR

3/8/10

Blank Correction Report

Batch ID 957004

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202051963	DUP	Uranium-233/234	0.507 g	0.862	0.0804	0.0795	.014102584	pCi/g	NO
		Uranium-235/236	0.507 g	0.0428	0.0144	0.0507	-.00319527	pCi/g	NO
		Uranium-238	0.507 g	0.929	0.0857	0.0543	.012958580	pCi/g	NO
1202051964	LCS	Uranium-233/234	0.114 g	6.50	0.576	0.336	.062719298	pCi/g	NO
		Uranium-235/236	0.114 g	0.460	0.0938	0.214	-.01421053	pCi/g	NO
		Uranium-238	0.114 g	6.41	0.569	0.229	.057631579	pCi/g	NO
1202051962	MB	Uranium-233/234	1.00 g	0.00715	0.00484	0.0332	.00715	pCi/g	YES
		Uranium-235/236	1.00 g	-0.00162	0.0023	0.0211	-.00162	pCi/g	NO
		Uranium-238	1.00 g	0.00657	0.00438	0.0226	.00657	pCi/g	YES
246874001	RE46-10-12720	Uranium-233/234	0.549 g	0.902	0.0881	0.100	.013023679	pCi/g	NO
		Uranium-235/236	0.549 g	0.0491	0.0174	0.0639	-.00295082	pCi/g	NO
		Uranium-238	0.549 g	1.10	0.103	0.0684	.011967213	pCi/g	NO
246874002	RE46-10-12718	Uranium-233/234	0.527 g	0.804	0.0794	0.0953	.013567362	pCi/g	NO
		Uranium-235/236	0.527 g	0.0653	0.0181	0.0608	-.00307400	pCi/g	NO
		Uranium-238	0.527 g	0.774	0.0775	0.0651	.012466793	pCi/g	NO
246874003	RE46-10-12719	Uranium-233/234	0.508 g	0.900	0.0842	0.0871	.014074803	pCi/g	NO
		Uranium-235/236	0.508 g	0.0299	0.013	0.0555	-.00318898	pCi/g	NO
		Uranium-238	0.508 g	0.987	0.0907	0.0594	.012933071	pCi/g	NO
246874004	RE46-10-12721	Uranium-233/234	0.511 g	0.916	0.0881	0.0975	.013992172	pCi/g	NO
		Uranium-235/236	0.511 g	0.043	0.0146	0.0622	-.00317025	pCi/g	NO
		Uranium-238	0.511 g	0.958	0.0914	0.0666	.012857143	pCi/g	NO
246874005	RE46-10-12722	Uranium-233/234	0.500 g	1.08	0.100	0.0977	.0143	pCi/g	NO
		Uranium-235/236	0.500 g	0.0574	0.0184	0.0623	-.00324	pCi/g	NO
		Uranium-238	0.500 g	1.24	0.112	0.0667	.01314	pCi/g	NO
246874006	RE46-10-12723	Uranium-233/234	0.511 g	0.942	0.0906	0.0998	.013992172	pCi/g	NO
		Uranium-235/236	0.511 g	0.0489	0.0159	0.0637	-.00317025	pCi/g	NO
		Uranium-238	0.511 g	0.977	0.0933	0.0682	.012857143	pCi/g	NO
246874007	RE46-10-12714	Uranium-233/234	0.540 g	0.908	0.0958	0.129	.013240741	pCi/g	NO
		Uranium-235/236	0.540 g	0.0819	0.0235	0.082	-.003	pCi/g	NO
		Uranium-238	0.540 g	0.861	0.0924	0.0878	.012166667	pCi/g	NO
246874008	RE46-10-12727	Uranium-233/234	0.520 g	0.835	0.087	0.112	.01375	pCi/g	NO
		Uranium-235/236	0.520 g	0.0274	0.0124	0.0715	-.00311538	pCi/g	NO
		Uranium-238	0.520 g	0.839	0.0873	0.0765	.012634615	pCi/g	NO
246874009	RE46-10-12716	Uranium-233/234	0.558 g	0.710	0.0733	0.0979	.012813620	pCi/g	NO
		Uranium-235/236	0.558 g	0.024	0.0128	0.0624	-.00290323	pCi/g	NO
		Uranium-238	0.558 g	0.768	0.0775	0.0668	.011774194	pCi/g	NO
246874010	RE46-10-12717	Uranium-233/234	0.545 g	0.819	0.0788	0.0844	.013119266	pCi/g	NO
		Uranium-235/236	0.545 g	0.062	0.0166	0.0538	-.00297248	pCi/g	NO
		Uranium-238	0.545 g	0.893	0.0845	0.0577	.012055046	pCi/g	NO
246875001	RE15-10-8368	Uranium-233/234	0.540 g	2.75	0.219	0.0905	.013240741	pCi/g	NO
		Uranium-235/236	0.540 g	0.173	0.0303	0.0577	-.003	pCi/g	NO

Blank Correction Report

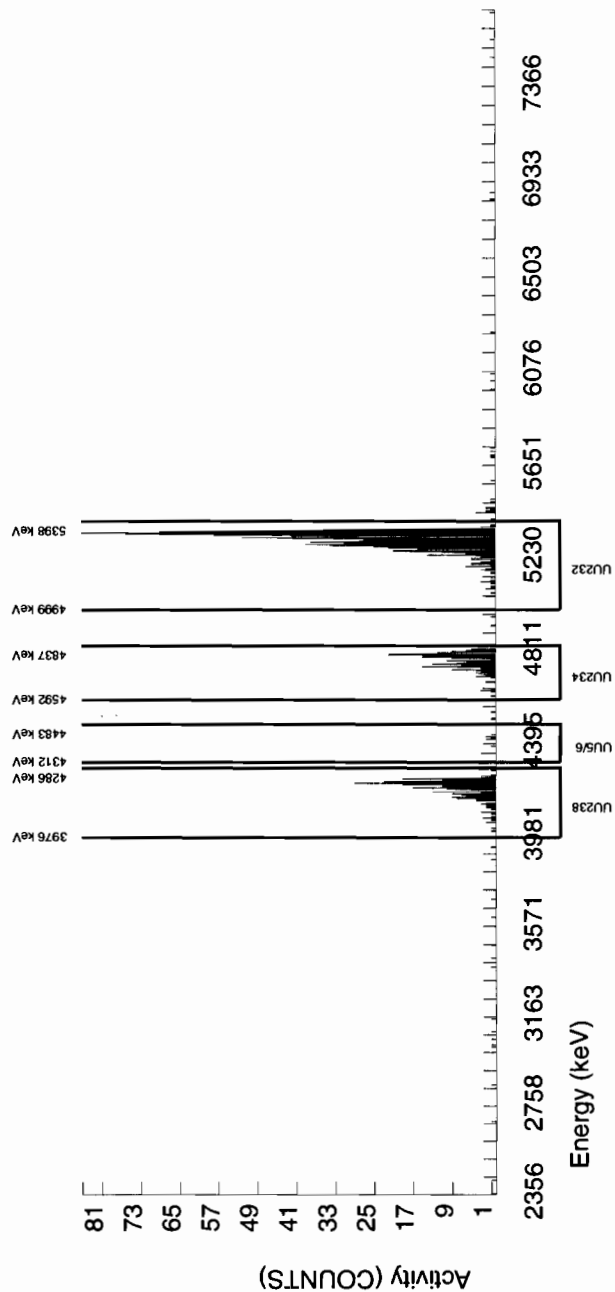
GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
246875001	RE15-10-8366	Uranium-238	0.540 g	3.93	0.303	0.0818	.012166667	pCi/g	NO
246875002	RE15-10-8367	Uranium-233/234	0.503 g	1.82	0.156	0.0957	.014214712	pCi/g	NO
		Uranium-235/236	0.503 g	0.117	0.0258	0.061	-.00322068	pCi/g	NO
		Uranium-238	0.503 g	3.43	0.273	0.0853	.013081830	pCi/g	NO
246875003	RE15-10-8364	Uranium-233/234	0.513 g	1.61	0.138	0.0934	.013937622	pCi/g	NO
		Uranium-235/236	0.513 g	0.119	0.0248	0.0595	-.00315789	pCi/g	NO
		Uranium-238	0.513 g	2.93	0.233	0.0638	.012807018	pCi/g	NO
246875005	RE15-10-8368	Uranium-233/234	0.508 g	1.99	0.166	0.0961	.014074803	pCi/g	NO
		Uranium-235/236	0.508 g	0.104	0.0233	0.0613	-.00318898	pCi/g	NO
		Uranium-238	0.508 g	3.45	0.270	0.0656	.012933071	pCi/g	NO
246875006	RE15-10-8340	Uranium-233/234	0.550 g	1.32	0.122	0.112	.013	pCi/g	NO
		Uranium-235/236	0.550 g	0.0549	0.0194	0.0715	-.00294545	pCi/g	NO
		Uranium-238	0.550 g	1.15	0.110	0.0765	.011945455	pCi/g	NO
246875007	RE15-10-8341	Uranium-233/234	0.504 g	1.17	0.109	0.108	.014186508	pCi/g	NO
		Uranium-235/236	0.504 g	0.0581	0.018	0.0687	-.00321429	pCi/g	NO
		Uranium-238	0.504 g	1.15	0.108	0.0736	.013035714	pCi/g	NO
246875008	RE15-10-8376	Uranium-233/234	0.556 g	1.14	0.108	0.108	.012859712	pCi/g	NO
		Uranium-235/236	0.556 g	0.0362	0.0139	0.0674	-.00291367	pCi/g	NO
		Uranium-238	0.556 g	1.20	0.112	0.0721	.011816547	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957004 SAMPLE ID : S0246874001_UU SAMPLE QTY : 0.549 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 82.405		CHAMBER : 126 DETECTOR S/N : 75548 AVERAGE %EFFICIENCY : 25.0705 COUNT DATE : 5-MAR-2010 18:06:37 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B126.CNF:456 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W126.CNF:134 CAL DATE : 18-FEB-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 3.7121E+00 dpm		MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5316.169	37.946
U-3/4	4763.020	4767.588	64.218
U-235	4391.000	4395.104	73.874
U-238	4184.730	4199.257	43.832
	GROSS AREA	NET AREA	BKG AREA
U232	931.000	930.000	1.000
U-3/4	228.000	227.058	0.000
U-235	11.000	10.000	1.000
U-238	279.000	278.000	1.000
	%ABUN	BKG Sg	ACTIVITY pCi/G
U232	100.0000	1.0000	3.70E+00
U-3/4	100.0000	4.8416	9.02E-01
U-235	80.90000	2.2152	4.91E-02
U-238	100.0000	3.1208	1.10E+00
	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G
U232	2.91E-01	9.24E-03	2.92E-02
U-3/4	8.81E-02	4.47E-02	1.00E-01
U-235	1.74E-02	2.53E-02	6.39E-02
U-238	1.03E-01	2.88E-02	6.84E-02
	UNC pCi/G		
U232	1.21E-01		
U-3/4	5.98E-02		
U-235	1.70E-02		
U-238	6.65E-02		

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

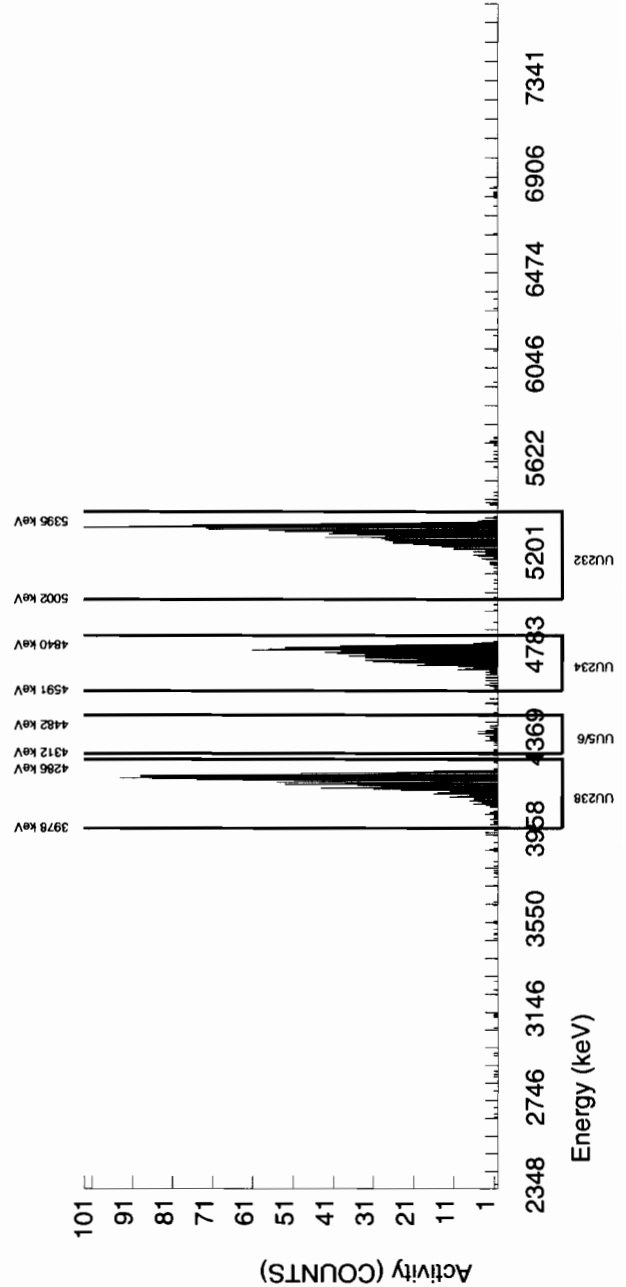


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957004 SAMPLE ID : S0246875001_UU SAMPLE QTY : 0.540 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 94.022		CHAMBER : 146 DETECTOR S/N : 72527 AVERAGE %EFFICIENCY : 24.7373 COUNT DATE : 5-MAR-2010 18:07:03 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B146.CNF;402 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W146.CNF;115 CAL DATE : 19-FEB-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 4.2354E+00 dpm		MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5303.680	33.796
U-3/4	4763.020	4756.761	71.466
U-235	4391.000	4398.688	28.120
U-238	4184.730	4190.007	51.499
	GROSS AREA	NET AREA	%ABUN
	1049.000	1047.000	100.0000
	769.000	765.940	100.0000
	39.000	39.000	80.90000
	1098.000	1097.000	100.0000
	BKG AREA	BKG Sg	ACTIVITY pCi/G
	2.000	1.4142	3.76E+00
	2.000	4.8416	2.75E+00
	0.000	2.2152	1.73E-01
	1.000	3.1208	3.93E+00
	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G
	2.91E-01	1.18E-02	3.33E-02
	2.19E-01	4.04E-02	9.05E-02
	3.03E-02	2.28E-02	5.77E-02
	3.03E-01	2.60E-02	6.18E-02
			1.16E-01
			9.95E-02
			2.77E-02
			1.19E-01

NOTES:

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

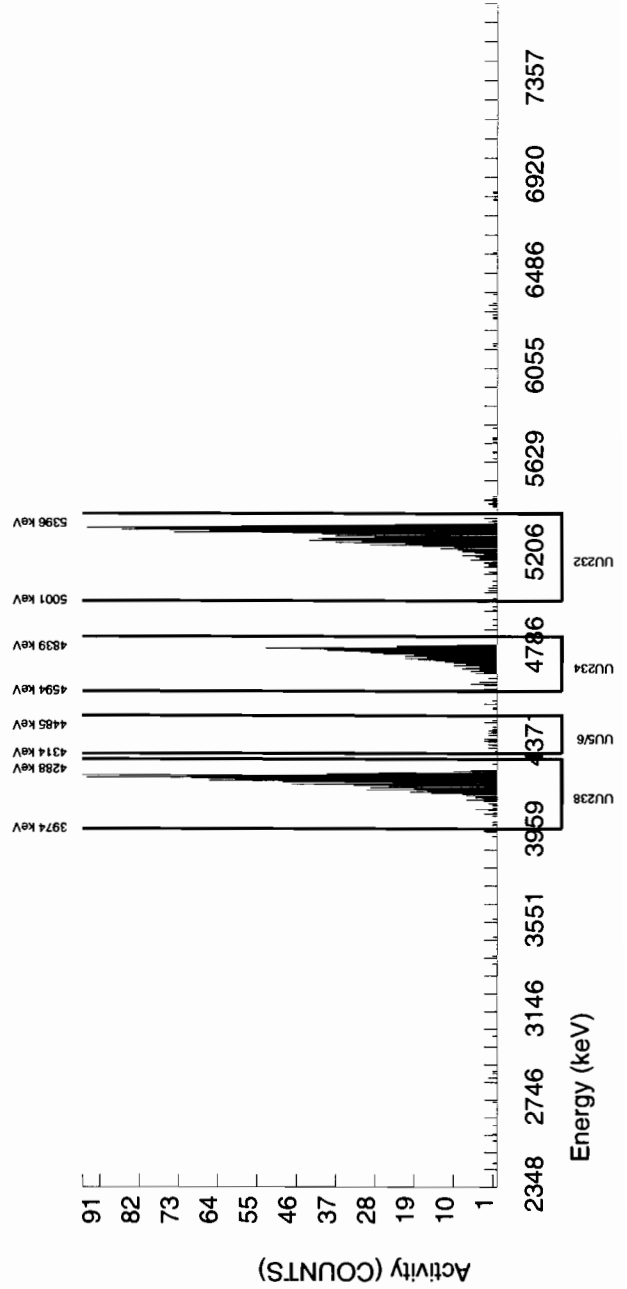
BATCH NUMBER : 957004 SAMPLE ID : S0246875002_UU SAMPLE QTY : 0.503 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 96.457		CHAMBER : 147 DETECTOR S/N : 75550 AVERAGE %EFFICIENCY : 24.4814 COUNT DATE : 5-MAR-2010 18:07:06 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B147.CNF:402 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W147.CNF:114 CAL DATE : 19-FEB-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 4.3451E+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	5301.679	34.218	1069.000	1063.000	6.000	2.4495	100.0000	4.03E+00	3.17E-01	2.16E-02	5.35E-02	1.24E-01
U-3/4	4763.020	4758.778	26.799	482.000	479.924	1.000	4.8416	100.0000	1.82E+00	1.56E-01	4.27E-02	9.57E-02	8.33E-02
U-235	4391.000	4396.394	77.343	26.000	25.000	1.000	2.2152	80.90000	1.17E-01	2.58E-02	2.42E-02	6.10E-02	2.44E-02
U-238	4184.730	4190.364	33.899	905.000	904.000	1.000	3.1208	100.0000	3.43E+00	2.73E-01	2.75E-02	6.53E-02	1.14E-01

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

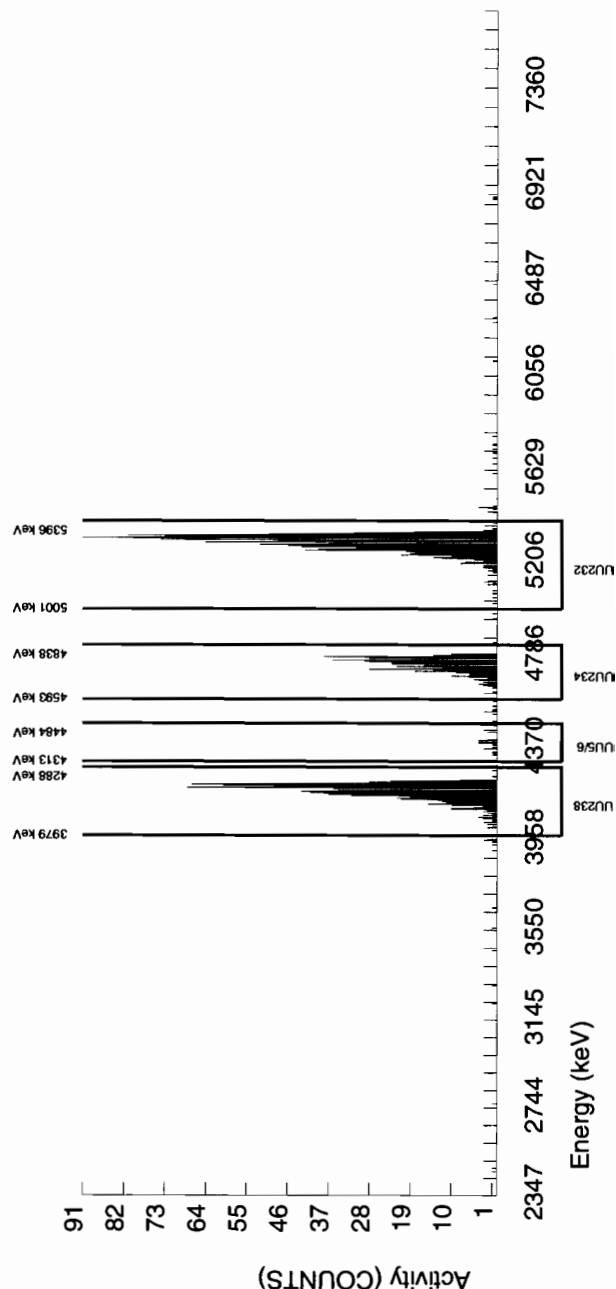


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957004 SAMPLE ID : S0246875003_UU SAMPLE QTY : 0.513 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 96.553				CHAMBER : 148 DETECTOR S/N : 74429 AVERAGE %EFFICIENCY : 24.5720 COUNT DATE : 5-MAR-2010 18:29:38 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_UU BKG FILE : B148.CNF;401 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W148.CNF;129 CAL DATE : 19-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 4.3494E+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	5301.013	51.203	1070.000	1068.000	2.000	1.4142	100.0000	3.96E+00	3.05E-01	1.22E-02	3.44E-02	1.21E-01
U-3/4	4763.020	4754.115	61.202	438.000	433.919	3.000	4.8416	100.0000	1.61E+00	1.38E-01	4.17E-02	9.34E-02	7.76E-02
U-235	4391.000	4405.738	17.345	26.000	26.000	0.000	2.2152	80.90000	1.19E-01	2.48E-02	2.36E-02	5.95E-02	2.33E-02
U-238	4184.730	4182.180	55.834	796.000	793.000	3.000	3.1208	100.0000	2.93E+00	2.33E-01	2.69E-02	6.38E-02	1.05E-01

NOTES:

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

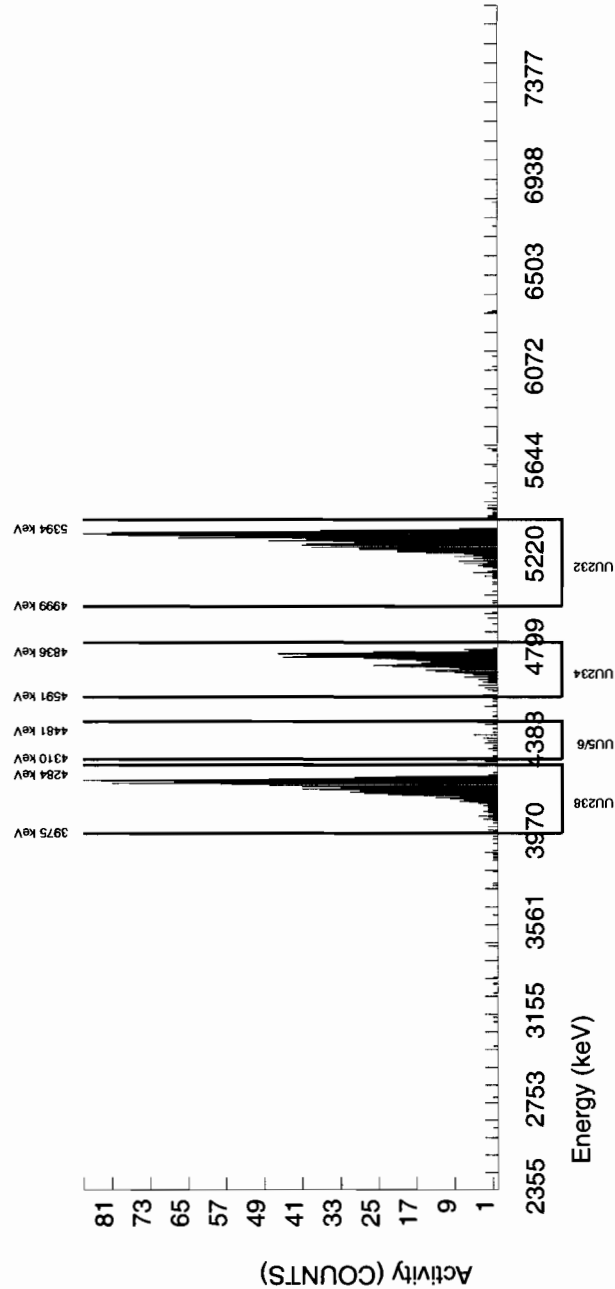
BATCH NUMBER : 957004 SAMPLE ID : S0246875005_UU SAMPLE QTY : 0.508 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 92.734		CHAMBER : 150 DETECTOR S/N : 75552 AVERAGE %EFFICIENCY : 25.1049 COUNT DATE : 5-MAR-2010 18:07:13 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B150.CNF:406 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W150.CNF:122 CAL DATE : 19-FEB-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 4.1774E+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	5302.483	44.564	1052.000	1048.000	4.000	2.0000	100.0000	3.99E+00	3.09E-01	1.77E-02	4.58E-02	1.24E-01
U-3/4	4763.020	4756.699	63.812	525.000	522.939	1.000	4.8416	100.0000	1.99E+00	1.66E-01	4.29E-02	9.61E-02	8.73E-02
U-235	4391.000	4401.238	18.164	22.000	22.000	0.000	2.2152	80.90000	1.04E-01	2.33E-02	2.43E-02	6.13E-02	2.21E-02
U-238	4184.730	4190.022	32.396	907.000	906.000	1.000	3.1208	100.0000	3.45E+00	2.70E-01	2.77E-02	6.56E-02	1.15E-01

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

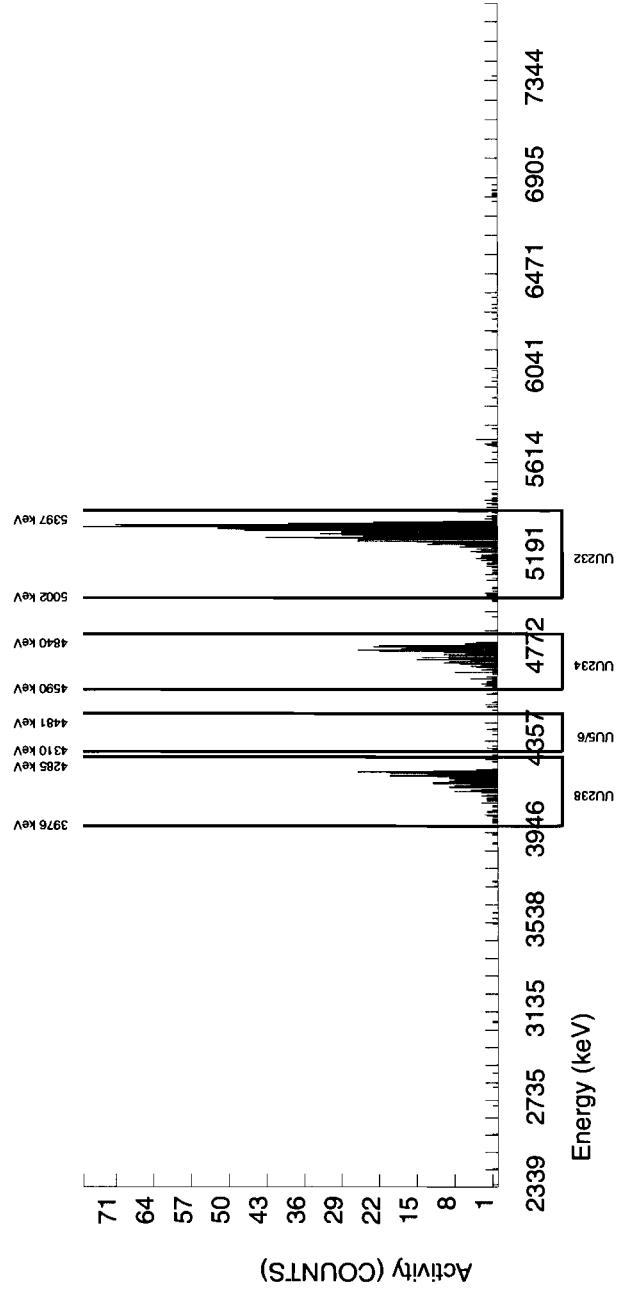


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957004 SAMPLE ID : S0246875006_UU SAMPLE QTY : 0.550 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 73.772				CHAMBER : 153 DETECTOR S/N : 76223 AVERAGE %EFFICIENCY : 24.9933 COUNT DATE : 5-MAR-2010 18:07:16 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_UU BKG FILE : B153.CNF;393 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W153.CNF;110 CAL DATE : 19-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 3.3232E+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	5299.271	60.966	832.000	830.000	2.000	1.4142	100.0000	3.69E+00	2.97E-01	1.46E-02	4.13E-02	1.28E-01
U-3/4	4763.020	4747.515	62.953	297.000	296.160	0.000	4.8416	100.0000	1.32E+00	1.22E-01	5.00E-02	1.12E-01	7.64E-02
U-235	4391.000	4368.563	88.419	11.000	10.000	1.000	2.2152	80.90000	5.49E-02	1.94E-02	2.83E-02	7.15E-02	1.90E-02
U-238	4184.730	4174.888	27.051	260.000	260.000	0.000	3.1208	100.0000	1.15E+00	1.10E-01	3.22E-02	7.65E-02	7.16E-02

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area
due to tracer impurity:
U-3/4

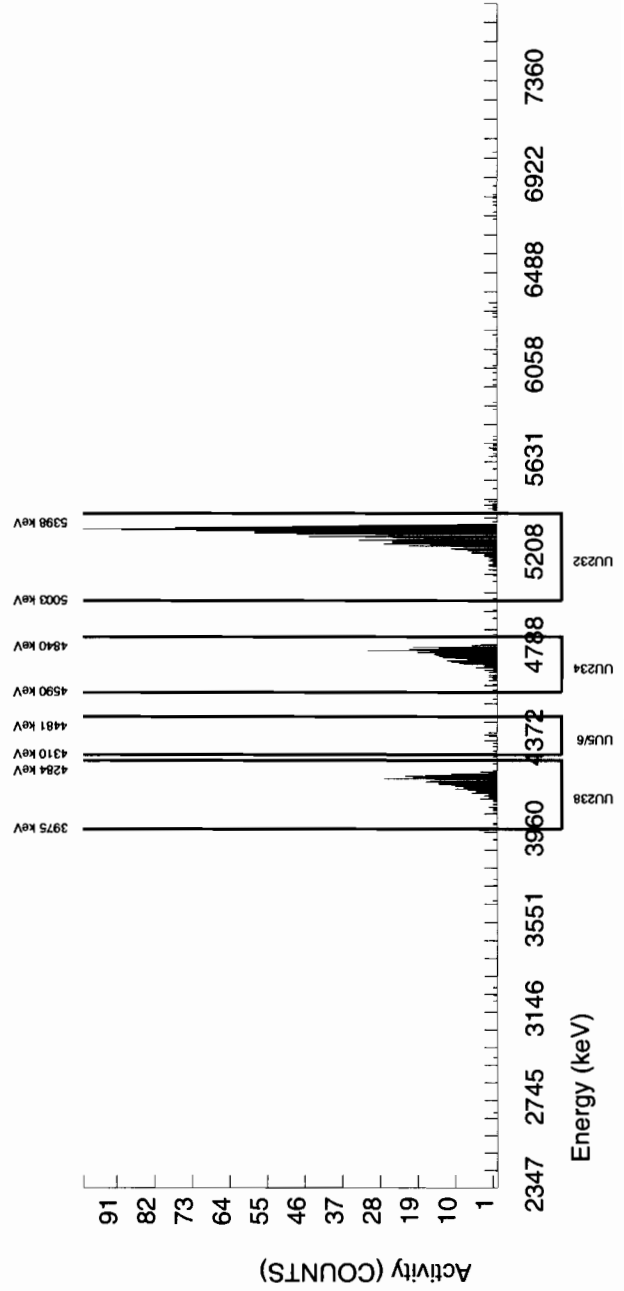


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

<p>BATCH NUMBER : 957004 SAMPLE ID : S0246875007_UU SAMPLE QTY : 0.504 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 81.831</p>		<p>CHAMBER : 154 DETECTOR S/N : 76224 AVERAGE %EFFICIENCY : 25.5722 COUNT DATE : 5-MAR-2010 18:07:19 ELAPSED LIVE TIME(SEC) : 60000.00</p>	<p>LIB FILE : ENV_ALPHA_UU BKG FILE : B154.CNF:395 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W154.CNF:108 CAL DATE : 19-FEB-2010</p>
<p>TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 3.6862E+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>	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5305.337	33.578
U-3/4	4763.020	4759.116	30.561
U-235	4391.000	4387.223	17.009
U-238	4184.730	4185.273	43.093
	GROSS AREA	NET AREA	BKG AREA
	944.000	942.000	2.000
	274.000	273.046	0.000
	11.000	11.000	0.000
	270.000	269.000	1.000
	%ABUN	BKG Sg	ACTIVITY pCi/G
	100.0000	1.4142	4.03E+00
	100.0000	4.8416	1.17E+00
	80.90000	2.2152	5.81E-02
	100.0000	3.1208	1.15E+00
	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G
	3.17E-01	1.41E-02	3.97E-02
	1.09E-01	4.81E-02	1.08E-01
	1.80E-02	2.72E-02	6.87E-02
	1.08E-01	3.10E-02	7.36E-02
	UNC pCi/G		
	1.31E-01		
	7.06E-02		
	1.75E-02		
	7.03E-02		

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

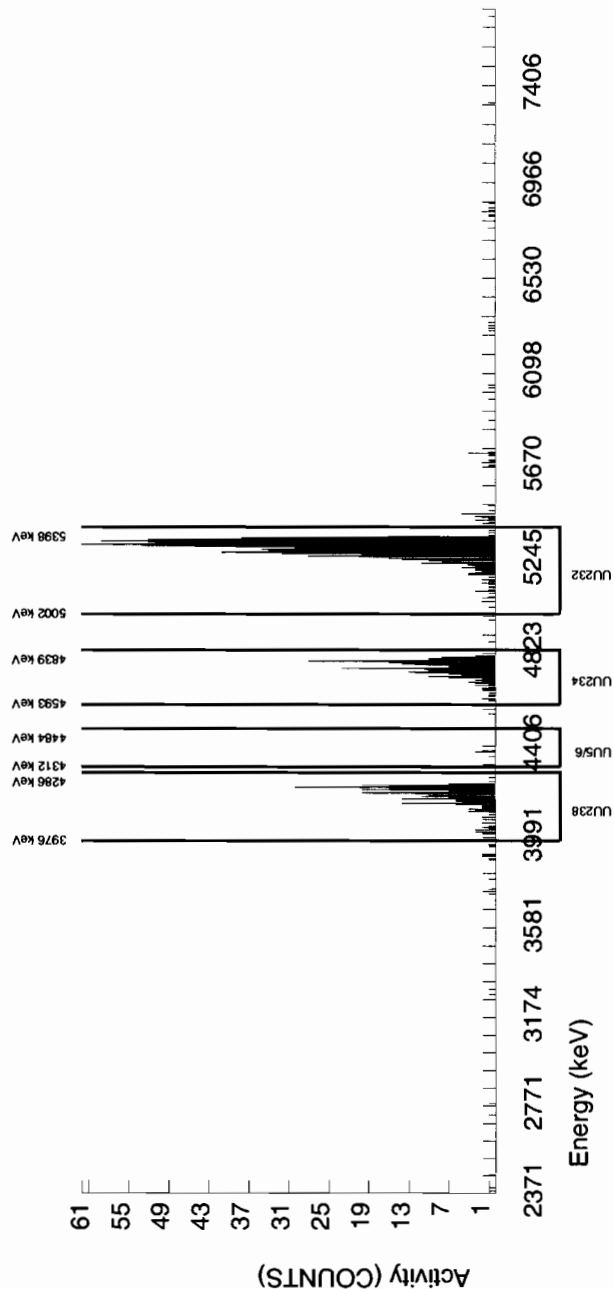


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957004 SAMPLE ID : S0246875008_UU SAMPLE QTY : 0.556 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 74.606				CHAMBER : 155 DETECTOR S/N : 75553 AVERAGE %EFFICIENCY : 25.9347 COUNT DATE : 5-MAR-2010 18:07:21 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_UU BKG FILE : B155.CNF:402 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W155.CNF:117 CAL DATE : 19-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 3.3608E+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	5304.317	71.615	874.000	871.000	3.000	1.7321	100.0000	3.65E+00	2.91E-01	1.69E-02	4.51E-02	1.24E-01
U-3/4	4763.020	4758.131	41.843	275.000	272.118	2.000	4.8416	100.0000	1.14E+00	1.08E-01	4.72E-02	1.06E-01	6.96E-02
U-235	4391.000	4373.592	8.444	7.000	7.000	0.000	2.2152	80.90000	3.62E-02	1.39E-02	2.67E-02	6.74E-02	1.37E-02
U-238	4184.730	4184.410	39.834	287.000	286.000	1.000	3.1208	100.0000	1.20E+00	1.12E-01	3.04E-02	7.21E-02	7.11E-02

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

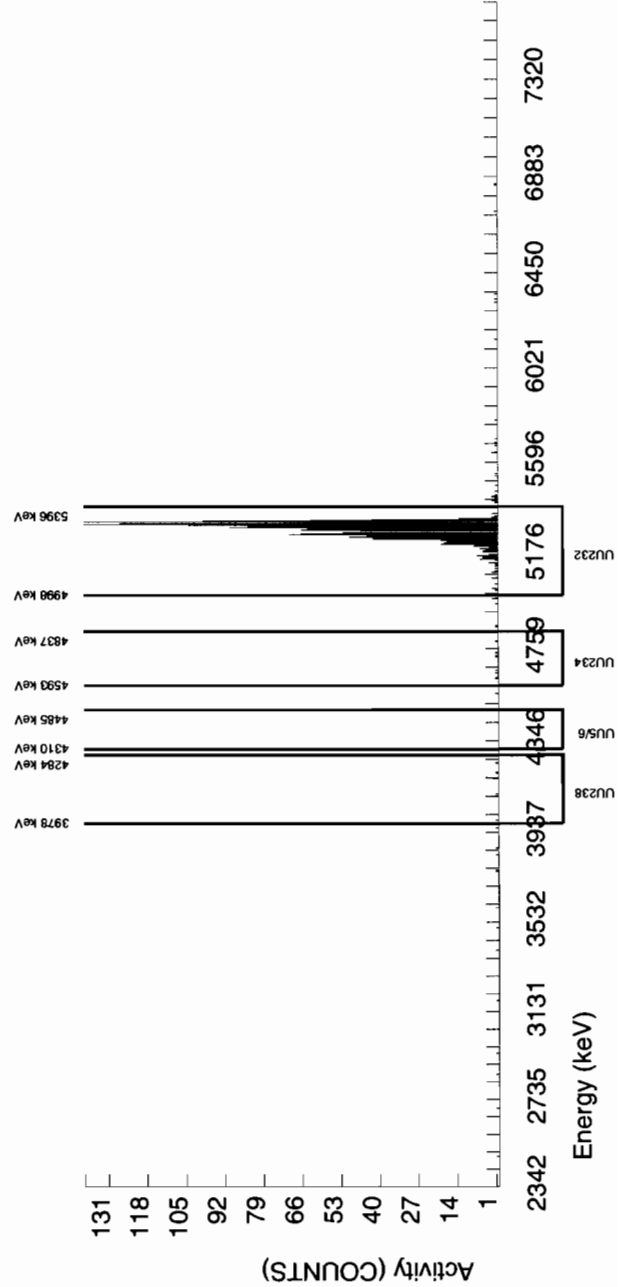


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 957004 SAMPLE ID : S1202051962_UU SAMPLE QTY : 1.000 G SAMPLE DATE : 1-MAR-2010 00:00:00. ANALYST : MXE1 % YIELD : 102.175		CHAMBER : 005 DETECTOR S/N : 79454 AVERAGE %EFFICIENCY : 33.5469 COUNT DATE : 5-MAR-2010 12:23:25 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B005.CNF;1109 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W005.CNF;339 CAL DATE : 4-MAR-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5022E+00 dpm RESULTS : 4.6001E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5296.550	35.485
U-3/4	4763.020	4702.648	195.330
U-235	4391.000	4397.248	0.000
U-238	4184.730	4142.223	4.883
	GROSS AREA	NET AREA	BKG AREA
	1546.000	1543.000	3.000
	11.000	5.438	4.000
	0.000	-1.000	1.000
	8.000	5.000	3.000
	BKG Sg	%ABUN	ACTIVITY pCi/G
	1.7321	100.0000	2.03E+00
	4.8416	100.0000	7.15E-03
	2.2152	80.90000	-1.62E-03
	3.1208	100.0000	6.57E-03
	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G
	1.51E-01	5.30E-03	1.42E-02
	4.84E-03	1.48E-02	3.32E-02
	2.30E-03	8.37E-03	2.11E-02
	4.38E-03	9.54E-03	2.26E-02
			UNC pCi/G
			5.17E-02
			4.82E-03
			2.30E-03
			4.36E-03

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG 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 : 957004 SAMPLE ID : S1202051963_UU SAMPLE QTY : 0.507 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 87.979		CHAMBER : 006 DETECTOR S/N : 79455 AVERAGE %EFFICIENCY : 32.0671 COUNT DATE : 5-MAR-2010 12:23:25 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B006.CNF;1122 BKG DATE : 28-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W006.CNF;363 CAL DATE : 4-MAR-2010
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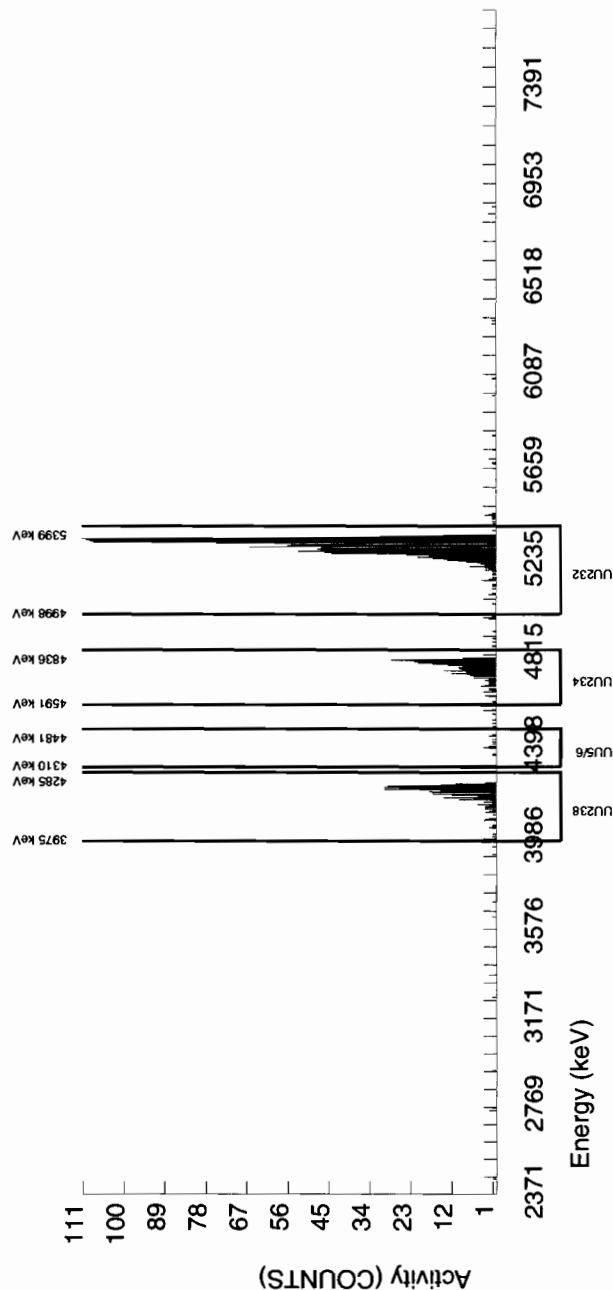
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 3.9632E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

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	5311.718	44.487	1270.000	1270.000	0.000	0.0000	100.0000	4.00E+00	3.06E-01	0.00E+00	8.53E-03	1.12E-01
U-3/4	4763.020	4758.152	26.612	275.000	273.714	0.000	4.8416	100.0000	8.62E-01	8.04E-02	3.55E-02	7.95E-02	5.21E-02
U-235	4391.000	4417.891	61.908	12.000	11.000	1.000	2.2152	80.90000	4.28E-02	1.44E-02	2.01E-02	5.07E-02	1.40E-02
U-238	4184.730	4194.502	41.067	298.000	295.000	3.000	3.1208	100.0000	9.29E-01	8.57E-02	2.29E-02	5.43E-02	5.46E-02

NOTES:

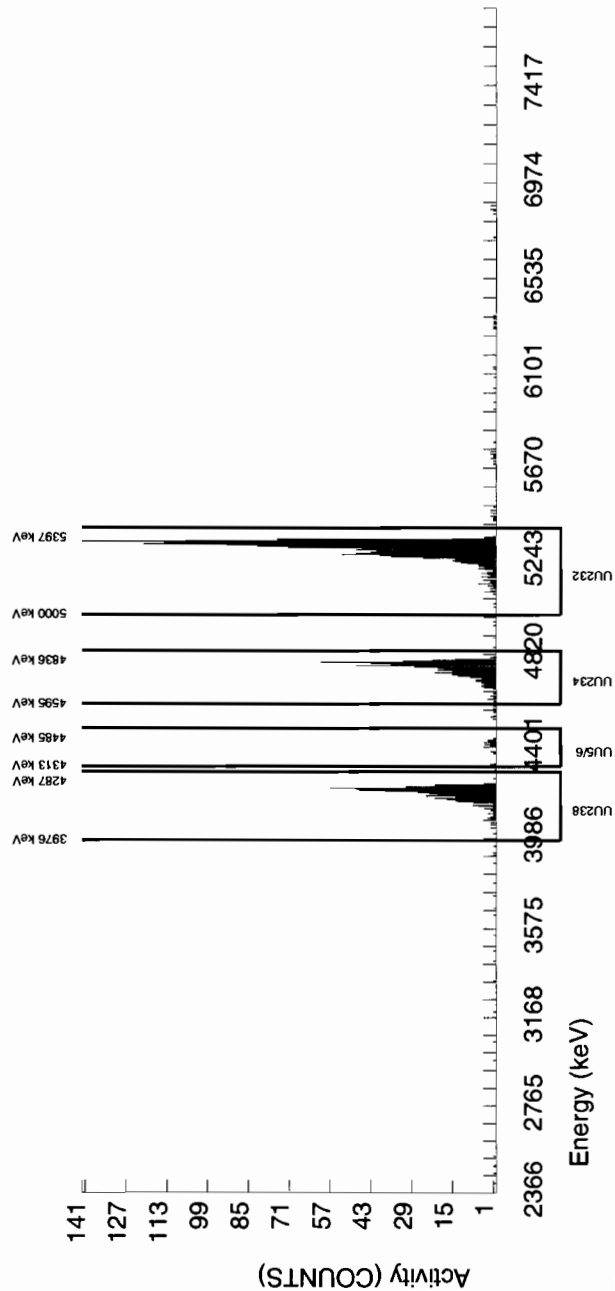
- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



BATCH NUMBER : 957004				CHAMBER : 008				LIB FILE : ENV_ALPHA_UU					
SAMPLE ID : S1202051964_UU				DETECTOR S/N : 78788				BKG FILE : B008.CNF;1119					
SAMPLE QTY : 0.114 G				AVERAGE %EFFICIENCY : 33.4538				BKG DATE : 28-FEB-2010					
SAMPLE DATE : 1-MAR-2010 00:00:00.				COUNT DATE : 5-MAR-2010 12:23:26				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : MXE1				ELAPSED LIVE TIME(SEC) : 60000.00				EFF FILE : W008.CNF;345					
% YIELD : 88.781								CAL DATE : 4-MAR-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1283-H				ID : 0244-A				ID : 0244-A					
NUCLIDE : U232				NUCLIDE : U-238				NUCLIDE : U-238					
NOMINAL : 4.5022E+00 dpm				NOMINAL : 5.7500E+00 pCi/G				NOMINAL : 5.7500E+00 pCi/G					
RESULTS : 3.9971E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5306.839	33.996	1342.000	1337.000	5.000	2.2361	100.0000	1.78E+01	1.44E+00	6.92E-02	1.74E-01	4.88E-01
U-3/4	4763.020	4759.407	25.189	495.000	488.646	5.000	4.8416	100.0000	6.50E+00	5.76E-01	1.50E-01	3.36E-01	2.97E-01
U-235	4391.000	4412.366	27.300	28.000	28.000	0.000	2.2152	80.90000	4.60E-01	9.38E-02	8.47E-02	2.14E-01	8.70E-02
U-238	4184.730	4193.019	24.893	484.000	482.000	2.000	3.1208	100.0000	6.41E+00	5.69E-01	9.66E-02	2.29E-01	2.93E-01

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * BKG Sg of U232 calculated as $\text{sqrt}(\text{BKG AREA})$.
- * Corrections made to the following net area
due to tracer impurity:
U-3/4



Radiochemistry Batch Checklist, Rev10

Batch# 91026036

Product: U

Date: 3/10/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10° MDA/ MDC, error is 150% or less of sample activity. If greater 10° MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDU/ LLD has been met.	✓		
If duplicate activities are less 5° MDA/ MDC, then RPD is 100% or less. If greater 5° MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%.	✓		
Or meets the client's required RER acceptance criteria.			
Tracer yield is 15-125% . Carrier yield 25-125%.	✓		
Or meets the client's contract acceptance criteria.			
Method blank is less than the RDU/ 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 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 or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: Denise Green

3/10/10

Secondary Review Performed By: JPLMR

3/10/10

3/11
LANL

✓

Uranium Que Sheet

08-MAR-10

Batch #: 962636 Analyst: MXR First Client Due Date: 11-MAR-10 Internal Due Date: 05-MAR-10
Tracer Isotope: U-232/U-236 Tracer Code: 1083-H Expiration Date: 12/9/10 Vol: 0.1 Analyzed Sequentially with Pu
LCS Isotope: U-238 LCS Code: 1 Expiration Date: 1 Vol: 1 Pu-236 ID: 1
Spike Isotope: U-238 Spike Code: 1 Expiration Date: 1 Vol: 1
Prep Date: 3/9/10 Initials: ME Pipet ID: 2911058 Balance ID: 19350208 Witness: JEH 3-8-10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	U Det #
246875004-2	RE15-10-8365	SAMPLE		.1 pCi/g	SOIL	LANL010	09-FEB-10	1	1	0.553	137
1202065198-1	MB for batch 962636	MB		UCF pCi/g to pCi	SOIL	QC ACCOUNT		2	2	1	140
1202065199-2	RE15-10-8365(246875004DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	09-FEB-10	3	3	0.529	141
1202065200-1	LCS for batch 962636	LCS		UCF pCi/g to pCi	SOIL	QC ACCOUNT		4	4	0.115	142

* SRM 0244-A Exp 10/31/20

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

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

[Signature] 3/10/10

Blank Correction Report

Batch ID 962636

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Allquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202065199	DUP	Uranium-233/234	0.529 g	0.986	0.095	0.110	.018389414	pCi/g	NO
		Uranium-235/236	0.529 g	0.0627	0.018	0.0672	.004177694	pCi/g	NO
		Uranium-238	0.529 g	1.64	0.144	0.0773	.023629490	pCi/g	NO
1202065200	LCS	Uranium-233/234	0.115 g	4.40	0.433	0.481	.075391304	pCi/g	NO
		Uranium-235/236	0.115 g	0.253	0.0756	0.294	.019217391	pCi/g	NO
		Uranium-238	0.115 g	4.32	0.427	0.338	.108695652	pCi/g	NO
1202065198	MB	Uranium-233/234	1.00 g	0.00867	0.00398	0.0504	.00867	pCi/g	YES
		Uranium-235/236	1.00 g	0.00221	0.00383	0.0308	.00221	pCi/g	YES
		Uranium-238	1.00 g	0.0125	0.00481	0.0354	.0125	pCi/g	YES
246875004	RE15-10-8365	Uranium-233/234	0.553 g	1.12	0.102	0.0966	.015678119	pCi/g	NO
		Uranium-235/236	0.553 g	0.0932	0.0218	0.059	.003996383	pCi/g	NO
		Uranium-238	0.553 g	1.66	0.142	0.0679	.022603978	pCi/g	NO

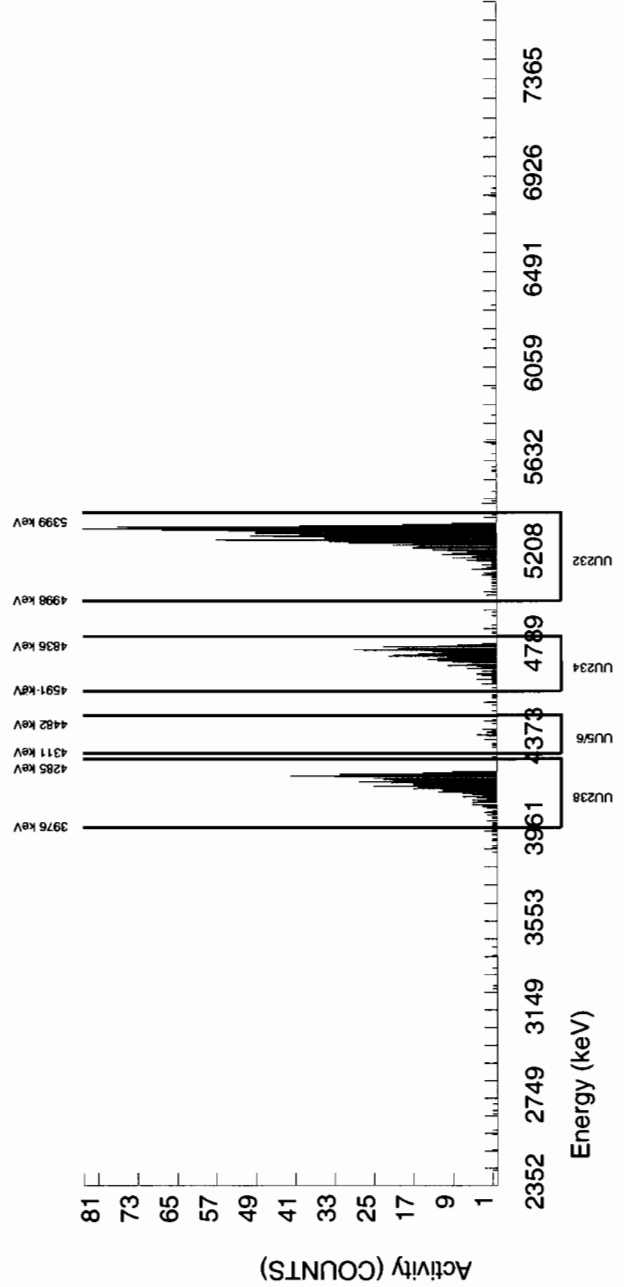
DM
3/10/12

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 962636 SAMPLE ID : S0246875004_UU SAMPLE QTY : 0.553 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 95.729				CHAMBER : 139 DETECTOR S/N : 76231 AVERAGE %EFFICIENCY : 24.8328 COUNT DATE : 9-MAR-2010 17:23:54 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_UU BKG FILE : B139.CNF;403 BKG DATE : 7-MAR-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W139.CNF;104 CAL DATE : 19-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 4.3123E+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	5293.901	66.815	1075.000	1070.000	5.000	2.2361	100.0000	3.67E+00	2.88E-01	1.78E-02	4.49E-02	1.13E-01
U-3/4	4763.020	4750.990	46.081	328.000	325.916	1.000	5.4790	100.0000	1.12E+00	1.02E-01	4.37E-02	9.66E-02	6.20E-02
U-235	4391.000	4394.953	31.165	23.000	22.000	1.000	2.4127	80.90000	9.32E-02	2.18E-02	2.38E-02	5.90E-02	2.07E-02
U-238	4184.730	4177.847	59.597	486.000	485.000	1.000	3.6781	100.0000	1.66E+00	1.42E-01	2.93E-02	6.79E-02	7.56E-02

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 8-MAR-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

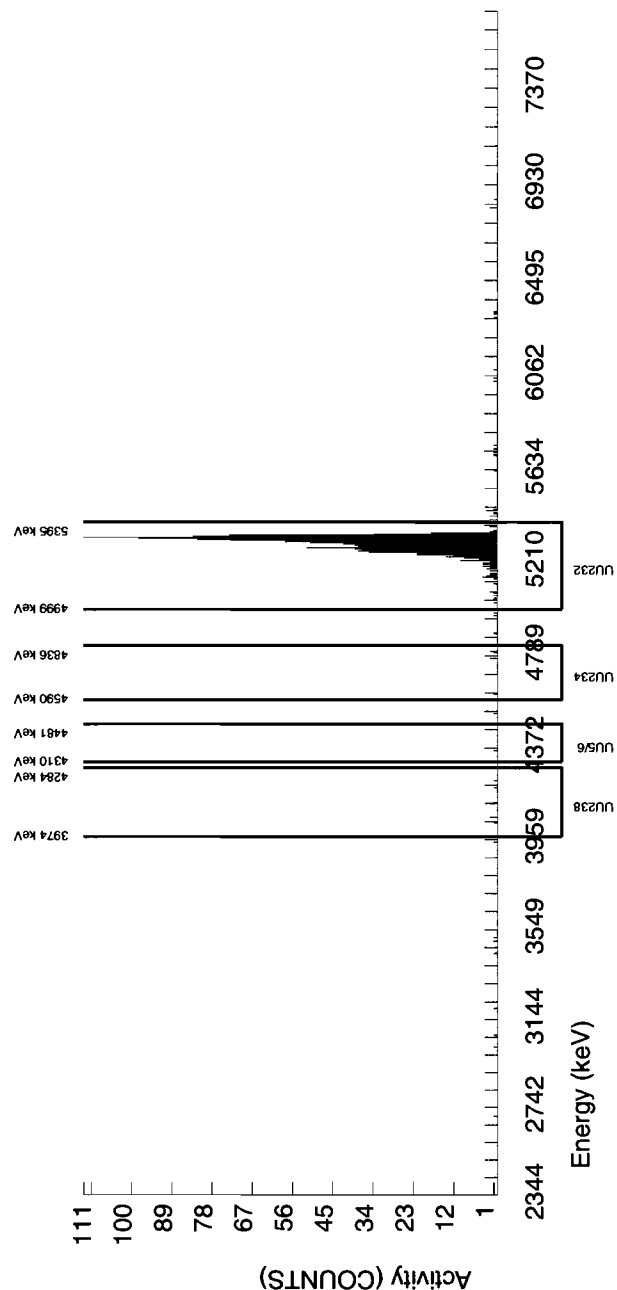


GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 962636 SAMPLE ID : S1202065198_UU SAMPLE QTY : 1.000 G SAMPLE DATE : 8-MAR-2010 00:00:00. ANALYST : MXE1 % YIELD : 98.308				CHAMBER : 140 DETECTOR S/N : 78771 AVERAGE %EFFICIENCY : 25.6501 COUNT DATE : 9-MAR-2010 17:23:56 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_UU BKG FILE : B140.CNF:403 BKG DATE : 7-MAR-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W140.CNF:109 CAL DATE : 19-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5013E+00 dpm RESULTS : 4.4252E+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	5301.451	32.467	1141.000	1135.000	6.000	2.4495	100.0000	2.03E+00	1.55E-01	1.02E-02	2.52E-02	6.05E-02
U-3/4	4763.020	4771.530	34.671	6.000	4.851	0.000	5.4790	100.0000	8.66E-03	3.98E-03	2.28E-02	5.04E-02	3.93E-03
U-235	4391.000	4423.917	0.000	2.000	1.000	1.000	2.4127	80.90000	2.21E-03	3.83E-03	1.24E-02	3.08E-02	3.82E-03
U-238	4184.730	4124.355	4.953	7.000	7.000	0.000	3.6781	100.0000	1.25E-02	4.81E-03	1.53E-02	3.54E-02	4.73E-03

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 8-MAR-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

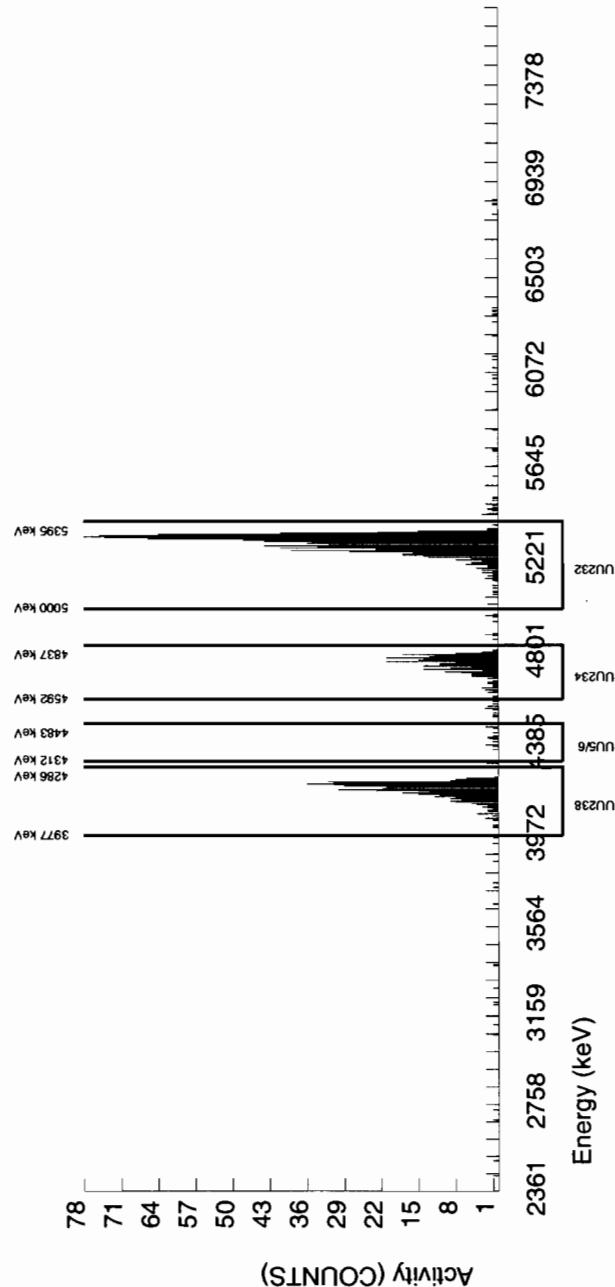


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 962636 SAMPLE ID : S1202065199_UU SAMPLE QTY : 0.529 G SAMPLE DATE : 9-FEB-2010 00:00:00. ANALYST : MXE1 % YIELD : 84.619		CHAMBER : 141 DETECTOR S/N : 76232 AVERAGE %EFFICIENCY : 25.8088 COUNT DATE : 9-MAR-2010 17:23:59 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B141.CNF;406 BKG DATE : 7-MAR-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W141.CNF;107 CAL DATE : 19-FEB-2010
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5047E+00 dpm RESULTS : 3.8118E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	
NUCLIDE ACTIVITY SUMMARY			
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM
U232	5302.100	5299.559	65.246
U-3/4	4763.020	4755.141	69.332
U-235	4391.000	4404.595	106.191
U-238	4184.730	4186.287	44.989
	GROSS AREA	NET AREA	BKG AREA
U232	990.000	983.000	7.000
U-3/4	255.000	253.005	1.000
U-235	13.000	13.000	0.000
U-238	421.000	420.000	1.000
	%ABUN	BKG Sg	ACTIVITY pCi/G
U232	100.0000	2.6458	3.84E+00
U-3/4	100.0000	5.4790	9.86E-01
U-235	80.90000	2.4127	6.27E-02
U-238	100.0000	3.6781	1.64E+00
	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G
U232	3.05E-01	2.40E-02	5.86E-02
U-3/4	9.50E-02	4.97E-02	1.10E-01
U-235	1.80E-02	2.71E-02	6.72E-02
U-238	1.44E-01	3.34E-02	7.73E-02
	UNC pCi/G		
U232	1.23E-01		
U-3/4	6.23E-02		
U-235	1.74E-02		
U-238	8.01E-02		

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 8-MAR-2010)
- * BKG Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4

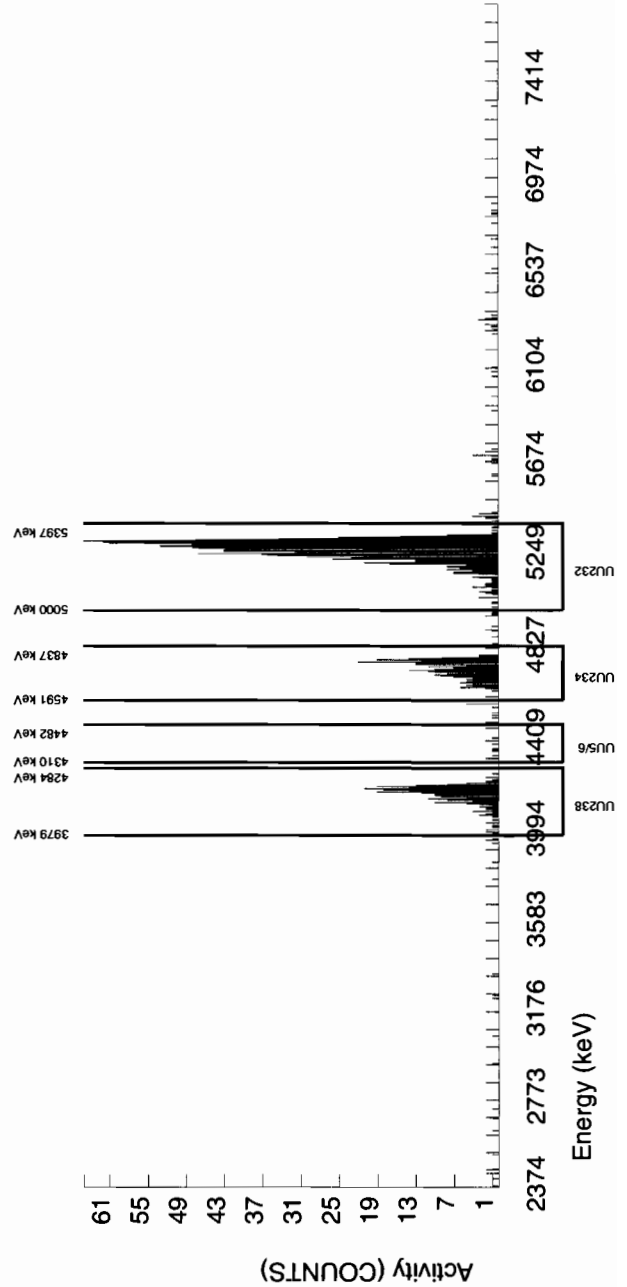


GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 962636 SAMPLE ID : S1202065200_UU SAMPLE QTY : 0.115 G SAMPLE DATE : 8-MAR-2010 00:00:00. ANALYST : MXE1 % YIELD : 89.092				CHAMBER : 142 DETECTOR S/N : 64261 AVERAGE %EFFICIENCY : 25.7599 COUNT DATE : 9-MAR-2010 17:24:01 ELAPSED LIVE TIME(SEC) : 60000.00				LIB FILE : ENV_ALPHA_UU BKG FILE : B142.CNF;400 BKG DATE : 7-MAR-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W142.CNF;111 CAL DATE : 19-FEB-2010					
TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5013E+00 dpm RESULTS : 4.0103E+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	5278.535	77.447	1043.000	1033.000	10.000	3.1623	100.0000	1.76E+01	1.45E+00	1.26E-01	2.97E-01	5.54E-01
U-3/4	4763.020	4735.919	57.654	259.000	257.954	0.000	5.4790	100.0000	4.40E+00	4.33E-01	2.18E-01	4.81E-01	2.74E-01
U-235	4391.000	4388.275	136.545	12.000	12.000	0.000	2.4127	80.90000	2.53E-01	7.56E-02	1.18E-01	2.94E-01	7.31E-02
U-238	4184.730	4168.518	62.700	254.000	253.000	1.000	3.6781	100.0000	4.32E+00	4.27E-01	1.46E-01	3.38E-01	2.73E-01

NOTES:

- * BKG Sg calculated via blank population.
(Sg updated 8-MAR-2010)
- * BKG 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# 952643 Product: YS Date: 2/25/10

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.	✓		
OC data entered into OC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMF, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [Signature] 2/25/10

Secondary Review Performed By: [Signature] 2/27/10

Gamma Spec Que Sheet

1.9-2/23/10

02/12/2010

Batch #: 952643 Analyst: MXR1 First Client Due Date: 03/11/2010 Internal Due Date: 02/28/2010
 Gamma Spike Isotope: Mixed Gamma Spike Code: hA Expiration Date: nA Vol: hA Nominal Concentration: hA
 Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 2/2/10 Vol: 1.0 mL Nominal Concentration: hA
 Initials: MS Prep Date: 2/16/10 Library: 8011D Witness: hA Co: 6.535

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date	Geometry	Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
246874001-1	RE46-10-12720	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00	CGA	111.79	15	2/16/10
246874002-1	RE46-10-12718	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		130.63	22	
246874003-1	RE46-10-12719	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		111.50	23	
246874004-1	RE46-10-12721	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		118.75	12	
246874005-1	RE46-10-12722	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		118.24	14	
246874006-1	RE46-10-12723	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		127.48	7	
246874007-1	RE46-10-12714	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		117.46	2	
246874008-1	RE46-10-12727	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		126.11	2	
246874009-1	RE46-10-12716	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		134.37	15	
246874010-1	RE46-10-12717	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		124.75	22	
246875001-1	RE15-10-8366	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		148.68	23	
246875002-1	RE15-10-8367	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		124.51	20	
246875003-1	RE15-10-8364	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		122.44	4	
246875004-1	RE15-10-8365	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		144.49	7	
246875005-1	RE15-10-8368	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		122.26	14	
246875006-1	RE15-10-8340	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		113.30	15	
246875007-1	RE15-10-8341	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		130.57	22	
246875008-1	RE15-10-8376	SAMPLE		LANL010	SOIL	09-FEB-10 12:00:00		148.30	11	
1202041820-1	MB	MB		QC ACCOUNT	SOIL	2/16/10		111.79	20	
1202041821-1	DUP RE46-10-12720(246874001)	DUP		QC ACCOUNT	SOIL	2/16/10		151.73	10	
1202041822-1	LCS	LCS		QC ACCOUNT	SOIL	2/16/10				

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: [Signature] 2/24/10
[Signature] 2/27/10
 Page 1 of 1

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
952643	246874001	SAMPLE	23-FEB-10		Americium-241	-0.1769	0.5811	0.200
					Cerium-139	-0.00636	0.07377	0.050
					Cesium-134	0.08567	0.1174	0.100
					Europium-152	-0.01352	0.2325	0.200
					Mercury-203	0.02035	0.1018	0.100
					Sodium-22	-0.08403	0.09868	0.080
					Thorium-234	2.151	4.597	2.00
					Tin-113	0.03003	0.1066	0.100
					Uranium-235	0.06344	0.5117	0.500
952643	246874002	SAMPLE	23-FEB-10		Americium-241	0.1193	0.2174	0.200
952643	246874003	SAMPLE	23-FEB-10		Americium-241	0.2455	0.406	0.200
					Cerium-139	-0.00749	0.05799	0.050
					Cesium-134	0.09886	0.122	0.100
					Europium-152	-0.00966	0.2144	0.200
					Sodium-22	0.02037	0.1029	0.080
					Thorium-234	2.56	3.217	2.00
952643	246874004	SAMPLE	23-FEB-10		Americium-241	-0.05095	0.2631	0.200
					Thorium-234	1.33	2.548	2.00
952643	246874005	SAMPLE	23-FEB-10		Americium-241	-0.1641	0.2425	0.200
					Cerium-139	0.01058	0.05375	0.050
					Thorium-234	1.12	2.214	2.00
952643	246874006	SAMPLE	23-FEB-10		Cerium-139	-0.00684	0.051	0.050
					Cesium-134	0.08328	0.102	0.100
952643	246874007	SAMPLE	23-FEB-10		Americium-241	-0.2092	0.3348	0.200
					Cerium-139	0.0189	0.05919	0.050
					Cesium-134	0.07783	0.1035	0.100
					Sodium-22	-0.0334	0.08496	0.080
					Thorium-234	2.43	3.206	2.00
952643	246874008	SAMPLE	23-FEB-10		Americium-241	0.09369	0.2198	0.200
952643	246874009	SAMPLE	23-FEB-10		Americium-241	-4.52E-05	0.2192	0.200
952643	246874010	SAMPLE	23-FEB-10		Americium-241	-0.3112	0.3729	0.200
					Thorium-234	1.639	3.007	2.00
952643	246875001	SAMPLE	23-FEB-10					
952643	246875002	SAMPLE	23-FEB-10		Americium-241	0.07304	0.2625	0.200
952643	246875003	SAMPLE	23-FEB-10					
952643	246875004	SAMPLE	24-FEB-10		Americium-241	0.06486	0.4232	0.200
					Cerium-139	-0.00937	0.05244	0.050
					Cesium-134	0.07887	0.1112	0.100
					Sodium-22	0.00201	0.08391	0.080
					Thorium-234	0.7669	3.246	2.00
952643	246875005	SAMPLE	24-FEB-10					
952643	246875006	SAMPLE	24-FEB-10		Americium-241	0.1757	0.2608	0.200
					Cerium-139	-0.00687	0.05816	0.050
952643	246875007	SAMPLE	24-FEB-10		Americium-241	-0.09446	0.6305	0.200

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
952643	246875007	SAMPLE	24-FEB-10		Cerium-139	0.02158	0.07773	0.050
					Europium-152	-0.0625	0.2311	0.200
					Sodium-22	-0.108	0.09566	0.080
					Thorium-234	1.191	4.782	2.00
					Tin-113	-0.04154	0.1111	0.100
					Uranium-235	0.2991	0.5458	0.500
952643	246875008	SAMPLE	24-FEB-10		Americium-241	0.07999	0.2434	0.200
					Cerium-139	-0.00543	0.05056	0.050
952643	1202041820	MB	24-FEB-10					
952643	1202041821	DUP	24-FEB-10		Americium-241	0.1309	0.2145	0.200
					Cerium-139	-0.00241	0.05464	0.050
					Sodium-22	0.02794	0.0825	0.080
					Thorium-234	1.166	2.03	2.00
952643	1202041822	LCS	24-FEB-10		Cerium-139	-0.00838	0.07987	0.050
					Cesium-134	0.05393	0.1583	0.100
					Europium-152	0.07817	0.3199	0.200
					Mercury-203	1.54E-05	0.1091	0.100
					Potassium-40	0.4761	1.109	1.00
					Ruthenium-106	-0.2624	1.014	0.800
					Sodium-22	0.02682	0.1099	0.080
					Thorium-234	-0.6701	5.195	2.00
					Tin-113	0.01203	0.1417	0.100
					Uranium-235	-0.09558	0.5672	0.500

GEL QUALS

Batch ID: 952643

Report run on: February 25, 2010 12:01 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
246874001-1 23-FEB-2010 19:29	Bismuth-211	UI	UI	UI	Data rejected due to interference.		5.355			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.165			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1226			
246874002-1 23-FEB-2010 19:29	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.826			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.684			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1333		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.782			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1569			
246874003-1 23-FEB-2010 19:30	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.671			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.859			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.795			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08774			
246874004-1 23-FEB-2010 19:33	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.835			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.844			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09827		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.87			
	Radium-228	UI	UI	UI	Data rejected due to low abundance.		2.081		.5	.5
246874005-1 23-FEB-2010 19:33	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.762			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.815			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1058		.1	.1

GEL QUALS

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Samp Id	Parmname	Cofa	Edd	Qual Comments	Auto	Result	MDA	Uncert	SQL
246874005-1 23-FEB-2010 19:33	Radium-224	UI	UI	Data rejected due to interference.		4.659			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.1263			
246874006-1 23-FEB-2010 20:22	Bismuth-211	UI	UI	Data rejected due to interference.		4.559			
	Cadmium-109	UI	UI	Data rejected due to interference.		4.847			
	Radium-224	UI	UI	Data rejected due to interference.		4.697			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.1208			
246874007-1 23-FEB-2010 21:07	Bismuth-211	UI	UI	Data rejected due to interference.		4.688			
	Cadmium-109	UI	UI	Data rejected due to interference.		3.712			
	Radium-224	UI	UI	Data rejected due to interference.		5.976			
	Thallium-208	UI	UI	Data rejected due to low abundance.		.5689		.08	.08
246874008-1 23-FEB-2010 23:19	Bismuth-211	UI	UI	Data rejected due to interference.		4.042			
	Cadmium-109	UI	UI	Data rejected due to interference.		3.772			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.171		.1	.1
	Mercury-203	UI	UI	Data rejected due to low abundance.		.08135		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		4.171			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.07475			
246874009-1 23-FEB-2010 23:20	Bismuth-211	UI	UI	Data rejected due to interference.		3.828			
	Cadmium-109	UI	UI	Data rejected due to interference.		2.969			
	Radium-224	UI	UI	Data rejected due to interference.		3.981			

GEL QUALS

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Report run on: February 25, 2010 12:01 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
246874010-1 23-FEB-2010 23:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.232			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.356			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1432		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.021			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1308			
246875001-1 23-FEB-2010 23:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.538			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.604			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1119		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.997			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1287			
246875002-1 23-FEB-2010 23:21	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.665			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.553			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08483		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.066			
246875003-1 23-FEB-2010 23:49	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.198			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.851			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1264		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.606			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08262			
246875004-1 24-FEB-2010 08:51	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.176			

GEL QUALS

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Report run on: February 25, 2010 12:01 PM

Samp Id	Parmname	Cofa	Edd	Qual Comments	Auto	Result	MDA	Uncert	SQL
246875004-1 24-FEB-2010 08:51	Cadmium-109	UI	UI	Data rejected due to interference.		2.345			
	Radium-224	UI	UI	Data rejected due to interference.		5.27			
246875005-1 24-FEB-2010 08:52	Bismuth-211	UI	UI	Data rejected due to interference.		3.89			
	Cadmium-109	UI	UI	Data rejected due to interference.		2.551			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.09605		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		4.915			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.09814			
246875006-1 24-FEB-2010 08:52	Bismuth-211	UI	UI	Data rejected due to interference.		5.418			
	Cadmium-109	UI	UI	Data rejected due to interference.		4.745			
	Radium-224	UI	UI	Data rejected due to interference.		6.57			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.1021			
	Thorium-234	UI	UI	Data rejected due to high counting uncertainty.		2.338		2	2
246875007-1 24-FEB-2010 08:53	Bismuth-211	UI	UI	Data rejected due to interference.		6.062			
	Cadmium-109	UI	UI	Data rejected due to interference.		3.721			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.1755		.1	.1
	Mercury-203	UI	UI	Data rejected due to low abundance.		.1286		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		6.868			
246875008-1 24-FEB-2010 08:54	Strontium-85	UI	UI	Data rejected due to low abundance.		.1061			
	Bismuth-211	UI	UI	Data rejected due to interference.		5.422			
	Cadmium-109	UI	UI	Data rejected due to interference.		4.76			

GEL QUALS

Batch ID: 952643

Report run on: February 25, 2010 12:01 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
246875008-1 24-FEB-2010 08:54	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1167		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.493			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1605			
1202041821-1 DUP 24-FEB-2010 09:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.516			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.636			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.919			

Gamma Review Report based on Result > MDA for Batch:952643

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246874001	09-FEB-10 12:00	23-FEB-10 19:29	14.3	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.784	0.2502	pCi/g	0.3064	N	911.5 3	1.806	IDENTIFIED 12.73	<input type="checkbox"/>	
Americium-243	0.3503	0.07711	pCi/g	0.156	N	74.82 1	1.601	IDENTIFIED 21.25	<input type="checkbox"/>	
Annihilation Rad.	0.236	0.04593	pCi/g	0.06663	N	510.9 1	2	IDENTIFIED 18.98	<input type="checkbox"/>	
Barium-137m	0.1698	0.04552	pCi/g	0.08393	N	662.4 2	1.56	IDENTIFIED 26.49	<input type="checkbox"/>	
Bismuth-211	5.355	0.4253	pCi/g	0.4704	Y	351.8 4	1.595	IDENTIFIED 6.194	<input checked="" type="checkbox"/>	UI
Bismuth-212	0.9983	0.3337	pCi/g	0.6497	N	727.8 1	1.459	IDENTIFIED 33.06	<input type="checkbox"/>	
Bismuth-214	1.248	0.1178	pCi/g	0.1542	0.200	609.3 4	1.528	IDENTIFIED 8.034	<input type="checkbox"/>	
Cerium-143	534	103.5	pCi/g	0	N	0 10 0		SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-137	0.1795	0.04813	pCi/g	0.08872	0.100	662.4 2	1.56	IDENTIFIED 26.49	<input type="checkbox"/>	
Gross Gamma	10.18	1.603	pCi/g	3.279	N	0			<input type="checkbox"/>	
Krypton-85	24.11	6.06	pCi/g	19.75	N	0 10 0		NOT_IDENTI 0	<input type="checkbox"/>	
Lead-212	2.069	0.147	pCi/g	0.1253	0.100	238.7 4	1.362	IDENTIFIED 3.873	<input type="checkbox"/>	
Lead-214	1.863	0.1557	pCi/g	0.1639	0.100	351.8 4	1.595	IDENTIFIED 6.194	<input type="checkbox"/>	
Lutetium-177	3.042	1.042	pCi/g	2.721	N	0 10 0		FAIL_ABUND 0	<input type="checkbox"/>	
Niobium-95m	0.5026	0.1116	pCi/g	0.355	N	0 10 0		NOT_IDENTI 0	<input type="checkbox"/>	
Niobium-97	23190	34950	pCi/g	0	N	0 10 0		SHORT_HLIF 0	<input type="checkbox"/>	
Polonium-212	2.069	0.147	pCi/g	0.1253	N	238.7 4	1.362	IDENTIFIED 3.873	<input type="checkbox"/>	
Polonium-214	1.863	0.1557	pCi/g	0.1639	N	351.8 4	1.595	IDENTIFIED 6.194	<input type="checkbox"/>	
Polonium-216	2.069	0.147	pCi/g	0.1253	N	238.7 4	1.362	IDENTIFIED 3.873	<input type="checkbox"/>	
Polonium-218	1.863	0.1557	pCi/g	0.1639	N	351.8 4	1.595	IDENTIFIED 6.194	<input type="checkbox"/>	
Potassium-40	35.61	2.077	pCi/g	0.689	1.00	1460 1	2.021	IDENTIFIED 3.139	<input type="checkbox"/>	
Radium-224	5.165	1.055	pCi/g	1.425	Y	241.5 1	2.04	IDENTIFIED 19.66	<input checked="" type="checkbox"/>	UI
Radium-226	1.248	0.1178	pCi/g	0.1542	Y	609.3 4	1.528	IDENTIFIED 8.034	<input type="checkbox"/>	
Radium-228	1.784	0.2502	pCi/g	0.3064	0.500	911.5 3	1.806	IDENTIFIED 12.73	<input type="checkbox"/>	
Strontium-85	0.1226	0.03081	pCi/g	0.1004	Y	0 10 0		NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Technetium-99m	1.49E+14	2.85E+15	pCi/g	0	N	0 10 0		SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-200	228.8	198	pCi/g	0	N	0 10 0		SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-208	0.5159	0.05615	pCi/g	0.08111	0.080	583.2 1	1.49	IDENTIFIED 9.874	<input type="checkbox"/>	
Thorium-228	2.099	0.1491	pCi/g	0.1271	N	238.7 4	1.362	IDENTIFIED 3.873	<input type="checkbox"/>	
Thorium-230	1.248	0.1178	pCi/g	0.1542	N	609.3 4	1.528	IDENTIFIED 8.034	<input type="checkbox"/>	
Thorium-232	1.784	0.2502	pCi/g	0.3064	N	911.5 3	1.806	IDENTIFIED 12.73	<input type="checkbox"/>	
Titanium-44	0.4621	0.05201	pCi/g	0.1269	N	0 10 0		FAIL_ABUND 0	<input type="checkbox"/>	
Uranium-234	1.248	0.1178	pCi/g	0.1542	N	609.3 4	1.528	IDENTIFIED 8.034	<input type="checkbox"/>	
Zirconium-97	3.13E+06	6.90E+05	pCi/g	0	N	0 10 0		SHORT_HLIF 0	<input type="checkbox"/>	
*** = Number of isotopes identified with a keyline at this energy.										
Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246874002	09-FEB-10 12:00	23-FEB-10 19:29	14.3	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.535	0.1741	pCi/g	0.179	N	911.3 3	1.931	IDENTIFIED 9.206	<input type="checkbox"/>	
Americium-243	0.3524	0.0333	pCi/g	0.07774	N	74.82 1	1.072	IDENTIFIED 8.521	<input type="checkbox"/>	
Annihilation Rad.	0.11	0.03107	pCi/g	0.04049	N	510.9 1	1.991	IDENTIFIED 27.79	<input type="checkbox"/>	
Barium-137m	0.1326	0.0213	pCi/g	0.05053	N	661.4 2	1.926	IDENTIFIED 15.17	<input type="checkbox"/>	
Bismuth-211	3.826	0.3049	pCi/g	0.2896	Y	352 4	1.407	IDENTIFIED 5.45	<input checked="" type="checkbox"/>	UI
Bismuth-212	0.88	0.1828	pCi/g	0.5309	N	0 13 0		FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214	1.158	0.09313	pCi/g	0.0996	0.200	609.3 4	1.821	IDENTIFIED 5.555	<input type="checkbox"/>	
Cadmium-109	2.684	0.4146	pCi/g	1.146	Y	87.23 3	1.351	IDENTIFIED 14.71	<input checked="" type="checkbox"/>	UI
Cerium-143	525.6	82.72	pCi/g	0	N	0 13 0		SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134	0.1333	0.02983	pCi/g	0.07973	0.100	0 13 0		FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-135	0.2598	0.08389	pCi/g	0.2577	N	0 13 0		NOT_IDENTI 0	<input type="checkbox"/>	
Cesium-137	0.1402	0.02252	pCi/g	0.05342	0.100	661.4 2	1.926	IDENTIFIED 15.17	<input type="checkbox"/>	
Gross Gamma	9.01	1.133	pCi/g	1.978	N	0			<input type="checkbox"/>	

Iodine-123	HE	48490	9.49E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Iodine-135	HE	3.81E+14	3.17E+14	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	LA	30.85	4.187	pCi/g	13.76	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.515	0.1108	pCi/g	0.08252	0.100	238.7	4	1.204	IDENTIFIED	3.131	<input type="checkbox"/>
Lead-214	✓	1.331	0.1116	pCi/g	0.1009	0.100	352	4	1.407	IDENTIFIED	5.45	<input type="checkbox"/>
Lutetium-177	HE	2.419	0.7213	pCi/g	1.736	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	INT	0.7757	0.1441	pCi/g	0.3656	N	87.23	3	1.351	IDENTIFIED	14.71	<input type="checkbox"/>
Niobium-95	HE	0.07471	0.02135	pCi/g	0.06756	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-97	HE	18680	22910	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212	NR	1.515	0.1108	pCi/g	0.08252	N	238.7	4	1.204	IDENTIFIED	3.131	<input type="checkbox"/>
Polonium-214	NR	1.331	0.1116	pCi/g	0.1009	N	352	4	1.407	IDENTIFIED	5.45	<input type="checkbox"/>
Polonium-216	NR	1.515	0.1108	pCi/g	0.08252	N	238.7	4	1.204	IDENTIFIED	3.131	<input type="checkbox"/>
Polonium-218	NR	1.331	0.1116	pCi/g	0.1009	N	352	4	1.407	IDENTIFIED	5.45	<input type="checkbox"/>
Potassium-40	✓	29.66	1.549	pCi/g	0.4467	1.00	1461	1	2.599	IDENTIFIED	2.513	<input type="checkbox"/>
Radium-224	INT	4.782	0.634	pCi/g	0.938	Y	241.6	1	1.886	IDENTIFIED	11.68	<input checked="" type="checkbox"/> UI
Radium-226	✓	1.158	0.09313	pCi/g	0.0996	Y	609.3	4	1.821	IDENTIFIED	5.555	<input type="checkbox"/>
Radium-228	✓	1.535	0.1741	pCi/g	0.179	0.500	911.3	3	1.931	IDENTIFIED	9.206	<input type="checkbox"/>
Strontium-85	LA	0.1569	0.02129	pCi/g	0.06995	Y	0	13	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundances.
Thallium-208	✓	0.4302	0.04298	pCi/g	0.05004	0.080	583.3	1	1.887	IDENTIFIED	8.391	<input type="checkbox"/>
Thorium-228	NR	1.537	0.1124	pCi/g	0.08371	N	238.7	4	1.204	IDENTIFIED	3.131	<input type="checkbox"/>
Thorium-230	NR	1.158	0.09313	pCi/g	0.0996	N	609.3	4	1.821	IDENTIFIED	5.555	<input type="checkbox"/>
Thorium-232	NR	1.535	0.1741	pCi/g	0.179	N	911.3	3	1.931	IDENTIFIED	9.206	<input type="checkbox"/>
Thorium-234	✓	2.299	0.863	pCi/g	1.789	2.00	63.25	2	1.221	IDENTIFIED	36.51	<input type="checkbox"/>
Tin-126	INT	0.2642	0.0408	pCi/g	0.1214	N	87.23	3	1.351	IDENTIFIED	14.71	<input type="checkbox"/>
Titanium-44	LA	0.3628	0.02611	pCi/g	0.06994	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		6.8664	2.57E-06	ug/g	2.6632	N	0					<input type="checkbox"/>
Uranium-234	NR	1.158	0.09313	pCi/g	0.0996	N	609.3	4	1.821	IDENTIFIED	5.555	<input type="checkbox"/>
Uranium-238	HE	2.299	0.863	pCi/g	1.789	N	63.25	2	1.221	IDENTIFIED	36.51	<input type="checkbox"/>
Zirconium-97		2.72E+06	4.25E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246874003	09-FEB-10 12:00	23-FEB-10 19:30	14.3	SAMPLE	LOAD	I	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.786	0.2153	pCi/g	0.2632	N	910	3	1.447	IDENTIFIED	10.58 <input type="checkbox"/>
Americium-243	0.56	0.05794	pCi/g	0.1232	N	74.61	1	1.385	IDENTIFIED	9.344 <input type="checkbox"/>
Annihilation Rad.	0.2094	0.0401	pCi/g	0.05813	N	510.5	1	1.643	IDENTIFIED	18.93 <input type="checkbox"/>
Bismuth-211	4.671	0.3151	pCi/g	0.4176	Y	351.5	4	1.33	IDENTIFIED	5.908 <input checked="" type="checkbox"/> UI
Bismuth-212	1.676	0.3089	pCi/g	0.8589	N	0	11	0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214	1.557	0.1195	pCi/g	0.1368	0.200	608.6	4	1.691	IDENTIFIED	6.694 <input type="checkbox"/>
Cadmium-109	4.859	0.6521	pCi/g	1.761	Y	87.1	3	1.153	IDENTIFIED	12.52 <input checked="" type="checkbox"/> UI
Cerium-143	1082	153	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>
Cesium-135	0.6317	0.1336	pCi/g	0.303	N	270.1	1	0.9661	IDENTIFIED	20.79 <input type="checkbox"/>
Gross Gamma	11.21	1.542	pCi/g	3.663	N	0				<input type="checkbox"/>
Iodine-123	2.33E+06	1.30E+06	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>
Iodine-133	831.2	1952	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>
Iodine-135	1.49E+14	5.13E+14	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>
Krypton-85	17.26	4.659	pCi/g	15.7	N	0	11	0	NOT_IDENTI	0 <input type="checkbox"/>
Lead-212	1.991	0.09897	pCi/g	0.1136	0.100	238.3	4	1.184	IDENTIFIED	3.432 <input type="checkbox"/>
Lead-214	1.625	0.1175	pCi/g	0.1297	0.100	351.5	4	1.33	IDENTIFIED	5.908 <input type="checkbox"/>
Lutetium-177	3.442	0.9545	pCi/g	2.365	N	0	11	0	FAIL_ABUND	0 <input type="checkbox"/>
Neptunium-237	1.404	0.2377	pCi/g	0.5349	N	87.1	3	1.153	IDENTIFIED	12.52 <input type="checkbox"/>
Niobium-95m	0.8229	0.1082	pCi/g	0.3539	N	0	11	0	NOT_IDENTI	0 <input type="checkbox"/>
Polonium-212	1.991	0.09897	pCi/g	0.1136	N	238.3	4	1.184	IDENTIFIED	3.432 <input type="checkbox"/>
Polonium-214	1.625	0.1175	pCi/g	0.1297	N	351.5	4	1.33	IDENTIFIED	5.908 <input type="checkbox"/>
Polonium-216	1.991	0.09897	pCi/g	0.1136	N	238.3	4	1.184	IDENTIFIED	3.432 <input type="checkbox"/>
Polonium-218	1.625	0.1175	pCi/g	0.1297	N	351.5	4	1.33	IDENTIFIED	5.908 <input type="checkbox"/>
Potassium-40	33.64	1.686	pCi/g	0.5619	1.00	1459	1	2.281	IDENTIFIED	3.332 <input type="checkbox"/>
Radium-224	4.795	0.6926	pCi/g	1.292	Y	241.3	1	1.645	IDENTIFIED	14.16 <input checked="" type="checkbox"/> UI

Radium-226	✓	1.557	0.1195	pCi/g	0.1368	Y	608.6	4	1.691	IDENTIFIED	6.694	<input type="checkbox"/>	
Radium-228	✓	1.786	0.2153	pCi/g	0.2632	0.500	910	3	1.447	IDENTIFIED	10.58	<input type="checkbox"/>	
Strontium-85	LA	0.08774	0.02369	pCi/g	0.07983	Y	0	11	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.6561	0.05619	pCi/g	0.07371	0.080	582.3	1	1.575	IDENTIFIED	7.925	<input type="checkbox"/>	
Thorium-228	NR	2.02	0.1004	pCi/g	0.1152	N	238.3	4	1.184	IDENTIFIED	3.432	<input type="checkbox"/>	
Thorium-230	NR	1.557	0.1195	pCi/g	0.1368	N	608.6	4	1.691	IDENTIFIED	6.694	<input type="checkbox"/>	
Thorium-232	NR	1.786	0.2153	pCi/g	0.2632	N	910	3	1.447	IDENTIFIED	10.58	<input type="checkbox"/>	
Tin-126	INT	0.4781	0.06417	pCi/g	0.1743	N	87.1	3	1.153	IDENTIFIED	12.52	<input type="checkbox"/>	
Titanium-44	LA	0.4888	0.0401	pCi/g	0.1078	N	0	11	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium		7.6952	3.70E-06	ug/g	4.7891	N		0				<input type="checkbox"/>	
Uranium-234	NR	1.557	0.1195	pCi/g	0.1368	N	608.6	4	1.691	IDENTIFIED	6.694	<input type="checkbox"/>	
Zirconium-97		3.59E+06	6.66E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246874004	09-FEB-10 12:00	23-FEB-10 19:33	14.3	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment		
Actinium-228	LA	2.081	0.2137	pCi/g	0.5786	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Americium-243	INT	0.4692	0.04478	pCi/g	0.09307	N	74.73	1	1.223	IDENTIFIED	8.917	<input type="checkbox"/>	
Annihilation Rad.	HE	0.1057	0.0362	pCi/g	0.05304	N	510.8	1	1.659	IDENTIFIED	34.11	<input type="checkbox"/>	
Bismuth-211	INT	3.835	0.273	pCi/g	0.3361	Y	351.6	4	1.162	IDENTIFIED	6.387	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	0.9804	0.2771	pCi/g	0.7614	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.135	0.09902	pCi/g	0.1216	0.200	609.1	4	1.464	IDENTIFIED	7.695	<input type="checkbox"/>	
Cadmium-109	INT	4.844	0.625	pCi/g	1.245	Y	87.04	3	1.26	IDENTIFIED	12.33	<input checked="" type="checkbox"/>	UI
Cerium-143		479.2	79.87	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.09827	0.04294	pCi/g	0.09608	0.100	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma		10.23	1.29	pCi/g	2.55	N	0					<input type="checkbox"/>	
Iodine-123	HE	1.56E+06	1.06E+06	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-133	HE	1618	1718	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	HE	1.92E+14	4.35E+14	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.863	0.08945	pCi/g	0.0957	0.100	238.5	4	1.05	IDENTIFIED	3.233	<input type="checkbox"/>	
Lead-214	✓	1.334	0.1011	pCi/g	0.1172	0.100	351.6	4	1.162	IDENTIFIED	6.387	<input type="checkbox"/>	
Lutetium-177	LA	4.533	0.7771	pCi/g	2.046	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	1.4	0.2313	pCi/g	0.3657	N	87.04	3	1.26	IDENTIFIED	12.33	<input type="checkbox"/>	
Polonium-212	NR	1.863	0.08945	pCi/g	0.0957	N	238.5	4	1.05	IDENTIFIED	3.233	<input type="checkbox"/>	
Polonium-214	NR	1.334	0.1011	pCi/g	0.1172	N	351.6	4	1.162	IDENTIFIED	6.387	<input type="checkbox"/>	
Polonium-216	NR	1.863	0.08945	pCi/g	0.0957	N	238.5	4	1.05	IDENTIFIED	3.233	<input type="checkbox"/>	
Polonium-218	NR	1.334	0.1011	pCi/g	0.1172	N	351.6	4	1.162	IDENTIFIED	6.387	<input type="checkbox"/>	
Potassium-40	✓	32.93	1.528	pCi/g	0.5254	1.00	1460	1	2.152	IDENTIFIED	2.967	<input type="checkbox"/>	
Radium-224	INT	4.87	0.7339	pCi/g	1.089	Y	241.5	1	1.728	IDENTIFIED	14.82	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.135	0.09902	pCi/g	0.1216	Y	609.1	4	1.464	IDENTIFIED	7.695	<input type="checkbox"/>	
Radium-228	LA	2.081	0.2137	pCi/g	0.5786	0.500	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-200		345.1	144	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.6634	0.04894	pCi/g	0.05728	0.080	582.9	1	1.341	IDENTIFIED	6.452	<input type="checkbox"/>	
Thorium-228	NR	1.89	0.09073	pCi/g	0.09708	N	238.5	4	1.05	IDENTIFIED	3.233	<input type="checkbox"/>	
Thorium-230	NR	1.135	0.09902	pCi/g	0.1216	N	609.1	4	1.464	IDENTIFIED	7.695	<input type="checkbox"/>	
Thorium-232	NR	2.081	0.2137	pCi/g	0.5786	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Tin-126	INT	0.4767	0.06151	pCi/g	0.1231	N	87.04	3	1.26	IDENTIFIED	12.33	<input type="checkbox"/>	
Titanium-44	LA	0.4398	0.03053	pCi/g	0.08029	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium		4.0324	2.12E-06	ug/g	3.7932	N		0				<input type="checkbox"/>	
Uranium-234	NR	1.135	0.09902	pCi/g	0.1216	N	609.1	4	1.464	IDENTIFIED	7.695	<input type="checkbox"/>	
Zirconium-97		1.32E+06	5.06E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246874005	09-FEB-10 12:00	23-FEB-10 19:33	14.3	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 NR	1.816	0.1824	pCi/g	0.2327	N	911.6	3	1.911	IDENTIFIED	8.152	<input type="checkbox"/>
Americium-243 INT	0.4805	0.04814	pCi/g	0.09133	N	74.99	1	1.69	IDENTIFIED	9.287	<input type="checkbox"/>

Annihilation Rad. HE	0.1201	0.04446	pCi/g	0.04468	N	510.9	1	2.15	IDENTIFIED	36.91	<input type="checkbox"/>
Barium-137m NR	0.2472	0.04322	pCi/g	0.06322	N	662.2	2	1.976	IDENTIFIED	17.23	<input type="checkbox"/>
Bismuth-211 INT	3.762	0.2914	pCi/g	0.364	Y	351.8	4	1.461	IDENTIFIED	7.068	<input checked="" type="checkbox"/> UI
Bismuth-212 LA	1.699	0.2964	pCi/g	0.7346	N	0	17	0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214 ✓	1.405	0.1053	pCi/g	0.1188	0.200	609.5	4	1.676	IDENTIFIED	6.363	<input type="checkbox"/>
Cadmium-109 INT	2.815	0.5653	pCi/g	1.389	Y	87.43	3	1.265	IDENTIFIED	19.6	<input checked="" type="checkbox"/> UI
Cerium-143	651.9	95.31	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134 LA	0.1058	0.03299	pCi/g	0.09742	0.100	0	17	0	FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-135 HE	0.4119	0.09649	pCi/g	0.3171	N	0	17	0	NOT_IDENTI	0	<input type="checkbox"/>
Cesium-137 ✓	0.2613	0.04569	pCi/g	0.06683	0.100	662.2	2	1.976	IDENTIFIED	17.23	<input type="checkbox"/>
Gross Gamma	10.76	1.505	pCi/g	3.982	N	0					<input type="checkbox"/>
Iodine-123 HE	1.07E+06	1.32E+06	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Iodine-133 HE	1010	1677	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Iodine-135 HE	4.54E+13	4.46E+14	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85 LA	24.85	4.045	pCi/g	15.43	N	0	17	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212 ✓	1.782	0.08651	pCi/g	0.09812	0.100	238.6	4	1.355	IDENTIFIED	3.209	<input type="checkbox"/>
Lead-214 ✓	1.309	0.107	pCi/g	0.1269	0.100	351.8	4	1.461	IDENTIFIED	7.068	<input type="checkbox"/>
Neptunium-237 INT	0.8136	0.1837	pCi/g	0.4242	N	87.43	3	1.265	IDENTIFIED	19.6	<input type="checkbox"/>
Niobium-95 HE	0.08544	0.025	pCi/g	0.08334	N	0	17	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-95m LA	0.5007	0.08488	pCi/g	0.2798	N	0	17	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-97 HE	32350	27380	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212 NR	1.782	0.08651	pCi/g	0.09812	N	238.6	4	1.355	IDENTIFIED	3.209	<input type="checkbox"/>
Polonium-214 NR	1.309	0.107	pCi/g	0.1269	N	351.8	4	1.461	IDENTIFIED	7.068	<input type="checkbox"/>
Polonium-216 NR	1.782	0.08651	pCi/g	0.09812	N	238.6	4	1.355	IDENTIFIED	3.209	<input type="checkbox"/>
Polonium-218 NR	1.309	0.107	pCi/g	0.1269	N	351.8	4	1.461	IDENTIFIED	7.068	<input type="checkbox"/>
Potassium-40 ✓	33.95	1.564	pCi/g	0.5645	1.00	1462	1	2.066	IDENTIFIED	2.836	<input type="checkbox"/>
Radium-224 INT	4.659	0.7429	pCi/g	1.116	Y	241.4	1	2.062	IDENTIFIED	15.68	<input checked="" type="checkbox"/> UI
Radium-226 ✓	1.405	0.1053	pCi/g	0.1188	Y	609.5	4	1.676	IDENTIFIED	6.363	<input type="checkbox"/>
Radium-228 ✓	1.816	0.1824	pCi/g	0.2327	0.500	911.6	3	1.911	IDENTIFIED	8.152	<input type="checkbox"/>
Sodium-24 HE	2.09E+05	1.68E+05	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Strontium-85 LA	0.1263	0.02057	pCi/g	0.07845	Y	0	17	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Technetium-99m HE	1.31E+15	2.36E+15	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-200 HE	131.4	146.9	pCi/g	0	N	0	17	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208 ✓	0.5791	0.04592	pCi/g	0.06536	0.080	583.4	1	1.593	IDENTIFIED	7.155	<input type="checkbox"/>
Thorium-228 NR	1.808	0.08775	pCi/g	0.09953	N	238.6	4	1.355	IDENTIFIED	3.209	<input type="checkbox"/>
Thorium-230 NR	1.405	0.1053	pCi/g	0.1188	N	609.5	4	1.676	IDENTIFIED	6.363	<input type="checkbox"/>
Thorium-232 NR	1.816	0.1824	pCi/g	0.2327	N	911.6	3	1.911	IDENTIFIED	8.152	<input type="checkbox"/>
Tin-126 INT	0.2771	0.05563	pCi/g	0.1372	N	87.43	3	1.265	IDENTIFIED	19.6	<input type="checkbox"/>
Titanium-44 LA	0.4159	0.02971	pCi/g	0.08822	N	0	17	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium	3.4322	1.92E-06	ug/g	3.2961	N	0					<input type="checkbox"/>
Uranium-234 NR	1.405	0.1053	pCi/g	0.1188	N	609.5	4	1.676	IDENTIFIED	6.363	<input type="checkbox"/>
Zirconium-97	1.86E+06	4.79E+05	pCi/g	0	N	0	17	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
246874006	09-FEB-10 12:00	23-FEB-10 20:22	14.3	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 NR	1.867	0.1906	pCi/g	0.2281	N	911.5	3	1.72	IDENTIFIED	8.38 <input type="checkbox"/>
Americium-243 INT	0.3965	0.03461	pCi/g	0.07897	N	74.84	1	1.037	IDENTIFIED	7.745 <input type="checkbox"/>
Annihilation Rad.	0.1618	0.03612	pCi/g	0.04757	N	511.3	1	2.147	IDENTIFIED	21.87 <input type="checkbox"/>
Bismuth-211 INT	4.559	0.3068	pCi/g	0.3378	Y	352.1	4	1.244	IDENTIFIED	5.02 <input checked="" type="checkbox"/> UI
Bismuth-212 HE	1.165	0.3106	pCi/g	0.7784	N	0	7	0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214 ✓	1.331	0.1097	pCi/g	0.1224	0.200	609.5	4	1.407	IDENTIFIED	6.41 <input type="checkbox"/>
Cadmium-109 INT	4.847	0.6144	pCi/g	1.054	Y	87.15	3	1.659	IDENTIFIED	11.79 <input checked="" type="checkbox"/> UI
Cerium-143	288.4	68.15	pCi/g	0	N	0	7	0	SHORT_HLIF	0 <input type="checkbox"/>
Gross Gamma	10.56	1.308	pCi/g	3.606	N	0				<input type="checkbox"/>
Iodine-133 HE	63.55	1674	pCi/g	0	N	0	7	0	SHORT_HLIF	0 <input type="checkbox"/>
Krypton-85 LA	23.76	4.198	pCi/g	15.04	N	0	7	0	NOT_IDENTI	0 <input type="checkbox"/>
Lead-212 ✓	1.97	0.1125	pCi/g	0.09377	0.100	238.7	4	1.11	IDENTIFIED	3.115 <input type="checkbox"/>

Lead-214	✓	1.586	0.1145	pCi/g	0.1177	0.100	352.1	4	1.244	IDENTIFIED	5.02	<input type="checkbox"/>
Neptunium-237	INT	1.401	0.2289	pCi/g	0.3069	N	87.15	3	1.659	IDENTIFIED	11.79	<input type="checkbox"/>
Niobium-97	HE	618.1	26130	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212	NR	1.97	0.1125	pCi/g	0.09377	N	238.7	4	1.11	IDENTIFIED	3.115	<input type="checkbox"/>
Polonium-214	NR	1.586	0.1145	pCi/g	0.1177	N	352.1	4	1.244	IDENTIFIED	5.02	<input type="checkbox"/>
Polonium-216	NR	1.97	0.1125	pCi/g	0.09377	N	238.7	4	1.11	IDENTIFIED	3.115	<input type="checkbox"/>
Polonium-218	NR	1.586	0.1145	pCi/g	0.1177	N	352.1	4	1.244	IDENTIFIED	5.02	<input type="checkbox"/>
Potassium-40	✓	34.52	1.755	pCi/g	0.5862	1.00	1461	1	1.969	IDENTIFIED	2.719	<input type="checkbox"/>
Radium-224	INT	4.697	0.6721	pCi/g	1.067	Y	241.6	1	1.662	IDENTIFIED	13.67	<input checked="" type="checkbox"/> UT
Radium-226	✓	1.331	0.1097	pCi/g	0.1224	Y	609.5	4	1.407	IDENTIFIED	6.41	<input type="checkbox"/>
Radium-228	✓	1.867	0.1906	pCi/g	0.2281	0.500	911.5	3	1.72	IDENTIFIED	8.38	<input type="checkbox"/>
Strontium-85	LA	0.1208	0.02135	pCi/g	0.07651	Y	0	7	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thallium-208	✓	0.5953	0.05306	pCi/g	0.0636	0.080	583.4	1	1.436	IDENTIFIED	7.522	<input type="checkbox"/>
Thorium-228	NR	1.999	0.1141	pCi/g	0.09512	N	238.7	4	1.11	IDENTIFIED	3.115	<input type="checkbox"/>
Thorium-230	NR	1.331	0.1097	pCi/g	0.1224	N	609.5	4	1.407	IDENTIFIED	6.41	<input type="checkbox"/>
Thorium-232	NR	1.867	0.1906	pCi/g	0.2281	N	911.5	3	1.72	IDENTIFIED	8.38	<input type="checkbox"/>
Tin-126	INT	0.477	0.06046	pCi/g	0.1039	N	87.15	3	1.659	IDENTIFIED	11.79	<input type="checkbox"/>
Titanium-44	LA	0.4328	0.03037	pCi/g	0.07519	N	0	7	0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234	NR	1.331	0.1097	pCi/g	0.1224	N	609.5	4	1.407	IDENTIFIED	6.41	<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		
246874007	09-FEB-10 12:00	23-FEB-10 21:07	14.4	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment	
Actinium-228	NR	1.689	0	pCi/g	0.2693	N	911	3	1.466	IDENTIFIED	10.55	<input type="checkbox"/>
Americium-243	INT	0.4357	0	pCi/g	0.1058	N	74.56	1	1.029	IDENTIFIED	10.19	<input type="checkbox"/>
Barium-137m	NR	0.1474	0	pCi/g	0.06936	N	661.3	2	1.226	IDENTIFIED	28.67	<input type="checkbox"/>
Bismuth-211	INT	4.688	0	pCi/g	0.4052	Y	351.6	4	1.274	IDENTIFIED	6.101	<input checked="" type="checkbox"/> UF
Bismuth-212	LA	1.227	0	pCi/g	0.772	N	0	7	0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	1.271	0	pCi/g	0.1297	0.200	608.9	4	1.669	IDENTIFIED	8.192	<input type="checkbox"/>
Cadmium-109	INT	3.712	0	pCi/g	1.417	Y	86.84	3	1.275	IDENTIFIED	15.15	<input checked="" type="checkbox"/> UF
Cerium-143		814.7	0	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-137	✓	0.1559	0	pCi/g	0.07332	0.100	661.3	2	1.226	IDENTIFIED	28.67	<input type="checkbox"/>
Gross Gamma		9.928	1.391	pCi/g	2.958	N	0					<input type="checkbox"/>
Iodine-123		1.61E+06	0	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Lead-212	✓	2.042	0	pCi/g	0.1031	0.100	238.3	4	1.062	IDENTIFIED	3.246	<input type="checkbox"/>
Lead-214	✓	1.631	0	pCi/g	0.1412	0.100	351.6	4	1.274	IDENTIFIED	6.101	<input type="checkbox"/>
Neptunium-237	INT	1.073	0	pCi/g	0.4774	N	86.84	3	1.275	IDENTIFIED	15.15	<input type="checkbox"/>
Polonium-212	NR	2.042	0	pCi/g	0.1031	N	238.3	4	1.062	IDENTIFIED	3.246	<input type="checkbox"/>
Polonium-214	NR	1.631	0	pCi/g	0.1412	N	351.6	4	1.274	IDENTIFIED	6.101	<input type="checkbox"/>
Polonium-216	NR	2.042	0	pCi/g	0.1031	N	238.3	4	1.062	IDENTIFIED	3.246	<input type="checkbox"/>
Polonium-218	NR	1.631	0	pCi/g	0.1412	N	351.6	4	1.274	IDENTIFIED	6.101	<input type="checkbox"/>
Potassium-40	✓	33.09	0	pCi/g	0.6296	1.00	1460	1	2.141	IDENTIFIED	3.22	<input type="checkbox"/>
Radium-224	INT	5.976	0	pCi/g	1.174	Y	241.4	1	1.84	IDENTIFIED	12.46	<input checked="" type="checkbox"/> UF
Radium-226	✓	1.271	0	pCi/g	0.1297	Y	608.9	4	1.669	IDENTIFIED	8.192	<input type="checkbox"/>
Radium-228	✓	1.689	0	pCi/g	0.2693	0.500	911	3	1.466	IDENTIFIED	10.55	<input type="checkbox"/>
Sodium-24		2.99E+05	0	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Technetium-99m		2.49E+15	0	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	LA	0.5689	0	pCi/g	0.1619	0.080	0	7	0	FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thorium-228	NR	2.072	0	pCi/g	0.1046	N	238.3	4	1.062	IDENTIFIED	3.246	<input type="checkbox"/>
Thorium-230	NR	1.271	0	pCi/g	0.1297	N	608.9	4	1.669	IDENTIFIED	8.192	<input type="checkbox"/>
Thorium-232	NR	1.689	0	pCi/g	0.2693	N	911	3	1.466	IDENTIFIED	10.55	<input type="checkbox"/>
Tin-126	INT	0.3653	0	pCi/g	0.1402	N	86.84	3	1.275	IDENTIFIED	15.15	<input type="checkbox"/>
Titanium-44	LA	0.1316	0	pCi/g	0.0778	N	0	7	0	NOT_IDENTI	0	<input type="checkbox"/>
Total Uranium	HE	7.1267	5.2689	ug/g	4.6318	N	0					<input type="checkbox"/>
Uranium-234	NR	1.271	0	pCi/g	0.1297	N	608.9	4	1.669	IDENTIFIED	8.192	<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
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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246874007	09-FEB-10 12:00	23-FEB-10 21:07	14.4	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 <i>NR</i>	1.689	0.207	pCi/g	0.2698	N	911 3	1.466	IDENTIFIED 10.55	<input type="checkbox"/>	
Americium-243 <i>INT</i>	0.4357	0.04831	pCi/g	0.1088	N	74.56 1	1.029	IDENTIFIED 10.19	<input type="checkbox"/>	
Barium-137m <i>HE</i>	0.1474	0.04275	pCi/g	0.06973	N	661.3 2	1.226	IDENTIFIED 28.67	<input type="checkbox"/>	
Bismuth-211 <i>INT</i>	4.688	0.3934	pCi/g	0.4101	Y	351.6 4	1.274	IDENTIFIED 6.101	<input checked="" type="checkbox"/>	<i>UI</i>
Bismuth-212 <i>HE</i>	1.227	0.2282	pCi/g	0.7754	N	0 7 0		FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214 <i>✓</i>	1.271	0.1239	pCi/g	0.1305	0.200	608.9 4	1.669	IDENTIFIED 8.192	<input type="checkbox"/>	
Cadmium-109 <i>INT</i>	3.712	0.5917	pCi/g	1.455	Y	86.84 3	1.275	IDENTIFIED 15.15	<input checked="" type="checkbox"/>	<i>UI</i>
Cerium-143	814.7	123.9	pCi/g	0	N	0 7 0		SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-137 <i>✓</i>	0.1559	0.04519	pCi/g	0.07371	0.100	661.3 2	1.226	IDENTIFIED 28.67	<input type="checkbox"/>	
Gross Gamma	9.928	1.391	pCi/g	2.958	N	0			<input type="checkbox"/>	
Iodine-123 <i>HE</i>	1.61E+06	1.31E+06	pCi/g	0	N	0 7 0		SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212 <i>✓</i>	2.042	0.1445	pCi/g	0.1048	0.100	238.3 4	1.062	IDENTIFIED 3.246	<input type="checkbox"/>	
Lead-214 <i>✓</i>	1.631	0.1433	pCi/g	0.143	0.100	351.6 4	1.274	IDENTIFIED 6.101	<input type="checkbox"/>	
Neptunium-237 <i>INT</i>	1.073	0.2037	pCi/g	0.4903	N	86.84 3	1.275	IDENTIFIED 15.15	<input type="checkbox"/>	
Polonium-212 <i>NR</i>	2.042	0.1445	pCi/g	0.1048	N	238.3 4	1.062	IDENTIFIED 3.246	<input type="checkbox"/>	
Polonium-214 <i>NR</i>	1.631	0.1433	pCi/g	0.143	N	351.6 4	1.274	IDENTIFIED 6.101	<input type="checkbox"/>	
Polonium-216 <i>NR</i>	2.042	0.1445	pCi/g	0.1048	N	238.3 4	1.062	IDENTIFIED 3.246	<input type="checkbox"/>	
Polonium-218 <i>NR</i>	1.631	0.1433	pCi/g	0.143	N	351.6 4	1.274	IDENTIFIED 6.101	<input type="checkbox"/>	
Potassium-40 <i>✓</i>	33.09	1.9	pCi/g	0.6276	1.00	1460 1	2.141	IDENTIFIED 3.22	<input type="checkbox"/>	
Radium-224 <i>INT</i>	5.976	0.8241	pCi/g	1.193	Y	241.4 1	1.84	IDENTIFIED 12.46	<input checked="" type="checkbox"/>	<i>UI</i>
Radium-226 <i>✓</i>	1.271	0.1239	pCi/g	0.1305	Y	608.9 4	1.669	IDENTIFIED 8.192	<input type="checkbox"/>	
Radium-228 <i>✓</i>	1.689	0.207	pCi/g	0.2698	0.500	911 3	1.466	IDENTIFIED 10.55	<input type="checkbox"/>	
Sodium-24 <i>HE</i>	2.99E+05	1.98E+05	pCi/g	0	N	0 7 0		SHORT_HLIF 0	<input type="checkbox"/>	
Technetium-99m <i>HE</i>	2.49E+15	2.86E+15	pCi/g	0	N	0 7 0		SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-208 <i>LA</i>	0.5689	0.05168	pCi/g	0.163	0.080	0 7 0		FAIL_ABUND 0	<input checked="" type="checkbox"/>	<i>UI</i>
Thorium-228 <i>NR</i>	2.072	0.1466	pCi/g	0.1063	N	238.3 4	1.062	IDENTIFIED 3.246	<input type="checkbox"/>	
Thorium-230 <i>NR</i>	1.271	0.1239	pCi/g	0.1305	N	608.9 4	1.669	IDENTIFIED 8.192	<input type="checkbox"/>	
Thorium-232 <i>NR</i>	1.689	0.207	pCi/g	0.2698	N	911 3	1.466	IDENTIFIED 10.55	<input type="checkbox"/>	
Tin-126 <i>INT</i>	0.3653	0.05822	pCi/g	0.144	N	86.84 3	1.275	IDENTIFIED 15.15	<input type="checkbox"/>	
Titanium-44 <i>LA</i>	0.1316	0.02394	pCi/g	0.07998	N	0 7 0		NOT_IDENTI 0	<input type="checkbox"/>	
Total Uranium <i>NR</i>	7.1267	2.69E-06	ug/g	4.7721	N	0			<input type="checkbox"/>	
Uranium-234	1.271	0.1239	pCi/g	0.1305	N	608.9 4	1.669	IDENTIFIED 8.192	<input type="checkbox"/>	

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

Total Uranium	6.7113	2.72E-06 ug/g	2.6325	N	0						
Uranium-234	1.262	0.08831 pCi/g	0.09168	N	609.7	4	1.512	IDENTIFIED	4.969		
Uranium-238 HE	2.25	0.9157 pCi/g	1.768	N	63.05	2	1.197	IDENTIFIED	39.73		
Zirconium-97	2.25E+06	4.58E+05 pCi/g	0	N	0	11	0	SHORT_HLIF	0		

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246874009	09-FEB-10 12:00	23-FEB-10 23:20	14.5	SAMPLE	LOAD	1	LANL	LANL01004IGEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 <i>ML</i>	1.487	0.1447	pCi/g	0.1558	N	910.7	3	1.96	IDENTIFIED	7.478		
Americium-243	0.3733	0.03143	pCi/g	0.06499	N	74.58	1	1.027	IDENTIFIED	7.197		
Annihilation Rad.	0.1018	0.03072	pCi/g	0.03476	N	510.6	1	1.868	IDENTIFIED	29.75		
Barium-137m <i>ML</i>	0.234	0.02648	pCi/g	0.04499	N	661.2	2	1.445	IDENTIFIED	10.46		
Bismuth-211 <i>JNT</i>	3.828	0.2875	pCi/g	0.2526	Y	351.5	4	1.188	IDENTIFIED	4.816	<i>✓</i>	<i>UT</i>
Bismuth-212 <i>4</i>	1.257	0.2113	pCi/g	0.4894	N	0	9	0	FAIL_ABUND	0		
Bismuth-214 <i>✓</i>	1.161	0.08839	pCi/g	0.0828	0.200	609	4	1.409	IDENTIFIED	5.479		
Cadmium-109 <i>JNT</i>	2.969	0.4152	pCi/g	0.9193	Y	86.84	3	0.9898	IDENTIFIED	13.08	<i>✓</i>	<i>UT</i>
Cerium-143	696.4	97.58	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Cesium-135 HE	0.2671	0.06843	pCi/g	0.2212	N	0	9	0	NOT_IDENTI	0		
Cesium-137 <i>✓</i>	0.2474	0.028	pCi/g	0.04756	0.100	661.2	2	1.445	IDENTIFIED	10.46		
Gross Gamma	9.765	1.212	pCi/g	2.444	N	0						
Iodine-133 HE	510.8	1420	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Iodine-135 HE	2.96E+14	4.93E+14	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Lead-212 <i>✓</i>	1.707	0.1161	pCi/g	0.06922	0.100	238.3	4	1.102	IDENTIFIED	2.59		
Lead-214 <i>✓</i>	1.331	0.1059	pCi/g	0.08804	0.100	351.5	4	1.188	IDENTIFIED	4.816		
Lutetium-177 <i>LA</i>	3.296	0.7447	pCi/g	1.466	N	0	9	0	FAIL_ABUND	0		
Neptunium-237 <i>ML</i>	0.8578	0.1491	pCi/g	0.2658	N	86.84	3	0.9898	IDENTIFIED	13.08		
Niobium-97 HE	26100	23350	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Polonium-212 <i>ML</i>	1.707	0.1161	pCi/g	0.06922	N	238.3	4	1.102	IDENTIFIED	2.59		
Polonium-214 <i>ML</i>	1.331	0.1059	pCi/g	0.08804	N	351.5	4	1.188	IDENTIFIED	4.816		
Polonium-216 <i>ML</i>	1.707	0.1161	pCi/g	0.06922	N	238.3	4	1.102	IDENTIFIED	2.59		
Polonium-218 <i>ML</i>	1.331	0.1059	pCi/g	0.08804	N	351.5	4	1.188	IDENTIFIED	4.816		
Potassium-40 <i>✓</i>	31.32	1.635	pCi/g	0.3597	1.00	1460	1	2.161	IDENTIFIED	2.16		
Radium-224 <i>JNT</i>	3.981	0.5072	pCi/g	0.788	Y	241.3	1	1.574	IDENTIFIED	11.29	<i>✓</i>	<i>UT</i>
Radium-226 <i>✓</i>	1.161	0.08839	pCi/g	0.0828	Y	609	4	1.409	IDENTIFIED	5.479		
Radium-228 <i>✓</i>	1.487	0.1447	pCi/g	0.1558	0.500	910.7	3	1.96	IDENTIFIED	7.478		
Thallium-208 <i>✓</i>	0.5602	0.04322	pCi/g	0.04443	0.080	582.8	1	1.433	IDENTIFIED	5.867		
Thorium-228 <i>ML</i>	1.732	0.1178	pCi/g	0.07023	N	238.3	4	1.102	IDENTIFIED	2.59		
Thorium-230 <i>ML</i>	1.161	0.08839	pCi/g	0.08279	N	609	4	1.409	IDENTIFIED	5.479		
Thorium-232 <i>ML</i>	1.487	0.1447	pCi/g	0.1558	N	910.7	3	1.96	IDENTIFIED	7.478		
Thorium-234 <i>✓</i>	2.043	0.7528	pCi/g	1.718	2.00	62.98	2	1.083	IDENTIFIED	35.77		
Tin-126 <i>ML</i>	0.2921	0.04085	pCi/g	0.09095	N	86.84	3	0.9898	IDENTIFIED	13.08		
Titanium-44 <i>LA</i>	0.09235	0.01503	pCi/g	0.04945	N	0	9	0	NOT_IDENTI	0		
Total Uranium	6.1243	2.24E-06 ug/g	2.558	N	0							
Uranium-234 <i>ML</i>	1.161	0.08839	pCi/g	0.08279	N	609	4	1.409	IDENTIFIED	5.479		
Uranium-238 HE	2.043	0.7528	pCi/g	1.718	N	62.98	2	1.083	IDENTIFIED	35.77		
Zirconium-97	2.24E+06	4.53E+05 pCi/g	0	N	0	9	0	SHORT_HLIF	0			

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

Lead-212	✓	1.707	0	pCi/g	0.06685	0.100	238.3	4	1.102	IDENTIFIED	2.59	<input type="checkbox"/>
Lead-214	✓	1.331	0	pCi/g	0.08561	0.100	351.5	4	1.188	IDENTIFIED	4.816	<input type="checkbox"/>
Lutetium-177	LA	3.296	0	pCi/g	1.412	N	0	9	0	FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	INT	0.8578	0	pCi/g	0.2522	N	86.84	3	0.9898	IDENTIFIED	13.08	<input type="checkbox"/>
Niobium-97		26100	0	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212	NR	1.707	0	pCi/g	0.06685	N	238.3	4	1.102	IDENTIFIED	2.59	<input type="checkbox"/>
Polonium-214	NR	1.331	0	pCi/g	0.08561	N	351.5	4	1.188	IDENTIFIED	4.816	<input type="checkbox"/>
Polonium-216	NR	1.707	0	pCi/g	0.06685	N	238.3	4	1.102	IDENTIFIED	2.59	<input type="checkbox"/>
Polonium-218	NR	1.331	0	pCi/g	0.08561	N	351.5	4	1.188	IDENTIFIED	4.816	<input type="checkbox"/>
Potassium-40	✓	31.32	0	pCi/g	0.359	1.00	1460	1	2.161	IDENTIFIED	2.16	<input type="checkbox"/>
Radium-224	INT	3.981	0	pCi/g	0.7611	Y	241.3	1	1.574	IDENTIFIED	11.29	<input checked="" type="checkbox"/> UI
Radium-226	✓	1.161	0	pCi/g	0.08131	Y	609	4	1.409	IDENTIFIED	5.479	<input type="checkbox"/>
Radium-228	✓	1.487	0	pCi/g	0.1541	0.500	910.7	3	1.96	IDENTIFIED	7.478	<input type="checkbox"/>
Thallium-208	✓	0.5602	0	pCi/g	0.04359	0.080	582.8	1	1.433	IDENTIFIED	5.867	<input type="checkbox"/>
Thorium-228	NR	1.732	0	pCi/g	0.08782	N	238.3	4	1.102	IDENTIFIED	2.59	<input type="checkbox"/>
Thorium-230	NR	1.161	0	pCi/g	0.08131	N	609	4	1.409	IDENTIFIED	5.479	<input type="checkbox"/>
Thorium-232	NR	1.487	0	pCi/g	0.1541	N	910.7	3	1.96	IDENTIFIED	7.478	<input type="checkbox"/>
Thorium-234	✓	2.043	0	pCi/g	1.622	2.00	62.98	2	1.083	IDENTIFIED	35.77	<input type="checkbox"/>
Tin-126	INT	0.2921	0	pCi/g	0.08633	N	86.84	3	0.9898	IDENTIFIED	13.08	<input type="checkbox"/>
Titanium-44	LA	0.09235	0	pCi/g	0.04684	N	0	9	0	NOT_IDENTI	0	<input type="checkbox"/>
Total Uranium	HE	6.1243	4.3906	ug/g	2.4148	N	0	0				<input type="checkbox"/>
Uranium-234	NR	1.161	0	pCi/g	0.08131	N	609	4	1.409	IDENTIFIED	5.479	<input type="checkbox"/>
Uranium-238	NR	2.043	0	pCi/g	1.622	N	62.98	2	1.083	IDENTIFIED	35.77	<input type="checkbox"/>
Zirconium-97		2.24E+06	0	pCi/g	0	N	0	9	0	SHORT_HLIF	0	<input type="checkbox"/>

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
246874010	09-FEB-10 12:00	23-FEB-10 23:20	14.5	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.739	0.1609	pCi/g	0.1858	N	911.2	3	1.864	IDENTIFIED	7.132 <input type="checkbox"/>
Americium-243	INT	0.4395	0.05136	pCi/g	0.09794	N	74.82	1	1.566	IDENTIFIED	10.17 <input type="checkbox"/>
Annihilation Rad.		0.1595	0.03506	pCi/g	0.04339	N	511	1	1.872	IDENTIFIED	21.56 <input type="checkbox"/>
Bismuth-211	INT	4.232	0.3007	pCi/g	0.3023	Y	351.9	4	1.478	IDENTIFIED	5.078 <input checked="" type="checkbox"/> UI
Bismuth-212	LA	1.267	0.1941	pCi/g	0.5821	N	0	13	0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214	✓	1.249	0.09033	pCi/g	0.1009	0.200	609.3	4	1.879	IDENTIFIED	5.263 <input type="checkbox"/>
Cadmium-109	INT	3.356	0.4584	pCi/g	1.291	Y	87.26	3	1.254	IDENTIFIED	12.19 <input checked="" type="checkbox"/> UI
Cerium-143		859.5	118.3	pCi/g	0	N	0	13	0	SHORT_HLIF	0 <input type="checkbox"/>
Cesium-134	LA	0.1432	0.03783	pCi/g	0.07972	0.100	0	13	0	FAIL_ABUND	0 <input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-135	HE	0.3533	0.08541	pCi/g	0.2695	N	0	13	0	NOT_IDENTI	0 <input type="checkbox"/>
Gross Gamma		10.76	1.312	pCi/g	2.725	N	0				<input type="checkbox"/>
Iodine-123	HE	1.52E+06	1.28E+06	pCi/g	0	N	0	13	0	SHORT_HLIF	0 <input type="checkbox"/>
Krypton-85	LA	25.68	4.066	pCi/g	13.27	N	0	13	0	NOT_IDENTI	0 <input type="checkbox"/>
Lead-212	✓	2.064	0.1343	pCi/g	0.09015	0.100	238.7	4	1.381	IDENTIFIED	2.625 <input type="checkbox"/>
Lead-214	✓	1.472	0.1114	pCi/g	0.1054	0.100	351.9	4	1.478	IDENTIFIED	5.078 <input type="checkbox"/>
Lutetium-177	LA	4.71	0.8422	pCi/g	1.835	N	0	13	0	FAIL_ABUND	0 <input type="checkbox"/>
Neptunium-237	INT	0.9695	0.166	pCi/g	0.3707	N	87.26	3	1.254	IDENTIFIED	12.19 <input type="checkbox"/>
Niobium-95m	LA	0.5706	0.07859	pCi/g	0.2413	N	0	13	0	NOT_IDENTI	0 <input type="checkbox"/>
Niobium-97	HE	7223	22580	pCi/g	0	N	0	13	0	SHORT_HLIF	0 <input type="checkbox"/>
Polonium-212	NR	2.064	0.1343	pCi/g	0.09015	N	238.7	4	1.381	IDENTIFIED	2.625 <input type="checkbox"/>
Polonium-214	NR	1.472	0.1114	pCi/g	0.1054	N	351.9	4	1.478	IDENTIFIED	5.078 <input type="checkbox"/>
Polonium-216	NR	2.064	0.1343	pCi/g	0.09015	N	238.7	4	1.381	IDENTIFIED	2.625 <input type="checkbox"/>
Polonium-218	NR	1.472	0.1114	pCi/g	0.1054	N	351.9	4	1.478	IDENTIFIED	5.078 <input type="checkbox"/>
Potassium-40	✓	34.37	1.855	pCi/g	0.4626	1.00	1460	1	2.113	IDENTIFIED	2.234 <input type="checkbox"/>
Radium-224	INT	5.021	0.6601	pCi/g	1.025	Y	241.7	1	1.768	IDENTIFIED	11.93 <input checked="" type="checkbox"/> UI
Radium-226	✓	1.249	0.09033	pCi/g	0.1009	Y	609.3	4	1.879	IDENTIFIED	5.263 <input type="checkbox"/>
Radium-228	✓	1.739	0.1609	pCi/g	0.1858	0.500	911.2	3	1.864	IDENTIFIED	7.132 <input type="checkbox"/>
Strontium-85	LA	0.1308	0.02071	pCi/g	0.06762	Y	0	13	0	NOT_IDENTI	0 <input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thallium-200	HE	82.08	139.5	pCi/g	0	N	0	13	0	SHORT_HLIF	0 <input type="checkbox"/>
Thallium-208	✓	0.6205	0.04662	pCi/g	0.05204	0.080	583.1	1	1.462	IDENTIFIED	5.956 <input type="checkbox"/>

Thorium-228	NR	2.094	0.1363	pCi/g	0.09146	N	238.7	4	1.381	IDENTIFIED	2.625	<input type="checkbox"/>
Thorium-230	NR	1.249	0.09033	pCi/g	0.1009	N	609.3	4	1.879	IDENTIFIED	5.263	<input type="checkbox"/>
Thorium-232	NR	1.739	0.1609	pCi/g	0.1858	N	911.2	3	1.864	IDENTIFIED	7.132	<input type="checkbox"/>
Tin-126	INT	0.3302	0.0451	pCi/g	0.128	N	87.26	3	1.254	IDENTIFIED	12.19	<input type="checkbox"/>
Titanium-44	LA	0.4923	0.0414	pCi/g	0.08851	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		4.9705	2.71E-06	ug/g	4.4764	N	0					<input type="checkbox"/>
Uranium-234	NR	1.249	0.09033	pCi/g	0.1009	N	609.3	4	1.879	IDENTIFIED	5.263	<input type="checkbox"/>
Zirconium-97		2.03E+06	5.65E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
246875001	09-FEB-10 12:00	23-FEB-10 23:20	14.5	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment	
Actinium-228	NR	1.675	0.1404	pCi/g	0.1315	N	911.4	3	1.967	IDENTIFIED 5.133	
Americium-243	INT	0.3322	0.02495	pCi/g	0.05675	N	74.84	1	1.083	IDENTIFIED 6.303	
Annihilation Rad.		0.07752	0.02173	pCi/g	0.02754	N	510.7	1	2.167	IDENTIFIED 27.58	
Barium-137m	NR	0.1855	0.02122	pCi/g	0.03644	N	661.8	2	1.851	IDENTIFIED 10.15	
Bismuth-211	INT	3.538	0.2395	pCi/g	0.2041	Y	352	4	1.361	IDENTIFIED 3.467	✓
Bismuth-212	LA	1.189	0.1636	pCi/g	0.386	N	0	18	0	FAIL_ABUND 0	
Bismuth-214	✓	1.1	0.07822	pCi/g	0.06531	0.200	609.4	4	1.729	IDENTIFIED 4.09	✓
Cadmium-109	INT	2.604	0.336	pCi/g	0.7727	Y	86.99	3	1.125	IDENTIFIED 12.02	✓
Cerium-141	HE	0.08579	0.02867	pCi/g	0.06359	N	144	2	1.324	IDENTIFIED 33.11	
Cerium-143		534.4	76.7	pCi/g	0	N	0	18	0	SHORT_HLIF 0	
Cesium-134	LA	0.1119	0.02112	pCi/g	0.0542	0.100	0	18	0	FAIL_ABUND 0	✓ UI Data rejected due to low abundance.
Cesium-135	HE	0.2335	0.05854	pCi/g	0.1775	N	0	18	0	NOT_IDENTI 0	
Cesium-137	✓	0.1961	0.02244	pCi/g	0.03852	0.100	661.8	2	1.851	IDENTIFIED 10.15	
Gold-195	HE	0.2708	0.07425	pCi/g	0.2553	N	0	18	0	FAIL_ABUND 0	
Gross Gamma		10.3	1.194	pCi/g	2.252	N	0				
Iodine-123	HE	5.48E+05	1.28E+06	pCi/g	0	N	0	18	0	SHORT_HLIF 0	
Iodine-135	HE	2.78E+14	3.51E+14	pCi/g	0	N	0	18	0	SHORT_HLIF 0	
Krypton-85	LA	25.26	2.846	pCi/g	8.863	N	0	18	0	NOT_IDENTI 0	
Lead-212	✓	1.648	0.1138	pCi/g	0.05941	0.100	238.7	4	1.217	IDENTIFIED 2.016	
Lead-214	✓	1.231	0.08928	pCi/g	0.07049	0.100	352	4	1.361	IDENTIFIED 3.467	
Lutetium-177	HE	2.153	0.5136	pCi/g	1.202	N	0	18	0	FAIL_ABUND 0	
Neptunium-237	INT	0.7522	0.1243	pCi/g	0.2261	N	86.99	3	1.125	IDENTIFIED 12.02	
Niobium-95	HE	0.06054	0.01567	pCi/g	0.04783	N	0	18	0	NOT_IDENTI 0	
Niobium-95m	HE	0.1849	0.04609	pCi/g	0.1415	N	0	18	0	NOT_IDENTI 0	
Niobium-97	HE	34140	18230	pCi/g	0	N	0	18	0	SHORT_HLIF 0	
Polonium-212	NR	1.648	0.1138	pCi/g	0.05941	N	238.7	4	1.217	IDENTIFIED 2.016	
Polonium-214	NR	1.231	0.08928	pCi/g	0.07049	N	352	4	1.361	IDENTIFIED 3.467	
Polonium-216	NR	1.648	0.1138	pCi/g	0.05941	N	238.7	4	1.217	IDENTIFIED 2.016	
Polonium-218	NR	1.231	0.08928	pCi/g	0.07049	N	352	4	1.361	IDENTIFIED 3.467	
Potassium-40	✓	34.52	1.665	pCi/g	0.3323	1.00	1461	1	2.668	IDENTIFIED 1.511	
Protactinium-234m	HE	7.456	2.133	pCi/g	5.198	N	0	18	0	FAIL_ABUND 0	
Radium-224	INT	3.997	0.443	pCi/g	0.6753	Y	241.6	1	1.737	IDENTIFIED 9.138	✓
Radium-226	✓	1.1	0.07822	pCi/g	0.06531	Y	609.4	4	1.729	IDENTIFIED 4.09	
Radium-228	✓	1.675	0.1404	pCi/g	0.1315	0.500	911.4	3	1.967	IDENTIFIED 5.133	
Strontium-85	LA	0.1287	0.0145	pCi/g	0.04515	Y	0	18	0	NOT_IDENTI 0	✓ UI Data rejected due to low abundance.
Technetium-99m	HE	1.80E+15	2.51E+15	pCi/g	0	N	0	18	0	SHORT_HLIF 0	
Thallium-200	HE	22.61	90.87	pCi/g	0	N	0	18	0	SHORT_HLIF 0	
Thallium-208	✓	0.4938	0.03476	pCi/g	0.03363	0.080	583.3	1	1.544	IDENTIFIED 4.491	
Thorium-228	NR	1.672	0.1155	pCi/g	0.06028	N	238.7	4	1.217	IDENTIFIED 2.016	
Thorium-230	NR	1.1	0.07822	pCi/g	0.06531	N	609.4	4	1.729	IDENTIFIED 4.09	
Thorium-232	NR	1.675	0.1404	pCi/g	0.1315	N	911.4	3	1.967	IDENTIFIED 5.133	
Thorium-234	✓	3.583	0.6767	pCi/g	1.25	2.00	63.22	2	1.121	IDENTIFIED 16.76	
Tin-126	INT	0.2561	0.03305	pCi/g	0.08573	N	86.99	3	1.125	IDENTIFIED 12.02	
Titanium-44	LA	0.3239	0.01987	pCi/g	0.04845	N	0	18	0	FAIL_ABUND 0	
Total Uranium		10.793	2.01E-06	ug/g	1.8607	N	0				
Uranium-234	NR	1.1	0.07822	pCi/g	0.06531	N	609.4	4	1.729	IDENTIFIED 4.09	

Uranium-235 *NR* 0.2899 0.09934 pCi/g 0.2224 0.500 144 2 1.324 IDENTIFIED 33.11 ☐
 Uranium-238 *NR* 3.583 0.6767 pCi/g 1.25 N 63.22 2 1.121 IDENTIFIED 16.76 ☐
 Zirconium-97 2.16E+06 3.59E+05 pCi/g 0 N 0 18 0 SHORT_HLIF 0 ☐

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246875002	09-FEB-10 12:00	23-FEB-10 23:21	14.5	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 <i>NR</i>	1.582	0.1472	pCi/g	0.1859	N	910.2 3	1.838	IDENTIFIED 7.291	<input type="checkbox"/>	
Americium-243 <i>NR</i>	0.3616	0.03618	pCi/g	0.08441	N	74.63 1	1.161	IDENTIFIED 8.965	<input type="checkbox"/>	
Annihilation Rad.	0.1607	0.02958	pCi/g	0.03957	N	510.4 1	1.756	IDENTIFIED 18.17	<input type="checkbox"/>	
Barium-137m HE	0.07685	0.02507	pCi/g	0.05023	N	661.7 2	1.3	IDENTIFIED 32.52	<input type="checkbox"/>	
Bismuth-211 <i>NR</i>	3.665	0.208	pCi/g	0.274	Y	351.4 4	1.248	IDENTIFIED 4.646	<input checked="" type="checkbox"/>	<i>UI</i>
Bismuth-212 <i>LA</i>	1.107	0.2271	pCi/g	0.5728	N	0 15 0		FAIL_ABUND 0	<input type="checkbox"/>	
Bismuth-214 <i>NR</i>	1.036	0.07609	pCi/g	0.0935	0.200	608.6 4	1.781	IDENTIFIED 6.307	<input type="checkbox"/>	
Cadmium-109 <i>NR</i>	3.553	0.4239	pCi/g	1.102	Y	87.09 3	1.186	IDENTIFIED 10.9	<input checked="" type="checkbox"/>	<i>UI</i>
Cerium-143	678	90.59	pCi/g	0	N	0 15 0		SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134 <i>LA</i>	0.08483	0.02281	pCi/g	0.07524	0.100	0 15 0		NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137 <i>NR</i>	0.08123	0.0265	pCi/g	0.0531	0.100	661.7 2	1.3	IDENTIFIED 32.52	<input type="checkbox"/>	
Gadolinium-153 HE	0.1437	0.03776	pCi/g	0.1196	N	0 15 0		FAIL_ABUND 0	<input type="checkbox"/>	
Gold-195 HE	0.3992	0.108	pCi/g	0.3422	N	0 15 0		FAIL_ABUND 0	<input type="checkbox"/>	
Gross Gamma	9.816	1.274	pCi/g	2.708	N	0			<input type="checkbox"/>	
Iodine-133 HE	214.8	1546	pCi/g	0	N	0 15 0		SHORT_HLIF 0	<input type="checkbox"/>	
Iodine-135 HE	8.06E+14	5.89E+14	pCi/g	0	N	0 15 0		SHORT_HLIF 0	<input type="checkbox"/>	
Lead-212 <i>NR</i>	1.601	0.07144	pCi/g	0.0741	0.100	238.3 4	1.231	IDENTIFIED 2.646	<input type="checkbox"/>	
Lead-214 <i>NR</i>	1.275	0.07962	pCi/g	0.08633	0.100	351.4 4	1.248	IDENTIFIED 4.646	<input type="checkbox"/>	
Lutetium-177 HE	1.534	0.4833	pCi/g	1.473	N	0 15 0		FAIL_ABUND 0	<input type="checkbox"/>	
Neptunium-237 <i>NR</i>	1.026	0.1619	pCi/g	0.3084	N	87.09 3	1.186	IDENTIFIED 10.9	<input type="checkbox"/>	
Niobium-95 HE	0.08927	0.01975	pCi/g	0.07077	N	0 15 0		NOT_IDENTI 0	<input type="checkbox"/>	
Niobium-95m <i>NR</i>	0.7098	0.07222	pCi/g	0.2299	N	0 15 0		NOT_IDENTI 0	<input type="checkbox"/>	
Niobium-97 HE	21200	26430	pCi/g	0	N	0 15 0		SHORT_HLIF 0	<input type="checkbox"/>	
Polonium-212 <i>NR</i>	1.601	0.07144	pCi/g	0.0741	N	238.3 4	1.231	IDENTIFIED 2.646	<input type="checkbox"/>	
Polonium-214 <i>NR</i>	1.275	0.07962	pCi/g	0.08633	N	351.4 4	1.248	IDENTIFIED 4.646	<input type="checkbox"/>	
Polonium-216 <i>NR</i>	1.601	0.07144	pCi/g	0.0741	N	238.3 4	1.231	IDENTIFIED 2.646	<input type="checkbox"/>	
Polonium-218 <i>NR</i>	1.275	0.07962	pCi/g	0.08633	N	351.4 4	1.248	IDENTIFIED 4.646	<input type="checkbox"/>	
Potassium-40 <i>NR</i>	34.49	1.509	pCi/g	0.4484	1.00	1459 1	2.429	IDENTIFIED 2.27	<input type="checkbox"/>	
Radium-224 <i>NR</i>	4.066	0.5251	pCi/g	0.8432	Y	241.3 1	1.774	IDENTIFIED 12.6	<input checked="" type="checkbox"/>	<i>UI</i>
Radium-226 <i>NR</i>	1.036	0.07609	pCi/g	0.0935	Y	608.6 4	1.781	IDENTIFIED 6.307	<input type="checkbox"/>	
Radium-228 <i>NR</i>	1.582	0.1472	pCi/g	0.1859	0.500	910.2 3	1.838	IDENTIFIED 7.291	<input type="checkbox"/>	
Sodium-24 HE	1.36E+05	1.73E+05	pCi/g	0	N	0 15 0		SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-200 HE	223.3	122.1	pCi/g	0	N	0 15 0		SHORT_HLIF 0	<input type="checkbox"/>	
Thallium-208 <i>NR</i>	0.5284	0.03887	pCi/g	0.0472	0.080	582.5 1	1.56	IDENTIFIED 6.6	<input type="checkbox"/>	
Thorium-228 <i>NR</i>	1.624	0.07248	pCi/g	0.07518	N	238.3 4	1.231	IDENTIFIED 2.646	<input type="checkbox"/>	
Thorium-230 <i>NR</i>	1.036	0.07608	pCi/g	0.0935	N	608.6 4	1.781	IDENTIFIED 6.307	<input type="checkbox"/>	
Thorium-232 <i>NR</i>	1.582	0.1472	pCi/g	0.1859	N	910.2 3	1.838	IDENTIFIED 7.291	<input type="checkbox"/>	
Thorium-234 <i>NR</i>	4.544	1.133	pCi/g	2.051	2.00	63.07 2	1.136	IDENTIFIED 23.24	<input type="checkbox"/>	
Tin-126 <i>NR</i>	0.3495	0.0417	pCi/g	0.1091	N	87.09 3	1.186	IDENTIFIED 10.9	<input type="checkbox"/>	
Titanium-44 <i>LA</i>	0.3552	0.02529	pCi/g	0.06942	N	0 15 0		FAIL_ABUND 0	<input type="checkbox"/>	
Total Uranium	13.547	3.37E-06	ug/g	3.0539	N	0			<input type="checkbox"/>	
Uranium-234 <i>NR</i>	1.036	0.07608	pCi/g	0.0935	N	608.6 4	1.781	IDENTIFIED 6.307	<input type="checkbox"/>	
Uranium-238 <i>NR</i>	4.544	1.133	pCi/g	2.051	N	63.07 2	1.136	IDENTIFIED 23.24	<input type="checkbox"/>	
Zirconium-97	3.97E+06	5.22E+05	pCi/g	0	N	0 15 0		SHORT_HLIF 0	<input type="checkbox"/>	

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246875003	09-FEB-10 12:00	23-FEB-10 23:49	14.5	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 <i>NR</i>	1.71	0.1411	pCi/g	0.146	N	911.9 3	1.575	IDENTIFIED 5.529	<input type="checkbox"/>	
Americium-243 <i>NR</i>	0.3479	0.02568	pCi/g	0.05569	N	75.01 1	1.026	IDENTIFIED 6.179	<input type="checkbox"/>	

Annihilation Rad.		0.1449	0.02389	pCi/g	0.03014	N	511.1	1	1.716	IDENTIFIED	15.82	<input type="checkbox"/>	
Barium-137m	NR	0.1584	0.01997	pCi/g	0.04179	N	662.1	2	1.393	IDENTIFIED	11.57	<input type="checkbox"/>	
Bismuth-211	INT	4.198	0.2593	pCi/g	0.2326	Y	352.2	4	1.282	IDENTIFIED	3.912	<input checked="" type="checkbox"/>	UI
Bismuth-212	NR	1.238	0.1985	pCi/g	0.3308	N	727.9	1	1.436	IDENTIFIED	15	<input type="checkbox"/>	
Bismuth-214	✓	1.243	0.08698	pCi/g	0.08024	0.200	609.9	4	1.433	IDENTIFIED	4.245	<input type="checkbox"/>	
Cadmium-109	INT	4.851	0.4462	pCi/g	0.7298	Y	87.32	3	1.439	IDENTIFIED	7.913	<input checked="" type="checkbox"/>	UI
Cerium-143		317.3	52.62	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1264	0.02611	pCi/g	0.06699	0.100	0	10	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137	✓	0.1674	0.02112	pCi/g	0.04418	0.100	662.1	2	1.393	IDENTIFIED	11.57	<input type="checkbox"/>	
Gross Gamma		11.19	1.219	pCi/g	3.65	N	0	0	0			<input type="checkbox"/>	
Iodine-123	HE	9.95E+05	1.01E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-133		3026	1307	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85	LA	16.21	2.846	pCi/g	9.385	N	0	10	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212	✓	1.772	0.1025	pCi/g	0.0614	0.100	238.8	4	1.142	IDENTIFIED	2.277	<input type="checkbox"/>	
Lead-214	✓	1.46	0.09792	pCi/g	0.07669	0.100	352.2	4	1.282	IDENTIFIED	3.912	<input type="checkbox"/>	
Lutetium-177	HE	2.298	0.5167	pCi/g	1.354	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	1.401	0.1937	pCi/g	0.213	N	87.32	3	1.439	IDENTIFIED	7.913	<input type="checkbox"/>	
Niobium-97	HE	3327	19880	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Polonium-212	NR	1.772	0.1025	pCi/g	0.0614	N	238.8	4	1.142	IDENTIFIED	2.277	<input type="checkbox"/>	
Polonium-214	NR	1.46	0.09792	pCi/g	0.07669	N	352.2	4	1.282	IDENTIFIED	3.912	<input type="checkbox"/>	
Polonium-216	NR	1.772	0.1025	pCi/g	0.0614	N	238.8	4	1.142	IDENTIFIED	2.277	<input type="checkbox"/>	
Polonium-218	NR	1.46	0.09792	pCi/g	0.07669	N	352.2	4	1.282	IDENTIFIED	3.912	<input type="checkbox"/>	
Potassium-40	✓	36.56	1.729	pCi/g	0.3312	1.00	1462	1	1.897	IDENTIFIED	1.83	<input type="checkbox"/>	
Radium-224	INT	4.606	0.4992	pCi/g	0.6985	Y	241.7	1	1.793	IDENTIFIED	9.697	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.243	0.08698	pCi/g	0.08024	Y	609.9	4	1.433	IDENTIFIED	4.245	<input type="checkbox"/>	
Radium-228	✓	1.71	0.1411	pCi/g	0.146	0.500	911.9	3	1.575	IDENTIFIED	5.529	<input type="checkbox"/>	
Rhenium-188	HE	0.2171	0.06527	pCi/g	0.1844	N	154.4	1	1.876	IDENTIFIED	29.76	<input type="checkbox"/>	
Strontium-85	LA	0.08262	0.0145	pCi/g	0.04783	Y	0	10	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-200	HE	69.05	106.9	pCi/g	0	N	0	10	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.6009	0.04317	pCi/g	0.03986	0.080	583.7	1	1.381	IDENTIFIED	5.016	<input type="checkbox"/>	
Thorium-228	NR	1.798	0.104	pCi/g	0.06229	N	238.8	4	1.142	IDENTIFIED	2.277	<input type="checkbox"/>	
Thorium-230	NR	1.243	0.08698	pCi/g	0.08024	N	609.9	4	1.433	IDENTIFIED	4.245	<input type="checkbox"/>	
Thorium-232	NR	1.71	0.1411	pCi/g	0.146	N	911.9	3	1.575	IDENTIFIED	5.529	<input type="checkbox"/>	
Thorium-234	✓	2.973	0.6331	pCi/g	1.208	2.00	63.58	2	0.8617	IDENTIFIED	19.44	<input type="checkbox"/>	
Tin-126	INT	0.4772	0.04389	pCi/g	0.072	N	87.32	3	1.439	IDENTIFIED	7.913	<input type="checkbox"/>	
Titanium-44	LA	0.3944	0.02266	pCi/g	0.05522	N	0	10	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium		8.8739	1.88E-06	ug/g	1.7988	N	0	0	0			<input type="checkbox"/>	
Uranium-234	NR	1.243	0.08698	pCi/g	0.08024	N	609.9	4	1.433	IDENTIFIED	4.245	<input type="checkbox"/>	
Uranium-238	NR	2.973	0.6331	pCi/g	1.208	N	63.58	2	0.8617	IDENTIFIED	19.44	<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
246875004	09-FEB-10 12:00	24-FEB-10 08:51	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.859	0.2048	pCi/g	0.2445	N	911.3	3	1.7	IDENTIFIED 9.575 <input type="checkbox"/>
Americium-243	INT	0.3956	0.05382	pCi/g	0.1162	N	74.75	1	1.133	IDENTIFIED 12.34 <input type="checkbox"/>
Annihilation Rad.		0.1324	0.03578	pCi/g	0.05315	N	511	1	1.552	IDENTIFIED 26.88 <input type="checkbox"/>
Bismuth-211	INT	4.176	0.2786	pCi/g	0.3598	Y	352	4	1.254	IDENTIFIED 5.757 <input checked="" type="checkbox"/> UI
Bismuth-212	LA	1.331	0.2488	pCi/g	0.7604	N	0	7	0	FAIL_ABUND 0 <input type="checkbox"/>
Bismuth-214	✓	1.115	0.09534	pCi/g	0.1197	0.200	609.4	4	1.304	IDENTIFIED 7.721 <input type="checkbox"/>
Cadmium-109	INT	2.345	0.5749	pCi/g	1.487	Y	87.21	3	1.016	IDENTIFIED 23.78 <input checked="" type="checkbox"/> UI
Cerium-143		432.8	86.39	pCi/g	0	N	0	7	0	SHORT_HLIF 0 <input type="checkbox"/>
Gross Gamma		11.05	1.602	pCi/g	3.744	N	0	0	0	
Iodine-123	HE	1.91E+05	2.05E+06	pCi/g	0	N	0	7	0	SHORT_HLIF 0 <input type="checkbox"/>
Lead-212	✓	1.895	0.09804	pCi/g	0.094	0.100	238.7	4	1.089	IDENTIFIED 3.26 <input type="checkbox"/>
Lead-214	✓	1.453	0.1041	pCi/g	0.1254	0.100	352	4	1.254	IDENTIFIED 5.757 <input type="checkbox"/>
Lutetium-177	HE	2.93	0.7608	pCi/g	2.139	N	0	7	0	FAIL_ABUND 0 <input type="checkbox"/>
Neptunium-237	HE	0.6771	0.1801	pCi/g	0.4875	N	87.21	3	1.016	IDENTIFIED 23.78 <input type="checkbox"/>
Niobium-97	HE	47460	46730	pCi/g	0	N	0	7	0	SHORT_HLIF 0 <input type="checkbox"/>

Polonium-212	NR	1.895	0.09804	pCi/g	0.094	N	238.7	4	1.089	IDENTIFIED	3.26	<input type="checkbox"/>
Polonium-214	NR	1.453	0.1041	pCi/g	0.1254	N	352	4	1.254	IDENTIFIED	5.757	<input type="checkbox"/>
Polonium-216	NR	1.895	0.09804	pCi/g	0.094	N	238.7	4	1.089	IDENTIFIED	3.26	<input type="checkbox"/>
Polonium-218	NR	1.453	0.1041	pCi/g	0.1254	N	352	4	1.254	IDENTIFIED	5.757	<input type="checkbox"/>
Potassium-40	✓	37.26	1.687	pCi/g	0.548	1.00	1461	1	2.062	IDENTIFIED	2.808	<input type="checkbox"/>
Radium-224	INT	5.27	0.7355	pCi/g	1.07	Y	241.6	1	1.865	IDENTIFIED	13.55	<input checked="" type="checkbox"/>
Radium-226	✓	1.115	0.09534	pCi/g	0.1197	Y	609.4	4	1.304	IDENTIFIED	7.721	<input type="checkbox"/>
Radium-228	✓	1.859	0.2048	pCi/g	0.2445	0.500	911.3	3	1.7	IDENTIFIED	9.575	<input type="checkbox"/>
Thallium-208	✓	0.6006	0.04995	pCi/g	0.06183	0.080	583.2	1	1.385	IDENTIFIED	7.7	<input type="checkbox"/>
Thorium-228	NR	1.924	0.0995	pCi/g	0.0954	N	238.7	4	1.089	IDENTIFIED	3.26	<input type="checkbox"/>
Thorium-230	NR	1.115	0.09534	pCi/g	0.1197	N	609.4	4	1.304	IDENTIFIED	7.721	<input type="checkbox"/>
Thorium-232	NR	1.859	0.2048	pCi/g	0.2445	N	911.3	3	1.7	IDENTIFIED	9.575	<input type="checkbox"/>
Tin-126	HE	0.2306	0.05653	pCi/g	0.1566	N	87.21	3	1.016	IDENTIFIED	23.78	<input type="checkbox"/>
Titanium-44	LA	0.4481	0.03997	pCi/g	0.09416	N	0	7	0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234	NR	1.115	0.09534	pCi/g	0.1197	N	609.4	4	1.304	IDENTIFIED	7.721	<input type="checkbox"/>
Zirconium-97	HE	8.26E+05	7.91E+05	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project	Quals	Zero?	queue
246875005	09-FEB-10 12:00	24-FEB-10 08:52	14.9	SAMPLE	LOAD	1	LANL	LANL01004	GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.654	0.1578	pCi/g	0.203	N	911.5	3	1.583	IDENTIFIED	7.559	<input type="checkbox"/>	
Americium-243	INT	0.3213	0.0334	pCi/g	0.07279	N	74.88	1	1.217	IDENTIFIED	9.582	<input type="checkbox"/>	
Annihilation Rad.		0.1402	0.03429	pCi/g	0.04003	N	511	1	1.838	IDENTIFIED	24.05	<input type="checkbox"/>	
Barium-137m	HE	0.1119	0.03034	pCi/g	0.05743	N	661.6	2	0.8907	IDENTIFIED	26.75	<input type="checkbox"/>	
Bismuth-210	HE	4.739	1.445	pCi/g	2.785	N	46.25	3	0.9846	IDENTIFIED	30.11	<input type="checkbox"/>	
Bismuth-211	INT	3.89	0.2732	pCi/g	0.3239	Y	352.1	4	1.241	IDENTIFIED	5.404	<input checked="" type="checkbox"/>	
Bismuth-212	HE	1.086	0.2995	pCi/g	0.6941	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Bismuth-214	✓	1.172	0.1019	pCi/g	0.1119	0.200	609.4	4	1.406	IDENTIFIED	6.995	<input type="checkbox"/>	
Cadmium-109	INT	2.551	0.4666	pCi/g	1.136	Y	87.22	3	1.117	IDENTIFIED	17.68	<input checked="" type="checkbox"/>	
Cerium-143		444.1	84.63	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.09605	0.03039	pCi/g	0.08912	0.100	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137	✓	0.1183	0.03207	pCi/g	0.0607	0.100	661.6	2	0.8907	IDENTIFIED	26.75	<input type="checkbox"/>	
Gross Gamma		10.27	1.428	pCi/g	3.987	N	0					<input type="checkbox"/>	
Iodine-123	HE	2.36E+06	2.21E+06	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	HE	1.83E+14	1.42E+15	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85	HE	19.19	3.986	pCi/g	14.02	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-210	HE	4.739	1.445	pCi/g	2.785	N	46.25	3	0.9846	IDENTIFIED	30.11	<input type="checkbox"/>	
Lead-212	✓	1.645	0.09493	pCi/g	0.08965	0.100	238.7	4	1.067	IDENTIFIED	3.228	<input type="checkbox"/>	
Lead-214	✓	1.353	0.1014	pCi/g	0.1091	0.100	352.1	4	1.241	IDENTIFIED	5.404	<input type="checkbox"/>	
Lutetium-177	LA	4.273	0.7961	pCi/g	1.968	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	INT	0.7366	0.1547	pCi/g	0.3306	N	87.22	3	1.117	IDENTIFIED	17.68	<input type="checkbox"/>	
Niobium-97	HE	4870	39800	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Polonium-210	HE	4.739	1.442	pCi/g	2.785	N	46.25	3	0.9846	IDENTIFIED	30.11	<input type="checkbox"/>	
Polonium-212	NR	1.645	0.09493	pCi/g	0.08965	N	238.7	4	1.067	IDENTIFIED	3.228	<input type="checkbox"/>	
Polonium-214	NR	1.353	0.1014	pCi/g	0.1091	N	352.1	4	1.241	IDENTIFIED	5.404	<input type="checkbox"/>	
Polonium-216	NR	1.645	0.09493	pCi/g	0.08965	N	238.7	4	1.067	IDENTIFIED	3.228	<input type="checkbox"/>	
Polonium-218	NR	1.353	0.1014	pCi/g	0.1091	N	352.1	4	1.241	IDENTIFIED	5.404	<input type="checkbox"/>	
Potassium-40	✓	30.91	1.577	pCi/g	0.489	1.00	1461	1	2.158	IDENTIFIED	2.759	<input type="checkbox"/>	
Radium-224	INT	4.915	0.8336	pCi/g	1.02	Y	241.6	1	2.212	IDENTIFIED	16.43	<input checked="" type="checkbox"/>	
Radium-226	✓	1.172	0.1019	pCi/g	0.1119	Y	609.4	4	1.406	IDENTIFIED	6.995	<input type="checkbox"/>	
Radium-228	✓	1.654	0.1578	pCi/g	0.203	0.500	911.5	3	1.583	IDENTIFIED	7.559	<input type="checkbox"/>	
Rhenium-188	HE	0.2722	0.1321	pCi/g	0.2562	N	154.4	1	2.226	IDENTIFIED	48.35	<input type="checkbox"/>	
Sodium-24	HE	1.81E+05	2.92E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Strontium-85	LA	0.09814	0.02038	pCi/g	0.07172	Y	0	13	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-200	HE	203.8	175.8	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.5751	0.04754	pCi/g	0.05963	0.080	583.3	1	1.527	IDENTIFIED	6.743	<input type="checkbox"/>	
Thorium-228	NR	1.67	0.09635	pCi/g	0.09098	N	238.7	4	1.067	IDENTIFIED	3.228	<input type="checkbox"/>	
Thorium-230	NR	1.172	0.1019	pCi/g	0.1119	N	609.4	4	1.406	IDENTIFIED	6.995	<input type="checkbox"/>	

Thorium-232	NR	1.654	0.1578	pCi/g	0.203	N	911.5	3	1.583	IDENTIFIED	7.559	<input type="checkbox"/>
Thorium-234	✓	5.086	0.8641	pCi/g	1.563	2.00	63.1	2	1.13	IDENTIFIED	14.6	<input type="checkbox"/>
Tin-126	INT	0.2508	0.04588	pCi/g	0.1119	N	87.22	3	1.117	IDENTIFIED	17.68	<input type="checkbox"/>
Titanium-44	LA	0.3588	0.02493	pCi/g	0.06983	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		15.252	2.57E-06	ug/g	2.3273	N		0				<input type="checkbox"/>
Uranium-234	NR	1.172	0.1019	pCi/g	0.1119	N	609.4	4	1.406	IDENTIFIED	6.995	<input type="checkbox"/>
Uranium-238	NR	5.086	0.8641	pCi/g	1.563	N	63.1	2	1.13	IDENTIFIED	14.6	<input type="checkbox"/>
Zirconium-97		1.64E+06	7.11E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246875006	09-FEB-10 12:00	24-FEB-10 08:52	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	2.33	0.2299	pCi/g	0.2335	N	911.8	3	1.781	IDENTIFIED	7.933 <input type="checkbox"/>
Americium-243	INT	0.5673	0.05147	pCi/g	0.1017	N	74.87	1	1.536	IDENTIFIED	8.257 <input type="checkbox"/>
Annihilation Rad. HE		0.1289	0.03693	pCi/g	0.05556	N	511.4	1	1.933	IDENTIFIED	28.49 <input type="checkbox"/>
Bismuth-211	INT	5.418	0.3283	pCi/g	0.3543	Y	351.8	4	1.47	IDENTIFIED	5.166 <input checked="" type="checkbox"/>
Bismuth-212	LA	1.825	0.3085	pCi/g	0.7981	N	0	11	0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214	✓	1.655	0.12	pCi/g	0.1248	0.200	609.4	4	1.779	IDENTIFIED	6.07 <input type="checkbox"/>
Cadmium-109	INT	4.745	0.6229	pCi/g	1.357	Y	87.39	3	1.553	IDENTIFIED	12.39 <input checked="" type="checkbox"/>
Cerium-143		1360	174	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>
Cesium-135	HE	0.5148	0.108	pCi/g	0.3541	N	0	11	0	NOT_IDENTI	0 <input type="checkbox"/>
Europium-155	HE	0.2295	0.06983	pCi/g	0.2089	N	105.6	1	1.607	IDENTIFIED	30.18 <input type="checkbox"/>
Gross Gamma		13.03	1.797	pCi/g	4.46	N	0				<input type="checkbox"/>
Iodine-135	HE	3.70E+13	1.74E+15	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>
Krypton-85	HE	19.96	4.985	pCi/g	16.28	N	0	11	0	NOT_IDENTI	0 <input type="checkbox"/>
Lead-212	✓	2.343	0.1074	pCi/g	0.104	0.100	238.6	4	1.334	IDENTIFIED	2.784 <input type="checkbox"/>
Lead-214	✓	1.885	0.1243	pCi/g	0.1235	0.100	351.8	4	1.47	IDENTIFIED	5.166 <input type="checkbox"/>
Lutetium-177	HE	3.124	0.9227	pCi/g	2.329	N	0	11	0	FAIL_ABUND	0 <input type="checkbox"/>
Neptunium-237	INT	1.37	0.2288	pCi/g	0.3965	N	87.39	3	1.553	IDENTIFIED	12.39 <input type="checkbox"/>
Niobium-95m	LA	0.722	0.09384	pCi/g	0.3117	N	0	11	0	NOT_IDENTI	0 <input type="checkbox"/>
Polonium-212	NR	2.343	0.1074	pCi/g	0.104	N	238.6	4	1.334	IDENTIFIED	2.784 <input type="checkbox"/>
Polonium-214	NR	1.885	0.1243	pCi/g	0.1235	N	351.8	4	1.47	IDENTIFIED	5.166 <input type="checkbox"/>
Polonium-216	NR	2.343	0.1074	pCi/g	0.104	N	238.6	4	1.334	IDENTIFIED	2.784 <input type="checkbox"/>
Polonium-218	NR	1.885	0.1243	pCi/g	0.1235	N	351.8	4	1.47	IDENTIFIED	5.166 <input type="checkbox"/>
Potassium-40	✓	37.75	1.722	pCi/g	0.6601	1.00	1462	1	1.969	IDENTIFIED	2.763 <input type="checkbox"/>
Radium-224	INT	6.57	0.8577	pCi/g	1.183	Y	241.6	1	2.024	IDENTIFIED	12.73 <input checked="" type="checkbox"/>
Radium-226	✓	1.655	0.12	pCi/g	0.1248	Y	609.4	4	1.779	IDENTIFIED	6.07 <input type="checkbox"/>
Radium-228	✓	2.33	0.2299	pCi/g	0.2335	0.500	911.8	3	1.781	IDENTIFIED	7.933 <input type="checkbox"/>
Sodium-24	HE	1.30E+05	2.98E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>
Strontium-85	LA	0.1021	0.02549	pCi/g	0.08323	Y	0	11	0	NOT_IDENTI	0 <input checked="" type="checkbox"/>
Thallium-208	✓	0.8115	0.05822	pCi/g	0.06945	0.080	583.3	1	1.655	IDENTIFIED	6.306 <input type="checkbox"/>
Thorium-228	NR	2.378	0.109	pCi/g	0.1055	N	238.6	4	1.334	IDENTIFIED	2.784 <input type="checkbox"/>
Thorium-230	NR	1.655	0.1199	pCi/g	0.1248	N	609.4	4	1.779	IDENTIFIED	6.07 <input type="checkbox"/>
Thorium-232	NR	2.33	0.2299	pCi/g	0.2335	N	911.8	3	1.781	IDENTIFIED	7.933 <input type="checkbox"/>
Thorium-234	PNVNC	2.338	1.128	pCi/g	2.197	2.00	63.26	2	1.327	IDENTIFIED	47.45 <input checked="" type="checkbox"/>
Tin-126	INT	0.4666	0.06125	pCi/g	0.1339	N	87.39	3	1.553	IDENTIFIED	12.39 <input type="checkbox"/>
Titanium-44	LA	0.5387	0.03619	pCi/g	0.09838	N	0	11	0	FAIL_ABUND	0 <input type="checkbox"/>
Total Uranium		7.0252	3.36E-06	ug/g	3.2718	N		0			<input type="checkbox"/>
Uranium-234	NR	1.655	0.1199	pCi/g	0.1248	N	609.4	4	1.779	IDENTIFIED	6.07 <input type="checkbox"/>
Uranium-238	HE	2.338	1.128	pCi/g	2.197	N	63.26	2	1.327	IDENTIFIED	47.45 <input type="checkbox"/>
Zirconium-97		3.11E+06	9.15E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0 <input type="checkbox"/>

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
246875007	09-FEB-10 12:00	24-FEB-10 08:53	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	2.324	0.24	pCi/g	0.2934	N	910.8	3	1.874	IDENTIFIED	8.481 <input type="checkbox"/>
Americium-243	INT	0.6075	0.08845	pCi/g	0.1564	N	75.03	1	1.602	IDENTIFIED	13.37 <input type="checkbox"/>

Annihilation Rad.		0.2353	0.04706	pCi/g	0.06743	N	511	1	2.023	IDENTIFIED	19.52	<input type="checkbox"/>	
Bismuth-211	INT	6.062	0.447	pCi/g	0.4633	Y	352	4	1.536	IDENTIFIED	5.45	<input checked="" type="checkbox"/>	UI
Bismuth-212	HE	1.309	0.253	pCi/g	0.9288	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>	
Bismuth-214	✓	1.655	0.1435	pCi/g	0.1634	0.200	609.4	4	1.527	IDENTIFIED	7.119	<input type="checkbox"/>	
Cadmium-109	INT	3.721	0.7982	pCi/g	2.046	Y	87.44	3	1.131	IDENTIFIED	20.54	<input checked="" type="checkbox"/>	UI
Cerium-143		1244	186.9	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	LA	0.1755	0.04796	pCi/g	0.1274	0.100	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma		13.21	1.937	pCi/g	3.89	N	0					<input type="checkbox"/>	
Iodine-133	HE	125.6	3739	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	HE	4.84E+15	2.45E+15	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85	HE	20.76	6	pCi/g	19.27	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212	✓	2.487	0.1714	pCi/g	0.1326	0.100	238.7	4	1.31	IDENTIFIED	3.468	<input type="checkbox"/>	
Lead-214	✓	2.109	0.165	pCi/g	0.1615	0.100	352	4	1.536	IDENTIFIED	5.45	<input type="checkbox"/>	
Lutetium-177	HE	4.124	1.106	pCi/g	2.947	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Mercury-203	LA	0.1286	0.03181	pCi/g	0.1137	0.100	0	13	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Neptunium-237	HE	1.074	0.2557	pCi/g	0.6064	N	87.44	3	1.131	IDENTIFIED	20.54	<input type="checkbox"/>	
Niobium-95m	HE	0.6018	0.1219	pCi/g	0.3858	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>	
Niobium-97	HE	16100	49290	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Polonium-212	NR	2.487	0.1714	pCi/g	0.1326	N	238.7	4	1.31	IDENTIFIED	3.468	<input type="checkbox"/>	
Polonium-214	NR	2.109	0.165	pCi/g	0.1615	N	352	4	1.536	IDENTIFIED	5.45	<input type="checkbox"/>	
Polonium-216	NR	2.487	0.1714	pCi/g	0.1326	N	238.7	4	1.31	IDENTIFIED	3.468	<input type="checkbox"/>	
Polonium-218	NR	2.109	0.165	pCi/g	0.1615	N	352	4	1.536	IDENTIFIED	5.45	<input type="checkbox"/>	
Potassium-40	✓	40.42	2.326	pCi/g	0.7942	1.00	1460	1	1.916	IDENTIFIED	2.996	<input checked="" type="checkbox"/>	UI
Radium-224	INT	6.868	1.078	pCi/g	1.509	Y	241.9	1	2.04	IDENTIFIED	14.7	<input checked="" type="checkbox"/>	UI
Radium-226	✓	1.655	0.1435	pCi/g	0.1634	Y	609.4	4	1.527	IDENTIFIED	7.119	<input type="checkbox"/>	
Radium-228	✓	2.324	0.24	pCi/g	0.2934	0.500	910.8	3	1.874	IDENTIFIED	8.481	<input type="checkbox"/>	
Strontium-85	LA	0.1061	0.03068	pCi/g	0.09853	Y	0	13	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.7438	0.06642	pCi/g	0.08244	0.080	583.2	1	1.293	IDENTIFIED	7.667	<input type="checkbox"/>	
Thorium-228	NR	2.525	0.174	pCi/g	0.1346	N	238.7	4	1.31	IDENTIFIED	3.468	<input type="checkbox"/>	
Thorium-230	NR	1.655	0.1435	pCi/g	0.1634	N	609.4	4	1.527	IDENTIFIED	7.119	<input type="checkbox"/>	
Thorium-232	NR	2.324	0.24	pCi/g	0.2934	N	910.8	3	1.874	IDENTIFIED	8.481	<input type="checkbox"/>	
Tin-126	INT	0.3658	0.07848	pCi/g	0.2027	N	87.44	3	1.131	IDENTIFIED	20.54	<input type="checkbox"/>	
Titanium-44	LA	0.5515	0.05603	pCi/g	0.1392	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Uranium-234	NR	1.655	0.1435	pCi/g	0.1634	N	609.4	4	1.527	IDENTIFIED	7.119	<input type="checkbox"/>	
Zirconium-97		5.05E+06	1.19E+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
246875008	09-FEB-10 12:00	24-FEB-10 08:54	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	2.018	0.2011	pCi/g	0.2152	N	911.4	3	2.009	IDENTIFIED 7.443 <input type="checkbox"/>
Americium-243	INT	0.4335	0.03818	pCi/g	0.08867	N	74.83	1	1.023	IDENTIFIED 7.804 <input type="checkbox"/>
Annihilation Rad.		0.1135	0.03204	pCi/g	0.04562	N	510.8	1	2.006	IDENTIFIED 27.79 <input type="checkbox"/>
Bismuth-211	INT	5.422	0.387	pCi/g	0.3153	Y	352	4	1.487	IDENTIFIED 4.14 <input checked="" type="checkbox"/>
Bismuth-212	LA	1.851	0.2465	pCi/g	0.6594	N	0	11	0	FAIL_ABUND 0 <input type="checkbox"/>
Bismuth-214	✓	1.648	0.1216	pCi/g	0.1127	0.200	609.4	4	1.475	IDENTIFIED 4.545 <input type="checkbox"/>
Cadmium-109	INT	4.76	0.5575	pCi/g	1.254	Y	87.2	3	1.199	IDENTIFIED 10.73 <input checked="" type="checkbox"/>
Cerium-143		1046	151.1	pCi/g	0	N	0	11	0	SHORT_HLIF 0 <input type="checkbox"/>
Cesium-134	LA	0.1167	0.02847	pCi/g	0.0873	0.100	0	11	0	FAIL_ABUND 0 <input checked="" type="checkbox"/>
Cesium-135	HE	0.3513	0.09557	pCi/g	0.2919	N	0	11	0	NOT_IDENTI 0 <input type="checkbox"/>
Gross Gamma		12.78	1.583	pCi/g	2.728	N	0			<input type="checkbox"/>
Iodine-123	HE	1.62E+06	2.20E+06	pCi/g	0	N	0	11	0	SHORT_HLIF 0 <input type="checkbox"/>
Krypton-85	LA	31.38	4.425	pCi/g	14.36	N	0	11	0	NOT_IDENTI 0 <input type="checkbox"/>
Lead-212	✓	2.442	0.1718	pCi/g	0.09279	0.100	238.7	4	1.261	IDENTIFIED 2.418 <input type="checkbox"/>
Lead-214	✓	1.886	0.1433	pCi/g	0.1097	0.100	352	4	1.487	IDENTIFIED 4.14 <input type="checkbox"/>
Lutetium-177	HE	3.613	0.8619	pCi/g	2.042	N	0	11	0	FAIL_ABUND 0 <input type="checkbox"/>
Neptunium-237	INT	1.374	0.2145	pCi/g	0.3672	N	87.2	3	1.199	IDENTIFIED 10.73 <input type="checkbox"/>
Niobium-95	HE	0.099	0.02477	pCi/g	0.07795	N	0	11	0	NOT_IDENTI 0 <input type="checkbox"/>
Polonium-212	NR	2.442	0.1718	pCi/g	0.09279	N	238.7	4	1.261	IDENTIFIED 2.418 <input type="checkbox"/>

Polonium-214	NR	1.886	0.1433	pCi/g	0.1097	N	352	4	1.487	IDENTIFIED	4.14	<input type="checkbox"/>
Polonium-216	NR	2.442	0.1718	pCi/g	0.09279	N	238.7	4	1.261	IDENTIFIED	2.418	<input type="checkbox"/>
Polonium-218	NR	1.886	0.1433	pCi/g	0.1097	N	352	4	1.487	IDENTIFIED	4.14	<input type="checkbox"/>
Potassium-40	✓	39.23	1.971	pCi/g	0.4664	1.00	1461	1	2.666	IDENTIFIED	2.064	<input type="checkbox"/>
Radium-224	INT	6.493	0.7591	pCi/g	1.055	Y	241.7	1	1.886	IDENTIFIED	9.865	<input checked="" type="checkbox"/> VF
Radium-226	✓	1.648	0.1216	pCi/g	0.1127	Y	609.4	4	1.475	IDENTIFIED	4.545	<input type="checkbox"/>
Radium-228	✓	2.018	0.2011	pCi/g	0.2152	0.500	911.4	3	2.009	IDENTIFIED	7.443	<input type="checkbox"/>
Strontium-85	LA	0.1605	0.02263	pCi/g	0.07342	Y	0	11	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thallium-208	✓	0.7563	0.05609	pCi/g	0.05542	0.080	583.3	1	1.535	IDENTIFIED	5.061	<input type="checkbox"/>
Thorium-228	NR	2.479	0.1744	pCi/g	0.09417	N	238.7	4	1.261	IDENTIFIED	2.418	<input type="checkbox"/>
Thorium-230	NR	1.648	0.1216	pCi/g	0.1127	N	609.4	4	1.475	IDENTIFIED	4.545	<input type="checkbox"/>
Thorium-232	NR	2.018	0.2011	pCi/g	0.2152	N	911.4	3	2.009	IDENTIFIED	7.443	<input type="checkbox"/>
Thorium-234	✓	2.262	0.976	pCi/g	2.06	2.00	63.37	2	1.426	IDENTIFIED	42.26	<input type="checkbox"/>
Tin-126	INT	0.4681	0.05482	pCi/g	0.1238	N	87.2	3	1.199	IDENTIFIED	10.73	<input type="checkbox"/>
Titanium-44	LA	0.4922	0.03337	pCi/g	0.08073	N	0	11	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		6.6942	2.90E-06	ug/g	3.0668	N		0				<input type="checkbox"/>
Uranium-234	NR	1.648	0.1216	pCi/g	0.1127	N	609.4	4	1.475	IDENTIFIED	4.545	<input type="checkbox"/>
Uranium-238	HE	2.262	0.976	pCi/g	2.06	N	63.37	2	1.426	IDENTIFIED	42.26	<input type="checkbox"/>
Zirconium-97		3.48E+06	8.53E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>

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

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202041820		24-FEB-10 09:11	0	MB	LOAD	1		GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy	*** FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Gross Gamma	HE	0.052	0.02127	pCi/g	0.03543	N	0		<input type="checkbox"/>	
Niobium-97	HE	25.14	21.37	pCi/g	0	N	0	2 0	SHORT_HLIF 0	<input type="checkbox"/>
Sodium-24	HE	76.75	78.6	pCi/g	0	N	0	2 0	SHORT_HLIF 0	<input type="checkbox"/>
Total Uranium		2.374	9.84E-07	ug/g	1.2828	N	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
1202041821	09-FEB-10 12:00	24-FEB-10 09:12	14.9	DUP	LOAD	1		LANL01004GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy	*** FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	NR	1.915	0.2247	pCi/g	0.2308	N	911.8	3	1.864	IDENTIFIED 10.01 <input type="checkbox"/>
Americium-243	INT	0.4889	0.04122	pCi/g	0.08089	N	75	1	1.178	IDENTIFIED 7.4 <input type="checkbox"/>
Annihilation Rad.		0.1613	0.03951	pCi/g	0.04466	N	511	1	2.188	IDENTIFIED 24.05 <input type="checkbox"/>
Barium-137m	NR	0.2373	0.0414	pCi/g	0.06093	N	662.1	2	1.623	IDENTIFIED 16.71 <input type="checkbox"/>
Bismuth-211	INT	4.516	0.3453	pCi/g	0.3525	Y	352.2	4	1.175	IDENTIFIED 5.967 <input checked="" type="checkbox"/> VI
Bismuth-212	NR	1.5	0.265	pCi/g	0.5719	N	728	1	1.312	IDENTIFIED 16.74 <input type="checkbox"/>
Bismuth-214	✓	1.266	0.1086	pCi/g	0.113	0.200	609.8	4	1.307	IDENTIFIED 6.53 <input type="checkbox"/>
Cadmium-109	INT	4.636	0.5649	pCi/g	1.058	Y	87.46	3	1.411	IDENTIFIED 11.24 <input checked="" type="checkbox"/> VI
Cerium-143		406.6	88.47	pCi/g	0	N	0	5	0	SHORT_HLIF 0 <input type="checkbox"/>
Cesium-137	✓	0.2509	0.04377	pCi/g	0.06441	0.100	662.1	2	1.623	IDENTIFIED 16.71 <input type="checkbox"/>
Gross Gamma		11.41	1.397	pCi/g	4.451	N	0			<input type="checkbox"/>
Lead-212	✓	2.023	0.1251	pCi/g	0.1027	0.100	238.8	4	1.122	IDENTIFIED 3.159 <input type="checkbox"/>
Lead-214	✓	1.571	0.1269	pCi/g	0.1229	0.100	352.2	4	1.175	IDENTIFIED 5.967 <input type="checkbox"/>
Lutetium-177	HE	3.56	0.8632	pCi/g	2.155	N	0	5	0	FAIL_ABUND 0 <input type="checkbox"/>
Neptunium-237	INT	1.339	0.2137	pCi/g	0.3087	N	87.46	3	1.411	IDENTIFIED 11.24 <input type="checkbox"/>
Niobium-97	HE	8085	45700	pCi/g	0	N	0	5	0	SHORT_HLIF 0 <input type="checkbox"/>
Polonium-212	NR	2.023	0.1251	pCi/g	0.1027	N	238.8	4	1.122	IDENTIFIED 3.159 <input type="checkbox"/>
Polonium-214	NR	1.571	0.1269	pCi/g	0.1229	N	352.2	4	1.175	IDENTIFIED 5.967 <input type="checkbox"/>
Polonium-216	NR	2.023	0.1251	pCi/g	0.1027	N	238.8	4	1.122	IDENTIFIED 3.159 <input type="checkbox"/>
Polonium-218	NR	1.571	0.1269	pCi/g	0.1229	N	352.2	4	1.175	IDENTIFIED 5.967 <input type="checkbox"/>
Potassium-40	✓	34.5	1.791	pCi/g	0.5277	1.00	1462	1	1.831	IDENTIFIED 2.817 <input type="checkbox"/>
Radium-224	INT	4.919	0.7029	pCi/g	1.168	Y	241.6	1	1.63	IDENTIFIED 13.45 <input checked="" type="checkbox"/> VI
Radium-226	✓	1.266	0.1086	pCi/g	0.113	Y	609.8	4	1.307	IDENTIFIED 6.53 <input type="checkbox"/>
Radium-228	✓	1.915	0.2247	pCi/g	0.2308	0.500	911.8	3	1.864	IDENTIFIED 10.01 <input type="checkbox"/>
Thallium-208	✓	0.5836	0.05427	pCi/g	0.05882	0.080	583.6	1	1.163	IDENTIFIED 7.748 <input type="checkbox"/>
Thorium-228	NR	2.053	0.127	pCi/g	0.1042	N	238.8	4	1.122	IDENTIFIED 3.159 <input type="checkbox"/>

Thorium-230	NE	1.266	0.1086	pCi/g	0.113	N	609.8	4	1.307	IDENTIFIED	6.53	<input type="checkbox"/>
Thorium-232	NE	1.915	0.2247	pCi/g	0.2308	N	911.8	3	1.864	IDENTIFIED	10.01	<input type="checkbox"/>
Tin-126	NT	0.4559	0.05554	pCi/g	0.1044	N	87.46	3	1.411	IDENTIFIED	11.24	<input type="checkbox"/>
Titanium-44	LT	0.4648	0.0309	pCi/g	0.08554	N	0	5	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		3.3972	1.75E-06	ug/g	3.0229	N			0			<input type="checkbox"/>
Uranium-234	NE	1.266	0.1086	pCi/g	0.113	N	609.8	4	1.307	IDENTIFIED	6.53	<input type="checkbox"/>
Zirconium-97		2.73E+06	8.71E+05	pCi/g	0	N	0	5	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
1202041822		24-FEB-10 09:10	0	LCS	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.558	0.2956	pCi/g	0.523	N	910.8	3	1.256	IDENTIFIED	17.95	<input type="checkbox"/>	
Americium-241	15.96	1.18	pCi/g	0.8054	0.200	59.16	1	1.054	IDENTIFIED	3.607	<input type="checkbox"/>	
Annihilation Rad. HE	0.1955	0.0594	pCi/g	0.08456	N	510.5	1	2.392	IDENTIFIED	30.21	<input type="checkbox"/>	
Barium-137m	5.485	0.1839	pCi/g	0.1109	N	661	2	1.456	IDENTIFIED	2.265	<input type="checkbox"/>	
Bismuth-211	2.494	0.3298	pCi/g	0.6638	Y	351.5	4	1.281	IDENTIFIED	12.71	<input type="checkbox"/>	
Bismuth-214	0.9589	0.1207	pCi/g	0.2077	0.200	608.6	4	1.434	IDENTIFIED	11.99	<input type="checkbox"/>	
Cadmium-109	33.88	2.254	pCi/g	2.393	Y	87.7	3	1.027	IDENTIFIED	3.492	<input type="checkbox"/>	
Cerium-143	31.33	6.868	pCi/g	16.79	N	0	7	0	FAIL_ABUND	0	<input type="checkbox"/>	
Cesium-137	5.799	0.195	pCi/g	0.1172	0.100	661	2	1.456	IDENTIFIED	2.265	<input type="checkbox"/>	
Cobalt-57	0.1715	0.03331	pCi/g	0.07059	N	121.8	1	1.072	IDENTIFIED	19.14	<input type="checkbox"/>	
Cobalt-60	6.762	0.343	pCi/g	0.08551	0.100	1331	1	1.992	IDENTIFIED	2.636	<input type="checkbox"/>	
Gross Gamma	29.15	2.74	pCi/g	3.977	N			0			<input type="checkbox"/>	
Iodine-123	HE	830.7	878.9	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Lead-212		1.464	0.0942	pCi/g	0.1554	0.100	238.3	4	1.167	IDENTIFIED	5.201	<input type="checkbox"/>
Lead-214		0.8675	0.1169	pCi/g	0.2371	0.100	351.5	4	1.281	IDENTIFIED	12.71	<input type="checkbox"/>
Neptunium-237		9.877	1.213	pCi/g	0.7953	N	87.7	3	1.027	IDENTIFIED	3.492	<input type="checkbox"/>
Niobium-97		2485	205.8	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212		1.464	0.0942	pCi/g	0.1554	N	238.3	4	1.167	IDENTIFIED	5.201	<input type="checkbox"/>
Polonium-214		0.8675	0.1169	pCi/g	0.2371	N	351.5	4	1.281	IDENTIFIED	12.71	<input type="checkbox"/>
Polonium-216		1.464	0.0942	pCi/g	0.1554	N	238.3	4	1.167	IDENTIFIED	5.201	<input type="checkbox"/>
Polonium-218		0.8675	0.1169	pCi/g	0.2371	N	351.5	4	1.281	IDENTIFIED	12.71	<input type="checkbox"/>
Radium-224		4.922	1.184	pCi/g	1.768	Y	241.2	1	2.15	IDENTIFIED	23.85	<input type="checkbox"/>
Radium-226		0.9589	0.1207	pCi/g	0.2077	Y	608.6	4	1.434	IDENTIFIED	11.99	<input type="checkbox"/>
Radium-228		1.558	0.2956	pCi/g	0.523	0.500	910.8	3	1.256	IDENTIFIED	17.95	<input type="checkbox"/>
Silver-110m		0.3972	0.04827	pCi/g	0.1798	N	0	7	0	NOT_IDENTI	0	<input type="checkbox"/>
Sodium-24	HE	426	251.8	pCi/g	0	N	0	7	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208		0.4504	0.07514	pCi/g	0.116	0.080	582.7	1	1.519	IDENTIFIED	16.34	<input type="checkbox"/>
Thorium-228		1.476	0.09499	pCi/g	0.1567	N	238.3	4	1.167	IDENTIFIED	5.201	<input type="checkbox"/>
Thorium-230		0.9589	0.1207	pCi/g	0.2077	N	608.6	4	1.434	IDENTIFIED	11.99	<input type="checkbox"/>
Thorium-232		1.558	0.2956	pCi/g	0.523	N	910.8	3	1.256	IDENTIFIED	17.95	<input type="checkbox"/>
Tin-126		3.363	0.2238	pCi/g	0.2393	N	87.7	3	1.027	IDENTIFIED	3.492	<input type="checkbox"/>
Titanium-44	HE	0.2052	0.04478	pCi/g	0.1238	N	0	7	0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234		0.9589	0.1207	pCi/g	0.2077	N	608.6	4	1.434	IDENTIFIED	11.99	<input type="checkbox"/>
Zirconium-97	HE	3328	2484	pCi/g	0	N	0	7	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	Parname	Result	Uncertainty	Units	DL	RDL
952643	246875007	SAMPLE	24-FEB-10	Radium-224	6.868	1.078	pCi/g	0.7547	Y
				Radium-226	1.655	0.1435	pCi/g	0.08174	Y
				Radium-228	2.324	0.24	pCi/g	0.1468	0.500
				Strontium-85	0.1061	0.03068	pCi/g	0.0483	Y
				Thallium-208	0.7438	0.06642	pCi/g	0.04125	0.080
				Uranium-235	0.2991	0.1651	pCi/g	0.2731	0.500
				Zirconium-97	5.05E+06	1.19E+06	pCi/g	0	N
952643	246875008	SAMPLE	24-FEB-10	Bismuth-211	5.422	0.387	pCi/g	0.1577	Y
				Bismuth-214	1.648	0.1216	pCi/g	0.05638	0.200
				Cadmium-109	4.76	0.5575	pCi/g	0.6272	Y
				Cerium-143	1046	151.1	pCi/g	0	N
				Cesium-134	0.1167	0.02847	pCi/g	0.04368	0.100
				Gross Gamma	12.78	1.583	pCi/g	1.33	N
				Iodine-123	1.62E+06	2.20E+06	pCi/g	0	N
				Krypton-85	31.38	4.425	pCi/g	7.182	N
				Lead-212	2.442	0.1718	pCi/g	0.04642	0.100
				Lead-214	1.886	0.1433	pCi/g	0.05486	0.100
				Mercury-203	0.04285	0.02399	pCi/g	0.03585	0.100
				Potassium-40	39.23	1.971	pCi/g	0.2333	1.00
				Radium-224	6.493	0.7591	pCi/g	0.5276	Y
				Radium-226	1.648	0.1216	pCi/g	0.05638	Y
				Radium-228	2.018	0.2011	pCi/g	0.1077	0.500
				Strontium-85	0.1605	0.02263	pCi/g	0.03673	Y
				Thallium-208	0.7563	0.05609	pCi/g	0.02773	0.080
				Thorium-234	2.262	0.976	pCi/g	1.03	2.00
				Zirconium-97	3.48E+06	8.53E+05	pCi/g	0	N
952643	1202041820	MB	24-FEB-10	Bismuth-211	0.09661	0.05239	pCi/g	0.06887	Y
				Niobium-97	25.14	21.37	pCi/g	0	N
				Sodium-24	76.75	78.6	pCi/g	0	N
				Thorium-234	0.7872	0.3308	pCi/g	0.431	2.00
				Tin-113	0.02608	0.00912	pCi/g	0.01823	0.100
952643	1202041821	DUP	24-FEB-10	Americium-241	0.1309	0.06169	pCi/g	0.1073	0.200
				Bismuth-211	4.516	0.3453	pCi/g	0.1763	Y
				Bismuth-214	1.266	0.1086	pCi/g	0.05654	0.200
				Cadmium-109	4.636	0.5649	pCi/g	0.5295	Y
				Cerium-143	406.6	88.47	pCi/g	0	N
				Cesium-134	0.06647	0.02717	pCi/g	0.04885	0.100

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2/27/10

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2/27/10

VAX/VMS Nuclide Identification Report Generated 23-FEB-2010 21:29:51.97

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*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246874001.CNF;1
Sample date   : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 19:29:19
Sample ID     : G246874001 Sample quantity : 1.11790E+02 GRAM
Detector name : GAM15 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.27 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 952643 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	2	74.82*	222	513	1.60	148.56	144	16	3.09E-02	21.2	4.11E+00
2	2	77.27*	470	434	1.52	153.46	144	16	6.53E-02	9.6	
3	0	93.49*	113	568	1.73	185.91	180	11	1.57E-02	44.2	
4	0	186.14*	131	396	1.35	371.18	365	11	1.82E-02	32.0	
5	0	209.12	102	311	1.91	417.15	413	10	1.42E-02	33.8	
6	3	238.67*	1131	205	1.36	476.25	470	20	1.57E-01	3.9	1.40E+00
7	3	241.54	248	290	2.04	481.99	470	20	3.44E-02	19.7	
8	0	295.38*	305	197	1.38	589.66	584	12	4.23E-02	11.1	
9	0	300.76*	90	241	1.74	600.42	595	14	1.25E-02	38.6	
10	0	338.22	214	182	1.73	675.33	670	12	2.98E-02	14.3	
11	0	351.84*	648	175	1.60	702.58	695	17	9.00E-02	6.2	
12	0	462.94	57	144	1.53	924.77	920	12	7.92E-03	44.1	
13	0	510.86*	170	129	2.00	1020.63	1014	17	2.36E-02	19.0	
14	0	583.18*	283	106	1.49	1165.27	1160	13	3.94E-02	9.9	
15	0	609.31*	364	98	1.53	1217.53	1212	13	5.06E-02	8.0	
16	0	662.36	90	99	1.56	1323.64	1318	15	1.25E-02	26.5	
17	0	727.77*	64	87	1.46	1454.48	1447	13	8.92E-03	33.1	
18	0	861.16	69	43	2.25	1721.29	1715	16	9.54E-03	24.7	
19	0	911.46*	220	87	1.81	1821.90	1812	20	3.05E-02	12.7	
20	0	969.24*	98	70	1.67	1937.49	1932	12	1.36E-02	20.6	
21	0	1120.31*	69	94	1.75	2239.69	2231	18	9.53E-03	35.8	
22	0	1460.33*	1094	11	2.02	2919.92	2910	21	1.52E-01	3.1	
23	0	1620.48	16	4	1.90	3240.34	3236	9	2.25E-03	33.9	
24	0	1763.82*	83	0	2.22	3527.11	3520	14	1.15E-02	12.1	

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


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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246874001.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 23-FEB-2010 19:29:19
Sample ID        : G246874001             Sample quantity  : 111.79 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA15                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00           Elapsed real time: 0 02:00:01.27   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	*	3.561E+01	4.153E+00	6.924E-01	6.804E-02	51.433
BA-137M	+	661.65	*	1.698E-01	9.105E-02	8.380E-02	6.890E-03	2.026
CS-137	+	661.65	*	1.795E-01	9.625E-02	8.859E-02	7.298E-03	2.026
TL-208		277.35		5.646E-01	5.720E-01	9.740E-01	1.361E-01	0.580
	+	510.84		1.093E+00	4.350E-01	3.073E-01	3.689E-02	3.556
	+	583.14	*	5.159E-01	1.123E-01	8.091E-02	7.409E-03	6.376
	+	860.37		1.176E+00	5.921E-01	5.902E-01	5.772E-02	1.992
BI-211		72.87		6.578E+00	6.203E+00	9.327E+00	1.068E+00	0.705
	+	351.07	*	5.355E+00	8.505E-01	4.673E-01	4.654E-02	11.459
BI-212	+	727.18	*	9.983E-01	6.675E-01	6.492E-01	6.469E-02	1.538
		785.46		2.265E+00	2.429E+00	4.311E+00	3.817E-01	0.525
	+	1620.62		2.206E+00	1.509E+00	2.168E+00	2.018E-01	1.018
PB-212	+	74.81		2.161E+00	9.724E-01	9.396E-01	1.393E-01	2.300
	+	77.11		2.504E+00	5.637E-01	5.180E-01	6.005E-02	4.834
		87.30		4.408E-01	7.017E-01	1.031E+00	1.639E-01	0.427
	+	238.63	*	2.069E+00	2.940E-01	1.241E-01	1.478E-02	16.675
	+	300.09		2.527E+00	1.976E+00	1.507E+00	1.820E-01	1.677
PO-212	+	74.81		2.161E+00	9.724E-01	9.396E-01	1.393E-01	2.300
	+	77.11		2.504E+00	5.637E-01	5.180E-01	6.005E-02	4.834
		87.30		4.408E-01	7.017E-01	1.031E+00	1.639E-01	0.427
		115.19		3.080E+00	5.102E+00	8.492E+00	8.595E-01	0.363
	+	238.63	*	2.069E+00	2.940E-01	1.241E-01	1.478E-02	16.675
	+	300.09		2.527E+00	1.976E+00	1.507E+00	1.820E-01	1.677
BI-214	+	609.31	*	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
	+	1120.29		1.244E+00	9.006E-01	6.594E-01	7.108E-02	1.886
	+	1764.49		2.050E+00	5.275E-01	3.055E-01	2.679E-02	6.710
PB-214	+	74.81		3.723E+00	1.662E+00	1.619E+00	2.215E-01	2.300
	+	77.11		4.293E+00	1.020E+00	8.881E-01	1.232E-01	4.834
		87.30		7.551E-01	1.201E+00	1.767E+00	2.572E-01	0.427
	+	241.98		2.724E+00	1.123E+00	7.469E-01	9.241E-02	3.647
	+	295.21		1.502E+00	3.812E-01	2.897E-01	3.572E-02	5.185
	+	351.92	*	1.863E+00	3.114E-01	1.629E-01	1.828E-02	11.438
PO-214	+	74.81		3.723E+00	1.662E+00	1.619E+00	2.215E-01	2.300
	+	77.11		4.293E+00	1.020E+00	8.881E-01	1.232E-01	4.834

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216		87.30		7.551E-01	1.201E+00	1.767E+00	2.572E-01	0.427
	+	241.98		2.724E+00	1.123E+00	7.469E-01	9.241E-02	3.647
	+	295.21		1.502E+00	3.812E-01	2.897E-01	3.572E-02	5.185
	+	351.92	*	1.863E+00	3.114E-01	1.629E-01	1.828E-02	11.438
	+	74.81		2.161E+00	9.724E-01	9.396E-01	1.393E-01	2.300
	+	77.11		2.504E+00	5.637E-01	5.180E-01	6.005E-02	4.834
PO-218		87.30		4.408E-01	7.017E-01	1.031E+00	1.639E-01	0.427
	+	238.63	*	2.069E+00	2.940E-01	1.241E-01	1.478E-02	16.675
	+	300.09		2.527E+00	1.976E+00	1.507E+00	1.820E-01	1.677
	+	74.81		3.723E+00	1.662E+00	1.619E+00	2.215E-01	2.300
	+	77.11		4.293E+00	1.020E+00	8.881E-01	1.232E-01	4.834
		87.30		7.551E-01	1.201E+00	1.767E+00	2.572E-01	0.427
RA-224	+	241.98		2.724E+00	1.123E+00	7.469E-01	9.241E-02	3.647
	+	295.21		1.502E+00	3.812E-01	2.897E-01	3.572E-02	5.185
	+	351.92	*	1.863E+00	3.114E-01	1.629E-01	1.828E-02	11.438
RA-226	+	240.98	*	5.165E+00	2.109E+00	1.412E+00	1.557E-01	3.659
	+	609.31	*	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
	+	1120.29		1.244E+00	9.006E-01	6.594E-01	7.108E-02	1.886
AC-228	+	1764.49		2.050E+00	5.275E-01	3.055E-01	2.679E-02	6.710
	+	338.32		1.955E+00	9.854E-01	5.354E-01	2.224E-01	3.651
	+	911.07	*	1.784E+00	5.004E-01	3.067E-01	3.613E-02	5.815
RA-228	+	969.11		1.404E+00	6.657E-01	6.370E-01	1.500E-01	2.204
	+	338.32		1.955E+00	9.854E-01	5.354E-01	2.224E-01	3.651
	+	911.07	*	1.784E+00	5.004E-01	3.067E-01	3.613E-02	5.815
TH-228	+	969.11		1.404E+00	6.657E-01	6.370E-01	1.500E-01	2.204
	+	74.81		2.192E+00	9.652E-01	9.531E-01	1.102E-01	2.300
	+	77.11		2.540E+00	5.718E-01	5.255E-01	6.091E-02	4.834
TH-230		87.30		4.471E-01	7.104E-01	1.046E+00	1.292E-01	0.427
	+	238.63	*	2.099E+00	2.982E-01	1.259E-01	1.499E-02	16.675
	+	300.09		2.563E+00	2.501E+00	1.528E+00	9.108E-01	1.677
	+	609.31	*	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
	+	1120.29		1.244E+00	9.006E-01	6.594E-01	7.108E-02	1.886
	+	1764.49		2.050E+00	5.275E-01	3.055E-01	2.679E-02	6.710
TH-232	+	338.32		1.955E+00	5.906E-01	5.354E-01	5.279E-02	3.651
	+	911.07	*	1.784E+00	5.004E-01	3.067E-01	3.613E-02	5.815
	+	969.11		1.404E+00	6.657E-01	6.370E-01	1.500E-01	2.204
U-234	+	609.31	*	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
	+	1120.29		1.244E+00	9.006E-01	6.594E-01	7.108E-02	1.886
	+	1764.49		2.050E+00	5.275E-01	3.055E-01	2.679E-02	6.710
AM-243	+	74.67	*	3.503E-01	1.542E-01	1.531E-01	1.760E-02	2.288
		86.72		2.441E+01	1.546E+01	2.534E+01	3.113E+00	0.963
		117.66		6.373E-02	5.499E+00	8.951E+00	9.030E-01	0.007
ANH-511		142.18		-3.203E+00	2.501E+01	4.023E+01	4.083E+00	-0.080
	+	511.00	*	2.360E-01	9.187E-02	6.639E-02	5.736E-03	3.555

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	4.358E-01	4.571E-01	7.902E-01	7.346E-02	0.551

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	1274.54	*		-8.403E-02	7.026E-02	9.907E-02	9.000E-03	-0.848
NA-24	1368.53	*		-4.743E-02	7.026E-02	Half-Life too short		
AL-26	1129.67			5.074E-01	2.284E+00	3.539E+00	2.989E-01	0.143
	1808.65	*		-5.418E-03	4.124E-02	6.595E-02	5.642E-03	-0.082
TI-44	67.85			-4.012E-02	8.520E-02	1.381E-01	1.576E-02	-0.290
	+ 78.38	*		4.621E-01	1.040E-01	1.245E-01	1.451E-02	3.710
SC-46	889.25	*		-5.813E-02	5.499E-02	8.143E-02	7.567E-03	-0.714
	+ 1120.51			2.115E-01	1.525E-01	1.734E-01	1.475E-02	1.219
V-48	944.10			4.714E-01	1.232E+00	2.096E+00	1.938E-01	0.225
	983.50	*		-3.378E-02	9.338E-02	1.478E-01	1.351E-02	-0.229
	1312.09			2.747E-02	1.090E-01	1.811E-01	1.706E-02	0.152
CR-51	320.08	*		2.749E-01	5.354E-01	9.110E-01	9.674E-02	0.302
MN-52	744.21			7.150E-02	2.987E-01	5.073E-01	4.391E-02	0.141
	848.13			7.070E+00	7.647E+00	1.369E+01	1.250E+00	0.516
	935.52			7.807E-03	3.077E-01	5.079E-01	4.705E-02	0.015
	1246.25			2.570E+00	9.687E+00	1.606E+01	1.415E+00	0.160
	1333.61			2.482E-01	6.521E+00	1.056E+01	1.015E+00	0.024
	1434.06	*		1.610E-01	2.933E-01	5.222E-01	5.027E-02	0.308
MN-54	834.83	*		-6.624E-03	5.161E-02	8.465E-02	7.682E-03	-0.078
CO-56	846.75	*		3.515E-02	4.974E-02	8.747E-02	7.981E-03	0.402
	977.42			2.245E+00	4.264E+00	7.042E+00	6.450E-01	0.319
	1037.82			-3.398E-01	4.343E-01	6.529E-01	6.128E-02	-0.520
	1175.09			2.176E+00	3.403E+00	5.824E+00	4.750E-01	0.374
	1238.25			1.326E-01	1.380E-01	2.397E-01	2.153E-02	0.553
	1360.21			1.048E+00	1.334E+00	2.428E+00	2.338E-01	0.431
	1771.40			-1.323E+00	4.815E-01	4.230E-01	3.696E-02	-3.128
CO-57	122.06	*		-3.025E-02	3.670E-02	5.736E-02	5.778E-03	-0.527
	136.48			-1.323E-01	2.916E-01	4.623E-01	4.916E-02	-0.286
CO-58	810.76	*		-1.800E-02	4.843E-02	7.754E-02	6.971E-03	-0.232
FE-59	142.65			-1.021E+00	3.932E+00	6.191E+00	6.288E-01	-0.165
	192.34			-6.252E-01	1.433E+00	2.157E+00	3.229E-01	-0.290
	1099.22	*		-5.485E-02	1.297E-01	2.027E-01	1.891E-02	-0.271
	1291.56			2.981E-02	1.761E-01	2.895E-01	2.990E-02	0.103
CO-60	1173.22			-4.633E-02	7.137E-02	1.092E-01	8.891E-03	-0.424
	1332.49	*		5.259E-02	5.534E-02	9.897E-02	9.514E-03	0.531
ZN-65	1115.52	*		5.961E-02	1.495E-01	2.193E-01	1.874E-02	0.272
GE-68	1077.35	*		3.228E-01	1.708E+00	2.841E+00	2.486E-01	0.114
AS-73	53.44	*		4.864E-01	2.291E+00	3.834E+00	4.978E-01	0.127
AS-74	595.88	*		2.419E-02	1.261E-01	2.064E-01	1.753E-02	0.117
	634.78			-4.796E-01	4.858E-01	7.101E-01	5.929E-02	-0.675
SE-75	66.05			-1.108E+01	9.319E+00	1.456E+01	1.869E+00	-0.761
	96.73			-1.686E+00	1.338E+00	1.750E+00	2.681E-01	-0.963
	121.11			-1.179E-01	1.964E-01	3.104E-01	3.838E-02	-0.380
	136.00			-1.414E-02	5.393E-02	8.632E-02	8.738E-03	-0.164
	198.60			-1.256E+00	2.647E+00	4.052E+00	4.730E-01	-0.310
	264.65	*		-1.217E-02	6.284E-02	1.041E-01	1.142E-02	-0.117
	279.53			5.385E-03	1.609E-01	2.690E-01	2.977E-02	0.020
	303.91			4.540E-01	3.450E+00	5.032E+00	6.516E-01	0.090
	400.65			1.913E-01	3.756E-01	6.350E-01	6.974E-02	0.301

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77		87.88		5.891E+01	2.675E+02	3.881E+02	4.815E+01	0.152
		200.40		1.131E+02	1.806E+02	2.967E+02	3.241E+01	0.381
	+	239.00		2.628E+02	3.542E+01	4.251E+01	4.690E+00	6.182
		249.79		2.168E+01	7.270E+01	1.205E+02	1.327E+01	0.180
		281.68		-1.304E+02	1.050E+02	1.629E+02	1.758E+01	-0.800
		297.23		4.291E+02	1.075E+02	1.430E+02	1.516E+01	3.000
		303.76		3.719E+01	2.338E+02	3.417E+02	3.589E+01	0.109
		439.47		1.464E+02	1.567E+02	2.716E+02	2.328E+01	0.539
		484.57		-9.404E+01	2.409E+02	3.805E+02	3.286E+01	-0.247
		520.65	*	-8.383E-02	1.274E+01	2.011E+01	1.737E+00	-0.004
		574.64		-2.878E+01	2.321E+02	3.713E+02	3.176E+01	-0.078
		578.91		7.600E+01	1.034E+02	1.556E+02	1.329E+01	0.489
		585.48		1.518E+03	3.026E+02	5.297E+02	4.516E+01	2.866
		755.35		7.996E+01	1.834E+02	3.155E+02	2.748E+01	0.253
		817.79		1.924E+01	1.282E+02	2.159E+02	1.943E+01	0.089
		698.33		-2.781E+01	4.531E+01	7.229E+01	6.087E+00	-0.385
SR-82		776.49	*	-2.293E-01	5.266E-01	8.456E-01	7.451E-02	-0.271
		1395.20		-2.370E+00	1.552E+01	2.545E+01	2.452E+00	-0.093
RB-83		520.41	*	-2.749E-02	1.113E-01	1.666E-01	1.439E-02	-0.165
		529.64		-8.644E-02	1.325E-01	2.024E-01	1.747E-02	-0.427
		552.65		1.043E-01	2.665E-01	4.445E-01	3.822E-02	0.235
RB-84		881.50	*	2.845E-02	9.581E-02	1.624E-01	1.504E-02	0.175
KR-85		513.99	*	2.411E+01	1.212E+01	1.968E+01	1.700E+00	1.225
SR-85		513.99	*	1.226E-01	6.162E-02	1.001E-01	8.644E-03	1.225
RB-86		1076.63	*	6.735E-01	1.059E+00	1.833E+00	1.605E-01	0.367
Y-88		898.02		-4.259E-02	6.000E-02	9.261E-02	8.672E-03	-0.460
		1836.01	*	-3.590E-02	4.174E-02	5.423E-02	4.568E-03	-0.662
ZR-88		392.90	*	-1.106E-02	4.408E-02	7.140E-02	6.010E-03	-0.155
Y-91		1204.90	*	1.420E+01	2.953E+01	4.972E+01	4.192E+00	0.286
NB-94		702.63	*	4.575E-02	4.631E-02	8.252E-02	6.967E-03	0.554
		871.10		3.753E-02	4.720E-02	8.035E-02	7.411E-03	0.467
NB-95		765.79	*	6.959E-02	6.280E-02	1.117E-01	9.787E-03	0.623
NB-95M		235.69	*	5.026E-01	2.232E-01	3.515E-01	4.230E-02	1.430
ZR-95		724.18		1.403E-01	1.500E-01	2.355E-01	2.191E-02	0.596
		756.15	*	6.116E-02	9.764E-02	1.702E-01	1.630E-02	0.359
NB-97		657.90	*	2.319E-02	9.764E-02	Half-Life	too short	
		1024.50		-2.323E+00	9.764E-02	Half-Life	too short	
ZR-97		254.15		-8.552E-01	9.764E-02	Half-Life	too short	
		355.39		4.472E+00	9.764E-02	Half-Life	too short	
		507.63	*	3.133E+00	9.764E-02	Half-Life	too short	
		602.52		4.183E-02	9.764E-02	Half-Life	too short	
		1021.30		7.510E-01	9.764E-02	Half-Life	too short	
		1147.95		1.744E+00	9.764E-02	Half-Life	too short	
		1362.66		1.113E-01	9.764E-02	Half-Life	too short	
		1750.46		8.905E-01	9.764E-02	Half-Life	too short	
		140.51		7.743E-01	2.958E+01	4.792E+01	1.351E+01	0.016
		181.06		1.988E+01	2.415E+01	3.498E+01	6.788E+00	0.568
MO-99		366.43		-2.486E+01	1.008E+02	1.639E+02	1.502E+01	-0.152
		739.58	*	1.006E+00	1.268E+01	2.128E+01	3.233E+00	0.047

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	778.00			-5.336E-01	3.870E+01	6.433E+01	5.674E+00	-0.008
TC-99M	140.51	*		1.491E+08	3.870E+01	Half-Life	too short	
RH-101	127.23			3.147E-02	4.716E-02	7.837E-02	7.863E-03	0.402
	198.01	*		-1.909E-02	4.863E-02	7.479E-02	8.160E-03	-0.255
	325.23			-2.612E-01	3.284E-01	5.205E-01	5.274E-02	-0.502
RH-102	418.52			-2.529E-01	4.336E-01	6.851E-01	5.833E-02	-0.369
	475.06	*		1.731E-03	4.415E-02	7.220E-02	6.230E-03	0.024
	631.29			3.392E-03	7.727E-02	1.246E-01	1.043E-02	0.027
	697.49			-6.008E-03	1.039E-01	1.732E-01	1.457E-02	-0.035
	766.84			1.625E-01	1.658E-01	2.923E-01	2.562E-02	0.556
	1046.59			2.463E-03	1.578E-01	2.586E-01	2.302E-02	0.010
	1112.84			2.373E-01	3.479E-01	5.315E-01	4.546E-02	0.446
RU-103	497.08	*		6.341E-03	5.279E-02	8.669E-02	1.229E-02	0.073
+	610.33			1.329E+01	3.069E+00	3.731E+00	6.192E-01	3.561
RH-106	511.85	+		1.177E+00	4.582E-01	6.267E-01	5.414E-02	1.878
	621.84	*		1.603E-01	4.512E-01	7.458E-01	9.859E-02	0.215
	1050.47			-6.679E-01	3.163E+00	5.063E+00	4.499E-01	-0.132
RU-106	511.85	+		1.177E+00	4.582E-01	6.267E-01	5.414E-02	1.878
	621.84	*		1.603E-01	4.509E-01	7.458E-01	6.268E-02	0.215
	1050.47			-6.679E-01	3.163E+00	5.063E+00	4.499E-01	-0.132
AG-108M	433.93	*		-1.049E-02	4.414E-02	7.107E-02	6.326E-03	-0.148
	614.37			-5.217E-02	5.982E-02	7.421E-02	6.514E-03	-0.703
	722.95			2.750E-02	6.372E-02	9.604E-02	8.536E-03	0.286
CD-109	88.03	*		5.707E-01	1.567E+00	2.285E+00	2.837E-01	0.250
AG-110M	657.75	*		1.554E-02	5.505E-02	8.211E-02	6.987E-03	0.189
	677.61			-6.208E-02	4.259E-01	7.061E-01	6.044E-02	-0.088
	706.67			-1.158E-01	2.850E-01	4.620E-01	4.022E-02	-0.251
	763.93			-1.372E-01	2.454E-01	3.922E-01	3.526E-02	-0.350
	884.67			1.091E-04	7.041E-02	1.163E-01	1.109E-02	0.001
	937.48			-7.814E-02	1.525E-01	2.388E-01	2.281E-02	-0.327
	1384.27			-4.636E-02	2.555E-01	4.186E-01	4.125E-02	-0.111
IN-111	171.28			1.014E+00	1.253E+00	2.075E+00	2.223E-01	0.489
	245.39	*		9.193E-01	1.332E+00	2.030E+00	2.238E-01	0.453
IN-113M	391.69	*		3.003E-02	6.265E-02	1.060E-01	9.207E-03	0.283
SN-113	391.69	*		3.003E-02	6.265E-02	1.060E-01	9.207E-03	0.283
IN-114M	190.27	*		-6.198E-02	3.071E-01	4.231E-01	4.594E-02	-0.146
CD-115	260.90			-4.960E+01	1.451E+02	2.387E+02	2.616E+01	-0.208
	492.35			9.546E+00	3.787E+01	6.281E+01	5.427E+00	0.152
	527.90	*		-1.851E+00	1.112E+01	1.780E+01	1.536E+00	-0.104
SN-117M	156.02			-9.749E-01	3.164E+00	5.031E+00	5.244E-01	-0.194
	158.56	*		-3.061E-02	7.786E-02	1.232E-01	1.292E-02	-0.248
SB-122	563.90	*		-2.075E+00	2.469E+00	3.626E+00	3.110E-01	-0.572
	692.80			1.091E+01	4.819E+01	8.199E+01	6.879E+00	0.133
I-123	159.00	*		-8.652E-01	4.819E+01	Half-Life	too short	
	528.96			-1.375E+02	4.819E+01	Half-Life	too short	
TE-123M	159.00	*		-1.180E-02	4.169E-02	6.633E-02	6.990E-03	-0.178
I-124	602.71	*		-8.837E-02	9.984E-01	1.373E+00	1.164E-01	-0.064
	722.78			2.168E+00	5.799E+00	8.692E+00	7.429E-01	0.249
	1325.50			-1.932E+01	4.360E+01	6.628E+01	6.329E+00	-0.291

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

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SB-124		1376.25		5.413E+01	4.337E+01	8.016E+01	7.723E+00	0.675
		1509.49		4.498E+00	1.770E+01	3.046E+01	2.909E+00	0.148
		1691.02		7.460E-01	3.629E+00	6.253E+00	5.674E-01	0.119
		602.71		-5.815E-03	6.570E-02	9.038E-02	7.660E-03	-0.064
		645.85		-2.244E-02	6.838E-01	1.095E+00	9.671E-02	-0.020
		709.31		-1.905E+00	3.866E+00	6.225E+00	5.278E-01	-0.306
		713.82		4.739E-01	2.192E+00	3.723E+00	4.450E-01	0.127
		722.78		2.068E-01	5.532E-01	8.291E-01	7.242E-02	0.249
	+	968.20		1.432E+01	6.038E+00	9.210E+00	8.460E-01	1.555
		1045.16		1.888E+00	3.222E+00	5.573E+00	4.966E-01	0.339
		1325.50		-1.968E+00	4.442E+00	6.753E+00	6.448E-01	-0.291
		1368.21		-2.911E-01	2.424E+00	3.993E+00	5.649E-01	-0.073
		1436.60		5.515E+00	5.510E+00	1.020E+01	9.821E-01	0.540
		1691.02	*	1.679E-02	8.166E-02	1.407E-01	1.322E-02	0.119
SB-125		427.89	*	1.182E-01	1.287E-01	2.228E-01	1.940E-02	0.530
	+	463.38		7.193E-01	6.385E-01	7.879E-01	7.320E-02	0.913
		600.56		5.428E-02	2.598E-01	4.251E-01	3.880E-02	0.128
		635.90		-4.844E-01	3.801E-01	5.364E-01	4.862E-02	-0.903
TE-125M		109.28	*	1.167E+00	1.392E+01	2.236E+01	2.626E+00	0.052
		388.63		-3.145E-01	2.925E-01	4.486E-01	3.817E-02	-0.701
I-126		666.33	*	-2.738E-03	2.737E-01	3.958E-01	3.264E-02	-0.007
		753.82		1.219E+00	1.973E+00	3.437E+00	2.991E-01	0.355
SB-126		223.80		-5.321E-01	5.525E+00	9.262E+00	1.021E+00	-0.057
		278.60		8.927E-01	3.563E+00	5.927E+00	6.412E-01	0.151
	+	296.50		1.430E+01	3.516E+00	4.697E+00	4.983E-01	3.044
		414.70		-2.650E-02	1.082E-01	1.749E-01	1.487E-02	-0.151
		415.30		-3.210E+00	8.869E+00	1.423E+01	1.210E+00	-0.226
		555.20		-1.530E+00	5.215E+00	8.237E+00	7.080E-01	-0.186
		573.80		-6.392E-01	1.420E+00	2.212E+00	1.893E-01	-0.289
		593.00		2.124E-01	1.222E+00	1.998E+00	1.699E-01	0.106
		656.30		-2.012E-01	5.010E+00	7.230E+00	5.964E-01	-0.028
		666.33		-1.142E-03	1.142E-01	1.651E-01	1.362E-02	-0.007
		675.00		1.275E+00	2.627E+00	4.554E+00	3.777E-01	0.280
		695.00		-1.127E-02	9.840E-02	1.633E-01	1.372E-02	-0.069
		697.00		-6.086E-02	3.430E-01	5.665E-01	4.766E-02	-0.107
		720.50	*	1.219E-01	2.070E-01	3.176E-01	2.711E-02	0.384
SN-126		856.80		4.673E-01	6.222E-01	9.749E-01	8.936E-02	0.479
		989.30		5.475E-01	1.577E+00	2.677E+00	2.442E-01	0.205
		1034.80		1.582E+01	1.162E+01	2.131E+01	1.908E+00	0.742
		1213.00		7.700E-01	6.517E+00	1.067E+01	9.079E-01	0.072
		64.28		1.111E-01	1.020E+00	1.656E+00	2.803E-01	0.067
		86.94		4.548E-01	6.362E-01	9.468E-01	4.003E-01	0.480
		87.57	*	2.980E-03	1.547E-01	2.227E-01	2.755E-02	0.013
		61.10		4.420E+01	1.060E+02	1.779E+02	2.347E+01	0.248
		252.40		1.937E+00	5.202E+00	8.761E+00	3.726E+00	0.221
		290.80		-3.096E+01	3.158E+01	4.220E+01	5.324E+00	-0.734
SB-127		411.60		1.033E+01	1.560E+01	2.648E+01	4.101E+00	0.390
		444.90		-1.572E+00	1.176E+01	1.905E+01	2.343E+00	-0.083
		473.00		-4.724E-01	2.131E+00	3.423E+00	4.336E-01	-0.138

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
XE-127		543.00		2.484E-01	1.999E+01	3.242E+01	4.606E+00	0.008
		603.60		1.830E+00	1.693E+01	2.376E+01	2.898E+00	0.077
		685.20	*	1.519E+00	1.633E+00	2.902E+00	3.177E-01	0.523
		698.50		-1.158E+01	1.797E+01	2.848E+01	4.428E+00	-0.407
		722.20		3.396E+01	3.760E+01	5.941E+01	6.455E+00	0.572
		783.80		1.639E+00	4.261E+00	7.292E+00	9.018E-01	0.225
		57.60		-1.565E+01	1.419E+01	2.226E+01	2.616E+00	-0.703
		145.22		5.130E-01	1.017E+00	1.649E+00	1.682E-01	0.311
		172.10		2.862E-02	1.776E-01	2.873E-01	3.080E-02	0.100
		202.84	*	-3.681E-02	6.906E-02	1.032E-01	1.129E-02	-0.357
I-131		374.96		1.521E-01	2.803E-01	4.764E-01	4.250E-02	0.319
		80.18		1.222E+00	7.770E+00	1.129E+01	1.331E+00	0.108
		284.30		-1.303E+00	2.053E+00	3.310E+00	3.680E-01	-0.394
		364.48	*	4.738E-02	1.555E-01	2.611E-01	2.520E-02	0.181
TE-132		636.97		-1.478E+00	2.060E+00	3.099E+00	2.737E-01	-0.477
		722.89		4.111E+00	9.997E+00	1.504E+01	1.293E+00	0.273
		49.72		-1.227E+01	5.709E+01	9.402E+01	1.407E+01	-0.130
		111.76		-3.495E+01	3.651E+01	5.680E+01	6.792E+00	-0.615
BA-133		116.30		2.920E+01	3.337E+01	5.593E+01	6.645E+00	0.522
		228.16	*	-4.196E-01	8.233E-01	1.349E+00	2.297E-01	-0.311
		53.15		-2.943E+00	1.027E+01	1.684E+01	2.199E+00	-0.175
		79.62		5.490E+00	2.533E+00	3.752E+00	6.442E-01	1.463
I-133		81.00		-2.787E-01	1.894E-01	2.444E-01	4.354E-02	-1.140
		276.40		5.614E-01	5.689E-01	9.660E-01	1.533E-01	0.581
		302.84		2.634E-01	2.419E-01	3.716E-01	5.422E-02	0.709
		356.01	*	6.759E-02	6.433E-02	9.977E-02	1.372E-02	0.677
		383.85		2.427E-01	4.491E-01	7.609E-01	9.609E-02	0.319
	+	510.53		1.261E+00	4.491E-01	Half-Life	too short	
		529.87	*	-4.312E-03	4.491E-01	Half-Life	too short	
		706.58		-8.576E-02	4.491E-01	Half-Life	too short	
		856.28		7.324E-02	4.491E-01	Half-Life	too short	
		875.33		5.971E-03	4.491E-01	Half-Life	too short	
CS-134		1236.41		5.760E-01	4.491E-01	Half-Life	too short	
		1298.22		-1.253E-01	4.491E-01	Half-Life	too short	
		475.35		1.221E+00	2.860E+00	4.791E+00	4.134E-01	0.255
		563.23		-2.780E-01	5.227E-01	7.888E-01	6.832E-02	-0.352
		569.32		7.932E-02	2.754E-01	4.546E-01	3.948E-02	0.174
		604.70		-2.506E-03	5.595E-02	7.731E-02	6.563E-03	-0.032
		795.84	*	8.567E-02	6.471E-02	1.174E-01	1.052E-02	0.730
		801.93		-2.377E-01	5.072E-01	8.065E-01	7.240E-02	-0.295
		1038.57		-6.744E+00	5.530E+00	7.872E+00	7.036E-01	-0.857
		1167.94		2.271E-02	3.903E+00	6.346E+00	5.190E-01	0.004
CS-135		1365.15		6.807E-01	1.703E+00	2.979E+00	2.974E-01	0.228
		268.24	*	8.072E-02	2.302E-01	3.905E-01	4.686E-02	0.207
		288.45		5.809E+09	2.302E-01	Half-Life	too short	
		417.63		-2.920E+09	2.302E-01	Half-Life	too short	
I-135		546.56		6.481E+08	2.302E-01	Half-Life	too short	
		836.80		3.725E+09	2.302E-01	Half-Life	too short	
		1038.76		-4.341E+09	2.302E-01	Half-Life	too short	

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

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	1124.00			6.565E+09	2.302E-01	Half-Life	too short	
	1131.51			8.033E+07	2.302E-01	Half-Life	too short	
	1260.41	*		-6.621E+08	2.302E-01	Half-Life	too short	
	1457.56			1.533E+11	2.302E-01	Half-Life	too short	
	1678.03			3.709E+08	2.302E-01	Half-Life	too short	
	1706.46			-2.802E+09	2.302E-01	Half-Life	too short	
	1791.20			1.254E+09	2.302E-01	Half-Life	too short	
CS-136	66.91			-1.538E+00	1.438E+00	2.244E+00	3.848E-01	-0.685
	86.29			3.753E+00	1.792E+00	2.888E+00	4.482E-01	1.299
	153.22			8.138E-01	9.021E-01	1.503E+00	1.686E-01	0.541
	163.89			-4.785E-01	1.591E+00	2.496E+00	2.865E-01	-0.192
	176.55			-3.833E-01	5.346E-01	8.283E-01	9.240E-02	-0.463
	273.65			-1.272E+00	6.799E-01	1.016E+00	1.150E-01	-1.252
	340.57			6.513E-01	2.224E-01	3.650E-01	3.661E-02	1.784
	818.51			-2.444E-02	8.545E-02	1.377E-01	1.241E-02	-0.177
	1048.07	*		-5.618E-02	1.410E-01	2.212E-01	2.046E-02	-0.254
	1235.34			7.027E-01	8.944E-01	1.527E+00	1.820E-01	0.460
CE-139	165.85	*		-6.358E-03	4.555E-02	7.285E-02	7.776E-03	-0.087
BA-140	162.64			-3.118E-01	1.118E+00	1.757E+00	1.932E-01	-0.178
	304.84			6.145E-01	1.975E+00	2.909E+00	8.334E-01	0.211
	423.70			-8.213E-01	2.732E+00	4.375E+00	1.417E+00	-0.188
	537.32	*		2.596E-01	3.470E-01	5.772E-01	1.913E-01	0.450
LA-140	328.77			2.367E-01	4.149E-01	7.063E-01	7.401E-02	0.335
	432.53			3.840E-01	2.611E+00	4.321E+00	3.878E-01	0.089
	487.03			-4.716E-02	1.755E-01	2.800E-01	2.567E-02	-0.168
	751.79			-4.215E-01	2.315E+00	3.805E+00	3.655E-01	-0.111
	815.85			-2.365E-01	3.674E-01	5.684E-01	5.655E-02	-0.416
	867.82			-4.905E-01	2.008E+00	2.757E+00	2.657E-01	-0.178
	919.63			3.459E+00	3.714E+00	5.952E+00	6.666E-01	0.581
	925.24			-1.455E+00	1.417E+00	2.075E+00	2.031E-01	-0.701
	1596.49	*		-5.008E-02	1.193E-01	1.856E-01	1.740E-02	-0.270
CE-141	145.44	*		7.798E-02	8.986E-02	1.497E-01	1.547E-02	0.521
CE-143	57.37			-1.699E-03	8.986E-02	Half-Life	too short	
	231.56			-1.932E-03	8.986E-02	Half-Life	too short	
	293.26	*		5.340E-04	8.986E-02	Half-Life	too short	
	350.59			2.829E-02	8.986E-02	Half-Life	too short	
	490.36			8.616E-04	8.986E-02	Half-Life	too short	
	664.57			1.190E-03	8.986E-02	Half-Life	too short	
	721.93			1.628E-03	8.986E-02	Half-Life	too short	
CE-144	80.11			1.114E+00	3.847E+00	5.620E+00	6.605E-01	0.198
	133.54	*		-1.199E-01	2.931E-01	4.657E-01	7.639E-02	-0.257
PM-144	476.78			8.015E-02	9.755E-02	1.673E-01	1.579E-02	0.479
	618.01			-1.648E-03	4.426E-02	6.900E-02	5.978E-03	-0.024
	696.49	*		-1.703E-02	4.664E-02	7.593E-02	6.388E-03	-0.224
	778.57			6.531E-01	3.185E+00	5.383E+00	4.751E-01	0.121
PR-144	696.49	*		-1.153E+00	3.159E+00	5.143E+00	4.325E-01	-0.224
	1489.15			-2.031E+00	1.376E+01	2.231E+01	2.137E+00	-0.091
PM-146	453.90	*		2.922E-02	5.976E-02	1.008E-01	1.080E-02	0.290
	633.02			-1.427E-01	1.880E+00	3.000E+00	1.119E+00	-0.048

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	735.90			-8.612E-02	1.985E-01	3.090E-01	8.839E-02	-0.279
	747.13			-1.475E-02	1.262E-01	2.085E-01	2.934E-02	-0.071
	91.11			-3.888E-01	5.189E-01	7.196E-01	8.908E-02	-0.540
	319.41			2.417E+00	4.647E+00	7.910E+00	8.103E-01	0.306
	439.89			8.018E+00	7.804E+00	1.358E+01	1.164E+00	0.590
PM-149	531.02	*		-1.097E+00	7.129E-01	9.683E-01	1.448E-01	-1.132
EU-152	285.90	*		3.109E+01	1.068E+02	1.803E+02	3.032E+01	0.172
	121.78			-9.822E-02	1.074E-01	1.669E-01	1.871E-02	-0.588
	244.69			8.001E-01	5.250E-01	8.291E-01	9.139E-02	0.965
	344.27	*		-1.352E-02	2.064E-01	2.310E-01	2.351E-02	-0.059
	443.98			3.748E-01	1.366E+00	2.276E+00	1.953E-01	0.165
	778.89			7.889E-02	3.588E-01	6.075E-01	5.360E-02	0.130
	867.32			-7.383E-01	1.273E+00	1.659E+00	1.527E-01	-0.445
	964.01			7.431E-01	4.806E-01	7.861E-01	7.230E-02	0.945
	1085.78			3.741E-01	5.380E-01	9.368E-01	8.157E-02	0.399
	1112.02			3.667E-01	4.872E-01	7.514E-01	6.430E-02	0.488
GD-153	1407.95			1.803E-01	2.691E-01	4.814E-01	4.638E-02	0.374
	69.67			2.903E+00	3.304E+00	4.966E+00	5.669E-01	0.585
	83.37			-3.521E+01	2.700E+01	3.842E+01	4.606E+00	-0.916
	97.43	*		3.020E-02	1.278E-01	1.854E-01	2.047E-02	0.163
EU-154	103.18			-2.835E-01	1.602E-01	2.385E-01	2.521E-02	-1.189
	123.07			3.075E-02	7.456E-02	1.230E-01	1.537E-02	0.250
	247.94			-5.368E-01	5.851E-01	7.929E-01	1.060E-01	-0.677
	591.81			-4.613E-01	8.917E-01	1.332E+00	1.543E-01	-0.346
	723.30			1.509E-01	2.718E-01	4.140E-01	3.919E-02	0.365
EU-155	756.87			3.972E-01	1.082E+00	1.851E+00	2.230E-01	0.215
	873.19			1.273E-01	4.077E-01	6.924E-01	8.780E-02	0.184
	996.32			-2.477E-01	5.085E-01	7.917E-01	1.425E-01	-0.313
	1004.76			-1.488E-01	2.754E-01	4.251E-01	5.092E-02	-0.350
	1274.45	*		-1.540E-01	1.893E-01	2.789E-01	3.252E-02	-0.552
	48.70			1.829E+00	9.060E+00	1.518E+01	2.038E+00	0.120
	60.01			-2.282E+00	1.099E+01	1.804E+01	2.037E+00	-0.126
	86.54			2.624E-01	1.693E-01	2.774E-01	3.421E-02	0.946
	105.31	*		1.790E-01	1.580E-01	2.674E-01	2.817E-02	0.669
	86.79			5.752E-01	4.670E-01	7.337E-01	9.021E-02	0.784
TB-160	197.04			-2.287E-01	8.266E-01	1.280E+00	1.395E-01	-0.179
	215.65			-4.829E-01	1.129E+00	1.760E+00	1.936E-01	-0.274
	298.57			4.266E-01	2.466E-01	2.945E-01	3.115E-02	1.449
	879.36	*		1.478E-02	1.978E-01	3.290E-01	3.045E-02	0.045
	962.29			1.225E+00	8.481E-01	1.383E+00	1.273E-01	0.886
HO-166M	966.15			1.044E+00	4.003E-01	6.792E-01	6.243E-02	1.537
	1177.93			1.442E-01	5.493E-01	9.122E-01	7.464E-02	0.158
	1271.85			7.480E-01	1.019E+00	1.768E+00	1.600E-01	0.423
	80.57			-3.268E-01	4.961E-01	6.906E-01	8.136E-02	-0.473
	184.41			8.381E-02	6.357E-02	9.657E-02	1.044E-02	0.868
	280.46			-8.944E-02	1.260E-01	2.026E-01	2.188E-02	-0.442
	410.95			2.169E-01	3.562E-01	6.051E-01	5.136E-02	0.359
	711.68	*		6.263E-02	8.040E-02	1.420E-01	1.206E-02	0.441
	752.31			-1.525E-02	3.844E-01	6.389E-01	5.555E-02	-0.024

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		810.29		-2.787E-02	7.406E-02	1.185E-01	1.063E-02	-0.235
		51.35		-1.699E+01	9.667E+01	1.594E+02	2.148E+01	-0.107
		52.39		-5.614E+00	4.665E+01	7.707E+01	1.022E+01	-0.073
		59.40		-3.686E+01	6.051E+01	9.762E+01	1.101E+01	-0.378
LU-176		66.72	*	-7.446E+01	5.484E+01	8.509E+01	9.713E+00	-0.875
		88.36		4.499E-01	3.608E-01	5.396E-01	6.663E-02	0.834
		201.83		-2.773E-02	4.211E-02	6.500E-02	7.107E-03	-0.427
		306.84	*	5.519E-03	4.016E-02	5.860E-02	6.128E-03	0.094
LU-177		401.10		3.100E+00	9.909E+00	1.658E+01	1.401E+00	0.187
		112.95		-1.904E+00	2.160E+00	3.377E+00	3.434E-01	-0.564
LU-177M	+	208.36	*	3.042E+00	2.085E+00	2.691E+00	2.952E-01	1.130
		52.97		-1.195E+00	4.682E+00	7.685E+00	1.008E+00	-0.155
		54.07		1.150E+00	2.334E+00	3.943E+00	5.048E-01	0.292
		61.30		1.405E+00	3.159E+00	5.306E+00	6.031E-01	0.265
HF-181		121.62		-4.607E-01	5.479E-01	8.558E-01	8.614E-02	-0.538
		147.16		3.713E-01	9.480E-01	1.555E+00	1.591E-01	0.239
		171.86		2.831E-01	7.262E-01	1.185E+00	1.270E-01	0.239
		218.09		-8.166E-03	1.231E+00	2.072E+00	2.282E-01	-0.004
		268.79		1.275E+00	1.163E+00	2.023E+00	2.206E-01	0.630
		319.02		2.581E-01	3.761E-01	6.451E-01	6.612E-02	0.400
		367.43		7.185E-01	1.300E+00	2.213E+00	2.021E-01	0.325
		413.65	*	-8.299E-02	2.596E-01	4.177E-01	3.549E-02	-0.199
		56.28		-1.544E+00	2.318E+00	3.725E+00	4.521E-01	-0.415
		57.53		-1.287E+00	1.201E+00	1.887E+00	2.222E-01	-0.682
		65.20		-5.606E-01	1.801E+00	2.940E+00	3.357E-01	-0.191
		133.02		-1.022E-01	9.550E-02	1.470E-01	1.477E-02	-0.695
W-181		136.25		-1.731E-01	6.257E-01	1.001E+00	1.008E-01	-0.173
		345.85		-2.598E-02	3.297E-01	4.432E-01	4.293E-02	-0.059
		482.03	*	-2.613E-02	5.843E-02	9.204E-02	7.947E-03	-0.284
		56.28		-6.089E-01	9.150E-01	1.470E+00	1.785E-01	-0.414
TA-182		57.53		-5.080E-01	4.747E-01	7.458E-01	8.781E-02	-0.681
		65.20	*	-2.197E-01	7.057E-01	1.152E+00	1.316E-01	-0.191
		67.75		-1.949E-01	2.063E-01	3.272E-01	3.734E-02	-0.596
		100.10		2.076E-01	2.568E-01	4.314E-01	4.657E-02	0.481
RE-183		152.43		1.815E-01	4.799E-01	7.861E-01	8.129E-02	0.231
		222.10		-2.971E-02	4.892E-01	8.215E-01	9.053E-02	-0.036
		1001.68		-1.627E+00	2.755E+00	4.323E+00	3.926E-01	-0.376
	+	1121.28		5.852E-01	4.220E-01	4.773E-01	4.057E-02	1.226
		1189.05		3.233E-01	4.222E-01	7.330E-01	6.073E-02	0.441
		1221.42	*	9.407E-02	2.750E-01	4.593E-01	3.942E-02	0.205
		1230.97		-6.916E-02	7.265E-01	1.167E+00	1.012E-01	-0.059
		57.98		-4.969E-01	4.630E-01	7.274E-01	8.474E-02	-0.683
RE-184		59.32		-8.000E-02	2.437E-01	3.981E-01	4.496E-02	-0.201
		67.20		-3.780E-01	3.756E-01	5.939E-01	6.778E-02	-0.637
		162.32	*	9.183E-02	1.637E-01	2.658E-01	2.812E-02	0.345
	+	208.81		2.949E+00	2.021E+00	2.620E+00	2.874E-01	1.126
RE-184		291.72		-1.659E+00	1.592E+00	2.122E+00	2.264E-01	-0.782
		57.98		-1.840E+00	1.714E+00	2.693E+00	3.137E-01	-0.683
		59.32		-2.959E-01	9.013E-01	1.473E+00	1.663E-01	-0.201

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OS-185		67.20		-1.399E+00	1.390E+00	2.198E+00	2.509E-01	-0.637
		161.27		3.365E-01	5.246E-01	8.656E-01	9.134E-02	0.389
		216.55		-4.978E-02	3.896E-01	6.362E-01	7.000E-02	-0.078
		252.85	*	1.587E-01	3.140E-01	5.381E-01	5.917E-02	0.295
		318.01		2.629E-01	6.433E-01	1.090E+00	1.119E-01	0.241
		792.07		-1.496E-01	1.399E+00	2.306E+00	2.049E-01	-0.065
		903.28		6.695E-01	1.635E+00	2.435E+00	2.269E-01	0.275
		920.93		-2.328E-01	6.371E-01	9.284E-01	8.626E-02	-0.251
		59.72		-2.440E-01	6.605E-01	1.077E+00	1.214E-01	-0.227
		61.14		1.527E-01	3.464E-01	5.818E-01	6.608E-02	0.262
		69.30		3.664E-01	5.702E-01	8.931E-01	1.019E-01	0.410
		592.07		-1.429E+00	3.482E+00	5.422E+00	4.613E-01	-0.263
		646.12	*	5.114E-03	5.767E-02	9.329E-02	7.742E-03	0.055
		717.42		-1.069E+00	1.201E+00	1.858E+00	1.583E-01	-0.575
		874.81		1.933E-01	8.041E-01	1.357E+00	1.254E-01	0.142
RE-188		880.27		9.064E-02	1.105E+00	1.840E+00	1.704E-01	0.049
		155.03	*	1.428E-01	2.437E-01	4.020E-01	4.181E-02	0.355
		477.96		2.466E+00	4.470E+00	7.547E+00	6.514E-01	0.327
W-188		633.10		-2.539E-01	3.771E+00	6.024E+00	5.035E-01	-0.042
		63.58		7.112E+01	1.067E+02	1.762E+02	2.011E+01	0.404
IR-192		227.08		-1.502E+00	1.762E+01	2.953E+01	3.257E+00	-0.051
		290.67	*	-1.151E+01	1.254E+01	1.689E+01	1.805E+00	-0.682
	+	295.96		1.137E+00	2.798E-01	3.769E-01	4.020E-02	3.016
		308.46		1.274E-02	1.462E-01	2.224E-01	2.328E-02	0.057
		316.51	*	-2.258E-02	4.958E-02	8.023E-02	8.272E-03	-0.281
AU-195		468.07		7.878E-02	1.026E-01	1.555E-01	1.437E-02	0.507
		604.41		-7.267E-02	7.557E-01	1.038E+00	1.341E-01	-0.070
		612.46		3.996E+00	1.196E+00	2.088E+00	2.034E-01	1.914
		65.12		-9.356E-02	3.284E-01	5.369E-01	6.131E-02	-0.174
		66.83		-1.961E-01	1.783E-01	2.805E-01	3.202E-02	-0.699
	+	75.70		1.130E+00	4.975E-01	7.019E-01	8.096E-02	1.610
TL-200		98.88	*	4.451E-01	3.478E-01	5.535E-01	6.032E-02	0.804
		129.76		5.679E+00	4.247E+00	7.176E+00	7.201E-01	0.791
		367.94	*	2.288E-04	4.247E+00	Half-Life	too short	
		579.30		4.109E-03	4.247E+00	Half-Life	too short	
TL-201		828.27		2.355E-03	4.247E+00	Half-Life	too short	
		1205.75		1.619E-03	4.247E+00	Half-Life	too short	
		68.90		4.894E+00	7.747E+00	1.213E+01	1.385E+00	0.403
		70.82		1.381E+00	4.521E+00	6.635E+00	7.580E-01	0.208
TL-202		80.30		-4.009E+00	7.682E+00	1.078E+01	1.268E+00	-0.372
		135.34		9.106E-01	2.921E+01	4.738E+01	4.769E+00	0.019
		167.43	*	-9.617E-01	9.066E+00	1.452E+01	1.551E+00	-0.066
		68.90		5.051E-01	7.996E-01	1.252E+00	1.429E-01	0.403
		70.82		1.421E-01	4.653E-01	6.830E-01	7.801E-02	0.208
HG-203		80.30		-4.128E-01	7.909E-01	1.110E+00	1.306E-01	-0.372
		439.56	*	9.114E-02	9.205E-02	1.600E-01	1.371E-02	0.570
		70.83		6.440E-01	2.086E+00	3.061E+00	4.755E-01	0.210
		72.87		1.293E+00	1.226E+00	1.833E+00	2.787E-01	0.705
		82.60		-2.095E-01	1.962E+00	2.812E+00	4.507E-01	-0.074

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-207		279.20	*	2.035E-02	5.960E-02	1.010E-01	1.112E-02	0.202
		72.80		3.288E-01	3.603E-01	5.396E-01	6.179E-02	0.609
	+	74.97		6.287E-01	2.768E-01	3.576E-01	4.116E-02	1.758
		84.90		4.001E-02	3.031E-01	4.996E-01	6.054E-02	0.080
		569.67		2.952E-02	4.205E-02	7.148E-02	6.122E-03	0.413
TL-207		1063.62	*	-1.108E-01	8.114E-02	1.145E-01	1.010E-02	-0.968
		1770.23		-5.780E-01	7.116E-01	7.300E-01	6.381E-02	-0.792
		81.07		-6.260E-01	4.096E-01	5.377E-01	6.353E-02	-1.164
		83.78		-3.091E-01	2.288E-01	3.244E-01	3.899E-02	-0.953
	+	94.90		6.963E-01	6.212E-01	6.263E-01	7.088E-02	1.112
		122.32		-1.102E+00	2.516E+00	4.008E+00	4.252E-01	-0.275
		144.24		-3.585E-02	1.027E+00	1.633E+00	1.806E-01	-0.022
		154.21		4.969E-01	5.663E-01	9.428E-01	1.047E-01	0.527
		269.46		4.211E-01	2.775E-01	4.878E-01	5.385E-02	0.863
	+	323.87	*	-1.248E+00	1.015E+00	1.531E+00	2.833E-01	-0.815
PO-209		338.28		8.163E+00	2.569E+00	3.374E+00	4.457E-01	2.419
		445.03		-3.676E-01	3.170E+00	5.144E+00	6.204E-01	-0.071
		260.50		1.967E+00	1.364E+01	2.298E+01	2.518E+00	0.086
		262.80		-2.026E+00	3.786E+01	6.318E+01	6.915E+00	-0.032
		896.60	*	-6.166E+00	1.040E+01	1.621E+01	1.511E+00	-0.380
BI-210		46.50	*	2.101E+00	1.563E+01	2.573E+01	3.169E+00	0.082
PB-210		46.50	*	2.101E+00	1.563E+01	2.573E+01	3.169E+00	0.082
PO-210		46.50	*	2.101E+00	1.563E+01	2.573E+01	3.001E+00	0.082
PB-211		404.84	*	-4.315E-01	1.419E+00	2.247E+00	1.408E+00	-0.192
PO-215		427.08		-6.567E-02	2.922E+00	4.783E+00	2.971E+00	-0.014
		831.96		-4.098E-01	1.686E+00	2.706E+00	1.698E+00	-0.151
		81.07		-6.260E-01	4.096E-01	5.377E-01	6.353E-02	-1.164
		83.78		-3.091E-01	2.288E-01	3.244E-01	3.899E-02	-0.953
	+	94.90		6.963E-01	6.212E-01	6.263E-01	7.088E-02	1.112
		122.32		-1.102E+00	2.516E+00	4.008E+00	4.252E-01	-0.275
		144.24		-3.585E-02	1.027E+00	1.633E+00	1.806E-01	-0.022
		154.21		4.969E-01	5.663E-01	9.428E-01	1.047E-01	0.527
		269.46		4.211E-01	2.775E-01	4.878E-01	5.385E-02	0.863
	+	323.87	*	-1.248E+00	1.015E+00	1.531E+00	2.833E-01	-0.815
RN-219		338.28		8.163E+00	2.569E+00	3.374E+00	4.457E-01	2.419
		445.03		-3.676E-01	3.170E+00	5.144E+00	6.204E-01	-0.071
		271.23		4.671E-01	3.590E-01	6.259E-01	7.679E-02	0.746
RN-220		401.81	*	7.310E-02	6.163E-01	1.020E+00	1.523E-01	0.072
RA-223		549.76	*	-1.845E+01	3.654E+01	5.674E+01	4.882E+00	-0.325
RA-223		81.07		-6.260E-01	4.096E-01	5.377E-01	6.353E-02	-1.164
		83.78		-3.091E-01	2.288E-01	3.244E-01	3.899E-02	-0.953
	+	94.90		6.963E-01	6.212E-01	6.263E-01	7.088E-02	1.112
		122.32		-1.102E+00	2.516E+00	4.008E+00	4.252E-01	-0.275
		144.24		-3.585E-02	1.027E+00	1.633E+00	1.806E-01	-0.022
		154.21		4.969E-01	5.663E-01	9.428E-01	1.047E-01	0.527
		269.46		4.211E-01	2.775E-01	4.878E-01	5.385E-02	0.863
	+	323.87	*	-1.248E+00	1.015E+00	1.531E+00	2.833E-01	-0.815
		338.28		8.163E+00	2.569E+00	3.374E+00	4.457E-01	2.419
		445.03		-3.676E-01	3.170E+00	5.144E+00	6.204E-01	-0.071

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		79.80		2.632E+00	3.105E+00	4.567E+00	1.047E+00	0.576
		236.00		1.937E+00	5.122E-01	7.623E-01	1.071E-01	2.541
		256.20	*	-2.806E-01	5.225E-01	8.483E-01	1.424E-01	-0.331
		286.10		1.210E+00	2.298E+00	3.915E+00	5.745E-01	0.309
	+	299.80		4.683E+00	3.721E+00	3.840E+00	7.114E-01	1.220
		304.40		1.802E-01	3.084E+00	4.475E+00	8.674E-01	0.040
TH-227		334.20		-2.664E-01	3.710E+00	5.304E+00	1.063E+00	-0.050
		79.80		2.632E+00	3.106E+00	4.567E+00	1.059E+00	0.576
	+	94.00		5.571E+00	5.093E+00	5.573E+00	1.284E+00	1.000
		236.00		1.937E+00	5.022E-01	7.623E-01	9.944E-02	2.541
		256.20	*	-2.806E-01	5.231E-01	8.483E-01	1.637E-01	-0.331
		286.10		1.210E+00	2.594E+00	3.915E+00	3.937E+00	0.309
TH-229	+	299.80		4.683E+00	3.721E+00	3.840E+00	7.114E-01	1.220
		304.40		1.802E-01	3.084E+00	4.475E+00	8.674E-01	0.040
		334.20		-2.664E-01	3.710E+00	5.304E+00	1.063E+00	-0.050
		85.43		5.341E-01	3.058E-01	5.177E-01	6.298E-02	1.032
		88.47		2.597E-01	2.074E-01	3.102E-01	3.823E-02	0.837
		100.00		2.189E-01	2.680E-01	4.505E-01	4.866E-02	0.486
PA-231		193.63	*	7.088E-03	7.366E-01	1.179E+00	1.283E-01	0.006
		210.97		1.833E+00	1.294E+00	2.020E+00	2.218E-01	0.907
		283.67	*	-1.788E+00	2.271E+00	3.609E+00	5.954E-01	-0.496
TH-231	+	301.29		1.873E+00	1.470E+00	1.579E+00	2.158E-01	1.186
		81.07		-6.260E-01	4.096E-01	5.377E-01	6.353E-02	-1.164
		83.78		-3.091E-01	2.288E-01	3.244E-01	3.899E-02	-0.953
	+	94.90		6.963E-01	6.212E-01	6.263E-01	7.088E-02	1.112
		122.32		-1.102E+00	2.516E+00	4.008E+00	4.252E-01	-0.275
		144.24		-3.585E-02	1.027E+00	1.633E+00	1.806E-01	-0.022
		154.21		4.969E-01	5.663E-01	9.428E-01	1.047E-01	0.527
		269.46		4.211E-01	2.775E-01	4.878E-01	5.385E-02	0.863
		323.87	*	-1.248E+00	1.015E+00	1.531E+00	2.833E-01	-0.815
	+	338.28		8.163E+00	2.569E+00	3.374E+00	4.457E-01	2.419
		445.03		-3.676E-01	3.170E+00	5.144E+00	6.204E-01	-0.071
	U-231	84.21		-1.585E+01	8.391E+00	1.207E+01	1.455E+00	-1.313
	+	92.29		4.817E+00	4.297E+00	5.155E+00	6.015E-01	0.935
PA-233		95.87	*	-1.405E+00	1.647E+00	2.246E+00	2.516E-01	-0.625
		108.00		7.738E-01	2.735E+00	4.430E+00	4.573E-01	0.175
	+	75.28		1.835E+01	8.407E+00	1.091E+01	1.871E+00	1.681
		86.59		4.286E+00	2.958E+00	4.508E+00	1.272E+00	0.951
	+	300.12		1.306E+00	1.030E+00	1.073E+00	1.724E-01	1.217
		311.98	*	-2.599E-02	9.009E-02	1.473E-01	1.558E-02	-0.176
PA-234		340.50		3.478E+00	1.374E+00	1.871E+00	4.546E-01	1.858
		398.62		-8.883E-02	3.139E+00	5.152E+00	1.369E+00	-0.017
		415.76		-5.681E-01	2.469E+00	3.990E+00	8.580E-01	-0.142
		63.00		3.015E+00	3.250E+00	5.362E+00	9.228E-01	0.562
	+	94.67		4.968E-01	4.453E-01	4.646E-01	6.705E-02	1.069
		98.44		2.508E-01	2.018E-01	2.270E-01	1.275E-01	1.105
		99.86		5.620E-01	6.793E-01	1.142E+00	1.235E-01	0.492
		111.00		-1.074E-01	2.684E-01	4.298E-01	5.706E-02	-0.250
		131.20		5.750E-02	1.552E-01	2.552E-01	2.562E-02	0.225

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	152.70			3.115E-01	4.663E-01	7.681E-01	1.381E-01	0.406
	186.00		+	4.527E+00	3.235E+00	3.716E+00	1.185E+00	1.218
	226.40			-3.317E-02	5.687E-01	9.543E-01	1.421E-01	-0.035
	227.20			-6.450E-02	5.994E-01	1.004E+00	1.107E-01	-0.064
	248.90			-3.475E-02	1.227E+00	1.870E+00	4.383E-01	-0.019
	293.70			5.556E+00	1.666E+00	2.301E+00	4.232E-01	2.415
	369.80			1.451E-02	1.213E+00	2.003E+00	4.398E-01	0.007
	568.70			-8.957E-02	1.376E+00	2.213E+00	1.896E-01	-0.040
	569.50			2.100E-01	3.779E-01	6.358E-01	5.447E-02	0.330
	574.00			-2.406E-01	2.087E+00	3.341E+00	2.858E-01	-0.072
	699.00			-7.532E-01	9.851E-01	1.538E+00	2.920E-01	-0.490
	706.10			-8.604E-02	1.456E+00	2.425E+00	1.080E+00	-0.035
	733.00			4.499E-01	5.337E-01	8.337E-01	1.850E-01	0.540
	742.81			6.364E-01	1.903E+00	3.176E+00	2.135E+00	0.200
	796.30			1.874E+00	1.337E+00	2.287E+00	6.207E-01	0.819
	805.60			6.547E-02	1.271E+00	2.120E+00	6.516E-01	0.031
	819.60			-6.886E-02	1.533E+00	2.533E+00	9.655E-01	-0.027
	826.30			-2.417E-01	1.121E+00	1.816E+00	8.139E-01	-0.133
	831.60			-2.171E-01	8.647E-01	1.399E+00	4.195E-01	-0.155
	876.40			-5.041E-01	1.278E+00	1.855E+00	1.908E+00	-0.272
	880.51			1.975E-02	4.009E-01	6.654E-01	6.162E-02	0.030
	883.24			3.483E-01	4.679E-01	7.180E-01	4.833E-01	0.485
	899.00			2.328E-03	1.191E+00	1.966E+00	8.621E-01	0.001
	925.00			-1.401E+00	1.524E+00	2.262E+00	2.100E-01	-0.619
	926.50			-3.860E-02	2.297E-01	3.719E-01	9.488E-02	-0.104
	946.00		*	-1.771E-01	4.265E-01	6.727E-01	1.282E-01	-0.263
	949.00			-1.709E-01	6.560E-01	1.054E+00	9.737E-02	-0.162
	980.50			2.092E-02	1.025E+00	1.686E+00	1.543E-01	0.012
	1394.10			-4.307E-01	1.716E+00	2.739E+00	1.787E+00	-0.157
PA-234M	766.42			1.748E+01	1.940E+01	3.059E+01	1.553E+01	0.571
	1001.03		*	-3.499E+00	6.302E+00	9.923E+00	1.029E+00	-0.353
TH-234	63.29		*	2.151E+00	2.741E+00	4.505E+00	8.777E-01	0.477
	92.38		+	1.442E+00	1.306E+00	1.537E+00	3.030E-01	0.938
U-235	89.95			-3.165E+00	2.318E+00	2.800E+00	8.956E-01	-1.130
	93.35		+	1.733E+00	1.614E+00	1.791E+00	5.202E-01	0.968
	105.00			1.586E+00	1.619E+00	2.623E+00	7.980E-01	0.605
	143.76		*	6.344E-02	3.146E-01	5.047E-01	9.248E-02	0.126
	163.35			-3.469E-01	7.329E-01	1.137E+00	2.280E-01	-0.305
	185.71		+	1.677E-01	1.088E-01	1.366E-01	1.478E-02	1.228
	205.31			-1.553E-01	8.541E-01	1.173E+00	2.374E-01	-0.132
NP-236	94.67		+	3.768E-01	3.361E-01	3.526E-01	4.001E-02	1.068
	98.44			1.896E-01	1.112E-01	1.716E-01	1.877E-02	1.105
	111.00			-8.121E-02	2.029E-01	3.251E-01	3.322E-02	-0.250
	160.31		*	1.020E-02	1.179E-01	1.906E-01	2.006E-02	0.054
NP-237	86.50		*	6.374E-01	4.334E-01	6.767E-01	1.624E-01	0.942
	95.87			-1.416E+00	1.692E+00	2.264E+00	5.807E-01	-0.625
U-238	63.29		*	2.151E+00	2.741E+00	4.505E+00	8.777E-01	0.477
	92.38		+	1.442E+00	1.286E+00	1.537E+00	1.791E-01	0.938
NP-239	99.55			2.679E-01	2.342E-01	3.852E-01	4.176E-02	0.695

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-241 CM-243	+	117.00	*	2.122E-01	2.728E-01	4.566E-01	4.610E-02	0.465
		209.75		2.345E+00	1.607E+00	2.108E+00	2.314E-01	1.112
		228.18		-1.632E-01	3.189E-01	5.237E-01	5.777E-02	-0.312
		277.60		2.373E-01	2.741E-01	4.666E-01	5.052E-02	0.508
		334.30		7.076E-01	2.029E+00	2.998E+00	2.981E-01	0.236
		59.54	*	-1.769E-01	3.511E-01	5.692E-01	6.681E-02	-0.311
		99.55		2.756E-01	2.410E-01	3.964E-01	4.297E-02	0.695
		103.76	*	-9.628E-02	1.454E-01	2.307E-01	2.431E-02	-0.417
		117.00		2.183E-01	2.807E-01	4.697E-01	4.742E-02	0.465
		209.75		2.311E+00	1.584E+00	2.078E+00	2.281E-01	1.112
AM-246	+	228.18		-1.649E-01	3.222E-01	5.292E-01	5.837E-02	-0.312
		277.60		2.392E-01	2.763E-01	4.704E-01	5.093E-02	0.508
		798.80		-2.022E-01	1.933E-01	2.917E-01	2.601E-02	-0.693
		1036.00		3.011E-01	4.033E-01	7.068E-01	6.326E-02	0.426
		1062.04		-7.509E-02	3.294E-01	5.266E-01	4.650E-02	-0.143
CM-247	*	1078.86	*	-1.779E-01	1.964E-01	2.893E-01	2.530E-02	-0.615
		278.00		5.403E-01	1.134E+00	1.904E+00	2.061E-01	0.284
		287.40		1.978E+00	1.825E+00	3.177E+00	3.407E-01	0.622
CF-249	*	402.60	*	1.813E-02	5.482E-02	9.182E-02	7.765E-03	0.197
		252.85		5.973E-01	1.182E+00	2.026E+00	2.228E-01	0.295
		333.44		-1.971E-01	2.869E-01	3.899E-01	3.885E-02	-0.505
CF-251	*	387.95	*	-1.553E-02	5.825E-02	9.436E-02	8.050E-03	-0.165
		176.60	*	-7.703E-02	1.895E-01	2.984E-01	3.208E-02	-0.258
		227.00		2.742E-02	5.323E-01	8.974E-01	9.898E-02	0.031
		285.00		-2.866E-01	2.593E+00	4.301E+00	4.624E-01	-0.067

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]G246874001      *
* Acquisition date   : 23-FEB-2010 19:29:19 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 02:00:01.27                               Half life ratio   : 8.000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246874001 Analyst initials: MXR1                 *
* Batch Number       : 952643 Sample Quantity : 1.1179E+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	3.561E+01	4.070E+00	6.890E-01	0.000E+00
BA-137M	1.698E-01	8.923E-02	8.393E-02	0.000E+00
CS-137	1.795E-01	9.433E-02	8.872E-02	0.000E+00
TL-208	5.159E-01	1.101E-01	8.111E-02	0.000E+00
BI-211	5.355E+00	8.335E-01	4.704E-01	0.000E+00
BI-212	9.983E-01	6.541E-01	6.497E-01	0.000E+00
PB-212	2.069E+00	2.881E-01	1.253E-01	0.000E+00
PO-212	2.069E+00	2.881E-01	1.253E-01	0.000E+00
BI-214	1.248E+00	2.309E-01	1.542E-01	0.000E+00
PB-214	1.863E+00	3.052E-01	1.639E-01	0.000E+00
PO-214	1.863E+00	3.052E-01	1.639E-01	0.000E+00
PO-216	2.069E+00	2.881E-01	1.253E-01	0.000E+00
PO-218	1.863E+00	3.052E-01	1.639E-01	0.000E+00
RA-224	5.165E+00	2.067E+00	1.425E+00	0.000E+00
RA-226	1.248E+00	2.309E-01	1.542E-01	0.000E+00
AC-228	1.784E+00	4.904E-01	3.064E-01	0.000E+00
RA-228	1.784E+00	4.904E-01	3.064E-01	0.000E+00
TH-228	2.099E+00	2.922E-01	1.271E-01	0.000E+00
TH-230	1.248E+00	2.309E-01	1.542E-01	0.000E+00
TH-232	1.784E+00	4.904E-01	3.064E-01	0.000E+00
U-234	1.248E+00	2.309E-01	1.542E-01	0.000E+00
AM-243	3.503E-01	1.511E-01	1.560E-01	0.000E+00
ANH-511	2.360E-01	9.003E-02	6.663E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	4.358E-01	4.480E-01	7.934E-01	0.000E+00 NOT IDENT.
NA-22	-8.403E-02	6.885E-02	9.868E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	4.144E+05	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-5.418E-03	4.041E-02	6.550E-02	0.000E+00 NOT IDENT.

TI-44	0.000E+00	1.019E-01	1.269E-01	0.000E+00	FAIL ABUN
SC-46	-5.813E-02	5.389E-02	8.136E-02	0.000E+00	FAIL ABUN
V-48	-3.378E-02	9.152E-02	1.475E-01	0.000E+00	NOT IDENT.
CR-51	2.749E-01	5.247E-01	9.177E-01	0.000E+00	NOT IDENT.
MN-52	1.610E-01	2.875E-01	5.197E-01	0.000E+00	NOT IDENT.
MN-54	-6.624E-03	5.057E-02	8.461E-02	0.000E+00	NOT IDENT.
CO-56	3.515E-02	4.874E-02	8.742E-02	0.000E+00	NOT IDENT.
CO-57	-3.025E-02	3.596E-02	5.823E-02	0.000E+00	NOT IDENT.
CO-58	-1.800E-02	4.746E-02	7.752E-02	0.000E+00	NOT IDENT.
FE-59	-5.485E-02	1.271E-01	2.021E-01	0.000E+00	NOT IDENT.
CO-60	5.259E-02	5.423E-02	9.855E-02	0.000E+00	NOT IDENT.
ZN-65	5.961E-02	1.465E-01	2.187E-01	0.000E+00	NOT IDENT.
GE-68	3.228E-01	1.673E+00	2.833E+00	0.000E+00	NOT IDENT.
AS-73	4.864E-01	2.245E+00	3.917E+00	0.000E+00	NOT IDENT.
AS-74	2.419E-02	1.236E-01	2.068E-01	0.000E+00	NOT IDENT.
SE-75	-1.217E-02	6.159E-02	1.050E-01	0.000E+00	NOT IDENT.
BR-77	-8.383E-02	1.249E+01	2.018E+01	0.000E+00	FAIL ABUN
SR-82	-2.293E-01	5.160E-01	8.457E-01	0.000E+00	NOT IDENT.
RB-83	-2.749E-02	1.090E-01	1.671E-01	0.000E+00	NOT IDENT.
RB-84	2.845E-02	9.390E-02	1.623E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.188E+01	1.975E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	6.039E-02	1.004E-01	0.000E+00	NOT IDENT.
RB-86	6.735E-01	1.038E+00	1.828E+00	0.000E+00	NOT IDENT.
Y-88	-3.590E-02	4.090E-02	5.386E-02	0.000E+00	NOT IDENT.
ZR-88	-1.106E-02	4.319E-02	7.181E-02	0.000E+00	NOT IDENT.
Y-91	1.420E+01	2.894E+01	4.955E+01	0.000E+00	NOT IDENT.
NB-94	4.575E-02	4.538E-02	8.260E-02	0.000E+00	NOT IDENT.
NB-95	6.959E-02	6.154E-02	1.117E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.187E-01	3.550E-01	0.000E+00	NOT IDENT.
ZR-95	6.116E-02	9.568E-02	1.702E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	6.850E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.353E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.006E+00	1.242E+01	2.129E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	5.582E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.909E-02	4.766E-02	7.563E-02	0.000E+00	NOT IDENT.
RH-102	1.731E-03	4.327E-02	7.250E-02	0.000E+00	NOT IDENT.
RU-103	6.341E-03	5.173E-02	8.701E-02	0.000E+00	FAIL ABUN
RH-106	1.603E-01	4.422E-01	7.472E-01	0.000E+00	FAIL ABUN
RU-106	1.603E-01	4.419E-01	7.472E-01	0.000E+00	FAIL ABUN
AG-108M	-1.049E-02	4.325E-02	7.142E-02	0.000E+00	NOT IDENT.
CD-109	5.707E-01	1.536E+00	2.326E+00	0.000E+00	NOT IDENT.
AG-110M	1.554E-02	5.395E-02	8.223E-02	0.000E+00	NOT IDENT.
IN-111	9.193E-01	1.306E+00	2.050E+00	0.000E+00	NOT IDENT.
IN-113M	3.003E-02	6.140E-02	1.066E-01	0.000E+00	NOT IDENT.
SN-113	3.003E-02	6.140E-02	1.066E-01	0.000E+00	NOT IDENT.
IN-114M	-6.198E-02	3.009E-01	4.280E-01	0.000E+00	NOT IDENT.
CD-115	-1.851E+00	1.090E+01	1.786E+01	0.000E+00	NOT IDENT.
SN-117M	-3.061E-02	7.631E-02	1.249E-01	0.000E+00	NOT IDENT.
SB-122	-2.075E+00	2.420E+00	3.636E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.997E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.180E-02	4.086E-02	6.719E-02	0.000E+00	NOT IDENT.
I-124	-8.837E-02	9.784E-01	1.377E+00	0.000E+00	NOT IDENT.
SB-124	1.679E-02	8.003E-02	1.398E-01	0.000E+00	FAIL ABUN
SB-125	1.182E-01	1.261E-01	2.239E-01	0.000E+00	FAIL ABUN
TE-125M	1.167E+00	1.364E+01	2.272E+01	0.000E+00	NOT IDENT.
I-126	-2.738E-03	2.682E-01	3.964E-01	0.000E+00	NOT IDENT.
SB-126	1.219E-01	2.028E-01	3.179E-01	0.000E+00	FAIL ABUN
SN-126	2.980E-03	1.516E-01	2.266E-01	0.000E+00	NOT IDENT.
SB-127	1.519E+00	1.600E+00	2.906E+00	0.000E+00	NOT IDENT.
XE-127	-3.681E-02	6.768E-02	1.043E-01	0.000E+00	NOT IDENT.
I-131	4.738E-02	1.524E-01	2.628E-01	0.000E+00	NOT IDENT.
TE-132	-4.196E-01	8.068E-01	1.363E+00	0.000E+00	NOT IDENT.
BA-133	6.759E-02	6.305E-02	1.004E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.051E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.567E-02	6.342E-02	1.174E-01	0.000E+00	NOT IDENT.
CS-135	8.072E-02	2.256E-01	3.940E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.002E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.618E-02	1.382E-01	2.207E-01	0.000E+00	NOT IDENT.
CE-139	-6.358E-03	4.464E-02	7.377E-02	0.000E+00	NOT IDENT.
BA-140	2.596E-01	3.401E-01	5.790E-01	0.000E+00	NOT IDENT.
LA-140	-5.008E-02	1.169E-01	1.845E-01	0.000E+00	NOT IDENT.
CE-141	7.798E-02	8.806E-02	1.518E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.028E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.199E-01	2.872E-01	4.724E-01	0.000E+00	NOT IDENT.
PM-144	-1.703E-02	4.571E-02	7.601E-02	0.000E+00	NOT IDENT.
PR-144	-1.153E+00	3.096E+00	5.148E+00	0.000E+00	NOT IDENT.
PM-146	2.922E-02	5.857E-02	1.013E-01	0.000E+00	NOT IDENT.
ND-147	-1.097E+00	6.986E-01	9.715E-01	0.000E+00	NOT IDENT.

PM-149	3.109E+01	1.047E+02	1.818E+02	0.000E+00	NOT IDENT.
EU-152	-1.352E-02	2.022E-01	2.325E-01	0.000E+00	NOT IDENT.
GD-153	3.020E-02	1.252E-01	1.886E-01	0.000E+00	NOT IDENT.
EU-154	-1.540E-01	1.855E-01	2.778E-01	0.000E+00	NOT IDENT.
EU-155	1.790E-01	1.548E-01	2.717E-01	0.000E+00	NOT IDENT.
TB-160	1.478E-02	1.938E-01	3.287E-01	0.000E+00	NOT IDENT.
HO-166M	6.263E-02	7.879E-02	1.421E-01	0.000E+00	NOT IDENT.
TM-171	-7.446E+01	5.374E+01	8.679E+01	0.000E+00	NOT IDENT.
LU-176	5.519E-03	3.935E-02	5.905E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	2.043E+00	2.721E+00	0.000E+00	FAIL ABUN
LU-177M	-8.299E-02	2.544E-01	4.199E-01	0.000E+00	NOT IDENT.
HF-181	-2.613E-02	5.726E-02	9.241E-02	0.000E+00	NOT IDENT.
W-181	-2.197E-01	6.916E-01	1.176E+00	0.000E+00	NOT IDENT.
TA-182	9.407E-02	2.695E-01	4.577E-01	0.000E+00	FAIL ABUN
RE-183	9.183E-02	1.604E-01	2.693E-01	0.000E+00	FAIL ABUN
RE-184	1.587E-01	3.077E-01	5.431E-01	0.000E+00	NOT IDENT.
OS-185	5.114E-03	5.652E-02	9.345E-02	0.000E+00	NOT IDENT.
RE-188	1.428E-01	2.389E-01	4.074E-01	0.000E+00	NOT IDENT.
W-188	-1.151E+01	1.229E+01	1.703E+01	0.000E+00	NOT IDENT.
IR-192	-2.258E-02	4.859E-02	8.083E-02	0.000E+00	FAIL ABUN
AU-195	4.451E-01	3.408E-01	5.628E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.880E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-9.617E-01	8.884E+00	1.470E+01	0.000E+00	NOT IDENT.
TL-202	9.114E-02	9.021E-02	1.608E-01	0.000E+00	NOT IDENT.
HG-203	2.035E-02	5.841E-02	1.018E-01	0.000E+00	NOT IDENT.
BI-207	-1.108E-01	7.951E-02	1.142E-01	0.000E+00	FAIL ABUN
TL-207	-1.248E+00	9.945E-01	1.542E+00	0.000E+00	FAIL ABUN
PO-209	-6.166E+00	1.019E+01	1.619E+01	0.000E+00	NOT IDENT.
BI-210	2.101E+00	1.531E+01	2.632E+01	0.000E+00	NOT IDENT.
PB-210	2.101E+00	1.531E+01	2.632E+01	0.000E+00	NOT IDENT.
PO-210	2.101E+00	1.531E+01	2.632E+01	0.000E+00	NOT IDENT.
PB-211	-4.315E-01	1.391E+00	2.260E+00	0.000E+00	NOT IDENT.
PO-215	-1.248E+00	9.945E-01	1.542E+00	0.000E+00	FAIL ABUN
RN-219	7.310E-02	6.040E-01	1.026E+00	0.000E+00	NOT IDENT.
RN-220	-1.845E+01	3.581E+01	5.691E+01	0.000E+00	NOT IDENT.
RA-223	-1.248E+00	9.945E-01	1.542E+00	0.000E+00	FAIL ABUN
AC-227	-2.806E-01	5.120E-01	8.560E-01	0.000E+00	FAIL ABUN
TH-227	-2.806E-01	5.127E-01	8.560E-01	0.000E+00	FAIL ABUN
TH-229	7.088E-03	7.219E-01	1.193E+00	0.000E+00	NOT IDENT.
PA-231	-1.788E+00	2.225E+00	3.639E+00	0.000E+00	FAIL ABUN
TH-231	-1.248E+00	9.945E-01	1.542E+00	0.000E+00	FAIL ABUN
U-231	-1.405E+00	1.614E+00	2.284E+00	0.000E+00	FAIL ABUN
PA-233	-2.599E-02	8.828E-02	1.484E-01	0.000E+00	FAIL ABUN
PA-234	-1.771E-01	4.179E-01	6.717E-01	0.000E+00	FAIL ABUN
PA-234M	-3.499E+00	6.176E+00	9.904E+00	0.000E+00	NOT IDENT.
TH-234	2.151E+00	2.687E+00	4.597E+00	0.000E+00	FAIL ABUN
U-235	6.344E-02	3.083E-01	5.117E-01	0.000E+00	FAIL ABUN
NP-236	1.020E-02	1.155E-01	1.930E-01	0.000E+00	FAIL ABUN
NP-237	6.374E-01	4.247E-01	6.888E-01	0.000E+00	NOT IDENT.
U-238	2.151E+00	2.687E+00	4.597E+00	0.000E+00	FAIL ABUN
NP-239	2.122E-01	2.674E-01	4.637E-01	0.000E+00	FAIL ABUN
AM-241	-1.769E-01	3.441E-01	5.811E-01	0.000E+00	NOT IDENT.
CM-243	-9.628E-02	1.425E-01	2.345E-01	0.000E+00	FAIL ABUN
AM-246	-1.779E-01	1.925E-01	2.886E-01	0.000E+00	NOT IDENT.
CM-247	1.813E-02	5.373E-02	9.232E-02	0.000E+00	NOT IDENT.
CF-249	-1.553E-02	5.709E-02	9.491E-02	0.000E+00	NOT IDENT.
CF-251	-7.703E-02	1.857E-01	3.020E-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]G246874001.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 19:29:19
Sample ID          : G246874001      Sample quantity   : 1.11790E+02 GRAM
Detector name      : GAM15           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.27  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials  : MXR1
Abundance limit    : 75.00000        Sensitivity       : 5.00000
Batch ID           : 952643          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	1094	10.67*	9.664E-01	3.561E+01	3.561E+01	11.66
BA-137M	661.65	90	89.98*	1.980E+00	1.697E-01	1.698E-01	53.62
CS-137	661.65	90	85.12*	1.980E+00	1.793E-01	1.795E-01	53.62
TL-208	277.35	-----	6.80	3.705E+00	-----	Line Not Found	-----
	510.84	170	21.60	2.419E+00	1.093E+00	1.093E+00	39.80
	583.14	283	84.20*	2.191E+00	5.159E-01	5.159E-01	21.77
	860.37	69	12.46	1.575E+00	1.176E+00	1.176E+00	50.36
BI-211	72.87	-----	1.27	3.001E+00	-----	Line Not Found	-----
	351.07	648	12.94*	3.141E+00	5.355E+00	5.355E+00	15.88
BI-212	727.18	64	11.80*	1.830E+00	9.983E-01	9.983E-01	66.86
	785.46	-----	1.97	1.712E+00	-----	Line Not Found	-----
	1620.62	16	2.75	8.965E-01	2.206E+00	2.206E+00	68.40
PB-212	74.81	222	10.70	3.228E+00	2.161E+00	2.161E+00	45.01
	77.11	470	18.00	3.502E+00	2.504E+00	2.504E+00	22.51
	87.30	-----	8.00	4.444E+00	-----	Line Not Found	-----
	238.63	1131	44.60*	4.115E+00	2.069E+00	2.069E+00	14.21
	300.09	90	3.41	3.502E+00	2.527E+00	2.527E+00	78.20
PO-212	74.81	222	10.70	3.228E+00	2.161E+00	2.161E+00	45.01
	77.11	470	18.00	3.502E+00	2.504E+00	2.504E+00	22.51
	87.30	-----	8.00	4.444E+00	-----	Line Not Found	-----
	115.19	-----	0.60	5.586E+00	-----	Line Not Found	-----
	238.63	1131	44.60*	4.115E+00	2.069E+00	2.069E+00	14.21
	300.09	90	3.41	3.502E+00	2.527E+00	2.527E+00	78.20
BI-214	609.31	364	46.30*	2.117E+00	1.248E+00	1.248E+00	18.88
	1120.29	69	15.10	1.226E+00	1.244E+00	1.244E+00	72.41
	1764.49	83	15.80	8.555E-01	2.050E+00	2.050E+00	25.73
PB-214	74.81	222	6.21	3.228E+00	3.723E+00	3.723E+00	44.64
	77.11	470	10.50	3.502E+00	4.293E+00	4.293E+00	23.77
	87.30	-----	4.67	4.444E+00	-----	Line Not Found	-----
	241.98	248	7.49	4.081E+00	2.724E+00	2.724E+00	41.23
	295.21	305	19.20	3.546E+00	1.502E+00	1.502E+00	25.37
	351.92	648	37.20*	3.141E+00	1.863E+00	1.863E+00	16.72

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	74.81	222	6.21	3.228E+00	3.723E+00	3.723E+00	44.64
	77.11	470	10.50	3.502E+00	4.293E+00	4.293E+00	23.77
	87.30	-----	4.67	4.444E+00	-----	Line Not Found	-----
	241.98	248	7.49	4.081E+00	2.724E+00	2.724E+00	41.23
	295.21	305	19.20	3.546E+00	1.502E+00	1.502E+00	25.37
PO-216	351.92	648	37.20*	3.141E+00	1.863E+00	1.863E+00	16.72
	74.81	222	10.70	3.228E+00	2.161E+00	2.161E+00	45.01
	77.11	470	18.00	3.502E+00	2.504E+00	2.504E+00	22.51
	87.30	-----	8.00	4.444E+00	-----	Line Not Found	-----
	238.63	1131	44.60*	4.115E+00	2.069E+00	2.069E+00	14.21
PO-218	300.09	90	3.41	3.502E+00	2.527E+00	2.527E+00	78.20
	74.81	222	6.21	3.228E+00	3.723E+00	3.723E+00	44.64
	77.11	470	10.50	3.502E+00	4.293E+00	4.293E+00	23.77
	87.30	-----	4.67	4.444E+00	-----	Line Not Found	-----
	241.98	248	7.49	4.081E+00	2.724E+00	2.724E+00	41.23
RA-224	295.21	305	19.20	3.546E+00	1.502E+00	1.502E+00	25.37
	351.92	648	37.20*	3.141E+00	1.863E+00	1.863E+00	16.72
	240.98	248	3.95*	4.081E+00	5.165E+00	5.165E+00	40.84
	609.31	364	46.30*	2.117E+00	1.248E+00	1.248E+00	18.88
	1120.29	69	15.10	1.226E+00	1.244E+00	1.244E+00	72.41
AC-228	1764.49	83	15.80	8.555E-01	2.050E+00	2.050E+00	25.73
	338.32	214	11.40	3.228E+00	1.955E+00	1.955E+00	50.41
	911.07	220	27.70*	1.494E+00	1.784E+00	1.784E+00	28.05
	969.11	98	16.60	1.409E+00	1.404E+00	1.404E+00	47.41
	338.32	214	11.40	3.228E+00	1.955E+00	1.955E+00	50.41
RA-228	911.07	220	27.70*	1.494E+00	1.784E+00	1.784E+00	28.05
	969.11	98	16.60	1.409E+00	1.404E+00	1.404E+00	47.41
	74.81	222	10.70	3.228E+00	2.161E+00	2.192E+00	44.04
	77.11	470	18.00	3.502E+00	2.504E+00	2.540E+00	22.51
	87.30	-----	8.00	4.444E+00	-----	Line Not Found	-----
TH-228	238.63	1131	44.60*	4.115E+00	2.069E+00	2.099E+00	14.21
	300.09	90	3.41	3.502E+00	2.527E+00	2.563E+00	97.57
	609.31	364	46.30*	2.117E+00	1.248E+00	1.248E+00	18.88
	1120.29	69	15.10	1.226E+00	1.244E+00	1.244E+00	72.41
	1764.49	83	15.80	8.555E-01	2.050E+00	2.050E+00	25.73
TH-232	338.32	214	11.40	3.228E+00	1.955E+00	1.955E+00	30.22
	911.07	220	27.70*	1.494E+00	1.784E+00	1.784E+00	28.05
	969.11	98	16.60	1.409E+00	1.404E+00	1.404E+00	47.41
	609.31	364	46.30*	2.117E+00	1.248E+00	1.248E+00	18.88
	1120.29	69	15.10	1.226E+00	1.244E+00	1.244E+00	72.41
U-234	1764.49	83	15.80	8.555E-01	2.050E+00	2.050E+00	25.73
	74.67	222	66.00*	3.228E+00	3.503E-01	3.503E-01	44.03
	86.72	-----	0.34	4.398E+00	-----	Line Not Found	-----
	117.66	-----	0.55	5.611E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.525E+00	-----	Line Not Found	-----
ANH-511	511.00	170	100.00*	2.419E+00	2.360E-01	2.360E-01	38.92

Flag: "*" = Keyline

Total number of lines in spectrum 24
Number of unidentified lines 0
Number of lines tentatively identified by NID 24 100.00%

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	3.561E+01	3.561E+01	0.415E+01	11.66	
BA-137M	30.17Y	1.00	1.697E-01	1.698E-01	0.910E-01	53.62	
CS-137	30.17Y	1.00	1.793E-01	1.795E-01	0.963E-01	53.62	
TL-208	1.41E+10Y	1.00	5.159E-01	5.159E-01	1.123E-01	21.77	
BI-211	7.04E+08Y	1.00	5.355E+00	5.355E+00	0.851E+00	15.88	
BI-212	1.41E+10Y	1.00	9.983E-01	9.983E-01	6.675E-01	66.86	
PB-212	1.41E+10Y	1.00	2.069E+00	2.069E+00	0.294E+00	14.21	
PO-212	1.41E+10Y	1.00	2.069E+00	2.069E+00	0.294E+00	14.21	
BI-214	1600.00Y	1.00	1.248E+00	1.248E+00	0.236E+00	18.88	
PB-214	1600.00Y	1.00	1.863E+00	1.863E+00	0.311E+00	16.72	
PO-214	1600.00Y	1.00	1.863E+00	1.863E+00	0.311E+00	16.72	
PO-216	1.41E+10Y	1.00	2.069E+00	2.069E+00	0.294E+00	14.21	
PO-218	1600.00Y	1.00	1.863E+00	1.863E+00	0.311E+00	16.72	
RA-224	1.41E+10Y	1.00	5.165E+00	5.165E+00	2.109E+00	40.84	
RA-226	1600.00Y	1.00	1.248E+00	1.248E+00	0.236E+00	18.88	
AC-228	1.41E+10Y	1.00	1.784E+00	1.784E+00	0.500E+00	28.05	
RA-228	1.41E+10Y	1.00	1.784E+00	1.784E+00	0.500E+00	28.05	
TH-228	1.91Y	1.01	2.069E+00	2.099E+00	0.298E+00	14.21	
TH-230	4.47E+09Y	1.00	1.248E+00	1.248E+00	0.236E+00	18.88	
TH-232	1.41E+10Y	1.00	1.784E+00	1.784E+00	0.500E+00	28.05	
U-234	4.47E+09Y	1.00	1.248E+00	1.248E+00	0.236E+00	18.88	
AM-243	7380.00Y	1.00	3.503E-01	3.503E-01	1.542E-01	44.03	
ANH-511	1.00E+09Y	1.00	2.360E-01	2.360E-01	0.919E-01	38.92	

Total Activity : 7.279E+01 7.282E+01

Grand Total Activity : 7.279E+01 7.282E+01

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

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

Unidentified Energy Lines
Sample ID : G246874001

Page : 4
Acquisition date : 23-FEB-2010 19:29:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	93.49	113	568	1.73	185.91	180	11	1.57E-02	88.5	4.87E+00	T
0	186.14	131	396	1.35	371.18	365	11	1.82E-02	64.0	4.85E+00	T
0	209.12	102	311	1.91	417.15	413	10	1.42E-02	67.6	4.50E+00	T
0	462.94	57	144	1.53	924.77	920	12	7.92E-03	88.3	2.60E+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]G246874001.CNF;1
* Acquisition date   : 23-FEB-2010 19:29:19   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 02:00:01.27          Half life ratio     : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246874001             Analyst initials  : MXR1
* Batch Number       : 952643                 Sample Quantity   : 1.11790E+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	3.561E+01	4.153E+00	6.924E-01	6.804E-02	51.433
BA-137M	1.698E-01	9.105E-02	8.380E-02	6.890E-03	2.026
CS-137	1.795E-01	9.625E-02	8.859E-02	7.298E-03	2.026
TL-208	5.159E-01	1.123E-01	8.091E-02	7.409E-03	6.376
BI-211	5.355E+00	8.505E-01	4.673E-01	4.654E-02	11.459
BI-212	9.983E-01	6.675E-01	6.492E-01	6.469E-02	1.538
PB-212	2.069E+00	2.940E-01	1.241E-01	1.478E-02	16.675
PO-212	2.069E+00	2.940E-01	1.241E-01	1.478E-02	16.675
BI-214	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
PB-214	1.863E+00	3.114E-01	1.629E-01	1.828E-02	11.438
PO-214	1.863E+00	3.114E-01	1.629E-01	1.828E-02	11.438
PO-216	2.069E+00	2.940E-01	1.241E-01	1.478E-02	16.675
PO-218	1.863E+00	3.114E-01	1.629E-01	1.828E-02	11.438
RA-224	5.165E+00	2.109E+00	1.412E+00	1.557E-01	3.659
RA-226	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
AC-228	1.784E+00	5.004E-01	3.067E-01	3.613E-02	5.815
RA-228	1.784E+00	5.004E-01	3.067E-01	3.613E-02	5.815
TH-228	2.099E+00	2.982E-01	1.259E-01	1.499E-02	16.675

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
TH-232	1.784E+00	5.004E-01	3.067E-01	3.613E-02	5.815
U-234	1.248E+00	2.356E-01	1.538E-01	1.525E-02	8.112
AM-243	3.503E-01	1.542E-01	1.531E-01	1.760E-02	2.288
ANH-511	2.360E-01	9.187E-02	6.639E-02	5.736E-03	3.555

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	4.358E-01		4.571E-01	7.902E-01	7.346E-02	0.551
NA-22	-8.403E-02		7.026E-02	9.907E-02	9.000E-03	-0.848
NA-24	-4.743E-02		2.114E-01	Half-Life too short		
AL-26	-5.418E-03		4.124E-02	6.595E-02	5.642E-03	-0.082
TI-44	4.621E-01	+	1.040E-01	1.245E-01	1.451E-02	3.710
SC-46	-5.813E-02		5.499E-02	8.143E-02	7.567E-03	-0.714
V-48	-3.378E-02		9.338E-02	1.478E-01	1.351E-02	-0.229
CR-51	2.749E-01		5.354E-01	9.110E-01	9.674E-02	0.302
MN-52	1.610E-01		2.933E-01	5.222E-01	5.027E-02	0.308
MN-54	-6.624E-03		5.161E-02	8.465E-02	7.682E-03	-0.078
CO-56	3.515E-02		4.974E-02	8.747E-02	7.981E-03	0.402
CO-57	-3.025E-02		3.670E-02	5.736E-02	5.778E-03	-0.527
CO-58	-1.800E-02		4.843E-02	7.754E-02	6.971E-03	-0.232
FE-59	-5.485E-02		1.297E-01	2.027E-01	1.891E-02	-0.271
CO-60	5.259E-02		5.534E-02	9.897E-02	9.514E-03	0.531
ZN-65	5.961E-02		1.495E-01	2.193E-01	1.874E-02	0.272
GE-68	3.228E-01		1.708E+00	2.841E+00	2.486E-01	0.114
AS-73	4.864E-01		2.291E+00	3.834E+00	4.978E-01	0.127
AS-74	2.419E-02		1.261E-01	2.064E-01	1.753E-02	0.117
SE-75	-1.217E-02		6.284E-02	1.041E-01	1.142E-02	-0.117
BR-77	-8.383E-02		1.274E+01	2.011E+01	1.737E+00	-0.004
SR-82	-2.293E-01		5.266E-01	8.456E-01	7.451E-02	-0.271
RB-83	-2.749E-02		1.113E-01	1.666E-01	1.439E-02	-0.165
RB-84	2.845E-02		9.581E-02	1.624E-01	1.504E-02	0.175
KR-85	2.411E+01		1.212E+01	1.968E+01	1.700E+00	1.225
SR-85	1.226E-01		6.162E-02	1.001E-01	8.644E-03	1.225
RB-86	6.735E-01		1.059E+00	1.833E+00	1.605E-01	0.367
Y-88	-3.590E-02		4.174E-02	5.423E-02	4.568E-03	-0.662
ZR-88	-1.106E-02		4.408E-02	7.140E-02	6.010E-03	-0.155
Y-91	1.420E+01		2.953E+01	4.972E+01	4.192E+00	0.286
NB-94	4.575E-02		4.631E-02	8.252E-02	6.967E-03	0.554
NB-95	6.959E-02		6.280E-02	1.117E-01	9.787E-03	0.623
NB-95M	5.026E-01		2.232E-01	3.515E-01	4.230E-02	1.430
ZR-95	6.116E-02		9.764E-02	1.702E-01	1.630E-02	0.359
NB-97	2.319E-02		3.495E-02	Half-Life too short		
ZR-97	3.133E+00		6.903E-01	Half-Life too short		
MO-99	1.006E+00		1.268E+01	2.128E+01	3.233E+00	0.047
TC-99M	1.491E+08		2.848E+09	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
RH-101	-1.909E-02		4.863E-02	7.479E-02	8.160E-03	-0.255
RH-102	1.731E-03		4.415E-02	7.220E-02	6.230E-03	0.024
RU-103	6.341E-03		5.279E-02	8.669E-02	1.229E-02	0.073
RH-106	1.603E-01		4.512E-01	7.458E-01	9.859E-02	0.215
RU-106	1.603E-01		4.509E-01	7.458E-01	6.268E-02	0.215
AG-108M	-1.049E-02		4.414E-02	7.107E-02	6.326E-03	-0.148
CD-109	5.707E-01		1.567E+00	2.285E+00	2.837E-01	0.250
AG-110M	1.554E-02		5.505E-02	8.211E-02	6.987E-03	0.189
IN-111	9.193E-01		1.332E+00	2.030E+00	2.238E-01	0.453
IN-113M	3.003E-02		6.265E-02	1.060E-01	9.207E-03	0.283
SN-113	3.003E-02		6.265E-02	1.060E-01	9.207E-03	0.283
IN-114M	-6.198E-02		3.071E-01	4.231E-01	4.594E-02	-0.146
CD-115	-1.851E+00		1.112E+01	1.780E+01	1.536E+00	-0.104
SN-117M	-3.061E-02		7.786E-02	1.232E-01	1.292E-02	-0.248
SB-122	-2.075E+00		2.469E+00	3.626E+00	3.110E-01	-0.572
I-123	-8.652E-01		1.529E+00	Half-Life too short		
TE-123M	-1.180E-02		4.169E-02	6.633E-02	6.990E-03	-0.178
I-124	-8.837E-02		9.984E-01	1.373E+00	1.164E-01	-0.064
SB-124	1.679E-02		8.166E-02	1.407E-01	1.322E-02	0.119
SB-125	1.182E-01		1.287E-01	2.228E-01	1.940E-02	0.530
TE-125M	1.167E+00		1.392E+01	2.236E+01	2.626E+00	0.052
I-126	-2.738E-03		2.737E-01	3.958E-01	3.264E-02	-0.007
SB-126	1.219E-01		2.070E-01	3.176E-01	2.711E-02	0.384
SN-126	2.980E-03		1.547E-01	2.227E-01	2.755E-02	0.013
SB-127	1.519E+00		1.633E+00	2.902E+00	3.177E-01	0.523
XE-127	-3.681E-02		6.906E-02	1.032E-01	1.129E-02	-0.357
I-131	4.738E-02		1.555E-01	2.611E-01	2.520E-02	0.181
TE-132	-4.196E-01		8.233E-01	1.349E+00	2.297E-01	-0.311
BA-133	6.759E-02		6.433E-02	9.977E-02	1.372E-02	0.677
I-133	-4.312E-03		2.067E-03	Half-Life too short		
CS-134	8.567E-02		6.471E-02	1.174E-01	1.052E-02	0.730
CS-135	8.072E-02		2.302E-01	3.905E-01	4.686E-02	0.207
I-135	-6.621E+08		5.114E+08	Half-Life too short		
CS-136	-5.618E-02		1.410E-01	2.212E-01	2.046E-02	-0.254
CE-139	-6.358E-03		4.555E-02	7.285E-02	7.776E-03	-0.087
BA-140	2.596E-01		3.470E-01	5.772E-01	1.913E-01	0.450
LA-140	-5.008E-02		1.193E-01	1.856E-01	1.740E-02	-0.270
CE-141	7.798E-02		8.986E-02	1.497E-01	1.547E-02	0.521
CE-143	5.340E-04		1.035E-04	Half-Life too short		
CE-144	-1.199E-01		2.931E-01	4.657E-01	7.639E-02	-0.257
PM-144	-1.703E-02		4.664E-02	7.593E-02	6.388E-03	-0.224
PR-144	-1.153E+00		3.159E+00	5.143E+00	4.325E-01	-0.224
PM-146	2.922E-02		5.976E-02	1.008E-01	1.080E-02	0.290
ND-147	-1.097E+00		7.129E-01	9.683E-01	1.448E-01	-1.132
PM-149	3.109E+01		1.068E+02	1.803E+02	3.032E+01	0.172
EU-152	-1.352E-02		2.064E-01	2.310E-01	2.351E-02	-0.059
GD-153	3.020E-02		1.278E-01	1.854E-01	2.047E-02	0.163
EU-154	-1.540E-01		1.893E-01	2.789E-01	3.252E-02	-0.552

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	1.790E-01		1.580E-01	2.674E-01	2.817E-02	0.669
TB-160	1.478E-02		1.978E-01	3.290E-01	3.045E-02	0.045
HO-166M	6.263E-02		8.040E-02	1.420E-01	1.206E-02	0.441
TM-171	-7.446E+01		5.484E+01	8.509E+01	9.713E+00	-0.875
LU-176	5.519E-03		4.016E-02	5.860E-02	6.128E-03	0.094
LU-177	3.042E+00	+	2.085E+00	2.691E+00	2.952E-01	1.130
LU-177M	-8.299E-02		2.596E-01	4.177E-01	3.549E-02	-0.199
HF-181	-2.613E-02		5.843E-02	9.204E-02	7.947E-03	-0.284
W-181	-2.197E-01		7.057E-01	1.152E+00	1.316E-01	-0.191
TA-182	9.407E-02		2.750E-01	4.593E-01	3.942E-02	0.205
RE-183	9.183E-02		1.637E-01	2.658E-01	2.812E-02	0.345
RE-184	1.587E-01		3.140E-01	5.381E-01	5.917E-02	0.295
OS-185	5.114E-03		5.767E-02	9.329E-02	7.742E-03	0.055
RE-188	1.428E-01		2.437E-01	4.020E-01	4.181E-02	0.355
W-188	-1.151E+01		1.254E+01	1.689E+01	1.805E+00	-0.682
IR-192	-2.258E-02		4.958E-02	8.023E-02	8.272E-03	-0.281
AU-195	4.451E-01		3.478E-01	5.535E-01	6.032E-02	0.804
TL-200	2.288E-04		1.980E-04	Half-Life too short		
TL-201	-9.617E-01		9.066E+00	1.452E+01	1.551E+00	-0.066
TL-202	9.114E-02		9.205E-02	1.600E-01	1.371E-02	0.570
HG-203	2.035E-02		5.960E-02	1.010E-01	1.112E-02	0.202
BI-207	-1.108E-01		8.114E-02	1.145E-01	1.010E-02	-0.968
TL-207	-1.248E+00		1.015E+00	1.531E+00	2.833E-01	-0.815
PO-209	-6.166E+00		1.040E+01	1.621E+01	1.511E+00	-0.380
BI-210	2.101E+00		1.563E+01	2.573E+01	3.169E+00	0.082
PB-210	2.101E+00		1.563E+01	2.573E+01	3.169E+00	0.082
PO-210	2.101E+00		1.563E+01	2.573E+01	3.001E+00	0.082
PB-211	-4.315E-01		1.419E+00	2.247E+00	1.408E+00	-0.192
PO-215	-1.248E+00		1.015E+00	1.531E+00	2.833E-01	-0.815
RN-219	7.310E-02		6.163E-01	1.020E+00	1.523E-01	0.072
RN-220	-1.845E+01		3.654E+01	5.674E+01	4.882E+00	-0.325
RA-223	-1.248E+00		1.015E+00	1.531E+00	2.833E-01	-0.815
AC-227	-2.806E-01		5.225E-01	8.483E-01	1.424E-01	-0.331
TH-227	-2.806E-01		5.231E-01	8.483E-01	1.637E-01	-0.331
TH-229	7.088E-03		7.366E-01	1.179E+00	1.283E-01	0.006
PA-231	-1.788E+00		2.271E+00	3.609E+00	5.954E-01	-0.496
TH-231	-1.248E+00		1.015E+00	1.531E+00	2.833E-01	-0.815
U-231	-1.405E+00		1.647E+00	2.246E+00	2.516E-01	-0.625
PA-233	-2.599E-02		9.009E-02	1.473E-01	1.558E-02	-0.176
PA-234	-1.771E-01		4.265E-01	6.727E-01	1.282E-01	-0.263
PA-234M	-3.499E+00		6.302E+00	9.923E+00	1.029E+00	-0.353
TH-234	2.151E+00		2.741E+00	4.505E+00	8.777E-01	0.477
U-235	6.344E-02		3.146E-01	5.047E-01	9.248E-02	0.126
NP-236	1.020E-02		1.179E-01	1.906E-01	2.006E-02	0.054
NP-237	6.374E-01		4.334E-01	6.767E-01	1.624E-01	0.942
U-238	2.151E+00		2.741E+00	4.505E+00	8.777E-01	0.477
NP-239	2.122E-01		2.728E-01	4.566E-01	4.610E-02	0.465
AM-241	-1.769E-01		3.511E-01	5.692E-01	6.681E-02	-0.311

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-9.628E-02		1.454E-01	2.307E-01	2.431E-02	-0.417
AM-246	-1.779E-01		1.964E-01	2.893E-01	2.530E-02	-0.615
CM-247	1.813E-02		5.482E-02	9.182E-02	7.765E-03	0.197
CF-249	-1.553E-02		5.825E-02	9.436E-02	8.050E-03	-0.165
CF-251	-7.703E-02		1.895E-01	2.984E-01	3.208E-02	-0.258

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]G246874001          *
* Acquisition date   : 23-FEB-2010 19:29:19 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 02:00:01.27 Half life ratio : 8.000             *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246874001 Analyst initials: MXR1                  *
* Batch Number       : 952643 Sample Quantity : 1.1179E+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	3.561E+01	4.070E+00	3.447E-01	2.077E+00
BA-137M	1.698E-01	8.923E-02	4.199E-02	4.552E-02
CS-137	1.795E-01	9.433E-02	4.439E-02	4.813E-02
TL-208	5.159E-01	1.101E-01	4.058E-02	5.615E-02
BI-211	5.355E+00	8.335E-01	2.354E-01	4.253E-01
BI-212	9.983E-01	6.541E-01	3.250E-01	3.337E-01
PB-212	2.069E+00	2.881E-01	6.269E-02	1.470E-01
PO-212	2.069E+00	2.881E-01	6.269E-02	1.470E-01
BI-214	1.248E+00	2.309E-01	7.713E-02	1.178E-01
PB-214	1.863E+00	3.052E-01	8.202E-02	1.557E-01
PO-214	1.863E+00	3.052E-01	8.202E-02	1.557E-01
PO-216	2.069E+00	2.881E-01	6.269E-02	1.470E-01
PO-218	1.863E+00	3.052E-01	8.202E-02	1.557E-01
RA-224	5.165E+00	2.067E+00	7.131E-01	1.055E+00
RA-226	1.248E+00	2.309E-01	7.713E-02	1.178E-01
AC-228	1.784E+00	4.904E-01	1.533E-01	2.502E-01
RA-228	1.784E+00	4.904E-01	1.533E-01	2.502E-01
TH-228	2.099E+00	2.922E-01	6.359E-02	1.491E-01
TH-230	1.248E+00	2.309E-01	7.713E-02	1.178E-01
TH-232	1.784E+00	4.904E-01	1.533E-01	2.502E-01
U-234	1.248E+00	2.309E-01	7.713E-02	1.178E-01
AM-243	3.503E-01	1.511E-01	7.804E-02	7.711E-02
ANH-511	2.360E-01	9.003E-02	3.333E-02	4.593E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	4.358E-01	4.480E-01	3.969E-01	2.286E-01 NOT IDENT.
NA-22	-8.403E-02	6.885E-02	4.937E-02	3.513E-02 NOT IDENT.
NA-24	-4.743E+04	4.144E+05	0.000E+00	2.114E+05 SHORT HLIF
AL-26	-5.418E-03	4.041E-02	3.277E-02	2.062E-02 NOT IDENT.

TI-44	4.621E-01	1.019E-01	6.347E-02	5.201E-02	FAIL ABUN
SC-46	-5.813E-02	5.389E-02	4.070E-02	2.750E-02	FAIL ABUN
V-48	-3.378E-02	9.152E-02	7.381E-02	4.669E-02	NOT IDENT.
CR-51	2.749E-01	5.247E-01	4.591E-01	2.677E-01	NOT IDENT.
MN-52	1.610E-01	2.875E-01	2.600E-01	1.467E-01	NOT IDENT.
MN-54	-6.624E-03	5.057E-02	4.233E-02	2.580E-02	NOT IDENT.
CO-56	3.515E-02	4.874E-02	4.374E-02	2.487E-02	NOT IDENT.
CO-57	-3.025E-02	3.596E-02	2.913E-02	1.835E-02	NOT IDENT.
CO-58	-1.800E-02	4.746E-02	3.878E-02	2.421E-02	NOT IDENT.
FE-59	-5.485E-02	1.271E-01	1.011E-01	6.483E-02	NOT IDENT.
CO-60	5.259E-02	5.423E-02	4.930E-02	2.767E-02	NOT IDENT.
ZN-65	5.961E-02	1.465E-01	1.094E-01	7.474E-02	NOT IDENT.
GE-68	3.228E-01	1.673E+00	1.418E+00	8.538E-01	NOT IDENT.
AS-73	4.864E-01	2.245E+00	1.960E+00	1.145E+00	NOT IDENT.
AS-74	2.419E-02	1.236E-01	1.035E-01	6.307E-02	NOT IDENT.
SE-75	-1.217E-02	6.159E-02	5.256E-02	3.142E-02	NOT IDENT.
BR-77	-8.383E-02	1.249E+01	1.010E+01	6.372E+00	FAIL ABUN
SR-82	-2.293E-01	5.160E-01	4.231E-01	2.633E-01	NOT IDENT.
RB-83	-2.749E-02	1.090E-01	8.362E-02	5.563E-02	NOT IDENT.
RB-84	2.845E-02	9.390E-02	8.118E-02	4.791E-02	NOT IDENT.
KR-85	2.411E+01	1.188E+01	9.881E+00	6.060E+00	NOT IDENT.
SR-85	1.226E-01	6.039E-02	5.023E-02	3.081E-02	NOT IDENT.
RB-86	6.735E-01	1.038E+00	9.147E-01	5.295E-01	NOT IDENT.
Y-88	-3.590E-02	4.090E-02	2.695E-02	2.087E-02	NOT IDENT.
ZR-88	-1.106E-02	4.319E-02	3.592E-02	2.204E-02	NOT IDENT.
Y-91	1.420E+01	2.894E+01	2.479E+01	1.476E+01	NOT IDENT.
NB-94	4.575E-02	4.538E-02	4.132E-02	2.315E-02	NOT IDENT.
NB-95	6.959E-02	6.154E-02	5.590E-02	3.140E-02	NOT IDENT.
NB-95M	5.026E-01	2.187E-01	1.776E-01	1.116E-01	NOT IDENT.
ZR-95	6.116E-02	9.568E-02	8.517E-02	4.882E-02	NOT IDENT.
NB-97	2.319E+04	6.850E+04	0.000E+00	3.495E+04	SHORT HLIF
ZR-97	3.133E+06	1.353E+06	0.000E+00	6.903E+05	SHORT HLIF
MO-99	1.006E+00	1.242E+01	1.065E+01	6.338E+00	NOT IDENT.
TC-99M	1.491E+14	5.582E+15	0.000E+00	2.848E+15	SHORT HLIF
RH-101	-1.909E-02	4.766E-02	3.784E-02	2.432E-02	NOT IDENT.
RH-102	1.731E-03	4.327E-02	3.627E-02	2.208E-02	NOT IDENT.
RU-103	6.341E-03	5.173E-02	4.353E-02	2.639E-02	FAIL ABUN
RH-106	1.603E-01	4.422E-01	3.738E-01	2.256E-01	FAIL ABUN
RU-106	1.603E-01	4.419E-01	3.738E-01	2.255E-01	FAIL ABUN
AG-108M	-1.049E-02	4.325E-02	3.573E-02	2.207E-02	NOT IDENT.
CD-109	5.707E-01	1.536E+00	1.164E+00	7.835E-01	NOT IDENT.
AG-110M	1.554E-02	5.395E-02	4.114E-02	2.752E-02	NOT IDENT.
IN-111	9.193E-01	1.306E+00	1.025E+00	6.662E-01	NOT IDENT.
IN-113M	3.003E-02	6.140E-02	5.334E-02	3.133E-02	NOT IDENT.
SN-113	3.003E-02	6.140E-02	5.334E-02	3.133E-02	NOT IDENT.
IN-114M	-6.198E-02	3.009E-01	2.141E-01	1.535E-01	NOT IDENT.
CD-115	-1.851E+00	1.090E+01	8.936E+00	5.562E+00	NOT IDENT.
SN-117M	-3.061E-02	7.631E-02	6.246E-02	3.893E-02	NOT IDENT.
SB-122	-2.075E+00	2.420E+00	1.819E+00	1.235E+00	NOT IDENT.
I-123	-8.652E+05	2.997E+06	0.000E+00	1.529E+06	SHORT HLIF
TE-123M	-1.180E-02	4.086E-02	3.362E-02	2.085E-02	NOT IDENT.
I-124	-8.837E-02	9.784E-01	6.887E-01	4.992E-01	NOT IDENT.
SB-124	1.679E-02	8.003E-02	6.996E-02	4.083E-02	FAIL ABUN
SB-125	1.182E-01	1.261E-01	1.120E-01	6.434E-02	FAIL ABUN
TE-125M	1.167E+00	1.364E+01	1.137E+01	6.958E+00	NOT IDENT.
I-126	-2.738E-03	2.682E-01	1.983E-01	1.368E-01	NOT IDENT.
SB-126	1.219E-01	2.028E-01	1.590E-01	1.035E-01	FAIL ABUN
SN-126	2.980E-03	1.516E-01	1.134E-01	7.735E-02	NOT IDENT.
SB-127	1.519E+00	1.600E+00	1.454E+00	8.163E-01	NOT IDENT.
XE-127	-3.681E-02	6.768E-02	5.218E-02	3.453E-02	NOT IDENT.
I-131	4.738E-02	1.524E-01	1.315E-01	7.773E-02	NOT IDENT.
TE-132	-4.196E-01	8.068E-01	6.818E-01	4.117E-01	NOT IDENT.
BA-133	6.759E-02	6.305E-02	5.024E-02	3.217E-02	NOT IDENT.
I-133	-4.312E+03	4.051E+03	0.000E+00	2.067E+03	SHORT HLIF
CS-134	8.567E-02	6.342E-02	5.871E-02	3.236E-02	NOT IDENT.
CS-135	8.072E-02	2.256E-01	1.971E-01	1.151E-01	NOT IDENT.
I-135	-6.621E+14	1.002E+15	0.000E+00	5.114E+14	SHORT HLIF
CS-136	-5.618E-02	1.382E-01	1.104E-01	7.051E-02	NOT IDENT.
CE-139	-6.358E-03	4.464E-02	3.691E-02	2.278E-02	NOT IDENT.
BA-140	2.596E-01	3.401E-01	2.897E-01	1.735E-01	NOT IDENT.
LA-140	-5.008E-02	1.169E-01	9.232E-02	5.966E-02	NOT IDENT.
CE-141	7.798E-02	8.806E-02	7.593E-02	4.493E-02	NOT IDENT.
CE-143	5.340E+02	2.028E+02	0.000E+00	1.035E+02	SHORT HLIF
CE-144	-1.199E-01	2.872E-01	2.364E-01	1.465E-01	NOT IDENT.
PM-144	-1.703E-02	4.571E-02	3.803E-02	2.332E-02	NOT IDENT.
PR-144	-1.153E+00	3.096E+00	2.576E+00	1.580E+00	NOT IDENT.
PM-146	2.922E-02	5.857E-02	5.068E-02	2.988E-02	NOT IDENT.
ND-147	-1.097E+00	6.986E-01	4.860E-01	3.564E-01	NOT IDENT.

PM-149	3.109E+01	1.047E+02	9.097E+01	5.340E+01	NOT IDENT.
EU-152	-1.352E-02	2.022E-01	1.163E-01	1.032E-01	NOT IDENT.
GD-153	3.020E-02	1.252E-01	9.434E-02	6.388E-02	NOT IDENT.
EU-154	-1.540E-01	1.855E-01	1.390E-01	9.463E-02	NOT IDENT.
EU-155	1.790E-01	1.548E-01	1.359E-01	7.899E-02	NOT IDENT.
TB-160	1.478E-02	1.938E-01	1.644E-01	9.888E-02	NOT IDENT.
HO-166M	6.263E-02	7.879E-02	7.111E-02	4.020E-02	NOT IDENT.
TM-171	-7.446E+01	5.374E+01	4.342E+01	2.742E+01	NOT IDENT.
LU-176	5.519E-03	3.935E-02	2.954E-02	2.008E-02	NOT IDENT.
LU-177	3.042E+00	2.043E+00	1.361E+00	1.042E+00	FAIL ABUN
LU-177M	-8.299E-02	2.544E-01	2.101E-01	1.298E-01	NOT IDENT.
HF-181	-2.613E-02	5.726E-02	4.623E-02	2.922E-02	NOT IDENT.
W-181	-2.197E-01	6.916E-01	5.882E-01	3.529E-01	NOT IDENT.
TA-182	9.407E-02	2.695E-01	2.290E-01	1.375E-01	FAIL ABUN
RE-183	9.183E-02	1.604E-01	1.347E-01	8.184E-02	FAIL ABUN
RE-184	1.587E-01	3.077E-01	2.717E-01	1.570E-01	NOT IDENT.
OS-185	5.114E-03	5.652E-02	4.675E-02	2.884E-02	NOT IDENT.
RE-188	1.428E-01	2.389E-01	2.038E-01	1.219E-01	NOT IDENT.
W-188	-1.151E+01	1.229E+01	8.520E+00	6.270E+00	NOT IDENT.
IR-192	-2.258E-02	4.859E-02	4.044E-02	2.479E-02	FAIL ABUN
AU-195	4.451E-01	3.408E-01	2.816E-01	1.739E-01	FAIL ABUN
TL-200	2.288E+02	3.880E+02	0.000E+00	1.980E+02	SHORT HLIF
TL-201	-9.617E-01	8.884E+00	7.354E+00	4.533E+00	NOT IDENT.
TL-202	9.114E-02	9.021E-02	8.043E-02	4.603E-02	NOT IDENT.
HG-203	2.035E-02	5.841E-02	5.094E-02	2.980E-02	NOT IDENT.
BI-207	-1.108E-01	7.951E-02	5.715E-02	4.057E-02	FAIL ABUN
TL-207	-1.248E+00	9.945E-01	7.715E-01	5.074E-01	FAIL ABUN
PO-209	-6.166E+00	1.019E+01	8.102E+00	5.200E+00	NOT IDENT.
BI-210	2.101E+00	1.531E+01	1.317E+01	7.813E+00	NOT IDENT.
PB-210	2.101E+00	1.531E+01	1.317E+01	7.813E+00	NOT IDENT.
PO-210	2.101E+00	1.531E+01	1.317E+01	7.813E+00	NOT IDENT.
PB-211	-4.315E-01	1.391E+00	1.130E+00	7.095E-01	NOT IDENT.
PO-215	-1.248E+00	9.945E-01	7.715E-01	5.074E-01	FAIL ABUN
RN-219	7.310E-02	6.040E-01	5.131E-01	3.082E-01	NOT IDENT.
RN-220	-1.845E+01	3.581E+01	2.847E+01	1.827E+01	NOT IDENT.
RA-223	-1.248E+00	9.945E-01	7.715E-01	5.074E-01	FAIL ABUN
AC-227	-2.806E-01	5.120E-01	4.283E-01	2.612E-01	FAIL ABUN
TH-227	-2.806E-01	5.127E-01	4.283E-01	2.616E-01	FAIL ABUN
TH-229	7.088E-03	7.219E-01	5.966E-01	3.683E-01	NOT IDENT.
PA-231	-1.788E+00	2.225E+00	1.821E+00	1.135E+00	FAIL ABUN
TH-231	-1.248E+00	9.945E-01	7.715E-01	5.074E-01	FAIL ABUN
U-231	-1.405E+00	1.614E+00	1.143E+00	8.236E-01	FAIL ABUN
PA-233	-2.599E-02	8.828E-02	7.424E-02	4.504E-02	FAIL ABUN
PA-234	-1.771E-01	4.179E-01	3.360E-01	2.132E-01	FAIL ABUN
PA-234M	-3.499E+00	6.176E+00	4.955E+00	3.151E+00	NOT IDENT.
TH-234	2.151E+00	2.687E+00	2.300E+00	1.371E+00	FAIL ABUN
U-235	6.344E-02	3.083E-01	2.560E-01	1.573E-01	FAIL ABUN
NP-236	1.020E-02	1.155E-01	9.658E-02	5.895E-02	FAIL ABUN
NP-237	6.374E-01	4.247E-01	3.446E-01	2.167E-01	NOT IDENT.
U-238	2.151E+00	2.687E+00	2.300E+00	1.371E+00	FAIL ABUN
NP-239	2.122E-01	2.674E-01	2.320E-01	1.364E-01	FAIL ABUN
AM-241	-1.769E-01	3.441E-01	2.907E-01	1.756E-01	NOT IDENT.
CM-243	-9.628E-02	1.425E-01	1.173E-01	7.271E-02	FAIL ABUN
AM-246	-1.779E-01	1.925E-01	1.444E-01	9.820E-02	NOT IDENT.
CM-247	1.813E-02	5.373E-02	4.619E-02	2.741E-02	NOT IDENT.
CF-249	-1.553E-02	5.709E-02	4.748E-02	2.913E-02	NOT IDENT.
CF-251	-7.703E-02	1.857E-01	1.511E-01	9.474E-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
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46.50	283.4492
46.50	283.4492
46.50	283.4492
48.70	279.7518
49.72	288.8420
51.35	281.9537
52.39	276.6709
52.97	284.6238
53.15	284.7068
53.44	264.6318
54.07	267.7891
56.28	302.5567
56.28	302.5585
57.37	0.0000
57.53	322.5159
57.53	322.5169
57.60	322.5506
57.98	325.6468
57.98	325.6468
59.32	330.1973
59.32	330.1973
59.40	347.7207
59.54	347.7937
59.72	347.8886
60.01	341.2350
61.10	337.8969
61.14	337.9168
61.30	342.8678
63.00	332.0095
63.29	338.9880
63.29	338.9880
63.58	345.9725
64.28	369.8029
65.12	388.8603
65.20	388.9053
65.20	388.9053
66.05	424.6854
66.72	440.7957
66.83	427.1187
66.91	427.1677
67.20	427.3419
67.20	427.3419
67.75	425.7042
67.85	402.1663
68.90	378.1362
68.90	378.1362
69.30	379.6579
69.67	364.3438
70.82	409.1485
70.82	409.1485
70.83	409.1549
72.80	443.5088
72.87	443.5507
72.87	443.5507
74.67	431.7127
74.81	431.7924
74.81	431.7924
74.81	431.7924
74.81	431.7924
74.81	431.7924
74.81	431.7924
74.81	431.7924
74.97	431.8837
75.28	432.0596
75.70	432.2968
77.11	433.0917
77.11	433.0917

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77.11	433.0917
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77.11	433.0917
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80.11	426.9637
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81.07	507.5328
81.07	507.5328
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83.37	547.2555
83.78	547.5342
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83.78	547.5342
83.78	547.5342
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85.43	438.6462
86.29	425.8687
86.50	467.4232
86.54	467.4445
86.59	467.4728
86.72	467.5471
86.79	487.7388
86.94	514.7069
87.30	504.9799
87.30	504.9799
87.30	504.9799
87.30	504.9799
87.30	504.9799
87.30	504.9799
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87.88	547.3079
88.03	547.4072
88.36	500.7756
88.47	500.8419
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91.11	667.7146
92.29	525.8198
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92.38	410.8399
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94.00	294.3261
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94.67	304.3167
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94.90	346.7191
94.90	346.7191
94.90	346.7191
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95.87	410.6566
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98.44	261.4902
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99.55	292.2025
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100.10	303.9304
103.18	395.3144
103.76	363.7134
105.00	306.5861
105.31	301.5426
108.00	338.5303
109.28	340.0205

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111.00	342.7011
111.76	359.5500
112.95	350.6539
115.19	303.6257
116.30	292.5157
117.00	291.6798
117.00	291.6798
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121.11	326.3465
121.62	335.9281
121.78	338.0741
122.06	332.9330
122.32	318.3555
122.32	318.3555
122.32	318.3555
122.32	318.3555
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129.76	320.6372
131.20	331.6342
133.02	359.7040
133.54	324.9485
135.34	291.5602
136.00	295.9799
136.25	298.1702
136.48	307.7843
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143.76	318.3506
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144.24	329.1722
144.24	329.1722
144.24	329.1722
145.22	302.7149
145.44	305.9828
147.16	318.2318
152.43	299.2288
152.70	290.6838
153.22	283.2740
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154.21	282.4328
154.21	282.4328
154.21	282.4328
155.03	291.2585
156.02	320.6518
158.56	322.4158
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161.27	296.0298
162.32	291.9427
162.64	336.5271
163.35	337.8096
163.89	334.6990
165.85	334.1417
167.43	338.9272
171.28	288.5909
171.86	296.3794
172.10	300.8106
176.55	322.7154
176.60	307.3608
181.06	290.7944
184.41	310.9713
185.71	312.8239
186.00	312.8908
190.27	296.3639
192.34	289.4531
193.63	269.0780
197.04	271.9757
198.01	271.0520
198.60	273.3988
200.40	233.5273
201.83	287.4544
202.84	273.7490
205.31	269.1028

208.36	262.4881
208.81	271.5622
209.75	277.1380
209.75	277.1380
210.97	277.6732
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216.55	269.1977
218.09	268.7756
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223.80	257.0906
226.40	247.5243
227.00	235.7874
227.08	239.4433
227.20	239.4610
228.16	254.1907
228.18	254.1941
228.18	254.1941
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236.00	267.0911
236.00	267.0911
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238.63	212.8102
238.63	212.8102
238.63	212.8102
239.00	212.8597
240.98	213.1288
241.98	213.2647
241.98	213.2647
241.98	213.2647
244.69	185.6985
245.39	184.2444
247.94	221.4463
248.90	193.8809
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252.85	176.7718
254.15	0.0000
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256.20	200.3194
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260.90	209.2621
262.80	198.3276
264.65	205.0737
268.24	215.7870
268.79	199.9719
269.46	193.5066
269.46	193.5066
269.46	193.5066
269.46	193.5066
271.23	200.2593
273.65	293.3191
276.40	192.4177
277.35	189.7054
277.60	191.6136
277.60	191.6136
278.00	200.1113
278.60	202.0612
279.20	207.7729
279.53	215.3332
280.46	224.8590
281.68	226.8995
283.67	213.0171
284.30	208.3799
285.00	200.9173
285.90	197.2463
286.10	190.6597
286.10	190.6597
287.40	173.7982
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290.80	222.3980
291.72	227.2471
293.26	0.0000
293.70	192.7422
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295.21	159.6989

295.21	159.6989
295.96	132.8735
296.50	132.9146
297.23	132.9675
298.57	133.0667
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299.80	133.1555
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300.09	133.1777
300.09	133.1777
300.09	133.1777
300.12	133.1794
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303.76	179.5167
303.91	179.5305
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304.40	177.9896
304.84	165.3163
306.84	162.3114
308.46	158.3591
311.98	164.6766
316.51	174.6729
318.01	156.5612
319.02	155.6837
319.41	162.4459
320.08	161.5400
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323.87	208.1083
323.87	208.1083
323.87	208.1083
325.23	197.6503
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333.44	188.8087
334.20	164.6667
334.20	164.6667
334.30	146.9160
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338.28	159.1853
338.28	159.1853
338.28	159.1853
338.32	159.1893
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338.32	159.1893
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351.92	148.5488
351.92	148.5488
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356.01	104.4544
364.48	135.6972
366.43	147.6343
367.43	129.9810
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369.80	136.0442
374.96	129.4601
383.85	137.9412
387.95	146.1584
388.63	166.0949
391.69	123.5020
391.69	123.5020
392.90	140.5129
398.62	146.8744
400.65	133.0081
401.10	138.0371
401.81	144.0844
402.60	138.1314
404.84	152.2987
410.95	129.6063
411.60	130.6490
413.65	144.8508
414.70	145.9240
415.30	142.9430

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427.89	101.2195
432.53	99.3937
433.93	108.5870
439.47	95.6202
439.56	95.6236
439.89	97.6711
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444.90	111.1329
445.03	111.1395
445.03	111.1395
445.03	111.1395
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475.06	121.8128
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476.78	99.1711
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511.85	105.7788
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513.99	97.8297
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555.20	90.4681
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591.81	93.4417
592.07	90.5748
593.00	81.9746
595.88	89.6141
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602.71	108.2227
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604.41	106.4790
604.70	104.6860
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609.31	93.2794
609.31	93.2794
609.31	93.2794
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614.37	88.7308
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621.84	80.6033
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661.65	91.4301
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666.33	86.8295
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692.80	80.7872
695.00	81.7713
696.49	89.2461
696.49	89.2461
697.00	84.6108
697.49	85.5537
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698.50	94.8821
699.00	96.7573
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722.78	73.8965
722.89	73.8997
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723.30	75.5144
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727.18	80.6967
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751.79	81.2846
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753.82	69.9832
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756.87	72.8846
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765.79	83.5116
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792.07	82.2260

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836.80	0.0000
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867.82	56.8853
871.10	46.8867
873.19	55.7081
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880.27	63.6445
880.51	63.6485
881.50	57.7876
883.24	52.9146
884.67	63.7172
889.25	73.6069
896.60	67.8461
898.02	74.7568
899.00	63.9526
903.28	60.7864
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911.07	66.1235
911.07	66.1235
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920.93	55.4053
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926.50	53.5012
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969.11	91.1111
969.11	91.1111
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980.50	56.2222
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1001.68	56.5070
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1038.76	0.0000
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1046.59	53.0220
1048.07	56.0988

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1050.47	55.1096
1062.04	60.3708
1063.62	81.8880
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1078.86	61.6260
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1112.84	46.1257
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1120.29	61.1558
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1120.51	61.1582
1121.28	61.1702
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1173.22	82.8188
1175.09	61.8761
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1230.97	80.6294
1235.34	80.7005
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1274.54	69.5650
1291.56	44.0263
1298.22	0.0000
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1325.50	41.0739
1332.49	27.0589
1333.61	35.7245
1360.21	24.2480
1362.66	0.0000
1365.15	28.0047
1368.21	32.6904
1368.53	0.0000
1376.25	36.4809
1384.27	43.0929
1394.10	33.7864
1395.20	33.7939
1407.95	29.1685
1434.06	22.6892
1436.60	22.7001
1457.56	0.0000
1460.81	20.8989
1489.15	17.1851
1509.49	21.0785
1596.49	28.2000
1620.62	11.7158
1678.03	0.0000
1691.02	8.8876
1691.02	8.8876
1706.46	0.0000
1750.46	0.0000
1764.49	6.9927
1764.49	6.9927
1764.49	6.9927
1764.49	6.9927
1770.23	17.4969
1771.40	56.0000
1791.20	0.0000
1808.65	14.0796

1836.01

15.1475

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246874001

Total Uranium Activity	6.4288E+00	ug/g
Total Uranium Counting Unc.	7.9939E+00	ug/g
Total Uranium Tpu	4.0785E-06	ug/g
Total Uranium Mda	6.8429E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 952643                          SAMPLE ID   : G246874001
*  ANALYST       : MXR1                             DETECTOR    : GAM15
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 23-FEB-2010 19:29:19.67          SAMPLE ALQT  : 111.790 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.018E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.603E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 3.279E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.586E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 03:22:37.10

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875001.CNF;1
Sample date   : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 23:20:58
Sample ID     : G246875001 Sample quantity : 1.48300E+02 GRAM
Detector name : GAM22 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00 Elapsed real time: 0 04:00:05.02 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 952643 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.22*	465	1629	1.12	126.69	123	9	3.23E-02	16.8	
2	3	74.84*	1069	1373	1.08	149.90	146	19	7.42E-02	6.3	2.72E+00
3	3	77.16*	1614	1241	1.04	154.54	146	19	1.12E-01	4.5	
4	0	84.01*	321	1233	1.88	168.23	165	7	2.23E-02	19.7	
5	0	86.99	559	1458	1.13	174.19	172	7	3.88E-02	12.0	
6	4	89.94	314	611	0.90	180.08	178	13	2.18E-02	11.2	1.90E+00
7	4	92.71*	1430	1480	1.31	185.61	178	13	9.93E-02	5.8	
8	0	129.02*	261	1204	1.33	258.16	254	9	1.81E-02	25.3	
9	0	144.01*	201	1135	1.32	288.11	284	9	1.40E-02	33.1	
10	0	153.91	118	1173	1.31	307.89	304	9	8.21E-03	53.1	
11	0	163.25	135	959	1.44	326.56	323	8	9.36E-03	40.6	
12	0	185.83*	781	1383	1.21	371.67	367	11	5.42E-02	10.5	
13	0	209.81	298	1196	1.15	419.60	413	11	2.07E-02	23.2	
14	4	238.71*	3896	680	1.22	477.33	471	17	2.71E-01	2.0	1.79E+00
15	4	241.58	832	844	1.74	483.07	471	17	5.77E-02	9.1	
16	0	270.22	363	802	1.61	540.31	536	11	2.52E-02	15.9	
17	0	277.53	154	674	0.80	554.90	551	9	1.07E-02	31.4	
18	0	295.25*	1115	843	1.38	590.31	583	13	7.74E-02	6.3	
19	0	300.20	239	577	1.25	600.22	597	9	1.66E-02	19.2	
20	0	328.00*	198	626	1.54	655.76	651	11	1.37E-02	26.1	
21	0	338.48*	709	850	1.26	676.71	670	14	4.92E-02	9.6	
22	0	352.02*	1954	578	1.36	703.76	698	11	1.36E-01	3.5	
23	0	462.99*	322	317	1.70	925.55	920	11	2.23E-02	12.6	
24	0	478.37	65	380	2.94	956.30	951	11	4.49E-03	59.8	
25	0	510.69*	263	679	2.17	1020.89	1014	19	1.83E-02	27.6	
26	0	583.29*	1291	392	1.54	1165.99	1159	14	8.97E-02	4.5	
27	0	609.42*	1534	424	1.73	1218.22	1210	16	1.07E-01	4.1	
28	0	661.77	473	384	1.85	1322.87	1314	15	3.28E-02	10.2	
29	0	727.64	370	347	1.80	1454.55	1447	16	2.57E-02	12.4	
30	0	768.78	231	424	2.26	1536.78	1529	19	1.60E-02	22.5	
31	0	795.26	209	269	1.50	1589.73	1582	14	1.45E-02	18.1	
32	0	860.76	198	248	1.89	1720.66	1715	12	1.38E-02	17.4	
33	0	911.38*	1022	293	1.97	1821.87	1813	17	7.10E-02	5.1	
34	1	964.72	233	235	2.56	1928.54	1921	24	1.62E-02	16.2	1.05E+00
35	1	969.26*	584	195	2.14	1937.60	1921	24	4.05E-02	6.9	
36	0	1000.66*	128	222	1.29	2000.39	1993	15	8.86E-03	28.0	
37	0	1120.60*	382	343	2.19	2240.23	2230	20	2.65E-02	13.4	
38	0	1238.39	101	351	2.24	2475.79	2466	16	7.00E-03	42.8	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1378.58	86	129	3.10	2756.18	2747	17	5.98E-03	33.1	
40	0	1409.17	51	100	2.28	2817.35	2809	13	3.55E-03	43.3	
41	0	1461.02*	5556	170	2.67	2921.06	2909	26	3.86E-01	1.5	
42	0	1730.07*	64	52	1.31	3459.31	3447	19	4.47E-03	32.3	
43	0	1765.36*	311	86	3.01	3529.91	3520	26	2.16E-02	10.9	
44	0	1848.87	65	69	11.16	3697.01	3682	30	4.53E-03	33.8	

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

VMS Nuclide Identification Report V3.1 Generated 24-FEB-2010 03:22:40

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875001.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 23-FEB-2010 23:20:58
Sample ID        : G246875001             Sample quantity  : 148.30 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA22                 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00           Elapsed real time: 0 04:00:05.02   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
BE-7	+	477.59	*	2.114E-01	2.540E-01	3.031E-01	3.163E-02	0.698
K-40	+	1460.81	*	3.452E+01	3.330E+00	3.303E-01	3.025E-02	104.537
CD-109	+	88.03	*	2.604E+00	6.720E-01	7.189E-01	6.822E-02	3.622
SN-126	+	64.28		1.418E+00	5.179E-01	4.541E-01	6.595E-02	3.123
	+	86.94		1.065E+00	5.109E-01	2.965E-01	1.231E-01	3.592
	+	87.57	*	2.561E-01	6.611E-02	7.975E-02	7.530E-03	3.212
BA-137M	+	661.65	*	1.855E-01	4.244E-02	3.551E-02	3.745E-03	5.224
CS-137	+	661.65	*	1.961E-01	4.488E-02	3.754E-02	3.964E-03	5.224
CE-141	+	145.44	*	8.579E-02	5.734E-02	5.983E-02	5.446E-03	1.434
RE-188	+	155.03	*	1.407E-01	1.500E-01	1.741E-01	1.625E-02	0.808
	+	477.96		2.028E+00	2.436E+00	2.859E+00	2.816E-01	0.709
	+	633.10		1.115E+00	1.572E+00	2.656E+00	2.782E-01	0.420
TL-208	+	277.35		4.652E-01	3.020E-01	3.609E-01	5.950E-02	1.289
	+	510.84		3.589E-01	2.034E-01	1.235E-01	1.609E-02	2.906
	+	583.14	*	4.938E-01	6.953E-02	3.268E-02	3.543E-03	15.112
	+	860.37		6.891E-01	2.532E-01	2.513E-01	2.928E-02	2.742
BI-211		72.87		3.472E+00	2.048E+00	3.106E+00	2.486E-01	1.118
	+	351.07	*	3.538E+00	4.790E-01	1.959E-01	2.286E-02	18.060
PB-212	+	74.81		2.049E+00	3.625E-01	3.235E-01	4.015E-02	6.333
	+	77.11		1.755E+00	2.154E-01	1.842E-01	1.541E-02	9.527
	+	87.30		1.185E+00	3.279E-01	3.697E-01	5.077E-02	3.204
	+	238.63	*	1.648E+00	2.277E-01	5.653E-02	7.469E-03	29.152
	+	300.09		1.500E+00	6.149E-01	7.118E-01	1.038E-01	2.107
PO-212	+	74.81		2.049E+00	3.625E-01	3.235E-01	4.015E-02	6.333
	+	77.11		1.755E+00	2.154E-01	1.842E-01	1.541E-02	9.527
	+	87.30		1.185E+00	3.279E-01	3.697E-01	5.077E-02	3.204
	+	115.19		8.207E-01	2.268E+00	3.641E+00	3.016E-01	0.225
	+	238.63	*	1.648E+00	2.277E-01	5.653E-02	7.469E-03	29.152
	+	300.09		1.500E+00	6.149E-01	7.118E-01	1.038E-01	2.107
BI-214	+	609.31	*	1.100E+00	1.564E-01	6.352E-02	7.386E-03	17.323
	+	1120.29		1.364E+00	3.951E-01	2.727E-01	3.013E-02	5.002
	+	1764.49		1.453E+00	3.392E-01	1.712E-01	1.427E-02	8.486
PB-214	+	74.81		3.531E+00	5.913E-01	5.575E-01	6.145E-02	6.333
	+	77.11		3.009E+00	4.346E-01	3.158E-01	3.573E-02	9.527

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	87.30		2.029E+00	5.466E-01	6.334E-01	7.705E-02	3.204
	+	241.98		2.108E+00	4.819E-01	3.113E-01	4.281E-02	6.772
	+	295.21		1.231E+00	2.396E-01	1.298E-01	1.932E-02	9.485
	+	351.92	*	1.231E+00	1.786E-01	6.767E-02	8.626E-03	18.189
	+	74.81		3.531E+00	5.913E-01	5.575E-01	6.145E-02	6.333
	+	77.11		3.009E+00	4.346E-01	3.158E-01	3.573E-02	9.527
	+	87.30		2.029E+00	5.466E-01	6.334E-01	7.705E-02	3.204
	+	241.98		2.108E+00	4.819E-01	3.113E-01	4.281E-02	6.772
PO-216	+	295.21		1.231E+00	2.396E-01	1.298E-01	1.932E-02	9.485
	+	351.92	*	1.231E+00	1.786E-01	6.767E-02	8.626E-03	18.189
	+	74.81		2.049E+00	3.625E-01	3.235E-01	4.015E-02	6.333
	+	77.11		1.755E+00	2.154E-01	1.842E-01	1.541E-02	9.527
	+	87.30		1.185E+00	3.279E-01	3.697E-01	5.077E-02	3.204
	+	238.63	*	1.648E+00	2.277E-01	5.653E-02	7.469E-03	29.152
	+	300.09		1.500E+00	6.149E-01	7.118E-01	1.038E-01	2.107
	+	74.81		3.531E+00	5.913E-01	5.575E-01	6.145E-02	6.333
PO-218	+	77.11		3.009E+00	4.346E-01	3.158E-01	3.573E-02	9.527
	+	87.30		2.029E+00	5.466E-01	6.334E-01	7.705E-02	3.204
	+	241.98		2.108E+00	4.819E-01	3.113E-01	4.281E-02	6.772
	+	295.21		1.231E+00	2.396E-01	1.298E-01	1.932E-02	9.485
	+	351.92	*	1.231E+00	1.786E-01	6.767E-02	8.626E-03	18.189
	+	240.98	*	3.997E+00	8.859E-01	6.426E-01	8.044E-02	6.220
	+	609.31	*	1.100E+00	1.564E-01	6.352E-02	7.386E-03	17.323
	+	1120.29		1.364E+00	3.951E-01	2.727E-01	3.013E-02	5.002
AC-228	+	1764.49		1.453E+00	3.392E-01	1.712E-01	1.427E-02	8.486
	+	338.32		1.424E+00	6.591E-01	2.163E-01	9.100E-02	6.585
	+	911.07	*	1.675E+00	2.807E-01	1.291E-01	1.711E-02	12.971
	+	969.11		1.680E+00	4.669E-01	2.185E-01	5.276E-02	7.690
	+	338.32		1.424E+00	6.591E-01	2.163E-01	9.100E-02	6.585
	+	911.07	*	1.675E+00	2.807E-01	1.291E-01	1.711E-02	12.971
	+	969.11		1.680E+00	4.669E-01	2.185E-01	5.276E-02	7.690
	+	74.81		2.079E+00	3.131E-01	3.283E-01	2.705E-02	6.333
TH-228	+	77.11		1.781E+00	2.185E-01	1.869E-01	1.563E-02	9.527
	+	87.30		1.202E+00	3.102E-01	3.751E-01	3.530E-02	3.204
	+	238.63	*	1.672E+00	2.310E-01	5.735E-02	7.577E-03	29.152
	+	300.09		1.522E+00	1.085E+00	7.222E-01	4.344E-01	2.107
	+	609.31	*	1.100E+00	1.564E-01	6.352E-02	7.385E-03	17.323
	+	1120.29		1.364E+00	3.951E-01	2.727E-01	3.013E-02	5.002
	+	1764.49		1.453E+00	3.392E-01	1.712E-01	1.427E-02	8.486
	+	338.32		1.424E+00	3.227E-01	2.163E-01	2.572E-02	6.585
TH-232	+	911.07	*	1.675E+00	2.807E-01	1.291E-01	1.711E-02	12.971
	+	969.11		1.680E+00	4.669E-01	2.185E-01	5.276E-02	7.690
	+	63.29	*	3.583E+00	1.353E+00	1.154E+00	2.009E-01	3.104
	+	92.38		4.257E+00	9.217E-01	4.567E-01	8.367E-02	9.322
	+	609.31	*	1.100E+00	1.564E-01	6.352E-02	7.385E-03	17.323
	+	1120.29		1.364E+00	3.951E-01	2.727E-01	3.013E-02	5.002
	+	1764.49		1.453E+00	3.392E-01	1.712E-01	1.427E-02	8.486
	+	89.95		1.918E+00	7.345E-01	1.152E+00	3.578E-01	1.665
U-235	+	93.35		5.118E+00	1.558E+00	5.458E-01	1.537E-01	9.377

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		105.00		1.161E+00	7.421E-01	1.096E+00	3.267E-01	1.060
	+	143.76	*	2.899E-01	1.987E-01	2.092E-01	3.690E-02	1.386
	+	163.35		4.517E-01	3.774E-01	4.788E-01	9.379E-02	0.943
	+	185.71		2.406E-01	5.645E-02	4.390E-02	4.596E-03	5.481
		205.31		-9.482E-02	3.752E-01	5.347E-01	1.089E-01	-0.177
NP-237	+	86.50	*	7.522E-01	2.485E-01	2.103E-01	4.762E-02	3.577
		95.87		-6.362E-01	6.752E-01	9.161E-01	2.265E-01	-0.694
U-238	+	63.29	*	3.583E+00	1.353E+00	1.154E+00	2.009E-01	3.104
	+	92.38		4.257E+00	6.258E-01	4.567E-01	4.161E-02	9.322
AM-243	+	74.67	*	3.322E-01	4.990E-02	5.260E-02	4.287E-03	6.316
	+	86.72		2.821E+01	7.279E+00	7.870E+00	7.354E-01	3.584
		117.66		-2.107E+00	2.413E+00	3.741E+00	3.090E-01	-0.563
		142.18		9.645E+00	1.221E+01	1.853E+01	1.637E+00	0.520
ANH-511	+	511.00	*	7.752E-02	4.345E-02	2.668E-02	2.673E-03	2.906

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	1.088E-03	2.542E-02	4.215E-02	3.632E-03	0.026
NA-24		1368.53	*	-7.405E-02	2.542E-02	Half-Life too short		
AL-26		1129.67		1.059E+00	1.184E+00	1.721E+00	1.498E-01	0.616
		1808.65	*	8.230E-03	1.485E-02	2.573E-02	2.104E-03	0.320
TI-44		67.85		-2.714E-02	2.948E-02	4.233E-02	3.231E-03	-0.641
	+	78.38	*	3.239E-01	3.974E-02	4.496E-02	3.812E-03	7.204
SC-46		889.25	*	-1.121E-02	2.245E-02	3.637E-02	4.071E-03	-0.308
	+	1120.51		2.324E-01	6.551E-02	7.266E-02	6.424E-03	3.198
V-48		944.10		-1.660E-01	4.988E-01	8.098E-01	8.783E-02	-0.205
		983.50	*	1.795E-02	4.009E-02	6.711E-02	7.038E-03	0.267
		1312.09		1.958E-02	4.555E-02	7.675E-02	6.761E-03	0.255
CR-51		320.08	*	-1.433E-01	2.239E-01	3.667E-01	4.748E-02	-0.391
MN-52		744.21		1.834E-01	1.262E-01	2.149E-01	2.336E-02	0.853
		848.13		2.457E+00	3.570E+00	6.100E+00	6.791E-01	0.403
		935.52		2.268E-01	1.377E-01	2.393E-01	2.612E-02	0.948
		1246.25		5.757E+00	4.572E+00	7.095E+00	5.998E-01	0.811
		1333.61		6.122E-01	2.493E+00	4.166E+00	3.715E-01	0.147
		1434.06	*	-3.327E-03	1.223E-01	1.997E-01	1.785E-02	-0.017
MN-54		834.83	*	1.905E-02	2.182E-02	3.743E-02	4.158E-03	0.509
CO-56		846.75	*	-1.423E-02	2.279E-02	3.692E-02	4.110E-03	-0.385
		977.42		3.359E-01	1.909E+00	2.806E+00	2.960E-01	0.120
		1037.82		1.049E-02	1.835E-01	3.006E-01	3.099E-02	0.035
		1175.09		-1.678E+00	1.314E+00	2.065E+00	1.663E-01	-0.812
	+	1238.25		1.001E-01	8.615E-02	9.576E-02	8.298E-03	1.046
		1360.21		-5.106E-01	5.672E-01	8.519E-01	7.609E-02	-0.599
		1771.40		1.610E-01	1.349E-01	2.169E-01	1.802E-02	0.742
CO-57		122.06	*	-3.324E-03	1.608E-02	2.536E-02	2.091E-03	-0.131
		136.48		-1.191E-01	1.262E-01	2.083E-01	1.933E-02	-0.572
CO-58		810.76	*	-8.275E-04	2.208E-02	3.689E-02	4.085E-03	-0.022
FE-59	+	142.65		3.705E+00	2.476E+00	2.909E+00	2.574E-01	1.274

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	192.34			-2.781E-02	6.115E-01	9.734E-01	1.445E-01	-0.029
	1099.22	*		1.707E-02	5.580E-02	9.182E-02	8.999E-03	0.186
	1291.56			-1.172E-02	7.197E-02	1.180E-01	1.163E-02	-0.099
CO-60	1173.22			-9.314E-03	2.605E-02	4.281E-02	3.442E-03	-0.218
	1332.49	*		1.520E-02	2.102E-02	3.600E-02	3.210E-03	0.422
ZN-65	1115.52	*		6.230E-02	6.420E-02	9.346E-02	8.338E-03	0.667
GE-68	1077.35	*		1.705E-02	7.428E-01	1.210E+00	1.141E-01	0.014
AS-73	53.44	*		9.113E-02	4.564E-01	7.668E-01	5.794E-02	0.119
AS-74	595.88	*		4.431E-02	5.286E-02	8.986E-02	9.314E-03	0.493
	634.78			1.153E-01	1.986E-01	3.341E-01	3.502E-02	0.345
SE-75	66.05			-2.954E+00	3.073E+00	4.337E+00	4.138E-01	-0.681
	96.73			-5.010E-01	5.414E-01	7.494E-01	1.031E-01	-0.669
	121.11			-3.439E-03	8.563E-02	1.357E-01	1.483E-02	-0.025
	136.00			-1.299E-02	2.362E-02	3.944E-02	3.422E-03	-0.329
	198.60			-2.546E-01	1.222E+00	1.895E+00	2.215E-01	-0.134
	264.65	*		-1.081E-02	3.120E-02	4.309E-02	5.800E-03	-0.251
	279.53			8.035E-02	7.835E-02	1.126E-01	1.598E-02	0.714
	303.91			-1.288E-02	1.397E+00	2.043E+00	3.114E-01	-0.006
	400.65			2.065E-01	1.539E-01	2.601E-01	3.045E-02	0.794
BR-77	87.88	+		4.723E+02	1.219E+02	1.707E+02	1.618E+01	2.768
	200.40			3.813E+01	8.857E+01	1.469E+02	1.615E+01	0.260
	239.00	+		2.220E+02	2.901E+01	1.887E+01	2.347E+00	11.766
	249.79			-9.849E+00	3.456E+01	5.533E+01	7.114E+00	-0.178
	281.68			6.748E+00	5.272E+01	7.384E+01	1.029E+01	0.091
	297.23			3.070E+02	6.025E+01	6.180E+01	8.311E+00	4.967
	303.76			2.126E+00	1.003E+02	1.468E+02	1.942E+01	0.014
	439.47			1.784E+00	6.939E+01	1.131E+02	1.088E+01	0.016
	484.57			-6.052E+01	1.340E+02	1.817E+02	1.796E+01	-0.333
	520.65	*		-6.167E+00	5.585E+00	7.923E+00	7.975E-01	-0.778
	574.64			4.642E+01	1.067E+02	1.721E+02	1.771E+01	0.270
	578.91			-4.157E+00	4.835E+01	6.888E+01	7.099E+00	-0.060
	585.48			1.647E+03	2.139E+02	2.572E+02	2.656E+01	6.405
	755.35			5.023E+01	7.989E+01	1.327E+02	1.447E+01	0.379
	817.79			-6.012E+01	6.315E+01	1.007E+02	1.115E+01	-0.597
SR-82	698.33			-1.069E+01	1.949E+01	3.109E+01	3.326E+00	-0.344
	776.49	*		-5.277E-02	2.552E-01	3.479E-01	3.816E-02	-0.152
	1395.20			-2.398E-01	5.914E+00	9.673E+00	8.649E-01	-0.025
RB-83	520.41	*		-4.870E-02	4.379E-02	6.210E-02	6.250E-03	-0.784
	529.64			-1.503E-02	5.823E-02	9.662E-02	9.765E-03	-0.156
	552.65			-6.308E-02	1.106E-01	1.803E-01	1.840E-02	-0.350
RB-84	881.50	*		4.715E-02	4.095E-02	7.062E-02	7.899E-03	0.668
KR-85	513.99	*		2.526E+01	5.692E+00	8.585E+00	8.614E-01	2.943
SR-85	513.99	*		1.287E-01	2.900E-02	4.374E-02	4.389E-03	2.943
RB-86	1076.63	*		1.396E-01	4.535E-01	7.486E-01	7.064E-02	0.186
Y-88	898.02			-4.736E-03	2.454E-02	4.032E-02	4.530E-03	-0.117
	1836.01	*		6.514E-03	1.995E-02	2.899E-02	2.344E-03	0.225
ZR-88	392.90	*		-2.139E-03	1.768E-02	2.895E-02	2.695E-03	-0.074
Y-91	1204.90	*		-2.102E-01	1.250E+01	1.935E+01	1.591E+00	-0.011
NB-94	702.63	*		2.374E-02	1.989E-02	3.366E-02	3.607E-03	0.705

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	871.10			1.222E-03	1.883E-02	3.139E-02	3.506E-03	0.039
NB-95	765.79	*		6.054E-02	3.134E-02	4.678E-02	5.116E-03	1.294
NB-95M	235.69	*		1.849E-01	9.218E-02	1.346E-01	1.779E-02	1.374
ZR-95	724.18			1.284E-01	6.453E-02	9.731E-02	1.109E-02	1.320
	756.15	*		7.382E-03	4.037E-02	6.593E-02	7.653E-03	0.112
NB-97	657.90	*		3.414E-02	4.037E-02	Half-Life	too short	
	1024.50			-1.804E+00	4.037E-02	Half-Life	too short	
ZR-97	254.15			3.426E-01	4.037E-02	Half-Life	too short	
	355.39			1.808E+00	4.037E-02	Half-Life	too short	
	507.63	*		2.158E+00	4.037E-02	Half-Life	too short	
	602.52			-1.023E+00	4.037E-02	Half-Life	too short	
	1021.30			-9.550E-01	4.037E-02	Half-Life	too short	
	1147.95			-6.271E-01	4.037E-02	Half-Life	too short	
	1362.66			1.586E+00	4.037E-02	Half-Life	too short	
	1750.46			8.534E-01	4.037E-02	Half-Life	too short	
MO-99	140.51			5.654E+00	1.576E+01	2.291E+01	6.354E+00	0.247
	181.06			-1.075E+01	1.082E+01	1.498E+01	2.867E+00	-0.718
	366.43			1.380E+01	4.244E+01	7.088E+01	7.518E+00	0.195
	739.58	*		-3.830E+00	5.841E+00	9.165E+00	1.517E+00	-0.418
	778.00			-2.698E+01	2.115E+01	2.657E+01	2.915E+00	-1.015
TC-99M	140.51	*		1.799E+09	2.115E+01	Half-Life	too short	
RH-101	127.23			2.432E-02	2.353E-02	3.398E-02	2.841E-03	0.716
	198.01	*		-1.300E-02	2.257E-02	3.465E-02	3.780E-03	-0.375
	325.23			1.130E-01	1.524E-01	2.269E-01	2.821E-02	0.498
RH-102	418.52			9.410E-02	1.665E-01	2.771E-01	2.630E-02	0.340
	475.06	*		3.205E-03	2.012E-02	2.828E-02	2.781E-03	0.113
	631.29			3.493E-03	3.098E-02	5.131E-02	5.373E-03	0.068
	697.49			-2.019E-02	4.474E-02	7.172E-02	7.672E-03	-0.282
	766.84			1.929E-01	8.110E-02	1.221E-01	1.335E-02	1.581
	1046.59			-3.805E-02	7.046E-02	1.084E-01	1.063E-02	-0.351
	1112.84			1.187E-02	1.603E-01	2.221E-01	1.988E-02	0.053
RU-103	497.08	*		-1.495E-02	2.413E-02	3.776E-02	5.667E-03	-0.396
	610.33	+		1.176E+01	2.290E+00	1.560E+00	2.757E-01	7.537
RH-106	511.85	+		3.867E-01	2.168E-01	2.422E-01	2.427E-02	1.597
	621.84	*		2.335E-02	1.820E-01	3.020E-01	4.409E-02	0.077
	1050.47			1.616E+00	1.360E+00	2.323E+00	2.267E-01	0.696
RU-106	511.85	+		3.867E-01	2.168E-01	2.422E-01	2.427E-02	1.597
	621.84	*		2.335E-02	1.820E-01	3.020E-01	3.154E-02	0.077
	1050.47			1.616E+00	1.360E+00	2.323E+00	2.267E-01	0.696
AG-108M	433.93	*		6.167E-03	1.917E-02	3.158E-02	3.126E-03	0.195
	614.37			1.441E-02	2.446E-02	3.582E-02	3.834E-03	0.402
	722.95			-1.303E-03	2.725E-02	3.787E-02	4.190E-03	-0.034
AG-110M	657.75	*		1.575E-02	2.337E-02	3.410E-02	3.665E-03	0.462
	677.61			1.530E-01	1.762E-01	2.973E-01	3.214E-02	0.515
	706.67			3.955E-02	1.229E-01	2.029E-01	2.217E-02	0.195
	763.93			1.268E-01	1.128E-01	1.651E-01	1.836E-02	0.768
	884.67			-7.948E-03	2.889E-02	4.736E-02	5.401E-03	-0.168
	937.48			1.521E-03	6.423E-02	1.061E-01	1.183E-02	0.014
	1384.27			6.285E-02	8.977E-02	1.339E-01	1.229E-02	0.469

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111	171.28			-6.592E-02	5.298E-01	8.789E-01	8.772E-02	-0.075
	245.39	*		-3.416E-01	6.352E-01	8.768E-01	1.113E-01	-0.390
IN-113M	391.69	*		-1.318E-02	2.590E-02	4.184E-02	3.995E-03	-0.315
SN-113	391.69	*		-1.318E-02	2.590E-02	4.184E-02	3.995E-03	-0.315
IN-114M	190.27	*		-4.135E-02	1.286E-01	1.844E-01	1.960E-02	-0.224
CD-115	260.90			-8.047E+00	6.835E+01	1.096E+02	1.456E+01	-0.073
	492.35			-1.003E+01	1.791E+01	2.819E+01	2.798E+00	-0.356
	527.90	*		2.747E+00	4.989E+00	8.509E+00	8.593E-01	0.323
SN-117M	156.02			1.426E-01	1.538E+00	2.275E+00	2.133E-01	0.063
	158.56	*		4.957E-02	4.936E-02	5.496E-02	5.212E-03	0.902
SB-122	563.90	*		5.480E-01	1.023E+00	1.732E+00	1.776E-01	0.316
	692.80			-3.595E-01	2.108E+01	3.444E+01	3.677E+00	-0.010
I-123	159.00	*		5.476E-01	2.108E+01	Half-Life	too short	
	528.96			-3.835E+01	2.108E+01	Half-Life	too short	
TE-123M	159.00	*		5.791E-03	2.713E-02	2.904E-02	2.774E-03	0.199
I-124	602.71	*		-1.723E-01	4.050E-01	5.635E-01	5.853E-02	-0.306
	722.78			-2.856E-01	2.570E+00	3.558E+00	3.840E-01	-0.080
	1325.50			1.025E+00	1.739E+01	2.876E+01	2.554E+00	0.036
	1376.25			5.074E+01	1.912E+01	3.127E+01	2.795E+00	1.623
	1509.49			1.278E+01	7.794E+00	1.393E+01	1.238E+00	0.917
	1691.02			5.212E-01	1.846E+00	3.127E+00	2.674E-01	0.167
SB-124	602.71			-1.099E-02	2.583E-02	3.594E-02	3.734E-03	-0.306
	645.85			-1.776E-02	2.776E-01	4.556E-01	4.983E-02	-0.039
	709.31			-9.530E-01	1.673E+00	2.663E+00	2.861E-01	-0.358
	713.82			4.547E-02	9.689E-01	1.582E+00	2.160E-01	0.029
	722.78			-2.640E-02	2.376E-01	3.290E-01	3.600E-02	-0.080
+	968.20			1.718E+01	2.985E+00	4.208E+00	4.474E-01	4.082
	1045.16			-1.071E+00	1.458E+00	2.293E+00	2.252E-01	-0.467
	1325.50			1.012E-01	1.717E+00	2.840E+00	2.522E-01	0.036
	1368.21			-4.266E-01	1.107E+00	1.589E+00	2.173E-01	-0.269
	1436.60			-8.790E-01	2.076E+00	3.295E+00	2.944E-01	-0.267
	1691.02	*		1.137E-02	4.025E-02	6.820E-02	6.067E-03	0.167
SB-125	427.89	*		2.222E-02	5.505E-02	9.099E-02	8.829E-03	0.244
+	463.38			8.678E-01	2.358E-01	3.195E-01	3.313E-02	2.716
	600.56			-4.621E-03	1.135E-01	1.739E-01	1.898E-02	-0.027
	635.90			5.017E-02	1.546E-01	2.579E-01	2.853E-02	0.195
TE-125M	109.28	*		3.296E-01	6.174E+00	9.570E+00	9.690E-01	0.034
I-126	388.63			4.613E-02	1.161E-01	1.934E-01	1.831E-02	0.239
	666.33	*		8.402E-02	1.174E-01	1.713E-01	1.810E-02	0.490
	753.82			7.014E-01	8.006E-01	1.341E+00	1.462E-01	0.523
SB-126	223.80			-6.161E-01	2.467E+00	3.994E+00	4.739E-01	-0.154
+	278.60			2.974E+00	1.913E+00	2.541E+00	3.552E-01	1.170
+	296.50			1.185E+01	2.184E+00	2.017E+00	2.717E-01	5.875
	414.70			-5.547E-02	4.380E-02	6.814E-02	6.449E-03	-0.814
	415.30			-2.605E+00	3.600E+00	5.735E+00	5.430E-01	-0.454
	555.20			-5.475E-01	2.177E+00	3.598E+00	3.676E-01	-0.152
	573.80			1.288E-01	6.000E-01	9.841E-01	1.012E-01	0.131
	593.00			-2.278E-01	5.217E-01	8.506E-01	8.808E-02	-0.268
	656.30			-2.265E+00	2.173E+00	2.857E+00	3.009E-01	-0.793

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		666.33		3.506E-02	4.898E-02	7.150E-02	7.554E-03	0.490
		675.00		-5.364E-01	1.118E+00	1.794E+00	1.903E-01	-0.299
		695.00		-2.030E-03	4.267E-02	6.960E-02	7.437E-03	-0.029
		697.00		2.170E-02	1.481E-01	2.433E-01	2.602E-02	0.089
		720.50	*	-5.467E-02	9.428E-02	1.266E-01	1.365E-02	-0.432
		856.80		3.347E-01	3.056E-01	4.601E-01	5.130E-02	0.727
		989.30		-4.470E-01	7.132E-01	1.134E+00	1.183E-01	-0.394
		1034.80		2.063E+00	5.092E+00	8.469E+00	8.421E-01	0.244
		1213.00		1.531E+00	2.770E+00	4.696E+00	3.883E-01	0.326
		61.10		1.069E+01	3.055E+01	4.589E+01	4.540E+00	0.233
		252.40		-2.529E-01	2.451E+00	3.939E+00	1.697E+00	-0.064
		290.80		-2.670E+00	1.297E+01	1.891E+01	2.885E+00	-0.141
		411.60		4.018E+00	6.550E+00	1.088E+01	1.749E+00	0.369
		444.90		-1.085E+00	5.055E+00	8.153E+00	1.070E+00	-0.133
		473.00		-3.954E-02	1.048E+00	1.460E+00	1.979E-01	-0.027
		543.00		-6.401E-01	8.064E+00	1.344E+01	2.048E+00	-0.048
		603.60		-3.825E-01	6.836E+00	9.706E+00	1.324E+00	-0.039
		685.20	*	-6.189E-01	7.017E-01	1.099E+00	1.410E-01	-0.563
		698.50		-4.040E+00	7.945E+00	1.267E+01	2.145E+00	-0.319
		722.20		-1.399E+01	1.797E+01	2.376E+01	3.031E+00	-0.589
XE-127		783.80		3.075E+00	1.979E+00	3.320E+00	4.656E-01	0.926
		57.60		-1.582E+00	3.304E+00	5.440E+00	3.908E-01	-0.291
	+	145.22		9.473E-01	6.329E-01	7.522E-01	6.728E-02	1.259
		172.10		-2.984E-02	7.280E-02	1.198E-01	1.199E-02	-0.249
I-131		202.84	*	-2.039E-02	3.271E-02	4.876E-02	5.405E-03	-0.418
		374.96		5.054E-02	1.195E-01	1.905E-01	1.940E-02	0.265
		80.18		-2.340E+00	2.867E+00	4.077E+00	3.547E-01	-0.574
		284.30		-5.444E-01	8.948E-01	1.398E+00	1.975E-01	-0.390
TE-132		364.48	*	1.957E-02	6.463E-02	1.079E-01	1.195E-02	0.181
		636.97		-5.708E-02	8.407E-01	1.382E+00	1.503E-01	-0.041
		722.89		-3.053E-01	4.354E+00	6.043E+00	6.546E-01	-0.051
		49.72		-8.531E+00	9.164E+00	1.498E+01	1.530E+00	-0.570
BA-133		111.76		-2.651E+00	1.712E+01	2.722E+01	2.849E+00	-0.097
		116.30		-4.866E+00	1.554E+01	2.453E+01	2.555E+00	-0.198
		228.16	*	-1.662E-01	3.868E-01	6.209E-01	1.100E-01	-0.268
		53.15		4.604E-01	1.979E+00	3.328E+00	2.525E-01	0.138
I-133		79.62		-5.442E-01	8.528E-01	1.217E+00	1.851E-01	-0.447
		81.00		6.812E-02	7.581E-02	8.975E-02	1.430E-02	0.759
	+	276.40		4.597E-01	3.004E-01	3.997E-01	7.233E-02	1.150
		302.84		6.063E-02	9.924E-02	1.478E-01	2.464E-02	0.410
I-133		356.01	*	1.326E-02	2.851E-02	4.178E-02	6.243E-03	0.317
		383.85		-8.280E-02	1.785E-01	2.892E-01	3.870E-02	-0.286
	+	510.53		4.868E-01	1.785E-01	Half-Life	too short	
		529.87	*	-7.932E-04	1.785E-01	Half-Life	too short	
		706.58		5.592E-02	1.785E-01	Half-Life	too short	
		856.28		5.008E-02	1.785E-01	Half-Life	too short	
		875.33		-2.737E-02	1.785E-01	Half-Life	too short	
		1236.41		4.586E-01	1.785E-01	Half-Life	too short	
		1298.22		5.913E-02	1.785E-01	Half-Life	too short	

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		1.844E-01	1.337E+00	1.877E+00	1.846E-01	0.098
		563.23		5.482E-02	2.055E-01	3.455E-01	3.564E-02	0.159
		569.32		-1.266E-01	1.223E-01	1.850E-01	1.919E-02	-0.684
		604.70		2.615E-03	2.187E-02	3.133E-02	3.262E-03	0.083
	+	795.84	*	1.119E-01	4.224E-02	5.306E-02	5.873E-03	2.108
		801.93		-3.198E-01	2.872E-01	3.567E-01	3.950E-02	-0.896
		1038.57		-8.354E-01	2.289E+00	3.674E+00	3.637E-01	-0.227
		1167.94		2.917E-01	1.456E+00	2.451E+00	1.991E-01	0.119
		1365.15		2.076E-01	6.892E-01	1.149E+00	1.070E-01	0.181
		268.24	*	2.335E-01	1.171E-01	1.694E-01	2.450E-02	1.379
CS-135		288.45		4.812E+09	1.171E-01	Half-Life	too short	
I-135		417.63		-7.838E+07	1.171E-01	Half-Life	too short	
		546.56		6.338E+08	1.171E-01	Half-Life	too short	
		836.80		1.435E+09	1.171E-01	Half-Life	too short	
		1038.76		-5.705E+08	1.171E-01	Half-Life	too short	
		1124.00		2.791E+10	1.171E-01	Half-Life	too short	
		1131.51		7.487E+08	1.171E-01	Half-Life	too short	
		1260.41	*	2.775E+08	1.171E-01	Half-Life	too short	
		1457.56		2.367E+11	1.171E-01	Half-Life	too short	
		1678.03		1.180E+08	1.171E-01	Half-Life	too short	
		1706.46		-9.237E+08	1.171E-01	Half-Life	too short	
CS-136		1791.20		-4.305E+07	1.171E-01	Half-Life	too short	
		66.91		-4.115E-01	4.860E-01	6.853E-01	1.019E-01	-0.601
	+	86.29		3.238E+00	8.909E-01	1.160E+00	1.544E-01	2.792
	+	153.22		5.267E-01	5.619E-01	6.841E-01	6.985E-02	0.770
	+	163.89		9.914E-01	8.120E-01	1.123E+00	1.195E-01	0.883
		176.55		1.743E-01	2.385E-01	3.846E-01	4.070E-02	0.453
		273.65		-6.738E-02	4.334E-01	4.280E-01	6.055E-02	-0.157
		340.57		5.535E-01	1.095E-01	1.528E-01	1.831E-02	3.622
		818.51		-1.410E-02	3.941E-02	6.482E-02	7.182E-03	-0.217
		1048.07	*	-4.510E-02	6.501E-02	9.927E-02	1.004E-02	-0.454
CE-139		1235.34		5.947E-01	4.146E-01	6.206E-01	7.251E-02	0.958
		165.85	*	1.946E-02	2.070E-02	3.113E-02	3.053E-03	0.625
	+	162.64		6.974E-01	5.708E-01	7.627E-01	7.713E-02	0.914
		304.84		2.718E-01	8.394E-01	1.213E+00	3.610E-01	0.224
		423.70		-1.287E+00	1.170E+00	1.710E+00	5.587E-01	-0.752
		537.32	*	3.572E-02	1.368E-01	2.302E-01	7.726E-02	0.155
	+	328.77		4.783E-01	2.567E-01	3.051E-01	3.854E-02	1.568
		432.53		2.149E-02	1.175E+00	1.917E+00	1.909E-01	0.011
		487.03		5.881E-02	7.974E-02	1.317E-01	1.366E-02	0.446
		751.79		-4.579E-01	9.475E-01	1.502E+00	1.747E-01	-0.305
LA-140		815.85		-5.884E-02	1.746E-01	2.875E-01	3.410E-02	-0.205
		867.82		-4.632E-01	8.839E-01	1.212E+00	1.396E-01	-0.382
		919.63		1.523E-01	1.811E+00	2.665E+00	3.382E-01	0.057
		925.24		-1.547E-02	6.451E-01	1.065E+00	1.217E-01	-0.015
		1596.49	*	-8.079E-02	4.944E-02	7.258E-02	6.362E-03	-1.113
		57.37		-1.434E-04	4.944E-02	Half-Life	too short	
		231.56		-4.533E-04	4.944E-02	Half-Life	too short	
		293.26	*	5.344E-04	4.944E-02	Half-Life	too short	
CE-143								

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	350.59		2.070E-02	4.944E-02	Half-Life	too short	
		490.36		5.152E-04	4.944E-02	Half-Life	too short	
		664.57		3.326E-03	4.944E-02	Half-Life	too short	
		721.93		-5.675E-04	4.944E-02	Half-Life	too short	
CE-144		80.11		-1.087E+00	1.388E+00	1.977E+00	1.709E-01	-0.550
		133.54	*	5.434E-03	1.373E-01	2.056E-01	3.191E-02	0.026
PM-144		476.78		1.816E-02	4.705E-02	6.683E-02	7.055E-03	0.272
		618.01		7.867E-03	1.894E-02	3.036E-02	3.227E-03	0.259
		696.49	*	6.377E-03	1.956E-02	3.235E-02	3.460E-03	0.197
		778.57		-1.459E+00	1.533E+00	2.073E+00	2.275E-01	-0.704
PR-144		696.49	*	4.320E-01	1.325E+00	2.192E+00	2.343E-01	0.197
		1489.15		-5.756E+00	6.460E+00	9.766E+00	8.698E-01	-0.589
PM-146		453.90	*	1.135E-02	2.583E-02	4.253E-02	4.942E-03	0.267
		633.02		7.280E-01	8.199E-01	1.320E+00	4.996E-01	0.551
		735.90		2.941E-02	9.659E-02	1.419E-01	4.165E-02	0.207
		747.13		-2.213E-02	5.197E-02	8.256E-02	1.282E-02	-0.268
ND-147	+	91.11		4.635E-01	1.137E-01	3.293E-01	3.254E-02	1.408
		319.41		-1.399E+00	1.920E+00	3.135E+00	3.968E-01	-0.446
		439.89		1.296E+00	3.259E+00	5.377E+00	5.177E-01	0.241
		531.02	*	-3.042E-01	3.044E-01	4.849E-01	7.690E-02	-0.627
PM-149		285.90	*	-8.380E+00	4.744E+01	7.529E+01	1.424E+01	-0.111
EU-152		121.78		-1.897E-02	4.695E-02	7.362E-02	7.066E-03	-0.258
		244.69		8.288E-02	2.285E-01	3.271E-01	4.142E-02	0.253
		344.27	*	-4.076E-02	6.924E-02	9.142E-02	1.099E-02	-0.446
		443.98		-7.223E-02	5.603E-01	9.071E-01	8.757E-02	-0.080
		778.89		-1.477E-01	1.703E-01	2.412E-01	2.647E-02	-0.612
		867.32		-1.256E-01	5.277E-01	7.383E-01	8.243E-02	-0.170
	+	964.01		7.715E-01	2.631E-01	3.381E-01	3.608E-02	2.282
		1085.78		-4.408E-02	2.423E-01	3.908E-01	3.641E-02	-0.113
		1112.02		-7.634E-03	2.240E-01	3.082E-01	2.762E-02	-0.025
	+	1407.95		1.599E-01	1.391E-01	1.927E-01	1.723E-02	0.830
GD-153		69.67		-1.283E-01	9.843E-01	1.541E+00	1.196E-01	-0.083
	+	83.37		2.672E+01	1.078E+01	1.470E+01	1.319E+00	1.818
		97.43	*	-1.398E-02	5.748E-02	8.002E-02	7.037E-03	-0.175
		103.18		-7.848E-02	6.607E-02	1.024E-01	8.752E-03	-0.766
EU-154		123.07		-1.526E-02	3.318E-02	5.188E-02	5.754E-03	-0.294
		247.94		5.843E-02	2.225E-01	3.620E-01	5.380E-02	0.161
		591.81		-2.879E-01	3.778E-01	5.758E-01	7.486E-02	-0.500
		723.30		6.010E-02	1.141E-01	1.637E-01	1.888E-02	0.367
		756.87		4.786E-02	4.512E-01	7.345E-01	1.007E-01	0.065
		873.19		2.229E-03	1.673E-01	2.781E-01	3.938E-02	0.008
		996.32		1.498E-01	2.492E-01	3.602E-01	6.725E-02	0.416
		1004.76		5.890E-02	1.471E-01	2.106E-01	2.719E-02	0.280
		1274.45	*	3.653E-03	7.104E-02	1.179E-01	1.332E-02	0.031
EU-155		48.70		-2.069E+00	1.327E+00	2.130E+00	1.735E-01	-0.971
		60.01		1.647E+00	2.945E+00	4.457E+00	3.165E-01	0.369
	+	86.54		3.084E-01	7.969E-02	1.107E-01	1.041E-02	2.787
		105.31	*	9.224E-02	6.784E-02	1.115E-01	9.569E-03	0.828
TB-160	+	86.79		8.193E-01	2.114E-01	2.938E-01	2.748E-02	2.789

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		-2.337E-01	3.833E-01	5.881E-01	6.395E-02	-0.397
		215.65		-2.816E-01	4.833E-01	7.492E-01	8.660E-02	-0.376
		298.57		2.585E-01	1.083E-01	1.200E-01	1.609E-02	2.154
		879.36	*	7.773E-02	8.201E-02	1.407E-01	1.573E-02	0.552
		962.29		1.201E+00	3.804E-01	5.942E-01	6.350E-02	2.021
	+	966.15		5.268E-01	1.796E-01	3.089E-01	3.291E-02	1.705
		1177.93		-8.787E-02	2.094E-01	3.431E-01	2.768E-02	-0.256
		1271.85		2.315E-01	4.153E-01	7.042E-01	6.052E-02	0.329
HO-166M		80.57		-1.816E-01	1.776E-01	2.506E-01	2.177E-02	-0.725
	+	184.41		1.804E-01	4.234E-02	4.537E-02	4.730E-03	3.977
		280.46		4.469E-04	5.954E-02	8.302E-02	1.159E-02	0.005
		410.95		1.535E-01	1.460E-01	2.459E-01	2.321E-02	0.624
		711.68	*	1.836E-02	3.607E-02	5.990E-02	6.439E-03	0.306
		752.31		-3.356E-03	1.545E-01	2.503E-01	2.727E-02	-0.013
		810.29		8.099E-03	3.334E-02	5.631E-02	6.225E-03	0.144
TM-171		51.35		-3.611E+00	1.661E+01	2.771E+01	2.161E+00	-0.130
		52.39		4.011E+00	8.557E+00	1.448E+01	1.111E+00	0.277
		59.40		7.334E+00	1.599E+01	2.415E+01	1.707E+00	0.304
		66.72	*	-1.695E+01	1.810E+01	2.560E+01	1.935E+00	-0.662
LU-176	+	88.36		6.075E-01	1.568E-01	2.196E-01	2.076E-02	2.767
		201.83		-1.508E-02	1.867E-02	3.000E-02	3.314E-03	-0.503
		306.84	*	-7.382E-03	1.604E-02	2.439E-02	3.200E-03	-0.303
		401.10		4.375E+00	4.026E+00	6.799E+00	6.371E-01	0.643
LU-177		112.95		7.417E-02	9.919E-01	1.584E+00	1.317E-01	0.047
	+	208.36	*	2.153E+00	1.027E+00	1.140E+00	1.287E-01	1.888
LU-177M		52.97		2.938E-01	8.870E-01	1.495E+00	1.138E-01	0.196
		54.07		3.550E-02	4.697E-01	7.865E-01	5.891E-02	0.045
		61.30		7.835E-01	8.879E-01	1.351E+00	9.722E-02	0.580
		121.62		-1.131E-01	2.398E-01	3.753E-01	3.092E-02	-0.301
		147.16		1.332E-01	4.282E-01	6.408E-01	5.779E-02	0.208
		171.86		-1.363E-01	2.957E-01	4.861E-01	4.861E-02	-0.280
		218.09		1.308E-01	5.336E-01	8.763E-01	1.021E-01	0.149
	+	268.79		2.296E+00	7.961E-01	8.948E-01	1.216E-01	2.566
		319.02		-6.842E-02	1.542E-01	2.545E-01	3.225E-02	-0.269
		367.43		1.582E-01	5.262E-01	8.780E-01	9.270E-02	0.180
		413.65	*	-1.371E-01	1.059E-01	1.646E-01	1.557E-02	-0.833
HF-181		56.28		-2.393E-01	5.223E-01	8.617E-01	6.277E-02	-0.278
		57.53		-1.093E-01	2.776E-01	4.581E-01	3.293E-02	-0.239
		65.20		-4.243E-02	6.010E-01	8.750E-01	6.522E-02	-0.048
		133.02		-3.080E-03	4.367E-02	6.519E-02	5.556E-03	-0.047
		136.25		-1.808E-01	2.733E-01	4.549E-01	3.924E-02	-0.398
		345.85		-1.269E-04	1.432E-01	1.808E-01	2.091E-02	-0.001
		482.03	*	-2.456E-03	2.834E-02	3.925E-02	3.875E-03	-0.063
W-181		56.28		-9.409E-02	2.058E-01	3.395E-01	2.473E-02	-0.277
		57.53		-4.300E-02	1.094E-01	1.806E-01	1.298E-02	-0.238
		65.20	*	-1.659E-02	2.351E-01	3.422E-01	2.551E-02	-0.048
TA-182		67.75		-8.853E-02	7.191E-02	1.006E-01	7.675E-03	-0.880
		100.10		1.077E-01	1.109E-01	1.818E-01	1.576E-02	0.592
	+	152.43		2.780E-01	2.963E-01	3.529E-01	3.256E-02	0.788

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-2.835E-01	2.213E-01	3.452E-01	4.073E-02	-0.821
	+	1001.68		3.272E+00	1.865E+00	2.251E+00	2.320E-01	1.453
	+	1121.28		6.427E-01	1.812E-01	2.006E-01	1.772E-02	3.203
		1189.05		-3.570E-02	1.835E-01	3.034E-01	2.468E-02	-0.118
		1221.42	*	-1.517E-02	1.208E-01	1.998E-01	1.661E-02	-0.076
		1230.97		-6.910E-02	3.466E-01	4.845E-01	4.054E-02	-0.143
RE-183		57.98		2.116E-03	1.088E-01	1.813E-01	1.297E-02	0.012
		59.32		2.817E-02	6.541E-02	9.871E-02	6.982E-03	0.285
		67.20		-8.566E-02	1.267E-01	1.807E-01	1.371E-02	-0.474
	+	162.32	*	1.048E-01	8.571E-02	1.137E-01	1.097E-02	0.922
	+	208.81		2.047E+00	9.769E-01	1.098E+00	1.241E-01	1.865
		291.72		-2.343E-01	6.347E-01	9.186E-01	1.252E-01	-0.255
RE-184		57.98		7.825E-03	4.024E-01	6.704E-01	4.797E-02	0.012
		59.32		1.041E-01	2.417E-01	3.647E-01	2.580E-02	0.285
		67.20		-3.167E-01	4.685E-01	6.681E-01	5.070E-02	-0.474
		161.27		-4.035E-02	2.451E-01	3.587E-01	3.444E-02	-0.113
		216.55		-9.705E-02	1.676E-01	2.694E-01	3.123E-02	-0.360
		252.85	*	-1.676E-02	1.456E-01	2.341E-01	3.038E-02	-0.072
		318.01		2.032E-02	2.667E-01	4.473E-01	5.685E-02	0.045
		792.07		7.922E-02	7.450E-01	1.033E+00	1.137E-01	0.077
		903.28		5.129E-01	6.784E-01	1.001E+00	1.118E-01	0.512
		920.93		2.171E-01	2.829E-01	4.545E-01	5.015E-02	0.478
OS-185		59.72		9.974E-02	1.749E-01	2.648E-01	1.875E-02	0.377
		61.14		3.547E-02	9.643E-02	1.449E-01	1.041E-02	0.245
		69.30		-3.354E-02	1.674E-01	2.747E-01	2.125E-02	-0.122
		592.07		-7.107E-01	1.486E+00	2.363E+00	2.446E-01	-0.301
		646.12	*	-1.651E-02	2.414E-02	3.853E-02	4.049E-03	-0.428
		717.42		1.761E-01	5.188E-01	8.563E-01	9.224E-02	0.206
		874.81		-1.265E-01	3.362E-01	5.490E-01	6.136E-02	-0.230
		880.27		3.377E-01	4.568E-01	7.789E-01	8.711E-02	0.434
W-188	+	63.58		1.431E+02	4.912E+01	5.760E+01	4.232E+00	2.485
		227.08		4.356E+00	7.971E+00	1.313E+01	1.574E+00	0.332
		290.67	*	-9.928E-01	4.978E+00	7.259E+00	9.915E-01	-0.137
IR-192	+	295.96		9.333E-01	1.723E-01	1.612E-01	2.181E-02	5.790
		308.46		1.143E-02	5.659E-02	9.545E-02	1.250E-02	0.120
		316.51	*	6.138E-04	2.048E-02	3.432E-02	4.386E-03	0.018
		468.07		-1.250E-02	4.489E-02	6.174E-02	6.387E-03	-0.202
		604.41		-6.731E-03	2.936E-01	4.175E-01	5.951E-02	-0.016
		612.46		5.183E+00	8.343E-01	1.091E+00	1.255E-01	4.750
AU-195		65.12		3.719E-02	1.088E-01	1.601E-01	1.193E-02	0.232
		66.83		-5.302E-02	5.978E-02	8.468E-02	6.405E-03	-0.626
	+	75.70		1.073E+00	1.611E-01	2.620E-01	2.158E-02	4.095
		98.88	*	2.708E-01	1.485E-01	2.381E-01	2.076E-02	1.138
	+	129.76		5.045E+00	2.587E+00	3.085E+00	2.600E-01	1.635
TL-200		367.94	*	2.261E-05	2.587E+00	Half-Life	too short	
		579.30		1.555E-03	2.587E+00	Half-Life	too short	
		828.27		-1.699E-03	2.587E+00	Half-Life	too short	
		1205.75		2.542E-04	2.587E+00	Half-Life	too short	
TL-201		68.90		2.520E-01	2.332E+00	3.851E+00	2.968E-01	0.065

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TL-202		70.82		4.185E-01	1.494E+00	2.215E+00	1.738E-01	0.189
		80.30		-2.522E+00	2.866E+00	4.067E+00	3.523E-01	-0.620
		135.34		5.388E+00	1.314E+01	2.241E+01	1.926E+00	0.240
		167.43	*	2.373E+00	4.194E+00	6.249E+00	6.159E-01	0.380
		68.90		2.513E-02	2.325E-01	3.840E-01	2.959E-02	0.065
HG-203		70.82		4.161E-02	1.486E-01	2.203E-01	1.728E-02	0.189
		80.30		-2.508E-01	2.851E-01	4.045E-01	3.504E-02	-0.620
		439.56	*	5.654E-03	3.867E-02	6.328E-02	6.091E-03	0.089
		70.83		1.940E-01	6.607E-01	9.794E-01	1.286E-01	0.198
BI-207		72.87		6.843E-01	4.095E-01	6.122E-01	7.842E-02	1.118
	+	82.60		1.972E+00	8.235E-01	1.052E+00	1.464E-01	1.875
		279.20	*	3.896E-02	2.954E-02	4.262E-02	6.032E-03	0.914
		72.80		1.573E-01	1.184E-01	1.787E-01	1.429E-02	0.880
TL-207	+	74.97		5.963E-01	8.956E-02	1.316E-01	1.076E-02	4.533
	+	84.90		3.462E-01	1.397E-01	1.911E-01	1.747E-02	1.812
		569.67		-1.825E-02	1.905E-02	2.894E-02	2.972E-03	-0.631
		1063.62	*	1.465E-02	3.184E-02	5.291E-02	5.080E-03	0.277
PO-209		1770.23		1.258E+00	3.607E-01	6.479E-01	5.385E-02	1.942
		81.07		1.449E-01	1.660E-01	1.977E-01	1.728E-02	0.733
	+	83.78		2.283E-01	9.213E-02	1.266E-01	1.142E-02	1.804
		94.90		4.087E-01	1.610E-01	2.421E-01	2.164E-02	1.688
BI-210		122.32		-2.749E-01	1.113E+00	1.753E+00	1.560E-01	-0.157
	+	144.24		9.396E-01	6.291E-01	7.575E-01	7.498E-02	1.240
	+	154.21		3.271E-01	3.490E-01	4.231E-01	4.273E-02	0.773
	+	269.46		5.391E-01	1.871E-01	2.163E-01	2.970E-02	2.492
PB-210		323.87	*	-3.313E-02	4.549E-01	6.594E-01	1.310E-01	-0.050
	+	338.28		5.948E+00	1.445E+00	1.415E+00	2.093E-01	4.202
		445.03		-3.953E-01	1.309E+00	2.104E+00	2.703E-01	-0.188
		260.50		1.518E+00	6.078E+00	9.846E+00	1.307E+00	0.154
PB-211		262.80		-5.017E+00	1.670E+01	2.660E+01	3.554E+00	-0.189
		896.60	*	-7.556E-01	4.362E+00	7.175E+00	8.038E-01	-0.105
		46.50	*	1.123E+00	2.017E+00	3.266E+00	3.034E-01	0.344
		46.50	*	1.123E+00	2.017E+00	3.266E+00	3.034E-01	0.344
BI-212		46.50	*	1.123E+00	2.017E+00	3.266E+00	2.746E-01	0.344
		404.84	*	-5.274E-01	6.613E-01	9.118E-01	5.724E-01	-0.578
		427.08		1.328E+00	1.465E+00	2.047E+00	1.275E+00	0.649
		831.96		-4.041E-02	7.017E-01	1.168E+00	7.364E-01	-0.035
PO-215	+	727.18	*	1.189E+00	3.273E-01	3.771E-01	4.504E-02	3.154
		785.46		1.960E+00	1.126E+00	1.836E+00	2.018E-01	1.068
		1620.62		7.007E-01	7.073E-01	1.250E+00	1.090E-01	0.560
		81.07		1.449E-01	1.660E-01	1.977E-01	1.728E-02	0.733
PB-211	+	83.78		2.283E-01	9.213E-02	1.266E-01	1.142E-02	1.804
		94.90		4.087E-01	1.610E-01	2.421E-01	2.164E-02	1.688
		122.32		-2.749E-01	1.113E+00	1.753E+00	1.560E-01	-0.157
	+	144.24		9.396E-01	6.291E-01	7.575E-01	7.498E-02	1.240
PB-211	+	154.21		3.271E-01	3.490E-01	4.231E-01	4.273E-02	0.773
	+	269.46		5.391E-01	1.871E-01	2.163E-01	2.970E-02	2.492
		323.87	*	-3.313E-02	4.549E-01	6.594E-01	1.310E-01	-0.050
	+	338.28		5.948E+00	1.445E+00	1.415E+00	2.093E-01	4.202

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		-3.953E-01	1.309E+00	2.104E+00	2.703E-01	-0.188
		271.23		6.916E-01	2.429E-01	2.819E-01	4.176E-02	2.453
		401.81	*	2.946E-01	2.511E-01	4.203E-01	6.503E-02	0.701
		549.76	*	4.574E+00	1.461E+01	2.467E+01	2.514E+00	0.185
RN-220		81.07		1.449E-01	1.660E-01	1.977E-01	1.728E-02	0.733
RA-223	+	83.78		2.283E-01	9.213E-02	1.266E-01	1.142E-02	1.804
		94.90		4.087E-01	1.610E-01	2.421E-01	2.164E-02	1.688
		122.32		-2.749E-01	1.113E+00	1.753E+00	1.560E-01	-0.157
		144.24		9.396E-01	6.291E-01	7.575E-01	7.498E-02	1.240
	+	154.21		3.271E-01	3.490E-01	4.231E-01	4.273E-02	0.773
		269.46		5.391E-01	1.871E-01	2.163E-01	2.970E-02	2.492
		323.87	*	-3.313E-02	4.549E-01	6.594E-01	1.310E-01	-0.050
		338.28		5.948E+00	1.445E+00	1.415E+00	2.093E-01	4.202
AC-227		445.03		-3.953E-01	1.309E+00	2.104E+00	2.703E-01	-0.188
		79.80		-8.865E-01	1.090E+00	1.530E+00	3.291E-01	-0.579
		236.00		9.301E-01	2.273E-01	2.915E-01	4.398E-02	3.190
		256.20	*	-1.117E-02	2.411E-01	3.881E-01	7.082E-02	-0.029
	+	286.10		-3.131E-01	9.700E-01	1.531E+00	2.609E-01	-0.205
		299.80		2.780E+00	1.205E+00	1.541E+00	3.121E-01	1.804
		304.40		-2.219E-01	1.286E+00	1.831E+00	3.841E-01	-0.121
		334.20		-2.766E-01	2.277E+00	2.190E+00	4.636E-01	-0.126
TH-227	+	79.80		-8.865E-01	1.091E+00	1.530E+00	3.333E-01	-0.579
		94.00		1.645E+01	4.083E+00	2.581E+00	5.660E-01	6.374
		236.00		9.301E-01	2.221E-01	2.915E-01	4.126E-02	3.190
		256.20	*	-1.117E-02	2.411E-01	3.881E-01	7.988E-02	-0.029
	+	286.10		-3.131E-01	1.019E+00	1.531E+00	1.545E+00	-0.205
		299.80		2.780E+00	1.205E+00	1.541E+00	3.121E-01	1.804
		304.40		-2.219E-01	1.286E+00	1.831E+00	3.841E-01	-0.121
		334.20		-2.766E-01	2.277E+00	2.190E+00	4.636E-01	-0.126
TH-229	+	85.43		3.418E-01	1.379E-01	1.937E-01	1.782E-02	1.764
		88.47		1.911E-01	4.637E-02	1.260E-01	1.190E-02	1.517
		100.00		1.103E-01	1.163E-01	1.905E-01	1.652E-02	0.579
		193.63	*	1.387E-01	3.197E-01	5.316E-01	5.716E-02	0.261
PA-231	+	210.97		1.613E+00	7.696E-01	8.499E-01	9.675E-02	1.898
		283.67	*	-6.451E-01	9.995E-01	1.495E+00	2.792E-01	-0.431
		301.29		1.112E+00	4.614E-01	6.288E-01	9.999E-02	1.768
		81.07		1.449E-01	1.660E-01	1.977E-01	1.728E-02	0.733
TH-231	+	83.78		2.283E-01	9.213E-02	1.266E-01	1.142E-02	1.804
		94.90		4.087E-01	1.610E-01	2.421E-01	2.164E-02	1.688
		122.32		-2.749E-01	1.113E+00	1.753E+00	1.560E-01	-0.157
		144.24		9.396E-01	6.291E-01	7.575E-01	7.498E-02	1.240
	+	154.21		3.271E-01	3.490E-01	4.231E-01	4.273E-02	0.773
		269.46		5.391E-01	1.871E-01	2.163E-01	2.970E-02	2.492
		323.87	*	-3.313E-02	4.549E-01	6.594E-01	1.310E-01	-0.050
		338.28		5.948E+00	1.445E+00	1.415E+00	2.093E-01	4.202
U-231	+	445.03		-3.953E-01	1.309E+00	2.104E+00	2.703E-01	-0.188
		84.21		8.900E+00	3.592E+00	4.890E+00	4.433E-01	1.820
		92.29		1.471E+01	2.162E+00	2.573E+00	2.346E-01	5.717
		95.87	*	-6.527E-01	6.761E-01	9.398E-01	8.346E-02	-0.694

---- 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		-1.454E+00	1.256E+00	1.883E+00	1.583E-01	-0.772
	+	75.28		1.740E+01	3.423E+00	3.982E+00	6.020E-01	4.370
	+	86.59		5.014E+00	1.816E+00	1.799E+00	4.867E-01	2.787
	+	300.12		7.750E-01	3.282E-01	4.309E-01	7.770E-02	1.799
		311.98	*	-1.768E-02	3.845E-02	6.354E-02	8.324E-03	-0.278
		340.50		2.952E+00	8.634E-01	7.779E-01	1.957E-01	3.795
PA-234		398.62		-7.124E-01	1.253E+00	1.995E+00	5.363E-01	-0.357
		415.76		3.122E-02	9.650E-01	1.581E+00	3.463E-01	0.020
	+	63.00		4.176E+00	1.531E+00	1.711E+00	2.534E-01	2.441
		94.67		4.931E-01	1.313E-01	1.852E-01	2.340E-02	2.663
		98.44		1.216E-01	9.035E-02	9.727E-02	5.428E-02	1.250
		99.86		3.355E-01	2.961E-01	4.863E-01	4.219E-02	0.690
		111.00		7.998E-02	1.198E-01	1.937E-01	2.303E-02	0.413
		131.20		4.212E-02	7.034E-02	1.070E-01	9.066E-03	0.393
	+	152.70		2.684E-01	2.889E-01	3.444E-01	5.981E-02	0.779
	+	186.00		6.496E+00	2.474E+00	1.725E+00	5.483E-01	3.765
		226.40		8.379E-02	2.528E-01	4.145E-01	6.463E-02	0.202
		227.20		1.296E-01	2.715E-01	4.465E-01	5.354E-02	0.290
		248.90		-1.018E-01	5.071E-01	8.136E-01	1.980E-01	-0.125
		293.70		5.183E+00	1.178E+00	9.886E-01	1.999E-01	5.243
		369.80		3.267E-02	4.897E-01	8.110E-01	1.830E-01	0.040
		568.70		-6.252E-01	6.294E-01	9.570E-01	9.827E-02	-0.653
		569.50		-1.679E-01	1.689E-01	2.561E-01	2.630E-02	-0.656
		574.00		3.759E-01	8.863E-01	1.464E+00	1.506E-01	0.257
		699.00		-4.342E-01	4.285E-01	6.575E-01	1.322E-01	-0.660
		706.10		3.203E-01	6.409E-01	1.039E+00	4.679E-01	0.308
		733.00		2.383E-01	2.488E-01	3.582E-01	8.290E-02	0.665
		742.81		4.995E-01	8.445E-01	1.292E+00	8.725E-01	0.387
	+	796.30		2.175E+00	9.926E-01	1.026E+00	2.863E-01	2.120
		805.60		1.017E-01	5.649E-01	9.509E-01	2.988E-01	0.107
		819.60		-3.140E-01	7.039E-01	1.137E+00	4.395E-01	-0.276
		826.30		7.583E-04	4.739E-01	7.916E-01	3.585E-01	0.001
		831.60		-2.043E-01	3.676E-01	5.911E-01	1.812E-01	-0.346
		876.40		7.926E-02	4.933E-01	8.136E-01	8.384E-01	0.097
		880.51		1.279E-01	1.647E-01	2.812E-01	3.145E-02	0.455
		883.24		6.794E-02	1.747E-01	2.844E-01	1.923E-01	0.239
		899.00		-2.872E-01	5.142E-01	8.056E-01	3.568E-01	-0.357
		925.00		-2.424E-02	6.948E-01	1.146E+00	1.261E-01	-0.021
		926.50		-5.717E-02	1.052E-01	1.680E-01	4.397E-02	-0.340
		946.00	*	1.208E-01	1.756E-01	2.955E-01	5.873E-02	0.409
		949.00		2.641E-01	2.581E-01	4.417E-01	4.772E-02	0.598
		980.50		5.729E-02	4.253E-01	7.031E-01	7.394E-02	0.081
PA-234M		1394.10		-3.073E-01	6.699E-01	1.015E+00	6.612E-01	-0.303
		766.42		1.989E+01	1.309E+01	1.280E+01	6.550E+00	1.554
NP-236	+	1001.03	*	7.456E+00	4.266E+00	5.117E+00	5.864E-01	1.457
		94.67		3.787E-01	9.404E-02	1.407E-01	1.260E-02	2.691
		98.44		9.193E-02	4.579E-02	7.353E-02	6.428E-03	1.250
		111.00		6.050E-02	9.048E-02	1.465E-01	1.222E-02	0.413
		160.31	*	-3.870E-02	5.696E-02	7.946E-02	7.596E-03	-0.487

---- 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		1.159E-01	1.028E-01	1.634E-01	1.420E-02	0.710
		117.00	*	-6.605E-02	1.199E-01	1.878E-01	1.552E-02	-0.352
	+	209.75		1.625E+00	7.753E-01	8.836E-01	1.002E-01	1.839
		228.18		-6.132E-02	1.436E-01	2.309E-01	2.778E-02	-0.266
	+	277.60		2.244E-01	1.443E-01	1.933E-01	2.695E-02	1.161
AM-241		334.30		-9.152E-01	1.151E+00	1.241E+00	1.497E-01	-0.738
		59.54	*	4.716E-02	9.303E-02	1.406E-01	1.099E-02	0.335
CM-243		99.55		1.193E-01	1.057E-01	1.681E-01	1.461E-02	0.710
		103.76	*	3.849E-03	5.995E-02	9.632E-02	8.212E-03	0.040
		117.00		-6.795E-02	1.233E-01	1.932E-01	1.597E-02	-0.352
	+	209.75		1.602E+00	7.643E-01	8.710E-01	9.876E-02	1.839
		228.18		-6.196E-02	1.451E-01	2.333E-01	2.807E-02	-0.266
AM-246	+	277.60		2.262E-01	1.455E-01	1.949E-01	2.717E-02	1.161
		798.80		1.355E-01	9.266E-02	1.378E-01	1.519E-02	0.983
		1036.00		-4.997E-03	1.799E-01	2.936E-01	2.915E-02	-0.017
		1062.04		3.363E-02	1.391E-01	2.291E-01	2.204E-02	0.147
		1078.86	*	4.106E-02	8.435E-02	1.402E-01	1.319E-02	0.293
CM-247	+	278.00		9.305E-01	5.984E-01	8.017E-01	1.119E-01	1.161
		287.40		-4.635E-02	8.107E-01	1.245E+00	1.713E-01	-0.037
		402.60	*	2.168E-02	2.242E-02	3.774E-02	3.540E-03	0.574
CF-249		252.85		-6.305E-02	5.477E-01	8.807E-01	1.143E-01	-0.072
		333.44		-4.001E-02	1.731E-01	1.650E-01	1.996E-02	-0.242
		387.95	*	5.375E-03	2.350E-02	3.896E-02	3.703E-03	0.138
CF-251		176.60	*	6.415E-02	8.496E-02	1.371E-01	1.392E-02	0.468
		227.00		1.281E-01	2.405E-01	3.960E-01	4.746E-02	0.324
		285.00		-9.501E-01	1.109E+00	1.713E+00	2.369E-01	-0.555

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]G246875001      *
* Acquisition date   : 23-FEB-2010 23:20:58 Detector SN#      :             *
* Detector ID        : GAM22                      Sensitivity   : 5.000        *
* Geometry           : CAN                      Energy tolerance: 1.500        *
* Elapsed live time  : 0 04:00:00.00             Abundance limit: 75.000        *
* Elapsed real time  : 0 04:00:05.02             Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246875001             Analyst initials: MXR1          *
* Batch Number       : 952643                 Sample Quantity : 1.4830E+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)	
BE-7	2.114E-01	2.489E-01	3.134E-01	0.000E+00
K-40	3.452E+01	3.264E+00	3.323E-01	0.000E+00
CD-109	2.604E+00	6.585E-01	7.727E-01	0.000E+00
SN-126	2.561E-01	6.478E-02	8.573E-02	0.000E+00
BA-137M	1.855E-01	4.159E-02	3.644E-02	0.000E+00
CS-137	1.961E-01	4.398E-02	3.852E-02	0.000E+00
CE-141	8.579E-02	5.619E-02	6.359E-02	0.000E+00
RE-188	1.407E-01	1.470E-01	1.848E-01	0.000E+00
TL-208	4.938E-01	6.813E-02	3.363E-02	0.000E+00
BI-211	3.538E+00	4.694E-01	2.041E-01	0.000E+00
PB-212	1.648E+00	2.231E-01	5.941E-02	0.000E+00
PO-212	1.648E+00	2.231E-01	5.941E-02	0.000E+00
BI-214	1.100E+00	1.533E-01	6.531E-02	0.000E+00
PB-214	1.231E+00	1.750E-01	7.049E-02	0.000E+00
PO-214	1.231E+00	1.750E-01	7.049E-02	0.000E+00
PO-216	1.648E+00	2.231E-01	5.941E-02	0.000E+00
PO-218	1.231E+00	1.750E-01	7.049E-02	0.000E+00
RA-224	3.997E+00	8.682E-01	6.753E-01	0.000E+00
RA-226	1.100E+00	1.533E-01	6.531E-02	0.000E+00
AC-228	1.675E+00	2.751E-01	1.315E-01	0.000E+00
RA-228	1.675E+00	2.751E-01	1.315E-01	0.000E+00
TH-228	1.672E+00	2.264E-01	6.028E-02	0.000E+00
TH-230	1.100E+00	1.533E-01	6.531E-02	0.000E+00
TH-232	1.675E+00	2.751E-01	1.315E-01	0.000E+00
TH-234	3.583E+00	1.326E+00	1.250E+00	0.000E+00
U-234	1.100E+00	1.533E-01	6.531E-02	0.000E+00
U-235	2.899E-01	1.947E-01	2.224E-01	0.000E+00
NP-237	7.522E-01	2.436E-01	2.261E-01	0.000E+00
U-238	3.583E+00	1.326E+00	1.250E+00	0.000E+00
AM-243	3.322E-01	4.890E-02	5.675E-02	0.000E+00
ANH-511	7.752E-02	4.258E-02	2.754E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
NA-22	1.088E-03	2.491E-02	4.256E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.411E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	8.230E-03	1.456E-02	2.575E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	3.895E-02	4.845E-02	0.000E+00	FAIL ABUN
SC-46	-1.121E-02	2.200E-02	3.705E-02	0.000E+00	FAIL ABUN
V-48	1.795E-02	3.929E-02	6.820E-02	0.000E+00	NOT IDENT.
CR-51	-1.433E-01	2.194E-01	3.828E-01	0.000E+00	NOT IDENT.
MN-52	-3.327E-03	1.199E-01	2.011E-01	0.000E+00	NOT IDENT.
MN-54	1.905E-02	2.139E-02	3.819E-02	0.000E+00	NOT IDENT.
CO-56	-1.423E-02	2.234E-02	3.766E-02	0.000E+00	FAIL ABUN
CO-57	-3.324E-03	1.576E-02	2.706E-02	0.000E+00	NOT IDENT.
CO-58	-8.275E-04	2.164E-02	3.767E-02	0.000E+00	NOT IDENT.
FE-59	1.707E-02	5.468E-02	9.306E-02	0.000E+00	FAIL ABUN
CO-60	1.520E-02	2.059E-02	3.631E-02	0.000E+00	NOT IDENT.
ZN-65	6.230E-02	6.291E-02	9.469E-02	0.000E+00	NOT IDENT.
GE-68	1.705E-02	7.279E-01	1.227E+00	0.000E+00	NOT IDENT.
AS-73	9.113E-02	4.472E-01	8.332E-01	0.000E+00	NOT IDENT.
AS-74	4.431E-02	5.181E-02	9.244E-02	0.000E+00	NOT IDENT.
SE-75	-1.081E-02	3.058E-02	4.519E-02	0.000E+00	NOT IDENT.
BR-77	-6.167E+00	5.473E+00	8.177E+00	0.000E+00	FAIL ABUN
SR-82	-5.277E-02	2.501E-01	3.556E-01	0.000E+00	NOT IDENT.
RB-83	-4.870E-02	4.292E-02	6.409E-02	0.000E+00	NOT IDENT.
RB-84	4.715E-02	4.013E-02	7.196E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.578E+00	8.863E+00	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.842E-02	4.515E-02	0.000E+00	NOT IDENT.
RB-86	1.396E-01	4.445E-01	7.591E-01	0.000E+00	NOT IDENT.
Y-88	6.514E-03	1.955E-02	2.900E-02	0.000E+00	NOT IDENT.
ZR-88	-2.139E-03	1.732E-02	3.008E-02	0.000E+00	NOT IDENT.
Y-91	-2.102E-01	1.225E+01	1.957E+01	0.000E+00	NOT IDENT.
NB-94	2.374E-02	1.949E-02	3.449E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.071E-02	4.783E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	9.034E-02	1.415E-01	0.000E+00	NOT IDENT.
ZR-95	7.382E-03	3.956E-02	6.743E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.572E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.027E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.830E+00	5.724E+00	9.379E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.912E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.300E-02	2.212E-02	3.658E-02	0.000E+00	NOT IDENT.
RH-102	3.205E-03	1.971E-02	2.925E-02	0.000E+00	NOT IDENT.
RU-103	-1.495E-02	2.365E-02	3.901E-02	0.000E+00	FAIL ABUN
RH-106	2.335E-02	1.784E-01	3.103E-01	0.000E+00	FAIL ABUN
RU-106	2.335E-02	1.784E-01	3.103E-01	0.000E+00	FAIL ABUN
AG-108M	6.167E-03	1.878E-02	3.273E-02	0.000E+00	NOT IDENT.
AG-110M	1.575E-02	2.290E-02	3.500E-02	0.000E+00	NOT IDENT.
IN-111	-3.416E-01	6.225E-01	9.210E-01	0.000E+00	NOT IDENT.
IN-113M	-1.318E-02	2.538E-02	4.347E-02	0.000E+00	NOT IDENT.
SN-113	-1.318E-02	2.538E-02	4.347E-02	0.000E+00	NOT IDENT.
IN-114M	-4.135E-02	1.261E-01	1.948E-01	0.000E+00	NOT IDENT.
CD-115	2.747E+00	4.889E+00	8.779E+00	0.000E+00	NOT IDENT.
SN-117M	4.957E-02	4.837E-02	5.831E-02	0.000E+00	NOT IDENT.
SB-122	5.480E-01	1.002E+00	1.785E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.514E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	5.791E-03	2.658E-02	3.081E-02	0.000E+00	NOT IDENT.
I-124	-1.723E-01	3.969E-01	5.795E-01	0.000E+00	NOT IDENT.
SB-124	1.137E-02	3.944E-02	6.838E-02	0.000E+00	FAIL ABUN
SB-125	2.222E-02	5.395E-02	9.435E-02	0.000E+00	FAIL ABUN
TE-125M	3.296E-01	6.051E+00	1.024E+01	0.000E+00	NOT IDENT.
I-126	8.402E-02	1.150E-01	1.758E-01	0.000E+00	NOT IDENT.
SB-126	-5.467E-02	9.240E-02	1.296E-01	0.000E+00	FAIL ABUN
SB-127	-6.189E-01	6.876E-01	1.127E+00	0.000E+00	NOT IDENT.
XE-127	-2.039E-02	3.206E-02	5.144E-02	0.000E+00	FAIL ABUN
I-131	1.957E-02	6.334E-02	1.123E-01	0.000E+00	NOT IDENT.
TE-132	-1.662E-01	3.791E-01	6.532E-01	0.000E+00	NOT IDENT.
BA-133	1.326E-02	2.794E-02	4.351E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.036E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.140E-02	5.420E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.147E-01	1.775E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.886E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.510E-02	6.370E-02	1.007E-01	0.000E+00	FAIL ABUN
CE-139	1.946E-02	2.029E-02	3.299E-02	0.000E+00	NOT IDENT.
BA-140	3.572E-02	1.341E-01	2.374E-01	0.000E+00	FAIL ABUN
LA-140	-8.079E-02	4.845E-02	7.287E-02	0.000E+00	FAIL ABUN
CE-143	0.000E+00	1.503E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	5.434E-03	1.345E-01	2.189E-01	0.000E+00	NOT IDENT.

PM-144	6.377E-03	1.917E-02	3.316E-02	0.000E+00	NOT IDENT.
PR-144	4.320E-01	1.299E+00	2.246E+00	0.000E+00	NOT IDENT.
PM-146	1.135E-02	2.531E-02	4.404E-02	0.000E+00	NOT IDENT.
ND-147	-3.042E-01	2.983E-01	5.002E-01	0.000E+00	FAIL ABUN
PM-149	-8.380E+00	4.649E+01	7.880E+01	0.000E+00	NOT IDENT.
EU-152	-4.076E-02	6.786E-02	9.528E-02	0.000E+00	FAIL ABUN
GD-153	-1.398E-02	5.633E-02	8.582E-02	0.000E+00	FAIL ABUN
EU-154	3.653E-03	6.962E-02	1.190E-01	0.000E+00	NOT IDENT.
EU-155	9.224E-02	6.648E-02	1.193E-01	0.000E+00	FAIL ABUN
TB-160	7.773E-02	8.037E-02	1.434E-01	0.000E+00	FAIL ABUN
HO-166M	1.836E-02	3.535E-02	6.135E-02	0.000E+00	FAIL ABUN
TM-171	-1.695E+01	1.774E+01	2.769E+01	0.000E+00	NOT IDENT.
LU-176	-7.382E-03	1.572E-02	2.549E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.007E+00	1.202E+00	0.000E+00	FAIL ABUN
LU-177M	-1.371E-01	1.038E-01	1.708E-01	0.000E+00	FAIL ABUN
HF-181	-2.456E-03	2.777E-02	4.058E-02	0.000E+00	NOT IDENT.
W-181	-1.659E-02	2.304E-01	3.703E-01	0.000E+00	NOT IDENT.
TA-182	-1.517E-02	1.184E-01	2.020E-01	0.000E+00	FAIL ABUN
RE-183	1.048E-01	8.400E-02	1.205E-01	0.000E+00	FAIL ABUN
RE-184	-1.676E-02	1.427E-01	2.458E-01	0.000E+00	NOT IDENT.
OS-185	-1.651E-02	2.366E-02	3.956E-02	0.000E+00	NOT IDENT.
W-188	-9.928E-01	4.878E+00	7.595E+00	0.000E+00	FAIL ABUN
IR-192	6.138E-04	2.007E-02	3.583E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	1.455E-01	2.553E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.781E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.373E+00	4.110E+00	6.621E+00	0.000E+00	NOT IDENT.
TL-202	5.654E-03	3.789E-02	6.557E-02	0.000E+00	NOT IDENT.
HG-203	3.896E-02	2.895E-02	4.463E-02	0.000E+00	FAIL ABUN
BI-207	1.465E-02	3.121E-02	5.367E-02	0.000E+00	FAIL ABUN
TL-207	-3.313E-02	4.458E-01	6.881E-01	0.000E+00	FAIL ABUN
PO-209	-7.556E-01	4.275E+00	7.309E+00	0.000E+00	NOT IDENT.
BI-210	1.123E+00	1.977E+00	3.560E+00	0.000E+00	NOT IDENT.
PB-210	1.123E+00	1.977E+00	3.560E+00	0.000E+00	NOT IDENT.
PO-210	1.123E+00	1.976E+00	3.560E+00	0.000E+00	NOT IDENT.
PB-211	-5.274E-01	6.481E-01	9.466E-01	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.207E-01	3.860E-01	0.000E+00	FAIL ABUN
PO-215	-3.313E-02	4.458E-01	6.881E-01	0.000E+00	FAIL ABUN
RN-219	2.946E-01	2.461E-01	4.364E-01	0.000E+00	FAIL ABUN
RN-220	4.574E+00	1.432E+01	2.542E+01	0.000E+00	NOT IDENT.
RA-223	-3.313E-02	4.458E-01	6.881E-01	0.000E+00	FAIL ABUN
AC-227	-1.117E-02	2.363E-01	4.072E-01	0.000E+00	FAIL ABUN
TH-227	-1.117E-02	2.363E-01	4.072E-01	0.000E+00	FAIL ABUN
TH-229	1.387E-01	3.133E-01	5.614E-01	0.000E+00	FAIL ABUN
PA-231	-6.451E-01	9.795E-01	1.565E+00	0.000E+00	FAIL ABUN
TH-231	-3.313E-02	4.458E-01	6.881E-01	0.000E+00	FAIL ABUN
U-231	-6.527E-01	6.625E-01	1.008E+00	0.000E+00	FAIL ABUN
PA-233	-1.768E-02	3.769E-02	6.637E-02	0.000E+00	FAIL ABUN
PA-234	1.208E-01	1.721E-01	3.006E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	4.180E+00	5.198E+00	0.000E+00	FAIL ABUN
NP-236	-3.870E-02	5.582E-02	8.428E-02	0.000E+00	NOT IDENT.
NP-239	-6.605E-02	1.175E-01	2.006E-01	0.000E+00	FAIL ABUN
AM-241	4.716E-02	9.117E-02	1.525E-01	0.000E+00	NOT IDENT.
CM-243	3.849E-03	5.875E-02	1.032E-01	0.000E+00	FAIL ABUN
AM-246	4.106E-02	8.267E-02	1.422E-01	0.000E+00	NOT IDENT.
CM-247	2.168E-02	2.197E-02	3.919E-02	0.000E+00	FAIL ABUN
CF-249	5.375E-03	2.303E-02	4.049E-02	0.000E+00	NOT IDENT.
CF-251	6.415E-02	8.326E-02	1.451E-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]G246875001.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 23:20:58
Sample ID          : G246875001      Sample quantity   : 1.48300E+02 GRAM
Detector name      : GAM22           Detector geometry: CAN
Elapsed live time  : 0 04:00:00.00   Elapsed real time: 0 04:00:05.02  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 952643          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
BE-7	477.59	65	10.42*	4.485E+00	1.750E-01	2.114E-01	120.15
K-40	1460.81	5556	10.67*	1.909E+00	3.452E+01	3.452E+01	9.65
CD-109	88.03	559	3.72*	7.462E+00	2.548E+00	2.604E+00	25.81
SN-126	64.28	465	9.60	4.321E+00	1.418E+00	1.418E+00	36.52
	86.94	559	8.90	7.462E+00	1.065E+00	1.065E+00	47.98
	87.57	559	37.00*	7.462E+00	2.561E-01	2.561E-01	25.81
BA-137M	661.65	473	89.98*	3.589E+00	1.853E-01	1.855E-01	22.88
CS-137	661.65	473	85.12*	3.589E+00	1.959E-01	1.961E-01	22.89
CE-141	145.44	201	48.40*	8.360E+00	6.290E-02	8.579E-02	66.83
RE-188	155.03	118	15.00*	8.200E+00	1.217E-01	1.407E-01	106.61
	477.96	65	1.04	4.485E+00	1.754E+00	2.028E+00	120.10
	633.10	-----	1.26	3.708E+00	-----	Line Not Found	-----
TL-208	277.35	154	6.80	6.180E+00	4.652E-01	4.652E-01	64.92
	510.84	263	21.60	4.299E+00	3.589E-01	3.589E-01	56.67
	583.14	1291	84.20*	3.930E+00	4.938E-01	4.938E-01	14.08
	860.37	198	12.46	2.922E+00	6.891E-01	6.891E-01	36.74
BI-211	72.87	-----	1.27	5.897E+00	-----	Line Not Found	-----
	351.07	1954	12.94*	5.401E+00	3.538E+00	3.538E+00	13.54
PB-212	74.81	1069	10.70	6.169E+00	2.049E+00	2.049E+00	17.69
	77.11	1614	18.00	6.467E+00	1.755E+00	1.755E+00	12.27
	87.30	559	8.00	7.462E+00	1.185E+00	1.185E+00	27.68
	238.63	3896	44.60*	6.709E+00	1.648E+00	1.648E+00	13.82
	300.09	239	3.41	5.914E+00	1.500E+00	1.500E+00	40.99
PO-212	74.81	1069	10.70	6.169E+00	2.049E+00	2.049E+00	17.69
	77.11	1614	18.00	6.467E+00	1.755E+00	1.755E+00	12.27
	87.30	559	8.00	7.462E+00	1.185E+00	1.185E+00	27.68
	115.19	-----	0.60	8.535E+00	-----	Line Not Found	-----
	238.63	3896	44.60*	6.709E+00	1.648E+00	1.648E+00	13.82
	300.09	239	3.41	5.914E+00	1.500E+00	1.500E+00	40.99
BI-214	609.31	1534	46.30*	3.811E+00	1.100E+00	1.100E+00	14.22
	1120.29	382	15.10	2.345E+00	1.364E+00	1.364E+00	28.96
	1764.49	311	15.80	1.716E+00	1.453E+00	1.453E+00	23.34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	1069	6.21	6.169E+00	3.531E+00	3.531E+00	16.75
	77.11	1614	10.50	6.467E+00	3.009E+00	3.009E+00	14.44
	87.30	559	4.67	7.462E+00	2.029E+00	2.029E+00	26.93
	241.98	832	7.49	6.666E+00	2.108E+00	2.108E+00	22.86
	295.21	1115	19.20	5.970E+00	1.231E+00	1.231E+00	19.46
	351.92	1954	37.20*	5.401E+00	1.231E+00	1.231E+00	14.51
PO-214	74.81	1069	6.21	6.169E+00	3.531E+00	3.531E+00	16.75
	77.11	1614	10.50	6.467E+00	3.009E+00	3.009E+00	14.44
	87.30	559	4.67	7.462E+00	2.029E+00	2.029E+00	26.93
	241.98	832	7.49	6.666E+00	2.108E+00	2.108E+00	22.86
	295.21	1115	19.20	5.970E+00	1.231E+00	1.231E+00	19.46
	351.92	1954	37.20*	5.401E+00	1.231E+00	1.231E+00	14.51
PO-216	74.81	1069	10.70	6.169E+00	2.049E+00	2.049E+00	17.69
	77.11	1614	18.00	6.467E+00	1.755E+00	1.755E+00	12.27
	87.30	559	8.00	7.462E+00	1.185E+00	1.185E+00	27.68
	238.63	3896	44.60*	6.709E+00	1.648E+00	1.648E+00	13.82
	300.09	239	3.41	5.914E+00	1.500E+00	1.500E+00	40.99
	74.81	1069	6.21	6.169E+00	3.531E+00	3.531E+00	16.75
PO-218	77.11	1614	10.50	6.467E+00	3.009E+00	3.009E+00	14.44
	87.30	559	4.67	7.462E+00	2.029E+00	2.029E+00	26.93
	241.98	832	7.49	6.666E+00	2.108E+00	2.108E+00	22.86
	295.21	1115	19.20	5.970E+00	1.231E+00	1.231E+00	19.46
	351.92	1954	37.20*	5.401E+00	1.231E+00	1.231E+00	14.51
	240.98	832	3.95*	6.666E+00	3.997E+00	3.997E+00	22.17
RA-224	609.31	1534	46.30*	3.811E+00	1.100E+00	1.100E+00	14.22
RA-226	1120.29	382	15.10	2.345E+00	1.364E+00	1.364E+00	28.96
	1764.49	311	15.80	1.716E+00	1.453E+00	1.453E+00	23.34
AC-228	338.32	709	11.40	5.524E+00	1.424E+00	1.424E+00	46.28
	911.07	1022	27.70*	2.788E+00	1.675E+00	1.675E+00	16.76
	969.11	584	16.60	2.648E+00	1.680E+00	1.680E+00	27.79
RA-228	338.32	709	11.40	5.524E+00	1.424E+00	1.424E+00	46.28
	911.07	1022	27.70*	2.788E+00	1.675E+00	1.675E+00	16.76
	969.11	584	16.60	2.648E+00	1.680E+00	1.680E+00	27.79
TH-228	74.81	1069	10.70	6.169E+00	2.049E+00	2.079E+00	15.06
	77.11	1614	18.00	6.467E+00	1.755E+00	1.781E+00	12.27
	87.30	559	8.00	7.462E+00	1.185E+00	1.202E+00	25.81
	238.63	3896	44.60*	6.709E+00	1.648E+00	1.672E+00	13.82
	300.09	239	3.41	5.914E+00	1.500E+00	1.522E+00	71.32
TH-230	609.31	1534	46.30*	3.811E+00	1.100E+00	1.100E+00	14.22
	1120.29	382	15.10	2.345E+00	1.364E+00	1.364E+00	28.96
	1764.49	311	15.80	1.716E+00	1.453E+00	1.453E+00	23.34
TH-232	338.32	709	11.40	5.524E+00	1.424E+00	1.424E+00	22.66
	911.07	1022	27.70*	2.788E+00	1.675E+00	1.675E+00	16.76
	969.11	584	16.60	2.648E+00	1.680E+00	1.680E+00	27.79
TH-234	63.29	465	3.80*	4.321E+00	3.583E+00	3.583E+00	37.77
	92.38	1430	5.41	7.860E+00	4.257E+00	4.257E+00	21.65
U-234	609.31	1534	46.30*	3.811E+00	1.100E+00	1.100E+00	14.22
	1120.29	382	15.10	2.345E+00	1.364E+00	1.364E+00	28.96
	1764.49	311	15.80	1.716E+00	1.453E+00	1.453E+00	23.34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-235	89.95	314	2.70	7.682E+00	1.918E+00	1.918E+00	38.30
	93.35	1430	4.50	7.860E+00	5.118E+00	5.118E+00	30.45
	105.00	-----	2.10	8.370E+00	-----	Line Not Found	-----
	143.76	201	10.50*	8.360E+00	2.899E-01	2.899E-01	68.53
	163.35	135	4.70	8.032E+00	4.517E-01	4.517E-01	83.54
	185.71	781	54.00	7.608E+00	2.406E-01	2.406E-01	23.46
NP-237	205.31	-----	4.70	7.253E+00	-----	Line Not Found	-----
	86.50	559	12.60*	7.462E+00	7.522E-01	7.522E-01	33.04
	95.87	-----	2.60	8.032E+00	-----	Line Not Found	-----
U-238	63.29	465	3.80*	4.321E+00	3.583E+00	3.583E+00	37.77
	92.38	1430	5.41	7.860E+00	4.257E+00	4.257E+00	14.70
AM-243	74.67	1069	66.00*	6.169E+00	3.322E-01	3.322E-01	15.02
	86.72	559	0.34	7.462E+00	2.821E+01	2.821E+01	25.81
	117.66	-----	0.55	8.550E+00	-----	Line Not Found	-----
ANH-511	142.18	-----	0.13	8.387E+00	-----	Line Not Found	-----
	511.00	263	100.00*	4.299E+00	7.752E-02	7.752E-02	56.05

Flag: "*" = Keyline

Total number of lines in spectrum 44
Number of unidentified lines 4
Number of lines tentatively identified by NID 40 90.91%

Nuclide Type :

Nuclide	Hlflife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BE-7	53.44D	1.21	1.750E-01	2.114E-01	2.540E-01	120.15	
K-40	1.28E+09Y	1.00	3.452E+01	3.452E+01	0.333E+01	9.65	
CD-109	464.00D	1.02	2.548E+00	2.604E+00	0.672E+00	25.81	
SN-126	1.00E+05Y	1.00	2.561E-01	2.561E-01	0.661E-01	25.81	
BA-137M	30.17Y	1.00	1.853E-01	1.855E-01	0.424E-01	22.88	
CS-137	30.17Y	1.00	1.959E-01	1.961E-01	0.449E-01	22.89	
CE-141	32.50D	1.36	6.290E-02	8.579E-02	5.734E-02	66.83	
RE-188	69.40D	1.16	1.217E-01	1.407E-01	1.500E-01	106.61	
TL-208	1.41E+10Y	1.00	4.938E-01	4.938E-01	0.695E-01	14.08	
BI-211	7.04E+08Y	1.00	3.538E+00	3.538E+00	0.479E+00	13.54	
PB-212	1.41E+10Y	1.00	1.648E+00	1.648E+00	0.228E+00	13.82	
PO-212	1.41E+10Y	1.00	1.648E+00	1.648E+00	0.228E+00	13.82	
BI-214	1600.00Y	1.00	1.100E+00	1.100E+00	0.156E+00	14.22	
PB-214	1600.00Y	1.00	1.231E+00	1.231E+00	0.179E+00	14.51	
PO-214	1600.00Y	1.00	1.231E+00	1.231E+00	0.179E+00	14.51	
PO-216	1.41E+10Y	1.00	1.648E+00	1.648E+00	0.228E+00	13.82	
PO-218	1600.00Y	1.00	1.231E+00	1.231E+00	0.179E+00	14.51	
RA-224	1.41E+10Y	1.00	3.997E+00	3.997E+00	0.886E+00	22.17	
RA-226	1600.00Y	1.00	1.100E+00	1.100E+00	0.156E+00	14.22	
AC-228	1.41E+10Y	1.00	1.675E+00	1.675E+00	0.281E+00	16.76	
RA-228	1.41E+10Y	1.00	1.675E+00	1.675E+00	0.281E+00	16.76	
TH-228	1.91Y	1.01	1.648E+00	1.672E+00	0.231E+00	13.82	
TH-230	4.47E+09Y	1.00	1.100E+00	1.100E+00	0.156E+00	14.22	
TH-232	1.41E+10Y	1.00	1.675E+00	1.675E+00	0.281E+00	16.76	
TH-234	4.47E+09Y	1.00	3.583E+00	3.583E+00	1.353E+00	37.77	
U-234	4.47E+09Y	1.00	1.100E+00	1.100E+00	0.156E+00	14.22	
U-235	7.04E+08Y	1.00	2.899E-01	2.899E-01	1.987E-01	68.53	
NP-237	2.14E+06Y	1.00	7.522E-01	7.522E-01	2.485E-01	33.04	
U-238	4.47E+09Y	1.00	3.583E+00	3.583E+00	1.353E+00	37.77	
AM-243	7380.00Y	1.00	3.322E-01	3.322E-01	0.499E-01	15.02	
ANH-511	1.00E+09Y	1.00	7.752E-02	7.752E-02	4.345E-02	56.05	
Total Activity :			7.442E+01	7.458E+01			

Grand Total Activity : 7.442E+01 7.458E+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
0	84.01	321	1233	1.88	168.23	165	7	2.23E-02	39.3	7.20E+00	T
0	129.02	261	1204	1.33	258.16	254	9	1.81E-02	50.6	8.53E+00	T
0	209.81	298	1196	1.15	419.60	413	11	2.07E-02	46.3	7.17E+00	T
0	270.22	363	802	1.61	540.31	536	11	2.52E-02	31.9	6.27E+00	T
0	328.00	198	626	1.54	655.76	651	11	1.37E-02	52.2	5.62E+00	T
0	462.99	322	317	1.70	925.55	920	11	2.23E-02	25.1	4.58E+00	T
0	727.64	370	347	1.80	1454.55	1447	16	2.57E-02	24.8	3.34E+00	T
0	768.78	231	424	2.26	1536.78	1529	19	1.60E-02	44.9	3.20E+00	T
0	795.26	209	269	1.50	1589.73	1582	14	1.45E-02	36.1	3.12E+00	T
1	964.72	233	235	2.56	1928.54	1921	24	1.62E-02	32.4	2.66E+00	T
0	1000.66	128	222	1.29	2000.39	1993	15	8.86E-03	56.1	2.58E+00	T
0	1238.39	101	351	2.24	2475.79	2466	16	7.00E-03	85.6	2.16E+00	T
0	1378.58	86	129	3.10	2756.18	2747	17	5.98E-03	66.2	1.99E+00	T
0	1409.17	51	100	2.28	2817.35	2809	13	3.55E-03	86.5	1.96E+00	T
0	1730.07	64	52	1.31	3459.31	3447	19	4.47E-03	64.5	1.73E+00	T
0	1848.87	65	69	11.16	3697.01	3682	30	4.53E-03	67.5	1.69E+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]G246875001.CNF;1
* Acquisition date   : 23-FEB-2010 23:20:58   Detector SN#      :
* Detector ID        : GAM22                  Sensitivity       : 5.00000
* Geometry           : CAN                    Energy tolerance   : 1.50000
* Elapsed live time  : 0 04:00:00.00          Abundance limit      : 75.00000
* Elapsed real time  : 0 04:00:05.02          Half life ratio     : 8.00000
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246875001             Analyst initials: MXR1
* Batch Number       : 952643                 Sample Quantity   : 1.48300E+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
BE-7	2.114E-01	2.540E-01	3.031E-01	3.163E-02	0.698
K-40	3.452E+01	3.330E+00	3.303E-01	3.025E-02	104.537
CD-109	2.604E+00	6.720E-01	7.189E-01	6.822E-02	3.622
SN-126	2.561E-01	6.611E-02	7.975E-02	7.530E-03	3.212
BA-137M	1.855E-01	4.244E-02	3.551E-02	3.745E-03	5.224
CS-137	1.961E-01	4.488E-02	3.754E-02	3.964E-03	5.224
CE-141	8.579E-02	5.734E-02	5.983E-02	5.446E-03	1.434
RE-188	1.407E-01	1.500E-01	1.741E-01	1.625E-02	0.808
TL-208	4.938E-01	6.953E-02	3.268E-02	3.543E-03	15.112
BI-211	3.538E+00	4.790E-01	1.959E-01	2.286E-02	18.060
PB-212	1.648E+00	2.277E-01	5.653E-02	7.469E-03	29.152
PO-212	1.648E+00	2.277E-01	5.653E-02	7.469E-03	29.152
BI-214	1.100E+00	1.564E-01	6.352E-02	7.386E-03	17.323
PB-214	1.231E+00	1.786E-01	6.767E-02	8.626E-03	18.189
PO-214	1.231E+00	1.786E-01	6.767E-02	8.626E-03	18.189
PO-216	1.648E+00	2.277E-01	5.653E-02	7.469E-03	29.152
PO-218	1.231E+00	1.786E-01	6.767E-02	8.626E-03	18.189
RA-224	3.997E+00	8.859E-01	6.426E-01	8.044E-02	6.220

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.100E+00	1.564E-01	6.352E-02	7.386E-03	17.323
AC-228	1.675E+00	2.807E-01	1.291E-01	1.711E-02	12.971
RA-228	1.675E+00	2.807E-01	1.291E-01	1.711E-02	12.971
TH-228	1.672E+00	2.310E-01	5.735E-02	7.577E-03	29.152
TH-230	1.100E+00	1.564E-01	6.352E-02	7.385E-03	17.323
TH-232	1.675E+00	2.807E-01	1.291E-01	1.711E-02	12.971
TH-234	3.583E+00	1.353E+00	1.154E+00	2.009E-01	3.104
U-234	1.100E+00	1.564E-01	6.352E-02	7.385E-03	17.323
U-235	2.899E-01	1.987E-01	2.092E-01	3.690E-02	1.386
NP-237	7.522E-01	2.485E-01	2.103E-01	4.762E-02	3.577
U-238	3.583E+00	1.353E+00	1.154E+00	2.009E-01	3.104
AM-243	3.322E-01	4.990E-02	5.260E-02	4.287E-03	6.316
ANH-511	7.752E-02	4.345E-02	2.668E-02	2.673E-03	2.906

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	1.088E-03		2.542E-02	4.215E-02	3.632E-03	0.026
NA-24	-7.405E-02		1.230E-01	Half-Life too short		
AL-26	8.230E-03		1.485E-02	2.573E-02	2.104E-03	0.320
TI-44	3.239E-01	+	3.974E-02	4.496E-02	3.812E-03	7.204
SC-46	-1.121E-02		2.245E-02	3.637E-02	4.071E-03	-0.308
V-48	1.795E-02		4.009E-02	6.711E-02	7.038E-03	0.267
CR-51	-1.433E-01		2.239E-01	3.667E-01	4.748E-02	-0.391
MN-52	-3.327E-03		1.223E-01	1.997E-01	1.785E-02	-0.017
MN-54	1.905E-02		2.182E-02	3.743E-02	4.158E-03	0.509
CO-56	-1.423E-02		2.279E-02	3.692E-02	4.110E-03	-0.385
CO-57	-3.324E-03		1.608E-02	2.536E-02	2.091E-03	-0.131
CO-58	-8.275E-04		2.208E-02	3.689E-02	4.085E-03	-0.022
FE-59	1.707E-02		5.580E-02	9.182E-02	8.999E-03	0.186
CO-60	1.520E-02		2.102E-02	3.600E-02	3.210E-03	0.422
ZN-65	6.230E-02		6.420E-02	9.346E-02	8.338E-03	0.667
GE-68	1.705E-02		7.428E-01	1.210E+00	1.141E-01	0.014
AS-73	9.113E-02		4.564E-01	7.668E-01	5.794E-02	0.119
AS-74	4.431E-02		5.286E-02	8.986E-02	9.314E-03	0.493
SE-75	-1.081E-02		3.120E-02	4.309E-02	5.800E-03	-0.251
BR-77	-6.167E+00		5.585E+00	7.923E+00	7.975E-01	-0.778
SR-82	-5.277E-02		2.552E-01	3.479E-01	3.816E-02	-0.152
RB-83	-4.870E-02		4.379E-02	6.210E-02	6.250E-03	-0.784
RB-84	4.715E-02		4.095E-02	7.062E-02	7.899E-03	0.668
KR-85	2.526E+01		5.692E+00	8.585E+00	8.614E-01	2.943
SR-85	1.287E-01		2.900E-02	4.374E-02	4.389E-03	2.943
RB-86	1.396E-01		4.535E-01	7.486E-01	7.064E-02	0.186
Y-88	6.514E-03		1.995E-02	2.899E-02	2.344E-03	0.225
ZR-88	-2.139E-03		1.768E-02	2.895E-02	2.695E-03	-0.074
Y-91	-2.102E-01		1.250E+01	1.935E+01	1.591E+00	-0.011
NB-94	2.374E-02		1.989E-02	3.366E-02	3.607E-03	0.705

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	6.054E-02		3.134E-02	4.678E-02	5.116E-03	1.294
NB-95M	1.849E-01		9.218E-02	1.346E-01	1.779E-02	1.374
ZR-95	7.382E-03		4.037E-02	6.593E-02	7.653E-03	0.112
NB-97	3.414E-02		1.823E-02	Half-Life	too short	
ZR-97	2.158E+00		3.585E-01	Half-Life	too short	
MO-99	-3.830E+00		5.841E+00	9.165E+00	1.517E+00	-0.418
TC-99M	1.799E+09		2.506E+09	Half-Life	too short	
RH-101	-1.300E-02		2.257E-02	3.465E-02	3.780E-03	-0.375
RH-102	3.205E-03		2.012E-02	2.828E-02	2.781E-03	0.113
RU-103	-1.495E-02		2.413E-02	3.776E-02	5.667E-03	-0.396
RH-106	2.335E-02		1.820E-01	3.020E-01	4.409E-02	0.077
RU-106	2.335E-02		1.820E-01	3.020E-01	3.154E-02	0.077
AG-108M	6.167E-03		1.917E-02	3.158E-02	3.126E-03	0.195
AG-110M	1.575E-02		2.337E-02	3.410E-02	3.665E-03	0.462
IN-111	-3.416E-01		6.352E-01	8.768E-01	1.113E-01	-0.390
IN-113M	-1.318E-02		2.590E-02	4.184E-02	3.995E-03	-0.315
SN-113	-1.318E-02		2.590E-02	4.184E-02	3.995E-03	-0.315
IN-114M	-4.135E-02		1.286E-01	1.844E-01	1.960E-02	-0.224
CD-115	2.747E+00		4.989E+00	8.509E+00	8.593E-01	0.323
SN-117M	4.957E-02		4.936E-02	5.496E-02	5.212E-03	0.902
SB-122	5.480E-01		1.023E+00	1.732E+00	1.776E-01	0.316
I-123	5.476E-01		1.283E+00	Half-Life	too short	
TE-123M	5.791E-03		2.713E-02	2.904E-02	2.774E-03	0.199
I-124	-1.723E-01		4.050E-01	5.635E-01	5.853E-02	-0.306
SB-124	1.137E-02		4.025E-02	6.820E-02	6.067E-03	0.167
SB-125	2.222E-02		5.505E-02	9.099E-02	8.829E-03	0.244
TE-125M	3.296E-01		6.174E+00	9.570E+00	9.690E-01	0.034
I-126	8.402E-02		1.174E-01	1.713E-01	1.810E-02	0.490
SB-126	-5.467E-02		9.428E-02	1.266E-01	1.365E-02	-0.432
SB-127	-6.189E-01		7.017E-01	1.099E+00	1.410E-01	-0.563
XE-127	-2.039E-02		3.271E-02	4.876E-02	5.405E-03	-0.418
I-131	1.957E-02		6.463E-02	1.079E-01	1.195E-02	0.181
TE-132	-1.662E-01		3.868E-01	6.209E-01	1.100E-01	-0.268
BA-133	1.326E-02		2.851E-02	4.178E-02	6.243E-03	0.317
I-133	-7.932E-04		1.039E-03	Half-Life	too short	
CS-134	1.119E-01	+	4.224E-02	5.306E-02	5.873E-03	2.108
CS-135	2.335E-01		1.171E-01	1.694E-01	2.450E-02	1.379
I-135	2.775E+08		3.513E+08	Half-Life	too short	
CS-136	-4.510E-02		6.501E-02	9.927E-02	1.004E-02	-0.454
CE-139	1.946E-02		2.070E-02	3.113E-02	3.053E-03	0.625
BA-140	3.572E-02		1.368E-01	2.302E-01	7.726E-02	0.155
LA-140	-8.079E-02		4.944E-02	7.258E-02	6.362E-03	-1.113
CE-143	5.344E-04		7.670E-05	Half-Life	too short	
CE-144	5.434E-03		1.373E-01	2.056E-01	3.191E-02	0.026
PM-144	6.377E-03		1.956E-02	3.235E-02	3.460E-03	0.197
PR-144	4.320E-01		1.325E+00	2.192E+00	2.343E-01	0.197
PM-146	1.135E-02		2.583E-02	4.253E-02	4.942E-03	0.267
ND-147	-3.042E-01		3.044E-01	4.849E-01	7.690E-02	-0.627

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	-8.380E+00		4.744E+01	7.529E+01	1.424E+01	-0.111
EU-152	-4.076E-02		6.924E-02	9.142E-02	1.099E-02	-0.446
GD-153	-1.398E-02		5.748E-02	8.002E-02	7.037E-03	-0.175
EU-154	3.653E-03		7.104E-02	1.179E-01	1.332E-02	0.031
EU-155	9.224E-02		6.784E-02	1.115E-01	9.569E-03	0.828
TB-160	7.773E-02		8.201E-02	1.407E-01	1.573E-02	0.552
HO-166M	1.836E-02		3.607E-02	5.990E-02	6.439E-03	0.306
TM-171	-1.695E+01		1.810E+01	2.560E+01	1.935E+00	-0.662
LU-176	-7.382E-03		1.604E-02	2.439E-02	3.200E-03	-0.303
LU-177	2.153E+00	+	1.027E+00	1.140E+00	1.287E-01	1.888
LU-177M	-1.371E-01		1.059E-01	1.646E-01	1.557E-02	-0.833
HF-181	-2.456E-03		2.834E-02	3.925E-02	3.875E-03	-0.063
W-181	-1.659E-02		2.351E-01	3.422E-01	2.551E-02	-0.048
TA-182	-1.517E-02		1.208E-01	1.998E-01	1.661E-02	-0.076
RE-183	1.048E-01	+	8.571E-02	1.137E-01	1.097E-02	0.922
RE-184	-1.676E-02		1.456E-01	2.341E-01	3.038E-02	-0.072
OS-185	-1.651E-02		2.414E-02	3.853E-02	4.049E-03	-0.428
W-188	-9.928E-01		4.978E+00	7.259E+00	9.915E-01	-0.137
IR-192	6.138E-04		2.048E-02	3.432E-02	4.386E-03	0.018
AU-195	2.708E-01		1.485E-01	2.381E-01	2.076E-02	1.138
TL-200	2.261E-05		9.087E-05	Half-Life	too short	
TL-201	2.373E+00		4.194E+00	6.249E+00	6.159E-01	0.380
TL-202	5.654E-03		3.867E-02	6.328E-02	6.091E-03	0.089
HG-203	3.896E-02		2.954E-02	4.262E-02	6.032E-03	0.914
BI-207	1.465E-02		3.184E-02	5.291E-02	5.080E-03	0.277
TL-207	-3.313E-02		4.549E-01	6.594E-01	1.310E-01	-0.050
PO-209	-7.556E-01		4.362E+00	7.175E+00	8.038E-01	-0.105
BI-210	1.123E+00		2.017E+00	3.266E+00	3.034E-01	0.344
PB-210	1.123E+00		2.017E+00	3.266E+00	3.034E-01	0.344
PO-210	1.123E+00		2.017E+00	3.266E+00	2.746E-01	0.344
PB-211	-5.274E-01		6.613E-01	9.118E-01	5.724E-01	-0.578
BI-212	1.189E+00	+	3.273E-01	3.771E-01	4.504E-02	3.154
PO-215	-3.313E-02		4.549E-01	6.594E-01	1.310E-01	-0.050
RN-219	2.946E-01		2.511E-01	4.203E-01	6.503E-02	0.701
RN-220	4.574E+00		1.461E+01	2.467E+01	2.514E+00	0.185
RA-223	-3.313E-02		4.549E-01	6.594E-01	1.310E-01	-0.050
AC-227	-1.117E-02		2.411E-01	3.881E-01	7.082E-02	-0.029
TH-227	-1.117E-02		2.411E-01	3.881E-01	7.988E-02	-0.029
TH-229	1.387E-01		3.197E-01	5.316E-01	5.716E-02	0.261
PA-231	-6.451E-01		9.995E-01	1.495E+00	2.792E-01	-0.431
TH-231	-3.313E-02		4.549E-01	6.594E-01	1.310E-01	-0.050
U-231	-6.527E-01		6.761E-01	9.398E-01	8.346E-02	-0.694
PA-233	-1.768E-02		3.845E-02	6.354E-02	8.324E-03	-0.278
PA-234	1.208E-01		1.756E-01	2.955E-01	5.873E-02	0.409
PA-234M	7.456E+00	+	4.266E+00	5.117E+00	5.864E-01	1.457
NP-236	-3.870E-02		5.696E-02	7.946E-02	7.596E-03	-0.487
NP-239	-6.605E-02		1.199E-01	1.878E-01	1.552E-02	-0.352
AM-241	4.716E-02		9.303E-02	1.406E-01	1.099E-02	0.335

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	3.849E-03		5.995E-02	9.632E-02	8.212E-03	0.040
AM-246	4.106E-02		8.435E-02	1.402E-01	1.319E-02	0.293
CM-247	2.168E-02		2.242E-02	3.774E-02	3.540E-03	0.574
CF-249	5.375E-03		2.350E-02	3.896E-02	3.703E-03	0.138
CF-251	6.415E-02		8.496E-02	1.371E-01	1.392E-02	0.468

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]G246875001
* Acquisition date   : 23-FEB-2010 23:20:58 Detector SN#      :
* Detector ID        : GAM22                      Sensitivity   : 5.000
* Geometry           : CAN                        Energy tolerance: 1.500
* Elapsed live time  : 0 04:00:00.00             Abundance limit : 75.000
* Elapsed real time  : 0 04:00:05.02             Half life ratio : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246875001 Analyst initials: MXR1
* Batch Number       : 952643 Sample Quantity : 1.4830E+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
BE-7	2.114E-01	2.489E-01	1.568E-01	1.270E-01
K-40	3.452E+01	3.264E+00	1.663E-01	1.665E+00
CD-109	2.604E+00	6.585E-01	3.866E-01	3.360E-01
SN-126	2.561E-01	6.478E-02	4.289E-02	3.305E-02
BA-137M	1.855E-01	4.159E-02	1.823E-02	2.122E-02
CS-137	1.961E-01	4.398E-02	1.927E-02	2.244E-02
CE-141	8.579E-02	5.619E-02	3.182E-02	2.867E-02
RE-188	1.407E-01	1.470E-01	9.246E-02	7.501E-02
TL-208	4.938E-01	6.813E-02	1.683E-02	3.476E-02
BI-211	3.538E+00	4.694E-01	1.021E-01	2.395E-01
PB-212	1.648E+00	2.231E-01	2.972E-02	1.138E-01
PO-212	1.648E+00	2.231E-01	2.972E-02	1.138E-01
BI-214	1.100E+00	1.533E-01	3.267E-02	7.822E-02
PB-214	1.231E+00	1.750E-01	3.526E-02	8.928E-02
PO-214	1.231E+00	1.750E-01	3.526E-02	8.928E-02
PO-216	1.648E+00	2.231E-01	2.972E-02	1.138E-01
PO-218	1.231E+00	1.750E-01	3.526E-02	8.928E-02
RA-224	3.997E+00	8.682E-01	3.378E-01	4.430E-01
RA-226	1.100E+00	1.533E-01	3.267E-02	7.822E-02
AC-228	1.675E+00	2.751E-01	6.578E-02	1.404E-01
RA-228	1.675E+00	2.751E-01	6.578E-02	1.404E-01
TH-228	1.672E+00	2.264E-01	3.016E-02	1.155E-01
TH-230	1.100E+00	1.533E-01	3.267E-02	7.822E-02
TH-232	1.675E+00	2.751E-01	6.578E-02	1.404E-01
TH-234	3.583E+00	1.326E+00	6.252E-01	6.767E-01
U-234	1.100E+00	1.533E-01	3.267E-02	7.822E-02
U-235	2.899E-01	1.947E-01	1.113E-01	9.934E-02
NP-237	7.522E-01	2.436E-01	1.131E-01	1.243E-01
U-238	3.583E+00	1.326E+00	6.252E-01	6.767E-01
AM-243	3.322E-01	4.890E-02	2.839E-02	2.495E-02
ANH-511	7.752E-02	4.258E-02	1.378E-02	2.173E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
NA-22	1.088E-03	2.491E-02	2.129E-02	1.271E-02 NOT IDENT.
NA-24	-7.405E+04	2.411E+05	0.000E+00	1.230E+05 SHORT HLIF
AL-26	8.230E-03	1.456E-02	1.288E-02	7.427E-03 NOT IDENT.
TI-44	3.239E-01	3.895E-02	2.424E-02	1.987E-02 FAIL ABUN
SC-46	-1.121E-02	2.200E-02	1.854E-02	1.123E-02 FAIL ABUN
V-48	1.795E-02	3.929E-02	3.412E-02	2.004E-02 NOT IDENT.
CR-51	-1.433E-01	2.194E-01	1.915E-01	1.119E-01 NOT IDENT.
MN-52	-3.327E-03	1.199E-01	1.006E-01	6.117E-02 NOT IDENT.
MN-54	1.905E-02	2.139E-02	1.911E-02	1.091E-02 NOT IDENT.
CO-56	-1.423E-02	2.234E-02	1.884E-02	1.140E-02 FAIL ABUN
CO-57	-3.324E-03	1.576E-02	1.354E-02	8.042E-03 NOT IDENT.
CO-58	-8.275E-04	2.164E-02	1.884E-02	1.104E-02 NOT IDENT.
FE-59	1.707E-02	5.468E-02	4.656E-02	2.790E-02 FAIL ABUN
CO-60	1.520E-02	2.059E-02	1.817E-02	1.051E-02 NOT IDENT.
ZN-65	6.230E-02	6.291E-02	4.737E-02	3.210E-02 NOT IDENT.
GE-68	1.705E-02	7.279E-01	6.140E-01	3.714E-01 NOT IDENT.
AS-73	9.113E-02	4.472E-01	4.168E-01	2.282E-01 NOT IDENT.
AS-74	4.431E-02	5.181E-02	4.625E-02	2.643E-02 NOT IDENT.
SE-75	-1.081E-02	3.058E-02	2.261E-02	1.560E-02 NOT IDENT.
BR-77	-6.167E+00	5.473E+00	4.091E+00	2.793E+00 FAIL ABUN
SR-82	-5.277E-02	2.501E-01	1.779E-01	1.276E-01 NOT IDENT.
RB-83	-4.870E-02	4.292E-02	3.206E-02	2.190E-02 NOT IDENT.
RB-84	4.715E-02	4.013E-02	3.600E-02	2.047E-02 NOT IDENT.
KR-85	2.526E+01	5.578E+00	4.434E+00	2.846E+00 NOT IDENT.
SR-85	1.287E-01	2.842E-02	2.259E-02	1.450E-02 NOT IDENT.
RB-86	1.396E-01	4.445E-01	3.798E-01	2.268E-01 NOT IDENT.
Y-88	6.514E-03	1.955E-02	1.451E-02	9.973E-03 NOT IDENT.
ZR-88	-2.139E-03	1.732E-02	1.505E-02	8.838E-03 NOT IDENT.
Y-91	-2.102E-01	1.225E+01	9.791E+00	6.252E+00 NOT IDENT.
NB-94	2.374E-02	1.949E-02	1.725E-02	9.945E-03 NOT IDENT.
NB-95	6.054E-02	3.071E-02	2.393E-02	1.567E-02 NOT IDENT.
NB-95M	1.849E-01	9.034E-02	7.079E-02	4.609E-02 NOT IDENT.
ZR-95	7.382E-03	3.956E-02	3.374E-02	2.018E-02 NOT IDENT.
NB-97	3.414E+04	3.572E+04	0.000E+00	1.823E+04 SHORT HLIF
ZR-97	2.158E+06	7.027E+05	0.000E+00	3.585E+05 SHORT HLIF
MO-99	-3.830E+00	5.724E+00	4.692E+00	2.921E+00 NOT IDENT.
TC-99M	1.799E+15	4.912E+15	0.000E+00	2.506E+15 SHORT HLIF
RH-101	-1.300E-02	2.212E-02	1.830E-02	1.129E-02 NOT IDENT.
RH-102	3.205E-03	1.971E-02	1.463E-02	1.006E-02 NOT IDENT.
RU-103	-1.495E-02	2.365E-02	1.952E-02	1.207E-02 FAIL ABUN
RH-106	2.335E-02	1.784E-01	1.553E-01	9.101E-02 FAIL ABUN
RU-106	2.335E-02	1.784E-01	1.553E-01	9.100E-02 FAIL ABUN
AG-108M	6.167E-03	1.878E-02	1.637E-02	9.583E-03 NOT IDENT.
AG-110M	1.575E-02	2.290E-02	1.751E-02	1.168E-02 NOT IDENT.
IN-111	-3.416E-01	6.225E-01	4.608E-01	3.176E-01 NOT IDENT.
IN-113M	-1.318E-02	2.538E-02	2.175E-02	1.295E-02 NOT IDENT.
SN-113	-1.318E-02	2.538E-02	2.175E-02	1.295E-02 NOT IDENT.
IN-114M	-4.135E-02	1.261E-01	9.745E-02	6.431E-02 NOT IDENT.
CD-115	2.747E+00	4.889E+00	4.392E+00	2.494E+00 NOT IDENT.
SN-117M	4.957E-02	4.837E-02	2.917E-02	2.468E-02 NOT IDENT.
SB-122	5.480E-01	1.002E+00	8.928E-01	5.113E-01 NOT IDENT.
I-123	5.476E+05	2.514E+06	0.000E+00	1.283E+06 SHORT HLIF
TE-123M	5.791E-03	2.658E-02	1.541E-02	1.356E-02 NOT IDENT.
I-124	-1.723E-01	3.969E-01	2.899E-01	2.025E-01 NOT IDENT.
SB-124	1.137E-02	3.944E-02	3.421E-02	2.012E-02 FAIL ABUN
SB-125	2.222E-02	5.395E-02	4.720E-02	2.752E-02 FAIL ABUN
TE-125M	3.296E-01	6.051E+00	5.122E+00	3.087E+00 NOT IDENT.
I-126	8.402E-02	1.150E-01	8.794E-02	5.869E-02 NOT IDENT.
SB-126	-5.467E-02	9.240E-02	6.485E-02	4.714E-02 FAIL ABUN
SB-127	-6.189E-01	6.876E-01	5.636E-01	3.508E-01 NOT IDENT.
XE-127	-2.039E-02	3.206E-02	2.573E-02	1.636E-02 FAIL ABUN
I-131	1.957E-02	6.334E-02	5.619E-02	3.232E-02 NOT IDENT.
TE-132	-1.662E-01	3.791E-01	3.268E-01	1.934E-01 NOT IDENT.
BA-133	1.326E-02	2.794E-02	2.177E-02	1.426E-02 FAIL ABUN
I-133	-7.932E+02	2.036E+03	0.000E+00	1.039E+03 SHORT HLIF
CS-134	1.119E-01	4.140E-02	2.712E-02	2.112E-02 FAIL ABUN
CS-135	2.335E-01	1.147E-01	8.883E-02	5.854E-02 NOT IDENT.
I-135	2.775E+14	6.886E+14	0.000E+00	3.513E+14 SHORT HLIF
CS-136	-4.510E-02	6.370E-02	5.039E-02	3.250E-02 FAIL ABUN
CE-139	1.946E-02	2.029E-02	1.651E-02	1.035E-02 NOT IDENT.
BA-140	3.572E-02	1.341E-01	1.188E-01	6.839E-02 FAIL ABUN
LA-140	-8.079E-02	4.845E-02	3.646E-02	2.472E-02 FAIL ABUN
CE-143	5.344E+02	1.503E+02	0.000E+00	7.670E+01 SHORT HLIF
CE-144	5.434E-03	1.345E-01	1.095E-01	6.865E-02 NOT IDENT.

PM-144	6.377E-03	1.917E-02	1.659E-02	9.781E-03	NOT IDENT.
PR-144	4.320E-01	1.299E+00	1.124E+00	6.626E-01	NOT IDENT.
PM-146	1.135E-02	2.531E-02	2.203E-02	1.292E-02	NOT IDENT.
ND-147	-3.042E-01	2.983E-01	2.503E-01	1.522E-01	FAIL ABUN
PM-149	-8.380E+00	4.649E+01	3.943E+01	2.372E+01	NOT IDENT.
EU-152	-4.076E-02	6.786E-02	4.767E-02	3.462E-02	FAIL ABUN
GD-153	-1.398E-02	5.633E-02	4.294E-02	2.874E-02	FAIL ABUN
EU-154	3.653E-03	6.962E-02	5.954E-02	3.552E-02	NOT IDENT.
EU-155	9.224E-02	6.648E-02	5.971E-02	3.392E-02	FAIL ABUN
TB-160	7.773E-02	8.037E-02	7.174E-02	4.100E-02	FAIL ABUN
HO-166M	1.836E-02	3.535E-02	3.069E-02	1.804E-02	FAIL ABUN
TM-171	-1.695E+01	1.774E+01	1.385E+01	9.052E+00	NOT IDENT.
LU-176	-7.382E-03	1.572E-02	1.275E-02	8.022E-03	FAIL ABUN
LU-177	2.153E+00	1.007E+00	6.015E-01	5.136E-01	FAIL ABUN
LU-177M	-1.371E-01	1.038E-01	8.547E-02	5.295E-02	FAIL ABUN
HF-181	-2.456E-03	2.777E-02	2.030E-02	1.417E-02	NOT IDENT.
W-181	-1.659E-02	2.304E-01	1.852E-01	1.175E-01	NOT IDENT.
TA-182	-1.517E-02	1.184E-01	1.010E-01	6.039E-02	FAIL ABUN
RE-183	1.048E-01	8.400E-02	6.030E-02	4.286E-02	FAIL ABUN
RE-184	-1.676E-02	1.427E-01	1.230E-01	7.280E-02	NOT IDENT.
OS-185	-1.651E-02	2.366E-02	1.979E-02	1.207E-02	NOT IDENT.
W-188	-9.928E-01	4.878E+00	3.800E+00	2.489E+00	FAIL ABUN
IR-192	6.138E-04	2.007E-02	1.793E-02	1.024E-02	FAIL ABUN
AU-195	2.708E-01	1.455E-01	1.277E-01	7.425E-02	FAIL ABUN
TL-200	2.261E+01	1.781E+02	0.000E+00	9.087E+01	SHORT HLIF
TL-201	2.373E+00	4.110E+00	3.313E+00	2.097E+00	NOT IDENT.
TL-202	5.654E-03	3.789E-02	3.280E-02	1.933E-02	NOT IDENT.
HG-203	3.896E-02	2.895E-02	2.233E-02	1.477E-02	FAIL ABUN
BI-207	1.465E-02	3.121E-02	2.685E-02	1.592E-02	FAIL ABUN
TL-207	-3.313E-02	4.458E-01	3.443E-01	2.275E-01	FAIL ABUN
PO-209	-7.556E-01	4.275E+00	3.656E+00	2.181E+00	NOT IDENT.
BI-210	1.123E+00	1.977E+00	1.781E+00	1.009E+00	NOT IDENT.
PB-210	1.123E+00	1.977E+00	1.781E+00	1.009E+00	NOT IDENT.
PO-210	1.123E+00	1.976E+00	1.781E+00	1.008E+00	NOT IDENT.
PB-211	-5.274E-01	6.481E-01	4.736E-01	3.307E-01	NOT IDENT.
BI-212	1.189E+00	3.207E-01	1.931E-01	1.636E-01	FAIL ABUN
PO-215	-3.313E-02	4.458E-01	3.443E-01	2.275E-01	FAIL ABUN
RN-219	2.946E-01	2.461E-01	2.184E-01	1.255E-01	FAIL ABUN
RN-220	4.574E+00	1.432E+01	1.272E+01	7.307E+00	NOT IDENT.
RA-223	-3.313E-02	4.458E-01	3.443E-01	2.275E-01	FAIL ABUN
AC-227	-1.117E-02	2.363E-01	2.037E-01	1.206E-01	FAIL ABUN
TH-227	-1.117E-02	2.363E-01	2.037E-01	1.206E-01	FAIL ABUN
TH-229	1.387E-01	3.133E-01	2.809E-01	1.598E-01	FAIL ABUN
PA-231	-6.451E-01	9.795E-01	7.831E-01	4.998E-01	FAIL ABUN
TH-231	-3.313E-02	4.458E-01	3.443E-01	2.275E-01	FAIL ABUN
U-231	-6.527E-01	6.625E-01	5.045E-01	3.380E-01	FAIL ABUN
PA-233	-1.768E-02	3.769E-02	3.321E-02	1.923E-02	FAIL ABUN
PA-234	1.208E-01	1.721E-01	1.504E-01	8.779E-02	FAIL ABUN
PA-234M	7.456E+00	4.180E+00	2.601E+00	2.133E+00	FAIL ABUN
NP-236	-3.870E-02	5.582E-02	4.217E-02	2.848E-02	NOT IDENT.
NP-239	-6.605E-02	1.175E-01	1.003E-01	5.994E-02	FAIL ABUN
AM-241	4.716E-02	9.117E-02	7.627E-02	4.652E-02	NOT IDENT.
CM-243	3.849E-03	5.875E-02	5.161E-02	2.998E-02	FAIL ABUN
AM-246	4.106E-02	8.267E-02	7.113E-02	4.218E-02	NOT IDENT.
CM-247	2.168E-02	2.197E-02	1.961E-02	1.121E-02	FAIL ABUN
CF-249	5.375E-03	2.303E-02	2.026E-02	1.175E-02	NOT IDENT.
CF-251	6.415E-02	8.326E-02	7.257E-02	4.248E-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	760.4715
46.50	760.4715
46.50	760.4715
48.70	867.8030
49.72	825.1007
51.35	820.0658
52.39	798.7727
52.97	825.9012
53.15	843.2991
53.44	849.9438
54.07	858.7813
56.28	937.5223
56.28	937.5324
57.37	0.0000
57.53	932.8776
57.53	932.8851
57.60	942.6286
57.98	928.8881
57.98	928.8881
59.32	925.3080
59.32	925.3080
59.40	925.6013
59.54	926.1163
59.72	916.7368
60.01	917.7898
61.10	969.3248
61.14	969.4748
61.30	970.0785
63.00	1042.3188
63.29	1043.4709
63.29	1043.4709
63.58	1044.6174
64.28	1116.9752
65.12	1136.5989
65.20	1161.8450
65.20	1161.8450
66.05	1178.7268
66.72	1184.5677
66.83	1185.0461
66.91	1185.3958
67.20	1176.3157
67.20	1176.3157
67.75	1246.6846
67.85	1247.1379
68.90	1181.0583
68.90	1181.0583
69.30	1231.3177
69.67	1236.5150
70.82	1236.4304
70.82	1236.4304
70.83	1236.4745
72.80	1356.3187
72.87	1356.6487
72.87	1356.6487
74.67	1314.9532
74.81	1315.5691
74.81	1315.5691
74.81	1315.5691
74.81	1315.5691
74.81	1315.5691
74.81	1315.5691
74.81	1315.5691
74.97	1316.2777
75.28	1317.6420
75.70	1319.4829
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77.11	1325.6350

77.11	1325.6350
77.11	1325.6350
77.11	1325.6350
77.11	1325.6350
77.11	1325.6350
78.38	1331.1316
79.62	1336.4559
79.80	1337.2241
79.80	1337.2241
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80.18	1338.8466
80.30	1339.3564
80.30	1339.3564
80.57	1340.5022
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81.07	1079.6708
81.07	1079.6708
81.07	1079.6708
81.07	1079.6708
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83.37	1087.4404
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83.78	1091.9449
83.78	1091.9449
83.78	1091.9449
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84.90	1111.3522
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86.29	1116.0377
86.50	1116.7419
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86.59	1117.0453
86.72	1117.4840
86.79	1117.7115
86.94	1118.2207
87.30	1415.8340
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87.30	1415.8340
87.30	1415.8340
87.30	1415.8340
87.30	1415.8340
87.57	1416.9713
87.88	1124.5159
88.03	1125.0156
88.36	1126.1129
88.47	1126.4823
89.95	1649.4026
91.11	1079.3975
92.29	1083.0647
92.38	1083.3436
92.38	1083.3436
93.35	1086.3342
94.00	975.8023
94.67	1062.9932
94.67	1063.0083
94.90	1063.6931
94.90	1063.6931
94.90	1063.6931
94.90	1063.6931
94.90	1063.6931
95.87	1161.9186
95.87	1161.9186
96.73	1138.7761
97.43	1090.6516
98.44	940.6788
98.44	940.6832
98.88	950.4979
99.55	977.2547
99.55	977.2547
99.86	997.6726
100.00	998.0500
100.10	984.1611
103.18	1060.3573
103.76	977.2345
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105.31	941.4000
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109.28	1051.4229

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111.00	1023.4379
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112.95	1056.5286
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116.30	1003.8117
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117.00	965.6788
117.66	985.4219
121.11	921.0714
121.62	956.6553
121.78	957.0065
122.06	941.5104
122.32	942.0721
122.32	942.0721
122.32	942.0721
122.32	942.0721
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136.25	1001.1397
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140.51	0.0000
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144.24	975.2424
144.24	975.2424
144.24	975.2424
144.24	975.2424
145.22	926.1826
145.44	904.8101
147.16	906.4633
152.43	958.5800
152.70	966.4468
153.22	930.5478
154.21	962.2394
154.21	962.2394
154.21	962.2394
154.21	962.2394
155.03	985.5775
156.02	996.3351
158.56	819.3738
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159.00	905.7772
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161.27	950.7869
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162.64	939.6801
163.35	943.1573
163.89	980.9448
165.85	902.9128
167.43	888.8335
171.28	912.8525
171.86	933.8115
172.10	934.2073
176.55	949.1531
176.60	949.2360
181.06	1065.1938
184.41	983.8655
185.71	939.4972
186.00	939.9522
190.27	966.6003
192.34	947.7173
193.63	920.0027
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201.83	1037.1399
202.84	1034.4017
205.31	984.8571

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208.81	979.3502
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209.75	879.5128
210.97	890.8679
215.65	895.6392
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218.09	850.1290
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223.80	863.3331
226.40	822.8710
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227.08	809.0970
227.20	816.5145
228.16	867.6046
228.18	867.6299
228.18	867.6299
231.56	0.0000
235.69	877.2859
236.00	907.9834
236.00	907.9834
238.63	826.2631
238.63	826.2631
238.63	826.2631
238.63	826.2631
239.00	826.6748
240.98	828.8704
241.98	696.2493
241.98	696.2493
241.98	696.2493
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245.39	733.5143
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252.85	714.8213
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256.20	723.2945
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260.90	709.1057
262.80	693.3444
264.65	681.8240
268.24	654.9811
268.79	651.9129
269.46	650.6887
269.46	650.6887
269.46	650.6887
269.46	650.6887
271.23	724.7880
273.65	729.1159
276.40	731.5228
277.35	664.5033
277.60	673.7333
277.60	673.7333
278.00	675.1680
278.60	622.3096
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279.53	653.2529
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281.68	626.3585
283.67	665.6324
284.30	668.9998
285.00	679.6240
285.90	646.7126
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286.10	663.6785
287.40	662.1058
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290.67	673.1849
290.80	673.2852
291.72	693.5540
293.26	0.0000
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295.21	638.9063

295.21	638.9063
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297.23	526.8215
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299.80	528.3367
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300.09	595.3373
300.12	595.3532
301.29	596.1268
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303.91	613.1089
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306.84	604.7602
308.46	584.9073
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319.02	600.8699
319.41	615.0802
320.08	633.2002
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323.87	612.3594
323.87	612.3594
323.87	612.3594
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334.20	581.1194
334.30	648.9050
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338.28	536.0810
338.28	536.0810
338.28	536.0810
338.32	536.1086
338.32	536.1086
338.32	536.1086
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340.57	494.5205
344.27	551.7106
345.85	516.2498
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351.07	542.9297
351.92	533.7607
351.92	533.7607
351.92	533.7607
355.39	0.0000
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364.48	485.7271
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367.43	471.4615
367.94	0.0000
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374.96	455.1213
383.85	508.3847
387.95	482.4128
388.63	473.7513
391.69	491.0150
391.69	491.0150
392.90	468.5649
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400.65	451.6528
401.10	464.9157
401.81	462.1825
402.60	477.6164
404.84	559.3087
410.95	464.8264
411.60	477.2692
413.65	528.9629
414.70	518.2393
415.30	492.0150

415.76	451.4468
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423.70	489.3442
427.08	408.4176
427.89	441.6312
432.53	430.9170
433.93	415.8924
439.47	411.5316
439.56	407.4034
439.89	404.3948
443.98	420.3262
444.90	409.1548
445.03	409.1978
445.03	409.1978
445.03	409.1978
445.03	409.1978
453.90	411.0273
463.38	423.6035
468.07	419.8177
473.00	417.8383
475.06	404.2421
475.35	418.5842
476.78	408.3349
477.59	397.8766
477.96	384.4263
482.03	383.0901
484.57	417.8944
487.03	378.4047
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497.08	409.4398
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510.53	0.0000
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511.00	379.5441
511.85	379.7701
511.85	379.7701
513.99	360.9262
513.99	360.9262
520.41	403.0416
520.65	403.1129
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529.87	0.0000
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546.56	0.0000
549.76	339.8390
552.65	362.1281
555.20	359.9125
563.23	367.4917
563.90	367.6575
568.70	415.3776
569.32	402.2252
569.50	399.4238
569.67	399.4666
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574.00	367.2826
574.64	367.5434
578.91	390.3608
579.30	0.0000
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592.07	368.3483
593.00	371.6371
595.88	356.8306
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602.71	404.5367
602.71	404.5367
603.60	386.4347
604.41	379.9629
604.70	378.3597
609.31	362.7136

609.31	362.7136
609.31	362.7136
609.31	362.7136
610.33	324.4723
612.46	351.6870
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618.01	325.8131
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621.84	331.0830
631.29	317.1338
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634.78	306.8970
635.90	313.0427
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661.65	379.1992
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666.33	323.1737
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677.61	290.1429
685.20	332.1151
692.80	321.2188
695.00	328.7716
696.49	320.8390
696.49	320.8390
697.00	329.1308
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698.33	362.1999
698.50	362.2358
699.00	382.8577
702.63	320.8740
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717.42	306.8278
720.50	332.8394
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722.78	317.1991
722.89	317.2177
722.95	317.2239
723.30	304.8085
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727.18	301.1064
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739.58	314.5813
742.81	268.8906
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747.13	292.6375
751.79	299.6641
752.31	281.8026
753.82	257.7210
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756.87	299.3748
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766.84	337.1708
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778.00	348.1986
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778.89	319.4236
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792.07	372.7404

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796.30	273.6544
798.80	242.5135
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818.51	256.9397
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836.80	0.0000
846.75	296.2922
848.13	249.1171
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856.80	259.6080
860.37	241.9254
867.32	240.7720
867.82	260.8934
871.10	235.4340
873.19	244.2742
874.81	266.4958
875.33	0.0000
876.40	259.0106
879.36	245.9018
880.27	250.8047
880.51	246.0268
881.50	240.3652
883.24	256.9055
884.67	269.5850
889.25	265.3033
896.60	270.0234
898.02	278.9046
899.00	289.6771
903.28	254.7867
911.07	287.2885
911.07	287.2885
911.07	287.2885
919.63	264.5542
920.93	241.4666
925.00	260.5820
925.24	258.6504
926.50	276.4332
935.52	221.3941
937.48	258.9961
944.10	250.8197
946.00	234.2185
949.00	226.5920
962.29	245.4892
964.01	277.0175
966.15	266.0501
968.20	266.2690
969.11	266.3714
969.11	266.3714
969.11	266.3714
977.42	236.6754
980.50	239.5293
983.50	231.7896
989.30	256.4630
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1001.68	217.5472
1004.76	247.9138
1021.30	0.0000
1024.50	0.0000
1034.80	237.5022
1036.00	252.9700
1037.82	245.9682
1038.57	253.2198
1038.76	0.0000
1045.16	265.1537
1046.59	259.1279
1048.07	268.5372

1050.47	217.2847
1050.47	217.2847
1062.04	255.4596
1063.62	250.4403
1076.63	235.0094
1077.35	249.6345
1078.86	235.2065
1085.78	262.9248
1099.22	266.3138
1112.02	270.9595
1112.84	276.5717
1115.52	274.9916
1120.29	269.3811
1120.29	269.3811
1120.29	269.3811
1120.29	269.3811
1120.51	269.4078
1121.28	269.4789
1124.00	0.0000
1129.67	241.1316
1131.51	0.0000
1147.95	0.0000
1167.94	271.6166
1173.22	283.4000
1175.09	311.8479
1177.93	289.5176
1189.05	304.8033
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1205.75	0.0000
1213.00	316.7921
1221.42	345.4222
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1235.34	343.4731
1236.41	0.0000
1238.25	331.8271
1246.25	254.6543
1260.41	0.0000
1271.85	213.9575
1274.45	221.9187
1274.54	221.9257
1291.56	215.2869
1298.22	0.0000
1312.09	178.2547
1325.50	155.2560
1325.50	155.2560
1332.49	129.8206
1333.61	136.8040
1360.21	143.8989
1362.66	0.0000
1365.15	122.0931
1368.21	145.6987
1368.53	0.0000
1376.25	119.5946
1384.27	87.6720
1394.10	126.1673
1395.20	123.1765
1407.95	135.7952
1434.06	117.4146
1436.60	121.5893
1457.56	0.0000
1460.81	130.6509
1489.15	106.7940
1509.49	83.4082
1596.49	143.1969
1620.62	82.0621
1678.03	0.0000
1691.02	64.0933
1691.02	64.0933
1706.46	0.0000
1750.46	0.0000
1764.49	62.2668
1764.49	62.2668
1764.49	62.2668
1764.49	62.2668
1770.23	49.8805
1771.40	44.5483
1791.20	0.0000
1808.65	43.9367

1836.01

48.8347

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875001

Total Uranium Activity	1.0793E+01	ug/g
Total Uranium Counting Unc.	3.9467E+00	ug/g
Total Uranium Tpu	2.0136E-06	ug/g
Total Uranium Mda	1.8607E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 952643                          SAMPLE ID   : G246875001
*  ANALYST       : MXR1                             DETECTOR    : GAM22
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00          COUNT TIME   : 0 04:00:00.00
*  ANALYSIS DATE : 23-FEB-2010 23:20:58.30          SAMPLE ALQT  : 148.300 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.030E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.194E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.252E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.107E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 03:23:26.72

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875002.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 23:21:25
Sample ID          : G246875002          Sample quantity  : 1.22680E+02 GRAM
Detector name      : GAM23              Detector geometry: CAN
Elapsed live time  : 0 04:00:00.00      Elapsed real time: 0 04:00:03.48  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 952643             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	63.07*	289	1068	1.14	126.14	122	11	2.01E-02	23.2	
2	3	74.63*	629	897	1.16	149.26	144	15	4.37E-02	9.0	7.51E-01
3	3	76.92	971	720	1.00	153.84	144	15	6.75E-02	5.5	
4	0	83.59*	111	776	1.48	167.18	165	7	7.71E-03	44.1	
5	3	87.09	441	723	1.19	174.18	171	23	3.06E-02	10.9	2.45E+00
6	3	89.86	244	691	1.25	179.73	171	23	1.69E-02	19.0	
7	3	92.49*	851	824	1.48	184.99	171	23	5.91E-02	7.4	
8	0	128.36	102	766	1.07	256.72	254	9	7.10E-03	49.6	
9	0	185.52*	572	745	1.19	371.05	365	13	3.97E-02	11.0	
10	0	208.92	125	470	0.91	417.85	414	8	8.67E-03	31.4	
11	2	238.29*	2165	363	1.23	476.59	470	23	1.50E-01	2.6	1.33E+00
12	2	241.30	483	515	1.77	482.59	470	23	3.35E-02	12.6	
13	0	269.88	162	418	1.31	539.75	534	11	1.12E-02	25.7	
14	0	294.80	554	335	1.31	589.61	585	9	3.84E-02	7.3	
15	0	299.92	139	296	1.47	599.84	596	9	9.66E-03	24.1	
16	0	337.87*	354	376	1.16	675.75	671	10	2.46E-02	11.9	
17	0	351.44*	1067	329	1.25	702.88	697	12	7.41E-02	4.6	
18	0	462.89	97	279	1.63	925.77	918	14	6.70E-03	38.1	
19	0	510.41*	267	293	1.76	1020.82	1011	18	1.86E-02	18.2	
20	0	582.50*	663	225	1.56	1165.01	1156	17	4.60E-02	6.6	
21	0	608.56	688	253	1.78	1217.12	1211	15	4.78E-02	6.3	
22	0	661.66	92	181	1.30	1323.31	1318	14	6.40E-03	32.5	
23	0	726.37	160	196	1.40	1452.73	1445	14	1.11E-02	20.1	
24	0	769.86	109	286	6.12	1539.71	1525	23	7.59E-03	41.7	
25	0	793.42	81	130	0.85	1586.84	1583	12	5.59E-03	30.1	
26	0	860.22	74	137	1.46	1720.45	1713	15	5.14E-03	36.6	
27	0	910.15	438	137	1.84	1820.30	1814	13	3.04E-02	7.3	
28	1	963.31	72	107	2.12	1926.61	1917	39	5.02E-03	32.2	1.12E+00
29	1	967.69	267	92	2.06	1935.39	1917	39	1.85E-02	9.5	
30	0	1119.25	178	111	2.18	2238.49	2232	13	1.23E-02	14.3	
31	0	1459.37*	2399	82	2.43	2918.74	2908	22	1.67E-01	2.3	
32	0	1588.57	58	41	4.74	3177.14	3164	24	4.00E-03	32.5	
33	0	1763.22	103	17	2.67	3526.44	3516	17	7.15E-03	13.5	

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


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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875002.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 23-FEB-2010 23:21:25
Sample ID        : G246875002             Sample quantity  : 122.68 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA23                 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00           Elapsed real time: 0 04:00:03.48   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

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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	*	3.449E+01	3.018E+00	4.491E-01	3.360E-02	76.780
CD-109	+	88.03	*	3.553E+00	8.477E-01	1.065E+00	1.039E-01	3.337
SN-126	+	64.28		1.799E+00	8.797E-01	7.433E-01	1.131E-01	2.420
	+	86.94		1.453E+00	6.824E-01	4.191E-01	1.743E-01	3.467
	+	87.57	*	3.495E-01	8.340E-02	1.054E-01	1.025E-02	3.317
BA-137M	+	661.65	*	7.685E-02	5.014E-02	4.979E-02	2.543E-03	1.544
CS-137	+	661.65	*	8.123E-02	5.300E-02	5.263E-02	2.703E-03	1.544
TL-208		277.35		2.245E-01	3.091E-01	5.055E-01	5.341E-02	0.444
	+	510.84		7.440E-01	2.808E-01	1.809E-01	1.838E-02	4.112
	+	583.14	*	5.284E-01	7.774E-02	4.671E-02	3.032E-03	11.314
	+	860.37		5.644E-01	4.158E-01	3.800E-01	3.435E-02	1.485
BI-211		72.87		1.356E+01	3.523E+00	5.406E+00	4.768E-01	2.508
	+	351.07	*	3.665E+00	4.159E-01	2.694E-01	1.755E-02	13.605
PB-212	+	74.81		2.230E+00	4.926E-01	5.001E-01	6.451E-02	4.460
	+	77.11		1.925E+00	2.741E-01	2.802E-01	2.521E-02	6.870
	+	87.30		1.617E+00	4.182E-01	4.891E-01	6.816E-02	3.305
	+	238.63	*	1.601E+00	1.429E-01	7.248E-02	5.211E-03	22.084
	+	300.09		1.601E+00	7.831E-01	9.912E-01	8.231E-02	1.615
PO-212	+	74.81		2.230E+00	4.926E-01	5.001E-01	6.451E-02	4.460
	+	77.11		1.925E+00	2.741E-01	2.802E-01	2.521E-02	6.870
	+	87.30		1.617E+00	4.182E-01	4.891E-01	6.816E-02	3.305
		115.19		6.948E-01	2.957E+00	4.902E+00	3.127E-01	0.142
	+	238.63	*	1.601E+00	1.429E-01	7.248E-02	5.211E-03	22.084
	+	300.09		1.601E+00	7.831E-01	9.912E-01	8.231E-02	1.615
BI-214	+	609.31	*	1.036E+00	1.522E-01	9.257E-02	6.960E-03	11.193
	+	1120.29		1.429E+00	4.305E-01	4.391E-01	4.080E-02	3.253
	+	1764.49		1.141E+00	3.152E-01	2.510E-01	1.560E-02	4.545
PB-214	+	74.81		3.843E+00	8.201E-01	8.616E-01	9.972E-02	4.460
	+	77.11		3.300E+00	5.330E-01	4.803E-01	5.663E-02	6.870
	+	87.30		2.769E+00	6.944E-01	8.379E-01	1.039E-01	3.305
	+	241.98		2.145E+00	5.667E-01	4.365E-01	3.472E-02	4.912
	+	295.21		1.117E+00	1.895E-01	1.687E-01	1.447E-02	6.619
	+	351.92	*	1.275E+00	1.592E-01	8.488E-02	7.085E-03	15.021
PO-214	+	74.81		3.843E+00	8.201E-01	8.616E-01	9.972E-02	4.460

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		3.300E+00	5.330E-01	4.803E-01	5.663E-02	6.870
	+	87.30		2.769E+00	6.944E-01	8.379E-01	1.039E-01	3.305
	+	241.98		2.145E+00	5.667E-01	4.365E-01	3.472E-02	4.912
	+	295.21		1.117E+00	1.895E-01	1.687E-01	1.447E-02	6.619
	+	351.92	*	1.275E+00	1.592E-01	8.488E-02	7.085E-03	15.021
	+	74.81		2.230E+00	4.926E-01	5.001E-01	6.451E-02	4.460
	+	77.11		1.925E+00	2.741E-01	2.802E-01	2.521E-02	6.870
	+	87.30		1.617E+00	4.182E-01	4.891E-01	6.816E-02	3.305
PO-218	+	238.63	*	1.601E+00	1.429E-01	7.248E-02	5.211E-03	22.084
	+	300.09		1.601E+00	7.831E-01	9.912E-01	8.231E-02	1.615
	+	74.81		3.843E+00	8.201E-01	8.616E-01	9.972E-02	4.460
	+	77.11		3.300E+00	5.330E-01	4.803E-01	5.663E-02	6.870
	+	87.30		2.769E+00	6.944E-01	8.379E-01	1.039E-01	3.305
	+	241.98		2.145E+00	5.667E-01	4.365E-01	3.472E-02	4.912
	+	295.21		1.117E+00	1.895E-01	1.687E-01	1.447E-02	6.619
	+	351.92	*	1.275E+00	1.592E-01	8.488E-02	7.085E-03	15.021
RA-224	+	240.98	*	4.066E+00	1.050E+00	8.250E-01	4.648E-02	4.929
RA-226	+	609.31	*	1.036E+00	1.522E-01	9.257E-02	6.960E-03	11.193
AC-228	+	1120.29		1.429E+00	4.305E-01	4.391E-01	4.080E-02	3.253
	+	1764.49		1.141E+00	3.152E-01	2.510E-01	1.560E-02	4.545
	+	338.32		1.337E+00	6.312E-01	3.061E-01	1.248E-01	4.368
	+	911.07	*	1.582E+00	2.943E-01	1.851E-01	2.135E-02	8.550
RA-228	+	969.11		1.707E+00	5.139E-01	2.912E-01	6.779E-02	5.862
	+	338.32		1.337E+00	6.312E-01	3.061E-01	1.248E-01	4.368
	+	911.07	*	1.582E+00	2.943E-01	1.851E-01	2.135E-02	8.550
	+	969.11		1.707E+00	5.139E-01	2.912E-01	6.779E-02	5.862
TH-228	+	74.81		2.263E+00	4.536E-01	5.073E-01	4.547E-02	4.460
	+	77.11		1.953E+00	2.781E-01	2.843E-01	2.558E-02	6.870
	+	87.30		1.640E+00	3.913E-01	4.962E-01	4.817E-02	3.305
	+	238.63	*	1.624E+00	1.450E-01	7.354E-02	5.287E-03	22.084
TH-230	+	300.09		1.624E+00	1.237E+00	1.006E+00	5.928E-01	1.615
	+	609.31	*	1.036E+00	1.522E-01	9.257E-02	6.959E-03	11.193
	+	1120.29		1.429E+00	4.305E-01	4.391E-01	4.080E-02	3.253
	+	1764.49		1.141E+00	3.152E-01	2.510E-01	1.560E-02	4.545
TH-232	+	338.32		1.337E+00	3.278E-01	3.061E-01	1.808E-02	4.368
	+	911.07	*	1.582E+00	2.943E-01	1.851E-01	2.135E-02	8.550
	+	969.11		1.707E+00	5.139E-01	2.912E-01	6.779E-02	5.862
	+	63.29	*	4.544E+00	2.265E+00	1.974E+00	3.557E-01	2.302
U-234	+	92.38		4.315E+00	1.016E+00	6.816E-01	1.243E-01	6.330
	+	609.31	*	1.036E+00	1.522E-01	9.257E-02	6.959E-03	11.193
	+	1120.29		1.429E+00	4.305E-01	4.391E-01	4.080E-02	3.253
	+	1764.49		1.141E+00	3.152E-01	2.510E-01	1.560E-02	4.545
NP-237	+	86.50	*	1.026E+00	3.238E-01	2.979E-01	6.784E-02	3.446
	+	95.87		3.152E-01	9.121E-01	1.338E+00	3.286E-01	0.235
U-238	+	63.29	*	4.544E+00	2.265E+00	1.974E+00	3.557E-01	2.302
	+	92.38		4.315E+00	7.489E-01	6.816E-01	6.091E-02	6.330
	+	74.67	*	3.616E-01	7.236E-02	8.138E-02	7.232E-03	4.443
AM-243	+	86.72		3.849E+01	9.184E+00	1.114E+01	1.075E+00	3.457
	+	117.66		-1.768E+00	3.165E+00	5.127E+00	3.175E-01	-0.345

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	142.18			1.695E+01	1.496E+01	2.517E+01	1.370E+00	0.673
ANH-511	+	511.00	*	1.607E-01	5.915E-02	3.909E-02	2.271E-03	4.111

---- 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	*	1.827E-01	2.692E-01	4.572E-01	3.107E-02	0.399
NA-22		1274.54	*	-4.418E-02	4.024E-02	6.004E-02	4.032E-03	-0.736
NA-24		1368.53	*	1.362E-01	4.024E-02	Half-Life too short		
AL-26		1129.67		-1.266E-01	1.584E+00	2.589E+00	1.649E-01	-0.049
		1808.65	*	-4.433E-03	2.247E-02	3.602E-02	2.165E-03	-0.123
TI-44		67.85		-6.980E-02	4.983E-02	6.947E-02	6.049E-03	-1.005
	+	78.38	*	3.552E-01	5.058E-02	6.696E-02	6.070E-03	5.304
SC-46		889.25	*	-7.685E-03	3.481E-02	5.722E-02	5.112E-03	-0.134
	+	1120.51		2.433E-01	7.154E-02	1.070E-01	6.972E-03	2.274
V-48		944.10		-1.762E-01	7.376E-01	1.205E+00	1.050E-01	-0.146
		983.50	*	-9.584E-03	5.917E-02	9.475E-02	7.882E-03	-0.101
		1312.09		6.649E-02	6.975E-02	1.217E-01	8.655E-03	0.547
CR-51		320.08	*	1.624E-01	3.002E-01	5.131E-01	3.365E-02	0.316
MN-52		744.21		-1.372E-01	1.873E-01	2.860E-01	1.821E-02	-0.480
		848.13		-3.575E+00	5.395E+00	8.636E+00	7.047E-01	-0.414
		935.52		1.707E-01	2.093E-01	3.636E-01	3.197E-02	0.470
		1246.25		-2.093E+00	6.650E+00	1.044E+01	6.682E-01	-0.200
		1333.61		2.074E+00	4.144E+00	7.013E+00	5.148E-01	0.296
		1434.06	*	1.124E-01	1.885E-01	3.229E-01	2.336E-02	0.348
MN-54		834.83	*	7.043E-03	3.445E-02	5.820E-02	4.608E-03	0.121
CO-56		846.75	*	-3.003E-02	3.409E-02	5.379E-02	4.376E-03	-0.558
		977.42		-4.302E-01	2.812E+00	3.945E+00	3.308E-01	-0.109
		1037.82		8.295E-02	2.635E-01	4.442E-01	3.641E-02	0.187
		1175.09		1.578E+00	2.021E+00	3.468E+00	1.963E-01	0.455
		1238.25		1.462E-01	8.418E-02	1.492E-01	9.925E-03	0.980
		1360.21		-8.688E-02	8.360E-01	1.343E+00	9.832E-02	-0.065
		1771.40		-1.550E-01	1.804E-01	2.604E-01	1.611E-02	-0.595
CO-57		122.06	*	-5.003E-03	2.110E-02	3.446E-02	2.032E-03	-0.145
		136.48		1.091E-01	1.865E-01	2.902E-01	1.887E-02	0.376
CO-58		810.76	*	-3.638E-02	3.273E-02	5.088E-02	3.822E-03	-0.715
FE-59		142.65		1.859E+00	2.362E+00	3.826E+00	2.080E-01	0.486
		192.34		7.888E-01	8.164E-01	1.260E+00	1.458E-01	0.626
		1099.22	*	-3.281E-02	8.265E-02	1.324E-01	1.020E-02	-0.248
		1291.56		-2.928E-02	1.125E-01	1.796E-01	1.490E-02	-0.163
CO-60		1173.22		3.187E-02	4.084E-02	7.008E-02	3.954E-03	0.455
		1332.49	*	-4.096E-03	3.544E-02	5.702E-02	4.186E-03	-0.072
ZN-65		1115.52	*	9.231E-02	9.504E-02	1.451E-01	9.581E-03	0.636
GE-68		1077.35	*	5.872E-01	1.124E+00	1.912E+00	1.369E-01	0.307
AS-73		53.44	*	-3.672E-02	9.219E-01	1.547E+00	1.366E-01	-0.024
AS-74		595.88	*	3.430E-02	7.683E-02	1.281E-01	7.062E-03	0.268
		634.78		-1.049E-01	2.967E-01	4.712E-01	2.494E-02	-0.223
SE-75		66.05		-3.328E+00	5.081E+00	7.304E+00	7.666E-01	-0.456

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		96.73		3.435E-01	7.471E-01	1.102E+00	1.478E-01	0.312
		121.11		6.105E-03	1.121E-01	1.846E-01	1.722E-02	0.033
		136.00		2.284E-02	3.478E-02	5.423E-02	3.062E-03	0.421
		198.60		8.256E-01	1.455E+00	2.394E+00	1.616E-01	0.345
		264.65	*	1.876E-02	4.092E-02	5.845E-02	3.402E-03	0.321
		279.53		-8.471E-02	8.587E-02	1.396E-01	8.781E-03	-0.607
		303.91		-4.167E-01	1.874E+00	2.709E+00	2.599E-01	-0.154
		400.65		-8.119E-02	2.084E-01	3.399E-01	3.093E-02	-0.239
BR-77	+	87.88		6.446E+02	1.538E+02	2.424E+02	2.365E+01	2.659
		200.40		-3.581E+01	1.139E+02	1.823E+02	9.751E+00	-0.196
	+	239.00		2.156E+02	1.664E+01	2.470E+01	1.389E+00	8.732
		249.79		-2.895E+01	4.918E+01	7.058E+01	4.013E+00	-0.410
		281.68		-2.254E+01	6.028E+01	1.003E+02	5.845E+00	-0.225
		297.23		1.496E+02	6.469E+01	7.572E+01	4.447E+00	1.976
		303.76		-2.849E+01	1.344E+02	1.945E+02	1.145E+01	-0.146
		439.47		1.199E+02	1.020E+02	1.771E+02	1.036E+01	0.677
		484.57		-4.344E+01	1.560E+02	2.530E+02	1.479E+01	-0.172
		520.65	*	-6.339E+00	7.055E+00	1.097E+01	6.350E-01	-0.578
		574.64		1.050E+02	1.657E+02	2.451E+02	1.376E+01	0.428
		578.91		8.294E+01	7.334E+01	1.115E+02	6.236E+00	0.744
		585.48		5.208E+02	1.459E+02	2.489E+02	1.385E+01	2.093
		755.35		9.645E-01	1.218E+02	1.958E+02	1.282E+01	0.005
		817.79		3.860E+01	9.853E+01	1.685E+02	1.283E+01	0.229
SR-82		698.33		2.288E+01	3.053E+01	5.123E+01	2.894E+00	0.447
		776.49	*	1.519E-01	3.322E-01	5.009E-01	3.455E-02	0.303
		1395.20		-8.712E+00	9.606E+00	1.411E+01	1.028E+00	-0.618
RB-83		520.41	*	-4.326E-02	5.565E-02	8.723E-02	5.050E-03	-0.496
		529.64		-2.316E-02	8.772E-02	1.417E-01	8.169E-03	-0.163
		552.65		-6.513E-02	1.723E-01	2.759E-01	1.572E-02	-0.236
RB-84		881.50	*	-5.018E-03	6.027E-02	9.995E-02	8.782E-03	-0.050
KR-85		513.99	*	1.026E+01	6.686E+00	1.043E+01	6.055E-01	0.983
SR-85		513.99	*	5.226E-02	3.407E-02	5.316E-02	3.085E-03	0.983
RB-86		1076.63	*	2.619E-01	7.087E-01	1.194E+00	8.561E-02	0.219
Y-88		898.02		1.194E-02	3.731E-02	6.327E-02	5.785E-03	0.189
		1836.01	*	-1.532E-03	2.732E-02	4.479E-02	2.637E-03	-0.034
ZR-88		392.90	*	-1.564E-02	2.549E-02	4.123E-02	2.380E-03	-0.379
Y-91		1204.90	*	-1.222E+01	1.822E+01	2.860E+01	1.706E+00	-0.427
NB-94		702.63	*	-2.105E-02	3.106E-02	4.817E-02	2.752E-03	-0.437
		871.10		-1.973E-02	2.948E-02	4.702E-02	4.038E-03	-0.420
NB-95		765.79	*	8.927E-02	3.950E-02	7.028E-02	4.723E-03	1.270
NB-95M		235.69	*	7.098E-01	1.444E-01	2.249E-01	1.659E-02	3.157
ZR-95		724.18		2.715E-01	9.971E-02	1.633E-01	1.154E-02	1.663
		756.15	*	9.193E-03	6.300E-02	1.021E-01	7.834E-03	0.090
NB-97		657.90	*	2.120E-02	6.300E-02	Half-Life	too short	
		1024.50		7.679E-01	6.300E-02	Half-Life	too short	
ZR-97		254.15		1.680E+00	6.300E-02	Half-Life	too short	
		355.39		1.847E-01	6.300E-02	Half-Life	too short	
		507.63	*	3.973E+00	6.300E-02	Half-Life	too short	
		602.52		4.210E+00	6.300E-02	Half-Life	too short	

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

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1021.30			-2.286E+00	6.300E-02	Half-Life	too short	
	1147.95			5.955E-01	6.300E-02	Half-Life	too short	
	1362.66			2.030E+00	6.300E-02	Half-Life	too short	
	1750.46			-1.086E+00	6.300E-02	Half-Life	too short	
MO-99	140.51			-2.091E+01	2.086E+01	3.079E+01	8.276E+00	-0.679
	181.06			-6.371E+00	1.360E+01	1.884E+01	3.194E+00	-0.338
	366.43			1.513E+01	5.810E+01	9.794E+01	5.740E+00	0.154
	739.58	*		-1.058E+00	8.241E+00	1.314E+01	1.839E+00	-0.081
	778.00			-1.844E+01	2.700E+01	3.846E+01	2.664E+00	-0.479
TC-99M	140.51	*		-6.656E+09	2.700E+01	Half-Life	too short	
RH-101	+	127.23		3.669E-02	3.648E-02	4.601E-02	2.642E-03	0.797
		198.01	*	5.160E-03	2.676E-02	4.354E-02	2.321E-03	0.118
		325.23		-9.365E-02	1.875E-01	3.085E-01	1.823E-02	-0.304
RH-102		418.52		-2.058E-01	2.257E-01	3.571E-01	2.081E-02	-0.576
		475.06	*	-3.670E-03	2.493E-02	4.077E-02	2.387E-03	-0.090
		631.29		-1.744E-02	4.637E-02	7.355E-02	3.910E-03	-0.237
		697.49		5.318E-02	6.992E-02	1.174E-01	6.617E-03	0.453
		766.84		2.365E-01	1.008E-01	1.797E-01	1.211E-02	1.316
		1046.59		-5.025E-02	9.510E-02	1.509E-01	1.142E-02	-0.333
		1112.84		-2.621E-02	2.321E-01	3.240E-01	2.150E-02	-0.081
RU-103		497.08	*	1.360E-03	3.475E-02	5.541E-02	7.014E-03	0.025
		610.33		1.029E+01	1.895E+00	2.119E+00	3.239E-01	4.855
RH-106	+	511.85		8.018E-01	2.951E-01	3.392E-01	1.970E-02	2.364
		621.84	*	-1.322E-01	2.756E-01	4.346E-01	5.012E-02	-0.304
		1050.47		1.787E+00	2.006E+00	3.494E+00	2.629E-01	0.511
RU-106	+	511.85		8.018E-01	2.951E-01	3.392E-01	1.970E-02	2.364
		621.84	*	-1.322E-01	2.753E-01	4.346E-01	2.335E-02	-0.304
		1050.47		1.787E+00	2.006E+00	3.494E+00	2.629E-01	0.511
AG-108M		433.93	*	-3.274E-02	2.698E-02	4.190E-02	2.656E-03	-0.782
		614.37		9.837E-03	3.606E-02	5.175E-02	3.074E-03	0.190
		722.95		-2.135E-02	4.196E-02	5.562E-02	3.616E-03	-0.384
AG-110M		657.75	*	8.801E-03	3.402E-02	4.856E-02	2.698E-03	0.181
		677.61		-1.845E-01	2.646E-01	4.090E-01	2.340E-02	-0.451
		706.67		-4.681E-02	1.831E-01	2.907E-01	1.781E-02	-0.161
		763.93		2.576E-02	1.741E-01	2.436E-01	1.705E-02	0.106
		884.67		-2.902E-02	4.233E-02	6.730E-02	6.136E-03	-0.431
		937.48		-8.945E-02	9.941E-02	1.553E-01	1.410E-02	-0.576
		1384.27		-1.541E-02	1.403E-01	2.250E-01	1.707E-02	-0.068
IN-111		171.28		1.052E-01	7.155E-01	1.169E+00	5.994E-02	0.090
		245.39	*	5.786E-01	8.220E-01	1.192E+00	6.746E-02	0.485
IN-113M		391.69	*	-6.426E-03	3.722E-02	6.142E-02	3.784E-03	-0.105
SN-113		391.69	*	-6.426E-03	3.722E-02	6.142E-02	3.784E-03	-0.105
IN-114M		190.27	*	-2.399E-02	1.639E-01	2.305E-01	1.215E-02	-0.104
CD-115		260.90		-6.143E+01	9.024E+01	1.403E+02	8.057E+00	-0.438
		492.35		-7.517E+00	2.407E+01	3.892E+01	2.272E+00	-0.193
		527.90	*	1.175E+00	7.399E+00	1.223E+01	7.055E-01	0.096
SN-117M		156.02		-1.951E+00	1.823E+00	2.877E+00	1.506E-01	-0.678
		158.56	*	-1.318E-02	4.332E-02	6.998E-02	3.637E-03	-0.188
SB-122		563.90	*	4.338E-01	1.510E+00	2.502E+00	1.415E-01	0.173

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

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I-123	692.80			-1.769E+01	3.314E+01	5.182E+01	2.884E+00	-0.341
	159.00	*		-9.017E-01	3.314E+01	Half-Life	too short	
	528.96			-9.841E+01	3.314E+01	Half-Life	too short	
TE-123M	159.00	*		-9.531E-03	2.320E-02	3.736E-02	1.971E-03	-0.255
I-124	602.71	*		4.399E-01	5.689E-01	8.469E-01	4.641E-02	0.519
	722.78			-2.432E+00	3.947E+00	5.178E+00	3.120E-01	-0.470
	1325.50			-9.969E+00	2.745E+01	4.318E+01	3.136E+00	-0.231
SB-124	1376.25			2.103E+01	2.623E+01	4.514E+01	3.299E+00	0.466
	1509.49			1.519E+01	1.067E+01	1.989E+01	1.411E+00	0.763
	1691.02			-2.818E-01	2.490E+00	4.069E+00	2.656E-01	-0.069
	602.71			2.806E-02	3.629E-02	5.402E-02	2.962E-03	0.519
	645.85			-6.925E-03	4.155E-01	6.728E-01	4.061E-02	-0.010
	709.31			2.457E+00	2.303E+00	3.946E+00	2.295E-01	0.623
	713.82			-2.133E+00	1.386E+00	1.978E+00	2.030E-01	-1.078
	722.78			-2.248E-01	3.650E-01	4.787E-01	3.011E-02	-0.470
	968.20	+		1.745E+01	3.643E+00	5.697E+00	4.831E-01	3.063
	1045.16			-1.737E+00	2.019E+00	3.114E+00	2.364E-01	-0.558
	1325.50			-9.845E-01	2.711E+00	4.264E+00	3.097E-01	-0.231
	1368.21			4.158E-01	1.561E+00	2.592E+00	3.287E-01	0.160
SB-125	1436.60			3.043E-01	3.198E+00	5.221E+00	3.776E-01	0.058
	1691.02	*		-6.146E-03	5.430E-02	8.874E-02	6.187E-03	-0.069
	427.89	*		3.720E-02	7.326E-02	1.241E-01	7.550E-03	0.300
	463.38	+		5.224E-01	4.001E-01	4.358E-01	2.969E-02	1.199
TE-125M	600.56			-2.453E-02	1.551E-01	2.432E-01	1.567E-02	-0.101
	635.90			5.553E-02	2.337E-01	3.843E-01	2.443E-02	0.144
	109.28	*		6.431E+00	7.881E+00	1.324E+01	1.181E+00	0.486
I-126	388.63			1.104E-01	1.659E-01	2.832E-01	1.638E-02	0.390
	666.33	*		1.646E-01	1.640E-01	2.481E-01	1.284E-02	0.663
SB-126	753.82			6.226E-01	1.233E+00	2.043E+00	1.332E-01	0.305
	223.80			-1.422E+00	3.326E+00	5.276E+00	2.913E-01	-0.270
	278.60			4.647E-01	1.871E+00	3.182E+00	1.851E-01	0.146
	296.50			8.588E+00	2.057E+00	2.616E+00	1.536E-01	3.283
	414.70			7.724E-04	5.786E-02	9.599E-02	5.587E-03	0.008
	415.30			-1.661E+00	4.828E+00	7.875E+00	4.584E-01	-0.211
	555.20			-2.876E-01	3.301E+00	5.370E+00	3.054E-01	-0.054
	573.80			6.394E-01	9.181E-01	1.422E+00	7.990E-02	0.449
	593.00			6.429E-01	7.647E-01	1.301E+00	7.194E-02	0.494
	656.30			7.750E-01	3.113E+00	4.442E+00	2.287E-01	0.174
	666.33			6.870E-02	6.842E-02	1.035E-01	5.358E-03	0.663
	675.00			1.617E+00	1.607E+00	2.753E+00	1.459E-01	0.587
	695.00			-5.519E-02	7.047E-02	1.063E-01	5.951E-03	-0.519
	697.00			1.506E-01	2.339E-01	3.907E-01	2.199E-02	0.385
	720.50	*		1.366E-01	1.306E-01	1.980E-01	1.186E-02	0.690
	856.80			6.703E-02	4.651E-01	6.774E-01	5.637E-02	0.099
	989.30			2.107E-01	1.058E+00	1.774E+00	1.465E-01	0.119
	1034.80			1.403E+00	7.320E+00	1.224E+01	9.455E-01	0.115
SB-127	1213.00			3.107E+00	4.328E+00	7.360E+00	4.452E-01	0.422
	61.10			5.699E+01	5.549E+01	8.425E+01	9.298E+00	0.676
	252.40			-5.957E-01	3.193E+00	5.061E+00	2.099E+00	-0.118

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	290.80			7.374E-01	1.728E+01	2.541E+01	2.281E+00	0.029
	411.60			8.598E+00	9.132E+00	1.561E+01	2.224E+00	0.551
	444.90			-6.550E+00	7.482E+00	1.147E+01	1.219E+00	-0.571
	473.00			8.125E-01	1.240E+00	2.104E+00	2.320E-01	0.386
	543.00			5.088E+00	1.289E+01	2.150E+01	2.735E+00	0.237
	603.60			1.847E+00	9.899E+00	1.411E+01	1.468E+00	0.131
	685.20	*		6.465E-01	1.094E+00	1.825E+00	1.644E-01	0.354
	698.50			8.723E+00	1.246E+01	2.078E+01	2.967E+00	0.420
	722.20			-2.020E+01	2.676E+01	3.455E+01	3.139E+00	-0.585
	783.80			3.645E+00	2.708E+00	4.822E+00	5.397E-01	0.756
XE-127	57.60			4.608E+00	6.613E+00	1.051E+01	9.202E-01	0.439
	145.22			3.792E-01	6.016E-01	9.699E-01	5.233E-02	0.391
	172.10			6.340E-02	9.654E-02	1.600E-01	8.217E-03	0.396
	202.84	*		3.171E-03	3.959E-02	6.191E-02	3.323E-03	0.051
	374.96			-3.454E-02	1.617E-01	2.668E-01	1.557E-02	-0.129
I-131	80.18			-9.811E-03	5.747E+00	6.095E+00	5.618E-01	-0.002
	284.30			4.736E-01	1.162E+00	1.985E+00	1.286E-01	0.239
	364.48	*		1.054E-02	8.530E-02	1.430E-01	9.336E-03	0.074
	636.97			1.218E+00	1.253E+00	2.142E+00	1.292E-01	0.568
	722.89			-3.661E+00	6.698E+00	8.846E+00	5.396E-01	-0.414
TE-132	49.72			-1.457E+01	2.033E+01	3.347E+01	3.521E+00	-0.435
	111.76			-1.322E+01	2.225E+01	3.606E+01	3.314E+00	-0.367
	116.30			1.691E+00	2.005E+01	3.309E+01	2.955E+00	0.051
	228.16	*		-3.605E-01	5.211E-01	8.142E-01	1.152E-01	-0.443
BA-133	53.15			4.569E-02	4.032E+00	6.778E+00	5.978E-01	0.007
	79.62			1.152E+00	1.675E+00	1.838E+00	2.854E-01	0.626
	81.00			6.760E-02	1.254E-01	1.367E-01	2.216E-02	0.495
	276.40			1.544E-01	3.195E-01	5.006E-01	6.492E-02	0.309
	302.84			-6.784E-02	1.318E-01	1.874E-01	2.193E-02	-0.362
	356.01	*		3.050E-03	3.734E-02	5.447E-02	6.320E-03	0.056
	383.85			-2.674E-01	2.429E-01	3.814E-01	4.147E-02	-0.701
I-133	510.53	+		1.010E+00	2.429E-01	Half-Life	too short	
	529.87	*		2.148E-04	2.429E-01	Half-Life	too short	
	706.58			-5.067E-02	2.429E-01	Half-Life	too short	
	856.28			-3.520E-02	2.429E-01	Half-Life	too short	
	875.33			-2.615E-02	2.429E-01	Half-Life	too short	
	1236.41			7.905E-01	2.429E-01	Half-Life	too short	
	1298.22			-5.316E-02	2.429E-01	Half-Life	too short	
CS-134	475.35			-7.450E-01	1.636E+00	2.634E+00	1.542E-01	-0.283
	563.23			1.388E-01	3.078E-01	5.142E-01	2.974E-02	0.270
	569.32			2.371E-03	1.617E-01	2.642E-01	1.536E-02	0.009
	604.70			1.134E-02	3.403E-02	4.896E-02	2.695E-03	0.232
	795.84	*		8.483E-02	4.562E-02	7.476E-02	5.459E-03	1.135
	801.93			-3.746E-01	3.712E-01	5.107E-01	3.774E-02	-0.733
	1038.57			1.505E-01	3.299E+00	5.463E+00	4.193E-01	0.028
	1167.94			-1.988E+00	2.357E+00	3.654E+00	2.095E-01	-0.544
	1365.15			-1.307E-01	1.146E+00	1.840E+00	1.431E-01	-0.071
CS-135	268.24	*		1.363E-01	1.566E-01	2.271E-01	1.735E-02	0.600
I-135	288.45			-2.159E+09	1.566E-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			-6.316E+09	1.566E-01	Half-Life	too short	
	546.56			7.944E+08	1.566E-01	Half-Life	too short	
	836.80			2.783E+09	1.566E-01	Half-Life	too short	
	1038.76			-9.689E+08	1.566E-01	Half-Life	too short	
	1124.00			4.368E+08	1.566E-01	Half-Life	too short	
	1131.51			-3.700E+08	1.566E-01	Half-Life	too short	
	1260.41	*		8.056E+08	1.566E-01	Half-Life	too short	
	1457.56			3.185E+11	1.566E-01	Half-Life	too short	
	1678.03			1.499E+09	1.566E-01	Half-Life	too short	
	1706.46			-1.790E+09	1.566E-01	Half-Life	too short	
	1791.20			3.012E+08	1.566E-01	Half-Life	too short	
CS-136	66.91			-8.206E-01	8.103E-01	1.139E+00	1.763E-01	-0.721
	86.29	+		4.419E+00	1.135E+00	1.661E+00	2.249E-01	2.661
	153.22			5.252E-01	5.319E-01	8.902E-01	6.059E-02	0.590
	163.89			1.271E+00	8.642E-01	1.460E+00	9.813E-02	0.870
	176.55			3.637E-02	2.913E-01	4.750E-01	2.831E-02	0.077
	273.65			-3.781E-01	4.279E-01	5.658E-01	3.742E-02	-0.668
	340.57			2.814E-01	1.079E-01	1.764E-01	1.105E-02	1.595
	818.51			3.532E-02	6.262E-02	1.081E-01	8.253E-03	0.327
	1048.07	*		-2.987E-02	8.953E-02	1.443E-01	1.150E-02	-0.207
	1235.34			7.346E-01	5.589E-01	9.667E-01	9.933E-02	0.760
CE-139	165.85	*		-6.148E-03	2.514E-02	4.063E-02	2.071E-03	-0.151
BA-140	162.64			2.705E-01	6.094E-01	1.005E+00	5.974E-02	0.269
	304.84			1.199E+00	1.117E+00	1.657E+00	4.526E-01	0.724
	423.70			3.709E-01	1.442E+00	2.410E+00	7.663E-01	0.154
	537.32	*		-6.937E-02	2.122E-01	3.393E-01	1.103E-01	-0.204
LA-140	328.77			3.465E-01	2.454E-01	4.287E-01	2.827E-02	0.808
	432.53			-4.915E-01	1.694E+00	2.658E+00	1.714E-01	-0.185
	487.03			6.672E-04	1.077E-01	1.772E-01	1.170E-02	0.004
	751.79			1.820E-01	1.427E+00	2.312E+00	1.774E-01	0.079
	815.85			4.043E-01	2.675E-01	4.826E-01	4.194E-02	0.838
	867.82			-1.005E-01	1.254E+00	1.865E+00	1.676E-01	-0.054
	919.63			-1.220E+00	2.313E+00	3.709E+00	4.042E-01	-0.329
	925.24			-1.801E-01	9.384E-01	1.540E+00	1.449E-01	-0.117
	1596.49	*		4.186E-02	6.240E-02	1.003E-01	6.881E-03	0.417
CE-141	145.44	*		3.807E-02	5.218E-02	8.695E-02	4.903E-03	0.438
CE-143	57.37			6.475E-04	5.218E-02	Half-Life	too short	
	231.56			-1.015E-04	5.218E-02	Half-Life	too short	
	293.26	*		6.780E-04	5.218E-02	Half-Life	too short	
	350.59	+		2.144E-02	5.218E-02	Half-Life	too short	
	490.36			3.649E-04	5.218E-02	Half-Life	too short	
	664.57			3.855E-04	5.218E-02	Half-Life	too short	
	721.93			-5.236E-04	5.218E-02	Half-Life	too short	
CE-144	80.11			5.986E-02	2.785E+00	2.957E+00	2.711E-01	0.020
	133.54	*		-1.196E-01	2.059E-01	2.737E-01	3.865E-02	-0.437
PM-144	476.78			2.911E-02	5.722E-02	9.646E-02	6.739E-03	0.302
	618.01			-2.170E-03	2.701E-02	4.368E-02	2.520E-03	-0.050
	696.49	*		6.987E-03	3.129E-02	5.113E-02	2.876E-03	0.137
	778.57			-9.332E-01	1.972E+00	3.061E+00	2.123E-01	-0.305

---- 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	*	4.733E-01	2.120E+00	3.463E+00	1.947E-01	0.137
		1489.15		2.167E+00	8.029E+00	1.344E+01	9.591E-01	0.161
PM-146		453.90	*	1.866E-02	3.644E-02	6.005E-02	5.201E-03	0.311
		633.02		-1.395E+00	1.294E+00	1.791E+00	6.583E-01	-0.779
		735.90		1.783E-02	1.229E-01	1.995E-01	5.582E-02	0.089
		747.13		-6.589E-03	7.855E-02	1.256E-01	1.608E-02	-0.052
ND-147	+	91.11		6.169E-01	2.423E-01	4.801E-01	4.720E-02	1.285
		319.41		9.631E-01	2.612E+00	4.440E+00	2.623E-01	0.217
		439.89		4.792E+00	4.708E+00	8.127E+00	4.757E-01	0.590
		531.02	*	2.176E-01	4.581E-01	7.674E-01	1.036E-01	0.284
PM-149		285.90	*	2.287E+01	6.222E+01	1.060E+02	1.504E+01	0.216
EU-152		121.78		-1.596E-02	6.128E-02	1.000E-01	7.691E-03	-0.160
		244.69		2.246E-01	2.964E-01	4.306E-01	2.436E-02	0.522
		344.27	*	-8.931E-02	9.148E-02	1.252E-01	8.298E-03	-0.713
		443.98		-7.070E-01	7.848E-01	1.238E+00	7.248E-02	-0.571
		778.89		-1.122E-01	2.277E-01	3.528E-01	2.448E-02	-0.318
		867.32		-2.218E-02	8.088E-01	1.160E+00	9.880E-02	-0.019
	+	964.01		5.319E-01	3.454E-01	5.119E-01	4.362E-02	1.039
		1085.78		2.001E-01	3.797E-01	6.449E-01	4.538E-02	0.310
		1112.02		-1.123E-01	3.410E-01	4.663E-01	3.099E-02	-0.241
		1407.95		6.688E-02	1.573E-01	2.649E-01	1.926E-02	0.252
GD-153		69.67		1.067E+00	1.812E+00	2.536E+00	2.215E-01	0.421
	+	83.37		1.631E+01	1.445E+01	2.164E+01	2.031E+00	0.754
		97.43	*	1.437E-01	7.553E-02	1.159E-01	9.467E-03	1.240
		103.18		-1.881E-02	8.948E-02	1.471E-01	1.099E-02	-0.128
EU-154		123.07		2.464E-02	4.422E-02	7.135E-02	6.735E-03	0.345
		247.94		-8.219E-02	3.361E-01	4.634E-01	4.387E-02	-0.177
		591.81		9.644E-02	5.255E-01	8.644E-01	8.315E-02	0.112
		723.30		-1.088E-02	1.828E-01	2.525E-01	1.836E-02	-0.043
		756.87		-3.279E-02	6.927E-01	1.109E+00	1.176E-01	-0.030
		873.19		1.197E-01	2.578E-01	4.414E-01	5.406E-02	0.271
		996.32		-1.244E-01	3.513E-01	5.681E-01	9.973E-02	-0.219
		1004.76		-3.320E-01	1.970E-01	2.839E-01	3.193E-02	-1.170
		1274.45	*	-1.248E-01	1.127E-01	1.674E-01	1.662E-02	-0.746
EU-155		48.70		-1.983E+00	2.941E+00	4.856E+00	3.917E-01	-0.408
		60.01		2.092E+00	5.318E+00	7.958E+00	6.912E-01	0.263
	+	86.54		4.209E-01	1.006E-01	1.566E-01	1.522E-02	2.687
		105.31	*	2.504E-02	9.214E-02	1.532E-01	1.130E-02	0.163
TB-160	+	86.79		1.118E+00	2.668E-01	4.132E-01	3.992E-02	2.706
		197.04		-1.814E-02	4.564E-01	7.373E-01	3.925E-02	-0.025
		215.65		3.355E-01	6.215E-01	1.019E+00	5.568E-02	0.329
	+	298.57		2.316E-01	1.125E-01	1.666E-01	9.791E-03	1.390
		879.36	*	9.011E-03	1.216E-01	2.036E-01	1.780E-02	0.044
	+	962.29		9.765E-01	6.341E-01	8.746E-01	7.467E-02	1.117
		966.15		1.460E+00	2.527E-01	4.596E-01	3.907E-02	3.176
		1177.93		-1.122E-01	3.248E-01	5.200E-01	2.958E-02	-0.216
		1271.85		1.682E-01	6.559E-01	1.088E+00	7.263E-02	0.155
HO-166M		80.57		1.689E-01	3.464E-01	3.775E-01	3.472E-02	0.447
	+	184.41		2.214E-01	5.025E-02	5.886E-02	3.076E-03	3.761

---- 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		-8.695E-02	6.808E-02	1.094E-01	6.372E-03	-0.795
		410.95		3.626E-01	2.047E-01	3.625E-01	2.107E-02	1.000
		711.68	*	-3.601E-02	5.081E-02	7.810E-02	4.571E-03	-0.461
		752.31		7.168E-02	2.384E-01	3.903E-01	2.536E-02	0.184
		810.29		-5.246E-02	4.898E-02	7.631E-02	5.708E-03	-0.688
		51.35		1.608E+01	3.507E+01	5.963E+01	5.184E+00	0.270
		52.39		8.779E+00	1.801E+01	3.062E+01	2.690E+00	0.287
		59.40		1.164E+01	2.902E+01	4.346E+01	3.776E+00	0.268
		66.72	*	-2.545E+01	2.992E+01	4.270E+01	3.713E+00	-0.596
		88.36		8.291E-01	1.978E-01	3.145E-01	3.048E-02	2.636
LU-176	+	201.83		-6.177E-03	2.395E-02	3.839E-02	2.058E-03	-0.161
		306.84	*	-3.272E-03	2.073E-02	3.373E-02	1.987E-03	-0.097
		401.10		-3.655E-01	5.457E+00	9.035E+00	5.234E-01	-0.040
		112.95		-1.549E-01	1.283E+00	2.109E+00	1.383E-01	-0.073
LU-177	+	208.36	*	1.534E+00	9.666E-01	1.439E+00	7.784E-02	1.066
		52.97		4.474E-01	1.821E+00	3.079E+00	2.714E-01	0.145
LU-177M		54.07		2.414E-01	9.418E-01	1.592E+00	1.407E-01	0.152
		61.30		2.252E+00	1.625E+00	2.491E+00	2.164E-01	0.904
		121.62		-7.622E-02	3.132E-01	5.115E-01	3.023E-02	-0.149
		147.16		-3.843E-01	5.518E-01	8.841E-01	4.743E-02	-0.435
		171.86		2.855E-01	3.933E-01	6.532E-01	3.354E-02	0.437
		218.09		-2.542E-01	7.221E-01	1.150E+00	6.302E-02	-0.221
	+	268.79		1.837E+00	9.490E-01	1.163E+00	6.724E-02	1.579
		319.02		9.101E-02	2.103E-01	3.583E-01	2.116E-02	0.254
		367.43		2.884E-01	7.130E-01	1.209E+00	7.080E-02	0.239
		413.65	*	-8.533E-02	1.460E-01	2.357E-01	1.371E-02	-0.362
HF-181		56.28		-5.893E-01	9.985E-01	1.649E+00	1.452E-01	-0.357
		57.53		3.782E-01	5.587E-01	8.872E-01	7.774E-02	0.426
		65.20		4.670E-01	1.009E+00	1.507E+00	1.309E-01	0.310
		133.02		-3.207E-02	6.180E-02	8.701E-02	4.885E-03	-0.369
		136.25		2.510E-01	4.028E-01	6.272E-01	3.481E-02	0.400
		345.85		-2.491E-02	1.758E-01	2.535E-01	1.496E-02	-0.098
W-181		482.03	*	-8.204E-03	3.450E-02	5.610E-02	3.281E-03	-0.146
		56.28		-2.312E-01	3.934E-01	6.495E-01	5.719E-02	-0.356
		57.53		1.492E-01	2.203E-01	3.498E-01	3.065E-02	0.426
		65.20	*	1.826E-01	3.947E-01	5.895E-01	5.121E-02	0.310
TA-182		67.75		-1.687E-01	1.186E-01	1.652E-01	1.438E-02	-1.021
		100.10		4.499E-02	1.621E-01	2.507E-01	1.962E-02	0.179
		152.43		3.390E-01	2.801E-01	4.718E-01	2.493E-02	0.718
		222.10		3.195E-01	2.923E-01	4.867E-01	2.682E-02	0.657
RE-183		1001.68		2.339E+00	1.836E+00	3.250E+00	2.639E-01	0.720
		1121.28		4.454E-01	1.716E-01	2.828E-01	1.839E-02	1.575
		1189.05		-1.725E-01	2.869E-01	4.519E-01	2.622E-02	-0.382
		1221.42	*	9.289E-02	1.837E-01	3.089E-01	1.896E-02	0.301
		1230.97		-4.182E-01	4.629E-01	7.156E-01	4.464E-02	-0.584
		57.98		1.507E-01	2.247E-01	3.396E-01	2.970E-02	0.444
		59.32		4.862E-02	1.189E-01	1.781E-01	1.548E-02	0.273
		67.20		-2.165E-01	2.104E-01	2.981E-01	2.594E-02	-0.726
		162.32	*	8.737E-03	9.152E-02	1.495E-01	7.691E-03	0.058

---- 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		1.459E+00	9.193E-01	1.366E+00	7.395E-02	1.068
		291.72		4.578E-01	8.627E-01	1.297E+00	7.601E-02	0.353
		57.98		5.572E-01	8.310E-01	1.256E+00	1.098E-01	0.444
		59.32		1.796E-01	4.394E-01	6.582E-01	5.720E-02	0.273
		67.20		-8.002E-01	7.779E-01	1.102E+00	9.588E-02	-0.726
		161.27		-1.031E-02	2.955E-01	4.811E-01	2.482E-02	-0.021
		216.55		1.554E-02	2.250E-01	3.635E-01	1.989E-02	0.043
		252.85	*	-8.787E-02	1.894E-01	2.976E-01	1.697E-02	-0.295
OS-185		318.01		2.496E-01	3.662E-01	6.291E-01	3.715E-02	0.397
	+	792.07		2.000E+00	1.215E+00	1.625E+00	1.164E-01	1.231
		903.28		-9.616E-01	9.944E-01	1.289E+00	1.168E-01	-0.746
		920.93		-1.956E-01	3.750E-01	6.009E-01	5.360E-02	-0.325
		59.72		1.316E-01	3.172E-01	4.751E-01	4.126E-02	0.277
		61.14		1.619E-01	1.763E-01	2.675E-01	2.323E-02	0.605
		69.30		7.675E-02	3.596E-01	4.511E-01	3.939E-02	0.170
		592.07		5.535E-01	2.151E+00	3.552E+00	1.966E-01	0.156
RE-188		646.12	*	1.251E-02	3.479E-02	5.763E-02	3.007E-03	0.217
		717.42		1.064E+00	7.301E-01	1.255E+00	7.457E-02	0.848
		874.81		-7.051E-02	5.188E-01	8.581E-01	7.430E-02	-0.082
		880.27		-2.273E-01	6.871E-01	1.122E+00	9.831E-02	-0.203
		155.03	*	3.039E-02	1.400E-01	2.299E-01	1.206E-02	0.132
		477.96		1.989E+00	2.565E+00	4.377E+00	2.562E-01	0.454
		633.10		-2.846E+00	2.391E+00	3.591E+00	1.905E-01	-0.792
	+	63.58		1.815E+02	8.584E+01	9.254E+01	8.036E+00	1.962
W-188		227.08		4.160E+00	1.055E+01	1.719E+01	9.534E-01	0.242
IR-192		290.67	*	2.244E-01	6.627E+00	9.739E+00	5.703E-01	0.023
	+	295.96		8.468E-01	1.339E-01	2.123E-01	1.265E-02	3.990
		308.46		6.555E-03	7.674E-02	1.293E-01	7.705E-03	0.051
		316.51	*	7.573E-03	2.807E-02	4.756E-02	2.821E-03	0.159
		468.07		-5.072E-02	6.096E-02	8.154E-02	5.493E-03	-0.622
		604.41		5.617E-04	4.512E-01	6.341E-01	7.093E-02	0.001
		612.46		3.517E-02	6.852E-01	9.657E-01	7.042E-02	0.036
		65.12		1.171E-01	1.841E-01	2.762E-01	2.399E-02	0.424
AU-195		66.83		-8.077E-02	9.864E-02	1.410E-01	1.226E-02	-0.573
	+	75.70		1.168E+00	2.336E-01	4.135E-01	3.693E-02	2.823
		98.88	*	3.992E-01	2.159E-01	3.311E-01	2.642E-02	1.206
	+	129.76		3.227E+00	3.210E+00	4.156E+00	2.362E-01	0.777
		367.94	*	2.233E-04	3.210E+00	Half-Life	too short	
		579.30		6.125E-03	3.210E+00	Half-Life	too short	
		828.27		1.573E-04	3.210E+00	Half-Life	too short	
		1205.75		-1.188E-03	3.210E+00	Half-Life	too short	
TL-201		68.90		-3.644E+00	6.156E+00	6.338E+00	5.529E-01	-0.575
		70.82		2.021E+00	2.412E+00	3.627E+00	3.178E-01	0.557
		80.30		-9.549E-02	5.745E+00	6.087E+00	5.587E-01	-0.016
		135.34		6.161E+00	1.976E+01	3.054E+01	1.700E+00	0.202
		167.43	*	-3.376E+00	5.093E+00	8.119E+00	4.144E-01	-0.416
		68.90		-3.632E-01	6.137E-01	6.319E-01	5.512E-02	-0.575
		70.82		2.009E-01	2.398E-01	3.606E-01	3.160E-02	0.557
		80.30		-9.497E-03	5.714E-01	6.054E-01	5.556E-02	-0.016

---- 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	*	6.374E-02	5.674E-02	9.831E-02	5.752E-03	0.648
		70.83		8.983E-01	1.070E+00	1.603E+00	2.195E-01	0.560
		72.87		2.673E+00	7.442E-01	1.066E+00	1.421E-01	2.508
+ BI-207		82.60		1.204E+00	1.074E+00	1.619E+00	2.299E-01	0.743
		279.20	*	-2.012E-02	3.200E-02	5.277E-02	3.260E-03	-0.381
		72.80		7.229E-01	2.026E-01	3.115E-01	2.747E-02	2.321
+ +		74.97		6.491E-01	1.299E-01	2.126E-01	1.892E-02	3.053
		84.90		2.113E-01	1.872E-01	2.843E-01	2.702E-02	0.743
		569.67		2.458E-03	2.497E-02	4.097E-02	2.308E-03	0.060
TL-207		1063.62	*	-9.466E-03	4.778E-02	7.775E-02	5.712E-03	-0.122
		1770.23		-9.816E-01	4.688E-01	5.701E-01	3.530E-02	-1.722
		81.07		1.537E-01	2.760E-01	3.019E-01	2.785E-02	0.509
+ +		83.78		1.393E-01	1.235E-01	1.815E-01	1.709E-02	0.768
		94.90		3.923E-01	2.325E-01	3.529E-01	3.011E-02	1.112
		122.32		1.046E-02	1.455E+00	2.393E+00	1.619E-01	0.004
+ +		144.24		1.930E-01	6.015E-01	9.627E-01	6.666E-02	0.201
		154.21		2.684E-01	3.298E-01	5.497E-01	3.613E-02	0.488
		269.46		4.312E-01	2.229E-01	2.780E-01	1.681E-02	1.551
+ +		323.87	*	-1.121E+00	5.914E-01	8.723E-01	1.444E-01	-1.285
		338.28		5.583E+00	1.454E+00	1.967E+00	2.084E-01	2.837
		445.03		-1.712E+00	1.942E+00	2.975E+00	3.064E-01	-0.576
PO-209		260.50		-2.678E+00	7.893E+00	1.245E+01	7.147E-01	-0.215
		262.80		1.327E-01	2.286E+01	3.525E+01	2.028E+00	0.004
		896.60	*	9.978E-01	6.806E+00	1.143E+01	1.037E+00	0.087
BI-210		46.50	*	1.355E+00	4.408E+00	7.487E+00	5.829E-01	0.181
PB-210		46.50	*	1.355E+00	4.408E+00	7.487E+00	5.829E-01	0.181
PO-210		46.50	*	1.355E+00	4.408E+00	7.487E+00	5.023E-01	0.181
PB-211		404.84	*	-9.051E-01	9.642E-01	1.233E+00	7.684E-01	-0.734
+ +		427.08		-7.003E-01	1.711E+00	2.685E+00	1.660E+00	-0.261
		831.96		6.895E-01	1.184E+00	1.906E+00	1.192E+00	0.362
		727.18	*	1.107E+00	4.543E-01	5.685E-01	4.512E-02	1.947
BI-212		785.46		1.758E+00	1.453E+00	2.589E+00	1.826E-01	0.679
		1620.62		1.659E+00	1.103E+00	2.097E+00	1.422E-01	0.791
		81.07		1.537E-01	2.760E-01	3.019E-01	2.785E-02	0.509
+ +		83.78		1.393E-01	1.235E-01	1.815E-01	1.709E-02	0.768
		94.90		3.923E-01	2.325E-01	3.529E-01	3.011E-02	1.112
		122.32		1.046E-02	1.455E+00	2.393E+00	1.619E-01	0.004
+ +		144.24		1.930E-01	6.015E-01	9.627E-01	6.666E-02	0.201
		154.21		2.684E-01	3.298E-01	5.497E-01	3.613E-02	0.488
		269.46		4.312E-01	2.229E-01	2.780E-01	1.681E-02	1.551
+ +		323.87	*	-1.121E+00	5.914E-01	8.723E-01	1.444E-01	-1.285
		338.28		5.583E+00	1.454E+00	1.967E+00	2.084E-01	2.837
		445.03		-1.712E+00	1.942E+00	2.975E+00	3.064E-01	-0.576
RN-219		271.23		5.532E-01	2.875E-01	3.546E-01	2.871E-02	1.560
		401.81	*	1.381E-01	3.298E-01	5.569E-01	7.575E-02	0.248
RN-220		549.76	*	1.037E+01	2.278E+01	3.811E+01	2.175E+00	0.272
RA-223		81.07		1.537E-01	2.760E-01	3.019E-01	2.785E-02	0.509
+ +		83.78		1.393E-01	1.235E-01	1.815E-01	1.709E-02	0.768
		94.90		3.923E-01	2.325E-01	3.529E-01	3.011E-02	1.112

---- 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		1.046E-02	1.455E+00	2.393E+00	1.619E-01	0.004
		144.24		1.930E-01	6.015E-01	9.627E-01	6.666E-02	0.201
		154.21		2.684E-01	3.298E-01	5.497E-01	3.613E-02	0.488
	+	269.46		4.312E-01	2.229E-01	2.780E-01	1.681E-02	1.551
		323.87	*	-1.121E+00	5.914E-01	8.723E-01	1.444E-01	-1.285
	+	338.28		5.583E+00	1.454E+00	1.967E+00	2.084E-01	2.837
		445.03		-1.712E+00	1.942E+00	2.975E+00	3.064E-01	-0.576
		79.80		1.316E+00	2.127E+00	2.318E+00	5.035E-01	0.568
		236.00		2.554E+00	3.832E-01	5.014E-01	5.186E-02	5.095
		256.20	*	-6.683E-03	3.143E-01	5.026E-01	7.000E-02	-0.013
		286.10		5.580E-01	1.262E+00	2.154E+00	2.495E-01	0.259
	+	299.80		2.967E+00	1.510E+00	2.108E+00	3.439E-01	1.408
TH-227		304.40		2.707E-01	1.686E+00	2.487E+00	4.310E-01	0.109
		334.20		-4.107E-01	2.216E+00	3.194E+00	5.867E-01	-0.129
		79.80		1.316E+00	2.127E+00	2.318E+00	5.098E-01	0.568
		94.00		1.304E+01	3.502E+00	3.489E+00	7.605E-01	3.738
		236.00		2.554E+00	3.593E-01	5.014E-01	4.478E-02	5.095
		256.20	*	-6.683E-03	3.143E-01	5.026E-01	8.480E-02	-0.013
		286.10		5.580E-01	1.378E+00	2.154E+00	2.158E+00	0.259
	+	299.80		2.967E+00	1.510E+00	2.108E+00	3.439E-01	1.408
		304.40		2.707E-01	1.686E+00	2.487E+00	4.310E-01	0.109
		334.20		-4.107E-01	2.216E+00	3.194E+00	5.867E-01	-0.129
		85.43		8.367E-01	2.495E-01	2.966E-01	2.832E-02	2.821
	+	88.47		4.772E-01	1.139E-01	1.800E-01	1.741E-02	2.651
PA-231		100.00		6.545E-02	1.694E-01	2.628E-01	2.060E-02	0.249
		193.63	*	2.672E-03	4.172E-01	6.754E-01	3.578E-02	0.004
		210.97		4.146E-01	7.181E-01	1.037E+00	5.630E-02	0.400
		283.67	*	4.732E-01	1.257E+00	2.142E+00	2.955E-01	0.221
	+	301.29		1.187E+00	5.855E-01	8.260E-01	8.671E-02	1.437
TH-231		81.07		1.537E-01	2.760E-01	3.019E-01	2.785E-02	0.509
	+	83.78		1.393E-01	1.235E-01	1.815E-01	1.709E-02	0.768
		94.90		3.923E-01	2.325E-01	3.529E-01	3.011E-02	1.112
		122.32		1.046E-02	1.455E+00	2.393E+00	1.619E-01	0.004
U-231		144.24		1.930E-01	6.015E-01	9.627E-01	6.666E-02	0.201
		154.21		2.684E-01	3.298E-01	5.497E-01	3.613E-02	0.488
	+	269.46		4.312E-01	2.229E-01	2.780E-01	1.681E-02	1.551
		323.87	*	-1.121E+00	5.914E-01	8.723E-01	1.444E-01	-1.285
	+	338.28		5.583E+00	1.454E+00	1.967E+00	2.084E-01	2.837
		445.03		-1.712E+00	1.942E+00	2.975E+00	3.064E-01	-0.576
	+	84.21		5.431E+00	4.813E+00	7.102E+00	6.713E-01	0.765
	+	92.29		1.491E+01	2.588E+00	3.405E+00	3.048E-01	4.378
		95.87	*	3.233E-01	9.328E-01	1.373E+00	1.152E-01	0.235
		108.00		-1.549E-01	1.597E+00	2.630E+00	1.838E-01	-0.059
	+	75.28		1.894E+01	4.489E+00	6.554E+00	1.017E+00	2.890
	+	86.59		6.843E+00	2.385E+00	2.542E+00	6.906E-01	2.692
PA-233	+	300.12		8.273E-01	4.140E-01	5.811E-01	7.828E-02	1.424
		311.98	*	-1.329E-02	5.242E-02	8.718E-02	5.450E-03	-0.152
		340.50		1.624E+00	6.572E-01	9.082E-01	2.088E-01	1.789
		398.62		-6.861E-01	1.699E+00	2.755E+00	7.124E-01	-0.249

---- 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		-7.538E-01	1.323E+00	2.119E+00	4.364E-01	-0.356
		63.00		5.297E+00	2.596E+00	2.765E+00	4.296E-01	1.916
		94.67		4.763E-01	1.780E-01	2.655E-01	3.283E-02	1.794
		98.44		1.687E-01	1.276E-01	1.342E-01	7.474E-02	1.257
		99.86		2.291E-01	4.308E-01	6.710E-01	5.272E-02	0.341
		111.00		1.822E-02	1.571E-01	2.598E-01	2.810E-02	0.070
		131.20		-3.667E-02	1.002E-01	1.420E-01	8.027E-03	-0.258
		152.70		3.124E-01	2.729E-01	4.526E-01	7.072E-02	0.690
	+	186.00		7.970E+00	2.998E+00	2.136E+00	6.505E-01	3.732
		226.40		6.413E-02	3.322E-01	5.379E-01	6.150E-02	0.119
		227.20		1.562E-01	3.590E-01	5.859E-01	3.249E-02	0.267
		248.90		-1.925E-01	7.641E-01	1.052E+00	2.256E-01	-0.183
	+	293.70		5.361E+00	1.167E+00	1.333E+00	2.146E-01	4.023
		369.80		-6.870E-02	6.888E-01	1.143E+00	2.382E-01	-0.060
		568.70		-1.440E-01	8.287E-01	1.340E+00	7.552E-02	-0.107
		569.50		2.790E-02	2.219E-01	3.646E-01	2.055E-02	0.077
		574.00		1.233E+00	1.349E+00	2.119E+00	1.190E-01	0.582
		699.00		4.408E-01	6.590E-01	1.094E+00	1.963E-01	0.403
		706.10		-3.173E-01	9.337E-01	1.459E+00	6.437E-01	-0.218
		733.00		-2.216E-01	3.480E-01	4.738E-01	1.012E-01	-0.468
		742.81		-1.550E-01	1.146E+00	1.818E+00	1.218E+00	-0.085
		796.30		1.575E+00	9.623E-01	1.429E+00	3.808E-01	1.102
		805.60		2.809E-01	7.966E-01	1.356E+00	4.111E-01	0.207
		819.60		-2.088E-01	1.091E+00	1.801E+00	6.810E-01	-0.116
		826.30		-7.430E-01	7.950E-01	1.135E+00	5.062E-01	-0.654
		831.60		1.544E-01	5.731E-01	9.691E-01	2.872E-01	0.159
		876.40		1.036E-02	7.434E-01	1.241E+00	1.275E+00	0.008
		880.51		-8.728E-02	2.483E-01	4.049E-01	3.550E-02	-0.216
		883.24		9.570E-03	2.450E-01	4.092E-01	2.752E-01	0.023
		899.00		7.673E-02	7.346E-01	1.230E+00	5.388E-01	0.062
		925.00		-2.017E-01	1.002E+00	1.644E+00	1.461E-01	-0.123
		926.50		6.698E-02	1.496E-01	2.542E-01	6.448E-02	0.263
		946.00	*	-2.176E-01	2.622E-01	4.060E-01	7.632E-02	-0.536
		949.00		3.264E-01	3.732E-01	6.525E-01	5.655E-02	0.500
		980.50		3.879E-02	7.025E-01	1.007E+00	8.406E-02	0.039
		1394.10		-1.334E-01	9.970E-01	1.587E+00	1.030E+00	-0.084
PA-234M		766.42		2.474E+01	1.628E+01	1.888E+01	9.527E+00	1.310
		1001.03	*	4.154E+00	4.214E+00	7.347E+00	7.010E-01	0.565
U-235	+	89.95		2.552E+00	1.252E+00	1.645E+00	5.113E-01	1.551
	+	93.35		5.187E+00	1.650E+00	1.154E+00	3.240E-01	4.494
		105.00		5.339E-01	9.113E-01	1.506E+00	4.439E-01	0.355
		143.76	*	6.291E-02	1.853E-01	2.964E-01	4.793E-02	0.212
		163.35		3.109E-01	3.989E-01	6.581E-01	1.170E-01	0.472
	+	185.71		2.952E-01	6.701E-02	7.918E-02	4.146E-03	3.728
		205.31		7.090E-02	4.801E-01	6.816E-01	1.217E-01	0.104
NP-236		94.67		3.655E-01	1.313E-01	2.017E-01	1.728E-02	1.813
		98.44		1.275E-01	6.600E-02	1.014E-01	8.150E-03	1.257
		111.00		1.378E-02	1.188E-01	1.965E-01	1.321E-02	0.070
		160.31	*	-3.542E-02	6.583E-02	1.055E-01	5.459E-03	-0.336

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

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		2.265E-01	1.491E-01	2.270E-01	1.792E-02	0.998
		117.00	*	-3.265E-02	1.577E-01	2.581E-01	1.611E-02	-0.126
	+	209.75		1.158E+00	7.296E-01	1.084E+00	5.876E-02	1.068
		228.18		-1.339E-01	1.930E-01	3.027E-01	1.681E-02	-0.442
		277.60		1.088E-01	1.493E-01	2.447E-01	1.423E-02	0.445
		334.30		-2.832E-01	1.253E+00	1.804E+00	1.066E-01	-0.157
AM-241		59.54	*	7.304E-02	1.684E-01	2.524E-01	2.349E-02	0.289
CM-243		99.55		2.330E-01	1.534E-01	2.336E-01	1.844E-02	0.998
		103.76	*	7.636E-02	8.160E-02	1.378E-01	1.021E-02	0.554
		117.00		-3.358E-02	1.622E-01	2.655E-01	1.657E-02	-0.126
	+	209.75		1.141E+00	7.192E-01	1.069E+00	5.793E-02	1.068
		228.18		-1.353E-01	1.950E-01	3.059E-01	1.698E-02	-0.442
		277.60		1.097E-01	1.505E-01	2.467E-01	1.434E-02	0.445
AM-246		798.80		-5.259E-03	1.268E-01	1.828E-01	1.330E-02	-0.029
		1036.00		1.850E-01	2.559E-01	4.424E-01	3.410E-02	0.418
		1062.04		2.723E-01	2.076E-01	3.686E-01	2.716E-02	0.739
		1078.86	*	-5.929E-02	1.345E-01	2.152E-01	1.535E-02	-0.276
CM-247		278.00		2.939E-01	5.948E-01	1.019E+00	5.926E-02	0.288
		287.40		-1.499E-02	1.007E+00	1.695E+00	9.911E-02	-0.009
		402.60	*	-1.336E-03	2.985E-02	4.946E-02	2.867E-03	-0.027
CF-249		252.85		-3.305E-01	7.124E-01	1.120E+00	6.384E-02	-0.295
		333.44		9.310E-03	1.650E-01	2.410E-01	1.424E-02	0.039
CF-251		387.95	*	3.090E-02	3.316E-02	5.718E-02	3.309E-03	0.540
		176.60	*	1.249E-02	1.037E-01	1.690E-01	8.736E-03	0.074
		227.00		1.120E-01	3.187E-01	5.188E-01	2.876E-02	0.216
		285.00		4.479E-01	1.425E+00	2.426E+00	1.417E-01	0.185

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]G246875002      *
* Acquisition date   : 23-FEB-2010 23:21:25 Detector SN# :                  *
* Detector ID        : GAM23 Sensitivity      : 5.000                      *
* Geometry           : CAN Energy tolerance: 1.500                      *
* Elapsed live time  : 0 04:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 04:00:03.48 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246875002 Analyst initials: MXR1                 *
* Batch Number       : 952643 Sample Quantity : 1.2268E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                             *
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00 MS Isotope :                   *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.449E+01	2.958E+00	4.484E-01	0.000E+00
CD-109	3.553E+00	8.308E-01	1.102E+00	0.000E+00
SN-126	3.495E-01	8.173E-02	1.091E-01	0.000E+00
BA-137M	7.685E-02	4.914E-02	5.023E-02	0.000E+00
CS-137	8.123E-02	5.194E-02	5.310E-02	0.000E+00
TL-208	5.284E-01	7.619E-02	4.720E-02	0.000E+00
BI-211	3.665E+00	4.076E-01	2.740E-01	0.000E+00
PB-212	1.601E+00	1.400E-01	7.410E-02	0.000E+00
PO-212	1.601E+00	1.400E-01	7.410E-02	0.000E+00
BI-214	1.036E+00	1.491E-01	9.350E-02	0.000E+00
PB-214	1.275E+00	1.561E-01	8.633E-02	0.000E+00
PO-214	1.275E+00	1.561E-01	8.633E-02	0.000E+00
PO-216	1.601E+00	1.400E-01	7.410E-02	0.000E+00
PO-218	1.275E+00	1.561E-01	8.633E-02	0.000E+00
RA-224	4.066E+00	1.029E+00	8.432E-01	0.000E+00
RA-226	1.036E+00	1.491E-01	9.350E-02	0.000E+00
AC-228	1.582E+00	2.884E-01	1.859E-01	0.000E+00
RA-228	1.582E+00	2.884E-01	1.859E-01	0.000E+00
TH-228	1.624E+00	1.421E-01	7.518E-02	0.000E+00
TH-230	1.036E+00	1.491E-01	9.350E-02	0.000E+00
TH-232	1.582E+00	2.884E-01	1.859E-01	0.000E+00
TH-234	4.544E+00	2.220E+00	2.051E+00	0.000E+00
U-234	1.036E+00	1.491E-01	9.350E-02	0.000E+00
NP-237	1.026E+00	3.173E-01	3.084E-01	0.000E+00
U-238	4.544E+00	2.220E+00	2.051E+00	0.000E+00
AM-243	3.616E-01	7.091E-02	8.441E-02	0.000E+00
ANH-511	1.607E-01	5.797E-02	3.957E-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	1.827E-01	2.638E-01	4.633E-01	0.000E+00	NOT IDENT.
NA-22	-4.418E-02	3.943E-02	6.005E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	3.396E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-4.433E-03	2.202E-02	3.586E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.957E-02	6.942E-02	0.000E+00	FAIL ABUN
SC-46	-7.685E-03	3.412E-02	5.750E-02	0.000E+00	FAIL ABUN
V-48	-9.584E-03	5.799E-02	9.509E-02	0.000E+00	NOT IDENT.
CR-51	1.624E-01	2.942E-01	5.226E-01	0.000E+00	NOT IDENT.
MN-52	1.124E-01	1.848E-01	3.225E-01	0.000E+00	NOT IDENT.
MN-54	7.043E-03	3.376E-02	5.854E-02	0.000E+00	NOT IDENT.
CO-56	-3.003E-02	3.341E-02	5.409E-02	0.000E+00	NOT IDENT.
CO-57	-5.003E-03	2.068E-02	3.553E-02	0.000E+00	NOT IDENT.
CO-58	-3.638E-02	3.207E-02	5.119E-02	0.000E+00	NOT IDENT.
FE-59	-3.281E-02	8.099E-02	1.327E-01	0.000E+00	NOT IDENT.
CO-60	-4.096E-03	3.474E-02	5.700E-02	0.000E+00	NOT IDENT.
ZN-65	9.231E-02	9.314E-02	1.453E-01	0.000E+00	NOT IDENT.
GE-68	5.872E-01	1.102E+00	1.917E+00	0.000E+00	NOT IDENT.
AS-73	-3.672E-02	9.034E-01	1.612E+00	0.000E+00	NOT IDENT.
AS-74	3.430E-02	7.529E-02	1.294E-01	0.000E+00	NOT IDENT.
SE-75	1.876E-02	4.010E-02	5.967E-02	0.000E+00	NOT IDENT.
BR-77	-6.339E+00	6.914E+00	1.110E+01	0.000E+00	FAIL ABUN
SR-82	1.519E-01	3.256E-01	5.042E-01	0.000E+00	NOT IDENT.
RB-83	-4.326E-02	5.454E-02	8.828E-02	0.000E+00	NOT IDENT.
RB-84	-5.018E-03	5.907E-02	1.005E-01	0.000E+00	NOT IDENT.
KR-85	1.026E+01	6.553E+00	1.056E+01	0.000E+00	NOT IDENT.
SR-85	5.226E-02	3.339E-02	5.381E-02	0.000E+00	NOT IDENT.
RB-86	2.619E-01	6.946E-01	1.197E+00	0.000E+00	NOT IDENT.
Y-88	-1.532E-03	2.677E-02	4.458E-02	0.000E+00	NOT IDENT.
ZR-88	-1.564E-02	2.498E-02	4.188E-02	0.000E+00	NOT IDENT.
Y-91	-1.222E+01	1.786E+01	2.863E+01	0.000E+00	NOT IDENT.
NB-94	-2.105E-02	3.044E-02	4.856E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.871E-02	7.077E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.416E-01	2.299E-01	0.000E+00	NOT IDENT.
ZR-95	9.193E-03	6.174E-02	1.028E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	5.180E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.024E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.058E+00	8.076E+00	1.324E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	6.516E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.160E-03	2.622E-02	4.462E-02	0.000E+00	FAIL ABUN
RH-102	-3.670E-03	2.443E-02	4.131E-02	0.000E+00	NOT IDENT.
RU-103	1.360E-03	3.406E-02	5.611E-02	0.000E+00	NOT IDENT.
RH-106	-1.322E-01	2.701E-01	4.389E-01	0.000E+00	FAIL ABUN
RU-106	-1.322E-01	2.698E-01	4.389E-01	0.000E+00	FAIL ABUN
AG-108M	-3.274E-02	2.644E-02	4.250E-02	0.000E+00	NOT IDENT.
AG-110M	8.801E-03	3.334E-02	4.900E-02	0.000E+00	NOT IDENT.
IN-111	5.786E-01	8.055E-01	1.218E+00	0.000E+00	NOT IDENT.
IN-113M	-6.426E-03	3.648E-02	6.239E-02	0.000E+00	NOT IDENT.
SN-113	-6.426E-03	3.648E-02	6.239E-02	0.000E+00	NOT IDENT.
IN-114M	-2.399E-02	1.606E-01	2.363E-01	0.000E+00	NOT IDENT.
CD-115	1.175E+00	7.251E+00	1.237E+01	0.000E+00	NOT IDENT.
SN-117M	-1.318E-02	4.245E-02	7.191E-02	0.000E+00	NOT IDENT.
SB-122	4.338E-01	1.480E+00	2.530E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.151E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-9.531E-03	2.274E-02	3.838E-02	0.000E+00	NOT IDENT.
I-124	4.399E-01	5.575E-01	8.555E-01	0.000E+00	NOT IDENT.
SB-124	-6.146E-03	5.321E-02	8.842E-02	0.000E+00	FAIL ABUN
SB-125	3.720E-02	7.179E-02	1.259E-01	0.000E+00	FAIL ABUN
TE-125M	6.431E+00	7.724E+00	1.367E+01	0.000E+00	NOT IDENT.
I-126	1.646E-01	1.607E-01	2.503E-01	0.000E+00	NOT IDENT.
SB-126	1.366E-01	1.280E-01	1.995E-01	0.000E+00	NOT IDENT.
SB-127	6.465E-01	1.072E+00	1.841E+00	0.000E+00	NOT IDENT.
XE-127	3.171E-03	3.880E-02	6.341E-02	0.000E+00	NOT IDENT.
I-131	1.054E-02	8.359E-02	1.454E-01	0.000E+00	NOT IDENT.
TE-132	-3.605E-01	5.107E-01	8.328E-01	0.000E+00	NOT IDENT.
BA-133	3.050E-03	3.659E-02	5.540E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.030E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.471E-02	7.524E-02	0.000E+00	NOT IDENT.
CS-135	1.363E-01	1.535E-01	2.318E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.154E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.987E-02	8.774E-02	1.447E-01	0.000E+00	FAIL ABUN
CE-139	-6.148E-03	2.464E-02	4.172E-02	0.000E+00	NOT IDENT.
BA-140	-6.937E-02	2.080E-01	3.432E-01	0.000E+00	NOT IDENT.
LA-140	4.186E-02	6.115E-02	1.000E-01	0.000E+00	NOT IDENT.
CE-141	3.807E-02	5.114E-02	8.944E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.776E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.196E-01	2.018E-01	2.818E-01	0.000E+00	NOT IDENT.
PM-144	6.987E-03	3.067E-02	5.155E-02	0.000E+00	NOT IDENT.
PR-144	4.733E-01	2.077E+00	3.492E+00	0.000E+00	NOT IDENT.

PM-146	1.866E-02	3.571E-02	6.089E-02	0.000E+00	NOT IDENT.
ND-147	2.176E-01	4.490E-01	7.764E-01	0.000E+00	FAIL ABUN
PM-149	2.287E+01	6.098E+01	1.081E+02	0.000E+00	NOT IDENT.
EU-152	-8.931E-02	8.965E-02	1.274E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	7.402E-02	1.198E-01	0.000E+00	FAIL ABUN
EU-154	-1.248E-01	1.105E-01	1.674E-01	0.000E+00	NOT IDENT.
EU-155	2.504E-02	9.030E-02	1.583E-01	0.000E+00	FAIL ABUN
TB-160	9.011E-03	1.191E-01	2.046E-01	0.000E+00	FAIL ABUN
HO-166M	-3.601E-02	4.979E-02	7.872E-02	0.000E+00	FAIL ABUN
TM-171	-2.545E+01	2.932E+01	4.435E+01	0.000E+00	NOT IDENT.
LU-176	-3.272E-03	2.032E-02	3.436E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	9.473E-01	1.473E+00	0.000E+00	FAIL ABUN
LU-177M	-8.533E-02	1.431E-01	2.393E-01	0.000E+00	FAIL ABUN
HF-181	-8.204E-03	3.381E-02	5.683E-02	0.000E+00	NOT IDENT.
W-181	1.826E-01	3.868E-01	6.125E-01	0.000E+00	NOT IDENT.
TA-182	9.289E-02	1.800E-01	3.091E-01	0.000E+00	NOT IDENT.
RE-183	8.737E-03	8.969E-02	1.536E-01	0.000E+00	FAIL ABUN
RE-184	-8.787E-02	1.856E-01	3.040E-01	0.000E+00	FAIL ABUN
OS-185	1.251E-02	3.410E-02	5.816E-02	0.000E+00	NOT IDENT.
RE-188	3.039E-02	1.372E-01	2.363E-01	0.000E+00	NOT IDENT.
W-188	2.244E-01	6.495E+00	9.931E+00	0.000E+00	FAIL ABUN
IR-192	7.573E-03	2.751E-02	4.844E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	2.116E-01	3.422E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.393E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.376E+00	4.991E+00	8.337E+00	0.000E+00	NOT IDENT.
TL-202	6.374E-02	5.560E-02	9.971E-02	0.000E+00	NOT IDENT.
HG-203	-2.012E-02	3.136E-02	5.384E-02	0.000E+00	FAIL ABUN
BI-207	-9.466E-03	4.682E-02	7.795E-02	0.000E+00	FAIL ABUN
TL-207	-1.121E+00	5.796E-01	8.882E-01	0.000E+00	FAIL ABUN
PO-209	9.978E-01	6.670E+00	1.149E+01	0.000E+00	NOT IDENT.
BI-210	1.355E+00	4.320E+00	7.811E+00	0.000E+00	NOT IDENT.
PB-210	1.355E+00	4.320E+00	7.811E+00	0.000E+00	NOT IDENT.
PO-210	1.355E+00	4.320E+00	7.811E+00	0.000E+00	NOT IDENT.
PB-211	-9.051E-01	9.449E-01	1.252E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.452E-01	5.728E-01	0.000E+00	FAIL ABUN
PO-215	-1.121E+00	5.796E-01	8.882E-01	0.000E+00	FAIL ABUN
RN-219	1.381E-01	3.232E-01	5.655E-01	0.000E+00	FAIL ABUN
RN-220	1.037E+01	2.232E+01	3.854E+01	0.000E+00	NOT IDENT.
RA-223	-1.121E+00	5.796E-01	8.882E-01	0.000E+00	FAIL ABUN
AC-227	-6.683E-03	3.080E-01	5.133E-01	0.000E+00	FAIL ABUN
TH-227	-6.683E-03	3.080E-01	5.133E-01	0.000E+00	FAIL ABUN
TH-229	2.672E-03	4.088E-01	6.923E-01	0.000E+00	FAIL ABUN
PA-231	4.732E-01	1.231E+00	2.185E+00	0.000E+00	FAIL ABUN
TH-231	-1.121E+00	5.796E-01	8.882E-01	0.000E+00	FAIL ABUN
U-231	3.233E-01	9.141E-01	1.420E+00	0.000E+00	FAIL ABUN
PA-233	-1.329E-02	5.138E-02	8.881E-02	0.000E+00	FAIL ABUN
PA-234	-2.176E-01	2.569E-01	4.077E-01	0.000E+00	FAIL ABUN
PA-234M	4.154E+00	4.130E+00	7.372E+00	0.000E+00	NOT IDENT.
U-235	6.291E-02	1.816E-01	3.049E-01	0.000E+00	FAIL ABUN
NP-236	-3.542E-02	6.452E-02	1.084E-01	0.000E+00	NOT IDENT.
NP-239	-3.265E-02	1.545E-01	2.662E-01	0.000E+00	FAIL ABUN
AM-241	7.304E-02	1.650E-01	2.625E-01	0.000E+00	NOT IDENT.
CM-243	7.636E-02	7.996E-02	1.424E-01	0.000E+00	FAIL ABUN
AM-246	-5.929E-02	1.318E-01	2.157E-01	0.000E+00	NOT IDENT.
CM-247	-1.336E-03	2.926E-02	5.023E-02	0.000E+00	NOT IDENT.
CF-249	3.090E-02	3.249E-02	5.809E-02	0.000E+00	NOT IDENT.
CF-251	1.249E-02	1.016E-01	1.735E-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]G246875002.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 23:21:25
Sample ID          : G246875002          Sample quantity  : 1.22680E+02 GRAM
Detector name      : GAM23              Detector geometry: CAN
Elapsed live time  : 0 04:00:00.00      Elapsed real time: 0 04:00:03.48  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 952643             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	2399	10.67*	9.975E-01	3.449E+01	3.449E+01	8.75
CD-109	88.03	441	3.72*	5.216E+00	3.477E+00	3.553E+00	23.86
SN-126	64.28	289	9.60	2.559E+00	1.799E+00	1.799E+00	48.91
	86.94	441	8.90	5.216E+00	1.453E+00	1.453E+00	46.96
	87.57	441	37.00*	5.216E+00	3.495E-01	3.495E-01	23.86
BA-137M	661.65	92	89.98*	2.040E+00	7.678E-02	7.685E-02	65.25
CS-137	661.65	92	85.12*	2.040E+00	8.116E-02	8.123E-02	65.25
TL-208	277.35	-----	6.80	4.140E+00	-----	Line Not Found	-----
	510.84	267	21.60	2.546E+00	7.440E-01	7.440E-01	37.74
	583.14	663	84.20*	2.278E+00	5.284E-01	5.284E-01	14.71
	860.37	74	12.46	1.609E+00	5.644E-01	5.644E-01	73.67
BI-211	72.87	-----	1.27	3.829E+00	-----	Line Not Found	-----
	351.07	1067	12.94*	3.442E+00	3.665E+00	3.665E+00	11.35
PB-212	74.81	629	10.70	4.035E+00	2.230E+00	2.230E+00	22.09
	77.11	971	18.00	4.289E+00	1.925E+00	1.925E+00	14.24
	87.30	441	8.00	5.216E+00	1.617E+00	1.617E+00	25.87
	238.63	2165	44.60*	4.639E+00	1.601E+00	1.601E+00	8.93
	300.09	139	3.41	3.897E+00	1.601E+00	1.601E+00	48.91
PO-212	74.81	629	10.70	4.035E+00	2.230E+00	2.230E+00	22.09
	77.11	971	18.00	4.289E+00	1.925E+00	1.925E+00	14.24
	87.30	441	8.00	5.216E+00	1.617E+00	1.617E+00	25.87
	115.19	-----	0.60	6.293E+00	-----	Line Not Found	-----
	238.63	2165	44.60*	4.639E+00	1.601E+00	1.601E+00	8.93
	300.09	139	3.41	3.897E+00	1.601E+00	1.601E+00	48.91
BI-214	609.31	688	46.30*	2.194E+00	1.036E+00	1.036E+00	14.69
	1120.29	178	15.10	1.259E+00	1.429E+00	1.429E+00	30.14
	1764.49	103	15.80	8.743E-01	1.141E+00	1.141E+00	27.63
PB-214	74.81	629	6.21	4.035E+00	3.843E+00	3.843E+00	21.34
	77.11	971	10.50	4.289E+00	3.300E+00	3.300E+00	16.15
	87.30	441	4.67	5.216E+00	2.769E+00	2.769E+00	25.07
	241.98	483	7.49	4.596E+00	2.144E+00	2.145E+00	26.43
	295.21	554	19.20	3.950E+00	1.117E+00	1.117E+00	16.97

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	1067	37.20*	3.442E+00	1.275E+00	1.275E+00	12.49
	74.81	629	6.21	4.035E+00	3.843E+00	3.843E+00	21.34
	77.11	971	10.50	4.289E+00	3.300E+00	3.300E+00	16.15
	87.30	441	4.67	5.216E+00	2.769E+00	2.769E+00	25.07
	241.98	483	7.49	4.596E+00	2.144E+00	2.145E+00	26.43
PO-216	295.21	554	19.20	3.950E+00	1.117E+00	1.117E+00	16.97
	351.92	1067	37.20*	3.442E+00	1.275E+00	1.275E+00	12.49
	74.81	629	10.70	4.035E+00	2.230E+00	2.230E+00	22.09
	77.11	971	18.00	4.289E+00	1.925E+00	1.925E+00	14.24
	87.30	441	8.00	5.216E+00	1.617E+00	1.617E+00	25.87
PO-218	238.63	2165	44.60*	4.639E+00	1.601E+00	1.601E+00	8.93
	300.09	139	3.41	3.897E+00	1.601E+00	1.601E+00	48.91
	74.81	629	6.21	4.035E+00	3.843E+00	3.843E+00	21.34
	77.11	971	10.50	4.289E+00	3.300E+00	3.300E+00	16.15
	87.30	441	4.67	5.216E+00	2.769E+00	2.769E+00	25.07
RA-224	241.98	483	7.49	4.596E+00	2.144E+00	2.145E+00	26.43
	295.21	554	19.20	3.950E+00	1.117E+00	1.117E+00	16.97
	351.92	1067	37.20*	3.442E+00	1.275E+00	1.275E+00	12.49
	240.98	483	3.95*	4.596E+00	4.066E+00	4.066E+00	25.83
	609.31	688	46.30*	2.194E+00	1.036E+00	1.036E+00	14.69
AC-228	1120.29	178	15.10	1.259E+00	1.429E+00	1.429E+00	30.14
	1764.49	103	15.80	8.743E-01	1.141E+00	1.141E+00	27.63
	338.32	354	11.40	3.550E+00	1.337E+00	1.337E+00	47.22
	911.07	438	27.70*	1.527E+00	1.582E+00	1.582E+00	18.60
	969.11	267	16.60	1.442E+00	1.707E+00	1.707E+00	30.10
RA-228	338.32	354	11.40	3.550E+00	1.337E+00	1.337E+00	47.22
	911.07	438	27.70*	1.527E+00	1.582E+00	1.582E+00	18.60
	969.11	267	16.60	1.442E+00	1.707E+00	1.707E+00	30.10
	74.81	629	10.70	4.035E+00	2.230E+00	2.263E+00	20.04
	77.11	971	18.00	4.289E+00	1.925E+00	1.953E+00	14.24
TH-228	87.30	441	8.00	5.216E+00	1.617E+00	1.640E+00	23.86
	238.63	2165	44.60*	4.639E+00	1.601E+00	1.624E+00	8.93
	300.09	139	3.41	3.897E+00	1.601E+00	1.624E+00	76.14
	609.31	688	46.30*	2.194E+00	1.036E+00	1.036E+00	14.69
	1120.29	178	15.10	1.259E+00	1.429E+00	1.429E+00	30.14
TH-232	1764.49	103	15.80	8.743E-01	1.141E+00	1.141E+00	27.63
	338.32	354	11.40	3.550E+00	1.337E+00	1.337E+00	24.52
	911.07	438	27.70*	1.527E+00	1.582E+00	1.582E+00	18.60
	969.11	267	16.60	1.442E+00	1.707E+00	1.707E+00	30.10
	63.29	289	3.80*	2.559E+00	4.544E+00	4.544E+00	49.85
TH-234	92.38	851	5.41	5.576E+00	4.315E+00	4.315E+00	23.54
	609.31	688	46.30*	2.194E+00	1.036E+00	1.036E+00	14.69
	1120.29	178	15.10	1.259E+00	1.429E+00	1.429E+00	30.14
	1764.49	103	15.80	8.743E-01	1.141E+00	1.141E+00	27.63
	86.50	441	12.60*	5.216E+00	1.026E+00	1.026E+00	31.54
NP-237	95.87	-----	2.60	5.757E+00	-----	Line Not Found	-----
U-238	63.29	289	3.80*	2.559E+00	4.544E+00	4.544E+00	49.85
	92.38	851	5.41	5.576E+00	4.315E+00	4.315E+00	17.36
AM-243	74.67	629	66.00*	4.035E+00	3.616E-01	3.616E-01	20.01

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	441	0.34	5.216E+00	3.849E+01	3.849E+01	23.86
	117.66	-----	0.55	6.314E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.209E+00	-----	Line Not Found	-----
ANH-511	511.00	267	100.00*	2.546E+00	1.607E-01	1.607E-01	36.81

Flag: "*" = Keyline

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.449E+01	3.449E+01	0.302E+01	8.75	
CD-109	464.00D	1.02	3.477E+00	3.553E+00	0.848E+00	23.86	
SN-126	1.00E+05Y	1.00	3.495E-01	3.495E-01	0.834E-01	23.86	
BA-137M	30.17Y	1.00	7.678E-02	7.685E-02	5.014E-02	65.25	
CS-137	30.17Y	1.00	8.116E-02	8.123E-02	5.300E-02	65.25	
TL-208	1.41E+10Y	1.00	5.284E-01	5.284E-01	0.777E-01	14.71	
BI-211	7.04E+08Y	1.00	3.665E+00	3.665E+00	0.416E+00	11.35	
PB-212	1.41E+10Y	1.00	1.601E+00	1.601E+00	0.143E+00	8.93	
PO-212	1.41E+10Y	1.00	1.601E+00	1.601E+00	0.143E+00	8.93	
BI-214	1600.00Y	1.00	1.036E+00	1.036E+00	0.152E+00	14.69	
PB-214	1600.00Y	1.00	1.275E+00	1.275E+00	0.159E+00	12.49	
PO-214	1600.00Y	1.00	1.275E+00	1.275E+00	0.159E+00	12.49	
PO-216	1.41E+10Y	1.00	1.601E+00	1.601E+00	0.143E+00	8.93	
PO-218	1600.00Y	1.00	1.275E+00	1.275E+00	0.159E+00	12.49	
RA-224	1.41E+10Y	1.00	4.066E+00	4.066E+00	1.050E+00	25.83	
RA-226	1600.00Y	1.00	1.036E+00	1.036E+00	0.152E+00	14.69	
AC-228	1.41E+10Y	1.00	1.582E+00	1.582E+00	0.294E+00	18.60	
RA-228	1.41E+10Y	1.00	1.582E+00	1.582E+00	0.294E+00	18.60	
TH-228	1.91Y	1.01	1.601E+00	1.624E+00	0.145E+00	8.93	
TH-230	4.47E+09Y	1.00	1.036E+00	1.036E+00	0.152E+00	14.69	
TH-232	1.41E+10Y	1.00	1.582E+00	1.582E+00	0.294E+00	18.60	
TH-234	4.47E+09Y	1.00	4.544E+00	4.544E+00	2.265E+00	49.85	
U-234	4.47E+09Y	1.00	1.036E+00	1.036E+00	0.152E+00	14.69	
NP-237	2.14E+06Y	1.00	1.026E+00	1.026E+00	0.324E+00	31.54	
U-238	4.47E+09Y	1.00	4.544E+00	4.544E+00	2.265E+00	49.85	
AM-243	7380.00Y	1.00	3.616E-01	3.616E-01	0.724E-01	20.01	
ANH-511	1.00E+09Y	1.00	1.607E-01	1.607E-01	0.592E-01	36.81	
Total Activity :			7.649E+01	7.659E+01			

Grand Total Activity : 7.649E+01 7.659E+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	83.59	111	776	1.48	167.18	165	7	7.71E-03	88.1	4.94E+00	T
3	89.86	244	691	1.25	179.73	171	23	1.69E-02	38.0	5.41E+00	T
0	128.36	102	766	1.07	256.72	254	9	7.10E-03	99.3	6.33E+00	T
0	185.52	572	745	1.19	371.05	365	13	3.97E-02	22.1	5.49E+00	T
0	208.92	125	470	0.91	417.85	414	8	8.67E-03	62.8	5.09E+00	T
0	269.88	162	418	1.31	539.75	534	11	1.12E-02	51.3	4.23E+00	T
0	462.89	97	279	1.63	925.77	918	14	6.70E-03	76.3	2.76E+00	T
0	726.37	160	196	1.40	1452.73	1445	14	1.11E-02	40.3	1.88E+00	T
0	769.86	109	286	6.12	1539.71	1525	23	7.59E-03	83.4	1.78E+00	
0	793.42	81	130	0.85	1586.84	1583	12	5.59E-03	60.3	1.73E+00	T
1	963.31	72	107	2.12	1926.61	1917	39	5.02E-03	64.4	1.45E+00	T
0	1588.57	58	41	4.74	3177.14	3164	24	4.00E-03	65.0	9.35E-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]G246875002.CNF;1
* Acquisition date   : 23-FEB-2010 23:21:25  Detector SN#      :
* Detector ID        : GAM23                      Sensitivity    : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 04:00:00.00             Abundance limit : 75.00000
* Elapsed real time  : 0 04:00:03.48             Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G246875002             Analyst initials: MXR1
* Batch Number       : 952643                 Sample Quantity : 1.22680E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00.62MS Isotope      :
* MSD ID             :                               MSD Isotope
* LCS ID             : 1032-A                       LCS Isotope
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.449E+01	3.018E+00	4.491E-01	3.360E-02	76.780
CD-109	3.553E+00	8.477E-01	1.065E+00	1.039E-01	3.337
SN-126	3.495E-01	8.340E-02	1.054E-01	1.025E-02	3.317
BA-137M	7.685E-02	5.014E-02	4.979E-02	2.543E-03	1.544
CS-137	8.123E-02	5.300E-02	5.263E-02	2.703E-03	1.544
TL-208	5.284E-01	7.774E-02	4.671E-02	3.032E-03	11.314
BI-211	3.665E+00	4.159E-01	2.694E-01	1.755E-02	13.605
PB-212	1.601E+00	1.429E-01	7.248E-02	5.211E-03	22.084
PO-212	1.601E+00	1.429E-01	7.248E-02	5.211E-03	22.084
BI-214	1.036E+00	1.522E-01	9.257E-02	6.960E-03	11.193
PB-214	1.275E+00	1.592E-01	8.488E-02	7.085E-03	15.021
PO-214	1.275E+00	1.592E-01	8.488E-02	7.085E-03	15.021
PO-216	1.601E+00	1.429E-01	7.248E-02	5.211E-03	22.084
PO-218	1.275E+00	1.592E-01	8.488E-02	7.085E-03	15.021
RA-224	4.066E+00	1.050E+00	8.250E-01	4.648E-02	4.929
RA-226	1.036E+00	1.522E-01	9.257E-02	6.960E-03	11.193
AC-228	1.582E+00	2.943E-01	1.851E-01	2.135E-02	8.550
RA-228	1.582E+00	2.943E-01	1.851E-01	2.135E-02	8.550

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.624E+00	1.450E-01	7.354E-02	5.287E-03	22.084
TH-230	1.036E+00	1.522E-01	9.257E-02	6.959E-03	11.193
TH-232	1.582E+00	2.943E-01	1.851E-01	2.135E-02	8.550
TH-234	4.544E+00	2.265E+00	1.974E+00	3.557E-01	2.302
U-234	1.036E+00	1.522E-01	9.257E-02	6.959E-03	11.193
NP-237	1.026E+00	3.238E-01	2.979E-01	6.784E-02	3.446
U-238	4.544E+00	2.265E+00	1.974E+00	3.557E-01	2.302
AM-243	3.616E-01	7.236E-02	8.138E-02	7.232E-03	4.443
ANH-511	1.607E-01	5.915E-02	3.909E-02	2.271E-03	4.111

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.827E-01		2.692E-01	4.572E-01	3.107E-02	0.399
NA-22	-4.418E-02		4.024E-02	6.004E-02	4.032E-03	-0.736
NA-24	1.362E-01		1.733E-01	Half-Life too short		
AL-26	-4.433E-03		2.247E-02	3.602E-02	2.165E-03	-0.123
TI-44	3.552E-01	+	5.058E-02	6.696E-02	6.070E-03	5.304
SC-46	-7.685E-03		3.481E-02	5.722E-02	5.112E-03	-0.134
V-48	-9.584E-03		5.917E-02	9.475E-02	7.882E-03	-0.101
CR-51	1.624E-01		3.002E-01	5.131E-01	3.365E-02	0.316
MN-52	1.124E-01		1.885E-01	3.229E-01	2.336E-02	0.348
MN-54	7.043E-03		3.445E-02	5.820E-02	4.608E-03	0.121
CO-56	-3.003E-02		3.409E-02	5.379E-02	4.376E-03	-0.558
CO-57	-5.003E-03		2.110E-02	3.446E-02	2.032E-03	-0.145
CO-58	-3.638E-02		3.273E-02	5.088E-02	3.822E-03	-0.715
FE-59	-3.281E-02		8.265E-02	1.324E-01	1.020E-02	-0.248
CO-60	-4.096E-03		3.544E-02	5.702E-02	4.186E-03	-0.072
ZN-65	9.231E-02		9.504E-02	1.451E-01	9.581E-03	0.636
GE-68	5.872E-01		1.124E+00	1.912E+00	1.369E-01	0.307
AS-73	-3.672E-02		9.219E-01	1.547E+00	1.366E-01	-0.024
AS-74	3.430E-02		7.683E-02	1.281E-01	7.062E-03	0.268
SE-75	1.876E-02		4.092E-02	5.845E-02	3.402E-03	0.321
BR-77	-6.339E+00		7.055E+00	1.097E+01	6.350E-01	-0.578
SR-82	1.519E-01		3.322E-01	5.009E-01	3.455E-02	0.303
RB-83	-4.326E-02		5.565E-02	8.723E-02	5.050E-03	-0.496
RB-84	-5.018E-03		6.027E-02	9.995E-02	8.782E-03	-0.050
KR-85	1.026E+01		6.686E+00	1.043E+01	6.055E-01	0.983
SR-85	5.226E-02		3.407E-02	5.316E-02	3.085E-03	0.983
RB-86	2.619E-01		7.087E-01	1.194E+00	8.561E-02	0.219
Y-88	-1.532E-03		2.732E-02	4.479E-02	2.637E-03	-0.034
ZR-88	-1.564E-02		2.549E-02	4.123E-02	2.380E-03	-0.379
Y-91	-1.222E+01		1.822E+01	2.860E+01	1.706E+00	-0.427
NB-94	-2.105E-02		3.106E-02	4.817E-02	2.752E-03	-0.437
NB-95	8.927E-02		3.950E-02	7.028E-02	4.723E-03	1.270
NB-95M	7.098E-01		1.444E-01	2.249E-01	1.659E-02	3.157
ZR-95	9.193E-03		6.300E-02	1.021E-01	7.834E-03	0.090

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	2.120E-02		2.643E-02	Half-Life too short		
ZR-97	3.973E+00		5.223E-01	Half-Life too short		
MO-99	-1.058E+00		8.241E+00	1.314E+01	1.839E+00	-0.081
TC-99M	-6.656E+09		3.324E+09	Half-Life too short		
RH-101	5.160E-03		2.676E-02	4.354E-02	2.321E-03	0.118
RH-102	-3.670E-03		2.493E-02	4.077E-02	2.387E-03	-0.090
RU-103	1.360E-03		3.475E-02	5.541E-02	7.014E-03	0.025
RH-106	-1.322E-01		2.756E-01	4.346E-01	5.012E-02	-0.304
RU-106	-1.322E-01		2.753E-01	4.346E-01	2.335E-02	-0.304
AG-108M	-3.274E-02		2.698E-02	4.190E-02	2.656E-03	-0.782
AG-110M	8.801E-03		3.402E-02	4.856E-02	2.698E-03	0.181
IN-111	5.786E-01		8.220E-01	1.192E+00	6.746E-02	0.485
IN-113M	-6.426E-03		3.722E-02	6.142E-02	3.784E-03	-0.105
SN-113	-6.426E-03		3.722E-02	6.142E-02	3.784E-03	-0.105
IN-114M	-2.399E-02		1.639E-01	2.305E-01	1.215E-02	-0.104
CD-115	1.175E+00		7.399E+00	1.223E+01	7.055E-01	0.096
SN-117M	-1.318E-02		4.332E-02	6.998E-02	3.637E-03	-0.188
SB-122	4.338E-01		1.510E+00	2.502E+00	1.415E-01	0.173
I-123	-9.017E-01		1.098E+00	Half-Life too short		
TE-123M	-9.531E-03		2.320E-02	3.736E-02	1.971E-03	-0.255
I-124	4.399E-01		5.689E-01	8.469E-01	4.641E-02	0.519
SB-124	-6.146E-03		5.430E-02	8.874E-02	6.187E-03	-0.069
SB-125	3.720E-02		7.326E-02	1.241E-01	7.550E-03	0.300
TE-125M	6.431E+00		7.881E+00	1.324E+01	1.181E+00	0.486
I-126	1.646E-01		1.640E-01	2.481E-01	1.284E-02	0.663
SB-126	1.366E-01		1.306E-01	1.980E-01	1.186E-02	0.690
SB-127	6.465E-01		1.094E+00	1.825E+00	1.644E-01	0.354
XE-127	3.171E-03		3.959E-02	6.191E-02	3.323E-03	0.051
I-131	1.054E-02		8.530E-02	1.430E-01	9.336E-03	0.074
TE-132	-3.605E-01		5.211E-01	8.142E-01	1.152E-01	-0.443
BA-133	3.050E-03		3.734E-02	5.447E-02	6.320E-03	0.056
I-133	2.148E-04		1.546E-03	Half-Life too short		
CS-134	8.483E-02		4.562E-02	7.476E-02	5.459E-03	1.135
CS-135	1.363E-01		1.566E-01	2.271E-01	1.735E-02	0.600
I-135	8.056E+08		5.887E+08	Half-Life too short		
CS-136	-2.987E-02		8.953E-02	1.443E-01	1.150E-02	-0.207
CE-139	-6.148E-03		2.514E-02	4.063E-02	2.071E-03	-0.151
BA-140	-6.937E-02		2.122E-01	3.393E-01	1.103E-01	-0.204
LA-140	4.186E-02		6.240E-02	1.003E-01	6.881E-03	0.417
CE-141	3.807E-02		5.218E-02	8.695E-02	4.903E-03	0.438
CE-143	6.780E-04		9.059E-05	Half-Life too short		
CE-144	-1.196E-01		2.059E-01	2.737E-01	3.865E-02	-0.437
PM-144	6.987E-03		3.129E-02	5.113E-02	2.876E-03	0.137
PR-144	4.733E-01		2.120E+00	3.463E+00	1.947E-01	0.137
PM-146	1.866E-02		3.644E-02	6.005E-02	5.201E-03	0.311
ND-147	2.176E-01		4.581E-01	7.674E-01	1.036E-01	0.284
PM-149	2.287E+01		6.222E+01	1.060E+02	1.504E+01	0.216
EU-152	-8.931E-02		9.148E-02	1.252E-01	8.298E-03	-0.713

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.437E-01		7.553E-02	1.159E-01	9.467E-03	1.240
EU-154	-1.248E-01		1.127E-01	1.674E-01	1.662E-02	-0.746
EU-155	2.504E-02		9.214E-02	1.532E-01	1.130E-02	0.163
TB-160	9.011E-03		1.216E-01	2.036E-01	1.780E-02	0.044
HO-166M	-3.601E-02		5.081E-02	7.810E-02	4.571E-03	-0.461
TM-171	-2.545E+01		2.992E+01	4.270E+01	3.713E+00	-0.596
LU-176	-3.272E-03		2.073E-02	3.373E-02	1.987E-03	-0.097
LU-177	1.534E+00	+	9.666E-01	1.439E+00	7.784E-02	1.066
LU-177M	-8.533E-02		1.460E-01	2.357E-01	1.371E-02	-0.362
HF-181	-8.204E-03		3.450E-02	5.610E-02	3.281E-03	-0.146
W-181	1.826E-01		3.947E-01	5.895E-01	5.121E-02	0.310
TA-182	9.289E-02		1.837E-01	3.089E-01	1.896E-02	0.301
RE-183	8.737E-03		9.152E-02	1.495E-01	7.691E-03	0.058
RE-184	-8.787E-02		1.894E-01	2.976E-01	1.697E-02	-0.295
OS-185	1.251E-02		3.479E-02	5.763E-02	3.007E-03	0.217
RE-188	3.039E-02		1.400E-01	2.299E-01	1.206E-02	0.132
W-188	2.244E-01		6.627E+00	9.739E+00	5.703E-01	0.023
IR-192	7.573E-03		2.807E-02	4.756E-02	2.821E-03	0.159
AU-195	3.992E-01		2.159E-01	3.311E-01	2.642E-02	1.206
TL-200	2.233E-04		1.221E-04	Half-Life	too short	
TL-201	-3.376E+00		5.093E+00	8.119E+00	4.144E-01	-0.416
TL-202	6.374E-02		5.674E-02	9.831E-02	5.752E-03	0.648
HG-203	-2.012E-02		3.200E-02	5.277E-02	3.260E-03	-0.381
BI-207	-9.466E-03		4.778E-02	7.775E-02	5.712E-03	-0.122
TL-207	-1.121E+00		5.914E-01	8.723E-01	1.444E-01	-1.285
PO-209	9.978E-01		6.806E+00	1.143E+01	1.037E+00	0.087
BI-210	1.355E+00		4.408E+00	7.487E+00	5.829E-01	0.181
PB-210	1.355E+00		4.408E+00	7.487E+00	5.829E-01	0.181
PO-210	1.355E+00		4.408E+00	7.487E+00	5.023E-01	0.181
PB-211	-9.051E-01		9.642E-01	1.233E+00	7.684E-01	-0.734
BI-212	1.107E+00	+	4.543E-01	5.685E-01	4.512E-02	1.947
PO-215	-1.121E+00		5.914E-01	8.723E-01	1.444E-01	-1.285
RN-219	1.381E-01		3.298E-01	5.569E-01	7.575E-02	0.248
RN-220	1.037E+01		2.278E+01	3.811E+01	2.175E+00	0.272
RA-223	-1.121E+00		5.914E-01	8.723E-01	1.444E-01	-1.285
AC-227	-6.683E-03		3.143E-01	5.026E-01	7.000E-02	-0.013
TH-227	-6.683E-03		3.143E-01	5.026E-01	8.480E-02	-0.013
TH-229	2.672E-03		4.172E-01	6.754E-01	3.578E-02	0.004
PA-231	4.732E-01		1.257E+00	2.142E+00	2.955E-01	0.221
TH-231	-1.121E+00		5.914E-01	8.723E-01	1.444E-01	-1.285
U-231	3.233E-01		9.328E-01	1.373E+00	1.152E-01	0.235
PA-233	-1.329E-02		5.242E-02	8.718E-02	5.450E-03	-0.152
PA-234	-2.176E-01		2.622E-01	4.060E-01	7.632E-02	-0.536
PA-234M	4.154E+00		4.214E+00	7.347E+00	7.010E-01	0.565
U-235	6.291E-02		1.853E-01	2.964E-01	4.793E-02	0.212
NP-236	-3.542E-02		6.583E-02	1.055E-01	5.459E-03	-0.336
NP-239	-3.265E-02		1.577E-01	2.581E-01	1.611E-02	-0.126
AM-241	7.304E-02		1.684E-01	2.524E-01	2.349E-02	0.289

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	7.636E-02		8.160E-02	1.378E-01	1.021E-02	0.554
AM-246	-5.929E-02		1.345E-01	2.152E-01	1.535E-02	-0.276
CM-247	-1.336E-03		2.985E-02	4.946E-02	2.867E-03	-0.027
CF-249	3.090E-02		3.316E-02	5.718E-02	3.309E-03	0.540
CF-251	1.249E-02		1.037E-01	1.690E-01	8.736E-03	0.074

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]G246875002          *
* Acquisition date   : 23-FEB-2010 23:21:25 Detector SN#      :             *
* Detector ID        : GAM23 Sensitivity      : 5.000           *
* Geometry           : CAN Energy tolerance: 1.500           *
* Elapsed live time  : 0 04:00:00.00 Abundance limit : 75.000    *
* Elapsed real time  : 0 04:00:03.48 Half life ratio : 8.000    *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246875002 Analyst initials: MXR1          *
* Batch Number       : 952643 Sample Quantity : 1.2268E+02 GRAM      *
* Recovery           : 1.00000 Carrier Weight : 0.00000           *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 2-JUN-2009 11:17:00 MS Isotope          :             *
* MSD DPM             : 0.000 MSD Isotope          :             *
* LCS DPM             : 0.000 LCS Isotope          :             *
* LCSD DPM            : 0.000 LCSD Isotope         :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.449E+01	2.958E+00	2.243E-01	1.509E+00
CD-109	3.553E+00	8.308E-01	5.513E-01	4.239E-01
SN-126	3.495E-01	8.173E-02	5.457E-02	4.170E-02
BA-137M	7.685E-02	4.914E-02	2.513E-02	2.507E-02
CS-137	8.123E-02	5.194E-02	2.656E-02	2.650E-02
TL-208	5.284E-01	7.619E-02	2.361E-02	3.887E-02
BI-211	3.665E+00	4.076E-01	1.371E-01	2.080E-01
PB-212	1.601E+00	1.400E-01	3.707E-02	7.144E-02
PO-212	1.601E+00	1.400E-01	3.707E-02	7.144E-02
BI-214	1.036E+00	1.491E-01	4.678E-02	7.609E-02
PB-214	1.275E+00	1.561E-01	4.319E-02	7.962E-02
PO-214	1.275E+00	1.561E-01	4.319E-02	7.962E-02
PO-216	1.601E+00	1.400E-01	3.707E-02	7.144E-02
PO-218	1.275E+00	1.561E-01	4.319E-02	7.962E-02
RA-224	4.066E+00	1.029E+00	4.219E-01	5.251E-01
RA-226	1.036E+00	1.491E-01	4.678E-02	7.609E-02
AC-228	1.582E+00	2.884E-01	9.302E-02	1.472E-01
RA-228	1.582E+00	2.884E-01	9.302E-02	1.472E-01
TH-228	1.624E+00	1.421E-01	3.761E-02	7.248E-02
TH-230	1.036E+00	1.491E-01	4.678E-02	7.608E-02
TH-232	1.582E+00	2.884E-01	9.302E-02	1.472E-01
TH-234	4.544E+00	2.220E+00	1.026E+00	1.133E+00
U-234	1.036E+00	1.491E-01	4.678E-02	7.608E-02
NP-237	1.026E+00	3.173E-01	1.543E-01	1.619E-01
U-238	4.544E+00	2.220E+00	1.026E+00	1.133E+00
AM-243	3.616E-01	7.091E-02	4.223E-02	3.618E-02
ANH-511	1.607E-01	5.797E-02	1.980E-02	2.958E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	1.827E-01	2.638E-01	2.318E-01	1.346E-01	NOT IDENT.
NA-22	-4.418E-02	3.943E-02	3.004E-02	2.012E-02	NOT IDENT.
NA-24	1.362E+05	3.396E+05	0.000E+00	1.733E+05	SHORT HLIF
AL-26	-4.433E-03	2.202E-02	1.794E-02	1.124E-02	NOT IDENT.
TI-44	3.552E-01	4.957E-02	3.473E-02	2.529E-02	FAIL ABUN
SC-46	-7.685E-03	3.412E-02	2.877E-02	1.741E-02	FAIL ABUN
V-48	-9.584E-03	5.799E-02	4.757E-02	2.959E-02	NOT IDENT.
CR-51	1.624E-01	2.942E-01	2.614E-01	1.501E-01	NOT IDENT.
MN-52	1.124E-01	1.848E-01	1.613E-01	9.427E-02	NOT IDENT.
MN-54	7.043E-03	3.376E-02	2.929E-02	1.722E-02	NOT IDENT.
CO-56	-3.003E-02	3.341E-02	2.706E-02	1.705E-02	NOT IDENT.
CO-57	-5.003E-03	2.068E-02	1.778E-02	1.055E-02	NOT IDENT.
CO-58	-3.638E-02	3.207E-02	2.561E-02	1.636E-02	NOT IDENT.
FE-59	-3.281E-02	8.099E-02	6.638E-02	4.132E-02	NOT IDENT.
CO-60	-4.096E-03	3.474E-02	2.852E-02	1.772E-02	NOT IDENT.
ZN-65	9.231E-02	9.314E-02	7.272E-02	4.752E-02	NOT IDENT.
GE-68	5.872E-01	1.102E+00	9.591E-01	5.621E-01	NOT IDENT.
AS-73	-3.672E-02	9.034E-01	8.063E-01	4.609E-01	NOT IDENT.
AS-74	3.430E-02	7.529E-02	6.472E-02	3.841E-02	NOT IDENT.
SE-75	1.876E-02	4.010E-02	2.985E-02	2.046E-02	NOT IDENT.
BR-77	-6.339E+00	6.914E+00	5.554E+00	3.527E+00	FAIL ABUN
SR-82	1.519E-01	3.256E-01	2.523E-01	1.661E-01	NOT IDENT.
RB-83	-4.326E-02	5.454E-02	4.417E-02	2.783E-02	NOT IDENT.
RB-84	-5.018E-03	5.907E-02	5.026E-02	3.014E-02	NOT IDENT.
KR-85	1.026E+01	6.553E+00	5.284E+00	3.343E+00	NOT IDENT.
SR-85	5.226E-02	3.339E-02	2.692E-02	1.703E-02	NOT IDENT.
RB-86	2.619E-01	6.946E-01	5.990E-01	3.544E-01	NOT IDENT.
Y-88	-1.532E-03	2.677E-02	2.230E-02	1.366E-02	NOT IDENT.
ZR-88	-1.564E-02	2.498E-02	2.095E-02	1.275E-02	NOT IDENT.
Y-91	-1.222E+01	1.786E+01	1.432E+01	9.112E+00	NOT IDENT.
NB-94	-2.105E-02	3.044E-02	2.429E-02	1.553E-02	NOT IDENT.
NB-95	8.927E-02	3.871E-02	3.541E-02	1.975E-02	NOT IDENT.
NB-95M	7.098E-01	1.416E-01	1.150E-01	7.222E-02	NOT IDENT.
ZR-95	9.193E-03	6.174E-02	5.144E-02	3.150E-02	NOT IDENT.
NB-97	2.120E+04	5.180E+04	0.000E+00	2.643E+04	SHORT HLIF
ZR-97	3.973E+06	1.024E+06	0.000E+00	5.223E+05	SHORT HLIF
MO-99	-1.058E+00	8.076E+00	6.622E+00	4.121E+00	NOT IDENT.
TC-99M	-6.656E+15	6.516E+15	0.000E+00	3.324E+15	SHORT HLIF
RH-101	5.160E-03	2.622E-02	2.232E-02	1.338E-02	FAIL ABUN
RH-102	-3.670E-03	2.443E-02	2.067E-02	1.246E-02	NOT IDENT.
RU-103	1.360E-03	3.406E-02	2.807E-02	1.738E-02	NOT IDENT.
RH-106	-1.322E-01	2.701E-01	2.196E-01	1.378E-01	FAIL ABUN
RU-106	-1.322E-01	2.698E-01	2.196E-01	1.376E-01	FAIL ABUN
AG-108M	-3.274E-02	2.644E-02	2.126E-02	1.349E-02	NOT IDENT.
AG-110M	8.801E-03	3.334E-02	2.451E-02	1.701E-02	NOT IDENT.
IN-111	5.786E-01	8.055E-01	6.093E-01	4.110E-01	NOT IDENT.
IN-113M	-6.426E-03	3.648E-02	3.121E-02	1.861E-02	NOT IDENT.
SN-113	-6.426E-03	3.648E-02	3.121E-02	1.861E-02	NOT IDENT.
IN-114M	-2.399E-02	1.606E-01	1.182E-01	8.195E-02	NOT IDENT.
CD-115	1.175E+00	7.251E+00	6.189E+00	3.699E+00	NOT IDENT.
SN-117M	-1.318E-02	4.245E-02	3.598E-02	2.166E-02	NOT IDENT.
SB-122	4.338E-01	1.480E+00	1.266E+00	7.549E-01	NOT IDENT.
I-123	-9.017E+05	2.151E+06	0.000E+00	1.098E+06	SHORT HLIF
TE-123M	-9.531E-03	2.274E-02	1.920E-02	1.160E-02	NOT IDENT.
I-124	4.399E-01	5.575E-01	4.280E-01	2.845E-01	NOT IDENT.
SB-124	-6.146E-03	5.321E-02	4.424E-02	2.715E-02	FAIL ABUN
SB-125	3.720E-02	7.179E-02	6.300E-02	3.663E-02	FAIL ABUN
TE-125M	6.431E+00	7.724E+00	6.840E+00	3.941E+00	NOT IDENT.
I-126	1.646E-01	1.607E-01	1.252E-01	8.198E-02	NOT IDENT.
SB-126	1.366E-01	1.280E-01	9.983E-02	6.532E-02	NOT IDENT.
SB-127	6.465E-01	1.072E+00	9.209E-01	5.472E-01	NOT IDENT.
XE-127	3.171E-03	3.880E-02	3.173E-02	1.980E-02	NOT IDENT.
I-131	1.054E-02	8.359E-02	7.275E-02	4.265E-02	NOT IDENT.
TE-132	-3.605E-01	5.107E-01	4.167E-01	2.605E-01	NOT IDENT.
BA-133	3.050E-03	3.659E-02	2.771E-02	1.867E-02	NOT IDENT.
I-133	2.148E+02	3.030E+03	0.000E+00	1.546E+03	SHORT HLIF
CS-134	8.483E-02	4.471E-02	3.764E-02	2.281E-02	NOT IDENT.
CS-135	1.363E-01	1.535E-01	1.160E-01	7.830E-02	NOT IDENT.
I-135	8.056E+14	1.154E+15	0.000E+00	5.887E+14	SHORT HLIF
CS-136	-2.987E-02	8.774E-02	7.238E-02	4.477E-02	FAIL ABUN
CE-139	-6.148E-03	2.464E-02	2.087E-02	1.257E-02	NOT IDENT.
BA-140	-6.937E-02	2.080E-01	1.717E-01	1.061E-01	NOT IDENT.
LA-140	4.186E-02	6.115E-02	5.004E-02	3.120E-02	NOT IDENT.
CE-141	3.807E-02	5.114E-02	4.475E-02	2.609E-02	NOT IDENT.
CE-143	6.780E+02	1.776E+02	0.000E+00	9.059E+01	SHORT HLIF
CE-144	-1.196E-01	2.018E-01	1.410E-01	1.030E-01	NOT IDENT.
PM-144	6.987E-03	3.067E-02	2.579E-02	1.565E-02	NOT IDENT.
PR-144	4.733E-01	2.077E+00	1.747E+00	1.060E+00	NOT IDENT.

PM-146	1.866E-02	3.571E-02	3.046E-02	1.822E-02	NOT IDENT.
ND-147	2.176E-01	4.490E-01	3.885E-01	2.291E-01	FAIL ABUN
PM-149	2.287E+01	6.098E+01	5.408E+01	3.111E+01	NOT IDENT.
EU-152	-8.931E-02	8.965E-02	6.373E-02	4.574E-02	FAIL ABUN
GD-153	1.437E-01	7.402E-02	5.994E-02	3.776E-02	FAIL ABUN
EU-154	-1.248E-01	1.105E-01	8.377E-02	5.635E-02	NOT IDENT.
EU-155	2.504E-02	9.030E-02	7.919E-02	4.607E-02	FAIL ABUN
TB-160	9.011E-03	1.191E-01	1.024E-01	6.079E-02	FAIL ABUN
HO-166M	-3.601E-02	4.979E-02	3.938E-02	2.540E-02	FAIL ABUN
TM-171	-2.545E+01	2.932E+01	2.219E+01	1.496E+01	NOT IDENT.
LU-176	-3.272E-03	2.032E-02	1.719E-02	1.037E-02	FAIL ABUN
LU-177	1.534E+00	9.473E-01	7.371E-01	4.833E-01	FAIL ABUN
LU-177M	-8.533E-02	1.431E-01	1.197E-01	7.300E-02	FAIL ABUN
HF-181	-8.204E-03	3.381E-02	2.843E-02	1.725E-02	NOT IDENT.
W-181	1.826E-01	3.868E-01	3.064E-01	1.973E-01	NOT IDENT.
TA-182	9.289E-02	1.800E-01	1.547E-01	9.184E-02	NOT IDENT.
RE-183	8.737E-03	8.969E-02	7.684E-02	4.576E-02	FAIL ABUN
RE-184	-8.787E-02	1.856E-01	1.521E-01	9.470E-02	FAIL ABUN
OS-185	1.251E-02	3.410E-02	2.910E-02	1.740E-02	NOT IDENT.
RE-188	3.039E-02	1.372E-01	1.182E-01	7.001E-02	NOT IDENT.
W-188	2.244E-01	6.495E+00	4.968E+00	3.314E+00	FAIL ABUN
IR-192	7.573E-03	2.751E-02	2.424E-02	1.404E-02	FAIL ABUN
AU-195	3.992E-01	2.116E-01	1.712E-01	1.080E-01	FAIL ABUN
TL-200	2.233E+02	2.393E+02	0.000E+00	1.221E+02	SHORT HLIF
TL-201	-3.376E+00	4.991E+00	4.171E+00	2.546E+00	NOT IDENT.
TL-202	6.374E-02	5.560E-02	4.989E-02	2.837E-02	NOT IDENT.
HG-203	-2.012E-02	3.136E-02	2.694E-02	1.600E-02	FAIL ABUN
BI-207	-9.466E-03	4.682E-02	3.900E-02	2.389E-02	FAIL ABUN
TL-207	-1.121E+00	5.796E-01	4.444E-01	2.957E-01	FAIL ABUN
PO-209	9.978E-01	6.670E+00	5.746E+00	3.403E+00	NOT IDENT.
BI-210	1.355E+00	4.320E+00	3.908E+00	2.204E+00	NOT IDENT.
PB-210	1.355E+00	4.320E+00	3.908E+00	2.204E+00	NOT IDENT.
PO-210	1.355E+00	4.320E+00	3.908E+00	2.204E+00	NOT IDENT.
PB-211	-9.051E-01	9.449E-01	6.262E-01	4.821E-01	NOT IDENT.
BI-212	1.107E+00	4.452E-01	2.866E-01	2.271E-01	FAIL ABUN
PO-215	-1.121E+00	5.796E-01	4.444E-01	2.957E-01	FAIL ABUN
RN-219	1.381E-01	3.232E-01	2.829E-01	1.649E-01	FAIL ABUN
RN-220	1.037E+01	2.232E+01	1.928E+01	1.139E+01	NOT IDENT.
RA-223	-1.121E+00	5.796E-01	4.444E-01	2.957E-01	FAIL ABUN
AC-227	-6.683E-03	3.080E-01	2.568E-01	1.571E-01	FAIL ABUN
TH-227	-6.683E-03	3.080E-01	2.568E-01	1.571E-01	FAIL ABUN
TH-229	2.672E-03	4.088E-01	3.463E-01	2.086E-01	FAIL ABUN
PA-231	4.732E-01	1.231E+00	1.093E+00	6.283E-01	FAIL ABUN
TH-231	-1.121E+00	5.796E-01	4.444E-01	2.957E-01	FAIL ABUN
U-231	3.233E-01	9.141E-01	7.104E-01	4.664E-01	FAIL ABUN
PA-233	-1.329E-02	5.138E-02	4.443E-02	2.621E-02	FAIL ABUN
PA-234	-2.176E-01	2.569E-01	2.040E-01	1.311E-01	FAIL ABUN
PA-234M	4.154E+00	4.130E+00	3.688E+00	2.107E+00	NOT IDENT.
U-235	6.291E-02	1.816E-01	1.526E-01	9.266E-02	FAIL ABUN
NP-236	-3.542E-02	6.452E-02	5.425E-02	3.292E-02	NOT IDENT.
NP-239	-3.265E-02	1.545E-01	1.332E-01	7.883E-02	FAIL ABUN
AM-241	7.304E-02	1.650E-01	1.313E-01	8.421E-02	NOT IDENT.
CM-243	7.636E-02	7.996E-02	7.122E-02	4.080E-02	FAIL ABUN
AM-246	-5.929E-02	1.318E-01	1.079E-01	6.723E-02	NOT IDENT.
CM-247	-1.336E-03	2.926E-02	2.513E-02	1.493E-02	NOT IDENT.
CF-249	3.090E-02	3.249E-02	2.906E-02	1.658E-02	NOT IDENT.
CF-251	1.249E-02	1.016E-01	8.678E-02	5.185E-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	604.3940
46.50	604.3940
46.50	604.3940
48.70	645.7960
49.72	657.8650
51.35	610.5255
52.39	637.1743
52.97	645.1113
53.15	659.0184
53.44	660.2547
54.07	656.3757
56.28	714.8193
56.28	714.8222
57.37	0.0000
57.53	661.6477
57.53	661.6490
57.60	659.2663
57.98	645.6650
57.98	645.6650
59.32	666.2490
59.32	666.2490
59.40	666.3329
59.54	666.4802
59.72	668.1484
60.01	668.4532
61.10	697.7391
61.14	717.0417
61.30	717.2205
63.00	744.7283
63.29	745.0564
63.29	745.0564
63.58	745.3860
64.28	746.1754
65.12	854.0616
65.20	854.1631
65.20	854.1631
66.05	873.1582
66.72	891.9473
66.83	892.0967
66.91	913.1250
67.20	913.5129
67.20	913.5129
67.75	957.6406
67.85	957.7813
68.90	955.4990
68.90	955.4990
69.30	869.8195
69.67	851.5306
70.82	871.7134
70.82	871.7134
70.83	871.7275
72.80	934.4426
72.87	934.5334
72.87	934.5334
74.67	930.2611
74.81	930.4415
74.81	930.4415
74.81	930.4415
74.81	930.4415
74.81	930.4415
74.81	930.4415
74.97	930.6443
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77.11	933.3647
77.11	933.3647

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77.11	933.3647
77.11	933.3647
77.11	933.3647
77.11	933.3647
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79.80	814.0497
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80.30	875.4922
80.30	875.4922
80.57	814.8791
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81.07	815.4146
81.07	815.4146
81.07	815.4146
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83.78	913.1178
83.78	913.1178
83.78	913.1178
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84.90	742.8783
85.43	743.3785
86.29	744.1896
86.50	744.3880
86.54	744.4235
86.59	744.4709
86.72	744.5952
86.79	744.6573
86.94	744.7994
87.30	828.1006
87.30	828.1006
87.30	828.1006
87.30	828.1006
87.30	828.1006
87.30	828.1006
87.57	828.3802
87.88	828.7026
88.03	828.8573
88.36	829.1961
88.47	829.3113
89.95	830.8312
91.11	832.0155
92.29	833.2097
92.38	833.3018
92.38	833.3018
93.35	834.2789
94.00	834.9302
94.67	835.5931
94.67	835.5981
94.90	842.0311
94.90	842.0311
94.90	842.0311
94.90	842.0311
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95.87	762.2727
96.73	752.1704
97.43	648.5796
98.44	627.5426
98.44	627.5451
98.88	641.8867
99.55	642.3871
99.55	642.3871
99.86	708.3853
100.00	708.4989
100.10	708.5848
103.18	725.1055
103.76	659.9746
105.00	691.2923
105.31	714.0923
108.00	740.8207
109.28	692.6002

111.00	713.6393
111.00	713.6393
111.76	746.8234
112.95	707.2239
115.19	664.2953
116.30	655.1459
117.00	660.5936
117.00	660.5936
117.66	675.9612
121.11	632.4860
121.62	653.7782
121.78	655.8797
122.06	656.0677
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122.32	642.2568
122.32	642.2568
122.32	642.2568
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129.76	624.7122
131.20	691.6997
133.02	684.8439
133.54	678.7266
135.34	640.4421
136.00	616.5456
136.25	616.6943
136.48	626.9576
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140.51	0.0000
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142.65	667.2682
143.76	684.2693
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144.24	687.6320
144.24	687.6320
144.24	687.6320
145.22	659.6571
145.44	660.8115
147.16	718.1104
152.43	609.4818
152.70	603.4583
153.22	617.1066
154.21	618.6716
154.21	618.6716
154.21	618.6716
154.21	618.6716
155.03	622.2114
156.02	673.2717
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159.00	614.0263
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161.27	622.4774
162.32	625.1055
162.64	611.7955
163.35	598.6763
163.89	562.6198
165.85	638.4153
167.43	628.8472
171.28	570.2774
171.86	538.1583
172.10	538.2644
176.55	557.0007
176.60	557.0209
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185.71	518.7993
186.00	518.9192
190.27	527.6370
192.34	488.5394
193.63	543.2377
197.04	548.9045
198.01	533.3062
198.60	519.6668
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201.83	565.8442
202.84	538.2833
205.31	526.7606

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208.81	521.4401
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209.75	516.4124
210.97	534.0953
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216.55	522.1715
218.09	529.2327
222.10	468.8580
223.80	519.3954
226.40	464.8095
227.00	465.0017
227.08	462.8496
227.20	462.8885
228.16	519.8627
228.18	519.8701
228.18	519.8701
231.56	0.0000
235.69	532.8127
236.00	536.4301
236.00	536.4301
238.63	443.4192
238.63	443.4192
238.63	443.4192
238.63	443.4192
239.00	443.5271
240.98	444.1096
241.98	444.4025
241.98	444.4025
241.98	444.4025
244.69	373.7846
245.39	363.3717
247.94	388.7087
248.90	387.1825
249.79	396.5440
252.40	383.1812
252.85	389.9387
252.85	389.9387
254.15	0.0000
256.20	384.1077
256.20	384.1077
260.50	379.5821
260.90	399.7227
262.80	369.4587
264.65	346.4150
268.24	409.8183
268.79	379.5245
269.46	387.2913
269.46	387.2913
269.46	387.2913
269.46	387.2913
271.23	378.3010
273.65	443.4965
276.40	375.1180
277.35	358.7825
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277.60	361.0858
278.00	378.0513
278.60	371.8815
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279.53	402.7202
280.46	411.9583
281.68	377.9797
283.67	363.9741
284.30	360.4979
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285.90	360.8388
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286.10	359.9733
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290.80	353.7089
291.72	364.4860
293.26	0.0000
293.70	360.3653
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295.21	322.7891

295.21	322.7891
295.96	391.1572
296.50	391.2780
297.23	391.4407
298.57	391.7399
299.80	331.2401
299.80	331.2401
300.09	342.5825
300.09	342.5825
300.09	342.5825
300.12	342.5870
301.29	346.7268
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303.76	330.4623
303.91	330.4888
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304.40	321.4410
304.84	274.2810
306.84	337.6468
308.46	317.8998
311.98	332.2914
316.51	312.8772
318.01	301.1657
319.02	305.9369
319.41	309.6885
320.08	306.1152
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323.87	409.3045
323.87	409.3045
323.87	409.3045
325.23	370.7683
328.77	338.1285
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334.20	353.0447
334.20	353.0447
334.30	353.0632
338.28	302.5967
338.28	302.5967
338.28	302.5967
338.28	302.5967
338.32	302.6007
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338.32	302.6007
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340.57	242.3662
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351.92	232.8549
351.92	232.8549
351.92	232.8549
355.39	0.0000
356.01	239.6041
364.48	236.8537
366.43	245.5876
367.43	235.3129
367.94	0.0000
369.80	258.2969
374.96	271.2845
383.85	271.5084
387.95	242.4534
388.63	253.9891
391.69	270.6153
391.69	270.6153
392.90	275.5547
398.62	252.3156
400.65	258.3181
401.10	250.6900
401.81	229.6349
402.60	245.0982
404.84	291.5376
410.95	219.9955
411.60	233.5749
413.65	263.7422
414.70	225.2068
415.30	233.0039

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417.63	0.0000
418.52	233.3452
423.70	202.8361
427.08	226.4725
427.89	201.2742
432.53	221.1781
433.93	245.6877
439.47	206.2195
439.56	206.2273
439.89	204.3031
443.98	231.1083
444.90	221.4039
445.03	221.4176
445.03	221.4176
445.03	221.4176
445.03	221.4176
453.90	196.6968
463.38	167.8708
468.07	211.0781
473.00	186.3981
475.06	218.3108
475.35	226.2772
476.78	201.5850
477.59	194.7008
477.96	189.7619
482.03	198.0429
484.57	194.2645
487.03	185.4869
490.36	0.0000
492.35	184.8893
497.08	187.2465
507.63	0.0000
510.53	0.0000
510.84	195.3250
511.00	195.3368
511.85	199.7690
511.85	199.7690
513.99	184.8149
513.99	184.8149
520.41	186.9647
520.65	186.9828
527.90	172.3076
528.96	0.0000
529.64	185.6092
529.87	0.0000
531.02	174.5447
537.32	187.1715
543.00	181.4592
546.56	0.0000
549.76	180.9021
552.65	196.4438
555.20	183.3177
563.23	178.7281
563.90	180.8297
568.70	179.0892
569.32	171.9252
569.50	166.7896
569.67	166.7975
573.80	159.0958
574.00	151.7411
574.64	156.4433
578.91	179.0674
579.30	0.0000
583.14	158.3042
585.48	144.9766
591.81	166.0625
592.07	167.1161
593.00	154.7112
595.88	169.4189
600.56	185.0868
602.52	0.0000
602.71	159.7572
602.71	159.7572
603.60	175.4431
604.41	198.0806
604.70	198.0991
609.31	174.4000

609.31	174.4000
609.31	174.4000
609.31	174.4000
610.33	160.1839
612.46	188.1826
614.37	156.9250
618.01	165.5027
621.84	175.1584
621.84	175.1584
631.29	162.0497
633.02	178.9897
633.10	178.9939
634.78	162.2414
635.90	154.9242
636.97	138.1129
645.85	146.9850
646.12	135.3656
656.30	145.0215
657.75	150.3998
657.90	0.0000
661.65	164.7670
661.65	164.7670
664.57	0.0000
666.33	129.5322
666.33	129.5322
675.00	127.0505
677.61	163.4889
685.20	152.1057
692.80	178.2474
695.00	186.9693
696.49	175.2330
696.49	175.2330
697.00	164.5086
697.49	166.6855
698.33	167.8028
698.50	168.8900
699.00	171.0686
702.63	198.1908
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706.58	0.0000
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713.82	167.5408
717.42	102.2011
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721.93	0.0000
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722.78	168.0062
722.78	168.0062
722.89	168.0138
722.95	168.0176
723.30	175.2639
724.18	135.5499
727.18	132.0571
733.00	142.9061
735.90	125.1552
739.58	128.5612
742.81	131.9597
744.21	144.0173
747.13	137.5941
751.79	135.5977
752.31	135.6189
753.82	131.3057
755.35	142.3113
756.15	145.6311
756.87	150.0444
763.93	166.4557
765.79	138.3631
766.42	138.3877
766.84	138.4062
776.49	110.1587
778.00	144.6474
778.57	139.9852
778.89	139.9977
783.80	116.8327
785.46	117.8099
792.07	102.7550

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796.30	113.9590
798.80	121.9614
801.93	138.1011
805.60	112.0146
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818.51	122.6462
819.60	138.4840
826.30	152.7123
828.27	0.0000
831.60	151.0741
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836.80	0.0000
846.75	146.0913
848.13	137.7168
856.28	0.0000
856.80	138.4452
860.37	114.6778
867.32	117.8536
867.82	117.2633
871.10	131.0365
873.19	113.1885
874.81	130.2257
875.33	0.0000
876.40	127.4469
879.36	122.8245
880.27	132.3067
880.51	131.3701
881.50	123.8413
883.24	116.3310
884.67	127.7298
889.25	130.7283
896.60	131.9329
898.02	126.2840
899.00	122.5175
903.28	135.2890
911.07	120.8643
911.07	120.8643
911.07	120.8643
919.63	122.2240
920.93	114.6240
925.00	114.7437
925.24	115.7072
926.50	104.2676
935.52	114.0974
937.48	141.9718
944.10	113.3858
946.00	126.9001
949.00	95.2476
962.29	95.5659
964.01	95.6061
966.15	95.6585
968.20	95.7068
969.11	95.7290
969.11	95.7290
969.11	95.7290
977.42	102.9859
980.50	99.7391
983.50	105.8638
989.30	106.8982
996.32	144.0736
1001.03	115.0015
1001.68	108.1952
1004.76	152.1724
1021.30	0.0000
1024.50	0.0000
1034.80	101.2020
1036.00	93.3649
1037.82	99.3068
1038.57	103.2568
1038.76	0.0000
1045.16	109.3289
1046.59	106.4092
1048.07	110.3867

1050.47	95.6580
1050.47	95.6580
1062.04	96.9074
1063.62	122.6629
1076.63	114.1016
1077.35	108.1662
1078.86	134.0112
1085.78	120.3058
1099.22	127.6563
1112.02	133.7415
1112.84	121.7638
1115.52	120.1172
1120.29	137.4275
1120.29	137.4275
1120.29	137.4275
1120.29	137.4275
1120.51	137.4330
1121.28	139.1735
1124.00	0.0000
1129.67	131.5437
1131.51	0.0000
1147.95	0.0000
1167.94	149.8669
1173.22	114.5587
1175.09	113.5905
1177.93	131.9254
1189.05	147.5016
1204.90	166.3693
1205.75	0.0000
1213.00	139.0491
1221.42	139.2982
1230.97	182.6789
1235.34	154.0833
1236.41	0.0000
1238.25	136.7017
1246.25	135.8994
1260.41	0.0000
1271.85	101.4254
1274.45	119.0804
1274.54	119.0851
1291.56	99.7500
1298.22	0.0000
1312.09	68.8601
1325.50	76.3654
1325.50	76.3654
1332.49	76.4724
1333.61	66.0095
1360.21	58.9805
1362.66	0.0000
1365.15	69.5771
1368.21	60.1265
1368.53	0.0000
1376.25	71.8405
1384.27	61.3701
1394.10	54.0630
1395.20	68.9197
1407.95	53.1413
1434.06	44.8574
1436.60	49.1520
1457.56	0.0000
1460.81	45.0796
1489.15	24.8137
1509.49	24.9036
1596.49	21.4368
1620.62	28.3845
1678.03	0.0000
1691.02	22.9746
1691.02	22.9746
1706.46	0.0000
1750.46	0.0000
1764.49	23.7318
1764.49	23.7318
1764.49	23.7318
1764.49	23.7318
1770.23	61.0796
1771.40	31.0301
1791.20	0.0000
1808.65	21.4583

1836.01

24.4873

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875002

Total Uranium Activity	1.3547E+01	ug/g
Total Uranium Counting Unc.	6.6046E+00	ug/g
Total Uranium Tpu	3.3697E-06	ug/g
Total Uranium Mda	3.0539E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417              *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 952643                          SAMPLE ID   : G246875002
*  ANALYST       : MXR1                             DETECTOR    : GAM23
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00          COUNT TIME   : 0 04:00:00.00
*  ANALYSIS DATE : 23-FEB-2010 23:21:25.95          SAMPLE ALQT  : 122.680 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.816E+00
GROSS GAMMA ERROR (pCi/GRAM )   : 1.274E+00
GROSS GAMMA MDA (pCi/GRAM )     : 2.708E+00
GROSS GAMMA DLC (pCi/GRAM )     : 1.325E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 03:50:55.75

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875003.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 23:49:24
Sample ID          : G246875003           Sample quantity  : 1.26510E+02 GRAM
Detector name      : GAM20                Detector geometry: CAN
Elapsed live time  : 0 04:00:00.00         Elapsed real time: 0 04:01:06.51 0.5%
Energy tolerance   : 1.50000 keV           Analyst Initials : MXR1
Abundance limit    : 75.00000              Sensitivity        : 5.00000
Batch ID           : 952643                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	63.58*	356	1285	0.86	127.15	123	9	2.47E-02	19.4	
2	3	75.01*	938	958	1.03	149.96	145	21	6.51E-02	6.2	2.35E+00
3	3	77.26*	1625	866	1.02	154.47	145	21	1.13E-01	4.0	
4	5	87.32	826	1055	1.44	174.55	165	27	5.74E-02	7.9	8.31E-01
5	5	90.11	461	802	1.22	180.12	165	27	3.20E-02	11.5	
6	5	92.92*	1043	886	1.40	185.73	165	27	7.25E-02	6.2	
7	0	129.05	110	682	0.65	257.89	255	7	7.64E-03	40.5	
8	0	154.38	129	486	1.88	308.47	305	7	8.99E-03	29.8	
9	0	185.95*	544	887	1.21	371.53	365	12	3.78E-02	12.2	
10	0	209.28	217	628	1.14	418.13	414	9	1.50E-02	22.0	
11	4	238.81*	2795	371	1.14	477.11	470	19	1.94E-01	2.3	2.05E+00
12	4	241.71*	638	579	1.79	482.91	470	19	4.43E-02	9.7	
13	0	270.99	183	510	1.33	541.40	535	11	1.27E-02	25.1	
14	0	277.88	68	368	0.74	555.16	551	8	4.73E-03	50.4	
15	0	295.43*	838	406	1.16	590.21	585	11	5.82E-02	5.9	
16	0	300.10	177	265	1.09	599.55	596	7	1.23E-02	17.1	
17	0	328.48	137	446	1.28	656.25	650	11	9.53E-03	31.0	
18	0	338.53	507	374	1.20	676.32	671	10	3.52E-02	8.4	
19	0	352.25*	1452	381	1.28	703.73	698	13	1.01E-01	3.9	
20	0	463.50	157	212	1.26	926.03	922	10	1.09E-02	19.1	
21	0	511.13*	292	267	1.72	1021.22	1014	15	2.03E-02	15.8	
22	0	583.72*	919	251	1.38	1166.31	1160	14	6.38E-02	5.0	
23	0	609.87*	1009	194	1.43	1218.57	1213	11	7.01E-02	4.2	
24	0	662.07	234	152	1.39	1322.92	1318	9	1.62E-02	11.6	
25	0	727.92	222	207	1.44	1454.56	1448	13	1.54E-02	15.0	
26	0	795.91	135	140	2.04	1590.50	1585	13	9.37E-03	20.0	
27	0	861.79*	107	137	1.11	1722.25	1715	13	7.46E-03	25.0	
28	0	911.92*	594	102	1.57	1822.51	1816	12	4.12E-02	5.5	
29	0	936.57	89	180	1.83	1871.81	1862	20	6.18E-03	38.4	
30	4	965.71	82	125	1.72	1930.10	1923	32	5.73E-03	25.9	2.05E+00
31	4	969.83*	393	100	1.71	1938.35	1923	32	2.73E-02	7.1	
32	0	1121.14	224	188	1.56	2241.04	2232	16	1.55E-02	15.3	
33	0	1239.17	99	167	1.66	2477.23	2471	14	6.85E-03	29.6	
34	0	1379.24	52	59	1.86	2757.58	2749	14	3.60E-03	34.5	
35	0	1461.96	3292	68	1.90	2923.18	2915	16	2.29E-01	1.8	
36	0	1510.49	38	20	0.67	3020.36	3015	12	2.67E-03	28.6	
37	0	1591.74	69	42	5.03	3183.07	3173	19	4.81E-03	25.6	
38	0	1622.06	29	21	1.28	3243.77	3237	12	2.02E-03	36.5	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1633.25	22	35	1.08	3266.19	3255	13	1.50E-03	61.0	
40	0	1730.79	59	10	2.27	3461.56	3454	14	4.07E-03	17.5	
41	0	1765.51	208	11	2.27	3531.10	3522	15	1.45E-02	7.8	
42	0	1849.34	21	20	1.50	3699.06	3694	9	1.45E-03	44.6	

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

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875003.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 23-FEB-2010 23:49:24
Sample ID        : G246875003             Sample quantity  : 126.51 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA20                 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00           Elapsed real time: 0 04:01:06.51   0.5%
Peak Width (FWHM): 3.00                    Confidence level  : 5.00 %
Energy tolerance : 1.50 keV                Half life ratio   : 8.00
Errors propagated: Yes                      Systematic Error  : 0.00 %
Efficiency type  : Empirical                Efficiencies at   : Peak Energy
Abundance limit  : 75.00                   WTM error limit   : 3.00

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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	*	3.656E+01	3.457E+00	3.314E-01	2.890E-02	110.317
CD-109	+	88.03	*	4.851E+00	8.923E-01	7.009E-01	6.628E-02	6.921
SN-126	+	64.28		1.177E+00	4.881E-01	4.409E-01	6.383E-02	2.670
	+	86.94		1.984E+00	8.816E-01	2.886E-01	1.198E-01	6.873
	+	87.57	*	4.772E-01	8.778E-02	6.915E-02	6.504E-03	6.901
BA-137M	+	661.65	*	1.584E-01	3.995E-02	4.132E-02	4.146E-03	3.833
CS-137	+	661.65	*	1.674E-01	4.224E-02	4.367E-02	4.389E-03	3.833
RE-188	+	155.03	*	2.171E-01	1.305E-01	1.785E-01	1.533E-02	1.216
		477.96		1.738E+00	2.148E+00	3.618E+00	3.288E-01	0.481
		633.10		1.759E+00	1.958E+00	3.280E+00	3.261E-01	0.536
HG-203		70.83		-4.985E-01	7.090E-01	9.991E-01	1.305E-01	-0.499
		72.87		6.898E-01	4.170E-01	6.247E-01	7.960E-02	1.104
		82.60		1.239E+00	8.981E-01	1.086E+00	1.507E-01	1.141
TL-208	+	279.20	*	3.441E-02	3.485E-02	4.086E-02	4.156E-03	0.842
	+	277.35		3.149E-01	3.201E-01	3.781E-01	5.028E-02	0.833
	+	510.84		6.706E-01	2.281E-01	1.374E-01	1.717E-02	4.881
	+	583.14	*	6.009E-01	8.633E-02	3.934E-02	4.044E-03	15.275
	+	860.37		6.556E-01	3.356E-01	3.034E-01	3.215E-02	2.161
BI-211		72.87		3.498E+00	2.086E+00	3.168E+00	2.502E-01	1.104
	+	351.07	*	4.198E+00	5.186E-01	2.278E-01	2.183E-02	18.426
BI-212	+	727.18	*	1.238E+00	3.971E-01	3.275E-01	3.717E-02	3.780
		785.46		1.146E+00	1.223E+00	2.130E+00	2.164E-01	0.538
PB-212	+	1620.62		1.354E+00	9.942E-01	9.217E-01	7.761E-02	1.469
	+	74.81		2.146E+00	3.749E-01	3.285E-01	4.054E-02	6.532
	+	77.11		2.137E+00	2.456E-01	1.890E-01	1.563E-02	11.307
	+	87.30		2.207E+00	4.621E-01	3.204E-01	4.391E-02	6.889
	+	238.63	*	1.772E+00	2.050E-01	5.981E-02	6.360E-03	29.629
	+	300.09		1.722E+00	6.197E-01	7.831E-01	8.954E-02	2.199
PO-212	+	74.81		2.146E+00	3.749E-01	3.285E-01	4.054E-02	6.532
	+	77.11		2.137E+00	2.456E-01	1.890E-01	1.563E-02	11.307
	+	87.30		2.207E+00	4.621E-01	3.204E-01	4.391E-02	6.889
		115.19		-5.783E-02	2.485E+00	3.998E+00	3.358E-01	-0.014
	+	238.63	*	1.772E+00	2.050E-01	5.981E-02	6.360E-03	29.629
	+	300.09		1.722E+00	6.197E-01	7.831E-01	8.954E-02	2.199

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-214	+	609.31	*	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
	+	1120.29		1.412E+00	4.570E-01	3.156E-01	3.415E-02	4.473
	+	1764.49		1.780E+00	3.123E-01	2.165E-01	1.779E-02	8.223
PB-214	+	74.81		3.697E+00	6.107E-01	5.660E-01	6.197E-02	6.532
	+	77.11		3.664E+00	5.052E-01	3.240E-01	3.644E-02	11.307
	+	87.30		3.781E+00	7.541E-01	5.488E-01	6.660E-02	6.889
	+	241.98		2.429E+00	5.438E-01	3.600E-01	4.026E-02	6.747
	+	295.21		1.435E+00	2.379E-01	1.421E-01	1.658E-02	10.098
PO-214	+	351.92	*	1.460E+00	1.958E-01	7.512E-02	8.186E-03	19.439
	+	74.81		3.697E+00	6.107E-01	5.660E-01	6.197E-02	6.532
	+	77.11		3.664E+00	5.052E-01	3.240E-01	3.644E-02	11.307
	+	87.30		3.781E+00	7.541E-01	5.488E-01	6.660E-02	6.889
	+	241.98		2.429E+00	5.438E-01	3.600E-01	4.026E-02	6.747
PO-216	+	295.21		1.435E+00	2.379E-01	1.421E-01	1.658E-02	10.098
	+	351.92	*	1.460E+00	1.958E-01	7.512E-02	8.186E-03	19.439
	+	74.81		2.146E+00	3.749E-01	3.285E-01	4.054E-02	6.532
	+	77.11		2.137E+00	2.456E-01	1.890E-01	1.563E-02	11.307
	+	87.30		2.207E+00	4.621E-01	3.204E-01	4.391E-02	6.889
PO-218	+	238.63	*	1.772E+00	2.050E-01	5.981E-02	6.360E-03	29.629
	+	300.09		1.722E+00	6.197E-01	7.831E-01	8.954E-02	2.199
	+	74.81		3.697E+00	6.107E-01	5.660E-01	6.197E-02	6.532
	+	77.11		3.664E+00	5.052E-01	3.240E-01	3.644E-02	11.307
	+	87.30		3.781E+00	7.541E-01	5.488E-01	6.660E-02	6.889
RA-224	+	241.98		2.429E+00	5.438E-01	3.600E-01	4.026E-02	6.747
	+	295.21		1.435E+00	2.379E-01	1.421E-01	1.658E-02	10.098
	+	351.92	*	1.460E+00	1.958E-01	7.512E-02	8.186E-03	19.439
	+	240.98	*	4.606E+00	9.983E-01	6.805E-01	6.578E-02	6.769
	+	609.31	*	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
AC-228	+	1120.29		1.412E+00	4.570E-01	3.156E-01	3.415E-02	4.473
	+	1764.49		1.780E+00	3.123E-01	2.165E-01	1.779E-02	8.223
	+	338.32		1.615E+00	7.219E-01	2.554E-01	1.058E-01	6.321
RA-228	+	911.07	*	1.710E+00	2.821E-01	1.450E-01	1.776E-02	11.791
	+	969.11		1.993E+00	5.511E-01	2.370E-01	5.625E-02	8.407
	+	338.32		1.615E+00	7.219E-01	2.554E-01	1.058E-01	6.321
TH-228	+	911.07	*	1.710E+00	2.821E-01	1.450E-01	1.776E-02	11.791
	+	969.11		1.993E+00	5.511E-01	2.370E-01	5.625E-02	8.407
	+	74.81		2.177E+00	3.223E-01	3.333E-01	2.713E-02	6.532
TH-230	+	77.11		2.169E+00	2.492E-01	1.918E-01	1.586E-02	11.307
	+	87.30		2.239E+00	4.119E-01	3.250E-01	3.047E-02	6.889
	+	238.63	*	1.798E+00	2.080E-01	6.068E-02	6.453E-03	29.629
TH-232	+	300.09		1.748E+00	1.198E+00	7.946E-01	4.725E-01	2.199
	+	609.31	*	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
	+	1120.29		1.412E+00	4.570E-01	3.156E-01	3.415E-02	4.473
TH-234	+	1764.49		1.780E+00	3.123E-01	2.165E-01	1.778E-02	8.223
	+	338.32		1.615E+00	3.110E-01	2.554E-01	2.393E-02	6.321
	+	911.07	*	1.710E+00	2.821E-01	1.450E-01	1.776E-02	11.791
TH-234	+	969.11		1.993E+00	5.511E-01	2.370E-01	5.625E-02	8.407
	+	63.29	*	2.973E+00	1.266E+00	1.155E+00	2.007E-01	2.575
	+	92.38		3.989E+00	8.835E-01	4.613E-01	8.458E-02	8.649

Sample ID : G246875003

Acquisition date : 23-FEB-2010 23:49:24

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
	+	1120.29		1.412E+00	4.570E-01	3.156E-01	3.415E-02	4.473
	+	1764.49		1.780E+00	3.123E-01	2.165E-01	1.778E-02	8.223
NP-237	+	86.50	*	1.401E+00	3.874E-01	2.045E-01	4.626E-02	6.853
		95.87		-3.948E-01	6.960E-01	9.563E-01	2.367E-01	-0.413
U-238	+	63.29	*	2.973E+00	1.266E+00	1.155E+00	2.007E-01	2.575
	+	92.38		3.989E+00	6.152E-01	4.613E-01	4.216E-02	8.649
AM-243	+	74.67	*	3.479E-01	5.136E-02	5.337E-02	4.296E-03	6.518
	+	86.72		5.255E+01	9.667E+00	7.657E+00	7.123E-01	6.863
		117.66		-1.036E+00	2.629E+00	4.177E+00	3.497E-01	-0.248
		142.18		-1.398E+01	1.304E+01	1.954E+01	1.650E+00	-0.715
ANH-511	+	511.00	*	1.449E-01	4.778E-02	2.968E-02	2.766E-03	4.880

---- 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	*	7.046E-02	2.247E-01	3.703E-01	3.599E-02	0.190
NA-22		1274.54	*	-1.306E-02	3.153E-02	4.920E-02	4.076E-03	-0.265
NA-24		1368.53	*	-1.040E-01	3.153E-02	Half-Life too short		
AL-26		1129.67		1.091E+00	1.209E+00	2.074E+00	1.756E-01	0.526
		1808.65	*	6.890E-03	1.757E-02	3.059E-02	2.485E-03	0.225
TI-44		67.85		-1.202E-02	3.005E-02	4.310E-02	3.242E-03	-0.279
	+	78.38	*	3.944E-01	4.532E-02	5.295E-02	4.444E-03	7.449
SC-46		889.25	*	-1.598E-02	2.871E-02	4.503E-02	4.489E-03	-0.355
	+	1120.51		2.405E-01	7.621E-02	9.181E-02	7.854E-03	2.620
V-48		944.10		-3.180E-01	6.732E-01	9.130E-01	8.909E-02	-0.348
		983.50	*	2.331E-02	4.789E-02	8.107E-02	7.748E-03	0.288
		1312.09		-2.397E-02	5.603E-02	8.684E-02	7.245E-03	-0.276
CR-51		320.08	*	-2.804E-02	2.430E-01	4.008E-01	4.018E-02	-0.070
MN-52		744.21		4.552E-02	1.467E-01	2.494E-01	2.534E-02	0.183
		848.13		2.136E+00	4.289E+00	7.317E+00	7.372E-01	0.292
	+	935.52		4.685E-01	3.629E-01	3.037E-01	2.975E-02	1.543
		1246.25		5.766E+00	5.962E+00	8.972E+00	7.371E-01	0.643
		1333.61		-1.406E+00	3.416E+00	5.288E+00	4.430E-01	-0.266
		1434.06	*	-9.584E-02	1.233E-01	1.877E-01	1.588E-02	-0.511
MN-54		834.83	*	1.720E-02	2.649E-02	4.542E-02	4.588E-03	0.379
CO-56		846.75	*	-5.301E-03	2.698E-02	4.418E-02	4.452E-03	-0.120
		977.42		8.170E-02	2.302E+00	3.284E+00	3.149E-01	0.025
		1037.82		5.235E-02	2.164E-01	3.596E-01	3.470E-02	0.146
		1175.09		2.538E-01	1.672E+00	2.736E+00	2.201E-01	0.093
	+	1238.25		1.737E-01	1.039E-01	1.225E-01	1.037E-02	1.417
		1360.21		1.800E-01	6.275E-01	1.079E+00	9.072E-02	0.167
		1771.40		3.708E-02	1.461E-01	2.184E-01	1.791E-02	0.170
CO-57		122.06	*	1.138E-02	1.726E-02	2.826E-02	2.359E-03	0.403
		136.48		9.314E-03	1.443E-01	2.313E-01	2.094E-02	0.040
CO-58		810.76	*	-3.921E-02	2.692E-02	4.014E-02	4.076E-03	-0.977
FE-59		142.65		-1.322E-01	1.961E+00	3.044E+00	2.571E-01	-0.043
		192.34		-2.499E-01	6.180E-01	1.034E+00	1.419E-01	-0.242

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60	1099.22	*		-9.382E-04	6.676E-02	1.086E-01	1.025E-02	-0.009
	1291.56			2.341E-02	7.923E-02	1.307E-01	1.243E-02	0.179
	1173.22			1.445E-02	3.294E-02	5.484E-02	4.409E-03	0.263
	1332.49	*		-7.476E-03	2.868E-02	4.502E-02	3.771E-03	-0.166
ZN-65	1115.52	*		-4.104E-02	7.959E-02	1.067E-01	9.188E-03	-0.384
GE-68	1077.35	*		-4.306E-01	9.356E-01	1.479E+00	1.320E-01	-0.291
AS-73	53.44	*		1.958E-01	3.988E-01	6.660E-01	4.944E-02	0.294
AS-74	595.88	*		-5.565E-02	6.554E-02	9.946E-02	9.734E-03	-0.560
SE-75	634.78			1.823E-01	2.329E-01	4.075E-01	4.053E-02	0.447
	66.05			-3.604E+00	3.113E+00	4.334E+00	4.100E-01	-0.832
	96.73			-3.254E-01	5.585E-01	7.868E-01	1.087E-01	-0.414
	121.11			4.863E-02	9.264E-02	1.510E-01	1.663E-02	0.322
	136.00			-6.843E-03	2.736E-02	4.342E-02	3.669E-03	-0.158
	198.60			-4.077E-01	1.263E+00	2.014E+00	2.027E-01	-0.202
	264.65	*		-5.390E-04	2.994E-02	4.643E-02	4.597E-03	-0.012
	279.53			7.287E-02	7.783E-02	1.193E-01	1.221E-02	0.611
BR-77	303.91			-8.468E-01	1.588E+00	2.247E+00	2.780E-01	-0.377
	400.65			8.517E-03	1.765E-01	2.898E-01	3.180E-02	0.029
	87.88	+		8.851E+02	1.628E+02	1.952E+02	1.843E+01	4.535
	200.40			-2.945E+00	9.027E+01	1.526E+02	1.404E+01	-0.019
	239.00	+		2.401E+02	2.561E+01	2.304E+01	2.222E+00	10.422
	249.79			3.789E+00	3.630E+01	6.108E+01	5.954E+00	0.062
	281.68			-4.295E+01	5.607E+01	7.866E+01	7.822E+00	-0.546
	297.23			2.774E+02	5.606E+01	7.307E+01	7.189E+00	3.796
	303.76			-6.047E+01	1.144E+02	1.622E+02	1.586E+01	-0.373
	439.47			4.751E+01	8.044E+01	1.348E+02	1.185E+01	0.352
	484.57			-1.234E+02	1.348E+02	2.069E+02	1.890E+01	-0.596
	520.65	*		-1.699E+00	5.957E+00	9.456E+00	8.870E-01	-0.180
	574.64			3.434E+01	1.273E+02	2.072E+02	2.007E+01	0.166
	578.91			2.684E+01	5.589E+01	8.113E+01	7.876E+00	0.331
	585.48			1.796E+03	2.392E+02	3.365E+02	3.277E+01	5.337
	755.35			6.300E+01	1.029E+02	1.768E+02	1.797E+01	0.356
SR-82	817.79			-1.808E+01	7.582E+01	1.240E+02	1.256E+01	-0.146
	698.33			1.305E+01	2.401E+01	4.127E+01	4.173E+00	0.316
	776.49	*		-1.709E-01	2.632E-01	4.215E-01	4.283E-02	-0.406
	1395.20			1.058E+00	6.506E+00	1.107E+01	9.342E-01	0.096
RB-83	520.41	*		5.617E-04	4.586E-02	7.409E-02	6.949E-03	0.008
	529.64			8.126E-02	7.166E-02	1.222E-01	1.153E-02	0.665
	552.65			-8.311E-03	1.313E-01	2.104E-01	2.013E-02	-0.040
	881.50	*		2.031E-02	4.761E-02	8.076E-02	8.070E-03	0.252
KR-85	513.99	*		1.621E+01	5.693E+00	9.244E+00	8.632E-01	1.754
SR-85	513.99	*		8.262E-02	2.901E-02	4.711E-02	4.399E-03	1.754
RB-86	1076.63	*		-4.891E-01	5.781E-01	8.873E-01	7.922E-02	-0.551
Y-88	898.02			-1.432E-02	2.827E-02	4.507E-02	4.497E-03	-0.318
ZR-88	1836.01	*		-1.082E-02	2.431E-02	3.759E-02	3.033E-03	-0.288
	392.90	*		1.147E-03	2.191E-02	3.602E-02	3.013E-03	0.032
	1204.90	*		-2.581E+00	1.404E+01	2.246E+01	1.823E+00	-0.115
	702.63	*		1.261E-02	2.386E-02	4.098E-02	4.146E-03	0.308
NB-94	871.10			1.692E-02	2.372E-02	4.087E-02	4.096E-03	0.414

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	765.79	*		-4.349E-03	3.043E-02	5.039E-02	5.122E-03	-0.086
NB-95M	235.69	*		9.472E-03	8.851E-02	1.318E-01	1.416E-02	0.072
ZR-95	724.18			-2.123E-02	7.468E-02	1.064E-01	1.147E-02	-0.199
	756.15	*		4.887E-02	5.199E-02	9.050E-02	9.877E-03	0.540
NB-97	657.90	*		3.327E-03	5.199E-02	Half-Life	too short	
	1024.50			-2.171E+00	5.199E-02	Half-Life	too short	
ZR-97	254.15			-5.511E-01	5.199E-02	Half-Life	too short	
	355.39			8.466E-01	5.199E-02	Half-Life	too short	
	507.63	*		-1.591E-01	5.199E-02	Half-Life	too short	
	602.52			-2.756E+00	5.199E-02	Half-Life	too short	
	1021.30			-1.256E+00	5.199E-02	Half-Life	too short	
	1147.95			1.797E+00	5.199E-02	Half-Life	too short	
	1362.66			9.143E-01	5.199E-02	Half-Life	too short	
	1750.46			1.441E+00	5.199E-02	Half-Life	too short	
MO-99	140.51			-6.176E+00	1.601E+01	2.485E+01	6.866E+00	-0.249
	181.06			-9.841E-01	1.153E+01	1.612E+01	2.972E+00	-0.061
	366.43			3.133E+00	5.003E+01	8.258E+01	7.341E+00	0.038
	739.58	*		-3.108E+00	6.777E+00	1.100E+01	1.771E+00	-0.283
	778.00			-3.093E+01	2.127E+01	3.210E+01	3.262E+00	-0.964
TC-99M	140.51	*		-2.066E+09	2.127E+01	Half-Life	too short	
RH-101	127.23			9.830E-03	2.465E-02	3.575E-02	2.982E-03	0.275
	198.01	*		-5.242E-03	2.315E-02	3.705E-02	3.396E-03	-0.141
	325.23			-9.281E-02	1.689E-01	2.377E-01	2.270E-02	-0.390
RH-102	418.52			9.861E-02	1.941E-01	3.246E-01	2.793E-02	0.304
	475.06	*		-1.869E-02	2.028E-02	3.118E-02	2.827E-03	-0.599
	631.29			-2.143E-02	3.809E-02	5.849E-02	5.810E-03	-0.366
	697.49			6.277E-02	5.479E-02	9.635E-02	9.741E-03	0.651
	766.84			9.205E-02	7.819E-02	1.369E-01	1.391E-02	0.672
	1046.59			2.620E-02	7.636E-02	1.278E-01	1.170E-02	0.205
	1112.84			8.036E-02	1.967E-01	2.862E-01	2.468E-02	0.281
RU-103	497.08	*		-2.954E-02	2.809E-02	4.228E-02	6.147E-03	-0.699
+	610.33			1.328E+01	2.566E+00	2.117E+00	3.673E-01	6.275
RH-106	511.85	+		7.227E-01	2.384E-01	3.180E-01	2.965E-02	2.273
	621.84	*		-1.051E-01	2.178E-01	3.363E-01	4.781E-02	-0.312
	1050.47			-1.257E+00	1.627E+00	2.510E+00	2.291E-01	-0.501
RU-106	511.85	+		7.227E-01	2.384E-01	3.180E-01	2.965E-02	2.273
	621.84	*		-1.051E-01	2.175E-01	3.363E-01	3.329E-02	-0.312
	1050.47			-1.257E+00	1.627E+00	2.510E+00	2.291E-01	-0.501
AG-108M	433.93	*		-5.769E-04	2.285E-02	3.722E-02	3.378E-03	-0.015
	614.37			1.185E-02	3.069E-02	4.403E-02	4.476E-03	0.269
	722.95			3.305E-03	3.223E-02	4.730E-02	4.933E-03	0.070
AG-110M	657.75	*		1.914E-03	2.526E-02	3.727E-02	3.818E-03	0.051
	677.61			1.163E-01	2.038E-01	3.523E-01	3.621E-02	0.330
	706.67			-7.267E-02	1.477E-01	2.411E-01	2.490E-02	-0.301
	763.93			-1.027E-01	1.135E-01	1.791E-01	1.858E-02	-0.573
	884.67			-5.834E-03	3.461E-02	5.658E-02	5.785E-03	-0.103
+	937.48			2.213E-01	1.715E-01	1.384E-01	1.393E-02	1.599
	1384.27			-2.894E-02	1.320E-01	1.763E-01	1.530E-02	-0.164
IN-111	171.28			9.052E-02	6.086E-01	9.693E-01	8.531E-02	0.093

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	245.39	*		5.140E-03	6.610E-01	9.778E-01	9.492E-02	0.005
IN-113M	391.69	*		-1.613E-02	3.161E-02	5.064E-02	4.368E-03	-0.319
SN-113	391.69	*		-1.613E-02	3.161E-02	5.064E-02	4.368E-03	-0.319
IN-114M	190.27	*		3.377E-02	1.292E-01	1.956E-01	1.772E-02	0.173
CD-115	260.90			-3.849E+01	7.094E+01	1.162E+02	1.143E+01	-0.331
	492.35			1.059E+01	2.095E+01	3.480E+01	3.198E+00	0.304
	527.90	*		-6.174E+00	6.426E+00	9.761E+00	9.201E-01	-0.633
SN-117M	156.02			-1.651E-02	1.671E+00	2.361E+00	2.030E-01	-0.007
	158.56	*		2.440E-02	4.119E-02	5.964E-02	5.147E-03	0.409
SB-122	563.90	*		1.822E+00	1.230E+00	2.118E+00	2.039E-01	0.860
	692.80			-2.727E+01	2.555E+01	4.016E+01	4.057E+00	-0.679
I-123	159.00	*		9.946E-01	2.555E+01	Half-Life	too short	
	528.96			5.277E+01	2.555E+01	Half-Life	too short	
TE-123M	159.00	*		1.025E-02	2.072E-02	3.187E-02	2.769E-03	0.322
I-124	602.71	*		-6.186E-01	4.551E-01	6.357E-01	6.241E-02	-0.973
	722.78			5.193E-01	3.067E+00	4.523E+00	4.587E-01	0.115
	1325.50			-1.521E+01	2.342E+01	3.552E+01	2.971E+00	-0.428
	1376.25			3.176E+01	1.964E+01	3.350E+01	2.822E+00	0.948
+	1509.49			1.799E+01	1.040E+01	1.683E+01	1.427E+00	1.069
	1691.02			-8.690E-01	1.858E+00	2.839E+00	2.368E-01	-0.306
SB-124	602.71			-3.934E-02	2.894E-02	4.042E-02	3.969E-03	-0.973
	645.85			-4.897E-03	3.327E-01	5.601E-01	5.845E-02	-0.009
	709.31			8.152E-01	1.971E+00	3.368E+00	3.411E-01	0.242
	713.82			-4.722E-01	1.147E+00	1.876E+00	2.470E-01	-0.252
	722.78			4.786E-02	2.827E-01	4.169E-01	4.295E-02	0.115
	968.20			2.067E+01	3.278E+00	5.432E+00	5.237E-01	3.806
	1045.16			5.723E-01	1.650E+00	2.761E+00	2.531E-01	0.207
	1325.50			-1.498E+00	2.306E+00	3.497E+00	2.925E-01	-0.428
	1368.21			-5.777E-01	1.055E+00	1.674E+00	2.234E-01	-0.345
	1436.60			2.778E-01	2.142E+00	3.631E+00	3.074E-01	0.076
	1691.02	*		-1.889E-02	4.040E-02	6.173E-02	5.365E-03	-0.306
SB-125	427.89	*		-5.703E-03	6.414E-02	1.043E-01	9.229E-03	-0.055
+	463.38			7.039E-01	2.777E-01	3.808E-01	3.666E-02	1.849
	600.56			-1.936E-02	1.266E-01	2.009E-01	2.084E-02	-0.096
	635.90			6.620E-02	1.825E-01	3.133E-01	3.308E-02	0.211
TE-125M	109.28	*		2.259E+00	6.228E+00	1.015E+01	1.037E+00	0.223
I-126	388.63			4.725E-02	1.393E-01	2.319E-01	1.953E-02	0.204
	666.33	*		2.254E-02	1.413E-01	2.094E-01	2.104E-02	0.108
	753.82			1.611E-01	1.035E+00	1.743E+00	1.771E-01	0.092
SB-126	223.80			8.894E-01	2.641E+00	4.491E+00	4.260E-01	0.198
+	278.60			2.015E+00	2.041E+00	2.824E+00	2.810E-01	0.714
+	296.50			1.383E+01	2.123E+00	2.533E+00	2.494E-01	5.458
	414.70			1.239E-02	5.104E-02	8.437E-02	7.229E-03	0.147
	415.30			7.140E-01	4.207E+00	6.932E+00	5.943E-01	0.103
	555.20			-9.119E-01	2.628E+00	4.137E+00	3.965E-01	-0.220
	573.80			3.810E-01	7.260E-01	1.197E+00	1.159E-01	0.318
	593.00			1.613E-01	6.203E-01	1.009E+00	9.858E-02	0.160
	656.30			1.393E+00	2.286E+00	3.512E+00	3.518E-01	0.397
	666.33			9.407E-03	5.899E-02	8.739E-02	8.780E-03	0.108

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	675.00			-8.677E-01	1.322E+00	2.138E+00	2.153E-01	-0.406
	695.00			1.777E-02	5.290E-02	9.018E-02	9.113E-03	0.197
	697.00			1.134E-01	1.853E-01	3.194E-01	3.229E-02	0.355
	720.50	*		1.699E-02	1.023E-01	1.634E-01	1.657E-02	0.104
	856.80			3.001E-02	3.384E-01	4.903E-01	4.931E-02	0.061
	989.30			2.187E-01	8.822E-01	1.470E+00	1.400E-01	0.149
	1034.80			-1.169E+00	6.005E+00	9.689E+00	8.951E-01	-0.121
	1213.00			2.292E-01	3.514E+00	5.706E+00	4.645E-01	0.040
SB-127	61.10			2.097E+01	3.042E+01	4.562E+01	4.505E+00	0.460
	252.40			-1.441E+00	2.669E+00	4.271E+00	1.804E+00	-0.337
	290.80			-7.708E+00	1.400E+01	1.985E+01	2.383E+00	-0.388
	411.60			4.461E+00	7.952E+00	1.327E+01	2.065E+00	0.336
	444.90			1.940E+00	5.876E+00	9.725E+00	1.218E+00	0.200
	473.00			3.026E-02	1.011E+00	1.644E+00	2.140E-01	0.018
	543.00			-3.150E+00	1.008E+01	1.591E+01	2.359E+00	-0.198
	603.60			-8.119E+00	7.978E+00	1.081E+01	1.429E+00	-0.751
	685.20	*		1.163E-01	8.045E-01	1.361E+00	1.685E-01	0.085
	698.50			4.615E+00	9.763E+00	1.670E+01	2.766E+00	0.276
	722.20			4.617E+00	2.105E+01	3.116E+01	3.807E+00	0.148
	783.80			1.517E+00	2.276E+00	3.913E+00	5.239E-01	0.388
XE-127	57.60			-2.230E+00	3.089E+00	4.983E+00	3.560E-01	-0.447
	145.22			4.073E-01	4.865E-01	7.940E-01	6.727E-02	0.513
	172.10			3.723E-02	8.383E-02	1.347E-01	1.187E-02	0.276
	202.84	*		-3.634E-02	3.087E-02	5.013E-02	4.627E-03	-0.725
	374.96			1.384E-01	1.314E-01	2.252E-01	1.963E-02	0.614
I-131	80.18			-1.419E+00	2.996E+00	4.291E+00	3.701E-01	-0.331
	284.30			-1.758E-01	9.347E-01	1.547E+00	1.596E-01	-0.114
	364.48	*		4.010E-02	7.475E-02	1.258E-01	1.180E-02	0.319
	636.97			-3.275E-01	9.942E-01	1.647E+00	1.708E-01	-0.199
	722.89			6.519E-01	5.168E+00	7.598E+00	7.739E-01	0.086
TE-132	49.72			-1.176E+01	7.891E+00	1.237E+01	1.248E+00	-0.951
	111.76			-1.279E+01	1.795E+01	2.825E+01	2.984E+00	-0.453
	116.30			1.353E+01	1.681E+01	2.760E+01	2.902E+00	0.490
	228.16	*		-3.007E-01	4.178E-01	6.829E-01	1.102E-01	-0.440
BA-133	53.15			1.808E+00	1.717E+00	2.903E+00	2.163E-01	0.623
	79.62			1.270E-02	8.915E-01	1.299E+00	1.970E-01	0.010
	81.00			-6.315E-02	6.737E-02	9.396E-02	1.494E-02	-0.672
	276.40	+		3.111E-01	3.172E-01	4.345E-01	6.635E-02	0.716
	302.84			-4.716E-02	1.075E-01	1.530E-01	2.153E-02	-0.308
	356.01	*		2.754E-04	3.089E-02	4.472E-02	6.041E-03	0.006
	383.85			-2.117E-01	2.143E-01	3.233E-01	4.055E-02	-0.655
I-133	510.53	+		9.245E-01	2.143E-01	Half-Life	too short	
	529.87	*		3.026E-03	2.143E-01	Half-Life	too short	
	706.58			-9.653E-02	2.143E-01	Half-Life	too short	
	856.28			1.654E-02	2.143E-01	Half-Life	too short	
	875.33			-1.583E-02	2.143E-01	Half-Life	too short	
	1236.41			2.469E-01	2.143E-01	Half-Life	too short	
	1298.22			1.814E-02	2.143E-01	Half-Life	too short	
CS-134	475.35			-1.334E+00	1.314E+00	2.006E+00	1.820E-01	-0.665

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

Nuclide	Line Ided	Energy (keV)	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-135 I-135		563.23	3.164E-01	2.492E-01	4.255E-01	4.128E-02	0.744
		569.32	-9.497E-02	1.423E-01	2.195E-01	2.143E-02	-0.433
		604.70	1.013E-02	2.585E-02	3.715E-02	3.658E-03	0.273
	+	795.84 *	1.264E-01	5.222E-02	6.641E-02	6.776E-03	1.903
		801.93	-9.210E-02	3.204E-01	4.515E-01	4.599E-02	-0.204
		1038.57	9.710E-01	2.668E+00	4.470E+00	4.118E-01	0.217
		1167.94	-4.996E-01	1.866E+00	2.974E+00	2.407E-01	-0.168
		1365.15	4.928E-01	7.680E-01	1.359E+00	1.198E-01	0.363
		268.24 *	5.456E-02	1.170E-01	1.759E-01	1.949E-02	0.310
		288.45	-3.197E+09	1.170E-01	Half-Life	too short	
		417.63	2.920E+08	1.170E-01	Half-Life	too short	
		546.56	7.183E+08	1.170E-01	Half-Life	too short	
		836.80	1.479E+09	1.170E-01	Half-Life	too short	
		1038.76	9.565E+08	1.170E-01	Half-Life	too short	
		1124.00	1.817E+10	1.170E-01	Half-Life	too short	
		1131.51	-3.395E+08	1.170E-01	Half-Life	too short	
		1260.41 *	-5.001E+08	1.170E-01	Half-Life	too short	
		1457.56	1.188E+10	1.170E-01	Half-Life	too short	
		1678.03	-7.276E+08	1.170E-01	Half-Life	too short	
		1706.46	-1.292E+09	1.170E-01	Half-Life	too short	
CS-136		1791.20	-2.203E+09	1.170E-01	Half-Life	too short	
		66.91	-4.037E-01	4.896E-01	6.878E-01	1.019E-01	-0.587
	+	86.29	6.039E+00	1.251E+00	1.314E+00	1.746E-01	4.595
	+	153.22	8.132E-01	4.902E-01	7.343E-01	7.037E-02	1.107
		163.89	-2.648E-01	7.599E-01	1.146E+00	1.115E-01	-0.231
		176.55	-1.861E-01	2.532E-01	3.897E-01	3.646E-02	-0.478
		273.65	1.276E-01	4.138E-01	4.539E-01	4.730E-02	0.281
		340.57	3.943E-01	1.047E-01	1.689E-01	1.616E-02	2.335
		818.51	6.423E-04	4.920E-02	8.179E-02	8.287E-03	0.008
		1048.07 *	-4.183E-02	7.221E-02	1.130E-01	1.072E-02	-0.370
CE-139 BA-140		1235.34	7.150E-02	4.799E-01	6.767E-01	7.810E-02	0.106
		165.85 *	3.083E-03	2.066E-02	3.295E-02	2.876E-03	0.094
		162.64	5.523E-03	5.300E-01	8.100E-01	7.439E-02	0.007
		304.84	2.400E-01	8.753E-01	1.362E+00	3.868E-01	0.176
		423.70	-1.199E+00	1.311E+00	1.947E+00	6.314E-01	-0.616
LA-140		537.32 *	3.365E-02	1.828E-01	2.880E-01	9.612E-02	0.117
	+	328.77	5.237E-01	3.289E-01	3.856E-01	3.834E-02	1.358
		432.53	1.325E+00	1.397E+00	2.372E+00	2.168E-01	0.559
		487.03	6.467E-02	9.099E-02	1.527E-01	1.474E-02	0.424
		751.79	-3.271E-01	1.171E+00	1.925E+00	2.108E-01	-0.170
		815.85	2.038E-01	2.137E-01	3.732E-01	4.101E-02	0.546
		867.82	-1.446E-01	1.090E+00	1.546E+00	1.612E-01	-0.094
		919.63	-4.169E-01	1.781E+00	2.888E+00	3.372E-01	-0.144
		925.24	6.811E-01	7.251E-01	1.264E+00	1.304E-01	0.539
		1596.49 *	-1.205E-02	6.103E-02	8.439E-02	7.125E-03	-0.143
CE-141		145.44 *	2.249E-02	4.364E-02	7.066E-02	6.101E-03	0.318
CE-143		57.37	-3.837E-04	4.364E-02	Half-Life	too short	
		231.56	3.977E-04	4.364E-02	Half-Life	too short	
		293.26 *	3.173E-04	4.364E-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
	350.59			1.843E-02	4.364E-02	Half-Life	too short	
	490.36			-1.310E-03	4.364E-02	Half-Life	too short	
	664.57			2.099E-03	4.364E-02	Half-Life	too short	
	721.93			3.345E-04	4.364E-02	Half-Life	too short	
CE-144	80.11			-7.146E-01	1.447E+00	2.072E+00	1.775E-01	-0.345
	133.54	*		-7.212E-02	1.514E-01	2.261E-01	3.489E-02	-0.319
PM-144	476.78			1.149E-02	4.733E-02	7.772E-02	7.655E-03	0.148
	618.01			3.143E-03	2.290E-02	3.688E-02	3.721E-03	0.085
	696.49	*		1.970E-02	2.404E-02	4.182E-02	4.228E-03	0.471
	778.57			-1.430E+00	1.631E+00	2.572E+00	2.614E-01	-0.556
PR-144	696.49	*		1.335E+00	1.628E+00	2.833E+00	2.863E-01	0.471
	1489.15			1.950E-01	6.668E+00	1.116E+01	9.462E-01	0.017
PM-146	453.90	*		-1.402E-03	3.117E-02	5.061E-02	5.543E-03	-0.028
	633.02			1.027E+00	1.033E+00	1.627E+00	6.134E-01	0.631
	735.90			-2.862E-03	1.015E-01	1.694E-01	4.931E-02	-0.017
	747.13			-4.141E-02	6.115E-02	9.753E-02	1.466E-02	-0.425
ND-147	91.11	+		8.675E-01	2.182E-01	3.435E-01	3.398E-02	2.525
	319.41			-1.773E+00	2.134E+00	3.404E+00	3.275E-01	-0.521
	439.89			1.063E+00	3.806E+00	6.289E+00	5.528E-01	0.169
	531.02	*		1.630E-01	3.711E-01	6.118E-01	9.446E-02	0.266
PM-149	285.90	*		5.232E+01	5.045E+01	8.610E+01	1.403E+01	0.608
EU-152	121.78			3.428E-02	5.040E-02	8.249E-02	7.991E-03	0.416
	244.69			1.462E-01	2.399E-01	3.643E-01	3.534E-02	0.401
	344.27	*		-7.478E-02	6.738E-02	1.012E-01	9.872E-03	-0.739
	443.98			-4.349E-01	6.613E-01	1.040E+00	9.172E-02	-0.418
	778.89			-7.929E-02	1.852E-01	3.008E-01	3.056E-02	-0.264
	867.32			3.446E-01	6.338E-01	9.542E-01	9.572E-02	0.361
	964.01			4.554E-01	2.342E-01	3.782E-01	3.654E-02	1.204
	1085.78			-1.909E-01	2.770E-01	4.286E-01	3.795E-02	-0.445
	1112.02			4.748E-02	2.591E-01	4.023E-01	3.472E-02	0.118
	1407.95			3.339E-02	1.335E-01	2.279E-01	1.925E-02	0.147
GD-153	69.67			5.405E-02	1.018E+00	1.569E+00	1.200E-01	0.034
	83.37			2.188E+01	1.242E+01	1.533E+01	1.367E+00	1.427
	97.43	*		-3.421E-02	5.936E-02	8.251E-02	7.318E-03	-0.415
	103.18			-6.518E-02	7.146E-02	1.121E-01	9.700E-03	-0.581
EU-154	123.07			6.285E-04	3.572E-02	5.740E-02	6.401E-03	0.011
	247.94			-9.615E-02	2.444E-01	3.901E-01	4.811E-02	-0.246
	591.81			1.163E-01	4.079E-01	6.646E-01	8.337E-02	0.175
	723.30			-5.965E-02	1.397E-01	1.966E-01	2.148E-02	-0.303
	756.87			6.787E-01	5.638E-01	9.877E-01	1.297E-01	0.687
	873.19			5.156E-02	2.041E-01	3.428E-01	4.547E-02	0.150
	996.32			4.454E-02	2.659E-01	4.405E-01	8.017E-02	0.101
	1004.76			-7.940E-02	1.524E-01	2.375E-01	2.910E-02	-0.334
	1274.45	*		-3.032E-02	8.759E-02	1.374E-01	1.518E-02	-0.221
EU-155	48.70			-9.847E-01	1.079E+00	1.735E+00	1.388E-01	-0.568
	60.01			1.684E+00	2.948E+00	4.414E+00	3.132E-01	0.381
	86.54	+		5.746E-01	1.059E-01	1.259E-01	1.179E-02	4.565
	105.31	*		1.064E-01	7.390E-02	1.232E-01	1.071E-02	0.864
TB-160	86.79	+		1.527E+00	2.808E-01	3.365E-01	3.134E-02	4.536

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HO-166M		197.04		1.910E-01	3.903E-01	6.371E-01	5.831E-02	0.300
		215.65		5.186E-02	4.892E-01	8.280E-01	7.775E-02	0.063
		298.57		2.187E-01	1.142E-01	1.392E-01	1.368E-02	1.571
		879.36	*	2.395E-02	9.467E-02	1.590E-01	1.590E-02	0.151
		962.29		-9.545E-02	3.824E-01	5.314E-01	5.138E-02	-0.180
	+	966.15		3.286E-01	1.733E-01	2.791E-01	2.693E-02	1.177
		1177.93		-1.705E-01	2.796E-01	4.357E-01	3.508E-02	-0.391
		1271.85		6.966E-02	5.004E-01	8.150E-01	6.739E-02	0.085
		80.57		-1.182E-01	1.854E-01	2.639E-01	2.273E-02	-0.448
		184.41		9.921E-02	2.815E-02	4.788E-02	4.301E-03	2.072
		280.46		3.937E-02	5.975E-02	9.061E-02	9.017E-03	0.434
		410.95		2.268E-01	1.778E-01	3.049E-01	2.602E-02	0.744
TM-171		711.68	*	2.799E-02	4.248E-02	7.342E-02	7.437E-03	0.381
		752.31		-1.637E-01	1.983E-01	3.150E-01	3.201E-02	-0.520
		810.29		-5.181E-02	4.038E-02	6.110E-02	6.194E-03	-0.848
		51.35		-1.664E+00	1.426E+01	2.348E+01	1.794E+00	-0.071
		52.39		1.342E+00	7.489E+00	1.242E+01	9.345E-01	0.108
LU-176		59.40		1.562E+01	1.536E+01	2.331E+01	1.650E+00	0.670
		66.72	*	-1.858E+01	1.827E+01	2.562E+01	1.909E+00	-0.725
	+	88.36		1.132E+00	2.082E-01	2.504E-01	2.361E-02	4.520
		201.83		-2.461E-02	1.907E-02	3.082E-02	2.841E-03	-0.798
LU-177		306.84	*	1.694E-02	1.643E-02	2.823E-02	2.754E-03	0.600
		401.10		2.256E+00	4.610E+00	7.712E+00	6.510E-01	0.293
		112.95		-2.449E-01	1.043E+00	1.668E+00	1.406E-01	-0.147
LU-177M	+	208.36	*	2.298E+00	1.033E+00	1.317E+00	1.224E-01	1.745
		52.97		8.254E-01	7.736E-01	1.308E+00	9.771E-02	0.631
HF-181		54.07		2.632E-01	4.103E-01	6.875E-01	5.066E-02	0.383
		61.30		2.172E-01	8.867E-01	1.313E+00	9.395E-02	0.165
		121.62		2.356E-01	2.562E-01	4.220E-01	3.519E-02	0.558
		147.16		-4.652E-02	4.542E-01	7.221E-01	6.132E-02	-0.064
		171.86		1.274E-01	3.399E-01	5.451E-01	4.802E-02	0.234
		218.09		-3.067E-01	5.674E-01	9.399E-01	8.853E-02	-0.326
		268.79		1.143E+00	6.173E-01	9.694E-01	9.591E-02	1.179
		319.02		-1.824E-01	1.737E-01	2.740E-01	2.637E-02	-0.666
		367.43		-1.158E-01	6.105E-01	9.961E-01	8.836E-02	-0.116
		413.65	*	-1.453E-01	1.285E-01	1.985E-01	1.699E-02	-0.732
		56.28		-5.623E-01	4.749E-01	7.549E-01	5.446E-02	-0.745
		57.53		-2.047E-01	2.598E-01	4.182E-01	2.990E-02	-0.489
		65.20		6.848E-01	6.066E-01	9.102E-01	6.697E-02	0.752
		133.02		-2.510E-02	5.132E-02	7.161E-02	5.992E-03	-0.351
		136.25		1.413E-02	3.134E-01	5.021E-01	4.213E-02	0.028
W-181		345.85		-5.268E-02	1.333E-01	1.994E-01	1.845E-02	-0.264
		482.03	*	-1.886E-02	2.978E-02	4.661E-02	4.250E-03	-0.405
		56.28		-2.211E-01	1.871E-01	2.974E-01	2.145E-02	-0.743
		57.53		-8.088E-02	1.024E-01	1.648E-01	1.178E-02	-0.491
TA-182		65.20	*	2.678E-01	2.372E-01	3.559E-01	2.619E-02	0.752
		67.75		-6.356E-03	7.066E-02	1.024E-01	7.695E-03	-0.062
		100.10		1.349E-01	1.167E-01	1.941E-01	1.699E-02	0.695
		152.43		2.642E-01	2.624E-01	3.858E-01	3.300E-02	0.685

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		222.10		-3.876E-02	2.349E-01	3.939E-01	3.729E-02	-0.098
		1001.68		9.868E-01	1.562E+00	2.533E+00	2.394E-01	0.390
	+	1121.28		6.651E-01	2.108E-01	2.517E-01	2.151E-02	2.643
		1189.05		2.182E-01	2.269E-01	3.880E-01	3.135E-02	0.562
		1221.42	*	-1.013E-01	1.526E-01	2.366E-01	1.931E-02	-0.428
		1230.97		-6.379E-02	3.709E-01	5.764E-01	4.716E-02	-0.111
		57.98		-6.805E-03	1.023E-01	1.682E-01	1.199E-02	-0.040
		59.32		6.022E-02	6.271E-02	9.504E-02	6.728E-03	0.634
		67.20		-8.724E-02	1.284E-01	1.824E-01	1.364E-02	-0.478
		162.32	*	-1.915E-02	8.028E-02	1.217E-01	1.057E-02	-0.157
RE-184	+	208.81		2.181E+00	9.810E-01	1.253E+00	1.166E-01	1.741
		291.72		-1.912E-01	6.770E-01	9.759E-01	9.643E-02	-0.196
		57.98		-2.516E-02	3.784E-01	6.218E-01	4.432E-02	-0.040
		59.32		2.225E-01	2.317E-01	3.511E-01	2.485E-02	0.634
		67.20		-3.225E-01	4.745E-01	6.740E-01	5.042E-02	-0.478
		161.27		-6.908E-02	2.496E-01	3.928E-01	3.404E-02	-0.176
		216.55		3.890E-02	1.750E-01	2.971E-01	2.793E-02	0.131
		252.85	*	-9.546E-02	1.565E-01	2.564E-01	2.505E-02	-0.372
		318.01		-1.268E-01	2.966E-01	4.826E-01	4.651E-02	-0.263
		792.07		4.877E-01	6.815E-01	1.046E+00	1.062E-01	0.466
OS-185		903.28		-1.702E-02	6.889E-01	1.135E+00	1.127E-01	-0.015
		920.93		5.749E-02	3.041E-01	5.075E-01	5.002E-02	0.113
		59.72		2.113E-01	1.701E-01	2.597E-01	1.839E-02	0.814
		61.14		6.530E-02	9.558E-02	1.435E-01	1.025E-02	0.455
		69.30		3.439E-02	1.823E-01	2.820E-01	2.150E-02	0.122
		592.07		2.032E-01	1.661E+00	2.680E+00	2.619E-01	0.076
		646.12	*	3.716E-03	2.829E-02	4.799E-02	4.792E-03	0.077
		717.42		-3.154E-01	6.247E-01	1.016E+00	1.030E-01	-0.310
		874.81		-3.170E-04	3.974E-01	6.572E-01	6.580E-02	0.000
		880.27		-3.850E-02	5.392E-01	8.874E-01	8.870E-02	-0.043
W-188	+	63.58		1.188E+02	4.699E+01	5.714E+01	4.153E+00	2.079
		227.08		-1.361E+00	8.490E+00	1.422E+01	1.354E+00	-0.096
		290.67	*	-2.602E+00	5.360E+00	7.634E+00	7.549E-01	-0.341
IR-192	+	295.96		1.088E+00	1.675E-01	2.022E-01	2.003E-02	5.379
		308.46		-7.941E-03	6.270E-02	1.036E-01	1.013E-02	-0.077
		316.51	*	1.133E-02	2.276E-02	3.846E-02	3.719E-03	0.295
AU-195		468.07		8.229E-03	4.880E-02	7.020E-02	6.745E-03	0.117
		604.41		1.204E-01	3.455E-01	4.947E-01	6.850E-02	0.243
		612.46		3.198E+00	7.680E-01	1.204E+00	1.324E-01	2.657
		65.12		1.678E-01	1.111E-01	1.681E-01	1.236E-02	0.998
		66.83		-5.235E-02	6.013E-02	8.480E-02	6.324E-03	-0.617
	+	75.70		1.123E+00	1.658E-01	2.857E-01	2.326E-02	3.932
		98.88	*	1.824E-01	1.589E-01	2.480E-01	2.184E-02	0.736
TL-200	+	129.76		2.920E+00	2.377E+00	3.413E+00	2.850E-01	0.856
		367.94	*	6.905E-05	2.377E+00	Half-Life	too short	
		579.30		9.143E-04	2.377E+00	Half-Life	too short	
TL-201		828.27		-8.764E-05	2.377E+00	Half-Life	too short	
		1205.75		-3.715E-04	2.377E+00	Half-Life	too short	
		68.90		-7.389E-03	2.464E+00	3.969E+00	3.014E-01	-0.002

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

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		70.82		-1.134E+00	1.607E+00	2.271E+00	1.756E-01	-0.499
		80.30		-1.463E+00	3.007E+00	4.305E+00	3.696E-01	-0.340
		135.34		-6.855E-01	1.546E+01	2.471E+01	2.071E+00	-0.028
		167.43	*	1.441E+00	4.205E+00	6.744E+00	5.901E-01	0.214
TL-202		68.90		-7.341E-04	2.448E-01	3.943E-01	2.995E-02	-0.002
		70.82		-1.123E-01	1.592E-01	2.250E-01	1.740E-02	-0.499
		80.30		-1.450E-01	2.980E-01	4.267E-01	3.663E-02	-0.340
		439.56	*	3.014E-02	4.485E-02	7.545E-02	6.628E-03	0.399
BI-207		72.80		1.561E-01	1.209E-01	1.824E-01	1.439E-02	0.856
	+	74.97		6.244E-01	9.218E-02	1.404E-01	1.134E-02	4.448
		84.90		5.318E-01	1.362E-01	2.064E-01	1.876E-02	2.576
		569.67		-1.311E-02	2.221E-02	3.443E-02	3.326E-03	-0.381
		1063.62	*	1.862E-02	3.877E-02	6.517E-02	5.884E-03	0.286
		1770.23		9.500E-02	2.944E-01	4.459E-01	3.658E-02	0.213
TL-207		81.07		-1.483E-01	1.474E-01	2.067E-01	1.791E-02	-0.718
		83.78		2.161E-01	1.067E-01	1.327E-01	1.189E-02	1.628
		94.90		6.096E-01	1.797E-01	2.721E-01	2.447E-02	2.240
		122.32		5.524E-01	1.192E+00	1.940E+00	1.744E-01	0.285
		144.24		3.054E-01	4.978E-01	7.870E-01	7.477E-02	0.388
	+	154.21		5.045E-01	3.040E-01	4.433E-01	4.184E-02	1.138
		269.46		4.423E-01	1.361E-01	2.381E-01	2.394E-02	1.858
		323.87	*	-3.648E-01	5.168E-01	7.161E-01	1.302E-01	-0.509
	+	338.28		6.742E+00	1.427E+00	1.757E+00	2.258E-01	3.837
		445.03		4.427E-01	1.517E+00	2.506E+00	3.067E-01	0.177
PO-209		260.50		-4.352E+00	6.344E+00	1.033E+01	1.016E+00	-0.421
		262.80		-8.512E+00	1.787E+01	2.830E+01	2.788E+00	-0.301
		896.60	*	1.349E+00	4.992E+00	8.386E+00	8.341E-01	0.161
BI-210		46.50	*	1.444E+00	1.569E+00	2.570E+00	2.383E-01	0.562
PB-210		46.50	*	1.444E+00	1.569E+00	2.570E+00	2.383E-01	0.562
PO-210		46.50	*	1.444E+00	1.568E+00	2.570E+00	2.156E-01	0.562
PB-211		404.84	*	-6.297E-02	6.537E-01	1.064E+00	6.665E-01	-0.059
		427.08		-7.471E-01	1.485E+00	2.244E+00	1.394E+00	-0.333
		831.96		-1.249E-01	8.357E-01	1.368E+00	8.605E-01	-0.091
PO-215		81.07		-1.483E-01	1.474E-01	2.067E-01	1.791E-02	-0.718
		83.78		2.161E-01	1.067E-01	1.327E-01	1.189E-02	1.628
		94.90		6.096E-01	1.797E-01	2.721E-01	2.447E-02	2.240
		122.32		5.524E-01	1.192E+00	1.940E+00	1.744E-01	0.285
		144.24		3.054E-01	4.978E-01	7.870E-01	7.477E-02	0.388
	+	154.21		5.045E-01	3.040E-01	4.433E-01	4.184E-02	1.138
		269.46		4.423E-01	1.361E-01	2.381E-01	2.394E-02	1.858
		323.87	*	-3.648E-01	5.168E-01	7.161E-01	1.302E-01	-0.509
	+	338.28		6.742E+00	1.427E+00	1.757E+00	2.258E-01	3.837
		445.03		4.427E-01	1.517E+00	2.506E+00	3.067E-01	0.177
RN-219	+	271.23		5.334E-01	2.745E-01	3.150E-01	3.595E-02	1.693
		401.81	*	2.173E-02	2.913E-01	4.788E-01	7.147E-02	0.045
RN-220		549.76	*	1.930E+00	1.772E+01	2.870E+01	2.742E+00	0.067
RA-223		81.07		-1.483E-01	1.474E-01	2.067E-01	1.791E-02	-0.718
		83.78		2.161E-01	1.067E-01	1.327E-01	1.189E-02	1.628
		94.90		6.096E-01	1.797E-01	2.721E-01	2.447E-02	2.240

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		5.524E-01	1.192E+00	1.940E+00	1.744E-01	0.285
		144.24		3.054E-01	4.978E-01	7.870E-01	7.477E-02	0.388
	+	154.21		5.045E-01	3.040E-01	4.433E-01	4.184E-02	1.138
		269.46		4.423E-01	1.361E-01	2.381E-01	2.394E-02	1.858
		323.87	*	-3.648E-01	5.168E-01	7.161E-01	1.302E-01	-0.509
	+	338.28		6.742E+00	1.427E+00	1.757E+00	2.258E-01	3.837
		445.03		4.427E-01	1.517E+00	2.506E+00	3.067E-01	0.177
		79.80		-5.458E-01	1.126E+00	1.605E+00	3.447E-01	-0.340
		236.00		2.188E-01	1.702E-01	2.621E-01	3.398E-02	0.835
		256.20	*	2.286E-01	2.625E-01	4.480E-01	7.186E-02	0.510
		286.10		1.237E+00	1.021E+00	1.753E+00	2.469E-01	0.706
	+	299.80		3.192E+00	1.233E+00	1.814E+00	3.285E-01	1.759
TH-227		304.40		-3.437E-02	1.386E+00	2.022E+00	3.843E-01	-0.017
		334.20		-3.061E-01	1.909E+00	2.555E+00	5.055E-01	-0.120
		79.80		-5.458E-01	1.126E+00	1.605E+00	3.491E-01	-0.340
	+	94.00		1.542E+01	3.893E+00	2.856E+00	6.268E-01	5.398
		236.00		2.188E-01	1.698E-01	2.621E-01	3.111E-02	0.835
		256.20	*	2.286E-01	2.634E-01	4.480E-01	8.357E-02	0.510
		286.10		1.237E+00	1.599E+00	1.753E+00	1.761E+00	0.706
	+	299.80		3.192E+00	1.233E+00	1.814E+00	3.285E-01	1.759
		304.40		-3.437E-02	1.386E+00	2.022E+00	3.843E-01	-0.017
		334.20		-3.061E-01	1.909E+00	2.555E+00	5.055E-01	-0.120
		85.43		6.656E-01	1.419E-01	2.127E-01	1.946E-02	3.130
	+	88.47		6.515E-01	1.199E-01	1.436E-01	1.352E-02	4.538
PA-231		100.00		1.439E-01	1.217E-01	2.024E-01	1.773E-02	0.711
		193.63	*	1.996E-02	3.329E-01	5.651E-01	5.146E-02	0.035
		210.97		1.024E+00	5.749E-01	9.044E-01	8.441E-02	1.132
		283.67	*	-4.684E-01	1.001E+00	1.635E+00	2.610E-01	-0.287
	+	301.29		1.277E+00	4.667E-01	7.108E-01	9.316E-02	1.796
		81.07		-1.483E-01	1.474E-01	2.067E-01	1.791E-02	-0.718
		83.78		2.161E-01	1.067E-01	1.327E-01	1.189E-02	1.628
		94.90		6.096E-01	1.797E-01	2.721E-01	2.447E-02	2.240
		122.32		5.524E-01	1.192E+00	1.940E+00	1.744E-01	0.285
		144.24		3.054E-01	4.978E-01	7.870E-01	7.477E-02	0.388
	+	154.21		5.045E-01	3.040E-01	4.433E-01	4.184E-02	1.138
		269.46		4.423E-01	1.361E-01	2.381E-01	2.394E-02	1.858
U-231		323.87	*	-3.648E-01	5.168E-01	7.161E-01	1.302E-01	-0.509
	+	338.28		6.742E+00	1.427E+00	1.757E+00	2.258E-01	3.837
		445.03		4.427E-01	1.517E+00	2.506E+00	3.067E-01	0.177
		84.21		1.196E+01	3.438E+00	5.228E+00	4.710E-01	2.288
	+	92.29		1.383E+01	2.132E+00	2.754E+00	2.519E-01	5.022
		95.87	*	-4.064E-01	7.103E-01	9.843E-01	8.803E-02	-0.413
		108.00		-5.082E-04	1.274E+00	2.057E+00	1.753E-01	0.000
	+	75.28		1.822E+01	3.548E+00	4.222E+00	6.359E-01	4.316
	+	86.59		9.342E+00	2.930E+00	2.050E+00	5.544E-01	4.556
	+	300.12		8.899E-01	3.338E-01	5.055E-01	7.884E-02	1.760
		311.98	*	-8.296E-04	4.125E-02	6.840E-02	6.786E-03	-0.012
		340.50		2.203E+00	7.267E-01	8.682E-01	2.093E-01	2.538
PA-233		398.62		-3.405E-01	1.475E+00	2.387E+00	6.342E-01	-0.143

---- 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		-4.677E-01	1.154E+00	1.845E+00	3.972E-01	-0.254
		63.00		3.466E+00	1.442E+00	1.678E+00	2.479E-01	2.066
		94.67		7.014E-01	1.548E-01	2.115E-01	2.681E-02	3.317
		98.44		4.908E-02	6.984E-02	9.962E-02	5.561E-02	0.493
		99.86		4.121E-01	3.075E-01	5.131E-01	4.498E-02	0.803
		111.00		-1.556E-01	1.273E-01	1.957E-01	2.344E-02	-0.795
		131.20		6.975E-02	8.112E-02	1.194E-01	9.979E-03	0.584
	+	152.70		1.363E-01	2.584E-01	3.723E-01	6.335E-02	0.366
		186.00		6.538E+00	2.595E+00	1.911E+00	5.986E-01	3.421
		226.40		-9.681E-02	2.714E-01	4.515E-01	6.232E-02	-0.214
		227.20		-1.218E-01	2.901E-01	4.817E-01	4.587E-02	-0.253
		248.90		-3.739E-03	5.358E-01	8.982E-01	2.054E-01	-0.004
		293.70		4.111E+00	9.430E-01	1.085E+00	1.948E-01	3.788
		369.80		-6.949E-02	5.726E-01	9.366E-01	2.047E-01	-0.074
		568.70		-6.824E-01	7.230E-01	1.094E+00	1.057E-01	-0.623
		569.50		-1.191E-01	1.975E-01	3.060E-01	2.956E-02	-0.389
		574.00		5.218E-01	1.075E+00	1.769E+00	1.713E-01	0.295
		699.00		1.560E-02	5.075E-01	8.525E-01	1.688E-01	0.018
		706.10		-4.759E-01	7.773E-01	1.212E+00	5.445E-01	-0.393
		733.00		-8.194E-02	2.937E-01	4.167E-01	9.516E-02	-0.197
		742.81		2.280E-01	9.108E-01	1.522E+00	1.026E+00	0.150
	+	796.30		2.458E+00	1.195E+00	1.284E+00	3.542E-01	1.913
		805.60		5.625E-01	7.218E-01	1.217E+00	3.787E-01	0.462
		819.60		7.299E-01	8.459E-01	1.402E+00	5.384E-01	0.521
		826.30		5.248E-02	5.567E-01	9.010E-01	4.059E-01	0.058
		831.60		-1.874E-01	4.390E-01	7.040E-01	2.133E-01	-0.266
		876.40		-4.869E-01	7.637E-01	9.002E-01	9.266E-01	-0.541
		880.51		3.478E-02	1.934E-01	3.234E-01	3.232E-02	0.108
		883.24		8.777E-02	2.075E-01	3.378E-01	2.277E-01	0.260
		899.00		-8.481E-02	5.649E-01	9.214E-01	4.054E-01	-0.092
		925.00		7.561E-01	7.792E-01	1.361E+00	1.340E-01	0.555
		926.50		7.428E-02	1.209E-01	2.001E-01	5.145E-02	0.371
		946.00	*	-2.088E-02	2.029E-01	3.225E-01	6.227E-02	-0.065
		949.00		9.545E-02	3.007E-01	5.049E-01	4.916E-02	0.189
		980.50		4.934E-02	5.605E-01	8.036E-01	7.694E-02	0.061
PA-234M		1394.10		2.197E-01	7.450E-01	1.259E+00	8.193E-01	0.174
		766.42		3.118E+00	8.305E+00	1.385E+01	7.068E+00	0.225
U-235		1001.03	*	3.097E+00	3.567E+00	5.850E+00	6.258E-01	0.529
	+	89.95		3.585E+00	1.387E+00	1.272E+00	3.949E-01	2.819
	+	93.35		4.796E+00	1.477E+00	9.448E-01	2.662E-01	5.076
		105.00		1.150E+00	7.940E-01	1.209E+00	3.606E-01	0.952
		143.76	*	6.145E-02	1.542E-01	2.422E-01	4.220E-02	0.254
		163.35		5.662E-02	3.429E-01	5.264E-01	1.006E-01	0.108
	+	185.71		2.421E-01	6.295E-02	7.083E-02	6.374E-03	3.419
NP-236		205.31		3.847E-01	3.923E-01	5.976E-01	1.158E-01	0.644
		94.67		5.362E-01	1.076E-01	1.607E-01	1.447E-02	3.337
		98.44		3.707E-02	4.867E-02	7.531E-02	6.645E-03	0.492
		111.00		-1.177E-01	9.581E-02	1.480E-01	1.253E-02	-0.795
		160.31	*	8.484E-03	5.618E-02	8.971E-02	7.763E-03	0.095

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		9.769E-02	1.061E-01	1.719E-01	1.509E-02	0.568
		117.00	*	7.184E-02	1.307E-01	2.135E-01	1.789E-02	0.336
	+	209.75		1.731E+00	7.784E-01	9.865E-01	9.192E-02	1.754
		228.18		-7.075E-02	1.526E-01	2.530E-01	2.412E-02	-0.280
	+	277.60		1.519E-01	1.538E-01	2.118E-01	2.107E-02	0.717
AM-241		334.30		-1.877E-01	1.081E+00	1.446E+00	1.363E-01	-0.130
		59.54	*	1.000E-01	8.967E-02	1.364E-01	1.067E-02	0.733
CM-243		99.55		1.005E-01	1.091E-01	1.769E-01	1.553E-02	0.568
		103.76	*	2.062E-03	6.482E-02	1.049E-01	9.052E-03	0.020
		117.00		7.391E-02	1.344E-01	2.197E-01	1.840E-02	0.336
	+	209.75		1.706E+00	7.673E-01	9.725E-01	9.061E-02	1.754
		228.18		-7.148E-02	1.542E-01	2.556E-01	2.437E-02	-0.280
AM-246	+	277.60		1.531E-01	1.550E-01	2.135E-01	2.124E-02	0.717
		798.80		5.054E-02	1.084E-01	1.625E-01	1.649E-02	0.311
		1036.00		-4.117E-03	2.081E-01	3.399E-01	3.138E-02	-0.012
		1062.04		-5.596E-02	1.725E-01	2.757E-01	2.492E-02	-0.203
		1078.86	*	3.792E-02	1.011E-01	1.689E-01	1.505E-02	0.225
CM-247	+	278.00		6.298E-01	6.378E-01	8.840E-01	8.796E-02	0.712
		287.40		6.619E-01	8.188E-01	1.400E+00	1.388E-01	0.473
		402.60	*	-9.044E-03	2.571E-02	4.142E-02	3.502E-03	-0.218
CF-249		252.85		-3.591E-01	5.888E-01	9.642E-01	9.424E-02	-0.372
		333.44		-5.865E-02	1.856E-01	1.887E-01	1.781E-02	-0.311
		387.95	*	1.888E-02	2.760E-02	4.658E-02	3.931E-03	0.405
CF-251		176.60	*	-6.513E-02	9.005E-02	1.387E-01	1.231E-02	-0.470
		227.00		-3.398E-02	2.565E-01	4.300E-01	4.094E-02	-0.079
		285.00		9.288E-02	1.162E+00	1.943E+00	1.928E-01	0.048

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]G246875003      *
* Acquisition date   : 23-FEB-2010 23:49:24 Detector SN#                   *
* Detector ID        : GAM20 Sensitivity : 5.000                          *
* Geometry           : CAN Energy tolerance: 1.500                        *
* Elapsed live time  : 0 04:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 04:01:06.51 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246875003 Analyst initials: MXR1                  *
* Batch Number       : 952643 Sample Quantity : 1.2651E+02 GRAM           *
* Recovery           : 1.00000 Carrier Weight : 0.00000                   *
*****
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                              *
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11 MS Isotope :                   *
* MSD DPM             : 0.000 MSD Isotope :                               *
* LCS DPM             : 0.000 LCS Isotope :                               *
* LCSD DPM            : 0.000 LCSD Isotope :                               *
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.656E+01	3.388E+00	3.312E-01	0.000E+00
CD-109	4.851E+00	8.745E-01	7.298E-01	0.000E+00
SN-126	4.772E-01	8.603E-02	7.200E-02	0.000E+00
BA-137M	1.584E-01	3.915E-02	4.179E-02	0.000E+00
CS-137	1.674E-01	4.139E-02	4.418E-02	0.000E+00
RE-188	2.171E-01	1.279E-01	1.844E-01	0.000E+00
HG-203	3.441E-02	3.415E-02	4.186E-02	0.000E+00
TL-208	6.009E-01	8.460E-02	3.986E-02	0.000E+00
BI-211	4.198E+00	5.082E-01	2.326E-01	0.000E+00
BI-212	1.238E+00	3.892E-01	3.308E-01	0.000E+00
PB-212	1.772E+00	2.009E-01	6.140E-02	0.000E+00
PO-212	1.772E+00	2.009E-01	6.140E-02	0.000E+00
BI-214	1.243E+00	1.705E-01	8.024E-02	0.000E+00
PB-214	1.460E+00	1.919E-01	7.669E-02	0.000E+00
PO-214	1.460E+00	1.919E-01	7.669E-02	0.000E+00
PO-216	1.772E+00	2.009E-01	6.140E-02	0.000E+00
PO-218	1.460E+00	1.919E-01	7.669E-02	0.000E+00
RA-224	4.606E+00	9.783E-01	6.985E-01	0.000E+00
RA-226	1.243E+00	1.705E-01	8.024E-02	0.000E+00
AC-228	1.710E+00	2.765E-01	1.460E-01	0.000E+00
RA-228	1.710E+00	2.765E-01	1.460E-01	0.000E+00
TH-228	1.798E+00	2.039E-01	6.229E-02	0.000E+00
TH-230	1.243E+00	1.705E-01	8.024E-02	0.000E+00
TH-232	1.710E+00	2.765E-01	1.460E-01	0.000E+00
TH-234	2.973E+00	1.241E+00	1.208E+00	0.000E+00
U-234	1.243E+00	1.705E-01	8.024E-02	0.000E+00
NP-237	1.401E+00	3.796E-01	2.130E-01	0.000E+00
U-238	2.973E+00	1.241E+00	1.208E+00	0.000E+00
AM-243	3.479E-01	5.033E-02	5.569E-02	0.000E+00
ANH-511	1.449E-01	4.682E-02	3.014E-02	0.000E+00

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

Key-Line

Nuclide	Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	7.046E-02	2.202E-01	3.763E-01	0.000E+00	NOT IDENT.
NA-22	-1.306E-02	3.090E-02	4.928E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.300E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	6.890E-03	1.722E-02	3.048E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.441E-02	5.522E-02	0.000E+00	FAIL ABUN
SC-46	-1.598E-02	2.814E-02	4.535E-02	0.000E+00	FAIL ABUN
V-48	2.331E-02	4.694E-02	8.151E-02	0.000E+00	NOT IDENT.
CR-51	-2.804E-02	2.381E-01	4.097E-01	0.000E+00	NOT IDENT.
MN-52	-9.584E-02	1.208E-01	1.877E-01	0.000E+00	FAIL ABUN
MN-54	1.720E-02	2.596E-02	4.578E-02	0.000E+00	NOT IDENT.
CO-56	-5.301E-03	2.644E-02	4.452E-02	0.000E+00	FAIL ABUN
CO-57	1.138E-02	1.692E-02	2.929E-02	0.000E+00	NOT IDENT.
CO-58	-3.921E-02	2.639E-02	4.048E-02	0.000E+00	NOT IDENT.
FE-59	-9.382E-04	6.542E-02	1.091E-01	0.000E+00	NOT IDENT.
CO-60	-7.476E-03	2.810E-02	4.506E-02	0.000E+00	NOT IDENT.
ZN-65	-4.104E-02	7.800E-02	1.071E-01	0.000E+00	NOT IDENT.
GE-68	-4.306E-01	9.169E-01	1.485E+00	0.000E+00	NOT IDENT.
AS-73	1.958E-01	3.909E-01	6.982E-01	0.000E+00	NOT IDENT.
AS-74	-5.565E-02	6.423E-02	1.008E-01	0.000E+00	NOT IDENT.
SE-75	-5.390E-04	2.934E-02	4.760E-02	0.000E+00	NOT IDENT.
BR-77	-1.699E+00	5.838E+00	9.598E+00	0.000E+00	FAIL ABUN
SR-82	-1.709E-01	2.579E-01	4.253E-01	0.000E+00	NOT IDENT.
RB-83	5.617E-04	4.494E-02	7.520E-02	0.000E+00	NOT IDENT.
RB-84	2.031E-02	4.666E-02	8.135E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.579E+00	9.385E+00	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.843E-02	4.783E-02	0.000E+00	NOT IDENT.
RB-86	-4.891E-01	5.665E-01	8.910E-01	0.000E+00	NOT IDENT.
Y-88	-1.082E-02	2.382E-02	3.745E-02	0.000E+00	NOT IDENT.
ZR-88	1.147E-03	2.148E-02	3.671E-02	0.000E+00	NOT IDENT.
Y-91	-2.581E+00	1.376E+01	2.251E+01	0.000E+00	NOT IDENT.
NB-94	1.261E-02	2.338E-02	4.141E-02	0.000E+00	NOT IDENT.
NB-95	-4.349E-03	2.983E-02	5.086E-02	0.000E+00	NOT IDENT.
NB-95M	9.472E-03	8.674E-02	1.353E-01	0.000E+00	NOT IDENT.
ZR-95	4.887E-02	5.095E-02	9.136E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.896E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.220E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.108E+00	6.642E+00	1.111E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	5.251E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-5.242E-03	2.269E-02	3.813E-02	0.000E+00	NOT IDENT.
RH-102	-1.869E-02	1.987E-02	3.169E-02	0.000E+00	NOT IDENT.
RU-103	-2.954E-02	2.753E-02	4.295E-02	0.000E+00	FAIL ABUN
RH-106	-1.051E-01	2.135E-01	3.405E-01	0.000E+00	FAIL ABUN
RU-106	-1.051E-01	2.132E-01	3.405E-01	0.000E+00	FAIL ABUN
AG-108M	-5.769E-04	2.239E-02	3.788E-02	0.000E+00	NOT IDENT.
AG-110M	1.914E-03	2.476E-02	3.770E-02	0.000E+00	FAIL ABUN
IN-111	5.140E-03	6.477E-01	1.003E+00	0.000E+00	NOT IDENT.
IN-113M	-1.613E-02	3.098E-02	5.161E-02	0.000E+00	NOT IDENT.
SN-113	-1.613E-02	3.098E-02	5.161E-02	0.000E+00	NOT IDENT.
IN-114M	3.377E-02	1.266E-01	2.014E-01	0.000E+00	NOT IDENT.
CD-115	-6.174E+00	6.298E+00	9.906E+00	0.000E+00	NOT IDENT.
SN-117M	2.440E-02	4.037E-02	6.158E-02	0.000E+00	NOT IDENT.
SB-122	1.822E+00	1.205E+00	2.147E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.970E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.025E-02	2.031E-02	3.291E-02	0.000E+00	NOT IDENT.
I-124	-6.186E-01	4.460E-01	6.439E-01	0.000E+00	FAIL ABUN
SB-124	-1.889E-02	3.960E-02	6.157E-02	0.000E+00	NOT IDENT.
SB-125	-5.703E-03	6.286E-02	1.061E-01	0.000E+00	FAIL ABUN
TE-125M	2.259E+00	6.103E+00	1.053E+01	0.000E+00	NOT IDENT.
I-126	2.254E-02	1.385E-01	2.118E-01	0.000E+00	NOT IDENT.
SB-126	1.699E-02	1.003E-01	1.651E-01	0.000E+00	FAIL ABUN
SB-127	1.163E-01	7.885E-01	1.376E+00	0.000E+00	NOT IDENT.
XE-127	-3.634E-02	3.026E-02	5.158E-02	0.000E+00	NOT IDENT.
I-131	4.010E-02	7.325E-02	1.284E-01	0.000E+00	NOT IDENT.
TE-132	-3.007E-01	4.094E-01	7.015E-01	0.000E+00	NOT IDENT.
BA-133	2.754E-04	3.027E-02	4.564E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.562E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.117E-02	6.699E-02	0.000E+00	FAIL ABUN
CS-135	5.456E-02	1.147E-01	1.803E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	9.840E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.183E-02	7.077E-02	1.135E-01	0.000E+00	FAIL ABUN
CE-139	3.083E-03	2.025E-02	3.400E-02	0.000E+00	NOT IDENT.
BA-140	3.365E-02	1.791E-01	2.922E-01	0.000E+00	NOT IDENT.
LA-140	-1.205E-02	5.980E-02	8.425E-02	0.000E+00	FAIL ABUN
CE-141	2.249E-02	4.277E-02	7.305E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.031E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-7.212E-02	1.484E-01	2.341E-01	0.000E+00	NOT IDENT.
PM-144	1.970E-02	2.356E-02	4.227E-02	0.000E+00	NOT IDENT.
PR-144	1.335E+00	1.596E+00	2.863E+00	0.000E+00	NOT IDENT.
PM-146	-1.402E-03	3.054E-02	5.147E-02	0.000E+00	NOT IDENT.
ND-147	1.630E-01	3.636E-01	6.208E-01	0.000E+00	FAIL ABUN
PM-149	5.232E+01	4.944E+01	8.816E+01	0.000E+00	NOT IDENT.
EU-152	-7.478E-02	6.603E-02	1.033E-01	0.000E+00	NOT IDENT.
GD-153	-3.421E-02	5.817E-02	8.578E-02	0.000E+00	NOT IDENT.
EU-154	-3.032E-02	8.584E-02	1.376E-01	0.000E+00	NOT IDENT.
EU-155	1.064E-01	7.243E-02	1.280E-01	0.000E+00	FAIL ABUN
TB-160	2.395E-02	9.278E-02	1.602E-01	0.000E+00	FAIL ABUN
HO-166M	2.799E-02	4.163E-02	7.418E-02	0.000E+00	NOT IDENT.
TM-171	-1.858E+01	1.790E+01	2.678E+01	0.000E+00	NOT IDENT.
LU-176	1.694E-02	1.610E-02	2.888E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.013E+00	1.354E+00	0.000E+00	FAIL ABUN
LU-177M	-1.453E-01	1.259E-01	2.022E-01	0.000E+00	NOT IDENT.
HF-181	-1.886E-02	2.918E-02	4.736E-02	0.000E+00	NOT IDENT.
W-181	2.678E-01	2.325E-01	3.721E-01	0.000E+00	NOT IDENT.
TA-182	-1.013E-01	1.495E-01	2.371E-01	0.000E+00	FAIL ABUN
RE-183	-1.915E-02	7.867E-02	1.257E-01	0.000E+00	FAIL ABUN
RE-184	-9.546E-02	1.534E-01	2.630E-01	0.000E+00	NOT IDENT.
OS-185	3.716E-03	2.772E-02	4.855E-02	0.000E+00	NOT IDENT.
W-188	-2.602E+00	5.252E+00	7.815E+00	0.000E+00	FAIL ABUN
IR-192	1.133E-02	2.231E-02	3.932E-02	0.000E+00	FAIL ABUN
AU-195	1.824E-01	1.557E-01	2.578E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.096E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.441E+00	4.121E+00	6.959E+00	0.000E+00	NOT IDENT.
TL-202	3.014E-02	4.396E-02	7.677E-02	0.000E+00	NOT IDENT.
BI-207	1.862E-02	3.799E-02	6.545E-02	0.000E+00	FAIL ABUN
TL-207	-3.648E-01	5.065E-01	7.319E-01	0.000E+00	FAIL ABUN
PO-209	1.349E+00	4.892E+00	8.444E+00	0.000E+00	NOT IDENT.
BI-210	1.444E+00	1.537E+00	2.700E+00	0.000E+00	NOT IDENT.
PB-210	1.444E+00	1.537E+00	2.700E+00	0.000E+00	NOT IDENT.
PO-210	1.444E+00	1.536E+00	2.700E+00	0.000E+00	NOT IDENT.
PB-211	-6.297E-02	6.407E-01	1.084E+00	0.000E+00	NOT IDENT.
PO-215	-3.648E-01	5.065E-01	7.319E-01	0.000E+00	FAIL ABUN
RN-219	2.173E-02	2.855E-01	4.878E-01	0.000E+00	FAIL ABUN
RN-220	1.930E+00	1.737E+01	2.911E+01	0.000E+00	NOT IDENT.
RA-223	-3.648E-01	5.065E-01	7.319E-01	0.000E+00	FAIL ABUN
AC-227	2.286E-01	2.572E-01	4.594E-01	0.000E+00	FAIL ABUN
TH-227	2.286E-01	2.581E-01	4.594E-01	0.000E+00	FAIL ABUN
TH-229	1.996E-02	3.262E-01	5.818E-01	0.000E+00	FAIL ABUN
PA-231	-4.684E-01	9.813E-01	1.674E+00	0.000E+00	FAIL ABUN
TH-231	-3.648E-01	5.065E-01	7.319E-01	0.000E+00	FAIL ABUN
U-231	-4.064E-01	6.961E-01	1.024E+00	0.000E+00	FAIL ABUN
PA-233	-8.296E-04	4.043E-02	6.995E-02	0.000E+00	FAIL ABUN
PA-234	-2.088E-02	1.989E-01	3.245E-01	0.000E+00	FAIL ABUN
PA-234M	3.097E+00	3.496E+00	5.881E+00	0.000E+00	NOT IDENT.
U-235	6.145E-02	1.511E-01	2.504E-01	0.000E+00	FAIL ABUN
NP-236	8.484E-03	5.506E-02	9.262E-02	0.000E+00	NOT IDENT.
NP-239	7.184E-02	1.281E-01	2.214E-01	0.000E+00	FAIL ABUN
AM-241	1.000E-01	8.788E-02	1.427E-01	0.000E+00	NOT IDENT.
CM-243	2.062E-03	6.353E-02	1.089E-01	0.000E+00	FAIL ABUN
AM-246	3.792E-02	9.904E-02	1.696E-01	0.000E+00	NOT IDENT.
CM-247	-9.044E-03	2.519E-02	4.220E-02	0.000E+00	FAIL ABUN
CF-249	1.888E-02	2.705E-02	4.749E-02	0.000E+00	NOT IDENT.
CF-251	-6.513E-02	8.825E-02	1.430E-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]G246875003.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 23-FEB-2010 23:49:24
Sample ID          : G246875003          Sample quantity  : 1.26510E+02 GRAM
Detector name      : GAM20              Detector geometry: CAN
Elapsed live time  : 0 04:00:00.00      Elapsed real time: 0 04:01:06.51  0.5%
Energy tolerance  : 1.50000 keV         Analyst Initials : MXR1
Abundance limit   : 75.00000            Sensitivity       : 5.00000
Batch ID          : 952643              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	3292	10.67*	1.252E+00	3.656E+01	3.656E+01	9.46
CD-109	88.03	826	3.72*	6.940E+00	4.746E+00	4.851E+00	18.40
SN-126	64.28	356	9.60	4.678E+00	1.177E+00	1.177E+00	41.48
	86.94	826	8.90	6.940E+00	1.984E+00	1.984E+00	44.44
	87.57	826	37.00*	6.940E+00	4.772E-01	4.772E-01	18.40
BA-137M	661.65	234	89.98*	2.434E+00	1.582E-01	1.584E-01	25.22
CS-137	661.65	234	85.12*	2.434E+00	1.673E-01	1.674E-01	25.23
RE-188	155.03	129	15.00*	6.824E+00	1.877E-01	2.171E-01	60.13
	477.96	-----	1.04	3.151E+00	-----	Line Not Found	-----
	633.10	-----	1.26	2.524E+00	-----	Line Not Found	-----
HG-203	70.83	-----	4.75	5.621E+00	-----	Line Not Found	-----
	72.87	-----	8.00	5.845E+00	-----	Line Not Found	-----
	82.60	-----	3.55	6.669E+00	-----	Line Not Found	-----
	279.20	68	77.30*	4.715E+00	2.770E-02	3.441E-02	101.29
TL-208	277.35	68	6.80	4.715E+00	3.149E-01	3.149E-01	101.66
	510.84	292	21.60	2.992E+00	6.706E-01	6.706E-01	34.02
	583.14	919	84.20*	2.694E+00	6.009E-01	6.009E-01	14.37
	860.37	107	12.46	1.951E+00	6.556E-01	6.556E-01	51.19
BI-211	72.87	-----	1.27	5.845E+00	-----	Line Not Found	-----
	351.07	1452	12.94*	3.967E+00	4.198E+00	4.198E+00	12.35
BI-212	727.18	222	11.80*	2.251E+00	1.238E+00	1.238E+00	32.08
	785.46	-----	1.97	2.111E+00	-----	Line Not Found	-----
	1620.62	29	2.75	1.161E+00	1.354E+00	1.354E+00	73.42
PB-212	74.81	938	10.70	6.059E+00	2.146E+00	2.146E+00	17.47
	77.11	1625	18.00	6.265E+00	2.137E+00	2.137E+00	11.49
	87.30	826	8.00	6.940E+00	2.207E+00	2.207E+00	20.94
	238.63	2795	44.60*	5.246E+00	1.772E+00	1.772E+00	11.57
	300.09	177	3.41	4.461E+00	1.722E+00	1.722E+00	35.98
PO-212	74.81	938	10.70	6.059E+00	2.146E+00	2.146E+00	17.47
	77.11	1625	18.00	6.265E+00	2.137E+00	2.137E+00	11.49
	87.30	826	8.00	6.940E+00	2.207E+00	2.207E+00	20.94
	115.19	-----	0.60	7.430E+00	-----	Line Not Found	-----

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BI-214	238.63	2795	44.60*	5.246E+00	1.772E+00	1.772E+00	11.57
	300.09	177	3.41	4.461E+00	1.722E+00	1.722E+00	35.98
	609.31	1009	46.30*	2.601E+00	1.243E+00	1.243E+00	14.00
	1120.29	224	15.10	1.556E+00	1.412E+00	1.412E+00	32.37
PB-214	1764.49	208	15.80	1.100E+00	1.780E+00	1.780E+00	17.54
	74.81	938	6.21	6.059E+00	3.697E+00	3.697E+00	16.52
	77.11	1625	10.50	6.265E+00	3.664E+00	3.664E+00	13.79
	87.30	826	4.67	6.940E+00	3.781E+00	3.781E+00	19.95
PO-214	241.98	638	7.49	5.202E+00	2.429E+00	2.429E+00	22.39
	295.21	838	19.20	4.512E+00	1.435E+00	1.435E+00	16.58
	351.92	1452	37.20*	3.967E+00	1.460E+00	1.460E+00	13.41
	74.81	938	6.21	6.059E+00	3.697E+00	3.697E+00	16.52
PO-216	77.11	1625	10.50	6.265E+00	3.664E+00	3.664E+00	13.79
	87.30	826	4.67	6.940E+00	3.781E+00	3.781E+00	19.95
	241.98	638	7.49	5.202E+00	2.429E+00	2.429E+00	22.39
	295.21	838	19.20	4.512E+00	1.435E+00	1.435E+00	16.58
PO-218	351.92	1452	37.20*	3.967E+00	1.460E+00	1.460E+00	13.41
	74.81	938	10.70	6.059E+00	2.146E+00	2.146E+00	17.47
	77.11	1625	18.00	6.265E+00	2.137E+00	2.137E+00	11.49
	87.30	826	8.00	6.940E+00	2.207E+00	2.207E+00	20.94
RA-224	238.63	2795	44.60*	5.246E+00	1.772E+00	1.772E+00	11.57
	300.09	177	3.41	4.461E+00	1.722E+00	1.722E+00	35.98
	74.81	938	6.21	6.059E+00	3.697E+00	3.697E+00	16.52
	77.11	1625	10.50	6.265E+00	3.664E+00	3.664E+00	13.79
RA-226	87.30	826	4.67	6.940E+00	3.781E+00	3.781E+00	19.95
	241.98	638	7.49	5.202E+00	2.429E+00	2.429E+00	22.39
	295.21	838	19.20	4.512E+00	1.435E+00	1.435E+00	16.58
	351.92	1452	37.20*	3.967E+00	1.460E+00	1.460E+00	13.41
AC-228	240.98	638	3.95*	5.202E+00	4.606E+00	4.606E+00	21.67
	609.31	1009	46.30*	2.601E+00	1.243E+00	1.243E+00	14.00
	1120.29	224	15.10	1.556E+00	1.412E+00	1.412E+00	32.37
	1764.49	208	15.80	1.100E+00	1.780E+00	1.780E+00	17.54
RA-228	338.32	507	11.40	4.085E+00	1.615E+00	1.615E+00	44.71
	911.07	594	27.70*	1.859E+00	1.710E+00	1.710E+00	16.50
	969.11	393	16.60	1.763E+00	1.993E+00	1.993E+00	27.65
	338.32	507	11.40	4.085E+00	1.615E+00	1.615E+00	44.71
TH-228	911.07	594	27.70*	1.859E+00	1.710E+00	1.710E+00	16.50
	969.11	393	16.60	1.763E+00	1.993E+00	1.993E+00	27.65
	74.81	938	10.70	6.059E+00	2.146E+00	2.146E+00	14.81
	77.11	1625	18.00	6.265E+00	2.137E+00	2.137E+00	11.49
TH-230	87.30	826	8.00	6.940E+00	2.207E+00	2.239E+00	18.40
	238.63	2795	44.60*	5.246E+00	1.772E+00	1.798E+00	11.57
	300.09	177	3.41	4.461E+00	1.722E+00	1.748E+00	68.56
	609.31	1009	46.30*	2.601E+00	1.243E+00	1.243E+00	14.00
TH-232	1120.29	224	15.10	1.556E+00	1.412E+00	1.412E+00	32.37
	1764.49	208	15.80	1.100E+00	1.780E+00	1.780E+00	17.54
	338.32	507	11.40	4.085E+00	1.615E+00	1.615E+00	19.26
	911.07	594	27.70*	1.859E+00	1.710E+00	1.710E+00	16.50
	969.11	393	16.60	1.763E+00	1.993E+00	1.993E+00	27.65

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	356	3.80*	4.678E+00	2.973E+00	2.973E+00	42.58
	92.38	1043	5.41	7.172E+00	3.989E+00	3.989E+00	22.15
U-234	609.31	1009	46.30*	2.601E+00	1.243E+00	1.243E+00	14.00
	1120.29	224	15.10	1.556E+00	1.412E+00	1.412E+00	32.37
	1764.49	208	15.80	1.100E+00	1.780E+00	1.780E+00	17.54
NP-237	86.50	826	12.60*	6.940E+00	1.401E+00	1.401E+00	27.64
	95.87	-----	2.60	7.260E+00	-----	Line Not Found	-----
U-238	63.29	356	3.80*	4.678E+00	2.973E+00	2.973E+00	42.58
	92.38	1043	5.41	7.172E+00	3.989E+00	3.989E+00	15.42
AM-243	74.67	938	66.00*	6.059E+00	3.479E-01	3.479E-01	14.76
	86.72	826	0.34	6.940E+00	5.255E+01	5.255E+01	18.40
	117.66	-----	0.55	7.416E+00	-----	Line Not Found	-----
ANH-511	142.18	-----	0.13	7.067E+00	-----	Line Not Found	-----
	511.00	292	100.00*	2.992E+00	1.449E-01	1.449E-01	32.98

Flag: "*" = Keyline

Total number of lines in spectrum 42
Number of unidentified lines 5
Number of lines tentatively identified by NID 37 88.10%

Nuclide Type :

Nuclide	Hlflife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.656E+01	3.656E+01	0.346E+01	9.46	
CD-109	464.00D	1.02	4.746E+00	4.851E+00	0.892E+00	18.40	
SN-126	1.00E+05Y	1.00	4.772E-01	4.772E-01	0.878E-01	18.40	
BA-137M	30.17Y	1.00	1.582E-01	1.584E-01	0.399E-01	25.22	
CS-137	30.17Y	1.00	1.673E-01	1.674E-01	0.422E-01	25.23	
RE-188	69.40D	1.16	1.877E-01	2.171E-01	1.305E-01	60.13	
HG-203	46.60D	1.24	2.770E-02	3.441E-02	3.485E-02	101.29	
TL-208	1.41E+10Y	1.00	6.009E-01	6.009E-01	0.863E-01	14.37	
BI-211	7.04E+08Y	1.00	4.198E+00	4.198E+00	0.519E+00	12.35	
BI-212	1.41E+10Y	1.00	1.238E+00	1.238E+00	0.397E+00	32.08	
PB-212	1.41E+10Y	1.00	1.772E+00	1.772E+00	0.205E+00	11.57	
PO-212	1.41E+10Y	1.00	1.772E+00	1.772E+00	0.205E+00	11.57	
BI-214	1600.00Y	1.00	1.243E+00	1.243E+00	0.174E+00	14.00	
PB-214	1600.00Y	1.00	1.460E+00	1.460E+00	0.196E+00	13.41	
PO-214	1600.00Y	1.00	1.460E+00	1.460E+00	0.196E+00	13.41	
PO-216	1.41E+10Y	1.00	1.772E+00	1.772E+00	0.205E+00	11.57	
PO-218	1600.00Y	1.00	1.460E+00	1.460E+00	0.196E+00	13.41	
RA-224	1.41E+10Y	1.00	4.606E+00	4.606E+00	0.998E+00	21.67	
RA-226	1600.00Y	1.00	1.243E+00	1.243E+00	0.174E+00	14.00	
AC-228	1.41E+10Y	1.00	1.710E+00	1.710E+00	0.282E+00	16.50	
RA-228	1.41E+10Y	1.00	1.710E+00	1.710E+00	0.282E+00	16.50	
TH-228	1.91Y	1.01	1.772E+00	1.798E+00	0.208E+00	11.57	
TH-230	4.47E+09Y	1.00	1.243E+00	1.243E+00	0.174E+00	14.00	
TH-232	1.41E+10Y	1.00	1.710E+00	1.710E+00	0.282E+00	16.50	
TH-234	4.47E+09Y	1.00	2.973E+00	2.973E+00	1.266E+00	42.58	
U-234	4.47E+09Y	1.00	1.243E+00	1.243E+00	0.174E+00	14.00	
NP-237	2.14E+06Y	1.00	1.401E+00	1.401E+00	0.387E+00	27.64	
U-238	4.47E+09Y	1.00	2.973E+00	2.973E+00	1.266E+00	42.58	
AM-243	7380.00Y	1.00	3.479E-01	3.479E-01	0.514E-01	14.76	
ANH-511	1.00E+09Y	1.00	1.449E-01	1.449E-01	0.478E-01	32.98	

Total Activity : 8.237E+01 8.254E+01

Grand Total Activity : 8.237E+01 8.254E+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
5	90.11	461	802	1.22	180.12	165	27	3.20E-02	23.1	7.07E+00	T
0	129.05	110	682	0.65	257.89	255	7	7.64E-03	81.0	7.29E+00	T
0	185.95	544	887	1.21	371.53	365	12	3.78E-02	24.4	6.17E+00	T
0	209.28	217	628	1.14	418.13	414	9	1.50E-02	44.0	5.73E+00	T
0	270.99	183	510	1.33	541.40	535	11	1.27E-02	50.2	4.80E+00	T
0	328.48	137	446	1.28	656.25	650	11	9.53E-03	62.0	4.18E+00	T
0	463.50	157	212	1.26	926.03	922	10	1.09E-02	38.3	3.23E+00	T
0	795.91	135	140	2.04	1590.50	1585	13	9.37E-03	40.0	2.09E+00	T
0	936.57	89	180	1.83	1871.81	1862	20	6.18E-03	76.8	1.82E+00	T
4	965.71	82	125	1.72	1930.10	1923	32	5.73E-03	51.9	1.77E+00	T
0	1239.17	99	167	1.66	2477.23	2471	14	6.85E-03	59.2	1.43E+00	T
0	1379.24	52	59	1.86	2757.58	2749	14	3.60E-03	69.0	1.31E+00	
0	1510.49	38	20	0.67	3020.36	3015	12	2.67E-03	57.2	1.22E+00	T
0	1591.74	69	42	5.03	3183.07	3173	19	4.81E-03	51.2	1.18E+00	
0	1633.25	22	35	1.08	3266.19	3255	13	1.50E-03	****	1.16E+00	
0	1730.79	59	10	2.27	3461.56	3454	14	4.07E-03	35.1	1.11E+00	
0	1849.34	21	20	1.50	3699.06	3694	9	1.45E-03	89.1	1.07E+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]G246875003.CNF;1
* Acquisition date   : 23-FEB-2010 23:49:24  Detector SN#      :
* Detector ID        : GAM20                      Sensitivity    : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 04:00:00.00             Abundance limit : 75.00000
* Elapsed real time  : 0 04:01:06.51             Half life ratio : 8.00000
*****
*                               SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G246875003             Analyst initials: MXR1
* Batch Number       : 952643                 Sample Quantity : 1.26510E+02 GRAM
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME  : 26-AUG-2009 06:32:11.7MS Isotope      :
* MSD ID            :                               MSD Isotope :
* LCS ID            : 1032-A                       LCS Isotope  :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.656E+01	3.457E+00	3.314E-01	2.890E-02	110.317
CD-109	4.851E+00	8.923E-01	7.009E-01	6.628E-02	6.921
SN-126	4.772E-01	8.778E-02	6.915E-02	6.504E-03	6.901
BA-137M	1.584E-01	3.995E-02	4.132E-02	4.146E-03	3.833
CS-137	1.674E-01	4.224E-02	4.367E-02	4.389E-03	3.833
RE-188	2.171E-01	1.305E-01	1.785E-01	1.533E-02	1.216
HG-203	3.441E-02	3.485E-02	4.086E-02	4.156E-03	0.842
TL-208	6.009E-01	8.633E-02	3.934E-02	4.044E-03	15.275
BI-211	4.198E+00	5.186E-01	2.278E-01	2.183E-02	18.426
BI-212	1.238E+00	3.971E-01	3.275E-01	3.717E-02	3.780
PB-212	1.772E+00	2.050E-01	5.981E-02	6.360E-03	29.629
PO-212	1.772E+00	2.050E-01	5.981E-02	6.360E-03	29.629
BI-214	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
PB-214	1.460E+00	1.958E-01	7.512E-02	8.186E-03	19.439
PO-214	1.460E+00	1.958E-01	7.512E-02	8.186E-03	19.439
PO-216	1.772E+00	2.050E-01	5.981E-02	6.360E-03	29.629
PO-218	1.460E+00	1.958E-01	7.512E-02	8.186E-03	19.439
RA-224	4.606E+00	9.983E-01	6.805E-01	6.578E-02	6.769

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
AC-228	1.710E+00	2.821E-01	1.450E-01	1.776E-02	11.791
RA-228	1.710E+00	2.821E-01	1.450E-01	1.776E-02	11.791
TH-228	1.798E+00	2.080E-01	6.068E-02	6.453E-03	29.629
TH-230	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
TH-232	1.710E+00	2.821E-01	1.450E-01	1.776E-02	11.791
TH-234	2.973E+00	1.266E+00	1.155E+00	2.007E-01	2.575
U-234	1.243E+00	1.740E-01	7.924E-02	8.817E-03	15.684
NP-237	1.401E+00	3.874E-01	2.045E-01	4.626E-02	6.853
U-238	2.973E+00	1.266E+00	1.155E+00	2.007E-01	2.575
AM-243	3.479E-01	5.136E-02	5.337E-02	4.296E-03	6.518
ANH-511	1.449E-01	4.778E-02	2.968E-02	2.766E-03	4.880

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.046E-02		2.247E-01	3.703E-01	3.599E-02	0.190
NA-22	-1.306E-02		3.153E-02	4.920E-02	4.076E-03	-0.265
NA-24	-1.040E-01		1.173E-01	Half-Life too short		
AL-26	6.890E-03		1.757E-02	3.059E-02	2.485E-03	0.225
TI-44	3.944E-01	+	4.532E-02	5.295E-02	4.444E-03	7.449
SC-46	-1.598E-02		2.871E-02	4.503E-02	4.489E-03	-0.355
V-48	2.331E-02		4.789E-02	8.107E-02	7.748E-03	0.288
CR-51	-2.804E-02		2.430E-01	4.008E-01	4.018E-02	-0.070
MN-52	-9.584E-02		1.233E-01	1.877E-01	1.588E-02	-0.511
MN-54	1.720E-02		2.649E-02	4.542E-02	4.588E-03	0.379
CO-56	-5.301E-03		2.698E-02	4.418E-02	4.452E-03	-0.120
CO-57	1.138E-02		1.726E-02	2.826E-02	2.359E-03	0.403
CO-58	-3.921E-02		2.692E-02	4.014E-02	4.076E-03	-0.977
FE-59	-9.382E-04		6.676E-02	1.086E-01	1.025E-02	-0.009
CO-60	-7.476E-03		2.868E-02	4.502E-02	3.771E-03	-0.166
ZN-65	-4.104E-02		7.959E-02	1.067E-01	9.188E-03	-0.384
GE-68	-4.306E-01		9.356E-01	1.479E+00	1.320E-01	-0.291
AS-73	1.958E-01		3.988E-01	6.660E-01	4.944E-02	0.294
AS-74	-5.565E-02		6.554E-02	9.946E-02	9.734E-03	-0.560
SE-75	-5.390E-04		2.994E-02	4.643E-02	4.597E-03	-0.012
BR-77	-1.699E+00		5.957E+00	9.456E+00	8.870E-01	-0.180
SR-82	-1.709E-01		2.632E-01	4.215E-01	4.283E-02	-0.406
RB-83	5.617E-04		4.586E-02	7.409E-02	6.949E-03	0.008
RB-84	2.031E-02		4.761E-02	8.076E-02	8.070E-03	0.252
KR-85	1.621E+01		5.693E+00	9.244E+00	8.632E-01	1.754
SR-85	8.262E-02		2.901E-02	4.711E-02	4.399E-03	1.754
RB-86	-4.891E-01		5.781E-01	8.873E-01	7.922E-02	-0.551
Y-88	-1.082E-02		2.431E-02	3.759E-02	3.033E-03	-0.288
ZR-88	1.147E-03		2.191E-02	3.602E-02	3.013E-03	0.032
Y-91	-2.581E+00		1.404E+01	2.246E+01	1.823E+00	-0.115
NB-94	1.261E-02		2.386E-02	4.098E-02	4.146E-03	0.308

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	-4.349E-03		3.043E-02	5.039E-02	5.122E-03	-0.086
NB-95M	9.472E-03		8.851E-02	1.318E-01	1.416E-02	0.072
ZR-95	4.887E-02		5.199E-02	9.050E-02	9.877E-03	0.540
NB-97	3.327E-03		1.988E-02	Half-Life too short		
ZR-97	-1.591E-01		3.683E-01	Half-Life too short		
MO-99	-3.108E+00		6.777E+00	1.100E+01	1.771E+00	-0.283
TC-99M	-2.066E+09		2.679E+09	Half-Life too short		
RH-101	-5.242E-03		2.315E-02	3.705E-02	3.396E-03	-0.141
RH-102	-1.869E-02		2.028E-02	3.118E-02	2.827E-03	-0.599
RU-103	-2.954E-02		2.809E-02	4.228E-02	6.147E-03	-0.699
RH-106	-1.051E-01		2.178E-01	3.363E-01	4.781E-02	-0.312
RU-106	-1.051E-01		2.175E-01	3.363E-01	3.329E-02	-0.312
AG-108M	-5.769E-04		2.285E-02	3.722E-02	3.378E-03	-0.015
AG-110M	1.914E-03		2.526E-02	3.727E-02	3.818E-03	0.051
IN-111	5.140E-03		6.610E-01	9.778E-01	9.492E-02	0.005
IN-113M	-1.613E-02		3.161E-02	5.064E-02	4.368E-03	-0.319
SN-113	-1.613E-02		3.161E-02	5.064E-02	4.368E-03	-0.319
IN-114M	3.377E-02		1.292E-01	1.956E-01	1.772E-02	0.173
CD-115	-6.174E+00		6.426E+00	9.761E+00	9.201E-01	-0.633
SN-117M	2.440E-02		4.119E-02	5.964E-02	5.147E-03	0.409
SB-122	1.822E+00		1.230E+00	2.118E+00	2.039E-01	0.860
I-123	9.946E-01		1.005E+00	Half-Life too short		
TE-123M	1.025E-02		2.072E-02	3.187E-02	2.769E-03	0.322
I-124	-6.186E-01		4.551E-01	6.357E-01	6.241E-02	-0.973
SB-124	-1.889E-02		4.040E-02	6.173E-02	5.365E-03	-0.306
SB-125	-5.703E-03		6.414E-02	1.043E-01	9.229E-03	-0.055
TE-125M	2.259E+00		6.228E+00	1.015E+01	1.037E+00	0.223
I-126	2.254E-02		1.413E-01	2.094E-01	2.104E-02	0.108
SB-126	1.699E-02		1.023E-01	1.634E-01	1.657E-02	0.104
SB-127	1.163E-01		8.045E-01	1.361E+00	1.685E-01	0.085
XE-127	-3.634E-02		3.087E-02	5.013E-02	4.627E-03	-0.725
I-131	4.010E-02		7.475E-02	1.258E-01	1.180E-02	0.319
TE-132	-3.007E-01		4.178E-01	6.829E-01	1.102E-01	-0.440
BA-133	2.754E-04		3.089E-02	4.472E-02	6.041E-03	0.006
I-133	3.026E-03		1.307E-03	Half-Life too short		
CS-134	1.264E-01	+	5.222E-02	6.641E-02	6.776E-03	1.903
CS-135	5.456E-02		1.170E-01	1.759E-01	1.949E-02	0.310
I-135	-5.001E+08		5.020E+08	Half-Life too short		
CS-136	-4.183E-02		7.221E-02	1.130E-01	1.072E-02	-0.370
CE-139	3.083E-03		2.066E-02	3.295E-02	2.876E-03	0.094
BA-140	3.365E-02		1.828E-01	2.880E-01	9.612E-02	0.117
LA-140	-1.205E-02		6.103E-02	8.439E-02	7.125E-03	-0.143
CE-141	2.249E-02		4.364E-02	7.066E-02	6.101E-03	0.318
CE-143	3.173E-04		5.262E-05	Half-Life too short		
CE-144	-7.212E-02		1.514E-01	2.261E-01	3.489E-02	-0.319
PM-144	1.970E-02		2.404E-02	4.182E-02	4.228E-03	0.471
PR-144	1.335E+00		1.628E+00	2.833E+00	2.863E-01	0.471
PM-146	-1.402E-03		3.117E-02	5.061E-02	5.543E-03	-0.028

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	1.630E-01		3.711E-01	6.118E-01	9.446E-02	0.266
PM-149	5.232E+01		5.045E+01	8.610E+01	1.403E+01	0.608
EU-152	-7.478E-02		6.738E-02	1.012E-01	9.872E-03	-0.739
GD-153	-3.421E-02		5.936E-02	8.251E-02	7.318E-03	-0.415
EU-154	-3.032E-02		8.759E-02	1.374E-01	1.518E-02	-0.221
EU-155	1.064E-01		7.390E-02	1.232E-01	1.071E-02	0.864
TB-160	2.395E-02		9.467E-02	1.590E-01	1.590E-02	0.151
HO-166M	2.799E-02		4.248E-02	7.342E-02	7.437E-03	0.381
TM-171	-1.858E+01		1.827E+01	2.562E+01	1.909E+00	-0.725
LU-176	1.694E-02		1.643E-02	2.823E-02	2.754E-03	0.600
LU-177	2.298E+00	+	1.033E+00	1.317E+00	1.224E-01	1.745
LU-177M	-1.453E-01		1.285E-01	1.985E-01	1.699E-02	-0.732
HF-181	-1.886E-02		2.978E-02	4.661E-02	4.250E-03	-0.405
W-181	2.678E-01		2.372E-01	3.559E-01	2.619E-02	0.752
TA-182	-1.013E-01		1.526E-01	2.366E-01	1.931E-02	-0.428
RE-183	-1.915E-02		8.028E-02	1.217E-01	1.057E-02	-0.157
RE-184	-9.546E-02		1.565E-01	2.564E-01	2.505E-02	-0.372
OS-185	3.716E-03		2.829E-02	4.799E-02	4.792E-03	0.077
W-188	-2.602E+00		5.360E+00	7.634E+00	7.549E-01	-0.341
IR-192	1.133E-02		2.276E-02	3.846E-02	3.719E-03	0.295
AU-195	1.824E-01		1.589E-01	2.480E-01	2.184E-02	0.736
TL-200	6.905E-05		1.069E-04	Half-Life	too short	
TL-201	1.441E+00		4.205E+00	6.744E+00	5.901E-01	0.214
TL-202	3.014E-02		4.485E-02	7.545E-02	6.628E-03	0.399
BI-207	1.862E-02		3.877E-02	6.517E-02	5.884E-03	0.286
TL-207	-3.648E-01		5.168E-01	7.161E-01	1.302E-01	-0.509
PO-209	1.349E+00		4.992E+00	8.386E+00	8.341E-01	0.161
BI-210	1.444E+00		1.569E+00	2.570E+00	2.383E-01	0.562
PB-210	1.444E+00		1.569E+00	2.570E+00	2.383E-01	0.562
PO-210	1.444E+00		1.568E+00	2.570E+00	2.156E-01	0.562
PB-211	-6.297E-02		6.537E-01	1.064E+00	6.665E-01	-0.059
PO-215	-3.648E-01		5.168E-01	7.161E-01	1.302E-01	-0.509
RN-219	2.173E-02		2.913E-01	4.788E-01	7.147E-02	0.045
RN-220	1.930E+00		1.772E+01	2.870E+01	2.742E+00	0.067
RA-223	-3.648E-01		5.168E-01	7.161E-01	1.302E-01	-0.509
AC-227	2.286E-01		2.625E-01	4.480E-01	7.186E-02	0.510
TH-227	2.286E-01		2.634E-01	4.480E-01	8.357E-02	0.510
TH-229	1.996E-02		3.329E-01	5.651E-01	5.146E-02	0.035
PA-231	-4.684E-01		1.001E+00	1.635E+00	2.610E-01	-0.287
TH-231	-3.648E-01		5.168E-01	7.161E-01	1.302E-01	-0.509
U-231	-4.064E-01		7.103E-01	9.843E-01	8.803E-02	-0.413
PA-233	-8.296E-04		4.125E-02	6.840E-02	6.786E-03	-0.012
PA-234	-2.088E-02		2.029E-01	3.225E-01	6.227E-02	-0.065
PA-234M	3.097E+00		3.567E+00	5.850E+00	6.258E-01	0.529
U-235	6.145E-02		1.542E-01	2.422E-01	4.220E-02	0.254
NP-236	8.484E-03		5.618E-02	8.971E-02	7.763E-03	0.095
NP-239	7.184E-02		1.307E-01	2.135E-01	1.789E-02	0.336
AM-241	1.000E-01		8.967E-02	1.364E-01	1.067E-02	0.733

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.062E-03		6.482E-02	1.049E-01	9.052E-03	0.020
AM-246	3.792E-02		1.011E-01	1.689E-01	1.505E-02	0.225
CM-247	-9.044E-03		2.571E-02	4.142E-02	3.502E-03	-0.218
CF-249	1.888E-02		2.760E-02	4.658E-02	3.931E-03	0.405
CF-251	-6.513E-02		9.005E-02	1.387E-01	1.231E-02	-0.470

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]G246875003
* Acquisition date   : 23-FEB-2010 23:49:24 Detector SN#      :
* Detector ID        : GAM20                               Sensitivity      : 5.000
* Geometry           : CAN                                 Energy tolerance: 1.500
* Elapsed live time  : 0 04:00:00.00                      Abundance limit : 75.000
* Elapsed real time  : 0 04:01:06.51                      Half life ratio  : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246875003 Analyst initials: MXR1
* Batch Number       : 952643 Sample Quantity : 1.2651E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11 MS Isotope      :
* MSD DPM             : 0.000 MSD Isotope                  :
* LCS DPM             : 0.000 LCS Isotope                  :
* LCSD DPM            : 0.000 LCSD Isotope                 :
*****
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.656E+01	3.388E+00	1.657E-01	1.729E+00
CD-109	4.851E+00	8.745E-01	3.651E-01	4.462E-01
SN-126	4.772E-01	8.603E-02	3.602E-02	4.389E-02
BA-137M	1.584E-01	3.915E-02	2.091E-02	1.997E-02
CS-137	1.674E-01	4.139E-02	2.210E-02	2.112E-02
RE-188	2.171E-01	1.279E-01	9.226E-02	6.527E-02
HG-203	3.441E-02	3.415E-02	2.094E-02	1.743E-02
TL-208	6.009E-01	8.460E-02	1.994E-02	4.317E-02
BI-211	4.198E+00	5.082E-01	1.164E-01	2.593E-01
BI-212	1.238E+00	3.892E-01	1.655E-01	1.985E-01
PB-212	1.772E+00	2.009E-01	3.072E-02	1.025E-01
PO-212	1.772E+00	2.009E-01	3.072E-02	1.025E-01
BI-214	1.243E+00	1.705E-01	4.015E-02	8.698E-02
PB-214	1.460E+00	1.919E-01	3.837E-02	9.792E-02
PO-214	1.460E+00	1.919E-01	3.837E-02	9.792E-02
PO-216	1.772E+00	2.009E-01	3.072E-02	1.025E-01
PO-218	1.460E+00	1.919E-01	3.837E-02	9.792E-02
RA-224	4.606E+00	9.783E-01	3.495E-01	4.992E-01
RA-226	1.243E+00	1.705E-01	4.015E-02	8.698E-02
AC-228	1.710E+00	2.765E-01	7.304E-02	1.411E-01
RA-228	1.710E+00	2.765E-01	7.304E-02	1.411E-01
TH-228	1.798E+00	2.039E-01	3.117E-02	1.040E-01
TH-230	1.243E+00	1.705E-01	4.015E-02	8.698E-02
TH-232	1.710E+00	2.765E-01	7.304E-02	1.411E-01
TH-234	2.973E+00	1.241E+00	6.043E-01	6.331E-01
U-234	1.243E+00	1.705E-01	4.015E-02	8.698E-02
NP-237	1.401E+00	3.796E-01	1.065E-01	1.937E-01
U-238	2.973E+00	1.241E+00	6.043E-01	6.331E-01
AM-243	3.479E-01	5.033E-02	2.786E-02	2.568E-02
ANH-511	1.449E-01	4.682E-02	1.508E-02	2.389E-02

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

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	7.046E-02	2.202E-01	1.883E-01	1.124E-01 NOT IDENT.
NA-22	-1.306E-02	3.090E-02	2.466E-02	1.576E-02 NOT IDENT.
NA-24	-1.040E+05	2.300E+05	0.000E+00	1.173E+05 SHORT HLIF
AL-26	6.890E-03	1.722E-02	1.525E-02	8.785E-03 NOT IDENT.
TI-44	3.944E-01	4.441E-02	2.762E-02	2.266E-02 FAIL ABUN
SC-46	-1.598E-02	2.814E-02	2.269E-02	1.436E-02 FAIL ABUN
V-48	2.331E-02	4.694E-02	4.078E-02	2.395E-02 NOT IDENT.
CR-51	-2.804E-02	2.381E-01	2.050E-01	1.215E-01 NOT IDENT.
MN-52	-9.584E-02	1.208E-01	9.388E-02	6.164E-02 FAIL ABUN
MN-54	1.720E-02	2.596E-02	2.290E-02	1.325E-02 NOT IDENT.
CO-56	-5.301E-03	2.644E-02	2.227E-02	1.349E-02 FAIL ABUN
CO-57	1.138E-02	1.692E-02	1.465E-02	8.632E-03 NOT IDENT.
CO-58	-3.921E-02	2.639E-02	2.025E-02	1.346E-02 NOT IDENT.
FE-59	-9.382E-04	6.542E-02	5.456E-02	3.338E-02 NOT IDENT.
CO-60	-7.476E-03	2.810E-02	2.255E-02	1.434E-02 NOT IDENT.
ZN-65	-4.104E-02	7.800E-02	5.359E-02	3.980E-02 NOT IDENT.
GE-68	-4.306E-01	9.169E-01	7.431E-01	4.678E-01 NOT IDENT.
AS-73	1.958E-01	3.909E-01	3.493E-01	1.994E-01 NOT IDENT.
AS-74	-5.565E-02	6.423E-02	5.041E-02	3.277E-02 NOT IDENT.
SE-75	-5.390E-04	2.934E-02	2.381E-02	1.497E-02 NOT IDENT.
BR-77	-1.699E+00	5.838E+00	4.802E+00	2.978E+00 FAIL ABUN
SR-82	-1.709E-01	2.579E-01	2.128E-01	1.316E-01 NOT IDENT.
RB-83	5.617E-04	4.494E-02	3.762E-02	2.293E-02 NOT IDENT.
RB-84	2.031E-02	4.666E-02	4.070E-02	2.381E-02 NOT IDENT.
KR-85	1.621E+01	5.579E+00	4.695E+00	2.846E+00 NOT IDENT.
SR-85	8.262E-02	2.843E-02	2.393E-02	1.450E-02 NOT IDENT.
RB-86	-4.891E-01	5.665E-01	4.458E-01	2.890E-01 NOT IDENT.
Y-88	-1.082E-02	2.382E-02	1.873E-02	1.215E-02 NOT IDENT.
ZR-88	1.147E-03	2.148E-02	1.837E-02	1.096E-02 NOT IDENT.
Y-91	-2.581E+00	1.376E+01	1.126E+01	7.018E+00 NOT IDENT.
NB-94	1.261E-02	2.338E-02	2.072E-02	1.193E-02 NOT IDENT.
NB-95	-4.349E-03	2.983E-02	2.545E-02	1.522E-02 NOT IDENT.
NB-95M	9.472E-03	8.674E-02	6.769E-02	4.425E-02 NOT IDENT.
ZR-95	4.887E-02	5.095E-02	4.571E-02	2.600E-02 NOT IDENT.
NB-97	3.327E+03	3.896E+04	0.000E+00	1.988E+04 SHORT HLIF
ZR-97	-1.591E+05	7.220E+05	0.000E+00	3.683E+05 SHORT HLIF
MO-99	-3.108E+00	6.642E+00	5.556E+00	3.389E+00 NOT IDENT.
TC-99M	-2.066E+15	5.251E+15	0.000E+00	2.679E+15 SHORT HLIF
RH-101	-5.242E-03	2.269E-02	1.908E-02	1.157E-02 NOT IDENT.
RH-102	-1.869E-02	1.987E-02	1.586E-02	1.014E-02 NOT IDENT.
RU-103	-2.954E-02	2.753E-02	2.149E-02	1.405E-02 FAIL ABUN
RH-106	-1.051E-01	2.135E-01	1.704E-01	1.089E-01 FAIL ABUN
RU-106	-1.051E-01	2.132E-01	1.704E-01	1.088E-01 FAIL ABUN
AG-108M	-5.769E-04	2.239E-02	1.895E-02	1.142E-02 NOT IDENT.
AG-110M	1.914E-03	2.476E-02	1.886E-02	1.263E-02 FAIL ABUN
IN-111	5.140E-03	6.477E-01	5.020E-01	3.305E-01 NOT IDENT.
IN-113M	-1.613E-02	3.098E-02	2.582E-02	1.581E-02 NOT IDENT.
SN-113	-1.613E-02	3.098E-02	2.582E-02	1.581E-02 NOT IDENT.
IN-114M	3.377E-02	1.266E-01	1.008E-01	6.459E-02 NOT IDENT.
CD-115	-6.114E+00	6.298E+00	4.956E+00	3.213E+00 NOT IDENT.
SN-117M	2.440E-02	4.037E-02	3.081E-02	2.060E-02 NOT IDENT.
SB-122	1.822E+00	1.205E+00	1.074E+00	6.150E-01 NOT IDENT.
I-123	9.946E+05	1.970E+06	0.000E+00	1.005E+06 SHORT HLIF
TE-123M	1.025E-02	2.031E-02	1.646E-02	1.036E-02 NOT IDENT.
I-124	-6.186E-01	4.460E-01	3.221E-01	2.276E-01 FAIL ABUN
SB-124	-1.889E-02	3.960E-02	3.080E-02	2.020E-02 NOT IDENT.
SB-125	-5.703E-03	6.286E-02	5.310E-02	3.207E-02 FAIL ABUN
TE-125M	2.259E+00	6.103E+00	5.269E+00	3.114E+00 NOT IDENT.
I-126	2.254E-02	1.385E-01	1.060E-01	7.067E-02 NOT IDENT.
SB-126	1.699E-02	1.003E-01	8.261E-02	5.115E-02 FAIL ABUN
SB-127	1.163E-01	7.885E-01	6.886E-01	4.023E-01 NOT IDENT.
XE-127	-3.634E-02	3.026E-02	2.581E-02	1.544E-02 NOT IDENT.
I-131	4.010E-02	7.325E-02	6.422E-02	3.737E-02 NOT IDENT.
TE-132	-3.007E-01	4.094E-01	3.510E-01	2.089E-01 NOT IDENT.
BA-133	2.754E-04	3.027E-02	2.284E-02	1.545E-02 FAIL ABUN
I-133	3.026E+03	2.562E+03	0.000E+00	1.307E+03 SHORT HLIF
CS-134	1.264E-01	5.117E-02	3.351E-02	2.611E-02 FAIL ABUN
CS-135	5.456E-02	1.147E-01	9.019E-02	5.852E-02 NOT IDENT.
I-135	-5.001E+14	9.840E+14	0.000E+00	5.020E+14 SHORT HLIF
CS-136	-4.183E-02	7.077E-02	5.680E-02	3.611E-02 FAIL ABUN
CE-139	3.083E-03	2.025E-02	1.701E-02	1.033E-02 NOT IDENT.
BA-140	3.365E-02	1.791E-01	1.462E-01	9.140E-02 NOT IDENT.
LA-140	-1.205E-02	5.980E-02	4.215E-02	3.051E-02 FAIL ABUN
CE-141	2.249E-02	4.277E-02	3.655E-02	2.182E-02 NOT IDENT.
CE-143	3.173E+02	1.031E+02	0.000E+00	5.262E+01 SHORT HLIF

CE-144	-7.212E-02	1.484E-01	1.171E-01	7.570E-02	NOT IDENT.
PM-144	1.970E-02	2.356E-02	2.115E-02	1.202E-02	NOT IDENT.
PR-144	1.335E+00	1.596E+00	1.432E+00	8.141E-01	NOT IDENT.
PM-146	-1.402E-03	3.054E-02	2.575E-02	1.558E-02	NOT IDENT.
ND-147	1.630E-01	3.636E-01	3.106E-01	1.855E-01	FAIL ABUN
PM-149	5.232E+01	4.944E+01	4.411E+01	2.522E+01	NOT IDENT.
EU-152	-7.478E-02	6.603E-02	5.169E-02	3.369E-02	NOT IDENT.
GD-153	-3.421E-02	5.817E-02	4.292E-02	2.968E-02	NOT IDENT.
EU-154	-3.032E-02	8.584E-02	6.885E-02	4.380E-02	NOT IDENT.
EU-155	1.064E-01	7.243E-02	6.403E-02	3.695E-02	FAIL ABUN
TB-160	2.395E-02	9.278E-02	8.013E-02	4.733E-02	FAIL ABUN
HO-166M	2.799E-02	4.163E-02	3.711E-02	2.124E-02	NOT IDENT.
TM-171	-1.858E+01	1.790E+01	1.340E+01	9.134E+00	NOT IDENT.
LU-176	1.694E-02	1.610E-02	1.445E-02	8.213E-03	FAIL ABUN
LU-177	2.298E+00	1.013E+00	6.775E-01	5.167E-01	FAIL ABUN
LU-177M	-1.453E-01	1.259E-01	1.012E-01	6.425E-02	NOT IDENT.
HF-181	-1.886E-02	2.918E-02	2.370E-02	1.489E-02	NOT IDENT.
W-181	2.678E-01	2.325E-01	1.862E-01	1.186E-01	NOT IDENT.
TA-182	-1.013E-01	1.495E-01	1.186E-01	7.629E-02	FAIL ABUN
RE-183	-1.915E-02	7.867E-02	6.286E-02	4.014E-02	FAIL ABUN
RE-184	-9.546E-02	1.534E-01	1.316E-01	7.827E-02	NOT IDENT.
OS-185	3.716E-03	2.772E-02	2.429E-02	1.414E-02	NOT IDENT.
W-188	-2.602E+00	5.252E+00	3.910E+00	2.680E+00	FAIL ABUN
IR-192	1.133E-02	2.231E-02	1.967E-02	1.138E-02	FAIL ABUN
AU-195	1.824E-01	1.557E-01	1.290E-01	7.943E-02	FAIL ABUN
TL-200	6.905E+01	2.096E+02	0.000E+00	1.069E+02	SHORT HLIF
TL-201	1.441E+00	4.121E+00	3.481E+00	2.102E+00	NOT IDENT.
TL-202	3.014E-02	4.396E-02	3.841E-02	2.243E-02	NOT IDENT.
BI-207	1.862E-02	3.799E-02	3.275E-02	1.938E-02	FAIL ABUN
TL-207	-3.648E-01	5.065E-01	3.662E-01	2.584E-01	FAIL ABUN
PO-209	1.349E+00	4.892E+00	4.225E+00	2.496E+00	NOT IDENT.
BI-210	1.444E+00	1.537E+00	1.351E+00	7.843E-01	NOT IDENT.
PB-210	1.444E+00	1.537E+00	1.351E+00	7.843E-01	NOT IDENT.
PO-210	1.444E+00	1.536E+00	1.351E+00	7.838E-01	NOT IDENT.
PB-211	-6.297E-02	6.407E-01	5.423E-01	3.269E-01	NOT IDENT.
PO-215	-3.648E-01	5.065E-01	3.662E-01	2.584E-01	FAIL ABUN
RN-219	2.173E-02	2.855E-01	2.441E-01	1.457E-01	FAIL ABUN
RN-220	1.930E+00	1.737E+01	1.456E+01	8.862E+00	NOT IDENT.
RA-223	-3.648E-01	5.065E-01	3.662E-01	2.584E-01	FAIL ABUN
AC-227	2.286E-01	2.572E-01	2.298E-01	1.312E-01	FAIL ABUN
TH-227	2.286E-01	2.581E-01	2.298E-01	1.317E-01	FAIL ABUN
TH-229	1.996E-02	3.262E-01	2.911E-01	1.664E-01	FAIL ABUN
PA-231	-4.684E-01	9.813E-01	8.375E-01	5.006E-01	FAIL ABUN
TH-231	-3.648E-01	5.065E-01	3.662E-01	2.584E-01	FAIL ABUN
U-231	-4.064E-01	6.961E-01	5.121E-01	3.551E-01	FAIL ABUN
PA-233	-8.296E-04	4.043E-02	3.500E-02	2.063E-02	FAIL ABUN
PA-234	-2.088E-02	1.989E-01	1.623E-01	1.015E-01	FAIL ABUN
PA-234M	3.097E+00	3.496E+00	2.942E+00	1.784E+00	NOT IDENT.
U-235	6.145E-02	1.511E-01	1.253E-01	7.712E-02	FAIL ABUN
NP-236	8.484E-03	5.506E-02	4.634E-02	2.809E-02	NOT IDENT.
NP-239	7.184E-02	1.281E-01	1.108E-01	6.534E-02	FAIL ABUN
AM-241	1.000E-01	8.788E-02	7.141E-02	4.484E-02	NOT IDENT.
CM-243	2.062E-03	6.353E-02	5.450E-02	3.241E-02	FAIL ABUN
AM-246	3.792E-02	9.904E-02	8.484E-02	5.053E-02	NOT IDENT.
CM-247	-9.044E-03	2.519E-02	2.111E-02	1.285E-02	FAIL ABUN
CF-249	1.888E-02	2.705E-02	2.376E-02	1.380E-02	NOT IDENT.
CF-251	-6.513E-02	8.825E-02	7.153E-02	4.502E-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	638.9466
46.50	638.9466
46.50	638.9466
48.70	713.2842
49.72	747.1216
51.35	681.8449
52.39	677.3760
52.97	638.7385
53.15	638.9676
53.44	669.9240
54.07	651.9921
56.28	770.8902
56.28	770.8941
57.37	0.0000
57.53	774.7327
57.53	774.7347
57.60	774.8357
57.98	758.4731
57.98	758.4731
59.32	730.4531
59.32	730.4531
59.40	730.5610
59.54	730.7527
59.72	730.9985
60.01	800.3339
61.10	795.9401
61.14	795.9968
61.30	844.3056
63.00	869.0202
63.29	869.4722
63.29	869.4722
63.58	869.9243
64.28	859.4343
65.12	895.5055
65.20	895.6320
65.20	895.6320
66.05	965.1518
66.72	949.5932
66.83	939.1542
66.91	939.2864
67.20	939.7587
67.20	939.7587
67.75	893.5427
67.85	925.6129
68.90	931.8488
68.90	931.8488
69.30	925.1702
69.67	925.7540
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70.82	1026.5339
70.83	1026.5493
72.80	996.2002
72.87	987.1175
72.87	987.1175
74.67	946.9816
74.81	947.1978
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74.81	947.1978
74.81	947.1978
74.81	947.1978
74.81	947.1978
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77.11	950.6990

77.11	950.6990
77.11	950.6990
77.11	950.6990
77.11	950.6990
77.11	950.6990
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79.80	954.7314
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80.18	955.2953
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80.30	955.4739
80.57	955.8734
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81.07	956.6113
81.07	956.6113
81.07	956.6113
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83.78	742.2610
83.78	742.2610
83.78	742.2610
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84.90	662.2865
85.43	662.8138
86.29	663.6613
86.50	663.8683
86.54	663.9072
86.59	663.9557
86.72	664.0818
86.79	664.1498
86.94	664.2986
87.30	664.6512
87.30	664.6512
87.30	664.6512
87.30	664.6512
87.30	664.6512
87.30	664.6512
87.57	664.9132
87.88	665.2173
88.03	665.3629
88.36	665.6831
88.47	665.7899
89.95	667.2229
91.11	668.3357
92.29	669.4614
92.38	669.5488
92.38	669.5488
93.35	670.4675
94.00	671.0821
94.67	652.6959
94.67	652.7021
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94.90	667.1722
94.90	667.1722
94.90	667.1722
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95.87	714.0942
96.73	727.6558
97.43	729.9449
98.44	652.2844
98.44	652.2844
98.88	638.6526
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99.55	645.4006
99.86	616.9521
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100.10	626.7322
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103.76	666.1519
105.00	623.3275
105.31	634.2935
108.00	685.9681
109.28	649.4009

111.00	712.3397
111.00	712.3397
111.76	696.8177
112.95	669.7269
115.19	673.7607
116.30	613.8420
117.00	610.0184
117.00	610.0184
117.66	647.5098
121.11	579.1780
121.62	560.9398
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122.32	576.7279
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122.32	576.7279
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135.34	613.1892
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136.48	598.3925
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140.51	0.0000
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142.65	611.3840
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144.24	579.9000
144.24	579.9000
144.24	579.9000
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145.44	609.8421
147.16	615.4529
152.43	554.9161
152.70	590.7148
153.22	614.8079
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154.21	606.3649
154.21	606.3649
154.21	606.3649
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163.89	569.9208
165.85	541.1982
167.43	514.4681
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171.86	525.8816
172.10	526.0022
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176.60	561.8322
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184.41	539.0470
185.71	539.6815
186.00	539.8224
190.27	482.7708
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198.01	516.3477
198.60	521.9224
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201.83	558.0284
202.84	554.9550
205.31	487.6715

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209.75	458.0000
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226.40	477.8229
227.00	462.6272
227.08	462.6544
227.20	475.4027
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228.18	478.4904
228.18	478.4904
231.56	0.0000
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236.00	444.3180
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238.63	411.8946
238.63	411.8946
238.63	411.8946
239.00	412.0114
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241.98	412.9417
241.98	412.9417
241.98	412.9417
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245.39	372.4183
247.94	383.4492
248.90	370.8084
249.79	359.9776
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252.85	403.3412
252.85	403.3412
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256.20	369.0880
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260.90	364.7605
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264.65	327.1715
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268.79	350.3373
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269.46	316.4263
269.46	316.4263
269.46	316.4263
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277.60	321.9870
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278.60	322.5830
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286.10	290.7075
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295.21	318.5770

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300.09	298.1891
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304.84	301.6644
306.84	272.6159
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323.87	329.1072
323.87	329.1072
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334.20	318.2997
334.30	318.3196
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338.28	297.5476
338.28	297.5476
338.28	297.5476
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338.32	297.5569
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351.92	258.5139
351.92	258.5139
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391.69	279.4726
391.69	279.4726
392.90	268.5490
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400.65	249.3858
401.10	237.2778
401.81	259.6836
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415.30	235.9876

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439.56	189.2633
439.89	202.7411
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445.03	191.8511
445.03	191.8511
445.03	191.8511
453.90	227.0545
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510.53	0.0000
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511.85	165.8452
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513.99	157.6488
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529.87	0.0000
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569.50	203.9824
569.67	202.9027
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574.00	176.8946
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602.71	219.7556
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609.31	191.6681

609.31	191.6681
609.31	191.6681
609.31	191.6681
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621.84	159.0133
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666.33	176.1193
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696.49	157.4778
697.00	169.4768
697.49	158.4533
698.33	174.1652
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722.78	158.0012
722.89	158.0054
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724.18	181.3224
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744.21	129.1998
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884.67	124.2963
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903.28	123.9913
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911.07	117.3701
911.07	117.3701
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925.24	90.1202
926.50	96.8659
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937.48	85.4646
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969.11	101.2638
969.11	101.2638
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1001.68	110.2587
1004.76	120.4759
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1024.50	0.0000
1034.80	113.2764
1036.00	109.2283
1037.82	107.2354
1038.57	102.1533
1038.76	0.0000
1045.16	98.2359
1046.59	96.2215
1048.07	116.7442

1050.47	125.0143
1050.47	125.0143
1062.04	134.6332
1063.62	117.2118
1076.63	139.2649
1077.35	135.1641
1078.86	108.3787
1085.78	118.9082
1099.22	126.5750
1112.02	140.5107
1112.84	133.5970
1115.52	159.7347
1120.29	115.7695
1120.29	115.7695
1120.29	115.7695
1120.29	115.7695
1120.51	115.7750
1121.28	115.7966
1124.00	0.0000
1129.67	106.6269
1131.51	0.0000
1147.95	0.0000
1167.94	141.3805
1173.22	125.7170
1175.09	136.3381
1177.93	160.7578
1189.05	121.9460
1204.90	151.1385
1205.75	0.0000
1213.00	159.9536
1221.42	176.2954
1230.97	166.5690
1235.34	158.9948
1236.41	0.0000
1238.25	164.4590
1246.25	125.3597
1260.41	0.0000
1271.85	97.2686
1274.45	107.0583
1274.54	109.2210
1291.56	73.8139
1298.22	0.0000
1312.09	90.5016
1325.50	92.9563
1325.50	92.9563
1332.49	83.2363
1333.61	84.3541
1360.21	55.0879
1362.66	0.0000
1365.15	47.7915
1368.21	57.0200
1368.53	0.0000
1376.25	44.2188
1384.27	58.5300
1394.10	48.0835
1395.20	47.1692
1407.95	71.4042
1434.06	45.6843
1436.60	39.1768
1457.56	0.0000
1460.81	41.2446
1489.15	32.9934
1509.49	34.0723
1596.49	42.8902
1620.62	18.2280
1678.03	0.0000
1691.02	23.4971
1691.02	23.4971
1706.46	0.0000
1750.46	0.0000
1764.49	29.7522
1764.49	29.7522
1764.49	29.7522
1764.49	29.7522
1770.23	18.7198
1771.40	18.7236
1791.20	0.0000
1808.65	17.9868

1836.01

35.1353

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875003

Total Uranium Activity	8.8739E+00	ug/g
Total Uranium Counting Unc.	3.6920E+00	ug/g
Total Uranium Tpu	1.8837E-06	ug/g
Total Uranium Mda	1.7988E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                          *
*                               GROSS GAMMA REPORT                            *
*
*****
*
*  BATCH ID      : 952643                SAMPLE ID   : G246875003                *
*  ANALYST       : MXR1                  DETECTOR    : GAM20                  *
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00  COUNT TIME : 0 04:00:00.00          *
*  ANALYSIS DATE: 23-FEB-2010 23:49:24.18  SAMPLE ALQT: 126.510 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.119E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.219E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.650E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.789E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 10:52:15.46

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875004.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:51:48
Sample ID          : G246875004           Sample quantity  : 1.22440E+02 GRAM
Detector name      : GAM04                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:01.38  0.0%
Energy tolerance   : 1.50000 keV          Analyst Initials  : MXR1
Abundance limit    : 75.00000             Sensitivity         : 5.00000
Batch ID           : 952643                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	3	74.75	309	442	1.13	149.55	145	20	4.30E-02	12.3	1.80E+00
2	3	77.13*	560	326	1.03	154.30	145	20	7.78E-02	6.8	
3	0	87.21	140	382	1.02	174.46	172	6	1.94E-02	23.8	
4	4	89.85	104	236	0.92	179.74	178	16	1.44E-02	22.9	1.07E+00
5	4	92.94*	273	421	1.39	185.93	178	16	3.80E-02	14.8	
6	0	128.93	84	343	1.14	257.90	254	8	1.17E-02	39.7	
7	0	185.95*	232	350	1.45	371.96	367	11	3.22E-02	17.4	
8	0	209.21*	119	263	1.47	418.49	415	8	1.65E-02	25.8	
9	5	238.65*	1330	180	1.09	477.37	471	18	1.85E-01	3.3	1.05E+00
10	5	241.65	325	255	1.87	483.36	471	18	4.51E-02	13.6	
11	0	270.05	112	288	1.02	540.17	534	12	1.55E-02	31.9	
12	0	295.29	406	202	1.23	590.67	586	10	5.63E-02	8.2	
13	0	300.66	134	199	1.18	601.40	596	12	1.86E-02	23.0	
14	0	327.80	60	171	0.84	655.68	651	9	8.29E-03	41.6	
15	0	338.24*	242	193	1.03	676.56	673	10	3.36E-02	12.6	
16	0	352.02*	639	167	1.25	704.12	698	12	8.87E-02	5.8	
17	0	463.31	79	112	2.07	926.71	920	11	1.10E-02	27.6	
18	0	511.00*	118	154	1.55	1022.09	1015	14	1.64E-02	26.9	
19	0	583.15*	405	108	1.39	1166.40	1158	16	5.62E-02	7.7	
20	0	609.44*	399	129	1.30	1218.97	1213	12	5.54E-02	7.7	
21	0	662.10*	32	75	1.64	1324.29	1321	8	4.45E-03	52.0	
22	0	727.37	104	70	1.09	1454.83	1450	11	1.45E-02	18.3	
23	0	768.93	35	73	1.04	1537.94	1532	10	4.92E-03	48.0	
24	0	795.48	37	89	1.06	1591.04	1586	11	5.08E-03	52.5	
25	0	862.36	74	82	5.15	1724.79	1716	19	1.03E-02	31.9	
26	0	911.31*	277	89	1.70	1822.67	1816	15	3.85E-02	9.6	
27	2	964.81	61	65	2.06	1929.68	1924	20	8.48E-03	26.9	1.07E+00
28	2	969.29*	156	34	1.85	1938.63	1924	20	2.17E-02	11.6	
29	0	1120.41*	94	57	1.30	2240.83	2236	11	1.30E-02	19.1	
30	0	1377.91	54	11	1.40	2755.74	2750	11	7.50E-03	18.1	
31	0	1461.09*	1393	27	2.06	2922.06	2914	15	1.94E-01	2.8	
32	0	1509.89	22	9	1.75	3019.64	3015	11	3.10E-03	32.8	
33	2	1588.54	35	8	2.43	3176.91	3166	26	4.92E-03	24.5	2.17E+00
34	2	1593.01	40	6	2.43	3185.84	3166	26	5.50E-03	17.1	
35	0	1764.78	75	17	1.91	3529.27	3519	18	1.04E-02	17.5	

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

VMS Nuclide Identification Report V3.1 Generated 24-FEB-2010 10:52:18

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875004.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 24-FEB-2010 08:51:48
Sample ID        : G246875004             Sample quantity  : 122.44 GRAM
Sample type       : SOLID                  Sample geometry   :
Detector name     : GAMMA4                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00           Elapsed real time: 0 02:00:01.38   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	*	3.726E+01	3.375E+00	5.489E-01	3.901E-02	67.878
CD-109	+	88.03	*	2.345E+00	1.150E+00	1.437E+00	1.727E-01	1.632
SN-126		64.28		5.514E-01	6.794E-01	1.154E+00	1.988E-01	0.478
	+	86.94		9.585E-01	6.093E-01	6.529E-01	2.754E-01	1.468
	+	87.57	*	2.306E-01	1.131E-01	1.513E-01	1.815E-02	1.524
BA-137M	+	661.65	*	4.951E-02	5.154E-02	7.338E-02	3.579E-03	0.675
CS-137	+	661.65	*	5.234E-02	5.449E-02	7.757E-02	3.806E-03	0.675
TL-208		277.35		2.160E-01	3.884E-01	6.717E-01	7.423E-02	0.322
	+	510.84		6.131E-01	3.352E-01	2.430E-01	2.439E-02	2.523
	+	583.14	*	6.006E-01	9.991E-02	6.120E-02	3.850E-03	9.814
		860.37		6.255E-01	3.567E-01	6.532E-01	5.449E-02	0.958
BI-211		72.87		4.524E+00	4.345E+00	6.817E+00	7.816E-01	0.664
	+	351.07	*	4.176E+00	5.573E-01	3.538E-01	2.390E-02	11.801
PB-212	+	74.81		2.440E+00	7.020E-01	6.882E-01	1.017E-01	3.546
	+	77.11		2.428E+00	4.332E-01	3.799E-01	4.358E-02	6.392
	+	87.30		1.066E+00	5.337E-01	7.044E-01	1.099E-01	1.514
	+	238.63	*	1.895E+00	1.961E-01	9.198E-02	7.387E-03	20.607
	+	300.09		2.947E+00	1.381E+00	1.149E+00	1.012E-01	2.565
PO-212	+	74.81		2.440E+00	7.020E-01	6.882E-01	1.017E-01	3.546
	+	77.11		2.428E+00	4.332E-01	3.799E-01	4.358E-02	6.392
	+	87.30		1.066E+00	5.337E-01	7.044E-01	1.099E-01	1.514
		115.19		2.477E+00	3.601E+00	6.103E+00	4.593E-01	0.406
	+	238.63	*	1.895E+00	1.961E-01	9.198E-02	7.387E-03	20.607
	+	300.09		2.947E+00	1.381E+00	1.149E+00	1.012E-01	2.565
BI-214	+	609.31	*	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
	+	1120.29		1.403E+00	5.519E-01	5.383E-01	5.015E-02	2.607
	+	1764.49		1.528E+00	5.437E-01	3.614E-01	2.203E-02	4.229
PB-214	+	74.81		4.205E+00	1.186E+00	1.186E+00	1.617E-01	3.546
	+	77.11		4.163E+00	8.075E-01	6.512E-01	8.969E-02	6.392
	+	87.30		1.827E+00	9.068E-01	1.207E+00	1.718E-01	1.514
	+	241.98		2.779E+00	7.913E-01	5.541E-01	4.827E-02	5.016
	+	295.21		1.568E+00	2.948E-01	2.159E-01	1.961E-02	7.263
	+	351.92	*	1.453E+00	2.081E-01	1.233E-01	1.052E-02	11.777
PO-214	+	74.81		4.205E+00	1.186E+00	1.186E+00	1.617E-01	3.546

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		4.163E+00	8.075E-01	6.512E-01	8.969E-02	6.392
	+	87.30		1.827E+00	9.068E-01	1.207E+00	1.718E-01	1.514
	+	241.98		2.779E+00	7.913E-01	5.541E-01	4.827E-02	5.016
	+	295.21		1.568E+00	2.948E-01	2.159E-01	1.961E-02	7.263
	+	351.92	*	1.453E+00	2.081E-01	1.233E-01	1.052E-02	11.777
	+	74.81		2.440E+00	7.020E-01	6.882E-01	1.017E-01	3.546
	+	77.11		2.428E+00	4.332E-01	3.799E-01	4.358E-02	6.392
	+	87.30		1.066E+00	5.337E-01	7.044E-01	1.099E-01	1.514
PO-218	+	238.63	*	1.895E+00	1.961E-01	9.198E-02	7.387E-03	20.607
	+	300.09		2.947E+00	1.381E+00	1.149E+00	1.012E-01	2.565
	+	74.81		4.205E+00	1.186E+00	1.186E+00	1.617E-01	3.546
	+	77.11		4.163E+00	8.075E-01	6.512E-01	8.969E-02	6.392
	+	87.30		1.827E+00	9.068E-01	1.207E+00	1.718E-01	1.514
	+	241.98		2.779E+00	7.913E-01	5.541E-01	4.827E-02	5.016
	+	295.21		1.568E+00	2.948E-01	2.159E-01	1.961E-02	7.263
	+	351.92	*	1.453E+00	2.081E-01	1.233E-01	1.052E-02	11.777
RA-224	+	240.98	*	5.270E+00	1.471E+00	1.047E+00	6.980E-02	5.033
RA-226	+	609.31	*	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
AC-228	+	1120.29		1.403E+00	5.519E-01	5.383E-01	5.015E-02	2.607
	+	1764.49		1.528E+00	5.437E-01	3.614E-01	2.203E-02	4.229
	+	338.32		1.743E+00	8.360E-01	3.889E-01	1.588E-01	4.482
	+	911.07	*	1.859E+00	4.095E-01	2.434E-01	2.653E-02	7.637
RA-228	+	969.11		1.851E+00	6.052E-01	3.565E-01	8.221E-02	5.193
	+	338.32		1.743E+00	8.360E-01	3.889E-01	1.588E-01	4.482
	+	911.07	*	1.859E+00	4.095E-01	2.434E-01	2.653E-02	7.637
	+	969.11		1.851E+00	6.052E-01	3.565E-01	8.221E-02	5.193
TH-228	+	74.81		2.477E+00	6.744E-01	6.985E-01	8.037E-02	3.546
	+	77.11		2.465E+00	4.397E-01	3.855E-01	4.423E-02	6.392
	+	87.30		1.082E+00	5.307E-01	7.149E-01	8.558E-02	1.514
	+	238.63	*	1.924E+00	1.990E-01	9.335E-02	7.497E-03	20.607
TH-230	+	300.09		2.991E+00	2.239E+00	1.166E+00	6.883E-01	2.565
	+	609.31	*	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
	+	1120.29		1.403E+00	5.519E-01	5.383E-01	5.015E-02	2.607
	+	1764.49		1.528E+00	5.437E-01	3.614E-01	2.203E-02	4.229
TH-232	+	338.32		1.743E+00	4.520E-01	3.889E-01	2.445E-02	4.482
	+	911.07	*	1.859E+00	4.095E-01	2.434E-01	2.653E-02	7.637
	+	969.11		1.851E+00	6.052E-01	3.565E-01	8.221E-02	5.193
	+	969.11		1.851E+00	6.052E-01	3.565E-01	8.221E-02	5.193
U-234	+	609.31	*	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
	+	1120.29		1.403E+00	5.519E-01	5.383E-01	5.015E-02	2.607
	+	1764.49		1.528E+00	5.437E-01	3.614E-01	2.203E-02	4.229
	+	1764.49		1.528E+00	5.437E-01	3.614E-01	2.203E-02	4.229
NP-237	+	86.50	*	6.771E-01	3.602E-01	4.711E-01	1.122E-01	1.437
AM-243	+	95.87		-5.341E-01	1.119E+00	1.612E+00	4.061E-01	-0.331
	+	74.67	*	3.956E-01	1.076E-01	1.121E-01	1.284E-02	3.529
	+	86.72		2.539E+01	1.245E+01	1.763E+01	2.102E+00	1.441
	+	117.66		-1.751E+00	3.914E+00	6.313E+00	4.608E-01	-0.277
ANH-511	+	142.18		1.190E+01	1.806E+01	3.027E+01	1.980E+00	0.393
	+	511.00	*	1.324E-01	7.157E-02	5.251E-02	2.937E-03	2.522

---- 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	*	-1.419E-01	3.608E-01	5.714E-01	3.785E-02	-0.248

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	1274.54	*		2.009E-03	4.995E-02	8.390E-02	5.486E-03	0.024
NA-24	1368.53	*		-2.263E-01	4.995E-02	Half-Life too short		
AL-26	1129.67			1.577E-01	2.064E+00	3.357E+00	2.166E-01	0.047
	1808.65	*		4.299E-02	3.054E-02	6.320E-02	3.749E-03	0.680
TI-44	67.85			-2.393E-02	5.813E-02	9.630E-02	1.120E-02	-0.249
	+ 78.38	*		4.481E-01	7.994E-02	9.087E-02	1.045E-02	4.931
SC-46	889.25	*		-3.196E-02	4.372E-02	6.678E-02	5.401E-03	-0.479
	+ 1120.51			2.397E-01	9.294E-02	1.488E-01	9.748E-03	1.611
V-48	944.10			-3.278E-01	9.967E-01	1.580E+00	1.263E-01	-0.207
	983.50	*		-4.868E-02	8.071E-02	1.237E-01	9.587E-03	-0.393
	1312.09			-5.826E-02	9.548E-02	1.491E-01	1.005E-02	-0.391
CR-51	320.08	*		-3.384E-02	3.875E-01	6.453E-01	4.544E-02	-0.052
MN-52	744.21			-1.244E-01	2.504E-01	4.004E-01	2.376E-02	-0.311
	848.13			-1.769E+00	7.347E+00	1.188E+01	8.838E-01	-0.149
	935.52			4.218E-01	2.984E-01	5.431E-01	4.368E-02	0.777
	1246.25			-1.410E+00	8.961E+00	1.484E+01	9.444E-01	-0.095
	1333.61			-2.226E+00	5.921E+00	9.466E+00	6.487E-01	-0.235
	1434.06	*		1.728E-01	2.615E-01	4.694E-01	3.203E-02	0.368
MN-54	834.83	*		-2.435E-02	3.858E-02	6.007E-02	4.347E-03	-0.405
CO-56	846.75	*		-8.252E-03	4.427E-02	7.197E-02	5.339E-03	-0.115
	977.42			3.013E+00	3.286E+00	5.827E+00	4.538E-01	0.517
	1037.82			6.164E-02	3.443E-01	5.702E-01	4.488E-02	0.108
	1175.09			-1.250E+00	2.599E+00	3.978E+00	2.370E-01	-0.314
	1238.25			1.249E-01	1.072E-01	1.940E-01	1.291E-02	0.644
	1360.21			4.669E-01	1.004E+00	1.773E+00	1.215E-01	0.263
	1771.40			-2.421E-02	2.952E-01	4.013E-01	2.437E-02	-0.060
CO-57	122.06	*		4.021E-03	2.722E-02	4.502E-02	3.125E-03	0.089
	136.48			-8.177E-02	2.129E-01	3.418E-01	2.542E-02	-0.239
CO-58	810.76	*		-1.960E-02	4.089E-02	6.473E-02	4.469E-03	-0.303
FE-59	142.65			2.122E+00	2.770E+00	4.660E+00	3.046E-01	0.455
	192.34			1.375E-01	9.442E-01	1.526E+00	1.856E-01	0.090
	1099.22	*		-3.676E-02	1.074E-01	1.678E-01	1.282E-02	-0.219
	1291.56			6.316E-02	1.305E-01	2.290E-01	1.851E-02	0.276
CO-60	1173.22			-1.076E-02	5.246E-02	8.272E-02	4.919E-03	-0.130
	1332.49	*		-8.377E-03	4.688E-02	7.664E-02	5.252E-03	-0.109
ZN-65	1115.52	*		-9.056E-02	1.271E-01	1.597E-01	1.057E-02	-0.567
GE-68	1077.35	*		-3.197E-01	1.551E+00	2.465E+00	1.722E-01	-0.130
AS-73	53.44	*		1.798E-01	1.657E+00	2.764E+00	3.616E-01	0.065
AS-74	595.88	*		2.458E-02	1.044E-01	1.706E-01	9.008E-03	0.144
	634.78			1.218E-01	3.759E-01	6.179E-01	3.126E-02	0.197
SE-75	66.05			-6.217E+00	6.239E+00	1.002E+01	1.315E+00	-0.620
	96.73			-5.854E-01	9.079E-01	1.298E+00	1.882E-01	-0.451
	121.11			-2.308E-02	1.425E-01	2.326E-01	2.335E-02	-0.099
	136.00			-2.187E-02	4.015E-02	6.398E-02	4.288E-03	-0.342
	198.60			4.266E-01	1.981E+00	3.151E+00	2.432E-01	0.135
	264.65	*		1.937E-02	4.931E-02	7.573E-02	5.094E-03	0.256
	279.53			1.401E-02	1.130E-01	1.918E-01	1.354E-02	0.073
	303.91			6.086E-01	2.308E+00	3.486E+00	3.490E-01	0.175
	400.65			-5.415E-02	2.775E-01	4.521E-01	4.070E-02	-0.120

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77	+	87.88		4.715E+02	2.312E+02	3.460E+02	4.158E+01	1.363
		200.40		-1.169E+02	1.653E+02	2.552E+02	1.665E+01	-0.458
	+	239.00		2.832E+02	2.640E+01	3.923E+01	2.614E+00	7.219
		249.79		-7.617E+01	5.927E+01	9.350E+01	6.243E+00	-0.815
		281.68		-5.596E+01	8.687E+01	1.415E+02	9.399E+00	-0.395
		297.23		2.598E+02	8.344E+01	1.178E+02	7.749E+00	2.206
		303.76		4.235E+01	1.858E+02	2.798E+02	1.831E+01	0.151
		439.47		7.002E+01	1.392E+02	2.362E+02	1.340E+01	0.296
		484.57		-2.517E+02	2.312E+02	3.374E+02	1.904E+01	-0.746
	*	520.65		2.672E+00	1.047E+01	1.731E+01	9.638E-01	0.154
		574.64		-1.117E+02	2.113E+02	3.109E+02	1.673E+01	-0.359
		578.91		6.661E+01	8.800E+01	1.349E+02	7.231E+00	0.494
		585.48		1.147E+03	2.652E+02	4.778E+02	2.547E+01	2.401
		755.35		7.742E+01	1.740E+02	3.000E+02	1.826E+01	0.258
		817.79		9.552E+00	1.191E+02	1.989E+02	1.389E+01	0.048
		698.33		-2.847E+01	3.771E+01	5.966E+01	3.181E+00	-0.477
SR-82	*	776.49		-5.643E-01	4.192E-01	6.134E-01	3.915E-02	-0.920
		1395.20		1.563E+00	1.118E+01	1.893E+01	1.296E+00	0.083
RB-83	*	520.41		3.287E-02	7.302E-02	1.225E-01	6.824E-03	0.268
		529.64		-6.498E-02	1.119E-01	1.723E-01	9.549E-03	-0.377
		552.65		6.322E-02	2.299E-01	3.786E-01	2.070E-02	0.167
RB-84	*	881.50		-8.841E-03	7.385E-02	1.209E-01	9.630E-03	-0.073
KR-85	*	513.99		1.200E+01	8.849E+00	1.411E+01	7.880E-01	0.851
SR-85	*	513.99		6.137E-02	4.525E-02	7.215E-02	4.030E-03	0.851
RB-86	*	1076.63		-1.354E-01	9.720E-01	1.555E+00	1.087E-01	-0.087
Y-88		898.02		-3.377E-02	4.886E-02	7.519E-02	6.221E-03	-0.449
	*	1836.01		-1.149E-02	4.073E-02	6.245E-02	3.644E-03	-0.184
ZR-88	*	392.90		-1.337E-02	3.268E-02	5.255E-02	2.957E-03	-0.254
Y-91	*	1204.90		-1.029E+01	2.497E+01	3.866E+01	2.369E+00	-0.266
NB-94	*	702.63		1.274E-02	3.638E-02	6.252E-02	3.368E-03	0.204
		871.10		3.801E-02	3.907E-02	6.525E-02	5.089E-03	0.582
NB-95	*	765.79		3.759E-02	4.872E-02	7.672E-02	4.781E-03	0.490
NB-95M	*	235.69		9.304E-02	1.419E-01	2.088E-01	1.713E-02	0.446
ZR-95		724.18		2.179E-02	1.084E-01	1.614E-01	1.089E-02	0.135
	*	756.15		-1.375E-03	7.985E-02	1.329E-01	9.680E-03	-0.010
NB-97	*	657.90		4.746E-02	7.985E-02	Half-Life	too short	
		1024.50		-3.636E-02	7.985E-02	Half-Life	too short	
ZR-97		254.15		4.488E+00	7.985E-02	Half-Life	too short	
		355.39		-2.012E-01	7.985E-02	Half-Life	too short	
	*	507.63		8.261E-01	7.985E-02	Half-Life	too short	
		602.52		-4.092E+00	7.985E-02	Half-Life	too short	
		1021.30		6.049E-01	7.985E-02	Half-Life	too short	
		1147.95		3.939E+00	7.985E-02	Half-Life	too short	
		1362.66		3.294E+00	7.985E-02	Half-Life	too short	
		1750.46		4.061E+00	7.985E-02	Half-Life	too short	
MO-99		140.51		-1.626E+01	2.609E+01	4.082E+01	1.107E+01	-0.398
		181.06		1.601E+01	1.882E+01	2.814E+01	4.885E+00	0.569
		366.43		-3.683E+01	8.568E+01	1.384E+02	8.270E+00	-0.266
	*	739.58		1.120E+01	1.167E+01	2.081E+01	2.874E+00	0.539

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	778.00			-2.140E+01	3.569E+01	5.636E+01	3.609E+00	-0.380
TC-99M	140.51	*		-1.269E+10	3.569E+01	Half-Life	too short	
RH-101	127.23			-5.658E-03	3.778E-02	5.493E-02	3.731E-03	-0.103
	198.01	*		4.052E-02	3.604E-02	5.963E-02	3.884E-03	0.679
	325.23			-1.118E-03	2.643E-01	3.890E-01	2.490E-02	-0.003
RH-102	418.52			8.931E-02	3.108E-01	5.210E-01	2.950E-02	0.171
	475.06	*		-7.307E-03	3.281E-02	5.266E-02	2.977E-03	-0.139
	631.29			-3.251E-02	5.708E-02	8.609E-02	4.374E-03	-0.378
	697.49			-8.019E-02	8.596E-02	1.340E-01	7.131E-03	-0.598
	766.84			6.891E-02	1.416E-01	2.150E-01	1.343E-02	0.321
	1046.59			6.872E-03	1.282E-01	2.094E-01	1.521E-02	0.033
	1112.84			-1.480E-01	2.882E-01	4.294E-01	2.848E-02	-0.345
RU-103	497.08	*		3.376E-03	4.225E-02	6.912E-02	8.685E-03	0.049
+	610.33			1.199E+01	2.598E+00	3.174E+00	4.825E-01	3.777
RH-106	511.85	+		6.611E-01	3.573E-01	4.733E-01	2.646E-02	1.397
	621.84	*		-2.083E-01	3.623E-01	5.490E-01	6.272E-02	-0.379
	1050.47			-1.071E+00	2.721E+00	4.246E+00	3.070E-01	-0.252
RU-106	511.85	+		6.611E-01	3.573E-01	4.733E-01	2.646E-02	1.397
	621.84	*		-2.083E-01	3.617E-01	5.490E-01	2.821E-02	-0.379
	1050.47			-1.071E+00	2.721E+00	4.246E+00	3.070E-01	-0.252
AG-108M	433.93	*		-2.635E-02	3.454E-02	5.224E-02	3.228E-03	-0.504
	614.37			-4.187E-02	5.133E-02	6.479E-02	3.710E-03	-0.646
	722.95			-3.676E-03	4.691E-02	6.759E-02	4.160E-03	-0.054
AG-110M	657.75	*		1.896E-02	4.255E-02	6.536E-02	3.492E-03	0.290
	677.61			7.682E-02	3.194E-01	5.468E-01	2.993E-02	0.140
	706.67			-3.629E-02	2.178E-01	3.600E-01	2.091E-02	-0.101
	763.93			7.346E-02	1.917E-01	2.900E-01	1.897E-02	0.253
	884.67			-5.032E-02	5.210E-02	7.720E-02	6.416E-03	-0.652
	937.48			-9.095E-02	1.360E-01	2.094E-01	1.752E-02	-0.434
	1384.27			8.008E-02	1.816E-01	2.855E-01	2.042E-02	0.280
IN-111	171.28			1.561E-01	1.020E+00	1.658E+00	1.057E-01	0.094
	245.39	*		-2.633E-01	1.133E+00	1.560E+00	1.041E-01	-0.169
IN-113M	391.69	*		-2.872E-02	4.582E-02	7.247E-02	4.366E-03	-0.396
SN-113	391.69	*		-2.872E-02	4.582E-02	7.247E-02	4.366E-03	-0.396
IN-114M	190.27	*		-8.317E-02	2.070E-01	2.876E-01	1.862E-02	-0.289
CD-115	260.90			-4.023E+01	1.196E+02	1.990E+02	1.329E+01	-0.202
	492.35			7.107E+00	3.369E+01	5.575E+01	3.139E+00	0.127
	527.90	*		-5.192E-01	1.033E+01	1.666E+01	9.242E-01	-0.031
SN-117M	156.02			1.593E-01	2.306E+00	3.755E+00	2.408E-01	0.042
	158.56	*		1.666E-02	5.276E-02	8.688E-02	5.557E-03	0.192
SB-122	563.90	*		-2.294E-02	2.215E+00	3.566E+00	1.934E-01	-0.006
	692.80			6.276E+01	4.586E+01	8.288E+01	4.361E+00	0.757
I-123	159.00	*		1.905E-01	4.586E+01	Half-Life	too short	
	528.96			-8.794E+01	4.586E+01	Half-Life	too short	
TE-123M	159.00	*		1.286E-03	2.772E-02	4.505E-02	2.912E-03	0.029
I-124	602.71	*		-4.730E-01	7.428E-01	1.024E+00	5.369E-02	-0.462
	722.78			-3.400E-02	4.729E+00	6.874E+00	3.883E-01	-0.005
	1325.50			-1.924E+01	3.973E+01	6.274E+01	4.275E+00	-0.307
	1376.25			9.078E+01	4.061E+01	7.567E+01	5.185E+00	1.200

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

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SB-124	+	1509.49		2.658E+01	1.755E+01	3.216E+01	2.169E+00	0.826
		1691.02		-2.441E+00	4.102E+00	5.914E+00	3.748E-01	-0.413
		602.71		-2.856E-02	4.485E-02	6.182E-02	3.244E-03	-0.462
		645.85		-7.657E-02	5.043E-01	8.400E-01	4.902E-02	-0.091
		709.31		9.200E-01	2.877E+00	4.940E+00	2.704E-01	0.186
		713.82		-8.806E-01	1.733E+00	2.778E+00	2.795E-01	-0.317
		722.78		-2.976E-03	4.139E-01	6.017E-01	3.568E-02	-0.005
SB-125	+	968.20		1.900E+01	4.649E+00	8.151E+00	6.397E-01	2.332
		1045.16		-3.426E-01	2.759E+00	4.427E+00	3.220E-01	-0.077
		1325.50		-1.798E+00	3.714E+00	5.866E+00	3.996E-01	-0.307
		1368.21		-5.041E-01	1.778E+00	2.838E+00	3.525E-01	-0.178
		1436.60		4.755E-01	4.119E+00	6.933E+00	4.730E-01	0.069
		1691.02	*	-5.040E-02	8.470E-02	1.221E-01	8.296E-03	-0.413
		427.89	*	8.647E-03	9.903E-02	1.636E-01	9.687E-03	0.053
TE-125M I-126	+	463.38		8.052E-01	4.475E-01	5.998E-01	3.987E-02	1.342
		600.56		-5.443E-02	1.963E-01	3.075E-01	1.920E-02	-0.177
		635.90		8.863E-02	2.818E-01	4.630E-01	2.854E-02	0.191
		109.28	*	4.212E+00	9.841E+00	1.653E+01	1.640E+00	0.255
		388.63		-9.911E-03	2.105E-01	3.469E-01	1.968E-02	-0.029
		666.33	*	1.434E-01	2.112E-01	3.319E-01	1.637E-02	0.432
		753.82		1.871E+00	1.629E+00	2.946E+00	1.787E-01	0.635
SB-126		223.80		3.039E+00	4.170E+00	6.883E+00	4.559E-01	0.442
		278.60		2.368E+00	2.519E+00	4.433E+00	2.948E-01	0.534
	+	296.50		1.540E+01	2.730E+00	4.015E+00	2.644E-01	3.835
		414.70		-7.853E-02	7.639E-02	1.163E-01	6.581E-03	-0.675
		415.30		-3.798E+00	6.221E+00	9.784E+00	5.537E-01	-0.388
		555.20		3.801E+00	4.577E+00	7.833E+00	4.276E-01	0.485
		573.80		-3.628E-01	1.078E+00	1.683E+00	9.058E-02	-0.216
SB-127		593.00		-6.600E-01	1.073E+00	1.635E+00	8.656E-02	-0.404
		656.30		-3.265E+00	3.761E+00	5.511E+00	2.709E-01	-0.592
		666.33		5.991E-02	8.819E-02	1.386E-01	6.837E-03	0.432
		675.00		-5.218E-01	2.006E+00	3.301E+00	1.664E-01	-0.158
		695.00		-3.672E-02	8.585E-02	1.371E-01	7.254E-03	-0.268
		697.00		-2.555E-01	2.906E-01	4.544E-01	2.415E-02	-0.562
		720.50	*	-4.501E-03	1.543E-01	2.432E-01	1.366E-02	-0.019
SB-127		856.80		-3.781E-02	5.264E-01	7.460E-01	5.650E-02	-0.051
		989.30		1.426E+00	1.378E+00	2.467E+00	1.902E-01	0.578
		1034.80		-2.030E+00	9.950E+00	1.585E+01	1.167E+00	-0.128
		1213.00		7.872E-01	5.841E+00	9.485E+00	5.857E-01	0.083
		61.10		-6.008E+01	8.036E+01	1.311E+02	1.829E+01	-0.458
		252.40		9.158E-01	4.229E+00	7.222E+00	3.009E+00	0.127
		290.80		-7.162E+00	2.227E+01	3.221E+01	3.094E+00	-0.222
SB-127		411.60		-2.290E+00	1.283E+01	2.089E+01	2.979E+00	-0.110
		444.90		2.687E+00	9.507E+00	1.590E+01	1.692E+00	0.169
		473.00		1.950E-01	1.762E+00	2.897E+00	3.194E-01	0.067
		543.00		-7.085E+00	1.768E+01	2.761E+01	3.509E+00	-0.257
		603.60		-8.532E+00	1.347E+01	1.734E+01	1.802E+00	-0.492
		685.20	*	1.591E-01	1.308E+00	2.219E+00	1.989E-01	0.072
		698.50		-6.739E+00	1.601E+01	2.596E+01	3.696E+00	-0.260

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

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XE-127		722.20		1.017E+01	3.241E+01	4.890E+01	4.385E+00	0.208
		783.80		1.231E-01	4.202E+00	7.001E+00	7.679E-01	0.018
		57.60		7.565E+00	1.019E+01	1.771E+01	2.218E+00	0.427
		145.22		-1.752E-01	6.906E-01	1.112E+00	7.238E-02	-0.158
		172.10		6.739E-02	1.268E-01	2.097E-01	1.337E-02	0.321
I-131		202.84	*	8.968E-04	4.987E-02	7.984E-02	5.219E-03	0.011
		374.96		2.985E-02	2.041E-01	3.414E-01	2.003E-02	0.087
		80.18		-4.943E+00	5.016E+00	8.035E+00	9.317E-01	-0.615
		284.30		2.568E-01	1.511E+00	2.569E+00	1.850E-01	0.100
		364.48	*	-4.762E-03	1.248E-01	2.068E-01	1.376E-02	-0.023
TE-132		636.97		3.013E-01	1.613E+00	2.618E+00	1.526E-01	0.115
		722.89		-5.339E-01	7.739E+00	1.116E+01	6.399E-01	-0.048
		49.72		-9.413E+00	4.105E+01	6.921E+01	9.641E+00	-0.136
		111.76		-1.828E+01	2.828E+01	4.524E+01	4.613E+00	-0.404
		116.30		-8.328E+00	2.690E+01	4.370E+01	4.308E+00	-0.191
BA-133		228.16	*	-2.907E-01	6.798E-01	1.051E+00	1.543E-01	-0.276
		53.15		3.978E+00	7.202E+00	1.220E+01	1.598E+00	0.326
		79.62		-1.284E+00	1.462E+00	2.341E+00	3.991E-01	-0.548
		81.00		-2.080E-01	1.259E-01	1.649E-01	2.913E-02	-1.262
		276.40		1.379E-01	3.969E-01	6.596E-01	8.818E-02	0.209
I-133		302.84		1.442E-01	1.576E-01	2.483E-01	2.991E-02	0.581
		356.01	*	-4.815E-03	4.693E-02	6.795E-02	7.960E-03	-0.071
		383.85		1.550E-01	3.108E-01	5.300E-01	5.745E-02	0.293
	+	510.53		1.105E+00	3.108E-01	Half-Life	too short	
		529.87	*	-3.353E-03	3.108E-01	Half-Life	too short	
CS-134		706.58		-6.960E-02	3.108E-01	Half-Life	too short	
		856.28		-2.942E-01	3.108E-01	Half-Life	too short	
		875.33		-6.919E-02	3.108E-01	Half-Life	too short	
		1236.41		-3.170E-02	3.108E-01	Half-Life	too short	
		1298.22		1.245E-01	3.108E-01	Half-Life	too short	
CS-135		475.35		-1.833E-01	2.101E+00	3.404E+00	1.925E-01	-0.054
		563.23		2.421E-01	4.147E-01	6.970E-01	3.874E-02	0.347
		569.32		2.018E-02	2.246E-01	3.623E-01	2.024E-02	0.056
		604.70		1.951E-03	3.892E-02	5.472E-02	2.884E-03	0.036
	+	795.84	*	7.887E-02	8.291E-02	1.105E-01	7.446E-03	0.714
I-135		801.93		-4.746E-01	5.296E-01	7.319E-01	4.984E-02	-0.648
		1038.57		-1.438E+00	4.482E+00	7.052E+00	5.169E-01	-0.204
		1167.94		1.312E+00	3.041E+00	5.090E+00	3.059E-01	0.258
		1365.15		2.465E-01	1.333E+00	2.271E+00	1.667E-01	0.109
		268.24	*	1.368E-01	1.871E-01	2.920E-01	2.434E-02	0.468
I-135		288.45		4.940E+08	1.871E-01	Half-Life	too short	
		417.63		-4.864E+09	1.871E-01	Half-Life	too short	
		546.56		-1.850E+08	1.871E-01	Half-Life	too short	
		836.80		9.437E+09	1.871E-01	Half-Life	too short	
		1038.76		-2.307E+08	1.871E-01	Half-Life	too short	
I-135		1124.00		1.548E+10	1.871E-01	Half-Life	too short	
		1131.51		2.662E+09	1.871E-01	Half-Life	too short	
		1260.41	*	-4.132E+08	1.871E-01	Half-Life	too short	
		1457.56		2.405E+11	1.871E-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		1678.03		8.563E+08	1.871E-01	Half-Life	too short	
		1706.46		-1.820E+08	1.871E-01	Half-Life	too short	
		1791.20		-3.821E+09	1.871E-01	Half-Life	too short	
		66.91		-3.020E-01	9.661E-01	1.607E+00	2.785E-01	-0.188
	+	86.29		2.970E+00	1.484E+00	2.275E+00	3.468E-01	1.305
		153.22		1.675E-01	6.954E-01	1.129E+00	8.740E-02	0.148
		163.89		9.045E-01	1.127E+00	1.887E+00	1.454E-01	0.479
		176.55		-1.318E-01	3.791E-01	6.007E-01	4.239E-02	-0.219
		273.65		-6.491E-02	5.120E-01	7.569E-01	5.586E-02	-0.086
		340.57		2.293E-01	1.499E-01	2.429E-01	1.604E-02	0.944
CE-139		818.51		4.643E-02	6.891E-02	1.218E-01	8.527E-03	0.381
		1048.07	*	1.734E-02	1.202E-01	1.981E-01	1.522E-02	0.088
		1235.34		-6.304E-01	6.942E-01	1.079E+00	1.110E-01	-0.584
		165.85	*	-9.367E-03	3.200E-02	5.108E-02	3.246E-03	-0.183
	BA-140	162.64		7.160E-01	7.681E-01	1.294E+00	9.105E-02	0.553
		304.84		-2.033E-01	1.367E+00	1.996E+00	5.480E-01	-0.102
		423.70		-4.752E-01	2.059E+00	3.324E+00	1.056E+00	-0.143
		537.32	*	-1.927E-01	2.677E-01	3.931E-01	1.276E-01	-0.490
	+	328.77		5.240E-01	4.371E-01	5.985E-01	4.196E-02	0.876
		432.53		-2.210E+00	2.093E+00	3.072E+00	1.932E-01	-0.719
LA-140		487.03		-6.624E-02	1.432E-01	2.206E-01	1.417E-02	-0.300
		751.79		-5.332E-01	1.874E+00	3.053E+00	2.227E-01	-0.175
		815.85		-2.111E-01	3.123E-01	4.810E-01	3.920E-02	-0.439
		867.82		5.486E-02	1.644E+00	2.362E+00	1.949E-01	0.023
		919.63		2.886E-01	3.280E+00	5.128E+00	5.257E-01	0.056
		925.24		-3.083E-01	1.178E+00	1.881E+00	1.631E-01	-0.164
		1596.49	*	5.361E-02	7.958E-02	1.334E-01	8.784E-03	0.402
	CE-141	145.44	*	-6.129E-02	6.416E-02	9.982E-02	6.700E-03	-0.614
	CE-143	57.37		1.729E-03	6.416E-02	Half-Life	too short	
		231.56		-1.324E-03	6.416E-02	Half-Life	too short	
CE-144		293.26	*	4.328E-04	6.416E-02	Half-Life	too short	
	+	350.59		2.922E-02	6.416E-02	Half-Life	too short	
		490.36		3.668E-04	6.416E-02	Half-Life	too short	
		664.57		2.116E-03	6.416E-02	Half-Life	too short	
		721.93		4.989E-04	6.416E-02	Half-Life	too short	
		80.11		-2.311E+00	2.360E+00	3.782E+00	4.369E-01	-0.611
		133.54	*	-9.110E-02	2.225E-01	3.393E-01	4.945E-02	-0.269
	PM-144	476.78		-2.308E-02	7.734E-02	1.234E-01	8.418E-03	-0.187
		618.01		2.083E-02	3.571E-02	5.986E-02	3.322E-03	0.348
		696.49	*	-3.326E-02	3.950E-02	6.214E-02	3.302E-03	-0.535
PR-144		778.57		-7.978E-01	2.497E+00	4.040E+00	2.592E-01	-0.197
		696.49	*	-2.253E+00	2.676E+00	4.210E+00	2.235E-01	-0.535
		1489.15		-1.321E+00	1.018E+01	1.640E+01	1.110E+00	-0.081
	PM-146	453.90	*	2.194E-02	4.257E-02	7.235E-02	6.176E-03	0.303
		633.02		6.658E-01	1.450E+00	2.381E+00	8.742E-01	0.280
		735.90		-1.101E-01	1.603E-01	2.471E-01	6.890E-02	-0.445
		747.13		5.693E-03	9.428E-02	1.581E-01	1.991E-02	0.036
	+	91.11		5.554E-01	2.632E-01	5.304E-01	6.219E-02	1.047
		319.41		-1.708E+00	3.462E+00	5.632E+00	3.631E-01	-0.303

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		439.89		2.479E+00	5.928E+00	1.001E+01	5.680E-01	0.248
		531.02	*	-2.837E-01	5.919E-01	9.174E-01	1.230E-01	-0.309
PM-149		285.90	*	-9.809E+00	8.729E+01	1.462E+02	2.125E+01	-0.067
EU-152		121.78		1.448E-02	7.918E-02	1.311E-01	1.118E-02	0.110
		244.69		2.700E-01	3.663E-01	5.440E-01	3.630E-02	0.496
		344.27	*	-1.899E-02	1.110E-01	1.694E-01	1.172E-02	-0.112
		443.98		-7.077E-01	9.971E-01	1.546E+00	8.767E-02	-0.458
		778.89		-5.542E-03	2.835E-01	4.707E-01	3.020E-02	-0.012
		867.32		2.913E-01	1.015E+00	1.508E+00	1.167E-01	0.193
	+	964.01		8.320E-01	4.527E-01	6.891E-01	5.427E-02	1.207
		1085.78		-4.156E-02	4.685E-01	7.523E-01	5.194E-02	-0.055
		1112.02		5.838E-02	3.939E-01	6.455E-01	4.286E-02	0.090
		1407.95		1.246E-01	1.963E-01	3.508E-01	2.399E-02	0.355
GD-153		69.67		-8.807E-01	2.186E+00	3.454E+00	3.989E-01	-0.255
		83.37		1.223E+01	2.253E+01	2.792E+01	3.269E+00	0.438
		97.43	*	-5.373E-02	9.574E-02	1.380E-01	1.354E-02	-0.389
		103.18		-1.306E-01	1.132E-01	1.774E-01	1.579E-02	-0.736
EU-154		123.07		5.135E-02	5.500E-02	9.350E-02	9.464E-03	0.549
		247.94		-3.428E-02	3.603E-01	5.659E-01	5.714E-02	-0.061
		591.81		2.175E-02	7.011E-01	1.128E+00	1.070E-01	0.019
		723.30		-3.369E-02	1.994E-01	2.842E-01	1.979E-02	-0.119
		756.87		1.423E-01	8.736E-01	1.475E+00	1.521E-01	0.097
		873.19		-1.416E-02	3.334E-01	5.477E-01	6.409E-02	-0.026
		996.32		-1.624E-01	4.344E-01	6.821E-01	1.181E-01	-0.238
		1004.76		-1.715E-01	2.500E-01	3.792E-01	4.134E-02	-0.452
		1274.45	*	-1.333E-02	1.402E-01	2.325E-01	2.281E-02	-0.057
EU-155		48.70		-3.618E+00	5.769E+00	9.538E+00	1.099E+00	-0.379
		60.01		-3.764E+00	7.591E+00	1.257E+01	1.527E+00	-0.299
	+	86.54		2.777E-01	1.362E-01	2.116E-01	2.534E-02	1.312
		105.31	*	3.976E-02	1.165E-01	1.954E-01	1.703E-02	0.203
TB-160	+	86.79		7.400E-01	3.629E-01	5.597E-01	6.678E-02	1.322
		197.04		3.831E-01	6.081E-01	9.858E-01	6.415E-02	0.389
		215.65		-6.662E-01	8.196E-01	1.249E+00	8.239E-02	-0.533
		298.57		1.558E-01	1.724E-01	2.069E-01	1.360E-02	0.753
		879.36	*	1.233E-01	1.454E-01	2.584E-01	2.049E-02	0.477
		962.29		6.920E-01	6.889E-01	1.087E+00	8.568E-02	0.637
	+	966.15		5.700E-01	3.101E-01	5.188E-01	4.079E-02	1.099
		1177.93		-7.542E-02	4.092E-01	6.461E-01	3.860E-02	-0.117
		1271.85		-5.573E-01	8.215E-01	1.282E+00	8.347E-02	-0.435
HO-166M		80.57		-3.522E-01	2.993E-01	4.741E-01	5.486E-02	-0.743
		184.41		5.610E-02	4.207E-02	6.449E-02	4.154E-03	0.870
		280.46		-7.072E-02	8.922E-02	1.443E-01	9.587E-03	-0.490
		410.95		1.883E-01	2.681E-01	4.603E-01	2.603E-02	0.409
		711.68	*	-1.379E-02	6.384E-02	1.050E-01	5.782E-03	-0.131
		752.31		-8.952E-03	2.985E-01	4.966E-01	3.002E-02	-0.018
		810.29		-4.321E-02	6.201E-02	9.597E-02	6.593E-03	-0.450
TM-171		51.35		-8.434E+00	6.502E+01	1.100E+02	1.425E+01	-0.077
		52.39		1.438E+01	3.287E+01	5.551E+01	7.260E+00	0.259
		59.40		1.975E+01	4.115E+01	7.092E+01	8.648E+00	0.278

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

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LU-176	+	66.72	*	-1.061E+00	3.501E+01	5.898E+01	6.895E+00	-0.018
		88.36		5.469E-01	2.682E-01	3.965E-01	4.727E-02	1.379
	*	201.83		2.281E-03	3.029E-02	4.865E-02	3.177E-03	0.047
		306.84	*	-5.900E-03	2.673E-02	4.100E-02	2.677E-03	-0.144
LU-177	+	401.10		3.453E+00	7.045E+00	1.199E+01	6.762E-01	0.288
		112.95		3.263E-01	1.575E+00	2.622E+00	2.030E-01	0.124
		208.36	*	2.930E+00	1.522E+00	2.089E+00	1.371E-01	1.403
LU-177M	+	528.97		2.532E+00	3.277E+00	5.590E+00	7.320E-01	0.453
		54.07		-8.130E-01	1.686E+00	2.737E+00	3.569E-01	-0.297
		61.30		-1.458E+00	2.157E+00	3.538E+00	4.269E-01	-0.412
		121.62		5.230E-02	4.033E-01	6.666E-01	4.643E-02	0.078
		147.16		-3.105E-01	6.590E-01	1.049E+00	6.809E-02	-0.296
		171.86		2.886E-01	5.136E-01	8.504E-01	5.423E-02	0.339
		218.09		1.084E+00	9.110E-01	1.535E+00	1.014E-01	0.706
		268.79		2.431E+00	1.559E+00	1.617E+00	1.078E-01	1.503
		319.02		-1.699E-01	2.770E-01	4.476E-01	2.886E-02	-0.380
		367.43		-1.268E-01	9.464E-01	1.557E+00	9.285E-02	-0.081
		413.65	*	-1.615E-01	1.883E-01	2.918E-01	1.651E-02	-0.553
		56.28		-9.694E-01	1.651E+00	2.725E+00	3.473E-01	-0.356
		57.53		6.505E-01	8.622E-01	1.499E+00	1.879E-01	0.434
HF-181	+	65.20		-1.442E+00	1.254E+00	2.001E+00	2.359E-01	-0.721
		133.02		-4.472E-03	7.494E-02	1.092E-01	7.290E-03	-0.041
		136.25		-2.532E-01	4.662E-01	7.430E-01	4.919E-02	-0.341
		345.85		1.228E-01	2.222E-01	3.403E-01	2.114E-02	0.361
		482.03	*	1.202E-02	4.594E-02	7.630E-02	4.307E-03	0.158
		56.28		-3.809E-01	6.478E-01	1.069E+00	1.363E-01	-0.356
W-181	+	57.53		2.554E-01	3.387E-01	5.890E-01	7.381E-02	0.434
		65.20	*	-5.619E-01	4.886E-01	7.798E-01	9.191E-02	-0.721
TA-182	+	67.75		-7.088E-02	1.383E-01	2.281E-01	2.654E-02	-0.311
		100.10		5.182E-02	1.917E-01	3.214E-01	3.008E-02	0.161
		152.43		-3.639E-01	3.638E-01	5.573E-01	3.590E-02	-0.653
		222.10		-9.100E-03	3.599E-01	5.719E-01	3.785E-02	-0.016
		1001.68		7.440E-01	2.290E+00	3.849E+00	2.933E-01	0.193
		1121.28		6.624E-01	2.568E-01	4.110E-01	2.689E-02	1.612
RE-183	+	1189.05		2.143E-03	3.784E-01	6.087E-01	3.675E-02	0.004
		1221.42	*	-1.216E-01	2.390E-01	3.852E-01	2.397E-02	-0.316
		1230.97		-2.470E-01	5.701E-01	9.206E-01	5.780E-02	-0.268
		57.98		1.838E-01	3.236E-01	5.598E-01	6.970E-02	0.328
		59.32		8.246E-02	1.694E-01	2.920E-01	3.565E-02	0.282
		67.20		-1.324E-01	2.490E-01	4.103E-01	4.785E-02	-0.323
RE-184	+	162.32	*	5.518E-02	1.132E-01	1.874E-01	1.194E-02	0.294
		208.81		2.696E+00	1.400E+00	1.972E+00	1.294E-01	1.367
		291.72		-7.369E-01	1.049E+00	1.471E+00	9.714E-02	-0.501
		57.98		6.782E-01	1.194E+00	2.066E+00	2.572E-01	0.328
		59.32		3.040E-01	6.246E-01	1.077E+00	1.315E-01	0.282
		67.20		-4.883E-01	9.187E-01	1.513E+00	1.765E-01	-0.323
		161.27		-2.095E-01	3.659E-01	5.765E-01	3.677E-02	-0.363
		216.55		1.098E-01	2.854E-01	4.637E-01	3.059E-02	0.237
		252.85	*	-2.441E-02	2.356E-01	3.977E-01	2.656E-02	-0.061

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
OS-185		318.01		-3.797E-01	4.773E-01	7.623E-01	4.921E-02	-0.498
		792.07		-8.241E-01	1.320E+00	1.765E+00	1.166E-01	-0.467
		903.28		9.047E-02	1.196E+00	1.870E+00	1.534E-01	0.048
		920.93		-4.932E-03	5.139E-01	8.431E-01	6.845E-02	-0.006
		59.72		6.943E-02	4.475E-01	7.623E-01	9.274E-02	0.091
		61.14		-1.748E-01	2.381E-01	3.893E-01	4.701E-02	-0.449
		69.30		-2.417E-02	3.693E-01	6.204E-01	7.173E-02	-0.039
		592.07		-1.560E+00	2.972E+00	4.567E+00	2.420E-01	-0.342
		646.12	*	-2.572E-02	4.441E-02	7.144E-02	3.561E-03	-0.360
		717.42		1.574E-01	9.153E-01	1.553E+00	8.666E-02	0.101
RE-188		874.81		-3.956E-01	6.540E-01	1.015E+00	7.976E-02	-0.390
		880.27		5.371E-01	8.073E-01	1.421E+00	1.129E-01	0.378
		155.03	*	1.696E-01	1.798E-01	3.001E-01	1.927E-02	0.565
		477.96		-1.588E+00	3.479E+00	5.484E+00	3.099E-01	-0.290
W-188		633.10		1.283E+00	2.877E+00	4.785E+00	2.425E-01	0.268
		63.58		7.672E+01	7.221E+01	1.241E+02	1.476E+01	0.618
IR-192		227.08		-1.554E+01	1.355E+01	2.008E+01	1.332E+00	-0.774
	+	290.67	*	-3.090E+00	8.014E+00	1.153E+01	7.622E-01	-0.268
		295.96		1.193E+00	2.118E-01	3.212E-01	2.142E-02	3.714
		308.46		6.922E-04	9.810E-02	1.646E-01	1.083E-02	0.004
		316.51	*	1.953E-03	3.713E-02	6.236E-02	4.048E-03	0.031
AU-195		468.07		6.274E-02	8.026E-02	1.235E-01	8.108E-03	0.508
		604.41		-9.221E-03	5.347E-01	7.457E-01	8.257E-02	-0.012
		612.46		1.023E+00	8.768E-01	1.372E+00	9.769E-02	0.746
		65.12		-2.624E-01	2.269E-01	3.620E-01	4.268E-02	-0.725
		66.83		3.945E-03	1.157E-01	1.954E-01	2.283E-02	0.020
	+	75.70		1.279E+00	3.480E-01	5.422E-01	6.211E-02	2.359
		98.88	*	1.829E-01	2.701E-01	4.154E-01	3.972E-02	0.440
TL-200	+	129.76		5.174E+00	4.120E+00	5.346E+00	3.601E-01	0.968
		367.94	*	-9.706E-05	4.120E+00	Half-Life	too short	
		579.30		3.252E-03	4.120E+00	Half-Life	too short	
		828.27		2.263E-03	4.120E+00	Half-Life	too short	
TL-201		1205.75		-4.664E-04	4.120E+00	Half-Life	too short	
		68.90		-6.822E-01	5.620E+00	9.422E+00	1.091E+00	-0.072
		70.82		2.589E+00	3.522E+00	5.496E+00	6.326E-01	0.471
		80.30		-5.243E+00	5.269E+00	8.435E+00	9.752E-01	-0.622
TL-202		135.34		-1.984E+00	2.426E+01	3.952E+01	2.622E+00	-0.050
		167.43	*	-2.266E-01	6.964E+00	1.124E+01	7.148E-01	-0.020
		68.90		-6.401E-02	5.273E-01	8.840E-01	1.024E-01	-0.072
		70.82		2.423E-01	3.296E-01	5.143E-01	5.919E-02	0.471
HG-203		80.30		-4.907E-01	4.932E-01	7.895E-01	9.127E-02	-0.622
		439.56	*	3.684E-02	7.147E-02	1.214E-01	6.887E-03	0.303
		70.83		1.075E+00	1.448E+00	2.253E+00	3.514E-01	0.477
		72.87		8.965E-01	8.656E-01	1.351E+00	2.055E-01	0.664
BI-207		82.60		-8.789E-01	1.382E+00	2.000E+00	3.166E-01	-0.439
		279.20	*	2.539E-02	4.188E-02	7.269E-02	5.061E-03	0.349
		72.80		2.470E-01	2.532E-01	3.966E-01	4.547E-02	0.623
	+	74.97		7.102E-01	1.932E-01	2.725E-01	3.121E-02	2.606
		84.90		2.863E-01	2.564E-01	3.706E-01	4.373E-02	0.772

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-207		569.67		1.179E-02	3.380E-02	5.563E-02	3.005E-03	0.212
		1063.62	*	1.675E-02	5.892E-02	9.836E-02	6.995E-03	0.170
		1770.23		3.401E-01	5.744E-01	9.283E-01	5.640E-02	0.366
		81.07		-4.718E-01	2.707E-01	3.618E-01	4.194E-02	-1.304
		83.78		2.222E-01	1.906E-01	2.451E-01	2.874E-02	0.907
		94.90		1.542E-01	2.724E-01	4.169E-01	4.296E-02	0.370
		122.32		6.061E-01	1.870E+00	3.115E+00	2.396E-01	0.195
		144.24		5.284E-01	6.830E-01	1.149E+00	8.987E-02	0.460
		154.21		5.700E-01	4.202E-01	7.111E-01	5.362E-02	0.802
	+	269.46		5.697E-01	3.654E-01	3.903E-01	2.692E-02	1.460
		323.87	*	1.405E-01	7.858E-01	1.173E+00	1.963E-01	0.120
PO-209	+	338.28		7.278E+00	1.993E+00	2.782E+00	3.007E-01	2.616
		445.03		4.081E-01	2.297E+00	3.812E+00	3.888E-01	0.107
		260.50		-1.031E+00	9.628E+00	1.622E+01	1.083E+00	-0.064
		262.80		-1.900E+01	2.658E+01	4.329E+01	2.890E+00	-0.439
		896.60	*	4.547E-01	8.395E+00	1.388E+01	1.139E+00	0.033
BI-210		46.50	*	4.596E-01	9.385E+00	1.606E+01	1.400E+00	0.029
PB-210		46.50	*	4.596E-01	9.385E+00	1.606E+01	1.400E+00	0.029
PO-210		46.50	*	4.596E-01	9.385E+00	1.606E+01	1.248E+00	0.029
PB-211		404.84	*	-9.419E-01	1.166E+00	1.560E+00	9.720E-01	-0.604
BI-212		427.08		2.058E-01	2.243E+00	3.701E+00	2.287E+00	0.056
		831.96		-1.163E+00	1.425E+00	1.841E+00	1.150E+00	-0.632
	+	727.18	*	1.331E+00	4.976E-01	7.547E-01	5.769E-02	1.764
		785.46		1.484E+00	2.150E+00	3.747E+00	2.439E-01	0.396
PO-215		1620.62		1.946E+00	1.340E+00	2.673E+00	1.745E-01	0.728
		81.07		-4.718E-01	2.707E-01	3.618E-01	4.194E-02	-1.304
		83.78		2.222E-01	1.906E-01	2.451E-01	2.874E-02	0.907
		94.90		1.542E-01	2.724E-01	4.169E-01	4.296E-02	0.370
		122.32		6.061E-01	1.870E+00	3.115E+00	2.396E-01	0.195
		144.24		5.284E-01	6.830E-01	1.149E+00	8.987E-02	0.460
		154.21		5.700E-01	4.202E-01	7.111E-01	5.362E-02	0.802
	+	269.46		5.697E-01	3.654E-01	3.903E-01	2.692E-02	1.460
		323.87	*	1.405E-01	7.858E-01	1.173E+00	1.963E-01	0.120
	+	338.28		7.278E+00	1.993E+00	2.782E+00	3.007E-01	2.616
		445.03		4.081E-01	2.297E+00	3.812E+00	3.888E-01	0.107
RN-219	+	271.23		7.310E-01	4.705E-01	5.014E-01	4.385E-02	1.458
		401.81	*	2.125E-01	4.350E-01	7.387E-01	1.000E-01	0.288
RN-220		549.76	*	-3.329E+01	3.042E+01	4.470E+01	2.449E+00	-0.745
RA-223		81.07		-4.718E-01	2.707E-01	3.618E-01	4.194E-02	-1.304
		83.78		2.222E-01	1.906E-01	2.451E-01	2.874E-02	0.907
		94.90		1.542E-01	2.724E-01	4.169E-01	4.296E-02	0.370
		122.32		6.061E-01	1.870E+00	3.115E+00	2.396E-01	0.195
		144.24		5.284E-01	6.830E-01	1.149E+00	8.987E-02	0.460
		154.21		5.700E-01	4.202E-01	7.111E-01	5.362E-02	0.802
	+	269.46		5.697E-01	3.654E-01	3.903E-01	2.692E-02	1.460
		323.87	*	1.405E-01	7.858E-01	1.173E+00	1.963E-01	0.120
	+	338.28		7.278E+00	1.993E+00	2.782E+00	3.007E-01	2.616
		445.03		4.081E-01	2.297E+00	3.812E+00	3.888E-01	0.107
		79.80		-1.718E+00	1.868E+00	2.951E+00	6.738E-01	-0.582

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-227		236.00		7.327E-02	2.764E-01	3.960E-01	4.337E-02	0.185
		256.20	*	6.903E-02	4.089E-01	6.984E-01	1.002E-01	0.099
		286.10		3.719E-01	1.564E+00	2.666E+00	3.199E-01	0.139
	+	299.80		5.462E+00	2.671E+00	2.841E+00	4.709E-01	1.923
		304.40		2.256E-01	2.056E+00	3.068E+00	5.388E-01	0.074
		334.20		-1.777E-01	2.681E+00	3.918E+00	7.251E-01	-0.045
		79.80		-1.718E+00	1.869E+00	2.951E+00	6.814E-01	-0.582
	+	94.00		1.092E+01	4.068E+00	4.159E+00	9.394E-01	2.626
		236.00		7.327E-02	2.764E-01	3.960E-01	3.813E-02	0.185
		256.20	*	6.903E-02	4.089E-01	6.984E-01	1.203E-01	0.099
		286.10		3.719E-01	1.607E+00	2.666E+00	2.672E+00	0.139
	+	299.80		5.462E+00	2.671E+00	2.841E+00	4.709E-01	1.923
TH-229		304.40		2.256E-01	2.056E+00	3.068E+00	5.388E-01	0.074
		334.20		-1.777E-01	2.681E+00	3.918E+00	7.251E-01	-0.045
		85.43		2.323E-01	2.352E-01	3.657E-01	4.328E-02	0.635
	+	88.47		3.148E-01	1.544E-01	2.265E-01	2.692E-02	1.390
		100.00		5.824E-02	1.996E-01	3.348E-01	3.139E-02	0.174
		193.63	*	4.912E-02	5.167E-01	8.329E-01	5.405E-02	0.059
		210.97		1.257E+00	9.327E-01	1.429E+00	9.397E-02	0.880
	PA-231	283.67	*	2.916E-01	1.561E+00	2.655E+00	3.757E-01	0.110
	+	301.29		2.185E+00	1.033E+00	1.168E+00	1.272E-01	1.871
	TH-231	81.07		-4.718E-01	2.707E-01	3.618E-01	4.194E-02	-1.304
		83.78		2.222E-01	1.906E-01	2.451E-01	2.874E-02	0.907
		94.90		1.542E-01	2.724E-01	4.169E-01	4.296E-02	0.370
U-231		122.32		6.061E-01	1.870E+00	3.115E+00	2.396E-01	0.195
		144.24		5.284E-01	6.830E-01	1.149E+00	8.987E-02	0.460
		154.21		5.700E-01	4.202E-01	7.111E-01	5.362E-02	0.802
	+	269.46		5.697E-01	3.654E-01	3.903E-01	2.692E-02	1.460
		323.87	*	1.405E-01	7.858E-01	1.173E+00	1.963E-01	0.120
	+	338.28		7.278E+00	1.993E+00	2.782E+00	3.007E-01	2.616
		445.03		4.081E-01	2.297E+00	3.812E+00	3.888E-01	0.107
		84.21		1.180E+01	7.873E+00	1.028E+01	1.209E+00	1.148
	+	92.29		1.035E+01	3.254E+00	4.262E+00	4.638E-01	2.429
		95.87	*	-5.810E-01	1.210E+00	1.753E+00	1.773E-01	-0.331
		108.00		1.167E+00	2.123E+00	3.583E+00	2.966E-01	0.326
	PA-233	75.28		2.072E+01	6.222E+00	8.091E+00	1.384E+00	2.561
PA-234	+	86.59		4.514E+00	2.493E+00	3.433E+00	9.631E-01	1.315
	+	300.12		1.523E+00	7.314E-01	7.953E-01	1.096E-01	1.915
		311.98	*	-5.818E-03	6.867E-02	1.146E-01	7.813E-03	-0.051
		340.50		1.429E+00	8.172E-01	1.243E+00	2.869E-01	1.150
		398.62		6.080E-01	2.217E+00	3.715E+00	9.593E-01	0.164
		415.76		-6.594E-01	1.716E+00	2.741E+00	5.632E-01	-0.241
		63.00		4.494E-01	2.194E+00	3.678E+00	6.461E-01	0.122
		94.67		2.212E-01	2.007E-01	3.119E-01	4.261E-02	0.709
		98.44		9.037E-02	1.183E-01	1.665E-01	9.314E-02	0.543
		99.86		1.624E-01	5.062E-01	8.502E-01	7.991E-02	0.191
		111.00		-8.507E-02	1.901E-01	3.073E-01	3.570E-02	-0.277
		131.20		2.448E-02	1.229E-01	1.819E-01	1.220E-02	0.135
		152.70		-2.092E-01	3.468E-01	5.395E-01	8.660E-02	-0.388

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	186.00		6.230E+00	2.887E+00	2.693E+00	8.265E-01	2.313
		226.40		-3.598E-01	4.270E-01	6.430E-01	7.716E-02	-0.560
		227.20		-5.158E-01	4.594E-01	6.816E-01	4.522E-02	-0.757
		248.90		-2.021E-01	8.209E-01	1.274E+00	2.770E-01	-0.159
		293.70		5.097E+00	1.238E+00	1.746E+00	2.861E-01	2.920
		369.80		2.215E-01	8.611E-01	1.450E+00	3.025E-01	0.153
		568.70		-1.390E-01	1.121E+00	1.777E+00	9.606E-02	-0.078
		569.50		9.903E-02	3.051E-01	5.011E-01	2.707E-02	0.198
		574.00		-8.950E-01	1.585E+00	2.423E+00	1.304E-01	-0.369
		699.00		9.000E-02	7.903E-01	1.336E+00	2.383E-01	0.067
		706.10		-6.780E-01	1.148E+00	1.767E+00	7.792E-01	-0.384
		733.00		1.933E-02	4.378E-01	6.395E-01	1.359E-01	0.030
		742.81		2.185E-02	1.479E+00	2.472E+00	1.655E+00	0.009
	+	796.30		1.533E+00	1.659E+00	2.183E+00	5.785E-01	0.702
		805.60		2.129E+00	1.278E+00	2.111E+00	6.373E-01	1.008
		819.60		5.272E-01	1.225E+00	2.088E+00	7.871E-01	0.252
		826.30		1.165E-01	8.526E-01	1.427E+00	6.348E-01	0.082
		831.60		-4.798E-01	6.506E-01	9.743E-01	2.871E-01	-0.492
		876.40		-2.168E-01	9.382E-01	1.468E+00	1.508E+00	-0.148
		880.51		1.664E-01	2.895E-01	5.060E-01	4.022E-02	0.329
		883.24		-2.241E-01	3.318E-01	4.502E-01	3.023E-01	-0.498
		899.00		-1.398E-02	9.521E-01	1.564E+00	6.827E-01	-0.009
		925.00		-5.150E-01	1.273E+00	2.002E+00	1.622E-01	-0.257
		926.50		-1.362E-02	1.824E-01	2.970E-01	7.455E-02	-0.046
		946.00	*	2.143E-01	3.372E-01	5.818E-01	1.075E-01	0.368
		949.00		5.498E-02	5.036E-01	8.296E-01	6.608E-02	0.066
		980.50		-1.063E-01	8.478E-01	1.368E+00	1.063E-01	-0.078
		1394.10		3.313E-01	1.185E+00	2.014E+00	1.307E+00	0.164
PA-234M		766.42		8.183E+00	1.485E+01	2.190E+01	1.103E+01	0.374
		1001.03	*	1.775E+00	5.259E+00	8.845E+00	8.064E-01	0.201
TH-234		63.29	*	7.669E-01	1.854E+00	3.125E+00	6.182E-01	0.245
U-235	+	92.38		2.826E+00	9.954E-01	1.165E+00	2.244E-01	2.425
	+	89.95		2.247E+00	1.253E+00	2.129E+00	6.764E-01	1.056
	+	93.35		3.398E+00	1.400E+00	1.386E+00	3.979E-01	2.452
NP-236		105.00		1.983E-01	1.139E+00	1.896E+00	5.659E-01	0.105
		143.76	*	1.656E-01	2.177E-01	3.637E-01	6.028E-02	0.455
		163.35		6.508E-01	5.106E-01	8.511E-01	1.547E-01	0.765
	+	185.71		2.307E-01	8.148E-02	9.956E-02	6.419E-03	2.318
		205.31		3.968E-02	6.137E-01	8.764E-01	1.598E-01	0.045
		94.67		1.695E-01	1.515E-01	2.368E-01	2.451E-02	0.716
U-238		98.44		6.828E-02	8.113E-02	1.258E-01	1.213E-02	0.543
		111.00		-6.435E-02	1.437E-01	2.325E-01	1.847E-02	-0.277
		160.31	*	-6.304E-02	8.064E-02	1.256E-01	8.020E-03	-0.502
		63.29	*	7.669E-01	1.854E+00	3.125E+00	6.182E-01	0.245
NP-239	+	92.38		2.826E+00	8.882E-01	1.165E+00	1.266E-01	2.425
		99.55		1.192E-01	1.759E-01	2.867E-01	2.709E-02	0.416
	+	117.00	*	-6.866E-02	1.936E-01	3.137E-01	2.308E-02	-0.219
	+	209.75		2.132E+00	1.107E+00	1.555E+00	1.022E-01	1.371
		228.18		-9.701E-02	2.342E-01	3.631E-01	2.410E-02	-0.267

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	277.60			1.375E-01	1.873E-01	3.267E-01	2.173E-02	0.421
	334.30			-1.167E-01	1.518E+00	2.217E+00	1.402E-01	-0.053
AM-241	59.54		*	6.486E-02	2.379E-01	4.071E-01	5.139E-02	0.159
CM-243	99.55			1.227E-01	1.810E-01	2.950E-01	2.788E-02	0.416
	103.76		*	-9.252E-03	1.026E-01	1.692E-01	1.492E-02	-0.055
	117.00			-7.064E-02	1.992E-01	3.228E-01	2.375E-02	-0.219
	209.75		+	2.102E+00	1.091E+00	1.533E+00	1.007E-01	1.371
	228.18			-9.802E-02	2.366E-01	3.669E-01	2.435E-02	-0.267
	277.60			1.386E-01	1.888E-01	3.294E-01	2.191E-02	0.421
AM-246	798.80			-9.795E-02	1.995E-01	2.719E-01	1.822E-02	-0.360
	1036.00			-3.003E-02	3.344E-01	5.389E-01	3.962E-02	-0.056
	1062.04			-1.646E-01	2.685E-01	4.083E-01	2.910E-02	-0.403
	1078.86		*	5.563E-02	1.639E-01	2.746E-01	1.914E-02	0.203
CM-247	278.00			6.973E-01	7.849E-01	1.377E+00	9.161E-02	0.506
	287.40			2.436E-01	1.242E+00	2.113E+00	1.399E-01	0.115
	402.60		*	3.713E-03	3.892E-02	6.460E-02	3.646E-03	0.057
CF-249	252.85			-9.171E-02	8.848E-01	1.494E+00	9.976E-02	-0.061
	333.44			-4.396E-02	2.187E-01	2.941E-01	1.862E-02	-0.149
	387.95		*	-1.365E-02	4.177E-02	6.758E-02	3.840E-03	-0.202
CF-251	176.60		*	-4.488E-02	1.325E-01	2.101E-01	1.344E-02	-0.214
	227.00			-4.961E-01	4.087E-01	6.027E-01	3.998E-02	-0.823
	285.00			6.255E-01	1.803E+00	3.091E+00	2.049E-01	0.202

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]G246875004      *
* Acquisition date   : 24-FEB-2010 08:51:48 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 02:00:01.38 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246875004 Analyst initials: MXR1                  *
* Batch Number       : 952643 Sample Quantity : 1.2244E+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	3.726E+01	3.307E+00	5.480E-01	0.000E+00
CD-109	2.345E+00	1.127E+00	1.487E+00	0.000E+00
SN-126	2.306E-01	1.108E-01	1.566E-01	0.000E+00
BA-137M	4.951E-02	5.051E-02	7.402E-02	0.000E+00
CS-137	5.234E-02	5.340E-02	7.825E-02	0.000E+00
TL-208	6.006E-01	9.791E-02	6.183E-02	0.000E+00
BI-211	4.176E+00	5.461E-01	3.598E-01	0.000E+00
PB-212	1.895E+00	1.922E-01	9.400E-02	0.000E+00
PO-212	1.895E+00	1.922E-01	9.400E-02	0.000E+00
BI-214	1.115E+00	1.869E-01	1.197E-01	0.000E+00
PB-214	1.453E+00	2.040E-01	1.254E-01	0.000E+00
PO-214	1.453E+00	2.040E-01	1.254E-01	0.000E+00
PO-216	1.895E+00	1.922E-01	9.400E-02	0.000E+00
PO-218	1.453E+00	2.040E-01	1.254E-01	0.000E+00
RA-224	5.270E+00	1.442E+00	1.070E+00	0.000E+00
RA-226	1.115E+00	1.869E-01	1.197E-01	0.000E+00
AC-228	1.859E+00	4.013E-01	2.445E-01	0.000E+00
RA-228	1.859E+00	4.013E-01	2.445E-01	0.000E+00
TH-228	1.924E+00	1.950E-01	9.540E-02	0.000E+00
TH-230	1.115E+00	1.869E-01	1.197E-01	0.000E+00
TH-232	1.859E+00	4.013E-01	2.445E-01	0.000E+00
U-234	1.115E+00	1.869E-01	1.197E-01	0.000E+00
NP-237	6.771E-01	3.530E-01	4.875E-01	0.000E+00
AM-243	3.956E-01	1.055E-01	1.162E-01	0.000E+00
ANH-511	1.324E-01	7.014E-02	5.315E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.419E-01	3.536E-01	5.788E-01	0.000E+00 NOT IDENT.
NA-22	2.009E-03	4.895E-02	8.391E-02	0.000E+00 NOT IDENT.

NA-24	0.000E+00	5.617E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	4.299E-02	2.993E-02	6.292E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.834E-02	9.416E-02	0.000E+00	FAIL ABUN
SC-46	-3.196E-02	4.285E-02	6.710E-02	0.000E+00	FAIL ABUN
V-48	-4.868E-02	7.910E-02	1.242E-01	0.000E+00	NOT IDENT.
CR-51	-3.384E-02	3.797E-01	6.570E-01	0.000E+00	NOT IDENT.
MN-52	1.728E-01	2.563E-01	4.687E-01	0.000E+00	NOT IDENT.
MN-54	-2.435E-02	3.781E-02	6.041E-02	0.000E+00	NOT IDENT.
CO-56	-8.252E-03	4.339E-02	7.237E-02	0.000E+00	NOT IDENT.
CO-57	4.021E-03	2.668E-02	4.639E-02	0.000E+00	NOT IDENT.
CO-58	-1.960E-02	4.007E-02	6.513E-02	0.000E+00	NOT IDENT.
FE-59	-3.676E-02	1.052E-01	1.682E-01	0.000E+00	NOT IDENT.
CO-60	-8.377E-03	4.594E-02	7.661E-02	0.000E+00	NOT IDENT.
ZN-65	-9.056E-02	1.245E-01	1.600E-01	0.000E+00	NOT IDENT.
GE-68	-3.197E-01	1.520E+00	2.471E+00	0.000E+00	NOT IDENT.
AS-73	1.798E-01	1.624E+00	2.877E+00	0.000E+00	NOT IDENT.
AS-74	2.458E-02	1.023E-01	1.723E-01	0.000E+00	NOT IDENT.
SE-75	1.937E-02	4.833E-02	7.730E-02	0.000E+00	NOT IDENT.
BR-77	2.672E+00	1.026E+01	1.751E+01	0.000E+00	FAIL ABUN
SR-82	-5.643E-01	4.108E-01	6.175E-01	0.000E+00	NOT IDENT.
RB-83	3.287E-02	7.156E-02	1.240E-01	0.000E+00	NOT IDENT.
RB-84	-8.841E-03	7.237E-02	1.215E-01	0.000E+00	NOT IDENT.
KR-85	1.200E+01	8.672E+00	1.428E+01	0.000E+00	NOT IDENT.
SR-85	6.137E-02	4.435E-02	7.302E-02	0.000E+00	NOT IDENT.
RB-86	-1.354E-01	9.526E-01	1.559E+00	0.000E+00	NOT IDENT.
Y-88	-1.149E-02	3.992E-02	6.216E-02	0.000E+00	NOT IDENT.
ZR-88	-1.337E-02	3.203E-02	5.336E-02	0.000E+00	NOT IDENT.
Y-91	-1.029E+01	2.447E+01	3.869E+01	0.000E+00	NOT IDENT.
NB-94	1.274E-02	3.565E-02	6.302E-02	0.000E+00	NOT IDENT.
NB-95	3.759E-02	4.775E-02	7.724E-02	0.000E+00	NOT IDENT.
NB-95M	9.304E-02	1.391E-01	2.134E-01	0.000E+00	NOT IDENT.
ZR-95	-1.375E-03	7.826E-02	1.339E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.160E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.551E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.120E+01	1.143E+01	2.096E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.998E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.052E-02	3.532E-02	6.109E-02	0.000E+00	NOT IDENT.
RH-102	-7.307E-03	3.215E-02	5.335E-02	0.000E+00	NOT IDENT.
RU-103	3.376E-03	4.141E-02	6.998E-02	0.000E+00	FAIL ABUN
RH-106	-2.083E-01	3.551E-01	5.543E-01	0.000E+00	FAIL ABUN
RU-106	-2.083E-01	3.545E-01	5.543E-01	0.000E+00	FAIL ABUN
AG-108M	-2.635E-02	3.385E-02	5.298E-02	0.000E+00	NOT IDENT.
AG-110M	1.896E-02	4.169E-02	6.593E-02	0.000E+00	NOT IDENT.
IN-111	-2.633E-01	1.110E+00	1.593E+00	0.000E+00	NOT IDENT.
IN-113M	-2.872E-02	4.491E-02	7.359E-02	0.000E+00	NOT IDENT.
SN-113	-2.872E-02	4.491E-02	7.359E-02	0.000E+00	NOT IDENT.
IN-114M	-8.317E-02	2.028E-01	2.948E-01	0.000E+00	NOT IDENT.
CD-115	-5.192E-01	1.013E+01	1.685E+01	0.000E+00	NOT IDENT.
SN-117M	1.666E-02	5.171E-02	8.924E-02	0.000E+00	NOT IDENT.
SB-122	-2.294E-02	2.171E+00	3.604E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.024E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.286E-03	2.716E-02	4.628E-02	0.000E+00	NOT IDENT.
I-124	-4.730E-01	7.279E-01	1.034E+00	0.000E+00	FAIL ABUN
SB-124	-5.040E-02	8.300E-02	1.217E-01	0.000E+00	FAIL ABUN
SB-125	8.647E-03	9.705E-02	1.660E-01	0.000E+00	FAIL ABUN
TE-125M	4.212E+00	9.644E+00	1.706E+01	0.000E+00	NOT IDENT.
I-126	1.434E-01	2.069E-01	3.347E-01	0.000E+00	NOT IDENT.
SB-126	-4.501E-03	1.512E-01	2.450E-01	0.000E+00	FAIL ABUN
SB-127	1.591E-01	1.282E+00	2.237E+00	0.000E+00	NOT IDENT.
XE-127	8.968E-04	4.887E-02	8.176E-02	0.000E+00	NOT IDENT.
I-131	-4.762E-03	1.224E-01	2.102E-01	0.000E+00	NOT IDENT.
TE-132	-2.907E-01	6.662E-01	1.075E+00	0.000E+00	NOT IDENT.
BA-133	-4.815E-03	4.599E-02	6.910E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.155E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.887E-02	8.125E-02	1.112E-01	0.000E+00	FAIL ABUN
CS-135	1.368E-01	1.833E-01	2.980E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.411E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.734E-02	1.178E-01	1.987E-01	0.000E+00	FAIL ABUN
CE-139	-9.367E-03	3.136E-02	5.244E-02	0.000E+00	NOT IDENT.
BA-140	-1.927E-01	2.623E-01	3.976E-01	0.000E+00	NOT IDENT.
LA-140	5.361E-02	7.799E-02	1.330E-01	0.000E+00	FAIL ABUN
CE-141	-6.129E-02	6.288E-02	1.026E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.693E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-9.110E-02	2.181E-01	3.493E-01	0.000E+00	NOT IDENT.
PM-144	-3.326E-02	3.871E-02	6.264E-02	0.000E+00	NOT IDENT.
PR-144	-2.253E+00	2.623E+00	4.244E+00	0.000E+00	NOT IDENT.
PM-146	2.194E-02	4.172E-02	7.334E-02	0.000E+00	NOT IDENT.
ND-147	-2.837E-01	5.800E-01	9.281E-01	0.000E+00	FAIL ABUN

PM-149	-9.809E+00	8.555E+01	1.491E+02	0.000E+00	NOT IDENT.
EU-152	-1.899E-02	1.088E-01	1.723E-01	0.000E+00	FAIL ABUN
GD-153	-5.373E-02	9.383E-02	1.426E-01	0.000E+00	NOT IDENT.
EU-154	-1.333E-02	1.374E-01	2.326E-01	0.000E+00	NOT IDENT.
EU-155	3.976E-02	1.142E-01	2.018E-01	0.000E+00	FAIL ABUN
TB-160	1.233E-01	1.425E-01	2.597E-01	0.000E+00	FAIL ABUN
HO-166M	-1.379E-02	6.257E-02	1.059E-01	0.000E+00	NOT IDENT.
TM-171	-1.061E+00	3.431E+01	6.123E+01	0.000E+00	NOT IDENT.
LU-176	-5.900E-03	2.620E-02	4.177E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.491E+00	2.139E+00	0.000E+00	FAIL ABUN
LU-177M	-1.615E-01	1.846E-01	2.961E-01	0.000E+00	FAIL ABUN
HF-181	1.202E-02	4.502E-02	7.728E-02	0.000E+00	NOT IDENT.
W-181	-5.619E-01	4.789E-01	8.099E-01	0.000E+00	NOT IDENT.
TA-182	-1.216E-01	2.342E-01	3.855E-01	0.000E+00	FAIL ABUN
RE-183	5.518E-02	1.109E-01	1.925E-01	0.000E+00	FAIL ABUN
RE-184	-2.441E-02	2.309E-01	4.061E-01	0.000E+00	NOT IDENT.
OS-185	-2.572E-02	4.352E-02	7.208E-02	0.000E+00	NOT IDENT.
RE-188	1.696E-01	1.762E-01	3.083E-01	0.000E+00	NOT IDENT.
W-188	-3.090E+00	7.854E+00	1.176E+01	0.000E+00	NOT IDENT.
IR-192	1.953E-03	3.638E-02	6.350E-02	0.000E+00	FAIL ABUN
AU-195	1.829E-01	2.647E-01	4.293E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.002E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.266E-01	6.825E+00	1.154E+01	0.000E+00	NOT IDENT.
TL-202	3.684E-02	7.004E-02	1.231E-01	0.000E+00	NOT IDENT.
HG-203	2.539E-02	4.105E-02	7.414E-02	0.000E+00	NOT IDENT.
BI-207	1.675E-02	5.774E-02	9.861E-02	0.000E+00	FAIL ABUN
TL-207	1.405E-01	7.701E-01	1.194E+00	0.000E+00	FAIL ABUN
PO-209	4.547E-01	8.227E+00	1.395E+01	0.000E+00	NOT IDENT.
BI-210	4.596E-01	9.197E+00	1.675E+01	0.000E+00	NOT IDENT.
PB-210	4.596E-01	9.197E+00	1.675E+01	0.000E+00	NOT IDENT.
PO-210	4.596E-01	9.197E+00	1.675E+01	0.000E+00	NOT IDENT.
PB-211	-9.419E-01	1.143E+00	1.583E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.876E-01	7.604E-01	0.000E+00	FAIL ABUN
PO-215	1.405E-01	7.701E-01	1.194E+00	0.000E+00	FAIL ABUN
RN-219	2.125E-01	4.263E-01	7.499E-01	0.000E+00	FAIL ABUN
RN-220	-3.329E+01	2.981E+01	4.520E+01	0.000E+00	NOT IDENT.
RA-223	1.405E-01	7.701E-01	1.194E+00	0.000E+00	FAIL ABUN
AC-227	6.903E-02	4.007E-01	7.131E-01	0.000E+00	FAIL ABUN
TH-227	6.903E-02	4.008E-01	7.131E-01	0.000E+00	FAIL ABUN
TH-229	4.912E-02	5.064E-01	8.534E-01	0.000E+00	FAIL ABUN
PA-231	2.916E-01	1.529E+00	2.707E+00	0.000E+00	FAIL ABUN
TH-231	1.405E-01	7.701E-01	1.194E+00	0.000E+00	FAIL ABUN
U-231	-5.810E-01	1.186E+00	1.812E+00	0.000E+00	FAIL ABUN
PA-233	-5.818E-03	6.729E-02	1.167E-01	0.000E+00	FAIL ABUN
PA-234	2.143E-01	3.305E-01	5.841E-01	0.000E+00	FAIL ABUN
PA-234M	1.775E+00	5.154E+00	8.874E+00	0.000E+00	NOT IDENT.
TH-234	7.669E-01	1.817E+00	3.246E+00	0.000E+00	FAIL ABUN
U-235	1.656E-01	2.133E-01	3.740E-01	0.000E+00	FAIL ABUN
NP-236	-6.304E-02	7.903E-02	1.290E-01	0.000E+00	NOT IDENT.
U-238	7.669E-01	1.817E+00	3.246E+00	0.000E+00	FAIL ABUN
NP-239	-6.866E-02	1.897E-01	3.235E-01	0.000E+00	FAIL ABUN
AM-241	6.486E-02	2.331E-01	4.232E-01	0.000E+00	NOT IDENT.
CM-243	-9.252E-03	1.005E-01	1.747E-01	0.000E+00	FAIL ABUN
AM-246	5.563E-02	1.606E-01	2.753E-01	0.000E+00	NOT IDENT.
CM-247	3.713E-03	3.815E-02	6.559E-02	0.000E+00	NOT IDENT.
CF-249	-1.365E-02	4.093E-02	6.864E-02	0.000E+00	NOT IDENT.
CF-251	-4.488E-02	1.298E-01	2.155E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 10:52:16.52

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875004.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:51:48
Sample ID          : G246875004      Sample quantity   : 1.22440E+02 GRAM
Detector name      : GAM04           Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00   Elapsed real time: 0 02:00:01.38  0.0%
Energy tolerance   : 1.50000 keV     Analyst Initials : MXR1
Abundance limit    : 75.00000        Sensitivity      : 5.00000
Batch ID           : 952643          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	1393	10.67*	1.074E+00	3.726E+01	3.726E+01	9.06
CD-109	88.03	140	3.72*	5.013E+00	2.293E+00	2.345E+00	49.04
SN-126	64.28	-----	9.60	2.203E+00	-----	Line Not Found	-----
	86.94	140	8.90	5.013E+00	9.585E-01	9.585E-01	63.57
	87.57	140	37.00*	5.013E+00	2.306E-01	2.306E-01	49.04
BA-137M	661.65	32	89.98*	2.207E+00	4.946E-02	4.951E-02	104.11
CS-137	661.65	32	85.12*	2.207E+00	5.229E-02	5.234E-02	104.11
TL-208	277.35	-----	6.80	4.326E+00	-----	Line Not Found	-----
	510.84	118	21.60	2.730E+00	6.131E-01	6.131E-01	54.68
	583.14	405	84.20*	2.455E+00	6.006E-01	6.006E-01	16.64
	860.37	-----	12.46	1.744E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.384E+00	-----	Line Not Found	-----
	351.07	639	12.94*	3.625E+00	4.176E+00	4.176E+00	13.35
PB-212	74.81	309	10.70	3.631E+00	2.440E+00	2.440E+00	28.77
	77.11	560	18.00	3.930E+00	2.428E+00	2.428E+00	17.84
	87.30	140	8.00	5.013E+00	1.066E+00	1.066E+00	50.05
	238.63	1330	44.60*	4.825E+00	1.895E+00	1.895E+00	10.35
	300.09	134	3.41	4.076E+00	2.947E+00	2.947E+00	46.84
PO-212	74.81	309	10.70	3.631E+00	2.440E+00	2.440E+00	28.77
	77.11	560	18.00	3.930E+00	2.428E+00	2.428E+00	17.84
	87.30	140	8.00	5.013E+00	1.066E+00	1.066E+00	50.05
	115.19	-----	0.60	6.408E+00	-----	Line Not Found	-----
	238.63	1330	44.60*	4.825E+00	1.895E+00	1.895E+00	10.35
	300.09	134	3.41	4.076E+00	2.947E+00	2.947E+00	46.84
BI-214	609.31	399	46.30*	2.367E+00	1.115E+00	1.115E+00	17.10
	1120.29	94	15.10	1.357E+00	1.403E+00	1.403E+00	39.33
	1764.49	75	15.80	9.529E-01	1.528E+00	1.528E+00	35.58
PB-214	74.81	309	6.21	3.631E+00	4.205E+00	4.205E+00	28.20
	77.11	560	10.50	3.930E+00	4.163E+00	4.163E+00	19.40
	87.30	140	4.67	5.013E+00	1.827E+00	1.827E+00	49.64
	241.98	325	7.49	4.782E+00	2.779E+00	2.779E+00	28.47
	295.21	406	19.20	4.131E+00	1.568E+00	1.568E+00	18.80

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	639	37.20*	3.625E+00	1.453E+00	1.453E+00	14.33
	74.81	309	6.21	3.631E+00	4.205E+00	4.205E+00	28.20
	77.11	560	10.50	3.930E+00	4.163E+00	4.163E+00	19.40
	87.30	140	4.67	5.013E+00	1.827E+00	1.827E+00	49.64
	241.98	325	7.49	4.782E+00	2.779E+00	2.779E+00	28.47
PO-216	295.21	406	19.20	4.131E+00	1.568E+00	1.568E+00	18.80
	351.92	639	37.20*	3.625E+00	1.453E+00	1.453E+00	14.33
	74.81	309	10.70	3.631E+00	2.440E+00	2.440E+00	28.77
	77.11	560	18.00	3.930E+00	2.428E+00	2.428E+00	17.84
	87.30	140	8.00	5.013E+00	1.066E+00	1.066E+00	50.05
PO-218	238.63	1330	44.60*	4.825E+00	1.895E+00	1.895E+00	10.35
	300.09	134	3.41	4.076E+00	2.947E+00	2.947E+00	46.84
	74.81	309	6.21	3.631E+00	4.205E+00	4.205E+00	28.20
	77.11	560	10.50	3.930E+00	4.163E+00	4.163E+00	19.40
	87.30	140	4.67	5.013E+00	1.827E+00	1.827E+00	49.64
RA-224	241.98	325	7.49	4.782E+00	2.779E+00	2.779E+00	28.47
	295.21	406	19.20	4.131E+00	1.568E+00	1.568E+00	18.80
	351.92	639	37.20*	3.625E+00	1.453E+00	1.453E+00	14.33
	240.98	325	3.95*	4.782E+00	5.270E+00	5.270E+00	27.91
	609.31	399	46.30*	2.367E+00	1.115E+00	1.115E+00	17.10
RA-226	1120.29	94	15.10	1.357E+00	1.403E+00	1.403E+00	39.33
	1764.49	75	15.80	9.529E-01	1.528E+00	1.528E+00	35.58
	338.32	242	11.40	3.735E+00	1.743E+00	1.743E+00	47.96
	911.07	277	27.70*	1.652E+00	1.859E+00	1.859E+00	22.04
	969.11	156	16.60	1.558E+00	1.851E+00	1.851E+00	32.69
AC-228	338.32	242	11.40	3.735E+00	1.743E+00	1.743E+00	47.96
	911.07	277	27.70*	1.652E+00	1.859E+00	1.859E+00	22.04
	969.11	156	16.60	1.558E+00	1.851E+00	1.851E+00	32.69
	74.81	309	10.70	3.631E+00	2.440E+00	2.477E+00	27.23
	77.11	560	18.00	3.930E+00	2.428E+00	2.465E+00	17.84
TH-228	87.30	140	8.00	5.013E+00	1.066E+00	1.082E+00	49.04
	238.63	1330	44.60*	4.825E+00	1.895E+00	1.924E+00	10.35
	300.09	134	3.41	4.076E+00	2.947E+00	2.991E+00	74.83
	609.31	399	46.30*	2.367E+00	1.115E+00	1.115E+00	17.10
	1120.29	94	15.10	1.357E+00	1.403E+00	1.403E+00	39.33
TH-230	1764.49	75	15.80	9.529E-01	1.528E+00	1.528E+00	35.58
	338.32	242	11.40	3.735E+00	1.743E+00	1.743E+00	25.93
	911.07	277	27.70*	1.652E+00	1.859E+00	1.859E+00	22.04
	969.11	156	16.60	1.558E+00	1.851E+00	1.851E+00	32.69
	609.31	399	46.30*	2.367E+00	1.115E+00	1.115E+00	17.10
U-234	1120.29	94	15.10	1.357E+00	1.403E+00	1.403E+00	39.33
	1764.49	75	15.80	9.529E-01	1.528E+00	1.528E+00	35.58
	86.50	140	12.60*	5.013E+00	6.771E-01	6.771E-01	53.20
	95.87	-----	2.60	5.678E+00	-----	Line Not Found	-----
	74.67	309	66.00*	3.631E+00	3.956E-01	3.956E-01	27.21
AM-243	86.72	140	0.34	5.013E+00	2.539E+01	2.539E+01	49.04
	117.66	-----	0.55	6.445E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.417E+00	-----	Line Not Found	-----
	511.00	118	100.00*	2.730E+00	1.324E-01	1.324E-01	54.05

Flag: "*" = Keyline

Total number of lines in spectrum 35
Number of unidentified lines 5
Number of lines tentatively identified by NID 30 85.71%

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	3.726E+01	3.726E+01	0.337E+01	9.06	
CD-109	464.00D	1.02	2.293E+00	2.345E+00	1.150E+00	49.04	
SN-126	1.00E+05Y	1.00	2.306E-01	2.306E-01	1.131E-01	49.04	
BA-137M	30.17Y	1.00	4.946E-02	4.951E-02	5.154E-02	104.11	
CS-137	30.17Y	1.00	5.229E-02	5.234E-02	5.449E-02	104.11	
TL-208	1.41E+10Y	1.00	6.006E-01	6.006E-01	0.999E-01	16.64	
BI-211	7.04E+08Y	1.00	4.176E+00	4.176E+00	0.557E+00	13.35	
PB-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.196E+00	10.35	
PO-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.196E+00	10.35	
BI-214	1600.00Y	1.00	1.115E+00	1.115E+00	0.191E+00	17.10	
PB-214	1600.00Y	1.00	1.453E+00	1.453E+00	0.208E+00	14.33	
PO-214	1600.00Y	1.00	1.453E+00	1.453E+00	0.208E+00	14.33	
PO-216	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.196E+00	10.35	
PO-218	1600.00Y	1.00	1.453E+00	1.453E+00	0.208E+00	14.33	
RA-224	1.41E+10Y	1.00	5.270E+00	5.270E+00	1.471E+00	27.91	
RA-226	1600.00Y	1.00	1.115E+00	1.115E+00	0.191E+00	17.10	
AC-228	1.41E+10Y	1.00	1.859E+00	1.859E+00	0.410E+00	22.04	
RA-228	1.41E+10Y	1.00	1.859E+00	1.859E+00	0.410E+00	22.04	
TH-228	1.91Y	1.01	1.895E+00	1.924E+00	0.199E+00	10.35	
TH-230	4.47E+09Y	1.00	1.115E+00	1.115E+00	0.191E+00	17.10	
TH-232	1.41E+10Y	1.00	1.859E+00	1.859E+00	0.410E+00	22.04	
U-234	4.47E+09Y	1.00	1.115E+00	1.115E+00	0.191E+00	17.10	
NP-237	2.14E+06Y	1.00	6.771E-01	6.771E-01	3.602E-01	53.20	
AM-243	7380.00Y	1.00	3.956E-01	3.956E-01	1.076E-01	27.21	
ANH-511	1.00E+09Y	1.00	1.324E-01	1.324E-01	0.716E-01	54.05	
Total Activity :			7.311E+01	7.319E+01			

Grand Total Activity : 7.311E+01 7.319E+01

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

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

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.85	104	236	0.92	179.74	178	16	1.44E-02	45.8	5.24E+00	T
4	92.94	273	421	1.39	185.93	178	16	3.80E-02	29.5	5.48E+00	T
0	128.93	84	343	1.14	257.90	254	8	1.17E-02	79.3	6.50E+00	T
0	185.95	232	350	1.45	371.96	367	11	3.22E-02	34.7	5.70E+00	T
0	209.21	119	263	1.47	418.49	415	8	1.65E-02	51.5	5.29E+00	T
0	270.05	112	288	1.02	540.17	534	12	1.55E-02	63.8	4.41E+00	T
0	327.80	60	171	0.84	655.68	651	9	8.29E-03	83.1	3.82E+00	T
0	463.31	79	112	2.07	926.71	920	11	1.10E-02	55.2	2.95E+00	T
0	727.37	104	70	1.09	1454.83	1450	11	1.45E-02	36.6	2.03E+00	T
0	768.93	35	73	1.04	1537.94	1532	10	4.92E-03	96.0	1.93E+00	
0	795.48	37	89	1.06	1591.04	1586	11	5.08E-03	****	1.88E+00	T
0	862.36	74	82	5.15	1724.79	1716	19	1.03E-02	63.8	1.74E+00	
2	964.81	61	65	2.06	1929.68	1924	20	8.48E-03	53.8	1.57E+00	T
0	1377.91	54	11	1.40	2755.74	2750	11	7.50E-03	36.1	1.13E+00	
0	1509.89	22	9	1.75	3019.64	3015	11	3.10E-03	65.7	1.05E+00	T
2	1588.54	35	8	2.43	3176.91	3166	26	4.92E-03	48.9	1.01E+00	
2	1593.01	40	6	2.43	3185.84	3166	26	5.50E-03	34.3	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]G246875004.CNF;1
* Acquisition date   : 24-FEB-2010 08:51:48   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 02:00:01.38          Half life ratio    : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246875004             Analyst initials  : MXR1
* Batch Number       : 952643                 Sample Quantity   : 1.22440E+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	3.726E+01	3.375E+00	5.489E-01	3.901E-02	67.878
CD-109	2.345E+00	1.150E+00	1.437E+00	1.727E-01	1.632
SN-126	2.306E-01	1.131E-01	1.513E-01	1.815E-02	1.524
BA-137M	4.951E-02	5.154E-02	7.338E-02	3.579E-03	0.675
CS-137	5.234E-02	5.449E-02	7.757E-02	3.806E-03	0.675
TL-208	6.006E-01	9.991E-02	6.120E-02	3.850E-03	9.814
BI-211	4.176E+00	5.573E-01	3.538E-01	2.390E-02	11.801
PB-212	1.895E+00	1.961E-01	9.198E-02	7.387E-03	20.607
PO-212	1.895E+00	1.961E-01	9.198E-02	7.387E-03	20.607
BI-214	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
PB-214	1.453E+00	2.081E-01	1.233E-01	1.052E-02	11.777
PO-214	1.453E+00	2.081E-01	1.233E-01	1.052E-02	11.777
PO-216	1.895E+00	1.961E-01	9.198E-02	7.387E-03	20.607
PO-218	1.453E+00	2.081E-01	1.233E-01	1.052E-02	11.777
RA-224	5.270E+00	1.471E+00	1.047E+00	6.980E-02	5.033
RA-226	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
AC-228	1.859E+00	4.095E-01	2.434E-01	2.653E-02	7.637
RA-228	1.859E+00	4.095E-01	2.434E-01	2.653E-02	7.637

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.924E+00	1.990E-01	9.335E-02	7.497E-03	20.607
TH-230	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
TH-232	1.859E+00	4.095E-01	2.434E-01	2.653E-02	7.637
U-234	1.115E+00	1.907E-01	1.185E-01	8.711E-03	9.406
NP-237	6.771E-01	3.602E-01	4.711E-01	1.122E-01	1.437
AM-243	3.956E-01	1.076E-01	1.121E-01	1.284E-02	3.529
ANH-511	1.324E-01	7.157E-02	5.251E-02	2.937E-03	2.522

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.419E-01		3.608E-01	5.714E-01	3.785E-02	-0.248
NA-22	2.009E-03		4.995E-02	8.390E-02	5.486E-03	0.024
NA-24	-2.263E-01		2.866E-01	Half-Life too short		
AL-26	4.299E-02		3.054E-02	6.320E-02	3.749E-03	0.680
TI-44	4.481E-01	+	7.994E-02	9.087E-02	1.045E-02	4.931
SC-46	-3.196E-02		4.372E-02	6.678E-02	5.401E-03	-0.479
V-48	-4.868E-02		8.071E-02	1.237E-01	9.587E-03	-0.393
CR-51	-3.384E-02		3.875E-01	6.453E-01	4.544E-02	-0.052
MN-52	1.728E-01		2.615E-01	4.694E-01	3.203E-02	0.368
MN-54	-2.435E-02		3.858E-02	6.007E-02	4.347E-03	-0.405
CO-56	-8.252E-03		4.427E-02	7.197E-02	5.339E-03	-0.115
CO-57	4.021E-03		2.722E-02	4.502E-02	3.125E-03	0.089
CO-58	-1.960E-02		4.089E-02	6.473E-02	4.469E-03	-0.303
FE-59	-3.676E-02		1.074E-01	1.678E-01	1.282E-02	-0.219
CO-60	-8.377E-03		4.688E-02	7.664E-02	5.252E-03	-0.109
ZN-65	-9.056E-02		1.271E-01	1.597E-01	1.057E-02	-0.567
GE-68	-3.197E-01		1.551E+00	2.465E+00	1.722E-01	-0.130
AS-73	1.798E-01		1.657E+00	2.764E+00	3.616E-01	0.065
AS-74	2.458E-02		1.044E-01	1.706E-01	9.008E-03	0.144
SE-75	1.937E-02		4.931E-02	7.573E-02	5.094E-03	0.256
BR-77	2.672E+00		1.047E+01	1.731E+01	9.638E-01	0.154
SR-82	-5.643E-01		4.192E-01	6.134E-01	3.915E-02	-0.920
RB-83	3.287E-02		7.302E-02	1.225E-01	6.824E-03	0.268
RB-84	-8.841E-03		7.385E-02	1.209E-01	9.630E-03	-0.073
KR-85	1.200E+01		8.849E+00	1.411E+01	7.880E-01	0.851
SR-85	6.137E-02		4.525E-02	7.215E-02	4.030E-03	0.851
RB-86	-1.354E-01		9.720E-01	1.555E+00	1.087E-01	-0.087
Y-88	-1.149E-02		4.073E-02	6.245E-02	3.644E-03	-0.184
ZR-88	-1.337E-02		3.268E-02	5.255E-02	2.957E-03	-0.254
Y-91	-1.029E+01		2.497E+01	3.866E+01	2.369E+00	-0.266
NB-94	1.274E-02		3.638E-02	6.252E-02	3.368E-03	0.204
NB-95	3.759E-02		4.872E-02	7.672E-02	4.781E-03	0.490
NB-95M	9.304E-02		1.419E-01	2.088E-01	1.713E-02	0.446
ZR-95	-1.375E-03		7.985E-02	1.329E-01	9.680E-03	-0.010
NB-97	4.746E-02		4.673E-02	Half-Life too short		
ZR-97	8.261E-01		7.912E-01	Half-Life too short		

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	1.120E+01		1.167E+01	2.081E+01	2.874E+00	0.539
TC-99M	-1.269E+10		1.019E+10	Half-Life too short		
RH-101	4.052E-02		3.604E-02	5.963E-02	3.884E-03	0.679
RH-102	-7.307E-03		3.281E-02	5.266E-02	2.977E-03	-0.139
RU-103	3.376E-03		4.225E-02	6.912E-02	8.685E-03	0.049
RH-106	-2.083E-01		3.623E-01	5.490E-01	6.272E-02	-0.379
RU-106	-2.083E-01		3.617E-01	5.490E-01	2.821E-02	-0.379
AG-108M	-2.635E-02		3.454E-02	5.224E-02	3.228E-03	-0.504
AG-110M	1.896E-02		4.255E-02	6.536E-02	3.492E-03	0.290
IN-111	-2.633E-01		1.133E+00	1.560E+00	1.041E-01	-0.169
IN-113M	-2.872E-02		4.582E-02	7.247E-02	4.366E-03	-0.396
SN-113	-2.872E-02		4.582E-02	7.247E-02	4.366E-03	-0.396
IN-114M	-8.317E-02		2.070E-01	2.876E-01	1.862E-02	-0.289
CD-115	-5.192E-01		1.033E+01	1.666E+01	9.242E-01	-0.031
SN-117M	1.666E-02		5.276E-02	8.688E-02	5.557E-03	0.192
SB-122	-2.294E-02		2.215E+00	3.566E+00	1.934E-01	-0.006
I-123	1.905E-01		2.053E+00	Half-Life too short		
TE-123M	1.286E-03		2.772E-02	4.505E-02	2.912E-03	0.029
I-124	-4.730E-01		7.428E-01	1.024E+00	5.369E-02	-0.462
SB-124	-5.040E-02		8.470E-02	1.221E-01	8.296E-03	-0.413
SB-125	8.647E-03		9.903E-02	1.636E-01	9.687E-03	0.053
TE-125M	4.212E+00		9.841E+00	1.653E+01	1.640E+00	0.255
I-126	1.434E-01		2.112E-01	3.319E-01	1.637E-02	0.432
SB-126	-4.501E-03		1.543E-01	2.432E-01	1.366E-02	-0.019
SB-127	1.591E-01		1.308E+00	2.219E+00	1.989E-01	0.072
XE-127	8.968E-04		4.987E-02	7.984E-02	5.219E-03	0.011
I-131	-4.762E-03		1.248E-01	2.068E-01	1.376E-02	-0.023
TE-132	-2.907E-01		6.798E-01	1.051E+00	1.543E-01	-0.276
BA-133	-4.815E-03		4.693E-02	6.795E-02	7.960E-03	-0.071
I-133	-3.353E-03		2.630E-03	Half-Life too short		
CS-134	7.887E-02	+	8.291E-02	1.105E-01	7.446E-03	0.714
CS-135	1.368E-01		1.871E-01	2.920E-01	2.434E-02	0.468
I-135	-4.132E+08		1.740E+09	Half-Life too short		
CS-136	1.734E-02		1.202E-01	1.981E-01	1.522E-02	0.088
CE-139	-9.367E-03		3.200E-02	5.108E-02	3.246E-03	-0.183
BA-140	-1.927E-01		2.677E-01	3.931E-01	1.276E-01	-0.490
LA-140	5.361E-02		7.958E-02	1.334E-01	8.784E-03	0.402
CE-141	-6.129E-02		6.416E-02	9.982E-02	6.700E-03	-0.614
CE-143	4.328E-04		8.639E-05	Half-Life too short		
CE-144	-9.110E-02		2.225E-01	3.393E-01	4.945E-02	-0.269
PM-144	-3.326E-02		3.950E-02	6.214E-02	3.302E-03	-0.535
PR-144	-2.253E+00		2.676E+00	4.210E+00	2.235E-01	-0.535
PM-146	2.194E-02		4.257E-02	7.235E-02	6.176E-03	0.303
ND-147	-2.837E-01		5.919E-01	9.174E-01	1.230E-01	-0.309
PM-149	-9.809E+00		8.729E+01	1.462E+02	2.125E+01	-0.067
EU-152	-1.899E-02		1.110E-01	1.694E-01	1.172E-02	-0.112
GD-153	-5.373E-02		9.574E-02	1.380E-01	1.354E-02	-0.389
EU-154	-1.333E-02		1.402E-01	2.325E-01	2.281E-02	-0.057

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	3.976E-02		1.165E-01	1.954E-01	1.703E-02	0.203
TB-160	1.233E-01		1.454E-01	2.584E-01	2.049E-02	0.477
HO-166M	-1.379E-02		6.384E-02	1.050E-01	5.782E-03	-0.131
TM-171	-1.061E+00		3.501E+01	5.898E+01	6.895E+00	-0.018
LU-176	-5.900E-03		2.673E-02	4.100E-02	2.677E-03	-0.144
LU-177	2.930E+00	+	1.522E+00	2.089E+00	1.371E-01	1.403
LU-177M	-1.615E-01		1.883E-01	2.918E-01	1.651E-02	-0.553
HF-181	1.202E-02		4.594E-02	7.630E-02	4.307E-03	0.158
W-181	-5.619E-01		4.886E-01	7.798E-01	9.191E-02	-0.721
TA-182	-1.216E-01		2.390E-01	3.852E-01	2.397E-02	-0.316
RE-183	5.518E-02		1.132E-01	1.874E-01	1.194E-02	0.294
RE-184	-2.441E-02		2.356E-01	3.977E-01	2.656E-02	-0.061
OS-185	-2.572E-02		4.441E-02	7.144E-02	3.561E-03	-0.360
RE-188	1.696E-01		1.798E-01	3.001E-01	1.927E-02	0.565
W-188	-3.090E+00		8.014E+00	1.153E+01	7.622E-01	-0.268
IR-192	1.953E-03		3.713E-02	6.236E-02	4.048E-03	0.031
AU-195	1.829E-01		2.701E-01	4.154E-01	3.972E-02	0.440
TL-200	-9.706E-05		2.042E-04	Half-Life too short		
TL-201	-2.266E-01		6.964E+00	1.124E+01	7.148E-01	-0.020
TL-202	3.684E-02		7.147E-02	1.214E-01	6.887E-03	0.303
HG-203	2.539E-02		4.188E-02	7.269E-02	5.061E-03	0.349
BI-207	1.675E-02		5.892E-02	9.836E-02	6.995E-03	0.170
TL-207	1.405E-01		7.858E-01	1.173E+00	1.963E-01	0.120
PO-209	4.547E-01		8.395E+00	1.388E+01	1.139E+00	0.033
BI-210	4.596E-01		9.385E+00	1.606E+01	1.400E+00	0.029
PB-210	4.596E-01		9.385E+00	1.606E+01	1.400E+00	0.029
PO-210	4.596E-01		9.385E+00	1.606E+01	1.248E+00	0.029
PB-211	-9.419E-01		1.166E+00	1.560E+00	9.720E-01	-0.604
BI-212	1.331E+00	+	4.976E-01	7.547E-01	5.769E-02	1.764
PO-215	1.405E-01		7.858E-01	1.173E+00	1.963E-01	0.120
RN-219	2.125E-01		4.350E-01	7.387E-01	1.000E-01	0.288
RN-220	-3.329E+01		3.042E+01	4.470E+01	2.449E+00	-0.745
RA-223	1.405E-01		7.858E-01	1.173E+00	1.963E-01	0.120
AC-227	6.903E-02		4.089E-01	6.984E-01	1.002E-01	0.099
TH-227	6.903E-02		4.089E-01	6.984E-01	1.203E-01	0.099
TH-229	4.912E-02		5.167E-01	8.329E-01	5.405E-02	0.059
PA-231	2.916E-01		1.561E+00	2.655E+00	3.757E-01	0.110
TH-231	1.405E-01		7.858E-01	1.173E+00	1.963E-01	0.120
U-231	-5.810E-01		1.210E+00	1.753E+00	1.773E-01	-0.331
PA-233	-5.818E-03		6.867E-02	1.146E-01	7.813E-03	-0.051
PA-234	2.143E-01		3.372E-01	5.818E-01	1.075E-01	0.368
PA-234M	1.775E+00		5.259E+00	8.845E+00	8.064E-01	0.201
TH-234	7.669E-01		1.854E+00	3.125E+00	6.182E-01	0.245
U-235	1.656E-01		2.177E-01	3.637E-01	6.028E-02	0.455
NP-236	-6.304E-02		8.064E-02	1.256E-01	8.020E-03	-0.502
U-238	7.669E-01		1.854E+00	3.125E+00	6.182E-01	0.245
NP-239	-6.866E-02		1.936E-01	3.137E-01	2.308E-02	-0.219
AM-241	6.486E-02		2.379E-01	4.071E-01	5.139E-02	0.159

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-9.252E-03		1.026E-01	1.692E-01	1.492E-02	-0.055
AM-246	5.563E-02		1.639E-01	2.746E-01	1.914E-02	0.203
CM-247	3.713E-03		3.892E-02	6.460E-02	3.646E-03	0.057
CF-249	-1.365E-02		4.177E-02	6.758E-02	3.840E-03	-0.202
CF-251	-4.488E-02		1.325E-01	2.101E-01	1.344E-02	-0.214

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]G246875004          *
* Acquisition date   : 24-FEB-2010 08:51:48 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 02:00:01.38              Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID            *
* Sample ID          : G246875004              Analyst initials: MXR1          *
* Batch Number       : 952643                  Sample Quantity : 1.2244E+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	3.726E+01	3.307E+00	2.742E-01	1.687E+00
CD-109	2.345E+00	1.127E+00	7.438E-01	5.749E-01
SN-126	2.306E-01	1.108E-01	7.835E-02	5.653E-02
BA-137M	4.951E-02	5.051E-02	3.703E-02	2.577E-02
CS-137	5.234E-02	5.340E-02	3.915E-02	2.724E-02
TL-208	6.006E-01	9.791E-02	3.093E-02	4.995E-02
BI-211	4.176E+00	5.461E-01	1.800E-01	2.786E-01
PB-212	1.895E+00	1.922E-01	4.703E-02	9.804E-02
PO-212	1.895E+00	1.922E-01	4.703E-02	9.804E-02
BI-214	1.115E+00	1.869E-01	5.989E-02	9.534E-02
PB-214	1.453E+00	2.040E-01	6.275E-02	1.041E-01
PO-214	1.453E+00	2.040E-01	6.275E-02	1.041E-01
PO-216	1.895E+00	1.922E-01	4.703E-02	9.804E-02
PO-218	1.453E+00	2.040E-01	6.275E-02	1.041E-01
RA-224	5.270E+00	1.442E+00	5.353E-01	7.355E-01
RA-226	1.115E+00	1.869E-01	5.989E-02	9.534E-02
AC-228	1.859E+00	4.013E-01	1.223E-01	2.048E-01
RA-228	1.859E+00	4.013E-01	1.223E-01	2.048E-01
TH-228	1.924E+00	1.950E-01	4.773E-02	9.950E-02
TH-230	1.115E+00	1.869E-01	5.989E-02	9.534E-02
TH-232	1.859E+00	4.013E-01	1.223E-01	2.048E-01
U-234	1.115E+00	1.869E-01	5.989E-02	9.534E-02
NP-237	6.771E-01	3.530E-01	2.439E-01	1.801E-01
AM-243	3.956E-01	1.055E-01	5.816E-02	5.382E-02
ANH-511	1.324E-01	7.014E-02	2.659E-02	3.578E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.419E-01	3.536E-01	2.896E-01	1.804E-01 NOT IDENT.
NA-22	2.009E-03	4.895E-02	4.198E-02	2.497E-02 NOT IDENT.

NA-24	-2.263E+05	5.617E+05	0.000E+00	2.866E+05	SHORT HLIF
AL-26	4.299E-02	2.993E-02	3.148E-02	1.527E-02	NOT IDENT.
TI-44	4.481E-01	7.834E-02	4.711E-02	3.997E-02	FAIL ABUN
SC-46	-3.196E-02	4.285E-02	3.357E-02	2.186E-02	FAIL ABUN
V-48	-4.868E-02	7.910E-02	6.213E-02	4.036E-02	NOT IDENT.
CR-51	-3.384E-02	3.797E-01	3.287E-01	1.937E-01	NOT IDENT.
MN-52	1.728E-01	2.563E-01	2.345E-01	1.308E-01	NOT IDENT.
MN-54	-2.435E-02	3.781E-02	3.022E-02	1.929E-02	NOT IDENT.
CO-56	-8.252E-03	4.339E-02	3.620E-02	2.214E-02	NOT IDENT.
CO-57	4.021E-03	2.668E-02	2.321E-02	1.361E-02	NOT IDENT.
CO-58	-1.960E-02	4.007E-02	3.258E-02	2.044E-02	NOT IDENT.
FE-59	-3.676E-02	1.052E-01	8.413E-02	5.369E-02	NOT IDENT.
CO-60	-8.377E-03	4.594E-02	3.833E-02	2.344E-02	NOT IDENT.
ZN-65	-9.056E-02	1.245E-01	8.006E-02	6.353E-02	NOT IDENT.
GE-68	-3.197E-01	1.520E+00	1.236E+00	7.753E-01	NOT IDENT.
AS-73	1.798E-01	1.624E+00	1.440E+00	8.287E-01	NOT IDENT.
AS-74	2.458E-02	1.023E-01	8.623E-02	5.221E-02	NOT IDENT.
SE-75	1.937E-02	4.833E-02	3.867E-02	2.466E-02	NOT IDENT.
BR-77	2.672E+00	1.026E+01	8.762E+00	5.236E+00	FAIL ABUN
SR-82	-5.643E-01	4.108E-01	3.089E-01	2.096E-01	NOT IDENT.
RB-83	3.287E-02	7.156E-02	6.203E-02	3.651E-02	NOT IDENT.
RB-84	-8.841E-03	7.237E-02	6.080E-02	3.692E-02	NOT IDENT.
KR-85	1.200E+01	8.672E+00	7.143E+00	4.424E+00	NOT IDENT.
SR-85	6.137E-02	4.435E-02	3.653E-02	2.263E-02	NOT IDENT.
RB-86	-1.354E-01	9.526E-01	7.799E-01	4.860E-01	NOT IDENT.
Y-88	-1.149E-02	3.992E-02	3.110E-02	2.037E-02	NOT IDENT.
ZR-88	-1.337E-02	3.203E-02	2.670E-02	1.634E-02	NOT IDENT.
Y-91	-1.029E+01	2.447E+01	1.936E+01	1.248E+01	NOT IDENT.
NB-94	1.274E-02	3.565E-02	3.153E-02	1.819E-02	NOT IDENT.
NB-95	3.759E-02	4.775E-02	3.864E-02	2.436E-02	NOT IDENT.
NB-95M	9.304E-02	1.391E-01	1.068E-01	7.096E-02	NOT IDENT.
ZR-95	-1.375E-03	7.826E-02	6.698E-02	3.993E-02	NOT IDENT.
NB-97	4.746E+04	9.160E+04	0.000E+00	4.673E+04	SHORT HLIF
ZR-97	8.261E+05	1.551E+06	0.000E+00	7.912E+05	SHORT HLIF
MO-99	1.120E+01	1.143E+01	1.048E+01	5.833E+00	NOT IDENT.
TC-99M	-1.269E+16	1.998E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.052E-02	3.532E-02	3.056E-02	1.802E-02	NOT IDENT.
RH-102	-7.307E-03	3.215E-02	2.669E-02	1.641E-02	NOT IDENT.
RU-103	3.376E-03	4.141E-02	3.501E-02	2.113E-02	FAIL ABUN
RH-106	-2.083E-01	3.551E-01	2.773E-01	1.812E-01	FAIL ABUN
RU-106	-2.083E-01	3.545E-01	2.773E-01	1.809E-01	FAIL ABUN
AG-108M	-2.635E-02	3.385E-02	2.651E-02	1.727E-02	NOT IDENT.
AG-110M	1.896E-02	4.169E-02	3.299E-02	2.127E-02	NOT IDENT.
IN-111	-2.633E-01	1.110E+00	7.972E-01	5.665E-01	NOT IDENT.
IN-113M	-2.872E-02	4.491E-02	3.682E-02	2.291E-02	NOT IDENT.
SN-113	-2.872E-02	4.491E-02	3.682E-02	2.291E-02	NOT IDENT.
IN-114M	-8.317E-02	2.028E-01	1.475E-01	1.035E-01	NOT IDENT.
CD-115	-5.192E-01	1.013E+01	8.430E+00	5.167E+00	NOT IDENT.
SN-117M	1.666E-02	5.171E-02	4.465E-02	2.638E-02	NOT IDENT.
SB-122	-2.294E-02	2.171E+00	1.803E+00	1.108E+00	NOT IDENT.
I-123	1.905E+05	4.024E+06	0.000E+00	2.053E+06	SHORT HLIF
TE-123M	1.286E-03	2.716E-02	2.315E-02	1.386E-02	NOT IDENT.
I-124	-4.730E-01	7.279E-01	5.173E-01	3.714E-01	FAIL ABUN
SB-124	-5.040E-02	8.300E-02	6.086E-02	4.235E-02	FAIL ABUN
SB-125	8.647E-03	9.705E-02	8.305E-02	4.951E-02	FAIL ABUN
TE-125M	4.212E+00	9.644E+00	8.534E+00	4.921E+00	NOT IDENT.
I-126	1.434E-01	2.069E-01	1.675E-01	1.056E-01	NOT IDENT.
SB-126	-4.501E-03	1.512E-01	1.226E-01	7.714E-02	FAIL ABUN
SB-127	1.591E-01	1.282E+00	1.119E+00	6.542E-01	NOT IDENT.
XE-127	8.968E-04	4.887E-02	4.091E-02	2.493E-02	NOT IDENT.
I-131	-4.762E-03	1.224E-01	1.052E-01	6.242E-02	NOT IDENT.
TE-132	-2.907E-01	6.662E-01	5.379E-01	3.399E-01	NOT IDENT.
BA-133	-4.815E-03	4.599E-02	3.457E-02	2.346E-02	NOT IDENT.
I-133	-3.353E+03	5.155E+03	0.000E+00	2.630E+03	SHORT HLIF
CS-134	7.887E-02	8.125E-02	5.562E-02	4.145E-02	FAIL ABUN
CS-135	1.368E-01	1.833E-01	1.491E-01	9.354E-02	NOT IDENT.
I-135	-4.132E+14	3.411E+15	0.000E+00	1.740E+15	SHORT HLIF
CS-136	1.734E-02	1.178E-01	9.939E-02	6.009E-02	FAIL ABUN
CE-139	-9.367E-03	3.136E-02	2.624E-02	1.600E-02	NOT IDENT.
BA-140	-1.927E-01	2.623E-01	1.989E-01	1.339E-01	NOT IDENT.
LA-140	5.361E-02	7.799E-02	6.654E-02	3.979E-02	FAIL ABUN
CE-141	-6.129E-02	6.288E-02	5.135E-02	3.208E-02	NOT IDENT.
CE-143	4.328E+02	1.693E+02	0.000E+00	8.639E+01	SHORT HLIF
CE-144	-9.110E-02	2.181E-01	1.747E-01	1.113E-01	NOT IDENT.
PM-144	-3.326E-02	3.871E-02	3.134E-02	1.975E-02	NOT IDENT.
PR-144	-2.253E+00	2.623E+00	2.123E+00	1.338E+00	NOT IDENT.
PM-146	2.194E-02	4.172E-02	3.669E-02	2.128E-02	NOT IDENT.
ND-147	-2.837E-01	5.800E-01	4.643E-01	2.959E-01	FAIL ABUN

PM-149	-9.809E+00	8.555E+01	7.458E+01	4.365E+01	NOT IDENT.
EU-152	-1.899E-02	1.088E-01	8.620E-02	5.548E-02	FAIL ABUN
GD-153	-5.373E-02	9.383E-02	7.133E-02	4.787E-02	NOT IDENT.
EU-154	-1.333E-02	1.374E-01	1.163E-01	7.012E-02	NOT IDENT.
EU-155	3.976E-02	1.142E-01	1.009E-01	5.827E-02	FAIL ABUN
TB-160	1.233E-01	1.425E-01	1.299E-01	7.270E-02	FAIL ABUN
HO-166M	-1.379E-02	6.257E-02	5.296E-02	3.192E-02	NOT IDENT.
TM-171	-1.061E+00	3.431E+01	3.063E+01	1.751E+01	NOT IDENT.
LU-176	-5.900E-03	2.620E-02	2.090E-02	1.337E-02	FAIL ABUN
LU-177	2.930E+00	1.491E+00	1.070E+00	7.608E-01	FAIL ABUN
LU-177M	-1.615E-01	1.846E-01	1.482E-01	9.417E-02	FAIL ABUN
HF-181	1.202E-02	4.502E-02	3.866E-02	2.297E-02	NOT IDENT.
W-181	-5.619E-01	4.789E-01	4.052E-01	2.443E-01	NOT IDENT.
TA-182	-1.216E-01	2.342E-01	1.929E-01	1.195E-01	FAIL ABUN
RE-183	5.518E-02	1.109E-01	9.629E-02	5.661E-02	FAIL ABUN
RE-184	-2.441E-02	2.309E-01	2.032E-01	1.178E-01	NOT IDENT.
OS-185	-2.572E-02	4.352E-02	3.606E-02	2.221E-02	NOT IDENT.
RE-188	1.696E-01	1.762E-01	1.542E-01	8.988E-02	NOT IDENT.
W-188	-3.090E+00	7.854E+00	5.882E+00	4.007E+00	NOT IDENT.
IR-192	1.953E-03	3.638E-02	3.177E-02	1.856E-02	FAIL ABUN
AU-195	1.829E-01	2.647E-01	2.148E-01	1.351E-01	FAIL ABUN
TL-200	-9.706E+01	4.002E+02	0.000E+00	2.042E+02	SHORT HLIF
TL-201	-2.266E-01	6.825E+00	5.775E+00	3.482E+00	NOT IDENT.
TL-202	3.684E-02	7.004E-02	6.159E-02	3.573E-02	NOT IDENT.
HG-203	2.539E-02	4.105E-02	3.709E-02	2.094E-02	NOT IDENT.
BI-207	1.675E-02	5.774E-02	4.933E-02	2.946E-02	FAIL ABUN
TL-207	1.405E-01	7.701E-01	5.973E-01	3.929E-01	FAIL ABUN
PO-209	4.547E-01	8.227E+00	6.979E+00	4.197E+00	NOT IDENT.
BI-210	4.596E-01	9.197E+00	8.379E+00	4.692E+00	NOT IDENT.
PB-210	4.596E-01	9.197E+00	8.379E+00	4.692E+00	NOT IDENT.
PO-210	4.596E-01	9.197E+00	8.379E+00	4.692E+00	NOT IDENT.
PB-211	-9.419E-01	1.143E+00	7.920E-01	5.830E-01	NOT IDENT.
BI-212	1.331E+00	4.876E-01	3.804E-01	2.488E-01	FAIL ABUN
PO-215	1.405E-01	7.701E-01	5.973E-01	3.929E-01	FAIL ABUN
RN-219	2.125E-01	4.263E-01	3.752E-01	2.175E-01	FAIL ABUN
RN-220	-3.329E+01	2.981E+01	2.261E+01	1.521E+01	NOT IDENT.
RA-223	1.405E-01	7.701E-01	5.973E-01	3.929E-01	FAIL ABUN
AC-227	6.903E-02	4.007E-01	3.567E-01	2.044E-01	FAIL ABUN
TH-227	6.903E-02	4.008E-01	3.567E-01	2.045E-01	FAIL ABUN
TH-229	4.912E-02	5.064E-01	4.270E-01	2.584E-01	FAIL ABUN
PA-231	2.916E-01	1.529E+00	1.355E+00	7.803E-01	FAIL ABUN
TH-231	1.405E-01	7.701E-01	5.973E-01	3.929E-01	FAIL ABUN
U-231	-5.810E-01	1.186E+00	9.068E-01	6.050E-01	FAIL ABUN
PA-233	-5.818E-03	6.729E-02	5.838E-02	3.433E-02	FAIL ABUN
PA-234	2.143E-01	3.305E-01	2.922E-01	1.686E-01	FAIL ABUN
PA-234M	1.775E+00	5.154E+00	4.440E+00	2.630E+00	NOT IDENT.
TH-234	7.669E-01	1.817E+00	1.624E+00	9.272E-01	FAIL ABUN
U-235	1.656E-01	2.133E-01	1.871E-01	1.088E-01	FAIL ABUN
NP-236	-6.304E-02	7.903E-02	6.455E-02	4.032E-02	NOT IDENT.
U-238	7.669E-01	1.817E+00	1.624E+00	9.272E-01	FAIL ABUN
NP-239	-6.866E-02	1.897E-01	1.618E-01	9.680E-02	FAIL ABUN
AM-241	6.486E-02	2.331E-01	2.117E-01	1.189E-01	NOT IDENT.
CM-243	-9.252E-03	1.005E-01	8.741E-02	5.128E-02	FAIL ABUN
AM-246	5.563E-02	1.606E-01	1.377E-01	8.196E-02	NOT IDENT.
CM-247	3.713E-03	3.815E-02	3.281E-02	1.946E-02	NOT IDENT.
CF-249	-1.365E-02	4.093E-02	3.434E-02	2.088E-02	NOT IDENT.
CF-251	-4.488E-02	1.298E-01	1.078E-01	6.624E-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	207.3932
46.50	207.3932
46.50	207.3932
48.70	220.7711
49.72	211.0846
51.35	222.4515
52.39	209.2092
52.97	199.1113
53.15	206.1696
53.44	222.0044
54.07	243.3176
56.28	252.6592
56.28	252.6614
57.37	0.0000
57.53	233.2491
57.53	233.2505
57.60	232.4119
57.98	229.1170
57.98	229.1170
59.32	241.4063
59.32	241.4063
59.40	241.4556
59.54	246.8503
59.72	249.6194
60.01	273.7211
61.10	283.3590
61.14	283.3874
61.30	283.5017
63.00	269.5290
63.29	265.2558
63.29	265.2558
63.58	240.4196
64.28	243.5159
65.12	314.8825
65.20	314.9432
65.20	314.9432
66.05	305.6953
66.72	269.2594
66.83	269.3308
66.91	286.5005
67.20	293.0072
67.20	293.0072
67.75	299.7065
67.85	299.7774
68.90	304.1326
68.90	304.1326
69.30	309.8505
69.67	330.7930
70.82	308.2068
70.82	308.2068
70.83	308.2137
72.80	358.9048
72.87	358.9607
72.87	358.9607
74.67	353.0596
74.81	353.1693
74.81	353.1693
74.81	353.1693
74.81	353.1693
74.81	353.1693
74.81	353.1693
74.97	353.2926
75.28	353.5335
75.70	353.8586
77.11	354.9414
77.11	354.9414

77.11	354.9414
77.11	354.9414
77.11	354.9414
77.11	354.9414
77.11	354.9414
78.38	355.9088
79.62	356.8468
79.80	356.9819
79.80	356.9819
80.11	357.2149
80.18	357.2668
80.30	357.3559
80.30	357.3559
80.57	357.5596
81.00	376.4720
81.07	376.5255
81.07	376.5255
81.07	376.5255
81.07	376.5255
82.60	367.9295
83.37	327.8735
83.78	311.3220
83.78	311.3220
83.78	311.3220
83.78	311.3220
84.21	305.9804
84.90	339.2056
85.43	360.2031
86.29	424.2527
86.50	424.4295
86.54	424.4639
86.59	424.5052
86.72	426.0262
86.79	426.0838
86.94	413.5111
87.30	394.0360
87.30	394.0360
87.30	394.0360
87.30	394.0360
87.30	394.0360
87.30	394.0360
87.30	394.0360
87.57	392.8336
87.88	347.8275
88.03	347.9307
88.36	348.1578
88.47	348.2329
89.95	363.4375
91.11	304.4935
92.29	305.1841
92.38	305.2364
92.38	305.2364
93.35	305.7997
94.00	306.1768
94.67	306.5589
94.67	306.5621
94.90	306.6944
94.90	306.6944
94.90	306.6944
94.90	306.6944
95.87	304.3796
95.87	304.3796
96.73	300.5523
97.43	311.0191
98.44	255.3355
98.44	255.3355
98.88	272.8656
99.55	269.4404
99.55	269.4404
99.86	282.5114
100.00	282.5830
100.10	282.6366
103.18	312.3240
103.76	279.6328
105.00	285.1075
105.31	284.2889
108.00	280.7245
109.28	276.4377

111.00	279.2115
111.00	279.2115
111.76	272.6761
112.95	248.5611
115.19	241.5626
116.30	270.7644
117.00	263.1292
117.00	263.1292
117.66	270.3689
121.11	269.8682
121.62	275.0881
121.78	277.1578
122.06	277.2804
122.32	269.3831
122.32	269.3831
122.32	269.3831
122.32	269.3831
123.07	251.6536
127.23	293.6457
129.76	275.0269
131.20	275.6234
133.02	267.2104
133.54	278.7267
135.34	258.4253
136.00	274.0114
136.25	273.0894
136.48	268.0647
140.51	297.4168
140.51	0.0000
142.18	258.9254
142.65	257.0320
143.76	257.4348
144.24	243.1255
144.24	243.1255
144.24	243.1255
144.24	243.1255
145.22	264.1801
145.44	292.2411
147.16	271.1263
152.43	296.1044
152.70	278.4200
153.22	261.8561
154.21	226.5425
154.21	226.5425
154.21	226.5425
154.21	226.5425
155.03	232.0428
156.02	258.6323
158.56	218.3603
159.00	0.0000
159.00	224.8196
160.31	259.0389
161.27	263.5974
162.32	241.6934
162.64	232.2486
163.35	232.4625
163.89	249.6182
165.85	275.8014
167.43	256.0815
171.28	256.2472
171.86	240.3379
172.10	240.4085
176.55	249.2795
176.60	249.2960
181.06	229.4821
184.41	245.1027
185.71	231.2949
186.00	231.3725
190.27	233.6209
192.34	211.0898
193.63	218.0067
197.04	213.3221
198.01	204.7037
198.60	230.3036
200.40	264.0506
201.83	233.3554
202.84	239.1783
205.31	235.9216

208.36	241.7410
208.81	236.8187
209.75	225.2908
209.75	225.2908
210.97	225.5852
215.65	249.2657
216.55	213.3748
218.09	191.1049
222.10	200.9850
223.80	186.5487
226.40	218.9805
227.00	228.2430
227.08	225.9787
227.20	226.0069
228.16	201.0902
228.18	201.0938
228.18	201.0938
231.56	0.0000
235.69	198.5793
236.00	228.0029
236.00	228.0029
238.63	192.8033
238.63	192.8033
238.63	192.8033
238.63	192.8033
239.00	192.8729
240.98	193.2449
241.98	193.4335
241.98	193.4335
241.98	193.4335
244.69	151.5517
245.39	169.0840
247.94	153.7704
248.90	156.2420
249.79	183.7981
252.40	172.8439
252.85	179.0619
252.85	179.0619
254.15	0.0000
256.20	193.7093
256.20	193.7093
260.50	169.7285
260.90	169.7900
262.80	176.2870
264.65	154.7529
268.24	179.4700
268.79	178.1342
269.46	178.2410
269.46	178.2410
269.46	178.2410
269.46	178.2410
271.23	179.9499
273.65	184.6312
276.40	177.2900
277.35	171.4121
277.60	167.8594
277.60	167.8594
278.00	167.9165
278.60	160.8176
279.20	162.7000
279.53	174.4360
280.46	191.6759
281.68	181.0675
283.67	154.3060
284.30	158.0036
285.00	153.5800
285.90	161.8364
286.10	151.9167
286.10	151.9167
287.40	149.3701
288.45	0.0000
290.67	149.6040
290.80	149.6191
291.72	165.7258
293.26	0.0000
293.70	136.8806
295.21	144.3428
295.21	144.3428

295.21	144.3428
295.96	145.8936
296.50	145.9570
297.23	146.0474
298.57	146.2085
299.80	125.8674
299.80	125.8674
300.09	125.8989
300.09	125.8989
300.09	125.8989
300.09	125.8989
300.12	125.9010
301.29	126.0228
302.84	123.2478
303.76	138.0258
303.91	133.6363
304.40	133.6896
304.40	133.6896
304.84	133.7385
306.84	141.0711
308.46	141.8701
311.98	154.2818
316.51	151.1337
318.01	161.5240
319.02	160.7224
319.41	155.1967
320.08	145.0503
323.87	144.7351
323.87	144.7351
323.87	144.7351
323.87	144.7351
325.23	150.8638
328.77	152.7759
333.44	154.0753
334.20	144.3891
334.20	144.3891
334.30	144.3984
338.28	134.8393
338.28	134.8393
338.28	134.8393
338.28	134.8393
338.32	134.8437
338.32	134.8437
338.32	134.8437
340.50	134.4995
340.57	134.5060
344.27	140.1818
345.85	119.8636
350.59	0.0000
351.07	136.1289
351.92	136.2140
351.92	136.2140
351.92	136.2140
355.39	0.0000
356.01	108.5315
364.48	133.6106
366.43	132.8326
367.43	120.4052
367.94	0.0000
369.80	106.1345
374.96	113.2973
383.85	105.2281
387.95	121.1562
388.63	116.3235
391.69	120.4832
391.69	120.4832
392.90	124.5021
398.62	111.2033
400.65	125.1493
401.10	107.4432
401.81	107.4948
402.60	113.4698
404.84	136.3660
410.95	114.0928
411.60	128.0375
413.65	128.2067
414.70	119.3445
415.30	108.4462

415.76	110.4682
417.63	0.0000
418.52	108.6707
423.70	117.0339
427.08	109.2645
427.89	106.3122
432.53	103.6051
433.93	104.7014
439.47	90.9187
439.56	90.9242
439.89	89.9330
443.98	105.3536
444.90	87.1692
445.03	87.1758
445.03	87.1758
445.03	87.1758
445.03	87.1758
453.90	76.4362
463.38	98.3936
468.07	87.1563
473.00	97.9224
475.06	107.3278
475.35	101.1522
476.78	112.5992
477.59	109.5519
477.96	111.6436
482.03	91.1824
484.57	103.7674
487.03	89.3659
490.36	0.0000
492.35	76.0866
497.08	83.6047
507.63	0.0000
510.53	0.0000
510.84	101.0955
511.00	101.1050
511.85	101.1519
511.85	101.1519
513.99	89.4556
513.99	89.4556
520.41	77.2773
520.65	82.5822
527.90	77.5892
528.96	0.0000
529.64	89.3654
529.87	0.0000
531.02	88.3648
537.32	83.3201
543.00	93.2128
546.56	0.0000
549.76	109.6699
552.65	90.4523
555.20	83.0227
563.23	87.6964
563.90	94.2243
568.70	83.5960
569.32	83.6242
569.50	77.1146
569.67	73.8624
573.80	81.6353
574.00	85.9988
574.64	83.3808
578.91	59.3639
579.30	0.0000
583.14	78.7346
585.48	91.0889
591.81	84.5642
592.07	98.8522
593.00	98.8989
595.88	86.9318
600.56	90.4382
602.52	0.0000
602.71	91.2694
602.71	91.2694
603.60	90.1315
604.41	79.5586
604.70	76.0332
609.31	83.0681

609.31	83.0681
609.31	83.0681
609.31	83.0681
610.33	85.1039
612.46	74.5418
614.37	103.0321
618.01	73.4041
621.84	88.0191
621.84	88.0191
631.29	72.7422
633.02	59.3614
633.10	59.3630
634.78	65.0146
635.90	61.6837
636.97	66.2021
645.85	69.4015
646.12	79.3268
656.30	89.4295
657.75	72.4961
657.90	0.0000
661.65	104.3956
661.65	104.3956
664.57	0.0000
666.33	66.7108
666.33	66.7108
675.00	71.2302
677.61	66.7408
685.20	63.2927
692.80	60.7406
695.00	85.6708
696.49	101.3969
696.49	101.3969
697.00	94.0437
697.49	98.6746
698.33	95.9410
698.50	89.4905
699.00	83.0500
702.63	75.7859
706.10	83.3027
706.58	0.0000
706.67	74.9903
709.31	66.7336
711.68	73.2949
713.82	77.0749
717.42	63.2420
720.50	67.5139
721.93	0.0000
722.20	62.1256
722.78	65.2490
722.78	65.2490
722.89	65.2507
722.95	65.2524
723.30	68.3704
724.18	68.3955
727.18	68.1702
733.00	62.4056
735.90	74.0394
739.58	54.4401
742.81	68.6104
744.21	74.2920
747.13	61.1993
751.79	75.4648
752.31	69.8194
753.82	59.4762
755.35	68.9597
756.15	74.6527
756.87	72.7834
763.93	61.6151
765.79	58.4990
766.42	74.3268
766.84	82.2487
776.49	85.7395
778.00	77.2110
778.57	70.5547
778.89	64.8424
783.80	86.9410
785.46	78.3925
792.07	86.2625

795.84	68.7919
796.30	68.8042
798.80	92.8953
801.93	86.5920
805.60	43.3570
810.29	64.6691
810.76	61.7844
815.85	55.1339
817.79	45.4945
818.51	37.7613
819.60	43.5883
826.30	52.4377
828.27	0.0000
831.60	63.2449
831.96	65.1990
834.83	67.2177
836.80	0.0000
846.75	65.5573
848.13	64.6126
856.28	0.0000
856.80	50.7408
860.37	51.1342
867.32	50.9351
867.82	50.9439
871.10	40.8976
873.19	58.2870
874.81	64.2510
875.33	0.0000
876.40	57.3642
879.36	41.5837
880.27	40.6066
880.51	40.6106
881.50	50.5331
883.24	53.5386
884.67	57.5341
889.25	64.5826
896.60	57.7763
898.02	71.7592
899.00	59.8198
903.28	59.9092
911.07	61.0730
911.07	61.0730
911.07	61.0730
919.63	55.2283
920.93	57.2616
925.00	55.3303
925.24	51.3100
926.50	48.3129
935.52	50.4810
937.48	75.7709
944.10	58.7278
946.00	47.6196
949.00	52.7389
962.29	59.4242
964.01	45.8679
966.15	41.8198
968.20	41.8488
969.11	41.8608
969.11	41.8608
969.11	41.8608
977.42	42.9987
980.50	57.3904
983.50	61.5498
989.30	40.0826
996.32	63.8648
1001.03	54.6770
1001.68	53.6567
1004.76	66.1047
1021.30	0.0000
1024.50	0.0000
1034.80	54.2217
1036.00	51.1126
1037.82	48.0103
1038.57	57.4170
1038.76	0.0000
1045.16	52.3047
1046.59	50.2336
1048.07	50.2570

1050.47	60.7726
1050.47	60.7726
1062.04	62.0393
1063.62	48.3943
1076.63	63.3721
1077.35	64.4432
1078.86	49.6759
1085.78	56.1339
1099.22	60.6126
1112.02	64.0430
1112.84	72.3647
1115.52	74.7954
1120.29	59.9184
1120.29	59.9184
1120.29	59.9184
1120.29	59.9184
1120.51	65.2742
1121.28	62.4349
1124.00	0.0000
1129.67	61.1553
1131.51	0.0000
1147.95	0.0000
1167.94	58.5747
1173.22	60.8344
1175.09	63.0410
1177.93	57.6530
1189.05	66.5609
1204.90	85.4839
1205.75	0.0000
1213.00	72.4937
1221.42	82.5696
1230.97	80.0261
1235.34	93.9316
1236.41	0.0000
1238.25	68.2007
1246.25	75.7372
1260.41	0.0000
1271.85	56.7234
1274.45	50.2493
1274.54	48.3882
1291.56	34.5836
1298.22	0.0000
1312.09	50.7415
1325.50	45.2578
1325.50	45.2578
1332.49	41.5606
1333.61	44.4067
1360.21	21.8760
1362.66	0.0000
1365.15	26.6647
1368.21	26.6852
1368.53	0.0000
1376.25	21.2810
1384.27	18.6581
1394.10	20.1412
1395.20	23.0254
1407.95	20.2096
1434.06	22.2728
1436.60	24.2238
1457.56	0.0000
1460.81	19.4906
1489.15	13.7334
1509.49	11.8262
1596.49	8.6126
1620.62	9.0905
1678.03	0.0000
1691.02	18.4526
1691.02	18.4526
1706.46	0.0000
1750.46	0.0000
1764.49	14.5680
1764.49	14.5680
1764.49	14.5680
1764.49	14.5680
1770.23	10.7151
1771.40	14.2902
1791.20	0.0000
1808.65	4.1986

1836.01

16.8841

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875004

Total Uranium Activity	2.3581E+00	ug/g
Total Uranium Counting Unc.	5.4077E+00	ug/g
Total Uranium Tpu	2.7590E-06	ug/g
Total Uranium Mda	4.8327E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 952643          SAMPLE ID   : G246875004
*  ANALYST       : MXR1            DETECTOR    : GAM04
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00 COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE: 24-FEB-2010 08:51:48.98 SAMPLE ALQT: 122.440 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.105E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.602E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.744E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.806E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 10:53:18.59

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875005.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:52:20
Sample ID          : G246875005          Sample quantity  : 1.44490E+02 GRAM
Detector name      : GAM07              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.47  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID          : 952643              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	46.25*	150	509	0.98	92.15	87	10	2.08E-02	30.1	
2	0	63.10*	355	688	1.13	125.86	121	9	4.93E-02	14.6	
3	2	74.88*	496	607	1.22	149.40	142	16	6.89E-02	9.6	1.17E+00
4	2	77.14*	843	490	1.01	153.93	142	16	1.17E-01	5.6	
5	2	87.22	244	697	1.12	174.08	169	23	3.39E-02	17.7	7.44E+00
6	2	89.87	165	422	0.84	179.39	169	23	2.29E-02	19.6	
7	2	92.72*	647	430	1.16	185.08	169	23	8.98E-02	7.4	
8	0	154.39	88	450	2.23	308.41	302	11	1.22E-02	48.3	
9	0	186.18*	333	423	1.26	371.97	367	12	4.62E-02	13.9	
10	0	209.55*	208	318	0.93	418.69	414	11	2.89E-02	18.2	
11	6	238.75*	1386	218	1.07	477.09	472	19	1.93E-01	3.2	1.58E+00
12	6	241.61*	364	368	2.21	482.81	472	19	5.05E-02	16.4	
13	0	270.33	96	217	1.09	540.24	536	9	1.33E-02	29.7	
14	0	295.30*	412	224	1.22	590.17	585	11	5.73E-02	8.7	
15	0	300.04	88	186	0.91	599.66	596	9	1.22E-02	29.9	
16	0	338.67*	239	220	1.06	676.89	671	10	3.32E-02	13.4	
17	0	352.12*	713	179	1.24	703.79	699	12	9.90E-02	5.4	
18	0	409.79	58	181	1.75	819.12	815	12	7.99E-03	48.5	
19	0	463.94	106	177	1.42	927.41	919	16	1.47E-02	30.2	
20	0	511.01*	149	172	1.84	1021.53	1014	17	2.07E-02	24.0	
21	0	583.32*	462	109	1.53	1166.12	1159	13	6.41E-02	6.7	
22	0	609.44*	499	146	1.41	1218.35	1210	15	6.93E-02	7.0	
23	0	661.63	86	123	0.89	1322.73	1319	11	1.20E-02	26.7	
24	0	727.89*	102	128	1.94	1455.23	1449	16	1.41E-02	27.1	
25	0	768.56	102	108	2.71	1536.56	1529	18	1.42E-02	25.9	
26	0	795.40	54	61	1.37	1590.23	1585	11	7.43E-03	31.3	
27	0	861.38	31	70	1.38	1722.17	1717	9	4.32E-03	52.2	
28	0	911.49*	299	48	1.58	1822.37	1816	12	4.15E-02	7.6	
29	2	964.88	51	38	2.12	1929.14	1925	29	7.02E-03	25.2	1.57E+00
30	2	969.18*	181	45	2.12	1937.74	1925	29	2.52E-02	11.2	
31	0	1120.73*	132	80	2.59	2240.82	2233	18	1.84E-02	18.2	
32	0	1377.85	56	30	2.62	2755.02	2746	15	7.78E-03	25.2	
33	0	1461.17*	1433	22	2.16	2921.64	2912	17	1.99E-01	2.8	
34	0	1730.23	22	9	1.53	3459.73	3452	12	3.12E-03	33.9	
35	0	1764.79*	96	9	2.33	3528.84	3518	17	1.34E-02	12.8	
36	0	1847.40	31	0	3.82	3694.06	3688	14	4.31E-03	18.0	

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

```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875005.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 24-FEB-2010 08:52:20
Sample ID        : G246875005             Sample quantity  : 144.49 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA7                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00           Elapsed real time: 0 02:00:01.47   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	*	3.091E+01	3.155E+00	4.865E-01	4.177E-02	63.529
CD-109	+	88.03	*	2.551E+00	9.332E-01	1.063E+00	1.001E-01	2.401
SN-126	+	64.28		2.013E+00	6.560E-01	6.067E-01	8.800E-02	3.318
	+	86.94		1.043E+00	5.687E-01	4.366E-01	1.812E-01	2.388
	+	87.57	*	2.508E-01	9.176E-02	1.047E-01	9.811E-03	2.396
BA-137M	+	661.65	*	1.119E-01	6.067E-02	5.610E-02	4.965E-03	1.995
CS-137	+	661.65	*	1.183E-01	6.414E-02	5.931E-02	5.258E-03	1.995
RE-188	+	155.03	*	2.722E-01	2.641E-01	2.425E-01	1.957E-02	1.123
		477.96		8.657E-01	2.898E+00	4.749E+00	4.171E-01	0.182
		633.10		-1.284E-01	2.447E+00	4.055E+00	3.616E-01	-0.032
TL-208		277.35		1.986E-01	3.663E-01	6.197E-01	7.589E-02	0.320
	+	510.84		6.492E-01	3.221E-01	1.800E-01	2.192E-02	3.607
	+	583.14	*	5.751E-01	9.509E-02	5.809E-02	5.557E-03	9.900
	+	860.37		3.638E-01	3.813E-01	4.076E-01	3.986E-02	0.892
BI-210	+	46.50	*	4.739E+00	2.890E+00	2.571E+00	2.412E-01	1.843
PB-210	+	46.50	*	4.739E+00	2.890E+00	2.571E+00	2.412E-01	1.843
PO-210	+	46.50	*	4.739E+00	2.884E+00	2.571E+00	2.187E-01	1.843
BI-211		72.87		5.103E+00	2.407E+00	4.139E+00	3.267E-01	1.233
	+	351.07	*	3.890E+00	5.463E-01	3.120E-01	2.799E-02	12.468
PB-212	+	74.81		1.982E+00	4.518E-01	4.178E-01	5.154E-02	4.744
	+	77.11		1.944E+00	2.702E-01	2.416E-01	1.994E-02	8.048
	+	87.30		1.160E+00	4.399E-01	4.849E-01	6.634E-02	2.393
	+	238.63	*	1.645E+00	1.899E-01	8.564E-02	8.191E-03	19.211
	+	300.09		1.613E+00	9.779E-01	1.032E+00	1.071E-01	1.562
PO-212	+	74.81		1.982E+00	4.518E-01	4.178E-01	5.154E-02	4.744
	+	77.11		1.944E+00	2.702E-01	2.416E-01	1.994E-02	8.048
	+	87.30		1.160E+00	4.399E-01	4.849E-01	6.634E-02	2.393
		115.19		2.032E+00	3.295E+00	5.433E+00	4.680E-01	0.374
	+	238.63	*	1.645E+00	1.899E-01	8.564E-02	8.191E-03	19.211
	+	300.09		1.613E+00	9.779E-01	1.032E+00	1.071E-01	1.562
BI-214	+	609.31	*	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
	+	1120.29		1.611E+00	6.124E-01	4.320E-01	4.638E-02	3.730
	+	1764.49		1.613E+00	4.325E-01	2.436E-01	2.003E-02	6.622
PB-214	+	74.81		3.415E+00	7.537E-01	7.199E-01	7.875E-02	4.744

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	77.11		3.333E+00	5.282E-01	4.141E-01	4.652E-02	8.048
	+	87.30		1.987E+00	7.429E-01	8.307E-01	1.006E-01	2.393
	+	241.98		2.592E+00	8.912E-01	5.158E-01	5.236E-02	5.024
	+	295.21		1.328E+00	2.706E-01	2.019E-01	2.137E-02	6.579
	+	351.92	*	1.353E+00	2.027E-01	1.051E-01	1.091E-02	12.872
	+	74.81		3.415E+00	7.537E-01	7.199E-01	7.875E-02	4.744
	+	77.11		3.333E+00	5.282E-01	4.141E-01	4.652E-02	8.048
	+	87.30		1.987E+00	7.429E-01	8.307E-01	1.006E-01	2.393
	+	241.98		2.592E+00	8.912E-01	5.158E-01	5.236E-02	5.024
	+	295.21		1.328E+00	2.706E-01	2.019E-01	2.137E-02	6.579
PO-216	+	351.92	*	1.353E+00	2.027E-01	1.051E-01	1.091E-02	12.872
	+	74.81		1.982E+00	4.518E-01	4.178E-01	5.154E-02	4.744
	+	77.11		1.944E+00	2.702E-01	2.416E-01	1.994E-02	8.048
	+	87.30		1.160E+00	4.399E-01	4.849E-01	6.634E-02	2.393
	+	238.63	*	1.645E+00	1.899E-01	8.564E-02	8.191E-03	19.211
PO-218	+	300.09		1.613E+00	9.779E-01	1.032E+00	1.071E-01	1.562
	+	74.81		3.415E+00	7.537E-01	7.199E-01	7.875E-02	4.744
	+	77.11		3.333E+00	5.282E-01	4.141E-01	4.652E-02	8.048
	+	87.30		1.987E+00	7.429E-01	8.307E-01	1.006E-01	2.393
	+	241.98		2.592E+00	8.912E-01	5.158E-01	5.236E-02	5.024
RA-224	+	295.21		1.328E+00	2.706E-01	2.019E-01	2.137E-02	6.579
	+	351.92	*	1.353E+00	2.027E-01	1.051E-01	1.091E-02	12.872
	+	240.98	*	4.915E+00	1.667E+00	9.748E-01	8.243E-02	5.042
RA-226	+	609.31	*	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
	+	1120.29		1.611E+00	6.124E-01	4.320E-01	4.638E-02	3.730
AC-228	+	1764.49		1.613E+00	4.325E-01	2.436E-01	2.003E-02	6.622
	+	338.32		1.437E+00	7.072E-01	3.408E-01	1.406E-01	4.217
	+	911.07	*	1.654E+00	3.156E-01	1.998E-01	2.327E-02	8.278
	+	969.11		1.765E+00	5.721E-01	3.458E-01	8.124E-02	5.104
RA-228	+	338.32		1.437E+00	7.072E-01	3.408E-01	1.406E-01	4.217
	+	911.07	*	1.654E+00	3.156E-01	1.998E-01	2.327E-02	8.278
	+	969.11		1.765E+00	5.721E-01	3.458E-01	8.124E-02	5.104
TH-228	+	74.81		2.012E+00	4.188E-01	4.240E-01	3.447E-02	4.744
	+	77.11		1.973E+00	2.742E-01	2.452E-01	2.024E-02	8.048
	+	87.30		1.177E+00	4.307E-01	4.921E-01	4.595E-02	2.393
	+	238.63	*	1.670E+00	1.927E-01	8.691E-02	8.313E-03	19.211
TH-230	+	300.09		1.637E+00	1.378E+00	1.048E+00	6.211E-01	1.562
	+	609.31	*	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
	+	1120.29		1.611E+00	6.124E-01	4.320E-01	4.638E-02	3.730
TH-232	+	1764.49		1.613E+00	4.325E-01	2.436E-01	2.003E-02	6.622
	+	338.32		1.437E+00	4.049E-01	3.408E-01	2.917E-02	4.217
	+	911.07	*	1.654E+00	3.156E-01	1.998E-01	2.327E-02	8.278
TH-234	+	969.11		1.765E+00	5.721E-01	3.458E-01	8.124E-02	5.104
	+	63.29	*	5.086E+00	1.728E+00	1.452E+00	2.526E-01	3.503
	+	92.38		4.427E+00	1.042E+00	7.029E-01	1.290E-01	6.297
U-234	+	609.31	*	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
	+	1120.29		1.611E+00	6.124E-01	4.320E-01	4.638E-02	3.730
	+	1764.49		1.613E+00	4.325E-01	2.436E-01	2.003E-02	6.622
NP-237	+	86.50	*	7.366E-01	3.094E-01	3.091E-01	6.990E-02	2.383

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-238	+	95.87	*	-8.331E-01	9.280E-01	1.252E+00	3.101E-01	-0.665
	+	63.29	*	5.086E+00	1.728E+00	1.452E+00	2.526E-01	3.503
	+	92.38	*	4.427E+00	7.688E-01	7.029E-01	6.439E-02	6.297
AM-243	+	74.67	*	3.213E-01	6.680E-02	6.786E-02	5.455E-03	4.736
	+	86.72	*	2.762E+01	1.010E+01	1.158E+01	1.073E+00	2.386
		117.66	*	-9.383E-01	3.418E+00	5.441E+00	4.680E-01	-0.172
		142.18	*	7.602E-02	1.717E+01	2.741E+01	2.262E+00	0.003
ANH-511	+	511.00	*	1.402E-01	6.858E-02	3.888E-02	3.455E-03	3.606

---- 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	*	1.980E-01	2.967E-01	4.987E-01	4.707E-02	0.397
NA-22		1274.54	*	-1.643E-02	4.369E-02	6.958E-02	5.712E-03	-0.236
NA-24		1368.53	*	1.811E-01	4.369E-02	Half-Life too short		
AL-26		1129.67	*	7.432E-01	1.875E+00	2.926E+00	2.458E-01	0.254
		1808.65	*	1.368E-02	2.801E-02	5.066E-02	4.131E-03	0.270
TI-44		67.85	*	3.614E-02	3.636E-02	5.884E-02	4.439E-03	0.614
	+	78.38	*	3.588E-01	4.985E-02	6.517E-02	5.456E-03	5.506
SC-46		889.25	*	4.305E-03	3.897E-02	6.390E-02	5.856E-03	0.067
	+	1120.51	*	2.753E-01	1.030E-01	1.264E-01	1.068E-02	2.177
V-48		944.10	*	4.726E-01	8.560E-01	1.454E+00	1.322E-01	0.325
		983.50	*	-5.137E-02	7.161E-02	1.070E-01	9.629E-03	-0.480
		1312.09	*	5.278E-04	7.504E-02	1.238E-01	1.015E-02	0.004
CR-51		320.08	*	2.800E-02	3.318E-01	5.484E-01	4.956E-02	0.051
MN-52		744.21	*	-9.696E-02	2.229E-01	3.532E-01	3.206E-02	-0.275
		848.13	*	1.632E+00	6.083E+00	1.015E+01	9.322E-01	0.161
		935.52	*	2.958E-01	2.414E-01	4.304E-01	3.919E-02	0.687
		1246.25	*	6.729E+00	7.341E+00	1.299E+01	1.064E+00	0.518
		1333.61	*	5.580E+00	4.574E+00	8.499E+00	6.963E-01	0.657
		1434.06	*	8.637E-02	2.019E-01	3.502E-01	2.912E-02	0.247
MN-54		834.83	*	3.487E-02	3.750E-02	6.539E-02	6.002E-03	0.533
CO-56		846.75	*	2.990E-03	3.804E-02	6.242E-02	5.731E-03	0.048
		977.42	*	-9.751E-01	3.356E+00	4.464E+00	4.026E-01	-0.218
		1037.82	*	1.110E-01	2.955E-01	5.117E-01	4.747E-02	0.217
		1175.09	*	-3.328E-01	2.269E+00	3.728E+00	3.034E-01	-0.089
		1238.25	*	1.298E-01	9.724E-02	1.741E-01	1.472E-02	0.745
		1360.21	*	-4.621E-01	9.094E-01	1.394E+00	1.147E-01	-0.332
		1771.40	*	-1.146E-01	2.088E-01	2.433E-01	1.998E-02	-0.471
CO-57		122.06	*	4.663E-03	2.371E-02	3.843E-02	3.306E-03	0.121
		136.48	*	-1.225E-01	1.998E-01	3.109E-01	2.799E-02	-0.394
CO-58		810.76	*	-2.286E-02	3.629E-02	5.573E-02	5.120E-03	-0.410
FE-59		142.65	*	1.920E+00	2.632E+00	4.315E+00	3.559E-01	0.445
		192.34	*	2.559E-01	9.170E-01	1.459E+00	1.916E-01	0.175
		1099.22	*	6.781E-03	9.132E-02	1.536E-01	1.423E-02	0.044
		1291.56	*	-7.194E-02	1.112E-01	1.700E-01	1.601E-02	-0.423
CO-60		1173.22	*	-2.803E-02	4.590E-02	7.241E-02	5.893E-03	-0.387
		1332.49	*	1.732E-02	3.825E-02	6.604E-02	5.410E-03	0.262

---- 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	*		-3.724E-02	9.716E-02	1.329E-01	1.128E-02	-0.280
GE-68	1077.35	*		-4.536E-01	1.284E+00	2.086E+00	1.808E-01	-0.217
AS-73	53.44	*		1.224E-01	5.000E-01	8.302E-01	6.234E-02	0.147
AS-74	595.88	*		-3.032E-02	8.838E-02	1.441E-01	1.292E-02	-0.210
	634.78			8.018E-02	3.136E-01	5.320E-01	4.743E-02	0.151
SE-75	66.05			-1.119E+00	3.937E+00	5.744E+00	5.449E-01	-0.195
	96.73			-7.779E-01	7.534E-01	1.024E+00	1.418E-01	-0.760
	121.11			2.442E-02	1.245E-01	2.019E-01	2.262E-02	0.121
	136.00			-3.583E-03	3.660E-02	5.831E-02	4.902E-03	-0.061
	198.60			-5.440E-01	1.607E+00	2.674E+00	2.458E-01	-0.203
	264.65	*		-1.457E-03	4.181E-02	6.431E-02	5.492E-03	-0.023
	279.53			8.525E-02	1.043E-01	1.790E-01	1.578E-02	0.476
	303.91			5.751E-01	2.124E+00	3.138E+00	3.587E-01	0.183
	400.65			1.540E-02	2.424E-01	3.947E-01	4.315E-02	0.039
BR-77	87.88	+		5.130E+02	1.877E+02	2.741E+02	2.578E+01	1.872
	200.40			5.320E+01	1.349E+02	2.310E+02	1.899E+01	0.230
	239.00	+		2.458E+02	2.614E+01	3.469E+01	2.931E+00	7.086
	249.79			-3.153E+01	5.604E+01	9.080E+01	7.701E+00	-0.347
	281.68			-5.837E+01	7.937E+01	1.264E+02	1.074E+01	-0.462
	297.23			2.655E+02	7.640E+01	1.059E+02	9.053E+00	2.507
	303.76			5.062E+01	1.688E+02	2.500E+02	2.140E+01	0.202
	439.47			1.458E+02	1.237E+02	2.148E+02	1.850E+01	0.679
	484.57			-8.577E+01	1.911E+02	2.944E+02	2.593E+01	-0.291
	520.65	*		7.646E+00	9.138E+00	1.618E+01	1.441E+00	0.473
	574.64			6.672E+00	1.852E+02	3.109E+02	2.788E+01	0.021
	578.91			6.388E+01	7.677E+01	1.213E+02	1.088E+01	0.527
	585.48			1.588E+03	2.808E+02	4.821E+02	4.323E+01	3.295
	755.35			-1.737E+00	1.527E+02	2.507E+02	2.281E+01	-0.007
	817.79			-3.126E+01	1.140E+02	1.813E+02	1.663E+01	-0.172
SR-82	698.33			3.568E+01	3.382E+01	5.971E+01	5.354E+00	0.598
	776.49	*		-4.883E-02	4.223E-01	5.910E-01	5.397E-02	-0.083
	1395.20			-1.012E+01	9.826E+00	1.363E+01	1.128E+00	-0.743
RB-83	520.41	*		6.210E-02	6.542E-02	1.165E-01	1.037E-02	0.533
	529.64			-2.527E-02	9.112E-02	1.503E-01	1.341E-02	-0.168
	552.65			7.215E-03	1.828E-01	3.077E-01	2.756E-02	0.023
RB-84	881.50	*		-4.990E-02	7.249E-02	1.102E-01	1.011E-02	-0.453
KR-85	513.99	*		1.919E+01	7.972E+00	1.362E+01	1.211E+00	1.409
SR-85	513.99	*		9.814E-02	4.077E-02	6.967E-02	6.196E-03	1.409
RB-86	1076.63	*		-5.968E-01	8.087E-01	1.268E+00	1.099E-01	-0.471
Y-88	898.02			-2.263E-02	4.178E-02	6.430E-02	5.913E-03	-0.352
	1836.01	*		2.833E-02	3.284E-02	6.224E-02	5.051E-03	0.455
ZR-88	392.90	*		-5.246E-03	2.825E-02	4.531E-02	3.774E-03	-0.116
Y-91	1204.90	*		-1.359E+01	1.938E+01	3.031E+01	2.476E+00	-0.448
NB-94	702.63	*		-3.173E-02	3.351E-02	5.125E-02	4.601E-03	-0.619
	871.10			-2.235E-02	3.196E-02	4.823E-02	4.425E-03	-0.463
NB-95	765.79	*		6.103E-02	4.850E-02	7.727E-02	7.044E-03	0.790
NB-95M	235.69	*		7.763E-02	1.275E-01	1.940E-01	1.883E-02	0.400
ZR-95	724.18			6.286E-02	1.013E-01	1.540E-01	1.501E-02	0.408
	756.15	*		4.850E-02	6.933E-02	1.199E-01	1.191E-02	0.405

---- 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	*		4.870E-03	6.933E-02	Half-Life	too short	
	1024.50			8.735E+00	6.933E-02	Half-Life	too short	
ZR-97	254.15			-6.724E-01	6.933E-02	Half-Life	too short	
	355.39			6.765E-01	6.933E-02	Half-Life	too short	
	507.63	*		1.635E+00	6.933E-02	Half-Life	too short	
	602.52			-4.275E+00	6.933E-02	Half-Life	too short	
	1021.30			-7.920E+00	6.933E-02	Half-Life	too short	
	1147.95			1.129E+00	6.933E-02	Half-Life	too short	
	1362.66			-7.612E-01	6.933E-02	Half-Life	too short	
	1750.46			2.180E+00	6.933E-02	Half-Life	too short	
MO-99	140.51			-2.349E+01	2.464E+01	3.640E+01	1.004E+01	-0.645
	181.06			-2.971E+00	1.540E+01	2.281E+01	4.111E+00	-0.130
	366.43			-2.571E+01	7.269E+01	1.158E+02	9.807E+00	-0.222
	739.58	*		3.577E+00	1.034E+01	1.747E+01	2.697E+00	0.205
	778.00			1.861E+01	3.224E+01	5.255E+01	4.800E+00	0.354
TC-99M	140.51	*		-1.835E+10	3.224E+01	Half-Life	too short	
RH-101	127.23			-2.399E-02	3.050E-02	4.728E-02	4.015E-03	-0.507
	198.01	*		-1.463E-02	2.907E-02	4.803E-02	3.940E-03	-0.305
	325.23			6.575E-02	2.195E-01	3.661E-01	3.140E-02	0.180
RH-102	418.52			1.728E-02	2.659E-01	4.319E-01	3.670E-02	0.040
	475.06	*		-3.293E-02	2.850E-02	4.141E-02	3.633E-03	-0.795
	631.29			-4.816E-02	4.946E-02	7.549E-02	6.735E-03	-0.638
	697.49			1.096E-01	7.846E-02	1.408E-01	1.262E-02	0.779
	766.84			1.981E-01	1.322E-01	2.125E-01	1.937E-02	0.932
	1046.59			-3.639E-02	1.144E-01	1.867E-01	1.642E-02	-0.195
	1112.84			7.226E-02	2.278E-01	3.417E-01	2.902E-02	0.211
RU-103	497.08	*		-1.470E-02	3.763E-02	5.816E-02	8.318E-03	-0.253
	610.33			1.260E+01	2.760E+00	2.847E+00	4.799E-01	4.425
RH-106	511.85			7.001E-01	3.424E-01	4.201E-01	3.734E-02	1.666
	621.84	*		-3.182E-01	3.138E-01	4.788E-01	6.495E-02	-0.665
	1050.47			5.580E-01	2.396E+00	4.092E+00	3.593E-01	0.136
RU-106	511.85			7.001E-01	3.424E-01	4.201E-01	3.734E-02	1.666
	621.84	*		-3.182E-01	3.121E-01	4.788E-01	4.279E-02	-0.665
	1050.47			5.580E-01	2.396E+00	4.092E+00	3.593E-01	0.136
AG-108M	433.93	*		-2.573E-02	3.236E-02	4.919E-02	4.391E-03	-0.523
	614.37			9.659E-03	4.194E-02	6.214E-02	5.763E-03	0.155
	722.95			-1.431E-02	4.467E-02	6.143E-02	5.746E-03	-0.233
AG-110M	657.75	*		2.228E-03	3.639E-02	5.278E-02	4.809E-03	0.042
	677.61			2.929E-01	2.794E-01	4.982E-01	4.553E-02	0.588
	706.67			-8.509E-02	2.041E-01	3.262E-01	3.007E-02	-0.261
	763.93			7.189E-02	1.779E-01	2.643E-01	2.469E-02	0.272
	884.67			1.002E-02	4.837E-02	8.003E-02	7.546E-03	0.125
	937.48			-5.540E-02	1.137E-01	1.754E-01	1.649E-02	-0.316
	1384.27			-1.702E-03	1.689E-01	2.375E-01	2.022E-02	-0.007
IN-111	171.28			3.600E-01	9.093E-01	1.463E+00	1.165E-01	0.246
	245.39	*		-2.243E-01	1.011E+00	1.463E+00	1.239E-01	-0.153
IN-113M	391.69	*		-3.060E-02	4.155E-02	6.402E-02	5.503E-03	-0.478
SN-113	391.69	*		-3.060E-02	4.155E-02	6.402E-02	5.503E-03	-0.478
IN-114M	190.27	*		-1.168E-02	1.776E-01	2.643E-01	2.150E-02	-0.044

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CD-115	260.90			4.351E+01	1.087E+02	1.844E+02	1.567E+01	0.236
	492.35			-2.216E+01	3.313E+01	5.017E+01	4.432E+00	-0.442
	527.90	*		1.814E+00	8.736E+00	1.492E+01	1.331E+00	0.122
SN-117M	156.02			6.398E-01	2.282E+00	3.276E+00	2.639E-01	0.195
	158.56	*		-1.308E-02	5.894E-02	8.203E-02	6.577E-03	-0.159
SB-122	563.90	*		3.251E+00	1.884E+00	3.462E+00	3.104E-01	0.939
	692.80			-1.441E+01	3.856E+01	6.188E+01	5.538E+00	-0.233
I-123	159.00	*		2.361E+00	3.856E+01	Half-Life	too short	
	528.96			1.952E+01	3.856E+01	Half-Life	too short	
TE-123M	159.00	*		1.594E-02	2.986E-02	4.341E-02	3.502E-03	0.367
I-124	602.71	*		-4.878E-01	7.193E-01	9.728E-01	8.716E-02	-0.501
	722.78			-1.591E+00	4.468E+00	6.117E+00	5.524E-01	-0.260
	1325.50			-5.844E+00	3.049E+01	4.908E+01	4.022E+00	-0.119
	1376.25			7.044E+01	3.327E+01	6.417E+01	5.296E+00	1.098
	1509.49			5.970E+00	1.395E+01	2.407E+01	2.012E+00	0.248
	1691.02			-2.564E+00	2.880E+00	3.583E+00	2.977E-01	-0.716
SB-124	602.71			-2.945E-02	4.343E-02	5.874E-02	5.264E-03	-0.501
	645.85			-3.670E-03	4.792E-01	7.957E-01	7.474E-02	-0.005
	709.31			2.278E+00	2.732E+00	4.770E+00	4.291E-01	0.478
	713.82			-1.538E+00	1.563E+00	2.353E+00	2.899E-01	-0.654
	722.78			-1.392E-01	3.911E-01	5.354E-01	4.931E-02	-0.260
	+ 968.20			1.812E+01	4.365E+00	7.199E+00	6.508E-01	2.516
	1045.16			2.974E-01	2.375E+00	4.026E+00	3.543E-01	0.074
	1325.50			-5.463E-01	2.850E+00	4.588E+00	3.760E-01	-0.119
	1368.21			6.295E-01	1.823E+00	2.912E+00	3.854E-01	0.216
	1436.60			-2.828E+00	3.201E+00	4.472E+00	3.719E-01	-0.632
	1691.02	*		-5.294E-02	5.948E-02	7.398E-02	6.408E-03	-0.716
SB-125	427.89	*		-6.640E-02	8.831E-02	1.347E-01	1.175E-02	-0.493
	+ 463.38			9.014E-01	5.510E-01	5.527E-01	5.191E-02	1.631
	600.56			1.838E-02	1.775E-01	2.909E-01	2.785E-02	0.063
	635.90			1.213E-02	2.434E-01	4.064E-01	3.897E-02	0.030
TE-125M	109.28	*		3.157E+00	8.141E+00	1.335E+01	1.384E+00	0.236
I-126	388.63			6.626E-02	1.838E-01	3.056E-01	2.550E-02	0.217
	666.33	*		1.402E-01	2.047E-01	3.140E-01	2.784E-02	0.447
	753.82			-2.005E-01	1.437E+00	2.336E+00	2.125E-01	-0.086
SB-126	223.80			7.300E-01	3.592E+00	6.076E+00	5.093E-01	0.120
	278.60			3.817E+00	2.353E+00	4.151E+00	3.523E-01	0.920
	+ 296.50			1.304E+01	2.529E+00	3.454E+00	2.952E-01	3.776
	414.70			8.930E-03	7.931E-02	1.134E-01	9.605E-03	0.079
	415.30			5.419E-01	6.604E+00	9.412E+00	7.978E-01	0.058
	555.20			6.062E-01	3.563E+00	6.051E+00	5.421E-01	0.100
	573.80			4.665E-02	9.913E-01	1.665E+00	1.494E-01	0.028
	593.00			-3.021E-01	8.825E-01	1.439E+00	1.290E-01	-0.210
	656.30			-6.295E-01	3.504E+00	4.946E+00	4.384E-01	-0.127
	666.33			5.855E-02	8.550E-02	1.311E-01	1.163E-02	0.447
	675.00			-1.454E-01	1.832E+00	3.015E+00	2.682E-01	-0.048
	695.00			-4.049E-02	7.788E-02	1.238E-01	1.109E-02	-0.327
	697.00			2.394E-01	2.706E-01	4.727E-01	4.236E-02	0.506
	720.50	*		1.226E-02	1.375E-01	2.157E-01	1.947E-02	0.057

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SB-127	856.80			-5.540E-02	4.983E-01	6.905E-01	6.338E-02	-0.080
	989.30			1.109E+00	1.343E+00	2.312E+00	2.078E-01	0.480
	1034.80			5.027E+00	8.460E+00	1.489E+01	1.316E+00	0.338
	1213.00			-3.316E+00	4.460E+00	6.918E+00	5.654E-01	-0.479
	61.10			4.393E+01	4.119E+01	6.337E+01	6.366E+00	0.693
	252.40			3.729E-01	3.760E+00	6.291E+00	2.641E+00	0.059
	290.80			-2.049E+01	2.219E+01	2.991E+01	3.296E+00	-0.685
	411.60			1.891E+01	1.352E+01	2.089E+01	3.255E+00	0.905
	444.90			-1.091E+00	9.118E+00	1.456E+01	1.818E+00	-0.075
	473.00			2.984E-01	1.496E+00	2.435E+00	3.142E-01	0.123
	543.00			-9.384E+00	1.489E+01	2.384E+01	3.465E+00	-0.394
	603.60			-2.709E+00	1.214E+01	1.723E+01	2.185E+00	-0.157
	685.20	*		1.616E-01	1.211E+00	2.024E+00	2.337E-01	0.080
	698.50			9.447E+00	1.483E+01	2.545E+01	4.062E+00	0.371
XE-127	722.20			-1.454E+01	3.036E+01	4.088E+01	4.663E+00	-0.356
	783.80			1.578E-01	3.433E+00	5.647E+00	7.183E-01	0.028
	57.60			2.180E+00	3.923E+00	6.333E+00	4.590E-01	0.344
	145.22			-1.139E-03	6.987E-01	1.098E+00	9.012E-02	-0.001
I-131	172.10			5.628E-02	1.136E-01	1.836E-01	1.463E-02	0.306
	202.84	*		-1.819E-02	4.239E-02	7.021E-02	5.786E-03	-0.259
	374.96			1.645E-01	1.797E-01	3.089E-01	2.603E-02	0.533
	80.18			-2.595E+00	4.018E+00	5.676E+00	4.883E-01	-0.457
TE-132	284.30			-1.591E+00	1.371E+00	2.118E+00	1.898E-01	-0.751
	364.48	*		-3.917E-02	1.003E-01	1.593E-01	1.426E-02	-0.246
	736.97			1.970E-01	1.447E+00	2.430E+00	2.279E-01	0.081
	122.89			-2.449E+00	7.358E+00	1.010E+01	9.176E-01	-0.242
BA-133	49.72			-6.646E-01	1.060E+01	1.578E+01	1.618E+00	-0.042
	111.76			-6.772E+00	2.592E+01	4.140E+01	4.474E+00	-0.164
	116.30			-6.766E+00	2.415E+01	3.846E+01	4.146E+00	-0.176
	228.16	*		-4.090E-01	5.961E-01	9.631E-01	1.498E-01	-0.425
I-133	53.15			5.223E-01	2.148E+00	3.567E+00	2.687E-01	0.146
	79.62			-8.032E-01	1.151E+00	1.616E+00	2.449E-01	-0.497
	81.00			-1.710E-01	9.600E-02	1.235E-01	1.962E-02	-1.385
	276.40			2.004E-01	3.614E-01	6.114E-01	8.786E-02	0.328
CS-134	302.84			9.278E-02	1.454E-01	2.199E-01	2.914E-02	0.422
	356.01	*		9.436E-03	4.635E-02	6.798E-02	8.927E-03	0.139
	383.85			1.116E-01	2.738E-01	4.566E-01	5.679E-02	0.244
	510.53	+		1.171E+00	2.738E-01	Half-Life	too short	
	529.87	*		-1.373E-03	2.738E-01	Half-Life	too short	
	706.58			-1.381E-01	2.738E-01	Half-Life	too short	
	856.28			6.052E-03	2.738E-01	Half-Life	too short	
	875.33			1.483E-01	2.738E-01	Half-Life	too short	
	1236.41			7.579E-01	2.738E-01	Half-Life	too short	
	1298.22			-5.272E-02	2.738E-01	Half-Life	too short	
	475.35			-2.566E+00	1.897E+00	2.706E+00	2.374E-01	-0.948
	563.23			4.209E-01	3.455E-01	6.209E-01	5.615E-02	0.678
	569.32			-1.842E-01	1.953E-01	3.019E-01	2.741E-02	-0.610
	604.70			9.212E-03	3.633E-02	5.398E-02	4.847E-03	0.171
	795.84	+	*	9.605E-02	6.077E-02	8.743E-02	8.056E-03	1.099

---- 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			8.297E-02	4.403E-01	6.659E-01	6.130E-02	0.125
	1038.57			1.050E+00	3.685E+00	6.336E+00	5.592E-01	0.166
	1167.94			1.914E+00	2.499E+00	4.403E+00	3.598E-01	0.435
	1365.15			5.669E-01	1.162E+00	2.021E+00	1.748E-01	0.280
	268.24	*		1.892E-01	1.632E-01	2.550E-01	2.514E-02	0.742
	288.45			1.070E+10	1.632E-01	Half-Life	too short	
	417.63			-1.008E+10	1.632E-01	Half-Life	too short	
	546.56			5.141E+09	1.632E-01	Half-Life	too short	
	836.80			8.480E+09	1.632E-01	Half-Life	too short	
	1038.76			1.616E+09	1.632E-01	Half-Life	too short	
	1124.00			2.074E+10	1.632E-01	Half-Life	too short	
	1131.51			3.136E+09	1.632E-01	Half-Life	too short	
	1260.41	*		1.831E+08	1.632E-01	Half-Life	too short	
	1457.56			1.990E+11	1.632E-01	Half-Life	too short	
	1678.03			3.038E+09	1.632E-01	Half-Life	too short	
CS-136	1706.46			-1.145E+10	1.632E-01	Half-Life	too short	
	1791.20			1.060E+09	1.632E-01	Half-Life	too short	
	66.91			1.686E-02	6.387E-01	9.435E-01	1.400E-01	0.018
	86.29			3.231E+00	1.221E+00	1.751E+00	2.321E-01	1.845
	153.22			1.034E+00	1.005E+00	1.030E+00	9.447E-02	1.004
	163.89			-5.768E-01	1.037E+00	1.601E+00	1.450E-01	-0.360
	176.55			1.536E-01	3.177E-01	5.487E-01	4.687E-02	0.280
	273.65			-4.067E-01	4.851E-01	6.662E-01	6.042E-02	-0.610
	340.57			3.103E-01	1.441E-01	2.328E-01	2.050E-02	1.333
	818.51			-2.239E-02	6.769E-02	1.071E-01	9.829E-03	-0.209
CE-139 BA-140	1048.07	*		-5.936E-02	1.086E-01	1.737E-01	1.589E-02	-0.342
	1235.34			-1.213E-01	6.223E-01	1.017E+00	1.173E-01	-0.119
	165.85	*		1.474E-02	2.903E-02	4.696E-02	3.715E-03	0.314
	162.64			-1.145E-01	7.142E-01	1.124E+00	9.553E-02	-0.102
	304.84			-3.933E-01	1.304E+00	1.837E+00	5.145E-01	-0.214
LA-140	423.70			-3.437E-01	1.811E+00	2.883E+00	9.340E-01	-0.119
	537.32	*		2.007E-01	2.485E-01	4.247E-01	1.411E-01	0.472
	328.77			3.601E-01	2.877E-01	4.989E-01	4.519E-02	0.722
	432.53			1.917E+00	1.909E+00	3.282E+00	2.953E-01	0.584
	487.03			2.562E-02	1.258E-01	2.046E-01	1.911E-02	0.125
	751.79			-5.649E-01	1.650E+00	2.636E+00	2.628E-01	-0.214
	815.85			1.809E-01	2.754E-01	4.773E-01	4.826E-02	0.379
	867.82			3.586E-01	1.276E+00	2.077E+00	1.995E-01	0.173
	919.63			-1.563E+00	2.648E+00	4.026E+00	4.455E-01	-0.388
	925.24			8.148E-01	1.007E+00	1.757E+00	1.693E-01	0.464
CE-141 CE-143	1596.49	*		-2.916E-02	7.936E-02	1.212E-01	1.014E-02	-0.241
	145.44	*		1.071E-02	6.218E-02	9.833E-02	8.231E-03	0.109
	57.37			-1.676E-04	6.218E-02	Half-Life	too short	
	231.56			1.329E-04	6.218E-02	Half-Life	too short	
	293.26	*		4.441E-04	6.218E-02	Half-Life	too short	
	350.59			2.210E-02	6.218E-02	Half-Life	too short	
	490.36			1.297E-03	6.218E-02	Half-Life	too short	
	664.57			2.489E-03	6.218E-02	Half-Life	too short	
	721.93			-3.280E-04	6.218E-02	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			-1.295E+00	1.886E+00	2.659E+00	2.271E-01	-0.487
	133.54	*		3.746E-02	1.910E-01	3.082E-01	4.758E-02	0.122
PM-144	476.78			1.810E-02	6.199E-02	1.016E-01	9.725E-03	0.178
	618.01			3.867E-03	3.082E-02	5.181E-02	4.752E-03	0.075
	696.49	*		3.054E-02	3.518E-02	6.141E-02	5.505E-03	0.497
	778.57			1.613E+00	2.218E+00	3.843E+00	3.511E-01	0.420
PR-144	696.49	*		2.069E+00	2.384E+00	4.161E+00	3.729E-01	0.497
	1489.15			1.642E+00	9.902E+00	1.660E+01	1.386E+00	0.099
PM-146	453.90	*		4.272E-02	4.546E-02	7.718E-02	8.317E-03	0.553
	633.02			-6.366E-02	1.214E+00	2.011E+00	7.529E-01	-0.032
	735.90			-1.086E-01	1.750E-01	2.276E-01	6.542E-02	-0.477
	747.13			-6.267E-03	8.737E-02	1.428E-01	2.046E-02	-0.044
ND-147	91.11	+		5.653E-01	2.286E-01	4.826E-01	4.776E-02	1.171
	319.41			1.827E+00	2.908E+00	4.950E+00	4.246E-01	0.369
	439.89			3.701E+00	5.408E+00	9.120E+00	7.859E-01	0.406
	531.02	*		-4.595E-01	4.983E-01	7.745E-01	1.172E-01	-0.593
PM-149	285.90	*		4.900E+00	7.732E+01	1.284E+02	1.988E+01	0.038
EU-152	121.78			6.344E-03	6.852E-02	1.106E-01	1.096E-02	0.057
	244.69			1.382E-01	3.369E-01	5.078E-01	4.300E-02	0.272
	344.27	*		1.313E-02	9.483E-02	1.513E-01	1.371E-02	0.087
	443.98			-4.617E-01	9.281E-01	1.441E+00	1.244E-01	-0.321
	778.89			1.728E-01	2.550E-01	4.403E-01	4.022E-02	0.392
	867.32			4.848E-01	7.720E-01	1.266E+00	1.162E-01	0.383
	964.01	+		5.668E-01	2.907E-01	5.349E-01	4.840E-02	1.060
	1085.78			-1.857E-01	3.971E-01	6.372E-01	5.497E-02	-0.291
	1112.02			-1.148E-02	3.188E-01	4.921E-01	4.180E-02	-0.023
	1407.95			1.948E-01	1.606E-01	3.026E-01	2.508E-02	0.644
GD-153	69.67			-8.342E-01	1.434E+00	2.060E+00	1.578E-01	-0.405
	83.37			2.872E+00	1.423E+01	2.086E+01	1.853E+00	0.138
	97.43	*		4.501E-02	7.502E-02	1.111E-01	9.932E-03	0.405
	103.18			-2.387E-02	9.241E-02	1.482E-01	1.300E-02	-0.161
EU-154	123.07			2.615E-02	4.810E-02	7.889E-02	8.939E-03	0.331
	247.94			1.027E-01	3.656E-01	5.468E-01	6.216E-02	0.188
	591.81			-3.661E-02	6.081E-01	1.012E+00	1.207E-01	-0.036
	723.30			-3.022E-02	1.849E-01	2.591E-01	2.566E-02	-0.117
	756.87			3.214E-01	7.730E-01	1.309E+00	1.614E-01	0.245
	873.19			-3.999E-01	2.972E-01	4.120E-01	5.207E-02	-0.971
	996.32			-8.760E-01	4.500E-01	5.487E-01	9.841E-02	-1.597
	1004.76			-3.240E-01	2.458E-01	3.438E-01	4.085E-02	-0.942
	1274.45	*		-4.977E-02	1.217E-01	1.931E-01	2.123E-02	-0.258
EU-155	48.70			-1.241E+00	1.375E+00	1.958E+00	1.585E-01	-0.634
	60.01			4.300E+00	3.576E+00	5.557E+00	4.001E-01	0.774
	86.54	+		3.021E-01	1.106E-01	1.649E-01	1.538E-02	1.832
	105.31	*		1.121E-01	9.435E-02	1.590E-01	1.404E-02	0.705
TB-160	86.79	+		8.051E-01	2.945E-01	4.422E-01	4.102E-02	1.820
	197.04			-1.913E-01	4.917E-01	8.166E-01	6.692E-02	-0.234
	215.65			4.872E-01	7.116E-01	1.148E+00	9.568E-02	0.424
	298.57	+		2.342E-01	1.413E-01	1.853E-01	1.584E-02	1.264
	879.36	*		-2.601E-02	1.431E-01	2.286E-01	2.097E-02	-0.114

---- 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		4.393E-01	5.569E-01	8.501E-01	7.696E-02	0.517
	+	966.15		3.883E-01	1.992E-01	4.456E-01	4.030E-02	0.871
		1177.93		-1.928E-01	3.723E-01	5.926E-01	4.825E-02	-0.325
		1271.85		-2.856E-01	7.147E-01	1.136E+00	9.314E-02	-0.251
		80.57		-6.872E-02	2.399E-01	3.446E-01	2.960E-02	-0.199
		184.41		1.527E-01	3.810E-02	6.405E-02	5.178E-03	2.384
		280.46		-4.705E-02	8.328E-02	1.341E-01	1.139E-02	-0.351
	+	410.95		4.076E-01	3.968E-01	4.554E-01	3.848E-02	0.895
		711.68	*	5.407E-02	5.851E-02	1.029E-01	9.263E-03	0.526
		752.31		-1.384E-01	2.709E-01	4.264E-01	3.878E-02	-0.325
TM-171		810.29		-5.339E-02	5.543E-02	8.203E-02	7.520E-03	-0.651
		51.35		7.442E+00	1.803E+01	2.908E+01	2.245E+00	0.256
		52.39		5.590E+00	9.228E+00	1.564E+01	1.190E+00	0.357
		59.40		9.863E+00	1.905E+01	2.888E+01	2.076E+00	0.342
LU-176		66.72	*	3.785E+00	2.331E+01	3.462E+01	2.589E+00	0.109
	+	88.36		5.949E-01	2.176E-01	3.187E-01	2.995E-02	1.867
		201.83		-4.303E-03	2.618E-02	4.386E-02	3.611E-03	-0.098
		306.84	*	5.828E-03	2.234E-02	3.736E-02	3.201E-03	0.156
LU-177		401.10		-9.099E-01	6.367E+00	1.023E+01	8.578E-01	-0.089
		112.95		5.784E-01	1.478E+00	2.420E+00	2.088E-01	0.239
LU-177M	+	208.36	*	4.273E+00	1.592E+00	1.874E+00	1.552E-01	2.279
		52.97		2.763E-01	9.660E-01	1.606E+00	1.213E-01	0.172
		54.07		-8.539E-02	5.236E-01	8.571E-01	6.391E-02	-0.100
		61.30		1.505E+00	1.122E+00	1.745E+00	1.263E-01	0.862
		121.62		1.344E-02	3.502E-01	5.641E-01	4.848E-02	0.024
		147.16		-2.803E-01	6.298E-01	9.842E-01	8.052E-02	-0.285
		171.86		2.187E-01	4.592E-01	7.414E-01	5.905E-02	0.295
		218.09		-1.319E-01	7.729E-01	1.289E+00	1.076E-01	-0.102
		268.79		1.597E+00	8.544E-01	1.377E+00	1.170E-01	1.160
		319.02		1.128E-01	2.280E-01	3.856E-01	3.307E-02	0.292
		367.43		5.209E-01	8.124E-01	1.378E+00	1.166E-01	0.378
		413.65	*	-2.844E-02	1.965E-01	2.744E-01	2.323E-02	-0.104
	HF-181	56.28		-6.133E-01	5.879E-01	9.369E-01	6.850E-02	-0.655
		57.53		1.688E-01	3.295E-01	5.311E-01	3.851E-02	0.318
W-181		65.20		-7.857E-02	7.728E-01	1.137E+00	8.412E-02	-0.069
		133.02		-2.390E-03	6.070E-02	9.705E-02	8.145E-03	-0.025
		136.25		-1.061E-01	4.287E-01	6.785E-01	5.660E-02	-0.156
		345.85		1.342E-01	1.838E-01	3.036E-01	2.594E-02	0.442
		482.03	*	-2.390E-02	3.948E-02	6.010E-02	5.288E-03	-0.398
		56.28		-2.406E-01	2.307E-01	3.677E-01	2.688E-02	-0.654
		57.53		6.614E-02	1.294E-01	2.086E-01	1.512E-02	0.317
		65.20	*	-3.062E-02	3.011E-01	4.430E-01	3.278E-02	-0.069
TA-182		67.75		8.632E-02	8.659E-02	1.401E-01	1.057E-02	0.616
		100.10		1.324E-01	1.578E-01	2.633E-01	2.332E-02	0.503
		152.43		1.050E-01	3.641E-01	5.230E-01	4.240E-02	0.201
		222.10		-1.467E-02	3.138E-01	5.255E-01	4.399E-02	-0.028
		1001.68		3.569E+00	2.341E+00	4.153E+00	3.717E-01	0.859
	+	1121.28		7.607E-01	2.847E-01	3.540E-01	2.990E-02	2.149
		1189.05		1.495E-01	3.148E-01	5.420E-01	4.419E-02	0.276

---- 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	*		1.027E-01	1.971E-01	3.396E-01	2.778E-02	0.302
	1230.97			1.347E-02	4.927E-01	8.181E-01	6.695E-02	0.016
	57.98			1.222E-01	1.374E-01	2.118E-01	1.532E-02	0.577
	59.32			4.189E-02	7.790E-02	1.182E-01	8.499E-03	0.354
	67.20			9.434E-02	1.648E-01	2.484E-01	1.865E-02	0.380
RE-184	162.32	*		-1.040E-02	1.057E-01	1.669E-01	1.329E-02	-0.062
	208.81	+		3.931E+00	1.465E+00	1.750E+00	1.450E-01	2.246
	291.72			-1.389E-01	9.765E-01	1.403E+00	1.197E-01	-0.099
	57.98			4.510E-01	5.072E-01	7.816E-01	5.654E-02	0.577
	59.32			1.544E-01	2.872E-01	4.357E-01	3.134E-02	0.354
OS-185	67.20			3.480E-01	6.078E-01	9.164E-01	6.879E-02	0.380
	161.27			1.348E-01	3.401E-01	5.487E-01	4.377E-02	0.246
	216.55			5.535E-02	2.358E-01	4.000E-01	3.335E-02	0.138
	252.85	*		9.656E-02	2.126E-01	3.617E-01	3.070E-02	0.267
	318.01			-1.857E-01	3.965E-01	6.335E-01	5.433E-02	-0.293
W-188	792.07			-8.906E-02	1.026E+00	1.438E+00	1.316E-01	-0.062
	903.28			7.732E-01	1.006E+00	1.699E+00	1.555E-01	0.455
	920.93			1.313E-01	4.148E-01	6.926E-01	6.322E-02	0.190
	59.72			1.636E-01	2.122E-01	3.247E-01	2.335E-02	0.504
	61.14			1.374E-01	1.222E-01	1.889E-01	1.366E-02	0.728
IR-192	69.30			-1.214E-01	2.544E-01	3.672E-01	2.804E-02	-0.331
	592.07			-4.331E-01	2.469E+00	4.077E+00	3.656E-01	-0.106
	646.12	*		-6.539E-03	4.103E-02	6.735E-02	5.988E-03	-0.097
	717.42			2.419E-01	8.030E-01	1.357E+00	1.224E-01	0.178
	874.81			6.591E-01	5.715E-01	1.018E+00	9.342E-02	0.647
TL-200	880.27			-9.126E-01	8.281E-01	1.205E+00	1.105E-01	-0.757
	63.58	+		2.039E+02	6.136E+01	7.464E+01	5.467E+00	2.732
	227.08			-5.830E+00	1.128E+01	1.845E+01	1.549E+00	-0.316
	290.67	*		-7.028E+00	8.011E+00	1.087E+01	9.271E-01	-0.647
	295.96	+		1.011E+00	1.962E-01	2.719E-01	2.340E-02	3.717
AU-195	308.46			9.604E-04	8.711E-02	1.437E-01	1.237E-02	0.007
	316.51	*		-2.205E-02	3.166E-02	4.990E-02	4.289E-03	-0.442
	468.07			-3.546E-02	7.266E-02	9.646E-02	9.025E-03	-0.368
	604.41			7.397E-02	4.870E-01	7.170E-01	9.496E-02	0.103
	612.46			1.592E+00	8.445E-01	1.392E+00	1.418E-01	1.144
TL-201	65.12			3.891E-02	1.396E-01	2.084E-01	1.541E-02	0.187
	66.83			1.368E-02	7.711E-02	1.146E-01	8.578E-03	0.119
	75.70	+		1.039E+00	2.160E-01	3.712E-01	3.017E-02	2.799
	98.88	*		3.086E-01	2.094E-01	3.381E-01	3.006E-02	0.913
	129.76			2.797E+00	2.671E+00	4.444E+00	3.754E-01	0.630
TL-200	367.94	*		2.038E-04	2.671E+00	Half-Life	too short	
	579.30			2.422E-03	2.671E+00	Half-Life	too short	
	828.27			1.871E-04	2.671E+00	Half-Life	too short	
	1205.75			4.540E-04	2.671E+00	Half-Life	too short	
	68.90			3.538E-01	3.773E+00	5.580E+00	4.246E-01	0.063
TL-201	70.82			-4.935E-01	2.182E+00	3.181E+00	2.462E-01	-0.155
	80.30			-2.438E+00	4.237E+00	6.006E+00	5.142E-01	-0.406
	135.34			-7.111E+00	2.259E+01	3.565E+01	2.979E+00	-0.199
	167.43	*		2.539E+00	6.512E+00	1.048E+01	8.303E-01	0.242

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		68.90		3.320E-02	3.540E-01	5.235E-01	3.984E-02	0.063
		70.82		-4.618E-02	2.041E-01	2.976E-01	2.303E-02	-0.155
		80.30		-2.282E-01	3.966E-01	5.621E-01	4.812E-02	-0.406
		439.56	*	7.365E-02	6.335E-02	1.100E-01	9.471E-03	0.670
HG-203		70.83		-2.029E-01	8.942E-01	1.303E+00	1.703E-01	-0.156
		72.87		1.011E+00	4.875E-01	8.202E-01	1.045E-01	1.233
		82.60		6.674E-01	1.002E+00	1.499E+00	2.077E-01	0.445
		279.20	*	5.880E-02	3.903E-02	6.864E-02	5.996E-03	0.857
BI-207		72.80		2.783E-01	1.396E-01	2.398E-01	1.891E-02	1.160
	+	74.97		5.768E-01	1.199E-01	1.804E-01	1.454E-02	3.198
		84.90		3.382E-02	1.864E-01	2.728E-01	2.471E-02	0.124
		569.67		-3.020E-02	3.037E-02	4.673E-02	4.190E-03	-0.646
		1063.62	*	-4.806E-02	5.360E-02	8.169E-02	7.128E-03	-0.588
		1770.23		-2.109E-01	4.184E-01	4.985E-01	4.095E-02	-0.423
TL-207		81.07		-3.738E-01	2.059E-01	2.730E-01	2.359E-02	-1.369
		83.78		-1.717E-02	1.234E-01	1.784E-01	1.593E-02	-0.096
		94.90		5.213E-01	2.219E-01	3.488E-01	3.154E-02	1.495
		122.32		4.798E-01	1.645E+00	2.675E+00	2.467E-01	0.179
		144.24		8.195E-01	6.834E-01	1.119E+00	1.039E-01	0.733
	+	154.21		6.304E-01	6.122E-01	6.339E-01	5.700E-02	0.994
	+	269.46		4.085E-01	2.449E-01	3.342E-01	2.900E-02	1.222
		323.87	*	-6.646E-01	6.622E-01	1.012E+00	1.790E-01	-0.657
	+	338.28		6.000E+00	1.771E+00	2.405E+00	2.951E-01	2.495
		445.03		-1.904E-01	2.226E+00	3.563E+00	4.313E-01	-0.053
PO-209		260.50		-3.546E+00	8.845E+00	1.442E+01	1.225E+00	-0.246
		262.80		-8.991E+00	2.396E+01	3.907E+01	3.320E+00	-0.230
		896.60	*	-2.425E+00	7.421E+00	1.167E+01	1.069E+00	-0.208
PB-211		404.84	*	-6.773E-01	1.103E+00	1.354E+00	8.479E-01	-0.500
		427.08		-1.870E+00	2.307E+00	3.007E+00	1.868E+00	-0.622
		831.96		-1.110E+00	1.408E+00	1.842E+00	1.155E+00	-0.603
BI-212	+	727.18	*	1.086E+00	5.991E-01	6.795E-01	7.048E-02	1.598
		785.46		2.041E+00	1.741E+00	3.093E+00	2.828E-01	0.660
		1620.62		1.766E+00	1.233E+00	2.391E+00	1.997E-01	0.739
PO-215		81.07		-3.738E-01	2.059E-01	2.730E-01	2.359E-02	-1.369
		83.78		-1.717E-02	1.234E-01	1.784E-01	1.593E-02	-0.096
		94.90		5.213E-01	2.219E-01	3.488E-01	3.154E-02	1.495
		122.32		4.798E-01	1.645E+00	2.675E+00	2.467E-01	0.179
		144.24		8.195E-01	6.834E-01	1.119E+00	1.039E-01	0.733
	+	154.21		6.304E-01	6.122E-01	6.339E-01	5.700E-02	0.994
	+	269.46		4.085E-01	2.449E-01	3.342E-01	2.900E-02	1.222
		323.87	*	-6.646E-01	6.622E-01	1.012E+00	1.790E-01	-0.657
	+	338.28		6.000E+00	1.771E+00	2.405E+00	2.951E-01	2.495
		445.03		-1.904E-01	2.226E+00	3.563E+00	4.313E-01	-0.053
RN-219	+	271.23		5.241E-01	3.154E-01	4.220E-01	4.308E-02	1.242
		401.81	*	2.449E-01	3.902E-01	6.554E-01	9.763E-02	0.374
RN-220		549.76	*	-6.556E+00	2.372E+01	3.905E+01	3.496E+00	-0.168
RA-223		81.07		-3.738E-01	2.059E-01	2.730E-01	2.359E-02	-1.369
		83.78		-1.717E-02	1.234E-01	1.784E-01	1.593E-02	-0.096
		94.90		5.213E-01	2.219E-01	3.488E-01	3.154E-02	1.495

---- 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		4.798E-01	1.645E+00	2.675E+00	2.467E-01	0.179
		144.24		8.195E-01	6.834E-01	1.119E+00	1.039E-01	0.733
	+	154.21		6.304E-01	6.122E-01	6.339E-01	5.700E-02	0.994
	+	269.46		4.085E-01	2.449E-01	3.342E-01	2.900E-02	1.222
		323.87	*	-6.646E-01	6.622E-01	1.012E+00	1.790E-01	-0.657
	+	338.28		6.000E+00	1.771E+00	2.405E+00	2.951E-01	2.495
		445.03		-1.904E-01	2.226E+00	3.563E+00	4.313E-01	-0.053
		79.80		-1.063E+00	1.470E+00	2.047E+00	4.393E-01	-0.519
		236.00		3.171E-01	2.447E-01	3.814E-01	4.622E-02	0.831
		256.20	*	9.145E-02	3.557E-01	5.991E-01	9.153E-02	0.153
		286.10		1.642E-01	1.397E+00	2.326E+00	3.055E-01	0.071
	+	299.80		2.990E+00	1.860E+00	2.487E+00	4.342E-01	1.202
TH-227		304.40		-7.033E-01	1.963E+00	2.758E+00	5.078E-01	-0.255
		334.20		-4.859E-01	2.415E+00	3.414E+00	6.619E-01	-0.142
		79.80		-1.063E+00	1.471E+00	2.047E+00	4.449E-01	-0.519
	+	94.00		1.711E+01	4.531E+00	3.838E+00	8.430E-01	4.457
		236.00		3.171E-01	2.442E-01	3.814E-01	4.171E-02	0.831
		256.20	*	9.145E-02	3.558E-01	5.991E-01	1.079E-01	0.153
		286.10		1.642E-01	1.406E+00	2.326E+00	2.334E+00	0.071
	+	299.80		2.990E+00	1.860E+00	2.487E+00	4.342E-01	1.202
		304.40		-7.033E-01	1.963E+00	2.758E+00	5.078E-01	-0.255
		334.20		-4.859E-01	2.415E+00	3.414E+00	6.619E-01	-0.142
		85.43		2.222E-01	1.895E-01	2.859E-01	2.607E-02	0.777
	+	88.47		3.425E-01	1.253E-01	1.832E-01	1.720E-02	1.870
TH-229		100.00		1.714E-01	1.634E-01	2.743E-01	2.430E-02	0.625
		193.63	*	3.620E-01	4.544E-01	7.898E-01	6.450E-02	0.458
	+	210.97		3.086E+00	1.150E+00	1.281E+00	1.063E-01	2.410
		283.67	*	-9.052E-01	1.423E+00	2.268E+00	3.429E-01	-0.399
	+	301.29		1.196E+00	7.290E-01	1.001E+00	1.221E-01	1.195
		81.07		-3.738E-01	2.059E-01	2.730E-01	2.359E-02	-1.369
		83.78		-1.717E-02	1.234E-01	1.784E-01	1.593E-02	-0.096
		94.90		5.213E-01	2.219E-01	3.488E-01	3.154E-02	1.495
		122.32		4.798E-01	1.645E+00	2.675E+00	2.467E-01	0.179
		144.24		8.195E-01	6.834E-01	1.119E+00	1.039E-01	0.733
	+	154.21		6.304E-01	6.122E-01	6.339E-01	5.700E-02	0.994
	+	269.46		4.085E-01	2.449E-01	3.342E-01	2.900E-02	1.222
U-231		323.87	*	-6.646E-01	6.622E-01	1.012E+00	1.790E-01	-0.657
	+	338.28		6.000E+00	1.771E+00	2.405E+00	2.951E-01	2.495
		445.03		-1.904E-01	2.226E+00	3.563E+00	4.313E-01	-0.053
		84.21		-2.265E-01	5.078E+00	7.369E+00	6.616E-01	-0.031
	+	92.29		1.622E+01	2.817E+00	3.978E+00	3.646E-01	4.077
		95.87	*	-9.062E-01	9.876E-01	1.362E+00	1.226E-01	-0.665
		108.00		-1.171E+00	1.747E+00	2.744E+00	2.384E-01	-0.427
	+	75.28		1.683E+01	4.100E+00	5.529E+00	8.324E-01	3.045
	+	86.59		4.911E+00	2.187E+00	2.684E+00	7.254E-01	1.830
	+	300.12		8.335E-01	5.129E-01	6.955E-01	1.032E-01	1.198
		311.98	*	-3.257E-02	5.836E-02	9.291E-02	8.194E-03	-0.351
		340.50		1.743E+00	8.177E-01	1.175E+00	2.798E-01	1.483
		398.62		-2.765E-01	2.019E+00	3.245E+00	8.616E-01	-0.085

---- 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		5.969E-01	1.726E+00	2.515E+00	5.407E-01	0.237	
		63.00		5.928E+00	1.941E+00	2.233E+00	3.306E-01	2.655	
		94.67		6.243E-01	1.784E-01	2.703E-01	3.435E-02	2.309	
		98.44		1.127E-01	1.104E-01	1.384E-01	7.725E-02	0.815	
		99.86		4.054E-01	4.203E-01	6.964E-01	6.172E-02	0.582	
		111.00		-5.618E-02	1.687E-01	2.687E-01	3.254E-02	-0.209	
		131.20		-9.754E-02	1.015E-01	1.558E-01	1.312E-02	-0.626	
		152.70		3.615E-01	3.119E-01	5.112E-01	8.582E-02	0.707	
		186.00		7.439E+00	3.102E+00	2.567E+00	7.976E-01	2.898	
		226.40		-1.540E-01	3.578E-01	5.874E-01	7.669E-02	-0.262	
	+	227.20		-2.090E-01	3.830E-01	6.256E-01	5.254E-02	-0.334	
		248.90		-6.391E-01	7.843E-01	1.189E+00	2.658E-01	-0.538	
		293.70		4.379E+00	1.146E+00	1.566E+00	2.703E-01	2.796	
		369.80		-1.530E-01	7.835E-01	1.260E+00	2.736E-01	-0.121	
		568.70		-9.547E-01	9.884E-01	1.525E+00	1.367E-01	-0.626	
		569.50		-2.616E-01	2.699E-01	4.162E-01	3.732E-02	-0.629	
		574.00		1.876E-01	1.425E+00	2.408E+00	2.160E-01	0.078	
		699.00		4.224E-01	7.355E-01	1.256E+00	2.416E-01	0.336	
		706.10		-1.677E-01	1.024E+00	1.666E+00	7.443E-01	-0.101	
		733.00		2.782E-01	3.985E-01	6.079E-01	1.360E-01	0.458	
	+	742.81		-3.508E-01	1.317E+00	2.084E+00	1.402E+00	-0.168	
		796.30		1.867E+00	1.274E+00	1.728E+00	4.704E-01	1.081	
		805.60		7.534E-01	1.020E+00	1.724E+00	5.312E-01	0.437	
		819.60		-2.116E-02	1.124E+00	1.833E+00	6.994E-01	-0.012	
		826.30		-2.156E-01	7.673E-01	1.209E+00	5.425E-01	-0.178	
		831.60		-7.329E-01	6.744E-01	9.375E-01	2.813E-01	-0.782	
		876.40		9.552E-01	1.280E+00	1.471E+00	1.512E+00	0.650	
		880.51		-2.700E-01	2.959E-01	4.395E-01	4.031E-02	-0.614	
		883.24		2.121E-01	3.076E-01	4.743E-01	3.192E-01	0.447	
		899.00		-3.261E-01	8.332E-01	1.281E+00	5.616E-01	-0.254	
PA-234M		925.00		8.058E-01	1.066E+00	1.851E+00	1.689E-01	0.435	
		926.50		3.061E-02	1.596E-01	2.630E-01	6.693E-02	0.116	
		946.00	*	-1.684E-01	3.092E-01	4.712E-01	8.945E-02	-0.357	
		949.00		1.072E-01	4.548E-01	7.502E-01	6.813E-02	0.143	
		980.50		6.978E-01	7.836E-01	1.222E+00	1.101E-01	0.571	
		1394.10		-4.962E-01	1.058E+00	1.533E+00	9.971E-01	-0.324	
		766.42		2.074E+01	1.690E+01	2.163E+01	1.099E+01	0.959	
		1001.03	*	9.411E+00	5.217E+00	9.389E+00	9.627E-01	1.002	
	U-235	+	89.95		2.287E+00	1.144E+00	1.626E+00	5.048E-01	1.407
		+	93.35		5.322E+00	1.694E+00	1.309E+00	3.690E-01	4.065
		105.00		1.128E+00	9.842E-01	1.568E+00	4.684E-01	0.719	
		143.76	*	2.635E-01	2.139E-01	3.449E-01	5.974E-02	0.764	
		163.35		-3.991E-01	4.671E-01	7.024E-01	1.319E-01	-0.568	
NP-236	+	185.71		2.755E-01	7.980E-02	9.505E-02	7.695E-03	2.898	
		205.31		-7.013E-02	5.222E-01	7.699E-01	1.457E-01	-0.091	
		94.67		4.771E-01	1.287E-01	2.054E-01	1.859E-02	2.323	
		98.44		8.527E-02	6.896E-02	1.046E-01	9.317E-03	0.815	
		111.00		-4.249E-02	1.276E-01	2.033E-01	1.758E-02	-0.209	
	160.31	*	2.718E-02	7.678E-02	1.237E-01	9.884E-03	0.220		

---- 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		1.515E-01	1.414E-01	2.350E-01	2.085E-02	0.645
		117.00	*	-8.488E-02	1.743E-01	2.750E-01	2.366E-02	-0.309
	+	209.75		3.109E+00	1.159E+00	1.400E+00	1.161E-01	2.221
		228.18		-1.414E-01	2.047E-01	3.320E-01	2.790E-02	-0.426
		277.60		9.841E-02	1.779E-01	3.013E-01	2.558E-02	0.327
		334.30		-3.088E-01	1.366E+00	1.928E+00	1.652E-01	-0.160
AM-241		59.54	*	6.845E-02	1.113E-01	1.692E-01	1.342E-02	0.404
CM-243		99.55		1.559E-01	1.455E-01	2.418E-01	2.145E-02	0.645
		103.76	*	-4.681E-02	8.688E-02	1.376E-01	1.206E-02	-0.340
		117.00		-8.732E-02	1.793E-01	2.829E-01	2.434E-02	-0.309
	+	209.75		3.064E+00	1.142E+00	1.380E+00	1.144E-01	2.221
		228.18		-1.429E-01	2.068E-01	3.354E-01	2.819E-02	-0.426
		277.60		9.921E-02	1.793E-01	3.038E-01	2.579E-02	0.327
AM-246		798.80		1.927E-02	1.541E-01	2.215E-01	2.028E-02	0.087
		1036.00		-1.491E-02	2.941E-01	4.917E-01	4.344E-02	-0.030
		1062.04		-1.132E-01	2.221E-01	3.553E-01	3.102E-02	-0.319
		1078.86	*	1.088E-01	1.399E-01	2.487E-01	2.153E-02	0.437
CM-247		278.00		5.706E-01	7.329E-01	1.253E+00	1.063E-01	0.455
		287.40		-2.225E-01	1.156E+00	1.894E+00	1.613E-01	-0.118
		402.60	*	1.580E-02	3.434E-02	5.732E-02	4.812E-03	0.276
CF-249		252.85		3.627E-01	7.986E-01	1.359E+00	1.153E-01	0.267
		333.44		-1.598E-01	1.830E-01	2.440E-01	2.091E-02	-0.655
CF-251		387.95	*	-1.051E-02	3.706E-02	5.909E-02	4.933E-03	-0.178
		176.60	*	5.317E-02	1.110E-01	1.916E-01	1.535E-02	0.277
		227.00		-1.754E-01	3.393E-01	5.550E-01	4.661E-02	-0.316
		285.00		-1.189E+00	1.617E+00	2.568E+00	2.186E-01	-0.463

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]G246875005      *
* Acquisition date   : 24-FEB-2010 08:52:20 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 02:00:01.47 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246875005 Analyst initials: MXR1                  *
* Batch Number       : 952643 Sample Quantity : 1.4449E+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	3.091E+01	3.091E+00	4.890E-01	0.000E+00
CD-109	2.551E+00	9.145E-01	1.136E+00	0.000E+00
SN-126	2.508E-01	8.992E-02	1.119E-01	0.000E+00
BA-137M	1.119E-01	5.946E-02	5.743E-02	0.000E+00
CS-137	1.183E-01	6.286E-02	6.070E-02	0.000E+00
RE-188	2.722E-01	2.588E-01	2.562E-01	0.000E+00
TL-208	5.751E-01	9.318E-02	5.963E-02	0.000E+00
BI-210	4.739E+00	2.832E+00	2.785E+00	0.000E+00
PB-210	4.739E+00	2.832E+00	2.785E+00	0.000E+00
PO-210	4.739E+00	2.826E+00	2.785E+00	0.000E+00
BI-211	3.890E+00	5.354E-01	3.239E-01	0.000E+00
PB-212	1.645E+00	1.861E-01	8.965E-02	0.000E+00
PO-212	1.645E+00	1.861E-01	8.965E-02	0.000E+00
BI-214	1.172E+00	1.998E-01	1.119E-01	0.000E+00
PB-214	1.353E+00	1.987E-01	1.091E-01	0.000E+00
PO-214	1.353E+00	1.987E-01	1.091E-01	0.000E+00
PO-216	1.645E+00	1.861E-01	8.965E-02	0.000E+00
PO-218	1.353E+00	1.987E-01	1.091E-01	0.000E+00
RA-224	4.915E+00	1.634E+00	1.020E+00	0.000E+00
RA-226	1.172E+00	1.998E-01	1.119E-01	0.000E+00
AC-228	1.654E+00	3.093E-01	2.030E-01	0.000E+00
RA-228	1.654E+00	3.093E-01	2.030E-01	0.000E+00
TH-228	1.670E+00	1.888E-01	9.098E-02	0.000E+00
TH-230	1.172E+00	1.998E-01	1.119E-01	0.000E+00
TH-232	1.654E+00	3.093E-01	2.030E-01	0.000E+00
TH-234	5.086E+00	1.694E+00	1.563E+00	0.000E+00
U-234	1.172E+00	1.998E-01	1.119E-01	0.000E+00
NP-237	7.366E-01	3.032E-01	3.306E-01	0.000E+00
U-238	5.086E+00	1.694E+00	1.563E+00	0.000E+00
AM-243	3.213E-01	6.547E-02	7.279E-02	0.000E+00
ANH-511	1.402E-01	6.721E-02	4.003E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	1.980E-01	2.908E-01	5.142E-01	0.000E+00	NOT IDENT.
NA-22	-1.643E-02	4.282E-02	7.017E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.717E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.368E-02	2.745E-02	5.067E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.886E-02	6.983E-02	0.000E+00	FAIL ABUN
SC-46	4.305E-03	3.819E-02	6.497E-02	0.000E+00	FAIL ABUN
V-48	-5.137E-02	7.018E-02	1.085E-01	0.000E+00	NOT IDENT.
CR-51	2.800E-02	3.252E-01	5.704E-01	0.000E+00	NOT IDENT.
MN-52	8.637E-02	1.979E-01	3.521E-01	0.000E+00	NOT IDENT.
MN-54	3.487E-02	3.675E-02	6.658E-02	0.000E+00	NOT IDENT.
CO-56	2.990E-03	3.728E-02	6.354E-02	0.000E+00	NOT IDENT.
CO-57	4.663E-03	2.324E-02	4.080E-02	0.000E+00	NOT IDENT.
CO-58	-2.286E-02	3.557E-02	5.678E-02	0.000E+00	NOT IDENT.
FE-59	6.781E-03	8.949E-02	1.554E-01	0.000E+00	NOT IDENT.
CO-60	1.732E-02	3.748E-02	6.652E-02	0.000E+00	NOT IDENT.
ZN-65	-3.724E-02	9.522E-02	1.344E-01	0.000E+00	NOT IDENT.
GE-68	-4.536E-01	1.258E+00	2.112E+00	0.000E+00	NOT IDENT.
AS-73	1.224E-01	4.900E-01	8.966E-01	0.000E+00	NOT IDENT.
AS-74	-3.032E-02	8.661E-02	1.479E-01	0.000E+00	NOT IDENT.
SE-75	-1.457E-03	4.097E-02	6.717E-02	0.000E+00	NOT IDENT.
BR-77	7.646E+00	8.955E+00	1.665E+01	0.000E+00	FAIL ABUN
SR-82	-4.883E-02	4.138E-01	6.028E-01	0.000E+00	NOT IDENT.
RB-83	6.210E-02	6.411E-02	1.199E-01	0.000E+00	NOT IDENT.
RB-84	-4.990E-02	7.104E-02	1.121E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.812E+00	1.402E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.995E-02	7.172E-02	0.000E+00	NOT IDENT.
RB-86	-5.968E-01	7.925E-01	1.283E+00	0.000E+00	NOT IDENT.
Y-88	2.833E-02	3.218E-02	6.222E-02	0.000E+00	NOT IDENT.
ZR-88	-5.246E-03	2.769E-02	4.692E-02	0.000E+00	NOT IDENT.
Y-91	-1.359E+01	1.899E+01	3.061E+01	0.000E+00	NOT IDENT.
NB-94	-3.173E-02	3.284E-02	5.238E-02	0.000E+00	NOT IDENT.
NB-95	6.103E-02	4.753E-02	7.883E-02	0.000E+00	NOT IDENT.
NB-95M	7.763E-02	1.249E-01	2.031E-01	0.000E+00	NOT IDENT.
ZR-95	4.850E-02	6.795E-02	1.223E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.801E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.393E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.577E+00	1.013E+01	1.783E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.891E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.463E-02	2.849E-02	5.049E-02	0.000E+00	NOT IDENT.
RH-102	-3.293E-02	2.793E-02	4.270E-02	0.000E+00	NOT IDENT.
RU-103	-1.470E-02	3.688E-02	5.991E-02	0.000E+00	FAIL ABUN
RH-106	-3.182E-01	3.075E-01	4.908E-01	0.000E+00	FAIL ABUN
RU-106	-3.182E-01	3.059E-01	4.908E-01	0.000E+00	FAIL ABUN
AG-108M	-2.573E-02	3.171E-02	5.082E-02	0.000E+00	NOT IDENT.
AG-110M	2.228E-03	3.566E-02	5.403E-02	0.000E+00	NOT IDENT.
IN-111	-2.243E-01	9.905E-01	1.531E+00	0.000E+00	NOT IDENT.
IN-113M	-3.060E-02	4.071E-02	6.630E-02	0.000E+00	NOT IDENT.
SN-113	-3.060E-02	4.071E-02	6.630E-02	0.000E+00	NOT IDENT.
IN-114M	-1.168E-02	1.741E-01	2.780E-01	0.000E+00	NOT IDENT.
CD-115	1.814E+00	8.561E+00	1.535E+01	0.000E+00	NOT IDENT.
SN-117M	-1.308E-02	5.776E-02	8.662E-02	0.000E+00	NOT IDENT.
SB-122	3.251E+00	1.847E+00	3.557E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.336E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.594E-02	2.926E-02	4.584E-02	0.000E+00	NOT IDENT.
I-124	-4.878E-01	7.049E-01	9.978E-01	0.000E+00	NOT IDENT.
SB-124	-5.294E-02	5.829E-02	7.411E-02	0.000E+00	FAIL ABUN
SB-125	-6.640E-02	8.654E-02	1.393E-01	0.000E+00	FAIL ABUN
TE-125M	3.157E+00	7.978E+00	1.421E+01	0.000E+00	NOT IDENT.
I-126	1.402E-01	2.006E-01	3.213E-01	0.000E+00	NOT IDENT.
SB-126	1.226E-02	1.348E-01	2.203E-01	0.000E+00	FAIL ABUN
SB-127	1.616E-01	1.186E+00	2.070E+00	0.000E+00	NOT IDENT.
XE-127	-1.819E-02	4.155E-02	7.375E-02	0.000E+00	NOT IDENT.
I-131	-3.917E-02	9.830E-02	1.652E-01	0.000E+00	NOT IDENT.
TE-132	-4.090E-01	5.842E-01	1.009E+00	0.000E+00	NOT IDENT.
BA-133	9.436E-03	4.542E-02	7.054E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.216E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.956E-02	8.912E-02	0.000E+00	FAIL ABUN
CS-135	1.892E-01	1.599E-01	2.662E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.787E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.936E-02	1.065E-01	1.760E-01	0.000E+00	FAIL ABUN
CE-139	1.474E-02	2.844E-02	4.955E-02	0.000E+00	NOT IDENT.
BA-140	2.007E-01	2.436E-01	4.368E-01	0.000E+00	NOT IDENT.
LA-140	-2.916E-02	7.777E-02	1.215E-01	0.000E+00	NOT IDENT.
CE-141	1.071E-02	6.094E-02	1.040E-01	0.000E+00	NOT IDENT.

CE-143	0.000E+00	1.659E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.746E-02	1.872E-01	3.266E-01	0.000E+00	NOT IDENT.
PM-144	3.054E-02	3.448E-02	6.279E-02	0.000E+00	NOT IDENT.
PR-144	2.069E+00	2.336E+00	4.254E+00	0.000E+00	NOT IDENT.
PM-146	4.272E-02	4.456E-02	7.967E-02	0.000E+00	NOT IDENT.
ND-147	-4.595E-01	4.884E-01	7.967E-01	0.000E+00	FAIL ABUN
PM-149	4.900E+00	7.577E+01	1.339E+02	0.000E+00	NOT IDENT.
EU-152	1.313E-02	9.293E-02	1.571E-01	0.000E+00	FAIL ABUN
GD-153	4.501E-02	7.352E-02	1.185E-01	0.000E+00	NOT IDENT.
EU-154	-4.977E-02	1.193E-01	1.947E-01	0.000E+00	NOT IDENT.
EU-155	1.121E-01	9.247E-02	1.693E-01	0.000E+00	FAIL ABUN
TB-160	-2.601E-02	1.402E-01	2.325E-01	0.000E+00	FAIL ABUN
HO-166M	5.407E-02	5.734E-02	1.051E-01	0.000E+00	FAIL ABUN
TM-171	3.785E+00	2.284E+01	3.722E+01	0.000E+00	NOT IDENT.
LU-176	5.828E-03	2.190E-02	3.890E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.560E+00	1.968E+00	0.000E+00	FAIL ABUN
LU-177M	-2.844E-02	1.926E-01	2.838E-01	0.000E+00	NOT IDENT.
HF-181	-2.390E-02	3.869E-02	6.195E-02	0.000E+00	NOT IDENT.
W-181	-3.062E-02	2.951E-01	4.765E-01	0.000E+00	NOT IDENT.
TA-182	1.027E-01	1.932E-01	3.428E-01	0.000E+00	FAIL ABUN
RE-183	-1.040E-02	1.036E-01	1.762E-01	0.000E+00	FAIL ABUN
RE-184	9.656E-02	2.084E-01	3.782E-01	0.000E+00	NOT IDENT.
OS-185	-6.539E-03	4.021E-02	6.898E-02	0.000E+00	NOT IDENT.
W-188	-7.028E+00	7.851E+00	1.133E+01	0.000E+00	FAIL ABUN
IR-192	-2.205E-02	3.103E-02	5.192E-02	0.000E+00	FAIL ABUN
AU-195	3.086E-01	2.053E-01	3.605E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.445E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.539E+00	6.382E+00	1.106E+01	0.000E+00	NOT IDENT.
TL-202	7.365E-02	6.209E-02	1.136E-01	0.000E+00	NOT IDENT.
HG-203	5.880E-02	3.825E-02	7.161E-02	0.000E+00	NOT IDENT.
BI-207	-4.806E-02	5.253E-02	8.272E-02	0.000E+00	FAIL ABUN
TL-207	-6.646E-01	6.490E-01	1.052E+00	0.000E+00	FAIL ABUN
PO-209	-2.425E+00	7.273E+00	1.186E+01	0.000E+00	NOT IDENT.
PB-211	-6.773E-01	1.081E+00	1.401E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.871E-01	6.941E-01	0.000E+00	FAIL ABUN
PO-215	-6.646E-01	6.490E-01	1.052E+00	0.000E+00	FAIL ABUN
RN-219	2.449E-01	3.824E-01	6.784E-01	0.000E+00	FAIL ABUN
RN-220	-6.556E+00	2.325E+01	4.014E+01	0.000E+00	NOT IDENT.
RA-223	-6.646E-01	6.490E-01	1.052E+00	0.000E+00	FAIL ABUN
AC-227	9.145E-02	3.486E-01	6.262E-01	0.000E+00	FAIL ABUN
TH-227	9.145E-02	3.487E-01	6.262E-01	0.000E+00	FAIL ABUN
TH-229	3.620E-01	4.453E-01	8.305E-01	0.000E+00	FAIL ABUN
PA-231	-9.052E-01	1.395E+00	2.365E+00	0.000E+00	FAIL ABUN
TH-231	-6.646E-01	6.490E-01	1.052E+00	0.000E+00	FAIL ABUN
U-231	-9.062E-01	9.679E-01	1.453E+00	0.000E+00	FAIL ABUN
PA-233	-3.257E-02	5.720E-02	9.670E-02	0.000E+00	FAIL ABUN
PA-234	-1.684E-01	3.030E-01	4.784E-01	0.000E+00	FAIL ABUN
PA-234M	9.411E+00	5.113E+00	9.520E+00	0.000E+00	NOT IDENT.
U-235	2.635E-01	2.096E-01	3.650E-01	0.000E+00	FAIL ABUN
NP-236	2.718E-02	7.524E-02	1.306E-01	0.000E+00	NOT IDENT.
NP-239	-8.488E-02	1.708E-01	2.922E-01	0.000E+00	FAIL ABUN
AM-241	6.845E-02	1.090E-01	1.824E-01	0.000E+00	NOT IDENT.
CM-243	-4.681E-02	8.515E-02	1.466E-01	0.000E+00	FAIL ABUN
AM-246	1.088E-01	1.371E-01	2.518E-01	0.000E+00	NOT IDENT.
CM-247	1.580E-02	3.366E-02	5.932E-02	0.000E+00	NOT IDENT.
CF-249	-1.051E-02	3.632E-02	6.121E-02	0.000E+00	NOT IDENT.
CF-251	5.317E-02	1.087E-01	2.019E-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]G246875005.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:52:20
Sample ID          : G246875005          Sample quantity  : 1.44490E+02 GRAM
Detector name      : GAM07              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.47  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000          Sensitivity       : 5.00000
Batch ID           : 952643             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*	1.129E+00	3.091E+01	3.091E+01	10.21
CD-109	88.03	244	3.72*	6.835E+00	2.495E+00	2.551E+00	36.58
SN-126	64.28	355	9.60	4.771E+00	2.013E+00	2.013E+00	32.58
	86.94	244	8.90	6.835E+00	1.043E+00	1.043E+00	54.54
	87.57	244	37.00*	6.835E+00	2.508E-01	2.508E-01	36.58
BA-137M	661.65	86	89.98*	2.232E+00	1.118E-01	1.119E-01	54.22
CS-137	661.65	86	85.12*	2.232E+00	1.182E-01	1.183E-01	54.22
RE-188	155.03	88	15.00*	6.469E+00	2.345E-01	2.722E-01	97.03
	477.96	-----	1.04	2.905E+00	-----	Line Not Found	-----
	633.10	-----	1.26	2.315E+00	-----	Line Not Found	-----
TL-208	277.35	-----	6.80	4.401E+00	-----	Line Not Found	-----
	510.84	149	21.60	2.755E+00	6.492E-01	6.492E-01	49.61
	583.14	462	84.20*	2.476E+00	5.751E-01	5.751E-01	16.53
	860.37	31	12.46	1.781E+00	3.638E-01	3.638E-01	104.82
BI-210	46.50	150	4.05*	2.027E+00	4.733E+00	4.739E+00	60.98
PB-210	46.50	150	4.05*	2.027E+00	4.733E+00	4.739E+00	60.98
PO-210	46.50	150	4.05*	2.027E+00	4.733E+00	4.739E+00	60.85
BI-211	72.87	-----	1.27	5.899E+00	-----	Line Not Found	-----
	351.07	713	12.94*	3.680E+00	3.890E+00	3.890E+00	14.04
PB-212	74.81	496	10.70	6.078E+00	1.982E+00	1.982E+00	22.79
	77.11	843	18.00	6.260E+00	1.944E+00	1.944E+00	13.90
	87.30	244	8.00	6.835E+00	1.160E+00	1.160E+00	37.92
	238.63	1386	44.60*	4.908E+00	1.645E+00	1.645E+00	11.54
	300.09	88	3.41	4.152E+00	1.613E+00	1.613E+00	60.62
PO-212	74.81	496	10.70	6.078E+00	1.982E+00	1.982E+00	22.79
	77.11	843	18.00	6.260E+00	1.944E+00	1.944E+00	13.90
	87.30	244	8.00	6.835E+00	1.160E+00	1.160E+00	37.92
	115.19	-----	0.60	7.150E+00	-----	Line Not Found	-----
	238.63	1386	44.60*	4.908E+00	1.645E+00	1.645E+00	11.54
	300.09	88	3.41	4.152E+00	1.613E+00	1.613E+00	60.62
BI-214	609.31	499	46.30*	2.389E+00	1.172E+00	1.172E+00	17.40
	1120.29	132	15.10	1.413E+00	1.611E+00	1.611E+00	38.01

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	1764.49	96	15.80	9.832E-01	1.613E+00	1.613E+00	26.81
	74.81	496	6.21	6.078E+00	3.415E+00	3.415E+00	22.07
	77.11	843	10.50	6.260E+00	3.333E+00	3.333E+00	15.85
	87.30	244	4.67	6.835E+00	1.987E+00	1.987E+00	37.38
	241.98	364	7.49	4.867E+00	2.592E+00	2.592E+00	34.38
	295.21	412	19.20	4.201E+00	1.328E+00	1.328E+00	20.37
PO-214	351.92	713	37.20*	3.680E+00	1.353E+00	1.353E+00	14.98
	74.81	496	6.21	6.078E+00	3.415E+00	3.415E+00	22.07
	77.11	843	10.50	6.260E+00	3.333E+00	3.333E+00	15.85
	87.30	244	4.67	6.835E+00	1.987E+00	1.987E+00	37.38
	241.98	364	7.49	4.867E+00	2.592E+00	2.592E+00	34.38
	295.21	412	19.20	4.201E+00	1.328E+00	1.328E+00	20.37
PO-216	351.92	713	37.20*	3.680E+00	1.353E+00	1.353E+00	14.98
	74.81	496	10.70	6.078E+00	1.982E+00	1.982E+00	22.79
	77.11	843	18.00	6.260E+00	1.944E+00	1.944E+00	13.90
	87.30	244	8.00	6.835E+00	1.160E+00	1.160E+00	37.92
	238.63	1386	44.60*	4.908E+00	1.645E+00	1.645E+00	11.54
	300.09	88	3.41	4.152E+00	1.613E+00	1.613E+00	60.62
PO-218	74.81	496	6.21	6.078E+00	3.415E+00	3.415E+00	22.07
	77.11	843	10.50	6.260E+00	3.333E+00	3.333E+00	15.85
	87.30	244	4.67	6.835E+00	1.987E+00	1.987E+00	37.38
	241.98	364	7.49	4.867E+00	2.592E+00	2.592E+00	34.38
	295.21	412	19.20	4.201E+00	1.328E+00	1.328E+00	20.37
	351.92	713	37.20*	3.680E+00	1.353E+00	1.353E+00	14.98
RA-224	240.98	364	3.95*	4.867E+00	4.915E+00	4.915E+00	33.92
RA-226	609.31	499	46.30*	2.389E+00	1.172E+00	1.172E+00	17.40
	1120.29	132	15.10	1.413E+00	1.611E+00	1.611E+00	38.01
AC-228	1764.49	96	15.80	9.832E-01	1.613E+00	1.613E+00	26.81
	338.32	239	11.40	3.790E+00	1.437E+00	1.437E+00	49.21
	911.07	299	27.70*	1.695E+00	1.654E+00	1.654E+00	19.09
	969.11	181	16.60	1.606E+00	1.765E+00	1.765E+00	32.42
RA-228	338.32	239	11.40	3.790E+00	1.437E+00	1.437E+00	49.21
	911.07	299	27.70*	1.695E+00	1.654E+00	1.654E+00	19.09
	969.11	181	16.60	1.606E+00	1.765E+00	1.765E+00	32.42
	74.81	496	10.70	6.078E+00	1.982E+00	2.012E+00	20.82
TH-228	77.11	843	18.00	6.260E+00	1.944E+00	1.973E+00	13.90
	87.30	244	8.00	6.835E+00	1.160E+00	1.177E+00	36.58
	238.63	1386	44.60*	4.908E+00	1.645E+00	1.670E+00	11.54
	300.09	88	3.41	4.152E+00	1.613E+00	1.637E+00	84.14
TH-230	609.31	499	46.30*	2.389E+00	1.172E+00	1.172E+00	17.40
	1120.29	132	15.10	1.413E+00	1.611E+00	1.611E+00	38.01
	1764.49	96	15.80	9.832E-01	1.613E+00	1.613E+00	26.81
	338.32	239	11.40	3.790E+00	1.437E+00	1.437E+00	28.18
TH-232	911.07	299	27.70*	1.695E+00	1.654E+00	1.654E+00	19.09
	969.11	181	16.60	1.606E+00	1.765E+00	1.765E+00	32.42
	63.29	355	3.80*	4.771E+00	5.086E+00	5.086E+00	33.98
TH-234	92.38	647	5.41	7.017E+00	4.427E+00	4.427E+00	23.54
	609.31	499	46.30*	2.389E+00	1.172E+00	1.172E+00	17.40
	1120.29	132	15.10	1.413E+00	1.611E+00	1.611E+00	38.01

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	96	15.80	9.832E-01	1.613E+00	1.613E+00	26.81
NP-237	86.50	244	12.60*	6.835E+00	7.366E-01	7.366E-01	42.00
	95.87	-----	2.60	7.087E+00	-----	Line Not Found	-----
U-238	63.29	355	3.80*	4.771E+00	5.086E+00	5.086E+00	33.98
	92.38	647	5.41	7.017E+00	4.427E+00	4.427E+00	17.37
AM-243	74.67	496	66.00*	6.078E+00	3.213E-01	3.213E-01	20.79
	86.72	244	0.34	6.835E+00	2.762E+01	2.762E+01	36.58
	117.66	-----	0.55	7.126E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.723E+00	-----	Line Not Found	-----
ANH-511	511.00	149	100.00*	2.755E+00	1.402E-01	1.402E-01	48.91

Flag: "*" = Keyline

Total number of lines in spectrum 36
Number of unidentified lines 4
Number of lines tentatively identified by NID 32 88.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.091E+01	3.091E+01	0.315E+01	10.21	
CD-109	464.00D	1.02	2.495E+00	2.551E+00	0.933E+00	36.58	
SN-126	1.00E+05Y	1.00	2.508E-01	2.508E-01	0.918E-01	36.58	
BA-137M	30.17Y	1.00	1.118E-01	1.119E-01	0.607E-01	54.22	
CS-137	30.17Y	1.00	1.182E-01	1.183E-01	0.641E-01	54.22	
RE-188	69.40D	1.16	2.345E-01	2.722E-01	2.641E-01	97.03	
TL-208	1.41E+10Y	1.00	5.751E-01	5.751E-01	0.951E-01	16.53	
BI-210	22.26Y	1.00	4.733E+00	4.739E+00	2.890E+00	60.98	
PB-210	22.26Y	1.00	4.733E+00	4.739E+00	2.890E+00	60.98	
PO-210	22.26Y	1.00	4.733E+00	4.739E+00	2.884E+00	60.85	
BI-211	7.04E+08Y	1.00	3.890E+00	3.890E+00	0.546E+00	14.04	
PB-212	1.41E+10Y	1.00	1.645E+00	1.645E+00	0.190E+00	11.54	
PO-212	1.41E+10Y	1.00	1.645E+00	1.645E+00	0.190E+00	11.54	
BI-214	1600.00Y	1.00	1.172E+00	1.172E+00	0.204E+00	17.40	
PB-214	1600.00Y	1.00	1.353E+00	1.353E+00	0.203E+00	14.98	
PO-214	1600.00Y	1.00	1.353E+00	1.353E+00	0.203E+00	14.98	
PO-216	1.41E+10Y	1.00	1.645E+00	1.645E+00	0.190E+00	11.54	
PO-218	1600.00Y	1.00	1.353E+00	1.353E+00	0.203E+00	14.98	
RA-224	1.41E+10Y	1.00	4.915E+00	4.915E+00	1.667E+00	33.92	
RA-226	1600.00Y	1.00	1.172E+00	1.172E+00	0.204E+00	17.40	
AC-228	1.41E+10Y	1.00	1.654E+00	1.654E+00	0.316E+00	19.09	
RA-228	1.41E+10Y	1.00	1.654E+00	1.654E+00	0.316E+00	19.09	
TH-228	1.91Y	1.01	1.645E+00	1.670E+00	0.193E+00	11.54	
TH-230	4.47E+09Y	1.00	1.172E+00	1.172E+00	0.204E+00	17.40	
TH-232	1.41E+10Y	1.00	1.654E+00	1.654E+00	0.316E+00	19.09	
TH-234	4.47E+09Y	1.00	5.086E+00	5.086E+00	1.728E+00	33.98	
U-234	4.47E+09Y	1.00	1.172E+00	1.172E+00	0.204E+00	17.40	
NP-237	2.14E+06Y	1.00	7.366E-01	7.366E-01	3.094E-01	42.00	
U-238	4.47E+09Y	1.00	5.086E+00	5.086E+00	1.728E+00	33.98	
AM-243	7380.00Y	1.00	3.213E-01	3.213E-01	0.668E-01	20.79	
ANH-511	1.00E+09Y	1.00	1.402E-01	1.402E-01	0.686E-01	48.91	

Total Activity : 8.935E+01 8.949E+01

Grand Total Activity : 8.935E+01 8.949E+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
2	89.87	165	422	0.84	179.39	169	23	2.29E-02	39.2	6.93E+00	T
0	186.18	333	423	1.26	371.97	367	12	4.62E-02	27.8	5.81E+00	T
0	209.55	208	318	0.93	418.69	414	11	2.89E-02	36.3	5.38E+00	T
0	270.33	96	217	1.09	540.24	536	9	1.33E-02	59.3	4.49E+00	T
0	409.79	58	181	1.75	819.12	815	12	7.99E-03	97.0	3.28E+00	T
0	463.94	106	177	1.42	927.41	919	16	1.47E-02	60.4	2.97E+00	T
0	727.89	102	128	1.94	1455.23	1449	16	1.41E-02	54.2	2.06E+00	T
0	768.56	102	108	2.71	1536.56	1529	18	1.42E-02	51.7	1.97E+00	
0	795.40	54	61	1.37	1590.23	1585	11	7.43E-03	62.6	1.91E+00	T
2	964.88	51	38	2.12	1929.14	1925	29	7.02E-03	50.5	1.61E+00	T
0	1377.85	56	30	2.62	2755.02	2746	15	7.78E-03	50.3	1.18E+00	
0	1730.23	22	9	1.53	3459.73	3452	12	3.12E-03	67.8	9.96E-01	
0	1847.40	31	0	3.82	3694.06	3688	14	4.31E-03	35.9	9.55E-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]G246875005.CNF;1
* Acquisition date   : 24-FEB-2010 08:52:20   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 02:00:01.47          Half life ratio    : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246875005             Analyst initials  : MXR1
* Batch Number       : 952643                 Sample Quantity   : 1.44490E+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	3.091E+01	3.155E+00	4.865E-01	4.177E-02	63.529
CD-109	2.551E+00	9.332E-01	1.063E+00	1.001E-01	2.401
SN-126	2.508E-01	9.176E-02	1.047E-01	9.811E-03	2.396
BA-137M	1.119E-01	6.067E-02	5.610E-02	4.965E-03	1.995
CS-137	1.183E-01	6.414E-02	5.931E-02	5.258E-03	1.995
RE-188	2.722E-01	2.641E-01	2.425E-01	1.957E-02	1.123
TL-208	5.751E-01	9.509E-02	5.809E-02	5.557E-03	9.900
BI-210	4.739E+00	2.890E+00	2.571E+00	2.412E-01	1.843
PB-210	4.739E+00	2.890E+00	2.571E+00	2.412E-01	1.843
PO-210	4.739E+00	2.884E+00	2.571E+00	2.187E-01	1.843
BI-211	3.890E+00	5.463E-01	3.120E-01	2.799E-02	12.468
PB-212	1.645E+00	1.899E-01	8.564E-02	8.191E-03	19.211
PO-212	1.645E+00	1.899E-01	8.564E-02	8.191E-03	19.211
BI-214	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
PB-214	1.353E+00	2.027E-01	1.051E-01	1.091E-02	12.872
PO-214	1.353E+00	2.027E-01	1.051E-01	1.091E-02	12.872
PO-216	1.645E+00	1.899E-01	8.564E-02	8.191E-03	19.211
PO-218	1.353E+00	2.027E-01	1.051E-01	1.091E-02	12.872

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224	4.915E+00	1.667E+00	9.748E-01	8.243E-02	5.042
RA-226	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
AC-228	1.654E+00	3.156E-01	1.998E-01	2.327E-02	8.278
RA-228	1.654E+00	3.156E-01	1.998E-01	2.327E-02	8.278
TH-228	1.670E+00	1.927E-01	8.691E-02	8.313E-03	19.211
TH-230	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
TH-232	1.654E+00	3.156E-01	1.998E-01	2.327E-02	8.278
TH-234	5.086E+00	1.728E+00	1.452E+00	2.526E-01	3.503
U-234	1.172E+00	2.039E-01	1.092E-01	1.129E-02	10.736
NP-237	7.366E-01	3.094E-01	3.091E-01	6.990E-02	2.383
U-238	5.086E+00	1.728E+00	1.452E+00	2.526E-01	3.503
AM-243	3.213E-01	6.680E-02	6.786E-02	5.455E-03	4.736
ANH-511	1.402E-01	6.858E-02	3.888E-02	3.455E-03	3.606

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.980E-01		2.967E-01	4.987E-01	4.707E-02	0.397
NA-22	-1.643E-02		4.369E-02	6.958E-02	5.712E-03	-0.236
NA-24	1.811E-01		2.917E-01	Half-Life too short		
AL-26	1.368E-02		2.801E-02	5.066E-02	4.131E-03	0.270
TI-44	3.588E-01	+	4.985E-02	6.517E-02	5.456E-03	5.506
SC-46	4.305E-03		3.897E-02	6.390E-02	5.856E-03	0.067
V-48	-5.137E-02		7.161E-02	1.070E-01	9.629E-03	-0.480
CR-51	2.800E-02		3.318E-01	5.484E-01	4.956E-02	0.051
MN-52	8.637E-02		2.019E-01	3.502E-01	2.912E-02	0.247
MN-54	3.487E-02		3.750E-02	6.539E-02	6.002E-03	0.533
CO-56	2.990E-03		3.804E-02	6.242E-02	5.731E-03	0.048
CO-57	4.663E-03		2.371E-02	3.843E-02	3.306E-03	0.121
CO-58	-2.286E-02		3.629E-02	5.573E-02	5.120E-03	-0.410
FE-59	6.781E-03		9.132E-02	1.536E-01	1.423E-02	0.044
CO-60	1.732E-02		3.825E-02	6.604E-02	5.410E-03	0.262
ZN-65	-3.724E-02		9.716E-02	1.329E-01	1.128E-02	-0.280
GE-68	-4.536E-01		1.284E+00	2.086E+00	1.808E-01	-0.217
AS-73	1.224E-01		5.000E-01	8.302E-01	6.234E-02	0.147
AS-74	-3.032E-02		8.838E-02	1.441E-01	1.292E-02	-0.210
SE-75	-1.457E-03		4.181E-02	6.431E-02	5.492E-03	-0.023
BR-77	7.646E+00		9.138E+00	1.618E+01	1.441E+00	0.473
SR-82	-4.883E-02		4.223E-01	5.910E-01	5.397E-02	-0.083
RB-83	6.210E-02		6.542E-02	1.165E-01	1.037E-02	0.533
RB-84	-4.990E-02		7.249E-02	1.102E-01	1.011E-02	-0.453
KR-85	1.919E+01		7.972E+00	1.362E+01	1.211E+00	1.409
SR-85	9.814E-02		4.077E-02	6.967E-02	6.196E-03	1.409
RB-86	-5.968E-01		8.087E-01	1.268E+00	1.099E-01	-0.471
Y-88	2.833E-02		3.284E-02	6.224E-02	5.051E-03	0.455
ZR-88	-5.246E-03		2.825E-02	4.531E-02	3.774E-03	-0.116
Y-91	-1.359E+01		1.938E+01	3.031E+01	2.476E+00	-0.448

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	-3.173E-02		3.351E-02	5.125E-02	4.601E-03	-0.619
NB-95	6.103E-02		4.850E-02	7.727E-02	7.044E-03	0.790
NB-95M	7.763E-02		1.275E-01	1.940E-01	1.883E-02	0.400
ZR-95	4.850E-02		6.933E-02	1.199E-01	1.191E-02	0.405
NB-97	4.870E-03		3.980E-02	Half-Life	too short	
ZR-97	1.635E+00		7.109E-01	Half-Life	too short	
MO-99	3.577E+00		1.034E+01	1.747E+01	2.697E+00	0.205
TC-99M	-1.835E+10		9.647E+09	Half-Life	too short	
RH-101	-1.463E-02		2.907E-02	4.803E-02	3.940E-03	-0.305
RH-102	-3.293E-02		2.850E-02	4.141E-02	3.633E-03	-0.795
RU-103	-1.470E-02		3.763E-02	5.816E-02	8.318E-03	-0.253
RH-106	-3.182E-01		3.138E-01	4.788E-01	6.495E-02	-0.665
RU-106	-3.182E-01		3.121E-01	4.788E-01	4.279E-02	-0.665
AG-108M	-2.573E-02		3.236E-02	4.919E-02	4.391E-03	-0.523
AG-110M	2.228E-03		3.639E-02	5.278E-02	4.809E-03	0.042
IN-111	-2.243E-01		1.011E+00	1.463E+00	1.239E-01	-0.153
IN-113M	-3.060E-02		4.155E-02	6.402E-02	5.503E-03	-0.478
SN-113	-3.060E-02		4.155E-02	6.402E-02	5.503E-03	-0.478
IN-114M	-1.168E-02		1.776E-01	2.643E-01	2.150E-02	-0.044
CD-115	1.814E+00		8.736E+00	1.492E+01	1.331E+00	0.122
SN-117M	-1.308E-02		5.894E-02	8.203E-02	6.577E-03	-0.159
SB-122	3.251E+00		1.884E+00	3.462E+00	3.104E-01	0.939
I-123	2.361E+00		2.212E+00	Half-Life	too short	
TE-123M	1.594E-02		2.986E-02	4.341E-02	3.502E-03	0.367
I-124	-4.878E-01		7.193E-01	9.728E-01	8.716E-02	-0.501
SB-124	-5.294E-02		5.948E-02	7.398E-02	6.408E-03	-0.716
SB-125	-6.640E-02		8.831E-02	1.347E-01	1.175E-02	-0.493
TE-125M	3.157E+00		8.141E+00	1.335E+01	1.384E+00	0.236
I-126	1.402E-01		2.047E-01	3.140E-01	2.784E-02	0.447
SB-126	1.226E-02		1.375E-01	2.157E-01	1.947E-02	0.057
SB-127	1.616E-01		1.211E+00	2.024E+00	2.337E-01	0.080
XE-127	-1.819E-02		4.239E-02	7.021E-02	5.786E-03	-0.259
I-131	-3.917E-02		1.003E-01	1.593E-01	1.426E-02	-0.246
TE-132	-4.090E-01		5.961E-01	9.631E-01	1.498E-01	-0.425
BA-133	9.436E-03		4.635E-02	6.798E-02	8.927E-03	0.139
I-133	-1.373E-03		2.151E-03	Half-Life	too short	
CS-134	9.605E-02	+	6.077E-02	8.743E-02	8.056E-03	1.099
CS-135	1.892E-01		1.632E-01	2.550E-01	2.514E-02	0.742
I-135	1.831E+08		1.422E+09	Half-Life	too short	
CS-136	-5.936E-02		1.086E-01	1.737E-01	1.589E-02	-0.342
CE-139	1.474E-02		2.903E-02	4.696E-02	3.715E-03	0.314
BA-140	2.007E-01		2.485E-01	4.247E-01	1.411E-01	0.472
LA-140	-2.916E-02		7.936E-02	1.212E-01	1.014E-02	-0.241
CE-141	1.071E-02		6.218E-02	9.833E-02	8.231E-03	0.109
CE-143	4.441E-04		8.463E-05	Half-Life	too short	
CE-144	3.746E-02		1.910E-01	3.082E-01	4.758E-02	0.122
PM-144	3.054E-02		3.518E-02	6.141E-02	5.505E-03	0.497
PR-144	2.069E+00		2.384E+00	4.161E+00	3.729E-01	0.497

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	4.272E-02		4.546E-02	7.718E-02	8.317E-03	0.553
ND-147	-4.595E-01		4.983E-01	7.745E-01	1.172E-01	-0.593
PM-149	4.900E+00		7.732E+01	1.284E+02	1.988E+01	0.038
EU-152	1.313E-02		9.483E-02	1.513E-01	1.371E-02	0.087
GD-153	4.501E-02		7.502E-02	1.111E-01	9.932E-03	0.405
EU-154	-4.977E-02		1.217E-01	1.931E-01	2.123E-02	-0.258
EU-155	1.121E-01		9.435E-02	1.590E-01	1.404E-02	0.705
TB-160	-2.601E-02		1.431E-01	2.286E-01	2.097E-02	-0.114
HO-166M	5.407E-02		5.851E-02	1.029E-01	9.263E-03	0.526
TM-171	3.785E+00		2.331E+01	3.462E+01	2.589E+00	0.109
LU-176	5.828E-03		2.234E-02	3.736E-02	3.201E-03	0.156
LU-177	4.273E+00	+	1.592E+00	1.874E+00	1.552E-01	2.279
LU-177M	-2.844E-02		1.965E-01	2.744E-01	2.323E-02	-0.104
HF-181	-2.390E-02		3.948E-02	6.010E-02	5.288E-03	-0.398
W-181	-3.062E-02		3.011E-01	4.430E-01	3.278E-02	-0.069
TA-182	1.027E-01		1.971E-01	3.396E-01	2.778E-02	0.302
RE-183	-1.040E-02		1.057E-01	1.669E-01	1.329E-02	-0.062
RE-184	9.656E-02		2.126E-01	3.617E-01	3.070E-02	0.267
OS-185	-6.539E-03		4.103E-02	6.735E-02	5.988E-03	-0.097
W-188	-7.028E+00		8.011E+00	1.087E+01	9.271E-01	-0.647
IR-192	-2.205E-02		3.166E-02	4.990E-02	4.289E-03	-0.442
AU-195	3.086E-01		2.094E-01	3.381E-01	3.006E-02	0.913
TL-200	2.038E-04		1.758E-04	Half-Life too short		
TL-201	2.539E+00		6.512E+00	1.048E+01	8.303E-01	0.242
TL-202	7.365E-02		6.335E-02	1.100E-01	9.471E-03	0.670
HG-203	5.880E-02		3.903E-02	6.864E-02	5.996E-03	0.857
BI-207	-4.806E-02		5.360E-02	8.169E-02	7.128E-03	-0.588
TL-207	-6.646E-01		6.622E-01	1.012E+00	1.790E-01	-0.657
PO-209	-2.425E+00		7.421E+00	1.167E+01	1.069E+00	-0.208
PB-211	-6.773E-01		1.103E+00	1.354E+00	8.479E-01	-0.500
BI-212	1.086E+00	+	5.991E-01	6.795E-01	7.048E-02	1.598
PO-215	-6.646E-01		6.622E-01	1.012E+00	1.790E-01	-0.657
RN-219	2.449E-01		3.902E-01	6.554E-01	9.763E-02	0.374
RN-220	-6.556E+00		2.372E+01	3.905E+01	3.496E+00	-0.168
RA-223	-6.646E-01		6.622E-01	1.012E+00	1.790E-01	-0.657
AC-227	9.145E-02		3.557E-01	5.991E-01	9.153E-02	0.153
TH-227	9.145E-02		3.558E-01	5.991E-01	1.079E-01	0.153
TH-229	3.620E-01		4.544E-01	7.898E-01	6.450E-02	0.458
PA-231	-9.052E-01		1.423E+00	2.268E+00	3.429E-01	-0.399
TH-231	-6.646E-01		6.622E-01	1.012E+00	1.790E-01	-0.657
U-231	-9.062E-01		9.876E-01	1.362E+00	1.226E-01	-0.665
PA-233	-3.257E-02		5.836E-02	9.291E-02	8.194E-03	-0.351
PA-234	-1.684E-01		3.092E-01	4.712E-01	8.945E-02	-0.357
PA-234M	9.411E+00		5.217E+00	9.389E+00	9.627E-01	1.002
U-235	2.635E-01		2.139E-01	3.449E-01	5.974E-02	0.764
NP-236	2.718E-02		7.678E-02	1.237E-01	9.884E-03	0.220
NP-239	-8.488E-02		1.743E-01	2.750E-01	2.366E-02	-0.309
AM-241	6.845E-02		1.113E-01	1.692E-01	1.342E-02	0.404

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-4.681E-02		8.688E-02	1.376E-01	1.206E-02	-0.340
AM-246	1.088E-01		1.399E-01	2.487E-01	2.153E-02	0.437
CM-247	1.580E-02		3.434E-02	5.732E-02	4.812E-03	0.276
CF-249	-1.051E-02		3.706E-02	5.909E-02	4.933E-03	-0.178
CF-251	5.317E-02		1.110E-01	1.916E-01	1.535E-02	0.277

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]G246875005            *
* Acquisition date   : 24-FEB-2010 08:52:20 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 02:00:01.47 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G246875005 Analyst initials: MXR1                   *
* Batch Number      : 952643 Sample Quantity : 1.4449E+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	3.091E+01	3.091E+00	2.446E-01	1.577E+00
CD-109	2.551E+00	9.145E-01	5.683E-01	4.666E-01
SN-126	2.508E-01	8.992E-02	5.601E-02	4.588E-02
BA-137M	1.119E-01	5.946E-02	2.873E-02	3.034E-02
CS-137	1.183E-01	6.286E-02	3.037E-02	3.207E-02
RE-188	2.722E-01	2.588E-01	1.282E-01	1.321E-01
TL-208	5.751E-01	9.318E-02	2.983E-02	4.754E-02
BI-210	4.739E+00	2.832E+00	1.393E+00	1.445E+00
PB-210	4.739E+00	2.832E+00	1.393E+00	1.445E+00
PO-210	4.739E+00	2.826E+00	1.393E+00	1.442E+00
BI-211	3.890E+00	5.354E-01	1.620E-01	2.732E-01
PB-212	1.645E+00	1.861E-01	4.485E-02	9.493E-02
PO-212	1.645E+00	1.861E-01	4.485E-02	9.493E-02
BI-214	1.172E+00	1.998E-01	5.600E-02	1.019E-01
PB-214	1.353E+00	1.987E-01	5.460E-02	1.014E-01
PO-214	1.353E+00	1.987E-01	5.460E-02	1.014E-01
PO-216	1.645E+00	1.861E-01	4.485E-02	9.493E-02
PO-218	1.353E+00	1.987E-01	5.460E-02	1.014E-01
RA-224	4.915E+00	1.634E+00	5.104E-01	8.336E-01
RA-226	1.172E+00	1.998E-01	5.600E-02	1.019E-01
AC-228	1.654E+00	3.093E-01	1.016E-01	1.578E-01
RA-228	1.654E+00	3.093E-01	1.016E-01	1.578E-01
TH-228	1.670E+00	1.888E-01	4.552E-02	9.635E-02
TH-230	1.172E+00	1.998E-01	5.600E-02	1.019E-01
TH-232	1.654E+00	3.093E-01	1.016E-01	1.578E-01
TH-234	5.086E+00	1.694E+00	7.818E-01	8.641E-01
U-234	1.172E+00	1.998E-01	5.600E-02	1.019E-01
NP-237	7.366E-01	3.032E-01	1.654E-01	1.547E-01
U-238	5.086E+00	1.694E+00	7.818E-01	8.641E-01
AM-243	3.213E-01	6.547E-02	3.642E-02	3.340E-02
ANH-511	1.402E-01	6.721E-02	2.003E-02	3.429E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.980E-01	2.908E-01	2.573E-01	1.484E-01 NOT IDENT.
NA-22	-1.643E-02	4.282E-02	3.510E-02	2.184E-02 NOT IDENT.
NA-24	1.811E+05	5.717E+05	0.000E+00	2.917E+05 SHORT HLIF
AL-26	1.368E-02	2.745E-02	2.535E-02	1.401E-02 NOT IDENT.
TI-44	3.588E-01	4.886E-02	3.494E-02	2.493E-02 FAIL ABUN
SC-46	4.305E-03	3.819E-02	3.251E-02	1.949E-02 FAIL ABUN
V-48	-5.137E-02	7.018E-02	5.428E-02	3.581E-02 NOT IDENT.
CR-51	2.800E-02	3.252E-01	2.854E-01	1.659E-01 NOT IDENT.
MN-52	8.637E-02	1.979E-01	1.762E-01	1.010E-01 NOT IDENT.
MN-54	3.487E-02	3.675E-02	3.331E-02	1.875E-02 NOT IDENT.
CO-56	2.990E-03	3.728E-02	3.179E-02	1.902E-02 NOT IDENT.
CO-57	4.663E-03	2.324E-02	2.041E-02	1.185E-02 NOT IDENT.
CO-58	-2.286E-02	3.557E-02	2.841E-02	1.815E-02 NOT IDENT.
FE-59	6.781E-03	8.949E-02	7.774E-02	4.566E-02 NOT IDENT.
CO-60	1.732E-02	3.748E-02	3.328E-02	1.912E-02 NOT IDENT.
ZN-65	-3.724E-02	9.522E-02	6.726E-02	4.858E-02 NOT IDENT.
GE-68	-4.536E-01	1.258E+00	1.057E+00	6.420E-01 NOT IDENT.
AS-73	1.224E-01	4.900E-01	4.486E-01	2.500E-01 NOT IDENT.
AS-74	-3.032E-02	8.661E-02	7.397E-02	4.419E-02 NOT IDENT.
SE-75	-1.457E-03	4.097E-02	3.361E-02	2.090E-02 NOT IDENT.
BR-77	7.646E+00	8.955E+00	8.331E+00	4.569E+00 FAIL ABUN
SR-82	-4.883E-02	4.138E-01	3.016E-01	2.111E-01 NOT IDENT.
RB-83	6.210E-02	6.411E-02	5.996E-02	3.271E-02 NOT IDENT.
RB-84	-4.990E-02	7.104E-02	5.608E-02	3.625E-02 NOT IDENT.
KR-85	1.919E+01	7.812E+00	7.016E+00	3.986E+00 NOT IDENT.
SR-85	9.814E-02	3.995E-02	3.588E-02	2.038E-02 NOT IDENT.
RB-86	-5.968E-01	7.925E-01	6.420E-01	4.043E-01 NOT IDENT.
Y-88	2.833E-02	3.218E-02	3.113E-02	1.642E-02 NOT IDENT.
ZR-88	-5.246E-03	2.769E-02	2.347E-02	1.413E-02 NOT IDENT.
Y-91	-1.359E+01	1.899E+01	1.531E+01	9.689E+00 NOT IDENT.
NB-94	-3.173E-02	3.284E-02	2.621E-02	1.676E-02 NOT IDENT.
NB-95	6.103E-02	4.753E-02	3.944E-02	2.425E-02 NOT IDENT.
NB-95M	7.763E-02	1.249E-01	1.016E-01	6.375E-02 NOT IDENT.
ZR-95	4.850E-02	6.795E-02	6.120E-02	3.467E-02 NOT IDENT.
NB-97	4.870E+03	7.801E+04	0.000E+00	3.980E+04 SHORT HLIF
ZR-97	1.635E+06	1.393E+06	0.000E+00	7.109E+05 SHORT HLIF
MO-99	3.577E+00	1.013E+01	8.922E+00	5.168E+00 NOT IDENT.
TC-99M	-1.835E+16	1.891E+16	0.000E+00	9.647E+15 SHORT HLIF
RH-101	-1.463E-02	2.849E-02	2.526E-02	1.454E-02 NOT IDENT.
RH-102	-3.293E-02	2.793E-02	2.136E-02	1.425E-02 NOT IDENT.
RU-103	-1.470E-02	3.688E-02	2.997E-02	1.882E-02 FAIL ABUN
RH-106	-3.182E-01	3.075E-01	2.455E-01	1.569E-01 FAIL ABUN
RU-106	-3.182E-01	3.059E-01	2.455E-01	1.561E-01 FAIL ABUN
AG-108M	-2.573E-02	3.171E-02	2.543E-02	1.618E-02 NOT IDENT.
AG-110M	2.228E-03	3.566E-02	2.703E-02	1.820E-02 NOT IDENT.
IN-111	-2.243E-01	9.905E-01	7.658E-01	5.054E-01 NOT IDENT.
IN-113M	-3.060E-02	4.071E-02	3.317E-02	2.077E-02 NOT IDENT.
SN-113	-3.060E-02	4.071E-02	3.317E-02	2.077E-02 NOT IDENT.
IN-114M	-1.168E-02	1.741E-01	1.391E-01	8.882E-02 NOT IDENT.
CD-115	1.814E+00	8.561E+00	7.681E+00	4.368E+00 NOT IDENT.
SN-117M	-1.308E-02	5.776E-02	4.334E-02	2.947E-02 NOT IDENT.
SB-122	3.251E+00	1.847E+00	1.779E+00	9.422E-01 NOT IDENT.
I-123	2.361E+06	4.336E+06	0.000E+00	2.212E+06 SHORT HLIF
TE-123M	1.594E-02	2.926E-02	2.293E-02	1.493E-02 NOT IDENT.
I-124	-4.878E-01	7.049E-01	4.992E-01	3.596E-01 NOT IDENT.
SB-124	-5.294E-02	5.829E-02	3.708E-02	2.974E-02 FAIL ABUN
SB-125	-6.640E-02	8.654E-02	6.967E-02	4.415E-02 FAIL ABUN
TE-125M	3.157E+00	7.978E+00	7.108E+00	4.070E+00 NOT IDENT.
I-126	1.402E-01	2.006E-01	1.608E-01	1.024E-01 NOT IDENT.
SB-126	1.226E-02	1.348E-01	1.102E-01	6.876E-02 FAIL ABUN
SB-127	1.616E-01	1.186E+00	1.036E+00	6.053E-01 NOT IDENT.
XE-127	-1.819E-02	4.155E-02	3.690E-02	2.120E-02 NOT IDENT.
I-131	-3.917E-02	9.830E-02	8.265E-02	5.015E-02 NOT IDENT.
TE-132	-4.090E-01	5.842E-01	5.049E-01	2.981E-01 NOT IDENT.
BA-133	9.436E-03	4.542E-02	3.529E-02	2.317E-02 NOT IDENT.
I-133	-1.373E+03	4.216E+03	0.000E+00	2.151E+03 SHORT HLIF
CS-134	9.605E-02	5.956E-02	4.459E-02	3.039E-02 FAIL ABUN
CS-135	1.892E-01	1.599E-01	1.332E-01	8.161E-02 NOT IDENT.
I-135	1.831E+14	2.787E+15	0.000E+00	1.422E+15 SHORT HLIF
CS-136	-5.936E-02	1.065E-01	8.804E-02	5.431E-02 FAIL ABUN
CE-139	1.474E-02	2.844E-02	2.479E-02	1.451E-02 NOT IDENT.
BA-140	2.007E-01	2.436E-01	2.185E-01	1.243E-01 NOT IDENT.
LA-140	-2.916E-02	7.777E-02	6.081E-02	3.968E-02 NOT IDENT.
CE-141	1.071E-02	6.094E-02	5.204E-02	3.109E-02 NOT IDENT.

CE-143	4.441E+02	1.659E+02	0.000E+00	8.463E+01	SHORT HLIF
CE-144	3.746E-02	1.872E-01	1.634E-01	9.550E-02	NOT IDENT.
PM-144	3.054E-02	3.448E-02	3.141E-02	1.759E-02	NOT IDENT.
PR-144	2.069E+00	2.336E+00	2.128E+00	1.192E+00	NOT IDENT.
PM-146	4.272E-02	4.456E-02	3.986E-02	2.273E-02	NOT IDENT.
ND-147	-4.595E-01	4.884E-01	3.986E-01	2.492E-01	FAIL ABUN
PM-149	4.900E+00	7.577E+01	6.699E+01	3.866E+01	NOT IDENT.
EU-152	1.313E-02	9.293E-02	7.860E-02	4.741E-02	FAIL ABUN
GD-153	4.501E-02	7.352E-02	5.928E-02	3.751E-02	NOT IDENT.
EU-154	-4.977E-02	1.193E-01	9.743E-02	6.087E-02	NOT IDENT.
EU-155	1.121E-01	9.247E-02	8.470E-02	4.718E-02	FAIL ABUN
TB-160	-2.601E-02	1.402E-01	1.163E-01	7.153E-02	FAIL ABUN
HO-166M	5.407E-02	5.734E-02	5.260E-02	2.926E-02	FAIL ABUN
TM-171	3.785E+00	2.284E+01	1.862E+01	1.165E+01	NOT IDENT.
LU-176	5.828E-03	2.190E-02	1.946E-02	1.117E-02	FAIL ABUN
LU-177	4.273E+00	1.560E+00	9.845E-01	7.961E-01	FAIL ABUN
LU-177M	-2.844E-02	1.926E-01	1.420E-01	9.827E-02	NOT IDENT.
HF-181	-2.390E-02	3.869E-02	3.099E-02	1.974E-02	NOT IDENT.
W-181	-3.062E-02	2.951E-01	2.384E-01	1.506E-01	NOT IDENT.
TA-182	1.027E-01	1.932E-01	1.715E-01	9.855E-02	FAIL ABUN
RE-183	-1.040E-02	1.036E-01	8.814E-02	5.287E-02	FAIL ABUN
RE-184	9.656E-02	2.084E-01	1.892E-01	1.063E-01	NOT IDENT.
OS-185	-6.539E-03	4.021E-02	3.451E-02	2.051E-02	NOT IDENT.
W-188	-7.028E+00	7.851E+00	5.669E+00	4.005E+00	FAIL ABUN
IR-192	-2.205E-02	3.103E-02	2.598E-02	1.583E-02	FAIL ABUN
AU-195	3.086E-01	2.053E-01	1.804E-01	1.047E-01	FAIL ABUN
TL-200	2.038E+02	3.445E+02	0.000E+00	1.758E+02	SHORT HLIF
TL-201	2.539E+00	6.382E+00	5.531E+00	3.256E+00	NOT IDENT.
TL-202	7.365E-02	6.209E-02	5.682E-02	3.168E-02	NOT IDENT.
HG-203	5.880E-02	3.825E-02	3.583E-02	1.951E-02	NOT IDENT.
BI-207	-4.806E-02	5.253E-02	4.138E-02	2.680E-02	FAIL ABUN
TL-207	-6.646E-01	6.490E-01	5.266E-01	3.311E-01	FAIL ABUN
PO-209	-2.425E+00	7.273E+00	5.935E+00	3.711E+00	NOT IDENT.
PB-211	-6.773E-01	1.081E+00	7.008E-01	5.515E-01	NOT IDENT.
BI-212	1.086E+00	5.871E-01	3.472E-01	2.995E-01	FAIL ABUN
PO-215	-6.646E-01	6.490E-01	5.266E-01	3.311E-01	FAIL ABUN
RN-219	2.449E-01	3.824E-01	3.394E-01	1.951E-01	FAIL ABUN
RN-220	-6.556E+00	2.325E+01	2.008E+01	1.186E+01	NOT IDENT.
RA-223	-6.646E-01	6.490E-01	5.266E-01	3.311E-01	FAIL ABUN
AC-227	9.145E-02	3.486E-01	3.133E-01	1.779E-01	FAIL ABUN
TH-227	9.145E-02	3.487E-01	3.133E-01	1.779E-01	FAIL ABUN
TH-229	3.620E-01	4.453E-01	4.155E-01	2.272E-01	FAIL ABUN
PA-231	-9.052E-01	1.395E+00	1.183E+00	7.117E-01	FAIL ABUN
TH-231	-6.646E-01	6.490E-01	5.266E-01	3.311E-01	FAIL ABUN
U-231	-9.062E-01	9.679E-01	7.271E-01	4.938E-01	FAIL ABUN
PA-233	-3.257E-02	5.720E-02	4.838E-02	2.918E-02	FAIL ABUN
PA-234	-1.684E-01	3.030E-01	2.393E-01	1.546E-01	FAIL ABUN
PA-234M	9.411E+00	5.113E+00	4.763E+00	2.609E+00	NOT IDENT.
U-235	2.635E-01	2.096E-01	1.826E-01	1.069E-01	FAIL ABUN
NP-236	2.718E-02	7.524E-02	6.532E-02	3.839E-02	NOT IDENT.
NP-239	-8.488E-02	1.708E-01	1.462E-01	8.716E-02	FAIL ABUN
AM-241	6.845E-02	1.090E-01	9.124E-02	5.563E-02	NOT IDENT.
CM-243	-4.681E-02	8.515E-02	7.336E-02	4.344E-02	FAIL ABUN
AM-246	1.088E-01	1.371E-01	1.260E-01	6.997E-02	NOT IDENT.
CM-247	1.580E-02	3.366E-02	2.968E-02	1.717E-02	NOT IDENT.
CF-249	-1.051E-02	3.632E-02	3.062E-02	1.853E-02	NOT IDENT.
CF-251	5.317E-02	1.087E-01	1.010E-01	5.548E-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	317.2753
46.50	317.2753
46.50	317.2753
48.70	382.1498
49.72	357.5427
51.35	375.3722
52.39	384.4055
52.97	383.0566
53.15	386.1048
53.44	388.3042
54.07	406.2022
56.28	441.2451
56.28	441.2474
57.37	0.0000
57.53	384.6683
57.53	384.6703
57.60	384.7329
57.98	375.1936
57.98	375.1936
59.32	414.3180
59.32	414.3180
59.40	417.3132
59.54	417.4507
59.72	417.6274
60.01	403.2977
61.10	446.8029
61.14	446.8437
61.30	447.0089
63.00	479.6438
63.29	479.9585
63.29	479.9585
63.58	503.8441
64.28	565.1319
65.12	546.9710
65.20	547.0677
65.20	547.0677
66.05	536.2418
66.72	523.6747
66.83	523.8040
66.91	535.7685
67.20	512.3436
67.20	512.3436
67.75	498.3834
67.85	498.4908
68.90	536.5805
68.90	536.5805
69.30	581.7925
69.67	592.7043
70.82	564.2086
70.82	564.2086
70.83	564.2200
72.80	502.9192
72.87	502.9932
72.87	502.9932
74.67	504.8469
74.81	504.9899
74.81	504.9899
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74.81	504.9899
74.97	505.1533
75.28	505.4699
75.70	505.8963
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77.11	507.3236

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77.11	507.3236
77.11	507.3236
77.11	507.3236
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79.80	521.1852
80.11	523.0232
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81.07	614.1241
81.07	614.1241
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83.78	589.6553
83.78	589.6553
83.78	589.6553
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84.90	584.7365
85.43	586.8537
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86.50	481.5253
86.54	481.5610
86.59	481.6062
86.72	481.7205
86.79	481.7800
86.94	481.9156
87.30	482.2322
87.30	482.2322
87.30	482.2322
87.30	482.2322
87.30	482.2322
87.30	482.2322
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87.88	482.7440
88.03	482.8749
88.36	483.1653
88.47	483.2629
89.95	484.5531
91.11	485.5600
92.29	486.5740
92.38	486.6526
92.38	486.6526
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94.00	488.0356
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94.67	349.2269
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94.90	363.4664
94.90	363.4664
94.90	363.4664
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95.87	423.7083
96.73	421.1913
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98.44	345.1833
98.44	345.1833
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99.55	349.5129
99.86	346.5353
100.00	346.6157
100.10	356.1595
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103.76	382.6995
105.00	317.6115
105.31	314.5828
108.00	369.3092
109.28	332.6236

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111.00	373.2015
111.76	377.9370
112.95	365.7255
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116.30	356.7883
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117.00	350.6721
117.66	330.4353
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121.78	332.4582
122.06	332.5947
122.32	331.6295
122.32	331.6295
122.32	331.6295
122.32	331.6295
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136.00	326.9578
136.25	334.8558
136.48	354.9907
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144.24	326.0671
144.24	326.0671
144.24	326.0671
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153.22	288.8842
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154.21	289.2407
154.21	289.2407
154.21	289.2407
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156.02	280.7614
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159.00	281.7899
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162.64	314.0983
163.35	339.6983
163.89	334.1590
165.85	299.1342
167.43	304.3211
171.28	280.1198
171.86	272.1669
172.10	272.2430
176.55	262.2295
176.60	262.2455
181.06	270.7899
184.41	250.5635
185.71	266.6911
186.00	266.7760
190.27	264.9864
192.34	273.6655
193.63	252.8932
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198.01	280.9960
198.60	284.7612
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201.83	285.7189
202.84	287.8209
205.31	273.5332

208.36	275.8340
208.81	264.1584
209.75	264.4070
209.75	264.4070
210.97	235.8018
215.65	227.8815
216.55	236.9260
218.09	253.7744
222.10	245.5662
223.80	234.9128
226.40	239.1905
227.00	238.4028
227.08	238.4225
227.20	240.2965
228.16	251.6154
228.18	251.6216
228.18	251.6216
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236.00	253.4664
236.00	253.4664
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238.63	241.0010
238.63	241.0010
238.63	241.0010
239.00	241.0837
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241.98	241.7382
241.98	241.7382
241.98	241.7382
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245.39	212.0319
247.94	189.9075
248.90	218.7302
249.79	211.3552
252.40	193.8735
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252.85	191.1119
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256.20	202.1105
256.20	202.1105
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260.90	180.0685
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268.24	179.4676
268.79	179.5504
269.46	171.9758
269.46	171.9758
269.46	171.9758
269.46	171.9758
271.23	209.1365
273.65	240.3756
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277.35	205.7555
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277.60	208.6963
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278.60	179.8583
279.20	176.0764
279.53	191.6071
280.46	225.6476
281.68	210.3611
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284.30	204.9793
285.00	192.4590
285.90	173.1437
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286.10	171.2251
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290.80	212.4934
291.72	187.6318
293.26	0.0000
293.70	194.1890
295.21	181.8759
295.21	181.8759

295.21	181.8759
295.96	181.9835
296.50	149.1008
297.23	149.1866
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300.09	146.3706
300.09	146.3706
300.09	146.3706
300.12	146.3751
301.29	160.6849
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303.91	156.2730
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304.40	175.2830
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318.01	149.5720
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319.41	132.7585
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323.87	201.2944
323.87	201.2944
325.23	180.4422
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333.44	180.7121
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334.20	163.0524
334.30	163.0647
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338.28	148.7541
338.28	148.7541
338.28	148.7541
338.32	148.7585
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338.32	148.7585
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345.85	133.7068
350.59	0.0000
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351.92	142.0075
351.92	142.0075
351.92	142.0075
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364.48	124.6779
366.43	131.0327
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367.94	0.0000
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374.96	108.9478
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387.95	130.7983
388.63	116.1997
391.69	137.4045
391.69	137.4045
392.90	124.9140
398.62	134.8477
400.65	127.6357
401.10	131.8913
401.81	117.1719
402.60	116.1734
404.84	140.4495
410.95	116.7760
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413.65	134.4080
414.70	117.4701
415.30	117.5123

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439.56	88.5539
439.89	99.3728
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445.03	117.0044
445.03	117.0044
445.03	117.0044
445.03	117.0044
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468.07	114.1515
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475.35	130.0420
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477.59	87.1681
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487.03	90.9450
490.36	0.0000
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497.08	97.0108
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510.53	0.0000
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511.00	78.6282
511.85	78.6629
511.85	78.6629
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513.99	91.5000
520.41	87.5889
520.65	87.6008
527.90	81.5801
528.96	0.0000
529.64	87.0961
529.87	0.0000
531.02	100.7753
537.32	84.7013
543.00	104.1196
546.56	0.0000
549.76	92.5570
552.65	90.8523
555.20	85.4528
563.23	83.0193
563.90	76.5865
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569.32	114.7182
569.50	114.7272
569.67	114.7363
573.80	100.1294
574.00	96.4285
574.64	97.3865
578.91	68.1538
579.30	0.0000
583.14	100.5724
585.48	93.2251
591.81	99.1110
592.07	100.0565
593.00	99.1654
595.88	103.9812
600.56	102.2242
602.52	0.0000
602.71	115.8990
602.71	115.8990
603.60	106.5461
604.41	98.7477
604.70	98.7605
609.31	99.9107

609.31	99.9107
609.31	99.9107
609.31	99.9107
610.33	95.8710
612.46	94.3896
614.37	92.8981
618.01	90.8414
621.84	106.1648
621.84	106.1648
631.29	88.5248
633.02	72.3985
633.10	72.4004
634.78	70.5475
635.90	74.3971
636.97	83.0217
645.85	84.3025
646.12	87.1854
656.30	81.7959
657.75	77.0313
657.90	0.0000
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661.65	86.8052
664.57	0.0000
666.33	86.9788
666.33	86.9788
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677.61	60.2033
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695.00	104.6515
696.49	86.1201
696.49	86.1201
697.00	86.1373
697.49	78.3223
698.33	80.3083
698.50	90.1088
699.00	92.0860
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706.58	0.0000
706.67	94.3383
709.31	76.7317
711.68	69.9132
713.82	91.6559
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720.50	72.8785
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722.78	84.0703
722.78	84.0703
722.89	84.0745
722.95	84.0765
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724.18	77.5206
727.18	77.2821
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735.90	89.4792
739.58	68.6985
742.81	76.7613
744.21	80.7924
747.13	74.8920
751.79	82.0300
752.31	86.0483
753.82	82.0941
755.35	80.1387
756.15	69.1415
756.87	76.1763
763.93	73.7021
765.79	75.4303
766.42	77.1252
766.84	85.5209
776.49	75.7361
778.00	64.4115
778.57	64.6781
778.89	64.6859
783.80	81.0059
785.46	64.8453
792.07	67.7132

795.84	72.8932
796.30	74.6009
798.80	71.2749
801.93	75.7257
805.60	65.3281
810.29	74.6414
810.76	69.5406
815.85	46.1052
817.79	62.5414
818.51	63.5833
819.60	58.4793
826.30	63.7619
828.27	0.0000
831.60	92.7312
831.96	88.6224
834.83	68.0818
836.80	0.0000
846.75	65.2610
848.13	57.0007
856.28	0.0000
856.80	64.1041
860.37	56.2043
867.32	45.6448
867.82	52.1741
871.10	64.7693
873.19	78.4058
874.81	49.1618
875.33	0.0000
876.40	50.2348
879.36	71.2373
880.27	86.9798
880.51	82.7938
881.50	78.6292
883.24	50.3520
884.67	59.8222
889.25	63.0674
896.60	68.4928
898.02	72.7414
899.00	67.4938
903.28	56.3242
911.07	60.3524
911.07	60.3524
911.07	60.3524
919.63	64.7708
920.93	49.9260
925.00	43.6105
925.24	42.5508
926.50	50.0178
935.52	49.0974
937.48	73.6915
944.10	52.4441
946.00	71.7535
949.00	63.2464
962.29	57.4141
964.01	46.6743
966.15	58.2029
968.20	58.2398
969.11	58.2570
969.11	58.2570
969.11	58.2570
977.42	61.2930
980.50	43.3076
983.50	70.4399
989.30	59.7104
996.32	107.7132
1001.03	49.0309
1001.68	56.6693
1004.76	97.0830
1021.30	0.0000
1024.50	0.0000
1034.80	53.2044
1036.00	62.3997
1037.82	54.1698
1038.57	55.1001
1038.76	0.0000
1045.16	58.8880
1046.59	68.1194
1048.07	73.6751

1050.47	67.2761
1050.47	67.2761
1062.04	66.5801
1063.62	74.0104
1076.63	77.0762
1077.35	72.4490
1078.86	52.9667
1085.78	68.9023
1099.22	65.4285
1112.02	60.0365
1112.84	49.8625
1115.52	67.6084
1120.29	58.2965
1120.29	58.2965
1120.29	58.2965
1120.29	58.2965
1120.51	58.2991
1121.28	58.3117
1124.00	0.0000
1129.67	62.2188
1131.51	0.0000
1147.95	0.0000
1167.94	60.0187
1173.22	80.1377
1175.09	73.4971
1177.93	81.1955
1189.05	68.9824
1204.90	87.5527
1205.75	0.0000
1213.00	79.0605
1221.42	70.5405
1230.97	85.2464
1235.34	101.8298
1236.41	0.0000
1238.25	82.4925
1246.25	62.2422
1260.41	0.0000
1271.85	60.6907
1274.45	59.7515
1274.54	59.7515
1291.56	48.2025
1298.22	0.0000
1312.09	41.5266
1325.50	37.6954
1325.50	37.6954
1332.49	35.7729
1333.61	25.8424
1360.21	35.0114
1362.66	0.0000
1365.15	28.0422
1368.21	30.7353
1368.53	0.0000
1376.25	30.1245
1384.27	29.3195
1394.10	28.2347
1395.20	35.3019
1407.95	18.2095
1434.06	21.3726
1436.60	28.5127
1457.56	0.0000
1460.81	23.5503
1489.15	17.5174
1509.49	22.7716
1596.49	25.3076
1620.62	12.7178
1678.03	0.0000
1691.02	15.0505
1691.02	15.0505
1706.46	0.0000
1750.46	0.0000
1764.49	9.8156
1764.49	9.8156
1764.49	9.8156
1764.49	9.8156
1770.23	13.1016
1771.40	13.1050
1791.20	0.0000
1808.65	11.3124

1836.01

10.4230

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875005

Total Uranium Activity	1.5252E+01	ug/g
Total Uranium Counting Unc.	5.0397E+00	ug/g
Total Uranium Tpu	2.5713E-06	ug/g
Total Uranium Mda	2.3273E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 952643                SAMPLE ID   : G246875005                *
*  ANALYST       : MXR1                  DETECTOR    : GAM07                  *
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00          *
*  ANALYSIS DATE : 24-FEB-2010 08:52:20.29  SAMPLE ALQT: 144.490 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.027E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.428E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.987E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.941E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 10:54:22.21

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875006.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:52:50
Sample ID          : G246875006           Sample quantity  : 1.22260E+02 GRAM
Detector name      : GAM14                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00         Elapsed real time: 0 02:00:01.81  0.0%
Energy tolerance   : 1.50000 keV           Analyst Initials : MXR1
Abundance limit    : 75.00000              Sensitivity        : 5.00000
Batch ID           : 952643                Detector SN#       :
Matrix Spike ID    :                      LCS ID           : 1032-A
*****

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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.26*	134	959	1.33	126.07	121	12	1.86E-02	47.5	
2	1	74.87	742	809	1.54	149.28	141	18	1.03E-01	8.3	2.62E+00
3	1	77.26	1081	685	1.32	154.05	141	18	1.50E-01	5.5	
4	1	87.39	397	606	1.55	174.28	162	30	5.51E-02	12.4	2.28E+00
5	1	90.11	284	501	1.28	179.72	162	30	3.94E-02	15.5	
6	1	92.85*	396	520	1.43	185.20	162	30	5.50E-02	12.8	
7	0	105.58	117	380	1.61	210.64	207	8	1.63E-02	30.2	
8	0	128.81	64	440	1.27	257.04	255	7	8.91E-03	55.3	
9	0	185.90*	303	450	1.57	371.11	366	11	4.21E-02	15.0	
10	0	209.64	146	438	1.12	418.55	413	11	2.02E-02	29.4	
11	3	238.58*	1895	263	1.33	476.38	469	20	2.63E-01	2.8	1.80E+00
12	3	241.57	467	378	2.02	482.36	469	20	6.48E-02	12.7	
13	6	270.08	170	238	1.64	539.33	535	28	2.36E-02	16.6	2.11E+00
14	6	277.41	123	372	2.79	553.97	535	28	1.71E-02	39.6	
15	0	295.01	632	260	1.33	589.15	581	13	8.78E-02	6.6	
16	0	299.93	105	257	1.06	598.99	595	10	1.46E-02	30.3	
17	0	328.11	178	225	1.80	655.30	649	13	2.47E-02	19.0	
18	0	338.38*	324	330	1.46	675.84	670	14	4.51E-02	13.3	
19	0	351.76*	954	288	1.47	702.56	695	16	1.33E-01	5.2	
20	0	409.41	67	162	1.55	817.79	814	10	9.34E-03	37.3	
21	0	463.18	137	96	1.37	925.27	920	11	1.91E-02	16.4	
22	0	511.38*	130	210	1.93	1021.62	1013	15	1.80E-02	28.5	
23	0	569.42*	133	261	1.61	1137.65	1129	18	1.85E-02	30.2	
24	0	583.35*	614	169	1.66	1165.49	1158	16	8.52E-02	6.3	
25	0	609.37*	663	187	1.78	1217.51	1209	16	9.20E-02	6.1	
26	0	727.90	159	101	2.12	1454.49	1448	16	2.21E-02	16.4	
27	0	795.86	36	72	0.95	1590.39	1583	11	4.93E-03	49.1	
28	0	861.25	78	80	1.77	1721.15	1715	11	1.09E-02	24.8	
29	0	911.78*	387	101	1.78	1822.21	1815	17	5.38E-02	7.9	
30	0	934.95	58	43	1.60	1868.55	1865	10	8.05E-03	24.8	
31	4	965.12	66	61	2.31	1928.89	1924	20	9.17E-03	26.8	6.55E-01
32	4	969.48	201	78	1.67	1937.60	1924	20	2.79E-02	10.7	
33	0	1121.05	159	89	1.62	2240.79	2233	17	2.21E-02	15.7	
34	0	1461.65*	1588	50	1.97	2922.27	2914	19	2.21E-01	2.8	
35	0	1570.63	16	12	0.79	3140.39	3129	16	2.24E-03	53.9	
36	0	1765.19*	130	0	1.80	3529.85	3523	14	1.80E-02	9.0	

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

VMS Nuclide Identification Report V3.1 Generated 24-FEB-2010 10:54:25

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875006.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 24-FEB-2010 08:52:50
Sample ID        : G246875006           Sample quantity  : 122.26 GRAM
Sample type      : SOLID                 Sample geometry   :
Detector name    : GAMMA14              Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.81   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	*	3.775E+01	3.444E+00	6.613E-01	4.802E-02	57.089
CD-109	+	88.03	*	4.745E+00	1.246E+00	1.312E+00	1.147E-01	3.617
SN-126	+	64.28		9.256E-01	8.882E-01	8.121E-01	1.157E-01	1.140
	+	86.94		1.940E+00	9.354E-01	5.407E-01	2.236E-01	3.588
	+	87.57	*	4.666E-01	1.225E-01	1.294E-01	1.126E-02	3.605
EU-155		48.70		-1.075E+00	2.014E+00	3.239E+00	2.076E-01	-0.332
		60.01		6.155E+00	5.413E+00	8.063E+00	5.361E-01	0.763
	+	86.54		5.619E-01	1.477E-01	1.571E-01	1.364E-02	3.576
	+	105.31	*	2.295E-01	1.397E-01	2.024E-01	1.566E-02	1.134
TL-208	+	277.35		1.111E+00	8.884E-01	6.623E-01	7.004E-02	1.678
	+	510.84		5.969E-01	3.455E-01	2.541E-01	2.591E-02	2.349
	+	583.14	*	8.115E-01	1.164E-01	6.875E-02	4.701E-03	11.805
	+	860.37		9.918E-01	5.016E-01	5.227E-01	4.917E-02	1.898
BI-211		72.87		2.056E+01	4.111E+00	6.779E+00	4.996E-01	3.032
	+	351.07	*	5.418E+00	6.566E-01	3.485E-01	2.208E-02	15.549
PB-212	+	74.81		3.499E+00	7.142E-01	6.037E-01	7.239E-02	5.796
	+	77.11		2.919E+00	3.922E-01	3.465E-01	2.668E-02	8.425
	+	87.30		2.158E+00	6.062E-01	5.999E-01	7.940E-02	3.597
	+	238.63	*	2.343E+00	2.148E-01	1.018E-01	7.414E-03	23.021
	+	300.09		2.000E+00	1.221E+00	1.392E+00	1.151E-01	1.437
PO-212	+	74.81		3.499E+00	7.142E-01	6.037E-01	7.239E-02	5.796
	+	77.11		2.919E+00	3.922E-01	3.465E-01	2.668E-02	8.425
	+	87.30		2.158E+00	6.062E-01	5.999E-01	7.940E-02	3.597
		115.19		3.841E+00	4.261E+00	7.059E+00	5.136E-01	0.544
	+	238.63	*	2.343E+00	2.148E-01	1.018E-01	7.414E-03	23.021
	+	300.09		2.000E+00	1.221E+00	1.392E+00	1.151E-01	1.437
BI-214	+	609.31	*	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
	+	1120.29		2.125E+00	6.972E-01	5.117E-01	4.740E-02	4.153
	+	1764.49		2.386E+00	4.548E-01	3.460E-01	2.075E-02	6.895
PB-214	+	74.81		6.029E+00	1.182E+00	1.040E+00	1.098E-01	5.796
	+	77.11		5.004E+00	7.729E-01	5.940E-01	6.434E-02	8.425
	+	87.30		3.697E+00	1.011E+00	1.028E+00	1.192E-01	3.597
	+	241.98		3.465E+00	9.252E-01	6.124E-01	4.919E-02	5.658
	+	295.21		2.115E+00	3.324E-01	2.447E-01	2.092E-02	8.644

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	351.92	*	1.885E+00	2.487E-01	1.215E-01	9.967E-03	15.517
	+	74.81		6.029E+00	1.182E+00	1.040E+00	1.098E-01	5.796
	+	77.11		5.004E+00	7.729E-01	5.940E-01	6.434E-02	8.425
	+	87.30		3.697E+00	1.011E+00	1.028E+00	1.192E-01	3.597
	+	241.98		3.465E+00	9.252E-01	6.124E-01	4.919E-02	5.658
PO-216	+	295.21		2.115E+00	3.324E-01	2.447E-01	2.092E-02	8.644
	+	351.92	*	1.885E+00	2.487E-01	1.215E-01	9.967E-03	15.517
	+	74.81		3.499E+00	7.142E-01	6.037E-01	7.239E-02	5.796
	+	77.11		2.919E+00	3.922E-01	3.465E-01	2.668E-02	8.425
	+	87.30		2.158E+00	6.062E-01	5.999E-01	7.940E-02	3.597
PO-218	+	238.63	*	2.343E+00	2.148E-01	1.018E-01	7.414E-03	23.021
	+	300.09		2.000E+00	1.221E+00	1.392E+00	1.151E-01	1.437
	+	74.81		6.029E+00	1.182E+00	1.040E+00	1.098E-01	5.796
	+	77.11		5.004E+00	7.729E-01	5.940E-01	6.434E-02	8.425
	+	87.30		3.697E+00	1.011E+00	1.028E+00	1.192E-01	3.597
RA-224	+	241.98		3.465E+00	9.252E-01	6.124E-01	4.919E-02	5.658
	+	295.21		2.115E+00	3.324E-01	2.447E-01	2.092E-02	8.644
	+	351.92	*	1.885E+00	2.487E-01	1.215E-01	9.967E-03	15.517
	+	240.98	*	6.570E+00	1.715E+00	1.158E+00	6.654E-02	5.675
	+	609.31	*	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
AC-228	+	1120.29		2.125E+00	6.972E-01	5.117E-01	4.740E-02	4.153
	+	1764.49		2.386E+00	4.548E-01	3.460E-01	2.075E-02	6.895
	+	338.32		2.029E+00	9.885E-01	4.201E-01	1.712E-01	4.831
	+	911.07	*	2.330E+00	4.598E-01	2.325E-01	2.731E-02	10.021
	+	969.11		2.138E+00	6.767E-01	4.401E-01	1.028E-01	4.858
RA-228	+	338.32		2.029E+00	9.885E-01	4.201E-01	1.712E-01	4.831
	+	911.07	*	2.330E+00	4.598E-01	2.325E-01	2.731E-02	10.021
	+	969.11		2.138E+00	6.767E-01	4.401E-01	1.028E-01	4.858
	+	74.81		3.551E+00	6.456E-01	6.127E-01	4.655E-02	5.796
	+	77.11		2.963E+00	3.980E-01	3.516E-01	2.708E-02	8.425
TH-228	+	87.30		2.190E+00	5.750E-01	6.088E-01	5.280E-02	3.597
	+	238.63	*	2.378E+00	2.180E-01	1.033E-01	7.524E-03	23.021
	+	300.09		2.030E+00	1.714E+00	1.412E+00	8.324E-01	1.437
	+	609.31	*	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
	+	1120.29		2.125E+00	6.972E-01	5.117E-01	4.740E-02	4.153
TH-230	+	1764.49		2.386E+00	4.548E-01	3.460E-01	2.075E-02	6.895
	+	338.32		2.029E+00	5.537E-01	4.201E-01	2.414E-02	4.831
	+	911.07	*	2.330E+00	4.598E-01	2.325E-01	2.731E-02	10.021
	+	969.11		2.138E+00	6.767E-01	4.401E-01	1.028E-01	4.858
	+	63.29	*	2.338E+00	2.255E+00	2.116E+00	3.636E-01	1.105
TH-234	+	92.38		3.074E+00	9.598E-01	8.592E-01	1.543E-01	3.577
	+	609.31	*	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
	+	1120.29		2.125E+00	6.972E-01	5.117E-01	4.740E-02	4.153
	+	1764.49		2.386E+00	4.548E-01	3.460E-01	2.075E-02	6.895
	+	89.95		4.480E+00	1.958E+00	1.746E+00	5.384E-01	2.567
U-234	+	93.35		3.695E+00	1.399E+00	1.028E+00	2.871E-01	3.595
	+	105.00		2.249E+00	1.512E+00	1.973E+00	5.836E-01	1.140
	+	143.76	*	1.482E-01	2.551E-01	4.133E-01	6.804E-02	0.359
	+	163.35		1.583E-01	5.582E-01	8.921E-01	1.595E-01	0.177

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	185.71		2.639E-01	8.064E-02	8.048E-02	4.408E-03	3.279
		205.31		-4.170E-02	7.033E-01	1.027E+00	1.840E-01	-0.041
NP-237	+	86.50	*	1.370E+00	4.575E-01	3.832E-01	8.565E-02	3.575
		95.87		9.121E-02	1.258E+00	1.784E+00	4.364E-01	0.051
U-238	+	63.29	*	2.338E+00	2.255E+00	2.116E+00	3.636E-01	1.105
	+	92.38		3.074E+00	8.261E-01	8.592E-01	7.188E-02	3.577
AM-243	+	74.67	*	5.673E-01	1.029E-01	9.809E-02	7.361E-03	5.783
	+	86.72		5.138E+01	1.349E+01	1.435E+01	1.235E+00	3.581
		117.66		-1.400E+00	4.536E+00	7.228E+00	5.211E-01	-0.194
		142.18		-7.396E+00	2.143E+01	3.396E+01	2.135E+00	-0.218
ANH-511	+	511.00	*	1.289E-01	7.385E-02	5.490E-02	3.226E-03	2.348

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-9.711E-02	3.677E-01	5.930E-01	3.997E-02	-0.164
NA-22		1274.54	*	-1.924E-02	4.775E-02	7.547E-02	4.930E-03	-0.255
NA-24		1368.53	*	1.301E-01	4.775E-02	Half-Life too short		
AL-26		1129.67		1.312E+00	2.171E+00	3.421E+00	2.161E-01	0.383
		1808.65	*	-1.306E-02	3.516E-02	5.287E-02	3.065E-03	-0.247
TI-44		67.85		-7.693E-03	7.888E-02	8.036E-02	5.656E-03	-0.096
	+	78.38	*	5.387E-01	7.237E-02	9.497E-02	7.415E-03	5.672
SC-46		889.25	*	1.543E-02	4.438E-02	7.619E-02	7.041E-03	0.203
	+	1120.51		3.630E-01	1.167E-01	1.532E-01	9.921E-03	2.370
V-48		944.10		3.828E-01	1.056E+00	1.809E+00	1.616E-01	0.212
		983.50	*	-5.439E-02	7.631E-02	1.189E-01	1.010E-02	-0.457
		1312.09		-1.045E-01	9.528E-02	1.387E-01	9.585E-03	-0.754
CR-51		320.08	*	2.017E-01	4.527E-01	7.473E-01	4.829E-02	0.270
MN-52		744.21		3.025E-01	2.770E-01	4.807E-01	3.392E-02	0.629
		848.13		2.944E+00	7.354E+00	1.269E+01	1.090E+00	0.232
	+	935.52		6.644E-01	3.354E-01	5.514E-01	4.977E-02	1.205
		1246.25		-1.129E+00	8.529E+00	1.391E+01	8.664E-01	-0.081
		1333.61		7.904E-01	5.311E+00	8.864E+00	6.316E-01	0.089
		1434.06	*	1.425E-01	2.295E-01	4.067E-01	2.851E-02	0.350
MN-54		834.83	*	-3.174E-02	4.451E-02	7.095E-02	5.951E-03	-0.447
CO-56		846.75	*	-7.569E-03	4.350E-02	7.197E-02	6.169E-03	-0.105
		977.42		-1.698E+00	3.422E+00	5.175E+00	4.432E-01	-0.328
		1037.82		7.698E-02	3.589E-01	6.066E-01	5.026E-02	0.127
		1175.09		-1.914E+00	2.762E+00	4.318E+00	2.386E-01	-0.443
		1238.25		2.161E-01	1.152E-01	2.105E-01	1.367E-02	1.027
		1360.21		1.800E-01	1.077E+00	1.801E+00	1.279E-01	0.100
		1771.40		1.291E-01	2.415E-01	3.872E-01	2.311E-02	0.334
CO-57		122.06	*	-2.207E-02	2.983E-02	4.667E-02	3.320E-03	-0.473
		136.48		9.539E-02	2.542E-01	4.133E-01	3.034E-02	0.231
CO-58		810.76	*	1.237E-02	4.459E-02	7.322E-02	5.892E-03	0.169
FE-59		142.65		-8.966E-03	3.325E+00	5.307E+00	3.328E-01	-0.002
		192.34		4.000E-01	1.158E+00	1.802E+00	2.104E-01	0.222
		1099.22	*	6.841E-02	1.113E-01	1.928E-01	1.484E-02	0.355

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60	1291.56			9.471E-02	1.364E-01	2.387E-01	1.943E-02	0.397
	1173.22			-3.725E-02	5.458E-02	8.533E-02	4.700E-03	-0.437
	1332.49		*	-2.756E-02	4.463E-02	6.822E-02	4.862E-03	-0.404
ZN-65	1115.52		*	-7.584E-02	1.276E-01	1.696E-01	1.115E-02	-0.447
GE-68	1077.35		*	4.501E-01	1.507E+00	2.558E+00	1.839E-01	0.176
AS-73	53.44		*	-3.942E-01	7.262E-01	1.165E+00	7.597E-02	-0.338
AS-74	595.88		*	1.787E-03	1.059E-01	1.724E-01	1.031E-02	0.010
SE-75	634.78			4.991E-01	4.146E-01	7.258E-01	4.335E-02	0.688
	66.05			-3.540E+00	5.956E+00	8.266E+00	7.517E-01	-0.428
	96.73			-4.683E-01	1.004E+00	1.386E+00	1.841E-01	-0.338
BR-77	121.11			-1.358E-01	1.596E-01	2.481E-01	2.511E-02	-0.547
	136.00			-1.663E-02	4.894E-02	7.767E-02	5.130E-03	-0.214
	198.60			-6.385E-01	2.086E+00	3.429E+00	2.374E-01	-0.186
	264.65		*	-3.066E-03	5.482E-02	7.934E-02	4.658E-03	-0.039
	279.53			1.480E-01	1.361E-01	2.097E-01	1.321E-02	0.706
	303.91			-6.543E-01	2.768E+00	3.939E+00	3.765E-01	-0.166
	400.65			3.517E-01	3.000E-01	5.211E-01	4.641E-02	0.675
	87.88		+	9.544E+02	2.506E+02	3.699E+02	3.231E+01	2.580
	200.40			5.081E+01	1.772E+02	3.008E+02	1.673E+01	0.169
	239.00		+	3.501E+02	2.800E+01	4.225E+01	2.426E+00	8.287
	249.79			-4.370E+01	7.008E+01	1.142E+02	6.599E+00	-0.382
	281.68			5.423E+01	9.945E+01	1.492E+02	8.699E+00	0.364
	297.23			5.503E+02	1.000E+02	1.423E+02	8.299E+00	3.868
	303.76			3.108E+01	2.152E+02	3.139E+02	1.829E+01	0.099
	439.47			8.437E+01	1.435E+02	2.441E+02	1.380E+01	0.346
	484.57			2.026E+02	2.415E+02	4.152E+02	2.411E+01	0.488
	520.65		*	-2.045E+00	1.102E+01	1.779E+01	1.049E+00	-0.115
	574.64			-8.463E+01	2.876E+02	3.691E+02	2.204E+01	-0.229
	578.91			-2.166E+01	1.198E+02	1.557E+02	9.302E+00	-0.139
	585.48			2.442E+03	3.347E+02	6.031E+02	3.605E+01	4.050
SR-82	755.35			1.659E+02	1.912E+02	3.263E+02	2.354E+01	0.508
	817.79			1.204E+02	1.392E+02	2.477E+02	2.014E+01	0.486
	698.33			-1.628E+01	3.932E+01	6.157E+01	3.957E+00	-0.264
RB-83	776.49		*	-3.181E-01	4.365E-01	6.582E-01	4.949E-02	-0.483
	1395.20			3.827E+00	1.068E+01	1.833E+01	1.295E+00	0.209
	520.41		*	-1.439E-03	7.897E-02	1.289E-01	7.598E-03	-0.011
RB-84	529.64			-8.720E-02	1.270E-01	1.983E-01	1.172E-02	-0.440
	552.65			-6.412E-02	2.210E-01	3.531E-01	2.100E-02	-0.182
	881.50		*	5.105E-02	8.112E-02	1.418E-01	1.293E-02	0.360
KR-85	513.99		*	1.996E+01	9.970E+00	1.608E+01	9.460E-01	1.241
SR-85	513.99		*	1.021E-01	5.099E-02	8.226E-02	4.838E-03	1.241
RB-86	1076.63		*	3.218E-01	9.623E-01	1.637E+00	1.178E-01	0.197
Y-88	898.02			-7.191E-03	4.849E-02	7.968E-02	7.506E-03	-0.090
ZR-88	1836.01		*	3.538E-03	3.472E-02	5.719E-02	3.248E-03	0.062
	392.90		*	2.005E-02	3.490E-02	5.929E-02	3.228E-03	0.338
	1204.90		*	-4.259E+00	2.239E+01	3.641E+01	2.118E+00	-0.117
NB-94	702.63		*	1.436E-02	4.012E-02	6.637E-02	4.304E-03	0.216
NB-95	871.10			6.042E-03	3.895E-02	6.598E-02	5.906E-03	0.092
	765.79		*	-1.551E-02	5.456E-02	8.578E-02	6.317E-03	-0.181

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NB-95M	235.69	*		7.220E-01	1.877E-01	3.050E-01	2.280E-02	2.367
ZR-95	724.18			5.148E-02	1.280E-01	1.850E-01	1.425E-02	0.278
	756.15	*		1.032E-01	8.847E-02	1.535E-01	1.266E-02	0.672
NB-97	657.90	*		-1.461E-02	8.847E-02	Half-Life	too short	
	1024.50			-3.726E+00	8.847E-02	Half-Life	too short	
ZR-97	254.15			1.727E+00	8.847E-02	Half-Life	too short	
	355.39			1.483E+00	8.847E-02	Half-Life	too short	
	507.63	*		3.106E+00	8.847E-02	Half-Life	too short	
	602.52			-9.632E+00	8.847E-02	Half-Life	too short	
	1021.30			2.111E-01	8.847E-02	Half-Life	too short	
	1147.95			-3.613E-01	8.847E-02	Half-Life	too short	
	1362.66			-4.175E+00	8.847E-02	Half-Life	too short	
	1750.46			1.322E+00	8.847E-02	Half-Life	too short	
MO-99	140.51			-2.610E+01	3.081E+01	4.667E+01	1.263E+01	-0.559
	181.06			-2.347E+00	2.001E+01	2.924E+01	4.978E+00	-0.080
	366.43			4.929E+01	9.175E+01	1.558E+02	8.741E+00	0.316
	739.58	*		-1.041E+00	1.339E+01	2.145E+01	3.073E+00	-0.049
	778.00			-5.426E+01	3.810E+01	5.356E+01	4.039E+00	-1.013
TC-99M	140.51	*		-2.040E+10	3.810E+01	Half-Life	too short	
RH-101	127.23			4.892E-02	4.529E-02	6.649E-02	4.575E-03	0.736
	198.01	*		-2.198E-02	3.819E-02	6.219E-02	3.450E-03	-0.353
	325.23			-1.509E-01	3.148E-01	4.402E-01	2.548E-02	-0.343
RH-102	418.52			-7.276E-02	3.225E-01	5.243E-01	2.919E-02	-0.139
	475.06	*		5.330E-03	3.217E-02	5.328E-02	3.079E-03	0.100
	631.29			6.775E-03	6.602E-02	1.056E-01	6.309E-03	0.064
	697.49			-4.091E-02	8.827E-02	1.376E-01	8.830E-03	-0.297
	766.84			3.720E-02	1.413E-01	2.304E-01	1.700E-02	0.161
	1046.59			-4.028E-02	1.346E-01	2.180E-01	1.669E-02	-0.185
	1112.84			4.697E-01	2.789E-01	4.838E-01	3.197E-02	0.971
RU-103	497.08	*		-2.252E-02	4.282E-02	6.739E-02	8.534E-03	-0.334
+	610.33			1.780E+01	3.502E+00	3.490E+00	5.405E-01	5.100
RH-106	511.85	+		6.437E-01	3.687E-01	4.889E-01	2.873E-02	1.317
	621.84	*		1.889E-01	3.817E-01	6.390E-01	7.558E-02	0.296
	1050.47			-8.714E-01	2.838E+00	4.600E+00	3.494E-01	-0.189
RU-106	511.85	+		6.437E-01	3.687E-01	4.889E-01	2.873E-02	1.317
	621.84	*		1.889E-01	3.813E-01	6.390E-01	3.821E-02	0.296
	1050.47			-8.714E-01	2.838E+00	4.600E+00	3.494E-01	-0.189
AG-108M	433.93	*		-5.256E-03	3.451E-02	5.623E-02	3.454E-03	-0.093
	614.37			3.485E-02	4.960E-02	7.420E-02	4.793E-03	0.470
	722.95			3.953E-04	5.607E-02	7.799E-02	5.606E-03	0.005
AG-110M	657.75	*		-7.908E-03	3.885E-02	6.194E-02	3.913E-03	-0.128
	677.61			6.161E-02	3.613E-01	5.915E-01	3.838E-02	0.104
	706.67			6.897E-02	2.602E-01	4.275E-01	2.928E-02	0.161
	763.93			-1.557E-01	2.132E-01	3.251E-01	2.478E-02	-0.479
	884.67			1.190E-03	5.890E-02	9.871E-02	9.307E-03	0.012
	937.48			1.232E-01	1.510E-01	2.356E-01	2.192E-02	0.523
	1384.27			-1.599E-01	1.988E-01	2.961E-01	2.183E-02	-0.540
IN-111	171.28			1.270E+00	1.169E+00	1.936E+00	1.044E-01	0.656
	245.39	*		6.320E-01	1.210E+00	1.815E+00	1.046E-01	0.348

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IN-113M	391.69	*		7.751E-03	4.970E-02	8.271E-02	4.840E-03	0.094
SN-113	391.69	*		7.751E-03	4.970E-02	8.271E-02	4.840E-03	0.094
IN-114M	190.27	*		7.151E-03	2.355E-01	3.462E-01	1.905E-02	0.021
CD-115	260.90			-5.948E+01	1.311E+02	2.148E+02	1.247E+01	-0.277
	492.35			-1.404E+00	3.549E+01	5.795E+01	3.378E+00	-0.024
	527.90	*		1.312E+00	1.177E+01	1.935E+01	1.144E+00	0.068
SN-117M	156.02			9.231E-01	2.715E+00	4.397E+00	2.531E-01	0.210
	158.56	*		-2.701E-02	6.499E-02	1.024E-01	5.790E-03	-0.264
SB-122	563.90	*		1.595E+00	2.716E+00	4.017E+00	2.395E-01	0.397
	692.80			7.445E+00	4.774E+01	7.800E+01	4.956E+00	0.095
I-123	159.00	*		-1.414E+00	4.774E+01	Half-Life	too short	
	528.96			-2.249E+02	4.774E+01	Half-Life	too short	
TE-123M	159.00	*		-9.538E-03	3.358E-02	5.315E-02	3.040E-03	-0.179
I-124	602.71	*		-1.162E+00	8.608E-01	1.040E+00	6.221E-02	-1.117
	722.78			3.985E-02	5.622E+00	7.820E+00	5.286E-01	0.005
	1325.50			1.006E+01	3.707E+01	6.262E+01	4.416E+00	0.161
	1376.25			7.209E+01	3.638E+01	6.979E+01	4.947E+00	1.033
	1509.49			2.062E+01	1.693E+01	3.159E+01	2.167E+00	0.653
	1691.02			-3.859E+00	4.440E+00	6.123E+00	3.858E-01	-0.630
SB-124	602.71			-7.016E-02	5.198E-02	6.279E-02	3.758E-03	-1.117
	645.85			1.722E-01	5.790E-01	9.582E-01	6.410E-02	0.180
	709.31			1.264E+00	3.374E+00	5.587E+00	3.674E-01	0.226
	713.82			-1.298E+00	2.022E+00	3.103E+00	3.323E-01	-0.418
	722.78			3.487E-03	4.920E-01	6.845E-01	4.788E-02	0.005
	968.20	+		2.195E+01	5.060E+00	9.020E+00	7.821E-01	2.433
	1045.16			-1.408E+00	2.957E+00	4.722E+00	3.623E-01	-0.298
	1325.50			9.402E-01	3.465E+00	5.854E+00	4.128E-01	0.161
	1368.21			4.128E-01	1.856E+00	3.124E+00	3.923E-01	0.132
	1436.60			-1.466E+00	3.835E+00	5.929E+00	4.153E-01	-0.247
	1691.02	*		-7.967E-02	9.168E-02	1.264E-01	8.545E-03	-0.630
SB-125	427.89	*		3.839E-02	1.061E-01	1.779E-01	1.043E-02	0.216
	463.38	+		1.228E+00	4.104E-01	6.209E-01	4.168E-02	1.978
	600.56			-1.574E-01	2.175E-01	3.131E-01	2.150E-02	-0.503
	635.90			3.527E-01	3.123E-01	5.448E-01	3.780E-02	0.647
TE-125M	109.28	*		1.644E+00	1.223E+01	1.734E+01	1.627E+00	0.095
I-126	388.63			-1.649E-01	2.329E-01	3.699E-01	2.021E-02	-0.446
	666.33	*		1.065E-01	2.154E-01	3.600E-01	2.162E-02	0.296
	753.82			1.441E+00	1.806E+00	3.068E+00	2.207E-01	0.470
SB-126	223.80			-1.567E+00	4.514E+00	7.477E+00	4.247E-01	-0.210
	278.60	+		7.246E+00	5.758E+00	4.841E+00	2.822E-01	1.497
	296.50	+		2.077E+01	2.995E+00	4.268E+00	2.490E-01	4.866
	414.70			4.884E-02	9.238E-02	1.374E-01	7.628E-03	0.355
	415.30			-1.036E+00	8.114E+00	1.146E+01	6.364E-01	-0.090
	555.20			1.635E+00	4.308E+00	7.203E+00	4.287E-01	0.227
	573.80			-1.235E-01	1.452E+00	2.027E+00	1.210E-01	-0.061
	593.00			-3.428E-01	1.079E+00	1.716E+00	1.026E-01	-0.200
	656.30			-3.079E+00	3.789E+00	5.754E+00	3.425E-01	-0.535
	666.33			4.447E-02	8.995E-02	1.503E-01	9.029E-03	0.296
	675.00			2.988E-02	2.328E+00	3.769E+00	2.306E-01	0.008

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		695.00		8.665E-02	8.739E-02	1.509E-01	9.629E-03	0.574
		697.00		-1.042E-01	3.059E-01	4.816E-01	3.087E-02	-0.216
		720.50	*	-1.031E-01	1.987E-01	2.759E-01	1.856E-02	-0.374
		856.80		-1.799E-01	5.884E-01	8.211E-01	7.166E-02	-0.219
		989.30		1.240E+00	1.398E+00	2.487E+00	2.094E-01	0.499
		1034.80		-2.132E+00	9.900E+00	1.615E+01	1.263E+00	-0.132
		1213.00		-3.045E+00	5.736E+00	9.091E+00	5.362E-01	-0.335
		61.10		3.453E+01	6.204E+01	9.037E+01	8.735E+00	0.382
		252.40		3.255E+00	4.911E+00	8.109E+00	3.367E+00	0.401
		290.80		2.856E+00	2.484E+01	3.622E+01	3.293E+00	0.079
		411.60		1.910E+01	1.565E+01	2.399E+01	3.410E+00	0.796
		444.90		4.106E+00	1.030E+01	1.731E+01	1.842E+00	0.237
		473.00		-4.881E-01	1.767E+00	2.846E+00	3.155E-01	-0.172
		543.00		1.592E+01	1.823E+01	3.123E+01	4.030E+00	0.510
		603.60		-1.357E+01	1.455E+01	1.840E+01	1.985E+00	-0.737
		685.20	*	8.571E-01	1.556E+00	2.610E+00	2.513E-01	0.328
		698.50		-6.790E+00	1.690E+01	2.645E+01	3.884E+00	-0.257
		722.20		4.234E+00	3.839E+01	5.398E+01	5.239E+00	0.078
		783.80		4.252E+00	4.417E+00	7.529E+00	8.793E-01	0.565
		57.60		9.363E+00	6.369E+00	9.625E+00	6.339E-01	0.973
XE-127		145.22		9.057E-01	8.413E-01	1.388E+00	8.569E-02	0.652
		172.10		1.535E-01	1.475E-01	2.441E-01	1.317E-02	0.629
		202.84	*	7.986E-03	6.052E-02	9.265E-02	5.165E-03	0.086
		374.96		5.642E-02	2.178E-01	3.648E-01	2.028E-02	0.155
I-131		80.18		9.166E-01	8.046E+00	8.261E+00	6.629E-01	0.111
		284.30		-4.630E-01	1.838E+00	2.619E+00	1.696E-01	-0.177
		364.48	*	4.973E-02	1.266E-01	2.136E-01	1.349E-02	0.233
TE-132		636.97		-2.558E-01	1.767E+00	2.834E+00	1.883E-01	-0.090
		722.89		6.517E-02	9.244E+00	1.286E+01	8.781E-01	0.005
		49.72		-4.729E+00	1.531E+01	2.480E+01	2.268E+00	-0.191
		111.76		-1.255E+01	3.372E+01	5.368E+01	5.276E+00	-0.234
		116.30		2.487E+00	3.142E+01	5.076E+01	4.938E+00	0.049
BA-133		228.16	*	-3.152E-01	7.289E-01	1.200E+00	1.713E-01	-0.263
		53.15		-1.753E+00	3.128E+00	5.017E+00	3.268E-01	-0.349
		79.62		5.104E+00	2.501E+00	2.748E+00	4.077E-01	1.858
		81.00		-8.309E-02	1.743E-01	1.712E-01	2.666E-02	-0.485
	+	276.40		1.098E+00	8.818E-01	7.514E-01	9.750E-02	1.461
I-133		302.84		1.187E-01	1.885E-01	2.822E-01	3.294E-02	0.421
		356.01	*	-1.469E-02	5.390E-02	7.579E-02	8.711E-03	-0.194
		383.85		-8.250E-02	3.342E-01	5.445E-01	5.833E-02	-0.152
	+	510.53		1.077E+00	3.342E-01	Half-Life	too short	
		529.87	*	-3.965E-03	3.342E-01	Half-Life	too short	
		706.58		1.620E-01	3.342E-01	Half-Life	too short	
		856.28		-6.596E-02	3.342E-01	Half-Life	too short	
		875.33		-2.972E-02	3.342E-01	Half-Life	too short	
		1236.41		1.047E+00	3.342E-01	Half-Life	too short	
		1298.22		-2.267E-02	3.342E-01	Half-Life	too short	
CS-134		475.35		8.152E-01	2.075E+00	3.484E+00	2.014E-01	0.234
		563.23		3.950E-01	4.966E-01	7.472E-01	4.542E-02	0.529

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	569.32		9.561E-01	5.798E-01	5.934E-01	3.640E-02	1.611
		604.70		1.042E-02	4.210E-02	6.048E-02	3.637E-03	0.172
	+	795.84	*	6.882E-02	6.777E-02	9.600E-02	7.556E-03	0.717
		801.93		-1.856E-01	4.913E-01	7.126E-01	5.662E-02	-0.261
		1038.57		9.775E-01	4.542E+00	7.676E+00	5.963E-01	0.127
		1167.94		2.151E+00	3.053E+00	5.303E+00	2.975E-01	0.406
		1365.15		-6.727E-01	1.327E+00	2.036E+00	1.541E-01	-0.330
CS-135		268.24	*	5.148E-01	2.160E-01	3.471E-01	2.663E-02	1.483
I-135		288.45		-3.634E+08	2.160E-01	Half-Life	too short	
		417.63		-1.002E+10	2.160E-01	Half-Life	too short	
		546.56		5.340E+09	2.160E-01	Half-Life	too short	
		836.80		-1.495E+09	2.160E-01	Half-Life	too short	
		1038.76		2.782E+09	2.160E-01	Half-Life	too short	
		1124.00		5.011E+10	2.160E-01	Half-Life	too short	
		1131.51		5.359E+08	2.160E-01	Half-Life	too short	
		1260.41	*	3.699E+07	2.160E-01	Half-Life	too short	
		1457.56		1.362E+11	2.160E-01	Half-Life	too short	
		1678.03		1.852E+09	2.160E-01	Half-Life	too short	
		1706.46		-2.724E+09	2.160E-01	Half-Life	too short	
		1791.20		-2.253E+09	2.160E-01	Half-Life	too short	
CS-136		66.91		-6.482E-01	1.128E+00	1.305E+00	1.904E-01	-0.497
	+	86.29		6.010E+00	1.679E+00	2.344E+00	3.003E-01	2.564
		153.22		8.419E-01	7.983E-01	1.321E+00	9.609E-02	0.637
		163.89		4.179E-01	1.246E+00	1.997E+00	1.392E-01	0.209
		176.55		-1.603E-01	4.426E-01	6.964E-01	4.307E-02	-0.230
		273.65		4.035E-01	4.815E-01	8.294E-01	5.504E-02	0.487
		340.57		6.288E-01	1.756E-01	2.966E-01	1.811E-02	2.120
		818.51		7.394E-02	8.121E-02	1.450E-01	1.182E-02	0.510
		1048.07	*	-5.662E-02	1.259E-01	2.014E-01	1.620E-02	-0.281
		1235.34		1.498E-02	7.573E-01	1.250E+00	1.272E-01	0.012
BA-137M		661.65	*	5.718E-03	4.217E-02	6.889E-02	4.097E-03	0.083
CS-137		661.65	*	6.044E-03	4.457E-02	7.283E-02	4.348E-03	0.083
CE-139		165.85	*	-6.871E-03	3.571E-02	5.667E-02	3.042E-03	-0.121
BA-140		162.64		-2.376E-01	8.824E-01	1.383E+00	8.648E-02	-0.172
		304.84		6.034E-01	1.626E+00	2.393E+00	6.532E-01	0.252
		423.70		-5.095E-01	2.185E+00	3.542E+00	1.124E+00	-0.144
		537.32	*	-4.180E-01	3.324E-01	4.416E-01	1.437E-01	-0.947
LA-140	+	328.77		1.354E+00	5.226E-01	6.375E-01	4.129E-02	2.123
		432.53		-1.874E+00	2.234E+00	3.482E+00	2.176E-01	-0.538
		487.03		1.293E-02	1.526E-01	2.512E-01	1.653E-02	0.051
		751.79		-7.762E-01	2.034E+00	3.177E+00	2.621E-01	-0.244
		815.85		-1.577E-01	3.528E-01	5.719E-01	5.232E-02	-0.276
		867.82		-2.114E-02	1.712E+00	2.659E+00	2.484E-01	-0.008
		919.63		1.105E+00	3.078E+00	4.642E+00	5.157E-01	0.238
		925.24		-2.073E-01	1.152E+00	1.893E+00	1.825E-01	-0.109
		1596.49	*	-5.377E-02	1.148E-01	1.762E-01	1.168E-02	-0.305
CE-141		145.44	*	7.603E-02	7.556E-02	1.251E-01	7.981E-03	0.608
CE-143		57.37		1.291E-03	7.556E-02	Half-Life	too short	
		231.56		8.407E-04	7.556E-02	Half-Life	too short	

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

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	293.26	*		1.360E-03	7.556E-02	Half-Life	too short	
	350.59	+		3.793E-02	7.556E-02	Half-Life	too short	
	490.36			-2.375E-03	7.556E-02	Half-Life	too short	
	664.57			9.489E-04	7.556E-02	Half-Life	too short	
	721.93			1.152E-04	7.556E-02	Half-Life	too short	
CE-144	80.11			6.931E-01	3.785E+00	3.904E+00	3.108E-01	0.178
	133.54	*		2.415E-01	2.924E-01	4.226E-01	6.152E-02	0.571
PM-144	476.78			1.231E-02	7.496E-02	1.241E-01	8.601E-03	0.099
	618.01			-5.985E-04	3.829E-02	6.208E-02	3.923E-03	-0.010
	696.49	*		-2.726E-03	3.975E-02	6.388E-02	4.093E-03	-0.043
	778.57			-3.687E+00	2.661E+00	3.743E+00	2.826E-01	-0.985
PR-144	696.49	*		-1.847E-01	2.693E+00	4.328E+00	2.771E-01	-0.043
	1489.15			5.184E+00	1.254E+01	2.166E+01	1.496E+00	0.239
PM-146	453.90	*		2.418E-02	5.030E-02	8.479E-02	7.259E-03	0.285
	633.02			2.145E+00	1.816E+00	2.886E+00	1.063E+00	0.744
	735.90			3.106E-02	1.949E-01	2.753E-01	7.748E-02	0.113
	747.13			-9.438E-02	1.116E-01	1.667E-01	2.194E-02	-0.566
ND-147	91.11	+		1.108E+00	3.580E-01	6.128E-01	5.632E-02	1.807
	319.41			4.188E-02	3.877E+00	6.444E+00	3.740E-01	0.007
	439.89			3.793E+00	6.195E+00	1.055E+01	5.969E-01	0.360
	531.02	*		-1.231E-01	6.696E-01	1.080E+00	1.466E-01	-0.114
PM-149	285.90	*		1.134E+01	9.952E+01	1.519E+02	2.155E+01	0.075
EU-152	121.78			-5.768E-02	8.619E-02	1.352E-01	1.169E-02	-0.427
	244.69			7.342E-01	4.197E-01	6.649E-01	3.830E-02	1.104
	344.27	*		6.014E-02	1.506E-01	1.780E-01	1.152E-02	0.338
	443.98			3.070E-02	1.063E+00	1.750E+00	9.923E-02	0.018
	778.89			-3.412E-01	3.014E-01	4.352E-01	3.287E-02	-0.784
	867.32			-3.788E-01	1.101E+00	1.599E+00	1.422E-01	-0.237
	964.01	+		8.072E-01	4.376E-01	6.758E-01	5.892E-02	1.195
	1085.78			-3.047E-01	4.325E-01	6.705E-01	4.730E-02	-0.454
	1112.02			4.601E-01	3.920E-01	6.676E-01	4.420E-02	0.689
	1407.95			3.089E-02	2.369E-01	3.930E-01	2.770E-02	0.079
GD-153	69.67			1.374E+00	2.400E+00	2.954E+00	2.112E-01	0.465
	83.37			5.436E+01	1.734E+01	2.858E+01	2.363E+00	1.902
	97.43	*		1.804E-02	1.026E-01	1.455E-01	1.167E-02	0.124
	103.18			-9.339E-02	1.436E-01	1.963E-01	1.515E-02	-0.476
EU-154	123.07			-4.004E-02	6.192E-02	9.716E-02	9.941E-03	-0.412
	247.94			-3.683E-01	4.775E-01	6.624E-01	6.308E-02	-0.556
	591.81			-1.343E-01	7.842E-01	1.184E+00	1.170E-01	-0.113
	723.30			6.943E-02	2.262E-01	3.247E-01	2.562E-02	0.214
	756.87			8.836E-01	9.695E-01	1.653E+00	1.822E-01	0.534
	873.19			-1.476E-01	3.491E-01	5.651E-01	7.066E-02	-0.261
	996.32			-4.946E-01	4.075E-01	5.894E-01	1.039E-01	-0.839
	1004.76			1.386E-01	2.406E-01	4.178E-01	4.742E-02	0.332
	1274.45	*		-4.914E-02	1.339E-01	2.123E-01	2.082E-02	-0.231
TB-160	86.79	+		1.498E+00	3.931E-01	5.737E-01	4.944E-02	2.610
	197.04			-2.932E-01	6.290E-01	1.042E+00	5.774E-02	-0.281
	215.65			5.234E-03	9.477E-01	1.450E+00	8.180E-02	0.004
	298.57	+		2.903E-01	1.765E-01	2.407E-01	1.404E-02	1.206

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

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HO-166M		879.36	*	4.555E-02	1.629E-01	2.781E-01	2.526E-02	0.164
		962.29		6.677E-01	6.820E-01	1.074E+00	9.385E-02	0.622
	+	966.15		5.530E-01	2.998E-01	5.377E-01	4.675E-02	1.029
		1177.93		-1.389E-01	4.487E-01	7.240E-01	4.021E-02	-0.192
		1271.85		1.186E-01	7.606E-01	1.271E+00	8.250E-02	0.093
		80.57		-1.350E-01	4.818E-01	4.814E-01	3.852E-02	-0.280
	+	184.41		1.979E-01	6.048E-02	7.846E-02	4.291E-03	2.523
		280.46		4.929E-02	1.025E-01	1.530E-01	8.924E-03	0.322
		410.95		5.199E-01	3.299E-01	5.217E-01	2.886E-02	0.997
		711.68	*	-5.787E-02	7.540E-02	1.148E-01	7.585E-03	-0.504
TM-171		752.31		-9.937E-02	3.317E-01	5.216E-01	3.741E-02	-0.191
		810.29		3.525E-02	6.767E-02	1.132E-01	9.076E-03	0.311
		51.35		6.441E-01	2.601E+01	4.256E+01	2.760E+00	0.015
		52.39		3.346E-01	1.366E+01	2.235E+01	1.453E+00	0.015
		59.40		4.033E+01	2.869E+01	4.316E+01	2.859E+00	0.935
LU-176		66.72	*	-3.214E+01	3.780E+01	4.808E+01	3.352E+00	-0.668
	+	88.36		1.107E+00	2.905E-01	4.390E-01	3.825E-02	2.521
		201.83		1.242E-02	3.453E-02	5.680E-02	3.163E-03	0.219
		306.84	*	-5.670E-03	3.010E-02	4.679E-02	2.725E-03	-0.121
LU-177		401.10		7.951E+00	7.901E+00	1.366E+01	7.494E-01	0.582
		112.95		3.124E-01	1.897E+00	3.075E+00	2.258E-01	0.102
LU-177M	+	208.36	*	3.124E+00	1.845E+00	2.276E+00	1.275E-01	1.373
		52.97		-6.333E-01	1.406E+00	2.263E+00	1.474E-01	-0.280
		54.07		-6.588E-01	7.635E-01	1.211E+00	7.908E-02	-0.544
		61.30		1.268E+00	1.683E+00	2.470E+00	1.656E-01	0.513
		121.62		-4.625E-01	4.467E-01	6.904E-01	4.910E-02	-0.670
		147.16		-8.194E-01	8.015E-01	1.236E+00	7.538E-02	-0.663
		171.86		6.206E-01	5.967E-01	9.872E-01	5.327E-02	0.629
		218.09		2.021E-01	9.920E-01	1.677E+00	9.479E-02	0.121
	+	268.79		3.206E+00	1.080E+00	1.810E+00	1.053E-01	1.772
		319.02		-9.858E-02	3.039E-01	4.973E-01	2.886E-02	-0.198
HF-181		367.43		-5.769E-02	1.035E+00	1.707E+00	9.567E-02	-0.034
		413.65	*	7.133E-02	2.230E-01	3.264E-01	1.810E-02	0.219
		56.28		-1.709E-01	8.756E-01	1.421E+00	9.325E-02	-0.120
		57.53		7.861E-01	5.360E-01	8.098E-01	5.332E-02	0.971
		65.20		5.757E-01	1.164E+00	1.683E+00	1.160E-01	0.342
		133.02		7.488E-02	9.441E-02	1.369E-01	9.098E-03	0.547
		136.25		3.236E-02	5.626E-01	9.051E-01	5.898E-02	0.036
		345.85		4.271E-02	2.991E-01	3.437E-01	1.965E-02	0.124
		482.03	*	-1.158E-02	4.952E-02	8.000E-02	4.640E-03	-0.145
	W-181	56.28		-6.639E-02	3.437E-01	5.578E-01	3.660E-02	-0.119
TA-182		57.53		3.087E-01	2.105E-01	3.181E-01	2.094E-02	0.971
		65.20	*	2.243E-01	4.535E-01	6.558E-01	4.518E-02	0.342
		67.75		-2.504E-02	1.878E-01	1.909E-01	1.342E-02	-0.131
		100.10		3.002E-01	2.341E-01	3.466E-01	2.727E-02	0.866
		152.43		3.526E-01	4.139E-01	6.814E-01	4.017E-02	0.518
		222.10		2.535E-01	3.931E-01	6.741E-01	3.824E-02	0.376
		1001.68		-4.283E-01	2.179E+00	3.567E+00	2.948E-01	-0.120
	+	1121.28		1.003E+00	3.224E-01	4.283E-01	2.768E-02	2.342

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183	1189.05			-1.738E-01	3.848E-01	6.139E-01	3.476E-02	-0.283
	1221.42	*		-1.083E-01	2.309E-01	3.670E-01	2.195E-02	-0.295
	1230.97			-3.246E-01	5.652E-01	8.913E-01	5.416E-02	-0.364
	57.98			3.022E-01	2.098E-01	3.167E-01	2.088E-02	0.954
	59.32			1.642E-01	1.176E-01	1.769E-01	1.172E-02	0.928
	67.20			-1.545E-01	2.918E-01	3.394E-01	2.376E-02	-0.455
RE-184	162.32	*		-8.654E-02	1.318E-01	2.034E-01	1.120E-02	-0.425
	208.81	+		2.874E+00	1.698E+00	2.095E+00	1.174E-01	1.372
	291.72			3.584E-01	1.171E+00	1.727E+00	1.008E-01	0.208
	57.98			1.115E+00	7.744E-01	1.169E+00	7.706E-02	0.954
	59.32			6.056E-01	4.337E-01	6.523E-01	4.320E-02	0.928
	67.20			-5.701E-01	1.077E+00	1.252E+00	8.765E-02	-0.455
OS-185	161.27			-2.842E-01	4.212E-01	6.561E-01	3.641E-02	-0.433
	216.55			-2.980E-02	3.159E-01	5.151E-01	2.908E-02	-0.058
	252.85	*		1.435E-01	2.655E-01	4.532E-01	2.621E-02	0.317
	318.01			-4.883E-01	5.196E-01	8.243E-01	4.785E-02	-0.592
	792.07			-2.187E+00	1.494E+00	1.719E+00	1.331E-01	-1.272
	903.28			-1.573E-01	1.237E+00	1.897E+00	1.770E-01	-0.083
RE-188	920.93			2.711E-01	4.768E-01	7.842E-01	7.191E-02	0.346
	59.72			3.461E-01	3.207E-01	4.769E-01	3.165E-02	0.726
	61.14			1.099E-01	1.842E-01	2.689E-01	1.801E-02	0.409
	69.30			1.209E-01	5.052E-01	5.250E-01	3.742E-02	0.230
	592.07			-3.142E-01	3.048E+00	4.784E+00	2.861E-01	-0.066
	646.12	*		1.865E-03	5.045E-02	8.196E-02	4.888E-03	0.023
W-188	717.42			9.570E-01	1.106E+00	1.888E+00	1.262E-01	0.507
	874.81			-2.894E-01	6.724E-01	1.088E+00	9.801E-02	-0.266
	880.27			7.718E-01	8.949E-01	1.588E+00	1.445E-01	0.486
	155.03	*		1.516E-01	2.101E-01	3.444E-01	1.996E-02	0.440
	477.96			-1.160E+00	3.526E+00	5.662E+00	3.277E-01	-0.205
	633.10			4.432E+00	3.313E+00	5.840E+00	3.489E-01	0.759
IR-192	63.58	+		9.375E+01	8.920E+01	9.338E+01	6.357E+00	1.004
	227.08			-1.036E+01	1.424E+01	2.323E+01	1.323E+00	-0.446
	290.67	*		8.381E-01	8.962E+00	1.305E+01	7.614E-01	0.064
	295.96	+		1.609E+00	2.326E-01	3.349E-01	1.984E-02	4.804
	308.46			2.080E-02	1.049E-01	1.760E-01	1.036E-02	0.118
	316.51	*		-2.708E-03	3.919E-02	6.490E-02	3.788E-03	-0.042
AU-195	468.07			2.331E-02	7.814E-02	1.140E-01	7.582E-03	0.204
	604.41			-6.079E-02	5.784E-01	8.030E-01	9.189E-02	-0.076
	612.46			4.384E+00	1.217E+00	2.048E+00	1.580E-01	2.141
	65.12			1.207E-01	2.105E-01	3.052E-01	2.102E-02	0.396
	66.83			-1.079E-01	1.249E-01	1.588E-01	1.108E-02	-0.680
	75.70	+		1.834E+00	3.328E-01	5.527E-01	4.192E-02	3.318
TL-200	98.88	*		3.370E-01	2.934E-01	4.325E-01	3.432E-02	0.779
	129.76	+		3.388E+00	3.755E+00	6.211E+00	4.208E-01	0.546
	367.94	*		-1.731E-05	3.755E+00	Half-Life	too short	
	579.30			1.877E-03	3.755E+00	Half-Life	too short	
	828.27			8.918E-04	3.755E+00	Half-Life	too short	
	1205.75			8.352E-05	3.755E+00	Half-Life	too short	
TL-201	68.90			3.904E+00	7.522E+00	7.961E+00	5.654E-01	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		70.82		4.109E+00	3.171E+00	4.705E+00	3.400E-01	0.873
		80.30		-4.278E-02	8.451E+00	8.609E+00	6.868E-01	-0.005
		135.34		-2.696E+01	3.071E+01	4.780E+01	3.132E+00	-0.564
		167.43	*	-4.690E+00	8.016E+00	1.252E+01	6.727E-01	-0.375
		68.90		3.663E-01	7.057E-01	7.469E-01	5.304E-02	0.490
		70.82		3.844E-01	2.967E-01	4.402E-01	3.181E-02	0.873
HG-203		80.30		-4.003E-03	7.909E-01	8.057E-01	6.428E-02	-0.005
		439.56	*	4.368E-02	7.365E-02	1.253E-01	7.085E-03	0.349
		70.83		1.693E+00	1.312E+00	1.928E+00	2.462E-01	0.878
		72.87		4.073E+00	9.109E-01	1.343E+00	1.669E-01	3.032
BI-207		82.60		7.501E-01	2.008E+00	2.093E+00	2.821E-01	0.358
		279.20	*	4.774E-02	4.606E-02	7.984E-02	4.940E-03	0.598
		72.80		1.124E+00	2.365E-01	3.907E-01	2.878E-02	2.877
	+	74.97		1.018E+00	1.848E-01	2.807E-01	2.113E-02	3.628
		84.90		9.535E-01	2.345E-01	3.851E-01	3.244E-02	2.476
	+	569.67		1.490E-01	9.036E-02	9.231E-02	5.507E-03	1.615
TL-207		1063.62	*	1.670E-02	6.005E-02	1.019E-01	7.542E-03	0.164
		1770.23		6.836E-01	4.796E-01	9.180E-01	5.483E-02	0.745
		81.07		-1.973E-01	3.837E-01	3.766E-01	3.032E-02	-0.524
		83.78		4.945E-01	1.490E-01	2.456E-01	2.040E-02	2.014
		94.90		1.030E+00	3.239E-01	4.977E-01	4.073E-02	2.071
		122.32		-1.380E+00	2.061E+00	3.233E+00	2.537E-01	-0.427
PO-209		144.24		8.006E-01	8.214E-01	1.351E+00	1.022E-01	0.593
		154.21		3.056E-01	4.879E-01	7.973E-01	5.609E-02	0.383
	+	269.46		7.514E-01	2.535E-01	4.259E-01	2.590E-02	1.764
		323.87	*	1.429E-01	8.943E-01	1.302E+00	2.150E-01	0.110
	+	338.28		8.474E+00	2.429E+00	2.883E+00	3.028E-01	2.940
		445.03		9.409E-01	2.504E+00	4.203E+00	4.287E-01	0.224
		260.50		-2.604E+00	1.057E+01	1.748E+01	1.015E+00	-0.149
		262.80		-3.076E+01	2.959E+01	4.716E+01	2.739E+00	-0.652
		896.60	*	-1.027E+00	8.603E+00	1.416E+01	1.326E+00	-0.073
		46.50	*	-1.366E+00	2.811E+00	4.585E+00	3.400E-01	-0.298
BI-210		46.50	*	-1.366E+00	2.811E+00	4.585E+00	3.400E-01	-0.298
PB-210		46.50	*	-1.366E+00	2.811E+00	4.585E+00	3.400E-01	-0.298
PO-210		46.50	*	-1.366E+00	2.811E+00	4.585E+00	2.877E-01	-0.298
PB-211		404.84	*	-1.159E+00	1.487E+00	1.733E+00	1.080E+00	-0.669
BI-212		427.08		2.154E+00	2.712E+00	4.081E+00	2.522E+00	0.528
		831.96		7.478E-01	1.466E+00	2.417E+00	1.514E+00	0.309
	+	727.18	*	1.825E+00	6.169E-01	7.923E-01	6.740E-02	2.303
		785.46		3.257E+00	2.302E+00	4.030E+00	3.082E-01	0.808
PO-215		1620.62		9.500E-01	1.444E+00	2.558E+00	1.676E-01	0.371
		81.07		-1.973E-01	3.837E-01	3.766E-01	3.032E-02	-0.524
		83.78		4.945E-01	1.490E-01	2.456E-01	2.040E-02	2.014
		94.90		1.030E+00	3.239E-01	4.977E-01	4.073E-02	2.071
		122.32		-1.380E+00	2.061E+00	3.233E+00	2.537E-01	-0.427
		144.24		8.006E-01	8.214E-01	1.351E+00	1.022E-01	0.593
		154.21		3.056E-01	4.879E-01	7.973E-01	5.609E-02	0.383
	+	269.46		7.514E-01	2.535E-01	4.259E-01	2.590E-02	1.764
		323.87	*	1.429E-01	8.943E-01	1.302E+00	2.150E-01	0.110
	+	338.28		8.474E+00	2.429E+00	2.883E+00	3.028E-01	2.940

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		9.409E-01	2.504E+00	4.203E+00	4.287E-01	0.224
		271.23		9.640E-01	3.293E-01	5.396E-01	4.381E-02	1.787
		401.81	*	2.661E-01	4.912E-01	8.298E-01	1.118E-01	0.321
		549.76	*	-2.407E+01	3.045E+01	4.697E+01	2.792E+00	-0.512
RN-220		81.07		-1.973E-01	3.837E-01	3.766E-01	3.032E-02	-0.524
RA-223		83.78		4.945E-01	1.490E-01	2.456E-01	2.040E-02	2.014
		94.90		1.030E+00	3.239E-01	4.977E-01	4.073E-02	2.071
		122.32		-1.380E+00	2.061E+00	3.233E+00	2.537E-01	-0.427
		144.24		8.006E-01	8.214E-01	1.351E+00	1.022E-01	0.593
AC-227	+	154.21		3.056E-01	4.879E-01	7.973E-01	5.609E-02	0.383
		269.46		7.514E-01	2.535E-01	4.259E-01	2.590E-02	1.764
		323.87	*	1.429E-01	8.943E-01	1.302E+00	2.150E-01	0.110
		338.28		8.474E+00	2.429E+00	2.883E+00	3.028E-01	2.940
		445.03		9.409E-01	2.504E+00	4.203E+00	4.287E-01	0.224
		79.80		4.234E+00	3.121E+00	3.319E+00	7.048E-01	1.276
		236.00		2.897E+00	4.782E-01	6.881E-01	7.165E-02	4.210
		256.20	*	1.361E-01	4.355E-01	7.362E-01	1.028E-01	0.185
	+	286.10		-3.700E-01	1.755E+00	2.730E+00	3.160E-01	-0.136
		299.80		3.706E+00	2.322E+00	3.097E+00	5.048E-01	1.197
		304.40		5.202E-01	2.395E+00	3.507E+00	6.069E-01	0.148
		334.20		1.183E+00	4.208E+00	4.207E+00	7.707E-01	0.281
TH-227	+	79.80		4.234E+00	3.125E+00	3.319E+00	7.141E-01	1.276
		94.00		1.188E+01	3.979E+00	4.475E+00	9.680E-01	2.654
		236.00		2.897E+00	4.537E-01	6.881E-01	6.201E-02	4.210
		256.20	*	1.361E-01	4.357E-01	7.362E-01	1.244E-01	0.185
	+	286.10		-3.700E-01	1.793E+00	2.730E+00	2.734E+00	-0.136
		299.80		3.706E+00	2.322E+00	3.097E+00	5.048E-01	1.197
		304.40		5.202E-01	2.395E+00	3.507E+00	6.069E-01	0.148
		334.20		1.183E+00	4.208E+00	4.207E+00	7.707E-01	0.281
TH-229	+	85.43		1.241E+00	2.474E-01	4.010E-01	3.399E-02	3.095
		88.47		6.370E-01	1.672E-01	2.530E-01	2.202E-02	2.518
		100.00		3.196E-01	2.436E-01	3.610E-01	2.843E-02	0.885
		193.63	*	-2.328E-02	5.713E-01	9.606E-01	5.305E-02	-0.024
	+	210.97		2.256E+00	1.333E+00	1.593E+00	8.949E-02	1.416
		283.67	*	1.870E-01	1.861E+00	2.714E+00	3.743E-01	0.069
PA-231	+	301.29		1.482E+00	9.103E-01	1.245E+00	1.303E-01	1.191
TH-231		81.07		-1.973E-01	3.837E-01	3.766E-01	3.032E-02	-0.524
		83.78		4.945E-01	1.490E-01	2.456E-01	2.040E-02	2.014
		94.90		1.030E+00	3.239E-01	4.977E-01	4.073E-02	2.071
		122.32		-1.380E+00	2.061E+00	3.233E+00	2.537E-01	-0.427
	+	144.24		8.006E-01	8.214E-01	1.351E+00	1.022E-01	0.593
		154.21		3.056E-01	4.879E-01	7.973E-01	5.609E-02	0.383
		269.46		7.514E-01	2.535E-01	4.259E-01	2.590E-02	1.764
		323.87	*	1.429E-01	8.943E-01	1.302E+00	2.150E-01	0.110
	+	338.28		8.474E+00	2.429E+00	2.883E+00	3.028E-01	2.940
		445.03		9.409E-01	2.504E+00	4.203E+00	4.287E-01	0.224
		84.21		2.136E+01	6.186E+00	1.019E+01	8.511E-01	2.096
		92.29		1.126E+01	3.027E+00	4.565E+00	3.822E-01	2.467
U-231	+	95.87	*	9.923E-02	1.368E+00	1.941E+00	1.575E-01	0.051

---- 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		1.536E+00	2.593E+00	3.754E+00	2.820E-01	0.409
	+	75.28		2.971E+01	6.581E+00	8.595E+00	1.270E+00	3.457
	+	86.59		9.134E+00	3.336E+00	3.522E+00	9.444E-01	2.593
	+	300.12		1.033E+00	6.404E-01	8.605E-01	1.157E-01	1.201
		311.98	*	-9.986E-02	7.059E-02	1.088E-01	6.716E-03	-0.918
		340.50		3.347E+00	1.147E+00	1.487E+00	3.414E-01	2.251
PA-234		398.62		7.944E-01	2.482E+00	4.147E+00	1.069E+00	0.192
		415.76		-8.242E-01	2.066E+00	2.990E+00	6.136E-01	-0.276
	+	63.00		2.726E+00	2.617E+00	2.760E+00	4.018E-01	0.988
		94.67		1.033E+00	2.566E-01	3.710E-01	4.494E-02	2.785
		98.44		8.289E-02	1.290E-01	1.746E-01	9.726E-02	0.475
		99.86		8.966E-01	5.857E-01	9.163E-01	7.222E-02	0.979
		111.00		-1.005E-01	2.400E-01	3.509E-01	3.949E-02	-0.286
		131.20		9.603E-02	1.583E-01	2.276E-01	1.529E-02	0.422
		152.70		3.468E-01	4.026E-01	6.578E-01	1.042E-01	0.527
	+	186.00		7.125E+00	3.051E+00	2.949E+00	8.994E-01	2.416
		226.40		-2.864E-01	4.557E-01	7.448E-01	8.570E-02	-0.384
		227.20		-3.644E-01	4.819E-01	7.847E-01	4.469E-02	-0.464
		248.90		-6.398E-01	9.946E-01	1.509E+00	3.242E-01	-0.424
	+	293.70		1.015E+01	2.112E+00	2.081E+00	3.350E-01	4.877
		369.80		3.363E-01	9.652E-01	1.620E+00	3.365E-01	0.208
	+	568.70		4.851E+00	2.941E+00	2.975E+00	1.774E-01	1.631
	+	569.50		1.323E+00	8.020E-01	8.200E-01	4.892E-02	1.613
		574.00		-4.638E-01	2.100E+00	2.893E+00	1.727E-01	-0.160
		699.00		-5.010E-01	8.291E-01	1.271E+00	2.313E-01	-0.394
		706.10		2.654E-01	1.312E+00	2.138E+00	9.459E-01	0.124
		733.00		-1.147E-01	4.906E-01	6.622E-01	1.429E-01	-0.173
		742.81		2.197E+00	2.190E+00	2.869E+00	1.923E+00	0.766
	+	796.30		1.338E+00	1.361E+00	1.853E+00	4.968E-01	0.722
		805.60		4.506E-01	1.176E+00	1.933E+00	5.890E-01	0.233
		819.60		1.255E+00	1.408E+00	2.382E+00	9.035E-01	0.527
		826.30		-8.341E-01	9.735E-01	1.399E+00	6.250E-01	-0.596
		831.60		4.491E-01	7.362E-01	1.266E+00	3.768E-01	0.355
		876.40		4.197E-02	9.711E-01	1.629E+00	1.676E+00	0.026
		880.51		3.049E-01	3.264E-01	5.816E-01	5.293E-02	0.524
		883.24		-1.326E-01	3.514E-01	5.522E-01	3.716E-01	-0.240
		899.00		-2.176E-01	9.954E-01	1.620E+00	7.106E-01	-0.134
		925.00		-2.698E-01	1.208E+00	1.978E+00	1.806E-01	-0.136
		926.50		1.154E-02	1.788E-01	3.003E-01	7.644E-02	0.038
		946.00	*	1.395E-01	3.577E-01	6.126E-01	1.158E-01	0.228
		949.00		-6.541E-02	5.263E-01	8.698E-01	7.728E-02	-0.075
		980.50		6.901E-01	7.678E-01	1.373E+00	1.171E-01	0.503
	1394.10			1.530E-01	1.172E+00	1.948E+00	1.264E+00	0.079
PA-234M		766.42		3.969E+00	1.457E+01	2.356E+01	1.191E+01	0.168
NP-236	1001.03	*		-9.311E-01	4.813E+00	7.876E+00	7.614E-01	-0.118
		94.67		7.870E-01	1.818E-01	2.817E-01	2.309E-02	2.794
		98.44		6.264E-02	9.116E-02	1.320E-01	1.051E-02	0.474
		111.00		-7.603E-02	1.814E-01	2.654E-01	1.966E-02	-0.286
		160.31	*	-1.166E-02	9.377E-02	1.493E-01	8.342E-03	-0.078

---- 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		2.912E-01	2.055E-01	3.056E-01	2.414E-02	0.953
		117.00	*	8.891E-02	2.272E-01	3.708E-01	2.680E-02	0.240
	+	209.75		2.273E+00	1.343E+00	1.620E+00	9.090E-02	1.403
		228.18		-1.100E-01	2.508E-01	4.136E-01	2.357E-02	-0.266
	+	277.60		5.359E-01	4.259E-01	3.628E-01	2.115E-02	1.477
AM-241		334.30		6.775E-01	2.382E+00	2.385E+00	1.374E-01	0.284
		59.54	*	1.757E-01	1.691E-01	2.510E-01	1.863E-02	0.700
CM-243		99.55		2.996E-01	2.114E-01	3.145E-01	2.484E-02	0.953
		103.76	*	-1.336E-02	1.320E-01	1.854E-01	1.425E-02	-0.072
		117.00		9.147E-02	2.338E-01	3.815E-01	2.757E-02	0.240
	+	209.75		2.241E+00	1.323E+00	1.597E+00	8.961E-02	1.403
		228.18		-1.112E-01	2.534E-01	4.179E-01	2.381E-02	-0.266
AM-246	+	277.60		5.403E-01	4.293E-01	3.657E-01	2.132E-02	1.477
		798.80		-7.908E-02	1.762E-01	2.296E-01	1.801E-02	-0.344
		1036.00		-4.156E-02	3.442E-01	5.663E-01	4.420E-02	-0.073
		1062.04		-1.526E-02	2.656E-01	4.389E-01	3.259E-02	-0.035
		1078.86	*	1.641E-02	1.683E-01	2.814E-01	2.016E-02	0.058
CM-247	+	278.00		2.222E+00	1.766E+00	1.478E+00	8.618E-02	1.503
		287.40		-2.344E-01	1.547E+00	2.219E+00	1.294E-01	-0.106
		402.60	*	9.557E-03	4.492E-02	7.294E-02	4.006E-03	0.131
CF-249		252.85		5.390E-01	9.973E-01	1.702E+00	9.846E-02	0.317
		333.44		5.938E-02	3.104E-01	3.071E-01	1.769E-02	0.193
		387.95	*	-1.659E-02	4.544E-02	7.356E-02	4.022E-03	-0.225
CF-251		176.60	*	-5.624E-02	1.546E-01	2.433E-01	1.319E-02	-0.231
		227.00		-3.033E-01	4.288E-01	6.998E-01	3.984E-02	-0.433
		285.00		7.150E-01	2.149E+00	3.179E+00	1.855E-01	0.225

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]G246875006
* Acquisition date   : 24-FEB-2010 08:52:50 Detector SN#      :
* Detector ID        : GAM14 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 02:00:01.81 Half life ratio : 8.000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G246875006 Analyst initials: MXR1
* Batch Number       : 952643 Sample Quantity : 1.2226E+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	3.775E+01	3.376E+00	6.601E-01	0.000E+00
CD-109	4.745E+00	1.221E+00	1.357E+00	0.000E+00
SN-126	4.666E-01	1.200E-01	1.339E-01	0.000E+00
EU-155	2.295E-01	1.369E-01	2.089E-01	0.000E+00
TL-208	8.115E-01	1.141E-01	6.945E-02	0.000E+00
BI-211	5.418E+00	6.435E-01	3.543E-01	0.000E+00
PB-212	2.343E+00	2.105E-01	1.040E-01	0.000E+00
PO-212	2.343E+00	2.105E-01	1.040E-01	0.000E+00
BI-214	1.655E+00	2.351E-01	1.248E-01	0.000E+00
PB-214	1.885E+00	2.437E-01	1.235E-01	0.000E+00
PO-214	1.885E+00	2.437E-01	1.235E-01	0.000E+00
PO-216	2.343E+00	2.105E-01	1.040E-01	0.000E+00
PO-218	1.885E+00	2.437E-01	1.235E-01	0.000E+00
RA-224	6.570E+00	1.681E+00	1.183E+00	0.000E+00
RA-226	1.655E+00	2.351E-01	1.248E-01	0.000E+00
AC-228	2.330E+00	4.506E-01	2.335E-01	0.000E+00
RA-228	2.330E+00	4.506E-01	2.335E-01	0.000E+00
TH-228	2.378E+00	2.137E-01	1.055E-01	0.000E+00
TH-230	1.655E+00	2.351E-01	1.248E-01	0.000E+00
TH-232	2.330E+00	4.506E-01	2.335E-01	0.000E+00
TH-234	2.338E+00	2.210E+00	2.197E+00	0.000E+00
U-234	1.655E+00	2.351E-01	1.248E-01	0.000E+00
U-235	1.482E-01	2.500E-01	4.250E-01	0.000E+00
NP-237	1.370E+00	4.484E-01	3.965E-01	0.000E+00
U-238	2.338E+00	2.210E+00	2.197E+00	0.000E+00
AM-243	5.673E-01	1.009E-01	1.017E-01	0.000E+00
ANH-511	1.289E-01	7.238E-02	5.556E-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	-9.711E-02	3.603E-01	6.006E-01	0.000E+00	NOT IDENT.
NA-22	-1.924E-02	4.680E-02	7.548E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.843E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.306E-02	3.446E-02	5.263E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.092E-02	9.838E-02	0.000E+00	FAIL ABUN
SC-46	1.543E-02	4.350E-02	7.655E-02	0.000E+00	FAIL ABUN
V-48	-5.439E-02	7.478E-02	1.193E-01	0.000E+00	NOT IDENT.
CR-51	2.017E-01	4.436E-01	7.607E-01	0.000E+00	NOT IDENT.
MN-52	1.425E-01	2.249E-01	4.061E-01	0.000E+00	FAIL ABUN
MN-54	-3.174E-02	4.362E-02	7.135E-02	0.000E+00	NOT IDENT.
CO-56	-7.569E-03	4.263E-02	7.236E-02	0.000E+00	NOT IDENT.
CO-57	-2.207E-02	2.923E-02	4.808E-02	0.000E+00	NOT IDENT.
CO-58	1.237E-02	4.370E-02	7.366E-02	0.000E+00	NOT IDENT.
FE-59	6.841E-02	1.091E-01	1.932E-01	0.000E+00	NOT IDENT.
CO-60	-2.756E-02	4.374E-02	6.819E-02	0.000E+00	NOT IDENT.
ZN-65	-7.584E-02	1.250E-01	1.699E-01	0.000E+00	NOT IDENT.
GE-68	4.501E-01	1.477E+00	2.563E+00	0.000E+00	NOT IDENT.
AS-73	-3.942E-01	7.117E-01	1.213E+00	0.000E+00	NOT IDENT.
AS-74	1.787E-03	1.038E-01	1.741E-01	0.000E+00	NOT IDENT.
SE-75	-3.066E-03	5.372E-02	8.096E-02	0.000E+00	NOT IDENT.
BR-77	-2.045E+00	1.080E+01	1.800E+01	0.000E+00	FAIL ABUN
SR-82	-3.181E-01	4.278E-01	6.625E-01	0.000E+00	NOT IDENT.
RB-83	-1.439E-03	7.739E-02	1.304E-01	0.000E+00	NOT IDENT.
RB-84	5.105E-02	7.950E-02	1.425E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.771E+00	1.628E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.997E-02	8.323E-02	0.000E+00	NOT IDENT.
RB-86	3.218E-01	9.431E-01	1.640E+00	0.000E+00	NOT IDENT.
Y-88	3.538E-03	3.403E-02	5.692E-02	0.000E+00	NOT IDENT.
ZR-88	2.005E-02	3.421E-02	6.020E-02	0.000E+00	NOT IDENT.
Y-91	-4.259E+00	2.194E+01	3.643E+01	0.000E+00	NOT IDENT.
NB-94	1.436E-02	3.932E-02	6.689E-02	0.000E+00	NOT IDENT.
NB-95	-1.551E-02	5.346E-02	8.635E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.839E-01	3.117E-01	0.000E+00	NOT IDENT.
ZR-95	1.032E-01	8.670E-02	1.545E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.350E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.793E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.041E+00	1.313E+01	2.161E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.366E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.198E-02	3.743E-02	6.369E-02	0.000E+00	NOT IDENT.
RH-102	5.330E-03	3.152E-02	5.397E-02	0.000E+00	NOT IDENT.
RU-103	-2.252E-02	4.196E-02	6.822E-02	0.000E+00	FAIL ABUN
RH-106	1.889E-01	3.741E-01	6.450E-01	0.000E+00	FAIL ABUN
RU-106	1.889E-01	3.736E-01	6.450E-01	0.000E+00	FAIL ABUN
AG-108M	-5.256E-03	3.382E-02	5.702E-02	0.000E+00	NOT IDENT.
AG-110M	-7.908E-03	3.808E-02	6.248E-02	0.000E+00	NOT IDENT.
IN-111	6.320E-01	1.186E+00	1.854E+00	0.000E+00	NOT IDENT.
IN-113M	7.751E-03	4.871E-02	8.398E-02	0.000E+00	NOT IDENT.
SN-113	7.751E-03	4.871E-02	8.398E-02	0.000E+00	NOT IDENT.
IN-114M	7.151E-03	2.308E-01	3.547E-01	0.000E+00	NOT IDENT.
CD-115	1.312E+00	1.153E+01	1.958E+01	0.000E+00	NOT IDENT.
SN-117M	-2.701E-02	6.369E-02	1.051E-01	0.000E+00	NOT IDENT.
SB-122	1.595E+00	2.662E+00	4.060E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.879E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-9.538E-03	3.291E-02	5.458E-02	0.000E+00	NOT IDENT.
I-124	-1.162E+00	8.436E-01	1.050E+00	0.000E+00	NOT IDENT.
SB-124	-7.967E-02	8.985E-02	1.259E-01	0.000E+00	FAIL ABUN
SB-125	3.839E-02	1.039E-01	1.805E-01	0.000E+00	FAIL ABUN
TE-125M	1.644E+00	1.198E+01	1.789E+01	0.000E+00	NOT IDENT.
I-126	1.065E-01	2.111E-01	3.630E-01	0.000E+00	NOT IDENT.
SB-126	-1.031E-01	1.947E-01	2.780E-01	0.000E+00	FAIL ABUN
SB-127	8.571E-01	1.525E+00	2.631E+00	0.000E+00	NOT IDENT.
XE-127	7.986E-03	5.931E-02	9.486E-02	0.000E+00	NOT IDENT.
I-131	4.973E-02	1.241E-01	2.171E-01	0.000E+00	NOT IDENT.
TE-132	-3.152E-01	7.143E-01	1.227E+00	0.000E+00	NOT IDENT.
BA-133	-1.469E-02	5.282E-02	7.704E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	5.866E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.882E-02	6.642E-02	9.660E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	2.117E-01	3.541E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.406E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.662E-02	1.234E-01	2.019E-01	0.000E+00	FAIL ABUN
BA-137M	5.718E-03	4.132E-02	6.949E-02	0.000E+00	NOT IDENT.
CS-137	6.044E-03	4.368E-02	7.345E-02	0.000E+00	NOT IDENT.
CE-139	-6.871E-03	3.500E-02	5.816E-02	0.000E+00	NOT IDENT.
BA-140	-4.180E-01	3.258E-01	4.466E-01	0.000E+00	NOT IDENT.
LA-140	-5.377E-02	1.125E-01	1.757E-01	0.000E+00	FAIL ABUN
CE-141	7.603E-02	7.405E-02	1.286E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	3.410E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.415E-01	2.866E-01	4.349E-01	0.000E+00	NOT IDENT.

PM-144	-2.726E-03	3.895E-02	6.439E-02	0.000E+00	NOT IDENT.
PR-144	-1.847E-01	2.639E+00	4.363E+00	0.000E+00	NOT IDENT.
PM-146	2.418E-02	4.930E-02	8.594E-02	0.000E+00	NOT IDENT.
ND-147	-1.231E-01	6.562E-01	1.093E+00	0.000E+00	FAIL ABUN
PM-149	1.134E+01	9.753E+01	1.548E+02	0.000E+00	NOT IDENT.
EU-152	6.014E-02	1.476E-01	1.811E-01	0.000E+00	FAIL ABUN
GD-153	1.804E-02	1.006E-01	1.503E-01	0.000E+00	NOT IDENT.
EU-154	-4.914E-02	1.312E-01	2.124E-01	0.000E+00	NOT IDENT.
TB-160	4.555E-02	1.596E-01	2.795E-01	0.000E+00	FAIL ABUN
HO-166M	-5.787E-02	7.389E-02	1.157E-01	0.000E+00	FAIL ABUN
TM-171	-3.214E+01	3.704E+01	4.991E+01	0.000E+00	NOT IDENT.
LU-176	-5.670E-03	2.950E-02	4.766E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.808E+00	2.329E+00	0.000E+00	FAIL ABUN
LU-177M	7.133E-02	2.186E-01	3.312E-01	0.000E+00	FAIL ABUN
HF-181	-1.158E-02	4.853E-02	8.102E-02	0.000E+00	NOT IDENT.
W-181	2.243E-01	4.444E-01	6.809E-01	0.000E+00	NOT IDENT.
TA-182	-1.083E-01	2.263E-01	3.672E-01	0.000E+00	FAIL ABUN
RE-183	-8.654E-02	1.292E-01	2.088E-01	0.000E+00	FAIL ABUN
RE-184	1.435E-01	2.602E-01	4.627E-01	0.000E+00	NOT IDENT.
OS-185	1.865E-03	4.945E-02	8.269E-02	0.000E+00	NOT IDENT.
RE-188	1.516E-01	2.059E-01	3.538E-01	0.000E+00	NOT IDENT.
W-188	8.381E-01	8.783E+00	1.330E+01	0.000E+00	FAIL ABUN
IR-192	-2.708E-03	3.840E-02	6.608E-02	0.000E+00	FAIL ABUN
AU-195	3.370E-01	2.876E-01	4.467E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.358E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.690E+00	7.856E+00	1.285E+01	0.000E+00	NOT IDENT.
TL-202	4.368E-02	7.218E-02	1.270E-01	0.000E+00	NOT IDENT.
HG-203	4.774E-02	4.514E-02	8.142E-02	0.000E+00	NOT IDENT.
BI-207	1.670E-02	5.885E-02	1.022E-01	0.000E+00	FAIL ABUN
TL-207	1.429E-01	8.765E-01	1.325E+00	0.000E+00	FAIL ABUN
PO-209	-1.027E+00	8.431E+00	1.423E+01	0.000E+00	NOT IDENT.
BI-210	-1.366E+00	2.755E+00	4.779E+00	0.000E+00	NOT IDENT.
PB-210	-1.366E+00	2.755E+00	4.779E+00	0.000E+00	NOT IDENT.
PO-210	-1.366E+00	2.755E+00	4.779E+00	0.000E+00	NOT IDENT.
PB-211	-1.159E+00	1.457E+00	1.759E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.046E-01	7.981E-01	0.000E+00	FAIL ABUN
PO-215	1.429E-01	8.765E-01	1.325E+00	0.000E+00	FAIL ABUN
RN-219	2.661E-01	4.814E-01	8.423E-01	0.000E+00	FAIL ABUN
RN-220	-2.407E+01	2.984E+01	4.749E+01	0.000E+00	NOT IDENT.
RA-223	1.429E-01	8.765E-01	1.325E+00	0.000E+00	FAIL ABUN
AC-227	1.361E-01	4.268E-01	7.515E-01	0.000E+00	FAIL ABUN
TH-227	1.361E-01	4.269E-01	7.515E-01	0.000E+00	FAIL ABUN
TH-229	-2.328E-02	5.599E-01	9.841E-01	0.000E+00	FAIL ABUN
PA-231	1.870E-01	1.824E+00	2.767E+00	0.000E+00	FAIL ABUN
TH-231	1.429E-01	8.765E-01	1.325E+00	0.000E+00	FAIL ABUN
U-231	9.923E-02	1.341E+00	2.005E+00	0.000E+00	FAIL ABUN
PA-233	-9.986E-02	6.918E-02	1.108E-01	0.000E+00	FAIL ABUN
PA-234	1.395E-01	3.505E-01	6.150E-01	0.000E+00	FAIL ABUN
PA-234M	-9.311E-01	4.717E+00	7.901E+00	0.000E+00	NOT IDENT.
NP-236	-1.166E-02	9.189E-02	1.533E-01	0.000E+00	NOT IDENT.
NP-239	8.891E-02	2.227E-01	3.823E-01	0.000E+00	FAIL ABUN
AM-241	1.757E-01	1.657E-01	2.608E-01	0.000E+00	NOT IDENT.
CM-243	-1.336E-02	1.293E-01	1.914E-01	0.000E+00	FAIL ABUN
AM-246	1.641E-02	1.650E-01	2.820E-01	0.000E+00	NOT IDENT.
CM-247	9.557E-03	4.402E-02	7.403E-02	0.000E+00	FAIL ABUN
CF-249	-1.659E-02	4.453E-02	7.470E-02	0.000E+00	NOT IDENT.
CF-251	-5.624E-02	1.515E-01	2.495E-01	0.000E+00	NOT IDENT.

```

*****
*                                     GEL Laboratories LLC                               *
*                                     2040 Savage Road                               *
*                                     Charleston, SC 29414                          *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875006.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:52:50
Sample ID          : G246875006           Sample quantity  : 1.22260E+02 GRAM
Detector name      : GAM14                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:01.81  0.0%
Energy tolerance   : 1.50000 keV          Analyst Initials : MXR1
Abundance limit    : 75.00000             Sensitivity       : 5.00000
Batch ID           : 952643               Detector SN#      :
Matrix Spike ID    :                      LCS ID           : 1032-A
*****

```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1588	10.67*	1.211E+00	3.775E+01	3.775E+01	9.12
CD-109	88.03	397	3.72*	7.058E+00	4.641E+00	4.745E+00	26.25
SN-126	64.28	134	9.60	4.622E+00	9.256E-01	9.256E-01	95.96
	86.94	397	8.90	7.058E+00	1.940E+00	1.940E+00	48.22
	87.57	397	37.00*	7.058E+00	4.666E-01	4.666E-01	26.25
EU-155	48.70	-----	4.60	2.195E+00	-----	Line Not Found	-----
	60.01	-----	1.11	4.118E+00	-----	Line Not Found	-----
	86.54	397	30.90	7.058E+00	5.587E-01	5.619E-01	26.28
	105.31	117	20.70*	7.636E+00	2.282E-01	2.295E-01	60.85
TL-208	277.35	123	6.80	5.001E+00	1.111E+00	1.111E+00	79.95
	510.84	130	21.60	3.086E+00	5.969E-01	5.969E-01	57.89
	583.14	614	84.20*	2.757E+00	8.115E-01	8.115E-01	14.35
	860.37	78	12.46	1.943E+00	9.918E-01	9.918E-01	50.57
BI-211	72.87	-----	1.27	5.875E+00	-----	Line Not Found	-----
	351.07	954	12.94*	4.178E+00	5.418E+00	5.418E+00	12.12
PB-212	74.81	742	10.70	6.088E+00	3.499E+00	3.499E+00	20.41
	77.11	1081	18.00	6.319E+00	2.919E+00	2.919E+00	13.44
	87.30	397	8.00	7.058E+00	2.158E+00	2.158E+00	28.09
	238.63	1895	44.60*	5.568E+00	2.343E+00	2.343E+00	9.17
	300.09	105	3.41	4.720E+00	2.000E+00	2.000E+00	61.07
PO-212	74.81	742	10.70	6.088E+00	3.499E+00	3.499E+00	20.41
	77.11	1081	18.00	6.319E+00	2.919E+00	2.919E+00	13.44
	87.30	397	8.00	7.058E+00	2.158E+00	2.158E+00	28.09
	115.19	-----	0.60	7.689E+00	-----	Line Not Found	-----
	238.63	1895	44.60*	5.568E+00	2.343E+00	2.343E+00	9.17
	300.09	105	3.41	4.720E+00	2.000E+00	2.000E+00	61.07
BI-214	609.31	663	46.30*	2.655E+00	1.655E+00	1.655E+00	14.49
	1120.29	159	15.10	1.523E+00	2.125E+00	2.125E+00	32.81
	1764.49	130	15.80	1.059E+00	2.386E+00	2.386E+00	19.06
PB-214	74.81	742	6.21	6.088E+00	6.029E+00	6.029E+00	19.60
	77.11	1081	10.50	6.319E+00	5.004E+00	5.004E+00	15.45
	87.30	397	4.67	7.058E+00	3.697E+00	3.697E+00	27.36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	241.98	467	7.49	5.520E+00	3.465E+00	3.465E+00	26.70
	295.21	632	19.20	4.779E+00	2.115E+00	2.115E+00	15.72
	351.92	954	37.20*	4.178E+00	1.885E+00	1.885E+00	13.19
	74.81	742	6.21	6.088E+00	6.029E+00	6.029E+00	19.60
	77.11	1081	10.50	6.319E+00	5.004E+00	5.004E+00	15.45
	87.30	397	4.67	7.058E+00	3.697E+00	3.697E+00	27.36
PO-216	241.98	467	7.49	5.520E+00	3.465E+00	3.465E+00	26.70
	295.21	632	19.20	4.779E+00	2.115E+00	2.115E+00	15.72
	351.92	954	37.20*	4.178E+00	1.885E+00	1.885E+00	13.19
	74.81	742	10.70	6.088E+00	3.499E+00	3.499E+00	20.41
	77.11	1081	18.00	6.319E+00	2.919E+00	2.919E+00	13.44
	87.30	397	8.00	7.058E+00	2.158E+00	2.158E+00	28.09
PO-218	238.63	1895	44.60*	5.568E+00	2.343E+00	2.343E+00	9.17
	300.09	105	3.41	4.720E+00	2.000E+00	2.000E+00	61.07
	74.81	742	6.21	6.088E+00	6.029E+00	6.029E+00	19.60
	77.11	1081	10.50	6.319E+00	5.004E+00	5.004E+00	15.45
	87.30	397	4.67	7.058E+00	3.697E+00	3.697E+00	27.36
	241.98	467	7.49	5.520E+00	3.465E+00	3.465E+00	26.70
RA-224	295.21	632	19.20	4.779E+00	2.115E+00	2.115E+00	15.72
	351.92	954	37.20*	4.178E+00	1.885E+00	1.885E+00	13.19
	240.98	467	3.95*	5.520E+00	6.570E+00	6.570E+00	26.11
	609.31	663	46.30*	2.655E+00	1.655E+00	1.655E+00	14.49
	1120.29	159	15.10	1.523E+00	2.125E+00	2.125E+00	32.81
	1764.49	130	15.80	1.059E+00	2.386E+00	2.386E+00	19.06
AC-228	338.32	324	11.40	4.306E+00	2.029E+00	2.029E+00	48.71
	911.07	387	27.70*	1.843E+00	2.330E+00	2.330E+00	19.74
	969.11	201	16.60	1.741E+00	2.138E+00	2.138E+00	31.65
	338.32	324	11.40	4.306E+00	2.029E+00	2.029E+00	48.71
	911.07	387	27.70*	1.843E+00	2.330E+00	2.330E+00	19.74
	969.11	201	16.60	1.741E+00	2.138E+00	2.138E+00	31.65
TH-228	74.81	742	10.70	6.088E+00	3.499E+00	3.551E+00	18.18
	77.11	1081	18.00	6.319E+00	2.919E+00	2.963E+00	13.44
	87.30	397	8.00	7.058E+00	2.158E+00	2.190E+00	26.25
	238.63	1895	44.60*	5.568E+00	2.343E+00	2.378E+00	9.17
	300.09	105	3.41	4.720E+00	2.000E+00	2.030E+00	84.47
	609.31	663	46.30*	2.655E+00	1.655E+00	1.655E+00	14.49
TH-230	1120.29	159	15.10	1.523E+00	2.125E+00	2.125E+00	32.81
	1764.49	130	15.80	1.059E+00	2.386E+00	2.386E+00	19.06
	338.32	324	11.40	4.306E+00	2.029E+00	2.029E+00	27.28
	911.07	387	27.70*	1.843E+00	2.330E+00	2.330E+00	19.74
	969.11	201	16.60	1.741E+00	2.138E+00	2.138E+00	31.65
	63.29	134	3.80*	4.622E+00	2.338E+00	2.338E+00	96.45
TH-234	92.38	396	5.41	7.317E+00	3.074E+00	3.074E+00	31.23
	609.31	663	46.30*	2.655E+00	1.655E+00	1.655E+00	14.49
	1120.29	159	15.10	1.523E+00	2.125E+00	2.125E+00	32.81
	1764.49	130	15.80	1.059E+00	2.386E+00	2.386E+00	19.06
	89.95	284	2.70	7.198E+00	4.480E+00	4.480E+00	43.70
	93.35	396	4.50	7.317E+00	3.695E+00	3.695E+00	37.86
U-235	105.00	117	2.10	7.636E+00	2.249E+00	2.249E+00	67.21

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	143.76	-----	10.50*	7.372E+00	-----	Line Not Found	-----
	163.35	-----	4.70	6.991E+00	-----	Line Not Found	-----
	185.71	303	54.00	6.530E+00	2.639E-01	2.639E-01	30.56
	205.31	-----	4.70	6.150E+00	-----	Line Not Found	-----
NP-237	86.50	397	12.60*	7.058E+00	1.370E+00	1.370E+00	33.39
	95.87	-----	2.60	7.425E+00	-----	Line Not Found	-----
U-238	63.29	134	3.80*	4.622E+00	2.338E+00	2.338E+00	96.45
	92.38	396	5.41	7.317E+00	3.074E+00	3.074E+00	26.88
AM-243	74.67	742	66.00*	6.088E+00	5.673E-01	5.673E-01	18.15
	86.72	397	0.34	7.058E+00	5.138E+01	5.138E+01	26.25
	117.66	-----	0.55	7.685E+00	-----	Line Not Found	-----
	142.18	-----	0.13	7.399E+00	-----	Line Not Found	-----
ANH-511	511.00	130	100.00*	3.086E+00	1.289E-01	1.289E-01	57.28

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	3.775E+01	3.775E+01	0.344E+01	9.12	
CD-109	464.00D	1.02	4.641E+00	4.745E+00	1.246E+00	26.25	
SN-126	1.00E+05Y	1.00	4.666E-01	4.666E-01	1.225E-01	26.25	
EU-155	4.96Y	1.01	2.282E-01	2.295E-01	1.397E-01	60.85	
TL-208	1.41E+10Y	1.00	8.115E-01	8.115E-01	1.164E-01	14.35	
BI-211	7.04E+08Y	1.00	5.418E+00	5.418E+00	0.657E+00	12.12	
PB-212	1.41E+10Y	1.00	2.343E+00	2.343E+00	0.215E+00	9.17	
PO-212	1.41E+10Y	1.00	2.343E+00	2.343E+00	0.215E+00	9.17	
BI-214	1600.00Y	1.00	1.655E+00	1.655E+00	0.240E+00	14.49	
PB-214	1600.00Y	1.00	1.885E+00	1.885E+00	0.249E+00	13.19	
PO-214	1600.00Y	1.00	1.885E+00	1.885E+00	0.249E+00	13.19	
PO-216	1.41E+10Y	1.00	2.343E+00	2.343E+00	0.215E+00	9.17	
PO-218	1600.00Y	1.00	1.885E+00	1.885E+00	0.249E+00	13.19	
RA-224	1.41E+10Y	1.00	6.570E+00	6.570E+00	1.715E+00	26.11	
RA-226	1600.00Y	1.00	1.655E+00	1.655E+00	0.240E+00	14.49	
AC-228	1.41E+10Y	1.00	2.330E+00	2.330E+00	0.460E+00	19.74	
RA-228	1.41E+10Y	1.00	2.330E+00	2.330E+00	0.460E+00	19.74	
TH-228	1.91Y	1.01	2.343E+00	2.378E+00	0.218E+00	9.17	
TH-230	4.47E+09Y	1.00	1.655E+00	1.655E+00	0.240E+00	14.49	
TH-232	1.41E+10Y	1.00	2.330E+00	2.330E+00	0.460E+00	19.74	
TH-234	4.47E+09Y	1.00	2.338E+00	2.338E+00	2.255E+00	96.45	
U-234	4.47E+09Y	1.00	1.655E+00	1.655E+00	0.240E+00	14.49	
U-235	7.04E+08Y	1.00	2.639E-01	2.639E-01	0.806E-01	30.56	K
NP-237	2.14E+06Y	1.00	1.370E+00	1.370E+00	0.458E+00	33.39	
U-238	4.47E+09Y	1.00	2.338E+00	2.338E+00	2.255E+00	96.45	
AM-243	7380.00Y	1.00	5.673E-01	5.673E-01	1.029E-01	18.15	
ANH-511	1.00E+09Y	1.00	1.289E-01	1.289E-01	0.739E-01	57.28	
Total Activity :			9.153E+01	9.167E+01			

Grand Total Activity : 9.153E+01 9.167E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G246875006

Page : 5
Acquisition date : 24-FEB-2010 08:52:50

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.81	64	440	1.27	257.04	255	7	8.91E-03	****	7.60E+00	T
0	209.64	146	438	1.12	418.55	413	11	2.02E-02	58.8	6.07E+00	T
6	270.08	170	238	1.64	539.33	535	28	2.36E-02	33.2	5.10E+00	T
0	328.11	178	225	1.80	655.30	649	13	2.47E-02	38.1	4.41E+00	T
0	409.41	67	162	1.55	817.79	814	10	9.34E-03	74.6	3.71E+00	
0	463.18	137	96	1.37	925.27	920	11	1.91E-02	32.7	3.35E+00	T
0	569.42	133	261	1.61	1137.65	1129	18	1.85E-02	60.3	2.82E+00	T
0	727.90	159	101	2.12	1454.49	1448	16	2.21E-02	32.7	2.27E+00	T
0	795.86	36	72	0.95	1590.39	1583	11	4.93E-03	98.2	2.09E+00	T
0	934.95	58	43	1.60	1868.55	1865	10	8.05E-03	49.7	1.80E+00	T
4	965.12	66	61	2.31	1928.89	1924	20	9.17E-03	53.5	1.75E+00	T
0	1570.63	16	12	0.79	3140.39	3129	16	2.24E-03	****	1.15E+00	

Flags: "T" = Tentatively associated


```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875006.CNF;1
* Acquisition date   : 24-FEB-2010 08:52:50  Detector SN#      :
* Detector ID        : GAM14                  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 02:00:01.81          Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G246875006           Analyst initials: MXR1
* Batch Number       : 952643              Sample Quantity : 1.22260E+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	3.775E+01	3.444E+00	6.613E-01	4.802E-02	57.089
CD-109	4.745E+00	1.246E+00	1.312E+00	1.147E-01	3.617
SN-126	4.666E-01	1.225E-01	1.294E-01	1.126E-02	3.605
EU-155	2.295E-01	1.397E-01	2.024E-01	1.566E-02	1.134
TL-208	8.115E-01	1.164E-01	6.875E-02	4.701E-03	11.805
BI-211	5.418E+00	6.566E-01	3.485E-01	2.208E-02	15.549
PB-212	2.343E+00	2.148E-01	1.018E-01	7.414E-03	23.021
PO-212	2.343E+00	2.148E-01	1.018E-01	7.414E-03	23.021
BI-214	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
PB-214	1.885E+00	2.487E-01	1.215E-01	9.967E-03	15.517
PO-214	1.885E+00	2.487E-01	1.215E-01	9.967E-03	15.517
PO-216	2.343E+00	2.148E-01	1.018E-01	7.414E-03	23.021
PO-218	1.885E+00	2.487E-01	1.215E-01	9.967E-03	15.517
RA-224	6.570E+00	1.715E+00	1.158E+00	6.654E-02	5.675
RA-226	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
AC-228	2.330E+00	4.598E-01	2.325E-01	2.731E-02	10.021
RA-228	2.330E+00	4.598E-01	2.325E-01	2.731E-02	10.021
TH-228	2.378E+00	2.180E-01	1.033E-01	7.524E-03	23.021

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
TH-232	2.330E+00	4.598E-01	2.325E-01	2.731E-02	10.021
TH-234	2.338E+00	2.255E+00	2.116E+00	3.636E-01	1.105
U-234	1.655E+00	2.399E-01	1.236E-01	9.787E-03	13.388
U-235	2.639E-01	8.064E-02	4.133E-01	6.804E-02	0.639
NP-237	1.370E+00	4.575E-01	3.832E-01	8.565E-02	3.575
U-238	2.338E+00	2.255E+00	2.116E+00	3.636E-01	1.105
AM-243	5.673E-01	1.029E-01	9.809E-02	7.361E-03	5.783
ANH-511	1.289E-01	7.385E-02	5.490E-02	3.226E-03	2.348

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-9.711E-02		3.677E-01	5.930E-01	3.997E-02	-0.164
NA-22	-1.924E-02		4.775E-02	7.547E-02	4.930E-03	-0.255
NA-24	1.301E-01		2.981E-01	Half-Life too short		
AL-26	-1.306E-02		3.516E-02	5.287E-02	3.065E-03	-0.247
TI-44	5.387E-01	+	7.237E-02	9.497E-02	7.415E-03	5.672
SC-46	1.543E-02		4.438E-02	7.619E-02	7.041E-03	0.203
V-48	-5.439E-02		7.631E-02	1.189E-01	1.010E-02	-0.457
CR-51	2.017E-01		4.527E-01	7.473E-01	4.829E-02	0.270
MN-52	1.425E-01		2.295E-01	4.067E-01	2.851E-02	0.350
MN-54	-3.174E-02		4.451E-02	7.095E-02	5.951E-03	-0.447
CO-56	-7.569E-03		4.350E-02	7.197E-02	6.169E-03	-0.105
CO-57	-2.207E-02		2.983E-02	4.667E-02	3.320E-03	-0.473
CO-58	1.237E-02		4.459E-02	7.322E-02	5.892E-03	0.169
FE-59	6.841E-02		1.113E-01	1.928E-01	1.484E-02	0.355
CO-60	-2.756E-02		4.463E-02	6.822E-02	4.862E-03	-0.404
ZN-65	-7.584E-02		1.276E-01	1.696E-01	1.115E-02	-0.447
GE-68	4.501E-01		1.507E+00	2.558E+00	1.839E-01	0.176
AS-73	-3.942E-01		7.262E-01	1.165E+00	7.597E-02	-0.338
AS-74	1.787E-03		1.059E-01	1.724E-01	1.031E-02	0.010
SE-75	-3.066E-03		5.482E-02	7.934E-02	4.658E-03	-0.039
BR-77	-2.045E+00		1.102E+01	1.779E+01	1.049E+00	-0.115
SR-82	-3.181E-01		4.365E-01	6.582E-01	4.949E-02	-0.483
RB-83	-1.439E-03		7.897E-02	1.289E-01	7.598E-03	-0.011
RB-84	5.105E-02		8.112E-02	1.418E-01	1.293E-02	0.360
KR-85	1.996E+01		9.970E+00	1.608E+01	9.460E-01	1.241
SR-85	1.021E-01		5.099E-02	8.226E-02	4.838E-03	1.241
RB-86	3.218E-01		9.623E-01	1.637E+00	1.178E-01	0.197
Y-88	3.538E-03		3.472E-02	5.719E-02	3.248E-03	0.062
ZR-88	2.005E-02		3.490E-02	5.929E-02	3.228E-03	0.338
Y-91	-4.259E+00		2.239E+01	3.641E+01	2.118E+00	-0.117
NB-94	1.436E-02		4.012E-02	6.637E-02	4.304E-03	0.216
NB-95	-1.551E-02		5.456E-02	8.578E-02	6.317E-03	-0.181
NB-95M	7.220E-01		1.877E-01	3.050E-01	2.280E-02	2.367
ZR-95	1.032E-01		8.847E-02	1.535E-01	1.266E-02	0.672

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-1.461E-02		4.260E-02	Half-Life too short		
ZR-97	3.106E+00		9.149E-01	Half-Life too short		
MO-99	-1.041E+00		1.339E+01	2.145E+01	3.073E+00	-0.049
TC-99M	-2.040E+10		1.207E+10	Half-Life too short		
RH-101	-2.198E-02		3.819E-02	6.219E-02	3.450E-03	-0.353
RH-102	5.330E-03		3.217E-02	5.328E-02	3.079E-03	0.100
RU-103	-2.252E-02		4.282E-02	6.739E-02	8.534E-03	-0.334
RH-106	1.889E-01		3.817E-01	6.390E-01	7.558E-02	0.296
RU-106	1.889E-01		3.813E-01	6.390E-01	3.821E-02	0.296
AG-108M	-5.256E-03		3.451E-02	5.623E-02	3.454E-03	-0.093
AG-110M	-7.908E-03		3.885E-02	6.194E-02	3.913E-03	-0.128
IN-111	6.320E-01		1.210E+00	1.815E+00	1.046E-01	0.348
IN-113M	7.751E-03		4.970E-02	8.271E-02	4.840E-03	0.094
SN-113	7.751E-03		4.970E-02	8.271E-02	4.840E-03	0.094
IN-114M	7.151E-03		2.355E-01	3.462E-01	1.905E-02	0.021
CD-115	1.312E+00		1.177E+01	1.935E+01	1.144E+00	0.068
SN-117M	-2.701E-02		6.499E-02	1.024E-01	5.790E-03	-0.264
SB-122	1.595E+00		2.716E+00	4.017E+00	2.395E-01	0.397
I-123	-1.414E+00		2.489E+00	Half-Life too short		
TE-123M	-9.538E-03		3.358E-02	5.315E-02	3.040E-03	-0.179
I-124	-1.162E+00		8.608E-01	1.040E+00	6.221E-02	-1.117
SB-124	-7.967E-02		9.168E-02	1.264E-01	8.545E-03	-0.630
SB-125	3.839E-02		1.061E-01	1.779E-01	1.043E-02	0.216
TE-125M	1.644E+00		1.223E+01	1.734E+01	1.627E+00	0.095
I-126	1.065E-01		2.154E-01	3.600E-01	2.162E-02	0.296
SB-126	-1.031E-01		1.987E-01	2.759E-01	1.856E-02	-0.374
SB-127	8.571E-01		1.556E+00	2.610E+00	2.513E-01	0.328
XE-127	7.986E-03		6.052E-02	9.265E-02	5.165E-03	0.086
I-131	4.973E-02		1.266E-01	2.136E-01	1.349E-02	0.233
TE-132	-3.152E-01		7.289E-01	1.200E+00	1.713E-01	-0.263
BA-133	-1.469E-02		5.390E-02	7.579E-02	8.711E-03	-0.194
I-133	-3.965E-03		2.993E-03	Half-Life too short		
CS-134	6.882E-02	+	6.777E-02	9.600E-02	7.556E-03	0.717
CS-135	5.148E-01		2.160E-01	3.471E-01	2.663E-02	1.483
I-135	3.699E+07		1.738E+09	Half-Life too short		
CS-136	-5.662E-02		1.259E-01	2.014E-01	1.620E-02	-0.281
BA-137M	5.718E-03		4.217E-02	6.889E-02	4.097E-03	0.083
CS-137	6.044E-03		4.457E-02	7.283E-02	4.348E-03	0.083
CE-139	-6.871E-03		3.571E-02	5.667E-02	3.042E-03	-0.121
BA-140	-4.180E-01		3.324E-01	4.416E-01	1.437E-01	-0.947
LA-140	-5.377E-02		1.148E-01	1.762E-01	1.168E-02	-0.305
CE-141	7.603E-02		7.556E-02	1.251E-01	7.981E-03	0.608
CE-143	1.360E-03		1.740E-04	Half-Life too short		
CE-144	2.415E-01		2.924E-01	4.226E-01	6.152E-02	0.571
PM-144	-2.726E-03		3.975E-02	6.388E-02	4.093E-03	-0.043
PR-144	-1.847E-01		2.693E+00	4.328E+00	2.771E-01	-0.043
PM-146	2.418E-02		5.030E-02	8.479E-02	7.259E-03	0.285
ND-147	-1.231E-01		6.696E-01	1.080E+00	1.466E-01	-0.114

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	1.134E+01		9.952E+01	1.519E+02	2.155E+01	0.075
EU-152	6.014E-02		1.506E-01	1.780E-01	1.152E-02	0.338
GD-153	1.804E-02		1.026E-01	1.455E-01	1.167E-02	0.124
EU-154	-4.914E-02		1.339E-01	2.123E-01	2.082E-02	-0.231
TB-160	4.555E-02		1.629E-01	2.781E-01	2.526E-02	0.164
HO-166M	-5.787E-02		7.540E-02	1.148E-01	7.585E-03	-0.504
TM-171	-3.214E+01		3.780E+01	4.808E+01	3.352E+00	-0.668
LU-176	-5.670E-03		3.010E-02	4.679E-02	2.725E-03	-0.121
LU-177	3.124E+00	+	1.845E+00	2.276E+00	1.275E-01	1.373
LU-177M	7.133E-02		2.230E-01	3.264E-01	1.810E-02	0.219
HF-181	-1.158E-02		4.952E-02	8.000E-02	4.640E-03	-0.145
W-181	2.243E-01		4.535E-01	6.558E-01	4.518E-02	0.342
TA-182	-1.083E-01		2.309E-01	3.670E-01	2.195E-02	-0.295
RE-183	-8.654E-02		1.318E-01	2.034E-01	1.120E-02	-0.425
RE-184	1.435E-01		2.655E-01	4.532E-01	2.621E-02	0.317
OS-185	1.865E-03		5.045E-02	8.196E-02	4.888E-03	0.023
RE-188	1.516E-01		2.101E-01	3.444E-01	1.996E-02	0.440
W-188	8.381E-01		8.962E+00	1.305E+01	7.614E-01	0.064
IR-192	-2.708E-03		3.919E-02	6.490E-02	3.788E-03	-0.042
AU-195	3.370E-01		2.934E-01	4.325E-01	3.432E-02	0.779
TL-200	-1.731E-05		2.224E-04	Half-Life	too short	
TL-201	-4.690E+00		8.016E+00	1.252E+01	6.727E-01	-0.375
TL-202	4.368E-02		7.365E-02	1.253E-01	7.085E-03	0.349
HG-203	4.774E-02		4.606E-02	7.984E-02	4.940E-03	0.598
BI-207	1.670E-02		6.005E-02	1.019E-01	7.542E-03	0.164
TL-207	1.429E-01		8.943E-01	1.302E+00	2.150E-01	0.110
PO-209	-1.027E+00		8.603E+00	1.416E+01	1.326E+00	-0.073
BI-210	-1.366E+00		2.811E+00	4.585E+00	3.400E-01	-0.298
PB-210	-1.366E+00		2.811E+00	4.585E+00	3.400E-01	-0.298
PO-210	-1.366E+00		2.811E+00	4.585E+00	2.877E-01	-0.298
PB-211	-1.159E+00		1.487E+00	1.733E+00	1.080E+00	-0.669
BI-212	1.825E+00	+	6.169E-01	7.923E-01	6.740E-02	2.303
PO-215	1.429E-01		8.943E-01	1.302E+00	2.150E-01	0.110
RN-219	2.661E-01		4.912E-01	8.298E-01	1.118E-01	0.321
RN-220	-2.407E+01		3.045E+01	4.697E+01	2.792E+00	-0.512
RA-223	1.429E-01		8.943E-01	1.302E+00	2.150E-01	0.110
AC-227	1.361E-01		4.355E-01	7.362E-01	1.028E-01	0.185
TH-227	1.361E-01		4.357E-01	7.362E-01	1.244E-01	0.185
TH-229	-2.328E-02		5.713E-01	9.606E-01	5.305E-02	-0.024
PA-231	1.870E-01		1.861E+00	2.714E+00	3.743E-01	0.069
TH-231	1.429E-01		8.943E-01	1.302E+00	2.150E-01	0.110
U-231	9.923E-02		1.368E+00	1.941E+00	1.575E-01	0.051
PA-233	-9.986E-02		7.059E-02	1.088E-01	6.716E-03	-0.918
PA-234	1.395E-01		3.577E-01	6.126E-01	1.158E-01	0.228
PA-234M	-9.311E-01		4.813E+00	7.876E+00	7.614E-01	-0.118
NP-236	-1.166E-02		9.377E-02	1.493E-01	8.342E-03	-0.078
NP-239	8.891E-02		2.272E-01	3.708E-01	2.680E-02	0.240
AM-241	1.757E-01		1.691E-01	2.510E-01	1.863E-02	0.700

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.336E-02		1.320E-01	1.854E-01	1.425E-02	-0.072
AM-246	1.641E-02		1.683E-01	2.814E-01	2.016E-02	0.058
CM-247	9.557E-03		4.492E-02	7.294E-02	4.006E-03	0.131
CF-249	-1.659E-02		4.544E-02	7.356E-02	4.022E-03	-0.225
CF-251	-5.624E-02		1.546E-01	2.433E-01	1.319E-02	-0.231

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]G246875006             *
* Acquisition date   : 24-FEB-2010 08:52:50 Detector SN# :                   *
* Detector ID        : GAM14 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 02:00:01.81 Half life ratio : 8.000                 *
*****
*                                     SAMPLE DATA                            *
*                                     *                                     *
* Sample date       : 9-FEB-2010 12:00:00 Nuclide Library : SOLID              *
* Sample ID         : G246875006 Analyst initials: MXR1                     *
* Batch Number      : 952643 Sample Quantity : 1.2226E+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	3.775E+01	3.376E+00	3.303E-01	1.722E+00
CD-109	4.745E+00	1.221E+00	6.791E-01	6.229E-01
SN-126	4.666E-01	1.200E-01	6.700E-02	6.125E-02
EU-155	2.295E-01	1.369E-01	1.045E-01	6.983E-02
TL-208	8.115E-01	1.141E-01	3.475E-02	5.822E-02
BI-211	5.418E+00	6.435E-01	1.773E-01	3.283E-01
PB-212	2.343E+00	2.105E-01	5.203E-02	1.074E-01
PO-212	2.343E+00	2.105E-01	5.203E-02	1.074E-01
BI-214	1.655E+00	2.351E-01	6.246E-02	1.200E-01
PB-214	1.885E+00	2.437E-01	6.179E-02	1.243E-01
PO-214	1.885E+00	2.437E-01	6.179E-02	1.243E-01
PO-216	2.343E+00	2.105E-01	5.203E-02	1.074E-01
PO-218	1.885E+00	2.437E-01	6.179E-02	1.243E-01
RA-224	6.570E+00	1.681E+00	5.917E-01	8.577E-01
RA-226	1.655E+00	2.351E-01	6.246E-02	1.200E-01
AC-228	2.330E+00	4.506E-01	1.168E-01	2.299E-01
RA-228	2.330E+00	4.506E-01	1.168E-01	2.299E-01
TH-228	2.378E+00	2.137E-01	5.281E-02	1.090E-01
TH-230	1.655E+00	2.351E-01	6.246E-02	1.199E-01
TH-232	2.330E+00	4.506E-01	1.168E-01	2.299E-01
TH-234	2.338E+00	2.210E+00	1.099E+00	1.128E+00
U-234	1.655E+00	2.351E-01	6.246E-02	1.199E-01
U-235	1.482E-01	2.500E-01	2.126E-01	1.276E-01
NP-237	1.370E+00	4.484E-01	1.984E-01	2.288E-01
U-238	2.338E+00	2.210E+00	1.099E+00	1.128E+00
AM-243	5.673E-01	1.009E-01	5.087E-02	5.147E-02
ANH-511	1.289E-01	7.238E-02	2.780E-02	3.693E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	-9.711E-02	3.603E-01	3.005E-01	1.839E-01	NOT IDENT.
NA-22	-1.924E-02	4.680E-02	3.776E-02	2.388E-02	NOT IDENT.
NA-24	1.301E+05	5.843E+05	0.000E+00	2.981E+05	SHORT HLIF
AL-26	-1.306E-02	3.446E-02	2.633E-02	1.758E-02	NOT IDENT.
TI-44	5.387E-01	7.092E-02	4.922E-02	3.619E-02	FAIL ABUN
SC-46	1.543E-02	4.350E-02	3.830E-02	2.219E-02	FAIL ABUN
V-48	-5.439E-02	7.478E-02	5.971E-02	3.815E-02	NOT IDENT.
CR-51	2.017E-01	4.436E-01	3.806E-01	2.263E-01	NOT IDENT.
MN-52	1.425E-01	2.249E-01	2.032E-01	1.148E-01	FAIL ABUN
MN-54	-3.174E-02	4.362E-02	3.569E-02	2.226E-02	NOT IDENT.
CO-56	-7.569E-03	4.263E-02	3.620E-02	2.175E-02	NOT IDENT.
CO-57	-2.207E-02	2.923E-02	2.405E-02	1.491E-02	NOT IDENT.
CO-58	1.237E-02	4.370E-02	3.685E-02	2.230E-02	NOT IDENT.
FE-59	6.841E-02	1.091E-01	9.666E-02	5.566E-02	NOT IDENT.
CO-60	-2.756E-02	4.374E-02	3.411E-02	2.231E-02	NOT IDENT.
ZN-65	-7.584E-02	1.250E-01	8.499E-02	6.379E-02	NOT IDENT.
GE-68	4.501E-01	1.477E+00	1.282E+00	7.536E-01	NOT IDENT.
AS-73	-3.942E-01	7.117E-01	6.068E-01	3.631E-01	NOT IDENT.
AS-74	1.787E-03	1.038E-01	8.709E-02	5.296E-02	NOT IDENT.
SE-75	-3.066E-03	5.372E-02	4.050E-02	2.741E-02	NOT IDENT.
BR-77	-2.045E+00	1.080E+01	9.005E+00	5.511E+00	FAIL ABUN
SR-82	-3.181E-01	4.278E-01	3.314E-01	2.183E-01	NOT IDENT.
RB-83	-1.439E-03	7.739E-02	6.524E-02	3.948E-02	NOT IDENT.
RB-84	5.105E-02	7.950E-02	7.129E-02	4.056E-02	NOT IDENT.
KR-85	1.996E+01	9.771E+00	8.143E+00	4.985E+00	NOT IDENT.
SR-85	1.021E-01	4.997E-02	4.164E-02	2.549E-02	NOT IDENT.
RB-86	3.218E-01	9.431E-01	8.207E-01	4.812E-01	NOT IDENT.
Y-88	3.538E-03	3.403E-02	2.848E-02	1.736E-02	NOT IDENT.
ZR-88	2.005E-02	3.421E-02	3.012E-02	1.745E-02	NOT IDENT.
Y-91	-4.259E+00	2.194E+01	1.823E+01	1.119E+01	NOT IDENT.
NB-94	1.436E-02	3.932E-02	3.346E-02	2.006E-02	NOT IDENT.
NB-95	-1.551E-02	5.346E-02	4.320E-02	2.728E-02	NOT IDENT.
NB-95M	7.220E-01	1.839E-01	1.559E-01	9.384E-02	NOT IDENT.
ZR-95	1.032E-01	8.670E-02	7.731E-02	4.424E-02	NOT IDENT.
NB-97	-1.461E+04	8.350E+04	0.000E+00	4.260E+04	SHORT HLIF
ZR-97	3.106E+06	1.793E+06	0.000E+00	9.149E+05	SHORT HLIF
MO-99	-1.041E+00	1.313E+01	1.081E+01	6.697E+00	NOT IDENT.
TC-99M	-2.040E+16	2.366E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.198E-02	3.743E-02	3.187E-02	1.910E-02	NOT IDENT.
RH-102	5.330E-03	3.152E-02	2.700E-02	1.608E-02	NOT IDENT.
RU-103	-2.252E-02	4.196E-02	3.413E-02	2.141E-02	FAIL ABUN
RH-106	1.889E-01	3.741E-01	3.227E-01	1.909E-01	FAIL ABUN
RU-106	1.889E-01	3.736E-01	3.227E-01	1.906E-01	FAIL ABUN
AG-108M	-5.256E-03	3.382E-02	2.853E-02	1.726E-02	NOT IDENT.
AG-110M	-7.908E-03	3.808E-02	3.126E-02	1.943E-02	NOT IDENT.
IN-111	6.320E-01	1.186E+00	9.273E-01	6.051E-01	NOT IDENT.
IN-113M	7.751E-03	4.871E-02	4.202E-02	2.485E-02	NOT IDENT.
SN-113	7.751E-03	4.871E-02	4.202E-02	2.485E-02	NOT IDENT.
IN-114M	7.151E-03	2.308E-01	1.775E-01	1.177E-01	NOT IDENT.
CD-115	1.312E+00	1.153E+01	9.793E+00	5.883E+00	NOT IDENT.
SN-117M	-2.701E-02	6.369E-02	5.259E-02	3.250E-02	NOT IDENT.
SB-122	1.595E+00	2.662E+00	2.031E+00	1.358E+00	NOT IDENT.
I-123	-1.414E+06	4.879E+06	0.000E+00	2.489E+06	SHORT HLIF
TE-123M	-9.538E-03	3.291E-02	2.731E-02	1.679E-02	NOT IDENT.
I-124	-1.162E+00	8.436E-01	5.254E-01	4.304E-01	NOT IDENT.
SB-124	-7.967E-02	8.985E-02	6.301E-02	4.584E-02	FAIL ABUN
SB-125	3.839E-02	1.039E-01	9.029E-02	5.303E-02	FAIL ABUN
TE-125M	1.644E+00	1.198E+01	8.949E+00	6.113E+00	NOT IDENT.
I-126	1.065E-01	2.111E-01	1.816E-01	1.077E-01	NOT IDENT.
SB-126	-1.031E-01	1.947E-01	1.391E-01	9.933E-02	FAIL ABUN
SB-127	8.571E-01	1.525E+00	1.316E+00	7.779E-01	NOT IDENT.
XE-127	7.986E-03	5.931E-02	4.746E-02	3.026E-02	NOT IDENT.
I-131	4.973E-02	1.241E-01	1.086E-01	6.332E-02	NOT IDENT.
TE-132	-3.152E-01	7.143E-01	6.139E-01	3.644E-01	NOT IDENT.
BA-133	-1.469E-02	5.282E-02	3.855E-02	2.695E-02	FAIL ABUN
I-133	-3.965E+03	5.866E+03	0.000E+00	2.993E+03	SHORT HLIF
CS-134	6.882E-02	6.642E-02	4.833E-02	3.389E-02	FAIL ABUN
CS-135	5.148E-01	2.117E-01	1.772E-01	1.080E-01	NOT IDENT.
I-135	3.699E+13	3.406E+15	0.000E+00	1.738E+15	SHORT HLIF
CS-136	-5.662E-02	1.234E-01	1.010E-01	6.297E-02	FAIL ABUN
BA-137M	5.718E-03	4.132E-02	3.476E-02	2.108E-02	NOT IDENT.
CS-137	6.044E-03	4.368E-02	3.675E-02	2.229E-02	NOT IDENT.
CE-139	-6.871E-03	3.500E-02	2.910E-02	1.786E-02	NOT IDENT.
BA-140	-4.180E-01	3.258E-01	2.234E-01	1.662E-01	NOT IDENT.
LA-140	-5.377E-02	1.125E-01	8.790E-02	5.739E-02	FAIL ABUN
CE-141	7.603E-02	7.405E-02	6.432E-02	3.778E-02	NOT IDENT.
CE-143	1.360E+03	3.410E+02	0.000E+00	1.740E+02	SHORT HLIF
CE-144	2.415E-01	2.866E-01	2.176E-01	1.462E-01	NOT IDENT.

PM-144	-2.726E-03	3.895E-02	3.221E-02	1.987E-02	NOT IDENT.
PR-144	-1.847E-01	2.639E+00	2.183E+00	1.347E+00	NOT IDENT.
PM-146	2.418E-02	4.930E-02	4.299E-02	2.515E-02	NOT IDENT.
ND-147	-1.231E-01	6.562E-01	5.467E-01	3.348E-01	FAIL ABUN
PM-149	1.134E+01	9.753E+01	7.745E+01	4.976E+01	NOT IDENT.
EU-152	6.014E-02	1.476E-01	9.058E-02	7.529E-02	FAIL ABUN
GD-153	1.804E-02	1.006E-01	7.520E-02	5.130E-02	NOT IDENT.
EU-154	-4.914E-02	1.312E-01	1.062E-01	6.694E-02	NOT IDENT.
TB-160	4.555E-02	1.596E-01	1.398E-01	8.143E-02	FAIL ABUN
HO-166M	-5.787E-02	7.389E-02	5.787E-02	3.770E-02	FAIL ABUN
TM-171	-3.214E+01	3.704E+01	2.497E+01	1.890E+01	NOT IDENT.
LU-176	-5.670E-03	2.950E-02	2.384E-02	1.505E-02	FAIL ABUN
LU-177	3.124E+00	1.808E+00	1.165E+00	9.227E-01	FAIL ABUN
LU-177M	7.133E-02	2.186E-01	1.657E-01	1.115E-01	FAIL ABUN
HF-181	-1.158E-02	4.853E-02	4.053E-02	2.476E-02	NOT IDENT.
W-181	2.243E-01	4.444E-01	3.406E-01	2.267E-01	NOT IDENT.
TA-182	-1.083E-01	2.263E-01	1.837E-01	1.155E-01	FAIL ABUN
RE-183	-8.654E-02	1.292E-01	1.045E-01	6.590E-02	FAIL ABUN
RE-184	1.435E-01	2.602E-01	2.315E-01	1.328E-01	NOT IDENT.
OS-185	1.865E-03	4.945E-02	4.137E-02	2.523E-02	NOT IDENT.
RE-188	1.516E-01	2.059E-01	1.770E-01	1.050E-01	NOT IDENT.
W-188	8.381E-01	8.783E+00	6.655E+00	4.481E+00	FAIL ABUN
IR-192	-2.708E-03	3.840E-02	3.306E-02	1.959E-02	FAIL ABUN
AU-195	3.370E-01	2.876E-01	2.235E-01	1.467E-01	FAIL ABUN
TL-200	-1.731E+01	4.358E+02	0.000E+00	2.224E+02	SHORT HLIF
TL-201	-4.690E+00	7.856E+00	6.429E+00	4.008E+00	NOT IDENT.
TL-202	4.368E-02	7.218E-02	6.355E-02	3.682E-02	NOT IDENT.
HG-203	4.774E-02	4.514E-02	4.073E-02	2.303E-02	NOT IDENT.
BI-207	1.670E-02	5.885E-02	5.111E-02	3.003E-02	FAIL ABUN
TL-207	1.429E-01	8.765E-01	6.629E-01	4.472E-01	FAIL ABUN
PO-209	-1.027E+00	8.431E+00	7.119E+00	4.301E+00	NOT IDENT.
BI-210	-1.366E+00	2.755E+00	2.391E+00	1.406E+00	NOT IDENT.
PB-210	-1.366E+00	2.755E+00	2.391E+00	1.406E+00	NOT IDENT.
PO-210	-1.366E+00	2.755E+00	2.391E+00	1.405E+00	NOT IDENT.
PB-211	-1.159E+00	1.457E+00	8.802E-01	7.433E-01	NOT IDENT.
BI-212	1.825E+00	6.046E-01	3.993E-01	3.085E-01	FAIL ABUN
PO-215	1.429E-01	8.765E-01	6.629E-01	4.472E-01	FAIL ABUN
RN-219	2.661E-01	4.814E-01	4.214E-01	2.456E-01	FAIL ABUN
RN-220	-2.407E+01	2.984E+01	2.376E+01	1.523E+01	NOT IDENT.
RA-223	1.429E-01	8.765E-01	6.629E-01	4.472E-01	FAIL ABUN
AC-227	1.361E-01	4.268E-01	3.760E-01	2.177E-01	FAIL ABUN
TH-227	1.361E-01	4.269E-01	3.760E-01	2.178E-01	FAIL ABUN
TH-229	-2.328E-02	5.599E-01	4.923E-01	2.857E-01	FAIL ABUN
PA-231	1.870E-01	1.824E+00	1.384E+00	9.306E-01	FAIL ABUN
TH-231	1.429E-01	8.765E-01	6.629E-01	4.472E-01	FAIL ABUN
U-231	9.923E-02	1.341E+00	1.003E+00	6.842E-01	FAIL ABUN
PA-233	-9.986E-02	6.918E-02	5.542E-02	3.530E-02	FAIL ABUN
PA-234	1.395E-01	3.505E-01	3.077E-01	1.788E-01	FAIL ABUN
PA-234M	-9.311E-01	4.717E+00	3.953E+00	2.406E+00	NOT IDENT.
NP-236	-1.166E-02	9.189E-02	7.669E-02	4.688E-02	NOT IDENT.
NP-239	8.891E-02	2.227E-01	1.913E-01	1.136E-01	FAIL ABUN
AM-241	1.757E-01	1.657E-01	1.305E-01	8.454E-02	NOT IDENT.
CM-243	-1.336E-02	1.293E-01	9.574E-02	6.599E-02	FAIL ABUN
AM-246	1.641E-02	1.650E-01	1.411E-01	8.416E-02	NOT IDENT.
CM-247	9.557E-03	4.402E-02	3.704E-02	2.246E-02	FAIL ABUN
CF-249	-1.659E-02	4.453E-02	3.737E-02	2.272E-02	NOT IDENT.
CF-251	-5.624E-02	1.515E-01	1.248E-01	7.731E-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	516.1652
46.50	516.1652
46.50	516.1652
48.70	554.1788
49.72	530.3556
51.35	507.8398
52.39	513.5483
52.97	522.0699
53.15	529.3410
53.44	530.5349
54.07	555.5012
56.28	564.0253
56.28	564.0269
57.37	0.0000
57.53	500.3800
57.53	500.3810
57.60	500.4171
57.98	503.9120
57.98	503.9120
59.32	539.2516
59.32	539.2516
59.40	539.2966
59.54	567.4163
59.72	567.5223
60.01	567.6924
61.10	645.9805
61.14	646.0067
61.30	646.1129
63.00	678.6790
63.29	678.8773
63.29	678.8773
63.58	679.0744
64.28	679.5505
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65.20	759.8008
65.20	759.8008
66.05	785.3412
66.72	793.3308
66.83	793.4183
66.91	769.9382
67.20	770.1559
67.20	770.1559
67.75	744.2337
67.85	744.3047
68.90	703.4352
68.90	703.4352
69.30	745.3426
69.67	724.7805
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70.82	722.2331
70.83	722.2384
72.80	755.5607
72.87	755.6090
72.87	755.6090
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74.81	756.9612
74.97	757.0716
75.28	757.2855
75.70	757.5739
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77.11	758.5397

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77.11	758.5397
77.11	758.5397
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80.30	744.4690
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81.07	744.9713
81.07	744.9713
81.07	744.9713
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83.78	560.4911
83.78	560.4911
83.78	560.4911
83.78	560.4911
84.21	560.6979
84.90	561.0283
85.43	561.2797
86.29	561.6871
86.50	561.7865
86.54	561.8068
86.59	561.8290
86.72	561.8919
86.79	561.9223
86.94	561.9953
87.30	562.1636
87.30	562.1636
87.30	562.1636
87.30	562.1636
87.30	562.1636
87.30	562.1636
87.57	562.2913
87.88	562.4373
88.03	562.5062
88.36	562.6623
88.47	562.7130
89.95	563.4022
91.11	563.9374
92.29	564.4787
92.38	564.5212
92.38	564.5212
93.35	564.9632
94.00	479.9232
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94.67	517.6405
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94.90	555.2028
94.90	555.2028
94.90	555.2028
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98.44	486.7353
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99.55	451.2605
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100.10	456.5840
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103.76	523.0292
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105.31	495.7410
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109.28	476.9746

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111.00	525.8495
111.76	526.1399
112.95	505.0115
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116.30	488.9160
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117.00	466.4327
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122.32	467.0794
122.32	467.0794
122.32	467.0794
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144.24	434.1689
144.24	434.1689
144.24	434.1689
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147.16	522.1686
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152.70	454.1556
153.22	445.4320
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154.21	460.1120
154.21	460.1120
154.21	460.1120
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163.89	390.2679
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167.43	448.0503
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171.86	405.4907
172.10	405.5460
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176.60	432.3995
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185.71	395.5019
186.00	395.5634
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192.34	376.7030
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198.60	400.0149
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201.83	396.6310
202.84	409.9960
205.31	436.3595

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209.75	407.7726
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216.55	380.1991
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223.80	356.2743
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227.08	352.2239
227.20	352.2425
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228.18	338.5700
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236.00	358.0254
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238.63	313.3452
238.63	313.3452
238.63	313.3452
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241.98	313.8300
241.98	313.8300
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247.94	316.5441
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249.79	305.6262
252.40	270.5333
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252.85	277.1196
254.15	0.0000
256.20	281.2698
256.20	281.2698
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260.90	264.9981
262.80	285.8333
264.65	251.6739
268.24	259.8917
268.79	255.2579
269.46	272.5618
269.46	272.5618
269.46	272.5618
269.46	272.5618
271.23	248.3121
273.65	248.5699
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277.35	248.9566
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277.60	248.9856
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278.60	249.0888
279.20	249.1532
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281.68	207.8425
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284.30	239.5936
285.00	217.5903
285.90	221.7278
286.10	233.0688
286.10	233.0688
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290.67	226.0006
290.80	226.0123
291.72	238.7454
293.26	0.0000
293.70	212.0385
295.21	247.0032
295.21	247.0032

295.21	247.0032
295.96	190.0586
296.50	190.1001
297.23	190.1563
298.57	190.2612
299.80	190.3540
299.80	190.3540
300.09	245.9023
300.09	245.9023
300.09	245.9023
300.09	245.9023
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302.84	238.2324
303.76	238.3209
303.91	255.8109
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304.40	228.8467
304.84	227.2953
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323.87	240.1978
323.87	240.1978
323.87	240.1978
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334.20	197.7354
334.30	197.7429
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338.28	208.6620
338.28	208.6620
338.28	208.6620
338.32	208.6673
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338.32	208.6673
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345.85	180.8311
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351.07	174.7068
351.92	174.7617
351.92	174.7617
351.92	174.7617
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367.43	186.4745
367.94	0.0000
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391.69	168.3573
392.90	165.4714
398.62	182.5678
400.65	161.9540
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401.81	180.7862
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404.84	214.2625
410.95	158.5449
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413.65	153.7266
414.70	142.2048
415.30	168.6947

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432.53	156.6646
433.93	133.7726
439.47	126.0077
439.56	126.0123
439.89	126.0246
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445.03	132.2401
445.03	132.2401
445.03	132.2401
445.03	132.2401
453.90	142.6500
463.38	137.6927
468.07	112.6658
473.00	134.3898
475.06	127.3966
475.35	120.3292
476.78	129.4844
477.59	144.6932
477.96	145.7227
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497.08	120.0872
507.63	0.0000
510.53	0.0000
510.84	141.0011
511.00	141.0078
511.85	126.0516
511.85	126.0516
513.99	138.0594
513.99	138.0594
520.41	126.0179
520.65	126.0270
527.90	127.3119
528.96	0.0000
529.64	147.9164
529.87	0.0000
531.02	139.7520
537.32	145.1446
543.00	106.1936
546.56	0.0000
549.76	135.3144
552.65	116.8126
555.20	102.4128
563.23	120.9505
563.90	127.8831
568.70	136.0085
569.32	136.0308
569.50	136.0372
569.67	136.0436
573.80	136.8871
574.00	136.8935
574.64	135.1829
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579.30	0.0000
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591.81	124.0439
592.07	119.5548
593.00	123.2979
595.88	119.2074
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602.52	0.0000
602.71	144.9089
602.71	144.9089
603.60	134.4649
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604.70	110.0475
609.31	113.3262

609.31	113.3262
609.31	113.3262
609.31	113.3262
610.33	120.7023
612.46	134.7688
614.37	101.5637
618.01	119.8865
621.84	108.4241
621.84	108.4241
631.29	106.5703
633.02	89.7252
633.10	89.7273
634.78	89.7646
635.90	86.6205
636.97	107.7773
645.85	98.4833
646.12	106.9624
656.30	114.6604
657.75	100.8934
657.90	0.0000
661.65	110.5584
661.65	110.5584
664.57	0.0000
666.33	109.6186
666.33	109.6186
675.00	105.5790
677.61	100.3110
685.20	97.2851
692.80	103.8843
695.00	87.8657
696.49	106.1180
696.49	106.1180
697.00	110.4182
697.49	111.5029
698.33	113.6705
698.50	113.6757
699.00	114.7612
702.63	107.3438
706.10	118.1721
706.58	0.0000
706.67	116.0394
709.31	106.4347
711.68	124.7793
713.82	120.5367
717.42	96.9390
720.50	124.7234
721.93	0.0000
722.20	102.4381
722.78	104.2471
722.78	104.2471
722.89	104.2518
722.95	104.2518
723.30	93.4756
724.18	106.0804
727.18	89.5999
733.00	91.8793
735.90	84.7285
739.58	102.8417
742.81	76.9161
744.21	81.2750
747.13	110.6062
751.79	103.1223
752.31	103.1339
753.82	93.3948
755.35	91.2536
756.15	88.0104
756.87	92.3711
763.93	134.9650
765.79	121.9531
766.42	112.1684
766.84	119.8022
776.49	97.1352
778.00	110.2690
778.57	104.8219
778.89	98.2793
783.80	96.1963
785.46	94.0436
792.07	133.2363

795.84	62.1051
796.30	76.7266
798.80	82.2510
801.93	82.3059
805.60	80.1735
810.29	72.5581
810.76	74.7635
815.85	84.3820
817.79	68.8187
818.51	66.0762
819.60	61.5012
826.30	88.2441
828.27	0.0000
831.60	82.8204
831.96	82.8278
834.83	112.3422
836.80	0.0000
846.75	80.3111
848.13	73.8704
856.28	0.0000
856.80	82.4579
860.37	78.6828
867.32	90.3807
867.82	81.5833
871.10	75.1432
873.19	86.3115
874.81	83.5547
875.33	0.0000
876.40	78.9387
879.36	77.1269
880.27	66.9170
880.51	66.9199
881.50	71.5812
883.24	87.4155
884.67	82.7893
889.25	70.7614
896.60	72.7299
898.02	75.5469
899.00	78.3604
903.28	82.1616
911.07	69.1958
911.07	69.1958
911.07	69.1958
919.63	49.7760
920.93	48.7172
925.00	61.8831
925.24	61.8857
926.50	58.1490
935.52	68.5845
937.48	70.8938
944.10	75.2848
946.00	74.3711
949.00	81.0064
962.29	76.0849
964.01	84.2062
966.15	79.3789
968.20	79.4097
969.11	79.4233
969.11	79.4233
969.11	79.4233
977.42	72.7281
980.50	49.2716
983.50	72.0525
989.30	56.9446
996.32	79.8267
1001.03	65.6281
1001.68	69.4408
1004.76	63.7694
1021.30	0.0000
1024.50	0.0000
1034.80	69.8573
1036.00	70.8293
1037.82	67.9810
1038.57	69.9049
1038.76	0.0000
1045.16	82.4517
1046.59	76.7188
1048.07	79.6160

1050.47	84.4479
1050.47	84.4479
1062.04	72.1191
1063.62	66.3693
1076.63	75.1975
1077.35	73.2786
1078.86	72.3328
1085.78	69.5244
1099.22	72.5891
1112.02	58.1982
1112.84	49.4747
1115.52	96.4994
1120.29	67.9919
1120.29	67.9919
1120.29	67.9919
1120.29	67.9919
1120.51	67.9948
1121.28	68.0033
1124.00	0.0000
1129.67	64.2087
1131.51	0.0000
1147.95	0.0000
1167.94	75.3896
1173.22	93.0943
1175.09	96.0660
1177.93	93.1677
1189.05	95.3028
1204.90	88.6523
1205.75	0.0000
1213.00	102.5739
1221.42	92.8372
1230.97	99.9027
1235.34	119.7691
1236.41	0.0000
1238.25	83.1831
1246.25	83.2891
1260.41	0.0000
1271.85	50.7717
1274.45	58.7599
1274.54	58.7599
1291.56	44.9341
1298.22	0.0000
1312.09	66.1101
1325.50	41.1518
1325.50	41.1518
1332.49	50.2380
1333.61	39.1936
1360.21	34.3044
1362.66	0.0000
1365.15	38.3680
1368.21	31.3141
1368.53	0.0000
1376.25	31.3519
1384.27	52.6517
1394.10	26.3639
1395.20	24.3398
1407.95	47.7535
1434.06	21.4170
1436.60	29.5865
1457.56	0.0000
1460.81	35.8303
1489.15	21.5836
1509.49	21.6443
1596.49	43.7996
1620.62	20.9237
1678.03	0.0000
1691.02	27.4483
1691.02	27.4483
1706.46	0.0000
1750.46	0.0000
1764.49	16.4387
1764.49	16.4387
1764.49	16.4387
1764.49	16.4387
1770.23	5.4833
1771.40	9.1403
1791.20	0.0000
1808.65	19.2825

1836.01

12.8970

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875006

Total Uranium Activity	7.0252E+00	ug/g
Total Uranium Counting Unc.	6.5763E+00	ug/g
Total Uranium Tpu	3.3553E-06	ug/g
Total Uranium Mda	3.2718E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 952643                          SAMPLE ID   : G246875006
*  ANALYST       : MXR1                             DETECTOR    : GAM14
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 24-FEB-2010 08:52:50.30          SAMPLE ALQT  : 122.260 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.303E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.797E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 4.460E+00
GROSS GAMMA DLC       (pCi/GRAM ) : 2.180E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 10:55:18.25

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875007.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:53:30
Sample ID          : G246875007           Sample quantity  : 1.13300E+02 GRAM
Detector name      : GAM15                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:01.43  0.0%
Energy tolerance   : 1.50000 keV          Analyst Initials  : MXR1
Abundance limit    : 75.00000             Sensitivity         : 5.00000
Batch ID           : 952643               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	2	75.03*	394	582	1.60	148.98	142	17	5.47E-02	13.4	1.34E+00
2	2	77.27*	569	453	1.39	153.46	142	17	7.90E-02	8.3	
3	4	87.44	182	523	1.13	173.81	168	26	2.53E-02	20.5	2.78E+00
4	4	89.91	127	630	1.59	178.75	168	26	1.77E-02	38.7	
5	4	93.06*	253	603	1.98	185.04	168	26	3.51E-02	22.9	
6	0	129.39	78	417	1.57	257.69	254	10	1.08E-02	50.4	
7	0	186.00*	216	371	1.47	370.90	366	11	3.00E-02	19.4	
8	0	209.67	132	306	1.74	418.24	414	10	1.83E-02	26.3	
9	3	238.74*	1378	252	1.31	476.39	468	23	1.91E-01	3.5	1.71E+00
10	3	241.87	334	292	2.04	482.64	468	23	4.64E-02	14.7	
11	0	270.19	135	240	1.73	539.29	534	11	1.87E-02	23.8	
12	0	295.29*	417	211	1.51	589.48	585	10	5.79E-02	8.3	
13	0	300.46*	97	186	1.09	599.82	596	9	1.35E-02	28.0	
14	0	327.89	62	147	1.82	654.68	651	8	8.62E-03	36.1	
15	0	338.55	250	207	1.51	675.99	671	10	3.47E-02	12.5	
16	0	351.97*	744	188	1.54	702.83	696	14	1.03E-01	5.5	
17	0	463.11	96	129	1.33	925.12	921	10	1.34E-02	24.5	
18	0	511.05*	172	128	2.02	1021.00	1014	18	2.39E-02	19.5	
19	0	583.16*	414	127	1.29	1165.23	1159	13	5.75E-02	7.7	
20	0	609.36*	490	138	1.53	1217.64	1210	15	6.80E-02	7.1	
21	0	728.68	83	170	1.66	1456.31	1448	22	1.16E-02	40.3	
22	0	794.74	68	60	1.89	1588.43	1582	14	9.45E-03	27.0	
23	0	910.81*	290	55	1.87	1820.60	1812	17	4.03E-02	8.5	
24	0	934.83	63	54	1.10	1868.65	1860	18	8.75E-03	30.1	
25	0	968.15*	235	81	2.11	1935.31	1925	21	3.27E-02	11.8	
26	0	1120.07*	124	92	1.95	2239.22	2231	17	1.72E-02	20.3	
27	0	1237.77*	39	47	1.51	2474.67	2470	10	5.45E-03	36.7	
28	0	1460.47*	1258	22	1.92	2920.19	2909	22	1.75E-01	3.0	
29	0	1763.92*	92	8	2.22	3527.33	3518	15	1.28E-02	13.1	

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

VMS Nuclide Identification Report V3.1 Generated 24-FEB-2010 10:55:22

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875007.CNF;1
 Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
 Sample title : MXR1
 Sample date : 9-FEB-2010 12:00:00 Acquisition date : 24-FEB-2010 08:53:30
 Sample ID : G246875007 Sample quantity : 113.30 GRAM
 Sample type : SOLID Sample geometry :
 Detector name : GAMMA15 Detector geometry: CAN
 Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.43 0.0%
 Peak Width (FWHM): 3.00 Confidence level : 5.00 %
 Energy tolerance : 1.50 keV Half life ratio : 8.00
 Errors propagated: Yes Systematic Error : 0.00 %
 Efficiency type : Empirical Efficiencies at : Peak Energy
 Abundance limit : 75.00 WTM error limit : 3.00

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	*	4.042E+01	4.652E+00	7.978E-01	7.840E-02	50.667
CD-109	+	88.03	*	3.721E+00	1.596E+00	2.005E+00	2.489E-01	1.856
SN-126		64.28		-3.161E-01	1.064E+00	1.705E+00	2.886E-01	-0.185
	+	86.94		1.521E+00	8.968E-01	8.349E-01	3.530E-01	1.822
	+	87.57	*	3.658E-01	1.570E-01	1.987E-01	2.458E-02	1.842
TL-208		277.35		2.167E-01	6.107E-01	9.976E-01	1.394E-01	0.217
	+	510.84		1.090E+00	4.451E-01	3.106E-01	3.728E-02	3.508
	+	583.14	*	7.438E-01	1.328E-01	8.215E-02	7.523E-03	9.054
		860.37		7.858E-01	4.412E-01	8.113E-01	7.935E-02	0.968
BI-211		72.87		1.596E+01	6.683E+00	1.024E+01	1.173E+00	1.559
	+	351.07	*	6.062E+00	8.941E-01	4.596E-01	4.576E-02	13.189
PB-212	+	74.81		3.747E+00	1.146E+00	9.398E-01	1.393E-01	3.987
	+	77.11		2.989E+00	6.073E-01	5.181E-01	6.006E-02	5.768
	+	87.30		1.692E+00	7.454E-01	9.230E-01	1.467E-01	1.833
	+	238.63	*	2.487E+00	3.428E-01	1.311E-01	1.561E-02	18.974
	+	300.09		2.701E+00	1.546E+00	1.885E+00	2.276E-01	1.433
PO-212	+	74.81		3.747E+00	1.146E+00	9.398E-01	1.393E-01	3.987
	+	77.11		2.989E+00	6.073E-01	5.181E-01	6.006E-02	5.768
	+	87.30		1.692E+00	7.454E-01	9.230E-01	1.467E-01	1.833
		115.19		-6.401E-01	5.520E+00	8.947E+00	9.055E-01	-0.072
	+	238.63	*	2.487E+00	3.428E-01	1.311E-01	1.561E-02	18.974
	+	300.09		2.701E+00	1.546E+00	1.885E+00	2.276E-01	1.433
BI-214	+	609.31	*	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160
	+	1120.29		2.210E+00	9.278E-01	6.561E-01	7.072E-02	3.369
	+	1764.49		2.256E+00	6.221E-01	3.014E-01	2.643E-02	7.483
PB-214	+	74.81		6.457E+00	1.940E+00	1.619E+00	2.216E-01	3.987
	+	77.11		5.124E+00	1.112E+00	8.883E-01	1.232E-01	5.768
	+	87.30		2.899E+00	1.264E+00	1.581E+00	2.302E-01	1.833
	+	241.98		3.622E+00	1.155E+00	7.891E-01	9.763E-02	4.590
	+	295.21		2.030E+00	4.196E-01	3.389E-01	4.178E-02	5.988
	+	351.92	*	2.109E+00	3.299E-01	1.602E-01	1.798E-02	13.164
PO-214	+	74.81		6.457E+00	1.940E+00	1.619E+00	2.216E-01	3.987
	+	77.11		5.124E+00	1.112E+00	8.883E-01	1.232E-01	5.768
	+	87.30		2.899E+00	1.264E+00	1.581E+00	2.302E-01	1.833

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	241.98		3.622E+00	1.155E+00	7.891E-01	9.763E-02	4.590
	+	295.21		2.030E+00	4.196E-01	3.389E-01	4.178E-02	5.988
	+	351.92	*	2.109E+00	3.299E-01	1.602E-01	1.798E-02	13.164
	+	74.81		3.747E+00	1.146E+00	9.398E-01	1.393E-01	3.987
	+	77.11		2.989E+00	6.073E-01	5.181E-01	6.006E-02	5.768
	+	87.30		1.692E+00	7.454E-01	9.230E-01	1.467E-01	1.833
PO-218	+	238.63	*	2.487E+00	3.428E-01	1.311E-01	1.561E-02	18.974
	+	300.09		2.701E+00	1.546E+00	1.885E+00	2.276E-01	1.433
	+	74.81		6.457E+00	1.940E+00	1.619E+00	2.216E-01	3.987
	+	77.11		5.124E+00	1.112E+00	8.883E-01	1.232E-01	5.768
	+	87.30		2.899E+00	1.264E+00	1.581E+00	2.302E-01	1.833
	+	241.98		3.622E+00	1.155E+00	7.891E-01	9.763E-02	4.590
RA-224	+	295.21		2.030E+00	4.196E-01	3.389E-01	4.178E-02	5.988
	+	351.92	*	2.109E+00	3.299E-01	1.602E-01	1.798E-02	13.164
	+	240.98	*	6.868E+00	2.157E+00	1.492E+00	1.645E-01	4.605
RA-226	+	609.31	*	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160
	+	1120.29		2.210E+00	9.278E-01	6.561E-01	7.072E-02	3.369
	+	1764.49		2.256E+00	6.221E-01	3.014E-01	2.643E-02	7.483
AC-228	+	338.32		2.250E+00	1.092E+00	5.550E-01	2.305E-01	4.053
	+	911.07	*	2.324E+00	4.799E-01	2.935E-01	3.457E-02	7.918
	+	969.11		3.331E+00	1.110E+00	5.744E-01	1.353E-01	5.799
RA-228	+	338.32		2.250E+00	1.092E+00	5.550E-01	2.305E-01	4.053
	+	911.07	*	2.324E+00	4.799E-01	2.935E-01	3.457E-02	7.918
	+	969.11		3.331E+00	1.110E+00	5.744E-01	1.353E-01	5.799
TH-228	+	74.81		3.803E+00	1.108E+00	9.538E-01	1.102E-01	3.987
	+	77.11		3.033E+00	6.164E-01	5.259E-01	6.096E-02	5.768
	+	87.30		1.717E+00	7.368E-01	9.368E-01	1.157E-01	1.833
TH-230	+	238.63	*	2.525E+00	3.479E-01	1.331E-01	1.585E-02	18.974
	+	300.09		2.741E+00	2.240E+00	1.913E+00	1.140E+00	1.433
	+	609.31	*	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160
TH-232	+	1120.29		2.210E+00	9.278E-01	6.561E-01	7.072E-02	3.369
	+	1764.49		2.256E+00	6.221E-01	3.014E-01	2.643E-02	7.483
	+	338.32		2.250E+00	6.066E-01	5.550E-01	5.471E-02	4.053
U-234	+	911.07	*	2.324E+00	4.799E-01	2.935E-01	3.457E-02	7.918
	+	969.11		3.331E+00	1.110E+00	5.744E-01	1.353E-01	5.799
	+	609.31	*	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160
NP-237	+	1120.29		2.210E+00	9.278E-01	6.561E-01	7.072E-02	3.369
	+	1764.49		2.256E+00	6.221E-01	3.014E-01	2.643E-02	7.483
	+	86.50	*	1.074E+00	5.115E-01	5.943E-01	1.427E-01	1.808
AM-243	+	95.87		2.223E-01	1.688E+00	2.434E+00	6.245E-01	0.091
	+	74.67	*	6.075E-01	1.769E-01	1.531E-01	1.761E-02	3.968
	+	86.72		4.029E+01	1.729E+01	2.220E+01	2.728E+00	1.815
ANH-511	+	117.66		5.126E-01	5.805E+00	9.476E+00	9.559E-01	0.054
	+	142.18		3.247E+00	2.670E+01	4.337E+01	4.402E+00	0.075
	+	511.00	*	2.353E-01	9.411E-02	6.711E-02	5.798E-03	3.507

---- 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	*	-7.422E-02	4.758E-01	7.677E-01	7.137E-02	-0.097

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	1274.54	*		-1.080E-01	7.103E-02	9.597E-02	8.719E-03	-1.126
NA-24	1368.53	*		-4.150E-01	7.103E-02	Half-Life too short		
AL-26	1129.67			-9.756E-01	2.548E+00	3.785E+00	3.197E-01	-0.258
	1808.65	*		-3.434E-02	4.421E-02	6.150E-02	5.262E-03	-0.558
TI-44	67.85			2.289E-02	9.473E-02	1.463E-01	1.669E-02	0.156
+	78.38	*		5.515E-01	1.121E-01	1.363E-01	1.588E-02	4.047
SC-46	889.25	*		2.974E-02	5.819E-02	1.000E-01	9.293E-03	0.297
+	1120.51			3.776E-01	1.565E-01	1.987E-01	1.690E-02	1.900
V-48	944.10			-4.582E-01	1.366E+00	2.003E+00	1.852E-01	-0.229
	983.50	*		-5.962E-02	9.645E-02	1.485E-01	1.358E-02	-0.401
	1312.09			-5.411E-02	1.104E-01	1.670E-01	1.574E-02	-0.324
CR-51	320.08	*		-2.815E-01	5.731E-01	9.268E-01	9.842E-02	-0.304
MN-52	744.21			-1.129E-01	3.426E-01	5.575E-01	4.826E-02	-0.202
	848.13			2.685E+00	9.355E+00	1.585E+01	1.447E+00	0.169
+	935.52			9.619E-01	5.862E-01	6.898E-01	6.390E-02	1.395
	1246.25			-6.935E-01	1.181E+01	1.858E+01	1.637E+00	-0.037
	1333.61			-2.182E-01	7.045E+00	1.131E+01	1.087E+00	-0.019
	1434.06	*		4.490E-02	2.677E-01	4.573E-01	4.402E-02	0.098
MN-54	834.83	*		-1.422E-02	5.611E-02	9.124E-02	8.280E-03	-0.156
CO-56	846.75	*		2.118E-02	5.575E-02	9.513E-02	8.680E-03	0.223
	977.42			3.588E+00	4.685E+00	7.484E+00	6.855E-01	0.479
	1037.82			-7.361E-02	4.576E-01	7.378E-01	6.925E-02	-0.100
	1175.09			1.587E+00	3.272E+00	5.540E+00	4.519E-01	0.286
+	1238.25			1.982E-01	1.467E-01	2.520E-01	2.264E-02	0.787
	1360.21			5.111E-01	1.409E+00	2.451E+00	2.360E-01	0.209
	1771.40			-1.632E+00	5.072E-01	3.702E-01	3.234E-02	-4.408
CO-57	122.06	*		-2.334E-02	4.007E-02	6.357E-02	6.403E-03	-0.367
	136.48			1.952E-01	3.176E-01	5.254E-01	5.587E-02	0.371
CO-58	810.76	*		-4.373E-03	5.476E-02	9.031E-02	8.119E-03	-0.048
FE-59	142.65			1.341E+00	4.222E+00	6.815E+00	6.921E-01	0.197
	192.34			7.847E-01	1.586E+00	2.395E+00	3.586E-01	0.328
	1099.22	*		4.376E-02	1.312E-01	2.204E-01	2.057E-02	0.199
	1291.56			-1.547E-01	1.913E-01	2.813E-01	2.906E-02	-0.550
CO-60	1173.22			3.942E-02	6.738E-02	1.149E-01	9.349E-03	0.343
	1332.49	*		-2.528E-02	5.713E-02	8.689E-02	8.353E-03	-0.291
ZN-65	1115.52	*		9.640E-02	1.659E-01	2.466E-01	2.108E-02	0.391
GE-68	1077.35	*		8.682E-01	1.910E+00	3.239E+00	2.835E-01	0.268
AS-73	53.44	*		1.117E+00	2.468E+00	4.160E+00	5.401E-01	0.268
AS-74	595.88	*		-7.151E-02	1.271E-01	1.955E-01	1.661E-02	-0.366
	634.78			-1.650E-01	5.248E-01	8.219E-01	6.863E-02	-0.201
SE-75	66.05			-9.240E+00	9.684E+00	1.536E+01	1.972E+00	-0.602
	96.73			-8.668E-01	1.365E+00	1.884E+00	2.887E-01	-0.460
	121.11			-6.260E-02	2.084E-01	3.345E-01	4.137E-02	-0.187
	136.00			2.982E-02	6.205E-02	9.884E-02	1.001E-02	0.302
	198.60			-2.257E+00	2.861E+00	4.326E+00	5.049E-01	-0.522
	264.65	*		-2.417E-02	7.831E-02	1.117E-01	1.224E-02	-0.216
	279.53			2.685E-01	1.697E-01	2.978E-01	3.297E-02	0.902
	303.91			-2.492E+00	3.630E+00	4.970E+00	6.436E-01	-0.501
	400.65			-3.453E-01	3.957E-01	6.148E-01	6.753E-02	-0.562

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77	+	87.88		7.484E+02	3.211E+02	5.201E+02	6.452E+01	1.439
		200.40		9.317E+01	2.355E+02	3.824E+02	4.178E+01	0.244
	+	239.00		3.718E+02	4.845E+01	5.387E+01	5.943E+00	6.901
		249.79		-1.896E+01	9.740E+01	1.527E+02	1.681E+01	-0.124
		281.68		-2.061E+02	1.356E+02	2.079E+02	2.242E+01	-0.992
		297.23		4.819E+02	1.611E+02	1.923E+02	2.038E+01	2.506
		303.76		-1.566E+02	2.894E+02	4.016E+02	4.219E+01	-0.390
		439.47		1.762E+01	1.935E+02	3.186E+02	2.730E+01	0.055
		484.57		3.690E+01	3.175E+02	5.213E+02	4.502E+01	0.071
		520.65	*	-4.649E+00	1.541E+01	2.297E+01	1.983E+00	-0.202
		574.64		5.187E+01	2.949E+02	4.695E+02	4.016E+01	0.110
		578.91		-7.608E+00	1.379E+02	1.909E+02	1.631E+01	-0.040
		585.48		2.373E+03	4.233E+02	7.169E+02	6.112E+01	3.310
		755.35		1.686E+02	2.292E+02	4.009E+02	3.492E+01	0.420
		817.79		-6.218E+01	1.689E+02	2.712E+02	2.441E+01	-0.229
	SR-82	698.33		-1.029E+01	4.811E+01	7.932E+01	6.679E+00	-0.130
		776.49	*	-7.458E-01	5.536E-01	8.174E-01	7.203E-02	-0.912
RB-83		1395.20		-1.166E+01	1.599E+01	2.429E+01	2.340E+00	-0.480
		520.41	*	-3.920E-02	1.134E-01	1.614E-01	1.394E-02	-0.243
		529.64		-2.356E-02	1.600E-01	2.569E-01	2.217E-02	-0.092
RB-84		552.65		5.441E-03	2.975E-01	4.821E-01	4.146E-02	0.011
		881.50	*	-9.316E-03	9.903E-02	1.623E-01	1.504E-02	-0.057
KR-85		513.99	*	2.076E+01	1.200E+01	1.918E+01	1.657E+00	1.082
SR-85		513.99	*	1.061E-01	6.137E-02	9.807E-02	8.473E-03	1.082
RB-86		1076.63	*	5.617E-02	1.240E+00	2.032E+00	1.780E-01	0.028
Y-88		898.02		2.475E-02	5.768E-02	9.867E-02	9.240E-03	0.251
		1836.01	*	3.027E-02	4.022E-02	7.595E-02	6.397E-03	0.399
ZR-88		392.90	*	-3.334E-03	4.734E-02	7.759E-02	6.531E-03	-0.043
Y-91		1204.90	*	-1.818E+00	2.923E+01	4.716E+01	3.976E+00	-0.039
NB-94		702.63	*	2.713E-02	4.895E-02	8.479E-02	7.158E-03	0.320
		871.10		4.792E-02	4.624E-02	8.296E-02	7.651E-03	0.578
NB-95		765.79	*	1.526E-02	6.493E-02	1.098E-01	9.616E-03	0.139
NB-95M		235.69	*	6.018E-01	2.437E-01	3.813E-01	4.589E-02	1.578
ZR-95		724.18		1.554E-01	1.527E-01	2.408E-01	2.240E-02	0.646
		756.15	*	3.892E-02	1.082E-01	1.847E-01	1.769E-02	0.211
NB-97		657.90	*	1.610E-02	1.082E-01	Half-Life	too short	
		1024.50		-4.386E+00	1.082E-01	Half-Life	too short	
ZR-97		254.15		1.299E+00	1.082E-01	Half-Life	too short	
		355.39		4.613E+00	1.082E-01	Half-Life	too short	
		507.63	*	5.053E+00	1.082E-01	Half-Life	too short	
		602.52		2.093E+00	1.082E-01	Half-Life	too short	
		1021.30		7.605E-01	1.082E-01	Half-Life	too short	
		1147.95		2.135E+00	1.082E-01	Half-Life	too short	
		1362.66		6.055E+00	1.082E-01	Half-Life	too short	
		1750.46		3.326E+00	1.082E-01	Half-Life	too short	
MO-99		140.51		-4.636E+01	3.980E+01	5.788E+01	1.632E+01	-0.801
		181.06		-1.780E+01	2.858E+01	3.822E+01	7.416E+00	-0.466
		366.43		1.949E+01	1.195E+02	1.990E+02	1.824E+01	0.098
		739.58	*	-1.637E+01	1.821E+01	2.452E+01	3.726E+00	-0.667

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TC-99M	778.00			-4.002E+01	4.586E+01	7.084E+01	6.248E+00	-0.565
RH-101	140.51	*		-3.629E+10	4.586E+01	Half-Life too short		
	127.23			3.387E-02	5.760E-02	8.402E-02	8.430E-03	0.403
	198.01	*		-3.600E-02	5.189E-02	7.887E-02	8.605E-03	-0.456
	325.23			2.889E-02	3.858E-01	5.584E-01	5.657E-02	0.052
RH-102	418.52			-2.928E-01	4.287E-01	6.727E-01	5.727E-02	-0.435
	475.06	*		2.572E-02	4.220E-02	7.151E-02	6.170E-03	0.360
	631.29			-3.516E-02	8.178E-02	1.269E-01	1.062E-02	-0.277
	697.49			-1.332E-01	1.119E-01	1.708E-01	1.437E-02	-0.780
	766.84			6.960E-02	1.711E-01	2.919E-01	2.559E-02	0.238
	1046.59			1.084E-01	1.755E-01	3.018E-01	2.687E-02	0.359
	1112.84			8.223E-02	4.012E-01	5.743E-01	4.912E-02	0.143
RU-103	497.08	*		-2.650E-02	5.892E-02	9.264E-02	1.313E-02	-0.286
	610.33	+		1.779E+01	3.890E+00	4.217E+00	6.999E-01	4.218
RH-106	511.85	+		1.175E+00	4.699E-01	6.182E-01	5.341E-02	1.901
	621.84	*		2.016E-01	4.739E-01	7.856E-01	1.039E-01	0.257
	1050.47			-9.227E-01	3.604E+00	5.762E+00	5.120E-01	-0.160
RU-106	511.85	+		1.175E+00	4.699E-01	6.182E-01	5.341E-02	1.901
	621.84	*		2.016E-01	4.735E-01	7.856E-01	6.603E-02	0.257
	1050.47			-9.227E-01	3.604E+00	5.762E+00	5.120E-01	-0.160
AG-108M	433.93	*		-1.825E-02	4.861E-02	7.769E-02	6.916E-03	-0.235
	614.37			4.004E-03	6.115E-02	8.589E-02	7.540E-03	0.047
	722.95			-1.637E-02	6.734E-02	9.446E-02	8.396E-03	-0.173
AG-110M	657.75	*		9.561E-03	4.522E-02	7.708E-02	6.559E-03	0.124
	677.61			1.827E-01	4.377E-01	7.544E-01	6.458E-02	0.242
	706.67			-9.377E-02	3.041E-01	4.977E-01	4.333E-02	-0.188
	763.93			-2.319E-01	2.593E-01	4.047E-01	3.639E-02	-0.573
	884.67			1.458E-02	7.191E-02	1.208E-01	1.152E-02	0.121
	937.48			7.568E-02	1.722E-01	2.576E-01	2.460E-02	0.294
	1384.27			-3.997E-01	2.560E-01	3.459E-01	3.408E-02	-1.156
IN-111	171.28			1.173E+00	1.463E+00	2.420E+00	2.593E-01	0.485
	245.39	*		5.035E-01	1.644E+00	2.445E+00	2.694E-01	0.206
IN-113M	391.69	*		-4.154E-02	6.945E-02	1.103E-01	9.581E-03	-0.377
SN-113	391.69	*		-4.154E-02	6.945E-02	1.103E-01	9.581E-03	-0.377
IN-114M	190.27	*		5.074E-02	3.165E-01	4.459E-01	4.842E-02	0.114
CD-115	260.90			7.391E+01	1.851E+02	3.147E+02	3.448E+01	0.235
	492.35			1.806E+01	4.970E+01	8.285E+01	7.159E+00	0.218
	527.90	*		-2.053E+00	1.576E+01	2.535E+01	2.188E+00	-0.081
SN-117M	156.02			1.471E+00	3.622E+00	5.922E+00	6.172E-01	0.248
	158.56	*		-6.372E-02	8.749E-02	1.366E-01	1.432E-02	-0.467
SB-122	563.90	*		1.407E+00	2.847E+00	4.656E+00	3.994E-01	0.302
	692.80			2.223E+01	5.626E+01	9.676E+01	8.118E+00	0.230
I-123	159.00	*		-3.364E+00	5.626E+01	Half-Life too short		
	528.96			-1.176E+01	5.626E+01	Half-Life too short		
TE-123M	159.00	*		-2.267E-02	4.530E-02	7.145E-02	7.529E-03	-0.317
I-124	602.71	*		-9.393E-02	1.117E+00	1.537E+00	1.303E-01	-0.061
	722.78			-2.091E+00	6.724E+00	9.358E+00	7.999E-01	-0.223
	1325.50			1.967E+01	4.769E+01	8.057E+01	7.693E+00	0.244
	1376.25			5.644E+01	4.758E+01	8.745E+01	8.426E+00	0.645

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SB-124		1509.49		8.658E+00	2.230E+01	3.875E+01	3.701E+00	0.223
		1691.02		5.280E+00	4.860E+00	9.426E+00	8.553E-01	0.560
		602.71		-5.671E-03	6.741E-02	9.281E-02	7.866E-03	-0.061
		645.85		-1.040E-01	7.428E-01	1.179E+00	1.042E-01	-0.088
		709.31		1.836E+00	3.797E+00	6.563E+00	5.564E-01	0.280
		713.82		-1.328E+00	2.331E+00	3.726E+00	4.454E-01	-0.356
		722.78		-1.830E-01	5.885E-01	8.190E-01	7.154E-02	-0.223
	+	968.20		3.419E+01	8.646E+00	1.050E+01	9.648E-01	3.256
		1045.16		1.208E+00	3.892E+00	6.530E+00	5.818E-01	0.185
		1325.50		1.839E+00	4.458E+00	7.531E+00	7.191E-01	0.244
SB-125		1368.21		-7.155E-01	2.595E+00	4.201E+00	5.942E-01	-0.170
		1436.60		-1.927E+00	4.592E+00	7.166E+00	6.897E-01	-0.269
		1691.02		1.090E-01	1.004E-01	1.946E-01	1.829E-02	0.560
		427.89	*	-8.768E-02	1.374E-01	2.159E-01	1.881E-02	-0.406
	+	463.38		1.200E+00	5.982E-01	8.763E-01	8.141E-02	1.370
		600.56		-1.816E-01	2.657E-01	3.922E-01	3.580E-02	-0.463
		635.90		-1.186E-01	4.138E-01	6.498E-01	5.889E-02	-0.183
		109.28	*	-2.658E+00	1.507E+01	2.405E+01	2.824E+00	-0.110
		388.63		-1.242E-01	3.133E-01	5.041E-01	4.289E-02	-0.246
		666.33	*	5.757E-02	2.494E-01	4.248E-01	3.504E-02	0.135
TE-125M		753.82		-4.445E-01	2.209E+00	3.630E+00	3.159E-01	-0.122
		223.80		-2.660E+00	6.079E+00	1.005E+01	1.108E+00	-0.265
I-126		278.60		4.824E+00	3.891E+00	6.689E+00	7.236E-01	0.721
	+	296.50		1.993E+01	3.928E+00	5.594E+00	5.935E-01	3.562
SB-126		414.70		-1.354E-01	1.113E-01	1.680E-01	1.428E-02	-0.806
		415.30		-7.345E+00	9.098E+00	1.415E+01	1.203E+00	-0.519
		555.20		-2.784E+00	5.726E+00	8.919E+00	7.665E-01	-0.312
		573.80		6.482E-01	1.497E+00	2.492E+00	2.132E-01	0.260
		593.00		-4.917E-01	1.301E+00	2.035E+00	1.730E-01	-0.242
		656.30		2.886E-01	4.141E+00	6.990E+00	5.766E-01	0.041
		666.33		2.404E-02	1.042E-01	1.774E-01	1.463E-02	0.135
		675.00		-3.088E+00	2.795E+00	4.287E+00	3.556E-01	-0.720
		695.00		1.413E-02	1.061E-01	1.793E-01	1.506E-02	0.079
		697.00		-3.622E-01	3.823E-01	5.954E-01	5.009E-02	-0.608
SB-127		720.50	*	1.053E-01	2.295E-01	3.462E-01	2.955E-02	0.304
		856.80		-4.054E-01	7.100E-01	1.122E+00	1.028E-01	-0.361
		989.30		3.624E-01	1.789E+00	2.991E+00	2.728E-01	0.121
		1034.80		-4.733E+00	1.224E+01	1.928E+01	1.726E+00	-0.246
		1213.00		1.618E+00	7.339E+00	1.210E+01	1.030E+00	0.134
		61.10		2.535E+01	1.247E+02	2.077E+02	2.768E+01	0.122
		252.40		5.194E+00	6.543E+00	1.069E+01	4.552E+00	0.486
		290.80		-2.070E+01	3.473E+01	4.807E+01	6.133E+00	-0.431
		411.60		5.851E+00	1.764E+01	2.948E+01	4.599E+00	0.198
		444.90		-1.753E+00	1.392E+01	2.258E+01	2.810E+00	-0.078
SB-127		473.00		-5.811E-02	2.302E+00	3.749E+00	4.801E-01	-0.016
		543.00		-2.142E+01	2.319E+01	3.459E+01	4.959E+00	-0.619
		603.60		6.662E+00	1.844E+01	2.653E+01	3.274E+00	0.251
		685.20	*	-4.246E-01	1.817E+00	2.991E+00	3.322E-01	-0.142
		698.50		1.851E-01	2.067E+01	3.462E+01	5.421E+00	0.005

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
XE-127	722.20			-3.841E+01	4.829E+01	6.348E+01	7.000E+00	-0.605
	783.80			1.364E+00	5.176E+00	8.765E+00	1.097E+00	0.156
	57.60			1.440E+00	1.541E+01	2.562E+01	3.012E+00	0.056
	145.22			2.491E-01	1.102E+00	1.773E+00	1.808E-01	0.140
	172.10			8.738E-02	1.837E-01	3.006E-01	3.222E-02	0.291
I-131	202.84	*		1.678E-02	7.441E-02	1.199E-01	1.312E-02	0.140
	374.96			-4.832E-02	2.909E-01	4.750E-01	4.237E-02	-0.102
	80.18			-6.439E+00	8.661E+00	1.202E+01	1.418E+00	-0.536
	284.30			-5.534E-01	2.265E+00	3.734E+00	4.153E-01	-0.148
	364.48	*		9.967E-02	1.669E-01	2.843E-01	2.744E-02	0.351
TE-132	636.97			6.670E-01	2.264E+00	3.718E+00	3.285E-01	0.179
	722.89			-2.960E+00	1.109E+01	1.551E+01	1.334E+00	-0.191
	49.72			-3.581E+01	6.748E+01	1.095E+02	1.650E+01	-0.327
	111.76			1.200E+00	4.392E+01	7.164E+01	8.659E+00	0.017
	116.30			2.679E+01	4.019E+01	6.682E+01	8.025E+00	0.401
BA-133	228.16	*		3.884E-01	1.033E+00	1.757E+00	3.008E-01	0.221
	53.15			3.063E+00	1.091E+01	1.828E+01	2.389E+00	0.167
	79.62			4.507E+00	2.638E+00	3.913E+00	6.720E-01	1.152
	81.00			-4.452E-01	2.454E-01	2.476E-01	4.411E-02	-1.798
	276.40			-1.683E-01	6.454E-01	9.607E-01	1.525E-01	-0.175
I-133	302.84			2.185E-01	2.523E-01	3.826E-01	5.583E-02	0.571
	356.01	*		-4.853E-03	7.117E-02	1.014E-01	1.395E-02	-0.048
	383.85			-1.503E-01	4.793E-01	7.755E-01	9.795E-02	-0.194
	510.53	+		1.966E+00	4.793E-01	Half-Life	too short	
	529.87	*		1.256E-04	4.793E-01	Half-Life	too short	
CS-134	706.58			-2.560E-01	4.793E-01	Half-Life	too short	
	856.28			-9.935E-01	4.793E-01	Half-Life	too short	
	875.33			-1.634E-01	4.793E-01	Half-Life	too short	
	1236.41	+		1.182E+00	4.793E-01	Half-Life	too short	
	1298.22			-2.830E-02	4.793E-01	Half-Life	too short	
I-135	475.35			1.848E+00	2.745E+00	4.670E+00	4.030E-01	0.396
	563.23			5.590E-02	5.404E-01	8.607E-01	7.456E-02	0.065
	569.32			-1.385E-01	2.811E-01	4.370E-01	3.795E-02	-0.317
	604.70			4.235E-03	5.795E-02	8.104E-02	6.880E-03	0.052
	795.84	*		1.755E-01	9.591E-02	1.273E-01	1.141E-02	1.378
CS-135	801.93			-4.657E-01	7.112E-01	9.420E-01	8.457E-02	-0.494
	1038.57			-1.348E+00	5.722E+00	9.161E+00	8.188E-01	-0.147
	1167.94			-1.890E+00	3.894E+00	6.055E+00	4.953E-01	-0.312
	1365.15			-1.369E-01	1.774E+00	2.940E+00	2.936E-01	-0.047
	268.24	*		2.713E-01	2.796E-01	4.273E-01	5.127E-02	0.635
I-135	288.45			-1.316E+10	2.796E-01	Half-Life	too short	
	417.63			6.827E+09	2.796E-01	Half-Life	too short	
	546.56			7.701E+09	2.796E-01	Half-Life	too short	
	836.80			1.380E+10	2.796E-01	Half-Life	too short	
	1038.76			-5.235E+09	2.796E-01	Half-Life	too short	
I-135	1124.00			4.798E+10	2.796E-01	Half-Life	too short	
	1131.51			-3.483E+09	2.796E-01	Half-Life	too short	
	1260.41	*		4.836E+09	2.796E-01	Half-Life	too short	
	1457.56			6.649E+11	2.796E-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		1678.03		6.292E+09	2.796E-01	Half-Life	too short	
		1706.46		-4.193E+09	2.796E-01	Half-Life	too short	
		1791.20		3.000E+09	2.796E-01	Half-Life	too short	
		66.91		-9.308E-01	1.512E+00	2.431E+00	4.170E-01	-0.383
	+	86.29		4.713E+00	2.071E+00	3.313E+00	5.142E-01	1.422
		153.22		1.171E+00	1.037E+00	1.730E+00	1.941E-01	0.677
		163.89		1.195E+00	1.685E+00	2.748E+00	3.154E-01	0.435
		176.55		1.150E-01	5.687E-01	9.202E-01	1.027E-01	0.125
		273.65		-9.332E-01	8.070E-01	1.078E+00	1.220E-01	-0.866
		340.57		9.551E-01	2.484E-01	4.098E-01	4.110E-02	2.331
BA-137M		818.51		3.313E-02	1.010E-01	1.720E-01	1.550E-02	0.193
		1048.07	*	2.074E-02	1.646E-01	2.722E-01	2.518E-02	0.076
		1235.34		3.886E-01	1.082E+00	1.555E+00	1.853E-01	0.250
		661.65	*	-2.235E-02	4.850E-02	7.864E-02	6.465E-03	-0.284
		661.65	*	-2.363E-02	5.127E-02	8.313E-02	6.849E-03	-0.284
		165.85	*	2.158E-02	4.682E-02	7.661E-02	8.177E-03	0.282
		162.64		-1.789E-01	1.206E+00	1.909E+00	2.100E-01	-0.094
		304.84		-1.154E+00	2.187E+00	3.004E+00	8.607E-01	-0.384
		423.70		3.040E+00	2.981E+00	4.905E+00	1.589E+00	0.620
		537.32	*	2.528E-01	3.650E-01	6.062E-01	2.009E-01	0.417
LA-140	+	328.77		6.824E-01	4.974E-01	8.228E-01	8.621E-02	0.829
		432.53		3.719E-01	2.943E+00	4.860E+00	4.362E-01	0.077
		487.03		-8.967E-02	2.058E-01	3.252E-01	2.982E-02	-0.276
		751.79		-2.282E+00	2.532E+00	3.925E+00	3.771E-01	-0.582
		815.85		-3.948E-01	4.257E-01	6.442E-01	6.409E-02	-0.613
		867.82		5.210E-01	1.850E+00	3.135E+00	3.022E-01	0.166
		919.63		5.050E-01	4.086E+00	6.325E+00	7.083E-01	0.080
		925.24		-3.954E-01	1.573E+00	2.403E+00	2.352E-01	-0.165
		1596.49	*	-1.162E-01	1.286E-01	1.854E-01	1.738E-02	-0.627
		145.44	*	2.496E-02	9.803E-02	1.599E-01	1.652E-02	0.156
CE-141		57.37		-4.728E-05	9.803E-02	Half-Life	too short	
		231.56		-2.190E-03	9.803E-02	Half-Life	too short	
		293.26	*	1.244E-03	9.803E-02	Half-Life	too short	
	+	350.59		4.244E-02	9.803E-02	Half-Life	too short	
		490.36		2.897E-04	9.803E-02	Half-Life	too short	
		664.57		-2.479E-04	9.803E-02	Half-Life	too short	
		721.93		-1.196E-03	9.803E-02	Half-Life	too short	
		80.11		-2.357E+00	4.086E+00	5.726E+00	6.730E-01	-0.412
		133.54	*	1.116E-01	3.570E-01	5.135E-01	8.423E-02	0.217
		476.78		-4.504E-02	9.900E-02	1.563E-01	1.475E-02	-0.288
PM-144		618.01		3.918E-03	4.793E-02	7.549E-02	6.540E-03	0.052
		696.49	*	-2.220E-02	4.935E-02	7.998E-02	6.728E-03	-0.278
		778.57		-2.090E+00	3.342E+00	5.286E+00	4.665E-01	-0.395
		696.49	*	-1.504E+00	3.344E+00	5.419E+00	4.557E-01	-0.278
		1489.15		-8.533E+00	1.480E+01	2.226E+01	2.132E+00	-0.383
		453.90	*	7.291E-02	6.652E-02	1.152E-01	1.233E-02	0.633
		633.02		3.118E-01	2.021E+00	3.281E+00	1.224E+00	0.095
		735.90		-1.959E-01	2.614E-01	3.362E-01	9.615E-02	-0.583
		747.13		8.005E-02	1.341E-01	2.323E-01	3.269E-02	0.345

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	+	91.11		8.325E-01	6.528E-01	8.237E-01	1.020E-01	1.011
		319.41		-2.747E+00	5.089E+00	8.211E+00	8.410E-01	-0.335
		439.89		-2.037E+00	8.366E+00	1.348E+01	1.155E+00	-0.151
		531.02	*	8.298E-02	8.177E-01	1.336E+00	1.997E-01	0.062
PM-149		285.90	*	1.035E+02	1.299E+02	2.225E+02	3.741E+01	0.465
EU-152		121.78		-8.134E-02	1.170E-01	1.846E-01	2.068E-02	-0.441
		244.69		1.086E+00	5.689E-01	9.030E-01	9.953E-02	1.203
		344.27	*	-6.250E-02	1.749E-01	2.292E-01	2.333E-02	-0.273
		443.98		-3.516E-01	1.424E+00	2.293E+00	1.967E-01	-0.153
		778.89		-1.103E-01	3.713E-01	6.031E-01	5.322E-02	-0.183
		867.32		2.927E-01	1.133E+00	1.916E+00	1.765E-01	0.153
		964.01		7.394E-01	5.146E-01	8.261E-01	7.598E-02	0.895
		1085.78		-3.915E-02	5.844E-01	9.480E-01	8.256E-02	-0.041
		1112.02		-1.888E-01	5.820E-01	7.790E-01	6.666E-02	-0.242
		1407.95		1.904E-03	2.890E-01	4.827E-01	4.651E-02	0.004
		69.67		5.337E-01	3.466E+00	5.055E+00	5.770E-01	0.106
GD-153		83.37		-8.210E-01	3.027E+01	4.053E+01	4.858E+00	-0.020
		97.43	*	-1.700E-02	1.373E-01	1.955E-01	2.158E-02	-0.087
		103.18		-2.692E-01	1.675E-01	2.531E-01	2.675E-02	-1.064
EU-154		123.07		-9.522E-04	8.113E-02	1.317E-01	1.645E-02	-0.007
		247.94		-1.237E-01	6.032E-01	8.684E-01	1.161E-01	-0.142
		591.81		6.307E-01	8.584E-01	1.459E+00	1.690E-01	0.432
		723.30		2.149E-02	2.773E-01	4.026E-01	3.811E-02	0.053
		756.87		8.220E-01	1.202E+00	2.087E+00	2.515E-01	0.394
		873.19		8.441E-02	4.050E-01	6.818E-01	8.646E-02	0.124
		996.32		-3.196E-01	5.434E-01	8.395E-01	1.511E-01	-0.381
		1004.76		-1.117E-01	2.987E-01	4.721E-01	5.655E-02	-0.236
		1274.45	*	-2.609E-01	1.958E-01	2.695E-01	3.143E-02	-0.968
		48.70		-2.428E+00	9.525E+00	1.568E+01	2.104E+00	-0.155
EU-155		60.01		-1.343E+00	1.181E+01	1.947E+01	2.198E+00	-0.069
		86.54	+	4.406E-01	1.891E-01	3.072E-01	3.788E-02	1.434
TB-160	+	105.31	*	7.322E-02	1.685E-01	2.790E-01	2.939E-02	0.262
		86.79		1.174E+00	5.038E-01	8.122E-01	9.987E-02	1.446
		197.04		-1.125E-01	8.691E-01	1.359E+00	1.482E-01	-0.083
		215.65		-6.624E-01	1.213E+00	1.809E+00	1.990E-01	-0.366
		298.57		1.390E-01	3.312E-01	3.369E-01	3.565E-02	0.413
		879.36	*	-1.956E-03	1.839E-01	3.036E-01	2.810E-02	-0.006
		962.29		1.078E+00	9.338E-01	1.469E+00	1.352E-01	0.734
		966.15		1.682E+00	4.184E-01	7.821E-01	7.189E-02	2.151
		1177.93		-6.101E-01	5.534E-01	8.049E-01	6.586E-02	-0.758
		1271.85		4.001E-01	1.020E+00	1.714E+00	1.551E-01	0.233
		80.57		-8.348E-01	5.713E-01	6.957E-01	8.197E-02	-1.200
HO-166M		184.41		1.608E-01	6.645E-02	1.030E-01	1.113E-02	1.561
		280.46		-6.895E-02	1.341E-01	2.185E-01	2.360E-02	-0.316
		410.95		3.226E-01	3.741E-01	6.419E-01	5.448E-02	0.503
		711.68	*	-3.377E-02	8.756E-02	1.423E-01	1.208E-02	-0.237
		752.31		-2.826E-01	4.143E-01	6.553E-01	5.699E-02	-0.431
		810.29		2.961E-03	8.342E-02	1.389E-01	1.246E-02	0.021
		51.35		-3.180E+01	1.020E+02	1.673E+02	2.255E+01	-0.190
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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-176	+	52.39		5.148E+00	4.946E+01	8.245E+01	1.093E+01	0.062
		59.40		-1.927E+01	6.487E+01	1.062E+02	1.198E+01	-0.181
		66.72	*	-4.167E+01	5.588E+01	8.963E+01	1.023E+01	-0.465
		88.36		8.677E-01	3.723E-01	6.132E-01	7.571E-02	1.415
		201.83		-1.005E-02	4.593E-02	7.267E-02	7.946E-03	-0.138
LU-177	+	306.84	*	2.600E-02	3.867E-02	6.293E-02	6.580E-03	0.413
		401.10		-3.930E+00	1.021E+01	1.640E+01	1.386E+00	-0.240
		112.95		-2.495E-01	2.469E+00	4.006E+00	4.073E-01	-0.062
LU-177M	+	208.36	*	4.124E+00	2.213E+00	2.910E+00	3.192E-01	1.417
		52.97		9.357E-01	4.956E+00	8.284E+00	1.086E+00	0.113
		54.07		5.003E-01	2.474E+00	4.135E+00	5.294E-01	0.121
		61.30		1.073E-01	3.355E+00	5.558E+00	6.316E-01	0.019
		121.62		-5.205E-02	5.820E-01	9.426E-01	9.488E-02	-0.055
HF-181	+	147.16		-7.488E-01	1.029E+00	1.611E+00	1.649E-01	-0.465
		171.86		6.196E-01	7.414E-01	1.228E+00	1.316E-01	0.505
		218.09		1.683E-01	1.235E+00	2.092E+00	2.303E-01	0.080
		268.79		3.717E+00	1.816E+00	2.253E+00	2.456E-01	1.650
		319.02		-5.577E-02	3.985E-01	6.569E-01	6.733E-02	-0.085
		367.43		-2.530E-01	1.378E+00	2.250E+00	2.056E-01	-0.112
		413.65	*	-2.309E-01	2.721E-01	4.234E-01	3.598E-02	-0.545
		56.28		-1.847E+00	2.535E+00	4.071E+00	4.941E-01	-0.454
		57.53		7.814E-02	1.300E+00	2.158E+00	2.541E-01	0.036
		65.20		-4.273E-02	1.906E+00	3.147E+00	3.594E-01	-0.014
W-181	+	133.02		1.957E-02	1.135E-01	1.623E-01	1.631E-02	0.121
		136.25		5.521E-01	7.123E-01	1.147E+00	1.155E-01	0.481
		345.85		-3.040E-01	3.296E-01	4.366E-01	4.229E-02	-0.696
		482.03	*	1.402E-02	6.365E-02	1.052E-01	9.084E-03	0.133
		56.28		-7.234E-01	9.947E-01	1.598E+00	1.939E-01	-0.453
TA-182	+	57.53		3.019E-02	5.105E-01	8.477E-01	9.982E-02	0.036
		65.20	*	-1.665E-02	7.427E-01	1.226E+00	1.400E-01	-0.014
		67.75		-6.567E-02	2.211E-01	3.486E-01	3.979E-02	-0.188
		100.10		3.215E-01	3.046E-01	4.571E-01	4.934E-02	0.703
		152.43		1.375E-01	5.451E-01	8.874E-01	9.177E-02	0.155
RE-183	+	222.10		-5.658E-01	5.280E-01	8.455E-01	9.318E-02	-0.669
		1001.68		5.340E-01	2.872E+00	4.848E+00	4.403E-01	0.110
		1121.28		1.043E+00	4.325E-01	5.407E-01	4.596E-02	1.930
		1189.05		-5.503E-02	4.639E-01	7.452E-01	6.174E-02	-0.074
		1221.42	*	8.004E-02	3.110E-01	5.142E-01	4.413E-02	0.156
		1230.97		9.236E-01	8.108E-01	1.305E+00	1.131E-01	0.708
		57.98		1.129E-02	5.029E-01	8.339E-01	9.714E-02	0.014
		59.32		1.603E-02	2.630E-01	4.365E-01	4.929E-02	0.037
		67.20		-2.049E-01	3.884E-01	6.288E-01	7.176E-02	-0.326
		162.32	*	1.314E-03	1.771E-01	2.821E-01	2.985E-02	0.005
RE-184	+	208.81		3.794E+00	2.036E+00	2.686E+00	2.947E-01	1.413
		291.72		-4.397E-01	1.587E+00	2.254E+00	2.405E-01	-0.195
		57.98		4.165E-02	1.856E+00	3.077E+00	3.585E-01	0.014
		59.32		5.911E-02	9.697E-01	1.609E+00	1.818E-01	0.037
		67.20		-7.559E-01	1.433E+00	2.320E+00	2.647E-01	-0.326
		161.27		-1.882E-01	5.614E-01	8.915E-01	9.407E-02	-0.211

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
OS-185		216.55		-1.383E-01	4.127E-01	6.469E-01	7.118E-02	-0.214
		252.85	*	2.135E-01	3.470E-01	5.955E-01	6.549E-02	0.358
		318.01		-2.448E-01	6.928E-01	1.130E+00	1.160E-01	-0.217
		792.07		4.726E-01	1.727E+00	2.541E+00	2.257E-01	0.186
		903.28		-3.110E-02	1.605E+00	2.271E+00	2.116E-01	-0.014
		920.93		8.617E-02	6.105E-01	1.019E+00	9.472E-02	0.085
		59.72		-1.368E-01	7.075E-01	1.163E+00	1.311E-01	-0.118
		61.14		7.306E-02	3.694E-01	6.152E-01	6.988E-02	0.119
		69.30		2.618E-01	6.177E-01	9.116E-01	1.040E-01	0.287
		592.07		2.017E+00	3.492E+00	5.879E+00	5.001E-01	0.343
		646.12	*	2.688E-02	6.090E-02	1.012E-01	8.398E-03	0.266
		717.42		1.034E-01	1.312E+00	2.205E+00	1.879E-01	0.047
		874.81		-8.133E-01	8.111E-01	1.211E+00	1.118E-01	-0.672
		880.27		2.503E-01	1.033E+00	1.745E+00	1.615E-01	0.143
RE-188		155.03	*	1.384E-02	2.790E-01	4.507E-01	4.687E-02	0.031
W-188		477.96		-2.428E+00	4.633E+00	7.284E+00	6.287E-01	-0.333
		633.10		-3.312E-01	4.121E+00	6.580E+00	5.500E-01	-0.050
IR-192		63.58		3.853E+01	1.121E+02	1.837E+02	2.097E+01	0.210
		227.08		2.579E+01	1.987E+01	3.469E+01	3.826E+00	0.743
AU-195		290.67	*	-6.982E+00	1.255E+01	1.744E+01	1.864E+00	-0.400
	+	295.96		1.544E+00	3.047E-01	4.359E-01	4.649E-02	3.542
		308.46		7.617E-02	1.434E-01	2.442E-01	2.556E-02	0.312
		316.51	*	2.106E-02	5.245E-02	8.877E-02	9.152E-03	0.237
TL-200		468.07		8.572E-03	1.083E-01	1.540E-01	1.423E-02	0.056
		604.41		-1.349E-01	7.899E-01	1.077E+00	1.392E-01	-0.125
		612.46		3.911E+00	1.381E+00	2.288E+00	2.229E-01	1.709
		65.12		-2.040E-03	3.452E-01	5.703E-01	6.512E-02	-0.004
TL-201		66.83		-1.179E-01	1.836E-01	2.957E-01	3.376E-02	-0.399
	+	75.70		1.964E+00	5.719E-01	8.094E-01	9.335E-02	2.427
		98.88	*	3.641E-01	3.844E-01	5.748E-01	6.265E-02	0.634
	+	129.76		5.983E+00	6.062E+00	7.429E+00	7.454E-01	0.805
TL-202		367.94	*	-1.329E-04	6.062E+00	Half-Life	too short	
		579.30		4.117E-03	6.062E+00	Half-Life	too short	
		828.27		1.634E-03	6.062E+00	Half-Life	too short	
		1205.75		-3.186E-04	6.062E+00	Half-Life	too short	
TL-203		68.90		1.577E+00	9.464E+00	1.382E+01	1.577E+00	0.114
		70.82		1.710E+00	5.231E+00	7.682E+00	8.774E-01	0.223
		80.30		-1.307E+01	1.003E+01	1.237E+01	1.456E+00	-1.056
		135.34		1.117E+01	4.210E+01	6.043E+01	6.082E+00	0.185
TL-207		167.43	*	-2.458E+00	1.035E+01	1.649E+01	1.761E+00	-0.149
		68.90		1.479E-01	8.879E-01	1.296E+00	1.479E-01	0.114
		70.82		1.599E-01	4.894E-01	7.186E-01	8.209E-02	0.223
		80.30		-1.223E+00	9.382E-01	1.158E+00	1.362E-01	-1.056
HG-203		439.56	*	6.226E-03	9.906E-02	1.628E-01	1.395E-02	0.038
		70.83		7.058E-01	2.144E+00	3.146E+00	4.887E-01	0.224
		72.87		3.162E+00	1.362E+00	2.029E+00	3.085E-01	1.559
		82.60		-3.666E+00	3.216E+00	2.993E+00	4.797E-01	-1.225
BI-207		279.20	*	1.286E-01	6.363E-02	1.126E-01	1.239E-02	1.142
		72.80		8.518E-01	3.861E-01	5.911E-01	6.769E-02	1.441

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-207	+	74.97		1.090E+00	3.175E-01	4.155E-01	4.782E-02	2.625
		84.90		3.657E-01	3.610E-01	5.378E-01	6.517E-02	0.680
		569.67		-1.393E-02	4.389E-02	6.920E-02	5.928E-03	-0.201
		1063.62	*	3.590E-02	7.730E-02	1.315E-01	1.160E-02	0.273
		1770.23		-5.284E+00	1.251E+00	6.408E-01	5.601E-02	-8.246
		81.07		-9.801E-01	5.250E-01	5.462E-01	6.454E-02	-1.794
		83.78		2.773E-02	2.570E-01	3.463E-01	4.163E-02	0.080
		94.90		7.711E-01	3.974E-01	6.730E-01	7.616E-02	1.146
		122.32		-1.121E+00	2.764E+00	4.419E+00	4.688E-01	-0.254
		144.24		6.338E-01	1.074E+00	1.748E+00	1.934E-01	0.363
		154.21		7.165E-01	6.413E-01	1.069E+00	1.187E-01	0.670
	+	269.46		8.712E-01	4.260E-01	5.488E-01	6.059E-02	1.587
PO-209		323.87	*	-2.647E-01	1.140E+00	1.612E+00	2.983E-01	-0.164
	+	338.28		9.394E+00	2.664E+00	3.714E+00	4.905E-01	2.530
		445.03		-2.891E-01	3.397E+00	5.528E+00	6.667E-01	-0.052
		260.50		1.126E+01	1.485E+01	2.557E+01	2.802E+00	0.440
		262.80		-2.542E+00	4.264E+01	6.931E+01	7.586E+00	-0.037
		896.60	*	-9.426E-01	1.054E+01	1.727E+01	1.610E+00	-0.055
BI-210		46.50	*	-2.146E+00	1.642E+01	2.682E+01	3.303E+00	-0.080
PB-210		46.50	*	-2.146E+00	1.642E+01	2.682E+01	3.303E+00	-0.080
PO-210		46.50	*	-2.146E+00	1.642E+01	2.682E+01	3.128E+00	-0.080
PB-211		404.84	*	-4.745E-01	1.514E+00	2.397E+00	1.501E+00	-0.198
		427.08		-1.216E+00	3.184E+00	4.947E+00	3.074E+00	-0.246
BI-212		831.96		-1.003E+00	1.859E+00	2.769E+00	1.737E+00	-0.362
		727.18	*	1.309E+00	5.059E-01	9.273E-01	9.240E-02	1.411
		785.46		1.699E+00	2.709E+00	4.605E+00	4.078E-01	0.369
PO-215		1620.62		8.561E-01	1.725E+00	3.058E+00	2.846E-01	0.280
		81.07		-9.801E-01	5.250E-01	5.462E-01	6.454E-02	-1.794
		83.78		2.773E-02	2.570E-01	3.463E-01	4.163E-02	0.080
		94.90		7.711E-01	3.974E-01	6.730E-01	7.616E-02	1.146
		122.32		-1.121E+00	2.764E+00	4.419E+00	4.688E-01	-0.254
		144.24		6.338E-01	1.074E+00	1.748E+00	1.934E-01	0.363
		154.21		7.165E-01	6.413E-01	1.069E+00	1.187E-01	0.670
RN-219	+	269.46		8.712E-01	4.260E-01	5.488E-01	6.059E-02	1.587
		323.87	*	-2.647E-01	1.140E+00	1.612E+00	2.983E-01	-0.164
	+	338.28		9.394E+00	2.664E+00	3.714E+00	4.905E-01	2.530
		445.03		-2.891E-01	3.397E+00	5.528E+00	6.667E-01	-0.052
	+	271.23		1.118E+00	5.498E-01	7.095E-01	8.704E-02	1.575
		401.81	*	1.796E-01	6.271E-01	1.046E+00	1.563E-01	0.172
RN-220		549.76	*	1.737E+01	3.972E+01	6.621E+01	5.696E+00	0.262
RA-223		81.07		-9.801E-01	5.250E-01	5.462E-01	6.454E-02	-1.794
		83.78		2.773E-02	2.570E-01	3.463E-01	4.163E-02	0.080
		94.90		7.711E-01	3.974E-01	6.730E-01	7.616E-02	1.146
		122.32		-1.121E+00	2.764E+00	4.419E+00	4.688E-01	-0.254
		144.24		6.338E-01	1.074E+00	1.748E+00	1.934E-01	0.363
		154.21		7.165E-01	6.413E-01	1.069E+00	1.187E-01	0.670
	+	269.46		8.712E-01	4.260E-01	5.488E-01	6.059E-02	1.587
		323.87	*	-2.647E-01	1.140E+00	1.612E+00	2.983E-01	-0.164
	+	338.28		9.394E+00	2.664E+00	3.714E+00	4.905E-01	2.530

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		445.03		-2.891E-01	3.397E+00	5.528E+00	6.667E-01	-0.052
		79.80		4.778E-01	3.235E+00	4.694E+00	1.076E+00	0.102
		236.00		2.166E+00	5.546E-01	8.103E-01	1.138E-01	2.674
		256.20	*	-3.025E-01	5.827E-01	9.501E-01	1.595E-01	-0.318
		286.10		2.138E+00	2.354E+00	4.052E+00	5.946E-01	0.528
	+	299.80		5.005E+00	2.949E+00	4.209E+00	7.796E-01	1.189
TH-227		304.40		-2.252E+00	3.238E+00	4.403E+00	8.534E-01	-0.511
		334.20		-5.169E+00	4.995E+00	5.542E+00	1.110E+00	-0.933
		79.80		4.778E-01	3.235E+00	4.694E+00	1.088E+00	0.102
	+	94.00		1.235E+01	6.332E+00	6.002E+00	1.383E+00	2.059
		236.00		2.166E+00	5.430E-01	8.103E-01	1.057E-01	2.674
		256.20	*	-3.025E-01	5.834E-01	9.501E-01	1.834E-01	-0.318
TH-229		286.10		2.138E+00	3.173E+00	4.052E+00	4.075E+00	0.528
	+	299.80		5.005E+00	2.949E+00	4.209E+00	7.796E-01	1.189
		304.40		-2.252E+00	3.238E+00	4.403E+00	8.534E-01	-0.511
		334.20		-5.169E+00	4.995E+00	5.542E+00	1.110E+00	-0.933
		85.43		8.315E-01	3.714E-01	5.625E-01	6.844E-02	1.478
	+	88.47		4.995E-01	2.143E-01	3.521E-01	4.340E-02	1.418
PA-231		100.00		3.429E-01	3.171E-01	4.764E-01	5.146E-02	0.720
		193.63	*	-4.921E-02	7.893E-01	1.259E+00	1.370E-01	-0.039
	+	210.97		2.978E+00	1.598E+00	2.114E+00	2.322E-01	1.408
		283.67	*	-6.360E-01	2.382E+00	3.922E+00	6.469E-01	-0.162
	+	301.29		2.002E+00	1.153E+00	1.656E+00	2.262E-01	1.209
		81.07		-9.801E-01	5.250E-01	5.462E-01	6.454E-02	-1.794
TH-231		83.78		2.773E-02	2.570E-01	3.463E-01	4.163E-02	0.080
		94.90		7.711E-01	3.974E-01	6.730E-01	7.616E-02	1.146
		122.32		-1.121E+00	2.764E+00	4.419E+00	4.688E-01	-0.254
		144.24		6.338E-01	1.074E+00	1.748E+00	1.934E-01	0.363
		154.21		7.165E-01	6.413E-01	1.069E+00	1.187E-01	0.670
	+	269.46		8.712E-01	4.260E-01	5.488E-01	6.059E-02	1.587
U-231		323.87	*	-2.647E-01	1.140E+00	1.612E+00	2.983E-01	-0.164
	+	338.28		9.394E+00	2.664E+00	3.714E+00	4.905E-01	2.530
		445.03		-2.891E-01	3.397E+00	5.528E+00	6.667E-01	-0.052
		84.21		3.469E+00	9.683E+00	1.415E+01	1.706E+00	0.245
	+	92.29		1.171E+01	5.528E+00	6.189E+00	7.222E-01	1.893
		95.87	*	2.418E-01	1.836E+00	2.648E+00	2.967E-01	0.091
PA-233		108.00		2.221E-01	3.189E+00	5.137E+00	5.304E-01	0.043
	+	75.28		3.182E+01	1.011E+01	1.265E+01	2.168E+00	2.516
	+	86.59		7.162E+00	3.571E+00	4.986E+00	1.406E+00	1.436
	+	300.12		1.395E+00	8.121E-01	1.177E+00	1.892E-01	1.186
		311.98	*	-1.131E-01	9.881E-02	1.535E-01	1.624E-02	-0.737
		340.50		4.968E+00	1.658E+00	2.047E+00	4.972E-01	2.427
PA-234		398.62		-2.082E+00	3.288E+00	5.135E+00	1.364E+00	-0.406
		415.76		-7.728E-01	2.443E+00	3.923E+00	8.438E-01	-0.197
		63.00		1.054E+00	3.398E+00	5.560E+00	9.567E-01	0.190
		94.67		7.322E-01	3.018E-01	4.983E-01	7.191E-02	1.469
		98.44		1.475E-01	1.757E-01	2.329E-01	1.309E-01	0.633
		99.86		8.980E-01	8.046E-01	1.210E+00	1.309E-01	0.742
		111.00		1.372E-01	2.905E-01	4.805E-01	6.379E-02	0.285

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		131.20		4.006E-02	1.877E-01	2.690E-01	2.700E-02	0.149
		152.70		2.999E-01	5.264E-01	8.627E-01	1.551E-01	0.348
	+	186.00		7.371E+00	3.703E+00	3.862E+00	1.232E+00	1.908
		226.40		4.266E-01	6.285E-01	1.079E+00	1.606E-01	0.396
		227.20		8.667E-01	6.725E-01	1.174E+00	1.295E-01	0.738
		248.90		-4.071E-01	1.407E+00	2.011E+00	4.713E-01	-0.202
		293.70		8.890E+00	2.158E+00	2.614E+00	4.807E-01	3.401
		369.80		-5.680E-02	1.309E+00	2.154E+00	4.730E-01	-0.026
		568.70		-1.256E+00	1.450E+00	2.183E+00	1.870E-01	-0.575
		569.50		-1.899E-01	3.912E-01	6.086E-01	5.214E-02	-0.312
		574.00		7.457E-01	2.188E+00	3.619E+00	3.097E-01	0.206
		699.00		1.214E-01	1.012E+00	1.707E+00	3.242E-01	0.071
		706.10		-1.142E+00	1.617E+00	2.436E+00	1.086E+00	-0.469
		733.00		1.816E-01	6.260E-01	9.262E-01	2.055E-01	0.196
		742.81		6.431E-01	1.992E+00	3.323E+00	2.234E+00	0.194
		796.30		1.953E+00	1.652E+00	2.516E+00	6.829E-01	0.776
		805.60		1.157E+00	1.511E+00	2.581E+00	7.936E-01	0.448
		819.60		2.906E-01	1.694E+00	2.845E+00	1.084E+00	0.102
		826.30		4.412E-01	1.231E+00	2.072E+00	9.286E-01	0.213
		831.60		-6.977E-01	9.372E-01	1.423E+00	4.265E-01	-0.490
		876.40		-5.828E-01	1.276E+00	1.772E+00	1.822E+00	-0.329
		880.51		8.238E-02	3.798E-01	6.398E-01	5.924E-02	0.129
		883.24		-2.341E-01	4.393E-01	6.436E-01	4.332E-01	-0.364
		899.00		-1.322E-02	1.182E+00	1.950E+00	8.551E-01	-0.007
		925.00		2.640E-01	1.629E+00	2.604E+00	2.418E-01	0.101
		926.50		-1.950E-02	2.727E-01	3.821E-01	9.747E-02	-0.051
		946.00	*	1.412E-01	4.350E-01	7.346E-01	1.400E-01	0.192
		949.00		5.054E-01	6.488E-01	1.135E+00	1.048E-01	0.445
		980.50		-1.881E-01	1.036E+00	1.673E+00	1.531E-01	-0.112
		1394.10		3.207E-01	1.655E+00	2.805E+00	1.830E+00	0.114
PA-234M		766.42		1.019E+01	1.840E+01	3.047E+01	1.547E+01	0.334
		1001.03	*	2.857E+00	6.417E+00	1.107E+01	1.148E+00	0.258
TH-234		63.29	*	1.191E+00	2.853E+00	4.675E+00	9.107E-01	0.255
	+	92.38		3.197E+00	1.592E+00	1.681E+00	3.313E-01	1.902
U-235	+	89.95		3.368E+00	2.821E+00	3.135E+00	1.003E+00	1.074
	+	93.35		3.844E+00	2.083E+00	1.921E+00	5.581E-01	2.001
		105.00		1.378E+00	1.678E+00	2.735E+00	8.321E-01	0.504
		143.76	*	2.991E-01	3.301E-01	5.373E-01	9.845E-02	0.557
		163.35		2.041E-01	7.599E-01	1.221E+00	2.448E-01	0.167
	+	185.71		2.730E-01	1.100E-01	1.430E-01	1.547E-02	1.910
		205.31		-3.056E-01	9.538E-01	1.299E+00	2.629E-01	-0.235
NP-236		94.67		5.578E-01	2.237E-01	3.782E-01	4.291E-02	1.475
		98.44		1.115E-01	1.177E-01	1.761E-01	1.926E-02	0.633
		111.00		1.037E-01	2.195E-01	3.635E-01	3.714E-02	0.285
		160.31	*	-1.528E-02	1.262E-01	2.023E-01	2.129E-02	-0.076
U-238		63.29	*	1.191E+00	2.853E+00	4.675E+00	9.107E-01	0.255
	+	92.38		3.197E+00	1.509E+00	1.681E+00	1.959E-01	1.902
NP-239		99.55		4.028E-01	2.652E-01	4.048E-01	4.388E-02	0.995
		117.00	*	1.373E-01	2.897E-01	4.794E-01	4.840E-02	0.286

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	209.75		3.000E+00	1.610E+00	2.144E+00	2.353E-01	1.399
		228.18		1.301E-01	3.553E-01	6.053E-01	6.677E-02	0.215
		277.60		2.179E-01	2.926E-01	4.853E-01	5.255E-02	0.449
		334.30		-2.089E+00	2.492E+00	3.139E+00	3.122E-01	-0.665
AM-241		59.54	*	-9.446E-02	3.755E-01	6.160E-01	7.230E-02	-0.153
CM-243		99.55		4.145E-01	2.729E-01	4.165E-01	4.515E-02	0.995
		103.76	*	-8.961E-02	1.490E-01	2.374E-01	2.501E-02	-0.378
		117.00		1.413E-01	2.981E-01	4.932E-01	4.979E-02	0.286
	+	209.75		2.957E+00	1.587E+00	2.113E+00	2.319E-01	1.399
		228.18		1.315E-01	3.591E-01	6.116E-01	6.747E-02	0.215
		277.60		2.196E-01	2.950E-01	4.893E-01	5.298E-02	0.449
AM-246		798.80		1.597E-01	2.160E-01	3.347E-01	2.985E-02	0.477
		1036.00		1.575E-01	4.152E-01	7.038E-01	6.299E-02	0.224
		1062.04		1.910E-02	3.418E-01	5.614E-01	4.958E-02	0.034
		1078.86	*	3.247E-01	2.055E-01	3.793E-01	3.317E-02	0.856
CM-247		278.00		1.270E+00	1.201E+00	2.054E+00	2.223E-01	0.618
		287.40		4.519E-01	1.857E+00	3.131E+00	3.357E-01	0.144
		402.60	*	4.215E-02	5.523E-02	9.452E-02	7.994E-03	0.446
CF-249		252.85		8.019E-01	1.303E+00	2.237E+00	2.460E-01	0.358
		333.44		-4.168E-01	4.084E-01	4.074E-01	4.059E-02	-1.023
		387.95	*	1.633E-02	6.107E-02	1.020E-01	8.701E-03	0.160
CF-251		176.60	*	5.695E-02	1.984E-01	3.221E-01	3.463E-02	0.177
		227.00		5.190E-01	6.032E-01	1.042E+00	1.150E-01	0.498
		285.00		1.823E-01	2.665E+00	4.458E+00	4.793E-01	0.041

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]G246875007      *
* Acquisition date   : 24-FEB-2010 08:53:30 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 02:00:01.43 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G246875007 Analyst initials: MXR1                  *
* Batch Number      : 952643 Sample Quantity : 1.1330E+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	4.042E+01	4.559E+00	7.942E-01	0.000E+00
CD-109	3.721E+00	1.564E+00	2.046E+00	0.000E+00
SN-126	3.658E-01	1.538E-01	2.027E-01	0.000E+00
TL-208	7.438E-01	1.302E-01	8.244E-02	0.000E+00
BI-211	6.062E+00	8.762E-01	4.633E-01	0.000E+00
PB-212	2.487E+00	3.360E-01	1.326E-01	0.000E+00
PO-212	2.487E+00	3.360E-01	1.326E-01	0.000E+00
BI-214	1.655E+00	2.813E-01	1.634E-01	0.000E+00
PB-214	2.109E+00	3.233E-01	1.615E-01	0.000E+00
PO-214	2.109E+00	3.233E-01	1.615E-01	0.000E+00
PO-216	2.487E+00	3.360E-01	1.326E-01	0.000E+00
PO-218	2.109E+00	3.233E-01	1.615E-01	0.000E+00
RA-224	6.868E+00	2.114E+00	1.509E+00	0.000E+00
RA-226	1.655E+00	2.813E-01	1.634E-01	0.000E+00
AC-228	2.324E+00	4.703E-01	2.934E-01	0.000E+00
RA-228	2.324E+00	4.703E-01	2.934E-01	0.000E+00
TH-228	2.525E+00	3.410E-01	1.346E-01	0.000E+00
TH-230	1.655E+00	2.813E-01	1.634E-01	0.000E+00
TH-232	2.324E+00	4.703E-01	2.934E-01	0.000E+00
U-234	1.655E+00	2.813E-01	1.634E-01	0.000E+00
NP-237	1.074E+00	5.012E-01	6.064E-01	0.000E+00
AM-243	6.075E-01	1.734E-01	1.564E-01	0.000E+00
ANH-511	2.353E-01	9.223E-02	6.743E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-7.422E-02	4.663E-01	7.718E-01	0.000E+00 NOT IDENT.
NA-22	-1.080E-01	6.961E-02	9.566E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	8.289E+05	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-3.434E-02	4.332E-02	6.111E-02	0.000E+00 NOT IDENT.

TI-44	0.000E+00	1.098E-01	1.392E-01	0.000E+00	FAIL ABUN
SC-46	2.974E-02	5.703E-02	9.999E-02	0.000E+00	FAIL ABUN
V-48	-5.962E-02	9.452E-02	1.484E-01	0.000E+00	NOT IDENT.
CR-51	-2.815E-01	5.616E-01	9.351E-01	0.000E+00	NOT IDENT.
MN-52	4.490E-02	2.623E-01	4.553E-01	0.000E+00	FAIL ABUN
MN-54	-1.422E-02	5.499E-02	9.128E-02	0.000E+00	NOT IDENT.
CO-56	2.118E-02	5.464E-02	9.516E-02	0.000E+00	FAIL ABUN
CO-57	-2.334E-02	3.927E-02	6.467E-02	0.000E+00	NOT IDENT.
CO-58	-4.373E-03	5.366E-02	9.038E-02	0.000E+00	NOT IDENT.
FE-59	4.376E-02	1.286E-01	2.200E-01	0.000E+00	NOT IDENT.
CO-60	-2.528E-02	5.599E-02	8.657E-02	0.000E+00	NOT IDENT.
ZN-65	9.640E-02	1.626E-01	2.461E-01	0.000E+00	NOT IDENT.
GE-68	8.682E-01	1.872E+00	3.233E+00	0.000E+00	NOT IDENT.
AS-73	1.117E+00	2.419E+00	4.262E+00	0.000E+00	NOT IDENT.
AS-74	-7.151E-02	1.246E-01	1.961E-01	0.000E+00	NOT IDENT.
SE-75	-2.417E-02	7.675E-02	1.128E-01	0.000E+00	NOT IDENT.
BR-77	-4.649E+00	1.511E+01	2.307E+01	0.000E+00	FAIL ABUN
SR-82	-7.458E-01	5.425E-01	8.182E-01	0.000E+00	NOT IDENT.
RB-83	-3.920E-02	1.112E-01	1.621E-01	0.000E+00	NOT IDENT.
RB-84	-9.316E-03	9.705E-02	1.623E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.176E+01	1.927E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	6.014E-02	9.853E-02	0.000E+00	NOT IDENT.
RB-86	5.617E-02	1.215E+00	2.029E+00	0.000E+00	NOT IDENT.
Y-88	3.027E-02	3.941E-02	7.545E-02	0.000E+00	NOT IDENT.
ZR-88	-3.334E-03	4.640E-02	7.814E-02	0.000E+00	NOT IDENT.
Y-91	-1.818E+00	2.864E+01	4.702E+01	0.000E+00	NOT IDENT.
NB-94	2.713E-02	4.797E-02	8.495E-02	0.000E+00	NOT IDENT.
NB-95	1.526E-02	6.363E-02	1.099E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.389E-01	3.858E-01	0.000E+00	NOT IDENT.
ZR-95	3.892E-02	1.060E-01	1.849E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.662E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.337E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.637E+01	1.784E+01	2.456E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.065E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.600E-02	5.085E-02	7.991E-02	0.000E+00	NOT IDENT.
RH-102	2.572E-02	4.136E-02	7.190E-02	0.000E+00	NOT IDENT.
RU-103	-2.650E-02	5.774E-02	9.310E-02	0.000E+00	FAIL ABUN
RH-106	2.016E-01	4.644E-01	7.880E-01	0.000E+00	FAIL ABUN
RU-106	2.016E-01	4.640E-01	7.880E-01	0.000E+00	FAIL ABUN
AG-108M	-1.825E-02	4.764E-02	7.817E-02	0.000E+00	NOT IDENT.
AG-110M	9.561E-03	4.431E-02	7.728E-02	0.000E+00	NOT IDENT.
IN-111	5.035E-01	1.611E+00	2.472E+00	0.000E+00	NOT IDENT.
IN-113M	-4.154E-02	6.806E-02	1.111E-01	0.000E+00	NOT IDENT.
SN-113	-4.154E-02	6.806E-02	1.111E-01	0.000E+00	NOT IDENT.
IN-114M	5.074E-02	3.102E-01	4.519E-01	0.000E+00	NOT IDENT.
CD-115	-2.053E+00	1.545E+01	2.546E+01	0.000E+00	NOT IDENT.
SN-117M	-6.372E-02	8.574E-02	1.386E-01	0.000E+00	NOT IDENT.
SB-122	1.407E+00	2.790E+00	4.675E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	6.585E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.267E-02	4.439E-02	7.252E-02	0.000E+00	NOT IDENT.
I-124	-9.393E-02	1.094E+00	1.542E+00	0.000E+00	NOT IDENT.
SB-124	1.090E-01	9.835E-02	1.934E-01	0.000E+00	FAIL ABUN
SB-125	-8.768E-02	1.347E-01	2.173E-01	0.000E+00	FAIL ABUN
TE-125M	-2.658E+00	1.477E+01	2.449E+01	0.000E+00	NOT IDENT.
I-126	5.757E-02	2.444E-01	4.259E-01	0.000E+00	NOT IDENT.
SB-126	1.053E-01	2.249E-01	3.468E-01	0.000E+00	FAIL ABUN
SB-127	-4.246E-01	1.781E+00	2.998E+00	0.000E+00	NOT IDENT.
XE-127	1.678E-02	7.292E-02	1.215E-01	0.000E+00	NOT IDENT.
I-131	9.967E-02	1.636E-01	2.865E-01	0.000E+00	NOT IDENT.
TE-132	3.884E-01	1.012E+00	1.778E+00	0.000E+00	NOT IDENT.
BA-133	-4.853E-03	6.975E-02	1.022E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.329E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	9.400E-02	1.274E-01	0.000E+00	FAIL ABUN
CS-135	2.713E-01	2.740E-01	4.317E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.798E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.074E-02	1.613E-01	2.718E-01	0.000E+00	FAIL ABUN
BA-137M	-2.235E-02	4.753E-02	7.884E-02	0.000E+00	NOT IDENT.
CS-137	-2.363E-02	5.024E-02	8.334E-02	0.000E+00	NOT IDENT.
CE-139	2.158E-02	4.588E-02	7.773E-02	0.000E+00	NOT IDENT.
BA-140	2.528E-01	3.577E-01	6.088E-01	0.000E+00	NOT IDENT.
LA-140	-1.162E-01	1.261E-01	1.844E-01	0.000E+00	FAIL ABUN
CE-141	2.496E-02	9.607E-02	1.624E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	3.663E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.116E-01	3.499E-01	5.220E-01	0.000E+00	NOT IDENT.
PM-144	-2.220E-02	4.836E-02	8.014E-02	0.000E+00	NOT IDENT.
PR-144	-1.504E+00	3.277E+00	5.430E+00	0.000E+00	NOT IDENT.
PM-146	7.291E-02	6.519E-02	1.158E-01	0.000E+00	NOT IDENT.
ND-147	8.298E-02	8.014E-01	1.342E+00	0.000E+00	FAIL ABUN

PM-149	1.035E+02	1.273E+02	2.247E+02	0.000E+00	NOT IDENT.
EU-152	-6.250E-02	1.714E-01	2.311E-01	0.000E+00	NOT IDENT.
GD-153	-1.700E-02	1.346E-01	1.993E-01	0.000E+00	NOT IDENT.
EU-154	-2.609E-01	1.918E-01	2.686E-01	0.000E+00	NOT IDENT.
EU-155	7.322E-02	1.651E-01	2.842E-01	0.000E+00	FAIL ABUN
TB-160	-1.956E-03	1.802E-01	3.036E-01	0.000E+00	FAIL ABUN
HO-166M	-3.377E-02	8.581E-02	1.426E-01	0.000E+00	NOT IDENT.
TM-171	-4.167E+01	5.477E+01	9.165E+01	0.000E+00	NOT IDENT.
LU-176	2.600E-02	3.789E-02	6.351E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.169E+00	2.947E+00	0.000E+00	FAIL ABUN
LU-177M	-2.309E-01	2.666E-01	4.262E-01	0.000E+00	FAIL ABUN
HF-181	1.402E-02	6.237E-02	1.058E-01	0.000E+00	NOT IDENT.
W-181	-1.665E-02	7.278E-01	1.254E+00	0.000E+00	NOT IDENT.
TA-182	8.004E-02	3.048E-01	5.127E-01	0.000E+00	FAIL ABUN
RE-183	1.314E-03	1.736E-01	2.863E-01	0.000E+00	FAIL ABUN
RE-184	2.135E-01	3.401E-01	6.021E-01	0.000E+00	NOT IDENT.
OS-185	2.688E-02	5.969E-02	1.015E-01	0.000E+00	NOT IDENT.
RE-188	1.384E-02	2.734E-01	4.576E-01	0.000E+00	NOT IDENT.
W-188	-6.982E+00	1.230E+01	1.761E+01	0.000E+00	NOT IDENT.
IR-192	2.106E-02	5.140E-02	8.956E-02	0.000E+00	FAIL ABUN
AU-195	3.641E-01	3.767E-01	5.858E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	5.850E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.458E+00	1.015E+01	1.673E+01	0.000E+00	NOT IDENT.
TL-202	6.226E-03	9.708E-02	1.638E-01	0.000E+00	NOT IDENT.
HG-203	0.000E+00	6.235E-02	1.137E-01	0.000E+00	NOT IDENT.
BI-207	3.590E-02	7.576E-02	1.312E-01	0.000E+00	FAIL ABUN
TL-207	-2.647E-01	1.117E+00	1.626E+00	0.000E+00	FAIL ABUN
PO-209	-9.426E-01	1.033E+01	1.727E+01	0.000E+00	NOT IDENT.
BI-210	-2.146E+00	1.610E+01	2.751E+01	0.000E+00	NOT IDENT.
PB-210	-2.146E+00	1.610E+01	2.751E+01	0.000E+00	NOT IDENT.
PO-210	-2.146E+00	1.609E+01	2.751E+01	0.000E+00	NOT IDENT.
PB-211	-4.745E-01	1.484E+00	2.413E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.958E-01	9.288E-01	0.000E+00	NOT IDENT.
PO-215	-2.647E-01	1.117E+00	1.626E+00	0.000E+00	FAIL ABUN
RN-219	1.796E-01	6.145E-01	1.054E+00	0.000E+00	FAIL ABUN
RN-220	1.737E+01	3.892E+01	6.648E+01	0.000E+00	NOT IDENT.
RA-223	-2.647E-01	1.117E+00	1.626E+00	0.000E+00	FAIL ABUN
AC-227	-3.025E-01	5.710E-01	9.604E-01	0.000E+00	FAIL ABUN
TH-227	-3.025E-01	5.717E-01	9.604E-01	0.000E+00	FAIL ABUN
TH-229	-4.921E-02	7.735E-01	1.276E+00	0.000E+00	FAIL ABUN
PA-231	-6.360E-01	2.334E+00	3.961E+00	0.000E+00	FAIL ABUN
TH-231	-2.647E-01	1.117E+00	1.626E+00	0.000E+00	FAIL ABUN
U-231	2.418E-01	1.799E+00	2.700E+00	0.000E+00	FAIL ABUN
PA-233	-1.131E-01	9.683E-02	1.549E-01	0.000E+00	FAIL ABUN
PA-234	1.412E-01	4.263E-01	7.342E-01	0.000E+00	FAIL ABUN
PA-234M	2.857E+00	6.289E+00	1.106E+01	0.000E+00	NOT IDENT.
TH-234	1.191E+00	2.796E+00	4.782E+00	0.000E+00	FAIL ABUN
U-235	2.991E-01	3.235E-01	5.458E-01	0.000E+00	FAIL ABUN
NP-236	-1.528E-02	1.237E-01	2.053E-01	0.000E+00	NOT IDENT.
U-238	1.191E+00	2.796E+00	4.782E+00	0.000E+00	FAIL ABUN
NP-239	1.373E-01	2.839E-01	4.879E-01	0.000E+00	FAIL ABUN
AM-241	-9.446E-02	3.679E-01	6.305E-01	0.000E+00	NOT IDENT.
CM-243	-8.961E-02	1.461E-01	2.418E-01	0.000E+00	FAIL ABUN
AM-246	3.247E-01	2.014E-01	3.786E-01	0.000E+00	NOT IDENT.
CM-247	4.215E-02	5.413E-02	9.517E-02	0.000E+00	NOT IDENT.
CF-249	1.633E-02	5.984E-02	1.027E-01	0.000E+00	NOT IDENT.
CF-251	5.695E-02	1.944E-01	3.266E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875007.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:53:30
Sample ID          : G246875007          Sample quantity  : 1.13300E+02 GRAM
Detector name      : GAM15              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.43  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID          : 952643              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	1258	10.67*	9.663E-01	4.042E+01	4.042E+01	11.51
CD-109	88.03	182	3.72*	4.455E+00	3.639E+00	3.721E+00	42.91
SN-126	64.28	-----	9.60	1.941E+00	-----	Line Not Found	-----
	86.94	182	8.90	4.455E+00	1.521E+00	1.521E+00	58.97
	87.57	182	37.00*	4.455E+00	3.658E-01	3.658E-01	42.91
TL-208	277.35	-----	6.80	3.705E+00	-----	Line Not Found	-----
	510.84	172	21.60	2.418E+00	1.090E+00	1.090E+00	40.85
	583.14	414	84.20*	2.191E+00	7.438E-01	7.438E-01	17.86
	860.37	-----	12.46	1.576E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.001E+00	-----	Line Not Found	-----
	351.07	744	12.94*	3.141E+00	6.062E+00	6.062E+00	14.75
PB-212	74.81	394	10.70	3.252E+00	3.747E+00	3.747E+00	30.58
	77.11	569	18.00	3.502E+00	2.989E+00	2.989E+00	20.32
	87.30	182	8.00	4.455E+00	1.692E+00	1.692E+00	44.06
	238.63	1378	44.60*	4.114E+00	2.487E+00	2.487E+00	13.78
	300.09	97	3.41	3.504E+00	2.701E+00	2.701E+00	57.22
PO-212	74.81	394	10.70	3.252E+00	3.747E+00	3.747E+00	30.58
	77.11	569	18.00	3.502E+00	2.989E+00	2.989E+00	20.32
	87.30	182	8.00	4.455E+00	1.692E+00	1.692E+00	44.06
	115.19	-----	0.60	5.586E+00	-----	Line Not Found	-----
	238.63	1378	44.60*	4.114E+00	2.487E+00	2.487E+00	13.78
	300.09	97	3.41	3.504E+00	2.701E+00	2.701E+00	57.22
BI-214	609.31	490	46.30*	2.117E+00	1.655E+00	1.655E+00	17.35
	1120.29	124	15.10	1.227E+00	2.210E+00	2.210E+00	41.98
	1764.49	92	15.80	8.555E-01	2.256E+00	2.256E+00	27.58
PB-214	74.81	394	6.21	3.252E+00	6.457E+00	6.457E+00	30.05
	77.11	569	10.50	3.502E+00	5.124E+00	5.124E+00	21.70
	87.30	182	4.67	4.455E+00	2.899E+00	2.899E+00	43.59
	241.98	334	7.49	4.077E+00	3.622E+00	3.622E+00	31.90
	295.21	417	19.20	3.547E+00	2.029E+00	2.030E+00	20.68
	351.92	744	37.20*	3.141E+00	2.109E+00	2.109E+00	15.65
PO-214	74.81	394	6.21	3.252E+00	6.457E+00	6.457E+00	30.05

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	569	10.50	3.502E+00	5.124E+00	5.124E+00	21.70
	87.30	182	4.67	4.455E+00	2.899E+00	2.899E+00	43.59
	241.98	334	7.49	4.077E+00	3.622E+00	3.622E+00	31.90
	295.21	417	19.20	3.547E+00	2.029E+00	2.030E+00	20.68
	351.92	744	37.20*	3.141E+00	2.109E+00	2.109E+00	15.65
PO-216	74.81	394	10.70	3.252E+00	3.747E+00	3.747E+00	30.58
	77.11	569	18.00	3.502E+00	2.989E+00	2.989E+00	20.32
	87.30	182	8.00	4.455E+00	1.692E+00	1.692E+00	44.06
	238.63	1378	44.60*	4.114E+00	2.487E+00	2.487E+00	13.78
	300.09	97	3.41	3.504E+00	2.701E+00	2.701E+00	57.22
PO-218	74.81	394	6.21	3.252E+00	6.457E+00	6.457E+00	30.05
	77.11	569	10.50	3.502E+00	5.124E+00	5.124E+00	21.70
	87.30	182	4.67	4.455E+00	2.899E+00	2.899E+00	43.59
	241.98	334	7.49	4.077E+00	3.622E+00	3.622E+00	31.90
	295.21	417	19.20	3.547E+00	2.029E+00	2.030E+00	20.68
	351.92	744	37.20*	3.141E+00	2.109E+00	2.109E+00	15.65
RA-224	240.98	334	3.95*	4.077E+00	6.868E+00	6.868E+00	31.40
RA-226	609.31	490	46.30*	2.117E+00	1.655E+00	1.655E+00	17.35
	1120.29	124	15.10	1.227E+00	2.210E+00	2.210E+00	41.98
	1764.49	92	15.80	8.555E-01	2.256E+00	2.256E+00	27.58
AC-228	338.32	250	11.40	3.226E+00	2.250E+00	2.250E+00	48.53
	911.07	290	27.70*	1.495E+00	2.324E+00	2.324E+00	20.65
	969.11	235	16.60	1.411E+00	3.331E+00	3.331E+00	33.31
RA-228	338.32	250	11.40	3.226E+00	2.250E+00	2.250E+00	48.53
	911.07	290	27.70*	1.495E+00	2.324E+00	2.324E+00	20.65
	969.11	235	16.60	1.411E+00	3.331E+00	3.331E+00	33.31
TH-228	74.81	394	10.70	3.252E+00	3.747E+00	3.803E+00	29.14
	77.11	569	18.00	3.502E+00	2.989E+00	3.033E+00	20.32
	87.30	182	8.00	4.455E+00	1.692E+00	1.717E+00	42.91
	238.63	1378	44.60*	4.114E+00	2.487E+00	2.525E+00	13.78
	300.09	97	3.41	3.504E+00	2.701E+00	2.741E+00	81.73
TH-230	609.31	490	46.30*	2.117E+00	1.655E+00	1.655E+00	17.35
	1120.29	124	15.10	1.227E+00	2.210E+00	2.210E+00	41.98
	1764.49	92	15.80	8.555E-01	2.256E+00	2.256E+00	27.58
TH-232	338.32	250	11.40	3.226E+00	2.250E+00	2.250E+00	26.96
	911.07	290	27.70*	1.495E+00	2.324E+00	2.324E+00	20.65
	969.11	235	16.60	1.411E+00	3.331E+00	3.331E+00	33.31
U-234	609.31	490	46.30*	2.117E+00	1.655E+00	1.655E+00	17.35
	1120.29	124	15.10	1.227E+00	2.210E+00	2.210E+00	41.98
	1764.49	92	15.80	8.555E-01	2.256E+00	2.256E+00	27.58
NP-237	86.50	182	12.60*	4.455E+00	1.074E+00	1.074E+00	47.61
	95.87	-----	2.60	5.004E+00	-----	Line Not Found	-----
AM-243	74.67	394	66.00*	3.252E+00	6.075E-01	6.075E-01	29.12
	86.72	182	0.34	4.455E+00	4.029E+01	4.029E+01	42.91
	117.66	-----	0.55	5.611E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.525E+00	-----	Line Not Found	-----
ANH-511	511.00	172	100.00*	2.418E+00	2.353E-01	2.353E-01	39.99

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	4.042E+01	4.042E+01	0.465E+01	11.51	
CD-109	464.00D	1.02	3.639E+00	3.721E+00	1.596E+00	42.91	
SN-126	1.00E+05Y	1.00	3.658E-01	3.658E-01	1.570E-01	42.91	
TL-208	1.41E+10Y	1.00	7.438E-01	7.438E-01	1.328E-01	17.86	
BI-211	7.04E+08Y	1.00	6.062E+00	6.062E+00	0.894E+00	14.75	
PB-212	1.41E+10Y	1.00	2.487E+00	2.487E+00	0.343E+00	13.78	
PO-212	1.41E+10Y	1.00	2.487E+00	2.487E+00	0.343E+00	13.78	
BI-214	1600.00Y	1.00	1.655E+00	1.655E+00	0.287E+00	17.35	
PB-214	1600.00Y	1.00	2.109E+00	2.109E+00	0.330E+00	15.65	
PO-214	1600.00Y	1.00	2.109E+00	2.109E+00	0.330E+00	15.65	
PO-216	1.41E+10Y	1.00	2.487E+00	2.487E+00	0.343E+00	13.78	
PO-218	1600.00Y	1.00	2.109E+00	2.109E+00	0.330E+00	15.65	
RA-224	1.41E+10Y	1.00	6.868E+00	6.868E+00	2.157E+00	31.40	
RA-226	1600.00Y	1.00	1.655E+00	1.655E+00	0.287E+00	17.35	
AC-228	1.41E+10Y	1.00	2.324E+00	2.324E+00	0.480E+00	20.65	
RA-228	1.41E+10Y	1.00	2.324E+00	2.324E+00	0.480E+00	20.65	
TH-228	1.91Y	1.01	2.487E+00	2.525E+00	0.348E+00	13.78	
TH-230	4.47E+09Y	1.00	1.655E+00	1.655E+00	0.287E+00	17.35	
TH-232	1.41E+10Y	1.00	2.324E+00	2.324E+00	0.480E+00	20.65	
U-234	4.47E+09Y	1.00	1.655E+00	1.655E+00	0.287E+00	17.35	
NP-237	2.14E+06Y	1.00	1.074E+00	1.074E+00	0.511E+00	47.61	
AM-243	7380.00Y	1.00	6.075E-01	6.075E-01	1.769E-01	29.12	
ANH-511	1.00E+09Y	1.00	2.353E-01	2.353E-01	0.941E-01	39.99	

Total Activity : 8.988E+01 9.000E+01

Grand Total Activity : 8.988E+01 9.000E+01

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

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

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.91	127	630	1.59	178.75	168	26	1.77E-02	77.4	4.64E+00	T
4	93.06	253	603	1.98	185.04	168	26	3.51E-02	45.8	4.84E+00	T
0	129.39	78	417	1.57	257.69	254	10	1.08E-02	****	5.63E+00	T
0	186.00	216	371	1.47	370.90	366	11	3.00E-02	38.8	4.86E+00	T
0	209.67	132	306	1.74	418.24	414	10	1.83E-02	52.5	4.50E+00	T
0	270.19	135	240	1.73	539.29	534	11	1.87E-02	47.6	3.77E+00	T
0	327.89	62	147	1.82	654.68	651	8	8.62E-03	72.1	3.30E+00	T
0	463.11	96	129	1.33	925.12	921	10	1.34E-02	49.0	2.60E+00	T
0	728.68	83	170	1.66	1456.31	1448	22	1.16E-02	80.6	1.83E+00	
0	794.74	68	60	1.89	1588.43	1582	14	9.45E-03	53.9	1.69E+00	T
0	934.83	63	54	1.10	1868.65	1860	18	8.75E-03	60.2	1.46E+00	T
0	1237.77	39	47	1.51	2474.67	2470	10	5.45E-03	73.4	1.12E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875007.CNF;1
* Acquisition date   : 24-FEB-2010 08:53:30  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 02:00:01.43          Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.  Nuclide Library : SOLID
* Sample ID          : G246875007            Analyst initials: MXR1
* Batch Number       : 952643                Sample Quantity : 1.13300E+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	4.042E+01	4.652E+00	7.978E-01	7.840E-02	50.667
CD-109	3.721E+00	1.596E+00	2.005E+00	2.489E-01	1.856
SN-126	3.658E-01	1.570E-01	1.987E-01	2.458E-02	1.842
TL-208	7.438E-01	1.328E-01	8.215E-02	7.523E-03	9.054
BI-211	6.062E+00	8.941E-01	4.596E-01	4.576E-02	13.189
PB-212	2.487E+00	3.428E-01	1.311E-01	1.561E-02	18.974
PO-212	2.487E+00	3.428E-01	1.311E-01	1.561E-02	18.974
BI-214	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160
PB-214	2.109E+00	3.299E-01	1.602E-01	1.798E-02	13.164
PO-214	2.109E+00	3.299E-01	1.602E-01	1.798E-02	13.164
PO-216	2.487E+00	3.428E-01	1.311E-01	1.561E-02	18.974
PO-218	2.109E+00	3.299E-01	1.602E-01	1.798E-02	13.164
RA-224	6.868E+00	2.157E+00	1.492E+00	1.645E-01	4.605
RA-226	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160
AC-228	2.324E+00	4.799E-01	2.935E-01	3.457E-02	7.918
RA-228	2.324E+00	4.799E-01	2.935E-01	3.457E-02	7.918
TH-228	2.525E+00	3.479E-01	1.331E-01	1.585E-02	18.974
TH-230	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	2.324E+00	4.799E-01	2.935E-01	3.457E-02	7.918
U-234	1.655E+00	2.871E-01	1.629E-01	1.615E-02	10.160
NP-237	1.074E+00	5.115E-01	5.943E-01	1.427E-01	1.808
AM-243	6.075E-01	1.769E-01	1.531E-01	1.761E-02	3.968
ANH-511	2.353E-01	9.411E-02	6.711E-02	5.798E-03	3.507

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-7.422E-02		4.758E-01	7.677E-01	7.137E-02	-0.097
NA-22	-1.080E-01		7.103E-02	9.597E-02	8.719E-03	-1.126
NA-24	-4.150E-01		4.229E-01	Half-Life too short		
AL-26	-3.434E-02		4.421E-02	6.150E-02	5.262E-03	-0.558
TI-44	5.515E-01	+	1.121E-01	1.363E-01	1.588E-02	4.047
SC-46	2.974E-02		5.819E-02	1.000E-01	9.293E-03	0.297
V-48	-5.962E-02		9.645E-02	1.485E-01	1.358E-02	-0.401
CR-51	-2.815E-01		5.731E-01	9.268E-01	9.842E-02	-0.304
MN-52	4.490E-02		2.677E-01	4.573E-01	4.402E-02	0.098
MN-54	-1.422E-02		5.611E-02	9.124E-02	8.280E-03	-0.156
CO-56	2.118E-02		5.575E-02	9.513E-02	8.680E-03	0.223
CO-57	-2.334E-02		4.007E-02	6.357E-02	6.403E-03	-0.367
CO-58	-4.373E-03		5.476E-02	9.031E-02	8.119E-03	-0.048
FE-59	4.376E-02		1.312E-01	2.204E-01	2.057E-02	0.199
CO-60	-2.528E-02		5.713E-02	8.689E-02	8.353E-03	-0.291
ZN-65	9.640E-02		1.659E-01	2.466E-01	2.108E-02	0.391
GE-68	8.682E-01		1.910E+00	3.239E+00	2.835E-01	0.268
AS-73	1.117E+00		2.468E+00	4.160E+00	5.401E-01	0.268
AS-74	-7.151E-02		1.271E-01	1.955E-01	1.661E-02	-0.366
SE-75	-2.417E-02		7.831E-02	1.117E-01	1.224E-02	-0.216
BR-77	-4.649E+00		1.541E+01	2.297E+01	1.983E+00	-0.202
SR-82	-7.458E-01		5.536E-01	8.174E-01	7.203E-02	-0.912
RB-83	-3.920E-02		1.134E-01	1.614E-01	1.394E-02	-0.243
RB-84	-9.316E-03		9.903E-02	1.623E-01	1.504E-02	-0.057
KR-85	2.076E+01		1.200E+01	1.918E+01	1.657E+00	1.082
SR-85	1.061E-01		6.137E-02	9.807E-02	8.473E-03	1.082
RB-86	5.617E-02		1.240E+00	2.032E+00	1.780E-01	0.028
Y-88	3.027E-02		4.022E-02	7.595E-02	6.397E-03	0.399
ZR-88	-3.334E-03		4.734E-02	7.759E-02	6.531E-03	-0.043
Y-91	-1.818E+00		2.923E+01	4.716E+01	3.976E+00	-0.039
NB-94	2.713E-02		4.895E-02	8.479E-02	7.158E-03	0.320
NB-95	1.526E-02		6.493E-02	1.098E-01	9.616E-03	0.139
NB-95M	6.018E-01		2.437E-01	3.813E-01	4.589E-02	1.578
ZR-95	3.892E-02		1.082E-01	1.847E-01	1.769E-02	0.211
NB-97	1.610E-02		4.929E-02	Half-Life too short		
ZR-97	5.053E+00		1.192E+00	Half-Life too short		
MO-99	-1.637E+01		1.821E+01	2.452E+01	3.726E+00	-0.667
TC-99M	-3.629E+10		1.564E+10	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
RH-101	-3.600E-02		5.189E-02	7.887E-02	8.605E-03	-0.456
RH-102	2.572E-02		4.220E-02	7.151E-02	6.170E-03	0.360
RU-103	-2.650E-02		5.892E-02	9.264E-02	1.313E-02	-0.286
RH-106	2.016E-01		4.739E-01	7.856E-01	1.039E-01	0.257
RU-106	2.016E-01		4.735E-01	7.856E-01	6.603E-02	0.257
AG-108M	-1.825E-02		4.861E-02	7.769E-02	6.916E-03	-0.235
AG-110M	9.561E-03		4.522E-02	7.708E-02	6.559E-03	0.124
IN-111	5.035E-01		1.644E+00	2.445E+00	2.694E-01	0.206
IN-113M	-4.154E-02		6.945E-02	1.103E-01	9.581E-03	-0.377
SN-113	-4.154E-02		6.945E-02	1.103E-01	9.581E-03	-0.377
IN-114M	5.074E-02		3.165E-01	4.459E-01	4.842E-02	0.114
CD-115	-2.053E+00		1.576E+01	2.535E+01	2.188E+00	-0.081
SN-117M	-6.372E-02		8.749E-02	1.366E-01	1.432E-02	-0.467
SB-122	1.407E+00		2.847E+00	4.656E+00	3.994E-01	0.302
I-123	-3.364E+00		3.360E+00	Half-Life	too short	
TE-123M	-2.267E-02		4.530E-02	7.145E-02	7.529E-03	-0.317
I-124	-9.393E-02		1.117E+00	1.537E+00	1.303E-01	-0.061
SB-124	1.090E-01		1.004E-01	1.946E-01	1.829E-02	0.560
SB-125	-8.768E-02		1.374E-01	2.159E-01	1.881E-02	-0.406
TE-125M	-2.658E+00		1.507E+01	2.405E+01	2.824E+00	-0.110
I-126	5.757E-02		2.494E-01	4.248E-01	3.504E-02	0.135
SB-126	1.053E-01		2.295E-01	3.462E-01	2.955E-02	0.304
SB-127	-4.246E-01		1.817E+00	2.991E+00	3.322E-01	-0.142
XE-127	1.678E-02		7.441E-02	1.199E-01	1.312E-02	0.140
I-131	9.967E-02		1.669E-01	2.843E-01	2.744E-02	0.351
TE-132	3.884E-01		1.033E+00	1.757E+00	3.008E-01	0.221
BA-133	-4.853E-03		7.117E-02	1.014E-01	1.395E-02	-0.048
I-133	1.256E-04		3.739E-03	Half-Life	too short	
CS-134	1.755E-01	+	9.591E-02	1.273E-01	1.141E-02	1.378
CS-135	2.713E-01		2.796E-01	4.273E-01	5.127E-02	0.635
I-135	4.836E+09		2.448E+09	Half-Life	too short	
CS-136	2.074E-02		1.646E-01	2.722E-01	2.518E-02	0.076
BA-137M	-2.235E-02		4.850E-02	7.864E-02	6.465E-03	-0.284
CS-137	-2.363E-02		5.127E-02	8.313E-02	6.849E-03	-0.284
CE-139	2.158E-02		4.682E-02	7.661E-02	8.177E-03	0.282
BA-140	2.528E-01		3.650E-01	6.062E-01	2.009E-01	0.417
LA-140	-1.162E-01		1.286E-01	1.854E-01	1.738E-02	-0.627
CE-141	2.496E-02		9.803E-02	1.599E-01	1.652E-02	0.156
CE-143	1.244E-03		1.869E-04	Half-Life	too short	
CE-144	1.116E-01		3.570E-01	5.135E-01	8.423E-02	0.217
PM-144	-2.220E-02		4.935E-02	7.998E-02	6.728E-03	-0.278
PR-144	-1.504E+00		3.344E+00	5.419E+00	4.557E-01	-0.278
PM-146	7.291E-02		6.652E-02	1.152E-01	1.233E-02	0.633
ND-147	8.298E-02		8.177E-01	1.336E+00	1.997E-01	0.062
PM-149	1.035E+02		1.299E+02	2.225E+02	3.741E+01	0.465
EU-152	-6.250E-02		1.749E-01	2.292E-01	2.333E-02	-0.273
GD-153	-1.700E-02		1.373E-01	1.955E-01	2.158E-02	-0.087
EU-154	-2.609E-01		1.958E-01	2.695E-01	3.143E-02	-0.968

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	7.322E-02		1.685E-01	2.790E-01	2.939E-02	0.262
TB-160	-1.956E-03		1.839E-01	3.036E-01	2.810E-02	-0.006
HO-166M	-3.377E-02		8.756E-02	1.423E-01	1.208E-02	-0.237
TM-171	-4.167E+01		5.588E+01	8.963E+01	1.023E+01	-0.465
LU-176	2.600E-02		3.867E-02	6.293E-02	6.580E-03	0.413
LU-177	4.124E+00	+	2.213E+00	2.910E+00	3.192E-01	1.417
LU-177M	-2.309E-01		2.721E-01	4.234E-01	3.598E-02	-0.545
HF-181	1.402E-02		6.365E-02	1.052E-01	9.084E-03	0.133
W-181	-1.665E-02		7.427E-01	1.226E+00	1.400E-01	-0.014
TA-182	8.004E-02		3.110E-01	5.142E-01	4.413E-02	0.156
RE-183	1.314E-03		1.771E-01	2.821E-01	2.985E-02	0.005
RE-184	2.135E-01		3.470E-01	5.955E-01	6.549E-02	0.358
OS-185	2.688E-02		6.090E-02	1.012E-01	8.398E-03	0.266
RE-188	1.384E-02		2.790E-01	4.507E-01	4.687E-02	0.031
W-188	-6.982E+00		1.255E+01	1.744E+01	1.864E+00	-0.400
IR-192	2.106E-02		5.245E-02	8.877E-02	9.152E-03	0.237
AU-195	3.641E-01		3.844E-01	5.748E-01	6.265E-02	0.634
TL-200	-1.329E-04		2.985E-04	Half-Life too short		
TL-201	-2.458E+00		1.035E+01	1.649E+01	1.761E+00	-0.149
TL-202	6.226E-03		9.906E-02	1.628E-01	1.395E-02	0.038
HG-203	1.286E-01		6.363E-02	1.126E-01	1.239E-02	1.142
BI-207	3.590E-02		7.730E-02	1.315E-01	1.160E-02	0.273
TL-207	-2.647E-01		1.140E+00	1.612E+00	2.983E-01	-0.164
PO-209	-9.426E-01		1.054E+01	1.727E+01	1.610E+00	-0.055
BI-210	-2.146E+00		1.642E+01	2.682E+01	3.303E+00	-0.080
PB-210	-2.146E+00		1.642E+01	2.682E+01	3.303E+00	-0.080
PO-210	-2.146E+00		1.642E+01	2.682E+01	3.128E+00	-0.080
PB-211	-4.745E-01		1.514E+00	2.397E+00	1.501E+00	-0.198
BI-212	1.309E+00		5.059E-01	9.273E-01	9.240E-02	1.411
PO-215	-2.647E-01		1.140E+00	1.612E+00	2.983E-01	-0.164
RN-219	1.796E-01		6.271E-01	1.046E+00	1.563E-01	0.172
RN-220	1.737E+01		3.972E+01	6.621E+01	5.696E+00	0.262
RA-223	-2.647E-01		1.140E+00	1.612E+00	2.983E-01	-0.164
AC-227	-3.025E-01		5.827E-01	9.501E-01	1.595E-01	-0.318
TH-227	-3.025E-01		5.834E-01	9.501E-01	1.834E-01	-0.318
TH-229	-4.921E-02		7.893E-01	1.259E+00	1.370E-01	-0.039
PA-231	-6.360E-01		2.382E+00	3.922E+00	6.469E-01	-0.162
TH-231	-2.647E-01		1.140E+00	1.612E+00	2.983E-01	-0.164
U-231	2.418E-01		1.836E+00	2.648E+00	2.967E-01	0.091
PA-233	-1.131E-01		9.881E-02	1.535E-01	1.624E-02	-0.737
PA-234	1.412E-01		4.350E-01	7.346E-01	1.400E-01	0.192
PA-234M	2.857E+00		6.417E+00	1.107E+01	1.148E+00	0.258
TH-234	1.191E+00		2.853E+00	4.675E+00	9.107E-01	0.255
U-235	2.991E-01		3.301E-01	5.373E-01	9.845E-02	0.557
NP-236	-1.528E-02		1.262E-01	2.023E-01	2.129E-02	-0.076
U-238	1.191E+00		2.853E+00	4.675E+00	9.107E-01	0.255
NP-239	1.373E-01		2.897E-01	4.794E-01	4.840E-02	0.286
AM-241	-9.446E-02		3.755E-01	6.160E-01	7.230E-02	-0.153

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-8.961E-02		1.490E-01	2.374E-01	2.501E-02	-0.378
AM-246	3.247E-01		2.055E-01	3.793E-01	3.317E-02	0.856
CM-247	4.215E-02		5.523E-02	9.452E-02	7.994E-03	0.446
CF-249	1.633E-02		6.107E-02	1.020E-01	8.701E-03	0.160
CF-251	5.695E-02		1.984E-01	3.221E-01	3.463E-02	0.177

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]G246875007          *
* Acquisition date   : 24-FEB-2010 08:53:30 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 02:00:01.43 Half life ratio : 8.000    *
*****
*                                     SAMPLE DATA                          *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G246875007 Analyst initials: MXR1          *
* Batch Number       : 952643 Sample Quantity : 1.1330E+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	4.042E+01	4.559E+00	3.973E-01	2.326E+00
CD-109	3.721E+00	1.564E+00	1.023E+00	7.982E-01
SN-126	3.658E-01	1.538E-01	1.014E-01	7.848E-02
TL-208	7.438E-01	1.302E-01	4.125E-02	6.642E-02
BI-211	6.062E+00	8.762E-01	2.318E-01	4.470E-01
PB-212	2.487E+00	3.360E-01	6.634E-02	1.714E-01
PO-212	2.487E+00	3.360E-01	6.634E-02	1.714E-01
BI-214	1.655E+00	2.813E-01	8.174E-02	1.435E-01
PB-214	2.109E+00	3.233E-01	8.078E-02	1.650E-01
PO-214	2.109E+00	3.233E-01	8.078E-02	1.650E-01
PO-216	2.487E+00	3.360E-01	6.634E-02	1.714E-01
PO-218	2.109E+00	3.233E-01	8.078E-02	1.650E-01
RA-224	6.868E+00	2.114E+00	7.547E-01	1.078E+00
RA-226	1.655E+00	2.813E-01	8.174E-02	1.435E-01
AC-228	2.324E+00	4.703E-01	1.468E-01	2.400E-01
RA-228	2.324E+00	4.703E-01	1.468E-01	2.400E-01
TH-228	2.525E+00	3.410E-01	6.733E-02	1.740E-01
TH-230	1.655E+00	2.813E-01	8.174E-02	1.435E-01
TH-232	2.324E+00	4.703E-01	1.468E-01	2.400E-01
U-234	1.655E+00	2.813E-01	8.174E-02	1.435E-01
NP-237	1.074E+00	5.012E-01	3.034E-01	2.557E-01
AM-243	6.075E-01	1.734E-01	7.825E-02	8.845E-02
ANH-511	2.353E-01	9.223E-02	3.373E-02	4.706E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-7.422E-02	4.663E-01	3.861E-01	2.379E-01 NOT IDENT.
NA-22	-1.080E-01	6.961E-02	4.786E-02	3.551E-02 NOT IDENT.
NA-24	-4.150E+05	8.289E+05	0.000E+00	4.229E+05 SHORT HLIF
AL-26	-3.434E-02	4.332E-02	3.057E-02	2.210E-02 NOT IDENT.

TI-44	5.515E-01	1.098E-01	6.963E-02	5.603E-02	FAIL ABUN
SC-46	2.974E-02	5.703E-02	5.002E-02	2.910E-02	FAIL ABUN
V-48	-5.962E-02	9.452E-02	7.424E-02	4.822E-02	NOT IDENT.
CR-51	-2.815E-01	5.616E-01	4.678E-01	2.865E-01	NOT IDENT.
MN-52	4.490E-02	2.623E-01	2.278E-01	1.338E-01	FAIL ABUN
MN-54	-1.422E-02	5.499E-02	4.567E-02	2.805E-02	NOT IDENT.
CO-56	2.118E-02	5.464E-02	4.761E-02	2.788E-02	FAIL ABUN
CO-57	-2.334E-02	3.927E-02	3.235E-02	2.003E-02	NOT IDENT.
CO-58	-4.373E-03	5.366E-02	4.521E-02	2.738E-02	NOT IDENT.
FE-59	4.376E-02	1.286E-01	1.101E-01	6.559E-02	NOT IDENT.
CO-60	-2.528E-02	5.599E-02	4.331E-02	2.856E-02	NOT IDENT.
ZN-65	9.640E-02	1.626E-01	1.231E-01	8.293E-02	NOT IDENT.
GE-68	8.682E-01	1.872E+00	1.618E+00	9.549E-01	NOT IDENT.
AS-73	1.117E+00	2.419E+00	2.132E+00	1.234E+00	NOT IDENT.
AS-74	-7.151E-02	1.246E-01	9.813E-02	6.355E-02	NOT IDENT.
SE-75	-2.417E-02	7.675E-02	5.645E-02	3.916E-02	NOT IDENT.
BR-77	-4.649E+00	1.511E+01	1.154E+01	7.707E+00	FAIL ABUN
SR-82	-7.458E-01	5.425E-01	4.094E-01	2.768E-01	NOT IDENT.
RB-83	-3.920E-02	1.112E-01	8.112E-02	5.671E-02	NOT IDENT.
RB-84	-9.316E-03	9.705E-02	8.120E-02	4.951E-02	NOT IDENT.
KR-85	2.076E+01	1.176E+01	9.640E+00	6.000E+00	NOT IDENT.
SR-85	1.061E-01	6.014E-02	4.930E-02	3.068E-02	NOT IDENT.
RB-86	5.617E-02	1.215E+00	1.015E+00	6.198E-01	NOT IDENT.
Y-88	3.027E-02	3.941E-02	3.775E-02	2.011E-02	NOT IDENT.
ZR-88	-3.334E-03	4.640E-02	3.909E-02	2.367E-02	NOT IDENT.
Y-91	-1.818E+00	2.864E+01	2.353E+01	1.461E+01	NOT IDENT.
NB-94	2.713E-02	4.797E-02	4.250E-02	2.448E-02	NOT IDENT.
NB-95	1.526E-02	6.363E-02	5.498E-02	3.247E-02	NOT IDENT.
NB-95M	6.018E-01	2.389E-01	1.930E-01	1.219E-01	NOT IDENT.
ZR-95	3.892E-02	1.060E-01	9.252E-02	5.410E-02	NOT IDENT.
NB-97	1.610E+04	9.662E+04	0.000E+00	4.929E+04	SHORT HLIF
ZR-97	5.053E+06	2.337E+06	0.000E+00	1.192E+06	SHORT HLIF
MO-99	-1.637E+01	1.784E+01	1.229E+01	9.103E+00	NOT IDENT.
TC-99M	-3.629E+16	3.065E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.600E-02	5.085E-02	3.998E-02	2.594E-02	NOT IDENT.
RH-102	2.572E-02	4.136E-02	3.597E-02	2.110E-02	NOT IDENT.
RU-103	-2.650E-02	5.774E-02	4.658E-02	2.946E-02	FAIL ABUN
RH-106	2.016E-01	4.644E-01	3.942E-01	2.370E-01	FAIL ABUN
RU-106	2.016E-01	4.640E-01	3.942E-01	2.367E-01	FAIL ABUN
AG-108M	-1.825E-02	4.764E-02	3.911E-02	2.431E-02	NOT IDENT.
AG-110M	9.561E-03	4.431E-02	3.866E-02	2.261E-02	NOT IDENT.
IN-111	5.035E-01	1.611E+00	1.237E+00	8.219E-01	NOT IDENT.
IN-113M	-4.154E-02	6.806E-02	5.558E-02	3.472E-02	NOT IDENT.
SN-113	-4.154E-02	6.806E-02	5.558E-02	3.472E-02	NOT IDENT.
IN-114M	5.074E-02	3.102E-01	2.261E-01	1.583E-01	NOT IDENT.
CD-115	-2.053E+00	1.545E+01	1.274E+01	7.882E+00	NOT IDENT.
SN-117M	-6.372E-02	8.574E-02	6.935E-02	4.375E-02	NOT IDENT.
SB-122	1.407E+00	2.790E+00	2.339E+00	1.424E+00	NOT IDENT.
I-123	-3.364E+06	6.585E+06	0.000E+00	3.360E+06	SHORT HLIF
TE-123M	-2.267E-02	4.439E-02	3.628E-02	2.265E-02	NOT IDENT.
I-124	-9.393E-02	1.094E+00	7.716E-01	5.583E-01	NOT IDENT.
SB-124	1.090E-01	9.835E-02	9.678E-02	5.018E-02	FAIL ABUN
SB-125	-8.768E-02	1.347E-01	1.087E-01	6.872E-02	FAIL ABUN
TE-125M	-2.658E+00	1.477E+01	1.225E+01	7.535E+00	NOT IDENT.
I-126	5.757E-02	2.444E-01	2.131E-01	1.247E-01	NOT IDENT.
SB-126	1.053E-01	2.249E-01	1.735E-01	1.147E-01	FAIL ABUN
SB-127	-4.246E-01	1.781E+00	1.500E+00	9.085E-01	NOT IDENT.
XE-127	1.678E-02	7.292E-02	6.077E-02	3.721E-02	NOT IDENT.
I-131	9.967E-02	1.636E-01	1.433E-01	8.345E-02	NOT IDENT.
TE-132	3.884E-01	1.012E+00	8.897E-01	5.163E-01	NOT IDENT.
BA-133	-4.853E-03	6.975E-02	5.115E-02	3.559E-02	NOT IDENT.
I-133	1.256E+02	7.329E+03	0.000E+00	3.739E+03	SHORT HLIF
CS-134	1.755E-01	9.400E-02	6.375E-02	4.796E-02	FAIL ABUN
CS-135	2.713E-01	2.740E-01	2.160E-01	1.398E-01	NOT IDENT.
I-135	4.836E+15	4.798E+15	0.000E+00	2.448E+15	SHORT HLIF
CS-136	2.074E-02	1.613E-01	1.360E-01	8.231E-02	FAIL ABUN
BA-137M	-2.235E-02	4.753E-02	3.944E-02	2.425E-02	NOT IDENT.
CS-137	-2.363E-02	5.024E-02	4.169E-02	2.563E-02	NOT IDENT.
CE-139	2.158E-02	4.588E-02	3.889E-02	2.341E-02	NOT IDENT.
BA-140	2.528E-01	3.577E-01	3.046E-01	1.825E-01	NOT IDENT.
LA-140	-1.162E-01	1.261E-01	9.225E-02	6.431E-02	FAIL ABUN
CE-141	2.496E-02	9.607E-02	8.124E-02	4.901E-02	NOT IDENT.
CE-143	1.244E+03	3.663E+02	0.000E+00	1.869E+02	SHORT HLIF
CE-144	1.116E-01	3.499E-01	2.612E-01	1.785E-01	NOT IDENT.
PM-144	-2.220E-02	4.836E-02	4.009E-02	2.468E-02	NOT IDENT.
PR-144	-1.504E+00	3.277E+00	2.717E+00	1.672E+00	NOT IDENT.
PM-146	7.291E-02	6.519E-02	5.796E-02	3.326E-02	NOT IDENT.
ND-147	8.298E-02	8.014E-01	6.712E-01	4.089E-01	FAIL ABUN

PM-149	1.035E+02	1.273E+02	1.124E+02	6.495E+01	NOT IDENT.
EU-152	-6.250E-02	1.714E-01	1.156E-01	8.745E-02	NOT IDENT.
GD-153	-1.700E-02	1.346E-01	9.969E-02	6.866E-02	NOT IDENT.
EU-154	-2.609E-01	1.918E-01	1.344E-01	9.788E-02	NOT IDENT.
EU-155	7.322E-02	1.651E-01	1.422E-01	8.423E-02	FAIL ABUN
TB-160	-1.956E-03	1.802E-01	1.519E-01	9.195E-02	FAIL ABUN
HO-166M	-3.377E-02	8.581E-02	7.133E-02	4.378E-02	NOT IDENT.
TM-171	-4.167E+01	5.477E+01	4.585E+01	2.794E+01	NOT IDENT.
LU-176	2.600E-02	3.789E-02	3.177E-02	1.933E-02	FAIL ABUN
LU-177	4.124E+00	2.169E+00	1.474E+00	1.106E+00	FAIL ABUN
LU-177M	-2.309E-01	2.666E-01	2.132E-01	1.360E-01	FAIL ABUN
HF-181	1.402E-02	6.237E-02	5.291E-02	3.182E-02	NOT IDENT.
W-181	-1.665E-02	7.278E-01	6.275E-01	3.713E-01	NOT IDENT.
TA-182	8.004E-02	3.048E-01	2.565E-01	1.555E-01	FAIL ABUN
RE-183	1.314E-03	1.736E-01	1.432E-01	8.856E-02	FAIL ABUN
RE-184	2.135E-01	3.401E-01	3.012E-01	1.735E-01	NOT IDENT.
OS-185	2.688E-02	5.969E-02	5.076E-02	3.045E-02	NOT IDENT.
RE-188	1.384E-02	2.734E-01	2.289E-01	1.395E-01	NOT IDENT.
W-188	-6.982E+00	1.230E+01	8.812E+00	6.274E+00	NOT IDENT.
IR-192	2.106E-02	5.140E-02	4.481E-02	2.623E-02	FAIL ABUN
AU-195	3.641E-01	3.767E-01	2.931E-01	1.922E-01	FAIL ABUN
TL-200	-1.329E+02	5.850E+02	0.000E+00	2.985E+02	SHORT HLIF
TL-201	-2.458E+00	1.015E+01	8.368E+00	5.177E+00	NOT IDENT.
TL-202	6.226E-03	9.708E-02	8.195E-02	4.953E-02	NOT IDENT.
HG-203	1.286E-01	6.235E-02	5.689E-02	3.181E-02	NOT IDENT.
BI-207	3.590E-02	7.576E-02	6.566E-02	3.865E-02	FAIL ABUN
TL-207	-2.647E-01	1.117E+00	8.136E-01	5.698E-01	FAIL ABUN
PO-209	-9.426E-01	1.033E+01	8.639E+00	5.272E+00	NOT IDENT.
BI-210	-2.146E+00	1.610E+01	1.376E+01	8.212E+00	NOT IDENT.
PB-210	-2.146E+00	1.610E+01	1.376E+01	8.212E+00	NOT IDENT.
PO-210	-2.146E+00	1.609E+01	1.376E+01	8.212E+00	NOT IDENT.
PB-211	-4.745E-01	1.484E+00	1.207E+00	7.569E-01	NOT IDENT.
BI-212	1.309E+00	4.958E-01	4.647E-01	2.530E-01	NOT IDENT.
PO-215	-2.647E-01	1.117E+00	8.136E-01	5.698E-01	FAIL ABUN
RN-219	1.796E-01	6.145E-01	5.272E-01	3.135E-01	FAIL ABUN
RN-220	1.737E+01	3.892E+01	3.326E+01	1.986E+01	NOT IDENT.
RA-223	-2.647E-01	1.117E+00	8.136E-01	5.698E-01	FAIL ABUN
AC-227	-3.025E-01	5.710E-01	4.805E-01	2.913E-01	FAIL ABUN
TH-227	-3.025E-01	5.717E-01	4.805E-01	2.917E-01	FAIL ABUN
TH-229	-4.921E-02	7.735E-01	6.385E-01	3.947E-01	FAIL ABUN
PA-231	-6.360E-01	2.334E+00	1.981E+00	1.191E+00	FAIL ABUN
TH-231	-2.647E-01	1.117E+00	8.136E-01	5.698E-01	FAIL ABUN
U-231	2.418E-01	1.799E+00	1.351E+00	9.178E-01	FAIL ABUN
PA-233	-1.131E-01	9.683E-02	7.749E-02	4.940E-02	FAIL ABUN
PA-234	1.412E-01	4.263E-01	3.673E-01	2.175E-01	FAIL ABUN
PA-234M	2.857E+00	6.289E+00	5.531E+00	3.209E+00	NOT IDENT.
TH-234	1.191E+00	2.796E+00	2.393E+00	1.426E+00	FAIL ABUN
U-235	2.991E-01	3.235E-01	2.731E-01	1.651E-01	FAIL ABUN
NP-236	-1.528E-02	1.237E-01	1.027E-01	6.309E-02	NOT IDENT.
U-238	1.191E+00	2.796E+00	2.393E+00	1.426E+00	FAIL ABUN
NP-239	1.373E-01	2.839E-01	2.441E-01	1.449E-01	FAIL ABUN
AM-241	-9.446E-02	3.679E-01	3.154E-01	1.877E-01	NOT IDENT.
CM-243	-8.961E-02	1.461E-01	1.210E-01	7.452E-02	FAIL ABUN
AM-246	3.247E-01	2.014E-01	1.894E-01	1.028E-01	NOT IDENT.
CM-247	4.215E-02	5.413E-02	4.761E-02	2.762E-02	NOT IDENT.
CF-249	1.633E-02	5.984E-02	5.140E-02	3.053E-02	NOT IDENT.
CF-251	5.695E-02	1.944E-01	1.634E-01	9.919E-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	331.9590
46.50	331.9590
46.50	331.9590
48.70	329.4006
49.72	332.8378
51.35	325.1099
52.39	313.1761
52.97	314.4324
53.15	314.5241
53.44	306.0106
54.07	316.9159
56.28	364.4213
56.28	364.4235
57.37	0.0000
57.53	353.5085
57.53	353.5095
57.60	353.5464
57.98	363.4450
57.98	363.4450
59.32	379.7269
59.32	379.7269
59.40	401.1414
59.54	401.2257
59.72	401.3352
60.01	401.5101
61.10	400.2180
61.14	400.2415
61.30	409.1036
63.00	407.1999
63.29	400.5334
63.29	400.5334
63.58	404.6119
64.28	428.5017
65.12	430.9787
65.20	431.0286
65.20	431.0286
66.05	462.9366
66.72	457.4851
66.83	452.6476
66.91	452.6995
67.20	452.8842
67.20	452.8842
67.75	449.4402
67.85	418.2267
68.90	419.1010
68.90	419.1010
69.30	416.1786
69.67	435.3199
70.82	436.0039
70.82	436.0039
70.83	436.0106
72.80	457.7644
72.87	457.8076
72.87	457.8076
74.67	443.6221
74.81	443.7039
74.81	443.7039
74.81	443.7039
74.81	443.7039
74.81	443.7039
74.81	443.7039
74.97	443.7977
75.28	443.9785
75.70	444.2223
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77.11	445.0391

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77.11	445.0391
77.11	445.0391
77.11	445.0391
77.11	445.0391
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83.78	522.0987
83.78	522.0987
84.21	501.4814
84.90	506.7311
85.43	490.9618
86.29	515.6465
86.50	453.3199
86.54	453.3405
86.59	453.3680
86.72	453.4401
86.79	453.4761
86.94	453.5603
87.30	453.7560
87.30	453.7560
87.30	453.7560
87.30	453.7560
87.30	453.7560
87.30	453.7560
87.57	453.9036
87.88	454.0718
88.03	454.1542
88.36	454.3327
88.47	454.3928
89.95	455.1910
91.11	455.8125
92.29	456.4407
92.38	456.4888
92.38	456.4888
93.35	457.0004
94.00	457.3437
94.67	457.6921
94.67	457.6956
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94.90	457.8157
94.90	457.8157
94.90	457.8157
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95.87	413.9158
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98.44	330.1302
98.44	330.1314
98.88	333.5631
99.55	307.6308
99.55	307.6308
99.86	330.6530
100.00	330.7047
100.10	330.7417
103.18	437.4128
103.76	390.4269
105.00	354.9403
105.31	378.7293
108.00	403.5529
109.28	415.4657

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111.00	386.1859
111.76	396.8520
112.95	398.3760
115.19	387.8506
116.30	352.8927
117.00	348.9741
117.00	348.9741
117.66	360.6718
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121.62	368.3698
121.78	405.0609
122.06	398.8914
122.32	392.7083
122.32	392.7083
122.32	392.7083
122.32	392.7083
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127.23	390.5775
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131.20	386.9770
133.02	362.2431
133.54	359.0310
135.34	363.0189
136.00	351.5992
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136.48	343.8693
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140.51	0.0000
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142.65	359.6591
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144.24	354.8220
144.24	354.8220
144.24	354.8220
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145.44	387.2929
147.16	413.5941
152.43	399.3305
152.70	387.5784
153.22	357.5930
154.21	366.5158
154.21	366.5158
154.21	366.5158
154.21	366.5158
155.03	406.6832
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159.00	386.3887
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163.89	335.7857
165.85	343.9374
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171.28	308.2675
171.86	302.9413
172.10	315.0308
176.55	331.4968
176.60	328.2175
181.06	352.4780
184.41	307.4375
185.71	327.1939
186.00	327.2639
190.27	310.5609
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198.60	334.7740
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201.83	340.0239
202.84	324.5973
205.31	346.2456

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208.81	338.1039
209.75	328.4265
209.75	328.4265
210.97	288.1797
215.65	305.8881
216.55	294.9373
218.09	273.3004
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223.80	307.9636
226.40	288.4750
227.00	287.6788
227.08	267.6667
227.20	267.6864
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228.18	300.6597
228.18	300.6597
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236.00	317.4569
236.00	317.4569
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238.63	243.9978
238.63	243.9978
238.63	243.9978
239.00	244.0547
240.98	244.3631
241.98	244.5190
241.98	244.5190
241.98	244.5190
244.69	214.8578
245.39	228.7701
247.94	230.6732
248.90	243.1205
249.79	240.1763
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252.85	219.3451
254.15	0.0000
256.20	254.1089
256.20	254.1089
260.50	225.0198
260.90	229.7233
262.80	245.1938
264.65	247.0206
268.24	233.5358
268.79	230.4972
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269.46	221.2394
269.46	221.2394
269.46	221.2394
271.23	198.0758
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277.60	221.2531
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278.60	208.6399
279.20	189.9101
279.53	202.1688
280.46	256.8473
281.68	281.5060
283.67	231.8682
284.30	228.1807
285.00	214.1232
285.90	197.2463
286.10	195.3790
286.10	195.3790
287.40	205.9131
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290.80	220.8207
291.72	217.7784
293.26	0.0000
293.70	189.5825
295.21	224.5271
295.21	224.5271

295.21	224.5271
295.96	284.7290
296.50	284.8169
297.23	284.9304
298.57	285.1428
299.80	285.3333
299.80	285.3333
300.09	214.0356
300.09	214.0356
300.09	214.0356
300.09	214.0356
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301.29	177.6865
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303.76	216.0555
303.91	216.0721
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304.40	211.3626
304.84	208.2349
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308.46	177.7444
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319.02	197.0072
319.41	208.5844
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323.87	192.6929
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323.87	192.6929
325.23	194.4365
328.77	191.5762
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334.20	239.7354
334.30	222.7957
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338.28	175.6862
338.28	175.6862
338.28	175.6862
338.32	175.6906
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338.32	175.6906
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340.57	152.2432
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345.85	186.7510
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351.07	147.5089
351.92	147.5715
351.92	147.5715
351.92	147.5715
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366.43	153.5397
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367.94	0.0000
369.80	163.6474
374.96	153.1779
383.85	178.6289
387.95	155.1069
388.63	172.0623
391.69	175.2932
391.69	175.2932
392.90	161.4404
398.62	171.8530
400.65	175.0107
401.10	163.0438
401.81	150.0879
402.60	136.1295
404.84	177.3479
410.95	142.6674
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413.65	171.0044
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415.30	152.0027

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433.93	137.0023
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439.89	129.2107
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445.03	130.5125
445.03	130.5125
445.03	130.5125
445.03	130.5125
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473.00	113.4603
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475.35	103.2434
476.78	124.9969
477.59	122.9701
477.96	132.2906
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507.63	0.0000
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511.00	110.9798
511.85	111.0153
511.85	111.0153
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513.99	103.0705
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520.65	115.5913
527.90	123.2813
528.96	0.0000
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529.87	0.0000
531.02	105.4932
537.32	84.5918
543.00	114.4389
546.56	0.0000
549.76	104.0987
552.65	107.3988
555.20	107.4974
563.23	102.4711
563.90	91.8180
568.70	115.5041
569.32	106.9727
569.50	108.0498
569.67	104.8452
573.80	96.4270
574.00	98.5766
574.64	102.4096
578.91	110.9118
579.30	0.0000
583.14	96.7434
585.48	107.5806
591.81	77.6285
592.07	79.7921
593.00	97.0752
595.88	99.3312
600.56	112.9484
602.52	0.0000
602.71	115.4375
602.71	115.4375
603.60	101.0374
604.41	119.1121
604.70	113.7107
609.31	107.3797

609.31	107.3797
609.31	107.3797
609.31	107.3797
610.33	77.7608
612.46	95.9137
614.37	85.1091
618.01	94.2796
621.84	90.4064
621.84	90.4064
631.29	100.5239
633.02	87.4609
633.10	92.9293
634.78	97.3568
635.90	101.7710
636.97	89.7636
645.85	93.3195
646.12	79.0523
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657.75	76.2286
657.90	0.0000
661.65	94.7142
661.65	94.7142
664.57	0.0000
666.33	90.2500
666.33	90.2500
675.00	105.2723
677.61	84.1035
685.20	88.9355
692.80	82.6444
695.00	88.2759
696.49	103.1908
696.49	103.1908
697.00	111.5747
697.49	117.1714
698.33	99.5288
698.50	96.7425
699.00	93.9662
702.63	92.2083
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706.58	0.0000
706.67	102.5812
709.31	78.3962
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713.82	96.2607
717.42	91.6876
720.50	80.2682
721.93	0.0000
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722.78	93.1738
722.78	93.1738
722.89	93.1779
722.95	93.1799
723.30	86.7612
724.18	81.9643
727.18	79.7584
733.00	83.7909
735.90	98.3782
739.58	100.3009
742.81	78.2431
744.21	93.3644
747.13	78.3427
751.79	103.0235
752.31	102.0938
753.82	97.4091
755.35	79.4763
756.15	89.9052
756.87	88.0295
763.93	123.3032
765.79	105.3384
766.42	105.3588
766.84	112.0150
776.49	101.8538
778.00	91.4219
778.57	91.4375
778.89	80.9672
783.80	88.7106
785.46	84.3277
792.07	90.1481

795.84	86.9605
796.30	77.1274
798.80	62.4007
801.93	98.6133
805.60	71.0190
810.29	72.0734
810.76	72.0825
815.85	73.1457
817.79	69.3325
818.51	62.6051
819.60	63.5870
826.30	72.3892
828.27	0.0000
831.60	89.8932
831.96	86.0341
834.83	92.8730
836.80	0.0000
846.75	65.9967
848.13	66.9911
856.28	0.0000
856.80	92.4487
860.37	60.3917
867.32	59.5269
867.82	57.5824
871.10	47.8635
873.19	57.6628
874.81	73.3322
875.33	0.0000
876.40	64.5592
879.36	56.7775
880.27	54.8322
880.51	56.7940
881.50	66.6027
883.24	72.5125
884.67	65.6778
889.25	64.7740
896.60	65.8795
898.02	58.0349
899.00	64.9365
903.28	64.1634
911.07	62.1758
911.07	62.1758
911.07	62.1758
919.63	58.0245
920.93	55.4053
925.00	52.2930
925.24	58.2389
926.50	56.0489
935.52	45.6781
937.48	52.7958
944.10	66.3405
946.00	60.7295
949.00	56.7901
962.29	75.3948
964.01	73.7128
966.15	76.0371
968.20	76.0758
969.11	76.0928
969.11	76.0928
969.11	76.0928
977.42	52.6688
980.50	61.2420
983.50	62.2901
989.30	58.3528
996.32	72.5596
1001.03	49.4356
1001.68	54.4889
1004.76	63.6165
1021.30	0.0000
1024.50	0.0000
1034.80	59.9963
1036.00	50.8586
1037.82	64.1074
1038.57	65.1380
1038.76	0.0000
1045.16	68.2950
1046.59	60.1595
1048.07	67.3186

1050.47	73.4795
1050.47	73.4795
1062.04	63.4405
1063.62	57.3216
1076.63	70.8362
1077.35	61.6064
1078.86	41.0840
1085.78	61.7212
1099.22	56.7478
1112.02	78.0435
1112.84	69.1885
1115.52	74.5547
1120.29	62.1924
1120.29	62.1924
1120.29	62.1924
1120.29	62.1924
1120.51	62.1948
1121.28	51.5430
1124.00	0.0000
1129.67	64.8121
1131.51	0.0000
1147.95	0.0000
1167.94	79.5872
1173.22	61.8520
1175.09	59.7786
1177.93	85.0012
1189.05	72.5769
1204.90	79.1473
1205.75	0.0000
1213.00	80.3356
1221.42	80.4748
1230.97	66.8375
1235.34	91.0156
1236.41	0.0000
1238.25	78.6250
1246.25	80.1059
1260.41	0.0000
1271.85	45.9954
1274.45	71.7028
1274.54	75.9864
1291.56	62.2811
1298.22	0.0000
1312.09	43.1234
1325.50	34.5885
1325.50	34.5885
1332.49	42.2119
1333.61	37.8896
1360.21	31.7090
1362.66	0.0000
1365.15	35.4726
1368.21	39.2285
1368.53	0.0000
1376.25	38.3517
1384.27	56.2081
1394.10	29.0939
1395.20	40.3650
1407.95	41.4004
1434.06	18.9076
1436.60	24.5917
1457.56	0.0000
1460.81	28.4985
1489.15	22.9135
1509.49	27.7853
1596.49	35.0068
1620.62	17.5737
1678.03	0.0000
1691.02	8.8876
1691.02	8.8876
1706.46	0.0000
1750.46	0.0000
1764.49	6.9927
1764.49	6.9927
1764.49	6.9927
1764.49	6.9927
1770.23	98.9827
1771.40	65.0000
1791.20	0.0000
1808.65	20.1137

1836.01

7.0688

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875007

Total Uranium Activity	3.6821E+00	ug/g
Total Uranium Counting Unc.	8.3190E+00	ug/g
Total Uranium Tpu	4.2444E-06	ug/g
Total Uranium Mda	7.1188E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 952643                          SAMPLE ID   : G246875007      *
*  ANALYST       : MXR1                             DETECTOR    : GAM15        *
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00  *
*  ANALYSIS DATE : 24-FEB-2010 08:53:30.12          SAMPLE ALQT  : 113.300 GRAM  *
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.321E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.937E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 3.890E+00
GROSS GAMMA DLC       (pCi/GRAM ) : 1.888E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 10:56:17.92

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875008.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:54:00
Sample ID          : G246875008           Sample quantity  : 1.30570E+02 GRAM
Detector name      : GAM22                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:02.64  0.0%
Energy tolerance   : 1.50000 keV          Analyst Initials  : MXR1
Abundance limit    : 75.00000             Sensitivity         : 5.00000
Batch ID           : 952643               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	63.37*	130	853	1.43	127.00	123	9	1.81E-02	42.3	
2	3	74.83*	614	658	1.02	149.89	143	17	8.53E-02	7.8	1.49E+00
3	3	77.11*	1079	714	1.10	154.44	143	17	1.50E-01	5.3	
4	3	87.20	451	701	1.20	174.61	163	28	6.26E-02	10.7	3.70E+00
5	3	89.97	253	575	1.03	180.15	163	28	3.51E-02	16.3	
6	3	92.67*	294	641	1.19	185.53	163	28	4.08E-02	17.1	
7	0	129.36*	116	494	1.03	258.85	256	7	1.61E-02	33.7	
8	0	185.92*	291	621	1.55	371.86	367	10	4.04E-02	17.9	
9	0	209.32	213	593	1.30	418.60	414	11	2.96E-02	23.2	
10	3	238.70*	2542	345	1.26	477.33	471	27	3.53E-01	2.4	1.82E+00
11	3	241.71	595	400	1.89	483.33	471	27	8.26E-02	9.9	
12	0	270.33	200	365	1.87	540.53	536	10	2.78E-02	19.3	
13	0	277.21	90	300	1.01	554.28	551	8	1.25E-02	35.0	
14	0	295.23*	706	367	1.28	590.28	585	10	9.80E-02	6.4	
15	0	299.56	90	474	0.84	598.94	596	12	1.26E-02	49.4	
16	0	328.02*	109	319	1.15	655.81	651	10	1.51E-02	32.5	
17	0	338.46*	591	330	1.29	676.68	671	13	8.21E-02	7.6	
18	0	352.00*	1318	339	1.49	703.74	698	14	1.83E-01	4.1	
19	0	409.15	80	233	1.53	817.94	813	10	1.12E-02	37.2	
20	0	462.99*	158	199	1.33	925.56	920	12	2.19E-02	19.9	
21	0	510.79*	170	321	2.01	1021.09	1014	16	2.36E-02	27.8	
22	0	562.43	40	122	0.95	1124.29	1121	8	5.61E-03	49.7	
23	0	583.33*	870	211	1.54	1166.06	1160	14	1.21E-01	5.1	
24	0	609.41*	1011	225	1.47	1218.21	1212	14	1.40E-01	4.5	
25	0	727.51	254	139	1.70	1454.27	1446	15	3.53E-02	11.9	
26	0	770.08	148	207	5.43	1539.38	1530	20	2.06E-02	25.6	
27	0	795.16	96	113	1.27	1589.52	1585	11	1.33E-02	23.8	
28	0	860.59	141	102	1.51	1720.34	1712	14	1.96E-02	17.3	
29	0	911.37*	542	206	2.01	1821.87	1813	16	7.53E-02	7.4	
30	0	933.88	95	89	1.03	1866.87	1858	15	1.31E-02	24.2	
31	7	965.64	166	135	3.04	1930.36	1920	25	2.31E-02	20.6	3.45E+00
32	7	969.22*	346	113	2.43	1937.52	1920	25	4.81E-02	9.1	
33	0	1120.20*	221	118	2.48	2239.43	2232	16	3.07E-02	13.2	
34	0	1240.80	109	236	2.51	2480.60	2472	24	1.52E-02	39.1	
35	0	1461.00*	2779	63	2.67	2921.02	2908	25	3.86E-01	2.1	
36	0	1764.88*	182	30	3.25	3528.95	3517	24	2.53E-02	11.5	

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


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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875008.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 24-FEB-2010 08:54:00
Sample ID        : G246875008             Sample quantity  : 130.57 GRAM
Sample type      : SOLID                   Sample geometry   :
Detector name    : GAMMA22                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00           Elapsed real time: 0 02:00:02.64   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	*	3.923E+01	3.942E+00	4.660E-01	4.269E-02	84.191
CD-109	+	88.03	*	4.760E+00	1.115E+00	1.197E+00	1.136E-01	3.978
SB-122	+	563.90	*	1.876E+00	1.873E+00	2.971E+00	3.045E-01	0.631
		692.80		2.090E+00	3.864E+01	6.335E+01	6.764E+00	0.033
SN-126	+	64.28		8.953E-01	7.678E-01	7.752E-01	1.126E-01	1.155
	+	86.94		1.946E+00	9.095E-01	4.940E-01	2.051E-01	3.939
	+	87.57	*	4.681E-01	1.096E-01	1.182E-01	1.116E-02	3.962
TL-208	+	277.35		6.153E-01	4.420E-01	5.955E-01	9.819E-02	1.033
	+	510.84		5.254E-01	2.999E-01	2.073E-01	2.701E-02	2.535
	+	583.14	*	7.563E-01	1.122E-01	5.453E-02	5.913E-03	13.868
	+	860.37		1.115E+00	4.074E-01	4.264E-01	4.969E-02	2.615
BI-211		72.87		5.766E+00	2.967E+00	5.057E+00	4.048E-01	1.140
	+	351.07	*	5.422E+00	7.740E-01	3.077E-01	3.589E-02	17.626
PB-212	+	74.81		2.674E+00	5.332E-01	5.193E-01	6.444E-02	5.149
	+	77.11		2.667E+00	3.617E-01	2.957E-01	2.473E-02	9.020
	+	87.30		2.165E+00	5.513E-01	5.478E-01	7.522E-02	3.952
	+	238.63	*	2.442E+00	3.437E-01	8.998E-02	1.189E-02	27.144
	+	300.09		1.288E+00	1.286E+00	1.257E+00	1.834E-01	1.024
PO-212	+	74.81		2.674E+00	5.332E-01	5.193E-01	6.444E-02	5.149
	+	77.11		2.667E+00	3.617E-01	2.957E-01	2.473E-02	9.020
	+	87.30		2.165E+00	5.513E-01	5.478E-01	7.522E-02	3.952
	+	115.19		9.241E-01	3.677E+00	5.903E+00	4.890E-01	0.157
	+	238.63	*	2.442E+00	3.437E-01	8.998E-02	1.189E-02	27.144
	+	300.09		1.288E+00	1.286E+00	1.257E+00	1.834E-01	1.024
BI-214	+	609.31	*	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
	+	1120.29		1.797E+00	5.137E-01	4.178E-01	4.617E-02	4.300
	+	1764.49		1.929E+00	4.718E-01	2.593E-01	2.161E-02	7.440
PB-214	+	74.81		4.607E+00	8.804E-01	8.948E-01	9.863E-02	5.149
	+	77.11		4.572E+00	7.112E-01	5.069E-01	5.735E-02	9.020
	+	87.30		3.708E+00	9.145E-01	9.384E-01	1.142E-01	3.952
	+	241.98		3.424E+00	8.233E-01	5.410E-01	7.440E-02	6.329
	+	295.21		1.770E+00	3.479E-01	2.262E-01	3.367E-02	7.826
	+	351.92	*	1.886E+00	2.867E-01	1.070E-01	1.364E-02	17.626
PO-214	+	74.81		4.607E+00	8.804E-01	8.948E-01	9.863E-02	5.149

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	77.11		4.572E+00	7.112E-01	5.069E-01	5.735E-02	9.020
	+	87.30		3.708E+00	9.145E-01	9.384E-01	1.142E-01	3.952
	+	241.98		3.424E+00	8.233E-01	5.410E-01	7.440E-02	6.329
	+	295.21		1.770E+00	3.479E-01	2.262E-01	3.367E-02	7.826
	+	351.92	*	1.886E+00	2.867E-01	1.070E-01	1.364E-02	17.626
	+	74.81		2.674E+00	5.332E-01	5.193E-01	6.444E-02	5.149
	+	77.11		2.667E+00	3.617E-01	2.957E-01	2.473E-02	9.020
	+	87.30		2.165E+00	5.513E-01	5.478E-01	7.522E-02	3.952
PO-218	+	238.63	*	2.442E+00	3.437E-01	8.998E-02	1.189E-02	27.144
	+	300.09		1.288E+00	1.286E+00	1.257E+00	1.834E-01	1.024
	+	74.81		4.607E+00	8.804E-01	8.948E-01	9.863E-02	5.149
	+	77.11		4.572E+00	7.112E-01	5.069E-01	5.735E-02	9.020
	+	87.30		3.708E+00	9.145E-01	9.384E-01	1.142E-01	3.952
RA-224	+	241.98		3.424E+00	8.233E-01	5.410E-01	7.440E-02	6.329
	+	295.21		1.770E+00	3.479E-01	2.262E-01	3.367E-02	7.826
	+	351.92	*	1.886E+00	2.867E-01	1.070E-01	1.364E-02	17.626
	+	240.98	*	6.493E+00	1.518E+00	1.023E+00	1.281E-01	6.348
RA-226	+	609.31	*	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
AC-228	+	1120.29		1.797E+00	5.137E-01	4.178E-01	4.617E-02	4.300
	+	1764.49		1.929E+00	4.718E-01	2.593E-01	2.161E-02	7.440
	+	338.32		2.700E+00	1.208E+00	3.640E-01	1.531E-01	7.418
	+	911.07	*	2.018E+00	4.022E-01	2.133E-01	2.826E-02	9.462
RA-228	+	969.11		2.263E+00	6.838E-01	3.436E-01	8.298E-02	6.585
	+	338.32		2.700E+00	1.208E+00	3.640E-01	1.531E-01	7.418
	+	911.07	*	2.018E+00	4.022E-01	2.133E-01	2.826E-02	9.462
TH-228	+	969.11		2.263E+00	6.838E-01	3.436E-01	8.298E-02	6.585
	+	74.81		2.714E+00	4.790E-01	5.271E-01	4.342E-02	5.149
	+	77.11		2.707E+00	3.671E-01	3.001E-01	2.510E-02	9.020
	+	87.30		2.197E+00	5.146E-01	5.560E-01	5.232E-02	3.952
TH-230	+	238.63	*	2.479E+00	3.488E-01	9.132E-02	1.207E-02	27.144
	+	300.09		1.307E+00	1.511E+00	1.276E+00	7.676E-01	1.024
	+	609.31	*	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
	+	1120.29		1.797E+00	5.137E-01	4.178E-01	4.616E-02	4.300
TH-232	+	1764.49		1.929E+00	4.718E-01	2.593E-01	2.161E-02	7.440
	+	338.32		2.700E+00	5.209E-01	3.640E-01	4.328E-02	7.418
	+	911.07	*	2.018E+00	4.022E-01	2.133E-01	2.826E-02	9.462
TH-234	+	969.11		2.263E+00	6.838E-01	3.436E-01	8.298E-02	6.585
	+	63.29	*	2.262E+00	1.952E+00	1.956E+00	3.405E-01	1.156
	+	92.38		1.989E+00	7.709E-01	7.792E-01	1.428E-01	2.552
U-234	+	609.31	*	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
	+	1120.29		1.797E+00	5.137E-01	4.178E-01	4.616E-02	4.300
	+	1764.49		1.929E+00	4.718E-01	2.593E-01	2.161E-02	7.440
NP-237	+	86.50	*	1.374E+00	4.290E-01	3.504E-01	7.934E-02	3.923
	+	95.87		-4.921E-01	1.059E+00	1.482E+00	3.665E-01	-0.332
U-238	+	63.29	*	2.262E+00	1.952E+00	1.956E+00	3.405E-01	1.156
	+	92.38		1.989E+00	7.031E-01	7.792E-01	7.100E-02	2.552
AM-243	+	74.67	*	4.335E-01	7.636E-02	8.443E-02	6.881E-03	5.135
	+	86.72		5.154E+01	1.207E+01	1.311E+01	1.225E+00	3.931
		117.66		-1.115E+00	4.000E+00	6.296E+00	5.200E-01	-0.177

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	142.18			-5.431E+00	1.722E+01	2.876E+01	2.540E+00	-0.189
ANH-511	+	511.00	*	1.135E-01	6.408E-02	4.479E-02	4.488E-03	2.534

---- 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	*	2.218E-01	3.096E-01	5.171E-01	5.397E-02	0.429
NA-22		1274.54	*	-1.875E-02	4.023E-02	6.442E-02	5.552E-03	-0.291
NA-24		1368.53	*	-4.322E-01	4.023E-02	Half-Life too short		
AL-26		1129.67		-2.285E+00	1.910E+00	2.529E+00	2.203E-01	-0.904
		1808.65	*	-1.353E-02	2.445E-02	3.695E-02	3.022E-03	-0.366
TI-44		67.85		-4.012E-02	4.816E-02	6.871E-02	5.244E-03	-0.584
	+	78.38	*	4.922E-01	6.675E-02	7.693E-02	6.523E-03	6.397
SC-46		889.25	*	-1.722E-02	3.650E-02	5.870E-02	6.571E-03	-0.293
	+	1120.51		3.069E-01	8.538E-02	1.208E-01	1.068E-02	2.540
V-48		944.10		6.098E-01	8.811E-01	1.507E+00	1.634E-01	0.405
		983.50	*	5.266E-02	6.744E-02	1.157E-01	1.213E-02	0.455
		1312.09		-4.182E-02	7.372E-02	1.164E-01	1.025E-02	-0.359
CR-51		320.08	*	1.806E-01	3.644E-01	6.198E-01	8.025E-02	0.291
MN-52		744.21		6.161E-02	2.115E-01	3.492E-01	3.795E-02	0.176
		848.13		2.970E+00	6.167E+00	1.054E+01	1.174E+00	0.282
		935.52		3.275E-01	2.881E-01	4.405E-01	4.809E-02	0.743
		1246.25		7.983E+00	8.079E+00	1.229E+01	1.039E+00	0.650
		1333.61		-1.323E+00	4.529E+00	7.289E+00	6.500E-01	-0.182
		1434.06	*	-2.513E-02	2.061E-01	3.332E-01	2.978E-02	-0.075
MN-54		834.83	*	1.205E-02	3.317E-02	5.642E-02	6.268E-03	0.214
CO-56		846.75	*	1.310E-02	3.628E-02	6.166E-02	6.863E-03	0.213
		977.42		-2.554E+00	3.292E+00	4.450E+00	4.693E-01	-0.574
		1037.82		6.172E-02	2.989E-01	4.946E-01	5.100E-02	0.125
		1175.09		-1.744E+00	2.075E+00	3.281E+00	2.642E-01	-0.532
		1238.25		1.839E-01	1.069E-01	1.672E-01	1.449E-02	1.100
		1360.21		-7.374E-01	8.885E-01	1.337E+00	1.194E-01	-0.552
		1771.40		-2.015E-02	2.373E-01	3.256E-01	2.705E-02	-0.062
CO-57		122.06	*	2.824E-02	2.713E-02	4.438E-02	3.660E-03	0.636
		136.48		-3.858E-02	2.054E-01	3.453E-01	3.204E-02	-0.112
CO-58		810.76	*	-4.689E-02	3.817E-02	5.890E-02	6.522E-03	-0.796
FE-59		142.65		-1.839E+00	2.791E+00	4.448E+00	3.936E-01	-0.413
		192.34		-3.944E-01	9.748E-01	1.584E+00	2.352E-01	-0.249
		1099.22	*	4.405E-02	8.993E-02	1.503E-01	1.473E-02	0.293
		1291.56		-1.557E-01	1.155E-01	1.706E-01	1.681E-02	-0.913
CO-60		1173.22		-3.913E-02	4.112E-02	6.446E-02	5.184E-03	-0.607
		1332.49	*	-1.394E-03	3.614E-02	5.938E-02	5.295E-03	-0.023
ZN-65		1115.52	*	1.043E-01	9.597E-02	1.449E-01	1.293E-02	0.720
GE-68		1077.35	*	9.415E-01	1.186E+00	2.023E+00	1.907E-01	0.465
AS-73		53.44	*	3.486E-01	7.306E-01	1.240E+00	9.371E-02	0.281
AS-74		595.88	*	1.216E-02	8.475E-02	1.415E-01	1.467E-02	0.086
		634.78		2.523E-01	3.345E-01	5.714E-01	5.989E-02	0.442
SE-75		66.05		3.859E+00	4.844E+00	7.342E+00	7.005E-01	0.526

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	96.73			-2.701E-01	8.661E-01	1.226E+00	1.688E-01	-0.220
	121.11			8.993E-02	1.454E-01	2.350E-01	2.570E-02	0.383
	136.00			-6.573E-03	3.852E-02	6.482E-02	5.625E-03	-0.101
	198.60			1.894E-01	1.906E+00	3.082E+00	3.602E-01	0.061
	264.65	*		1.769E-03	5.178E-02	7.276E-02	9.793E-03	0.024
	279.53			6.731E-02	1.264E-01	1.811E-01	2.570E-02	0.372
	303.91			8.563E-01	2.239E+00	3.339E+00	5.088E-01	0.256
	400.65			-1.181E-01	2.560E-01	4.113E-01	4.813E-02	-0.287
BR-77	+	87.88		9.576E+02	2.243E+02	3.218E+02	3.051E+01	2.975
	+	200.40		-7.741E+01	1.585E+02	2.561E+02	2.816E+01	-0.302
	+	239.00		3.650E+02	4.869E+01	3.736E+01	4.649E+00	9.770
		249.79		-2.703E+01	7.328E+01	1.012E+02	1.301E+01	-0.267
		281.68		1.654E+01	9.595E+01	1.350E+02	1.881E+01	0.123
		297.23		4.270E+02	1.118E+02	1.256E+02	1.689E+01	3.400
		303.76		6.607E+01	1.776E+02	2.649E+02	3.504E+01	0.249
		439.47		-3.600E+01	1.310E+02	2.104E+02	2.025E+01	-0.171
		484.57		-8.110E+01	2.001E+02	3.155E+02	3.119E+01	-0.257
		520.65	*	-3.524E+00	9.172E+00	1.475E+01	1.485E+00	-0.239
		574.64		-4.755E+00	1.890E+02	3.072E+02	3.161E+01	-0.015
		578.91		6.017E+01	9.132E+01	1.361E+02	1.403E+01	0.442
		585.48		2.804E+03	3.817E+02	5.125E+02	5.293E+01	5.472
		755.35		4.028E+01	1.441E+02	2.374E+02	2.589E+01	0.170
		817.79		2.513E+01	1.238E+02	2.092E+02	2.316E+01	0.120
SR-82		698.33		-1.787E+01	3.219E+01	5.090E+01	5.446E+00	-0.351
		776.49	*	-3.070E-01	4.174E-01	5.356E-01	5.874E-02	-0.573
		1395.20		-4.731E+00	9.983E+00	1.566E+01	1.401E+00	-0.302
RB-83		520.41	*	-2.815E-02	6.487E-02	1.040E-01	1.047E-02	-0.271
		529.64		-1.943E-02	9.861E-02	1.636E-01	1.653E-02	-0.119
		552.65		1.265E-02	1.872E-01	3.135E-01	3.199E-02	0.040
RB-84		881.50	*	3.679E-02	6.690E-02	1.144E-01	1.279E-02	0.322
KR-85		513.99	*	3.138E+01	8.851E+00	1.410E+01	1.414E+00	2.226
SR-85		513.99	*	1.605E-01	4.526E-02	7.209E-02	7.233E-03	2.226
RB-86		1076.63	*	5.055E-01	7.360E-01	1.249E+00	1.179E-01	0.405
Y-88		898.02		-6.116E-03	3.847E-02	6.312E-02	7.092E-03	-0.097
		1836.01	*	-2.036E-02	2.766E-02	4.050E-02	3.274E-03	-0.503
ZR-88		392.90	*	-2.691E-02	2.978E-02	4.678E-02	4.356E-03	-0.575
Y-91		1204.90	*	9.719E+00	1.802E+01	2.966E+01	2.438E+00	0.328
NB-94		702.63	*	5.679E-03	3.140E-02	5.175E-02	5.546E-03	0.110
		871.10		-1.079E-03	3.199E-02	5.306E-02	5.927E-03	-0.020
NB-95		765.79	*	9.900E-02	4.954E-02	7.704E-02	8.425E-03	1.285
NB-95M		235.69	*	1.702E-01	1.512E-01	2.228E-01	2.945E-02	0.764
ZR-95		724.18		1.403E-01	1.100E-01	1.658E-01	1.890E-02	0.846
		756.15	*	0.000E+00	6.670E-02	1.081E-01	1.255E-02	0.000
NB-97		657.90	*	-1.434E-02	6.670E-02	Half-Life	too short	
		1024.50		-1.613E+00	6.670E-02	Half-Life	too short	
ZR-97		254.15		-1.468E+00	6.670E-02	Half-Life	too short	
		355.39		1.083E+00	6.670E-02	Half-Life	too short	
		507.63	*	3.475E+00	6.670E-02	Half-Life	too short	
		602.52		5.749E+00	6.670E-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			-3.631E+00	6.670E-02	Half-Life	too short	
	1147.95			1.959E-01	6.670E-02	Half-Life	too short	
	1362.66			2.002E+00	6.670E-02	Half-Life	too short	
	1750.46			-2.542E+00	6.670E-02	Half-Life	too short	
MO-99	140.51			-1.102E+01	2.493E+01	4.052E+01	1.124E+01	-0.272
	181.06			2.206E+01	1.821E+01	2.719E+01	5.206E+00	0.811
	366.43			1.787E+01	7.429E+01	1.242E+02	1.317E+01	0.144
	739.58	*		-1.955E+00	1.068E+01	1.716E+01	2.840E+00	-0.114
	778.00			-3.116E+01	3.601E+01	4.557E+01	4.999E+00	-0.684
TC-99M	140.51	*		-8.630E+09	3.601E+01	Half-Life	too short	
RH-101	127.23			3.536E-02	3.792E-02	5.527E-02	4.620E-03	0.640
	198.01	*		2.619E-03	3.520E-02	5.688E-02	6.205E-03	0.046
	325.23			-6.639E-02	2.527E-01	3.618E-01	4.497E-02	-0.184
RH-102	418.52			-1.768E-01	2.782E-01	4.404E-01	4.179E-02	-0.401
	475.06	*		4.394E-03	2.838E-02	4.623E-02	4.547E-03	0.095
	631.29			-2.935E-02	5.375E-02	8.597E-02	9.002E-03	-0.341
	697.49			-3.873E-02	7.350E-02	1.164E-01	1.245E-02	-0.333
	766.84			1.727E-01	1.301E-01	1.953E-01	2.137E-02	0.884
	1046.59			-3.548E-02	1.134E-01	1.788E-01	1.754E-02	-0.198
	1112.84			-3.557E-02	2.373E-01	3.221E-01	2.883E-02	-0.110
RU-103	497.08	*		-2.198E-02	4.027E-02	6.274E-02	9.417E-03	-0.350
	610.33	+		1.771E+01	3.521E+00	2.869E+00	5.072E-01	6.174
RH-106	511.85	+		5.666E-01	3.199E-01	4.046E-01	4.056E-02	1.400
	621.84	*		-1.528E-01	3.027E-01	4.850E-01	7.083E-02	-0.315
	1050.47			-1.738E-01	2.283E+00	3.709E+00	3.620E-01	-0.047
RU-106	511.85	+		5.666E-01	3.199E-01	4.046E-01	4.056E-02	1.400
	621.84	*		-1.528E-01	3.023E-01	4.850E-01	5.066E-02	-0.315
	1050.47			-1.738E-01	2.283E+00	3.709E+00	3.620E-01	-0.047
AG-108M	433.93	*		1.120E-02	3.172E-02	5.255E-02	5.202E-03	0.213
	614.37			4.761E-02	3.983E-02	6.123E-02	6.554E-03	0.778
	722.95			1.128E-02	4.582E-02	6.511E-02	7.204E-03	0.173
AG-110M	657.75	*		-6.811E-03	3.228E-02	5.239E-02	5.631E-03	-0.130
	677.61			-2.077E-01	3.019E-01	4.746E-01	5.131E-02	-0.438
	706.67			-1.345E-01	1.934E-01	3.021E-01	3.300E-02	-0.445
	763.93			2.361E-01	1.776E-01	2.701E-01	3.004E-02	0.874
	884.67			2.934E-02	4.690E-02	8.047E-02	9.177E-03	0.365
	937.48			1.254E-01	1.257E-01	1.910E-01	2.130E-02	0.657
	1384.27			-3.385E-01	1.718E-01	2.324E-01	2.132E-02	-1.456
IN-111	171.28			3.939E-01	9.452E-01	1.592E+00	1.589E-01	0.247
	245.39	*		-8.088E-01	1.015E+00	1.583E+00	2.009E-01	-0.511
IN-113M	391.69	*		-2.805E-03	4.271E-02	7.004E-02	6.689E-03	-0.040
SN-113	391.69	*		-2.805E-03	4.271E-02	7.004E-02	6.689E-03	-0.040
IN-114M	190.27	*		1.268E-01	2.071E-01	3.076E-01	3.271E-02	0.412
CD-115	260.90			-5.652E+01	1.257E+02	1.983E+02	2.635E+01	-0.285
	492.35			-5.233E+00	3.294E+01	5.263E+01	5.224E+00	-0.099
	527.90	*		5.323E+00	9.409E+00	1.616E+01	1.632E+00	0.329
SN-117M	156.02			-6.937E-01	2.308E+00	3.831E+00	3.592E-01	-0.181
	158.56	*		8.288E-03	5.683E-02	9.393E-02	8.907E-03	0.088
I-123	159.00	*		1.623E+00	5.683E-02	Half-Life	too short	

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

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	528.96			-5.208E+00	5.683E-02	Half-Life too short		
TE-123M	159.00	*		1.093E-02	2.960E-02	4.919E-02	4.698E-03	0.222
I-124	602.71	*		6.978E-01	6.992E-01	1.060E+00	1.101E-01	0.659
	722.78			9.531E-01	4.586E+00	6.499E+00	7.013E-01	0.147
	1325.50			-2.133E+01	3.269E+01	5.121E+01	4.548E+00	-0.417
	1376.25			8.137E+01	3.044E+01	5.734E+01	5.125E+00	1.419
	1509.49			1.779E+01	1.477E+01	2.633E+01	2.341E+00	0.676
	1691.02			1.791E-01	3.438E+00	5.725E+00	4.896E-01	0.031
SB-124	602.71			4.213E-02	4.221E-02	6.397E-02	6.646E-03	0.659
	645.85			4.654E-01	4.817E-01	8.282E-01	9.058E-02	0.562
	709.31			-2.389E+00	2.644E+00	4.071E+00	4.373E-01	-0.587
	713.82			9.933E-01	1.602E+00	2.689E+00	3.672E-01	0.369
	722.78			8.341E-02	4.014E-01	5.687E-01	6.223E-02	0.147
+	968.20			2.323E+01	4.889E+00	7.318E+00	7.781E-01	3.174
	1045.16			-6.701E-01	2.371E+00	3.799E+00	3.732E-01	-0.176
	1325.50			-1.994E+00	3.056E+00	4.786E+00	4.251E-01	-0.417
	1368.21			-7.517E-01	1.654E+00	2.608E+00	3.568E-01	-0.288
	1436.60			-8.618E-01	3.491E+00	5.577E+00	4.984E-01	-0.155
	1691.02	*		3.697E-03	7.096E-02	1.182E-01	1.051E-02	0.031
SB-125	427.89	*		-6.566E-02	9.163E-02	1.441E-01	1.398E-02	-0.456
+	463.38			9.683E-01	3.982E-01	5.345E-01	5.543E-02	1.812
	600.56			-5.578E-02	1.783E-01	2.842E-01	3.101E-02	-0.196
	635.90			1.272E-01	2.563E-01	4.329E-01	4.789E-02	0.294
TE-125M	109.28	*		2.718E+00	9.928E+00	1.578E+01	1.598E+00	0.172
I-126	388.63			1.027E-02	1.922E-01	3.172E-01	3.003E-02	0.032
	666.33	*		5.541E-02	1.753E-01	2.921E-01	3.087E-02	0.190
	753.82			1.152E+00	1.350E+00	2.290E+00	2.495E-01	0.503
SB-126	223.80			-3.747E+00	4.261E+00	6.698E+00	7.947E-01	-0.559
+	278.60			4.013E+00	2.861E+00	4.233E+00	5.917E-01	0.948
+	296.50			1.738E+01	3.239E+00	3.721E+00	5.013E-01	4.671
	414.70			-3.265E-02	8.021E-02	1.103E-01	1.044E-02	-0.296
	415.30			-2.155E+00	6.333E+00	9.191E+00	8.703E-01	-0.234
	555.20			1.222E+00	3.727E+00	6.046E+00	6.176E-01	0.202
	573.80			-3.782E-03	9.827E-01	1.634E+00	1.681E-01	-0.002
	593.00			-4.289E-03	8.320E-01	1.380E+00	1.429E-01	-0.003
	656.30			-2.123E+00	3.093E+00	4.875E+00	5.135E-01	-0.436
	666.33			2.314E-02	7.323E-02	1.220E-01	1.289E-02	0.190
	675.00			-4.178E-01	1.861E+00	3.010E+00	3.192E-01	-0.139
	695.00			4.700E-02	7.158E-02	1.208E-01	1.291E-02	0.389
	697.00			-6.582E-02	2.522E-01	4.060E-01	4.342E-02	-0.162
	720.50	*		2.815E-03	1.618E-01	2.260E-01	2.437E-02	0.012
	856.80			2.171E-01	5.092E-01	7.500E-01	8.362E-02	0.289
	989.30			-4.826E-01	1.200E+00	1.919E+00	2.001E-01	-0.252
	1034.80			3.580E+00	8.385E+00	1.406E+01	1.399E+00	0.255
	1213.00			-2.143E+00	4.436E+00	7.175E+00	5.933E-01	-0.299
SB-127	61.10			4.002E+01	5.390E+01	8.234E+01	8.241E+00	0.486
	252.40			3.640E+00	4.894E+00	7.162E+00	3.088E+00	0.508
	290.80			-1.521E+01	2.266E+01	3.196E+01	4.901E+00	-0.476
	411.60			9.254E+00	1.314E+01	1.932E+01	3.119E+00	0.479

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		444.90		-5.183E-01	8.935E+00	1.449E+01	1.914E+00	-0.036
		473.00		-4.490E-01	1.558E+00	2.481E+00	3.384E-01	-0.181
		543.00		-4.087E+00	1.512E+01	2.493E+01	3.818E+00	-0.164
		603.60		7.056E+00	1.217E+01	1.798E+01	2.468E+00	0.392
		685.20	*	1.272E-02	1.263E+00	2.067E+00	2.671E-01	0.006
		698.50		-7.420E+00	1.386E+01	2.188E+01	3.718E+00	-0.339
		722.20		1.249E+01	3.072E+01	4.420E+01	5.678E+00	0.283
		783.80		4.142E+00	3.387E+00	5.767E+00	8.134E-01	0.718
XE-127		57.60		-5.410E+00	5.365E+00	8.624E+00	6.194E-01	-0.627
		145.22		1.435E-01	7.099E-01	1.161E+00	1.038E-01	0.124
		172.10		7.500E-02	1.192E-01	2.018E-01	2.020E-02	0.372
		202.84	*	-1.331E-03	4.974E-02	7.885E-02	8.741E-03	-0.017
		374.96		-1.319E-01	1.998E-01	3.135E-01	3.191E-02	-0.421
I-131		80.18		1.098E+00	5.867E+00	6.825E+00	5.941E-01	0.161
		284.30		-1.242E+00	1.539E+00	2.359E+00	3.335E-01	-0.526
		364.48	*	-7.121E-02	1.065E-01	1.705E-01	1.889E-02	-0.418
		636.97		2.867E-01	1.421E+00	2.366E+00	2.575E-01	0.121
		722.89		1.757E+00	7.550E+00	1.072E+01	1.161E+00	0.164
TE-132		49.72		5.737E+00	1.591E+01	2.702E+01	2.786E+00	0.212
		111.76		-8.414E+00	2.922E+01	4.615E+01	4.874E+00	-0.182
		116.30		8.587E+00	2.726E+01	4.381E+01	4.607E+00	0.196
		228.16	*	3.899E-01	6.984E-01	1.152E+00	2.048E-01	0.338
BA-133		53.15		1.340E-01	3.164E+00	5.302E+00	4.023E-01	0.025
		79.62		6.477E-01	1.693E+00	1.991E+00	3.028E-01	0.325
		81.00		1.820E-02	1.277E-01	1.480E-01	2.358E-02	0.123
	+	276.40		6.081E-01	4.392E-01	6.506E-01	1.177E-01	0.935
		302.84		1.303E-01	1.550E-01	2.348E-01	3.915E-02	0.555
		356.01	*	-2.911E-02	4.794E-02	6.614E-02	9.884E-03	-0.440
		383.85		8.521E-02	2.936E-01	4.894E-01	6.549E-02	0.174
I-133	+	510.53		9.483E-01	2.936E-01	Half-Life	too short	
		529.87	*	-2.185E-03	2.936E-01	Half-Life	too short	
		706.58		-2.107E-01	2.936E-01	Half-Life	too short	
		856.28		2.457E-01	2.936E-01	Half-Life	too short	
		875.33		-1.923E-02	2.936E-01	Half-Life	too short	
		1236.41		8.044E-01	2.936E-01	Half-Life	too short	
		1298.22		1.745E-01	2.936E-01	Half-Life	too short	
CS-134		475.35		2.539E-01	1.867E+00	3.039E+00	2.989E-01	0.084
	+	563.23		3.484E-01	3.479E-01	6.024E-01	6.215E-02	0.578
		569.32		-9.015E-02	2.079E-01	3.088E-01	3.202E-02	-0.292
		604.70		2.321E-02	3.722E-02	5.514E-02	5.741E-03	0.421
	+	795.84	*	1.167E-01	5.694E-02	8.634E-02	9.557E-03	1.352
		801.93		-5.026E-01	4.922E-01	6.146E-01	6.805E-02	-0.818
		1038.57		6.478E-01	3.693E+00	6.100E+00	6.040E-01	0.106
		1167.94		-4.183E-01	2.306E+00	3.808E+00	3.094E-01	-0.110
		1365.15		-3.697E-01	1.097E+00	1.755E+00	1.634E-01	-0.211
CS-135		268.24	*	3.513E-01	1.911E-01	2.836E-01	4.102E-02	1.239
I-135		288.45		9.186E+09	1.911E-01	Half-Life	too short	
		417.63		-6.458E+09	1.911E-01	Half-Life	too short	
		546.56		-4.670E+08	1.911E-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		836.80		1.037E+10	1.911E-01	Half-Life	too short	
		1038.76		1.312E+09	1.911E-01	Half-Life	too short	
		1124.00		9.266E+10	1.911E-01	Half-Life	too short	
		1131.51		7.804E+08	1.911E-01	Half-Life	too short	
		1260.41	*	-4.055E+08	1.911E-01	Half-Life	too short	
		1457.56		6.619E+11	1.911E-01	Half-Life	too short	
		1678.03		-3.352E+09	1.911E-01	Half-Life	too short	
		1706.46		7.565E+09	1.911E-01	Half-Life	too short	
		1791.20		3.941E+09	1.911E-01	Half-Life	too short	
		66.91		-6.387E-02	7.895E-01	1.160E+00	1.725E-01	-0.055
	+	86.29		6.030E+00	1.525E+00	2.025E+00	2.696E-01	2.977
		153.22		9.541E-01	6.689E-01	1.155E+00	1.179E-01	0.826
		173.89		4.739E-01	1.054E+00	1.781E+00	1.897E-01	0.266
		176.55		-2.431E-01	3.735E-01	5.925E-01	6.270E-02	-0.410
		273.65		3.997E-01	6.669E-01	7.049E-01	9.972E-02	0.567
		340.57		8.347E-01	1.899E-01	2.840E-01	3.403E-02	2.939
		818.51		5.462E-02	7.212E-02	1.250E-01	1.385E-02	0.437
BA-137M		1048.07	*	9.614E-03	1.043E-01	1.688E-01	1.708E-02	0.057
		1235.34		6.294E-01	6.926E-01	1.036E+00	1.211E-01	0.607
		661.65	*	5.413E-03	3.404E-02	5.635E-02	5.942E-03	0.096
CS-137		661.65	*	5.722E-03	3.599E-02	5.957E-02	6.290E-03	0.096
CE-139		165.85	*	-5.430E-03	2.941E-02	4.875E-02	4.781E-03	-0.111
BA-140		162.64		3.912E-02	7.535E-01	1.260E+00	1.274E-01	0.031
		304.84		6.702E-01	1.351E+00	1.997E+00	5.941E-01	0.336
LA-140		423.70		7.330E-01	1.886E+00	3.110E+00	1.016E+00	0.236
		537.32	*	2.226E-02	2.425E-01	4.073E-01	1.367E-01	0.055
	+	328.77		6.099E-01	4.037E-01	5.344E-01	6.751E-02	1.141
		432.53		-3.093E-01	1.965E+00	3.180E+00	3.167E-01	-0.097
		487.03		7.052E-02	1.286E-01	2.131E-01	2.208E-02	0.331
		751.79		8.086E-02	1.545E+00	2.514E+00	2.924E-01	0.032
		815.85		1.130E-01	3.105E-01	5.289E-01	6.272E-02	0.214
		867.82		7.116E-02	1.428E+00	2.114E+00	2.435E-01	0.034
		919.63		4.967E-01	2.899E+00	4.436E+00	5.629E-01	0.112
		925.24		-1.333E+00	1.279E+00	1.616E+00	1.847E-01	-0.825
		1596.49	*	-9.941E-02	8.415E-02	1.246E-01	1.092E-02	-0.798
		145.44	*	-3.406E-03	6.372E-02	1.033E-01	9.406E-03	-0.033
CE-141		57.37		-8.065E-04	6.372E-02	Half-Life	too short	
CE-143		231.56		6.517E-04	6.372E-02	Half-Life	too short	
		293.26	*	1.046E-03	6.372E-02	Half-Life	too short	
	+	350.59		3.797E-02	6.372E-02	Half-Life	too short	
		490.36		-1.570E-03	6.372E-02	Half-Life	too short	
		664.57		7.090E-04	6.372E-02	Half-Life	too short	
CE-144		721.93		5.384E-04	6.372E-02	Half-Life	too short	
		80.11		5.235E-01	2.757E+00	3.208E+00	2.773E-01	0.163
PM-144		133.54	*	-2.627E-02	2.250E-01	3.348E-01	5.197E-02	-0.078
		476.78		3.468E-02	6.556E-02	1.086E-01	1.147E-02	0.319
		618.01		6.243E-03	3.128E-02	4.987E-02	5.302E-03	0.125
		696.49	*	1.035E-02	3.233E-02	5.371E-02	5.744E-03	0.193
		778.57		7.166E-02	2.444E+00	3.385E+00	3.715E-01	0.021

----- 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	*		7.010E-01	2.191E+00	3.639E+00	3.891E-01	0.193
	1489.15			-1.250E+01	1.170E+01	1.696E+01	1.511E+00	-0.737
PM-146	453.90	*		2.093E-02	4.205E-02	6.982E-02	8.113E-03	0.300
	633.02			-1.537E-01	1.334E+00	2.183E+00	8.261E-01	-0.070
	735.90			7.082E-03	1.491E-01	2.315E-01	6.793E-02	0.031
	747.13			-6.379E-02	8.501E-02	1.306E-01	2.027E-02	-0.489
ND-147	91.11	+		8.666E-01	2.951E-01	5.051E-01	4.990E-02	1.716
	319.41			7.644E-01	3.229E+00	5.450E+00	6.899E-01	0.140
	439.89			5.860E-01	5.549E+00	9.080E+00	8.744E-01	0.065
	531.02	*		-7.749E-02	5.237E-01	8.707E-01	1.381E-01	-0.089
PM-149	285.90	*		2.687E+01	8.681E+01	1.402E+02	2.651E+01	0.192
EU-152	121.78			6.634E-02	7.904E-02	1.285E-01	1.234E-02	0.516
	244.69			1.855E-01	3.448E-01	5.673E-01	7.182E-02	0.327
	344.27	*		4.643E-02	1.142E-01	1.596E-01	1.918E-02	0.291
	443.98			4.871E-01	9.402E-01	1.565E+00	1.511E-01	0.311
	778.89			4.266E-02	2.859E-01	4.001E-01	4.391E-02	0.107
	867.32			1.726E-01	8.883E-01	1.285E+00	1.435E-01	0.134
	964.01			1.238E+00	3.350E-01	5.976E-01	6.378E-02	2.072
	1085.78			-1.124E-01	3.839E-01	6.121E-01	5.703E-02	-0.184
	1112.02			1.193E-02	3.394E-01	4.697E-01	4.209E-02	0.025
	1407.95			7.199E-02	1.839E-01	3.102E-01	2.773E-02	0.232
GD-153	69.67			-6.532E-01	1.717E+00	2.493E+00	1.935E-01	-0.262
	83.37			2.176E+01	1.444E+01	2.390E+01	2.145E+00	0.910
	97.43	*		-5.864E-02	9.092E-02	1.257E-01	1.106E-02	-0.466
	103.18			-4.031E-02	1.089E-01	1.725E-01	1.474E-02	-0.234
EU-154	123.07			1.651E-02	5.618E-02	8.984E-02	9.966E-03	0.184
	247.94			-8.896E-02	4.134E-01	5.765E-01	8.567E-02	-0.154
	591.81			-2.941E-01	6.048E-01	8.981E-01	1.168E-01	-0.327
	723.30			5.882E-02	1.961E-01	2.795E-01	3.224E-02	0.210
	756.87			-2.831E-01	7.407E-01	1.172E+00	1.607E-01	-0.242
	873.19			-6.331E-02	2.817E-01	4.615E-01	6.535E-02	-0.137
	996.32			-1.525E-01	3.656E-01	5.828E-01	1.088E-01	-0.262
	1004.76			-1.006E-01	2.076E-01	3.294E-01	4.254E-02	-0.305
	1274.45	*		-5.308E-02	1.124E-01	1.798E-01	2.032E-02	-0.295
EU-155	48.70			-3.608E-01	2.130E+00	3.560E+00	2.899E-01	-0.101
	60.01			4.641E+00	4.803E+00	7.421E+00	5.270E-01	0.625
	86.54	+		5.637E-01	1.322E-01	1.916E-01	1.802E-02	2.941
	105.31	*		3.513E-02	1.121E-01	1.815E-01	1.558E-02	0.194
TB-160	86.79	+		1.502E+00	3.519E-01	5.094E-01	4.764E-02	2.949
	197.04			1.750E-01	5.971E-01	9.713E-01	1.056E-01	0.180
	215.65			-1.039E-01	8.337E-01	1.254E+00	1.449E-01	-0.083
	298.57	+		1.870E-01	1.863E-01	2.108E-01	2.825E-02	0.887
	879.36	*		-4.775E-02	1.335E-01	2.168E-01	2.424E-02	-0.220
	962.29			1.672E+00	6.312E-01	1.020E+00	1.090E-01	1.640
	966.15	+		8.574E-01	3.644E-01	5.384E-01	5.735E-02	1.592
	1177.93			-7.180E-03	3.309E-01	5.513E-01	4.448E-02	-0.013
	1271.85			-1.811E-01	6.443E-01	1.046E+00	8.988E-02	-0.173
HO-166M	80.57			7.690E-02	3.535E-01	4.117E-01	3.578E-02	0.187
	184.41			8.656E-02	4.499E-02	6.904E-02	7.198E-03	1.254

---- 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		6.298E-02	9.402E-02	1.357E-01	1.895E-02	0.464
		410.95		4.114E-01	2.789E-01	4.269E-01	4.030E-02	0.964
		711.68	*	2.718E-02	5.729E-02	9.576E-02	1.029E-02	0.284
		752.31		8.979E-02	2.515E-01	4.164E-01	4.536E-02	0.216
		810.29		-7.593E-02	5.685E-02	8.689E-02	9.606E-03	-0.874
		51.35		-1.285E+01	2.673E+01	4.407E+01	3.437E+00	-0.292
		52.39		3.242E+00	1.389E+01	2.343E+01	1.798E+00	0.138
		59.40		1.114E+01	2.605E+01	3.950E+01	2.792E+00	0.282
		66.72	*	-2.483E+00	2.907E+01	4.271E+01	3.227E+00	-0.058
		88.36		1.110E+00	2.600E-01	3.717E-01	3.515E-02	2.986
LU-176	+	201.83		-2.853E-02	3.020E-02	4.785E-02	5.286E-03	-0.596
		306.84	*	-1.290E-03	2.703E-02	3.916E-02	5.138E-03	-0.033
		401.10		-1.566E+00	6.658E+00	1.081E+01	1.013E+00	-0.145
LU-177		112.95		-7.370E-01	1.644E+00	2.579E+00	2.144E-01	-0.286
	+	208.36	*	3.613E+00	1.724E+00	1.976E+00	2.231E-01	1.828
LU-177M		52.97		1.198E-01	1.424E+00	2.389E+00	1.818E-01	0.050
		54.07		3.981E-01	7.567E-01	1.285E+00	9.627E-02	0.310
		61.30		1.405E+00	1.462E+00	2.251E+00	1.620E-01	0.624
		121.62		3.204E-01	4.039E-01	6.564E-01	5.407E-02	0.488
		147.16		-3.524E-01	6.465E-01	1.069E+00	9.637E-02	-0.330
		171.86		2.918E-01	4.818E-01	8.150E-01	8.151E-02	0.358
		218.09		-7.930E-01	8.958E-01	1.411E+00	1.644E-01	-0.562
		268.79		2.134E+00	9.957E-01	1.483E+00	2.017E-01	1.438
		319.02		-8.646E-02	2.572E-01	4.246E-01	5.380E-02	-0.204
		367.43		-3.972E-01	8.659E-01	1.401E+00	1.479E-01	-0.283
HF-181		413.65	*	-2.581E-02	1.875E-01	2.630E-01	2.487E-02	-0.098
		56.28		-2.294E-01	8.302E-01	1.372E+00	9.995E-02	-0.167
		57.53		-4.387E-01	4.509E-01	7.258E-01	5.217E-02	-0.604
		65.20		5.082E-01	9.705E-01	1.460E+00	1.088E-01	0.348
		133.02		-2.821E-02	7.269E-02	1.070E-01	9.117E-03	-0.264
		136.25		-7.662E-02	4.483E-01	7.541E-01	6.505E-02	-0.102
		345.85		1.667E-01	2.376E-01	3.153E-01	3.646E-02	0.529
		482.03	*	-5.136E-02	4.114E-02	6.142E-02	6.064E-03	-0.836
		56.28		-9.064E-02	3.258E-01	5.384E-01	3.922E-02	-0.168
		57.53		-1.723E-01	1.771E-01	2.851E-01	2.049E-02	-0.604
TA-182		65.20	*	1.980E-01	3.781E-01	5.688E-01	4.240E-02	0.348
		67.75		-1.211E-01	1.163E-01	1.639E-01	1.250E-02	-0.739
		100.10		1.107E-01	1.802E-01	2.952E-01	2.558E-02	0.375
W-181		152.43		2.919E-01	3.414E-01	5.850E-01	5.397E-02	0.499
		222.10		2.708E-01	3.607E-01	6.008E-01	7.090E-02	0.451
		1001.68		1.561E+00	2.034E+00	3.397E+00	3.501E-01	0.460
	+	1121.28		8.481E-01	2.359E-01	3.345E-01	2.954E-02	2.535
		1189.05		-5.970E-02	2.924E-01	4.816E-01	3.917E-02	-0.124
		1221.42	*	-2.468E-02	1.959E-01	3.235E-01	2.690E-02	-0.076
		1230.97		-1.021E-01	5.377E-01	7.742E-01	6.479E-02	-0.132
		57.98		-1.145E-01	1.764E-01	2.873E-01	2.056E-02	-0.399
		59.32		3.952E-02	1.067E-01	1.615E-01	1.142E-02	0.245
		67.20		-6.464E-02	2.058E-01	2.995E-01	2.273E-02	-0.216
RE-183		162.32	*	1.661E-02	1.110E-01	1.861E-01	1.796E-02	0.089

---- 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		3.324E+00	1.586E+00	1.827E+00	2.065E-01	1.820
		291.72		-4.588E-01	1.041E+00	1.492E+00	2.032E-01	-0.308
		57.98		-4.227E-01	6.509E-01	1.060E+00	7.588E-02	-0.399
		59.32		1.457E-01	3.936E-01	5.956E-01	4.212E-02	0.245
		67.20		-2.385E-01	7.593E-01	1.105E+00	8.385E-02	-0.216
		161.27		-2.353E-01	3.648E-01	5.967E-01	5.729E-02	-0.394
		216.55		-1.888E-01	2.754E-01	4.381E-01	5.078E-02	-0.431
		252.85	*	1.021E-01	2.529E-01	3.998E-01	5.187E-02	0.255
		318.01		-9.950E-02	4.416E-01	7.325E-01	9.310E-02	-0.136
		792.07		4.018E-01	1.177E+00	1.666E+00	1.834E-01	0.241
OS-185		903.28		4.456E-01	1.115E+00	1.631E+00	1.821E-01	0.273
		920.93		1.710E-01	4.494E-01	7.317E-01	8.073E-02	0.234
		59.72		2.424E-01	2.847E-01	4.383E-01	3.103E-02	0.553
		61.14		1.220E-01	1.598E-01	2.446E-01	1.757E-02	0.499
		69.30		-2.349E-01	3.062E-01	4.374E-01	3.383E-02	-0.537
		592.07		-6.311E-01	2.389E+00	3.719E+00	3.850E-01	-0.170
		646.12	*	3.011E-02	4.169E-02	7.096E-02	7.457E-03	0.424
		717.42		-1.683E-01	9.208E-01	1.451E+00	1.563E-01	-0.116
		874.81		-2.782E-02	5.463E-01	9.048E-01	1.011E-01	-0.031
		880.27		2.896E-02	7.439E-01	1.238E+00	1.384E-01	0.023
RE-188		155.03	*	1.525E-01	1.762E-01	3.015E-01	2.814E-02	0.506
		477.96		2.722E+00	2.948E+00	4.968E+00	4.893E-01	0.548
		633.10		-1.028E+00	2.725E+00	4.400E+00	4.609E-01	-0.234
W-188	+	63.58		9.069E+01	7.694E+01	8.821E+01	6.481E+00	1.028
IR-192		227.08		4.092E-01	1.350E+01	2.199E+01	2.637E+00	0.019
	+	290.67	*	-5.491E+00	8.175E+00	1.154E+01	1.577E+00	-0.476
		295.96		1.347E+00	2.513E-01	2.901E-01	3.925E-02	4.641
AU-195		308.46		-2.390E-03	9.139E-02	1.493E-01	1.954E-02	-0.016
		316.51	*	7.511E-03	3.280E-02	5.540E-02	7.080E-03	0.136
		468.07		4.637E-02	7.174E-02	1.047E-01	1.083E-02	0.443
		604.41		1.841E-01	5.022E-01	7.322E-01	1.044E-01	0.251
		612.46		7.822E+00	1.359E+00	1.956E+00	2.249E-01	3.999
TL-200		65.12		5.325E-02	1.777E-01	2.653E-01	1.976E-02	0.201
		66.83		-7.949E-03	9.602E-02	1.411E-01	1.067E-02	-0.056
	+	75.70		1.402E+00	2.469E-01	4.536E-01	3.737E-02	3.090
TL-201		98.88	*	-1.265E-01	2.344E-01	3.655E-01	3.187E-02	-0.346
	+	129.76		5.089E+00	3.453E+00	5.112E+00	4.308E-01	0.996
		367.94	*	-4.856E-05	3.453E+00	Half-Life	too short	
		579.30		5.479E-03	3.453E+00	Half-Life	too short	
TL-202		828.27		1.860E-05	3.453E+00	Half-Life	too short	
		1205.75		8.581E-04	3.453E+00	Half-Life	too short	
		68.90		-4.708E+00	4.693E+00	6.635E+00	5.113E-01	-0.710
		70.82		2.843E+00	2.598E+00	3.966E+00	3.111E-01	0.717
		80.30		1.212E+00	6.176E+00	7.187E+00	6.226E-01	0.169
TL-202		135.34		4.029E+00	2.341E+01	3.980E+01	3.421E+00	0.101
		167.43	*	-8.920E+00	6.693E+00	1.059E+01	1.044E+00	-0.842
		68.90		-4.416E-01	4.402E-01	6.224E-01	4.797E-02	-0.710
		70.82		2.659E-01	2.430E-01	3.710E-01	2.911E-02	0.717
		80.30		1.134E-01	5.779E-01	6.725E-01	5.826E-02	0.169

---- 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	*		-4.640E-03	6.659E-02	1.080E-01	1.040E-02	-0.043
	70.83			1.167E+00	1.071E+00	1.624E+00	2.133E-01	0.719
	72.87			1.143E+00	5.990E-01	1.002E+00	1.284E-01	1.140
	82.60			4.020E-01	1.305E+00	1.742E+00	2.425E-01	0.231
BI-207	279.20	*		4.285E-02	4.797E-02	6.966E-02	9.859E-03	0.615
	72.80			2.775E-01	1.711E-01	2.904E-01	2.323E-02	0.955
	74.97		+	7.781E-01	1.371E-01	2.195E-01	1.795E-02	3.545
	84.90			3.842E-01	1.883E-01	3.131E-01	2.862E-02	1.227
TL-207	569.67			-7.594E-03	3.141E-02	4.854E-02	4.986E-03	-0.156
	1063.62	*		2.731E-02	5.492E-02	9.201E-02	8.833E-03	0.297
	1770.23			1.160E+00	5.605E-01	9.934E-01	8.258E-02	1.168
	81.07			3.587E-02	2.816E-01	3.261E-01	2.850E-02	0.110
	83.78			1.865E-01	1.227E-01	2.031E-01	1.832E-02	0.918
	94.90			5.615E-01	2.595E-01	3.979E-01	3.557E-02	1.411
	122.32			1.954E+00	1.879E+00	3.071E+00	2.733E-01	0.636
	144.24			1.147E-01	7.003E-01	1.144E+00	1.133E-01	0.100
	154.21			4.338E-01	4.090E-01	7.022E-01	7.092E-02	0.618
	269.46		+	6.744E-01	2.758E-01	3.565E-01	4.897E-02	1.892
	323.87	*		6.334E-02	7.409E-01	1.082E+00	2.150E-01	0.059
	338.28		+	1.127E+01	2.390E+00	2.558E+00	3.784E-01	4.407
PO-209	445.03			-1.261E-01	2.176E+00	3.528E+00	4.534E-01	-0.036
	260.50			-5.952E+00	1.004E+01	1.572E+01	2.087E+00	-0.379
	262.80			4.363E+00	2.726E+01	4.412E+01	5.894E+00	0.099
	896.60	*		-1.334E+00	6.939E+00	1.136E+01	1.273E+00	-0.117
BI-210	46.50	*		-1.993E+00	3.142E+00	5.070E+00	4.710E-01	-0.393
PB-210	46.50	*		-1.993E+00	3.142E+00	5.070E+00	4.710E-01	-0.393
PO-210	46.50	*		-1.993E+00	3.141E+00	5.070E+00	4.263E-01	-0.393
PB-211	404.84	*		1.278E+00	1.298E+00	1.564E+00	9.816E-01	0.817
	427.08			-7.339E-01	2.066E+00	3.231E+00	2.012E+00	-0.227
	831.96			-3.434E-01	1.135E+00	1.828E+00	1.152E+00	-0.188
	727.18	*	+	1.851E+00	4.931E-01	6.512E-01	7.778E-02	2.843
	785.46			7.609E-01	1.693E+00	2.802E+00	3.079E-01	0.272
PO-215	1620.62			1.199E+00	1.199E+00	2.164E+00	1.887E-01	0.554
	81.07			3.587E-02	2.816E-01	3.261E-01	2.850E-02	0.110
	83.78			1.865E-01	1.227E-01	2.031E-01	1.832E-02	0.918
	94.90			5.615E-01	2.595E-01	3.979E-01	3.557E-02	1.411
	122.32			1.954E+00	1.879E+00	3.071E+00	2.733E-01	0.636
	144.24			1.147E-01	7.003E-01	1.144E+00	1.133E-01	0.100
	154.21			4.338E-01	4.090E-01	7.022E-01	7.092E-02	0.618
	269.46		+	6.744E-01	2.758E-01	3.565E-01	4.897E-02	1.892
	323.87	*		6.334E-02	7.409E-01	1.082E+00	2.150E-01	0.059
	338.28		+	1.127E+01	2.390E+00	2.558E+00	3.784E-01	4.407
	445.03			-1.261E-01	2.176E+00	3.528E+00	4.534E-01	-0.036
	271.23		+	8.652E-01	3.569E-01	4.528E-01	6.707E-02	1.911
RN-219	401.81	*		-2.988E-01	4.273E-01	6.559E-01	1.015E-01	-0.456
RN-220	549.76	*		1.384E+01	2.464E+01	4.219E+01	4.300E+00	0.328
RA-223	81.07			3.587E-02	2.816E-01	3.261E-01	2.850E-02	0.110
	83.78			1.865E-01	1.227E-01	2.031E-01	1.832E-02	0.918
	94.90			5.615E-01	2.595E-01	3.979E-01	3.557E-02	1.411

----- 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		1.954E+00	1.879E+00	3.071E+00	2.733E-01	0.636
		144.24		1.147E-01	7.003E-01	1.144E+00	1.133E-01	0.100
		154.21		4.338E-01	4.090E-01	7.022E-01	7.092E-02	0.618
	+	269.46		6.744E-01	2.758E-01	3.565E-01	4.897E-02	1.892
		323.87	*	6.334E-02	7.409E-01	1.082E+00	2.150E-01	0.059
	+	338.28		1.127E+01	2.390E+00	2.558E+00	3.784E-01	4.407
		445.03		-1.261E-01	2.176E+00	3.528E+00	4.534E-01	-0.036
		79.80		4.949E-01	2.140E+00	2.495E+00	5.363E-01	0.198
		236.00		1.213E+00	3.531E-01	4.945E-01	7.460E-02	2.453
		256.20	*	4.536E-02	3.983E-01	6.446E-01	1.176E-01	0.070
		286.10		6.205E-01	1.583E+00	2.562E+00	4.367E-01	0.242
	+	299.80		2.387E+00	2.406E+00	2.668E+00	5.403E-01	0.895
TH-227		304.40		-2.327E-01	2.050E+00	2.962E+00	6.213E-01	-0.079
		334.20		1.136E-01	3.136E+00	3.591E+00	7.600E-01	0.032
		79.80		4.949E-01	2.140E+00	2.495E+00	5.432E-01	0.198
	+	94.00		7.685E+00	3.122E+00	3.787E+00	8.306E-01	2.029
		236.00		1.213E+00	3.474E-01	4.945E-01	7.000E-02	2.453
		256.20	*	4.536E-02	3.983E-01	6.446E-01	1.327E-01	0.070
		286.10		6.205E-01	1.699E+00	2.562E+00	2.587E+00	0.242
	+	299.80		2.387E+00	2.406E+00	2.668E+00	5.403E-01	0.895
		304.40		-2.327E-01	2.050E+00	2.962E+00	6.213E-01	-0.079
		334.20		1.136E-01	3.136E+00	3.591E+00	7.600E-01	0.032
		85.43		5.957E-01	1.906E-01	3.221E-01	2.963E-02	1.849
	+	88.47		6.391E-01	1.497E-01	2.134E-01	2.016E-02	2.994
TH-229		100.00		8.897E-02	1.880E-01	3.067E-01	2.659E-02	0.290
		193.63	*	-3.460E-01	5.320E-01	8.568E-01	9.212E-02	-0.404
		210.97		1.809E+00	9.363E-01	1.420E+00	1.616E-01	1.274
		283.67	*	-7.657E-01	1.596E+00	2.488E+00	4.647E-01	-0.308
PA-231		301.29		1.253E+00	6.837E-01	1.044E+00	1.660E-01	1.200
TH-231		81.07		3.587E-02	2.816E-01	3.261E-01	2.850E-02	0.110
		83.78		1.865E-01	1.227E-01	2.031E-01	1.832E-02	0.918
		94.90		5.615E-01	2.595E-01	3.979E-01	3.557E-02	1.411
		122.32		1.954E+00	1.879E+00	3.071E+00	2.733E-01	0.636
U-231		144.24		1.147E-01	7.003E-01	1.144E+00	1.133E-01	0.100
		154.21		4.338E-01	4.090E-01	7.022E-01	7.092E-02	0.618
	+	269.46		6.744E-01	2.758E-01	3.565E-01	4.897E-02	1.892
		323.87	*	6.334E-02	7.409E-01	1.082E+00	2.150E-01	0.059
	+	338.28		1.127E+01	2.390E+00	2.558E+00	3.784E-01	4.407
		445.03		-1.261E-01	2.176E+00	3.528E+00	4.534E-01	-0.036
		84.21		7.720E+00	5.053E+00	8.362E+00	7.580E-01	0.923
	+	92.29		7.287E+00	2.576E+00	3.836E+00	3.497E-01	1.900
		95.87	*	-5.354E-01	1.146E+00	1.613E+00	1.432E-01	-0.332
		108.00		-2.370E-01	2.113E+00	3.320E+00	2.791E-01	-0.071
	+	75.28		2.271E+01	4.931E+00	6.751E+00	1.021E+00	3.364
	+	86.59		9.163E+00	3.166E+00	3.119E+00	8.439E-01	2.938
	+	300.12		6.654E-01	6.680E-01	7.398E-01	1.334E-01	0.899
PA-233		311.98	*	-2.270E-02	6.027E-02	9.940E-02	1.302E-02	-0.228
		340.50		4.325E+00	1.351E+00	1.415E+00	3.561E-01	3.055
		398.62		-8.084E-01	2.079E+00	3.337E+00	8.969E-01	-0.242

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

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		-1.153E+00	1.675E+00	2.452E+00	5.372E-01	-0.470
		63.00		2.637E+00	2.263E+00	2.602E+00	3.854E-01	1.013
		94.67		5.569E-01	1.986E-01	2.975E-01	3.759E-02	1.872
		98.44		-6.507E-02	1.021E-01	1.483E-01	8.277E-02	-0.439
		99.86		2.353E-01	4.761E-01	7.775E-01	6.745E-02	0.303
		111.00		3.164E-02	1.928E-01	3.095E-01	3.681E-02	0.102
		131.20		1.189E-01	1.161E-01	1.802E-01	1.526E-02	0.659
		152.70		3.467E-01	3.360E-01	5.710E-01	9.916E-02	0.607
		186.00		5.495E+00	2.632E+00	2.628E+00	8.350E-01	2.091
		226.40		-6.035E-02	4.236E-01	6.862E-01	1.070E-01	-0.088
	+	227.20		3.451E-02	4.593E-01	7.495E-01	8.989E-02	0.046
		248.90		-7.874E-01	9.808E-01	1.296E+00	3.156E-01	-0.607
		293.70		8.166E+00	1.887E+00	1.752E+00	3.542E-01	4.662
		369.80		4.434E-01	8.215E-01	1.380E+00	3.113E-01	0.321
		568.70		-8.157E-01	1.096E+00	1.539E+00	1.580E-01	-0.530
		569.50		-7.410E-02	2.784E-01	4.297E-01	4.413E-02	-0.172
		574.00		1.277E-02	1.425E+00	2.371E+00	2.439E-01	0.005
		699.00		-1.997E-01	6.798E-01	1.091E+00	2.193E-01	-0.183
		706.10		-1.751E-01	9.642E-01	1.552E+00	6.990E-01	-0.113
		733.00		1.430E-01	3.946E-01	5.647E-01	1.307E-01	0.253
	+	742.81		9.134E-01	1.406E+00	2.140E+00	1.445E+00	0.427
		796.30		2.269E+00	1.250E+00	1.693E+00	4.725E-01	1.340
		805.60		9.400E-01	9.964E-01	1.675E+00	5.263E-01	0.561
		819.60		8.762E-01	1.280E+00	2.140E+00	8.271E-01	0.409
		826.30		-4.151E-01	7.993E-01	1.258E+00	5.697E-01	-0.330
		831.60		-3.655E-01	5.856E-01	9.248E-01	2.835E-01	-0.395
		876.40		6.371E-02	7.797E-01	1.297E+00	1.336E+00	0.049
		880.51		4.115E-02	2.704E-01	4.529E-01	5.065E-02	0.091
		883.24		1.111E-01	2.862E-01	4.690E-01	3.170E-01	0.237
		899.00		-3.944E-01	8.082E-01	1.268E+00	5.617E-01	-0.311
		925.00		-7.493E-01	1.306E+00	1.740E+00	1.914E-01	-0.431
		926.50		-1.910E-01	1.987E-01	2.451E-01	6.418E-02	-0.779
		946.00	*	2.101E-01	2.981E-01	5.068E-01	1.007E-01	0.415
		949.00		2.572E-01	4.318E-01	7.352E-01	7.944E-02	0.350
980.50		2.716E-01	7.010E-01	1.179E+00	1.239E-01	0.230		
PA-234M		1394.10		-6.436E-01	1.144E+00	1.650E+00	1.074E+00	-0.390
		766.42		2.431E+01	1.818E+01	2.077E+01	1.063E+01	1.170
		1001.03	*	4.524E+00	4.569E+00	7.701E+00	8.825E-01	0.587
U-235	+	89.95		3.506E+00	1.578E+00	1.868E+00	5.802E-01	1.877
		93.35		2.391E+00	1.059E+00	1.255E+00	3.534E-01	1.905
	+	105.00		1.143E-01	1.104E+00	1.775E+00	5.290E-01	0.064
		143.76	*	-7.568E-02	2.174E-01	3.496E-01	6.166E-02	-0.217
		163.35		2.463E-01	4.797E-01	8.090E-01	1.585E-01	0.304
		185.71		2.035E-01	7.598E-02	9.759E-02	1.022E-02	2.086
		205.31		1.691E-01	6.002E-01	8.729E-01	1.777E-01	0.194
NP-236		94.67		4.253E-01	1.460E-01	2.259E-01	2.023E-02	1.883
	98.44		-4.917E-02	7.227E-02	1.121E-01	9.802E-03	-0.439	
	111.00		2.393E-02	1.459E-01	2.341E-01	1.953E-02	0.102	
	160.31	*	-2.639E-02	8.377E-02	1.364E-01	1.304E-02	-0.193	

---- 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		1.002E-01	1.618E-01	2.617E-01	2.274E-02	0.383
		117.00	*	-5.071E-02	2.001E-01	3.153E-01	2.606E-02	-0.161
	+	209.75		2.629E+00	1.254E+00	1.464E+00	1.660E-01	1.795
		228.18		1.342E-01	2.401E-01	3.971E-01	4.777E-02	0.338
	+	277.60		2.968E-01	2.116E-01	3.150E-01	4.390E-02	0.942
AM-241		334.30		4.640E-01	1.575E+00	2.040E+00	2.460E-01	0.227
		59.54	*	7.999E-02	1.518E-01	2.309E-01	1.805E-02	0.346
CM-243		99.55		1.032E-01	1.664E-01	2.692E-01	2.340E-02	0.383
		103.76	*	-3.433E-02	1.011E-01	1.603E-01	1.366E-02	-0.214
		117.00		-5.217E-02	2.058E-01	3.244E-01	2.681E-02	-0.161
	+	209.75		2.591E+00	1.236E+00	1.443E+00	1.637E-01	1.795
		228.18		1.356E-01	2.426E-01	4.013E-01	4.827E-02	0.338
AM-246	+	277.60		2.992E-01	2.133E-01	3.175E-01	4.426E-02	0.942
		798.80		5.527E-02	1.609E-01	2.278E-01	2.512E-02	0.243
		1036.00		1.240E-01	2.897E-01	4.858E-01	4.824E-02	0.255
		1062.04		1.484E-02	2.428E-01	3.971E-01	3.820E-02	0.037
		1078.86	*	8.259E-02	1.338E-01	2.262E-01	2.128E-02	0.365
CM-247	+	278.00		1.231E+00	8.774E-01	1.309E+00	1.826E-01	0.940
		287.40		9.137E-01	1.267E+00	2.072E+00	2.851E-01	0.441
		402.60	*	5.083E-03	4.022E-02	6.030E-02	5.656E-03	0.084
CF-249		252.85		3.836E-01	9.499E-01	1.502E+00	1.948E-01	0.255
		333.44		5.283E-02	2.649E-01	2.635E-01	3.187E-02	0.201
		387.95	*	1.605E-02	3.848E-02	6.446E-02	6.126E-03	0.249
CF-251		176.60	*	-8.827E-02	1.304E-01	2.066E-01	2.099E-02	-0.427
		227.00		-1.482E-02	4.051E-01	6.587E-01	7.895E-02	-0.022
		285.00		-8.365E-01	1.799E+00	2.810E+00	3.887E-01	-0.298

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]G246875008      *
* Acquisition date   : 24-FEB-2010 08:54:00 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 02:00:02.64                               Half life ratio   : 8.000     *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID           : G246875008                               Analyst initials : MXR1        *
* Batch Number        : 952643                                   Sample Quantity  : 1.3057E+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	3.923E+01	3.863E+00	4.664E-01	0.000E+00
CD-109	4.760E+00	1.093E+00	1.254E+00	0.000E+00
SB-122	1.876E+00	1.836E+00	3.021E+00	0.000E+00
SN-126	4.681E-01	1.074E-01	1.238E-01	0.000E+00
TL-208	7.563E-01	1.099E-01	5.542E-02	0.000E+00
BI-211	5.422E+00	7.585E-01	3.153E-01	0.000E+00
PB-212	2.442E+00	3.368E-01	9.279E-02	0.000E+00
PO-212	2.442E+00	3.368E-01	9.279E-02	0.000E+00
BI-214	1.648E+00	2.383E-01	1.127E-01	0.000E+00
PB-214	1.886E+00	2.809E-01	1.097E-01	0.000E+00
PO-214	1.886E+00	2.809E-01	1.097E-01	0.000E+00
PO-216	2.442E+00	3.368E-01	9.279E-02	0.000E+00
PO-218	1.886E+00	2.809E-01	1.097E-01	0.000E+00
RA-224	6.493E+00	1.488E+00	1.055E+00	0.000E+00
RA-226	1.648E+00	2.383E-01	1.127E-01	0.000E+00
AC-228	2.018E+00	3.942E-01	2.152E-01	0.000E+00
RA-228	2.018E+00	3.942E-01	2.152E-01	0.000E+00
TH-228	2.479E+00	3.418E-01	9.417E-02	0.000E+00
TH-230	1.648E+00	2.383E-01	1.127E-01	0.000E+00
TH-232	2.018E+00	3.942E-01	2.152E-01	0.000E+00
TH-234	2.262E+00	1.913E+00	2.060E+00	0.000E+00
U-234	1.648E+00	2.383E-01	1.127E-01	0.000E+00
NP-237	1.374E+00	4.205E-01	3.672E-01	0.000E+00
U-238	2.262E+00	1.913E+00	2.060E+00	0.000E+00
AM-243	4.335E-01	7.483E-02	8.867E-02	0.000E+00
ANH-511	1.135E-01	6.280E-02	4.562E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	2.218E-01	3.035E-01	5.273E-01	0.000E+00 NOT IDENT.

NA-22	-1.875E-02	3.942E-02	6.463E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.326E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.353E-02	2.396E-02	3.685E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.541E-02	8.073E-02	0.000E+00	FAIL ABUN
SC-46	-1.722E-02	3.577E-02	5.924E-02	0.000E+00	FAIL ABUN
V-48	5.266E-02	6.609E-02	1.166E-01	0.000E+00	NOT IDENT.
CR-51	1.806E-01	3.571E-01	6.361E-01	0.000E+00	NOT IDENT.
MN-52	-2.513E-02	2.020E-01	3.336E-01	0.000E+00	NOT IDENT.
MN-54	1.205E-02	3.250E-02	5.700E-02	0.000E+00	NOT IDENT.
CO-56	1.310E-02	3.555E-02	6.228E-02	0.000E+00	NOT IDENT.
CO-57	2.824E-02	2.659E-02	4.625E-02	0.000E+00	NOT IDENT.
CO-58	-4.689E-02	3.740E-02	5.954E-02	0.000E+00	NOT IDENT.
FE-59	4.405E-02	8.813E-02	1.512E-01	0.000E+00	NOT IDENT.
CO-60	-1.394E-03	3.542E-02	5.952E-02	0.000E+00	NOT IDENT.
ZN-65	1.043E-01	9.405E-02	1.457E-01	0.000E+00	NOT IDENT.
GE-68	9.415E-01	1.162E+00	2.035E+00	0.000E+00	NOT IDENT.
AS-73	3.486E-01	7.160E-01	1.309E+00	0.000E+00	NOT IDENT.
AS-74	1.216E-02	8.306E-02	1.438E-01	0.000E+00	NOT IDENT.
SE-75	1.769E-03	5.075E-02	7.491E-02	0.000E+00	NOT IDENT.
BR-77	-3.524E+00	8.988E+00	1.502E+01	0.000E+00	FAIL ABUN
SR-82	-3.070E-01	4.090E-01	5.418E-01	0.000E+00	NOT IDENT.
RB-83	-2.815E-02	6.357E-02	1.059E-01	0.000E+00	NOT IDENT.
RB-84	3.679E-02	6.556E-02	1.154E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.674E+00	1.436E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.436E-02	7.342E-02	0.000E+00	NOT IDENT.
RB-86	5.055E-01	7.213E-01	1.257E+00	0.000E+00	NOT IDENT.
Y-88	-2.036E-02	2.711E-02	4.038E-02	0.000E+00	NOT IDENT.
ZR-88	-2.691E-02	2.918E-02	4.785E-02	0.000E+00	NOT IDENT.
Y-91	9.719E+00	1.766E+01	2.978E+01	0.000E+00	NOT IDENT.
NB-94	5.679E-03	3.077E-02	5.243E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.855E-02	7.795E-02	0.000E+00	NOT IDENT.
NB-95M	1.702E-01	1.482E-01	2.298E-01	0.000E+00	NOT IDENT.
ZR-95	0.000E+00	6.537E-02	1.094E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	6.930E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.673E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.955E+00	1.047E+01	1.737E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.915E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.619E-03	3.450E-02	5.883E-02	0.000E+00	NOT IDENT.
RH-102	4.394E-03	2.781E-02	4.715E-02	0.000E+00	NOT IDENT.
RU-103	-2.198E-02	3.947E-02	6.394E-02	0.000E+00	FAIL ABUN
RH-106	-1.528E-01	2.966E-01	4.925E-01	0.000E+00	FAIL ABUN
RU-106	-1.528E-01	2.962E-01	4.925E-01	0.000E+00	FAIL ABUN
AG-108M	1.120E-02	3.109E-02	5.367E-02	0.000E+00	NOT IDENT.
AG-110M	-6.811E-03	3.163E-02	5.314E-02	0.000E+00	NOT IDENT.
IN-111	-8.088E-01	9.948E-01	1.632E+00	0.000E+00	NOT IDENT.
IN-113M	-2.805E-03	4.185E-02	7.165E-02	0.000E+00	NOT IDENT.
SN-113	-2.805E-03	4.185E-02	7.165E-02	0.000E+00	NOT IDENT.
IN-114M	1.268E-01	2.030E-01	3.184E-01	0.000E+00	NOT IDENT.
CD-115	5.323E+00	9.220E+00	1.645E+01	0.000E+00	NOT IDENT.
SN-117M	8.288E-03	5.569E-02	9.749E-02	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.305E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.093E-02	2.900E-02	5.106E-02	0.000E+00	NOT IDENT.
I-124	6.978E-01	6.852E-01	1.076E+00	0.000E+00	NOT IDENT.
SB-124	3.697E-03	6.954E-02	1.180E-01	0.000E+00	FAIL ABUN
SB-125	-6.566E-02	8.979E-02	1.472E-01	0.000E+00	FAIL ABUN
TE-125M	2.718E+00	9.730E+00	1.648E+01	0.000E+00	NOT IDENT.
I-126	5.541E-02	1.718E-01	2.963E-01	0.000E+00	NOT IDENT.
SB-126	2.815E-03	1.586E-01	2.289E-01	0.000E+00	FAIL ABUN
SB-127	1.272E-02	1.237E+00	2.095E+00	0.000E+00	NOT IDENT.
XE-127	-1.331E-03	4.875E-02	8.152E-02	0.000E+00	NOT IDENT.
I-131	-7.121E-02	1.044E-01	1.746E-01	0.000E+00	NOT IDENT.
TE-132	3.899E-01	6.844E-01	1.189E+00	0.000E+00	NOT IDENT.
BA-133	-2.911E-02	4.698E-02	6.777E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	4.608E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.580E-02	8.730E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.873E-01	2.919E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.837E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	9.614E-03	1.022E-01	1.699E-01	0.000E+00	FAIL ABUN
BA-137M	5.413E-03	3.336E-02	5.715E-02	0.000E+00	NOT IDENT.
CS-137	5.722E-03	3.527E-02	6.042E-02	0.000E+00	NOT IDENT.
CE-139	-5.430E-03	2.882E-02	5.056E-02	0.000E+00	NOT IDENT.
BA-140	2.226E-02	2.376E-01	4.145E-01	0.000E+00	NOT IDENT.
LA-140	-9.941E-02	8.247E-02	1.245E-01	0.000E+00	FAIL ABUN
CE-141	-3.406E-03	6.245E-02	1.074E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.962E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.627E-02	2.205E-01	3.485E-01	0.000E+00	NOT IDENT.
PM-144	1.035E-02	3.169E-02	5.443E-02	0.000E+00	NOT IDENT.
PR-144	7.010E-01	2.147E+00	3.688E+00	0.000E+00	NOT IDENT.

PM-146	2.093E-02	4.121E-02	7.125E-02	0.000E+00	NOT IDENT.
ND-147	-7.749E-02	5.132E-01	8.863E-01	0.000E+00	FAIL ABUN
PM-149	2.687E+01	8.508E+01	1.441E+02	0.000E+00	NOT IDENT.
EU-152	4.643E-02	1.119E-01	1.636E-01	0.000E+00	NOT IDENT.
GD-153	-5.864E-02	8.910E-02	1.315E-01	0.000E+00	NOT IDENT.
EU-154	-5.308E-02	1.101E-01	1.804E-01	0.000E+00	NOT IDENT.
EU-155	3.513E-02	1.099E-01	1.896E-01	0.000E+00	FAIL ABUN
TB-160	-4.775E-02	1.308E-01	2.188E-01	0.000E+00	FAIL ABUN
HO-166M	2.718E-02	5.614E-02	9.700E-02	0.000E+00	NOT IDENT.
TM-171	-2.483E+00	2.849E+01	4.493E+01	0.000E+00	NOT IDENT.
LU-176	-1.290E-03	2.649E-02	4.022E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.689E+00	2.042E+00	0.000E+00	FAIL ABUN
LU-177M	-2.581E-02	1.837E-01	2.688E-01	0.000E+00	NOT IDENT.
HF-181	-5.136E-02	4.032E-02	6.262E-02	0.000E+00	NOT IDENT.
W-181	1.980E-01	3.706E-01	5.986E-01	0.000E+00	NOT IDENT.
TA-182	-2.468E-02	1.920E-01	3.247E-01	0.000E+00	FAIL ABUN
RE-183	1.661E-02	1.087E-01	1.931E-01	0.000E+00	FAIL ABUN
RE-184	1.021E-01	2.478E-01	4.119E-01	0.000E+00	NOT IDENT.
OS-185	3.011E-02	4.086E-02	7.199E-02	0.000E+00	NOT IDENT.
RE-188	1.525E-01	1.726E-01	3.130E-01	0.000E+00	NOT IDENT.
W-188	-5.491E+00	8.011E+00	1.187E+01	0.000E+00	FAIL ABUN
IR-192	7.511E-03	3.214E-02	5.687E-02	0.000E+00	FAIL ABUN
AU-195	-1.265E-01	2.297E-01	3.822E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.624E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-8.920E+00	6.559E+00	1.098E+01	0.000E+00	NOT IDENT.
TL-202	-4.640E-03	6.525E-02	1.103E-01	0.000E+00	NOT IDENT.
HG-203	4.285E-02	4.701E-02	7.165E-02	0.000E+00	NOT IDENT.
BI-207	2.731E-02	5.382E-02	9.258E-02	0.000E+00	FAIL ABUN
TL-207	6.334E-02	7.260E-01	1.110E+00	0.000E+00	FAIL ABUN
PO-209	-1.334E+00	6.800E+00	1.147E+01	0.000E+00	NOT IDENT.
BI-210	-1.993E+00	3.079E+00	5.363E+00	0.000E+00	NOT IDENT.
PB-210	-1.993E+00	3.079E+00	5.363E+00	0.000E+00	NOT IDENT.
PO-210	-1.993E+00	3.078E+00	5.363E+00	0.000E+00	NOT IDENT.
PB-211	1.278E+00	1.272E+00	1.599E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.832E-01	6.594E-01	0.000E+00	FAIL ABUN
PO-215	6.334E-02	7.260E-01	1.110E+00	0.000E+00	FAIL ABUN
RN-219	-2.988E-01	4.188E-01	6.707E-01	0.000E+00	FAIL ABUN
RN-220	1.384E+01	2.415E+01	4.292E+01	0.000E+00	NOT IDENT.
RA-223	6.334E-02	7.260E-01	1.110E+00	0.000E+00	FAIL ABUN
AC-227	4.536E-02	3.904E-01	6.640E-01	0.000E+00	FAIL ABUN
TH-227	4.536E-02	3.904E-01	6.640E-01	0.000E+00	FAIL ABUN
TH-229	-3.460E-01	5.214E-01	8.865E-01	0.000E+00	FAIL ABUN
PA-231	-7.657E-01	1.564E+00	2.559E+00	0.000E+00	NOT IDENT.
TH-231	6.334E-02	7.260E-01	1.110E+00	0.000E+00	FAIL ABUN
U-231	-5.354E-01	1.123E+00	1.687E+00	0.000E+00	FAIL ABUN
PA-233	-2.270E-02	5.906E-02	1.021E-01	0.000E+00	FAIL ABUN
PA-234	2.101E-01	2.921E-01	5.110E-01	0.000E+00	FAIL ABUN
PA-234M	4.524E+00	4.478E+00	7.757E+00	0.000E+00	NOT IDENT.
U-235	-7.568E-02	2.131E-01	3.634E-01	0.000E+00	FAIL ABUN
NP-236	-2.639E-02	8.210E-02	1.416E-01	0.000E+00	NOT IDENT.
NP-239	-5.071E-02	1.961E-01	3.289E-01	0.000E+00	FAIL ABUN
AM-241	7.999E-02	1.487E-01	2.434E-01	0.000E+00	NOT IDENT.
CM-243	-3.433E-02	9.905E-02	1.675E-01	0.000E+00	FAIL ABUN
AM-246	8.259E-02	1.311E-01	2.276E-01	0.000E+00	NOT IDENT.
CM-247	5.083E-03	3.942E-02	6.166E-02	0.000E+00	FAIL ABUN
CF-249	1.605E-02	3.771E-02	6.595E-02	0.000E+00	NOT IDENT.
CF-251	-8.827E-02	1.278E-01	2.141E-01	0.000E+00	NOT IDENT.

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875008.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 08:54:00
Sample ID          : G246875008          Sample quantity  : 1.30570E+02 GRAM
Detector name      : GAM22              Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00      Elapsed real time: 0 02:00:02.64  0.0%
Energy tolerance    : 1.50000 keV        Analyst Initials : MXR1
Abundance limit     : 75.00000          Sensitivity       : 5.00000
Batch ID           : 952643             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	2779	10.67*	1.909E+00	3.923E+01	3.923E+01	10.05
CD-109	88.03	451	3.72*	7.479E+00	4.655E+00	4.760E+00	23.42
SB-122	563.90	40	70.60*	4.030E+00	4.079E-02	1.876E+00	99.86
	692.80	-----	3.70	3.469E+00	-----	Line Not Found	-----
SN-126	64.28	130	9.60	4.349E+00	8.953E-01	8.953E-01	85.76
	86.94	451	8.90	7.479E+00	1.946E+00	1.946E+00	46.74
	87.57	451	37.00*	7.479E+00	4.681E-01	4.681E-01	23.42
TL-208	277.35	90	6.80	6.184E+00	6.153E-01	6.153E-01	71.84
	510.84	170	21.60	4.299E+00	5.254E-01	5.254E-01	57.08
	583.14	870	84.20*	3.930E+00	7.563E-01	7.563E-01	14.83
	860.37	141	12.46	2.923E+00	1.115E+00	1.115E+00	36.54
BI-211	72.87	-----	1.27	5.897E+00	-----	Line Not Found	-----
	351.07	1318	12.94*	5.401E+00	5.422E+00	5.422E+00	14.27
PB-212	74.81	614	10.70	6.169E+00	2.674E+00	2.674E+00	19.94
	77.11	1079	18.00	6.461E+00	2.667E+00	2.667E+00	13.56
	87.30	451	8.00	7.479E+00	2.165E+00	2.165E+00	25.47
	238.63	2542	44.60*	6.709E+00	2.442E+00	2.442E+00	14.07
	300.09	90	3.41	5.922E+00	1.288E+00	1.288E+00	99.82
PO-212	74.81	614	10.70	6.169E+00	2.674E+00	2.674E+00	19.94
	77.11	1079	18.00	6.461E+00	2.667E+00	2.667E+00	13.56
	87.30	451	8.00	7.479E+00	2.165E+00	2.165E+00	25.47
	115.19	-----	0.60	8.535E+00	-----	Line Not Found	-----
	238.63	2542	44.60*	6.709E+00	2.442E+00	2.442E+00	14.07
	300.09	90	3.41	5.922E+00	1.288E+00	1.288E+00	99.82
BI-214	609.31	1011	46.30*	3.811E+00	1.648E+00	1.648E+00	14.76
	1120.29	221	15.10	2.346E+00	1.797E+00	1.797E+00	28.60
	1764.49	182	15.80	1.716E+00	1.929E+00	1.929E+00	24.45
PB-214	74.81	614	6.21	6.169E+00	4.607E+00	4.607E+00	19.11
	77.11	1079	10.50	6.461E+00	4.572E+00	4.572E+00	15.56
	87.30	451	4.67	7.479E+00	3.708E+00	3.708E+00	24.66
	241.98	595	7.49	6.664E+00	3.424E+00	3.424E+00	24.04
	295.21	706	19.20	5.970E+00	1.770E+00	1.770E+00	19.65

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	351.92	1318	37.20*	5.401E+00	1.886E+00	1.886E+00	15.20
	74.81	614	6.21	6.169E+00	4.607E+00	4.607E+00	19.11
	77.11	1079	10.50	6.461E+00	4.572E+00	4.572E+00	15.56
	87.30	451	4.67	7.479E+00	3.708E+00	3.708E+00	24.66
	241.98	595	7.49	6.664E+00	3.424E+00	3.424E+00	24.04
PO-216	295.21	706	19.20	5.970E+00	1.770E+00	1.770E+00	19.65
	351.92	1318	37.20*	5.401E+00	1.886E+00	1.886E+00	15.20
	74.81	614	10.70	6.169E+00	2.674E+00	2.674E+00	19.94
	77.11	1079	18.00	6.461E+00	2.667E+00	2.667E+00	13.56
	87.30	451	8.00	7.479E+00	2.165E+00	2.165E+00	25.47
PO-218	238.63	2542	44.60*	6.709E+00	2.442E+00	2.442E+00	14.07
	300.09	90	3.41	5.922E+00	1.288E+00	1.288E+00	99.82
	74.81	614	6.21	6.169E+00	4.607E+00	4.607E+00	19.11
	77.11	1079	10.50	6.461E+00	4.572E+00	4.572E+00	15.56
	87.30	451	4.67	7.479E+00	3.708E+00	3.708E+00	24.66
RA-224	241.98	595	7.49	6.664E+00	3.424E+00	3.424E+00	24.04
	295.21	706	19.20	5.970E+00	1.770E+00	1.770E+00	19.65
	351.92	1318	37.20*	5.401E+00	1.886E+00	1.886E+00	15.20
	240.98	595	3.95*	6.664E+00	6.493E+00	6.493E+00	23.38
	609.31	1011	46.30*	3.811E+00	1.648E+00	1.648E+00	14.76
RA-226	1120.29	221	15.10	2.346E+00	1.797E+00	1.797E+00	28.60
	1764.49	182	15.80	1.716E+00	1.929E+00	1.929E+00	24.45
	338.32	591	11.40	5.524E+00	2.700E+00	2.700E+00	44.73
	911.07	542	27.70*	2.788E+00	2.018E+00	2.018E+00	19.93
	969.11	346	16.60	2.648E+00	2.263E+00	2.263E+00	30.22
AC-228	338.32	591	11.40	5.524E+00	2.700E+00	2.700E+00	44.73
	911.07	542	27.70*	2.788E+00	2.018E+00	2.018E+00	19.93
	969.11	346	16.60	2.648E+00	2.263E+00	2.263E+00	30.22
	74.81	614	10.70	6.169E+00	2.674E+00	2.714E+00	17.65
	77.11	1079	18.00	6.461E+00	2.667E+00	2.707E+00	13.56
TH-228	87.30	451	8.00	7.479E+00	2.165E+00	2.197E+00	23.42
	238.63	2542	44.60*	6.709E+00	2.442E+00	2.479E+00	14.07
	300.09	90	3.41	5.922E+00	1.288E+00	1.307E+00	115.63
	609.31	1011	46.30*	3.811E+00	1.648E+00	1.648E+00	14.76
	1120.29	221	15.10	2.346E+00	1.797E+00	1.797E+00	28.60
TH-230	1764.49	182	15.80	1.716E+00	1.929E+00	1.929E+00	24.45
	338.32	591	11.40	5.524E+00	2.700E+00	2.700E+00	19.29
	911.07	542	27.70*	2.788E+00	2.018E+00	2.018E+00	19.93
	969.11	346	16.60	2.648E+00	2.263E+00	2.263E+00	30.22
	63.29	130	3.80*	4.349E+00	2.262E+00	2.262E+00	86.30
TH-232	92.38	294	5.41	7.858E+00	1.989E+00	1.989E+00	38.76
	609.31	1011	46.30*	3.811E+00	1.648E+00	1.648E+00	14.76
	1120.29	221	15.10	2.346E+00	1.797E+00	1.797E+00	28.60
	1764.49	182	15.80	1.716E+00	1.929E+00	1.929E+00	24.45
	86.50	451	12.60*	7.479E+00	1.374E+00	1.374E+00	31.22
NP-237	95.87	-----	2.60	8.032E+00	-----	Line Not Found	-----
	63.29	130	3.80*	4.349E+00	2.262E+00	2.262E+00	86.30
	92.38	294	5.41	7.858E+00	1.989E+00	1.989E+00	35.36
	74.67	614	66.00*	6.169E+00	4.335E-01	4.335E-01	17.61

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	451	0.34	7.479E+00	5.154E+01	5.154E+01	23.42
	117.66	-----	0.55	8.550E+00	-----	Line Not Found	-----
	142.18	-----	0.13	8.387E+00	-----	Line Not Found	-----
ANH-511	511.00	170	100.00*	4.299E+00	1.135E-01	1.135E-01	56.47

Flag: "*" = Keyline

Total number of lines in spectrum 36
Number of unidentified lines 4
Number of lines tentatively identified by NID 32 88.89%

Nuclide Type :

Nuclide	Hlflife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.923E+01	3.923E+01	0.394E+01	10.05	
CD-109	464.00D	1.02	4.655E+00	4.760E+00	1.115E+00	23.42	
SB-122	2.70D	46.0	4.079E-02	1.876E+00	1.873E+00	99.86	
SN-126	1.00E+05Y	1.00	4.681E-01	4.681E-01	1.096E-01	23.42	
TL-208	1.41E+10Y	1.00	7.563E-01	7.563E-01	1.122E-01	14.83	
BI-211	7.04E+08Y	1.00	5.422E+00	5.422E+00	0.774E+00	14.27	
PB-212	1.41E+10Y	1.00	2.442E+00	2.442E+00	0.344E+00	14.07	
PO-212	1.41E+10Y	1.00	2.442E+00	2.442E+00	0.344E+00	14.07	
BI-214	1600.00Y	1.00	1.648E+00	1.648E+00	0.243E+00	14.76	
PB-214	1600.00Y	1.00	1.886E+00	1.886E+00	0.287E+00	15.20	
PO-214	1600.00Y	1.00	1.886E+00	1.886E+00	0.287E+00	15.20	
PO-216	1.41E+10Y	1.00	2.442E+00	2.442E+00	0.344E+00	14.07	
PO-218	1600.00Y	1.00	1.886E+00	1.886E+00	0.287E+00	15.20	
RA-224	1.41E+10Y	1.00	6.493E+00	6.493E+00	1.518E+00	23.38	
RA-226	1600.00Y	1.00	1.648E+00	1.648E+00	0.243E+00	14.76	
AC-228	1.41E+10Y	1.00	2.018E+00	2.018E+00	0.402E+00	19.93	
RA-228	1.41E+10Y	1.00	2.018E+00	2.018E+00	0.402E+00	19.93	
TH-228	1.91Y	1.01	2.442E+00	2.479E+00	0.349E+00	14.07	
TH-230	4.47E+09Y	1.00	1.648E+00	1.648E+00	0.243E+00	14.76	
TH-232	1.41E+10Y	1.00	2.018E+00	2.018E+00	0.402E+00	19.93	
TH-234	4.47E+09Y	1.00	2.262E+00	2.262E+00	1.952E+00	86.30	
U-234	4.47E+09Y	1.00	1.648E+00	1.648E+00	0.243E+00	14.76	
NP-237	2.14E+06Y	1.00	1.374E+00	1.374E+00	0.429E+00	31.22	
U-238	4.47E+09Y	1.00	2.262E+00	2.262E+00	1.952E+00	86.30	
AM-243	7380.00Y	1.00	4.335E-01	4.335E-01	0.764E-01	17.61	
ANH-511	1.00E+09Y	1.00	1.135E-01	1.135E-01	0.641E-01	56.47	

Total Activity : 9.159E+01 9.356E+01

Grand Total Activity : 9.159E+01 9.356E+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
3	89.97	253	575	1.03	180.15	163	28	3.51E-02	32.6	7.68E+00	T
0	129.36	116	494	1.03	258.85	256	7	1.61E-02	67.3	8.53E+00	T
0	185.92	291	621	1.55	371.86	367	10	4.04E-02	35.8	7.61E+00	T
0	209.32	213	593	1.30	418.60	414	11	2.96E-02	46.3	7.18E+00	T
0	270.33	200	365	1.87	540.53	536	10	2.78E-02	38.5	6.27E+00	T
0	328.02	109	319	1.15	655.81	651	10	1.51E-02	65.0	5.62E+00	T
0	409.15	80	233	1.53	817.94	813	10	1.12E-02	74.5	4.94E+00	
0	462.99	158	199	1.33	925.56	920	12	2.19E-02	39.8	4.58E+00	T
0	727.51	254	139	1.70	1454.27	1446	15	3.53E-02	23.8	3.34E+00	T
0	770.08	148	207	5.43	1539.38	1530	20	2.06E-02	51.1	3.20E+00	
0	795.16	96	113	1.27	1589.52	1585	11	1.33E-02	47.5	3.12E+00	T
0	933.88	95	89	1.03	1866.87	1858	15	1.31E-02	48.3	2.73E+00	
7	965.64	166	135	3.04	1930.36	1920	25	2.31E-02	41.1	2.66E+00	T
0	1240.80	109	236	2.51	2480.60	2472	24	1.52E-02	78.1	2.16E+00	

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G246875008.CNF;1
* Acquisition date   : 24-FEB-2010 08:54:00   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 02:00:02.64          Half life ratio    : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.   Nuclide Library   : SOLID
* Sample ID          : G246875008             Analyst initials  : MXR1
* Batch Number       : 952643                 Sample Quantity   : 1.30570E+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	3.923E+01	3.942E+00	4.660E-01	4.269E-02	84.191
CD-109	4.760E+00	1.115E+00	1.197E+00	1.136E-01	3.978
SB-122	1.876E+00	1.873E+00	2.971E+00	3.045E-01	0.631
SN-126	4.681E-01	1.096E-01	1.182E-01	1.116E-02	3.962
TL-208	7.563E-01	1.122E-01	5.453E-02	5.913E-03	13.868
BI-211	5.422E+00	7.740E-01	3.077E-01	3.589E-02	17.626
PB-212	2.442E+00	3.437E-01	8.998E-02	1.189E-02	27.144
PO-212	2.442E+00	3.437E-01	8.998E-02	1.189E-02	27.144
BI-214	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
PB-214	1.886E+00	2.867E-01	1.070E-01	1.364E-02	17.626
PO-214	1.886E+00	2.867E-01	1.070E-01	1.364E-02	17.626
PO-216	2.442E+00	3.437E-01	8.998E-02	1.189E-02	27.144
PO-218	1.886E+00	2.867E-01	1.070E-01	1.364E-02	17.626
RA-224	6.493E+00	1.518E+00	1.023E+00	1.281E-01	6.348
RA-226	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
AC-228	2.018E+00	4.022E-01	2.133E-01	2.826E-02	9.462
RA-228	2.018E+00	4.022E-01	2.133E-01	2.826E-02	9.462
TH-228	2.479E+00	3.488E-01	9.132E-02	1.207E-02	27.144

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
TH-232	2.018E+00	4.022E-01	2.133E-01	2.826E-02	9.462
TH-234	2.262E+00	1.952E+00	1.956E+00	3.405E-01	1.156
U-234	1.648E+00	2.432E-01	1.110E-01	1.290E-02	14.848
NP-237	1.374E+00	4.290E-01	3.504E-01	7.934E-02	3.923
U-238	2.262E+00	1.952E+00	1.956E+00	3.405E-01	1.156
AM-243	4.335E-01	7.636E-02	8.443E-02	6.881E-03	5.135
ANH-511	1.135E-01	6.408E-02	4.479E-02	4.488E-03	2.534

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.218E-01		3.096E-01	5.171E-01	5.397E-02	0.429
NA-22	-1.875E-02		4.023E-02	6.442E-02	5.552E-03	-0.291
NA-24	-4.322E-01		2.717E-01	Half-Life too short		
AL-26	-1.353E-02		2.445E-02	3.695E-02	3.022E-03	-0.366
TI-44	4.922E-01	+	6.675E-02	7.693E-02	6.523E-03	6.397
SC-46	-1.722E-02		3.650E-02	5.870E-02	6.571E-03	-0.293
V-48	5.266E-02		6.744E-02	1.157E-01	1.213E-02	0.455
CR-51	1.806E-01		3.644E-01	6.198E-01	8.025E-02	0.291
MN-52	-2.513E-02		2.061E-01	3.332E-01	2.978E-02	-0.075
MN-54	1.205E-02		3.317E-02	5.642E-02	6.268E-03	0.214
CO-56	1.310E-02		3.628E-02	6.166E-02	6.863E-03	0.213
CO-57	2.824E-02		2.713E-02	4.438E-02	3.660E-03	0.636
CO-58	-4.689E-02		3.817E-02	5.890E-02	6.522E-03	-0.796
FE-59	4.405E-02		8.993E-02	1.503E-01	1.473E-02	0.293
CO-60	-1.394E-03		3.614E-02	5.938E-02	5.295E-03	-0.023
ZN-65	1.043E-01		9.597E-02	1.449E-01	1.293E-02	0.720
GE-68	9.415E-01		1.186E+00	2.023E+00	1.907E-01	0.465
AS-73	3.486E-01		7.306E-01	1.240E+00	9.371E-02	0.281
AS-74	1.216E-02		8.475E-02	1.415E-01	1.467E-02	0.086
SE-75	1.769E-03		5.178E-02	7.276E-02	9.793E-03	0.024
BR-77	-3.524E+00		9.172E+00	1.475E+01	1.485E+00	-0.239
SR-82	-3.070E-01		4.174E-01	5.356E-01	5.874E-02	-0.573
RB-83	-2.815E-02		6.487E-02	1.040E-01	1.047E-02	-0.271
RB-84	3.679E-02		6.690E-02	1.144E-01	1.279E-02	0.322
KR-85	3.138E+01		8.851E+00	1.410E+01	1.414E+00	2.226
SR-85	1.605E-01		4.526E-02	7.209E-02	7.233E-03	2.226
RB-86	5.055E-01		7.360E-01	1.249E+00	1.179E-01	0.405
Y-88	-2.036E-02		2.766E-02	4.050E-02	3.274E-03	-0.503
ZR-88	-2.691E-02		2.978E-02	4.678E-02	4.356E-03	-0.575
Y-91	9.719E+00		1.802E+01	2.966E+01	2.438E+00	0.328
NB-94	5.679E-03		3.140E-02	5.175E-02	5.546E-03	0.110
NB-95	9.900E-02		4.954E-02	7.704E-02	8.425E-03	1.285
NB-95M	1.702E-01		1.512E-01	2.228E-01	2.945E-02	0.764
ZR-95	0.000E+00		6.670E-02	1.081E-01	1.255E-02	0.000
NB-97	-1.434E-02		3.536E-02	Half-Life too short		

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	3.475E+00		8.534E-01	Half-Life too short		
MO-99	-1.955E+00		1.068E+01	1.716E+01	2.840E+00	-0.114
TC-99M	-8.630E+09		9.770E+09	Half-Life too short		
RH-101	2.619E-03		3.520E-02	5.688E-02	6.205E-03	0.046
RH-102	4.394E-03		2.838E-02	4.623E-02	4.547E-03	0.095
RU-103	-2.198E-02		4.027E-02	6.274E-02	9.417E-03	-0.350
RH-106	-1.528E-01		3.027E-01	4.850E-01	7.083E-02	-0.315
RU-106	-1.528E-01		3.023E-01	4.850E-01	5.066E-02	-0.315
AG-108M	1.120E-02		3.172E-02	5.255E-02	5.202E-03	0.213
AG-110M	-6.811E-03		3.228E-02	5.239E-02	5.631E-03	-0.130
IN-111	-8.088E-01		1.015E+00	1.583E+00	2.009E-01	-0.511
IN-113M	-2.805E-03		4.271E-02	7.004E-02	6.689E-03	-0.040
SN-113	-2.805E-03		4.271E-02	7.004E-02	6.689E-03	-0.040
IN-114M	1.268E-01		2.071E-01	3.076E-01	3.271E-02	0.412
CD-115	5.323E+00		9.409E+00	1.616E+01	1.632E+00	0.329
SN-117M	8.288E-03		5.683E-02	9.393E-02	8.907E-03	0.088
I-123	1.623E+00		2.196E+00	Half-Life too short		
TE-123M	1.093E-02		2.960E-02	4.919E-02	4.698E-03	0.222
I-124	6.978E-01		6.992E-01	1.060E+00	1.101E-01	0.659
SB-124	3.697E-03		7.096E-02	1.182E-01	1.051E-02	0.031
SB-125	-6.566E-02		9.163E-02	1.441E-01	1.398E-02	-0.456
TE-125M	2.718E+00		9.928E+00	1.578E+01	1.598E+00	0.172
I-126	5.541E-02		1.753E-01	2.921E-01	3.087E-02	0.190
SB-126	2.815E-03		1.618E-01	2.260E-01	2.437E-02	0.012
SB-127	1.272E-02		1.263E+00	2.067E+00	2.671E-01	0.006
XE-127	-1.331E-03		4.974E-02	7.885E-02	8.741E-03	-0.017
I-131	-7.121E-02		1.065E-01	1.705E-01	1.889E-02	-0.418
TE-132	3.899E-01		6.984E-01	1.152E+00	2.048E-01	0.338
BA-133	-2.911E-02		4.794E-02	6.614E-02	9.884E-03	-0.440
I-133	-2.185E-03		2.351E-03	Half-Life too short		
CS-134	1.167E-01	+	5.694E-02	8.634E-02	9.557E-03	1.352
CS-135	3.513E-01		1.911E-01	2.836E-01	4.102E-02	1.239
I-135	-4.055E+08		1.448E+09	Half-Life too short		
CS-136	9.614E-03		1.043E-01	1.688E-01	1.708E-02	0.057
BA-137M	5.413E-03		3.404E-02	5.635E-02	5.942E-03	0.096
CS-137	5.722E-03		3.599E-02	5.957E-02	6.290E-03	0.096
CE-139	-5.430E-03		2.941E-02	4.875E-02	4.781E-03	-0.111
BA-140	2.226E-02		2.425E-01	4.073E-01	1.367E-01	0.055
LA-140	-9.941E-02		8.415E-02	1.246E-01	1.092E-02	-0.798
CE-141	-3.406E-03		6.372E-02	1.033E-01	9.406E-03	-0.033
CE-143	1.046E-03		1.511E-04	Half-Life too short		
CE-144	-2.627E-02		2.250E-01	3.348E-01	5.197E-02	-0.078
PM-144	1.035E-02		3.233E-02	5.371E-02	5.744E-03	0.193
PR-144	7.010E-01		2.191E+00	3.639E+00	3.891E-01	0.193
PM-146	2.093E-02		4.205E-02	6.982E-02	8.113E-03	0.300
ND-147	-7.749E-02		5.237E-01	8.707E-01	1.381E-01	-0.089
PM-149	2.687E+01		8.681E+01	1.402E+02	2.651E+01	0.192
EU-152	4.643E-02		1.142E-01	1.596E-01	1.918E-02	0.291

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-5.864E-02		9.092E-02	1.257E-01	1.106E-02	-0.466
EU-154	-5.308E-02		1.124E-01	1.798E-01	2.032E-02	-0.295
EU-155	3.513E-02		1.121E-01	1.815E-01	1.558E-02	0.194
TB-160	-4.775E-02		1.335E-01	2.168E-01	2.424E-02	-0.220
HO-166M	2.718E-02		5.729E-02	9.576E-02	1.029E-02	0.284
TM-171	-2.483E+00		2.907E+01	4.271E+01	3.227E+00	-0.058
LU-176	-1.290E-03		2.703E-02	3.916E-02	5.138E-03	-0.033
LU-177	3.613E+00	+	1.724E+00	1.976E+00	2.231E-01	1.828
LU-177M	-2.581E-02		1.875E-01	2.630E-01	2.487E-02	-0.098
HF-181	-5.136E-02		4.114E-02	6.142E-02	6.064E-03	-0.836
W-181	1.980E-01		3.781E-01	5.688E-01	4.240E-02	0.348
TA-182	-2.468E-02		1.959E-01	3.235E-01	2.690E-02	-0.076
RE-183	1.661E-02		1.110E-01	1.861E-01	1.796E-02	0.089
RE-184	1.021E-01		2.529E-01	3.998E-01	5.187E-02	0.255
OS-185	3.011E-02		4.169E-02	7.096E-02	7.457E-03	0.424
RE-188	1.525E-01		1.762E-01	3.015E-01	2.814E-02	0.506
W-188	-5.491E+00		8.175E+00	1.154E+01	1.577E+00	-0.476
IR-192	7.511E-03		3.280E-02	5.540E-02	7.080E-03	0.136
AU-195	-1.265E-01		2.344E-01	3.655E-01	3.187E-02	-0.346
TL-200	-4.856E-05		1.849E-04	Half-Life too short		
TL-201	-8.920E+00		6.693E+00	1.059E+01	1.044E+00	-0.842
TL-202	-4.640E-03		6.659E-02	1.080E-01	1.040E-02	-0.043
HG-203	4.285E-02		4.797E-02	6.966E-02	9.859E-03	0.615
BI-207	2.731E-02		5.492E-02	9.201E-02	8.833E-03	0.297
TL-207	6.334E-02		7.409E-01	1.082E+00	2.150E-01	0.059
PO-209	-1.334E+00		6.939E+00	1.136E+01	1.273E+00	-0.117
BI-210	-1.993E+00		3.142E+00	5.070E+00	4.710E-01	-0.393
PB-210	-1.993E+00		3.142E+00	5.070E+00	4.710E-01	-0.393
PO-210	-1.993E+00		3.141E+00	5.070E+00	4.263E-01	-0.393
PB-211	1.278E+00		1.298E+00	1.564E+00	9.816E-01	0.817
BI-212	1.851E+00	+	4.931E-01	6.512E-01	7.778E-02	2.843
PO-215	6.334E-02		7.409E-01	1.082E+00	2.150E-01	0.059
RN-219	-2.988E-01		4.273E-01	6.559E-01	1.015E-01	-0.456
RN-220	1.384E+01		2.464E+01	4.219E+01	4.300E+00	0.328
RA-223	6.334E-02		7.409E-01	1.082E+00	2.150E-01	0.059
AC-227	4.536E-02		3.983E-01	6.446E-01	1.176E-01	0.070
TH-227	4.536E-02		3.983E-01	6.446E-01	1.327E-01	0.070
TH-229	-3.460E-01		5.320E-01	8.568E-01	9.212E-02	-0.404
PA-231	-7.657E-01		1.596E+00	2.488E+00	4.647E-01	-0.308
TH-231	6.334E-02		7.409E-01	1.082E+00	2.150E-01	0.059
U-231	-5.354E-01		1.146E+00	1.613E+00	1.432E-01	-0.332
PA-233	-2.270E-02		6.027E-02	9.940E-02	1.302E-02	-0.228
PA-234	2.101E-01		2.981E-01	5.068E-01	1.007E-01	0.415
PA-234M	4.524E+00		4.569E+00	7.701E+00	8.825E-01	0.587
U-235	-7.568E-02		2.174E-01	3.496E-01	6.166E-02	-0.217
NP-236	-2.639E-02		8.377E-02	1.364E-01	1.304E-02	-0.193
NP-239	-5.071E-02		2.001E-01	3.153E-01	2.606E-02	-0.161
AM-241	7.999E-02		1.518E-01	2.309E-01	1.805E-02	0.346

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.433E-02		1.011E-01	1.603E-01	1.366E-02	-0.214
AM-246	8.259E-02		1.338E-01	2.262E-01	2.128E-02	0.365
CM-247	5.083E-03		4.022E-02	6.030E-02	5.656E-03	0.084
CF-249	1.605E-02		3.848E-02	6.446E-02	6.126E-03	0.249
CF-251	-8.827E-02		1.304E-01	2.066E-01	2.099E-02	-0.427

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]G246875008             *
* Acquisition date   : 24-FEB-2010 08:54:00 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 02:00:02.64 Half life ratio : 8.000               *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID          : G246875008 Analyst initials: MXR1                   *
* Batch Number       : 952643 Sample Quantity : 1.3057E+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	3.923E+01	3.863E+00	2.333E-01	1.971E+00
CD-109	4.760E+00	1.093E+00	6.272E-01	5.575E-01
SB-122	1.876E+00	1.836E+00	1.512E+00	9.366E-01
SN-126	4.681E-01	1.074E-01	6.193E-02	5.482E-02
TL-208	7.563E-01	1.099E-01	2.773E-02	5.609E-02
BI-211	5.422E+00	7.585E-01	1.577E-01	3.870E-01
PB-212	2.442E+00	3.368E-01	4.642E-02	1.718E-01
PO-212	2.442E+00	3.368E-01	4.642E-02	1.718E-01
BI-214	1.648E+00	2.383E-01	5.638E-02	1.216E-01
PB-214	1.886E+00	2.809E-01	5.486E-02	1.433E-01
PO-214	1.886E+00	2.809E-01	5.486E-02	1.433E-01
PO-216	2.442E+00	3.368E-01	4.642E-02	1.718E-01
PO-218	1.886E+00	2.809E-01	5.486E-02	1.433E-01
RA-224	6.493E+00	1.488E+00	5.276E-01	7.591E-01
RA-226	1.648E+00	2.383E-01	5.638E-02	1.216E-01
AC-228	2.018E+00	3.942E-01	1.077E-01	2.011E-01
RA-228	2.018E+00	3.942E-01	1.077E-01	2.011E-01
TH-228	2.479E+00	3.418E-01	4.711E-02	1.744E-01
TH-230	1.648E+00	2.383E-01	5.638E-02	1.216E-01
TH-232	2.018E+00	3.942E-01	1.077E-01	2.011E-01
TH-234	2.262E+00	1.913E+00	1.030E+00	9.760E-01
U-234	1.648E+00	2.383E-01	5.638E-02	1.216E-01
NP-237	1.374E+00	4.205E-01	1.837E-01	2.145E-01
U-238	2.262E+00	1.913E+00	1.030E+00	9.760E-01
AM-243	4.335E-01	7.483E-02	4.436E-02	3.818E-02
ANH-511	1.135E-01	6.280E-02	2.282E-02	3.204E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	2.218E-01	3.035E-01	2.638E-01	1.548E-01 NOT IDENT.

NA-22	-1.875E-02	3.942E-02	3.233E-02	2.011E-02	NOT IDENT.
NA-24	-4.322E+05	5.326E+05	0.000E+00	2.717E+05	SHORT HLIF
AL-26	-1.353E-02	2.396E-02	1.844E-02	1.222E-02	NOT IDENT.
TI-44	4.922E-01	6.541E-02	4.039E-02	3.337E-02	FAIL ABUN
SC-46	-1.722E-02	3.577E-02	2.964E-02	1.825E-02	FAIL ABUN
V-48	5.266E-02	6.609E-02	5.832E-02	3.372E-02	NOT IDENT.
CR-51	1.806E-01	3.571E-01	3.182E-01	1.822E-01	NOT IDENT.
MN-52	-2.513E-02	2.020E-01	1.669E-01	1.031E-01	NOT IDENT.
MN-54	1.205E-02	3.250E-02	2.852E-02	1.658E-02	NOT IDENT.
CO-56	1.310E-02	3.555E-02	3.116E-02	1.814E-02	NOT IDENT.
CO-57	2.824E-02	2.659E-02	2.314E-02	1.357E-02	NOT IDENT.
CO-58	-4.689E-02	3.740E-02	2.979E-02	1.908E-02	NOT IDENT.
FE-59	4.405E-02	8.813E-02	7.564E-02	4.496E-02	NOT IDENT.
CO-60	-1.394E-03	3.542E-02	2.978E-02	1.807E-02	NOT IDENT.
ZN-65	1.043E-01	9.405E-02	7.290E-02	4.799E-02	NOT IDENT.
GE-68	9.415E-01	1.162E+00	1.018E+00	5.928E-01	NOT IDENT.
AS-73	3.486E-01	7.160E-01	6.549E-01	3.653E-01	NOT IDENT.
AS-74	1.216E-02	8.306E-02	7.192E-02	4.238E-02	NOT IDENT.
SE-75	1.769E-03	5.075E-02	3.748E-02	2.589E-02	NOT IDENT.
BR-77	-3.524E+00	8.988E+00	7.515E+00	4.586E+00	FAIL ABUN
SR-82	-3.070E-01	4.090E-01	2.711E-01	2.087E-01	NOT IDENT.
RB-83	-2.815E-02	6.357E-02	5.300E-02	3.243E-02	NOT IDENT.
RB-84	3.679E-02	6.556E-02	5.776E-02	3.345E-02	NOT IDENT.
KR-85	3.138E+01	8.674E+00	7.182E+00	4.425E+00	NOT IDENT.
SR-85	1.605E-01	4.436E-02	3.673E-02	2.263E-02	NOT IDENT.
RB-86	5.055E-01	7.213E-01	6.287E-01	3.680E-01	NOT IDENT.
Y-88	-2.036E-02	2.711E-02	2.020E-02	1.383E-02	NOT IDENT.
ZR-88	-2.691E-02	2.918E-02	2.394E-02	1.489E-02	NOT IDENT.
Y-91	9.719E+00	1.766E+01	1.490E+01	9.012E+00	NOT IDENT.
NB-94	5.679E-03	3.077E-02	2.623E-02	1.570E-02	NOT IDENT.
NB-95	9.900E-02	4.855E-02	3.900E-02	2.477E-02	NOT IDENT.
NB-95M	1.702E-01	1.482E-01	1.150E-01	7.559E-02	NOT IDENT.
ZR-95	0.000E+00	6.537E-02	5.474E-02	0.000E+00	NOT IDENT.
NB-97	-1.434E+04	6.930E+04	0.000E+00	3.536E+04	SHORT HLIF
ZR-97	3.475E+06	1.673E+06	0.000E+00	8.534E+05	SHORT HLIF
MO-99	-1.955E+00	1.047E+01	8.690E+00	5.340E+00	NOT IDENT.
TC-99M	-8.630E+15	1.915E+16	0.000E+00	9.770E+15	SHORT HLIF
RH-101	2.619E-03	3.450E-02	2.943E-02	1.760E-02	NOT IDENT.
RH-102	4.394E-03	2.781E-02	2.359E-02	1.419E-02	NOT IDENT.
RU-103	-2.198E-02	3.947E-02	3.199E-02	2.014E-02	FAIL ABUN
RH-106	-1.528E-01	2.966E-01	2.464E-01	1.513E-01	FAIL ABUN
RU-106	-1.528E-01	2.962E-01	2.464E-01	1.511E-01	FAIL ABUN
AG-108M	1.120E-02	3.109E-02	2.685E-02	1.586E-02	NOT IDENT.
AG-110M	-6.811E-03	3.163E-02	2.659E-02	1.614E-02	NOT IDENT.
IN-111	-8.088E-01	9.948E-01	8.165E-01	5.075E-01	NOT IDENT.
IN-113M	-2.805E-03	4.185E-02	3.585E-02	2.135E-02	NOT IDENT.
SN-113	-2.805E-03	4.185E-02	3.585E-02	2.135E-02	NOT IDENT.
IN-114M	1.268E-01	2.030E-01	1.593E-01	1.035E-01	NOT IDENT.
CD-115	5.323E+00	9.220E+00	8.232E+00	4.704E+00	NOT IDENT.
SN-117M	8.288E-03	5.569E-02	4.877E-02	2.842E-02	NOT IDENT.
I-123	1.623E+06	4.305E+06	0.000E+00	2.196E+06	SHORT HLIF
TE-123M	1.093E-02	2.900E-02	2.554E-02	1.480E-02	NOT IDENT.
I-124	6.978E-01	6.852E-01	5.385E-01	3.496E-01	NOT IDENT.
SB-124	3.697E-03	6.954E-02	5.902E-02	3.548E-02	FAIL ABUN
SB-125	-6.566E-02	8.979E-02	7.365E-02	4.581E-02	FAIL ABUN
TE-125M	2.718E+00	9.730E+00	8.243E+00	4.964E+00	NOT IDENT.
I-126	5.541E-02	1.718E-01	1.482E-01	8.767E-02	NOT IDENT.
SB-126	2.815E-03	1.586E-01	1.145E-01	8.092E-02	FAIL ABUN
SB-127	1.272E-02	1.237E+00	1.048E+00	6.313E-01	NOT IDENT.
XE-127	-1.331E-03	4.875E-02	4.079E-02	2.487E-02	NOT IDENT.
I-131	-7.121E-02	1.044E-01	8.734E-02	5.325E-02	NOT IDENT.
TE-132	3.899E-01	6.844E-01	5.949E-01	3.492E-01	NOT IDENT.
BA-133	-2.911E-02	4.698E-02	3.390E-02	2.397E-02	FAIL ABUN
I-133	-2.185E+03	4.608E+03	0.000E+00	2.351E+03	SHORT HLIF
CS-134	1.167E-01	5.580E-02	4.368E-02	2.847E-02	FAIL ABUN
CS-135	3.513E-01	1.873E-01	1.460E-01	9.557E-02	NOT IDENT.
I-135	-4.055E+14	2.837E+15	0.000E+00	1.448E+15	SHORT HLIF
CS-136	9.614E-03	1.022E-01	8.502E-02	5.214E-02	FAIL ABUN
BA-137M	5.413E-03	3.336E-02	2.859E-02	1.702E-02	NOT IDENT.
CS-137	5.722E-03	3.527E-02	3.023E-02	1.799E-02	NOT IDENT.
CE-139	-5.430E-03	2.882E-02	2.530E-02	1.470E-02	NOT IDENT.
BA-140	2.226E-02	2.376E-01	2.074E-01	1.212E-01	NOT IDENT.
LA-140	-9.941E-02	8.247E-02	6.228E-02	4.207E-02	FAIL ABUN
CE-141	-3.406E-03	6.245E-02	5.373E-02	3.186E-02	NOT IDENT.
CE-143	1.046E+03	2.962E+02	0.000E+00	1.511E+02	SHORT HLIF
CE-144	-2.627E-02	2.205E-01	1.743E-01	1.125E-01	NOT IDENT.
PM-144	1.035E-02	3.169E-02	2.723E-02	1.617E-02	NOT IDENT.
PR-144	7.010E-01	2.147E+00	1.845E+00	1.095E+00	NOT IDENT.

PM-146	2.093E-02	4.121E-02	3.565E-02	2.102E-02	NOT IDENT.
ND-147	-7.749E-02	5.132E-01	4.434E-01	2.618E-01	FAIL ABUN
PM-149	2.687E+01	8.508E+01	7.210E+01	4.341E+01	NOT IDENT.
EU-152	4.643E-02	1.119E-01	8.185E-02	5.708E-02	NOT IDENT.
GD-153	-5.864E-02	8.910E-02	6.578E-02	4.546E-02	NOT IDENT.
EU-154	-5.308E-02	1.101E-01	9.024E-02	5.620E-02	NOT IDENT.
EU-155	3.513E-02	1.099E-01	9.485E-02	5.607E-02	FAIL ABUN
TB-160	-4.775E-02	1.308E-01	1.095E-01	6.673E-02	FAIL ABUN
HO-166M	2.718E-02	5.614E-02	4.853E-02	2.865E-02	NOT IDENT.
TM-171	-2.483E+00	2.849E+01	2.248E+01	1.453E+01	NOT IDENT.
LU-176	-1.290E-03	2.649E-02	2.012E-02	1.352E-02	FAIL ABUN
LU-177	3.613E+00	1.689E+00	1.022E+00	8.619E-01	FAIL ABUN
LU-177M	-2.581E-02	1.837E-01	1.345E-01	9.375E-02	NOT IDENT.
HF-181	-5.136E-02	4.032E-02	3.133E-02	2.057E-02	NOT IDENT.
W-181	1.980E-01	3.706E-01	2.995E-01	1.891E-01	NOT IDENT.
TA-182	-2.468E-02	1.920E-01	1.625E-01	9.795E-02	FAIL ABUN
RE-183	1.661E-02	1.087E-01	9.662E-02	5.548E-02	FAIL ABUN
RE-184	1.021E-01	2.478E-01	2.061E-01	1.264E-01	NOT IDENT.
OS-185	3.011E-02	4.086E-02	3.602E-02	2.085E-02	NOT IDENT.
RE-188	1.525E-01	1.726E-01	1.566E-01	8.808E-02	NOT IDENT.
W-188	-5.491E+00	8.011E+00	5.936E+00	4.087E+00	FAIL ABUN
IR-192	7.511E-03	3.214E-02	2.845E-02	1.640E-02	FAIL ABUN
AU-195	-1.265E-01	2.297E-01	1.912E-01	1.172E-01	FAIL ABUN
TL-200	-4.856E+01	3.624E+02	0.000E+00	1.849E+02	SHORT HLIF
TL-201	-8.920E+00	6.559E+00	5.495E+00	3.347E+00	NOT IDENT.
TL-202	-4.640E-03	6.525E-02	5.519E-02	3.329E-02	NOT IDENT.
HG-203	4.285E-02	4.701E-02	3.585E-02	2.399E-02	NOT IDENT.
BI-207	2.731E-02	5.382E-02	4.632E-02	2.746E-02	FAIL ABUN
TL-207	6.334E-02	7.260E-01	5.554E-01	3.704E-01	FAIL ABUN
PO-209	-1.334E+00	6.800E+00	5.737E+00	3.470E+00	NOT IDENT.
BI-210	-1.993E+00	3.079E+00	2.683E+00	1.571E+00	NOT IDENT.
PB-210	-1.993E+00	3.079E+00	2.683E+00	1.571E+00	NOT IDENT.
PO-210	-1.993E+00	3.078E+00	2.683E+00	1.571E+00	NOT IDENT.
PB-211	1.278E+00	1.272E+00	7.999E-01	6.492E-01	NOT IDENT.
BI-212	1.851E+00	4.832E-01	3.299E-01	2.465E-01	FAIL ABUN
PO-215	6.334E-02	7.260E-01	5.554E-01	3.704E-01	FAIL ABUN
RN-219	-2.988E-01	4.188E-01	3.355E-01	2.137E-01	FAIL ABUN
RN-220	1.384E+01	2.415E+01	2.147E+01	1.232E+01	NOT IDENT.
RA-223	6.334E-02	7.260E-01	5.554E-01	3.704E-01	FAIL ABUN
AC-227	4.536E-02	3.904E-01	3.322E-01	1.992E-01	FAIL ABUN
TH-227	4.536E-02	3.904E-01	3.322E-01	1.992E-01	FAIL ABUN
TH-229	-3.460E-01	5.214E-01	4.435E-01	2.660E-01	FAIL ABUN
PA-231	-7.657E-01	1.564E+00	1.280E+00	7.980E-01	NOT IDENT.
TH-231	6.334E-02	7.260E-01	5.554E-01	3.704E-01	FAIL ABUN
U-231	-5.354E-01	1.123E+00	8.442E-01	5.730E-01	FAIL ABUN
PA-233	-2.270E-02	5.906E-02	5.106E-02	3.013E-02	FAIL ABUN
PA-234	2.101E-01	2.921E-01	2.557E-01	1.491E-01	FAIL ABUN
PA-234M	4.524E+00	4.478E+00	3.881E+00	2.285E+00	NOT IDENT.
U-235	-7.568E-02	2.131E-01	1.818E-01	1.087E-01	FAIL ABUN
NP-236	-2.639E-02	8.210E-02	7.083E-02	4.189E-02	NOT IDENT.
NP-239	-5.071E-02	1.961E-01	1.645E-01	1.000E-01	FAIL ABUN
AM-241	7.999E-02	1.487E-01	1.218E-01	7.589E-02	NOT IDENT.
CM-243	-3.433E-02	9.905E-02	8.378E-02	5.054E-02	FAIL ABUN
AM-246	8.259E-02	1.311E-01	1.138E-01	6.691E-02	NOT IDENT.
CM-247	5.083E-03	3.942E-02	3.085E-02	2.011E-02	FAIL ABUN
CF-249	1.605E-02	3.771E-02	3.299E-02	1.924E-02	NOT IDENT.
CF-251	-8.827E-02	1.278E-01	1.071E-01	6.518E-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	411.8468
46.50	411.8468
46.50	411.8468
48.70	412.4574
49.72	387.7973
51.35	420.1914
52.39	410.9830
52.97	415.7408
53.15	421.6496
53.44	409.1287
54.07	415.8408
56.28	452.7271
56.28	452.7319
57.37	0.0000
57.53	491.0880
57.53	491.0920
57.60	494.0739
57.98	489.1384
57.98	489.1384
59.32	472.6806
59.32	472.6806
59.40	472.8304
59.54	473.0935
59.72	454.7818
60.01	455.3042
61.10	497.6444
61.14	497.7214
61.30	498.0314
63.00	580.2501
63.29	580.8914
63.29	580.8914
63.58	581.5297
64.28	630.7625
65.12	600.5226
65.20	575.7946
65.20	575.7946
66.05	534.9833
66.72	590.8105
66.83	591.0491
66.91	591.2235
67.20	608.0829
67.20	608.0829
67.75	650.7013
67.85	650.9380
68.90	662.3035
68.90	662.3035
69.30	652.8363
69.67	649.2299
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70.83	583.1017
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74.67	656.4667
74.81	656.7742
74.81	656.7742
74.81	656.7742
74.81	656.7742
74.81	656.7742
74.81	656.7742
74.81	656.7742
74.97	657.1279
75.28	657.8090
75.70	658.7280
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77.11	661.7994

77.11	661.7994
77.11	661.7994
77.11	661.7994
77.11	661.7994
77.11	661.7994
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79.80	616.2323
80.11	616.8427
80.18	616.9800
80.30	617.2150
80.30	617.2150
80.57	617.7429
81.00	618.5852
81.07	618.7225
81.07	618.7225
81.07	618.7225
81.07	618.7225
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83.37	595.1322
83.78	595.8900
83.78	595.8900
83.78	595.8900
83.78	595.8900
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84.90	597.9388
85.43	598.9034
86.29	600.4598
86.50	600.8386
86.54	600.9115
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86.72	601.2379
86.79	601.3603
86.94	601.6343
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87.30	602.2813
87.30	602.2813
87.30	602.2813
87.30	602.2813
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87.88	603.3217
88.03	603.5898
88.36	604.1786
88.47	604.3768
89.95	607.0056
91.11	609.0544
92.29	611.1237
92.38	611.2810
92.38	611.2810
93.35	612.9685
94.00	554.6158
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94.67	533.1147
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94.90	533.4582
94.90	533.4582
94.90	533.4582
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98.44	558.7654
98.44	558.7680
98.88	550.7457
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99.55	498.4217
99.86	514.0845
100.00	514.2790
100.10	505.7040
103.18	546.1115
103.76	550.2447
105.00	537.6697
105.31	527.0515
108.00	549.6067
109.28	533.5245

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111.00	526.8519
111.76	536.8286
112.95	537.2752
115.19	498.3033
116.30	497.3637
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117.00	517.5311
117.66	516.0649
121.11	490.3958
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121.78	487.7052
122.06	477.6612
122.32	477.9461
122.32	477.9461
122.32	477.9461
122.32	477.9461
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136.25	507.6954
136.48	508.8344
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144.24	481.7354
144.24	481.7354
144.24	481.7354
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145.44	473.8271
147.16	537.3928
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152.70	502.7439
153.22	489.4225
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154.21	507.8999
154.21	507.8999
154.21	507.8999
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156.02	552.2840
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159.00	494.8227
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161.27	540.9005
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162.64	509.4312
163.35	489.4272
163.89	476.7437
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167.43	529.0225
171.28	456.4263
171.86	449.2597
172.10	449.4501
176.55	490.4439
176.60	490.4867
181.06	427.9381
184.41	533.2520
185.71	507.8363
186.00	508.0823
190.27	456.5376
192.34	504.4620
193.63	523.3134
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198.01	482.1241
198.60	474.5909
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201.83	536.1061
202.84	488.6215
205.31	475.5038

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208.81	499.2964
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209.75	499.9998
210.97	468.1934
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216.55	478.4085
218.09	490.7749
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223.80	495.8472
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227.00	459.6163
227.08	459.6669
227.20	462.8649
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228.18	442.6683
228.18	442.6683
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236.00	496.9482
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238.63	405.7354
238.63	405.7354
238.63	405.7354
239.00	405.9375
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241.98	407.5605
241.98	407.5605
241.98	407.5605
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245.39	409.4033
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249.79	387.7423
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252.85	374.0201
252.85	374.0201
254.15	0.0000
256.20	378.4052
256.20	378.4052
260.50	386.9849
260.90	380.6549
262.80	348.8525
264.65	356.6464
268.24	333.6365
268.79	346.1640
269.46	355.2409
269.46	355.2409
269.46	355.2409
269.46	355.2409
271.23	341.4655
273.65	309.3219
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277.35	350.6396
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277.60	352.9608
278.00	347.5782
278.60	337.8252
279.20	338.0664
279.53	338.1963
280.46	295.8010
281.68	324.7785
283.67	356.6116
284.30	368.0617
285.00	345.9701
285.90	323.9167
286.10	326.2339
286.10	326.2339
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288.45	0.0000
290.67	359.1321
290.80	359.1856
291.72	362.5738
293.26	0.0000
293.70	304.5822
295.21	376.0938
295.21	376.0938

295.21	376.0938
295.96	426.2990
296.50	426.5571
297.23	426.9071
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299.80	359.8155
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300.09	359.9360
300.09	359.9360
300.09	359.9360
300.12	359.9457
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303.76	294.3062
303.91	294.3533
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304.40	306.7221
304.84	273.2816
306.84	287.6532
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311.98	293.5677
316.51	282.9366
318.01	314.0528
319.02	323.6884
319.41	305.2138
320.08	296.1142
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323.87	311.6333
323.87	311.6333
323.87	311.6333
325.23	335.4782
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333.44	273.8114
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334.20	292.9220
334.30	278.7772
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338.28	294.1329
338.28	294.1329
338.28	294.1329
338.32	294.1481
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338.32	294.1481
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340.57	315.4153
344.27	274.9008
345.85	258.1249
350.59	0.0000
351.07	259.4531
351.92	258.7056
351.92	258.7056
351.92	258.7056
355.39	0.0000
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364.48	258.9247
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367.43	261.5977
367.94	0.0000
369.80	239.6765
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387.95	244.6877
388.63	247.8237
391.69	251.4955
391.69	251.4955
392.90	272.7467
398.62	271.1140
400.65	280.6484
401.10	272.7103
401.81	287.5355
402.60	260.5442
404.84	220.4255
410.95	231.7366
411.60	240.3270
413.65	227.1828
414.70	234.1749
415.30	229.9271

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423.70	240.0557
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427.89	258.3903
432.53	228.3757
433.93	218.2918
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439.56	228.6448
439.89	221.4295
443.98	215.8996
444.90	216.0588
445.03	216.0815
445.03	216.0815
445.03	216.0815
445.03	216.0815
453.90	207.0905
463.38	227.6869
468.07	191.3093
473.00	216.5647
475.06	208.3539
475.35	211.6077
476.78	200.0663
477.59	192.6936
477.96	185.2527
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484.57	200.1589
487.03	183.2729
490.36	0.0000
492.35	208.8862
497.08	220.4676
507.63	0.0000
510.53	0.0000
510.84	207.3001
511.00	207.3232
511.85	207.4466
511.85	207.4466
513.99	179.5470
513.99	179.5470
520.41	198.7603
520.65	198.7954
527.90	182.2226
528.96	0.0000
529.64	198.1825
529.87	0.0000
531.02	200.2280
537.32	195.5035
543.00	202.7973
546.56	0.0000
549.76	180.2461
552.65	190.9403
555.20	169.5923
563.23	180.9044
563.90	188.4312
568.70	212.4414
569.32	204.1238
569.50	198.5707
569.67	198.5919
573.80	200.2631
574.00	198.3812
574.64	197.7719
578.91	205.0215
579.30	0.0000
583.14	182.2727
585.48	153.1717
591.81	177.4826
592.07	173.6499
593.00	170.8566
595.88	182.7669
600.56	221.1208
602.52	0.0000
602.71	183.1236
602.71	183.1236
603.60	196.5487
604.41	206.6465
604.70	201.6807
609.31	214.5081

609.31	214.5081
609.31	214.5081
609.31	214.5081
610.33	205.7221
612.46	185.8917
614.37	150.8956
618.01	174.0807
621.84	187.6465
621.84	187.6465
631.29	196.6032
633.02	179.9931
633.10	189.8906
634.78	157.4084
635.90	161.4745
636.97	164.5511
645.85	155.4382
646.12	166.4258
656.30	182.4369
657.75	171.5532
657.90	0.0000
661.65	178.9705
661.65	178.9705
664.57	0.0000
666.33	186.5018
666.33	186.5018
675.00	172.2135
677.61	190.7233
685.20	173.1889
692.80	172.8853
695.00	158.7527
696.49	168.1073
696.49	168.1073
697.00	184.5593
697.49	191.7861
698.33	190.8475
698.50	190.8665
699.00	185.7835
702.63	169.6930
706.10	167.9478
706.58	0.0000
706.67	178.3077
709.31	187.8467
711.68	156.0475
713.82	163.4679
717.42	186.5845
720.50	176.2091
721.93	0.0000
722.20	158.5499
722.78	169.2916
722.78	169.2916
722.89	169.3016
722.95	169.3049
723.30	176.4681
724.18	178.3308
727.18	159.4092
733.00	137.9458
735.90	155.7387
739.58	166.7281
742.81	134.4453
744.21	137.6923
747.13	157.8979
751.79	142.4460
752.31	138.2627
753.82	133.0854
755.35	144.8155
756.15	152.2764
756.87	163.9685
763.93	136.4947
765.79	153.0146
766.42	167.6388
766.84	184.0770
776.49	159.3215
778.00	164.9362
778.57	137.4861
778.89	139.3404
783.80	140.4428
785.46	152.3599
792.07	175.2987

795.84	144.4987
796.30	135.9027
798.80	157.3561
801.93	187.2579
805.60	138.3675
810.29	174.9747
810.76	177.8068
815.85	147.4389
817.79	156.9141
818.51	141.0833
819.60	147.6979
826.30	153.7900
828.27	0.0000
831.60	156.9877
831.96	152.3129
834.83	137.4530
836.80	0.0000
846.75	131.5802
848.13	132.6099
856.28	0.0000
856.80	141.4531
860.37	135.0115
867.32	127.0741
867.82	130.8184
871.10	133.0298
873.19	137.9431
874.81	132.2893
875.33	0.0000
876.40	128.5460
879.36	144.0831
880.27	137.4141
880.51	136.4680
881.50	128.8357
883.24	131.8204
884.67	123.2388
889.25	136.9930
896.60	133.5600
898.02	132.6734
899.00	142.4165
903.28	135.8862
911.07	151.9221
911.07	151.9221
911.07	151.9221
919.63	132.7332
920.93	126.6455
925.00	137.1484
925.24	150.8794
926.50	140.6672
935.52	132.5905
937.48	124.0818
944.10	130.3472
946.00	127.4860
949.00	126.6540
962.29	130.5794
964.01	127.4330
966.15	127.5446
968.20	127.6496
969.11	127.6987
969.11	127.6987
969.11	127.6987
977.42	147.9221
980.50	121.2680
983.50	115.3931
989.30	134.7688
996.32	148.2561
1001.03	114.1764
1001.68	122.2914
1004.76	143.6888
1021.30	0.0000
1024.50	0.0000
1034.80	117.7274
1036.00	119.8279
1037.82	122.9841
1038.57	120.9714
1038.76	0.0000
1045.16	131.5491
1046.59	133.6771
1048.07	124.4943

1050.47	135.9316
1050.47	135.9316
1062.04	153.0689
1063.62	141.7782
1076.63	109.1858
1077.35	110.2552
1078.86	110.3181
1085.78	130.4191
1099.22	127.9145
1112.02	119.8120
1112.84	119.8477
1115.52	112.5804
1120.29	122.5420
1120.29	122.5420
1120.29	122.5420
1120.29	122.5420
1120.51	122.5541
1121.28	107.2632
1124.00	0.0000
1129.67	167.6792
1131.51	0.0000
1147.95	0.0000
1167.94	137.2181
1173.22	147.8199
1175.09	149.8000
1177.93	134.8568
1189.05	150.5085
1204.90	130.3733
1205.75	0.0000
1213.00	166.9838
1221.42	176.0601
1230.97	182.7533
1235.34	184.5527
1236.41	0.0000
1238.25	171.0449
1246.25	132.0430
1260.41	0.0000
1271.85	108.9238
1274.45	114.8527
1274.54	114.8563
1291.56	122.3221
1298.22	0.0000
1312.09	99.4681
1325.50	103.8336
1325.50	103.8336
1332.49	82.2528
1333.61	86.2460
1360.21	72.9488
1362.66	0.0000
1365.15	67.0511
1368.21	79.1326
1368.53	0.0000
1376.25	59.2395
1384.27	118.7598
1394.10	70.6537
1395.20	71.6847
1407.95	78.0316
1434.06	60.2388
1436.60	65.3926
1457.56	0.0000
1460.81	50.4086
1489.15	71.5416
1509.49	53.1727
1596.49	77.7625
1620.62	42.9395
1678.03	0.0000
1691.02	39.8155
1691.02	39.8155
1706.46	0.0000
1750.46	0.0000
1764.49	27.6742
1764.49	27.6742
1764.49	27.6742
1764.49	27.6742
1770.23	28.5031
1771.40	33.8567
1791.20	0.0000
1808.65	29.9569

1836.01

32.1545

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G246875008

Total Uranium Activity	6.6942E+00	ug/g
Total Uranium Counting Unc.	5.6921E+00	ug/g
Total Uranium Tpu	2.9041E-06	ug/g
Total Uranium Mda	3.0668E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 952643                SAMPLE ID   : G246875008                *
*  ANALYST       : MXR1                  DETECTOR    : GAM22                  *
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00          *
*  ANALYSIS DATE : 24-FEB-2010 08:54:00.49  SAMPLE ALQT: 130.570 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.278E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.583E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.728E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.330E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 11:11:58.54

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041820.CNF;1
Sample date        : 16-FEB-2010 00:00:00 Acquisition date : 24-FEB-2010 09:11:35
Sample ID          : G1202041820 Sample quantity : 1.48300E+02 GRAM
Detector name      : GAM11 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:00.57 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 952643 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	63.11*	50	88	1.28	125.11	120	10	6.98E-03	41.1	
2	0	185.43*	54	75	1.06	369.93	364	12	7.47E-03	40.7	

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

VMS Nuclide Identification Report V3.1 Generated 24-FEB-2010 11:12:01

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041820.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 16-FEB-2010 00:00:00 Acquisition date : 24-FEB-2010 09:11:35
Sample ID        : G1202041820 Sample quantity : 148.30 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA11 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.57 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type  : Empirical Efficiencies at : Peak Energy
Abundance limit  : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

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

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	477.59	*	5.083E-02	1.182E-01	2.085E-01	2.360E-02	0.244	
NA-22	1274.54	*	3.144E-03	1.517E-02	2.594E-02	2.130E-03	0.121	
NA-24	1368.53	*	7.675E-05	1.517E-02	Half-Life too short			
AL-26	1129.67		-3.331E-01	5.500E-01	7.587E-01	6.409E-02	-0.439	
	1808.65	*	-2.311E-03	1.266E-02	1.937E-02	1.581E-03	-0.119	
K-40	1460.81	*	6.775E-03	2.167E-01	3.796E-01	3.282E-02	0.018	
TI-44	67.85		-2.293E-04	1.271E-02	2.007E-02	1.520E-03	-0.011	
	78.38	*	-9.422E-03	1.088E-02	1.417E-02	1.195E-03	-0.665	
SC-46	889.25	*	-1.742E-03	1.694E-02	2.795E-02	2.753E-03	-0.062	
	1120.51		-1.947E-02	1.966E-02	2.387E-02	2.036E-03	-0.816	
V-48	944.10		5.422E-02	2.382E-01	4.160E-01	4.024E-02	0.130	
	983.50	*	-1.454E-05	2.247E-02	3.737E-02	3.545E-03	0.000	
	1312.09		2.036E-02	2.388E-02	4.610E-02	3.801E-03	0.442	
CR-51	320.08	*	-1.535E-01	1.435E-01	1.954E-01	2.836E-02	-0.786	
MN-52	744.21		-1.918E-02	4.503E-02	6.679E-02	6.490E-03	-0.287	
	848.13		-5.199E-01	1.315E+00	2.075E+00	2.045E-01	-0.251	
	935.52		3.290E-02	3.680E-02	7.220E-02	7.010E-03	0.456	
	1246.25		-4.152E-01	1.089E+00	1.609E+00	1.313E-01	-0.258	
	1333.61		1.823E-01	9.949E-01	1.677E+00	1.386E-01	0.109	
	1434.06	*	3.006E-02	4.384E-02	8.316E-02	6.967E-03	0.362	
MN-54	834.83	*	-1.201E-02	1.628E-02	2.427E-02	2.390E-03	-0.495	
CO-56	846.75	*	8.245E-03	1.618E-02	2.931E-02	2.887E-03	0.281	
	977.42		-4.577E-02	1.084E+00	1.789E+00	1.702E-01	-0.026	
	1037.82		4.765E-02	1.189E-01	2.116E-01	2.030E-02	0.225	
	1175.09		-1.893E-01	8.346E-01	1.304E+00	1.048E-01	-0.145	
	1238.25		6.085E-03	2.376E-02	4.116E-02	3.463E-03	0.148	
	1360.21		2.490E-01	4.446E-01	8.072E-01	6.701E-02	0.308	
	1771.40		-9.276E-02	1.137E-01	1.370E-01	1.127E-02	-0.677	
CO-57	122.06	*	3.159E-05	9.163E-03	1.557E-02	1.317E-03	0.002	
	136.48		-2.604E-02	6.849E-02	1.116E-01	1.048E-02	-0.233	
CO-58	810.76	*	-2.800E-03	1.459E-02	2.237E-02	2.202E-03	-0.125	
FE-59	142.65		-1.328E-01	1.008E+00	1.577E+00	1.409E-01	-0.084	
	192.34		1.425E-01	3.018E-01	5.213E-01	7.821E-02	0.273	
	1099.22	*	1.296E-02	2.767E-02	5.032E-02	4.730E-03	0.258	

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60	1291.56			-3.630E-02	3.722E-02	4.053E-02	3.824E-03	-0.896
	1173.22			1.466E-03	1.738E-02	2.895E-02	2.326E-03	0.051
	1332.49	*		-4.840E-03	1.874E-02	2.859E-02	2.362E-03	-0.169
ZN-65	1115.52	*		1.327E-02	2.967E-02	5.344E-02	4.586E-03	0.248
GE-68	1077.35	*		4.739E-02	3.789E-01	6.453E-01	5.731E-02	0.073
AS-73	53.44	*		-1.305E-01	1.925E-01	2.823E-01	2.120E-02	-0.462
AS-74	595.88	*		2.491E-02	3.356E-02	6.018E-02	6.119E-03	0.414
	634.78			7.467E-02	9.916E-02	1.832E-01	1.793E-02	0.407
	66.05			5.681E-01	1.294E+00	1.992E+00	1.893E-01	0.285
SE-75	96.73			-2.692E-01	2.973E-01	3.864E-01	5.340E-02	-0.697
	121.11			4.230E-02	4.986E-02	8.963E-02	9.942E-03	0.472
	136.00			-6.631E-03	1.313E-02	2.117E-02	1.864E-03	-0.313
	198.60			3.078E-02	8.183E-01	1.298E+00	1.553E-01	0.024
	264.65	*		7.977E-04	1.722E-02	2.806E-02	4.124E-03	0.028
	279.53			4.541E-04	4.284E-02	6.926E-02	1.084E-02	0.007
	303.91			2.872E-01	8.249E-01	1.377E+00	2.289E-01	0.209
	400.65			1.895E-02	9.739E-02	1.684E-01	2.154E-02	0.113
	87.88			3.254E+00	7.552E+00	1.227E+01	1.162E+00	0.265
BR-77	200.40			-2.841E+00	9.617E+00	1.547E+01	1.749E+00	-0.184
	239.00			9.153E-02	6.232E-01	1.046E+00	1.389E-01	0.088
	249.79			1.072E+00	3.828E+00	6.408E+00	8.885E-01	0.167
	281.68			2.005E+00	5.163E+00	8.686E+00	1.340E+00	0.231
	297.23			-1.728E+00	2.997E+00	4.464E+00	6.697E-01	-0.387
	303.76			4.026E+00	1.016E+01	1.705E+01	2.524E+00	0.236
	439.47			-6.092E-01	8.614E+00	1.434E+01	1.547E+00	-0.042
	484.57			-1.718E+00	1.248E+01	2.039E+01	2.195E+00	-0.084
	520.65	*		-1.239E-02	5.275E-01	8.714E-01	9.285E-02	-0.014
	574.64			1.195E+00	1.291E+01	2.152E+01	2.225E+00	0.056
	578.91			-2.152E+00	4.487E+00	6.757E+00	6.965E-01	-0.318
	585.48			4.953E+00	9.952E+00	1.746E+01	1.790E+00	0.284
	755.35			-4.623E+00	1.096E+01	1.635E+01	1.593E+00	-0.283
	817.79			-4.124E+00	7.058E+00	9.671E+00	9.510E-01	-0.426
	698.33			-4.076E+00	1.527E+01	2.385E+01	2.288E+00	-0.171
SR-82	776.49	*		5.487E-02	1.456E-01	2.481E-01	2.426E-02	0.221
	1395.20			2.193E+00	4.431E+00	7.944E+00	6.628E-01	0.276
	520.41	*		1.466E-03	2.323E-02	3.893E-02	4.149E-03	0.038
RB-83	529.64			-4.998E-03	4.233E-02	6.891E-02	7.315E-03	-0.073
	552.65			-3.481E-02	7.802E-02	1.197E-01	1.256E-02	-0.291
	881.50	*		-2.012E-02	2.780E-02	4.110E-02	4.049E-03	-0.489
RB-84	513.99	*		-7.572E+00	5.485E+00	8.072E+00	8.622E-01	-0.938
KR-85	513.99	*		-3.617E-02	2.620E-02	3.856E-02	4.119E-03	-0.938
SR-85	1076.63	*		-9.449E-02	2.204E-01	3.271E-01	2.907E-02	-0.289
RB-86	898.02	*		-2.260E-03	1.799E-02	2.956E-02	2.921E-03	-0.076
Y-88	1836.01	*		5.050E-03	1.449E-02	2.662E-02	2.161E-03	0.190
	392.90	*		3.608E-03	1.261E-02	2.199E-02	2.346E-03	0.164
	1204.90	*		-1.732E+00	6.912E+00	1.074E+01	8.692E-01	-0.161
Y-91	702.63	*		2.485E-03	1.503E-02	2.495E-02	2.396E-03	0.100
NB-94	871.10	*		-4.212E-03	1.413E-02	2.249E-02	2.217E-03	-0.187
NB-95	765.79	*		-9.808E-03	1.569E-02	2.211E-02	2.158E-03	-0.444

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	235.69	*		-1.107E-01	5.202E-02	6.347E-02	8.862E-03	-1.744
ZR-95	724.18			-1.987E-02	3.883E-02	5.733E-02	5.925E-03	-0.347
	756.15	*		2.272E-02	2.668E-02	4.924E-02	5.182E-03	0.461
NB-97	657.90	*		2.514E-05	2.668E-02	Half-Life	too short	
	1024.50			3.905E-04	2.668E-02	Half-Life	too short	
ZR-97	254.15			5.059E-04	2.668E-02	Half-Life	too short	
	355.39			-1.619E-03	2.668E-02	Half-Life	too short	
	507.63	*		-5.250E-03	2.668E-02	Half-Life	too short	
	602.52			-1.365E-03	2.668E-02	Half-Life	too short	
	1021.30			-3.007E-03	2.668E-02	Half-Life	too short	
	1147.95			-1.582E-03	2.668E-02	Half-Life	too short	
	1362.66			-2.561E-03	2.668E-02	Half-Life	too short	
	1750.46			8.025E-04	2.668E-02	Half-Life	too short	
MO-99	140.51			-6.920E-01	1.764E+00	2.861E+00	7.944E-01	-0.242
	181.06			-8.253E-02	1.147E+00	1.691E+00	3.245E-01	-0.049
	366.43			3.942E+00	6.545E+00	1.119E+01	1.356E+00	0.352
	739.58	*		1.053E-01	9.760E-01	1.601E+00	2.533E-01	0.066
	778.00			-2.424E-01	2.927E+00	4.631E+00	4.531E-01	-0.052
TC-99M	140.51	*		-4.549E+01	2.927E+00	Half-Life	too short	
RH-101	127.23			4.195E-03	1.021E-02	1.792E-02	1.530E-03	0.234
	198.01	*		2.708E-04	1.558E-02	2.469E-02	2.764E-03	0.011
	325.23			-3.134E-02	9.781E-02	1.500E-01	2.105E-02	-0.209
RH-102	418.52			3.481E-02	1.178E-01	2.054E-01	2.208E-02	0.170
	475.06	*		-8.611E-03	1.194E-02	1.783E-02	1.922E-03	-0.483
	631.29			5.088E-03	2.249E-02	3.808E-02	3.740E-03	0.134
	697.49			3.103E-03	4.040E-02	6.610E-02	6.338E-03	0.047
	766.84			-4.835E-02	4.291E-02	5.265E-02	5.141E-03	-0.918
	1046.59			-4.049E-02	4.694E-02	6.332E-02	5.764E-03	-0.639
	1112.84			-6.071E-02	7.952E-02	1.066E-01	9.163E-03	-0.569
RU-103	497.08	*		8.383E-03	1.586E-02	2.808E-02	4.364E-03	0.299
	610.33			-2.462E-01	3.739E-01	5.522E-01	9.640E-02	-0.446
RH-106	511.85			-1.737E-01	1.384E-01	2.577E-01	2.755E-02	-0.674
	621.84	*		-7.400E-02	1.452E-01	2.183E-01	3.107E-02	-0.339
	1050.47			1.026E+00	9.162E-01	1.811E+00	1.643E-01	0.566
RU-106	511.85			-1.737E-01	1.384E-01	2.577E-01	2.755E-02	-0.674
	621.84	*		-7.400E-02	1.450E-01	2.183E-01	2.166E-02	-0.339
	1050.47			1.026E+00	9.162E-01	1.811E+00	1.643E-01	0.566
AG-108M	433.93	*		7.952E-03	1.365E-02	2.451E-02	2.709E-03	0.324
	614.37			3.647E-03	1.850E-02	3.106E-02	3.196E-03	0.117
	722.95			8.301E-03	1.876E-02	3.231E-02	3.220E-03	0.257
CD-109	88.03	*		-2.729E-02	2.553E-01	3.940E-01	3.736E-02	-0.069
AG-110M	657.75	*		3.846E-03	1.176E-02	2.035E-02	1.983E-03	0.189
	677.61			-6.036E-02	1.143E-01	1.658E-01	1.615E-02	-0.364
	706.67			-1.423E-01	9.490E-02	1.106E-01	1.087E-02	-1.287
	763.93			6.871E-02	5.873E-02	1.141E-01	1.138E-02	0.602
	884.67			2.452E-03	2.121E-02	3.627E-02	3.662E-03	0.068
	937.48			-5.396E-02	4.147E-02	4.824E-02	4.814E-03	-1.119
	1384.27			7.611E-03	7.236E-02	1.198E-01	1.028E-02	0.064
IN-111	171.28			-6.549E-02	7.540E-02	1.154E-01	1.149E-02	-0.567

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-113M	245.39	*		9.936E-03	7.733E-02	1.278E-01	1.741E-02	0.078
	391.69	*		2.608E-02	1.823E-02	3.507E-02	3.815E-03	0.743
	391.69	*		2.608E-02	1.823E-02	3.507E-02	3.815E-03	0.743
IN-114M	190.27	*		7.960E-03	5.967E-02	1.001E-01	1.083E-02	0.080
CD-115	260.90			3.629E-01	6.783E+00	1.107E+01	1.602E+00	0.033
	492.35			-1.269E+00	1.941E+00	2.933E+00	3.152E-01	-0.433
	527.90	*		-1.057E-01	5.224E-01	8.378E-01	8.900E-02	-0.126
SN-117M	156.02			-2.797E-01	5.946E-01	9.552E-01	8.942E-02	-0.293
	158.56	*		-6.638E-03	1.404E-02	2.247E-02	2.124E-03	-0.295
	563.90	*		-1.239E-01	1.524E-01	2.178E-01	2.269E-02	-0.569
SB-122	692.80			1.163E+00	4.021E+00	6.765E+00	6.476E-01	0.172
	159.00	*		-2.032E-05	4.021E+00	Half-Life	too short	
	528.96			-2.175E-02	4.021E+00	Half-Life	too short	
TE-123M	159.00	*		-4.897E-04	9.861E-03	1.644E-02	1.564E-03	-0.030
I-124	602.71	*		-3.003E-02	1.126E-01	1.786E-01	1.805E-02	-0.168
	722.78			2.999E-01	6.439E-01	1.112E+00	1.075E-01	0.270
	1325.50			5.839E-01	5.015E+00	8.343E+00	6.889E-01	0.070
SB-124	1376.25			2.628E-01	4.210E+00	6.903E+00	5.745E-01	0.038
	1509.49			-1.911E+00	2.386E+00	2.738E+00	2.304E-01	-0.698
	1691.02			2.889E-01	6.035E-01	1.132E+00	9.443E-02	0.255
SB-124	602.71			-4.933E-03	1.850E-02	2.934E-02	2.965E-03	-0.168
	645.85			-1.822E-01	2.065E-01	2.847E-01	2.881E-02	-0.640
	709.31			1.234E+00	1.224E+00	2.252E+00	2.167E-01	0.548
SB-124	713.82			-3.883E-01	7.827E-01	1.170E+00	1.496E-01	-0.332
	722.78			7.143E-02	1.533E-01	2.649E-01	2.604E-02	0.270
	968.20			-4.680E-01	9.756E-01	1.498E+00	1.432E-01	-0.312
SB-124	1045.16			-4.485E-01	9.028E-01	1.337E+00	1.218E-01	-0.335
	1325.50			1.485E-01	1.276E+00	2.122E+00	1.752E-01	0.070
	1368.21			3.365E-01	6.169E-01	1.145E+00	1.521E-01	0.294
SB-125	1436.60			-6.575E-01	1.634E+00	2.332E+00	1.954E-01	-0.282
	1691.02	*		1.623E-02	3.390E-02	6.362E-02	5.528E-03	0.255
	427.89	*		-1.948E-02	3.077E-02	4.639E-02	5.059E-03	-0.420
SB-125	463.38			-2.581E-02	1.039E-01	1.677E-01	1.901E-02	-0.154
	600.56			-4.692E-02	9.263E-02	1.421E-01	1.517E-02	-0.330
	635.90			2.510E-02	1.025E-01	1.746E-01	1.814E-02	0.144
TE-125M	109.28	*		-2.976E-01	2.594E+00	4.386E+00	4.495E-01	-0.068
I-126	388.63			-6.547E-02	5.131E-02	7.012E-02	7.607E-03	-0.934
	666.33	*		2.103E-02	5.048E-02	8.768E-02	8.311E-03	0.240
	753.82			7.666E-02	4.865E-01	8.025E-01	7.814E-02	0.096
SB-126	223.80			4.783E-01	9.720E-01	1.676E+00	2.093E-01	0.285
	278.60			6.464E-02	6.901E-01	1.126E+00	1.740E-01	0.057
	296.50			-5.502E-01	4.178E-01	5.472E-01	8.222E-02	-1.005
SB-126	414.70			-1.525E-02	2.106E-02	3.216E-02	3.455E-03	-0.474
	415.30			-1.192E-01	1.690E+00	2.825E+00	3.034E-01	-0.042
	555.20			4.382E-01	1.018E+00	1.795E+00	1.880E-01	0.244
SB-126	573.80			-2.155E-02	3.196E-01	5.210E-01	5.391E-02	-0.041
	593.00			-1.082E-01	2.949E-01	4.581E-01	4.669E-02	-0.236
	656.30			-3.282E-01	8.335E-01	1.250E+00	1.191E-01	-0.263
SB-126	666.33			8.655E-03	2.077E-02	3.608E-02	3.420E-03	0.240

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		3.391E-01	4.796E-01	8.821E-01	8.390E-02	0.384
		695.00		2.755E-02	2.825E-02	5.116E-02	4.901E-03	0.539
		697.00		2.691E-02	9.671E-02	1.623E-01	1.556E-02	0.166
		720.50	*	1.616E-03	4.830E-02	7.841E-02	7.571E-03	0.021
		856.80		-3.172E-02	1.348E-01	2.181E-01	2.149E-02	-0.145
		989.30		1.546E-01	3.492E-01	6.275E-01	5.932E-02	0.246
		1034.80		-1.722E-01	2.119E+00	3.446E+00	3.164E-01	-0.050
		1213.00		-2.418E-01	1.028E+00	1.582E+00	1.283E-01	-0.153
SN-126	+	64.28		3.116E-01	2.602E-01	2.628E-01	3.813E-02	1.185
		86.94		5.224E-02	1.080E-01	1.727E-01	7.172E-02	0.302
		87.57	*	1.494E-02	2.491E-02	4.103E-02	3.871E-03	0.364
SB-127		61.10		2.553E+00	4.141E+00	6.600E+00	5.411E-01	0.387
		252.40		-3.709E-02	5.465E-01	8.821E-01	3.798E-01	-0.042
		290.80		7.706E-01	2.619E+00	4.355E+00	6.833E-01	0.177
		411.60		2.583E-01	1.348E+00	2.329E+00	3.707E-01	0.111
		444.90		-3.447E-01	1.306E+00	2.121E+00	2.720E-01	-0.163
		473.00		-5.723E-02	2.057E-01	3.303E-01	4.342E-02	-0.173
		543.00		4.374E-01	1.905E+00	3.261E+00	4.719E-01	0.134
		603.60		-4.439E-01	1.794E+00	2.851E+00	3.485E-01	-0.156
		685.20	*	4.038E-02	1.926E-01	3.221E-01	3.404E-02	0.125
		698.50		-8.020E-01	2.422E+00	3.745E+00	5.718E-01	-0.214
		722.20		4.386E+00	3.928E+00	7.360E+00	7.679E-01	0.596
		783.80		1.770E-01	4.443E-01	7.629E-01	9.060E-02	0.232
XE-127		57.60		4.950E-01	1.185E+00	1.987E+00	1.430E-01	0.249
		145.22		-2.011E-01	2.502E-01	3.663E-01	3.299E-02	-0.549
		172.10		-1.677E-02	4.125E-02	6.625E-02	6.616E-03	-0.253
		202.84	*	-2.384E-03	1.630E-02	2.653E-02	3.032E-03	-0.090
		374.96		-4.462E-02	7.438E-02	1.066E-01	1.242E-02	-0.418
I-131		80.18		4.313E-01	7.309E-01	1.213E+00	1.046E-01	0.356
		284.30		-1.885E-01	3.512E-01	5.280E-01	8.234E-02	-0.357
		364.48	*	-1.118E-03	2.856E-02	4.498E-02	5.635E-03	-0.025
		636.97		1.536E-01	3.208E-01	5.678E-01	5.765E-02	0.271
		722.89		7.980E-01	1.770E+00	3.053E+00	2.954E-01	0.261
TE-132		49.72		-5.624E-01	1.256E+00	1.921E+00	1.680E-01	-0.293
		111.76		1.849E-01	2.290E+00	3.933E+00	3.643E-01	0.047
		116.30		9.368E-01	2.351E+00	4.122E+00	3.803E-01	0.227
		228.16	*	2.634E-02	5.381E-02	9.288E-02	1.620E-02	0.284
BA-133		53.15		-9.974E-01	9.476E-01	1.329E+00	1.002E-01	-0.751
		79.62		1.078E-01	3.639E-01	5.875E-01	8.922E-02	0.184
		81.00		8.895E-03	2.911E-02	4.692E-02	7.468E-03	0.190
		276.40		-5.989E-02	1.508E-01	2.319E-01	4.457E-02	-0.258
		302.84		1.557E-02	5.926E-02	9.801E-02	1.759E-02	0.159
		356.01	*	-1.526E-02	1.926E-02	2.696E-02	4.348E-03	-0.566
		383.85		8.473E-02	1.255E-01	2.273E-01	3.282E-02	0.373
I-133		510.53		-2.286E-03	1.255E-01	Half-Life	too short	
		529.87	*	-5.898E-07	1.255E-01	Half-Life	too short	
		706.58		-1.336E-03	1.255E-01	Half-Life	too short	
		856.28		-1.952E-04	1.255E-01	Half-Life	too short	
		875.33		2.533E-04	1.255E-01	Half-Life	too short	

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134	1236.41			3.355E-06	1.255E-01	Half-Life	too short	
	1298.22			-9.142E-05	1.255E-01	Half-Life	too short	
	475.35			-4.578E-01	7.787E-01	1.190E+00	1.283E-01	-0.385
	563.23			-1.099E-01	1.501E-01	2.185E-01	2.292E-02	-0.503
	569.32			9.732E-03	1.014E-01	1.663E-01	1.743E-02	0.059
	604.70			6.041E-03	1.755E-02	2.988E-02	3.020E-03	0.202
	795.84	*		6.078E-03	1.947E-02	3.290E-02	3.245E-03	0.185
	801.93			-1.197E-01	1.892E-01	2.614E-01	2.577E-02	-0.458
	1038.57			-3.144E-01	1.553E+00	2.467E+00	2.259E-01	-0.127
	1167.94			-3.338E-01	9.208E-01	1.388E+00	1.123E-01	-0.240
CS-135	1365.15			-1.446E-01	5.108E-01	7.589E-01	6.614E-02	-0.191
	268.24	*		2.540E-03	5.969E-02	9.714E-02	1.524E-02	0.026
I-135	288.45			-2.291E+02	5.969E-02	Half-Life	too short	
	417.63			1.928E+02	5.969E-02	Half-Life	too short	
	546.56			7.571E+01	5.969E-02	Half-Life	too short	
	836.80			2.850E+02	5.969E-02	Half-Life	too short	
	1038.76			-1.185E+02	5.969E-02	Half-Life	too short	
	1124.00			2.644E+02	5.969E-02	Half-Life	too short	
	1131.51			-4.050E+01	5.969E-02	Half-Life	too short	
	1260.41	*		-1.021E+02	5.969E-02	Half-Life	too short	
	1457.56			-4.699E+02	5.969E-02	Half-Life	too short	
	1678.03			1.122E+02	5.969E-02	Half-Life	too short	
CS-136	1706.46			9.973E+01	5.969E-02	Half-Life	too short	
	1791.20			-1.351E+02	5.969E-02	Half-Life	too short	
	66.91			9.578E-02	1.538E-01	2.410E-01	3.577E-02	0.397
	86.29			1.046E-02	2.335E-01	3.662E-01	4.870E-02	0.029
	153.22			8.794E-02	1.690E-01	2.953E-01	3.016E-02	0.298
	163.89			1.317E-01	3.110E-01	5.138E-01	5.434E-02	0.256
	176.55			-3.054E-02	1.027E-01	1.663E-01	1.764E-02	-0.184
	273.65			6.468E-02	1.250E-01	2.131E-01	3.302E-02	0.304
	340.57			1.412E-02	3.448E-02	5.771E-02	7.816E-03	0.245
	818.51			-1.713E-02	1.953E-02	2.411E-02	2.372E-03	-0.711
BA-137M	1048.07	*		-4.920E-03	3.188E-02	5.120E-02	4.831E-03	-0.096
	1235.34			-1.887E-02	1.262E-01	1.985E-01	2.284E-02	-0.095
	661.65	*		-1.654E-02	1.512E-02	1.962E-02	1.856E-03	-0.843
	661.65	*		-1.748E-02	1.598E-02	2.074E-02	1.965E-03	-0.843
	165.85	*		-2.776E-03	1.136E-02	1.857E-02	1.805E-03	-0.149
	162.64			-6.944E-02	2.102E-01	3.249E-01	3.266E-02	-0.214
	304.84			-4.569E-02	3.662E-01	5.782E-01	1.762E-01	-0.079
	423.70			4.469E-01	5.222E-01	9.378E-01	3.100E-01	0.477
	537.32	*		3.555E-02	7.306E-02	1.279E-01	4.310E-02	0.278
	328.77			2.142E-03	8.776E-02	1.405E-01	1.994E-02	0.015
LA-140	432.53			-6.238E-02	5.771E-01	9.567E-01	1.063E-01	-0.065
	487.03			2.319E-03	3.921E-02	6.588E-02	7.373E-03	0.035
	751.79			2.378E-01	5.299E-01	9.156E-01	9.666E-02	0.260
	815.85			-1.337E-02	9.106E-02	1.410E-01	1.511E-02	-0.095
	867.82			7.241E-02	3.937E-01	6.824E-01	6.999E-02	0.106
	919.63			2.047E-01	8.309E-01	1.447E+00	1.678E-01	0.141
	925.24			-1.578E-01	3.369E-01	5.153E-01	5.272E-02	-0.306

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141	1596.49	*		-3.905E-03	2.697E-02	4.327E-02	3.639E-03	-0.090
	145.44	*		-2.091E-02	2.001E-02	3.052E-02	2.797E-03	-0.685
CE-143	57.37			2.308E+00	7.929E+00	1.310E+01	1.161E+00	0.176
	231.56			2.360E+00	3.262E+01	5.374E+01	1.777E+01	0.044
	293.26	*		9.065E-01	1.786E+00	3.014E+00	7.491E-01	0.301
	350.59			6.973E+00	2.699E+01	4.394E+01	1.430E+01	0.159
	490.36			1.439E+01	3.944E+01	6.853E+01	2.212E+01	0.210
	664.57			1.763E+01	1.844E+01	3.299E+01	1.075E+01	0.535
	721.93			1.892E+01	2.215E+01	3.908E+01	1.155E+01	0.484
	80.11			3.274E-01	5.894E-01	9.750E-01	8.386E-02	0.336
CE-144	133.54	*		2.856E-03	7.178E-02	1.217E-01	1.899E-02	0.023
PM-144	476.78			1.324E-02	2.477E-02	4.444E-02	5.081E-02	0.298
	618.01			-3.821E-03	1.620E-02	2.567E-02	2.609E-03	-0.149
	696.49	*		4.983E-03	1.877E-02	3.141E-02	3.011E-03	0.159
	778.57			-2.707E-01	1.063E+00	1.630E+00	1.595E-01	-0.166
PR-144	696.49	*		3.365E-01	1.268E+00	2.121E+00	2.033E-01	0.159
PM-146	1489.15			3.285E+00	5.888E+00	1.103E+01	9.275E-01	0.298
	453.90	*		-1.479E-02	2.013E-02	2.922E-02	3.663E-03	-0.506
	633.02			-6.464E-01	6.215E-01	7.374E-01	2.777E-01	-0.877
	735.90			3.679E-02	7.127E-02	1.228E-01	3.554E-02	0.300
ND-147	747.13			-2.157E-03	4.095E-02	6.535E-02	9.633E-03	-0.033
	91.11			-8.419E-02	6.421E-02	8.722E-02	8.642E-03	-0.965
	319.41			-7.862E-01	9.479E-01	1.341E+00	1.912E-01	-0.586
	439.89			1.381E-01	1.618E+00	2.745E+00	2.961E-01	0.050
PM-149	531.02	*		1.266E-01	1.529E-01	2.800E-01	4.531E-02	0.452
EU-152	285.90	*		-5.038E-01	4.445E+00	7.065E+00	1.415E+00	-0.071
	121.78			-2.867E-03	2.710E-02	4.566E-02	4.466E-03	-0.063
	244.69			-9.386E-02	1.297E-01	1.935E-01	2.630E-02	-0.485
	344.27	*		-1.757E-02	4.495E-02	6.789E-02	9.204E-03	-0.259
	443.98			1.195E-03	4.184E-01	7.024E-01	7.579E-02	0.002
	778.89			-9.064E-03	1.242E-01	1.969E-01	1.926E-02	-0.046
	867.32			2.256E-01	3.271E-01	6.125E-01	6.037E-02	0.368
	964.01			6.425E-02	1.112E-01	2.025E-01	1.941E-02	0.317
	1085.78			-1.125E-02	1.471E-01	2.386E-01	2.103E-02	-0.047
	1112.02			-5.239E-02	9.778E-02	1.374E-01	1.182E-02	-0.381
GD-153	1407.95			4.853E-02	7.277E-02	1.378E-01	1.152E-02	0.352
	69.67			1.801E-01	4.321E-01	7.112E-01	5.477E-02	0.253
	83.37			6.670E-01	4.303E+00	6.835E+00	6.114E-01	0.098
	97.43	*		-2.268E-02	3.084E-02	4.104E-02	3.646E-03	-0.553
EU-154	103.18			-1.489E-03	3.082E-02	5.257E-02	4.561E-03	-0.028
	123.07			-1.723E-02	1.919E-02	3.005E-02	3.380E-03	-0.573
	247.94			-6.496E-02	1.482E-01	2.292E-01	3.602E-02	-0.283
	591.81			-1.528E-02	2.636E-01	4.289E-01	5.526E-02	-0.036
	723.30			1.366E-02	7.894E-02	1.309E-01	1.372E-02	0.104
	756.87			1.212E-01	2.963E-01	5.135E-01	6.578E-02	0.236
	873.19			9.689E-02	1.263E-01	2.370E-01	3.114E-02	0.409
	996.32			6.946E-02	1.468E-01	2.641E-01	4.797E-02	0.263
	1004.76			1.357E-02	9.191E-02	1.565E-01	1.910E-02	0.087
	1274.45	*		8.811E-03	4.253E-02	7.272E-02	7.996E-03	0.121

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	48.70			-8.958E-01	6.603E-01	8.997E-01	7.276E-02	-0.996
	60.01			-5.103E-01	1.275E+00	1.757E+00	1.254E-01	-0.290
	86.54			9.237E-04	3.082E-02	4.825E-02	4.530E-03	0.019
	105.31	*		9.075E-03	3.470E-02	6.062E-02	5.289E-03	0.150
TB-160	86.79			3.147E-02	7.634E-02	1.238E-01	1.156E-02	0.254
	197.04			-1.147E-01	2.464E-01	3.737E-01	4.165E-02	-0.307
	215.65			-5.320E-02	2.570E-01	4.130E-01	4.986E-02	-0.129
	298.57			1.523E-03	4.278E-02	6.904E-02	1.033E-02	0.022
	879.36	*		-3.570E-02	5.241E-02	7.637E-02	7.525E-03	-0.467
	962.29			5.302E-02	1.811E-01	3.175E-01	3.045E-02	0.167
	966.15			-1.060E-02	7.094E-02	1.151E-01	1.102E-02	-0.092
	1177.93			-5.840E-02	1.278E-01	1.885E-01	1.516E-02	-0.310
HO-166M	1271.85			-3.125E-01	3.386E-01	3.676E-01	3.014E-02	-0.850
	80.57			5.214E-02	7.915E-02	1.319E-01	1.140E-02	0.395
	184.41	+		3.068E-02	2.518E-02	2.706E-02	2.853E-03	1.134
	280.46			1.912E-02	3.548E-02	6.047E-02	9.344E-03	0.316
	410.95			5.308E-02	9.096E-02	1.643E-01	1.763E-02	0.323
	711.68	*		1.301E-02	3.126E-02	5.339E-02	5.142E-03	0.244
	752.31			1.045E-01	1.234E-01	2.248E-01	2.188E-02	0.465
	810.29			-5.742E-04	2.321E-02	3.692E-02	3.628E-03	-0.016
TM-171	51.35			7.081E+00	8.296E+00	1.438E+01	1.112E+00	0.492
	52.39			-2.115E-01	4.060E+00	6.462E+00	4.922E-01	-0.033
	59.40			3.843E-01	6.162E+00	9.129E+00	6.494E-01	0.042
	66.72	*		4.800E+00	7.879E+00	1.236E+01	9.278E-01	0.388
LU-176	88.36			2.502E-02	5.631E-02	9.165E-02	8.665E-03	0.273
	201.83			-6.875E-03	1.168E-02	1.821E-02	2.072E-03	-0.377
	306.84	*		-4.714E-04	1.013E-02	1.616E-02	2.375E-03	-0.029
	401.10			-2.322E-01	2.706E+00	4.528E+00	4.843E-01	-0.051
LU-177	112.95			-4.157E-04	2.789E-01	4.755E-01	4.038E-02	-0.001
	208.36	*		-2.873E-02	1.842E-01	2.985E-01	3.493E-02	-0.096
LU-177M	52.97			-3.662E-01	4.230E-01	6.103E-01	4.611E-02	-0.600
	54.07			1.917E-02	1.972E-01	3.188E-01	2.375E-02	0.060
	61.30			2.854E-01	3.565E-01	5.800E-01	4.176E-02	0.492
	121.62			-1.233E-02	1.353E-01	2.282E-01	1.928E-02	-0.054
	147.16			-1.367E-01	2.307E-01	3.679E-01	3.336E-02	-0.372
	171.86			-8.660E-02	1.825E-01	2.911E-01	2.903E-02	-0.298
	218.09			-7.686E-02	3.309E-01	5.310E-01	6.476E-02	-0.145
	268.79			-2.501E-01	3.151E-01	4.601E-01	6.857E-02	-0.543
HF-181	319.02			-4.147E-02	1.084E-01	1.646E-01	2.349E-02	-0.252
	367.43			1.033E-02	3.939E-01	6.255E-01	7.544E-02	0.017
	413.65	*		-3.503E-02	6.784E-02	1.068E-01	1.146E-02	-0.328
	56.28			-2.036E-01	1.949E-01	2.665E-01	1.940E-02	-0.764
	57.53			4.005E-02	1.013E-01	1.693E-01	1.220E-02	0.236
	65.20			-7.508E-02	2.462E-01	3.450E-01	2.558E-02	-0.218
	133.02			3.662E-03	2.113E-02	3.622E-02	3.140E-03	0.101
	136.25			-9.574E-02	1.416E-01	2.243E-01	1.963E-02	-0.427
W-181	345.85			7.855E-02	7.412E-02	1.321E-01	1.737E-02	0.594
	482.03	*		-3.122E-03	1.458E-02	2.354E-02	2.535E-03	-0.133
	56.28			-8.556E-02	8.196E-02	1.121E-01	8.159E-03	-0.763

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182	57.53			1.682E-02	4.260E-02	7.125E-02	5.131E-03	0.236
	65.20	*		-3.134E-02	1.028E-01	1.440E-01	1.068E-02	-0.218
	67.75			-2.668E-04	2.916E-02	4.606E-02	3.487E-03	-0.006
	100.10			2.493E-02	5.201E-02	9.265E-02	8.130E-03	0.269
	152.43			4.737E-02	1.230E-01	2.126E-01	1.964E-02	0.223
	222.10			-1.009E-01	1.232E-01	1.827E-01	2.266E-02	-0.553
	1001.68			5.814E-02	7.576E-01	1.277E+00	1.198E-01	0.046
	1121.28			-3.760E-02	5.113E-02	7.090E-02	6.042E-03	-0.530
	1189.05			-2.268E-02	1.020E-01	1.584E-01	1.277E-02	-0.143
	1221.42	*		1.398E-02	5.641E-02	9.766E-02	7.934E-03	0.143
RE-183	1230.97			-1.096E-01	1.564E-01	2.125E-01	1.730E-02	-0.516
	57.98			3.193E-02	4.107E-02	7.162E-02	5.141E-03	0.446
	59.32			2.904E-03	2.401E-02	3.590E-02	2.555E-03	0.081
	67.20			1.786E-02	5.411E-02	8.207E-02	6.184E-03	0.218
	162.32	*		-1.450E-02	4.159E-02	6.422E-02	6.156E-03	-0.226
	208.81			-1.966E-01	3.133E-01	4.801E-01	5.629E-02	-0.410
RE-184	291.72			9.300E-02	3.675E-01	6.080E-01	9.218E-02	0.153
	57.98			1.223E-01	1.574E-01	2.744E-01	1.970E-02	0.446
	59.32			1.112E-02	9.193E-02	1.374E-01	9.780E-03	0.081
	67.20			6.840E-02	2.073E-01	3.144E-01	2.369E-02	0.218
	161.27			-1.117E-01	1.277E-01	1.959E-01	1.871E-02	-0.570
	216.55			2.281E-02	9.347E-02	1.574E-01	1.907E-02	0.145
	252.85	*		-3.110E-02	9.841E-02	1.546E-01	2.169E-02	-0.201
	318.01			4.469E-02	1.901E-01	3.126E-01	4.472E-02	0.143
	792.07			-2.291E-02	3.656E-01	5.783E-01	5.670E-02	-0.040
	903.28			7.481E-02	4.102E-01	7.079E-01	6.957E-02	0.106
OS-185	920.93			1.748E-01	1.848E-01	3.556E-01	3.473E-02	0.491
	59.72			-4.905E-02	7.302E-02	9.608E-02	6.841E-03	-0.511
	61.14			2.338E-02	3.768E-02	6.009E-02	4.322E-03	0.389
	69.30			-1.924E-02	7.888E-02	1.215E-01	9.324E-03	-0.158
	592.07			2.715E-01	9.797E-01	1.677E+00	1.711E-01	0.162
	646.12	*		-1.165E-02	1.735E-02	2.493E-02	2.406E-03	-0.467
	717.42			-2.474E-01	4.219E-01	6.180E-01	5.962E-02	-0.400
	874.81			3.046E-01	2.245E-01	4.561E-01	4.494E-02	0.668
	880.27			-4.586E-01	3.387E-01	4.277E-01	4.214E-02	-1.072
	155.03	*		-3.672E-02	5.684E-02	8.956E-02	8.354E-03	-0.410
RE-188	477.96			9.762E-01	1.115E+00	2.074E+00	2.235E-01	0.471
	633.10			-1.210E+00	1.092E+00	1.406E+00	1.378E-01	-0.861
	W-188	+		2.958E+01	2.442E+01	2.940E+01	2.152E+00	1.006
IR-192	227.08			9.180E-02	4.311E+00	7.077E+00	8.959E-01	0.013
	290.67	*		6.422E-01	2.865E+00	4.729E+00	7.183E-01	0.136
	295.96			-2.207E-02	4.168E-02	6.200E-02	9.347E-03	-0.356
	308.46			1.339E-02	3.606E-02	6.048E-02	8.873E-03	0.221
	316.51	*		4.071E-03	1.495E-02	2.466E-02	3.544E-03	0.165
	468.07			-2.658E-03	2.705E-02	4.467E-02	5.043E-03	-0.060
	604.41			4.496E-02	2.265E-01	3.794E-01	5.326E-02	0.118
	612.46			-1.374E-01	3.129E-01	4.815E-01	5.362E-02	-0.285
	AU-195			65.12	-2.561E-02	4.986E-02	5.037E-03	-0.377
	66.83			1.582E-02	2.559E-02	4.019E-02	3.019E-03	0.394

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	75.70			3.206E-02	4.646E-02	7.806E-02	6.387E-03	0.411
	98.88	*		9.180E-03	7.913E-02	1.244E-01	1.098E-02	0.074
	129.76			-1.147E+00	1.043E+00	1.470E+00	1.264E-01	-0.780
TL-200	367.94	*		2.514E-01	2.780E+00	4.452E+00	5.357E-01	0.056
	579.30			-1.224E+01	1.859E+01	2.711E+01	2.794E+00	-0.451
	828.27			2.844E+00	2.526E+01	4.132E+01	4.067E+00	0.069
	1205.75			2.798E+00	1.315E+01	2.238E+01	1.812E+00	0.125
TL-201	68.90			-2.226E-01	2.968E-01	4.326E-01	3.309E-02	-0.514
	70.82			5.149E-02	1.614E-01	2.626E-01	2.044E-02	0.196
	80.30			2.005E-01	3.090E-01	5.151E-01	4.440E-02	0.389
	135.34			-6.567E-01	1.910E+00	3.130E+00	2.732E-01	-0.210
	167.43	*		-1.134E-01	5.766E-01	9.459E-01	9.254E-02	-0.120
TL-202	68.90			-6.332E-02	8.445E-02	1.231E-01	9.413E-03	-0.514
	70.82			1.461E-02	4.579E-02	7.451E-02	5.800E-03	0.196
	80.30			5.692E-02	8.769E-02	1.462E-01	1.260E-02	0.389
	439.56	*		-1.192E-03	2.032E-02	3.388E-02	3.655E-03	-0.035
HG-203	70.83			8.435E-02	2.631E-01	4.280E-01	5.603E-02	0.197
	72.87			-5.742E-02	1.537E-01	2.328E-01	2.973E-02	-0.247
	82.60			-2.798E-02	3.075E-01	4.768E-01	6.626E-02	-0.059
	279.20	*		2.560E-04	1.526E-02	2.469E-02	3.856E-03	0.010
BI-207	72.80			-2.008E-02	4.970E-02	7.507E-02	5.959E-03	-0.268
	74.97			-1.012E-02	2.947E-02	4.480E-02	3.637E-03	-0.226
	84.90			-2.788E-02	5.818E-02	8.647E-02	7.884E-03	-0.322
	569.67			-3.586E-03	1.643E-02	2.594E-02	2.692E-03	-0.138
	1063.62	*		-5.474E-03	2.091E-02	3.271E-02	2.939E-03	-0.167
	1770.23			-3.391E-01	2.568E-01	2.278E-01	1.875E-02	-1.488
TL-207	81.07			1.816E-02	6.415E-02	1.033E-01	8.983E-03	0.176
	83.78			6.609E-03	3.769E-02	5.996E-02	5.391E-03	0.110
	94.90			-3.158E-01	1.085E-01	1.202E-01	1.083E-02	-2.627
	122.32			-8.579E-02	6.455E-01	1.085E+00	9.867E-02	-0.079
	144.24			2.314E-01	2.729E-01	4.576E-01	4.559E-02	0.506
	154.21			-5.028E-03	1.444E-01	2.415E-01	2.439E-02	-0.021
	269.46			-4.620E-02	7.473E-02	1.118E-01	1.682E-02	-0.413
	323.87	*		1.326E-01	2.884E-01	4.837E-01	1.012E-01	0.274
	338.28			-7.692E-02	4.198E-01	6.528E-01	1.051E-01	-0.118
	445.03			-2.186E-01	1.029E+00	1.682E+00	2.308E-01	-0.130
TL-208	277.35			-1.160E-01	1.576E-01	2.311E-01	4.097E-02	-0.502
	510.84			-1.770E-01	1.308E-01	2.404E-01	3.259E-02	-0.736
	583.14	*		-4.942E-03	1.852E-02	2.798E-02	3.021E-03	-0.177
	860.37			-4.057E-02	1.140E-01	1.797E-01	1.872E-02	-0.226
PO-209	260.50			1.687E-01	4.053E+00	6.606E+00	9.544E-01	0.026
	262.80			-6.760E-01	1.110E+01	1.788E+01	2.606E+00	-0.038
	896.60	*		-2.562E+00	3.193E+00	4.559E+00	4.488E-01	-0.562
BI-210	46.50	*		-6.090E-01	1.026E+00	1.554E+00	1.446E-01	-0.392
PB-210	46.50	*		-6.090E-01	1.026E+00	1.554E+00	1.446E-01	-0.392
PO-210	46.50	*		-6.090E-01	1.026E+00	1.554E+00	1.310E-01	-0.392
BI-211	72.87			-3.191E-01	8.537E-01	1.294E+00	1.028E-01	-0.247
	351.07	*		9.661E-02	1.048E-01	1.705E-01	2.250E-02	0.567
PB-211	404.84	*		-2.539E-02	3.611E-01	6.040E-01	3.804E-01	-0.042

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BI-212	427.08			-3.110E-01	7.182E-01	1.082E+00	6.757E-01	-0.288
	831.96			-2.089E-01	4.894E-01	6.786E-01	4.264E-01	-0.308
	727.18	*		-3.699E-02	1.261E-01	1.806E-01	1.974E-02	-0.205
	785.46			4.064E-01	7.248E-01	1.277E+00	1.251E-01	0.318
PB-212	1620.62			7.717E-02	7.502E-01	1.275E+00	1.071E-01	0.061
	74.81			-3.614E-02	1.015E-01	1.541E-01	1.906E-02	-0.235
	77.11			-1.069E-02	6.022E-02	8.577E-02	7.127E-03	-0.125
	87.30			9.078E-02	1.146E-01	1.913E-01	2.626E-02	0.474
PO-212	238.63	*		-1.649E-03	2.717E-02	4.488E-02	6.286E-03	-0.037
	300.09			2.497E-01	3.143E-01	5.462E-01	8.753E-02	0.457
	74.81			-3.614E-02	1.015E-01	1.541E-01	1.906E-02	-0.235
	77.11			-1.069E-02	6.022E-02	8.577E-02	7.127E-03	-0.125
BI-214	87.30			9.078E-02	1.146E-01	1.913E-01	2.626E-02	0.474
	115.19			-1.859E-01	1.287E+00	2.168E+00	1.837E-01	-0.086
	238.63	*		-1.649E-03	2.717E-02	4.488E-02	6.286E-03	-0.037
	300.09			2.497E-01	3.143E-01	5.462E-01	8.753E-02	0.457
PB-214	609.31	*		-4.188E-02	4.001E-02	5.616E-02	6.348E-03	-0.746
	1120.29			-1.154E-01	1.225E-01	1.512E-01	1.633E-02	-0.763
	1764.49			-2.282E-02	1.295E-01	2.307E-01	1.901E-02	-0.099
	74.81			-6.228E-02	1.749E-01	2.654E-01	2.914E-02	-0.235
PO-214	77.11			-1.833E-02	1.032E-01	1.470E-01	1.658E-02	-0.125
	87.30			1.555E-01	1.960E-01	3.278E-01	3.985E-02	0.474
	241.98			-1.574E-01	1.568E-01	2.186E-01	3.185E-02	-0.720
	295.21			-1.061E-02	5.793E-02	9.021E-02	1.471E-02	-0.118
PO-215	351.92	*		1.864E-02	3.774E-02	5.908E-02	8.360E-03	0.316
	74.81			-6.228E-02	1.749E-01	2.654E-01	2.914E-02	-0.235
	77.11			-1.833E-02	1.032E-01	1.470E-01	1.658E-02	-0.125
	87.30			1.555E-01	1.960E-01	3.278E-01	3.985E-02	0.474
PO-216	241.98			-1.574E-01	1.568E-01	2.186E-01	3.185E-02	-0.720
	295.21			-1.061E-02	5.793E-02	9.021E-02	1.471E-02	-0.118
	351.92	*		1.864E-02	3.774E-02	5.908E-02	8.360E-03	0.316
	81.07			1.816E-02	6.415E-02	1.033E-01	8.983E-03	0.176
PO-218	83.78			6.609E-03	3.769E-02	5.996E-02	5.391E-03	0.110
	94.90			-3.158E-01	1.085E-01	1.202E-01	1.083E-02	-2.627
	122.32			-8.579E-02	6.455E-01	1.085E+00	9.867E-02	-0.079
	144.24			2.314E-01	2.729E-01	4.576E-01	4.559E-02	0.506
PO-216	154.21			-5.028E-03	1.444E-01	2.415E-01	2.439E-02	-0.021
	269.46			-4.620E-02	7.473E-02	1.118E-01	1.682E-02	-0.413
	323.87	*		1.326E-01	2.884E-01	4.837E-01	1.012E-01	0.274
	338.28			-7.692E-02	4.198E-01	6.528E-01	1.051E-01	-0.118
PO-216	445.03			-2.186E-01	1.029E+00	1.682E+00	2.308E-01	-0.130
	74.81			-3.614E-02	1.015E-01	1.541E-01	1.906E-02	-0.235
	77.11			-1.069E-02	6.022E-02	8.577E-02	7.127E-03	-0.125
	87.30			9.078E-02	1.146E-01	1.913E-01	2.626E-02	0.474
PO-218	238.63	*		-1.649E-03	2.717E-02	4.488E-02	6.286E-03	-0.037
	300.09			2.497E-01	3.143E-01	5.462E-01	8.753E-02	0.457
	74.81			-6.228E-02	1.749E-01	2.654E-01	2.914E-02	-0.235
	77.11			-1.833E-02	1.032E-01	1.470E-01	1.658E-02	-0.125
	87.30			1.555E-01	1.960E-01	3.278E-01	3.985E-02	0.474

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	241.98			-1.574E-01	1.568E-01	2.186E-01	3.185E-02	-0.720
	295.21			-1.061E-02	5.793E-02	9.021E-02	1.471E-02	-0.118
	351.92	*		1.864E-02	3.774E-02	5.908E-02	8.360E-03	0.316
RN-219	271.23			-9.428E-02	9.823E-02	1.392E-01	2.237E-02	-0.677
	401.81	*		-4.090E-02	1.634E-01	2.675E-01	4.363E-02	-0.153
RN-220	549.76	*		4.700E+00	1.151E+01	2.005E+01	2.107E+00	0.234
RA-223	81.07			1.816E-02	6.415E-02	1.033E-01	8.983E-03	0.176
	83.78			6.609E-03	3.769E-02	5.996E-02	5.391E-03	0.110
	94.90			-3.158E-01	1.085E-01	1.202E-01	1.083E-02	-2.627
	122.32			-8.579E-02	6.455E-01	1.085E+00	9.867E-02	-0.079
	144.24			2.314E-01	2.729E-01	4.576E-01	4.559E-02	0.506
	154.21			-5.028E-03	1.444E-01	2.415E-01	2.439E-02	-0.021
	269.46			-4.620E-02	7.473E-02	1.118E-01	1.682E-02	-0.413
	323.87	*		1.326E-01	2.884E-01	4.837E-01	1.012E-01	0.274
	338.28			-7.692E-02	4.198E-01	6.528E-01	1.051E-01	-0.118
	445.03			-2.186E-01	1.029E+00	1.682E+00	2.308E-01	-0.130
RA-224	240.98	*		-3.261E-01	2.888E-01	4.154E-01	5.563E-02	-0.785
RA-226	609.31	*		-4.188E-02	4.001E-02	5.616E-02	6.348E-03	-0.746
	1120.29			-1.154E-01	1.225E-01	1.512E-01	1.633E-02	-0.763
	1764.49			-2.282E-02	1.295E-01	2.307E-01	1.901E-02	-0.099
AC-227	79.80			1.661E-01	4.657E-01	7.548E-01	1.621E-01	0.220
	236.00			-2.113E-01	1.013E-01	1.214E-01	1.912E-02	-1.740
	256.20	*		-2.451E-02	1.640E-01	2.622E-01	4.998E-02	-0.093
	286.10			-9.738E-02	6.118E-01	9.664E-01	1.767E-01	-0.101
	299.80			5.146E-01	5.855E-01	1.017E+00	2.168E-01	0.506
	304.40			1.563E-01	7.674E-01	1.261E+00	2.774E-01	0.124
	334.20			1.884E-01	1.078E+00	1.751E+00	3.872E-01	0.108
TH-227	79.80			1.661E-01	4.658E-01	7.548E-01	1.642E-01	0.220
	94.00			-2.242E+00	9.823E-01	1.217E+00	2.672E-01	-1.843
	236.00			-2.113E-01	1.007E-01	1.214E-01	1.804E-02	-1.740
	256.20	*		-2.451E-02	1.641E-01	2.622E-01	5.587E-02	-0.093
	286.10			-9.738E-02	6.194E-01	9.664E-01	9.777E-01	-0.101
	299.80			5.146E-01	5.855E-01	1.017E+00	2.168E-01	0.506
	304.40			1.563E-01	7.674E-01	1.261E+00	2.774E-01	0.124
	334.20			1.884E-01	1.078E+00	1.751E+00	3.872E-01	0.108
AC-228	338.32			-3.849E-02	1.039E-01	1.558E-01	6.629E-02	-0.247
	911.07	*		-4.745E-03	6.717E-02	1.096E-01	1.334E-02	-0.043
	969.11			-6.142E-02	9.848E-02	1.444E-01	3.423E-02	-0.425
RA-228	338.32			-3.849E-02	1.039E-01	1.558E-01	6.629E-02	-0.247
	911.07	*		-4.745E-03	6.717E-02	1.096E-01	1.334E-02	-0.043
	969.11			-6.142E-02	9.848E-02	1.444E-01	3.423E-02	-0.425
TH-228	74.81			-3.645E-02	1.023E-01	1.554E-01	1.271E-02	-0.235
	77.11			-1.078E-02	6.073E-02	8.649E-02	7.187E-03	-0.125
	87.30			9.154E-02	1.152E-01	1.929E-01	1.814E-02	0.474
	238.63	*		-1.663E-03	2.740E-02	4.526E-02	6.338E-03	-0.037
	300.09			2.518E-01	3.494E-01	5.507E-01	3.333E-01	0.457
TH-229	85.43			-1.881E-02	5.787E-02	8.748E-02	8.029E-03	-0.215
	88.47			1.410E-02	3.237E-02	5.264E-02	4.972E-03	0.268
	100.00			3.671E-02	5.637E-02	1.017E-01	8.925E-03	0.361

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	193.63	*		-1.553E-01	1.919E-01	2.912E-01	3.198E-02	-0.533
	210.97			1.430E-01	2.570E-01	4.463E-01	5.282E-02	0.320
	609.31	*		-4.188E-02	4.001E-02	5.616E-02	6.348E-03	-0.746
	1120.29			-1.154E-01	1.225E-01	1.512E-01	1.633E-02	-0.763
	1764.49			-2.282E-02	1.295E-01	2.307E-01	1.901E-02	-0.099
PA-231	283.67	*		-3.214E-01	6.525E-01	9.866E-01	1.955E-01	-0.326
TH-231	301.29			-1.641E-01	2.480E-01	3.652E-01	6.294E-02	-0.449
	81.07			1.816E-02	6.415E-02	1.033E-01	8.983E-03	0.176
	83.78			6.609E-03	3.769E-02	5.996E-02	5.391E-03	0.110
	94.90			-3.158E-01	1.085E-01	1.202E-01	1.083E-02	-2.627
	122.32			-8.579E-02	6.455E-01	1.085E+00	9.867E-02	-0.079
U-231	144.24			2.314E-01	2.729E-01	4.576E-01	4.559E-02	0.506
	154.21			-5.028E-03	1.444E-01	2.415E-01	2.439E-02	-0.021
	269.46			-4.620E-02	7.473E-02	1.118E-01	1.682E-02	-0.413
	323.87	*		1.326E-01	2.884E-01	4.837E-01	1.012E-01	0.274
	338.28			-7.692E-02	4.198E-01	6.528E-01	1.051E-01	-0.118
	445.03			-2.186E-01	1.029E+00	1.682E+00	2.308E-01	-0.130
	84.21			-7.476E-02	5.425E-01	8.365E-01	7.562E-02	-0.089
	92.29			-4.927E-02	2.876E-01	4.899E-01	4.489E-02	-0.101
	95.87	*		6.376E-02	1.180E-01	1.932E-01	1.731E-02	0.330
	108.00			-9.664E-02	2.144E-01	3.521E-01	3.015E-02	-0.274
TH-232	338.32			-3.849E-02	1.028E-01	1.558E-01	2.101E-02	-0.247
PA-233	911.07	*		-4.745E-03	6.717E-02	1.096E-01	1.334E-02	-0.043
	969.11			-6.142E-02	9.848E-02	1.444E-01	3.423E-02	-0.425
	75.28			3.057E-01	7.956E-01	1.298E+00	1.958E-01	0.236
	86.59			1.497E-01	4.931E-01	7.898E-01	2.136E-01	0.190
	300.12			1.285E-01	1.629E-01	2.820E-01	5.420E-02	0.456
PA-234	311.98	*		-6.766E-03	2.883E-02	4.487E-02	6.583E-03	-0.151
	340.50			1.015E-01	2.399E-01	4.005E-01	1.039E-01	0.253
	398.62			-1.812E-01	8.711E-01	1.435E+00	3.928E-01	-0.126
	415.76			3.300E-01	6.654E-01	1.181E+00	2.657E-01	0.279
	63.00			9.176E-01	7.666E-01	9.241E-01	1.368E-01	0.993
	94.67			-2.212E-01	8.005E-02	8.700E-02	1.104E-02	-2.543
	98.44			-7.436E-03	3.312E-02	5.017E-02	2.801E-02	-0.148
	99.86			1.108E-01	1.446E-01	2.626E-01	2.307E-02	0.422
	111.00			-2.105E-02	5.909E-02	9.769E-02	1.174E-02	-0.215
	131.20			4.631E-02	3.679E-02	6.808E-02	5.873E-03	0.680
	152.70			7.452E-02	1.221E-01	2.138E-01	3.714E-02	0.349
	186.00	+		1.104E+00	9.651E-01	1.090E+00	3.469E-01	1.013
	226.40			-5.561E-04	1.428E-01	2.338E-01	3.766E-02	-0.002
	227.20			6.091E-03	1.561E-01	2.567E-01	3.251E-02	0.024
	248.90			-2.753E-02	3.307E-01	5.334E-01	1.327E-01	-0.052
PA-234	293.70			3.605E-02	2.662E-01	4.347E-01	9.255E-02	0.083
	369.80			-3.611E-03	3.672E-01	5.799E-01	1.351E-01	-0.006
	568.70			-4.160E-02	5.061E-01	8.112E-01	8.423E-02	-0.051
	569.50			-2.605E-02	1.465E-01	2.326E-01	2.414E-02	-0.112
	574.00			1.407E-01	6.555E-01	1.111E+00	1.150E-01	0.127
	699.00			-2.983E-01	3.916E-01	5.616E-01	1.097E-01	-0.531
	706.10			-7.079E-01	5.659E-01	5.488E-01	2.458E-01	-1.290

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	733.00			1.013E-02	1.670E-01	2.721E-01	6.159E-02	0.037
	742.81			-3.155E-01	6.842E-01	9.625E-01	6.485E-01	-0.328
	796.30			2.699E-01	3.763E-01	6.677E-01	1.833E-01	0.404
	805.60			1.197E-01	4.114E-01	6.924E-01	2.147E-01	0.173
	819.60			-2.519E-01	5.281E-01	6.494E-01	2.489E-01	-0.388
	826.30			1.415E-01	2.922E-01	5.072E-01	2.282E-01	0.279
	831.60			-1.081E-01	2.462E-01	3.512E-01	1.061E-01	-0.308
	876.40			1.232E-02	3.580E-01	6.044E-01	6.220E-01	0.020
	880.51			-1.638E-01	1.304E-01	1.701E-01	1.676E-02	-0.963
	883.24			1.435E-01	1.511E-01	2.338E-01	1.575E-01	0.614
	899.00			1.775E-01	3.559E-01	6.314E-01	2.776E-01	0.281
	925.00			-8.379E-02	4.849E-01	7.854E-01	7.658E-02	-0.107
	926.50			-3.096E-02	7.382E-02	1.132E-01	2.908E-02	-0.273
	946.00	*		-1.031E-02	1.181E-01	1.938E-01	3.733E-02	-0.053
	949.00			1.959E-02	1.682E-01	2.871E-01	2.771E-02	0.068
	980.50			4.205E-02	2.867E-01	4.905E-01	4.660E-02	0.086
PA-234M	1394.10			-7.875E-02	5.613E-01	8.693E-01	5.655E-01	-0.091
	766.42			-4.485E+00	5.141E+00	5.993E+00	3.053E+00	-0.748
TH-234	1001.03	*		-2.459E-01	1.846E+00	2.991E+00	3.181E-01	-0.082
	63.29	*		7.872E-01	6.616E-01	7.958E-01	1.384E-01	0.989
	92.38			-3.202E-02	2.294E-01	3.912E-01	7.177E-02	-0.082
U-234	609.31	*		-4.188E-02	4.001E-02	5.616E-02	6.348E-03	-0.746
	1120.29			-1.154E-01	1.225E-01	1.512E-01	1.633E-02	-0.763
	1764.49			-2.282E-02	1.295E-01	2.307E-01	1.901E-02	-0.099
U-235	89.95			-4.921E-01	3.752E-01	4.534E-01	1.408E-01	-1.085
	93.35			-7.639E-02	2.717E-01	4.590E-01	1.293E-01	-0.166
	105.00			1.351E-01	3.379E-01	5.929E-01	1.769E-01	0.228
	143.76	*		6.952E-02	8.547E-02	1.421E-01	2.513E-02	0.489
	163.35			2.275E-02	1.850E-01	2.971E-01	5.809E-02	0.077
	185.71	+		4.090E-02	3.357E-02	4.026E-02	4.269E-03	1.016
	205.31			-4.269E-02	1.975E-01	3.069E-01	6.314E-02	-0.139
NP-236	94.67			-1.677E-01	5.885E-02	6.601E-02	5.954E-03	-2.541
	98.44			-5.628E-03	2.485E-02	3.793E-02	3.353E-03	-0.148
	111.00			-1.592E-02	4.467E-02	7.390E-02	6.293E-03	-0.215
	160.31	*		3.356E-02	2.782E-02	5.116E-02	4.867E-03	0.656
NP-237	86.50	*		4.592E-03	7.492E-02	1.176E-01	2.663E-02	0.039
	95.87			1.710E-01	3.189E-01	5.181E-01	1.283E-01	0.330
U-238	63.29	*		7.872E-01	6.616E-01	7.958E-01	1.384E-01	0.989
	92.38			-3.202E-02	2.293E-01	3.912E-01	3.582E-02	-0.082
NP-239	99.55			5.020E-02	4.958E-02	9.139E-02	8.039E-03	0.549
	117.00	*		-9.790E-03	7.093E-02	1.195E-01	1.011E-02	-0.082
	209.75			-8.883E-02	2.643E-01	4.195E-01	4.939E-02	-0.212
	228.18			1.355E-02	7.613E-02	1.272E-01	1.618E-02	0.107
	277.60			-5.680E-02	7.583E-02	1.112E-01	1.712E-02	-0.511
	334.30			1.067E-01	6.107E-01	9.921E-01	1.355E-01	0.108
AM-241	59.54	*		-2.798E-02	4.037E-02	5.290E-02	4.157E-03	-0.529
AM-243	74.67	*		-6.055E-03	1.647E-02	2.498E-02	2.022E-03	-0.242
	86.72			1.044E+00	2.780E+00	4.493E+00	4.192E-01	0.232
	117.66			-5.497E-01	1.419E+00	2.342E+00	1.981E-01	-0.235

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CM-243	142.18			-2.127E+00	6.592E+00	1.082E+01	9.644E-01	-0.197
	99.55			5.163E-02	5.100E-02	9.400E-02	8.268E-03	0.549
	103.76	*		1.006E-02	2.928E-02	5.158E-02	4.467E-03	0.195
	117.00			-1.007E-02	7.294E-02	1.229E-01	1.040E-02	-0.082
	209.75			-8.753E-02	2.605E-01	4.133E-01	4.866E-02	-0.212
	228.18			1.369E-02	7.689E-02	1.285E-01	1.634E-02	0.107
AM-246	277.60			-5.723E-02	7.642E-02	1.121E-01	1.725E-02	-0.511
	798.80			-1.467E-03	6.058E-02	9.655E-02	9.475E-03	-0.015
	1036.00			1.081E-01	9.938E-02	2.020E-01	1.854E-02	0.535
	1062.04			-6.815E-02	8.985E-02	1.234E-01	1.110E-02	-0.552
	1078.86	*		3.444E-03	4.347E-02	7.321E-02	6.494E-03	0.047
CM-247	278.00			-1.034E-01	3.012E-01	4.666E-01	7.192E-02	-0.222
	287.40			2.144E-01	4.830E-01	8.186E-01	1.251E-01	0.262
CF-249	402.60	*		1.862E-03	1.450E-02	2.487E-02	2.662E-03	0.075
	252.85			-1.200E-01	3.796E-01	5.964E-01	8.368E-02	-0.201
	333.44			4.141E-02	7.789E-02	1.313E-01	1.798E-02	0.315
CF-251	387.95	*		-2.495E-02	1.553E-02	2.013E-02	2.192E-03	-1.239
	176.60	*		-1.434E-02	5.053E-02	8.199E-02	8.352E-03	-0.175
	227.00			5.104E-04	1.381E-01	2.263E-01	2.863E-02	0.002
	285.00			1.363E-01	7.045E-01	1.162E+00	1.782E-01	0.117
ANH-511	511.00	*		-4.109E-02	2.835E-02	5.201E-02	5.562E-03	-0.790

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041820
* Acquisition date   : 24-FEB-2010 09:11:35 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 02:00:00.57 Half life ratio : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 16-FEB-2010 00:00:00 Nuclide Library : SOLID
* Sample ID          : G1202041820 Analyst initials: MXR1
* Batch Number       : 952643 Sample Quantity : 1.4830E+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

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)
---------	-------------------------------------	------------------------	--------------------

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	5.083E-02	1.158E-01	2.156E-01	0.000E+00 NOT IDENT.
NA-22	3.144E-03	1.487E-02	2.620E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	1.541E+02	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-2.311E-03	1.241E-02	1.939E-02	0.000E+00 NOT IDENT.
K-40	6.775E-03	2.123E-01	3.820E-01	0.000E+00 NOT IDENT.
TI-44	-9.422E-03	1.066E-02	1.527E-02	0.000E+00 NOT IDENT.
SC-46	-1.742E-03	1.660E-02	2.848E-02	0.000E+00 NOT IDENT.
V-48	-1.454E-05	2.202E-02	3.798E-02	0.000E+00 NOT IDENT.
CR-51	-1.535E-01	1.406E-01	2.040E-01	0.000E+00 NOT IDENT.
MN-52	3.006E-02	4.296E-02	8.372E-02	0.000E+00 NOT IDENT.
MN-54	-1.201E-02	1.595E-02	2.477E-02	0.000E+00 NOT IDENT.
CO-56	8.245E-03	1.585E-02	2.989E-02	0.000E+00 NOT IDENT.
CO-57	3.159E-05	8.980E-03	1.661E-02	0.000E+00 NOT IDENT.
CO-58	-2.800E-03	1.430E-02	2.284E-02	0.000E+00 NOT IDENT.
FE-59	1.296E-02	2.711E-02	5.100E-02	0.000E+00 NOT IDENT.
CO-60	-4.840E-03	1.837E-02	2.883E-02	0.000E+00 NOT IDENT.
ZN-65	1.327E-02	2.907E-02	5.415E-02	0.000E+00 NOT IDENT.
GE-68	4.739E-02	3.713E-01	6.543E-01	0.000E+00 NOT IDENT.
AS-73	-1.305E-01	1.887E-01	3.068E-01	0.000E+00 NOT IDENT.
AS-74	2.491E-02	3.289E-02	6.191E-02	0.000E+00 NOT IDENT.
SE-75	7.977E-04	1.688E-02	2.942E-02	0.000E+00 NOT IDENT.
BR-77	-1.239E-02	5.170E-01	8.993E-01	0.000E+00 NOT IDENT.
SR-82	5.487E-02	1.427E-01	2.536E-01	0.000E+00 NOT IDENT.
RB-83	1.466E-03	2.277E-02	4.018E-02	0.000E+00 NOT IDENT.
RB-84	-2.012E-02	2.725E-02	4.188E-02	0.000E+00 NOT IDENT.
KR-85	-7.572E+00	5.375E+00	8.333E+00	0.000E+00 NOT IDENT.

SR-85	-3.617E-02	2.568E-02	3.981E-02	0.000E+00	NOT IDENT.
RB-86	-9.449E-02	2.160E-01	3.317E-01	0.000E+00	NOT IDENT.
Y-88	5.050E-03	1.420E-02	2.663E-02	0.000E+00	NOT IDENT.
ZR-88	3.608E-03	1.236E-02	2.285E-02	0.000E+00	NOT IDENT.
Y-91	-1.732E+00	6.774E+00	1.086E+01	0.000E+00	NOT IDENT.
NB-94	2.485E-03	1.473E-02	2.556E-02	0.000E+00	NOT IDENT.
NB-95	-9.808E-03	1.538E-02	2.261E-02	0.000E+00	NOT IDENT.
NB-95M	-1.107E-01	5.098E-02	6.673E-02	0.000E+00	NOT IDENT.
ZR-95	2.272E-02	2.615E-02	5.036E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.189E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.624E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.053E-01	9.564E-01	1.638E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.133E+08	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.708E-04	1.527E-02	2.607E-02	0.000E+00	NOT IDENT.
RH-102	-8.611E-03	1.170E-02	1.844E-02	0.000E+00	NOT IDENT.
RU-103	8.383E-03	1.554E-02	2.902E-02	0.000E+00	NOT IDENT.
RH-106	-7.400E-02	1.423E-01	2.243E-01	0.000E+00	NOT IDENT.
RU-106	-7.400E-02	1.421E-01	2.243E-01	0.000E+00	NOT IDENT.
AG-108M	7.952E-03	1.338E-02	2.540E-02	0.000E+00	NOT IDENT.
CD-109	-2.729E-02	2.502E-01	4.235E-01	0.000E+00	NOT IDENT.
AG-110M	3.846E-03	1.152E-02	2.088E-02	0.000E+00	NOT IDENT.
IN-111	9.936E-03	7.579E-02	1.342E-01	0.000E+00	NOT IDENT.
IN-113M	2.608E-02	1.787E-02	3.644E-02	0.000E+00	NOT IDENT.
SN-113	2.608E-02	1.787E-02	3.644E-02	0.000E+00	NOT IDENT.
IN-114M	7.960E-03	5.847E-02	1.057E-01	0.000E+00	NOT IDENT.
CD-115	-1.057E-01	5.120E-01	8.643E-01	0.000E+00	NOT IDENT.
SN-117M	-6.638E-03	1.376E-02	2.384E-02	0.000E+00	NOT IDENT.
SB-122	-1.239E-01	1.493E-01	2.243E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.009E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-4.897E-04	9.664E-03	1.744E-02	0.000E+00	NOT IDENT.
I-124	-3.003E-02	1.104E-01	1.836E-01	0.000E+00	NOT IDENT.
SB-124	1.623E-02	3.323E-02	6.378E-02	0.000E+00	NOT IDENT.
SB-125	-1.948E-02	3.015E-02	4.810E-02	0.000E+00	NOT IDENT.
TE-125M	-2.976E-01	2.542E+00	4.692E+00	0.000E+00	NOT IDENT.
I-126	2.103E-02	4.947E-02	8.995E-02	0.000E+00	NOT IDENT.
SB-126	1.616E-03	4.733E-02	8.029E-02	0.000E+00	NOT IDENT.
SN-126	1.494E-02	2.441E-02	4.411E-02	0.000E+00	FAIL ABUN
SB-127	4.038E-02	1.887E-01	3.302E-01	0.000E+00	NOT IDENT.
XE-127	-2.384E-03	1.597E-02	2.798E-02	0.000E+00	NOT IDENT.
I-131	-1.118E-03	2.799E-02	4.681E-02	0.000E+00	NOT IDENT.
TE-132	2.634E-02	5.273E-02	9.772E-02	0.000E+00	NOT IDENT.
BA-133	-1.526E-02	1.888E-02	2.807E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.160E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.078E-03	1.908E-02	3.361E-02	0.000E+00	NOT IDENT.
CS-135	2.540E-03	5.849E-02	1.018E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	9.528E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.920E-03	3.124E-02	5.195E-02	0.000E+00	NOT IDENT.
BA-137M	-1.654E-02	1.482E-02	2.013E-02	0.000E+00	NOT IDENT.
CS-137	-1.748E-02	1.566E-02	2.128E-02	0.000E+00	NOT IDENT.
CE-139	-2.776E-03	1.113E-02	1.968E-02	0.000E+00	NOT IDENT.
BA-140	3.555E-02	7.160E-02	1.319E-01	0.000E+00	NOT IDENT.
LA-140	-3.905E-03	2.643E-02	4.344E-02	0.000E+00	NOT IDENT.
CE-141	-2.091E-02	1.961E-02	3.244E-02	0.000E+00	NOT IDENT.
CE-143	9.065E-01	1.750E+00	3.153E+00	0.000E+00	NOT IDENT.
CE-144	2.856E-03	7.034E-02	1.297E-01	0.000E+00	NOT IDENT.
PM-144	4.983E-03	1.840E-02	3.219E-02	0.000E+00	NOT IDENT.
PR-144	3.365E-01	1.242E+00	2.174E+00	0.000E+00	NOT IDENT.
PM-146	-1.479E-02	1.973E-02	3.025E-02	0.000E+00	NOT IDENT.
ND-147	1.266E-01	1.498E-01	2.889E-01	0.000E+00	NOT IDENT.
PM-149	-5.038E-01	4.356E+00	7.395E+00	0.000E+00	NOT IDENT.
EU-152	-1.757E-02	4.405E-02	7.075E-02	0.000E+00	NOT IDENT.
GD-153	-2.268E-02	3.023E-02	4.401E-02	0.000E+00	NOT IDENT.
EU-154	8.811E-03	4.168E-02	7.343E-02	0.000E+00	NOT IDENT.
EU-155	9.075E-03	3.401E-02	6.490E-02	0.000E+00	NOT IDENT.
TB-160	-3.570E-02	5.137E-02	7.783E-02	0.000E+00	NOT IDENT.
HO-166M	1.301E-02	3.063E-02	5.469E-02	0.000E+00	FAIL ABUN
TM-171	4.800E+00	7.721E+00	1.337E+01	0.000E+00	NOT IDENT.
LU-176	-4.714E-04	9.931E-03	1.689E-02	0.000E+00	NOT IDENT.
LU-177	-2.873E-02	1.806E-01	3.147E-01	0.000E+00	NOT IDENT.
LU-177M	-3.503E-02	6.648E-02	1.108E-01	0.000E+00	NOT IDENT.
HF-181	-3.122E-03	1.429E-02	2.434E-02	0.000E+00	NOT IDENT.
W-181	-3.134E-02	1.007E-01	1.558E-01	0.000E+00	NOT IDENT.
TA-182	1.398E-02	5.528E-02	9.872E-02	0.000E+00	NOT IDENT.
RE-183	-1.450E-02	4.076E-02	6.810E-02	0.000E+00	NOT IDENT.
RE-184	-3.110E-02	9.645E-02	1.623E-01	0.000E+00	NOT IDENT.
OS-185	-1.165E-02	1.701E-02	2.559E-02	0.000E+00	NOT IDENT.
RE-188	-3.672E-02	5.570E-02	9.506E-02	0.000E+00	NOT IDENT.
W-188	6.422E-01	2.808E+00	4.948E+00	0.000E+00	FAIL ABUN

IR-192	4.071E-03	1.466E-02	2.575E-02	0.000E+00	NOT IDENT.
AU-195	9.180E-03	7.755E-02	1.334E-01	0.000E+00	NOT IDENT.
TL-200	2.514E-01	2.724E+00	4.632E+00	0.000E+00	NOT IDENT.
TL-201	-1.134E-01	5.651E-01	1.002E+00	0.000E+00	NOT IDENT.
TL-202	-1.192E-03	1.992E-02	3.511E-02	0.000E+00	NOT IDENT.
HG-203	2.560E-04	1.495E-02	2.585E-02	0.000E+00	NOT IDENT.
BI-207	-5.474E-03	2.049E-02	3.318E-02	0.000E+00	NOT IDENT.
TL-207	1.326E-01	2.826E-01	5.049E-01	0.000E+00	NOT IDENT.
TL-208	-4.942E-03	1.815E-02	2.880E-02	0.000E+00	NOT IDENT.
PO-209	-2.562E+00	3.129E+00	4.644E+00	0.000E+00	NOT IDENT.
BI-210	-6.090E-01	1.006E+00	1.693E+00	0.000E+00	NOT IDENT.
PB-210	-6.090E-01	1.006E+00	1.693E+00	0.000E+00	NOT IDENT.
PO-210	-6.090E-01	1.006E+00	1.693E+00	0.000E+00	NOT IDENT.
BI-211	9.661E-02	1.027E-01	1.776E-01	0.000E+00	NOT IDENT.
PB-211	-2.539E-02	3.538E-01	6.271E-01	0.000E+00	NOT IDENT.
BI-212	-3.699E-02	1.236E-01	1.849E-01	0.000E+00	NOT IDENT.
PB-212	-1.649E-03	2.662E-02	4.717E-02	0.000E+00	NOT IDENT.
PO-212	-1.649E-03	2.662E-02	4.717E-02	0.000E+00	NOT IDENT.
BI-214	-4.188E-02	3.921E-02	5.774E-02	0.000E+00	NOT IDENT.
PB-214	1.864E-02	3.699E-02	6.154E-02	0.000E+00	NOT IDENT.
PO-214	1.864E-02	3.699E-02	6.154E-02	0.000E+00	NOT IDENT.
PO-215	1.326E-01	2.826E-01	5.049E-01	0.000E+00	NOT IDENT.
PO-216	-1.649E-03	2.662E-02	4.717E-02	0.000E+00	NOT IDENT.
PO-218	1.864E-02	3.699E-02	6.154E-02	0.000E+00	NOT IDENT.
RN-219	-4.090E-02	1.601E-01	2.778E-01	0.000E+00	NOT IDENT.
RN-220	4.700E+00	1.128E+01	2.066E+01	0.000E+00	NOT IDENT.
RA-223	1.326E-01	2.826E-01	5.049E-01	0.000E+00	NOT IDENT.
RA-224	-3.261E-01	2.830E-01	4.365E-01	0.000E+00	NOT IDENT.
RA-226	-4.188E-02	3.921E-02	5.774E-02	0.000E+00	NOT IDENT.
AC-227	-2.451E-02	1.608E-01	2.752E-01	0.000E+00	NOT IDENT.
TH-227	-2.451E-02	1.608E-01	2.752E-01	0.000E+00	NOT IDENT.
AC-228	-4.745E-03	6.583E-02	1.116E-01	0.000E+00	NOT IDENT.
RA-228	-4.745E-03	6.583E-02	1.116E-01	0.000E+00	NOT IDENT.
TH-228	-1.663E-03	2.685E-02	4.757E-02	0.000E+00	NOT IDENT.
TH-229	-1.553E-01	1.881E-01	3.076E-01	0.000E+00	NOT IDENT.
TH-230	-4.188E-02	3.921E-02	5.774E-02	0.000E+00	NOT IDENT.
PA-231	-3.214E-01	6.395E-01	1.033E+00	0.000E+00	NOT IDENT.
TH-231	1.326E-01	2.826E-01	5.049E-01	0.000E+00	NOT IDENT.
U-231	6.376E-02	1.157E-01	2.073E-01	0.000E+00	NOT IDENT.
TH-232	-4.745E-03	6.583E-02	1.116E-01	0.000E+00	NOT IDENT.
PA-233	-6.766E-03	2.825E-02	4.687E-02	0.000E+00	NOT IDENT.
PA-234	-1.031E-02	1.157E-01	1.971E-01	0.000E+00	FAIL ABUN
PA-234M	-2.459E-01	1.809E+00	3.038E+00	0.000E+00	NOT IDENT.
TH-234	7.872E-01	6.484E-01	8.616E-01	0.000E+00	FAIL ABUN
U-234	-4.188E-02	3.921E-02	5.774E-02	0.000E+00	NOT IDENT.
U-235	6.952E-02	8.376E-02	1.511E-01	0.000E+00	FAIL ABUN
NP-236	3.356E-02	2.726E-02	5.427E-02	0.000E+00	NOT IDENT.
NP-237	4.592E-03	7.342E-02	1.265E-01	0.000E+00	NOT IDENT.
U-238	7.872E-01	6.484E-01	8.616E-01	0.000E+00	FAIL ABUN
NP-239	-9.790E-03	6.951E-02	1.276E-01	0.000E+00	NOT IDENT.
AM-241	-2.798E-02	3.956E-02	5.734E-02	0.000E+00	NOT IDENT.
AM-243	-6.055E-03	1.615E-02	2.695E-02	0.000E+00	NOT IDENT.
CM-243	1.006E-02	2.869E-02	5.524E-02	0.000E+00	NOT IDENT.
AM-246	3.444E-03	4.260E-02	7.424E-02	0.000E+00	NOT IDENT.
CM-247	1.862E-03	1.421E-02	2.583E-02	0.000E+00	NOT IDENT.
CF-249	-2.495E-02	1.522E-02	2.092E-02	0.000E+00	NOT IDENT.
CF-251	-1.434E-02	4.952E-02	8.677E-02	0.000E+00	NOT IDENT.
ANH-511	-4.109E-02	2.778E-02	5.370E-02	0.000E+00	NOT IDENT.

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041820.CNF;1
Sample date        : 16-FEB-2010 00:00:00 Acquisition date : 24-FEB-2010 09:11:35
Sample ID          : G1202041820      Sample quantity   : 1.48300E+02 GRAM
Detector name      : GAM11            Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00    Elapsed real time: 0 02:00:00.57  0.0%
Energy tolerance   : 1.50000 keV      Analyst Initials  : MXR1
Abundance limit    : 75.00000         Sensitivity       : 5.00000
Batch ID           : 952643            Detector SN#       :
Matrix Spike ID    :                   LCS ID            : 1032-A
*****

```

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202041820

Page : 2
Acquisition date : 24-FEB-2010 09:11:35

Total number of lines in spectrum 2
Number of unidentified lines 0
Number of lines tentatively identified by NID 2 100.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202041820

Page : 3
Acquisition date : 24-FEB-2010 09:11:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	63.11	50	88	1.28	125.11	120	10	6.98E-03	82.2	4.26E+00	T
0	185.43	54	75	1.06	369.93	364	12	7.47E-03	81.4	6.17E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*                                     *                                         *
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041820.CNF;1 *
* Acquisition date   : 24-FEB-2010 09:11:35   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 02:00:00.57          Half life ratio : 8.00000    *
*****
*                                     SAMPLE DATA                            *
*                                     *                                         *
* Sample date        : 16-FEB-2010 00:00:00   Nuclide Library : SOLID        *
* Sample ID           : G1202041820           Analyst initials: MXR1         *
* Batch Number        : 952643                Sample Quantity : 1.48300E+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

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.083E-02		1.182E-01	2.085E-01	2.360E-02	0.244
NA-22	3.144E-03		1.517E-02	2.594E-02	2.130E-03	0.121
NA-24	7.675E-05		7.860E-05	Half-Life too short		
AL-26	-2.311E-03		1.266E-02	1.937E-02	1.581E-03	-0.119
K-40	6.775E-03		2.167E-01	3.796E-01	3.282E-02	0.018
TI-44	-9.422E-03		1.088E-02	1.417E-02	1.195E-03	-0.665
SC-46	-1.742E-03		1.694E-02	2.795E-02	2.753E-03	-0.062
V-48	-1.454E-05		2.247E-02	3.737E-02	3.545E-03	0.000
CR-51	-1.535E-01		1.435E-01	1.954E-01	2.836E-02	-0.786
MN-52	3.006E-02		4.384E-02	8.316E-02	6.967E-03	0.362
MN-54	-1.201E-02		1.628E-02	2.427E-02	2.390E-03	-0.495
CO-56	8.245E-03		1.618E-02	2.931E-02	2.887E-03	0.281
CO-57	3.159E-05		9.163E-03	1.557E-02	1.317E-03	0.002
CO-58	-2.800E-03		1.459E-02	2.237E-02	2.202E-03	-0.125
FE-59	1.296E-02		2.767E-02	5.032E-02	4.730E-03	0.258
CO-60	-4.840E-03		1.874E-02	2.859E-02	2.362E-03	-0.169
ZN-65	1.327E-02		2.967E-02	5.344E-02	4.586E-03	0.248

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	4.739E-02		3.789E-01	6.453E-01	5.731E-02	0.073
AS-73	-1.305E-01		1.925E-01	2.823E-01	2.120E-02	-0.462
AS-74	2.491E-02		3.356E-02	6.018E-02	6.119E-03	0.414
SE-75	7.977E-04		1.722E-02	2.806E-02	4.124E-03	0.028
BR-77	-1.239E-02		5.275E-01	8.714E-01	9.285E-02	-0.014
SR-82	5.487E-02		1.456E-01	2.481E-01	2.426E-02	0.221
RB-83	1.466E-03		2.323E-02	3.893E-02	4.149E-03	0.038
RB-84	-2.012E-02		2.780E-02	4.110E-02	4.049E-03	-0.489
KR-85	-7.572E+00		5.485E+00	8.072E+00	8.622E-01	-0.938
SR-85	-3.617E-02		2.620E-02	3.856E-02	4.119E-03	-0.938
RB-86	-9.449E-02		2.204E-01	3.271E-01	2.907E-02	-0.289
Y-88	5.050E-03		1.449E-02	2.662E-02	2.161E-03	0.190
ZR-88	3.608E-03		1.261E-02	2.199E-02	2.346E-03	0.164
Y-91	-1.732E+00		6.912E+00	1.074E+01	8.692E-01	-0.161
NB-94	2.485E-03		1.503E-02	2.495E-02	2.396E-03	0.100
NB-95	-9.808E-03		1.569E-02	2.211E-02	2.158E-03	-0.444
NB-95M	-1.107E-01		5.202E-02	6.347E-02	8.862E-03	-1.744
ZR-95	2.272E-02		2.668E-02	4.924E-02	5.182E-03	0.461
NB-97	2.514E-05		2.137E-05	Half-Life too short		
ZR-97	-5.250E-03		8.286E-04	Half-Life too short		
MO-99	1.053E-01		9.760E-01	1.601E+00	2.533E-01	0.066
TC-99M	-4.549E+01		5.778E+01	Half-Life too short		
RH-101	2.708E-04		1.558E-02	2.469E-02	2.764E-03	0.011
RH-102	-8.611E-03		1.194E-02	1.783E-02	1.922E-03	-0.483
RU-103	8.383E-03		1.586E-02	2.808E-02	4.364E-03	0.299
RH-106	-7.400E-02		1.452E-01	2.183E-01	3.107E-02	-0.339
RU-106	-7.400E-02		1.450E-01	2.183E-01	2.166E-02	-0.339
AG-108M	7.952E-03		1.365E-02	2.451E-02	2.709E-03	0.324
CD-109	-2.729E-02		2.553E-01	3.940E-01	3.736E-02	-0.069
AG-110M	3.846E-03		1.176E-02	2.035E-02	1.983E-03	0.189
IN-111	9.936E-03		7.733E-02	1.278E-01	1.741E-02	0.078
IN-113M	2.608E-02		1.823E-02	3.507E-02	3.815E-03	0.743
SN-113	2.608E-02		1.823E-02	3.507E-02	3.815E-03	0.743
IN-114M	7.960E-03		5.967E-02	1.001E-01	1.083E-02	0.080
CD-115	-1.057E-01		5.224E-01	8.378E-01	8.900E-02	-0.126
SN-117M	-6.638E-03		1.404E-02	2.247E-02	2.124E-03	-0.295
SB-122	-1.239E-01		1.524E-01	2.178E-01	2.269E-02	-0.569
I-123	-2.032E-05		2.046E-04	Half-Life too short		
TE-123M	-4.897E-04		9.861E-03	1.644E-02	1.564E-03	-0.030
I-124	-3.003E-02		1.126E-01	1.786E-01	1.805E-02	-0.168
SB-124	1.623E-02		3.390E-02	6.362E-02	5.528E-03	0.255
SB-125	-1.948E-02		3.077E-02	4.639E-02	5.059E-03	-0.420
TE-125M	-2.976E-01		2.594E+00	4.386E+00	4.495E-01	-0.068
I-126	2.103E-02		5.048E-02	8.768E-02	8.311E-03	0.240
SB-126	1.616E-03		4.830E-02	7.841E-02	7.571E-03	0.021
SN-126	1.494E-02		2.491E-02	4.103E-02	3.871E-03	0.364
SB-127	4.038E-02		1.926E-01	3.221E-01	3.404E-02	0.125
XE-127	-2.384E-03		1.630E-02	2.653E-02	3.032E-03	-0.090

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	-1.118E-03		2.856E-02	4.498E-02	5.635E-03	-0.025
TE-132	2.634E-02		5.381E-02	9.288E-02	1.620E-02	0.284
BA-133	-1.526E-02		1.926E-02	2.696E-02	4.348E-03	-0.566
I-133	-5.898E-07		5.919E-06	Half-Life too short		
CS-134	6.078E-03		1.947E-02	3.290E-02	3.245E-03	0.185
CS-135	2.540E-03		5.969E-02	9.714E-02	1.524E-02	0.026
I-135	-1.021E+02		4.861E+01	Half-Life too short		
CS-136	-4.920E-03		3.188E-02	5.120E-02	4.831E-03	-0.096
BA-137M	-1.654E-02		1.512E-02	1.962E-02	1.856E-03	-0.843
CS-137	-1.748E-02		1.598E-02	2.074E-02	1.965E-03	-0.843
CE-139	-2.776E-03		1.136E-02	1.857E-02	1.805E-03	-0.149
BA-140	3.555E-02		7.306E-02	1.279E-01	4.310E-02	0.278
LA-140	-3.905E-03		2.697E-02	4.327E-02	3.639E-03	-0.090
CE-141	-2.091E-02		2.001E-02	3.052E-02	2.797E-03	-0.685
CE-143	9.065E-01		1.786E+00	3.014E+00	7.491E-01	0.301
CE-144	2.856E-03		7.178E-02	1.217E-01	1.899E-02	0.023
PM-144	4.983E-03		1.877E-02	3.141E-02	3.011E-03	0.159
PR-144	3.365E-01		1.268E+00	2.121E+00	2.033E-01	0.159
PM-146	-1.479E-02		2.013E-02	2.922E-02	3.663E-03	-0.506
ND-147	1.266E-01		1.529E-01	2.800E-01	4.531E-02	0.452
PM-149	-5.038E-01		4.445E+00	7.065E+00	1.415E+00	-0.071
EU-152	-1.757E-02		4.495E-02	6.789E-02	9.204E-03	-0.259
GD-153	-2.268E-02		3.084E-02	4.104E-02	3.646E-03	-0.553
EU-154	8.811E-03		4.253E-02	7.272E-02	7.996E-03	0.121
EU-155	9.075E-03		3.470E-02	6.062E-02	5.289E-03	0.150
TB-160	-3.570E-02		5.241E-02	7.637E-02	7.525E-03	-0.467
HO-166M	1.301E-02		3.126E-02	5.339E-02	5.142E-03	0.244
TM-171	4.800E+00		7.879E+00	1.236E+01	9.278E-01	0.388
LU-176	-4.714E-04		1.013E-02	1.616E-02	2.375E-03	-0.029
LU-177	-2.873E-02		1.842E-01	2.985E-01	3.493E-02	-0.096
LU-177M	-3.503E-02		6.784E-02	1.068E-01	1.146E-02	-0.328
HF-181	-3.122E-03		1.458E-02	2.354E-02	2.535E-03	-0.133
W-181	-3.134E-02		1.028E-01	1.440E-01	1.068E-02	-0.218
TA-182	1.398E-02		5.641E-02	9.766E-02	7.934E-03	0.143
RE-183	-1.450E-02		4.159E-02	6.422E-02	6.156E-03	-0.226
RE-184	-3.110E-02		9.841E-02	1.546E-01	2.169E-02	-0.201
OS-185	-1.165E-02		1.735E-02	2.493E-02	2.406E-03	-0.467
RE-188	-3.672E-02		5.684E-02	8.956E-02	8.354E-03	-0.410
W-188	6.422E-01		2.865E+00	4.729E+00	7.183E-01	0.136
IR-192	4.071E-03		1.495E-02	2.466E-02	3.544E-03	0.165
AU-195	9.180E-03		7.913E-02	1.244E-01	1.098E-02	0.074
TL-200	2.514E-01		2.780E+00	4.452E+00	5.357E-01	0.056
TL-201	-1.134E-01		5.766E-01	9.459E-01	9.254E-02	-0.120
TL-202	-1.192E-03		2.032E-02	3.388E-02	3.655E-03	-0.035
HG-203	2.560E-04		1.526E-02	2.469E-02	3.856E-03	0.010
BI-207	-5.474E-03		2.091E-02	3.271E-02	2.939E-03	-0.167
TL-207	1.326E-01		2.884E-01	4.837E-01	1.012E-01	0.274
TL-208	-4.942E-03		1.852E-02	2.798E-02	3.021E-03	-0.177

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-2.562E+00		3.193E+00	4.559E+00	4.488E-01	-0.562
BI-210	-6.090E-01		1.026E+00	1.554E+00	1.446E-01	-0.392
PB-210	-6.090E-01		1.026E+00	1.554E+00	1.446E-01	-0.392
PO-210	-6.090E-01		1.026E+00	1.554E+00	1.310E-01	-0.392
BI-211	9.661E-02		1.048E-01	1.705E-01	2.250E-02	0.567
PB-211	-2.539E-02		3.611E-01	6.040E-01	3.804E-01	-0.042
BI-212	-3.699E-02		1.261E-01	1.806E-01	1.974E-02	-0.205
PB-212	-1.649E-03		2.717E-02	4.488E-02	6.286E-03	-0.037
PO-212	-1.649E-03		2.717E-02	4.488E-02	6.286E-03	-0.037
BI-214	-4.188E-02		4.001E-02	5.616E-02	6.348E-03	-0.746
PB-214	1.864E-02		3.774E-02	5.908E-02	8.360E-03	0.316
PO-214	1.864E-02		3.774E-02	5.908E-02	8.360E-03	0.316
PO-215	1.326E-01		2.884E-01	4.837E-01	1.012E-01	0.274
PO-216	-1.649E-03		2.717E-02	4.488E-02	6.286E-03	-0.037
PO-218	1.864E-02		3.774E-02	5.908E-02	8.360E-03	0.316
RN-219	-4.090E-02		1.634E-01	2.675E-01	4.363E-02	-0.153
RN-220	4.700E+00		1.151E+01	2.005E+01	2.107E+00	0.234
RA-223	1.326E-01		2.884E-01	4.837E-01	1.012E-01	0.274
RA-224	-3.261E-01		2.888E-01	4.154E-01	5.563E-02	-0.785
RA-226	-4.188E-02		4.001E-02	5.616E-02	6.348E-03	-0.746
AC-227	-2.451E-02		1.640E-01	2.622E-01	4.998E-02	-0.093
TH-227	-2.451E-02		1.641E-01	2.622E-01	5.587E-02	-0.093
AC-228	-4.745E-03		6.717E-02	1.096E-01	1.334E-02	-0.043
RA-228	-4.745E-03		6.717E-02	1.096E-01	1.334E-02	-0.043
TH-228	-1.663E-03		2.740E-02	4.526E-02	6.338E-03	-0.037
TH-229	-1.553E-01		1.919E-01	2.912E-01	3.198E-02	-0.533
TH-230	-4.188E-02		4.001E-02	5.616E-02	6.348E-03	-0.746
PA-231	-3.214E-01		6.525E-01	9.866E-01	1.955E-01	-0.326
TH-231	1.326E-01		2.884E-01	4.837E-01	1.012E-01	0.274
U-231	6.376E-02		1.180E-01	1.932E-01	1.731E-02	0.330
TH-232	-4.745E-03		6.717E-02	1.096E-01	1.334E-02	-0.043
PA-233	-6.766E-03		2.883E-02	4.487E-02	6.583E-03	-0.151
PA-234	-1.031E-02		1.181E-01	1.938E-01	3.733E-02	-0.053
PA-234M	-2.459E-01		1.846E+00	2.991E+00	3.181E-01	-0.082
TH-234	7.872E-01	+	6.616E-01	7.958E-01	1.384E-01	0.989
U-234	-4.188E-02		4.001E-02	5.616E-02	6.348E-03	-0.746
U-235	6.952E-02		8.547E-02	1.421E-01	2.513E-02	0.489
NP-236	3.356E-02		2.782E-02	5.116E-02	4.867E-03	0.656
NP-237	4.592E-03		7.492E-02	1.176E-01	2.663E-02	0.039
U-238	7.872E-01	+	6.616E-01	7.958E-01	1.384E-01	0.989
NP-239	-9.790E-03		7.093E-02	1.195E-01	1.011E-02	-0.082
AM-241	-2.798E-02		4.037E-02	5.290E-02	4.157E-03	-0.529
AM-243	-6.055E-03		1.647E-02	2.498E-02	2.022E-03	-0.242
CM-243	1.006E-02		2.928E-02	5.158E-02	4.467E-03	0.195
AM-246	3.444E-03		4.347E-02	7.321E-02	6.494E-03	0.047
CM-247	1.862E-03		1.450E-02	2.487E-02	2.662E-03	0.075
CF-249	-2.495E-02		1.553E-02	2.013E-02	2.192E-03	-1.239
CF-251	-1.434E-02		5.053E-02	8.199E-02	8.352E-03	-0.175

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	-4.109E-02		2.835E-02	5.201E-02	5.562E-03	-0.790

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]G1202041820          *
* Acquisition date   : 24-FEB-2010 09:11:35 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 02:00:00.57 Half life ratio : 8.000    *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 16-FEB-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202041820 Analyst initials: MXR1         *
* Batch Number       : 952643 Sample Quantity : 1.4830E+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

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU
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---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	5.083E-02	1.158E-01	1.079E-01	5.910E-02 NOT IDENT.
NA-22	3.144E-03	1.487E-02	1.311E-02	7.586E-03 NOT IDENT.
NA-24	7.675E+01	1.541E+02	0.000E+00	7.860E+01 SHORT HLIF
AL-26	-2.311E-03	1.241E-02	9.701E-03	6.329E-03 NOT IDENT.
K-40	6.775E-03	2.123E-01	1.911E-01	1.083E-01 NOT IDENT.
TI-44	-9.422E-03	1.066E-02	7.640E-03	5.440E-03 NOT IDENT.
SC-46	-1.742E-03	1.660E-02	1.425E-02	8.468E-03 NOT IDENT.
V-48	-1.454E-05	2.202E-02	1.900E-02	1.123E-02 NOT IDENT.
CR-51	-1.535E-01	1.406E-01	1.020E-01	7.176E-02 NOT IDENT.
MN-52	3.006E-02	4.296E-02	4.189E-02	2.192E-02 NOT IDENT.
MN-54	-1.201E-02	1.595E-02	1.239E-02	8.139E-03 NOT IDENT.
CO-56	8.245E-03	1.585E-02	1.496E-02	8.088E-03 NOT IDENT.
CO-57	3.159E-05	8.980E-03	8.312E-03	4.582E-03 NOT IDENT.
CO-58	-2.800E-03	1.430E-02	1.143E-02	7.294E-03 NOT IDENT.
FE-59	1.296E-02	2.711E-02	2.552E-02	1.383E-02 NOT IDENT.
CO-60	-4.840E-03	1.837E-02	1.442E-02	9.371E-03 NOT IDENT.
ZN-65	1.327E-02	2.907E-02	2.709E-02	1.483E-02 NOT IDENT.
GE-68	4.739E-02	3.713E-01	3.274E-01	1.895E-01 NOT IDENT.
AS-73	-1.305E-01	1.887E-01	1.535E-01	9.626E-02 NOT IDENT.
AS-74	2.491E-02	3.289E-02	3.097E-02	1.678E-02 NOT IDENT.
SE-75	7.977E-04	1.688E-02	1.472E-02	8.611E-03 NOT IDENT.
BR-77	-1.239E-02	5.170E-01	4.499E-01	2.638E-01 NOT IDENT.
SR-82	5.487E-02	1.427E-01	1.269E-01	7.281E-02 NOT IDENT.
RB-83	1.466E-03	2.277E-02	2.010E-02	1.161E-02 NOT IDENT.
RB-84	-2.012E-02	2.725E-02	2.095E-02	1.390E-02 NOT IDENT.
KR-85	-7.572E+00	5.375E+00	4.169E+00	2.743E+00 NOT IDENT.

SR-85	-3.617E-02	2.568E-02	1.991E-02	1.310E-02	NOT IDENT.
RB-86	-9.449E-02	2.160E-01	1.659E-01	1.102E-01	NOT IDENT.
Y-88	5.050E-03	1.420E-02	1.333E-02	7.246E-03	NOT IDENT.
ZR-88	3.608E-03	1.236E-02	1.143E-02	6.306E-03	NOT IDENT.
Y-91	-1.732E+00	6.774E+00	5.432E+00	3.456E+00	NOT IDENT.
NB-94	2.485E-03	1.473E-02	1.279E-02	7.515E-03	NOT IDENT.
NB-95	-9.808E-03	1.538E-02	1.131E-02	7.846E-03	NOT IDENT.
NB-95M	-1.107E-01	5.098E-02	3.339E-02	2.601E-02	NOT IDENT.
ZR-95	2.272E-02	2.615E-02	2.520E-02	1.334E-02	NOT IDENT.
NB-97	2.514E+01	4.189E+01	0.000E+00	2.137E+01	SHORT HLIF
ZR-97	-5.250E+03	1.624E+03	0.000E+00	8.286E+02	SHORT HLIF
MO-99	1.053E-01	9.564E-01	8.196E-01	4.880E-01	NOT IDENT.
TC-99M	-4.549E+07	1.133E+08	0.000E+00	5.778E+07	SHORT HLIF
RH-101	2.708E-04	1.527E-02	1.304E-02	7.792E-03	NOT IDENT.
RH-102	-8.611E-03	1.170E-02	9.225E-03	5.970E-03	NOT IDENT.
RU-103	8.383E-03	1.554E-02	1.452E-02	7.930E-03	NOT IDENT.
RH-106	-7.400E-02	1.423E-01	1.122E-01	7.258E-02	NOT IDENT.
RU-106	-7.400E-02	1.421E-01	1.122E-01	7.248E-02	NOT IDENT.
AG-108M	7.952E-03	1.338E-02	1.271E-02	6.827E-03	NOT IDENT.
CD-109	-2.729E-02	2.502E-01	2.119E-01	1.277E-01	NOT IDENT.
AG-110M	3.846E-03	1.152E-02	1.045E-02	5.879E-03	NOT IDENT.
IN-111	9.936E-03	7.579E-02	6.715E-02	3.867E-02	NOT IDENT.
IN-113M	2.608E-02	1.787E-02	1.823E-02	9.117E-03	NOT IDENT.
SN-113	2.608E-02	1.787E-02	1.823E-02	9.117E-03	NOT IDENT.
IN-114M	7.960E-03	5.847E-02	5.290E-02	2.983E-02	NOT IDENT.
CD-115	-1.057E-01	5.120E-01	4.324E-01	2.612E-01	NOT IDENT.
SN-117M	-6.638E-03	1.376E-02	1.193E-02	7.018E-03	NOT IDENT.
SB-122	-1.239E-01	1.493E-01	1.122E-01	7.619E-02	NOT IDENT.
I-123	-2.032E+01	4.009E+02	0.000E+00	2.046E+02	SHORT HLIF
TE-123M	-4.897E-04	9.664E-03	8.724E-03	4.931E-03	NOT IDENT.
I-124	-3.003E-02	1.104E-01	9.187E-02	5.631E-02	NOT IDENT.
SB-124	1.623E-02	3.323E-02	3.191E-02	1.695E-02	NOT IDENT.
SB-125	-1.948E-02	3.015E-02	2.407E-02	1.538E-02	NOT IDENT.
TE-125M	-2.976E-01	2.542E+00	2.347E+00	1.297E+00	NOT IDENT.
I-126	2.103E-02	4.947E-02	4.500E-02	2.524E-02	NOT IDENT.
SB-126	1.616E-03	4.733E-02	4.017E-02	2.415E-02	NOT IDENT.
SN-126	1.494E-02	2.441E-02	2.207E-02	1.246E-02	FAIL ABUN
SB-127	4.038E-02	1.887E-01	1.652E-01	9.628E-02	NOT IDENT.
XE-127	-2.384E-03	1.597E-02	1.400E-02	8.149E-03	NOT IDENT.
I-131	-1.118E-03	2.799E-02	2.342E-02	1.428E-02	NOT IDENT.
TE-132	2.634E-02	5.273E-02	4.889E-02	2.690E-02	NOT IDENT.
BA-133	-1.526E-02	1.888E-02	1.405E-02	9.632E-03	NOT IDENT.
I-133	-5.898E-01	1.160E+01	0.000E+00	5.919E+00	SHORT HLIF
CS-134	6.078E-03	1.908E-02	1.681E-02	9.733E-03	NOT IDENT.
CS-135	2.540E-03	5.849E-02	5.094E-02	2.984E-02	NOT IDENT.
I-135	-1.021E+08	9.528E+07	0.000E+00	4.861E+07	SHORT HLIF
CS-136	-4.920E-03	3.124E-02	2.599E-02	1.594E-02	NOT IDENT.
BA-137M	-1.654E-02	1.482E-02	1.007E-02	7.559E-03	NOT IDENT.
CS-137	-1.748E-02	1.566E-02	1.065E-02	7.991E-03	NOT IDENT.
CE-139	-2.776E-03	1.113E-02	9.848E-03	5.678E-03	NOT IDENT.
BA-140	3.555E-02	7.160E-02	6.598E-02	3.653E-02	NOT IDENT.
LA-140	-3.905E-03	2.643E-02	2.173E-02	1.349E-02	NOT IDENT.
CE-141	-2.091E-02	1.961E-02	1.623E-02	1.001E-02	NOT IDENT.
CE-143	9.065E-01	1.750E+00	1.577E+00	8.928E-01	NOT IDENT.
CE-144	2.856E-03	7.034E-02	6.486E-02	3.589E-02	NOT IDENT.
PM-144	4.983E-03	1.840E-02	1.611E-02	9.387E-03	NOT IDENT.
PR-144	3.365E-01	1.242E+00	1.087E+00	6.338E-01	NOT IDENT.
PM-146	-1.479E-02	1.973E-02	1.513E-02	1.006E-02	NOT IDENT.
ND-147	1.266E-01	1.498E-01	1.445E-01	7.645E-02	NOT IDENT.
PM-149	-5.038E-01	4.356E+00	3.700E+00	2.222E+00	NOT IDENT.
EU-152	-1.757E-02	4.405E-02	3.540E-02	2.247E-02	NOT IDENT.
GD-153	-2.268E-02	3.023E-02	2.202E-02	1.542E-02	NOT IDENT.
EU-154	8.811E-03	4.168E-02	3.673E-02	2.126E-02	NOT IDENT.
EU-155	9.075E-03	3.401E-02	3.247E-02	1.735E-02	NOT IDENT.
TB-160	-3.570E-02	5.137E-02	3.894E-02	2.621E-02	NOT IDENT.
HO-166M	1.301E-02	3.063E-02	2.736E-02	1.563E-02	FAIL ABUN
TM-171	4.800E+00	7.721E+00	6.689E+00	3.940E+00	NOT IDENT.
LU-176	-4.714E-04	9.931E-03	8.448E-03	5.067E-03	NOT IDENT.
LU-177	-2.873E-02	1.806E-01	1.574E-01	9.212E-02	NOT IDENT.
LU-177M	-3.503E-02	6.648E-02	5.542E-02	3.392E-02	NOT IDENT.
HF-181	-3.122E-03	1.429E-02	1.218E-02	7.292E-03	NOT IDENT.
W-181	-3.134E-02	1.007E-01	7.797E-02	5.138E-02	NOT IDENT.
TA-182	1.398E-02	5.528E-02	4.939E-02	2.821E-02	NOT IDENT.
RE-183	-1.450E-02	4.076E-02	3.407E-02	2.079E-02	NOT IDENT.
RE-184	-3.110E-02	9.645E-02	8.120E-02	4.921E-02	NOT IDENT.
OS-185	-1.165E-02	1.701E-02	1.280E-02	8.677E-03	NOT IDENT.
RE-188	-3.672E-02	5.570E-02	4.756E-02	2.842E-02	NOT IDENT.
W-188	6.422E-01	2.808E+00	2.475E+00	1.432E+00	FAIL ABUN

IR-192	4.071E-03	1.466E-02	1.288E-02	7.477E-03	NOT IDENT.
AU-195	9.180E-03	7.755E-02	6.675E-02	3.957E-02	NOT IDENT.
TL-200	2.514E-01	2.724E+00	2.317E+00	1.390E+00	NOT IDENT.
TL-201	-1.134E-01	5.651E-01	5.015E-01	2.883E-01	NOT IDENT.
TL-202	-1.192E-03	1.992E-02	1.757E-02	1.016E-02	NOT IDENT.
HG-203	2.560E-04	1.495E-02	1.293E-02	7.629E-03	NOT IDENT.
BI-207	-5.474E-03	2.049E-02	1.660E-02	1.046E-02	NOT IDENT.
TL-207	1.326E-01	2.826E-01	2.526E-01	1.442E-01	NOT IDENT.
TL-208	-4.942E-03	1.815E-02	1.441E-02	9.261E-03	NOT IDENT.
PO-209	-2.562E+00	3.129E+00	2.323E+00	1.597E+00	NOT IDENT.
BI-210	-6.090E-01	1.006E+00	8.471E-01	5.132E-01	NOT IDENT.
PB-210	-6.090E-01	1.006E+00	8.471E-01	5.132E-01	NOT IDENT.
PO-210	-6.090E-01	1.006E+00	8.471E-01	5.131E-01	NOT IDENT.
BI-211	9.661E-02	1.027E-01	8.887E-02	5.239E-02	NOT IDENT.
PB-211	-2.539E-02	3.538E-01	3.137E-01	1.805E-01	NOT IDENT.
BI-212	-3.699E-02	1.236E-01	9.251E-02	6.304E-02	NOT IDENT.
PB-212	-1.649E-03	2.662E-02	2.360E-02	1.358E-02	NOT IDENT.
PO-212	-1.649E-03	2.662E-02	2.360E-02	1.358E-02	NOT IDENT.
BI-214	-4.188E-02	3.921E-02	2.889E-02	2.001E-02	NOT IDENT.
PB-214	1.864E-02	3.699E-02	3.079E-02	1.887E-02	NOT IDENT.
PO-214	1.864E-02	3.699E-02	3.079E-02	1.887E-02	NOT IDENT.
PO-215	1.326E-01	2.826E-01	2.526E-01	1.442E-01	NOT IDENT.
PO-216	-1.649E-03	2.662E-02	2.360E-02	1.358E-02	NOT IDENT.
PO-218	1.864E-02	3.699E-02	3.079E-02	1.887E-02	NOT IDENT.
RN-219	-4.090E-02	1.601E-01	1.390E-01	8.171E-02	NOT IDENT.
RN-220	4.700E+00	1.128E+01	1.034E+01	5.753E+00	NOT IDENT.
RA-223	1.326E-01	2.826E-01	2.526E-01	1.442E-01	NOT IDENT.
RA-224	-3.261E-01	2.830E-01	2.184E-01	1.444E-01	NOT IDENT.
RA-226	-4.188E-02	3.921E-02	2.889E-02	2.001E-02	NOT IDENT.
AC-227	-2.451E-02	1.608E-01	1.377E-01	8.202E-02	NOT IDENT.
TH-227	-2.451E-02	1.608E-01	1.377E-01	8.203E-02	NOT IDENT.
AC-228	-4.745E-03	6.583E-02	5.581E-02	3.359E-02	NOT IDENT.
RA-228	-4.745E-03	6.583E-02	5.581E-02	3.359E-02	NOT IDENT.
TH-228	-1.663E-03	2.685E-02	2.380E-02	1.370E-02	NOT IDENT.
TH-229	-1.553E-01	1.881E-01	1.539E-01	9.596E-02	NOT IDENT.
TH-230	-4.188E-02	3.921E-02	2.889E-02	2.001E-02	NOT IDENT.
PA-231	-3.214E-01	6.395E-01	5.168E-01	3.263E-01	NOT IDENT.
TH-231	1.326E-01	2.826E-01	2.526E-01	1.442E-01	NOT IDENT.
U-231	6.376E-02	1.157E-01	1.037E-01	5.901E-02	NOT IDENT.
TH-232	-4.745E-03	6.583E-02	5.581E-02	3.359E-02	NOT IDENT.
PA-233	-6.766E-03	2.825E-02	2.345E-02	1.441E-02	NOT IDENT.
PA-234	-1.031E-02	1.157E-01	9.860E-02	5.903E-02	FAIL ABUN
PA-234M	-2.459E-01	1.809E+00	1.520E+00	9.232E-01	NOT IDENT.
TH-234	7.872E-01	6.484E-01	4.310E-01	3.308E-01	FAIL ABUN
U-234	-4.188E-02	3.921E-02	2.889E-02	2.001E-02	NOT IDENT.
U-235	6.952E-02	8.376E-02	7.560E-02	4.273E-02	FAIL ABUN
NP-236	3.356E-02	2.726E-02	2.715E-02	1.391E-02	NOT IDENT.
NP-237	4.592E-03	7.342E-02	6.328E-02	3.746E-02	NOT IDENT.
U-238	7.872E-01	6.484E-01	4.310E-01	3.308E-01	FAIL ABUN
NP-239	-9.790E-03	6.951E-02	6.385E-02	3.547E-02	NOT IDENT.
AM-241	-2.798E-02	3.956E-02	2.869E-02	2.019E-02	NOT IDENT.
AM-243	-6.055E-03	1.615E-02	1.348E-02	8.237E-03	NOT IDENT.
CM-243	1.006E-02	2.869E-02	2.764E-02	1.464E-02	NOT IDENT.
AM-246	3.444E-03	4.260E-02	3.714E-02	2.173E-02	NOT IDENT.
CM-247	1.862E-03	1.421E-02	1.292E-02	7.248E-03	NOT IDENT.
CF-249	-2.495E-02	1.522E-02	1.046E-02	7.766E-03	NOT IDENT.
CF-251	-1.434E-02	4.952E-02	4.341E-02	2.526E-02	NOT IDENT.
ANH-511	-4.109E-02	2.778E-02	2.687E-02	1.417E-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	48.9367
46.50	48.9367
46.50	48.9367
48.70	72.3287
49.72	61.5845
51.35	46.4423
52.39	49.9310
52.97	61.1428
53.15	61.1786
53.44	50.1023
54.07	40.1634
56.28	47.1864
56.28	47.1869
57.37	33.8192
57.53	32.7081
57.53	32.7083
57.60	32.7152
57.98	29.3652
57.98	29.3652
59.32	34.7773
59.32	34.7773
59.40	34.7857
59.54	49.9309
59.72	49.9579
60.01	46.9711
61.10	34.9628
61.14	34.9669
61.30	34.9834
63.00	43.5651
63.29	43.6016
63.29	43.6016
63.58	43.6382
64.28	56.7670
65.12	67.6682
65.20	61.5305
65.20	61.5305
66.05	49.3424
66.72	47.8897
66.83	47.9049
66.91	47.9153
67.20	54.1417
67.20	54.1417
67.75	60.4210
67.85	60.4376
68.90	74.5991
68.90	74.5991
69.30	65.3452
69.67	52.5627
70.82	58.5835
70.82	58.5835
70.83	58.5850
72.80	69.4922
72.87	69.5048
72.87	69.5048
74.67	74.5650
74.81	74.5919
74.81	74.5919
74.81	74.5919
74.81	74.5919
74.81	74.5919
74.81	74.5919
74.81	74.5919
74.97	74.6226
75.28	56.9008
75.70	51.0284
77.11	60.7388
77.11	60.7388

77.11	60.7388
77.11	60.7388
77.11	60.7388
77.11	60.7388
77.11	60.7388
78.38	68.1011
79.62	56.3263
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81.07	62.5407
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81.07	62.5407
81.07	62.5407
82.60	70.0153
83.37	62.8878
83.78	64.1603
83.78	64.1603
83.78	64.1603
83.78	64.1603
84.21	70.2848
84.90	75.2550
85.43	75.3487
86.29	70.6295
86.50	70.6640
86.54	71.8891
86.59	65.8047
86.72	65.8244
86.79	65.8347
86.94	65.8578
87.30	58.5894
87.30	58.5894
87.30	58.5894
87.30	58.5894
87.30	58.5894
87.30	58.5894
87.57	62.2897
87.88	62.3345
88.03	73.3598
88.36	58.7325
88.47	58.7472
89.95	88.4185
91.11	110.8122
92.29	55.5524
92.38	55.5634
92.38	55.5634
93.35	54.4454
94.00	84.2633
94.67	166.2906
94.67	166.2926
94.90	166.3754
94.90	166.3754
94.90	166.3754
94.90	166.3754
95.87	54.7462
95.87	54.7462
96.73	76.0396
97.43	71.1595
98.44	59.2187
98.44	59.2190
98.88	55.1000
99.55	47.6537
99.55	47.6537
99.86	47.6850
100.00	47.6989
100.10	49.3833
103.18	51.3844
103.76	48.0723
105.00	52.4213
105.31	55.8386
108.00	61.2444
109.28	52.0192

111.00	59.8960
111.00	59.8960
111.76	56.5569
112.95	64.4173
115.19	70.7315
116.30	61.3721
117.00	72.7049
117.00	72.7049
117.66	75.3949
121.11	60.1788
121.62	68.0917
121.78	68.1115
122.06	66.3991
122.32	68.1786
122.32	68.1786
122.32	68.1786
122.32	68.1786
123.07	77.8994
127.23	48.4996
129.76	69.0873
131.20	46.1734
133.02	61.4608
133.54	61.5156
135.34	62.5980
136.00	63.5630
136.25	64.4854
136.48	57.3424
140.51	70.3558
140.51	0.0000
142.18	73.2612
142.65	66.9819
143.76	49.8734
144.24	48.0970
144.24	48.0970
144.24	48.0970
144.24	48.0970
145.22	72.7140
145.44	77.2855
147.16	70.2042
152.43	62.5132
152.70	57.9410
153.22	56.1469
154.21	61.7629
154.21	61.7629
154.21	61.7629
154.21	61.7629
155.03	64.6099
156.02	67.4810
158.56	62.1732
159.00	0.0000
159.00	57.5712
160.31	40.0067
161.27	68.9474
162.32	63.4560
162.64	62.5521
163.35	53.2717
163.89	57.0553
165.85	69.4134
167.43	63.9312
171.28	71.8484
171.86	67.1764
172.10	67.1995
176.55	67.6199
176.60	67.6249
181.06	45.9995
184.41	49.0965
185.71	49.1826
186.00	49.2013
190.27	50.4506
192.34	43.7778
193.63	63.3404
197.04	65.5769
198.01	61.7381
198.60	60.8036
200.40	70.7725
201.83	69.9152
202.84	61.1303
205.31	50.4397

208.36	47.6514
208.81	52.6442
209.75	49.7213
209.75	49.7213
210.97	38.8405
215.65	49.0753
216.55	43.1124
218.09	57.2540
222.10	53.4879
223.80	36.4036
226.40	41.5843
227.00	42.6281
227.08	42.6319
227.20	42.6379
228.16	30.4892
228.18	35.5714
228.18	35.5714
231.56	46.9312
235.69	94.2994
236.00	89.2054
236.00	89.2054
238.63	45.2474
238.63	45.2474
238.63	45.2474
238.63	45.2474
239.00	45.2658
240.98	78.3572
241.98	63.9936
241.98	63.9936
241.98	63.9936
244.69	53.8308
245.39	41.4396
247.94	50.9036
248.90	45.7563
249.79	43.7180
252.40	49.0587
252.85	54.3037
252.85	54.3037
254.15	0.0000
256.20	51.3517
256.20	51.3517
260.50	46.3185
260.90	46.3373
262.80	45.3734
264.65	42.2876
268.24	39.2591
268.79	53.0823
269.46	49.9318
269.46	49.9318
269.46	49.9318
269.46	49.9318
271.23	54.2778
273.65	38.4060
276.40	48.1393
277.35	53.5380
277.60	53.5512
277.60	53.5512
278.00	46.0724
278.60	42.8833
279.20	43.9812
279.53	42.9224
280.46	38.6653
281.68	37.6361
283.67	47.4053
284.30	46.3559
285.00	36.6784
285.90	38.8696
286.10	38.8770
286.10	38.8770
287.40	32.4384
288.45	0.0000
290.67	40.1323
290.80	39.0527
291.72	41.2579
293.26	38.0562
293.70	41.3352
295.21	39.2153
295.21	39.2153

295.21	39.2153
295.96	42.5134
296.50	53.4412
297.23	46.9298
298.57	41.5246
299.80	32.8198
299.80	32.8198
300.09	33.9233
300.09	33.9233
300.09	33.9233
300.09	33.9233
300.12	33.9239
301.29	52.5840
302.84	37.3003
303.76	34.0381
303.91	35.1406
304.40	36.2556
304.40	36.2556
304.84	39.5676
306.84	36.3361
308.46	30.8762
311.98	44.2497
316.51	41.0973
318.01	36.7027
319.02	41.1884
319.41	45.6570
320.08	51.2549
323.87	35.7747
323.87	35.7747
323.87	35.7747
323.87	35.7747
325.23	44.7713
328.77	40.4180
333.44	39.4533
334.20	45.1188
334.20	45.1188
334.30	45.1229
338.28	40.7476
338.28	40.7476
338.28	40.7476
338.28	40.7476
338.32	44.1448
338.32	44.1448
338.32	44.1448
340.50	30.6178
340.57	30.6200
344.27	44.3661
345.85	26.1988
350.59	45.7422
351.07	30.8881
351.92	38.9231
351.92	38.9231
351.92	38.9231
355.39	0.0000
356.01	42.4990
364.48	33.5372
366.43	25.4814
367.43	33.6156
367.94	32.4696
369.80	31.3561
374.96	34.9811
383.85	27.2972
387.95	40.6318
388.63	33.5828
391.69	21.2593
391.69	21.2593
392.90	32.8041
398.62	33.8351
400.65	27.6434
401.10	31.2210
401.81	31.2376
402.60	27.6836
404.84	28.6235
410.95	21.5632
411.60	24.2702
413.65	32.4080
414.70	35.1355
415.30	27.9400

415.76	24.3431
417.63	0.0000
418.52	27.1014
423.70	18.1342
427.08	21.8126
427.89	22.7345
432.53	27.3697
433.93	23.7434
439.47	30.2517
439.56	30.2532
439.89	28.4263
443.98	30.3448
444.90	34.0444
445.03	34.0473
445.03	34.0473
445.03	34.0473
445.03	34.0473
453.90	31.4745
463.38	25.1518
468.07	29.9014
473.00	27.1848
475.06	30.0371
475.35	29.1037
476.78	16.9146
477.59	20.6841
477.96	15.9870
482.03	22.6285
484.57	22.6652
487.03	23.6462
490.36	20.8526
492.35	31.3177
497.08	22.8439
507.63	0.0000
510.53	0.0000
510.84	45.1157
511.00	48.9600
511.85	43.2226
511.85	43.2226
513.99	114.4469
513.99	114.4469
520.41	16.4127
520.65	17.3809
527.90	21.3353
528.96	0.0000
529.64	24.2691
529.87	0.0000
531.02	16.5165
537.32	17.5529
543.00	17.6111
546.56	0.0000
549.76	21.6086
552.65	24.5956
555.20	14.7789
563.23	27.7120
563.90	27.7223
568.70	24.8192
569.32	24.8276
569.50	29.7958
569.67	29.7986
573.80	25.8849
574.00	22.9003
574.64	23.9048
578.91	20.9660
579.30	23.9663
583.14	19.0133
585.48	21.0410
591.81	22.1188
592.07	18.1000
593.00	28.1692
595.88	22.1672
600.56	39.3951
602.52	0.0000
602.71	37.4178
602.71	37.4178
603.60	38.4465
604.41	36.4395
604.70	34.4202
609.31	39.5784

609.31	39.5784
609.31	39.5784
609.31	39.5784
610.33	33.5066
612.46	33.5448
614.37	27.4730
618.01	32.6221
621.84	27.5801
621.84	27.5801
631.29	17.4498
633.02	25.6844
633.10	25.6851
634.78	10.2829
635.90	14.4042
636.97	12.3530
645.85	26.8855
646.12	23.7861
656.30	16.6313
657.75	11.4421
657.90	0.0000
661.65	27.0974
661.65	27.0974
664.57	12.5244
666.33	15.6688
666.33	15.6688
675.00	9.4411
677.61	17.8555
685.20	22.1375
692.80	27.5076
695.00	23.2998
696.49	31.7944
696.49	31.7944
697.00	28.6224
697.49	30.7497
698.33	35.0051
698.50	35.0071
699.00	39.2594
702.63	21.2579
706.10	31.9382
706.58	0.0000
706.67	33.0113
709.31	17.0591
711.68	24.5498
713.82	30.9842
717.42	28.8960
720.50	24.6495
721.93	17.1587
722.20	13.9434
722.78	19.3112
722.78	19.3112
722.89	19.3123
722.95	19.3129
723.30	21.4618
724.18	25.7644
727.18	17.1997
733.00	19.4008
735.90	18.3473
739.58	19.4584
742.81	24.9001
744.21	20.5824
747.13	19.5244
751.79	16.3037
752.31	14.1335
753.82	20.6699
755.35	23.9497
756.15	10.8902
756.87	11.9829
763.93	7.6492
765.79	20.7789
766.42	24.0665
766.84	24.0706
776.49	17.5791
778.00	20.8891
778.57	21.9940
778.89	20.8972
783.80	14.3282
785.46	13.2352
792.07	14.3786

795.84	15.5095
796.30	12.1884
798.80	17.7471
801.93	19.9918
805.60	13.3484
810.29	13.3744
810.76	14.4917
815.85	14.5222
817.79	14.5338
818.51	15.6564
819.60	6.7130
826.30	7.8534
828.27	11.2280
831.60	15.7406
831.96	15.7432
834.83	25.2185
836.80	0.0000
846.75	14.4797
848.13	20.8263
856.28	0.0000
856.80	18.1724
860.37	17.2883
867.32	10.0364
867.82	13.6886
871.10	16.4474
873.19	10.9740
874.81	6.4054
875.33	0.0000
876.40	15.5660
879.36	17.4173
880.27	20.1744
880.51	20.1762
881.50	16.5142
883.24	7.3445
884.67	15.6158
889.25	18.4038
896.60	20.3017
898.02	18.4658
899.00	12.0072
903.28	14.8023
911.07	12.0625
911.07	12.0625
911.07	12.0625
919.63	13.9629
920.93	9.3130
925.00	14.9234
925.24	17.7234
926.50	16.7985
935.52	5.6181
937.48	18.7407
944.10	9.3931
946.00	13.1595
949.00	11.2919
962.29	12.2919
964.01	12.2995
966.15	16.0960
968.20	14.2130
969.11	13.2699
969.11	13.2699
969.11	13.2699
977.42	12.3586
980.50	11.4202
983.50	14.2906
989.30	10.5010
996.32	10.5271
1001.03	14.3785
1001.68	12.4643
1004.76	14.3972
1021.30	0.0000
1024.50	0.0000
1034.80	9.6973
1036.00	3.8805
1037.82	10.6777
1038.57	13.5933
1038.76	0.0000
1045.16	14.5972
1046.59	17.5245
1048.07	14.6111

1050.47	6.8240
1050.47	6.8240
1062.04	15.6578
1063.62	13.7074
1076.63	11.7996
1077.35	6.8848
1078.86	6.8882
1085.78	10.8485
1099.22	6.9337
1112.02	9.9458
1112.84	13.9282
1115.52	7.9656
1120.29	15.9555
1120.29	15.9555
1120.29	15.9555
1120.29	15.9555
1120.51	15.9563
1121.28	16.9577
1124.00	0.0000
1129.67	11.0016
1131.51	0.0000
1147.95	0.0000
1167.94	13.1568
1173.22	12.1641
1175.09	14.1996
1177.93	14.2119
1189.05	11.2041
1204.90	15.3508
1205.75	12.2836
1213.00	10.2583
1221.42	7.1986
1230.97	14.4375
1235.34	10.3257
1236.41	0.0000
1238.25	7.2341
1246.25	11.3942
1260.41	0.0000
1271.85	16.6953
1274.45	7.3097
1274.54	7.3097
1291.56	10.4927
1298.22	0.0000
1312.09	5.2764
1325.50	9.5326
1325.50	9.5326
1332.49	12.7342
1333.61	9.5537
1360.21	7.4840
1362.66	0.0000
1365.15	8.5645
1368.21	4.2857
1368.53	0.0000
1376.25	8.5898
1384.27	8.6078
1394.10	9.7088
1395.20	7.5537
1407.95	4.3307
1434.06	4.3600
1436.60	9.8161
1457.56	0.0000
1460.81	5.4871
1489.15	6.4469
1509.49	7.4049
1596.49	7.5602
1620.62	10.4535
1678.03	0.0000
1691.02	3.8620
1691.02	3.8620
1706.46	0.0000
1750.46	0.0000
1764.49	4.9052
1764.49	4.9052
1764.49	4.9052
1764.49	4.9052
1770.23	11.7871
1771.40	8.8425
1791.20	0.0000
1808.65	3.9609

1836.01

2.9875

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202041820

Total Uranium Activity	2.3740E+00	ug/g
Total Uranium Counting Unc.	1.9293E+00	ug/g
Total Uranium Tpu	9.8434E-07	ug/g
Total Uranium Mda	1.2828E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*             2040 SAVAGE ROAD                     *
*             CHARLESTON ,SC 29417                 *
*             GROSS GAMMA REPORT                   *
*
*****
*
*  BATCH ID      : 952643                          SAMPLE ID   : G1202041820
*  ANALYST       : MXR1                             DETECTOR    : GAM11
*  SAMPLE DATE   : 16-FEB-2010 00:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 24-FEB-2010 09:11:35.58          SAMPLE ALQT  : 148.300 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 5.200E-02
GROSS GAMMA ERROR   (pCi/GRAM ) : 2.127E-02
GROSS GAMMA MDA     (pCi/GRAM ) : 3.543E-02
GROSS GAMMA DLC     (pCi/GRAM ) : 1.636E-02

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 11:13:09.00

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041821.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 09:12:05
Sample ID          : G1202041821      Sample quantity   : 1.11790E+02 GRAM
Detector name      : GAM20             Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00     Elapsed real time: 0 02:00:33.37 0.5%
Energy tolerance   : 1.50000 keV       Analyst Initials  : MXR1
Abundance limit    : 75.00000          Sensitivity        : 5.00000
Batch ID          : 952643             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	3	75.00*	582	448	1.18	149.94	143	22	8.09E-02	7.4	1.92E+00
2	3	77.28*	846	365	1.06	154.50	143	22	1.18E-01	5.2	
3	4	87.46	349	391	1.41	174.82	164	29	4.85E-02	11.2	8.09E-01
4	4	90.10	250	381	1.26	180.09	164	29	3.48E-02	15.5	
5	4	93.03*	294	415	1.46	185.94	164	29	4.08E-02	14.7	
6	0	129.04	115	379	1.23	257.86	255	9	1.60E-02	31.7	
7	0	186.07*	200	393	1.19	371.76	367	11	2.78E-02	21.2	
8	0	209.42	143	290	1.03	418.40	414	10	1.99E-02	23.8	
9	3	238.77*	1410	183	1.12	477.03	470	22	1.96E-01	3.2	1.39E+00
10	3	241.62*	301	249	1.63	482.73	470	22	4.18E-02	13.4	
11	0	270.22	156	213	2.00	539.86	535	12	2.17E-02	20.3	
12	2	295.39*	361	154	1.14	590.13	584	21	5.01E-02	7.9	8.29E-01
13	2	300.35	83	158	1.28	600.05	584	21	1.15E-02	28.8	
14	0	328.51	97	149	1.72	656.29	652	11	1.35E-02	26.1	
15	0	338.35	291	173	1.07	675.96	670	11	4.04E-02	10.5	
16	0	352.19*	690	227	1.17	703.62	697	13	9.59E-02	6.0	
17	0	463.09	118	146	1.39	925.20	918	15	1.64E-02	24.2	
18	0	511.02*	144	163	2.19	1020.99	1013	16	2.00E-02	24.0	
19	0	583.61*	394	129	1.16	1166.08	1161	12	5.48E-02	7.7	
20	0	609.84*	454	95	1.31	1218.50	1213	12	6.31E-02	6.5	
21	0	662.10	155	97	1.62	1322.98	1315	17	2.15E-02	16.7	
22	0	728.00	119	68	1.31	1454.74	1450	12	1.65E-02	16.7	
23	0	768.52	51	60	1.28	1535.74	1529	12	7.02E-03	34.3	
24	0	861.27*	70	47	1.19	1721.22	1716	11	9.67E-03	23.2	
25	0	911.83*	294	101	1.86	1822.34	1814	18	4.08E-02	10.0	
26	1	965.19	71	52	1.84	1929.06	1922	36	9.88E-03	23.0	7.42E-01
27	1	969.76*	203	41	1.65	1938.21	1922	36	2.83E-02	9.3	
28	0	1121.12	90	64	1.11	2241.00	2237	11	1.24E-02	20.0	
29	0	1461.84	1373	22	1.83	2922.94	2915	18	1.91E-01	2.8	
30	0	1590.22	21	19	1.65	3180.01	3171	13	2.89E-03	48.9	
31	0	1593.58	18	4	2.36	3186.75	3183	8	2.50E-03	30.4	
32	0	1621.75	26	5	1.52	3243.16	3238	11	3.65E-03	25.9	
33	0	1639.25	14	5	1.35	3278.20	3272	10	1.93E-03	40.4	
34	0	1732.34	45	0	1.13	3464.67	3455	21	6.25E-03	14.9	
35	0	1765.38	92	11	1.67	3530.84	3523	15	1.28E-02	13.1	

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

VMS Nuclide Identification Report V3.1 Generated 24-FEB-2010 11:13:11

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041821.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 9-FEB-2010 12:00:00   Acquisition date : 24-FEB-2010 09:12:05
Sample ID        : G1202041821           Sample quantity  : 111.79 GRAM
Sample type       : SOLID                 Sample geometry   :
Detector name     : GAMMA20               Detector geometry: CAN
Elapsed live time: 0 02:00:00.00          Elapsed real time: 0 02:00:33.37    0.5%
Peak Width (FWHM):      3.00              Confidence level  :      5.00 %
Energy tolerance   :      1.50 keV         Half life ratio   :      8.00
Errors propagated: Yes                    Systematic Error  :      0.00 %
Efficiency type    : Empirical             Efficiencies at   : Peak Energy
Abundance limit    :      75.00           WTM error limit   :      3.00
    
```

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.450E+01	3.582E+00	5.303E-01	4.625E-02	65.057
CD-109	+	88.03	*	4.636E+00	1.130E+00	1.040E+00	9.834E-02	4.458
SN-126		64.28		3.040E-01	4.530E-01	7.641E-01	1.106E-01	0.398
	+	86.94		1.895E+00	8.949E-01	4.280E-01	1.777E-01	4.428
	+	87.57	*	4.559E-01	1.111E-01	1.025E-01	9.645E-03	4.446
BA-137M	+	661.65	*	2.373E-01	8.280E-02	6.084E-02	6.106E-03	3.901
CS-137	+	661.65	*	2.509E-01	8.754E-02	6.431E-02	6.464E-03	3.901
TL-208		277.35		4.548E-01	3.969E-01	6.738E-01	8.958E-02	0.675
	+	510.84		7.467E-01	3.711E-01	2.060E-01	2.575E-02	3.626
	+	583.14	*	5.836E-01	1.085E-01	5.867E-02	6.032E-03	9.947
	+	860.37		9.613E-01	4.577E-01	5.474E-01	5.802E-02	1.756
BI-211		72.87		5.753E+00	3.114E+00	4.865E+00	3.842E-01	1.183
	+	351.07	*	4.516E+00	6.907E-01	3.501E-01	3.354E-02	12.898
BI-212	+	727.18	*	1.500E+00	5.301E-01	5.715E-01	6.486E-02	2.624
		785.46		6.640E-01	2.007E+00	3.424E+00	3.478E-01	0.194
	+	1620.62		2.760E+00	1.447E+00	1.664E+00	1.401E-01	1.659
PB-212	+	74.81		3.016E+00	5.813E-01	4.886E-01	6.030E-02	6.172
	+	77.11		2.519E+00	3.348E-01	2.811E-01	2.325E-02	8.960
	+	87.30		2.108E+00	5.553E-01	4.751E-01	6.511E-02	4.438
	+	238.63	*	2.023E+00	2.502E-01	1.017E-01	1.082E-02	19.888
	+	300.09		1.832E+00	1.077E+00	1.225E+00	1.401E-01	1.496
PO-212	+	74.81		3.016E+00	5.813E-01	4.886E-01	6.030E-02	6.172
	+	77.11		2.519E+00	3.348E-01	2.811E-01	2.325E-02	8.960
	+	87.30		2.108E+00	5.553E-01	4.751E-01	6.511E-02	4.438
		115.19		1.962E+00	3.683E+00	6.063E+00	5.093E-01	0.324
	+	238.63	*	2.023E+00	2.502E-01	1.017E-01	1.082E-02	19.888
	+	300.09		1.832E+00	1.077E+00	1.225E+00	1.401E-01	1.496
BI-214	+	609.31	*	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
	+	1120.29		1.280E+00	5.299E-01	5.252E-01	5.683E-02	2.437
	+	1764.49		1.777E+00	4.880E-01	2.967E-01	2.438E-02	5.987
PB-214	+	74.81		5.196E+00	9.569E-01	8.418E-01	9.216E-02	6.172
	+	77.11		4.318E+00	6.616E-01	4.820E-01	5.420E-02	8.960
	+	87.30		3.612E+00	9.231E-01	8.138E-01	9.876E-02	4.438
	+	241.98		2.594E+00	7.555E-01	6.122E-01	6.847E-02	4.237

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.398E+00	2.735E-01	2.146E-01	2.505E-02	6.514
	+	351.92	*	1.571E+00	2.539E-01	1.220E-01	1.330E-02	12.872
PO-214	+	74.81		5.196E+00	9.569E-01	8.418E-01	9.216E-02	6.172
	+	77.11		4.318E+00	6.616E-01	4.820E-01	5.420E-02	8.960
	+	87.30		3.612E+00	9.231E-01	8.138E-01	9.876E-02	4.438
	+	241.98		2.594E+00	7.555E-01	6.122E-01	6.847E-02	4.237
	+	295.21		1.398E+00	2.735E-01	2.146E-01	2.505E-02	6.514
	+	351.92	*	1.571E+00	2.539E-01	1.220E-01	1.330E-02	12.872
PO-216	+	74.81		3.016E+00	5.813E-01	4.886E-01	6.030E-02	6.172
	+	77.11		2.519E+00	3.348E-01	2.811E-01	2.325E-02	8.960
	+	87.30		2.108E+00	5.553E-01	4.751E-01	6.511E-02	4.438
	+	238.63	*	2.023E+00	2.502E-01	1.017E-01	1.082E-02	19.888
	+	300.09		1.832E+00	1.077E+00	1.225E+00	1.401E-01	1.496
PO-218	+	74.81		5.196E+00	9.569E-01	8.418E-01	9.216E-02	6.172
	+	77.11		4.318E+00	6.616E-01	4.820E-01	5.420E-02	8.960
	+	87.30		3.612E+00	9.231E-01	8.138E-01	9.876E-02	4.438
	+	241.98		2.594E+00	7.555E-01	6.122E-01	6.847E-02	4.237
	+	295.21		1.398E+00	2.735E-01	2.146E-01	2.505E-02	6.514
	+	351.92	*	1.571E+00	2.539E-01	1.220E-01	1.330E-02	12.872
RA-224	+	240.98	*	4.919E+00	1.406E+00	1.157E+00	1.118E-01	4.251
RA-226	+	609.31	*	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
	+	1120.29		1.280E+00	5.299E-01	5.252E-01	5.683E-02	2.437
	+	1764.49		1.777E+00	4.880E-01	2.967E-01	2.438E-02	5.987
AC-228	+	338.32		2.096E+00	9.744E-01	4.207E-01	1.743E-01	4.982
	+	911.07	*	1.915E+00	4.494E-01	2.311E-01	2.831E-02	8.288
	+	969.11		2.334E+00	7.046E-01	3.923E-01	9.310E-02	5.949
RA-228	+	338.32		2.096E+00	9.744E-01	4.207E-01	1.743E-01	4.982
	+	911.07	*	1.915E+00	4.494E-01	2.311E-01	2.831E-02	8.288
	+	969.11		2.334E+00	7.046E-01	3.923E-01	9.310E-02	5.949
TH-228	+	74.81		3.061E+00	5.172E-01	4.959E-01	4.036E-02	6.172
	+	77.11		2.557E+00	3.398E-01	2.853E-01	2.360E-02	8.960
	+	87.30		2.140E+00	5.214E-01	4.822E-01	4.519E-02	4.438
	+	238.63	*	2.053E+00	2.540E-01	1.032E-01	1.098E-02	19.888
	+	300.09		1.859E+00	1.540E+00	1.243E+00	7.393E-01	1.496
TH-230	+	609.31	*	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
	+	1120.29		1.280E+00	5.299E-01	5.252E-01	5.683E-02	2.437
	+	1764.49		1.777E+00	4.880E-01	2.967E-01	2.437E-02	5.987
TH-232	+	338.32		2.096E+00	4.838E-01	4.207E-01	3.942E-02	4.982
	+	911.07	*	1.915E+00	4.494E-01	2.311E-01	2.831E-02	8.288
	+	969.11		2.334E+00	7.046E-01	3.923E-01	9.310E-02	5.949
U-234	+	609.31	*	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
	+	1120.29		1.280E+00	5.299E-01	5.252E-01	5.683E-02	2.437
	+	1764.49		1.777E+00	4.880E-01	2.967E-01	2.437E-02	5.987
NP-237	+	86.50	*	1.339E+00	4.274E-01	3.032E-01	6.860E-02	4.415
		95.87		-4.014E-01	1.020E+00	1.426E+00	3.530E-01	-0.281
AM-243	+	74.67	*	4.889E-01	8.243E-02	7.938E-02	6.389E-03	6.159
	+	86.72		5.020E+01	1.223E+01	1.135E+01	1.056E+00	4.421
		117.66		-1.776E+00	3.879E+00	6.104E+00	5.109E-01	-0.291
		142.18		-8.837E+00	1.878E+01	2.919E+01	2.464E+00	-0.303

Sample ID : G1202041821

Acquisition date : 24-FEB-2010 09:12:05

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	+	511.00	*	1.613E-01	7.902E-02	4.450E-02	4.147E-03	3.625

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

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-7.252E-02	3.487E-01	5.567E-01	5.411E-02	-0.130
NA-22		1274.54	*	2.794E-02	4.850E-02	8.282E-02	6.861E-03	0.337
NA-24		1368.53	*	-1.116E-01	4.850E-02	Half-Life too short		
AL-26		1129.67		-3.255E-01	1.871E+00	2.990E+00	2.532E-01	-0.109
		1808.65	*	1.249E-02	2.637E-02	4.792E-02	3.892E-03	0.261
TI-44		67.85		2.505E-02	4.144E-02	6.899E-02	5.190E-03	0.363
	+	78.38	*	4.648E-01	6.179E-02	8.397E-02	7.048E-03	5.535
SC-46		889.25	*	1.618E-02	4.281E-02	7.286E-02	7.264E-03	0.222
	+	1120.51		2.187E-01	8.937E-02	1.350E-01	1.155E-02	1.619
V-48		944.10		-2.808E-01	9.492E-01	1.517E+00	1.480E-01	-0.185
		983.50	*	7.215E-03	7.626E-02	1.193E-01	1.141E-02	0.060
		1312.09		-8.299E-02	8.703E-02	1.223E-01	1.020E-02	-0.679
CR-51		320.08	*	4.388E-03	3.892E-01	6.454E-01	6.470E-02	0.007
MN-52		744.21		5.276E-02	2.551E-01	4.330E-01	4.399E-02	0.122
		848.13		-6.868E+00	7.432E+00	1.125E+01	1.134E+00	-0.610
		935.52		1.412E-01	2.730E-01	4.695E-01	4.599E-02	0.301
		1246.25		2.827E+00	8.219E+00	1.368E+01	1.124E+00	0.207
		1333.61		6.235E-01	5.270E+00	8.593E+00	7.199E-01	0.073
		1434.06	*	1.713E-01	2.153E-01	3.988E-01	3.375E-02	0.429
MN-54		834.83	*	4.776E-03	4.028E-02	6.748E-02	6.816E-03	0.071
CO-56		846.75	*	-1.697E-02	4.416E-02	7.072E-02	7.128E-03	-0.240
		977.42		-6.140E-02	3.682E+00	5.222E+00	5.009E-01	-0.012
		1037.82		5.626E-02	3.455E-01	5.738E-01	5.536E-02	0.098
		1175.09		-1.050E+00	2.686E+00	4.199E+00	3.378E-01	-0.250
		1238.25		1.093E-01	1.117E-01	1.928E-01	1.631E-02	0.567
		1360.21		-5.609E-02	1.004E+00	1.674E+00	1.407E-01	-0.034
		1771.40		-1.494E-03	2.727E-01	3.851E-01	3.158E-02	-0.004
CO-57		122.06	*	-1.587E-02	2.566E-02	3.996E-02	3.335E-03	-0.397
		136.48		8.765E-02	2.257E-01	3.672E-01	3.324E-02	0.239
CO-58		810.76	*	-4.160E-02	4.228E-02	6.366E-02	6.464E-03	-0.653
FE-59		142.65		-1.999E+00	2.949E+00	4.538E+00	3.833E-01	-0.440
		192.34		-7.174E-02	9.946E-01	1.627E+00	2.233E-01	-0.044
		1099.22	*	-3.007E-02	1.003E-01	1.584E-01	1.494E-02	-0.190
		1291.56		-4.371E-03	1.202E-01	1.926E-01	1.832E-02	-0.023
CO-60		1173.22		1.866E-02	5.142E-02	8.610E-02	6.922E-03	0.217
		1332.49	*	-2.607E-02	4.196E-02	6.158E-02	5.159E-03	-0.423
ZN-65		1115.52	*	-4.937E-02	1.182E-01	1.568E-01	1.349E-02	-0.315
GE-68		1077.35	*	6.349E-02	1.365E+00	2.236E+00	1.995E-01	0.028
AS-73		53.44	*	4.348E-02	5.832E-01	9.650E-01	7.164E-02	0.045
AS-74		595.88	*	7.329E-02	1.020E-01	1.723E-01	1.687E-02	0.425
		634.78		-2.645E-02	3.671E-01	6.157E-01	6.124E-02	-0.043
SE-75		66.05		-8.714E+00	4.551E+00	6.839E+00	6.469E-01	-1.274
		96.73		-5.662E-01	8.358E-01	1.156E+00	1.596E-01	-0.490

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

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		121.11		-5.059E-02	1.367E-01	2.156E-01	2.374E-02	-0.235
		136.00		1.293E-02	4.277E-02	6.932E-02	5.857E-03	0.187
		198.60		1.801E-01	1.892E+00	3.152E+00	3.172E-01	0.057
		264.65	*	1.069E-02	4.816E-02	7.580E-02	7.505E-03	0.141
		279.53		-6.422E-02	1.112E-01	1.794E-01	1.837E-02	-0.358
		303.91		-2.803E-01	2.434E+00	3.522E+00	4.358E-01	-0.080
		400.65		-4.768E-02	2.615E-01	4.229E-01	4.641E-02	-0.113
BR-77	+	87.88		9.362E+02	2.281E+02	3.261E+02	3.080E+01	2.871
		200.40		-5.327E+01	1.560E+02	2.602E+02	2.393E+01	-0.205
	+	239.00		3.034E+02	3.499E+01	4.084E+01	3.940E+00	7.430
		249.79		-6.968E+01	6.652E+01	1.009E+02	9.838E+00	-0.690
		281.68		-1.623E+01	8.322E+01	1.372E+02	1.365E+01	-0.118
		297.23		2.877E+02	6.763E+01	1.211E+02	1.192E+01	2.375
		303.76		-2.684E+01	1.937E+02	2.799E+02	2.738E+01	-0.096
		439.47		-1.892E+01	1.445E+02	2.334E+02	2.050E+01	-0.081
		484.57		-1.017E+02	2.269E+02	3.544E+02	3.238E+01	-0.287
		520.65	*	2.198E-01	1.023E+01	1.654E+01	1.552E+00	0.013
		574.64		5.403E+01	2.099E+02	3.440E+02	3.332E+01	0.157
		578.91		-8.298E+00	9.452E+01	1.308E+02	1.270E+01	-0.063
		585.48		1.923E+03	3.354E+02	5.616E+02	5.470E+01	3.423
		755.35		2.036E+02	1.580E+02	2.891E+02	2.938E+01	0.704
		817.79		-7.856E+01	1.331E+02	2.089E+02	2.115E+01	-0.376
SR-82		698.33		-1.749E+01	3.533E+01	5.692E+01	5.755E+00	-0.307
		776.49	*	-1.127E-01	3.728E-01	6.040E-01	6.137E-02	-0.187
		1395.20		3.429E+00	8.810E+00	1.565E+01	1.321E+00	0.219
RB-83		520.41	*	2.693E-02	7.185E-02	1.195E-01	1.121E-02	0.225
		529.64		-6.481E-02	1.117E-01	1.710E-01	1.614E-02	-0.379
		552.65		-5.787E-03	2.036E-01	3.267E-01	3.127E-02	-0.018
RB-84		881.50	*	2.436E-02	6.882E-02	1.177E-01	1.176E-02	0.207
KR-85		513.99	*	1.279E+01	8.822E+00	1.406E+01	1.313E+00	0.910
SR-85		513.99	*	6.541E-02	4.512E-02	7.191E-02	6.715E-03	0.910
RB-86		1076.63	*	6.624E-02	8.691E-01	1.428E+00	1.275E-01	0.046
Y-88		898.02		-2.635E-03	3.729E-02	6.109E-02	6.096E-03	-0.043
		1836.01	*	9.980E-03	3.174E-02	5.559E-02	4.485E-03	0.180
ZR-88		392.90	*	-3.303E-02	3.383E-02	5.172E-02	4.325E-03	-0.639
Y-91		1204.90	*	2.078E+00	2.130E+01	3.478E+01	2.824E+00	0.060
NB-94		702.63	*	1.490E-02	3.537E-02	6.111E-02	6.183E-03	0.244
		871.10		-2.813E-02	3.539E-02	5.371E-02	5.383E-03	-0.524
NB-95		765.79	*	3.012E-02	4.958E-02	7.666E-02	7.791E-03	0.393
NB-95M		235.69	*	7.809E-02	1.394E-01	2.133E-01	2.292E-02	0.366
ZR-95		724.18		7.519E-02	1.078E-01	1.686E-01	1.819E-02	0.446
		756.15	*	8.119E-02	7.270E-02	1.315E-01	1.435E-02	0.617
NB-97		657.90	*	8.085E-03	7.270E-02	Half-Life	too short	
		1024.50		-2.726E-01	7.270E-02	Half-Life	too short	
ZR-97		254.15		-7.399E-01	7.270E-02	Half-Life	too short	
		355.39		2.753E-01	7.270E-02	Half-Life	too short	
		507.63	*	2.730E+00	7.270E-02	Half-Life	too short	
		602.52		-7.016E-01	7.270E-02	Half-Life	too short	
		1021.30		4.703E+00	7.270E-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
	1147.95			1.312E+00	7.270E-02	Half-Life	too short	
	1362.66			-9.339E-02	7.270E-02	Half-Life	too short	
	1750.46			3.471E+00	7.270E-02	Half-Life	too short	
MO-99	140.51			-1.213E+01	2.635E+01	4.075E+01	1.126E+01	-0.298
	181.06			-1.340E+01	1.955E+01	2.593E+01	4.781E+00	-0.517
	366.43			1.109E+01	7.747E+01	1.288E+02	1.145E+01	0.086
	739.58	*		-3.445E+00	1.113E+01	1.808E+01	2.912E+00	-0.191
	778.00			-2.148E+01	3.338E+01	5.234E+01	5.319E+00	-0.410
TC-99M	140.51	*		-9.815E+09	3.338E+01	Half-Life	too short	
RH-101	127.23			1.383E-02	3.657E-02	5.339E-02	4.454E-03	0.259
	198.01	*		5.134E-03	3.477E-02	5.806E-02	5.322E-03	0.088
	325.23			-7.893E-02	2.449E-01	3.460E-01	3.304E-02	-0.228
RH-102	418.52			-6.448E-02	3.248E-01	5.239E-01	4.507E-02	-0.123
	475.06	*		2.042E-02	3.224E-02	5.463E-02	4.953E-03	0.374
	631.29			-9.996E-03	6.020E-02	9.459E-02	9.397E-03	-0.106
	697.49			5.861E-02	7.740E-02	1.370E-01	1.385E-02	0.428
	766.84			8.526E-02	1.340E-01	2.068E-01	2.102E-02	0.412
	1046.59			4.780E-02	1.178E-01	2.004E-01	1.835E-02	0.239
	1112.84			1.100E-01	2.500E-01	4.231E-01	3.649E-02	0.260
RU-103	497.08	*		-6.412E-03	4.490E-02	7.188E-02	1.045E-02	-0.089
	610.33	+		1.361E+01	2.956E+00	3.228E+00	5.602E-01	4.216
RH-106	511.85	+		8.053E-01	3.945E-01	4.962E-01	4.626E-02	1.623
	621.84	*		-2.804E-01	3.870E-01	5.777E-01	8.213E-02	-0.485
	1050.47			3.351E-01	2.327E+00	3.860E+00	3.523E-01	0.087
RU-106	511.85	+		8.053E-01	3.945E-01	4.962E-01	4.626E-02	1.623
	621.84	*		-2.804E-01	3.859E-01	5.777E-01	5.718E-02	-0.485
	1050.47			3.351E-01	2.327E+00	3.860E+00	3.523E-01	0.087
AG-108M	433.93	*		-1.080E-02	3.529E-02	5.628E-02	5.108E-03	-0.192
	614.37			-3.513E-02	4.887E-02	6.194E-02	6.296E-03	-0.567
	722.95			4.175E-02	4.831E-02	7.682E-02	8.013E-03	0.544
AG-110M	657.75	*		2.735E-03	4.115E-02	6.079E-02	6.229E-03	0.045
	677.61			-9.937E-04	2.950E-01	4.955E-01	5.094E-02	-0.002
	706.67			-1.009E-01	2.156E-01	3.474E-01	3.588E-02	-0.291
	763.93			1.015E-01	1.884E-01	2.900E-01	3.008E-02	0.350
	884.67			2.974E-02	5.227E-02	9.079E-02	9.282E-03	0.328
	937.48			-1.657E-02	1.204E-01	1.956E-01	1.968E-02	-0.085
	1384.27			-2.375E-01	1.881E-01	2.562E-01	2.224E-02	-0.927
IN-111	171.28			-1.955E-01	1.041E+00	1.634E+00	1.438E-01	-0.120
	245.39	*		2.824E-01	1.093E+00	1.646E+00	1.598E-01	0.172
IN-113M	391.69	*		-6.459E-03	4.876E-02	7.930E-02	6.841E-03	-0.081
SN-113	391.69	*		-6.459E-03	4.876E-02	7.930E-02	6.841E-03	-0.081
IN-114M	190.27	*		-2.233E-02	2.067E-01	3.077E-01	2.789E-02	-0.073
CD-115	260.90			-4.998E+01	1.247E+02	2.042E+02	2.009E+01	-0.245
	492.35			-6.867E-01	3.631E+01	5.873E+01	5.398E+00	-0.012
	527.90	*		4.368E+00	1.072E+01	1.785E+01	1.683E+00	0.245
SN-117M	156.02			-2.212E+00	2.451E+00	3.720E+00	3.199E-01	-0.595
	158.56	*		-3.759E-02	5.869E-02	9.026E-02	7.790E-03	-0.416
SB-122	563.90	*		2.971E+00	2.143E+00	3.781E+00	3.642E-01	0.786
	692.80			-1.913E+01	4.221E+01	6.820E+01	6.890E+00	-0.280

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-123	159.00	*		-3.058E+00	4.221E+01	Half-Life	too short	
	528.96			-2.049E+01	4.221E+01	Half-Life	too short	
TE-123M	159.00	*		-2.028E-02	3.095E-02	4.756E-02	4.133E-03	-0.426
I-124	602.71	*		-1.440E-01	7.269E-01	1.101E+00	1.081E-01	-0.131
	722.78			4.011E+00	4.839E+00	7.673E+00	7.782E-01	0.523
	1325.50			1.866E+01	3.713E+01	6.323E+01	5.289E+00	0.295
	1376.25			3.543E+01	3.459E+01	6.349E+01	5.348E+00	0.558
	1509.49			1.163E+01	1.514E+01	2.777E+01	2.354E+00	0.419
	1691.02			-1.296E+00	3.386E+00	5.142E+00	4.288E-01	-0.252
SB-124	602.71			-8.679E-03	4.379E-02	6.635E-02	6.515E-03	-0.131
	645.85			-7.757E-01	5.273E-01	7.712E-01	8.047E-02	-1.006
	709.31			-2.042E-01	2.898E+00	4.830E+00	4.891E-01	-0.042
	713.82			1.155E+00	1.744E+00	3.058E+00	4.026E-01	0.378
	722.78			3.503E-01	4.227E-01	6.702E-01	6.903E-02	0.523
	968.20			2.313E+01	4.732E+00	8.737E+00	8.423E-01	2.648
	1045.16			2.322E-01	2.636E+00	4.346E+00	3.983E-01	0.053
	1325.50			1.741E+00	3.464E+00	5.898E+00	4.934E-01	0.295
	1368.21			-6.326E-02	1.559E+00	2.600E+00	3.470E-01	-0.024
	1436.60			2.717E+00	3.742E+00	6.843E+00	5.792E-01	0.397
	1691.02			-2.670E-02	6.976E-02	1.059E-01	9.206E-03	-0.252
SB-125	427.89	*		1.817E-02	9.375E-02	1.552E-01	1.374E-02	0.117
+	463.38			1.198E+00	5.901E-01	6.460E-01	6.219E-02	1.854
	600.56			-4.119E-02	2.038E-01	3.208E-01	3.328E-02	-0.128
	635.90			2.526E-02	2.828E-01	4.801E-01	5.069E-02	0.053
TE-125M	109.28	*		-3.883E+00	9.602E+00	1.521E+01	1.554E+00	-0.255
I-126	388.63			9.484E-02	2.232E-01	3.757E-01	3.164E-02	0.252
	666.33	*		-7.645E-02	1.957E-01	2.728E-01	2.741E-02	-0.280
	753.82			8.821E-01	1.530E+00	2.669E+00	2.712E-01	0.331
SB-126	223.80			3.492E+00	4.080E+00	7.111E+00	6.745E-01	0.491
	278.60			1.724E+00	2.476E+00	4.268E+00	4.248E-01	0.404
+	296.50			1.374E+01	2.547E+00	3.977E+00	3.915E-01	3.455
	414.70			-3.497E-02	8.032E-02	1.274E-01	1.091E-02	-0.275
	415.30			-3.919E-01	6.651E+00	1.083E+01	9.288E-01	-0.036
	555.20			-7.470E-01	4.123E+00	6.525E+00	6.254E-01	-0.114
	573.80			-3.979E-01	1.104E+00	1.716E+00	1.662E-01	-0.232
	593.00			2.547E-02	9.783E-01	1.571E+00	1.535E-01	0.016
	656.30			-6.418E-01	3.966E+00	5.712E+00	5.723E-01	-0.112
	666.33			-3.193E-02	8.173E-02	1.139E-01	1.145E-02	-0.280
	675.00			-2.311E-01	1.924E+00	3.201E+00	3.222E-01	-0.072
	695.00			-1.467E-02	8.165E-02	1.351E-01	1.365E-02	-0.109
	697.00			2.087E-01	2.682E-01	4.753E-01	4.805E-02	0.439
	720.50	*		-5.711E-02	1.517E-01	2.463E-01	2.497E-02	-0.232
	856.80			4.242E-01	5.661E-01	8.860E-01	8.910E-02	0.479
	989.30			1.455E+00	1.340E+00	2.412E+00	2.298E-01	0.603
	1034.80			5.577E+00	9.034E+00	1.568E+01	1.449E+00	0.356
	1213.00			-1.423E+00	5.201E+00	8.198E+00	6.673E-01	-0.174
SB-127	61.10			-8.552E+01	4.825E+01	7.311E+01	7.302E+00	-1.170
	252.40			2.521E+00	4.294E+00	7.186E+00	3.037E+00	0.351
	290.80			1.450E+00	2.366E+01	3.482E+01	4.214E+00	0.042

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	411.60			-4.076E+00	1.245E+01	1.989E+01	3.109E+00	-0.205
	444.90			-2.545E+00	1.006E+01	1.607E+01	2.028E+00	-0.158
	473.00			4.382E-01	1.753E+00	2.897E+00	3.795E-01	0.151
	543.00			-5.501E-01	1.583E+01	2.541E+01	3.785E+00	-0.022
	603.60			-8.375E+00	1.307E+01	1.793E+01	2.386E+00	-0.467
	685.20	*		2.454E-01	1.327E+00	2.261E+00	2.819E-01	0.109
	698.50			-7.941E+00	1.519E+01	2.435E+01	4.049E+00	-0.326
	722.20			2.799E+01	3.360E+01	5.317E+01	6.545E+00	0.526
	783.80			5.431E+00	3.915E+00	7.079E+00	9.537E-01	0.767
XE-127	57.60			-9.456E-01	4.672E+00	7.631E+00	5.452E-01	-0.124
	145.22			7.176E-01	7.414E-01	1.230E+00	1.042E-01	0.583
	172.10			-1.424E-02	1.299E-01	2.047E-01	1.804E-02	-0.070
	202.84	*		1.957E-02	4.716E-02	8.109E-02	7.485E-03	0.241
	374.96			9.083E-02	2.131E-01	3.595E-01	3.135E-02	0.253
I-131	80.18			-1.384E+00	4.591E+00	6.583E+00	5.679E-01	-0.210
	284.30			-4.219E-01	1.429E+00	2.341E+00	2.415E-01	-0.180
	364.48	*		-1.526E-02	1.117E-01	1.822E-01	1.709E-02	-0.084
	636.97			-1.642E-01	1.624E+00	2.718E+00	2.819E-01	-0.060
	722.89			6.785E+00	7.964E+00	1.265E+01	1.289E+00	0.536
TE-132	49.72			-1.900E+01	1.245E+01	1.899E+01	1.935E+00	-1.000
	111.76			1.599E+00	2.883E+01	4.658E+01	4.964E+00	0.034
	116.30			-3.902E+00	2.703E+01	4.322E+01	4.585E+00	-0.090
	228.16	*		-2.014E-01	6.611E-01	1.096E+00	1.774E-01	-0.184
BA-133	53.15			5.557E-01	2.518E+00	4.191E+00	3.123E-01	0.133
	79.62			6.740E-01	1.350E+00	2.006E+00	3.042E-01	0.336
	81.00			9.541E-02	1.136E-01	1.383E-01	2.199E-02	0.690
	276.40			6.002E-01	4.193E-01	6.646E-01	1.015E-01	0.903
	302.84			-3.965E-03	1.662E-01	2.424E-01	3.413E-02	-0.016
	356.01	*		-1.230E-02	5.188E-02	7.345E-02	9.922E-03	-0.167
	383.85			-1.423E-01	3.305E-01	5.215E-01	6.541E-02	-0.273
I-133	510.53	+		1.362E+00	3.305E-01	Half-Life	too short	
	529.87	*		-2.803E-03	3.305E-01	Half-Life	too short	
	706.58			-1.630E-01	3.305E-01	Half-Life	too short	
	856.28			2.571E-01	3.305E-01	Half-Life	too short	
	875.33			7.891E-02	3.305E-01	Half-Life	too short	
	1236.41			5.446E-01	3.305E-01	Half-Life	too short	
	1298.22			8.909E-02	3.305E-01	Half-Life	too short	
CS-134	475.35			1.931E+00	2.097E+00	3.617E+00	3.280E-01	0.534
	563.23			3.453E-01	3.989E-01	6.819E-01	6.615E-02	0.506
	569.32			9.359E-02	2.180E-01	3.617E-01	3.532E-02	0.259
	604.70			-2.430E-02	4.250E-02	5.526E-02	5.441E-03	-0.440
	795.84	*		6.647E-02	5.433E-02	9.764E-02	9.963E-03	0.681
	801.93			2.933E-01	4.437E-01	7.747E-01	7.892E-02	0.379
	1038.57			8.377E-01	4.366E+00	7.268E+00	6.696E-01	0.115
	1167.94			-1.599E+00	2.627E+00	3.985E+00	3.225E-01	-0.401
	1365.15			1.896E-01	1.132E+00	1.943E+00	1.712E-01	0.098
CS-135	268.24	*		9.006E-02	1.875E-01	2.846E-01	3.154E-02	0.316
I-135	288.45			3.259E+09	1.875E-01	Half-Life	too short	
	417.63			-6.202E+08	1.875E-01	Half-Life	too short	

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CS-136		546.56		4.808E+09	1.875E-01	Half-Life	too short	
		836.80		2.634E+09	1.875E-01	Half-Life	too short	
		1038.76		2.747E+09	1.875E-01	Half-Life	too short	
		1124.00		3.871E+10	1.875E-01	Half-Life	too short	
		1131.51		-4.111E+09	1.875E-01	Half-Life	too short	
		1260.41	*	-7.875E+08	1.875E-01	Half-Life	too short	
		1457.56		4.247E+10	1.875E-01	Half-Life	too short	
		1678.03		5.130E+08	1.875E-01	Half-Life	too short	
		1706.46		3.775E+09	1.875E-01	Half-Life	too short	
		1791.20		9.787E+08	1.875E-01	Half-Life	too short	
	+	66.91		-6.702E-01	7.073E-01	1.107E+00	1.641E-01	-0.605
		86.29		5.876E+00	1.537E+00	1.969E+00	2.616E-01	2.984
		153.22		5.508E-01	7.120E-01	1.170E+00	1.121E-01	0.471
		163.89		6.690E-02	1.243E+00	1.946E+00	1.893E-01	0.034
		176.55		-6.880E-02	3.940E-01	6.180E-01	5.783E-02	-0.111
		273.65		-2.526E-01	5.183E-01	7.340E-01	7.650E-02	-0.344
		340.57		3.523E-01	1.673E-01	2.719E-01	2.601E-02	1.296
		818.51		-3.403E-02	7.643E-02	1.216E-01	1.232E-02	-0.280
		1048.07	*	-1.218E-01	1.155E-01	1.667E-01	1.582E-02	-0.731
		1235.34		-5.507E-01	7.547E-01	1.147E+00	1.323E-01	-0.480
CE-139		165.85	*	-2.411E-03	3.412E-02	5.396E-02	4.711E-03	-0.045
BA-140		162.64		6.656E-01	8.516E-01	1.374E+00	1.262E-01	0.484
		304.84		8.556E-01	1.401E+00	2.118E+00	6.014E-01	0.404
		423.70		1.409E-02	2.016E+00	3.295E+00	1.068E+00	0.004
LA-140	+	537.32	*	4.769E-02	2.914E-01	4.691E-01	1.566E-01	0.102
		328.77		8.573E-01	4.560E-01	5.784E-01	5.751E-02	1.482
		432.53		1.746E-01	2.150E+00	3.528E+00	3.225E-01	0.050
		487.03		1.408E-02	1.454E-01	2.373E-01	2.292E-02	0.059
		751.79		-2.721E+00	1.862E+00	2.682E+00	2.938E-01	-1.014
		815.85		2.729E-02	3.328E-01	5.570E-01	6.120E-02	0.049
		867.82		1.460E+00	1.441E+00	2.431E+00	2.534E-01	0.601
		919.63		-7.966E-01	3.442E+00	4.759E+00	5.556E-01	-0.167
		925.24		-1.682E-01	1.133E+00	1.839E+00	1.897E-01	-0.091
		1596.49	*	5.493E-02	8.845E-02	1.445E-01	1.220E-02	0.380
CE-141		145.44	*	6.451E-02	6.724E-02	1.115E-01	9.629E-03	0.578
CE-143		57.37		-2.395E-04	6.724E-02	Half-Life	too short	
		231.56		-9.384E-04	6.724E-02	Half-Life	too short	
		293.26	*	4.066E-04	6.724E-02	Half-Life	too short	
		350.59		2.710E-02	6.724E-02	Half-Life	too short	
		490.36		-1.544E-03	6.724E-02	Half-Life	too short	
		664.57		2.749E-03	6.724E-02	Half-Life	too short	
		721.93		1.201E-03	6.724E-02	Half-Life	too short	
CE-144		80.11		-5.093E-01	2.159E+00	3.106E+00	2.661E-01	-0.164
		133.54	*	-5.435E-02	2.552E-01	3.589E-01	5.538E-02	-0.151
PM-144		476.78		8.709E-03	7.331E-02	1.200E-01	1.182E-02	0.073
		618.01		1.862E-02	3.700E-02	6.144E-02	6.200E-03	0.303
		696.49	*	2.164E-02	3.484E-02	6.113E-02	6.180E-03	0.354
		778.57		-2.549E+00	2.425E+00	3.641E+00	3.701E-01	-0.700
PR-144		696.49	*	1.466E+00	2.361E+00	4.142E+00	4.186E-01	0.354

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PM-146	1489.15			3.603E-01	1.055E+01	1.770E+01	1.501E+00	0.020
	453.90	*		1.285E-02	4.612E-02	7.655E-02	8.384E-03	0.168
	633.02			-1.367E-01	1.516E+00	2.398E+00	9.038E-01	-0.057
	735.90			3.326E-02	1.607E-01	2.660E-01	7.741E-02	0.125
ND-147	747.13			4.059E-02	1.020E-01	1.754E-01	2.636E-02	0.231
	91.11	+		1.090E+00	3.541E-01	5.039E-01	4.985E-02	2.164
	319.41			-9.803E-01	3.356E+00	5.463E+00	5.256E-01	-0.179
	439.89			-6.219E-01	6.098E+00	9.865E+00	8.671E-01	-0.063
PM-149	531.02	*		-2.753E-01	5.913E-01	9.135E-01	1.410E-01	-0.301
	285.90	*		-8.490E+01	8.787E+01	1.366E+02	2.226E+01	-0.622
	121.78			-5.655E-02	7.461E-02	1.152E-01	1.116E-02	-0.491
	244.69			-1.153E-01	3.705E-01	5.358E-01	5.198E-02	-0.215
EU-152	344.27	*		5.924E-02	1.066E-01	1.760E-01	1.717E-02	0.337
	443.98			4.247E-02	9.986E-01	1.632E+00	1.440E-01	0.026
	778.89			-3.236E-01	2.819E-01	4.187E-01	4.254E-02	-0.773
	867.32			9.099E-01	9.166E-01	1.491E+00	1.495E-01	0.610
	964.01	+		9.390E-01	4.420E-01	7.014E-01	6.776E-02	1.339
	1085.78			-2.320E-01	3.995E-01	6.077E-01	5.381E-02	-0.382
	1112.02			6.279E-02	3.548E-01	5.869E-01	5.065E-02	0.107
	1407.95			2.879E-01	1.945E-01	3.772E-01	3.186E-02	0.763
GD-153	69.67			3.179E-01	1.674E+00	2.461E+00	1.883E-01	0.129
	83.37			3.397E+01	1.508E+01	2.381E+01	2.123E+00	1.427
	97.43	*		-6.381E-02	8.868E-02	1.217E-01	1.080E-02	-0.524
	103.18			-1.048E-01	1.086E-01	1.677E-01	1.450E-02	-0.625
EU-154	123.07			4.026E-04	5.257E-02	8.446E-02	9.419E-03	0.005
	247.94			1.108E-01	4.148E-01	6.242E-01	7.697E-02	0.177
	591.81			-1.441E-01	6.378E-01	1.000E+00	1.254E-01	-0.144
	723.30			2.011E-01	1.999E-01	3.220E-01	3.518E-02	0.625
	756.87			4.395E-01	7.903E-01	1.377E+00	1.808E-01	0.319
	873.19			8.879E-02	2.983E-01	5.075E-01	6.732E-02	0.175
	996.32			-1.631E-01	3.867E-01	6.050E-01	1.101E-01	-0.270
	1004.76			-1.096E-01	2.400E-01	3.757E-01	4.603E-02	-0.292
EU-155	1274.45	*		7.598E-02	1.369E-01	2.330E-01	2.575E-02	0.326
	48.70			-7.492E-01	1.617E+00	2.622E+00	2.099E-01	-0.286
	60.01			1.729E+00	4.030E+00	6.727E+00	4.773E-01	0.257
	86.54	+		5.490E-01	1.339E-01	1.857E-01	1.739E-02	2.956
TB-160	105.31	*		3.001E-02	1.089E-01	1.780E-01	1.548E-02	0.169
	86.79	+		1.463E+00	3.566E-01	4.996E-01	4.652E-02	2.929
	197.04			-1.919E-01	5.831E-01	9.535E-01	8.727E-02	-0.201
	215.65			3.696E-01	7.545E-01	1.261E+00	1.184E-01	0.293
	298.57			1.341E-01	1.150E-01	2.015E-01	1.981E-02	0.665
	879.36	*		-1.457E-01	1.406E-01	2.060E-01	2.059E-02	-0.707
	962.29			8.616E-01	6.278E-01	1.033E+00	9.989E-02	0.834
	966.15	+		6.434E-01	3.028E-01	4.954E-01	4.781E-02	1.299
HO-166M	1177.93			1.505E-01	4.285E-01	7.156E-01	5.763E-02	0.210
	1271.85			2.307E-01	8.012E-01	1.330E+00	1.100E-01	0.173
	80.57			-1.713E-01	2.740E-01	3.859E-01	3.324E-02	-0.444
	184.41			9.355E-02	4.308E-02	7.152E-02	6.424E-03	1.308
	280.46			-1.020E-01	8.635E-02	1.336E-01	1.329E-02	-0.763

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		410.95		1.321E-01	2.674E-01	4.509E-01	3.848E-02	0.293
		711.68	*	-3.412E-03	6.558E-02	1.094E-01	1.108E-02	-0.031
		752.31		-2.323E-01	2.930E-01	4.550E-01	4.624E-02	-0.510
		810.29		-5.010E-02	6.087E-02	9.298E-02	9.424E-03	-0.539
		51.35		2.513E+00	2.028E+01	3.366E+01	2.572E+00	0.075
		52.39		5.336E+00	1.077E+01	1.813E+01	1.364E+00	0.294
LU-176		59.40		2.196E+01	2.118E+01	3.607E+01	2.552E+00	0.609
		66.72	*	-5.691E+01	2.689E+01	4.027E+01	3.000E+00	-1.413
	+	88.36		1.081E+00	2.635E-01	3.801E-01	3.584E-02	2.845
		201.83		-1.004E-02	2.927E-02	4.879E-02	4.496E-03	-0.206
LU-177		306.84	*	-6.869E-03	2.590E-02	4.235E-02	4.131E-03	-0.162
		401.10		1.146E+00	6.875E+00	1.139E+01	9.616E-01	0.101
		112.95		8.143E-01	1.648E+00	2.710E+00	2.284E-01	0.301
LU-177M	+	208.36	*	3.560E+00	1.726E+00	2.131E+00	1.982E-01	1.670
		52.97		2.251E-01	1.135E+00	1.887E+00	1.409E-01	0.119
HF-181		54.07		-4.582E-02	6.114E-01	1.005E+00	7.407E-02	-0.046
		61.30		-2.292E+00	1.294E+00	1.977E+00	1.414E-01	-1.159
		121.62		-4.032E-01	3.890E-01	5.919E-01	4.936E-02	-0.681
		147.16		7.250E-01	7.025E-01	1.168E+00	9.918E-02	0.621
		171.86		-4.132E-02	5.260E-01	8.301E-01	7.313E-02	-0.050
		218.09		1.879E-02	8.221E-01	1.388E+00	1.307E-01	0.014
	+	268.79		3.418E+00	1.425E+00	1.554E+00	1.538E-01	2.199
		319.02		3.945E-03	2.596E-01	4.307E-01	4.145E-02	0.009
		367.43		-5.433E-01	9.161E-01	1.444E+00	1.281E-01	-0.376
		413.65	*	-1.367E-01	1.943E-01	3.023E-01	2.587E-02	-0.452
		56.28		-6.073E-01	7.086E-01	1.125E+00	8.113E-02	-0.540
		57.53		-9.418E-02	3.926E-01	6.402E-01	4.576E-02	-0.147
		65.20		2.604E-01	8.343E-01	1.378E+00	1.014E-01	0.189
		133.02		-2.918E-02	8.212E-02	1.145E-01	9.586E-03	-0.255
W-181		136.25		2.099E-01	4.936E-01	8.043E-01	6.748E-02	0.261
		345.85		-1.891E-01	2.378E-01	3.205E-01	2.965E-02	-0.590
		482.03	*	-1.662E-02	4.369E-02	6.863E-02	6.257E-03	-0.242
		56.28		-2.378E-01	2.781E-01	4.414E-01	3.184E-02	-0.539
		57.53		-3.715E-02	1.542E-01	2.514E-01	1.797E-02	-0.148
TA-182		65.20	*	1.014E-01	3.250E-01	5.368E-01	3.950E-02	0.189
		67.75		4.785E-02	9.885E-02	1.640E-01	1.233E-02	0.292
		100.10		2.571E-01	1.788E-01	3.043E-01	2.664E-02	0.845
		152.43		3.056E-01	3.624E-01	5.979E-01	5.114E-02	0.511
RE-183		222.10		-1.840E-01	3.477E-01	5.709E-01	5.404E-02	-0.322
		1001.68		2.448E+00	2.277E+00	4.014E+00	3.794E-01	0.610
	+	1121.28		6.042E-01	2.469E-01	3.798E-01	3.246E-02	1.591
		1189.05		1.394E-01	3.406E-01	5.724E-01	4.626E-02	0.244
		1221.42	*	4.685E-02	2.233E-01	3.677E-01	3.000E-02	0.127
		1230.97		2.415E-01	5.731E-01	9.572E-01	7.832E-02	0.252
		57.98		-1.986E-02	1.561E-01	2.557E-01	1.823E-02	-0.078
		59.32		8.877E-02	8.681E-02	1.478E-01	1.046E-02	0.601
		67.20		-1.221E-01	1.834E-01	2.926E-01	2.189E-02	-0.417
	+	162.32	*	9.719E-02	1.266E-01	2.042E-01	1.773E-02	0.476
		208.81		3.271E+00	1.586E+00	1.968E+00	1.831E-01	1.662

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184	291.72			-1.013E+00	1.133E+00	1.541E+00	1.523E-01	-0.658
	57.98			-7.329E-02	5.762E-01	9.437E-01	6.727E-02	-0.078
	59.32			3.273E-01	3.201E-01	5.449E-01	3.857E-02	0.601
	67.20			-4.502E-01	6.764E-01	1.079E+00	8.073E-02	-0.417
	161.27			1.172E-02	3.991E-01	6.350E-01	5.503E-02	0.018
	216.55			5.042E-02	2.622E-01	4.461E-01	4.193E-02	0.113
	252.85	*		3.479E-02	2.281E-01	3.852E-01	3.765E-02	0.090
	318.01			3.351E-02	4.604E-01	7.666E-01	7.387E-02	0.044
	792.07			-9.085E-01	1.126E+00	1.748E+00	1.775E-01	-0.520
	903.28			4.698E-01	1.012E+00	1.660E+00	1.647E-01	0.283
OS-185	920.93			-7.742E-02	4.837E-01	7.628E-01	7.519E-02	-0.101
	59.72			2.561E-01	2.341E-01	3.993E-01	2.828E-02	0.641
	61.14			-2.522E-01	1.419E-01	2.167E-01	1.549E-02	-1.164
	69.30			8.336E-02	3.001E-01	4.429E-01	3.377E-02	0.188
	592.07			-5.740E-01	2.600E+00	4.079E+00	3.986E-01	-0.141
	646.12	*		-5.725E-02	4.356E-02	6.471E-02	6.463E-03	-0.885
	717.42			-1.517E-01	9.341E-01	1.544E+00	1.565E-01	-0.098
	874.81			4.197E-01	5.519E-01	9.807E-01	9.818E-02	0.428
	880.27			-3.116E-01	7.695E-01	1.218E+00	1.218E-01	-0.256
	155.03	*		5.778E-02	1.860E-01	3.002E-01	2.577E-02	0.192
RE-188	477.96			-2.214E+00	3.369E+00	5.182E+00	4.709E-01	-0.427
	633.10			-1.356E-01	3.044E+00	4.835E+00	4.807E-01	-0.028
W-188	63.58			5.205E+01	4.650E+01	7.967E+01	5.790E+00	0.653
	227.08			3.587E+00	1.306E+01	2.225E+01	2.119E+00	0.161
IR-192	290.67	*		6.902E-01	8.534E+00	1.258E+01	1.244E+00	0.055
	295.96			1.064E+00	1.975E-01	3.143E-01	3.112E-02	3.385
	308.46			-4.044E-02	1.007E-01	1.632E-01	1.596E-02	-0.248
	316.51	*		-3.136E-03	3.393E-02	5.594E-02	5.410E-03	-0.056
	468.07			6.512E-03	7.254E-02	1.041E-01	1.000E-02	0.063
	604.41			-4.036E-01	5.817E-01	7.427E-01	1.028E-01	-0.543
	612.46			2.450E+00	1.021E+00	1.682E+00	1.849E-01	1.456
AU-195	65.12			6.653E-02	1.513E-01	2.508E-01	1.844E-02	0.265
	66.83			-8.810E-02	8.511E-02	1.337E-01	9.974E-03	-0.659
	75.70			1.581E+00	2.665E-01	4.594E-01	3.740E-02	3.441
	98.88	*		1.572E-02	2.576E-01	3.706E-01	3.263E-02	0.042
	129.76			6.925E+00	4.425E+00	5.579E+00	4.659E-01	1.241
TL-200	367.94	*		-1.108E-04	4.425E+00	Half-Life	too short	
	579.30			-1.778E-03	4.425E+00	Half-Life	too short	
	828.27			3.320E-03	4.425E+00	Half-Life	too short	
	1205.75			8.901E-04	4.425E+00	Half-Life	too short	
TL-201	68.90			1.676E+00	4.583E+00	6.791E+00	5.158E-01	0.247
	70.82			-1.091E+00	2.603E+00	3.718E+00	2.876E-01	-0.293
	80.30			-2.041E+00	4.825E+00	6.874E+00	5.902E-01	-0.297
	135.34			6.324E+00	2.619E+01	4.236E+01	3.551E+00	0.149
	167.43	*		3.873E+00	7.379E+00	1.198E+01	1.048E+00	0.323
TL-202	68.90			1.569E-01	4.289E-01	6.357E-01	4.828E-02	0.247
	70.82			-1.018E-01	2.430E-01	3.471E-01	2.685E-02	-0.293
	80.30			-1.905E-01	4.505E-01	6.418E-01	5.510E-02	-0.297
	439.56	*		-1.242E-02	7.372E-02	1.187E-01	1.043E-02	-0.105

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203		70.83		-4.443E-01	1.065E+00	1.519E+00	1.984E-01	-0.293
		72.87		1.140E+00	6.278E-01	9.643E-01	1.229E-01	1.183
		82.60		1.745E+00	1.325E+00	1.654E+00	2.296E-01	1.055
BI-207		279.20	*	-5.267E-04	4.129E-02	6.883E-02	7.000E-03	-0.008
		72.80		2.114E-01	1.824E-01	2.788E-01	2.200E-02	0.758
	+	74.97		8.775E-01	1.480E-01	2.249E-01	1.816E-02	3.903
		84.90		5.752E-01	1.958E-01	3.132E-01	2.847E-02	1.836
		569.67		1.822E-03	3.514E-02	5.664E-02	5.472E-03	0.032
		1063.62	*	2.333E-03	5.304E-02	8.699E-02	7.854E-03	0.027
TL-207		1770.23		1.286E-01	5.301E-01	8.002E-01	6.565E-02	0.161
		81.07		2.121E-01	2.493E-01	3.055E-01	2.647E-02	0.694
		83.78		3.302E-01	1.303E-01	2.069E-01	1.854E-02	1.596
		94.90		5.656E-01	2.530E-01	3.977E-01	3.577E-02	1.422
		122.32		-8.818E-01	1.781E+00	2.791E+00	2.509E-01	-0.316
		144.24		3.463E-02	7.526E-01	1.199E+00	1.139E-01	0.029
		154.21		4.505E-01	4.251E-01	7.064E-01	6.667E-02	0.638
	+	269.46		8.010E-01	3.343E-01	3.863E-01	3.884E-02	2.073
		323.87	*	2.408E-01	7.539E-01	1.125E+00	2.045E-01	0.214
	+	338.28		8.753E+00	2.162E+00	2.820E+00	3.624E-01	3.104
		445.03		-5.961E-01	2.445E+00	3.910E+00	4.786E-01	-0.152
		260.50		-4.159E-01	9.870E+00	1.648E+01	1.621E+00	-0.025
PO-209		262.80		-8.366E+00	2.822E+01	4.577E+01	4.509E+00	-0.183
		896.60	*	-5.910E+00	7.193E+00	1.078E+01	1.072E+00	-0.548
		46.50	*	3.928E+00	2.314E+00	4.002E+00	3.711E-01	0.982
BI-210		46.50	*	3.928E+00	2.314E+00	4.002E+00	3.711E-01	0.982
PB-210		46.50	*	3.928E+00	2.309E+00	4.002E+00	3.357E-01	0.982
PB-211		404.84	*	1.692E-01	1.040E+00	1.712E+00	1.072E+00	0.099
		427.08		4.775E-02	2.131E+00	3.485E+00	2.166E+00	0.014
PO-215		831.96		-8.033E-01	1.379E+00	2.010E+00	1.264E+00	-0.400
		81.07		2.121E-01	2.493E-01	3.055E-01	2.647E-02	0.694
		83.78		3.302E-01	1.303E-01	2.069E-01	1.854E-02	1.596
		94.90		5.656E-01	2.530E-01	3.977E-01	3.577E-02	1.422
		122.32		-8.818E-01	1.781E+00	2.791E+00	2.509E-01	-0.316
		144.24		3.463E-02	7.526E-01	1.199E+00	1.139E-01	0.029
		154.21		4.505E-01	4.251E-01	7.064E-01	6.667E-02	0.638
	+	269.46		8.010E-01	3.343E-01	3.863E-01	3.884E-02	2.073
		323.87	*	2.408E-01	7.539E-01	1.125E+00	2.045E-01	0.214
	+	338.28		8.753E+00	2.162E+00	2.820E+00	3.624E-01	3.104
RN-219		445.03		-5.961E-01	2.445E+00	3.910E+00	4.786E-01	-0.152
	+	271.23		1.028E+00	4.325E-01	5.000E-01	5.706E-02	2.056
		401.81	*	7.790E-02	4.322E-01	7.164E-01	1.069E-01	0.109
RN-220		549.76	*	-6.852E+00	2.589E+01	4.064E+01	3.883E+00	-0.169
RA-223		81.07		2.121E-01	2.493E-01	3.055E-01	2.647E-02	0.694
		83.78		3.302E-01	1.303E-01	2.069E-01	1.854E-02	1.596
		94.90		5.656E-01	2.530E-01	3.977E-01	3.577E-02	1.422
		122.32		-8.818E-01	1.781E+00	2.791E+00	2.509E-01	-0.316
		144.24		3.463E-02	7.526E-01	1.199E+00	1.139E-01	0.029
		154.21		4.505E-01	4.251E-01	7.064E-01	6.667E-02	0.638
	+	269.46		8.010E-01	3.343E-01	3.863E-01	3.884E-02	2.073

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		323.87	*	2.408E-01	7.539E-01	1.125E+00	2.045E-01	0.214
	+	338.28		8.753E+00	2.162E+00	2.820E+00	3.624E-01	3.104
		445.03		-5.961E-01	2.445E+00	3.910E+00	4.786E-01	-0.152
		79.80		1.784E-01	1.688E+00	2.470E+00	5.303E-01	0.072
		236.00		2.416E-01	2.710E-01	4.198E-01	5.442E-02	0.576
		256.20	*	-2.309E-01	3.887E-01	6.278E-01	1.007E-01	-0.368
		286.10		-1.113E+00	1.573E+00	2.503E+00	3.526E-01	-0.445
TH-227	+	299.80		3.395E+00	2.052E+00	2.813E+00	5.095E-01	1.207
		304.40		-1.244E-01	2.192E+00	3.188E+00	6.058E-01	-0.039
		334.20		4.165E+00	3.606E+00	4.319E+00	8.545E-01	0.964
		79.80		1.784E-01	1.688E+00	2.470E+00	5.371E-01	0.072
	+	94.00		9.822E+00	3.605E+00	3.932E+00	8.631E-01	2.498
		236.00		2.416E-01	2.707E-01	4.198E-01	4.982E-02	0.576
		256.20	*	-2.309E-01	3.893E-01	6.278E-01	1.171E-01	-0.368
TH-229		286.10		-1.113E+00	1.923E+00	2.503E+00	2.515E+00	-0.445
	+	299.80		3.395E+00	2.052E+00	2.813E+00	5.095E-01	1.207
		304.40		-1.244E-01	2.192E+00	3.188E+00	6.058E-01	-0.039
		334.20		4.165E+00	3.606E+00	4.319E+00	8.545E-01	0.964
		85.43		6.747E-01	1.988E-01	3.191E-01	2.920E-02	2.114
	+	88.47		6.224E-01	1.517E-01	2.187E-01	2.060E-02	2.846
		100.00		2.642E-01	1.857E-01	3.158E-01	2.767E-02	0.836
PA-231		193.63	*	2.335E-01	5.192E-01	8.952E-01	8.153E-02	0.261
		210.97		1.436E+00	9.007E-01	1.447E+00	1.350E-01	0.993
		283.67	*	-6.635E-02	1.507E+00	2.505E+00	4.000E-01	-0.026
TH-231	+	301.29		1.358E+00	8.032E-01	1.133E+00	1.484E-01	1.199
		81.07		2.121E-01	2.493E-01	3.055E-01	2.647E-02	0.694
		83.78		3.302E-01	1.303E-01	2.069E-01	1.854E-02	1.596
U-231		94.90		5.656E-01	2.530E-01	3.977E-01	3.577E-02	1.422
		122.32		-8.818E-01	1.781E+00	2.791E+00	2.509E-01	-0.316
		144.24		3.463E-02	7.526E-01	1.199E+00	1.139E-01	0.029
		154.21		4.505E-01	4.251E-01	7.064E-01	6.667E-02	0.638
	+	269.46		8.010E-01	3.343E-01	3.863E-01	3.884E-02	2.073
	+	323.87	*	2.408E-01	7.539E-01	1.125E+00	2.045E-01	0.214
	+	338.28		8.753E+00	2.162E+00	2.820E+00	3.624E-01	3.104
PA-233		445.03		-5.961E-01	2.445E+00	3.910E+00	4.786E-01	-0.152
		84.21		1.538E+01	5.351E+00	8.561E+00	7.713E-01	1.796
	+	92.29		9.333E+00	2.873E+00	3.935E+00	3.599E-01	2.372
		95.87	*	-4.377E-01	1.108E+00	1.555E+00	1.391E-01	-0.281
PA-234		108.00		6.317E-01	2.010E+00	3.287E+00	2.801E-01	0.192
	+	75.28		2.561E+01	5.405E+00	6.724E+00	1.013E+00	3.809
	+	86.59		8.924E+00	3.141E+00	3.027E+00	8.185E-01	2.948
	+	300.12		9.465E-01	5.655E-01	7.883E-01	1.230E-01	1.201
PA-234		311.98	*	3.335E-02	6.389E-02	1.092E-01	1.083E-02	0.305
		340.50		2.001E+00	9.487E-01	1.375E+00	3.313E-01	1.456
		398.62		-2.593E+00	2.262E+00	3.226E+00	8.571E-01	-0.804
		415.76		7.124E-01	1.772E+00	2.966E+00	6.387E-01	0.240
		63.00		8.665E-01	1.373E+00	2.316E+00	3.422E-01	0.374
		94.67		5.622E-01	1.978E-01	3.042E-01	3.856E-02	1.848
		98.44		-5.003E-02	1.093E-01	1.475E-01	8.236E-02	-0.339

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	99.86			6.742E-01	4.686E-01	7.976E-01	6.992E-02	0.845
	111.00			-1.220E-01	1.902E-01	2.971E-01	3.558E-02	-0.411
	131.20			1.081E-01	1.312E-01	1.953E-01	1.632E-02	0.553
	152.70			2.447E-01	3.561E-01	5.809E-01	9.883E-02	0.421
+	186.00			5.438E+00	2.864E+00	2.862E+00	8.963E-01	1.900
	226.40			1.624E-01	4.189E-01	7.164E-01	9.888E-02	0.227
	227.20			1.370E-01	4.402E-01	7.511E-01	7.153E-02	0.182
	248.90			-4.620E-01	9.170E-01	1.373E+00	3.140E-01	-0.336
	293.70			4.891E+00	1.285E+00	1.751E+00	3.144E-01	2.793
	369.80			-8.433E-02	8.563E-01	1.399E+00	3.058E-01	-0.060
	568.70			5.657E-01	1.098E+00	1.834E+00	1.771E-01	0.309
	569.50			1.335E-01	3.020E-01	5.016E-01	4.845E-02	0.266
	574.00			-7.263E-01	1.596E+00	2.457E+00	2.380E-01	-0.296
	699.00			-3.598E-01	7.495E-01	1.205E+00	2.385E-01	-0.299
	706.10			-5.593E-01	1.133E+00	1.780E+00	7.991E-01	-0.314
	733.00			7.979E-02	4.521E-01	6.706E-01	1.531E-01	0.119
	742.81			2.811E-01	1.451E+00	2.442E+00	1.647E+00	0.115
	796.30			5.996E-01	1.073E+00	1.837E+00	5.065E-01	0.326
	805.60			6.483E-01	1.082E+00	1.858E+00	5.781E-01	0.349
	819.60			3.312E-01	1.258E+00	2.130E+00	8.178E-01	0.155
	826.30			-1.597E-01	8.887E-01	1.435E+00	6.463E-01	-0.111
	831.60			-5.893E-01	6.969E-01	1.031E+00	3.125E-01	-0.571
	876.40			1.318E-01	8.102E-01	1.344E+00	1.383E+00	0.098
	880.51			7.131E-02	2.659E-01	4.518E-01	4.516E-02	0.158
	883.24			-5.383E-02	3.100E-01	5.006E-01	3.375E-01	-0.108
	899.00			-7.984E-02	7.606E-01	1.240E+00	5.455E-01	-0.064
	925.00			-1.769E-01	1.192E+00	1.935E+00	1.904E-01	-0.091
	926.50			-5.231E-02	1.770E-01	2.820E-01	7.251E-02	-0.185
	946.00	*		-1.055E-01	3.416E-01	5.452E-01	1.053E-01	-0.193
	949.00			4.126E-01	5.108E-01	8.966E-01	8.728E-02	0.460
	980.50			3.396E-01	8.146E-01	1.231E+00	1.178E-01	0.276
PA-234M	1394.10			4.290E-01	9.026E-01	1.562E+00	1.017E+00	0.275
	766.42			5.861E+00	1.402E+01	2.079E+01	1.061E+01	0.282
TH-234	1001.03	*		5.978E+00	5.224E+00	9.235E+00	9.878E-01	0.647
	63.29	*		1.166E+00	1.179E+00	1.990E+00	3.457E-01	0.586
+	92.38			2.542E+00	8.805E-01	1.066E+00	1.954E-01	2.385
U-235	+	89.95		4.408E+00	1.931E+00	1.963E+00	6.098E-01	2.245
+	93.35			3.056E+00	1.244E+00	1.282E+00	3.613E-01	2.383
	105.00			5.057E-01	1.083E+00	1.767E+00	5.272E-01	0.286
	143.76	*		-1.569E-01	2.307E-01	3.528E-01	6.148E-02	-0.445
	163.35			3.403E-01	5.517E-01	8.798E-01	1.681E-01	0.387
+	185.71			2.014E-01	8.717E-02	1.061E-01	9.550E-03	1.898
	205.31			-1.890E-01	5.867E-01	8.570E-01	1.661E-01	-0.221
NP-236	94.67			4.295E-01	1.453E-01	2.311E-01	2.081E-02	1.859
	98.44			-3.785E-02	7.995E-02	1.115E-01	9.842E-03	-0.339
	111.00			-9.232E-02	1.436E-01	2.247E-01	1.901E-02	-0.411
	160.31	*		-5.418E-02	8.906E-02	1.373E-01	1.188E-02	-0.395
U-238	63.29	*		1.166E+00	1.179E+00	1.990E+00	3.457E-01	0.586
+	92.38			2.542E+00	7.823E-01	1.066E+00	9.741E-02	2.385

---- 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		1.640E-01	1.588E-01	2.643E-01	2.320E-02	0.621
		117.00	*	-4.532E-02	1.939E-01	3.086E-01	2.586E-02	-0.147
	+	209.75		2.586E+00	1.254E+00	1.583E+00	1.475E-01	1.634
		228.18		-8.763E-02	2.277E-01	3.762E-01	3.586E-02	-0.233
		277.60		1.986E-01	1.849E-01	3.235E-01	3.218E-02	0.614
		334.30		2.320E+00	2.000E+00	2.440E+00	2.301E-01	0.951
AM-241		59.54	*	1.309E-01	1.234E-01	2.101E-01	1.644E-02	0.623
CM-243		99.55		1.688E-01	1.634E-01	2.720E-01	2.388E-02	0.621
		103.76	*	-6.537E-02	9.966E-02	1.563E-01	1.349E-02	-0.418
		117.00		-4.662E-02	1.995E-01	3.175E-01	2.660E-02	-0.147
	+	209.75		2.550E+00	1.236E+00	1.560E+00	1.454E-01	1.634
		228.18		-8.855E-02	2.301E-01	3.801E-01	3.624E-02	-0.233
		277.60		2.002E-01	1.864E-01	3.261E-01	3.244E-02	0.614
AM-246		798.80		-1.855E-01	1.654E-01	2.490E-01	2.526E-02	-0.745
		1036.00		1.653E-01	3.230E-01	5.541E-01	5.115E-02	0.298
		1062.04		-1.919E-02	2.365E-01	3.828E-01	3.461E-02	-0.050
		1078.86	*	3.105E-02	1.568E-01	2.607E-01	2.323E-02	0.119
CM-247		278.00		5.378E-01	7.664E-01	1.321E+00	1.315E-01	0.407
		287.40		8.806E-01	1.245E+00	2.150E+00	2.130E-01	0.410
		402.60	*	6.460E-03	3.924E-02	6.498E-02	5.495E-03	0.099
CF-249		252.85		1.307E-01	8.566E-01	1.447E+00	1.414E-01	0.090
		333.44		2.771E-01	2.600E-01	3.143E-01	2.967E-02	0.882
		387.95	*	2.516E-02	4.422E-02	7.503E-02	6.331E-03	0.335
CF-251		176.60	*	-2.521E-02	1.375E-01	2.156E-01	1.913E-02	-0.117
		227.00		1.175E-01	3.933E-01	6.708E-01	6.387E-02	0.175
		285.00		-7.419E-01	1.776E+00	2.887E+00	2.866E-01	-0.257

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]G1202041821
* Acquisition date   : 24-FEB-2010 09:12:05 Detector SN#      :
* Detector ID        : GAM20 Sensitivity      : 5.000
* Geometry           : CAN Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00 Abundance limit : 75.000
* Elapsed real time  : 0 02:00:33.37 Half life ratio : 8.000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G1202041821 Analyst initials: MXR1
* Batch Number       : 952643 Sample Quantity : 1.1179E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*
*                               QC DATA
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11 MS Isotope      :
* MSD DPM            : 0.000 MSD Isotope      :
* LCS DPM            : 0.000 LCS Isotope      :
* LCSD DPM           : 0.000 LCSD Isotope     :
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.450E+01	3.510E+00	5.277E-01	0.000E+00
CD-109	4.636E+00	1.107E+00	1.058E+00	0.000E+00
SN-126	4.559E-01	1.089E-01	1.044E-01	0.000E+00
BA-137M	2.373E-01	8.115E-02	6.093E-02	0.000E+00
CS-137	2.509E-01	8.579E-02	6.441E-02	0.000E+00
TL-208	5.836E-01	1.064E-01	5.882E-02	0.000E+00
BI-211	4.516E+00	6.768E-01	3.525E-01	0.000E+00
BI-212	1.500E+00	5.195E-01	5.719E-01	0.000E+00
PB-212	2.023E+00	2.452E-01	1.027E-01	0.000E+00
PO-212	2.023E+00	2.452E-01	1.027E-01	0.000E+00
BI-214	1.266E+00	2.128E-01	1.130E-01	0.000E+00
PB-214	1.571E+00	2.488E-01	1.229E-01	0.000E+00
PO-214	1.571E+00	2.488E-01	1.229E-01	0.000E+00
PO-216	2.023E+00	2.452E-01	1.027E-01	0.000E+00
PO-218	1.571E+00	2.488E-01	1.229E-01	0.000E+00
RA-224	4.919E+00	1.378E+00	1.168E+00	0.000E+00
RA-226	1.266E+00	2.128E-01	1.130E-01	0.000E+00
AC-228	1.915E+00	4.404E-01	2.308E-01	0.000E+00
RA-228	1.915E+00	4.404E-01	2.308E-01	0.000E+00
TH-228	2.053E+00	2.489E-01	1.042E-01	0.000E+00
TH-230	1.266E+00	2.128E-01	1.130E-01	0.000E+00
TH-232	1.915E+00	4.404E-01	2.308E-01	0.000E+00
U-234	1.266E+00	2.128E-01	1.130E-01	0.000E+00
NP-237	1.339E+00	4.189E-01	3.087E-01	0.000E+00
AM-243	4.889E-01	8.078E-02	8.089E-02	0.000E+00
ANH-511	1.613E-01	7.744E-02	4.466E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-7.252E-02	3.417E-01	5.590E-01	0.000E+00 NOT IDENT.

NA-22	2.794E-02	4.753E-02	8.250E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.058E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.249E-02	2.584E-02	4.759E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.056E-02	8.554E-02	0.000E+00	FAIL ABUN
SC-46	1.618E-02	4.195E-02	7.279E-02	0.000E+00	FAIL ABUN
V-48	7.215E-03	7.473E-02	1.191E-01	0.000E+00	NOT IDENT.
CR-51	4.388E-03	3.814E-01	6.501E-01	0.000E+00	NOT IDENT.
MN-52	1.713E-01	2.110E-01	3.969E-01	0.000E+00	NOT IDENT.
MN-54	4.776E-03	3.948E-02	6.745E-02	0.000E+00	NOT IDENT.
CO-56	-1.697E-02	4.328E-02	7.068E-02	0.000E+00	NOT IDENT.
CO-57	-1.587E-02	2.515E-02	4.056E-02	0.000E+00	NOT IDENT.
CO-58	-4.160E-02	4.143E-02	6.364E-02	0.000E+00	NOT IDENT.
FE-59	-3.007E-02	9.825E-02	1.579E-01	0.000E+00	NOT IDENT.
CO-60	-2.607E-02	4.113E-02	6.132E-02	0.000E+00	NOT IDENT.
ZN-65	-4.937E-02	1.158E-01	1.563E-01	0.000E+00	NOT IDENT.
GE-68	6.349E-02	1.337E+00	2.231E+00	0.000E+00	NOT IDENT.
AS-73	4.348E-02	5.716E-01	9.860E-01	0.000E+00	NOT IDENT.
AS-74	7.329E-02	9.997E-02	1.727E-01	0.000E+00	NOT IDENT.
SE-75	1.069E-02	4.720E-02	7.647E-02	0.000E+00	NOT IDENT.
BR-77	2.198E-01	1.002E+01	1.660E+01	0.000E+00	FAIL ABUN
SR-82	-1.127E-01	3.654E-01	6.041E-01	0.000E+00	NOT IDENT.
RB-83	2.693E-02	7.041E-02	1.199E-01	0.000E+00	NOT IDENT.
RB-84	2.436E-02	6.744E-02	1.176E-01	0.000E+00	NOT IDENT.
KR-85	1.279E+01	8.645E+00	1.411E+01	0.000E+00	NOT IDENT.
SR-85	6.541E-02	4.422E-02	7.216E-02	0.000E+00	NOT IDENT.
RB-86	6.624E-02	8.517E-01	1.425E+00	0.000E+00	NOT IDENT.
Y-88	9.980E-03	3.110E-02	5.520E-02	0.000E+00	NOT IDENT.
ZR-88	-3.303E-02	3.315E-02	5.201E-02	0.000E+00	NOT IDENT.
Y-91	2.078E+00	2.088E+01	3.466E+01	0.000E+00	NOT IDENT.
NB-94	1.490E-02	3.466E-02	6.117E-02	0.000E+00	NOT IDENT.
NB-95	3.012E-02	4.859E-02	7.668E-02	0.000E+00	NOT IDENT.
NB-95M	7.809E-02	1.366E-01	2.154E-01	0.000E+00	NOT IDENT.
ZR-95	8.119E-02	7.124E-02	1.316E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.958E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.706E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.445E+00	1.091E+01	1.809E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.090E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.134E-03	3.408E-02	5.871E-02	0.000E+00	NOT IDENT.
RH-102	2.042E-02	3.160E-02	5.486E-02	0.000E+00	NOT IDENT.
RU-103	-6.412E-03	4.400E-02	7.215E-02	0.000E+00	FAIL ABUN
RH-106	-2.804E-01	3.793E-01	5.789E-01	0.000E+00	FAIL ABUN
RU-106	-2.804E-01	3.782E-01	5.789E-01	0.000E+00	FAIL ABUN
AG-108M	-1.080E-02	3.458E-02	5.656E-02	0.000E+00	NOT IDENT.
AG-110M	2.735E-03	4.033E-02	6.089E-02	0.000E+00	NOT IDENT.
IN-111	2.824E-01	1.072E+00	1.662E+00	0.000E+00	NOT IDENT.
IN-113M	-6.459E-03	4.779E-02	7.975E-02	0.000E+00	NOT IDENT.
SN-113	-6.459E-03	4.779E-02	7.975E-02	0.000E+00	NOT IDENT.
IN-114M	-2.233E-02	2.026E-01	3.113E-01	0.000E+00	NOT IDENT.
CD-115	4.368E+00	1.051E+01	1.791E+01	0.000E+00	NOT IDENT.
SN-117M	-3.759E-02	5.752E-02	9.143E-02	0.000E+00	NOT IDENT.
SB-122	2.971E+00	2.100E+00	3.792E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.575E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.028E-02	3.033E-02	4.818E-02	0.000E+00	NOT IDENT.
I-124	-1.440E-01	7.123E-01	1.104E+00	0.000E+00	NOT IDENT.
SB-124	-2.670E-02	6.837E-02	1.053E-01	0.000E+00	NOT IDENT.
SB-125	1.817E-02	9.188E-02	1.560E-01	0.000E+00	FAIL ABUN
TE-125M	-3.883E+00	9.410E+00	1.545E+01	0.000E+00	NOT IDENT.
I-126	-7.645E-02	1.918E-01	2.732E-01	0.000E+00	NOT IDENT.
SB-126	-5.711E-02	1.487E-01	2.464E-01	0.000E+00	FAIL ABUN
SB-127	2.454E-01	1.301E+00	2.263E+00	0.000E+00	NOT IDENT.
XE-127	1.957E-02	4.621E-02	8.199E-02	0.000E+00	NOT IDENT.
I-131	-1.526E-02	1.095E-01	1.833E-01	0.000E+00	NOT IDENT.
TE-132	-2.014E-01	6.479E-01	1.107E+00	0.000E+00	NOT IDENT.
BA-133	-1.230E-02	5.084E-02	7.393E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.240E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.647E-02	5.325E-02	9.764E-02	0.000E+00	NOT IDENT.
CS-135	9.006E-02	1.838E-01	2.871E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.212E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.218E-01	1.132E-01	1.663E-01	0.000E+00	FAIL ABUN
CE-139	-2.411E-03	3.343E-02	5.464E-02	0.000E+00	NOT IDENT.
BA-140	4.769E-02	2.856E-01	4.706E-01	0.000E+00	NOT IDENT.
LA-140	5.493E-02	8.668E-02	1.437E-01	0.000E+00	FAIL ABUN
CE-141	6.451E-02	6.589E-02	1.131E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.734E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-5.435E-02	2.501E-01	3.641E-01	0.000E+00	NOT IDENT.
PM-144	2.164E-02	3.415E-02	6.119E-02	0.000E+00	NOT IDENT.
PR-144	1.466E+00	2.314E+00	4.146E+00	0.000E+00	NOT IDENT.
PM-146	1.285E-02	4.520E-02	7.689E-02	0.000E+00	NOT IDENT.

ND-147	-2.753E-01	5.795E-01	9.165E-01	0.000E+00	FAIL ABUN
PM-149	-8.490E+01	8.612E+01	1.377E+02	0.000E+00	NOT IDENT.
EU-152	5.924E-02	1.044E-01	1.772E-01	0.000E+00	FAIL ABUN
GD-153	-6.381E-02	8.690E-02	1.238E-01	0.000E+00	NOT IDENT.
EU-154	7.598E-02	1.342E-01	2.321E-01	0.000E+00	NOT IDENT.
EU-155	3.001E-02	1.068E-01	1.809E-01	0.000E+00	FAIL ABUN
TB-160	-1.457E-01	1.378E-01	2.058E-01	0.000E+00	FAIL ABUN
HO-166M	-3.412E-03	6.426E-02	1.095E-01	0.000E+00	NOT IDENT.
TM-171	-5.691E+01	2.635E+01	4.108E+01	0.000E+00	NOT IDENT.
LU-176	-6.869E-03	2.538E-02	4.267E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.692E+00	2.155E+00	0.000E+00	FAIL ABUN
LU-177M	-1.367E-01	1.904E-01	3.039E-01	0.000E+00	FAIL ABUN
HF-181	-1.662E-02	4.282E-02	6.890E-02	0.000E+00	NOT IDENT.
W-181	1.014E-01	3.185E-01	5.476E-01	0.000E+00	NOT IDENT.
TA-182	4.685E-02	2.189E-01	3.664E-01	0.000E+00	FAIL ABUN
RE-183	9.719E-02	1.241E-01	2.069E-01	0.000E+00	FAIL ABUN
RE-184	3.479E-02	2.235E-01	3.888E-01	0.000E+00	NOT IDENT.
OS-185	-5.725E-02	4.269E-02	6.482E-02	0.000E+00	NOT IDENT.
RE-188	5.778E-02	1.823E-01	3.041E-01	0.000E+00	NOT IDENT.
W-188	6.902E-01	8.364E+00	1.268E+01	0.000E+00	NOT IDENT.
IR-192	-3.136E-03	3.325E-02	5.635E-02	0.000E+00	FAIL ABUN
AU-195	1.572E-02	2.524E-01	3.768E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.800E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.873E+00	7.231E+00	1.213E+01	0.000E+00	NOT IDENT.
TL-202	-1.242E-02	7.225E-02	1.193E-01	0.000E+00	NOT IDENT.
HG-203	-5.267E-04	4.046E-02	6.941E-02	0.000E+00	NOT IDENT.
BI-207	2.333E-03	5.197E-02	8.678E-02	0.000E+00	FAIL ABUN
TL-207	2.408E-01	7.388E-01	1.133E+00	0.000E+00	FAIL ABUN
PO-209	-5.910E+00	7.049E+00	1.077E+01	0.000E+00	NOT IDENT.
BI-210	3.928E+00	2.268E+00	4.093E+00	0.000E+00	NOT IDENT.
PB-210	3.928E+00	2.268E+00	4.093E+00	0.000E+00	NOT IDENT.
PO-210	3.928E+00	2.263E+00	4.093E+00	0.000E+00	NOT IDENT.
PB-211	1.692E-01	1.019E+00	1.721E+00	0.000E+00	NOT IDENT.
PO-215	2.408E-01	7.388E-01	1.133E+00	0.000E+00	FAIL ABUN
RN-219	7.790E-02	4.236E-01	7.203E-01	0.000E+00	FAIL ABUN
RN-220	-6.852E+00	2.538E+01	4.076E+01	0.000E+00	NOT IDENT.
RA-223	2.408E-01	7.388E-01	1.133E+00	0.000E+00	FAIL ABUN
AC-227	-2.309E-01	3.809E-01	6.336E-01	0.000E+00	FAIL ABUN
TH-227	-2.309E-01	3.815E-01	6.336E-01	0.000E+00	FAIL ABUN
TH-229	2.335E-01	5.088E-01	9.055E-01	0.000E+00	FAIL ABUN
PA-231	-6.635E-02	1.476E+00	2.526E+00	0.000E+00	FAIL ABUN
TH-231	2.408E-01	7.388E-01	1.133E+00	0.000E+00	FAIL ABUN
U-231	-4.377E-01	1.086E+00	1.582E+00	0.000E+00	FAIL ABUN
PA-233	3.335E-02	6.261E-02	1.100E-01	0.000E+00	FAIL ABUN
PA-234	-1.055E-01	3.348E-01	5.444E-01	0.000E+00	FAIL ABUN
PA-234M	5.978E+00	5.119E+00	9.217E+00	0.000E+00	NOT IDENT.
TH-234	1.166E+00	1.155E+00	2.030E+00	0.000E+00	FAIL ABUN
U-235	-1.569E-01	2.261E-01	3.577E-01	0.000E+00	FAIL ABUN
NP-236	-5.418E-02	8.728E-02	1.390E-01	0.000E+00	NOT IDENT.
U-238	1.166E+00	1.155E+00	2.030E+00	0.000E+00	FAIL ABUN
NP-239	-4.532E-02	1.900E-01	3.134E-01	0.000E+00	FAIL ABUN
AM-241	1.309E-01	1.209E-01	2.145E-01	0.000E+00	NOT IDENT.
CM-243	-6.537E-02	9.767E-02	1.588E-01	0.000E+00	FAIL ABUN
AM-246	3.105E-02	1.537E-01	2.601E-01	0.000E+00	NOT IDENT.
CM-247	6.460E-03	3.846E-02	6.533E-02	0.000E+00	NOT IDENT.
CF-249	2.516E-02	4.333E-02	7.547E-02	0.000E+00	NOT IDENT.
CF-251	-2.521E-02	1.348E-01	2.182E-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]G1202041821.CNF;1
Sample date        : 9-FEB-2010 12:00:00. Acquisition date : 24-FEB-2010 09:12:05
Sample ID          : G1202041821      Sample quantity   : 1.11790E+02 GRAM
Detector name      : GAM20             Detector geometry: CAN
Elapsed live time   : 0 02:00:00.00    Elapsed real time: 0 02:00:33.37  0.5%
Energy tolerance    : 1.50000 keV      Analyst Initials  : MXR1
Abundance limit     : 75.00000         Sensitivity       : 5.00000
Batch ID           : 952643            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	1373	10.67*	1.252E+00	3.450E+01	3.450E+01	10.38
CD-109	88.03	349	3.72*	6.947E+00	4.534E+00	4.636E+00	24.37
SN-126	64.28	-----	9.60	4.779E+00	-----	Line Not Found	-----
	86.94	349	8.90	6.947E+00	1.895E+00	1.895E+00	47.22
	87.57	349	37.00*	6.947E+00	4.559E-01	4.559E-01	24.37
BA-137M	661.65	155	89.98*	2.434E+00	2.371E-01	2.373E-01	34.89
CS-137	661.65	155	85.12*	2.434E+00	2.507E-01	2.509E-01	34.89
TL-208	277.35	-----	6.80	4.722E+00	-----	Line Not Found	-----
	510.84	144	21.60	2.992E+00	7.467E-01	7.467E-01	49.69
	583.14	394	84.20*	2.695E+00	5.836E-01	5.836E-01	18.60
	860.37	70	12.46	1.952E+00	9.613E-01	9.613E-01	47.62
BI-211	72.87	-----	1.27	5.845E+00	-----	Line Not Found	-----
	351.07	690	12.94*	3.967E+00	4.516E+00	4.516E+00	15.29
BI-212	727.18	119	11.80*	2.250E+00	1.500E+00	1.500E+00	35.35
	785.46	-----	1.97	2.111E+00	-----	Line Not Found	-----
	1620.62	26	2.75	1.161E+00	2.760E+00	2.760E+00	52.41
PB-212	74.81	582	10.70	6.059E+00	3.016E+00	3.016E+00	19.28
	77.11	846	18.00	6.266E+00	2.519E+00	2.519E+00	13.29
	87.30	349	8.00	6.947E+00	2.108E+00	2.108E+00	26.34
	238.63	1410	44.60*	5.247E+00	2.023E+00	2.023E+00	12.37
	300.09	83	3.41	4.458E+00	1.832E+00	1.832E+00	58.80
PO-212	74.81	582	10.70	6.059E+00	3.016E+00	3.016E+00	19.28
	77.11	846	18.00	6.266E+00	2.519E+00	2.519E+00	13.29
	87.30	349	8.00	6.947E+00	2.108E+00	2.108E+00	26.34
	115.19	-----	0.60	7.430E+00	-----	Line Not Found	-----
	238.63	1410	44.60*	5.247E+00	2.023E+00	2.023E+00	12.37
	300.09	83	3.41	4.458E+00	1.832E+00	1.832E+00	58.80
BI-214	609.31	454	46.30*	2.602E+00	1.266E+00	1.266E+00	17.16
	1120.29	90	15.10	1.556E+00	1.280E+00	1.280E+00	41.40
	1764.49	92	15.80	1.100E+00	1.777E+00	1.777E+00	27.47
PB-214	74.81	582	6.21	6.059E+00	5.196E+00	5.196E+00	18.42
	77.11	846	10.50	6.266E+00	4.318E+00	4.318E+00	15.32

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	87.30	349	4.67	6.947E+00	3.612E+00	3.612E+00	25.56
	241.98	301	7.49	5.204E+00	2.594E+00	2.594E+00	29.13
	295.21	361	19.20	4.512E+00	1.398E+00	1.398E+00	19.56
	351.92	690	37.20*	3.967E+00	1.571E+00	1.571E+00	16.16
	74.81	582	6.21	6.059E+00	5.196E+00	5.196E+00	18.42
	77.11	846	10.50	6.266E+00	4.318E+00	4.318E+00	15.32
	87.30	349	4.67	6.947E+00	3.612E+00	3.612E+00	25.56
	241.98	301	7.49	5.204E+00	2.594E+00	2.594E+00	29.13
PO-216	295.21	361	19.20	4.512E+00	1.398E+00	1.398E+00	19.56
	351.92	690	37.20*	3.967E+00	1.571E+00	1.571E+00	16.16
	74.81	582	10.70	6.059E+00	3.016E+00	3.016E+00	19.28
	77.11	846	18.00	6.266E+00	2.519E+00	2.519E+00	13.29
	87.30	349	8.00	6.947E+00	2.108E+00	2.108E+00	26.34
	238.63	1410	44.60*	5.247E+00	2.023E+00	2.023E+00	12.37
	300.09	83	3.41	4.458E+00	1.832E+00	1.832E+00	58.80
	74.81	582	6.21	6.059E+00	5.196E+00	5.196E+00	18.42
PO-218	77.11	846	10.50	6.266E+00	4.318E+00	4.318E+00	15.32
	87.30	349	4.67	6.947E+00	3.612E+00	3.612E+00	25.56
	241.98	301	7.49	5.204E+00	2.594E+00	2.594E+00	29.13
	295.21	361	19.20	4.512E+00	1.398E+00	1.398E+00	19.56
	351.92	690	37.20*	3.967E+00	1.571E+00	1.571E+00	16.16
	240.98	301	3.95*	5.204E+00	4.919E+00	4.919E+00	28.58
	609.31	454	46.30*	2.602E+00	1.266E+00	1.266E+00	17.16
	1120.29	90	15.10	1.556E+00	1.280E+00	1.280E+00	41.40
AC-228	1764.49	92	15.80	1.100E+00	1.777E+00	1.777E+00	27.47
	338.32	291	11.40	4.086E+00	2.096E+00	2.096E+00	46.48
	911.07	294	27.70*	1.859E+00	1.915E+00	1.915E+00	23.46
	969.11	203	16.60	1.763E+00	2.334E+00	2.334E+00	30.19
	338.32	291	11.40	4.086E+00	2.096E+00	2.096E+00	46.48
	911.07	294	27.70*	1.859E+00	1.915E+00	1.915E+00	23.46
	969.11	203	16.60	1.763E+00	2.334E+00	2.334E+00	30.19
	74.81	582	10.70	6.059E+00	3.016E+00	3.061E+00	16.90
TH-228	77.11	846	18.00	6.266E+00	2.519E+00	2.557E+00	13.29
	87.30	349	8.00	6.947E+00	2.108E+00	2.140E+00	24.37
	238.63	1410	44.60*	5.247E+00	2.023E+00	2.053E+00	12.37
	300.09	83	3.41	4.458E+00	1.832E+00	1.859E+00	82.84
	609.31	454	46.30*	2.602E+00	1.266E+00	1.266E+00	17.16
	1120.29	90	15.10	1.556E+00	1.280E+00	1.280E+00	41.40
	1764.49	92	15.80	1.100E+00	1.777E+00	1.777E+00	27.47
	338.32	291	11.40	4.086E+00	2.096E+00	2.096E+00	23.08
TH-232	911.07	294	27.70*	1.859E+00	1.915E+00	1.915E+00	23.46
	969.11	203	16.60	1.763E+00	2.334E+00	2.334E+00	30.19
	609.31	454	46.30*	2.602E+00	1.266E+00	1.266E+00	17.16
	1120.29	90	15.10	1.556E+00	1.280E+00	1.280E+00	41.40
	1764.49	92	15.80	1.100E+00	1.777E+00	1.777E+00	27.47
	86.50	349	12.60*	6.947E+00	1.339E+00	1.339E+00	31.93
	95.87	-----	2.60	7.260E+00	-----	Line Not Found	-----
	74.67	582	66.00*	6.059E+00	4.889E-01	4.889E-01	16.86
AM-243	86.72	349	0.34	6.947E+00	5.020E+01	5.020E+01	24.37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	117.66	-----	0.55	7.416E+00	-----	Line Not Found	-----
	142.18	-----	0.13	7.067E+00	-----	Line Not Found	-----
ANH-511	511.00	144	100.00*	2.992E+00	1.613E-01	1.613E-01	48.99

Flag: "*" = Keyline

Total number of lines in spectrum 35
Number of unidentified lines 5
Number of lines tentatively identified by NID 30 85.71%

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	3.450E+01	3.450E+01	0.358E+01	10.38	
CD-109	464.00D	1.02	4.534E+00	4.636E+00	1.130E+00	24.37	
SN-126	1.00E+05Y	1.00	4.559E-01	4.559E-01	1.111E-01	24.37	
BA-137M	30.17Y	1.00	2.371E-01	2.373E-01	0.828E-01	34.89	
CS-137	30.17Y	1.00	2.507E-01	2.509E-01	0.875E-01	34.89	
TL-208	1.41E+10Y	1.00	5.836E-01	5.836E-01	1.085E-01	18.60	
BI-211	7.04E+08Y	1.00	4.516E+00	4.516E+00	0.691E+00	15.29	
BI-212	1.41E+10Y	1.00	1.500E+00	1.500E+00	0.530E+00	35.35	
PB-212	1.41E+10Y	1.00	2.023E+00	2.023E+00	0.250E+00	12.37	
PO-212	1.41E+10Y	1.00	2.023E+00	2.023E+00	0.250E+00	12.37	
BI-214	1600.00Y	1.00	1.266E+00	1.266E+00	0.217E+00	17.16	
PB-214	1600.00Y	1.00	1.571E+00	1.571E+00	0.254E+00	16.16	
PO-214	1600.00Y	1.00	1.571E+00	1.571E+00	0.254E+00	16.16	
PO-216	1.41E+10Y	1.00	2.023E+00	2.023E+00	0.250E+00	12.37	
PO-218	1600.00Y	1.00	1.571E+00	1.571E+00	0.254E+00	16.16	
RA-224	1.41E+10Y	1.00	4.919E+00	4.919E+00	1.406E+00	28.58	
RA-226	1600.00Y	1.00	1.266E+00	1.266E+00	0.217E+00	17.16	
AC-228	1.41E+10Y	1.00	1.915E+00	1.915E+00	0.449E+00	23.46	
RA-228	1.41E+10Y	1.00	1.915E+00	1.915E+00	0.449E+00	23.46	
TH-228	1.91Y	1.01	2.023E+00	2.053E+00	0.254E+00	12.37	
TH-230	4.47E+09Y	1.00	1.266E+00	1.266E+00	0.217E+00	17.16	
TH-232	1.41E+10Y	1.00	1.915E+00	1.915E+00	0.449E+00	23.46	
U-234	4.47E+09Y	1.00	1.266E+00	1.266E+00	0.217E+00	17.16	
NP-237	2.14E+06Y	1.00	1.339E+00	1.339E+00	0.427E+00	31.93	
AM-243	7380.00Y	1.00	4.889E-01	4.889E-01	0.824E-01	16.86	
ANH-511	1.00E+09Y	1.00	1.613E-01	1.613E-01	0.790E-01	48.99	

Total Activity : 7.710E+01 7.723E+01

Grand Total Activity : 7.710E+01 7.723E+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	90.10	250	381	1.26	180.09	164	29	3.48E-02	30.9	7.07E+00	T
4	93.03	294	415	1.46	185.94	164	29	4.08E-02	29.4	7.18E+00	T
0	129.04	115	379	1.23	257.86	255	9	1.60E-02	63.4	7.29E+00	T
0	186.07	200	393	1.19	371.76	367	11	2.78E-02	42.3	6.17E+00	T
0	209.42	143	290	1.03	418.40	414	10	1.99E-02	47.6	5.73E+00	T
0	270.22	156	213	2.00	539.86	535	12	2.17E-02	40.5	4.81E+00	T
0	328.51	97	149	1.72	656.29	652	11	1.35E-02	52.3	4.18E+00	T
0	463.09	118	146	1.39	925.20	918	15	1.64E-02	48.3	3.23E+00	T
0	768.52	51	60	1.28	1535.74	1529	12	7.02E-03	68.5	2.15E+00	
1	965.19	71	52	1.84	1929.06	1922	36	9.88E-03	46.1	1.77E+00	T
0	1590.22	21	19	1.65	3180.01	3171	13	2.89E-03	97.8	1.18E+00	
0	1593.58	18	4	2.36	3186.75	3183	8	2.50E-03	60.9	1.18E+00	
0	1639.25	14	5	1.35	3278.20	3272	10	1.93E-03	80.8	1.15E+00	
0	1732.34	45	0	1.13	3464.67	3455	21	6.25E-03	29.8	1.11E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 11:13:15.66

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041821.CNF;1
* Acquisition date   : 24-FEB-2010 09:12:05   Detector SN#      :
* Detector ID        : GAM20                  Sensitivity       : 5.00000
* Geometry           : CAN                    Energy tolerance: 1.50000
* Elapsed live time  : 0 02:00:00.00          Abundance limit  : 75.00000
* Elapsed real time  : 0 02:00:33.37          Half life ratio  : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 9-FEB-2010 12:00:00.   Nuclide Library : SOLID
* Sample ID          : G1202041821            Analyst initials: MXR1
* Batch Number       : 952643                 Sample Quantity : 1.11790E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11.7MS Isotope      :
* MSD ID             :                          MSD Isotope    :
* LCS ID             : 1032-A                  LCS Isotope      :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.450E+01	3.582E+00	5.303E-01	4.625E-02	65.057
CD-109	4.636E+00	1.130E+00	1.040E+00	9.834E-02	4.458
SN-126	4.559E-01	1.111E-01	1.025E-01	9.645E-03	4.446
BA-137M	2.373E-01	8.280E-02	6.084E-02	6.106E-03	3.901
CS-137	2.509E-01	8.754E-02	6.431E-02	6.464E-03	3.901
TL-208	5.836E-01	1.085E-01	5.867E-02	6.032E-03	9.947
BI-211	4.516E+00	6.907E-01	3.501E-01	3.354E-02	12.898
BI-212	1.500E+00	5.301E-01	5.715E-01	6.486E-02	2.624
PB-212	2.023E+00	2.502E-01	1.017E-01	1.082E-02	19.888
PO-212	2.023E+00	2.502E-01	1.017E-01	1.082E-02	19.888
BI-214	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
PB-214	1.571E+00	2.539E-01	1.220E-01	1.330E-02	12.872
PO-214	1.571E+00	2.539E-01	1.220E-01	1.330E-02	12.872
PO-216	2.023E+00	2.502E-01	1.017E-01	1.082E-02	19.888
PO-218	1.571E+00	2.539E-01	1.220E-01	1.330E-02	12.872
RA-224	4.919E+00	1.406E+00	1.157E+00	1.118E-01	4.251
RA-226	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
AC-228	1.915E+00	4.494E-01	2.311E-01	2.831E-02	8.288

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.915E+00	4.494E-01	2.311E-01	2.831E-02	8.288
TH-228	2.053E+00	2.540E-01	1.032E-01	1.098E-02	19.888
TH-230	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
TH-232	1.915E+00	4.494E-01	2.311E-01	2.831E-02	8.288
U-234	1.266E+00	2.172E-01	1.128E-01	1.255E-02	11.224
NP-237	1.339E+00	4.274E-01	3.032E-01	6.860E-02	4.415
AM-243	4.889E-01	8.243E-02	7.938E-02	6.389E-03	6.159
ANH-511	1.613E-01	7.902E-02	4.450E-02	4.147E-03	3.625

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-7.252E-02		3.487E-01	5.567E-01	5.411E-02	-0.130
NA-22	2.794E-02		4.850E-02	8.282E-02	6.861E-03	0.337
NA-24	-1.116E-01		2.581E-01	Half-Life too short		
AL-26	1.249E-02		2.637E-02	4.792E-02	3.892E-03	0.261
TI-44	4.648E-01	+	6.179E-02	8.397E-02	7.048E-03	5.535
SC-46	1.618E-02		4.281E-02	7.286E-02	7.264E-03	0.222
V-48	7.215E-03		7.626E-02	1.193E-01	1.141E-02	0.060
CR-51	4.388E-03		3.892E-01	6.454E-01	6.470E-02	0.007
MN-52	1.713E-01		2.153E-01	3.988E-01	3.375E-02	0.429
MN-54	4.776E-03		4.028E-02	6.748E-02	6.816E-03	0.071
CO-56	-1.697E-02		4.416E-02	7.072E-02	7.128E-03	-0.240
CO-57	-1.587E-02		2.566E-02	3.996E-02	3.335E-03	-0.397
CO-58	-4.160E-02		4.228E-02	6.366E-02	6.464E-03	-0.653
FE-59	-3.007E-02		1.003E-01	1.584E-01	1.494E-02	-0.190
CO-60	-2.607E-02		4.196E-02	6.158E-02	5.159E-03	-0.423
ZN-65	-4.937E-02		1.182E-01	1.568E-01	1.349E-02	-0.315
GE-68	6.349E-02		1.365E+00	2.236E+00	1.995E-01	0.028
AS-73	4.348E-02		5.832E-01	9.650E-01	7.164E-02	0.045
AS-74	7.329E-02		1.020E-01	1.723E-01	1.687E-02	0.425
SE-75	1.069E-02		4.816E-02	7.580E-02	7.505E-03	0.141
BR-77	2.198E-01		1.023E+01	1.654E+01	1.552E+00	0.013
SR-82	-1.127E-01		3.728E-01	6.040E-01	6.137E-02	-0.187
RB-83	2.693E-02		7.185E-02	1.195E-01	1.121E-02	0.225
RB-84	2.436E-02		6.882E-02	1.177E-01	1.176E-02	0.207
KR-85	1.279E+01		8.822E+00	1.406E+01	1.313E+00	0.910
SR-85	6.541E-02		4.512E-02	7.191E-02	6.715E-03	0.910
RB-86	6.624E-02		8.691E-01	1.428E+00	1.275E-01	0.046
Y-88	9.980E-03		3.174E-02	5.559E-02	4.485E-03	0.180
ZR-88	-3.303E-02		3.383E-02	5.172E-02	4.325E-03	-0.639
Y-91	2.078E+00		2.130E+01	3.478E+01	2.824E+00	0.060
NB-94	1.490E-02		3.537E-02	6.111E-02	6.183E-03	0.244
NB-95	3.012E-02		4.958E-02	7.666E-02	7.791E-03	0.393
NB-95M	7.809E-02		1.394E-01	2.133E-01	2.292E-02	0.366
ZR-95	8.119E-02		7.270E-02	1.315E-01	1.435E-02	0.617
NB-97	8.085E-03		4.570E-02	Half-Life too short		

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	2.730E+00		8.706E-01	Half-Life too short		
MO-99	-3.445E+00		1.113E+01	1.808E+01	2.912E+00	-0.191
TC-99M	-9.815E+09		1.066E+10	Half-Life too short		
RH-101	5.134E-03		3.477E-02	5.806E-02	5.322E-03	0.088
RH-102	2.042E-02		3.224E-02	5.463E-02	4.953E-03	0.374
RU-103	-6.412E-03		4.490E-02	7.188E-02	1.045E-02	-0.089
RH-106	-2.804E-01		3.870E-01	5.777E-01	8.213E-02	-0.485
RU-106	-2.804E-01		3.859E-01	5.777E-01	5.718E-02	-0.485
AG-108M	-1.080E-02		3.529E-02	5.628E-02	5.108E-03	-0.192
AG-110M	2.735E-03		4.115E-02	6.079E-02	6.229E-03	0.045
IN-111	2.824E-01		1.093E+00	1.646E+00	1.598E-01	0.172
IN-113M	-6.459E-03		4.876E-02	7.930E-02	6.841E-03	-0.081
SN-113	-6.459E-03		4.876E-02	7.930E-02	6.841E-03	-0.081
IN-114M	-2.233E-02		2.067E-01	3.077E-01	2.789E-02	-0.073
CD-115	4.368E+00		1.072E+01	1.785E+01	1.683E+00	0.245
SN-117M	-3.759E-02		5.869E-02	9.026E-02	7.790E-03	-0.416
SB-122	2.971E+00		2.143E+00	3.781E+00	3.642E-01	0.786
I-123	-3.058E+00		2.334E+00	Half-Life too short		
TE-123M	-2.028E-02		3.095E-02	4.756E-02	4.133E-03	-0.426
I-124	-1.440E-01		7.269E-01	1.101E+00	1.081E-01	-0.131
SB-124	-2.670E-02		6.976E-02	1.059E-01	9.206E-03	-0.252
SB-125	1.817E-02		9.375E-02	1.552E-01	1.374E-02	0.117
TE-125M	-3.883E+00		9.602E+00	1.521E+01	1.554E+00	-0.255
I-126	-7.645E-02		1.957E-01	2.728E-01	2.741E-02	-0.280
SB-126	-5.711E-02		1.517E-01	2.463E-01	2.497E-02	-0.232
SB-127	2.454E-01		1.327E+00	2.261E+00	2.819E-01	0.109
XE-127	1.957E-02		4.716E-02	8.109E-02	7.485E-03	0.241
I-131	-1.526E-02		1.117E-01	1.822E-01	1.709E-02	-0.084
TE-132	-2.014E-01		6.611E-01	1.096E+00	1.774E-01	-0.184
BA-133	-1.230E-02		5.188E-02	7.345E-02	9.922E-03	-0.167
I-133	-2.803E-03		2.674E-03	Half-Life too short		
CS-134	6.647E-02		5.433E-02	9.764E-02	9.963E-03	0.681
CS-135	9.006E-02		1.875E-01	2.846E-01	3.154E-02	0.316
I-135	-7.875E+08		1.639E+09	Half-Life too short		
CS-136	-1.218E-01		1.155E-01	1.667E-01	1.582E-02	-0.731
CE-139	-2.411E-03		3.412E-02	5.396E-02	4.711E-03	-0.045
BA-140	4.769E-02		2.914E-01	4.691E-01	1.566E-01	0.102
LA-140	5.493E-02		8.845E-02	1.445E-01	1.220E-02	0.380
CE-141	6.451E-02		6.724E-02	1.115E-01	9.629E-03	0.578
CE-143	4.066E-04		8.847E-05	Half-Life too short		
CE-144	-5.435E-02		2.552E-01	3.589E-01	5.538E-02	-0.151
PM-144	2.164E-02		3.484E-02	6.113E-02	6.180E-03	0.354
PR-144	1.466E+00		2.361E+00	4.142E+00	4.186E-01	0.354
PM-146	1.285E-02		4.612E-02	7.655E-02	8.384E-03	0.168
ND-147	-2.753E-01		5.913E-01	9.135E-01	1.410E-01	-0.301
PM-149	-8.490E+01		8.787E+01	1.366E+02	2.226E+01	-0.622
EU-152	5.924E-02		1.066E-01	1.760E-01	1.717E-02	0.337
GD-153	-6.381E-02		8.868E-02	1.217E-01	1.080E-02	-0.524

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	7.598E-02		1.369E-01	2.330E-01	2.575E-02	0.326
EU-155	3.001E-02		1.089E-01	1.780E-01	1.548E-02	0.169
TB-160	-1.457E-01		1.406E-01	2.060E-01	2.059E-02	-0.707
HO-166M	-3.412E-03		6.558E-02	1.094E-01	1.108E-02	-0.031
TM-171	-5.691E+01		2.689E+01	4.027E+01	3.000E+00	-1.413
LU-176	-6.869E-03		2.590E-02	4.235E-02	4.131E-03	-0.162
LU-177	3.560E+00	+	1.726E+00	2.131E+00	1.982E-01	1.670
LU-177M	-1.367E-01		1.943E-01	3.023E-01	2.587E-02	-0.452
HF-181	-1.662E-02		4.369E-02	6.863E-02	6.257E-03	-0.242
W-181	1.014E-01		3.250E-01	5.368E-01	3.950E-02	0.189
TA-182	4.685E-02		2.233E-01	3.677E-01	3.000E-02	0.127
RE-183	9.719E-02		1.266E-01	2.042E-01	1.773E-02	0.476
RE-184	3.479E-02		2.281E-01	3.852E-01	3.765E-02	0.090
OS-185	-5.725E-02		4.356E-02	6.471E-02	6.463E-03	-0.885
RE-188	5.778E-02		1.860E-01	3.002E-01	2.577E-02	0.192
W-188	6.902E-01		8.534E+00	1.258E+01	1.244E+00	0.055
IR-192	-3.136E-03		3.393E-02	5.594E-02	5.410E-03	-0.056
AU-195	1.572E-02		2.576E-01	3.706E-01	3.263E-02	0.042
TL-200	-1.108E-04		1.939E-04	Half-Life too short		
TL-201	3.873E+00		7.379E+00	1.198E+01	1.048E+00	0.323
TL-202	-1.242E-02		7.372E-02	1.187E-01	1.043E-02	-0.105
HG-203	-5.267E-04		4.129E-02	6.883E-02	7.000E-03	-0.008
BI-207	2.333E-03		5.304E-02	8.699E-02	7.854E-03	0.027
TL-207	2.408E-01		7.539E-01	1.125E+00	2.045E-01	0.214
PO-209	-5.910E+00		7.193E+00	1.078E+01	1.072E+00	-0.548
BI-210	3.928E+00		2.314E+00	4.002E+00	3.711E-01	0.982
PB-210	3.928E+00		2.314E+00	4.002E+00	3.711E-01	0.982
PO-210	3.928E+00		2.309E+00	4.002E+00	3.357E-01	0.982
PB-211	1.692E-01		1.040E+00	1.712E+00	1.072E+00	0.099
PO-215	2.408E-01		7.539E-01	1.125E+00	2.045E-01	0.214
RN-219	7.790E-02		4.322E-01	7.164E-01	1.069E-01	0.109
RN-220	-6.852E+00		2.589E+01	4.064E+01	3.883E+00	-0.169
RA-223	2.408E-01		7.539E-01	1.125E+00	2.045E-01	0.214
AC-227	-2.309E-01		3.887E-01	6.278E-01	1.007E-01	-0.368
TH-227	-2.309E-01		3.893E-01	6.278E-01	1.171E-01	-0.368
TH-229	2.335E-01		5.192E-01	8.952E-01	8.153E-02	0.261
PA-231	-6.635E-02		1.507E+00	2.505E+00	4.000E-01	-0.026
TH-231	2.408E-01		7.539E-01	1.125E+00	2.045E-01	0.214
U-231	-4.377E-01		1.108E+00	1.555E+00	1.391E-01	-0.281
PA-233	3.335E-02		6.389E-02	1.092E-01	1.083E-02	0.305
PA-234	-1.055E-01		3.416E-01	5.452E-01	1.053E-01	-0.193
PA-234M	5.978E+00		5.224E+00	9.235E+00	9.878E-01	0.647
TH-234	1.166E+00		1.179E+00	1.990E+00	3.457E-01	0.586
U-235	-1.569E-01		2.307E-01	3.528E-01	6.148E-02	-0.445
NP-236	-5.418E-02		8.906E-02	1.373E-01	1.188E-02	-0.395
U-238	1.166E+00		1.179E+00	1.990E+00	3.457E-01	0.586
NP-239	-4.532E-02		1.939E-01	3.086E-01	2.586E-02	-0.147
AM-241	1.309E-01		1.234E-01	2.101E-01	1.644E-02	0.623

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-6.537E-02		9.966E-02	1.563E-01	1.349E-02	-0.418
AM-246	3.105E-02		1.568E-01	2.607E-01	2.323E-02	0.119
CM-247	6.460E-03		3.924E-02	6.498E-02	5.495E-03	0.099
CF-249	2.516E-02		4.422E-02	7.503E-02	6.331E-03	0.335
CF-251	-2.521E-02		1.375E-01	2.156E-01	1.913E-02	-0.117

VAX/VMS Nuclide Identification Report Generated

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
*                               DETECTOR DATA                               *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202041821
* Acquisition date   : 24-FEB-2010 09:12:05 Detector SN#      :
* Detector ID        : GAM20                               Sensitivity      : 5.000
* Geometry           : CAN                               Energy tolerance: 1.500
* Elapsed live time  : 0 02:00:00.00                     Abundance limit : 75.000
* Elapsed real time  : 0 02:00:33.37                     Half life ratio  : 8.000
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 9-FEB-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G1202041821 Analyst initials: MXR1
* Batch Number       : 952643 Sample Quantity : 1.1179E+02 GRAM
* Recovery           : 1.00000 Carrier Weight : 0.00000
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11 MS Isotope      :
* MSD DPM             : 0.000 MSD Isotope                   :
* LCS DPM             : 0.000 LCS Isotope                    :
* LCSD DPM            : 0.000 LCSD Isotope                   :
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.450E+01	3.510E+00	2.640E-01	1.791E+00
CD-109	4.636E+00	1.107E+00	5.295E-01	5.649E-01
SN-126	4.559E-01	1.089E-01	5.221E-02	5.554E-02
BA-137M	2.373E-01	8.115E-02	3.048E-02	4.140E-02
CS-137	2.509E-01	8.579E-02	3.222E-02	4.377E-02
TL-208	5.836E-01	1.064E-01	2.943E-02	5.427E-02
BI-211	4.516E+00	6.768E-01	1.763E-01	3.453E-01
BI-212	1.500E+00	5.195E-01	2.861E-01	2.650E-01
PB-212	2.023E+00	2.452E-01	5.138E-02	1.251E-01
PO-212	2.023E+00	2.452E-01	5.138E-02	1.251E-01
BI-214	1.266E+00	2.128E-01	5.654E-02	1.086E-01
PB-214	1.571E+00	2.488E-01	6.146E-02	1.269E-01
PO-214	1.571E+00	2.488E-01	6.146E-02	1.269E-01
PO-216	2.023E+00	2.452E-01	5.138E-02	1.251E-01
PO-218	1.571E+00	2.488E-01	6.146E-02	1.269E-01
RA-224	4.919E+00	1.378E+00	5.845E-01	7.029E-01
RA-226	1.266E+00	2.128E-01	5.654E-02	1.086E-01
AC-228	1.915E+00	4.404E-01	1.155E-01	2.247E-01
RA-228	1.915E+00	4.404E-01	1.155E-01	2.247E-01
TH-228	2.053E+00	2.489E-01	5.214E-02	1.270E-01
TH-230	1.266E+00	2.128E-01	5.653E-02	1.086E-01
TH-232	1.915E+00	4.404E-01	1.155E-01	2.247E-01
U-234	1.266E+00	2.128E-01	5.653E-02	1.086E-01
NP-237	1.339E+00	4.189E-01	1.544E-01	2.137E-01
AM-243	4.889E-01	8.078E-02	4.047E-02	4.122E-02
ANH-511	1.613E-01	7.744E-02	2.234E-02	3.951E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-7.252E-02	3.417E-01	2.797E-01	1.743E-01 NOT IDENT.

NA-22	2.794E-02	4.753E-02	4.127E-02	2.425E-02	NOT IDENT.
NA-24	-1.116E+05	5.058E+05	0.000E+00	2.581E+05	SHORT HLIF
AL-26	1.249E-02	2.584E-02	2.381E-02	1.318E-02	NOT IDENT.
TI-44	4.648E-01	6.056E-02	4.280E-02	3.090E-02	FAIL ABUN
SC-46	1.618E-02	4.195E-02	3.642E-02	2.141E-02	FAIL ABUN
V-48	7.215E-03	7.473E-02	5.960E-02	3.813E-02	NOT IDENT.
CR-51	4.388E-03	3.814E-01	3.253E-01	1.946E-01	NOT IDENT.
MN-52	1.713E-01	2.110E-01	1.986E-01	1.076E-01	NOT IDENT.
MN-54	4.776E-03	3.948E-02	3.375E-02	2.014E-02	NOT IDENT.
CO-56	-1.697E-02	4.328E-02	3.536E-02	2.208E-02	NOT IDENT.
CO-57	-1.587E-02	2.515E-02	2.029E-02	1.283E-02	NOT IDENT.
CO-58	-4.160E-02	4.143E-02	3.184E-02	2.114E-02	NOT IDENT.
FE-59	-3.007E-02	9.825E-02	7.901E-02	5.013E-02	NOT IDENT.
CO-60	-2.607E-02	4.113E-02	3.068E-02	2.098E-02	NOT IDENT.
ZN-65	-4.937E-02	1.158E-01	7.820E-02	5.910E-02	NOT IDENT.
GE-68	6.349E-02	1.337E+00	1.116E+00	6.823E-01	NOT IDENT.
AS-73	4.348E-02	5.716E-01	4.933E-01	2.916E-01	NOT IDENT.
AS-74	7.329E-02	9.997E-02	8.642E-02	5.101E-02	NOT IDENT.
SE-75	1.069E-02	4.720E-02	3.826E-02	2.408E-02	NOT IDENT.
BR-77	2.198E-01	1.002E+01	8.304E+00	5.114E+00	FAIL ABUN
SR-82	-1.127E-01	3.654E-01	3.022E-01	1.864E-01	NOT IDENT.
RB-83	2.693E-02	7.041E-02	5.999E-02	3.592E-02	NOT IDENT.
RB-84	2.436E-02	6.744E-02	5.883E-02	3.441E-02	NOT IDENT.
KR-85	1.279E+01	8.645E+00	7.059E+00	4.411E+00	NOT IDENT.
SR-85	6.541E-02	4.422E-02	3.610E-02	2.256E-02	NOT IDENT.
RB-86	6.624E-02	8.517E-01	7.127E-01	4.345E-01	NOT IDENT.
Y-88	9.980E-03	3.110E-02	2.762E-02	1.587E-02	NOT IDENT.
ZR-88	-3.303E-02	3.315E-02	2.602E-02	1.691E-02	NOT IDENT.
Y-91	2.078E+00	2.088E+01	1.734E+01	1.065E+01	NOT IDENT.
NB-94	1.490E-02	3.466E-02	3.060E-02	1.768E-02	NOT IDENT.
NB-95	3.012E-02	4.859E-02	3.836E-02	2.479E-02	NOT IDENT.
NB-95M	7.809E-02	1.366E-01	1.078E-01	6.969E-02	NOT IDENT.
ZR-95	8.119E-02	7.124E-02	6.581E-02	3.635E-02	NOT IDENT.
NB-97	8.085E+03	8.958E+04	0.000E+00	4.570E+04	SHORT HLIF
ZR-97	2.730E+06	1.706E+06	0.000E+00	8.706E+05	SHORT HLIF
MO-99	-3.445E+00	1.091E+01	9.051E+00	5.564E+00	NOT IDENT.
TC-99M	-9.815E+15	2.090E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.134E-03	3.408E-02	2.937E-02	1.739E-02	NOT IDENT.
RH-102	2.042E-02	3.160E-02	2.744E-02	1.612E-02	NOT IDENT.
RU-103	-6.412E-03	4.400E-02	3.610E-02	2.245E-02	FAIL ABUN
RH-106	-2.804E-01	3.793E-01	2.896E-01	1.935E-01	FAIL ABUN
RU-106	-2.804E-01	3.782E-01	2.896E-01	1.930E-01	FAIL ABUN
AG-108M	-1.080E-02	3.458E-02	2.829E-02	1.764E-02	NOT IDENT.
AG-110M	2.735E-03	4.033E-02	3.046E-02	2.058E-02	NOT IDENT.
IN-111	2.824E-01	1.072E+00	8.314E-01	5.467E-01	NOT IDENT.
IN-113M	-6.459E-03	4.779E-02	3.990E-02	2.438E-02	NOT IDENT.
SN-113	-6.459E-03	4.779E-02	3.990E-02	2.438E-02	NOT IDENT.
IN-114M	-2.233E-02	2.026E-01	1.557E-01	1.033E-01	NOT IDENT.
CD-115	4.368E+00	1.051E+01	8.962E+00	5.361E+00	NOT IDENT.
SN-117M	-3.759E-02	5.752E-02	4.574E-02	2.935E-02	NOT IDENT.
SB-122	2.971E+00	2.100E+00	1.897E+00	1.071E+00	NOT IDENT.
I-123	-3.058E+06	4.575E+06	0.000E+00	2.334E+06	SHORT HLIF
TE-123M	-2.028E-02	3.033E-02	2.411E-02	1.548E-02	NOT IDENT.
I-124	-1.440E-01	7.123E-01	5.521E-01	3.634E-01	NOT IDENT.
SB-124	-2.670E-02	6.837E-02	5.267E-02	3.488E-02	NOT IDENT.
SB-125	1.817E-02	9.188E-02	7.804E-02	4.688E-02	FAIL ABUN
TE-125M	-3.883E+00	9.410E+00	7.729E+00	4.801E+00	NOT IDENT.
I-126	-7.645E-02	1.918E-01	1.367E-01	9.785E-02	NOT IDENT.
SB-126	-5.711E-02	1.487E-01	1.233E-01	7.585E-02	FAIL ABUN
SB-127	2.454E-01	1.301E+00	1.132E+00	6.635E-01	NOT IDENT.
XE-127	1.957E-02	4.621E-02	4.102E-02	2.358E-02	NOT IDENT.
I-131	-1.526E-02	1.095E-01	9.172E-02	5.586E-02	NOT IDENT.
TE-132	-2.014E-01	6.479E-01	5.536E-01	3.305E-01	NOT IDENT.
BA-133	-1.230E-02	5.084E-02	3.699E-02	2.594E-02	NOT IDENT.
I-133	-2.803E+03	5.240E+03	0.000E+00	2.674E+03	SHORT HLIF
CS-134	6.647E-02	5.325E-02	4.885E-02	2.717E-02	NOT IDENT.
CS-135	9.006E-02	1.838E-01	1.436E-01	9.376E-02	NOT IDENT.
I-135	-7.875E+14	3.212E+15	0.000E+00	1.639E+15	SHORT HLIF
CS-136	-1.218E-01	1.132E-01	8.322E-02	5.775E-02	FAIL ABUN
CE-139	-2.411E-03	3.343E-02	2.734E-02	1.706E-02	NOT IDENT.
BA-140	4.769E-02	2.856E-01	2.354E-01	1.457E-01	NOT IDENT.
LA-140	5.493E-02	8.668E-02	7.190E-02	4.423E-02	FAIL ABUN
CE-141	6.451E-02	6.589E-02	5.656E-02	3.362E-02	NOT IDENT.
CE-143	4.066E+02	1.734E+02	0.000E+00	8.847E+01	SHORT HLIF
CE-144	-5.435E-02	2.501E-01	1.821E-01	1.276E-01	NOT IDENT.
PM-144	2.164E-02	3.415E-02	3.061E-02	1.742E-02	NOT IDENT.
PR-144	1.466E+00	2.314E+00	2.074E+00	1.180E+00	NOT IDENT.
PM-146	1.285E-02	4.520E-02	3.847E-02	2.306E-02	NOT IDENT.

ND-147	-2.753E-01	5.795E-01	4.585E-01	2.957E-01	FAIL ABUN
PM-149	-8.490E+01	8.612E+01	6.890E+01	4.394E+01	NOT IDENT.
EU-152	5.924E-02	1.044E-01	8.863E-02	5.328E-02	FAIL ABUN
GD-153	-6.381E-02	8.690E-02	6.194E-02	4.434E-02	NOT IDENT.
EU-154	7.598E-02	1.342E-01	1.161E-01	6.846E-02	NOT IDENT.
EU-155	3.001E-02	1.068E-01	9.052E-02	5.447E-02	FAIL ABUN
TB-160	-1.457E-01	1.378E-01	1.030E-01	7.029E-02	FAIL ABUN
HO-166M	-3.412E-03	6.426E-02	5.479E-02	3.279E-02	NOT IDENT.
TM-171	-5.691E+01	2.635E+01	2.055E+01	1.344E+01	NOT IDENT.
LU-176	-6.869E-03	2.538E-02	2.135E-02	1.295E-02	FAIL ABUN
LU-177	3.560E+00	1.692E+00	1.078E+00	8.632E-01	FAIL ABUN
LU-177M	-1.367E-01	1.904E-01	1.520E-01	9.717E-02	FAIL ABUN
HF-181	-1.662E-02	4.282E-02	3.447E-02	2.185E-02	NOT IDENT.
W-181	1.014E-01	3.185E-01	2.740E-01	1.625E-01	NOT IDENT.
TA-182	4.685E-02	2.189E-01	1.833E-01	1.117E-01	FAIL ABUN
RE-183	9.719E-02	1.241E-01	1.035E-01	6.331E-02	FAIL ABUN
RE-184	3.479E-02	2.235E-01	1.945E-01	1.140E-01	NOT IDENT.
OS-185	-5.725E-02	4.269E-02	3.243E-02	2.178E-02	NOT IDENT.
RE-188	5.778E-02	1.823E-01	1.521E-01	9.300E-02	NOT IDENT.
W-188	6.902E-01	8.364E+00	6.343E+00	4.267E+00	NOT IDENT.
IR-192	-3.136E-03	3.325E-02	2.819E-02	1.696E-02	FAIL ABUN
AU-195	1.572E-02	2.524E-01	1.885E-01	1.288E-01	FAIL ABUN
TL-200	-1.108E+02	3.800E+02	0.000E+00	1.939E+02	SHORT HLIF
TL-201	3.873E+00	7.231E+00	6.070E+00	3.689E+00	NOT IDENT.
TL-202	-1.242E-02	7.225E-02	5.967E-02	3.686E-02	NOT IDENT.
HG-203	-5.267E-04	4.046E-02	3.473E-02	2.064E-02	NOT IDENT.
BI-207	2.333E-03	5.197E-02	4.342E-02	2.652E-02	FAIL ABUN
TL-207	2.408E-01	7.388E-01	5.667E-01	3.769E-01	FAIL ABUN
PO-209	-5.910E+00	7.049E+00	5.387E+00	3.597E+00	NOT IDENT.
BI-210	3.928E+00	2.268E+00	2.048E+00	1.157E+00	NOT IDENT.
PB-210	3.928E+00	2.268E+00	2.048E+00	1.157E+00	NOT IDENT.
PO-210	3.928E+00	2.263E+00	2.048E+00	1.155E+00	NOT IDENT.
PB-211	1.692E-01	1.019E+00	8.609E-01	5.200E-01	NOT IDENT.
PO-215	2.408E-01	7.388E-01	5.667E-01	3.769E-01	FAIL ABUN
RN-219	7.790E-02	4.236E-01	3.604E-01	2.161E-01	FAIL ABUN
RN-220	-6.852E+00	2.538E+01	2.039E+01	1.295E+01	NOT IDENT.
RA-223	2.408E-01	7.388E-01	5.667E-01	3.769E-01	FAIL ABUN
AC-227	-2.309E-01	3.809E-01	3.170E-01	1.943E-01	FAIL ABUN
TH-227	-2.309E-01	3.815E-01	3.170E-01	1.946E-01	FAIL ABUN
TH-229	2.335E-01	5.088E-01	4.530E-01	2.596E-01	FAIL ABUN
PA-231	-6.635E-02	1.476E+00	1.264E+00	7.533E-01	FAIL ABUN
TH-231	2.408E-01	7.388E-01	5.667E-01	3.769E-01	FAIL ABUN
U-231	-4.377E-01	1.086E+00	7.913E-01	5.539E-01	FAIL ABUN
PA-233	3.335E-02	6.261E-02	5.504E-02	3.195E-02	FAIL ABUN
PA-234	-1.055E-01	3.348E-01	2.724E-01	1.708E-01	FAIL ABUN
PA-234M	5.978E+00	5.119E+00	4.611E+00	2.612E+00	NOT IDENT.
TH-234	1.166E+00	1.155E+00	1.016E+00	5.894E-01	FAIL ABUN
U-235	-1.569E-01	2.261E-01	1.789E-01	1.154E-01	FAIL ABUN
NP-236	-5.418E-02	8.728E-02	6.956E-02	4.453E-02	NOT IDENT.
U-238	1.166E+00	1.155E+00	1.016E+00	5.894E-01	FAIL ABUN
NP-239	-4.532E-02	1.900E-01	1.568E-01	9.695E-02	FAIL ABUN
AM-241	1.309E-01	1.209E-01	1.073E-01	6.169E-02	NOT IDENT.
CM-243	-6.537E-02	9.767E-02	7.947E-02	4.983E-02	FAIL ABUN
AM-246	3.105E-02	1.537E-01	1.301E-01	7.842E-02	NOT IDENT.
CM-247	6.460E-03	3.846E-02	3.269E-02	1.962E-02	NOT IDENT.
CF-249	2.516E-02	4.333E-02	3.776E-02	2.211E-02	NOT IDENT.
CF-251	-2.521E-02	1.348E-01	1.092E-01	6.876E-02	NOT IDENT.

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*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GAMMA SPECTROSCOPY BACKGROUNND REPORT           *
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ENERGY	MDA COUNTS
46.50	247.9930
46.50	247.9930
46.50	247.9930
48.70	310.7183
49.72	326.0701
51.35	264.2886
52.39	263.8616
52.97	280.9267
53.15	281.0274
53.44	284.1504
54.07	294.3843
56.28	334.3501
56.28	334.3518
57.37	0.0000
57.53	335.1540
57.53	335.1548
57.60	335.1985
57.98	344.3986
57.98	344.3986
59.32	327.3068
59.32	327.3068
59.40	327.3552
59.54	327.4411
59.72	327.5512
60.01	362.6981
61.10	485.5735
61.14	485.6081
61.30	487.7542
63.00	396.8358
63.29	384.9802
63.29	384.9802
63.58	385.1803
64.28	404.7951
65.12	425.5668
65.20	425.6269
65.20	425.6269
66.05	533.3335
66.72	544.0693
66.83	476.4045
66.91	476.4716
67.20	476.7112
67.20	476.7112
67.75	412.3264
67.85	407.3305
68.90	429.3813
68.90	429.3813
69.30	432.7213
69.67	432.9943
70.82	453.6913
70.82	453.6913
70.83	453.6982
72.80	435.2628
72.87	407.7224
72.87	407.7224
74.67	408.9239
74.81	409.0172
74.81	409.0172
74.81	409.0172
74.81	409.0172
74.81	409.0172
74.81	409.0172
74.81	409.0172
74.97	409.1227
75.28	409.3277
75.70	409.6037
77.11	410.5291
77.11	410.5291

77.11	410.5291
77.11	410.5291
77.11	410.5291
77.11	410.5291
77.11	410.5291
78.38	411.3551
79.62	412.1547
79.80	412.2704
79.80	412.2704
80.11	412.4693
80.18	412.5139
80.30	412.5910
80.30	412.5910
80.57	412.7635
81.00	304.3434
81.07	304.3763
81.07	304.3763
81.07	304.3763
81.07	304.3763
82.60	305.0911
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83.78	302.5182
83.78	302.5182
83.78	302.5182
83.78	302.5182
84.21	283.9890
84.90	284.2834
85.43	284.5097
86.29	284.8735
86.50	284.9624
86.54	284.9790
86.59	284.9998
86.72	285.0540
86.79	285.0832
86.94	285.1470
87.30	285.2984
87.30	285.2984
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87.30	285.2984
87.30	285.2984
87.30	285.2984
87.57	285.4109
87.88	285.5414
88.03	285.6039
88.36	285.7413
88.47	285.7872
89.95	286.4023
91.11	286.8799
92.29	287.3632
92.38	287.4007
92.38	287.4007
93.35	287.7950
94.00	288.0588
94.67	288.3268
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94.90	278.9128
94.90	278.9128
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98.44	332.8307
98.88	313.9086
99.55	277.5116
99.55	277.5116
99.86	265.9276
100.00	268.1063
100.10	268.1435
103.18	334.4236
103.76	322.9179
105.00	287.0305
105.31	289.2892
108.00	289.2248
109.28	314.4694

111.00	310.8391
111.00	310.8391
111.76	291.6911
112.95	287.7986
115.19	275.5801
116.30	284.6489
117.00	276.1937
117.00	276.1937
117.66	279.6807
121.11	261.1765
121.62	288.6708
121.78	273.4146
122.06	270.2241
122.32	269.2126
122.32	269.2126
122.32	269.2126
122.32	269.2126
123.07	258.4995
127.23	264.1626
129.76	288.1132
131.20	295.2199
133.02	320.7577
133.54	310.9657
135.34	286.5993
136.00	284.5859
136.25	276.8803
136.48	276.9512
140.51	282.6433
140.51	0.0000
142.18	271.9635
142.65	291.1353
143.76	289.2396
144.24	279.2942
144.24	279.2942
144.24	279.2942
144.24	279.2942
145.22	262.7430
145.44	262.8049
147.16	258.7827
152.43	255.6800
152.70	267.0665
153.22	266.0771
154.21	245.9462
154.21	245.9462
154.21	245.9462
154.21	245.9462
155.03	271.1069
156.02	298.6306
158.56	277.7664
159.00	0.0000
159.00	281.3047
160.31	294.2183
161.27	283.0844
162.32	265.0947
162.64	260.6075
163.35	272.2266
163.89	292.9714
165.85	291.2380
167.43	257.2340
171.28	258.1865
171.86	252.5616
172.10	252.6195
176.55	250.2048
176.60	250.2180
181.06	261.7218
184.41	232.4203
185.71	247.0620
186.00	247.1265
190.27	244.9041
192.34	244.7501
193.63	232.0453
197.04	237.1601
198.01	232.9321
198.60	233.0485
200.40	248.4991
201.83	247.9139
202.84	225.0058
205.31	239.5579

208.36	228.7344
208.81	220.7758
209.75	220.9492
209.75	220.9492
210.97	217.7708
215.65	193.1324
216.55	201.4995
218.09	193.6447
222.10	216.8610
223.80	192.7257
226.40	208.5375
227.00	204.1002
227.08	204.1122
227.20	201.4111
228.16	207.0094
228.18	209.7368
228.18	209.7368
231.56	0.0000
235.69	210.4172
236.00	223.6206
236.00	223.6206
238.63	232.4916
238.63	232.4916
238.63	232.4916
238.63	232.4916
239.00	232.5575
240.98	232.9083
241.98	233.0827
241.98	233.0827
241.98	233.0827
244.69	188.3188
245.39	163.3930
247.94	169.6025
248.90	189.4013
249.79	199.3722
252.40	154.4398
252.85	157.2661
252.85	157.2661
254.15	0.0000
256.20	181.7619
256.20	181.7619
260.50	171.1636
260.90	177.7277
262.80	174.2425
264.65	160.4758
268.24	178.0962
268.79	160.1970
269.46	165.7025
269.46	165.7025
269.46	165.7025
269.46	165.7025
271.23	165.9078
273.65	187.7838
276.40	133.9563
277.35	148.4588
277.60	150.6372
277.60	150.6372
278.00	158.2126
278.60	154.5082
279.20	164.9384
279.53	176.2884
280.46	180.1744
281.68	152.9453
283.67	143.6968
284.30	144.7052
285.00	158.0201
285.90	169.4786
286.10	164.7658
286.10	164.7658
287.40	136.4766
288.45	0.0000
290.67	156.5318
290.80	156.5469
291.72	188.5793
293.26	0.0000
293.70	149.2323
295.21	141.9497
295.21	141.9497

295.21	141.9497
295.96	142.0202
296.50	142.0702
297.23	142.1384
298.57	142.2634
299.80	142.3771
299.80	142.3771
300.09	142.4044
300.09	142.4044
300.09	142.4044
300.09	142.4044
300.12	142.4067
301.29	146.9156
302.84	150.1271
303.76	150.2156
303.91	150.2300
304.40	150.2778
304.40	150.2778
304.84	121.1771
306.84	150.7067
308.46	152.7842
311.98	120.3823
316.51	125.5566
318.01	133.4074
319.02	128.6550
319.41	139.3286
320.08	141.3239
323.87	127.2962
323.87	127.2962
323.87	127.2962
323.87	127.2962
325.23	130.5097
328.77	148.8958
333.44	113.2087
334.20	113.2600
334.20	113.2600
334.30	113.2671
338.28	157.5828
338.28	157.5828
338.28	157.5828
338.28	157.5828
338.32	157.5877
338.32	157.5877
338.32	157.5877
340.50	150.5391
340.57	150.5461
344.27	125.7305
345.85	154.1634
350.59	0.0000
351.07	133.1378
351.92	133.2037
351.92	133.2037
351.92	133.2037
355.39	0.0000
356.01	131.3430
364.48	106.3404
366.43	98.4985
367.43	117.4688
367.94	0.0000
369.80	108.6541
374.96	116.9661
383.85	124.5733
387.95	118.8120
388.63	120.8698
391.69	126.1158
391.69	126.1158
392.90	139.3224
398.62	125.5723
400.65	109.4865
401.10	105.4568
401.81	109.5540
402.60	112.6446
404.84	123.9547
410.95	115.1777
411.60	120.3155
413.65	131.6711
414.70	120.5099
415.30	113.3966

415.76	104.2272
417.63	0.0000
418.52	124.8408
423.70	107.7301
427.08	98.6660
427.89	92.5378
432.53	98.9385
433.93	108.2893
439.47	105.4863
439.56	105.4910
439.89	101.3705
443.98	94.3214
444.90	103.6972
445.03	103.7033
445.03	103.7033
445.03	103.7033
445.03	103.7033
453.90	92.6966
463.38	86.8438
468.07	77.1803
473.00	93.5480
475.06	90.4827
475.35	85.2332
476.78	94.7667
477.59	99.0158
477.96	106.4079
482.03	89.7224
484.57	95.1114
487.03	88.8719
490.36	0.0000
492.35	90.1504
497.08	96.7222
507.63	0.0000
510.53	0.0000
510.84	72.7252
511.00	72.7299
511.85	72.7579
511.85	72.7579
513.99	85.6787
513.99	85.6787
520.41	75.1825
520.65	80.5595
527.90	76.5057
528.96	0.0000
529.64	88.4263
529.87	0.0000
531.02	87.3998
537.32	85.4732
543.00	70.4987
546.56	0.0000
549.76	71.7887
552.65	74.0533
555.20	78.4929
563.23	76.5689
563.90	67.8371
568.70	80.0309
569.32	82.2464
569.50	82.2510
569.67	93.2256
573.80	85.6934
574.00	85.7005
574.64	78.0289
578.91	77.5049
579.30	0.0000
583.14	72.7857
585.48	70.6465
591.81	73.0395
592.07	73.0475
593.00	75.2881
595.88	76.4837
600.56	96.6165
602.52	0.0000
602.71	90.1887
602.71	90.1887
603.60	94.8776
604.41	101.4338
604.70	97.8855
609.31	75.7758

609.31	75.7758
609.31	75.7758
609.31	75.7758
610.33	75.8069
612.46	80.3320
614.37	92.8992
618.01	80.5056
621.84	101.9029
621.84	101.9029
631.29	76.4232
633.02	74.2238
633.10	73.1012
634.78	74.7243
635.90	72.9554
636.97	79.2924
645.85	91.3093
646.12	84.9901
656.30	77.1454
657.75	72.6465
657.90	0.0000
661.65	72.7500
661.65	72.7500
664.57	0.0000
666.33	68.3221
666.33	68.3221
675.00	64.8828
677.61	60.3700
685.20	65.1220
692.80	78.1747
695.00	80.9982
696.49	63.5437
696.49	63.5437
697.00	61.7116
697.49	61.7231
698.33	82.9358
698.50	82.9402
699.00	82.9556
702.63	71.9862
706.10	83.1643
706.58	0.0000
706.67	78.5586
709.31	74.0059
711.68	76.8459
713.82	64.8577
717.42	71.4318
720.50	78.9384
721.93	0.0000
722.20	61.9482
722.78	60.4122
722.78	60.4122
722.89	60.4138
722.95	60.4154
723.30	57.3247
724.18	63.5403
727.18	94.6349
733.00	66.8428
735.90	64.3142
739.58	65.4336
742.81	64.5696
744.21	70.2173
747.13	69.3497
751.79	89.1692
752.31	77.9199
753.82	60.1125
755.35	46.9873
756.15	49.8195
756.87	56.4126
763.93	59.6873
765.79	64.4395
766.42	72.3130
766.84	73.8946
776.49	60.5656
778.00	70.0633
778.57	76.7048
778.89	78.6068
783.80	57.8636
785.46	74.9786
792.07	89.4056

795.84	66.6589
796.30	77.1458
798.80	96.2706
801.93	62.9723
805.60	56.3597
810.29	66.0099
810.76	73.6745
815.85	56.5426
817.79	66.1666
818.51	61.3859
819.60	50.8521
826.30	58.6514
828.27	0.0000
831.60	75.1207
831.96	70.3124
834.83	67.4827
836.80	0.0000
846.75	70.6350
848.13	76.4715
856.28	0.0000
856.80	53.3806
860.37	72.8705
867.32	37.3235
867.82	36.1698
871.10	60.4349
873.19	45.8422
874.81	36.1057
875.33	0.0000
876.40	42.9569
879.36	59.6075
880.27	51.8031
880.51	41.0546
881.50	44.0002
883.24	57.7195
884.67	47.9568
889.25	50.9615
896.60	53.0363
898.02	40.2843
899.00	41.2791
903.28	41.8224
911.07	58.1919
911.07	58.1919
911.07	58.1919
919.63	57.6768
920.93	52.7526
925.00	49.5129
925.24	49.5166
926.50	50.5244
935.52	54.6281
937.48	58.6327
944.10	56.7523
946.00	63.7547
949.00	52.8421
962.29	48.3687
964.01	54.0646
966.15	54.0962
968.20	54.1279
969.11	54.1411
969.11	54.1411
969.11	54.1411
977.42	53.5951
980.50	38.5542
983.50	46.5549
989.30	40.3271
996.32	55.5559
1001.03	40.4551
1001.68	40.4619
1004.76	60.7441
1021.30	0.0000
1024.50	0.0000
1034.80	40.8203
1036.00	45.9371
1037.82	53.1070
1038.57	54.1413
1038.76	0.0000
1045.16	50.1413
1046.59	42.9926
1048.07	62.4684

1050.47	44.0624
1050.47	44.0624
1062.04	48.3035
1063.62	45.2397
1076.63	53.6428
1077.35	52.6211
1078.86	51.6089
1085.78	49.6313
1099.22	58.1000
1112.02	57.2451
1112.84	54.1328
1115.52	69.4499
1120.29	62.5781
1120.29	62.5781
1120.29	62.5781
1120.29	62.5781
1120.51	59.1043
1121.28	64.6792
1124.00	0.0000
1129.67	58.5402
1131.51	0.0000
1147.95	0.0000
1167.94	59.0844
1173.22	59.1609
1175.09	73.9819
1177.93	64.5146
1189.05	56.2012
1204.90	64.9257
1205.75	0.0000
1213.00	69.3132
1221.42	66.2443
1230.97	74.9561
1235.34	110.4031
1236.41	0.0000
1238.25	80.4419
1246.25	60.1727
1260.41	0.0000
1271.85	46.4728
1274.45	43.2559
1274.54	42.1745
1291.56	34.7359
1298.22	0.0000
1312.09	46.8864
1325.50	32.8081
1325.50	32.8081
1332.49	38.3325
1333.61	32.8652
1360.21	29.3802
1362.66	0.0000
1365.15	22.0576
1368.21	22.0723
1368.53	0.0000
1376.25	34.0853
1384.27	42.4474
1394.10	11.0962
1395.20	14.7982
1407.95	18.5465
1434.06	15.8496
1436.60	18.6556
1457.56	0.0000
1460.81	20.6223
1489.15	16.0253
1509.49	17.9826
1596.49	13.1970
1620.62	11.5996
1678.03	0.0000
1691.02	13.7066
1691.02	13.7066
1706.46	0.0000
1750.46	0.0000
1764.49	10.9091
1764.49	10.9091
1764.49	10.9091
1764.49	10.9091
1770.23	11.9126
1771.40	13.6172
1791.20	0.0000
1808.65	6.9949

1836.01

9.0348

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202041821

Total Uranium Activity	3.3972E+00	ug/g
Total Uranium Counting Unc.	3.4385E+00	ug/g
Total Uranium Tpu	1.7543E-06	ug/g
Total Uranium Mda	3.0229E+00	ug/g


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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 952643                          SAMPLE ID   : G1202041821
*  ANALYST       : MXR1                             DETECTOR    : GAM20
*  SAMPLE DATE   : 9-FEB-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 24-FEB-2010 09:12:05.91          SAMPLE ALQT  : 111.790 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.141E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.397E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 4.451E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 2.161E+00

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VAX/VMS Nuclide Identification Report Generated 24-FEB-2010 10:11:36.24

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041822.CNF;1
Sample date        : 16-FEB-2010 00:00:00 Acquisition date : 24-FEB-2010 09:10:57
Sample ID          : G1202041822 Sample quantity : 1.51730E+02 GRAM
Detector name      : GAM10 Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00 Elapsed real time: 0 01:00:01.23 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 952643 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	59.16	1971	771	1.05	118.48	112	12	5.48E-01	3.6	
2	0	76.92*	168	424	0.94	153.97	151	6	4.68E-02	21.1	
3	3	87.70	1337	352	1.03	175.52	171	19	3.71E-01	3.5	1.97E+00
4	0	121.85	195	368	1.07	243.76	240	9	5.43E-02	19.1	
5	0	185.91*	141	350	1.61	371.76	367	11	3.93E-02	27.3	
6	6	238.29*	675	195	1.17	476.44	469	20	1.88E-01	5.2	1.32E+00
7	6	241.21	199	325	2.15	482.28	469	20	5.54E-02	23.8	
8	0	294.71*	170	250	1.22	589.19	584	10	4.72E-02	19.3	
9	0	337.93*	104	208	1.38	675.59	671	9	2.90E-02	27.0	
10	0	351.46*	254	220	1.28	702.62	698	10	7.05E-02	12.7	
11	0	510.47*	116	203	2.39	1020.46	1013	16	3.22E-02	30.2	
12	0	582.69*	202	184	1.52	1164.83	1157	15	5.60E-02	16.3	
13	0	608.59*	227	127	1.43	1216.59	1211	12	6.31E-02	12.0	
14	0	660.97	2350	114	1.46	1321.31	1315	13	6.53E-01	2.3	
15	0	726.72	53	80	1.65	1452.76	1448	9	1.46E-02	33.7	
16	0	910.81*	152	128	1.26	1820.86	1814	14	4.22E-02	17.9	
17	0	968.33*	58	127	1.52	1935.88	1931	10	1.61E-02	39.2	
18	0	1172.12	1792	56	1.71	2343.44	2336	15	4.98E-01	2.5	
19	0	1331.21	1634	41	1.99	2661.67	2654	17	4.54E-01	2.6	
20	0	1763.25*	49	5	2.31	3526.07	3518	18	1.37E-02	18.2	

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

VMS Nuclide Identification Report V3.1 Generated 24-FEB-2010 10:11:39

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041822.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 16-FEB-2010 00:00:00 Acquisition date : 24-FEB-2010 09:10:57
Sample ID         : G1202041822 Sample quantity : 151.73 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.23 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

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Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	1.715E-01	6.661E-02	6.585E-02	4.343E-03	2.604
		136.48		1.241E-01	3.342E-01	5.476E-01	3.829E-02	0.227
CO-60	+	1173.22		6.572E+00	5.255E-01	1.119E-01	6.899E-03	58.746
	+	1332.49	*	6.762E+00	6.860E-01	8.468E-02	7.358E-03	79.853
CD-109	+	88.03	*	3.388E+01	4.508E+00	2.215E+00	2.512E-01	15.291
SN-126		64.28		7.307E-02	1.124E+00	1.790E+00	3.061E-01	0.041
	+	86.94		1.398E+01	5.954E+00	9.306E-01	3.908E-01	15.026
	+	87.57	*	3.363E+00	4.475E-01	2.216E-01	2.507E-02	15.180
BA-137M	+	661.65	*	5.485E+00	3.678E-01	1.078E-01	5.320E-03	50.877
CS-137	+	661.65	*	5.799E+00	3.900E-01	1.140E-01	5.656E-03	50.877
TL-208		277.35		5.912E-02	6.173E-01	1.035E+00	1.129E-01	0.057
	+	510.84		9.052E-01	5.552E-01	3.781E-01	3.974E-02	2.394
	+	583.14	*	4.504E-01	1.503E-01	1.124E-01	7.553E-03	4.007
		860.37		3.910E-01	6.583E-01	1.119E+00	1.093E-01	0.349
BI-211		72.87		1.210E+00	6.812E+00	1.018E+01	1.120E+00	0.119
	+	351.07	*	2.494E+00	6.595E-01	6.352E-01	4.631E-02	3.926
PB-212		74.81		1.115E+00	8.303E-01	1.282E+00	1.845E-01	0.870
	+	77.11		1.112E+00	4.855E-01	6.746E-01	7.375E-02	1.649
	+	87.30		1.556E+01	2.589E+00	1.029E+00	1.553E-01	15.115
	+	238.63	*	1.464E+00	1.884E-01	1.473E-01	1.118E-02	9.935
		300.09		3.261E+00	1.434E+00	2.452E+00	2.154E-01	1.330
PO-212		74.81		1.115E+00	8.303E-01	1.282E+00	1.845E-01	0.870
	+	77.11		1.112E+00	4.855E-01	6.746E-01	7.375E-02	1.649
	+	87.30		1.556E+01	2.589E+00	1.029E+00	1.553E-01	15.115
		115.19		-3.846E+00	5.651E+00	8.879E+00	6.353E-01	-0.433
	+	238.63	*	1.464E+00	1.884E-01	1.473E-01	1.118E-02	9.935
		300.09		3.261E+00	1.434E+00	2.452E+00	2.154E-01	1.330
BI-214	+	609.31	*	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
		1120.29		4.630E-01	6.600E-01	1.113E+00	1.088E-01	0.416
	+	1764.49		1.584E+00	5.872E-01	4.609E-01	3.078E-02	3.436
PB-214		74.81		1.921E+00	1.426E+00	2.208E+00	2.919E-01	0.870
	+	77.11		1.907E+00	8.448E-01	1.156E+00	1.541E-01	1.649
	+	87.30		2.665E+01	4.098E+00	1.763E+00	2.412E-01	15.115
	+	241.98		2.596E+00	1.257E+00	8.869E-01	7.379E-02	2.927

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	295.21		9.912E-01	3.930E-01	4.010E-01	3.621E-02	2.472
	+	351.92	*	8.675E-01	2.338E-01	2.269E-01	2.035E-02	3.823
		74.81		1.921E+00	1.426E+00	2.208E+00	2.919E-01	0.870
	+	77.11		1.907E+00	8.448E-01	1.156E+00	1.541E-01	1.649
	+	87.30		2.665E+01	4.098E+00	1.763E+00	2.412E-01	15.115
PO-216	+	241.98		2.596E+00	1.257E+00	8.869E-01	7.379E-02	2.927
	+	295.21		9.912E-01	3.930E-01	4.010E-01	3.621E-02	2.472
	+	351.92	*	8.675E-01	2.338E-01	2.269E-01	2.035E-02	3.823
		74.81		1.115E+00	8.303E-01	1.282E+00	1.845E-01	0.870
	+	77.11		1.112E+00	4.855E-01	6.746E-01	7.375E-02	1.649
PO-218	+	87.30		1.556E+01	2.589E+00	1.029E+00	1.553E-01	15.115
	+	238.63	*	1.464E+00	1.884E-01	1.473E-01	1.118E-02	9.935
		300.09		3.261E+00	1.434E+00	2.452E+00	2.154E-01	1.330
		74.81		1.921E+00	1.426E+00	2.208E+00	2.919E-01	0.870
	+	77.11		1.907E+00	8.448E-01	1.156E+00	1.541E-01	1.649
RA-224	+	87.30		2.665E+01	4.098E+00	1.763E+00	2.412E-01	15.115
	+	241.98		2.596E+00	1.257E+00	8.869E-01	7.379E-02	2.927
	+	295.21		9.912E-01	3.930E-01	4.010E-01	3.621E-02	2.472
	+	351.92	*	8.675E-01	2.338E-01	2.269E-01	2.035E-02	3.823
	+	240.98	*	4.922E+00	2.367E+00	1.676E+00	1.029E-01	2.937
AC-228	+	609.31	*	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
		1120.29		4.630E-01	6.600E-01	1.113E+00	1.088E-01	0.416
	+	1764.49		1.584E+00	5.872E-01	4.609E-01	3.078E-02	3.436
	+	338.32		1.131E+00	7.665E-01	6.393E-01	2.615E-01	1.769
	+	911.07	*	1.558E+00	5.913E-01	5.127E-01	6.328E-02	3.038
RA-228	+	969.11		1.052E+00	8.623E-01	9.704E-01	2.294E-01	1.084
	+	338.32		1.131E+00	7.665E-01	6.393E-01	2.615E-01	1.769
	+	911.07	*	1.558E+00	5.913E-01	5.127E-01	6.328E-02	3.038
	+	969.11		1.052E+00	8.623E-01	9.704E-01	2.294E-01	1.084
	+	969.11		1.052E+00	8.623E-01	9.704E-01	2.294E-01	1.084
TH-228		74.81		1.124E+00	8.307E-01	1.292E+00	1.422E-01	0.870
	+	77.11		1.121E+00	4.895E-01	6.802E-01	7.437E-02	1.649
	+	87.30		1.569E+01	2.087E+00	1.038E+00	1.173E-01	15.115
	+	238.63	*	1.476E+00	1.900E-01	1.486E-01	1.127E-02	9.935
		300.09		3.288E+00	2.403E+00	2.472E+00	1.459E+00	1.330
TH-230	+	609.31	*	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
		1120.29		4.630E-01	6.600E-01	1.113E+00	1.088E-01	0.416
	+	1764.49		1.584E+00	5.872E-01	4.609E-01	3.078E-02	3.436
	+	338.32		1.131E+00	6.159E-01	6.393E-01	4.285E-02	1.769
	+	911.07	*	1.558E+00	5.913E-01	5.127E-01	6.328E-02	3.038
U-234	+	969.11		1.052E+00	8.623E-01	9.704E-01	2.294E-01	1.084
	+	609.31	*	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
		1120.29		4.630E-01	6.600E-01	1.113E+00	1.088E-01	0.416
	+	1764.49		1.584E+00	5.872E-01	4.609E-01	3.078E-02	3.436
	+	86.50	*	9.877E+00	2.425E+00	7.360E-01	1.730E-01	13.420
NP-237		95.87		-1.161E+00	1.692E+00	2.338E+00	5.841E-01	-0.497
	+	59.54	*	1.596E+01	2.360E+00	7.390E-01	9.491E-02	21.604
ANH-511	+	511.00	*	1.955E-01	1.188E-01	8.169E-02	5.233E-03	2.394

---- 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	*	3.606E-01	6.064E-01	1.013E+00	7.533E-02	0.356

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	1274.54	*		2.682E-02	6.220E-02	1.087E-01	8.423E-03	0.247
NA-24	1368.53	*		4.260E-04	6.220E-02	Half-Life	too short	
AL-26	1129.67			-3.421E+00	3.143E+00	4.764E+00	3.342E-01	-0.718
	1808.65	*		-2.051E-02	4.886E-02	7.107E-02	4.506E-03	-0.289
K-40	1460.81	*		4.761E-01	5.717E-01	1.101E+00	9.483E-02	0.432
TI-44	67.85			-1.621E-02	9.340E-02	1.540E-01	1.738E-02	-0.105
	78.38	*	+	2.052E-01	8.956E-02	1.143E-01	1.251E-02	1.794
SC-46	889.25	*		-3.447E-02	8.670E-02	1.376E-01	1.362E-02	-0.250
	1120.51			1.005E-01	1.050E-01	1.804E-01	1.296E-02	0.557
V-48	944.10			5.937E-01	1.748E+00	2.906E+00	2.815E-01	0.204
	983.50	*		-1.633E-02	1.309E-01	2.105E-01	1.947E-02	-0.078
	1312.09			-3.539E-02	8.080E-02	1.253E-01	1.046E-02	-0.282
CR-51	320.08	*		-7.325E-02	5.605E-01	9.220E-01	6.659E-02	-0.079
MN-52	744.21			1.453E-02	1.943E-01	3.237E-01	2.111E-02	0.045
	848.13			-8.928E-01	6.008E+00	9.744E+00	8.637E-01	-0.092
	935.52			6.020E-03	2.806E-01	4.577E-01	4.474E-02	0.013
	1246.25			1.601E+00	3.119E+00	5.601E+00	4.080E-01	0.286
	1333.61			2.740E+02	2.875E+01	3.718E+01	3.230E+00	7.371
	1434.06	*		6.094E-02	1.334E-01	2.376E-01	2.008E-02	0.257
MN-54	834.83	*		-3.125E-02	7.284E-02	1.157E-01	9.888E-03	-0.270
CO-56	846.75	*		-3.374E-02	7.488E-02	1.184E-01	1.046E-02	-0.285
	977.42			1.842E-01	7.238E+00	1.177E+01	1.097E+00	0.016
	1037.82			-3.303E-01	7.267E-01	1.133E+00	1.019E-01	-0.292
	1175.09			1.235E+02	1.247E+01	2.204E+01	1.365E+00	5.602
	1238.25			4.516E-02	9.578E-02	1.691E-01	1.261E-02	0.267
	1360.21			-8.261E-01	1.133E+00	1.603E+00	1.385E-01	-0.515
	1771.40			6.049E-02	3.565E-01	6.089E-01	4.035E-02	0.099
CO-58	810.76	*		8.766E-02	7.875E-02	1.389E-01	1.111E-02	0.631
FE-59	142.65			-1.853E+00	3.895E+00	6.124E+00	3.649E-01	-0.303
	192.34			-4.937E-01	1.384E+00	2.148E+00	2.526E-01	-0.230
	1099.22	*		-1.834E-01	2.015E-01	3.001E-01	2.505E-02	-0.611
	1291.56			-1.033E-01	1.416E-01	2.088E-01	1.932E-02	-0.495
ZN-65	1115.52	*		-2.153E-01	2.068E-01	3.041E-01	2.215E-02	-0.708
GE-68	1077.35	*		-1.609E+00	2.965E+00	4.582E+00	3.630E-01	-0.351
AS-73	53.44	*		6.556E-01	3.395E+00	5.143E+00	6.805E-01	0.127
AS-74	595.88	*		-6.097E-02	1.307E-01	2.133E-01	1.218E-02	-0.286
	634.78			-2.515E-02	5.077E-01	8.475E-01	4.473E-02	-0.030
SE-75	66.05			-4.662E-01	9.691E+00	1.607E+01	2.070E+00	-0.029
	96.73			-7.544E-01	1.323E+00	1.864E+00	2.638E-01	-0.405
	121.11		+	9.022E-01	3.564E-01	4.606E-01	4.511E-02	1.959
	136.00			-5.124E-03	6.220E-02	9.990E-02	6.204E-03	-0.051
	198.60			1.360E+00	2.991E+00	4.818E+00	3.413E-01	0.282
	264.65	*		4.332E-02	7.067E-02	1.216E-01	7.759E-03	0.356
	279.53			5.533E-03	1.792E-01	2.996E-01	2.053E-02	0.018
	303.91			-3.493E+00	3.509E+00	5.502E+00	5.515E-01	-0.635
	400.65			1.199E-01	4.607E-01	7.635E-01	7.457E-02	0.157
BR-77	87.88		+	1.031E+03	1.372E+02	1.461E+02	1.657E+01	7.055
	200.40			-2.673E+01	4.016E+01	6.134E+01	3.538E+00	-0.436
	239.00		+	3.278E+01	3.955E+00	6.940E+00	4.248E-01	4.722

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	249.79			-1.622E+01	1.589E+01	2.534E+01	1.574E+00	-0.640
	281.68			3.699E+00	2.204E+01	3.705E+01	2.386E+00	0.100
	297.23			-1.024E+01	1.516E+01	2.118E+01	1.383E+00	-0.484
	303.76			-6.678E+01	4.452E+01	6.798E+01	4.462E+00	-0.982
	439.47			1.786E+01	4.125E+01	6.859E+01	4.611E+00	0.260
	484.57			1.613E+01	6.477E+01	1.061E+02	6.951E+00	0.152
	520.65	*		4.638E-01	2.830E+00	4.594E+00	2.915E-01	0.101
	574.64			1.219E+01	5.582E+01	9.038E+01	5.349E+00	0.135
	578.91			-3.421E+00	2.513E+01	3.646E+01	2.144E+00	-0.094
	585.48			3.513E+01	5.237E+01	8.084E+01	4.702E+00	0.435
	755.35			2.056E+01	4.605E+01	7.850E+01	5.304E+00	0.262
	817.79			-4.989E+00	3.846E+01	6.266E+01	5.102E+00	-0.080
SR-82	698.33			-2.406E+01	5.066E+01	8.141E+01	4.568E+00	-0.296
	776.49	*		6.229E-02	6.173E-01	1.027E+00	7.402E-02	0.061
	1395.20			-8.014E+00	1.266E+01	1.856E+01	1.589E+00	-0.432
RB-83	520.41	*		1.700E-02	1.268E-01	2.055E-01	1.304E-02	0.083
	529.64			-9.626E-02	1.928E-01	2.980E-01	1.872E-02	-0.323
	552.65			-1.073E-02	3.778E-01	6.028E-01	3.682E-02	-0.018
RB-84	881.50	*		5.690E-04	1.407E-01	2.303E-01	2.233E-02	0.002
KR-85	513.99	*		5.983E+00	1.420E+01	2.069E+01	1.322E+00	0.289
SR-85	513.99	*		2.857E-02	6.779E-02	9.881E-02	6.311E-03	0.289
RB-86	1076.63	*		-6.100E-01	1.466E+00	2.290E+00	1.817E-01	-0.266
Y-88	898.02			-1.119E-02	9.727E-02	1.577E-01	1.602E-02	-0.071
	1836.01	*		5.550E-03	6.007E-02	9.867E-02	6.054E-03	0.056
ZR-88	292.90	*		2.033E-02	5.654E-02	9.427E-02	6.406E-03	0.216
Y-91	1204.90	*		2.236E+00	2.381E+01	4.019E+01	2.670E+00	0.056
NB-94	702.63	*		1.532E-02	5.802E-02	9.833E-02	5.598E-03	0.156
	871.10			2.435E-02	7.998E-02	1.336E-01	1.261E-02	0.182
NB-95	765.79	*		5.578E-02	7.874E-02	1.359E-01	9.484E-03	0.410
NB-95M	235.69	*		2.101E-01	2.119E-01	3.314E-01	2.571E-02	0.634
ZR-95	724.18			7.283E-02	1.956E-01	2.914E-01	2.077E-02	0.250
	756.15	*		4.974E-02	1.308E-01	2.221E-01	1.745E-02	0.224
NB-97	657.90	*		2.485E-03	1.308E-01	Half-Life	too short	
	1024.50			9.323E-03	1.308E-01	Half-Life	too short	
ZR-97	254.15			1.312E-02	1.308E-01	Half-Life	too short	
	355.39			5.423E-03	1.308E-01	Half-Life	too short	
	507.63	*		3.328E-03	1.308E-01	Half-Life	too short	
	602.52			-1.079E-02	1.308E-01	Half-Life	too short	
	1021.30			-1.003E-02	1.308E-01	Half-Life	too short	
	1147.95			-5.800E-03	1.308E-01	Half-Life	too short	
	1362.66			-7.354E-03	1.308E-01	Half-Life	too short	
	1750.46			-6.444E-04	1.308E-01	Half-Life	too short	
MO-99	140.51			-9.146E-01	7.602E+00	1.216E+01	3.283E+00	-0.075
	181.06			4.737E+00	5.523E+00	8.158E+00	1.392E+00	0.581
	366.43			-1.733E+01	2.899E+01	4.600E+01	3.114E+00	-0.377
	739.58	*		-5.127E+00	4.172E+00	6.177E+00	8.682E-01	-0.830
	778.00			-1.788E+00	1.257E+01	2.055E+01	1.488E+00	-0.087
TC-99M	140.51	*		-5.709E+01	1.257E+01	Half-Life	too short	
RH-101	127.23			3.224E-02	5.157E-02	8.196E-02	5.238E-03	0.393

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RH-102	198.01	*		2.909E-02	5.536E-02	8.954E-02	5.144E-03	0.325
	325.23			-1.585E-01	3.843E-01	6.218E-01	4.140E-02	-0.255
	418.52			3.137E-01	5.948E-01	9.957E-01	6.740E-02	0.315
	475.06	*		-1.891E-02	6.180E-02	9.801E-02	6.465E-03	-0.193
	631.29			-3.790E-02	1.037E-01	1.696E-01	9.023E-03	-0.223
	697.49			-2.985E-02	1.372E-01	2.248E-01	1.257E-02	-0.133
	766.84			2.000E-01	2.114E-01	3.699E-01	2.590E-02	0.541
RU-103	1046.59			5.024E-03	2.741E-01	4.430E-01	3.721E-02	0.011
	1112.84			4.157E-01	5.200E-01	8.840E-01	6.471E-02	0.470
	497.08	*		7.387E-02	7.043E-02	1.201E-01	1.558E-02	0.615
RH-106	610.33			7.789E+00	2.101E+00	3.257E+00	4.992E-01	2.392
	511.85	+		9.643E-01	5.859E-01	6.224E-01	3.984E-02	1.549
RU-106	621.84	*		-2.624E-01	6.043E-01	9.840E-01	1.137E-01	-0.267
	1050.47			-8.209E-01	5.341E+00	8.514E+00	7.102E-01	-0.096
	511.85	+		9.643E-01	5.859E-01	6.224E-01	3.984E-02	1.549
AG-108M	621.84	*		-2.624E-01	6.037E-01	9.840E-01	5.344E-02	-0.267
	1050.47			-8.209E-01	5.341E+00	8.514E+00	7.102E-01	-0.096
	433.93	*		-4.160E-02	6.851E-02	1.074E-01	7.701E-03	-0.387
AG-110M	614.37			-9.848E-03	8.241E-02	1.191E-01	7.185E-03	-0.083
	722.95			3.149E-02	8.690E-02	1.297E-01	8.512E-03	0.243
	657.75	*		3.972E-01	9.653E-02	1.748E-01	9.470E-03	2.272
IN-111	677.61			8.528E-01	6.090E-01	1.100E+00	6.172E-02	0.776
	706.67			-7.079E-02	3.515E-01	5.755E-01	3.522E-02	-0.123
	763.93			-2.677E-02	3.134E-01	5.151E-01	3.729E-02	-0.052
	884.67			7.375E-02	1.133E-01	1.933E-01	1.937E-02	0.382
	937.48			3.164E-02	2.754E-01	4.518E-01	4.533E-02	0.070
	1384.27			3.680E-02	1.947E-01	3.325E-01	2.936E-02	0.111
	171.28			1.551E-01	3.178E-01	5.182E-01	2.850E-02	0.299
IN-113M	245.39	*		-3.440E-02	3.776E-01	5.563E-01	3.435E-02	-0.062
SN-113	391.69	*		1.203E-02	8.245E-02	1.360E-01	9.695E-03	0.088
IN-114M	391.69	*		1.203E-02	8.245E-02	1.360E-01	9.695E-03	0.088
CD-115	190.27	*		-4.817E-03	3.005E-01	4.224E-01	2.396E-02	-0.011
SN-117M	260.90			5.698E+00	2.632E+01	4.456E+01	2.805E+00	0.128
	492.35			-5.148E+00	8.467E+00	1.306E+01	8.508E-01	-0.394
	527.90	*		8.736E-01	2.548E+00	4.184E+00	2.634E-01	0.209
SB-122	156.02			-4.061E-01	2.524E+00	4.010E+00	2.270E-01	-0.101
	158.56	*		7.969E-03	6.128E-02	9.866E-02	5.533E-03	0.081
	563.90	*		6.320E-01	6.785E-01	1.154E+00	6.939E-02	0.548
I-123	692.80			3.587E+00	1.392E+01	2.359E+01	1.299E+00	0.152
	159.00	*		8.307E-04	1.392E+01	Half-Life	too short	
TE-123M	528.96			-2.284E-02	1.392E+01	Half-Life	too short	
	159.00	*		2.056E-02	4.351E-02	7.117E-02	4.042E-03	0.289
SB-124	602.71	*		-3.072E-01	4.610E-01	6.339E-01	3.576E-02	-0.485
	722.78			9.446E-01	2.953E+00	4.392E+00	2.674E-01	0.215
	1325.50			1.784E+00	1.942E+01	2.821E+01	2.419E+00	0.063
	1376.25			1.563E+01	1.405E+01	2.667E+01	2.295E+00	0.586
	1509.49			-7.386E-01	7.093E+00	1.142E+01	9.336E-01	-0.065
	1691.02			1.429E+00	1.866E+00	3.506E+00	2.522E-01	0.408
	602.71			-5.063E-02	7.599E-02	1.045E-01	5.897E-03	-0.485

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	645.85			-5.519E-01	8.754E-01	1.401E+00	8.359E-02	-0.394
	709.31			-6.613E-01	4.370E+00	7.172E+00	4.176E-01	-0.092
	713.82			6.087E-01	2.680E+00	4.526E+00	4.650E-01	0.134
	722.78			2.257E-01	7.055E-01	1.049E+00	6.662E-02	0.215
	+ 968.20			1.002E+01	7.920E+00	1.121E+01	1.057E+00	0.894
	1045.16			-2.273E+00	5.557E+00	8.688E+00	7.316E-01	-0.262
	1325.50			4.551E-01	4.955E+00	7.200E+00	6.172E-01	0.063
	1368.21			1.557E+00	1.963E+00	3.675E+00	4.953E-01	0.424
	1436.60			4.514E-01	4.403E+00	7.396E+00	6.244E-01	0.061
SB-125	1691.02	*		8.054E-02	1.052E-01	1.976E-01	1.501E-02	0.408
	427.89	*		2.291E-01	1.929E-01	3.325E-01	2.315E-02	0.689
	463.38			6.209E-01	6.189E-01	1.050E+00	7.876E-02	0.591
	600.56			2.684E-01	3.217E-01	5.673E-01	3.739E-02	0.473
	635.90			-2.821E-01	4.972E-01	7.997E-01	5.070E-02	-0.353
TE-125M	109.28	*		1.063E+01	1.328E+01	2.235E+01	2.142E+00	0.475
I-126	388.63			-1.169E-01	2.754E-01	4.400E-01	2.990E-02	-0.266
	666.33	*		6.381E-02	2.475E-01	3.687E-01	1.850E-02	0.173
	753.82			1.715E-01	2.149E+00	3.575E+00	2.404E-01	0.048
SB-126	223.80			1.767E+00	4.666E+00	8.000E+00	4.790E-01	0.221
	278.60			-3.918E-01	2.802E+00	4.645E+00	2.982E-01	-0.084
	296.50			5.648E-01	2.106E+00	3.128E+00	2.041E-01	0.181
	414.70			-6.504E-02	1.035E-01	1.626E-01	1.102E-02	-0.400
	415.30			-5.978E+00	8.683E+00	1.359E+01	9.208E-01	-0.440
	555.20			3.228E+00	5.419E+00	9.011E+00	5.486E-01	0.358
	573.80			4.783E-01	1.332E+00	2.240E+00	1.328E-01	0.214
	593.00			-5.581E-01	1.187E+00	1.937E+00	1.112E-01	-0.288
	656.30			-4.313E+00	5.274E+00	7.070E+00	3.539E-01	-0.610
	666.33			2.626E-02	1.018E-01	1.517E-01	7.611E-03	0.173
	675.00			8.833E-01	2.723E+00	4.634E+00	2.398E-01	0.191
	695.00			-1.720E-02	9.628E-02	1.582E-01	8.778E-03	-0.109
	697.00			1.870E-02	3.275E-01	5.472E-01	3.056E-02	0.034
	720.50	*		4.404E-02	2.039E-01	3.136E-01	1.895E-02	0.140
	856.80			-7.425E-01	7.005E-01	1.054E+00	9.565E-02	-0.705
	989.30			-9.113E-01	2.145E+00	3.367E+00	3.090E-01	-0.271
	1034.80			-4.633E+00	1.531E+01	2.418E+01	2.073E+00	-0.192
SB-127	1213.00			8.241E-01	4.195E+00	7.159E+00	4.844E-01	0.115
	61.10			1.866E+02	5.636E+01	8.793E+01	1.121E+01	2.123
	252.40			6.252E-02	2.208E+00	3.711E+00	1.529E+00	0.017
	290.80			-3.706E+00	1.297E+01	1.865E+01	1.415E+00	-0.199
	411.60			-6.130E+00	7.121E+00	1.097E+01	1.488E+00	-0.559
	444.90			-6.596E-01	5.930E+00	9.560E+00	9.216E-01	-0.069
	473.00			-1.748E-01	1.057E+00	1.691E+00	1.691E-01	-0.103
	543.00			-2.484E+00	8.893E+00	1.392E+01	1.625E+00	-0.178
	603.60			-4.862E+00	7.091E+00	9.703E+00	8.628E-01	-0.501
	685.20	*		6.508E-02	6.997E-01	1.174E+00	8.236E-02	0.055
	698.50			-4.387E+00	8.080E+00	1.289E+01	1.694E+00	-0.340
	722.20			7.378E+00	1.837E+01	2.753E+01	1.992E+00	0.268
	783.80			1.810E+00	2.183E+00	3.790E+00	3.778E-01	0.477
XE-127	57.60			2.005E+02	3.412E+01	4.534E+01	5.764E+00	4.422

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

Nuclide	Line Ided	Energy (keV)	Activity Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131		145.22		1.874E-01	9.746E-01	1.580E+00	9.319E-02	0.119
		172.10		1.081E-01	1.731E-01	2.840E-01	1.564E-02	0.381
		202.84	*	-2.955E-03	6.655E-02	1.128E-01	6.529E-03	-0.026
		374.96		-1.844E-01	3.289E-01	5.223E-01	3.543E-02	-0.353
		80.18		2.741E-02	5.170E+00	7.634E+00	8.388E-01	0.004
		284.30		-5.583E-01	1.504E+00	2.463E+00	1.723E-01	-0.227
		364.48	*	6.485E-02	1.193E-01	2.017E-01	1.474E-02	0.322
		636.97		-1.436E+00	1.616E+00	2.537E+00	1.511E-01	-0.566
		722.89		2.837E+00	8.167E+00	1.218E+01	7.446E-01	0.233
		49.72		2.822E+00	1.986E+01	3.347E+01	4.410E+00	0.084
TE-132		111.76		-6.196E+00	1.103E+01	1.747E+01	1.455E+00	-0.355
		116.30		-2.868E+00	1.049E+01	1.682E+01	1.337E+00	-0.171
		228.16	*	-3.100E-02	2.852E-01	4.791E-01	6.407E-02	-0.065
BA-133		53.15		-7.220E+00	1.494E+01	2.341E+01	3.100E+00	-0.308
		79.62		-7.143E-02	2.615E+00	3.857E+00	6.426E-01	-0.019
		81.00		-8.523E-03	1.854E-01	2.910E-01	5.030E-02	-0.029
		276.40		-2.679E-01	6.120E-01	9.988E-01	1.323E-01	-0.268
		302.84		-4.249E-01	2.601E-01	3.881E-01	4.677E-02	-1.095
I-133		356.01	*	7.909E-02	9.225E-02	1.408E-01	1.699E-02	0.562
		383.85		-2.594E-01	5.724E-01	9.125E-01	1.043E-01	-0.284
	+	510.53		8.961E-03	5.724E-01	Half-Life	too short	
		529.87	*	-5.223E-05	5.724E-01	Half-Life	too short	
		706.58		-7.763E-04	5.724E-01	Half-Life	too short	
		856.28		-8.883E-03	5.724E-01	Half-Life	too short	
		875.33		-8.868E-04	5.724E-01	Half-Life	too short	
		1236.41		1.113E-03	5.724E-01	Half-Life	too short	
		1298.22		-7.012E-04	5.724E-01	Half-Life	too short	
		475.35		7.386E-01	3.993E+00	6.520E+00	4.300E-01	0.113
CS-134		563.23		1.280E-01	6.934E-01	1.121E+00	6.882E-02	0.114
		569.32		-3.601E-01	3.629E-01	5.331E-01	3.270E-02	-0.676
		604.70		-3.429E-02	6.751E-02	9.409E-02	5.320E-03	-0.364
		795.84	*	5.393E-02	9.011E-02	1.546E-01	1.192E-02	0.349
		801.93		1.240E-01	7.785E-01	1.300E+00	1.018E-01	0.095
		1038.57		1.252E+00	9.378E+00	1.530E+01	1.303E+00	0.082
		1167.94		1.409E+01	6.298E+00	1.092E+01	6.853E-01	1.290
CS-135 I-135		1365.15		4.988E-02	1.461E+00	2.433E+00	2.195E-01	0.020
		268.24	*	1.056E-02	2.751E-01	4.611E-01	3.726E-02	0.023
		288.45		-2.958E+02	2.751E-01	Half-Life	too short	
		417.63		1.937E+03	2.751E-01	Half-Life	too short	
		546.56		4.733E+02	2.751E-01	Half-Life	too short	
		836.80		1.139E+03	2.751E-01	Half-Life	too short	
		1038.76		3.123E+02	2.751E-01	Half-Life	too short	
		1124.00		-1.168E+03	2.751E-01	Half-Life	too short	
		1131.51		-5.262E+02	2.751E-01	Half-Life	too short	
		1260.41	*	-1.606E+01	2.751E-01	Half-Life	too short	
		1457.56		7.921E+02	2.751E-01	Half-Life	too short	
		1678.03		-6.193E+01	2.751E-01	Half-Life	too short	
		1706.46		-6.419E+02	2.751E-01	Half-Life	too short	
		1791.20		-2.866E+02	2.751E-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		5.380E-01	1.114E+00	1.877E+00	3.213E-01	0.287
	+	86.29		3.075E+01	5.032E+00	3.710E+00	5.465E-01	8.289
		153.22		-1.874E-02	7.105E-01	1.137E+00	8.135E-02	-0.016
		163.89		-4.451E-02	1.216E+00	1.939E+00	1.359E-01	-0.023
		176.55		8.024E-02	4.277E-01	6.867E-01	4.315E-02	0.117
		273.65		-3.018E-01	5.275E-01	8.571E-01	6.109E-02	-0.352
		340.57		-1.371E-01	1.753E-01	2.389E-01	1.678E-02	-0.574
		818.51		7.632E-02	1.070E-01	1.849E-01	1.509E-02	0.413
		1048.07	*	7.975E-02	1.790E-01	2.984E-01	2.611E-02	0.267
		1235.34		2.410E-01	4.831E-01	8.509E-01	9.188E-02	0.283
CE-139		165.85	*	-8.378E-03	4.743E-02	7.505E-02	4.099E-03	-0.112
BA-140		162.64		-2.342E-01	8.501E-01	1.340E+00	8.414E-02	-0.175
		304.84		-9.634E-01	1.528E+00	2.417E+00	6.637E-01	-0.399
LA-140		423.70		-2.373E+00	2.770E+00	4.114E+00	1.315E+00	-0.577
		537.32	*	9.223E-04	3.682E-01	5.872E-01	1.914E-01	0.002
		328.77		3.611E-01	3.664E-01	6.334E-01	4.614E-02	0.570
		432.53		-9.202E-01	3.005E+00	4.800E+00	3.489E-01	-0.192
		487.03		2.129E-02	1.899E-01	3.085E-01	2.230E-02	0.069
		751.79		4.459E-02	2.440E+00	4.044E+00	3.168E-01	0.011
		815.85		-6.584E-01	4.813E-01	7.040E-01	6.439E-02	-0.935
		867.82		-1.481E+00	2.328E+00	3.641E+00	3.558E-01	-0.407
		919.63		-2.097E+00	4.754E+00	7.504E+00	8.805E-01	-0.279
		925.24		2.421E-01	1.962E+00	3.224E+00	3.338E-01	0.075
CE-141		1596.49	*	-3.235E-02	7.895E-02	1.176E-01	9.122E-03	-0.275
		145.44	*	3.722E-02	8.600E-02	1.409E-01	8.623E-03	0.264
CE-143		57.37		8.015E+02	1.755E+02	2.619E+02	3.600E+01	3.060
		231.56		1.411E+01	1.634E+02	2.443E+02	7.581E+01	0.058
	+	293.26	*	3.133E+01	1.374E+01	1.600E+01	3.323E+00	1.959
	+	350.59		6.563E+02	2.611E+02	2.489E+02	7.619E+01	2.636
		490.36		-1.486E+02	1.915E+02	2.835E+02	8.824E+01	-0.524
		664.57		1.719E+02	1.111E+02	1.617E+02	5.107E+01	1.063
		721.93		7.081E+01	9.515E+01	1.444E+02	4.128E+01	0.490
		80.11		2.250E+00	4.088E+00	6.189E+00	6.791E-01	0.364
		133.54	*	-5.502E-02	3.302E-01	5.286E-01	7.594E-02	-0.104
		476.78		3.487E-02	1.380E-01	2.262E-01	1.722E-02	0.154
PM-144		618.01		5.502E-02	5.905E-02	1.047E-01	6.111E-03	0.526
		696.49	*	7.336E-03	6.088E-02	1.022E-01	5.698E-03	0.072
PR-144		778.57		2.575E+00	4.568E+00	7.831E+00	5.682E-01	0.329
		696.49	*	4.953E-01	4.111E+00	6.899E+00	3.847E-01	0.072
PM-146		1489.15		-5.965E+00	1.583E+01	2.401E+01	1.982E+00	-0.248
		453.90	*	-5.030E-02	9.808E-02	1.544E-01	1.426E-02	-0.326
ND-147		633.02		2.410E-01	2.517E+00	4.241E+00	1.559E+00	0.057
		735.90		3.285E-01	3.002E-01	5.111E-01	1.431E-01	0.643
		747.13		-4.847E-02	1.789E-01	2.903E-01	3.742E-02	-0.167
		91.11		-1.799E-01	2.912E-01	4.712E-01	5.253E-02	-0.382
		319.41		-1.241E+00	3.878E+00	6.316E+00	4.191E-01	-0.197
		439.89		5.061E+00	7.710E+00	1.298E+01	8.724E-01	0.390
PM-149		531.02	*	-7.274E-01	7.299E-01	1.076E+00	1.477E-01	-0.676
		285.90	*	3.220E+00	1.930E+01	3.242E+01	4.681E+00	0.099

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

Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	+	121.78	5.059E-01	1.981E-01	2.605E-01	2.146E-02	1.942
		244.69	-1.743E-01	6.094E-01	8.868E-01	5.470E-02	-0.197
		344.27 *	7.817E-02	1.817E-01	3.060E-01	2.255E-02	0.255
		443.98	1.898E-01	1.946E+00	3.175E+00	2.131E-01	0.060
		778.89	3.291E-01	5.304E-01	9.127E-01	6.628E-02	0.361
		867.32	-1.060E+00	1.994E+00	3.144E+00	2.936E-01	-0.337
		964.01	3.033E-01	8.353E-01	1.208E+00	1.144E-01	0.251
		1085.78	9.629E-02	9.271E-01	1.504E+00	1.171E-01	0.064
		1112.02	4.101E-01	7.633E-01	1.274E+00	9.341E-02	0.322
		1407.95	3.984E-01	2.625E-01	5.235E-01	4.464E-02	0.761
GD-153	+	69.67	-6.811E-02	3.175E+00	5.261E+00	5.868E-01	-0.013
		83.37	8.555E+00	2.918E+01	4.373E+01	4.846E+00	0.196
		97.43 *	1.738E-02	1.282E-01	2.012E-01	1.874E-02	0.086
		103.18	9.551E-02	1.626E-01	2.722E-01	2.301E-02	0.351
EU-154	+	123.07	3.550E-01	1.404E-01	1.674E-01	1.654E-02	2.121
		247.94	2.606E-01	6.243E-01	1.035E+00	1.013E-01	0.252
		591.81	-2.995E-01	1.164E+00	1.926E+00	1.878E-01	-0.155
		723.30	1.278E-01	3.657E-01	5.452E-01	3.994E-02	0.234
		756.87	2.175E-01	1.534E+00	2.563E+00	2.751E-01	0.085
		873.19	4.965E-01	6.875E-01	1.177E+00	1.514E-01	0.422
		996.32	-1.397E+00	8.916E-01	1.205E+00	2.169E-01	-1.159
		1004.76	-2.218E-01	4.883E-01	7.617E-01	9.071E-02	-0.291
		1274.45 *	8.179E-02	1.726E-01	3.032E-01	3.229E-02	0.270
		48.70	-7.497E+00	1.096E+01	1.791E+01	2.151E+00	-0.419
EU-155	+	60.01	5.180E+02	7.459E+01	5.173E+01	6.372E+00	10.012
		86.54	4.040E+00	5.399E-01	5.356E-01	6.062E-02	7.544
		105.31 *	-2.805E-02	1.718E-01	2.781E-01	2.307E-02	-0.101
TB-160	+	86.79	1.014E+01	1.349E+00	1.422E+00	1.602E-01	7.132
		197.04	5.840E-01	8.977E-01	1.460E+00	8.374E-02	0.400
		215.65	1.058E-01	1.207E+00	2.049E+00	1.212E-01	0.052
		298.57	2.452E-01	2.080E-01	3.262E-01	2.132E-02	0.752
		879.36 *	8.070E-02	2.933E-01	4.892E-01	4.717E-02	0.165
		962.29	-1.136E-01	1.454E+00	2.027E+00	1.924E-01	-0.056
		966.15	9.869E-01	5.729E-01	9.011E-01	8.515E-02	1.095
		1177.93	-3.852E-01	6.620E-01	8.779E-01	5.475E-02	-0.439
		1271.85	5.717E-01	9.161E-01	1.639E+00	1.261E-01	0.349
		80.57	1.183E-01	5.495E-01	8.192E-01	8.999E-02	0.144
HO-166M	+	184.41	1.625E-01	8.916E-02	9.595E-02	5.389E-03	1.694
		280.46	4.296E-05	1.464E-01	2.443E-01	1.571E-02	0.000
		410.95	-1.957E-02	4.614E-01	7.508E-01	5.091E-02	-0.026
		711.68 *	-2.932E-02	1.067E-01	1.737E-01	1.019E-02	-0.169
		752.31	-3.335E-03	5.674E-01	9.388E-01	6.282E-02	-0.004
		810.29	1.725E-01	1.241E-01	2.225E-01	1.773E-02	0.775
		51.35	7.999E+00	1.262E+02	2.118E+02	2.786E+01	0.038
TM-171	+	52.39	-1.801E+01	6.360E+01	1.053E+02	1.395E+01	-0.171
		59.40	2.713E+03	3.907E+02	2.953E+02	3.669E+01	9.188
		66.72 *	2.376E+01	5.808E+01	9.783E+01	1.114E+01	0.243
LU-176	+	88.36	7.977E+00	1.061E+00	1.106E+00	1.244E-01	7.212
		201.83	-1.372E-03	4.591E-02	7.784E-02	4.500E-03	-0.018

---- 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	*		-1.668E-02	4.515E-02	7.358E-02	4.840E-03	-0.227
	401.10			7.691E-01	1.266E+01	2.075E+01	1.409E+00	0.037
	112.95			7.043E-02	1.233E+00	2.012E+00	1.481E-01	0.035
	208.36	*		1.138E+00	8.920E-01	1.579E+00	9.226E-02	0.721
LU-177M	52.97			-3.259E+00	6.598E+00	1.033E+01	1.369E+00	-0.315
	54.07			9.889E-01	3.559E+00	5.405E+00	7.129E-01	0.183
	61.30			9.773E+00	4.225E+00	6.717E+00	8.126E-01	1.455
	121.62	+		2.523E+00	9.798E-01	1.298E+00	8.587E-02	1.944
HF-181	147.16			-6.883E-02	9.957E-01	1.594E+00	9.329E-02	-0.043
	171.86			3.240E-01	7.844E-01	1.274E+00	7.014E-02	0.254
	218.09			6.035E-01	1.445E+00	2.483E+00	1.474E-01	0.243
	268.79			1.083E-03	1.345E+00	2.251E+00	1.430E-01	0.000
	319.02			4.344E-03	4.503E-01	7.463E-01	4.951E-02	0.006
	367.43			-1.525E+00	1.689E+00	2.630E+00	1.781E-01	-0.580
	413.65	*		1.074E-01	3.272E-01	5.432E-01	3.681E-02	0.198
	56.28			3.196E+00	3.437E+00	5.307E+00	6.856E-01	0.602
	57.53			1.520E+01	2.707E+00	3.749E+00	4.770E-01	4.054
	65.20			-9.055E-02	1.797E+00	2.981E+00	3.444E-01	-0.030
	133.02			4.512E-03	9.630E-02	1.557E-01	9.671E-03	0.029
	136.25			1.362E-01	6.689E-01	1.088E+00	6.660E-02	0.125
W-181	345.85			7.790E-02	3.407E-01	5.279E-01	3.550E-02	0.148
	482.03	*		-1.453E-02	7.705E-02	1.229E-01	8.065E-03	-0.118
	56.28			1.344E+00	1.445E+00	2.232E+00	2.883E-01	0.602
	57.53			6.372E+00	1.137E+00	1.576E+00	2.005E-01	4.043
TA-182	65.20	*		-3.781E-02	7.502E-01	1.245E+00	1.438E-01	-0.030
	67.75			-4.322E-02	2.143E-01	3.528E-01	3.986E-02	-0.122
	100.10			-5.353E-02	2.726E-01	4.416E-01	3.924E-02	-0.121
	152.43			-3.872E-01	5.039E-01	7.763E-01	4.454E-02	-0.499
RE-183	222.10			-1.036E-01	5.708E-01	9.574E-01	5.718E-02	-0.108
	1001.68			1.342E+00	4.297E+00	7.147E+00	6.447E-01	0.188
	1121.28			2.969E-01	2.923E-01	5.044E-01	3.616E-02	0.589
	1189.05			-3.432E-01	4.639E-01	7.176E-01	4.594E-02	-0.478
	1221.42	*		3.435E-02	2.302E-01	3.911E-01	2.697E-02	0.088
	1230.97			2.624E-01	5.295E-01	9.359E-01	6.593E-02	0.280
	57.98	+		1.821E+01	2.622E+00	1.899E+00	2.402E-01	9.591
	59.32	+		1.047E+01	1.507E+00	1.149E+00	1.429E-01	9.112
	67.20			9.134E-02	3.766E-01	6.308E-01	7.158E-02	0.145
	162.32	*		4.909E-02	1.636E-01	2.652E-01	1.467E-02	0.185
	208.81			1.493E+00	1.512E+00	2.653E+00	1.551E-01	0.563
	291.72			2.284E-01	1.800E+00	2.659E+00	1.728E-01	0.086
RE-184	57.98	+		6.979E+01	1.005E+01	7.277E+00	9.207E-01	9.591
	59.32	+		4.008E+01	5.771E+00	4.399E+00	5.471E-01	9.112
	67.20			3.499E-01	1.443E+00	2.417E+00	2.742E-01	0.145
	161.27			-1.031E-01	5.560E-01	8.807E-01	4.890E-02	-0.117
	216.55			-1.441E-01	4.433E-01	7.401E-01	4.382E-02	-0.195
	252.85	*		1.675E-01	3.876E-01	6.630E-01	4.133E-02	0.253
	318.01			3.775E-01	7.687E-01	1.305E+00	8.653E-02	0.289
	792.07			1.554E-01	1.862E+00	3.090E+00	2.334E-01	0.050
	903.28			2.145E+00	2.606E+00	4.109E+00	4.141E-01	0.522

---- 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		1.182E-01	1.053E+00	1.730E+00	1.715E-01	0.068
		59.72		2.904E+01	4.182E+00	3.037E+00	3.756E-01	9.563
		61.14		1.559E+00	4.986E-01	7.875E-01	9.548E-02	1.979
		69.30		-4.420E-02	5.538E-01	9.156E-01	1.023E-01	-0.048
		592.07		-1.325E+00	4.514E+00	7.456E+00	4.288E-01	-0.178
		646.12	*	-5.428E-02	7.686E-02	1.223E-01	6.284E-03	-0.444
		717.42		-1.487E-01	1.582E+00	2.610E+00	1.561E-01	-0.057
		874.81		-4.236E-01	1.270E+00	2.028E+00	1.932E-01	-0.209
RE-188		880.27		1.015E+00	1.659E+00	2.827E+00	2.733E-01	0.359
		155.03	*	8.892E-02	2.486E-01	4.051E-01	2.302E-02	0.220
		477.96		3.615E+00	5.849E+00	9.789E+00	6.444E-01	0.369
		633.10		3.167E-01	4.753E+00	7.999E+00	4.238E-01	0.040
W-188		63.58		-2.480E+01	1.192E+02	1.762E+02	2.071E+01	-0.141
		227.08		-1.122E+01	2.065E+01	3.405E+01	2.049E+00	-0.330
		290.67	*	-4.495E+00	1.415E+01	2.030E+01	1.318E+00	-0.221
IR-192	+	295.96		7.095E-01	2.779E-01	3.537E-01	2.336E-02	2.006
		308.46		4.509E-02	1.659E-01	2.789E-01	1.853E-02	0.162
		316.51	*	-1.027E-02	5.646E-02	9.267E-02	6.161E-03	-0.111
		468.07		-1.290E-02	1.334E-01	2.145E-01	1.590E-02	-0.060
		604.41		-5.569E-01	8.570E-01	1.174E+00	1.322E-01	-0.474
		612.46		-1.979E-01	1.353E+00	1.952E+00	1.439E-01	-0.101
AU-195		65.12		-1.780E-02	3.528E-01	5.852E-01	6.767E-02	-0.030
		66.83		9.835E-02	1.865E-01	3.153E-01	3.588E-02	0.312
		75.70	+	9.568E-01	4.176E-01	7.073E-01	7.737E-02	1.353
		98.88	*	1.605E-01	3.524E-01	5.874E-01	5.330E-02	0.273
TL-200		129.76		2.248E+00	4.387E+00	7.249E+00	4.573E-01	0.310
		367.94	*	-1.083E+01	1.211E+01	1.888E+01	1.279E+00	-0.573
		579.30		3.393E+00	1.008E+02	1.485E+02	8.727E+00	0.023
		828.27		1.169E+01	1.351E+02	2.234E+02	1.874E+01	0.052
TL-201		1205.75		1.476E+01	4.647E+01	8.022E+01	5.339E+00	0.184
		68.90		-5.927E-01	2.026E+00	3.322E+00	3.722E-01	-0.178
		70.82		-1.010E+00	1.152E+00	1.838E+00	2.037E-01	-0.550
		80.30		8.571E-02	2.175E+00	3.216E+00	3.531E-01	0.027
TL-202		135.34		-3.012E-01	8.922E+00	1.437E+01	8.827E-01	-0.021
		167.43	*	8.777E-01	2.448E+00	3.973E+00	2.173E-01	0.221
		68.90		-1.692E-01	5.785E-01	9.484E-01	1.063E-01	-0.178
		70.82		-2.877E-01	3.280E-01	5.233E-01	5.801E-02	-0.550
HG-203		80.30		2.441E-02	6.194E-01	9.161E-01	1.006E-01	0.027
		439.56	*	5.766E-02	9.697E-02	1.626E-01	1.093E-02	0.355
		70.83		-1.653E+00	1.893E+00	3.007E+00	4.597E-01	-0.550
		72.87		2.176E-01	1.226E+00	1.831E+00	2.722E-01	0.119
BI-207		82.60		-1.551E+00	1.969E+00	2.978E+00	4.581E-01	-0.521
		279.20	*	1.544E-05	6.217E-02	1.038E-01	7.003E-03	0.000
		72.80		1.539E-02	3.962E-01	5.885E-01	6.474E-02	0.026
		74.97		3.910E-01	2.416E-01	3.776E-01	4.134E-02	1.035
		84.90		2.724E-01	3.797E-01	5.759E-01	6.425E-02	0.473
		569.67		-4.987E-02	5.733E-02	8.522E-02	5.082E-03	-0.585
		1063.62	*	1.061E-01	1.262E-01	2.156E-01	1.755E-02	0.492
		1770.23		-6.684E-01	9.896E-01	1.128E+00	7.482E-02	-0.593

---- 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		-3.980E-02	4.087E-01	6.401E-01	7.040E-02	-0.062
		83.78		-2.858E-02	2.598E-01	3.820E-01	4.241E-02	-0.075
		94.90		2.795E-02	3.864E-01	5.683E-01	5.549E-02	0.049
	+	122.32		1.206E+01	4.702E+00	6.126E+00	4.521E-01	1.969
		144.24		1.569E-01	1.086E+00	1.758E+00	1.288E-01	0.089
		154.21		2.186E-01	6.044E-01	9.854E-01	6.829E-02	0.222
		269.46		9.594E-02	3.257E-01	5.517E-01	3.640E-02	0.174
		323.87	*	-1.116E+00	1.186E+00	1.842E+00	3.101E-01	-0.606
	+	338.28		4.723E+00	2.605E+00	3.602E+00	3.983E-01	1.311
		445.03		-9.559E-01	4.638E+00	7.433E+00	8.034E-01	-0.129
PO-209		260.50		2.575E+00	1.554E+01	2.625E+01	1.652E+00	0.098
		262.80		-4.520E+01	4.523E+01	7.193E+01	4.539E+00	-0.628
		896.60	*	1.421E+00	1.818E+01	2.985E+01	3.011E+00	0.048
BI-210		46.50	*	1.144E-02	1.712E+01	2.877E+01	2.822E+00	0.000
PB-210		46.50	*	1.144E-02	1.712E+01	2.877E+01	2.822E+00	0.000
PO-210		46.50	*	1.144E-02	1.712E+01	2.877E+01	2.582E+00	0.000
PB-211		404.84	*	-5.433E-01	1.792E+00	2.821E+00	1.762E+00	-0.193
		427.08		2.074E+00	4.495E+00	7.191E+00	4.452E+00	0.288
		831.96		-2.331E+00	2.819E+00	3.666E+00	2.296E+00	-0.636
BI-212	+	727.18	*	1.021E+00	6.934E-01	1.068E+00	8.543E-02	0.956
		785.46		-4.808E-01	3.633E+00	5.940E+00	4.400E-01	-0.081
		1620.62		7.650E-01	1.907E+00	3.338E+00	2.546E-01	0.229
PO-215		81.07		-3.980E-02	4.087E-01	6.401E-01	7.040E-02	-0.062
		83.78		-2.858E-02	2.598E-01	3.820E-01	4.241E-02	-0.075
		94.90		2.795E-02	3.864E-01	5.683E-01	5.549E-02	0.049
	+	122.32		1.206E+01	4.702E+00	6.126E+00	4.521E-01	1.969
		144.24		1.569E-01	1.086E+00	1.758E+00	1.288E-01	0.089
		154.21		2.186E-01	6.044E-01	9.854E-01	6.829E-02	0.222
		269.46		9.594E-02	3.257E-01	5.517E-01	3.640E-02	0.174
		323.87	*	-1.116E+00	1.186E+00	1.842E+00	3.101E-01	-0.606
	+	338.28		4.723E+00	2.605E+00	3.602E+00	3.983E-01	1.311
		445.03		-9.559E-01	4.638E+00	7.433E+00	8.034E-01	-0.129
RN-219		271.23		3.730E-01	4.117E-01	7.141E-01	6.085E-02	0.522
		401.81	*	-5.180E-01	7.995E-01	1.252E+00	1.761E-01	-0.414
RN-220		549.76	*	3.272E+01	5.044E+01	8.428E+01	5.168E+00	0.388
RA-223		81.07		-3.980E-02	4.087E-01	6.401E-01	7.040E-02	-0.062
		83.78		-2.858E-02	2.598E-01	3.820E-01	4.241E-02	-0.075
		94.90		2.795E-02	3.864E-01	5.683E-01	5.549E-02	0.049
	+	122.32		1.206E+01	4.702E+00	6.126E+00	4.521E-01	1.969
		144.24		1.569E-01	1.086E+00	1.758E+00	1.288E-01	0.089
		154.21		2.186E-01	6.044E-01	9.854E-01	6.829E-02	0.222
		269.46		9.594E-02	3.257E-01	5.517E-01	3.640E-02	0.174
		323.87	*	-1.116E+00	1.186E+00	1.842E+00	3.101E-01	-0.606
	+	338.28		4.723E+00	2.605E+00	3.602E+00	3.983E-01	1.311
		445.03		-9.559E-01	4.638E+00	7.433E+00	8.034E-01	-0.129
AC-227		79.80		1.844E+00	3.251E+00	4.896E+00	1.104E+00	0.377
		236.00		8.682E-01	4.470E-01	7.176E-01	7.621E-02	1.210
		256.20	*	-5.420E-02	6.497E-01	1.085E+00	1.537E-01	-0.050
		286.10		4.806E-01	2.695E+00	4.529E+00	5.393E-01	0.106

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-227	299.80			6.044E+00	2.820E+00	4.587E+00	7.597E-01	1.318
	304.40			-1.546E+00	3.207E+00	5.175E+00	9.092E-01	-0.299
	334.20			-4.634E+00	5.125E+00	6.868E+00	1.280E+00	-0.675
	79.80			1.844E+00	3.251E+00	4.896E+00	1.117E+00	0.377
	94.00			4.658E+00	3.365E+00	5.068E+00	1.132E+00	0.919
	236.00			8.682E-01	4.447E-01	7.176E-01	6.638E-02	1.210
	256.20	*		-5.420E-02	6.497E-01	1.085E+00	1.852E-01	-0.050
TH-229	286.10			4.806E-01	2.737E+00	4.529E+00	4.539E+00	0.106
	299.80			6.044E+00	2.820E+00	4.587E+00	7.597E-01	1.318
	304.40			-1.546E+00	3.207E+00	5.175E+00	9.092E-01	-0.299
	334.20			-4.634E+00	5.125E+00	6.868E+00	1.280E+00	-0.675
	85.43			6.301E-01	3.893E-01	6.046E-01	6.763E-02	1.042
	+	88.47		4.592E+00	6.110E-01	6.303E-01	7.071E-02	7.285
	100.00			-4.446E-02	2.954E-01	4.796E-01	4.269E-02	-0.093
PA-231	193.63	*		-5.855E-01	8.405E-01	1.281E+00	7.307E-02	-0.457
	210.97			-9.362E-01	1.243E+00	2.040E+00	1.197E-01	-0.459
	283.67	*		1.062E+00	2.733E+00	4.634E+00	6.518E-01	0.229
TH-231	301.29			7.628E-01	1.007E+00	1.726E+00	1.879E-01	0.442
	81.07			-3.980E-02	4.087E-01	6.401E-01	7.040E-02	-0.062
	83.78			-2.858E-02	2.598E-01	3.820E-01	4.241E-02	-0.075
	94.90			2.795E-02	3.864E-01	5.683E-01	5.549E-02	0.049
	+	122.32		1.206E+01	4.702E+00	6.126E+00	4.521E-01	1.969
	144.24			1.569E-01	1.086E+00	1.758E+00	1.288E-01	0.089
	154.21			2.186E-01	6.044E-01	9.854E-01	6.829E-02	0.222
U-231	269.46			9.594E-02	3.257E-01	5.517E-01	3.640E-02	0.174
	323.87	*		-1.116E+00	1.186E+00	1.842E+00	3.101E-01	-0.606
	+	338.28		4.723E+00	2.605E+00	3.602E+00	3.983E-01	1.311
	445.03			-9.559E-01	4.638E+00	7.433E+00	8.034E-01	-0.129
	84.21			1.347E+00	3.590E+00	5.394E+00	6.000E-01	0.250
	92.29			-3.990E-01	1.102E+00	1.803E+00	1.856E-01	-0.221
	95.87	*		-4.314E-01	6.208E-01	8.688E-01	8.326E-02	-0.497
PA-233	108.00			-2.651E-01	1.087E+00	1.751E+00	1.378E-01	-0.151
	75.28			1.202E+01	7.398E+00	1.129E+01	1.893E+00	1.064
	+	86.59		6.584E+01	1.888E+01	8.876E+00	2.466E+00	7.419
	300.12			1.675E+00	7.616E-01	1.265E+00	1.743E-01	1.324
	311.98	*		1.401E-01	1.191E-01	2.080E-01	1.440E-02	0.673
PA-234	340.50			-8.794E-01	1.232E+00	1.666E+00	3.868E-01	-0.528
	398.62			7.324E-01	4.046E+00	6.671E+00	1.741E+00	0.110
	415.76			-1.696E+00	3.402E+00	5.361E+00	1.120E+00	-0.316
	63.00			-2.796E-01	3.791E+00	5.644E+00	9.875E-01	-0.050
	94.67			1.074E-01	2.785E-01	4.164E-01	5.520E-02	0.258
	98.44			1.236E-01	1.601E-01	2.452E-01	1.370E-01	0.504
	99.86			-6.679E-02	7.502E-01	1.222E+00	1.090E-01	-0.055
	111.00			-1.023E-01	2.900E-01	4.638E-01	5.265E-02	-0.221
	131.20			-3.498E-02	1.730E-01	2.768E-01	1.734E-02	-0.126
	152.70			-2.769E-01	5.073E-01	7.882E-01	1.244E-01	-0.351
	+	186.00		5.851E+00	3.658E+00	3.710E+00	1.133E+00	1.577
	226.40			-1.161E-01	6.831E-01	1.145E+00	1.336E-01	-0.101
	227.20			-4.843E-01	7.504E-01	1.232E+00	7.416E-02	-0.393

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	248.90			3.979E-02	1.393E+00	2.340E+00	5.055E-01	0.017
	293.70		+	4.758E+00	1.995E+00	2.505E+00	4.096E-01	1.899
	369.80			2.561E+00	1.707E+00	2.878E+00	6.078E-01	0.890
	568.70			-8.322E-01	1.796E+00	2.760E+00	1.648E-01	-0.301
	569.50			-4.712E-01	5.071E-01	7.496E-01	4.471E-02	-0.629
	574.00			8.535E-01	2.780E+00	4.661E+00	2.761E-01	0.183
	699.00			-6.450E-01	1.271E+00	2.029E+00	3.638E-01	-0.318
	706.10			-1.428E+00	1.903E+00	2.805E+00	1.238E+00	-0.509
	733.00			2.296E-01	7.871E-01	1.258E+00	2.692E-01	0.183
	742.81			-2.357E-02	2.563E+00	4.244E+00	2.843E+00	-0.006
	796.30			1.064E+00	1.785E+00	3.028E+00	8.102E-01	0.351
	805.60			-2.524E+00	2.192E+00	3.068E+00	9.340E-01	-0.823
	819.60			1.511E+00	2.635E+00	4.410E+00	1.673E+00	0.343
	826.30			1.246E+00	1.762E+00	2.898E+00	1.295E+00	0.430
	831.60			-1.023E+00	1.258E+00	1.872E+00	5.579E-01	-0.546
	876.40			-1.704E+00	2.613E+00	2.970E+00	3.056E+00	-0.574
	880.51			4.614E-01	6.364E-01	1.092E+00	1.056E-01	0.423
	883.24			-4.943E-02	6.737E-01	1.095E+00	7.378E-01	-0.045
	899.00			1.298E-01	2.128E+00	3.489E+00	1.536E+00	0.037
	925.00			5.367E-02	2.959E+00	4.829E+00	4.771E-01	0.011
	926.50			-9.939E-02	4.477E-01	7.177E-01	1.847E-01	-0.138
	946.00		*	-2.133E-01	7.902E-01	1.261E+00	2.430E-01	-0.169
	949.00			8.360E-01	1.133E+00	1.928E+00	1.858E-01	0.434
	980.50			1.202E-01	1.844E+00	3.005E+00	2.790E-01	0.040
PA-234M	1394.10			-1.568E-01	1.570E+00	2.542E+00	1.654E+00	-0.062
	766.42			1.576E+01	2.378E+01	3.871E+01	1.954E+01	0.407
TH-234	1001.03		*	4.603E+00	1.021E+01	1.713E+01	1.768E+00	0.269
	63.29		*	-6.701E-01	3.231E+00	4.773E+00	9.408E-01	-0.140
	92.38			-3.331E-01	8.809E-01	1.437E+00	2.720E-01	-0.232
U-235	89.95			1.732E+00	1.927E+00	3.136E+00	9.894E-01	0.552
	93.35			1.418E+00	1.122E+00	1.676E+00	4.776E-01	0.846
	105.00			4.435E-02	1.701E+00	2.778E+00	8.259E-01	0.016
	143.76		*	-9.558E-02	3.351E-01	5.312E-01	8.686E-02	-0.180
	163.35			1.355E-01	7.621E-01	1.227E+00	2.196E-01	0.110
	185.71		+	2.167E-01	1.189E-01	1.360E-01	7.654E-03	1.593
	205.31			-6.580E-01	8.686E-01	1.416E+00	2.548E-01	-0.465
NP-236	94.67			8.262E-02	2.111E-01	3.160E-01	3.100E-02	0.261
	98.44			9.337E-02	1.095E-01	1.854E-01	1.695E-02	0.504
	111.00			-7.742E-02	2.192E-01	3.508E-01	2.650E-02	-0.221
	160.31		*	-7.611E-02	1.298E-01	2.015E-01	1.123E-02	-0.378
U-238	63.29		*	-6.701E-01	3.231E+00	4.773E+00	9.408E-01	-0.140
	92.38			-3.331E-01	8.793E-01	1.437E+00	1.477E-01	-0.232
NP-239	99.55			-8.233E-03	2.517E-01	4.110E-01	3.686E-02	-0.020
	117.00		*	9.143E-02	3.223E-01	5.056E-01	3.537E-02	0.181
	209.75			1.199E+00	1.279E+00	2.239E+00	1.311E-01	0.535
	228.18			-4.266E-02	3.926E-01	6.595E-01	3.975E-02	-0.065
	277.60			-2.176E-02	3.003E-01	4.997E-01	3.204E-02	-0.044
	334.30			-2.578E+00	2.870E+00	3.900E+00	2.609E-01	-0.661
AM-243	74.67		*	1.594E-01	1.332E-01	2.065E-01	2.261E-02	0.772

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

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.72		3.704E+02	4.928E+01	5.168E+01	5.820E+00	7.167
		117.66		6.702E+00	6.659E+00	1.022E+01	7.088E-01	0.656
		142.18		-2.055E+00	2.831E+01	4.538E+01	2.709E+00	-0.045
CM-243		99.55		-8.468E-03	2.589E-01	4.227E-01	3.792E-02	-0.020
		103.76	*	7.528E-02	1.531E-01	2.552E-01	2.138E-02	0.295
		117.00		9.402E-02	3.315E-01	5.199E-01	3.637E-02	0.181
		209.75		1.181E+00	1.260E+00	2.206E+00	1.292E-01	0.535
		228.18		-4.309E-02	3.965E-01	6.661E-01	4.014E-02	-0.065
		277.60		-2.193E-02	3.026E-01	5.035E-01	3.229E-02	-0.044
AM-246		798.80		-2.010E-01	2.820E-01	4.400E-01	3.390E-02	-0.457
		1036.00		-2.868E-01	7.316E-01	1.146E+00	9.805E-02	-0.250
		1062.04		1.224E-01	5.445E-01	8.928E-01	7.290E-02	0.137
		1078.86	*	5.946E-03	3.383E-01	5.455E-01	4.309E-02	0.011
CM-247		278.00		-2.277E-01	1.240E+00	2.052E+00	1.316E-01	-0.111
		287.40		-1.284E+00	2.199E+00	3.559E+00	2.304E-01	-0.361
		402.60	*	-5.424E-02	7.020E-02	1.094E-01	7.425E-03	-0.496
CF-249		252.85		6.461E-01	1.495E+00	2.557E+00	1.594E-01	0.253
		333.44		-7.015E-02	3.625E-01	5.190E-01	3.471E-02	-0.135
		387.95	*	1.082E-02	7.544E-02	1.245E-01	8.458E-03	0.087
CF-251		176.60	*	9.689E-03	2.116E-01	3.374E-01	1.871E-02	0.029
		227.00		-2.773E-01	6.595E-01	1.094E+00	6.579E-02	-0.254
		285.00		-1.237E+00	3.117E+00	5.097E+00	3.292E-01	-0.243

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]G1202041822
* Acquisition date   : 24-FEB-2010 09:10:57 Detector SN#      :
* Detector ID        : GAM10 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 01:00:01.23 Half life ratio : 8.000
*****
*
*                                     SAMPLE DATA
*
* Sample date        : 16-FEB-2010 00:00:00 Nuclide Library : SOLID
* Sample ID          : G1202041822 Analyst initials: MXR1
* Batch Number       : 952643 Sample Quantity : 1.5173E+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)	
CO-57	1.715E-01	6.528E-02	7.059E-02	0.000E+00
CO-60	6.762E+00	6.723E-01	8.551E-02	0.000E+00
CD-109	3.388E+01	4.417E+00	2.393E+00	0.000E+00
SN-126	3.363E+00	4.386E-01	2.393E-01	0.000E+00
BA-137M	5.485E+00	3.605E-01	1.109E-01	0.000E+00
CS-137	5.799E+00	3.822E-01	1.172E-01	0.000E+00
TL-208	4.504E-01	1.473E-01	1.160E-01	0.000E+00
BI-211	2.494E+00	6.464E-01	6.638E-01	0.000E+00
PB-212	1.464E+00	1.846E-01	1.554E-01	0.000E+00
PO-212	1.464E+00	1.846E-01	1.554E-01	0.000E+00
BI-214	9.589E-01	2.365E-01	2.077E-01	0.000E+00
PB-214	8.675E-01	2.292E-01	2.371E-01	0.000E+00
PO-214	8.675E-01	2.292E-01	2.371E-01	0.000E+00
PO-216	1.464E+00	1.846E-01	1.554E-01	0.000E+00
PO-218	8.675E-01	2.292E-01	2.371E-01	0.000E+00
RA-224	4.922E+00	2.320E+00	1.768E+00	0.000E+00
RA-226	9.589E-01	2.365E-01	2.077E-01	0.000E+00
AC-228	1.558E+00	5.794E-01	5.230E-01	0.000E+00
RA-228	1.558E+00	5.794E-01	5.230E-01	0.000E+00
TH-228	1.476E+00	1.862E-01	1.567E-01	0.000E+00
TH-230	9.589E-01	2.365E-01	2.077E-01	0.000E+00
TH-232	1.558E+00	5.794E-01	5.230E-01	0.000E+00
U-234	9.589E-01	2.365E-01	2.077E-01	0.000E+00
NP-237	9.877E+00	2.377E+00	7.953E-01	0.000E+00
AM-241	1.596E+01	2.313E+00	8.054E-01	0.000E+00
ANH-511	1.955E-01	1.164E-01	8.456E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	3.606E-01	5.942E-01	1.050E+00	0.000E+00 NOT IDENT.

NA-22	2.682E-02	6.095E-02	1.099E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	4.935E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.051E-02	4.788E-02	7.118E-02	0.000E+00	NOT IDENT.
K-40	4.761E-01	5.603E-01	1.109E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	8.777E-02	1.238E-01	0.000E+00	FAIL ABUN
SC-46	-3.447E-02	8.497E-02	1.405E-01	0.000E+00	NOT IDENT.
V-48	-1.633E-02	1.283E-01	2.143E-01	0.000E+00	NOT IDENT.
CR-51	-7.325E-02	5.493E-01	9.656E-01	0.000E+00	NOT IDENT.
MN-52	6.094E-02	1.307E-01	2.394E-01	0.000E+00	NOT IDENT.
MN-54	-3.125E-02	7.138E-02	1.183E-01	0.000E+00	NOT IDENT.
CO-56	-3.374E-02	7.338E-02	1.210E-01	0.000E+00	NOT IDENT.
CO-58	8.766E-02	7.718E-02	1.421E-01	0.000E+00	NOT IDENT.
FE-59	-1.834E-01	1.975E-01	3.046E-01	0.000E+00	NOT IDENT.
ZN-65	-2.153E-01	2.026E-01	3.086E-01	0.000E+00	NOT IDENT.
GE-68	-1.609E+00	2.906E+00	4.653E+00	0.000E+00	NOT IDENT.
AS-73	6.556E-01	3.327E+00	5.618E+00	0.000E+00	NOT IDENT.
AS-74	-6.097E-02	1.281E-01	2.199E-01	0.000E+00	NOT IDENT.
SE-75	4.332E-02	6.925E-02	1.280E-01	0.000E+00	FAIL ABUN
BR-77	4.638E-01	2.773E+00	4.753E+00	0.000E+00	FAIL ABUN
SR-82	6.229E-02	6.049E-01	1.052E+00	0.000E+00	NOT IDENT.
RB-83	1.700E-02	1.243E-01	2.126E-01	0.000E+00	NOT IDENT.
RB-84	5.690E-04	1.379E-01	2.351E-01	0.000E+00	NOT IDENT.
KR-85	5.983E+00	1.391E+01	2.141E+01	0.000E+00	NOT IDENT.
SR-85	2.857E-02	6.644E-02	1.023E-01	0.000E+00	NOT IDENT.
RB-86	-6.100E-01	1.437E+00	2.325E+00	0.000E+00	NOT IDENT.
Y-88	5.550E-03	5.887E-02	9.879E-02	0.000E+00	NOT IDENT.
ZR-88	2.033E-02	5.541E-02	9.823E-02	0.000E+00	NOT IDENT.
Y-91	2.236E+00	2.334E+01	4.069E+01	0.000E+00	NOT IDENT.
NB-94	1.532E-02	5.686E-02	1.010E-01	0.000E+00	NOT IDENT.
NB-95	5.578E-02	7.716E-02	1.392E-01	0.000E+00	NOT IDENT.
NB-95M	2.101E-01	2.076E-01	3.497E-01	0.000E+00	NOT IDENT.
ZR-95	4.974E-02	1.282E-01	2.276E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.033E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.869E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-5.127E+00	4.089E+00	6.334E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.649E+08	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.909E-02	5.425E-02	9.488E-02	0.000E+00	NOT IDENT.
RH-102	-1.891E-02	6.056E-02	1.016E-01	0.000E+00	NOT IDENT.
RU-103	7.387E-02	6.902E-02	1.244E-01	0.000E+00	NOT IDENT.
RH-106	-2.624E-01	5.922E-01	1.014E+00	0.000E+00	FAIL ABUN
RU-106	-2.624E-01	5.916E-01	1.014E+00	0.000E+00	FAIL ABUN
AG-108M	-4.160E-02	6.714E-02	1.116E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	9.460E-02	1.798E-01	0.000E+00	NOT IDENT.
IN-111	-3.440E-02	3.700E-01	5.865E-01	0.000E+00	NOT IDENT.
IN-113M	1.203E-02	8.080E-02	1.417E-01	0.000E+00	NOT IDENT.
SN-113	1.203E-02	8.080E-02	1.417E-01	0.000E+00	NOT IDENT.
IN-114M	-4.817E-03	2.945E-01	4.480E-01	0.000E+00	NOT IDENT.
CD-115	8.736E-01	2.497E+00	4.327E+00	0.000E+00	NOT IDENT.
SN-117M	7.969E-03	6.005E-02	1.051E-01	0.000E+00	NOT IDENT.
SB-122	6.320E-01	6.649E-01	1.191E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.723E+03	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.056E-02	4.264E-02	7.581E-02	0.000E+00	NOT IDENT.
I-124	-3.072E-01	4.518E-01	6.534E-01	0.000E+00	NOT IDENT.
SB-124	8.054E-02	1.031E-01	1.983E-01	0.000E+00	FAIL ABUN
SB-125	2.291E-01	1.890E-01	3.457E-01	0.000E+00	NOT IDENT.
TE-125M	1.063E+01	1.301E+01	2.402E+01	0.000E+00	NOT IDENT.
I-126	6.381E-02	2.426E-01	3.791E-01	0.000E+00	NOT IDENT.
SB-126	4.404E-02	1.998E-01	3.218E-01	0.000E+00	NOT IDENT.
SB-127	6.508E-02	6.857E-01	1.206E+00	0.000E+00	NOT IDENT.
XE-127	-2.955E-03	6.522E-02	1.194E-01	0.000E+00	NOT IDENT.
I-131	6.485E-02	1.169E-01	2.106E-01	0.000E+00	NOT IDENT.
TE-132	-3.100E-02	2.795E-01	5.060E-01	0.000E+00	NOT IDENT.
BA-133	7.909E-02	9.040E-02	1.471E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.315E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.393E-02	8.831E-02	1.583E-01	0.000E+00	NOT IDENT.
CS-135	1.056E-02	2.696E-01	4.850E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.939E+08	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.975E-02	1.754E-01	3.033E-01	0.000E+00	FAIL ABUN
CE-139	-8.378E-03	4.648E-02	7.987E-02	0.000E+00	NOT IDENT.
BA-140	9.223E-04	3.608E-01	6.071E-01	0.000E+00	NOT IDENT.
LA-140	-3.235E-02	7.738E-02	1.181E-01	0.000E+00	NOT IDENT.
CE-141	3.722E-02	8.428E-02	1.504E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.346E+01	1.679E+01	0.000E+00	FAIL ABUN
CE-144	-5.502E-02	3.236E-01	5.654E-01	0.000E+00	NOT IDENT.
PM-144	7.336E-03	5.967E-02	1.049E-01	0.000E+00	NOT IDENT.
PR-144	4.953E-01	4.029E+00	7.086E+00	0.000E+00	NOT IDENT.
PM-146	-5.030E-02	9.612E-02	1.603E-01	0.000E+00	NOT IDENT.
ND-147	-7.274E-01	7.153E-01	1.112E+00	0.000E+00	NOT IDENT.

PM-149	3.220E+00	1.891E+01	3.405E+01	0.000E+00	NOT IDENT.
EU-152	7.817E-02	1.780E-01	3.199E-01	0.000E+00	FAIL ABUN
GD-153	1.738E-02	1.256E-01	2.169E-01	0.000E+00	NOT IDENT.
EU-154	8.179E-02	1.692E-01	3.065E-01	0.000E+00	FAIL ABUN
EU-155	-2.805E-02	1.684E-01	2.992E-01	0.000E+00	FAIL ABUN
TB-160	8.070E-02	2.874E-01	4.994E-01	0.000E+00	FAIL ABUN
HO-166M	-2.932E-02	1.046E-01	1.783E-01	0.000E+00	FAIL ABUN
TM-171	2.376E+01	5.692E+01	1.063E+02	0.000E+00	FAIL ABUN
LU-176	-1.668E-02	4.425E-02	7.714E-02	0.000E+00	FAIL ABUN
LU-177	1.138E+00	8.741E-01	1.671E+00	0.000E+00	NOT IDENT.
LU-177M	1.074E-01	3.206E-01	5.653E-01	0.000E+00	FAIL ABUN
HF-181	-1.453E-02	7.551E-02	1.274E-01	0.000E+00	NOT IDENT.
W-181	-3.781E-02	7.352E-01	1.354E+00	0.000E+00	NOT IDENT.
TA-182	3.435E-02	2.256E-01	3.958E-01	0.000E+00	NOT IDENT.
RE-183	4.909E-02	1.603E-01	2.823E-01	0.000E+00	FAIL ABUN
RE-184	1.675E-01	3.799E-01	6.984E-01	0.000E+00	FAIL ABUN
OS-185	-5.428E-02	7.532E-02	1.259E-01	0.000E+00	FAIL ABUN
RE-188	8.892E-02	2.436E-01	4.317E-01	0.000E+00	NOT IDENT.
W-188	-4.495E+00	1.387E+01	2.131E+01	0.000E+00	NOT IDENT.
IR-192	-1.027E-02	5.533E-02	9.708E-02	0.000E+00	FAIL ABUN
AU-195	1.605E-01	3.453E-01	6.327E-01	0.000E+00	FAIL ABUN
TL-200	-1.083E+01	1.187E+01	1.971E+01	0.000E+00	NOT IDENT.
TL-201	8.777E-01	2.399E+00	4.227E+00	0.000E+00	NOT IDENT.
TL-202	5.766E-02	9.503E-02	1.690E-01	0.000E+00	NOT IDENT.
HG-203	1.544E-05	6.093E-02	1.091E-01	0.000E+00	NOT IDENT.
BI-207	1.061E-01	1.236E-01	2.190E-01	0.000E+00	NOT IDENT.
TL-207	-1.116E+00	1.163E+00	1.928E+00	0.000E+00	FAIL ABUN
PO-209	1.421E+00	1.781E+01	3.046E+01	0.000E+00	NOT IDENT.
BI-210	1.144E-02	1.677E+01	3.153E+01	0.000E+00	NOT IDENT.
PB-210	1.144E-02	1.677E+01	3.153E+01	0.000E+00	NOT IDENT.
PO-210	1.144E-02	1.677E+01	3.153E+01	0.000E+00	NOT IDENT.
PB-211	-5.433E-01	1.756E+00	2.938E+00	0.000E+00	NOT IDENT.
BI-212	1.021E+00	6.795E-01	1.096E+00	0.000E+00	FAIL ABUN
PO-215	-1.116E+00	1.163E+00	1.928E+00	0.000E+00	FAIL ABUN
RN-219	-5.180E-01	7.835E-01	1.304E+00	0.000E+00	NOT IDENT.
RN-220	3.272E+01	4.943E+01	8.708E+01	0.000E+00	NOT IDENT.
RA-223	-1.116E+00	1.163E+00	1.928E+00	0.000E+00	FAIL ABUN
AC-227	-5.420E-02	6.367E-01	1.143E+00	0.000E+00	NOT IDENT.
TH-227	-5.420E-02	6.367E-01	1.143E+00	0.000E+00	NOT IDENT.
TH-229	-5.855E-01	8.237E-01	1.358E+00	0.000E+00	FAIL ABUN
PA-231	1.062E+00	2.678E+00	4.867E+00	0.000E+00	NOT IDENT.
TH-231	-1.116E+00	1.163E+00	1.928E+00	0.000E+00	FAIL ABUN
U-231	-4.314E-01	6.084E-01	9.365E-01	0.000E+00	NOT IDENT.
PA-233	1.401E-01	1.167E-01	2.180E-01	0.000E+00	FAIL ABUN
PA-234	-2.133E-01	7.744E-01	1.285E+00	0.000E+00	FAIL ABUN
PA-234M	4.603E+00	1.000E+01	1.743E+01	0.000E+00	NOT IDENT.
TH-234	-6.701E-01	3.167E+00	5.195E+00	0.000E+00	NOT IDENT.
U-235	-9.558E-02	3.284E-01	5.672E-01	0.000E+00	FAIL ABUN
NP-236	-7.611E-02	1.272E-01	2.146E-01	0.000E+00	NOT IDENT.
U-238	-6.701E-01	3.167E+00	5.195E+00	0.000E+00	NOT IDENT.
NP-239	9.143E-02	3.159E-01	5.425E-01	0.000E+00	NOT IDENT.
AM-243	1.594E-01	1.305E-01	2.239E-01	0.000E+00	FAIL ABUN
CM-243	7.528E-02	1.500E-01	2.745E-01	0.000E+00	NOT IDENT.
AM-246	5.946E-03	3.316E-01	5.540E-01	0.000E+00	NOT IDENT.
CM-247	-5.424E-02	6.880E-02	1.139E-01	0.000E+00	NOT IDENT.
CF-249	1.082E-02	7.394E-02	1.298E-01	0.000E+00	NOT IDENT.
CF-251	9.689E-03	2.074E-01	3.585E-01	0.000E+00	NOT IDENT.

```

*****
*                                     GEL Laboratories LLC                               *
*                                     2040 Savage Road                               *
*                                     Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041822.CNF;1
Sample date        : 16-FEB-2010 00:00:00 Acquisition date : 24-FEB-2010 09:10:57
Sample ID          : G1202041822           Sample quantity  : 1.51730E+02 GRAM
Detector name      : GAM10                 Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00         Elapsed real time  : 0 01:00:01.23  0.0%
Energy tolerance   : 1.50000 keV           Analyst Initials : MXR1
Abundance limit    : 75.00000              Sensitivity        : 5.00000
Batch ID           : 952643                Detector SN#       :
Matrix Spike ID    :                      LCS ID           : 1032-A
*****

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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	195	85.51*	6.736E+00	1.678E-01	1.715E-01	38.85
	136.48	-----	10.60	6.726E+00	-----	Line Not Found	-----
CO-60	1173.22	1792	100.00	1.353E+00	6.552E+00	6.572E+00	8.00
	1332.49	1634	100.00*	1.200E+00	6.741E+00	6.762E+00	10.15
CD-109	88.03	1337	3.72*	5.317E+00	3.345E+01	3.388E+01	13.31
SN-126	64.28	-----	9.60	2.419E+00	-----	Line Not Found	-----
	86.94	1337	8.90	5.317E+00	1.398E+01	1.398E+01	42.58
	87.57	1337	37.00*	5.317E+00	3.363E+00	3.363E+00	13.31
BA-137M	661.65	2350	89.98*	2.357E+00	5.483E+00	5.485E+00	6.71
CS-137	661.65	2350	85.12*	2.357E+00	5.796E+00	5.799E+00	6.73
TL-208	277.35	-----	6.80	4.610E+00	-----	Line Not Found	-----
	510.84	116	21.60	2.931E+00	9.052E-01	9.052E-01	61.33
	583.14	202	84.20*	2.629E+00	4.504E-01	4.504E-01	33.37
	860.37	-----	12.46	1.841E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.633E+00	-----	Line Not Found	-----
	351.07	254	12.94*	3.891E+00	2.494E+00	2.494E+00	26.45
PB-212	74.81	-----	10.70	3.891E+00	-----	Line Not Found	-----
	77.11	168	18.00	4.160E+00	1.112E+00	1.112E+00	43.65
	87.30	1337	8.00	5.317E+00	1.556E+01	1.556E+01	16.64
	238.63	675	44.60*	5.119E+00	1.464E+00	1.464E+00	12.87
	300.09	-----	3.41	4.359E+00	-----	Line Not Found	-----
PO-212	74.81	-----	10.70	3.891E+00	-----	Line Not Found	-----
	77.11	168	18.00	4.160E+00	1.112E+00	1.112E+00	43.65
	87.30	1337	8.00	5.317E+00	1.556E+01	1.556E+01	16.64
	115.19	-----	0.60	6.657E+00	-----	Line Not Found	-----
	238.63	675	44.60*	5.119E+00	1.464E+00	1.464E+00	12.87
	300.09	-----	3.41	4.359E+00	-----	Line Not Found	-----
BI-214	609.31	227	46.30*	2.533E+00	9.589E-01	9.589E-01	25.17
	1120.29	-----	15.10	1.415E+00	-----	Line Not Found	-----
	1764.49	49	15.80	9.768E-01	1.584E+00	1.584E+00	37.07
PB-214	74.81	-----	6.21	3.891E+00	-----	Line Not Found	-----
	77.11	168	10.50	4.160E+00	1.907E+00	1.907E+00	44.31

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	1337	4.67	5.317E+00	2.665E+01	2.665E+01	15.38
	241.98	199	7.49	5.077E+00	2.596E+00	2.596E+00	48.41
	295.21	170	19.20	4.416E+00	9.912E-01	9.912E-01	39.65
	351.92	254	37.20*	3.891E+00	8.675E-01	8.675E-01	26.96
PO-214	74.81	-----	6.21	3.891E+00	-----	Line Not Found	-----
	77.11	168	10.50	4.160E+00	1.907E+00	1.907E+00	44.31
	87.30	1337	4.67	5.317E+00	2.665E+01	2.665E+01	15.38
	241.98	199	7.49	5.077E+00	2.596E+00	2.596E+00	48.41
	295.21	170	19.20	4.416E+00	9.912E-01	9.912E-01	39.65
	351.92	254	37.20*	3.891E+00	8.675E-01	8.675E-01	26.96
PO-216	74.81	-----	10.70	3.891E+00	-----	Line Not Found	-----
	77.11	168	18.00	4.160E+00	1.112E+00	1.112E+00	43.65
	87.30	1337	8.00	5.317E+00	1.556E+01	1.556E+01	16.64
	238.63	675	44.60*	5.119E+00	1.464E+00	1.464E+00	12.87
	300.09	-----	3.41	4.359E+00	-----	Line Not Found	-----
PO-218	74.81	-----	6.21	3.891E+00	-----	Line Not Found	-----
	77.11	168	10.50	4.160E+00	1.907E+00	1.907E+00	44.31
	87.30	1337	4.67	5.317E+00	2.665E+01	2.665E+01	15.38
	241.98	199	7.49	5.077E+00	2.596E+00	2.596E+00	48.41
	295.21	170	19.20	4.416E+00	9.912E-01	9.912E-01	39.65
	351.92	254	37.20*	3.891E+00	8.675E-01	8.675E-01	26.96
RA-224	240.98	199	3.95*	5.077E+00	4.922E+00	4.922E+00	48.09
RA-226	609.31	227	46.30*	2.533E+00	9.589E-01	9.589E-01	25.17
	1120.29	-----	15.10	1.415E+00	-----	Line Not Found	-----
	1764.49	49	15.80	9.768E-01	1.584E+00	1.584E+00	37.07
AC-228	338.32	104	11.40	4.003E+00	1.131E+00	1.131E+00	67.77
	911.07	152	27.70*	1.740E+00	1.558E+00	1.558E+00	37.96
	969.11	58	16.60	1.637E+00	1.052E+00	1.052E+00	81.97
RA-228	338.32	104	11.40	4.003E+00	1.131E+00	1.131E+00	67.77
	911.07	152	27.70*	1.740E+00	1.558E+00	1.558E+00	37.96
	969.11	58	16.60	1.637E+00	1.052E+00	1.052E+00	81.97
TH-228	74.81	-----	10.70	3.891E+00	-----	Line Not Found	-----
	77.11	168	18.00	4.160E+00	1.112E+00	1.121E+00	43.65
	87.30	1337	8.00	5.317E+00	1.556E+01	1.569E+01	13.31
	238.63	675	44.60*	5.119E+00	1.464E+00	1.476E+00	12.87
	300.09	-----	3.41	4.359E+00	-----	Line Not Found	-----
TH-230	609.31	227	46.30*	2.533E+00	9.589E-01	9.589E-01	25.17
	1120.29	-----	15.10	1.415E+00	-----	Line Not Found	-----
	1764.49	49	15.80	9.768E-01	1.584E+00	1.584E+00	37.07
TH-232	338.32	104	11.40	4.003E+00	1.131E+00	1.131E+00	54.45
	911.07	152	27.70*	1.740E+00	1.558E+00	1.558E+00	37.96
	969.11	58	16.60	1.637E+00	1.052E+00	1.052E+00	81.97
U-234	609.31	227	46.30*	2.533E+00	9.589E-01	9.589E-01	25.17
	1120.29	-----	15.10	1.415E+00	-----	Line Not Found	-----
	1764.49	49	15.80	9.768E-01	1.584E+00	1.584E+00	37.07
NP-237	86.50	1337	12.60*	5.317E+00	9.877E+00	9.877E+00	24.55
	95.87	-----	2.60	5.933E+00	-----	Line Not Found	-----
AM-241	59.54	1971	35.90*	1.702E+00	1.596E+01	1.596E+01	14.78
ANH-511	511.00	116	100.00*	2.931E+00	1.955E-01	1.955E-01	60.76

Flag: "*" = Keyline

Total number of lines in spectrum 20
Number of unidentified lines 0
Number of lines tentatively identified by NID 20 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	1.678E-01	1.715E-01	0.666E-01	38.85	
CO-60	5.27Y	1.00	6.741E+00	6.762E+00	0.686E+00	10.15	
CD-109	464.00D	1.01	3.345E+01	3.388E+01	0.451E+01	13.31	
SN-126	1.00E+05Y	1.00	3.363E+00	3.363E+00	0.448E+00	13.31	
BA-137M	30.17Y	1.00	5.483E+00	5.485E+00	0.368E+00	6.71	
CS-137	30.17Y	1.00	5.796E+00	5.799E+00	0.390E+00	6.73	
TL-208	1.41E+10Y	1.00	4.504E-01	4.504E-01	1.503E-01	33.37	
BI-211	7.04E+08Y	1.00	2.494E+00	2.494E+00	0.660E+00	26.45	
PB-212	1.41E+10Y	1.00	1.464E+00	1.464E+00	0.188E+00	12.87	
PO-212	1.41E+10Y	1.00	1.464E+00	1.464E+00	0.188E+00	12.87	
BI-214	1600.00Y	1.00	9.589E-01	9.589E-01	2.413E-01	25.17	
PB-214	1600.00Y	1.00	8.675E-01	8.675E-01	2.338E-01	26.96	
PO-214	1600.00Y	1.00	8.675E-01	8.675E-01	2.338E-01	26.96	
PO-216	1.41E+10Y	1.00	1.464E+00	1.464E+00	0.188E+00	12.87	
PO-218	1600.00Y	1.00	8.675E-01	8.675E-01	2.338E-01	26.96	
RA-224	1.41E+10Y	1.00	4.922E+00	4.922E+00	2.367E+00	48.09	
RA-226	1600.00Y	1.00	9.589E-01	9.589E-01	2.413E-01	25.17	
AC-228	1.41E+10Y	1.00	1.558E+00	1.558E+00	0.591E+00	37.96	
RA-228	1.41E+10Y	1.00	1.558E+00	1.558E+00	0.591E+00	37.96	
TH-228	1.91Y	1.01	1.464E+00	1.476E+00	0.190E+00	12.87	
TH-230	4.47E+09Y	1.00	9.589E-01	9.589E-01	2.413E-01	25.17	
TH-232	1.41E+10Y	1.00	1.558E+00	1.558E+00	0.591E+00	37.96	
U-234	4.47E+09Y	1.00	9.589E-01	9.589E-01	2.413E-01	25.17	
NP-237	2.14E+06Y	1.00	9.877E+00	9.877E+00	2.425E+00	24.55	
AM-241	432.20Y	1.00	1.596E+01	1.596E+01	0.236E+01	14.78	
ANH-511	1.00E+09Y	1.00	1.955E-01	1.955E-01	1.188E-01	60.76	

Total Activity : 1.059E+02 1.063E+02

Grand Total Activity : 1.059E+02 1.063E+02

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

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

Unidentified Energy Lines
Sample ID : G1202041822

Page : 5
Acquisition date : 24-FEB-2010 09:10:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.91	141	350	1.61	371.76	367	11	3.93E-02	54.6	5.98E+00	T
0	726.72	53	80	1.65	1452.76	1448	9	1.46E-02	67.4	2.16E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202041822.CNF;1
* Acquisition date   : 24-FEB-2010 09:10:57  Detector SN#      :
* Detector ID        : GAM10                  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 01:00:01.23          Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 16-FEB-2010 00:00:00  Nuclide Library : SOLID
* Sample ID          : G1202041822          Analyst initials: MXR1
* Batch Number       : 952643              Sample Quantity : 1.51730E+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
CO-57	1.715E-01	6.661E-02	6.585E-02	4.343E-03	2.604
CO-60	6.762E+00	6.860E-01	8.468E-02	7.358E-03	79.853
CD-109	3.388E+01	4.508E+00	2.215E+00	2.512E-01	15.291
SN-126	3.363E+00	4.475E-01	2.216E-01	2.507E-02	15.180
BA-137M	5.485E+00	3.678E-01	1.078E-01	5.320E-03	50.877
CS-137	5.799E+00	3.900E-01	1.140E-01	5.656E-03	50.877
TL-208	4.504E-01	1.503E-01	1.124E-01	7.553E-03	4.007
BI-211	2.494E+00	6.595E-01	6.352E-01	4.631E-02	3.926
PB-212	1.464E+00	1.884E-01	1.473E-01	1.118E-02	9.935
PO-212	1.464E+00	1.884E-01	1.473E-01	1.118E-02	9.935
BI-214	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
PB-214	8.675E-01	2.338E-01	2.269E-01	2.035E-02	3.823
PO-214	8.675E-01	2.338E-01	2.269E-01	2.035E-02	3.823
PO-216	1.464E+00	1.884E-01	1.473E-01	1.118E-02	9.935
PO-218	8.675E-01	2.338E-01	2.269E-01	2.035E-02	3.823
RA-224	4.922E+00	2.367E+00	1.676E+00	1.029E-01	2.937
RA-226	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
AC-228	1.558E+00	5.913E-01	5.127E-01	6.328E-02	3.038

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.558E+00	5.913E-01	5.127E-01	6.328E-02	3.038
TH-228	1.476E+00	1.900E-01	1.486E-01	1.127E-02	9.935
TH-230	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
TH-232	1.558E+00	5.913E-01	5.127E-01	6.328E-02	3.038
U-234	9.589E-01	2.413E-01	2.016E-01	1.534E-02	4.757
NP-237	9.877E+00	2.425E+00	7.360E-01	1.730E-01	13.420
AM-241	1.596E+01	2.360E+00	7.390E-01	9.491E-02	21.604
ANH-511	1.955E-01	1.188E-01	8.169E-02	5.233E-03	2.394

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.606E-01		6.064E-01	1.013E+00	7.533E-02	0.356
NA-22	2.682E-02		6.220E-02	1.087E-01	8.423E-03	0.247
NA-24	4.260E-04		2.518E-04	Half-Life too short		
AL-26	-2.051E-02		4.886E-02	7.107E-02	4.506E-03	-0.289
K-40	4.761E-01		5.717E-01	1.101E+00	9.483E-02	0.432
TI-44	2.052E-01	+	8.956E-02	1.143E-01	1.251E-02	1.794
SC-46	-3.447E-02		8.670E-02	1.376E-01	1.362E-02	-0.250
V-48	-1.633E-02		1.309E-01	2.105E-01	1.947E-02	-0.078
CR-51	-7.325E-02		5.605E-01	9.220E-01	6.659E-02	-0.079
MN-52	6.094E-02		1.334E-01	2.376E-01	2.008E-02	0.257
MN-54	-3.125E-02		7.284E-02	1.157E-01	9.888E-03	-0.270
CO-56	-3.374E-02		7.488E-02	1.184E-01	1.046E-02	-0.285
CO-58	8.766E-02		7.875E-02	1.389E-01	1.111E-02	0.631
FE-59	-1.834E-01		2.015E-01	3.001E-01	2.505E-02	-0.611
ZN-65	-2.153E-01		2.068E-01	3.041E-01	2.215E-02	-0.708
GE-68	-1.609E+00		2.965E+00	4.582E+00	3.630E-01	-0.351
AS-73	6.556E-01		3.395E+00	5.143E+00	6.805E-01	0.127
AS-74	-6.097E-02		1.307E-01	2.133E-01	1.218E-02	-0.286
SE-75	4.332E-02		7.067E-02	1.216E-01	7.759E-03	0.356
BR-77	4.638E-01		2.830E+00	4.594E+00	2.915E-01	0.101
SR-82	6.229E-02		6.173E-01	1.027E+00	7.402E-02	0.061
RB-83	1.700E-02		1.268E-01	2.055E-01	1.304E-02	0.083
RB-84	5.690E-04		1.407E-01	2.303E-01	2.233E-02	0.002
KR-85	5.983E+00		1.420E+01	2.069E+01	1.322E+00	0.289
SR-85	2.857E-02		6.779E-02	9.881E-02	6.311E-03	0.289
RB-86	-6.100E-01		1.466E+00	2.290E+00	1.817E-01	-0.266
Y-88	5.550E-03		6.007E-02	9.867E-02	6.054E-03	0.056
ZR-88	2.033E-02		5.654E-02	9.427E-02	6.406E-03	0.216
Y-91	2.236E+00		2.381E+01	4.019E+01	2.670E+00	0.056
NB-94	1.532E-02		5.802E-02	9.833E-02	5.598E-03	0.156
NB-95	5.578E-02		7.874E-02	1.359E-01	9.484E-03	0.410
NB-95M	2.101E-01		2.119E-01	3.314E-01	2.571E-02	0.634
ZR-95	4.974E-02		1.308E-01	2.221E-01	1.745E-02	0.224
NB-97	2.485E-03		2.058E-04	Half-Life too short		
ZR-97	3.328E-03		2.484E-03	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	-5.127E+00		4.172E+00	6.177E+00	8.682E-01	-0.830
TC-99M	-5.709E+01		2.372E+02	Half-Life too short		
RH-101	2.909E-02		5.536E-02	8.954E-02	5.144E-03	0.325
RH-102	-1.891E-02		6.180E-02	9.801E-02	6.465E-03	-0.193
RU-103	7.387E-02		7.043E-02	1.201E-01	1.558E-02	0.615
RH-106	-2.624E-01		6.043E-01	9.840E-01	1.137E-01	-0.267
RU-106	-2.624E-01		6.037E-01	9.840E-01	5.344E-02	-0.267
AG-108M	-4.160E-02		6.851E-02	1.074E-01	7.701E-03	-0.387
AG-110M	3.972E-01		9.653E-02	1.748E-01	9.470E-03	2.272
IN-111	-3.440E-02		3.776E-01	5.563E-01	3.435E-02	-0.062
IN-113M	1.203E-02		8.245E-02	1.360E-01	9.695E-03	0.088
SN-113	1.203E-02		8.245E-02	1.360E-01	9.695E-03	0.088
IN-114M	-4.817E-03		3.005E-01	4.224E-01	2.396E-02	-0.011
CD-115	8.736E-01		2.548E+00	4.184E+00	2.634E-01	0.209
SN-117M	7.969E-03		6.128E-02	9.866E-02	5.533E-03	0.081
SB-122	6.320E-01		6.785E-01	1.154E+00	6.939E-02	0.548
I-123	8.307E-04		8.789E-04	Half-Life too short		
TE-123M	2.056E-02		4.351E-02	7.117E-02	4.042E-03	0.289
I-124	-3.072E-01		4.610E-01	6.339E-01	3.576E-02	-0.485
SB-124	8.054E-02		1.052E-01	1.976E-01	1.501E-02	0.408
SB-125	2.291E-01		1.929E-01	3.325E-01	2.315E-02	0.689
TE-125M	1.063E+01		1.328E+01	2.235E+01	2.142E+00	0.475
I-126	6.381E-02		2.475E-01	3.687E-01	1.850E-02	0.173
SB-126	4.404E-02		2.039E-01	3.136E-01	1.895E-02	0.140
SB-127	6.508E-02		6.997E-01	1.174E+00	8.236E-02	0.055
XE-127	-2.955E-03		6.655E-02	1.128E-01	6.529E-03	-0.026
I-131	6.485E-02		1.193E-01	2.017E-01	1.474E-02	0.322
TE-132	-3.100E-02		2.852E-01	4.791E-01	6.407E-02	-0.065
BA-133	7.909E-02		9.225E-02	1.408E-01	1.699E-02	0.562
I-133	-5.223E-05		2.712E-05	Half-Life too short		
CS-134	5.393E-02		9.011E-02	1.546E-01	1.192E-02	0.349
CS-135	1.056E-02		2.751E-01	4.611E-01	3.726E-02	0.023
I-135	-1.606E+01		1.499E+02	Half-Life too short		
CS-136	7.975E-02		1.790E-01	2.984E-01	2.611E-02	0.267
CE-139	-8.378E-03		4.743E-02	7.505E-02	4.099E-03	-0.112
BA-140	9.223E-04		3.682E-01	5.872E-01	1.914E-01	0.002
LA-140	-3.235E-02		7.895E-02	1.176E-01	9.122E-03	-0.275
CE-141	3.722E-02		8.600E-02	1.409E-01	8.623E-03	0.264
CE-143	3.133E+01	+	1.374E+01	1.600E+01	3.323E+00	1.959
CE-144	-5.502E-02		3.302E-01	5.286E-01	7.594E-02	-0.104
PM-144	7.336E-03		6.088E-02	1.022E-01	5.698E-03	0.072
PR-144	4.953E-01		4.111E+00	6.899E+00	3.847E-01	0.072
PM-146	-5.030E-02		9.808E-02	1.544E-01	1.426E-02	-0.326
ND-147	-7.274E-01		7.299E-01	1.076E+00	1.477E-01	-0.676
PM-149	3.220E+00		1.930E+01	3.242E+01	4.681E+00	0.099
EU-152	7.817E-02		1.817E-01	3.060E-01	2.255E-02	0.255
GD-153	1.738E-02		1.282E-01	2.012E-01	1.874E-02	0.086
EU-154	8.179E-02		1.726E-01	3.032E-01	3.229E-02	0.270

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	-2.805E-02		1.718E-01	2.781E-01	2.307E-02	-0.101
TB-160	8.070E-02		2.933E-01	4.892E-01	4.717E-02	0.165
HO-166M	-2.932E-02		1.067E-01	1.737E-01	1.019E-02	-0.169
TM-171	2.376E+01		5.808E+01	9.783E+01	1.114E+01	0.243
LU-176	-1.668E-02		4.515E-02	7.358E-02	4.840E-03	-0.227
LU-177	1.138E+00		8.920E-01	1.579E+00	9.226E-02	0.721
LU-177M	1.074E-01		3.272E-01	5.432E-01	3.681E-02	0.198
HF-181	-1.453E-02		7.705E-02	1.229E-01	8.065E-03	-0.118
W-181	-3.781E-02		7.502E-01	1.245E+00	1.438E-01	-0.030
TA-182	3.435E-02		2.302E-01	3.911E-01	2.697E-02	0.088
RE-183	4.909E-02		1.636E-01	2.652E-01	1.467E-02	0.185
RE-184	1.675E-01		3.876E-01	6.630E-01	4.133E-02	0.253
OS-185	-5.428E-02		7.686E-02	1.223E-01	6.284E-03	-0.444
RE-188	8.892E-02		2.486E-01	4.051E-01	2.302E-02	0.220
W-188	-4.495E+00		1.415E+01	2.030E+01	1.318E+00	-0.221
IR-192	-1.027E-02		5.646E-02	9.267E-02	6.161E-03	-0.111
AU-195	1.605E-01		3.524E-01	5.874E-01	5.330E-02	0.273
TL-200	-1.083E+01		1.211E+01	1.888E+01	1.279E+00	-0.573
TL-201	8.777E-01		2.448E+00	3.973E+00	2.173E-01	0.221
TL-202	5.766E-02		9.697E-02	1.626E-01	1.093E-02	0.355
HG-203	1.544E-05		6.217E-02	1.038E-01	7.003E-03	0.000
BI-207	1.061E-01		1.262E-01	2.156E-01	1.755E-02	0.492
TL-207	-1.116E+00		1.186E+00	1.842E+00	3.101E-01	-0.606
PO-209	1.421E+00		1.818E+01	2.985E+01	3.011E+00	0.048
BI-210	1.144E-02		1.712E+01	2.877E+01	2.822E+00	0.000
PB-210	1.144E-02		1.712E+01	2.877E+01	2.822E+00	0.000
PO-210	1.144E-02		1.712E+01	2.877E+01	2.582E+00	0.000
PB-211	-5.433E-01		1.792E+00	2.821E+00	1.762E+00	-0.193
BI-212	1.021E+00	+	6.934E-01	1.068E+00	8.543E-02	0.956
PO-215	-1.116E+00		1.186E+00	1.842E+00	3.101E-01	-0.606
RN-219	-5.180E-01		7.995E-01	1.252E+00	1.761E-01	-0.414
RN-220	3.272E+01		5.044E+01	8.428E+01	5.168E+00	0.388
RA-223	-1.116E+00		1.186E+00	1.842E+00	3.101E-01	-0.606
AC-227	-5.420E-02		6.497E-01	1.085E+00	1.537E-01	-0.050
TH-227	-5.420E-02		6.497E-01	1.085E+00	1.852E-01	-0.050
TH-229	-5.855E-01		8.405E-01	1.281E+00	7.307E-02	-0.457
PA-231	1.062E+00		2.733E+00	4.634E+00	6.518E-01	0.229
TH-231	-1.116E+00		1.186E+00	1.842E+00	3.101E-01	-0.606
U-231	-4.314E-01		6.208E-01	8.688E-01	8.326E-02	-0.497
PA-233	1.401E-01		1.191E-01	2.080E-01	1.440E-02	0.673
PA-234	-2.133E-01		7.902E-01	1.261E+00	2.430E-01	-0.169
PA-234M	4.603E+00		1.021E+01	1.713E+01	1.768E+00	0.269
TH-234	-6.701E-01		3.231E+00	4.773E+00	9.408E-01	-0.140
U-235	-9.558E-02		3.351E-01	5.312E-01	8.686E-02	-0.180
NP-236	-7.611E-02		1.298E-01	2.015E-01	1.123E-02	-0.378
U-238	-6.701E-01		3.231E+00	4.773E+00	9.408E-01	-0.140
NP-239	9.143E-02		3.223E-01	5.056E-01	3.537E-02	0.181
AM-243	1.594E-01		1.332E-01	2.065E-01	2.261E-02	0.772

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	7.528E-02		1.531E-01	2.552E-01	2.138E-02	0.295
AM-246	5.946E-03		3.383E-01	5.455E-01	4.309E-02	0.011
CM-247	-5.424E-02		7.020E-02	1.094E-01	7.425E-03	-0.496
CF-249	1.082E-02		7.544E-02	1.245E-01	8.458E-03	0.087
CF-251	9.689E-03		2.116E-01	3.374E-01	1.871E-02	0.029

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]G1202041822          *
* Acquisition date   : 24-FEB-2010 09:10:57 Detector SN#      :              *
* Detector ID        : GAM10                      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 01:00:01.23             Half life ratio : 8.000        *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 16-FEB-2010 00:00:00 Nuclide Library : SOLID            *
* Sample ID          : G1202041822             Analyst initials: MXR1          *
* Batch Number       : 952643                  Sample Quantity : 1.5173E+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
CO-57	1.715E-01	6.528E-02	3.531E-02	3.331E-02
CO-60	6.762E+00	6.723E-01	4.278E-02	3.430E-01
CD-109	3.388E+01	4.417E+00	1.197E+00	2.254E+00
SN-126	3.363E+00	4.386E-01	1.197E-01	2.238E-01
BA-137M	5.485E+00	3.605E-01	5.547E-02	1.839E-01
CS-137	5.799E+00	3.822E-01	5.864E-02	1.950E-01
TL-208	4.504E-01	1.473E-01	5.802E-02	7.514E-02
BI-211	2.494E+00	6.464E-01	3.321E-01	3.298E-01
PB-212	1.464E+00	1.846E-01	7.775E-02	9.420E-02
PO-212	1.464E+00	1.846E-01	7.775E-02	9.420E-02
BI-214	9.589E-01	2.365E-01	1.039E-01	1.207E-01
PB-214	8.675E-01	2.292E-01	1.186E-01	1.169E-01
PO-214	8.675E-01	2.292E-01	1.186E-01	1.169E-01
PO-216	1.464E+00	1.846E-01	7.775E-02	9.420E-02
PO-218	8.675E-01	2.292E-01	1.186E-01	1.169E-01
RA-224	4.922E+00	2.320E+00	8.845E-01	1.184E+00
RA-226	9.589E-01	2.365E-01	1.039E-01	1.207E-01
AC-228	1.558E+00	5.794E-01	2.616E-01	2.956E-01
RA-228	1.558E+00	5.794E-01	2.616E-01	2.956E-01
TH-228	1.476E+00	1.862E-01	7.840E-02	9.499E-02
TH-230	9.589E-01	2.365E-01	1.039E-01	1.207E-01
TH-232	1.558E+00	5.794E-01	2.616E-01	2.956E-01
U-234	9.589E-01	2.365E-01	1.039E-01	1.207E-01
NP-237	9.877E+00	2.377E+00	3.979E-01	1.213E+00
AM-241	1.596E+01	2.313E+00	4.029E-01	1.180E+00
ANH-511	1.955E-01	1.164E-01	4.231E-02	5.940E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.606E-01	5.942E-01	5.255E-01	3.032E-01 NOT IDENT.

NA-22	2.682E-02	6.095E-02	5.500E-02	3.110E-02	NOT IDENT.
NA-24	4.260E+02	4.935E+02	0.000E+00	2.518E+02	SHORT HLIF
AL-26	-2.051E-02	4.788E-02	3.561E-02	2.443E-02	NOT IDENT.
K-40	4.761E-01	5.603E-01	5.549E-01	2.859E-01	NOT IDENT.
TI-44	2.052E-01	8.777E-02	6.196E-02	4.478E-02	FAIL ABUN
SC-46	-3.447E-02	8.497E-02	7.027E-02	4.335E-02	NOT IDENT.
V-48	-1.633E-02	1.283E-01	1.072E-01	6.547E-02	NOT IDENT.
CR-51	-7.325E-02	5.493E-01	4.831E-01	2.802E-01	NOT IDENT.
MN-52	6.094E-02	1.307E-01	1.198E-01	6.670E-02	NOT IDENT.
MN-54	-3.125E-02	7.138E-02	5.920E-02	3.642E-02	NOT IDENT.
CO-56	-3.374E-02	7.338E-02	6.056E-02	3.744E-02	NOT IDENT.
CO-58	8.766E-02	7.718E-02	7.109E-02	3.938E-02	NOT IDENT.
FE-59	-1.834E-01	1.975E-01	1.524E-01	1.008E-01	NOT IDENT.
ZN-65	-2.153E-01	2.026E-01	1.544E-01	1.034E-01	NOT IDENT.
GE-68	-1.609E+00	2.906E+00	2.328E+00	1.482E+00	NOT IDENT.
AS-73	6.556E-01	3.327E+00	2.811E+00	1.697E+00	NOT IDENT.
AS-74	-6.097E-02	1.281E-01	1.100E-01	6.535E-02	NOT IDENT.
SE-75	4.332E-02	6.925E-02	6.404E-02	3.533E-02	FAIL ABUN
BR-77	4.638E-01	2.773E+00	2.378E+00	1.415E+00	FAIL ABUN
SR-82	6.229E-02	6.049E-01	5.261E-01	3.086E-01	NOT IDENT.
RB-83	1.700E-02	1.243E-01	1.064E-01	6.341E-02	NOT IDENT.
RB-84	5.690E-04	1.379E-01	1.176E-01	7.037E-02	NOT IDENT.
KR-85	5.983E+00	1.391E+01	1.071E+01	7.098E+00	NOT IDENT.
SR-85	2.857E-02	6.644E-02	5.116E-02	3.390E-02	NOT IDENT.
RB-86	-6.100E-01	1.437E+00	1.163E+00	7.331E-01	NOT IDENT.
Y-88	5.550E-03	5.887E-02	4.943E-02	3.003E-02	NOT IDENT.
ZR-88	2.033E-02	5.541E-02	4.914E-02	2.827E-02	NOT IDENT.
Y-91	2.236E+00	2.334E+01	2.036E+01	1.191E+01	NOT IDENT.
NB-94	1.532E-02	5.686E-02	5.051E-02	2.901E-02	NOT IDENT.
NB-95	5.578E-02	7.716E-02	6.967E-02	3.937E-02	NOT IDENT.
NB-95M	2.101E-01	2.076E-01	1.750E-01	1.059E-01	NOT IDENT.
ZR-95	4.974E-02	1.282E-01	1.139E-01	6.542E-02	NOT IDENT.
NB-97	2.485E+03	4.033E+02	0.000E+00	2.058E+02	SHORT HLIF
ZR-97	3.328E+03	4.869E+03	0.000E+00	2.484E+03	SHORT HLIF
MO-99	-5.127E+00	4.089E+00	3.169E+00	2.086E+00	NOT IDENT.
TC-99M	-5.709E+07	4.649E+08	0.000E+00	2.372E+08	SHORT HLIF
RH-101	2.909E-02	5.425E-02	4.747E-02	2.768E-02	NOT IDENT.
RH-102	-1.891E-02	6.056E-02	5.085E-02	3.090E-02	NOT IDENT.
RU-103	7.387E-02	6.902E-02	6.223E-02	3.521E-02	NOT IDENT.
RH-106	-2.624E-01	5.922E-01	5.071E-01	3.021E-01	FAIL ABUN
RU-106	-2.624E-01	5.916E-01	5.071E-01	3.018E-01	FAIL ABUN
AG-108M	-4.160E-02	6.714E-02	5.585E-02	3.425E-02	NOT IDENT.
AG-110M	3.972E-01	9.460E-02	8.995E-02	4.827E-02	NOT IDENT.
IN-111	-3.440E-02	3.700E-01	2.934E-01	1.888E-01	NOT IDENT.
IN-113M	1.203E-02	8.080E-02	7.088E-02	4.122E-02	NOT IDENT.
SN-113	1.203E-02	8.080E-02	7.088E-02	4.122E-02	NOT IDENT.
IN-114M	-4.817E-03	2.945E-01	2.242E-01	1.503E-01	NOT IDENT.
CD-115	8.736E-01	2.497E+00	2.165E+00	1.274E+00	NOT IDENT.
SN-117M	7.969E-03	6.005E-02	5.258E-02	3.064E-02	NOT IDENT.
SB-122	6.320E-01	6.649E-01	5.961E-01	3.392E-01	NOT IDENT.
I-123	8.307E+02	1.723E+03	0.000E+00	8.789E+02	SHORT HLIF
TE-123M	2.056E-02	4.264E-02	3.793E-02	2.175E-02	NOT IDENT.
I-124	-3.072E-01	4.518E-01	3.269E-01	2.305E-01	NOT IDENT.
SB-124	8.054E-02	1.031E-01	9.920E-02	5.259E-02	FAIL ABUN
SB-125	2.291E-01	1.890E-01	1.730E-01	9.644E-02	NOT IDENT.
TE-125M	1.063E+01	1.301E+01	1.202E+01	6.640E+00	NOT IDENT.
I-126	6.381E-02	2.426E-01	1.897E-01	1.238E-01	NOT IDENT.
SB-126	4.404E-02	1.998E-01	1.610E-01	1.019E-01	NOT IDENT.
SB-127	6.508E-02	6.857E-01	6.034E-01	3.499E-01	NOT IDENT.
XE-127	-2.955E-03	6.522E-02	5.974E-02	3.327E-02	NOT IDENT.
I-131	6.485E-02	1.169E-01	1.053E-01	5.963E-02	NOT IDENT.
TE-132	-3.100E-02	2.795E-01	2.531E-01	1.426E-01	NOT IDENT.
BA-133	7.909E-02	9.040E-02	7.359E-02	4.612E-02	NOT IDENT.
I-133	-5.223E+01	5.315E+01	0.000E+00	2.712E+01	SHORT HLIF
CS-134	5.393E-02	8.831E-02	7.919E-02	4.505E-02	NOT IDENT.
CS-135	1.056E-02	2.696E-01	2.426E-01	1.376E-01	NOT IDENT.
I-135	-1.606E+07	2.939E+08	0.000E+00	1.499E+08	SHORT HLIF
CS-136	7.975E-02	1.754E-01	1.517E-01	8.951E-02	FAIL ABUN
CE-139	-8.378E-03	4.648E-02	3.996E-02	2.371E-02	NOT IDENT.
BA-140	9.223E-04	3.608E-01	3.037E-01	1.841E-01	NOT IDENT.
LA-140	-3.235E-02	7.738E-02	5.911E-02	3.948E-02	NOT IDENT.
CE-141	3.722E-02	8.428E-02	7.525E-02	4.300E-02	NOT IDENT.
CE-143	3.133E+01	1.346E+01	8.400E+00	6.868E+00	FAIL ABUN
CE-144	-5.502E-02	3.236E-01	2.828E-01	1.651E-01	NOT IDENT.
PM-144	7.336E-03	5.967E-02	5.250E-02	3.044E-02	NOT IDENT.
PR-144	4.953E-01	4.029E+00	3.545E+00	2.056E+00	NOT IDENT.
PM-146	-5.030E-02	9.612E-02	8.018E-02	4.904E-02	NOT IDENT.
ND-147	-7.274E-01	7.153E-01	5.565E-01	3.650E-01	NOT IDENT.

PM-149	3.220E+00	1.891E+01	1.703E+01	9.649E+00	NOT IDENT.
EU-152	7.817E-02	1.780E-01	1.600E-01	9.083E-02	FAIL ABUN
GD-153	1.738E-02	1.256E-01	1.085E-01	6.408E-02	NOT IDENT.
EU-154	8.179E-02	1.692E-01	1.534E-01	8.631E-02	FAIL ABUN
EU-155	-2.805E-02	1.684E-01	1.497E-01	8.591E-02	FAIL ABUN
TB-160	8.070E-02	2.874E-01	2.499E-01	1.466E-01	FAIL ABUN
HO-166M	-2.932E-02	1.046E-01	8.918E-02	5.336E-02	FAIL ABUN
TM-171	2.376E+01	5.692E+01	5.320E+01	2.904E+01	FAIL ABUN
LU-176	-1.668E-02	4.425E-02	3.859E-02	2.258E-02	FAIL ABUN
LU-177	1.138E+00	8.741E-01	8.360E-01	4.460E-01	NOT IDENT.
LU-177M	1.074E-01	3.206E-01	2.828E-01	1.636E-01	FAIL ABUN
HF-181	-1.453E-02	7.551E-02	6.373E-02	3.852E-02	NOT IDENT.
W-181	-3.781E-02	7.352E-01	6.772E-01	3.751E-01	NOT IDENT.
TA-182	3.435E-02	2.256E-01	1.980E-01	1.151E-01	NOT IDENT.
RE-183	4.909E-02	1.603E-01	1.412E-01	8.179E-02	FAIL ABUN
RE-184	1.675E-01	3.799E-01	3.494E-01	1.938E-01	FAIL ABUN
OS-185	-5.428E-02	7.532E-02	6.298E-02	3.843E-02	FAIL ABUN
RE-188	8.892E-02	2.436E-01	2.160E-01	1.243E-01	NOT IDENT.
W-188	-4.495E+00	1.387E+01	1.066E+01	7.075E+00	NOT IDENT.
IR-192	-1.027E-02	5.533E-02	4.857E-02	2.823E-02	FAIL ABUN
AU-195	1.605E-01	3.453E-01	3.166E-01	1.762E-01	FAIL ABUN
TL-200	-1.083E+01	1.187E+01	9.860E+00	6.054E+00	NOT IDENT.
TL-201	8.777E-01	2.399E+00	2.115E+00	1.224E+00	NOT IDENT.
TL-202	5.766E-02	9.503E-02	8.454E-02	4.849E-02	NOT IDENT.
HG-203	1.544E-05	6.093E-02	5.456E-02	3.109E-02	NOT IDENT.
BI-207	1.061E-01	1.236E-01	1.096E-01	6.309E-02	NOT IDENT.
TL-207	-1.116E+00	1.163E+00	9.648E-01	5.932E-01	FAIL ABUN
PO-209	1.421E+00	1.781E+01	1.524E+01	9.088E+00	NOT IDENT.
BI-210	1.144E-02	1.677E+01	1.577E+01	8.558E+00	NOT IDENT.
PB-210	1.144E-02	1.677E+01	1.577E+01	8.558E+00	NOT IDENT.
PO-210	1.144E-02	1.677E+01	1.577E+01	8.558E+00	NOT IDENT.
PB-211	-5.433E-01	1.756E+00	1.470E+00	8.958E-01	NOT IDENT.
BI-212	1.021E+00	6.795E-01	5.481E-01	3.467E-01	FAIL ABUN
PO-215	-1.116E+00	1.163E+00	9.648E-01	5.932E-01	FAIL ABUN
RN-219	-5.180E-01	7.835E-01	6.526E-01	3.997E-01	NOT IDENT.
RN-220	3.272E+01	4.943E+01	4.357E+01	2.522E+01	NOT IDENT.
RA-223	-1.116E+00	1.163E+00	9.648E-01	5.932E-01	FAIL ABUN
AC-227	-5.420E-02	6.367E-01	5.718E-01	3.248E-01	NOT IDENT.
TH-227	-5.420E-02	6.367E-01	5.718E-01	3.249E-01	NOT IDENT.
TH-229	-5.855E-01	8.237E-01	6.796E-01	4.202E-01	FAIL ABUN
PA-231	1.062E+00	2.678E+00	2.435E+00	1.366E+00	NOT IDENT.
TH-231	-1.116E+00	1.163E+00	9.648E-01	5.932E-01	FAIL ABUN
U-231	-4.314E-01	6.084E-01	4.685E-01	3.104E-01	NOT IDENT.
PA-233	1.401E-01	1.167E-01	1.091E-01	5.956E-02	FAIL ABUN
PA-234	-2.133E-01	7.744E-01	6.430E-01	3.951E-01	FAIL ABUN
PA-234M	4.603E+00	1.000E+01	8.722E+00	5.103E+00	NOT IDENT.
TH-234	-6.701E-01	3.167E+00	2.599E+00	1.616E+00	NOT IDENT.
U-235	-9.558E-02	3.284E-01	2.838E-01	1.676E-01	FAIL ABUN
NP-236	-7.611E-02	1.272E-01	1.074E-01	6.491E-02	NOT IDENT.
U-238	-6.701E-01	3.167E+00	2.599E+00	1.616E+00	NOT IDENT.
NP-239	9.143E-02	3.159E-01	2.714E-01	1.612E-01	NOT IDENT.
AM-243	1.594E-01	1.305E-01	1.120E-01	6.658E-02	FAIL ABUN
CM-243	7.528E-02	1.500E-01	1.374E-01	7.653E-02	NOT IDENT.
AM-246	5.946E-03	3.316E-01	2.772E-01	1.692E-01	NOT IDENT.
CM-247	-5.424E-02	6.880E-02	5.698E-02	3.510E-02	NOT IDENT.
CF-249	1.082E-02	7.394E-02	6.492E-02	3.772E-02	NOT IDENT.
CF-251	9.689E-03	2.074E-01	1.794E-01	1.058E-01	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	379.0900
46.50	379.0900
46.50	379.0900
48.70	415.3656
49.72	395.3022
51.35	422.9030
52.39	445.3784
52.97	459.4187
53.15	462.9755
53.44	435.4044
54.07	447.2778
56.28	463.7831
56.28	463.7868
57.37	406.7722
57.53	406.9297
57.53	406.9313
57.60	406.9979
57.98	407.3701
57.98	407.3701
59.32	408.6717
59.32	408.6717
59.40	408.7488
59.54	408.8842
59.72	409.0582
60.01	409.3368
61.10	321.2903
61.14	321.3196
61.30	311.4825
63.00	316.9837
63.29	327.1940
63.29	327.1940
63.58	327.4089
64.28	316.1837
65.12	331.8904
65.20	331.9491
65.20	331.9491
66.05	331.6168
66.72	319.6263
66.83	311.0636
66.91	311.1180
67.20	316.1200
67.20	316.1200
67.75	333.8142
67.85	333.8865
68.90	338.5013
68.90	338.5013
69.30	334.9314
69.67	336.1639
70.82	384.4302
70.82	384.4302
70.83	384.4383
72.80	405.4725
72.87	405.5319
72.87	405.5319
74.67	426.0675
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74.81	426.1896
74.81	426.1896
74.81	426.1896
74.81	426.1896
74.81	426.1896
74.81	426.1896
74.97	426.3273
75.28	458.8471
75.70	490.0478
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77.11	487.5129

77.11	487.5129
77.11	487.5129
77.11	487.5129
77.11	487.5129
77.11	487.5129
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79.62	368.1903
79.80	334.2980
79.80	334.2980
80.11	334.5015
80.18	367.1127
80.30	370.1591
80.30	370.1591
80.57	370.3537
81.00	377.1863
81.07	377.2368
81.07	377.2368
81.07	377.2368
81.07	377.2368
82.60	415.2278
83.37	367.8768
83.78	403.9383
83.78	403.9383
83.78	403.9383
83.78	403.9383
84.21	380.3969
84.90	379.3974
85.43	382.7637
86.29	440.2822
86.50	440.4550
86.54	440.4864
86.59	440.5267
86.72	356.7040
86.79	356.7476
86.94	356.8475
87.30	357.0854
87.30	357.0854
87.30	357.0854
87.30	357.0854
87.30	357.0854
87.30	357.0854
87.57	357.2615
87.88	357.4648
88.03	357.5629
88.36	357.7790
88.47	357.8498
89.95	358.8122
91.11	359.5603
92.29	360.3156
92.38	360.3737
92.38	360.3737
93.35	251.7837
94.00	244.4787
94.67	256.9246
94.67	256.9272
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94.90	260.0721
94.90	260.0721
94.90	260.0721
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95.87	281.8373
96.73	277.6794
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98.44	232.5853
98.44	232.5853
98.88	250.1141
99.55	261.6393
99.55	261.6393
99.86	260.7535
100.00	260.8157
100.10	260.8611
103.18	235.4632
103.76	238.7757
105.00	260.9166
105.31	262.0809
108.00	272.5444
109.28	227.4099

111.00	260.3035
111.00	260.3035
111.76	261.6562
112.95	234.9861
115.19	270.3811
116.30	263.4895
117.00	252.2095
117.00	252.2095
117.66	220.9033
121.11	291.8279
121.62	260.3040
121.78	260.3653
122.06	260.4716
122.32	260.5705
122.32	260.5705
122.32	260.5705
122.32	260.5705
123.07	249.7241
127.23	235.5473
129.76	254.8094
131.20	284.2906
133.02	273.1797
133.54	276.6049
135.34	271.8951
136.00	275.3810
136.25	263.5912
136.48	258.2724
140.51	267.2833
140.51	0.0000
142.18	274.4125
142.65	273.4920
143.76	267.3457
144.24	257.6857
144.24	257.6857
144.24	257.6857
144.24	257.6857
145.22	255.8304
145.44	250.4361
147.16	256.4755
152.43	261.5187
152.70	257.1926
153.22	240.7926
154.21	226.7129
154.21	226.7129
154.21	226.7129
154.21	226.7129
155.03	233.5888
156.02	249.3942
158.56	236.8342
159.00	0.0000
159.00	233.6246
160.31	268.5410
161.27	253.2367
162.32	237.9219
162.64	262.5964
163.35	247.1637
163.89	254.0380
165.85	261.3642
167.43	241.6257
171.28	239.3324
171.86	246.2723
172.10	232.7810
176.55	246.4671
176.60	252.1596
181.06	214.0484
184.41	237.1917
185.71	254.7431
186.00	254.8244
190.27	235.2545
192.34	239.2469
193.63	254.6234
197.04	240.4450
198.01	237.2010
198.60	251.3101
200.40	285.5866
201.83	259.1626
202.84	262.9395
205.31	301.3916

208.36	247.6801
208.81	256.6120
209.75	257.7389
209.75	257.7389
210.97	291.6378
215.65	269.9150
216.55	275.4883
218.09	267.8944
222.10	268.0504
223.80	243.4308
226.40	257.4969
227.00	269.3138
227.08	274.7211
227.20	280.1411
228.16	266.0165
228.18	266.0211
228.18	266.0211
231.56	252.4469
235.69	237.4917
236.00	237.5618
236.00	237.5618
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238.63	213.2718
238.63	213.2718
238.63	213.2718
239.00	213.3435
240.98	213.7307
241.98	213.9262
241.98	213.9262
241.98	213.9262
244.69	223.3964
245.39	216.2314
247.94	200.8276
248.90	210.6836
249.79	235.6042
252.40	214.0965
252.85	204.9895
252.85	204.9895
254.15	0.0000
256.20	212.9672
256.20	212.9672
260.50	182.3008
260.90	188.8438
262.80	220.6773
264.65	182.0244
268.24	227.2905
268.79	228.3305
269.46	222.8627
269.46	222.8627
269.46	222.8627
269.46	222.8627
271.23	199.8478
273.65	221.7752
276.40	208.2131
277.35	195.2349
277.60	201.8479
277.60	201.8479
278.00	201.9135
278.60	199.1964
279.20	199.2935
279.53	204.0501
280.46	203.2646
281.68	203.4657
283.67	198.1343
284.30	217.1165
285.00	212.5168
285.90	193.7672
286.10	194.7438
286.10	194.7438
287.40	216.7107
288.45	0.0000
290.67	223.1629
290.80	223.1845
291.72	218.7914
293.26	208.4099
293.70	208.4835
295.21	217.8725
295.21	217.8725

295.21	217.8725
295.96	268.3098
296.50	259.2708
297.23	242.6342
298.57	186.3687
299.80	158.0046
299.80	158.0046
300.09	152.9419
300.09	152.9419
300.09	152.9419
300.09	152.9419
300.12	152.9443
301.29	194.2247
302.84	234.6932
303.76	228.1475
303.91	207.0846
304.40	189.8970
304.40	189.8970
304.84	190.9229
306.84	202.7449
308.46	191.4513
311.98	172.6715
316.51	174.2294
318.01	164.7342
319.02	180.3748
319.41	186.2461
320.08	181.4872
323.87	200.4866
323.87	200.4866
323.87	200.4866
323.87	200.4866
325.23	186.0746
328.77	174.8375
333.44	208.5528
334.20	235.3418
334.20	235.3418
334.30	235.3564
338.28	160.4981
338.28	160.4981
338.28	160.4981
338.28	160.4981
338.32	160.5031
338.32	160.5031
338.32	160.5031
340.50	200.1521
340.57	200.1614
344.27	176.7849
345.85	174.0154
350.59	176.1800
351.07	193.5033
351.92	203.3500
351.92	203.3500
351.92	203.3500
355.39	0.0000
356.01	159.3140
364.48	151.2212
366.43	176.4915
367.43	188.6512
367.94	195.7409
369.80	139.7020
374.96	176.4874
383.85	174.4723
387.95	161.7149
388.63	180.1005
391.69	166.1811
391.69	166.1811
392.90	164.2674
398.62	163.8403
400.65	152.7718
401.10	159.9943
401.81	179.5609
402.60	175.5427
404.84	166.5360
410.95	162.0093
411.60	187.8819
413.65	154.0087
414.70	184.1030
415.30	187.2749

415.76	187.3274
417.63	0.0000
418.52	171.0551
423.70	184.0707
427.08	168.8126
427.89	155.3432
432.53	179.8184
433.93	183.1043
439.47	158.5090
439.56	153.2693
439.89	148.0483
443.98	156.8233
444.90	162.1704
445.03	162.1845
445.03	162.1845
445.03	162.1845
445.03	162.1845
453.90	202.1797
463.38	179.8565
468.07	172.8616
473.00	164.7764
475.06	167.1068
475.35	155.3480
476.78	149.0364
477.59	140.5208
477.96	136.2591
482.03	146.2411
484.57	138.9049
487.03	134.7790
490.36	142.5824
492.35	133.0035
497.08	109.4901
507.63	0.0000
510.53	0.0000
510.84	108.1053
511.00	108.1143
511.85	108.1612
511.85	108.1612
513.99	113.7508
513.99	113.7508
520.41	118.5205
520.65	118.5337
527.90	111.2640
528.96	0.0000
529.64	124.5938
529.87	0.0000
531.02	136.8170
537.32	128.3972
543.00	104.3415
546.56	0.0000
549.76	103.5791
552.65	122.6859
555.20	109.4395
563.23	114.3547
563.90	94.2052
568.70	106.7880
569.32	120.3130
569.50	120.3228
569.67	120.3326
573.80	107.1742
574.00	107.1829
574.64	108.2197
578.91	118.9822
579.30	122.0175
583.14	116.8055
585.48	129.9273
591.81	117.2810
592.07	117.2968
593.00	118.2568
595.88	120.2373
600.56	100.4126
602.52	0.0000
602.71	129.4472
602.71	129.4472
603.60	124.9319
604.41	118.8821
604.70	118.8979
609.31	105.4008

609.31	105.4008
609.31	105.4008
609.31	105.4008
610.33	99.3355
612.46	116.2575
614.37	117.8906
618.01	94.7746
621.84	117.9813
621.84	117.9813
631.29	111.9989
633.02	95.4108
633.10	95.4158
634.78	101.0485
635.90	106.6642
636.97	114.1384
645.85	110.8565
646.12	112.7315
656.30	127.8914
657.75	99.8802
657.90	0.0000
661.65	98.4836
661.65	98.4836
664.57	92.3459
666.33	84.5815
666.33	84.5815
675.00	106.5886
677.61	90.6516
685.20	81.4669
692.80	91.2258
695.00	97.9682
696.49	92.3158
696.49	92.3158
697.00	92.3371
697.49	98.0663
698.33	101.9112
698.50	102.8716
699.00	100.0345
702.63	83.9631
706.10	95.5469
706.58	0.0000
706.67	86.9677
709.31	81.3207
711.68	88.1008
713.82	81.4680
717.42	93.1044
720.50	93.3565
721.93	78.5284
722.20	88.1531
722.78	89.7764
722.78	89.7764
722.89	89.7809
722.95	89.7832
723.30	91.4004
724.18	107.4710
727.18	86.7217
733.00	97.7868
735.90	77.3535
739.58	111.3557
742.81	88.2273
744.21	87.3062
747.13	99.0590
751.79	105.0759
752.31	107.0432
753.82	109.0523
755.35	92.5531
756.15	92.5833
756.87	96.5081
763.93	103.6114
765.79	101.7275
766.42	101.7529
766.84	96.8755
776.49	91.3380
778.00	100.2344
778.57	89.4448
778.89	87.4877
783.80	91.5900
785.46	108.3994
792.07	92.8594

795.84	87.0547
796.30	87.0676
798.80	107.9462
801.93	85.2672
805.60	113.1790
810.29	76.5770
810.76	84.5476
815.85	116.5915
817.79	92.7412
818.51	79.7988
819.60	83.8216
826.30	78.0210
828.27	87.0850
831.60	97.2108
831.96	103.2364
834.83	99.3287
836.80	0.0000
846.75	91.6887
848.13	89.7170
856.28	0.0000
856.80	117.2886
860.37	106.2997
867.32	123.8080
867.82	125.8588
871.10	102.6299
873.19	92.5352
874.81	105.8129
875.33	0.0000
876.40	117.0692
879.36	93.7497
880.27	88.6822
880.51	88.6886
881.50	104.0146
883.24	107.1379
884.67	94.9390
889.25	110.4231
896.60	113.7723
898.02	117.9283
899.00	124.1225
903.28	105.6621
911.07	115.3523
911.07	115.3523
911.07	115.3523
919.63	118.7791
920.93	104.3634
925.00	115.8855
925.24	112.7895
926.50	123.1865
935.52	125.6261
937.48	119.4725
944.10	119.7308
946.00	130.2216
949.00	107.4057
962.29	148.3523
964.01	139.7038
966.15	132.8083
968.20	160.5230
969.11	131.1829
969.11	131.1829
969.11	131.1829
977.42	118.9011
980.50	109.5351
983.50	108.5850
989.30	111.9496
996.32	119.6018
1001.03	82.6770
1001.68	83.7523
1004.76	99.7488
1021.30	0.0000
1024.50	0.0000
1034.80	110.2975
1036.00	104.9815
1037.82	109.3263
1038.57	97.5584
1038.76	0.0000
1045.16	105.2687
1046.59	96.7192
1048.07	88.1580

1050.47	94.6773
1050.47	94.6773
1062.04	91.7610
1063.62	85.3223
1076.63	98.6559
1077.35	103.0156
1078.86	93.2982
1085.78	88.0480
1099.22	113.4859
1112.02	94.1843
1112.84	84.3466
1115.52	117.2977
1120.29	84.5233
1120.29	84.5233
1120.29	84.5233
1120.29	84.5233
1120.51	77.9440
1121.28	75.7652
1124.00	0.0000
1129.67	77.0427
1131.51	0.0000
1147.95	0.0000
1167.94	63.5575
1173.22	42.9634
1175.09	36.6161
1177.93	60.5439
1189.05	55.9302
1204.90	37.4447
1205.75	36.5165
1213.00	33.7720
1221.42	30.0859
1230.97	25.4476
1235.34	28.3081
1236.41	0.0000
1238.25	25.4960
1246.25	15.1400
1260.41	0.0000
1271.85	23.8108
1274.45	26.6864
1274.54	27.6394
1291.56	27.7586
1298.22	0.0000
1312.09	25.9761
1325.50	24.8207
1325.50	24.8207
1332.49	19.3376
1333.61	11.6060
1360.21	18.4944
1362.66	0.0000
1365.15	13.6434
1368.21	9.7526
1368.53	0.0000
1376.25	14.6564
1384.27	13.7055
1394.10	16.6811
1395.20	21.5927
1407.95	9.8442
1434.06	11.8843
1436.60	12.8820
1457.56	0.0000
1460.81	12.9535
1489.15	15.0409
1509.49	16.1159
1596.49	14.3674
1620.62	12.3770
1678.03	0.0000
1691.02	7.3239
1691.02	7.3239
1706.46	0.0000
1750.46	0.0000
1764.49	9.5530
1764.49	9.5530
1764.49	9.5530
1764.49	9.5530
1770.23	18.2164
1771.40	10.6287
1791.20	0.0000
1808.65	12.8452

1836.01

13.9871

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202041822

Total Uranium Activity	-2.0377E+00	ug/g
Total Uranium Counting Unc.	9.4217E+00	ug/g
Total Uranium Tpu	4.8070E-06	ug/g
Total Uranium Mda	7.7330E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON , SC 29417                          *
*                               GROSS GAMMA REPORT                            *
*
*****
*
*  BATCH ID      : 952643                SAMPLE ID   : G1202041822                *
*  ANALYST       : MXR1                  DETECTOR    : GAM10                    *
*  SAMPLE DATE   : 16-FEB-2010 00:00:00.00  COUNT TIME : 0 01:00:00.00          *
*  ANALYSIS DATE : 24-FEB-2010 09:10:57.60  SAMPLE ALQT: 151.730 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.915E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 2.740E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.977E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.934E+00

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Radiochemistry Batch Checklist, Rev10

Batch# 953115 Product: H3 Date: 2-23-10

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 stasured.	✓		
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: Jim Hu

Secondary Review Performed By: Laurel Yarn 2/23/10

LANL 3-11-10

Tritium Que Sheet

Batch #: 953115 Analyst: KXK2 First Client Due Date 11-MAR-10 Internal Due Date: 28-FEB-10
 Spike Isotope: Hydrogen-3 Spike Code: Expiration Date: Vol:
 LCS Isotope: Hydrogen-3 LCS Code: 0134-K Expiration Date: 3/27/10 Vol: 0.1

Prep Date: 2/16/10 Initials: YK Pipet ID: 2970968 Witness: WJ 11/6/10

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 Vol (mL)
246875001-1	RE15-10-8366	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	5	1		447.66	367.08	80.58
246875002-1	RE15-10-8367	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	6	2		397.46	320.75	76.71
246875003-1	RE15-10-8364	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	7	3		275.16	211.32	63.84
246875004-1	RE15-10-8365	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	8	4		438.08	364.04	74.04
246875005-1	RE15-10-8368	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	9	5		271.09	204.67	66.42
246875006-1	RE15-10-8340	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	10	6		320.71	243.42	77.29
246875007-1	RE15-10-8341	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	11	7		297.39	279.25	18.14
246875008-1	RE15-10-8376	SAMPLE		.25 pCi/mL SOIL		LANL010	09-FEB-10	10	12	8		413.76	317.35	96.41
1202042948-1	MB for batch 953115	MB		.25 pCi/mL SOIL		QC ACCOUNT		10	13	9		20.00	0	20.00
1202042949-1	RE15-10-8366(246875001DUP)	DUP		.25 pCi/mL SOIL		QC ACCOUNT	09-FEB-10	10	14	1		447.66	367.08	80.58
1202042950-1	LCS for batch 953115	LCS		.25 pCi/mL SOIL		QC ACCOUNT		10	15	10		20.00	0	20.00

Bkg Rack #: 4/53-1
 *4/22/10
YK

Comments:

Bkg prepared with dead water? Yes/No

Instrument Used (circle as appropriate): LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4140127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656, Orange DG06095168

Calibration Used: Ecoscint Ultra (40 mL sample/13 mL Ecoscint Ultra)
 Data Reviewed By: JM 2-23-10

GEL Laboratories LLC, Radiochemistry Division

DATE	2/15/2010	INITIALS	KXK2	BATCH NUMBER	953115	
Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
246875001	447.66	0.180	80.58	367.08	10	
246875002	397.46	0.193	76.71	320.75	10	
246875003	275.16	0.232	63.84	211.32	10	
246875004	438.08	0.169	74.04	364.04	10	
246875005	271.09	0.245	66.42	204.67	10	
246875006	320.71	0.241	77.29	243.42	10	
246875007	297.39	0.061	18.14	279.25	10	
246875008	413.76	0.233	96.41	317.35	10	
MB	20.00	1.000	20.00	0.00	10	
DUP	447.66	0.180	80.58	367.08	10	
LCS	20.00	1.000	20.00	0.00	10	

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.6

Spike SN :
Spike Exp Date :
Spike Activity (dpm/ml):
Spike Volume Added:

LCS SN : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2466.30
LCS Volume Added: 0.10

Batch : 953115
Analyst : KXK2
Prep Date : 2/16/2010

H-3 Abundance : 1

Method Uncertainty : 0.0691

Geometry: 10mL DW/13mL
Ecoscint Ultra

Procedure Code : LSC_VH3S
Permanence : Tritium
Required MDC : 250 pCi/L
Half-life of Tritium : 12.32 years

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	246875001.1	447.66	0.0806	0.0100	2.5729E-05	367.08	18.00%	1	2/9/2010 12:00
2	246875002.1	397.46	0.0767	0.0100	2.5729E-05	320.75	19.30%	2	2/9/2010 12:00
3	246875003.1	275.16	0.0638	0.0100	2.5729E-05	211.32	23.20%	3	2/9/2010 12:00
4	246875004.1	438.08	0.0740	0.0100	2.5729E-05	364.04	16.90%	4	2/9/2010 12:00
5	246875005.1	271.09	0.0664	0.0100	2.5729E-05	204.67	24.50%	5	2/9/2010 12:00
6	246875006.1	320.71	0.0773	0.0100	2.5729E-05	243.42	24.10%	6	2/9/2010 12:00
7	246875007.1	297.39	0.0181	0.0100	2.5729E-05	279.25	6.10%	7	2/9/2010 12:00
8	246875008.1	413.76	0.0964	0.0100	2.5729E-05	317.35	23.30%	8	2/9/2010 12:00
9	1202042948.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	9	2/16/2010 0:00
10	1202042949.1	447.66	0.0806	0.0100	2.5729E-05	367.08	18.00%	1	2/9/2010 12:00
11	1202042950.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	10	2/16/2010 0:00

Count raw Data				Background				Calibration Data				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	5	45.0297	763.39	2.02	1.72	45	2/16/2010 22:31	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2766	0.00792	4	2/16/2010 21:43
2	6	45.0297	762.17	2.15	1.72	45	2/16/2010 23:18	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2746	0.00792	4	2/16/2010 21:43
3	7	45.0297	760.94	1.56	1.72	45	2/17/2010 0:06	0.998	LSCORANGE	7/23/2009	7/31/2010	0.2726	0.00792	4	2/16/2010 21:43
4	53-2	60	122.1	4.17	2.87	60	2/19/2010 6:24	0.998	LSCORANGE	8/21/2009	8/31/2010	0.2037	0.00792	53-1	2/19/2010 5:21
5	6	45.0297	762.02	3.02	1.02	45	2/18/2010 2:22	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2744	0.00792	4	2/18/2010 0:47
6	10	45.0296	760.23	1.81	1.72	45	2/17/2010 2:28	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2715	0.00792	4	2/16/2010 21:43
7	7	45.0297	760.82	13.82	1.02	45	2/18/2010 3:09	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2724	0.00792	4	2/18/2010 0:47
8	12	45.0296	762.23	1.5	1.72	45	2/17/2010 4:04	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2747	0.00792	4	2/16/2010 21:43
9	13	45.0295	758.57	1.18	1.72	45	2/17/2010 4:51	1.000	LSCORANGE	7/23/2009	7/31/2010	0.2688	0.00792	4	2/16/2010 21:43
10	14	45.0296	762.48	2.43	1.72	45	2/17/2010 5:39	0.999	LSCORANGE	7/23/2009	7/31/2010	0.2751	0.00792	4	2/16/2010 21:43
11	15	15.0297	762.86	38.68	1.72	45	2/17/2010 6:26	1.000	LSCORANGE	7/23/2009	7/31/2010	0.2757	0.00792	4	2/16/2010 21:43

Notes:

- 1 - Results are decay corrected to Sample Date/Time
- 2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
- 3 - Spike Nominals are decay corrected to Sample Date/Time

* - RPD changed to 0% due to activity below MDC for 1202042849.1

Results		Decision Level		Critical Level	Required MDC	MDC	Sample Act. Conc.	Sample Act. Error	Net Count Rate	Net Count Rate Error	Counting Uncertainty	1 SIGMA	1 SIGMA	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
Pos.	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	CPM	CPM	pCi/L	pCi/L	Total Prop. Uncertainty						
1	105.0087	74.1371	250	159.1374	48.9171	0.961	0.300	0.288	46.9822	47.1156	SAMPLE								
2	105.7609	74.6881	250	160.2773	70.6168	0.682	0.430	0.293	48.1444	48.3949	SAMPLE								
3	106.5338	75.2138	250	161.4486	-26.4680	1.687	-0.160	0.270	44.6467	44.6474	SAMPLE								
4	159.6093	112.6856	250	236.4448	287.9157	0.264	1.300	0.343	75.8635	78.4689	SAMPLE								
5	61.5304	57.5612	250	126.0751	328.7973	0.150	2.000	0.300	49.2424	54.3067	SAMPLE								
6	106.9881	75.5345	250	162.1371	14.9617	3.111	0.090	0.280	46.5144	46.5261	SAMPLE								
7	82.1124	57.9721	250	126.9751	2119.3238	0.046	12.800	0.574	95.0506	175.5621	SAMPLE								
8	105.7269	74.6441	250	160.2258	-36.1179	1.216	-0.220	0.267	43.9014	43.9021	SAMPLE								
9	107.9595	76.2203	250	163.6093	-90.5250	0.470	-0.540	0.254	42.5427	42.5435	MB								
10	105.5729	74.5354	250	159.9925	116.3925	0.428	0.710	0.304	49.7670	50.4229	246875001.1	DUP	0.0%	0.3459					
11	148.7489	105.0180	250	242.6527	6039.4759	0.045	36.960	1.616	264.0799	496.6604	LCS							5554.7324	108.7%

REGISTRY

TUE 16 FEB 2010 21:41

*** DIRECTORY PATH :S:\LSC\O\DA\953115A0 ***

PARAMETER GROUP: 8
ID: H-3 (1)

00A PROGRAM MODE 6 ->

ORDER	POS	ID	CTIME	COUNTS	CUCNTS	MCW	REP	STD	STMS	STIME
1	4	BKG	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
2	5	246875001	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
3	6	246875002	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
4	7	246875003	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
5	8	246875004	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
6	9	246875005	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
7	10	246875006	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
8	11	246875007	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
9	12	246875008	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
10	13	1202042948	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
11	14	1202042949	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
12	15	1202042950	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. POS	2. ID	3. CTIME	4. SQP	5. CPM1	6. CPM2	7. CPM3
SEND SPECTRA 12						
RESOLUTION OF SPECTRA 1024						
LISTING Y						
INSTRUMENT NUMBER 1						

POS	ID	CTIME	SQP	CPM1	CPM2	CPM3
Q010401N.001	16 FEB 2010 22:29					
4	BKG	45:01.780	760.44	1.72	2.77	7.54
Q020501N.001	16 FEB 2010 23:17					

Page 1

2-25-10

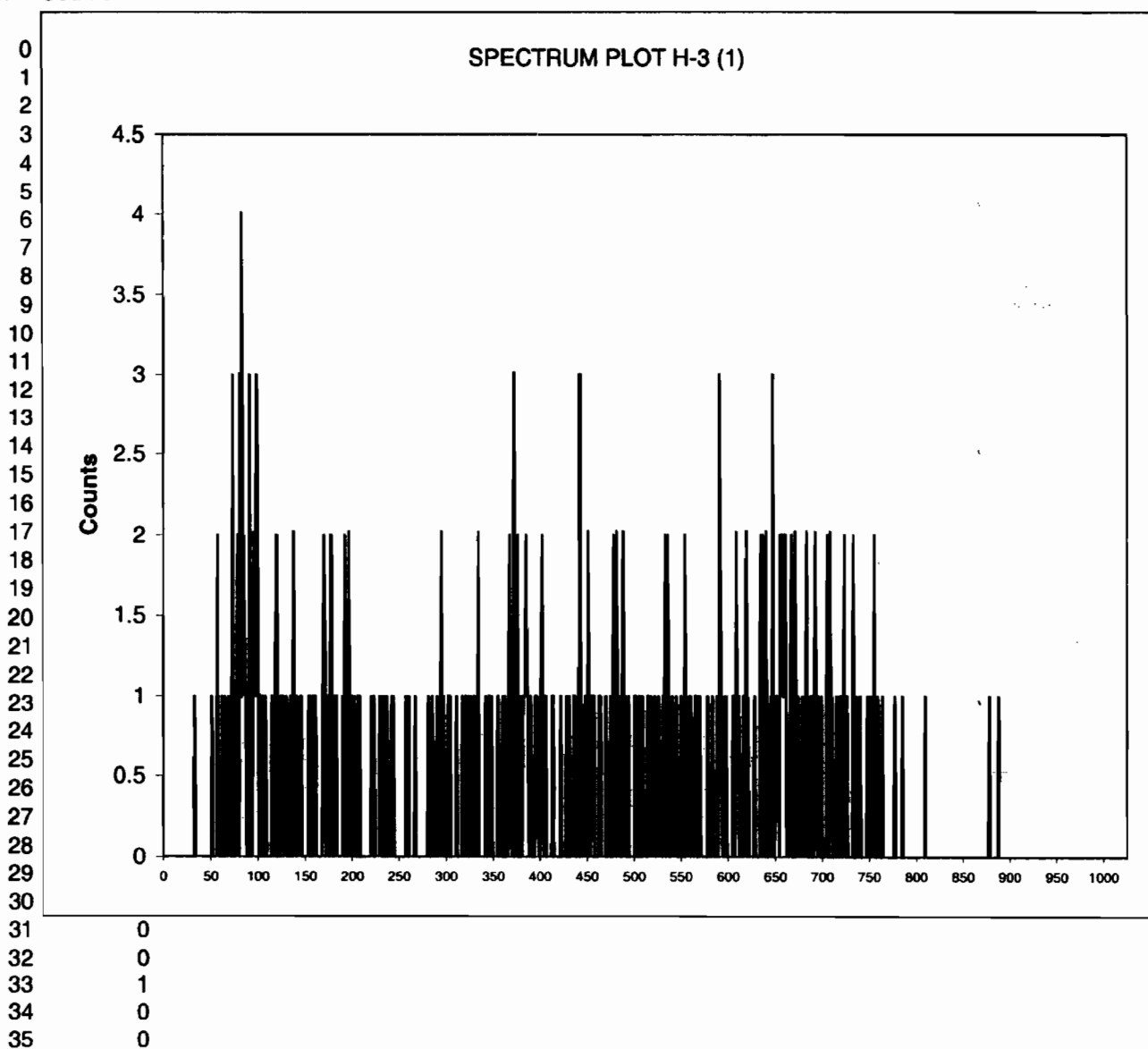
REGISTRY							
5	246875001	45:01.780	763.39	2.02	3.43	7.91	
Q030601N.001	17 FEB 2010	0:04					
6	246875002	45:01.780	762.17	2.15	3.65	8.77	
Q040701N.001	17 FEB 2010	0:52					
7	246875003	45:01.780	760.94	1.56	2.86	7.31	
Q050801N.001	17 FEB 2010	1:39					
8	246875004	45:01.780	761.89	3.06	4.63	9.61	
Q060901N.001	17 FEB 2010	2:27					
9	246875005	45:01.773	761.68	3.29	4.79	9.31	
Q071001N.001	17 FEB 2010	3:14					
10	246875006	45:01.773	760.23	1.81	3.63	8.31	
Q081101N.001	17 FEB 2010	4:02					
11	246875007	45:01.779	759.14	15.02	17.34	23.00	
Q091201N.001	17 FEB 2010	4:50					
12	246875008	45:01.773	762.23	1.50	3.11	8.72	
Q101301N.001	17 FEB 2010	5:37					
13	1202042948	45:01.772	758.57	1.18	2.27	7.47	
Q111401N.001	17 FEB 2010	6:25					
14	1202042949	45:01.773	762.48	2.43	3.70	8.38	
Q121501N.001	17 FEB 2010	6:42					
15	1202042950	15:01.779	762.86	38.68	44.13	49.16	

Instrument Type:	Quantulus
Data Capture Date:	TUE 16 FEB 2010 21:41
FileName:	s:\sc\files\orange\953115A0\SQ010401N.001.xls
File Info:	s:\sc\files\orange\953115A0\U953115A0.xls

ID:	H-3 (1)
Comments:	ORANGE

Sample, Rack-Pos, Time:	1, BKG, 45.02967:
Quench:	760.44
Start, End, X-Axis	50-175

Channel	Counts
---------	--------

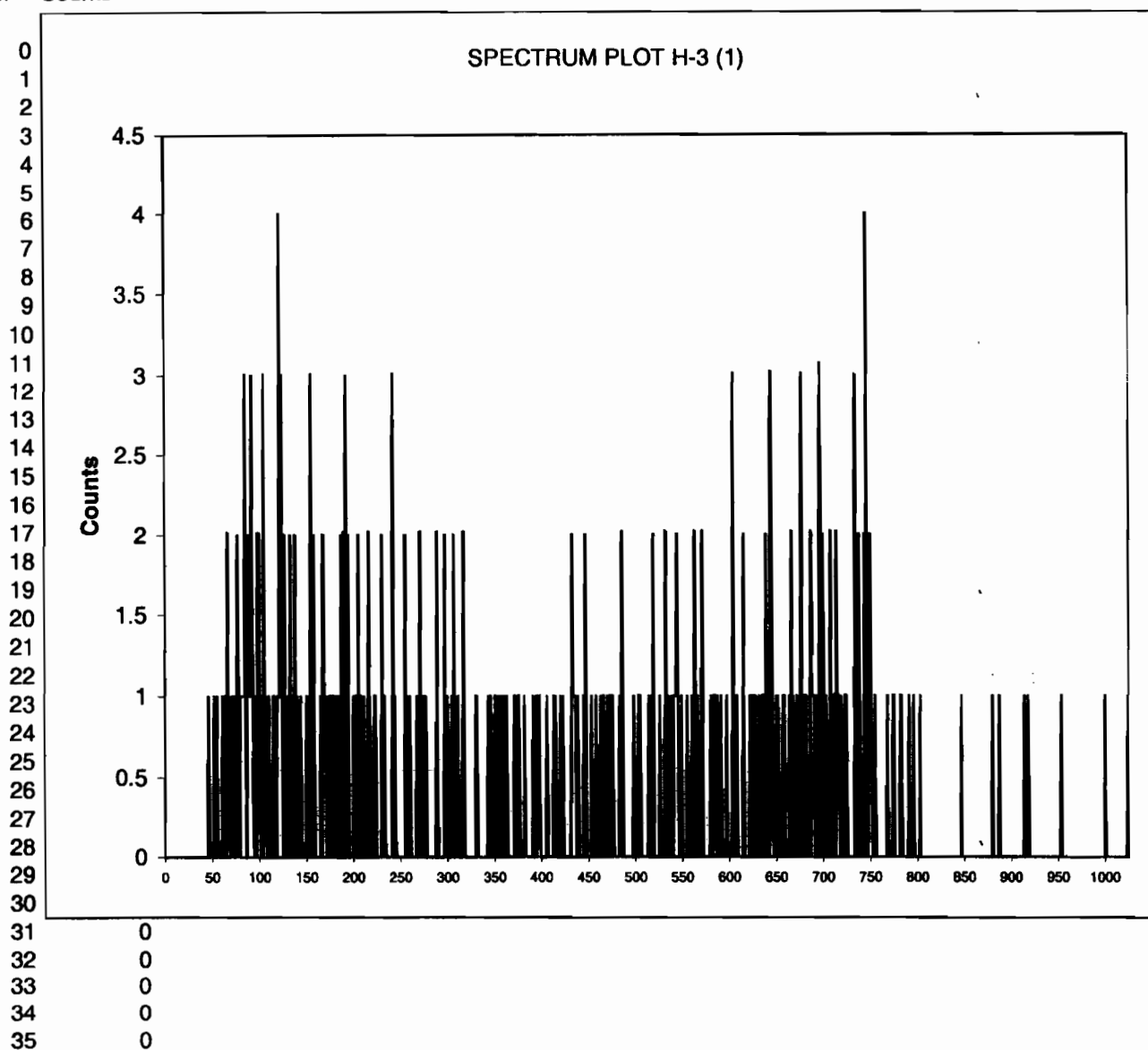


Instrument Type: Quantulus
Data Capture Date: TUE 16 FEB 2010 21:41
FileName: s:\sc\files\orange\953115A0\SQ020501N.001.xls
File Info: s:\sc\files\orange\953115A0\U953115A0.xls

ID: H-3 (1)
Comments: ORANGE

Sample, Rack-Pos, Time: 2, 246875001, 45.02967:
Quench: 763.39
Start, End, X-Axis 50-175

Channel Counts

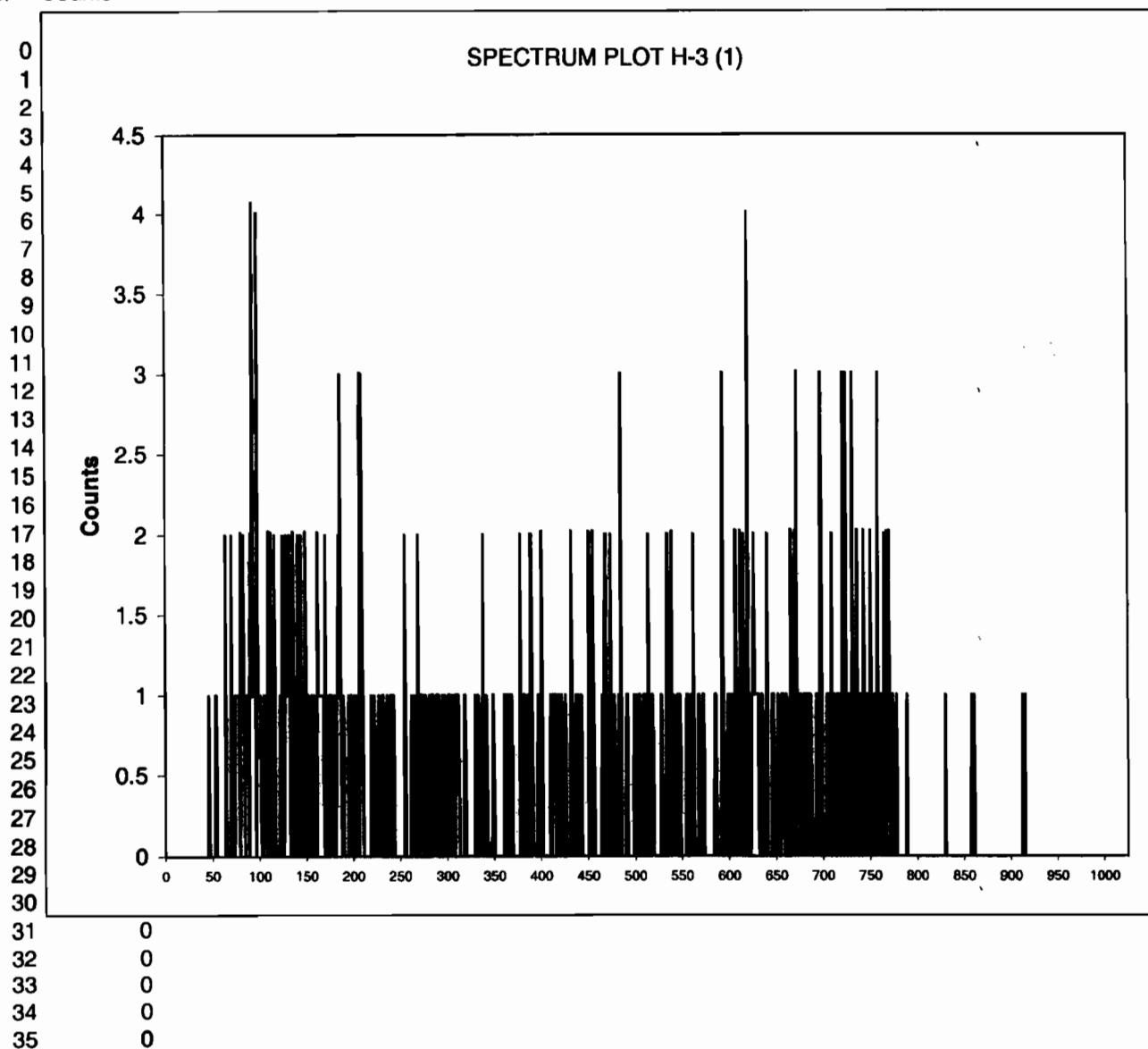


Instrument Type: Quantulus
Data Capture Date: TUE 16 FEB 2010 21:41
FileName: s:\sc\files\orange\953115A0\SQ030601N.001.xls
File Info: s:\sc\files\orange\953115A0\U953115A0.xls

ID: H-3 (1)
Comments: ORANGE

Sample, Rack-Pos, Time: 3, 246875002, 45.02967:
Quench: 762.17
Start, End, X-Axis 50-175

Channel Counts

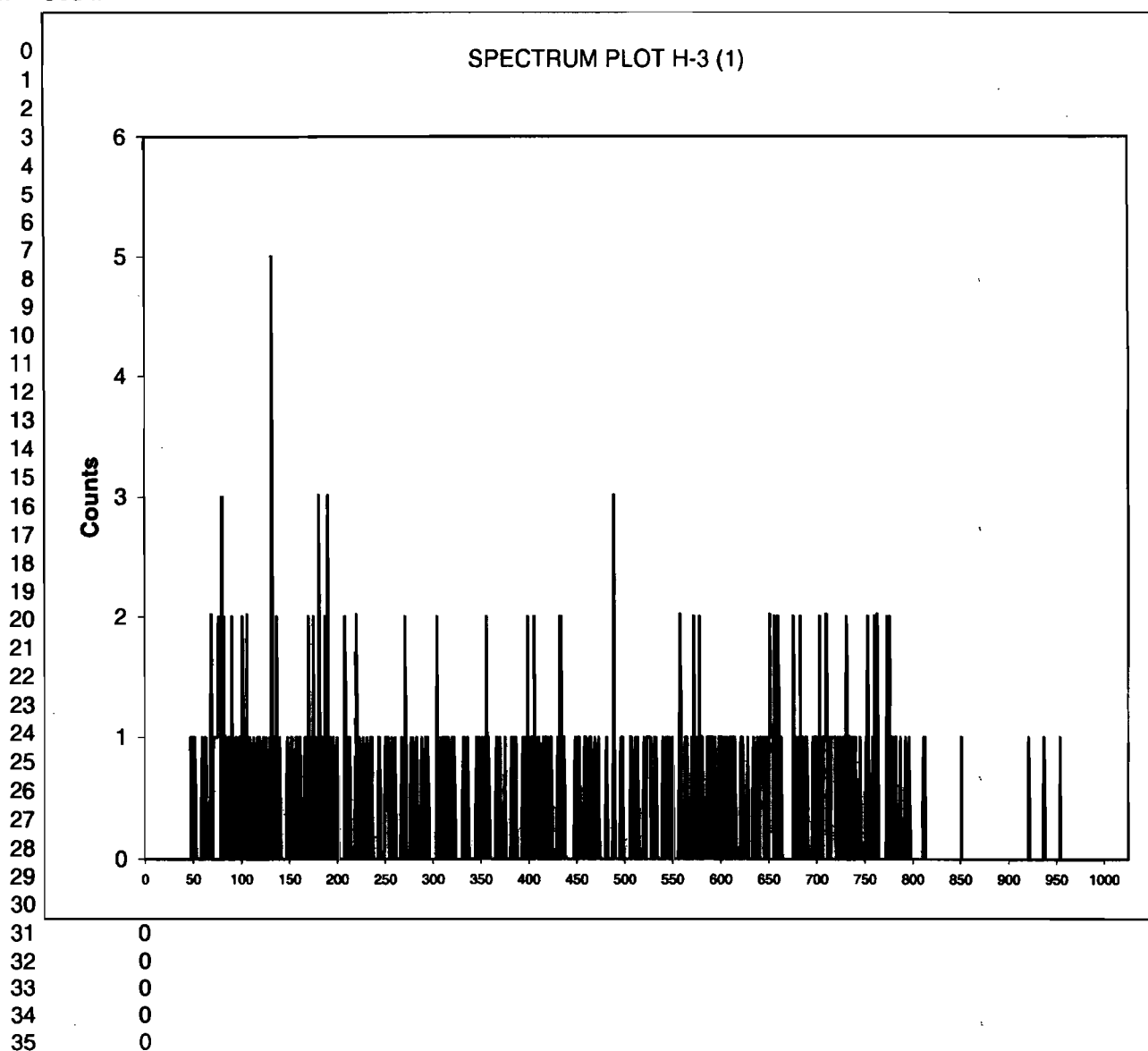


Instrument Type: Quantulus
Data Capture Date: TUE 16 FEB 2010 21:41
FileName: s:\lsc\files\orange\953115A0\SQ040701N.001.xls
File Info: s:\lsc\files\orange\953115A0\U953115A0.xls

ID: H-3 (1)
Comments: ORANGE

Sample, Rack-Pos, Time: 4, 246875003, 45.02967:
Quench: 760.94
Start, End, X-Axis 50-175

Channel Counts



Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
TUE 16 FEB 2010 21:41
s:\sc\files\orange\953115A0\SQ071001N.001.xls
s:\sc\files\orange\953115A0\U953115A0.xls

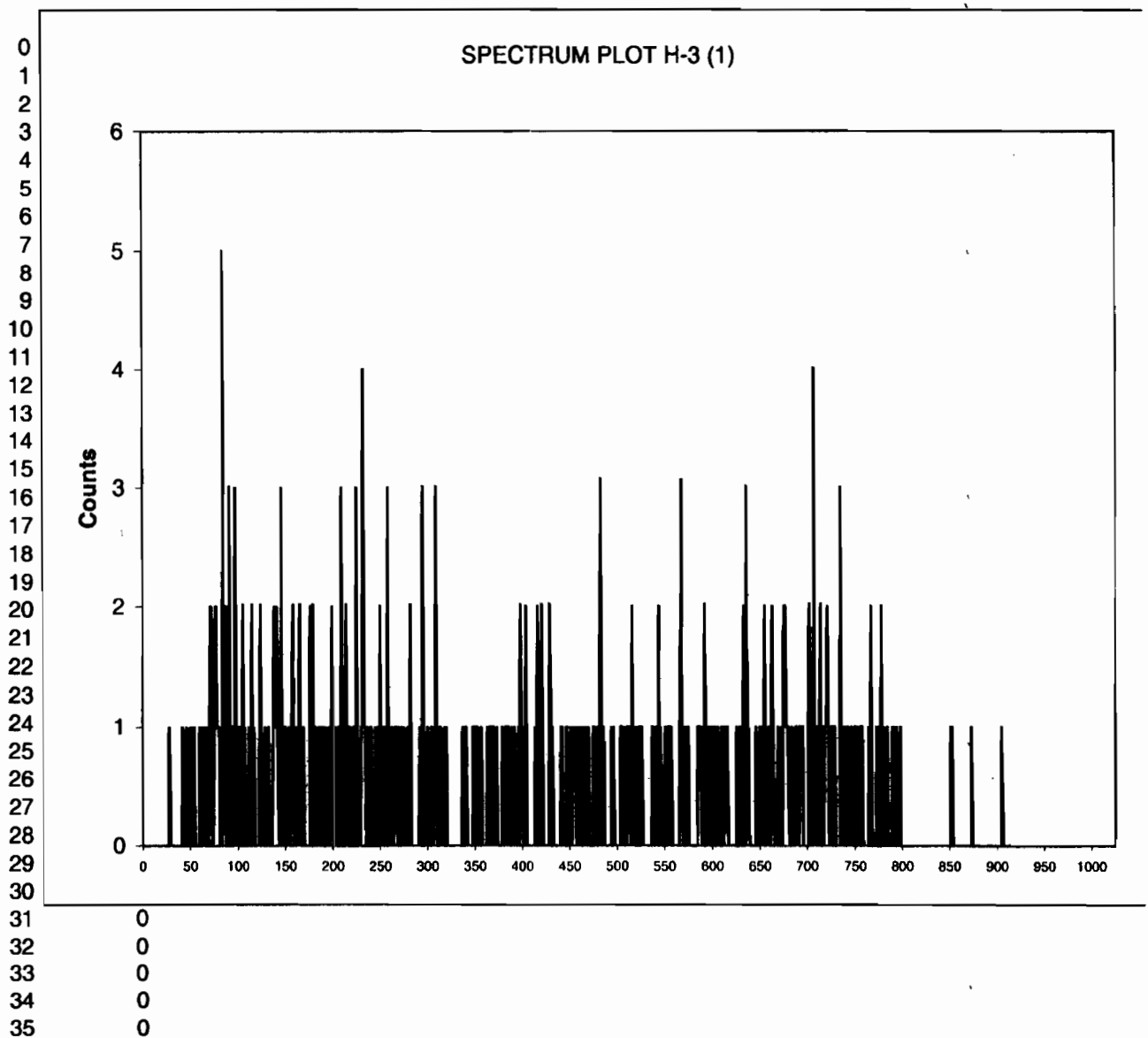
ID:
Comments:

H-3 (1)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

7, 246875006, 45.02955:
760.23
50-175

Channel Counts

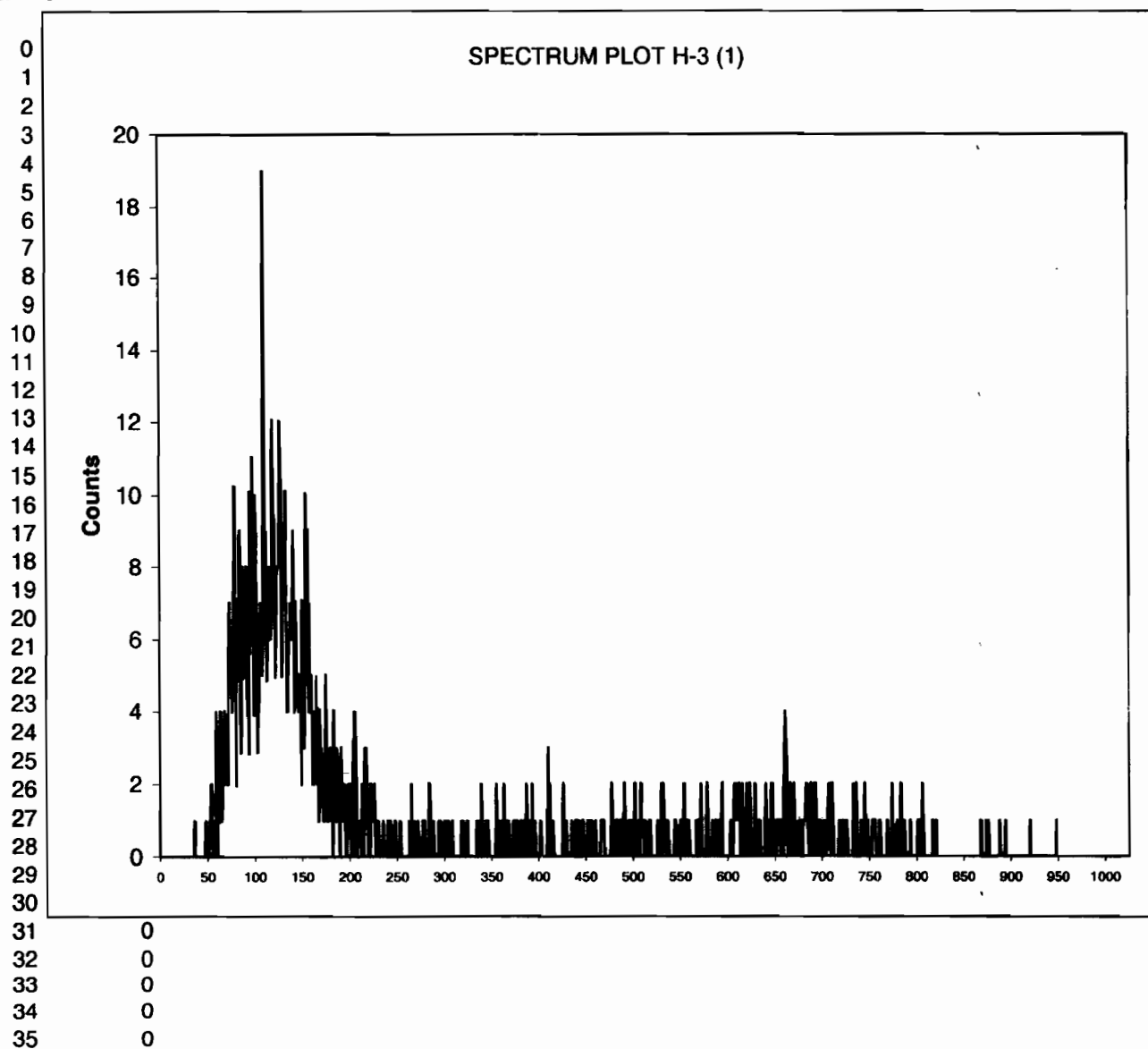


Instrument Type: Quantulus
Data Capture Date: TUE 16 FEB 2010 21:41
FileName: s:\sc\files\orange\953115A0\SQ081101N.001.xls
File Info: s:\sc\files\orange\953115A0\U953115A0.xls

ID: H-3 (1)
Comments: ORANGE

Sample, Rack-Pos, Time: 8, 246875007, 45.02965:
Quench: 759.14
Start, End, X-Axis: 50-175

Channel Counts



Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
TUE 16 FEB 2010 21:41
s:\sc\files\orange\953115A0\SQ091201N.001.xls
s:\sc\files\orange\953115A0\U953115A0.xls

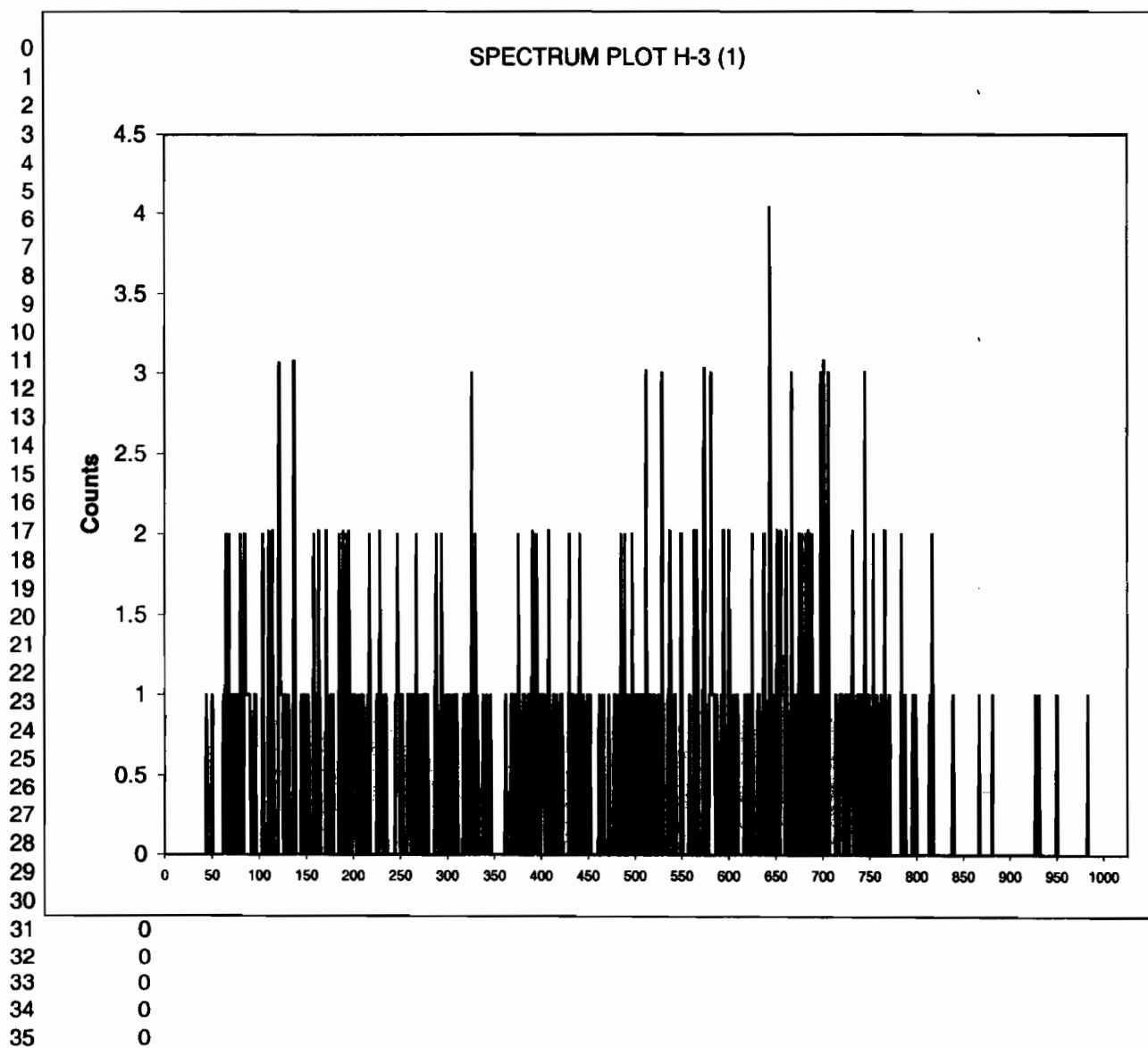
ID:
Comments:

H-3 (1)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

9, 246875008, 45.02955:
762.23
50-175

Channel Counts

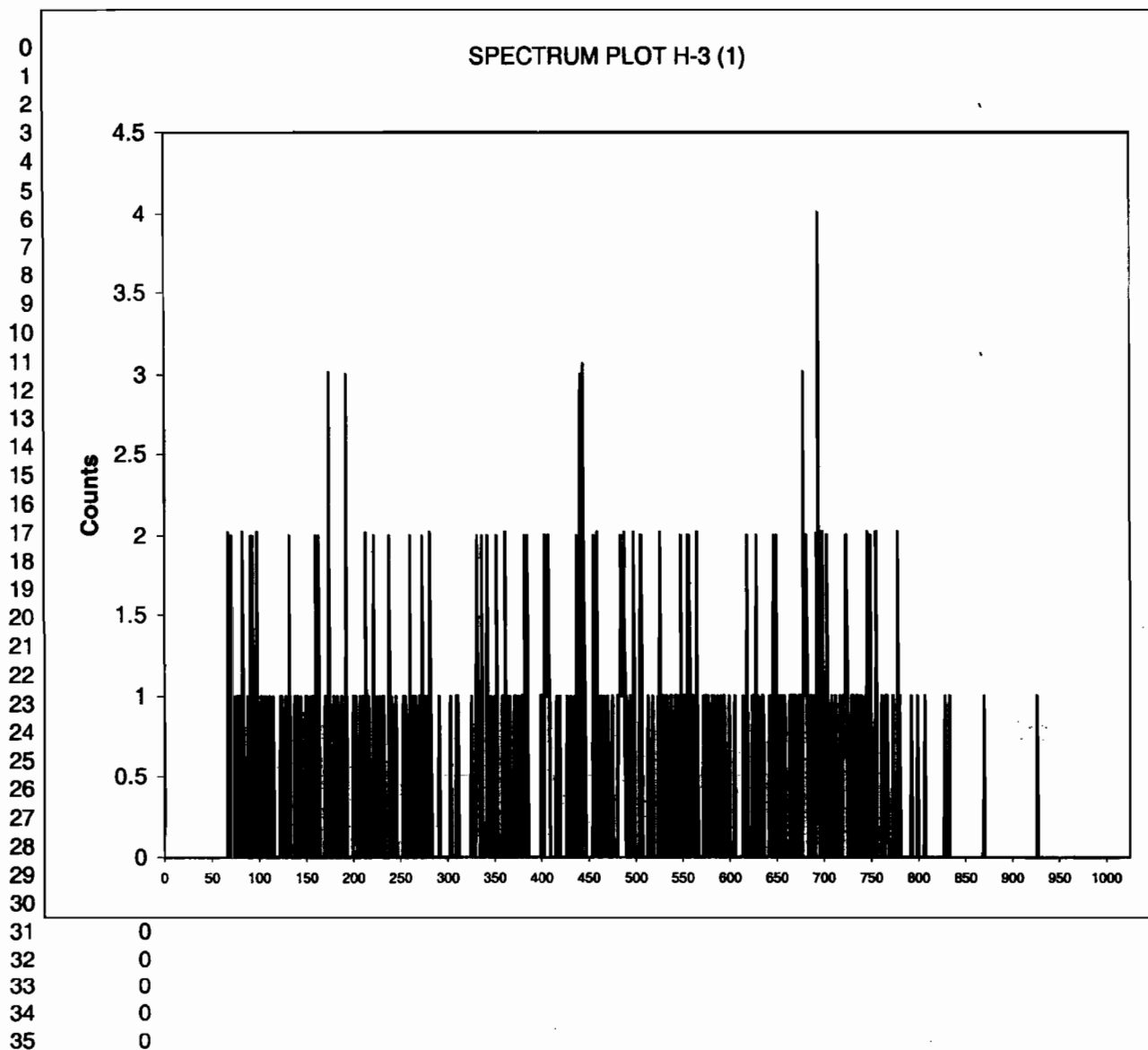


Instrument Type: Quantulus
Data Capture Date: TUE 16 FEB 2010 21:41
FileName: s:\sc\files\orange\953115A0\SQ101301N.001.xls
File Info: s:\sc\files\orange\953115A0\U953115A0.xls

ID: H-3 (1)
Comments: ORANGE

Sample, Rack-Pos, Time: 10, 1202042948, 45.02953:
Quench: 758.57
Start, End, X-Axis 50-175

Channel Counts



Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
TUE 16 FEB 2010 21:41
s:\sc\files\orange\953115A0\SQ111401N.001.xls
s:\sc\files\orange\953115A0\U953115A0.xls

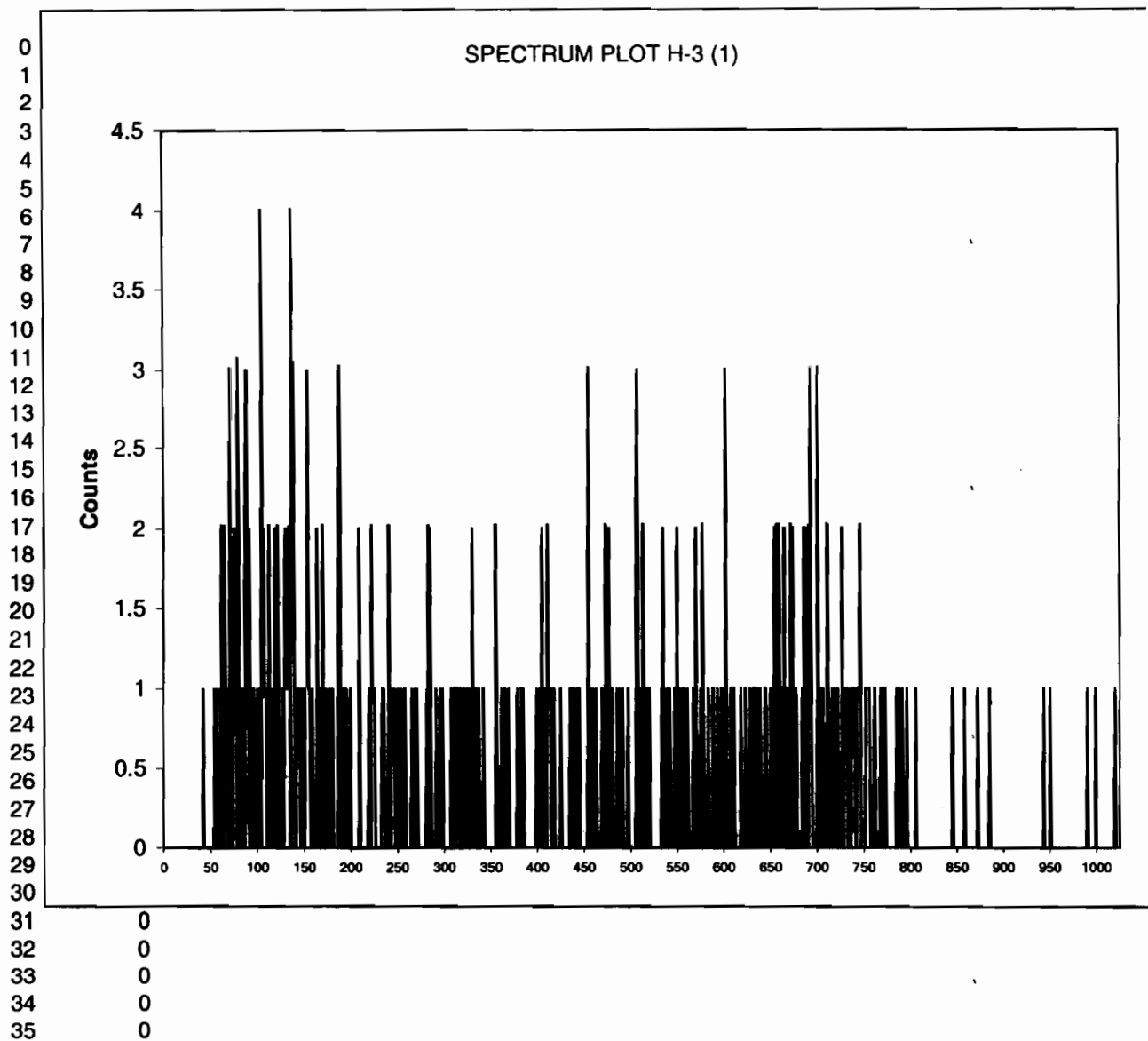
ID:
Comments:

H-3 (1)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

11, 1202042949, 45.02955:
762.48
50-175

Channel Counts

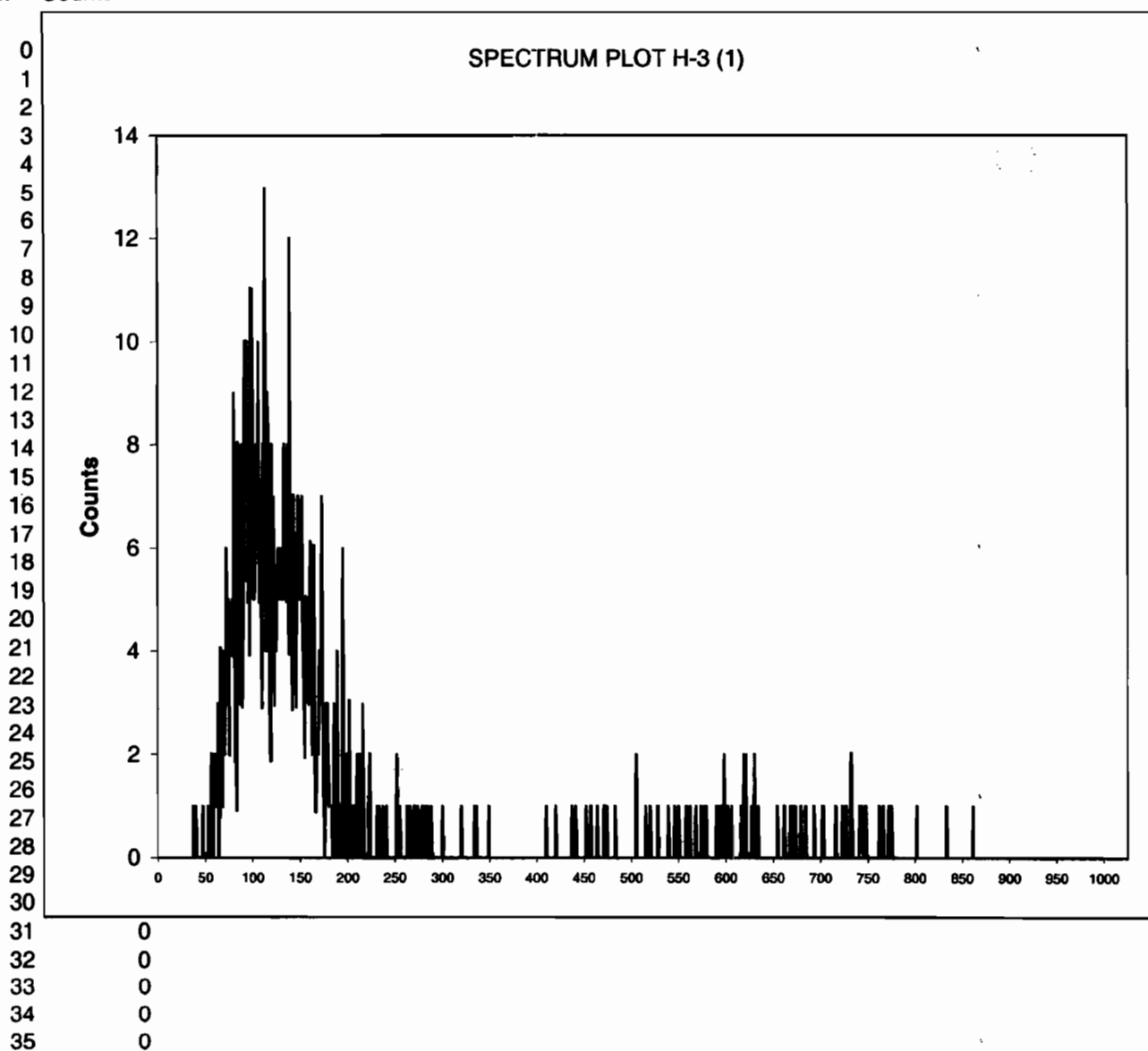


Instrument Type: Quantulus
Data Capture Date: TUE 16 FEB 2010 21:41
FileName: s:\sc\files\orange\953115A0\SQ121501N.001.xls
File Info: s:\sc\files\orange\953115A0\U953115A0.xls

ID: H-3 (1)
Comments: ORANGE

Sample, Rack-Pos, Time: 12, 1202042950, 15.02965:
Quench: 762.86
Start, End, X-Axis 50-175

Channel Counts



REGISTRY

THU 18 FEB 2010 0:45

*** DIRECTORY PATH :S:\LSC\O\DA\953115A1 ***

PARAMETER GROUP: 8
ID: H-3 (4)

00A PROGRAM MODE 6 ->

ORDER	POS	ID	CTIME	COUNTS	CUCNTS	MCW	REP	STD	STMS	STIME
1	4	BKG	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
2	5	246875004	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
3	6	246875005	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00
4	7	246875007	45:00	1.0E04	NO LIM	1	1	Y	1/10	1:00

NUMBER OF CYCLES 1
COINCIDENCE BIAS (L/H) L

MCA INPUT	TRIGG.	INHIBIT	MEMORY SPLIT
1 LRSUM	DCOS	G	L*R
2 GSUM	G		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. POS	2. ID	3. CTIME	4. SQP	5. CPM1	6. CPM2	7. CPM3
SEND SPECTRA 12						
RESOLUTION OF SPECTRA 1024						
LISTING Y						
INSTRUMENT NUMBER 1						

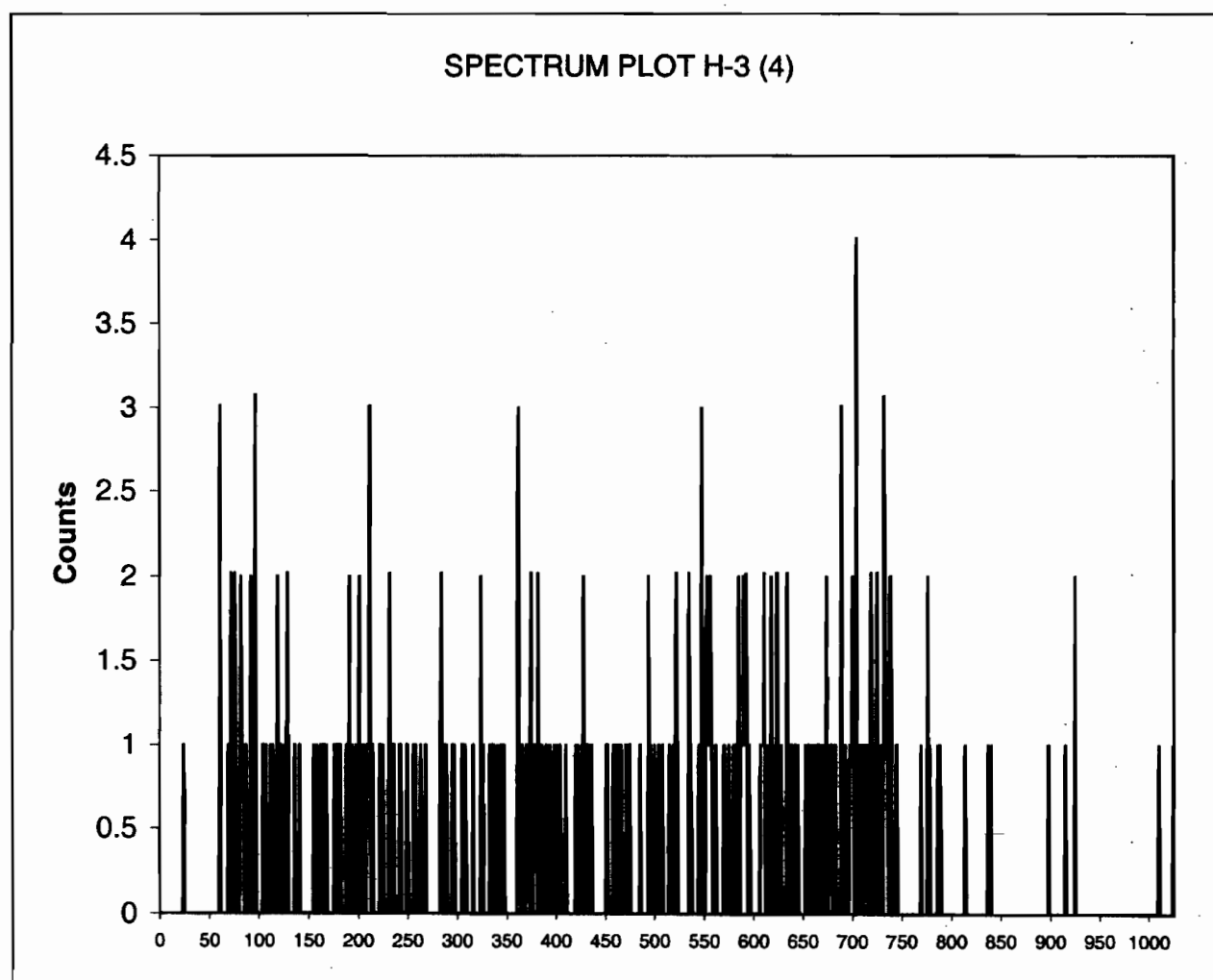
POS	ID	CTIME	SQP	CPM1	CPM2	CPM3
Q010401N.001	18 FEB 2010	1:33				
4	BKG	45:01.780	760.23	1.02	2.15	6.91
Q020501N.001	18 FEB 2010	2:20				
5	246875004	45:01.780	765.41	2.65	4.34	9.56
Q030601N.001	18 FEB 2010	3:08				
6	246875005	45:01.780	762.02	3.02	4.36	8.86
Q040701N.001	18 FEB 2010	3:55				
7	246875007	45:01.780	760.82	13.82	16.70	21.75

Instrument Type: Quantulus
Data Capture Date: THU 18 FEB 2010 0:45
FileName: s:\sc\files\orange\953115A1\SQ010401N.001.xls
File Info: s:\sc\files\orange\953115A1\U953115A1.xls

ID: H-3 (4)
Comments: ORANGE

Sample, Rack-Pos, Time: 1, BKG, 45.02967:
Quench: 760.23
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
THU 18 FEB 2010 0:45
s:\sc\files\orange\953115A1\SQ030601N.001.xls
s:\sc\files\orange\953115A1\U953115A1.xls

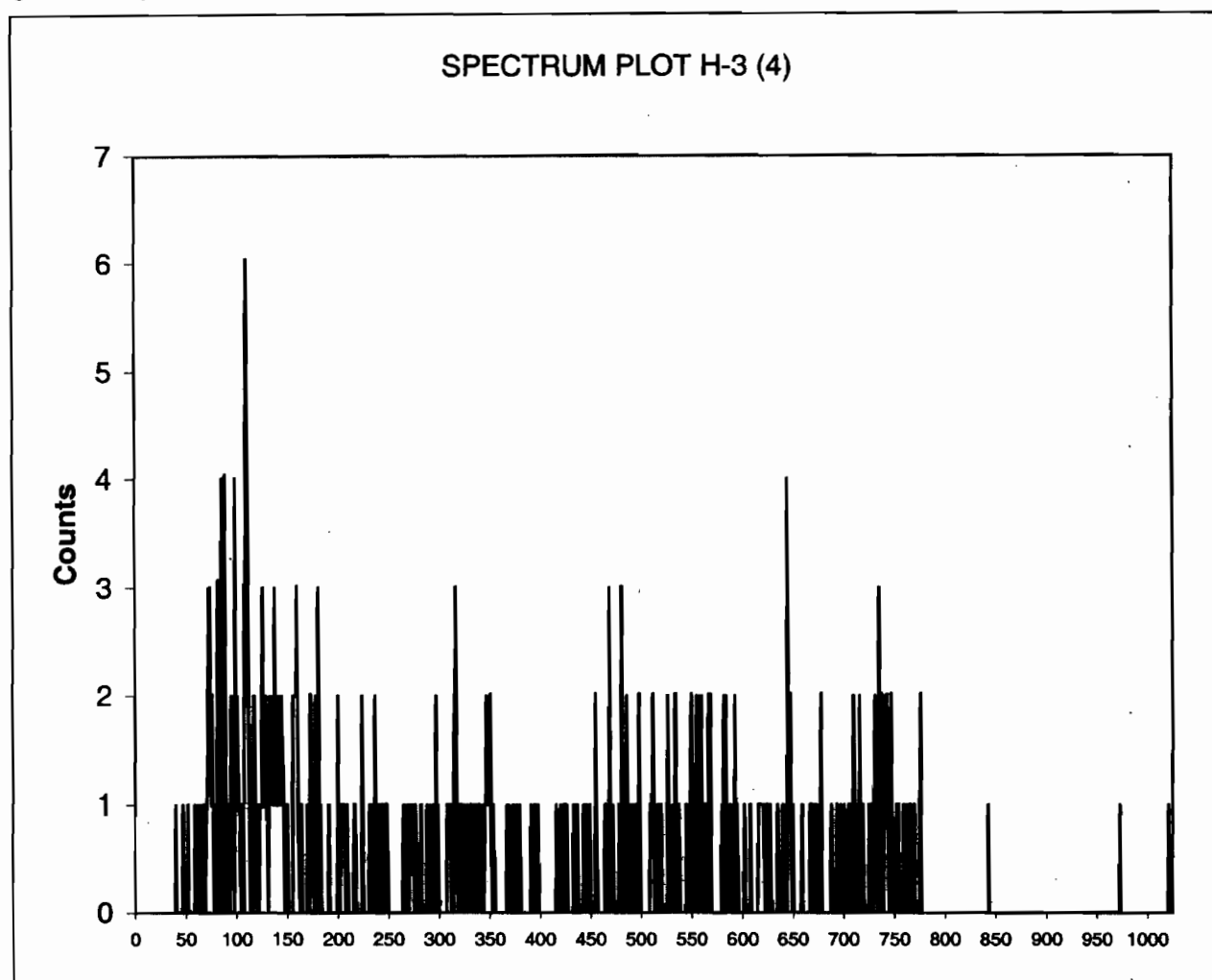
ID:
Comments:

H-3 (4)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

3, 246875005, 45.02967:
762.02
50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

Instrument Type:
Data Capture Date:
FileName:
File Info:

Quantulus
THU 18 FEB 2010 0:45
s:\sc\files\orange\953115A1\SQ040701N.001.xls
s:\sc\files\orange\953115A1\U953115A1.xls

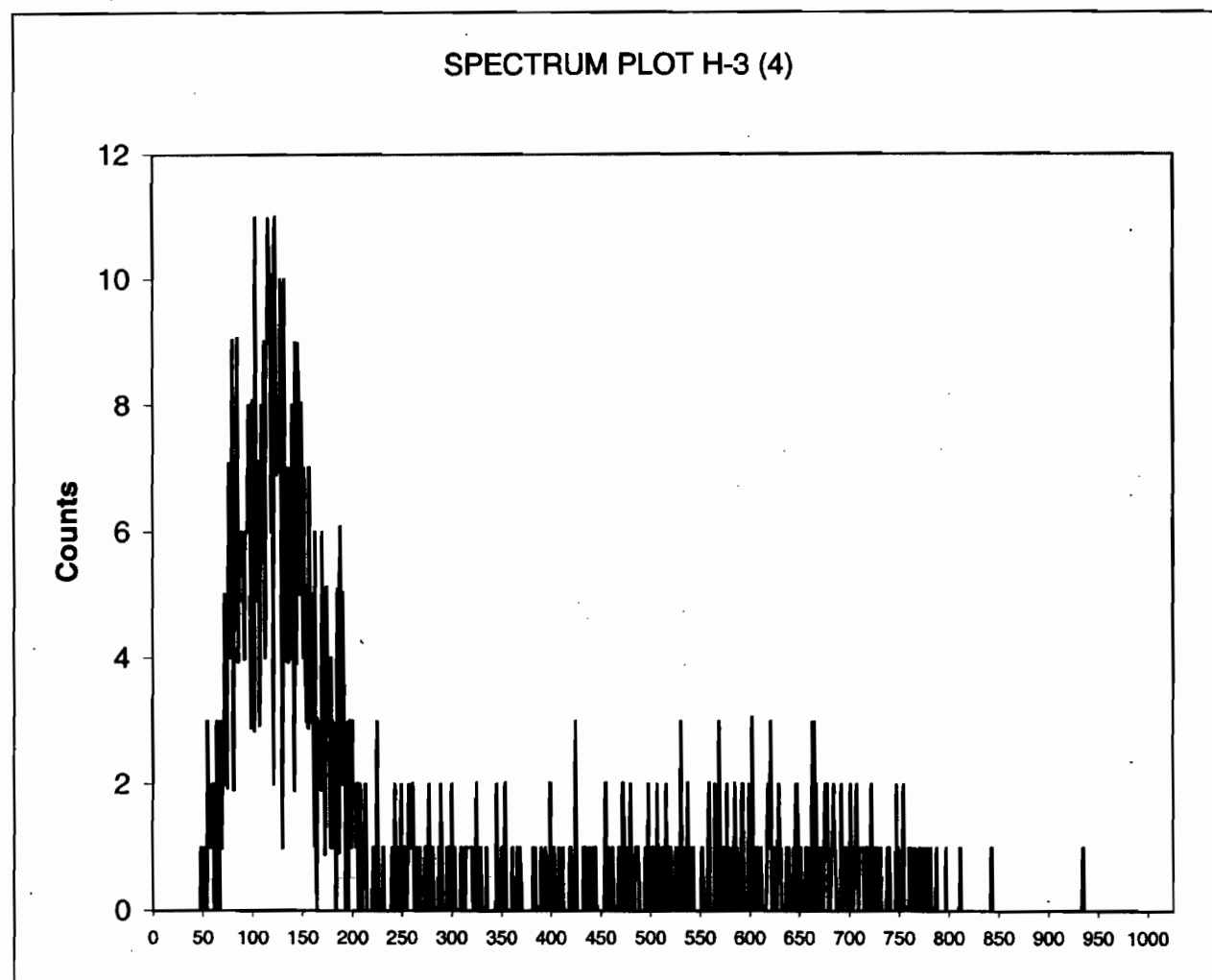
ID:
Comments:

H-3 (4)
ORANGE

Sample, Rack-Pos, Time:
Quench:
Start, End, X-Axis

4, 246875007, 45.02967:
760.82
50-175

Channel Counts



31	0
32	0
33	0
34	0
35	0

ID: TRITIUM

19 FEB 2010 05:30

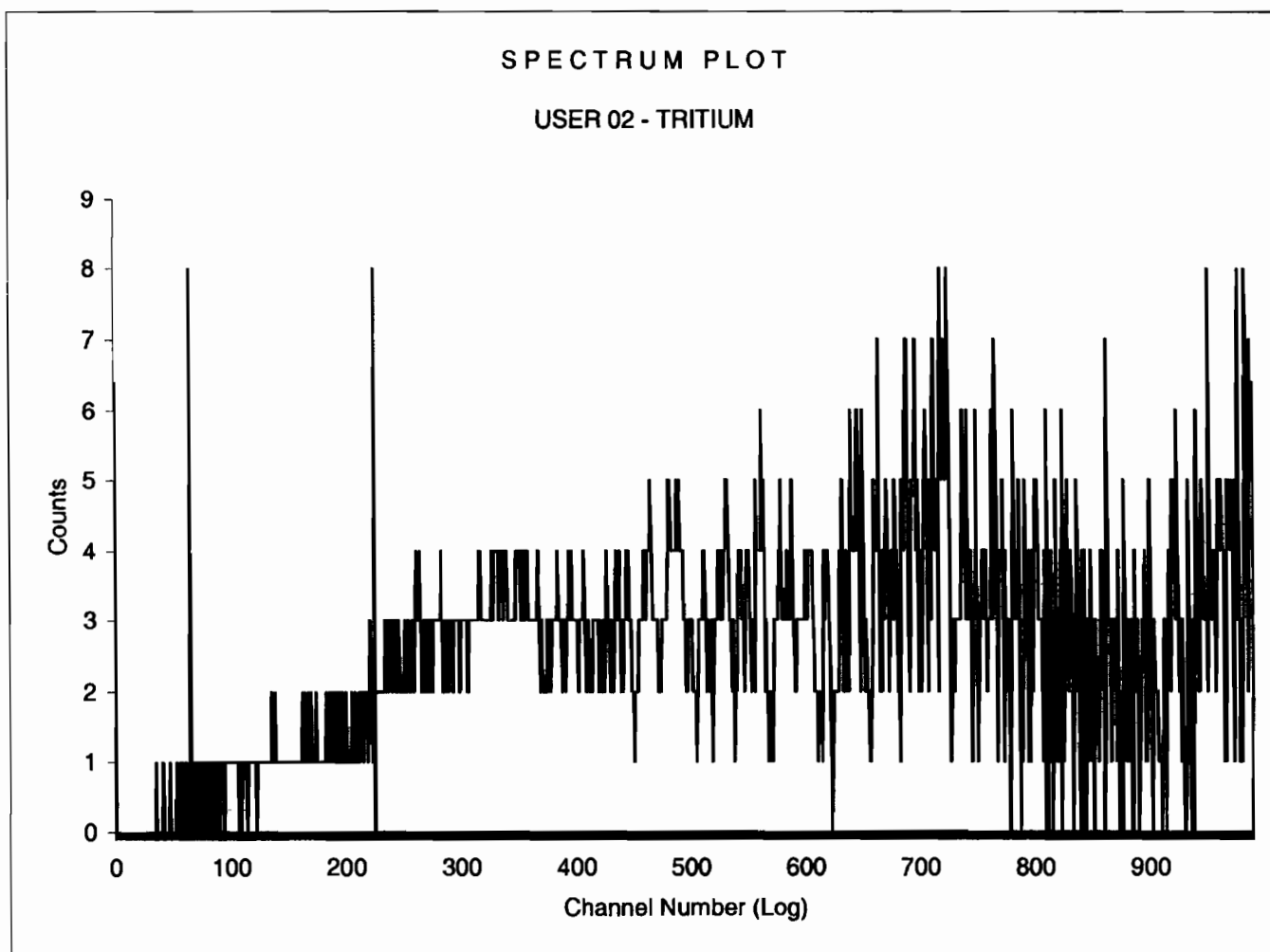
USER: 2 COMMENT: RED
 PRESET TIME : 60.00
 DATA CALC : CPM H# : YES SAMPLE REPEATS: 1 PRINTER : EDIT
 COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 : EDIT
 TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF
 SCINTILLATOR: LIQUID LUMEX: YES LOW SAMPLE REJ: 0
 LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 65.0 - 225.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0
 CHAN: 0.0 - 990.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

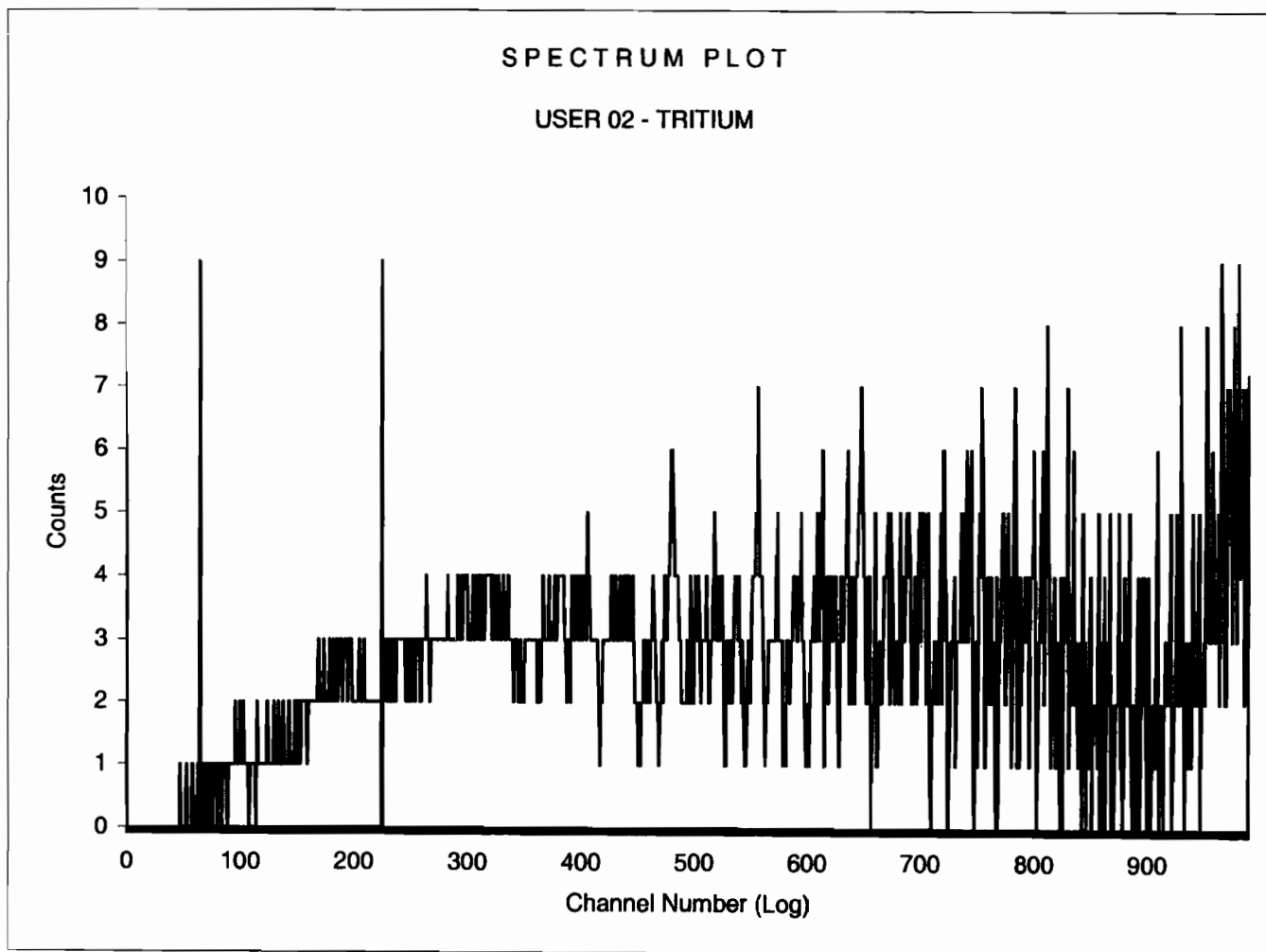
ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1		WIND2		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR		
1	53-1	60.00	113.2	2.87	16.28	42.50	3.98	0.94	61.90
2	53-2	60.00	122.1	4.17	13.22	43.58	3.93	0.89	124.31

Sample Count Start Time:	19 Feb 2010 05:21:47		
Data Capture Date	19 Feb 2010 06:21:18		
User Filename	S02021953-1A.XLS		
	U02021953-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	53-1	60.00
H#, Total Counts:	113.2	3019	
Win1: Tritium - Start, End, Counts:	65	225	172
Win2: - Start, End, Counts:	0	990	2550

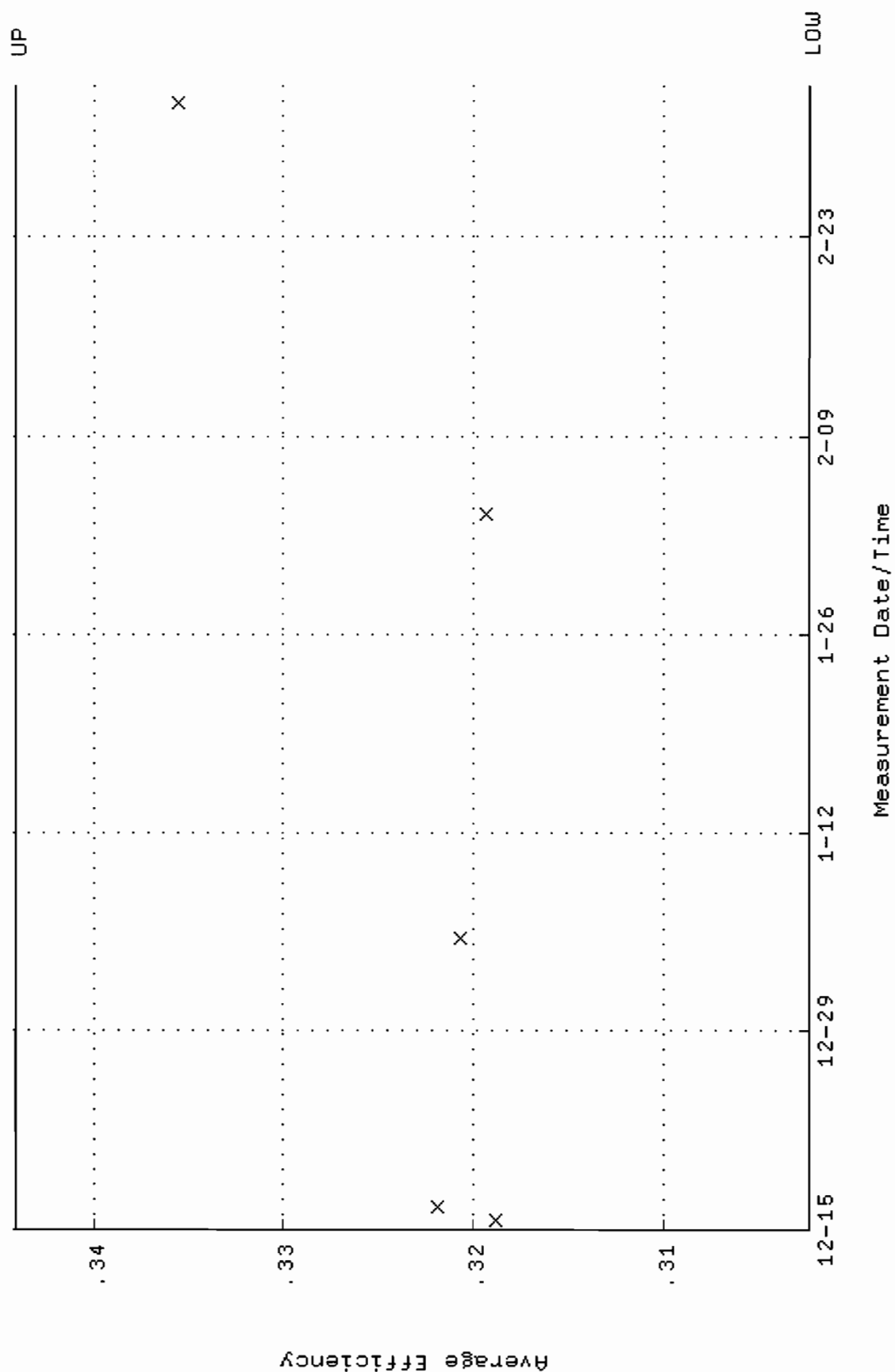


Sample Count Start Time:	19 Feb 2010 06:24:12		
Data Capture Date	19 Feb 2010 07:23:44		
User Filename	S02021953-2A.XLS		
	U02021953-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	53-2	60.00
H#, Total Counts:	122.1	3071	
Win1: Tritium - Start, End, Counts:	65	225	250
Win2: - Start, End, Counts:	0	990	2615

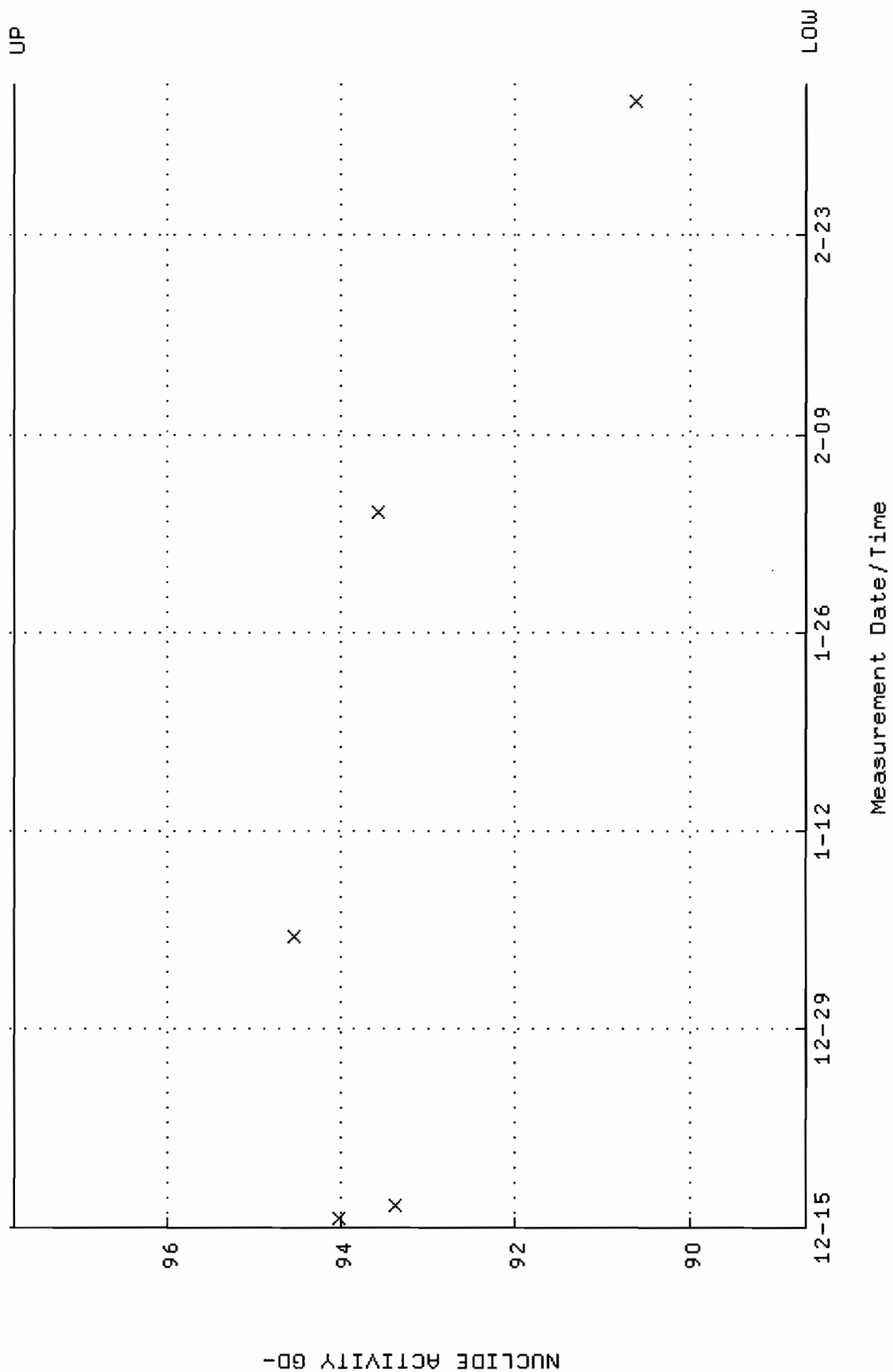


BACKGROUND AND EFFICIENCY DATA

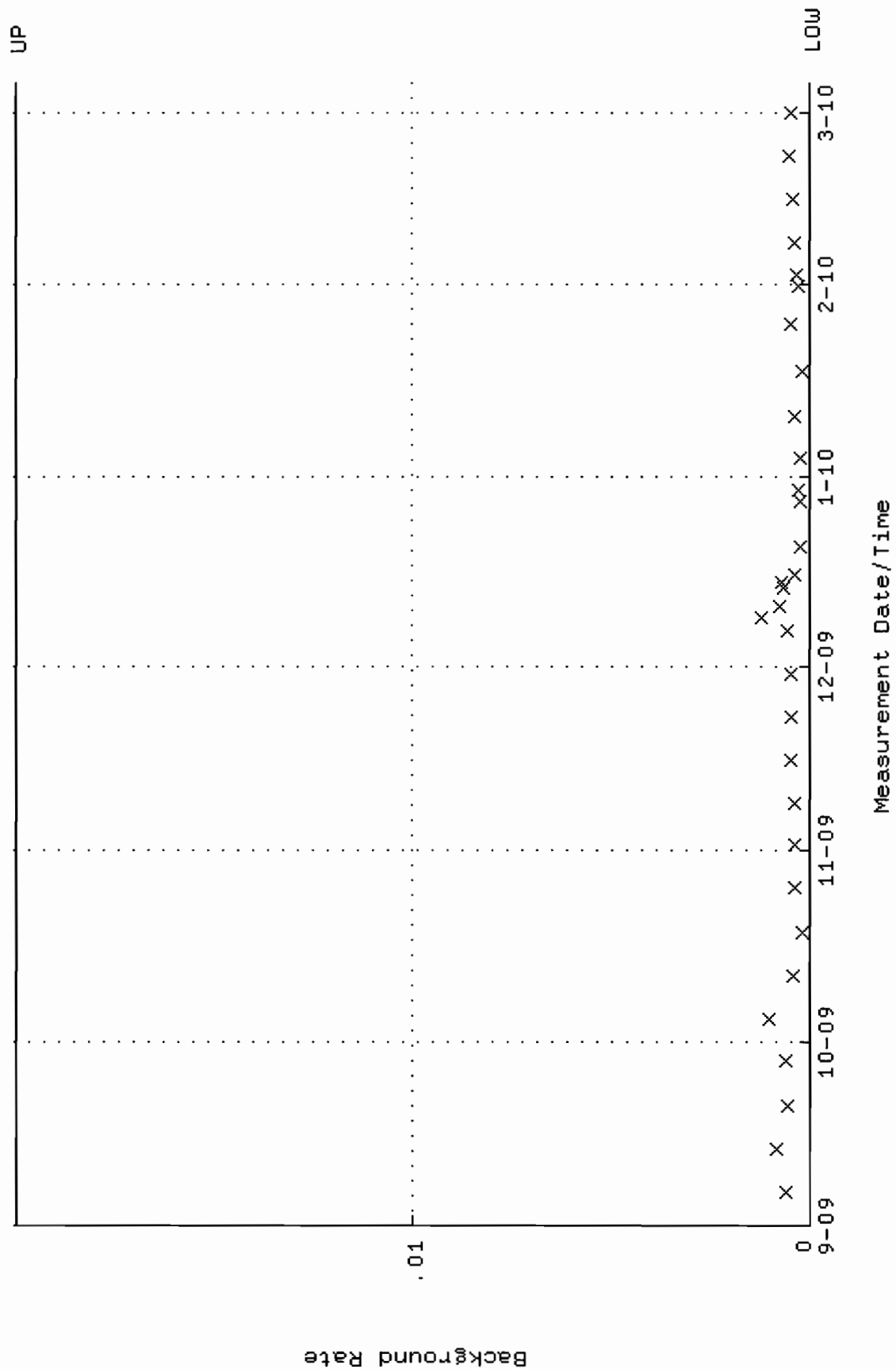
QA filename : DKA100:[ENV_ALPHA.QA.W]w005.QAF;6
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.302314 through 0.344088



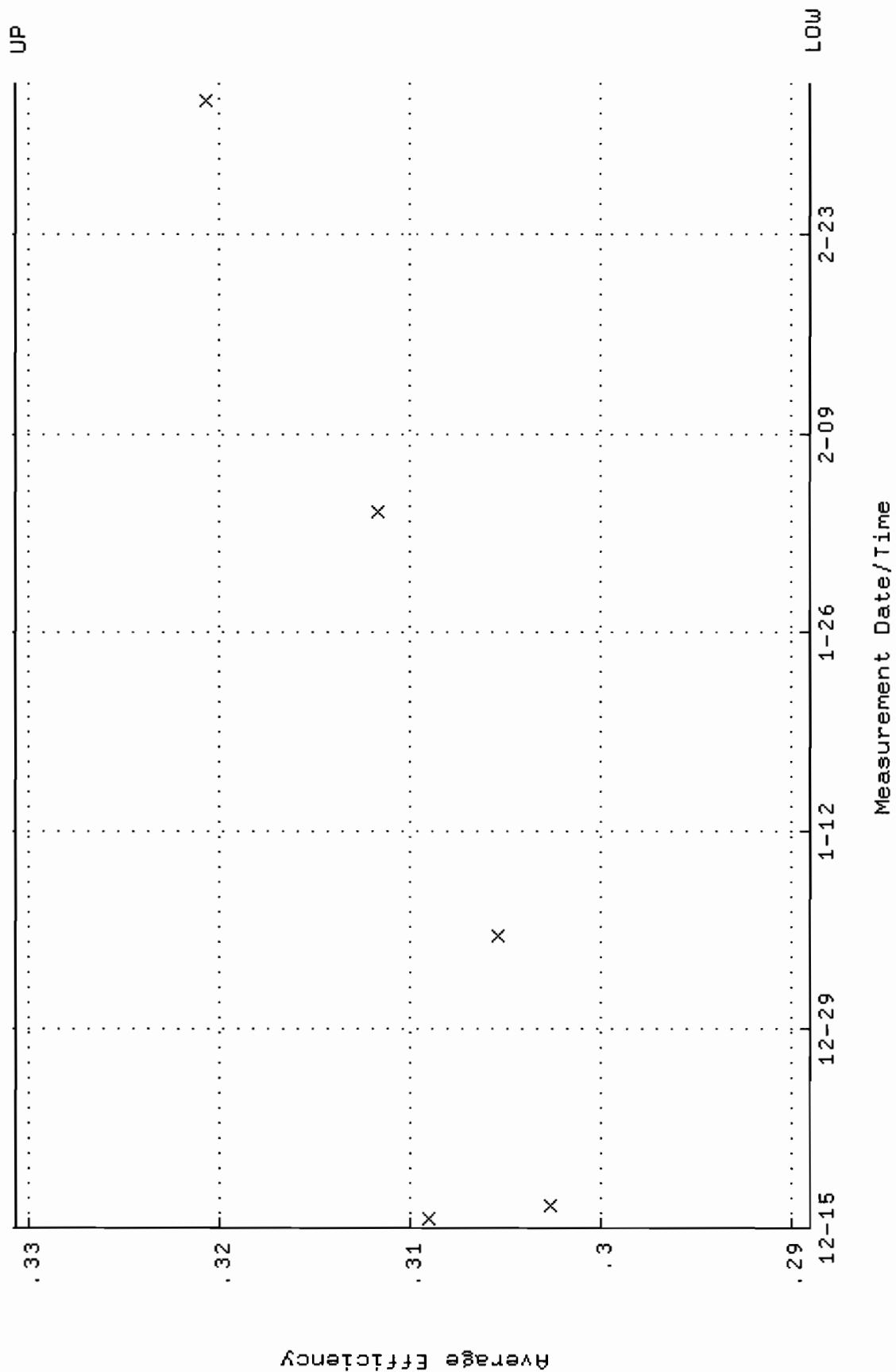
QA filename : DKA100:[ENV_ALPHA.QA.W]W005.QAF;6
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 88.6685 through 97.7693



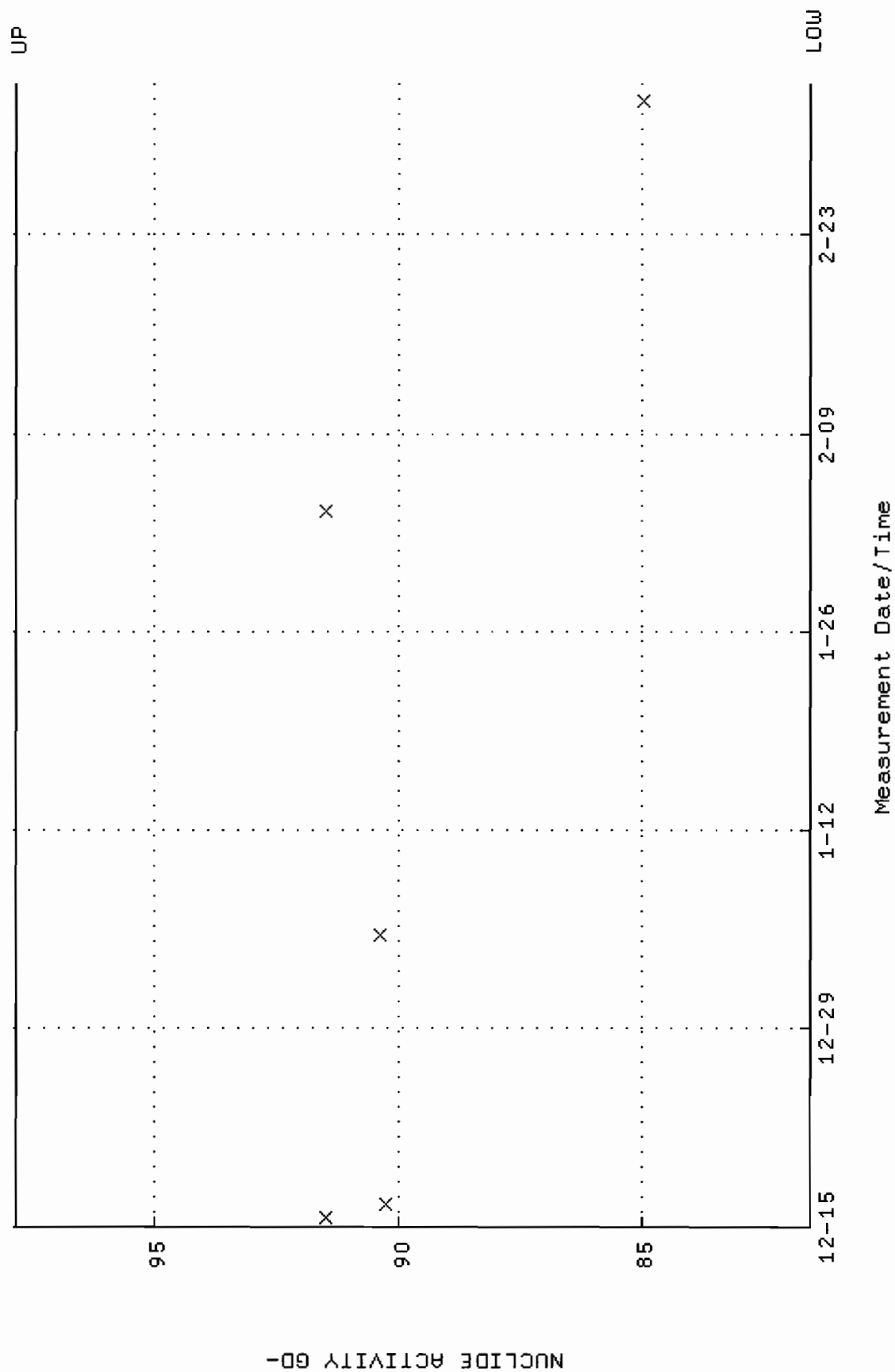
QA filename : DKA100:[ENV_ALPHA.QA.B]B005.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:00 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



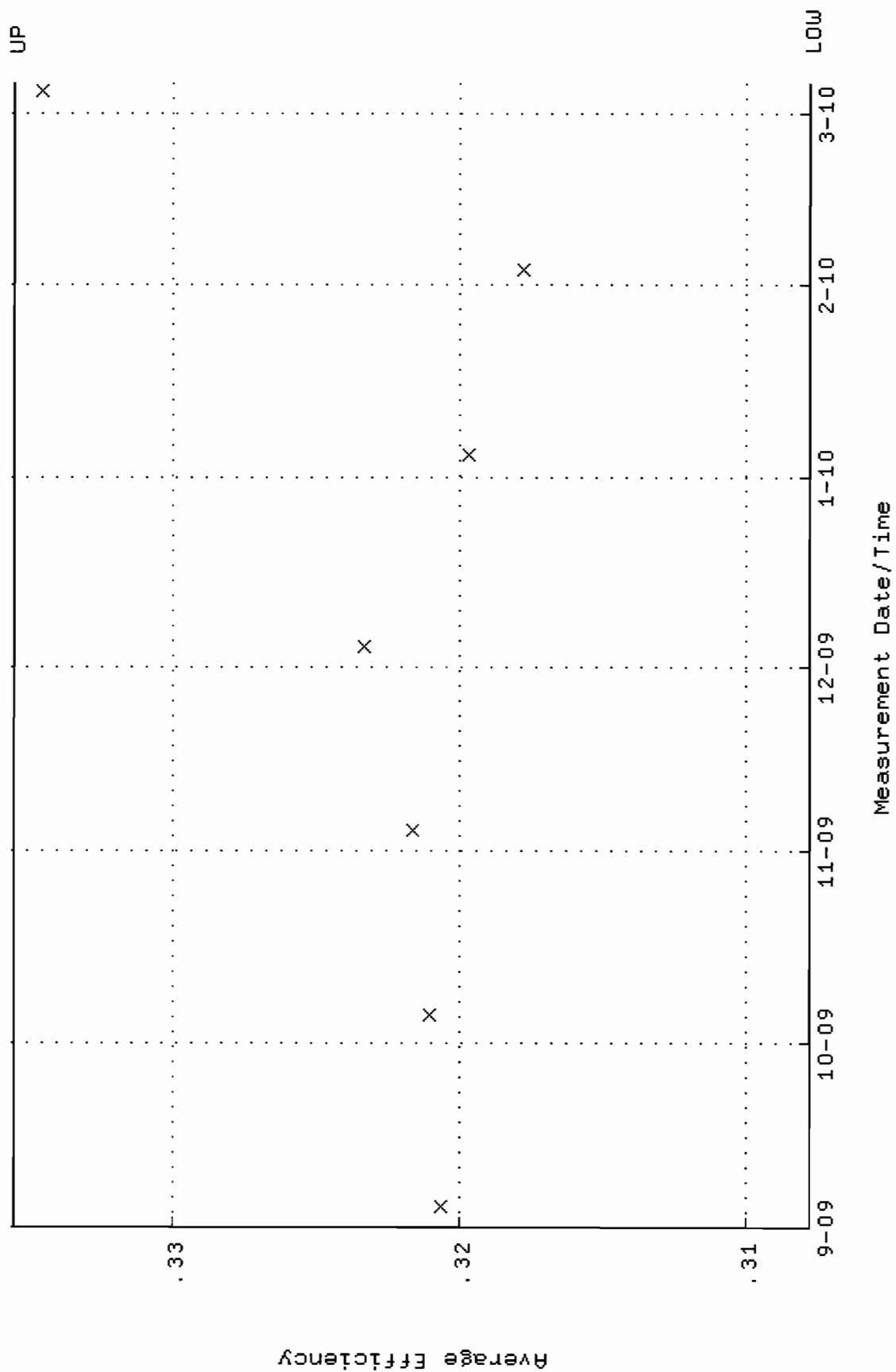
QA filename : DKA100:[ENV_ALPHA.QA.W]W006.QAF;6
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.288996 through 0.330714



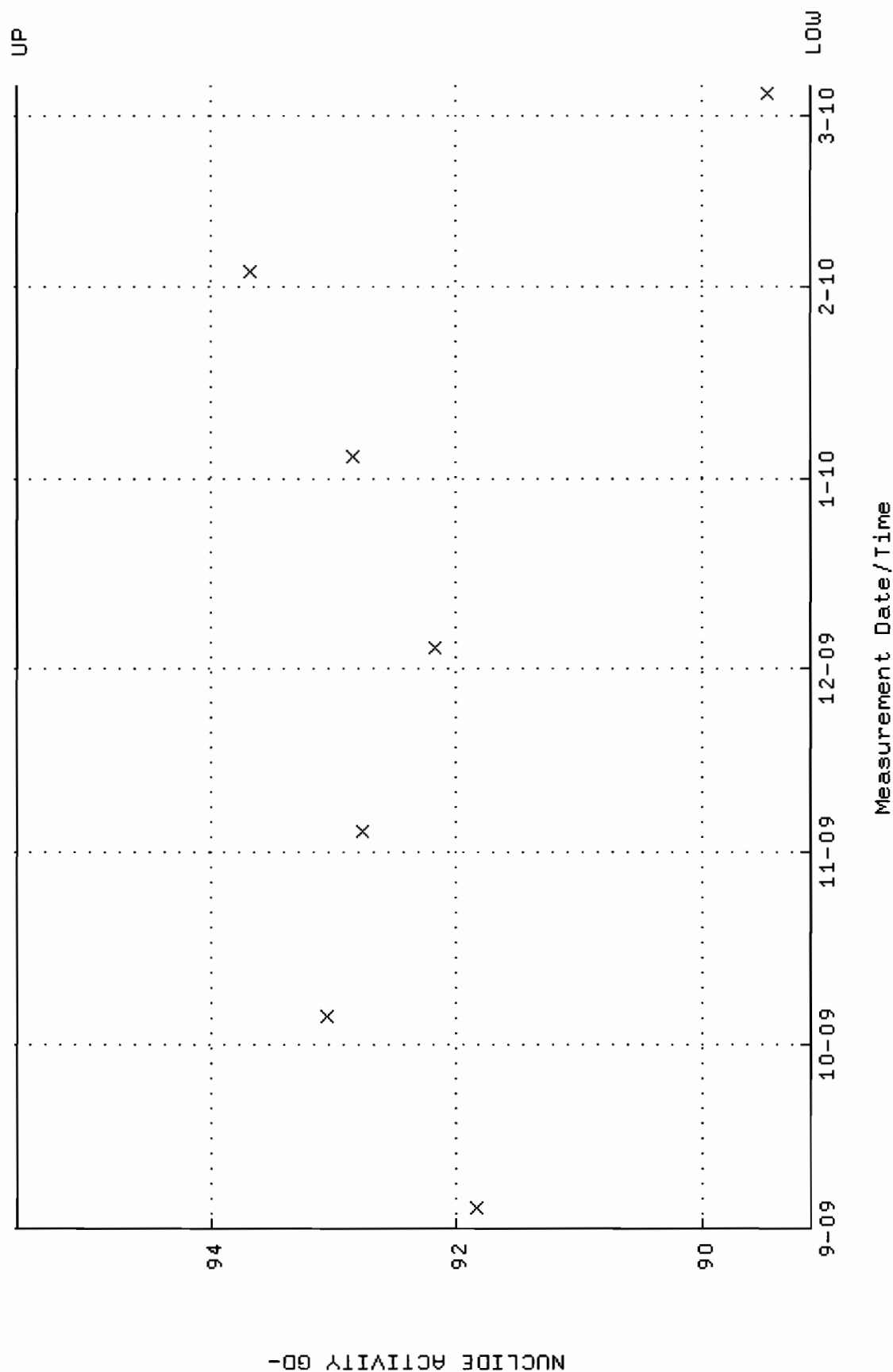
QA filename : DKA100:[ENV_ALPHA.QA.W]W0006.QAF;6
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 15-DEC-2009 14:48:34 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 81.5567 through 97.8515



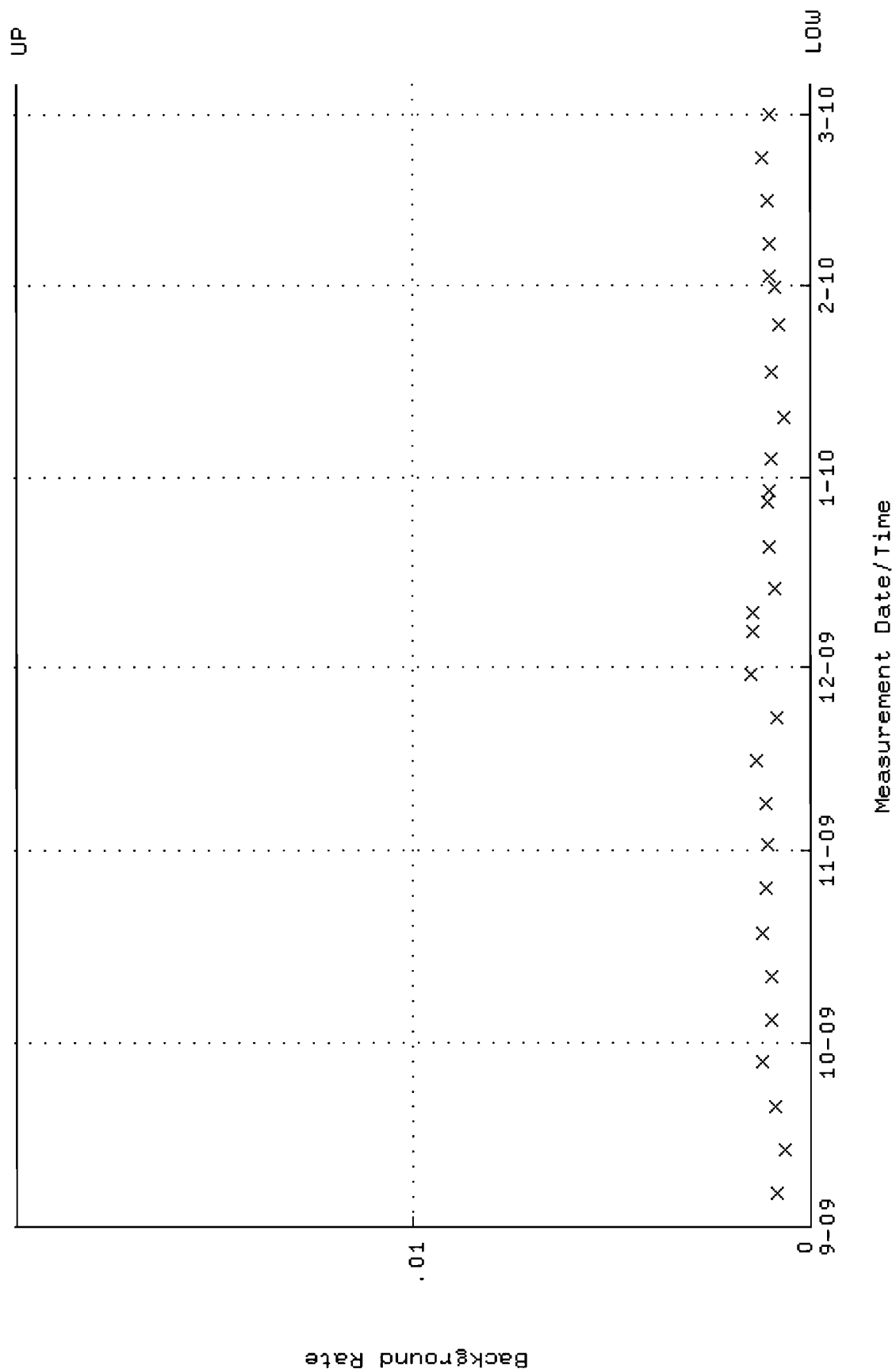
QA filename : DKA100:[ENV_ALPHA.QA.W]W008.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 4-SEP-2009 07:36:40 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.307754 through 0.335576



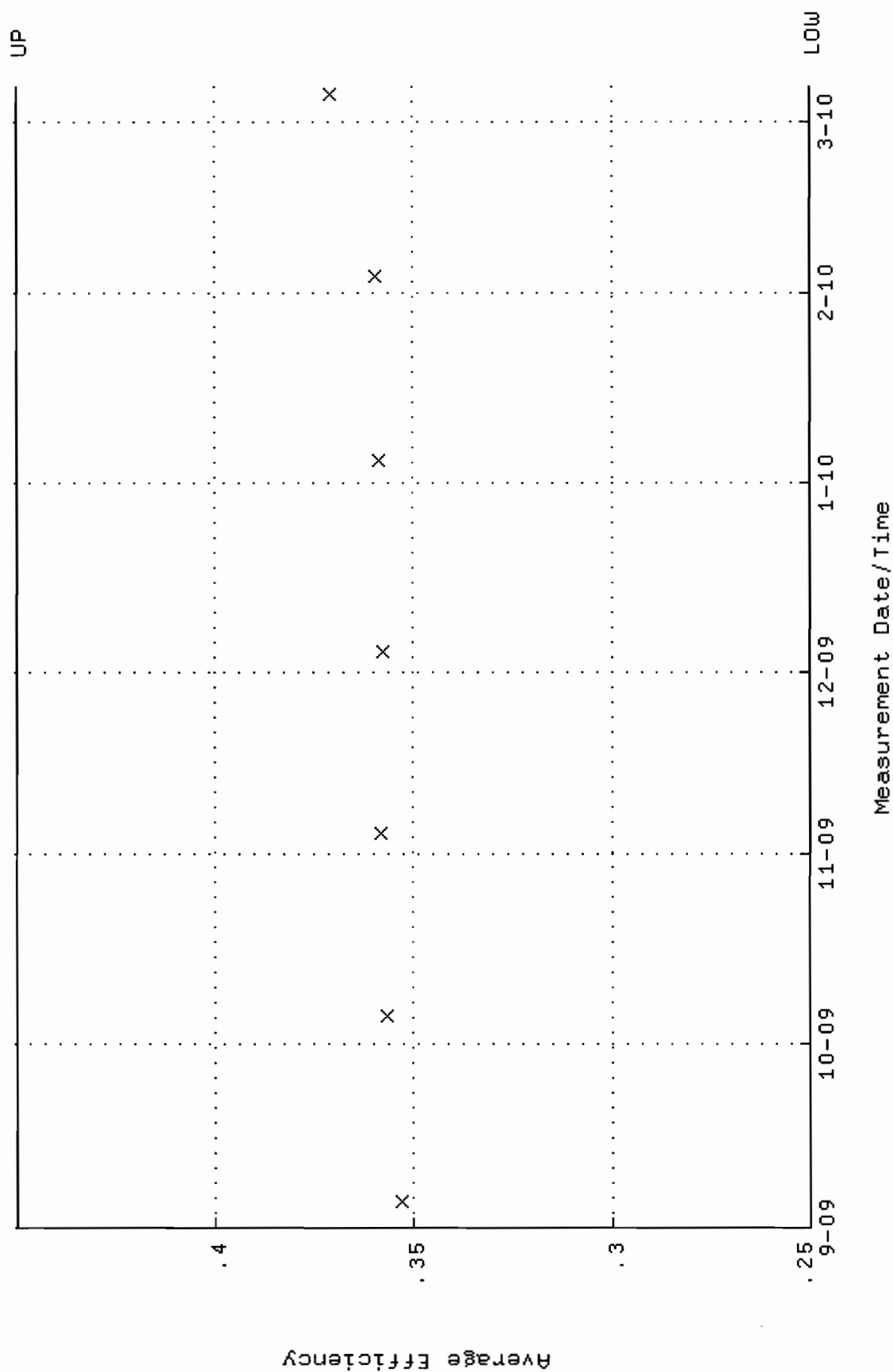
QA filename : DKA100:[ENV_ALPHA.QA.W]w008.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 4-SEP-2009 07:36:40 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 89.1115 through 95.5851



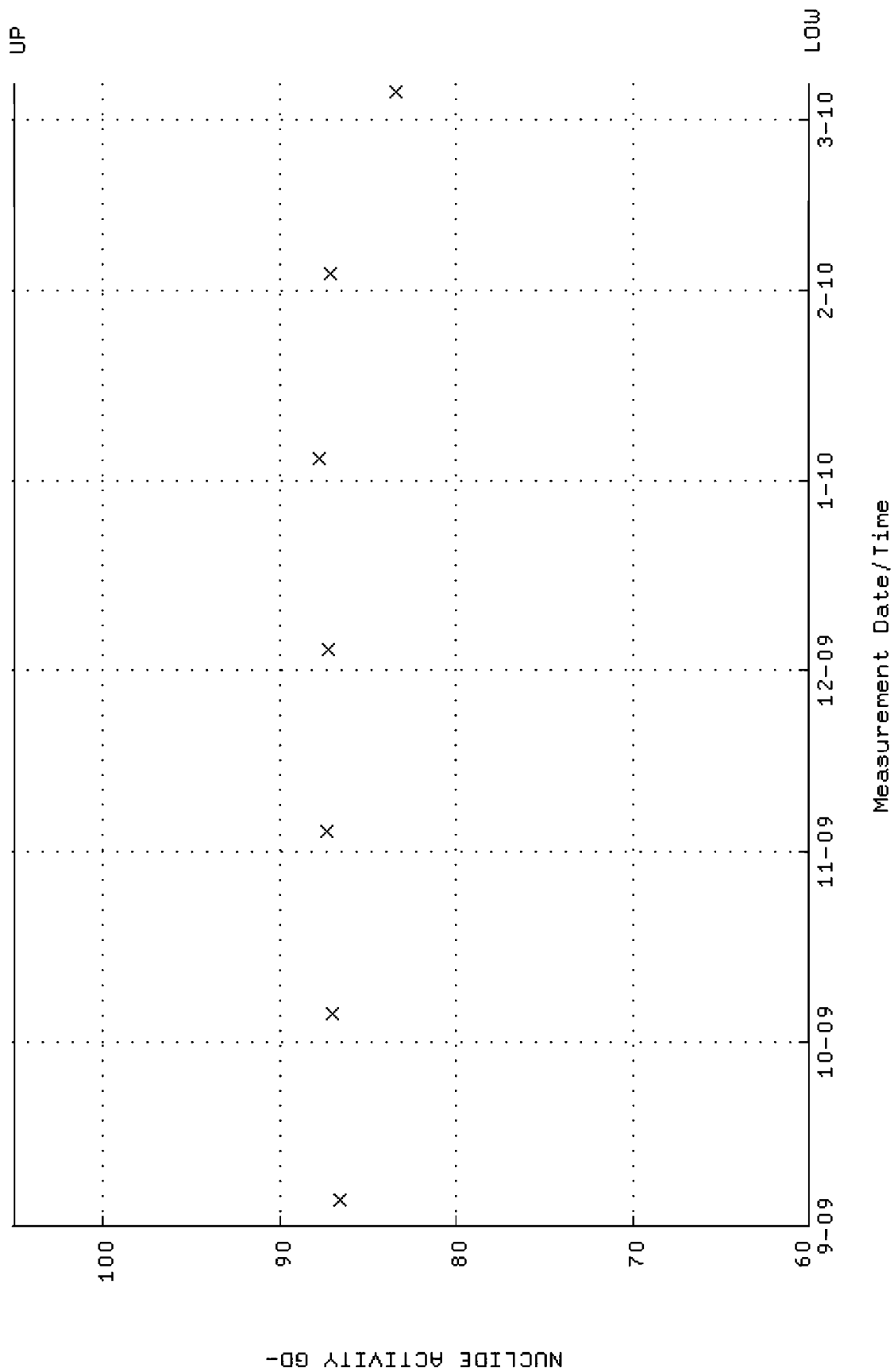
QA filename : DKA100:[ENV_ALPHA.QA.B]B008.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:01 through 5-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



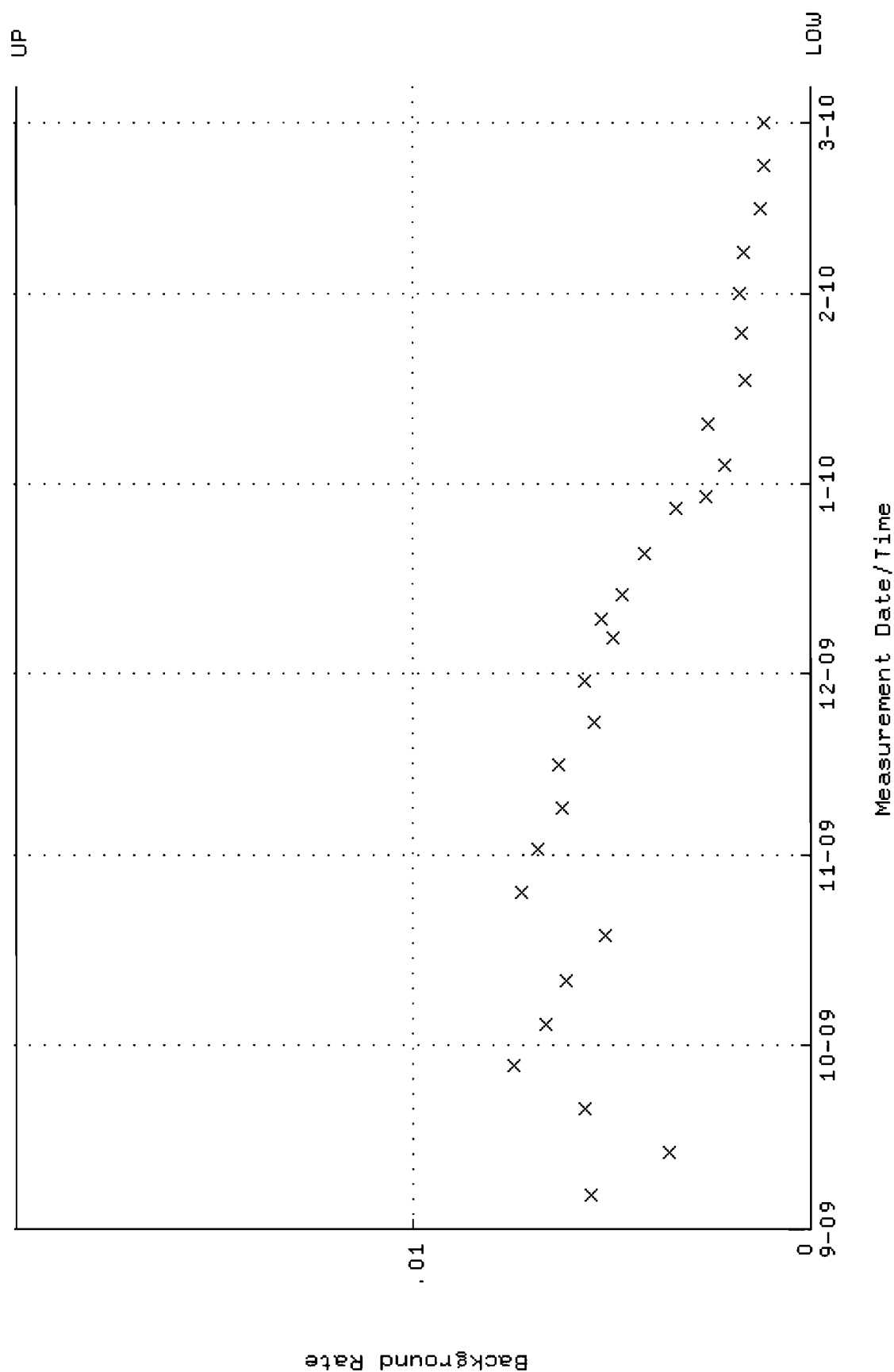
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 5-SEP-2009 09:03:11 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



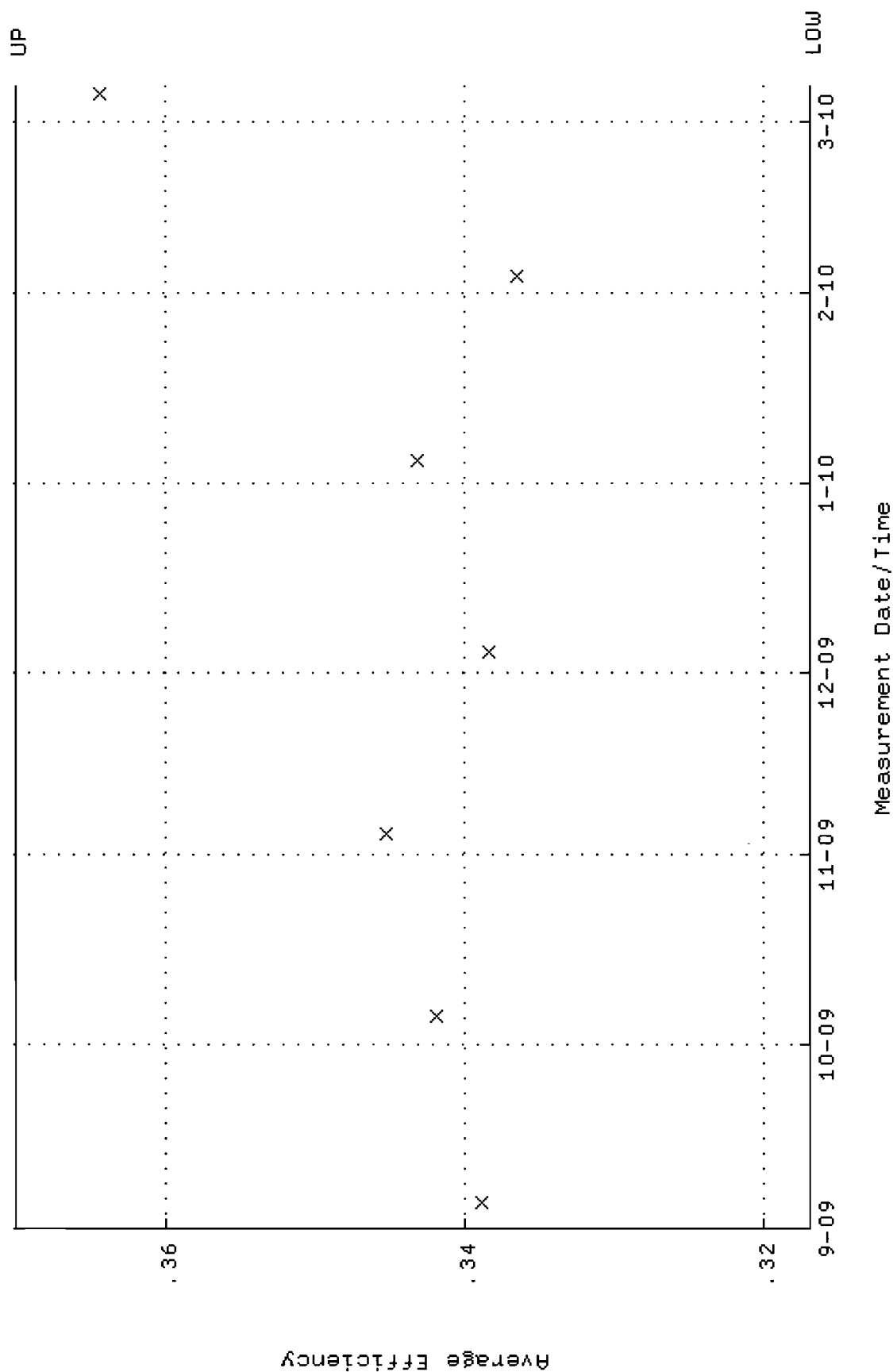
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 5-SEP-2009 09:03:11 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



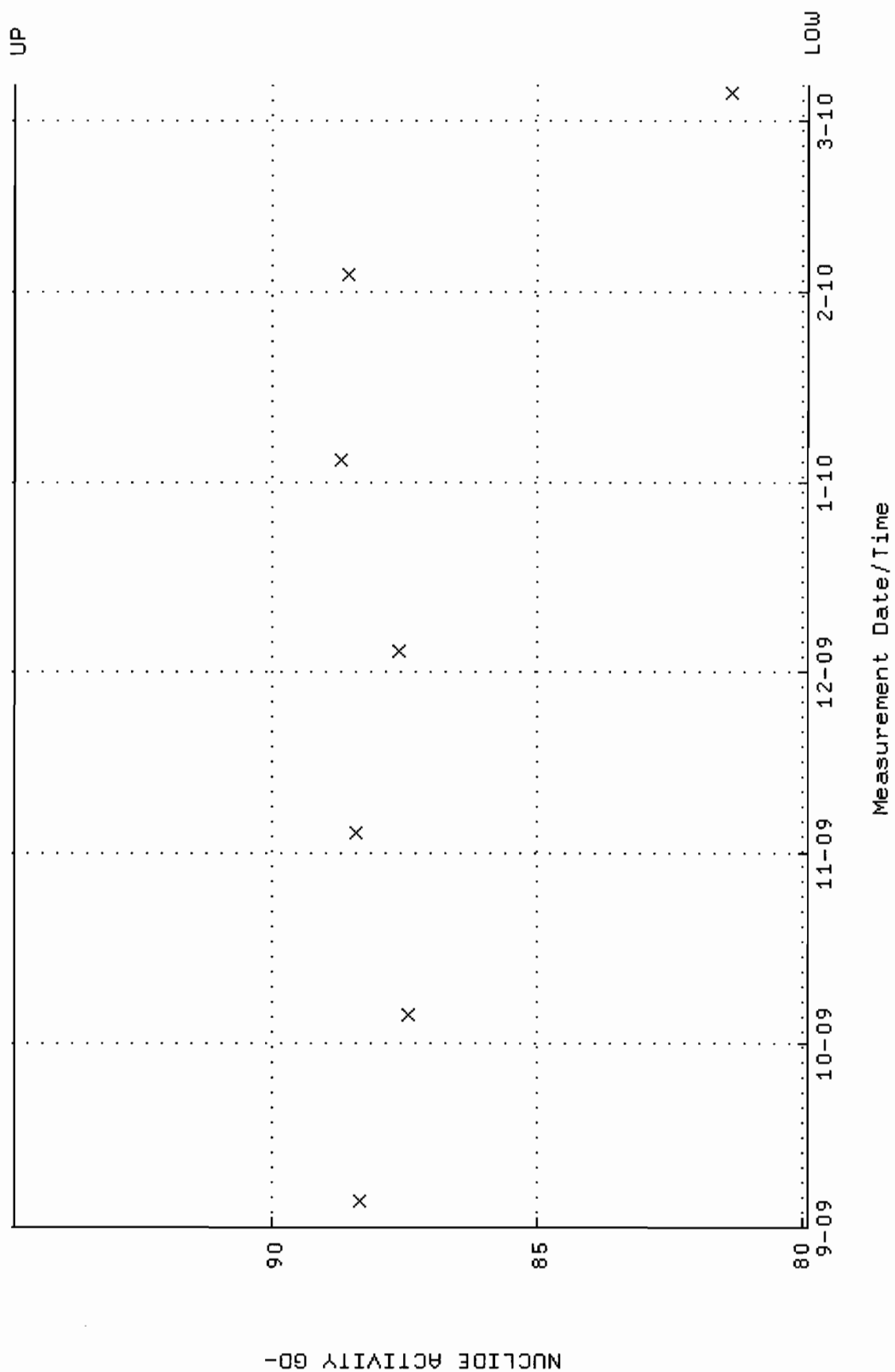
QA filename : DKA100:[ENV_ALPHA.QA.B]B037.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:05 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



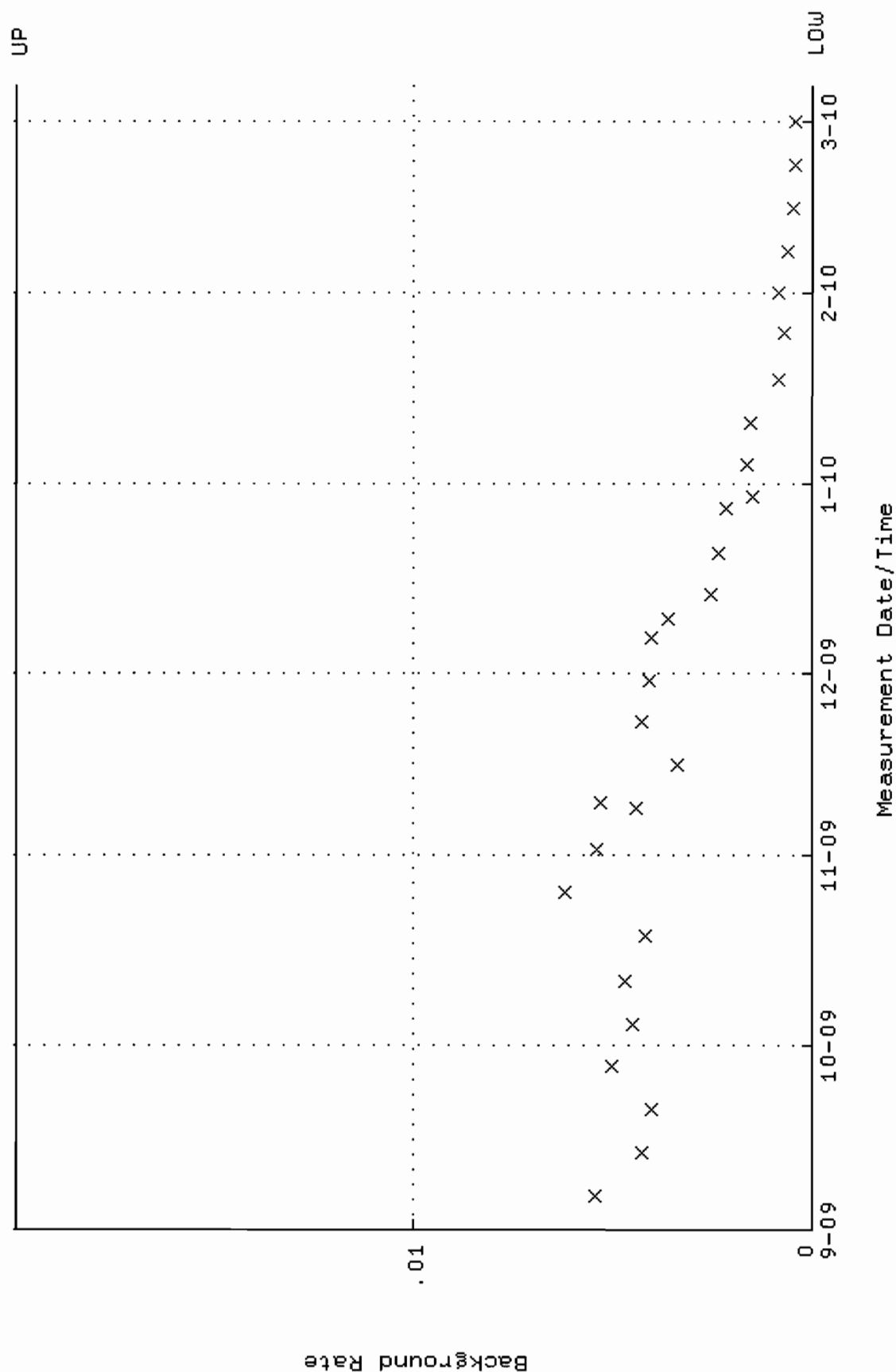
QA filename : DKA100:[ENV_ALPHA.QA.W]W043.QAF;102
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.316853 through 0.369991



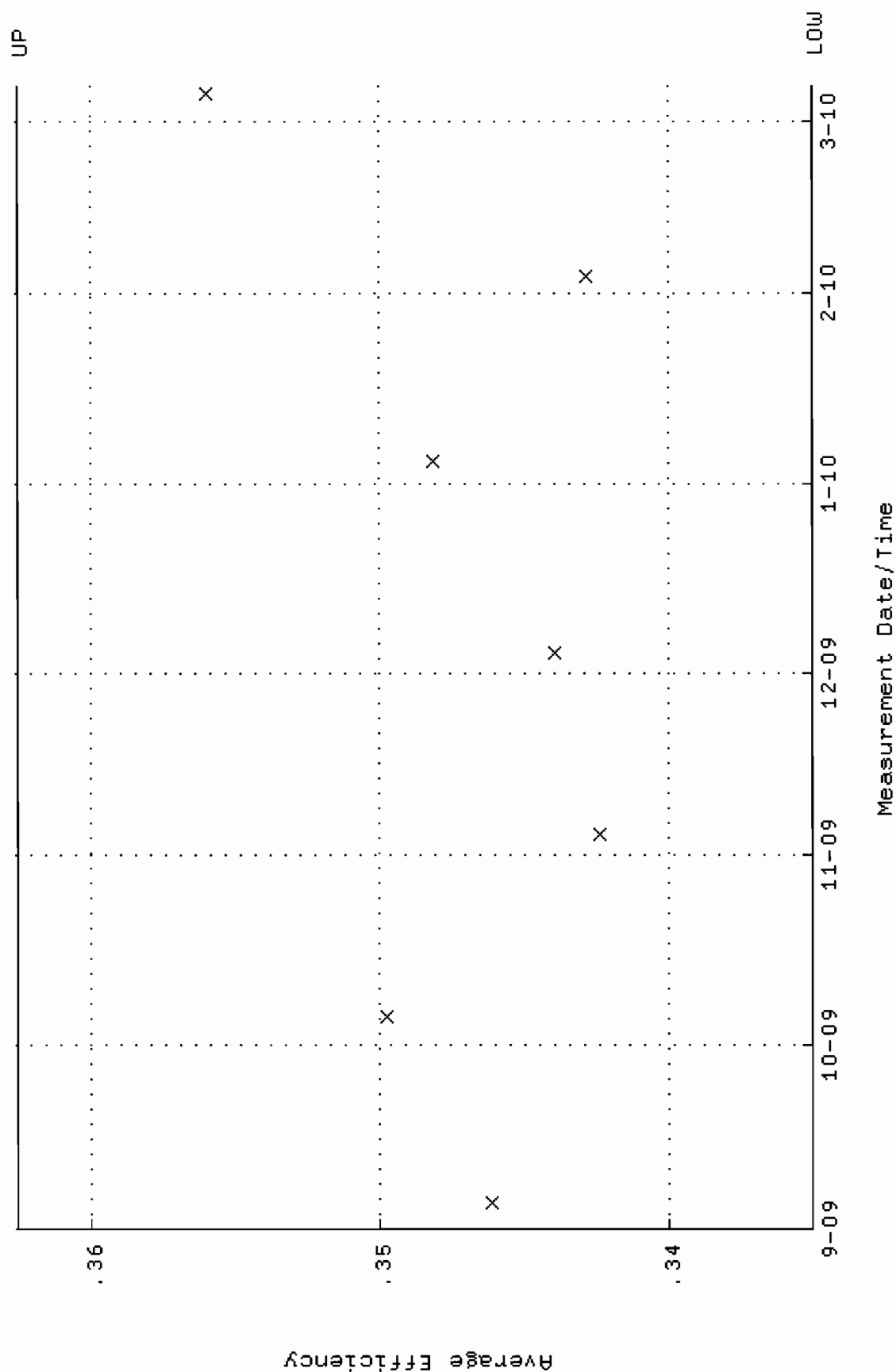
QA filename : DKA100:[ENV_ALPHA,QA,W]W043.QAF;102
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 79.8821 through 94.8741



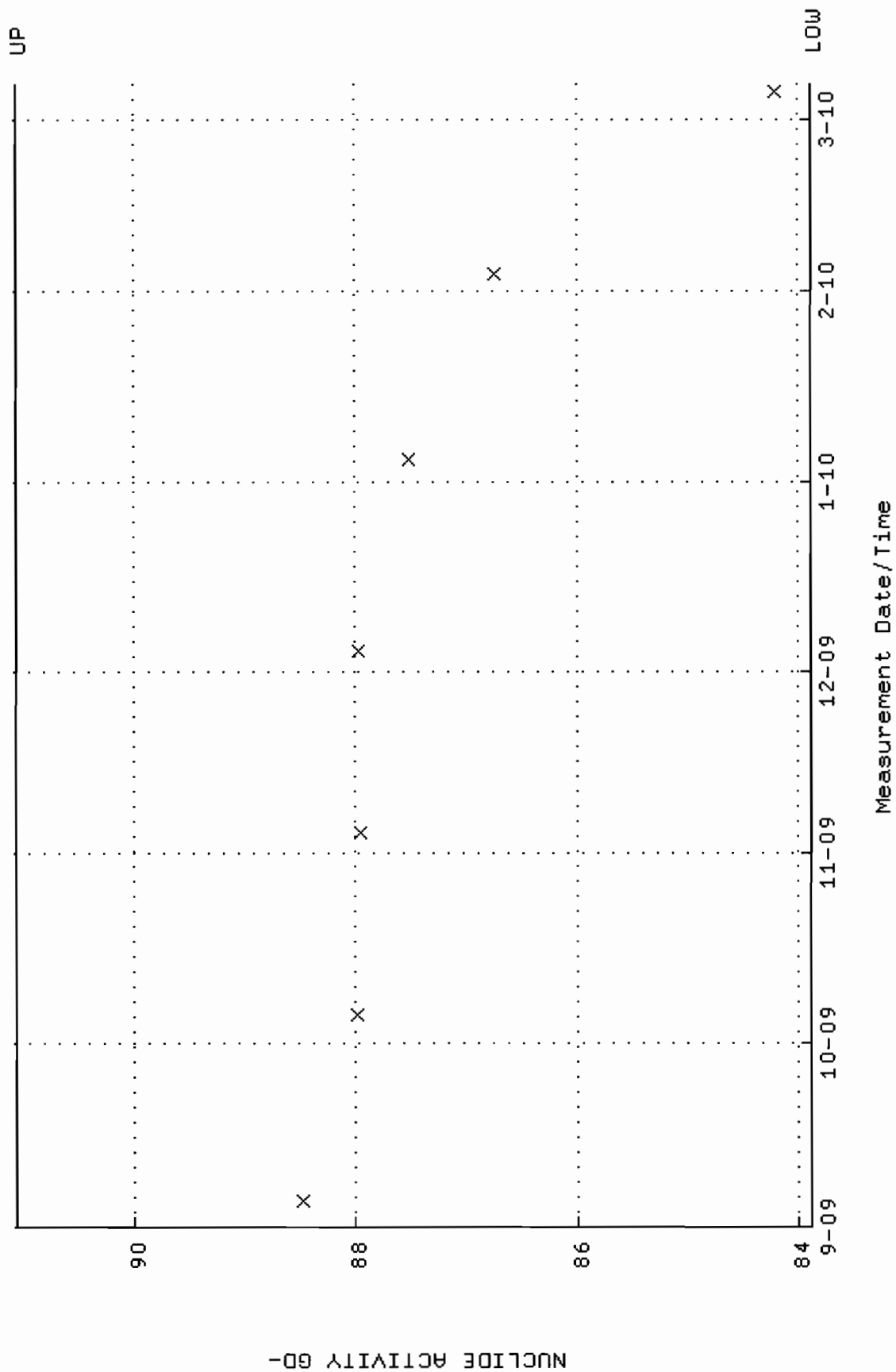
QA filename : DKA100:[ENV_ALPHA.QA.B]B043.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:06 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



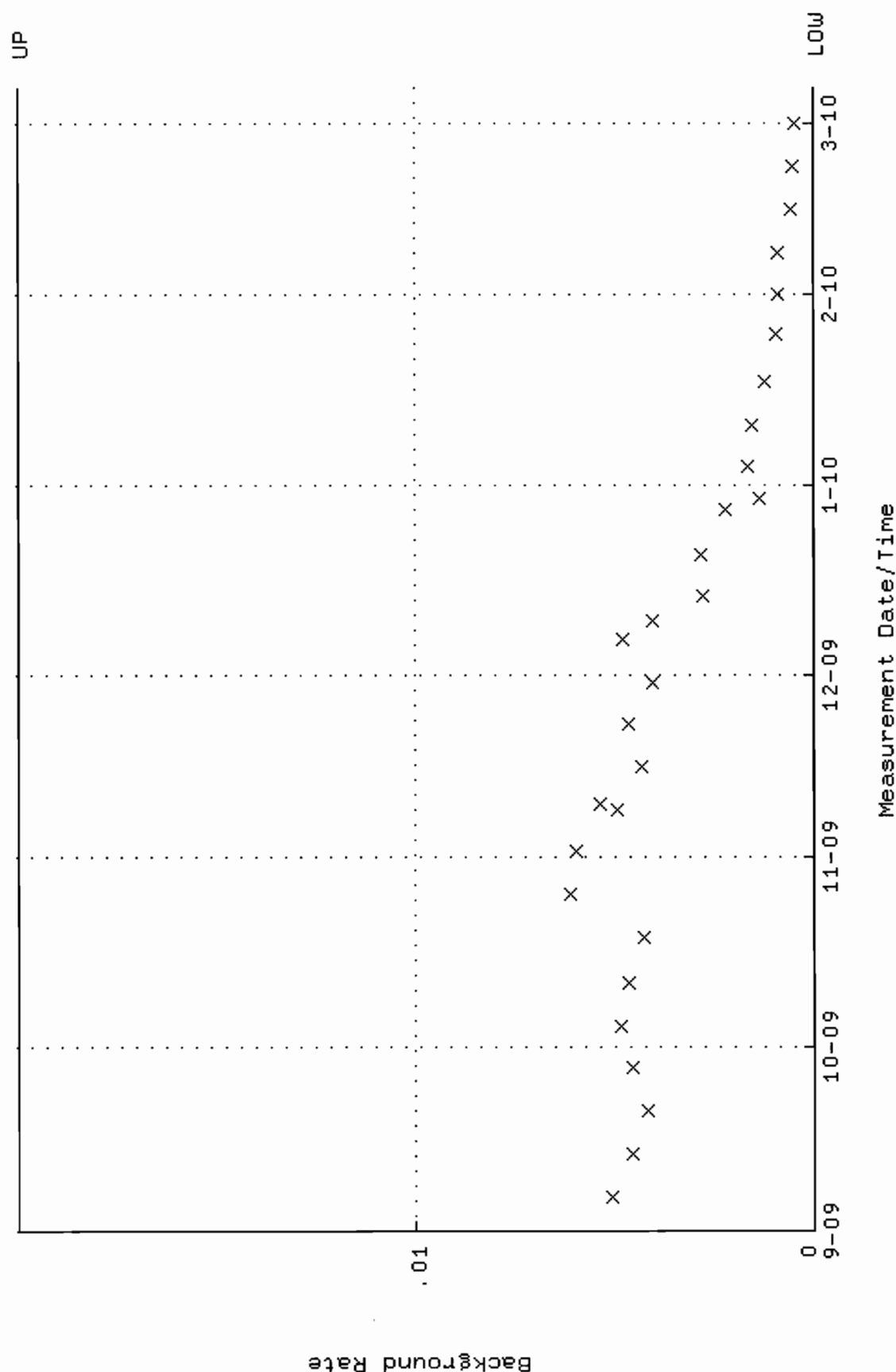
QA filename : DKA100:[ENV_ALPHA.QA.W]W044.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.335013 through 0.362525



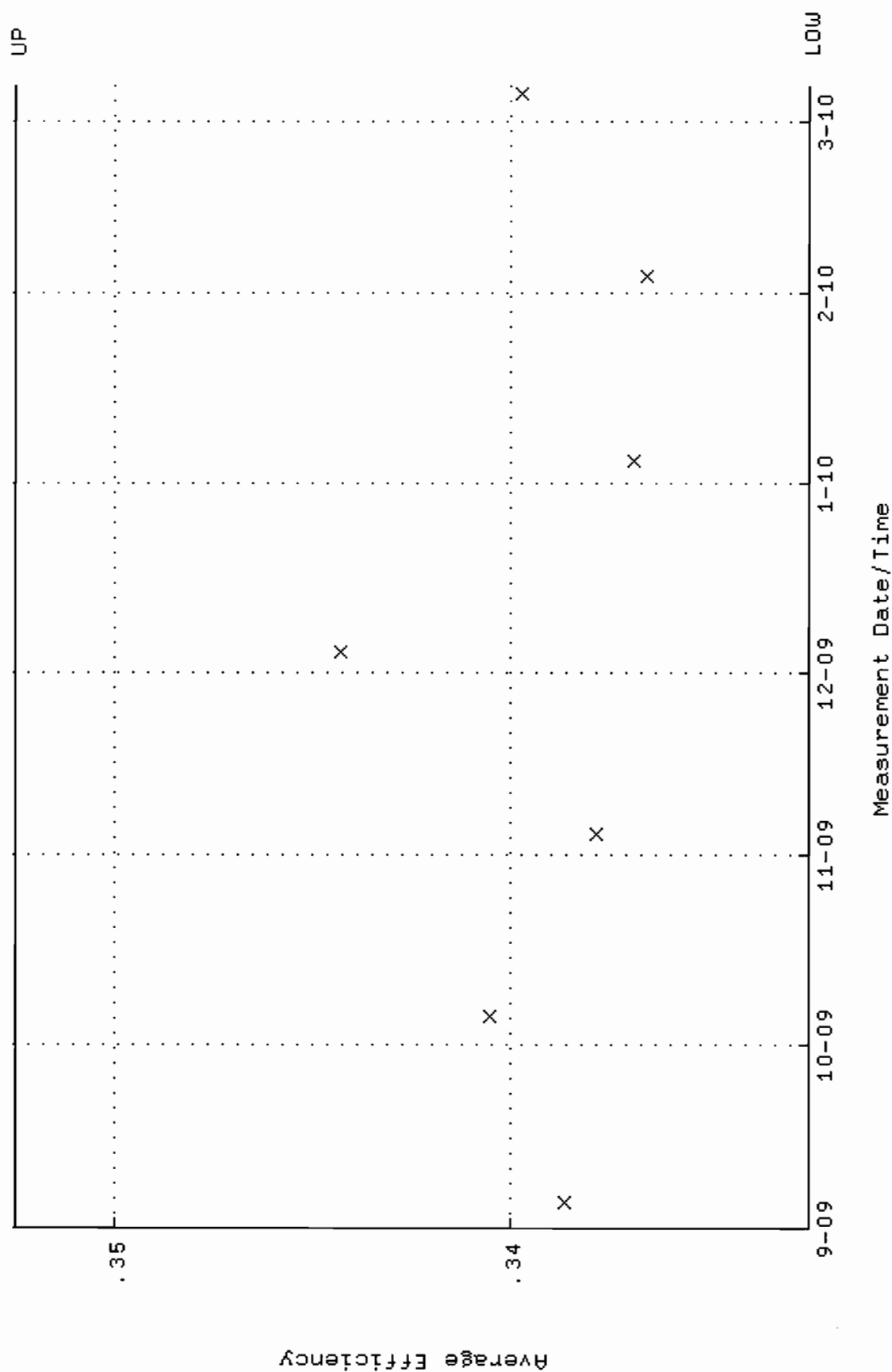
QA filename : DKA100:[ENV_ALPHA.QA.W]W044.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 83.8858 through 91.0588



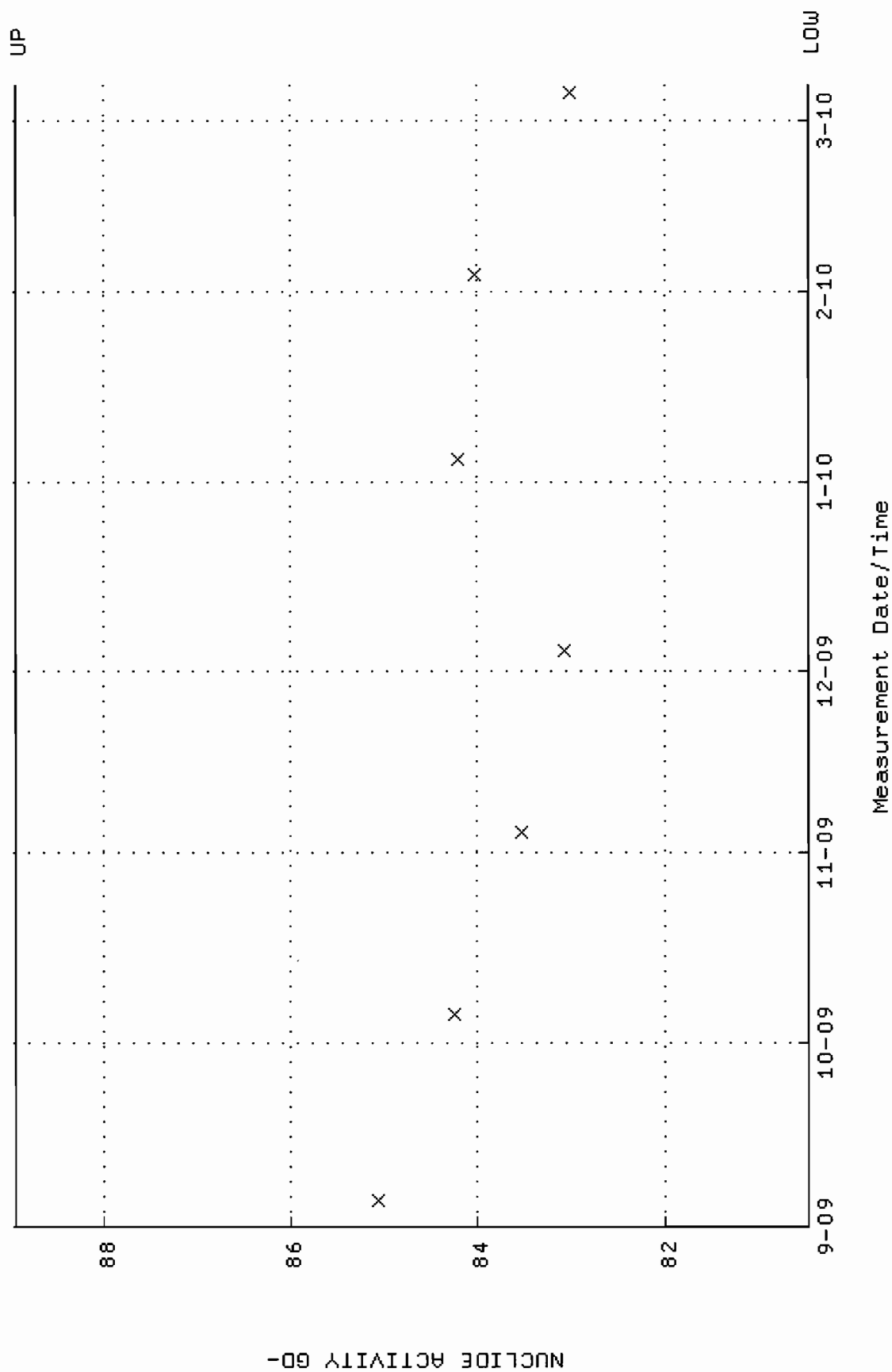
QA filename : DKA100:[ENV_ALPHA.QA.B]B044.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:06 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



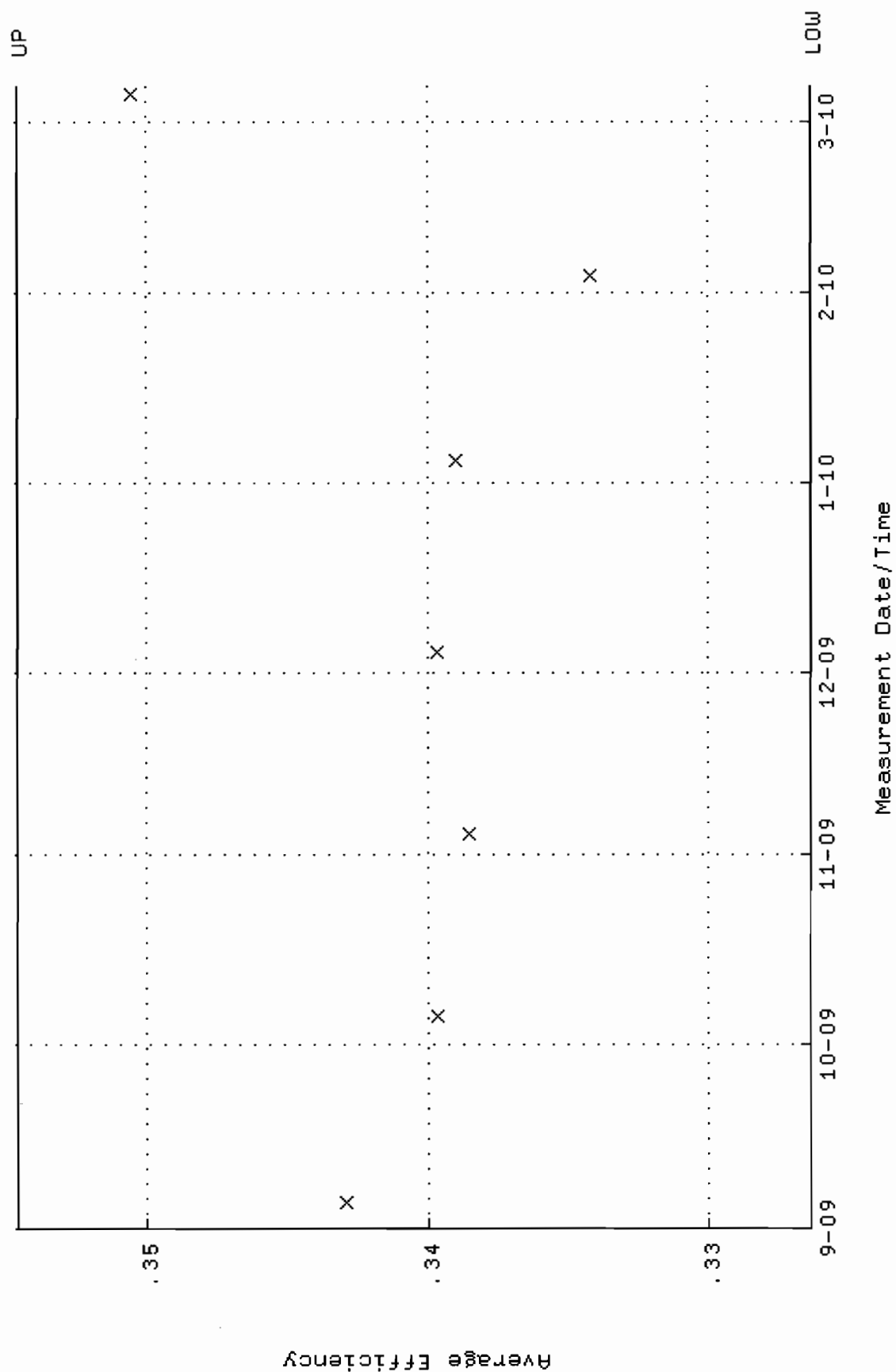
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.332472 through 0.352472



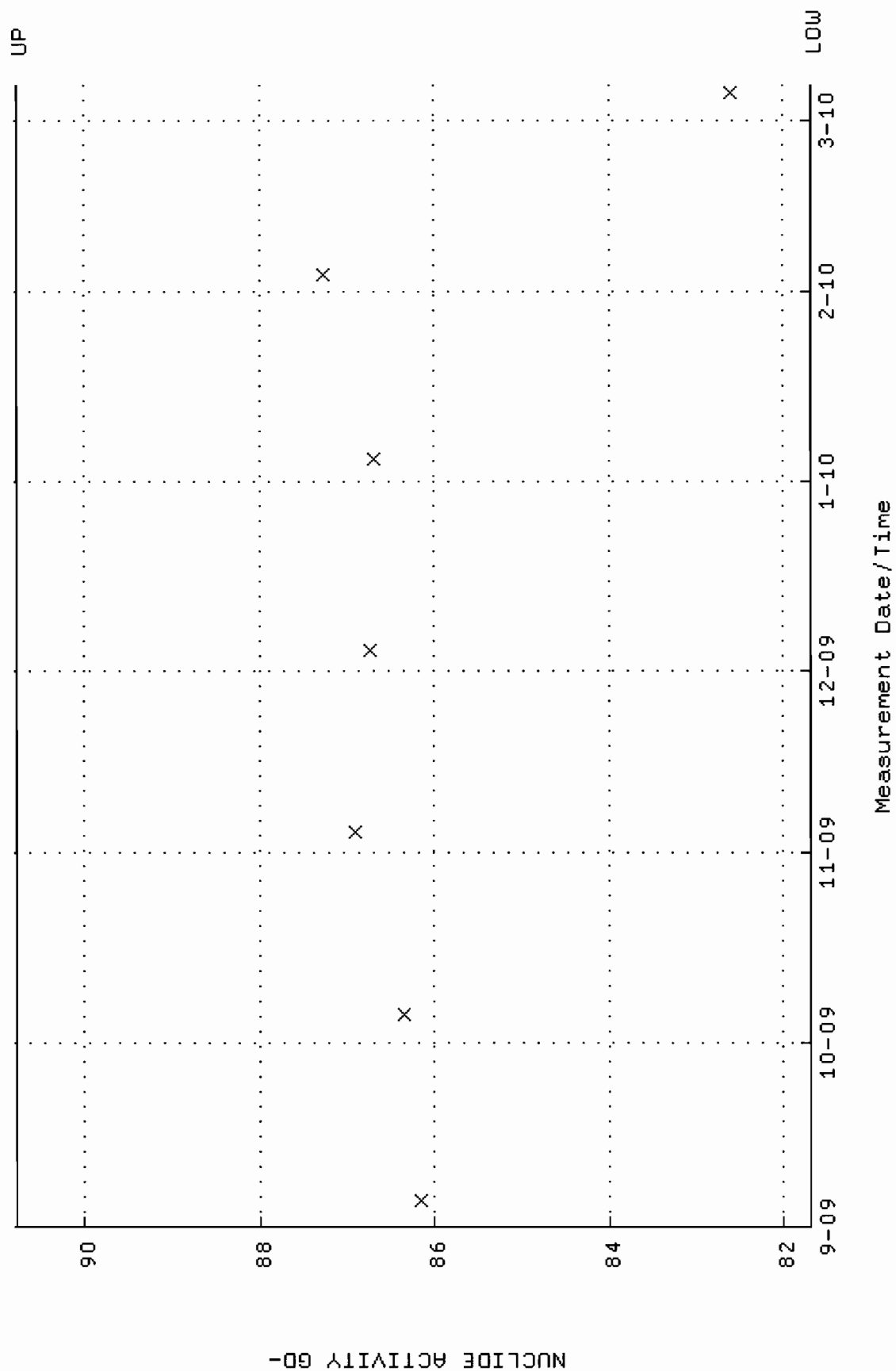
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 80.4622 through 88.9320



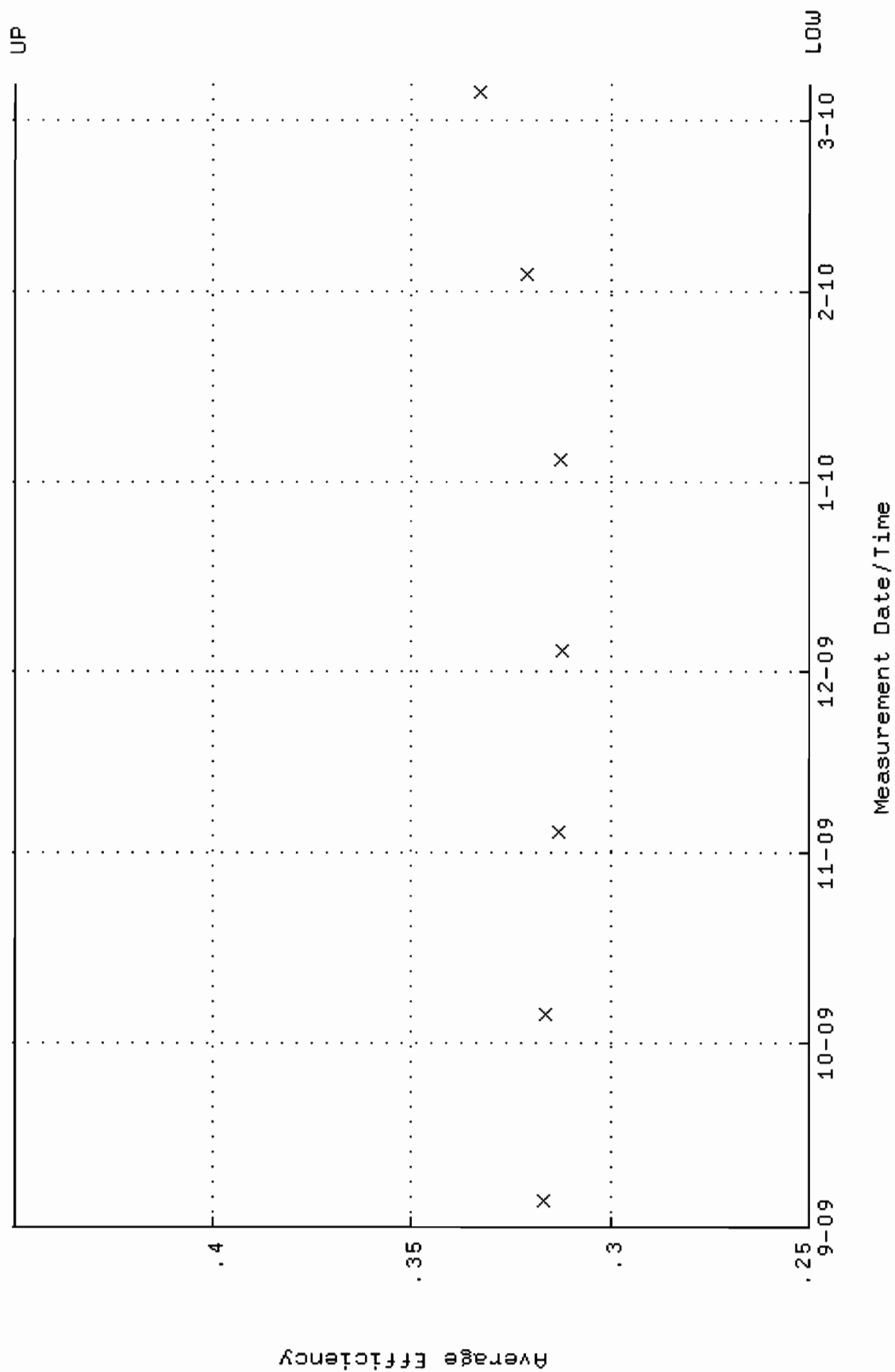
QA filename : DKA100:[ENV_ALPHA.QA.W]W046.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.326384 through 0.354578



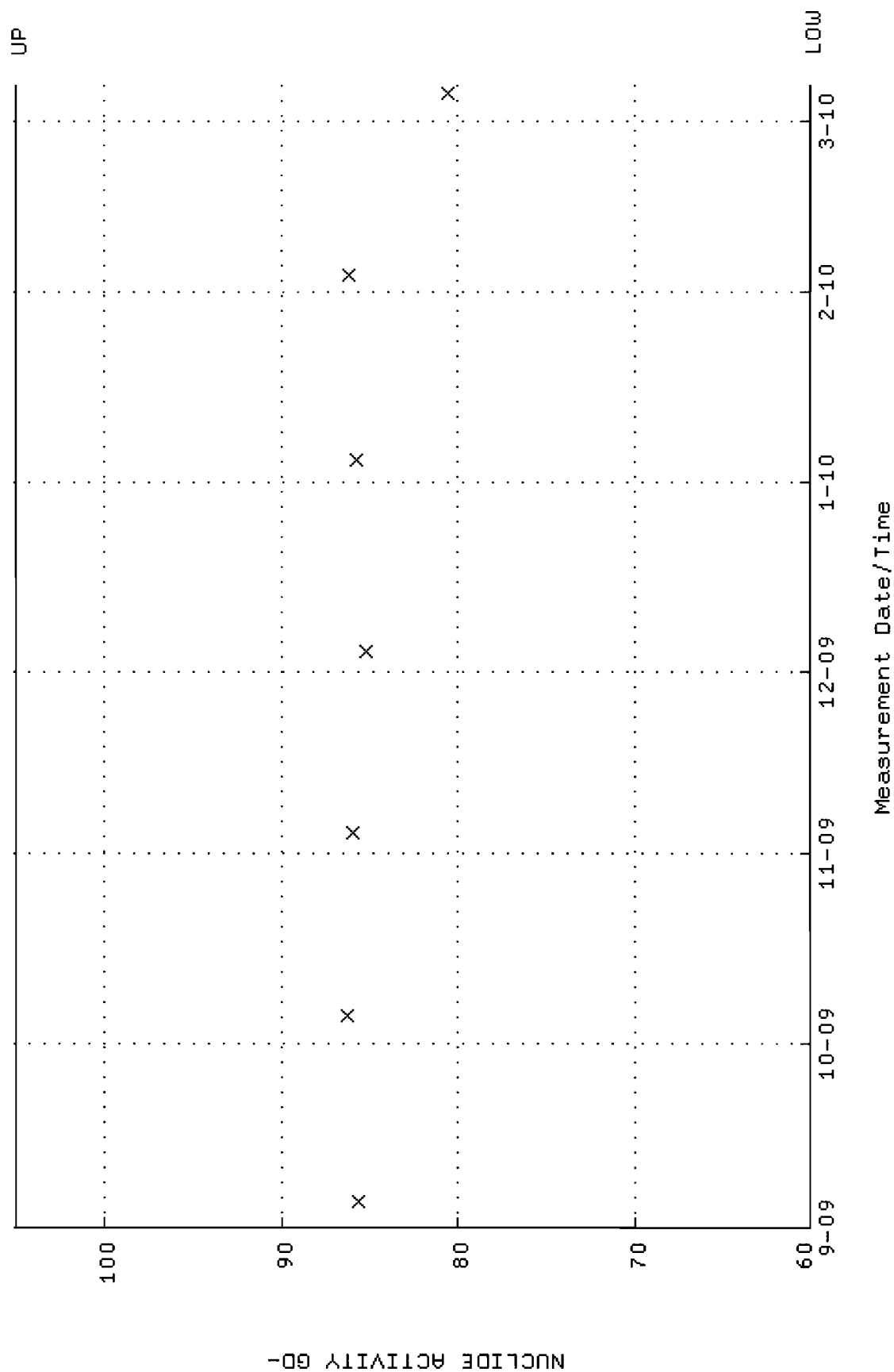
QA filename : DKA100:[ENV_ALPHA.QA.W]W046.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 81.6839 through 90.7805



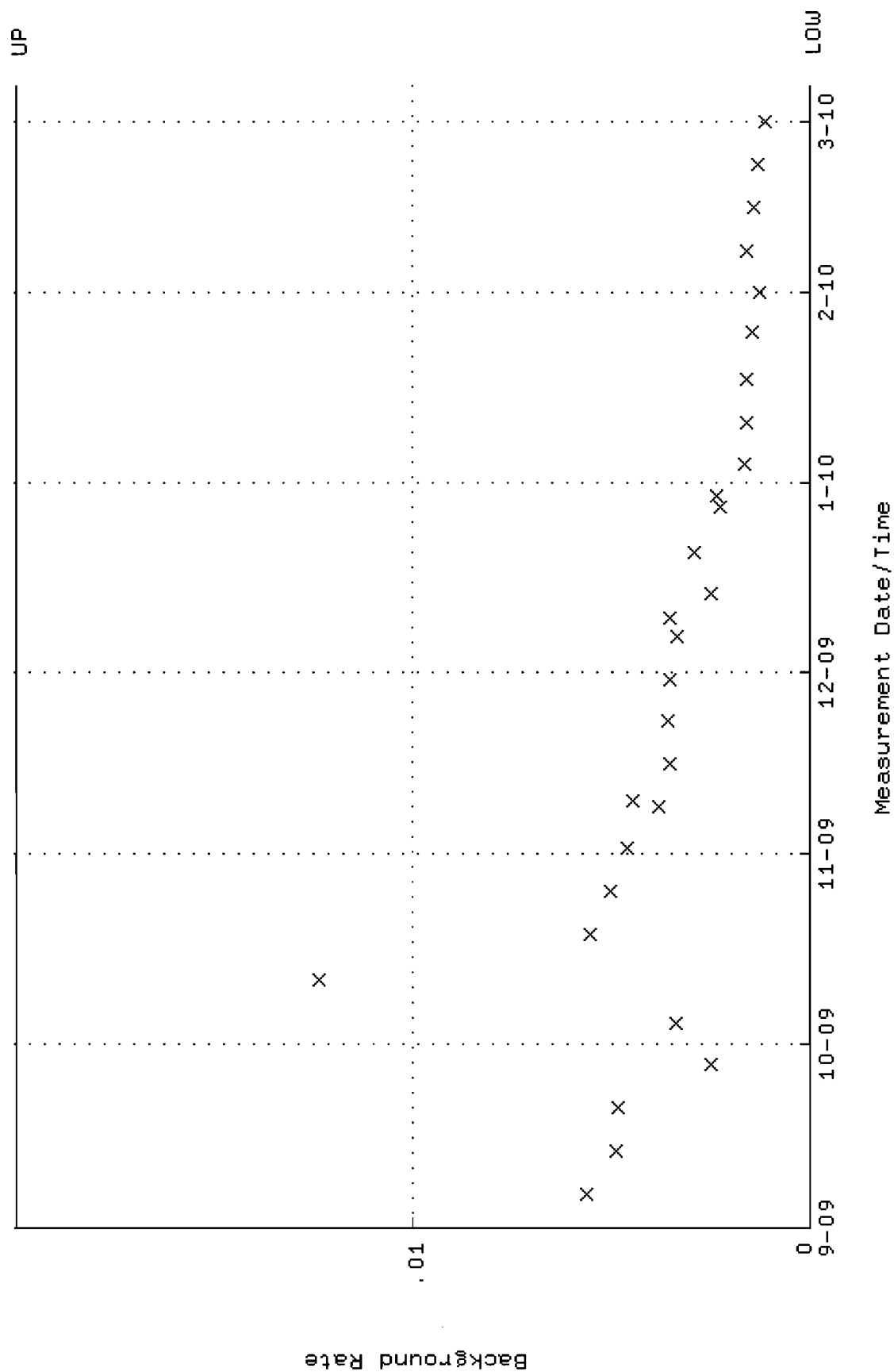
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



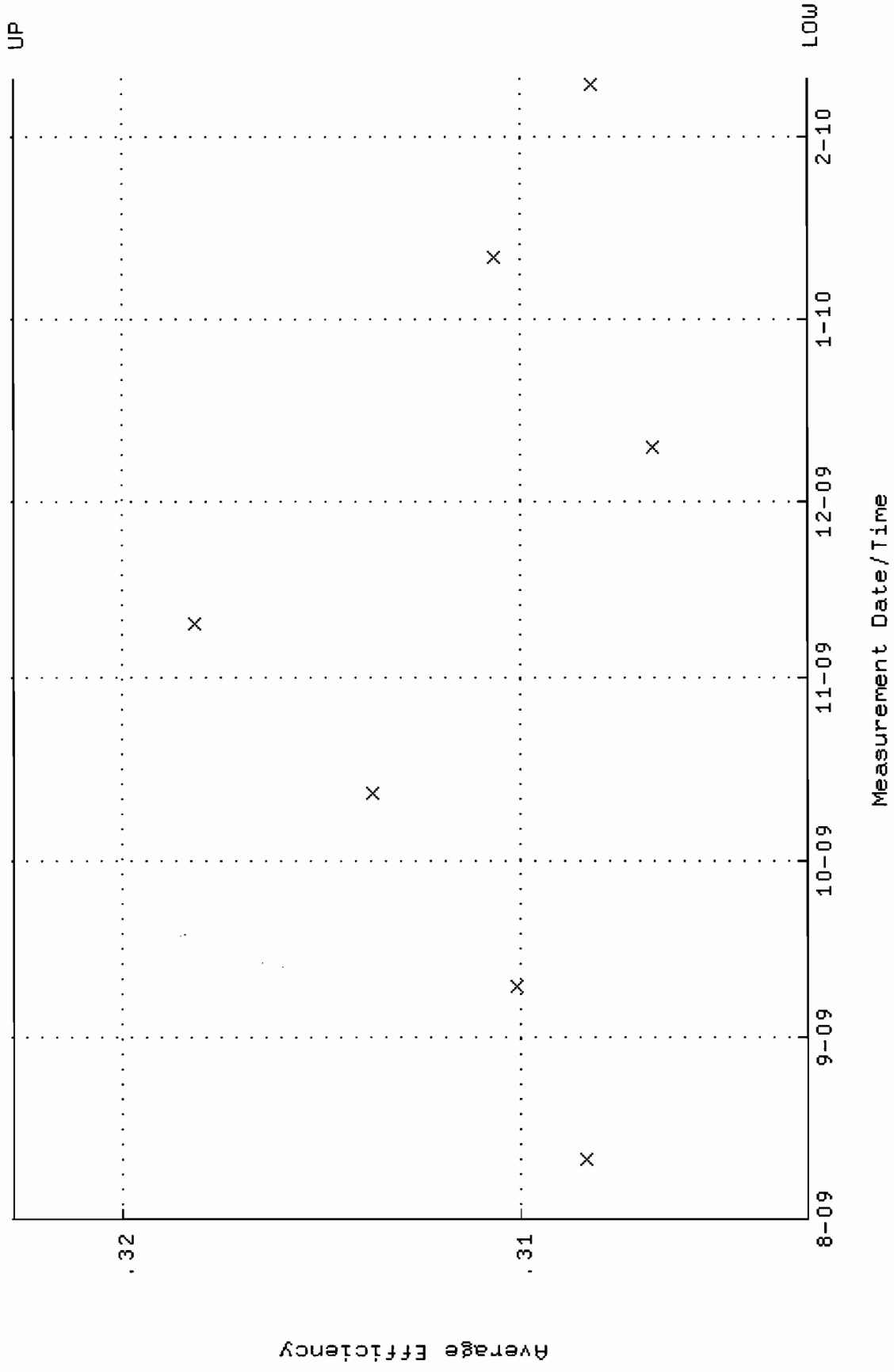
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 5-SEP-2009 09:03:12 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



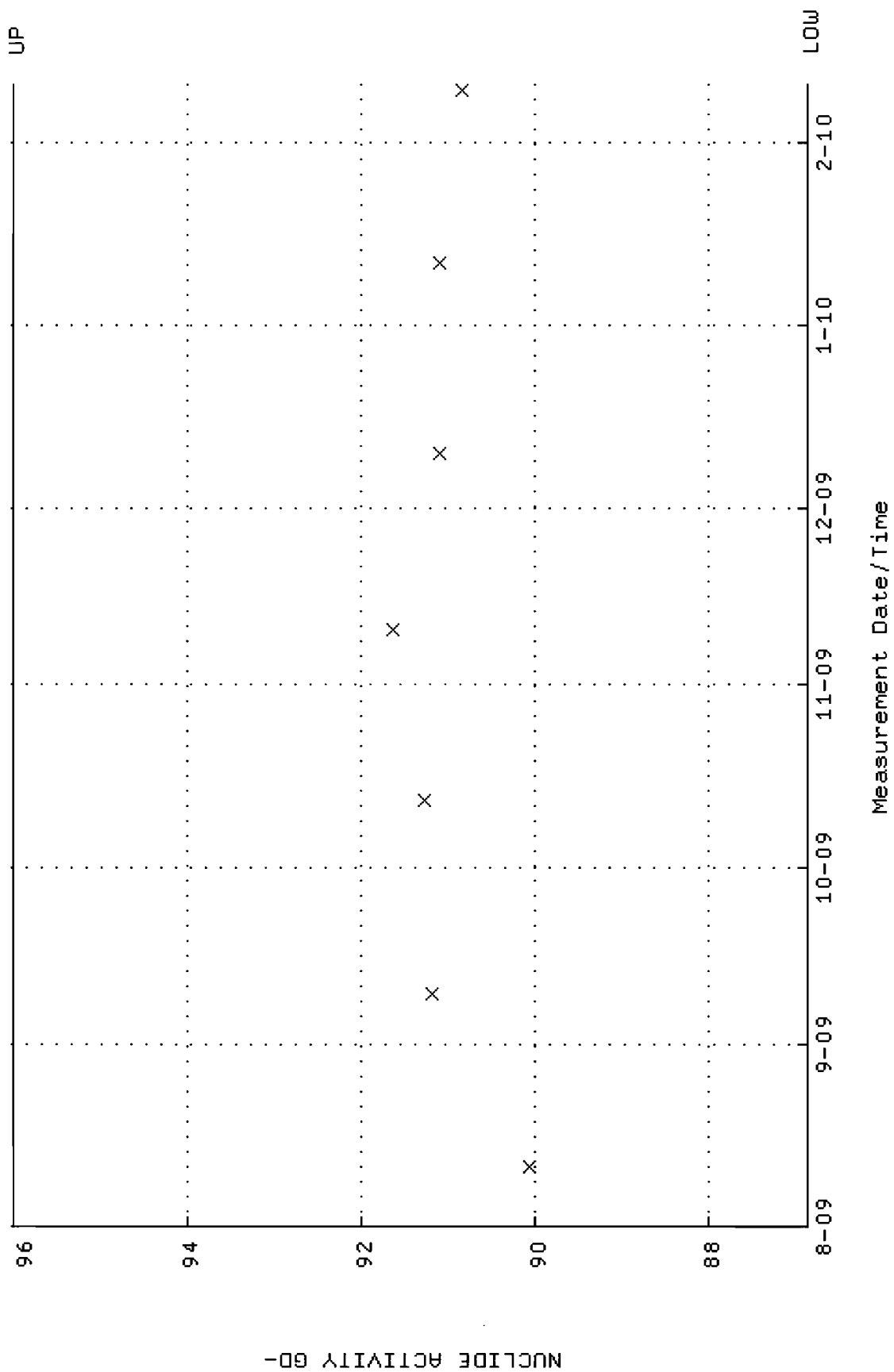
QA filename : DKA100:[ENV_ALPHA.QA.B]B048.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 6-SEP-2009 14:27:06 through 6-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



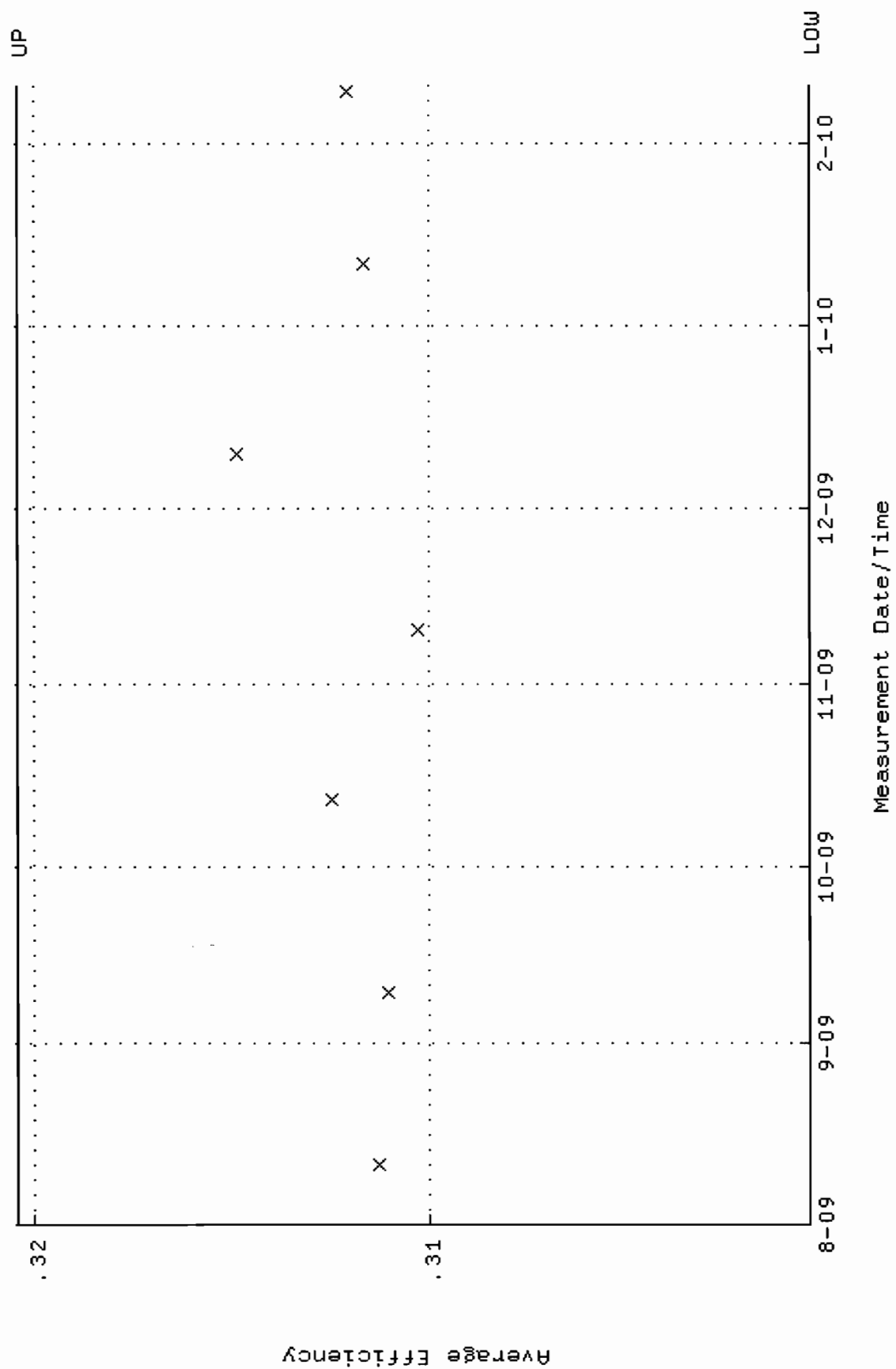
QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.302750 through 0.322750



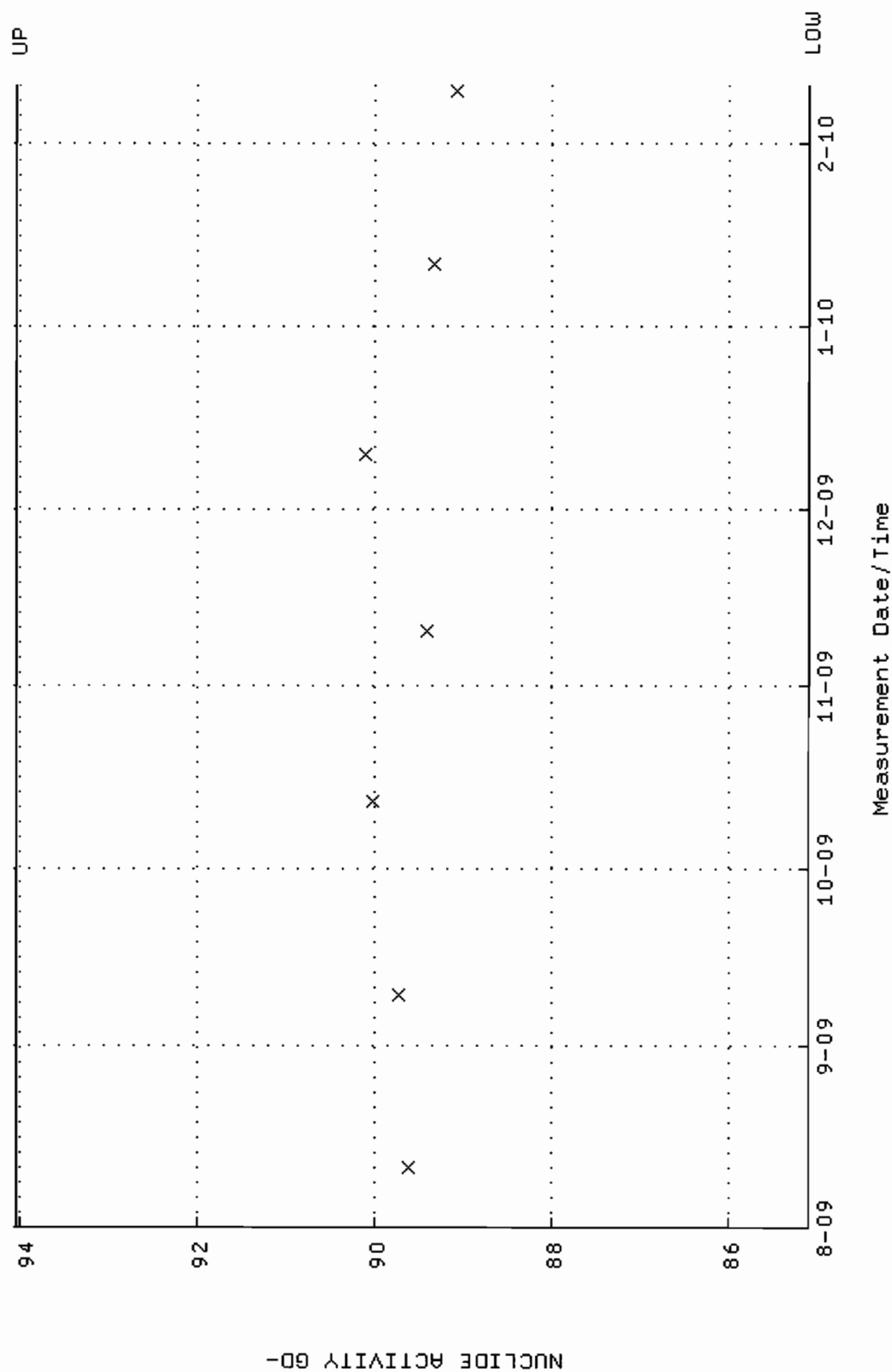
QA filename : DKA100:[ENV_ALPHA.QA.W]w065.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.8638 through 96.0074



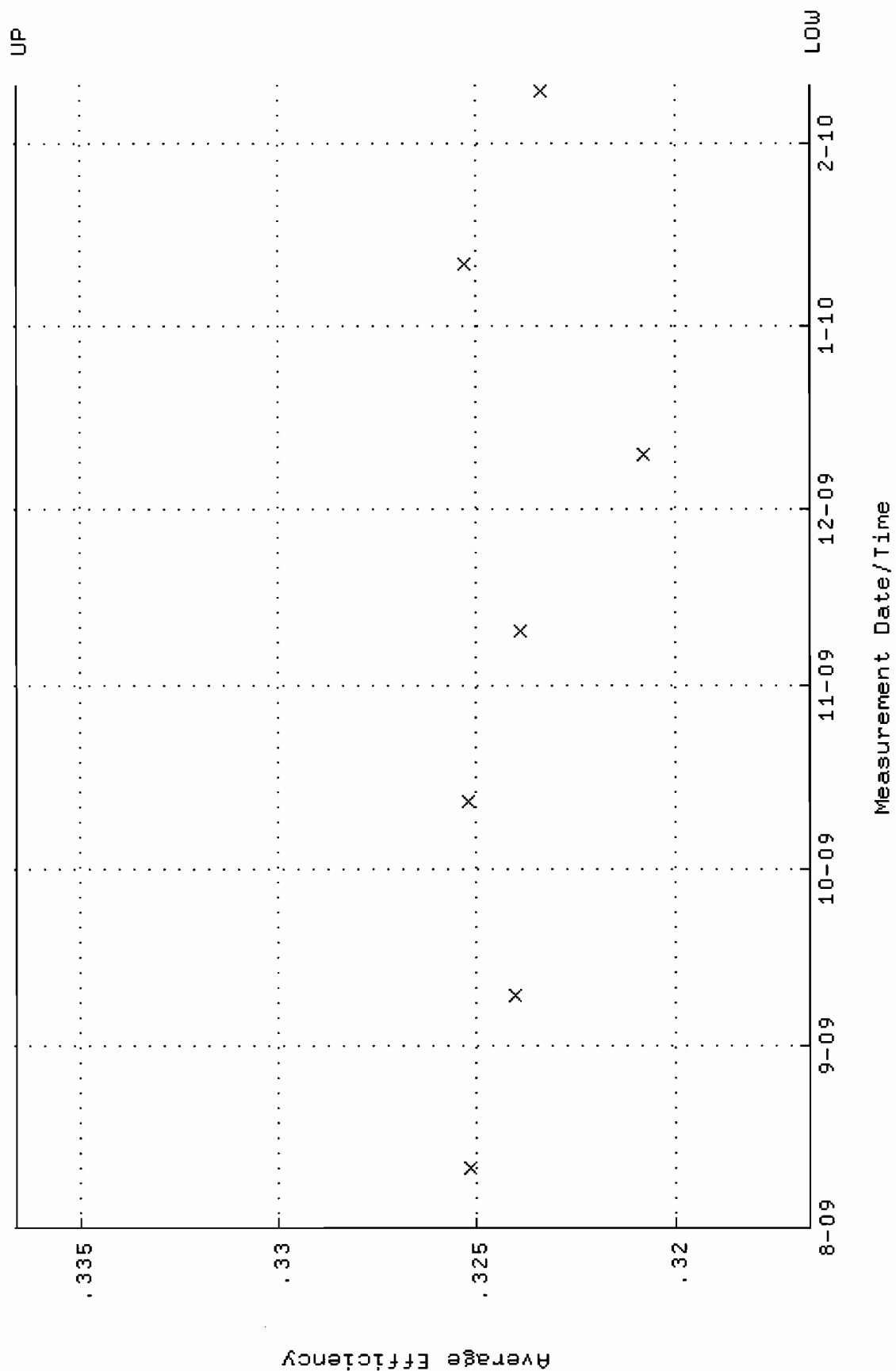
QA filename : DKA100:[ENV_ALPHA.QA.W]W066.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.300416 through 0.320416



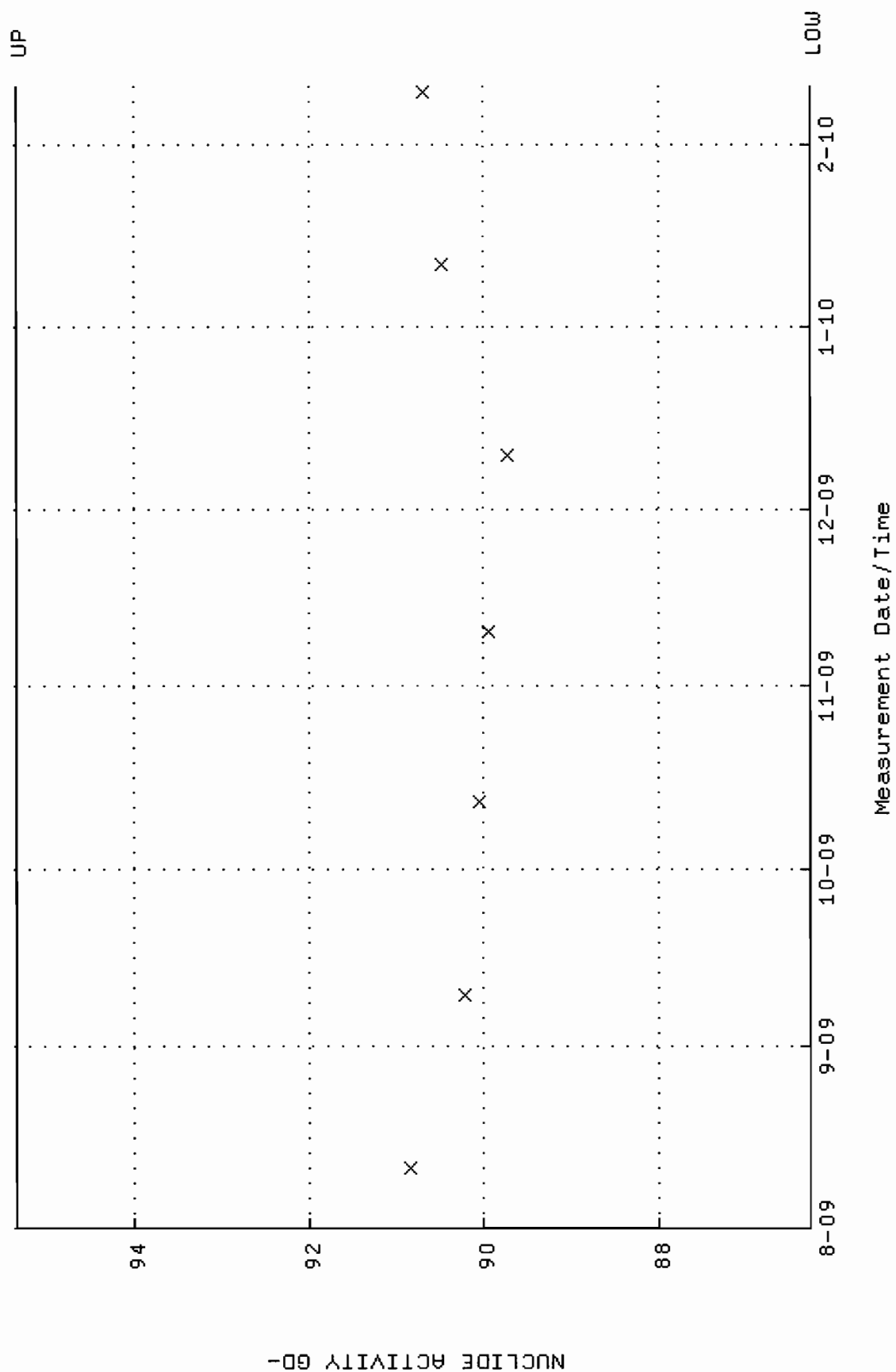
QA filename : DKA100:[ENV_ALPHA.QA.W]W066.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.0864 through 94.0428



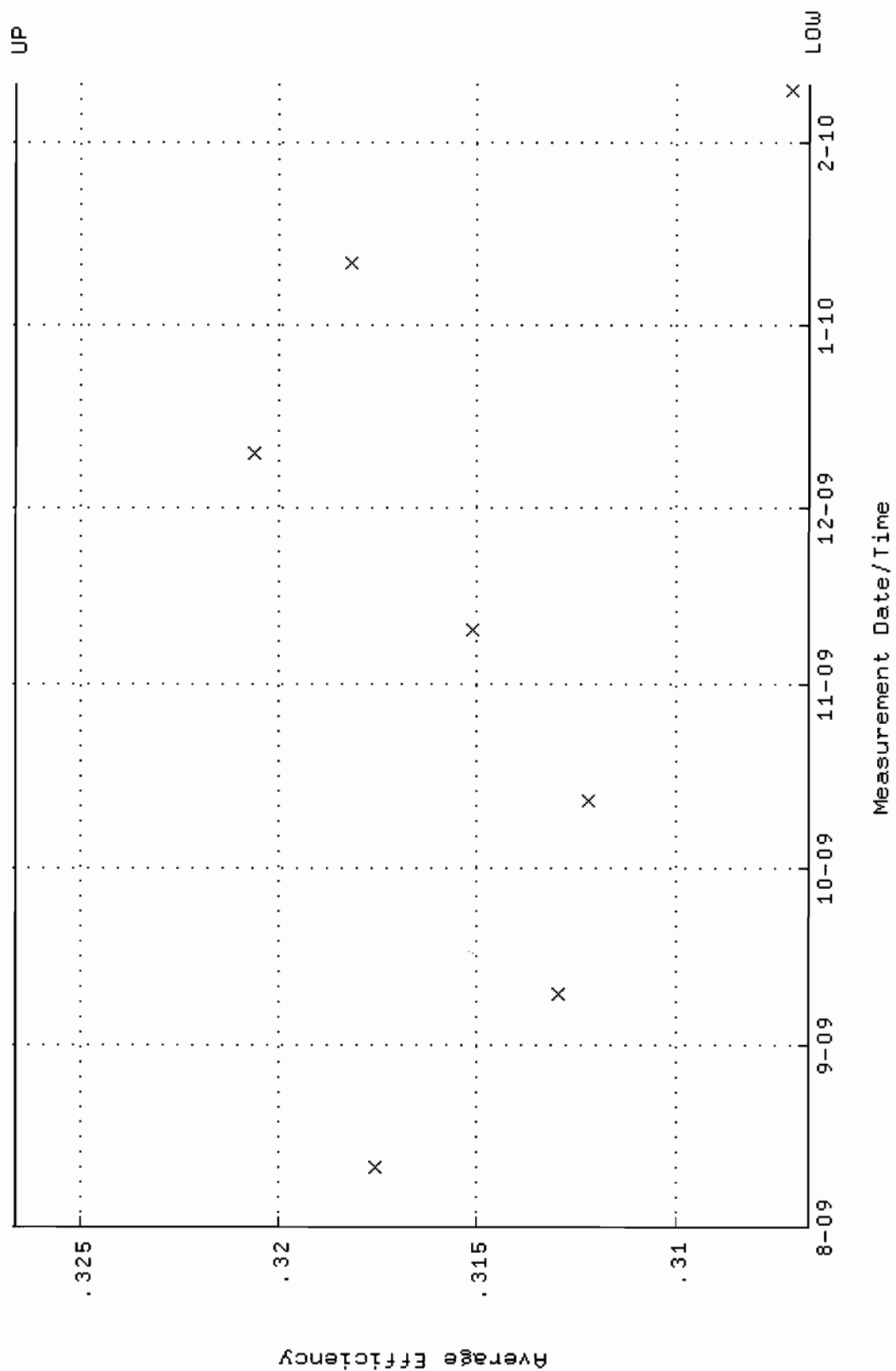
QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.316597 through 0.336597



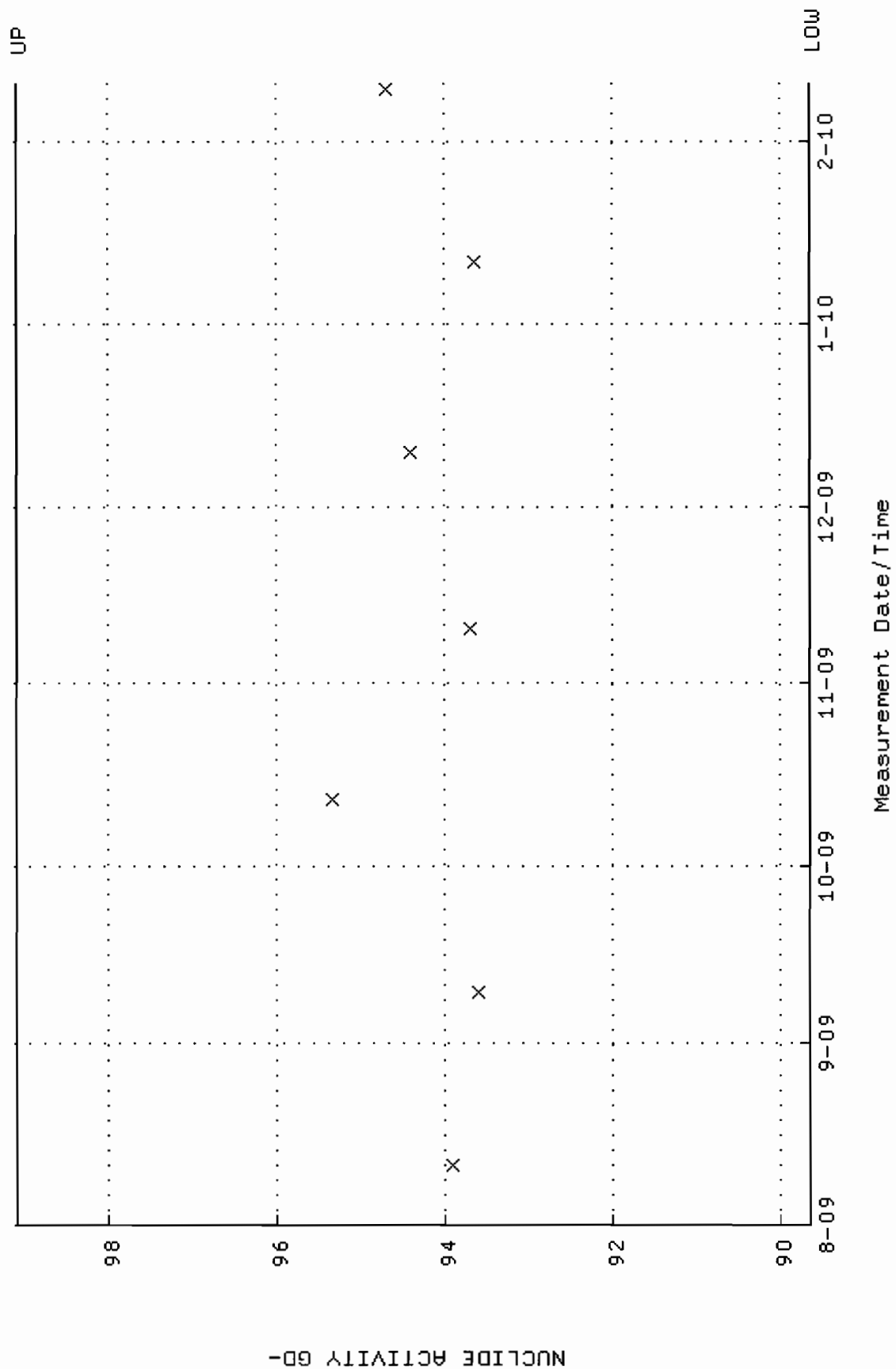
QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.2683 through 95.3491



QA filename : DKA100:[ENV_ALPHA.QA.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

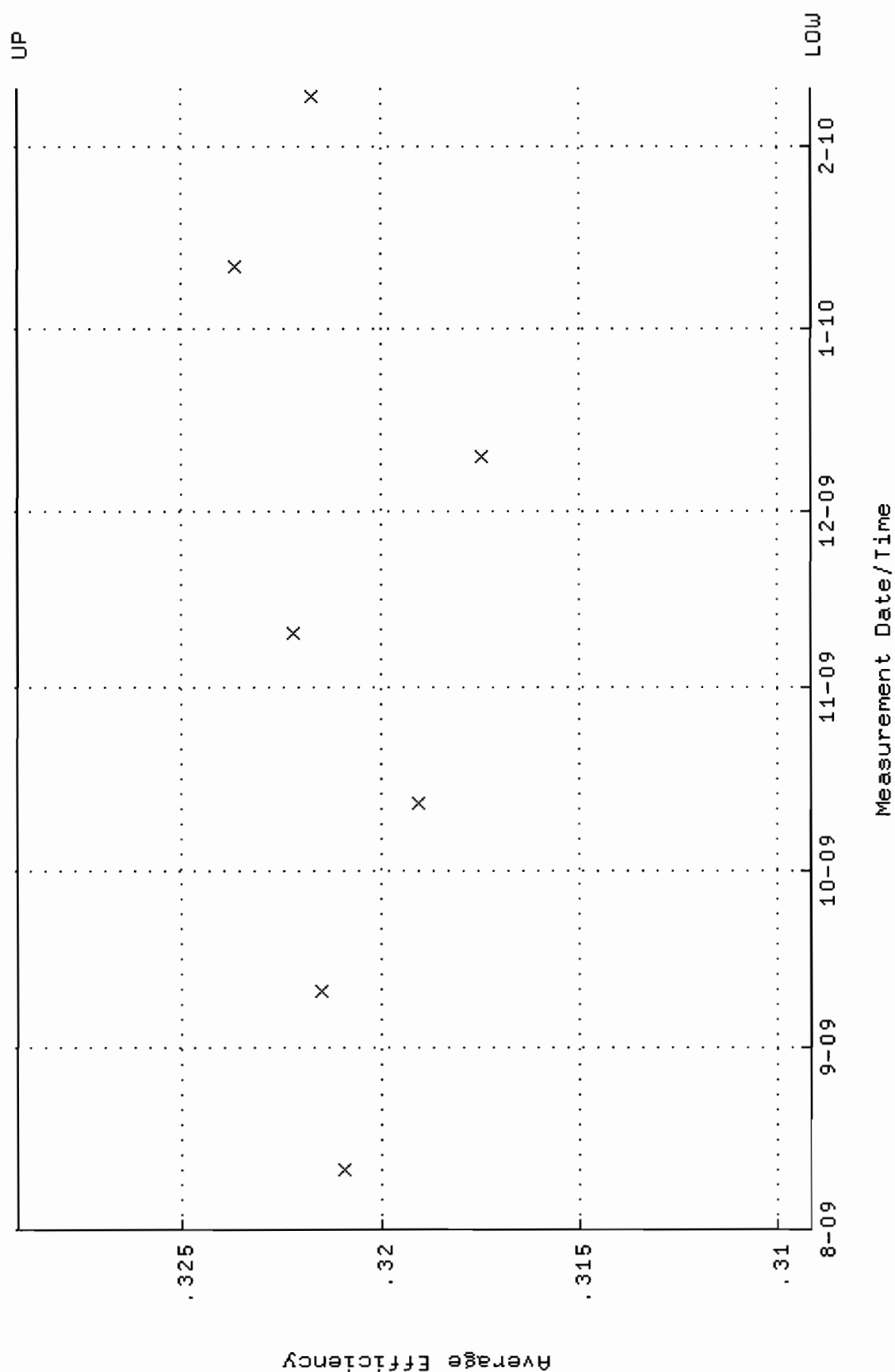


QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3

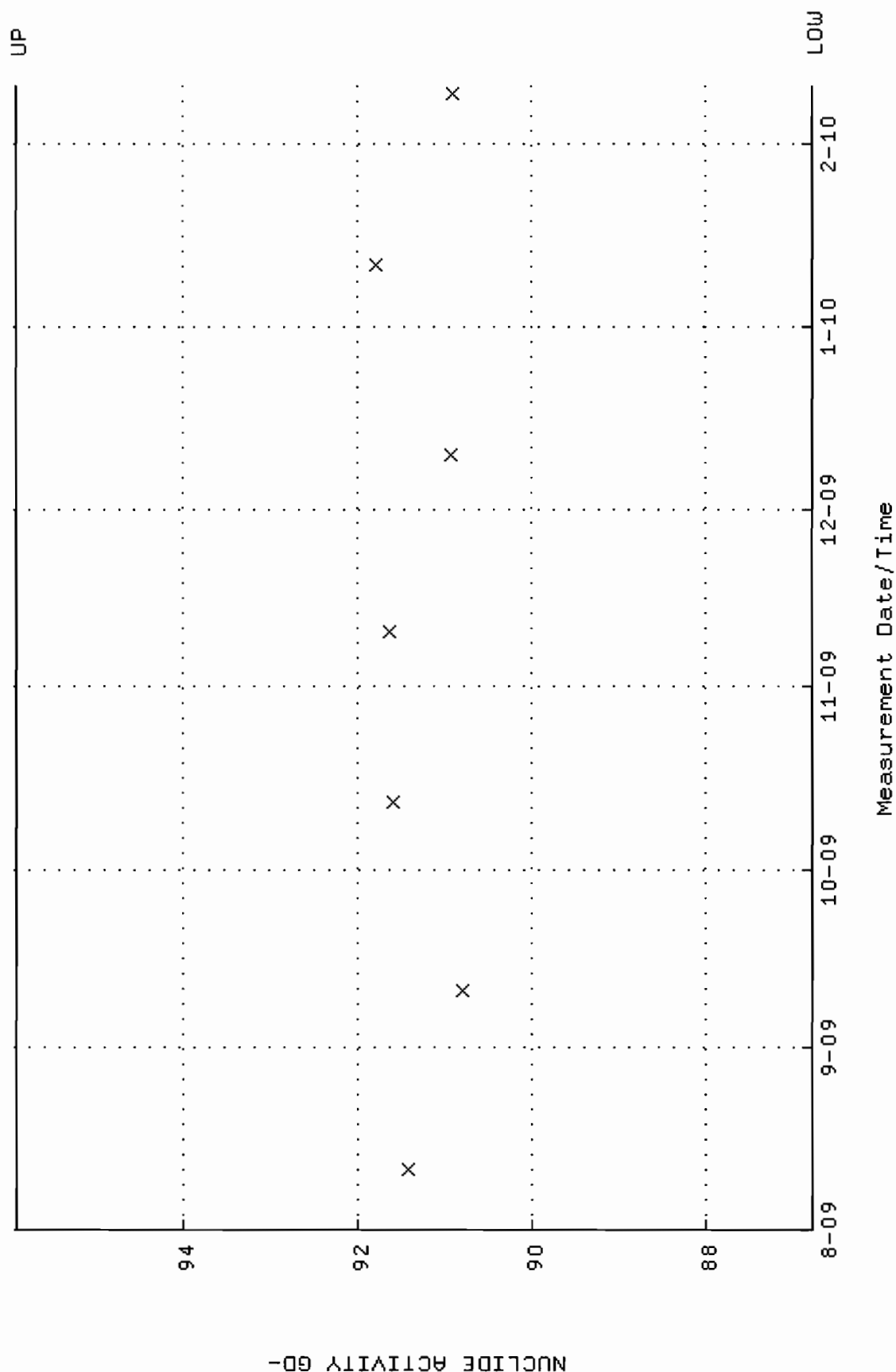
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00

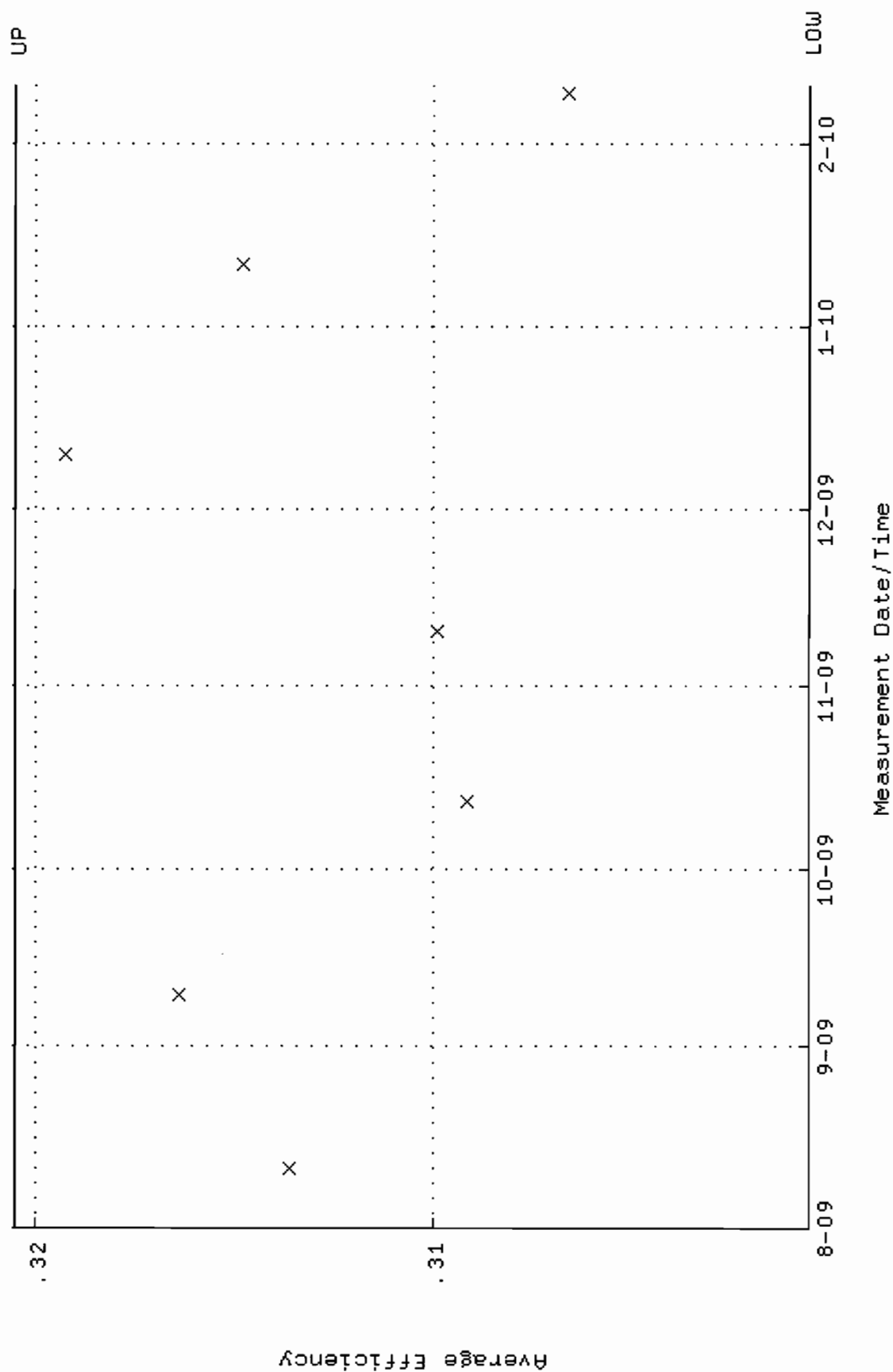
Lower/Upper Lmts: 0.309161 through 0.329161



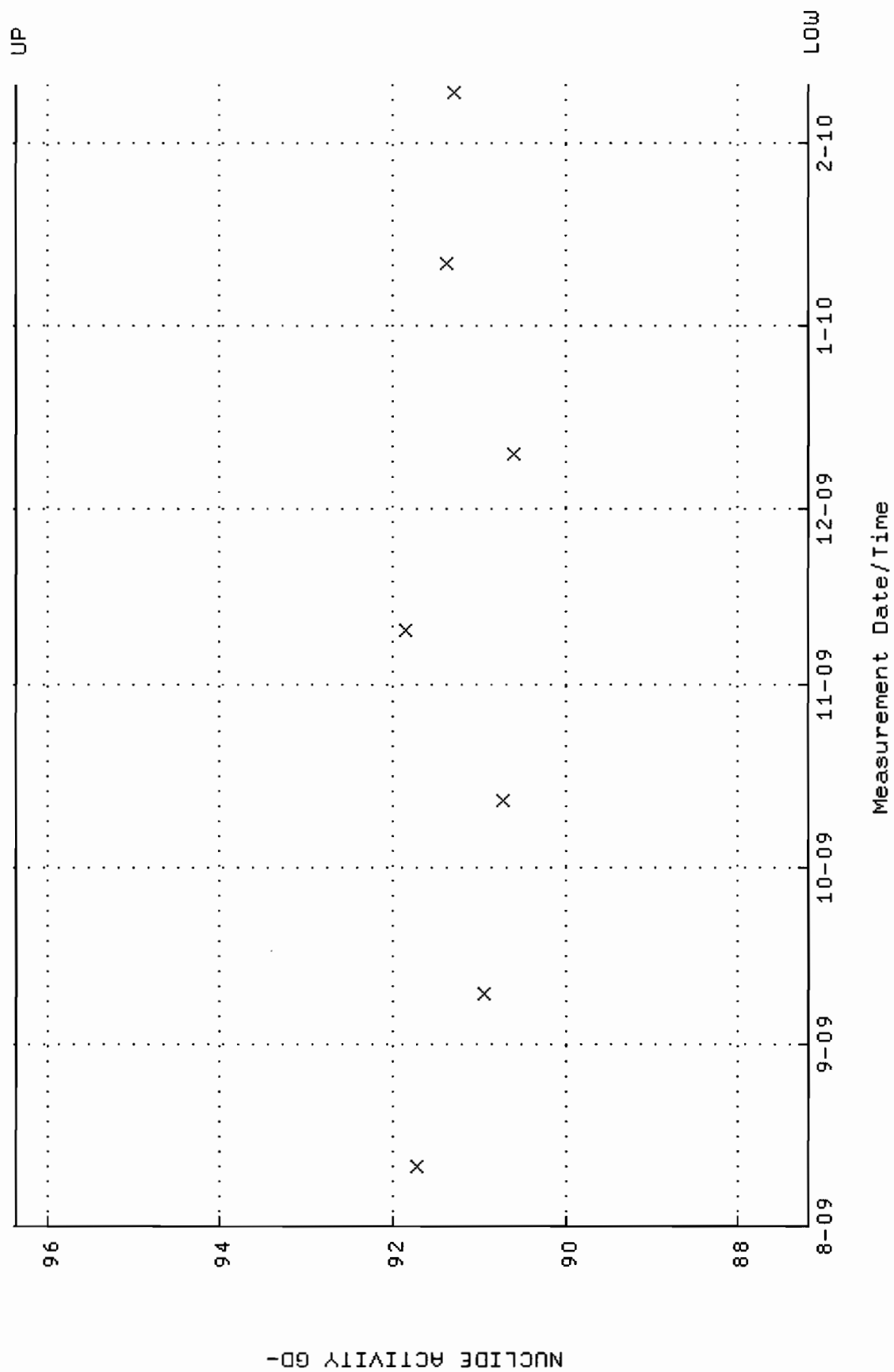
QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.7769 through 95.9113



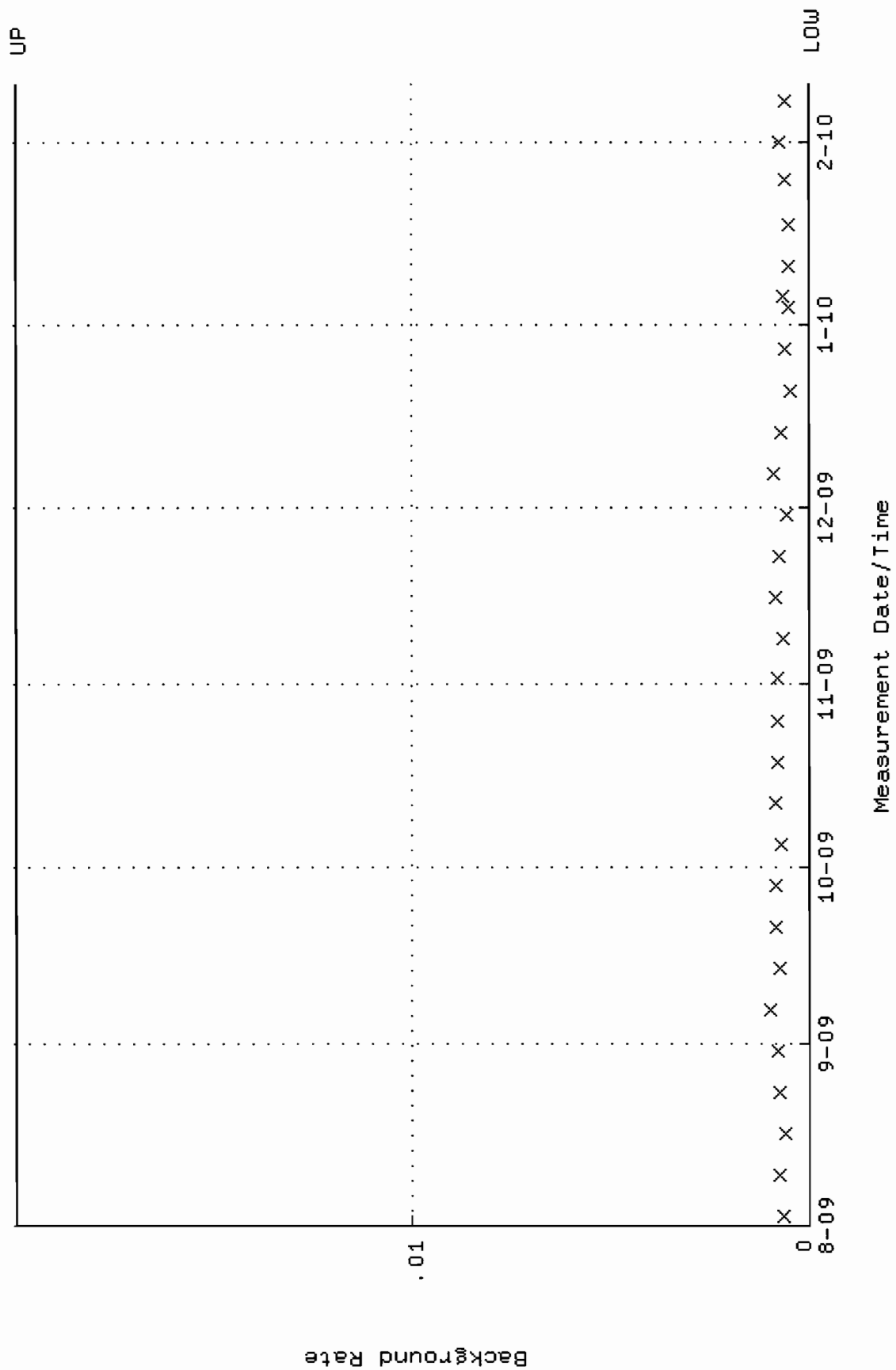
QA filename : DKA100:[ENV_ALPHA.QA.W]W087.QAF;4
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.300530 through 0.320530



QA filename : DKA100:[ENV_ALPHA.QA.W]W087.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.1845 through 96.3619



QA filename : DKA100:[ENV_ALPHA.QA.B]B087.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

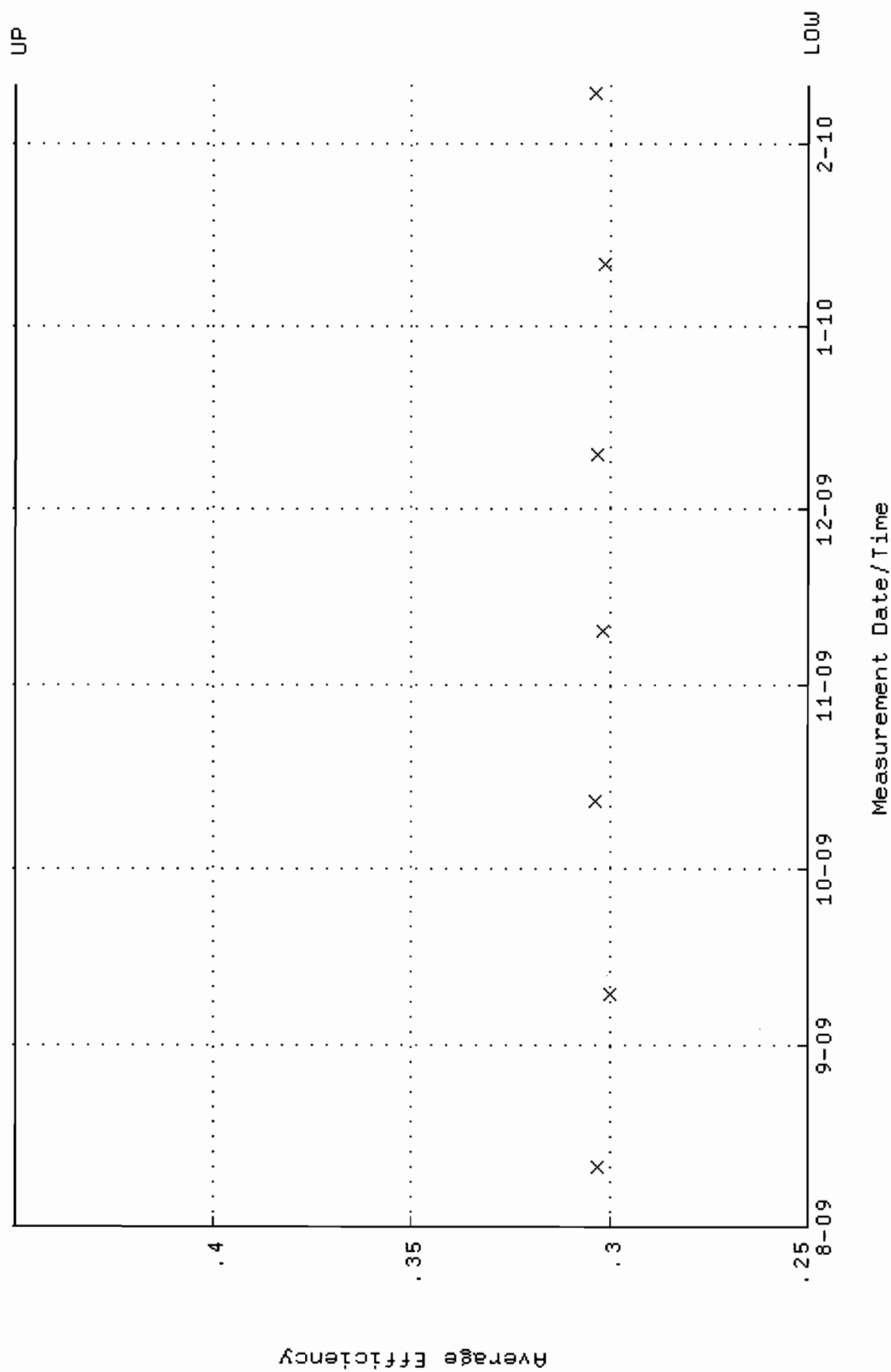


QA filename : DKA100:[ENV_ALPHA.QA.W]w088.QAF;4

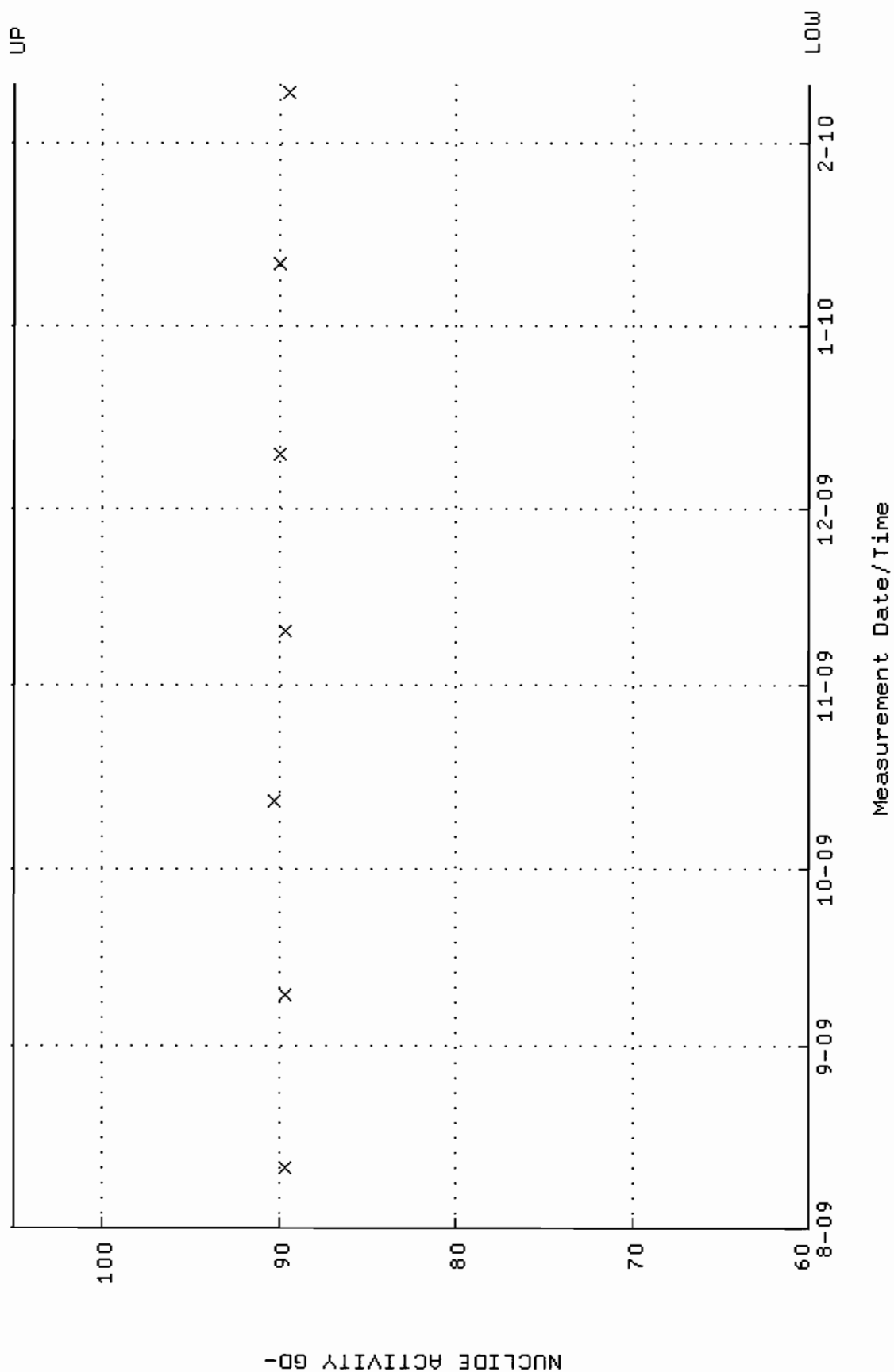
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00

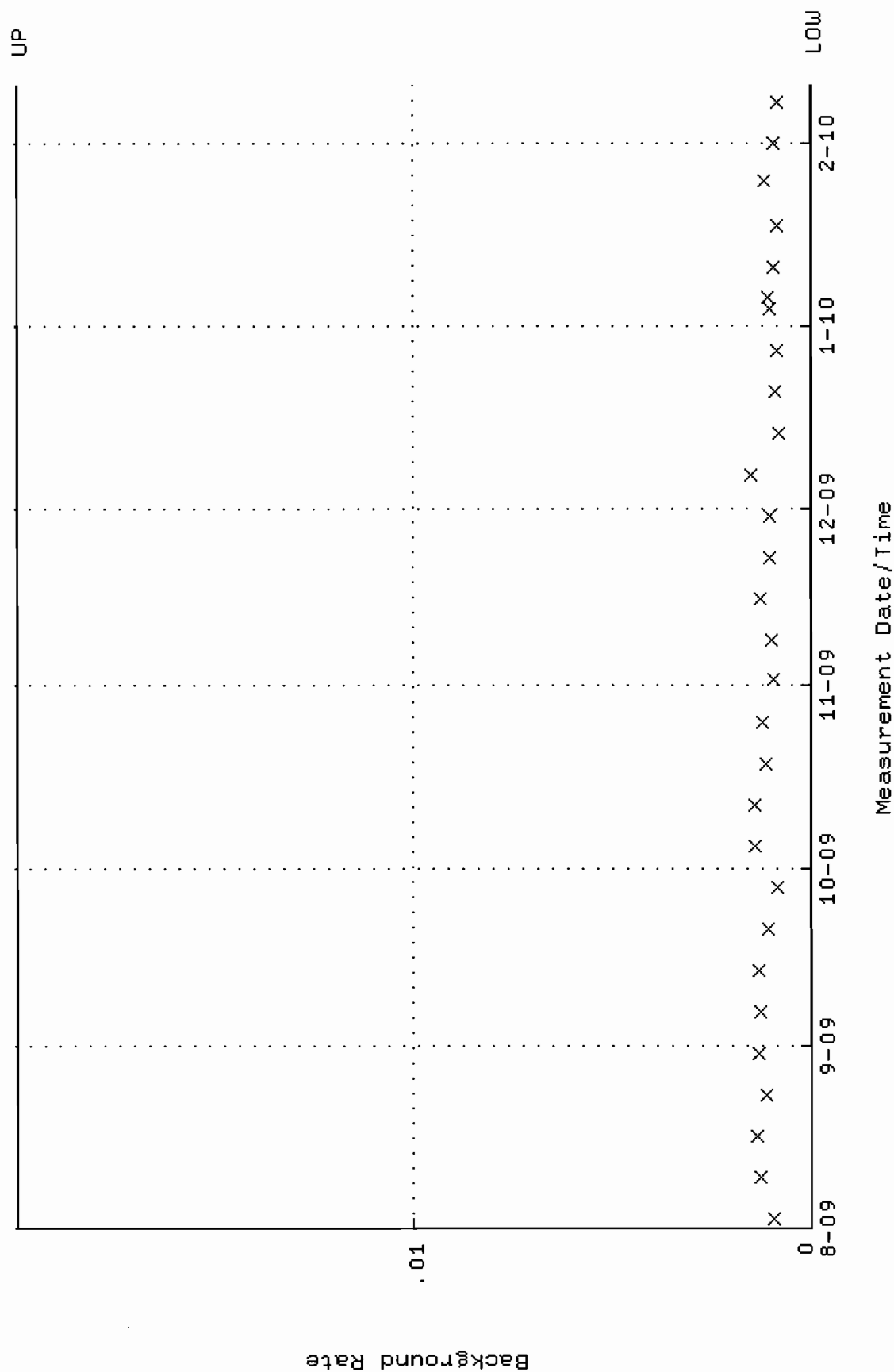
Lower/Upper Lmts: 0.250000 through 0.450000



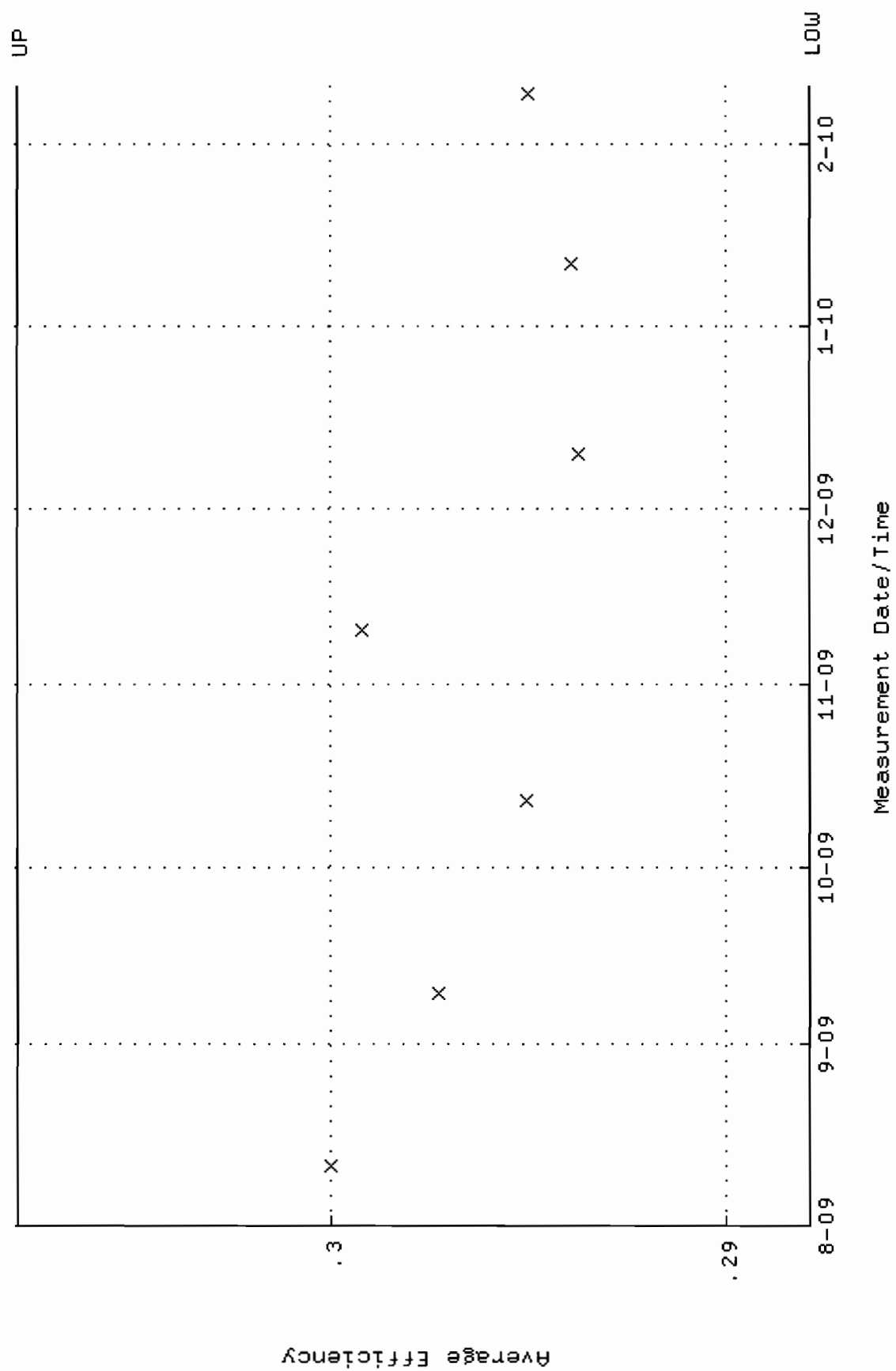
QA filename : DKA100:[ENV_ALPHA.QA.W]W088.QAF; 4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:14 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



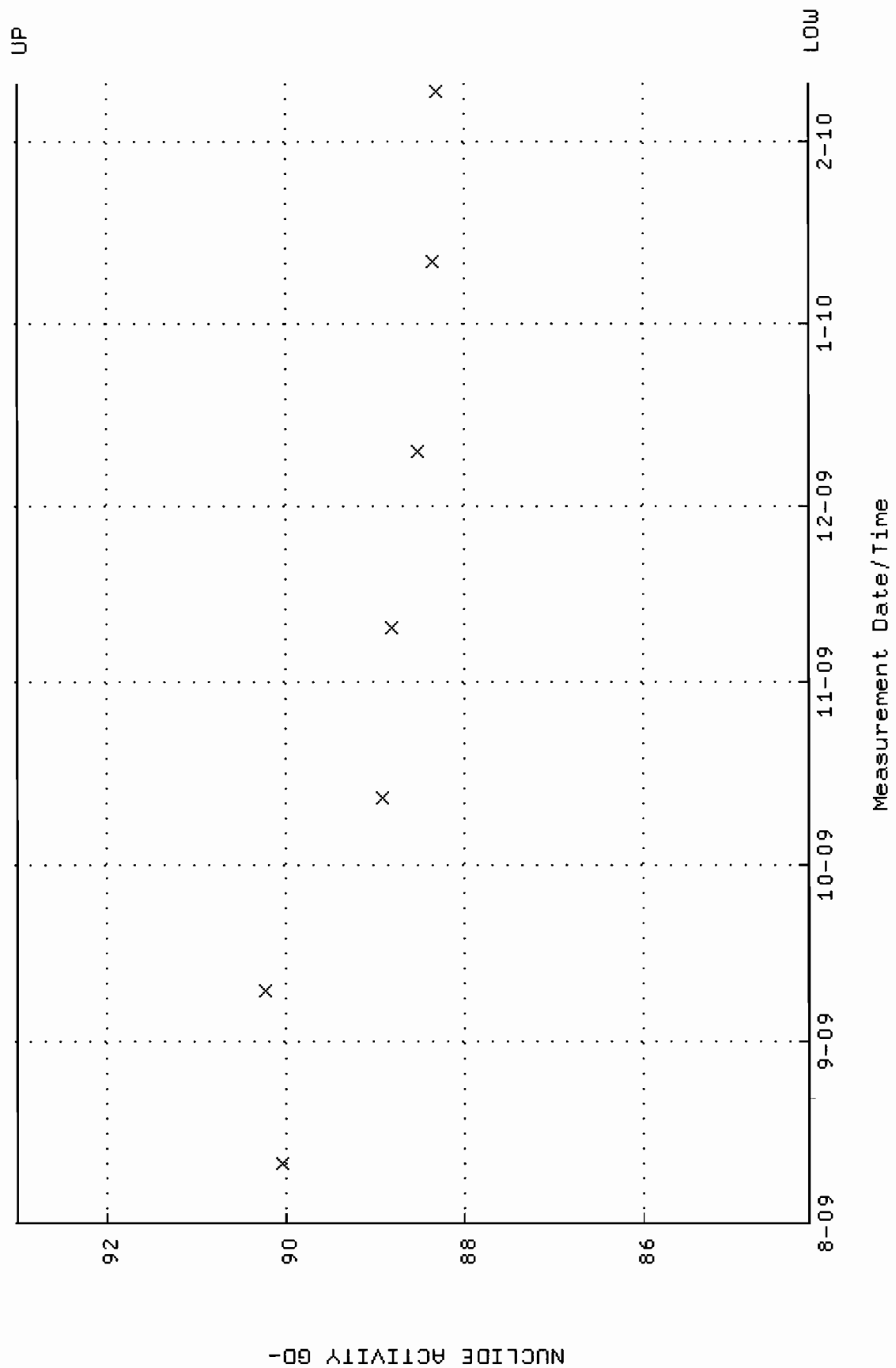
QA filename : DKA100:[ENV_ALPHA.QA.B]B088.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:41 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



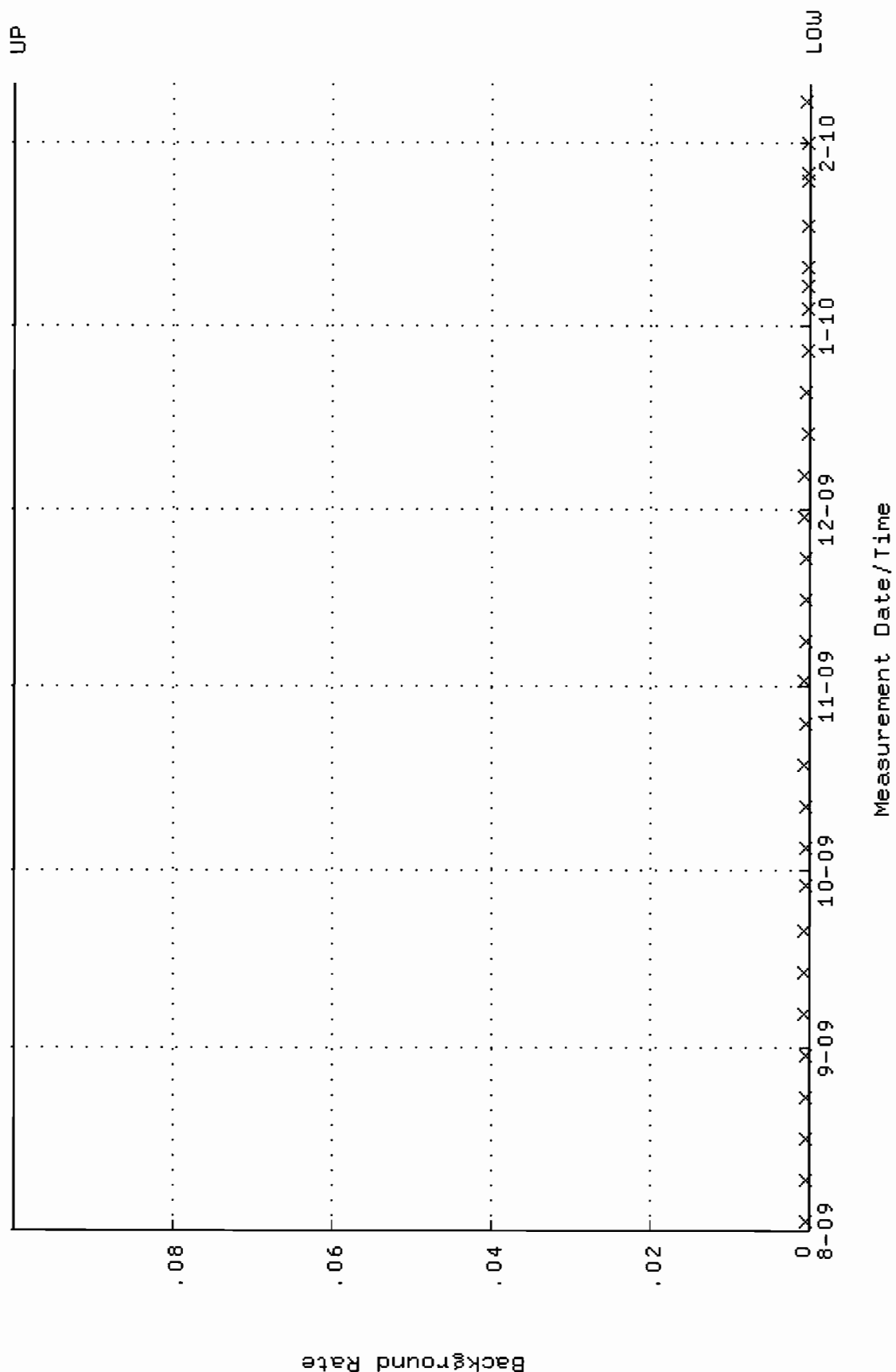
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.287888 through 0.307888



QA filename : DKA100:[ENV_ALPHA.QA.W]W089.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: 84.1413 through 92.9983



QA filename : DKA100:[ENV_ALPHA.QA.B]B089.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

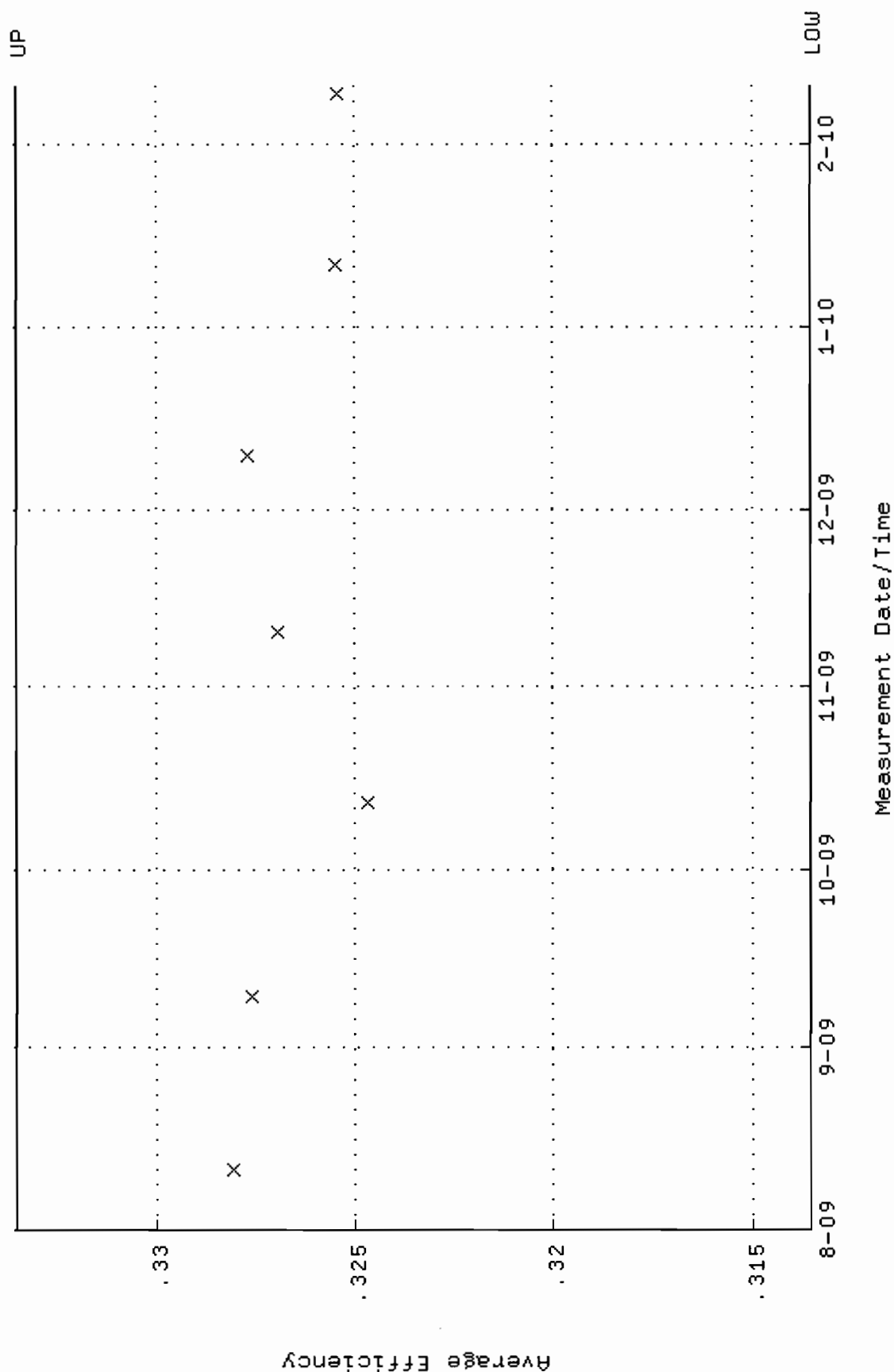


QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3

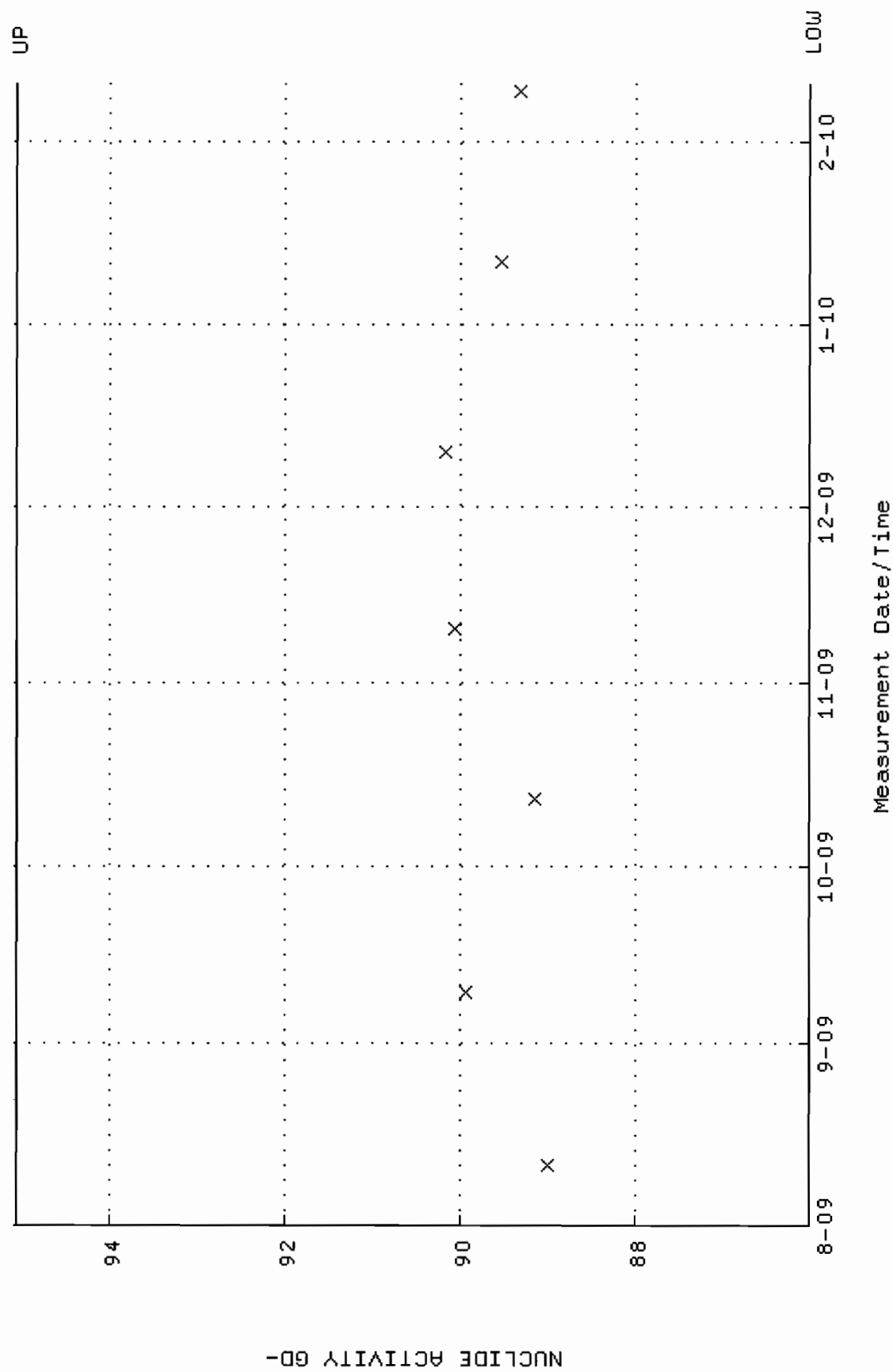
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00

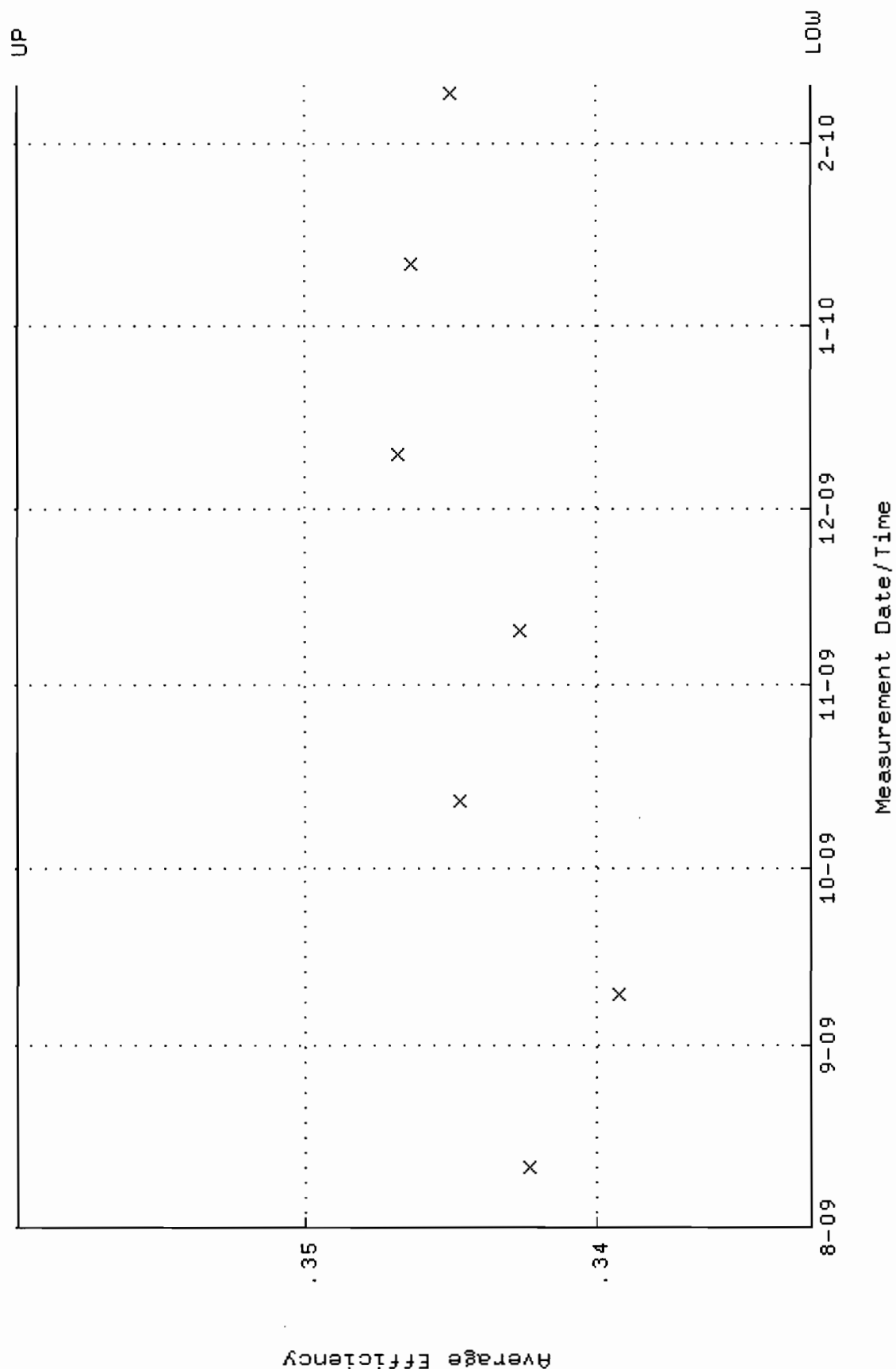
Lower/Upper Lmts: 0.313529 through 0.333529



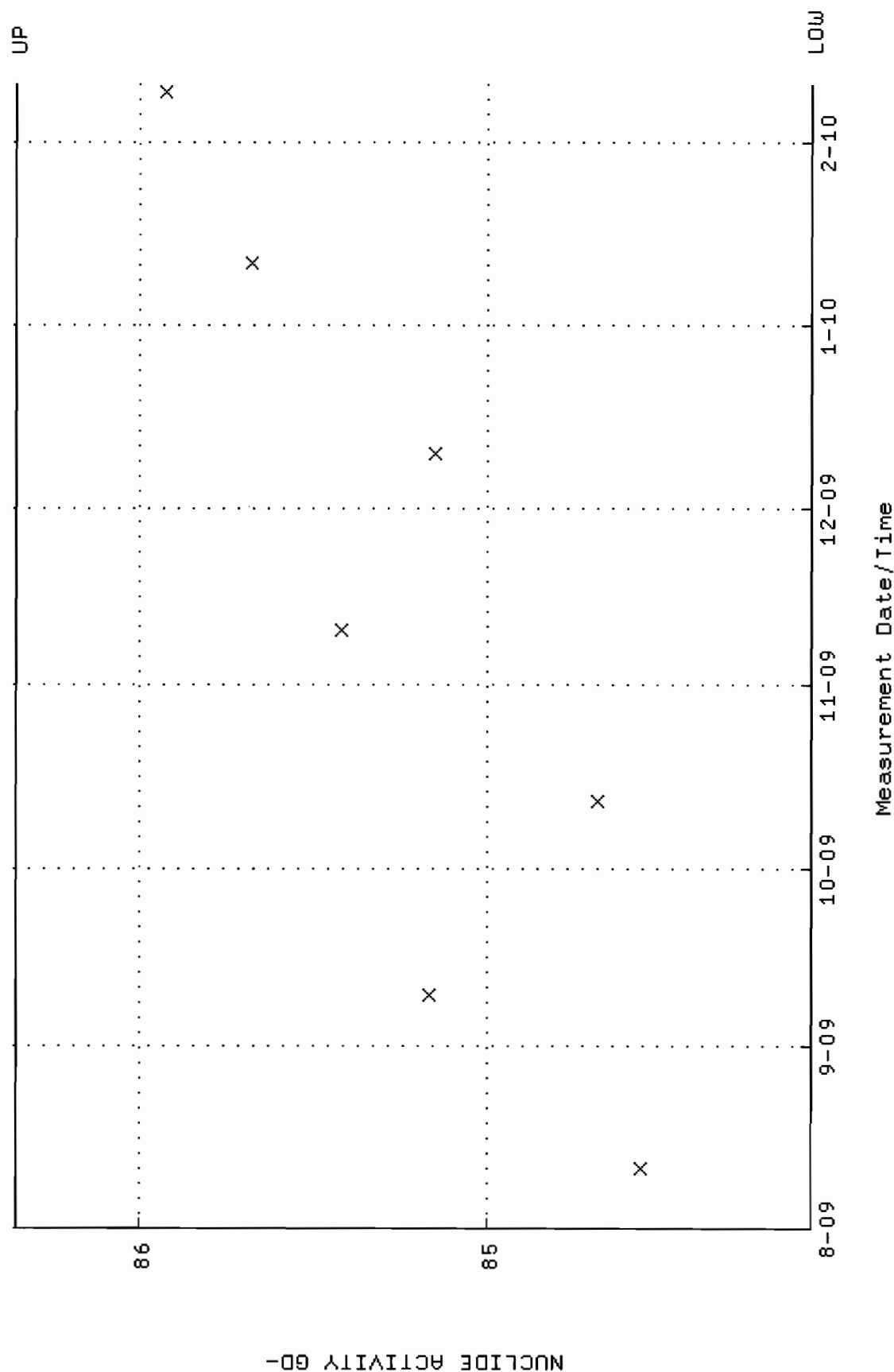
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.0139 through 95.0680



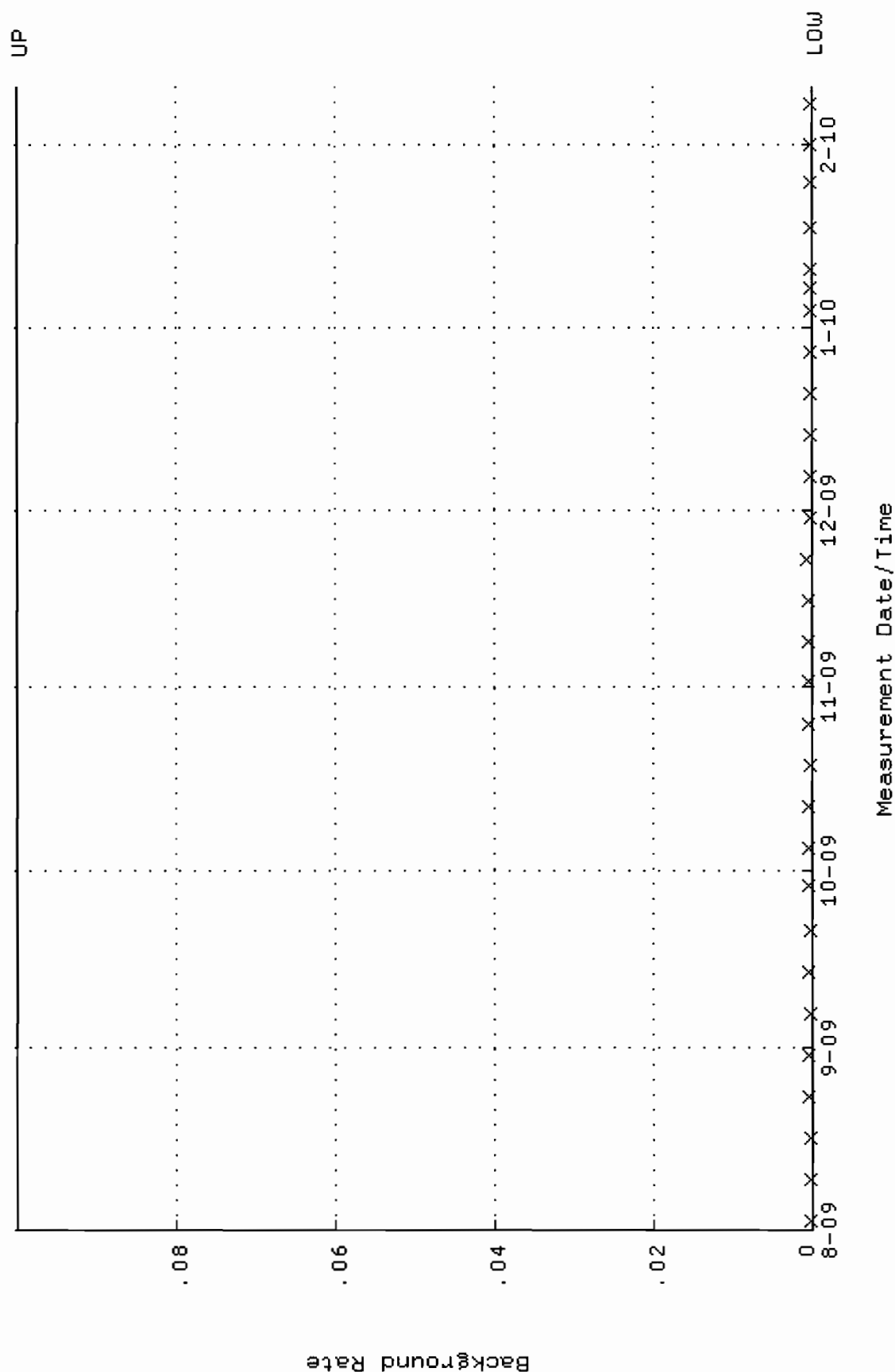
QA filename : DKA100:[ENV_ALPHA.QA.W]W091.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.332648 through 0.359902



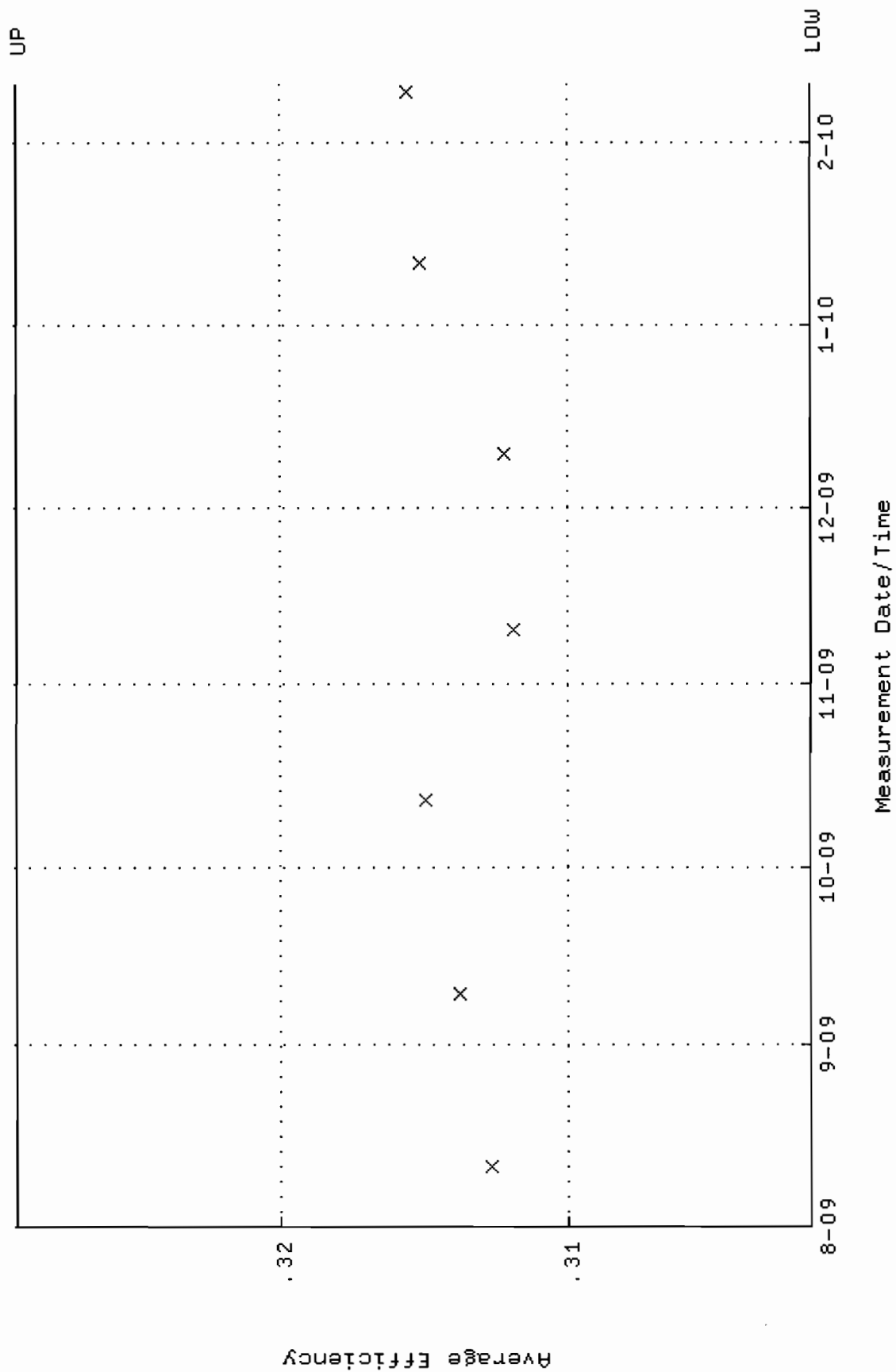
QA filename : DKA100:[ENV_ALPHA.QA.W]W091.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.0764 through 86.3518



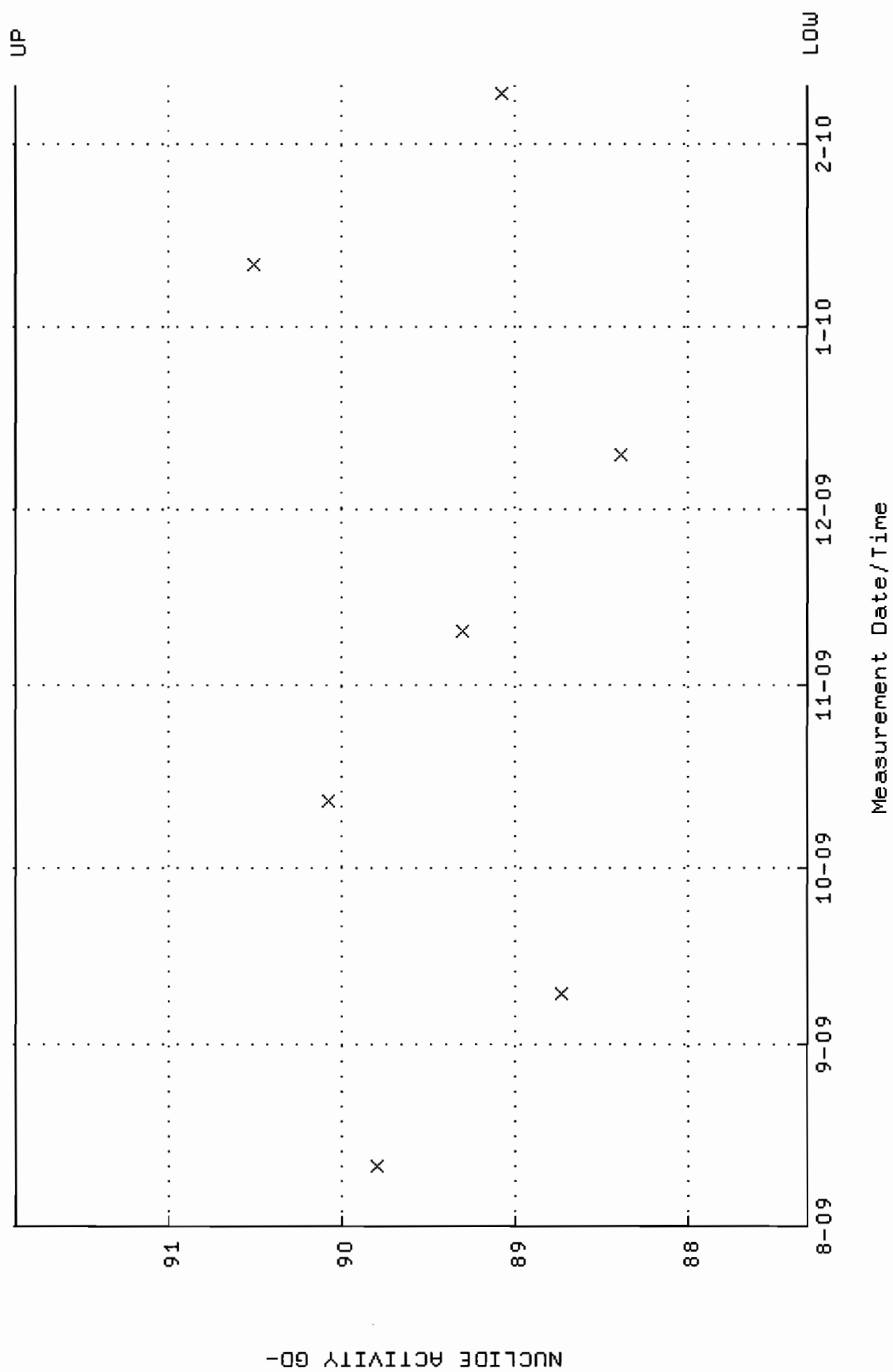
QA filename : DKA100:[ENV_ALPHA.QA.B]B091.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



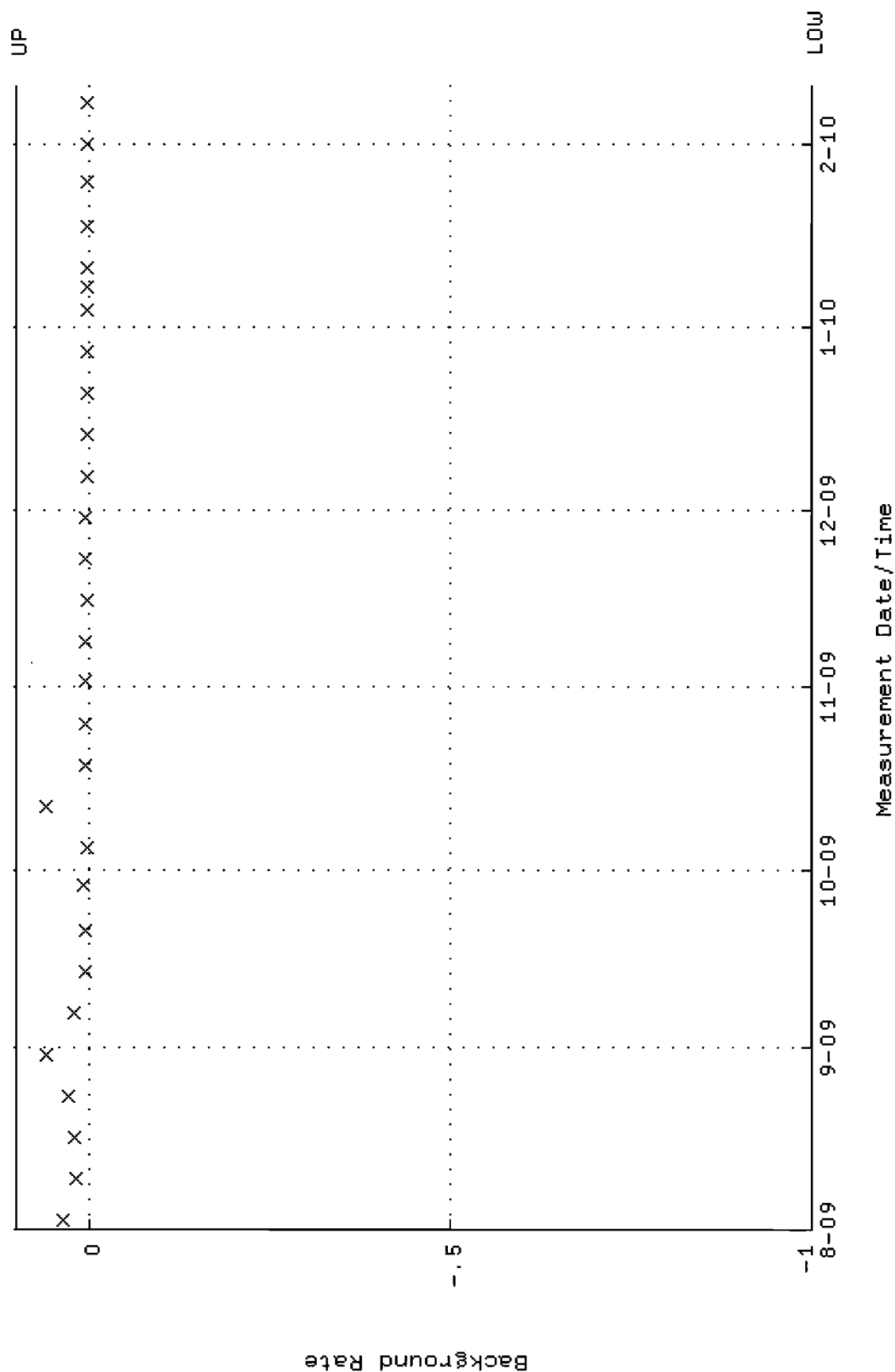
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.301529 through 0.329133



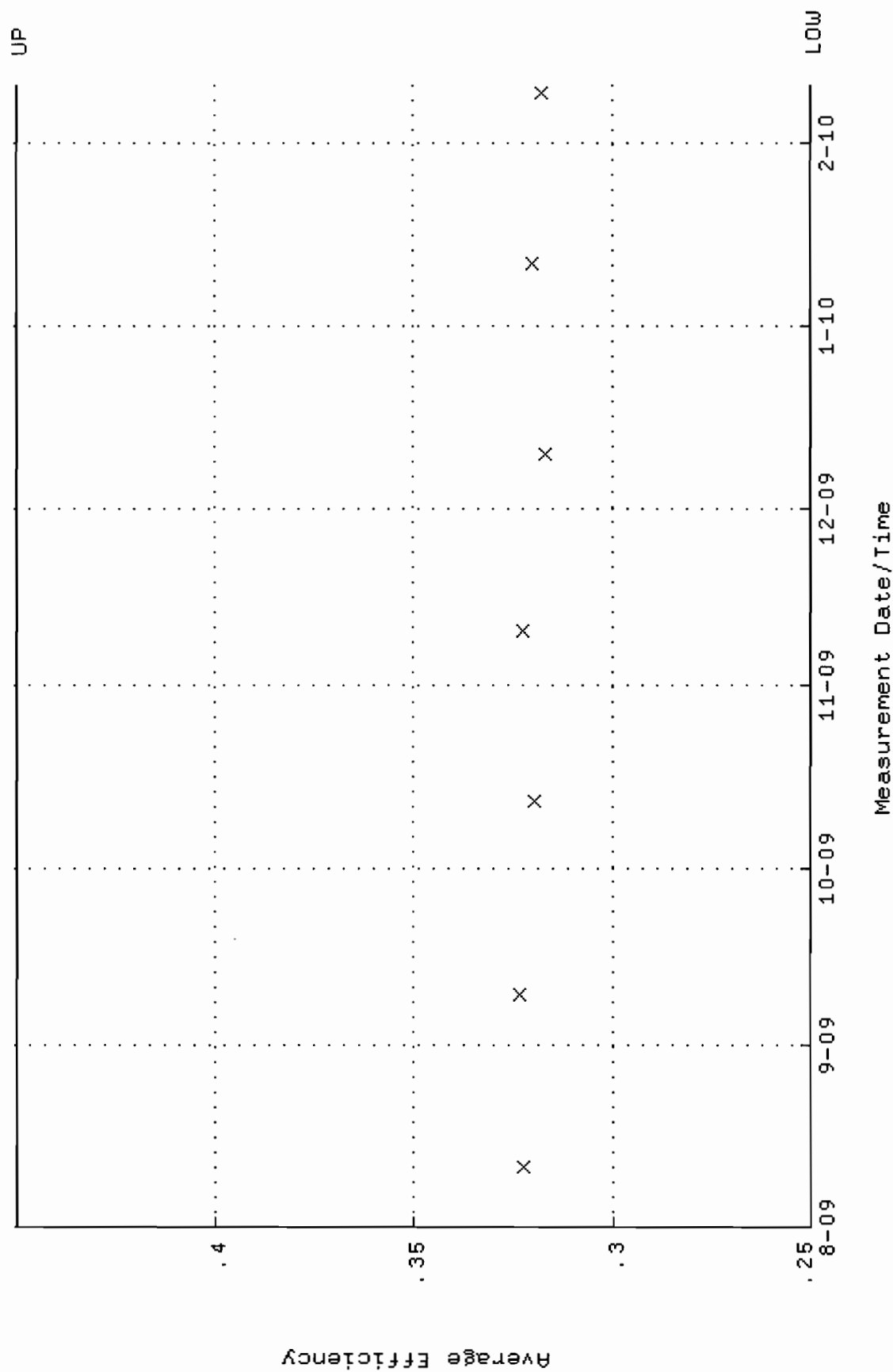
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.3140 through 91.8878



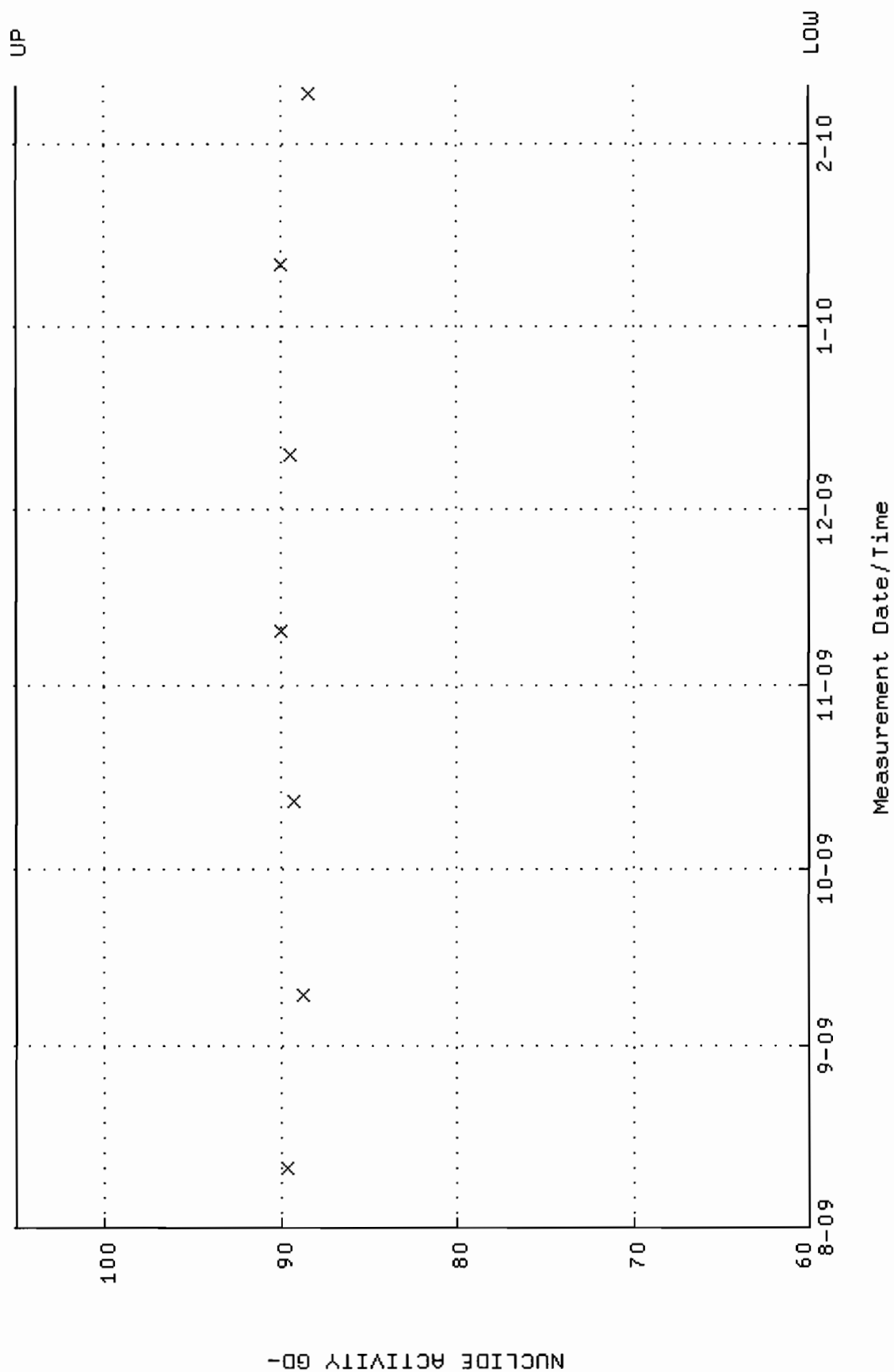
QA filename : DKA100:[ENV_ALPHA.QA.B]B092.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: -1.00000 through 0.100000



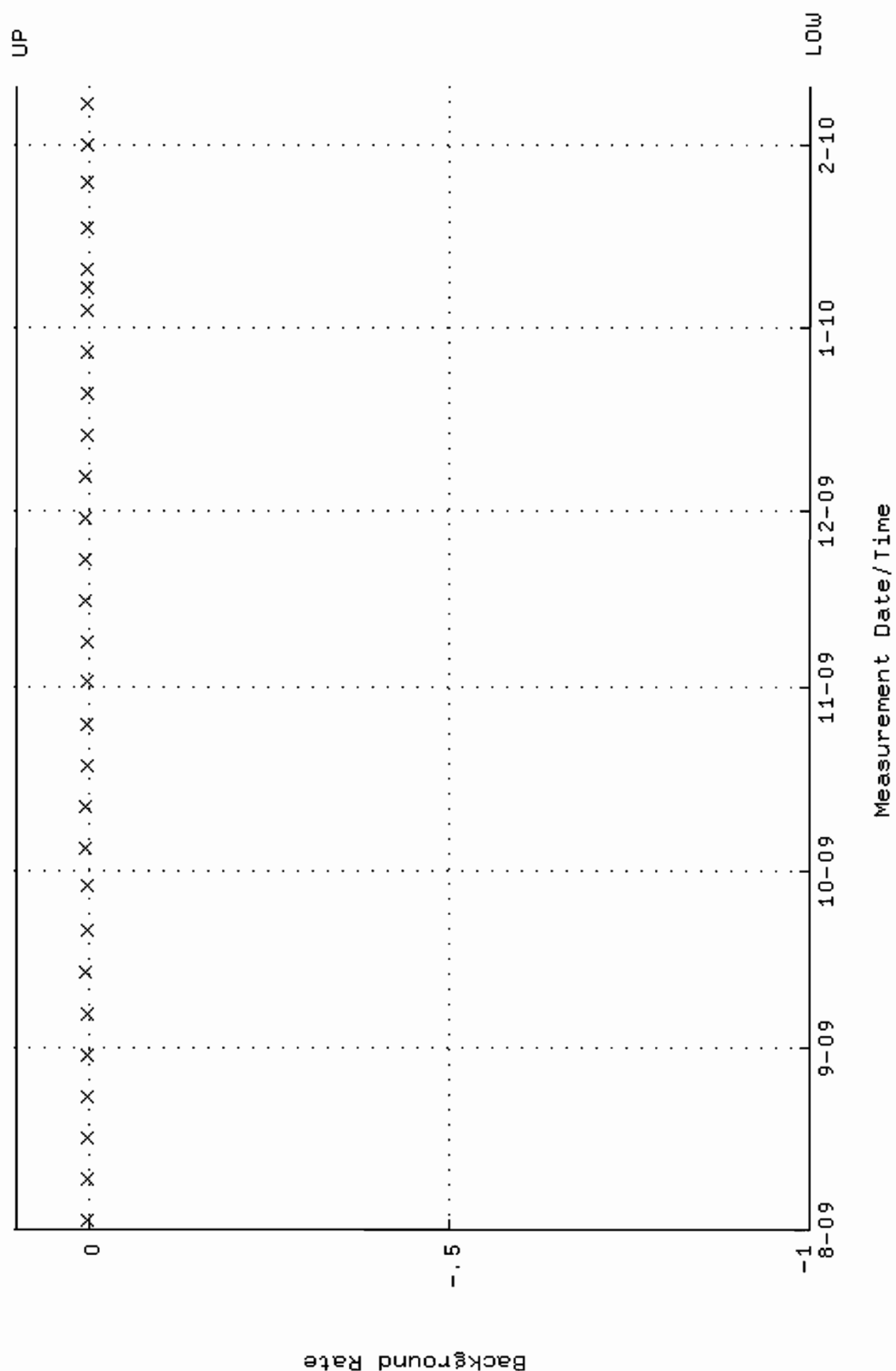
QA filename : DKA100:[ENV_ALPHA.QA.W]W093.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.250000 through 0.450000



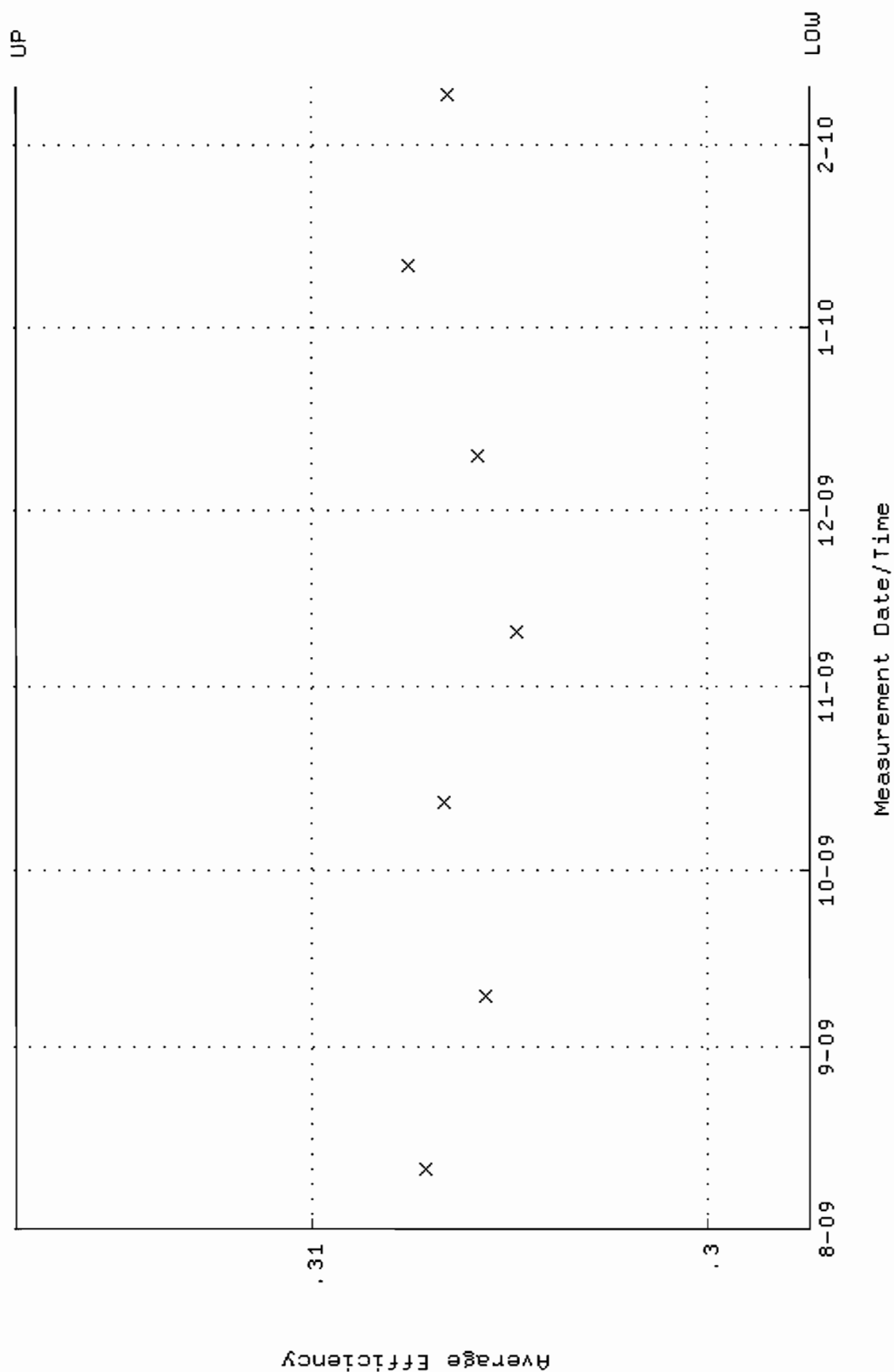
QA filename : DKA100:[ENV_ALPHA.QA.W]W093.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 60.0000 through 105.000



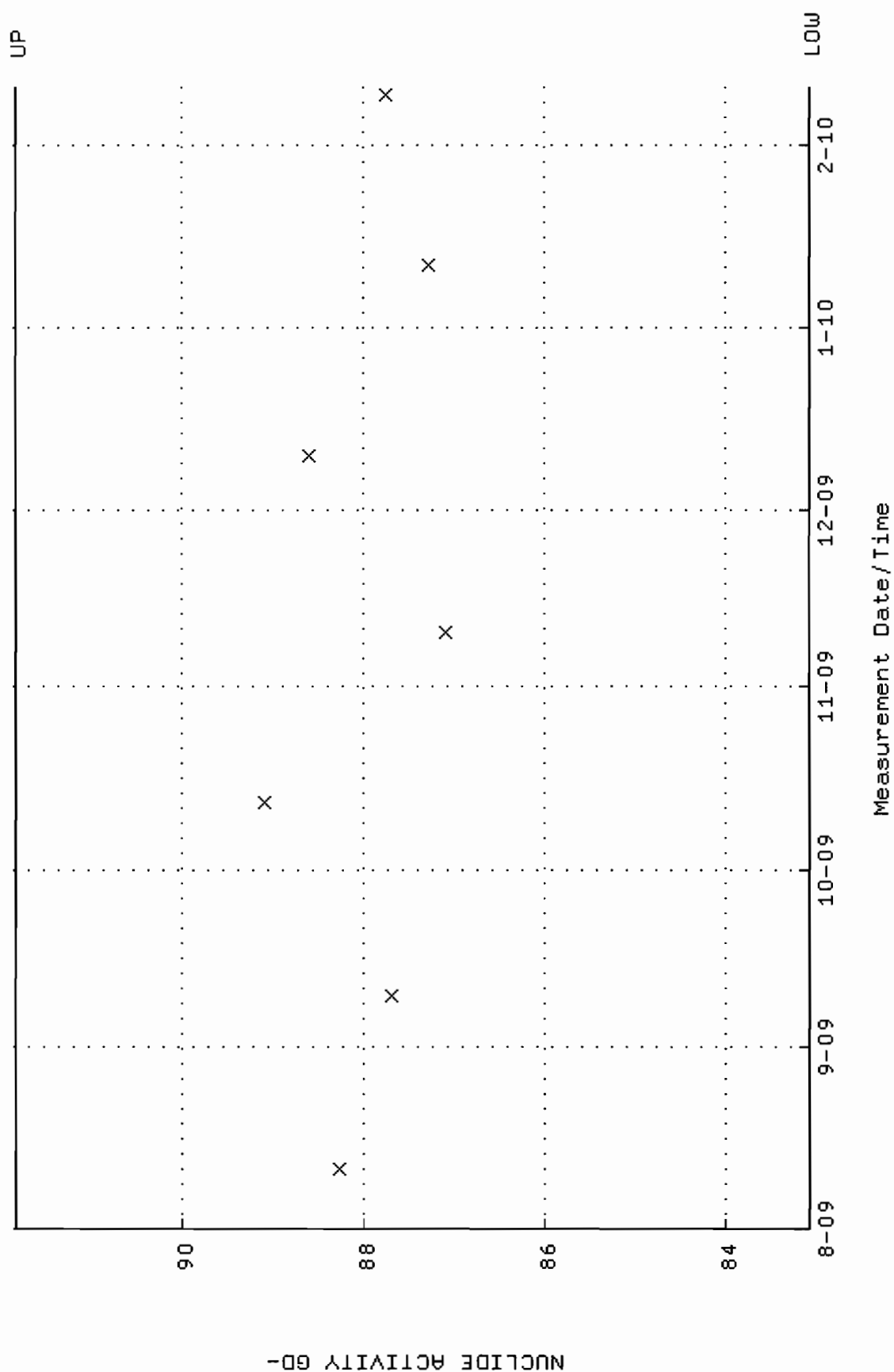
QA filename : DKA100:[ENV_ALPHA.QA.B]B093.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: -1.00000 through 0.100000



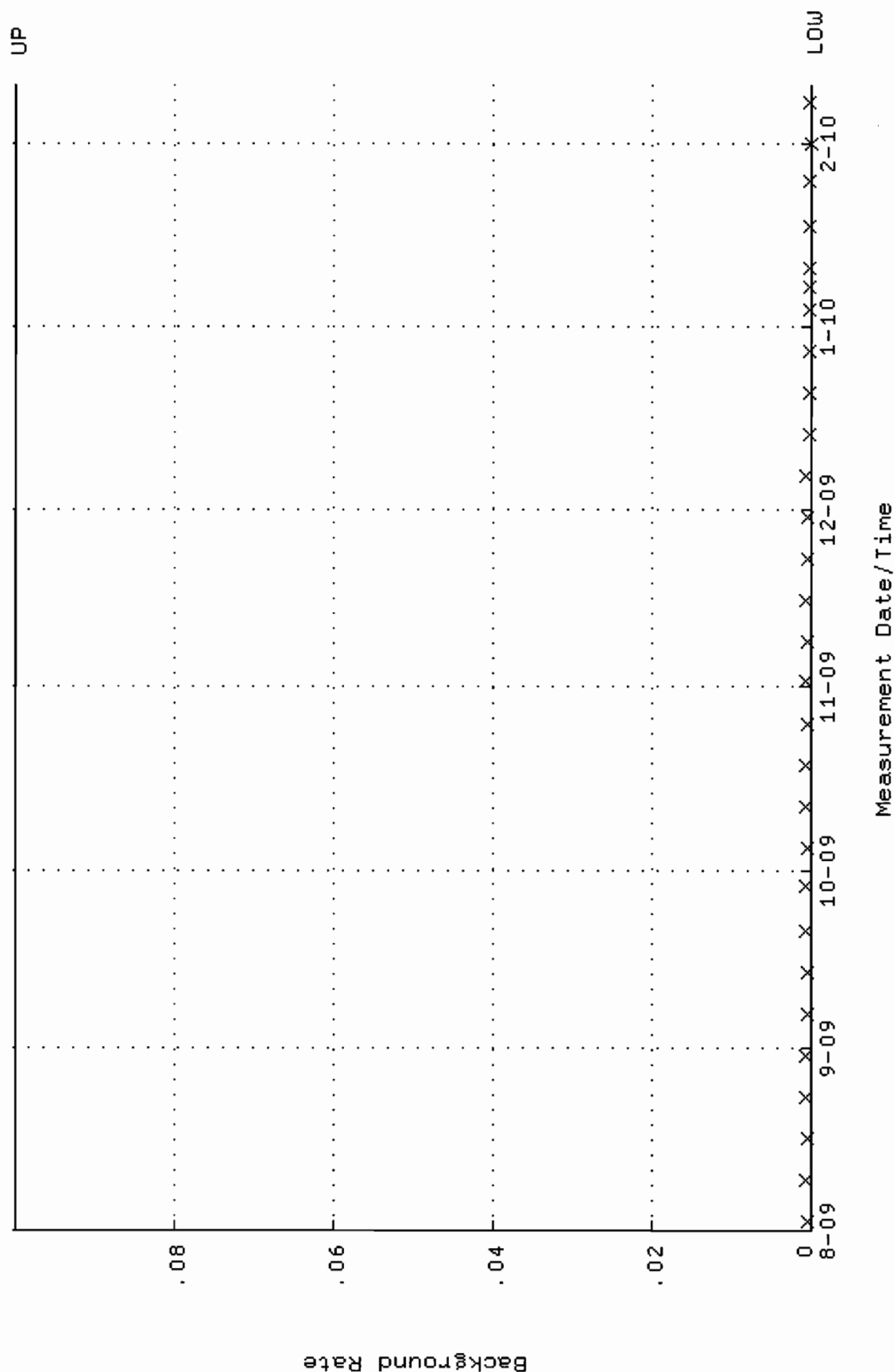
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.297429 through 0.317429



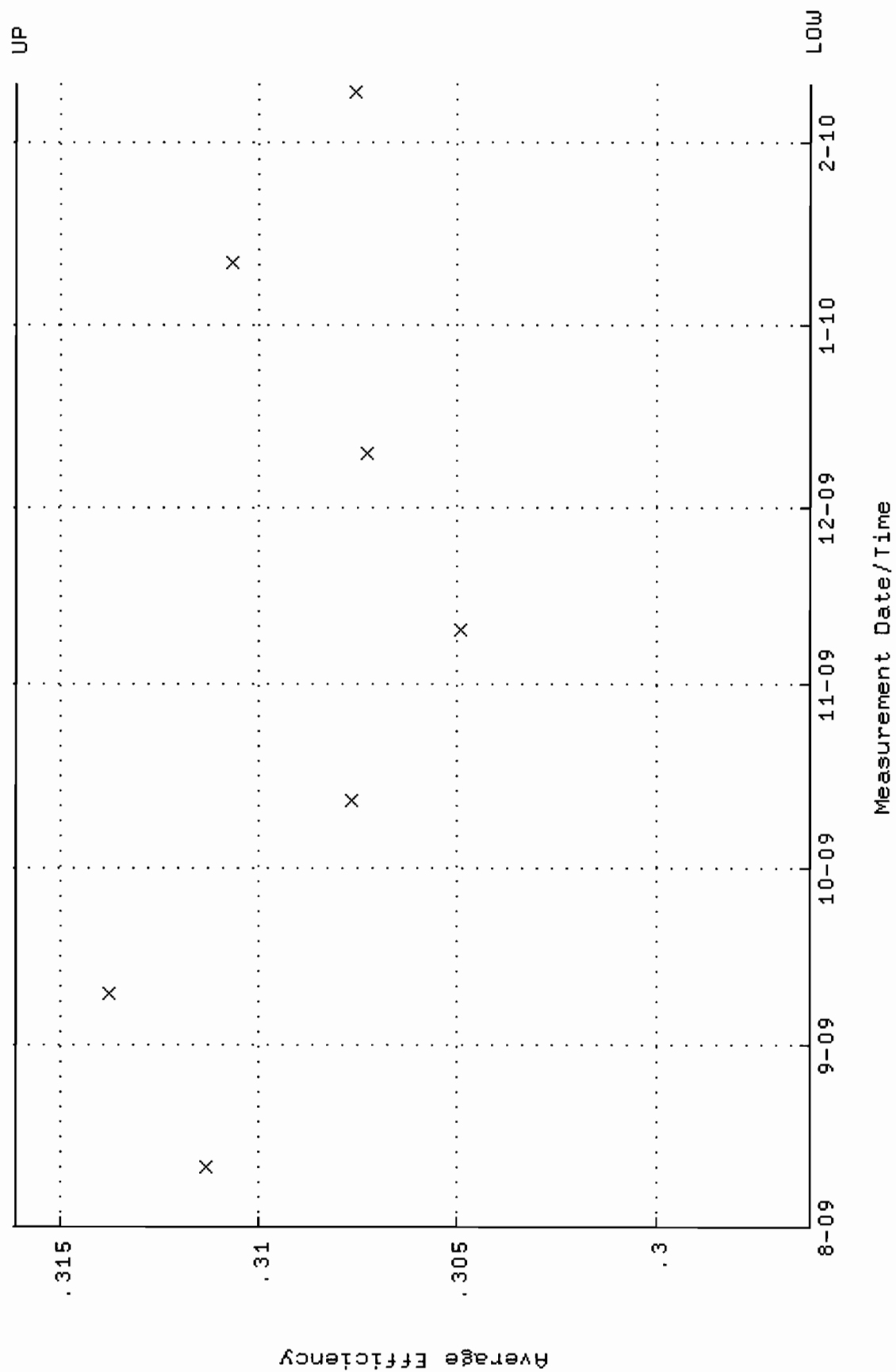
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:15 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 83.0827 through 91.8283



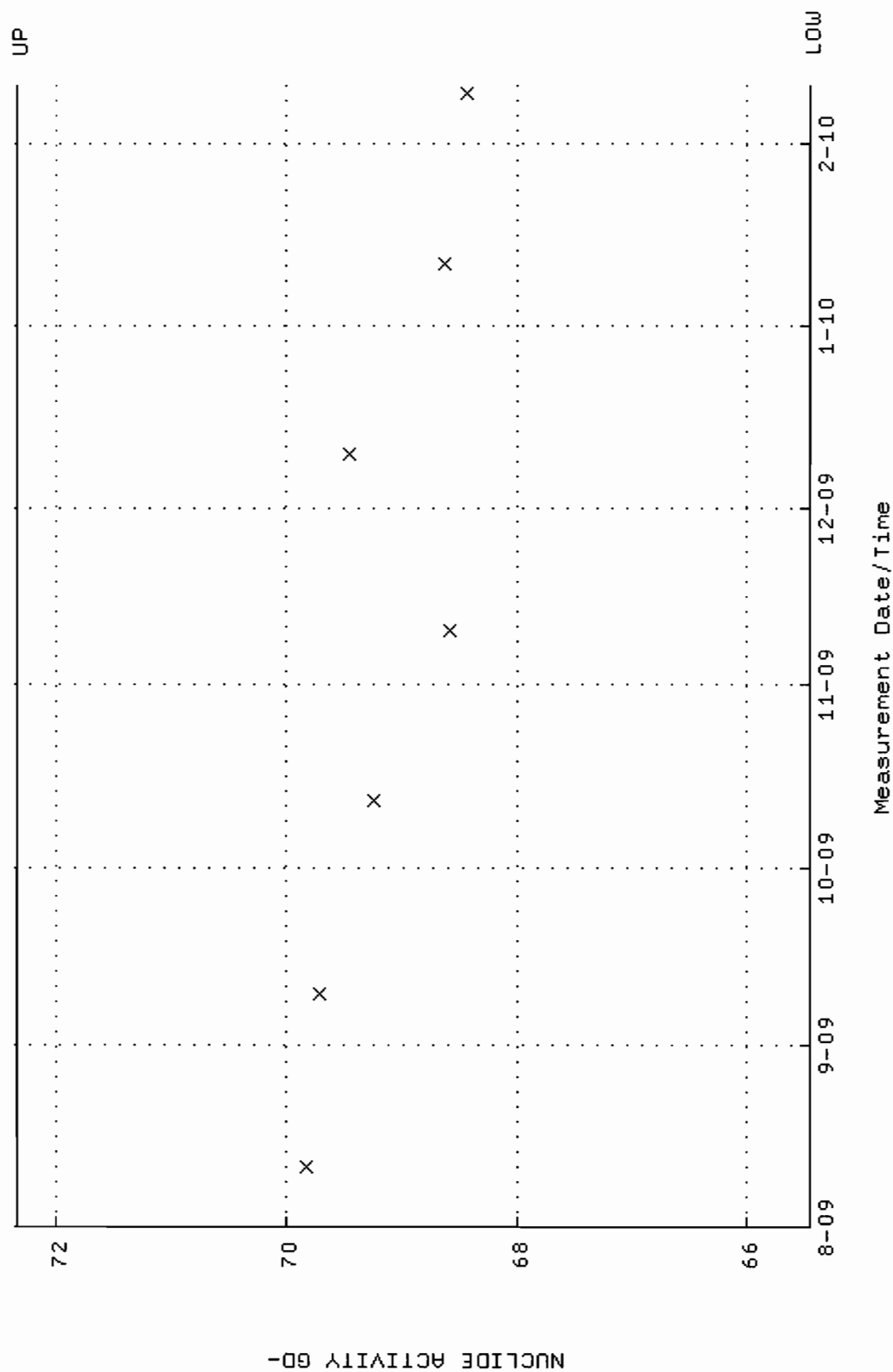
QA filename : DKA100:[ENV_ALPHA.QA.B]B094.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:42 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



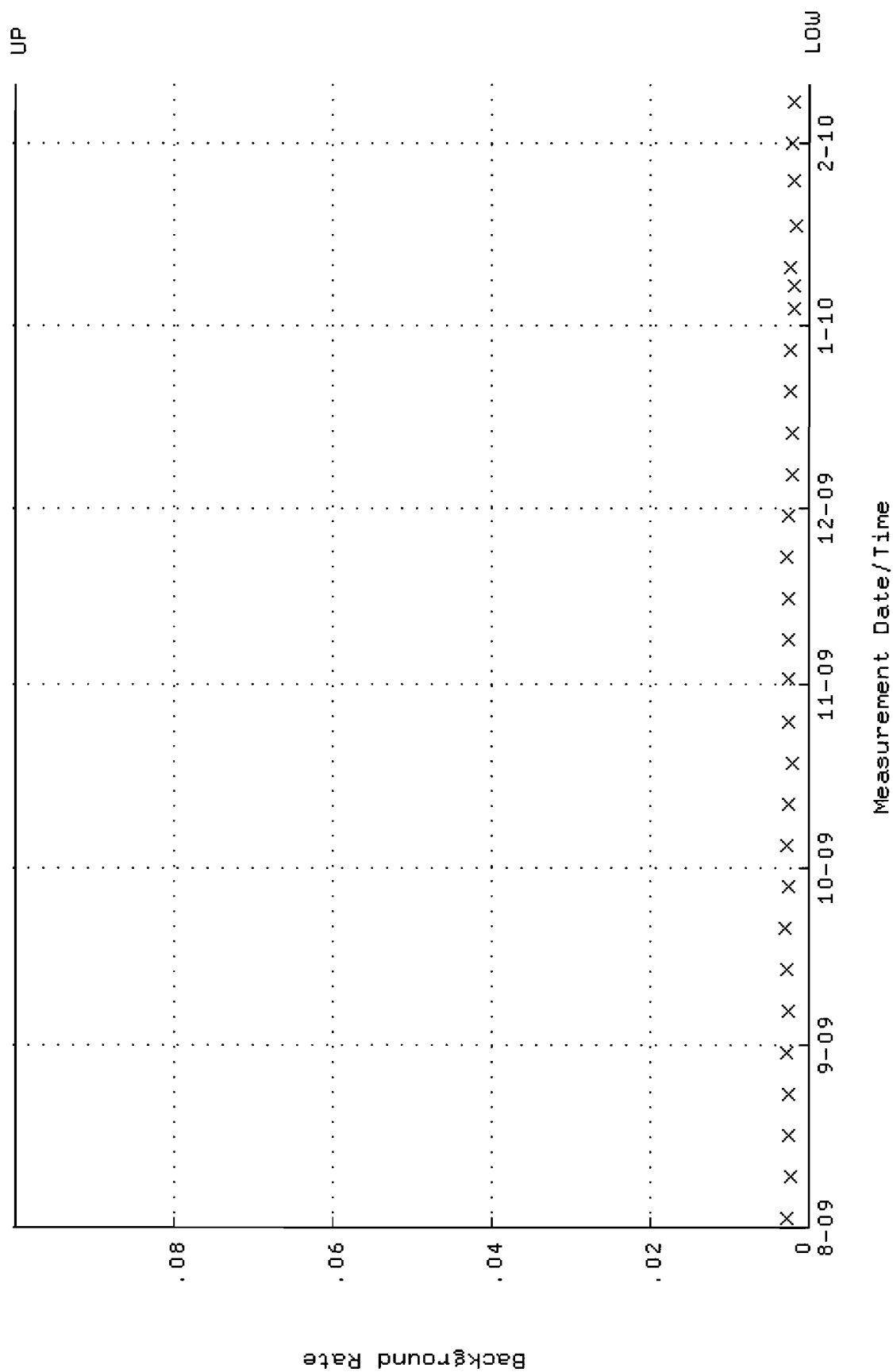
QA filename : DKA100:[ENV_ALPHA.QA.W]W095.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.296122 through 0.316122



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 : DKA100:[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

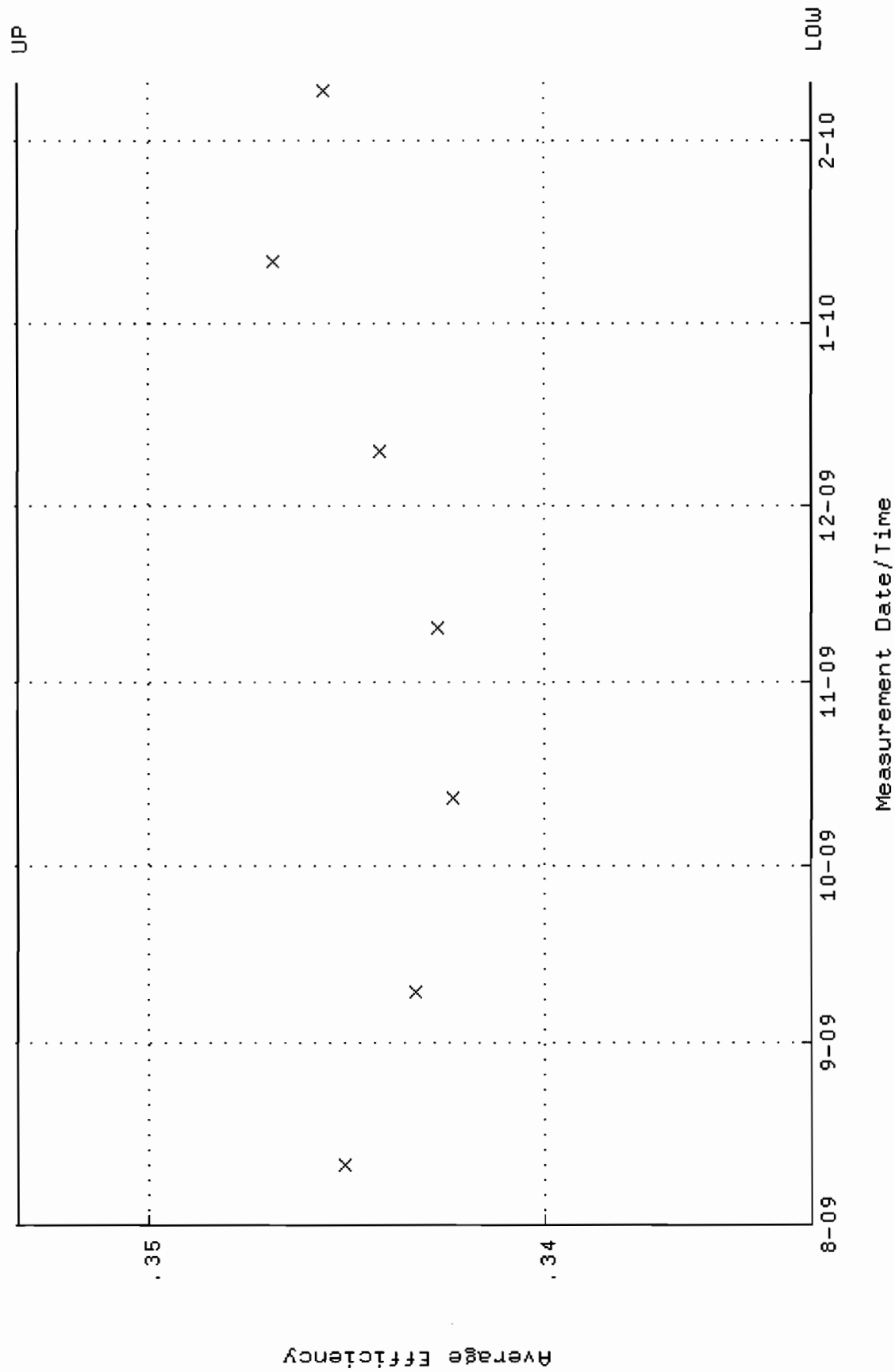


QA filename : DKA100:[ENV_ALPHA.QA.W]W097.QAF;2

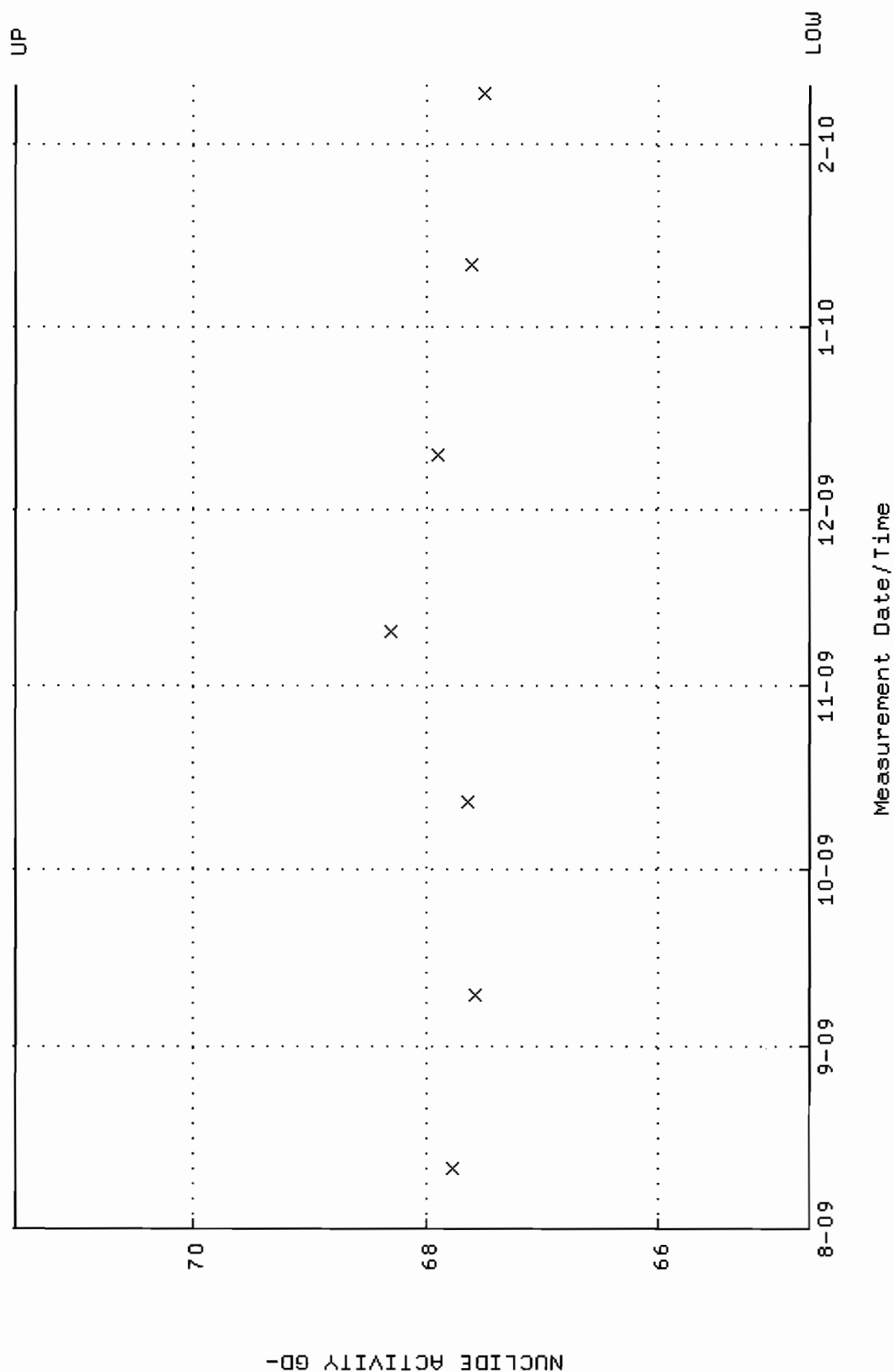
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00

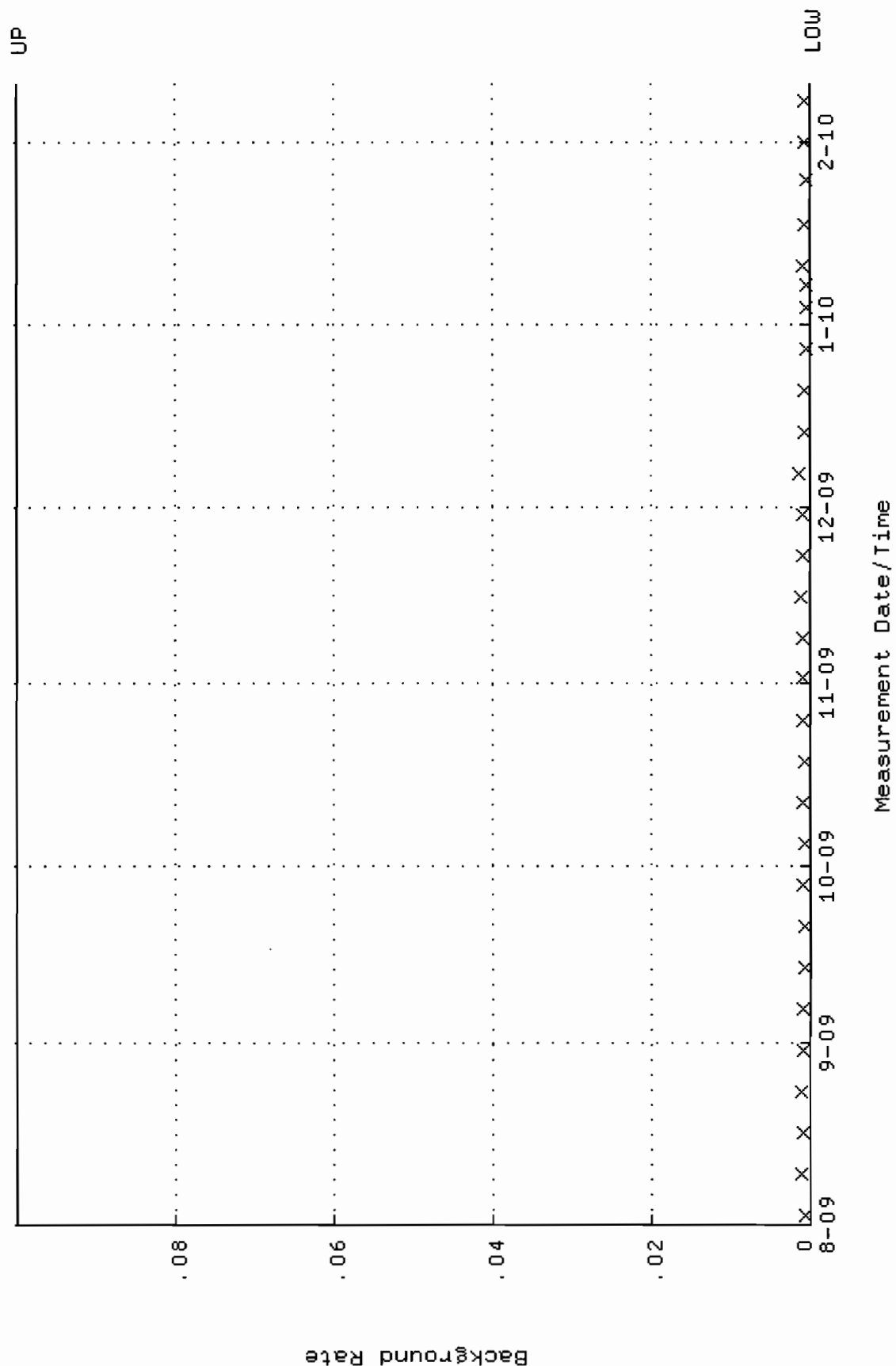
Lower/Upper Lmts: 0.333275 through 0.353275



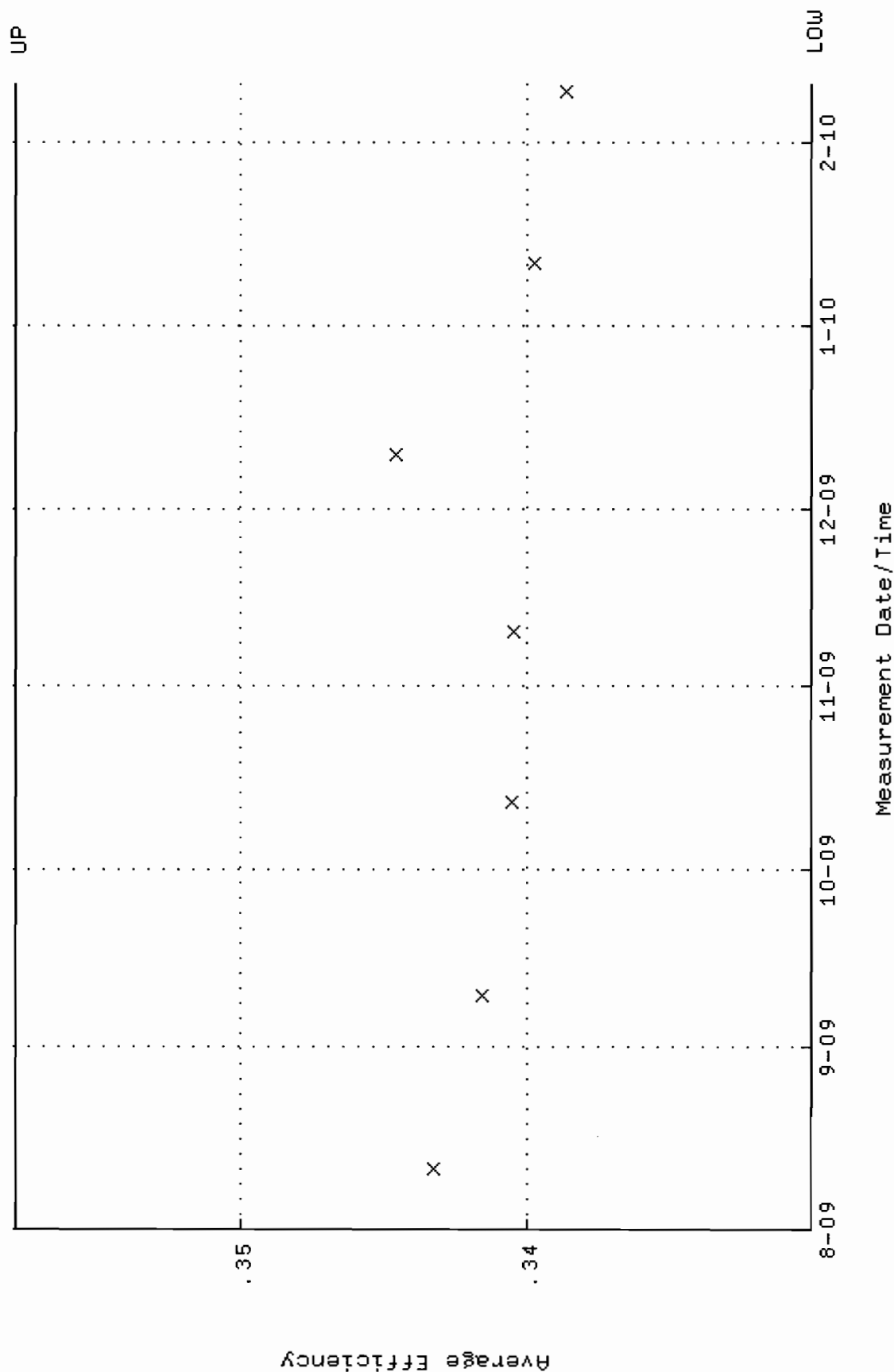
QA filename : DKA100:[ENV-ALPHA.QA.W]W097.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 64.7068 through 71.5180



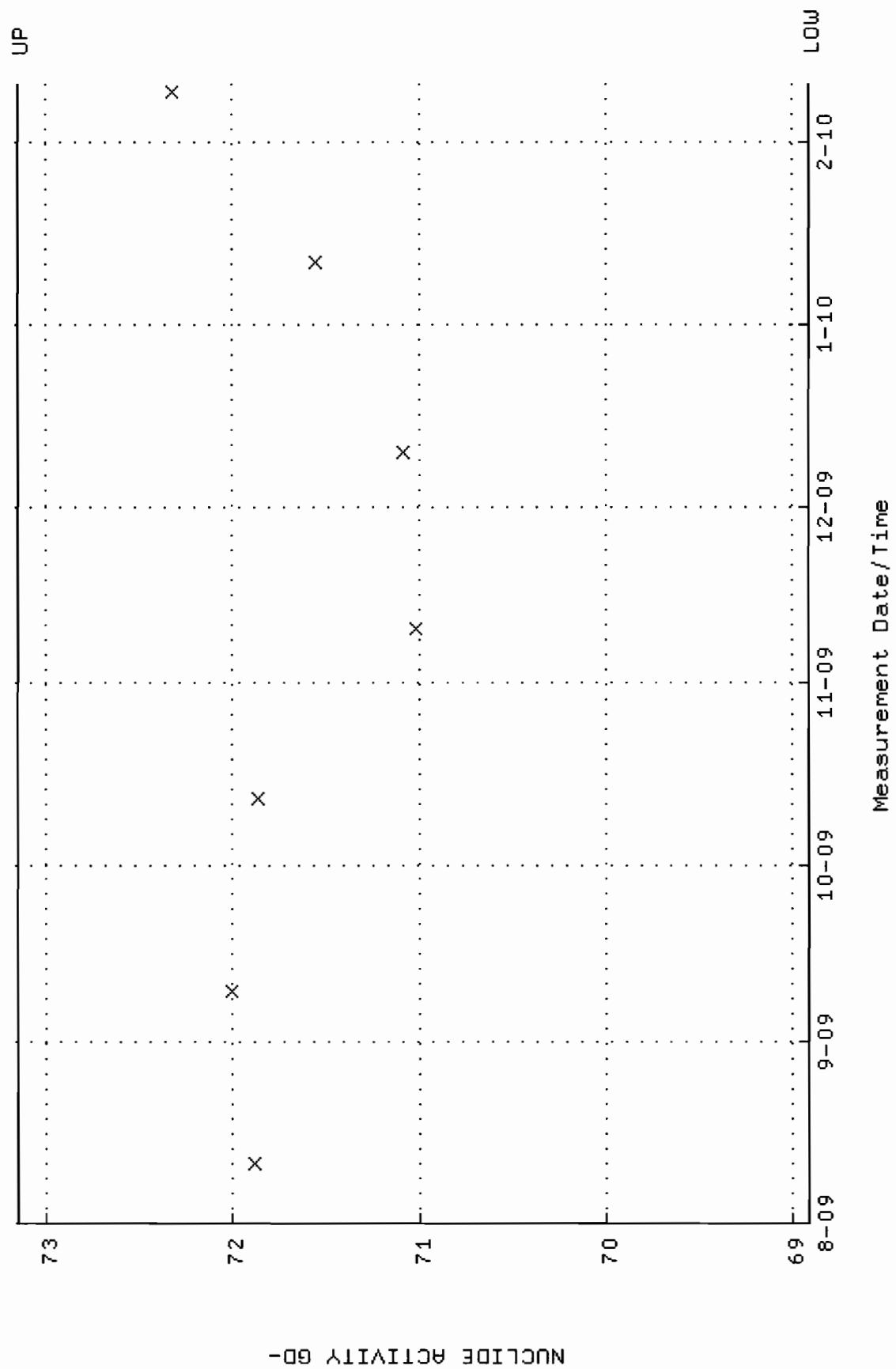
QA filename : DKA100:[ENV_ALPHA,QA,B]B097.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:43 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



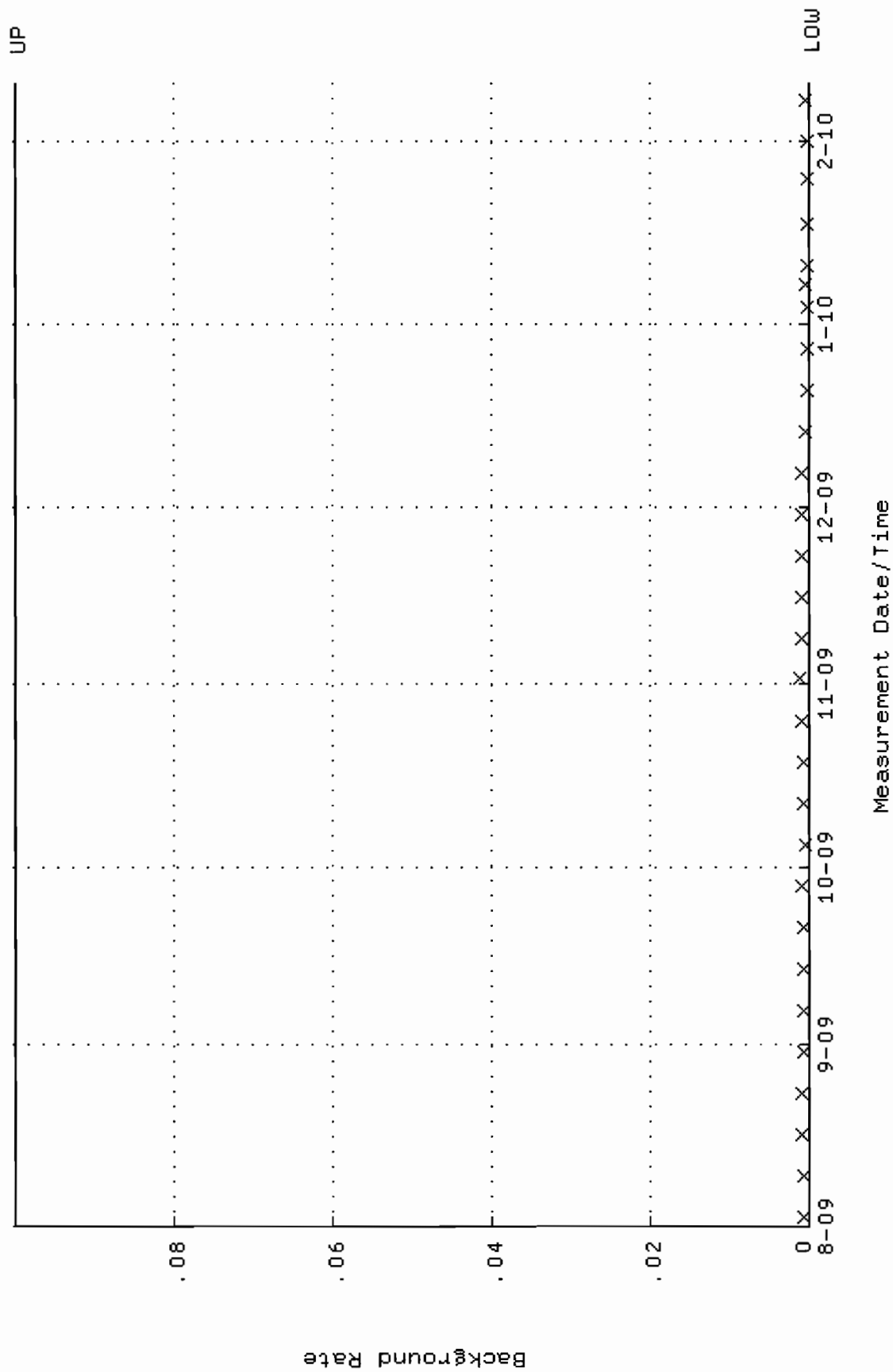
QA filename : DKA100:[ENV_ALPHA.QA.W]W099.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:16 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.330127 through 0.357809



QA filename : DKA100:[ENV_ALPHA.QA.W]W099.QAF;2
 Parameter Name : 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: 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

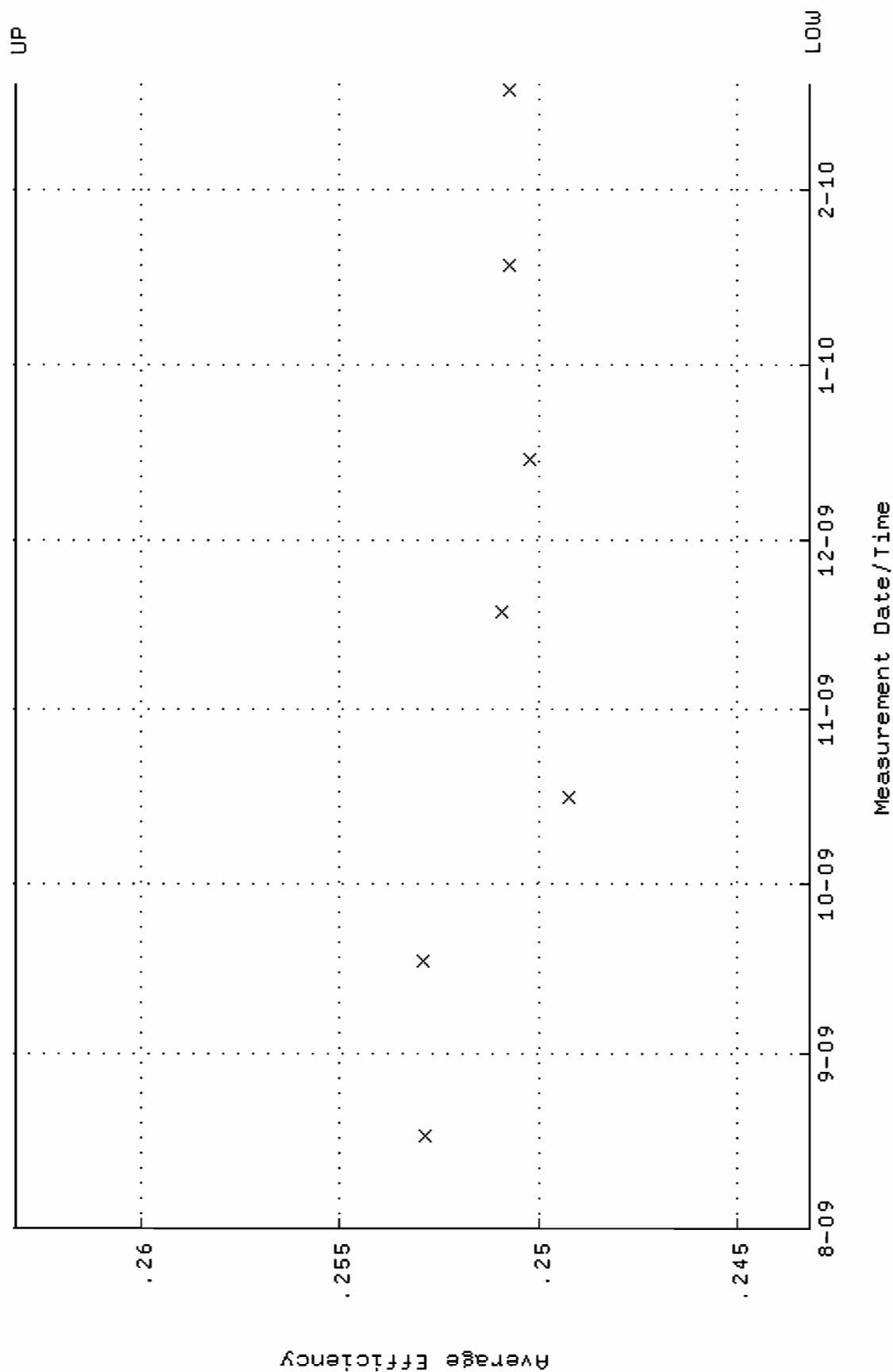


QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;1

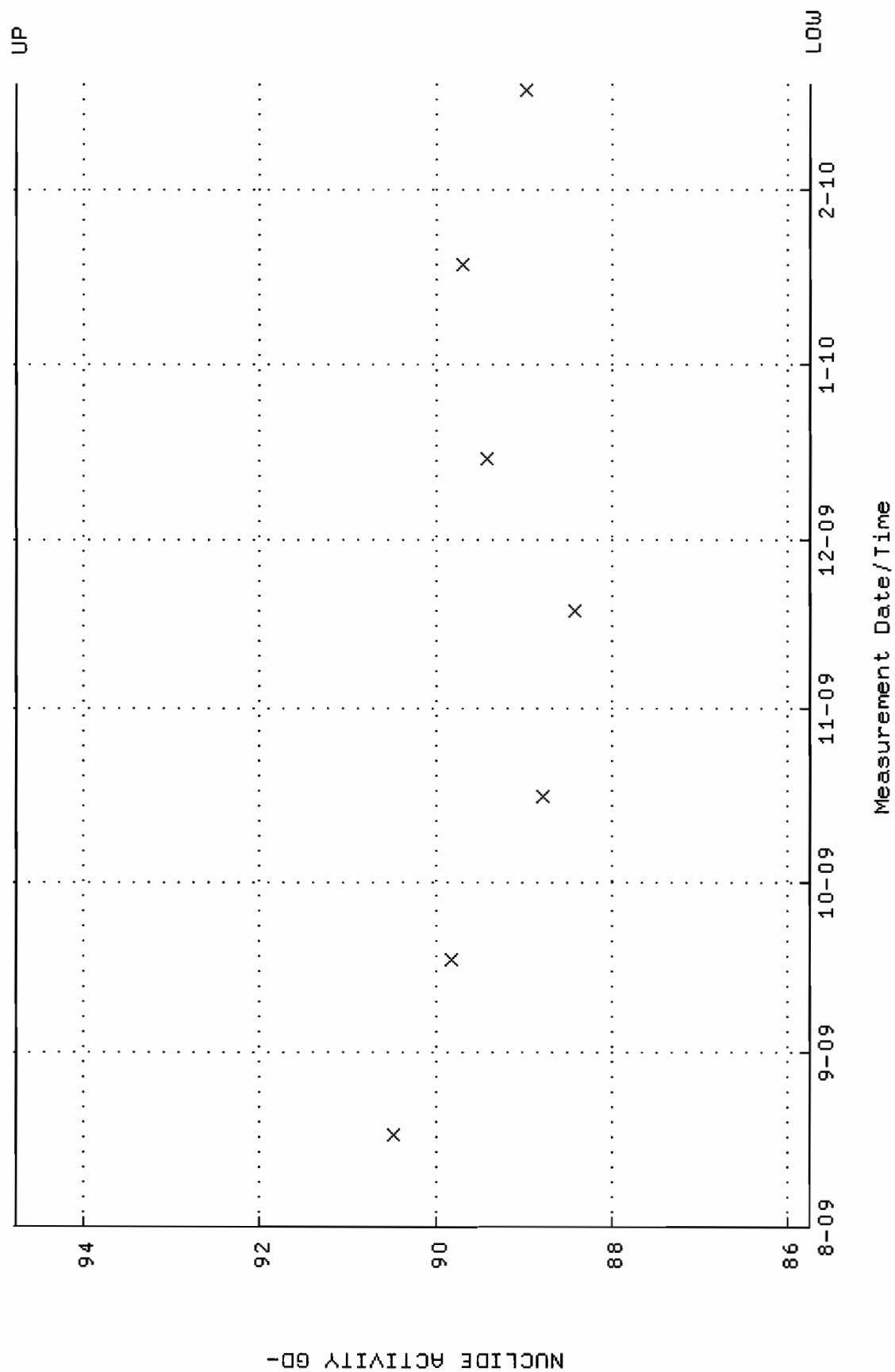
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 17-AUG-2009 09:41:49 through 19-FEB-2010 12:00:00

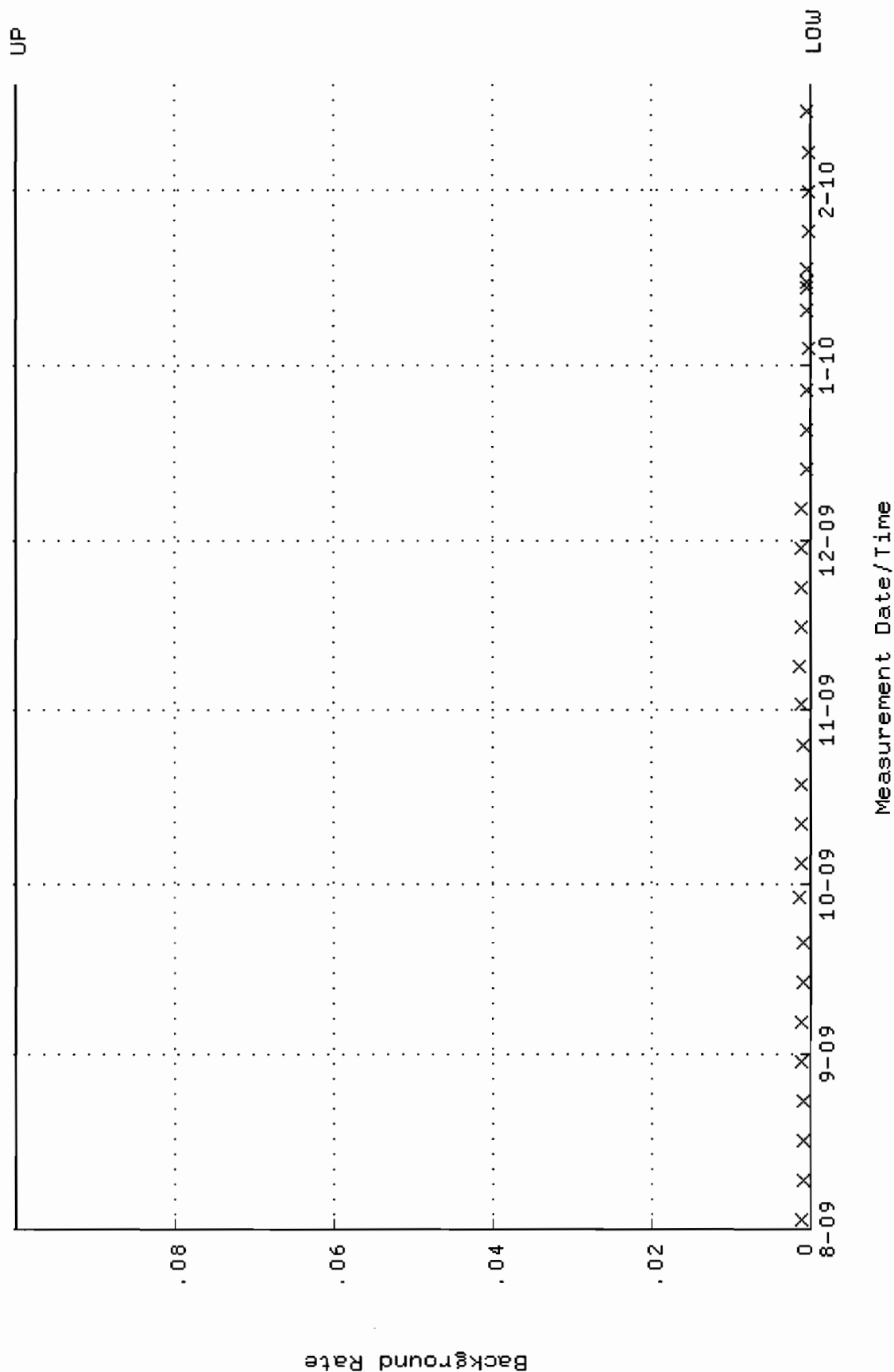
Lower/Upper Lmts: 0.243156 through 0.263156



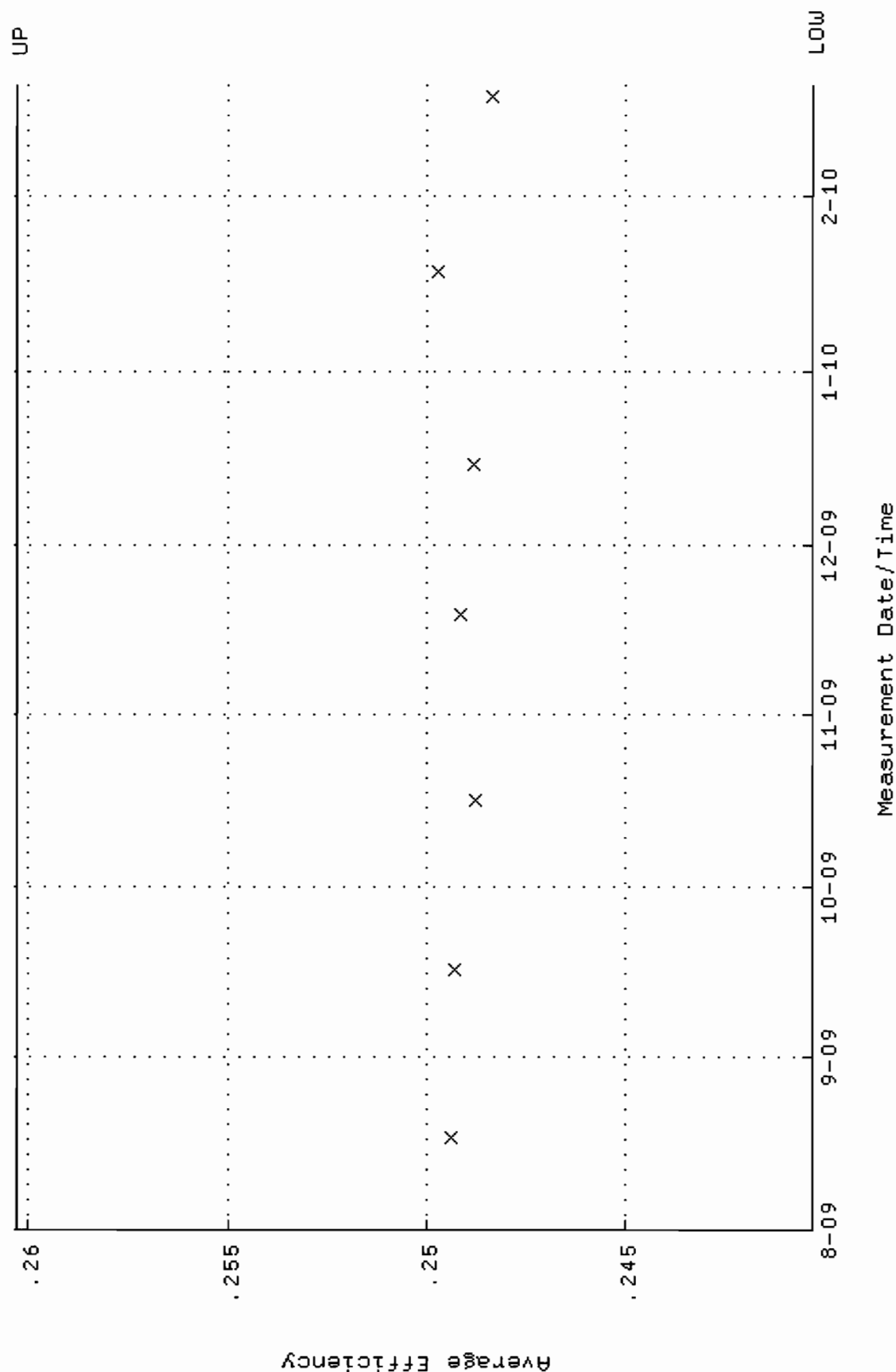
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:41:49 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.7449 through 94.7707



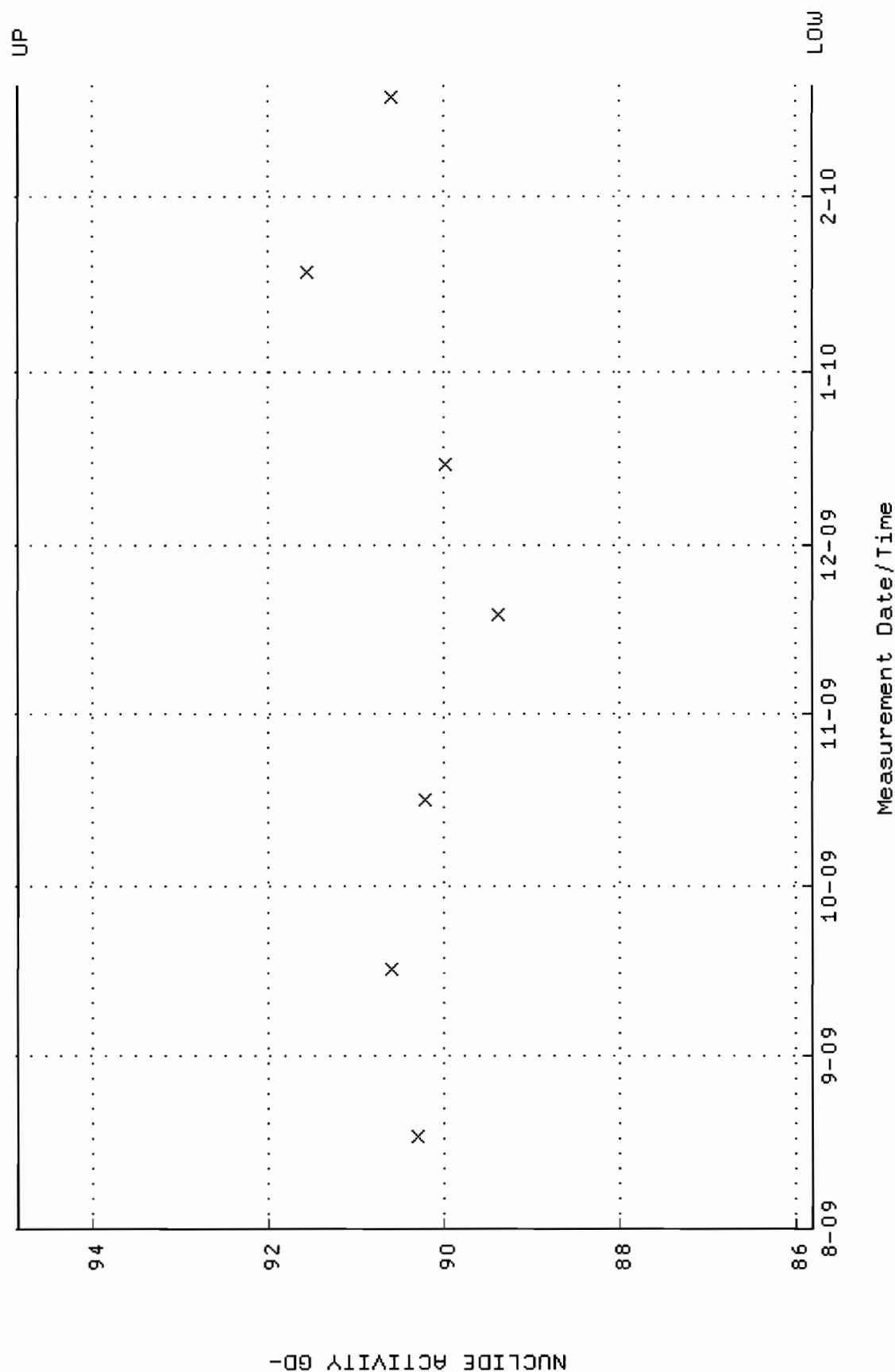
QA filename : DKA100:[ENV_ALPHA.QA.B]B126.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:12:55 through 19-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



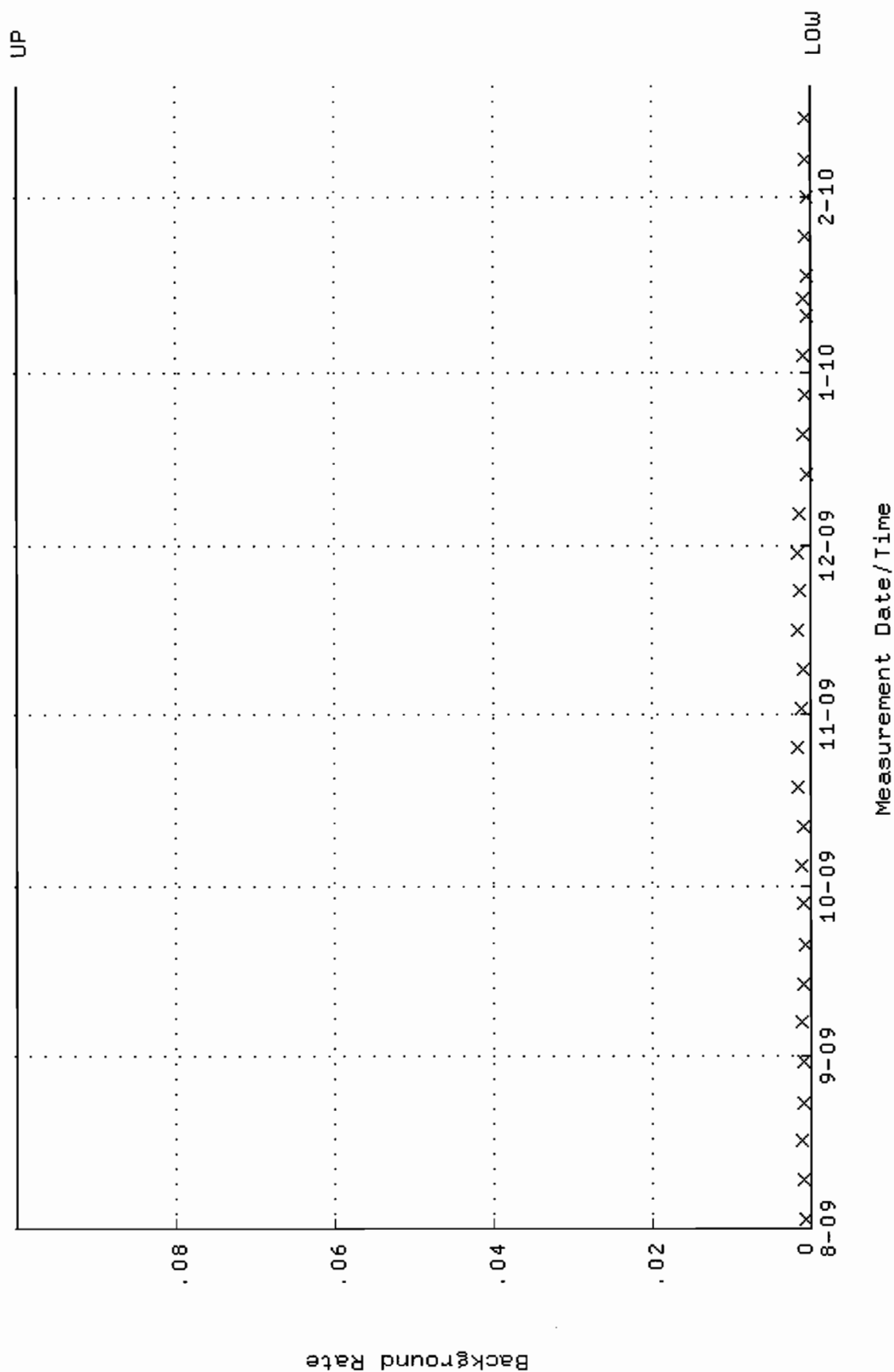
QA filename : DKA100:[ENV_ALPHA.QA.W]w139.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:05:40 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.240299 through 0.260299



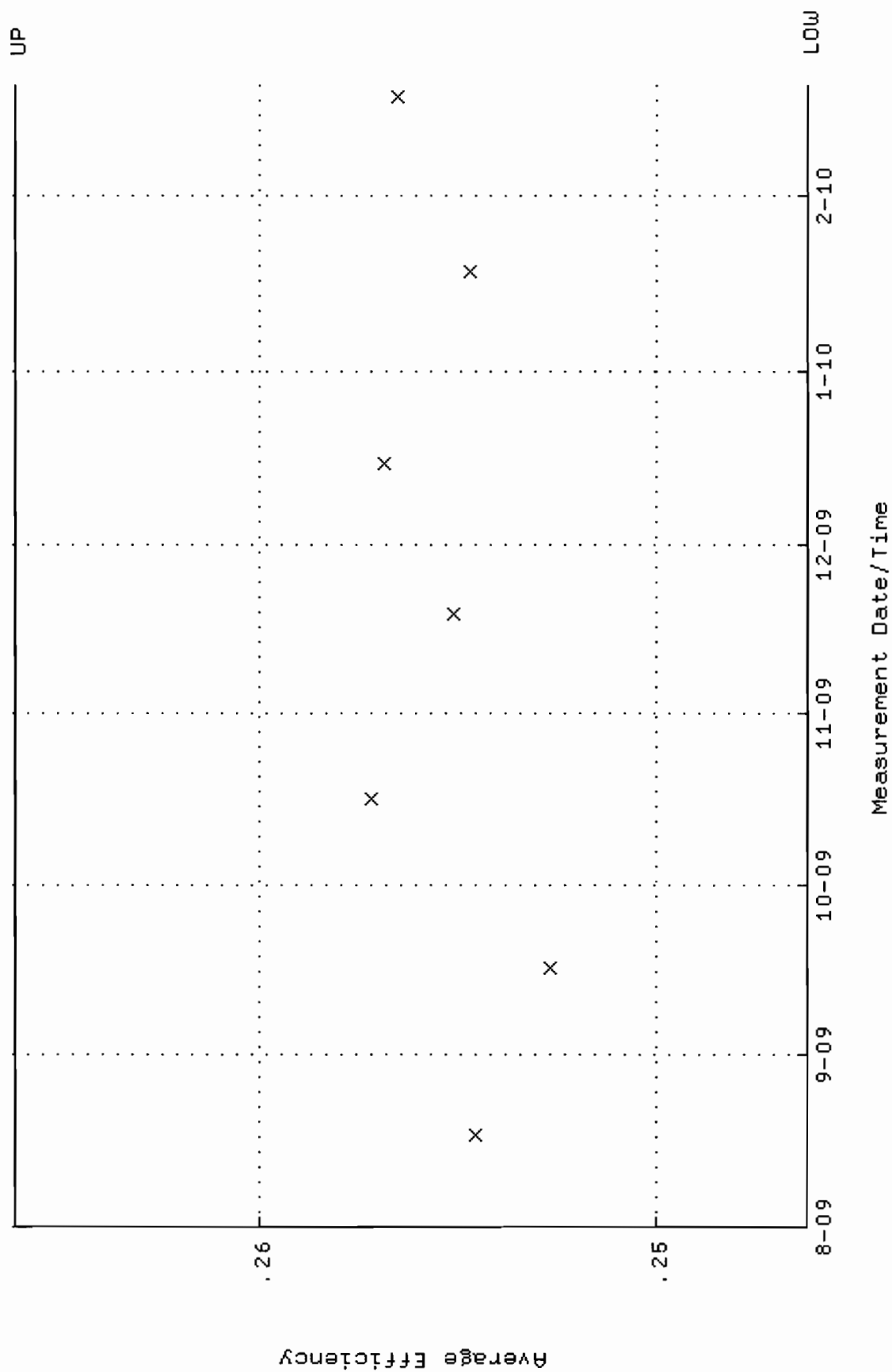
QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:05:40 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.8145 through 94.8477



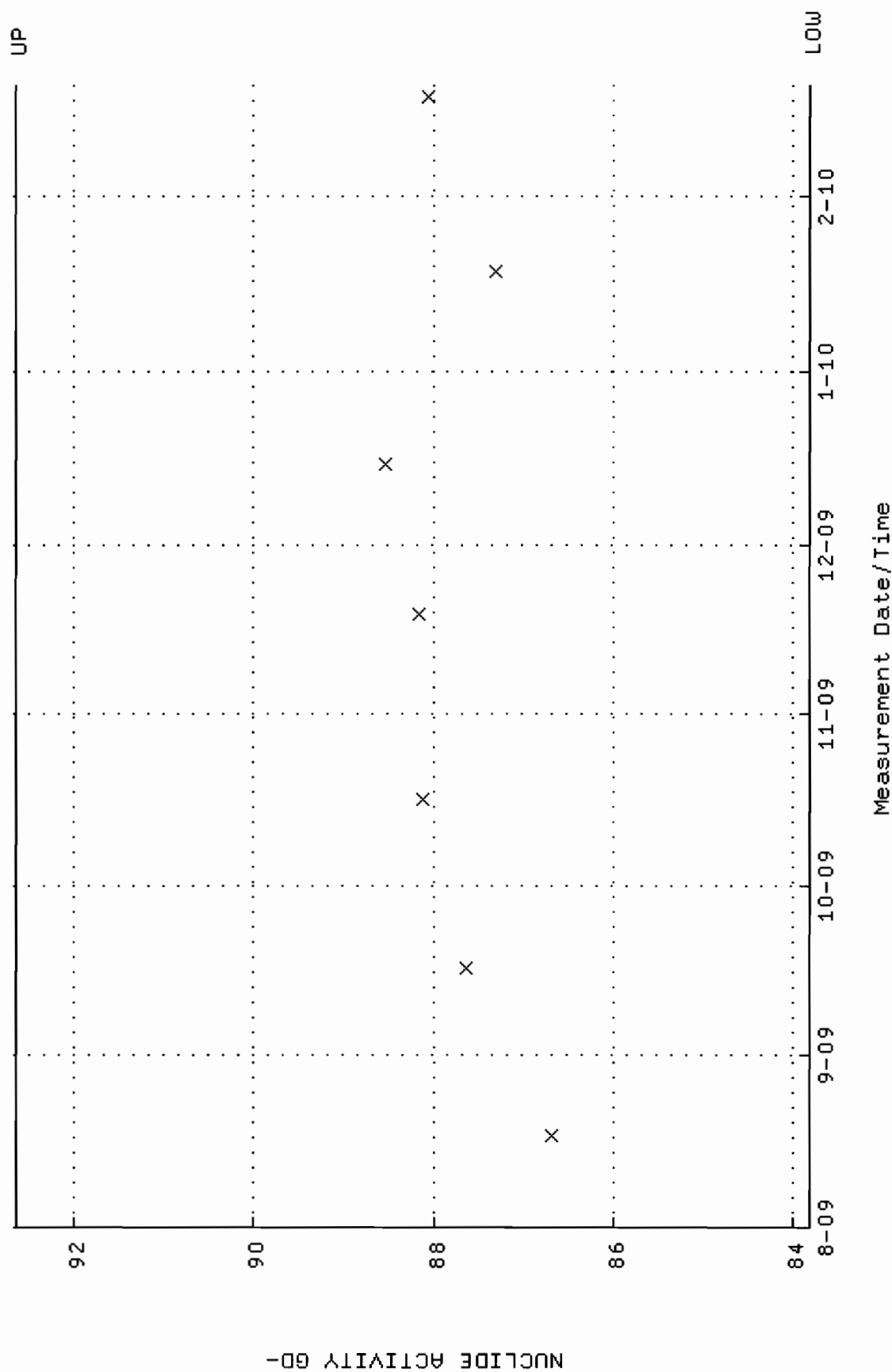
QA filename : DKA100:[ENV_ALPHA.QA.B]B139.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:52 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



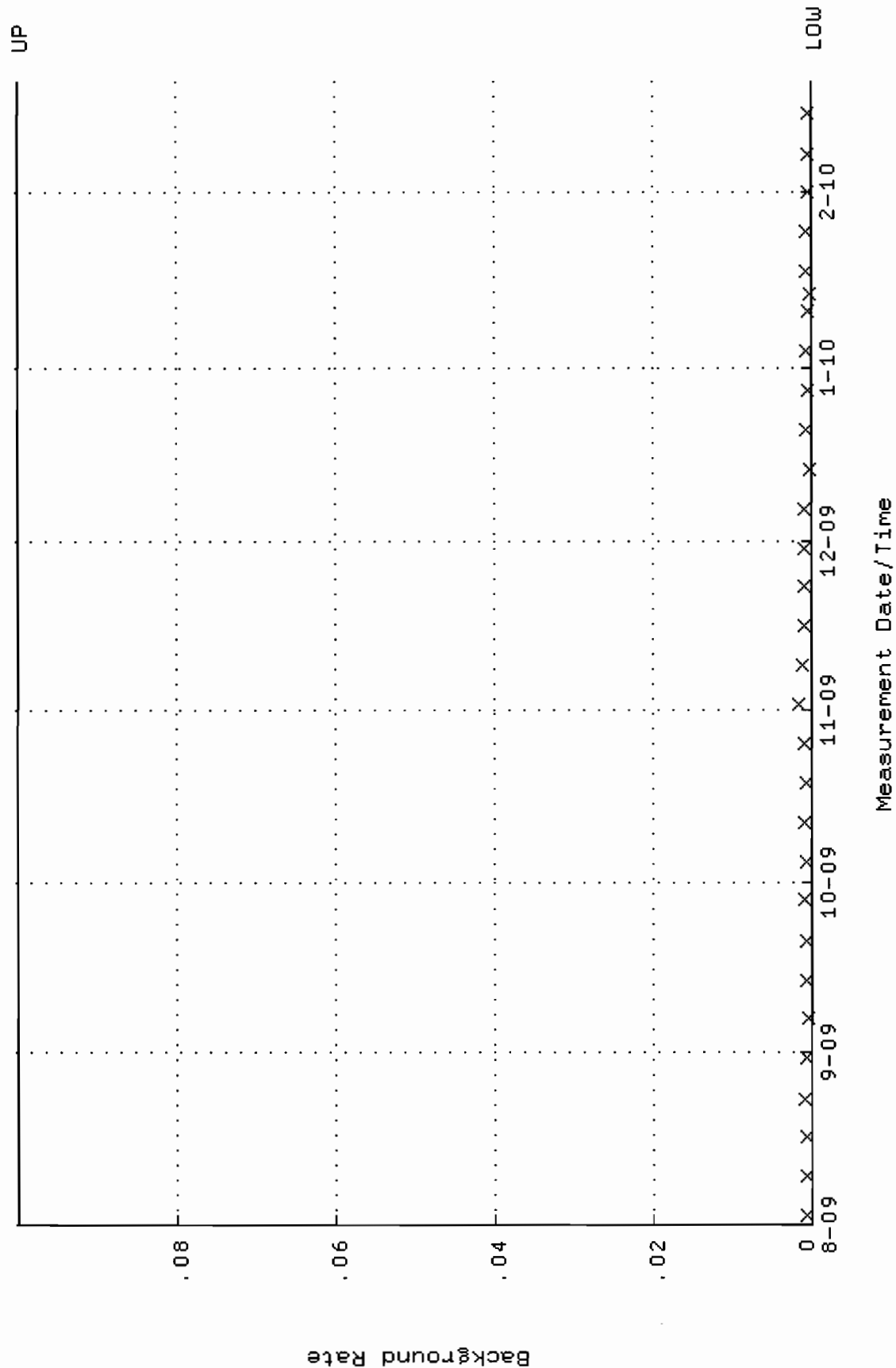
QA filename : DKA100:[ENV_ALPHA.QA.W]W140.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:05:55 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.246178 through 0.266178



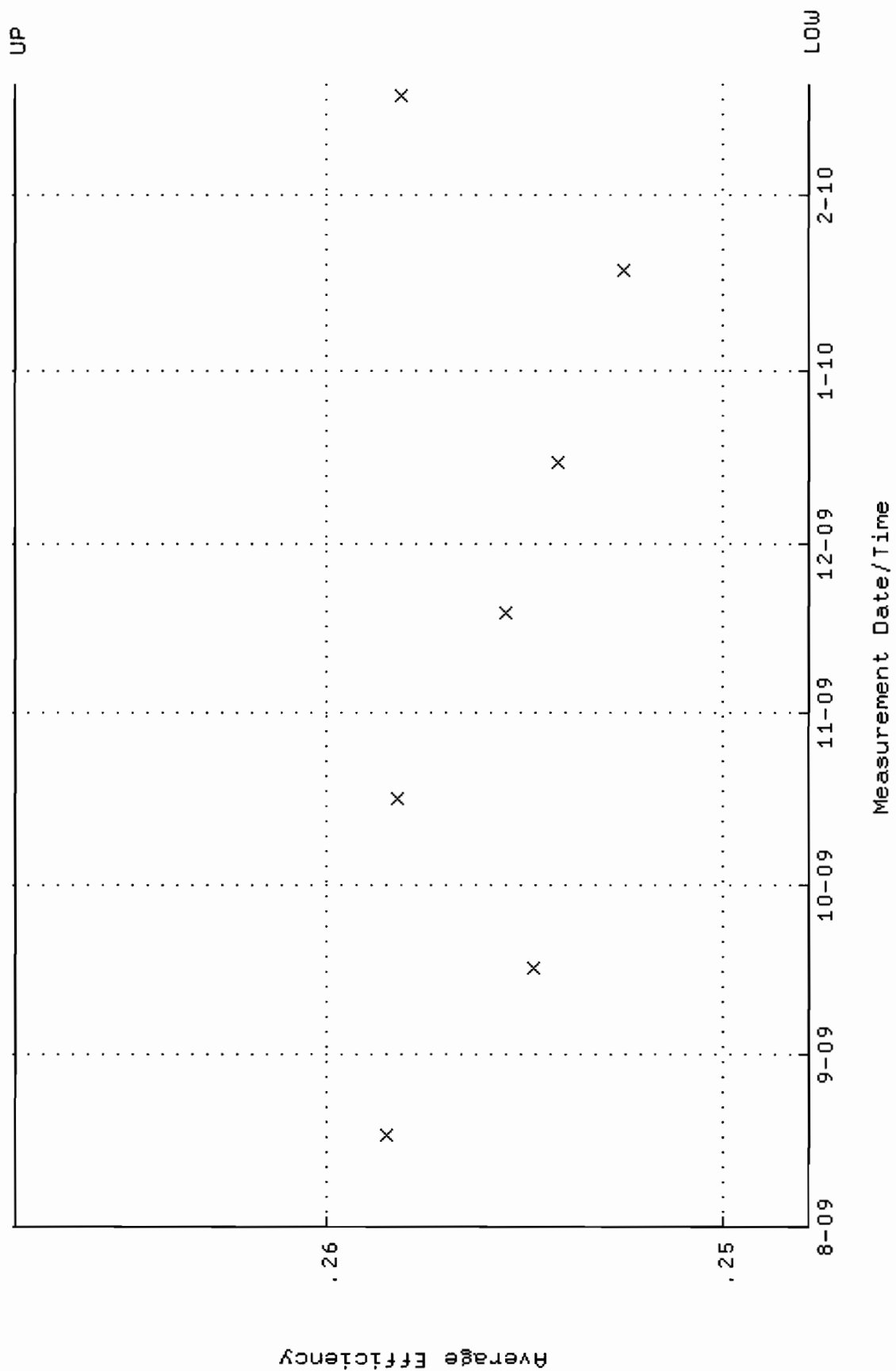
QA filename : DKA100:[ENV_ALPHA.QA.W]w140.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:05:55 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 83.8171 through 92.6399



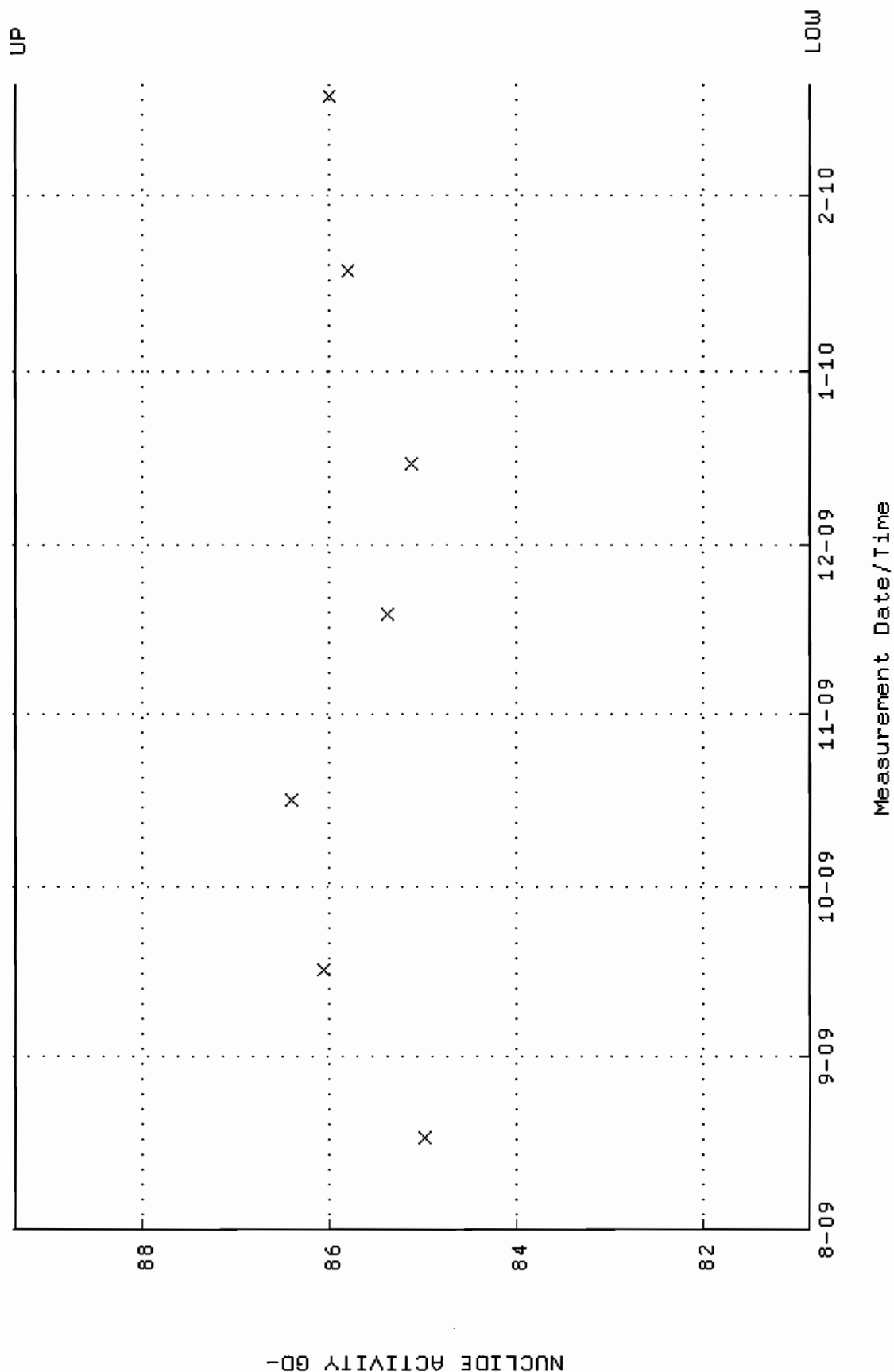
QA filename : DKA100:[ENV_ALPHA.QA.B]B140.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:13:56 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



QA filename : DKA100:[ENV_ALPHA.QA.W]w141.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:09 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.247845 through 0.267845



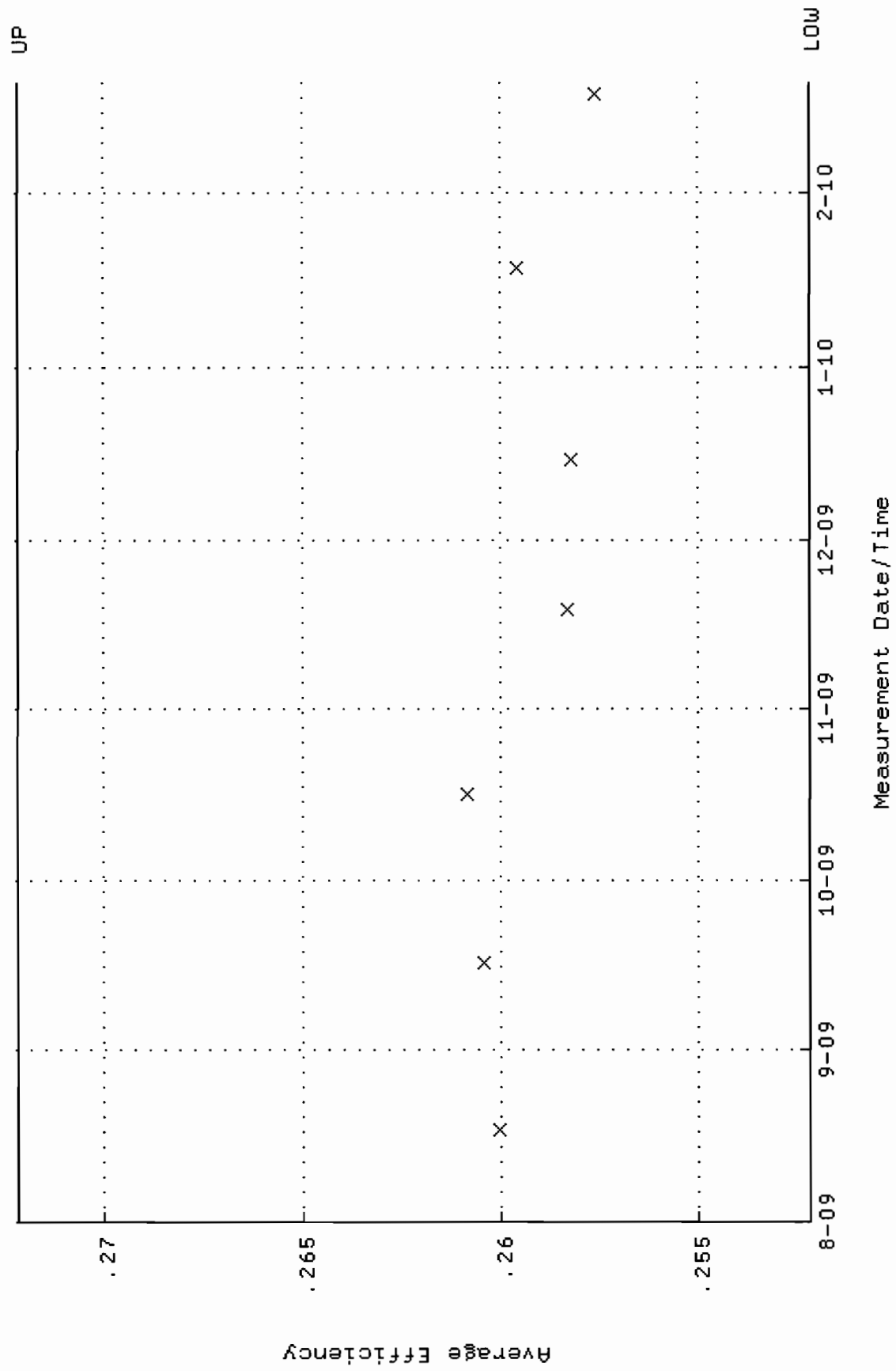
QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:09 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 80.8595 through 89.3711



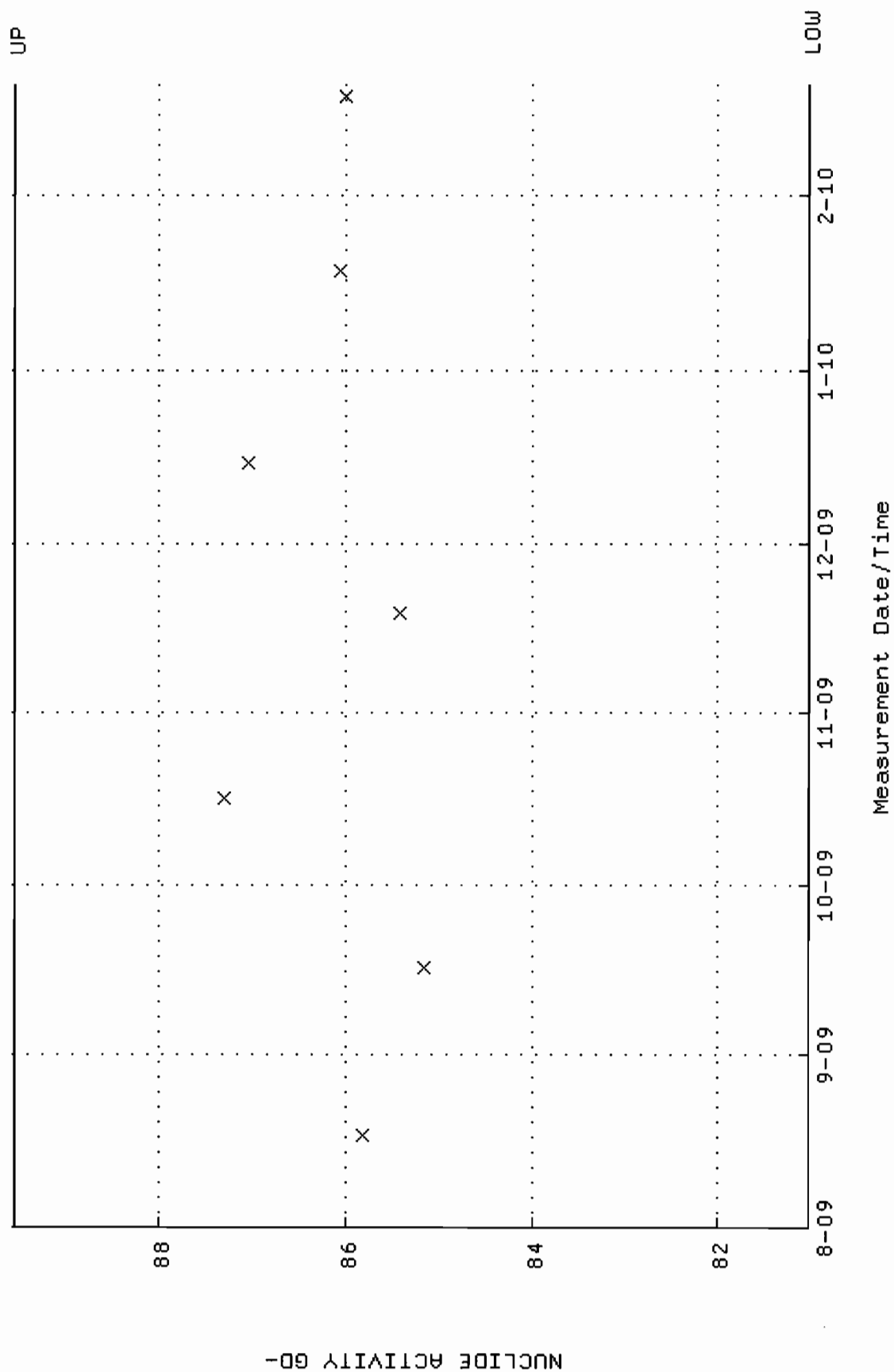
Lower/Upper Lmts: 0.00000E+00 through 0.100000



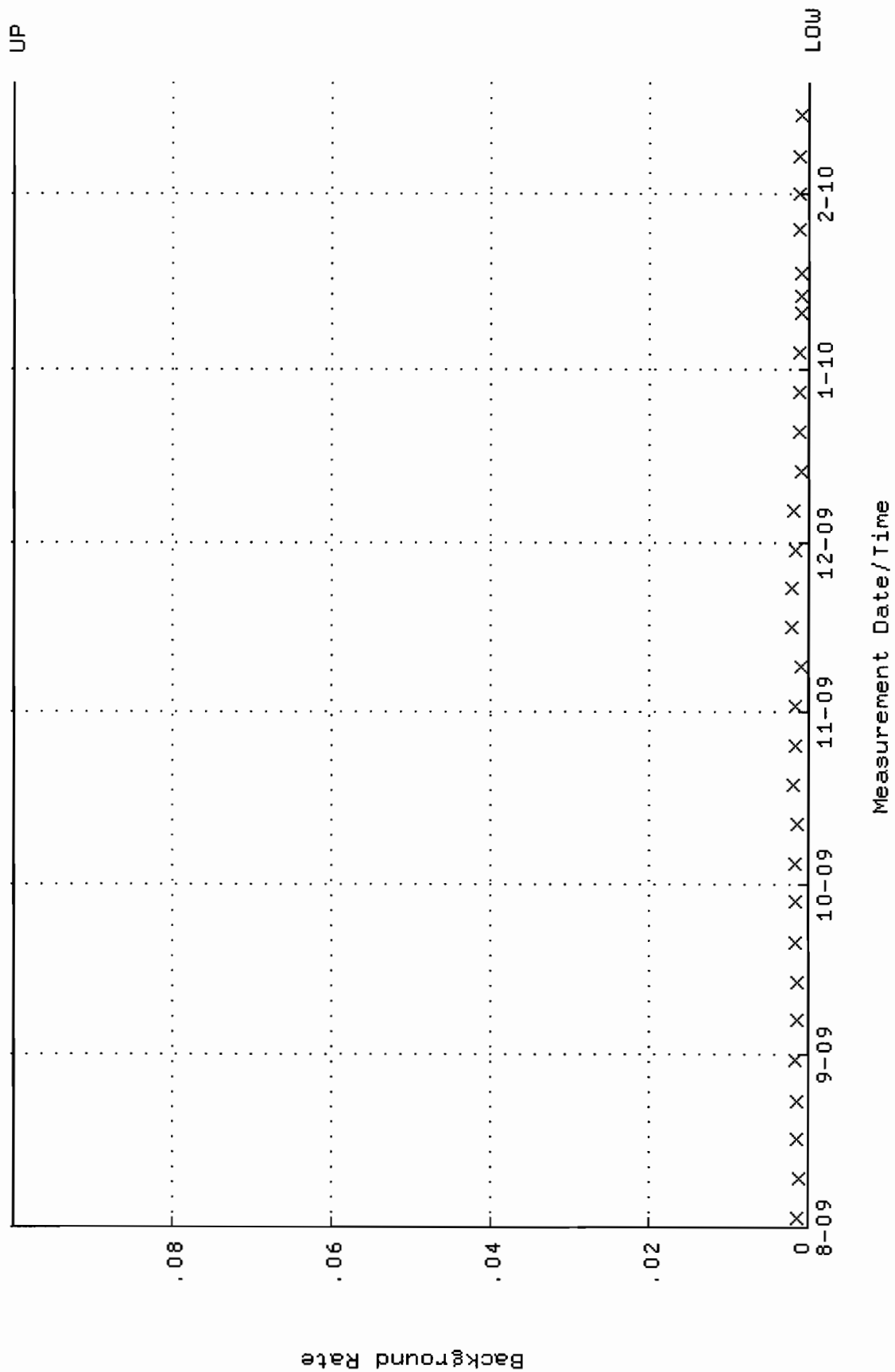
QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:21 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.252182 through 0.272182



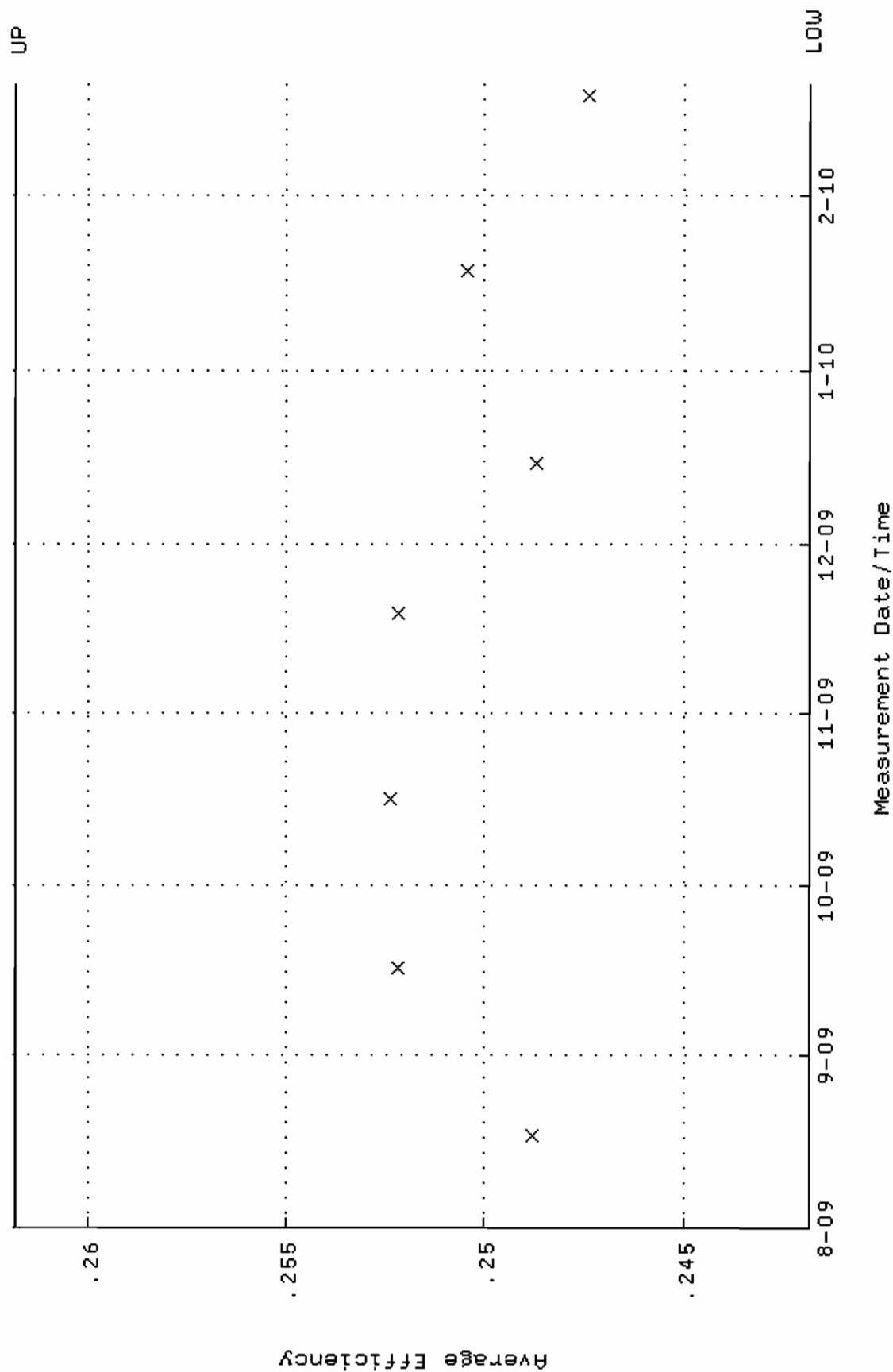
QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:21 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 81.0245 through 89.5533



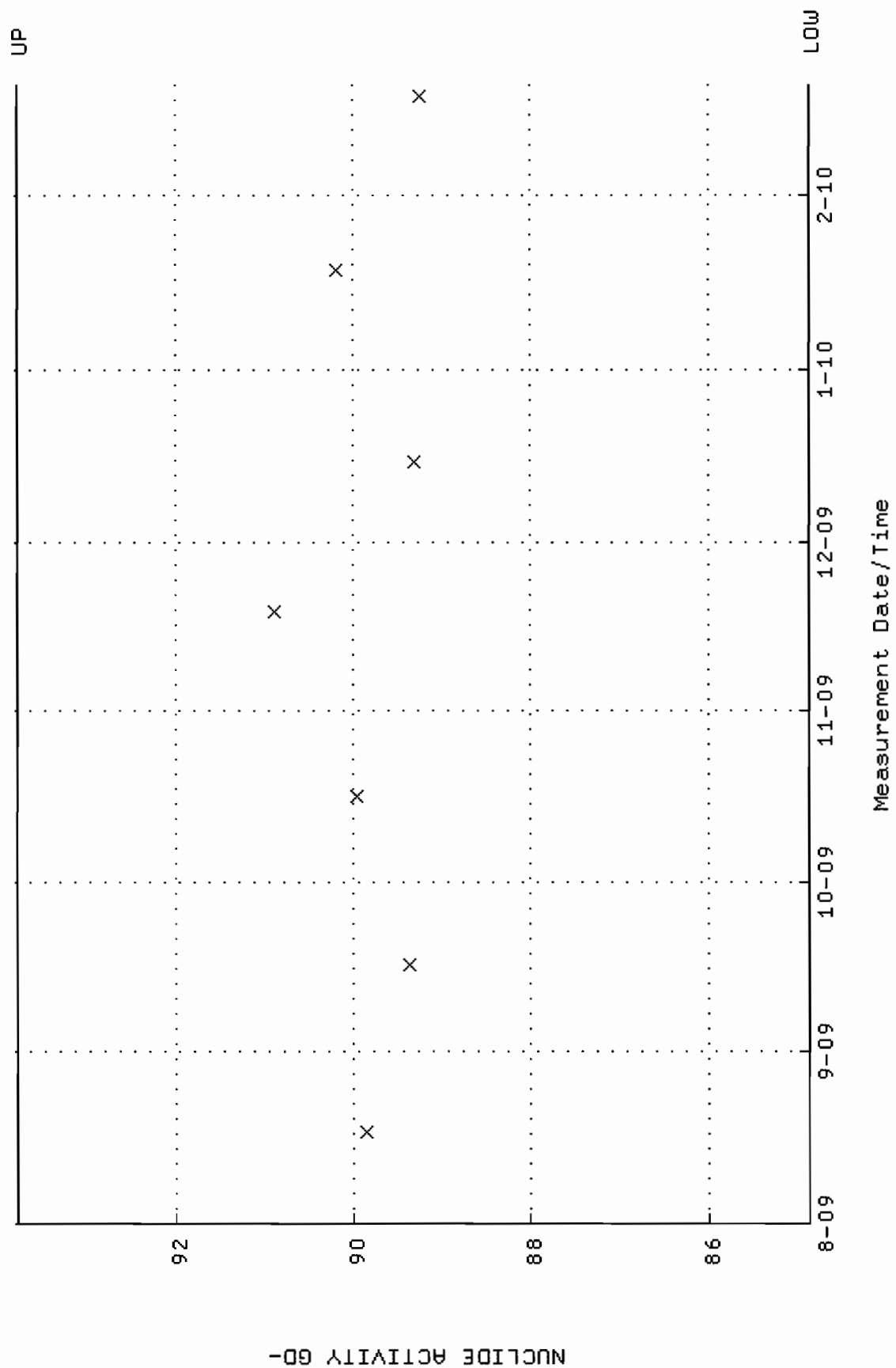
QA filename : DKA100:[ENV_ALPHA.QA.B]B142.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:04 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



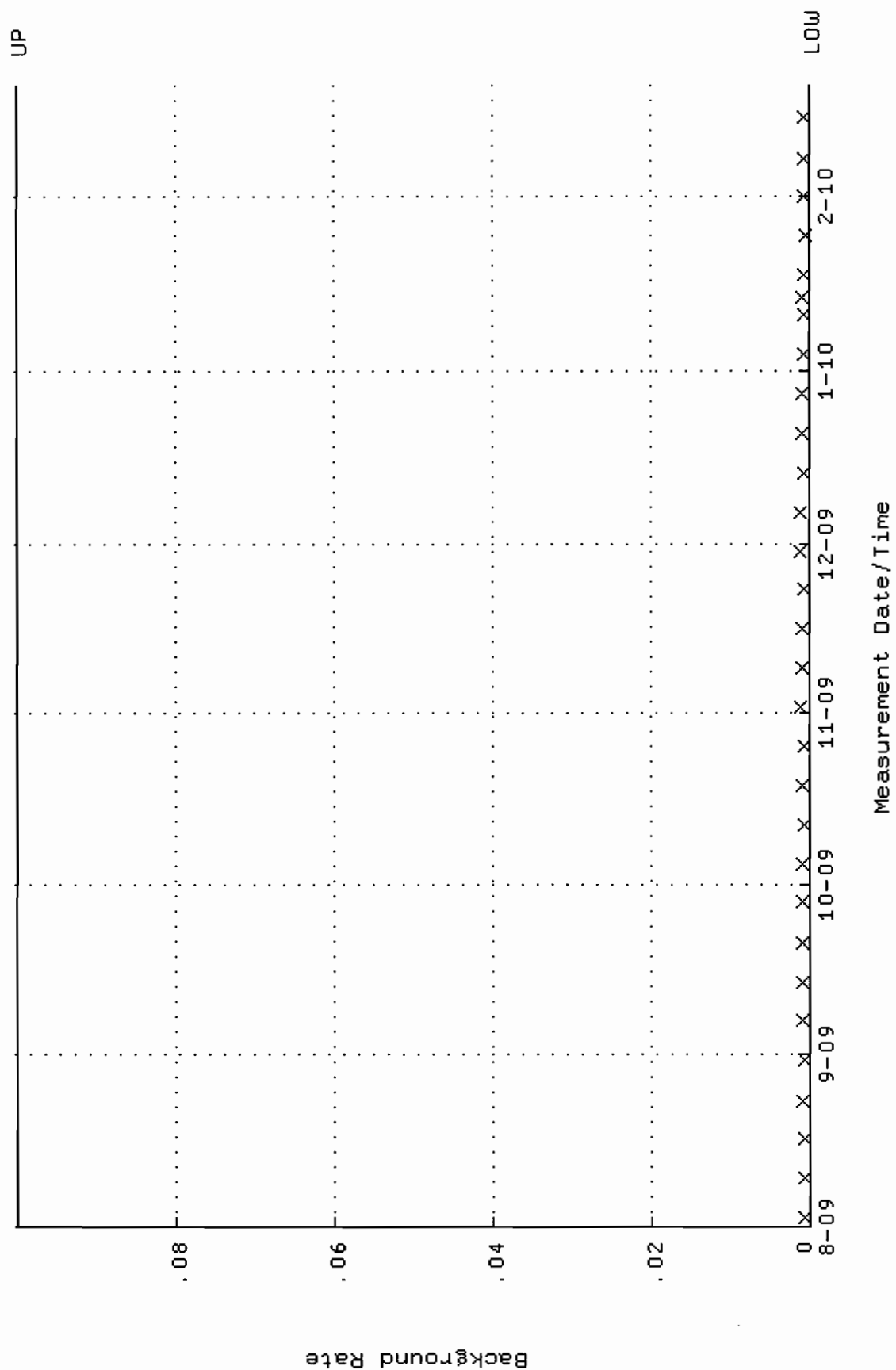
QA filename : DKA100:[ENV_ALPHA.QA.W]w146.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:06:56 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.241831 through 0.261831



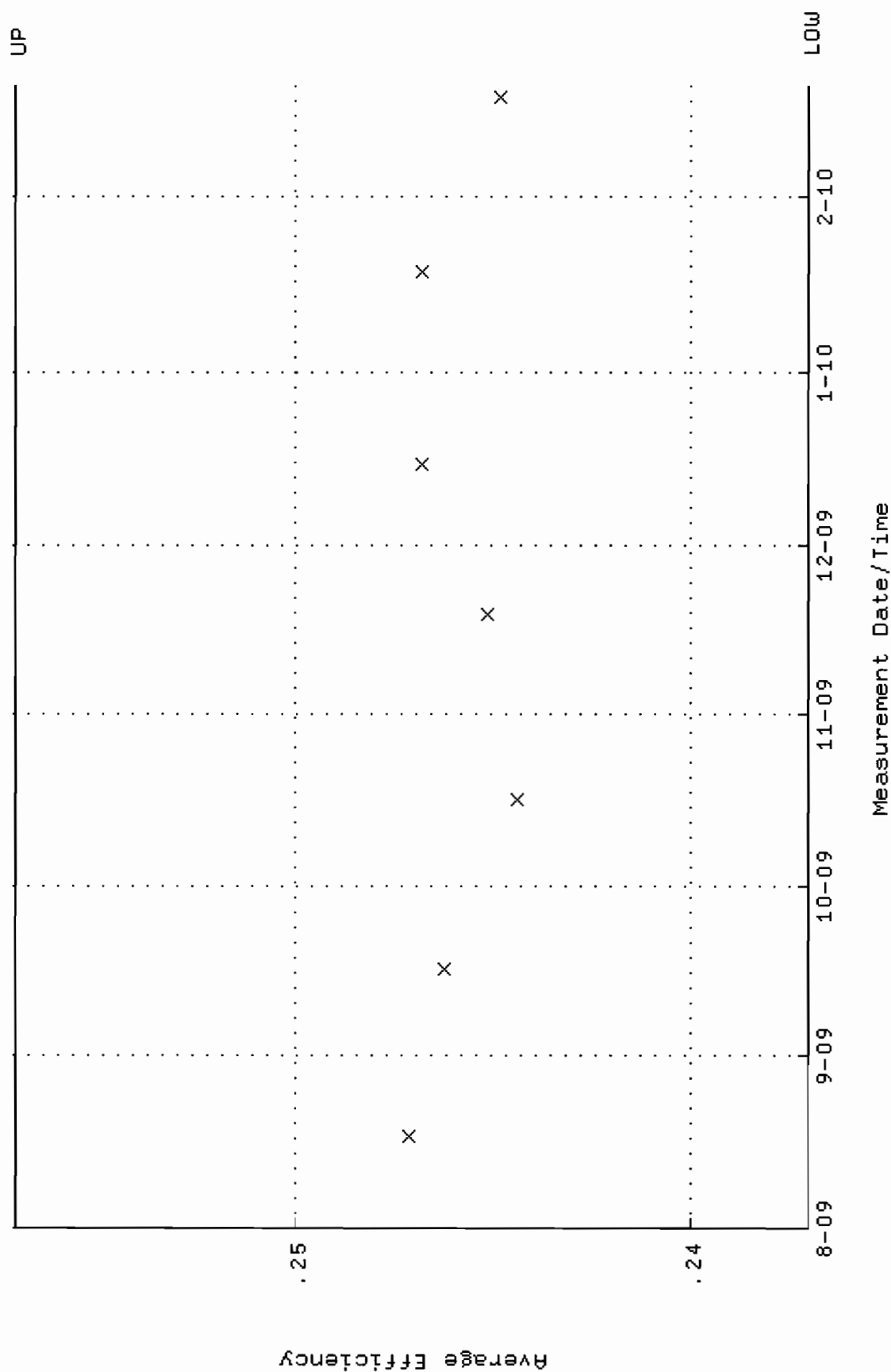
QA filename : DKA100:[ENV_ALPHA.QA.W]w146.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:06:56 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.8578 through 93.7902



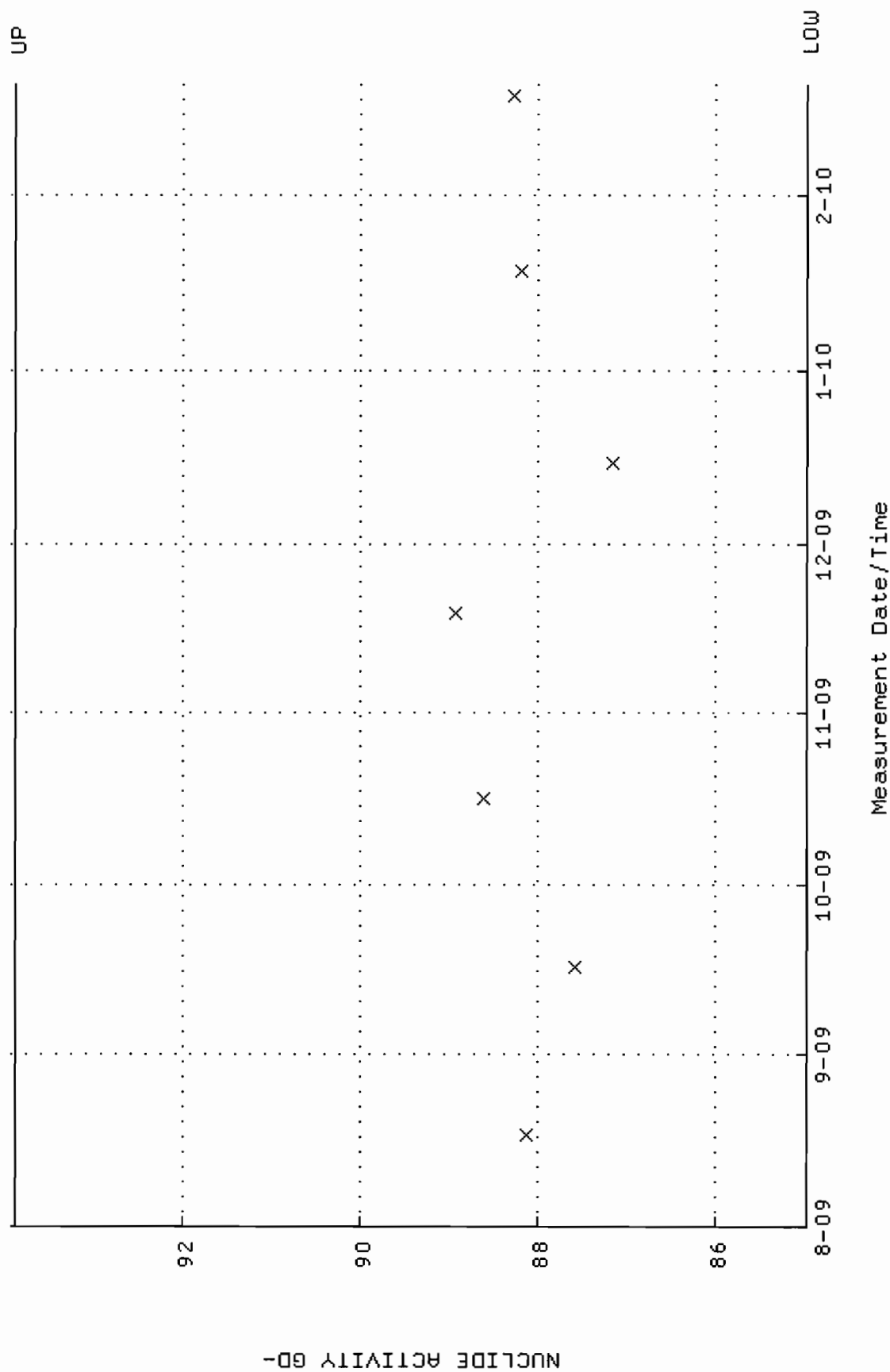
QA filename : DKA100:[ENV_ALPHA.QA.B]B146.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:20 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



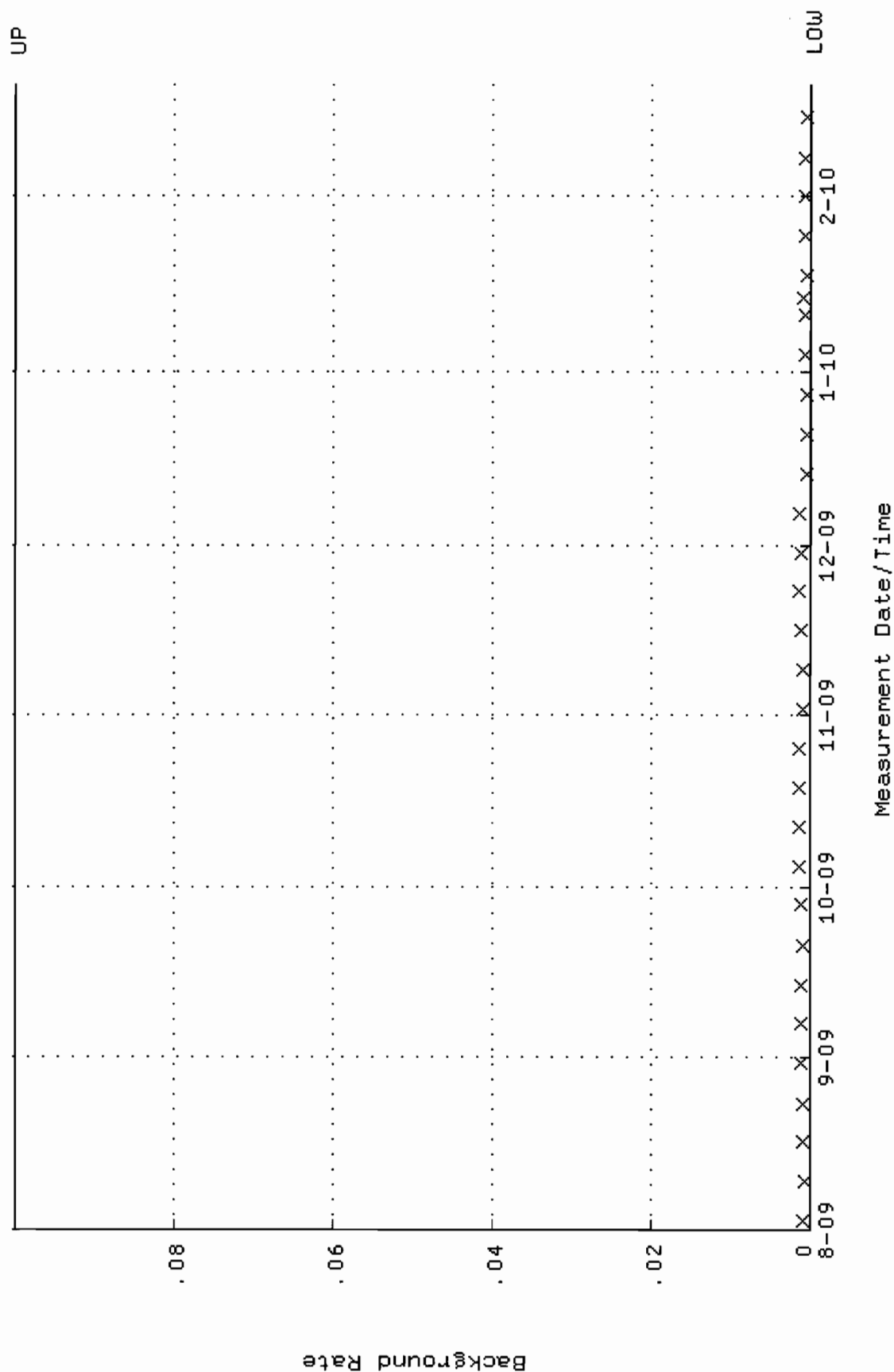
QA filename : DKA100: [ENV_ALPHA.QA.W]w147.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:07:03 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.237046 through 0.257046



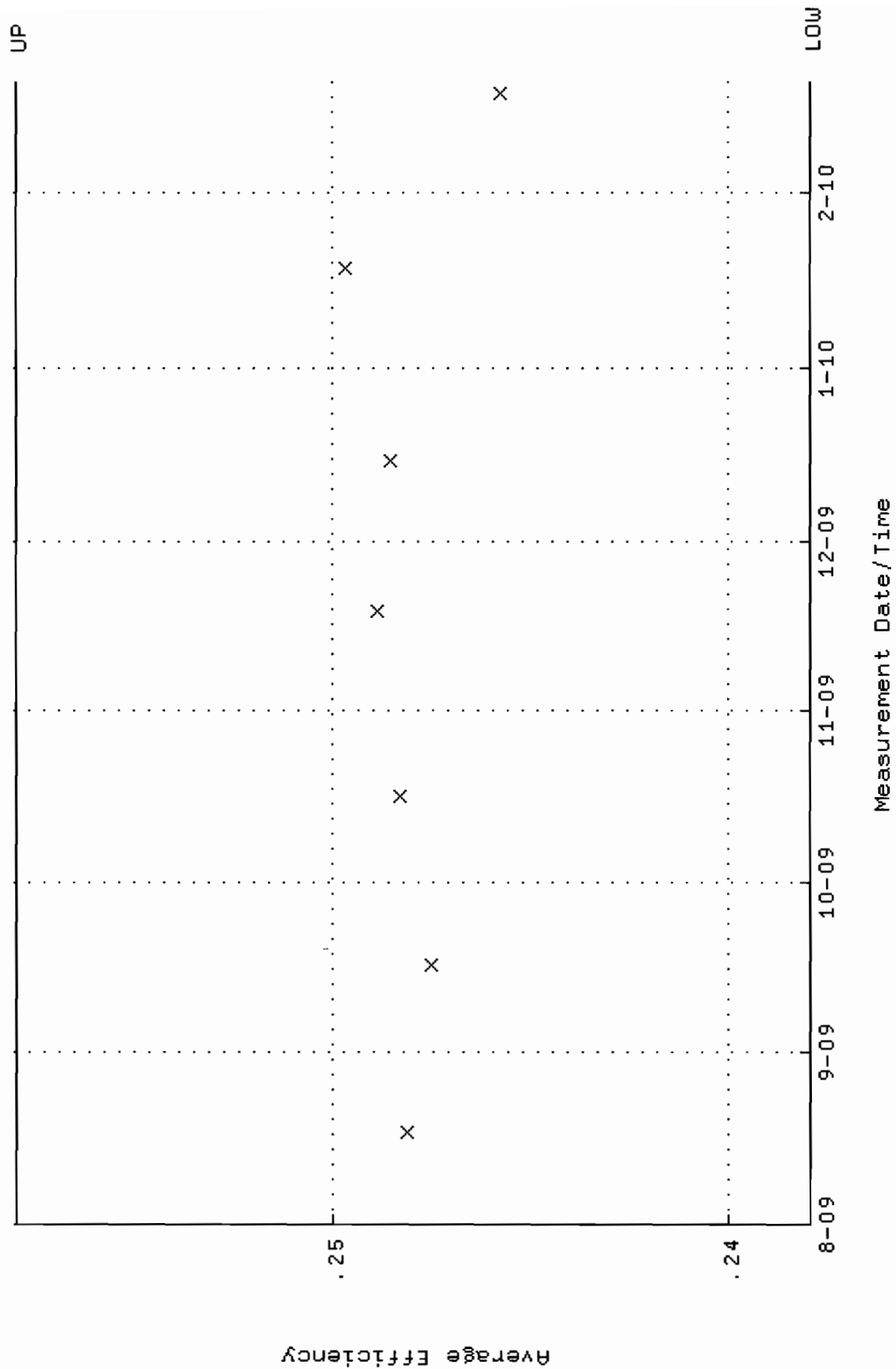
QA filename : DKA100:[ENV_ALPHA.QA.W]W147.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:07:03 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.9777 through 93.9227



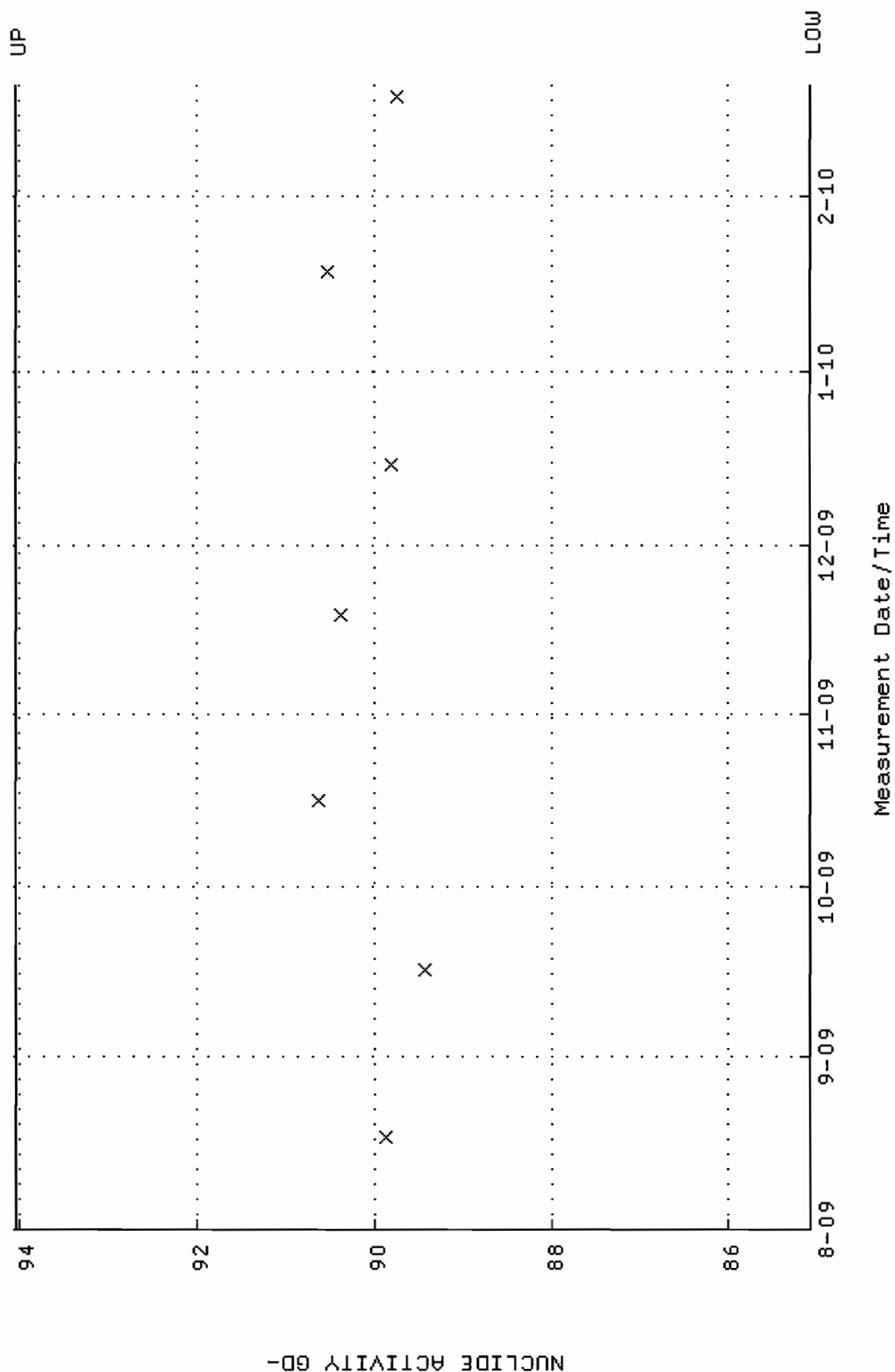
QA filename : DKA100:[ENV_ALPHA.QA.B]B147.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:24 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



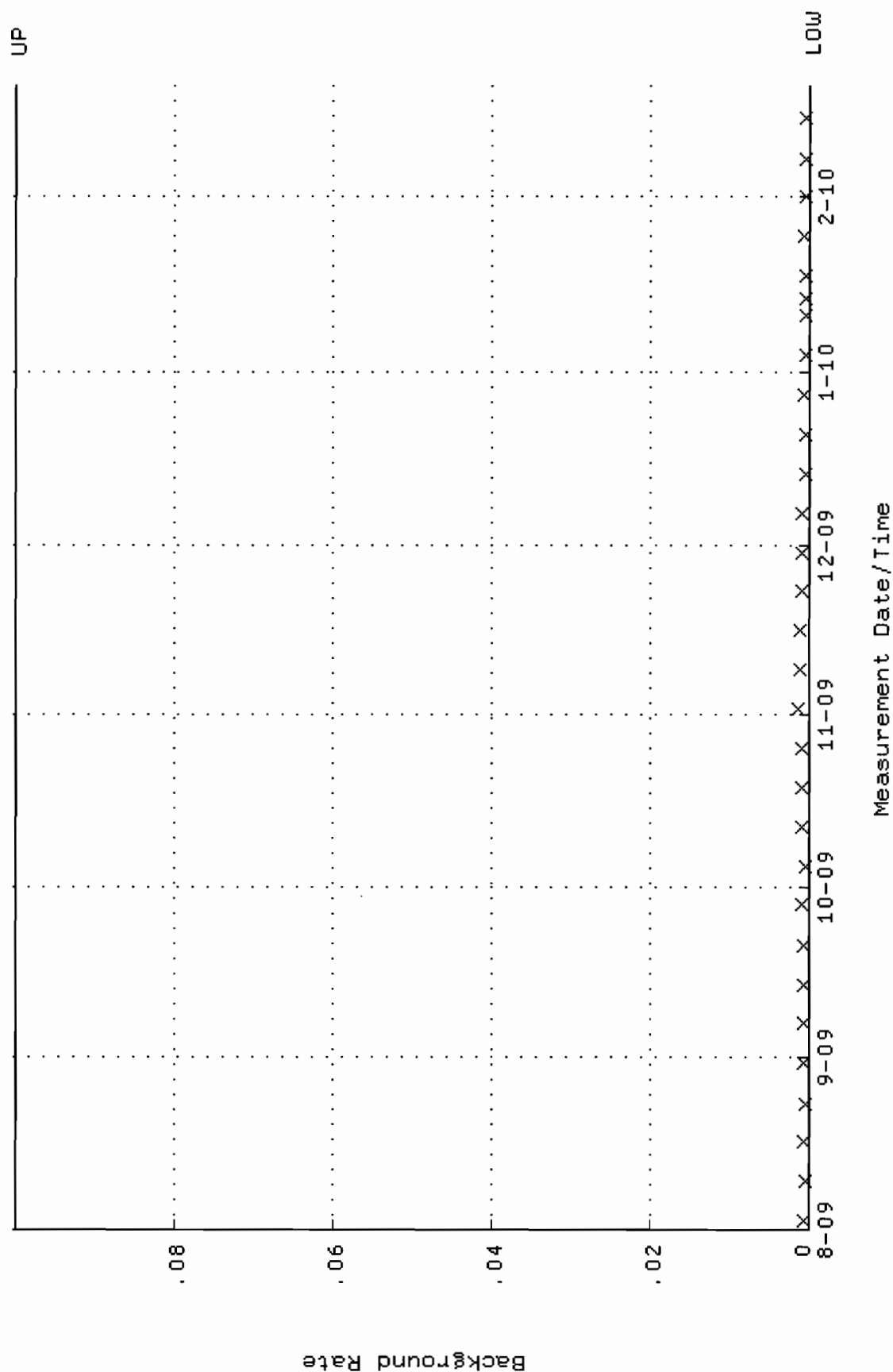
QA filename : DKA100:[ENV_ALPHA.QA.W]W148.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 10:07:10 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.237934 through 0.257934



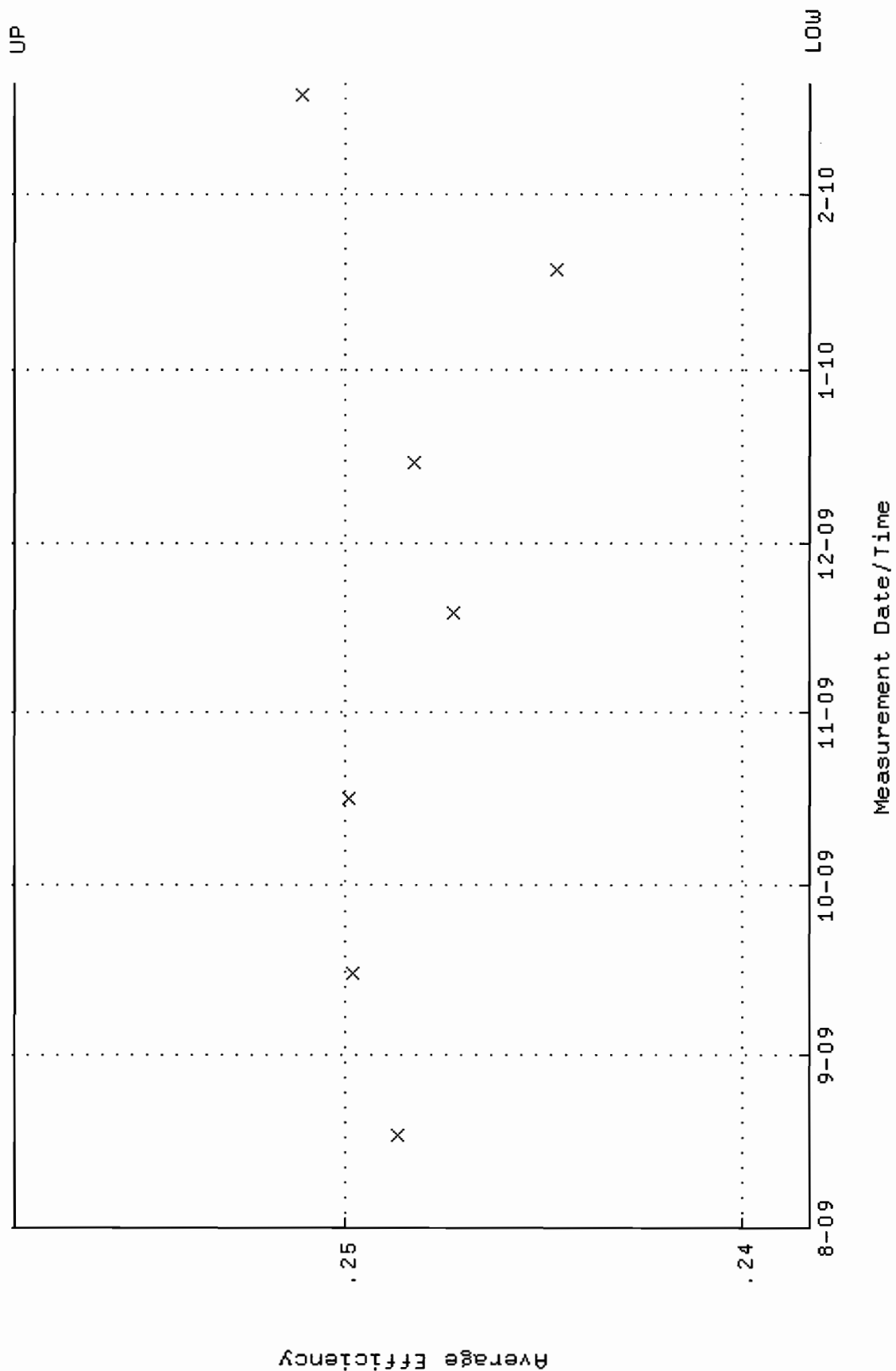
QA filename : DKA100:[ENV_ALPHA.QA.W]W148.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 10:07:10 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.0831 through 94.0393



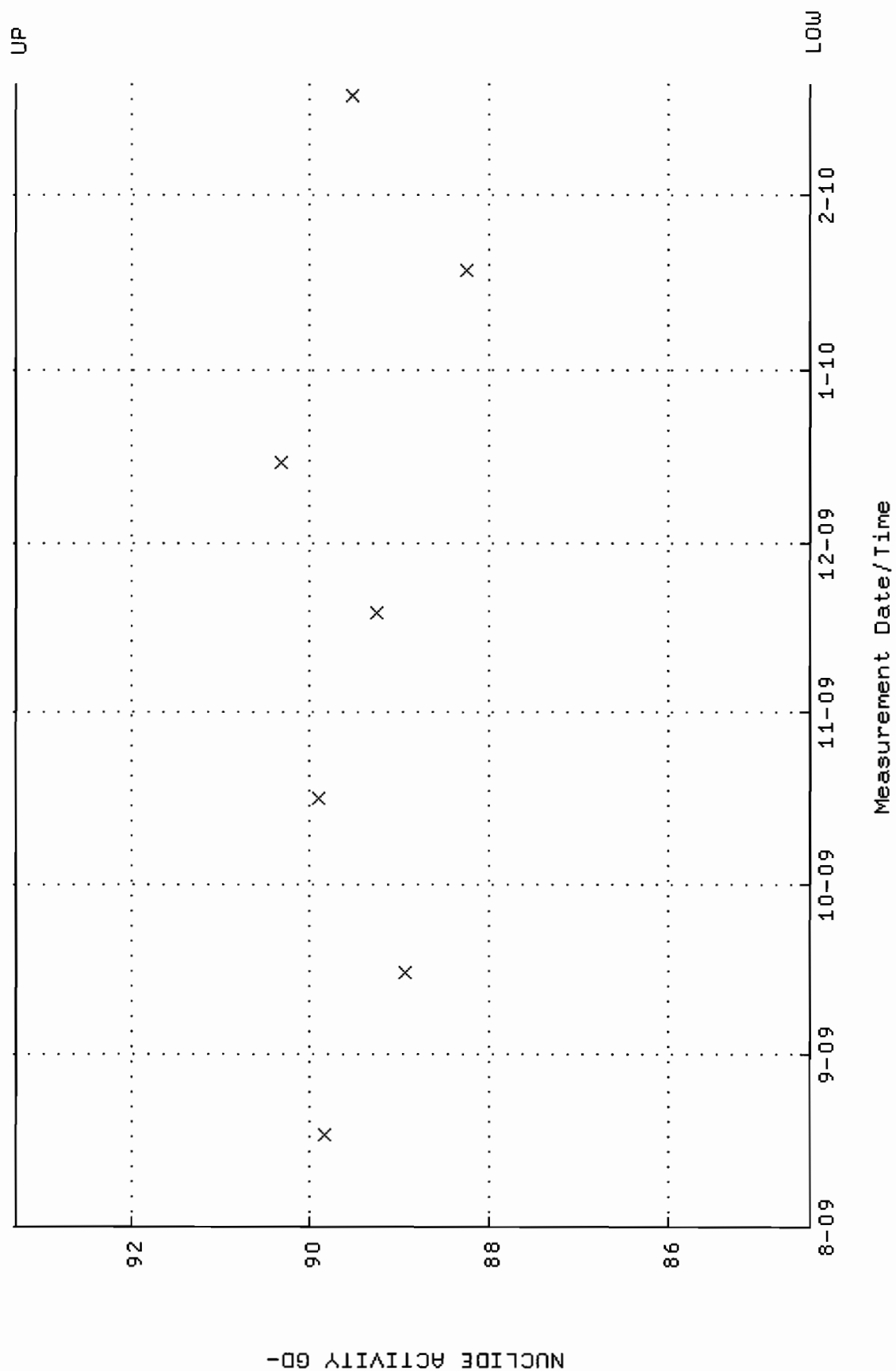
QA filename : DKA100:[ENV_ALPHA.QA.B]B148.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:28 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



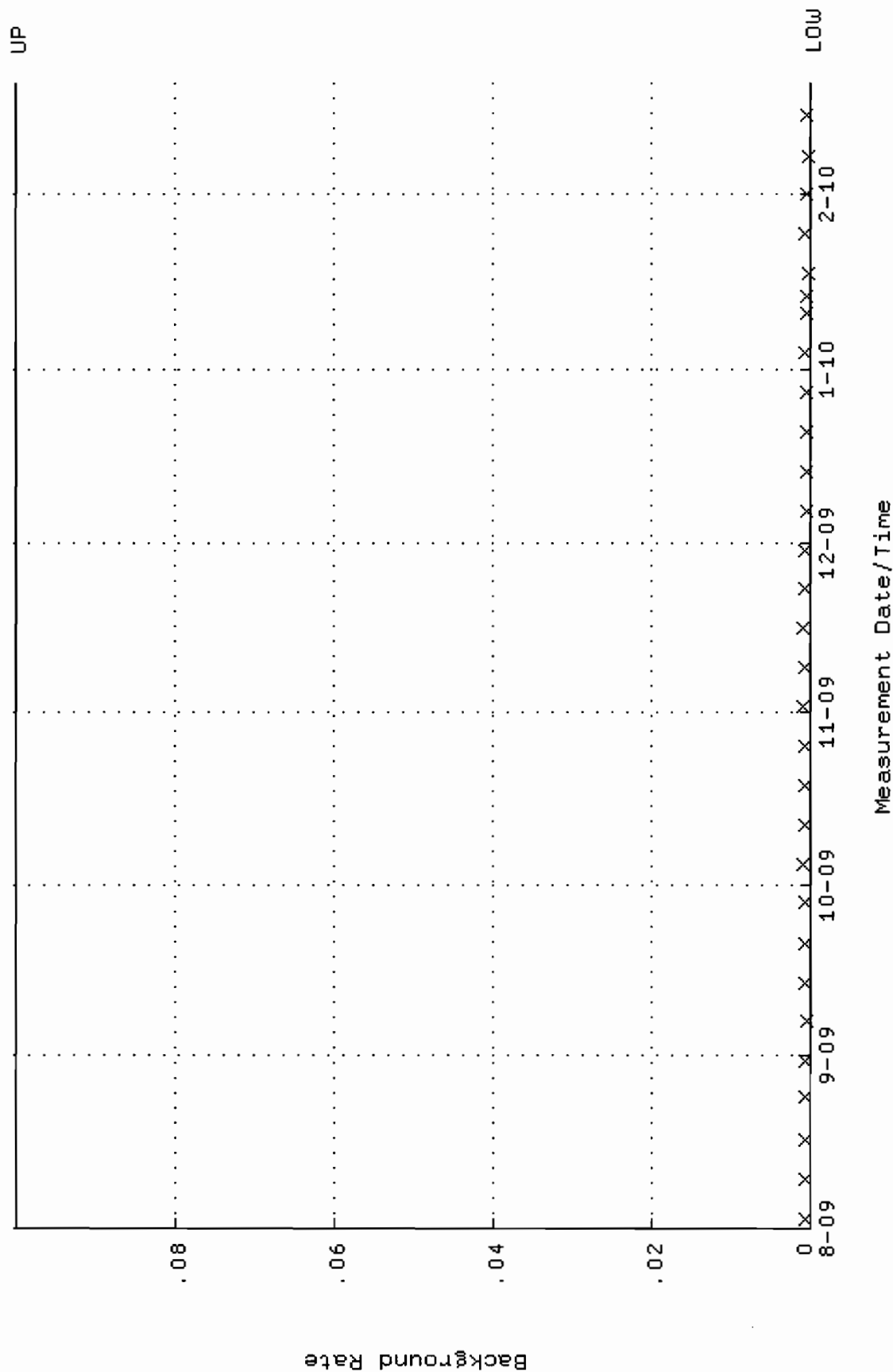
QA filename : DKA100:[ENV_ALPHA.QA.W]W150.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:47:06 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.238314 through 0.258314



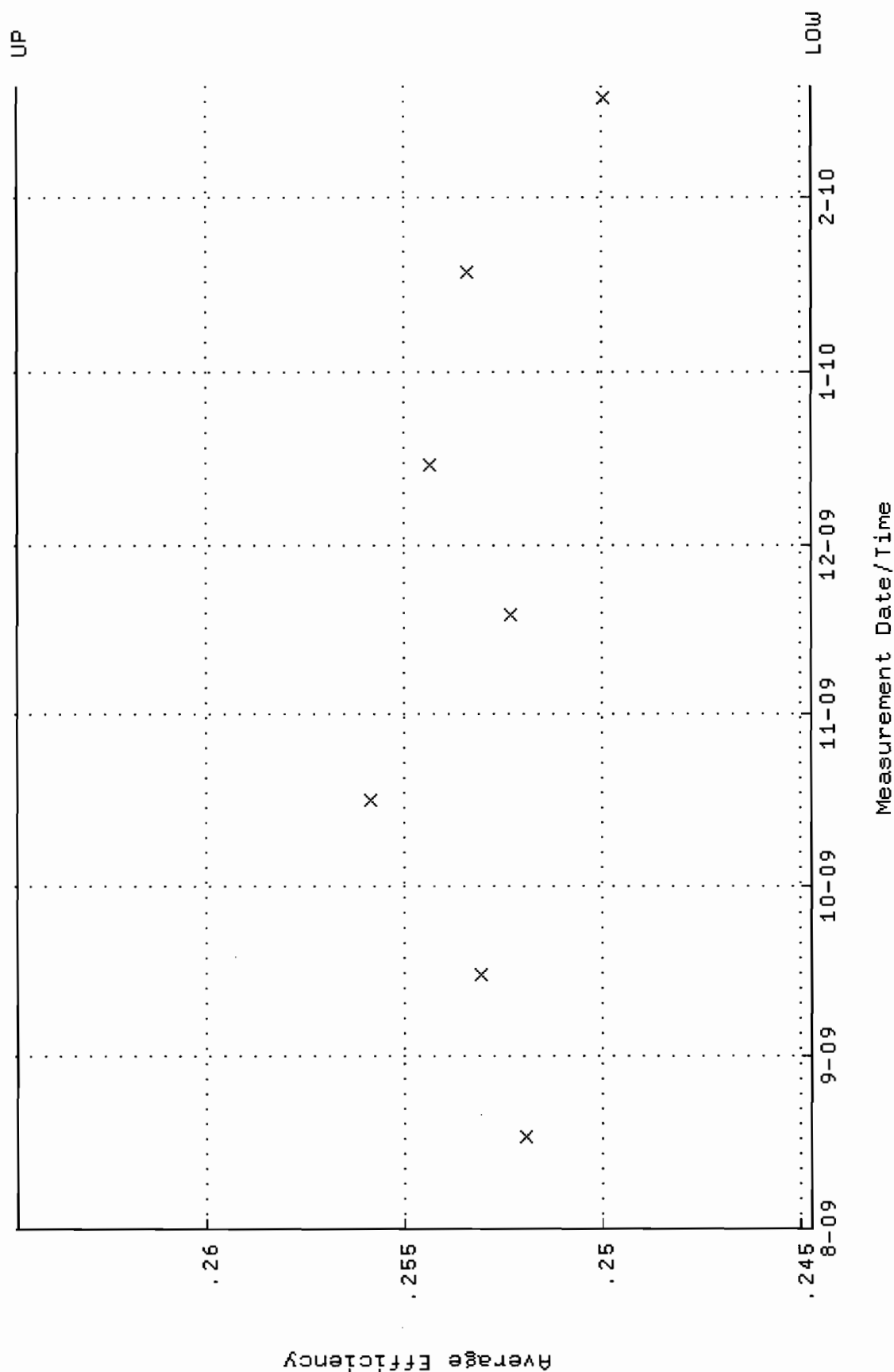
QA filename : DKA100:[ENV_ALPHA.QA.W]w150.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:47:06 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 84.4039 through 93.2885



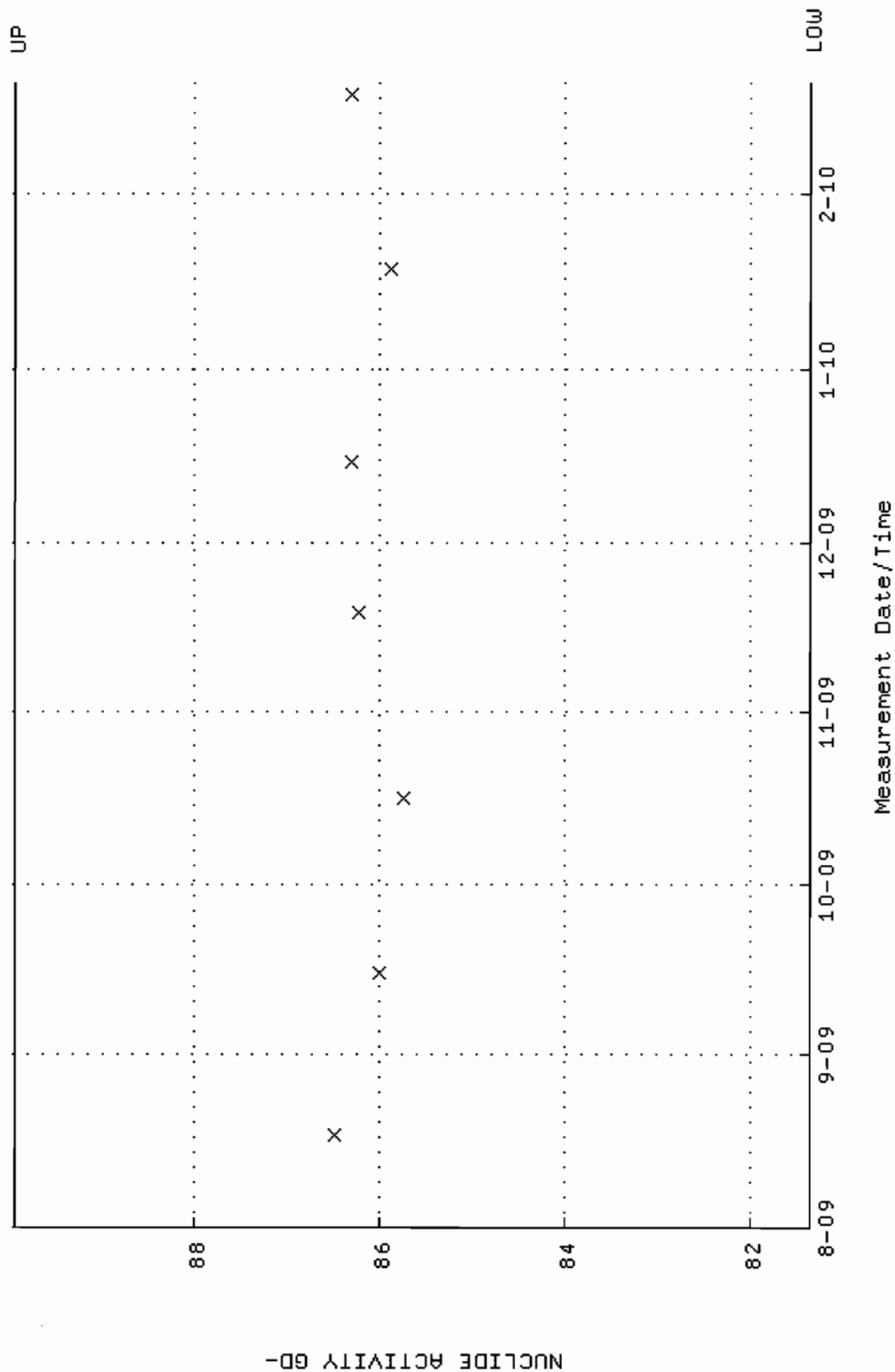
QA filename : DKA100:[ENV_ALPHA.QA.B]B150.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:36 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



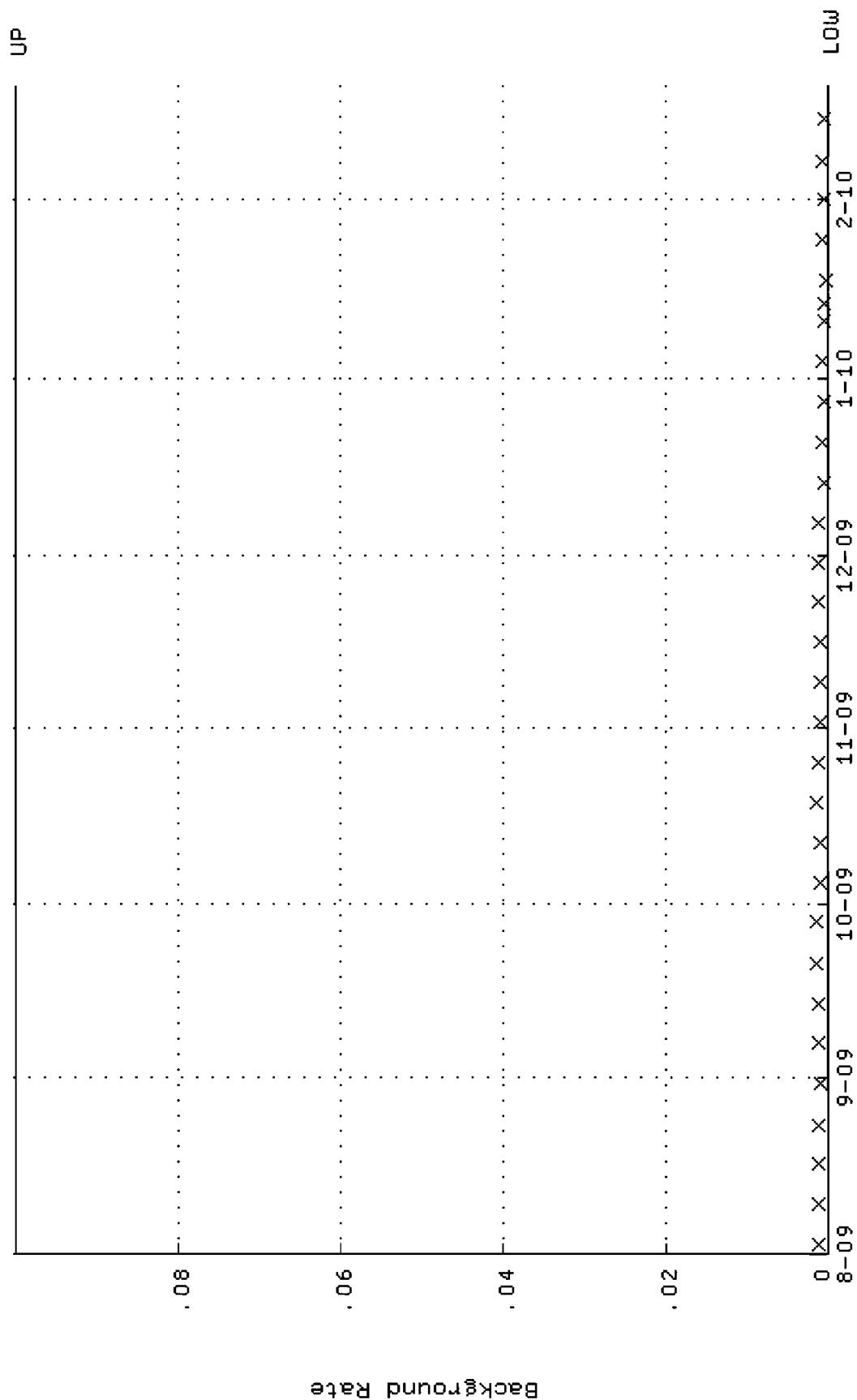
QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:47:33 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.244738 through 0.264738



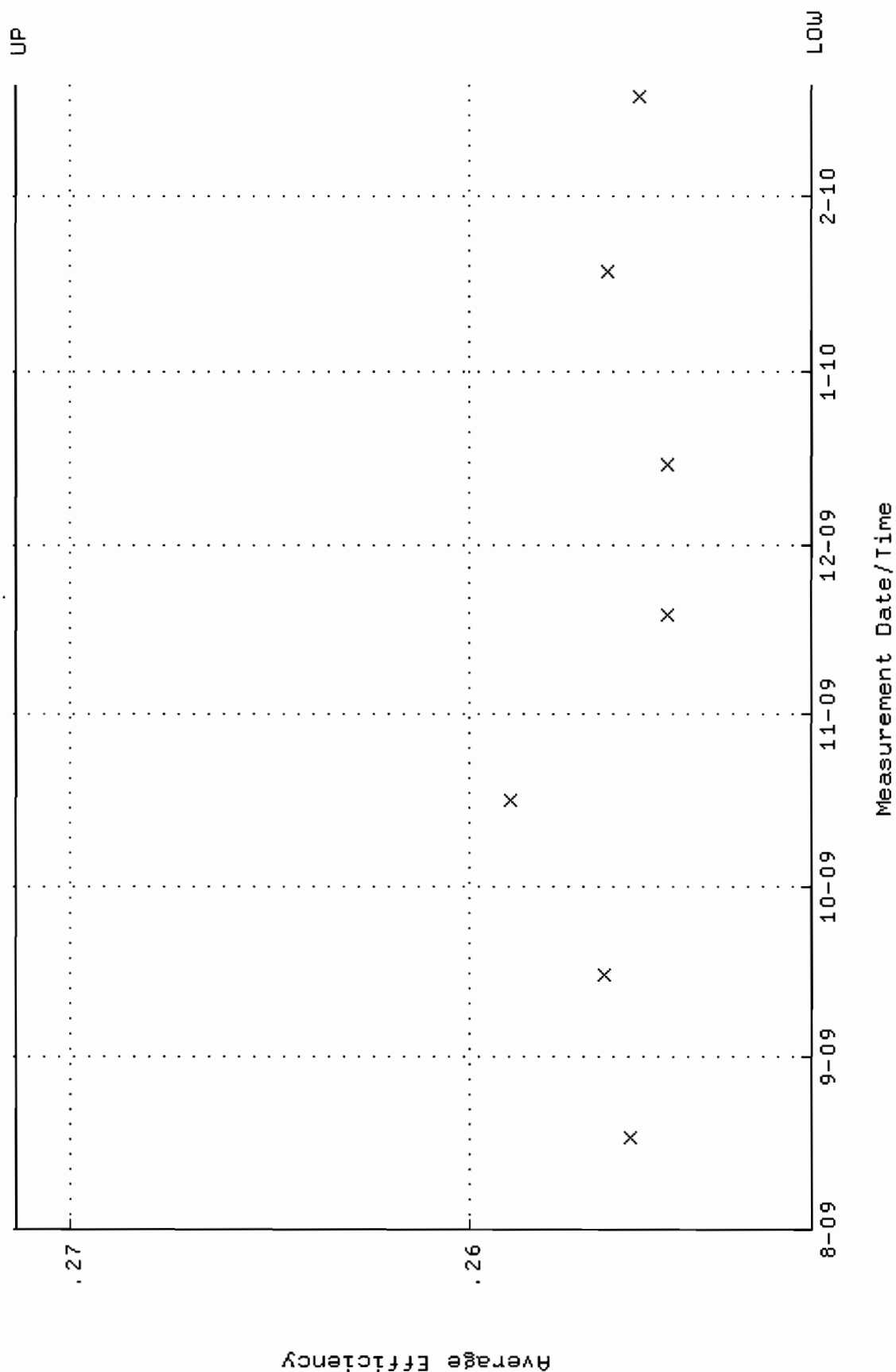
QA filename : OKA100:[ENV_ALPHA.QA.W]w153.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:47:33 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 81.3634 through 89.9280



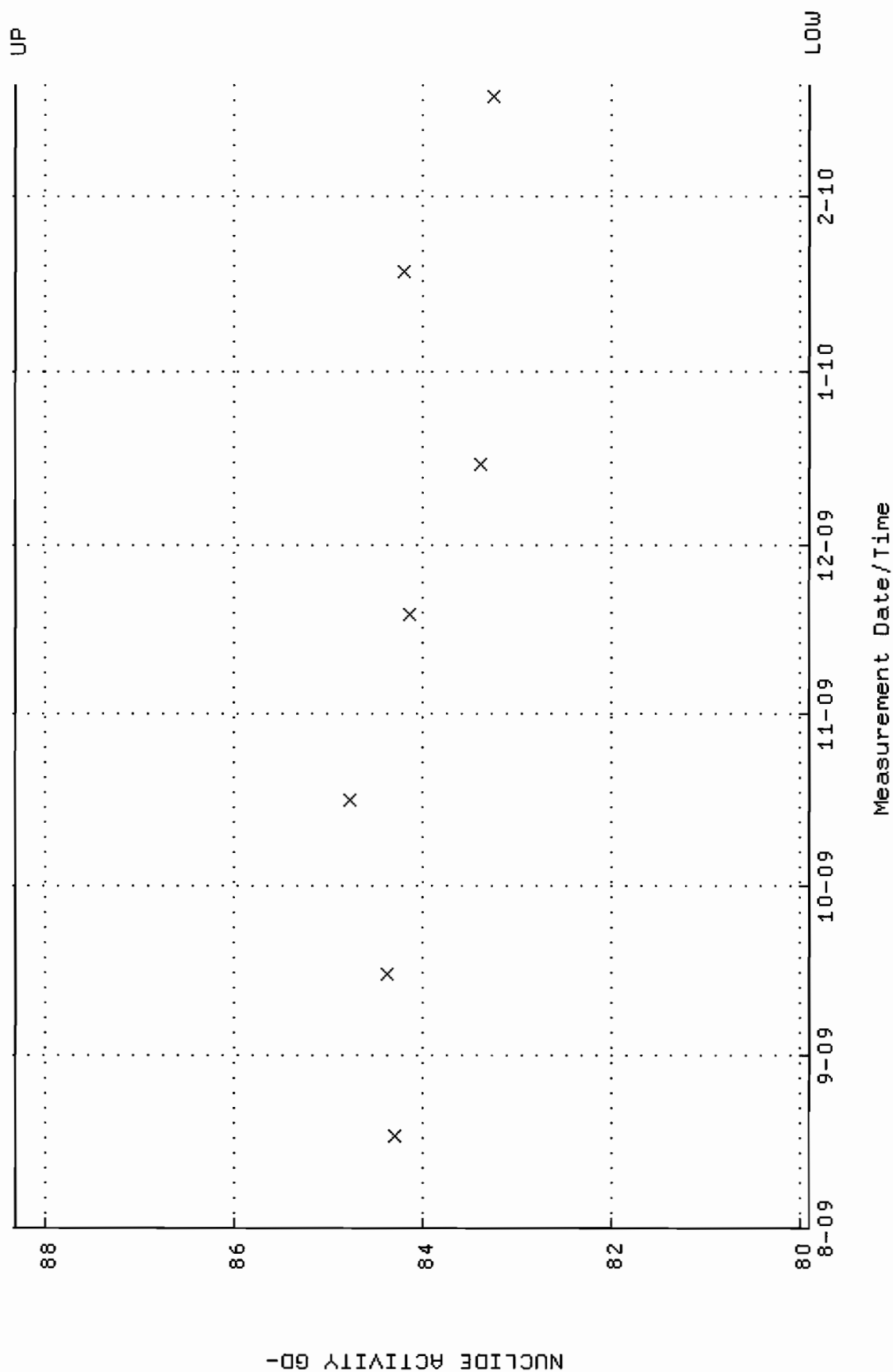
QA filename : DKA100:[ENV_ALPHA.QA.B]B153.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:49 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



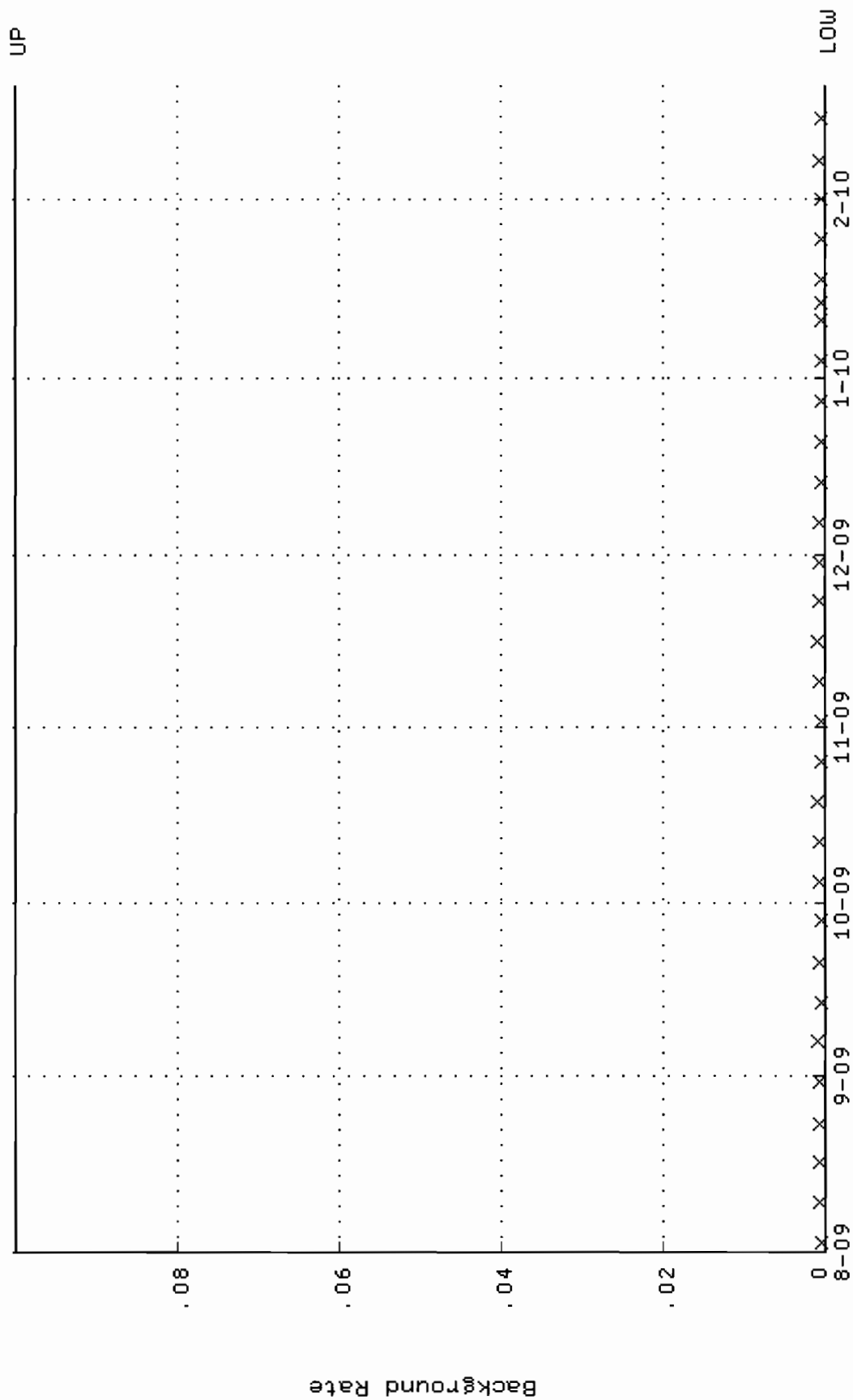
QA filename : DKA100:[ENV_ALPHA.QA.W]w154.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-AUG-2009 09:47:38 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.251386 through 0.271386



QA filename : DKA100:[ENV_ALPHA.QA.W]W154.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:47:38 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 79.9003 through 88.3109



QA filename : DKA100:[ENV_ALPHA.QA.B]B154.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:53 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000

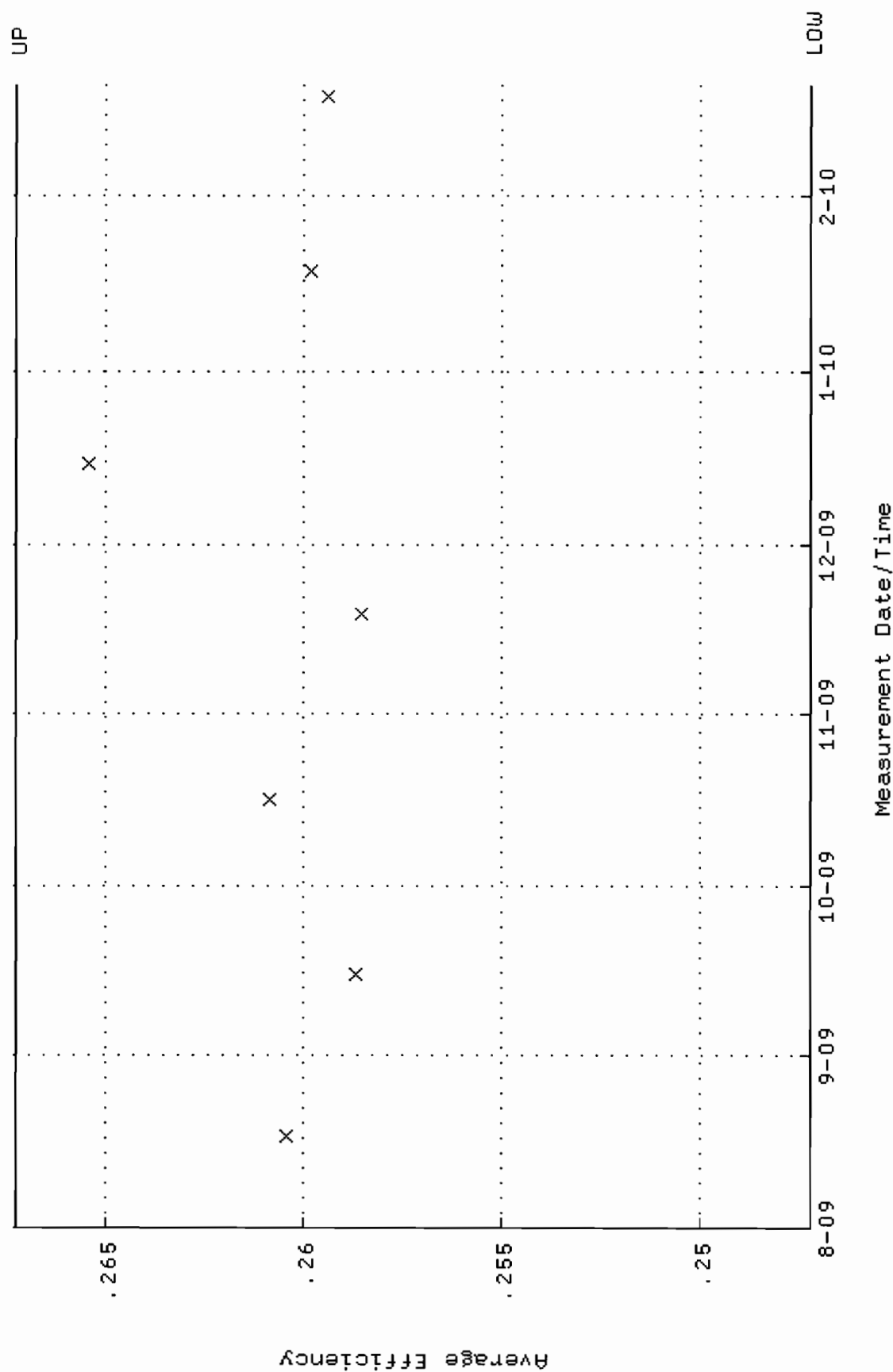


QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1

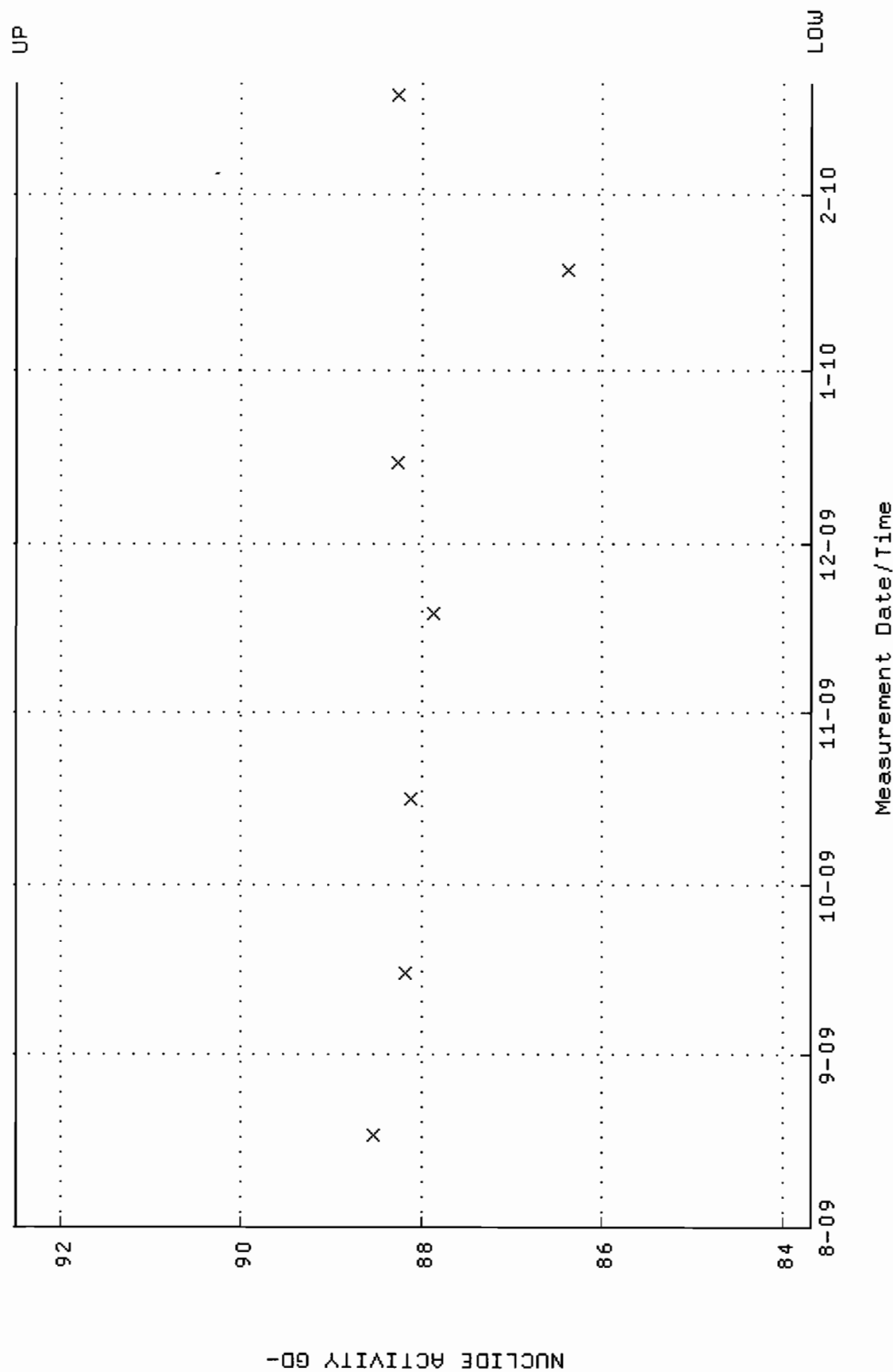
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 17-AUG-2009 09:47:43 through 20-FEB-2010 12:00:00

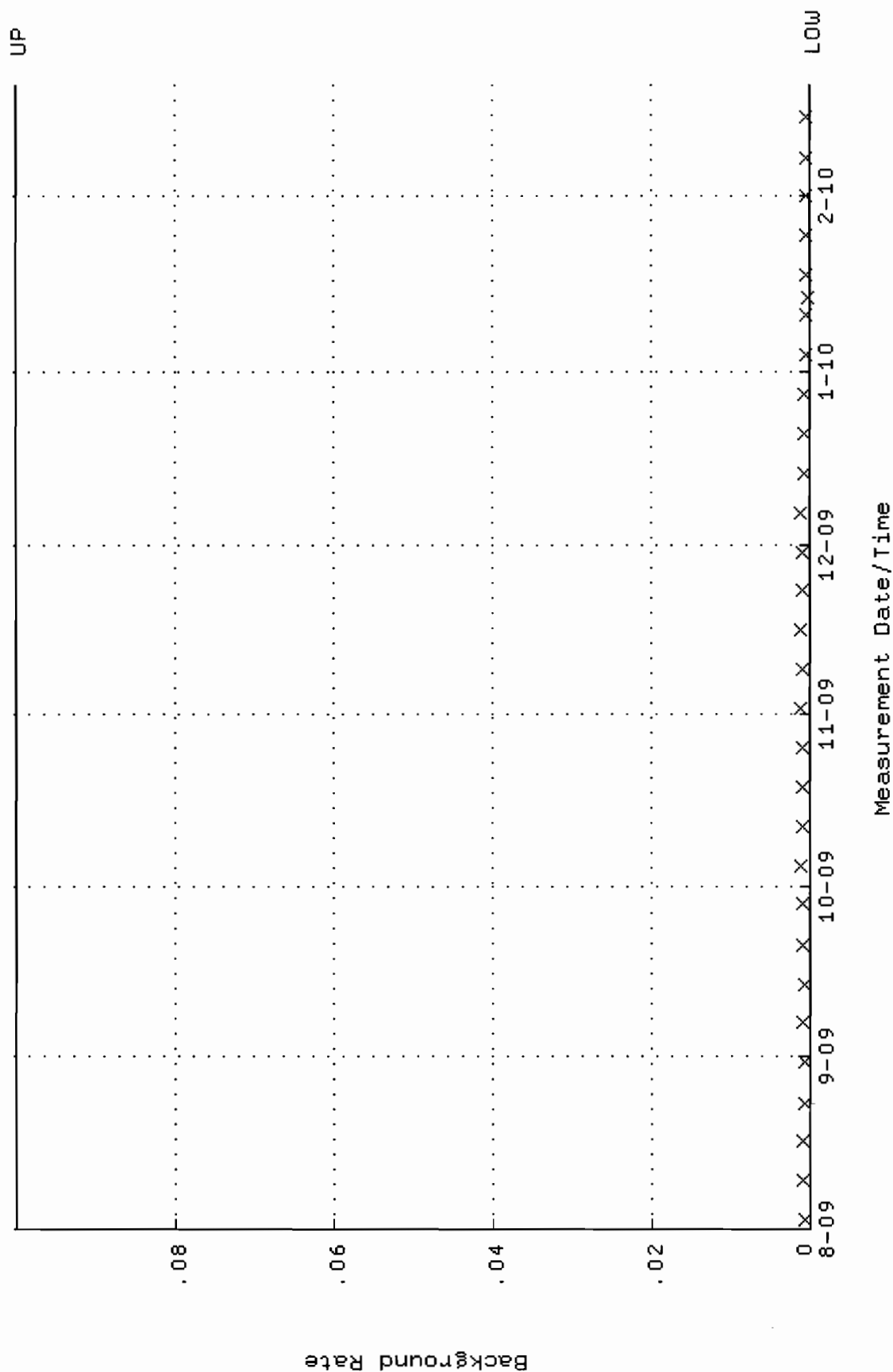
Lower/Upper Lmts: 0.247241 through 0.267241



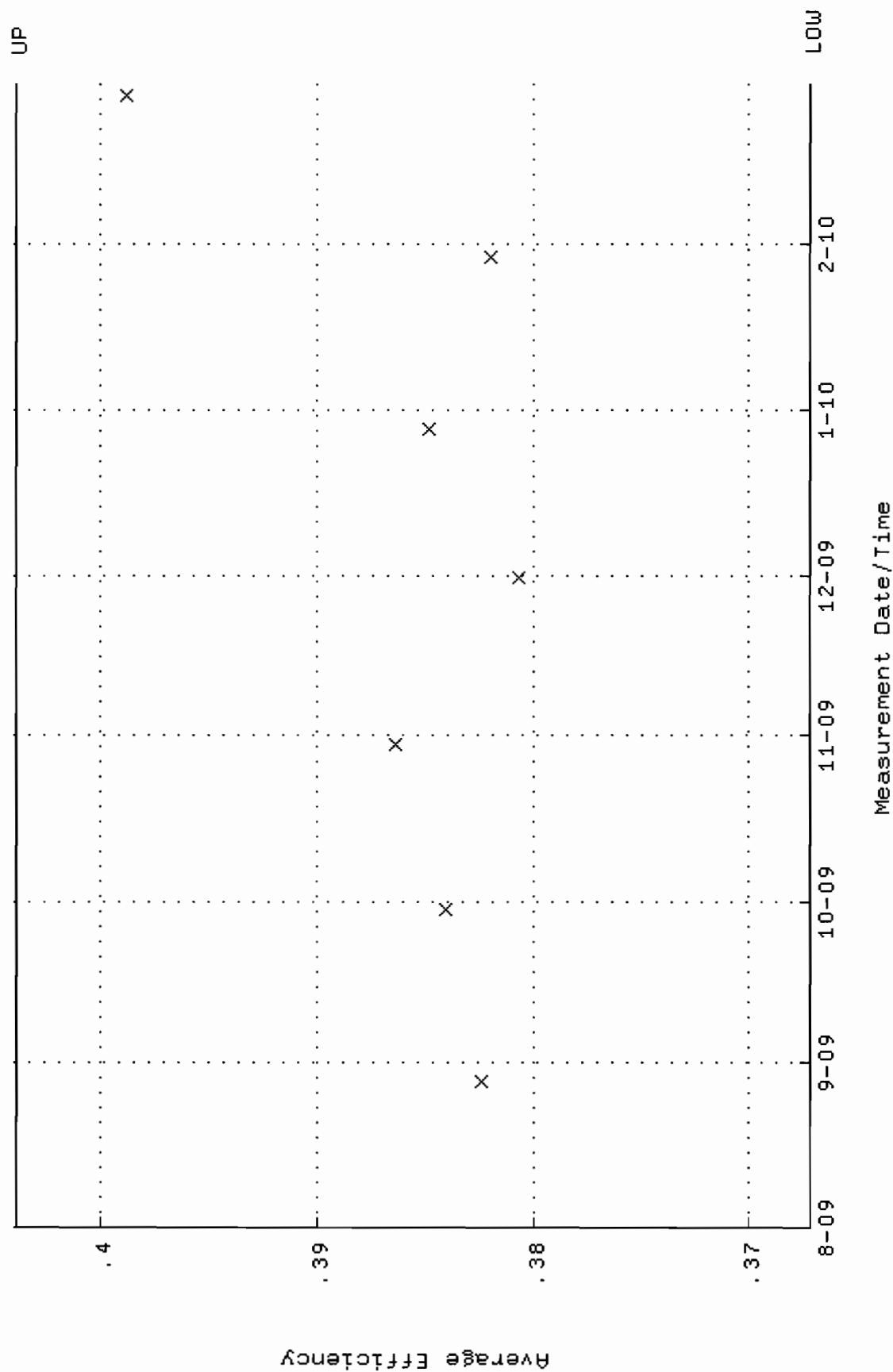
QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-AUG-2009 09:47:43 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 83.6873 through 92.4965



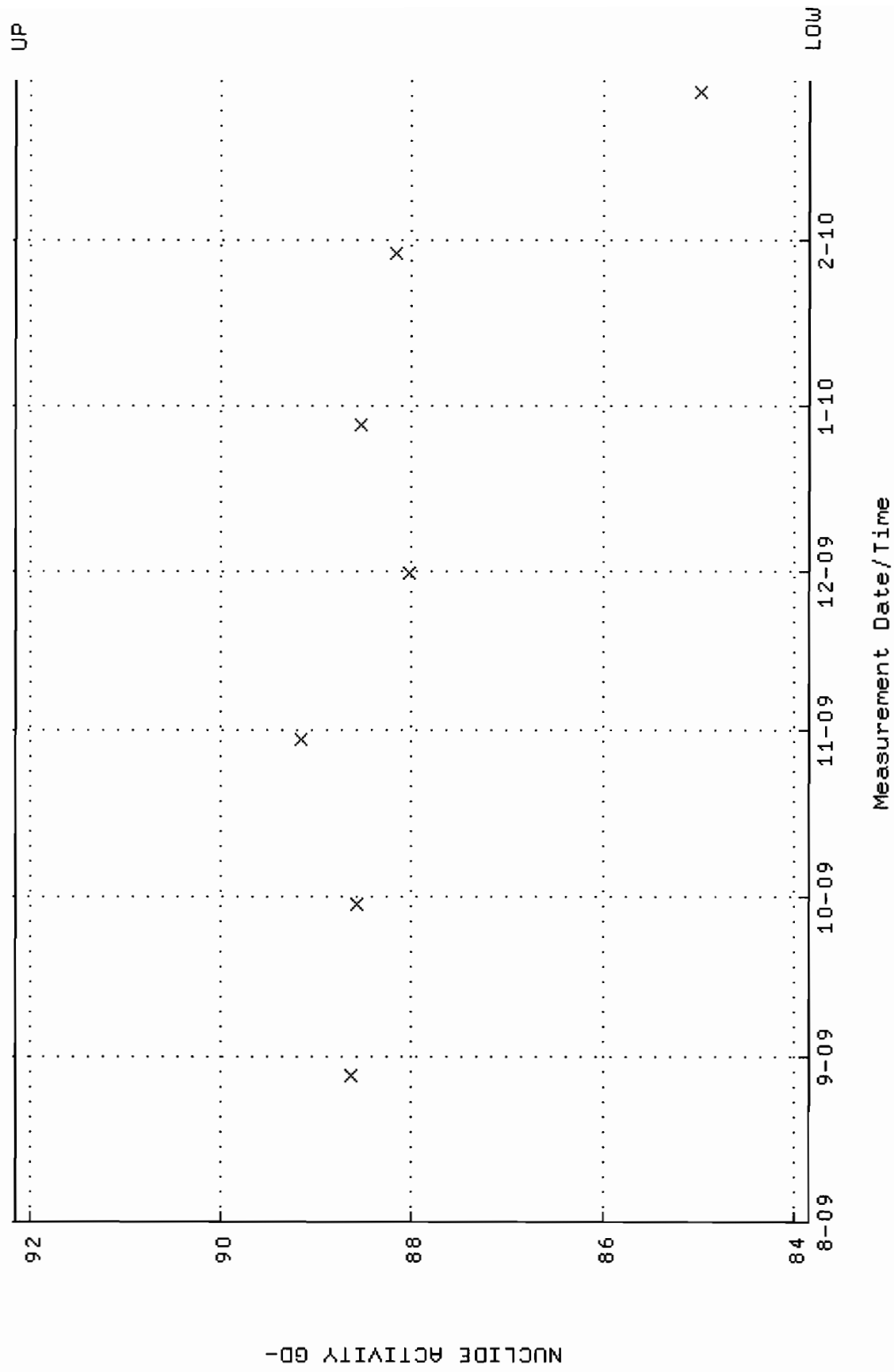
QA filename : DKA100:[ENV_ALPHA.QA.B]B155.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:14:56 through 20-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



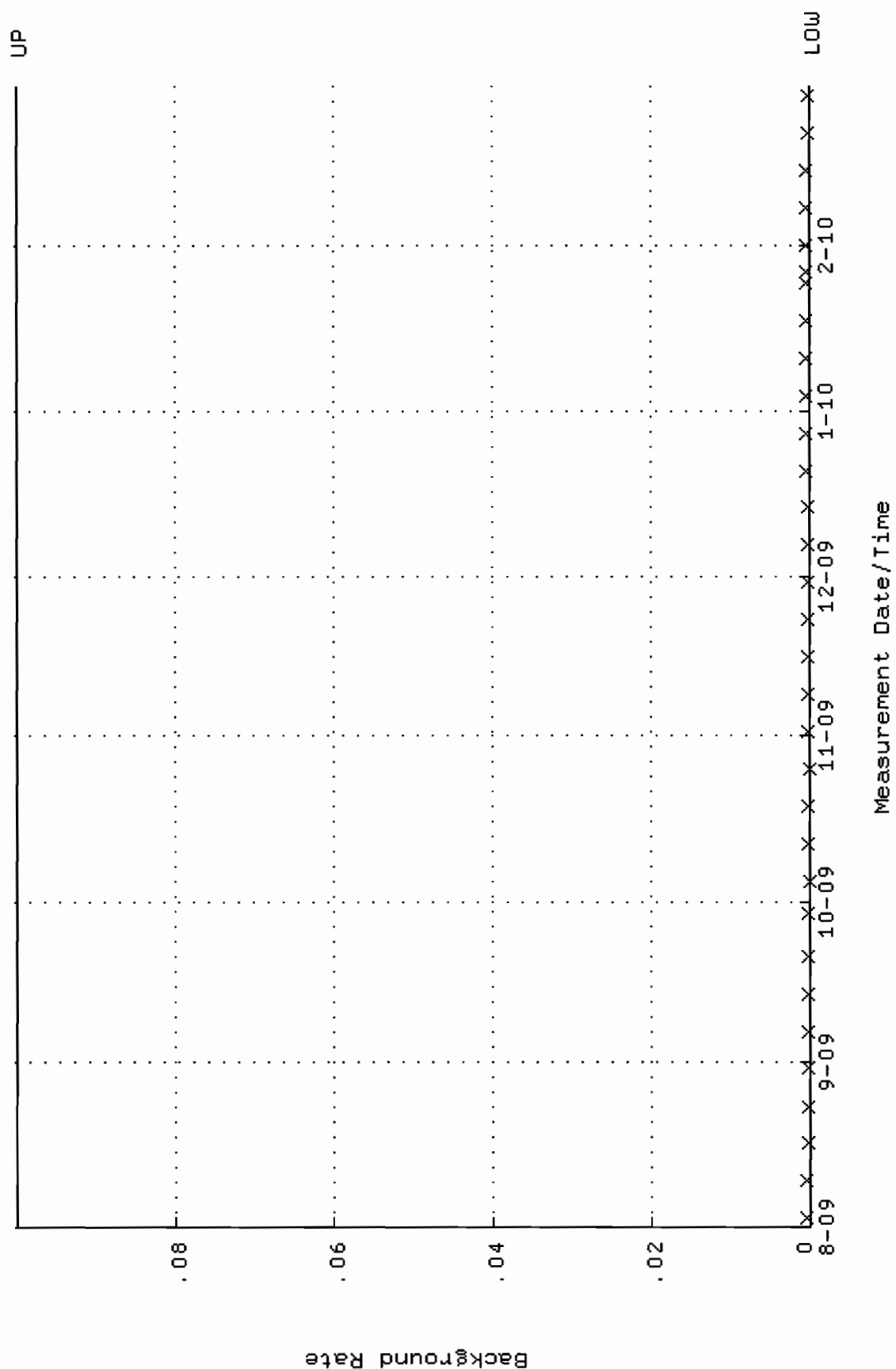
QA filename : DKA100:[ENV_ALPHA.QA.W]W211.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 28-AUG-2009 07:06:39 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.367181 through 0.403915



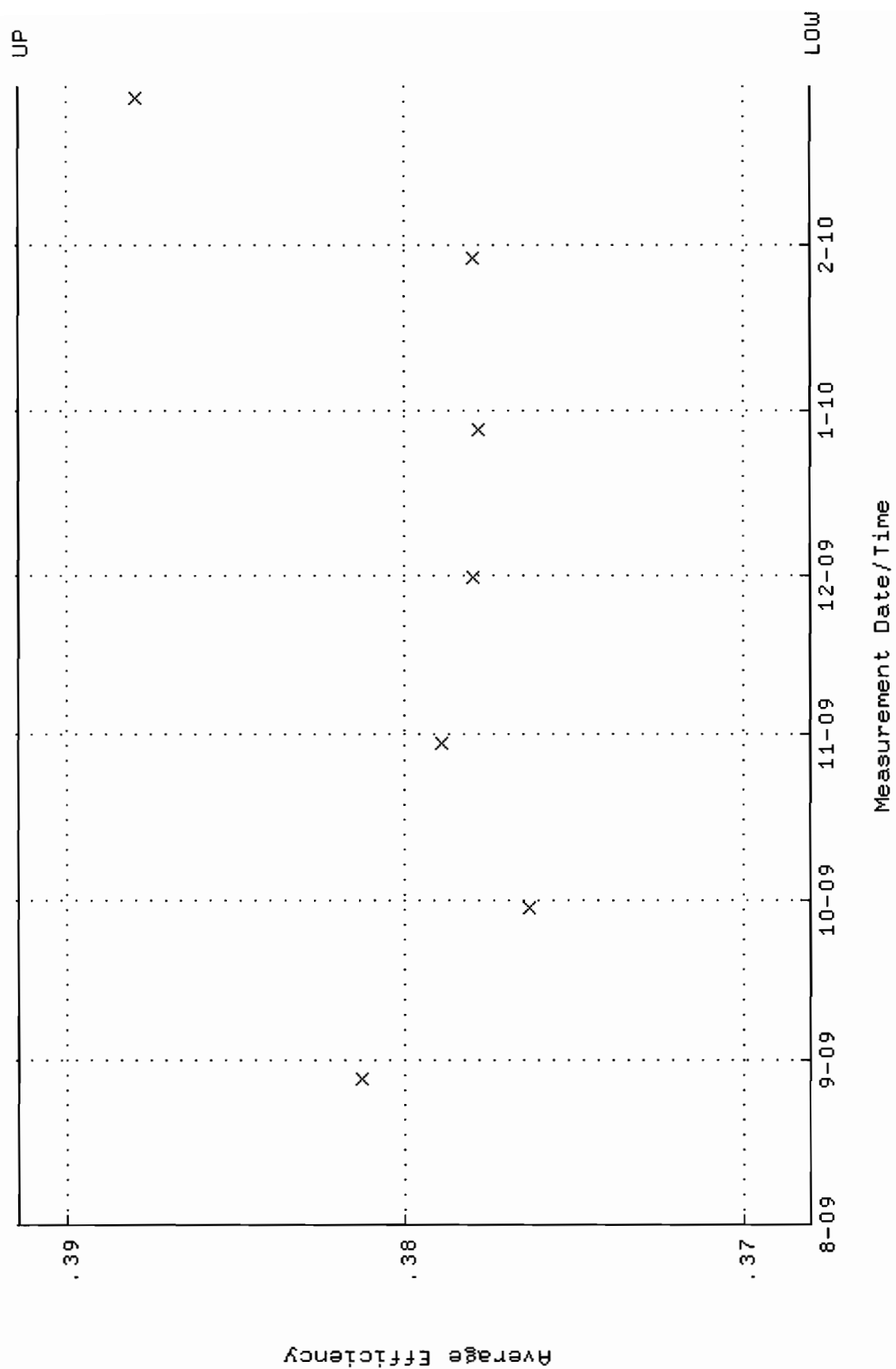
QA filename : DKA100:[ENV_ALPHA.QA.W]W211.QAF;1
Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 28-AUG-2009 07:06:39 through 2-MAR-2010 12:00:00
Lower/Upper Lmts: 83.8443 through 92.1557



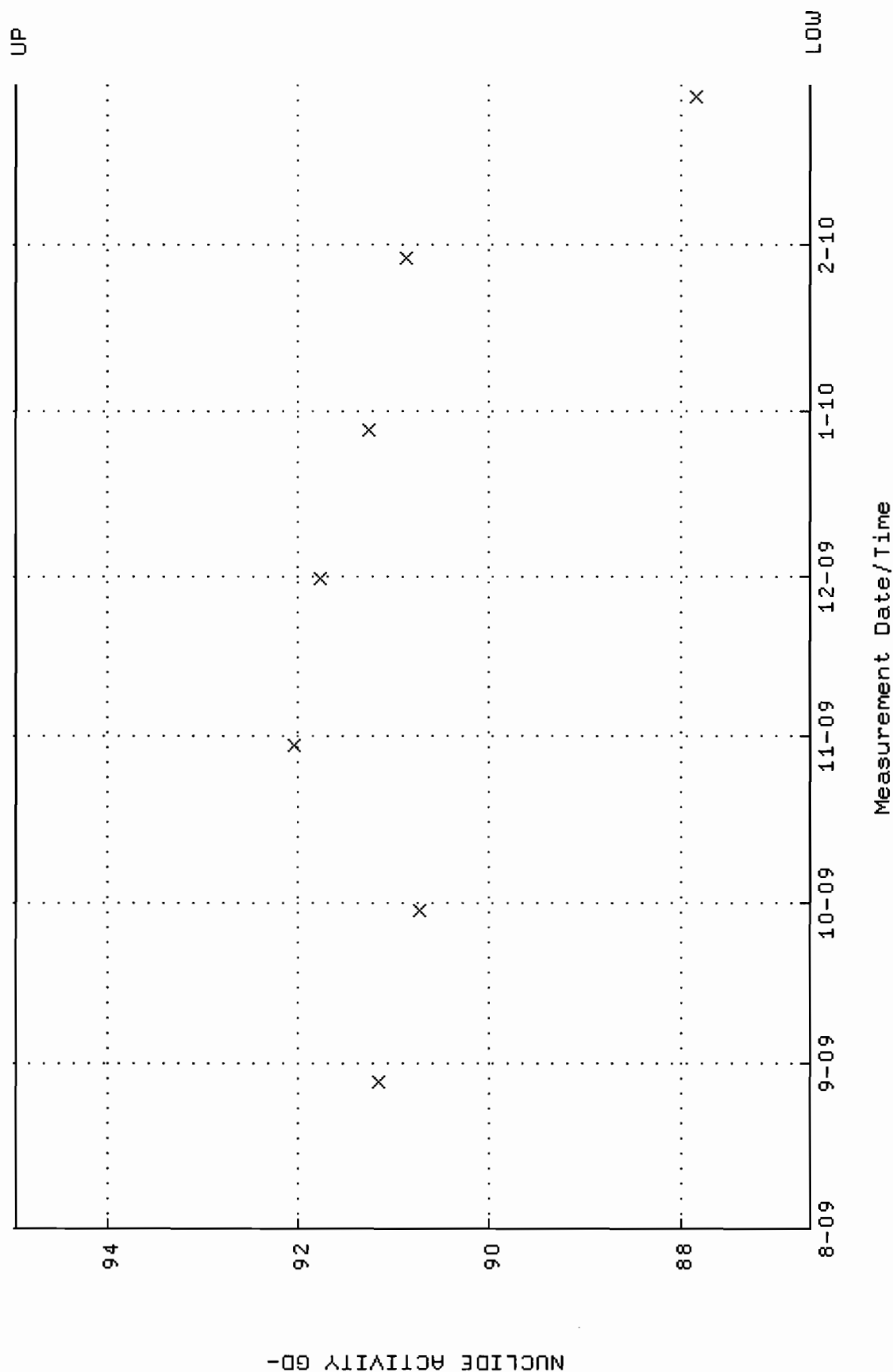
QA filename : DKA100:[ENV_ALPHA.QA.B]B211.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:25:19 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



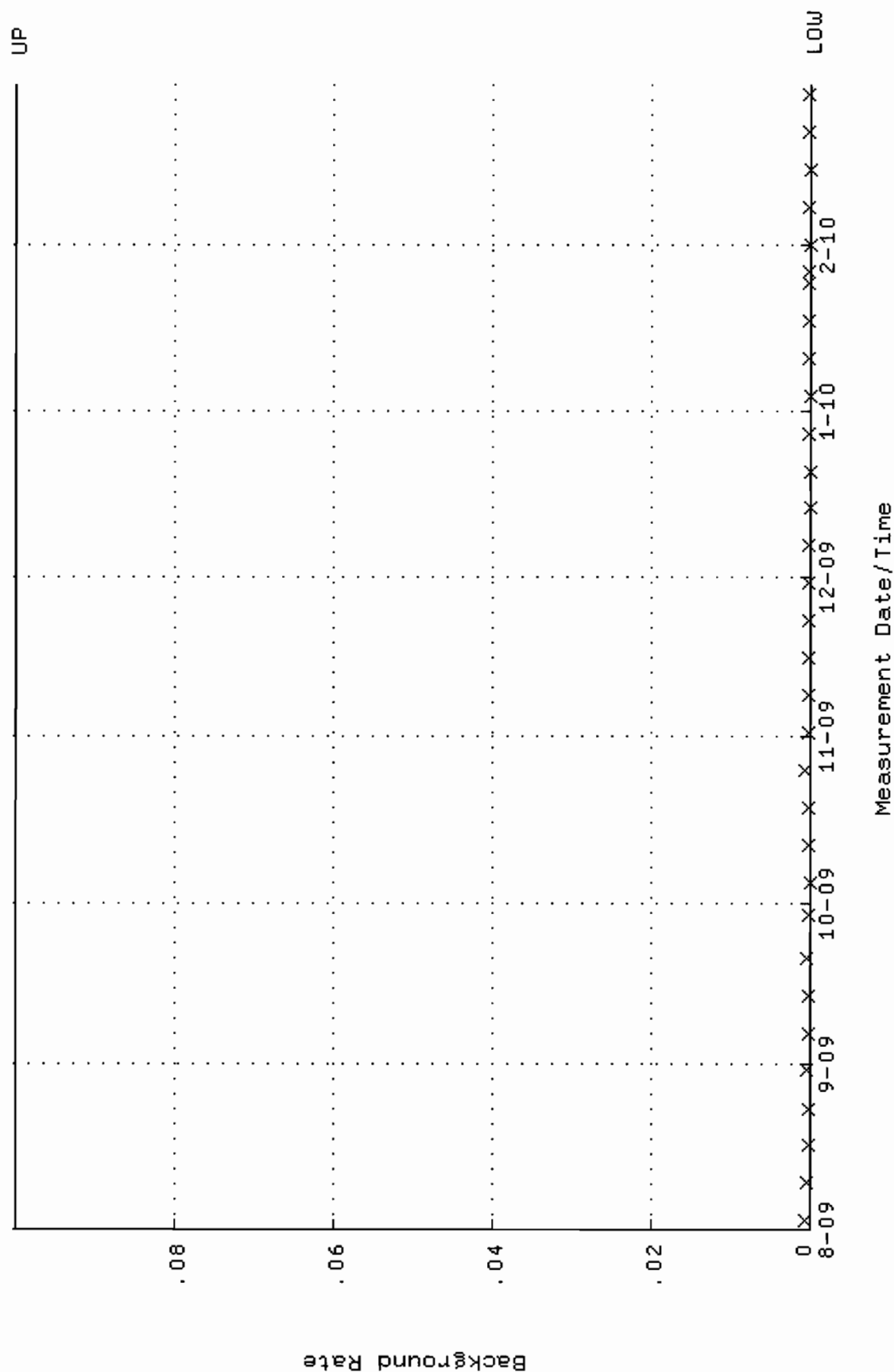
QA filename : DKA100:[ENV_ALPHA.QA.W]W212.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 28-AUG-2009 07:06:45 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.367986 through 0.391444



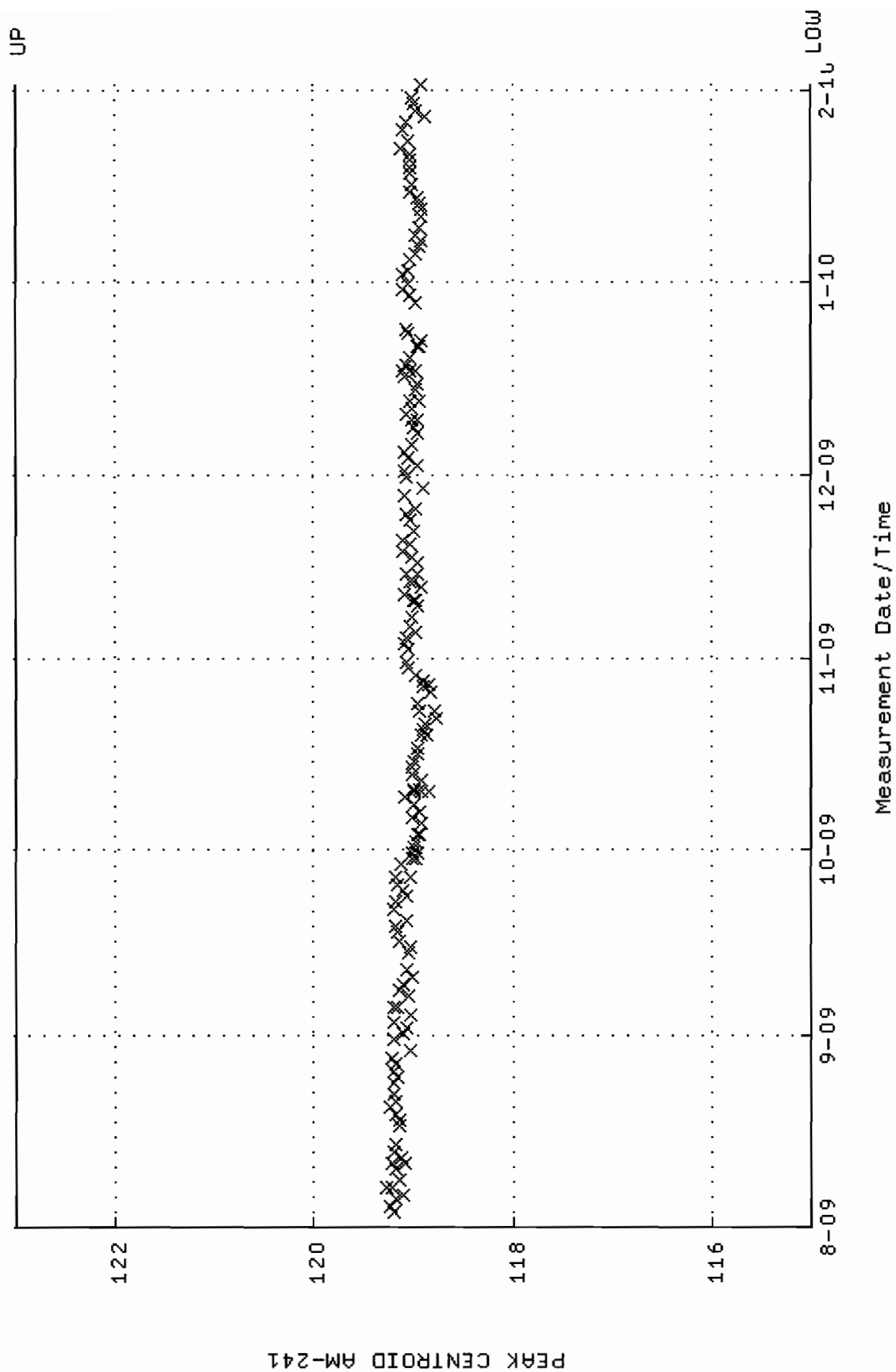
QA filename : DKA100:[ENV_ALPHA.QA.W]W212.QAF;1
 Parameter Name : NACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 28-AUG-2009 07:06:45 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 86.6415 through 94.9511



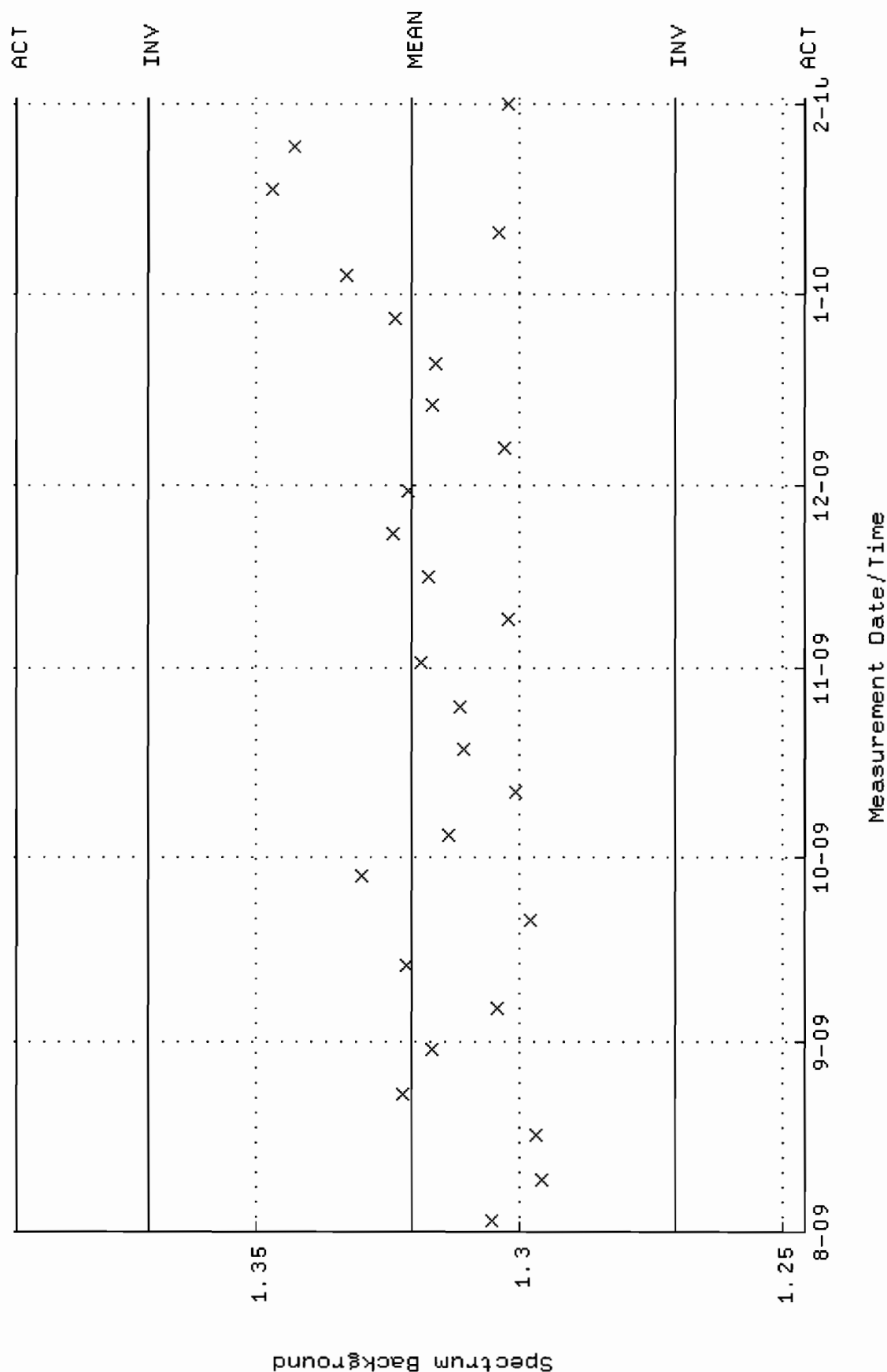
QA filename : DKA100:[ENV_ALPHA.QA.B]B212.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:25:23 through 2-MAR-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



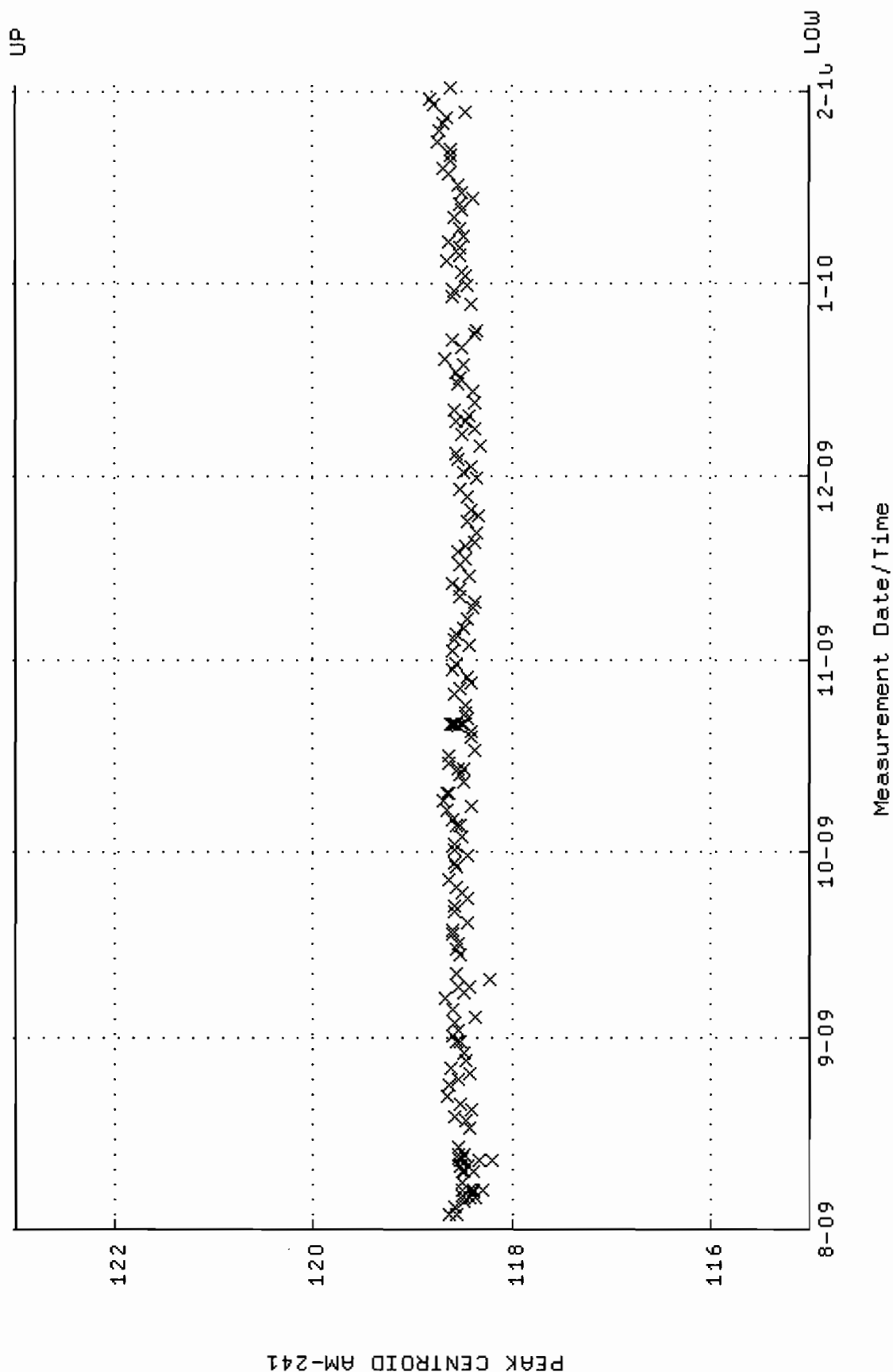
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM04-CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:11:46 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



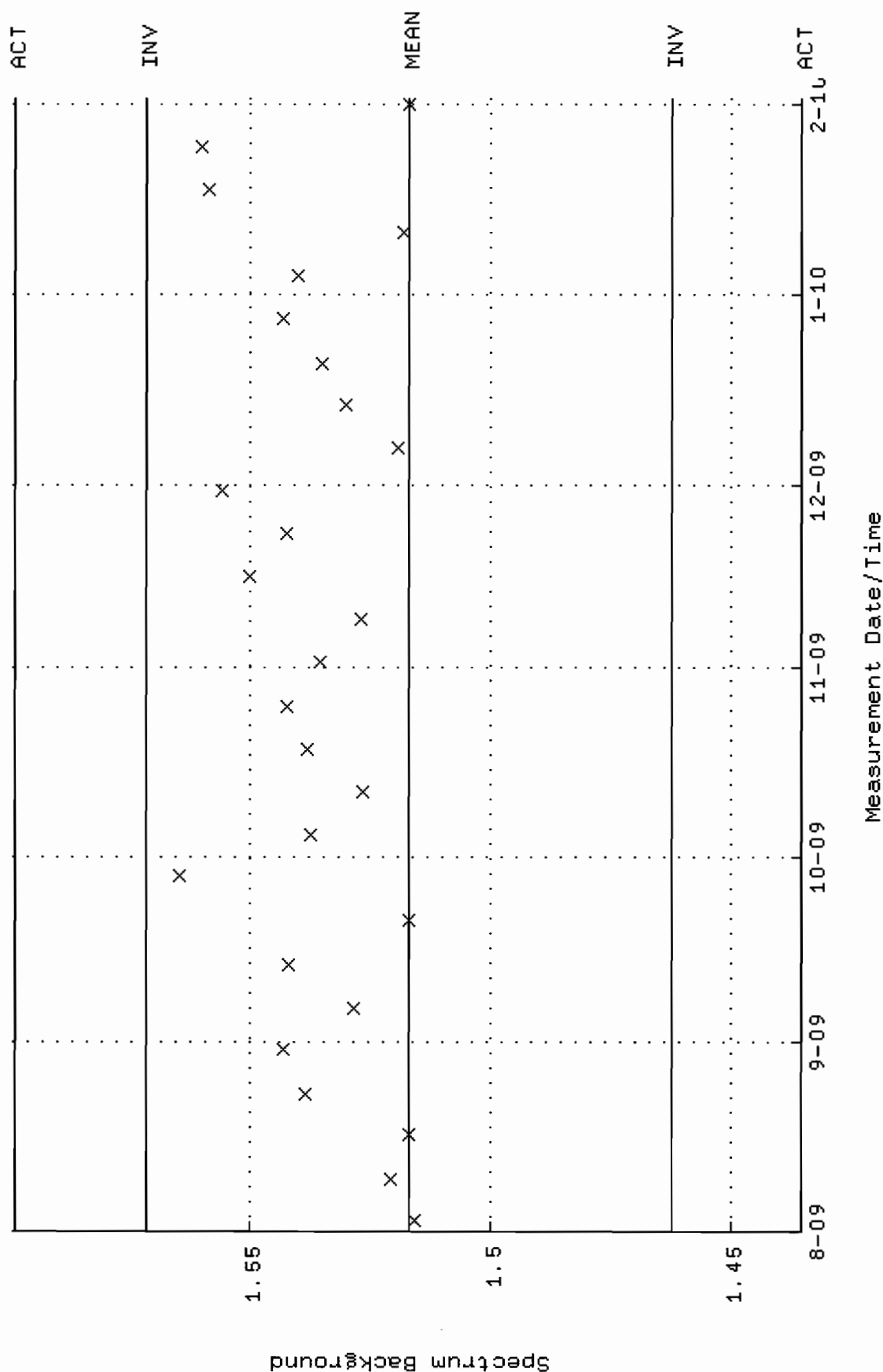
QA filename : DKA100: [CANBERRA.GAMMA.SCUSR.QA]LBC_GAM04.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:22:48 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.32050 +- 2.495234E-02 (1.89 %)



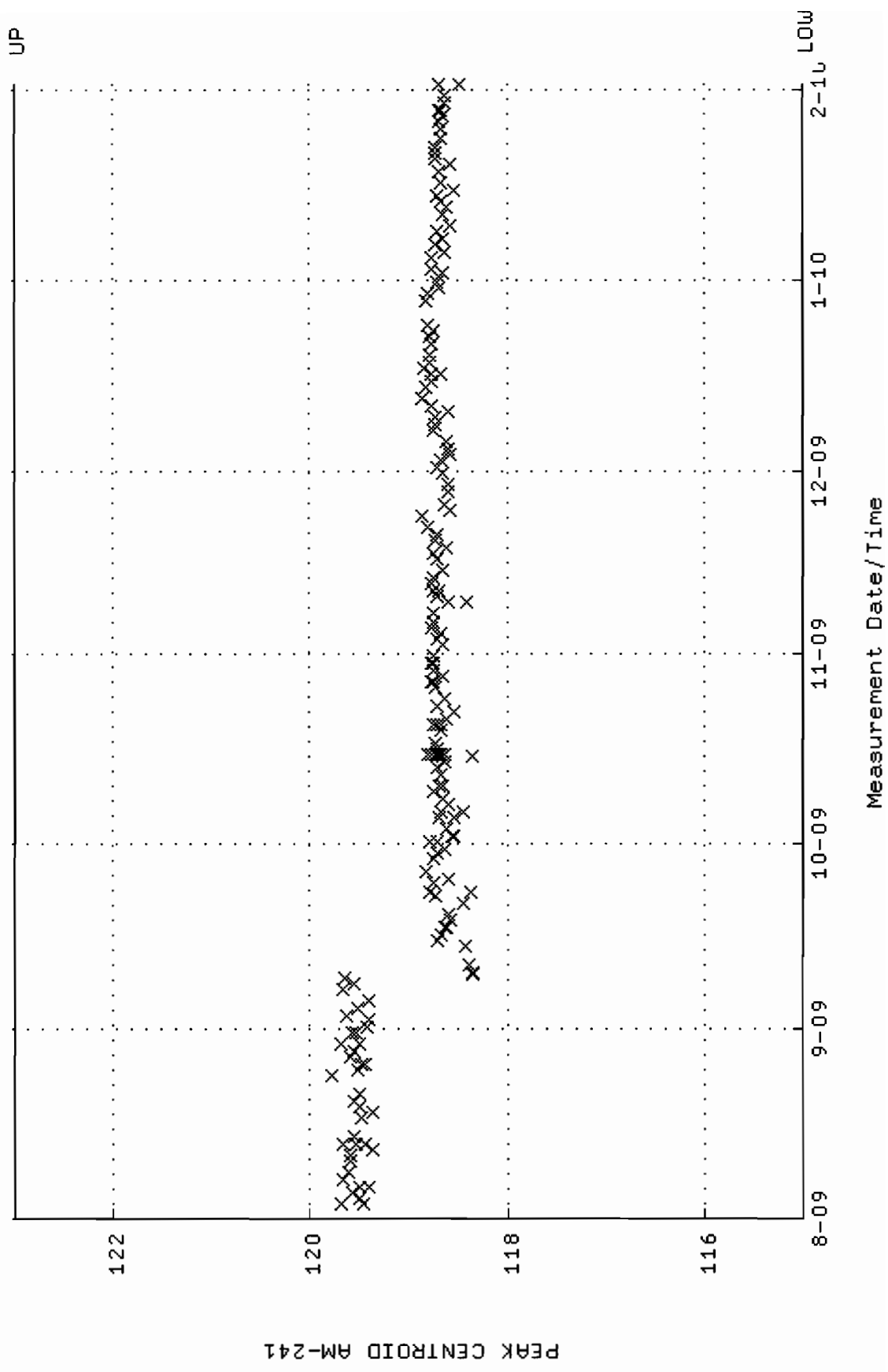
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_JAR.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:13:52 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



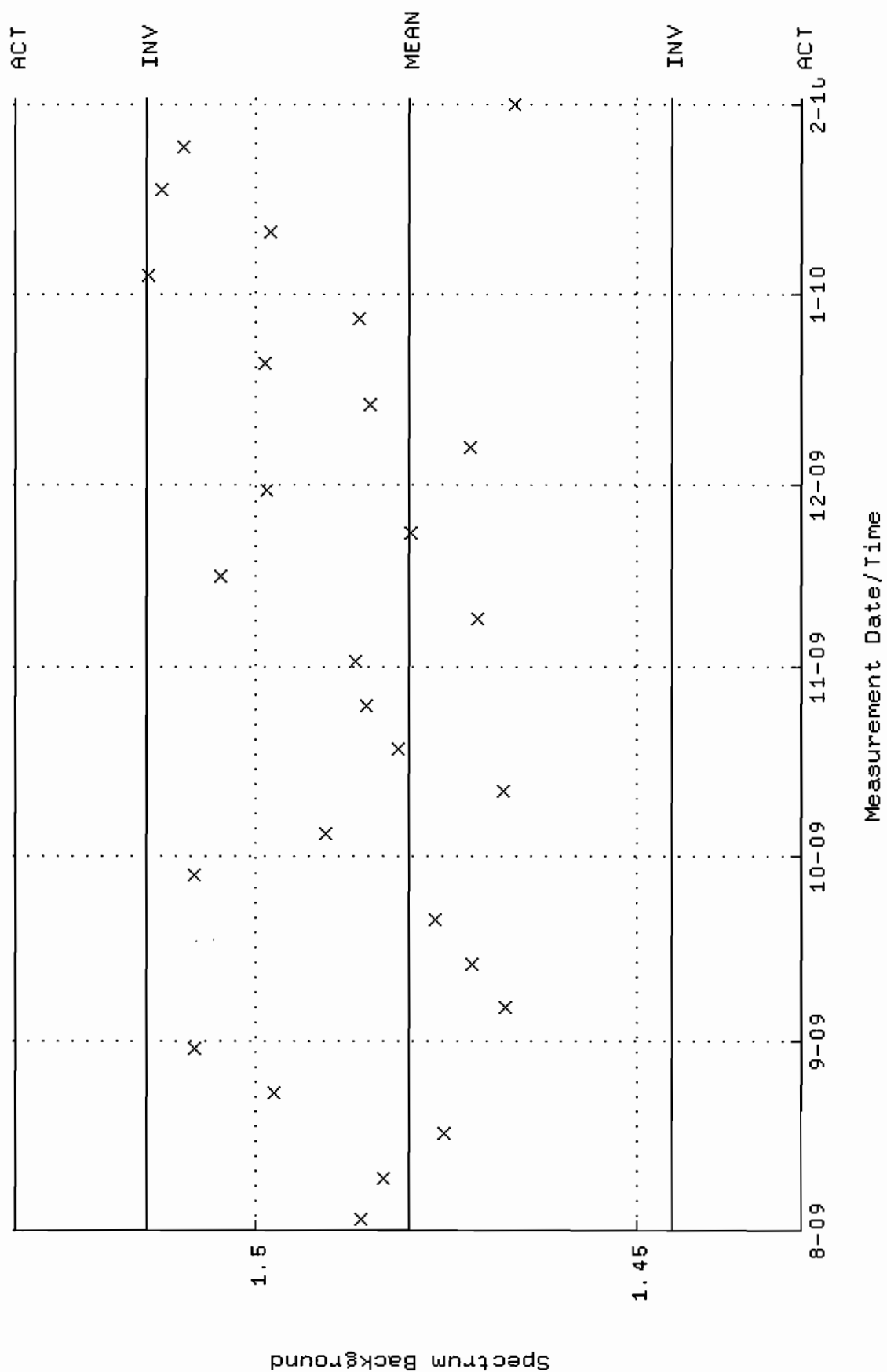
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM07.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:26 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.51715 +- 2.726376E-02 (1.80 %)



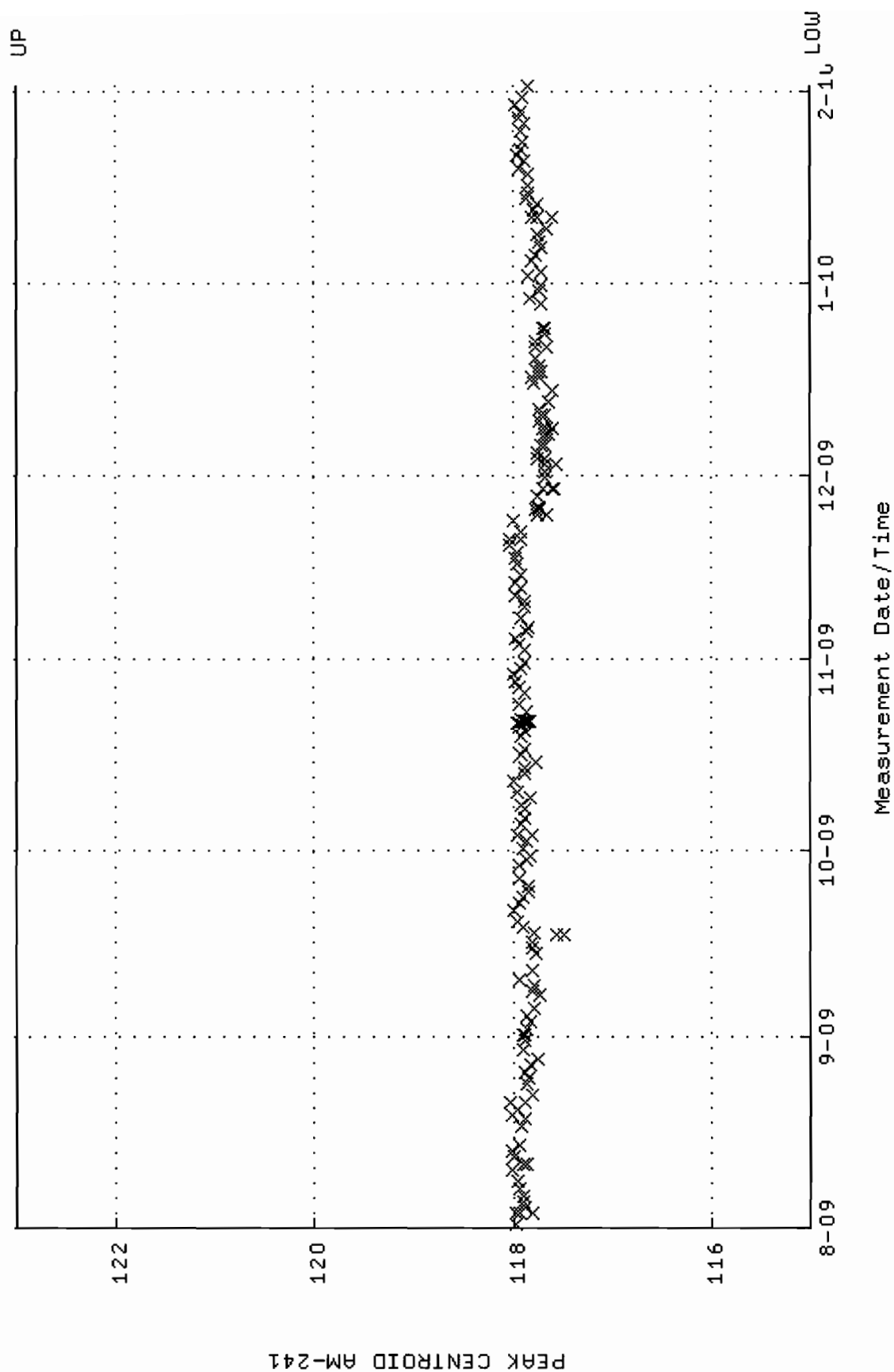
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_500MLMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-AUG-2009 09:36:50 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



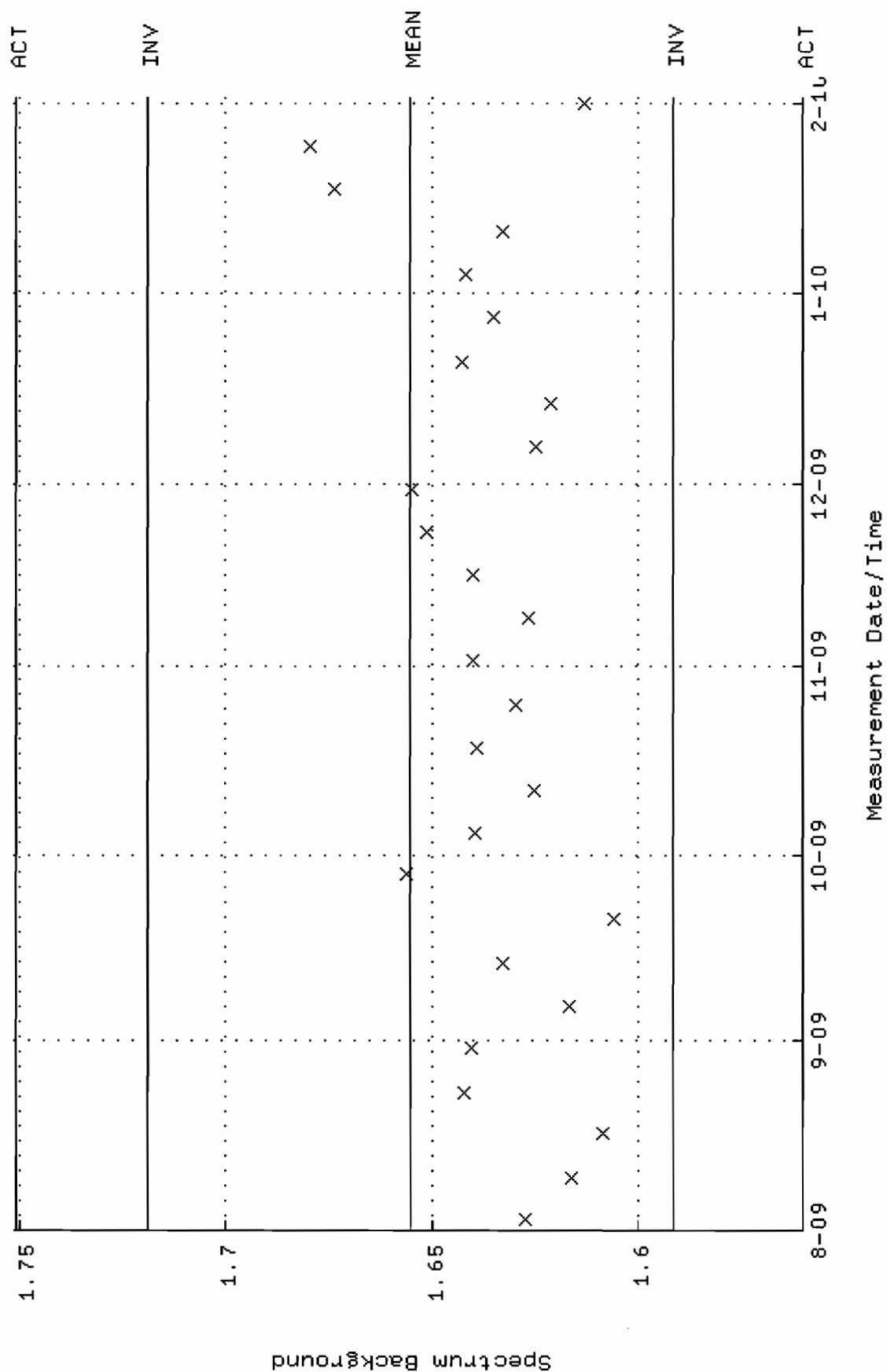
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:43 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48000 +- 1.723892E-02 (1.16 %)



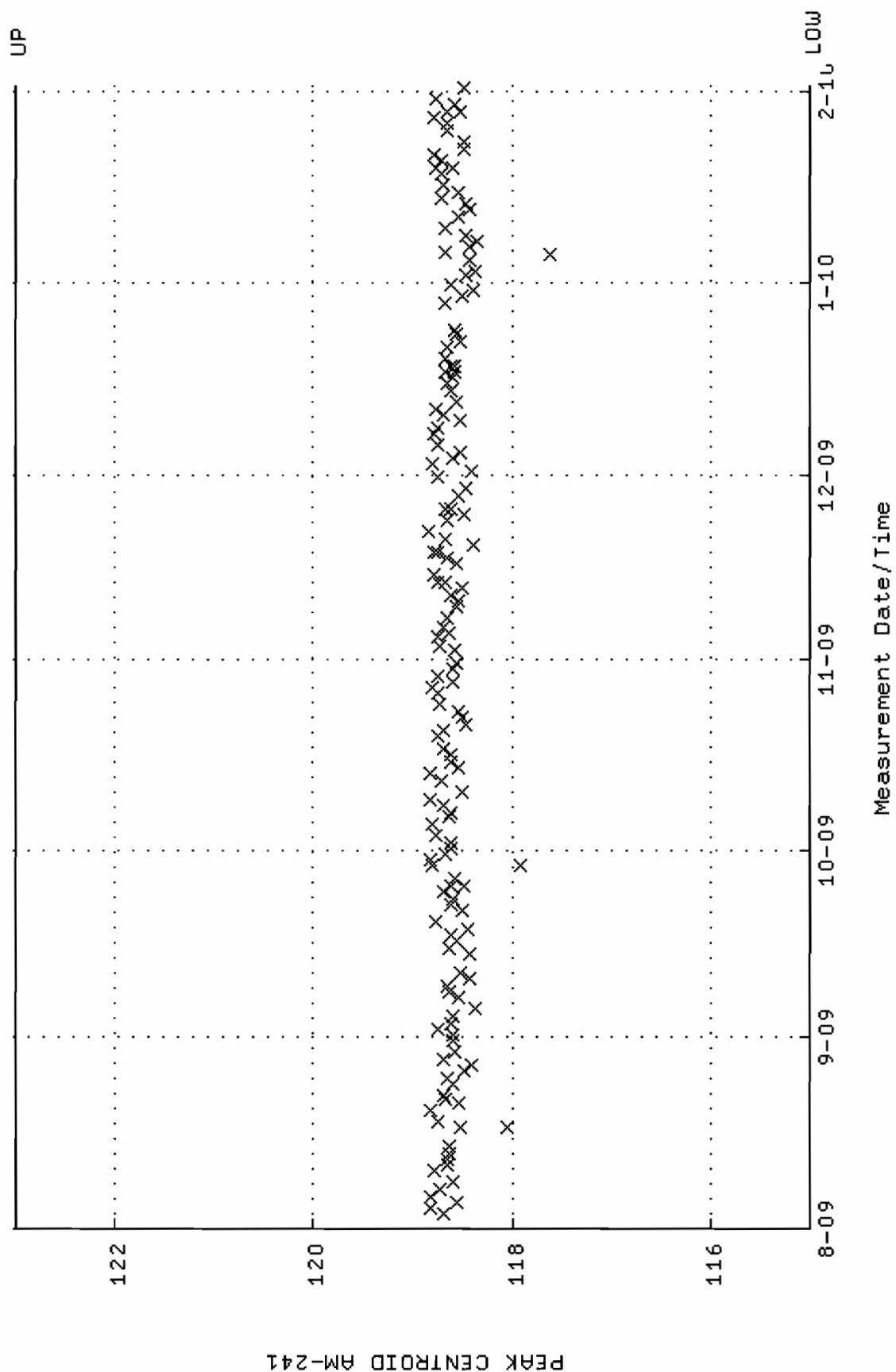
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM11-JAR.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 1-AUG-2009 13:27:21 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



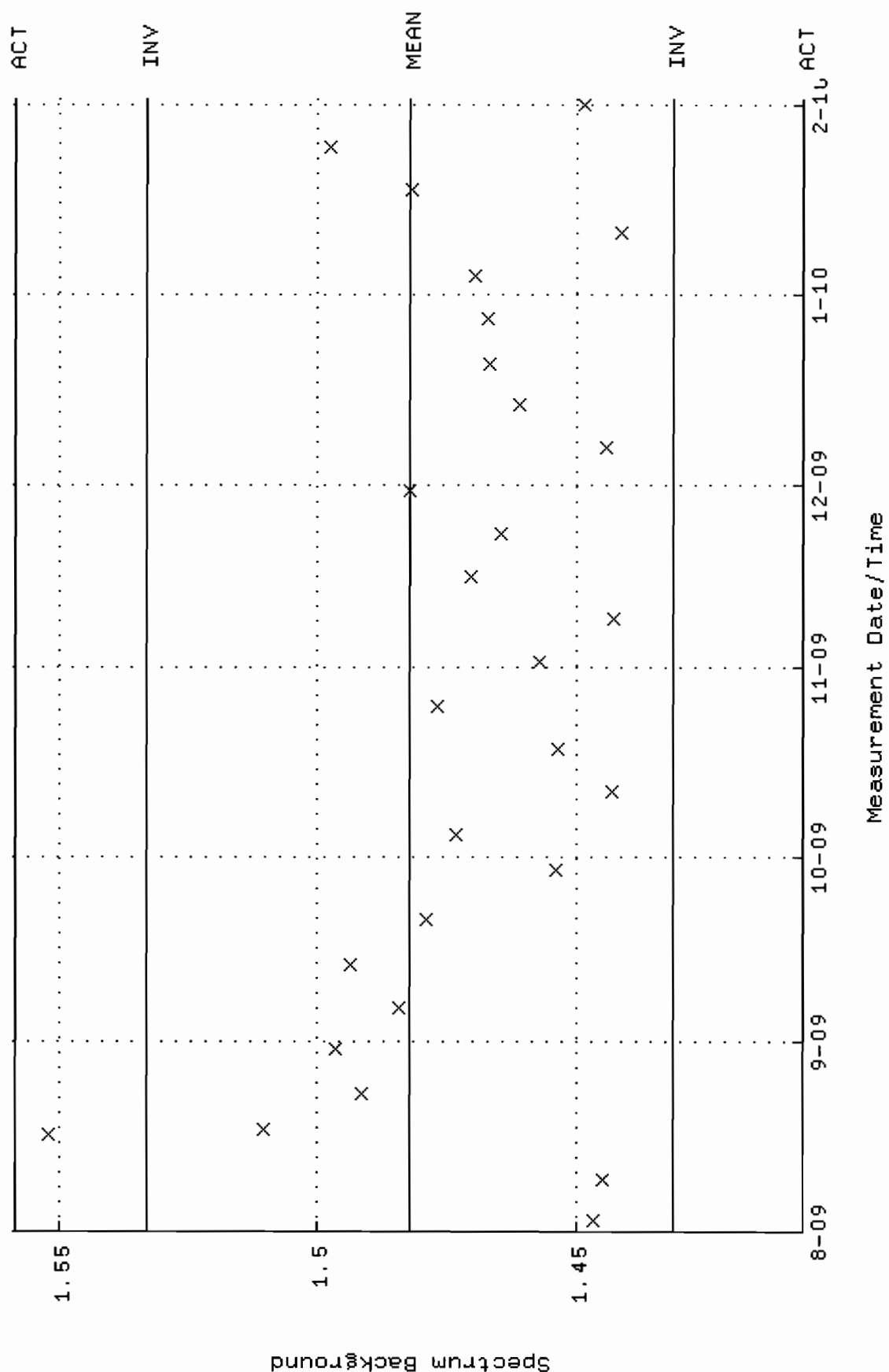
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:55 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.65552 +- 3.175806E-02 (1.92 %)



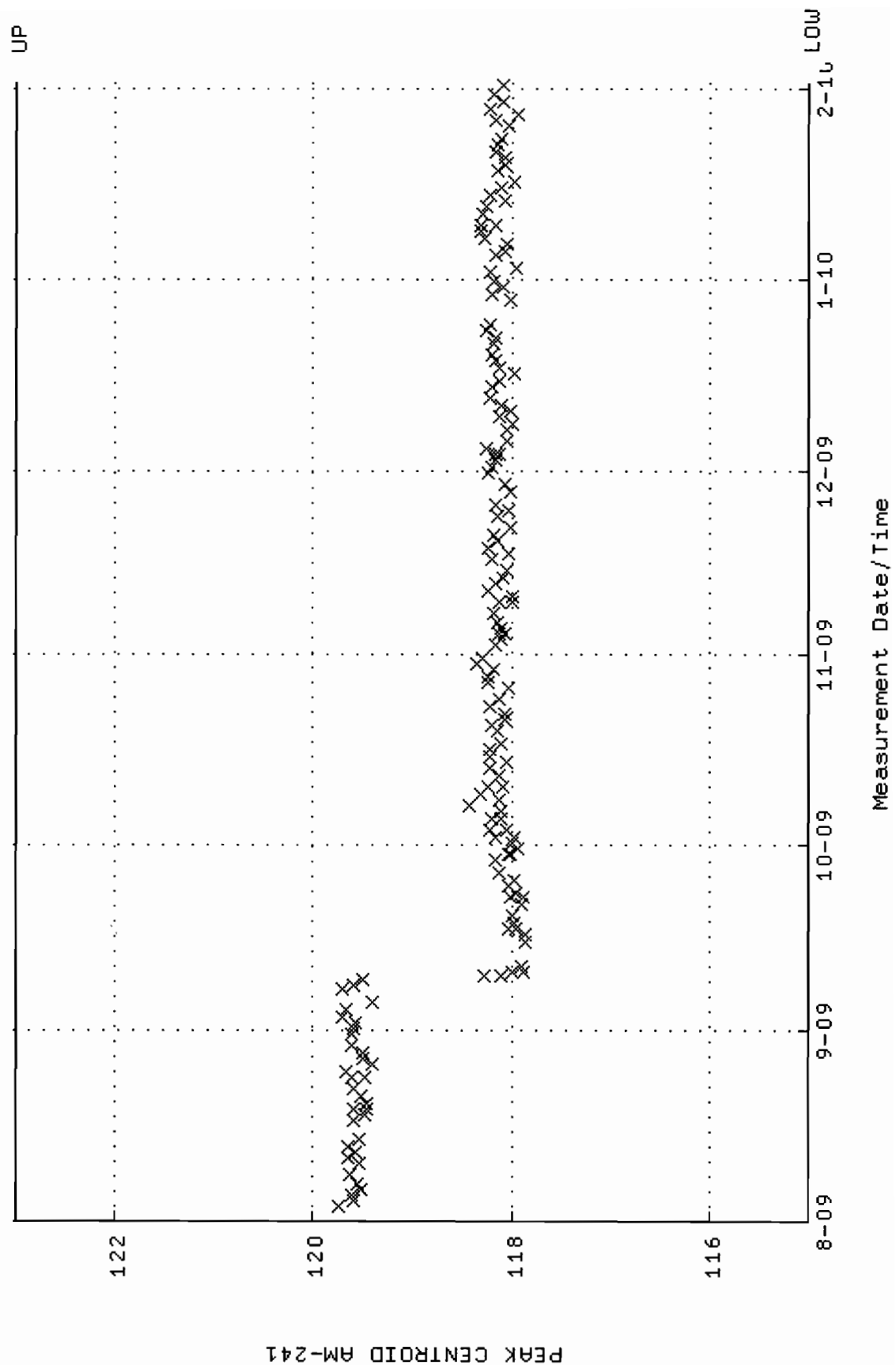
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:15:54 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



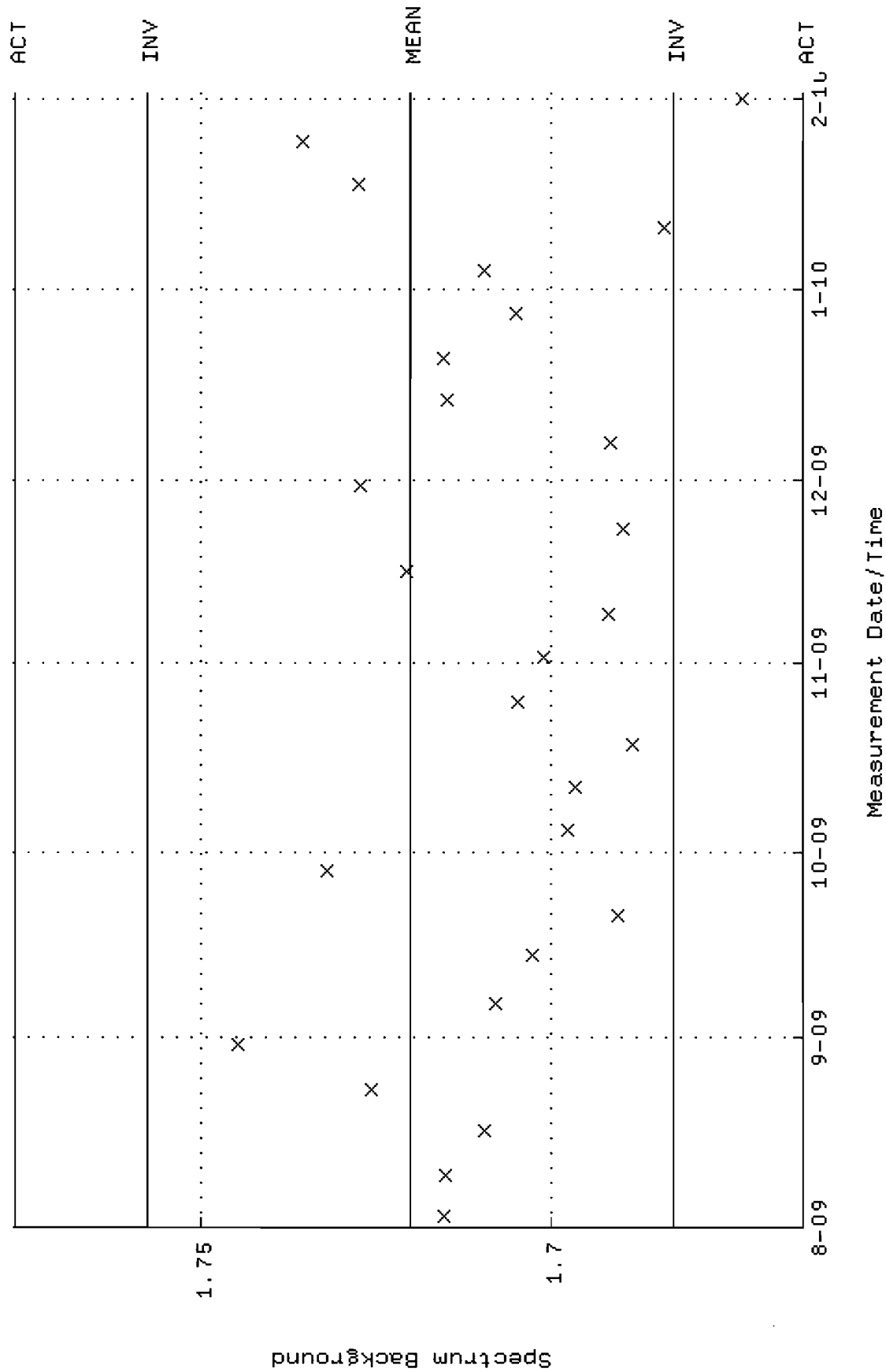
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM14.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:33 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48240 +- 2.535500E-02 (1.71 %)



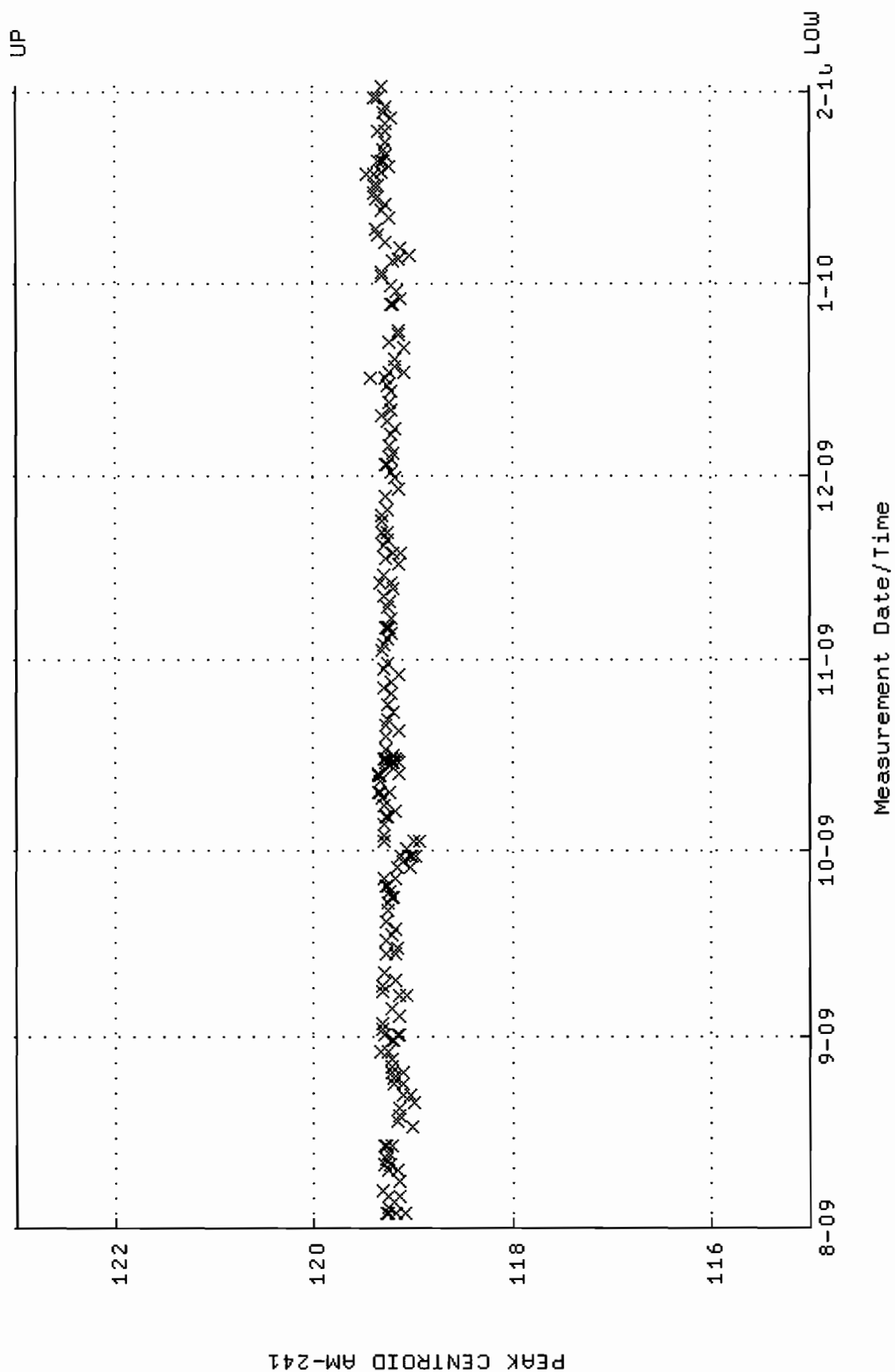
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM15_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-AUG-2009 09:53:43 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



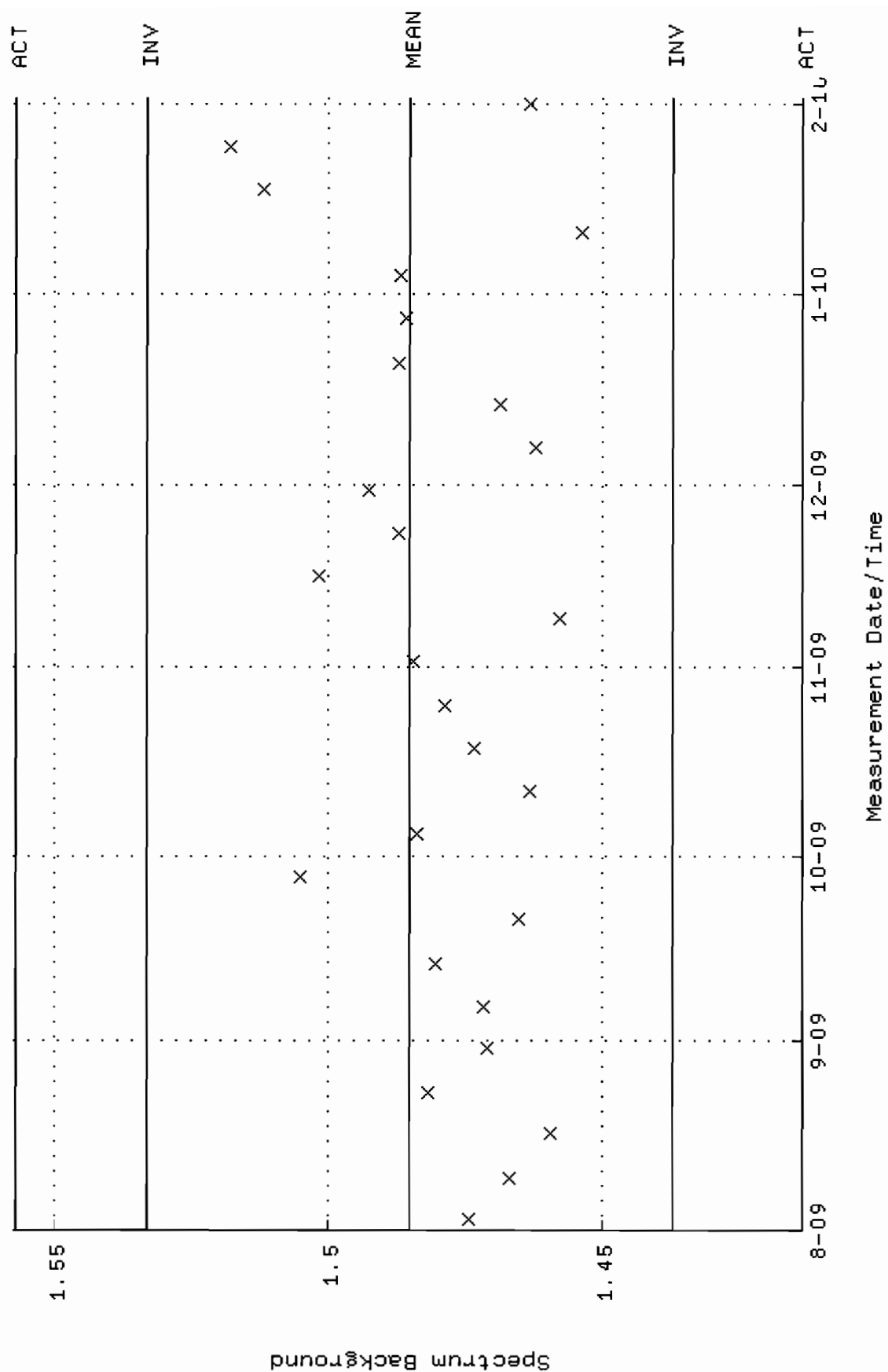
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM15.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:46 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.72024 +- 1.875820E-02 (1.09 %)



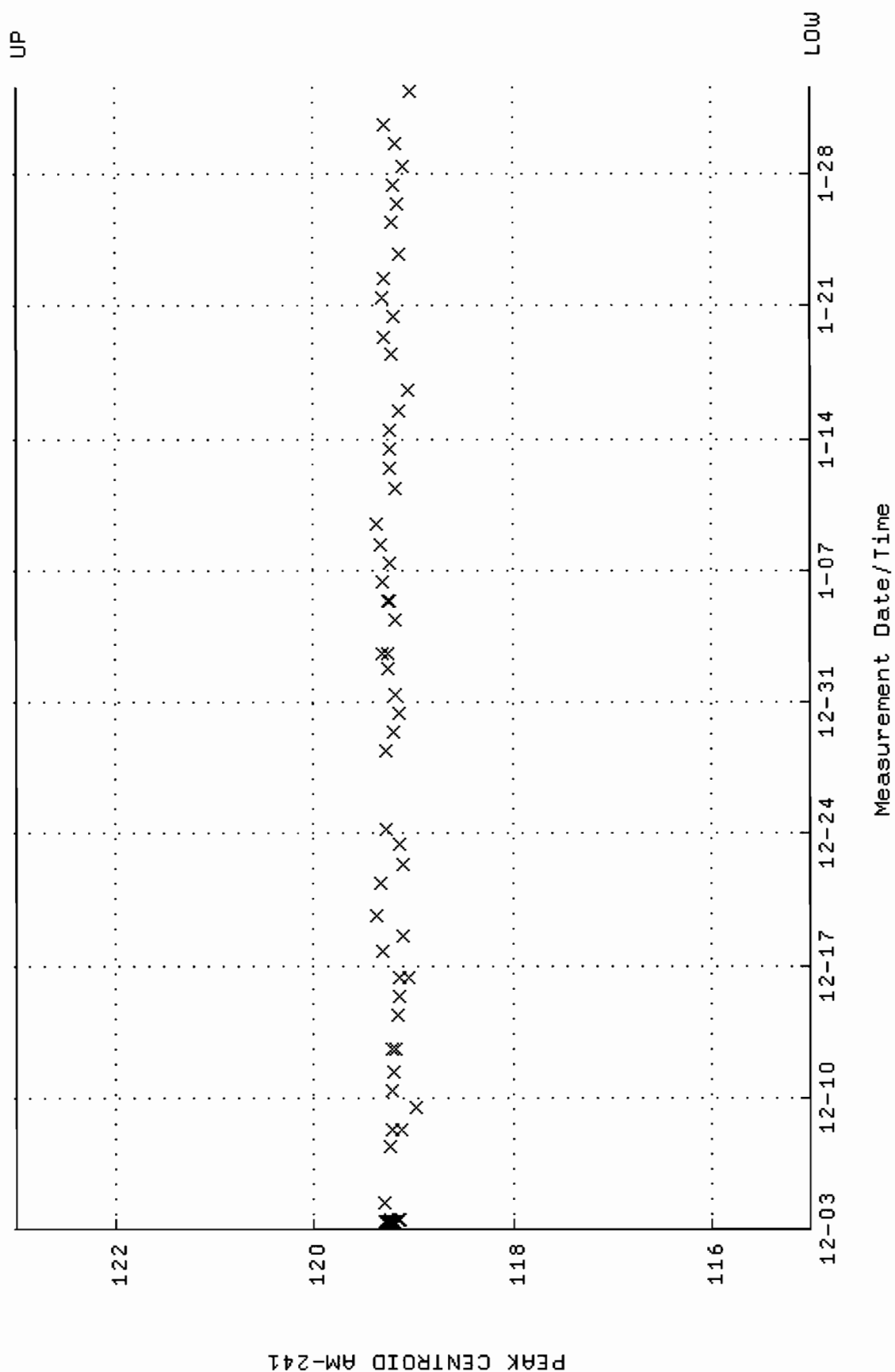
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_500MLMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-AUG-2009 09:19:21 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



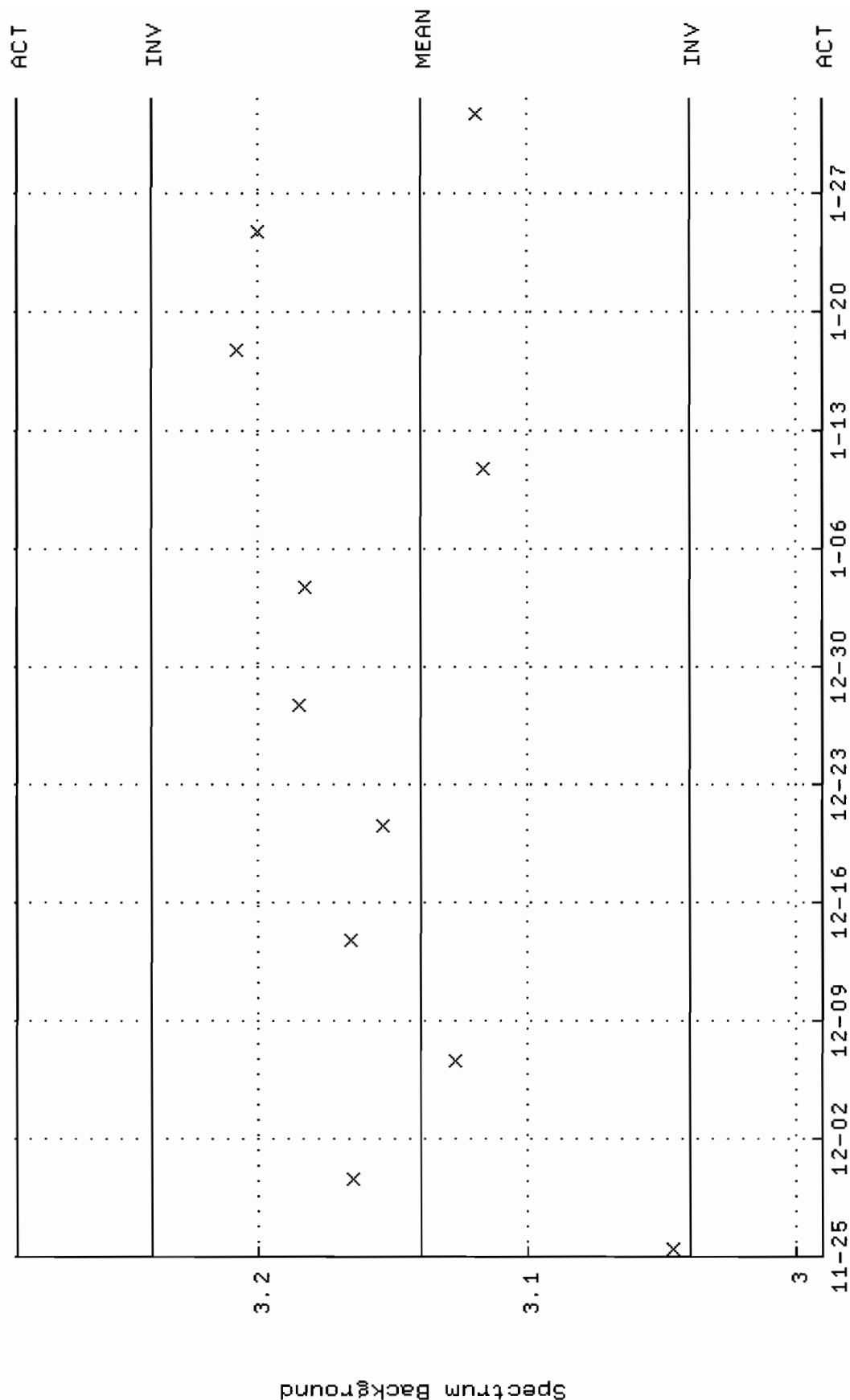
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM20.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:55 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48527 +- 2.388665E-02 (1.61 %)



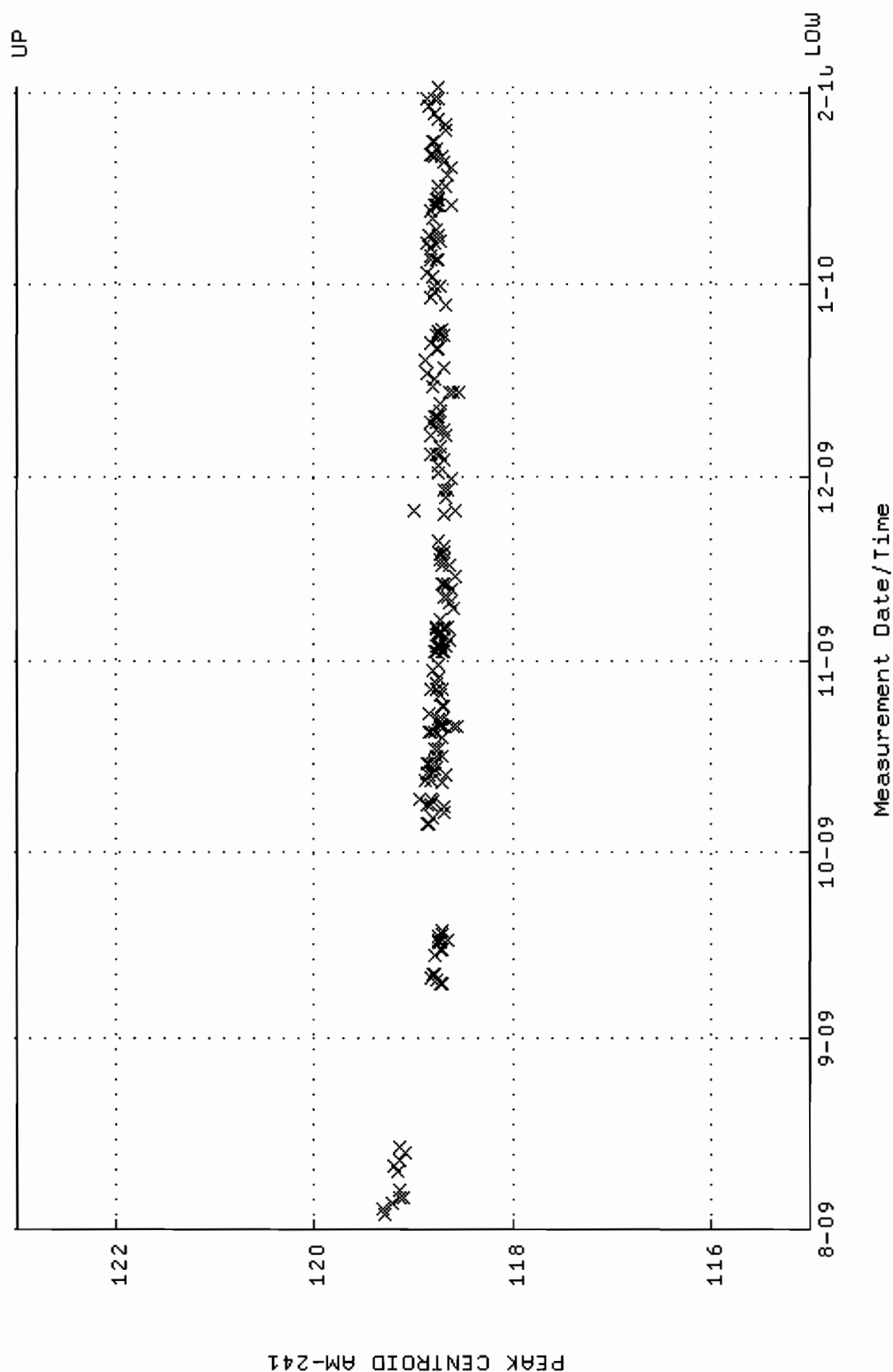
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM22-CAN.QAF;1
 Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-DEC-2009 09:11:39 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



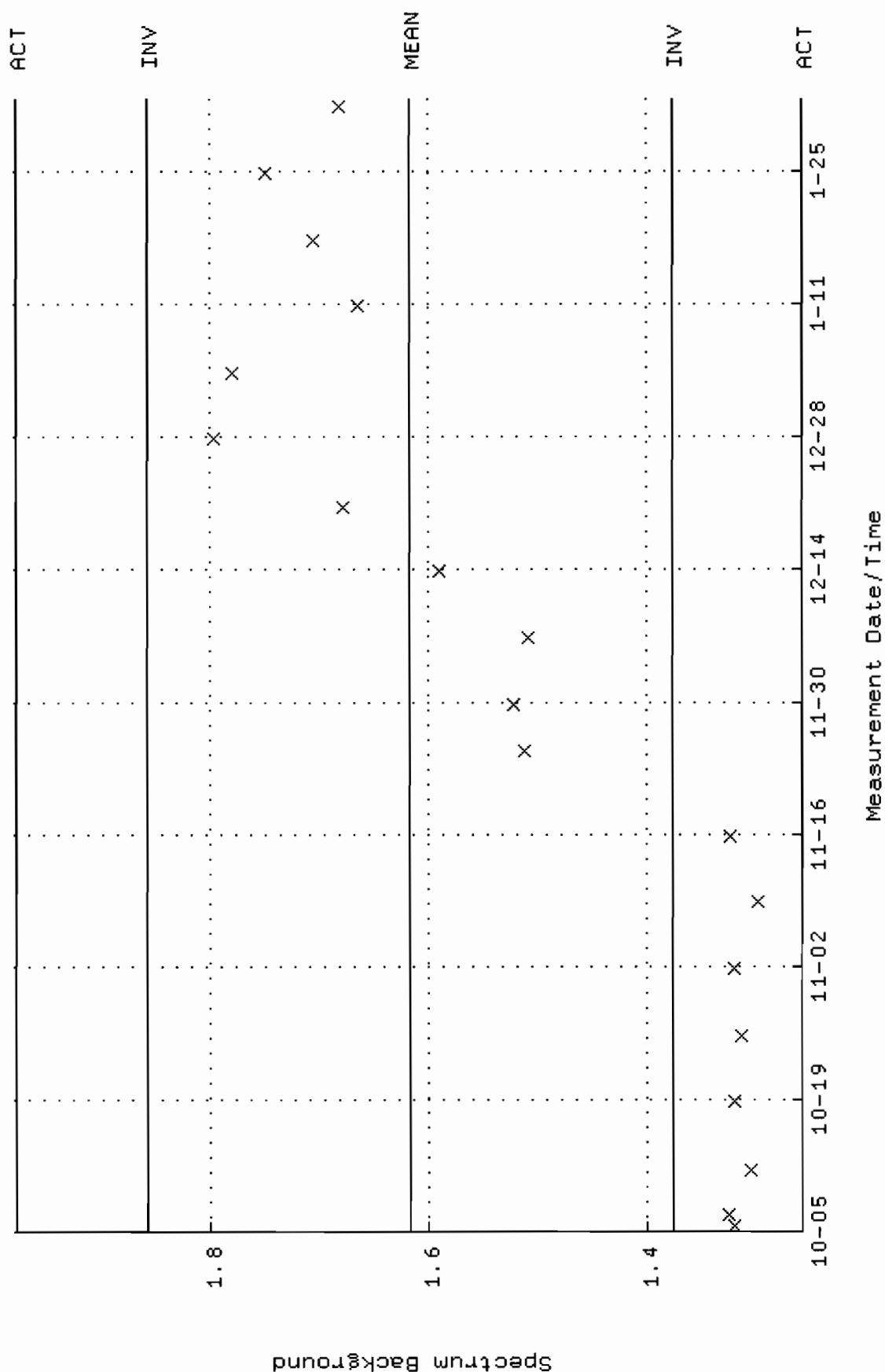
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM22.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 25-NOV-2009 10:28:37 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 3.13961 +- 4.985064E-02 (1.59 %)

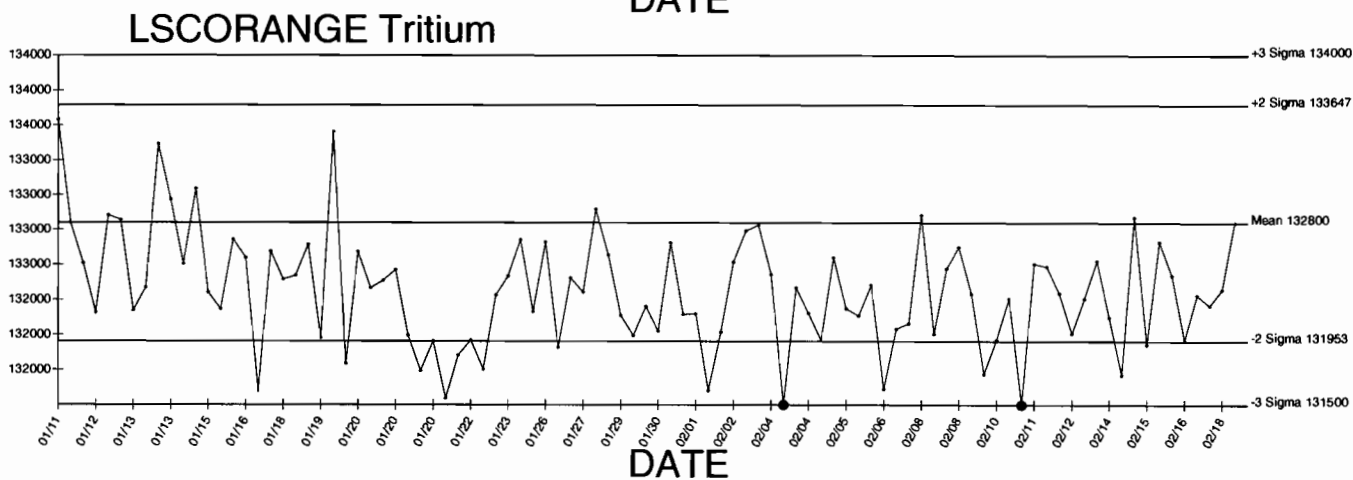
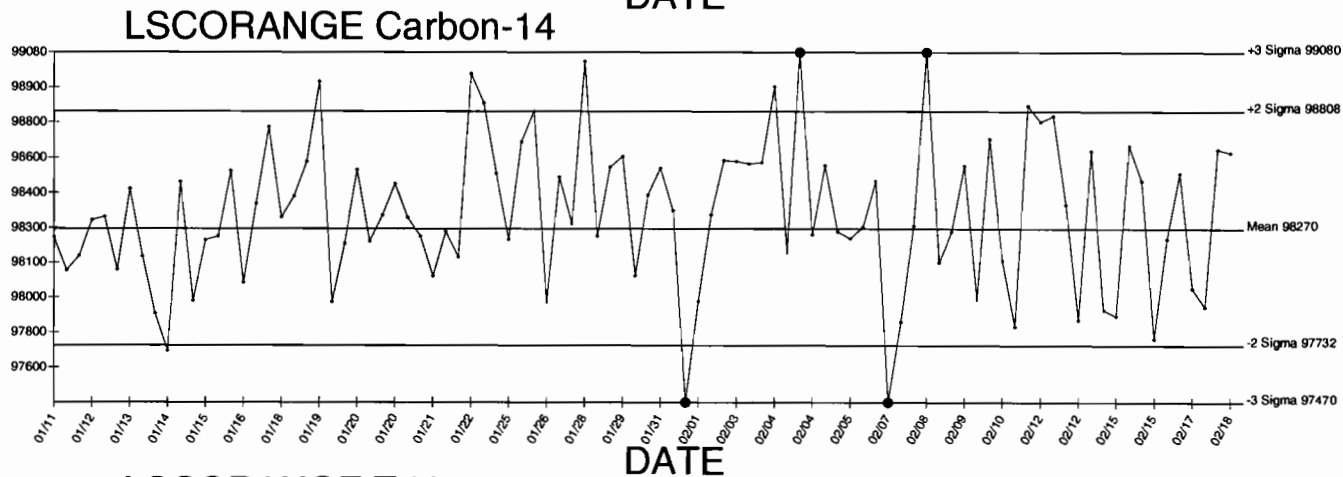
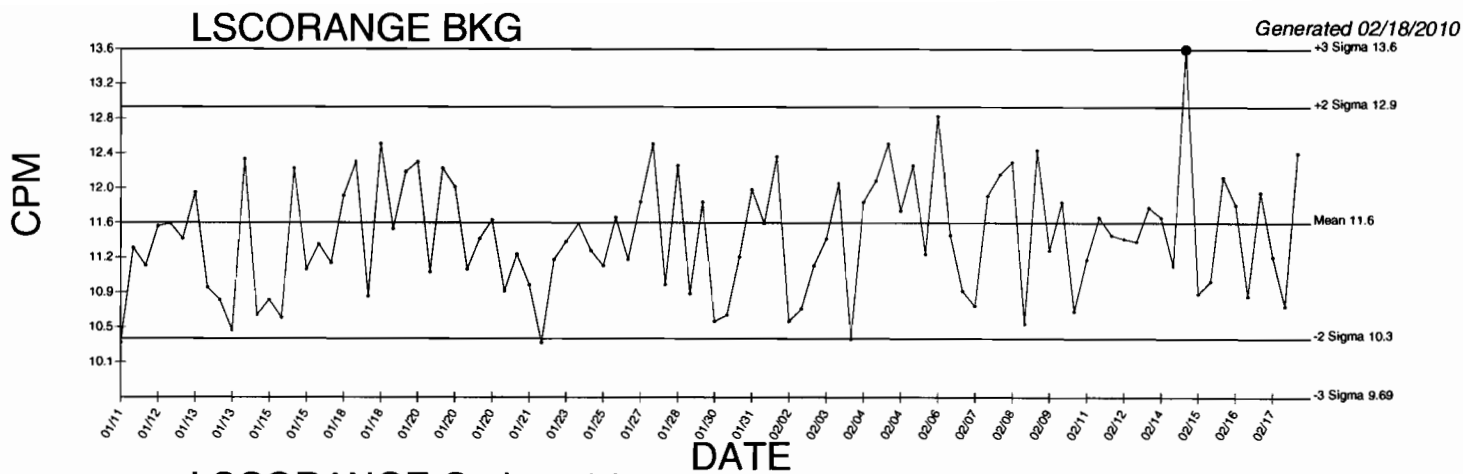


QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:16:07 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 5-OCT-2009 15:13:53 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.61827 +- 0.119991 (7.41 %)

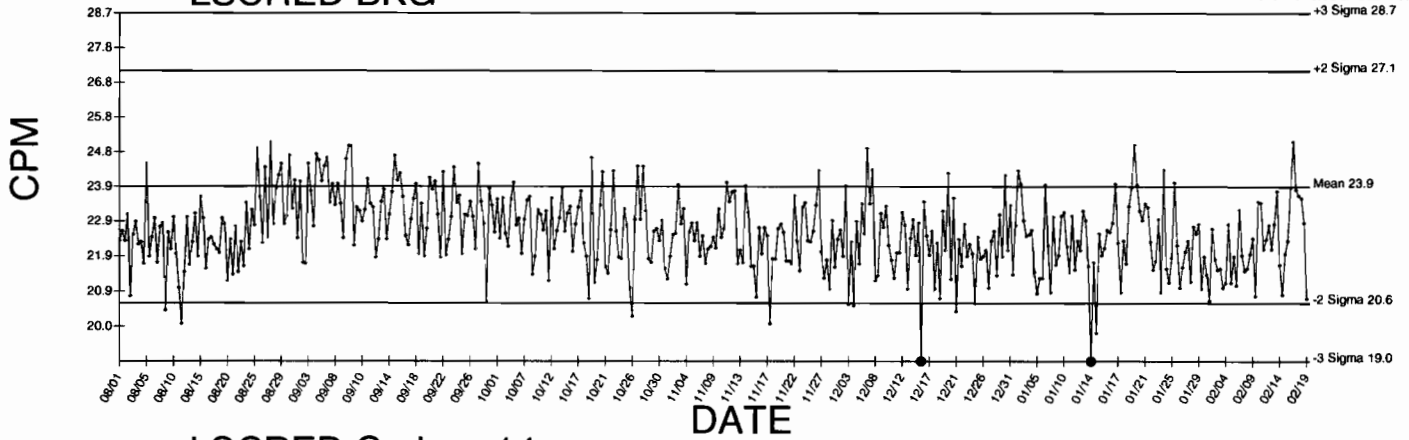




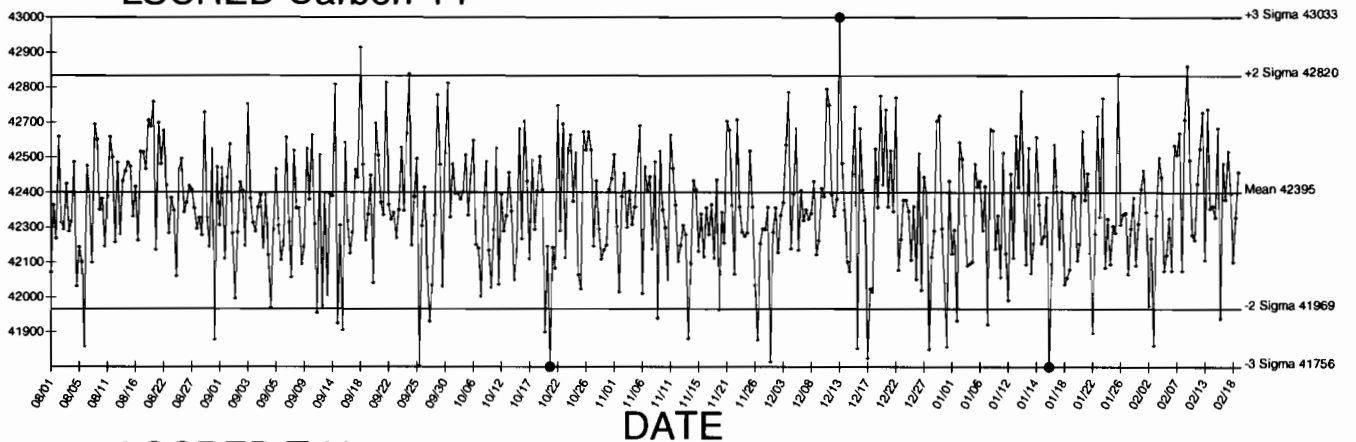
● Denotes Outlier

LSURED BKG

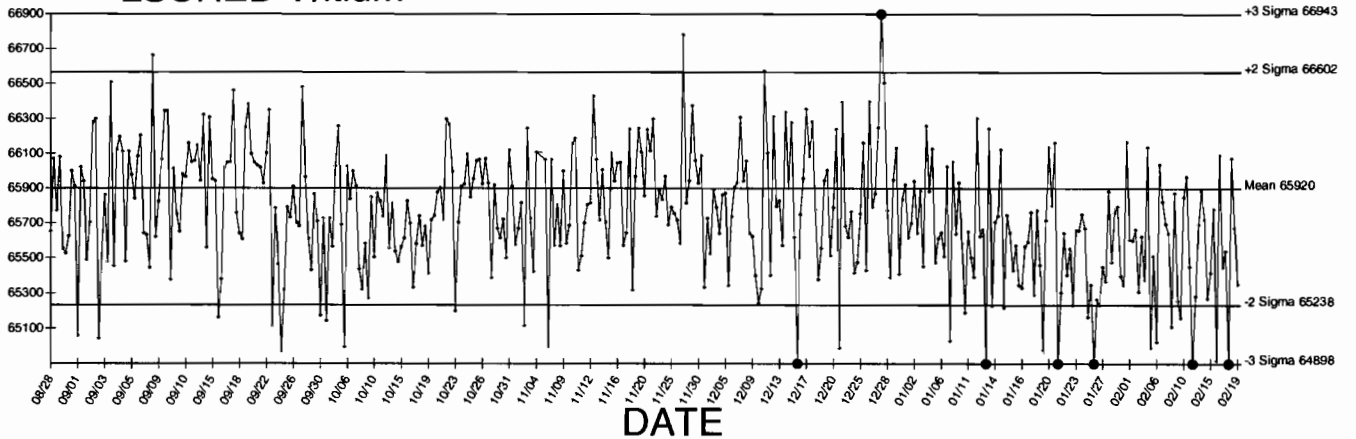
Generated 02/19/2010



LSURED Carbon-14



LSURED Tritium



● 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

2(-5-023-061a

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	0134	Isotope:	Tritium
Prepared By:	Angela Johnson	Prepared By:	Angela Johnson
Carrier Conc:	DI WATER	Prep Date:	02/21/2001
Reference Date:	03/01/1996	Verification Date:	09/10/2008
Ampoule Mass (g):	5 g	Expiration Date:	03/27/2010
Uncertainty:	+/- 2.5 %	Primary Code:	0134-A
LogBook No:	RC S 023 061	Dilution(mL):	100 mL
		Mass of Parent(g):	3.3659 g
		Density(g/mL):	1.0004
		Balance ID:	38080204

Calculations Converting parent activity to dpm/mL/dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (100 \text{ mL}) = 985535.5200 \text{ dpm/mL}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (1.0004 \text{ g/mL}) / (100 \text{ mL}) = 985180.3116 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	2741.3089
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	2709.776428

Mean Value (Counting) = 2709.776428
 Stdev = 31.53347278

Certificate Value = 2581.86 dpm/mL
 Lower Limit = 2646.709482 dpm/mL
 Upper Limit = 2772.843373 dpm/mL
 Rule 1 Pass/Fail Fail
 Two sigma = 63.06894556 dpm/mL
 10 % of Mean = 270.9776428 dpm/mL
 Rule 2 (Pass/Fail) Pass

*exception taken due to full recovery of standard

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 Ecosint 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 Ecosint 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

Heather Johnson 4/9/09
 Amanda J. Lehn 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:

W.M. [Signature] 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-c

1380 Seaboard Industrial Blvd.
 Atlanta, Georgia 30318

Tel 404-352-8677

Fax 404-352-2837

www.analytisticsinc.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	Weighting	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
100.00
Rule 3 (Pass/Fail) Pass

Certificate Value = 2485.68018
Lower Limit = 2357.536524
Upper Limit = 2613.796809
Rule 1 (Pass/Fail) Pass
Two sigma = 128.1301422
10 % of Mean = 248.5666667
Rule 2 (Pass/Fail) Pass

pCi/L
pCi/L
pCi/L

M. Stamps
12/2/09
independent
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

Cs-137

Isotope	Result	pCi/L - Ver. IAE-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) =
Stdev =

886.90
28.651
95.01
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

Handwritten:
12/2/21
12/4/09

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-JAN-5
Mixed Gamma N1	1572	pCi/L - VER-JAN-2
Mixed Gamma N2	1495	pCi/L - VER-JAN-3
Mixed Gamma N3	1501	

Mean Value (Counting) = 1522.67
Stdev = 42.829
98.50 Pass
Rule 3 (Pass/Fail)

Certificate Value = 1545.8378
Lower Limit = 1437.008431
Upper Limit = 1608.324902
Rule 1 (Pass/Fail) Pass
Two sigma = 85.65823564
10 % of Mean = 152.26666667
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 issued 12/2/09
12/2/09

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 4/14/2000 *lett c held 12/1/04*

angela d. johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
 10 " " TRM-2 and 3
 5 " each of TRM-1 through 6
 7 " baghouse dirt

use 1/4 gal 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	485 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Not for legal use
After 6/2/77

SF 2001-COC (10-97)

Internal Lab
Batch No.

SARAWR No. N/A

Press F1 for instructions for each field.

Page 1 of 1

AR/COC-

602945

[illegible]3rd Copy Field Copy (Pink)

2nd Copy SMO Suspense Copy

1st Copy To Accompany Sample Return to SMO (Blue)

Original / To Accompany Samples,
(Laboratory Copy (White))

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 & Stahel 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.

CERTIFICATE OF CALIBRATION

ALPHA STANDARD SOLUTION

Radionuclide Am-243
Half Life: 7380 \pm 40 years
Catalog No.: 7243
Source No.: 445-96-2

Customer: GENERAL ENGINEERING LABS
P.O.No.: 9290-RAD
Reference Date: January 1 1994 12:00 PST.
Contained Radioactivity: (Am-243) 101.2 μ Ci
Contained Radioactivity: (Am-243) 3750 kBq

Description of Solution

a. Mass of solution: 5.3739 g (in a 5 ml Flame Sealed Ampoule)
b. Chemical form: Am(NO₃)₃ in 2N HNO₃
c. Carrier content: None added
d. Density: 1.0651 g/ml @ 20°C.

Radioimpurities

None detected

Radioactive Daughters

Np-239 (beta active) in equilibrium

Radionuclide Concentration

(Am-243) 18.84 μ Ci/g

Method of Calibration

Weighed aliquots of the solution were assayed using gamma spectrometry for Np-239:

Energy peak(s) intergrated under: 228, 278 keV.
Branching ratio(s) used: 0.108, 0.1420 gamma rays per decay.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration: $\pm 3.0\%$
b. Random uncertainty in assay: $\pm 0.4\%$
c. Random uncertainty in weighing(s): $\pm 0.0\%$
d. Total uncertainty at the 99% confidence level: $\pm 3.0\%$

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).



ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

Anna H. Khan
QUALITY CONTROL

Jan 3, 1994
Date Signed

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO
DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE



1. STANDARD WIPE TEST

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



2. SOAK TEST

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



3. SOAK TEST -- BERYLLIUM WINDOW

The source is immersed in distilled water and maintained at $50 \pm 10^\circ \text{C}$ for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



4. GAS SOURCE TEST (Radioactive Gas)

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.



5. OTHER LEAK TEST

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.



6. LEAK TEST NOT APPLICABLE

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	445-96-2	Isotope:	Americium-243
Prepared By:	Genie Bost	Prepared By:	Angela Johnson
Carrier Conc:	2M HNO3	Prep Date:	01/05/1994
Reference Date:	01/01/1994	Verification Date:	05/11/2009
Ampoule Mass (g):	5.3739 g	Expiration Date:	05/11/2010
Uncertainty:	+/- 3 %	Primary Code:	445-96-2-A
LogBook No:	RC S 005 032	Dilution(mL):	100 mL
		Mass of Parent(g):	5.3419 g
		Density(g/mL):	1.0785
		Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (100 \text{ mL}) = 2234238.9912 \text{ dpm/mL}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (1.0785 \text{ g/mL}) / (100 \text{ mL}) = 2071617.0528 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	Joe Davis	.1809	100	445-96-2-P	3745.92 dpm/mL	05/13/1999	05/13/2000
01/04/2008	Julie Strock	.00001005	100	445-96-2-PP	.20819 dpm/mL	12/29/2008	12/29/2009
01/28/2000	Angela Johnson	.0354	1000	445-96-2-Q	73.3 dpm/mL	02/08/2001	02/08/2002
09/29/2008	Julie Strock	.0025219	250	445-96-2-QQ	20.8977 dpm/mL	09/30/2008	09/29/2009
04/18/2000	Robert Timm	.429	250	445-96-2-R	3553.34 dpm/mL	04/18/2000	04/18/2001
04/23/2009	Tina Schoneman	.001251	500	445-96-2-RR	4.8075 dpm/mL	04/23/2009	04/23/2010
04/13/2001	Angela Johnson	.1869	100	445-96-2-S	3870.16 dpm/mL	04/13/2001	04/13/2002
05/08/2009	Mary Aders	.0141	1000	445-96-2-SS	29.2098 dpm/ml	05/11/2009	05/11/2010
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-103	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-203	4153.225 dpm/mL	07/03/2002	07/03/2003

07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-303	4153.225 dpm/mL	07/03/2002	07/03/2003
06/03/2009	Julie Strock	.00000927	100	445-96-2-TT	.1923 dpm/mL	06/05/2009	06/03/2010
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-103	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-203	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-303	80.34 dpm/ml	08/23/2001	08/23/2002
06/02/2009	Mary Aders	2.1177	1000	445-96-2-UU	4385.1449 dpm/ml	06/04/2009	06/04/2010
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-103	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-203	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-303	81.586 dpm/mL	08/27/2002	08/27/2003
03/17/2003	Angela Johnson	2.1108	1000	445-96-2-W	4370.857 dpm/mL	03/14/2006	03/14/2007
04/14/2003	Lonnie Morris	.0315	1000	445-96-2-X	65.2559 dpm/mL	04/14/2004	04/14/2005
05/03/2003	Tim Chandler	.0103	1000	445-96-2-Y	21.3376 dpm/mL	05/05/2003	05/05/2004
05/05/2003	Eric Williamson	.011	1000	445-96-2-Z	22.7877 dpm/mL	04/03/2007	04/03/2008

GEL Laboratories LLC

Version 1.0 9/18/2000

Verification for Am-243 Standard 445-96-2-SS

M. Aders 5/15/2009	Isotope	Value	Uncertainty
	445-96-2-SS #1	1.360	0.1690
	445-96-2-SS #2	1.370	0.1690
	445-96-2-SS #3	1.290	0.1590
Mean Value (Counting) =	1.340	101.99	Pass
Stdev =	0.043588989	Rule 3 (Pass/Fail)	
Target =	1.314		
Lower Limit =	1.252822021		
Upper Limit =	1.427177979		
Rule 1 Pass/Fail	Pass		
Two sigma =	0.087177979		
10 % of Mean =	0.134		
Rule 2 (Pass/Fail)	Pass		

The analyst prepared three standard verification sources for standard **445-96-2-SS** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **Cm-244** standard **0533-O** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 48% HF was added to precipitate Nd (and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241 certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 5% of the certificate value.

M. Aders 5/15/09
Rahab 07/09



Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

78747-278

1283

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:

Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO₃ solution.

Source Prepared By: WLS

W. Mao, Radiochemist

QA Approved: DM

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

Date: 12/10/09

Serial #	Value	Uncertainty	
1283-H N1	2.020	pCi/L 0.238	pCi/L
1283-H N2	2.000	pCi/L 0.234	pCi/L
1283-H N3	2.060	pCi/L 0.242	pCi/L
Mean Value (Counting) =	2.027	pCi/L	99.66904 Pass
Stdev =	0.030550505	pCi/L	Rule 3 (Pass/Fail)
Target =	2.033	pCi/L	
Lower Limit =	1.965565657	pCi/L	
Upper Limit =	2.087767676	pCi/L	
Rule 1 Pass/Fail	Pass		
Two sigma =	0.061101009		
10 % of Mean =	0.202666667		
Rule 2 (Pass/Fail)	Pass		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements

Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.

Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 1283-H using 0.1 mL for each source. Each standard was combined with 0.1 mL of U-238 standard 1163-G and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

A. Drochter
12/14/09



NATIONAL 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*
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Signed: *[Signature]*
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:	$4.97 \text{ g} \pm 0.02 \text{ g}$

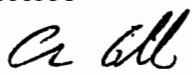
UNCERTAINTIES

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.

Reference: 2009100356

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Checked by:



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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		A Solution Material Info	
Parent Code:	1430	Isotope:	Plutonium-236
Prepared By:	Ashley Drochter	Prepared By:	Ashley Drochter
Carrier Conc:	2 M HNO ₃	Prep Date:	01/27/2010
Reference Date:	07/01/2009	Verification Date:	01/27/2010
Ampoule Mass (g):	4.97 g	Expiration Date:	01/27/2011
Uncertainty:	+/- .36 %	Primary Code:	1430-A
LogBook No:	RC-S-051-149	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 1/29/2010	1430-B	3.080	0.4720
	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 1/29/10
2/1/10

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER

Batch ID:952643

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246874001	SAMPLE	MXR1	GAM15	23-FEB-10 19:29	DONE	CAN	03-FEB-10 00:00
246874002	SAMPLE	MXR1	GAM22	23-FEB-10 19:29	DONE	CAN	02-DEC-09 00:00
246874003	SAMPLE	MXR1	GAM23	23-FEB-10 19:30	DONE	CAN	02-JUN-09 00:00
246874004	SAMPLE	MXR1	GAM12	23-FEB-10 19:33	DONE	CAN	10-FEB-09 00:00
246874005	SAMPLE	MXR1	GAM14	23-FEB-10 19:33	DONE	CAN	06-MAR-09 00:00
246874006	SAMPLE	MXR1	GAM07	23-FEB-10 20:22	DONE	CAN	20-JUL-09 00:00
246874007	SAMPLE	MXR1	GAM02	23-FEB-10 21:07	DONE	CAN	29-OCT-09 00:00
246874008	SAMPLE	MXR1	GAM01	23-FEB-10 23:19	DONE	CAN	12-JAN-10 00:00
246874009	SAMPLE	MXR1	GAM02	23-FEB-10 23:20	DONE	CAN	29-OCT-09 00:00
246874010	SAMPLE	MXR1	GAM15	23-FEB-10 23:20	DONE	CAN	03-FEB-10 00:00
246875001	SAMPLE	MXR1	GAM22	23-FEB-10 23:20	DONE	CAN	02-DEC-09 00:00
246875002	SAMPLE	MXR1	GAM23	23-FEB-10 23:21	DONE	CAN	02-JUN-09 00:00
246875003	SAMPLE	MXR1	GAM20	23-FEB-10 23:49	DONE	CAN	26-AUG-09 00:00
246875004	SAMPLE	MXR1	GAM04	24-FEB-10 08:51	DONE	CAN	05-MAY-09 00:00
246875005	SAMPLE	MXR1	GAM07	24-FEB-10 08:52	DONE	CAN	20-JUL-09 00:00
246875006	SAMPLE	MXR1	GAM14	24-FEB-10 08:52	DONE	CAN	06-MAR-09 00:00
246875007	SAMPLE	MXR1	GAM15	24-FEB-10 08:53	DONE	CAN	03-FEB-10 00:00
246875008	SAMPLE	MXR1	GAM22	24-FEB-10 08:54	DONE	CAN	02-DEC-09 00:00
1202041822	LCS	MXR1	GAM10	24-FEB-10 09:10	DONE	CAN	16-MAR-09 00:00
1202041820	MB	MXR1	GAM11	24-FEB-10 09:11	DONE	CAN	18-NOV-09 00:00
1202041821	DUP	MXR1	GAM20	24-FEB-10 09:12	DONE	CAN	26-AUG-09 00:00

Instrument Run Log

Instrument Type: LSC

Batch ID:953115

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246875001	SAMPLE	KXK2	LSCORANGE	16-FEB-10 22:31	DONE		
246875002	SAMPLE	KXK2	LSCORANGE	16-FEB-10 23:18	DONE		
246875003	SAMPLE	KXK2	LSCORANGE	17-FEB-10 00:06	DONE		
246875006	SAMPLE	KXK2	LSCORANGE	17-FEB-10 02:28	DONE		
246875008	SAMPLE	KXK2	LSCORANGE	17-FEB-10 04:04	DONE		
1202042948	MB	KXK2	LSCORANGE	17-FEB-10 04:51	DONE		
1202042949	DUP	KXK2	LSCORANGE	17-FEB-10 05:39	DONE		
1202042950	LCS	KXK2	LSCORANGE	17-FEB-10 06:26	DONE		
246875005	SAMPLE	KXK2	LSCORANGE	18-FEB-10 02:22	DONE		
246875007	SAMPLE	KXK2	LSCORANGE	18-FEB-10 03:09	DONE		
246875004	SAMPLE	KXK2	LSCRED	19-FEB-10 06:24	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID:956999

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246874007	SAMPLE	MXE1	1031	06-MAR-10 12:01	DONE		
246874008	SAMPLE	MXE1	1033	06-MAR-10 12:01	DONE		
246874009	SAMPLE	MXE1	1035	06-MAR-10 12:01	DONE		
246874010	SAMPLE	MXE1	1036	06-MAR-10 12:01	DONE		
246874001	SAMPLE	MXE1	1037	06-MAR-10 12:01	DONE		
246874002	SAMPLE	MXE1	1038	06-MAR-10 12:01	DONE		
246874003	SAMPLE	MXE1	1039	06-MAR-10 12:01	DONE		
246874004	SAMPLE	MXE1	1040	06-MAR-10 12:01	DONE		
246874005	SAMPLE	MXE1	1041	06-MAR-10 12:01	DONE		
246874006	SAMPLE	MXE1	1042	06-MAR-10 12:01	DONE		
246875001	SAMPLE	MXE1	1043	06-MAR-10 12:01	DONE		
246875002	SAMPLE	MXE1	1044	06-MAR-10 12:01	DONE		
246875003	SAMPLE	MXE1	1045	06-MAR-10 12:01	DONE		
246875004	SAMPLE	MXE1	1046	06-MAR-10 12:01	DONE		
246875005	SAMPLE	MXE1	1048	06-MAR-10 12:01	DONE		
246875006	SAMPLE	MXE1	1065	06-MAR-10 12:01	DONE		
246875007	SAMPLE	MXE1	1066	06-MAR-10 12:01	DONE		
246875008	SAMPLE	MXE1	1067	06-MAR-10 12:01	DONE		
1202051945	MB	MXE1	1068	06-MAR-10 12:01	DUSE		
1202051946	DUP	MXE1	1069	06-MAR-10 12:01	DONE		
1202051947	LCS	MXE1	1070	06-MAR-10 12:01	DUSE		
1202051945	MB	MXE1	1211	08-MAR-10 19:08	DONE		
1202051947	LCS	MXE1	1212	08-MAR-10 19:08	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 957001

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246874001	SAMPLE	MXE1	1071	06-MAR-10 12:01	DONE		
246874002	SAMPLE	MXE1	1072	06-MAR-10 12:01	DUSE		
246874003	SAMPLE	MXE1	1073	06-MAR-10 12:01	DONE		
246874004	SAMPLE	MXE1	1074	06-MAR-10 12:01	DONE		
246874005	SAMPLE	MXE1	1075	06-MAR-10 12:01	DONE		
246874006	SAMPLE	MXE1	1076	06-MAR-10 12:01	DONE		
246874007	SAMPLE	MXE1	1083	06-MAR-10 12:01	DONE		
246874008	SAMPLE	MXE1	1084	06-MAR-10 12:01	DONE		
246874009	SAMPLE	MXE1	1085	06-MAR-10 12:01	DONE		
246874010	SAMPLE	MXE1	1086	06-MAR-10 12:01	DONE		
246875001	SAMPLE	MXE1	1087	06-MAR-10 12:01	DONE		
246875002	SAMPLE	MXE1	1088	06-MAR-10 12:01	DONE		
246875003	SAMPLE	MXE1	1089	06-MAR-10 12:01	DONE		
246875004	SAMPLE	MXE1	1090	06-MAR-10 12:01	DONE		
246875005	SAMPLE	MXE1	1091	06-MAR-10 12:01	DONE		
246875006	SAMPLE	MXE1	1092	06-MAR-10 12:01	DONE		
246875007	SAMPLE	MXE1	1093	06-MAR-10 12:01	DONE		
246875008	SAMPLE	MXE1	1094	06-MAR-10 12:01	DONE		
1202051955	MB	MXE1	1095	06-MAR-10 12:01	DONE		
1202051956	DUP	MXE1	1097	06-MAR-10 12:01	DONE		
1202051957	LCS	MXE1	1099	06-MAR-10 12:01	DONE		
246874002	SAMPLE	MXE1	1216	08-MAR-10 19:08	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 957004

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202051962	MB	MXE1	1005	05-MAR-10 12:23	DONE		
1202051963	DUP	MXE1	1006	05-MAR-10 12:23	DONE		
1202051964	LCS	MXE1	1008	05-MAR-10 12:23	DONE		
246874001	SAMPLE	MXE1	1126	05-MAR-10 18:06	DONE		
246874002	SAMPLE	MXE1	1127	05-MAR-10 18:06	DONE		
246874003	SAMPLE	MXE1	1128	05-MAR-10 18:06	DONE		
246874004	SAMPLE	MXE1	1131	05-MAR-10 18:06	DONE		
246874005	SAMPLE	MXE1	1132	05-MAR-10 18:06	DONE		
246874006	SAMPLE	MXE1	1133	05-MAR-10 18:06	DONE		
246874007	SAMPLE	MXE1	1138	05-MAR-10 18:06	DONE		
246874008	SAMPLE	MXE1	1141	05-MAR-10 18:06	DONE		
246874009	SAMPLE	MXE1	1142	05-MAR-10 18:06	DONE		
246874010	SAMPLE	MXE1	1145	05-MAR-10 18:07	DONE		
246875001	SAMPLE	MXE1	1146	05-MAR-10 18:07	DONE		
246875002	SAMPLE	MXE1	1147	05-MAR-10 18:07	DONE		
246875004	SAMPLE	MXE1	1149	05-MAR-10 18:07	DUSE		
246875005	SAMPLE	MXE1	1150	05-MAR-10 18:07	DONE		
246875006	SAMPLE	MXE1	1153	05-MAR-10 18:07	DONE		
246875007	SAMPLE	MXE1	1154	05-MAR-10 18:07	DONE		
246875008	SAMPLE	MXE1	1155	05-MAR-10 18:07	DONE		
246875003	SAMPLE	MXE1	1148	05-MAR-10 18:29	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 962636

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
246875004	SAMPLE	MXE1	1139	09-MAR-10 17:23	DONE		
1202065198	MB	MXE1	1140	09-MAR-10 17:23	DONE		
1202065199	DUP	MXE1	1141	09-MAR-10 17:23	DONE		
1202065200	LCS	MXE1	1142	09-MAR-10 17:24	DONE		