

# TABLE OF CONTENTS

General Narrative.....	1
Chain of Custody.....	3
Radiological Analysis.....	7
Sample Data Summary.....	14
Quality Control Data.....	25
Raw Data.....	37
Continuing Calibration Data.....	200
Runlogs.....	211

# General Narrative

**General Narrative  
for  
BRC  
Radiochemistry Analysis  
SDG: 204220**

**March 12, 2008**

**Laboratory Identification:**

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

**Summary**

**Sample receipt**

The sample(s) arrived at GEL Laboratories, LLC, Charleston, South Carolina on March 07, 2008, for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Shipping container temperature was within specification. There are no additional comments concerning sample receipt.

**Sample Identification**

The laboratory received the following samples:

<b>Laboratory Identification</b>	<b>Sample Description</b>
204220001	TSB-HJ-10-Surf
204220002	TSB-HJ-01 Surf
204220003	TSB-HR-05-Surf

**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: General Narrative, Chain of Custody and Supporting Documentation, and data from the following fractions: Radiochemistry. This package, to the best of my knowledge, is in compliance with technical and administrative requirements.

GEL Laboratories, LLC appreciates this opportunity to provide you with analytical results and trusts that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate in contacting me at (843) 556-8171.



Amanda Rasco

Project Manager

# Chain of Custody





Client: <b>BAC</b>		SDG/ARCOC/Work Order: <b>204220</b>	
Received By: <b>JRA</b>		Date Received: <b>3-7-08 945</b>	
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
Marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Counts Observed*: <b>40cpm</b>
Classified Radioactive II by RSO?		<input checked="" type="checkbox"/>	
Marked containing PCBs?		<input checked="" type="checkbox"/>	
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken    damaged container    leaking container    other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)?		<input checked="" type="checkbox"/>		ice bags    blue ice    Preservation Method: <b>dry ice</b> <u>none</u> other (describe) <b>16</b>
3	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4	Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken    damaged container    leaking container    other (describe)
5	Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7	Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	<input checked="" type="checkbox"/>			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			

Comments: **Fed Ex 8606 4424 3387**

PM (or PMA) review: Initials

*JRA*

Date

**3/7/08**

**List of current GEL Certifications as of 12 March 2008**

<b>State</b>	<b>Certification</b>
Alaska	UST-062
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California	01151CA
Colorado	GenEngLabs
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA	WG-15J
Florida/NELAP	E87156
Georgia	E87156 (FL/NELAP)
Hawaii	N/A
Idaho	N/A
Illinois	200029
Indiana	C-SC-01
Kansas	E-10332
Kentucky	90129
Louisiana	03046
Maryland	270
Massachusetts	M-SC012
Michigan	9903
Nevada	SC12
New Jersey	SC002
New Mexico	FL NELAP E87156
New York	11501
North Carolina	233
North Carolina Drinking W	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania	68-00485
South Carolina	10120001/10585001/10120002
Tennessee	02934
Texas NELAP	T104704235-07-TX
U.S. Dept. of Agriculture	S-52597
US Army Corps of Engineer	N/A
Utah	8037697376 GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

# RADIOLOGICAL ANALYSIS



**Radiochemistry Case Narrative  
BRC (BRCM)  
SDG 204220**

**Method/Analysis Information**

**Product:**                               **Gammasec, Gamma, Solid (Standard List)**  
Analytical Method:                    EML HASL 300, 4.5.2.3  
Prep Method:                            Dry Soil Prep  
Analytical Batch Number:            734275  
Prep Batch Number:                    733663

<b>Sample ID</b>	<b>Client ID</b>
204220001	TSB-HJ-10-Surf
204220002	TSB-HJ-01 Surf
204220003	TSB-HR-05-Surf
1201532439	Method Blank (MB)
1201532440	204220001(TSB-HJ-10-Surf) Sample Duplicate (DUP)
1201532441	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# 14.

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 204220001 (TSB-HJ-10-Surf).

**QC Information**

All of the QC samples met the required acceptance limits.

**Technical Information:****Holding Time**

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

**Preparation Information**

All preparation criteria have been met for these analyses.

**Sample Re-prep/Re-analysis**

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

**Miscellaneous Information:****NCR Documentation**

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

**Additional Comments**

Additional comments were not required for this sample set.

**Qualifier information**

<b>Qualifier</b>	<b>Reason</b>	<b>Analyte</b>	<b>Sample</b>
UI	Data rejected due to a high counting uncertainty.	Cesium-137	204220002
UI	Data rejected due to high counting uncertainty.	Mercury-203	204220003
UI	Data rejected due to high peak-width.	Cobalt-58	204220003
		Neodymium-147	1201532439
UI	Data rejected due to interference.	Bismuth-211	204220001
			204220002
			204220003
			1201532440
		Radium-224	204220001
			204220002
			204220003
			1201532440
UI	Data rejected due to low abundance.	Bismuth-212	204220002
			1201532440
		Cesium-134	204220001
			204220002
			204220003
		Neptunium-239	204220002
		Thorium-231	204220001
			204220002
			204220003
			1201532440
UI	Data rejected due to no valid peak.	Thorium-234	204220003
			1201532440
		Uranium-238	204220003
			1201532440

**Method/Analysis Information**

**Product:** GFPC, Gross A/B, solid  
**Analytical Method:** EPA 900.0 Modified  
**Prep Method:** Dry Soil Prep  
**Analytical Batch Number:** 734299  
**Prep Batch Number:** 733663

<b>Sample ID</b>	<b>Client ID</b>
204220001	TSB-HJ-10-Surf
204220002	TSB-HJ-01 Surf
204220003	TSB-HR-05-Surf
1201532514	Method Blank (MB)
1201532515	204220001(TSB-HJ-10-Surf) Sample Duplicate (DUP)
1201532516	204220001(TSB-HJ-10-Surf) Matrix Spike (MS)
1201532517	204220001(TSB-HJ-10-Surf) Matrix Spike Duplicate (MSD)
1201532518	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-001B REV# 11.

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met. The discrimination settings are calibrated in beta discriminating mode to reduce beta to alpha crosstalk.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 204220001 (TSB-HJ-10-Surf).

**QC Information**

All of the QC samples met the required acceptance limits.

### **Technical Information:**

#### **Holding Time**

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

#### **Preparation Information**

All preparation criteria have been met for these analyses.

#### **Sample Re-prep/Re-analysis**

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

#### **Chemical Recoveries**

All chemical recoveries meet the required acceptance limits for this sample set.

#### **Gross Alpha/Beta Preparation Information**

High hygroscopic salt content in evaporated samples can cause the sample mass to fluctuate due to moisture absorption. To minimize this interference, the salts are converted to oxides by heating the sample under a flame until a dull red color is obtained. The conversion to oxides stabilizes the sample weight and ensures that proper alpha/beta efficiencies are assigned for each sample. Volatile radioisotopes of carbon, hydrogen, technetium, polonium and cesium may be lost during sample heating.

### **Miscellaneous Information:**

#### **NCR Documentation**

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

#### **Additional Comments**

The beta blank result for is greater than the MDA but less than the detection limit.

#### **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: 2/over 21 GCOA 3/11/08

# SAMPLE DATA SUMMARY

# GEL LABORATORIES LLC

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

## Certificate of Analysis Report for

BRCM001 BRC

Client SDG: 204220 GEL Work Order: 204220

### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification

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, Amanda Rasco.



Reviewed by \_\_\_\_\_



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
Address : 875 W. Warm Springs Road  
Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HJ-10-Surf  
Sample ID: 204220001  
Matrix: Soil  
Collect Date: 06-MAR-08 14:28  
Receive Date: 07-MAR-08  
Collector: Client

Project: BRCM00100  
Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Rad Gamma Spec Analysis</b>											
<i>Gammascpec, Gamma, Solid (Standard List)</i>											
Actinium-227	U	-0.0616	+/-0.364	0.584		pCi/g		MJH1 03/10/08	1020	734275	1
Actinium-228		1.85	+/-0.356	0.225		pCi/g					
Americium-241	U	0.0467	+/-0.0544	0.0844		pCi/g					
Antimony-124	U	0.0713	+/-0.0744	0.136		pCi/g					
Antimony-125	U	0.0411	+/-0.0931	0.159		pCi/g					
Barium-133	U	0.0127	+/-0.0512	0.0684		pCi/g					
Barium-140	U	0.113	+/-0.151	0.264		pCi/g					
Beryllium-7	U	-0.0507	+/-0.329	0.467		pCi/g					
Bismuth-210	U	0.103	+/-0.624	0.677		pCi/g					
Bismuth-211	UI	0.00	+/-0.455	0.274		pCi/g					
Bismuth-212		1.48	+/-0.437	0.498		pCi/g					
Bismuth-214		0.930	+/-0.169	0.128		pCi/g					
Cerium-139	U	-0.0113	+/-0.0247	0.0406		pCi/g					
Cerium-141	U	0.0119	+/-0.0565	0.0686		pCi/g					
Cerium-144	U	-0.0102	+/-0.179	0.272		pCi/g					
Cesium-134	UI	0.00	+/-0.079	0.088		pCi/g					
Cesium-136	U	-0.0362	+/-0.0674	0.109		pCi/g					
Cesium-137	U	0.0478	+/-0.0444	0.0721		pCi/g					
Chromium-51	U	-0.153	+/-0.266	0.441		pCi/g					
Cobalt-56	U	0.0166	+/-0.0366	0.0628		pCi/g					
Cobalt-57	U	0.00395	+/-0.0196	0.0338		pCi/g					
Cobalt-58	U	-0.0224	+/-0.0386	0.061		pCi/g					
Cobalt-60	U	0.0168	+/-0.0427	0.0734	0.200	pCi/g					
Europium-152	U	0.0495	+/-0.0881	0.154		pCi/g					
Europium-154	U	0.0743	+/-0.153	0.239		pCi/g					
Europium-155	U	0.0528	+/-0.109	0.140		pCi/g					
Iridium-192	U	0.0191	+/-0.0298	0.0525		pCi/g					
Iron-59	U	-0.0142	+/-0.0867	0.144		pCi/g					
Lead-210	U	0.103	+/-0.624	0.677		pCi/g					
Lead-211	U	-0.0929	+/-1.10	1.60		pCi/g					
Lead-212		1.52	+/-0.167	0.0939		pCi/g					
Lead-214		1.17	+/-0.169	0.0954		pCi/g					
Manganese-54	U	-0.0107	+/-0.0399	0.0646		pCi/g					
Mercury-203	U	0.0262	+/-0.0359	0.0484		pCi/g					
Neodymium-147	U	-0.113	+/-0.337	0.462		pCi/g					
Neptunium-239	U	-0.245	+/-0.152	0.243		pCi/g					
Niobium-94	U	0.00806	+/-0.0381	0.065		pCi/g					
Niobium-95	U	0.0114	+/-0.0427	0.0814		pCi/g					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
Address : 875 W. Warm Springs Road  
Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HJ-10-Surf  
Sample ID: 204220001

Project: BRCM00100  
Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Rad Gamma Spec Analysis</b>												
<i>Gammascpec, Gamma, Solid (Standard List)</i>												
Polonium-210	U	0.103	+/-0.624	0.677		pCi/g						
Polonium-212		1.52	+/-0.167	0.0939		pCi/g						
Polonium-214		1.17	+/-0.169	0.0954		pCi/g						
Polonium-215	U	0.0276	+/-0.692	1.04		pCi/g						
Polonium-216		1.52	+/-0.167	0.0939		pCi/g						
Polonium-218		1.17	+/-0.169	0.0954		pCi/g						
Potassium-40		23.8	+/-2.11	0.532		pCi/g						
Promethium-144	U	0.0232	+/-0.036	0.0632		pCi/g						
Promethium-146	U	0.0102	+/-0.0467	0.0784		pCi/g						
Protactinium-231	U	-0.919	+/-1.36	2.27		pCi/g						
Protactinium-234	U	-0.211	+/-0.337	0.546		pCi/g						
Radium-223	U	0.0276	+/-0.692	1.04		pCi/g						
Radium-224	UI	0.00	+/-0.823	1.24		pCi/g						
Radium-226		0.930	+/-0.169	0.128		pCi/g						
Radium-228		1.85	+/-0.356	0.225		pCi/g						
Ruthenium-106	U	0.134	+/-0.321	0.560		pCi/g						
Silver-110m	U	0.0204	+/-0.039	0.0602		pCi/g						
Sodium-22	U	0.0364	+/-0.0532	0.085		pCi/g						
Thallium-207	U	0.0276	+/-0.692	1.04		pCi/g						
Thallium-208		0.531	+/-0.0953	0.064		pCi/g						
Thorium-227	U	-0.0616	+/-0.365	0.584		pCi/g						
Thorium-231	UI	0.00	+/-0.284	0.336		pCi/g						
Thorium-234		1.56	+/-0.936	0.795		pCi/g						
Tin-113	U	0.0395	+/-0.0416	0.0735		pCi/g						
Uranium-235	U	0.0505	+/-0.240	0.298		pCi/g						
Uranium-238		1.56	+/-0.936	0.795		pCi/g						
Yttrium-88	U	0.0131	+/-0.0279	0.0506		pCi/g						
Zinc-65	U	0.0102	+/-0.173	0.158		pCi/g						
Zirconium-95	U	0.051	+/-0.0708	0.124		pCi/g						

### Rad Gas Flow Proportional Counting

*GFPC, Gross A/B, solid*

Alpha	16.6	+/-4.55	3.73	4.00	pCi/g	MXP1 03/11/08 0856 734299	2
Beta	33.0	+/-3.87	3.73	10.0	pCi/g		

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BSW1	03/07/08	1152	733663

### The following Analytical Methods were performed

Method	Description	Analyst Comments
--------	-------------	------------------

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
Address : 875 W. Warm Springs Road  
Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HJ-10-Surf  
Sample ID: 204220001

Project: BRCM00100  
Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
-----------	-----------	--------	-------------	----	----	-------	----	-------------	------	-------	--------

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
 Address : 875 W. Warm Springs Road  
 Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
 Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HJ-01 Surf  
 Sample ID: 204220002  
 Matrix: Soil  
 Collect Date: 06-MAR-08 14:42  
 Receive Date: 07-MAR-08  
 Collector: Client

Project: BRCM00100  
 Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Rad Gamma Spec Analysis</b>											
<i>Gammascpec, Gamma, Solid (Standard List)</i>											
Actinium-227	U	0.0472	+/-0.350	0.598		pCi/g		MJH1 03/10/08	1021	734275	1
Actinium-228		1.58	+/-0.387	0.237		pCi/g					
Americium-241	U	0.058	+/-0.0581	0.0883		pCi/g					
Antimony-124	U	0.00828	+/-0.0708	0.123		pCi/g					
Antimony-125	U	-0.0533	+/-0.0935	0.150		pCi/g					
Barium-133	U	0.00738	+/-0.050	0.0738		pCi/g					
Barium-140	U	-0.0134	+/-0.146	0.239		pCi/g					
Beryllium-7	U	-0.0386	+/-0.309	0.509		pCi/g					
Bismuth-210	U	0.526	+/-0.560	0.743		pCi/g					
Bismuth-211	UI	0.00	+/-0.470	0.361		pCi/g					
Bismuth-212	UI	0.00	+/-0.539	0.822		pCi/g					
Bismuth-214		1.16	+/-0.179	0.108		pCi/g					
Cerium-139	U	0.00209	+/-0.0283	0.0426		pCi/g					
Cerium-141	U	0.000196	+/-0.0451	0.0738		pCi/g					
Cerium-144	U	-0.0668	+/-0.204	0.286		pCi/g					
Cesium-134	UI	0.00	+/-0.0569	0.0923		pCi/g					
Cesium-136	U	0.032	+/-0.0666	0.117		pCi/g					
Cesium-137	UI	0.00	+/-0.0846	0.0757		pCi/g					
Chromium-51	U	-0.248	+/-0.279	0.435		pCi/g					
Cobalt-56	U	-0.0239	+/-0.0502	0.0597		pCi/g					
Cobalt-57	U	-0.00501	+/-0.0208	0.0338		pCi/g					
Cobalt-58	U	-0.0259	+/-0.039	0.0621		pCi/g					
Cobalt-60	U	0.0209	+/-0.043	0.0761	0.200	pCi/g					
Europium-152	U	-0.115	+/-0.117	0.156		pCi/g					
Europium-154	U	0.0208	+/-0.152	0.256		pCi/g					
Europium-155	U	0.0453	+/-0.0851	0.143		pCi/g					
Iridium-192	U	0.0321	+/-0.0292	0.0521		pCi/g					
Iron-59	U	-0.0601	+/-0.096	0.151		pCi/g					
Lead-210	U	0.526	+/-0.560	0.743		pCi/g					
Lead-211	U	0.117	+/-1.10	1.60		pCi/g					
Lead-212		1.69	+/-0.165	0.0839		pCi/g					
Lead-214		0.996	+/-0.171	0.125		pCi/g					
Manganese-54	U	0.024	+/-0.0397	0.065		pCi/g					
Mercury-203	U	0.0484	+/-0.0388	0.0616		pCi/g					
Neodymium-147	U	-0.00926	+/-0.287	0.474		pCi/g					
Neptunium-239	UI	0.00	+/-0.221	0.281		pCi/g					
Niobium-94	U	-0.00688	+/-0.0382	0.0645		pCi/g					
Niobium-95	U	0.0593	+/-0.0542	0.0882		pCi/g					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
 Address : 875 W. Warm Springs Road  
 Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
 Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HJ-01 Surf  
 Sample ID: 204220002

Project: BRCM00100  
 Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Rad Gamma Spec Analysis</b>												
<i>Gammascpec, Gamma, Solid (Standard List)</i>												
Polonium-210	U	0.526	+/-0.560	0.743		pCi/g						
Polonium-212		1.69	+/-0.165	0.0839		pCi/g						
Polonium-214		0.996	+/-0.171	0.125		pCi/g						
Polonium-215	U	0.351	+/-0.712	1.08		pCi/g						
Polonium-216		1.69	+/-0.165	0.0839		pCi/g						
Polonium-218		0.996	+/-0.171	0.125		pCi/g						
Potassium-40		21.3	+/-2.14	0.618		pCi/g						
Promethium-144	U	-0.0145	+/-0.0372	0.0618		pCi/g						
Promethium-146	U	-0.0132	+/-0.0464	0.0758		pCi/g						
Protactinium-231	U	-0.418	+/-1.53	2.49		pCi/g						
Protactinium-234	U	-0.153	+/-0.355	0.572		pCi/g						
Radium-223	U	0.351	+/-0.712	1.08		pCi/g						
Radium-224	UI	0.00	+/-1.50	0.957		pCi/g						
Radium-226		1.16	+/-0.179	0.108		pCi/g						
Radium-228		1.58	+/-0.387	0.237		pCi/g						
Ruthenium-106	U	0.228	+/-0.339	0.588		pCi/g						
Silver-110m	U	-0.0145	+/-0.0452	0.0646		pCi/g						
Sodium-22	U	0.0124	+/-0.0541	0.092		pCi/g						
Thallium-207	U	0.351	+/-0.712	1.08		pCi/g						
Thallium-208		0.613	+/-0.0901	0.0609		pCi/g						
Thorium-227	U	0.0472	+/-0.350	0.598		pCi/g						
Thorium-231	UI	0.00	+/-0.304	0.347		pCi/g						
Thorium-234		1.23	+/-0.718	0.846		pCi/g						
Tin-113	U	-0.0385	+/-0.0423	0.0666		pCi/g						
Uranium-235	U	0.00992	+/-0.194	0.317		pCi/g						
Uranium-238		1.23	+/-0.718	0.846		pCi/g						
Yttrium-88	U	0.00993	+/-0.039	0.0682		pCi/g						
Zinc-65	U	-0.0361	+/-0.112	0.152		pCi/g						
Zirconium-95	U	0.00325	+/-0.0711	0.122		pCi/g						
<b>Rad Gas Flow Proportional Counting</b>												
<i>GFPC, Gross A/B, solid</i>												
Alpha		15.3	+/-4.24	3.64	4.00	pCi/g						
Beta		33.7	+/-3.67	2.96	10.0	pCi/g						

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BSW1	03/07/08	1152	733663

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
--------	-------------	------------------

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
Address : 875 W. Warm Springs Road  
Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HJ-01 Surf  
Sample ID: 204220002

Project: BRCM00100  
Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
-----------	-----------	--------	-------------	----	----	-------	----	-------------	------	-------	--------

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
Address : 875 W. Warm Springs Road  
Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HR-05-Surf  
Sample ID: 204220003  
Matrix: Soil  
Collect Date: 06-MAR-08 14:55  
Receive Date: 07-MAR-08  
Collector: Client

Project: BRCM00100  
Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Rad Gamma Spec Analysis</b>											
<i>Gammascpec, Gamma, Solid (Standard List)</i>											
Actinium-227	U	0.0544	+/-0.328	0.538		pCi/g		MJH1 03/10/08	1021	734275	1
Actinium-228		1.65	+/-0.340	0.197		pCi/g					
Americium-241	U	0.144	+/-0.148	0.235		pCi/g					
Antimony-124	U	0.0557	+/-0.0593	0.116		pCi/g					
Antimony-125	U	0.00453	+/-0.0791	0.133		pCi/g					
Barium-133	U	-0.0135	+/-0.0419	0.061		pCi/g					
Barium-140	U	0.0548	+/-0.133	0.225		pCi/g					
Beryllium-7	U	0.251	+/-0.310	0.416		pCi/g					
Bismuth-210	U	-1.48	+/-4.16	6.70		pCi/g					
Bismuth-211	UI	0.00	+/-0.437	0.276		pCi/g					
Bismuth-212		1.31	+/-0.417	0.411		pCi/g					
Bismuth-214		0.785	+/-0.147	0.109		pCi/g					
Cerium-139	U	0.000974	+/-0.0223	0.0375		pCi/g					
Cerium-141	U	0.0231	+/-0.0399	0.0694		pCi/g					
Cerium-144	U	0.195	+/-0.170	0.273		pCi/g					
Cesium-134	UI	0.00	+/-0.0483	0.080		pCi/g					
Cesium-136	U	0.000382	+/-0.0512	0.0877		pCi/g					
Cesium-137	U	0.0311	+/-0.0396	0.0635		pCi/g					
Chromium-51	U	-0.056	+/-0.239	0.405		pCi/g					
Cobalt-56	U	0.00477	+/-0.0362	0.0532		pCi/g					
Cobalt-57	U	0.0021	+/-0.0191	0.0329		pCi/g					
Cobalt-58	UI	0.00	+/-0.141	0.0538		pCi/g					
Cobalt-60	U	-0.0102	+/-0.0347	0.0558	0.200	pCi/g					
Europium-152	U	-0.0571	+/-0.0815	0.133		pCi/g					
Europium-154	U	0.0173	+/-0.125	0.185		pCi/g					
Europium-155	U	-0.0115	+/-0.083	0.143		pCi/g					
Iridium-192	U	0.00768	+/-0.0272	0.0474		pCi/g					
Iron-59	U	0.00124	+/-0.0711	0.121		pCi/g					
Lead-210	U	-1.48	+/-4.16	6.70		pCi/g					
Lead-211	U	-1.02	+/-1.15	1.28		pCi/g					
Lead-212		1.56	+/-0.148	0.0744		pCi/g					
Lead-214		1.02	+/-0.161	0.0963		pCi/g					
Manganese-54	U	0.00802	+/-0.0414	0.0611		pCi/g					
Mercury-203	UI	0.00	+/-0.0557	0.0431		pCi/g					
Neodymium-147	U	0.183	+/-0.250	0.433		pCi/g					
Neptunium-239	U	-0.00321	+/-0.146	0.251		pCi/g					
Niobium-94	U	0.0278	+/-0.0318	0.0538		pCi/g					
Niobium-95	U	0.0224	+/-0.0369	0.0649		pCi/g					

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
 Address : 875 W. Warm Springs Road  
 Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
 Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HR-05-Surf  
 Sample ID: 204220003

Project: BRCM00100  
 Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Rad Gamma Spec Analysis</b>												
<i>Gammasec, Gamma, Solid (Standard List)</i>												
Polonium-210	U	-1.48	+/-4.16	6.70		pCi/g						
Polonium-212		1.56	+/-0.148	0.0744		pCi/g						
Polonium-214		1.02	+/-0.161	0.0963		pCi/g						
Polonium-215	U	-0.344	+/-0.655	0.947		pCi/g						
Polonium-216		1.56	+/-0.148	0.0744		pCi/g						
Polonium-218		1.02	+/-0.161	0.0963		pCi/g						
Potassium-40		21.2	+/-2.18	0.497		pCi/g						
Promethium-144	U	-0.00694	+/-0.0323	0.0488		pCi/g						
Promethium-146	U	0.0243	+/-0.038	0.0663		pCi/g						
Protactinium-231	U	0.139	+/-1.41	2.18		pCi/g						
Protactinium-234	U	-0.232	+/-0.294	0.441		pCi/g						
Radium-223	U	-0.344	+/-0.655	0.947		pCi/g						
Radium-224	UI	0.00	+/-1.16	0.847		pCi/g						
Radium-226		0.785	+/-0.147	0.109		pCi/g						
Radium-228		1.65	+/-0.340	0.197		pCi/g						
Ruthenium-106	U	0.260	+/-0.284	0.519		pCi/g						
Silver-110m	U	-0.0139	+/-0.0307	0.0506		pCi/g						
Sodium-22	U	0.00535	+/-0.0446	0.0654		pCi/g						
Thallium-207	U	-0.344	+/-0.655	0.947		pCi/g						
Thallium-208		0.470	+/-0.0872	0.0531		pCi/g						
Thorium-227	U	0.0544	+/-0.328	0.538		pCi/g						
Thorium-231	UI	0.00	+/-0.309	0.305		pCi/g						
Thorium-234	UI	0.00	+/-1.82	1.78		pCi/g						
Tin-113	U	-0.0241	+/-0.038	0.0616		pCi/g						
Uranium-235	U	0.0237	+/-0.173	0.295		pCi/g						
Uranium-238	UI	0.00	+/-1.82	1.78		pCi/g						
Yttrium-88	U	-0.0271	+/-0.0334	0.0477		pCi/g						
Zinc-65	U	0.0165	+/-0.0924	0.138		pCi/g						
Zirconium-95	U	-0.0178	+/-0.060	0.0987		pCi/g						
<b>Rad Gas Flow Proportional Counting</b>												
<i>GFPC, Gross A/B, solid</i>												
Alpha		21.0	+/-5.00	3.85	4.00	pCi/g			MXP1 03/11/08	0856	734299	2
Beta		31.6	+/-3.73	3.40	10.0	pCi/g						

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BSW1	03/07/08	1152	733663

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
--------	-------------	------------------



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : BRC  
Address : 875 W. Warm Springs Road  
Henderson, Nevada 89015

Report Date: March 11, 2008

Contact: Mr. Ron Sahu  
Project: **Radiochemistry Analysis**

Client Sample ID: TSB-HR-05-Surf  
Sample ID: 204220003

Project: BRCM00100  
Client ID: BRCM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
-----------	-----------	--------	-------------	----	----	-------	----	-------------	------	-------	--------

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

# QUALITY CONTROL DATA

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: March 11, 2008  
Page 1 of 11

**BRC**  
875 W. Warm Springs Road  
Henderson, Nevada

Contact: Mr. Ron Sahu

Workorder: 204220

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
QC1201532440	204220001	DUP									
Actinium-227	U	-0.0616	U	0.0544	pCi/g	3200		N/A	MJH1	03/10/08	12:23
		+/-0.364		+/-0.375							
Actinium-228		1.85		1.98	pCi/g	6		(0% - 20%)			
		+/-0.356		+/-0.395							
Americium-241	U	0.0467	U	0.076	pCi/g	48		N/A			
		+/-0.0544		+/-0.0587							
Antimony-124	U	0.0713	U	0.0285	pCi/g	86		N/A			
		+/-0.0744		+/-0.0798							
Antimony-125	U	0.0411	U	0.00574	pCi/g	151		N/A			
		+/-0.0931		+/-0.0939							
Barium-133	U	0.0127	U	0.0502	pCi/g	119		N/A			
		+/-0.0512		+/-0.0447							
Barium-140	U	0.113	U	0.0315	pCi/g	113		N/A			
		+/-0.151		+/-0.159							
Beryllium-7	U	-0.0507	U	-0.188	pCi/g	115		N/A			
		+/-0.329		+/-0.297							
Bismuth-210	U	0.103	U	0.338	pCi/g	106		N/A			
		+/-0.624		+/-0.486							
Bismuth-211	UI	0.00	UI	0.00	pCi/g	15		N/A			
		+/-0.455		+/-0.498							
Bismuth-212		1.48	UI	0.00	pCi/g	56		(0% - 100%)			
		+/-0.437		+/-0.496							
Bismuth-214		0.930		0.932	pCi/g	0		(0% - 20%)			
		+/-0.169		+/-0.154							
Cerium-139	U	-0.0113	U	-0.00271	pCi/g	123		N/A			
		+/-0.0247		+/-0.0254							
Cerium-141	U	0.0119	U	0.00982	pCi/g	19		N/A			
		+/-0.0565		+/-0.0454							
Cerium-144	U	-0.0102	U	0.187	pCi/g	223		N/A			
		+/-0.179		+/-0.204							
Cesium-134	UI	0.00	U	0.0553	pCi/g	75		N/A			
		+/-0.079		+/-0.0838							
Cesium-136	U	-0.0362	U	0.0103	pCi/g	359		N/A			
		+/-0.0674		+/-0.0886							
Cesium-137	U	0.0478	U	0.0246	pCi/g	64		N/A			
		+/-0.0444		+/-0.0462							
Chromium-51	U	-0.153	U	-0.0512	pCi/g	100		N/A			
		+/-0.266		+/-0.297							
Cobalt-56	U	0.0166	U	0.0152	pCi/g	9		N/A			
		+/-0.0366		+/-0.040							

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 2 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
Cobalt-57	U	0.00395 +/-0.0196	U	0.00649 +/-0.0226	pCi/g	49		N/A			
Cobalt-58	U	-0.0224 +/-0.0386	U	-0.000776 +/-0.0408	pCi/g	187		N/A	MJH1	03/10/08	12:23
Cobalt-60	U	0.0168 +/-0.0427	U	0.00384 +/-0.0458	pCi/g	125		N/A			
Europium-152	U	0.0495 +/-0.0881	U	-0.106 +/-0.148	pCi/g	552		N/A			
Europium-154	U	0.0743 +/-0.153	U	-0.161 +/-0.173	pCi/g	544		N/A			
Europium-155	U	0.0528 +/-0.109	U	0.0849 +/-0.0865	pCi/g	47		N/A			
Iridium-192	U	0.0191 +/-0.0298	U	0.0214 +/-0.0297	pCi/g	12		N/A			
Iron-59	U	-0.0142 +/-0.0867	U	-0.0354 +/-0.0878	pCi/g	86		N/A			
Lead-210	U	0.103 +/-0.624	U	0.338 +/-0.486	pCi/g	106		N/A			
Lead-211	U	-0.0929 +/-1.10	U	-0.196 +/-1.14	pCi/g	71		N/A			
Lead-212		1.52 +/-0.167		1.67 +/-0.167	pCi/g	9		(0% - 20%)			
Lead-214		1.17 +/-0.169		1.00 +/-0.181	pCi/g	15		(0% - 20%)			
Manganese-54	U	-0.0107 +/-0.0399	U	0.0378 +/-0.0414	pCi/g	357		N/A			
Mercury-203	U	0.0262 +/-0.0359	U	0.0285 +/-0.0574	pCi/g	8		N/A			
Neodymium-147	U	-0.113 +/-0.337	U	0.429 +/-0.334	pCi/g	343		N/A			
Neptunium-239	U	-0.245 +/-0.152	U	0.0147 +/-0.170	pCi/g	226		N/A			
Niobium-94	U	0.00806 +/-0.0381	U	-0.0117 +/-0.0468	pCi/g	1100		N/A			
Niobium-95	U	0.0114 +/-0.0427	U	-0.00737 +/-0.0436	pCi/g	925		N/A			
Polonium-210	U	0.103 +/-0.624	U	0.338 +/-0.486	pCi/g	106		N/A			
Polonium-212		1.52 +/-0.167		1.67 +/-0.167	pCi/g	9		(0% - 20%)			
Polonium-214		1.17 +/-0.169		1.00 +/-0.181	pCi/g	15		(0% - 20%)			
Polonium-215	U	0.0276 +/-0.692	U	0.318 +/-0.929	pCi/g	168		N/A			
Polonium-216		1.52		1.67	pCi/g	9		(0% - 20%)			

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 3 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
Polonium-218		+/-0.167		+/-0.167							
		1.17		1.00	pCi/g	15		(0% - 20%)	MJH1	03/10/08	12:23
		+/-0.169		+/-0.181							
Potassium-40		23.8		23.1	pCi/g	3		(0% - 20%)			
		+/-2.11		+/-2.26							
Promethium-144	U	0.0232	U	-0.00905	pCi/g	457		N/A			
		+/-0.036		+/-0.0387							
Promethium-146	U	0.0102	U	0.0385	pCi/g	116		N/A			
		+/-0.0467		+/-0.0475							
Protactinium-231	U	-0.919	U	-0.114	pCi/g	156		N/A			
		+/-1.36		+/-1.76							
Protactinium-234	U	-0.211	U	0.00789	pCi/g	216		N/A			
		+/-0.337		+/-0.356							
Radium-223	U	0.0276	U	0.318	pCi/g	168		N/A			
		+/-0.692		+/-0.929							
Radium-224	UI	0.00	UI	0.00	pCi/g	47		N/A			
		+/-0.823		+/-1.26							
Radium-226		0.930		0.932	pCi/g	0		(0% - 20%)			
		+/-0.169		+/-0.154							
Radium-228		1.85		1.98	pCi/g	6		(0% - 20%)			
		+/-0.356		+/-0.395							
Ruthenium-106	U	0.134	U	0.191	pCi/g	35		N/A			
		+/-0.321		+/-0.368							
Silver-110m	U	0.0204	U	-0.00716	pCi/g	417		N/A			
		+/-0.039		+/-0.039							
Sodium-22	U	0.0364	U	-0.0563	pCi/g	932		N/A			
		+/-0.0532		+/-0.0614							
Thallium-207	U	0.0276	U	0.318	pCi/g	168		N/A			
		+/-0.692		+/-0.929							
Thallium-208		0.531		0.524	pCi/g	1		(0% - 20%)			
		+/-0.0953		+/-0.094							
Thorium-227	U	-0.0616	U	0.0544	pCi/g	3200		N/A			
		+/-0.365		+/-0.375							
Thorium-231	UI	0.00	UI	0.00	pCi/g	37		N/A			
		+/-0.284		+/-0.272							
Thorium-234		1.56	UI	0.00	pCi/g	12		(0% - 100%)			
		+/-0.936		+/-0.921							
Tin-113	U	0.0395	U	0.00108	pCi/g	189		N/A			
		+/-0.0416		+/-0.0438							
Uranium-235	U	0.0505	U	0.185	pCi/g	114		N/A			
		+/-0.240		+/-0.190							
Uranium-238		1.56	UI	0.00	pCi/g	12		(0% - 100%)			
		+/-0.936		+/-0.921							
Yttrium-88	U	0.0131	U	0.00892	pCi/g	38		N/A			

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 4 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
Zinc-65											
		+/-0.0279		+/-0.0412							
	U	0.0102	U	0.0652	pCi/g	146		N/A	MJH1	03/10/08	12:23
		+/-0.173		+/-0.108							
Zirconium-95											
	U	0.051	U	0.0122	pCi/g	123		N/A			
		+/-0.0708		+/-0.0804							
QC1201532441	LCS										
Actinium-227											
			U	0.161	pCi/g					03/10/08	12:41
				+/-0.803							
Actinium-228											
				1.34	pCi/g						
				+/-0.779							
Americium-241	16.0							95	(75%-125%)		
				15.2	pCi/g						
				+/-1.30							
Antimony-124			U								
				0.102	pCi/g						
				+/-0.132							
Antimony-125			U								
				0.0411	pCi/g						
				+/-0.242							
Barium-133			U								
				-0.028	pCi/g						
				+/-0.117							
Barium-140			U								
				0.115	pCi/g						
				+/-0.349							
Beryllium-7			U								
				0.0846	pCi/g						
				+/-0.763							
Bismuth-210											
				2.91	pCi/g						
				+/-1.51							
Bismuth-211											
				1.73	pCi/g						
				+/-0.845							
Bismuth-212			U								
				1.26	pCi/g						
				+/-0.751							
Bismuth-214											
				0.748	pCi/g						
				+/-0.328							
Cerium-139											
				0.616	pCi/g						
				+/-0.108							
Cerium-141			U								
				0.0306	pCi/g						
				+/-0.0865							
Cerium-144			U								
				0.244	pCi/g						
				+/-0.414							
Cesium-134			U								
				-0.0246	pCi/g						
				+/-0.110							
Cesium-136			U								
				0.183	pCi/g						
				+/-0.179							
Cesium-137	6.07							105	(75%-125%)		
				6.38	pCi/g						
				+/-0.602							
Chromium-51			U								
				0.324	pCi/g						
				+/-0.631							

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 5 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
Cobalt-56			U	0.039 +/-0.108	pCi/g						
Cobalt-57				1.47 +/-0.179	pCi/g				MJH1	03/10/08	12:41
Cobalt-58			U	-0.0651 +/-0.0999	pCi/g						
Cobalt-60	8.24			8.74 +/-0.836	pCi/g		106	(75%-125%)			
Europium-152			U	-0.125 +/-0.284	pCi/g						
Europium-154			U	-0.211 +/-0.194	pCi/g						
Europium-155			U	0.198 +/-0.188	pCi/g						
Iridium-192			U	-0.046 +/-0.0712	pCi/g						
Iron-59			U	0.126 +/-0.221	pCi/g						
Lead-210				2.91 +/-1.51	pCi/g						
Lead-211			U	1.63 +/-2.46	pCi/g						
Lead-212				1.33 +/-0.206	pCi/g						
Lead-214				0.603 +/-0.296	pCi/g						
Manganese-54			U	0.0472 +/-0.109	pCi/g						
Mercury-203			U	0.047 +/-0.0696	pCi/g						
Neodymium-147			U	0.135 +/-0.649	pCi/g						
Neptunium-239			U	-0.0492 +/-0.414	pCi/g						
Niobium-94			U	0.028 +/-0.0986	pCi/g						
Niobium-95			U	0.0446 +/-0.0973	pCi/g						
Polonium-210				2.91 +/-1.50	pCi/g						
Polonium-212				1.33 +/-0.206	pCi/g						
Polonium-214				0.603 +/-0.296	pCi/g						
Polonium-215			U	-0.731	pCi/g						

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 6 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	734275										
Polonium-216				+/-1.76 1.33	pCi/g				MJH1	03/10/08	12:41
Polonium-218				+/-0.206 0.603	pCi/g						
Potassium-40			U	+/-0.296 1.06	pCi/g						
Promethium-144			U	+/-0.676 -0.0294	pCi/g						
Promethium-146			U	+/-0.0833 -0.106	pCi/g						
Protactinium-231			U	+/-0.125 -1.02	pCi/g						
Protactinium-234			U	+/-3.23 -0.0893	pCi/g						
Radium-223			U	+/-1.31 -0.731	pCi/g						
Radium-224				+/-1.76 3.75	pCi/g						
Radium-226				+/-2.13 0.748	pCi/g			(75%-125%)			
Radium-228				+/-0.328 1.34	pCi/g						
Ruthenium-106			U	+/-0.779 0.406	pCi/g						
Silver-110m				+/-0.796 0.275	pCi/g						
Sodium-22			U	+/-0.109 -0.0749	pCi/g						
Thallium-207			U	+/-0.0687 -0.731	pCi/g						
Thallium-208				+/-1.76 0.352	pCi/g						
Thorium-227			U	+/-0.139 0.161	pCi/g						
Thorium-231			U	+/-0.803 0.700	pCi/g						
Thorium-234			U	+/-0.383 0.124	pCi/g						
Tin-113				+/-1.24 0.583	pCi/g						
Uranium-235			U	+/-0.188 0.318	pCi/g						
Uranium-238			U	+/-0.376 0.124	pCi/g						



# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 7 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
Yttrium-88				+/-1.24 0.772	pCi/g				MJH1	03/10/08	12:41
Zinc-65			U	+/-0.161 -0.00847	pCi/g						
Zirconium-95			U	+/-0.258 0.157	pCi/g						
QC1201532439	MB			+/-0.176							
Actinium-227			U	0.0311	pCi/g					03/10/08	12:23
Actinium-228			U	+/-0.251 -0.0409	pCi/g						
Americium-241			U	+/-0.118 -0.000377	pCi/g						
Antimony-124			U	+/-0.0301 -0.0117	pCi/g						
Antimony-125			U	+/-0.0562 0.0229	pCi/g						
Barium-133			U	+/-0.0604 -0.0241	pCi/g						
Barium-140			U	+/-0.0359 0.0733	pCi/g						
Beryllium-7			U	+/-0.103 0.0057	pCi/g						
Bismuth-210			U	+/-0.184 0.0396	pCi/g						
Bismuth-211			U	+/-0.401 0.0167	pCi/g						
Bismuth-212			U	+/-0.195 0.119	pCi/g						
Bismuth-214			U	+/-0.175 0.00441	pCi/g						
Cerium-139			U	+/-0.057 0.00233	pCi/g						
Cerium-141			U	+/-0.0151 0.0225	pCi/g						
Cerium-144			U	+/-0.0411 0.0439	pCi/g						
Cesium-134			U	+/-0.0976 0.0222	pCi/g						
Cesium-136			U	+/-0.0306 -0.0154	pCi/g						
Cesium-137			U	+/-0.0389 -0.0256	pCi/g						
				+/-0.0277							

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 8 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
Chromium-51			U	-0.12 +/-0.173	pCi/g						
Cobalt-56			U	0.00282 +/-0.0298	pCi/g				MJH1	03/10/08	12:23
Cobalt-57			U	-0.000857 +/-0.0116	pCi/g						
Cobalt-58			U	-0.00843 +/-0.0284	pCi/g						
Cobalt-60			U	0.00841 +/-0.0309	pCi/g						
Europium-152			U	-0.0616 +/-0.0588	pCi/g						
Europium-154			U	0.078 +/-0.0794	pCi/g						
Europium-155			U	0.0166 +/-0.0447	pCi/g						
Iridium-192			U	0.0132 +/-0.0194	pCi/g						
Iron-59			U	-0.0169 +/-0.0641	pCi/g						
Lead-210			U	0.0396 +/-0.401	pCi/g						
Lead-211			U	-0.0274 +/-0.604	pCi/g						
Lead-212			U	0.000777 +/-0.0624	pCi/g						
Lead-214			U	0.00582 +/-0.0677	pCi/g						
Manganese-54			U	-0.00741 +/-0.0281	pCi/g						
Mercury-203			U	0.0044 +/-0.0179	pCi/g						
Neodymium-147			UI	0.00 +/-0.253	pCi/g						
Neptunium-239			U	0.013 +/-0.0872	pCi/g						
Niobium-94			U	-0.0203 +/-0.0242	pCi/g						
Niobium-95			U	0.0136 +/-0.031	pCi/g						
Polonium-210			U	0.0396 +/-0.401	pCi/g						
Polonium-212			U	0.000777 +/-0.0624	pCi/g						
Polonium-214			U	0.00582	pCi/g						

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 9 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	734275										
				+/-0.0677							
Polonium-215			U	0.0482	pCi/g				MJH1	03/10/08	12:23
				+/-0.413							
Polonium-216			U	0.000777	pCi/g						
				+/-0.0624							
Polonium-218			U	0.00582	pCi/g						
				+/-0.0677							
Potassium-40			U	-0.101	pCi/g						
				+/-0.322							
Promethium-144			U	0.00764	pCi/g						
				+/-0.027							
Promethium-146			U	-0.00995	pCi/g						
				+/-0.0314							
Protactinium-231			U	-0.05	pCi/g						
				+/-0.996							
Protactinium-234			U	0.0358	pCi/g						
				+/-0.197							
Radium-223			U	0.0482	pCi/g						
				+/-0.413							
Radium-224			U	0.00877	pCi/g						
				+/-0.704							
Radium-226			U	0.00441	pCi/g						
				+/-0.057							
Radium-228			U	-0.0409	pCi/g						
				+/-0.118							
Ruthenium-106			U	-0.0473	pCi/g						
				+/-0.223							
Silver-110m			U	0.0129	pCi/g						
				+/-0.0257							
Sodium-22			U	0.0275	pCi/g						
				+/-0.0281							
Thallium-207			U	0.0482	pCi/g						
				+/-0.413							
Thallium-208			U	0.0159	pCi/g						
				+/-0.0364							
Thorium-227			U	0.0311	pCi/g						
				+/-0.251							
Thorium-231			U	0.0517	pCi/g						
				+/-0.114							
Thorium-234			U	0.182	pCi/g						
				+/-0.569							
Tin-113			U	0.0105	pCi/g						
				+/-0.0266							
Uranium-235			U	0.0982	pCi/g						

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 10 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	734275										
Uranium-238			U	0.182	pCi/g				MJH1	03/10/08	12:23
				+/-0.180							
				+/-0.569							
Yttrium-88			U	0.000961	pCi/g						
				+/-0.0199							
Zinc-65			U	-0.0342	pCi/g						
				+/-0.059							
Zirconium-95			U	0.0102	pCi/g						
				+/-0.0416							
<b>Rad Gas Flow</b>											
Batch	734299										
QC1201532515	204220001	DUP									
Alpha		16.6		16.3	pCi/g	2		(0% - 100%)	MXP1	03/11/08	08:56
		+/-4.55		+/-4.09							
Beta		33.0		34.3	pCi/g	4		(0% - 20%)			
		+/-3.87		+/-3.47							
QC1201532518	LCS										
Alpha	106			107	pCi/g		101	(75%-125%)		03/11/08	08:56
				+/-15.1							
Beta	301			314	pCi/g		104	(75%-125%)			
				+/-18.9							
QC1201532514	MB										
Alpha			U	1.24	pCi/g					03/11/08	08:56
				+/-2.02							
Beta				4.34	pCi/g						
				+/-2.31							
QC1201532516	204220001	MS									
Alpha	116	16.6		128	pCi/g		96	(75%-125%)		03/11/08	08:56
		+/-4.55		+/-24.8							
Beta	328	33.0		388	pCi/g		108	(75%-125%)			
		+/-3.87		+/-24.2							
QC1201532517	204220001	MSD									
Alpha	114	16.6		123	pCi/g	4	94	(0%-20%)		03/11/08	08:56
		+/-4.55		+/-23.8							
Beta	322	33.0		391	pCi/g	1	111	(0%-20%)			
		+/-3.87		+/-23.3							

**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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 204220

Page 11 of 11

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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											
H											
Analytical holding time was exceeded											
J											
Value is estimated											
M											
M if above MDC and less than LLD											
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.

^ 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.

\* Indicates that a Quality Control parameter was not within specifications.

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, Rev 6

Batch# 734275 Product: 8S BPCM Date: 3/10/08

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
If activity less 10* MDA, error is 150% or less of sample activity. If greater 10* MDA, error is 40% or less. If below the MDA, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument bkg check is within limits.	✓		
Method RDL has been met.	✓		
If duplicate activities are less 5* MDA, then rpd is 100% or less. If greater 5* MDA, then rpd 20% or less. If below the MDA, 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.			NA
Method blank is less than the RDL. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Special requirements page checked	✓		
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 lineouts initialed and dated.	✓		
No transcription errors are apparent.	✓		
QC data entered into QC database.	✓		
Batch entered into Case Narrative.	✓		
Batch non-conformances completed If applicable.			NA
Aliquot Correction completed if required.			NA

GEL Laboratories, LLC

1/2/2007

Primary Review Performed By: S. Euland 3/10/08

Secondary Review Performed By: Heather A. Coe 3/10/08

FAX DUE

3/11/08

# Gamma Spec Que Sheet

03/10/2008

Batch #: 734275      Analyst: MJH1      First Client Due Date: 03/14/2008      Internal Due Date: 03/08/2008

Gamma Spike Isotope: Mixed Gamma      Spike Code: \_\_\_\_\_      Expiration Date: \_\_\_\_\_      Vol: \_\_\_\_\_      Nominal Concentration: \_\_\_\_\_  
 Gamma LCS Isotope: Mixed Gamma      LCS Code: 1032-A      Expiration Date: 12/3/08      Vol: 1.0 mL      Nominal Concentration: Am 241 - 15.95 Cs 137 - 6.067  
 Initials: MJL      Prep Date: 3/8/08      Witness: \_\_\_\_\_      660-81237

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry		Sealing Date/Time (if Applicable)
								Aliquot (1/g) F)	Detector	
204220001-1	TSB-HJ-10-Surf	SAMPLE		.2 pCi/g	BRCM001	SOIL	06-MAR-08 14:28:00	150.00	13	
204220002-1	TSB-HJ-01 Surf	SAMPLE		.2 pCi/g	BRCM001	SOIL	06-MAR-08 14:42:00	153.05	21	
204220003-1	TSB-HJ-05-Surf	SAMPLE		.2 pCi/g	BRCM001	SOIL	06-MAR-08 14:55:00	146.66	23	
1201532439-1	MB for batch 734275	MB		.2 pCi/g	QC ACCOUNT	SOIL	3/8/08	155.00	13	3/10/08
1201532440-1	TSB-HJ-10-Surf(204220001DUP)	DUP		.2 pCi/g	QC ACCOUNT	SOIL	06-MAR-08 14:28:00	150.07	21	3/10/08
1201532441-1	LCS for batch 734275	LCS		.2 pCi/g	QC ACCOUNT	SOIL	3/8/08	155.44	5	

CAN  
SOLID  
GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: S. Euland      3/10/08  
 Page 1 of 1  
 Attention: A. A.      3/10/08



## Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
734275	204220001	SAMPLE	10-MAR-08				
734275	204220002	SAMPLE	10-MAR-08				
734275	204220003	SAMPLE	10-MAR-08				
734275	1201532439	MB	10-MAR-08				
734275	1201532440	DUP	10-MAR-08				
734275	1201532441	LCS	10-MAR-08				

# Gamma Review Report based on Result > MDA for Batch:734275

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue		
204220001	06-MAR-08 14:28	10-MAR-08 10:20	3.83	SAMPLE	LOAD	1	BRCM	BRCM00100 GEL	Y	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.851	0.3558	pCi/g	0.2245	Y	911.8	2	1.461	IDENTIFIED	8.583	
Americium-243	INT	0.3172	0.04899	pCi/g	0.04937	N	74.91	1	0.9386	IDENTIFIED	6.821	
Annihilation Rad.	HE	0.1175	0.07185	pCi/g	0.05014	N	511.2	1	1.643	IDENTIFIED	31.04	
Arsenic-73	HE	0.3604	0.2893	pCi/g	0.2601	N	53.63	1	0.8523	IDENTIFIED	40.79	
Bismuth-211	INT	3.357	0.4551	pCi/g	0.2737	Y	352	4	1.242	IDENTIFIED	6.247	✓ UI
Bismuth-212	✓	1.481	0.4374	pCi/g	0.4981	Y	727.9	1	1.282	IDENTIFIED	14.34	
Bismuth-214	✓	0.9297	0.1685	pCi/g	0.1278	Y	609.7	3	1.36	IDENTIFIED	8.05	
Bromine-77	HE	0.5666	0.7198	pCi/g	0.4621	N	519.3	3	4.197	IDENTIFIED	64.73	
Cadmium-109	INT	2.547	0.6168	pCi/g	0.7617	N	87.26	3	0.9056	IDENTIFIED	11.7	
Cerium-143	HE	0.9758	0.4941	pCi/g	0.7781	N	143.9	1	0.9079	FAIL_ABUND	242.4	
Cesium-134	✓	0.1216	0.07904	pCi/g	0.08804	Y	795.8	2	2.02	FAIL_ABUND	32.96	✓ UI Data rejected due to low abundance.
Cesium-135	HE	0.2549	0.1921	pCi/g	0.2466	N	795.8	2	2.02	NOT_IDENTI	32.96	
Gross Gamma	HE	9.147	2.901	pCi/g	8.492	N		0				
Krypton-85	HE	15.65	10.8	pCi/g	13.51	N	519.3	3	4.197	NOT_IDENTI	64.73	
Lead-212	✓	1.52	0.1669	pCi/g	0.0939	Y	238.7	5	1.092	IDENTIFIED	3.89	
Lead-214	✓	1.168	0.1692	pCi/g	0.09542	Y	352	4	1.242	IDENTIFIED	6.247	
Lutetium-177	HE	1.207	0.5199	pCi/g	0.5659	N	210	1	0.9636	FAIL_ABUND	21.66	
Neptunium-237	INT	0.7476	0.2359	pCi/g	0.2461	N	87.26	3	0.9056	IDENTIFIED	11.7	
Polonium-212	✓	1.52	0.1669	pCi/g	0.0939	Y	238.7	5	1.092	IDENTIFIED	3.89	
Polonium-214	✓	1.168	0.1692	pCi/g	0.09542	Y	352	4	1.242	IDENTIFIED	6.247	
Polonium-216	✓	1.52	0.1669	pCi/g	0.0939	Y	238.7	5	1.092	IDENTIFIED	3.89	
Polonium-218	✓	1.168	0.1692	pCi/g	0.09542	Y	352	4	1.242	IDENTIFIED	6.247	
Potassium-40	✓	23.82	2.114	pCi/g	0.5323	Y	1462	1	2.133	IDENTIFIED	3.42	
Radium-224	INT	2.363	0.823	pCi/g	1.242	Y	241.8	1	1.758	IDENTIFIED	17.46	✓ UI
Radium-226	✓	0.9297	0.1685	pCi/g	0.1278	Y	609.7	3	1.36	IDENTIFIED	8.05	
Radium-228	✓	1.851	0.3558	pCi/g	0.2245	Y	911.8	2	1.461	IDENTIFIED	8.583	
Strontium-85	HE	0.07128	0.0492	pCi/g	0.06151	N	519.3	3	4.197	NOT_IDENTI	64.73	
Thallium-208	✓	0.5311	0.09525	pCi/g	0.06396	Y	583.5	1	1.422	IDENTIFIED	8.249	
Thorium-228	✓	1.52	0.1669	pCi/g	0.09389	N	238.7	5	1.092	IDENTIFIED	3.89	
Thorium-230	✓	0.9297	0.1685	pCi/g	0.1278	N	609.7	3	1.36	IDENTIFIED	8.05	
Thorium-231	✓	0.5924	0.2839	pCi/g	0.3358	Y	270.3	1	1.427	FAIL_ABUND	24.19	✓ UI Data rejected due to low abundance.
Thorium-232	✓	1.514	0.1663	pCi/g	0.09353	N	238.7	5	1.092	IDENTIFIED	3.89	
Thorium-234	✓	1.561	0.9364	pCi/g	0.7949	Y	63.33	2	0.9676	IDENTIFIED	29.3	
Tin-126	INT	0.2546	0.06166	pCi/g	0.07603	N	87.26	3	0.9056	IDENTIFIED	11.7	
Titanium-44	INT	0.3433	0.04131	pCi/g	0.0321	N	77.15	1	1.003	IDENTIFIED	4.704	
Total Uranium	HE	4.6678	2.788	ug/g	2.3689	N		0				
Uranium-234	✓	1.034	0.2408	pCi/g	0.1964	N	295.4	1	1.017	IDENTIFIED	11.15	
Uranium-238	✓	1.561	0.9364	pCi/g	0.7949	Y	63.33	2	0.9676	IDENTIFIED	29.3	

\*\*\* = 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		
204220002	06-MAR-08 14:42	10-MAR-08 10:21	3.82	SAMPLE	LOAD	1	BRCM	BRCM00100 GEL	Y	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.583	0.3868	pCi/g	0.2371	Y	911	2	1.59	IDENTIFIED	11.45	
Americium-243	INT	0.3012	0.05068	pCi/g	0.0479	N	74.84	1	1.489	IDENTIFIED	7.855	
Annihilation Rad.	HE	0.1229	0.071	pCi/g	0.04711	N	510.8	1	2.51	IDENTIFIED	29.3	
Antimony-122	HE	0.2891	0.1686	pCi/g	0.276	N	87.27	4	1.362	NOT_IDENTI	10.88	
Barium-137m	HE	0.08286	0.08006	pCi/g	0.0716	N	661.4	2	1.559	IDENTIFIED	49.13	
Bismuth-211	INT	2.864	0.4695	pCi/g	0.361	Y	352	4	1.461	IDENTIFIED	7.828	✓ UI
Bismuth-212	✓	1.528	0.5394	pCi/g	0.822	Y	727	1	1.434	FAIL_ABUND	17.37	✓ UI Data rejected due to low abundance.

Bismuth-214	✓	1.158	0.1788	pCi/g	0.1076	Y	609.1	3	1.997	IDENTIFIED	6.402	<input type="checkbox"/>
Cadmium-109	INT	2.516	0.5663	pCi/g	0.7847	N	87.27	4	1.362	IDENTIFIED	10.88	<input type="checkbox"/>
Cerium-143	LA	2.719	0.7704	pCi/g	1.031	N	1595	1	4.971	FAIL_ABUND	115.5	<input type="checkbox"/>
Cesium-134	LA	0.1054	0.05692	pCi/g	0.09227	Y	794.6	1	3.287	FAIL_ABUND	27.29	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-135	HE	0.4793	0.2589	pCi/g	0.2163	N	269.8	2	1.773	IDENTIFIED	27.31	<input type="checkbox"/>
Cesium-137	MNC	0.08759	0.08463	pCi/g	0.07568	Y	661.4	2	1.559	IDENTIFIED	49.13	<input checked="" type="checkbox"/> UI
Iodine-135	HE	2141	2815	pCi/g	0	N	545.5	1	1.027	FAIL_DECAY	83.14	<input type="checkbox"/>
Krypton-85	HE	15.75	8.68	pCi/g	14.48	N	295.3	6	1.522	NOT_IDENTI	12.78	<input type="checkbox"/>
Lead-212	✓	1.687	0.1654	pCi/g	0.08392	Y	238.6	5	1.403	IDENTIFIED	3.257	<input type="checkbox"/>
Lead-214	✓	0.9964	0.1711	pCi/g	0.1251	Y	352	4	1.461	IDENTIFIED	7.828	<input type="checkbox"/>
Lutetium-177	HE	0.9519	0.4921	pCi/g	0.6062	N	209.1	1	1.623	FAIL_ABUND	26.17	<input type="checkbox"/>
Neptunium-237	INT	0.7387	0.2235	pCi/g	0.2491	N	87.27	4	1.362	IDENTIFIED	10.88	<input type="checkbox"/>
Neptunium-239	LA	0.3246	0.221	pCi/g	0.2806	Y	115.4	1	3.075	FAIL_ABUND	34.46	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Niobium-95m	LA	1.243	0.2882	pCi/g	0.4832	N	295.3	6	1.522	NOT_IDENTI	12.78	<input type="checkbox"/>
Polonium-212	✓	1.687	0.1654	pCi/g	0.08392	Y	238.6	5	1.403	IDENTIFIED	3.257	<input type="checkbox"/>
Polonium-214	✓	0.9964	0.1711	pCi/g	0.1251	Y	352	4	1.461	IDENTIFIED	7.828	<input type="checkbox"/>
Polonium-216	✓	1.687	0.1654	pCi/g	0.08392	Y	238.6	5	1.403	IDENTIFIED	3.257	<input type="checkbox"/>
Polonium-218	✓	0.9964	0.1711	pCi/g	0.1251	Y	352	4	1.461	IDENTIFIED	7.828	<input type="checkbox"/>
Potassium-40	✓	21.33	2.14	pCi/g	0.618	Y	1461	1	1.838	IDENTIFIED	4.183	<input type="checkbox"/>
Radium-224	INT	3.653	1.503	pCi/g	0.9568	Y	241.6	1	2.311	IDENTIFIED	20.77	<input checked="" type="checkbox"/> UI
Radium-226	✓	1.158	0.1788	pCi/g	0.1076	Y	609.1	3	1.997	IDENTIFIED	6.402	<input type="checkbox"/>
Radium-228	✓	1.583	0.3868	pCi/g	0.2371	Y	911	2	1.59	IDENTIFIED	11.45	<input type="checkbox"/>
Strontium-85	HE	0.07171	0.03952	pCi/g	0.06594	N	295.3	6	1.522	NOT_IDENTI	12.78	<input type="checkbox"/>
Technetium-99m	HE	22.44	955	pCi/g	0	N	295.3	6	1.522	NOT_IDENTI	12.78	<input type="checkbox"/>
Thallium-208	✓	0.6132	0.09009	pCi/g	0.06086	Y	583.1	1	1.759	IDENTIFIED	6.335	<input type="checkbox"/>
Thorium-228	✓	1.687	0.1654	pCi/g	0.08391	N	238.6	5	1.403	IDENTIFIED	3.257	<input type="checkbox"/>
Thorium-230	✓	1.158	0.1788	pCi/g	0.1076	N	609.1	3	1.997	IDENTIFIED	6.402	<input type="checkbox"/>
Thorium-231	LA	0.5639	0.3043	pCi/g	0.3468	Y	269.8	2	1.773	FAIL_ABUND	27.31	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thorium-232	✓	1.681	0.1648	pCi/g	0.08359	N	238.6	5	1.403	IDENTIFIED	3.257	<input type="checkbox"/>
Thorium-234	✓	1.225	0.7183	pCi/g	0.8462	Y	63.34	3	1.458	IDENTIFIED	28.66	<input type="checkbox"/>
Tin-126	INT	0.2516	0.05661	pCi/g	0.07836	N	87.27	4	1.362	IDENTIFIED	10.88	<input type="checkbox"/>
Titanium-44	INT	0.3997	0.04775	pCi/g	0.03249	N	77.23	1	1.862	IDENTIFIED	4.994	<input type="checkbox"/>
Total Uranium	HE	3.6491	2.1389	ug/g	2.5216	N		0				<input type="checkbox"/>
Tungsten-181	HE	0.3449	0.1951	pCi/g	0.264	N	63.34	3	1.458	FAIL_ABUND	28.66	<input type="checkbox"/>
Uranium-234	✓	0.8508	0.2237	pCi/g	0.208	N	295.3	6	1.522	IDENTIFIED	12.78	<input type="checkbox"/>
Uranium-238	✓	1.225	0.7183	pCi/g	0.8462	Y	63.34	3	1.458	IDENTIFIED	28.66	<input type="checkbox"/>
Zirconium-97	HE	73.94	34.17	pCi/g	57.65	N	295.3	6	1.522	NOT_IDENTI	12.78	<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	
204220003	06-MAR-08 14:55	10-MAR-08 10:21	3.81	SAMPLE	LOAD	1	BRCM	BRCM00100 GEL	Y	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment	
Actinium-228	1.645	0.3396	pCi/g	0.1968	Y	911.1	2	1.845	IDENTIFIED	9.051	<input type="checkbox"/>
Americium-243	0.3117	0.06554	pCi/g	0.071	N	74.85	1	0.9789	IDENTIFIED	10.13	<input type="checkbox"/>
Annihilation Rad.	0.1495	0.07078	pCi/g	0.04384	N	511	1	1.958	IDENTIFIED	24	<input type="checkbox"/>
Bismuth-211	2.926	0.4365	pCi/g	0.2762	Y	351.9	4	1.055	IDENTIFIED	6.979	<input checked="" type="checkbox"/> UI
Bismuth-212	1.308	0.4168	pCi/g	0.4108	Y	727.3	1	2.118	IDENTIFIED	15.73	<input type="checkbox"/>
Bismuth-214	0.7845	0.1468	pCi/g	0.1092	Y	609.3	3	1.302	IDENTIFIED	8.721	<input type="checkbox"/>
Cadmium-109	1.962	0.8459	pCi/g	1.155	N	87.19	3	0.9423	IDENTIFIED	21.68	<input type="checkbox"/>
Cerium-143	3.505	0.9578	pCi/g	0.7747	N	295.1	2	1.17	FAIL_ABUND	9.673	<input type="checkbox"/>
Cesium-134	0.08893	0.04834	pCi/g	0.08004	Y	794.6	1	1.784	FAIL_ABUND	27.5	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cobalt-58	0.062	0.1412	pCi/g	0.05381	Y	811.6	1	13.01	IDENTIFIED	116.2	<input checked="" type="checkbox"/> UI Data rejected due to high peak-width.
Gross Gamma	8.57	2.21	pCi/g	5.631	N		0				<input type="checkbox"/>
Iodine-126	0.1905	0.1414	pCi/g	0.1576	N	666.7	1	3.696	FAIL_ABUND	37.77	<input type="checkbox"/>
Lead-212	1.556	0.1484	pCi/g	0.07439	Y	238.6	5	0.9953	IDENTIFIED	3.268	<input type="checkbox"/>
Lead-214	1.018	0.1605	pCi/g	0.0963	Y	351.9	4	1.055	IDENTIFIED	6.979	<input type="checkbox"/>

Lutetium-177	HE	1.013	0.4883	pCi/g	0.5486	N	209.4	1	1.052	FAIL_ABUND	24.44	<input type="checkbox"/>	
Mercury-203	INT	0.04364	0.05566	pCi/g	0.04312	Y	277.5	1	2.775	IDENTIFIED	65	<input checked="" type="checkbox"/>	UI Data rejected due to high counting unc
Neptunium-237	HE	0.5759	0.2743	pCi/g	0.308	N	87.19	3	0.9423	IDENTIFIED	21.68	<input type="checkbox"/>	
Polonium-212	✓	1.556	0.1484	pCi/g	0.07439	Y	238.6	5	0.9953	IDENTIFIED	3.268	<input type="checkbox"/>	
Polonium-214	✓	1.018	0.1605	pCi/g	0.0963	Y	351.9	4	1.055	IDENTIFIED	6.979	<input type="checkbox"/>	
Polonium-216	✓	1.556	0.1484	pCi/g	0.07439	Y	238.6	5	0.9953	IDENTIFIED	3.268	<input type="checkbox"/>	
Polonium-218	✓	1.018	0.1605	pCi/g	0.0963	Y	351.9	4	1.055	IDENTIFIED	6.979	<input type="checkbox"/>	
Potassium-40	✓	21.23	2.175	pCi/g	0.497	Y	1461	1	1.985	IDENTIFIED	3.678	<input type="checkbox"/>	
Protactinium-234m	HE	12.49	15.56	pCi/g	9.303	N	1000	1	12.03	FAIL_ABUND	63.36	<input type="checkbox"/>	
Radium-224	INT	3.385	1.161	pCi/g	0.8474	Y	241.6	1	1.796	IDENTIFIED	17.26	<input checked="" type="checkbox"/>	UI
Radium-226	✓	0.7845	0.1468	pCi/g	0.1092	Y	609.3	3	1.302	IDENTIFIED	8.721	<input type="checkbox"/>	
Radium-228	✓	1.645	0.3396	pCi/g	0.1968	Y	911.1	2	1.845	IDENTIFIED	9.051	<input type="checkbox"/>	
Technetium-99m	HE	465.9	807	pCi/g	0	N	723.5	2	2.158	NOT_IDENTI	128.7	<input type="checkbox"/>	
Thallium-208	✓	0.4704	0.08717	pCi/g	0.0531	Y	583.2	1	1.318	IDENTIFIED	8.86	<input type="checkbox"/>	
Thorium-228	✓	1.556	0.1484	pCi/g	0.07439	N	238.6	5	0.9953	IDENTIFIED	3.268	<input type="checkbox"/>	
Thorium-230	✓	0.7845	0.1468	pCi/g	0.1092	N	609.3	3	1.302	IDENTIFIED	8.721	<input type="checkbox"/>	
Thorium-231	LA	0.651	0.3087	pCi/g	0.3049	Y	271.1	1	1.174	FAIL_ABUND	23.91	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thorium-232	✓	1.55	0.1478	pCi/g	0.0741	N	238.6	5	0.9953	IDENTIFIED	3.268	<input type="checkbox"/>	
Thorium-234	NUP	2.108	1.818	pCi/g	1.783	Y	62.93	2	1.337	IDENTIFIED	43.12	<input checked="" type="checkbox"/>	UI
Tin-126	HE	0.1961	0.08456	pCi/g	0.1161	N	87.19	3	0.9423	IDENTIFIED	21.68	<input type="checkbox"/>	
Titanium-44	INT	0.3153	0.04477	pCi/g	0.05739	N	77.08	1	0.8727	FAIL_ABUND	6.315	<input type="checkbox"/>	
Total Uranium	HE	6.2821	5.4082	ug/g	5.3075	N		0				<input type="checkbox"/>	
Uranium-234	✓	1.1	0.2282	pCi/g	0.1911	N	295.1	2	1.17	IDENTIFIED	9.673	<input type="checkbox"/>	
Uranium-238	UUD	2.108	1.818	pCi/g	1.783	Y	62.93	2	1.337	IDENTIFIED	43.12	<input checked="" type="checkbox"/>	UI
Zirconium-97	HE	58.94	27.39	pCi/g	46.92	N	723.5	2	2.158	NOT_IDENTI	128.7	<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
1201532439		10-MAR-08 12:23	0	MB	LOAD	1		GEL	Y	RGSP
<b>Name</b>	<b>Result</b>	<b>Uncert.</b>	<b>Units</b>	<b>MDA</b>	<b>RDL Energy</b>	<b>***</b>	<b>FWHM</b>	<b>Comb Act Rpt Err(%)</b>	<b>Qual</b>	<b>Qual Comment</b>
Iodine-133	HE	0.3076	0.2498	pCi/g	0.3067	N	529.4	2	3.508	IDENTIFIED 41.29 <input type="checkbox"/>
Krypton-85	HE	17.23	5.996	pCi/g	11.49	N	251.6	3	4.823	NOT_IDENTI 57.75 <input type="checkbox"/>
Neodymium-147	MPW	0.308	0.2528	pCi/g	0.2865	Y	529.4	2	3.508	IDENTIFIED 41.29 <input checked="" type="checkbox"/> UI Data rejected due to high peak-width.
Rhenium-184	HE	0.2444	0.2771	pCi/g	0.2319	N	251.6	3	4.823	FAIL_ABUND 57.75 <input type="checkbox"/>
Strontium-85	HE	0.07739	0.02693	pCi/g	0.05162	N	251.6	3	4.823	NOT_IDENTI 57.75 <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
1201532440	06-MAR-08 14:28	10-MAR-08 12:23	3.91	DUP	LOAD	1		BRCM00100GEL	Y	RGSP
<b>Name</b>	<b>Result</b>	<b>Uncert.</b>	<b>Units</b>	<b>MDA</b>	<b>RDL Energy</b>	<b>***</b>	<b>FWHM</b>	<b>Comb Act Rpt Err(%)</b>	<b>Qual</b>	<b>Qual Comment</b>
Actinium-228	✓	1.975	0.3951	pCi/g	0.2465	Y	911	2	1.75	IDENTIFIED 8.93 <input type="checkbox"/>
Americium-243	INT	0.3181	0.05242	pCi/g	0.05561	N	75.06	1	1.579	IDENTIFIED 7.662 <input type="checkbox"/>
Annihilation Rad.	HE	0.1192	0.05978	pCi/g	0.05065	N	510.9	1	2.131	IDENTIFIED 25.39 <input type="checkbox"/>
Bismuth-211	INT	2.885	0.4977	pCi/g	0.3377	Y	351.8	4	1.504	IDENTIFIED 8.297 <input checked="" type="checkbox"/> UI
Bismuth-212	LA	0.833	0.4964	pCi/g	0.762	Y	727.3	1	1.621	FAIL_ABUND 30.03 <input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Bismuth-214	✓	0.9323	0.1541	pCi/g	0.1308	Y	609	3	1.719	IDENTIFIED 7.07 <input type="checkbox"/>
Cadmium-109	INT	3.2	0.8099	pCi/g	0.9039	N	87.35	3	1.653	IDENTIFIED 12.38 <input type="checkbox"/>
Cerium-143	LA	3.823	1.078	pCi/g	1.14	N	295.2	2	1.655	FAIL_ABUND 10.4 <input type="checkbox"/>
Iodine-135	HE	1343	3837	pCi/g	0	N	1131	1	0.8507	FAIL_DECAY 76.39 <input type="checkbox"/>
Lead-212	✓	1.67	0.1672	pCi/g	0.09454	Y	238.6	5	1.483	IDENTIFIED 3.419 <input type="checkbox"/>
Lead-214	✓	1.003	0.1806	pCi/g	0.1178	Y	351.8	4	1.504	IDENTIFIED 8.297 <input type="checkbox"/>
Neptunium-237	INT	0.9393	0.3043	pCi/g	0.2645	N	87.35	3	1.653	IDENTIFIED 12.38 <input type="checkbox"/>
Niobium-95m	LA	1.352	0.3017	pCi/g	0.5334	N	515.1	2	2.134	NOT_IDENTI 74.34 <input type="checkbox"/>
Polonium-212	✓	1.67	0.1672	pCi/g	0.09454	Y	238.6	5	1.483	IDENTIFIED 3.419 <input type="checkbox"/>
Polonium-214	✓	1.003	0.1806	pCi/g	0.1178	Y	351.8	4	1.504	IDENTIFIED 8.297 <input type="checkbox"/>
Polonium-216	✓	1.67	0.1672	pCi/g	0.09454	Y	238.6	5	1.483	IDENTIFIED 3.419 <input type="checkbox"/>

Polonium-218	✓	1.003	0.1806	pCi/g	0.1178	Y	351.8	4	1.504	IDENTIFIED	8.297	<input type="checkbox"/>
Potassium-40	✓	23.08	2.261	pCi/g	0.6884	Y	1461	1	2.225	IDENTIFIED	4.034	<input type="checkbox"/>
Radium-224	INT	3.795	1.264	pCi/g	1.078	Y	241.4	1	1.812	IDENTIFIED	16.72	<input checked="" type="checkbox"/> UI
Radium-226	✓	0.9323	0.1541	pCi/g	0.1308	Y	609	3	1.719	IDENTIFIED	7.07	<input type="checkbox"/>
Radium-228	✓	1.975	0.3951	pCi/g	0.2465	Y	911	2	1.75	IDENTIFIED	8.93	<input type="checkbox"/>
Thallium-208	✓	0.5244	0.09404	pCi/g	0.06825	Y	583.1	1	1.238	IDENTIFIED	8.226	<input type="checkbox"/>
Thorium-228	✓	1.67	0.1672	pCi/g	0.09452	N	238.6	5	1.483	IDENTIFIED	3.419	<input type="checkbox"/>
Thorium-230	✓	0.9323	0.1541	pCi/g	0.1307	N	609	3	1.719	IDENTIFIED	7.07	<input type="checkbox"/>
Thorium-231	WA	0.8591	0.2722	pCi/g	0.3737	Y	270.6	1	1.476	FAIL_ABUND	15.79	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Thorium-232	✓	1.663	0.1665	pCi/g	0.09415	N	238.6	5	1.483	IDENTIFIED	3.419	<input type="checkbox"/>
Thorium-234	NVP	1.753	0.9213	pCi/g	0.9649	Y	63.21	3	2.338	IDENTIFIED	25.41	<input checked="" type="checkbox"/> UI
Tin-126	INT	0.3199	0.08095	pCi/g	0.09026	N	87.35	3	1.653	IDENTIFIED	12.38	<input type="checkbox"/>
Titanium-44	INT	0.2996	0.0382	pCi/g	0.05933	N	77.29	1	1.328	FAIL_ABUND	5.486	<input type="checkbox"/>
Total Uranium	HE	5.2999	2.7422	ug/g	2.875	N		0				<input type="checkbox"/>
Tungsten-181	HE	0.4937	0.248	pCi/g	0.2951	N	63.21	3	2.338	FAIL_ABUND	25.41	<input type="checkbox"/>
Uranium-234	✓	1.139	0.2492	pCi/g	0.2202	N	295.2	2	1.655	IDENTIFIED	10.4	<input type="checkbox"/>
Uranium-238	NVP	1.753	0.9213	pCi/g	0.9649	Y	63.21	3	2.338	IDENTIFIED	25.41	<input checked="" type="checkbox"/> UI
Zirconium-97	HE	69.5	36.86	pCi/g	63.51	N	515.1	2	2.134	NOT_IDENTI	74.34	<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	
1201532441		10-MAR-08 12:41	0	LCS	LOAD	1		GEL		Y	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment	
Actinium-228	1.34	0.7792	pCi/g	0.7093	Y	911.6	2	1.62	IDENTIFIED	29.09	<input type="checkbox"/>	
Americium-241	15.19	1.296	pCi/g	0.3452	Y	59.24	1	1.117	IDENTIFIED	1.423	<input type="checkbox"/>	
Americium-243	HE	0.2176	0.08753	pCi/g	0.1423	N	74.59	1	1.044	IDENTIFIED	20.12	<input type="checkbox"/>
Barium-137m	6.031	0.5683	pCi/g	0.1545	N	661.9	2	1.517	IDENTIFIED	2.54	<input type="checkbox"/>	
Bismuth-210	2.914	1.505	pCi/g	2.624	Y	583.4	4	1.604	NOT_IDENTI	19.81	<input type="checkbox"/>	
Bismuth-211	1.734	0.8447	pCi/g	0.8017	Y	351.9	4	1.142	IDENTIFIED	24.66	<input type="checkbox"/>	
Bismuth-214	0.7482	0.3282	pCi/g	0.4312	Y	610	3	1.357	FAIL_ABUND	21.91	<input type="checkbox"/>	
Cadmium-109	108	9.993	pCi/g	2.643	N	87.85	4	1.145	IDENTIFIED	1.722	<input type="checkbox"/>	
Cerium-139	0.6164	0.1082	pCi/g	0.0926	Y	165.7	2	1.26	IDENTIFIED	7.252	<input type="checkbox"/>	
Cerium-143	HE	1.405	0.7541	pCi/g	0.8338	N	294.9	2	0.8053	IDENTIFIED	25.48	<input type="checkbox"/>
Cesium-137	6.375	0.6017	pCi/g	0.1633	Y	661.9	2	1.517	IDENTIFIED	2.54	<input type="checkbox"/>	
Cobalt-57	1.471	0.1788	pCi/g	0.08375	Y	121.9	2	1.181	IDENTIFIED	3.619	<input type="checkbox"/>	
Cobalt-60	8.743	0.8357	pCi/g	0.1371	0.200	1333	1	1.983	IDENTIFIED	2.496	<input type="checkbox"/>	
Gross Gamma	40.81	5.935	pCi/g	16.73	N		0				<input type="checkbox"/>	
Indium-113m	0.5826	0.1882	pCi/g	0.1909	N	391.6	4	1.364	IDENTIFIED	16.27	<input type="checkbox"/>	
Iodine-135	HE	69.23	143	pCi/g	0	N	510.4	1	1.691	NOT_IDENTI	49.36	<input type="checkbox"/>
Lead-210	2.914	1.505	pCi/g	2.624	Y	583.4	4	1.604	NOT_IDENTI	19.81	<input type="checkbox"/>	
Lead-212	1.333	0.2062	pCi/g	0.1958	Y	238.6	5	1.411	IDENTIFIED	6.285	<input type="checkbox"/>	
Lead-214	0.6031	0.2955	pCi/g	0.2795	Y	351.9	4	1.142	IDENTIFIED	24.66	<input type="checkbox"/>	
Neptunium-237	31.76	7.064	pCi/g	0.7744	N	87.85	4	1.145	IDENTIFIED	1.722	<input type="checkbox"/>	
Niobium-97	HE	4.071	1.337	pCi/g	2.387	N	391.6	4	1.364	NOT_IDENTI	16.27	<input type="checkbox"/>
Polonium-210	2.914	1.501	pCi/g	2.624	Y	583.4	4	1.604	NOT_IDENTI	19.81	<input type="checkbox"/>	
Polonium-212	1.333	0.2062	pCi/g	0.1958	Y	238.6	5	1.411	IDENTIFIED	6.285	<input type="checkbox"/>	
Polonium-214	0.6031	0.2955	pCi/g	0.2795	Y	351.9	4	1.142	IDENTIFIED	24.66	<input type="checkbox"/>	
Polonium-216	1.333	0.2062	pCi/g	0.1958	Y	238.6	5	1.411	IDENTIFIED	6.285	<input type="checkbox"/>	
Polonium-218	0.6031	0.2955	pCi/g	0.2795	Y	351.9	4	1.142	IDENTIFIED	24.66	<input type="checkbox"/>	
Promethium-147	43180	5246	pCi/g	2451	N	121.9	2	1.181	IDENTIFIED	3.619	<input type="checkbox"/>	
Radium-224	3.749	2.132	pCi/g	2.228	Y	241.6	1	1.826	IDENTIFIED	28.71	<input type="checkbox"/>	
Radium-226	0.7482	0.3282	pCi/g	0.2892	Y	610	3	1.357	IDENTIFIED	21.91	<input type="checkbox"/>	
Radium-228	1.34	0.7792	pCi/g	0.7093	Y	911.6	2	1.62	IDENTIFIED	29.09	<input type="checkbox"/>	
Silver-110m	0.2746	0.1093	pCi/g	0.1916	Y	87.85	4	1.145	FAIL_ABUND	1.722	<input type="checkbox"/>	
Thallium-201	8.738	1.534	pCi/g	2.048	N	165.7	2	1.26	FAIL_ABUND	7.252	<input type="checkbox"/>	
Thallium-208	0.3519	0.1393	pCi/g	0.1544	Y	583.4	4	1.604	IDENTIFIED	19.81	<input type="checkbox"/>	

Thorium-228		<b>1.333</b>	0.2062	pCi/g	<b>0.1957</b>	N	238.6	5	1.411	IDENTIFIED	6.285	<input type="checkbox"/>
Thorium-230	HE	<b>0.7482</b>	0.3282	pCi/g	<b>0.2892</b>	N	610	3	1.357	IDENTIFIED	21.91	<input type="checkbox"/>
Thorium-232		<b>1.33</b>	0.2057	pCi/g	<b>0.1952</b>	N	238.6	5	1.411	IDENTIFIED	6.285	<input type="checkbox"/>
Tin-113		<b>0.5826</b>	0.1882	pCi/g	<b>0.1909</b>	Y	391.6	4	1.364	IDENTIFIED	16.27	<input type="checkbox"/>
Tin-126		<b>10.82</b>	1.001	pCi/g	<b>0.2644</b>	N	87.85	4	1.145	IDENTIFIED	1.722	<input type="checkbox"/>
Titanium-44	HE	<b>0.225</b>	0.06906	pCi/g	<b>0.1077</b>	N	76.86	1	1.215	FAIL_ABUND	15.11	<input type="checkbox"/>
Uranium-234	HE	<b>0.8497</b>	0.4307	pCi/g	<b>0.5424</b>	N	294.9	2	0.8053	IDENTIFIED	25.48	<input type="checkbox"/>
Yttrium-88		<b>0.7723</b>	0.1609	pCi/g	<b>0.06518</b>	Y	1837	1	1.616	IDENTIFIED	10.23	<input type="checkbox"/>
Zirconium-88		<b>0.3908</b>	0.126	pCi/g	<b>0.1257</b>	N	391.6	4	1.364	IDENTIFIED	16.27	<input type="checkbox"/>

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

# GEL QUALS

Batch ID: 734275

Report run on: March 10, 2008 4:25 PM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
204220001-1 10-MAR-2008 10:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		0			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		0			
	Radium-224	UI	UI	UI	Data rejected due to interference.		0			
	Thorium-231	UI	UI	UI	Data rejected due to low abundance.		0			
204220002-1 10-MAR-2008 10:21	Bismuth-211	UI	UI	UI	Data rejected due to interference.		0			
	Bismuth-212	UI	UI	UI	Data rejected due to low abundance.		0			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		0			
	Cesium-137	UI	UI	UI	Data rejected due to a high counting uncertainty.		0			
	Neptunium-239	UI	UI	UI	Data rejected due to low abundance.		0			
	Radium-224	UI	UI	UI	Data rejected due to interference.		0			
	Thorium-231	UI	UI	UI	Data rejected due to low abundance.		0			
204220003-1 10-MAR-2008 10:21	Bismuth-211	UI	UI	UI	Data rejected due to interference.		0			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		0			
	Cobalt-58	UI	UI	UI	Data rejected due to high peak-width.		0			
	Mercury-203	UI	UI	UI	Data rejected due to high counting uncertainty.		0			
	Radium-224	UI	UI	UI	Data rejected due to interference.		0			
	Thorium-231	UI	UI	UI	Data rejected due to low abundance.		0			
	Thorium-234	UI	UI	UI	Data rejected due to no valid peak.		0			
	Uranium-238	UI	UI	UI	Data rejected due to no valid peak.		0			
1201532439-1 MB 10-MAR-2008 12:23	Neodymium-147	UI	UI	UI	Data rejected due to high peak-width.		0			

# GEL QUALS

Batch ID: 734275

Report run on: March 10, 2008 4:25 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
1201532440-1 DUP	Bismuth-211	UI	UI	UI	Data rejected due to interference.		0			
10-MAR-2008 12:23	Bismuth-212	UI	UI	UI	Data rejected due to low abundance.		0			
	Radium-224	UI	UI	UI	Data rejected due to interference.		0			
	Thorium-231	UI	UI	UI	Data rejected due to low abundance.		0			
	Thorium-234	UI	UI	UI	Data rejected due to no valid peak.		0			
	Uranium-238	UI	UI	UI	Data rejected due to no valid peak.		0			



VAX/VMS Nuclide Identification Report Generated 10-MAR-2008 12:21:20.16

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                            *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220001.CNF;1
Sample date   : 6-MAR-2008 14:28:00. Acquisition date : 10-MAR-2008 10:20:47
Sample ID    : G204220001 Sample quantity : 1.50000E+02 GRAM
Detector name : GAM13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.13 0.0%
Energy tolerance : 2.00000 keV Analyst Initials : MJH1
Abundance limit : 75.00000 Sensitivity : 3.00000
Batch ID      : 734275 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.32*	12	439	0.77	92.08	90	7	1.68E-03	308.3	
2	0	53.63*	108	533	0.85	106.71	102	9	1.49E-02	40.8	
3	0	63.33*	182	687	0.97	126.13	122	9	2.52E-02	29.3	
4	0	66.87*	73	744	1.46	133.23	131	9	1.02E-02	68.5	
5	3	73.01	66	256	0.91	145.52	144	14	9.11E-03	33.6	1.94E+00
6	3	74.91	644	502	0.94	149.31	144	14	8.94E-02	6.8	
7	3	77.15*	1029	480	1.00	153.80	144	14	1.43E-01	4.7	
8	0	81.33*	38	389	0.74	162.17	160	5	5.26E-03	83.9	
9	0	83.96*	104	454	1.16	167.43	165	6	1.44E-02	34.9	
10	4	87.26	286	394	0.91	174.04	171	20	3.97E-02	11.7	2.21E+00
11	4	89.98	216	441	0.96	179.49	171	20	3.00E-02	16.7	
12	4	92.74*	286	473	1.12	185.00	171	20	3.97E-02	16.5	
13	0	99.73*	18	475	1.13	199.00	195	8	2.56E-03	212.4	
14	0	105.27	32	397	1.17	210.09	207	7	4.43E-03	105.5	
15	0	129.68	39	449	0.86	258.96	255	8	5.43E-03	95.9	
16	0	143.94*	14	368	0.91	287.50	284	7	1.92E-03	242.4	
17	0	185.86*	135	487	1.22	371.41	367	11	1.88E-02	35.0	
18	0	210.02	187	385	0.96	419.78	415	11	2.60E-02	21.7	
19	0	238.71*	1301	387	1.09	477.21	473	8	1.81E-01	3.9	
20	0	241.80	178	262	1.76	483.38	481	7	2.47E-02	17.5	
21	0	263.88	40	174	1.31	527.57	524	8	5.62E-03	58.3	
22	0	270.28	142	276	1.43	540.38	536	11	1.97E-02	24.2	
23	0	277.48	33	178	0.82	554.81	552	7	4.57E-03	69.9	
24	0	295.38*	326	250	1.02	590.62	586	11	4.53E-02	11.1	
25	0	300.03	51	229	1.56	599.94	596	9	7.12E-03	54.8	
26	0	328.26	64	165	0.84	656.44	652	8	8.91E-03	36.9	
27	0	338.52*	296	162	1.27	676.98	672	9	4.12E-02	10.0	
28	0	351.98*	619	195	1.24	703.90	697	13	8.60E-02	6.2	
29	0	356.04*	11	141	1.31	712.04	709	8	1.49E-03	206.2	
30	0	409.51	39	145	0.91	819.06	815	9	5.44E-03	57.5	
31	0	435.36	30	86	1.23	870.79	867	8	4.14E-03	57.3	
32	0	463.20*	76	149	1.07	926.51	921	11	1.06E-02	33.7	
33	0	474.22	10	161	1.16	948.57	944	11	1.34E-03	256.8	
34	0	511.24*	122	204	1.64	1022.65	1014	16	1.69E-02	31.0	
35	0	519.28	42	145	4.20	1038.75	1030	15	5.82E-03	64.7	
36	0	524.96	24	125	3.20	1050.10	1046	12	3.40E-03	93.1	
37	0	573.68	48	88	4.06	1147.60	1141	12	6.65E-03	43.0	
38	0	583.50*	410	160	1.42	1167.26	1160	13	5.70E-02	8.2	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	609.67*	381	129	1.36	1219.63	1214	12	5.30E-02	8.0	
40	0	661.46	34	73	2.33	1323.26	1320	8	4.66E-03	47.2	
41	0	727.89	132	60	1.28	1456.20	1451	11	1.83E-02	14.3	
42	0	764.15	8	70	0.94	1528.74	1524	8	1.07E-03	190.2	
43	0	795.83	73	100	2.02	1592.13	1581	16	1.01E-02	33.0	
44	0	861.40	68	73	1.32	1723.33	1717	12	9.49E-03	28.0	
45	0	911.81*	320	84	1.46	1824.20	1818	14	4.44E-02	8.6	
46	2	965.31	52	64	2.27	1931.24	1924	23	7.21E-03	38.9	2.57E+00
47	2	969.68*	131	62	1.88	1939.98	1924	23	1.82E-02	15.2	
48	0	1034.60	12	48	1.31	2069.87	2066	9	1.63E-03	110.0	
49	0	1111.65	15	40	1.00	2224.00	2220	8	2.08E-03	77.5	
50	0	1122.57*	93	123	7.29	2245.86	2236	23	1.29E-02	34.4	
51	0	1163.60	36	156	10.77	2327.94	2313	28	4.97E-03	99.6	
52	0	1238.32	56	108	2.58	2477.42	2468	18	7.75E-03	45.7	
53	0	1282.09	13	44	1.53	2564.97	2559	12	1.77E-03	108.8	
54	0	1379.64	13	24	1.69	2760.10	2755	8	1.81E-03	73.9	
55	0	1461.58*	1076	41	2.13	2923.99	2914	21	1.49E-01	3.4	
56	0	1546.10	12	17	7.40	3093.03	3080	18	1.62E-03	89.7	
57	0	1581.58	13	7	1.08	3163.98	3159	9	1.81E-03	45.5	
58	0	1591.27	45	39	7.32	3183.37	3171	26	6.25E-03	40.8	
59	0	1622.49	27	7	3.56	3245.81	3238	14	3.75E-03	28.3	
60	0	1640.31	25	0	3.48	3281.44	3274	14	3.47E-03	20.0	
61	0	1683.34	8	0	0.67	3367.50	3364	8	1.11E-03	35.4	
62	0	1731.17	23	12	2.50	3463.15	3457	11	3.16E-03	37.4	
63	0	1749.78	6	3	1.43	3500.37	3496	8	8.02E-04	71.4	
64	0	1765.56*	58	11	1.46	3531.92	3524	14	8.05E-03	19.0	
65	0	1952.91	9	3	1.62	3906.56	3900	10	1.29E-03	46.0	
66	0	1957.05	5	4	1.46	3914.83	3910	9	6.33E-04	96.0	
67	0	1991.20	10	5	0.50	3983.11	3978	9	1.32E-03	51.7	
68	0	2019.52	6	7	0.86	4039.73	4027	14	8.44E-04	100.8	

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

```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220001.CNF;1
Sample date        : 6-MAR-2008 14:28:00. Acquisition date : 10-MAR-2008 10:20:47
Sample ID          : G204220001           Sample quantity  : 1.50000E+02 GRAM
Detector name      : GAM13                Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00        Elapsed real time: 0 02:00:03.13  0.0%
Energy tolerance   : 2.00000 keV         Analyst Initials  : MJH1
Abundance limit    : 75.00000           Sensitivity       : 3.00000
Batch ID           : 734275              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	1076	10.67*	1.060E+00	2.382E+01	2.382E+01	9.06
TI-44	67.85	73	91.92	7.691E+00	2.594E-02	2.594E-02	137.30
	78.38	1029	97.60*	7.684E+00	3.433E-01	3.433E-01	12.28
AS-73	53.44	108	10.30*	7.500E+00	3.485E-01	3.604E-01	81.91
BR-77	87.88	286	1.40	7.592E+00	6.729E+00	2.080E+01	24.71
	200.40	-----	1.21	5.427E+00	-----	Line Not Found	-----
	239.00	1301	23.10	4.822E+00	2.924E+00	9.039E+00	10.27
	249.79	-----	2.98	4.667E+00	-----	Line Not Found	-----
	281.68	-----	2.29	4.264E+00	-----	Line Not Found	-----
	297.23	326	4.16	4.109E+00	4.770E+00	1.475E+01	22.93
	303.76	-----	1.18	4.020E+00	-----	Line Not Found	-----
	439.47	-----	1.56	2.954E+00	-----	Line Not Found	-----
	484.57	-----	1.00	2.713E+00	-----	Line Not Found	-----
	520.65	42	22.40*	2.553E+00	1.833E-01	5.666E-01	129.63
	574.64	48	1.19	2.339E+00	4.305E+00	1.331E+01	86.30
	578.91	-----	2.96	2.321E+00	-----	Line Not Found	-----
	585.48	410	1.57	2.305E+00	2.837E+01	8.771E+01	18.00
	755.35	-----	1.67	1.838E+00	-----	Line Not Found	-----
	817.79	-----	2.08	1.715E+00	-----	Line Not Found	-----
NB-95	765.79	8	99.81*	1.819E+00	1.060E-02	1.144E-02	380.42
CD-109	88.03	286	3.72*	7.592E+00	2.532E+00	2.547E+00	24.71
SN-126	64.28	182	9.60	7.666E+00	6.180E-01	6.180E-01	60.44
	86.94	286	8.90	7.592E+00	1.058E+00	1.058E+00	47.40
	87.57	286	37.00*	7.592E+00	2.546E-01	2.546E-01	24.71
BA-133	53.15	108	2.14	7.500E+00	1.678E+00	1.679E+00	81.91
	79.62	38	2.55	7.654E+00	4.853E-01	4.857E-01	168.48
	81.00	38	33.00	7.654E+00	3.750E-02	3.753E-02	168.54
	276.40	33	6.90	4.313E+00	2.767E-01	2.769E-01	140.43
	302.84	-----	17.80	4.029E+00	-----	Line Not Found	-----
	356.01	11	60.00*	3.532E+00	1.265E-02	1.266E-02	412.55
	383.85	-----	8.70	3.316E+00	-----	Line Not Found	-----
BA-137M	661.65	34	89.98*	2.064E+00	4.521E-02	4.522E-02	94.78

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CS-137	661.65	34	85.12*	2.064E+00	4.779E-02	4.781E-02	94.79
CE-141	145.44	14	48.40*	6.518E+00	1.095E-02	1.189E-02	484.98
EU-155	48.70	-----	4.60	7.347E+00	-----	Line Not Found	-----
	60.01	-----	1.11	7.626E+00	-----	Line Not Found	-----
	86.54	286	30.90	7.592E+00	3.049E-01	3.053E-01	24.74
AU-195	105.31	32	20.70*	7.309E+00	5.273E-02	5.280E-02	211.12
	65.12	73	29.00	7.691E+00	8.221E-02	8.343E-02	137.30
	66.83	73	49.70	7.691E+00	4.797E-02	4.868E-02	137.30
	75.70	644	21.60	7.694E+00	9.692E-01	9.835E-01	15.76
	98.88	18	10.90*	7.408E+00	5.707E-02	5.792E-02	424.98
	129.76	39	0.81	6.818E+00	1.770E+00	1.796E+00	192.09
HG-203	70.83	-----	4.75	7.701E+00	-----	Line Not Found	-----
	72.87	66	8.00	7.699E+00	2.666E-01	2.824E-01	68.37
	82.60	38	3.55	7.654E+00	3.486E-01	3.693E-01	168.35
TL-208	279.20	33	77.30*	4.313E+00	2.470E-02	2.616E-02	139.96
	72.80	66	2.03	7.699E+00	1.051E+00	1.055E+00	67.63
	74.97	644	3.43	7.694E+00	6.103E+00	6.127E+00	18.02
	277.35	33	6.80	4.313E+00	2.808E-01	2.819E-01	140.22
	510.84	122	21.60	2.589E+00	5.439E-01	5.460E-01	62.97
	583.14	410	84.20*	2.305E+00	5.290E-01	5.311E-01	18.30
	763.13	8	1.64	1.819E+00	6.452E-01	6.477E-01	380.58
	860.37	68	12.46	1.640E+00	8.366E-01	8.398E-01	56.48
	1093.90	-----	0.37	1.341E+00	-----	Line Not Found	-----
BI-210	46.50	12	4.05*	7.254E+00	1.033E-01	1.033E-01	616.64
PB-210	46.50	12	4.05*	7.254E+00	1.033E-01	1.033E-01	616.64
PO-210	46.50	12	4.05*	7.254E+00	1.033E-01	1.033E-01	616.63
BI-211	72.87	66	1.27	7.699E+00	1.679E+00	1.679E+00	67.63
	351.07	619	12.94*	3.566E+00	3.357E+00	3.357E+00	13.84
BI-212	727.18	132	11.80*	1.898E+00	1.475E+00	1.481E+00	30.14
	785.46	-----	1.97	1.776E+00	-----	Line Not Found	-----
	1620.62	27	2.75	9.762E-01	2.520E+00	2.529E+00	56.87
PB-212	74.81	644	10.70	7.694E+00	1.956E+00	1.964E+00	18.32
	77.11	1029	18.00	7.684E+00	1.861E+00	1.868E+00	12.28
	87.30	286	8.00	7.592E+00	1.178E+00	1.182E+00	26.66
	115.19	-----	0.60	7.117E+00	-----	Line Not Found	-----
	238.63	1301	44.60*	4.822E+00	1.514E+00	1.520E+00	11.20
	300.09	51	3.41	4.059E+00	9.273E-01	9.308E-01	109.98
PO-212	74.81	644	10.70	7.694E+00	1.956E+00	1.964E+00	18.32
	77.11	1029	18.00	7.684E+00	1.861E+00	1.868E+00	12.28
	87.30	286	8.00	7.592E+00	1.178E+00	1.182E+00	26.66
	115.19	-----	0.60	7.117E+00	-----	Line Not Found	-----
	238.63	1301	44.60*	4.822E+00	1.514E+00	1.520E+00	11.20
	300.09	51	3.41	4.059E+00	9.273E-01	9.308E-01	109.98
BI-214	609.31	381	46.30*	2.217E+00	9.297E-01	9.297E-01	18.50
	768.36	-----	5.04	1.811E+00	-----	Line Not Found	-----
	934.06	-----	3.21	1.531E+00	-----	Line Not Found	-----
	1120.29	-----	15.10	1.315E+00	-----	Line Not Found	-----
	1238.11	56	5.94	1.211E+00	1.941E+00	1.941E+00	91.76
	1377.67	13	4.11	1.110E+00	7.161E-01	7.161E-01	147.99

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	1764.49	58	15.80	9.139E-01	1.004E+00	1.004E+00	38.40
	74.81	644	6.21	7.694E+00	3.371E+00	3.371E+00	17.41
	77.11	1029	10.50	7.684E+00	3.191E+00	3.191E+00	14.45
	87.30	286	4.67	7.592E+00	2.017E+00	2.017E+00	25.89
	241.98	178	7.49	4.778E+00	1.241E+00	1.241E+00	35.98
PO-214	295.21	326	19.20	4.109E+00	1.034E+00	1.034E+00	23.77
	351.92	619	37.20*	3.566E+00	1.168E+00	1.168E+00	14.79
	74.81	644	6.21	7.694E+00	3.371E+00	3.371E+00	17.41
	77.11	1029	10.50	7.684E+00	3.191E+00	3.191E+00	14.45
	87.30	286	4.67	7.592E+00	2.017E+00	2.017E+00	25.89
PO-216	241.98	178	7.49	4.778E+00	1.241E+00	1.241E+00	35.98
	295.21	326	19.20	4.109E+00	1.034E+00	1.034E+00	23.77
	351.92	619	37.20*	3.566E+00	1.168E+00	1.168E+00	14.79
	74.81	644	10.70	7.694E+00	1.956E+00	1.964E+00	18.32
	77.11	1029	18.00	7.684E+00	1.861E+00	1.868E+00	12.28
PO-218	87.30	286	8.00	7.592E+00	1.178E+00	1.182E+00	26.66
	115.19	-----	0.60	7.117E+00	-----	Line Not Found	-----
	238.63	1301	44.60*	4.822E+00	1.514E+00	1.520E+00	11.20
	300.09	51	3.41	4.059E+00	9.273E-01	9.308E-01	109.98
	74.81	644	6.21	7.694E+00	3.371E+00	3.371E+00	17.41
RA-224	77.11	1029	10.50	7.684E+00	3.191E+00	3.191E+00	14.45
	87.30	286	4.67	7.592E+00	2.017E+00	2.017E+00	25.89
	241.98	178	7.49	4.778E+00	1.241E+00	1.241E+00	35.98
	295.21	326	19.20	4.109E+00	1.034E+00	1.034E+00	23.77
	351.92	619	37.20*	3.566E+00	1.168E+00	1.168E+00	14.79
AC-228	240.98	178	3.95*	4.778E+00	2.354E+00	2.363E+00	35.54
	295.21	326	19.20	4.109E+00	1.034E+00	1.034E+00	23.77
	351.92	619	37.20	3.566E+00	1.168E+00	1.168E+00	13.57
	609.31	381	46.30*	2.217E+00	9.297E-01	9.297E-01	18.50
	338.32	296	11.40	3.683E+00	1.767E+00	1.769E+00	45.31
RA-228	911.07	320	27.70*	1.563E+00	1.849E+00	1.851E+00	19.61
	969.11	131	16.60	1.483E+00	1.329E+00	1.331E+00	37.83
	338.32	296	11.40	3.683E+00	1.767E+00	1.769E+00	45.31
	911.07	320	27.70*	1.563E+00	1.849E+00	1.851E+00	19.61
	969.11	131	16.60	1.483E+00	1.329E+00	1.331E+00	37.83
TH-228	84.40	104	1.21	7.629E+00	2.816E+00	2.827E+00	70.99
	238.60	1301	44.60*	4.822E+00	1.514E+00	1.520E+00	11.20
	300.10	51	3.41	4.059E+00	9.273E-01	9.308E-01	124.51
	85.43	104	16.50	7.629E+00	2.065E-01	2.065E-01	70.29
	88.47	286	27.10	7.592E+00	3.476E-01	3.476E-01	24.71
TH-229	100.00	18	12.40	7.408E+00	5.017E-02	5.017E-02	424.98
	193.63	-----	4.59*	5.546E+00	-----	Line Not Found	-----
	210.97	187	3.26	5.265E+00	2.727E+00	2.727E+00	43.95
	295.21	326	19.20	4.109E+00	1.034E+00	1.034E+00	23.77
	351.92	619	37.20	3.566E+00	1.168E+00	1.168E+00	13.57
PA-231	609.31	381	46.30*	2.217E+00	9.297E-01	9.297E-01	18.50
	283.67	-----	1.60*	4.241E+00	-----	Line Not Found	-----
	301.29	51	4.60	4.059E+00	6.874E-01	6.874E-01	110.17
	330.00	64	1.30	3.777E+00	3.270E+00	3.270E+00	80.18

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-232	238.59	1301	44.60*	4.822E+00	1.514E+00	1.514E+00	11.20
	911.20	320	27.70	1.563E+00	1.849E+00	1.849E+00	19.61
	964.40	52	5.20	1.489E+00	1.678E+00	1.678E+00	81.35
TH-234	969.11	131	16.60	1.483E+00	1.329E+00	1.329E+00	37.83
	63.29	182	3.80*	7.666E+00	1.561E+00	1.561E+00	61.21
	92.38	286	5.41	7.519E+00	1.761E+00	1.761E+00	37.58
U-234	112.81	-----	0.24	7.165E+00	-----	Line Not Found	-----
	67.67	73	0.37	7.691E+00	6.392E+00	6.392E+00	137.77
	241.98	178	7.49	4.778E+00	1.241E+00	1.241E+00	35.98
U-235	295.21	326	19.20*	4.109E+00	1.034E+00	1.034E+00	23.77
	351.92	619	37.20	3.566E+00	1.168E+00	1.168E+00	14.79
	89.95	216	2.70	7.558E+00	2.648E+00	2.648E+00	45.33
U-238	93.35	286	4.50	7.519E+00	2.117E+00	2.117E+00	43.25
	105.00	32	2.10	7.309E+00	5.197E-01	5.197E-01	213.04
	143.76	14	10.50*	6.518E+00	5.047E-02	5.047E-02	485.22
NP-237	163.35	-----	4.70	6.120E+00	-----	Line Not Found	-----
	185.71	135	54.00	5.687E+00	1.102E-01	1.102E-01	70.45
	205.31	-----	4.70	5.344E+00	-----	Line Not Found	-----
AM-243	86.50	286	12.60*	7.592E+00	7.476E-01	7.476E-01	32.19
	95.87	-----	2.60	7.471E+00	-----	Line Not Found	-----
	63.29	182	3.80*	7.666E+00	1.561E+00	1.561E+00	61.21
ANH-511	74.67	644	66.00*	7.694E+00	3.172E-01	3.172E-01	15.76
	86.72	286	0.34	7.592E+00	2.804E+01	2.804E+01	24.71
	117.66	-----	0.55	7.068E+00	-----	Line Not Found	-----
AM-243	142.18	14	0.13	6.518E+00	4.239E+00	4.239E+00	484.98
	511.00	122	100.00*	2.589E+00	1.175E-01	1.175E-01	62.41

Flag: "\*" = Keyline

Total number of lines in spectrum 68  
 Number of unidentified lines 14  
 Number of lines tentatively identified by NID 54 79.41%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.382E+01	2.382E+01	0.216E+01	9.06	
TI-44	47.30Y	1.00	3.433E-01	3.433E-01	0.421E-01	12.28	
AS-73	80.30D	1.03	3.485E-01	3.604E-01	2.952E-01	81.91	
BR-77	57.04H	3.09	1.833E-01	5.666E-01	7.345E-01	129.63	
NB-95	35.06D	1.08	1.060E-02	1.144E-02	4.354E-02	380.42	
CD-109	464.00D	1.01	2.532E+00	2.547E+00	0.629E+00	24.71	
SN-126	1.00E+05Y	1.00	2.546E-01	2.546E-01	0.629E-01	24.71	
BA-133	10.50Y	1.00	1.265E-02	1.266E-02	5.222E-02	412.55	
BA-137M	30.17Y	1.00	4.521E-02	4.522E-02	4.287E-02	94.78	
CS-137	30.17Y	1.00	4.779E-02	4.781E-02	4.531E-02	94.79	
CE-141	32.50D	1.09	1.095E-02	1.189E-02	5.766E-02	484.98	
EU-155	4.96Y	1.00	5.273E-02	5.280E-02	11.15E-02	211.12	
AU-195	183.00D	1.01	5.707E-02	5.792E-02	24.61E-02	424.98	
HG-203	46.60D	1.06	2.470E-02	2.616E-02	3.662E-02	139.96	
TL-208	1.91Y	1.00	5.290E-01	5.311E-01	0.972E-01	18.30	
BI-210	22.26Y	1.00	1.033E-01	1.033E-01	6.371E-01	616.64	
PB-210	22.26Y	1.00	1.033E-01	1.033E-01	6.371E-01	616.64	
PO-210	22.26Y	1.00	1.033E-01	1.033E-01	6.371E-01	616.63	
BI-211	7.04E+08Y	1.00	3.357E+00	3.357E+00	0.464E+00	13.84	
BI-212	1.91Y	1.00	1.475E+00	1.481E+00	0.446E+00	30.14	
PB-212	1.91Y	1.00	1.514E+00	1.520E+00	0.170E+00	11.20	
PO-212	1.91Y	1.00	1.514E+00	1.520E+00	0.170E+00	11.20	
BI-214	1600.00Y	1.00	9.297E-01	9.297E-01	1.720E-01	18.50	
PB-214	1600.00Y	1.00	1.168E+00	1.168E+00	0.173E+00	14.79	
PO-214	1600.00Y	1.00	1.168E+00	1.168E+00	0.173E+00	14.79	
PO-216	1.91Y	1.00	1.514E+00	1.520E+00	0.170E+00	11.20	
PO-218	1600.00Y	1.00	1.168E+00	1.168E+00	0.173E+00	14.79	
RA-224	1.91Y	1.00	2.354E+00	2.363E+00	0.840E+00	35.54	
RA-226	1600.00Y	1.00	9.297E-01	9.297E-01	1.720E-01	18.50	
AC-228	5.75Y	1.00	1.849E+00	1.851E+00	0.363E+00	19.61	
RA-228	5.75Y	1.00	1.849E+00	1.851E+00	0.363E+00	19.61	
TH-228	1.91Y	1.00	1.514E+00	1.520E+00	0.170E+00	11.20	
TH-229	7340.00Y	1.00	3.476E-01	3.476E-01	0.859E-01	24.71	K
TH-230	7.70E+04Y	1.00	9.297E-01	9.297E-01	1.720E-01	18.50	
PA-231	3.28E+04Y	1.00	6.874E-01	6.874E-01	7.573E-01	110.17	K
TH-232	1.41E+10Y	1.00	1.514E+00	1.514E+00	0.170E+00	11.20	
TH-234	4.47E+09Y	1.00	1.561E+00	1.561E+00	0.956E+00	61.21	
U-234	2.45E+05Y	1.00	1.034E+00	1.034E+00	0.246E+00	23.77	
U-235	7.04E+08Y	1.00	5.047E-02	5.047E-02	24.49E-02	485.22	
NP-237	2.14E+06Y	1.00	7.476E-01	7.476E-01	2.407E-01	32.19	
U-238	4.47E+09Y	1.00	1.561E+00	1.561E+00	0.956E+00	61.21	
AM-243	7380.00Y	1.00	3.172E-01	3.172E-01	0.500E-01	15.76	
ANH-511	1.00E+09Y	1.00	1.175E-01	1.175E-01	0.733E-01	62.41	
Total Activity :			5.975E+01	6.021E+01			

Grand Total Activity : 5.975E+01 6.021E+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	263.88	40	174	1.31	527.57	524	8	5.62E-03	****	4.48E+00	T
0	270.28	142	276	1.43	540.38	536	11	1.97E-02	48.4	4.40E+00	T
0	409.51	39	145	0.91	819.06	815	9	5.44E-03	****	3.14E+00	
0	435.36	30	86	1.23	870.79	867	8	4.14E-03	****	2.98E+00	T
0	463.20	76	149	1.07	926.51	921	11	1.06E-02	67.4	2.82E+00	T
0	474.22	10	161	1.16	948.57	944	11	1.34E-03	****	2.76E+00	T
0	524.96	24	125	3.20	1050.10	1046	12	3.40E-03	****	2.53E+00	
0	795.83	73	100	2.02	1592.13	1581	16	1.01E-02	65.9	1.76E+00	T
0	1034.60	12	48	1.31	2069.87	2066	9	1.63E-03	****	1.40E+00	T
0	1111.65	15	40	1.00	2224.00	2220	8	2.08E-03	****	1.32E+00	T
0	1122.57	93	123	7.29	2245.86	2236	23	1.29E-02	68.8	1.31E+00	T
0	1163.60	36	156	10.77	2327.94	2313	28	4.97E-03	****	1.27E+00	
0	1282.09	13	44	1.53	2564.97	2559	12	1.77E-03	****	1.18E+00	
0	1546.10	12	17	7.40	3093.03	3080	18	1.62E-03	****	1.01E+00	
0	1581.58	13	7	1.08	3163.98	3159	9	1.81E-03	90.9	9.96E-01	
0	1591.27	45	39	7.32	3183.37	3171	26	6.25E-03	81.6	9.91E-01	
0	1640.31	25	0	3.48	3281.44	3274	14	3.47E-03	40.0	9.68E-01	
0	1683.34	8	0	0.67	3367.50	3364	8	1.11E-03	70.7	9.48E-01	
0	1731.17	23	12	2.50	3463.15	3457	11	3.16E-03	74.9	9.28E-01	
0	1749.78	6	3	1.43	3500.37	3496	8	8.02E-04	****	9.20E-01	T
0	1952.91	9	3	1.62	3906.56	3900	10	1.29E-03	92.0	8.45E-01	
0	1957.05	5	4	1.46	3914.83	3910	9	6.33E-04	****	8.44E-01	
0	1991.20	10	5	0.50	3983.11	3978	9	1.32E-03	****	8.32E-01	
0	2019.52	6	7	0.86	4039.73	4027	14	8.44E-04	****	8.23E-01	

Flags: "T" = Tentatively associated



```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*
*****
*
*           DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220001.CNF;1
* Acquisition date   : 10-MAR-2008 10:20:47  Detector SN#      :
* Detector ID        : GAM13                    Sensitivity           : 3.00000
* Geometry           : CAN                      Energy tolerance      : 2.00000
* Elapsed live time  : 0 02:00:00.00           Abundance limit      : 75.00000
* Elapsed real time  : 0 02:00:03.13           Half life ratio      : 8.00000
*****
*
*           SAMPLE DATA
*
* Sample date        : 6-MAR-2008 14:28:00.   Nuclide Library      : SOLID
* Sample ID          : G204220001             Analyst initials     : MJH1
* Batch Number       : 734275                 Sample Quantity      : 1.50000E+02 GRAM
*****
*
*           QC DATA
*
* CALIB. DATE/TIME  : 2-JUL-2007 15:48:48.70MS Isotope         :
* MSD ID             :                          MSD Isotope          :
* LCS ID             : 1032-A                   LCS Isotope          :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.382E+01	2.157E+00	5.323E-01	3.160E-02	44.744
TI-44	3.433E-01	4.215E-02	3.210E-02	2.532E-03	10.697
AS-73	3.604E-01	2.952E-01	2.601E-01	1.906E-02	1.386
BR-77	5.666E-01	7.345E-01	4.621E-01	2.994E-02	1.226
NB-95	1.144E-02	4.354E-02	8.144E-02	6.104E-03	0.141
CD-109	2.547E+00	6.294E-01	7.617E-01	6.038E-02	3.344
SN-126	2.546E-01	6.292E-02	7.603E-02	6.023E-03	3.349
BA-133	1.266E-02	5.222E-02	6.836E-02	7.715E-03	0.185
BA-137M	4.522E-02	4.287E-02	6.825E-02	5.509E-03	0.663
CS-137	4.781E-02	4.531E-02	7.214E-02	5.836E-03	0.663
CE-141	1.189E-02	5.766E-02	6.855E-02	6.312E-03	0.173
EU-155	5.280E-02	1.115E-01	1.404E-01	1.265E-02	0.376
AU-195	5.792E-02	2.461E-01	2.579E-01	2.198E-02	0.225
HG-203	2.616E-02	3.662E-02	4.841E-02	2.785E-03	0.540
TL-208	5.311E-01	9.720E-02	6.396E-02	5.065E-03	8.303
BI-210	1.033E-01	6.371E-01	6.769E-01	5.172E-02	0.153
PB-210	1.033E-01	6.371E-01	6.769E-01	5.172E-02	0.153
PO-210	1.033E-01	6.371E-01	6.769E-01	4.427E-02	0.153

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-211	3.357E+00	4.644E-01	2.737E-01	1.627E-02	12.267
BI-212	1.481E+00	4.463E-01	4.981E-01	4.621E-02	2.973
PB-212	1.520E+00	1.703E-01	9.390E-02	7.571E-03	16.189
PO-212	1.520E+00	1.703E-01	9.390E-02	7.571E-03	16.189
BI-214	9.297E-01	1.720E-01	1.278E-01	1.163E-02	7.275
PB-214	1.168E+00	1.727E-01	9.542E-02	7.547E-03	12.237
PO-214	1.168E+00	1.727E-01	9.542E-02	7.547E-03	12.237
PO-216	1.520E+00	1.703E-01	9.390E-02	7.571E-03	16.189
PO-218	1.168E+00	1.727E-01	9.542E-02	7.547E-03	12.237
RA-224	2.363E+00	8.398E-01	1.242E+00	8.241E-02	1.903
RA-226	9.297E-01	1.720E-01	1.278E-01	1.163E-02	7.275
AC-228	1.851E+00	3.630E-01	2.245E-01	2.128E-02	8.247
RA-228	1.851E+00	3.630E-01	2.245E-01	2.128E-02	8.247
TH-228	1.520E+00	1.703E-01	9.389E-02	7.571E-03	16.190
TH-229	3.476E-01	8.590E-02	7.573E-01	5.818E-02	0.459
TH-230	9.297E-01	1.720E-01	1.278E-01	1.163E-02	7.275
PA-231	6.874E-01	7.573E-01	2.268E+00	3.085E-01	0.303
TH-232	1.514E+00	1.697E-01	9.353E-02	7.542E-03	16.191
TH-234	1.561E+00	9.555E-01	7.949E-01	1.407E-01	1.964
U-234	1.034E+00	2.457E-01	1.964E-01	1.619E-02	5.263
U-235	5.047E-02	2.449E-01	2.984E-01	5.302E-02	0.169
NP-237	7.476E-01	2.407E-01	2.461E-01	5.438E-02	3.038
U-238	1.561E+00	9.555E-01	7.949E-01	1.407E-01	1.964
AM-243	3.172E-01	4.998E-02	4.937E-02	3.896E-03	6.425
ANH-511	1.175E-01	7.332E-02	5.014E-02	3.194E-03	2.343

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-5.069E-02		3.360E-01	4.671E-01	3.230E-02	-0.109
NA-22	3.639E-02		5.430E-02	8.504E-02	4.669E-03	0.428
NA-24	-5.394E-01		2.846E+00	4.486E+00	2.668E-01	-0.120
AL-26	-2.152E-02		2.984E-02	4.122E-02	2.315E-03	-0.522
SC-46	-1.868E-02		4.038E-02	6.231E-02	3.902E-03	-0.300
V-48	1.835E-02		4.876E-02	8.376E-02	5.067E-03	0.219
CR-51	-1.526E-01		2.717E-01	4.414E-01	2.675E-02	-0.346
MN-52	1.863E-02		6.581E-02	1.132E-01	6.281E-03	0.165
MN-54	-1.067E-02		4.071E-02	6.460E-02	4.443E-03	-0.165
CO-56	1.663E-02		3.735E-02	6.279E-02	4.239E-03	0.265
CO-57	3.948E-03		1.996E-02	3.379E-02	3.391E-03	0.117
CO-58	-2.244E-02		3.939E-02	6.096E-02	4.352E-03	-0.368
FE-59	-1.416E-02		8.843E-02	1.442E-01	9.739E-03	-0.098
CO-60	1.677E-02		4.359E-02	7.344E-02	4.004E-03	0.228
ZN-65	1.024E-02		1.764E-01	1.579E-01	9.016E-03	0.065
GE-68	3.344E-01		1.367E+00	2.307E+00	1.343E-01	0.145
AS-74	2.389E-02		6.132E-02	1.052E-01	7.713E-03	0.227
SE-75	3.867E-02	+	4.518E-02	6.251E-02	3.723E-03	0.619

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-83	9.208E-02	+	1.194E-01	1.048E-01	6.787E-03	0.879
RB-84	-2.935E-02		6.197E-02	9.562E-02	6.078E-03	-0.307
KR-85	1.565E+01		1.103E+01	1.351E+01	8.650E-01	1.159
SR-85	7.128E-02		5.020E-02	6.151E-02	3.939E-03	1.159
RB-86	-2.453E-01		6.001E-01	9.602E-01	5.592E-02	-0.255
Y-88	1.308E-02		2.842E-02	5.064E-02	2.847E-03	0.258
ZR-88	7.434E-04		2.811E-02	4.630E-02	2.331E-03	0.016
Y-91	1.312E+01		1.716E+01	2.981E+01	1.634E+00	0.440
NB-94	8.057E-03		3.891E-02	6.500E-02	5.133E-03	0.124
NB-95M	1.844E-01		2.188E-01	3.269E-01	2.753E-02	0.564
ZR-95	5.095E-02		7.219E-02	1.239E-01	1.059E-02	0.411
NB-97	8.585E-01		1.709E+00	2.584E+00	2.075E-01	0.332
ZR-97	6.769E+00		3.168E+01	4.522E+01	2.863E+00	0.150
MO-99	-2.635E-01		7.759E-01	1.239E+00	1.818E-01	-0.213
TC-99M	-9.372E-05		5.113E-04	Half-Life	too short	
RH-102	9.242E-03	+	4.747E-02	5.181E-02	3.089E-03	0.178
RU-103	1.862E-02		3.535E-02	5.883E-02	7.553E-03	0.317
RH-106	1.341E-01		3.274E-01	5.604E-01	7.138E-02	0.239
RU-106	1.341E-01		3.271E-01	5.604E-01	4.272E-02	0.239
AG-108M	3.073E-02	+	3.528E-02	5.328E-02	3.207E-03	0.577
AG-110M	2.037E-02		3.980E-02	6.023E-02	5.001E-03	0.338
IN-111	3.567E-02		6.713E-02	9.852E-02	6.413E-03	0.362
IN-113M	3.950E-02		4.249E-02	7.345E-02	4.014E-03	0.538
SN-113	3.950E-02		4.249E-02	7.345E-02	4.014E-03	0.538
IN-114M	-1.599E-02		1.566E-01	2.256E-01	1.745E-02	-0.071
CD-115	4.283E-02		3.941E-01	5.556E-01	3.646E-02	0.077
SN-117M	-1.841E-02		2.778E-02	4.448E-02	3.754E-03	-0.414
SB-122	1.902E-02		1.256E-01	2.131E-01	1.485E-02	0.089
I-123	-6.607E-01		3.159E+00	5.160E+00	4.345E-01	-0.128
TE-123M	-4.976E-03		2.379E-02	3.886E-02	3.293E-03	-0.128
I-124	-1.039E-02		1.092E-01	1.711E-01	1.268E-02	-0.061
SB-124	7.134E-02		7.596E-02	1.363E-01	8.380E-03	0.523
SB-125	4.111E-02		9.496E-02	1.590E-01	9.048E-03	0.259
TE-125M	4.263E+00		7.319E+00	1.142E+01	1.229E+00	0.373
I-126	1.092E-01		1.209E-01	1.885E-01	1.518E-02	0.579
SB-126	2.106E-02		8.956E-02	1.458E-01	1.137E-02	0.144
SB-127	-5.527E-03		1.937E-01	3.195E-01	2.710E-02	-0.017
XE-127	-1.387E-02		3.654E-02	5.808E-02	4.368E-03	-0.239
I-131	5.713E-02		4.616E-02	8.105E-02	4.751E-03	0.705
TE-132	9.345E-03		5.777E-02	9.323E-02	1.253E-02	0.100
I-133	-3.858E-01		9.154E-01	1.220E+00	8.888E-02	-0.316
CS-134	1.216E-01	+	8.065E-02	8.804E-02	6.434E-03	1.381
CS-135	2.549E-01		1.960E-01	2.466E-01	1.883E-02	1.034
I-135	-2.220E-04		1.456E-03	Half-Life	too short	
CS-136	-3.622E-02		6.880E-02	1.093E-01	7.015E-03	-0.331
CE-139	-1.133E-02		2.523E-02	4.063E-02	3.279E-03	-0.279
BA-140	1.129E-01		1.540E-01	2.638E-01	8.623E-02	0.428
LA-140	-6.917E-03		5.779E-02	7.957E-02	4.481E-03	-0.087

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-143	9.758E-01		5.042E-01	7.781E-01	1.551E-01	1.254
CE-144	-1.023E-02		1.823E-01	2.721E-01	4.385E-02	-0.038
PM-144	2.315E-02		3.678E-02	6.321E-02	5.011E-03	0.366
PR-144	1.559E+00		2.478E+00	4.258E+00	3.375E-01	0.366
PM-146	1.017E-02		4.769E-02	7.842E-02	6.720E-03	0.130
ND-147	-1.130E-01		3.434E-01	4.616E-01	6.407E-02	-0.245
PM-147	7.763E+01		5.750E+02	9.714E+02	9.685E+01	0.080
PM-149	-6.233E-02		2.408E+00	4.063E+00	5.679E-01	-0.015
EU-152	4.948E-02		8.992E-02	1.540E-01	9.368E-03	0.321
GD-153	-3.925E-02		7.564E-02	8.908E-02	7.517E-03	-0.441
EU-154	7.425E-02		1.561E-01	2.390E-01	2.185E-02	0.311
TB-160	-8.941E-03		1.449E-01	2.325E-01	1.483E-02	-0.038
TM-171	1.515E+01	+	2.080E+01	2.060E+01	1.636E+00	0.735
LU-176	1.349E-02		2.204E-02	3.817E-02	2.049E-03	0.353
LU-177	1.207E+00	+	5.305E-01	5.659E-01	4.196E-02	2.133
LU-177M	1.776E-02		1.935E-01	2.796E-01	1.473E-02	0.064
HF-181	1.983E-02		3.578E-02	5.997E-02	3.623E-03	0.331
W-181	1.766E-01	+	2.425E-01	2.239E-01	1.783E-02	0.789
TA-182	5.984E-02		2.143E-01	3.573E-01	1.958E-02	0.167
RE-183	6.284E-02		8.736E-02	1.478E-01	1.219E-02	0.425
RE-184	1.352E-01		2.058E-01	3.382E-01	2.126E-02	0.400
OS-185	4.523E-03		4.595E-02	7.683E-02	6.068E-03	0.059
RE-188	6.818E-02		1.382E-01	2.324E-01	2.002E-02	0.293
W-188	-2.411E+00		6.865E+00	9.971E+00	5.358E-01	-0.242
IR-192	1.907E-02		3.042E-02	5.248E-02	2.827E-03	0.363
TL-200	-2.493E-01		3.456E-01	5.476E-01	2.833E-02	-0.455
TL-201	3.369E-01		4.676E-01	7.900E-01	6.358E-02	0.426
TL-202	6.168E-02		4.013E-02	6.488E-02	3.608E-03	0.951
BI-207	-3.742E-02		5.790E-02	9.063E-02	5.313E-03	-0.413
TL-207	2.758E-02		7.056E-01	1.041E+00	1.703E-01	0.026
PB-211	-9.293E-02		1.124E+00	1.602E+00	9.979E-01	-0.058
PO-215	2.758E-02		7.056E-01	1.041E+00	1.703E-01	0.026
RN-219	1.345E-01		4.309E-01	7.190E-01	9.589E-02	0.187
RN-220	1.118E+01		2.686E+01	4.645E+01	3.163E+00	0.241
RA-223	2.758E-02		7.056E-01	1.041E+00	1.703E-01	0.026
AC-227	-6.164E-02		3.719E-01	5.839E-01	8.246E-02	-0.106
TH-227	-6.164E-02		3.719E-01	5.839E-01	9.946E-02	-0.106
TH-231	5.924E-01	+	2.897E-01	3.358E-01	2.428E-02	1.764
U-231	4.460E-02		1.509E-01	1.897E-01	1.584E-02	0.235
PA-233	-2.958E-02		6.007E-02	9.814E-02	5.641E-03	-0.301
PA-234	-2.107E-01		3.440E-01	5.460E-01	9.691E-02	-0.386
PA-234M	7.652E+00		7.472E+00	1.332E+01	1.242E+00	0.574
NP-236	-1.209E-02		7.119E-02	1.164E-01	9.726E-03	-0.104
NP-239	-2.449E-01		1.553E-01	2.425E-01	2.346E-02	-1.010
AM-241	4.671E-02		5.546E-02	8.442E-02	7.368E-03	0.553
CM-243	4.747E-02	+	1.002E-01	1.257E-01	1.108E-02	0.378
CM-247	7.235E-04		3.911E-02	6.424E-02	3.304E-03	0.011
CF-249	-6.004E-03		4.142E-02	6.763E-02	3.414E-03	-0.089

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CF-251	6.132E-03		1.131E-01	1.853E-01	1.470E-02	0.033

\*\*\*\*\*  
 \* GEL Laboratories LLC \*  
 \* 2040 SAVAGE ROAD \*  
 \* CHARLESTON ,SC 29417 \*  
 \* GAMMA SPECTROSCOPY BACKGROUND REPORT \*  
 \*\*\*\*\*

ENERGY	MDA COUNTS
46.50	291.2203
46.50	291.2203
46.50	291.2203
48.70	291.7430
49.72	233.0404
51.35	283.5117
52.39	275.9358
52.97	276.6462
53.15	276.8657
53.44	277.2186
54.07	277.9830
56.28	345.4999
56.28	345.5045
57.37	336.4767
57.53	345.8014
57.53	345.8037
57.60	345.9011
57.98	346.4462
57.98	346.4462
59.32	359.0477
59.32	359.0477
59.40	340.8245
59.54	341.0185
59.72	371.8737
60.01	390.6944
61.10	381.6295
61.14	381.6900
61.30	391.1725
63.00	393.7912
63.29	394.2337
63.29	394.2337
63.58	394.6761
64.28	395.7381
65.12	351.6792
65.20	351.7851
65.20	351.7851
66.05	352.9129
66.72	397.8244
66.83	397.9891
66.91	398.1075
67.20	398.5347
67.20	398.5347
67.67	399.2270
67.75	399.3428
67.85	399.4921
68.90	456.5068
68.90	456.5068
69.30	457.1689
69.67	446.6575
70.82	423.7564
70.82	423.7564
70.83	423.7726
72.80	464.4920
72.80	464.4920
72.87	464.6037
72.87	464.6037
74.67	462.2421
74.81	462.4630
74.81	462.4630
74.81	462.4630
74.81	462.4630
74.81	462.4630
74.81	462.4630
74.97	462.7159
74.97	462.7159
75.28	463.2043
75.70	463.8641

77.11	466.0675
77.11	466.0675
77.11	466.0675
77.11	466.0675
77.11	466.0675
77.11	466.0675
78.38	425.0400
79.62	463.7722
79.80	464.0447
79.80	464.0447
80.11	464.5123
80.18	464.6184
80.30	415.3524
80.30	415.3524
81.00	389.0335
81.07	389.1198
81.07	389.1198
81.07	389.1198
82.60	341.2123
83.37	342.0380
83.78	352.4828
83.78	352.4828
83.78	352.4828
84.21	352.9561
84.21	352.9561
84.40	405.7663
84.90	406.3966
85.43	407.0641
86.29	408.1418
86.50	408.4038
86.54	408.4533
86.59	408.5151
86.72	408.6782
86.79	334.3272
86.94	334.4828
87.30	334.8488
87.30	334.8488
87.30	334.8488
87.30	334.8488
87.30	334.8488
87.30	334.8488
87.57	335.1237
87.88	335.4371
88.03	335.5898
88.36	335.9244
88.47	336.0356
89.95	337.5236
91.11	338.6821
92.29	339.8527
92.38	339.9417
93.35	340.8980
94.00	341.5349
94.67	316.3605
94.67	316.3643
94.90	325.6166
94.90	325.6166
94.90	325.6166
95.87	303.1920
95.87	303.1920
96.73	345.4923
97.43	346.1661
98.44	319.7325
98.44	319.7344
98.88	310.9768
99.55	311.5506
99.55	311.5506
99.86	311.8157
100.00	311.9356
100.10	312.0246
103.18	330.4901
103.76	325.7053
105.00	330.3174
105.31	330.5867
108.00	384.2286
109.28	333.1081
111.00	351.6530
111.00	351.6530
111.76	330.7010

112.81	387.5833
112.95	383.1997
115.19	311.7126
115.19	311.7126
115.19	311.7126
116.30	300.7124
117.00	344.1260
117.00	344.1260
117.66	325.4750
121.11	277.4630
121.26	277.5609
121.62	296.2533
121.78	296.3643
122.06	283.6246
122.32	284.7208
122.32	284.7208
122.32	284.7208
123.07	268.5518
129.76	317.8068
131.20	270.2491
133.02	267.0715
133.54	285.8613
135.34	303.6380
136.00	285.9589
136.25	303.2814
136.48	307.2469
140.51	306.0310
140.51	0.0000
142.18	311.4442
142.65	288.5494
143.76	307.1357
144.24	315.6824
144.24	315.6824
144.24	315.6824
145.22	288.6191
145.44	288.7490
147.16	276.5873
152.43	300.7029
152.70	293.9561
153.22	304.1306
154.21	296.8018
154.21	296.8018
154.21	296.8018
155.03	302.2293
156.02	337.5582
158.56	315.2607
159.00	299.5483
159.00	299.5483
160.31	298.2880
161.27	305.8470
162.32	272.2874
162.64	266.4180
163.35	277.8446
163.89	299.2841
165.85	299.3543
167.43	253.5655
171.28	248.1836
171.86	243.3288
172.10	233.2046
176.33	261.7437
176.55	269.0607
176.60	269.0833
181.06	283.6307
185.71	298.4377
186.00	298.5826
190.27	272.2144
192.34	286.9010
193.63	260.9796
197.04	290.1483
198.60	283.3821
200.40	277.7563
201.83	264.4080
202.84	306.8105
205.31	298.2616
208.36	275.2310
208.81	270.5302
209.75	236.1010
209.75	236.1010



210.97	236.5358
215.65	216.0247
216.55	215.4337
218.09	225.8370
222.10	232.7039
223.80	245.4933
226.40	237.4886
227.00	222.0693
227.08	219.8615
227.20	223.2483
228.16	229.1402
228.18	229.1465
228.18	229.1465
231.56	219.0080
235.69	220.2676
236.00	220.3609
236.00	220.3609
236.00	220.3609
238.59	297.6944
238.60	297.6997
238.63	297.7104
238.63	297.7104
238.63	297.7104
239.00	401.6854
240.98	402.7693
241.98	367.4251
241.98	367.4251
241.98	367.4251
241.98	367.4251
244.69	174.9483
245.39	187.1292
247.94	195.2292
248.90	216.1740
249.79	214.1240
252.40	188.2880
252.85	180.3083
252.85	180.3083
254.15	217.6600
256.20	215.9149
256.20	215.9149
256.20	215.9149
260.90	227.0255
264.65	159.5770
268.24	152.0406
268.79	167.4752
269.46	169.9746
269.46	169.9746
269.46	169.9746
269.46	169.9746
271.23	190.7528
271.23	190.7528
273.65	185.0881
276.40	214.2773
277.35	203.7966
277.60	202.0675
277.60	202.0675
278.00	207.5348
278.60	184.7667
279.20	169.1324
279.53	169.1986
281.68	168.1961
283.67	199.0335
283.67	199.0335
284.30	203.6883
285.00	198.4451
285.90	184.2057
286.10	187.8621
286.10	187.8621
287.40	177.2930
288.45	0.0000
290.67	201.9402
290.80	201.9708
291.72	183.2753
293.26	174.8584
293.70	183.6936
295.21	176.7114
295.21	176.7114
295.21	176.7114

295.21	176.7114
295.21	176.7114
295.21	176.7114
295.96	176.8621
296.50	190.1345
297.23	190.2932
298.57	190.5820
299.80	173.2290
299.80	173.2290
300.09	176.2236
300.09	176.2236
300.09	176.2236
300.10	176.2266
300.12	176.2295
301.29	199.9891
301.29	199.9891
302.84	195.9185
303.76	179.8994
303.91	179.9292
304.40	147.5635
304.40	147.5635
304.84	193.4041
306.84	148.8886
308.46	183.4346
311.98	181.3515
316.51	171.9666
318.01	197.5195
319.02	194.9207
319.41	194.0657
320.08	190.4488
323.87	173.3226
323.87	173.3226
323.87	173.3226
328.77	174.2155
329.70	178.9359
329.70	178.9359
329.85	178.9619
330.00	177.4738
333.44	148.4233
334.20	176.7244
334.20	176.7244
334.30	176.7414
338.28	175.9337
338.28	175.9337
338.28	175.9337
338.32	175.9421
338.32	175.9421
340.50	164.0658
340.57	164.0762
344.27	142.3723
345.85	140.2858
350.59	117.7146
351.07	117.7703
351.07	117.7703
351.92	117.8705
351.92	117.8705
351.92	117.8705
351.92	117.8705
351.92	117.8705
351.92	117.8705
355.39	93.3721
356.01	154.1582
364.48	150.1261
366.43	177.9316
367.43	177.1161
367.94	168.3412
369.80	160.7491
374.96	135.7645
383.85	155.8691
387.95	163.4751
388.63	153.5393
391.69	136.8571
391.69	136.8571
392.90	147.0805
398.62	143.7832
400.65	137.9548
401.10	129.8906
401.81	152.3117

401.81	152.3117
402.60	161.5620
404.84	162.8979
411.60	158.9417
413.65	141.1672
414.70	149.5079
415.30	137.3746
415.76	130.3801
417.63	0.0000
418.52	159.6806
423.70	131.4106
427.08	143.1969
427.89	130.8334
432.53	143.4306
433.93	141.9268
439.47	92.2526
439.56	92.2593
439.89	104.0301
443.98	137.8342
444.90	117.9319
445.03	117.9438
445.03	117.9438
445.03	117.9438
453.90	138.9336
463.38	120.7401
468.07	134.4059
473.00	117.1190
475.06	122.4802
475.35	122.5062
476.78	120.9124
477.59	124.4443
477.96	124.4795
482.03	101.8845
484.57	117.2829
487.03	114.2349
490.36	113.4279
492.35	113.5945
497.08	107.4148
507.63	132.5409
510.53	123.9620
510.84	123.9902
511.00	124.0039
511.85	124.0800
511.85	124.0800
513.99	97.6404
513.99	97.6404
520.41	75.7924
520.65	53.5107
527.90	105.7736
528.96	121.9982
529.64	120.2598
529.87	120.2794
531.02	114.9844
537.32	106.4622
543.00	102.3483
546.56	0.0000
549.76	100.9975
552.65	98.4577
555.20	113.2378
563.23	124.8570
563.90	123.9950
568.70	130.5263
569.32	132.1144
569.50	132.1319
569.67	132.1459
573.80	113.7029
574.00	106.3217
574.64	100.2004
578.91	97.3839
579.30	106.6866
583.14	112.5276
585.48	105.5555
591.81	114.0861
592.07	107.5570
593.00	116.9769
595.88	99.3776
600.56	125.9947
602.52	107.0850

602.71	107.0961
602.71	107.0961
603.60	109.9048
604.41	103.6755
604.70	102.1232
606.64	99.0989
609.31	126.6784
609.31	126.6784
609.31	126.6784
610.33	127.7029
612.46	110.5058
614.37	118.5364
618.01	113.0965
621.84	92.4034
621.84	92.4034
631.29	104.4229
633.02	111.2450
633.10	111.2507
634.78	112.3211
635.90	99.9070
636.97	112.4668
645.85	103.3924
646.12	114.0388
656.30	89.1132
657.75	84.3223
657.90	84.3307
661.65	117.9927
661.65	117.9927
664.57	131.8623
666.33	87.9961
666.33	87.9961
675.00	90.3940
677.61	108.2383
685.20	95.8514
692.80	102.2079
695.00	91.4025
696.49	93.4653
696.49	93.4653
697.00	92.4959
697.49	111.4230
698.50	116.4630
699.00	127.4469
702.63	112.7324
706.10	122.9399
706.58	124.9725
706.67	124.9786
709.31	99.1233
713.82	125.4578
717.42	100.5591
720.50	100.7251
721.93	114.2409
722.20	99.1352
722.78	109.2511
722.78	109.2511
722.89	109.2564
722.95	109.2590
723.30	109.2802
724.18	102.6024
727.18	90.9712
733.00	86.1808
735.90	91.3887
739.58	101.7358
742.81	86.6207
744.21	105.0394
747.13	105.1978
751.79	119.7822
753.82	89.1601
755.35	86.1533
756.15	87.2142
756.87	92.3796
763.13	82.3750
763.93	96.8296
765.79	137.4772
766.41	123.7676
766.84	106.6003
768.36	113.5637
778.00	108.9247
778.57	103.7671

778.89	98.5927
783.80	113.3988
785.46	111.9276
792.07	109.6809
795.84	85.4629
796.30	83.7383
801.93	74.9704
805.60	76.7551
810.76	89.5924
815.85	80.3010
817.79	89.8933
818.51	86.7506
819.60	89.9701
826.30	77.5126
828.27	86.0882
831.60	96.8652
831.96	93.6891
834.83	92.7476
836.80	0.0000
846.75	64.3184
848.13	74.0116
856.28	75.3645
856.80	80.7678
860.37	80.8978
867.32	79.3490
867.82	74.2132
871.10	79.1237
873.19	81.3666
874.81	67.3115
875.33	72.7578
876.40	68.4464
879.36	79.4160
880.27	78.3598
880.51	78.3668
881.50	79.4909
883.24	68.6540
884.67	69.7891
889.25	79.7635
898.02	87.7480
899.00	79.0066
903.28	65.9619
911.07	69.3362
911.07	69.3362
911.20	69.3408
919.63	83.0347
920.93	72.5066
925.00	69.3542
925.24	73.9860
926.50	77.7263
934.06	78.9041
935.52	84.5257
937.48	69.7205
944.10	78.3040
946.00	87.6947
949.00	63.5176
962.29	83.7256
964.01	70.8954
964.40	78.9636
966.15	79.0200
968.20	79.0867
969.11	79.1157
969.11	79.1157
969.11	79.1157
977.42	78.1223
980.50	86.1049
983.50	70.1037
989.30	83.5617
996.32	97.1274
1001.03	68.6880
1001.68	71.5683
1004.76	72.6107
1021.30	74.0447
1024.50	68.3595
1034.80	84.0972
1037.82	74.6568
1038.57	79.6574
1038.76	0.0000
1045.16	72.7875

1046.59	79.6244
1048.07	84.5255
1050.47	81.6860
1050.47	81.6860
1063.62	79.1609
1076.63	82.4910
1077.35	70.7256
1085.78	79.8135
1093.90	72.1445
1099.22	81.1992
1112.02	76.4031
1112.84	76.9557
1115.52	77.6921
1120.29	83.8120
1120.51	79.8275
1121.28	79.8503
1124.00	0.0000
1129.67	72.0791
1131.51	0.0000
1147.95	79.6011
1167.94	88.7057
1173.22	62.7288
1175.09	69.5689
1177.93	83.4848
1189.05	75.6260
1204.90	63.7004
1205.75	77.0782
1213.00	86.5396
1221.42	90.9111
1230.97	85.2790
1235.34	99.6328
1236.41	92.5488
1238.11	82.0634
1238.25	82.0667
1246.25	85.7042
1260.41	0.0000
1271.85	71.4116
1274.45	61.4850
1274.54	56.7576
1291.56	66.5760
1298.22	50.8301
1312.09	51.0508
1325.50	58.7374
1325.50	58.7374
1332.49	43.8795
1333.61	56.7417
1360.21	42.0913
1362.66	25.9219
1365.15	38.9121
1368.21	37.8654
1368.53	37.8682
1376.25	47.1746
1377.67	48.3564
1384.27	30.9805
1394.10	28.0329
1407.95	38.4675
1434.06	36.8672
1436.60	43.5165
1457.56	0.0000
1460.81	26.6709
1489.15	29.7631
1509.49	37.6534
1596.49	29.3951
1620.62	24.3590
1678.03	0.0000
1691.02	14.1675
1691.02	14.1675
1706.46	0.0000
1750.46	9.2398
1764.49	15.4510
1770.23	21.6606
1771.40	19.8610
1791.20	0.0000
1808.65	17.6931
1836.01	9.4260

TOTAL URANIUM BY GAMMA SPEC REPORT  
Sample:G204220001

Total Uranium Activity	4.6678E+00	ug/g
Total Uranium Counting Unc.	2.7880E+00	ug/g
Total Uranium Mda	2.3689E+00	ug/g

```

*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                          *
*                               GROSS GAMMA REPORT                             *
*
*****
*
* BATCH ID      : 734275                SAMPLE ID   : G204220001
* ANALYST      : MJH1                   DETECTOR    : GAM13
* SAMPLE DATE  : 6-MAR-2008 14:28:00.00 COUNT TIME   : 0 02:00:00.00
* ANALYSIS DATE: 10-MAR-2008 10:20:47.21 SAMPLE ALQT: 150.000 GRAM
*
*****

```

```

GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.147E+00
GROSS GAMMA ERROR (pCi/GRAM ) : 2.901E+00
GROSS GAMMA MDA (pCi/GRAM ) : 8.492E+00
GROSS GAMMA DLC (pCi/GRAM ) : 4.131E+00

```



VAX/VMS Nuclide Identification Report Generated 10-MAR-2008 12:22:05.73

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration   : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220002.CNF;1
Sample date     : 6-MAR-2008 14:42:00. Acquisition date : 10-MAR-2008 10:21:10
Sample ID      : G204220002           Sample quantity  : 1.53050E+02 GRAM
Detector name   : GAM21               Detector geometry: CAN
Elapsed live time: 0 02:00:00.00      Elapsed real time: 0 02:00:14.36  0.2%
Energy tolerance: 2.00000 keV        Analyst Initials : MJH1
Abundance limit : 75.00000           Sensitivity      : 3.00000
Batch ID       : 734275              Detector SN#     :
Matrix Spike ID :                     LCS ID           : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.82	67	414	1.14	92.74	89	8	9.25E-03	54.2	
2	1	63.34*	162	563	1.46	125.72	121	22	2.24E-02	28.7	1.42E+00
3	1	67.84	72	634	1.53	134.72	121	22	9.93E-03	64.1	
4	6	74.84	701	676	1.49	148.69	144	17	9.73E-02	7.9	5.53E+00
5	6	77.23*	1374	719	1.86	153.48	144	17	1.91E-01	5.0	
6	0	84.10	84	495	1.53	167.19	164	7	1.17E-02	44.9	
7	4	87.27	324	421	1.36	173.53	170	22	4.50E-02	10.9	2.76E+00
8	4	89.89	241	529	1.57	178.76	170	22	3.35E-02	18.9	
9	4	93.08*	417	505	1.84	185.14	170	22	5.79E-02	12.7	
10	0	115.37	115	417	3.07	229.64	225	10	1.60E-02	34.5	
11	0	128.70	89	413	1.29	256.26	252	9	1.23E-02	42.5	
12	0	153.45	59	277	0.69	305.71	302	7	8.24E-03	48.2	
13	0	163.59	79	336	1.39	325.95	322	10	1.10E-02	44.9	
14	0	186.29*	201	498	1.51	371.31	365	14	2.79E-02	25.0	
15	0	199.05	41	246	1.54	396.78	393	8	5.65E-03	69.1	
16	0	209.06	152	355	1.62	416.78	411	12	2.11E-02	26.2	
17	4	238.58*	1439	227	1.40	475.76	469	20	2.00E-01	3.3	1.93E+00
18	4	241.61	273	310	2.31	481.82	469	20	3.79E-02	20.8	
19	0	269.79	131	256	1.77	538.11	531	14	1.82E-02	27.3	
20	0	277.19	55	242	1.38	552.90	546	11	7.62E-03	56.5	
21	0	295.29*	255	213	1.52	589.05	584	10	3.55E-02	12.8	
22	0	300.02	96	185	1.42	598.50	594	11	1.34E-02	29.1	
23	0	327.73	77	187	0.68	653.88	648	13	1.07E-02	38.2	
24	0	338.36	275	160	1.40	675.11	669	11	3.82E-02	10.7	
25	0	351.95*	484	206	1.46	702.27	697	13	6.73E-02	7.8	
26	0	408.97	44	111	0.85	816.21	812	11	6.16E-03	48.2	
27	0	463.30	102	93	1.34	924.77	919	14	1.42E-02	22.7	
28	0	510.76*	108	144	2.51	1019.64	1012	17	1.50E-02	29.3	
29	0	545.53	21	70	1.03	1089.12	1084	12	2.88E-03	83.1	
30	0	567.05	109	129	2.50	1132.13	1124	16	1.51E-02	25.5	
31	1	579.64	21	26	1.70	1157.32	1155	18	2.98E-03	35.5	2.80E+00
32	1	583.09*	393	57	1.76	1164.21	1155	18	5.46E-02	6.3	
33	1	609.09	391	64	2.00	1216.18	1208	43	5.44E-02	6.4	1.87E+00
34	1	613.68	32	44	2.00	1225.36	1208	43	4.44E-03	51.1	
35	1	624.33	28	21	2.01	1246.64	1208	43	3.92E-03	40.6	
36	0	661.39	50	115	1.56	1320.73	1313	15	6.93E-03	49.1	
37	0	726.97	109	59	1.43	1451.84	1446	13	1.51E-02	17.4	
38	0	768.44	30	42	1.48	1534.78	1530	9	4.15E-03	44.7	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	794.62	50	35	3.29	1587.12	1582	11	6.89E-03	27.3	
40	0	841.30	7	25	1.24	1680.47	1676	6	9.27E-04	125.6	
41	0	852.40	24	35	5.32	1702.67	1693	14	3.31E-03	56.6	
42	0	863.40	48	95	5.39	1724.68	1710	25	6.63E-03	59.5	
43	0	910.98	211	68	1.59	1819.83	1811	18	2.93E-02	11.4	
44	5	941.21	31	54	3.18	1880.30	1872	26	4.29E-03	58.8	2.63E+00
45	5	948.21*	20	30	3.18	1894.30	1872	26	2.71E-03	44.0	
46	1	964.62	38	65	2.18	1927.12	1922	25	5.31E-03	37.1	2.38E+00
47	1	968.96	147	43	2.18	1935.80	1922	25	2.05E-02	12.4	
48	0	1120.66	59	60	2.06	2239.29	2230	15	8.19E-03	31.4	
49	0	1195.66	18	12	1.70	2389.37	2386	8	2.45E-03	41.7	
50	0	1317.10	23	21	1.50	2632.41	2625	14	3.15E-03	50.2	
51	0	1407.14	24	3	4.03	2812.66	2806	12	3.32E-03	25.1	
52	0	1427.74	22	14	0.53	2853.88	2843	19	3.05E-03	46.4	
53	0	1460.57*	690	24	1.84	2919.62	2910	19	9.58E-02	4.2	
54	0	1511.21	6	9	0.66	3021.00	3016	9	8.33E-04	99.0	
55	0	1594.71	11	28	4.97	3188.22	3174	19	1.59E-03	115.5	
56	0	1764.32	61	0	1.90	3527.92	3521	15	8.47E-03	12.8	
57	0	1846.66	16	0	1.40	3692.88	3685	15	2.22E-03	25.0	
58	0	1936.03	7	6	1.15	3871.93	3863	13	1.01E-03	79.9	

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

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220002.CNF;1
Sample date        : 6-MAR-2008 14:42:00. Acquisition date : 10-MAR-2008 10:21:10
Sample ID          : G204220002          Sample quantity  : 1.53050E+02 GRAM
Detector name      : GAM21              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:14.36  0.2%
Energy tolerance  : 2.00000 keV        Analyst Initials  : MJH1
Abundance limit   : 75.00000          Sensitivity       : 3.00000
Batch ID          : 734275             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	690	10.67*	7.435E-01	2.133E+01	2.133E+01	10.24
TI-44	67.85	72	91.92	8.599E+00	2.219E-02	2.219E-02	128.35
	78.38	1374	97.60*	8.639E+00	3.997E-01	3.997E-01	12.19
CD-109	88.03	324	3.72*	8.537E+00	2.502E+00	2.516E+00	22.96
SN-126	64.28	162	9.60	8.515E+00	4.849E-01	4.849E-01	59.05
	86.94	324	8.90	8.537E+00	1.046E+00	1.046E+00	46.51
	87.57	324	37.00*	8.537E+00	2.516E-01	2.516E-01	22.96
CS-135	268.24	131	16.00*	4.191E+00	4.793E-01	4.793E-01	55.12
BA-137M	661.65	50	89.98*	1.642E+00	8.284E-02	8.286E-02	98.59
CS-137	661.65	50	85.12*	1.642E+00	8.757E-02	8.759E-02	98.59
RE-188	155.03	59	15.00*	6.714E+00	1.445E-01	1.502E-01	96.60
	477.96	-----	1.04	2.318E+00	-----	Line Not Found	-----
	633.10	-----	1.26	1.719E+00	-----	Line Not Found	-----
AU-195	65.12	162	29.00	8.515E+00	1.605E-01	1.629E-01	57.71
	66.83	72	49.70	8.599E+00	4.103E-02	4.164E-02	128.35
	75.70	701	21.60	8.644E+00	9.204E-01	9.340E-01	17.17
	98.88	-----	10.90*	8.302E+00	-----	Line Not Found	-----
	129.76	89	0.81	7.456E+00	3.608E+00	3.661E+00	85.53
TL-208	72.80	-----	2.03	8.640E+00	-----	Line Not Found	-----
	74.97	701	3.43	8.644E+00	5.796E+00	5.819E+00	19.27
	277.35	55	6.80	4.082E+00	4.850E-01	4.868E-01	113.51
	510.84	108	21.60	2.160E+00	5.689E-01	5.711E-01	59.54
	583.14	393	84.20*	1.876E+00	6.109E-01	6.132E-01	14.99
	763.13	-----	1.64	1.415E+00	-----	Line Not Found	-----
	860.37	-----	12.46	1.251E+00	-----	Line Not Found	-----
	1093.90	-----	0.37	9.847E-01	-----	Line Not Found	-----
BI-210	46.50	67	4.05*	7.673E+00	5.258E-01	5.260E-01	108.68
PB-210	46.50	67	4.05*	7.673E+00	5.258E-01	5.260E-01	108.68
PO-210	46.50	67	4.05*	7.673E+00	5.258E-01	5.260E-01	108.61
BI-211	72.87	701	1.27	8.644E+00	1.565E+01	1.565E+01	17.17
	351.07	484	12.94*	3.205E+00	2.864E+00	2.864E+00	16.73
PB-212	74.81	701	10.70	8.644E+00	1.858E+00	1.865E+00	19.55

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1374	18.00	8.639E+00	2.167E+00	2.175E+00	12.19
	87.30	324	8.00	8.537E+00	1.163E+00	1.168E+00	25.05
	115.19	115	0.60	7.856E+00	5.986E+00	6.009E+00	69.46
	238.63	1439	44.60*	4.709E+00	1.681E+00	1.687E+00	10.00
	300.09	96	3.41	3.774E+00	1.838E+00	1.845E+00	58.74
PO-212	74.81	701	10.70	8.644E+00	1.858E+00	1.865E+00	19.55
	77.11	1374	18.00	8.639E+00	2.167E+00	2.175E+00	12.19
	87.30	324	8.00	8.537E+00	1.163E+00	1.168E+00	25.05
	115.19	115	0.60	7.856E+00	5.986E+00	6.009E+00	69.46
	238.63	1439	44.60*	4.709E+00	1.681E+00	1.687E+00	10.00
	300.09	96	3.41	3.774E+00	1.838E+00	1.845E+00	58.74
BI-214	609.31	391	46.30*	1.791E+00	1.158E+00	1.158E+00	15.76
	768.36	30	5.04	1.405E+00	1.035E+00	1.035E+00	89.96
	934.06	-----	3.21	1.152E+00	-----	Line Not Found	-----
	1120.29	59	15.10	9.616E-01	9.966E-01	9.966E-01	63.49
	1238.11	-----	5.94	8.725E-01	-----	Line Not Found	-----
	1377.67	-----	4.11	7.867E-01	-----	Line Not Found	-----
	1764.49	61	15.80	6.186E-01	1.531E+00	1.531E+00	26.23
PB-214	74.81	701	6.21	8.644E+00	3.201E+00	3.201E+00	18.70
	77.11	1374	10.50	8.639E+00	3.715E+00	3.715E+00	14.38
	87.30	324	4.67	8.537E+00	1.993E+00	1.993E+00	24.22
	241.98	273	7.49	4.654E+00	1.919E+00	1.919E+00	42.35
	295.21	255	19.20	3.834E+00	8.508E-01	8.508E-01	26.83
	351.92	484	37.20*	3.205E+00	9.964E-01	9.964E-01	17.52
PO-214	74.81	701	6.21	8.644E+00	3.201E+00	3.201E+00	18.70
	77.11	1374	10.50	8.639E+00	3.715E+00	3.715E+00	14.38
	87.30	324	4.67	8.537E+00	1.993E+00	1.993E+00	24.22
	241.98	273	7.49	4.654E+00	1.919E+00	1.919E+00	42.35
	295.21	255	19.20	3.834E+00	8.508E-01	8.508E-01	26.83
	351.92	484	37.20*	3.205E+00	9.964E-01	9.964E-01	17.52
PO-216	74.81	701	10.70	8.644E+00	1.858E+00	1.865E+00	19.55
	77.11	1374	18.00	8.639E+00	2.167E+00	2.175E+00	12.19
	87.30	324	8.00	8.537E+00	1.163E+00	1.168E+00	25.05
	115.19	115	0.60	7.856E+00	5.986E+00	6.009E+00	69.46
	238.63	1439	44.60*	4.709E+00	1.681E+00	1.687E+00	10.00
	300.09	96	3.41	3.774E+00	1.838E+00	1.845E+00	58.74
PO-218	74.81	701	6.21	8.644E+00	3.201E+00	3.201E+00	18.70
	77.11	1374	10.50	8.639E+00	3.715E+00	3.715E+00	14.38
	87.30	324	4.67	8.537E+00	1.993E+00	1.993E+00	24.22
	241.98	273	7.49	4.654E+00	1.919E+00	1.919E+00	42.35
	295.21	255	19.20	3.834E+00	8.508E-01	8.508E-01	26.83
	351.92	484	37.20*	3.205E+00	9.964E-01	9.964E-01	17.52
RA-224	240.98	273	3.95*	4.654E+00	3.639E+00	3.653E+00	41.98
RA-226	295.21	255	19.20	3.834E+00	8.508E-01	8.508E-01	26.83
	351.92	484	37.20	3.205E+00	9.964E-01	9.964E-01	16.50
	609.31	391	46.30*	1.791E+00	1.158E+00	1.158E+00	15.76
AC-228	338.32	275	11.40	3.338E+00	1.773E+00	1.776E+00	46.01
	911.07	211	27.70*	1.181E+00	1.581E+00	1.583E+00	24.94
	969.11	147	16.60	1.110E+00	1.961E+00	1.964E+00	33.55

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
RA-228	338.32	275	11.40	3.338E+00	1.773E+00	1.776E+00	46.01
	911.07	211	27.70*	1.181E+00	1.581E+00	1.583E+00	24.94
	969.11	147	16.60	1.110E+00	1.961E+00	1.964E+00	33.55
TH-228	84.40	84	1.21	8.582E+00	1.996E+00	2.003E+00	90.64
	238.60	1439	44.60*	4.709E+00	1.681E+00	1.687E+00	10.00
TH-230	300.10	96	3.41	3.774E+00	1.838E+00	1.845E+00	82.80
	295.21	255	19.20	3.834E+00	8.508E-01	8.508E-01	26.83
	351.92	484	37.20	3.205E+00	9.964E-01	9.964E-01	16.50
TH-232	609.31	391	46.30*	1.791E+00	1.158E+00	1.158E+00	15.76
	238.59	1439	44.60*	4.709E+00	1.681E+00	1.681E+00	10.00
	911.20	211	27.70	1.181E+00	1.581E+00	1.581E+00	24.94
TH-234	964.40	38	5.20	1.115E+00	1.615E+00	1.615E+00	78.02
	969.11	147	16.60	1.110E+00	1.961E+00	1.961E+00	33.55
	63.29	162	3.80*	8.515E+00	1.225E+00	1.225E+00	59.83
U-234	92.38	417	5.41	8.431E+00	2.240E+00	2.240E+00	30.85
	112.81	-----	0.24	7.930E+00	-----	Line Not Found	-----
	67.67	72	0.37	8.599E+00	5.467E+00	5.467E+00	128.85
	241.98	273	7.49	4.654E+00	1.919E+00	1.919E+00	42.35
	295.21	255	19.20*	3.834E+00	8.508E-01	8.508E-01	26.83
U-235	351.92	484	37.20	3.205E+00	9.964E-01	9.964E-01	17.52
	89.95	241	2.70	8.493E+00	2.582E+00	2.582E+00	48.66
	93.35	417	4.50	8.431E+00	2.693E+00	2.693E+00	37.55
	105.00	-----	2.10	8.147E+00	-----	Line Not Found	-----
	143.76	-----	10.50*	7.000E+00	-----	Line Not Found	-----
NP-237	163.35	79	4.70	6.426E+00	6.406E-01	6.406E-01	91.60
	185.71	201	54.00	5.827E+00	1.566E-01	1.566E-01	50.36
	205.31	-----	4.70	5.380E+00	-----	Line Not Found	-----
	86.50	324	12.60*	8.537E+00	7.387E-01	7.387E-01	30.87
	95.87	-----	2.60	8.372E+00	-----	Line Not Found	-----
U-238	63.29	162	3.80*	8.515E+00	1.225E+00	1.225E+00	59.83
AM-243	74.67	701	66.00*	8.644E+00	3.012E-01	3.012E-01	17.17
	86.72	324	0.34	8.537E+00	2.770E+01	2.770E+01	22.96
	117.66	-----	0.55	7.788E+00	-----	Line Not Found	-----
ANH-511	142.18	-----	0.13	7.047E+00	-----	Line Not Found	-----
	511.00	108	100.00*	2.160E+00	1.229E-01	1.229E-01	58.96

Flag: "\*" = Keyline

Total number of lines in spectrum 58  
 Number of unidentified lines 11  
 Number of lines tentatively identified by NID 47 81.03%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.133E+01	2.133E+01	0.218E+01	10.24	
TI-44	47.30Y	1.00	3.997E-01	3.997E-01	0.487E-01	12.19	
CD-109	464.00D	1.01	2.502E+00	2.516E+00	0.578E+00	22.96	
SN-126	1.00E+05Y	1.00	2.516E-01	2.516E-01	0.578E-01	22.96	
CS-135	2.30E+06Y	1.00	4.793E-01	4.793E-01	2.642E-01	55.12	
BA-137M	30.17Y	1.00	8.284E-02	8.286E-02	8.169E-02	98.59	
CS-137	30.17Y	1.00	8.757E-02	8.759E-02	8.636E-02	98.59	
RE-188	69.40D	1.04	1.445E-01	1.502E-01	1.451E-01	96.60	
AU-195	183.00D	1.01	4.103E-02	4.164E-02	5.344E-02	128.35	K
TL-208	1.91Y	1.00	6.109E-01	6.132E-01	0.919E-01	14.99	
BI-210	22.26Y	1.00	5.258E-01	5.260E-01	5.717E-01	108.68	
PB-210	22.26Y	1.00	5.258E-01	5.260E-01	5.717E-01	108.68	
PO-210	22.26Y	1.00	5.258E-01	5.260E-01	5.713E-01	108.61	
BI-211	7.04E+08Y	1.00	2.864E+00	2.864E+00	0.479E+00	16.73	
PB-212	1.91Y	1.00	1.681E+00	1.687E+00	0.169E+00	10.00	
PO-212	1.91Y	1.00	1.681E+00	1.687E+00	0.169E+00	10.00	
BI-214	1600.00Y	1.00	1.158E+00	1.158E+00	0.182E+00	15.76	
PB-214	1600.00Y	1.00	9.964E-01	9.964E-01	1.746E-01	17.52	
PO-214	1600.00Y	1.00	9.964E-01	9.964E-01	1.746E-01	17.52	
PO-216	1.91Y	1.00	1.681E+00	1.687E+00	0.169E+00	10.00	
PO-218	1600.00Y	1.00	9.964E-01	9.964E-01	1.746E-01	17.52	
RA-224	1.91Y	1.00	3.639E+00	3.653E+00	1.534E+00	41.98	
RA-226	1600.00Y	1.00	1.158E+00	1.158E+00	0.182E+00	15.76	
AC-228	5.75Y	1.00	1.581E+00	1.583E+00	0.395E+00	24.94	
RA-228	5.75Y	1.00	1.581E+00	1.583E+00	0.395E+00	24.94	
TH-228	1.91Y	1.00	1.681E+00	1.687E+00	0.169E+00	10.00	
TH-230	7.70E+04Y	1.00	1.158E+00	1.158E+00	0.182E+00	15.76	
TH-232	1.41E+10Y	1.00	1.681E+00	1.681E+00	0.168E+00	10.00	
TH-234	4.47E+09Y	1.00	1.225E+00	1.225E+00	0.733E+00	59.83	
U-234	2.45E+05Y	1.00	8.508E-01	8.508E-01	2.283E-01	26.83	
U-235	7.04E+08Y	1.00	1.566E-01	1.566E-01	0.789E-01	50.36	K
NP-237	2.14E+06Y	1.00	7.387E-01	7.387E-01	2.281E-01	30.87	
U-238	4.47E+09Y	1.00	1.225E+00	1.225E+00	0.733E+00	59.83	
AM-243	7380.00Y	1.00	3.012E-01	3.012E-01	0.517E-01	17.17	
ANH-511	1.00E+09Y	1.00	1.229E-01	1.229E-01	0.725E-01	58.96	
Total Activity :			5.666E+01	5.673E+01			

Grand Total Activity : 5.666E+01 5.673E+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	199.05	41	246	1.54	396.78	393	8	5.65E-03	****	5.52E+00	T
0	209.06	152	355	1.62	416.78	411	12	2.11E-02	52.3	5.30E+00	T
0	327.73	77	187	0.68	653.88	648	13	1.07E-02	76.3	3.45E+00	T
0	408.97	44	111	0.85	816.21	812	11	6.16E-03	96.5	2.74E+00	
0	463.30	102	93	1.34	924.77	919	14	1.42E-02	45.4	2.40E+00	T
0	545.53	21	70	1.03	1089.12	1084	12	2.88E-03	****	2.01E+00	T
0	567.05	109	129	2.50	1132.13	1124	16	1.51E-02	51.0	1.93E+00	T
1	579.64	21	26	1.70	1157.32	1155	18	2.98E-03	71.1	1.89E+00	T
1	613.68	32	44	2.00	1225.36	1208	43	4.44E-03	****	1.78E+00	T
1	624.33	28	21	2.01	1246.64	1208	43	3.92E-03	81.1	1.74E+00	
0	726.97	109	59	1.43	1451.84	1446	13	1.51E-02	34.7	1.49E+00	T
0	794.62	50	35	3.29	1587.12	1582	11	6.89E-03	54.6	1.36E+00	T
0	841.30	7	25	1.24	1680.47	1676	6	9.27E-04	****	1.28E+00	
0	852.40	24	35	5.32	1702.67	1693	14	3.31E-03	****	1.26E+00	
0	863.40	48	95	5.39	1724.68	1710	25	6.63E-03	****	1.25E+00	
5	941.21	31	54	3.18	1880.30	1872	26	4.29E-03	****	1.14E+00	
5	948.21	20	30	3.18	1894.30	1872	26	2.71E-03	88.0	1.13E+00	T
0	1195.66	18	12	1.70	2389.37	2386	8	2.45E-03	83.3	9.03E-01	
0	1317.10	23	21	1.50	2632.41	2625	14	3.15E-03	****	8.22E-01	
0	1407.14	24	3	4.03	2812.66	2806	12	3.32E-03	50.2	7.71E-01	T
0	1427.74	22	14	0.53	2853.88	2843	19	3.05E-03	92.7	7.60E-01	
0	1511.21	6	9	0.66	3021.00	3016	9	8.33E-04	****	7.19E-01	T
0	1594.71	11	28	4.97	3188.22	3174	19	1.59E-03	****	6.83E-01	T
0	1846.66	16	0	1.40	3692.88	3685	15	2.22E-03	50.0	5.91E-01	
0	1936.03	7	6	1.15	3871.93	3863	13	1.01E-03	****	5.64E-01	

Flags: "T" = Tentatively associated

```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*
*****
*
*           DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220002.CNF;1
* Acquisition date   : 10-MAR-2008 10:21:10   Detector SN#      :
* Detector ID        : GAM21                   Sensitivity         : 3.00000
* Geometry           : CAN                     Energy tolerance    : 2.00000
* Elapsed live time  : 0 02:00:00.00          Abundance limit    : 75.00000
* Elapsed real time  : 0 02:00:14.36          Half life ratio    : 8.00000
*****
*
*           SAMPLE DATA
*
* Sample date        : 6-MAR-2008 14:42:00.   Nuclide Library    : SOLID
* Sample ID          : G204220002             Analyst initials    : MJH1
* Batch Number       : 734275                 Sample Quantity    : 1.53050E+02 GRAM
*****
*
*           QC DATA
*
* CALIB. DATE/TIME  : 2-JUL-2007 16:42:48.26MS Isotope      :
* MSD ID             :                          MSD Isotope       :
* LCS ID             : 1032-A                   LCS Isotope       :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.133E+01	2.183E+00	6.180E-01	3.647E-02	34.509
TI-44	3.997E-01	4.873E-02	3.249E-02	2.283E-03	12.302
CD-109	2.516E+00	5.779E-01	7.847E-01	5.794E-02	3.207
SN-126	2.516E-01	5.777E-02	7.836E-02	5.770E-03	3.210
CS-135	4.793E-01	2.642E-01	2.163E-01	1.602E-02	2.216
BA-137M	8.286E-02	8.169E-02	7.160E-02	5.853E-03	1.157
CS-137	8.759E-02	8.636E-02	7.568E-02	6.200E-03	1.157
RE-188	1.502E-01	1.451E-01	2.255E-01	1.677E-02	0.666
AU-195	4.164E-02	5.344E-02	2.666E-01	2.085E-02	0.156
TL-208	6.132E-01	9.193E-02	6.086E-02	4.877E-03	10.076
BI-210	5.260E-01	5.717E-01	7.425E-01	5.470E-02	0.708
PB-210	5.260E-01	5.717E-01	7.425E-01	5.470E-02	0.708
PO-210	5.260E-01	5.713E-01	7.425E-01	4.617E-02	0.708
BI-211	2.864E+00	4.791E-01	3.610E-01	2.125E-02	7.935
PB-212	1.687E+00	1.688E-01	8.392E-02	6.370E-03	20.108
PO-212	1.687E+00	1.688E-01	8.392E-02	6.370E-03	20.108
BI-214	1.158E+00	1.825E-01	1.076E-01	9.892E-03	10.759
PB-214	9.964E-01	1.746E-01	1.251E-01	9.836E-03	7.968



---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	9.964E-01	1.746E-01	1.251E-01	9.836E-03	7.968
PO-216	1.687E+00	1.688E-01	8.392E-02	6.370E-03	20.108
PO-218	9.964E-01	1.746E-01	1.251E-01	9.836E-03	7.968
RA-224	3.653E+00	1.534E+00	9.568E-01	5.819E-02	3.818
RA-226	1.158E+00	1.825E-01	1.076E-01	9.892E-03	10.759
AC-228	1.583E+00	3.947E-01	2.371E-01	2.345E-02	6.675
RA-228	1.583E+00	3.947E-01	2.371E-01	2.345E-02	6.675
TH-228	1.687E+00	1.688E-01	8.391E-02	6.370E-03	20.110
TH-230	1.158E+00	1.825E-01	1.076E-01	9.892E-03	10.759
TH-232	1.681E+00	1.682E-01	8.359E-02	6.345E-03	20.111
TH-234	1.225E+00	7.330E-01	8.462E-01	1.452E-01	1.448
U-234	8.508E-01	2.283E-01	2.080E-01	1.690E-02	4.091
U-235	1.566E-01	7.886E-02	3.174E-01	5.469E-02	0.493
NP-237	7.387E-01	2.281E-01	2.491E-01	5.453E-02	2.966
U-238	1.225E+00	7.330E-01	8.462E-01	1.452E-01	1.448
AM-243	3.012E-01	5.171E-02	4.790E-02	3.313E-03	6.289
ANH-511	1.229E-01	7.245E-02	4.711E-02	3.035E-03	2.609

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.864E-02		3.151E-01	5.091E-01	3.543E-02	-0.076
NA-22	1.244E-02		5.515E-02	9.196E-02	5.011E-03	0.135
NA-24	9.110E-01		3.316E+00	5.582E+00	3.283E-01	0.163
AL-26	1.968E-02		3.838E-02	7.003E-02	3.975E-03	0.281
SC-46	1.030E-02		3.958E-02	6.738E-02	4.635E-03	0.153
V-48	3.836E-02		4.801E-02	8.579E-02	5.624E-03	0.447
CR-51	-2.475E-01		2.851E-01	4.345E-01	2.587E-02	-0.570
MN-52	7.346E-03		7.687E-02	1.087E-01	5.977E-03	0.068
MN-54	2.397E-02		4.045E-02	6.497E-02	4.805E-03	0.369
CO-56	-2.392E-02		5.119E-02	5.970E-02	4.355E-03	-0.401
CO-57	-5.005E-03		2.122E-02	3.384E-02	3.061E-03	-0.148
CO-58	-2.585E-02		3.977E-02	6.206E-02	4.721E-03	-0.417
FE-59	-6.009E-02		9.791E-02	1.506E-01	1.048E-02	-0.399
CO-60	2.085E-02		4.392E-02	7.606E-02	4.083E-03	0.274
ZN-65	-3.610E-02		1.142E-01	1.524E-01	8.998E-03	-0.237
GE-68	5.670E-03		1.376E+00	2.262E+00	1.384E-01	0.003
AS-73	-2.392E-02		1.846E-01	3.012E-01	1.933E-02	-0.079
AS-74	-3.797E-02		6.371E-02	9.717E-02	7.227E-03	-0.391
SE-75	-2.410E-02		4.342E-02	6.022E-02	3.384E-03	-0.400
BR-77	1.938E-02		4.040E-01	6.587E-01	4.320E-02	0.029
RB-83	1.591E-02		6.635E-02	1.099E-01	7.202E-03	0.145
RB-84	9.197E-03		6.454E-02	1.086E-01	7.556E-03	0.085
KR-85	1.575E+01		8.857E+00	1.448E+01	9.384E-01	1.088
SR-85	7.171E-02		4.032E-02	6.594E-02	4.273E-03	1.088
RB-86	-4.045E-02		5.989E-01	9.764E-01	5.981E-02	-0.041
Y-88	9.932E-03		3.977E-02	6.819E-02	3.876E-03	0.146

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88	-2.920E-03		2.866E-02	4.676E-02	2.341E-03	-0.062
Y-91	1.171E+01		1.900E+01	3.294E+01	1.805E+00	0.355
NB-94	-6.877E-03		3.899E-02	6.450E-02	5.232E-03	-0.107
NB-95	5.933E-02		5.525E-02	8.820E-02	6.937E-03	0.673
NB-95M	1.243E+00		2.941E-01	4.832E-01	3.837E-02	2.573
ZR-95	3.253E-03		7.257E-02	1.218E-01	1.079E-02	0.027
NB-97	-4.951E-01		1.970E+00	2.781E+00	2.262E-01	-0.178
ZR-97	7.394E+01		3.487E+01	5.765E+01	3.692E+00	1.282
MO-99	-4.445E-01		7.573E-01	1.196E+00	1.775E-01	-0.372
TC-99M	2.244E-05		4.873E-04	Half-Life too short		
RH-102	2.785E-02		3.206E-02	5.538E-02	3.329E-03	0.503
RU-103	-1.643E-04		3.504E-02	5.699E-02	7.335E-03	-0.003
RH-106	2.283E-01		3.462E-01	5.883E-01	7.532E-02	0.388
RU-106	2.283E-01		3.454E-01	5.883E-01	4.549E-02	0.388
AG-108M	4.439E-02		3.393E-02	6.029E-02	3.636E-03	0.736
AG-110M	-1.449E-02		4.609E-02	6.458E-02	5.427E-03	-0.224
IN-111	-1.589E-04		6.964E-02	1.010E-01	6.058E-03	-0.002
IN-113M	-3.848E-02		4.311E-02	6.661E-02	3.622E-03	-0.578
SN-113	-3.848E-02		4.311E-02	6.661E-02	3.622E-03	-0.578
IN-114M	1.556E-01		1.557E-01	2.400E-01	1.606E-02	0.648
CD-115	3.425E-02		3.377E-01	5.527E-01	3.673E-02	0.062
SN-117M	1.296E-02		4.042E-02	4.826E-02	3.490E-03	0.269
SB-122	2.891E-01		1.720E-01	2.760E-01	1.951E-02	1.048
I-123	4.207E-01		4.157E+00	5.409E+00	3.898E-01	0.078
TE-123M	3.206E-03		3.168E-02	4.122E-02	2.996E-03	0.078
I-124	-7.085E-02		1.270E-01	1.638E-01	1.231E-02	-0.433
SB-124	8.284E-03		7.228E-02	1.232E-01	7.612E-03	0.067
SB-125	-5.330E-02		9.543E-02	1.500E-01	8.546E-03	-0.355
TE-125M	-7.009E+00		7.389E+00	1.049E+01	1.056E+00	-0.668
I-126	7.657E-02		1.330E-01	2.046E-01	1.672E-02	0.374
SB-126	2.461E-02		1.061E-01	1.572E-01	1.267E-02	0.157
SB-127	2.004E-02		2.120E-01	3.586E-01	3.098E-02	0.056
XE-127	1.947E-02		5.685E-02	5.801E-02	3.828E-03	0.336
I-131	-1.257E-02		4.763E-02	7.726E-02	4.494E-03	-0.163
TE-132	-3.070E-02		5.843E-02	9.540E-02	1.250E-02	-0.322
BA-133	7.375E-03		5.105E-02	7.379E-02	8.307E-03	0.100
I-133	-1.343E-01		7.737E-01	1.237E+00	9.105E-02	-0.109
CS-134	1.054E-01	+	5.808E-02	9.227E-02	7.145E-03	1.142
I-135	2.141E-03		1.436E-03	Half-Life too short		
CS-136	3.201E-02		6.799E-02	1.174E-01	7.937E-03	0.273
CE-139	2.091E-03		2.883E-02	4.259E-02	2.890E-03	0.049
BA-140	-1.340E-02		1.487E-01	2.392E-01	7.824E-02	-0.056
LA-140	5.303E-02	+	1.225E-01	9.838E-02	5.545E-03	0.539
CE-141	1.959E-04		4.603E-02	7.379E-02	5.997E-03	0.003
CE-143	2.719E+00		7.861E-01	1.031E+00	2.049E-01	2.638
CE-144	-6.675E-02		2.080E-01	2.861E-01	4.440E-02	-0.233
PM-144	-1.453E-02		3.798E-02	6.175E-02	5.018E-03	-0.235
PR-144	-9.788E-01		2.558E+00	4.160E+00	3.380E-01	-0.235

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	-1.323E-02		4.736E-02	7.581E-02	6.513E-03	-0.175
ND-147	-9.260E-03		2.929E-01	4.739E-01	6.598E-02	-0.020
PM-147	-6.500E+02		6.861E+02	9.695E+02	8.715E+01	-0.670
PM-149	6.831E-01		2.570E+00	4.325E+00	6.013E-01	0.158
EU-152	-1.148E-01		1.189E-01	1.564E-01	9.409E-03	-0.734
GD-153	1.778E-02		6.284E-02	9.017E-02	6.995E-03	0.197
EU-154	2.075E-02		1.553E-01	2.564E-01	2.338E-02	0.081
EU-155	4.530E-02		8.683E-02	1.428E-01	1.176E-02	0.317
TB-160	1.665E-02		1.500E-01	2.515E-01	1.756E-02	0.066
TM-171	1.296E+01	+	1.663E+01	2.188E+01	1.476E+00	0.592
LU-176	1.168E-02		2.687E-02	4.164E-02	2.173E-03	0.281
LU-177	9.519E-01	+	5.021E-01	6.062E-01	3.969E-02	1.570
LU-177M	-4.733E-02		2.089E-01	2.900E-01	1.526E-02	-0.163
HF-181	-5.228E-02		4.032E-02	5.909E-02	3.602E-03	-0.885
W-181	3.449E-01	+	1.990E-01	2.640E-01	1.776E-02	1.306
TA-182	-8.568E-02		2.118E-01	3.308E-01	1.810E-02	-0.259
RE-183	1.337E-01	+	1.203E-01	1.547E-01	1.083E-02	0.864
RE-184	-8.049E-02		2.059E-01	3.371E-01	1.968E-02	-0.239
OS-185	1.704E-02		4.650E-02	7.714E-02	6.174E-03	0.221
W-188	-5.107E+00		7.587E+00	1.040E+01	5.392E-01	-0.491
IR-192	3.210E-02		2.976E-02	5.212E-02	2.741E-03	0.616
TL-200	-2.860E-02		3.561E-01	5.835E-01	2.991E-02	-0.049
TL-201	-1.164E-01		5.400E-01	7.856E-01	5.323E-02	-0.148
TL-202	-3.223E-02		3.945E-02	6.072E-02	3.388E-03	-0.531
HG-203	4.840E-02		3.963E-02	6.160E-02	3.418E-03	0.786
BI-207	6.190E-02		6.425E-02	1.153E-01	7.146E-03	0.537
TL-207	3.510E-01		7.263E-01	1.079E+00	1.761E-01	0.325
PB-211	1.173E-01		1.117E+00	1.598E+00	9.952E-01	0.073
BI-212	1.528E+00	+	5.504E-01	8.220E-01	7.817E-02	1.859
PO-215	3.510E-01		7.263E-01	1.079E+00	1.761E-01	0.325
RN-219	-6.349E-02		4.537E-01	7.177E-01	9.566E-02	-0.088
RN-220	-2.816E+01		3.340E+01	4.163E+01	2.874E+00	-0.676
RA-223	3.510E-01		7.263E-01	1.079E+00	1.761E-01	0.325
AC-227	4.724E-02		3.566E-01	5.983E-01	8.344E-02	0.079
TH-227	4.724E-02		3.567E-01	5.983E-01	1.010E-01	0.079
TH-229	2.269E-01		6.509E-01	7.750E-01	5.169E-02	0.293
PA-231	-4.176E-01		1.560E+00	2.486E+00	3.363E-01	-0.168
TH-231	5.639E-01	+	3.105E-01	3.468E-01	2.426E-02	1.626
U-231	8.954E-02		1.404E-01	2.045E-01	1.572E-02	0.438
PA-233	-2.108E-02		6.122E-02	9.942E-02	5.587E-03	-0.212
PA-234	-1.532E-01		3.623E-01	5.720E-01	1.027E-01	-0.268
PA-234M	-7.620E-01		7.239E+00	1.180E+01	1.137E+00	-0.065
NP-236	-7.864E-02		8.396E-02	1.177E-01	8.385E-03	-0.668
NP-239	3.246E-01	+	2.255E-01	2.806E-01	2.453E-02	1.157
AM-241	5.801E-02		5.926E-02	8.834E-02	6.605E-03	0.657
CM-243	4.962E-02		7.801E-02	1.288E-01	1.037E-02	0.385
CM-247	-6.880E-03		4.449E-02	6.539E-02	3.352E-03	-0.105
CF-249	-1.009E-02		4.332E-02	7.018E-02	3.521E-03	-0.144

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CF-251	7.370E-02		1.140E-01	1.965E-01	1.327E-02	0.375

\*\*\*\*\*  
 \* GEL Laboratories LLC \*  
 \* 2040 SAVAGE ROAD \*  
 \* CHARLESTON ,SC 29417 \*  
 \* GAMMA SPECTROSCOPY BACKGROUND REPORT \*  
 \*\*\*\*\*

ENERGY	MDA COUNTS
46.50	404.5280
46.50	404.5280
46.50	404.5280
48.70	438.2325
49.72	468.1011
51.35	464.2435
52.39	436.9224
52.97	455.0380
53.15	455.1456
53.44	463.4855
54.07	480.2133
56.28	501.0420
56.28	501.0439
57.37	487.0266
57.53	487.1234
57.53	487.1252
57.60	487.1669
57.98	473.1592
57.98	473.1592
59.32	472.2993
59.32	472.2993
59.40	472.3457
59.54	472.4272
59.72	472.5314
60.01	497.4042
61.10	562.3835
61.14	562.4106
61.30	570.7680
63.00	573.5836
63.29	573.7811
63.29	573.7811
63.58	573.9780
64.28	574.4519
65.12	575.0174
65.20	575.0703
65.20	575.0703
66.05	575.6379
66.72	576.0827
66.83	576.1569
66.91	576.2098
67.20	576.4004
67.20	576.4004
67.67	576.7096
67.75	576.7626
67.85	576.8282
68.90	577.5165
68.90	577.5165
69.30	577.7749
69.67	674.6325
70.82	733.8713
70.82	733.8713
70.83	733.8794
72.80	735.4746
72.80	735.4746
72.87	735.5310
72.87	735.5310
74.67	571.5709
74.81	571.6563
74.81	571.6563
74.81	571.6563
74.81	571.6563
74.81	571.6563
74.81	571.6563
74.97	571.7542
74.97	571.7542
75.28	571.9457
75.70	572.2020

77.11	573.0601
77.11	573.0601
77.11	573.0601
77.11	573.0601
77.11	573.0601
77.11	573.0601
78.38	573.8265
79.62	513.5333
79.80	538.8906
79.80	538.8906
80.11	539.0645
80.18	513.8321
80.30	513.8964
80.30	513.8964
81.00	514.2668
81.07	514.3040
81.07	514.3040
81.07	514.3040
82.60	515.1082
83.37	591.5671
83.78	794.7200
83.78	794.7200
83.78	794.7200
84.21	592.0691
84.21	592.0691
84.40	579.4927
84.90	550.1593
85.43	550.4499
86.29	550.9210
86.50	551.0341
86.54	551.0559
86.59	551.0837
86.72	551.1551
86.79	551.1908
86.94	551.2741
87.30	818.7216
87.30	818.7216
87.30	818.7216
87.30	818.7216
87.30	818.7216
87.30	818.7216
87.57	468.4487
87.88	468.5919
88.03	468.6609
88.36	468.8109
88.47	468.8614
89.95	469.5369
91.11	470.0608
92.29	470.5915
92.38	470.6319
93.35	471.0648
94.00	471.3537
94.67	415.2550
94.67	415.2580
94.90	415.3470
94.90	415.3470
94.90	415.3470
95.87	446.5181
95.87	446.5181
96.73	426.3289
97.43	395.7652
98.44	406.4223
98.44	406.4223
98.88	399.7235
99.55	407.6929
99.55	407.6929
99.86	399.2220
100.00	398.6597
100.10	398.6966
103.18	439.1668
103.76	411.3935
105.00	411.8452
105.31	410.8790
108.00	422.6551
109.28	458.8346
111.00	381.4819
111.00	381.4819
111.76	397.3452

112.81	442.8524
112.95	442.9037
115.19	390.4459
115.19	390.4459
115.19	390.4459
116.30	351.8356
117.00	343.3252
117.00	343.3252
117.66	390.5932
121.11	402.1884
121.26	413.8951
121.62	392.3576
121.78	392.4083
122.06	381.7161
122.32	372.5747
122.32	372.5747
122.32	372.5747
123.07	351.7415
129.76	406.7180
131.20	396.5955
133.02	391.8577
133.54	404.3728
135.34	401.1702
136.00	400.2653
136.25	401.4458
136.48	401.5150
140.51	406.0564
140.51	0.0000
142.18	375.4536
142.65	372.2515
143.76	413.7007
144.24	413.8455
144.24	413.8455
144.24	413.8455
145.22	399.6680
145.44	399.7310
147.16	396.2479
152.43	400.6169
152.70	407.4088
153.22	398.6015
154.21	401.5676
154.21	401.5676
154.21	401.5676
155.03	360.5413
156.02	358.9941
158.56	362.6234
159.00	370.9781
159.00	370.9781
160.31	400.5652
161.27	390.3200
162.32	351.5380
162.64	359.1273
163.35	347.2731
163.89	346.4977
165.85	344.8465
167.43	337.6725
171.28	330.0705
171.86	317.4973
172.10	317.5464
176.33	309.3245
176.55	309.3680
176.60	309.3784
181.06	360.4520
185.71	337.7125
186.00	337.7733
190.27	273.8115
192.34	316.1256
193.63	285.1058
197.04	287.2302
198.60	307.1795
200.40	317.0532
201.83	307.3109
202.84	277.4377
205.31	298.2175
208.36	305.2447
208.81	305.3250
209.75	312.6105
209.75	312.6105

210.97	303.5384
215.65	288.8275
216.55	290.0108
218.09	299.4896
222.10	278.6602
223.80	265.8201
226.40	266.2032
227.00	285.0445
227.08	285.0575
227.20	293.5158
228.16	274.9057
228.18	274.9092
228.18	274.9092
231.56	259.1704
235.69	287.3411
236.00	265.4034
236.00	265.4034
236.00	265.4034
238.59	235.8917
238.60	235.8932
238.63	235.8978
238.63	235.8978
238.63	235.8978
239.00	235.9436
240.98	236.1938
241.98	236.3190
241.98	236.3190
241.98	236.3190
241.98	236.3190
244.69	212.9919
245.39	219.3834
247.94	192.8092
248.90	207.5321
249.79	211.9786
252.40	213.8489
252.85	214.8490
252.85	214.8490
254.15	209.2860
256.20	205.6970
256.20	205.6970
256.20	205.6970
260.90	193.7793
264.65	197.6527
268.24	162.8759
268.79	170.9079
269.46	170.9645
269.46	170.9645
269.46	170.9645
269.46	170.9645
271.23	201.4969
271.23	201.4969
273.65	201.7379
276.40	224.4552
277.35	202.1019
277.60	210.1485
277.60	210.1485
278.00	210.1885
278.60	184.5704
279.20	195.8622
279.53	195.8945
281.68	194.4907
283.67	203.7923
283.67	203.7923
284.30	207.6094
285.00	190.2931
285.90	181.6775
286.10	179.7607
286.10	179.7607
287.40	189.5424
288.45	0.0000
290.67	216.3105
290.80	216.3242
291.72	213.1895
293.26	179.4017
293.70	174.5881
295.21	179.5665
295.21	179.5665
295.21	179.5665



295.21	179.5665
295.21	179.5665
295.21	179.5665
295.96	160.2103
296.50	160.2506
297.23	160.3050
298.57	160.4037
299.80	160.4963
299.80	160.4963
300.09	173.4875
300.09	173.4875
300.09	173.4875
300.10	173.4897
300.12	173.4897
301.29	176.8300
301.29	176.8300
302.84	186.6948
303.76	177.0296
303.91	177.0429
304.40	165.7106
304.40	165.7106
304.84	175.4934
306.84	163.1071
308.46	150.3925
311.98	160.4125
316.51	132.3171
318.01	146.1353
319.02	153.0712
319.41	164.8726
320.08	175.6112
323.87	144.2210
323.87	144.2210
323.87	144.2210
328.77	180.6657
329.70	174.1650
329.70	174.1650
329.85	174.1780
330.00	174.1888
333.44	197.4878
334.20	197.5537
334.20	197.5537
334.30	197.5610
338.28	153.3728
338.28	153.3728
338.28	153.3728
338.32	153.3747
338.32	153.3747
340.50	140.3126
340.57	140.3161
344.27	181.8719
345.85	175.3759
350.59	170.7530
351.07	172.4447
351.07	172.4447
351.92	170.1838
351.92	170.1838
351.92	170.1838
351.92	170.1838
351.92	170.1838
351.92	170.1838
355.39	134.5501
356.01	144.5540
364.48	157.0632
366.43	140.1675
367.43	151.2415
367.94	138.2493
369.80	126.3230
374.96	127.5907
383.85	139.1320
387.95	145.4168
388.63	152.5262
391.69	140.5729
391.69	140.5729
392.90	124.4504
398.62	129.7953
400.65	143.0895
401.10	133.9803
401.81	134.2414

401.81	134.2414
402.60	139.2790
404.84	121.9746
411.60	130.7787
413.65	130.8806
414.70	122.4302
415.30	136.0628
415.76	115.1881
417.63	0.0000
418.52	120.5611
423.70	111.5800
427.08	114.7945
427.89	116.8792
432.53	99.6192
433.93	84.2572
439.47	122.5212
439.56	122.5255
439.89	112.2426
443.98	102.0950
444.90	109.3500
445.03	109.3552
445.03	109.3552
445.03	109.3552
453.90	111.7705
463.38	91.3763
468.07	98.8060
473.00	95.8487
475.06	89.6607
475.35	89.6701
476.78	103.2757
477.59	108.5208
477.96	111.6656
482.03	123.3166
484.57	90.9985
487.03	84.7929
490.36	111.0878
492.35	92.2851
497.08	85.0787
507.63	91.3491
510.53	79.1267
510.84	79.1350
511.00	79.1396
511.85	79.1611
511.85	79.1611
513.99	79.2165
513.99	79.2165
520.41	76.2064
520.65	77.2702
527.90	75.3283
528.96	89.1516
529.64	84.9258
529.87	82.8083
531.02	78.5907
537.32	77.6837
543.00	71.0710
546.56	0.0000
549.76	89.0259
552.65	67.2108
555.20	77.0484
563.23	85.8203
563.90	91.2028
568.70	57.3099
569.32	62.6941
569.50	62.6984
569.67	69.8671
573.80	80.7166
574.00	88.7943
574.64	89.7074
578.91	80.8411
579.30	84.4436
583.14	70.1511
585.48	59.4003
591.81	58.1592
592.07	62.5230
593.00	57.3684
595.88	79.0845
600.56	69.7396
602.52	81.4087

602.71	81.4142
602.71	81.4142
603.60	94.1019
604.41	83.2646
604.70	83.2702
606.64	65.2061
609.31	60.9055
609.31	60.9055
609.31	60.9055
610.33	60.9232
612.46	60.9615
614.37	60.9957
618.01	61.0586
621.84	61.1256
621.84	61.1256
631.29	63.2368
633.02	68.9862
633.10	67.8927
634.78	62.4467
635.90	62.4676
636.97	59.1970
645.85	68.1364
646.12	69.2400
656.30	77.1521
657.75	85.0587
657.90	85.0624
661.65	85.5433
661.65	85.5433
664.57	66.2813
666.33	74.2063
666.33	74.2063
675.00	75.7005
677.61	68.3633
685.20	75.9091
692.80	84.4127
695.00	67.7543
696.49	77.9946
696.49	77.9946
697.00	75.2190
697.49	67.7989
698.50	62.2441
699.00	63.1814
702.63	79.9811
706.10	67.9533
706.58	69.8242
706.67	68.8947
709.31	71.7379
713.82	75.5535
717.42	68.1553
720.50	73.6815
721.93	67.2993
722.20	70.5102
722.78	65.7113
722.78	65.7113
722.89	65.7141
722.95	65.7141
723.30	70.5301
724.18	80.1653
727.18	63.6476
733.00	35.3525
735.90	69.5892
739.58	67.6055
742.81	47.9266
744.21	58.2839
747.13	85.6087
751.79	63.1056
753.82	52.7712
755.35	62.2188
756.15	64.1166
756.87	69.7875
763.13	56.6724
763.93	56.6833
765.79	69.6725
766.41	69.6830
766.84	64.8284
768.36	77.5540
778.00	72.0494
778.57	68.2676

778.89	66.3755
783.80	57.9123
785.46	63.6331
792.07	47.2929
795.84	53.8644
796.30	55.5038
801.93	64.8416
805.60	52.4913
810.76	61.1563
815.85	58.3603
817.79	57.4304
818.51	49.7815
819.60	58.4124
826.30	51.7917
828.27	37.4226
831.60	67.2215
831.96	58.5837
834.83	40.3628
836.80	0.0000
846.75	53.1965
848.13	57.8406
856.28	57.9492
856.80	57.9565
860.37	50.2703
867.32	54.7760
867.82	49.8015
871.10	49.8392
873.19	53.0028
874.81	50.4353
875.33	51.4117
876.40	55.3046
879.36	52.4290
880.27	54.3822
880.51	54.3856
881.50	49.5401
883.24	49.5598
884.67	48.6033
889.25	42.8148
898.02	39.9740
899.00	35.1064
903.28	58.5669
911.07	45.9568
911.07	45.9568
911.20	45.9577
919.63	39.6752
920.93	49.1741
925.00	48.0579
925.24	48.0609
926.50	60.8282
934.06	30.3235
935.52	62.3523
937.48	59.0063
944.10	55.1512
946.00	55.1740
949.00	47.3223
962.29	45.7612
964.01	45.7781
964.40	47.4775
966.15	44.5267
968.20	44.5459
969.11	44.5541
969.11	44.5541
969.11	44.5541
977.42	47.6074
980.50	39.6989
983.50	33.7648
989.30	46.7313
996.32	51.7778
1001.03	44.8517
1001.68	47.8477
1004.76	47.8779
1021.30	40.0334
1024.50	51.0763
1034.80	50.1790
1037.82	38.1593
1038.57	36.1567
1038.76	0.0000
1045.16	54.3054

1046.59	40.2376
1048.07	38.2381
1050.47	42.2820
1050.47	42.2820
1063.62	39.3650
1076.63	43.5127
1077.35	41.4955
1085.78	38.5226
1093.90	39.5983
1099.22	59.9675
1112.02	38.4263
1112.84	50.6610
1115.52	48.9395
1120.29	47.2349
1120.51	47.2368
1121.28	41.9950
1124.00	0.0000
1129.67	47.0257
1131.51	0.0000
1147.95	45.1369
1167.94	42.2162
1173.22	39.1643
1175.09	48.4573
1177.93	49.5137
1189.05	37.2114
1204.90	42.5015
1205.75	38.3610
1213.00	50.8682
1221.42	54.0651
1230.97	65.6122
1235.34	65.6635
1236.41	59.4214
1238.11	39.6266
1238.25	39.6266
1246.25	65.7916
1260.41	0.0000
1271.85	41.9596
1274.45	43.0270
1274.54	41.9792
1291.56	41.0503
1298.22	26.3438
1312.09	56.1334
1325.50	25.4082
1325.50	25.4082
1332.49	22.2578
1333.61	21.2020
1360.21	30.8798
1362.66	31.9568
1365.15	29.8389
1368.21	22.3903
1368.53	24.5245
1376.25	20.2849
1377.67	24.5610
1384.27	22.4492
1394.10	11.7784
1407.95	22.0765
1434.06	18.4738
1436.60	17.2493
1457.56	0.0000
1460.81	18.3980
1489.15	15.8391
1509.49	22.4314
1596.49	8.2858
1620.62	19.9563
1678.03	0.0000
1691.02	9.5993
1691.02	9.5993
1706.46	0.0000
1750.46	12.5829
1764.49	9.6976
1770.23	11.8890
1771.40	10.1920
1791.20	0.0000
1808.65	8.7803
1836.01	9.4902

TOTAL URANIUM BY GAMMA SPEC REPORT  
Sample:G204220002

Total Uranium Activity	3.6491E+00	ug/g
Total Uranium Counting Unc.	2.1389E+00	ug/g
Total Uranium Mda	2.5216E+00	ug/g

```

*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 734275                SAMPLE ID   : G204220002
*  ANALYST       : MJH1                  DETECTOR    : GAM21
*  SAMPLE DATE   : 6-MAR-2008 14:42:00.00  COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 10-MAR-2008 10:21:10.10  SAMPLE ALQT  : 153.050 GRAM
*
*****

```

```

GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.319E+00
GROSS GAMMA ERROR (pCi/GRAM ) : 2.016E+00
GROSS GAMMA MDA (pCi/GRAM ) : 9.854E+00
GROSS GAMMA DLC (pCi/GRAM ) : 4.816E+00

```

VAX/VMS Nuclide Identification Report Generated 10-MAR-2008 12:22:47.34

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                            *
*****
Configuration   : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220003.CNF;1
Sample date     : 6-MAR-2008 14:55:00. Acquisition date : 10-MAR-2008 10:21:32
Sample ID      : G204220003           Sample quantity  : 1.46660E+02 GRAM
Detector name   : GAM23               Detector geometry: CAN
Elapsed live time: 0 02:00:00.00      Elapsed real time: 0 02:00:05.55  0.1%
Energy tolerance: 2.00000 keV         Analyst Initials  : MJH1
Abundance limit : 75.00000           Sensitivity      : 3.00000
Batch ID       : 734275              Detector SN#     :
Matrix Spike ID :                     LCS ID           : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.93*	81	356	1.34	125.82	122	8	1.12E-02	43.1	
2	2	74.85	334	341	0.98	149.66	145	20	4.64E-02	10.1	2.12E+00
3	2	77.08	530	251	0.87	154.11	145	20	7.36E-02	6.3	
4	0	83.77*	58	302	1.45	167.49	165	6	8.01E-03	50.7	
5	2	87.19*	152	368	0.94	174.34	171	13	2.11E-02	21.7	8.64E+00
6	2	89.62	82	316	0.83	179.20	171	13	1.13E-02	33.3	
7	0	92.91*	212	348	1.64	185.78	183	8	2.94E-02	17.8	
8	0	129.06	95	361	0.76	258.08	253	10	1.31E-02	39.1	
9	0	153.17	64	309	0.95	306.31	303	9	8.86E-03	51.3	
10	0	185.71*	183	396	1.22	371.40	365	12	2.54E-02	23.7	
11	0	204.28	48	228	1.67	408.54	405	8	6.62E-03	56.6	
12	0	209.43	153	332	1.05	418.85	414	11	2.13E-02	24.4	
13	0	215.38	66	164	2.24	430.76	428	7	9.18E-03	34.6	
14	5	238.59*	1288	164	1.00	477.19	470	20	1.79E-01	3.3	6.77E-01
15	5	241.61	246	268	1.80	483.22	470	20	3.41E-02	17.3	
16	0	271.07	150	250	1.17	542.16	535	14	2.08E-02	23.9	
17	0	277.50	53	264	2.77	555.01	550	13	7.35E-03	65.0	
18	0	295.14	334	191	1.17	590.31	585	11	4.65E-02	9.7	
19	0	299.96	90	163	1.27	599.94	596	9	1.24E-02	27.8	
20	0	327.85	63	158	0.82	655.74	651	10	8.70E-03	39.8	
21	0	338.31	283	195	1.24	676.66	671	10	3.93E-02	11.0	
22	0	351.89*	522	194	1.06	703.82	698	12	7.25E-02	7.0	
23	0	409.99	47	111	1.73	820.05	816	9	6.48E-03	43.5	
24	0	416.41	39	133	0.72	832.90	826	14	5.41E-03	66.1	
25	0	462.88	103	89	0.98	925.87	922	10	1.42E-02	19.8	
26	0	477.93	27	83	0.96	955.97	952	8	3.72E-03	63.1	
27	0	510.97*	153	165	1.96	1022.07	1014	18	2.12E-02	24.0	
28	0	583.16*	361	139	1.32	1166.49	1160	14	5.01E-02	8.9	
29	0	609.29	320	111	1.30	1218.78	1214	13	4.45E-02	8.7	
30	0	666.74	51	60	3.70	1333.72	1327	14	7.06E-03	37.8	
31	1	673.52	18	33	1.42	1347.28	1345	17	2.44E-03	50.9	1.12E+00
32	1	676.54	22	47	1.74	1353.32	1345	17	3.00E-03	67.4	
33	0	702.07	22	46	0.59	1404.40	1401	8	3.01E-03	58.3	
34	3	723.47*	14	65	2.16	1447.21	1439	22	1.99E-03	128.7	2.70E+00
35	3	727.33*	116	55	2.12	1454.92	1439	22	1.61E-02	15.7	
36	0	786.68*	28	67	1.68	1573.69	1566	10	3.95E-03	59.1	
37	0	794.59	53	46	1.78	1589.50	1585	10	7.34E-03	27.5	
38	0	811.57	41	207	13.01	1623.48	1596	38	5.65E-03	116.2	



Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	844.02	51	134	8.81	1688.41	1672	26	7.12E-03	66.4	
40	6	860.39	38	49	1.95	1721.16	1717	15	5.24E-03	35.7	2.88E+00
41	6	864.19*	9	26	2.08	1728.76	1717	15	1.29E-03	115.7	
42	0	911.13*	281	68	1.85	1822.68	1815	16	3.90E-02	9.1	
43	0	935.57	14	72	1.09	1871.58	1865	13	1.88E-03	131.7	
44	3	964.28	52	49	2.41	1929.03	1923	21	7.28E-03	29.0	1.07E+00
45	3	969.09	126	34	1.78	1938.66	1923	21	1.75E-02	13.0	
46	0	985.84	19	36	5.31	1972.18	1967	13	2.60E-03	71.9	
47	0	1000.30	42	79	12.03	2001.11	1979	29	5.80E-03	63.4	
48	0	1040.28*	15	24	0.75	2081.11	2076	9	2.10E-03	66.8	
49	0	1063.58*	27	39	1.68	2127.73	2121	13	3.82E-03	76.7	
50	0	1072.27	18	11	0.61	2145.13	2142	6	2.50E-03	38.0	
51	0	1120.64	74	88	1.08	2241.92	2235	18	1.03E-02	32.1	
52	0	1221.08	14	38	0.92	2442.90	2435	10	1.97E-03	86.9	
53	0	1281.63	37	47	0.77	2564.07	2554	17	5.18E-03	45.1	
54	0	1365.28	8	26	3.74	2731.47	2716	17	1.04E-03	158.5	
55	0	1378.24	28	11	1.21	2757.41	2750	15	3.90E-03	32.0	
56	0	1422.05	10	8	1.22	2845.09	2841	9	1.43E-03	60.2	
57	0	1460.67*	918	35	1.98	2922.38	2913	20	1.28E-01	3.7	
58	0	1630.40	26	0	2.01	3262.08	3257	12	3.61E-03	19.6	
59	0	1663.75	12	0	0.73	3328.83	3325	10	1.67E-03	28.9	
60	0	1764.52	58	4	1.99	3530.53	3523	13	8.10E-03	14.6	

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

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220003.CNF;1
Sample date        : 6-MAR-2008 14:55:00. Acquisition date : 10-MAR-2008 10:21:32
Sample ID          : G204220003          Sample quantity   : 1.46660E+02 GRAM
Detector name     : GAM23              Detector geometry: CAN
Elapsed live time : 0 02:00:00.00      Elapsed real time : 0 02:00:05.55  0.1%
Energy tolerance  : 2.00000 keV        Analyst Initials   : MJH1
Abundance limit   : 75.00000           Sensitivity        : 3.00000
Batch ID          : 734275             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
BE-7	477.59	27	10.42*	2.761E+00	2.385E-01	2.507E-01	126.36
K-40	1460.81	918	10.67*	1.037E+00	2.123E+01	2.123E+01	10.45
CO-58	810.76	41	99.40*	1.755E+00	5.971E-02	6.200E-02	232.43
CD-109	88.03	152	3.72*	5.369E+00	1.951E+00	1.962E+00	44.00
SN-126	64.28	81	9.60	2.577E+00	8.344E-01	8.344E-01	87.46
	86.94	152	8.90	5.369E+00	8.154E-01	8.154E-01	59.77
	87.57	152	37.00*	5.369E+00	1.961E-01	1.961E-01	44.00
RE-188	155.03	64	15.00*	6.249E+00	1.742E-01	1.811E-01	102.76
	477.96	27	1.04	2.761E+00	2.389E+00	2.483E+00	126.32
	633.10	-----	1.26	2.183E+00	-----	Line Not Found	-----
HG-203	70.83	-----	4.75	3.654E+00	-----	Line Not Found	-----
	72.87	334	8.00	4.153E+00	2.571E+00	2.723E+00	23.67
	82.60	58	3.55	5.083E+00	8.183E-01	8.666E-01	102.32
	279.20	53	77.30*	4.252E+00	4.121E-02	4.364E-02	130.15
TL-208	72.80	-----	2.03	3.904E+00	-----	Line Not Found	-----
	74.97	334	3.43	4.153E+00	5.997E+00	6.020E+00	23.17
	277.35	53	6.80	4.252E+00	4.685E-01	4.703E-01	130.43
	510.84	153	21.60	2.613E+00	6.922E-01	6.948E-01	49.02
	583.14	361	84.20*	2.341E+00	4.686E-01	4.704E-01	18.91
	763.13	-----	1.64	1.854E+00	-----	Line Not Found	-----
	860.37	38	12.46	1.664E+00	4.655E-01	4.673E-01	71.85
	1093.90	-----	0.37	1.335E+00	-----	Line Not Found	-----
BI-211	72.87	334	1.27	4.153E+00	1.620E+01	1.620E+01	21.46
	351.07	522	12.94*	3.529E+00	2.926E+00	2.926E+00	15.22
BI-212	727.18	116	11.80*	1.935E+00	1.303E+00	1.308E+00	32.51
	785.46	28	1.97	1.805E+00	2.046E+00	2.054E+00	118.51
	1620.62	-----	2.75	9.596E-01	-----	Line Not Found	-----
PB-212	74.81	334	10.70	4.153E+00	1.922E+00	1.930E+00	23.40
	77.11	530	18.00	4.409E+00	1.709E+00	1.716E+00	14.49
	87.30	152	8.00	5.369E+00	9.071E-01	9.106E-01	45.12
	115.19	-----	0.60	6.495E+00	-----	Line Not Found	-----
	238.63	1288	44.60*	4.767E+00	1.550E+00	1.556E+00	9.73

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-212	300.09	90	3.41	4.002E+00	1.680E+00	1.687E+00	56.31
	74.81	334	10.70	4.153E+00	1.922E+00	1.930E+00	23.40
	77.11	530	18.00	4.409E+00	1.709E+00	1.716E+00	14.49
	87.30	152	8.00	5.369E+00	9.071E-01	9.106E-01	45.12
	115.19	-----	0.60	6.495E+00	-----	Line Not Found	-----
BI-214	238.63	1288	44.60*	4.767E+00	1.550E+00	1.556E+00	9.73
	300.09	90	3.41	4.002E+00	1.680E+00	1.687E+00	56.31
	609.31	320	46.30*	2.256E+00	7.845E-01	7.845E-01	19.09
	768.36	-----	5.04	1.843E+00	-----	Line Not Found	-----
	934.06	14	3.21	1.541E+00	7.008E-01	7.008E-01	263.62
PB-214	1120.29	74	15.10	1.306E+00	9.627E-01	9.627E-01	64.87
	1238.11	-----	5.94	1.193E+00	-----	Line Not Found	-----
	1377.67	28	4.11	1.088E+00	1.610E+00	1.610E+00	64.81
	1764.49	58	15.80	9.087E-01	1.040E+00	1.040E+00	29.85
	74.81	334	6.21	4.153E+00	3.312E+00	3.312E+00	22.70
PO-214	77.11	530	10.50	4.409E+00	2.930E+00	2.930E+00	16.37
	87.30	152	4.67	5.369E+00	1.554E+00	1.554E+00	44.67
	241.98	246	7.49	4.723E+00	1.778E+00	1.778E+00	35.43
	295.21	334	19.20	4.053E+00	1.100E+00	1.100E+00	21.17
	351.92	522	37.20*	3.529E+00	1.018E+00	1.018E+00	16.09
PO-216	74.81	334	6.21	4.153E+00	3.312E+00	3.312E+00	22.70
	77.11	530	10.50	4.409E+00	2.930E+00	2.930E+00	16.37
	87.30	152	4.67	5.369E+00	1.554E+00	1.554E+00	44.67
	241.98	246	7.49	4.723E+00	1.778E+00	1.778E+00	35.43
	295.21	334	19.20	4.053E+00	1.100E+00	1.100E+00	21.17
PO-218	351.92	522	37.20*	3.529E+00	1.018E+00	1.018E+00	16.09
	74.81	334	10.70	4.153E+00	1.922E+00	1.930E+00	23.40
	77.11	530	18.00	4.409E+00	1.709E+00	1.716E+00	14.49
	87.30	152	8.00	5.369E+00	9.071E-01	9.106E-01	45.12
	115.19	-----	0.60	6.495E+00	-----	Line Not Found	-----
RA-224	238.63	1288	44.60*	4.767E+00	1.550E+00	1.556E+00	9.73
	300.09	90	3.41	4.002E+00	1.680E+00	1.687E+00	56.31
	74.81	334	6.21	4.153E+00	3.312E+00	3.312E+00	22.70
	77.11	530	10.50	4.409E+00	2.930E+00	2.930E+00	16.37
	87.30	152	4.67	5.369E+00	1.554E+00	1.554E+00	44.67
RA-226	241.98	246	7.49	4.723E+00	1.778E+00	1.778E+00	35.43
	295.21	334	19.20	4.053E+00	1.100E+00	1.100E+00	21.17
	351.92	522	37.20*	3.529E+00	1.018E+00	1.018E+00	16.09
	240.98	246	3.95*	4.723E+00	3.372E+00	3.385E+00	34.98
	295.21	334	19.20	4.053E+00	1.100E+00	1.100E+00	21.17
AC-228	351.92	522	37.20	3.529E+00	1.018E+00	1.018E+00	14.98
	609.31	320	46.30*	2.256E+00	7.845E-01	7.845E-01	19.09
	338.32	283	11.40	3.641E+00	1.743E+00	1.745E+00	46.29
	911.07	281	27.70*	1.579E+00	1.643E+00	1.645E+00	21.06
	969.11	126	16.60	1.492E+00	1.304E+00	1.306E+00	34.73
RA-228	338.32	283	11.40	3.641E+00	1.743E+00	1.745E+00	46.29
	911.07	281	27.70*	1.579E+00	1.643E+00	1.645E+00	21.06
	969.11	126	16.60	1.492E+00	1.304E+00	1.306E+00	34.73
TH-228	84.40	58	1.21	5.083E+00	2.401E+00	2.410E+00	102.24

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-230	238.60	1288	44.60*	4.767E+00	1.550E+00	1.556E+00	9.73
	300.10	90	3.41	4.002E+00	1.680E+00	1.687E+00	81.09
	295.21	334	19.20	4.053E+00	1.100E+00	1.100E+00	21.17
TH-232	351.92	522	37.20	3.529E+00	1.018E+00	1.018E+00	14.98
	609.31	320	46.30*	2.256E+00	7.845E-01	7.845E-01	19.09
	238.59	1288	44.60*	4.767E+00	1.550E+00	1.550E+00	9.73
TH-234	911.20	281	27.70	1.579E+00	1.643E+00	1.643E+00	21.06
	964.40	52	5.20	1.499E+00	1.720E+00	1.720E+00	62.91
	969.11	126	16.60	1.492E+00	1.304E+00	1.304E+00	34.73
U-234	63.29	81	3.80*	2.577E+00	2.108E+00	2.108E+00	87.99
	92.38	212	5.41	5.764E+00	1.736E+00	1.736E+00	39.67
	112.81	-----	0.24	6.464E+00	-----	Line Not Found	-----
U-235	67.67	-----	0.37	3.234E+00	-----	Line Not Found	-----
	241.98	246	7.49	4.723E+00	1.778E+00	1.778E+00	35.43
	295.21	334	19.20*	4.053E+00	1.100E+00	1.100E+00	21.17
NP-237	351.92	522	37.20	3.529E+00	1.018E+00	1.018E+00	16.09
	89.95	82	2.70	5.549E+00	1.396E+00	1.396E+00	73.35
	93.35	212	4.50	5.764E+00	2.088E+00	2.088E+00	45.08
AM-243	105.00	-----	2.10	6.295E+00	-----	Line Not Found	-----
	143.76	-----	10.50*	6.390E+00	-----	Line Not Found	-----
	163.35	-----	4.70	6.073E+00	-----	Line Not Found	-----
ANH-511	185.71	183	54.00	5.659E+00	1.530E-01	1.530E-01	47.64
	205.31	48	4.70	5.323E+00	4.877E-01	4.877E-01	114.60
	86.50	152	12.60*	5.369E+00	5.759E-01	5.759E-01	48.60
U-238	95.87	-----	2.60	5.929E+00	-----	Line Not Found	-----
	63.29	81	3.80*	2.577E+00	2.108E+00	2.108E+00	87.99
	74.67	334	66.00*	4.153E+00	3.117E-01	3.117E-01	21.46
AM-243	86.72	152	0.34	5.369E+00	2.160E+01	2.160E+01	44.00
	117.66	-----	0.55	6.518E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.410E+00	-----	Line Not Found	-----
511.00	153	100.00*	2.613E+00	1.495E-01	1.495E-01	48.31	

Flag: "\*" = Keyline

Total number of lines in spectrum 60  
 Number of unidentified lines 8  
 Number of lines tentatively identified by NID 52 86.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BE-7	53.44D	1.05	2.385E-01	2.507E-01	3.168E-01	126.36	
K-40	1.28E+09Y	1.00	2.123E+01	2.123E+01	0.222E+01	10.45	
CO-58	70.80D	1.04	5.971E-02	6.200E-02	14.41E-02	232.43	
CD-109	464.00D	1.01	1.951E+00	1.962E+00	0.863E+00	44.00	
SN-126	1.00E+05Y	1.00	1.961E-01	1.961E-01	0.863E-01	44.00	
RE-188	69.40D	1.04	1.742E-01	1.811E-01	1.861E-01	102.76	
HG-203	46.60D	1.06	4.121E-02	4.364E-02	5.680E-02	130.15	
TL-208	1.91Y	1.00	4.686E-01	4.704E-01	0.889E-01	18.91	
BI-211	7.04E+08Y	1.00	2.926E+00	2.926E+00	0.445E+00	15.22	
BI-212	1.91Y	1.00	1.303E+00	1.308E+00	0.425E+00	32.51	
PB-212	1.91Y	1.00	1.550E+00	1.556E+00	0.151E+00	9.73	
PO-212	1.91Y	1.00	1.550E+00	1.556E+00	0.151E+00	9.73	
BI-214	1600.00Y	1.00	7.845E-01	7.845E-01	1.498E-01	19.09	
PB-214	1600.00Y	1.00	1.018E+00	1.018E+00	0.164E+00	16.09	
PO-214	1600.00Y	1.00	1.018E+00	1.018E+00	0.164E+00	16.09	
PO-216	1.91Y	1.00	1.550E+00	1.556E+00	0.151E+00	9.73	
PO-218	1600.00Y	1.00	1.018E+00	1.018E+00	0.164E+00	16.09	
RA-224	1.91Y	1.00	3.372E+00	3.385E+00	1.184E+00	34.98	
RA-226	1600.00Y	1.00	7.845E-01	7.845E-01	1.498E-01	19.09	
AC-228	5.75Y	1.00	1.643E+00	1.645E+00	0.347E+00	21.06	
RA-228	5.75Y	1.00	1.643E+00	1.645E+00	0.347E+00	21.06	
TH-228	1.91Y	1.00	1.550E+00	1.556E+00	0.151E+00	9.73	
TH-230	7.70E+04Y	1.00	7.845E-01	7.845E-01	1.498E-01	19.09	
TH-232	1.41E+10Y	1.00	1.550E+00	1.550E+00	0.151E+00	9.73	
TH-234	4.47E+09Y	1.00	2.108E+00	2.108E+00	1.855E+00	87.99	
U-234	2.45E+05Y	1.00	1.100E+00	1.100E+00	0.233E+00	21.17	
U-235	7.04E+08Y	1.00	1.530E-01	1.530E-01	0.729E-01	47.64	K
NP-237	2.14E+06Y	1.00	5.759E-01	5.759E-01	2.799E-01	48.60	
U-238	4.47E+09Y	1.00	2.108E+00	2.108E+00	1.855E+00	87.99	
AM-243	7380.00Y	1.00	3.117E-01	3.117E-01	0.669E-01	21.46	
ANH-511	1.00E+09Y	1.00	1.495E-01	1.495E-01	0.722E-01	48.31	
Total Activity :			5.491E+01	5.500E+01			

Grand Total Activity : 5.491E+01 5.500E+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	129.06	95	361	0.76	258.08	253	10	1.31E-02	78.2	6.53E+00	T
0	209.43	153	332	1.05	418.85	414	11	2.13E-02	48.9	5.23E+00	T
0	215.38	66	164	2.24	430.76	428	7	9.18E-03	69.3	5.13E+00	T
0	271.07	150	250	1.17	542.16	535	14	2.08E-02	47.8	4.33E+00	T
0	327.85	63	158	0.82	655.74	651	10	8.70E-03	79.5	3.73E+00	T
0	409.99	47	111	1.73	820.05	816	9	6.48E-03	86.9	3.12E+00	T
0	416.41	39	133	0.72	832.90	826	14	5.41E-03	****	3.09E+00	T
0	462.88	103	89	0.98	925.87	922	10	1.42E-02	39.5	2.83E+00	T
0	666.74	51	60	3.70	1333.72	1327	14	7.06E-03	75.5	2.09E+00	T
1	673.52	18	33	1.42	1347.28	1345	17	2.44E-03	****	2.07E+00	T
1	676.54	22	47	1.74	1353.32	1345	17	3.00E-03	****	2.06E+00	T
0	702.07	22	46	0.59	1404.40	1401	8	3.01E-03	****	2.00E+00	T
3	723.47	14	65	2.16	1447.21	1439	22	1.99E-03	****	1.94E+00	T
0	794.59	53	46	1.78	1589.50	1585	10	7.34E-03	55.0	1.79E+00	T
0	844.02	51	134	8.81	1688.41	1672	26	7.12E-03	****	1.69E+00	
6	864.19	9	26	2.08	1728.76	1717	15	1.29E-03	****	1.66E+00	
0	985.84	19	36	5.31	1972.18	1967	13	2.60E-03	****	1.47E+00	
0	1000.30	42	79	12.03	2001.11	1979	29	5.80E-03	****	1.45E+00	T
0	1040.28	15	24	0.75	2081.11	2076	9	2.10E-03	****	1.40E+00	T
0	1063.58	27	39	1.68	2127.73	2121	13	3.82E-03	****	1.37E+00	T
0	1072.27	18	11	0.61	2145.13	2142	6	2.50E-03	76.0	1.36E+00	
0	1221.08	14	38	0.92	2442.90	2435	10	1.97E-03	****	1.21E+00	T
0	1281.63	37	47	0.77	2564.07	2554	17	5.18E-03	90.2	1.16E+00	
0	1365.28	8	26	3.74	2731.47	2716	17	1.04E-03	****	1.10E+00	T
0	1422.05	10	8	1.22	2845.09	2841	9	1.43E-03	****	1.06E+00	
0	1630.40	26	0	2.01	3262.08	3257	12	3.61E-03	39.2	9.56E-01	
0	1663.75	12	0	0.73	3328.83	3325	10	1.67E-03	57.7	9.43E-01	

Flags: "T" = Tentatively associated

```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*
*****
*
*           DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G204220003.CNF;1
* Acquisition date   : 10-MAR-2008 10:21:32  Detector SN#      :
* Detector ID        : GAM23                    Sensitivity           : 3.00000
* Geometry           : CAN                      Energy tolerance      : 2.00000
* Elapsed live time  : 0 02:00:00.00           Abundance limit      : 75.00000
* Elapsed real time  : 0 02:00:05.55           Half life ratio      : 8.00000
*****
*
*           SAMPLE DATA
*
* Sample date        : 6-MAR-2008 14:55:00.   Nuclide Library      : SOLID
* Sample ID          : G204220003             Analyst initials     : MJH1
* Batch Number       : 734275                 Sample Quantity      : 1.46660E+02 GRAM
*****
*
*           QC DATA
*
* CALIB. DATE/TIME  : 18-MAY-2007 16:30:26.5MS Isotope         :
* MSD ID             :                          MSD Isotope          :
* LCS ID             : 1032-A                   LCS Isotope          :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.507E-01	3.168E-01	4.159E-01	2.627E-02	0.603
K-40	2.123E+01	2.219E+00	4.970E-01	3.690E-02	42.724
CO-58	6.200E-02	1.441E-01	5.381E-02	3.911E-03	1.152
CD-109	1.962E+00	8.632E-01	1.155E+00	8.610E-02	1.699
SN-126	1.961E-01	8.629E-02	1.161E-01	8.634E-03	1.689
RE-188	1.811E-01	1.861E-01	2.055E-01	1.133E-02	0.881
HG-203	4.364E-02	5.680E-02	4.312E-02	2.723E-03	1.012
TL-208	4.704E-01	8.895E-02	5.310E-02	3.505E-03	8.858
BI-211	2.926E+00	4.454E-01	2.762E-01	1.679E-02	10.594
BI-212	1.308E+00	4.253E-01	4.108E-01	3.385E-02	3.184
PB-212	1.556E+00	1.514E-01	7.439E-02	5.360E-03	20.921
PO-212	1.556E+00	1.514E-01	7.439E-02	5.360E-03	20.921
BI-214	7.845E-01	1.498E-01	1.092E-01	8.473E-03	7.187
PB-214	1.018E+00	1.638E-01	9.630E-02	7.708E-03	10.570
PO-214	1.018E+00	1.638E-01	9.630E-02	7.708E-03	10.570
PO-216	1.556E+00	1.514E-01	7.439E-02	5.360E-03	20.921
PO-218	1.018E+00	1.638E-01	9.630E-02	7.708E-03	10.570
RA-224	3.385E+00	1.184E+00	8.474E-01	4.796E-02	3.995

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	7.845E-01	1.498E-01	1.092E-01	8.473E-03	7.187
AC-228	1.645E+00	3.465E-01	1.968E-01	2.120E-02	8.358
RA-228	1.645E+00	3.465E-01	1.968E-01	2.120E-02	8.358
TH-228	1.556E+00	1.514E-01	7.439E-02	5.359E-03	20.924
TH-230	7.845E-01	1.498E-01	1.092E-01	8.473E-03	7.187
TH-232	1.550E+00	1.508E-01	7.410E-02	5.338E-03	20.924
TH-234	2.108E+00	1.855E+00	1.783E+00	3.118E-01	1.182
U-234	1.100E+00	2.329E-01	1.911E-01	1.642E-02	5.756
U-235	1.530E-01	7.287E-02	2.954E-01	4.849E-02	0.518
NP-237	5.759E-01	2.799E-01	3.080E-01	6.750E-02	1.870
U-238	2.108E+00	1.855E+00	1.783E+00	3.118E-01	1.182
AM-243	3.117E-01	6.687E-02	7.100E-02	5.036E-03	4.389
ANH-511	1.495E-01	7.222E-02	4.384E-02	2.383E-03	3.411

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	5.346E-03		4.546E-02	6.540E-02	4.367E-03	0.082
NA-24	-2.667E-01		2.639E+00	3.414E+00	2.593E-01	-0.078
AL-26	6.414E-03		2.152E-02	3.821E-02	2.303E-03	0.168
TI-44	3.153E-01	+	4.569E-02	5.739E-02	4.088E-03	5.493
SC-46	-2.306E-02		3.519E-02	5.337E-02	4.259E-03	-0.432
V-48	3.868E-02		4.818E-02	7.461E-02	5.624E-03	0.518
CR-51	-5.597E-02		2.435E-01	4.045E-01	2.585E-02	-0.138
MN-52	4.311E-02		5.181E-02	9.461E-02	6.786E-03	0.456
MN-54	8.015E-03		4.221E-02	6.111E-02	4.563E-03	0.131
CO-56	4.766E-03		3.695E-02	5.317E-02	4.030E-03	0.090
CO-57	2.096E-03		1.946E-02	3.291E-02	2.416E-03	0.064
FE-59	1.236E-03		7.253E-02	1.212E-01	8.982E-03	0.010
CO-60	-1.022E-02		3.545E-02	5.577E-02	4.053E-03	-0.183
ZN-65	1.649E-02		9.427E-02	1.384E-01	8.784E-03	0.119
GE-68	-2.105E-01		1.133E+00	1.653E+00	1.113E-01	-0.127
AS-73	-3.909E-01		7.688E-01	1.192E+00	1.012E-01	-0.328
AS-74	1.075E-02		5.201E-02	8.912E-02	5.115E-03	0.121
SE-75	1.686E-03		3.780E-02	5.360E-02	3.172E-03	0.031
BR-77	5.648E-02		3.657E-01	5.981E-01	3.276E-02	0.094
RB-83	-1.084E-03		6.005E-02	9.688E-02	5.305E-03	-0.011
RB-84	-1.916E-02		5.546E-02	8.725E-02	6.898E-03	-0.220
KR-85	7.934E+00		7.323E+00	1.146E+01	6.246E-01	0.692
SR-85	3.612E-02		3.334E-02	5.219E-02	2.844E-03	0.692
RB-86	-7.843E-02		4.924E-01	6.907E-01	4.655E-02	-0.114
Y-88	-2.706E-02		3.409E-02	4.770E-02	2.821E-03	-0.567
ZR-88	1.039E-04		2.488E-02	4.121E-02	1.991E-03	0.003
Y-91	-6.607E+00		1.479E+01	2.336E+01	1.394E+00	-0.283
NB-94	2.782E-02	+	3.248E-02	5.382E-02	3.371E-03	0.517
NB-95	2.238E-02		3.762E-02	6.488E-02	4.432E-03	0.345
NB-95M	-1.055E-01		2.177E-01	3.004E-01	2.256E-02	-0.351



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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-1.778E-02		6.124E-02	9.867E-02	7.725E-03	-0.180
NB-97	-4.710E-01		1.324E+00	2.153E+00	1.269E-01	-0.219
ZR-97	5.894E+01		2.795E+01	4.692E+01	2.544E+00	1.256
MO-99	4.213E-01		6.337E-01	1.103E+00	1.559E-01	0.382
TC-99M	4.659E-04		4.117E-04	Half-Life too short		
RH-102	5.708E-03		3.198E-02	4.640E-02	2.448E-03	0.123
RU-103	-1.061E-02		3.160E-02	4.987E-02	6.212E-03	-0.213
RH-106	2.598E-01		2.915E-01	5.192E-01	6.097E-02	0.500
RU-106	2.598E-01		2.903E-01	5.192E-01	3.017E-02	0.500
AG-108M	1.366E-02		2.965E-02	5.026E-02	2.830E-03	0.272
AG-110M	-1.394E-02		3.135E-02	5.059E-02	3.169E-03	-0.275
IN-111	-6.111E-02		6.371E-02	8.334E-02	4.749E-03	-0.733
IN-113M	-2.411E-02		3.878E-02	6.163E-02	3.257E-03	-0.391
SN-113	-2.411E-02		3.878E-02	6.163E-02	3.257E-03	-0.391
IN-114M	1.022E-01		1.368E-01	2.093E-01	1.082E-02	0.488
CD-115	-2.549E-01		3.013E-01	4.503E-01	2.479E-02	-0.566
SN-117M	1.078E-02		2.599E-02	4.188E-02	2.233E-03	0.257
SB-122	-3.764E-02		1.088E-01	1.694E-01	9.549E-03	-0.222
I-123	-3.047E-01		2.819E+00	4.638E+00	2.462E-01	-0.066
TE-123M	-2.348E-03		2.172E-02	3.574E-02	1.928E-03	-0.066
I-124	-3.579E-02		9.347E-02	1.438E-01	8.283E-03	-0.249
SB-124	5.566E-02		6.053E-02	1.164E-01	8.102E-03	0.478
SB-125	4.529E-03		8.073E-02	1.333E-01	7.084E-03	0.034
TE-125M	3.857E+00		6.431E+00	1.115E+01	1.008E+00	0.346
I-126	1.905E-01	+	1.443E-01	1.576E-01	9.368E-03	1.208
SB-126	2.080E-02		8.036E-02	1.193E-01	7.660E-03	0.174
SB-127	1.161E-01		1.672E-01	2.875E-01	1.941E-02	0.404
XE-127	3.622E-02	+	4.105E-02	5.076E-02	2.687E-03	0.713
I-131	-2.296E-02		3.874E-02	6.204E-02	3.659E-03	-0.370
TE-132	2.227E-02		5.384E-02	8.847E-02	1.128E-02	0.252
BA-133	-1.345E-02		4.272E-02	6.097E-02	6.912E-03	-0.221
I-133	5.767E-02		6.594E-01	1.071E+00	6.778E-02	0.054
CS-134	8.893E-02	+	4.933E-02	8.004E-02	5.737E-03	1.111
CS-135	1.626E-01		1.416E-01	2.185E-01	1.688E-02	0.744
I-135	-3.280E-05		1.306E-03	Half-Life too short		
CS-136	3.821E-04		5.227E-02	8.767E-02	6.529E-03	0.004
BA-137M	2.944E-02		3.824E-02	6.011E-02	3.548E-03	0.490
CS-137	3.112E-02		4.043E-02	6.354E-02	3.766E-03	0.490
CE-139	9.742E-04		2.270E-02	3.750E-02	1.856E-03	0.026
BA-140	5.479E-02		1.362E-01	2.245E-01	7.292E-02	0.244
LA-140	-4.554E-02		4.410E-02	6.137E-02	4.190E-03	-0.742
CE-141	2.311E-02		4.074E-02	6.936E-02	4.324E-03	0.333
CE-143	3.505E+00	+	9.774E-01	7.747E-01	1.556E-01	4.525
CE-144	1.952E-01		1.730E-01	2.734E-01	3.983E-02	0.714
PM-144	-6.943E-03		3.298E-02	4.877E-02	3.028E-03	-0.142
PR-144	-4.677E-01		2.222E+00	3.285E+00	2.040E-01	-0.142
PM-146	2.428E-02		3.881E-02	6.632E-02	5.447E-03	0.366
ND-147	1.832E-01		2.549E-01	4.334E-01	5.808E-02	0.423

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-147	-2.800E+02		5.622E+02	9.253E+02	6.759E+01	-0.303
PM-149	6.719E-01		2.163E+00	3.730E+00	5.300E-01	0.180
EU-152	-5.712E-02		8.319E-02	1.332E-01	8.337E-03	-0.429
GD-153	-4.293E-02		6.469E-02	9.569E-02	6.780E-03	-0.449
EU-154	1.726E-02		1.279E-01	1.845E-01	1.827E-02	0.094
EU-155	-1.148E-02		8.466E-02	1.430E-01	1.023E-02	-0.080
TB-160	-1.219E-01		1.266E-01	1.859E-01	1.466E-02	-0.655
TM-171	-1.046E+01		2.670E+01	3.781E+01	2.755E+00	-0.277
LU-176	6.152E-03		2.023E-02	3.476E-02	2.024E-03	0.177
LU-177	1.013E+00	+	4.983E-01	5.486E-01	2.934E-02	1.847
LU-177M	4.478E-02		2.433E-01	2.616E-01	1.296E-02	0.171
HF-181	2.386E-02		3.514E-02	5.373E-02	2.853E-03	0.444
W-181	8.112E-03		3.210E-01	4.676E-01	3.448E-02	0.017
TA-182	1.136E-01	+	1.974E-01	2.775E-01	1.701E-02	0.409
RE-183	-8.442E-03		8.078E-02	1.328E-01	6.816E-03	-0.064
RE-184	-4.892E-02		1.949E-01	3.062E-01	1.765E-02	-0.160
OS-185	8.127E-03		3.512E-02	5.995E-02	3.519E-03	0.136
W-188	2.222E+00		6.024E+00	9.274E+00	5.488E-01	0.240
IR-192	7.678E-03		2.773E-02	4.743E-02	2.741E-03	0.162
AU-195	1.735E-01		1.642E-01	2.913E-01	2.057E-02	0.595
TL-200	1.458E-01		2.968E-01	5.095E-01	2.642E-02	0.286
TL-201	-3.959E-01		4.475E-01	7.061E-01	3.499E-02	-0.561
TL-202	2.641E-02		3.275E-02	5.675E-02	2.893E-03	0.465
BI-207	6.856E-02	+	1.053E-01	1.928E-01	1.324E-02	0.356
TL-207	-3.440E-01		6.681E-01	9.467E-01	1.560E-01	-0.363
BI-210	-1.477E+00		4.242E+00	6.699E+00	6.098E-01	-0.221
PB-210	-1.477E+00		4.242E+00	6.699E+00	6.098E-01	-0.221
PO-210	-1.477E+00		4.242E+00	6.699E+00	5.493E-01	-0.221
PB-211	-1.023E+00		1.169E+00	1.280E+00	7.967E-01	-0.799
PO-215	-3.440E-01		6.681E-01	9.467E-01	1.560E-01	-0.363
RN-219	7.132E-02		3.725E-01	6.232E-01	8.253E-02	0.114
RN-220	8.712E-02		2.462E+01	3.959E+01	2.212E+00	0.002
RA-223	-3.440E-01		6.681E-01	9.467E-01	1.560E-01	-0.363
AC-227	5.444E-02		3.344E-01	5.383E-01	7.513E-02	0.101
TH-227	5.444E-02		3.345E-01	5.383E-01	9.095E-02	0.101
TH-229	-3.853E-01		4.055E-01	6.266E-01	3.260E-02	-0.615
PA-231	1.394E-01		1.438E+00	2.175E+00	3.011E-01	0.064
TH-231	6.510E-01	+	3.150E-01	3.049E-01	2.246E-02	2.135
U-231	-3.850E-02		1.340E-01	2.030E-01	1.446E-02	-0.190
PA-233	-2.226E-02		5.715E-02	9.432E-02	5.796E-03	-0.236
PA-234	-2.324E-01		3.002E-01	4.408E-01	8.111E-02	-0.527
PA-234M	1.249E+01	+	1.588E+01	9.303E+00	9.557E-01	1.343
NP-236	9.958E-03		6.449E-02	1.073E-01	5.625E-03	0.093
NP-239	-3.214E-03		1.486E-01	2.507E-01	1.802E-02	-0.013
AM-241	1.439E-01		1.511E-01	2.345E-01	2.009E-02	0.614
CM-243	-1.782E-02		7.459E-02	1.256E-01	8.818E-03	-0.142
CM-247	2.750E-03		3.302E-02	5.487E-02	2.683E-03	0.050
CF-249	2.787E-02		3.677E-02	6.375E-02	3.114E-03	0.437

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CF-251	1.556E-02		1.026E-01	1.697E-01	8.547E-03	0.092

\*\*\*\*\*  
 \* GEL Laboratories LLC \*  
 \* 2040 SAVAGE ROAD \*  
 \* CHARLESTON ,SC 29417 \*  
 \* GAMMA SPECTROSCOPY BACKGROUND REPORT \*  
 \*\*\*\*\*

ENERGY	MDA COUNTS
46.50	188.6492
46.50	188.6492
46.50	188.6492
48.70	171.7735
49.72	186.9093
51.35	173.7272
52.39	166.6508
52.97	189.4713
53.15	189.6105
53.44	187.5883
54.07	174.5542
56.28	174.9572
56.28	174.9592
57.37	217.9177
57.53	216.9108
57.53	216.9123
57.60	216.9695
57.98	216.1434
57.98	216.1434
59.32	206.9035
59.32	206.9035
59.40	206.9659
59.54	177.9312
59.72	176.5166
60.01	181.3183
61.10	225.2541
61.14	225.2876
61.30	225.4205
63.00	222.5512
63.29	222.7837
63.29	222.7837
63.58	223.0161
64.28	251.2779
65.12	233.2430
65.20	233.3081
65.20	233.3081
66.05	223.0118
66.72	259.7360
66.83	259.8367
66.91	259.9089
67.20	256.6213
67.20	256.6213
67.67	239.2693
67.75	239.3341
67.85	239.4157
68.90	245.0321
68.90	245.0321
69.30	231.0692
69.67	269.5216
70.82	266.5657
70.82	266.5657
70.83	266.5742
72.80	265.0903
72.80	265.0903
72.87	265.1508
72.87	265.1508
74.67	263.4590
74.81	263.5767
74.81	263.5767
74.81	263.5767
74.81	263.5767
74.81	263.5767
74.81	263.5767
74.97	263.7110
74.97	263.7110
75.28	263.9713
75.70	264.3212

77.11	265.4935
77.11	265.4935
77.11	265.4935
77.11	265.4935
77.11	265.4935
77.11	265.4935
77.11	265.4935
78.38	266.5397
79.62	267.5529
79.80	267.6988
79.80	267.6988
80.11	267.9508
80.18	268.0072
80.30	268.1050
80.30	268.1050
81.00	268.6704
81.07	192.8898
81.07	192.8898
81.07	192.8898
82.60	193.7717
83.37	194.2109
83.78	254.2763
83.78	254.2763
83.78	254.2763
84.21	297.0279
84.21	297.0279
84.40	297.1931
84.90	297.6253
85.43	298.0829
86.29	298.8201
86.50	298.9998
86.54	376.9341
86.59	376.9867
86.72	377.1286
86.79	377.2018
86.94	377.3643
87.30	377.7512
87.30	377.7512
87.30	377.7512
87.30	377.7512
87.30	377.7512
87.30	377.7512
87.57	378.0396
87.88	378.3714
88.03	378.5316
88.36	378.8841
88.47	379.0031
89.95	380.5733
91.11	173.0806
92.29	173.6409
92.38	173.6835
93.35	226.6395
94.00	214.2096
94.67	213.3068
94.67	213.3093
94.90	213.4398
94.90	213.4398
94.90	213.4398
95.87	237.1945
95.87	237.1945
96.73	260.9932
97.43	253.7030
98.44	217.1674
98.44	217.1674
98.88	209.6200
99.55	213.4532
99.55	213.4532
99.86	219.7021
100.00	227.5989
100.10	237.2185
103.18	234.6949
103.76	239.4207
105.00	246.3174
105.31	250.0268
108.00	238.3823
109.28	235.5627
111.00	260.6299
111.00	260.6299
111.76	253.9443

112.81	241.1256
112.95	237.6182
115.19	235.2515
115.19	235.2515
115.19	235.2515
116.30	236.7552
117.00	231.7018
117.00	231.7018
117.66	234.7688
121.11	245.7255
121.26	235.7560
121.62	224.9695
121.78	224.1347
122.06	228.8501
122.32	224.4001
122.32	224.4001
122.32	224.4001
123.07	213.7611
129.76	231.7404
131.20	235.2400
133.02	215.0465
133.54	201.2072
135.34	227.8400
136.00	238.5155
136.25	237.6932
136.48	254.7894
140.51	234.9696
140.51	0.0000
142.18	272.0117
142.65	260.7974
143.76	269.9775
144.24	264.4803
144.24	264.4803
144.24	264.4803
145.22	243.8585
145.44	246.8433
147.16	248.6200
152.43	202.9197
152.70	203.0215
153.22	220.2732
154.21	220.6755
154.21	220.6755
154.21	220.6755
155.03	239.1003
156.02	230.7159
158.56	217.3096
159.00	234.4241
159.00	234.4241
160.31	225.1008
161.27	236.3621
162.32	237.7930
162.64	237.9272
163.35	214.4026
163.89	220.5660
165.85	221.3225
167.43	256.9163
171.28	227.4162
171.86	239.7262
172.10	239.8231
176.33	209.0490
176.55	209.1244
176.60	209.1412
181.06	199.4235
185.71	224.6129
186.00	224.7149
190.27	183.6800
192.34	208.2153
193.63	214.8872
197.04	199.2290
198.60	215.4644
200.40	192.8607
201.83	207.5299
202.84	201.4955
205.31	203.8203
208.36	199.9302
208.81	200.0599
209.75	200.3307
209.75	200.3307

210.97	199.0781
215.65	195.0173
216.55	186.0941
218.09	194.6045
222.10	227.2182
223.80	195.0547
226.40	226.3662
227.00	202.4717
227.08	202.4943
227.20	190.4842
228.16	184.1550
228.18	184.1602
228.18	184.1602
231.56	205.9161
235.69	232.5073
236.00	207.6797
236.00	207.6797
236.00	207.6797
238.59	174.4849
238.60	174.4865
238.63	174.4945
238.63	174.4945
238.63	174.4945
239.00	174.5775
240.98	175.0247
241.98	175.2499
241.98	175.2499
241.98	175.2499
241.98	175.2499
244.69	171.3764
245.39	183.3005
247.94	157.4615
248.90	149.7684
249.79	148.8088
252.40	176.4363
252.85	167.4816
252.85	167.4816
254.15	162.0838
256.20	159.0837
256.20	159.0837
256.20	159.0837
260.90	164.5664
264.65	132.5928
268.24	119.3223
268.79	122.8611
269.46	119.4950
269.46	119.4950
269.46	119.4950
269.46	119.4950
271.23	119.7435
271.23	119.7435
273.65	118.3401
276.40	111.7344
277.35	131.0806
277.60	131.1195
277.60	131.1195
278.00	131.1790
278.60	124.6174
279.20	124.7043
279.53	148.5786
281.68	158.7793
283.67	145.0550
283.67	145.0550
284.30	138.5813
285.00	137.0103
285.90	135.0049
286.10	151.8044
286.10	151.8044
287.40	167.0506
288.45	0.0000
290.67	136.2563
290.80	136.2750
291.72	123.6245
293.26	150.8792
293.70	169.4646
295.21	155.4793
295.21	155.4793
295.21	155.4793

295.21	155.4793
295.21	155.4793
295.21	155.4793
295.96	135.6208
296.50	135.7020
297.23	135.8087
298.57	136.0059
299.80	118.9842
299.80	118.9842
300.09	119.0207
300.09	119.0207
300.09	119.0207
300.10	119.0227
300.12	119.0248
301.29	114.8672
301.29	114.8672
302.84	117.9351
303.76	128.1265
303.91	128.1483
304.40	129.6563
304.40	129.6563
304.84	144.1284
306.84	121.8658
308.46	134.7357
311.98	153.3832
316.51	139.5154
318.01	140.6434
319.02	149.0171
319.41	142.6747
320.08	140.0267
323.87	154.3495
323.87	154.3495
323.87	154.3495
328.77	131.4749
329.70	158.2116
329.70	158.2116
329.85	158.2351
330.00	143.4681
333.44	133.5696
334.20	139.6093
334.20	139.6093
334.30	139.6230
338.28	139.7964
338.28	139.7964
338.28	139.7964
338.32	139.8010
338.32	139.8010
340.50	127.0227
340.57	127.0310
344.27	134.0472
345.85	106.3987
350.59	123.7287
351.07	112.2743
351.07	112.2743
351.92	112.3651
351.92	112.3651
351.92	112.3651
351.92	112.3651
351.92	112.3651
351.92	112.3651
355.39	122.7735
356.01	125.8779
364.48	126.1046
366.43	110.0586
367.43	109.2007
367.94	104.4611
369.80	105.5974
374.96	95.4787
383.85	118.5915
387.95	109.2622
388.63	120.0646
391.69	132.1264
391.69	132.1264
392.90	110.7102
398.62	124.0524
400.65	97.6374
401.10	105.5681
401.81	110.5679



401.81	110.5679
402.60	109.6535
404.84	133.0198
411.60	111.4753
413.65	111.6650
414.70	91.8035
415.30	126.1917
415.76	126.2399
417.63	0.0000
418.52	112.1111
423.70	113.7316
427.08	104.8268
427.89	95.8176
432.53	92.1233
433.93	92.2247
439.47	84.4856
439.56	84.4906
439.89	88.5864
443.98	97.0410
444.90	79.7329
445.03	79.7401
445.03	79.7401
445.03	79.7401
453.90	83.3730
463.38	87.0826
468.07	84.8908
473.00	111.9306
475.06	98.7155
475.35	103.7561
476.78	97.1642
477.59	91.1458
477.96	94.3135
482.03	72.3105
484.57	85.2900
487.03	81.2215
490.36	88.8168
492.35	76.2363
497.08	95.6154
507.63	80.4841
510.53	92.2273
510.84	92.2477
511.00	92.2575
511.85	92.3113
511.85	92.3113
513.99	82.5568
513.99	82.5568
520.41	87.4542
520.65	84.2294
527.90	93.3224
528.96	82.5289
529.64	80.3955
529.87	79.3202
531.02	70.6812
537.32	80.8065
543.00	84.3950
546.56	0.0000
549.76	80.3651
552.65	63.9703
555.20	108.2642
563.23	94.3851
563.90	89.9830
568.70	88.0264
569.32	93.6335
569.50	90.3018
569.67	90.3117
573.80	292.8710
574.00	232.5400
574.64	137.5642
578.91	75.3580
579.30	75.3754
583.14	76.4543
585.48	78.0656
591.81	78.6696
592.07	75.0627
593.00	79.6297
595.88	73.4240
600.56	86.3582
602.52	83.0473

602.71	83.0562
602.71	83.0562
603.60	69.8198
604.41	77.4463
604.70	71.3835
606.64	68.4247
609.31	91.3794
609.31	91.3794
609.31	91.3794
610.33	91.4331
612.46	70.1867
614.37	68.7396
618.01	90.0112
621.84	66.2783
621.84	66.2783
631.29	65.7166
633.02	76.8986
633.10	76.9027
634.78	80.6874
635.90	64.0339
636.97	65.9298
645.85	66.2626
646.12	65.3396
656.30	79.7933
657.75	80.7972
657.90	79.8660
661.65	69.0472
661.65	69.0472
664.57	102.1655
666.33	78.6641
666.33	78.6641
675.00	60.0677
677.61	60.1528
685.20	60.3986
692.80	66.0705
695.00	69.9827
696.49	71.2715
696.49	71.2715
697.00	70.3757
697.49	81.5925
698.50	72.0319
699.00	65.6474
702.63	71.2268
706.10	80.3548
706.58	70.7301
706.67	70.7337
709.31	71.4743
713.82	80.3556
717.42	66.2797
720.50	64.7640
721.93	61.2481
722.20	61.2558
722.78	61.2743
722.78	61.2743
722.89	61.2773
722.95	61.2789
723.30	61.2912
724.18	61.3173
727.18	61.4112
733.00	50.5125
735.90	59.7252
739.58	57.8736
742.81	64.8447
744.21	75.7048
747.13	64.9849
751.79	71.0561
753.82	55.3205
755.35	54.3743
756.15	74.1760
756.87	66.2868
763.13	69.4685
763.93	76.4436
765.79	71.5447
766.41	71.5658
766.84	66.6107
768.36	78.5988
778.00	77.7436
778.57	62.4893

778.89	69.9983
783.80	65.1508
785.46	68.2125
792.07	42.7667
795.84	80.6445
796.30	80.6621
801.93	57.2865
805.60	57.3847
810.76	57.5216
815.85	59.3530
817.79	61.1030
818.51	62.8214
819.60	57.7568
826.30	68.4983
828.27	53.2099
831.60	64.4163
831.96	65.8913
834.83	70.1318
836.80	0.0000
846.75	49.8709
848.13	41.2979
856.28	48.3551
856.80	46.6381
860.37	64.0123
867.32	50.3240
867.82	48.6001
871.10	70.9186
873.19	55.3239
874.81	42.8278
875.33	45.9723
876.40	53.3109
879.36	70.1259
880.27	58.6346
880.51	54.4527
881.50	62.8564
883.24	56.6130
884.67	45.1080
889.25	63.0659
898.02	45.3652
899.00	44.3287
903.28	46.8254
911.07	51.9800
911.07	51.9800
911.20	51.9823
919.63	46.5762
920.93	56.4535
925.00	52.2814
925.24	53.3533
926.50	57.6519
934.06	49.9764
935.52	55.7210
937.48	53.6206
944.10	54.8412
946.00	62.4151
949.00	38.7879
962.29	41.5219
964.01	56.3646
964.40	56.3723
966.15	56.4116
968.20	56.4573
969.11	52.4952
969.11	52.4952
969.11	52.4952
977.42	59.9320
980.50	41.8213
983.50	41.8705
989.30	32.8425
996.32	49.3978
1001.03	51.3197
1001.68	47.6656
1004.76	47.1983
1021.30	48.0232
1024.50	52.7046
1034.80	46.1459
1037.82	47.7916
1038.57	43.0237
1038.76	0.0000
1045.16	46.3239

1046.59	53.4514
1048.07	43.8407
1050.47	49.4826
1050.47	49.4826
1063.62	51.5961
1076.63	38.7790
1077.35	41.0114
1085.78	44.4450
1093.90	45.5234
1099.22	51.3105
1112.02	54.9773
1112.84	70.1743
1115.52	54.0624
1120.29	51.6907
1120.51	51.6951
1121.28	51.7083
1124.00	0.0000
1129.67	46.0957
1131.51	0.0000
1147.95	38.6556
1167.94	67.1329
1173.22	66.2762
1175.09	63.3919
1177.93	63.4501
1189.05	48.9888
1204.90	56.1372
1205.75	60.0940
1213.00	54.1696
1221.42	52.6196
1230.97	56.6127
1235.34	64.6482
1236.41	62.6796
1238.11	64.7038
1238.25	64.7091
1246.25	69.8633
1260.41	0.0000
1271.85	40.7455
1274.45	37.9736
1274.54	37.9752
1291.56	41.5005
1298.22	34.4856
1312.09	34.6309
1325.50	27.6119
1325.50	27.6119
1332.49	31.7682
1333.61	23.5784
1360.21	14.1696
1362.66	14.4751
1365.15	23.0592
1368.21	20.7121
1368.53	20.7145
1376.25	24.9131
1377.67	19.7306
1384.27	21.4035
1394.10	23.9976
1407.95	27.2346
1434.06	15.8282
1436.60	27.4547
1457.56	0.0000
1460.81	21.2606
1489.15	19.2828
1509.49	11.8482
1596.49	28.3301
1620.62	10.4506
1678.03	0.0000
1691.02	8.6993
1691.02	8.6993
1706.46	0.0000
1750.46	10.7829
1764.49	25.8160
1770.23	6.8933
1771.40	47.2818
1791.20	0.0000
1808.65	5.9607
1836.01	20.9905

TOTAL URANIUM BY GAMMA SPEC REPORT  
Sample:G204220003

Total Uranium Activity	6.2821E+00	ug/g
Total Uranium Counting Unc.	5.4082E+00	ug/g
Total Uranium Mda	5.3075E+00	ug/g

```

*****
*
*           GEL Laboratories LLC
*           2040 SAVAGE ROAD
*           CHARLESTON ,SC 29417
*           GROSS GAMMA REPORT
*
*****
*
* BATCH ID      : 734275           SAMPLE ID      : G204220003
* ANALYST       : MJH1             DETECTOR       : GAM23
* SAMPLE DATE   : 6-MAR-2008 14:55:00.00  COUNT TIME    : 0 02:00:00.00
* ANALYSIS DATE: 10-MAR-2008 10:21:32.35  SAMPLE ALQT   : 146.660 GRAM
*
*****

```

```

GROSS GAMMA ACTIVITY (pCi/GRAM ) : 8.570E+00
GROSS GAMMA ERROR (pCi/GRAM ) : 2.210E+00
GROSS GAMMA MDA (pCi/GRAM ) : 5.631E+00
GROSS GAMMA DLC (pCi/GRAM ) : 2.715E+00

```

VAX/VMS Nuclide Identification Report Generated 10-MAR-2008 14:24:56.19

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
Configuration   : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532439.CNF;1
Sample date     : 8-MAR-2008 00:00:00. Acquisition date : 10-MAR-2008 12:23:09
Sample ID      : G1201532439           Sample quantity : 1.55000E+02 GRAM
Detector name   : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00       Elapsed real time: 0 02:00:01.96  0.0%
Energy tolerance: 2.00000 keV         Analyst Initials  : MJH1
Abundance limit : 75.00000           Sensitivity       : 3.00000
Batch ID       : 734275              Detector SN#      :
Matrix Spike ID :                     LCS ID            : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.70*	5	157	1.07	92.85	89	7	6.69E-04	516.6	
2	0	63.25*	22	223	0.87	125.97	121	10	3.05E-03	159.1	
3	0	84.21*	10	155	0.95	167.93	165	7	1.39E-03	231.7	
4	0	92.78*	20	288	1.03	185.08	180	11	2.77E-03	205.0	
5	0	143.77*	28	145	1.38	287.15	283	11	3.86E-03	93.1	
6	0	239.32*	1	183	1.24	478.41	473	11	9.54E-05	*****	
7	0	251.58	51	161	4.82	502.96	496	16	7.02E-03	57.8	
8	0	287.21	10	109	0.74	574.27	569	9	1.40E-03	189.6	
9	0	351.86*	3	95	0.99	703.66	701	9	4.43E-04	594.0	
10	0	511.16*	33	59	3.14	1022.48	1014	15	4.61E-03	73.8	
11	0	524.24	33	39	0.78	1048.66	1044	10	4.53E-03	40.2	
12	0	529.36	36	45	3.51	1058.91	1054	12	4.94E-03	41.3	
13	0	538.65	16	38	0.58	1077.50	1074	8	2.26E-03	70.0	
14	0	564.53	22	27	0.73	1129.29	1126	8	3.04E-03	46.9	
15	0	580.80	16	28	1.28	1161.84	1156	8	2.22E-03	62.5	
16	0	583.59*	13	44	1.20	1167.44	1164	10	1.76E-03	116.9	
17	0	768.69*	20	30	3.38	1537.82	1533	11	2.75E-03	63.1	
18	0	1030.08	23	50	9.43	2060.83	2045	25	3.19E-03	85.4	
19	0	1102.01	7	18	1.27	2204.71	2200	9	9.72E-04	115.6	
20	0	1256.77*	4	12	0.56	2514.32	2507	11	5.50E-04	204.2	
21	4	1276.86	25	4	3.08	2554.51	2545	20	3.43E-03	31.9	1.01E+00
22	4	1280.86	10	2	1.47	2562.50	2545	20	1.38E-03	34.1	
23	1	1351.60	29	6	2.15	2704.00	2700	14	4.04E-03	19.2	6.21E+00
24	1	1354.10	17	2	2.15	2709.00	2700	14	2.34E-03	30.4	
25	0	1395.07	13	6	1.54	2790.95	2788	9	1.81E-03	44.8	
26	0	1488.65	10	9	1.25	2978.13	2970	11	1.32E-03	73.7	
27	0	1529.00	6	7	0.75	3058.83	3054	8	8.60E-04	80.7	
28	0	1586.67	11	18	7.72	3174.16	3162	18	1.50E-03	96.9	
29	0	1593.07	13	8	6.08	3186.97	3180	13	1.82E-03	55.5	
30	0	1809.83	5	5	1.19	3620.44	3614	9	6.25E-04	97.2	
31	0	1936.13	10	0	0.58	3873.00	3867	12	1.39E-03	31.6	

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

VAX/VMS Nuclide Identification Report Generated

```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*****
*
*           DETECTOR DATA
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532439
* Acquisition date   : 10-MAR-2008 12:23:09 Detector SN#      :
* Detector ID        : GAM13                               Sensitivity         : 3.000
* Geometry           : CAN                                 Energy tolerance    : 2.000
* Elapsed live time  : 0 02:00:00.00                     Abundance limit    : 75.000
* Elapsed real time  : 0 02:00:01.96                     Half life ratio    : 8.000
*****
*
*           SAMPLE DATA
*
* Sample date        : 8-MAR-2008 00:00:00 Nuclide Library   :
* Sample ID          : G1201532439                         Analyst initials    : MJH1
* Batch Number       : 734275                               Sample Quantity    : 1.5500E+02 GRAM
* Recovery           : 1.00000                             Carrier Weight     : 0.00000
*****
*
*           QC DATA
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME  : 2-JUL-2007 15:48:48 MS Isotope       :
* MSD DPM            : 0.000                               MSD Isotope        :
* LCS DPM            : 0.000                               LCS Isotope        :
* LCSD DPM           : 0.000                               LCSD Isotope       :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM )	Act error	MDA (pCi/GRAM )	
AL-26	1.219E-02	2.322E-02	4.079E-02	0.000E+00
SB-122	6.093E-02	5.615E-02	9.548E-02	0.000E+00
I-133	3.076E-01	2.498E-01	3.067E-01	0.000E+00
CE-141	2.251E-02	4.111E-02	4.051E-02	0.000E+00
ND-147	3.080E-01	2.528E-01	2.865E-01	0.000E+00
PM-149	4.189E-01	1.558E+00	1.841E+00	0.000E+00
TL-208	1.586E-02	3.637E-02	3.438E-02	0.000E+00
BI-210	3.960E-02	4.010E-01	4.033E-01	0.000E+00
PB-210	3.960E-02	4.010E-01	4.033E-01	0.000E+00
PO-210	3.960E-02	4.009E-01	4.033E-01	0.000E+00
BI-211	1.672E-02	1.946E-01	2.274E-01	0.000E+00
RA-224	8.769E-03	7.044E-01	5.904E-01	0.000E+00
TH-228	7.767E-04	6.239E-02	6.046E-02	0.000E+00
TH-234	1.823E-01	5.694E-01	4.707E-01	0.000E+00
U-238	1.823E-01	5.694E-01	4.707E-01	0.000E+00
ANH-511	3.104E-02	4.492E-02	3.686E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM )	K.L. Act error ) Ided	MDA (pCi/GRAM )	
BE-7	5.699E-03	1.840E-01	3.163E-01	0.000E+00 NOT IDENT.
NA-22	2.747E-02	2.812E-02	4.936E-02	0.000E+00 NOT IDENT.
NA-24	1.651E-01	4.739E-01	8.321E-01	0.000E+00 NOT IDENT.
K-40	-1.014E-01	3.219E-01	5.317E-01	0.000E+00 NOT IDENT.
TI-44	-7.009E-03	1.194E-02	1.925E-02	0.000E+00 NOT IDENT.
SC-46	6.040E-04	2.724E-02	4.589E-02	0.000E+00 NOT IDENT.
V-48	6.217E-03	3.023E-02	5.370E-02	0.000E+00 NOT IDENT.
CR-51	-1.203E-01	1.731E-01	2.947E-01	0.000E+00 NOT IDENT.
MN-52	2.793E-02	3.935E-02	7.416E-02	0.000E+00 NOT IDENT.
MN-54	-7.406E-03	2.811E-02	4.627E-02	0.000E+00 NOT IDENT.
CO-56	2.816E-03	2.976E-02	5.081E-02	0.000E+00 NOT IDENT.



CO-57	-8.574E-04	1.159E-02	2.128E-02	0.000E+00	NOT IDENT.
CO-58	-8.434E-03	2.837E-02	4.673E-02	0.000E+00	NOT IDENT.
FE-59	-1.685E-02	6.405E-02	8.990E-02	0.000E+00	FAIL ABUN
CO-60	8.413E-03	3.085E-02	5.349E-02	0.000E+00	NOT IDENT.
ZN-65	-3.422E-02	5.898E-02	9.362E-02	0.000E+00	NOT IDENT.
GE-68	-3.583E-01	7.555E-01	1.210E+00	0.000E+00	NOT IDENT.
AS-73	1.254E-02	1.105E-01	1.883E-01	0.000E+00	NOT IDENT.
AS-74	5.800E-03	4.061E-02	7.258E-02	0.000E+00	NOT IDENT.
SE-75	-8.441E-03	2.358E-02	4.212E-02	0.000E+00	NOT IDENT.
BR-77	-2.245E-03	1.831E-01	2.701E-01	0.000E+00	FAIL ABUN
RB-83	-7.174E-03	4.251E-02	6.101E-02	0.000E+00	FAIL ABUN
RB-84	-4.079E-02	4.249E-02	6.290E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.996E+00	1.149E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.693E-02	5.162E-02	0.000E+00	NOT IDENT.
RB-86	-2.604E-01	2.995E-01	4.463E-01	0.000E+00	NOT IDENT.
Y-88	9.607E-04	1.991E-02	3.359E-02	0.000E+00	NOT IDENT.
ZR-88	9.887E-03	1.774E-02	3.255E-02	0.000E+00	NOT IDENT.
Y-91	6.322E+00	1.033E+01	1.881E+01	0.000E+00	NOT IDENT.
NB-94	-2.031E-02	2.420E-02	3.819E-02	0.000E+00	NOT IDENT.
NB-95	1.358E-02	3.103E-02	4.830E-02	0.000E+00	NOT IDENT.
NB-95M	-8.366E-03	1.136E-01	1.730E-01	0.000E+00	NOT IDENT.
ZR-95	1.019E-02	4.159E-02	7.332E-02	0.000E+00	NOT IDENT.
NB-97	1.489E-01	3.035E-01	5.523E-01	0.000E+00	NOT IDENT.
ZR-97	2.469E+00	5.837E+00	9.108E+00	0.000E+00	NOT IDENT.
MO-99	-5.841E-02	3.844E-01	6.511E-01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.645E+01	0.000E+00	0.000E+00	SHORT HLIF
RH-102	-1.338E-02	2.024E-02	3.244E-02	0.000E+00	FAIL ABUN
RU-103	-9.825E-03	2.257E-02	3.672E-02	0.000E+00	NOT IDENT.
RH-106	-4.730E-02	2.235E-01	3.845E-01	0.000E+00	FAIL ABUN
RU-106	-4.730E-02	2.234E-01	3.845E-01	0.000E+00	FAIL ABUN
AG-108M	-6.777E-03	2.049E-02	3.436E-02	0.000E+00	NOT IDENT.
CD-109	-5.064E-02	3.621E-01	4.888E-01	0.000E+00	NOT IDENT.
AG-110M	1.294E-02	2.565E-02	4.673E-02	0.000E+00	NOT IDENT.
IN-111	-7.309E-03	3.127E-02	4.648E-02	0.000E+00	NOT IDENT.
IN-113M	1.053E-02	2.660E-02	4.818E-02	0.000E+00	NOT IDENT.
SN-113	1.053E-02	2.660E-02	4.818E-02	0.000E+00	NOT IDENT.
IN-114M	3.125E-02	8.176E-02	1.481E-01	0.000E+00	NOT IDENT.
CD-115	2.615E-01	2.123E-01	2.739E-01	0.000E+00	FAIL ABUN
SN-117M	4.084E-03	1.570E-02	2.870E-02	0.000E+00	NOT IDENT.
I-123	1.417E-01	3.594E-01	6.621E-01	0.000E+00	FAIL ABUN
TE-123M	5.583E-03	1.416E-02	2.609E-02	0.000E+00	NOT IDENT.
I-124	-2.119E-02	5.979E-02	1.022E-01	0.000E+00	NOT IDENT.
SB-124	-1.174E-02	5.622E-02	9.087E-02	0.000E+00	NOT IDENT.
SB-125	2.285E-02	6.043E-02	1.084E-01	0.000E+00	NOT IDENT.
TE-125M	-2.341E-01	3.800E+00	7.059E+00	0.000E+00	NOT IDENT.
I-126	-2.470E-02	6.827E-02	1.148E-01	0.000E+00	NOT IDENT.
SB-126	-9.285E-03	4.555E-02	7.671E-02	0.000E+00	NOT IDENT.
SN-126	4.980E-03	3.059E-02	4.886E-02	0.000E+00	FAIL ABUN
SB-127	2.037E-02	1.043E-01	1.845E-01	0.000E+00	FAIL ABUN
XE-127	-2.091E-02	2.217E-02	3.489E-02	0.000E+00	FAIL ABUN
I-131	2.236E-02	2.522E-02	4.761E-02	0.000E+00	NOT IDENT.
TE-132	1.727E-02	2.887E-02	5.032E-02	0.000E+00	NOT IDENT.
BA-133	-2.411E-02	3.586E-02	5.345E-02	0.000E+00	NOT IDENT.
CS-134	2.218E-02	3.062E-02	5.600E-02	0.000E+00	FAIL ABUN
CS-135	-1.407E-03	9.853E-02	1.800E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	7.270E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.539E-02	3.893E-02	6.381E-02	0.000E+00	NOT IDENT.
BA-137M	-2.425E-02	2.623E-02	4.148E-02	0.000E+00	NOT IDENT.
CS-137	-2.564E-02	2.773E-02	4.384E-02	0.000E+00	NOT IDENT.
CE-139	2.327E-03	1.510E-02	2.730E-02	0.000E+00	NOT IDENT.
BA-140	7.325E-02	1.033E-01	1.732E-01	0.000E+00	FAIL ABUN
LA-140	2.367E-02	2.724E-02	5.022E-02	0.000E+00	NOT IDENT.
CE-143	9.339E-03	1.493E-01	2.515E-01	0.000E+00	FAIL ABUN
CE-144	4.394E-02	9.761E-02	1.831E-01	0.000E+00	NOT IDENT.
PM-144	7.640E-03	2.698E-02	4.788E-02	0.000E+00	NOT IDENT.
PR-144	5.143E-01	1.816E+00	3.223E+00	0.000E+00	FAIL ABUN
PM-146	-9.951E-03	3.136E-02	5.253E-02	0.000E+00	NOT IDENT.
PM-147	2.540E+02	3.428E+02	6.597E+02	0.000E+00	NOT IDENT.
EU-152	-6.161E-02	5.882E-02	9.540E-02	0.000E+00	NOT IDENT.
GD-153	-6.657E-03	3.612E-02	5.684E-02	0.000E+00	FAIL ABUN
EU-154	7.797E-02	7.935E-02	1.391E-01	0.000E+00	NOT IDENT.
EU-155	1.661E-02	4.473E-02	8.548E-02	0.000E+00	FAIL ABUN
TB-160	-5.407E-03	9.383E-02	1.568E-01	0.000E+00	NOT IDENT.
TM-171	1.847E+00	6.847E+00	1.111E+01	0.000E+00	NOT IDENT.
LU-176	2.118E-04	1.590E-02	2.868E-02	0.000E+00	NOT IDENT.
LU-177	-7.745E-02	1.690E-01	2.861E-01	0.000E+00	NOT IDENT.
LU-177M	3.699E-02	1.057E-01	1.898E-01	0.000E+00	FAIL ABUN
HF-181	8.382E-03	2.474E-02	4.367E-02	0.000E+00	FAIL ABUN

W-181	5.095E-02	1.589E-01	1.278E-01	0.000E+00	FAIL	ABUN
TA-182	5.855E-02	1.168E-01	2.094E-01	0.000E+00	NOT	IDENT.
RE-183	-5.974E-02	5.714E-02	9.306E-02	0.000E+00	NOT	IDENT.
RE-184	0.000E+00	2.771E-01	2.319E-01	0.000E+00	FAIL	ABUN
OS-185	1.668E-03	3.031E-02	4.908E-02	0.000E+00	NOT	IDENT.
RE-188	-1.077E-02	7.533E-02	1.345E-01	0.000E+00	NOT	IDENT.
W-188	-1.363E+00	4.305E+00	6.667E+00	0.000E+00	FAIL	ABUN
IR-192	1.323E-02	1.942E-02	3.651E-02	0.000E+00	NOT	IDENT.
AU-195	-5.744E-03	9.786E-02	1.678E-01	0.000E+00	FAIL	ABUN
TL-200	-3.665E-02	9.340E-02	1.595E-01	0.000E+00	FAIL	ABUN
TL-201	-6.574E-02	2.086E-01	3.652E-01	0.000E+00	NOT	IDENT.
TL-202	1.649E-02	2.315E-02	4.253E-02	0.000E+00	NOT	IDENT.
HG-203	4.400E-03	1.790E-02	3.316E-02	0.000E+00	FAIL	ABUN
BI-207	-2.477E-02	3.666E-02	5.764E-02	0.000E+00	FAIL	ABUN
TL-207	4.821E-02	4.126E-01	7.453E-01	0.000E+00	FAIL	ABUN
PB-211	-2.742E-02	6.038E-01	1.051E+00	0.000E+00	NOT	IDENT.
BI-212	1.192E-01	1.753E-01	3.253E-01	0.000E+00	NOT	IDENT.
PB-212	7.767E-04	6.239E-02	7.230E-02	0.000E+00	FAIL	ABUN
PO-212	7.767E-04	6.239E-02	7.230E-02	0.000E+00	FAIL	ABUN
BI-214	4.409E-03	5.699E-02	9.996E-02	0.000E+00	FAIL	ABUN
PB-214	5.816E-03	6.771E-02	9.251E-02	0.000E+00	FAIL	ABUN
PO-214	5.816E-03	6.771E-02	9.251E-02	0.000E+00	FAIL	ABUN
PO-215	4.821E-02	4.126E-01	7.453E-01	0.000E+00	FAIL	ABUN
PO-216	7.767E-04	6.239E-02	7.230E-02	0.000E+00	FAIL	ABUN
PO-218	5.816E-03	6.771E-02	9.251E-02	0.000E+00	FAIL	ABUN
RN-219	2.835E-01	2.683E-01	5.055E-01	0.000E+00	NOT	IDENT.
RN-220	1.347E+01	1.781E+01	3.376E+01	0.000E+00	NOT	IDENT.
RA-223	4.821E-02	4.126E-01	7.453E-01	0.000E+00	FAIL	ABUN
RA-226	4.409E-03	5.699E-02	9.996E-02	0.000E+00	FAIL	ABUN
AC-227	3.108E-02	2.510E-01	3.860E-01	0.000E+00	FAIL	ABUN
TH-227	3.108E-02	2.510E-01	3.860E-01	0.000E+00	FAIL	ABUN
AC-228	-4.087E-02	1.178E-01	1.887E-01	0.000E+00	NOT	IDENT.
RA-228	-4.087E-02	1.178E-01	1.887E-01	0.000E+00	NOT	IDENT.
TH-229	7.620E-03	2.843E-01	5.020E-01	0.000E+00	FAIL	ABUN
TH-230	4.409E-03	5.699E-02	9.996E-02	0.000E+00	FAIL	ABUN
PA-231	-5.002E-02	9.957E-01	1.589E+00	0.000E+00	NOT	IDENT.
TH-231	5.171E-02	1.142E-01	2.142E-01	0.000E+00	FAIL	ABUN
U-231	-3.149E-02	6.269E-02	9.558E-02	0.000E+00	FAIL	ABUN
TH-232	7.747E-04	6.223E-02	7.204E-02	0.000E+00	FAIL	ABUN
PA-233	-1.343E-02	4.256E-02	7.493E-02	0.000E+00	NOT	IDENT.
PA-234	3.583E-02	1.969E-01	3.510E-01	0.000E+00	FAIL	ABUN
PA-234M	-1.843E+00	5.312E+00	8.880E+00	0.000E+00	NOT	IDENT.
U-234	2.276E-02	9.132E-02	1.559E-01	0.000E+00	FAIL	ABUN
U-235	9.823E-02	1.800E-01	2.102E-01	0.000E+00	FAIL	ABUN
NP-236	2.180E-02	4.293E-02	7.954E-02	0.000E+00	FAIL	ABUN
NP-237	1.722E-02	7.784E-02	1.358E-01	0.000E+00	NOT	IDENT.
NP-239	1.298E-02	8.721E-02	1.630E-01	0.000E+00	NOT	IDENT.
AM-241	-3.774E-04	3.012E-02	4.927E-02	0.000E+00	NOT	IDENT.
AM-243	5.058E-04	1.681E-02	2.932E-02	0.000E+00	FAIL	ABUN
CM-243	-1.806E-02	3.933E-02	7.147E-02	0.000E+00	NOT	IDENT.
CM-247	1.658E-02	2.420E-02	4.467E-02	0.000E+00	FAIL	ABUN
CF-249	-1.777E-02	2.634E-02	4.361E-02	0.000E+00	FAIL	ABUN
CF-251	1.079E-02	7.207E-02	1.238E-01	0.000E+00	NOT	IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532439.CNF;1
Sample date        : 8-MAR-2008 00:00:00. Acquisition date : 10-MAR-2008 12:23:09
Sample ID          : G1201532439          Sample quantity  : 1.55000E+02 GRAM
Detector name     : GAM13                 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00         Elapsed real time: 0 02:00:01.96  0.0%
Energy tolerance  : 2.00000 keV          Analyst Initials  : MJH1
Abundance limit   : 75.00000             Sensitivity       : 3.00000
Batch ID          : 734275                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
AL-26	1129.67	-----	2.50	1.306E+00	-----	Line Not Found	-----
	1808.65	5	99.76*	8.964E-01	1.219E-02	1.219E-02	194.45
SB-122	563.90	22	70.60*	2.373E+00	3.160E-02	6.093E-02	94.02
	692.80	-----	3.70	1.982E+00	-----	Line Not Found	-----
I-133	510.53	33	1.81	2.589E+00	1.715E+00	1.326E+01	147.67
	529.87	36	86.30*	2.511E+00	3.978E-02	3.076E-01	82.87
	706.58	-----	1.49	1.948E+00	-----	Line Not Found	-----
	856.28	-----	1.23	1.649E+00	-----	Line Not Found	-----
	875.33	-----	4.47	1.618E+00	-----	Line Not Found	-----
	1236.41	-----	1.49	1.212E+00	-----	Line Not Found	-----
CE-141	1298.22	-----	2.33	1.165E+00	-----	Line Not Found	-----
	145.44	28	48.40*	6.522E+00	2.131E-02	2.251E-02	186.39
ND-147	91.11	20	28.00	7.518E+00	2.292E-02	2.694E-02	410.16
	319.41	-----	1.96	3.861E+00	-----	Line Not Found	-----
	439.89	-----	1.20	2.951E+00	-----	Line Not Found	-----
	531.02	36	13.10*	2.511E+00	2.621E-01	3.080E-01	83.74
PM-149	285.90	10	3.10*	4.200E+00	1.879E-01	4.189E-01	379.45
TL-208	72.80	-----	2.03	7.699E+00	-----	Line Not Found	-----
	74.97	-----	3.43	7.694E+00	-----	Line Not Found	-----
	277.35	-----	6.80	4.315E+00	-----	Line Not Found	-----
	510.84	33	21.60	2.589E+00	1.437E-01	1.441E-01	147.89
	583.14	13	84.20*	2.304E+00	1.582E-02	1.586E-02	233.97
	763.13	-----	1.64	1.821E+00	-----	Line Not Found	-----
	860.37	-----	12.46	1.642E+00	-----	Line Not Found	-----
BI-210	1093.90	-----	0.37	1.341E+00	-----	Line Not Found	-----
	46.50	5	4.05*	7.270E+00	3.959E-02	3.960E-02	1033.18
PB-210	46.50	5	4.05*	7.270E+00	3.959E-02	3.960E-02	1033.18
PO-210	46.50	5	4.05*	7.270E+00	3.959E-02	3.960E-02	1033.17
BI-211	72.87	-----	1.27	7.699E+00	-----	Line Not Found	-----
	351.07	3	12.94*	3.567E+00	1.672E-02	1.672E-02	1188.00
RA-224	240.98	1	3.95*	4.813E+00	8.747E-03	8.769E-03	8196.74
TH-228	84.40	10	1.21	7.627E+00	2.620E-01	2.627E-01	463.49

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	238.60	1	44.60*	4.813E+00	7.747E-04	7.767E-04	8196.75
	300.10	-----	3.41	4.058E+00	-----	Line Not Found	-----
TH-234	63.29	22	3.80*	7.665E+00	1.823E-01	1.823E-01	318.67
	92.38	20	5.41	7.518E+00	1.186E-01	1.186E-01	410.45
	112.81	-----	0.24	7.165E+00	-----	Line Not Found	-----
U-238	63.29	22	3.80*	7.665E+00	1.823E-01	1.823E-01	318.67
ANH-511	511.00	33	100.00*	2.589E+00	3.104E-02	3.104E-02	147.66

Flag: "\*" = Keyline

Total number of lines in spectrum 31  
 Number of unidentified lines 12  
 Number of lines tentatively identified by NID 19 61.29%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AL-26	7.20E+05Y	1.00	1.219E-02	1.219E-02	2.370E-02	194.45	
SB-122	2.70D	1.93	3.160E-02	6.093E-02	5.729E-02	94.02	
I-133	20.80H	7.73	3.978E-02	3.076E-01	2.549E-01	82.87	
CE-141	32.50D	1.06	2.131E-02	2.251E-02	4.195E-02	186.39	
ND-147	10.98D	1.18	2.621E-01	3.080E-01	2.579E-01	83.74	
PM-149	53.08H	2.23	1.879E-01	4.189E-01	15.90E-01	379.45	
TL-208	1.91Y	1.00	1.582E-02	1.586E-02	3.712E-02	233.97	
BI-210	22.26Y	1.00	3.959E-02	3.960E-02	40.91E-02	1033.18	
PB-210	22.26Y	1.00	3.959E-02	3.960E-02	40.91E-02	1033.18	
PO-210	22.26Y	1.00	3.959E-02	3.960E-02	40.91E-02	1033.17	
BI-211	7.04E+08Y	1.00	1.672E-02	1.672E-02	19.86E-02	1188.00	
RA-224	1.91Y	1.00	8.747E-03	8.769E-03	718.8E-03	8196.74	
TH-228	1.91Y	1.00	7.747E-04	7.767E-04	636.6E-04	8196.75	
TH-234	4.47E+09Y	1.00	1.823E-01	1.823E-01	5.811E-01	318.67	
U-238	4.47E+09Y	1.00	1.823E-01	1.823E-01	5.811E-01	318.67	
ANH-511	1.00E+09Y	1.00	3.104E-02	3.104E-02	4.583E-02	147.66	
Total Activity :			1.111E+00	1.687E+00			

Grand Total Activity : 1.111E+00 1.687E+00

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	251.58	51	161	4.82	502.96	496	16	7.02E-03	****	4.64E+00	T
0	524.24	33	39	0.78	1048.66	1044	10	4.53E-03	80.4	2.53E+00	
0	538.65	16	38	0.58	1077.50	1074	8	2.26E-03	****	2.47E+00	T
0	580.80	16	28	1.28	1161.84	1156	8	2.22E-03	****	2.31E+00	T
0	768.69	20	30	3.38	1537.82	1533	11	2.75E-03	****	1.81E+00	T
0	1030.08	23	50	9.43	2060.83	2045	25	3.19E-03	****	1.41E+00	
0	1102.01	7	18	1.27	2204.71	2200	9	9.72E-04	****	1.33E+00	
0	1256.77	4	12	0.56	2514.32	2507	11	5.50E-04	****	1.20E+00	
4	1276.86	25	4	3.08	2554.51	2545	20	3.43E-03	63.8	1.18E+00	
4	1280.86	10	2	1.47	2562.50	2545	20	1.38E-03	68.3	1.18E+00	
1	1351.60	29	6	2.15	2704.00	2700	14	4.04E-03	38.3	1.13E+00	
1	1354.10	17	2	2.15	2709.00	2700	14	2.34E-03	60.8	1.13E+00	
0	1395.07	13	6	1.54	2790.95	2788	9	1.81E-03	89.6	1.10E+00	
0	1488.65	10	9	1.25	2978.13	2970	11	1.32E-03	****	1.04E+00	T
0	1529.00	6	7	0.75	3058.83	3054	8	8.60E-04	****	1.02E+00	T
0	1586.67	11	18	7.72	3174.16	3162	18	1.50E-03	****	9.93E-01	
0	1593.07	13	8	6.08	3186.97	3180	13	1.82E-03	****	9.90E-01	
0	1936.13	10	0	0.58	3873.00	3867	12	1.39E-03	63.2	8.51E-01	

Flags: "T" = Tentatively associated

```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*
*****
*
*           DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532439.CNF;1
* Acquisition date   : 10-MAR-2008 12:23:09  Detector SN#      :
* Detector ID        : GAM13                    Sensitivity           : 3.00000
* Geometry           : CAN                      Energy tolerance      : 2.00000
* Elapsed live time  : 0 02:00:00.00           Abundance limit      : 75.00000
* Elapsed real time  : 0 02:00:01.96           Half life ratio      : 8.00000
*****
*
*           SAMPLE DATA
*
* Sample date        : 8-MAR-2008 00:00:00.   Nuclide Library      : SOLID
* Sample ID          : G1201532439           Analyst initials     : MJH1
* Batch Number       : 734275                Sample Quantity      : 1.55000E+02 GRAM
*****
*
*           QC DATA
*
* CALIB. DATE/TIME  : 2-JUL-2007 15:48:48.70MS Isotope         :
* MSD ID            :                          MSD Isotope          :
* LCS ID            : 1032-A                   LCS Isotope          :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AL-26	1.219E-02	2.370E-02	4.069E-02	2.286E-03	0.299
SB-122	6.093E-02	5.729E-02	9.225E-02	6.429E-03	0.661
I-133	3.076E-01	2.549E-01	2.958E-01	2.051E-02	1.040
CE-141	2.251E-02	4.195E-02	3.780E-02	3.481E-03	0.595
ND-147	3.080E-01	2.579E-01	2.764E-01	3.836E-02	1.114
PM-149	4.189E-01	1.590E+00	1.747E+00	2.442E-01	0.240
TL-208	1.586E-02	3.712E-02	3.325E-02	2.633E-03	0.477
BI-210	3.960E-02	4.091E-01	3.660E-01	2.797E-02	0.108
PB-210	3.960E-02	4.091E-01	3.660E-01	2.797E-02	0.108
PO-210	3.960E-02	4.091E-01	3.660E-01	2.394E-02	0.108
BI-211	1.672E-02	1.986E-01	2.169E-01	1.290E-02	0.077
RA-224	8.769E-03	7.188E-01	5.580E-01	3.703E-02	0.016
TH-228	7.767E-04	6.366E-02	5.712E-02	4.606E-03	0.014
TH-234	1.823E-01	5.811E-01	4.304E-01	7.616E-02	0.424
U-238	1.823E-01	5.811E-01	4.304E-01	7.616E-02	0.424
ANH-511	3.104E-02	4.583E-02	3.552E-02	2.262E-03	0.874

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.699E-03		1.878E-01	3.042E-01	2.104E-02	0.019

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	2.747E-02		2.869E-02	4.876E-02	2.677E-03	0.563
NA-24	1.651E-01		4.836E-01	8.236E-01	4.690E-02	0.200
K-40	-1.014E-01		3.284E-01	5.272E-01	3.130E-02	-0.192
TI-44	-7.009E-03		1.218E-02	1.769E-02	1.396E-03	-0.396
SC-46	6.040E-04		2.780E-02	4.489E-02	2.811E-03	0.013
V-48	6.217E-03		3.085E-02	5.267E-02	3.186E-03	0.118
CR-51	-1.203E-01		1.767E-01	2.805E-01	1.700E-02	-0.429
MN-52	2.793E-02		4.015E-02	7.350E-02	4.077E-03	0.380
MN-54	-7.406E-03		2.869E-02	4.518E-02	3.107E-03	-0.164
CO-56	2.816E-03		3.037E-02	4.963E-02	3.351E-03	0.057
CO-57	-8.574E-04		1.183E-02	1.977E-02	1.984E-03	-0.043
CO-58	-8.434E-03		2.895E-02	4.559E-02	3.254E-03	-0.185
FE-59	-1.685E-02		6.535E-02	8.845E-02	5.974E-03	-0.191
CO-60	8.413E-03		3.148E-02	5.291E-02	2.884E-03	0.159
ZN-65	-3.422E-02		6.019E-02	9.215E-02	5.262E-03	-0.371
GE-68	-3.583E-01		7.709E-01	1.190E+00	6.928E-02	-0.301
AS-73	1.254E-02		1.128E-01	1.714E-01	1.257E-02	0.073
AS-74	5.800E-03		4.144E-02	7.023E-02	5.149E-03	0.083
SE-75	-8.441E-03		2.406E-02	3.990E-02	2.376E-03	-0.212
BR-77	-2.245E-03		1.868E-01	2.604E-01	1.687E-02	-0.009
RB-83	-7.174E-03		4.338E-02	5.882E-02	3.810E-03	-0.122
RB-84	-4.079E-02		4.335E-02	6.151E-02	3.910E-03	-0.663
KR-85	1.723E+01		6.118E+00	1.108E+01	7.094E-01	1.556
SR-85	7.739E-02		2.748E-02	4.975E-02	3.186E-03	1.556
RB-86	-2.604E-01		3.056E-01	4.389E-01	2.556E-02	-0.593
Y-88	9.607E-04		2.032E-02	3.353E-02	1.885E-03	0.029
ZR-88	9.887E-03		1.810E-02	3.115E-02	1.568E-03	0.317
Y-91	6.322E+00		1.054E+01	1.855E+01	1.016E+00	0.341
NB-94	-2.031E-02		2.469E-02	3.712E-02	2.931E-03	-0.547
NB-95	1.358E-02		3.167E-02	4.705E-02	3.526E-03	0.289
NB-95M	-8.366E-03		1.159E-01	1.633E-01	1.365E-02	-0.051
ZR-95	1.019E-02		4.244E-02	7.140E-02	6.104E-03	0.143
NB-97	1.489E-01		3.097E-01	5.358E-01	4.303E-02	0.278
ZR-97	2.469E+00		5.956E+00	8.775E+00	5.556E-01	0.281
MO-99	-5.841E-02		3.923E-01	6.337E-01	9.297E-02	-0.092
TC-99M	-1.162E-05		8.394E-06	Half-Life too short		
RH-102	-1.338E-02		2.065E-02	3.120E-02	1.860E-03	-0.429
RU-103	-9.825E-03		2.304E-02	3.536E-02	4.540E-03	-0.278
RH-106	-4.730E-02		2.280E-01	3.725E-01	4.745E-02	-0.127
RU-106	-4.730E-02		2.280E-01	3.725E-01	2.840E-02	-0.127
AG-108M	-6.777E-03		2.091E-02	3.296E-02	1.984E-03	-0.206
CD-109	-5.064E-02		3.695E-01	4.505E-01	3.571E-02	-0.112
AG-110M	1.294E-02		2.618E-02	4.533E-02	3.764E-03	0.286
IN-111	-7.309E-03		3.190E-02	4.395E-02	2.861E-03	-0.166
IN-113M	1.053E-02		2.714E-02	4.611E-02	2.520E-03	0.228
SN-113	1.053E-02		2.714E-02	4.611E-02	2.520E-03	0.228
IN-114M	3.125E-02		8.342E-02	1.391E-01	1.076E-02	0.225
CD-115	2.615E-01	+	2.166E-01	2.642E-01	1.733E-02	0.990



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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-117M	4.084E-03		1.602E-02	2.684E-02	2.265E-03	0.152
I-123	1.417E-01		3.668E-01	6.192E-01	5.213E-02	0.229
TE-123M	5.583E-03		1.445E-02	2.440E-02	2.067E-03	0.229
I-124	-2.119E-02		6.101E-02	9.888E-02	7.326E-03	-0.214
SB-124	-1.174E-02		5.737E-02	9.049E-02	5.564E-03	-0.130
SB-125	2.285E-02		6.166E-02	1.040E-01	5.917E-03	0.220
TE-125M	-2.341E-01		3.878E+00	6.540E+00	7.040E-01	-0.036
I-126	-2.470E-02		6.966E-02	1.114E-01	8.977E-03	-0.222
SB-126	-9.285E-03		4.648E-02	7.461E-02	5.819E-03	-0.124
SN-126	4.980E-03		3.121E-02	4.503E-02	3.567E-03	0.111
SB-127	2.037E-02		1.064E-01	1.792E-01	1.501E-02	0.114
XE-127	-2.091E-02		2.262E-02	3.283E-02	2.469E-03	-0.637
I-131	2.236E-02		2.573E-02	4.547E-02	2.664E-03	0.492
TE-132	1.727E-02		2.946E-02	4.749E-02	6.354E-03	0.364
BA-133	-2.411E-02		3.659E-02	5.102E-02	5.759E-03	-0.473
CS-134	2.218E-02		3.125E-02	5.461E-02	3.991E-03	0.406
CS-135	-1.407E-03		1.005E-01	1.705E-01	1.302E-02	-0.008
I-135	-4.402E-05		3.709E-05	Half-Life	too short	
CS-136	-1.539E-02		3.973E-02	6.270E-02	4.024E-03	-0.245
BA-137M	-2.425E-02		2.677E-02	4.024E-02	3.249E-03	-0.603
CS-137	-2.564E-02		2.830E-02	4.254E-02	3.442E-03	-0.603
CE-139	2.327E-03		1.541E-02	2.556E-02	2.063E-03	0.091
BA-140	7.325E-02	+	1.054E-01	1.671E-01	5.462E-02	0.438
LA-140	2.367E-02		2.779E-02	4.993E-02	2.812E-03	0.474
CE-143	9.339E-03		1.523E-01	2.389E-01	4.743E-02	0.039
CE-144	4.394E-02		9.960E-02	1.705E-01	2.747E-02	0.258
PM-144	7.640E-03		2.753E-02	4.653E-02	3.689E-03	0.164
PR-144	5.143E-01		1.853E+00	3.132E+00	2.483E-01	0.164
PM-146	-9.951E-03		3.200E-02	5.046E-02	4.325E-03	-0.197
PM-147	2.540E+02		3.498E+02	6.127E+02	6.109E+01	0.415
EU-152	-6.161E-02		6.002E-02	9.099E-02	5.535E-03	-0.677
GD-153	-6.657E-03		3.686E-02	5.252E-02	4.431E-03	-0.127
EU-154	7.797E-02		8.097E-02	1.374E-01	1.257E-02	0.567
EU-155	1.661E-02		4.564E-02	7.912E-02	7.130E-03	0.210
TB-160	-5.407E-03		9.575E-02	1.533E-01	9.784E-03	-0.035
TM-171	1.847E+00		6.987E+00	1.017E+01	8.083E-01	0.182
LU-176	2.118E-04		1.622E-02	2.727E-02	1.464E-03	0.008
LU-177	-7.745E-02		1.724E-01	2.694E-01	1.997E-02	-0.288
LU-177M	3.699E-02		1.078E-01	1.819E-01	9.583E-03	0.203
HF-181	8.382E-03		2.525E-02	4.202E-02	2.539E-03	0.199
W-181	5.095E-02	+	1.622E-01	1.169E-01	9.309E-03	0.436
TA-182	5.855E-02		1.192E-01	2.066E-01	1.133E-02	0.283
RE-183	-5.974E-02		5.831E-02	8.707E-02	7.185E-03	-0.686
RE-184	2.444E-01	+	2.828E-01	2.194E-01	1.379E-02	1.114
OS-185	1.668E-03		3.093E-02	4.760E-02	3.759E-03	0.035
RE-188	-1.077E-02		7.687E-02	1.257E-01	1.083E-02	-0.086
W-188	-1.363E+00		4.393E+00	6.330E+00	3.401E-01	-0.215
IR-192	1.323E-02		1.981E-02	3.474E-02	1.871E-03	0.381

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195	-5.744E-03		9.986E-02	1.551E-01	1.321E-02	-0.037
TL-200	-3.665E-02		9.531E-02	1.524E-01	7.882E-03	-0.241
TL-201	-6.574E-02		2.129E-01	3.419E-01	2.752E-02	-0.192
TL-202	1.649E-02		2.362E-02	4.082E-02	2.270E-03	0.404
HG-203	4.400E-03		1.826E-02	3.145E-02	1.809E-03	0.140
BI-207	-2.477E-02		3.741E-02	5.666E-02	3.321E-03	-0.437
TL-207	4.821E-02		4.210E-01	7.097E-01	1.161E-01	0.068
PB-211	-2.742E-02		6.161E-01	1.006E+00	6.267E-01	-0.027
BI-212	1.192E-01		1.789E-01	3.165E-01	2.936E-02	0.377
PB-212	7.767E-04	+	6.366E-02	6.830E-02	5.507E-03	0.011
PO-212	7.767E-04	+	6.366E-02	6.830E-02	5.507E-03	0.011
BI-214	4.409E-03		5.815E-02	9.678E-02	8.810E-03	0.046
PB-214	5.816E-03	+	6.909E-02	8.828E-02	6.981E-03	0.066
PO-214	5.816E-03	+	6.909E-02	8.828E-02	6.981E-03	0.066
PO-215	4.821E-02		4.210E-01	7.097E-01	1.161E-01	0.068
PO-216	7.767E-04	+	6.366E-02	6.830E-02	5.507E-03	0.011
PO-218	5.816E-03	+	6.909E-02	8.828E-02	6.981E-03	0.066
RN-219	2.835E-01		2.738E-01	4.841E-01	6.456E-02	0.586
RN-220	1.347E+01		1.817E+01	3.260E+01	2.220E+00	0.413
RA-223	4.821E-02		4.210E-01	7.097E-01	1.161E-01	0.068
RA-226	4.409E-03		5.815E-02	9.678E-02	8.810E-03	0.046
AC-227	3.108E-02		2.561E-01	3.654E-01	5.160E-02	0.085
TH-227	3.108E-02		2.562E-01	3.654E-01	6.223E-02	0.085
AC-228	-4.087E-02		1.202E-01	1.847E-01	1.751E-02	-0.221
RA-228	-4.087E-02		1.202E-01	1.847E-01	1.751E-02	-0.221
TH-229	7.620E-03		2.902E-01	4.718E-01	3.625E-02	0.016
TH-230	4.409E-03		5.815E-02	9.678E-02	8.810E-03	0.046
PA-231	-5.002E-02		1.016E+00	1.508E+00	2.051E-01	-0.033
TH-231	5.171E-02		1.165E-01	2.030E-01	1.467E-02	0.255
U-231	-3.149E-02		6.397E-02	8.827E-02	7.370E-03	-0.357
TH-232	7.747E-04	+	6.350E-02	6.806E-02	5.488E-03	0.011
PA-233	-1.343E-02		4.343E-02	7.127E-02	4.097E-03	-0.188
PA-234	3.583E-02		2.009E-01	3.439E-01	6.105E-02	0.104
PA-234M	-1.843E+00		5.420E+00	8.714E+00	8.122E-01	-0.212
U-234	2.276E-02		9.318E-02	1.481E-01	1.221E-02	0.154
U-235	9.823E-02	+	1.837E-01	1.961E-01	3.483E-02	0.501
NP-236	2.180E-02		4.381E-02	7.439E-02	6.215E-03	0.293
NP-237	1.722E-02		7.943E-02	1.251E-01	2.764E-02	0.138
NP-239	1.298E-02		8.899E-02	1.513E-01	1.463E-02	0.086
AM-241	-3.774E-04		3.073E-02	4.498E-02	3.926E-03	-0.008
AM-243	5.058E-04		1.715E-02	2.691E-02	2.124E-03	0.019
CM-243	-1.806E-02		4.013E-02	6.613E-02	5.828E-03	-0.273
CM-247	1.658E-02		2.469E-02	4.278E-02	2.200E-03	0.388
CF-249	-1.777E-02		2.688E-02	4.172E-02	2.106E-03	-0.426
CF-251	1.079E-02		7.354E-02	1.161E-01	9.209E-03	0.093

\*\*\*\*\*  
 \* GEL Laboratories LLC \*  
 \* 2040 SAVAGE ROAD \*  
 \* CHARLESTON ,SC 29417 \*  
 \* GAMMA SPECTROSCOPY BACKGROUND REPORT \*  
 \*\*\*\*\*

ENERGY	MDA COUNTS
46.50	90.9387
46.50	90.9387
46.50	90.9387
48.70	116.6972
49.72	118.7187
51.35	124.0364
52.39	126.8414
52.97	101.5113
53.15	107.1738
53.44	106.1926
54.07	107.6063
56.28	114.2865
56.28	114.2881
57.37	106.8541
57.53	105.7879
57.53	105.7886
57.60	105.8184
57.98	103.7059
57.98	103.7059
59.32	119.1733
59.32	119.1733
59.40	119.2122
59.54	119.2800
59.72	113.2455
60.01	113.3780
61.10	120.0286
61.14	120.0477
61.30	118.5838
63.00	123.2535
63.29	123.3920
63.29	123.3920
63.58	123.5305
64.28	123.8629
65.12	110.9743
65.20	111.0077
65.20	111.0077
66.05	117.6376
66.72	95.9181
66.83	102.2502
66.91	102.2806
67.20	113.4170
67.20	113.4170
67.67	132.5497
67.75	133.7720
67.85	138.5590
68.90	127.2037
68.90	127.2037
69.30	127.3882
69.67	121.5989
70.82	125.6905
70.82	125.6905
70.83	125.6953
72.80	166.3492
72.80	166.3492
72.87	166.3892
72.87	166.3892
74.67	145.5881
74.81	162.6510
74.81	162.6510
74.81	162.6510
74.81	162.6510
74.81	162.6510
74.81	162.6510
74.97	162.7400
74.97	162.7400
75.28	149.5384
75.70	146.0989

77.11	150.4627
77.11	150.4627
77.11	150.4627
77.11	150.4627
77.11	150.4627
77.11	150.4627
78.38	135.1283
79.62	168.9808
79.80	125.8845
79.80	125.8845
80.11	126.0113
80.18	126.0401
80.30	121.9686
80.30	121.9686
81.00	125.5480
81.07	125.5758
81.07	125.5758
81.07	125.5758
82.60	137.8132
83.37	158.1198
83.78	113.7444
83.78	113.7444
83.78	113.7444
84.21	138.5123
84.21	138.5123
84.40	138.5951
84.90	125.4311
85.43	126.8934
86.29	105.8145
86.50	105.8825
86.54	105.8953
86.59	105.9113
86.72	105.9536
86.79	118.5915
86.94	118.6467
87.30	119.6189
87.30	119.6189
87.30	119.6189
87.30	119.6189
87.30	119.6189
87.30	119.6189
87.57	119.7172
87.88	131.6432
88.03	131.7032
88.36	114.9326
88.47	114.9707
89.95	146.4725
91.11	125.2485
92.29	106.8719
92.38	106.8999
93.35	107.2006
94.00	107.4009
94.67	95.5538
94.67	95.5549
94.90	100.7861
94.90	100.7861
94.90	100.7861
95.87	119.2037
95.87	119.2037
96.73	107.8040
97.43	100.2060
98.44	96.5723
98.44	96.5728
98.88	101.0457
99.55	112.5771
99.55	112.5771
99.86	115.2932
100.00	115.3375
100.10	115.3704
103.18	110.1634
103.76	110.3338
105.00	111.5817
105.31	101.9235
108.00	116.9197
109.28	134.3178
111.00	144.7983
111.00	144.7983
111.76	134.2628

112.81	121.0633
112.95	119.2980
115.19	141.7701
115.19	141.7701
115.19	141.7701
116.30	123.0187
117.00	106.7977
117.00	106.7977
117.66	129.8243
121.11	99.5548
121.26	99.5900
121.62	108.9031
121.78	108.9439
122.06	109.9392
122.32	110.9302
122.32	110.9302
122.32	110.9302
123.07	132.4238
129.76	110.0100
131.20	104.7039
133.02	108.9121
133.54	106.1906
135.34	111.3657
136.00	110.5708
136.25	106.8161
136.48	118.3187
140.51	108.2657
140.51	0.0000
142.18	102.8490
142.65	104.3998
143.76	98.8260
144.24	98.9235
144.24	98.9235
144.24	98.9235
145.22	99.1217
145.44	99.1663
147.16	96.5860
152.43	96.6193
152.70	94.6973
153.22	97.7563
154.21	105.8593
154.21	105.8593
154.21	105.8593
155.03	109.0008
156.02	129.0664
158.56	117.7239
159.00	111.8314
159.00	111.8314
160.31	111.1073
161.27	133.3694
162.32	123.5843
162.64	127.6795
163.35	112.7485
163.89	126.9690
165.85	114.2805
167.43	113.5973
171.28	115.4105
171.86	107.3509
172.10	99.2142
176.33	112.3231
176.55	99.9957
176.60	100.0041
181.06	97.6604
185.71	96.3378
186.00	98.4799
190.27	101.2891
192.34	137.6278
193.63	112.4546
197.04	112.0058
198.60	111.2141
200.40	114.7488
201.83	120.3809
202.84	115.1885
205.31	105.9045
208.36	128.1154
208.81	123.8572
209.75	116.4184
209.75	116.4184

210.97	104.6426
215.65	102.0849
216.55	112.1135
218.09	98.0463
222.10	109.7032
223.80	87.7555
226.40	110.3820
227.00	110.4767
227.08	106.0246
227.20	103.8105
228.16	88.3028
228.18	88.3052
228.18	88.3052
231.56	107.8193
235.69	118.6057
236.00	118.6559
236.00	118.6559
236.00	118.6559
238.59	117.9437
238.60	117.9458
238.63	117.9500
238.63	117.9500
238.63	117.9500
239.00	118.0093
240.98	87.0391
241.98	85.4477
241.98	85.4477
241.98	85.4477
241.98	85.4477
244.69	90.9045
245.39	92.7062
247.94	75.7949
248.90	82.7900
249.79	79.4331
252.40	79.7047
252.85	79.7518
252.85	79.7518
254.15	93.7790
256.20	83.5800
256.20	83.5800
256.20	83.5800
260.90	84.9594
264.65	95.9222
268.24	114.9144
268.79	107.0308
269.46	103.5783
269.46	103.5783
269.46	103.5783
269.46	103.5783
271.23	92.2711
271.23	92.2711
273.65	109.4512
276.40	70.5330
277.35	77.7645
277.60	78.6812
277.60	78.6812
278.00	74.2474
278.60	72.5102
279.20	73.4579
279.53	73.4867
281.68	80.5041
283.67	83.5761
283.67	83.5761
284.30	87.9645
285.00	82.2645
285.90	82.3508
286.10	82.3703
286.10	82.3703
287.40	73.8118
288.45	0.0000
290.67	91.5269
290.80	91.5407
291.72	94.5468
293.26	88.3399
293.70	88.3843
295.21	87.6255
295.21	87.6255
295.21	87.6255

295.21	87.6255
295.21	87.6255
295.21	87.6255
295.96	97.7492
296.50	102.3801
297.23	103.3804
298.57	90.7097
299.80	104.5980
299.80	104.5980
300.09	100.0436
300.09	100.0436
300.09	100.0436
300.10	100.0453
300.12	100.0470
301.29	78.1207
301.29	78.1207
302.84	91.1463
303.76	82.0238
303.91	82.0374
304.40	86.6935
304.40	86.6935
304.84	91.3502
306.84	92.4774
308.46	91.7173
311.98	100.4409
316.51	76.6373
318.01	76.7611
319.02	77.7808
319.41	83.4389
320.08	95.6935
323.87	83.8354
323.87	83.8354
323.87	83.8354
328.77	91.8418
329.70	86.2456
329.70	86.2456
329.85	86.2581
330.00	87.2200
333.44	76.1145
334.20	88.5526
334.20	88.5526
334.30	88.5612
338.28	92.7477
338.28	92.7477
338.28	92.7477
338.32	92.7521
338.32	92.7521
340.50	78.5829
340.57	78.5879
344.27	84.6538
345.85	80.9341
350.59	86.7371
351.07	79.0301
351.07	79.0301
351.92	89.9538
351.92	89.9538
351.92	89.9538
351.92	89.9538
351.92	89.9538
351.92	89.9538
355.39	87.1473
356.01	84.0863
364.48	61.8166
366.43	73.7286
367.43	74.7823
367.94	71.8649
369.80	78.8953
374.96	60.4499
383.85	61.9480
387.95	80.2332
388.63	79.2785
391.69	63.3970
391.69	63.3970
392.90	60.4440
398.62	70.8791
400.65	69.9918
401.10	57.8419
401.81	54.8322

401.81	54.8322
402.60	60.9668
404.84	68.2135
411.60	55.3019
413.65	58.4777
414.70	53.3957
415.30	60.6151
415.76	66.8051
417.63	0.0000
418.52	64.9024
423.70	78.6394
427.08	65.3725
427.89	58.1482
432.53	57.3306
433.93	57.3969
439.47	55.5612
439.56	55.5652
439.89	53.4832
443.98	74.7041
444.90	66.3367
445.03	66.3434
445.03	66.3434
445.03	66.3434
453.90	72.1182
463.38	69.4523
468.07	67.5604
473.00	49.5172
475.06	66.8466
475.35	64.7040
476.78	61.5358
477.59	55.0925
477.96	55.1081
482.03	57.4455
484.57	62.9853
487.03	63.1012
490.36	62.1672
492.35	53.5205
497.08	59.1877
507.63	63.6196
510.53	66.4082
510.84	66.4233
511.00	66.4307
511.85	66.4714
511.85	66.4714
513.99	40.8315
513.99	40.8315
520.41	39.2337
520.65	39.2412
527.90	31.3735
528.96	53.8228
529.64	53.8477
529.87	53.8564
531.02	46.7124
537.32	61.3511
543.00	52.8347
546.56	0.0000
549.76	44.5845
552.65	66.5501
555.20	45.6604
563.23	44.3732
563.90	50.5165
568.70	46.0681
569.32	47.6226
569.50	53.7746
569.67	53.7803
573.80	55.4648
574.00	51.5099
574.64	53.9541
578.91	57.1937
579.30	57.2088
583.14	32.5493
585.48	62.0915
591.81	67.3295
592.07	69.2106
593.00	65.5071
595.88	55.3139
600.56	56.4155
602.52	64.9570



602.71	64.9638
602.71	64.9638
603.60	71.5951
604.41	81.0554
604.70	79.1848
606.64	67.9535
609.31	53.8856
609.31	53.8856
609.31	53.8856
610.33	62.4325
612.46	77.6698
614.37	65.4321
618.01	58.9242
621.84	53.3463
621.84	53.3463
631.29	41.1943
633.02	52.7455
633.10	52.7482
634.78	48.0005
635.90	45.1503
636.97	45.1790
645.85	42.5165
646.12	43.4894
656.30	55.4122
657.75	50.5934
657.90	50.5984
661.65	62.4094
661.65	62.4094
664.57	49.8146
666.33	57.6863
666.33	57.6863
675.00	60.9177
677.61	51.1672
685.20	47.4316
692.80	48.6232
695.00	61.5974
696.49	58.6644
696.49	58.6644
697.00	56.6911
697.49	52.7270
698.50	50.7659
699.00	48.7883
702.63	57.8626
706.10	58.9712
706.58	54.9879
706.67	54.9906
709.31	44.0548
713.82	56.2051
717.42	42.2348
720.50	38.2755
721.93	40.3203
722.20	44.3588
722.78	42.3558
722.78	42.3558
722.89	42.3579
722.95	42.3589
723.30	46.4021
724.18	43.3958
727.18	28.3021
733.00	48.6668
735.90	51.7869
739.58	52.9026
742.81	49.9343
744.21	49.9702
747.13	45.9602
751.79	42.9987
753.82	36.8938
755.35	33.8459
756.15	34.8857
756.87	30.7932
763.13	30.8906
763.93	27.4694
765.79	34.3693
766.41	37.8179
766.84	42.9840
768.36	44.7372
778.00	34.2335
778.57	34.2431

778.89	39.4371
783.80	38.4932
785.46	33.3180
792.07	44.9169
795.84	38.7199
796.30	39.7757
801.93	53.5288
805.60	52.5720
810.76	51.6474
815.85	46.4900
817.79	38.0725
818.51	37.0277
819.60	47.6312
826.30	46.7199
828.27	49.9524
831.60	36.1914
831.96	37.2627
834.83	50.1050
836.80	0.0000
846.75	49.3107
848.13	43.9779
856.28	33.3757
856.80	32.3071
860.37	43.1455
867.32	41.1172
867.82	41.1265
871.10	42.2716
873.19	39.0560
874.81	41.2554
875.33	39.0938
876.40	29.3342
879.36	38.0762
880.27	42.4449
880.51	42.4487
881.50	49.0012
883.24	43.5898
884.67	29.4423
889.25	38.2428
898.02	34.0024
899.00	38.4060
903.28	52.7695
911.07	41.3654
911.07	41.3654
911.20	41.3681
919.63	28.6008
920.93	33.2322
925.00	37.9137
925.24	40.6923
926.50	37.9378
934.06	29.7051
935.52	38.0830
937.48	38.1139
944.10	27.0335
946.00	27.9877
949.00	36.4292
962.29	37.5692
964.01	38.5359
964.40	40.4219
966.15	47.0357
968.20	47.0754
969.11	43.3253
969.11	43.3253
969.11	43.3253
977.42	45.3613
980.50	31.2249
983.50	34.1045
989.30	30.3861
996.32	44.7548
1001.03	34.3440
1001.68	39.1240
1004.76	38.2161
1021.30	41.2122
1024.50	28.0590
1034.80	23.1992
1037.82	33.1808
1038.57	37.7543
1038.76	0.0000
1045.16	32.0265

1046.59	33.9860
1048.07	34.9761
1050.47	38.8981
1050.47	38.8981
1063.62	37.1372
1076.63	29.4611
1077.35	28.4867
1085.78	34.4873
1093.90	25.8750
1099.22	37.3460
1112.02	31.8346
1112.84	29.8535
1115.52	38.8461
1120.29	31.9284
1120.51	30.9331
1121.28	26.9495
1124.00	0.0000
1129.67	32.0352
1131.51	0.0000
1147.95	41.3120
1167.94	33.4821
1173.22	28.4603
1175.09	26.4443
1177.93	28.5070
1189.05	23.5054
1204.90	25.6856
1205.75	26.7205
1213.00	30.9070
1221.42	27.8932
1230.97	33.1641
1235.34	33.2109
1236.41	31.1462
1238.11	20.7756
1238.25	20.7764
1246.25	28.1217
1260.41	0.0000
1271.85	21.6035
1274.45	12.6123
1274.54	12.6128
1291.56	17.9650
1298.22	28.5919
1312.09	24.4618
1325.50	29.9027
1325.50	29.9027
1332.49	24.6153
1333.61	27.8355
1360.21	12.9512
1362.66	23.7617
1365.15	21.6178
1368.21	18.3918
1368.53	18.3931
1376.25	18.5910
1377.67	15.8088
1384.27	24.2254
1394.10	25.2296
1407.95	21.5793
1434.06	17.0156
1436.60	20.8122
1457.56	0.0000
1460.81	23.8133
1489.15	10.0811
1509.49	16.4130
1596.49	5.1874
1620.62	12.9252
1678.03	0.0000
1691.02	15.1794
1691.02	15.1794
1706.46	0.0000
1750.46	11.2931
1764.49	20.6013
1770.23	13.4090
1771.40	17.5396
1791.20	0.0000
1808.65	10.4077
1836.01	6.2840

TOTAL URANIUM BY GAMMA SPEC REPORT  
Sample:G1201532439

Total Uranium Activity	5.8791E-01	ug/g
Total Uranium Counting Unc.	1.6962E+00	ug/g
Total Uranium Tpu	1.6962E+00	ug/g
Total Uranium Mda	1.4037E+00	ug/g

```

*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                          *
*                               GROSS GAMMA REPORT                            *
*
*****
*
*  BATCH ID      : 734275                SAMPLE ID   : G1201532439                *
*  ANALYST       : MJH1                  DETECTOR    : GAM13                    *
*  SAMPLE DATE  : 8-MAR-2008 00:00:00.00  COUNT TIME  : 0 02:00:00.00          *
*  ANALYSIS DATE: 10-MAR-2008 12:23:09.85  SAMPLE ALQT: 155.000 GRAM          *
*
*****

```

```

GROSS GAMMA ACTIVITY (pCi/GRAM ) : 6.491E-01
GROSS GAMMA ERROR (pCi/GRAM ) : 1.215E+00
GROSS GAMMA MDA (pCi/GRAM ) : 2.288E+00
GROSS GAMMA DLC (pCi/GRAM ) : 1.086E+00

```

VAX/VMS Nuclide Identification Report Generated 10-MAR-2008 14:25:42.23

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532440.CNF;1
Sample date        : 6-MAR-2008 14:28:00. Acquisition date : 10-MAR-2008 12:23:34
Sample ID          : G1201532440      Sample quantity   : 1.50070E+02 GRAM
Detector name     : GAM21              Detector geometry: CAN
Elapsed live time : 0 02:00:00.00     Elapsed real time: 0 02:00:14.03 0.2%
Energy tolerance  : 2.00000 keV       Analyst Initials  : MJH1
Abundance limit   : 75.00000          Sensitivity       : 3.00000
Batch ID          : 734275            Detector SN#      :
Matrix Spike ID   :                   LCS ID            : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.21*	227	763	2.34	125.48	119	12	3.15E-02	25.4	
2	2	75.06	725	709	1.58	149.13	143	16	1.01E-01	7.7	6.31E-01
3	2	77.29*	1010	555	1.33	153.60	143	16	1.40E-01	5.5	
4	5	84.23	156	380	1.34	167.46	164	27	2.16E-02	20.5	3.31E+00
5	5	87.35	404	591	1.65	173.68	164	27	5.61E-02	12.4	
6	5	89.93	256	504	1.49	178.84	164	27	3.56E-02	17.9	
7	5	93.14*	405	624	2.03	185.25	164	27	5.63E-02	14.1	
8	0	129.23	66	470	1.34	257.33	252	10	9.11E-03	63.1	
9	0	186.14*	215	422	1.65	371.01	365	14	2.98E-02	21.7	
10	0	209.62	96	564	1.53	417.90	409	16	1.33E-02	56.6	
11	2	238.57*	1396	250	1.48	475.73	469	20	1.94E-01	3.4	7.92E-01
12	2	241.38	278	266	1.81	481.36	469	20	3.86E-02	16.7	
13	0	270.58	195	174	1.48	539.69	534	13	2.71E-02	15.8	
14	0	277.62	34	275	0.77	553.74	549	13	4.70E-03	102.7	
15	0	295.18*	335	193	1.65	588.83	582	13	4.66E-02	10.4	
16	0	299.04	65	177	1.71	596.54	595	10	8.97E-03	39.8	
17	0	314.32	102	354	10.25	627.07	613	28	1.42E-02	53.2	
18	0	327.72	68	118	1.83	653.86	650	9	9.45E-03	31.1	
19	0	338.22	265	231	1.35	674.84	669	14	3.69E-02	13.5	
20	0	351.84*	478	210	1.50	702.04	695	16	6.64E-02	8.3	
21	0	410.11	36	175	0.89	818.48	815	13	5.04E-03	77.6	
22	0	463.00	33	125	1.52	924.18	918	12	4.65E-03	69.2	
23	2	510.89*	103	103	2.13	1019.88	1012	32	1.43E-02	25.4	1.40E+00
24	2	515.08	29	81	2.13	1028.26	1012	32	4.03E-03	74.3	
25	0	529.96	36	47	3.22	1058.00	1053	10	5.05E-03	39.1	
26	0	545.73	27	45	3.99	1089.53	1084	11	3.79E-03	50.9	
27	0	566.71	111	142	2.04	1131.47	1121	19	1.54E-02	27.4	
28	0	583.08*	330	89	1.24	1164.19	1158	13	4.58E-02	8.2	
29	0	609.02	309	56	1.72	1216.04	1211	10	4.29E-02	7.1	
30	0	708.66	30	85	3.21	1415.23	1406	15	4.23E-03	68.7	
31	0	727.29	58	66	1.62	1452.50	1446	11	8.08E-03	30.0	
32	0	749.57	22	46	1.76	1497.05	1492	11	3.01E-03	64.6	
33	0	795.24	26	81	1.76	1588.35	1578	14	3.54E-03	77.2	
34	0	826.91	18	38	0.50	1651.70	1646	13	2.54E-03	74.0	
35	0	860.70	85	35	1.40	1719.26	1711	16	1.18E-02	19.1	
36	0	871.02	24	31	2.32	1739.91	1732	14	3.26E-03	54.5	
37	0	875.56	12	19	0.87	1748.98	1745	8	1.61E-03	72.8	
38	0	911.04	258	50	1.75	1819.94	1812	18	3.58E-02	8.9	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	956.49	51	20	6.12	1910.87	1903	16	7.01E-03	25.6	
40	0	969.10	97	88	1.43	1936.07	1930	14	1.35E-02	23.1	
41	0	1051.97	33	48	7.38	2101.86	2091	18	4.53E-03	53.5	
42	0	1119.78	81	46	1.25	2237.54	2231	14	1.12E-02	21.0	
43	0	1126.79	12	24	0.93	2251.55	2246	9	1.68E-03	81.4	
44	0	1130.78	17	32	0.85	2259.55	2254	14	2.29E-03	76.4	
45	0	1138.74	20	39	0.89	2275.46	2269	11	2.71E-03	65.6	
46	0	1240.98	76	108	12.45	2480.07	2460	37	1.06E-02	45.7	
47	0	1280.38	27	28	3.95	2558.91	2551	16	3.71E-03	48.3	
48	0	1326.09	21	10	0.87	2650.41	2644	14	2.92E-03	39.1	
49	0	1378.37	58	11	5.74	2755.06	2746	21	7.99E-03	19.3	
50	0	1443.80	8	5	3.14	2886.05	2880	11	1.05E-03	70.3	
51	0	1447.11	6	3	1.06	2892.67	2890	6	8.33E-04	61.2	
52	0	1460.55*	732	26	2.22	2919.58	2911	17	1.02E-01	4.0	
53	0	1572.09	11	0	0.50	3142.91	3136	14	1.53E-03	30.2	
54	0	1581.28	7	13	0.69	3161.31	3153	12	9.34E-04	119.9	
55	0	1587.87	22	5	1.89	3174.52	3169	11	3.07E-03	29.4	
56	0	1593.26	12	14	2.28	3185.31	3179	11	1.66E-03	67.0	
57	0	1729.49	26	8	0.97	3458.15	3452	10	3.63E-03	27.8	
58	0	1764.57	67	4	2.30	3528.41	3520	20	9.29E-03	14.6	
59	0	1892.75	6	2	1.26	3785.22	3780	9	7.99E-04	62.9	
60	0	1985.92	11	3	4.01	3971.90	3966	13	1.59E-03	43.4	

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

VAX/VMS Nuclide Identification Report Generated

```

*****
*
*               GEL Laboratories LLC
*               2040 Savage Road
*               Charleston, SC 29414
*****
*
*               DETECTOR DATA
*
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532440
* Acquisition date   : 10-MAR-2008 12:23:34 Detector SN#      :
* Detector ID        : GAM21                      Sensitivity         : 3.000
* Geometry           : CAN                        Energy tolerance    : 2.000
* Elapsed live time  : 0 02:00:00.00             Abundance limit    : 75.000
* Elapsed real time  : 0 02:00:14.03             Half life ratio    : 8.000
*****
*
*               SAMPLE DATA
*
* Sample date        : 6-MAR-2008 14:28:00 Nuclide Library :
* Sample ID          : G1201532440                 Analyst initials: MJH1
* Batch Number       : 734275                      Sample Quantity : 1.5007E+02 GRAM
* Recovery           : 1.00000                     Carrier Weight  : 0.00000
*****
*
*               QC DATA
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME  : 2-JUL-2007 16:42:48 MS Isotope      :
* MSD DPM            : 0.000                      MSD Isotope       :
* LCS DPM            : 0.000                      LCS Isotope       :
* LCSD DPM           : 0.000                      LCSD Isotope      :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM )	Act error	MDA (pCi/GRAM )	
K-40	2.308E+01	2.261E+00	6.884E-01	0.000E+00
KR-85	7.824E+00	1.141E+01	1.176E+01	0.000E+00
SR-85	3.566E-02	5.201E-02	5.358E-02	0.000E+00
CD-109	3.200E+00	8.099E-01	9.039E-01	0.000E+00
SN-126	3.199E-01	8.095E-02	9.026E-02	0.000E+00
I-133	1.199E+00	9.231E-01	1.544E+00	0.000E+00
ND-147	4.289E-01	3.338E-01	5.303E-01	0.000E+00
HG-203	2.847E-02	5.735E-02	5.864E-02	0.000E+00
TL-208	5.244E-01	9.404E-02	6.825E-02	0.000E+00
BI-211	2.885E+00	4.977E-01	3.377E-01	0.000E+00
PB-212	1.670E+00	1.672E-01	9.454E-02	0.000E+00
PO-212	1.670E+00	1.672E-01	9.454E-02	0.000E+00
BI-214	9.323E-01	1.541E-01	1.308E-01	0.000E+00
PB-214	1.003E+00	1.806E-01	1.178E-01	0.000E+00
PO-214	1.003E+00	1.806E-01	1.178E-01	0.000E+00
PO-216	1.670E+00	1.672E-01	9.454E-02	0.000E+00
PO-218	1.003E+00	1.806E-01	1.178E-01	0.000E+00
RA-224	3.795E+00	1.264E+00	1.078E+00	0.000E+00
RA-226	9.323E-01	1.541E-01	1.308E-01	0.000E+00
AC-228	1.975E+00	3.951E-01	2.465E-01	0.000E+00
RA-228	1.975E+00	3.951E-01	2.465E-01	0.000E+00
TH-228	1.670E+00	1.672E-01	9.452E-02	0.000E+00
TH-230	9.323E-01	1.541E-01	1.307E-01	0.000E+00
TH-232	1.663E+00	1.665E-01	9.415E-02	0.000E+00
TH-234	1.753E+00	9.213E-01	9.649E-01	0.000E+00
U-234	1.139E+00	2.492E-01	2.202E-01	0.000E+00
NP-237	9.393E-01	3.043E-01	2.645E-01	0.000E+00
U-238	1.753E+00	9.213E-01	9.649E-01	0.000E+00
AM-243	3.181E-01	5.242E-02	5.561E-02	0.000E+00
ANH-511	1.192E-01	5.978E-02	5.065E-02	0.000E+00

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

Key-Line



Nuclide	Activity (pCi/GRAM	K.L. Act error ) Ided	MDA (pCi/GRAM	)	
BE-7	-1.881E-01	2.970E-01	4.771E-01	0.000E+00	NOT IDENT.
NA-22	-5.628E-02	6.143E-02	7.340E-02	0.000E+00	NOT IDENT.
NA-24	-1.610E+00	4.041E+00	5.784E+00	0.000E+00	NOT IDENT.
AL-26	-3.134E-04	3.384E-02	5.719E-02	0.000E+00	FAIL ABUN
TI-44	0.000E+00	3.820E-02	5.933E-02	0.000E+00	FAIL ABUN
SC-46	-7.858E-03	4.266E-02	7.235E-02	0.000E+00	FAIL ABUN
V-48	-2.161E-03	5.055E-02	8.621E-02	0.000E+00	NOT IDENT.
CR-51	-5.119E-02	2.974E-01	4.488E-01	0.000E+00	NOT IDENT.
MN-52	3.448E-02	7.402E-02	1.313E-01	0.000E+00	NOT IDENT.
MN-54	3.777E-02	4.135E-02	7.307E-02	0.000E+00	NOT IDENT.
CO-56	1.522E-02	3.998E-02	7.168E-02	0.000E+00	NOT IDENT.
CO-57	6.489E-03	2.260E-02	3.983E-02	0.000E+00	NOT IDENT.
CO-58	-7.763E-04	4.076E-02	7.071E-02	0.000E+00	NOT IDENT.
FE-59	-3.539E-02	8.780E-02	1.425E-01	0.000E+00	NOT IDENT.
CO-60	3.842E-03	4.584E-02	6.681E-02	0.000E+00	NOT IDENT.
ZN-65	6.516E-02	1.078E-01	1.712E-01	0.000E+00	NOT IDENT.
GE-68	-1.320E-01	1.475E+00	2.486E+00	0.000E+00	NOT IDENT.
AS-73	1.391E-03	1.832E-01	3.339E-01	0.000E+00	NOT IDENT.
AS-74	1.340E-02	6.607E-02	1.140E-01	0.000E+00	NOT IDENT.
SE-75	9.102E-03	4.662E-02	7.321E-02	0.000E+00	FAIL ABUN
BR-77	-1.520E-01	5.076E-01	7.245E-01	0.000E+00	FAIL ABUN
RB-83	-8.288E-03	7.898E-02	1.153E-01	0.000E+00	FAIL ABUN
RB-84	-1.109E-02	7.118E-02	1.079E-01	0.000E+00	NOT IDENT.
RB-86	-6.704E-01	6.730E-01	1.028E+00	0.000E+00	NOT IDENT.
Y-88	8.917E-03	4.115E-02	7.254E-02	0.000E+00	NOT IDENT.
ZR-88	-5.340E-03	2.910E-02	5.018E-02	0.000E+00	NOT IDENT.
Y-91	2.520E+00	2.083E+01	3.550E+01	0.000E+00	NOT IDENT.
NB-94	-1.165E-02	4.678E-02	6.891E-02	0.000E+00	FAIL ABUN
NB-95	-7.373E-03	4.363E-02	7.508E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	3.017E-01	5.334E-01	0.000E+00	NOT IDENT.
ZR-95	1.222E-02	8.039E-02	1.281E-01	0.000E+00	NOT IDENT.
NB-97	-4.707E-01	1.813E+00	3.135E+00	0.000E+00	NOT IDENT.
ZR-97	0.000E+00	3.686E+01	6.351E+01	0.000E+00	NOT IDENT.
MO-99	1.829E-01	7.656E-01	1.365E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.234E+03	0.000E+00	0.000E+00	SHORT HLIF
RH-102	-1.471E-03	3.110E-02	5.341E-02	0.000E+00	NOT IDENT.
RU-103	7.091E-03	3.387E-02	5.914E-02	0.000E+00	FAIL ABUN
RH-106	1.906E-01	3.688E-01	6.489E-01	0.000E+00	FAIL ABUN
RU-106	1.906E-01	3.683E-01	6.489E-01	0.000E+00	FAIL ABUN
AG-108M	-2.036E-02	3.376E-02	5.596E-02	0.000E+00	NOT IDENT.
AG-110M	-7.156E-03	3.904E-02	6.791E-02	0.000E+00	FAIL ABUN
IN-111	6.810E-02	7.185E-02	1.184E-01	0.000E+00	NOT IDENT.
IN-113M	1.077E-03	4.381E-02	7.654E-02	0.000E+00	NOT IDENT.
SN-113	1.077E-03	4.381E-02	7.654E-02	0.000E+00	NOT IDENT.
IN-114M	2.189E-02	1.554E-01	2.479E-01	0.000E+00	NOT IDENT.
CD-115	1.712E-01	4.175E-01	6.445E-01	0.000E+00	NOT IDENT.
SN-117M	1.449E-02	3.049E-02	5.381E-02	0.000E+00	NOT IDENT.
SB-122	1.849E-01	1.744E-01	2.811E-01	0.000E+00	NOT IDENT.
I-123	4.947E-01	3.885E+00	6.770E+00	0.000E+00	FAIL ABUN
TE-123M	3.346E-03	2.627E-02	4.578E-02	0.000E+00	NOT IDENT.
I-124	4.042E-02	1.304E-01	1.974E-01	0.000E+00	FAIL ABUN
SB-124	2.851E-02	7.979E-02	1.449E-01	0.000E+00	FAIL ABUN
SB-125	5.738E-03	9.390E-02	1.636E-01	0.000E+00	FAIL ABUN
TE-125M	-6.030E-01	6.779E+00	1.194E+01	0.000E+00	NOT IDENT.
I-126	-1.879E-02	1.160E-01	2.019E-01	0.000E+00	NOT IDENT.
SB-126	-7.937E-04	1.103E-01	1.666E-01	0.000E+00	FAIL ABUN
SB-127	-4.502E-02	2.142E-01	3.706E-01	0.000E+00	FAIL ABUN
XE-127	-1.622E-02	4.225E-02	6.527E-02	0.000E+00	NOT IDENT.
I-131	4.265E-02	4.269E-02	7.927E-02	0.000E+00	NOT IDENT.
TE-132	-5.803E-02	5.856E-02	1.001E-01	0.000E+00	NOT IDENT.
BA-133	5.022E-02	4.466E-02	7.425E-02	0.000E+00	FAIL ABUN
CS-134	5.528E-02	8.377E-02	9.946E-02	0.000E+00	FAIL ABUN
CS-135	2.835E-01	1.797E-01	3.033E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.837E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.028E-02	8.855E-02	1.316E-01	0.000E+00	FAIL ABUN
BA-137M	2.324E-02	4.367E-02	7.967E-02	0.000E+00	NOT IDENT.
CS-137	2.456E-02	4.616E-02	8.422E-02	0.000E+00	NOT IDENT.
CE-139	-2.710E-03	2.539E-02	4.631E-02	0.000E+00	NOT IDENT.
BA-140	3.148E-02	1.588E-01	2.679E-01	0.000E+00	NOT IDENT.
LA-140	-3.842E-02	7.105E-02	9.126E-02	0.000E+00	FAIL ABUN
CE-141	9.821E-03	4.540E-02	7.973E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.078E+00	1.140E+00	0.000E+00	FAIL ABUN
CE-144	1.874E-01	2.038E-01	3.229E-01	0.000E+00	NOT IDENT.
PM-144	-9.053E-03	3.866E-02	6.669E-02	0.000E+00	NOT IDENT.
PR-144	-6.098E-01	2.604E+00	4.493E+00	0.000E+00	NOT IDENT.

PM-146	3.845E-02	4.746E-02	8.626E-02	0.000E+00	NOT IDENT.
PM-147	7.039E+01	6.550E+02	1.148E+03	0.000E+00	NOT IDENT.
PM-149	1.804E-01	2.841E+00	4.783E+00	0.000E+00	NOT IDENT.
EU-152	-1.057E-01	1.484E-01	1.609E-01	0.000E+00	NOT IDENT.
GD-153	1.379E-02	6.480E-02	1.016E-01	0.000E+00	FAIL ABUN
EU-154	-1.607E-01	1.727E-01	2.050E-01	0.000E+00	NOT IDENT.
EU-155	8.492E-02	8.649E-02	1.579E-01	0.000E+00	FAIL ABUN
TB-160	-3.551E-02	1.595E-01	2.290E-01	0.000E+00	FAIL ABUN
TM-171	5.087E+00	1.541E+01	2.466E+01	0.000E+00	NOT IDENT.
LU-176	-1.640E-02	3.608E-02	4.114E-02	0.000E+00	FAIL ABUN
LU-177	6.214E-01	6.901E-01	6.566E-01	0.000E+00	FAIL ABUN
LU-177M	9.483E-02	1.996E-01	3.132E-01	0.000E+00	FAIL ABUN
HF-181	-1.179E-02	3.598E-02	6.031E-02	0.000E+00	FAIL ABUN
W-181	0.000E+00	2.480E-01	2.951E-01	0.000E+00	FAIL ABUN
TA-182	4.182E-02	2.198E-01	3.768E-01	0.000E+00	FAIL ABUN
RE-183	3.231E-02	8.952E-02	1.659E-01	0.000E+00	FAIL ABUN
RE-184	1.192E-01	2.101E-01	3.854E-01	0.000E+00	NOT IDENT.
OS-185	4.008E-03	4.682E-02	7.956E-02	0.000E+00	FAIL ABUN
RE-188	5.561E-02	1.492E-01	2.627E-01	0.000E+00	NOT IDENT.
W-188	-1.382E-01	7.286E+00	1.121E+01	0.000E+00	FAIL ABUN
IR-192	2.142E-02	2.968E-02	5.448E-02	0.000E+00	FAIL ABUN
AU-195	1.597E-01	1.813E-01	2.929E-01	0.000E+00	FAIL ABUN
TL-200	-1.611E-01	3.632E-01	6.183E-01	0.000E+00	FAIL ABUN
TL-201	-2.362E-01	4.932E-01	8.867E-01	0.000E+00	NOT IDENT.
TL-202	1.698E-02	3.825E-02	6.824E-02	0.000E+00	NOT IDENT.
BI-207	-9.048E-02	6.882E-02	1.014E-01	0.000E+00	FAIL ABUN
TL-207	3.176E-01	9.290E-01	1.007E+00	0.000E+00	FAIL ABUN
BI-210	3.380E-01	4.858E-01	9.089E-01	0.000E+00	NOT IDENT.
PB-210	3.380E-01	4.858E-01	9.089E-01	0.000E+00	NOT IDENT.
PO-210	3.380E-01	4.857E-01	9.089E-01	0.000E+00	NOT IDENT.
PB-211	-1.957E-01	1.142E+00	1.683E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.964E-01	7.620E-01	0.000E+00	FAIL ABUN
PO-215	3.176E-01	9.290E-01	1.007E+00	0.000E+00	FAIL ABUN
RN-219	8.968E-02	4.382E-01	7.725E-01	0.000E+00	FAIL ABUN
RN-220	-2.503E+01	3.361E+01	4.492E+01	0.000E+00	NOT IDENT.
RA-223	3.176E-01	9.290E-01	1.007E+00	0.000E+00	FAIL ABUN
AC-227	5.439E-02	3.750E-01	6.750E-01	0.000E+00	FAIL ABUN
TH-227	5.439E-02	3.750E-01	6.750E-01	0.000E+00	FAIL ABUN
TH-229	-5.334E-02	5.141E-01	8.462E-01	0.000E+00	FAIL ABUN
PA-231	-1.144E-01	1.761E+00	2.706E+00	0.000E+00	NOT IDENT.
TH-231	0.000E+00	2.722E-01	3.737E-01	0.000E+00	FAIL ABUN
U-231	1.241E-01	1.471E-01	2.367E-01	0.000E+00	FAIL ABUN
PA-233	5.123E-02	6.086E-02	1.124E-01	0.000E+00	FAIL ABUN
PA-234	7.893E-03	3.560E-01	6.130E-01	0.000E+00	FAIL ABUN
PA-234M	-2.570E+00	7.458E+00	1.230E+01	0.000E+00	NOT IDENT.
U-235	1.854E-01	1.900E-01	3.391E-01	0.000E+00	FAIL ABUN
NP-236	-2.529E-02	7.388E-02	1.339E-01	0.000E+00	FAIL ABUN
NP-239	1.471E-02	1.701E-01	2.976E-01	0.000E+00	FAIL ABUN
AM-241	7.599E-02	5.872E-02	9.814E-02	0.000E+00	NOT IDENT.
CM-243	-2.535E-02	7.735E-02	1.354E-01	0.000E+00	FAIL ABUN
CM-247	-4.013E-03	3.965E-02	6.862E-02	0.000E+00	FAIL ABUN
CF-249	1.821E-02	4.184E-02	7.493E-02	0.000E+00	NOT IDENT.
CF-251	6.318E-02	1.150E-01	2.138E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532440.CNF;1
Sample date        : 6-MAR-2008 14:28:00. Acquisition date : 10-MAR-2008 12:23:34
Sample ID          : G1201532440          Sample quantity  : 1.50070E+02 GRAM
Detector name     : GAM21                 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00        Elapsed real time: 0 02:00:14.03  0.2%
Energy tolerance  : 2.00000 keV         Analyst Initials  : MJH1
Abundance limit   : 75.00000           Sensitivity       : 3.00000
Batch ID          : 734275              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	732	10.67*	7.435E-01	2.308E+01	2.308E+01	9.99
KR-85	513.99	29	0.43*	2.140E+00	7.818E+00	7.824E+00	148.83
SR-85	513.99	29	99.27*	2.140E+00	3.418E-02	3.566E-02	148.83
CD-109	88.03	404	3.72*	8.536E+00	3.182E+00	3.200E+00	25.82
SN-126	64.28	227	9.60	8.512E+00	6.938E-01	6.938E-01	52.76
	86.94	404	8.90	8.536E+00	1.330E+00	1.330E+00	47.99
	87.57	404	37.00*	8.536E+00	3.199E-01	3.199E-01	25.82
I-133	510.53	103	1.81	2.159E+00	6.584E+00	1.557E+02	51.27
	529.87	36	86.30*	2.076E+00	5.072E-02	1.199E+00	78.54
	706.58	-----	1.49	1.532E+00	-----	Line Not Found	-----
	856.28	-----	1.23	1.257E+00	-----	Line Not Found	-----
	875.33	12	4.47	1.229E+00	5.271E-01	1.246E+01	145.78
	1236.41	-----	1.49	8.737E-01	-----	Line Not Found	-----
	1298.22	-----	2.33	8.333E-01	-----	Line Not Found	-----
ND-147	91.11	256	28.00	8.492E+00	2.693E-01	3.457E-01	36.76
	319.41	-----	1.96	3.542E+00	-----	Line Not Found	-----
	439.89	-----	1.20	2.533E+00	-----	Line Not Found	-----
	531.02	36	13.10*	2.076E+00	3.341E-01	4.289E-01	79.42
HG-203	70.83	-----	4.75	8.630E+00	-----	Line Not Found	-----
	72.87	-----	8.00	8.641E+00	-----	Line Not Found	-----
	82.60	156	3.55	8.580E+00	1.279E+00	1.357E+00	42.93
	279.20	34	77.30*	4.076E+00	2.685E-02	2.847E-02	205.54
TL-208	72.80	-----	2.03	8.640E+00	-----	Line Not Found	-----
	74.97	725	3.43	8.644E+00	6.120E+00	6.144E+00	18.96
	277.35	34	6.80	4.076E+00	3.052E-01	3.064E-01	205.72
	510.84	103	21.60	2.159E+00	5.518E-01	5.539E-01	51.86
	583.14	330	84.20*	1.876E+00	5.223E-01	5.244E-01	18.30
	763.13	-----	1.64	1.415E+00	-----	Line Not Found	-----
	860.37	85	12.46	1.251E+00	1.369E+00	1.374E+00	38.91
	1093.90	-----	0.37	9.847E-01	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	8.641E+00	-----	Line Not Found	-----
	351.07	478	12.94*	3.206E+00	2.885E+00	2.885E+00	17.61

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-212	74.81	725	10.70	8.644E+00	1.962E+00	1.970E+00	19.24
	77.11	1010	18.00	8.639E+00	1.624E+00	1.631E+00	13.01
	87.30	404	8.00	8.536E+00	1.479E+00	1.485E+00	27.69
	115.19	-----	0.60	7.861E+00	-----	Line Not Found	-----
	238.63	1396	44.60*	4.709E+00	1.663E+00	1.670E+00	10.22
PO-212	300.09	65	3.41	3.786E+00	1.252E+00	1.257E+00	79.95
	74.81	725	10.70	8.644E+00	1.962E+00	1.970E+00	19.24
	77.11	1010	18.00	8.639E+00	1.624E+00	1.631E+00	13.01
	87.30	404	8.00	8.536E+00	1.479E+00	1.485E+00	27.69
	115.19	-----	0.60	7.861E+00	-----	Line Not Found	-----
BI-214	238.63	1396	44.60*	4.709E+00	1.663E+00	1.670E+00	10.22
	300.09	65	3.41	3.786E+00	1.252E+00	1.257E+00	79.95
	609.31	309	46.30*	1.791E+00	9.323E-01	9.323E-01	16.86
	768.36	-----	5.04	1.405E+00	-----	Line Not Found	-----
	934.06	-----	3.21	1.152E+00	-----	Line Not Found	-----
PB-214	1120.29	81	15.10	9.624E-01	1.389E+00	1.389E+00	42.87
	1238.11	-----	5.94	8.725E-01	-----	Line Not Found	-----
	1377.67	58	4.11	7.864E-01	4.450E+00	4.450E+00	39.49
	1764.49	67	15.80	6.185E-01	1.713E+00	1.713E+00	29.83
	74.81	725	6.21	8.644E+00	3.380E+00	3.380E+00	18.38
PO-214	77.11	1010	10.50	8.639E+00	2.785E+00	2.785E+00	15.08
	87.30	404	4.67	8.536E+00	2.534E+00	2.534E+00	26.95
	241.98	278	7.49	4.658E+00	1.993E+00	1.993E+00	34.44
	295.21	335	19.20	3.836E+00	1.139E+00	1.139E+00	22.33
	351.92	478	37.20*	3.206E+00	1.003E+00	1.003E+00	18.36
PO-216	74.81	725	6.21	8.644E+00	3.380E+00	3.380E+00	18.38
	77.11	1010	10.50	8.639E+00	2.785E+00	2.785E+00	15.08
	87.30	404	4.67	8.536E+00	2.534E+00	2.534E+00	26.95
	241.98	278	7.49	4.658E+00	1.993E+00	1.993E+00	34.44
	295.21	335	19.20	3.836E+00	1.139E+00	1.139E+00	22.33
PO-218	351.92	478	37.20*	3.206E+00	1.003E+00	1.003E+00	18.36
	74.81	725	10.70	8.644E+00	1.962E+00	1.970E+00	19.24
	77.11	1010	18.00	8.639E+00	1.624E+00	1.631E+00	13.01
	87.30	404	8.00	8.536E+00	1.479E+00	1.485E+00	27.69
	115.19	-----	0.60	7.861E+00	-----	Line Not Found	-----
RA-224	238.63	1396	44.60*	4.709E+00	1.663E+00	1.670E+00	10.22
	300.09	65	3.41	3.786E+00	1.252E+00	1.257E+00	79.95
	74.81	725	6.21	8.644E+00	3.380E+00	3.380E+00	18.38
	77.11	1010	10.50	8.639E+00	2.785E+00	2.785E+00	15.08
	87.30	404	4.67	8.536E+00	2.534E+00	2.534E+00	26.95
RA-226	241.98	278	7.49	4.658E+00	1.993E+00	1.993E+00	34.44
	295.21	335	19.20	3.836E+00	1.139E+00	1.139E+00	22.33
	351.92	478	37.20*	3.206E+00	1.003E+00	1.003E+00	18.36
	240.98	278	3.95*	4.658E+00	3.780E+00	3.795E+00	33.98
	295.21	335	19.20	3.836E+00	1.139E+00	1.139E+00	22.33
AC-228	351.92	478	37.20	3.206E+00	1.003E+00	1.003E+00	17.40
	609.31	309	46.30*	1.791E+00	9.323E-01	9.323E-01	16.86
	338.32	265	11.40	3.340E+00	1.744E+00	1.746E+00	48.88
	911.07	258	27.70*	1.181E+00	1.972E+00	1.975E+00	20.42

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	97	16.60	1.110E+00	1.318E+00	1.320E+00	51.47
RA-228	338.32	265	11.40	3.340E+00	1.744E+00	1.746E+00	48.88
	911.07	258	27.70*	1.181E+00	1.972E+00	1.975E+00	20.42
	969.11	97	16.60	1.110E+00	1.318E+00	1.320E+00	51.47
TH-228	84.40	156	1.21	8.580E+00	3.753E+00	3.768E+00	42.74
	238.60	1396	44.60*	4.709E+00	1.663E+00	1.670E+00	10.22
	300.10	65	3.41	3.786E+00	1.252E+00	1.257E+00	98.98
TH-230	295.21	335	19.20	3.836E+00	1.139E+00	1.139E+00	22.33
	351.92	478	37.20	3.206E+00	1.003E+00	1.003E+00	17.40
	609.31	309	46.30*	1.791E+00	9.323E-01	9.323E-01	16.86
TH-232	238.59	1396	44.60*	4.709E+00	1.663E+00	1.663E+00	10.22
	911.20	258	27.70	1.181E+00	1.972E+00	1.972E+00	20.42
	964.40	-----	5.20	1.116E+00	-----	Line Not Found	-----
	969.11	97	16.60	1.110E+00	1.318E+00	1.318E+00	51.47
TH-234	63.29	227	3.80*	8.512E+00	1.753E+00	1.753E+00	53.64
	92.38	405	5.41	8.430E+00	2.222E+00	2.222E+00	33.17
	112.81	-----	0.24	7.930E+00	-----	Line Not Found	-----
U-234	67.67	-----	0.37	8.597E+00	-----	Line Not Found	-----
	241.98	278	7.49	4.658E+00	1.993E+00	1.993E+00	34.44
	295.21	335	19.20*	3.836E+00	1.139E+00	1.139E+00	22.33
	351.92	478	37.20	3.206E+00	1.003E+00	1.003E+00	18.36
NP-237	86.50	404	12.60*	8.536E+00	9.393E-01	9.393E-01	33.06
	95.87	-----	2.60	8.372E+00	-----	Line Not Found	-----
U-238	63.29	227	3.80*	8.512E+00	1.753E+00	1.753E+00	53.64
AM-243	74.67	725	66.00*	8.644E+00	3.181E-01	3.181E-01	16.82
	86.72	404	0.34	8.536E+00	3.523E+01	3.523E+01	25.82
	117.66	-----	0.55	7.788E+00	-----	Line Not Found	-----
	142.18	-----	0.13	7.047E+00	-----	Line Not Found	-----
ANH-511	511.00	103	100.00*	2.159E+00	1.192E-01	1.192E-01	51.18

Flag: "\*" = Keyline

Total number of lines in spectrum 60  
 Number of unidentified lines 16  
 Number of lines tentatively identified by NID 44 73.33%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.308E+01	2.308E+01	0.231E+01	9.99	
KR-85	10.72Y	1.00	7.818E+00	7.824E+00	11.64E+00	148.83	
SR-85	64.84D	1.04	3.418E-02	3.566E-02	5.307E-02	148.83	
CD-109	464.00D	1.01	3.182E+00	3.200E+00	0.826E+00	25.82	
SN-126	1.00E+05Y	1.00	3.199E-01	3.199E-01	0.826E-01	25.82	
I-133	20.80H	23.6	5.072E-02	1.199E+00	0.942E+00	78.54	
ND-147	10.98D	1.28	3.341E-01	4.289E-01	3.406E-01	79.42	
HG-203	46.60D	1.06	2.685E-02	2.847E-02	5.852E-02	205.54	
TL-208	1.91Y	1.00	5.223E-01	5.244E-01	0.960E-01	18.30	
BI-211	7.04E+08Y	1.00	2.885E+00	2.885E+00	0.508E+00	17.61	
PB-212	1.91Y	1.00	1.663E+00	1.670E+00	0.171E+00	10.22	
PO-212	1.91Y	1.00	1.663E+00	1.670E+00	0.171E+00	10.22	
BI-214	1600.00Y	1.00	9.323E-01	9.323E-01	1.572E-01	16.86	
PB-214	1600.00Y	1.00	1.003E+00	1.003E+00	0.184E+00	18.36	
PO-214	1600.00Y	1.00	1.003E+00	1.003E+00	0.184E+00	18.36	
PO-216	1.91Y	1.00	1.663E+00	1.670E+00	0.171E+00	10.22	
PO-218	1600.00Y	1.00	1.003E+00	1.003E+00	0.184E+00	18.36	
RA-224	1.91Y	1.00	3.780E+00	3.795E+00	1.290E+00	33.98	
RA-226	1600.00Y	1.00	9.323E-01	9.323E-01	1.572E-01	16.86	
AC-228	5.75Y	1.00	1.972E+00	1.975E+00	0.403E+00	20.42	
RA-228	5.75Y	1.00	1.972E+00	1.975E+00	0.403E+00	20.42	
TH-228	1.91Y	1.00	1.663E+00	1.670E+00	0.171E+00	10.22	
TH-230	7.70E+04Y	1.00	9.323E-01	9.323E-01	1.572E-01	16.86	
TH-232	1.41E+10Y	1.00	1.663E+00	1.663E+00	0.170E+00	10.22	
TH-234	4.47E+09Y	1.00	1.753E+00	1.753E+00	0.940E+00	53.64	
U-234	2.45E+05Y	1.00	1.139E+00	1.139E+00	0.254E+00	22.33	
NP-237	2.14E+06Y	1.00	9.393E-01	9.393E-01	3.105E-01	33.06	
U-238	4.47E+09Y	1.00	1.753E+00	1.753E+00	0.940E+00	53.64	
AM-243	7380.00Y	1.00	3.181E-01	3.181E-01	0.535E-01	16.82	
ANH-511	1.00E+09Y	1.00	1.192E-01	1.192E-01	0.610E-01	51.18	
Total Activity :			6.612E+01	6.744E+01			

Grand Total Activity : 6.612E+01 6.744E+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	129.23	66	470	1.34	257.33	252	10	9.11E-03	****	7.44E+00	T
0	186.14	215	422	1.65	371.01	365	14	2.98E-02	43.5	5.83E+00	T
0	209.62	96	564	1.53	417.90	409	16	1.33E-02	****	5.29E+00	T
0	270.58	195	174	1.48	539.69	534	13	2.71E-02	31.6	4.18E+00	T
0	314.32	102	354	10.25	627.07	613	28	1.42E-02	****	3.60E+00	
0	327.72	68	118	1.83	653.86	650	9	9.45E-03	62.3	3.45E+00	T
0	410.11	36	175	0.89	818.48	815	13	5.04E-03	****	2.73E+00	T
0	463.00	33	125	1.52	924.18	918	12	4.65E-03	****	2.40E+00	T
0	545.73	27	45	3.99	1089.53	1084	11	3.79E-03	****	2.01E+00	T
0	566.71	111	142	2.04	1131.47	1121	19	1.54E-02	54.9	1.93E+00	T
0	708.66	30	85	3.21	1415.23	1406	15	4.23E-03	****	1.53E+00	T
0	727.29	58	66	1.62	1452.50	1446	11	8.08E-03	60.1	1.49E+00	T
0	749.57	22	46	1.76	1497.05	1492	11	3.01E-03	****	1.44E+00	
0	795.24	26	81	1.76	1588.35	1578	14	3.54E-03	****	1.36E+00	T
0	826.91	18	38	0.50	1651.70	1646	13	2.54E-03	****	1.30E+00	T
0	871.02	24	31	2.32	1739.91	1732	14	3.26E-03	****	1.24E+00	T
0	956.49	51	20	6.12	1910.87	1903	16	7.01E-03	51.2	1.12E+00	
0	1051.97	33	48	7.38	2101.86	2091	18	4.53E-03	****	1.02E+00	T
0	1126.79	12	24	0.93	2251.55	2246	9	1.68E-03	****	9.57E-01	
0	1130.78	17	32	0.85	2259.55	2254	14	2.29E-03	****	9.53E-01	T
0	1138.74	20	39	0.89	2275.46	2269	11	2.71E-03	****	9.47E-01	
0	1240.98	76	108	12.45	2480.07	2460	37	1.06E-02	91.4	8.71E-01	
0	1280.38	27	28	3.95	2558.91	2551	16	3.71E-03	96.7	8.45E-01	
0	1326.09	21	10	0.87	2650.41	2644	14	2.92E-03	78.3	8.16E-01	T
0	1443.80	8	5	3.14	2886.05	2880	11	1.05E-03	****	7.52E-01	
0	1447.11	6	3	1.06	2892.67	2890	6	8.33E-04	****	7.50E-01	
0	1572.09	11	0	0.50	3142.91	3136	14	1.53E-03	60.3	6.92E-01	
0	1581.28	7	13	0.69	3161.31	3153	12	9.34E-04	****	6.88E-01	
0	1587.87	22	5	1.89	3174.52	3169	11	3.07E-03	58.8	6.86E-01	
0	1593.26	12	14	2.28	3185.31	3179	11	1.66E-03	****	6.83E-01	
0	1729.49	26	8	0.97	3458.15	3452	10	3.63E-03	55.6	6.31E-01	
0	1892.75	6	2	1.26	3785.22	3780	9	7.99E-04	****	5.77E-01	
0	1985.92	11	3	4.01	3971.90	3966	13	1.59E-03	86.7	5.50E-01	

Flags: "T" = Tentatively associated

```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*
*****
*
*           DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532440.CNF;1
* Acquisition date   : 10-MAR-2008 12:23:34  Detector SN#      :
* Detector ID        : GAM21                  Sensitivity           : 3.00000
* Geometry           : CAN                    Energy tolerance      : 2.00000
* Elapsed live time  : 0 02:00:00.00         Abundance limit      : 75.00000
* Elapsed real time  : 0 02:00:14.03         Half life ratio      : 8.00000
*****
*
*           SAMPLE DATA
*
* Sample date        : 6-MAR-2008 14:28:00.  Nuclide Library      : SOLID
* Sample ID          : G1201532440          Analyst initials     : MJH1
* Batch Number       : 734275              Sample Quantity      : 1.50070E+02 GRAM
*****
*
*           QC DATA
*
* CALIB. DATE/TIME  : 2-JUL-2007 16:42:48.26MS Isotope         :
* MSD ID            :                      MSD Isotope          :
* LCS ID            : 1032-A              LCS Isotope           :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.308E+01	2.307E+00	6.837E-01	4.034E-02	33.764
KR-85	7.824E+00	1.164E+01	1.137E+01	7.369E-01	0.688
SR-85	3.566E-02	5.307E-02	5.183E-02	3.358E-03	0.688
CD-109	3.200E+00	8.265E-01	8.388E-01	6.193E-02	3.815
SN-126	3.199E-01	8.260E-02	8.375E-02	6.167E-03	3.820
I-133	1.199E+00	9.420E-01	1.495E+00	1.105E-01	0.802
ND-147	4.289E-01	3.406E-01	5.134E-01	7.148E-02	0.835
HG-203	2.847E-02	5.852E-02	5.590E-02	3.101E-03	0.509
TL-208	5.244E-01	9.596E-02	6.623E-02	5.307E-03	7.918
BI-211	2.885E+00	5.079E-01	3.237E-01	1.905E-02	8.912
PB-212	1.670E+00	1.706E-01	8.977E-02	6.815E-03	18.597
PO-212	1.670E+00	1.706E-01	8.977E-02	6.815E-03	18.597
BI-214	9.323E-01	1.572E-01	1.270E-01	1.167E-02	7.340
PB-214	1.003E+00	1.843E-01	1.129E-01	8.880E-03	8.888
PO-214	1.003E+00	1.843E-01	1.129E-01	8.880E-03	8.888
PO-216	1.670E+00	1.706E-01	8.977E-02	6.815E-03	18.597
PO-218	1.003E+00	1.843E-01	1.129E-01	8.880E-03	8.888
RA-224	3.795E+00	1.290E+00	1.024E+00	6.224E-02	3.707



---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	9.323E-01	1.572E-01	1.270E-01	1.167E-02	7.340
AC-228	1.975E+00	4.032E-01	2.418E-01	2.392E-02	8.166
RA-228	1.975E+00	4.032E-01	2.418E-01	2.392E-02	8.166
TH-228	1.670E+00	1.706E-01	8.976E-02	6.814E-03	18.599
TH-230	9.323E-01	1.572E-01	1.270E-01	1.167E-02	7.340
TH-232	1.663E+00	1.699E-01	8.941E-02	6.787E-03	18.600
TH-234	1.753E+00	9.401E-01	8.889E-01	1.525E-01	1.972
U-234	1.139E+00	2.543E-01	2.102E-01	1.708E-02	5.418
NP-237	9.393E-01	3.105E-01	2.453E-01	5.371E-02	3.829
U-238	1.753E+00	9.401E-01	8.889E-01	1.525E-01	1.972
AM-243	3.181E-01	5.349E-02	5.142E-02	3.556E-03	6.186
ANH-511	1.192E-01	6.100E-02	4.899E-02	3.157E-03	2.433

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.881E-01		3.031E-01	4.607E-01	3.207E-02	-0.408
NA-22	-5.628E-02		6.268E-02	7.264E-02	3.959E-03	-0.775
NA-24	-1.610E+00		4.123E+00	5.735E+00	3.385E-01	-0.281
AL-26	-3.134E-04		3.453E-02	5.711E-02	3.242E-03	-0.005
TI-44	2.996E-01	+	3.898E-02	5.492E-02	3.858E-03	5.456
SC-46	-7.858E-03		4.353E-02	7.095E-02	4.880E-03	-0.111
V-48	-2.161E-03		5.158E-02	8.475E-02	5.556E-03	-0.025
CR-51	-5.119E-02		3.035E-01	4.292E-01	2.555E-02	-0.119
MN-52	3.448E-02		7.553E-02	1.304E-01	7.169E-03	0.264
MN-54	3.777E-02		4.219E-02	7.154E-02	5.291E-03	0.528
CO-56	1.522E-02		4.080E-02	7.021E-02	5.121E-03	0.217
CO-57	6.489E-03		2.306E-02	3.724E-02	3.369E-03	0.174
CO-58	-7.763E-04		4.159E-02	6.919E-02	5.263E-03	-0.011
FE-59	-3.539E-02		8.960E-02	1.405E-01	9.779E-03	-0.252
CO-60	3.842E-03		4.677E-02	6.620E-02	3.554E-03	0.058
ZN-65	6.516E-02		1.100E-01	1.689E-01	9.972E-03	0.386
GE-68	-1.320E-01		1.505E+00	2.450E+00	1.499E-01	-0.054
AS-73	1.391E-03		1.869E-01	3.065E-01	1.966E-02	0.005
AS-74	1.340E-02		6.742E-02	1.107E-01	8.230E-03	0.121
SE-75	9.102E-03		4.757E-02	6.970E-02	3.916E-03	0.131
BR-77	-1.520E-01		5.179E-01	7.010E-01	4.598E-02	-0.217
RB-83	-8.288E-03		8.059E-02	1.116E-01	7.316E-03	-0.074
RB-84	-1.109E-02		7.264E-02	1.058E-01	7.362E-03	-0.105
RB-86	-6.704E-01		6.867E-01	1.013E+00	6.206E-02	-0.662
Y-88	8.917E-03		4.199E-02	7.247E-02	4.120E-03	0.123
ZR-88	-5.340E-03		2.970E-02	4.822E-02	2.414E-03	-0.111
Y-91	2.520E+00		2.125E+01	3.509E+01	1.922E+00	0.072
NB-94	-1.165E-02		4.773E-02	6.718E-02	5.449E-03	-0.173
NB-95	-7.373E-03		4.452E-02	7.335E-02	5.770E-03	-0.101
NB-95M	1.352E+00		3.079E-01	5.064E-01	4.024E-02	2.671
ZR-95	1.222E-02		8.203E-02	1.251E-01	1.108E-02	0.098

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-4.707E-01		1.850E+00	3.051E+00	2.482E-01	-0.154
ZR-97	6.950E+01		3.762E+01	6.142E+01	3.933E+00	1.132
MO-99	1.829E-01		7.812E-01	1.333E+00	1.977E-01	0.137
TC-99M	-4.563E-04		6.297E-04	Half-Life too short		
RH-102	-1.471E-03		3.174E-02	5.157E-02	3.100E-03	-0.029
RU-103	7.091E-03		3.456E-02	5.717E-02	7.357E-03	0.124
RH-106	1.906E-01		3.763E-01	6.307E-01	8.074E-02	0.302
RU-106	1.906E-01		3.758E-01	6.307E-01	4.876E-02	0.302
AG-108M	-2.036E-02		3.445E-02	5.391E-02	3.252E-03	-0.378
AG-110M	-7.156E-03		3.984E-02	6.609E-02	5.554E-03	-0.108
IN-111	6.810E-02		7.332E-02	1.125E-01	6.748E-03	0.605
IN-113M	1.077E-03		4.470E-02	7.355E-02	4.000E-03	0.015
SN-113	1.077E-03		4.470E-02	7.355E-02	4.000E-03	0.015
IN-114M	2.189E-02		1.586E-01	2.341E-01	1.566E-02	0.094
CD-115	1.712E-01		4.260E-01	6.238E-01	4.145E-02	0.274
SN-117M	1.449E-02		3.111E-02	5.061E-02	3.660E-03	0.286
SB-122	1.849E-01		1.780E-01	2.726E-01	1.927E-02	0.678
I-123	4.947E-01		3.964E+00	6.368E+00	4.588E-01	0.078
TE-123M	3.346E-03		2.681E-02	4.306E-02	3.130E-03	0.078
I-124	4.042E-02		1.330E-01	1.917E-01	1.441E-02	0.211
SB-124	2.851E-02		8.142E-02	1.445E-01	8.923E-03	0.197
SB-125	5.738E-03		9.581E-02	1.575E-01	8.975E-03	0.036
TE-125M	-6.030E-01		6.917E+00	1.113E+01	1.121E+00	-0.054
I-126	-1.879E-02		1.183E-01	1.966E-01	1.606E-02	-0.096
SB-126	-7.937E-04		1.126E-01	1.625E-01	1.309E-02	-0.005
SB-127	-4.502E-02		2.186E-01	3.611E-01	3.123E-02	-0.125
XE-127	-1.622E-02		4.311E-02	6.175E-02	4.074E-03	-0.263
I-131	4.265E-02		4.356E-02	7.604E-02	4.423E-03	0.561
TE-132	-5.803E-02		5.976E-02	9.498E-02	1.245E-02	-0.611
BA-133	5.022E-02		4.558E-02	7.119E-02	8.015E-03	0.705
CS-134	5.528E-02	+	8.548E-02	9.726E-02	7.531E-03	0.568
CS-135	2.835E-01		1.834E-01	2.888E-01	2.139E-02	0.982
I-135	1.343E-03		1.957E-03	Half-Life too short		
CS-136	1.028E-02		9.036E-02	1.296E-01	8.763E-03	0.079
BA-137M	2.324E-02		4.456E-02	7.755E-02	6.340E-03	0.300
CS-137	2.456E-02		4.711E-02	8.198E-02	6.716E-03	0.300
CE-139	-2.710E-03		2.591E-02	4.360E-02	2.958E-03	-0.062
BA-140	3.148E-02		1.621E-01	2.594E-01	8.485E-02	0.121
LA-140	-3.842E-02		7.250E-02	9.085E-02	5.120E-03	-0.423
CE-141	9.821E-03		4.632E-02	7.484E-02	6.083E-03	0.131
CE-143	3.823E+00	+	1.100E+00	1.088E+00	2.163E-01	3.515
CE-144	1.874E-01		2.080E-01	3.025E-01	4.696E-02	0.619
PM-144	-9.053E-03		3.945E-02	6.500E-02	5.282E-03	-0.139
PR-144	-6.098E-01		2.657E+00	4.379E+00	3.558E-01	-0.139
PM-146	3.845E-02		4.843E-02	8.319E-02	7.147E-03	0.462
PM-147	7.039E+01		6.684E+02	1.073E+03	9.644E+01	0.066
PM-149	1.804E-01		2.899E+00	4.562E+00	6.342E-01	0.040
EU-152	-1.057E-01		1.514E-01	1.542E-01	9.276E-03	-0.685

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.379E-02		6.612E-02	9.449E-02	7.330E-03	0.146
EU-154	-1.607E-01		1.762E-01	2.029E-01	1.851E-02	-0.792
EU-155	8.492E-02		8.826E-02	1.471E-01	1.211E-02	0.577
TB-160	-3.551E-02		1.628E-01	2.245E-01	1.567E-02	-0.158
TM-171	5.087E+00		1.573E+01	2.275E+01	1.535E+00	0.224
LU-176	-1.640E-02		3.681E-02	3.930E-02	2.051E-03	-0.417
LU-177	6.214E-01	+	7.042E-01	6.216E-01	4.069E-02	1.000
LU-177M	9.483E-02		2.037E-01	3.013E-01	1.585E-02	0.315
HF-181	-1.179E-02		3.671E-02	5.825E-02	3.551E-03	-0.202
W-181	4.937E-01	+	2.531E-01	2.720E-01	1.829E-02	1.815
TA-182	4.182E-02		2.242E-01	3.725E-01	2.038E-02	0.112
RE-183	3.231E-02		9.135E-02	1.562E-01	1.094E-02	0.207
RE-184	1.192E-01		2.144E-01	3.665E-01	2.140E-02	0.325
OS-185	4.008E-03		4.778E-02	7.740E-02	6.195E-03	0.052
RE-188	5.561E-02		1.523E-01	2.469E-01	1.836E-02	0.225
W-188	-1.382E-01		7.435E+00	1.070E+01	5.547E-01	-0.013
IR-192	2.142E-02		3.028E-02	5.208E-02	2.739E-03	0.411
AU-195	1.597E-01		1.850E-01	2.725E-01	2.131E-02	0.586
TL-200	-1.611E-01		3.706E-01	5.932E-01	3.041E-02	-0.271
TL-201	-2.362E-01		5.032E-01	8.351E-01	5.659E-02	-0.283
TL-202	1.698E-02		3.903E-02	6.577E-02	3.669E-03	0.258
BI-207	-9.048E-02		7.023E-02	9.992E-02	6.191E-03	-0.906
TL-207	3.176E-01		9.479E-01	9.632E-01	1.572E-01	0.330
BI-210	3.380E-01		4.958E-01	8.316E-01	6.127E-02	0.406
PB-210	3.380E-01		4.958E-01	8.316E-01	6.127E-02	0.406
PO-210	3.380E-01		4.956E-01	8.316E-01	5.171E-02	0.406
PB-211	-1.957E-01		1.165E+00	1.619E+00	1.008E+00	-0.121
BI-212	8.330E-01	+	5.065E-01	7.435E-01	7.070E-02	1.120
PO-215	3.176E-01		9.479E-01	9.632E-01	1.572E-01	0.330
RN-219	8.968E-02		4.471E-01	7.428E-01	9.900E-02	0.121
RN-220	-2.503E+01		3.430E+01	4.352E+01	3.004E+00	-0.575
RA-223	3.176E-01		9.479E-01	9.632E-01	1.572E-01	0.330
AC-227	5.439E-02		3.827E-01	6.420E-01	8.953E-02	0.085
TH-227	5.439E-02		3.827E-01	6.420E-01	1.084E-01	0.085
TH-229	-5.334E-02		5.246E-01	7.996E-01	5.333E-02	-0.067
PA-231	-1.144E-01		1.797E+00	2.581E+00	3.490E-01	-0.044
TH-231	8.591E-01	+	2.778E-01	3.559E-01	2.490E-02	2.414
U-231	1.241E-01		1.501E-01	2.201E-01	1.693E-02	0.564
PA-233	5.123E-02		6.210E-02	1.074E-01	6.038E-03	0.477
PA-234	7.893E-03		3.633E-01	6.021E-01	1.081E-01	0.013
PA-234M	-2.570E+00		7.611E+00	1.210E+01	1.165E+00	-0.212
U-235	1.854E-01		1.939E-01	3.182E-01	5.483E-02	0.583
NP-236	-2.529E-02		7.539E-02	1.260E-01	8.977E-03	-0.201
NP-239	1.471E-02		1.736E-01	2.779E-01	2.430E-02	0.053
AM-241	7.599E-02		5.992E-02	9.028E-02	6.750E-03	0.842
CM-243	-2.535E-02		7.893E-02	1.261E-01	1.015E-02	-0.201
CM-247	-4.013E-03		4.046E-02	6.599E-02	3.382E-03	-0.061
CF-249	1.821E-02		4.270E-02	7.198E-02	3.611E-03	0.253

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CF-251	6.318E-02		1.174E-01	2.016E-01	1.361E-02	0.313

\*\*\*\*\*  
 \* GEL Laboratories LLC \*  
 \* 2040 SAVAGE ROAD \*  
 \* CHARLESTON ,SC 29417 \*  
 \* GAMMA SPECTROSCOPY BACKGROUND REPORT \*  
 \*\*\*\*\*

ENERGY	MDA COUNTS
46.50	445.9922
46.50	445.9922
46.50	445.9922
48.70	446.3480
49.72	519.0964
51.35	437.7735
52.39	446.5346
52.97	452.9975
53.15	453.1046
53.44	452.2556
54.07	435.2572
56.28	505.4821
56.28	505.4839
57.37	461.3072
57.53	461.3990
57.53	461.4007
57.60	461.4401
57.98	446.8726
57.98	446.8726
59.32	454.1972
59.32	454.1972
59.40	454.2419
59.54	454.3202
59.72	454.4204
60.01	466.1105
61.10	484.8703
61.14	484.8936
61.30	513.0314
63.00	608.5027
63.29	608.7122
63.29	608.7122
63.58	608.9212
64.28	708.5458
65.12	689.3580
65.20	681.1351
65.20	681.1351
66.05	658.5829
66.72	667.3926
66.83	667.4785
66.91	667.5399
67.20	666.0995
67.20	666.0995
67.67	679.3373
67.75	679.3997
67.85	671.1654
68.90	662.9512
68.90	662.9512
69.30	643.8222
69.67	672.5503
70.82	747.2144
70.82	747.2144
70.83	747.2227
72.80	697.0294
72.80	697.0294
72.87	673.6795
72.87	673.6795
74.67	633.3340
74.81	633.4286
74.81	633.4286
74.81	633.4286
74.81	633.4286
74.81	633.4286
74.81	633.4286
74.97	633.5371
74.97	633.5371
75.28	633.7494
75.70	634.0333

77.11	634.9841
77.11	634.9841
77.11	634.9841
77.11	634.9841
77.11	634.9841
77.11	634.9841
77.11	634.9841
78.38	578.0304
79.62	601.9284
79.80	526.2604
79.80	526.2604
80.11	526.4301
80.18	602.2786
80.30	602.3539
80.30	602.3539
81.00	602.7881
81.07	602.8318
81.07	602.8318
81.07	602.8318
82.60	603.7744
83.37	576.7779
83.78	577.0175
83.78	577.0175
83.78	577.0175
84.21	585.3026
84.21	585.3026
84.40	512.8722
84.90	513.1293
85.43	513.4004
86.29	513.8398
86.50	513.9453
86.54	513.9656
86.59	513.9915
86.72	514.0581
86.79	514.0914
86.94	514.1691
87.30	514.3523
87.30	514.3523
87.30	514.3523
87.30	514.3523
87.30	514.3523
87.30	514.3523
87.57	514.4874
87.88	514.6446
88.03	514.7205
88.36	514.8851
88.47	514.9406
89.95	515.6826
91.11	516.2579
92.29	516.8407
92.38	516.8851
93.35	517.3606
94.00	438.9055
94.67	451.1413
94.67	451.1445
94.90	451.2411
94.90	451.2411
94.90	451.2411
95.87	470.4692
95.87	470.4692
96.73	457.1479
97.43	423.1775
98.44	384.1291
98.44	384.1291
98.88	377.4214
99.55	392.3661
99.55	392.3661
99.86	404.7411
100.00	413.2261
100.10	413.2643
103.18	446.7016
103.76	432.9324
105.00	381.6576
105.31	393.6242
108.00	428.0599
109.28	433.9450
111.00	445.4235
111.00	445.4235
111.76	446.7964

112.81	454.7920
112.95	454.8448
115.19	396.9715
115.19	396.9715
115.19	396.9715
116.30	401.6935
117.00	414.9965
117.00	414.9965
117.66	435.9299
121.11	417.4890
121.26	404.4221
121.62	391.4205
121.78	391.4710
122.06	404.6847
122.32	408.8320
122.32	408.8320
122.32	408.8320
123.07	404.2838
129.76	431.3676
131.20	382.4943
133.02	372.4413
133.54	353.1641
135.34	411.7481
136.00	425.6965
136.25	406.9753
136.48	407.0455
140.51	396.0714
140.51	0.0000
142.18	388.7833
142.65	385.5858
143.76	348.0869
144.24	357.1086
144.24	357.1086
144.24	357.1086
145.22	381.8555
145.44	381.9156
147.16	419.1818
152.43	407.3311
152.70	405.1703
153.22	415.3965
154.21	387.6741
154.21	387.6741
154.21	387.6741
155.03	393.5012
156.02	406.1121
158.56	378.7316
159.00	388.9649
159.00	388.9649
160.31	396.0645
161.27	372.9058
162.32	360.5518
162.64	365.1378
163.35	367.1173
163.89	381.6888
165.85	356.8935
167.43	362.6965
171.28	339.1384
171.86	332.0114
172.10	332.0628
176.33	318.4222
176.55	318.4671
176.60	318.4778
181.06	330.0341
185.71	306.5953
186.00	306.6505
190.27	292.1676
192.34	312.4497
193.63	321.8936
197.04	324.4012
198.60	304.4121
200.40	337.5744
201.83	345.0508
202.84	352.9625
205.31	302.5395
208.36	318.2338
208.81	318.3176
209.75	318.4913
209.75	318.4913

210.97	308.1844
215.65	279.5105
216.55	272.9949
218.09	291.0927
222.10	294.5569
223.80	260.2042
226.40	255.8925
227.00	248.4763
227.08	248.4876
227.20	270.0721
228.16	273.0292
228.18	273.0327
228.18	273.0327
231.56	256.4847
235.69	284.2008
236.00	282.6782
236.00	282.6782
236.00	282.6782
238.59	259.4809
238.60	259.4826
238.63	259.4876
238.63	259.4876
238.63	259.4876
239.00	259.5380
240.98	259.8132
241.98	259.9509
241.98	259.9509
241.98	259.9509
241.98	259.9509
244.69	233.5023
245.39	205.1787
247.94	214.9349
248.90	220.5770
249.79	240.4533
252.40	225.2542
252.85	203.4411
252.85	203.4411
254.15	220.7016
256.20	227.5999
256.20	227.5999
256.20	227.5999
260.90	228.1441
264.65	213.5925
268.24	202.7964
268.79	217.2287
269.46	214.1050
269.46	214.1050
269.46	214.1050
269.46	214.1050
271.23	198.7555
271.23	198.7555
273.65	168.1149
276.40	187.5804
277.35	168.4183
277.60	188.3774
277.60	188.3774
278.00	188.4132
278.60	188.4682
279.20	200.6785
279.53	200.7116
281.68	197.7054
283.67	202.7197
283.67	202.7197
284.30	189.9063
285.00	194.5708
285.90	190.8580
286.10	193.2910
286.10	193.2910
287.40	192.2018
288.45	0.0000
290.67	188.8682
290.80	188.8801
291.72	190.5784
293.26	184.2504
293.70	185.9040
295.21	176.3311
295.21	176.3311
295.21	176.3311



295.21	176.3311
295.21	176.3311
295.21	176.3311
295.96	106.8069
296.50	106.8337
297.23	106.8700
298.57	106.9358
299.80	141.0422
299.80	141.0422
300.09	171.8661
300.09	171.8661
300.09	171.8661
300.10	171.8683
300.12	171.8683
301.29	184.9415
301.29	184.9415
302.84	204.5526
303.76	199.7674
303.91	199.7824
304.40	224.1967
304.40	224.1967
304.84	199.8675
306.84	178.9067
308.46	157.8796
311.98	137.9156
316.51	138.1979
318.01	138.2891
319.02	119.3824
319.41	132.4869
320.08	140.7071
323.87	108.1658
323.87	108.1658
323.87	108.1658
328.77	193.8050
329.70	179.0942
329.70	179.0942
329.85	179.1075
330.00	179.1186
333.44	153.0530
334.20	150.6347
334.20	150.6347
334.30	150.6403
338.28	162.2783
338.28	162.2783
338.28	162.2783
338.32	162.2803
338.32	162.2803
340.50	141.9633
340.57	141.9668
344.27	168.6449
345.85	148.9041
350.59	133.2868
351.07	133.3130
351.07	133.3130
351.92	133.3604
351.92	133.3604
351.92	133.3604
351.92	133.3604
351.92	133.3604
351.92	133.3604
355.39	106.3112
356.01	96.3693
364.48	105.0423
366.43	129.1543
367.43	134.2143
367.94	133.2403
369.80	136.3486
374.96	118.5488
383.85	135.0992
387.95	125.2200
388.63	127.2735
391.69	130.4597
391.69	130.4597
392.90	129.5094
398.62	126.7532
400.65	124.8228
401.10	123.8303
401.81	126.9089

401.81	126.9089
402.60	134.0560
404.84	130.4451
411.60	111.0770
413.65	110.4836
414.70	112.2277
415.30	115.6534
415.76	119.0763
417.63	0.0000
418.52	134.2811
423.70	115.6746
427.08	107.6199
427.89	104.5761
432.53	95.5112
433.93	110.9729
439.47	96.7814
439.56	96.7849
439.89	102.9749
443.98	114.4701
444.90	98.0024
445.03	98.0070
445.03	98.0070
445.03	98.0070
453.90	96.2468
463.38	103.8367
468.07	116.1404
473.00	102.0997
475.06	96.9586
475.35	96.9688
476.78	107.4484
477.59	92.8688
477.96	91.8371
482.03	87.7847
484.57	102.5040
487.03	79.5588
490.36	89.0798
492.35	87.0416
497.08	76.6758
507.63	87.8357
510.53	82.2918
510.84	82.3004
511.00	82.3051
511.85	82.3275
511.85	82.3275
513.99	82.3851
513.99	82.3851
520.41	84.6738
520.65	89.9722
527.90	77.8039
528.96	88.4440
529.64	94.4799
529.87	94.4864
531.02	86.7330
537.32	79.2208
543.00	76.4013
546.56	0.0000
549.76	89.0259
552.65	82.8679
555.20	85.6094
563.23	100.1237
563.90	98.3559
568.70	96.7104
569.32	98.5193
569.50	98.5260
569.67	93.1561
573.80	73.5417
574.00	78.9282
574.64	80.7367
578.91	91.6199
579.30	89.8336
583.14	79.8644
585.48	100.8005
591.81	75.7422
592.07	82.2418
593.00	94.1707
595.88	74.7511
600.56	83.5326
602.52	72.8802

602.71	74.1774
602.71	74.1774
603.60	66.9571
604.41	76.0242
604.70	77.8395
606.64	76.0737
609.31	81.5698
609.31	81.5698
609.31	81.5698
610.33	87.0332
612.46	72.5732
614.37	78.0600
618.01	86.1362
621.84	72.0409
621.84	72.0409
631.29	72.2358
633.02	56.9410
633.10	54.7522
634.78	49.3000
635.90	63.5635
636.97	70.1594
645.85	80.2252
646.12	73.6362
656.30	88.1738
657.75	80.8582
657.90	80.8618
661.65	82.7838
661.65	82.7838
664.57	74.5664
666.33	83.8110
666.33	83.8110
675.00	64.6224
677.61	70.2109
685.20	78.6862
692.80	77.9194
695.00	77.9639
696.49	78.9231
696.49	78.9231
697.00	77.0762
697.49	76.1576
698.50	80.2670
699.00	78.0476
702.63	86.0926
706.10	76.5971
706.58	76.6071
706.67	67.9637
709.31	62.2882
713.82	70.3567
717.42	70.9562
720.50	81.6904
721.93	67.2993
722.20	65.7027
722.78	73.7248
722.78	73.7248
722.89	73.7280
722.95	73.7280
723.30	67.3242
724.18	76.9587
727.18	89.8555
733.00	57.8496
735.90	69.4187
739.58	57.2769
742.81	60.6131
744.21	58.0153
747.13	66.1217
751.79	61.3564
753.82	63.0023
755.35	61.4107
756.15	62.2308
756.87	60.3568
763.13	77.4522
763.93	85.0250
765.79	70.8878
766.41	68.0625
766.84	65.2336
768.36	70.9335
778.00	75.8415
778.57	80.5937

778.89	81.5471
783.80	55.0641
785.46	56.9849
792.07	60.3392
795.84	62.0257
796.30	58.7687
801.93	67.5115
805.60	55.3544
810.76	57.3340
815.85	54.5334
817.79	51.6874
818.51	55.1426
819.60	50.2730
826.30	59.1906
828.27	46.0586
831.60	62.5571
831.96	65.8552
834.83	42.2848
836.80	0.0000
846.75	47.2215
848.13	45.3085
856.28	34.7695
856.80	36.4298
860.37	46.4033
867.32	11.6191
867.82	11.6204
871.10	11.6292
873.19	11.6348
874.81	46.5557
875.33	48.2244
876.40	49.8989
879.36	46.6035
880.27	44.9485
880.51	49.9459
881.50	50.9972
883.24	43.7292
884.67	51.5195
889.25	54.4915
898.02	50.6987
899.00	54.6100
903.28	45.1802
911.07	45.9568
911.07	45.9568
911.20	45.9577
919.63	50.3812
920.93	41.1566
925.00	57.8657
925.24	57.8693
926.50	47.0928
934.06	49.1353
935.52	34.4061
937.48	54.0892
944.10	46.2876
946.00	49.2625
949.00	49.0123
962.29	59.3201
964.01	59.3420
964.40	71.2163
966.15	79.1585
968.20	112.0011
969.11	81.1875
969.11	81.1875
969.11	81.1875
977.42	44.9626
980.50	56.5709
983.50	45.6818
989.30	47.7256
996.32	55.7607
1001.03	49.8352
1001.68	51.8350
1004.76	38.9008
1021.30	41.0342
1024.50	48.0718
1034.80	37.1325
1037.82	41.1718
1038.57	48.2090
1038.76	0.0000
1045.16	36.2036

1046.59	41.3873
1048.07	51.7508
1050.47	57.3827
1050.47	57.3827
1063.62	69.6458
1076.63	63.7511
1077.35	48.5801
1085.78	59.8114
1093.90	37.5676
1099.22	46.7543
1112.02	48.9063
1112.84	38.4325
1115.52	36.7046
1120.29	55.1074
1120.51	55.1096
1121.28	48.9941
1124.00	0.0000
1129.67	0.0000
1131.51	0.0000
1147.95	54.3694
1167.94	49.4238
1173.22	68.0222
1175.09	51.5503
1177.93	58.7975
1189.05	66.1536
1204.90	57.0142
1205.75	60.1335
1213.00	52.9445
1221.42	51.9857
1230.97	49.9902
1235.34	47.9447
1236.41	47.9541
1238.11	47.9691
1238.25	47.9691
1246.25	37.5952
1260.41	0.0000
1271.85	37.7637
1274.45	46.7750
1274.54	46.7768
1291.56	45.2606
1298.22	28.4513
1312.09	40.1384
1325.50	25.4082
1325.50	25.4082
1332.49	19.9866
1333.61	14.5385
1360.21	24.4908
1362.66	33.0220
1365.15	25.5762
1368.21	24.3094
1368.53	29.8560
1376.25	21.9626
1377.67	27.7647
1384.27	14.6607
1394.10	18.2029
1407.95	21.4632
1434.06	20.4751
1436.60	27.7222
1457.56	0.0000
1460.81	21.6447
1489.15	15.8391
1509.49	13.0850
1596.49	24.8575
1620.62	9.5030
1678.03	0.0000
1691.02	10.5592
1691.02	10.5592
1706.46	0.0000
1750.46	10.6470
1764.49	7.7581
1770.23	8.4921
1771.40	8.4933
1791.20	0.0000
1808.65	8.7803
1836.01	10.7706

TOTAL URANIUM BY GAMMA SPEC REPORT  
Sample:G1201532440

Total Uranium Activity	5.2999E+00	ug/g
Total Uranium Counting Unc.	2.7422E+00	ug/g
Total Uranium Tpu	2.7422E+00	ug/g
Total Uranium Mda	2.8750E+00	ug/g

```

*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                          *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*   BATCH ID      : 734275                SAMPLE ID   : G1201532440
*   ANALYST       : MJH1                  DETECTOR    : GAM21
*   SAMPLE DATE   : 6-MAR-2008 14:28:00.00  COUNT TIME   : 0 02:00:00.00
*   ANALYSIS DATE : 10-MAR-2008 12:23:34.42  SAMPLE ALQT  : 150.070 GRAM
*
*****

```

```

GROSS GAMMA ACTIVITY (pCi/GRAM ) : 9.880E+00
GROSS GAMMA ERROR (pCi/GRAM ) : 2.220E+00
GROSS GAMMA MDA (pCi/GRAM ) : 1.297E+01
GROSS GAMMA DLC (pCi/GRAM ) : 6.343E+00

```

VAX/VMS Nuclide Identification Report Generated 10-MAR-2008 13:49:11.45

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
Configuration   : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532441.CNF;1
Sample date     : 8-MAR-2008 00:00:00. Acquisition date : 10-MAR-2008 12:41:42
Sample ID      : G1201532441      Sample quantity   : 1.55440E+02 GRAM
Detector name  : GAM05            Detector geometry: CAN
Elapsed live time: 0 01:00:00.00  Elapsed real time: 0 01:00:02.28  0.1%
Energy tolerance : 2.00000 keV   Analyst Initials  : MJH1
Abundance limit : 75.00000       Sensitivity       : 3.00000
Batch ID       : 734275          Detector SN#     :
Matrix Spike ID :                 LCS ID            : 1032-A
*****

```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	10	49.02	168	736	1.12	98.81	96	10	4.66E-02	26.1	3.49E+00
2	10	50.82	143	1147	1.23	102.42	96	10	3.96E-02	40.4	
3	0	59.24	8336	1422	1.12	119.25	115	11	2.32E+00	1.4	
4	0	62.92*	7	526	1.15	126.61	125	6	2.00E-03	510.2	
5	3	74.59*	218	701	1.04	149.93	146	13	6.06E-02	20.1	2.08E+00
6	3	76.86*	332	754	1.22	154.46	146	13	9.23E-02	15.1	
7	0	87.85	5949	1054	1.15	176.43	170	13	1.65E+00	1.7	
8	0	92.43*	100	302	1.47	185.58	183	6	2.77E-02	30.3	
9	0	121.94	1696	515	1.18	244.57	239	12	4.71E-01	3.6	
10	0	136.52	182	415	1.32	273.71	269	10	5.06E-02	22.3	
11	0	165.73	574	334	1.26	332.10	326	10	1.59E-01	7.3	
12	2	238.61*	548	204	1.41	477.75	471	23	1.52E-01	6.3	1.40E+00
13	2	241.62	135	272	1.83	483.78	471	23	3.76E-02	28.7	
14	0	294.91*	128	249	0.81	590.28	585	11	3.56E-02	25.5	
15	0	328.07	47	139	1.17	656.55	653	7	1.31E-02	43.9	
16	0	338.50	138	192	1.54	677.38	672	11	3.83E-02	21.3	
17	0	351.93*	152	292	1.14	704.21	698	13	4.22E-02	24.7	
18	0	391.57	230	276	1.36	783.44	776	13	6.40E-02	16.3	
19	0	510.45*	63	178	1.69	1020.97	1014	14	1.74E-02	49.4	
20	0	583.41*	129	129	1.60	1166.75	1161	12	3.58E-02	19.8	
21	0	609.96*	145	186	1.36	1219.80	1214	14	4.04E-02	21.9	
22	0	661.88*	2120	179	1.52	1323.53	1315	14	5.89E-01	2.5	
23	0	707.43	36	153	5.24	1414.53	1405	15	9.91E-03	77.6	
24	0	727.55	53	68	1.52	1454.72	1451	8	1.48E-02	30.0	
25	0	883.64	25	93	1.43	1766.52	1761	10	7.01E-03	74.1	
26	0	898.52*	198	142	1.54	1796.25	1788	13	5.51E-02	14.2	
27	0	911.58*	110	172	1.62	1822.33	1813	17	3.07E-02	29.1	
28	0	915.81	22	123	4.03	1830.77	1830	12	6.15E-03	101.6	
29	0	923.18	78	81	2.22	1845.50	1841	12	2.17E-02	25.3	
30	0	942.64	9	127	1.08	1884.38	1883	10	2.60E-03	230.8	
31	0	969.34*	50	187	1.96	1937.71	1930	13	1.39E-02	59.1	
32	0	1050.18	31	159	2.98	2099.15	2087	16	8.66E-03	92.4	
33	0	1173.71	2128	47	2.02	2345.85	2338	17	5.91E-01	2.3	
34	0	1317.55	13	14	3.58	2633.08	2625	14	3.61E-03	67.1	
35	0	1333.21	1903	61	1.98	2664.34	2655	19	5.29E-01	2.5	
36	0	1402.03	17	7	1.07	2801.76	2793	16	4.65E-03	44.7	
37	0	1412.07	11	3	2.03	2821.80	2818	9	3.17E-03	38.2	
38	0	1494.77	5	10	0.97	2986.91	2979	9	1.28E-03	138.0	



Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1589.18	21	12	4.24	3175.39	3166	16	5.81E-03	43.0	
40	0	1596.15	18	7	0.67	3189.29	3182	13	4.86E-03	38.4	
41	0	1725.61	8	2	1.33	3447.70	3443	9	2.21E-03	48.8	
42	0	1765.54*	16	14	2.88	3527.42	3520	14	4.48E-03	56.4	
43	0	1837.29	126	8	1.62	3670.62	3663	16	3.50E-02	10.2	

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

VAX/VMS Nuclide Identification Report Generated

\*\*\*\*\*  
 \* GEL Laboratories LLC \*  
 \* 2040 Savage Road \*  
 \* Charleston, SC 29414 \*  
 \*\*\*\*\*

DETECTOR DATA

\* Configuration : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532441 \*  
 \* Acquisition date : 10-MAR-2008 12:41:42 Detector SN# : \*  
 \* Detector ID : GAM05 Sensitivity : 3.000 \*  
 \* Geometry : CAN Energy tolerance: 2.000 \*  
 \* Elapsed live time: 0 01:00:00.00 Abundance limit : 75.000 \*  
 \* Elapsed real time: 0 01:00:02.28 Half life ratio : 8.000 \*  
 \*\*\*\*\*

SAMPLE DATA

\* Sample date : 8-MAR-2008 00:00:00 Nuclide Library : \*  
 \* Sample ID : G1201532441 Analyst initials: MJH1 \*  
 \* Batch Number : 734275 Sample Quantity : 1.5544E+02 GRAM \*  
 \* Recovery : 1.00000 Carrier Weight : 0.00000 \*  
 \*\*\*\*\*

QC DATA

\* Standard Weight : 0.00000 \*  
 \* CALIB. DATE/TIME : 31-MAY-2007 12:09:24 MS Isotope : \*  
 \* MSD DPM : 0.000 MSD Isotope : \*  
 \* LCS DPM : 0.000 LCS Isotope : \*  
 \* LCSD DPM : 0.000 LCSD Isotope : \*  
 \*\*\*\*\*

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM )	Act error	MDA (pCi/GRAM )	
CO-57	1.471E+00	1.788E-01	8.375E-02	0.000E+00
CO-60	8.743E+00	8.357E-01	1.371E-01	0.000E+00
Y-88	7.723E-01	1.609E-01	6.518E-02	0.000E+00
ZR-88	3.908E-01	1.260E-01	1.257E-01	0.000E+00
CD-109	1.080E+02	9.993E+00	2.643E+00	0.000E+00
IN-113M	5.826E-01	1.882E-01	1.909E-01	0.000E+00
SN-113	5.826E-01	1.882E-01	1.909E-01	0.000E+00
SN-126	1.082E+01	1.001E+00	2.644E-01	0.000E+00
BA-137M	6.031E+00	5.683E-01	1.545E-01	0.000E+00
CS-137	6.375E+00	6.017E-01	1.633E-01	0.000E+00
CE-139	6.164E-01	1.082E-01	9.260E-02	0.000E+00
CE-143	1.405E+00	7.541E-01	8.338E-01	0.000E+00
PM-147	4.318E+04	5.246E+03	2.451E+03	0.000E+00
TM-171	2.471E+01	3.711E+01	6.269E+01	0.000E+00
TL-208	3.519E-01	1.393E-01	1.544E-01	0.000E+00
BI-211	1.734E+00	8.447E-01	8.017E-01	0.000E+00
PB-212	1.333E+00	2.062E-01	1.958E-01	0.000E+00
PO-212	1.333E+00	2.062E-01	1.958E-01	0.000E+00
PB-214	6.031E-01	2.955E-01	2.795E-01	0.000E+00
PO-214	6.031E-01	2.955E-01	2.795E-01	0.000E+00
PO-216	1.333E+00	2.062E-01	1.958E-01	0.000E+00
PO-218	6.031E-01	2.955E-01	2.795E-01	0.000E+00
RA-224	3.749E+00	2.132E+00	2.228E+00	0.000E+00
RA-226	7.482E-01	3.282E-01	2.892E-01	0.000E+00
AC-228	1.340E+00	7.792E-01	7.093E-01	0.000E+00
RA-228	1.340E+00	7.792E-01	7.093E-01	0.000E+00
TH-228	1.333E+00	2.062E-01	1.957E-01	0.000E+00
TH-230	7.482E-01	3.282E-01	2.892E-01	0.000E+00
TH-232	1.330E+00	2.057E-01	1.952E-01	0.000E+00
TH-234	1.241E-01	1.241E+00	2.485E+00	0.000E+00
U-234	8.497E-01	4.307E-01	5.424E-01	0.000E+00
NP-237	3.176E+01	7.064E+00	7.744E-01	0.000E+00
U-238	1.241E-01	1.241E+00	2.485E+00	0.000E+00
AM-241	1.519E+01	1.296E+00	3.452E-01	0.000E+00

AM-243	2.176E-01	8.753E-02	1.423E-01	0.000E+00
ANH-511	1.278E-01	1.239E-01	1.286E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act ) Ided	error	MDA (pCi/GRAM	)	
BE-7	8.464E-02	7.632E-01		1.323E+00	0.000E+00	NOT IDENT.
NA-22	-7.490E-02	6.865E-02		9.978E-02	0.000E+00	NOT IDENT.
NA-24	-2.037E-01	1.034E+00		1.699E+00	0.000E+00	NOT IDENT.
AL-26	8.327E-03	5.944E-02		1.036E-01	0.000E+00	NOT IDENT.
K-40	1.064E+00	6.759E-01		1.351E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.906E-02		1.077E-01	0.000E+00	FAIL ABUN
SC-46	1.493E-01	1.566E-01		2.095E-01	0.000E+00	NOT IDENT.
V-48	-3.908E-02	1.327E-01		2.196E-01	0.000E+00	FAIL ABUN
CR-51	3.235E-01	6.309E-01		1.150E+00	0.000E+00	NOT IDENT.
MN-52	-1.753E-02	8.609E-02		1.404E-01	0.000E+00	FAIL ABUN
MN-54	4.716E-02	1.088E-01		1.908E-01	0.000E+00	NOT IDENT.
CO-56	3.903E-02	1.075E-01		1.878E-01	0.000E+00	FAIL ABUN
CO-58	-6.508E-02	9.987E-02		1.643E-01	0.000E+00	NOT IDENT.
FE-59	1.259E-01	2.214E-01		3.960E-01	0.000E+00	NOT IDENT.
ZN-65	-8.471E-03	2.580E-01		4.455E-01	0.000E+00	NOT IDENT.
GE-68	-1.156E+00	3.748E+00		6.389E+00	0.000E+00	NOT IDENT.
AS-73	-8.244E-01	8.082E-01		1.230E+00	0.000E+00	NOT IDENT.
AS-74	1.596E-01	1.412E-01		2.639E-01	0.000E+00	NOT IDENT.
SE-75	-9.652E-02	8.810E-02		1.519E-01	0.000E+00	FAIL ABUN
BR-77	6.206E-01	6.757E-01		1.216E+00	0.000E+00	FAIL ABUN
RB-83	8.696E-02	1.613E-01		2.844E-01	0.000E+00	NOT IDENT.
RB-84	1.720E-02	1.979E-01		2.910E-01	0.000E+00	NOT IDENT.
KR-85	2.360E+01	1.939E+01		3.135E+01	0.000E+00	NOT IDENT.
SR-85	1.060E-01	8.706E-02		1.408E-01	0.000E+00	NOT IDENT.
RB-86	-9.728E-01	1.558E+00		2.605E+00	0.000E+00	NOT IDENT.
Y-91	7.194E-01	2.907E+01		4.999E+01	0.000E+00	NOT IDENT.
NB-94	2.797E-02	9.861E-02		1.513E-01	0.000E+00	NOT IDENT.
NB-95	4.460E-02	9.725E-02		1.725E-01	0.000E+00	NOT IDENT.
NB-95M	3.841E-01	3.734E-01		6.240E-01	0.000E+00	NOT IDENT.
ZR-95	1.568E-01	1.764E-01		3.194E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.337E+00		2.387E+00	0.000E+00	NOT IDENT.
ZR-97	1.492E+01	2.106E+01		3.276E+01	0.000E+00	NOT IDENT.
MO-99	-7.140E-01	1.319E+00		2.204E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	5.627E+01		0.000E+00	0.000E+00	SHORT HLIF
RH-102	-2.780E-02	8.409E-02		1.427E-01	0.000E+00	NOT IDENT.
RU-103	-3.078E-03	8.434E-02		1.446E-01	0.000E+00	FAIL ABUN
RH-106	4.059E-01	7.971E-01		1.441E+00	0.000E+00	FAIL ABUN
RU-106	4.059E-01	7.960E-01		1.441E+00	0.000E+00	FAIL ABUN
AG-108M	1.143E-02	9.174E-02		1.605E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	1.093E-01		1.916E-01	0.000E+00	FAIL ABUN
IN-111	5.398E-02	1.076E-01		1.756E-01	0.000E+00	NOT IDENT.
IN-114M	7.105E-02	2.965E-01		5.258E-01	0.000E+00	NOT IDENT.
CD-115	-6.385E-04	5.475E-01		9.355E-01	0.000E+00	NOT IDENT.
SN-117M	2.628E-02	5.671E-02		9.931E-02	0.000E+00	NOT IDENT.
SB-122	1.282E-01	1.946E-01		3.579E-01	0.000E+00	NOT IDENT.
I-123	6.468E-01	1.352E+00		2.274E+00	0.000E+00	NOT IDENT.
TE-123M	2.574E-02	5.380E-02		9.047E-02	0.000E+00	NOT IDENT.
I-124	-1.735E-01	2.267E-01		3.384E-01	0.000E+00	NOT IDENT.
SB-124	1.018E-01	1.316E-01		2.516E-01	0.000E+00	FAIL ABUN
SB-125	4.109E-02	2.424E-01		4.255E-01	0.000E+00	NOT IDENT.
TE-125M	-5.679E+00	1.467E+01		2.635E+01	0.000E+00	NOT IDENT.
I-126	-1.619E-01	2.863E-01		4.108E-01	0.000E+00	NOT IDENT.
SB-126	2.367E-02	2.060E-01		3.345E-01	0.000E+00	FAIL ABUN
SB-127	-4.303E-02	3.919E-01		6.802E-01	0.000E+00	FAIL ABUN
XE-127	-3.927E-03	7.744E-02		1.351E-01	0.000E+00	FAIL ABUN
I-131	1.927E-02	9.359E-02		1.668E-01	0.000E+00	NOT IDENT.
TE-132	-4.636E-02	1.039E-01		1.753E-01	0.000E+00	FAIL ABUN
BA-133	-2.799E-02	1.167E-01		1.764E-01	0.000E+00	NOT IDENT.
I-133	4.090E-02	6.419E-01		1.101E+00	0.000E+00	FAIL ABUN
CS-134	-2.455E-02	1.098E-01		1.864E-01	0.000E+00	NOT IDENT.
CS-135	2.781E-01	3.230E-01		6.030E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.430E+02		0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.833E-01	1.793E-01		3.279E-01	0.000E+00	FAIL ABUN
BA-140	1.147E-01	3.492E-01		6.039E-01	0.000E+00	NOT IDENT.
LA-140	1.119E-01	8.459E-02		1.554E-01	0.000E+00	FAIL ABUN
CE-141	3.059E-02	8.653E-02		1.570E-01	0.000E+00	NOT IDENT.
CE-144	2.443E-01	4.137E-01		6.706E-01	0.000E+00	NOT IDENT.
PM-144	-2.935E-02	8.328E-02		1.420E-01	0.000E+00	NOT IDENT.
PR-144	-1.976E+00	5.606E+00		9.560E+00	0.000E+00	NOT IDENT.

PM-146	-1.063E-01	1.246E-01	2.063E-01	0.000E+00	NOT IDENT.
ND-147	1.352E-01	6.485E-01	1.121E+00	0.000E+00	FAIL ABUN
PM-149	-3.289E-02	3.722E+00	6.698E+00	0.000E+00	NOT IDENT.
EU-152	-1.245E-01	2.836E-01	3.656E-01	0.000E+00	FAIL ABUN
GD-153	-7.699E-02	1.243E-01	2.153E-01	0.000E+00	NOT IDENT.
EU-154	-2.106E-01	1.936E-01	2.805E-01	0.000E+00	FAIL ABUN
EU-155	1.984E-01	1.883E-01	3.549E-01	0.000E+00	FAIL ABUN
TB-160	-1.852E-01	4.502E-01	6.323E-01	0.000E+00	FAIL ABUN
LU-176	2.157E-02	5.492E-02	9.997E-02	0.000E+00	FAIL ABUN
LU-177	1.797E-01	6.136E-01	1.082E+00	0.000E+00	NOT IDENT.
LU-177M	-2.675E-02	4.176E-01	7.269E-01	0.000E+00	FAIL ABUN
HF-181	-2.711E-02	9.177E-02	1.555E-01	0.000E+00	FAIL ABUN
W-181	-6.188E-01	4.316E-01	6.791E-01	0.000E+00	FAIL ABUN
TA-182	-1.464E-02	2.813E-01	4.794E-01	0.000E+00	NOT IDENT.
RE-183	-1.627E-01	2.185E-01	3.244E-01	0.000E+00	FAIL ABUN
RE-184	-1.109E-01	4.556E-01	8.197E-01	0.000E+00	FAIL ABUN
OS-185	-4.703E-02	1.031E-01	1.763E-01	0.000E+00	FAIL ABUN
RE-188	-2.930E-04	2.826E-01	5.037E-01	0.000E+00	NOT IDENT.
W-188	8.631E+00	1.506E+01	2.438E+01	0.000E+00	FAIL ABUN
IR-192	-4.604E-02	7.124E-02	1.235E-01	0.000E+00	FAIL ABUN
AU-195	2.789E-01	3.448E-01	6.489E-01	0.000E+00	FAIL ABUN
TL-200	-1.763E-01	3.518E-01	6.051E-01	0.000E+00	NOT IDENT.
TL-201	0.000E+00	1.534E+00	2.048E+00	0.000E+00	FAIL ABUN
TL-202	-7.637E-02	9.265E-02	1.542E-01	0.000E+00	NOT IDENT.
HG-203	4.700E-02	6.960E-02	1.289E-01	0.000E+00	FAIL ABUN
BI-207	-9.706E-03	1.542E-01	2.669E-01	0.000E+00	FAIL ABUN
TL-207	-7.314E-01	1.757E+00	2.642E+00	0.000E+00	FAIL ABUN
BI-210	0.000E+00	1.505E+00	2.624E+00	0.000E+00	NOT IDENT.
PB-210	0.000E+00	1.505E+00	2.624E+00	0.000E+00	NOT IDENT.
PO-210	0.000E+00	1.501E+00	2.624E+00	0.000E+00	NOT IDENT.
PB-211	1.625E+00	2.459E+00	4.075E+00	0.000E+00	NOT IDENT.
BI-212	1.261E+00	7.514E-01	1.417E+00	0.000E+00	FAIL ABUN
BI-214	0.000E+00	3.282E-01	4.312E-01	0.000E+00	FAIL ABUN
PO-215	-7.314E-01	1.757E+00	2.642E+00	0.000E+00	FAIL ABUN
RN-219	-3.869E-01	1.021E+00	1.753E+00	0.000E+00	NOT IDENT.
RN-220	-3.727E+01	6.721E+01	1.103E+02	0.000E+00	NOT IDENT.
RA-223	-7.314E-01	1.757E+00	2.642E+00	0.000E+00	FAIL ABUN
AC-227	1.613E-01	8.025E-01	1.468E+00	0.000E+00	FAIL ABUN
TH-227	1.613E-01	8.026E-01	1.468E+00	0.000E+00	FAIL ABUN
TH-229	-2.217E-01	9.792E-01	1.700E+00	0.000E+00	FAIL ABUN
PA-231	-1.020E+00	3.234E+00	5.741E+00	0.000E+00	FAIL ABUN
TH-231	7.000E-01	3.827E-01	7.346E-01	0.000E+00	FAIL ABUN
U-231	-1.270E-01	2.295E-01	3.609E-01	0.000E+00	FAIL ABUN
PA-233	8.590E-02	1.445E-01	2.649E-01	0.000E+00	FAIL ABUN
PA-234	-8.934E-02	1.312E+00	1.889E+00	0.000E+00	FAIL ABUN
PA-234M	8.363E+00	1.977E+01	3.411E+01	0.000E+00	NOT IDENT.
U-235	3.178E-01	3.761E-01	6.884E-01	0.000E+00	FAIL ABUN
NP-236	-1.658E-02	1.739E-01	2.690E-01	0.000E+00	NOT IDENT.
NP-239	-4.918E-02	4.142E-01	6.566E-01	0.000E+00	NOT IDENT.
CM-243	-4.197E-02	1.701E-01	3.088E-01	0.000E+00	NOT IDENT.
CM-247	-6.402E-02	9.106E-02	1.538E-01	0.000E+00	NOT IDENT.
CF-249	4.629E-02	1.132E-01	1.769E-01	0.000E+00	NOT IDENT.
CF-251	-1.014E-01	2.406E-01	4.169E-01	0.000E+00	NOT IDENT.

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532441.CNF;1
Sample date        : 8-MAR-2008 00:00:00. Acquisition date : 10-MAR-2008 12:41:42
Sample ID          : G1201532441          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM05                 Detector geometry: CAN
Elapsed live time : 0 01:00:00.00         Elapsed real time: 0 01:00:02.28  0.1%
Energy tolerance  : 2.00000 keV          Analyst Initials  : MJH1
Abundance limit   : 75.00000             Sensitivity       : 3.00000
Batch ID          : 734275                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
CO-57	122.06	1696	85.51*	6.555E+00	1.462E+00	1.471E+00	12.41
	136.48	182	10.60	6.256E+00	1.327E+00	1.336E+00	45.83
CO-60	1173.22	2128	100.00	1.167E+00	8.804E+00	8.813E+00	7.17
	1332.49	1903	100.00*	1.052E+00	8.735E+00	8.743E+00	9.75
Y-88	898.02	198	93.40	1.455E+00	7.055E-01	7.173E-01	29.99
	1836.01	126	99.38*	8.061E-01	7.596E-01	7.723E-01	21.26
ZR-88	392.90	230	97.32*	2.988E+00	3.826E-01	3.908E-01	32.89
CD-109	88.03	5949	3.72*	7.179E+00	1.076E+02	1.080E+02	9.44
IN-113M	391.69	230	64.90*	2.988E+00	5.737E-01	5.826E-01	32.96
SN-113	391.69	230	64.90*	2.988E+00	5.737E-01	5.826E-01	32.96
SN-126	64.28	7	9.60	7.386E+00	4.913E-02	4.913E-02	1020.46
	86.94	5949	8.90	7.179E+00	4.497E+01	4.497E+01	41.54
	87.57	5949	37.00*	7.179E+00	1.082E+01	1.082E+01	9.44
	661.65	2120	89.98*	1.887E+00	6.030E+00	6.031E+00	9.62
CS-137	661.65	2120	85.12*	1.887E+00	6.374E+00	6.375E+00	9.63
CE-139	165.85	574	80.35*	5.670E+00	6.085E-01	6.164E-01	17.91
CE-143	57.37	8336	11.80	7.383E+00	4.622E+01	1.671E+02	8.19
	231.56	-----	2.00	4.566E+00	-----	Line Not Found	-----
	293.26	128	42.00*	3.791E+00	3.884E-01	1.405E+00	54.79
	350.59	152	3.40	3.274E+00	6.598E+00	2.386E+01	57.72
	490.36	-----	2.00	2.455E+00	-----	Line Not Found	-----
	664.57	-----	5.20	1.881E+00	-----	Line Not Found	-----
PM-147	721.93	-----	5.10	1.751E+00	-----	Line Not Found	-----
	121.26	1696	0.00*	6.555E+00	4.310E+04	4.318E+04	12.40
	51.35	143	0.29	7.334E+00	3.240E+01	3.248E+01	81.14
	52.39	143	0.52	7.334E+00	1.807E+01	1.811E+01	81.14
TM-171	59.40	8336	0.21	7.383E+00	2.560E+03	2.567E+03	8.04
	66.72	-----	0.16*	7.379E+00	-----	Line Not Found	-----
	72.80	218	2.03	7.333E+00	7.074E+00	7.092E+00	41.05
	74.97	218	3.43	7.333E+00	4.187E+00	4.197E+00	41.97
TL-208	277.35	-----	6.80	3.982E+00	-----	Line Not Found	-----
	510.84	63	21.60	2.369E+00	5.919E-01	5.934E-01	99.28

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	583.14	129	84.20*	2.107E+00	3.510E-01	3.519E-01	40.40
	763.13	-----	1.64	1.670E+00	-----	Line Not Found	-----
	860.37	-----	12.46	1.508E+00	-----	Line Not Found	-----
	1093.90	-----	0.37	1.236E+00	-----	Line Not Found	-----
BI-211	72.87	218	1.27	7.333E+00	1.131E+01	1.131E+01	41.05
	351.07	152	12.94*	3.274E+00	1.734E+00	1.734E+00	49.72
PB-212	74.81	218	10.70	7.333E+00	1.342E+00	1.346E+00	42.10
	77.11	332	18.00	7.313E+00	1.220E+00	1.223E+00	31.33
	87.30	5949	8.00	7.179E+00	5.003E+01	5.015E+01	13.75
	115.19	-----	0.60	6.692E+00	-----	Line Not Found	-----
	238.63	548	44.60*	4.467E+00	1.330E+00	1.333E+00	15.78
	300.09	-----	3.41	3.738E+00	-----	Line Not Found	-----
PO-212	74.81	218	10.70	7.333E+00	1.342E+00	1.346E+00	42.10
	77.11	332	18.00	7.313E+00	1.220E+00	1.223E+00	31.33
	87.30	5949	8.00	7.179E+00	5.003E+01	5.015E+01	13.75
	115.19	-----	0.60	6.692E+00	-----	Line Not Found	-----
	238.63	548	44.60*	4.467E+00	1.330E+00	1.333E+00	15.78
	300.09	-----	3.41	3.738E+00	-----	Line Not Found	-----
PB-214	74.81	218	6.21	7.333E+00	2.313E+00	2.313E+00	41.71
	77.11	332	10.50	7.313E+00	2.091E+00	2.091E+00	32.24
	87.30	5949	4.67	7.179E+00	8.570E+01	8.570E+01	12.19
	241.98	135	7.49	4.425E+00	1.972E+00	1.972E+00	58.28
	295.21	128	19.20	3.791E+00	8.497E-01	8.497E-01	51.73
PO-214	351.92	152	37.20*	3.274E+00	6.031E-01	6.031E-01	49.99
	74.81	218	6.21	7.333E+00	2.313E+00	2.313E+00	41.71
	77.11	332	10.50	7.313E+00	2.091E+00	2.091E+00	32.24
	87.30	5949	4.67	7.179E+00	8.570E+01	8.570E+01	12.19
	241.98	135	7.49	4.425E+00	1.972E+00	1.972E+00	58.28
	295.21	128	19.20	3.791E+00	8.497E-01	8.497E-01	51.73
PO-216	351.92	152	37.20*	3.274E+00	6.031E-01	6.031E-01	49.99
	74.81	218	10.70	7.333E+00	1.342E+00	1.346E+00	42.10
	77.11	332	18.00	7.313E+00	1.220E+00	1.223E+00	31.33
	87.30	5949	8.00	7.179E+00	5.003E+01	5.015E+01	13.75
	115.19	-----	0.60	6.692E+00	-----	Line Not Found	-----
	238.63	548	44.60*	4.467E+00	1.330E+00	1.333E+00	15.78
	300.09	-----	3.41	3.738E+00	-----	Line Not Found	-----
PO-218	74.81	218	6.21	7.333E+00	2.313E+00	2.313E+00	41.71
	77.11	332	10.50	7.313E+00	2.091E+00	2.091E+00	32.24
	87.30	5949	4.67	7.179E+00	8.570E+01	8.570E+01	12.19
	241.98	135	7.49	4.425E+00	1.972E+00	1.972E+00	58.28
	295.21	128	19.20	3.791E+00	8.497E-01	8.497E-01	51.73
	351.92	152	37.20*	3.274E+00	6.031E-01	6.031E-01	49.99
RA-224	240.98	135	3.95*	4.425E+00	3.740E+00	3.749E+00	58.01
RA-226	295.21	128	19.20	3.791E+00	8.497E-01	8.497E-01	51.73
	351.92	152	37.20	3.274E+00	6.031E-01	6.031E-01	49.64
	609.31	145	46.30*	2.027E+00	7.482E-01	7.482E-01	44.76
AC-228	338.32	138	11.40	3.383E+00	1.726E+00	1.728E+00	58.91
	911.07	110	27.70*	1.437E+00	1.339E+00	1.340E+00	59.34
	969.11	50	16.60	1.366E+00	1.063E+00	1.064E+00	120.42

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
RA-228	338.32	138	11.40	3.383E+00	1.726E+00	1.728E+00	58.91
	911.07	110	27.70*	1.437E+00	1.339E+00	1.340E+00	59.34
	969.11	50	16.60	1.366E+00	1.063E+00	1.064E+00	120.42
TH-228	84.40	-----	1.21	7.227E+00	-----	Line Not Found	-----
	238.60	548	44.60*	4.467E+00	1.330E+00	1.333E+00	15.78
	300.10	-----	3.41	3.738E+00	-----	Line Not Found	-----
TH-230	295.21	128	19.20	3.791E+00	8.497E-01	8.497E-01	51.73
	351.92	152	37.20	3.274E+00	6.031E-01	6.031E-01	49.64
	609.31	145	46.30*	2.027E+00	7.482E-01	7.482E-01	44.76
TH-232	238.59	548	44.60*	4.467E+00	1.330E+00	1.330E+00	15.78
	911.20	110	27.70	1.437E+00	1.339E+00	1.339E+00	59.34
	964.40	-----	5.20	1.371E+00	-----	Line Not Found	-----
	969.11	50	16.60	1.366E+00	1.063E+00	1.063E+00	120.42
TH-234	63.29	7	3.80*	7.386E+00	1.241E-01	1.241E-01	1020.51
	92.38	100	5.41	7.110E+00	1.254E+00	1.254E+00	63.30
	112.81	-----	0.24	6.739E+00	-----	Line Not Found	-----
U-234	67.67	-----	0.37	7.376E+00	-----	Line Not Found	-----
	241.98	135	7.49	4.425E+00	1.972E+00	1.972E+00	58.28
	295.21	128	19.20*	3.791E+00	8.497E-01	8.497E-01	51.73
	351.92	152	37.20	3.274E+00	6.031E-01	6.031E-01	49.99
NP-237	86.50	5949	12.60*	7.179E+00	3.176E+01	3.176E+01	22.69
	95.87	-----	2.60	7.053E+00	-----	Line Not Found	-----
U-238	63.29	7	3.80*	7.386E+00	1.241E-01	1.241E-01	1020.51
AM-241	59.54	8336	35.90*	7.383E+00	1.519E+01	1.519E+01	8.71
AM-243	74.67	218	66.00*	7.333E+00	2.176E-01	2.176E-01	41.05
	86.72	5949	0.34	7.179E+00	1.191E+03	1.191E+03	9.44
	117.66	-----	0.55	6.642E+00	-----	Line Not Found	-----
	142.18	-----	0.13	6.139E+00	-----	Line Not Found	-----
ANH-511	511.00	63	100.00*	2.369E+00	1.278E-01	1.278E-01	98.93

Flag: "\*" = Keyline

Total number of lines in spectrum 43  
 Number of unidentified lines 7  
 Number of lines tentatively identified by NID 36 83.72%

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	1.01	1.462E+00	1.471E+00	0.182E+00	12.41	
CO-60	5.27Y	1.00	8.735E+00	8.743E+00	0.853E+00	9.75	
Y-88	106.60D	1.02	7.596E-01	7.723E-01	1.642E-01	21.26	
ZR-88	83.40D	1.02	3.826E-01	3.908E-01	1.285E-01	32.89	
CD-109	464.00D	1.00	1.076E+02	1.080E+02	0.102E+02	9.44	
IN-113M	115.10D	1.02	5.737E-01	5.826E-01	1.920E-01	32.96	
SN-113	115.10D	1.02	5.737E-01	5.826E-01	1.920E-01	32.96	
SN-126	1.00E+05Y	1.00	1.082E+01	1.082E+01	0.102E+01	9.44	
BA-137M	30.17Y	1.00	6.030E+00	6.031E+00	0.580E+00	9.62	
CS-137	30.17Y	1.00	6.374E+00	6.375E+00	0.614E+00	9.63	
CE-139	137.66D	1.01	6.085E-01	6.164E-01	1.104E-01	17.91	
CE-143	33.00H	3.62	3.884E-01	1.405E+00	0.770E+00	54.79	
PM-147	2.62Y	1.00	4.310E+04	4.318E+04	0.535E+04	12.40	
TM-171	1.92Y	1.00	1.807E+01	1.811E+01	1.470E+01	81.14	K
TL-208	1.91Y	1.00	3.510E-01	3.519E-01	1.422E-01	40.40	
BI-211	7.04E+08Y	1.00	1.734E+00	1.734E+00	0.862E+00	49.72	
PB-212	1.91Y	1.00	1.330E+00	1.333E+00	0.210E+00	15.78	
PO-212	1.91Y	1.00	1.330E+00	1.333E+00	0.210E+00	15.78	
PB-214	1600.00Y	1.00	6.031E-01	6.031E-01	3.015E-01	49.99	
PO-214	1600.00Y	1.00	6.031E-01	6.031E-01	3.015E-01	49.99	
PO-216	1.91Y	1.00	1.330E+00	1.333E+00	0.210E+00	15.78	
PO-218	1600.00Y	1.00	6.031E-01	6.031E-01	3.015E-01	49.99	
RA-224	1.91Y	1.00	3.740E+00	3.749E+00	2.175E+00	58.01	
RA-226	1600.00Y	1.00	7.482E-01	7.482E-01	3.349E-01	44.76	
AC-228	5.75Y	1.00	1.339E+00	1.340E+00	0.795E+00	59.34	
RA-228	5.75Y	1.00	1.339E+00	1.340E+00	0.795E+00	59.34	
TH-228	1.91Y	1.00	1.330E+00	1.333E+00	0.210E+00	15.78	
TH-230	7.70E+04Y	1.00	7.482E-01	7.482E-01	3.349E-01	44.76	
TH-232	1.41E+10Y	1.00	1.330E+00	1.330E+00	0.210E+00	15.78	
TH-234	4.47E+09Y	1.00	1.241E-01	1.241E-01	12.67E-01	1020.51	
U-234	2.45E+05Y	1.00	8.497E-01	8.497E-01	4.395E-01	51.73	
NP-237	2.14E+06Y	1.00	3.176E+01	3.176E+01	0.721E+01	22.69	
U-238	4.47E+09Y	1.00	1.241E-01	1.241E-01	12.67E-01	1020.51	
AM-241	432.20Y	1.00	1.519E+01	1.519E+01	0.132E+01	8.71	
AM-243	7380.00Y	1.00	2.176E-01	2.176E-01	0.893E-01	41.05	
ANH-511	1.00E+09Y	1.00	1.278E-01	1.278E-01	1.265E-01	98.93	
Total Activity :			4.333E+04	4.341E+04			

Grand Total Activity : 4.333E+04 4.341E+04

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
10	49.02	168	736	1.12	98.81	96	10	4.66E-02	52.1	7.32E+00	T
0	328.07	47	139	1.17	656.55	653	7	1.31E-02	87.8	3.47E+00	T
0	707.43	36	153	5.24	1414.53	1405	15	9.91E-03	****	1.78E+00	T
0	727.55	53	68	1.52	1454.72	1451	8	1.48E-02	60.0	1.74E+00	T
0	883.64	25	93	1.43	1766.52	1761	10	7.01E-03	****	1.47E+00	T
0	915.81	22	123	4.03	1830.77	1830	12	6.15E-03	****	1.43E+00	
0	923.18	78	81	2.22	1845.50	1841	12	2.17E-02	50.6	1.42E+00	T
0	942.64	9	127	1.08	1884.38	1883	10	2.60E-03	****	1.40E+00	T
0	1050.18	31	159	2.98	2099.15	2087	16	8.66E-03	****	1.28E+00	T
0	1317.55	13	14	3.58	2633.08	2625	14	3.61E-03	****	1.06E+00	
0	1402.03	17	7	1.07	2801.76	2793	16	4.65E-03	89.4	1.01E+00	
0	1412.07	11	3	2.03	2821.80	2818	9	3.17E-03	76.4	1.00E+00	
0	1494.77	5	10	0.97	2986.91	2979	9	1.28E-03	****	9.59E-01	
0	1589.18	21	12	4.24	3175.39	3166	16	5.81E-03	86.1	9.11E-01	
0	1596.15	18	7	0.67	3189.29	3182	13	4.86E-03	76.8	9.08E-01	T
0	1725.61	8	2	1.33	3447.70	3443	9	2.21E-03	97.6	8.51E-01	
0	1765.54	16	14	2.88	3527.42	3520	14	4.48E-03	****	8.34E-01	T

Flags: "T" = Tentatively associated

```

*****
*
*           GEL Laboratories LLC
*           2040 Savage Road
*           Charleston, SC 29414
*
*****
*
*           DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201532441.CNF;1
* Acquisition date   : 10-MAR-2008 12:41:42  Detector SN#      :
* Detector ID        : GAM05                  Sensitivity           : 3.00000
* Geometry           : CAN                    Energy tolerance     : 2.00000
* Elapsed live time  : 0 01:00:00.00         Abundance limit      : 75.00000
* Elapsed real time  : 0 01:00:02.28         Half life ratio      : 8.00000
*****
*
*           SAMPLE DATA
*
* Sample date        : 8-MAR-2008 00:00:00.  Nuclide Library     : SOLID
* Sample ID          : G1201532441          Analyst initials     : MJH1
* Batch Number       : 734275              Sample Quantity      : 1.55440E+02 GRAM
*****
*
*           QC DATA
*
* CALIB. DATE/TIME  : 31-MAY-2007 12:09:24.2MS Isotope       :
* MSD ID            :                      MSD Isotope        :
* LCS ID            : 1032-A              LCS Isotope         :
*****

```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	1.471E+00	1.825E-01	7.776E-02	7.838E-03	18.920
CO-60	8.743E+00	8.527E-01	1.356E-01	1.136E-02	64.474
Y-88	7.723E-01	1.642E-01	6.505E-02	3.774E-03	11.873
ZR-88	3.908E-01	1.285E-01	1.203E-01	5.819E-03	3.250
CD-109	1.080E+02	1.020E+01	2.434E+00	2.142E-01	44.363
IN-113M	5.826E-01	1.920E-01	1.826E-01	9.651E-03	3.190
SN-113	5.826E-01	1.920E-01	1.826E-01	9.651E-03	3.190
SN-126	1.082E+01	1.021E+00	2.435E-01	2.137E-02	44.421
BA-137M	6.031E+00	5.799E-01	1.499E-01	1.223E-02	40.233
CS-137	6.375E+00	6.139E-01	1.585E-01	1.296E-02	40.233
CE-139	6.164E-01	1.104E-01	8.664E-02	9.106E-03	7.115
CE-143	1.405E+00	7.695E-01	7.916E-01	1.593E-01	1.774
PM-147	4.318E+04	5.353E+03	2.275E+03	2.283E+02	18.978
TM-171	1.811E+01	1.470E+01	5.735E+01	4.476E+00	0.316
TL-208	3.519E-01	1.422E-01	1.493E-01	1.180E-02	2.357
BI-211	1.734E+00	8.620E-01	7.647E-01	4.783E-02	2.267
PB-212	1.333E+00	2.104E-01	1.849E-01	1.764E-02	7.212
PO-212	1.333E+00	2.104E-01	1.849E-01	1.764E-02	7.212

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	6.031E-01	3.015E-01	2.666E-01	2.169E-02	2.262
PO-214	6.031E-01	3.015E-01	2.666E-01	2.169E-02	2.262
PO-216	1.333E+00	2.104E-01	1.849E-01	1.764E-02	7.212
PO-218	6.031E-01	3.015E-01	2.666E-01	2.169E-02	2.262
RA-224	3.749E+00	2.175E+00	2.104E+00	1.752E-01	1.782
RA-226	7.482E-01	3.349E-01	2.799E-01	2.552E-02	2.673
AC-228	1.340E+00	7.951E-01	6.941E-01	8.119E-02	1.930
RA-228	1.340E+00	7.951E-01	6.941E-01	8.119E-02	1.930
TH-228	1.333E+00	2.104E-01	1.848E-01	1.764E-02	7.213
TH-230	7.482E-01	3.349E-01	2.799E-01	2.552E-02	2.673
TH-232	1.330E+00	2.099E-01	1.844E-01	1.760E-02	7.213
TH-234	1.241E-01	1.267E+00	2.271E+00	3.987E-01	0.055
U-234	8.497E-01	4.395E-01	5.150E-01	4.568E-02	1.650
NP-237	3.176E+01	7.208E+00	7.129E-01	1.597E-01	44.555
U-238	1.241E-01	1.267E+00	2.271E+00	3.987E-01	0.055
AM-241	1.519E+01	1.323E+00	3.149E-01	2.599E-02	48.238
AM-243	2.176E-01	8.931E-02	1.306E-01	1.063E-02	1.666
ANH-511	1.278E-01	1.265E-01	1.238E-01	7.771E-03	1.032

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	8.464E-02		7.788E-01	1.273E+00	8.660E-02	0.067
NA-22	-7.490E-02		7.006E-02	9.855E-02	7.190E-03	-0.760
NA-24	-2.037E-01		1.055E+00	1.681E+00	1.414E-01	-0.121
AL-26	8.327E-03		6.066E-02	1.033E-01	6.188E-03	0.081
K-40	1.064E+00		6.897E-01	1.339E+00	1.100E-01	0.795
TI-44	2.250E-01	+	7.047E-02	9.893E-02	8.220E-03	2.274
SC-46	1.493E-01		1.598E-01	2.048E-01	1.904E-02	0.729
V-48	-3.908E-02		1.355E-01	2.153E-01	1.811E-02	-0.182
CR-51	3.235E-01		6.438E-01	1.094E+00	7.304E-02	0.296
MN-52	-1.753E-02		8.785E-02	1.392E-01	1.121E-02	-0.126
MN-54	4.716E-02		1.110E-01	1.862E-01	1.693E-02	0.253
CO-56	3.903E-02		1.097E-01	1.834E-01	1.676E-02	0.213
CO-58	-6.508E-02		1.019E-01	1.603E-01	1.444E-02	-0.406
FE-59	1.259E-01		2.260E-01	3.895E-01	2.979E-02	0.323
ZN-65	-8.471E-03		2.633E-01	4.384E-01	2.861E-02	-0.019
GE-68	-1.156E+00		3.825E+00	6.281E+00	4.473E-01	-0.184
AS-73	-8.244E-01		8.247E-01	1.119E+00	7.780E-02	-0.736
AS-74	1.596E-01		1.440E-01	2.552E-01	1.871E-02	0.625
SE-75	-9.652E-02		8.990E-02	1.438E-01	1.044E-02	-0.671
BR-77	6.206E-01		6.895E-01	1.172E+00	7.494E-02	0.529
RB-83	8.696E-02		1.645E-01	2.741E-01	1.752E-02	0.317
RB-84	1.720E-02		2.019E-01	2.845E-01	2.637E-02	0.060
KR-85	2.360E+01		1.978E+01	3.020E+01	1.906E+00	0.781
SR-85	1.060E-01		8.884E-02	1.356E-01	8.560E-03	0.781
RB-86	-9.728E-01		1.589E+00	2.561E+00	1.827E-01	-0.380

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91	7.194E-01		2.966E+01	4.930E+01	2.979E+00	0.015
NB-94	2.797E-02		1.006E-01	1.470E-01	1.238E-02	0.190
NB-95	4.460E-02		9.924E-02	1.680E-01	1.473E-02	0.265
NB-95M	3.841E-01		3.810E-01	5.891E-01	5.798E-02	0.652
ZR-95	1.568E-01		1.800E-01	3.109E-01	2.980E-02	0.504
NB-97	4.071E+00		1.365E+00	2.315E+00	1.879E-01	1.758
ZR-97	1.492E+01		2.149E+01	3.155E+01	1.967E+00	0.473
MO-99	-7.140E-01		1.346E+00	2.144E+00	3.257E-01	-0.333
TC-99M	-6.614E-06		2.871E-05	Half-Life	too short	
RH-102	-2.780E-02		8.581E-02	1.372E-01	8.002E-03	-0.203
RU-103	-3.078E-03		8.606E-02	1.392E-01	1.780E-02	-0.022
RH-106	4.059E-01		8.133E-01	1.396E+00	1.781E-01	0.291
RU-106	4.059E-01		8.123E-01	1.396E+00	1.069E-01	0.291
AG-108M	1.143E-02		9.362E-02	1.539E-01	9.033E-03	0.074
AG-110M	2.746E-01		1.115E-01	1.859E-01	1.558E-02	1.477
IN-111	5.398E-02		1.098E-01	1.660E-01	1.350E-02	0.325
IN-114M	7.105E-02		3.025E-01	4.937E-01	4.937E-02	0.144
CD-115	-6.385E-04		5.587E-01	9.019E-01	5.848E-02	-0.001
SN-117M	2.628E-02		5.786E-02	9.281E-02	9.686E-03	0.283
SB-122	1.282E-01		1.986E-01	3.457E-01	2.396E-02	0.371
I-123	6.468E-01		1.379E+00	2.125E+00	2.219E-01	0.304
TE-123M	2.574E-02		5.489E-02	8.456E-02	8.865E-03	0.304
I-124	-1.735E-01		2.313E-01	3.274E-01	2.429E-02	-0.530
SB-124	1.018E-01		1.343E-01	2.505E-01	1.806E-02	0.406
SB-125	4.109E-02		2.473E-01	4.080E-01	2.255E-02	0.101
TE-125M	-5.679E+00		1.497E+01	2.440E+01	2.706E+00	-0.233
I-126	-1.619E-01		2.921E-01	3.985E-01	3.265E-02	-0.406
SB-126	2.367E-02		2.102E-01	3.252E-01	2.772E-02	0.073
SB-127	-4.303E-02		3.999E-01	6.605E-01	5.741E-02	-0.065
XE-127	-3.927E-03		7.902E-02	1.270E-01	1.228E-02	-0.031
I-131	1.927E-02		9.550E-02	1.592E-01	9.583E-03	0.121
TE-132	-4.636E-02		1.061E-01	1.654E-01	2.388E-02	-0.280
BA-133	-2.799E-02		1.191E-01	1.683E-01	1.922E-02	-0.166
I-133	4.090E-02		6.550E-01	1.061E+00	7.280E-02	0.039
CS-134	-2.455E-02		1.121E-01	1.818E-01	1.630E-02	-0.135
CS-135	2.781E-01		3.296E-01	5.711E-01	4.923E-02	0.487
I-135	6.923E-05		7.293E-05	Half-Life	too short	
CS-136	1.833E-01		1.829E-01	3.221E-01	2.565E-02	0.569
BA-140	1.147E-01		3.564E-01	5.825E-01	1.903E-01	0.197
LA-140	1.119E-01	+	8.631E-02	1.545E-01	1.131E-02	0.725
CE-141	3.059E-02		8.829E-02	1.464E-01	1.528E-02	0.209
CE-144	2.443E-01		4.222E-01	6.240E-01	1.029E-01	0.391
PM-144	-2.935E-02		8.498E-02	1.380E-01	1.156E-02	-0.213
PR-144	-1.976E+00		5.720E+00	9.287E+00	7.785E-01	-0.213
PM-146	-1.063E-01		1.271E-01	1.981E-01	1.678E-02	-0.537
ND-147	1.352E-01		6.618E-01	1.081E+00	1.497E-01	0.125
PM-149	-3.289E-02		3.798E+00	6.355E+00	9.144E-01	-0.005
EU-152	-1.245E-01		2.894E-01	3.486E-01	2.251E-02	-0.357

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-7.699E-02		1.268E-01	1.988E-01	1.809E-02	-0.387
EU-154	-2.106E-01		1.975E-01	2.771E-01	2.862E-02	-0.760
EU-155	1.984E-01		1.922E-01	3.283E-01	3.113E-02	0.604
TB-160	-1.852E-01		4.593E-01	6.181E-01	5.725E-02	-0.300
LU-176	2.157E-02		5.604E-02	9.502E-02	5.876E-03	0.227
LU-177	1.797E-01		6.261E-01	1.018E+00	9.683E-02	0.176
LU-177M	-2.675E-02		4.261E-01	6.964E-01	3.542E-02	-0.038
HF-181	-2.711E-02		9.364E-02	1.496E-01	8.853E-03	-0.181
W-181	-6.188E-01		4.404E-01	6.209E-01	4.810E-02	-0.997
TA-182	-1.464E-02		2.871E-01	4.729E-01	2.994E-02	-0.031
RE-183	-1.627E-01		2.229E-01	3.034E-01	3.178E-02	-0.536
RE-184	-1.109E-01		4.649E-01	7.752E-01	6.043E-02	-0.143
OS-185	-4.703E-02		1.053E-01	1.709E-01	1.361E-02	-0.275
RE-188	-2.930E-04		2.884E-01	4.705E-01	4.894E-02	-0.001
W-188	8.631E+00		1.537E+01	2.314E+01	1.465E+00	0.373
IR-192	-4.604E-02		7.270E-02	1.175E-01	7.176E-03	-0.392
AU-195	2.789E-01		3.518E-01	5.994E-01	5.485E-02	0.465
TL-200	-1.763E-01		3.590E-01	5.779E-01	3.067E-02	-0.305
TL-201	8.738E+00	+	1.565E+00	1.917E+00	2.009E-01	4.559
TL-202	-7.637E-02		9.455E-02	1.480E-01	7.991E-03	-0.516
HG-203	4.700E-02		7.102E-02	1.222E-01	8.237E-03	0.384
BI-207	-9.706E-03		1.573E-01	2.623E-01	1.923E-02	-0.037
TL-207	-7.314E-01		1.793E+00	2.514E+00	4.170E-01	-0.291
BI-210	2.914E+00		1.536E+00	2.380E+00	1.769E-01	1.224
PB-210	2.914E+00		1.536E+00	2.380E+00	1.769E-01	1.224
PO-210	2.914E+00		1.531E+00	2.380E+00	1.498E-01	1.224
PB-211	1.625E+00		2.509E+00	3.902E+00	2.429E+00	0.417
BI-212	1.261E+00	+	7.668E-01	1.378E+00	1.372E-01	0.915
BI-214	7.482E-01	+	3.349E-01	4.173E-01	3.805E-02	1.793
PO-215	-7.314E-01		1.793E+00	2.514E+00	4.170E-01	-0.291
RN-219	-3.869E-01		1.042E+00	1.678E+00	2.226E-01	-0.231
RN-220	-3.727E+01		6.858E+01	1.065E+02	7.194E+00	-0.350
RA-223	-7.314E-01		1.793E+00	2.514E+00	4.170E-01	-0.291
AC-227	1.613E-01		8.188E-01	1.389E+00	2.058E-01	0.116
TH-227	1.613E-01		8.190E-01	1.389E+00	2.446E-01	0.116
TH-229	-2.217E-01		9.991E-01	1.597E+00	1.584E-01	-0.139
PA-231	-1.020E+00		3.300E+00	5.446E+00	7.643E-01	-0.187
TH-231	7.000E-01		3.905E-01	6.958E-01	5.732E-02	1.006
U-231	-1.270E-01		2.342E-01	3.331E-01	3.013E-02	-0.381
PA-233	8.590E-02		1.475E-01	2.519E-01	1.630E-02	0.341
PA-234	-8.934E-02		1.339E+00	1.851E+00	3.492E-01	-0.048
PA-234M	8.363E+00		2.017E+01	3.347E+01	3.633E+00	0.250
U-235	3.178E-01		3.837E-01	6.418E-01	1.180E-01	0.495
NP-236	-1.658E-02		1.774E-01	2.515E-01	2.629E-02	-0.066
NP-239	-4.918E-02		4.226E-01	6.090E-01	6.000E-02	-0.081
CM-243	-4.197E-02		1.735E-01	2.855E-01	2.663E-02	-0.147
CM-247	-6.402E-02		9.292E-02	1.472E-01	7.293E-03	-0.435
CF-249	4.629E-02		1.155E-01	1.692E-01	8.301E-03	0.274

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CF-251	-1.014E-01		2.455E-01	3.906E-01	4.026E-02	-0.260

\*\*\*\*\*  
 \* GEL Laboratories LLC \*  
 \* 2040 SAVAGE ROAD \*  
 \* CHARLESTON ,SC 29417 \*  
 \* GAMMA SPECTROSCOPY BACKGROUND REPORT \*  
 \*\*\*\*\*

ENERGY	MDA COUNTS
46.50	665.1601
46.50	665.1601
46.50	665.1601
48.70	962.2319
49.72	1204.8972
51.35	1365.8884
52.39	1465.3195
52.97	1468.7156
53.15	1479.2389
53.44	1480.2306
54.07	1480.0127
56.28	1394.2798
56.28	1394.2917
57.37	1413.3905
57.53	1413.8916
57.53	1413.8976
57.60	1414.1089
57.98	1438.1854
57.98	1438.1854
59.32	1374.9353
59.32	1374.9353
59.40	1375.1721
59.54	1375.5902
59.72	1376.1223
60.01	1376.9818
61.10	446.6165
61.14	446.6543
61.30	446.8057
63.00	804.2334
63.29	801.8249
63.29	801.8249
63.58	829.8218
64.28	891.9340
65.12	893.4692
65.20	893.6156
65.20	893.6156
66.05	874.7807
66.72	816.2007
66.83	816.3853
66.91	816.5151
67.20	827.2026
67.20	827.2026
67.67	825.0573
67.75	823.9678
67.85	824.1348
68.90	852.1620
68.90	852.1620
69.30	887.5362
69.67	897.2240
70.82	947.7178
70.82	947.7178
70.83	947.7335
72.80	902.6477
72.80	902.6477
72.87	902.7673
72.87	902.7673
74.67	788.1644
74.81	788.3691
74.81	788.3691
74.81	788.3691
74.81	788.3691
74.81	788.3691
74.81	788.3691
74.81	788.3691
74.97	788.6031
74.97	788.6031
75.28	789.0614
75.70	789.6757

77.11	715.1587
77.11	715.1587
77.11	715.1587
77.11	715.1587
77.11	715.1587
77.11	715.1587
78.38	786.8566
79.62	845.3727
79.80	845.6456
79.80	845.6456
80.11	881.9931
80.18	882.1047
80.30	882.2920
80.30	882.2920
81.00	915.2073
81.07	898.4766
81.07	898.4766
81.07	898.4766
82.60	760.1351
83.37	760.7789
83.78	816.9956
83.78	816.9956
83.78	816.9956
84.21	817.6054
84.21	817.6054
84.40	832.9360
84.90	836.6700
85.43	881.1863
86.29	825.0618
86.50	825.3551
86.54	825.4117
86.59	825.4818
86.72	825.6650
86.79	825.7617
86.94	825.9716
87.30	826.4781
87.30	826.4781
87.30	826.4781
87.30	826.4781
87.30	826.4781
87.30	826.4781
87.57	826.8547
87.88	827.2846
88.03	827.4946
88.36	827.9545
88.47	828.1044
89.95	395.3098
91.11	396.0684
92.29	381.5704
92.38	381.6269
93.35	366.9390
94.00	374.9768
94.67	370.7811
94.67	370.7841
94.90	370.9214
94.90	370.9214
94.90	370.9214
95.87	402.1982
95.87	402.1982
96.73	424.2691
97.43	406.7087
98.44	381.4814
98.44	381.4814
98.88	361.4995
99.55	372.4915
99.55	372.4915
99.86	372.6712
100.00	381.4418
100.10	381.5035
103.18	443.4684
103.76	420.5474
105.00	372.6808
105.31	372.8531
108.00	423.2133
109.28	426.9455
111.00	392.6727
111.00	392.6727
111.76	391.1375



112.81	433.0646
112.95	421.3386
115.19	398.4131
115.19	398.4131
115.19	398.4131
116.30	398.8088
117.00	407.1201
117.00	407.1201
117.66	412.2517
121.11	369.4078
121.26	369.4828
121.62	369.6640
121.78	369.7447
122.06	369.8848
122.32	370.0150
122.32	370.0150
122.32	370.0150
123.07	340.2397
129.76	343.4716
131.20	321.3077
133.02	341.4816
133.54	319.0356
135.34	326.2594
136.00	315.7692
136.25	315.8689
136.48	315.9614
140.51	310.4037
140.51	0.0000
142.18	319.2268
142.65	332.2801
143.76	292.1646
144.24	300.5400
144.24	300.5400
144.24	300.5400
145.22	299.8708
145.44	310.2233
147.16	326.3040
152.43	303.4841
152.70	304.6163
153.22	333.8313
154.21	341.4801
154.21	341.4801
154.21	341.4801
155.03	323.1034
156.02	336.9949
158.56	306.3819
159.00	300.5728
159.00	300.5728
160.31	322.7590
161.27	341.5232
162.32	355.3329
162.64	335.3418
163.35	322.1836
163.89	335.8081
165.85	299.5189
167.43	268.0136
171.28	295.0114
171.86	292.1719
172.10	302.8364
176.33	297.8226
176.55	297.8931
176.60	302.1638
181.06	293.9583
185.71	307.1851
186.00	300.8282
190.27	296.7361
192.34	307.0824
193.63	293.4021
197.04	287.8725
198.60	314.4202
200.40	323.6904
201.83	328.5045
202.84	338.6557
205.31	356.9779
208.36	338.2426
208.81	328.4980
209.75	312.2934
209.75	312.2934

210.97	334.6686
215.65	323.9605
216.55	292.1378
218.09	314.7137
222.10	291.3939
223.80	308.5459
226.40	310.3788
227.00	318.3647
227.08	318.3876
227.20	318.4213
228.16	322.0466
228.18	322.0532
228.18	322.0532
231.56	296.0936
235.69	271.6454
236.00	274.7215
236.00	274.7215
236.00	274.7215
238.59	266.3066
238.60	266.3084
238.63	266.3156
238.63	266.3156
238.63	266.3156
239.00	266.4003
240.98	266.8504
241.98	267.0773
241.98	267.0773
241.98	267.0773
241.98	267.0773
244.69	252.5675
245.39	239.0959
247.94	245.6730
248.90	239.7982
249.79	249.9576
252.40	273.9807
252.85	263.1199
252.85	263.1199
254.15	250.5969
256.20	262.0110
256.20	262.0110
256.20	262.0110
260.90	256.5731
264.65	290.5483
268.24	237.7281
268.79	224.8729
269.46	212.9550
269.46	212.9550
269.46	212.9550
269.46	212.9550
271.23	245.7040
271.23	245.7040
273.65	276.8213
276.40	224.3518
277.35	224.5166
277.60	224.5578
277.60	224.5578
278.00	231.1528
278.60	221.0013
279.20	227.6331
279.53	228.6228
281.68	243.0200
283.67	242.4521
283.67	242.4521
284.30	243.5056
285.00	239.8844
285.90	234.4238
286.10	234.4574
286.10	234.4574
287.40	235.7293
288.45	0.0000
290.67	208.5999
290.80	208.6189
291.72	232.3069
293.26	242.0004
293.70	243.6507
295.21	276.9694
295.21	276.9694
295.21	276.9694

295.21	276.9694
295.21	276.9694
295.21	276.9694
295.96	289.7199
296.50	278.8096
297.23	280.5332
298.57	249.2570
299.80	222.6390
299.80	222.6390
300.09	202.1537
300.09	202.1537
300.09	202.1537
300.10	202.1563
300.12	202.1589
301.29	242.5259
301.29	242.5259
302.84	268.7049
303.76	268.8846
303.91	262.2640
304.40	254.7505
304.40	254.7505
304.84	270.0461
306.84	223.7750
308.46	221.1732
311.98	219.8168
316.51	255.9934
318.01	241.8640
319.02	228.5898
319.41	230.5723
320.08	230.6807
323.87	252.1672
323.87	252.1672
323.87	252.1672
328.77	230.1296
329.70	182.2226
329.70	182.2226
329.85	182.2410
330.00	182.2594
333.44	177.8347
334.20	203.8041
334.20	203.8041
334.30	203.8195
338.28	185.8729
338.28	185.8729
338.28	185.8729
338.32	185.8776
338.32	185.8776
340.50	198.1681
340.57	198.1780
344.27	210.0633
345.85	199.5226
350.59	192.9480
351.07	208.0561
351.07	208.0561
351.92	208.1699
351.92	208.1699
351.92	208.1699
351.92	208.1699
351.92	208.1699
351.92	208.1699
355.39	236.1943
356.01	219.8792
364.48	202.9230
366.43	198.2178
367.43	213.2180
367.94	213.2862
369.80	204.5968
374.96	215.2195
383.85	204.6623
387.95	204.2145
388.63	212.6718
391.69	239.9044
391.69	239.9044
392.90	230.0057
398.62	216.0514
400.65	210.4908
401.10	215.6079
401.81	215.6989

401.81	215.6989
402.60	219.8503
404.84	184.6349
411.60	234.2479
413.65	206.9946
414.70	220.3849
415.30	214.3348
415.76	216.4331
417.63	0.0000
418.52	214.7322
423.70	230.7486
427.08	219.8855
427.89	208.6796
432.53	207.1610
433.93	226.9207
439.47	229.6855
439.56	231.7656
439.89	220.4259
443.98	191.8788
444.90	210.6546
445.03	210.6695
445.03	210.6695
445.03	210.6695
453.90	246.0974
463.38	237.9122
468.07	240.6037
473.00	224.3728
475.06	226.7211
475.35	218.3178
476.78	198.4258
477.59	200.6226
477.96	197.4914
482.03	184.1486
484.57	169.5527
487.03	155.9740
490.36	165.8033
492.35	161.7152
497.08	164.2341
507.63	175.1068
510.53	169.6321
510.84	169.6581
511.00	169.6706
511.85	139.6619
511.85	139.6619
513.99	138.0155
513.99	138.0155
520.41	144.5636
520.65	134.8694
527.90	147.2525
528.96	135.4095
529.64	145.2081
529.87	145.2245
531.02	143.1343
537.32	151.1795
543.00	148.3117
546.56	0.0000
549.76	152.0652
552.65	141.3142
555.20	127.2233
563.23	127.5100
563.90	128.4672
568.70	153.5794
569.32	152.7036
569.50	152.7138
569.67	145.3669
573.80	143.7935
574.00	143.8062
574.64	133.7881
578.91	136.2077
579.30	134.6446
583.14	137.9172
585.48	123.8990
591.81	162.1875
592.07	151.0536
593.00	158.9766
595.88	124.7335
600.56	159.5019
602.52	182.0428

602.71	161.0519
602.71	161.0519
603.60	142.5018
604.41	137.7464
604.70	132.9586
606.64	157.1172
609.31	136.4322
609.31	136.4322
609.31	136.4322
610.33	138.6326
612.46	135.0117
614.37	133.5115
618.01	133.9214
621.84	128.9615
621.84	128.9615
631.29	117.1910
633.02	106.8732
633.10	106.8755
634.78	126.8273
635.90	142.9849
636.97	146.8388
645.85	138.8206
646.12	147.3970
656.30	129.3228
657.75	114.6582
657.90	114.6631
661.65	127.9633
661.65	127.9633
664.57	146.1801
666.33	157.7913
666.33	157.7913
675.00	149.1314
677.61	121.3550
685.20	150.6997
692.80	131.7721
695.00	136.7343
696.49	130.9900
696.49	130.9900
697.00	124.6122
697.49	122.3060
698.50	118.1930
699.00	109.8903
702.63	126.7179
706.10	136.3485
706.58	136.3741
706.67	136.3798
709.31	135.4021
713.82	127.2639
717.42	147.7006
720.50	135.7947
721.93	141.0938
722.20	134.3889
722.78	142.8209
722.78	142.8209
722.89	127.7040
722.95	127.7066
723.30	127.7225
724.18	124.4027
727.18	149.2292
733.00	121.4422
735.90	128.0454
739.58	138.0859
742.81	123.4385
744.21	123.5021
747.13	123.6343
751.79	151.5899
753.82	123.9395
755.35	130.9526
756.15	127.0208
756.87	130.0325
763.13	144.2566
763.93	144.3008
765.79	124.4812
766.41	126.5000
766.84	134.4891
768.36	134.5633
778.00	141.0316
778.57	141.0602

778.89	141.0746
783.80	148.3372
785.46	131.3758
792.07	158.8261
795.84	129.8451
796.30	125.8392
801.93	140.2104
805.60	117.1588
810.76	140.6402
815.85	127.7098
817.79	133.8799
818.51	132.9003
819.60	140.0524
826.30	146.4785
828.27	140.4679
831.60	150.8184
831.96	156.9514
834.83	146.9033
836.80	0.0000
846.75	136.2254
848.13	121.9416
856.28	158.2360
856.80	161.3441
860.37	160.5068
867.32	168.0938
867.82	167.0889
871.10	147.6520
873.19	143.6181
874.81	128.5637
875.33	131.5192
876.40	127.2191
879.36	143.7586
880.27	149.1270
880.51	149.1387
881.50	140.3082
883.24	153.4169
884.67	152.8965
889.25	124.6338
898.02	141.0549
899.00	142.8851
903.28	137.7148
911.07	150.6035
911.07	150.6035
911.20	150.6094
919.63	37.7527
920.93	37.7681
925.00	129.6537
925.24	131.4647
926.50	144.1267
934.06	150.6370
935.52	151.7578
937.48	166.0844
944.10	189.1423
946.00	192.1213
949.00	156.0160
962.29	209.4723
964.01	184.0665
964.40	184.0876
966.15	178.7119
968.20	152.2139
969.11	158.7950
969.11	158.7950
969.11	158.7950
977.42	161.3852
980.50	141.0234
983.50	143.2883
989.30	149.9605
996.32	141.6841
1001.03	122.5328
1001.68	130.0814
1004.76	138.8078
1021.30	142.7180
1024.50	135.2743
1034.80	130.2490
1037.82	141.2248
1038.57	145.7950
1038.76	0.0000
1045.16	130.6299

1046.59	143.7520
1048.07	128.8696
1050.47	125.9193
1050.47	125.9193
1063.62	123.8053
1076.63	149.6725
1077.35	140.2851
1085.78	144.3873
1093.90	148.4907
1099.22	116.5008
1112.02	130.2150
1112.84	123.5889
1115.52	143.6533
1120.29	114.3080
1120.51	114.3164
1121.28	122.9126
1124.00	0.0000
1129.67	82.1277
1131.51	0.0000
1147.95	78.6853
1167.94	81.0264
1173.22	76.3081
1175.09	69.3376
1177.93	60.9258
1189.05	64.0112
1204.90	52.5837
1205.75	49.6731
1213.00	36.1031
1221.42	41.0684
1230.97	44.1070
1235.34	52.0037
1236.41	53.9814
1238.11	51.0569
1238.25	53.0225
1246.25	47.2249
1260.41	0.0000
1271.85	21.7798
1274.45	39.6247
1274.54	39.6261
1291.56	32.8251
1298.22	21.9187
1312.09	27.9883
1325.50	28.0762
1325.50	28.0762
1332.49	40.1744
1333.61	40.1842
1360.21	21.2271
1362.66	19.2160
1365.15	17.2034
1368.21	21.2659
1368.53	23.2928
1376.25	22.3192
1377.67	22.3261
1384.27	27.4417
1394.10	19.6078
1407.95	14.3047
1434.06	22.6085
1436.60	18.5085
1457.56	0.0000
1460.81	15.5054
1489.15	25.4792
1509.49	22.9783
1596.49	22.3293
1620.62	11.7531
1678.03	0.0000
1691.02	12.3216
1691.02	12.3216
1706.46	0.0000
1750.46	18.2120
1764.49	15.3765
1770.23	23.9440
1771.40	22.2387
1791.20	0.0000
1808.65	12.5945
1836.01	5.1925

TOTAL URANIUM BY GAMMA SPEC REPORT  
Sample:G1201532441

Total Uranium Activity	5.1626E-01	ug/g
Total Uranium Counting Unc.	3.6966E+00	ug/g
Total Uranium Tpu	3.6966E+00	ug/g
Total Uranium Mda	7.4003E+00	ug/g



```

*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                          *
*                               GROSS GAMMA REPORT                            *
*
*****
*
* BATCH ID      : 734275                SAMPLE ID   : G1201532441
* ANALYST       : MJH1                  DETECTOR    : GAM05
* SAMPLE DATE   : 8-MAR-2008 00:00:00.00  COUNT TIME  : 0 01:00:00.00
* ANALYSIS DATE: 10-MAR-2008 12:41:42.57  SAMPLE ALQT: 155.440 GRAM
*
*****

```

```

GROSS GAMMA ACTIVITY (pCi/GRAM ) : 4.081E+01
GROSS GAMMA ERROR (pCi/GRAM ) : 5.935E+00
GROSS GAMMA MDA (pCi/GRAM ) : 1.673E+01
GROSS GAMMA DLC (pCi/GRAM ) : 8.212E+00

```

### Radiochemistry Batch Checklist, Rev 6

Batch# 734299 Product: GAB Date: 3/1/08

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.	✓		
If activity less 10* MDA, error is 150% or less of sample activity. If greater 10* MDA, error is 40% or less. If below the MDA, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL has been met.	✓		
If duplicate activities are less 5* MDA, then rpd is 100% or less. If greater 5* MDA, then rpd 20% or less. If below the MDA, 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.			NA
Method blank is less than the RDL. (If rad samples, < 5% of lowest activity)	✓		Case Narrative
Sample was run within hold time.	✓		
Special requirements page checked	✓		
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 lineouts initialed and dated. No transcription errors are apparent.	✓		
QC data entered into QC database. Batch entered into Case Narrative.	✓		
Batch non-conformances completed If applicable.			NA
Aliquot Correction completed if required.			NA

GEL Laboratories, LLC

1/2/2007

Primary Review Performed By: McCartney, wk 3/1/08

Secondary Review Performed By: Lynch 3/1/08

3/8-3/14

Page 193 of 213 Fax Due 3/1/08

RCM

# Gross Alpha Beta Que Sheet

03/10/2008 10:29:27

Fax due 3-11-08

Batch #: 734299

Analyst: MXP1 First Client Due Date 03/14/2008

Internal Due Date 03/08/2008

Alpha Spike Isotope: Th-230 Spike Code: AZ796G  
 Beta Spike Isotope: Sr-90 Spike Code: 0133W  
 Alpha LCS Isotope: Th-230 LCS Code: AZ796G  
 Beta LCS Isotope: Sr-90 LCS Code: 0133W

Vol: 0.126 Balance #: 50410272  
 Vol: 0.126 Pipet #: 4497063  
 Vol: 0.126 Prep Date: 3/10/08  
 Vol: 0.126 Initials: TFP

10% HNO3: 737363  
 Conc HNO3: 745603.3  
 Conc HCl: 739629.3  
 Conc HF: 743984  
 Conc Boric: N/A

Analytical Scale # C31514  
 Witness: 10/2/10/168

Sample ID	Client Description	Type	Hazard Code	RDL Alpha/Beta	Client	Matrix	Bkr#	Wet/Dry Aliquot (mL of g)	Carrier or Det#	Initial Wt (g)	Final Wt (g)	Net Wt (mg)
1201532514-1	TSB-HJ-10-Surf	SAMPLE		4 pCi/g	BRCM001	SOIL	31	0.106	3B	7.9065	7.9523	43.8
204220002-1	TSB-HJ-01 Surf	SAMPLE		4 pCi/g	BRCM001	SOIL	32	0.109	3D	7.8948	7.9385	43.7
204220003-1	TSB-HJ-05-Surf	SAMPLE		4 pCi/g	BRCM001	SOIL	33	0.100	5B	7.7989	7.8476	48.7
1201532514-1	MB for batch 734299	MB		4 pCi/g	QC ACCOUNT	SOIL	34	0.109	4D	7.8066	7.8058	0
1201532515-1	TSB-HJ-10-Surf(204220001DUP)	DUP		4 pCi/g	QC ACCOUNT	SOIL	35	0.107	5A	7.8689	7.9163	46.4
1201532516-1	TSB-HJ-10-Surf(204220001IMS)	MS		4 pCi/g	QC ACCOUNT	SOIL	36	0.100	4A	7.8151	7.8614	46.3
1201532517-1	TSB-HJ-10-Surf(204220001MSD)	MSD		4 pCi/g	QC ACCOUNT	SOIL	37	0.102	7A	7.8149	7.8594	44.5
1201532518-1	LCS for batch 734299	LCS		4 pCi/g	QC ACCOUNT	SOIL	38	0.109	7D	7.9108	7.9112	0.4

✓ just soil  
 ✓ rehistors  
 ✓ 100% pure

Have the planchets been flamed?  Yes /  No

Data Reviewed By: MNA 3/11/08

### Gross Alpha/Beta Solid

Filename : GAB.XLS  
 File type : Excel  
 Version # : 1.2.2

Alpha Spike S/N : A2796-G  
 Alpha Spike Exp Date : 6/11/2008  
 Alpha Spike Activity (dpm/ml) : 257.15  
 Alpha Spike Volume Added: 0.10

Beta Spike S/N : 0133-W  
 Beta Spike Exp Date : 7/12/2008  
 Beta Spike Activity (dpm/ml) : 364.06  
 Beta Spike Volume Added: 0.10

Batch : 734299  
 Analyst : MXP1  
 Prep Date : 3/10/2008

Alpha LCS S/N : A2796-G  
 Alpha LCS Exp Date : 6/11/2008  
 AlphaLCS Activity (dpm/ml) : 257.15  
 Alpha LCS Volume Added: 0.10

Beta LCS S/N : 0133-W  
 Beta LCS Exp Date : 7/12/2008  
 Beta LCS Activity (dpm/ml) : 364.06  
 Beta LCS Volume Added: 0.10

**Procedure Code : 3FCGANBS**

Alpha Method Uncertainty : 0.0928  
 Beta Method Uncertainty : 0.0628

Parname1 : Alpha  
 Parname2 : Beta

Calibration Date : 6/27/2007  
 Calibration Due Date : 6/30/2008

Pipet, 0.1 ml Stdev : +/- 0.000701 ml  
 Pipet, 0.5 ml Stdev : +/- 0.002564 ml  
 Pipet, 1 ml Stdev : +/- 0.005480 ml

Required Alpha MDA : 4 pCi/G  
 Required Beta MDA : 10 pCi/G  
 Batch counted on : PIC  
 BKG Count time : 500 min

Sample Characteristics				Count Raw Data				Weekly Background				Detector Efficiency			
Sample ID	Sample Aliquot G	Sample Residue Wt. (mg)	Sample Aliquot StDev. G	Sample Date/Time	Detector ID	Counting Time (min.)	Gross Counts Alpha	Gross Counts Beta	CPM Alpha	CPM Beta	Count Time (min.)	Alpha	Beta	Alpha	Beta
204220001.1	0.106	43.8	3.2301E-03	3/6/2008 14:28	3B	130	87	524	0.084	0.974	500	0.1334	0.3907	0.1334	0.3907
204220002.1	0.109	43.7	3.2304E-03	3/6/2008 14:42	3D	130	82	487	0.088	0.600	500	0.1355	0.3819	0.1355	0.3819
204220003.1	0.100	48.7	4.3713E-04	3/6/2008 14:55	5B	130	95	479	0.080	0.780	500	0.1343	0.4094	0.1343	0.4094
1201532514.1	0.109	0	3.2304E-03	3/10/2008 0:00	4D	70	18	77	0.160	0.612	500	0.2528	0.4564	0.2528	0.4564
1201532515.1	0.107	46.4	3.2302E-03	3/6/2008 14:28	5A	150	101	633	0.108	0.848	500	0.1385	0.4105	0.1385	0.4105
1201532516.1	0.100	46.3	4.3713E-04	3/6/2008 14:28	4A	30	126	1048	0.250	0.716	500	0.1334	0.3942	0.1334	0.3942
1201532517.1	0.102	44.5	3.2297E-03	3/6/2008 14:28	7A	30	126	1117	0.038	0.386	500	0.1362	0.4136	0.1362	0.4136
1201532518.1	0.109	0.4	3.2304E-03	3/10/2008 0:00	7D	30	213	1104	0.054	0.430	500	0.2610	0.4746	0.2610	0.4746

3/11/2008

Detector Efficiency Error (cpm/dpm)	X-Talk		Count Start Date/Time
	Alpha	Beta	
0.05471	0.03928	0.01596	3/11/2008 8:56
0.03657	0.04429	0.01061	3/11/2008 8:56
0.06392	0.04274	0.00669	3/11/2008 8:56
0.06392	0.03209	0.01911	3/11/2008 8:56
0.06392	0.04104	0.00715	3/11/2008 8:56
0.04683	0.00744	0.05322	3/11/2008 8:56
0.06392	0.00816	0.05433	3/11/2008 8:56
0.06392	0.00816	0.04250	3/11/2008 8:56

3/11/2008

Alpha Results		Sample Act.		Net Count		Net Count		2 SIGMA		2 SIGMA		Sample		Nominal	
Decision Level pCi/G	Critical Level pCi/G	Conc. pCi/G	Error pCi/G	Rate CPM	Rate CPM	Rate Error CPM	Counting Uncertainty pCi/G	Total Prop. Uncertainty pCi/G	Counting Uncertainty pCi/G	QC	Type	RPD	RER	pCi/G	Recovery
2.1178	1.4952	16.5939	0.1394	0.5852	0.0729	0.0729	4.5523	6.1203	4.2401		SAMPLE				
2.0760	1.4657	15.3458	0.1389	0.5428	0.0709	0.0709	4.2401	5.4206	4.2401		SAMPLE				
2.1757	1.5361	20.9959	0.1333	0.6508	0.0760	0.0760	4.9975	6.9456	4.9975		SAMPLE				
1.9442	1.3726	1.2443	0.6543	0.0971	0.0632	0.0632	2.0246	2.0568	2.0246		MS				
2.1669	1.5298	16.2680	0.1404	0.5653	0.0686	0.0686	4.0867	5.6693	2.04220001.1		DJP	2.0%		115.83	96.4%
7.3947	5.2207	128.2194	0.1059	3.9500	0.3748	0.3748	24.8081	36.8133	204220001.1		MS			113.56	93.8%
2.7686	1.9547	123.1210	0.1148	4.1620	0.3743	0.3743	23.7883	39.0466	204220001.1		MSD	4.1%		106.27	101.1%
1.6114	1.1377	107.4656	0.0987	7.0460	0.4866	0.4866	15.1001	29.6157	15.1001		LCS				

8/10/13/2011

Beta Results		Sample Act.		Net Count		Net Count		2 SIGMA		2 SIGMA		Sample		Nominal	
Decision Level pCi/G	Critical Level pCi/G	MDA pCi/G	Conc. pCi/G	Sample Error pCi/G	Rate CPM	Net Count	Rate Error CPM	Counting Uncertainty pCi/G	Total Prop. Uncertainty pCi/G	Sample QC	Type	RPD	FER	pCi/G	Recovery
2.4625	1.7385	3.7281	32.9639	0.0671	3.0568	0.1815	3.8702	5.9879		SAMPLE					
1.9228	1.3575	2.9648	33.7440	0.0627	3.1462	0.1733	3.6747	5.9222		SAMPLE					
2.2288	1.5735	3.4009	31.6111	0.0602	2.9046	0.1729	3.7287	5.4507		SAMPLE					
2.1061	1.4869	3.3618	4.3436	0.2685	0.4880	0.1301	2.3096	2.3876		MB					
2.0484	1.4462	3.0975	34.2962	0.0600	3.3720	0.1727	3.4714	5.8872	204220001.1	DUP	4.0%			327.99	108.4%
4.2346	2.9897	7.1220	388.4263	0.0327	34.2173	1.0798	24.1820	54.2632	204220001.1	MS				321.55	111.4%
2.9056	2.0514	5.1706	391.0225	0.0445	36.8473	1.1144	23.3233	59.3740	204220001.1	MSD	0.7%			300.90	104.4%
2.5009	1.7656	4.4021	314.0755	0.0433	36.3700	1.1079	18.9095	47.3421		LCS					

3/11/2011

734299a

SampleID	Instr	Time (min.)	Alpha Counts	Beta Counts	Count Start Time	Count End Time
204220001	3B	130	87	524	3/11/2008 8:56	3/11/2008 11:06
204220002	3D	130	82	487	3/11/2008 8:56	3/11/2008 11:06
204220003	5B	130	95	479	3/11/2008 8:56	3/11/2008 11:06
1201532514	4D	70	18	77	3/11/2008 8:56	3/11/2008 10:06
1201532515	5A	150	101	633	3/11/2008 8:56	3/11/2008 11:26
1201532516	4A	30	126	1048	3/11/2008 8:56	3/11/2008 9:26
1201532517	7A	30	126	1117	3/11/2008 8:56	3/11/2008 9:26
1201532518	7D	30	213	1104	3/11/2008 8:56	3/11/2008 9:26

MM3/11/08



# CONTINUING CALIBRATION DATA

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC\_GAM05\_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH  
Sample date : 1-APR-2005 12:00:00 Acquisition date : 10-MAR-2008 08:40:14  
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.98

Out-of-range Test: N-SIGMA

Parameter Description	Value	Deviation	Flag
[Mean+/-Stdev]			
*DECAY CORRECTED ACTIVITY CS-137 [2.7324E+04+/-449.6]	2.7677E+04	0.78	
*DECAY CORRECTED ACTIVITY CO-60 [4.1154E+04+/-757.2]	4.2714E+04	2.06	Investigate
*DECAY CORRECTED ACTIVITY AM-241 [6.9390E+04+/-927.5]	6.8211E+04	-1.27	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3237E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6643E+03	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6196E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3332E+03	
*PEAK FWHM CS-137	1.4355E+00	1.7081E+00	1.5780E+00	
*PEAK FWHM CO-60	1.7629E+00	2.2581E+00	1.9700E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1944E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9335E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0836E+00	

Flags: "\*" means the out-of-range test is parameter-dependent

Approved by: MR Approval Date: 3 / 10 / 08





QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC\_GAM23\_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH  
Sample date : 1-APR-2003 12:00:00 Acquisition date : 10-MAR-2008 08:50:57  
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.07

Out-of-range Test: N-SIGMA

Parameter Description	Value	Deviation	Flag
[Mean+/-Stdev]			
*DECAY CORRECTED ACTIVITY CS-137 [2.5576E+04+/-422.4]	2.6242E+04	1.58	
*DECAY CORRECTED ACTIVITY CO-60 [4.0337E+04+/-833.8]	4.2109E+04	2.12	Investigate
*DECAY CORRECTED ACTIVITY AM-241 [6.3886E+04+/-1391]	6.2375E+04	-1.09	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3232E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6651E+03	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6146E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3321E+03	
*PEAK FWHM CS-137	1.3260E+00	1.5802E+00	1.4647E+00	
*PEAK FWHM CO-60	1.7823E+00	2.2419E+00	2.0484E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1886E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9455E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	7.6459E-01	

Flags: "\*" means the out-of-range test is parameter-dependent

Approved by: MR Approval Date: 3 / 10 / 08

**Gas Flow Proportional Counter Checks for 11-MAR-2008**

— =  $\alpha$  lockout  
 == =  $\alpha/\beta$  lockout  
 w = weekly lockout  
 \* = Not a lockout condition.

Short Name	Parmname	Run Time	Count Time	Counts	CPM	Stdev	CrossTalk	Status	Comments
<u>LB4100A1</u>	ALPHA BKG	06:36	60	6.00	0.1	0.91		Good	
	BETA BKG	06:36	60	78.0	1.3	0.84		Good	
	ALPHA EFF	10:30	5	55532	11100	-3.6	0.171 (5.9) Xtalk Lockout	Lockout	
	BETA EFF	10:52	5	98490	19698	1.36	0.000132 (4.6) Xtalk Lockout	Good	
<u>LB4100A2</u>	ALPHA BKG	06:36	60	6.00	0.1	1.08		Good	
	BETA BKG	06:36	60	112	1.87	2.8		Good	
	ALPHA EFF	10:30	5	74418	14900	-1.4	0.183 (2) Xtalk Lockout	Good	
	BETA EFF	10:52	5	1.07E+05	21400	1.26	0.00014 (3.5) Xtalk Lockout	Good	
<u>LB4100A3</u>	ALPHA BKG	06:36	60	2.00	0.03	-1.1		Good	
	BETA BKG	06:36	60	97.0	1.62	3.12		Lockout	
	ALPHA EFF	10:30	5	61180	12236	-1.8	0.171 (0.9)	Good	
	BETA EFF	10:52	5	1.04E+05	20806	1.25	0.0000673 (1.2)	Good	
<u>LB4100A4</u>	ALPHA BKG	06:36	60	0	0	-1.5		Good	
	BETA BKG	06:36	60	1915	31.9	1.59		Lockout	
	ALPHA EFF	10:30	5	0	0		() Xtalk Lockout	Good	
	BETA EFF	10:52	5	1429	286	-66	0 (-4038275.2)	Lockout	
LB4100B1	ALPHA BKG	06:35	60	4.00	0.07	-0.12		Good	
	BETA BKG	06:35	60	92.0	1.53	2.92		Good	
	ALPHA EFF	10:30	5	58822	11800	1.44	0.163 (1.3)	Good	
	BETA EFF	10:52	5	2.59E+05	51900	1.35	0.0000309 (-0.6)	Good	
<u>LB4100B2</u>	ALPHA BKG	06:35	60	16.0	0.27	0.78		Good	
	BETA BKG	06:35	60	90.0	1.5	0.25		Good	
	ALPHA EFF	10:30	5	55150	11030	0.38	0.126 (2.4) Xtalk Lockout	Good	
	BETA EFF	10:52	5	1.14E+05	22700	4.06	0.0000791 (-0.8)	Lockout	
LB4100B3	ALPHA BKG	06:35	60	3.00	0.05	-0.96		Good	
	BETA BKG	06:35	60	113	1.88	4.59		Lockout	
	ALPHA EFF	10:30	5	1.25E+05	25100	2.44	0.118 (4.1) Xtalk Lockout	Good	
	BETA EFF	10:52	5	1.23E+05	24500	2.83	0.0000816 (1.6)	Good	
LB4100B4	ALPHA BKG	06:35	60	11.0	0.18	2.49		Good	
	BETA BKG	06:35	60	39.0	0.65	-2.1		Good	
	ALPHA EFF	10:30	5	96127	19200	0.86	0.155 (1.6)	Good	
	BETA EFF	10:52	5	2.14E+05	42800	2.32	0.0000514 (0.7)	Good	
<u>LB4100C1</u>	ALPHA BKG	06:36	60	9.00	0.15	1.88		Good	
	BETA BKG	06:36	60	112	1.87	4.73		Lockout	
	BETA EFF	10:30	5	93414	18700	-7.8	0.0000856 (1.5)	Lockout	
	ALPHA EFF	10:52	5	59565	11913	-10	0.0981 (1)	Lockout	
<u>LB4100C2</u>	ALPHA BKG	06:36	60	11.0	0.18	2.07		Good	
	BETA BKG	06:36	60	101	1.68	4.15		Lockout	
	BETA EFF	10:30	5	1.04E+05	20701	-29	0.000155 (5.2) Xtalk Lockout	Lockout	
	ALPHA EFF	10:52	5	75452	15100	-6.1	0.141 (-0.8)	Lockout	
<u>LB4100C3</u>	ALPHA BKG	06:36	60	4.00	0.07	0.45		Good	
	BETA BKG	06:36	60	66.0	1.1	0.52		Good	
	BETA EFF	10:30	5	1.03E+05	20600	-22	0.0000583 (0.7)	Lockout	
	ALPHA EFF	10:52	5	60277	12100	-13	0.151 (5.5) Xtalk Lockout	Lockout	
<u>LB4100C4</u>	ALPHA BKG	06:36	60	5.00	0.08	0.86		Good	
	BETA BKG	06:36	60	150	2.5	14.9		Lockout	
	BETA EFF	10:30	5	1.21E+05	24118	-2	0.0000249 (-0.5)	Good	
	ALPHA EFF	10:52	5	54661	10900	-14	0.23 (8.4) Xtalk Lockout	Lockout	
<u>LB4100E1</u>	ALPHA BKG	06:36	60	9.00	0.15	1.08		Good	
	BETA BKG	06:36	60	65.0	1.08	-2.1		Good	
	ALPHA EFF	13:50	5	58622	11700	-6	0.102 (3) Xtalk Lockout	Lockout	
	BETA EFF	14:07	5	83433	16700	-12	0.000204 (8.1) Xtalk Lockout	Lockout	
<u>LB4100E2</u>	ALPHA BKG	06:36	60	25.0	0.42	6.36		Lockout	
	BETA BKG	06:36	60	112	1.87	2.16		Good	
	ALPHA EFF	13:50	5	75373	15100	-2.3	0.196 (3.1) Xtalk Lockout	Good	

	BETA EFF	14:07	5	1.01E+05	20200	-14	0.000138 (2.5)		Lockout
<u>LB4100E3</u>	ALPHA BKG	06:36	60	7.00	0.12	-0.65			Good
<u>W</u>	BETA BKG	06:36	60	128	2.13	9.72			Lockout
	ALPHA EFF	13:50	5	62725	12545	-5.6	0.126 (-0.9) Xtalk	Lockout	Lockout
	BETA EFF	14:07	5	89116	17800	-8.9	0.000292 (10.8) Xtalk	Lockout	Lockout
<u>LB4100E4</u>	ALPHA BKG	06:36	60	9.00	0.15	0.35			Good
	BETA BKG	06:36	60	67.0	1.12	0.14			Good
	ALPHA EFF	13:50	5	59043	11800	-4.9	0.17 (2.1) Xtalk	Lockout	Lockout
	BETA EFF	14:07	5	1.07E+05	21500	-9.7	0.0000652 (2.7)		Lockout
<u>LB4100F1</u>	ALPHA BKG	06:36	60	4.00	0.07	-1.1			Good
	BETA BKG	06:36	60	105	1.75	1.04			Good
	ALPHA EFF	13:50	5	59282	11900	1.08	0.132 (3.2) Xtalk	Lockout	Good
	BETA EFF	14:07	5	2.48E+05	49500	-1.7	0.0000525 (0.7)		Good
<u>LB4100F2</u>	ALPHA BKG	06:36	60	11.0	0.18	0.58			Good
	BETA BKG	06:36	60	117	1.95	2.94			Good
	ALPHA EFF	13:50	5	55896	11200	-7.4	0.188 (12.3) Xtalk	Lockout	Lockout
	BETA EFF	14:07	5	1.10E+05	22100	-0.82	0.000163 (2)		Good
<u>LB4100F3</u>	ALPHA BKG	06:36	60	6.00	0.1	0.36			Good
	BETA BKG	06:36	60	69.0	1.15	0.37			Good
	ALPHA EFF	13:50	5	1.22E+05	24500	0.24	0.157 (1.7) Xtalk	Lockout	Good
	BETA EFF	14:07	5	1.22E+05	24400	-0.49	0.0000246 (0)		Good
<u>LB4100F4</u>	ALPHA BKG	06:36	60	3.00	0.05	0.08			Good
<u>W</u>	BETA BKG	06:36	60	113	1.88	2.84			Good
	ALPHA EFF	13:50	5	92909	18600	0.05	0.202 (1.1) Xtalk	Lockout	Good
	BETA EFF	14:07	5	2.14E+05	42700	-0.1	0.0000749 (3.2) Xtalk	Lockout	Good
<u>LB4100G1</u>	ALPHA BKG	06:36	60	5.00	0.08	0.45			Good
	BETA BKG	06:36	60	53.0	0.88	-0.42			Good
	BETA EFF	13:50	5	92530	18506	-0.77	0.0000865 (2.2) Xtalk	Lockout	Good
	ALPHA EFF	14:07	5	54789	11000	-3	0.0915 (-8.6) Xtalk	Lockout	Good
<u>LB4100G2</u>	ALPHA BKG	06:36	60	3.00	0.05	-0.59			Good
	BETA BKG	06:36	60	75.0	1.25	1.31			Good
	BETA EFF	13:50	5	1.08E+05	21500	0.44	0.000121 (2)		Good
	ALPHA EFF	14:07	5	76103	15200	-2.8	0.139 (-0.5) Xtalk	Lockout	Good
<u>LB4100G3</u>	ALPHA BKG	06:36	60	10.0	0.17	2.06			Good
	BETA BKG	06:36	60	78.0	1.3	2.52			Good
	BETA EFF	13:50	5	1.05E+05	20900	-1.5	0.0000765 (1.2)		Good
	ALPHA EFF	14:07	5	59485	11897	-7	0.128 (-8.5) Xtalk	Lockout	Lockout
<u>LB4100G4</u>	ALPHA BKG	06:36	60	7.00	0.12	1.07			Good
	BETA BKG	06:36	60	78.0	1.3	2.81			Good
	BETA EFF	13:50	5	1.16E+05	23200	-1.2	0.0000605 (3.2) Xtalk	Lockout	Good
	ALPHA EFF	14:07	5	57962	11600	-5.8	0.11 (-8.2) Xtalk	Lockout	Lockout
<u>LB4100H1</u>	ALPHA BKG	06:37	60	4.00	0.07	0.11			Good
	BETA BKG	06:37	60	51.0	0.85	1.19			Good
	BETA EFF	13:50	5	2.36E+05	47100	0.35	0.0000637 (-0.5)		Good
	ALPHA EFF	14:07	5	58403	11700	-0.94	0.0804 (0)		Good
<u>LB4100H2</u>	ALPHA BKG	06:37	60	6.00	0.1	0.86			Good
	BETA BKG	06:37	60	65.0	1.08	2.18			Good
	BETA EFF	13:50	5	1.08E+05	21600	2.39	0.000111 (0.2)		Good
	ALPHA EFF	14:07	5	54612	10900	-5.5	0.116 (9.8) Xtalk	Lockout	Lockout
<u>LB4100H3</u>	ALPHA BKG	06:37	60	16.0	0.27	1.56			Good
	BETA BKG	06:37	60	67.0	1.12	2.59			Good
	BETA EFF	13:50	5	1.24E+05	24800	1.14	0.0000161 (-1.4)		Good
	ALPHA EFF	14:07	5	1.26E+05	25100	0.79	0.103 (4.7) Xtalk	Lockout	Good
<u>LB4100H4</u>	ALPHA BKG	06:37	60	8.00	0.13	0.9			Good
	BETA BKG	06:37	60	47.0	0.78	-0.7			Good
	BETA EFF	13:50	5	1.99E+05	39800	9.09	0.0000654 (0.3)		Lockout
	ALPHA EFF	14:07	5	94729	18900	-1.1	0.134 (18.3) Xtalk	Lockout	Good
<u>PIC10A</u>	ALPHA BKG	06:42	60	10.0	0.17	2.19			Good
	BETA BKG	06:42	60	32.0	0.53	-0.36			Good

	BETA EFF	07:47	5	2.84E+05	56900	-1.6	0.000158 (0.4)	Good
	ALPHA EFF	07:58	5	56548	11300	0.76	0.284 (-0.7)	Good
<u>PIC10B</u>	ALPHA BKG	06:42	60	13.0	0.22	3.12		Lockout
	BETA BKG	06:42	60	145	2.42	5.87		<del>Lockout</del> *2/3/11/08
	ALPHA BKG	13:41	60	3.00	0.05	-0.9		Good
	BETA BKG	13:41	60	866	14.4	49.3		Lockout
	BETA EFF	07:47	5	1.22E+05	24300	-1.9	0.000444 (0.5)	Good
	ALPHA EFF	07:58	5	52775	10555	-1.3	0.263 (-1.1)	Good
PIC10C	ALPHA BKG	06:42	60	7.00	0.12	0.14		Good
	BETA BKG	06:42	60	28.0	0.47	-0.28		Good
	BETA EFF	07:47	5	1.36E+05	27200	-0.92	0.000418 (0.5)	Good
	ALPHA EFF	07:58	5	1.13E+05	22500	-0.85	0.282 (0)	Good
PIC10D	ALPHA BKG	06:42	60	3.00	0.05	-0.58		Good
	BETA BKG	06:42	60	46.0	0.77	0.64		Good
	BETA EFF	07:47	5	2.29E+05	45800	-0.97	0.00021 (-0.3)	Good
	ALPHA EFF	07:58	5	90482	18100	-0.7	0.285 (-0.3)	Good
PIC1A	ALPHA BKG	06:41	60	3.00	0.05	-0.59		Good
	BETA BKG	06:41	60	27.0	0.45	-0.73		Good
	ALPHA EFF	07:15	5	56343	11300	-1.2	0.272 (0)	Good
	BETA EFF	07:58	5	1.04E+05	20800	-1.7	0.000673 (-0.5)	Good
PIC1B	ALPHA BKG	06:41	60	3.00	0.05	-0.6		Good
	BETA BKG	06:41	60	17.0	0.28	-1.4		Good
	ALPHA EFF	07:15	5	73018	14600	-1.7	0.275 (-0.6)	Good
	BETA EFF	07:58	5	1.18E+05	23700	-1.3	0.000702 (-0.6)	Good
PIC1C	ALPHA BKG	06:41	60	4.00	0.07	-1.5		Good
	BETA BKG	06:41	60	37.0	0.62	-1.1		Good
	ALPHA EFF	07:15	5	59763	12000	-1.2	0.256 (0.5)	Good
	BETA EFF	07:58	5	1.11E+05	22200	-1.6	0.00222 (-2.1)	Good
PIC1D	ALPHA BKG	06:41	60	4.00	0.07	-0.85		Good
	BETA BKG	06:41	60	48.0	0.8	1.16		Good
	ALPHA EFF	07:15	5	58166	11600	-1.6	0.253 (0.8)	Good
	BETA EFF	07:58	5	1.26E+05	25280	-0.41	0.0121 (0.2)	Good
PIC2A	ALPHA BKG	06:41	60	8.00	0.13	-1.1		Good
	BETA BKG	06:41	60	77.0	1.28	0.91		Good
	ALPHA EFF	07:15	5	54076	10800	0.57	0.263 (-1.8)	Good
	BETA EFF	07:59	5	2.79E+05	55900	-0.72	0.000676 (-1.2)	Good
PIC2B	ALPHA BKG	06:41	60	3.00	0.05	-0.77		Good
	BETA BKG	06:41	60	56.0	0.93	2.58		Good
	ALPHA EFF	07:15	5	53099	10600	-1.2	0.253 (-1.1)	Good
	BETA EFF	07:59	5	1.22E+05	24400	-2.1	0.0011 (0.2)	Good
PIC2C	ALPHA BKG	06:41	60	5.00	0.08	-0.32		Good
	BETA BKG	06:41	60	35.0	0.58	-0.19		Good
	ALPHA EFF	07:16	5	1.10E+05	22063	-2.3	0.263 (0)	Good
	BETA EFF	07:59	5	1.33E+05	26700	-4.4	0.0096 (1.3)	<del>Lockout</del> *2/3/11/08
	BETA EFF	09:31	5	1.34E+05	26900	-2.8	0.00892 (0.6)	Good
PIC2D	ALPHA BKG	06:41	60	7.00	0.12	0.61		Good
	BETA BKG	06:41	60	38.0	0.63	-0.4		Good
	ALPHA EFF	07:15	5	89069	17800	-1.9	0.263 (1.1)	Good
	BETA EFF	07:59	5	2.29E+05	45700	-1	0.00941 (0.7)	Good
PIC3A	ALPHA BKG	06:41	60	10.0	0.17	-0.09		Good
	BETA BKG	06:41	60	56.0	0.93	0.12		Good
	BETA EFF	07:15	5	1.00E+05	20100	-0.26	0.0272 (-0.5)	Good
	ALPHA EFF	07:26	5	56434	11300	-0.84	0.249 (1.5)	Good
PIC3B	ALPHA BKG	06:41	60	6.00	0.1	-0.29		Good
	BETA BKG	06:41	60	40.0	0.67	0.75		Good
	BETA EFF	07:16	5	1.14E+05	22700	-1.2	0.0167 (-0.3)	Good
	ALPHA EFF	07:26	5	74782	15000	-0.1	0.249 (-1)	Good
PIC3C	ALPHA BKG	08:17	60	16.0	0.27	4.54		<del>Lockout</del>
	BETA BKG	08:17	60	222	3.7	30.1		<del>Lockout</del> *2/3/11/08

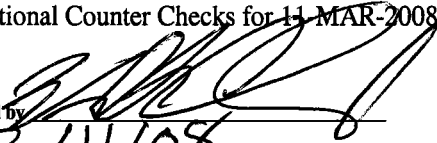


	ALPHA BKG	13:40	60	3.00	0.05	-2.1		Good
	BETA BKG	13:40	60	44.0	0.73	2.33		Good
	ALPHA EFF	09:16	5	61472	12300	1.23	0.256 (-2.1)	Good
	BETA EFF	09:25	5	1.11E+05	22251	-1.2	0.00905 (-0.7)	Good
PIC3D	ALPHA BKG	06:41	60	7.00	0.12	-0.12		Good
	BETA BKG	06:41	60	55.0	0.92	0.58		Good
	BETA EFF	07:16	5	1.24E+05	24860	1.02	0.00973 (-0.3)	Good
	ALPHA EFF	07:26	5	58122	11600	0.88	0.252 (-1.3)	Good
PIC4A	ALPHA BKG	06:41	60	15.0	0.25	1.36		Good
	BETA BKG	06:41	60	56.0	0.93	0.28		Good
	BETA EFF	07:16	5	2.81E+05	56200	-0.17	0.00229 (-2.4) <del>Xtalk Lockout</del>	Good
	ALPHA EFF	07:26	5	55459	11100	-0.55	0.26 (-0.1)	Good
PIC4B	ALPHA BKG	08:17	60	0	0	-1.4		Good
	BETA BKG	08:17	60	59.0	0.98	1.25		Good
	ALPHA EFF	09:16	5	49165	9833	-2.1	0.306 (0.8)	Good
	BETA EFF	09:25	5	1.18E+05	23662	-1.7	0.000127 (0.3)	Good
PIC4C	ALPHA BKG	06:41	60	9.00	0.15	0.35		Good
	BETA BKG	06:41	60	127	2.12	2.28		Lockout
	ALPHA BKG	13:40	60	6.00	0.1	-0.69		Good
	BETA BKG	13:40	60	72.0	1.2	-2.8		Good
	BETA EFF	07:16	5	1.35E+05	26900	-0.87	0.00584 (-0.4) <del>Xtalk Lockout</del>	Good
	ALPHA EFF	07:27	5	1.15E+05	22900	-1.5	0.262 (0.5)	Good
PIC4D	ALPHA BKG	06:41	60	15.0	0.25	2.63		Good
	BETA BKG	06:41	60	60.0	1	2.53		Good
	BETA EFF	07:16	5	2.21E+05	44300	-1.6	0.0162 (0.8)	Good
	ALPHA EFF	07:27	5	88791	17800	-2.8	0.257 (0.1)	Good
PIC5A	ALPHA BKG	06:41	60	14.0	0.23	0.23		Good
	BETA BKG	06:41	60	25.0	0.42	-1.3		Good
	BETA EFF	07:27	5	1.06E+05	21200	-1.8	0.00658 (0.8)	Good
	ALPHA EFF	07:37	5	56300	11260	-2.4	0.258 (1.2)	Good
PIC5B	ALPHA BKG	06:41	60	4.00	0.07	-0.93		Good
	BETA BKG	06:41	60	59.0	0.98	2.08		Good
	BETA EFF	07:27	5	1.21E+05	24200	-2.6	0.00507 (-0.8)	Good
	ALPHA EFF	07:37	5	75577	15100	-0.89	0.255 (0.8)	Good
<u>PIC5C</u>	ALPHA BKG	06:41	60	19.0	0.32	1.69		Lockout
	BETA BKG	06:41	60	56.0	0.93	1.19		Good
	BETA EFF	07:27	5	1.15E+05	23097	-1.3	0.00592 (-0.2)	Good
	ALPHA EFF	07:37	5	60916	12200	-1.6	0.259 (-0.7)	Good
PIC5D	ALPHA BKG	06:41	60	11.0	0.18	1.67		Good
	BETA BKG	06:41	60	94.0	1.57	1.81		Good
	BETA EFF	07:27	5	1.28E+05	25600	-2.1	0.00688 (-0.1)	Good
	ALPHA EFF	07:37	5	58043	11600	-3.8	0.257 (2.2)	Lockout
	ALPHA EFF	10:19	5	58408	11700	-2.6	0.255 (1.3)	Good
<u>PIC6A</u> W	ALPHA BKG	06:41	60	5.00	0.08	-1.8		Good
	BETA BKG	06:41	60	15.0	0.25	-4		Lockout
	BETA EFF	07:27	5	2.85E+05	56900	-0.19	0.00647 (-2.6) Xtalk Lockout	Good
	ALPHA EFF	07:37	5	55041	11000	-5.7	0.26 (6) Xtalk Lockout	Lockout
PIC6B	ALPHA BKG	06:41	60	14.0	0.23	1.38		Good
	BETA BKG	06:41	60	50.0	0.83	0.05		Good
	BETA EFF	07:27	5	1.23E+05	24500	-1.4	0.0102 (-0.8)	Good
	ALPHA EFF	07:37	5	52808	10600	-1.8	0.259 (3.2) Xtalk Lockout	Good
	ALPHA EFF	09:48	5	52070	10414	-6.5	0.255 (1.7) Xtalk Lockout	Lockout
	ALPHA EFF	10:16	5	52699	10500	-2.5	0.255 (1.6) Xtalk Lockout	Good
<u>PIC6C</u>	ALPHA BKG	06:41	60	20.0	0.33	1.66		Lockout
	BETA BKG	06:41	60	64.0	1.07	1.39		Good
	BETA EFF	07:27	5	1.38E+05	27600	1.26	0.0105 (-0.3)	Good
	ALPHA EFF	07:37	5	1.15E+05	23000	-1.3	0.257 (4) Xtalk Lockout	Good
PIC6D	ALPHA BKG	06:41	60	7.00	0.12	0.58		Good
	BETA BKG	06:41	60	27.0	0.45	0.35		Good

	BETA EFF	07:27	5	2.29E+05	45900	-0.77	0.00875 (-1.8)	Good
	ALPHA EFF	07:37	5	91327	18300	-4.3	0.255 (1.6)	<del>Lockout</del> * 3/11/08
	ALPHA EFF	09:48	5	91969	18400	-2.5	0.252 (0.5)	Good
PIC7A	ALPHA BKG	06:41	60	5.00	0.08	-0.62		Good
	BETA BKG	06:41	60	24.0	0.4	-1.2		Good
	BETA EFF	07:37	5	1.06E+05	21290	-2.2	0.00871 (-0.5)	Good
	ALPHA EFF	07:47	5	56909	11400	-0.82	0.249 (-1)	Good
PIC7B	ALPHA BKG	08:18	60	3.00	0.05	-0.73		Good
	BETA BKG	08:18	60	47.0	0.78	1.84		Good
	ALPHA EFF	09:17	5	76097	15200	-0.43	0.249 (0.5)	Good
	BETA EFF	09:25	5	1.23E+05	24700	1.03	0.00749 (-1.4)	Good
PIC7C	ALPHA BKG	06:41	60	5.00	0.08	0.09		Good
	BETA BKG	06:41	60	30.0	0.5	-0.19		Good
	BETA EFF	07:37	5	1.14E+05	22800	-0.7	0.00817 (-0.3)	Good
	ALPHA EFF	07:47	5	60263	12100	-3.6	0.257 (-0.4)	<del>Lockout</del> * 3/11/08
	ALPHA EFF	09:48	5	60577	12100	-2.2	0.261 (1.2)	Good
PIC7D	ALPHA BKG	06:41	60	10.0	0.17	1.28		Good
	BETA BKG	06:41	60	38.0	0.63	-0.09		Good
	BETA EFF	07:37	5	1.29E+05	25800	-0.46	0.00679 (-0.2)	Good
	ALPHA EFF	07:47	5	58228	11600	-3	0.251 (-0.4)	Good
PIC8A	ALPHA BKG	06:41	60	7.00	0.12	-0.42		Good
	BETA BKG	06:41	60	46.0	0.77	-0.41		Good
	BETA EFF	07:38	5	2.90E+05	58063	-1.1	0.00621 (-1.9)	Good
	ALPHA EFF	07:47	5	57486	11500	-2.5	0.245 (-0.7)	Good
<u>PIC8B</u>	ALPHA BKG	06:41	60	17.0	0.28	0.11		Good
	BETA BKG	06:41	60	101	1.68	0.12		Good
	BETA EFF	07:37	5	1.24E+05	24700	-1.5	0.00134 (-0.4)	Good
	ALPHA EFF	07:47	5	51882	10400	-3.9	0.264 (2.6)	Lockout
	ALPHA EFF	10:42	5	52151	10400	-3.2	0.262 (1.9)	Lockout
	ALPHA EFF	11:10	5	51739	10300	-4.3	0.258 (0.5)	Lockout
PIC8C	ALPHA BKG	06:41	60	11.0	0.18	1.41		Good
	BETA BKG	06:41	60	18.0	0.3	-0.42		Good
	BETA EFF	07:37	5	1.41E+05	28200	-1.1	0.00625 (-3.1) Xtalk	Lockout
	ALPHA EFF	07:47	5	1.16E+05	23300	-1.7	0.257 (2.3)	Good
	BETA EFF	10:20	5	1.42E+05	28400	0.36	0.00683 (-2.1) Xtalk	Lockout
PIC8D	ALPHA BKG	06:41	60	16.0	0.27	0.58		Good
	BETA BKG	06:41	60	101	1.68	3.24		<del>Lockout</del> * 3/11/08
	ALPHA BKG	13:41	60	11.0	0.18	-1.1		Good
	BETA BKG	13:41	60	73.0	1.22	0.94		Good
	BETA EFF	07:38	5	2.35E+05	46923	-0.73	0.00611 (-1.5)	Good
	ALPHA EFF	07:47	5	90386	18100	-3.8	0.258 (0.4)	<del>Lockout</del> * 3/11/08
	ALPHA EFF	10:42	5	90725	18145	-2.9	0.258 (0.6)	Good
PIC9A	ALPHA BKG	06:41	60	6.00	0.1	0.31		Good
	BETA BKG	06:41	60	48.0	0.8	0.79		Good
	BETA EFF	07:47	5	1.07E+05	21400	-2.2	0.000112 (-0.5)	Good
	ALPHA EFF	07:58	5	57784	11600	-1.8	0.268 (-0.5)	Good
PIC9B	ALPHA BKG	06:41	60	5.00	0.08	0.26		Good
	BETA BKG	06:41	60	49.0	0.82	1.39		Good
	BETA EFF	07:47	5	1.17E+05	23500	-2.7	0.000111 (0.2)	Good
	ALPHA EFF	07:58	5	74129	14800	-1.2	0.276 (2.3)	Good
<u>PIC9C</u>	ALPHA BKG	06:41	60	17.0	0.28	3.38		Lockout
	BETA BKG	06:41	60	40.0	0.67	-0.22		Good
	BETA EFF	07:47	5	1.14E+05	22846	-0.82	0.000105 (0)	Good
	ALPHA EFF	07:58	5	60688	12100	-4.5	0.274 (-0.4)	Lockout
PIC9D	ALPHA BKG	06:41	60	6.00	0.1	-0.32		Good
	BETA BKG	06:41	60	68.0	1.13	1.02		Good
	BETA EFF	07:47	5	1.29E+05	25880	0.16	0.000155 (-0.3)	Good
	ALPHA EFF	07:58	5	58920	11784	-3.2	0.268 (1.3)	<del>Lockout</del> * 3/11/08
	ALPHA EFF	09:45	5	59348	11900	-2	0.266 (0.4)	Good

Reviewed by

Date

  
3/11/08

GEL Laboratories LLC

# RUNLOGS

# Instrument Run Log

Instrument Type: **GAMMA SPECTROMETER**

Batch ID: **734275**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
204220001	SAMPLE	MJH1	GAM13	10-MAR-08 10:20	DONE	CAN	03-JUL-07 00:00
204220002	SAMPLE	MJH1	GAM21	10-MAR-08 10:21	DONE	CAN	03-JUL-07 00:00
204220003	SAMPLE	MJH1	GAM23	10-MAR-08 10:21	DONE	CAN	23-MAY-07 00:00
1201532439	MB	MJH1	GAM13	10-MAR-08 12:23	DONE	CAN	03-JUL-07 00:00
1201532440	DUP	MJH1	GAM21	10-MAR-08 12:23	DONE	CAN	03-JUL-07 00:00
1201532441	LCS	MJH1	GAM05	10-MAR-08 12:41	DONE	CAN	31-MAY-07 00:00

# Instrument Run Log

Instrument Type: GFPC

Batch ID: 734299

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
204220001	SAMPLE	MXP1	PIC3B	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00
204220002	SAMPLE	MXP1	PIC3D	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00
204220003	SAMPLE	MXP1	PIC5B	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00
1201532514	MB	MXP1	PIC4D	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00
1201532515	DUP	MXP1	PIC5A	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00
1201532516	MS	MXP1	PIC4A	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00
1201532517	MSD	MXP1	PIC7A	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00
1201532518	LCS	MXP1	PIC7D	11-MAR-08 08:56	DONE	2 inch Planchett	29-JUN-07 00:00