SC&A S. COHEN & ASSOCIATES
AN EMPLOYEE-OWNED COMPANY

December 20, 2007

Greg Miller
Cabrera Services, Inc.
5301 Montano Plaza Drive NW
Albuquerque, NM 87120

Dear Mr. Miller:

Enclosed is a Sample Data Package for the Schofield Barracks soil samples that SC&A subcontracted to General Engineering Laboratories in Charleston, South Carolina, for gamma spectroscopy, and to GPL Laboratories, in Frederick, Maryland, for the elemental lead analysis. SC&A has combined their reports and included them in this Sample Data Package.

If you have any questions please do not hesitate to call.

Sincerely,

Cynthia White

Cynthia White
Laboratory Director

cc: Tony Mason, Cabrera Services

1000 MONTICELLO COURT • MONTGOMERY, ALABAMA • 36117 • 334.272.2234 • FAX 334.213.0407

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Case Narrative
for
Sanford Cohen and Associates, Inc.
SDG: 198530

December 10, 2007

Laboratory Identification:

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

Summary

Sample Receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on November 30, 2007 for analysis. 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:

Laboratory ID	Client ID
198530001	SB-CZ-SS-2085-BA
198530002	SB-CZ-SS-2086-BA
198530003	SB-CZ-SS-2087-BA
198530004	SB-CZ-SS-2088-BA
198530005	SB-CZ-SS-2089-BA
198530006	SB-CZ-SS-2090-BA
198530007	SB-CZ-SS-2091-BA
198530008	SB-CZ-SS-2092-BA
198530009	SB-CZ-SS-2093-BA
198530010	SB-CZ-SS-2094-BA
198530011	SB-CZ-SS-2095-BA
198530012	SB-CZ-SS-2096-BA
198530013	SB-CZ-SS-2085-BD
198530014	SB-CZ-SS-2086-BD
198530015	SB-CZ-SS-2087-BD
198530016	SB-CZ-SS-2088-BD
198530017	SB-CZ-SS-2089-BD
198530018	SB-CZ-SS-2090-BD
198530019	SB-CZ-SS-2091-BD
198530020	SB-CZ-SS-2092-BD
198530021	SB-CZ-SS-2093-BD
198530022	SB-CZ-SS-2094-BD
198530023	SB-CZ-SS-2095-BD
198530024	SB-CZ-SS-2096-BD
198530025	SB-CZ-SS-RA1-ST
198530026	SB-CZ-SS-RA2-ST
198530027	SB-CZ-SS-RA3-ST
198530028	SB-CZ-SS-RA4-ST
198530029	SB-CZ-SS-RA5-ST

198530030	SB-CZ-SS-RA6-ST
198530031	SB-CZ-SS-RA7-ST
198530032	SB-CZ-SS-RA8-ST
198530033	SB-CZ-SS-RA9-ST
198530034	SB-CZ-SS-RA10-ST
198530035	SB-CZ-SS-RA11-ST
198530036	SB-CZ-SS-RA12-ST
198530037	SB-CZ-SS-RA1-SD
198530038	SB-CZ-SS-RA2-SD
198530039	SB-CZ-SS-RA3-SD
198530040	SB-CZ-SS-RA4-SD
198530041	SB-CZ-SS-RA5-SD
198530042	SB-CZ-SS-RA6-SD
198530043	SB-CZ-SS-RA7-SD
198530044	SB-CZ-SS-RA8-SD
198530045	SB-CZ-SS-RA9-SD
198530046	SB-CZ-SS-RA10-SD
198530047	SB-CZ-SS-RA11-SD
198530048	SB-CZ-SS-RA12-SD

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.

Amanda Rasco

Project Manager

Chain of Custody and Supporting Documentation

198530

SC & A 1000 MONTICELLO COURT
CHAIN OF CUSTODY RECORD MONTGOMERY, AL 36117 (334) 272-2234 (334)213-0407 FAX

WORK ASIGNMENT #	PROJECT NAME:	ANALYSIS REQUESTED	FOR LABORATORY USE
08-3040.01	Schofield CZ		

Client Name: JMC

Project Manager: Greg Miller Cabrera Services

Requested Comp. Date

Notify Upon Receipt?

COC# 40

Item No.	Date	Time	Matrix	Sample I.D.	# of CONTAINERS		Gamma Spec & Lead							Laboratory	Comments
												041207	8004		
1	10/12/2007		Soil	SB-CZ-SS-2085-BA	1		X						01		
2	10/12/2007		Soil	SB-CZ-SS-2086-BA	1		X						02		
3	10/12/2007		Soil	SB-CZ-SS-2087-BA	1		X						03		
4	10/12/2007		Soil	SB-CZ-SS-2088-BA	1		X						04		
5	10/12/2007		Soil	SB-CZ-SS-2089-BA	1		X						05		
6	10/12/2007		Soil	SB-CZ-SS-2090-BA	1		X						06		
7	10/12/2007		Soil	SB-CZ-SS-2091-BA	1		X						07		
8	10/12/2007		Soil	SB-CZ-SS-2092-BA	1		X						08		
9	10/12/2007		Soil	SB-CZ-SS-2093-BA	1		X						09		
10	10/12/2007		Soil	SB-CZ-SS-2094-BA	1		X						10		
11	10/12/2007		Soil	SB-CZ-SS-2095-BA	1		X						11		
12	10/12/2007		Soil	SB-CZ-SS-2096-BA	1		X						12		
13															
14															

Laboratory Prefix

Study I.D.

Pg 1 of 2

Sampled by and Title Alfred Craig FSP	Date/Time 10-12-07	Relinquished by: Alfred Craig FSP	Date/Time	QC Level 1 2 3	
Received by: [signature]	Date/Time 11/30/07 920	Relinquished by: C. Owens - SC&A	Date/Time 11/30/07 1430	COC	ICE
Received by: C. Owens SC&A	Date/Time 12/5/07 845	Relinquished by:	Date/Time	ANA REQ	TEMP
		Sample shipped via UPS FED-EX HAND OTHER	Air Bill #	Cust Seal	pH
				Sample	

SC & A 1000 MONTICELLO COURT
CHAIN OF CUSTODY RECORD MONTGOMERY, AL 36117 (334) 272-2234 (334)213-0407 FAX

WORK ASIGNMENT # 08-3040.01

PROJECT NAME: Schofield CZ

Client Name: JMC

Project Manager: Greg Miller Cabrera Services

Requested Comp. Date

Notify Upon Receipt?

COC# 40

ANALYSIS REQUESTED

FOR LABORATORY USE

Laboratory Prefix

Study I.D.

Pg 2 of X

Item No.	Date	Time	Matrix	Sample I.D.	# of CONTAINERS		Gamma Spec & Lead					0412007	8085	Laboratory	Comments
1	10/12/2007		Soil	SB-CZ-SS-2085-BD	1		X						01		
2	10/12/2007		Soil	SB-CZ-SS-2086-BD	1		X						02		
3	10/12/2007		Soil	SB-CZ-SS-2087-BD	1		X						03		
4	10/12/2007		Soil	SB-CZ-SS-2088-BD	1		X						04		
5	10/12/2007		Soil	SB-CZ-SS-2089-BD	1		X						05		
6	10/12/2007		Soil	SB-CZ-SS-2090-BD	1		X						06		
7	10/12/2007		Soil	SB-CZ-SS-2091-BD	1		X						07		
8	10/12/2007		Soil	SB-CZ-SS-2092-BD	1		X						08		
9	10/12/2007		Soil	SB-CZ-SS-2093-BD	1		X						09		
10	10/12/2007		Soil	SB-CZ-SS-2094-BD	1		X						10		
11	10/12/2007		Soil	SB-CZ-SS-2095-BD	1		X						11		
12	10/12/2007		Soil	SB-CZ-SS-2096-BD	1		X						12		
13															
14															

Sampled by and Title Alfred Craig FSP — Date/Time 10-12-07

Received by: C. Claus SC&A — Date/Time 10/15/07 8:45

Received by: Tiffany Adams — Date/Time 11/30/07 9:20

Relinquished by: Alfred Craig FSP — Date/Time

Relinquished by: C. Claus - SC&A — Date/Time 11/29/07 1430

Relinquished by: — Date/Time

Sample shipped via UPS FED-EX HAND OTHER — Air Bill #

QC Level 1 2 3

COC ICE

ANA REQ TEMP

Cust Sample pH

SC & A 1000 MONTICELLO COURT
MONTGOMERY, AL 36117 (334) 272-2234 (334)213-0407 FAX

CHAIN OF CUSTODY RECORD

WORK ASIGNMENT # 08-3040.01

PROJECT NAME: Schofield CZ

Client Name: JMC

Project Manager: Greg Miller Cabrera Services

Requested Comp. Date

Notify Upon Receipt?

COC# 40

ANALYSIS REQUESTED

FOR LABORATORY USE

Laboratory Prefix

Study I.D.

Pg 3 of 4

Item No.	Date	Time	Matrix	Sample I.D.	# of CONTAINERS		Gamma Spec & Lead							Laboratory	Comments
1	10/12/2007		Soil	SB-CZ-SS-RA1-ST	1		X					0H207	8006		
2	10/12/2007		Soil	SB-CZ-SS-RA2-ST	1		X						01		
3	10/12/2007		Soil	SB-CZ-SS-RA3-ST	1		X						02		
4	10/12/2007		Soil	SB-CZ-SS-RA4-ST	1		X						03		
5	10/12/2007		Soil	SB-CZ-SS-RA5-ST	1		X						04		
6	10/12/2007		Soil	SB-CZ-SS-RA6-ST	1		X						05		
7	10/12/2007		Soil	SB-CZ-SS-RA7-ST	1		X						06		
8	10/12/2007		Soil	SB-CZ-SS-RA8-ST	1		X						07		
9	10/12/2007		Soil	SB-CZ-SS-RA9-ST	1		X						08		
10	10/12/2007		Soil	SB-CZ-SS-RA10-ST	1		X						09		
11	10/12/2007		Soil	SB-CZ-SS-RA11-ST	1		X						10		
12	10/12/2007		Soil	SB-CZ-SS-RA12-ST	1		X						11		
13													12		
14															

Sampled by and Title Alfred Craig FSP — Date/Time 10-12-07

Received by: C. Owens - SC&A — Date/Time 10/12/07 8:45

Received by: Tiffany Adams — Date/Time 11-30-07 920

Relinquished by: Alfred Craig FSP — Date/Time

Relinquished by: C. Owens - SC&A — Date/Time 10/12/07 1400

Relinquished by: — Date/Time

Sample shipped via

UPS FED-EX HAND OTHER

Air Bill #

QC Level 1 2 3

COC | ICE

ANA REQ | TEMP

Cust Seal | pH

Sample

SC & A 1000 MONTICELLO COURT
CHAIN OF CUSTODY RECORD MONTGOMERY, AL 36117 (334) 272-2234 (334)213-0407 FAX

WORK ASIGNMENT # 08-3040.01

PROJECT NAME: Schofield CZ

Client Name: JMC

Project Manager: Greg Miller Cabrera Services

Requested Comp. Date

Notify Upon Receipt?

COC# 40

ANALYSIS REQUESTED

FOR LABORATORY USE

Laboratory Prefix

Study I.D.

Pg 4 of 4

Item No.	Date	Time	Matrix	Sample I.D.	# of CONTAINERS		Gamma Spec & Lead							Laboratory	Comments
												OH2007	8007		
1	10/12/2007		Soil	SB-CZ-SS-RA1-SD	1		X						01		
2	10/12/2007		Soil	SB-CZ-SS-RA2-SD	1		X						02		
3	10/12/2007		Soil	SB-CZ-SS-RA3-SD	1		X						03		
4	10/12/2007		Soil	SB-CZ-SS-RA4-SD	1		X						04		
5	10/12/2007		Soil	SB-CZ-SS-RA5-SD	1		X						05		
6	10/12/2007		Soil	SB-CZ-SS-RA6-SD	1		X						06		
7	10/12/2007		Soil	SB-CZ-SS-RA7-SD	1		X						07		
8	10/12/2007		Soil	SB-CZ-SS-RA8-SD	1		X						08		
9	10/12/2007		Soil	SB-CZ-SS-RA9-SD	1		X						09		
10	10/12/2007		Soil	SB-CZ-SS-RA10-SD	1		X						10		
11	10/12/2007		Soil	SB-CZ-SS-RA11-SD	1		X						11		
12	10/12/2007		Soil	SB-CZ-SS-RA12-SD	1		X						12		
13															
14															

Sampled by and Title Alfred Craig FSP — Date/Time 10-12-07

Received by: C. Clurent SCA — Date/Time 12/5/07 8:15

Received by: Jeffrey Adams — Date/Time 11-30-07 920

Relinquished by: Alfred Craig FSP — Date/Time

Relinquished by: C. Clurent SCA — Date/Time 12/5/07 1430

Relinquished by: — Date/Time

Sample shipped via

UPS FED-EX HAND OTHER

Air Bill #

QC Level 1 2 3

COC | ICE

ANA REQ | TEMP

Cust Seal | pH

Sample

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: SCAN	SDG/ARCOC/Work Order: 198528, 198530
Received By: YLA	Date Received: 11-30-07 920

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?		✓	Maximum Counts Observed*: 80CPM
Classified Radioactive II by RSO?		✓	
Marked containing PCBs?		✓	
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
Identified as Foreign Soil?		✓	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)?		✓		Preservation Method: ice bags blue ice dry ice none other (describe) 17°
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7	Are Encore containers present?			✓	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	✓			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	✓			

Comments:

FedEx 821230169725
FedEx 821230169736

PM (or PMA) review: Initials AJM Date 11/30/07

List of current GEL Certifications as of 10 December 2007

State	Certification
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

Method/Analysis Information

Product:	**Gammaspec, Gamma, Solid**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	707060
Prep Batch Number:	707053

Sample ID	Client ID
198530001	SB-CZ-SS-2085-BA
198530002	SB-CZ-SS-2086-BA
198530003	SB-CZ-SS-2087-BA
198530004	SB-CZ-SS-2088-BA
198530005	SB-CZ-SS-2089-BA
198530006	SB-CZ-SS-2090-BA
198530007	SB-CZ-SS-2091-BA
198530008	SB-CZ-SS-2092-BA
198530009	SB-CZ-SS-2093-BA
198530010	SB-CZ-SS-2094-BA
198530011	SB-CZ-SS-2095-BA
198530012	SB-CZ-SS-2096-BA
1201471362	Method Blank (MB)
1201471363	198528041(SB-CZ-SS-2077-BD) Sample Duplicate (DUP)
1201471364	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-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: 198528041 (SB-CZ-SS-2077-BD).

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
The sample and the duplicate, 1201471363 (SB-CZ-SS-2077-BD), did not meet the relative percent difference requirement for U-235, however they do meet the relative error ratio requirement with value of 1.67.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Protactinium-234m	198530005
UI	Data rejected due to interference.	Americium-243	198530001
			198530002
			198530003

	198530004
	198530005
	198530006
	198530007
	198530008
	198530009
	198530010
	198530011
	198530012
	1201471363
Curium-243	198530001
	198530007
	198530008
	198530011
	198530012
	1201471363
Europium-155	198530001
	198530007
	198530008
	198530011
	198530012
	1201471363
Neptunium-236	198530002
	198530007
	198530011
	198530012
Neptunium-237	198530001
	198530002
	198530003
	198530004

			198530005
			198530006
			198530007
			198530008
			198530009
			198530010
			198530011
			198530012
			1201471363
		Radium-223	198530001
			198530002
			198530003
			198530004
			198530005
			198530006
			198530007
			198530008
			198530009
			198530010
			198530011
			198530012
			1201471363
UI	Data rejected due to low abundance.	Americium-241	198530011
		Cobalt-60	198530007
		Neptunium-236	198530010
		Thorium-234	198530005
UI	Data rejected due to no valid peak.	Americium-246	198530005
		Protactinium-234m	198530002
		Uranium-235	198530005

Method/Analysis Information

Product:	**Gammaspec, Gamma, Solid**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	707062
Prep Batch Number:	707054

Sample ID	Client ID
198530013	SB-CZ-SS-2085-BD
198530014	SB-CZ-SS-2086-BD
198530015	SB-CZ-SS-2087-BD
198530016	SB-CZ-SS-2088-BD
198530017	SB-CZ-SS-2089-BD
198530018	SB-CZ-SS-2090-BD
198530019	SB-CZ-SS-2091-BD
198530020	SB-CZ-SS-2092-BD
198530021	SB-CZ-SS-2093-BD
198530022	SB-CZ-SS-2094-BD
198530023	SB-CZ-SS-2095-BD
198530024	SB-CZ-SS-2096-BD
198530025	SB-CZ-SS-RA1-ST
198530026	SB-CZ-SS-RA2-ST
198530027	SB-CZ-SS-RA3-ST
198530028	SB-CZ-SS-RA4-ST
198530029	SB-CZ-SS-RA5-ST
198530030	SB-CZ-SS-RA6-ST
198530031	SB-CZ-SS-RA7-ST
198530032	SB-CZ-SS-RA8-ST
1201471369	Method Blank (MB)
1201471370	198530013(SB-CZ-SS-2085-BD) Sample Duplicate (DUP)
1201471371	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-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: 198530013 (SB-CZ-SS-2085-BD).

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

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to a high counting uncertainty.	Protactinium-234m	1201471370

UI	Data rejected due to high peak-width.		198530024
UI	Data rejected due to interference.	Americium-243	198530013
			198530014
			198530015
			198530016
			198530017
			198530018
			198530019
			198530020
			198530021
			198530022
			198530023
			198530024
			198530025
			198530026
			198530027
			198530028
			198530029
			198530030
			198530031
			198530032
			1201471370
		Curium-243	198530013
			198530014
			198530015
			198530016
			198530023
			198530026
		Europium-155	198530013
			198530014

	198530015
	198530016
	198530023
	198530026
Neptunium-236	198530014
	198530017
	198530020
	198530025
	198530028
	198530032
Neptunium-237	198530013
	198530014
	198530015
	198530016
	198530017
	198530018
	198530019
	198530020
	198530021
	198530022
	198530023
	198530024
	198530025
	198530026
	198530027
	198530028
	198530029
	198530030
	198530031
	198530032

			1201471370
		Radium-223	198530013
			198530014
			198530015
			198530016
			198530017
			198530018
			198530019
			198530020
			198530021
			198530022
			198530023
			198530024
			198530025
			198530026
			198530027
			198530028
			198530029
			198530030
			198530031
			198530032
			1201471370
UI	Data rejected due to low abundance.	Neptunium-236	198530031
UI	Data rejected due to no valid peak.	Cesium-137	198530019
		Neptunium-239	198530029
		Protactinium-234m	198530031
		Uranium-235	198530015
			198530017
			198530019
			1201471370

Method/Analysis Information

Product:	**Gammaspec, Gamma, Solid**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	707073
Prep Batch Number:	707055

Sample ID	Client ID
198530033	SB-CZ-SS-RA9-ST
198530034	SB-CZ-SS-RA10-ST
198530035	SB-CZ-SS-RA11-ST
198530036	SB-CZ-SS-RA12-ST
198530037	SB-CZ-SS-RA1-SD
198530038	SB-CZ-SS-RA2-SD
198530039	SB-CZ-SS-RA3-SD
198530040	SB-CZ-SS-RA4-SD
198530041	SB-CZ-SS-RA5-SD
198530042	SB-CZ-SS-RA6-SD
198530043	SB-CZ-SS-RA7-SD
198530044	SB-CZ-SS-RA8-SD
198530045	SB-CZ-SS-RA9-SD
198530046	SB-CZ-SS-RA10-SD
198530047	SB-CZ-SS-RA11-SD
198530048	SB-CZ-SS-RA12-SD
1201471384	Method Blank (MB)
1201471385	198530033(SB-CZ-SS-RA9-ST) Sample Duplicate (DUP)
1201471386	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-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: 198530033 (SB-CZ-SS-RA9-ST).

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
The sample and the duplicate, 1201471385 (SB-CZ-SS-RA9-ST) and 198530033 (SB-CZ-SS-RA9-ST) , did not meet the relative percent difference requirement for Ac-228, however they do meet the relative error ratio requirement with value of 1.53.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Americium-243	1201471384
		Bismuth-211	198530046
UI	Data rejected due to interference.	Americium-243	198530033
			198530034

	198530035
	198530036
	198530037
	198530038
	198530039
	198530040
	198530041
	198530042
	198530043
	198530044
	198530045
	198530046
	198530047
	198530048
	1201471385
Californium-249	198530038
Curium-243	198530035
	198530037
	198530038
	198530039
Europium-155	198530035
	198530037
	198530038
	198530039
Neptunium-236	198530037
	198530038
	198530040
	1201471385
Neptunium-237	198530033
	198530034

	198530035
	198530036
	198530037
	198530038
	198530039
	198530040
	198530041
	198530042
	198530043
	198530044
	198530045
	198530046
	198530047
	198530048
	1201471385
Radium-223	198530033
	198530034
	198530035
	198530036
	198530037
	198530038
	198530039
	198530040
	198530041
	198530042
	198530043
	198530044
	198530045
	198530046
	198530047

			198530048
			1201471385
UI	Data rejected due to low abundance.	Americium-241	198530037
		Neptunium-236	198530036
UI	Data rejected due to no valid peak.	Cesium-137	198530038
			198530040
			198530041
			198530046

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:_____ 12/13/07 _____

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

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

Certificate of Analysis Report
for

SCAN001 Sanford Cohen and Associates, Inc.

Client SDG: 198530 GEL Work Order: 198530

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

ND The analyte concentration is not detected above the detection limit.

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.

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.

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 : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID:	SB−CZ−SS−2085−BA	Project:	SCAN00101
Sample ID:	198530001	Client ID:	SCAN001
Matrix:	Soil		
Collect Date:	12−OCT−07		
Receive Date:	30−NOV−07		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.970	+/−0.175	0.128	+/−0.175	0.800	pCi/g		MJH1	12/08/07	0936	707060	1
Americium−241	U	0.00667	+/−0.023	0.0378	+/−0.023	0.200	pCi/g						
Americium−243	UI	0.117	+/−0.0191	0.0225	+/−0.0191		pCi/g						
Americium−246	U	−0.00928	+/−0.0693	0.118	+/−0.0693		pCi/g						
Antimony−125	U	0.0247	+/−0.0476	0.084	+/−0.0476	0.200	pCi/g						
Bismuth−211	U	−0.342	+/−0.584	0.956	+/−0.584		pCi/g						
Bismuth−212		0.610	+/−0.237	0.245	+/−0.237	0.500	pCi/g						
Bismuth−214		0.644	+/−0.0969	0.0622	+/−0.0969	0.200	pCi/g						
Californium−249	U	−0.0195	+/−0.0245	0.0336	+/−0.0245		pCi/g						
Cesium−137		0.214	+/−0.0375	0.0342	+/−0.0375	0.100	pCi/g						
Cobalt−60	U	−0.000799	+/−0.0203	0.0343	+/−0.0203	0.100	pCi/g						
Curium−243	UI	0.125	+/−0.065	0.0581	+/−0.065		pCi/g						
Europium−155	UI	0.138	+/−0.0719	0.0664	+/−0.0719	0.500	pCi/g						
Lead−212		0.698	+/−0.0711	0.0519	+/−0.0711	0.100	pCi/g						
Lead−214		0.705	+/−0.0723	0.0705	+/−0.0723	0.100	pCi/g						
Neptunium−236	U	0.000252	+/−0.0241	0.0381	+/−0.0241		pCi/g						
Neptunium−237	UI	0.466	+/−0.101	0.122	+/−0.101		pCi/g						
Neptunium−239	U	0.0126	+/−0.0987	0.171	+/−0.0987	2.00	pCi/g						
Polonium−209	U	−3.17	+/−4.08	6.51	+/−4.08		pCi/g						
Potassium−40		4.10	+/−0.496	0.303	+/−0.496	1.00	pCi/g						
Protactinium−233	U	−0.0224	+/−0.0289	0.0504	+/−0.0289		pCi/g						
Protactinium−234m	U	3.28	+/−3.77	3.67	+/−3.77		pCi/g						
Radium−223	UI	0.197	+/−0.119	0.141	+/−0.119		pCi/g						
Rhodium−101	U	−0.0119	+/−0.016	0.025	+/−0.016		pCi/g						
Thallium−208		0.275	+/−0.0517	0.0318	+/−0.0517	0.080	pCi/g						
Thorium−234		1.10	+/−0.317	0.284	+/−0.317	0.500	pCi/g						
Uranium−235	U	0.0618	+/−0.119	0.140	+/−0.119	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2085−BA Project: SCAN00101
Sample ID: 198530001 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2086−BA
Sample ID: 198530002
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		1.12	+/−0.153	0.0912	+/−0.153	0.800	pCi/g		MJH1	12/08/07 0937	707060	1
Americium−241	U	0.0346	+/−0.0518	0.0836	+/−0.0518	0.200	pCi/g					
Americium−243	UI	0.182	+/−0.0353	0.0329	+/−0.0353		pCi/g					
Americium−246	U	0.00867	+/−0.0539	0.0931	+/−0.0539		pCi/g					
Antimony−125	U	0.0305	+/−0.0404	0.0721	+/−0.0404	0.200	pCi/g					
Bismuth−211	U	−0.263	+/−0.447	0.754	+/−0.447		pCi/g					
Bismuth−212		0.471	+/−0.205	0.182	+/−0.205	0.500	pCi/g					
Bismuth−214		0.915	+/−0.0972	0.0464	+/−0.0972	0.200	pCi/g					
Californium−249	U	0.0142	+/−0.0171	0.0307	+/−0.0171		pCi/g					
Cesium−137		0.178	+/−0.0299	0.0234	+/−0.0299	0.100	pCi/g					
Cobalt−60	U	2.28E−05	+/−0.0155	0.0263	+/−0.0155	0.100	pCi/g					
Curium−243	U	−0.00508	+/−0.0609	0.067	+/−0.0609		pCi/g					
Europium−155	U	0.0256	+/−0.0507	0.0742	+/−0.0507	0.500	pCi/g					
Lead−212		0.970	+/−0.0786	0.0422	+/−0.0786	0.100	pCi/g					
Lead−214		0.972	+/−0.0869	0.0499	+/−0.0869	0.100	pCi/g					
Neptunium−236	UI	0.0508	+/−0.0327	0.0407	+/−0.0327		pCi/g					
Neptunium−237	UI	0.508	+/−0.112	0.136	+/−0.112		pCi/g					
Neptunium−239	U	0.0324	+/−0.106	0.175	+/−0.106	2.00	pCi/g					
Polonium−209	U	−0.367	+/−3.07	4.83	+/−3.07		pCi/g					
Potassium−40		5.85	+/−0.550	0.254	+/−0.550	1.00	pCi/g					
Protactinium−233	U	0.026	+/−0.0269	0.0489	+/−0.0269		pCi/g					
Protactinium−234m	UI	3.32	+/−2.16	2.78	+/−2.16		pCi/g					
Radium−223	UI	0.247	+/−0.126	0.127	+/−0.126		pCi/g					
Rhodium−101	U	−0.00571	+/−0.0173	0.0259	+/−0.0173		pCi/g					
Thallium−208		0.300	+/−0.0394	0.0242	+/−0.0394	0.080	pCi/g					
Thorium−234		1.18	+/−0.330	0.301	+/−0.330	0.500	pCi/g					
Uranium−235	U	0.143	+/−0.139	0.150	+/−0.139	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2086−BA Project: SCAN00101
Sample ID: 198530002 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2087−BA
Sample ID: 198530003
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		1.00	+/−0.153	0.0922	+/−0.153	0.800	pCi/g		MJH1	12/08/07 0938	707060	1
Americium−241	U	−0.0164	+/−0.0553	0.0887	+/−0.0553	0.200	pCi/g					
Americium−243	UI	0.204	+/−0.0333	0.0335	+/−0.0333		pCi/g					
Americium−246	U	0.0124	+/−0.0563	0.097	+/−0.0563		pCi/g					
Antimony−125	U	0.0323	+/−0.0378	0.068	+/−0.0378	0.200	pCi/g					
Bismuth−211	U	−0.568	+/−0.547	0.755	+/−0.547		pCi/g					
Bismuth−212		0.684	+/−0.193	0.180	+/−0.193	0.500	pCi/g					
Bismuth−214		1.17	+/−0.118	0.0453	+/−0.118	0.200	pCi/g					
Californium−249	U	0.0221	+/−0.0224	0.0286	+/−0.0224		pCi/g					
Cesium−137		0.130	+/−0.029	0.0253	+/−0.029	0.100	pCi/g					
Cobalt−60	U	0.00562	+/−0.0159	0.0275	+/−0.0159	0.100	pCi/g					
Curium−243	U	0.00506	+/−0.0398	0.0715	+/−0.0398		pCi/g					
Europium−155	U	0.0204	+/−0.0437	0.079	+/−0.0437	0.500	pCi/g					
Lead−212		1.02	+/−0.0727	0.0402	+/−0.0727	0.100	pCi/g					
Lead−214		1.09	+/−0.0883	0.0495	+/−0.0883	0.100	pCi/g					
Neptunium−236	U	0.0261	+/−0.027	0.0438	+/−0.027		pCi/g					
Neptunium−237	UI	0.716	+/−0.125	0.145	+/−0.125		pCi/g					
Neptunium−239	U	−0.0569	+/−0.0972	0.164	+/−0.0972	2.00	pCi/g					
Polonium−209	U	0.461	+/−2.97	5.17	+/−2.97		pCi/g					
Potassium−40		5.53	+/−0.578	0.208	+/−0.578	1.00	pCi/g					
Protactinium−233	U	0.00289	+/−0.0258	0.046	+/−0.0258		pCi/g					
Protactinium−234m	U	1.43	+/−3.37	2.83	+/−3.37		pCi/g					
Radium−223	UI	0.287	+/−0.128	0.130	+/−0.128		pCi/g					
Rhodium−101	U	−0.0104	+/−0.0162	0.0249	+/−0.0162		pCi/g					
Thallium−208		0.286	+/−0.0417	0.025	+/−0.0417	0.080	pCi/g					
Thorium−234		1.29	+/−0.308	0.318	+/−0.308	0.500	pCi/g					
Uranium−235	U	0.0719	+/−0.111	0.145	+/−0.111	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2087−BA Project: SCAN00101
Sample ID: 198530003 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2088−BA
Sample ID: 198530004
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		1.09	+/−0.205	0.119	+/−0.205	0.800	pCi/g		MJH1	12/08/07 0938	707060	1
Americium−241	U	0.00601	+/−0.0266	0.0443	+/−0.0266	0.200	pCi/g					
Americium−243	UI	0.198	+/−0.0253	0.0242	+/−0.0253		pCi/g					
Americium−246	U	0.0672	+/−0.0749	0.134	+/−0.0749		pCi/g					
Antimony−125	U	−0.0195	+/−0.0512	0.0868	+/−0.0512	0.200	pCi/g					
Bismuth−211	U	0.144	+/−0.670	1.02	+/−0.670		pCi/g					
Bismuth−212		0.668	+/−0.314	0.275	+/−0.314	0.500	pCi/g					
Bismuth−214		0.911	+/−0.113	0.0657	+/−0.113	0.200	pCi/g					
Californium−249	U	0.0184	+/−0.0204	0.0368	+/−0.0204		pCi/g					
Cesium−137		0.148	+/−0.0406	0.0345	+/−0.0406	0.100	pCi/g					
Cobalt−60	U	0.0109	+/−0.0222	0.0383	+/−0.0222	0.100	pCi/g					
Curium−243	U	0.0416	+/−0.0549	0.0668	+/−0.0549		pCi/g					
Europium−155	U	0.0459	+/−0.0607	0.0732	+/−0.0607	0.500	pCi/g					
Lead−212		1.09	+/−0.102	0.0419	+/−0.102	0.100	pCi/g					
Lead−214		0.816	+/−0.0904	0.0601	+/−0.0904	0.100	pCi/g					
Neptunium−236	U	0.00869	+/−0.0291	0.0402	+/−0.0291		pCi/g					
Neptunium−237	UI	0.639	+/−0.108	0.120	+/−0.108		pCi/g					
Neptunium−239	U	0.147	+/−0.120	0.178	+/−0.120	2.00	pCi/g					
Polonium−209	U	−2.24	+/−3.87	6.32	+/−3.87		pCi/g					
Potassium−40		4.32	+/−0.609	0.322	+/−0.609	1.00	pCi/g					
Protactinium−233	U	−0.00571	+/−0.0304	0.0534	+/−0.0304		pCi/g					
Protactinium−234m	U	3.12	+/−4.63	3.57	+/−4.63		pCi/g					
Radium−223	UI	0.175	+/−0.139	0.148	+/−0.139		pCi/g					
Rhodium−101	U	−0.00488	+/−0.0179	0.0276	+/−0.0179		pCi/g					
Thallium−208		0.310	+/−0.0498	0.0316	+/−0.0498	0.080	pCi/g					
Thorium−234		1.36	+/−0.325	0.284	+/−0.325	0.500	pCi/g					
Uranium−235	U	0.0274	+/−0.105	0.167	+/−0.105	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2088−BA Project: SCAN00101
Sample ID: 198530004 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2089−BA
Sample ID: 198530005
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		1.08	+/−0.153	0.0698	+/−0.153	0.800	pCi/g		MJH1	12/08/07 0947	707060	1
Americium−241	U	−0.0325	+/−0.069	0.126	+/−0.069	0.200	pCi/g					
Americium−243	UI	0.166	+/−0.0301	0.0355	+/−0.0301		pCi/g					
Americium−246	UI	0.0938	+/−0.0554	0.0626	+/−0.0554		pCi/g					
Antimony−125	U	−0.0146	+/−0.0295	0.0516	+/−0.0295	0.200	pCi/g					
Bismuth−211	U	0.439	+/−0.443	0.552	+/−0.443		pCi/g					
Bismuth−212		0.659	+/−0.168	0.148	+/−0.168	0.500	pCi/g					
Bismuth−214		0.739	+/−0.0747	0.0396	+/−0.0747	0.200	pCi/g					
Californium−249	U	0.00642	+/−0.0137	0.0237	+/−0.0137		pCi/g					
Cesium−137		0.161	+/−0.0275	0.0213	+/−0.0275	0.100	pCi/g					
Cobalt−60	U	0.00179	+/−0.0126	0.0213	+/−0.0126	0.100	pCi/g					
Curium−243	U	0.0582	+/−0.0479	0.0617	+/−0.0479		pCi/g					
Europium−155	U	0.0642	+/−0.0529	0.0686	+/−0.0529	0.500	pCi/g					
Lead−212		0.970	+/−0.0665	0.0331	+/−0.0665	0.100	pCi/g					
Lead−214		0.817	+/−0.0673	0.0401	+/−0.0673	0.100	pCi/g					
Neptunium−236	U	0.0386	+/−0.0248	0.0412	+/−0.0248		pCi/g					
Neptunium−237	UI	0.550	+/−0.128	0.143	+/−0.128		pCi/g					
Neptunium−239	U	−0.0281	+/−0.0768	0.136	+/−0.0768	2.00	pCi/g					
Polonium−209	U	0.822	+/−2.25	3.94	+/−2.25		pCi/g					
Potassium−40		5.68	+/−0.584	0.182	+/−0.584	1.00	pCi/g					
Protactinium−233	U	0.00703	+/−0.0221	0.0387	+/−0.0221		pCi/g					
Protactinium−234m	UI	4.31	+/−2.58	2.13	+/−2.58		pCi/g					
Radium−223	UI	0.288	+/−0.121	0.106	+/−0.121		pCi/g					
Rhodium−101	U	0.0146	+/−0.0145	0.0204	+/−0.0145		pCi/g					
Thallium−208		0.277	+/−0.0343	0.0197	+/−0.0343	0.080	pCi/g					
Thorium−234	UI	1.14	+/−0.301	0.429	+/−0.301	0.500	pCi/g					
Uranium−235	UI	0.249	+/−0.124	0.124	+/−0.124	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2089−BA Project: SCAN00101
Sample ID: 198530005 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2090−BA
Sample ID: 198530006
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		0.864	+/−0.151	0.0853	+/−0.151	0.800	pCi/g		MJH1	12/08/07 0948	707060	1
Americium−241	U	0.0571	+/−0.0575	0.0983	+/−0.0575	0.200	pCi/g					
Americium−243	UI	0.139	+/−0.0313	0.0338	+/−0.0313		pCi/g					
Americium−246	U	0.0348	+/−0.0493	0.0895	+/−0.0493		pCi/g					
Antimony−125	U	0.0159	+/−0.0361	0.0654	+/−0.0361	0.200	pCi/g					
Bismuth−211	U	0.214	+/−0.591	0.658	+/−0.591		pCi/g					
Bismuth−212		0.595	+/−0.177	0.170	+/−0.177	0.500	pCi/g					
Bismuth−214		0.804	+/−0.0862	0.0446	+/−0.0862	0.200	pCi/g					
Californium−249	U	−0.00059	+/−0.0152	0.0271	+/−0.0152		pCi/g					
Cesium−137		0.166	+/−0.0363	0.0234	+/−0.0363	0.100	pCi/g					
Cobalt−60	U	−0.00772	+/−0.0139	0.0229	+/−0.0139	0.100	pCi/g					
Curium−243	U	0.0428	+/−0.0396	0.0658	+/−0.0396		pCi/g					
Europium−155	U	0.0473	+/−0.0438	0.0746	+/−0.0438	0.500	pCi/g					
Lead−212		0.792	+/−0.0667	0.0384	+/−0.0667	0.100	pCi/g					
Lead−214		0.822	+/−0.0821	0.0464	+/−0.0821	0.100	pCi/g					
Neptunium−236	U	0.017	+/−0.0251	0.0418	+/−0.0251		pCi/g					
Neptunium−237	UI	0.429	+/−0.112	0.142	+/−0.112		pCi/g					
Neptunium−239	U	0.000444	+/−0.0902	0.158	+/−0.0902	2.00	pCi/g					
Polonium−209	U	−2.75	+/−3.43	4.61	+/−3.43		pCi/g					
Potassium−40		4.31	+/−0.504	0.211	+/−0.504	1.00	pCi/g					
Protactinium−233	U	0.0101	+/−0.0263	0.0458	+/−0.0263		pCi/g					
Protactinium−234m	U	1.38	+/−1.79	2.95	+/−1.79		pCi/g					
Radium−223	UI	0.209	+/−0.103	0.122	+/−0.103		pCi/g					
Rhodium−101	U	0.00231	+/−0.0145	0.0245	+/−0.0145		pCi/g					
Thallium−208		0.228	+/−0.0339	0.0223	+/−0.0339	0.080	pCi/g					
Thorium−234		1.05	+/−0.297	0.308	+/−0.297	0.500	pCi/g					
Uranium−235	U	0.0497	+/−0.119	0.137	+/−0.119	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2090−BA Project: SCAN00101
Sample ID: 198530006 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2091−BA
Sample ID: 198530007
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.08	+/−0.151	0.0788	+/−0.151	0.800	pCi/g		MJH1	12/08/07	0949	707060	1
Americium−241	U	0.0163	+/−0.0477	0.0772	+/−0.0477	0.200	pCi/g						
Americium−243	UI	0.177	+/−0.0298	0.030	+/−0.0298		pCi/g						
Americium−246	U	−0.0159	+/−0.0494	0.0813	+/−0.0494		pCi/g						
Antimony−125	U	0.00546	+/−0.0366	0.0633	+/−0.0366	0.200	pCi/g						
Bismuth−211	U	−0.305	+/−0.375	0.613	+/−0.375		pCi/g						
Bismuth−212		0.525	+/−0.199	0.168	+/−0.199	0.500	pCi/g						
Bismuth−214		1.00	+/−0.0902	0.0417	+/−0.0902	0.200	pCi/g						
Californium−249	U	0.016	+/−0.0158	0.0264	+/−0.0158		pCi/g						
Cesium−137		0.158	+/−0.0237	0.0215	+/−0.0237	0.100	pCi/g						
Cobalt−60	UI	0.0257	+/−0.0284	0.0241	+/−0.0284	0.100	pCi/g						
Curium−243	UI	0.0702	+/−0.0454	0.060	+/−0.0454		pCi/g						
Europium−155	UI	0.0775	+/−0.0501	0.0693	+/−0.0501	0.500	pCi/g						
Lead−212		0.940	+/−0.070	0.0389	+/−0.070	0.100	pCi/g						
Lead−214		1.07	+/−0.0894	0.0456	+/−0.0894	0.100	pCi/g						
Neptunium−236	UI	0.0423	+/−0.0308	0.0356	+/−0.0308		pCi/g						
Neptunium−237	UI	0.511	+/−0.126	0.135	+/−0.126		pCi/g						
Neptunium−239	U	0.044	+/−0.0862	0.157	+/−0.0862	2.00	pCi/g						
Polonium−209	U	0.711	+/−2.63	4.57	+/−2.63		pCi/g						
Potassium−40		6.41	+/−0.689	0.186	+/−0.689	1.00	pCi/g						
Protactinium−233	U	0.00632	+/−0.024	0.0425	+/−0.024		pCi/g						
Protactinium−234m	U	2.33	+/−2.69	2.35	+/−2.69		pCi/g						
Radium−223	UI	0.395	+/−0.122	0.120	+/−0.122		pCi/g						
Rhodium−101	U	−0.00147	+/−0.0145	0.0245	+/−0.0145		pCi/g						
Thallium−208		0.262	+/−0.0327	0.020	+/−0.0327	0.080	pCi/g						
Thorium−234		1.31	+/−0.305	0.297	+/−0.305	0.500	pCi/g						
Uranium−235	U	0.0287	+/−0.105	0.139	+/−0.105	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2091−BA Project: SCAN00101
Sample ID: 198530007 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2092−BA
Sample ID: 198530008
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		1.02	+/−0.165	0.117	+/−0.165	0.800	pCi/g		MJH1	12/08/07 0949	707060	1
Americium−241	U	0.0223	+/−0.0231	0.0381	+/−0.0231	0.200	pCi/g					
Americium−243	UI	0.132	+/−0.0183	0.0224	+/−0.0183		pCi/g					
Americium−246	U	−0.0177	+/−0.0709	0.118	+/−0.0709		pCi/g					
Antimony−125	U	0.0204	+/−0.0472	0.0835	+/−0.0472	0.200	pCi/g					
Bismuth−211	U	−0.0706	+/−0.523	0.899	+/−0.523		pCi/g					
Bismuth−212		0.425	+/−0.216	0.249	+/−0.216	0.500	pCi/g					
Bismuth−214		0.749	+/−0.107	0.0575	+/−0.107	0.200	pCi/g					
Californium−249	U	0.0108	+/−0.0221	0.0344	+/−0.0221		pCi/g					
Cesium−137		0.190	+/−0.048	0.0327	+/−0.048	0.100	pCi/g					
Cobalt−60	U	0.0134	+/−0.0202	0.036	+/−0.0202	0.100	pCi/g					
Curium−243	UI	0.0699	+/−0.0474	0.0618	+/−0.0474		pCi/g					
Europium−155	UI	0.0772	+/−0.0524	0.0671	+/−0.0524	0.500	pCi/g					
Lead−212		0.912	+/−0.0744	0.0437	+/−0.0744	0.100	pCi/g					
Lead−214		0.834	+/−0.0823	0.0579	+/−0.0823	0.100	pCi/g					
Neptunium−236	U	0.020	+/−0.0233	0.0374	+/−0.0233		pCi/g					
Neptunium−237	UI	0.541	+/−0.0996	0.116	+/−0.0996		pCi/g					
Neptunium−239	U	−0.0476	+/−0.108	0.175	+/−0.108	2.00	pCi/g					
Polonium−209	U	2.11	+/−3.47	6.26	+/−3.47		pCi/g					
Potassium−40		4.39	+/−0.592	0.327	+/−0.592	1.00	pCi/g					
Protactinium−233	U	−0.00267	+/−0.029	0.0512	+/−0.029		pCi/g					
Protactinium−234m	U	1.66	+/−2.36	4.24	+/−2.36		pCi/g					
Radium−223	UI	0.274	+/−0.124	0.140	+/−0.124		pCi/g					
Rhodium−101	U	0.00526	+/−0.0143	0.0262	+/−0.0143		pCi/g					
Thallium−208		0.317	+/−0.0486	0.0301	+/−0.0486	0.080	pCi/g					
Thorium−234		0.854	+/−0.209	0.269	+/−0.209	0.500	pCi/g					
Uranium−235	U	0.0881	+/−0.0871	0.156	+/−0.0871	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2092−BA Project: SCAN00101
Sample ID: 198530008 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2093−BA
Sample ID: 198530009
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.824	+/−0.125	0.0645	+/−0.125	0.800	pCi/g		MJH1	12/08/07	0950	707060	1
Americium−241	U	0.001	+/−0.042	0.0682	+/−0.042	0.200	pCi/g						
Americium−243	UI	0.129	+/−0.025	0.027	+/−0.025		pCi/g						
Americium−246	U	0.0444	+/−0.0371	0.0671	+/−0.0371		pCi/g						
Antimony−125	U	0.0151	+/−0.0287	0.0507	+/−0.0287	0.200	pCi/g						
Bismuth−211	U	0.200	+/−0.356	0.512	+/−0.356		pCi/g						
Bismuth−212		0.521	+/−0.148	0.133	+/−0.148	0.500	pCi/g						
Bismuth−214		0.776	+/−0.0806	0.0354	+/−0.0806	0.200	pCi/g						
Californium−249	U	0.0058	+/−0.0119	0.0213	+/−0.0119		pCi/g						
Cesium−137		0.151	+/−0.0219	0.0182	+/−0.0219	0.100	pCi/g						
Cobalt−60	U	0.0107	+/−0.013	0.0201	+/−0.013	0.100	pCi/g						
Curium−243	U	−0.0103	+/−0.0297	0.0553	+/−0.0297		pCi/g						
Europium−155	U	−0.0112	+/−0.033	0.0614	+/−0.033	0.500	pCi/g						
Lead−212		0.793	+/−0.0586	0.032	+/−0.0586	0.100	pCi/g						
Lead−214		0.840	+/−0.0708	0.0361	+/−0.0708	0.100	pCi/g						
Neptunium−236	U	0.0191	+/−0.0218	0.0352	+/−0.0218		pCi/g						
Neptunium−237	UI	0.433	+/−0.0957	0.121	+/−0.0957		pCi/g						
Neptunium−239	U	−0.00293	+/−0.0768	0.134	+/−0.0768	2.00	pCi/g						
Polonium−209	U	−1.18	+/−2.18	3.69	+/−2.18		pCi/g						
Potassium−40		3.63	+/−0.367	0.169	+/−0.367	1.00	pCi/g						
Protactinium−233	U	0.00789	+/−0.0206	0.0373	+/−0.0206		pCi/g						
Protactinium−234m	U	1.85	+/−1.74	2.01	+/−1.74		pCi/g						
Radium−223	UI	0.237	+/−0.0942	0.0989	+/−0.0942		pCi/g						
Rhodium−101	U	−0.00446	+/−0.0135	0.0206	+/−0.0135		pCi/g						
Thallium−208		0.253	+/−0.0306	0.0175	+/−0.0306	0.080	pCi/g						
Thorium−234		0.946	+/−0.234	0.265	+/−0.234	0.500	pCi/g						
Uranium−235	U	0.0887	+/−0.0948	0.116	+/−0.0948	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2093−BA Project: SCAN00101
Sample ID: 198530009 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2094−BA
Sample ID: 198530010
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.945	+/−0.176	0.116	+/−0.176	0.800	pCi/g		MJH1	12/08/07	0951	707060	1
Americium−241	U	−0.00269	+/−0.0861	0.132	+/−0.0861	0.200	pCi/g						
Americium−243	UI	0.196	+/−0.0328	0.0403	+/−0.0328		pCi/g						
Americium−246	U	0.0205	+/−0.0645	0.112	+/−0.0645		pCi/g						
Antimony−125	U	0.0224	+/−0.051	0.0879	+/−0.051	0.200	pCi/g						
Bismuth−211	U	0.0168	+/−0.629	1.05	+/−0.629		pCi/g						
Bismuth−212		0.566	+/−0.207	0.259	+/−0.207	0.500	pCi/g						
Bismuth−214		0.673	+/−0.0917	0.0676	+/−0.0917	0.200	pCi/g						
Californium−249	U	−0.00422	+/−0.0223	0.0377	+/−0.0223		pCi/g						
Cesium−137		0.0785	+/−0.028	0.0356	+/−0.028	0.100	pCi/g						
Cobalt−60	U	−0.00714	+/−0.0193	0.0316	+/−0.0193	0.100	pCi/g						
Curium−243	U	0.0119	+/−0.0461	0.0743	+/−0.0461		pCi/g						
Europium−155	U	0.0601	+/−0.0781	0.0816	+/−0.0781	0.500	pCi/g						
Lead−212		0.984	+/−0.0795	0.0456	+/−0.0795	0.100	pCi/g						
Lead−214		0.675	+/−0.0944	0.0631	+/−0.0944	0.100	pCi/g						
Neptunium−236	UI	0.053	+/−0.0278	0.0498	+/−0.0278		pCi/g						
Neptunium−237	UI	0.594	+/−0.147	0.162	+/−0.147		pCi/g						
Neptunium−239	U	0.00111	+/−0.116	0.192	+/−0.116	2.00	pCi/g						
Polonium−209	U	−0.328	+/−4.11	6.77	+/−4.11		pCi/g						
Potassium−40		5.06	+/−0.642	0.265	+/−0.642	1.00	pCi/g						
Protactinium−233	U	0.0206	+/−0.0337	0.0598	+/−0.0337		pCi/g						
Protactinium−234m	U	1.57	+/−2.82	4.36	+/−2.82		pCi/g						
Radium−223	UI	0.331	+/−0.159	0.152	+/−0.159		pCi/g						
Rhodium−101	U	−0.00476	+/−0.0163	0.0272	+/−0.0163		pCi/g						
Thallium−208		0.302	+/−0.047	0.0319	+/−0.047	0.080	pCi/g						
Thorium−234		1.39	+/−0.392	0.347	+/−0.392	0.500	pCi/g						
Uranium−235		0.201	+/−0.148	0.153	+/−0.148	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2094−BA Project: SCAN00101
Sample ID: 198530010 Client ID: SCAN001

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

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol−condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
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J Value is estimated
M M if above MDC and less than LLD
N/A RPD or %Recovery limits do not apply.
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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
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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID:	SB−CZ−SS−2095−BA	Project:	SCAN00101
Sample ID:	198530011	Client ID:	SCAN001
Matrix:	Soil		
Collect Date:	12−OCT−07		
Receive Date:	30−NOV−07		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.25	+/−0.166	0.0845	+/−0.166	0.800	pCi/g		MJH1	12/09/07	1438	707060	1
Americium−241	UI	0.0359	+/−0.0195	0.0315	+/−0.0195	0.200	pCi/g						
Americium−243	UI	0.230	+/−0.0246	0.0183	+/−0.0246		pCi/g						
Americium−246	U	0.0765	+/−0.0494	0.0887	+/−0.0494		pCi/g						
Antimony−125	U	0.0133	+/−0.0363	0.0618	+/−0.0363	0.200	pCi/g						
Bismuth−211	U	0.101	+/−0.447	0.651	+/−0.447		pCi/g						
Bismuth−212		0.737	+/−0.178	0.174	+/−0.178	0.500	pCi/g						
Bismuth−214		0.943	+/−0.0942	0.0452	+/−0.0942	0.200	pCi/g						
Californium−249	U	0.018	+/−0.0153	0.0267	+/−0.0153		pCi/g						
Cesium−137		0.424	+/−0.0435	0.0249	+/−0.0435	0.100	pCi/g						
Cobalt−60	U	−0.00597	+/−0.015	0.0249	+/−0.015	0.100	pCi/g						
Curium−243	UI	0.0936	+/−0.0399	0.0489	+/−0.0399		pCi/g						
Europium−155	UI	0.103	+/−0.0441	0.0537	+/−0.0441	0.500	pCi/g						
Lead−212		1.23	+/−0.110	0.0333	+/−0.110	0.100	pCi/g						
Lead−214		1.01	+/−0.0857	0.042	+/−0.0857	0.100	pCi/g						
Neptunium−236	UI	0.0412	+/−0.0262	0.0288	+/−0.0262		pCi/g						
Neptunium−237	UI	0.734	+/−0.0997	0.0915	+/−0.0997		pCi/g						
Neptunium−239	U	−0.0709	+/−0.083	0.135	+/−0.083	2.00	pCi/g						
Polonium−209	U	2.58	+/−2.85	4.90	+/−2.85		pCi/g						
Potassium−40		7.77	+/−0.742	0.205	+/−0.742	1.00	pCi/g						
Protactinium−233	U	0.00245	+/−0.0231	0.040	+/−0.0231		pCi/g						
Protactinium−234m		3.51	+/−2.10	2.55	+/−2.10		pCi/g						
Radium−223	UI	0.479	+/−0.120	0.108	+/−0.120		pCi/g						
Rhodium−101	U	0.00213	+/−0.0173	0.0211	+/−0.0173		pCi/g						
Thallium−208		0.378	+/−0.0397	0.0222	+/−0.0397	0.080	pCi/g						
Thorium−234		1.62	+/−0.258	0.213	+/−0.258	0.500	pCi/g						
Uranium−235	U	0.0591	+/−0.098	0.115	+/−0.098	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2095−BA Project: SCAN00101
Sample ID: 198530011 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID:	SB−CZ−SS−2096−BA	Project:	SCAN00101
Sample ID:	198530012	Client ID:	SCAN001
Matrix:	Soil		
Collect Date:	12−OCT−07		
Receive Date:	30−NOV−07		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.33	+/−0.157	0.085	+/−0.157	0.800	pCi/g		MJH1	12/09/07	1439	707060	1
Americium−241	U	0.00135	+/−0.0179	0.028	+/−0.0179	0.200	pCi/g						
Americium−243	UI	0.176	+/−0.0184	0.0165	+/−0.0184		pCi/g						
Americium−246	U	0.0101	+/−0.057	0.089	+/−0.057		pCi/g						
Antimony−125	U	−0.0118	+/−0.0339	0.0569	+/−0.0339	0.200	pCi/g						
Bismuth−211	U	0.404	+/−0.591	0.688	+/−0.591		pCi/g						
Bismuth−212		0.836	+/−0.240	0.182	+/−0.240	0.500	pCi/g						
Bismuth−214		0.839	+/−0.0903	0.0439	+/−0.0903	0.200	pCi/g						
Californium−249	U	0.0165	+/−0.017	0.0239	+/−0.017		pCi/g						
Cesium−137		0.152	+/−0.027	0.0222	+/−0.027	0.100	pCi/g						
Cobalt−60	U	0.00998	+/−0.0156	0.0267	+/−0.0156	0.100	pCi/g						
Curium−243	UI	0.0834	+/−0.0376	0.0423	+/−0.0376		pCi/g						
Europium−155	UI	0.0922	+/−0.0416	0.0472	+/−0.0416	0.500	pCi/g						
Lead−212		1.17	+/−0.0864	0.0319	+/−0.0864	0.100	pCi/g						
Lead−214		0.833	+/−0.0624	0.0402	+/−0.0624	0.100	pCi/g						
Neptunium−236	UI	0.0404	+/−0.0269	0.0252	+/−0.0269		pCi/g						
Neptunium−237	UI	0.680	+/−0.0889	0.0884	+/−0.0889		pCi/g						
Neptunium−239	U	−0.0233	+/−0.0721	0.120	+/−0.0721	2.00	pCi/g						
Polonium−209	U	0.443	+/−2.93	4.86	+/−2.93		pCi/g						
Potassium−40		6.81	+/−0.607	0.219	+/−0.607	1.00	pCi/g						
Protactinium−233	U	0.002	+/−0.0215	0.0377	+/−0.0215		pCi/g						
Protactinium−234m	U	1.71	+/−2.98	2.74	+/−2.98		pCi/g						
Radium−223	UI	0.283	+/−0.0892	0.0994	+/−0.0892		pCi/g						
Rhodium−101	U	−0.00936	+/−0.0144	0.0184	+/−0.0144		pCi/g						
Thallium−208		0.377	+/−0.042	0.0229	+/−0.042	0.080	pCi/g						
Thorium−234		1.56	+/−0.281	0.206	+/−0.281	0.500	pCi/g						
Uranium−235		0.108	+/−0.114	0.101	+/−0.114	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2096−BA Project: SCAN00101
Sample ID: 198530012 Client ID: SCAN001

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

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol−condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
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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
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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2085−BD
Sample ID: 198530013
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.41	+/−0.190	0.124	+/−0.190	0.800	pCi/g		MJH1	12/10/07	1834	707062	1
Americium−241	U	0.00138	+/−0.0251	0.0391	+/−0.0251	0.200	pCi/g						
Americium−243	UI	0.185	+/−0.0226	0.0231	+/−0.0226		pCi/g						
Americium−246	U	−0.0427	+/−0.0736	0.121	+/−0.0736		pCi/g						
Antimony−125	U	0.0343	+/−0.0534	0.0814	+/−0.0534	0.200	pCi/g						
Bismuth−211	U	0.0369	+/−0.683	0.982	+/−0.683		pCi/g						
Bismuth−212		1.19	+/−0.280	0.254	+/−0.280	0.500	pCi/g						
Bismuth−214		0.709	+/−0.0893	0.0599	+/−0.0893	0.200	pCi/g						
Californium−249	U	−0.0053	+/−0.0196	0.0331	+/−0.0196		pCi/g						
Cesium−137	U	0.0284	+/−0.0235	0.0368	+/−0.0235	0.100	pCi/g						
Cobalt−60	U	−0.00616	+/−0.0221	0.0365	+/−0.0221	0.100	pCi/g						
Curium−243	UI	0.0973	+/−0.0528	0.059	+/−0.0528		pCi/g						
Europium−155	UI	0.108	+/−0.0584	0.0652	+/−0.0584	0.500	pCi/g						
Lead−212		1.16	+/−0.101	0.0485	+/−0.101	0.100	pCi/g						
Lead−214		0.721	+/−0.075	0.0649	+/−0.075	0.100	pCi/g						
Neptunium−236	U	0.0179	+/−0.0274	0.0388	+/−0.0274		pCi/g						
Neptunium−237	UI	0.648	+/−0.111	0.120	+/−0.111		pCi/g						
Neptunium−239	U	0.0252	+/−0.103	0.174	+/−0.103	2.00	pCi/g						
Polonium−209	U	0.204	+/−4.26	7.04	+/−4.26		pCi/g						
Potassium−40		4.99	+/−0.589	0.309	+/−0.589	1.00	pCi/g						
Protactinium−233	U	−0.0256	+/−0.0289	0.049	+/−0.0289		pCi/g						
Protactinium−234m	U	2.45	+/−3.82	3.60	+/−3.82		pCi/g						
Radium−223	UI	0.481	+/−0.130	0.139	+/−0.130		pCi/g						
Rhodium−101	U	0.020	+/−0.0293	0.025	+/−0.0293		pCi/g						
Thallium−208		0.383	+/−0.0462	0.0324	+/−0.0462	0.080	pCi/g						
Thorium−234		1.39	+/−0.336	0.281	+/−0.336	0.500	pCi/g						
Uranium−235	U	0.119	+/−0.138	0.144	+/−0.138	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2085−BD Project: SCAN00101
Sample ID: 198530013 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2086−BD
Sample ID: 198530014
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.16	+/−0.158	0.109	+/−0.158	0.800	pCi/g		MJH1	12/10/07	1835	707062	1
Americium−241	U	0.0201	+/−0.0209	0.0339	+/−0.0209	0.200	pCi/g						
Americium−243	UI	0.193	+/−0.0233	0.0204	+/−0.0233		pCi/g						
Americium−246	U	0.0486	+/−0.0621	0.110	+/−0.0621		pCi/g						
Antimony−125	U	0.00101	+/−0.0399	0.0691	+/−0.0399	0.200	pCi/g						
Bismuth−211	U	−0.131	+/−0.449	0.765	+/−0.449		pCi/g						
Bismuth−212		0.788	+/−0.217	0.219	+/−0.217	0.500	pCi/g						
Bismuth−214		0.877	+/−0.0992	0.0483	+/−0.0992	0.200	pCi/g						
Californium−249	U	0.0248	+/−0.0167	0.0305	+/−0.0167		pCi/g						
Cesium−137		0.0344	+/−0.0217	0.0277	+/−0.0217	0.100	pCi/g						
Cobalt−60	U	0.0103	+/−0.0198	0.0344	+/−0.0198	0.100	pCi/g						
Curium−243	UI	0.0557	+/−0.0385	0.0497	+/−0.0385		pCi/g						
Europium−155	UI	0.0616	+/−0.0425	0.059	+/−0.0425	0.500	pCi/g						
Lead−212		1.15	+/−0.0828	0.0375	+/−0.0828	0.100	pCi/g						
Lead−214		0.884	+/−0.0767	0.0493	+/−0.0767	0.100	pCi/g						
Neptunium−236	UI	0.0304	+/−0.0228	0.0301	+/−0.0228		pCi/g						
Neptunium−237	UI	0.663	+/−0.101	0.104	+/−0.101		pCi/g						
Neptunium−239	U	0.0541	+/−0.0833	0.152	+/−0.0833	2.00	pCi/g						
Polonium−209	U	1.90	+/−3.19	5.68	+/−3.19		pCi/g						
Potassium−40		5.71	+/−0.605	0.288	+/−0.605	1.00	pCi/g						
Protactinium−233	U	−0.00246	+/−0.0246	0.0432	+/−0.0246		pCi/g						
Protactinium−234m	U	0.567	+/−1.94	3.36	+/−1.94		pCi/g						
Radium−223	UI	0.363	+/−0.122	0.124	+/−0.122		pCi/g						
Rhodium−101	U	−0.00293	+/−0.0142	0.0229	+/−0.0142		pCi/g						
Thallium−208		0.340	+/−0.0443	0.0275	+/−0.0443	0.080	pCi/g						
Thorium−234		1.35	+/−0.247	0.242	+/−0.247	0.500	pCi/g						
Uranium−235	U	0.0209	+/−0.0848	0.129	+/−0.0848	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2086−BD Project: SCAN00101
Sample ID: 198530014 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2087−BD
Sample ID: 198530015
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.01	+/−0.154	0.0901	+/−0.154	0.800	pCi/g		MJH1	12/10/07	1934	707062	1
Americium−241	U	0.0131	+/−0.0683	0.107	+/−0.0683	0.200	pCi/g						
Americium−243	UI	0.193	+/−0.0338	0.0356	+/−0.0338		pCi/g						
Americium−246	U	0.059	+/−0.0506	0.0909	+/−0.0506		pCi/g						
Antimony−125	U	0.0106	+/−0.0382	0.0658	+/−0.0382	0.200	pCi/g						
Bismuth−211	U	0.260	+/−0.701	0.682	+/−0.701		pCi/g						
Bismuth−212		0.663	+/−0.256	0.189	+/−0.256	0.500	pCi/g						
Bismuth−214		0.896	+/−0.0925	0.0457	+/−0.0925	0.200	pCi/g						
Californium−249	U	0.00405	+/−0.0171	0.0296	+/−0.0171		pCi/g						
Cesium−137		0.146	+/−0.0388	0.0244	+/−0.0388	0.100	pCi/g						
Cobalt−60	U	0.0145	+/−0.0158	0.0278	+/−0.0158	0.100	pCi/g						
Curium−243	UI	0.073	+/−0.0529	0.0699	+/−0.0529		pCi/g						
Europium−155	UI	0.0807	+/−0.0584	0.0734	+/−0.0584	0.500	pCi/g						
Lead−212		0.963	+/−0.080	0.0422	+/−0.080	0.100	pCi/g						
Lead−214		0.936	+/−0.0878	0.0486	+/−0.0878	0.100	pCi/g						
Neptunium−236	U	0.037	+/−0.0328	0.0415	+/−0.0328		pCi/g						
Neptunium−237	UI	0.455	+/−0.102	0.154	+/−0.102		pCi/g						
Neptunium−239	U	0.0318	+/−0.0943	0.168	+/−0.0943	2.00	pCi/g						
Polonium−209	U	2.94	+/−3.89	5.07	+/−3.89		pCi/g						
Potassium−40		4.98	+/−0.517	0.218	+/−0.517	1.00	pCi/g						
Protactinium−233	U	0.00217	+/−0.0265	0.0463	+/−0.0265		pCi/g						
Protactinium−234m		3.24	+/−2.89	2.74	+/−2.89		pCi/g						
Radium−223	UI	0.329	+/−0.120	0.125	+/−0.120		pCi/g						
Rhodium−101	U	−0.00636	+/−0.016	0.0252	+/−0.016		pCi/g						
Thallium−208		0.315	+/−0.0414	0.0238	+/−0.0414	0.080	pCi/g						
Thorium−234		1.01	+/−0.286	0.332	+/−0.286	0.500	pCi/g						
Uranium−235	UI	0.174	+/−0.101	0.147	+/−0.101	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2087−BD Project: SCAN00101
Sample ID: 198530015 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2088−BD
Sample ID: 198530016
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.37	+/−0.168	0.0854	+/−0.168	0.800	pCi/g		MJH1	12/10/07	1934	707062	1
Americium−241	U	0.00627	+/−0.0711	0.118	+/−0.0711	0.200	pCi/g						
Americium−243	UI	0.225	+/−0.0378	0.0339	+/−0.0378		pCi/g						
Americium−246	U	0.0603	+/−0.101	0.0864	+/−0.101		pCi/g						
Antimony−125	U	0.0064	+/−0.0372	0.0638	+/−0.0372	0.200	pCi/g						
Bismuth−211	U	0.378	+/−0.461	0.714	+/−0.461		pCi/g						
Bismuth−212		0.918	+/−0.194	0.179	+/−0.194	0.500	pCi/g						
Bismuth−214		0.837	+/−0.0846	0.0434	+/−0.0846	0.200	pCi/g						
Californium−249	U	0.0103	+/−0.0169	0.0266	+/−0.0169		pCi/g						
Cesium−137	U	0.0203	+/−0.0184	0.0235	+/−0.0184	0.100	pCi/g						
Cobalt−60	U	−0.00786	+/−0.0154	0.0254	+/−0.0154	0.100	pCi/g						
Curium−243	UI	0.105	+/−0.0558	0.0612	+/−0.0558		pCi/g						
Europium−155	UI	0.117	+/−0.0617	0.069	+/−0.0617	0.500	pCi/g						
Lead−212		1.24	+/−0.0888	0.0374	+/−0.0888	0.100	pCi/g						
Lead−214		0.843	+/−0.0751	0.0477	+/−0.0751	0.100	pCi/g						
Neptunium−236	U	0.027	+/−0.0284	0.0416	+/−0.0284		pCi/g						
Neptunium−237	UI	0.686	+/−0.125	0.137	+/−0.125		pCi/g						
Neptunium−239	U	−0.0581	+/−0.101	0.146	+/−0.101	2.00	pCi/g						
Polonium−209	U	1.01	+/−3.12	4.64	+/−3.12		pCi/g						
Potassium−40		5.45	+/−0.547	0.199	+/−0.547	1.00	pCi/g						
Protactinium−233	U	−0.0105	+/−0.0234	0.0403	+/−0.0234		pCi/g						
Protactinium−234m	U	1.76	+/−2.87	2.67	+/−2.87		pCi/g						
Radium−223	UI	0.291	+/−0.120	0.113	+/−0.120		pCi/g						
Rhodium−101	U	0.00919	+/−0.0148	0.023	+/−0.0148		pCi/g						
Thallium−208		0.379	+/−0.0424	0.0219	+/−0.0424	0.080	pCi/g						
Thorium−234		1.61	+/−0.340	0.292	+/−0.340	0.500	pCi/g						
Uranium−235	U	0.098	+/−0.124	0.130	+/−0.124	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2088−BD Project: SCAN00101
Sample ID: 198530016 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2089−BD
Sample ID: 198530017
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.07	+/−0.134	0.071	+/−0.134	0.800	pCi/g		MJH1	12/10/07	1935	707062	1
Americium−241	U	−0.028	+/−0.0423	0.0565	+/−0.0423	0.200	pCi/g						
Americium−243	UI	0.165	+/−0.0207	0.0235	+/−0.0207		pCi/g						
Americium−246	U	−0.00846	+/−0.0446	0.0646	+/−0.0446		pCi/g						
Antimony−125	U	0.018	+/−0.0277	0.0501	+/−0.0277	0.200	pCi/g						
Bismuth−211	U	0.275	+/−0.359	0.576	+/−0.359		pCi/g						
Bismuth−212		0.555	+/−0.153	0.144	+/−0.153	0.500	pCi/g						
Bismuth−214		0.734	+/−0.0815	0.0365	+/−0.0815	0.200	pCi/g						
Californium−249	U	0.00751	+/−0.0118	0.0215	+/−0.0118		pCi/g						
Cesium−137		0.0483	+/−0.0186	0.0172	+/−0.0186	0.100	pCi/g						
Cobalt−60	U	−0.0051	+/−0.0117	0.0192	+/−0.0117	0.100	pCi/g						
Curium−243	U	0.030	+/−0.0392	0.0445	+/−0.0392		pCi/g						
Europium−155	U	0.0332	+/−0.0434	0.0536	+/−0.0434	0.500	pCi/g						
Lead−212		1.03	+/−0.0706	0.030	+/−0.0706	0.100	pCi/g						
Lead−214		0.883	+/−0.072	0.0342	+/−0.072	0.100	pCi/g						
Neptunium−236	UI	0.0303	+/−0.0252	0.0285	+/−0.0252		pCi/g						
Neptunium−237	UI	0.602	+/−0.106	0.0954	+/−0.106		pCi/g						
Neptunium−239	U	0.0599	+/−0.0683	0.121	+/−0.0683	2.00	pCi/g						
Polonium−209	U	−0.911	+/−2.73	3.79	+/−2.73		pCi/g						
Potassium−40		6.44	+/−0.596	0.167	+/−0.596	1.00	pCi/g						
Protactinium−233	U	−0.00841	+/−0.0215	0.0315	+/−0.0215		pCi/g						
Protactinium−234m		3.06	+/−2.23	2.02	+/−2.23		pCi/g						
Radium−223	UI	0.260	+/−0.110	0.0886	+/−0.110		pCi/g						
Rhodium−101	U	0.00119	+/−0.0112	0.018	+/−0.0112		pCi/g						
Thallium−208		0.280	+/−0.0335	0.0179	+/−0.0335	0.080	pCi/g						
Thorium−234		1.26	+/−0.246	0.211	+/−0.246	0.500	pCi/g						
Uranium−235	UI	0.106	+/−0.090	0.101	+/−0.090	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2089−BD Project: SCAN00101
Sample ID: 198530017 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2090−BD
Sample ID: 198530018
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.892	+/−0.136	0.0822	+/−0.136	0.800	pCi/g		MJH1	12/10/07	1952	707062	1
Americium−241	U	0.0141	+/−0.0196	0.0342	+/−0.0196	0.200	pCi/g						
Americium−243	UI	0.135	+/−0.0193	0.0207	+/−0.0193		pCi/g						
Americium−246	U	0.0521	+/−0.0506	0.093	+/−0.0506		pCi/g						
Antimony−125	U	−0.0401	+/−0.0368	0.0621	+/−0.0368	0.200	pCi/g						
Bismuth−211	U	0.103	+/−0.497	0.747	+/−0.497		pCi/g						
Bismuth−212		0.559	+/−0.184	0.188	+/−0.184	0.500	pCi/g						
Bismuth−214		0.907	+/−0.0908	0.0448	+/−0.0908	0.200	pCi/g						
Californium−249	U	0.00806	+/−0.0162	0.0293	+/−0.0162		pCi/g						
Cesium−137	U	0.0269	+/−0.0176	0.0281	+/−0.0176	0.100	pCi/g						
Cobalt−60	U	0.00495	+/−0.0151	0.0265	+/−0.0151	0.100	pCi/g						
Curium−243	U	−0.0128	+/−0.0319	0.0591	+/−0.0319		pCi/g						
Europium−155	U	0.0373	+/−0.0357	0.0677	+/−0.0357	0.500	pCi/g						
Lead−212		0.871	+/−0.0827	0.0389	+/−0.0827	0.100	pCi/g						
Lead−214		0.982	+/−0.0838	0.0485	+/−0.0838	0.100	pCi/g						
Neptunium−236	U	0.0236	+/−0.021	0.0356	+/−0.021		pCi/g						
Neptunium−237	UI	0.439	+/−0.0852	0.108	+/−0.0852		pCi/g						
Neptunium−239	U	−0.0283	+/−0.0903	0.158	+/−0.0903	2.00	pCi/g						
Polonium−209	U	−0.766	+/−3.39	4.88	+/−3.39		pCi/g						
Potassium−40		4.71	+/−0.536	0.228	+/−0.536	1.00	pCi/g						
Protactinium−233	U	−0.00902	+/−0.0243	0.0436	+/−0.0243		pCi/g						
Protactinium−234m	U	0.528	+/−1.70	2.93	+/−1.70		pCi/g						
Radium−223	UI	0.254	+/−0.115	0.121	+/−0.115		pCi/g						
Rhodium−101	U	0.00842	+/−0.0158	0.0245	+/−0.0158		pCi/g						
Thallium−208		0.316	+/−0.0374	0.0237	+/−0.0374	0.080	pCi/g						
Thorium−234		1.11	+/−0.217	0.253	+/−0.217	0.500	pCi/g						
Uranium−235	U	0.0358	+/−0.0871	0.136	+/−0.0871	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2090−BD Project: SCAN00101
Sample ID: 198530018 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2091−BD
Sample ID: 198530019
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.10	+/−0.156	0.0902	+/−0.156	0.800	pCi/g		MJH1	12/10/07	1953	707062	1
Americium−241	U	0.0552	+/−0.0595	0.104	+/−0.0595	0.200	pCi/g						
Americium−243	UI	0.135	+/−0.0263	0.033	+/−0.0263		pCi/g						
Americium−246	U	0.0214	+/−0.0469	0.0841	+/−0.0469		pCi/g						
Antimony−125	U	0.00534	+/−0.0355	0.0623	+/−0.0355	0.200	pCi/g						
Bismuth−211	U	−0.486	+/−0.408	0.652	+/−0.408		pCi/g						
Bismuth−212		0.604	+/−0.148	0.171	+/−0.148	0.500	pCi/g						
Bismuth−214		0.848	+/−0.0904	0.0428	+/−0.0904	0.200	pCi/g						
Californium−249	U	0.017	+/−0.0155	0.0282	+/−0.0155		pCi/g						
Cesium−137	UI	0.0271	+/−0.0173	0.0244	+/−0.0173	0.100	pCi/g						
Cobalt−60	U	−0.0197	+/−0.0173	0.025	+/−0.0173	0.100	pCi/g						
Curium−243	U	0.0432	+/−0.0379	0.0627	+/−0.0379		pCi/g						
Europium−155	U	0.0478	+/−0.0419	0.0692	+/−0.0419	0.500	pCi/g						
Lead−212		1.00	+/−0.0749	0.0391	+/−0.0749	0.100	pCi/g						
Lead−214		0.984	+/−0.0867	0.0438	+/−0.0867	0.100	pCi/g						
Neptunium−236	U	0.0232	+/−0.0305	0.0382	+/−0.0305		pCi/g						
Neptunium−237	UI	0.572	+/−0.125	0.135	+/−0.125		pCi/g						
Neptunium−239	U	0.0569	+/−0.0845	0.158	+/−0.0845	2.00	pCi/g						
Polonium−209	U	2.54	+/−2.81	5.00	+/−2.81		pCi/g						
Potassium−40		6.65	+/−0.620	0.219	+/−0.620	1.00	pCi/g						
Protactinium−233	U	−0.00769	+/−0.0244	0.0433	+/−0.0244		pCi/g						
Protactinium−234m	U	1.12	+/−2.04	2.58	+/−2.04		pCi/g						
Radium−223	UI	0.383	+/−0.107	0.120	+/−0.107		pCi/g						
Rhodium−101	U	0.0113	+/−0.015	0.0229	+/−0.015		pCi/g						
Thallium−208		0.283	+/−0.0344	0.0246	+/−0.0344	0.080	pCi/g						
Thorium−234		1.14	+/−0.290	0.290	+/−0.290	0.500	pCi/g						
Uranium−235	UI	0.181	+/−0.120	0.130	+/−0.120	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2091−BD Project: SCAN00101
Sample ID: 198530019 Client ID: SCAN001

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

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol−condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
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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
The above sample is reported on an "as received" basis.

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2092−BD
Sample ID: 198530020
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.12	+/−0.137	0.0773	+/−0.137	0.800	pCi/g		MJH1	12/10/07	1953	707062	1
Americium−241	U	0.0187	+/−0.0319	0.0538	+/−0.0319	0.200	pCi/g						
Americium−243	UI	0.162	+/−0.0227	0.0236	+/−0.0227		pCi/g						
Americium−246	U	0.0551	+/−0.0472	0.087	+/−0.0472		pCi/g						
Antimony−125	U	0.0133	+/−0.0324	0.0566	+/−0.0324	0.200	pCi/g						
Bismuth−211	U	0.101	+/−0.379	0.571	+/−0.379		pCi/g						
Bismuth−212		0.538	+/−0.194	0.165	+/−0.194	0.500	pCi/g						
Bismuth−214		0.859	+/−0.0812	0.0423	+/−0.0812	0.200	pCi/g						
Californium−249	U	−0.00453	+/−0.0154	0.0236	+/−0.0154		pCi/g						
Cesium−137		0.0368	+/−0.0183	0.0229	+/−0.0183	0.100	pCi/g						
Cobalt−60	U	−0.0111	+/−0.020	0.0235	+/−0.020	0.100	pCi/g						
Curium−243	U	0.0434	+/−0.047	0.0538	+/−0.047		pCi/g						
Europium−155	U	0.0479	+/−0.052	0.0596	+/−0.052	0.500	pCi/g						
Lead−212		1.03	+/−0.0746	0.0344	+/−0.0746	0.100	pCi/g						
Lead−214		0.899	+/−0.0769	0.0384	+/−0.0769	0.100	pCi/g						
Neptunium−236	UI	0.0499	+/−0.027	0.0317	+/−0.027		pCi/g						
Neptunium−237	UI	0.598	+/−0.095	0.111	+/−0.095		pCi/g						
Neptunium−239	U	−0.0436	+/−0.076	0.136	+/−0.076	2.00	pCi/g						
Polonium−209	U	0.315	+/−2.79	4.31	+/−2.79		pCi/g						
Potassium−40		5.38	+/−0.509	0.189	+/−0.509	1.00	pCi/g						
Protactinium−233	U	0.00225	+/−0.0214	0.038	+/−0.0214		pCi/g						
Protactinium−234m	U	1.32	+/−2.13	2.22	+/−2.13		pCi/g						
Radium−223	UI	0.429	+/−0.104	0.105	+/−0.104		pCi/g						
Rhodium−101	U	−0.00412	+/−0.0128	0.0208	+/−0.0128		pCi/g						
Thallium−208		0.342	+/−0.0376	0.0209	+/−0.0376	0.080	pCi/g						
Thorium−234		1.30	+/−0.254	0.249	+/−0.254	0.500	pCi/g						
Uranium−235	U	0.112	+/−0.100	0.113	+/−0.100	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2092−BD Project: SCAN00101
Sample ID: 198530020 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID:	SB−CZ−SS−2093−BD	Project:	SCAN00101
Sample ID:	198530021	Client ID:	SCAN001
Matrix:	Soil		
Collect Date:	12−OCT−07		
Receive Date:	30−NOV−07		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.769	+/−0.123	0.0792	+/−0.123	0.800	pCi/g		MJH1	12/11/07	0533	707062	1
Americium−241	U	0.013	+/−0.061	0.101	+/−0.061	0.200	pCi/g						
Americium−243	UI	0.0969	+/−0.0283	0.0339	+/−0.0283		pCi/g						
Americium−246	U	0.0421	+/−0.0517	0.0809	+/−0.0517		pCi/g						
Antimony−125	U	0.0205	+/−0.0364	0.0658	+/−0.0364	0.200	pCi/g						
Bismuth−211	U	0.00288	+/−0.355	0.623	+/−0.355		pCi/g						
Bismuth−212		0.502	+/−0.170	0.173	+/−0.170	0.500	pCi/g						
Bismuth−214		0.664	+/−0.0727	0.0471	+/−0.0727	0.200	pCi/g						
Californium−249	U	−0.000387	+/−0.0153	0.0271	+/−0.0153		pCi/g						
Cesium−137	U	0.00474	+/−0.0179	0.0252	+/−0.0179	0.100	pCi/g						
Cobalt−60	U	0.00667	+/−0.0131	0.0231	+/−0.0131	0.100	pCi/g						
Curium−243	U	−0.00676	+/−0.0406	0.0682	+/−0.0406		pCi/g						
Europium−155	U	0.0266	+/−0.059	0.0742	+/−0.059	0.500	pCi/g						
Lead−212		0.723	+/−0.0635	0.0399	+/−0.0635	0.100	pCi/g						
Lead−214		0.792	+/−0.0772	0.0457	+/−0.0772	0.100	pCi/g						
Neptunium−236	U	0.0225	+/−0.0279	0.0427	+/−0.0279		pCi/g						
Neptunium−237	UI	0.406	+/−0.119	0.147	+/−0.119		pCi/g						
Neptunium−239	U	0.0649	+/−0.0876	0.165	+/−0.0876	2.00	pCi/g						
Polonium−209	U	2.17	+/−2.52	4.62	+/−2.52		pCi/g						
Potassium−40		3.21	+/−0.387	0.202	+/−0.387	1.00	pCi/g						
Protactinium−233	U	0.00483	+/−0.0241	0.0438	+/−0.0241		pCi/g						
Protactinium−234m		3.60	+/−1.94	2.53	+/−1.94		pCi/g						
Radium−223	UI	0.242	+/−0.123	0.128	+/−0.123		pCi/g						
Rhodium−101	U	−0.00935	+/−0.0142	0.024	+/−0.0142		pCi/g						
Thallium−208		0.246	+/−0.0338	0.0223	+/−0.0338	0.080	pCi/g						
Thorium−234		0.962	+/−0.259	0.320	+/−0.259	0.500	pCi/g						
Uranium−235	U	0.0438	+/−0.0987	0.145	+/−0.0987	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2093−BD Project: SCAN00101
Sample ID: 198530021 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2094−BD
Sample ID: 198530022
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		1.06	+/−0.204	0.108	+/−0.204	0.800	pCi/g		MJH1	12/11/07 0534	707062	1
Americium−241	U	−0.0257	+/−0.0937	0.153	+/−0.0937	0.200	pCi/g					
Americium−243	UI	0.163	+/−0.0441	0.0457	+/−0.0441		pCi/g					
Americium−246	U	0.0497	+/−0.066	0.110	+/−0.066		pCi/g					
Antimony−125	U	0.0275	+/−0.0557	0.0858	+/−0.0557	0.200	pCi/g					
Bismuth−211	U	0.026	+/−0.536	0.906	+/−0.536		pCi/g					
Bismuth−212		0.722	+/−0.235	0.228	+/−0.235	0.500	pCi/g					
Bismuth−214		0.724	+/−0.0874	0.0596	+/−0.0874	0.200	pCi/g					
Californium−249	U	−0.00106	+/−0.0198	0.0338	+/−0.0198		pCi/g					
Cesium−137		0.0745	+/−0.031	0.0314	+/−0.031	0.100	pCi/g					
Cobalt−60	U	0.0193	+/−0.0189	0.0351	+/−0.0189	0.100	pCi/g					
Curium−243	U	0.049	+/−0.0592	0.076	+/−0.0592		pCi/g					
Europium−155	U	0.0541	+/−0.0654	0.083	+/−0.0654	0.500	pCi/g					
Lead−212		0.979	+/−0.0837	0.0468	+/−0.0837	0.100	pCi/g					
Lead−214		0.749	+/−0.0815	0.0554	+/−0.0815	0.100	pCi/g					
Neptunium−236	U	0.0276	+/−0.0342	0.0448	+/−0.0342		pCi/g					
Neptunium−237	UI	0.581	+/−0.164	0.187	+/−0.164		pCi/g					
Neptunium−239	U	0.0673	+/−0.116	0.199	+/−0.116	2.00	pCi/g					
Polonium−209	U	2.84	+/−3.52	6.28	+/−3.52		pCi/g					
Potassium−40		4.50	+/−0.624	0.258	+/−0.624	1.00	pCi/g					
Protactinium−233	U	0.0196	+/−0.0313	0.0561	+/−0.0313		pCi/g					
Protactinium−234m	U	1.67	+/−3.53	3.36	+/−3.53		pCi/g					
Radium−223	UI	0.315	+/−0.136	0.153	+/−0.136		pCi/g					
Rhodium−101	U	0.00421	+/−0.019	0.0304	+/−0.019		pCi/g					
Thallium−208		0.270	+/−0.0446	0.029	+/−0.0446	0.080	pCi/g					
Thorium−234		1.42	+/−0.414	0.397	+/−0.414	0.500	pCi/g					
Uranium−235	U	0.0544	+/−0.141	0.168	+/−0.141	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2094−BD Project: SCAN00101
Sample ID: 198530022 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2095−BD
Sample ID: 198530023
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.37	+/−0.260	0.183	+/−0.260	0.800	pCi/g		MJH1	12/11/07	0535	707062	1
Americium−241	U	0.0281	+/−0.0392	0.0625	+/−0.0392	0.200	pCi/g						
Americium−243	UI	0.230	+/−0.0357	0.0359	+/−0.0357		pCi/g						
Americium−246	U	0.0556	+/−0.0958	0.170	+/−0.0958		pCi/g						
Antimony−125	U	−0.0065	+/−0.0712	0.119	+/−0.0712	0.200	pCi/g						
Bismuth−211	U	−0.437	+/−0.847	1.36	+/−0.847		pCi/g						
Bismuth−212		1.01	+/−0.370	0.356	+/−0.370	0.500	pCi/g						
Bismuth−214		1.03	+/−0.143	0.0855	+/−0.143	0.200	pCi/g						
Californium−249	U	0.0414	+/−0.0305	0.0544	+/−0.0305		pCi/g						
Cesium−137		0.0598	+/−0.0403	0.0523	+/−0.0403	0.100	pCi/g						
Cobalt−60	U	−0.00444	+/−0.029	0.0484	+/−0.029	0.100	pCi/g						
Curium−243	UI	0.139	+/−0.0876	0.0987	+/−0.0876		pCi/g						
Europium−155	UI	0.153	+/−0.0968	0.113	+/−0.0968	0.500	pCi/g						
Lead−212		1.36	+/−0.136	0.0652	+/−0.136	0.100	pCi/g						
Lead−214		1.03	+/−0.123	0.0811	+/−0.123	0.100	pCi/g						
Neptunium−236	U	0.0331	+/−0.0443	0.061	+/−0.0443		pCi/g						
Neptunium−237	UI	0.727	+/−0.158	0.181	+/−0.158		pCi/g						
Neptunium−239	U	0.0639	+/−0.163	0.272	+/−0.163	2.00	pCi/g						
Polonium−209	U	1.64	+/−5.72	9.69	+/−5.72		pCi/g						
Potassium−40		7.88	+/−0.974	0.489	+/−0.974	1.00	pCi/g						
Protactinium−233	U	−0.0229	+/−0.046	0.077	+/−0.046		pCi/g						
Protactinium−234m	U	0.00508	+/−3.30	5.44	+/−3.30		pCi/g						
Radium−223	UI	0.575	+/−0.212	0.208	+/−0.212		pCi/g						
Rhodium−101	U	0.0134	+/−0.0281	0.043	+/−0.0281		pCi/g						
Thallium−208		0.392	+/−0.0546	0.0445	+/−0.0546	0.080	pCi/g						
Thorium−234		1.90	+/−0.422	0.423	+/−0.422	0.500	pCi/g						
Uranium−235	U	0.103	+/−0.169	0.234	+/−0.169	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2095−BD Project: SCAN00101
Sample ID: 198530023 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−2096−BD
Sample ID: 198530024
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.44	+/−0.236	0.128	+/−0.236	0.800	pCi/g		MJH1	12/11/07	0536	707062	1
Americium−241	U	0.0354	+/−0.0915	0.147	+/−0.0915	0.200	pCi/g						
Americium−243	UI	0.213	+/−0.0404	0.0451	+/−0.0404		pCi/g						
Americium−246	U	−0.0115	+/−0.0714	0.120	+/−0.0714		pCi/g						
Antimony−125	U	0.029	+/−0.0514	0.0882	+/−0.0514	0.200	pCi/g						
Bismuth−211	U	0.0052	+/−0.616	1.03	+/−0.616		pCi/g						
Bismuth−212		0.988	+/−0.278	0.250	+/−0.278	0.500	pCi/g						
Bismuth−214		0.836	+/−0.111	0.0645	+/−0.111	0.200	pCi/g						
Californium−249	U	0.0261	+/−0.0235	0.0414	+/−0.0235		pCi/g						
Cesium−137	U	−0.004	+/−0.0219	0.0369	+/−0.0219	0.100	pCi/g						
Cobalt−60	U	−0.034	+/−0.0272	0.039	+/−0.0272	0.100	pCi/g						
Curium−243	U	0.0585	+/−0.047	0.0876	+/−0.047		pCi/g						
Europium−155	U	0.0647	+/−0.0519	0.0913	+/−0.0519	0.500	pCi/g						
Lead−212		1.34	+/−0.107	0.0532	+/−0.107	0.100	pCi/g						
Lead−214		1.03	+/−0.102	0.0632	+/−0.102	0.100	pCi/g						
Neptunium−236	U	0.028	+/−0.0488	0.0534	+/−0.0488		pCi/g						
Neptunium−237	UI	0.791	+/−0.182	0.196	+/−0.182		pCi/g						
Neptunium−239	U	−0.0726	+/−0.122	0.209	+/−0.122	2.00	pCi/g						
Polonium−209	U	1.68	+/−4.23	7.20	+/−4.23		pCi/g						
Potassium−40		7.66	+/−0.835	0.324	+/−0.835	1.00	pCi/g						
Protactinium−233	U	−0.0354	+/−0.0368	0.0604	+/−0.0368		pCi/g						
Protactinium−234m	UI	3.95	+/−3.61	3.32	+/−3.61		pCi/g						
Radium−223	UI	0.389	+/−0.179	0.178	+/−0.179		pCi/g						
Rhodium−101	U	0.0116	+/−0.0188	0.0336	+/−0.0188		pCi/g						
Thallium−208		0.384	+/−0.0557	0.0332	+/−0.0557	0.080	pCi/g						
Thorium−234		1.77	+/−0.459	0.423	+/−0.459	0.500	pCi/g						
Uranium−235	U	0.146	+/−0.159	0.185	+/−0.159	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−2096−BD Project: SCAN00101
Sample ID: 198530024 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA1−ST
Sample ID: 198530025
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.48	+/−0.189	0.113	+/−0.189	0.800	pCi/g		MJH1	12/11/07	0537	707062	1
Americium−241	U	0.0394	+/−0.0498	0.0805	+/−0.0498	0.200	pCi/g						
Americium−243	UI	0.300	+/−0.0346	0.0344	+/−0.0346		pCi/g						
Americium−246	U	0.0154	+/−0.0627	0.109	+/−0.0627		pCi/g						
Antimony−125	U	0.0513	+/−0.0478	0.0838	+/−0.0478	0.200	pCi/g						
Bismuth−211	U	0.544	+/−0.574	0.902	+/−0.574		pCi/g						
Bismuth−212		1.02	+/−0.225	0.229	+/−0.225	0.500	pCi/g						
Bismuth−214		1.16	+/−0.116	0.0565	+/−0.116	0.200	pCi/g						
Californium−249	U	−0.00569	+/−0.025	0.0343	+/−0.025		pCi/g						
Cesium−137	U	0.032	+/−0.0263	0.0333	+/−0.0263	0.100	pCi/g						
Cobalt−60	U	−0.0313	+/−0.028	0.0338	+/−0.028	0.100	pCi/g						
Curium−243	U	0.0594	+/−0.0624	0.072	+/−0.0624		pCi/g						
Europium−155	U	0.0657	+/−0.069	0.0827	+/−0.069	0.500	pCi/g						
Lead−212		1.45	+/−0.105	0.0459	+/−0.105	0.100	pCi/g						
Lead−214		1.18	+/−0.108	0.0593	+/−0.108	0.100	pCi/g						
Neptunium−236	UI	0.0573	+/−0.0394	0.0434	+/−0.0394		pCi/g						
Neptunium−237	UI	0.864	+/−0.145	0.155	+/−0.145		pCi/g						
Neptunium−239	U	−0.0286	+/−0.111	0.192	+/−0.111	2.00	pCi/g						
Polonium−209	U	3.06	+/−3.86	6.74	+/−3.86		pCi/g						
Potassium−40		7.15	+/−0.710	0.274	+/−0.710	1.00	pCi/g						
Protactinium−233	U	0.020	+/−0.0311	0.0545	+/−0.0311		pCi/g						
Protactinium−234m	U	2.93	+/−2.60	3.34	+/−2.60		pCi/g						
Radium−223	UI	0.537	+/−0.159	0.147	+/−0.159		pCi/g						
Rhodium−101	U	0.0159	+/−0.0177	0.0293	+/−0.0177		pCi/g						
Thallium−208		0.454	+/−0.0513	0.0306	+/−0.0513	0.080	pCi/g						
Thorium−234		1.84	+/−0.348	0.348	+/−0.348	0.500	pCi/g						
Uranium−235	U	0.0854	+/−0.125	0.168	+/−0.125	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA1−ST Project: SCAN00101
Sample ID: 198530025 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA2−ST
Sample ID: 198530026
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.71	+/−0.213	0.112	+/−0.213	0.800	pCi/g		MJH1	12/11/07	0538	707062	1
Americium−241	U	0.0282	+/−0.0612	0.0922	+/−0.0612	0.200	pCi/g						
Americium−243	UI	0.250	+/−0.0343	0.0379	+/−0.0343		pCi/g						
Americium−246	U	0.0546	+/−0.065	0.115	+/−0.065		pCi/g						
Antimony−125	U	−0.0186	+/−0.0437	0.073	+/−0.0437	0.200	pCi/g						
Bismuth−211	U	0.740	+/−0.717	0.824	+/−0.717		pCi/g						
Bismuth−212		0.951	+/−0.213	0.226	+/−0.213	0.500	pCi/g						
Bismuth−214		1.17	+/−0.120	0.0588	+/−0.120	0.200	pCi/g						
Californium−249	U	0.0352	+/−0.0194	0.0355	+/−0.0194		pCi/g						
Cesium−137		0.0509	+/−0.0256	0.0285	+/−0.0256	0.100	pCi/g						
Cobalt−60	U	−0.00217	+/−0.0204	0.0336	+/−0.0204	0.100	pCi/g						
Curium−243	UI	0.0821	+/−0.0614	0.0654	+/−0.0614		pCi/g						
Europium−155	UI	0.0908	+/−0.0679	0.0759	+/−0.0679	0.500	pCi/g						
Lead−212		1.52	+/−0.108	0.0436	+/−0.108	0.100	pCi/g						
Lead−214		1.31	+/−0.101	0.0541	+/−0.101	0.100	pCi/g						
Neptunium−236	U	0.036	+/−0.0443	0.0424	+/−0.0443		pCi/g						
Neptunium−237	UI	0.982	+/−0.160	0.149	+/−0.160		pCi/g						
Neptunium−239	U	0.0213	+/−0.104	0.174	+/−0.104	2.00	pCi/g						
Polonium−209	U	−4.31	+/−4.06	5.34	+/−4.06		pCi/g						
Potassium−40		6.68	+/−0.739	0.276	+/−0.739	1.00	pCi/g						
Protactinium−233	U	−0.0234	+/−0.0312	0.0488	+/−0.0312		pCi/g						
Protactinium−234m	U	1.84	+/−2.90	3.35	+/−2.90		pCi/g						
Radium−223	UI	0.511	+/−0.171	0.137	+/−0.171		pCi/g						
Rhodium−101	U	−0.0111	+/−0.0172	0.0262	+/−0.0172		pCi/g						
Thallium−208		0.407	+/−0.0544	0.0291	+/−0.0544	0.080	pCi/g						
Thorium−234		1.90	+/−0.364	0.328	+/−0.364	0.500	pCi/g						
Uranium−235	U	0.0751	+/−0.137	0.148	+/−0.137	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA2−ST Project: SCAN00101
Sample ID: 198530026 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA3−ST
Sample ID: 198530027
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.35	+/−0.267	0.171	+/−0.267	0.800	pCi/g		MJH1	12/11/07	0539	707062	1
Americium−241	U	−0.0057	+/−0.0369	0.0548	+/−0.0369	0.200	pCi/g						
Americium−243	UI	0.238	+/−0.0308	0.0338	+/−0.0308		pCi/g						
Americium−246	U	0.0403	+/−0.130	0.191	+/−0.130		pCi/g						
Antimony−125	U	0.0397	+/−0.0715	0.107	+/−0.0715	0.200	pCi/g						
Bismuth−211	U	−0.24	+/−0.850	1.37	+/−0.850		pCi/g						
Bismuth−212		0.779	+/−0.342	0.350	+/−0.342	0.500	pCi/g						
Bismuth−214		1.09	+/−0.144	0.0892	+/−0.144	0.200	pCi/g						
Californium−249	U	0.0203	+/−0.028	0.0481	+/−0.028		pCi/g						
Cesium−137		0.170	+/−0.0442	0.0445	+/−0.0442	0.100	pCi/g						
Cobalt−60	U	0.0289	+/−0.0353	0.054	+/−0.0353	0.100	pCi/g						
Curium−243	U	0.0616	+/−0.0677	0.0839	+/−0.0677		pCi/g						
Europium−155	U	0.0681	+/−0.0748	0.092	+/−0.0748	0.500	pCi/g						
Lead−212		1.18	+/−0.104	0.060	+/−0.104	0.100	pCi/g						
Lead−214		1.12	+/−0.116	0.0932	+/−0.116	0.100	pCi/g						
Neptunium−236	U	0.046	+/−0.048	0.0498	+/−0.048		pCi/g						
Neptunium−237	UI	0.831	+/−0.154	0.174	+/−0.154		pCi/g						
Neptunium−239	U	0.0115	+/−0.143	0.233	+/−0.143	2.00	pCi/g						
Polonium−209	U	0.281	+/−6.96	9.79	+/−6.96		pCi/g						
Potassium−40		4.59	+/−0.689	0.369	+/−0.689	1.00	pCi/g						
Protactinium−233	U	−0.0228	+/−0.0415	0.0693	+/−0.0415		pCi/g						
Protactinium−234m	U	3.24	+/−5.48	5.54	+/−5.48		pCi/g						
Radium−223	UI	0.492	+/−0.200	0.186	+/−0.200		pCi/g						
Rhodium−101	U	0.00985	+/−0.0278	0.0342	+/−0.0278		pCi/g						
Thallium−208		0.325	+/−0.0656	0.0451	+/−0.0656	0.080	pCi/g						
Thorium−234		1.86	+/−0.463	0.406	+/−0.463	0.500	pCi/g						
Uranium−235	U	0.0344	+/−0.192	0.195	+/−0.192	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA3−ST Project: SCAN00101
Sample ID: 198530027 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA4−ST
Sample ID: 198530028
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.927	+/−0.176	0.138	+/−0.176	0.800	pCi/g		MJH1	12/11/07	0539	707062	1
Americium−241	U	0.0189	+/−0.0307	0.0445	+/−0.0307	0.200	pCi/g						
Americium−243	UI	0.196	+/−0.0267	0.0246	+/−0.0267		pCi/g						
Americium−246	U	0.073	+/−0.0798	0.144	+/−0.0798		pCi/g						
Antimony−125	U	−0.00641	+/−0.0562	0.0937	+/−0.0562	0.200	pCi/g						
Bismuth−211	U	−0.00718	+/−0.656	1.11	+/−0.656		pCi/g						
Bismuth−212		0.591	+/−0.282	0.259	+/−0.282	0.500	pCi/g						
Bismuth−214		0.871	+/−0.115	0.0714	+/−0.115	0.200	pCi/g						
Californium−249	U	0.00587	+/−0.0267	0.0395	+/−0.0267		pCi/g						
Cesium−137	U	0.00416	+/−0.0252	0.0436	+/−0.0252	0.100	pCi/g						
Cobalt−60	U	0.00736	+/−0.0268	0.0455	+/−0.0268	0.100	pCi/g						
Curium−243	U	0.0401	+/−0.0482	0.0641	+/−0.0482		pCi/g						
Europium−155	U	0.0443	+/−0.0533	0.0755	+/−0.0533	0.500	pCi/g						
Lead−212		0.858	+/−0.0777	0.0485	+/−0.0777	0.100	pCi/g						
Lead−214		0.928	+/−0.105	0.0661	+/−0.105	0.100	pCi/g						
Neptunium−236	UI	0.0467	+/−0.0352	0.0376	+/−0.0352		pCi/g						
Neptunium−237	UI	0.479	+/−0.105	0.126	+/−0.105		pCi/g						
Neptunium−239	U	0.0318	+/−0.109	0.189	+/−0.109	2.00	pCi/g						
Polonium−209	U	−2.1	+/−4.48	7.26	+/−4.48		pCi/g						
Potassium−40		2.15	+/−0.516	0.317	+/−0.516	1.00	pCi/g						
Protactinium−233	U	−0.0103	+/−0.0358	0.0602	+/−0.0358		pCi/g						
Protactinium−234m	U	0.854	+/−2.80	4.82	+/−2.80		pCi/g						
Radium−223	UI	0.317	+/−0.164	0.155	+/−0.164		pCi/g						
Rhodium−101	U	0.000123	+/−0.0189	0.0294	+/−0.0189		pCi/g						
Thallium−208		0.289	+/−0.0532	0.0338	+/−0.0532	0.080	pCi/g						
Thorium−234		1.38	+/−0.299	0.294	+/−0.299	0.500	pCi/g						
Uranium−235	U	0.0677	+/−0.0997	0.162	+/−0.0997	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA4−ST Project: SCAN00101
Sample ID: 198530028 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA5−ST
Sample ID: 198530029
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		0.928	+/−0.200	0.121	+/−0.200	0.800	pCi/g		MJH1	12/11/07 0540	707062	1
Americium−241	U	0.0194	+/−0.099	0.133	+/−0.099	0.200	pCi/g					
Americium−243	UI	0.214	+/−0.0373	0.0409	+/−0.0373		pCi/g					
Americium−246	U	−0.0279	+/−0.0667	0.109	+/−0.0667		pCi/g					
Antimony−125	U	−0.036	+/−0.0532	0.0861	+/−0.0532	0.200	pCi/g					
Bismuth−211	U	−0.0915	+/−0.633	1.04	+/−0.633		pCi/g					
Bismuth−212	U	0.268	+/−0.252	0.297	+/−0.252	0.500	pCi/g					
Bismuth−214		0.803	+/−0.0999	0.0661	+/−0.0999	0.200	pCi/g					
Californium−249	U	0.0181	+/−0.0225	0.0394	+/−0.0225		pCi/g					
Cesium−137		0.0387	+/−0.0292	0.0332	+/−0.0292	0.100	pCi/g					
Cobalt−60	U	0.00325	+/−0.0225	0.0355	+/−0.0225	0.100	pCi/g					
Curium−243	U	0.00377	+/−0.044	0.077	+/−0.044		pCi/g					
Europium−155	U	0.0268	+/−0.0482	0.0855	+/−0.0482	0.500	pCi/g					
Lead−212		0.870	+/−0.074	0.0488	+/−0.074	0.100	pCi/g					
Lead−214		0.904	+/−0.0971	0.0627	+/−0.0971	0.100	pCi/g					
Neptunium−236	U	−0.00554	+/−0.030	0.047	+/−0.030		pCi/g					
Neptunium−237	UI	0.580	+/−0.145	0.179	+/−0.145		pCi/g					
Neptunium−239	UI	0.189	+/−0.147	0.183	+/−0.147	2.00	pCi/g					
Polonium−209	U	2.41	+/−4.22	7.24	+/−4.22		pCi/g					
Potassium−40		2.81	+/−0.485	0.294	+/−0.485	1.00	pCi/g					
Protactinium−233	U	0.0268	+/−0.0385	0.0618	+/−0.0385		pCi/g					
Protactinium−234m	U	1.75	+/−4.03	4.26	+/−4.03		pCi/g					
Radium−223	UI	0.383	+/−0.211	0.158	+/−0.211		pCi/g					
Rhodium−101	U	−0.0107	+/−0.0207	0.0282	+/−0.0207		pCi/g					
Thallium−208		0.233	+/−0.0465	0.034	+/−0.0465	0.080	pCi/g					
Thorium−234		1.11	+/−0.378	0.342	+/−0.378	0.500	pCi/g					
Uranium−235	U	−0.0675	+/−0.122	0.164	+/−0.122	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA5−ST Project: SCAN00101
Sample ID: 198530029 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA6−ST
Sample ID: 198530030
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.988	+/−0.158	0.0903	+/−0.158	0.800	pCi/g		MJH1	12/11/07	0550	707062	1
Americium−241	U	0.0168	+/−0.0588	0.0889	+/−0.0588	0.200	pCi/g						
Americium−243	UI	0.199	+/−0.0319	0.0347	+/−0.0319		pCi/g						
Americium−246	U	0.0215	+/−0.0519	0.0885	+/−0.0519		pCi/g						
Antimony−125	U	0.00116	+/−0.0386	0.0644	+/−0.0386	0.200	pCi/g						
Bismuth−211	U	−0.408	+/−0.432	0.704	+/−0.432		pCi/g						
Bismuth−212		0.308	+/−0.213	0.179	+/−0.213	0.500	pCi/g						
Bismuth−214		0.883	+/−0.101	0.0463	+/−0.101	0.200	pCi/g						
Californium−249	U	0.0157	+/−0.016	0.0279	+/−0.016		pCi/g						
Cesium−137		0.0418	+/−0.0219	0.024	+/−0.0219	0.100	pCi/g						
Cobalt−60	U	−0.00881	+/−0.0159	0.0254	+/−0.0159	0.100	pCi/g						
Curium−243	U	0.0574	+/−0.0501	0.0642	+/−0.0501		pCi/g						
Europium−155	U	0.0635	+/−0.0554	0.0753	+/−0.0554	0.500	pCi/g						
Lead−212		0.973	+/−0.0743	0.0387	+/−0.0743	0.100	pCi/g						
Lead−214		0.998	+/−0.0838	0.0469	+/−0.0838	0.100	pCi/g						
Neptunium−236	U	0.00634	+/−0.0299	0.0421	+/−0.0299		pCi/g						
Neptunium−237	UI	0.645	+/−0.124	0.149	+/−0.124		pCi/g						
Neptunium−239	U	0.0538	+/−0.109	0.163	+/−0.109	2.00	pCi/g						
Polonium−209	U	0.489	+/−2.99	5.10	+/−2.99		pCi/g						
Potassium−40		3.49	+/−0.399	0.239	+/−0.399	1.00	pCi/g						
Protactinium−233	U	−0.012	+/−0.0262	0.0441	+/−0.0262		pCi/g						
Protactinium−234m		4.34	+/−3.33	2.41	+/−3.33		pCi/g						
Radium−223	UI	0.345	+/−0.121	0.127	+/−0.121		pCi/g						
Rhodium−101	U	0.00618	+/−0.021	0.0247	+/−0.021		pCi/g						
Thallium−208		0.267	+/−0.0379	0.0236	+/−0.0379	0.080	pCi/g						
Thorium−234		1.24	+/−0.329	0.326	+/−0.329	0.500	pCi/g						
Uranium−235	U	−0.0286	+/−0.0967	0.151	+/−0.0967	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA6−ST Project: SCAN00101
Sample ID: 198530030 Client ID: SCAN001

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

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol−condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
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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.
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The above sample is reported on an "as received" basis.

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Certificate of Analysis

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Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID:	SB−CZ−SS−RA7−ST	Project:	SCAN00101
Sample ID:	198530031	Client ID:	SCAN001
Matrix:	Soil		
Collect Date:	12−OCT−07		
Receive Date:	30−NOV−07		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.975	+/−0.182	0.110	+/−0.182	0.800	pCi/g		MJH1	12/11/07	0658	707062	1
Americium−241	U	−0.0215	+/−0.0958	0.140	+/−0.0958	0.200	pCi/g						
Americium−243	UI	0.230	+/−0.0404	0.0479	+/−0.0404		pCi/g						
Americium−246	U	−0.00855	+/−0.0649	0.109	+/−0.0649		pCi/g						
Antimony−125	U	0.0354	+/−0.0551	0.093	+/−0.0551	0.200	pCi/g						
Bismuth−211	U	0.683	+/−0.652	1.03	+/−0.652		pCi/g						
Bismuth−212		0.408	+/−0.224	0.265	+/−0.224	0.500	pCi/g						
Bismuth−214		0.993	+/−0.129	0.0656	+/−0.129	0.200	pCi/g						
Californium−249	U	0.0131	+/−0.0241	0.0406	+/−0.0241		pCi/g						
Cesium−137		0.0435	+/−0.0303	0.0307	+/−0.0303	0.100	pCi/g						
Cobalt−60	U	0.00652	+/−0.0211	0.0366	+/−0.0211	0.100	pCi/g						
Curium−243	U	−0.0204	+/−0.0566	0.0905	+/−0.0566		pCi/g						
Europium−155	U	0.0605	+/−0.0585	0.105	+/−0.0585	0.500	pCi/g						
Lead−212		0.980	+/−0.0873	0.0538	+/−0.0873	0.100	pCi/g						
Lead−214		1.02	+/−0.120	0.0697	+/−0.120	0.100	pCi/g						
Neptunium−236	UI	0.0601	+/−0.0376	0.0581	+/−0.0376		pCi/g						
Neptunium−237	UI	0.789	+/−0.189	0.181	+/−0.189		pCi/g						
Neptunium−239	U	0.0107	+/−0.126	0.214	+/−0.126	2.00	pCi/g						
Polonium−209	U	2.26	+/−4.94	6.27	+/−4.94		pCi/g						
Potassium−40		2.86	+/−0.545	0.303	+/−0.545	1.00	pCi/g						
Protactinium−233	U	−0.00511	+/−0.0376	0.0621	+/−0.0376		pCi/g						
Protactinium−234m	UI	5.58	+/−4.16	3.49	+/−4.16		pCi/g						
Radium−223	UI	0.315	+/−0.185	0.172	+/−0.185		pCi/g						
Rhodium−101	U	−0.00667	+/−0.0201	0.0324	+/−0.0201		pCi/g						
Thallium−208		0.255	+/−0.0457	0.0345	+/−0.0457	0.080	pCi/g						
Thorium−234		1.36	+/−0.475	0.391	+/−0.475	0.500	pCi/g						
Uranium−235	U	0.0288	+/−0.154	0.193	+/−0.154	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA7−ST Project: SCAN00101
Sample ID: 198530031 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA8−ST
Sample ID: 198530032
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.02	+/−0.155	0.090	+/−0.155	0.800	pCi/g		MJH1	12/11/07	0658	707062	1
Americium−241	U	0.0402	+/−0.0579	0.0884	+/−0.0579	0.200	pCi/g						
Americium−243	UI	0.215	+/−0.0375	0.0331	+/−0.0375		pCi/g						
Americium−246	U	0.0237	+/−0.058	0.0909	+/−0.058		pCi/g						
Antimony−125	U	−0.0155	+/−0.041	0.0664	+/−0.041	0.200	pCi/g						
Bismuth−211	U	−0.31	+/−0.437	0.695	+/−0.437		pCi/g						
Bismuth−212		0.530	+/−0.199	0.201	+/−0.199	0.500	pCi/g						
Bismuth−214		0.719	+/−0.0901	0.0536	+/−0.0901	0.200	pCi/g						
Californium−249	U	0.00571	+/−0.0182	0.0307	+/−0.0182		pCi/g						
Cesium−137	U	0.0148	+/−0.0185	0.0259	+/−0.0185	0.100	pCi/g						
Cobalt−60	U	0.00512	+/−0.0161	0.0272	+/−0.0161	0.100	pCi/g						
Curium−243	U	0.0312	+/−0.0441	0.0704	+/−0.0441		pCi/g						
Europium−155	U	0.0162	+/−0.0458	0.079	+/−0.0458	0.500	pCi/g						
Lead−212		0.961	+/−0.0766	0.0433	+/−0.0766	0.100	pCi/g						
Lead−214		0.939	+/−0.0974	0.0485	+/−0.0974	0.100	pCi/g						
Neptunium−236	UI	0.0597	+/−0.0394	0.042	+/−0.0394		pCi/g						
Neptunium−237	UI	0.533	+/−0.134	0.150	+/−0.134		pCi/g						
Neptunium−239	U	0.101	+/−0.126	0.183	+/−0.126	2.00	pCi/g						
Polonium−209	U	0.314	+/−3.12	5.25	+/−3.12		pCi/g						
Potassium−40		2.42	+/−0.411	0.257	+/−0.411	1.00	pCi/g						
Protactinium−233	U	0.00692	+/−0.0308	0.0485	+/−0.0308		pCi/g						
Protactinium−234m	U	0.206	+/−2.81	2.67	+/−2.81		pCi/g						
Radium−223	UI	0.231	+/−0.149	0.138	+/−0.149		pCi/g						
Rhodium−101	U	−0.00509	+/−0.0165	0.0257	+/−0.0165		pCi/g						
Thallium−208		0.281	+/−0.0425	0.0262	+/−0.0425	0.080	pCi/g						
Thorium−234		1.30	+/−0.354	0.332	+/−0.354	0.500	pCi/g						
Uranium−235	U	−0.0605	+/−0.104	0.161	+/−0.104	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA8−ST Project: SCAN00101
Sample ID: 198530032 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA9−ST
Sample ID: 198530033
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.767	+/−0.279	0.220	+/−0.279	0.800	pCi/g		MJH1	12/04/07	1253	707073	1
Americium−241	U	0.0283	+/−0.0428	0.0697	+/−0.0428	0.200	pCi/g						
Americium−243	UI	0.183	+/−0.0367	0.0404	+/−0.0367		pCi/g						
Americium−246	U	−0.0306	+/−0.120	0.193	+/−0.120		pCi/g						
Antimony−125	U	−0.00602	+/−0.0863	0.144	+/−0.0863	0.200	pCi/g						
Bismuth−211	U	0.139	+/−0.989	1.69	+/−0.989		pCi/g						
Bismuth−212		1.01	+/−0.471	0.462	+/−0.471	0.500	pCi/g						
Bismuth−214		0.807	+/−0.160	0.102	+/−0.160	0.200	pCi/g						
Californium−249	U	0.056	+/−0.0332	0.0623	+/−0.0332		pCi/g						
Cesium−137	U	0.0179	+/−0.0419	0.0658	+/−0.0419	0.100	pCi/g						
Cobalt−60	U	0.0208	+/−0.0335	0.0596	+/−0.0335	0.100	pCi/g						
Curium−243	U	−0.0179	+/−0.0611	0.103	+/−0.0611		pCi/g						
Europium−155	U	0.051	+/−0.0743	0.118	+/−0.0743	0.500	pCi/g						
Lead−212		0.940	+/−0.112	0.0724	+/−0.112	0.100	pCi/g						
Lead−214		0.865	+/−0.124	0.102	+/−0.124	0.100	pCi/g						
Neptunium−236	U	−0.00357	+/−0.0442	0.0649	+/−0.0442		pCi/g						
Neptunium−237	UI	0.746	+/−0.181	0.189	+/−0.181		pCi/g						
Neptunium−239	U	−0.0686	+/−0.164	0.259	+/−0.164	2.00	pCi/g						
Polonium−209	U	1.17	+/−6.80	11.6	+/−6.80		pCi/g						
Potassium−40		2.68	+/−0.675	0.585	+/−0.675	1.00	pCi/g						
Protactinium−233	U	−0.0108	+/−0.0502	0.0849	+/−0.0502		pCi/g						
Protactinium−234m	U	−4.87	+/−4.76	6.75	+/−4.76		pCi/g						
Radium−223	UI	0.360	+/−0.237	0.215	+/−0.237		pCi/g						
Rhodium−101	U	0.0042	+/−0.0264	0.0417	+/−0.0264		pCi/g						
Thallium−208		0.242	+/−0.0605	0.0524	+/−0.0605	0.080	pCi/g						
Thorium−234		1.73	+/−0.510	0.439	+/−0.510	0.500	pCi/g						
Uranium−235	U	0.0783	+/−0.215	0.241	+/−0.215	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA9−ST Project: SCAN00101
Sample ID: 198530033 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA10−ST
Sample ID: 198530034
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.730	+/−0.195	0.153	+/−0.195	0.800	pCi/g		MJH1	12/04/07	1254	707073	1
Americium−241	U	0.0043	+/−0.0881	0.136	+/−0.0881	0.200	pCi/g						
Americium−243	UI	0.162	+/−0.0467	0.055	+/−0.0467		pCi/g						
Americium−246	U	0.015	+/−0.0874	0.132	+/−0.0874		pCi/g						
Antimony−125	U	−0.0142	+/−0.0568	0.0957	+/−0.0568	0.200	pCi/g						
Bismuth−211	U	−0.268	+/−0.681	0.902	+/−0.681		pCi/g						
Bismuth−212		0.648	+/−0.251	0.280	+/−0.251	0.500	pCi/g						
Bismuth−214		0.675	+/−0.119	0.0785	+/−0.119	0.200	pCi/g						
Californium−249	U	0.0244	+/−0.0236	0.0435	+/−0.0236		pCi/g						
Cesium−137	U	0.0063	+/−0.0246	0.0422	+/−0.0246	0.100	pCi/g						
Cobalt−60	U	0.00664	+/−0.0288	0.0436	+/−0.0288	0.100	pCi/g						
Curium−243	U	−0.00732	+/−0.0579	0.099	+/−0.0579		pCi/g						
Europium−155	U	0.00577	+/−0.0636	0.110	+/−0.0636	0.500	pCi/g						
Lead−212		0.657	+/−0.0803	0.0613	+/−0.0803	0.100	pCi/g						
Lead−214		0.654	+/−0.0952	0.077	+/−0.0952	0.100	pCi/g						
Neptunium−236	U	0.0196	+/−0.0427	0.0652	+/−0.0427		pCi/g						
Neptunium−237	UI	0.311	+/−0.179	0.241	+/−0.179		pCi/g						
Neptunium−239	U	0.0853	+/−0.148	0.254	+/−0.148	2.00	pCi/g						
Polonium−209	U	−3.14	+/−5.29	7.32	+/−5.29		pCi/g						
Potassium−40		2.36	+/−0.452	0.397	+/−0.452	1.00	pCi/g						
Protactinium−233	U	−0.0315	+/−0.0432	0.0675	+/−0.0432		pCi/g						
Protactinium−234m	U	2.30	+/−3.14	5.44	+/−3.14		pCi/g						
Radium−223	UI	0.263	+/−0.197	0.190	+/−0.197		pCi/g						
Rhodium−101	U	−0.00496	+/−0.0233	0.0374	+/−0.0233		pCi/g						
Thallium−208		0.218	+/−0.0491	0.0335	+/−0.0491	0.080	pCi/g						
Thorium−234		1.14	+/−0.641	0.471	+/−0.641	0.500	pCi/g						
Uranium−235	U	−0.115	+/−0.133	0.208	+/−0.133	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA10−ST Project: SCAN00101
Sample ID: 198530034 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA11−ST
Sample ID: 198530035
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.03	+/−0.211	0.150	+/−0.211	0.800	pCi/g		MJH1	12/04/07	1616	707073	1
Americium−241	U	0.000562	+/−0.0306	0.0453	+/−0.0306	0.200	pCi/g						
Americium−243	UI	0.201	+/−0.0276	0.0266	+/−0.0276		pCi/g						
Americium−246	U	0.0654	+/−0.0871	0.151	+/−0.0871		pCi/g						
Antimony−125	U	0.0394	+/−0.0574	0.0969	+/−0.0574	0.200	pCi/g						
Bismuth−211	U	−0.38	+/−0.847	1.16	+/−0.847		pCi/g						
Bismuth−212		0.707	+/−0.317	0.318	+/−0.317	0.500	pCi/g						
Bismuth−214		0.828	+/−0.128	0.0782	+/−0.128	0.200	pCi/g						
Californium−249	U	−0.0294	+/−0.030	0.0412	+/−0.030		pCi/g						
Cesium−137	U	0.030	+/−0.0365	0.0426	+/−0.0365	0.100	pCi/g						
Cobalt−60	U	0.00279	+/−0.0266	0.0442	+/−0.0266	0.100	pCi/g						
Curium−243	UI	0.0796	+/−0.0641	0.0706	+/−0.0641		pCi/g						
Europium−155	UI	0.0878	+/−0.0707	0.0759	+/−0.0707	0.500	pCi/g						
Lead−212		0.949	+/−0.0863	0.050	+/−0.0863	0.100	pCi/g						
Lead−214		0.869	+/−0.0998	0.0756	+/−0.0998	0.100	pCi/g						
Neptunium−236	U	0.0144	+/−0.0434	0.0413	+/−0.0434		pCi/g						
Neptunium−237	UI	0.574	+/−0.117	0.139	+/−0.117		pCi/g						
Neptunium−239	U	−0.0634	+/−0.118	0.187	+/−0.118	2.00	pCi/g						
Polonium−209	U	−3.07	+/−5.46	8.33	+/−5.46		pCi/g						
Potassium−40		3.23	+/−0.605	0.353	+/−0.605	1.00	pCi/g						
Protactinium−233	U	−0.021	+/−0.037	0.0615	+/−0.037		pCi/g						
Protactinium−234m	U	−0.631	+/−3.92	5.40	+/−3.92		pCi/g						
Radium−223	UI	0.434	+/−0.156	0.166	+/−0.156		pCi/g						
Rhodium−101	U	−0.0116	+/−0.0215	0.0302	+/−0.0215		pCi/g						
Thallium−208		0.251	+/−0.0538	0.0392	+/−0.0538	0.080	pCi/g						
Thorium−234		1.56	+/−0.439	0.326	+/−0.439	0.500	pCi/g						
Uranium−235	U	0.036	+/−0.170	0.168	+/−0.170	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA11−ST Project: SCAN00101
Sample ID: 198530035 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA12−ST
Sample ID: 198530036
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.773	+/−0.129	0.0753	+/−0.129	0.800	pCi/g		MJH1	12/04/07	1617	707073	1
Americium−241	U	0.0433	+/−0.0799	0.126	+/−0.0799	0.200	pCi/g						
Americium−243	UI	0.156	+/−0.031	0.0363	+/−0.031		pCi/g						
Americium−246	U	0.0228	+/−0.041	0.0702	+/−0.041		pCi/g						
Antimony−125	U	−0.00241	+/−0.0309	0.0528	+/−0.0309	0.200	pCi/g						
Bismuth−211	U	0.189	+/−0.381	0.576	+/−0.381		pCi/g						
Bismuth−212		0.539	+/−0.142	0.156	+/−0.142	0.500	pCi/g						
Bismuth−214		0.747	+/−0.0761	0.0415	+/−0.0761	0.200	pCi/g						
Californium−249	U	0.0136	+/−0.0139	0.0236	+/−0.0139		pCi/g						
Cesium−137	U	0.00584	+/−0.0132	0.0223	+/−0.0132	0.100	pCi/g						
Cobalt−60	U	−0.00191	+/−0.0125	0.0204	+/−0.0125	0.100	pCi/g						
Curium−243	U	0.0242	+/−0.0359	0.0609	+/−0.0359		pCi/g						
Europium−155	U	0.0415	+/−0.040	0.0683	+/−0.040	0.500	pCi/g						
Lead−212		0.805	+/−0.060	0.0328	+/−0.060	0.100	pCi/g						
Lead−214		0.836	+/−0.0732	0.0409	+/−0.0732	0.100	pCi/g						
Neptunium−236	UI	0.0432	+/−0.0251	0.0394	+/−0.0251		pCi/g						
Neptunium−237	UI	0.557	+/−0.124	0.139	+/−0.124		pCi/g						
Neptunium−239	U	−0.0211	+/−0.0762	0.129	+/−0.0762	2.00	pCi/g						
Polonium−209	U	2.94	+/−2.35	4.18	+/−2.35		pCi/g						
Potassium−40		2.57	+/−0.379	0.177	+/−0.379	1.00	pCi/g						
Protactinium−233	U	8.67E−05	+/−0.022	0.0367	+/−0.022		pCi/g						
Protactinium−234m	U	0.564	+/−2.32	2.22	+/−2.32		pCi/g						
Radium−223	UI	0.237	+/−0.099	0.102	+/−0.099		pCi/g						
Rhodium−101	U	0.00929	+/−0.0168	0.0195	+/−0.0168		pCi/g						
Thallium−208		0.234	+/−0.0317	0.0198	+/−0.0317	0.080	pCi/g						
Thorium−234		1.33	+/−0.338	0.294	+/−0.338	0.500	pCi/g						
Uranium−235	U	0.0451	+/−0.0948	0.120	+/−0.0948	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA12−ST Project: SCAN00101
Sample ID: 198530036 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA1−SD
Sample ID: 198530037
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		2.08	+/−0.261	0.136	+/−0.261	0.800	pCi/g		MJH1	12/04/07	1617	707073	1
Americium−241	UI	0.079	+/−0.0336	0.0515	+/−0.0336	0.200	pCi/g						
Americium−243	UI	0.363	+/−0.0387	0.0288	+/−0.0387		pCi/g						
Americium−246	U	0.109	+/−0.0927	0.165	+/−0.0927		pCi/g						
Antimony−125	U	0.0418	+/−0.0622	0.106	+/−0.0622	0.200	pCi/g						
Bismuth−211	U	0.659	+/−0.807	1.24	+/−0.807		pCi/g						
Bismuth−212		1.42	+/−0.356	0.321	+/−0.356	0.500	pCi/g						
Bismuth−214		1.07	+/−0.130	0.0781	+/−0.130	0.200	pCi/g						
Californium−249	U	−0.00805	+/−0.0266	0.0439	+/−0.0266		pCi/g						
Cesium−137	U	−0.000585	+/−0.0255	0.0433	+/−0.0255	0.100	pCi/g						
Cobalt−60	U	−0.0045	+/−0.0328	0.0457	+/−0.0328	0.100	pCi/g						
Curium−243	UI	0.126	+/−0.0591	0.0697	+/−0.0591		pCi/g						
Europium−155	UI	0.139	+/−0.0653	0.0855	+/−0.0653	0.500	pCi/g						
Lead−212		2.03	+/−0.143	0.0536	+/−0.143	0.100	pCi/g						
Lead−214		1.13	+/−0.114	0.0723	+/−0.114	0.100	pCi/g						
Neptunium−236	UI	0.0549	+/−0.0376	0.043	+/−0.0376		pCi/g						
Neptunium−237	UI	1.11	+/−0.142	0.137	+/−0.142		pCi/g						
Neptunium−239	U	−0.0479	+/−0.147	0.220	+/−0.147	2.00	pCi/g						
Polonium−209	U	−2.15	+/−5.54	8.62	+/−5.54		pCi/g						
Potassium−40		8.07	+/−0.886	0.405	+/−0.886	1.00	pCi/g						
Protactinium−233	U	−0.00135	+/−0.0382	0.064	+/−0.0382		pCi/g						
Protactinium−234m	U	2.05	+/−3.07	5.32	+/−3.07		pCi/g						
Radium−223	UI	0.436	+/−0.182	0.177	+/−0.182		pCi/g						
Rhodium−101	U	0.00615	+/−0.019	0.0326	+/−0.019		pCi/g						
Thallium−208		0.720	+/−0.0809	0.0382	+/−0.0809	0.080	pCi/g						
Thorium−234		2.59	+/−0.391	0.320	+/−0.391	0.500	pCi/g						
Uranium−235	U	0.0328	+/−0.117	0.181	+/−0.117	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA1−SD Project: SCAN00101
Sample ID: 198530037 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA2−SD
Sample ID: 198530038
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.74	+/−0.205	0.113	+/−0.205	0.800	pCi/g		MJH1	12/04/07	1618	707073	1
Americium−241	U	−0.0266	+/−0.0803	0.123	+/−0.0803	0.200	pCi/g						
Americium−243	UI	0.292	+/−0.036	0.0378	+/−0.036		pCi/g						
Americium−246	U	0.0767	+/−0.0592	0.108	+/−0.0592		pCi/g						
Antimony−125	U	0.00447	+/−0.0465	0.0765	+/−0.0465	0.200	pCi/g						
Bismuth−211	U	0.368	+/−0.508	0.879	+/−0.508		pCi/g						
Bismuth−212		1.43	+/−0.252	0.236	+/−0.252	0.500	pCi/g						
Bismuth−214		0.961	+/−0.101	0.0598	+/−0.101	0.200	pCi/g						
Californium−249	UI	0.0402	+/−0.0376	0.0327	+/−0.0376		pCi/g						
Cesium−137	UI	0.0382	+/−0.0251	0.0311	+/−0.0251	0.100	pCi/g						
Cobalt−60	U	0.0141	+/−0.0178	0.0316	+/−0.0178	0.100	pCi/g						
Curium−243	UI	0.0718	+/−0.0597	0.0684	+/−0.0597		pCi/g						
Europium−155	UI	0.0793	+/−0.0659	0.0731	+/−0.0659	0.500	pCi/g						
Lead−212		1.70	+/−0.111	0.0451	+/−0.111	0.100	pCi/g						
Lead−214		1.06	+/−0.0951	0.0542	+/−0.0951	0.100	pCi/g						
Neptunium−236	UI	0.0513	+/−0.0376	0.043	+/−0.0376		pCi/g						
Neptunium−237	UI	0.960	+/−0.151	0.158	+/−0.151		pCi/g						
Neptunium−239	U	−0.0384	+/−0.103	0.170	+/−0.103	2.00	pCi/g						
Polonium−209	U	−1.27	+/−6.46	5.95	+/−6.46		pCi/g						
Potassium−40		5.58	+/−0.660	0.286	+/−0.660	1.00	pCi/g						
Protactinium−233	U	−0.00509	+/−0.0296	0.0515	+/−0.0296		pCi/g						
Protactinium−234m	U	0.00133	+/−2.55	3.69	+/−2.55		pCi/g						
Radium−223	UI	0.487	+/−0.148	0.137	+/−0.148		pCi/g						
Rhodium−101	U	0.00966	+/−0.0149	0.0256	+/−0.0149		pCi/g						
Thallium−208		0.507	+/−0.0525	0.0301	+/−0.0525	0.080	pCi/g						
Thorium−234		2.29	+/−0.391	0.338	+/−0.391	0.500	pCi/g						
Uranium−235	U	0.0645	+/−0.145	0.142	+/−0.145	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA2−SD Project: SCAN00101
Sample ID: 198530038 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA3−SD
Sample ID: 198530039
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.92	+/−0.325	0.226	+/−0.325	0.800	pCi/g		MJH1	12/05/07	0554	707073	1
Americium−241	U	0.000405	+/−0.048	0.073	+/−0.048	0.200	pCi/g						
Americium−243	UI	0.355	+/−0.049	0.0455	+/−0.049		pCi/g						
Americium−246	U	−0.0274	+/−0.114	0.188	+/−0.114		pCi/g						
Antimony−125	U	0.110	+/−0.0906	0.159	+/−0.0906	0.200	pCi/g						
Bismuth−211	U	−0.11	+/−1.05	1.73	+/−1.05		pCi/g						
Bismuth−212		1.21	+/−0.368	0.523	+/−0.368	0.500	pCi/g						
Bismuth−214		1.17	+/−0.180	0.106	+/−0.180	0.200	pCi/g						
Californium−249	U	0.0352	+/−0.0373	0.0649	+/−0.0373		pCi/g						
Cesium−137	U	−0.0148	+/−0.0366	0.0601	+/−0.0366	0.100	pCi/g						
Cobalt−60	U	−0.00403	+/−0.0356	0.0592	+/−0.0356	0.100	pCi/g						
Curium−243	UI	0.187	+/−0.0963	0.114	+/−0.0963		pCi/g						
Europium−155	UI	0.206	+/−0.106	0.134	+/−0.106	0.500	pCi/g						
Lead−212		2.03	+/−0.196	0.0798	+/−0.196	0.100	pCi/g						
Lead−214		1.32	+/−0.163	0.110	+/−0.163	0.100	pCi/g						
Neptunium−236	U	0.0605	+/−0.0609	0.0671	+/−0.0609		pCi/g						
Neptunium−237	UI	1.10	+/−0.205	0.238	+/−0.205		pCi/g						
Neptunium−239	U	0.0599	+/−0.194	0.319	+/−0.194	2.00	pCi/g						
Polonium−209	U	1.66	+/−6.69	11.3	+/−6.69		pCi/g						
Potassium−40		4.78	+/−0.856	0.541	+/−0.856	1.00	pCi/g						
Protactinium−233	U	−0.0839	+/−0.0547	0.0853	+/−0.0547		pCi/g						
Protactinium−234m	U	1.31	+/−3.95	6.64	+/−3.95		pCi/g						
Radium−223	UI	0.529	+/−0.315	0.253	+/−0.315		pCi/g						
Rhodium−101	U	−0.00209	+/−0.035	0.0518	+/−0.035		pCi/g						
Thallium−208		0.619	+/−0.0766	0.0538	+/−0.0766	0.080	pCi/g						
Thorium−234		2.92	+/−0.618	0.556	+/−0.618	0.500	pCi/g						
Uranium−235	U	−0.00889	+/−0.206	0.291	+/−0.206	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA3−SD Project: SCAN00101
Sample ID: 198530039 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA4−SD
Sample ID: 198530040
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.898	+/−0.228	0.140	+/−0.228	0.800	pCi/g		MJH1	12/05/07	0554	707073	1
Americium−241	U	0.0766	+/−0.107	0.173	+/−0.107	0.200	pCi/g						
Americium−243	UI	0.175	+/−0.040	0.0549	+/−0.040		pCi/g						
Americium−246	U	0.0642	+/−0.0813	0.149	+/−0.0813		pCi/g						
Antimony−125	U	−0.0072	+/−0.064	0.105	+/−0.064	0.200	pCi/g						
Bismuth−211	U	−0.384	+/−0.651	1.02	+/−0.651		pCi/g						
Bismuth−212		0.428	+/−0.237	0.288	+/−0.237	0.500	pCi/g						
Bismuth−214		0.763	+/−0.127	0.0755	+/−0.127	0.200	pCi/g						
Californium−249	U	0.0277	+/−0.0346	0.0441	+/−0.0346		pCi/g						
Cesium−137	UI	0.0432	+/−0.0354	0.0396	+/−0.0354	0.100	pCi/g						
Cobalt−60	U	0.00553	+/−0.0274	0.0472	+/−0.0274	0.100	pCi/g						
Curium−243	U	0.0232	+/−0.058	0.0998	+/−0.058		pCi/g						
Europium−155	U	0.0625	+/−0.067	0.117	+/−0.067	0.500	pCi/g						
Lead−212		0.914	+/−0.0929	0.0612	+/−0.0929	0.100	pCi/g						
Lead−214		0.877	+/−0.125	0.0751	+/−0.125	0.100	pCi/g						
Neptunium−236	UI	0.0703	+/−0.0537	0.0572	+/−0.0537		pCi/g						
Neptunium−237	UI	0.500	+/−0.194	0.238	+/−0.194		pCi/g						
Neptunium−239	U	0.00104	+/−0.147	0.254	+/−0.147	2.00	pCi/g						
Polonium−209	U	−0.0115	+/−5.07	8.37	+/−5.07		pCi/g						
Potassium−40		1.66	+/−0.564	0.383	+/−0.564	1.00	pCi/g						
Protactinium−233	U	0.00608	+/−0.0436	0.0745	+/−0.0436		pCi/g						
Protactinium−234m	U	3.41	+/−3.31	5.20	+/−3.31		pCi/g						
Radium−223	UI	0.271	+/−0.205	0.208	+/−0.205		pCi/g						
Rhodium−101	U	0.0122	+/−0.0336	0.0369	+/−0.0336		pCi/g						
Thallium−208		0.212	+/−0.0546	0.0386	+/−0.0546	0.080	pCi/g						
Thorium−234		1.71	+/−0.556	0.434	+/−0.556	0.500	pCi/g						
Uranium−235	U	0.0251	+/−0.149	0.228	+/−0.149	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA4−SD Project: SCAN00101
Sample ID: 198530040 Client ID: SCAN001

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

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

GEL LABORATORIES LLC

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID:	SB−CZ−SS−RA5−SD	Project:	SCAN00101
Sample ID:	198530041	Client ID:	SCAN001
Matrix:	Soil		
Collect Date:	12−OCT−07		
Receive Date:	30−NOV−07		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.04	+/−0.205	0.134	+/−0.205	0.800	pCi/g		MJH1	12/05/07	0555	707073	1
Americium−241	U	−0.00654	+/−0.0757	0.0906	+/−0.0757	0.200	pCi/g						
Americium−243	UI	0.189	+/−0.0375	0.0409	+/−0.0375		pCi/g						
Americium−246	U	0.129	+/−0.0789	0.132	+/−0.0789		pCi/g						
Antimony−125	U	−0.0199	+/−0.0589	0.0946	+/−0.0589	0.200	pCi/g						
Bismuth−211	U	−0.153	+/−0.627	1.01	+/−0.627		pCi/g						
Bismuth−212		0.604	+/−0.314	0.303	+/−0.314	0.500	pCi/g						
Bismuth−214		0.873	+/−0.122	0.0748	+/−0.122	0.200	pCi/g						
Californium−249	U	0.00261	+/−0.0254	0.0423	+/−0.0254		pCi/g						
Cesium−137	UI	0.0527	+/−0.0342	0.0427	+/−0.0342	0.100	pCi/g						
Cobalt−60	U	0.0099	+/−0.023	0.0405	+/−0.023	0.100	pCi/g						
Curium−243	U	0.0402	+/−0.0491	0.0921	+/−0.0491		pCi/g						
Europium−155	U	0.0443	+/−0.0542	0.0946	+/−0.0542	0.500	pCi/g						
Lead−212		1.02	+/−0.0965	0.0602	+/−0.0965	0.100	pCi/g						
Lead−214		1.03	+/−0.111	0.0742	+/−0.111	0.100	pCi/g						
Neptunium−236	U	−0.00314	+/−0.0352	0.0554	+/−0.0352		pCi/g						
Neptunium−237	UI	0.570	+/−0.179	0.186	+/−0.179		pCi/g						
Neptunium−239	U	0.0552	+/−0.138	0.239	+/−0.138	2.00	pCi/g						
Polonium−209	U	−1.08	+/−4.30	6.89	+/−4.30		pCi/g						
Potassium−40		2.96	+/−0.648	0.390	+/−0.648	1.00	pCi/g						
Protactinium−233	U	−0.0119	+/−0.0421	0.0695	+/−0.0421		pCi/g						
Protactinium−234m	U	−1.08	+/−3.41	4.88	+/−3.41		pCi/g						
Radium−223	UI	0.362	+/−0.199	0.183	+/−0.199		pCi/g						
Rhodium−101	U	0.0028	+/−0.022	0.036	+/−0.022		pCi/g						
Thallium−208		0.284	+/−0.0564	0.0416	+/−0.0564	0.080	pCi/g						
Thorium−234		1.26	+/−0.424	0.417	+/−0.424	0.500	pCi/g						
Uranium−235	U	0.159	+/−0.183	0.195	+/−0.183	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA5−SD Project: SCAN00101
Sample ID: 198530041 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA6−SD
Sample ID: 198530042
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		0.974	+/−0.168	0.0976	+/−0.168	0.800	pCi/g		MJH1	12/05/07 0556	707073	1
Americium−241	U	−0.0346	+/−0.0587	0.0852	+/−0.0587	0.200	pCi/g					
Americium−243	UI	0.171	+/−0.0314	0.0329	+/−0.0314		pCi/g					
Americium−246	U	0.0608	+/−0.0705	0.0966	+/−0.0705		pCi/g					
Antimony−125	U	0.00648	+/−0.0398	0.0694	+/−0.0398	0.200	pCi/g					
Bismuth−211	U	−0.147	+/−0.535	0.774	+/−0.535		pCi/g					
Bismuth−212		0.557	+/−0.242	0.215	+/−0.242	0.500	pCi/g					
Bismuth−214		0.708	+/−0.108	0.0584	+/−0.108	0.200	pCi/g					
Californium−249	U	0.0129	+/−0.0188	0.0339	+/−0.0188		pCi/g					
Cesium−137	U	0.0157	+/−0.0195	0.0343	+/−0.0195	0.100	pCi/g					
Cobalt−60	U	0.00216	+/−0.016	0.0272	+/−0.016	0.100	pCi/g					
Curium−243	U	0.0234	+/−0.0403	0.0726	+/−0.0403		pCi/g					
Europium−155	U	0.0144	+/−0.0452	0.0807	+/−0.0452	0.500	pCi/g					
Lead−212		0.839	+/−0.0738	0.0437	+/−0.0738	0.100	pCi/g					
Lead−214		0.697	+/−0.0903	0.0586	+/−0.0903	0.100	pCi/g					
Neptunium−236	U	0.0152	+/−0.0286	0.0448	+/−0.0286		pCi/g					
Neptunium−237	UI	0.414	+/−0.146	0.146	+/−0.146		pCi/g					
Neptunium−239	U	−0.0863	+/−0.102	0.164	+/−0.102	2.00	pCi/g					
Polonium−209	U	2.25	+/−3.86	6.33	+/−3.86		pCi/g					
Potassium−40		2.13	+/−0.464	0.231	+/−0.464	1.00	pCi/g					
Protactinium−233	U	0.00505	+/−0.0292	0.0484	+/−0.0292		pCi/g					
Protactinium−234m	U	−0.522	+/−2.36	3.76	+/−2.36		pCi/g					
Radium−223	UI	0.312	+/−0.115	0.130	+/−0.115		pCi/g					
Rhodium−101	U	0.0152	+/−0.0152	0.027	+/−0.0152		pCi/g					
Thallium−208		0.306	+/−0.0446	0.0292	+/−0.0446	0.080	pCi/g					
Thorium−234		1.31	+/−0.343	0.323	+/−0.343	0.500	pCi/g					
Uranium−235	U	0.0634	+/−0.125	0.156	+/−0.125	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA6−SD Project: SCAN00101
Sample ID: 198530042 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA7−SD
Sample ID: 198530043
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.929	+/−0.208	0.139	+/−0.208	0.800	pCi/g		MJH1	12/05/07	0557	707073	1
Americium−241	U	0.0078	+/−0.114	0.166	+/−0.114	0.200	pCi/g						
Americium−243	UI	0.154	+/−0.0461	0.0623	+/−0.0461		pCi/g						
Americium−246	U	0.0524	+/−0.0873	0.156	+/−0.0873		pCi/g						
Antimony−125	U	−0.0116	+/−0.0663	0.106	+/−0.0663	0.200	pCi/g						
Bismuth−211	U	0.130	+/−0.760	1.27	+/−0.760		pCi/g						
Bismuth−212		0.574	+/−0.334	0.311	+/−0.334	0.500	pCi/g						
Bismuth−214		0.901	+/−0.131	0.0796	+/−0.131	0.200	pCi/g						
Californium−249	U	−0.00659	+/−0.0316	0.0468	+/−0.0316		pCi/g						
Cesium−137	U	0.0106	+/−0.0279	0.0479	+/−0.0279	0.100	pCi/g						
Cobalt−60	U	−0.00251	+/−0.0286	0.0478	+/−0.0286	0.100	pCi/g						
Curium−243	U	0.0858	+/−0.0842	0.102	+/−0.0842		pCi/g						
Europium−155	U	0.0947	+/−0.0929	0.123	+/−0.0929	0.500	pCi/g						
Lead−212		0.913	+/−0.0952	0.0698	+/−0.0952	0.100	pCi/g						
Lead−214		0.960	+/−0.117	0.0833	+/−0.117	0.100	pCi/g						
Neptunium−236	U	0.0214	+/−0.0478	0.0699	+/−0.0478		pCi/g						
Neptunium−237	UI	0.897	+/−0.248	0.250	+/−0.248		pCi/g						
Neptunium−239	U	0.122	+/−0.158	0.272	+/−0.158	2.00	pCi/g						
Polonium−209	U	−1.65	+/−5.33	8.49	+/−5.33		pCi/g						
Potassium−40		2.67	+/−0.638	0.366	+/−0.638	1.00	pCi/g						
Protactinium−233	U	−0.00772	+/−0.0459	0.075	+/−0.0459		pCi/g						
Protactinium−234m	U	3.21	+/−3.93	5.28	+/−3.93		pCi/g						
Radium−223	UI	0.277	+/−0.170	0.211	+/−0.170		pCi/g						
Rhodium−101	U	−0.00298	+/−0.0255	0.0401	+/−0.0255		pCi/g						
Thallium−208		0.322	+/−0.0609	0.0422	+/−0.0609	0.080	pCi/g						
Thorium−234		1.60	+/−0.563	0.542	+/−0.563	0.500	pCi/g						
Uranium−235	U	0.103	+/−0.162	0.219	+/−0.162	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA7−SD Project: SCAN00101
Sample ID: 198530043 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID:	SB−CZ−SS−RA8−SD	Project:	SCAN00101
Sample ID:	198530044	Client ID:	SCAN001
Matrix:	Soil		
Collect Date:	12−OCT−07		
Receive Date:	30−NOV−07		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.23	+/−0.252	0.206	+/−0.252	0.800	pCi/g		MJH1	12/05/07	0557	707073	1
Americium−241	U	0.00102	+/−0.041	0.0621	+/−0.041	0.200	pCi/g						
Americium−243	UI	0.197	+/−0.0356	0.0363	+/−0.0356		pCi/g						
Americium−246	U	0.125	+/−0.122	0.218	+/−0.122		pCi/g						
Antimony−125	U	0.0217	+/−0.083	0.123	+/−0.083	0.200	pCi/g						
Bismuth−211	U	0.531	+/−0.934	1.60	+/−0.934		pCi/g						
Bismuth−212		0.919	+/−0.527	0.394	+/−0.527	0.500	pCi/g						
Bismuth−214		0.682	+/−0.130	0.100	+/−0.130	0.200	pCi/g						
Californium−249	U	−0.0137	+/−0.0345	0.053	+/−0.0345		pCi/g						
Cesium−137	U	0.031	+/−0.0378	0.0588	+/−0.0378	0.100	pCi/g						
Cobalt−60	U	0.0336	+/−0.0323	0.0582	+/−0.0323	0.100	pCi/g						
Curium−243	U	0.0866	+/−0.0818	0.0886	+/−0.0818		pCi/g						
Europium−155	U	0.0956	+/−0.0903	0.105	+/−0.0903	0.500	pCi/g						
Lead−212		1.01	+/−0.102	0.0691	+/−0.102	0.100	pCi/g						
Lead−214		0.794	+/−0.118	0.101	+/−0.118	0.100	pCi/g						
Neptunium−236	U	0.0423	+/−0.0517	0.0553	+/−0.0517		pCi/g						
Neptunium−237	UI	0.517	+/−0.147	0.168	+/−0.147		pCi/g						
Neptunium−239	U	0.037	+/−0.155	0.257	+/−0.155	2.00	pCi/g						
Polonium−209	U	−0.55	+/−6.85	11.1	+/−6.85		pCi/g						
Potassium−40		2.39	+/−0.636	0.522	+/−0.636	1.00	pCi/g						
Protactinium−233	U	0.032	+/−0.0447	0.079	+/−0.0447		pCi/g						
Protactinium−234m	U	2.80	+/−5.47	6.79	+/−5.47		pCi/g						
Radium−223	UI	0.427	+/−0.223	0.207	+/−0.223		pCi/g						
Rhodium−101	U	0.0107	+/−0.0246	0.039	+/−0.0246		pCi/g						
Thallium−208		0.317	+/−0.0685	0.050	+/−0.0685	0.080	pCi/g						
Thorium−234		1.40	+/−0.506	0.408	+/−0.506	0.500	pCi/g						
Uranium−235	U	−0.0699	+/−0.159	0.244	+/−0.159	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA8−SD Project: SCAN00101
Sample ID: 198530044 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA9−SD
Sample ID: 198530045
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		1.14	+/−0.226	0.136	+/−0.226	0.800	pCi/g		MJH1	12/05/07	0558	707073	1
Americium−241	U	−0.0254	+/−0.0868	0.124	+/−0.0868	0.200	pCi/g						
Americium−243	UI	0.238	+/−0.0538	0.0466	+/−0.0538		pCi/g						
Americium−246	U	0.0126	+/−0.0833	0.141	+/−0.0833		pCi/g						
Antimony−125	U	−0.00237	+/−0.0654	0.108	+/−0.0654	0.200	pCi/g						
Bismuth−211	U	0.0431	+/−0.706	1.20	+/−0.706		pCi/g						
Bismuth−212		0.734	+/−0.297	0.306	+/−0.297	0.500	pCi/g						
Bismuth−214		0.840	+/−0.131	0.0763	+/−0.131	0.200	pCi/g						
Californium−249	U	0.00662	+/−0.0268	0.0452	+/−0.0268		pCi/g						
Cesium−137	U	0.0184	+/−0.0286	0.0486	+/−0.0286	0.100	pCi/g						
Cobalt−60	U	−0.0159	+/−0.0234	0.0359	+/−0.0234	0.100	pCi/g						
Curium−243	U	0.067	+/−0.0624	0.102	+/−0.0624		pCi/g						
Europium−155	U	0.0807	+/−0.0754	0.113	+/−0.0754	0.500	pCi/g						
Lead−212		0.983	+/−0.0956	0.0629	+/−0.0956	0.100	pCi/g						
Lead−214		0.933	+/−0.129	0.0785	+/−0.129	0.100	pCi/g						
Neptunium−236	U	0.0296	+/−0.0411	0.0609	+/−0.0411		pCi/g						
Neptunium−237	UI	0.836	+/−0.202	0.210	+/−0.202		pCi/g						
Neptunium−239	U	−0.0967	+/−0.147	0.242	+/−0.147	2.00	pCi/g						
Polonium−209	U	0.565	+/−5.29	8.47	+/−5.29		pCi/g						
Potassium−40		2.83	+/−0.534	0.346	+/−0.534	1.00	pCi/g						
Protactinium−233	U	0.0207	+/−0.0426	0.0731	+/−0.0426		pCi/g						
Protactinium−234m	U	2.49	+/−2.93	5.24	+/−2.93		pCi/g						
Radium−223	UI	0.323	+/−0.196	0.196	+/−0.196		pCi/g						
Rhodium−101	U	−0.0188	+/−0.0272	0.0384	+/−0.0272		pCi/g						
Thallium−208		0.308	+/−0.052	0.0325	+/−0.052	0.080	pCi/g						
Thorium−234		1.97	+/−0.493	0.463	+/−0.493	0.500	pCi/g						
Uranium−235	U	0.018	+/−0.154	0.214	+/−0.154	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA9−SD Project: SCAN00101
Sample ID: 198530045 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA10−SD
Sample ID: 198530046
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.943	+/−0.164	0.136	+/−0.164	0.800	pCi/g		MJH1	12/05/07	0559	707073	1
Americium−241	U	−0.0189	+/−0.0857	0.127	+/−0.0857	0.200	pCi/g						
Americium−243	UI	0.187	+/−0.0413	0.0488	+/−0.0413		pCi/g						
Americium−246	U	0.0217	+/−0.0783	0.134	+/−0.0783		pCi/g						
Antimony−125	U	0.0607	+/−0.0631	0.0991	+/−0.0631	0.200	pCi/g						
Bismuth−211	UI	0.831	+/−0.802	0.598	+/−0.802		pCi/g						
Bismuth−212		0.724	+/−0.260	0.272	+/−0.260	0.500	pCi/g						
Bismuth−214		0.754	+/−0.113	0.0702	+/−0.113	0.200	pCi/g						
Californium−249	U	−0.00743	+/−0.0241	0.0398	+/−0.0241		pCi/g						
Cesium−137	UI	0.0592	+/−0.044	0.0387	+/−0.044	0.100	pCi/g						
Cobalt−60	U	−0.000884	+/−0.0243	0.0401	+/−0.0243	0.100	pCi/g						
Curium−243	U	0.00373	+/−0.0557	0.0936	+/−0.0557		pCi/g						
Europium−155	U	−0.00885	+/−0.0623	0.104	+/−0.0623	0.500	pCi/g						
Lead−212		0.838	+/−0.0794	0.0582	+/−0.0794	0.100	pCi/g						
Lead−214		0.866	+/−0.108	0.0701	+/−0.108	0.100	pCi/g						
Neptunium−236	U	0.0307	+/−0.0383	0.0587	+/−0.0383		pCi/g						
Neptunium−237	UI	0.692	+/−0.180	0.201	+/−0.180		pCi/g						
Neptunium−239	U	0.0455	+/−0.139	0.229	+/−0.139	2.00	pCi/g						
Polonium−209	U	2.46	+/−4.42	7.78	+/−4.42		pCi/g						
Potassium−40		2.97	+/−0.666	0.363	+/−0.666	1.00	pCi/g						
Protactinium−233	U	0.0152	+/−0.0384	0.0664	+/−0.0384		pCi/g						
Protactinium−234m	U	4.08	+/−3.51	4.74	+/−3.51		pCi/g						
Radium−223	UI	0.309	+/−0.169	0.166	+/−0.169		pCi/g						
Rhodium−101	U	−0.00862	+/−0.0234	0.0345	+/−0.0234		pCi/g						
Thallium−208		0.251	+/−0.0514	0.0354	+/−0.0514	0.080	pCi/g						
Thorium−234		1.69	+/−0.427	0.441	+/−0.427	0.500	pCi/g						
Uranium−235	U	0.0659	+/−0.138	0.198	+/−0.138	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA10−SD Project: SCAN00101
Sample ID: 198530046 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA11−SD
Sample ID: 198530047
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid													
Actinium−228		0.841	+/−0.233	0.171	+/−0.233	0.800	pCi/g		MJH1	12/05/07	0559	707073	1
Americium−241	U	0.00631	+/−0.035	0.0566	+/−0.035	0.200	pCi/g						
Americium−243	UI	0.192	+/−0.0305	0.0313	+/−0.0305		pCi/g						
Americium−246	U	0.0126	+/−0.0928	0.157	+/−0.0928		pCi/g						
Antimony−125	U	−0.00179	+/−0.0642	0.109	+/−0.0642	0.200	pCi/g						
Bismuth−211	U	−0.664	+/−0.757	1.19	+/−0.757		pCi/g						
Bismuth−212		0.377	+/−0.338	0.346	+/−0.338	0.500	pCi/g						
Bismuth−214		0.843	+/−0.127	0.0833	+/−0.127	0.200	pCi/g						
Californium−249	U	0.00323	+/−0.0269	0.0465	+/−0.0269		pCi/g						
Cesium−137	U	0.0392	+/−0.052	0.0462	+/−0.052	0.100	pCi/g						
Cobalt−60	U	−0.00691	+/−0.0284	0.0456	+/−0.0284	0.100	pCi/g						
Curium−243	U	0.0658	+/−0.0707	0.0782	+/−0.0707		pCi/g						
Europium−155	U	0.0726	+/−0.078	0.0907	+/−0.078	0.500	pCi/g						
Lead−212		0.903	+/−0.0978	0.0546	+/−0.0978	0.100	pCi/g						
Lead−214		0.829	+/−0.109	0.0744	+/−0.109	0.100	pCi/g						
Neptunium−236	U	0.0337	+/−0.0471	0.0472	+/−0.0471		pCi/g						
Neptunium−237	UI	0.648	+/−0.134	0.159	+/−0.134		pCi/g						
Neptunium−239	U	−0.0356	+/−0.129	0.210	+/−0.129	2.00	pCi/g						
Polonium−209	U	2.16	+/−5.74	10.0	+/−5.74		pCi/g						
Potassium−40		2.88	+/−0.583	0.400	+/−0.583	1.00	pCi/g						
Protactinium−233	U	0.00356	+/−0.0391	0.0683	+/−0.0391		pCi/g						
Protactinium−234m	U	−1.69	+/−4.03	6.08	+/−4.03		pCi/g						
Radium−223	UI	0.354	+/−0.150	0.171	+/−0.150		pCi/g						
Rhodium−101	U	−0.0157	+/−0.0224	0.0337	+/−0.0224		pCi/g						
Thallium−208		0.275	+/−0.0673	0.0439	+/−0.0673	0.080	pCi/g						
Thorium−234		1.22	+/−0.396	0.359	+/−0.396	0.500	pCi/g						
Uranium−235	U	0.0913	+/−0.171	0.194	+/−0.171	0.500	pCi/g						

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA11−SD Project: SCAN00101
Sample ID: 198530047 Client ID: SCAN001

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

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

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Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117
Contact: Cindy White
Project: SC&A (GELP07−0971)

Report Date: December 13, 2007

Client Sample ID: SB−CZ−SS−RA12−SD
Sample ID: 198530048
Matrix: Soil
Collect Date: 12−OCT−07
Receive Date: 30−NOV−07
Collector: Client

Project: SCAN00101
Client ID: SCAN001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid												
Actinium−228		1.36	+/−0.213	0.125	+/−0.213	0.800	pCi/g		MJH1	12/05/07 0600	707073	1
Americium−241	U	0.174	+/−0.131	0.211	+/−0.131	0.200	pCi/g					
Americium−243	UI	0.306	+/−0.0583	0.0605	+/−0.0583		pCi/g					
Americium−246	U	−0.0033	+/−0.0666	0.110	+/−0.0666		pCi/g					
Antimony−125	U	0.0219	+/−0.0531	0.0926	+/−0.0531	0.200	pCi/g					
Bismuth−211	U	0.348	+/−0.633	0.969	+/−0.633		pCi/g					
Bismuth−212		0.729	+/−0.373	0.257	+/−0.373	0.500	pCi/g					
Bismuth−214		1.14	+/−0.127	0.0662	+/−0.127	0.200	pCi/g					
Californium−249	U	0.00364	+/−0.024	0.0395	+/−0.024		pCi/g					
Cesium−137		0.0549	+/−0.0279	0.035	+/−0.0279	0.100	pCi/g					
Cobalt−60	U	−0.00618	+/−0.022	0.0353	+/−0.022	0.100	pCi/g					
Curium−243	U	0.00247	+/−0.0606	0.101	+/−0.0606		pCi/g					
Europium−155	U	−0.0235	+/−0.0675	0.111	+/−0.0675	0.500	pCi/g					
Lead−212		1.45	+/−0.106	0.0559	+/−0.106	0.100	pCi/g					
Lead−214		1.23	+/−0.115	0.066	+/−0.115	0.100	pCi/g					
Neptunium−236	U	0.0119	+/−0.0382	0.0645	+/−0.0382		pCi/g					
Neptunium−237	UI	0.872	+/−0.231	0.227	+/−0.231		pCi/g					
Neptunium−239	U	0.0592	+/−0.129	0.223	+/−0.129	2.00	pCi/g					
Polonium−209	U	1.41	+/−3.94	6.79	+/−3.94		pCi/g					
Potassium−40		6.62	+/−0.749	0.317	+/−0.749	1.00	pCi/g					
Protactinium−233	U	−0.0166	+/−0.0407	0.0576	+/−0.0407		pCi/g					
Protactinium−234m	U	2.91	+/−2.91	4.69	+/−2.91		pCi/g					
Radium−223	UI	0.468	+/−0.195	0.171	+/−0.195		pCi/g					
Rhodium−101	U	0.0174	+/−0.0267	0.0344	+/−0.0267		pCi/g					
Thallium−208		0.395	+/−0.0545	0.0328	+/−0.0545	0.080	pCi/g					
Thorium−234		1.90	+/−0.529	0.481	+/−0.529	0.500	pCi/g					
Uranium−235	U	0.0297	+/−0.133	0.210	+/−0.133	0.500	pCi/g					

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

GEL LABORATORIES LLC

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

Certificate of Analysis

Company : SC&A
Address : 1000 Monticello Court

Montgomery, Alabama 36117 Report Date: December 13, 2007
Contact: Cindy White
Project: SC&A (GELP07−0971)

Client Sample ID: SB−CZ−SS−RA12−SD Project: SCAN00101
Sample ID: 198530048 Client ID: SCAN001

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

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

QUALITY CONTROL DATA

QC Summary

Report Date: December 13, 2007

Client : **SC&A**
1000 Monticello Court

Montgomery, Alabama
Contact: **Cindy White**

Workorder: **198530**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707060										
QC1201471363 198528041 DUP										
Actinium-228		1.12		1.16	pCi/g	3		(0% - 20%)	MJH1	12/09/0714:40
	Uncert:	+/-0.146		+/-0.144						
	TPU:	+/-0.146		+/-0.144						
Americium-241	U	-0.0035	U	0.00655	pCi/g	658		N/A		
	Uncert:	+/-0.0591		+/-0.050						
	TPU:	+/-0.0591		+/-0.050						
Americium-243	UI	0.222	UI	0.218	pCi/g	2		(0% - 20%)		
	Uncert:	+/-0.0281		+/-0.025						
	TPU:	+/-0.0281		+/-0.025						
Americium-246	U	0.0137	U	0.0303	pCi/g	76		N/A		
	Uncert:	+/-0.0481		+/-0.0408						
	TPU:	+/-0.0481		+/-0.0408						
Antimony-125	U	0.0303	U	0.0109	pCi/g	94		N/A		
	Uncert:	+/-0.0383		+/-0.0305						
	TPU:	+/-0.0383		+/-0.0305						
Bismuth-211	U	0.294	U	0.0683	pCi/g	125		N/A		
	Uncert:	+/-0.441		+/-0.396						
	TPU:	+/-0.441		+/-0.396						
Bismuth-212		0.654		0.757	pCi/g	15		(0% - 100%)		
	Uncert:	+/-0.165		+/-0.202						
	TPU:	+/-0.165		+/-0.202						
Bismuth-214		0.699		0.736	pCi/g	5		(0% - 20%)		
	Uncert:	+/-0.0768		+/-0.0655						
	TPU:	+/-0.0768		+/-0.0655						
Californium-249	U	0.0152	U	0.00897	pCi/g	52		N/A		
	Uncert:	+/-0.0146		+/-0.0129						
	TPU:	+/-0.0146		+/-0.0129						
Cesium-137	U	0.0219	U	0.0173	pCi/g	23		N/A		
	Uncert:	+/-0.0205		+/-0.0166						
	TPU:	+/-0.0205		+/-0.0166						
Cobalt-60	U	0.00379	U	-0.00162	pCi/g	498		N/A		
	Uncert:	+/-0.0151		+/-0.0124						
	TPU:	+/-0.0151		+/-0.0124						
Curium-243	UI	0.0554	UI	0.0903	pCi/g	48		(0% - 100%)		
	Uncert:	+/-0.0393		+/-0.0418						
	TPU:	+/-0.0393		+/-0.0418						
Europium-155	UI	0.0612	UI	0.0998	pCi/g	48		(0% - 100%)		
	Uncert:	+/-0.0434		+/-0.0462						
	TPU:	+/-0.0434		+/-0.0462						
Lead-212		1.16		1.13	pCi/g	3		(0% - 20%)		
	Uncert:	+/-0.0776		+/-0.0725						
	TPU:	+/-0.0776		+/-0.0725						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707060										
Lead-214		0.777		0.860	pCi/g	10		(0% - 20%)		
	Uncert:	+/-0.0696		+/-0.069						
	TPU:	+/-0.0696		+/-0.069						
Neptunium-236	UI	0.0468	U	0.023	pCi/g	68		(0% - 100%)		
	Uncert:	+/-0.0308		+/-0.0138						
	TPU:	+/-0.0308		+/-0.0138						
Neptunium-237	UI	0.748	UI	0.585	pCi/g	24*		(0% - 20%)		
	Uncert:	+/-0.114		+/-0.0898						
	TPU:	+/-0.114		+/-0.0898						
Neptunium-239	U	-0.0437	U	-0.0263	pCi/g	50		N/A		
	Uncert:	+/-0.0776		+/-0.0671						
	TPU:	+/-0.0776		+/-0.0671						
Polonium-209	U	-2.2	U	2.61	pCi/g	2310		N/A		
	Uncert:	+/-2.90		+/-2.67						
	TPU:	+/-2.90		+/-2.67						
Potassium-40		7.08		6.46	pCi/g	9		(0% - 20%)		
	Uncert:	+/-0.688		+/-0.606						
	TPU:	+/-0.688		+/-0.606						
Protactinium-233	U	0.015	U	-0.0189	pCi/g	1740		N/A		
	Uncert:	+/-0.0219		+/-0.019						
	TPU:	+/-0.0219		+/-0.019						
Protactinium-234m	U	0.541	U	0.0606	pCi/g	160		N/A		
	Uncert:	+/-2.68		+/-2.86						
	TPU:	+/-2.68		+/-2.86						
Radium-223	UI	0.346	UI	0.325	pCi/g	6		(0% - 100%)		
	Uncert:	+/-0.109		+/-0.103						
	TPU:	+/-0.109		+/-0.103						
Rhodium-101	U	0.00752	U	-0.00464	pCi/g	844		N/A		
	Uncert:	+/-0.0112		+/-0.0146						
	TPU:	+/-0.0112		+/-0.0146						
Thallium-208		0.370		0.343	pCi/g	8		(0% - 20%)		
	Uncert:	+/-0.0405		+/-0.0347						
	TPU:	+/-0.0405		+/-0.0347						
Thorium-234		1.52		1.44	pCi/g	5		(0% - 20%)		
	Uncert:	+/-0.302		+/-0.259						
	TPU:	+/-0.302		+/-0.259						
Uranium-235		0.119	U	0.00104	pCi/g	197*		(0% - 100%)		
	Uncert:	+/-0.0986		+/-0.0968						
	TPU:	+/-0.0986		+/-0.0968						
QC1201471364 LCS										
Actinium-228				0.989	pCi/g					12/10/0708:38
	Uncert:			+/-0.864						
	TPU:			+/-0.864						
Americium-241	16.0			12.8	pCi/g		80	(75%-125%)		
	Uncert:			+/-1.33						
	TPU:			+/-1.33						
Americium-243				0.260	pCi/g					
	Uncert:			+/-0.175						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707060										
	TPU:			+/-0.175						
Americium-246			U	0.0391	pCi/g					
	Uncert:			+/-0.389						
	TPU:			+/-0.389						
Antimony-125			U	-0.14	pCi/g					
	Uncert:			+/-0.228						
	TPU:			+/-0.228						
Bismuth-211			U	0.839	pCi/g					
	Uncert:			+/-2.55						
	TPU:			+/-2.55						
Bismuth-212			U	0.643	pCi/g					
	Uncert:			+/-0.731						
	TPU:			+/-0.731						
Bismuth-214				0.674	pCi/g					
	Uncert:			+/-0.252						
	TPU:			+/-0.252						
Californium-249			U	0.0134	pCi/g					
	Uncert:			+/-0.110						
	TPU:			+/-0.110						
Cesium-137	6.11			5.81	pCi/g		95	(75%-125%)		
	Uncert:			+/-0.528						
	TPU:			+/-0.528						
Cobalt-60	8.54			8.34	pCi/g		98	(75%-125%)		
	Uncert:			+/-0.656						
	TPU:			+/-0.656						
Curium-243			U	-0.0838	pCi/g					
	Uncert:			+/-0.198						
	TPU:			+/-0.198						
Europium-155			U	-0.0265	pCi/g					
	Uncert:			+/-0.213						
	TPU:			+/-0.213						
Lead-212				1.15	pCi/g					
	Uncert:			+/-0.203						
	TPU:			+/-0.203						
Lead-214				0.906	pCi/g					
	Uncert:			+/-0.216						
	TPU:			+/-0.216						
Neptunium-236			U	-0.142	pCi/g					
	Uncert:			+/-0.124						
	TPU:			+/-0.124						
Neptunium-237				30.6	pCi/g					
	Uncert:			+/-2.82						
	TPU:			+/-2.82						
Neptunium-239			U	0.398	pCi/g					
	Uncert:			+/-0.408						
	TPU:			+/-0.408						
Polonium-209				243	pCi/g					
	Uncert:			+/-48.9						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707060										
	TPU:			+/-48.9						
Potassium-40				1.13	pCi/g					
	Uncert:			+/-0.849						
	TPU:			+/-0.849						
Protactinium-233			U	-0.0704	pCi/g					
	Uncert:			+/-0.142						
	TPU:			+/-0.142						
Protactinium-234m			U	-6.08	pCi/g					
	Uncert:			+/-12.5						
	TPU:			+/-12.5						
Radium-223			U	-0.00792	pCi/g					
	Uncert:			+/-0.380						
	TPU:			+/-0.380						
Rhodium-101			U	-0.000538	pCi/g					
	Uncert:			+/-0.0659						
	TPU:			+/-0.0659						
Thallium-208				0.395	pCi/g					
	Uncert:			+/-0.119						
	TPU:			+/-0.119						
Thorium-234			U	1.72	pCi/g					
	Uncert:			+/-1.08						
	TPU:			+/-1.08						
Uranium-235			U	0.263	pCi/g					
	Uncert:			+/-0.373						
	TPU:			+/-0.373						
QC1201471362 MB										
Actinium-228			U	0.0281	pCi/g					12/09/0714:39
	Uncert:			+/-0.0251						
	TPU:			+/-0.0251						
Americium-241			U	0.0032	pCi/g					
	Uncert:			+/-0.00562						
	TPU:			+/-0.00562						
Americium-243			U	0.00377	pCi/g					
	Uncert:			+/-0.0033						
	TPU:			+/-0.0033						
Americium-246			U	0.00108	pCi/g					
	Uncert:			+/-0.0254						
	TPU:			+/-0.0254						
Antimony-125			U	0.00683	pCi/g					
	Uncert:			+/-0.0151						
	TPU:			+/-0.0151						
Bismuth-211			U	0.199	pCi/g					
	Uncert:			+/-0.194						
	TPU:			+/-0.194						
Bismuth-212			U	-0.00678	pCi/g					
	Uncert:			+/-0.0489						
	TPU:			+/-0.0489						
Bismuth-214			U	-0.000474	pCi/g					

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707060										
	Uncert:			+/-0.0246						
	TPU:			+/-0.0246						
Californium-249			U	-0.00314	pCi/g					
	Uncert:			+/-0.00648						
	TPU:			+/-0.00648						
Cesium-137			U	-0.00264	pCi/g					
	Uncert:			+/-0.0063						
	TPU:			+/-0.0063						
Cobalt-60			U	-0.00127	pCi/g					
	Uncert:			+/-0.00905						
	TPU:			+/-0.00905						
Curium-243			U	-0.00258	pCi/g					
	Uncert:			+/-0.00916						
	TPU:			+/-0.00916						
Europium-155			U	0.00799	pCi/g					
	Uncert:			+/-0.00989						
	TPU:			+/-0.00989						
Lead-212			U	0.00346	pCi/g					
	Uncert:			+/-0.0151						
	TPU:			+/-0.0151						
Lead-214			U	-0.00667	pCi/g					
	Uncert:			+/-0.0203						
	TPU:			+/-0.0203						
Neptunium-236			U	0.00485	pCi/g					
	Uncert:			+/-0.00534						
	TPU:			+/-0.00534						
Neptunium-237			U	0.0161	pCi/g					
	Uncert:			+/-0.0164						
	TPU:			+/-0.0164						
Neptunium-239			U	0.0119	pCi/g					
	Uncert:			+/-0.0298						
	TPU:			+/-0.0298						
Polonium-209			U	1.53	pCi/g					
	Uncert:			+/-1.42						
	TPU:			+/-1.42						
Potassium-40			U	-0.0632	pCi/g					
	Uncert:			+/-0.156						
	TPU:			+/-0.156						
Protactinium-233			U	0.00161	pCi/g					
	Uncert:			+/-0.0103						
	TPU:			+/-0.0103						
Protactinium-234m			U	0.908	pCi/g					
	Uncert:			+/-1.03						
	TPU:			+/-1.03						
Radium-223			U	0.0362	pCi/g					
	Uncert:			+/-0.0257						
	TPU:			+/-0.0257						
Rhodium-101			U	0.00269	pCi/g					

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707060										
	Uncert:			+/-0.00707						
	TPU:			+/-0.00707						
Thallium-208			U	0.00136	pCi/g					
	Uncert:			+/-0.0125						
	TPU:			+/-0.0125						
Thorium-234			U	-0.0187	pCi/g					
	Uncert:			+/-0.0614						
	TPU:			+/-0.0614						
Uranium-235			U	-0.00753	pCi/g					
	Uncert:			+/-0.0241						
	TPU:			+/-0.0241						
Batch 707062										
QC1201471370 198530013 DUP										
Actinium-228		1.41		1.20	pCi/g	16		(0% - 20%)	MJH1	12/11/0708:51
	Uncert:	+/-0.190		+/-0.206						
	TPU:	+/-0.190		+/-0.206						
Americium-241	U	0.00138	U	0.0203	pCi/g	174		N/A		
	Uncert:	+/-0.0251		+/-0.0963						
	TPU:	+/-0.0251		+/-0.0963						
Americium-243	UI	0.185	UI	0.234	pCi/g	24*		(0% - 20%)		
	Uncert:	+/-0.0226		+/-0.0377						
	TPU:	+/-0.0226		+/-0.0377						
Americium-246	U	-0.0427	U	0.0214	pCi/g	603		N/A		
	Uncert:	+/-0.0736		+/-0.0686						
	TPU:	+/-0.0736		+/-0.0686						
Antimony-125	U	0.0343	U	-0.0138	pCi/g	470		N/A		
	Uncert:	+/-0.0534		+/-0.0497						
	TPU:	+/-0.0534		+/-0.0497						
Bismuth-211	U	0.0369	U	0.538	pCi/g	174		N/A		
	Uncert:	+/-0.683		+/-0.704						
	TPU:	+/-0.683		+/-0.704						
Bismuth-212		1.19		0.702	pCi/g	52		(0% - 100%)		
	Uncert:	+/-0.280		+/-0.255						
	TPU:	+/-0.280		+/-0.255						
Bismuth-214		0.709		0.758	pCi/g	7		(0% - 20%)		
	Uncert:	+/-0.0893		+/-0.106						
	TPU:	+/-0.0893		+/-0.106						
Californium-249	U	-0.0053	U	0.0126	pCi/g	493		N/A		
	Uncert:	+/-0.0196		+/-0.0202						
	TPU:	+/-0.0196		+/-0.0202						
Cesium-137	U	0.0284	U	0.00954	pCi/g	99		N/A		
	Uncert:	+/-0.0235		+/-0.0208						
	TPU:	+/-0.0235		+/-0.0208						
Cobalt-60	U	-0.00616	U	0.0207	pCi/g	370		N/A		
	Uncert:	+/-0.0221		+/-0.0215						
	TPU:	+/-0.0221		+/-0.0215						
Curium-243	UI	0.0973	U	0.0594	pCi/g	48		(0% - 100%)		
	Uncert:	+/-0.0528		+/-0.0465						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707062										
	TPU:	+/-0.0528		+/-0.0465						
Europium-155	UI	0.108	U	0.0656	pCi/g	48		(0% - 100%)		
	Uncert:	+/-0.0584		+/-0.0515						
	TPU:	+/-0.0584		+/-0.0515						
Lead-212		1.16		1.28	pCi/g	9		(0% - 20%)		
	Uncert:	+/-0.101		+/-0.096						
	TPU:	+/-0.101		+/-0.096						
Lead-214		0.721		0.821	pCi/g	13		(0% - 20%)		
	Uncert:	+/-0.075		+/-0.0975						
	TPU:	+/-0.075		+/-0.0975						
Neptunium-236	U	0.0179	U	-0.00594	pCi/g	399		N/A		
	Uncert:	+/-0.0274		+/-0.0366						
	TPU:	+/-0.0274		+/-0.0366						
Neptunium-237	UI	0.648	UI	0.731	pCi/g	12		(0% - 100%)		
	Uncert:	+/-0.111		+/-0.157						
	TPU:	+/-0.111		+/-0.157						
Neptunium-239	U	0.0252	U	0.0509	pCi/g	68		N/A		
	Uncert:	+/-0.103		+/-0.129						
	TPU:	+/-0.103		+/-0.129						
Polonium-209	U	0.204	U	1.27	pCi/g	145		N/A		
	Uncert:	+/-4.26		+/-3.80						
	TPU:	+/-4.26		+/-3.80						
Potassium-40		4.99		4.34	pCi/g	14		(0% - 20%)		
	Uncert:	+/-0.589		+/-0.659						
	TPU:	+/-0.589		+/-0.659						
Protactinium-233	U	-0.0256	U	-0.0089	pCi/g	97		N/A		
	Uncert:	+/-0.0289		+/-0.0398						
	TPU:	+/-0.0289		+/-0.0398						
Protactinium-234m	U	2.45	UI	4.04	pCi/g	49		(0% - 100%)		
	Uncert:	+/-3.82		+/-4.28						
	TPU:	+/-3.82		+/-4.28						
Radium-223	UI	0.481	UI	0.476	pCi/g	1		(0% - 100%)		
	Uncert:	+/-0.130		+/-0.163						
	TPU:	+/-0.130		+/-0.163						
Rhodium-101	U	0.020	U	0.00581	pCi/g	110		N/A		
	Uncert:	+/-0.0293		+/-0.0205						
	TPU:	+/-0.0293		+/-0.0205						
Thallium-208		0.383		0.351	pCi/g	9		(0% - 20%)		
	Uncert:	+/-0.0462		+/-0.0512						
	TPU:	+/-0.0462		+/-0.0512						
Thorium-234		1.39		1.50	pCi/g	8		(0% - 100%)		
	Uncert:	+/-0.336		+/-0.391						
	TPU:	+/-0.336		+/-0.391						
Uranium-235	U	0.119	UI	0.228	pCi/g	63		(0% - 100%)		
	Uncert:	+/-0.138		+/-0.153						
	TPU:	+/-0.138		+/-0.153						
QC1201471371 LCS										
Actinium-228				1.31	pCi/g					12/11/0708:52

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707062										
	Uncert:			+/-0.715						
	TPU:			+/-0.715						
Americium-241	16.0			12.9	pCi/g		81	(75%-125%)		
	Uncert:			+/-0.876						
	TPU:			+/-0.876						
Americium-243			U	0.101	pCi/g					
	Uncert:			+/-0.0751						
	TPU:			+/-0.0751						
Americium-246			U	0.167	pCi/g					
	Uncert:			+/-0.399						
	TPU:			+/-0.399						
Antimony-125			U	-0.0953	pCi/g					
	Uncert:			+/-0.218						
	TPU:			+/-0.218						
Bismuth-211			U	1.66	pCi/g					
	Uncert:			+/-2.72						
	TPU:			+/-2.72						
Bismuth-212				1.41	pCi/g					
	Uncert:			+/-1.20						
	TPU:			+/-1.20						
Bismuth-214				0.608	pCi/g					
	Uncert:			+/-0.236						
	TPU:			+/-0.236						
Californium-249			U	-0.0327	pCi/g					
	Uncert:			+/-0.0944						
	TPU:			+/-0.0944						
Cesium-137	6.11			5.71	pCi/g		94	(75%-125%)		
	Uncert:			+/-0.512						
	TPU:			+/-0.512						
Cobalt-60	8.54			8.38	pCi/g		98	(75%-125%)		
	Uncert:			+/-0.635						
	TPU:			+/-0.635						
Curium-243			U	0.0662	pCi/g					
	Uncert:			+/-0.150						
	TPU:			+/-0.150						
Europium-155			U	0.0861	pCi/g					
	Uncert:			+/-0.164						
	TPU:			+/-0.164						
Lead-212				0.791	pCi/g					
	Uncert:			+/-0.209						
	TPU:			+/-0.209						
Lead-214				0.675	pCi/g					
	Uncert:			+/-0.265						
	TPU:			+/-0.265						
Neptunium-236			U	0.107	pCi/g					
	Uncert:			+/-0.0969						
	TPU:			+/-0.0969						
Neptunium-237				0.660	pCi/g					

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707062										
	Uncert:			+/-0.508						
	TPU:			+/-0.508						
Neptunium-239			U	-0.0104	pCi/g					
	Uncert:			+/-0.418						
	TPU:			+/-0.418						
Polonium-209				267	pCi/g					
	Uncert:			+/-52.3						
	TPU:			+/-52.3						
Potassium-40			U	0.738	pCi/g					
	Uncert:			+/-0.754						
	TPU:			+/-0.754						
Protactinium-233			U	-0.0392	pCi/g					
	Uncert:			+/-0.119						
	TPU:			+/-0.119						
Protactinium-234m			U	-2.75	pCi/g					
	Uncert:			+/-13.1						
	TPU:			+/-13.1						
Radium-223			U	0.156	pCi/g					
	Uncert:			+/-0.347						
	TPU:			+/-0.347						
Rhodium-101			U	0.0416	pCi/g					
	Uncert:			+/-0.0562						
	TPU:			+/-0.0562						
Thallium-208				0.274	pCi/g					
	Uncert:			+/-0.116						
	TPU:			+/-0.116						
Thorium-234				1.74	pCi/g					
	Uncert:			+/-1.13						
	TPU:			+/-1.13						
Uranium-235			U	-0.119	pCi/g					
	Uncert:			+/-0.317						
	TPU:			+/-0.317						
QC1201471369 MB										
Actinium-228			U	0.0583	pCi/g					12/11/0707:15
	Uncert:			+/-0.0844						
	TPU:			+/-0.0844						
Americium-241			U	-0.034	pCi/g					
	Uncert:			+/-0.0433						
	TPU:			+/-0.0433						
Americium-243			U	-0.000381	pCi/g					
	Uncert:			+/-0.0147						
	TPU:			+/-0.0147						
Americium-246			U	0.00967	pCi/g					
	Uncert:			+/-0.0453						
	TPU:			+/-0.0453						
Antimony-125			U	0.00321	pCi/g					
	Uncert:			+/-0.0306						
	TPU:			+/-0.0306						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 707062											
Bismuth-211			U	0.123	pCi/g						
	Uncert:			+/-0.364							
	TPU:			+/-0.364							
Bismuth-212			U	0.0405	pCi/g						
	Uncert:			+/-0.0903							
	TPU:			+/-0.0903							
Bismuth-214			U	0.0283	pCi/g						
	Uncert:			+/-0.044							
	TPU:			+/-0.044							
Californium-249			U	-0.005	pCi/g						
	Uncert:			+/-0.0147							
	TPU:			+/-0.0147							
Cesium-137			U	0.00921	pCi/g						
	Uncert:			+/-0.013							
	TPU:			+/-0.013							
Cobalt-60			U	0.00417	pCi/g						
	Uncert:			+/-0.00621							
	TPU:			+/-0.00621							
Curium-243			U	-0.014	pCi/g						
	Uncert:			+/-0.0289							
	TPU:			+/-0.0289							
Europium-155			U	-0.0135	pCi/g						
	Uncert:			+/-0.0311							
	TPU:			+/-0.0311							
Lead-212			U	0.0378	pCi/g						
	Uncert:			+/-0.032							
	TPU:			+/-0.032							
Lead-214			U	0.0361	pCi/g						
	Uncert:			+/-0.0463							
	TPU:			+/-0.0463							
Neptunium-236			U	-0.0297	pCi/g						
	Uncert:			+/-0.0211							
	TPU:			+/-0.0211							
Neptunium-237			U	-0.0481	pCi/g						
	Uncert:			+/-0.0698							
	TPU:			+/-0.0698							
Neptunium-239			U	-0.0368	pCi/g						
	Uncert:			+/-0.0702							
	TPU:			+/-0.0702							
Polonium-209			U	-0.402	pCi/g						
	Uncert:			+/-2.76							
	TPU:			+/-2.76							
Potassium-40			U	-0.0838	pCi/g						
	Uncert:			+/-0.192							
	TPU:			+/-0.192							
Protactinium-233			U	0.0169	pCi/g						
	Uncert:			+/-0.0211							
	TPU:			+/-0.0211							

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707062										
Protactinium-234m			U	1.30	pCi/g					
	Uncert:			+/-1.50						
	TPU:			+/-1.50						
Radium-223			U	-0.0113	pCi/g					
	Uncert:			+/-0.0572						
	TPU:			+/-0.0572						
Rhodium-101			U	-0.00131	pCi/g					
	Uncert:			+/-0.0117						
	TPU:			+/-0.0117						
Thallium-208			U	0.00669	pCi/g					
	Uncert:			+/-0.0244						
	TPU:			+/-0.0244						
Thorium-234			U	-0.107	pCi/g					
	Uncert:			+/-0.215						
	TPU:			+/-0.215						
Uranium-235			U	0.0306	pCi/g					
	Uncert:			+/-0.0703						
	TPU:			+/-0.0703						
Batch 707073										
QC1201471385 198530033 DUP										
Actinium-228		0.767		1.03	pCi/g	29		(0% - 100%)	MJH1	12/05/0706:03
	Uncert:	+/-0.279		+/-0.187						
	TPU:	+/-0.279		+/-0.187						
Americium-241	U	0.0283	U	0.0175	pCi/g	47		N/A		
	Uncert:	+/-0.0428		+/-0.0762						
	TPU:	+/-0.0428		+/-0.0762						
Americium-243	UI	0.183	UI	0.192	pCi/g	5		(0% - 100%)		
	Uncert:	+/-0.0367		+/-0.0407						
	TPU:	+/-0.0367		+/-0.0407						
Americium-246	U	-0.0306	U	-0.0251	pCi/g	20		N/A		
	Uncert:	+/-0.120		+/-0.0727						
	TPU:	+/-0.120		+/-0.0727						
Antimony-125	U	-0.00602	U	0.0347	pCi/g	284		N/A		
	Uncert:	+/-0.0863		+/-0.0587						
	TPU:	+/-0.0863		+/-0.0587						
Bismuth-211	U	0.139	U	-0.27	pCi/g	624		N/A		
	Uncert:	+/-0.989		+/-0.634						
	TPU:	+/-0.989		+/-0.634						
Bismuth-212		1.01		0.955	pCi/g	5		(0% - 100%)		
	Uncert:	+/-0.471		+/-0.251						
	TPU:	+/-0.471		+/-0.251						
Bismuth-214		0.807		0.826	pCi/g	2		(0% - 20%)		
	Uncert:	+/-0.160		+/-0.111						
	TPU:	+/-0.160		+/-0.111						
Californium-249	U	0.056	U	0.0231	pCi/g	83		N/A		
	Uncert:	+/-0.0332		+/-0.0256						
	TPU:	+/-0.0332		+/-0.0256						
Cesium-137	U	0.0179	U	-0.00994	pCi/g	699		N/A		

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707073										
	Uncert:	+/-0.0419		+/-0.0225						
	TPU:	+/-0.0419		+/-0.0225						
Cobalt-60	U	0.0208	U	0.0171	pCi/g	19		N/A		
	Uncert:	+/-0.0335		+/-0.024						
	TPU:	+/-0.0335		+/-0.024						
Curium-243	U	-0.0179	U	0.0404	pCi/g	519		N/A		
	Uncert:	+/-0.0611		+/-0.0609						
	TPU:	+/-0.0611		+/-0.0609						
Europium-155	U	0.051	U	0.065	pCi/g	24		N/A		
	Uncert:	+/-0.0743		+/-0.068						
	TPU:	+/-0.0743		+/-0.068						
Lead-212		0.940		0.993	pCi/g	6		(0% - 20%)		
	Uncert:	+/-0.112		+/-0.090						
	TPU:	+/-0.112		+/-0.090						
Lead-214		0.865		0.919	pCi/g	6		(0% - 20%)		
	Uncert:	+/-0.124		+/-0.107						
	TPU:	+/-0.124		+/-0.107						
Neptunium-236	U	-0.00357	UI	0.0702	pCi/g	221*		(0% - 100%)		
	Uncert:	+/-0.0442		+/-0.0497						
	TPU:	+/-0.0442		+/-0.0497						
Neptunium-237	UI	0.746	UI	0.573	pCi/g	26		(0% - 100%)		
	Uncert:	+/-0.181		+/-0.199						
	TPU:	+/-0.181		+/-0.199						
Neptunium-239	U	-0.0686	U	-0.0124	pCi/g	139		N/A		
	Uncert:	+/-0.164		+/-0.133						
	TPU:	+/-0.164		+/-0.133						
Polonium-209	U	1.17	U	2.63	pCi/g	77		N/A		
	Uncert:	+/-6.80		+/-3.80						
	TPU:	+/-6.80		+/-3.80						
Potassium-40		2.68		2.67	pCi/g	0		(0% - 100%)		
	Uncert:	+/-0.675		+/-0.603						
	TPU:	+/-0.675		+/-0.603						
Protactinium-233	U	-0.0108	U	0.0114	pCi/g	7150		N/A		
	Uncert:	+/-0.0502		+/-0.0375						
	TPU:	+/-0.0502		+/-0.0375						
Protactinium-234m	U	-4.87	U	-1.34	pCi/g	114		N/A		
	Uncert:	+/-4.76		+/-3.00						
	TPU:	+/-4.76		+/-3.00						
Radium-223	UI	0.360	UI	0.352	pCi/g	2		(0% - 100%)		
	Uncert:	+/-0.237		+/-0.187						
	TPU:	+/-0.237		+/-0.187						
Rhodium-101	U	0.0042	U	-0.0114	pCi/g	433		N/A		
	Uncert:	+/-0.0264		+/-0.0219						
	TPU:	+/-0.0264		+/-0.0219						
Thallium-208		0.242		0.276	pCi/g	13		(0% - 100%)		
	Uncert:	+/-0.0605		+/-0.0479						
	TPU:	+/-0.0605		+/-0.0479						
Thorium-234		1.73		1.32	pCi/g	27		(0% - 100%)		

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707073										
	Uncert:	+/-0.510		+/-0.428						
	TPU:	+/-0.510		+/-0.428						
Uranium-235	U	0.0783	U	0.0968	pCi/g	21		N/A		
	Uncert:	+/-0.215		+/-0.138						
	TPU:	+/-0.215		+/-0.138						
QC1201471386 LCS										
Actinium-228			U	0.871	pCi/g					12/05/07 06:04
	Uncert:			+/-0.785						
	TPU:			+/-0.785						
Americium-241	16.0			13.6	pCi/g		86	(75%-125%)		
	Uncert:			+/-0.983						
	TPU:			+/-0.983						
Americium-243				0.179	pCi/g					
	Uncert:			+/-0.0745						
	TPU:			+/-0.0745						
Americium-246			U	0.121	pCi/g					
	Uncert:			+/-0.502						
	TPU:			+/-0.502						
Antimony-125			U	0.0463	pCi/g					
	Uncert:			+/-0.246						
	TPU:			+/-0.246						
Bismuth-211			U	0.569	pCi/g					
	Uncert:			+/-3.10						
	TPU:			+/-3.10						
Bismuth-212			U	0.933	pCi/g					
	Uncert:			+/-0.815						
	TPU:			+/-0.815						
Bismuth-214				0.926	pCi/g					
	Uncert:			+/-0.323						
	TPU:			+/-0.323						
Californium-249			U	0.0562	pCi/g					
	Uncert:			+/-0.118						
	TPU:			+/-0.118						
Cesium-137	6.11			6.16	pCi/g		101	(75%-125%)		
	Uncert:			+/-0.599						
	TPU:			+/-0.599						
Cobalt-60	8.54			8.31	pCi/g		97	(75%-125%)		
	Uncert:			+/-0.627						
	TPU:			+/-0.627						
Curium-243			U	0.00623	pCi/g					
	Uncert:			+/-0.167						
	TPU:			+/-0.167						
Europium-155			U	0.00255	pCi/g					
	Uncert:			+/-0.183						
	TPU:			+/-0.183						
Lead-212				1.05	pCi/g					
	Uncert:			+/-0.199						
	TPU:			+/-0.199						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707073										
Lead-214				0.695	pCi/g					
	Uncert:			+/-0.248						
	TPU:			+/-0.248						
Neptunium-236			U	0.0276	pCi/g					
	Uncert:			+/-0.0993						
	TPU:			+/-0.0993						
Neptunium-237				32.4	pCi/g					
	Uncert:			+/-2.58						
	TPU:			+/-2.58						
Neptunium-239			U	-0.153	pCi/g					
	Uncert:			+/-0.474						
	TPU:			+/-0.474						
Polonium-209				244	pCi/g					
	Uncert:			+/-53.6						
	TPU:			+/-53.6						
Potassium-40			U	0.441	pCi/g					
	Uncert:			+/-0.918						
	TPU:			+/-0.918						
Protactinium-233			U	0.146	pCi/g					
	Uncert:			+/-0.147						
	TPU:			+/-0.147						
Protactinium-234m			U	15.2	pCi/g					
	Uncert:			+/-19.7						
	TPU:			+/-19.7						
Radium-223			U	0.233	pCi/g					
	Uncert:			+/-0.379						
	TPU:			+/-0.379						
Rhodium-101			U	0.0442	pCi/g					
	Uncert:			+/-0.072						
	TPU:			+/-0.072						
Thallium-208				0.335	pCi/g					
	Uncert:			+/-0.160						
	TPU:			+/-0.160						
Thorium-234			U	1.04	pCi/g					
	Uncert:			+/-0.827						
	TPU:			+/-0.827						
Uranium-235			U	-0.0586	pCi/g					
	Uncert:			+/-0.367						
	TPU:			+/-0.367						
QC1201471384 MB										
Actinium-228			U	0.028	pCi/g					12/05/0706:01
	Uncert:			+/-0.0721						
	TPU:			+/-0.0721						
Americium-241			U	-0.0536	pCi/g					
	Uncert:			+/-0.0483						
	TPU:			+/-0.0483						
Americium-243			UI	0.0286	pCi/g					
	Uncert:			+/-0.0231						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 707073										
	TPU:			+/-0.0231						
Americium-246			U	-0.0187	pCi/g					
	Uncert:			+/-0.0524						
	TPU:			+/-0.0524						
Antimony-125			U	0.0164	pCi/g					
	Uncert:			+/-0.0355						
	TPU:			+/-0.0355						
Bismuth-211			U	0.0704	pCi/g					
	Uncert:			+/-0.404						
	TPU:			+/-0.404						
Bismuth-212			U	-0.0628	pCi/g					
	Uncert:			+/-0.114						
	TPU:			+/-0.114						
Bismuth-214			U	0.0328	pCi/g					
	Uncert:			+/-0.0324						
	TPU:			+/-0.0324						
Californium-249			U	-0.00382	pCi/g					
	Uncert:			+/-0.0162						
	TPU:			+/-0.0162						
Cesium-137			U	-0.0054	pCi/g					
	Uncert:			+/-0.0161						
	TPU:			+/-0.0161						
Cobalt-60			U	0.0143	pCi/g					
	Uncert:			+/-0.0153						
	TPU:			+/-0.0153						
Curium-243			U	0.0243	pCi/g					
	Uncert:			+/-0.0498						
	TPU:			+/-0.0498						
Europium-155			U	-0.0227	pCi/g					
	Uncert:			+/-0.0379						
	TPU:			+/-0.0379						
Lead-212			U	0.00851	pCi/g					
	Uncert:			+/-0.0344						
	TPU:			+/-0.0344						
Lead-214			U	0.00148	pCi/g					
	Uncert:			+/-0.035						
	TPU:			+/-0.035						
Neptunium-236			U	-0.0121	pCi/g					
	Uncert:			+/-0.0248						
	TPU:			+/-0.0248						
Neptunium-237			U	-0.0145	pCi/g					
	Uncert:			+/-0.0743						
	TPU:			+/-0.0743						
Neptunium-239			U	-0.0344	pCi/g					
	Uncert:			+/-0.087						
	TPU:			+/-0.087						
Polonium-209			U	0.328	pCi/g					
	Uncert:			+/-4.11						

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 707073											
	TPU:			+/-4.11							
Potassium-40			U	0.226	pCi/g						
	Uncert:			+/-0.197							
	TPU:			+/-0.197							
Protactinium-233			U	0.0349	pCi/g						
	Uncert:			+/-0.0279							
	TPU:			+/-0.0279							
Protactinium-234m			U	1.82	pCi/g						
	Uncert:			+/-2.10							
	TPU:			+/-2.10							
Radium-223			U	-0.0105	pCi/g						
	Uncert:			+/-0.0716							
	TPU:			+/-0.0716							
Rhodium-101			U	0.00746	pCi/g						
	Uncert:			+/-0.0135							
	TPU:			+/-0.0135							
Thallium-208			U	-0.00811	pCi/g						
	Uncert:			+/-0.0179							
	TPU:			+/-0.0179							
Thorium-234			U	-0.321	pCi/g						
	Uncert:			+/-0.245							
	TPU:			+/-0.245							
Uranium-235			U	-0.05	pCi/g						
	Uncert:			+/-0.0833							
	TPU:			+/-0.0833							

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

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

QC Summary

Workorder: 198530

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

RAW DATA

Radiochemistry Batch Checklist, Rev 6

Batch# 707060 Product: γ-S Date: 12/12/07

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 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. Instument 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: K Dotson 12/12/07

Secondary Review Performed By: [signature] 12/12/07

SCAN
12/5 – 12/14

Gamma Spec Que Sheet

11/30/2007

Batch #:707060 **Analyst: MJH1** **First Client DueDate:12/14/2007** **Internal Due Date: 12/05/2007**

Gamma Spike Isotope: Mixed Gamma **Spike Code:** N/A **Expiration Date:** N/A **Vol:** N/A **Nominal Concentration:** N/A

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/3/08 **Vol:** 1.0 ml **Nominal Concentration:** Am241-15.96 Cs137-6.105 Co60-8.535

Initials: MK **Prep Date:** 11/30/07 **Witness:** N/A

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
198528041-1	SB-CZ-SS-2078-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	123.49	23	
198528042-1	SB-CZ-SS-2079-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	112.03	1	
198528043-1	SB-CZ-SS-2080-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	111.81	2	
198528044-1	SB-CZ-SS-2081-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	105.93	5	
198528045-1	SB-CZ-SS-2082-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	98.32	6	
198528046-1	SB-CZ-SS-2083-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	120.96	7	
198528047-1	SB-CZ-SS-2084-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	140.22	11	
198528048-1	SB-CZ-SS-2085-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	169.69	12	
198530001-1	SB-CZ-SS-2085-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	153.32	13	
198530002-1	SB-CZ-SS-2086-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	147.05	14	
198530003-1	SB-CZ-SS-2087-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	142.72	16	
198530004-1	SB-CZ-SS-2088-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	130.55	17	
198530005-1	SB-CZ-SS-2089-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	147.23	18	
198530006-1	SB-CZ-SS-2090-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	156.81	19	
198530007-1	SB-CZ-SS-2091-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	156.95	20	
198530008-1	SB-CZ-SS-2092-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	154.21	21	
198530009-1	SB-CZ-SS-2093-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	165.87	22	
198530010-1	SB-CZ-SS-2094-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	115.45	23	
198530011-1	SB-CZ-SS-2095-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	120.56	5	
198530012-1	SB-CZ-SS-2096-BA	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	126.31	13	
1201471362-1	MB for batch 707060	MB		.08 pCi/g	QC ACCOUNT	SOIL	11/30/07	170.00	21	
1201471363-1	SB-CZ-SS-2078-BD(198528041DUP	DUP		.08 pCi/g	QC ACCOUNT	SOIL	12-OCT-07 00:00:00	123.59	23	
1201471364-1	LCS for batch 707060	LCS		.08 pCi/g	QC ACCOUNT	SOIL	11/30/07	155.44	1	

12/12/07

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: 12/12/07

12/13/07

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
707060	198528041	SAMPLE	07-DEC-07				
707060	198528042	SAMPLE	08-DEC-07				
707060	198528043	SAMPLE	08-DEC-07				
707060	198528044	SAMPLE	08-DEC-07				
707060	198528045	SAMPLE	08-DEC-07				
707060	198528046	SAMPLE	08-DEC-07				
707060	198528047	SAMPLE	08-DEC-07				
707060	198528048	SAMPLE	08-DEC-07				
707060	198530001	SAMPLE	08-DEC-07				
707060	198530002	SAMPLE	08-DEC-07				
707060	198530003	SAMPLE	08-DEC-07				
707060	198530004	SAMPLE	08-DEC-07				
707060	198530005	SAMPLE	08-DEC-07				
707060	198530006	SAMPLE	08-DEC-07				
707060	198530007	SAMPLE	08-DEC-07				
707060	198530008	SAMPLE	08-DEC-07				
707060	198530009	SAMPLE	08-DEC-07				
707060	198530010	SAMPLE	08-DEC-07				
707060	198530011	SAMPLE	09-DEC-07				
707060	198530012	SAMPLE	09-DEC-07				
707060	1201471362	MB	09-DEC-07				
707060	1201471363	DUP	09-DEC-07				
707060	1201471364	LCS	10-DEC-07	Antimony-125	-0.1403	0.3803	0.200
				Bismuth-212	0.6431	1.325	0.500
				Thorium-234	1.716	1.867	0.500
				Uranium-235	0.2632	0.6969	0.500

GEL QUALS

Batch ID: 707060

Report run on: December 12, 2007 2:53 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198528041-1 07-DEC-2007 16:27	Americium-243	UI	UI	UI	Data rejected due to interference.		.2221			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.05542			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.06122		.5	.5
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.04682			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7476			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.346			
198528042-1 08-DEC-2007 09:30	Americium-243	UI	UI	UI	Data rejected due to interference.		.268			
	Cesium-137	UI	UI	UI	Data rejected due to high peak-width.		.05955		.1	.1
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.555			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3378			
198528043-1 08-DEC-2007 09:31	Americium-243	UI	UI	UI	Data rejected due to interference.		.2456			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7259			
	Protactinium-234m	UI	UI	UI	Data rejected due to high counting uncertainty.		4.39			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2371			
	Thorium-234	UI	UI	UI	Data rejected due to low abundance.		1.658		.5	.5
198528044-1 08-DEC-2007 09:32	Americium-243	UI	UI	UI	Data rejected due to interference.		.3219			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.1152			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.1273		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7308			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.362			

GEL QUALS

Batch ID: 707060

Report run on: December 12, 2007 2:53 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198528045-1 08-DEC-2007 09:33	Americium-243	UI	UI	UI	Data rejected due to interference.		.2947			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.1081			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.1194		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.9452			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4095			
198528046-1 08-DEC-2007 09:34	Americium-243	UI	UI	UI	Data rejected due to interference.		.1401			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.04445			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5268			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3431			
198528047-1 08-DEC-2007 09:34	Americium-243	UI	UI	UI	Data rejected due to interference.		.1957			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5786			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2761			
198528048-1 08-DEC-2007 09:35	Americium-243	UI	UI	UI	Data rejected due to interference.		.1264			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.08244			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.09108		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5215			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3724			
198530001-1 08-DEC-2007 09:36	Americium-243	UI	UI	UI	Data rejected due to interference.		.1169			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.1249			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.138		.5	.5

GEL QUALS

Batch ID: 707060

Report run on: December 12, 2007 2:53 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530001-1 08-DEC-2007 09:36	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.466			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.1966			
198530002-1 08-DEC-2007 09:37	Americium-243	UI	UI	UI	Data rejected due to interference.		.1821			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.05082			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5084			
	Protactinium-234m	UI	UI	UI	Data rejected due to no valid peak.		3.317			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2469			
198530003-1 08-DEC-2007 09:38	Americium-243	UI	UI	UI	Data rejected due to interference.		.2039			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7159			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2872			
198530004-1 08-DEC-2007 09:38	Americium-243	UI	UI	UI	Data rejected due to interference.		.1982			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.639			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.1747			
198530005-1 08-DEC-2007 09:47	Americium-243	UI	UI	UI	Data rejected due to interference.		.1658			
	Americium-246	UI	UI	UI	Data rejected due to no valid peak.		.09378			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5502			
	Protactinium-234m	UI	UI	UI	Data rejected due to high peak-width.		4.311			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2882			
	Thorium-234	UI	UI	UI	Data rejected due to low abundance.		1.14		.5	.5
	Uranium-235	UI	UI	UI	Data rejected due to no valid peak.		.2494		.5	.5

GEL QUALS

Batch ID: 707060

Report run on: December 12, 2007 2:53 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530006-1 08-DEC-2007 09:48	Americium-243	UI	UI	UI	Data rejected due to interference.		.1387			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.4291			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2093			
198530007-1 08-DEC-2007 09:49	Americium-243	UI	UI	UI	Data rejected due to interference.		.177			
	Cobalt-60	UI	UI	UI	Data rejected due to low abundance.		.02574		.1	.1
	Curium-243	UI	UI	UI	Data rejected due to interference.		.07015			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.07749		.5	.5
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.04231			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5113			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3945			
198530008-1 08-DEC-2007 09:49	Americium-243	UI	UI	UI	Data rejected due to interference.		.1317			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.06986			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.07717		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5411			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2739			
198530009-1 08-DEC-2007 09:50	Americium-243	UI	UI	UI	Data rejected due to interference.		.1288			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.4329			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.237			
198530010-1 08-DEC-2007 09:51	Americium-243	UI	UI	UI	Data rejected due to interference.		.1961			
	Neptunium-236	UI	UI	UI	Data rejected due to low abundance.		.05302			

GEL QUALS

Batch ID: 707060

Report run on: December 12, 2007 2:53 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530010-1 08-DEC-2007 09:51	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5938			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3307			
198530011-1 09-DEC-2007 14:38	Americium-241	UI	UI	UI	Data rejected due to low abundance.		.03592		.2	.2
	Americium-243	UI	UI	UI	Data rejected due to interference.		.2303			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.09357			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.1034		.5	.5
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.04119			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7344			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4787			
198530012-1 09-DEC-2007 14:39	Americium-243	UI	UI	UI	Data rejected due to interference.		.1758			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.08338			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.09215		.5	.5
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.04037			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6799			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2831			
1201471363-1 DUP 09-DEC-2007 14:40	Americium-243	UI	UI	UI	Data rejected due to interference.		.218			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.09034			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.09984		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5852			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3254			

Gamma Review Report based on Result > MDA for Batch:707060

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
198528041	12-OCT-07 00:00	07-DEC-07 16:27	56.7	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.12	0.1457	pCi/g	0.08316	0.800	911	1	1.514	IDENTIFIED	5.304	☐	
Americium-243 INT	0.2221	0.02807	pCi/g	0.02814	Y	74.89	1	0.977	IDENTIFIED	5.386	☑ UI	
Bismuth-212 ✓	0.6544	0.1646	pCi/g	0.1703	0.500	727.3	1	1.622	IDENTIFIED	12.42	☐	
Bismuth-214 ✓	0.6987	0.07676	pCi/g	0.04663	0.200	609.1	1	1.313	IDENTIFIED	4.803	☐	
Curium-243 INT	0.05542	0.03925	pCi/g	0.04921	Y	105.3	2	1.634	IDENTIFIED	35.96	☑ UI	
Europium-155 INT	0.06122	0.04335	pCi/g	0.0547	0.500	105.3	2	1.634	IDENTIFIED	35.96	☑ UI	
Lead-212 ✓	1.163	0.07759	pCi/g	0.03271	0.100	238.6	1	0.9779	IDENTIFIED	1.907	☐	
Lead-214 ✓	0.7765	0.06962	pCi/g	0.04233	0.100	351.9	1	1.2	IDENTIFIED	3.695	☐	
Neptunium-236 INT	0.04682	0.03077	pCi/g	0.03078	Y	99.25	1	1.672	IDENTIFIED	33.34	☑ UI	
Neptunium-237 INT	0.7476	0.1138	pCi/g	0.116	Y	87.22	1	1.247	IDENTIFIED	6.82	☑ UI	
Potassium-40	7.08	0.6879	pCi/g	0.2161	1.00	1460	1	2.21	IDENTIFIED	3.443	☐	
Radium-223 INT	0.346	0.1093	pCi/g	0.1049	Y	270	1	1.438	IDENTIFIED	15.84	☑ UI	
Thallium-208 ✓	0.3703	0.04054	pCi/g	0.02252	0.080	583.1	1	1.361	IDENTIFIED	4.804	☐	
Thorium-234 ✓	1.517	0.3016	pCi/g	0.2479	0.500	92.76	1	1.345	IDENTIFIED	9.481	☐	
Uranium-235 ✓	0.1189	0.09863	pCi/g	0.1037	0.500	143.8	1	1.01	IDENTIFIED	42.21	☐	

*** = 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
198528042	12-OCT-07 00:00	08-DEC-07 09:30	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.181	0.2109	pCi/g	0.1282	0.800	911.2	1	1.717	IDENTIFIED	7.726	☐	
Americium-243 INT	0.268	0.05387	pCi/g	0.04851	Y	74.78	1	1.79	IDENTIFIED	9.458	☑ UI	
Bismuth-212 ✓	0.6605	0.2876	pCi/g	0.2317	0.500	727.3	1	1.152	IDENTIFIED	21.84	☐	
Bismuth-214 ✓	0.9699	0.1135	pCi/g	0.06701	0.200	609.3	1	1.646	IDENTIFIED	4.726	☐	
Cesium-137 ↑PW	0.05955	0.04614	pCi/g	0.03752	0.100	663.1	1	4.441	IDENTIFIED	39.34	☑ UI	Data rejected due to high peak-width.
Gross Gamma	5.98	1.699	pCi/g	2.62	N		0				☐	
Lead-212 ✓	1.144	0.1017	pCi/g	0.0556	0.100	238.6	1	1.457	IDENTIFIED	2.949	☐	
Lead-214 ✓	1.026	0.1167	pCi/g	0.07014	0.100	351.9	1	1.486	IDENTIFIED	4.88	☐	
Neptunium-237 INT	0.555	0.1618	pCi/g	0.2241	Y	87.27	1	1.262	IDENTIFIED	14.28	☑ UI	
Potassium-40 ✓	7.205	0.7526	pCi/g	0.2869	1.00	1461	1	1.895	IDENTIFIED	4.466	☐	
Radium-223 INT	0.3378	0.1833	pCi/g	0.168	Y	270.6	1	1.495	IDENTIFIED	27.47	☑ UI	
Thallium-208 ✓	0.3433	0.05047	pCi/g	0.03691	0.080	583.1	1	1.607	IDENTIFIED	6.597	☐	
Thorium-234 ✓	1.3	0.4173	pCi/g	0.4695	0.500	92.86	1	1.434	IDENTIFIED	15.89	☐	

*** = 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
198528043	12-OCT-07 00:00	08-DEC-07 09:31	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.331	0.1962	pCi/g	0.1199	0.800	911.1	1	1.695	IDENTIFIED	6.434	☐	
Americium-243 INT	0.2456	0.04259	pCi/g	0.04536	Y	74.86	1	1.009	IDENTIFIED	7.818	☑ UI	
Bismuth-212 ✓	0.7453	0.2823	pCi/g	0.24	0.500	727.3	1	1.231	IDENTIFIED	19.04	☐	
Bismuth-214 ✓	0.8583	0.09535	pCi/g	0.06046	0.200	609.2	1	1.454	IDENTIFIED	4.8	☐	
Gross Gamma	5.891	1.465	pCi/g	1.944	N		0				☐	
Lead-212 ✓	1.199	0.09502	pCi/g	0.04872	0.100	238.6	1	1.076	IDENTIFIED	2.605	☐	
Lead-214 ✓	0.9579	0.1015	pCi/g	0.05616	0.100	351.8	1	1.167	IDENTIFIED	4.531	☐	
Neptunium-237 INT	0.7259	0.1643	pCi/g	0.184	Y	87.29	1	1.128	IDENTIFIED	10.71	☑ UI	
Potassium-40 ✓	6.674	0.7497	pCi/g	0.2838	1.00	1460	1	2.217	IDENTIFIED	4.69	☐	
Protactinium-234m ↑UNC	4.39	6.649	pCi/g	3.65	Y	1002	1	2.848	IDENTIFIED	77.19	☑ UI	Data rejected due to high counting unc
Radium-223 INT	0.2371	0.1501	pCi/g	0.1569	Y	270.6	1	1.118	IDENTIFIED	32.13	☑ UI	
Thallium-208 ✓	0.3755	0.04671	pCi/g	0.03126	0.080	583.1	1	1.246	IDENTIFIED	5.606	☐	

Thorium-234 LA	**1.658**	0.4664	pCi/g	**0.6821**	**0.500**	92.66	1	1.26	FAIL_ABUND	13.78	☑ UI	Data rejected due to low abundance.

*** = 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
198528044	12-OCT-07 00:00	08-DEC-07 09:32	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.229**	0.231	pCi/g	**0.1645**	**0.800**	911	1	1.855	IDENTIFIED	8.416	☐	
Americium-243 INT	**0.3219**	0.04318	pCi/g	**0.03282**	**Y**	74.61	1	1.424	IDENTIFIED	5.503	☑ UI	
Bismuth-212 ✓	**0.9119**	0.3318	pCi/g	**0.319**	**0.500**	726.9	1	1.464	IDENTIFIED	18.06	☐	
Bismuth-214 ✓	**1.06**	0.1323	pCi/g	**0.08355**	**0.200**	609.1	1	1.419	IDENTIFIED	5.149	☐	
Curium-243 INT	**0.1152**	0.07192	pCi/g	**0.0885**	**Y**	105.2	2	1.847	IDENTIFIED	31.5	☑ UI	
Europium-155 INT	**0.1273**	0.07945	pCi/g	**0.09703**	**0.500**	105.2	2	1.847	IDENTIFIED	31.5	☑ UI	
Lead-212 ✓	**1.342**	0.131	pCi/g	**0.05942**	**0.100**	238.5	1	1.184	IDENTIFIED	2.654	☐	
Lead-214 ✓	**1.142**	0.1243	pCi/g	**0.07867**	**0.100**	351.8	1	1.4	IDENTIFIED	4.8	☐	
Neptunium-237 INT	**0.7308**	0.1547	pCi/g	**0.1876**	**Y**	86.97	1	1.144	IDENTIFIED	9.874	☑ UI	
Potassium-40 ✓	**6.661**	0.8706	pCi/g	**0.3894**	**1.00**	1461	1	2	IDENTIFIED	5.355	☐	
Radium-223 INT	**0.362**	0.179	pCi/g	**0.1986**	**Y**	269.8	1	1.543	IDENTIFIED	24.99	☑ UI	
Thallium-208 ✓	**0.4048**	0.06155	pCi/g	**0.04017**	**0.080**	583.1	1	1.529	IDENTIFIED	6.879	☐	
Thorium-234 ✓	**1.656**	0.4186	pCi/g	**0.3353**	**0.500**	92.73	1	1.364	IDENTIFIED	12.09	☐	

*** = 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
198528045	12-OCT-07 00:00	08-DEC-07 09:33	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.398**	0.2575	pCi/g	**0.1436**	**0.800**	910.9	1	1.827	IDENTIFIED	7.905	☐	
Americium-243 INT	**0.2947**	0.05045	pCi/g	**0.05145**	**Y**	74.38	1	1.167	IDENTIFIED	7.696	☑ UI	
Bismuth-212 ✓	**1.007**	0.3568	pCi/g	**0.279**	**0.500**	727.2	1	1.417	IDENTIFIED	17.66	☐	
Bismuth-214 ✓	**0.9463**	0.114	pCi/g	**0.06964**	**0.200**	609	1	1.418	IDENTIFIED	5.149	☐	
Curium-243 INT	**0.1081**	0.08569	pCi/g	**0.09614**	**Y**	104.7	2	1.578	IDENTIFIED	40.3	☑ UI	
Europium-155 INT	**0.1194**	0.09466	pCi/g	**0.09854**	**0.500**	104.7	2	1.578	IDENTIFIED	40.3	☑ UI	
Lead-212 ✓	**1.229**	0.1141	pCi/g	**0.08277**	**0.100**	238.2	1	1.094	IDENTIFIED	3.561	☐	
Lead-214 ✓	**1.017**	0.1254	pCi/g	**0.06927**	**0.100**	351.6	1	1.334	IDENTIFIED	5.462	☐	
Neptunium-237 INT	**0.9452**	0.2952	pCi/g	**0.2275**	**Y**	85.9	1	1.115	IDENTIFIED	15.33	☑ UI	
Potassium-40 ✓	**3.829**	0.6528	pCi/g	**0.3639**	**1.00**	1460	1	2.007	IDENTIFIED	8.088	☐	
Radium-223 INT	**0.4095**	0.1816	pCi/g	**0.1997**	**Y**	270	1	1.365	IDENTIFIED	22.4	☑ UI	
Thallium-208 ✓	**0.4507**	0.05493	pCi/g	**0.03497**	**0.080**	582.8	1	1.494	IDENTIFIED	5.245	☐	
Thorium-234 ✓	**1.401**	0.43	pCi/g	**0.4473**	**0.500**	92.39	1	1.26	IDENTIFIED	15.1	☐	
Uranium-235 ✓	**0.2723**	0.2276	pCi/g	**0.2046**	**0.500**	143.8	1	1.019	IDENTIFIED	42.54	☐	

*** = 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
198528046	12-OCT-07 00:00	08-DEC-07 09:34	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.938**	0.1565	pCi/g	**0.1002**	**0.800**	911.5	1	1.607	IDENTIFIED	7.809	☐	
Americium-243 INT	**0.1401**	0.02662	pCi/g	**0.02952**	**Y**	74.95	1	0.9433	IDENTIFIED	9.077	☑ UI	
Bismuth-212 ✓	**0.5665**	0.2291	pCi/g	**0.2025**	**0.500**	727.2	1	1.568	IDENTIFIED	20.31	☐	
Bismuth-214 ✓	**0.6488**	0.08858	pCi/g	**0.05292**	**0.200**	609.5	1	1.412	IDENTIFIED	6.051	☐	
Lead-212 ✓	**1.019**	0.08144	pCi/g	**0.03926**	**0.100**	238.8	1	1.13	IDENTIFIED	2.773	☐	
Lead-214 ✓	**0.6552**	0.07862	pCi/g	**0.05185**	**0.100**	352.1	1	1.274	IDENTIFIED	5.442	☐	
Neptunium-236 INT	**0.04445**	0.03037	pCi/g	**0.03926**	**Y**	99.32	1	0.7894	IDENTIFIED	34.66	☑ UI	
Neptunium-237 INT	**0.5268**	0.1206	pCi/g	**0.1391**	**Y**	87.28	1	1.226	IDENTIFIED	11.01	☑ UI	
Potassium-40 ✓	**3.693**	0.4965	pCi/g	**0.2283**	**1.00**	1461	1	1.896	IDENTIFIED	6.298	☐	
Radium-223 INT	**0.3431**	0.1322	pCi/g	**0.1281**	**Y**	270.6	1	0.9981	IDENTIFIED	19.41	☑ UI	
Thallium-208 ✓	**0.3425**	0.0438	pCi/g	**0.02444**	**0.080**	583.3	1	1.39	IDENTIFIED	5.601	☐	
Thorium-234 ✓	**1.131**	0.3018	pCi/g	**0.3122**	**0.500**	92.84	1	1.378	IDENTIFIED	13.06	☐	

*** = 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
198528047	12-OCT-07 00:00	08-DEC-07 09:34	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.127**	0.1591	pCi/g	**0.08604**	**0.800**	911.1	1	1.451	IDENTIFIED	5.715	☐	
Americium-243 INT	**0.1957**	0.02942	pCi/g	**0.02896**	**Y**	74.84	1	1.11	IDENTIFIED	6.925	☑ UI	
Bismuth-212 ✓	**0.6653**	0.1926	pCi/g	**0.1836**	**0.500**	727.1	1	1.234	IDENTIFIED	14.22	☐	
Bismuth-214 ✓	**1.043**	0.1046	pCi/g	**0.04421**	**0.200**	609.2	1	1.31	IDENTIFIED	3.689	☐	
Lead-212 ✓	**1.027**	0.07521	pCi/g	**0.03685**	**0.100**	238.5	1	0.9475	IDENTIFIED	2.31	☐	
Lead-214 ✓	**1.084**	0.08118	pCi/g	**0.04278**	**0.100**	351.8	1	1.064	IDENTIFIED	2.647	☐	
Neptunium-237 INT	**0.5786**	0.1324	pCi/g	**0.1299**	**Y**	87.1	1	1.359	IDENTIFIED	11.08	☑ UI	
Potassium-40 ✓	**7.13**	0.6946	pCi/g	**0.1827**	**1.00**	1461	1	1.903	IDENTIFIED	3.517	☐	
Radium-223 INT	**0.2761**	0.1126	pCi/g	**0.1199**	**Y**	270.3	1	1.223	IDENTIFIED	20.59	☑ UI	
Thallium-208 ✓	**0.3399**	0.03948	pCi/g	**0.02254**	**0.080**	583	1	1.278	IDENTIFIED	4.844	☐	
Thorium-234 ✓	**1.324**	0.2769	pCi/g	**0.2865**	**0.500**	92.65	1	1.194	IDENTIFIED	10.07	☐	

*** = 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
198528048	12-OCT-07 00:00	08-DEC-07 09:35	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.9848**	0.148	pCi/g	**0.06839**	**0.800**	910.5	1	1.856	IDENTIFIED	5.632	☐	
Americium-243 INT	**0.1264**	0.02855	pCi/g	**0.03676**	**Y**	74.82	1	1.094	IDENTIFIED	10.94	☑ UI	
Bismuth-212 ✓	**0.6855**	0.1643	pCi/g	**0.176**	**0.500**	726.5	1	1.553	IDENTIFIED	11.3	☐	
Bismuth-214 ✓	**0.6426**	0.08253	pCi/g	**0.04434**	**0.200**	608.8	1	1.59	IDENTIFIED	5.119	☐	
Cesium-137 ✓	**0.02827**	0.01692	pCi/g	**0.0246**	**0.100**	661.1	1	1.414	IDENTIFIED	30.22	☐	
Curium-243 INT	**0.08244**	0.05061	pCi/g	**0.06699**	**Y**	105	2	1.507	IDENTIFIED	31.12	☑ UI	
Europium-155 INT	**0.09108**	0.05591	pCi/g	**0.07466**	**0.500**	105	2	1.507	IDENTIFIED	31.12	☑ UI	
Lead-212 ✓	**0.8801**	0.06888	pCi/g	**0.0393**	**0.100**	238.5	1	1.13	IDENTIFIED	2.547	☐	
Lead-214 ✓	**0.7349**	0.081	pCi/g	**0.04782**	**0.100**	351.7	1	1.426	IDENTIFIED	4.796	☐	
Neptunium-237 INT	**0.5215**	0.1202	pCi/g	**0.1421**	**Y**	87.18	1	1.38	IDENTIFIED	11.06	☑ UI	
Potassium-40 ✓	**6.049**	0.5775	pCi/g	**0.2094**	**1.00**	1460	1	1.96	IDENTIFIED	3.797	☐	
Radium-223 INT	**0.3724**	0.1224	pCi/g	**0.1169**	**Y**	270.2	1	1.209	IDENTIFIED	16.48	☑ UI	
Thallium-208 ✓	**0.2853**	0.03933	pCi/g	**0.02134**	**0.080**	582.7	1	1.431	IDENTIFIED	5.837	☐	
Thorium-234 ✓	**0.9172**	0.2928	pCi/g	**0.3072**	**0.500**	92.7	1	1.261	IDENTIFIED	15.83	☐	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
198530001	12-OCT-07 00:00	08-DEC-07 09:36	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.9698**	0.1745	pCi/g	**0.1276**	**0.800**	911	1	1.788	IDENTIFIED	8.652	☐	
Americium-243 INT	**0.1169**	0.01906	pCi/g	**0.02249**	**Y**	74.91	1	0.8228	IDENTIFIED	7.322	☑ UI	
Bismuth-212 ✓	**0.6104**	0.2374	pCi/g	**0.2452**	**0.500**	726.4	1	1.785	IDENTIFIED	19.46	☐	
Bismuth-214 ✓	**0.6441**	0.09694	pCi/g	**0.06218**	**0.200**	609.1	1	1.518	IDENTIFIED	6.706	☐	
Cesium-137 ✓	**0.2142**	0.03745	pCi/g	**0.03416**	**0.100**	661.3	1	1.527	IDENTIFIED	7.956	☐	
Curium-243 INT	**0.1249**	0.06504	pCi/g	**0.05808**	**Y**	105.5	2	1.624	IDENTIFIED	26.19	☑ UI	
Europium-155 INT	**0.138**	0.07185	pCi/g	**0.0664**	**0.500**	105.5	2	1.624	IDENTIFIED	26.19	☑ UI	
Lead-212 ✓	**0.6976**	0.07109	pCi/g	**0.05193**	**0.100**	238.6	1	1.003	IDENTIFIED	3.975	☐	
Lead-214 ✓	**0.7046**	0.07229	pCi/g	**0.07045**	**0.100**	351.7	1	1.272	IDENTIFIED	4.528	☐	
Neptunium-237 INT	**0.466**	0.1014	pCi/g	**0.1216**	**Y**	87.25	1	1.12	IDENTIFIED	10.37	☑ UI	
Potassium-40 ✓	**4.103**	0.4962	pCi/g	**0.3026**	**1.00**	1460	1	1.692	IDENTIFIED	5.506	☐	
Radium-223 INT	**0.1966**	0.1194	pCi/g	**0.1411**	**Y**	270	1	1.428	IDENTIFIED	30.84	☑ UI	
Thallium-208 ✓	**0.2747**	0.0517	pCi/g	**0.03176**	**0.080**	582.9	1	1.604	IDENTIFIED	8.904	☐	
Thorium-234 ✓	**1.097**	0.3167	pCi/g	**0.2837**	**0.500**	92.66	1	1.107	IDENTIFIED	14.16	☐	

*** = 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
198530002	12-OCT-07 00:00	08-DEC-07 09:37	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.124**	0.1529	pCi/g	**0.09124**	**0.800**	911.1	1	1.93	IDENTIFIED	5.35	☐	
Americium-243 INT	**0.1821**	0.0353	pCi/g	**0.03294**	**Y**	74.98	1	1.846	IDENTIFIED	9.168	☑ UI	
Bismuth-212 ✓	**0.471**	0.205	pCi/g	**0.1818**	**0.500**	727.1	1	1.51	IDENTIFIED	21.82	☐	
Bismuth-214 ✓	**0.9148**	0.09724	pCi/g	**0.04636**	**0.200**	609.2	1	1.706	IDENTIFIED	3.966	☐	
Cesium-137 ✓	**0.1779**	0.02985	pCi/g	**0.02344**	**0.100**	661.4	1	1.551	IDENTIFIED	7.624	☐	
Lead-212 ✓	**0.9704**	0.07862	pCi/g	**0.0422**	**0.100**	238.5	1	1.418	IDENTIFIED	2.716	☐	
Lead-214 ✓	**0.9718**	0.08694	pCi/g	**0.04989**	**0.100**	351.6	1	1.552	IDENTIFIED	3.457	☐	
Neptunium-236 INT	**0.05082**	0.03265	pCi/g	**0.04069**	**Y**	99.32	1	2.439	IDENTIFIED	32.56	☑ UI	
Neptunium-237 INT	**0.5084**	0.1123	pCi/g	**0.1364**	**Y**	87.26	1	1.272	IDENTIFIED	10.47	☑ UI	
Potassium-40 ✓	**5.845**	0.55	pCi/g	**0.2537**	**1.00**	1461	1	2.038	IDENTIFIED	3.915	☐	
Protactinium-234m NVP	**3.317**	2.164	pCi/g	**2.783**	**Y**	1001	1	2.336	IDENTIFIED	33.03	☑ UI	
Radium-223 INT	**0.2469**	0.1259	pCi/g	**0.1274**	**Y**	269.8	1	1.455	IDENTIFIED	25.82	☑ UI	
Thallium-208 ✓	**0.2999**	0.03943	pCi/g	**0.02422**	**0.080**	582.9	1	1.568	IDENTIFIED	5.662	☐	
Thorium-234 ✓	**1.177**	0.3298	pCi/g	**0.3008**	**0.500**	92.87	1	1.842	IDENTIFIED	13.73	☐	

*** = 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
198530003	12-OCT-07 00:00	08-DEC-07 09:38	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.001**	0.1533	pCi/g	**0.09222**	**0.800**	910.9	1	1.382	IDENTIFIED	6.606	☐	
Americium-243 INT	**0.2039**	0.03334	pCi/g	**0.03354**	**Y**	74.66	1	1.523	IDENTIFIED	7.653	☑ UI	
Bismuth-212 ✓	**0.6837**	0.1926	pCi/g	**0.1796**	**0.500**	727.2	1	1.566	IDENTIFIED	13.72	☐	
Bismuth-214 ✓	**1.171**	0.1181	pCi/g	**0.04532**	**0.200**	609.2	1	1.442	IDENTIFIED	3.416	☐	
Cesium-137 ✓	**0.1298**	0.029	pCi/g	**0.02525**	**0.100**	661.3	1	1.63	IDENTIFIED	10.59	☐	
Lead-212 ✓	**1.015**	0.07266	pCi/g	**0.04024**	**0.100**	238.6	1	1.093	IDENTIFIED	2.347	☐	
Lead-214 ✓	**1.094**	0.08826	pCi/g	**0.04954**	**0.100**	351.9	1	1.263	IDENTIFIED	3.185	☐	
Neptunium-237 INT	**0.7159**	0.1249	pCi/g	**0.1446**	**Y**	87.16	1	1.375	IDENTIFIED	8.099	☑ UI	
Potassium-40 ✓	**5.531**	0.5776	pCi/g	**0.2084**	**1.00**	1460	1	2.088	IDENTIFIED	4.379	☐	
Radium-223 INT	**0.2872**	0.1277	pCi/g	**0.13**	**Y**	270.1	1	1.346	IDENTIFIED	22.51	☑ UI	
Thallium-208 ✓	**0.2858**	0.04172	pCi/g	**0.02502**	**0.080**	583.1	1	1.374	IDENTIFIED	6.481	☐	
Thorium-234 ✓	**1.294**	0.3082	pCi/g	**0.3175**	**0.500**	92.79	1	1.489	IDENTIFIED	11.6	☐	

*** = 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
198530004	12-OCT-07 00:00	08-DEC-07 09:38	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.094**	0.2053	pCi/g	**0.1187**	**0.800**	911.2	1	1.644	IDENTIFIED	8.972	☐	
Americium-243 INT	**0.1982**	0.02533	pCi/g	**0.02416**	**Y**	74.92	1	0.9249	IDENTIFIED	5.659	☑ UI	
Bismuth-212 ✓	**0.6682**	0.3138	pCi/g	**0.2746**	**0.500**	727.2	1	1.511	IDENTIFIED	23.68	☐	
Bismuth-214 ✓	**0.9111**	0.1127	pCi/g	**0.06573**	**0.200**	609.3	1	1.292	IDENTIFIED	5.216	☐	
Cesium-137 ✓	**0.1483**	0.04058	pCi/g	**0.03445**	**0.100**	661.7	1	1.187	IDENTIFIED	13.46	☐	
Lead-212 ✓	**1.089**	0.1015	pCi/g	**0.04194**	**0.100**	238.7	1	0.9971	IDENTIFIED	2.598	☐	
Lead-214 ✓	**0.8159**	0.0904	pCi/g	**0.06014**	**0.100**	352	1	1.095	IDENTIFIED	4.604	☐	
Neptunium-237 INT	**0.639**	0.1079	pCi/g	**0.12**	**Y**	87.36	1	1.06	IDENTIFIED	7.928	☑ UI	
Potassium-40 ✓	**4.318**	0.609	pCi/g	**0.3224**	**1.00**	1461	1	2.095	IDENTIFIED	6.663	☐	
Radium-223 INT	**0.1747**	0.1392	pCi/g	**0.1475**	**Y**	271	1	1.433	IDENTIFIED	40.45	☑ UI	
Thallium-208 ✓	**0.3103**	0.04978	pCi/g	**0.0316**	**0.080**	583.3	1	1.235	IDENTIFIED	7.406	☐	
Thorium-234 ✓	**1.359**	0.325	pCi/g	**0.2844**	**0.500**	92.79	1	1.229	IDENTIFIED	11.66	☐	

*** = 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
198530005	12-OCT-07 00:00	08-DEC-07 09:47	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.077**	0.1534	pCi/g	**0.06979**	**0.800**	911.1	1	2.039	IDENTIFIED	5.219	☐	
Americium-243 INT	**0.1658**	0.03008	pCi/g	**0.03552**	**Y**	74.63	1	1.001	IDENTIFIED	7.846	☑ UI	
Americium-246 NVP	**0.09378**	0.05541	pCi/g	**0.06255**	**Y**	1078	1	2.588	IDENTIFIED	29.92	☑ UI	

Bismuth-212 ✓	**0.6594**	0.1676	pCi/g	**0.1479**	**0.500**	727.1	1	1.707	IDENTIFIED	12.31	☐		
Bismuth-214 ✓	**0.7385**	0.07474	pCi/g	**0.03961**	**0.200**	609.1	1	1.716	IDENTIFIED	3.853	☐		
Cesium-137 ✓	**0.1608**	0.02748	pCi/g	**0.0213**	**0.100**	661.4	1	1.431	IDENTIFIED	7.892	☐		
Lead-212 ✓	**0.97**	0.0665	pCi/g	**0.03309**	**0.100**	238.5	1	1.143	IDENTIFIED	2.231	☐		
Lead-214 ✓	**0.8172**	0.06727	pCi/g	**0.04012**	**0.100**	351.8	1	1.394	IDENTIFIED	3.349	☐		
Neptunium-237 INT	**0.5502**	0.1276	pCi/g	**0.1433**	**Y**	87.13	1	1.349	IDENTIFIED	10.63	☑ UI		
Potassium-40 ✓	**5.684**	0.5835	pCi/g	**0.182**	**1.00**	1461	1	2.145	IDENTIFIED	3.511	☐		
Protactinium-234m ↑PW	**4.311**	2.575	pCi/g	**2.125**	**Y**	1003	1	4.947	IDENTIFIED	30.15	☑ UI	Data rejected due to high peak-width.	
Radium-223 INT	**0.2882**	0.1207	pCi/g	**0.1055**	**Y**	270	1	1.628	IDENTIFIED	21.2	☑ UI		
Thallium-208 ✓	**0.2772**	0.03431	pCi/g	**0.01973**	**0.080**	583	1	1.455	IDENTIFIED	5.379	☐		
Thorium-234 LA	**1.14**	0.3008	pCi/g	**0.4285**	**0.500**	92.57	1	1.366	FAIL_ABUND	12.6	☑ UI	Data rejected due to low abundance.	
Uranium-235 NVP	**0.2494**	0.1235	pCi/g	**0.1241**	**0.500**	144.2	1	1.751	IDENTIFIED	25.1	☑ UI		

*** = 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
198530006	12-OCT-07 00:00	08-DEC-07 09:48	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.864**	0.1513	pCi/g	**0.08525**	**0.800**	910.4	1	1.635	IDENTIFIED	7.253	☐	
Americium-243 INT	**0.1387**	0.03128	pCi/g	**0.03376**	**Y**	74.84	1	1.431	IDENTIFIED	11.05	☑ UI	
Bismuth-212 ✓	**0.5945**	0.1765	pCi/g	**0.1703**	**0.500**	726.5	1	1.458	IDENTIFIED	14.5	☐	
Bismuth-214 ✓	**0.8037**	0.08615	pCi/g	**0.04462**	**0.200**	608.7	1	1.553	IDENTIFIED	3.924	☐	
Cesium-137 ✓	**0.1662**	0.03628	pCi/g	**0.02341**	**0.100**	661.4	1	1.599	IDENTIFIED	10.38	☐	
Lead-212 ✓	**0.7922**	0.06673	pCi/g	**0.03841**	**0.100**	238.4	1	1.288	IDENTIFIED	2.926	☐	
Lead-214 ✓	**0.8215**	0.08209	pCi/g	**0.0464**	**0.100**	351.4	1	1.572	IDENTIFIED	4.118	☐	
Neptunium-237 INT	**0.4291**	0.1115	pCi/g	**0.1421**	**Y**	87.19	1	1.279	IDENTIFIED	12.82	☑ UI	
Potassium-40 ✓	**4.306**	0.5036	pCi/g	**0.211**	**1.00**	1460	1	1.972	IDENTIFIED	5.09	☐	
Radium-223 INT	**0.2093**	0.103	pCi/g	**0.122**	**Y**	269.8	1	1.363	IDENTIFIED	24.92	☑ UI	
Thallium-208 ✓	**0.2282**	0.03393	pCi/g	**0.02234**	**0.080**	582.6	1	1.499	IDENTIFIED	6.623	☐	
Thorium-234 ✓	**1.046**	0.2971	pCi/g	**0.308**	**0.500**	92.81	1	1.512	IDENTIFIED	14.11	☐	

*** = 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
198530007	12-OCT-07 00:00	08-DEC-07 09:49	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.081**	0.1511	pCi/g	**0.0788**	**0.800**	911.1	1	1.554	IDENTIFIED	5.373	☐	
Americium-243 INT	**0.177**	0.02976	pCi/g	**0.03001**	**Y**	74.96	1	1.211	IDENTIFIED	6.635	☑ UI	
Bismuth-212 ✓	**0.5247**	0.1991	pCi/g	**0.1679**	**0.500**	727.5	1	1.452	IDENTIFIED	18.99	☐	
Bismuth-214 ✓	**1.001**	0.09016	pCi/g	**0.04171**	**0.200**	609.2	1	1.368	IDENTIFIED	3.25	☐	
Cesium-137 ✓	**0.158**	0.02372	pCi/g	**0.02147**	**0.100**	661.6	1	1.525	IDENTIFIED	6.854	☐	
Cobalt-60 LA	**0.02574**	0.02843	pCi/g	**0.02414**	**0.100**	1172	1	6.687	FAIL_ABUND	56.29	☑ UI	Data rejected due to low abundance.
Curium-243 INT	**0.07015**	0.04536	pCi/g	**0.05996**	**Y**	105.5	2	1.41	IDENTIFIED	32.73	☑ UI	
Europium-155 INT	**0.07749**	0.05011	pCi/g	**0.06933**	**0.500**	105.5	2	1.41	IDENTIFIED	32.73	☑ UI	
Lead-212 ✓	**0.9403**	0.07004	pCi/g	**0.03887**	**0.100**	238.6	1	1.151	IDENTIFIED	2.44	☐	
Lead-214 ✓	**1.071**	0.08936	pCi/g	**0.04562**	**0.100**	351.9	1	1.209	IDENTIFIED	3.228	☐	
Neptunium-236 INT	**0.04231**	0.03081	pCi/g	**0.03562**	**Y**	99.06	1	1.823	IDENTIFIED	36.85	☑ UI	
Neptunium-237 INT	**0.5113**	0.1259	pCi/g	**0.1347**	**Y**	87.28	1	1.202	IDENTIFIED	11.09	☑ UI	
Potassium-40 ✓	**6.406**	0.6892	pCi/g	**0.186**	**1.00**	1461	1	1.863	IDENTIFIED	3.527	☐	
Radium-223 INT	**0.3945**	0.1215	pCi/g	**0.1204**	**Y**	270	1	1.551	IDENTIFIED	15.42	☑ UI	
Thallium-208 ✓	**0.2616**	0.03271	pCi/g	**0.02**	**0.080**	583.2	1	1.323	IDENTIFIED	5.541	☐	
Thorium-234 ✓	**1.313**	0.3051	pCi/g	**0.2972**	**0.500**	92.87	1	1.454	IDENTIFIED	10.58	☐	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
198530008	12-OCT-07 00:00	08-DEC-07 09:49	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb	Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.024**	0.1645	pCi/g	**0.1169**	**0.800**	910.8	1	1.595	IDENTIFIED		7.469	☐	
Americium-243 INT	**0.1317**	0.01828	pCi/g	**0.02242**	**Y**	75.02	1	1.207	IDENTIFIED		6.178	☑ UI	
Bismuth-212 ✓	**0.4253**	0.2162	pCi/g	**0.2493**	**0.500**	726.7	1	1.081	IDENTIFIED		25.62	☐	
Bismuth-214 ✓	**0.7487**	0.1068	pCi/g	**0.05754**	**0.200**	609	1	1.768	IDENTIFIED		6.215	☐	
Cesium-137 ✓	**0.1897**	0.04796	pCi/g	**0.03269**	**0.100**	661.3	1	1.895	IDENTIFIED		12.24	☐	
Curium-243 INT	**0.06986**	0.04741	pCi/g	**0.06178**	**Y**	105.4	2	1.862	IDENTIFIED		34.39	☑ UI	
Europium-155 INT	**0.07717**	0.05237	pCi/g	**0.06712**	**0.500**	105.4	2	1.862	IDENTIFIED		34.39	☑ UI	
Lead-212 ✓	**0.9116**	0.07441	pCi/g	**0.04373**	**0.100**	238.6	1	1.41	IDENTIFIED		2.822	☐	
Lead-214 ✓	**0.8342**	0.08231	pCi/g	**0.0579**	**0.100**	351.9	1	1.529	IDENTIFIED		4.315	☐	
Neptunium-237 INT	**0.5411**	0.09956	pCi/g	**0.1157**	**Y**	87.37	1	1.558	IDENTIFIED		8.638	☑ UI	
Potassium-40 ✓	**4.394**	0.5921	pCi/g	**0.3274**	**1.00**	1460	1	1.954	IDENTIFIED		6.296	☐	
Radium-223 INT	**0.2739**	0.1236	pCi/g	**0.1402**	**Y**	270.4	1	0.8657	IDENTIFIED		22.86	☑ UI	
Thallium-208 ✓	**0.3166**	0.0486	pCi/g	**0.03014**	**0.080**	583	1	1.643	IDENTIFIED		6.933	☐	
Thorium-234 ✓	**0.8539**	0.2086	pCi/g	**0.2689**	**0.500**	92.91	1	1.383	IDENTIFIED		11.88	☐	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
198530009	12-OCT-07 00:00	08-DEC-07 09:50	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb	Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.8238**	0.1246	pCi/g	**0.0645**	**0.800**	910.5	1	2.235	IDENTIFIED		5.917	☐	
Americium-243 INT	**0.1288**	0.02501	pCi/g	**0.027**	**Y**	74.57	1	1.291	IDENTIFIED		9.092	☑ UI	
Bismuth-212 ✓	**0.5213**	0.1482	pCi/g	**0.133**	**0.500**	726.5	1	1.802	IDENTIFIED		13.76	☐	
Bismuth-214 ✓	**0.7764**	0.08055	pCi/g	**0.03541**	**0.200**	608.8	1	1.743	IDENTIFIED		3.424	☐	
Cesium-137 ✓	**0.151**	0.02186	pCi/g	**0.01821**	**0.100**	661.1	1	1.754	IDENTIFIED		5.943	☐	
Lead-212 ✓	**0.7931**	0.05858	pCi/g	**0.03203**	**0.100**	238.3	1	1.267	IDENTIFIED		2.293	☐	
Lead-214 ✓	**0.8398**	0.07079	pCi/g	**0.0361**	**0.100**	351.4	1	1.374	IDENTIFIED		3.201	☐	
Neptunium-237 INT	**0.4329**	0.0957	pCi/g	**0.1209**	**Y**	87.04	1	1.288	IDENTIFIED		10.41	☑ UI	
Potassium-40 ✓	**3.631**	0.3666	pCi/g	**0.1685**	**1.00**	1460	1	2.697	IDENTIFIED		4.231	☐	
Radium-223 INT	**0.237**	0.0942	pCi/g	**0.09886**	**Y**	269.7	1	1.788	IDENTIFIED		20.06	☑ UI	
Thallium-208 ✓	**0.2528**	0.03064	pCi/g	**0.0175**	**0.080**	582.6	1	1.618	IDENTIFIED		4.824	☐	
Thorium-234 ✓	**0.9458**	0.2342	pCi/g	**0.265**	**0.500**	92.48	1	1.384	IDENTIFIED		11.93	☐	

*** = 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
198530010	12-OCT-07 00:00	08-DEC-07 09:51	57.4	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb	Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.9448**	0.1758	pCi/g	**0.1155**	**0.800**	911	1	1.619	IDENTIFIED		8.609	☐	
Americium-243 INT	**0.1961**	0.03279	pCi/g	**0.04034**	**Y**	74.85	1	0.8332	IDENTIFIED		7.761	☑ UI	
Bismuth-212 ✓	**0.566**	0.2065	pCi/g	**0.2586**	**0.500**	727.3	1	1.966	IDENTIFIED		18.33	☐	
Bismuth-214 ✓	**0.673**	0.09172	pCi/g	**0.06762**	**0.200**	609.2	1	1.394	IDENTIFIED		6.325	☐	
Cesium-137 ✓	**0.07847**	0.02802	pCi/g	**0.03556**	**0.100**	661.4	1	1.541	IDENTIFIED		17.98	☐	
Lead-212 ✓	**0.984**	0.07945	pCi/g	**0.04558**	**0.100**	238.6	1	0.997	IDENTIFIED		3.004	☐	
Lead-214 ✓	**0.6746**	0.09436	pCi/g	**0.06305**	**0.100**	351.8	1	1.172	IDENTIFIED		6.607	☐	
Neptunium-236 ~~INT~~ LA	**0.05302**	0.02781	pCi/g	**0.04982**	**Y**	143.7	2	1.254	NOT_IDENTI		37.52	☑ UI	Data rejected due to low abundance.
Neptunium-237 INT	**0.5938**	0.1471	pCi/g	**0.1623**	**Y**	87.26	1	1.13	IDENTIFIED		12.09	☑ UI	
Potassium-40 ✓	**5.057**	0.642	pCi/g	**0.2648**	**1.00**	1460	1	2.107	IDENTIFIED		5.407	☐	
Radium-223 INT	**0.3307**	0.1591	pCi/g	**0.1515**	**Y**	270.2	1	1.448	IDENTIFIED		24.37	☑ UI	
Thallium-208 ✓	**0.3017**	0.04702	pCi/g	**0.0319**	**0.080**	583.2	1	1.391	IDENTIFIED		7.423	☐	
Thorium-234 ✓	**1.388**	0.392	pCi/g	**0.3469**	**0.500**	92.8	1	1.355	IDENTIFIED		13.95	☐	
Uranium-235 ✓	**0.2012**	0.1484	pCi/g	**0.1529**	**0.500**	143.7	2	1.254	IDENTIFIED		37.52	☐	

*** = 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
198530011	12-OCT-07 00:00	09-DEC-07 14:38	58.6	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.252	0.1655	pCi/g	0.08451	0.800	911	1	1.595	IDENTIFIED	4.933		
Americium-241 LA	0.03592	0.01948	pCi/g	0.03153	0.200	86.94	2	1.238	NOT_IDENTI	5.376	☑ UI	Data rejected due to low abundance.
Americium-243 INT	0.2303	0.0246	pCi/g	0.01827	Y	74.54	1	1.147	IDENTIFIED	3.63	☑ UI	
Bismuth-212	0.737	0.1783	pCi/g	0.174	0.500	727.3	1	1.591	IDENTIFIED	11.58		
Bismuth-214	0.9427	0.09415	pCi/g	0.04518	0.200	609.2	1	1.532	IDENTIFIED	3.45		
Cesium-137	0.424	0.0435	pCi/g	0.02488	0.100	661.5	1	1.573	IDENTIFIED	3.278		
Curium-243 INT	0.09357	0.03986	pCi/g	0.04888	Y	105.2	2	1.659	IDENTIFIED	21.22	☑ UI	
Europium-155 INT	0.1034	0.04405	pCi/g	0.05369	0.500	105.2	2	1.659	IDENTIFIED	21.22	☑ UI	
Lead-212	1.228	0.1096	pCi/g	0.03327	0.100	238.5	1	1.191	IDENTIFIED	1.718		
Lead-214	1.012	0.08574	pCi/g	0.04195	0.100	351.8	1	1.248	IDENTIFIED	3.299		
Neptunium-236 INT	0.04119	0.02623	pCi/g	0.02882	Y	98.67	1	2.074	IDENTIFIED	32.17	☑ UI	
Neptunium-237 INT	0.7344	0.09973	pCi/g	0.09149	Y	86.94	2	1.238	IDENTIFIED	5.376	☑ UI	
Potassium-40	7.769	0.7423	pCi/g	0.2045	1.00	1461	1	2.155	IDENTIFIED	2.823		
Protactinium-234m	3.508	2.097	pCi/g	2.546	Y	1001	1	1.495	IDENTIFIED	30.22		
Radium-223 INT	0.4787	0.1202	pCi/g	0.1081	Y	270.1	1	1.641	IDENTIFIED	12.33	☑ UI	
Thallium-208	0.378	0.03966	pCi/g	0.02218	0.080	583.1	1	1.513	IDENTIFIED	3.974		
Thorium-234	1.619	0.2577	pCi/g	0.2133	0.500	92.52	1	1.384	IDENTIFIED	6.779		

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
198530012	12-OCT-07 00:00	09-DEC-07 14:39	58.6	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.331	0.157	pCi/g	0.08504	0.800	910.8	1	1.684	IDENTIFIED	5.176		
Americium-243 INT	0.1758	0.0184	pCi/g	0.01646	Y	74.88	1	0.85	IDENTIFIED	3.595	☑ UI	
Bismuth-212	0.8358	0.2398	pCi/g	0.1824	0.500	727.1	1	1.659	IDENTIFIED	14.11		
Bismuth-214	0.8388	0.09034	pCi/g	0.04393	0.200	609	1	1.395	IDENTIFIED	4.026		
Cesium-137	0.1521	0.02696	pCi/g	0.0222	0.100	661.4	1	1.674	IDENTIFIED	8.091		
Curium-243 INT	0.08338	0.0376	pCi/g	0.04233	Y	105.5	2	1.302	IDENTIFIED	22.57	☑ UI	
Europium-155 INT	0.09215	0.04155	pCi/g	0.04719	0.500	105.5	2	1.302	IDENTIFIED	22.57	☑ UI	
Lead-212	1.168	0.08642	pCi/g	0.03189	0.100	238.6	1	1.02	IDENTIFIED	1.738		
Lead-214	0.8326	0.06239	pCi/g	0.04021	0.100	351.8	1	1.219	IDENTIFIED	2.779		
Neptunium-236 INT	0.04037	0.02694	pCi/g	0.02522	Y	99.04	1	1.905	IDENTIFIED	33.77	☑ UI	
Neptunium-237 INT	0.6799	0.08892	pCi/g	0.08838	Y	87.28	1	1.108	IDENTIFIED	5.37	☑ UI	
Potassium-40	6.806	0.6072	pCi/g	0.2189	1.00	1460	1	2.276	IDENTIFIED	3.602		
Radium-223 INT	0.2831	0.08921	pCi/g	0.09944	Y	270.4	1	1.565	IDENTIFIED	15.82	☑ UI	
Thallium-208	0.3773	0.04197	pCi/g	0.02288	0.080	582.9	1	1.471	IDENTIFIED	4.393		
Thorium-234	1.563	0.2807	pCi/g	0.2064	0.500	92.69	1	1.147	IDENTIFIED	8.204		
Uranium-235	0.1076	0.1135	pCi/g	0.1007	0.500	143.8	1	1.061	IDENTIFIED	53.62		

*** = 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
1201471362		09-DEC-07 14:39	0	MB	LOAD	1		GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201471363	12-OCT-07 00:00	09-DEC-07 14:40	58.6	DUP	LOAD	1		SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	1.155	0.1437	pCi/g	0.07422	0.800	910.9	1	1.663	IDENTIFIED	4.928		
Americium-243 INT	0.218	0.02495	pCi/g	0.02452	Y	74.86	1	0.9789	IDENTIFIED	4.637	☑ UI	
Bismuth-212	0.7565	0.2019	pCi/g	0.1405	0.500	726.6	1	1.845	IDENTIFIED	13.22		
Bismuth-214	0.7361	0.0655	pCi/g	0.0359	0.200	609.1	1	1.353	IDENTIFIED	3.503		
Curium-243 INT	0.09034	0.0418	pCi/g	0.04321	Y	105.6	2	1.791	IDENTIFIED	23.34	☑ UI	
Europium-155 INT	0.09984	0.04619	pCi/g	0.04734	0.500	105.6	2	1.791	IDENTIFIED	23.34	☒ UI	
Lead-212	1.134	0.07253	pCi/g	0.02696	0.100	238.6	1	0.9839	IDENTIFIED	1.641		
Lead-214	0.8604	0.06903	pCi/g	0.03579	0.100	351.8	1	1.1	IDENTIFIED	3.079		
Neptunium-237 INT	0.5852	0.0898	pCi/g	0.1048	Y	87.15	1	1.044	IDENTIFIED	6.895	☑ UI	

Potassium-40 ✓	**6.459**	0.6063	pCi/g	**0.1743**	**1.00**	1460	1	2.212	IDENTIFIED	3.196	☐
Radium-223 INT	**0.3254**	0.1033	pCi/g	**0.08952**	**Y**	269.9	1	1.491	IDENTIFIED	15.93	☑ UI
Thallium-208 ✓	**0.3428**	0.03468	pCi/g	**0.01874**	**0.080**	583	1	1.322	IDENTIFIED	4.303	☐
Thorium-234 ✓	**1.436**	0.2586	pCi/g	**0.2075**	**0.500**	92.81	1	1.249	IDENTIFIED	8.449	☐

*** = 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
1201471364		10-DEC-07 08:38	0	LCS	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	**0.9887**	0.8643	pCi/g	**0.7173**	**0.800**	912.6	1	6.605	IDENTIFIED	44.34	☐	
Americium-241	**12.76**	1.332	pCi/g	**0.7485**	**0.200**	59.59	1	1.391	IDENTIFIED	3.07	☐	
Americium-243	**0.2601**	0.1749	pCi/g	**0.2262**	**Y**	74.62	1	1.627	IDENTIFIED	34.08	☐	
Bismuth-214	**0.6743**	0.2515	pCi/g	**0.3817**	**0.200**	609.6	1	1.865	FAIL_ABUND	18.68	☐	
Cesium-137	**5.813**	0.5279	pCi/g	**0.1566**	**0.100**	661.7	1	1.64	IDENTIFIED	2.653	☑	
Cobalt-60	**8.336**	0.656	pCi/g	**0.1671**	**0.100**	1174	1	1.909	IDENTIFIED	2.342	☐	
Gross Gamma	**39.82**	6.056	pCi/g	**10.22**	**N**		0				☐	
Lead-212	**1.154**	0.2034	pCi/g	**0.2096**	**0.100**	238.7	1	1.586	IDENTIFIED	8.306	☐	
Lead-214	**0.9058**	0.2157	pCi/g	**0.2541**	**0.100**	351.7	1	1.254	IDENTIFIED	11.74	☐	
Neptunium-237	**30.57**	2.824	pCi/g	**1.096**	**Y**	88.12	1	1.273	IDENTIFIED	2.136	☐	
Polonium-209	**243.4**	48.89	pCi/g	**37.85**	**Y**	898.2	1	1.676	IDENTIFIED	9.016	☑	
Potassium-40	**1.125**	0.8486	pCi/g	**0.744**	**1.00**	1461	1	0.639	IDENTIFIED	38.36	☑	
Thallium-208	**0.3952**	0.1187	pCi/g	**0.1537**	**0.080**	583.6	1	1.896	IDENTIFIED	14.91	☐	

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

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:28:03.27

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198528041.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 7-DEC-2007 16:27:42.
Sample ID        : G198528041           Sample quantity  : 1.23490E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 12:00:00.00        Elapsed real time: 0 12:00:29.17  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.28*	120	1643	1.02	92.50	88	10	2.77E-03	71.4	
2	0	63.16*	171	1539	0.73	126.27	123	8	3.95E-03	44.9	
3	2	73.13	67	884	0.97	146.22	144	15	1.55E-03	63.1	3.78E+00
4	2	74.89	1243	1317	0.98	149.74	144	15	2.88E-02	5.4	
5	2	77.12	1843	1085	0.87	154.20	144	15	4.27E-02	3.5	
6	6	84.16	452	1503	1.35	168.27	164	28	1.05E-02	15.4	2.69E+00
7	6	87.22	983	1288	1.25	174.40	164	28	2.28E-02	6.8	
8	6	89.99	621	1083	1.05	179.93	164	28	1.44E-02	9.3	
9	6	92.76*	932	1416	1.35	185.47	164	28	2.16E-02	9.5	
10	0	99.25	214	1496	1.67	198.46	194	9	4.95E-03	33.3	
11	0	105.33	158	1114	1.63	210.63	208	7	3.66E-03	36.0	
12	0	109.38	122	1152	1.42	218.72	215	7	2.82E-03	47.0	
13	0	112.34*	56	821	1.03	224.65	223	5	1.29E-03	95.1	
14	0	128.81	202	1620	0.74	257.58	254	9	4.67E-03	36.6	
15	0	140.32	107	1070	1.49	280.60	278	7	2.48E-03	51.8	
16	0	143.82*	164	1254	1.01	287.62	284	8	3.80E-03	42.2	
17	0	154.13	203	1409	0.90	308.24	304	9	4.69E-03	34.1	
18	2	185.88*	601	892	1.08	371.74	366	13	1.39E-02	12.2	5.60E-01
19	2	187.84	77	1008	1.22	375.66	366	13	1.79E-03	76.3	
20	0	209.25	414	1214	1.10	418.48	415	9	9.59E-03	15.9	
21	5	238.64*	4738	780	0.98	477.27	473	16	1.10E-01	1.9	4.17E+00
22	5	241.56	1154	1103	1.80	483.13	473	16	2.67E-02	7.7	
23	0	270.05	406	999	1.44	540.11	535	11	9.40E-03	15.8	
24	0	277.36	139	633	1.15	554.73	552	7	3.22E-03	31.1	
25	4	292.24	54	227	1.15	584.50	583	14	1.26E-03	38.9	4.78E+00
26	4	295.23*	1277	544	1.22	590.48	583	14	2.96E-02	4.7	
27	0	300.08	310	622	1.08	600.19	597	8	7.17E-03	15.1	
28	0	328.00	213	757	1.13	656.03	652	9	4.92E-03	24.3	
29	2	338.33	876	487	1.12	676.70	672	13	2.03E-02	5.4	1.27E+00
30	2	340.88	81	375	1.03	681.80	672	13	1.87E-03	41.1	
31	0	351.88*	2034	796	1.20	703.82	699	11	4.71E-02	3.7	
32	0	410.44	274	752	4.45	820.95	814	15	6.33E-03	22.7	
33	0	433.71*	117	617	1.55	867.52	862	14	2.70E-03	51.6	
34	0	439.17*	23	384	1.46	878.42	875	9	5.43E-04	200.9	
35	0	462.67	297	493	1.44	925.44	920	11	6.88E-03	15.6	
36	0	510.77*	465	610	2.20	1021.67	1015	14	1.08E-02	17.2	
37	0	537.82	69	307	1.62	1075.79	1072	9	1.59E-03	47.7	
38	0	583.11*	1446	499	1.36	1166.40	1159	15	3.35E-02	4.8	

Sample ID : G198528041 Acquisition date : 7-DEC-2007 16:27:42

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	597.67	36	301	0.88	1195.53	1193	8	8.41E-04	83.9	
40	0	609.11*	1435	601	1.31	1218.41	1211	15	3.32E-02	4.8	
41	0	661.18	77	339	2.74	1322.58	1317	11	1.78E-03	47.8	
42	0	665.11	47	241	1.74	1330.46	1328	8	1.08E-03	59.3	
43	0	721.73*	14	371	1.43	1443.73	1436	13	3.16E-04	362.4	
44	0	727.33	295	296	1.62	1454.93	1450	10	6.83E-03	12.4	
45	0	755.12	72	208	2.08	1510.54	1506	9	1.67E-03	37.9	
46	1	768.18	138	302	1.81	1536.67	1522	28	3.19E-03	25.8	1.60E+00
47	1	771.72	81	266	1.83	1543.75	1522	28	1.88E-03	42.9	
48	0	794.91	144	253	2.19	1590.15	1584	11	3.34E-03	22.9	
49	0	802.63*	67	229	2.55	1605.60	1601	10	1.55E-03	53.3	
50	0	835.76	76	210	1.43	1671.89	1667	9	1.75E-03	36.5	
51	0	860.42	203	343	1.89	1721.22	1713	17	4.70E-03	22.1	
52	0	866.84	42	155	2.35	1734.06	1729	9	9.77E-04	55.9	
53	0	911.01*	900	234	1.51	1822.45	1816	13	2.08E-02	5.3	
54	0	933.78	99	211	0.95	1868.01	1860	13	2.28E-03	32.0	
55	0	939.12	70	216	3.04	1878.68	1873	15	1.63E-03	47.1	
56	1	964.62*	174	189	1.99	1929.71	1919	24	4.02E-03	19.6	1.58E+00
57	1	968.75	566	153	1.69	1937.97	1919	24	1.31E-02	5.9	
58	0	1001.71*	13	191	0.95	2003.93	1996	12	3.00E-04	253.0	
59	0	1054.33	27	93	1.73	2109.22	2107	8	6.21E-04	64.5	
60	0	1063.40*	94	205	1.75	2127.37	2119	18	2.18E-03	65.5	
61	0	1120.02	366	210	1.77	2240.67	2234	17	8.48E-03	10.5	
62	0	1135.21	47	126	0.85	2271.06	2263	13	1.08E-03	52.1	
63	0	1139.42	22	51	1.45	2279.49	2276	7	5.10E-04	57.7	
64	0	1237.66	165	132	1.90	2476.08	2470	12	3.82E-03	16.0	
65	0	1269.70	32	103	4.29	2540.20	2532	14	7.31E-04	71.0	
66	0	1330.31	13	109	3.05	2661.50	2657	12	2.99E-04	163.5	
67	0	1377.74	52	136	1.52	2756.41	2749	13	1.20E-03	48.6	
68	0	1400.98	62	80	1.94	2802.91	2796	14	1.44E-03	33.1	
69	0	1408.19	23	78	0.82	2817.36	2812	10	5.40E-04	73.6	
70	0	1460.40*	1545	116	2.21	2921.84	2913	19	3.58E-02	3.4	
71	1	1509.45	52	59	2.15	3020.00	3011	23	1.21E-03	34.7	1.96E+00
72	1	1512.44	31	55	2.16	3026.00	3011	23	7.12E-04	57.2	
73	0	1587.11	52	69	3.21	3175.43	3170	11	1.20E-03	34.0	
74	0	1621.29	29	83	0.86	3243.85	3234	14	6.75E-04	69.1	
75	0	1630.07	34	39	1.19	3261.42	3257	11	7.85E-04	39.5	
76	0	1702.48	18	29	0.99	3406.34	3401	11	4.13E-04	63.9	
77	0	1729.61	119	46	2.11	3460.64	3449	24	2.76E-03	17.9	
78	0	1740.12	18	12	1.74	3481.68	3478	9	4.10E-04	43.8	
79	0	1763.91*	253	69	2.79	3529.30	3522	14	5.87E-03	10.9	
80	0	1780.00	32	44	8.18	3561.51	3552	19	7.50E-04	51.6	
81	0	1849.21	40	71	1.32	3700.05	3692	21	9.23E-04	54.3	
82	0	1939.65	18	21	1.35	3881.08	3877	8	4.12E-04	51.2	
83	0	1992.70	41	29	6.59	3987.26	3977	20	9.47E-04	36.3	
84	0	2041.17	13	6	1.48	4084.28	4079	9	2.97E-04	45.5	

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]G198528041       *
* Acquisition date :  7-DEC-2007 16:27:42 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 12:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 12:00:29.17     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198528041           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2349E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	7.080E+00	6.879E-01	2.161E-01	0.000E+00
CS-137	2.187E-02	2.052E-02	2.205E-02	0.000E+00
EU-155	6.122E-02	4.335E-02	5.470E-02	0.000E+00
TL-208	3.703E-01	4.054E-02	2.252E-02	0.000E+00
BI-212	6.544E-01	1.646E-01	1.703E-01	0.000E+00
PB-212	1.163E+00	7.759E-02	3.271E-02	0.000E+00
BI-214	6.987E-01	7.676E-02	4.663E-02	0.000E+00
PB-214	7.765E-01	6.962E-02	4.233E-02	0.000E+00
RA-223	3.460E-01	1.093E-01	1.049E-01	0.000E+00
AC-228	1.120E+00	1.457E-01	8.316E-02	0.000E+00
PA-234M	5.406E-01	2.681E+00	2.354E+00	0.000E+00
TH-234	1.517E+00	3.016E-01	2.479E-01	0.000E+00
U-235	1.189E-01	9.863E-02	1.037E-01	0.000E+00
NP-236	4.682E-02	3.077E-02	3.078E-02	0.000E+00
NP-237	7.476E-01	1.138E-01	1.160E-01	0.000E+00
AM-243	2.221E-01	2.807E-02	2.814E-02	0.000E+00
CM-243	5.542E-02	3.925E-02	4.921E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	3.793E-03	1.506E-02	2.579E-02	0.000E+00	NOT IDENT.
RH-101	7.521E-03	1.117E-02	1.928E-02	0.000E+00	NOT IDENT.
SB-125	3.026E-02	3.829E-02	5.910E-02	0.000E+00	NOT IDENT.
PO-209	-2.196E+00	2.899E+00	4.639E+00	0.000E+00	NOT IDENT.
BI-211	2.941E-01	4.405E-01	6.662E-01	0.000E+00	NOT IDENT.
PA-233	1.502E-02	2.185E-02	3.893E-02	0.000E+00	NOT IDENT.
NP-239	-4.367E-02	7.761E-02	1.282E-01	0.000E+00	NOT IDENT.
AM-241	-3.496E-03	5.913E-02	9.160E-02	0.000E+00	NOT IDENT.
AM-246	1.370E-02	4.808E-02	8.322E-02	0.000E+00	NOT IDENT.
CF-249	1.523E-02	1.459E-02	2.578E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:28:06.03

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198528041.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 7-DEC-2007 16:27:42.
Sample ID        : G198528041           Sample quantity  : 1.23490E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 12:00:00.00        Elapsed real time: 0 12:00:29.17  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	1545	10.66*	1.037E+00	7.080E+00	7.080E+00	9.91
CS-137	661.66	77	85.10*	2.103E+00	2.179E-02	2.187E-02	95.77
EU-155	105.31	158	21.20*	6.304E+00	5.990E-02	6.122E-02	72.26
TL-208	277.36	139	6.31	4.253E+00	2.623E-01	2.623E-01	62.51
	510.77	465	22.60	2.614E+00	3.986E-01	3.986E-01	34.82
	583.19	1446	84.50*	2.341E+00	3.703E-01	3.703E-01	11.17
	763.13	------	1.81	1.854E+00	------	Line Not Found	------
	860.56	203	12.42	1.664E+00	4.979E-01	4.979E-01	44.81
BI-212	727.33	295	11.80*	1.935E+00	6.544E-01	6.544E-01	25.66
	785.37	------	1.10	1.807E+00	------	Line Not Found	------
	1620.50	29	1.49	9.593E-01	1.034E+00	1.034E+00	138.28
PB-212	74.81	1243	10.40	4.158E+00	1.456E+00	1.456E+00	12.90
	77.11	1843	17.50	4.414E+00	1.209E+00	1.209E+00	10.02
	87.30	983	7.81	5.372E+00	1.187E+00	1.187E+00	15.53
	238.63	4738	43.30*	4.767E+00	1.163E+00	1.163E+00	6.81
	300.09	310	3.28	4.001E+00	1.196E+00	1.196E+00	30.70
BI-214	609.31	1435	46.10*	2.257E+00	6.987E-01	6.987E-01	11.21
	768.36	138	4.94	1.843E+00	7.673E-01	7.673E-01	52.00
	806.17	------	1.22	1.765E+00	------	Line Not Found	------
	934.06	99	3.03	1.544E+00	1.068E+00	1.068E+00	64.48
	1120.29	366	15.10	1.306E+00	9.411E-01	9.412E-01	21.91
	1155.19	------	1.63	1.270E+00	------	Line Not Found	------
	1238.11	165	5.79	1.194E+00	1.209E+00	1.209E+00	32.54
	1280.96	------	1.43	1.158E+00	------	Line Not Found	------
	1377.67	52	4.00	1.088E+00	6.026E-01	6.026E-01	97.38
	1401.50	62	1.27	1.073E+00	2.316E+00	2.316E+00	66.50
	1407.98	23	2.15	1.068E+00	5.145E-01	5.145E-01	147.37
	1509.23	52	2.11	1.011E+00	1.240E+00	1.241E+00	69.83
	1729.60	119	2.92	9.196E-01	2.249E+00	2.250E+00	36.27
	1764.49	253	15.40	9.089E-01	9.172E-01	9.172E-01	22.61
PB-214	74.81	1243	6.44	4.158E+00	2.352E+00	2.352E+00	12.90
	77.11	1843	10.80	4.414E+00	1.959E+00	1.959E+00	10.02

Sample ID : G198528041 Acquisition date : 7-DEC-2007 16:27:42

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	983	4.84	5.372E+00	1.915E+00	1.916E+00	15.53
	242.00	1154	7.43	4.724E+00	1.666E+00	1.666E+00	16.35
	295.22	1277	19.30	4.052E+00	8.275E-01	8.275E-01	11.08
	351.93	2034	37.60*	3.529E+00	7.764E-01	7.765E-01	9.15
RA-223	269.46	406	13.70*	4.342E+00	3.460E-01	3.460E-01	32.23
AC-228	129.07	202	2.42	6.530E+00	6.465E-01	6.465E-01	73.55
	209.25	414	3.89	5.237E+00	1.030E+00	1.030E+00	32.33
	270.25	406	3.46	4.342E+00	1.370E+00	1.370E+00	32.23
	338.32	876	11.27	3.641E+00	1.081E+00	1.081E+00	12.06
	409.46	274	1.92	3.122E+00	2.313E+00	2.313E+00	45.63
	463.00	297	4.40	2.834E+00	1.208E+00	1.208E+00	31.58
	794.95	144	4.25	1.788E+00	9.621E-01	9.621E-01	46.37
	911.20	900	25.80*	1.579E+00	1.120E+00	1.120E+00	13.28
	964.77	174	4.99	1.499E+00	1.177E+00	1.177E+00	39.96
	968.97	566	15.80	1.493E+00	1.216E+00	1.216E+00	14.09
	1588.20	52	3.22	9.739E-01	8.372E-01	8.372E-01	68.30
PA-234M	1001.03	13	0.84*	1.447E+00	5.406E-01	5.406E-01	506.02
TH-234	63.29	171	4.80	2.609E+00	6.907E-01	6.907E-01	90.11
	92.58	932	5.41*	5.755E+00	1.517E+00	1.517E+00	20.29
U-235	143.76	164	10.96*	6.389E+00	1.189E-01	1.189E-01	84.63
NP-236	98.44	214	38.00*	6.089E+00	4.682E-02	4.682E-02	67.05
NP-237	86.48	983	12.40*	5.372E+00	7.476E-01	7.476E-01	15.53
AM-243	74.66	1243	68.20*	4.158E+00	2.221E-01	2.221E-01	12.90
CM-243	103.76	158	23.00*	6.304E+00	5.522E-02	5.542E-02	72.26

Flag: "*" = Keyline

Sample ID : G198528041 Acquisition date : 7-DEC-2007 16:27:42

Total number of lines in spectrum 84
Number of unidentified lines 40
Number of lines tentatively identified by NID 44 52.38%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	7.080E+00	7.080E+00	0.702E+00	9.91	
CS-137	9.47E+08S	1.00	2.179E-02	2.187E-02	2.094E-02	95.77	
EU-155	1.57E+08S	1.02	5.990E-02	6.122E-02	4.423E-02	72.26	
TL-208	4.43E+17S	1.00	3.703E-01	3.703E-01	0.414E-01	11.17	
BI-212	4.43E+17S	1.00	6.544E-01	6.544E-01	1.679E-01	25.66	
PB-212	4.43E+17S	1.00	1.163E+00	1.163E+00	0.079E+00	6.81	
BI-214	5.05E+10S	1.00	6.987E-01	6.987E-01	0.783E-01	11.21	
PB-214	5.05E+10S	1.00	7.764E-01	7.765E-01	0.710E-01	9.15	
RA-223	1.04E+12S	1.00	3.460E-01	3.460E-01	1.115E-01	32.23	
AC-228	4.43E+17S	1.00	1.120E+00	1.120E+00	0.149E+00	13.28	
PA-234M	1.41E+17S	1.00	5.406E-01	5.406E-01	27.36E-01	506.02	
TH-234	1.41E+17S	1.00	1.517E+00	1.517E+00	0.308E+00	20.29	
U-235	2.22E+16S	1.00	1.189E-01	1.189E-01	1.006E-01	84.63	
NP-236	4.89E+12S	1.00	4.682E-02	4.682E-02	3.139E-02	67.05	
NP-237	6.75E+13S	1.00	7.476E-01	7.476E-01	1.161E-01	15.53	
AM-243	2.33E+11S	1.00	2.221E-01	2.221E-01	0.286E-01	12.90	
CM-243	8.99E+08S	1.00	5.522E-02	5.542E-02	4.005E-02	72.26	
			---	---			
	Total Activity :		1.554E+01	1.554E+01			

Grand Total Activity : 1.554E+01 1.554E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198528041 Acquisition date : 7-DEC-2007 16:27:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.28	120	1643	1.02	92.50	88	10	2.77E-03	****	5.64E-01	
2	73.13	67	884	0.97	146.22	144	15	1.55E-03	****	3.95E+00	
6	84.16	452	1503	1.35	168.27	164	28	1.05E-02	30.8	5.12E+00	
6	89.99	621	1083	1.05	179.93	164	28	1.44E-02	18.6	5.57E+00	
0	109.38	122	1152	1.42	218.72	215	7	2.82E-03	94.0	6.40E+00	
0	112.34	56	821	1.03	224.65	223	5	1.29E-03	****	6.46E+00	
0	140.32	107	1070	1.49	280.60	278	7	2.48E-03	****	6.43E+00	
0	154.13	203	1409	0.90	308.24	304	9	4.69E-03	68.3	6.23E+00	
2	185.88	601	892	1.08	371.74	366	13	1.39E-02	24.3	5.66E+00	
2	187.84	77	1008	1.22	375.66	366	13	1.79E-03	****	5.62E+00	
4	292.24	54	227	1.15	584.50	583	14	1.26E-03	77.9	4.08E+00	
0	328.00	213	757	1.13	656.03	652	9	4.92E-03	48.7	3.73E+00	
2	340.88	81	375	1.03	681.80	672	13	1.87E-03	82.1	3.62E+00	
0	433.71	117	617	1.55	867.52	862	14	2.70E-03	****	2.99E+00	
0	439.17	23	384	1.46	878.42	875	9	5.43E-04	****	2.96E+00	
0	537.82	69	307	1.62	1075.79	1072	9	1.59E-03	95.3	2.51E+00	
0	597.67	36	301	0.88	1195.53	1193	8	8.41E-04	****	2.29E+00	
0	665.11	47	241	1.74	1330.46	1328	8	1.08E-03	****	2.09E+00	
0	721.73	14	371	1.43	1443.73	1436	13	3.16E-04	****	1.95E+00	
0	755.12	72	208	2.08	1510.54	1506	9	1.67E-03	75.8	1.87E+00	
1	771.72	81	266	1.83	1543.75	1522	28	1.88E-03	85.8	1.84E+00	
0	802.63	67	229	2.55	1605.60	1601	10	1.55E-03	****	1.77E+00	
0	835.76	76	210	1.43	1671.89	1667	9	1.75E-03	73.1	1.71E+00	
0	866.84	42	155	2.35	1734.06	1729	9	9.77E-04	****	1.65E+00	
0	939.12	70	216	3.04	1878.68	1873	15	1.63E-03	94.3	1.54E+00	
0	1054.33	27	93	1.73	2109.22	2107	8	6.21E-04	****	1.38E+00	
0	1063.40	94	205	1.75	2127.37	2119	18	2.18E-03	****	1.37E+00	
0	1135.21	47	126	0.85	2271.06	2263	13	1.08E-03	****	1.29E+00	
0	1139.42	22	51	1.45	2279.49	2276	7	5.10E-04	****	1.29E+00	
0	1269.70	32	103	4.29	2540.20	2532	14	7.31E-04	****	1.17E+00	
0	1330.31	13	109	3.05	2661.50	2657	12	2.99E-04	****	1.12E+00	
1	1512.44	31	55	2.16	3026.00	3011	23	7.12E-04	****	1.01E+00	
0	1630.07	34	39	1.19	3261.42	3257	11	7.85E-04	78.9	9.56E-01	
0	1702.48	18	29	0.99	3406.34	3401	11	4.13E-04	****	9.29E-01	
0	1740.12	18	12	1.74	3481.68	3478	9	4.10E-04	87.6	9.16E-01	
0	1780.00	32	44	8.18	3561.51	3552	19	7.50E-04	****	9.04E-01	
0	1849.21	40	71	1.32	3700.05	3692	21	9.23E-04	****	8.86E-01	
0	1939.65	18	21	1.35	3881.08	3877	8	4.12E-04	****	8.67E-01	
0	1992.70	41	29	6.59	3987.26	3977	20	9.47E-04	72.5	8.57E-01	
0	2041.17	13	6	1.48	4084.28	4079	9	2.97E-04	91.1	8.51E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198528041            *
* Acquisition date :  7-DEC-2007 16:27:42 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 12:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 12:00:29.17     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198528041           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2349E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	7.080E+00	6.879E-01	1.081E-01	6.879E-01
CS-137	2.187E-02	2.052E-02	1.103E-02	2.052E-02
EU-155	6.122E-02	4.335E-02	2.737E-02	4.335E-02
TL-208	3.703E-01	4.054E-02	1.126E-02	4.054E-02
BI-212	6.544E-01	1.646E-01	8.520E-02	1.646E-01
PB-212	1.163E+00	7.759E-02	1.637E-02	7.759E-02
BI-214	6.987E-01	7.676E-02	2.333E-02	7.676E-02
PB-214	7.765E-01	6.962E-02	2.118E-02	6.962E-02
RA-223	3.460E-01	1.093E-01	5.247E-02	1.093E-01
AC-228	1.120E+00	1.457E-01	4.161E-02	1.457E-01
PA-234M	5.406E-01	2.681E+00	1.178E+00	2.681E+00
TH-234	1.517E+00	3.016E-01	1.240E-01	3.016E-01
U-235	1.189E-01	9.863E-02	5.189E-02	9.863E-02
NP-236	4.682E-02	3.077E-02	1.540E-02	3.077E-02
NP-237	7.476E-01	1.138E-01	5.805E-02	1.138E-01
AM-243	2.221E-01	2.807E-02	1.408E-02	2.807E-02
CM-243	5.542E-02	3.925E-02	2.462E-02	3.925E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	3.793E-03	1.506E-02	1.290E-02	1.506E-02	NOT IDENT.
RH-101	7.521E-03	1.117E-02	9.643E-03	1.117E-02	NOT IDENT.
SB-125	3.026E-02	3.829E-02	2.957E-02	3.829E-02	NOT IDENT.
PO-209	-2.196E+00	2.899E+00	2.321E+00	2.899E+00	NOT IDENT.
BI-211	2.941E-01	4.405E-01	3.333E-01	4.405E-01	NOT IDENT.
PA-233	1.502E-02	2.185E-02	1.948E-02	2.185E-02	NOT IDENT.
NP-239	-4.367E-02	7.761E-02	6.415E-02	7.761E-02	NOT IDENT.
AM-241	-3.496E-03	5.913E-02	4.583E-02	5.913E-02	NOT IDENT.
AM-246	1.370E-02	4.808E-02	4.163E-02	4.808E-02	NOT IDENT.
CF-249	1.523E-02	1.459E-02	1.290E-02	1.459E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	799.1566
63.29	881.8034
74.66	1049.7621
74.81	1050.2642
74.81	1050.2642
77.11	1057.9020
77.11	1057.9020
86.48	979.8619
87.30	982.1530
87.30	982.1530
92.58	996.6674
98.44	843.0596
103.76	838.4109
105.31	862.3285
129.07	992.5342
143.76	896.0955
198.00	881.0336
209.25	872.2845
228.18	839.6826
238.63	784.6694
242.00	788.0880
269.46	674.2520
270.25	674.8817
277.36	681.6312
295.22	633.3396
300.09	580.7637
312.17	544.6655
338.32	605.8044
351.93	548.6104
387.59	473.9716
409.46	477.8954
427.87	405.0500
463.00	417.6722
510.77	385.0611
583.19	349.6757
609.31	414.8625
661.66	273.0503
727.33	268.0847
763.13	261.9955
768.36	262.6594
785.37	271.8336
794.95	246.8722
806.17	248.1702
831.80	220.3540
860.56	237.0408
896.60	249.8857
911.20	204.7468
934.06	165.9930
964.77	186.4915
968.97	166.5291
1001.03	146.6276
1078.86	165.0808
1120.29	148.3714
1155.19	157.9063
1173.23	170.5638
1238.11	160.4085
1280.96	124.0961
1332.51	96.6221
1377.67	97.9112
1401.50	87.8281
1407.98	95.1752
1460.80	103.1138
1509.23	91.5472
1588.20	143.4725
1620.50	66.5039
1729.60	52.3508
1764.49	222.0179

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198528041

Total Uranium Activity	5.5023E-02	ug/g
Total Uranium Counting Unc.	4.5637E-02	ug/g
Total Uranium Tpu	4.5637E-08	ug/g
Total Uranium Mda	2.4008E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:34:14.11

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530001.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:36:41.
Sample ID        : G198530001           Sample quantity  : 1.53320E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:06.64  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.70*	16	941	0.81	92.84	89	8	7.62E-04	382.6	
2	0	53.31*	60	790	1.11	106.08	104	7	2.75E-03	91.5	
3	0	63.28*	240	1393	0.88	126.04	121	10	1.11E-02	35.3	
4	2	74.91*	752	856	0.82	149.33	146	11	3.48E-02	7.3	1.69E+00
5	2	77.18*	1279	794	0.87	153.87	146	11	5.92E-02	4.7	
6	3	84.20*	245	835	1.06	167.91	165	27	1.14E-02	22.0	3.21E+00
7	3	87.25	538	942	1.12	174.03	165	27	2.49E-02	10.4	
8	3	89.93	375	787	1.06	179.38	165	27	1.74E-02	13.0	
9	3	92.66*	547	865	1.11	184.86	165	27	2.53E-02	14.2	
10	0	105.47	256	1130	1.62	210.50	205	11	1.19E-02	26.2	
11	0	129.03	118	771	1.30	257.66	255	7	5.46E-03	40.1	
12	0	143.69*	54	739	0.88	287.00	284	7	2.51E-03	98.3	
13	0	154.02	76	706	0.97	307.68	304	7	3.52E-03	59.4	
14	0	163.30*	37	658	0.88	326.25	324	7	1.73E-03	133.5	
15	2	183.96*	24	421	0.90	367.60	365	12	1.11E-03	149.5	1.71E+00
16	2	185.79*	456	596	1.20	371.26	365	12	2.11E-02	12.8	
17	0	209.20	196	682	1.20	418.14	414	8	9.05E-03	24.2	
18	0	238.55*	1786	865	1.00	476.88	473	8	8.27E-02	4.0	
19	0	241.63	395	541	1.65	483.05	481	7	1.83E-02	11.3	
20	0	258.83	88	429	1.21	517.47	514	7	4.09E-03	40.4	
21	2	269.95	145	559	1.43	539.73	535	11	6.73E-03	30.8	1.25E+00
22	2	271.52	39	316	1.12	542.86	535	11	1.79E-03	71.0	
23	0	277.24	94	520	1.66	554.32	551	9	4.34E-03	45.2	
24	0	295.14*	764	479	1.18	590.15	586	10	3.54E-02	6.8	
25	0	299.74	143	456	1.10	599.34	596	9	6.62E-03	28.1	
26	0	328.05	126	424	1.23	656.02	652	9	5.81E-03	30.9	
27	0	338.08*	378	448	1.17	676.10	672	8	1.75E-02	11.3	
28	0	351.74*	1158	413	1.27	703.43	699	9	5.36E-02	4.5	
29	0	391.64	59	231	1.14	783.29	780	7	2.73E-03	44.7	
30	0	401.59	22	299	0.85	803.20	799	8	1.02E-03	138.3	
31	0	409.14	148	350	2.71	818.32	813	11	6.85E-03	25.9	
32	0	463.02*	134	272	1.18	926.14	921	9	6.18E-03	26.5	
33	0	510.73*	141	503	1.39	1021.63	1014	15	6.51E-03	43.9	
34	0	561.05	37	210	1.56	1122.33	1119	9	1.71E-03	72.1	
35	0	582.88*	656	430	1.60	1166.02	1158	17	3.04E-02	8.9	
36	0	609.11*	807	364	1.52	1218.50	1211	16	3.74E-02	6.7	
37	0	632.78	36	192	0.81	1265.87	1262	9	1.68E-03	70.9	
38	0	661.25	459	234	1.53	1322.85	1317	11	2.13E-02	8.0	

Sample ID : G198530001 Acquisition date : 8-DEC-2007 09:36:41

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	703.14*	21	155	1.48	1406.66	1404	8	9.86E-04	119.2	
40	0	726.40	168	212	1.79	1453.22	1447	13	7.77E-03	19.5	
41	1	762.77*	33	148	1.89	1525.99	1522	30	1.54E-03	79.1	3.07E+00
42	1	765.60*	49	217	1.89	1531.66	1522	30	2.26E-03	70.2	
43	1	768.10	85	200	1.89	1536.66	1522	30	3.93E-03	35.1	
44	1	771.66	66	178	1.89	1543.78	1522	30	3.03E-03	43.5	
45	0	785.71	79	180	0.81	1571.90	1566	12	3.64E-03	35.9	
46	0	794.62	107	243	1.42	1589.72	1582	16	4.94E-03	34.1	
47	0	860.77	76	209	1.53	1722.07	1717	13	3.51E-03	41.6	
48	0	881.61	55	261	6.57	1763.77	1754	19	2.53E-03	72.2	
49	0	910.99*	479	175	1.79	1822.56	1816	17	2.22E-02	8.7	
50	0	933.32	48	175	5.29	1867.23	1860	13	2.23E-03	58.4	
51	5	963.97	109	132	3.02	1928.55	1921	29	5.04E-03	24.3	1.92E+00
52	5	968.50*	284	81	1.64	1937.62	1921	29	1.31E-02	9.6	
53	5	972.01	43	88	2.39	1944.64	1921	29	2.01E-03	56.9	
54	0	1000.91*	49	125	1.38	2002.45	1995	14	2.26E-03	58.6	
55	0	1119.73*	182	130	1.17	2240.17	2233	13	8.44E-03	16.1	
56	0	1163.47	22	82	1.38	2327.67	2324	10	1.01E-03	79.7	
57	0	1199.88	10	105	1.22	2400.51	2394	12	4.70E-04	186.2	
58	0	1237.10	104	131	1.91	2474.98	2467	15	4.81E-03	26.0	
59	0	1286.99	83	188	14.06	2574.77	2554	36	3.86E-03	53.3	
60	0	1335.46	50	129	7.29	2671.71	2653	23	2.33E-03	62.0	
61	0	1380.77	128	137	11.94	2762.35	2746	32	5.93E-03	29.4	
62	0	1409.39	23	78	4.20	2819.60	2811	13	1.04E-03	84.8	
63	0	1459.93*	569	63	1.69	2920.69	2912	16	2.63E-02	5.5	
64	0	1515.69	144	186	12.98	3032.21	3009	56	6.64E-03	37.4	
65	0	1629.35	45	27	0.91	3259.53	3250	16	2.07E-03	30.3	
66	0	1672.00	19	26	3.57	3344.81	3337	13	8.98E-04	58.7	
67	1	1763.40*	120	48	2.64	3527.61	3517	47	5.54E-03	18.3	1.62E+00
68	1	1776.28	37	28	2.65	3553.35	3517	47	1.70E-03	41.6	
69	0	1814.05	20	13	1.74	3628.89	3625	8	9.13E-04	40.9	
70	0	1935.75	21	25	2.74	3872.24	3865	16	9.84E-04	56.0	
71	0	2042.72	8	3	1.34	4086.11	4083	7	3.87E-04	49.5	

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]G198530001       *
* Acquisition date :  8-DEC-2007 09:36:41 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:06.64     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530001           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5332E+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)	
K-40	4.103E+00	4.962E-01	3.026E-01	0.000E+00
CS-137	2.142E-01	3.745E-02	3.416E-02	0.000E+00
EU-155	1.380E-01	7.185E-02	6.640E-02	0.000E+00
TL-208	2.747E-01	5.170E-02	3.176E-02	0.000E+00
BI-212	6.104E-01	2.374E-01	2.452E-01	0.000E+00
PB-212	6.976E-01	7.109E-02	5.193E-02	0.000E+00
BI-214	6.441E-01	9.694E-02	6.218E-02	0.000E+00
PB-214	7.046E-01	7.229E-02	7.045E-02	0.000E+00
RA-223	1.966E-01	1.194E-01	1.411E-01	0.000E+00
AC-228	9.698E-01	1.745E-01	1.276E-01	0.000E+00
PA-234M	3.278E+00	3.771E+00	3.669E+00	0.000E+00
TH-234	1.097E+00	3.167E-01	2.837E-01	0.000E+00
U-235	6.176E-02	1.192E-01	1.401E-01	0.000E+00
NP-237	4.660E-01	1.014E-01	1.216E-01	0.000E+00
AM-243	1.169E-01	1.906E-02	2.249E-02	0.000E+00
CM-243	1.249E-01	6.504E-02	5.808E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-7.987E-04	2.027E-02	3.425E-02	0.000E+00	NOT IDENT.
RH-101	-1.186E-02	1.595E-02	2.497E-02	0.000E+00	NOT IDENT.
SB-125	2.474E-02	4.762E-02	8.403E-02	0.000E+00	NOT IDENT.
PO-209	-3.174E+00	4.079E+00	6.510E+00	0.000E+00	NOT IDENT.
BI-211	-3.417E-01	5.839E-01	9.557E-01	0.000E+00	NOT IDENT.
PA-233	-2.241E-02	2.888E-02	5.036E-02	0.000E+00	NOT IDENT.
NP-236	2.520E-04	2.405E-02	3.809E-02	0.000E+00	NOT IDENT.
NP-239	1.255E-02	9.872E-02	1.710E-01	0.000E+00	NOT IDENT.
AM-241	6.672E-03	2.295E-02	3.781E-02	0.000E+00	NOT IDENT.
AM-246	-9.283E-03	6.927E-02	1.177E-01	0.000E+00	NOT IDENT.
CF-249	-1.947E-02	2.451E-02	3.360E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:34:15.16

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530001.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:36:41.
Sample ID        : G198530001           Sample quantity  : 1.53320E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:06.64  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	569	10.66*	1.061E+00	4.103E+00	4.103E+00	12.34
CS-137	661.66	459	85.10*	2.064E+00	2.134E-01	2.142E-01	17.84
EU-155	105.31	256	21.20*	7.306E+00	1.350E-01	1.380E-01	53.13
TL-208	277.36	94	6.31	4.316E+00	2.812E-01	2.812E-01	90.56
	510.77	141	22.60	2.591E+00	1.961E-01	1.961E-01	87.95
	583.19	656	84.50*	2.307E+00	2.747E-01	2.747E-01	19.20
	763.13	33	1.81	1.822E+00	8.213E-01	8.213E-01	158.39
	860.56	76	12.42	1.641E+00	3.034E-01	3.034E-01	83.40
BI-212	727.33	168	11.80*	1.901E+00	6.104E-01	6.104E-01	39.69
	785.37	79	1.10	1.776E+00	3.287E+00	3.287E+00	72.23
	1620.50	------	1.49	9.772E-01	------	Line Not Found	------
PB-212	74.81	752	10.40	7.694E+00	7.665E-01	7.665E-01	16.63
	77.11	1279	17.50	7.684E+00	7.762E-01	7.762E-01	12.34
	87.30	538	7.81	7.593E+00	7.398E-01	7.398E-01	22.20
	238.63	1786	43.30*	4.824E+00	6.976E-01	6.976E-01	10.40
	300.09	143	3.28	4.062E+00	8.760E-01	8.760E-01	56.48
BI-214	609.31	807	46.10*	2.219E+00	6.441E-01	6.441E-01	15.36
	768.36	85	4.94	1.811E+00	7.737E-01	7.737E-01	70.51
	806.17	------	1.22	1.737E+00	------	Line Not Found	------
	934.06	48	3.03	1.532E+00	8.482E-01	8.482E-01	116.94
	1120.29	182	15.10	1.315E+00	7.495E-01	7.496E-01	32.74
	1155.19	------	1.63	1.282E+00	------	Line Not Found	------
	1238.11	104	5.79	1.212E+00	1.208E+00	1.208E+00	52.22
	1280.96	------	1.43	1.178E+00	------	Line Not Found	------
	1377.67	------	4.00	1.111E+00	------	Line Not Found	------
	1401.50	------	1.27	1.096E+00	------	Line Not Found	------
	1407.98	23	2.15	1.091E+00	7.839E-01	7.840E-01	169.67
	1509.23	------	2.11	1.033E+00	------	Line Not Found	------
	1729.60	------	2.92	9.286E-01	------	Line Not Found	------
	1764.49	120	15.40	9.147E-01	6.928E-01	6.928E-01	37.05
PB-214	74.81	752	6.44	7.694E+00	1.238E+00	1.238E+00	16.63
	77.11	1279	10.80	7.684E+00	1.258E+00	1.258E+00	12.34

Sample ID : G198530001 Acquisition date : 8-DEC-2007 09:36:41

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	538	4.84	7.593E+00	1.194E+00	1.194E+00	22.20
	242.00	395	7.43	4.780E+00	9.080E-01	9.080E-01	23.59
	295.22	764	19.30	4.112E+00	7.861E-01	7.861E-01	14.57
	351.93	1158	37.60*	3.568E+00	7.046E-01	7.046E-01	10.47
RA-223	269.46	145	13.70*	4.405E+00	1.966E-01	1.966E-01	61.94
AC-228	129.07	118	2.42	6.832E+00	5.821E-01	5.821E-01	80.80
	209.25	196	3.89	5.278E+00	7.772E-01	7.772E-01	49.03
	270.25	145	3.46	4.405E+00	7.786E-01	7.786E-01	61.94
	338.32	378	11.27	3.687E+00	7.430E-01	7.430E-01	23.23
	409.46	148	1.92	3.141E+00	2.002E+00	2.002E+00	52.01
	463.00	134	4.40	2.823E+00	8.777E-01	8.777E-01	53.32
	794.95	107	4.25	1.759E+00	1.166E+00	1.166E+00	68.58
	911.20	479	25.80*	1.564E+00	9.698E-01	9.698E-01	18.36
	964.77	109	4.99	1.491E+00	1.195E+00	1.195E+00	49.07
	968.97	284	15.80	1.485E+00	9.878E-01	9.878E-01	20.17
	1588.20	------	3.22	9.927E-01	------ Line Not Found		------
PA-234M	1001.03	49	0.84*	1.444E+00	3.278E+00	3.278E+00	117.38
TH-234	63.29	240	4.80	7.665E+00	5.324E-01	5.324E-01	70.96
	92.58	547	5.41*	7.520E+00	1.097E+00	1.097E+00	29.47
U-235	143.76	54	10.96*	6.524E+00	6.176E-02	6.176E-02	196.87
NP-237	86.48	538	12.40*	7.593E+00	4.660E-01	4.660E-01	22.20
AM-243	74.66	752	68.20*	7.694E+00	1.169E-01	1.169E-01	16.63
CM-243	103.76	256	23.00*	7.306E+00	1.244E-01	1.249E-01	53.13

Flag: "*" = Keyline

Sample ID : G198530001 Acquisition date : 8-DEC-2007 09:36:41

Total number of lines in spectrum 71
Number of unidentified lines 32
Number of lines tentatively identified by NID 39 54.93%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.103E+00	4.103E+00	0.506E+00	12.34	
CS-137	9.47E+08S	1.00	2.134E-01	2.142E-01	0.382E-01	17.84	
EU-155	1.57E+08S	1.02	1.350E-01	1.380E-01	0.733E-01	53.13	
TL-208	4.43E+17S	1.00	2.747E-01	2.747E-01	0.528E-01	19.20	
BI-212	4.43E+17S	1.00	6.104E-01	6.104E-01	2.423E-01	39.69	
PB-212	4.43E+17S	1.00	6.976E-01	6.976E-01	0.725E-01	10.40	
BI-214	5.05E+10S	1.00	6.441E-01	6.441E-01	0.989E-01	15.36	
PB-214	5.05E+10S	1.00	7.046E-01	7.046E-01	0.738E-01	10.47	
RA-223	1.04E+12S	1.00	1.966E-01	1.966E-01	1.218E-01	61.94	
AC-228	4.43E+17S	1.00	9.698E-01	9.698E-01	1.781E-01	18.36	
PA-234M	1.41E+17S	1.00	3.278E+00	3.278E+00	3.848E+00	117.38	
TH-234	1.41E+17S	1.00	1.097E+00	1.097E+00	0.323E+00	29.47	
U-235	2.22E+16S	1.00	6.176E-02	6.176E-02	12.16E-02	196.87	
NP-237	6.75E+13S	1.00	4.660E-01	4.660E-01	1.034E-01	22.20	
AM-243	2.33E+11S	1.00	1.169E-01	1.169E-01	0.194E-01	16.63	
CM-243	8.99E+08S	1.00	1.244E-01	1.249E-01	0.664E-01	53.13	
		Total Activity :	1.369E+01	1.370E+01			

Grand Total Activity : 1.369E+01 1.370E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530001 Acquisition date : 8-DEC-2007 09:36:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.70	16	941	0.81	92.84	89	8	7.62E-04	****	7.27E+00	
0	53.31	60	790	1.11	106.08	104	7	2.75E-03	****	7.49E+00	
3	84.20	245	835	1.06	167.91	165	27	1.14E-02	43.9	7.63E+00	
3	89.93	375	787	1.06	179.38	165	27	1.74E-02	26.0	7.56E+00	
0	154.02	76	706	0.97	307.68	304	7	3.52E-03	****	6.31E+00	
0	163.30	37	658	0.88	326.25	324	7	1.73E-03	****	6.12E+00	
2	183.96	24	421	0.90	367.60	365	12	1.11E-03	****	5.72E+00	
2	185.79	456	596	1.20	371.26	365	12	2.11E-02	25.6	5.69E+00	
0	258.83	88	429	1.21	517.47	514	7	4.09E-03	80.7	4.55E+00	
2	271.52	39	316	1.12	542.86	535	11	1.79E-03	****	4.39E+00	
0	328.05	126	424	1.23	656.02	652	9	5.81E-03	61.9	3.78E+00	
0	391.64	59	231	1.14	783.29	780	7	2.73E-03	89.3	3.26E+00	
0	401.59	22	299	0.85	803.20	799	8	1.02E-03	****	3.19E+00	
0	561.05	37	210	1.56	1122.33	1119	9	1.71E-03	****	2.39E+00	
0	632.78	36	192	0.81	1265.87	1262	9	1.68E-03	****	2.15E+00	
0	703.14	21	155	1.48	1406.66	1404	8	9.86E-04	****	1.96E+00	
1	765.60	49	217	1.89	1531.66	1522	30	2.26E-03	****	1.82E+00	
1	771.66	66	178	1.89	1543.78	1522	30	3.03E-03	87.1	1.80E+00	
0	881.61	55	261	6.57	1763.77	1754	19	2.53E-03	****	1.61E+00	
5	972.01	43	88	2.39	1944.64	1921	29	2.01E-03	****	1.48E+00	
0	1163.47	22	82	1.38	2327.67	2324	10	1.01E-03	****	1.27E+00	
0	1199.88	10	105	1.22	2400.51	2394	12	4.70E-04	****	1.24E+00	
0	1286.99	83	188	14.06	2574.77	2554	36	3.86E-03	****	1.17E+00	
0	1335.46	50	129	7.29	2671.71	2653	23	2.33E-03	****	1.14E+00	
0	1380.77	128	137	11.94	2762.35	2746	32	5.93E-03	58.8	1.11E+00	
0	1515.69	144	186	12.98	3032.21	3009	56	6.64E-03	74.8	1.03E+00	
0	1629.35	45	27	0.91	3259.53	3250	16	2.07E-03	60.6	9.73E-01	
0	1672.00	19	26	3.57	3344.81	3337	13	8.98E-04	****	9.54E-01	
1	1776.28	37	28	2.65	3553.35	3517	47	1.70E-03	83.2	9.10E-01	
0	1814.05	20	13	1.74	3628.89	3625	8	9.13E-04	81.7	8.95E-01	
0	1935.75	21	25	2.74	3872.24	3865	16	9.84E-04	****	8.51E-01	
0	2042.72	8	3	1.34	4086.11	4083	7	3.87E-04	99.0	8.16E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530001            *
* Acquisition date :  8-DEC-2007 09:36:41 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:06.64     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530001           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5332E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.103E+00	4.962E-01	1.514E-01	4.962E-01
CS-137	2.142E-01	3.745E-02	1.709E-02	3.745E-02
EU-155	1.380E-01	7.185E-02	3.322E-02	7.185E-02
TL-208	2.747E-01	5.170E-02	1.589E-02	5.170E-02
BI-212	6.104E-01	2.374E-01	1.227E-01	2.374E-01
PB-212	6.976E-01	7.109E-02	2.598E-02	7.109E-02
BI-214	6.441E-01	9.694E-02	3.111E-02	9.694E-02
PB-214	7.046E-01	7.229E-02	3.525E-02	7.229E-02
RA-223	1.966E-01	1.194E-01	7.060E-02	1.194E-01
AC-228	9.698E-01	1.745E-01	6.383E-02	1.745E-01
PA-234M	3.278E+00	3.771E+00	1.835E+00	3.771E+00
TH-234	1.097E+00	3.167E-01	1.419E-01	3.167E-01
U-235	6.176E-02	1.192E-01	7.009E-02	1.192E-01
NP-237	4.660E-01	1.014E-01	6.081E-02	1.014E-01
AM-243	1.169E-01	1.906E-02	1.125E-02	1.906E-02
CM-243	1.249E-01	6.504E-02	2.906E-02	6.504E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-7.987E-04	2.027E-02	1.714E-02	2.027E-02	NOT IDENT.
RH-101	-1.186E-02	1.595E-02	1.249E-02	1.595E-02	NOT IDENT.
SB-125	2.474E-02	4.762E-02	4.204E-02	4.762E-02	NOT IDENT.
PO-209	-3.174E+00	4.079E+00	3.257E+00	4.079E+00	NOT IDENT.
BI-211	-3.417E-01	5.839E-01	4.781E-01	5.839E-01	NOT IDENT.
PA-233	-2.241E-02	2.888E-02	2.520E-02	2.888E-02	NOT IDENT.
NP-236	2.520E-04	2.405E-02	1.906E-02	2.405E-02	NOT IDENT.
NP-239	1.255E-02	9.872E-02	8.553E-02	9.872E-02	NOT IDENT.
AM-241	6.672E-03	2.295E-02	1.891E-02	2.295E-02	NOT IDENT.
AM-246	-9.283E-03	6.927E-02	5.886E-02	6.927E-02	NOT IDENT.
CF-249	-1.947E-02	2.451E-02	1.681E-02	2.451E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	599.4585
63.29	655.3747
74.66	818.9072
74.81	819.3243
74.81	819.3243
77.11	825.7101
77.11	825.7101
86.48	777.2648
87.30	779.2079
87.30	779.2079
92.58	791.5156
98.44	632.6826
103.76	569.3222
105.31	605.3371
129.07	646.8417
143.76	608.4580
198.00	586.5237
209.25	574.0410
228.18	511.9468
238.63	731.5170
242.00	543.4619
269.46	455.0362
270.25	455.4832
277.36	433.5146
295.22	387.0126
300.09	446.4332
312.17	410.2210
338.32	414.6115
351.93	566.0886
387.59	362.5325
409.46	310.7539
427.87	312.5420
463.00	305.9257
510.77	297.7816
583.19	249.2478
609.31	263.7558
661.66	234.0352
727.33	198.8081
763.13	177.1063
768.36	177.5724
785.37	160.7979
794.95	166.2049
806.17	170.3769
831.80	211.8480
860.56	190.5766
896.60	185.2522
911.20	176.5039
934.06	151.1776
964.77	141.9680
968.97	142.2107
1001.03	132.6060
1078.86	136.6132
1120.29	133.4150
1155.19	123.2361
1173.23	122.9891
1238.11	131.7764
1280.96	114.8013
1332.51	95.2542
1377.67	76.2544
1401.50	77.0262
1407.98	93.8232
1460.80	80.0127
1509.23	68.5435
1588.20	87.7491
1620.50	57.4156
1729.60	54.1405
1764.49	44.2928

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530001

Total Uranium Activity	2.8577E-02	ug/g
Total Uranium Counting Unc.	5.5133E-02	ug/g
Total Uranium Tpu	5.5133E-08	ug/g
Total Uranium Mda	3.2432E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:34:49.83

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530002.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:37:37.
Sample ID        : G198530002           Sample quantity  : 1.47050E+02 GRAM
Detector name    : GAM14                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.37  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.30*	58	785	0.75	92.57	89	9	2.68E-03	96.3	
2	0	63.45*	115	922	1.78	126.86	123	8	5.34E-03	50.0	
3	3	74.98*	936	1438	1.85	149.92	142	18	4.34E-02	9.2	1.95E+00
4	3	77.24*	1307	1110	1.45	154.43	142	18	6.05E-02	5.9	
5	3	84.33*	217	1252	1.78	168.61	160	32	1.00E-02	33.2	9.92E-01
6	3	87.26	548	882	1.27	174.48	160	32	2.54E-02	10.5	
7	3	89.80	443	1072	1.61	179.55	160	32	2.05E-02	15.4	
8	3	92.87*	573	1141	1.84	185.69	160	32	2.65E-02	13.7	
9	0	99.32	178	908	2.44	198.59	194	10	8.24E-03	32.6	
10	0	106.08	50	824	1.45	212.10	209	8	2.29E-03	101.0	
11	0	129.21	253	1063	1.72	258.33	252	12	1.17E-02	26.5	
12	0	143.03*	139	1040	2.04	285.98	281	12	6.45E-03	49.5	
13	0	185.75*	459	1097	1.57	371.39	365	13	2.12E-02	16.6	
14	0	209.46	184	872	1.66	418.79	412	11	8.53E-03	31.9	
15	0	222.19	41	542	2.35	444.24	442	8	1.90E-03	99.1	
16	2	238.47*	2788	696	1.42	476.80	471	19	1.29E-01	2.7	1.56E+00
17	2	241.48	686	678	1.63	482.82	471	19	3.18E-02	9.3	
18	0	269.82	205	654	1.45	539.48	534	12	9.51E-03	25.8	
19	0	278.11	105	607	1.43	556.06	549	12	4.86E-03	48.3	
20	2	295.08*	1024	453	1.42	590.00	584	20	4.74E-02	5.0	1.59E+00
21	2	299.67*	189	361	1.76	599.17	584	20	8.74E-03	21.9	
22	0	327.84	206	472	1.73	655.51	650	12	9.53E-03	22.3	
23	0	337.92	571	353	1.52	675.66	671	9	2.64E-02	7.3	
24	0	351.60*	1816	450	1.55	703.01	696	13	8.41E-02	3.5	
25	0	408.56	73	432	1.51	816.93	810	14	3.38E-03	62.0	
26	0	445.87	48	185	1.22	891.55	888	8	2.24E-03	50.8	
27	0	462.77	118	301	1.53	925.33	920	11	5.47E-03	29.8	
28	0	510.63*	325	345	2.07	1021.05	1014	17	1.50E-02	17.3	
29	0	540.92	94	269	4.59	1081.63	1074	17	4.35E-03	41.2	
30	0	567.83*	259	371	3.08	1135.45	1128	15	1.20E-02	18.6	
31	0	582.91*	833	276	1.57	1165.62	1159	14	3.86E-02	5.7	
32	0	609.16*	1334	254	1.71	1218.11	1212	16	6.17E-02	4.0	
33	0	661.37	444	187	1.55	1322.54	1317	11	2.06E-02	7.6	
34	0	665.40	58	109	1.37	1330.60	1327	8	2.70E-03	33.7	
35	0	727.07	150	202	1.51	1453.96	1449	14	6.95E-03	21.8	
36	1	767.96	126	122	2.02	1535.75	1531	18	5.81E-03	18.5	2.11E+00
37	1	771.90	46	117	2.02	1543.63	1531	18	2.11E-03	47.5	
38	0	785.95	76	117	1.14	1571.74	1566	11	3.52E-03	29.9	

Sample ID : G198530002 Acquisition date : 8-DEC-2007 09:37:37

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	795.29	81	168	2.02	1590.42	1583	14	3.73E-03	36.1	
40	0	860.73	125	114	1.47	1721.34	1715	14	5.80E-03	20.0	
41	0	911.06*	637	84	1.93	1822.02	1814	16	2.95E-02	5.3	
42	0	934.28*	92	84	2.52	1868.48	1863	13	4.27E-03	25.3	
43	4	955.39	27	111	2.80	1910.72	1905	43	1.27E-03	66.2	2.50E+00
44	4	964.55*	102	109	2.17	1929.04	1905	43	4.71E-03	24.3	
45	4	968.85*	343	74	2.00	1937.63	1905	43	1.59E-02	8.2	
46	3	1001.21	56	56	2.34	2002.37	1995	17	2.60E-03	33.0	1.12E+00
47	3	1004.20	25	28	1.48	2008.36	1995	17	1.16E-03	42.7	
48	0	1120.15*	255	120	2.05	2240.36	2233	15	1.18E-02	11.5	
49	0	1150.24	19	89	3.79	2300.58	2297	11	8.57E-04	101.0	
50	0	1191.39	16	68	0.86	2382.92	2377	10	7.31E-04	100.7	
51	0	1207.61	37	67	3.74	2415.38	2409	14	1.72E-03	49.3	
52	0	1238.30	149	100	1.70	2476.77	2470	15	6.90E-03	16.8	
53	0	1281.63	22	44	1.50	2563.49	2558	9	9.98E-04	60.0	
54	0	1285.91	31	55	2.71	2572.05	2566	11	1.43E-03	50.0	
55	0	1294.83	21	44	1.70	2589.91	2585	9	9.55E-04	62.5	
56	0	1301.99	11	78	0.81	2604.23	2594	13	5.01E-04	171.1	
57	0	1357.83	20	28	1.26	2715.98	2711	9	9.28E-04	53.2	
58	0	1378.14	84	63	1.88	2756.64	2750	15	3.91E-03	24.1	
59	0	1408.23	43	61	1.39	2816.84	2812	13	1.98E-03	40.7	
60	0	1460.57*	901	52	2.04	2921.61	2913	16	4.17E-02	3.9	
61	0	1509.56	48	76	4.99	3019.66	3010	19	2.24E-03	45.6	
62	1	1587.96	66	16	2.34	3176.58	3170	24	3.04E-03	20.4	1.33E+00
63	1	1592.04	30	27	2.34	3184.75	3170	24	1.39E-03	43.2	
64	0	1622.79	48	51	3.95	3246.30	3237	17	2.21E-03	38.3	
65	0	1640.93	24	19	4.46	3282.61	3276	12	1.10E-03	43.1	
66	0	1712.78	9	35	3.44	3426.45	3414	14	4.09E-04	151.2	
67	0	1729.64	81	31	2.72	3460.19	3451	20	3.77E-03	20.8	
68	0	1764.07	237	35	1.94	3529.13	3518	20	1.10E-02	8.9	
69	0	1832.71	19	30	0.58	3666.55	3657	18	8.99E-04	71.1	
70	0	1939.05	19	21	4.64	3879.45	3873	15	8.88E-04	61.3	

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]G198530002       *
* Acquisition date :  8-DEC-2007 09:37:37 Detector SN#    :                 *
* Detector ID      : GAM14                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.37     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530002           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.4705E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-MAR-2007 18:40:51 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	5.845E+00	5.500E-01	2.537E-01	0.000E+00
CS-137	1.779E-01	2.985E-02	2.344E-02	0.000E+00
EU-155	2.557E-02	5.067E-02	7.419E-02	0.000E+00
TL-208	2.999E-01	3.943E-02	2.422E-02	0.000E+00
BI-212	4.710E-01	2.050E-01	1.818E-01	0.000E+00
PB-212	9.704E-01	7.862E-02	4.220E-02	0.000E+00
BI-214	9.148E-01	9.724E-02	4.636E-02	0.000E+00
PB-214	9.718E-01	8.694E-02	4.989E-02	0.000E+00
RA-223	2.469E-01	1.259E-01	1.274E-01	0.000E+00
AC-228	1.124E+00	1.529E-01	9.124E-02	0.000E+00
PA-234M	3.317E+00	2.164E+00	2.783E+00	0.000E+00
TH-234	1.177E+00	3.298E-01	3.008E-01	0.000E+00
U-235	1.426E-01	1.385E-01	1.496E-01	0.000E+00
NP-236	5.082E-02	3.265E-02	4.069E-02	0.000E+00
NP-237	5.084E-01	1.123E-01	1.364E-01	0.000E+00
AM-243	1.821E-01	3.530E-02	3.294E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	2.279E-05	1.546E-02	2.626E-02	0.000E+00	NOT IDENT.
RH-101	-5.705E-03	1.732E-02	2.588E-02	0.000E+00	NOT IDENT.
SB-125	3.050E-02	4.035E-02	7.205E-02	0.000E+00	NOT IDENT.
PO-209	-3.673E-01	3.073E+00	4.834E+00	0.000E+00	NOT IDENT.
BI-211	-2.632E-01	4.472E-01	7.539E-01	0.000E+00	NOT IDENT.
PA-233	2.602E-02	2.688E-02	4.892E-02	0.000E+00	NOT IDENT.
NP-239	3.235E-02	1.061E-01	1.753E-01	0.000E+00	NOT IDENT.
AM-241	3.460E-02	5.176E-02	8.355E-02	0.000E+00	NOT IDENT.
CM-243	-5.079E-03	6.093E-02	6.697E-02	0.000E+00	NOT IDENT.
AM-246	8.673E-03	5.388E-02	9.306E-02	0.000E+00	NOT IDENT.
CF-249	1.420E-02	1.706E-02	3.067E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:34:50.90

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530002.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:37:37.
Sample ID        : G198530002           Sample quantity  : 1.47050E+02 GRAM
Detector name    : GAM14                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.37  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	901	10.66*	1.230E+00	5.845E+00	5.845E+00	9.60
CS-137	661.66	444	85.10*	2.504E+00	1.773E-01	1.779E-01	17.12
EU-155	105.31	50	21.20*	7.950E+00	2.501E-02	2.557E-02	202.22
TL-208	277.36	105	6.31	5.052E+00	2.803E-01	2.803E-01	96.85
	510.77	325	22.60	3.130E+00	3.908E-01	3.908E-01	35.23
	583.19	833	84.50*	2.796E+00	2.999E-01	2.999E-01	13.42
	763.13	------	1.81	2.201E+00	------	Line Not Found	------
	860.56	125	12.42	1.970E+00	4.357E-01	4.357E-01	41.05
BI-212	727.33	150	11.80*	2.300E+00	4.710E-01	4.710E-01	44.41
	785.37	76	1.10	2.142E+00	2.748E+00	2.748E+00	60.42
	1620.50	------	1.49	1.140E+00	------	Line Not Found	------
PB-212	74.81	936	10.40	6.418E+00	1.194E+00	1.194E+00	19.78
	77.11	1307	17.50	6.643E+00	9.563E-01	9.563E-01	13.98
	87.30	548	7.81	7.391E+00	8.072E-01	8.072E-01	22.54
	238.63	2788	43.30*	5.646E+00	9.704E-01	9.704E-01	8.27
	300.09	189	3.28	4.779E+00	1.024E+00	1.024E+00	44.33
BI-214	609.31	1334	46.10*	2.691E+00	9.147E-01	9.148E-01	10.85
	768.36	126	4.94	2.188E+00	9.880E-01	9.881E-01	37.96
	806.17	------	1.22	2.093E+00	------	Line Not Found	------
	934.06	92	3.03	1.826E+00	1.420E+00	1.420E+00	51.36
	1120.29	255	15.10	1.544E+00	9.302E-01	9.303E-01	24.03
	1155.19	------	1.63	1.502E+00	------	Line Not Found	------
	1238.11	149	5.79	1.412E+00	1.552E+00	1.552E+00	34.17
	1280.96	22	1.43	1.370E+00	9.365E-01	9.366E-01	120.10
	1377.67	84	4.00	1.288E+00	1.394E+00	1.394E+00	48.53
	1401.50	------	1.27	1.271E+00	------	Line Not Found	------
	1407.98	43	2.15	1.266E+00	1.340E+00	1.340E+00	81.65
	1509.23	48	2.11	1.199E+00	1.624E+00	1.624E+00	91.38
	1729.60	81	2.92	1.093E+00	2.169E+00	2.169E+00	42.02
	1764.49	237	15.40	1.081E+00	1.210E+00	1.210E+00	18.73
PB-214	74.81	936	6.44	6.418E+00	1.928E+00	1.928E+00	19.78
	77.11	1307	10.80	6.643E+00	1.550E+00	1.550E+00	13.98

Sample ID : G198530002 Acquisition date : 8-DEC-2007 09:37:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	548	4.84	7.391E+00	1.303E+00	1.303E+00	22.54
	242.00	686	7.43	5.596E+00	1.404E+00	1.404E+00	19.62
	295.22	1024	19.30	4.834E+00	9.337E-01	9.337E-01	11.79
	351.93	1816	37.60*	4.228E+00	9.717E-01	9.718E-01	9.13
RA-223	269.46	205	13.70*	5.166E+00	2.469E-01	2.469E-01	52.02
AC-228	129.07	253	2.42	7.834E+00	1.136E+00	1.136E+00	53.45
	209.25	184	3.89	6.169E+00	6.536E-01	6.536E-01	64.05
	270.25	205	3.46	5.166E+00	9.776E-01	9.776E-01	52.02
	338.32	571	11.27	4.360E+00	9.882E-01	9.882E-01	15.74
	409.46	73	1.92	3.756E+00	8.610E-01	8.610E-01	124.18
	463.00	118	4.40	3.396E+00	6.729E-01	6.729E-01	60.01
	794.95	81	4.25	2.119E+00	7.620E-01	7.620E-01	72.75
	911.20	637	25.80*	1.869E+00	1.124E+00	1.124E+00	13.88
	964.77	102	4.99	1.773E+00	9.794E-01	9.794E-01	49.42
	968.97	343	15.80	1.765E+00	1.046E+00	1.046E+00	18.47
	1588.20	66	3.22	1.156E+00	1.500E+00	1.500E+00	41.12
PA-234M	1001.03	56	0.84*	1.712E+00	3.317E+00	3.317E+00	66.57
TH-234	63.29	115	4.80	4.896E+00	4.177E-01	4.177E-01	100.29
	92.58	573	5.41*	7.653E+00	1.177E+00	1.177E+00	28.60
U-235	143.76	139	10.96*	7.587E+00	1.426E-01	1.426E-01	99.11
NP-236	98.44	178	38.00*	7.846E+00	5.082E-02	5.082E-02	65.56
NP-237	86.48	548	12.40*	7.391E+00	5.084E-01	5.084E-01	22.54
AM-243	74.66	936	68.20*	6.418E+00	1.821E-01	1.821E-01	19.78

Flag: "*" = Keyline

Sample ID : G198530002 Acquisition date : 8-DEC-2007 09:37:37

Total number of lines in spectrum 70
Number of unidentified lines 26
Number of lines tentatively identified by NID 44 62.86%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.845E+00	5.845E+00	0.561E+00	9.60	
CS-137	9.47E+08S	1.00	1.773E-01	1.779E-01	0.305E-01	17.12	
EU-155	1.57E+08S	1.02	2.501E-02	2.557E-02	5.171E-02	202.22	
TL-208	4.43E+17S	1.00	2.999E-01	2.999E-01	0.402E-01	13.42	
BI-212	4.43E+17S	1.00	4.710E-01	4.710E-01	2.091E-01	44.41	
PB-212	4.43E+17S	1.00	9.704E-01	9.704E-01	0.802E-01	8.27	
BI-214	5.05E+10S	1.00	9.147E-01	9.148E-01	0.992E-01	10.85	
PB-214	5.05E+10S	1.00	9.717E-01	9.718E-01	0.887E-01	9.13	
RA-223	1.04E+12S	1.00	2.469E-01	2.469E-01	1.284E-01	52.02	
AC-228	4.43E+17S	1.00	1.124E+00	1.124E+00	0.156E+00	13.88	
PA-234M	1.41E+17S	1.00	3.317E+00	3.317E+00	2.208E+00	66.57	
TH-234	1.41E+17S	1.00	1.177E+00	1.177E+00	0.337E+00	28.60	
U-235	2.22E+16S	1.00	1.426E-01	1.426E-01	1.413E-01	99.11	
NP-236	4.89E+12S	1.00	5.082E-02	5.082E-02	3.332E-02	65.56	
NP-237	6.75E+13S	1.00	5.084E-01	5.084E-01	1.146E-01	22.54	
AM-243	2.33E+11S	1.00	1.821E-01	1.821E-01	0.360E-01	19.78	
			---	---			
	Total Activity :		1.642E+01	1.643E+01			

Grand Total Activity : 1.642E+01 1.643E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530002 Acquisition date : 8-DEC-2007 09:37:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.30	58	785	0.75	92.57	89	9	2.68E-03	****	1.86E+00	
3	84.33	217	1252	1.78	168.61	160	32	1.00E-02	66.3	7.21E+00	
3	89.80	443	1072	1.61	179.55	160	32	2.05E-02	30.8	7.52E+00	
0	185.75	459	1097	1.57	371.39	365	13	2.12E-02	33.3	6.65E+00	
0	222.19	41	542	2.35	444.24	442	8	1.90E-03	****	5.93E+00	
0	327.84	206	472	1.73	655.51	650	12	9.53E-03	44.6	4.46E+00	
0	445.87	48	185	1.22	891.55	888	8	2.24E-03	****	3.50E+00	
0	540.92	94	269	4.59	1081.63	1074	17	4.35E-03	82.4	2.98E+00	
0	567.83	259	371	3.08	1135.45	1128	15	1.20E-02	37.2	2.86E+00	
0	665.40	58	109	1.37	1330.60	1327	8	2.70E-03	67.4	2.49E+00	
1	771.90	46	117	2.02	1543.63	1531	18	2.11E-03	95.0	2.18E+00	
4	955.39	27	111	2.80	1910.72	1905	43	1.27E-03	****	1.79E+00	
3	1004.20	25	28	1.48	2008.36	1995	17	1.16E-03	85.4	1.71E+00	
0	1150.24	19	89	3.79	2300.58	2297	11	8.57E-04	****	1.51E+00	
0	1191.39	16	68	0.86	2382.92	2377	10	7.31E-04	****	1.46E+00	
0	1207.61	37	67	3.74	2415.38	2409	14	1.72E-03	98.6	1.44E+00	
0	1285.91	31	55	2.71	2572.05	2566	11	1.43E-03	99.9	1.37E+00	
0	1294.83	21	44	1.70	2589.91	2585	9	9.55E-04	****	1.36E+00	
0	1301.99	11	78	0.81	2604.23	2594	13	5.01E-04	****	1.35E+00	
0	1357.83	20	28	1.26	2715.98	2711	9	9.28E-04	****	1.30E+00	
1	1592.04	30	27	2.34	3184.75	3170	24	1.39E-03	86.5	1.15E+00	
0	1622.79	48	51	3.95	3246.30	3237	17	2.21E-03	76.7	1.14E+00	
0	1640.93	24	19	4.46	3282.61	3276	12	1.10E-03	86.3	1.13E+00	
0	1712.78	9	35	3.44	3426.45	3414	14	4.09E-04	****	1.10E+00	
0	1832.71	19	30	0.58	3666.55	3657	18	8.99E-04	****	1.06E+00	
0	1939.05	19	21	4.64	3879.45	3873	15	8.88E-04	****	1.03E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530002            *
* Acquisition date :  8-DEC-2007 09:37:37 Detector SN#    :                 *
* Detector ID      : GAM14                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.37     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530002           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.4705E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  7-MAR-2007 18:40:51 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	5.845E+00	5.500E-01	1.269E-01	5.500E-01
CS-137	1.779E-01	2.985E-02	1.173E-02	2.985E-02
EU-155	2.557E-02	5.067E-02	3.712E-02	5.067E-02
TL-208	2.999E-01	3.943E-02	1.212E-02	3.943E-02
BI-212	4.710E-01	2.050E-01	9.095E-02	2.050E-01
PB-212	9.704E-01	7.862E-02	2.111E-02	7.862E-02
BI-214	9.148E-01	9.724E-02	2.320E-02	9.724E-02
PB-214	9.718E-01	8.694E-02	2.496E-02	8.694E-02
RA-223	2.469E-01	1.259E-01	6.372E-02	1.259E-01
AC-228	1.124E+00	1.529E-01	4.565E-02	1.529E-01
PA-234M	3.317E+00	2.164E+00	1.393E+00	2.164E+00
TH-234	1.177E+00	3.298E-01	1.505E-01	3.298E-01
U-235	1.426E-01	1.385E-01	7.485E-02	1.385E-01
NP-236	5.082E-02	3.265E-02	2.036E-02	3.265E-02
NP-237	5.084E-01	1.123E-01	6.822E-02	1.123E-01
AM-243	1.821E-01	3.530E-02	1.648E-02	3.530E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	2.279E-05	1.546E-02	1.314E-02	1.546E-02	NOT IDENT.
RH-101	-5.705E-03	1.732E-02	1.295E-02	1.732E-02	NOT IDENT.
SB-125	3.050E-02	4.035E-02	3.604E-02	4.035E-02	NOT IDENT.
PO-209	-3.673E-01	3.073E+00	2.419E+00	3.073E+00	NOT IDENT.
BI-211	-2.632E-01	4.472E-01	3.771E-01	4.472E-01	NOT IDENT.
PA-233	2.602E-02	2.688E-02	2.447E-02	2.688E-02	NOT IDENT.
NP-239	3.235E-02	1.061E-01	8.771E-02	1.061E-01	NOT IDENT.
AM-241	3.460E-02	5.176E-02	4.180E-02	5.176E-02	NOT IDENT.
CM-243	-5.079E-03	6.093E-02	3.350E-02	6.093E-02	NOT IDENT.
AM-246	8.673E-03	5.388E-02	4.656E-02	5.388E-02	NOT IDENT.
CF-249	1.420E-02	1.706E-02	1.534E-02	1.706E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	823.8544
63.29	979.6003
74.66	1133.2266
74.81	1133.3928
74.81	1133.3928
77.11	1135.9365
77.11	1135.9365
86.48	855.3831
87.30	856.0161
87.30	856.0161
92.58	860.0247
98.44	816.1641
103.76	836.8371
105.31	835.0399
129.07	812.8766
143.76	873.9590
198.00	718.0543
209.25	666.0667
228.18	674.2074
238.63	616.4695
242.00	617.4908
269.46	474.5901
270.25	474.7622
277.36	457.3835
295.22	443.1350
300.09	385.1705
312.17	394.5038
338.32	396.1362
351.93	370.6206
387.59	329.1546
409.46	338.7092
427.87	294.7572
463.00	277.2605
510.77	236.8309
583.19	197.7075
609.31	200.1896
661.66	150.3462
727.33	148.4512
763.13	130.5299
768.36	150.6303
785.37	125.4027
794.95	138.6139
806.17	125.9948
831.80	177.9589
860.56	119.0703
896.60	105.8089
911.20	119.3965
934.06	124.0354
964.77	101.5380
968.97	101.6243
1001.03	99.3684
1078.86	101.8122
1120.29	92.7187
1155.19	110.5898
1173.23	90.5964
1238.11	95.6262
1280.96	95.5786
1332.51	60.3060
1377.67	67.9390
1401.50	44.2784
1407.98	56.7321
1460.80	69.8407
1509.23	62.9883
1588.20	53.0823
1620.50	45.7031
1729.60	36.7932
1764.49	38.2030

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530002

Total Uranium Activity	6.5974E-02	ug/g
Total Uranium Counting Unc.	6.4079E-02	ug/g
Total Uranium Tpu	6.4079E-08	ug/g
Total Uranium Mda	3.4634E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:35:25.97

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530003.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:38:21.
Sample ID        : G198530003           Sample quantity  : 1.42720E+02 GRAM
Detector name    : GAM16                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:02.85  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.73*	13	806	0.99	93.67	90	8	5.94E-04	420.4	
2	0	63.28*	148	937	1.10	126.77	123	8	6.87E-03	40.0	
3	2	74.66*	969	1199	1.52	149.53	143	18	4.49E-02	7.7	1.50E+01
4	2	77.15*	1603	1029	1.27	154.52	143	18	7.42E-02	4.6	
5	2	81.42	85	617	1.16	163.04	161	33	3.93E-03	43.1	2.95E+00
6	2	84.16*	182	1077	1.53	168.54	161	33	8.41E-03	34.1	
7	2	87.16	725	912	1.38	174.53	161	33	3.36E-02	8.1	
8	2	89.97	447	748	1.12	180.14	161	33	2.07E-02	11.4	
9	2	92.79*	595	909	1.49	185.78	161	33	2.76E-02	11.6	
10	0	129.18	209	779	1.47	258.57	254	9	9.65E-03	25.1	
11	0	143.38*	68	769	0.95	286.96	284	8	3.17E-03	78.8	
12	0	185.93*	474	944	1.32	372.06	367	11	2.20E-02	14.7	
13	0	209.49	266	703	1.32	419.19	415	10	1.23E-02	19.6	
14	3	238.60*	2896	415	1.09	477.41	469	21	1.34E-01	2.3	2.51E+00
15	3	241.65*	903	603	1.95	483.51	469	21	4.18E-02	8.0	
16	0	258.68	61	297	1.48	517.57	515	6	2.84E-03	46.4	
17	0	270.15	238	658	1.35	540.52	535	12	1.10E-02	22.5	
18	0	278.02	145	530	1.01	556.25	550	11	6.70E-03	32.2	
19	2	295.20	1273	354	1.26	590.63	583	28	5.89E-02	3.8	1.06E+00
20	2	300.13	257	415	1.67	600.48	583	28	1.19E-02	16.2	
21	0	327.82	164	481	1.03	655.87	650	12	7.57E-03	28.0	
22	0	338.20	508	493	1.19	676.64	671	11	2.35E-02	9.5	
23	0	351.88*	2045	498	1.26	703.99	698	12	9.47E-02	3.2	
24	0	374.45	24	281	1.29	749.14	746	8	1.09E-03	124.8	
25	0	389.12	67	318	1.06	778.47	773	10	3.11E-03	51.5	
26	0	409.59	91	308	0.93	819.44	815	10	4.20E-03	37.6	
27	0	462.73	219	324	1.27	925.73	919	14	1.02E-02	18.7	
28	0	510.80*	164	427	2.18	1021.88	1014	16	7.60E-03	35.6	
29	0	521.98	24	132	1.34	1044.25	1043	8	1.09E-03	86.8	
30	0	549.59	55	179	0.65	1099.49	1096	10	2.54E-03	47.7	
31	0	583.14*	803	352	1.37	1166.59	1159	15	3.72E-02	6.5	
32	0	597.02	11	157	1.39	1194.36	1190	8	5.21E-04	194.7	
33	0	609.20*	1730	309	1.44	1218.74	1211	16	8.01E-02	3.4	
34	0	661.27	329	207	1.63	1322.90	1316	13	1.52E-02	10.6	
35	0	664.69	17	177	0.97	1329.74	1328	9	7.98E-04	140.7	
36	0	702.29	66	220	4.32	1404.97	1399	13	3.04E-03	48.3	
37	0	727.21	222	174	1.57	1454.83	1449	12	1.03E-02	13.7	
38	0	754.86	40	108	1.71	1510.14	1506	8	1.83E-03	48.4	

Sample ID : G198530003 Acquisition date : 8-DEC-2007 09:38:21

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	768.33	102	182	1.47	1537.08	1532	10	4.74E-03	26.6	
40	0	785.66	71	166	1.33	1571.75	1567	13	3.30E-03	39.4	
41	0	794.12	97	166	1.59	1588.68	1582	15	4.48E-03	30.7	
42	0	806.23	28	148	0.93	1612.91	1608	12	1.31E-03	88.9	
43	0	827.65	10	176	4.79	1655.78	1652	14	4.83E-04	270.8	
44	0	859.86	101	158	1.60	1720.22	1716	14	4.66E-03	28.1	
45	0	910.88*	582	164	1.38	1822.30	1814	16	2.69E-02	6.6	
46	1	925.91	44	55	2.10	1852.38	1847	29	2.04E-03	40.0	2.06E+00
47	1	933.91	110	86	2.11	1868.38	1847	29	5.09E-03	19.9	
48	3	964.33	104	150	2.13	1929.25	1919	29	4.80E-03	25.3	1.76E+00
49	3	968.63	325	99	1.66	1937.85	1919	29	1.50E-02	8.0	
50	4	996.33	25	31	1.90	1993.28	1991	21	1.16E-03	39.3	3.35E+00
51	4	1000.22*	25	145	2.85	2001.06	1991	21	1.15E-03	120.2	
52	0	1120.07*	313	148	1.62	2240.88	2235	15	1.45E-02	11.2	
53	0	1236.91	123	187	1.83	2474.71	2467	19	5.70E-03	28.0	
54	0	1377.32	131	60	1.69	2755.71	2747	16	6.08E-03	15.8	
55	0	1408.82	18	87	1.07	2818.76	2815	11	8.10E-04	110.8	
56	0	1460.11*	881	78	2.09	2921.41	2911	21	4.08E-02	4.4	
57	0	1509.30	40	70	1.27	3019.86	3012	16	1.87E-03	48.3	
58	0	1552.30	42	20	6.28	3105.94	3096	18	1.93E-03	30.7	
59	0	1587.25	48	53	2.70	3175.89	3171	11	2.21E-03	32.8	
60	0	1622.55	18	58	4.74	3246.55	3234	18	8.24E-04	103.5	
61	3	1660.79	35	24	2.96	3323.09	3312	30	1.61E-03	40.6	8.89E-01
62	3	1665.50	20	14	2.96	3332.53	3312	30	9.23E-04	64.8	
63	0	1691.12	20	59	3.93	3383.81	3370	26	9.18E-04	108.1	
64	0	1731.30*	49	69	1.81	3464.24	3447	20	2.29E-03	43.6	
65	0	1764.05*	286	33	2.52	3529.79	3520	19	1.32E-02	8.2	
66	0	1784.81	20	28	3.99	3571.35	3556	22	9.47E-04	69.0	
67	0	1789.43	13	6	0.81	3580.60	3577	8	6.20E-04	41.6	
68	0	1847.65	36	36	1.85	3697.16	3689	15	1.66E-03	42.1	
69	0	1893.37	17	20	5.42	3788.68	3780	16	7.75E-04	64.6	
70	0	1899.60	13	17	3.57	3801.16	3795	11	5.79E-04	69.0	
71	0	1920.98	15	17	4.19	3843.95	3833	16	6.89E-04	71.1	
72	0	1953.62	29	18	6.12	3909.31	3901	15	1.35E-03	37.3	
73	0	2042.54	4	14	0.99	4087.34	4080	9	1.72E-04	186.9	

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]G198530003       *
* Acquisition date :  8-DEC-2007 09:38:21 Detector SN#    :                 *
* Detector ID      : GAM16                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:02.85     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530003           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.4272E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-OCT-2007 14:23:01 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	5.531E+00	5.776E-01	2.084E-01	0.000E+00
CS-137	1.298E-01	2.900E-02	2.525E-02	0.000E+00
TL-208	2.858E-01	4.172E-02	2.502E-02	0.000E+00
BI-212	6.837E-01	1.926E-01	1.796E-01	0.000E+00
PB-212	1.015E+00	7.266E-02	4.024E-02	0.000E+00
BI-214	1.171E+00	1.181E-01	4.532E-02	0.000E+00
PB-214	1.094E+00	8.826E-02	4.954E-02	0.000E+00
RA-223	2.872E-01	1.277E-01	1.300E-01	0.000E+00
AC-228	1.001E+00	1.533E-01	9.222E-02	0.000E+00
PA-234M	1.429E+00	3.368E+00	2.834E+00	0.000E+00
TH-234	1.294E+00	3.082E-01	3.175E-01	0.000E+00
U-235	7.189E-02	1.111E-01	1.445E-01	0.000E+00
NP-237	7.159E-01	1.249E-01	1.446E-01	0.000E+00
AM-243	2.039E-01	3.334E-02	3.354E-02	0.000E+00
CF-249	2.210E-02	2.235E-02	2.857E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	5.621E-03	1.592E-02	2.752E-02	0.000E+00	NOT IDENT.
RH-101	-1.041E-02	1.615E-02	2.491E-02	0.000E+00	NOT IDENT.
SB-125	3.228E-02	3.777E-02	6.803E-02	0.000E+00	NOT IDENT.
EU-155	2.038E-02	4.366E-02	7.900E-02	0.000E+00	NOT IDENT.
PO-209	4.613E-01	2.971E+00	5.172E+00	0.000E+00	NOT IDENT.
BI-211	-5.681E-01	5.474E-01	7.546E-01	0.000E+00	NOT IDENT.
PA-233	2.885E-03	2.575E-02	4.599E-02	0.000E+00	NOT IDENT.
NP-236	2.606E-02	2.695E-02	4.381E-02	0.000E+00	NOT IDENT.
NP-239	-5.688E-02	9.716E-02	1.638E-01	0.000E+00	NOT IDENT.
AM-241	-1.643E-02	5.528E-02	8.869E-02	0.000E+00	NOT IDENT.
CM-243	5.059E-03	3.976E-02	7.147E-02	0.000E+00	NOT IDENT.
AM-246	1.242E-02	5.627E-02	9.697E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:35:26.97

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530003.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:38:21.
Sample ID        : G198530003           Sample quantity  : 1.42720E+02 GRAM
Detector name    : GAM16                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:02.85  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	881	10.66*	1.310E+00	5.531E+00	5.531E+00	10.66
CS-137	661.66	329	85.10*	2.618E+00	1.293E-01	1.298E-01	22.80
TL-208	277.36	145	6.31	5.192E+00	3.872E-01	3.872E-01	64.55
	510.77	164	22.60	3.251E+00	1.958E-01	1.958E-01	71.50
	583.19	803	84.50*	2.914E+00	2.858E-01	2.858E-01	14.90
	763.13	------	1.81	2.311E+00	------	Line Not Found	------
	860.56	101	12.42	2.078E+00	3.418E-01	3.418E-01	56.79
BI-212	727.33	222	11.80*	2.411E+00	6.837E-01	6.837E-01	28.75
	785.37	71	1.10	2.252E+00	2.520E+00	2.520E+00	79.22
	1620.50	------	1.49	1.212E+00	------	Line Not Found	------
PB-212	74.81	969	10.40	6.107E+00	1.337E+00	1.337E+00	16.68
	77.11	1603	17.50	6.366E+00	1.261E+00	1.261E+00	11.40
	87.30	725	7.81	7.161E+00	1.137E+00	1.137E+00	17.81
	238.63	2896	43.30*	5.779E+00	1.015E+00	1.015E+00	7.31
	300.09	257	3.28	4.911E+00	1.401E+00	1.401E+00	32.93
BI-214	609.31	1730	46.10*	2.808E+00	1.171E+00	1.171E+00	10.29
	768.36	102	4.94	2.297E+00	7.915E-01	7.915E-01	53.81
	806.17	28	1.22	2.201E+00	9.253E-01	9.254E-01	178.02
	934.06	110	3.03	1.930E+00	1.649E+00	1.649E+00	40.57
	1120.29	313	15.10	1.639E+00	1.109E+00	1.109E+00	23.12
	1155.19	------	1.63	1.595E+00	------	Line Not Found	------
	1238.11	123	5.79	1.503E+00	1.240E+00	1.240E+00	56.35
	1280.96	------	1.43	1.458E+00	------	Line Not Found	------
	1377.67	131	4.00	1.373E+00	2.097E+00	2.097E+00	32.19
	1401.50	------	1.27	1.353E+00	------	Line Not Found	------
	1407.98	18	2.15	1.348E+00	5.295E-01	5.295E-01	221.76
	1509.23	40	2.11	1.277E+00	1.317E+00	1.317E+00	96.76
	1729.60	49	2.92	1.160E+00	1.279E+00	1.279E+00	87.36
	1764.49	286	15.40	1.147E+00	1.420E+00	1.420E+00	17.48
PB-214	74.81	969	6.44	6.107E+00	2.160E+00	2.160E+00	16.68
	77.11	1603	10.80	6.366E+00	2.044E+00	2.044E+00	11.40
	87.30	725	4.84	7.161E+00	1.834E+00	1.834E+00	17.81

Sample ID : G198530003 Acquisition date : 8-DEC-2007 09:38:21

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	903	7.43	5.729E+00	1.860E+00	1.860E+00	16.90
	295.22	1273	19.30	4.971E+00	1.163E+00	1.163E+00	9.35
	351.93	2045	37.60*	4.361E+00	1.093E+00	1.094E+00	8.24
RA-223	269.46	238	13.70*	5.300E+00	2.872E-01	2.872E-01	45.36
AC-228	129.07	209	2.42	7.819E+00	9.660E-01	9.660E-01	50.63
	209.25	266	3.89	6.293E+00	9.541E-01	9.541E-01	39.67
	270.25	238	3.46	5.300E+00	1.137E+00	1.137E+00	45.36
	338.32	508	11.27	4.493E+00	8.797E-01	8.797E-01	19.82
	409.46	91	1.92	3.878E+00	1.069E+00	1.069E+00	75.46
	463.00	219	4.40	3.522E+00	1.241E+00	1.241E+00	37.84
	794.95	97	4.25	2.231E+00	8.948E-01	8.948E-01	61.96
	911.20	582	25.80*	1.973E+00	1.001E+00	1.001E+00	15.62
	964.77	104	4.99	1.875E+00	9.711E-01	9.711E-01	51.22
	968.97	325	15.80	1.867E+00	9.649E-01	9.649E-01	17.80
	1588.20	48	3.22	1.230E+00	1.055E+00	1.055E+00	65.93
PA-234M	1001.03	25	0.84*	1.814E+00	1.429E+00	1.429E+00	240.43
TH-234	63.29	148	4.80	4.592E+00	5.900E-01	5.900E-01	80.21
	92.58	595	5.41*	7.456E+00	1.294E+00	1.294E+00	24.30
U-235	143.76	68	10.96*	7.612E+00	7.189E-02	7.189E-02	157.67
NP-237	86.48	725	12.40*	7.161E+00	7.159E-01	7.159E-01	17.81
AM-243	74.66	969	68.20*	6.107E+00	2.039E-01	2.039E-01	16.68
CF-249	387.59	67	66.00*	4.037E+00	2.209E-02	2.210E-02	103.20

Flag: "*" = Keyline

Sample ID : G198530003 Acquisition date : 8-DEC-2007 09:38:21

Total number of lines in spectrum	73	
Number of unidentified lines	30	
Number of lines tentatively identified by NID	43	58.90%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.531E+00	5.531E+00	0.589E+00	10.66	
CS-137	9.47E+08S	1.00	1.293E-01	1.298E-01	0.296E-01	22.80	
TL-208	4.43E+17S	1.00	2.858E-01	2.858E-01	0.426E-01	14.90	
BI-212	4.43E+17S	1.00	6.837E-01	6.837E-01	1.966E-01	28.75	
PB-212	4.43E+17S	1.00	1.015E+00	1.015E+00	0.074E+00	7.31	
BI-214	5.05E+10S	1.00	1.171E+00	1.171E+00	0.121E+00	10.29	
PB-214	5.05E+10S	1.00	1.093E+00	1.094E+00	0.090E+00	8.24	
RA-223	1.04E+12S	1.00	2.872E-01	2.872E-01	1.303E-01	45.36	
AC-228	4.43E+17S	1.00	1.001E+00	1.001E+00	0.156E+00	15.62	
PA-234M	1.41E+17S	1.00	1.429E+00	1.429E+00	3.437E+00	240.43	
TH-234	1.41E+17S	1.00	1.294E+00	1.294E+00	0.314E+00	24.30	
U-235	2.22E+16S	1.00	7.189E-02	7.189E-02	11.34E-02	157.67	
NP-237	6.75E+13S	1.00	7.159E-01	7.159E-01	1.275E-01	17.81	
AM-243	2.33E+11S	1.00	2.039E-01	2.039E-01	0.340E-01	16.68	
CF-249	1.11E+10S	1.00	2.209E-02	2.210E-02	2.281E-02	103.20	
			---	---			
		Total Activity :	1.494E+01	1.494E+01			

Grand Total Activity : 1.494E+01 1.494E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530003 Acquisition date : 8-DEC-2007 09:38:21

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.73	13	806	0.99	93.67	90	8	5.94E-04	****	1.78E+00	
2	81.42	85	617	1.16	163.04	161	33	3.93E-03	86.3	6.75E+00	
2	84.16	182	1077	1.53	168.54	161	33	8.41E-03	68.1	6.96E+00	
2	89.97	447	748	1.12	180.14	161	33	2.07E-02	22.8	7.32E+00	
0	185.93	474	944	1.32	372.06	367	11	2.20E-02	29.4	6.76E+00	
0	258.68	61	297	1.48	517.57	515	6	2.84E-03	92.9	5.47E+00	
0	327.82	164	481	1.03	655.87	650	12	7.57E-03	56.1	4.60E+00	
0	374.45	24	281	1.29	749.14	746	8	1.09E-03	****	4.16E+00	
0	521.98	24	132	1.34	1044.25	1043	8	1.09E-03	****	3.19E+00	
0	549.59	55	179	0.65	1099.49	1096	10	2.54E-03	95.5	3.06E+00	
0	597.02	11	157	1.39	1194.36	1190	8	5.21E-04	****	2.86E+00	
0	664.69	17	177	0.97	1329.74	1328	9	7.98E-04	****	2.61E+00	
0	702.29	66	220	4.32	1404.97	1399	13	3.04E-03	96.7	2.49E+00	
0	754.86	40	108	1.71	1510.14	1506	8	1.83E-03	96.9	2.33E+00	
0	827.65	10	176	4.79	1655.78	1652	14	4.83E-04	****	2.15E+00	
1	925.91	44	55	2.10	1852.38	1847	29	2.04E-03	80.1	1.94E+00	
4	996.33	25	31	1.90	1993.28	1991	21	1.16E-03	78.6	1.82E+00	
0	1552.30	42	20	6.28	3105.94	3096	18	1.93E-03	61.4	1.25E+00	
0	1622.55	18	58	4.74	3246.55	3234	18	8.24E-04	****	1.21E+00	
3	1660.79	35	24	2.96	3323.09	3312	30	1.61E-03	81.1	1.19E+00	
3	1665.50	20	14	2.96	3332.53	3312	30	9.23E-04	****	1.19E+00	
0	1691.12	20	59	3.93	3383.81	3370	26	9.18E-04	****	1.18E+00	
0	1784.81	20	28	3.99	3571.35	3556	22	9.47E-04	****	1.14E+00	
0	1789.43	13	6	0.81	3580.60	3577	8	6.20E-04	83.1	1.14E+00	
0	1847.65	36	36	1.85	3697.16	3689	15	1.66E-03	84.2	1.12E+00	
0	1893.37	17	20	5.42	3788.68	3780	16	7.75E-04	****	1.10E+00	
0	1899.60	13	17	3.57	3801.16	3795	11	5.79E-04	****	1.10E+00	
0	1920.98	15	17	4.19	3843.95	3833	16	6.89E-04	****	1.09E+00	
0	1953.62	29	18	6.12	3909.31	3901	15	1.35E-03	74.5	1.08E+00	
0	2042.54	4	14	0.99	4087.34	4080	9	1.72E-04	****	1.06E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530003            *
* Acquisition date :  8-DEC-2007 09:38:21 Detector SN#    :                 *
* Detector ID      : GAM16                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:02.85     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530003           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.4272E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  1-OCT-2007 14:23:01 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	5.531E+00	5.776E-01	1.043E-01	5.776E-01
CS-137	1.298E-01	2.900E-02	1.263E-02	2.900E-02
TL-208	2.858E-01	4.172E-02	1.252E-02	4.172E-02
BI-212	6.837E-01	1.926E-01	8.986E-02	1.926E-01
PB-212	1.015E+00	7.266E-02	2.013E-02	7.266E-02
BI-214	1.171E+00	1.181E-01	2.267E-02	1.181E-01
PB-214	1.094E+00	8.826E-02	2.478E-02	8.826E-02
RA-223	2.872E-01	1.277E-01	6.502E-02	1.277E-01
AC-228	1.001E+00	1.533E-01	4.614E-02	1.533E-01
PA-234M	1.429E+00	3.368E+00	1.418E+00	3.368E+00
TH-234	1.294E+00	3.082E-01	1.588E-01	3.082E-01
U-235	7.189E-02	1.111E-01	7.230E-02	1.111E-01
NP-237	7.159E-01	1.249E-01	7.233E-02	1.249E-01
AM-243	2.039E-01	3.334E-02	1.678E-02	3.334E-02
CF-249	2.210E-02	2.235E-02	1.429E-02	2.235E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	5.621E-03	1.592E-02	1.377E-02	1.592E-02	NOT IDENT.
RH-101	-1.041E-02	1.615E-02	1.246E-02	1.615E-02	NOT IDENT.
SB-125	3.228E-02	3.777E-02	3.404E-02	3.777E-02	NOT IDENT.
EU-155	2.038E-02	4.366E-02	3.952E-02	4.366E-02	NOT IDENT.
PO-209	4.613E-01	2.971E+00	2.588E+00	2.971E+00	NOT IDENT.
BI-211	-5.681E-01	5.474E-01	3.775E-01	5.474E-01	NOT IDENT.
PA-233	2.885E-03	2.575E-02	2.301E-02	2.575E-02	NOT IDENT.
NP-236	2.606E-02	2.695E-02	2.192E-02	2.695E-02	NOT IDENT.
NP-239	-5.688E-02	9.716E-02	8.193E-02	9.716E-02	NOT IDENT.
AM-241	-1.643E-02	5.528E-02	4.437E-02	5.528E-02	NOT IDENT.
CM-243	5.059E-03	3.976E-02	3.576E-02	3.976E-02	NOT IDENT.
AM-246	1.242E-02	5.627E-02	4.851E-02	5.627E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	865.9094
63.29	903.8417
74.66	1025.9266
74.81	1026.1379
74.81	1026.1379
77.11	1029.3622
77.11	1029.3622
86.48	860.9418
87.30	861.8287
87.30	861.8287
92.58	867.4510
98.44	778.5248
103.76	856.7219
105.31	836.6359
129.07	763.2040
143.76	783.1230
198.00	708.1647
209.25	731.2625
228.18	647.3354
238.63	558.6177
242.00	559.8643
269.46	495.0271
270.25	495.2701
277.36	439.5652
295.22	436.4180
300.09	437.6367
312.17	393.8034
338.32	434.4694
351.93	369.4135
387.59	327.6419
409.46	361.5555
427.87	261.5362
463.00	249.7695
510.77	249.6665
583.19	217.2649
609.31	197.3610
661.66	180.6956
727.33	150.8639
763.13	162.7466
768.36	197.7935
785.37	146.7202
794.95	157.8076
806.17	182.5192
831.80	211.0195
860.56	146.6340
896.60	132.8707
911.20	128.6169
934.06	102.5438
964.77	116.8667
968.97	116.9873
1001.03	109.1449
1078.86	116.1335
1120.29	115.2293
1155.19	110.0600
1173.23	96.3027
1238.11	113.0481
1280.96	87.0898
1332.51	63.8966
1377.67	56.1551
1401.50	86.6137
1407.98	76.5176
1460.80	50.4405
1509.23	56.2974
1588.20	68.6845
1620.50	45.4118
1729.60	45.5114
1764.49	37.7745

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530003

Total Uranium Activity	3.3264E-02	ug/g
Total Uranium Counting Unc.	5.1400E-02	ug/g
Total Uranium Tpu	5.1400E-08	ug/g
Total Uranium Mda	3.3452E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:36:02.66

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530004.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:38:57.
Sample ID        : G198530004           Sample quantity  : 1.30550E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:08.52  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.58*	57	625	0.91	93.66	90	8	2.65E-03	93.1	
2	0	63.37*	209	1145	0.90	127.20	122	10	9.69E-03	34.5	
3	0	70.63	51	720	0.60	141.70	139	6	2.37E-03	83.8	
4	3	73.01*	33	598	1.16	146.46	144	15	1.51E-03	127.5	2.71E+00
5	3	74.92*	1000	721	0.92	150.28	144	15	4.63E-02	5.7	
6	3	77.17*	1505	726	0.94	154.77	144	15	6.97E-02	4.0	
7	0	84.31*	207	644	1.27	169.05	167	6	9.56E-03	22.7	
8	3	87.36	581	660	1.06	175.14	172	20	2.69E-02	7.9	2.50E+00
9	3	89.99	348	623	0.92	180.40	172	20	1.61E-02	12.5	
10	3	92.79*	535	684	1.23	185.98	172	20	2.48E-02	11.7	
11	0	99.72*	24	528	0.92	199.83	198	6	1.10E-03	171.0	
12	0	105.53	67	661	1.08	211.45	208	8	3.12E-03	67.3	
13	0	129.15	171	662	0.96	258.65	255	8	7.92E-03	27.2	
14	0	154.46	57	473	0.92	309.23	306	6	2.62E-03	62.4	
15	4	185.89*	314	375	1.04	372.02	368	11	1.45E-02	14.0	1.60E+00
16	0	209.30	219	446	1.11	418.80	415	8	1.01E-02	18.0	
17	0	227.69	75	330	1.41	455.56	453	7	3.49E-03	41.5	
18	6	238.69*	2177	259	1.00	477.53	470	18	1.01E-01	2.6	2.76E+00
19	6	241.58	587	359	1.79	483.31	470	18	2.72E-02	7.7	
20	0	271.01	100	439	1.43	542.11	536	10	4.63E-03	40.5	
21	0	277.53	97	355	1.05	555.16	551	9	4.49E-03	36.5	
22	0	288.40	61	287	1.33	576.88	573	8	2.82E-03	49.9	
23	0	295.39*	625	523	1.10	590.84	584	13	2.89E-02	9.0	
24	0	300.28	148	292	1.04	600.61	597	9	6.86E-03	22.5	
25	0	328.36	101	303	0.99	656.73	653	9	4.65E-03	32.7	
26	0	338.30*	338	326	1.22	676.59	673	9	1.56E-02	11.8	
27	0	352.04*	1027	318	1.09	704.04	699	9	4.76E-02	4.6	
28	0	371.97	24	144	1.30	743.89	742	6	1.12E-03	80.7	
29	0	409.74	61	194	1.09	819.35	816	8	2.84E-03	41.5	
30	0	462.93	169	209	2.27	925.66	920	11	7.83E-03	18.2	
31	0	510.94*	258	336	2.15	1021.61	1013	20	1.19E-02	22.1	
32	0	537.45	13	160	0.60	1074.60	1068	9	5.94E-04	180.6	
33	0	566.82	51	74	1.54	1133.29	1130	7	2.37E-03	31.3	
34	0	583.30*	551	219	1.24	1166.23	1161	12	2.55E-02	7.4	
35	0	609.28*	847	210	1.29	1218.15	1211	14	3.92E-02	5.2	
36	0	661.69*	235	162	1.19	1322.90	1317	11	1.09E-02	13.5	
37	0	665.54	33	92	1.44	1330.60	1328	7	1.54E-03	51.0	
38	0	727.22*	135	175	1.51	1453.88	1447	14	6.24E-03	23.7	

Sample ID : G198530004 Acquisition date : 8-DEC-2007 09:38:57

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	735.93	17	130	4.30	1471.28	1463	12	7.79E-04	138.4	
40	1	768.32	48	119	1.69	1536.04	1530	21	2.23E-03	44.3	1.22E+00
41	1	772.46	43	99	1.69	1544.31	1530	21	1.99E-03	48.4	
42	0	795.26	78	102	1.48	1589.88	1585	9	3.59E-03	26.2	
43	0	839.14	113	153	8.93	1677.59	1667	22	5.22E-03	29.6	
44	0	860.64	112	69	2.02	1720.57	1715	11	5.19E-03	17.2	
45	0	904.63	19	67	1.42	1808.50	1805	8	8.78E-04	77.8	
46	0	911.22*	393	129	1.64	1821.66	1814	17	1.82E-02	9.0	
47	0	934.20	49	84	2.09	1867.60	1862	10	2.28E-03	38.1	
48	3	964.46	77	88	2.20	1928.09	1921	23	3.55E-03	29.5	2.08E+00
49	3	969.10*	267	83	1.76	1937.36	1921	23	1.24E-02	9.4	
50	0	1000.94*	34	96	1.66	2001.01	1993	16	1.55E-03	75.7	
51	0	1109.53	40	60	2.81	2218.10	2212	12	1.84E-03	42.1	
52	0	1120.55*	111	108	1.43	2240.13	2232	13	5.13E-03	23.5	
53	0	1155.52	26	53	1.82	2310.03	2307	8	1.22E-03	51.2	
54	0	1232.55	23	24	1.05	2464.04	2461	6	1.08E-03	40.0	
55	1	1237.85	88	43	1.97	2474.64	2468	18	4.08E-03	18.6	1.45E+00
56	1	1241.36	30	25	1.97	2481.64	2468	18	1.38E-03	35.2	
57	0	1290.45	14	45	0.75	2579.79	2573	10	6.30E-04	96.2	
58	0	1328.83	19	37	2.21	2656.53	2650	10	8.62E-04	65.7	
59	0	1378.02	64	58	1.80	2754.88	2749	16	2.97E-03	29.0	
60	0	1409.52	13	42	2.12	2817.85	2811	11	6.14E-04	97.8	
61	0	1437.99	20	21	1.49	2874.78	2871	8	9.32E-04	45.8	
62	0	1460.85*	429	61	2.10	2920.49	2913	17	1.98E-02	6.7	
63	0	1496.53*	17	49	1.08	2991.83	2983	14	7.87E-04	97.8	
64	0	1556.50	16	19	3.68	3111.74	3103	13	7.33E-04	62.7	
65	0	1590.91	65	52	7.00	3180.55	3172	19	3.01E-03	30.3	
66	0	1620.74	20	35	0.56	3240.20	3233	14	9.26E-04	66.6	
67	0	1631.12	49	18	1.46	3260.95	3255	14	2.27E-03	23.1	
68	0	1664.12	23	28	5.73	3326.94	3314	19	1.08E-03	58.3	
69	2	1729.69	62	21	2.43	3458.06	3451	16	2.86E-03	20.5	2.11E+00
70	2	1732.89	16	0	1.63	3464.46	3451	16	7.19E-04	25.8	
71	0	1740.11	5	15	1.35	3478.88	3472	9	2.27E-04	152.0	
72	0	1764.52*	116	28	2.02	3527.71	3520	14	5.36E-03	14.1	
73	0	1803.39	14	17	2.11	3605.43	3594	13	6.55E-04	64.7	
74	0	1847.89	33	16	0.70	3694.43	3688	14	1.54E-03	31.5	
75	0	1873.73	9	11	1.29	3746.09	3740	12	4.35E-04	79.6	
76	0	1879.70	12	6	1.73	3758.04	3752	11	5.32E-04	49.3	
77	0	1897.97*	7	7	2.42	3794.57	3786	14	3.03E-04	123.5	
78	0	1918.54	13	19	0.62	3835.71	3825	17	5.98E-04	85.7	
79	0	1923.14	12	13	1.30	3844.91	3841	10	5.45E-04	63.7	
80	0	1987.03	13	18	0.50	3972.69	3963	18	6.02E-04	81.4	
81	0	2010.29	8	15	0.66	4019.21	4010	15	3.92E-04	105.3	

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]G198530004       *
* Acquisition date :  8-DEC-2007 09:38:57 Detector SN#    :                 *
* Detector ID      : GAM17                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:08.52     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530004           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.3055E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	4.318E+00	6.090E-01	3.224E-01	0.000E+00
CS-137	1.483E-01	4.058E-02	3.445E-02	0.000E+00
EU-155	4.591E-02	6.065E-02	7.318E-02	0.000E+00
TL-208	3.103E-01	4.978E-02	3.160E-02	0.000E+00
BI-212	6.682E-01	3.138E-01	2.746E-01	0.000E+00
PB-212	1.089E+00	1.015E-01	4.194E-02	0.000E+00
BI-214	9.111E-01	1.127E-01	6.573E-02	0.000E+00
PB-214	8.159E-01	9.040E-02	6.014E-02	0.000E+00
RA-223	1.747E-01	1.392E-01	1.475E-01	0.000E+00
AC-228	1.094E+00	2.053E-01	1.187E-01	0.000E+00
PA-234M	3.117E+00	4.632E+00	3.567E+00	0.000E+00
TH-234	1.359E+00	3.250E-01	2.844E-01	0.000E+00
NP-236	8.691E-03	2.914E-02	4.017E-02	0.000E+00
NP-237	6.390E-01	1.079E-01	1.200E-01	0.000E+00
NP-239	1.467E-01	1.199E-01	1.776E-01	0.000E+00
AM-243	1.982E-01	2.533E-02	2.416E-02	0.000E+00
CM-243	4.155E-02	5.490E-02	6.680E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	1.090E-02	2.216E-02	3.833E-02	0.000E+00	NOT IDENT.
RH-101	-4.878E-03	1.790E-02	2.756E-02	0.000E+00	NOT IDENT.
SB-125	-1.954E-02	5.121E-02	8.680E-02	0.000E+00	NOT IDENT.
PO-209	-2.244E+00	3.873E+00	6.324E+00	0.000E+00	NOT IDENT.
BI-211	1.438E-01	6.699E-01	1.020E+00	0.000E+00	NOT IDENT.
PA-233	-5.713E-03	3.043E-02	5.343E-02	0.000E+00	NOT IDENT.
U-235	2.740E-02	1.050E-01	1.672E-01	0.000E+00	NOT IDENT.
AM-241	6.007E-03	2.658E-02	4.430E-02	0.000E+00	NOT IDENT.
AM-246	6.724E-02	7.486E-02	1.340E-01	0.000E+00	NOT IDENT.
CF-249	1.842E-02	2.038E-02	3.679E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:36:03.87

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530004.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:38:57.
Sample ID        : G198530004           Sample quantity  : 1.30550E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:08.52  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	429	10.66*	8.924E-01	4.318E+00	4.318E+00	14.39
CS-137	661.66	235	85.10*	1.790E+00	1.478E-01	1.483E-01	27.92
EU-155	105.31	67	21.20*	6.792E+00	4.491E-02	4.591E-02	134.81
TL-208	277.36	97	6.31	3.930E+00	3.748E-01	3.748E-01	73.37
	510.77	258	22.60	2.281E+00	4.789E-01	4.789E-01	44.77
	583.19	551	84.50*	2.015E+00	3.103E-01	3.103E-01	16.37
	763.13	------	1.81	1.568E+00	------	Line Not Found	------
	860.56	112	12.42	1.404E+00	6.159E-01	6.159E-01	35.02
BI-212	727.33	135	11.80*	1.639E+00	6.682E-01	6.682E-01	47.92
	785.37	------	1.10	1.527E+00	------	Line Not Found	------
	1620.50	20	1.49	8.222E-01	1.565E+00	1.565E+00	133.34
PB-212	74.81	1000	10.40	7.088E+00	1.300E+00	1.300E+00	13.04
	77.11	1505	17.50	7.087E+00	1.163E+00	1.163E+00	10.34
	87.30	581	7.81	7.032E+00	1.015E+00	1.015E+00	17.23
	238.63	2177	43.30*	4.423E+00	1.089E+00	1.089E+00	9.51
	300.09	148	3.28	3.682E+00	1.177E+00	1.177E+00	45.63
BI-214	609.31	847	46.10*	1.934E+00	9.110E-01	9.111E-01	12.63
	768.36	48	4.94	1.558E+00	6.007E-01	6.007E-01	88.86
	806.17	------	1.22	1.490E+00	------	Line Not Found	------
	934.06	49	3.03	1.304E+00	1.194E+00	1.194E+00	76.50
	1120.29	111	15.10	1.112E+00	6.328E-01	6.328E-01	47.37
	1155.19	26	1.63	1.083E+00	1.434E+00	1.434E+00	102.59
	1238.11	88	5.79	1.022E+00	1.429E+00	1.429E+00	37.61
	1280.96	------	1.43	9.933E-01	------	Line Not Found	------
	1377.67	64	4.00	9.354E-01	1.643E+00	1.643E+00	58.23
	1401.50	------	1.27	9.227E-01	------	Line Not Found	------
	1407.98	13	2.15	9.185E-01	6.442E-01	6.443E-01	195.64
	1509.23	------	2.11	8.695E-01	------	Line Not Found	------
	1729.60	62	2.92	7.819E-01	2.589E+00	2.589E+00	41.44
	1764.49	116	15.40	7.701E-01	9.357E-01	9.358E-01	28.68
PB-214	74.81	1000	6.44	7.088E+00	2.099E+00	2.099E+00	13.04
	77.11	1505	10.80	7.087E+00	1.884E+00	1.884E+00	10.34

Sample ID : G198530004 Acquisition date : 8-DEC-2007 09:38:57

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	581	4.84	7.032E+00	1.637E+00	1.637E+00	17.23
	242.00	587	7.43	4.383E+00	1.729E+00	1.729E+00	17.31
	295.22	625	19.30	3.733E+00	8.309E-01	8.310E-01	19.60
	351.93	1027	37.60*	3.210E+00	8.158E-01	8.159E-01	11.31
RA-223	269.46	100	13.70*	4.007E+00	1.747E-01	1.747E-01	81.28
AC-228	129.07	171	2.42	6.356E+00	1.066E+00	1.066E+00	55.26
	209.25	219	3.89	4.864E+00	1.110E+00	1.110E+00	36.92
	270.25	100	3.46	4.007E+00	6.919E-01	6.919E-01	81.28
	338.32	338	11.27	3.324E+00	8.638E-01	8.638E-01	24.60
	409.46	61	1.92	2.800E+00	1.095E+00	1.095E+00	83.26
	463.00	169	4.40	2.502E+00	1.474E+00	1.474E+00	36.99
	794.95	78	4.25	1.509E+00	1.159E+00	1.159E+00	52.91
	911.20	393	25.80*	1.334E+00	1.094E+00	1.094E+00	19.15
	964.77	77	4.99	1.268E+00	1.161E+00	1.161E+00	59.35
	968.97	267	15.80	1.262E+00	1.284E+00	1.284E+00	19.97
	1588.20	------	3.22	8.353E-01	------ Line Not Found		------
PA-234M	1001.03	34	0.84*	1.227E+00	3.117E+00	3.117E+00	151.63
TH-234	63.29	209	4.80	7.001E+00	5.972E-01	5.972E-01	69.26
	92.58	535	5.41*	6.975E+00	1.359E+00	1.359E+00	24.41
NP-236	98.44	24	38.00*	6.882E+00	8.691E-03	8.691E-03	342.10
NP-237	86.48	581	12.40*	7.032E+00	6.390E-01	6.390E-01	17.23
NP-239	228.18	75	10.76*	4.581E+00	1.467E-01	1.467E-01	83.42
AM-243	74.66	1000	68.20*	7.088E+00	1.982E-01	1.982E-01	13.04
CM-243	103.76	67	23.00*	6.792E+00	4.140E-02	4.155E-02	134.81

Flag: "*" = Keyline

Sample ID : G198530004 Acquisition date : 8-DEC-2007 09:38:57

Total number of lines in spectrum 81
Number of unidentified lines 39
Number of lines tentatively identified by NID 42 51.85%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.318E+00	4.318E+00	0.621E+00	14.39	
CS-137	9.47E+08S	1.00	1.478E-01	1.483E-01	0.414E-01	27.92	
EU-155	1.57E+08S	1.02	4.491E-02	4.591E-02	6.188E-02	134.81	
TL-208	4.43E+17S	1.00	3.103E-01	3.103E-01	0.508E-01	16.37	
BI-212	4.43E+17S	1.00	6.682E-01	6.682E-01	3.202E-01	47.92	
PB-212	4.43E+17S	1.00	1.089E+00	1.089E+00	0.104E+00	9.51	
BI-214	5.05E+10S	1.00	9.110E-01	9.111E-01	1.150E-01	12.63	
PB-214	5.05E+10S	1.00	8.158E-01	8.159E-01	0.922E-01	11.31	
RA-223	1.04E+12S	1.00	1.747E-01	1.747E-01	1.420E-01	81.28	
AC-228	4.43E+17S	1.00	1.094E+00	1.094E+00	0.209E+00	19.15	
PA-234M	1.41E+17S	1.00	3.117E+00	3.117E+00	4.727E+00	151.63	
TH-234	1.41E+17S	1.00	1.359E+00	1.359E+00	0.332E+00	24.41	
NP-236	4.89E+12S	1.00	8.691E-03	8.691E-03	29.73E-03	342.10	
NP-237	6.75E+13S	1.00	6.390E-01	6.390E-01	1.101E-01	17.23	
NP-239	2.33E+11S	1.00	1.467E-01	1.467E-01	1.223E-01	83.42	
AM-243	2.33E+11S	1.00	1.982E-01	1.982E-01	0.258E-01	13.04	
CM-243	8.99E+08S	1.00	4.140E-02	4.155E-02	5.602E-02	134.81	
			---	---			
	Total Activity :		1.508E+01	1.509E+01			

Grand Total Activity : 1.508E+01 1.509E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530004 Acquisition date : 8-DEC-2007 09:38:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.58	57	625	0.91	93.66	90	8	2.65E-03	****	6.48E+00	
0	70.63	51	720	0.60	141.70	139	6	2.37E-03	****	7.07E+00	
3	73.01	33	598	1.16	146.46	144	15	1.51E-03	****	7.08E+00	
0	84.31	207	644	1.27	169.05	167	6	9.56E-03	45.5	7.06E+00	
3	89.99	348	623	0.92	180.40	172	20	1.61E-02	24.9	7.01E+00	
0	154.46	57	473	0.92	309.23	306	6	2.62E-03	****	5.85E+00	
4	185.89	314	375	1.04	372.02	368	11	1.45E-02	28.0	5.26E+00	
0	288.40	61	287	1.33	576.88	573	8	2.82E-03	99.8	3.81E+00	
0	328.36	101	303	0.99	656.73	653	9	4.65E-03	65.5	3.41E+00	
0	371.97	24	144	1.30	743.89	742	6	1.12E-03	****	3.06E+00	
0	537.45	13	160	0.60	1074.60	1068	9	5.94E-04	****	2.18E+00	
0	566.82	51	74	1.54	1133.29	1130	7	2.37E-03	62.5	2.07E+00	
0	665.54	33	92	1.44	1330.60	1328	7	1.54E-03	****	1.78E+00	
0	735.93	17	130	4.30	1471.28	1463	12	7.79E-04	****	1.62E+00	
1	772.46	43	99	1.69	1544.31	1530	21	1.99E-03	96.8	1.55E+00	
0	839.14	113	153	8.93	1677.59	1667	22	5.22E-03	59.1	1.44E+00	
0	904.63	19	67	1.42	1808.50	1805	8	8.78E-04	****	1.34E+00	
0	1109.53	40	60	2.81	2218.10	2212	12	1.84E-03	84.3	1.12E+00	
0	1232.55	23	24	1.05	2464.04	2461	6	1.08E-03	79.9	1.03E+00	
1	1241.36	30	25	1.97	2481.64	2468	18	1.38E-03	70.5	1.02E+00	
0	1290.45	14	45	0.75	2579.79	2573	10	6.30E-04	****	9.87E-01	
0	1328.83	19	37	2.21	2656.53	2650	10	8.62E-04	****	9.64E-01	
0	1437.99	20	21	1.49	2874.78	2871	8	9.32E-04	91.6	9.04E-01	
0	1496.53	17	49	1.08	2991.83	2983	14	7.87E-04	****	8.75E-01	
0	1556.50	16	19	3.68	3111.74	3103	13	7.33E-04	****	8.49E-01	
0	1590.91	65	52	7.00	3180.55	3172	19	3.01E-03	60.6	8.34E-01	
0	1631.12	49	18	1.46	3260.95	3255	14	2.27E-03	46.2	8.18E-01	
0	1664.12	23	28	5.73	3326.94	3314	19	1.08E-03	****	8.06E-01	
2	1732.89	16	0	1.63	3464.46	3451	16	7.19E-04	51.5	7.81E-01	
0	1740.11	5	15	1.35	3478.88	3472	9	2.27E-04	****	7.78E-01	
0	1803.39	14	17	2.11	3605.43	3594	13	6.55E-04	****	7.58E-01	
0	1847.89	33	16	0.70	3694.43	3688	14	1.54E-03	62.9	7.44E-01	
0	1873.73	9	11	1.29	3746.09	3740	12	4.35E-04	****	7.36E-01	
0	1879.70	12	6	1.73	3758.04	3752	11	5.32E-04	98.6	7.34E-01	
0	1897.97	7	7	2.42	3794.57	3786	14	3.03E-04	****	7.29E-01	
0	1918.54	13	19	0.62	3835.71	3825	17	5.98E-04	****	7.23E-01	
0	1923.14	12	13	1.30	3844.91	3841	10	5.45E-04	****	7.22E-01	
0	1987.03	13	18	0.50	3972.69	3963	18	6.02E-04	****	7.05E-01	
0	2010.29	8	15	0.66	4019.21	4010	15	3.92E-04	****	6.99E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530004            *
* Acquisition date :  8-DEC-2007 09:38:57 Detector SN#    :                 *
* Detector ID      : GAM17                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:08.52     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530004           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.3055E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.318E+00	6.090E-01	1.613E-01	6.090E-01
CS-137	1.483E-01	4.058E-02	1.724E-02	4.058E-02
EU-155	4.591E-02	6.065E-02	3.661E-02	6.065E-02
TL-208	3.103E-01	4.978E-02	1.581E-02	4.978E-02
BI-212	6.682E-01	3.138E-01	1.374E-01	3.138E-01
PB-212	1.089E+00	1.015E-01	2.098E-02	1.015E-01
BI-214	9.111E-01	1.127E-01	3.289E-02	1.127E-01
PB-214	8.159E-01	9.040E-02	3.009E-02	9.040E-02
RA-223	1.747E-01	1.392E-01	7.381E-02	1.392E-01
AC-228	1.094E+00	2.053E-01	5.939E-02	2.053E-01
PA-234M	3.117E+00	4.632E+00	1.785E+00	4.632E+00
TH-234	1.359E+00	3.250E-01	1.423E-01	3.250E-01
NP-236	8.691E-03	2.914E-02	2.010E-02	2.914E-02
NP-237	6.390E-01	1.079E-01	6.003E-02	1.079E-01
NP-239	1.467E-01	1.199E-01	8.885E-02	1.199E-01
AM-243	1.982E-01	2.533E-02	1.209E-02	2.533E-02
CM-243	4.155E-02	5.490E-02	3.342E-02	5.490E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.090E-02	2.216E-02	1.918E-02	2.216E-02	NOT IDENT.
RH-101	-4.878E-03	1.790E-02	1.379E-02	1.790E-02	NOT IDENT.
SB-125	-1.954E-02	5.121E-02	4.342E-02	5.121E-02	NOT IDENT.
PO-209	-2.244E+00	3.873E+00	3.164E+00	3.873E+00	NOT IDENT.
BI-211	1.438E-01	6.699E-01	5.104E-01	6.699E-01	NOT IDENT.
PA-233	-5.713E-03	3.043E-02	2.673E-02	3.043E-02	NOT IDENT.
U-235	2.740E-02	1.050E-01	8.363E-02	1.050E-01	NOT IDENT.
AM-241	6.007E-03	2.658E-02	2.217E-02	2.658E-02	NOT IDENT.
AM-246	6.724E-02	7.486E-02	6.702E-02	7.486E-02	NOT IDENT.
CF-249	1.842E-02	2.038E-02	1.840E-02	2.038E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	535.1217
63.29	626.7454
74.66	622.6554
74.81	622.8602
74.81	622.8602
77.11	625.9921
77.11	625.9921
86.48	502.9762
87.30	502.4298
87.30	502.4298
92.58	529.7487
98.44	510.8791
103.76	502.6132
105.31	490.7690
129.07	477.7496
143.76	502.1569
198.00	423.7539
209.25	389.9283
228.18	361.1522
238.63	305.6004
242.00	313.3443
269.46	314.5454
270.25	314.7676
277.36	279.6271
295.22	282.7539
300.09	264.0283
312.17	266.1018
338.32	272.4861
351.93	252.7218
387.59	208.3951
409.46	209.5343
427.87	231.4777
463.00	163.9677
510.77	168.5034
583.19	141.0568
609.31	167.5734
661.66	133.8275
727.33	138.4521
763.13	128.6729
768.36	125.2588
785.37	117.7571
794.95	108.8905
806.17	117.7743
831.80	110.1099
860.56	94.4319
896.60	94.6887
911.20	82.5471
934.06	77.3240
964.77	83.0689
968.97	83.1838
1001.03	67.0442
1078.86	68.6881
1120.29	65.7331
1155.19	70.2420
1173.23	68.4944
1238.11	60.7894
1280.96	65.1006
1332.51	56.8081
1377.67	57.4514
1401.50	58.4083
1407.98	46.4089
1460.80	47.2677
1509.23	46.8427
1588.20	50.0391
1620.50	31.3542
1729.60	21.8697
1764.49	19.0352

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530004

Total Uranium Activity	1.2677E-02	ug/g
Total Uranium Counting Unc.	4.8584E-02	ug/g
Total Uranium Tpu	4.8584E-08	ug/g
Total Uranium Mda	3.8693E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:36:38.90

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530005.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:47:54.
Sample ID        : G198530005           Sample quantity  : 1.47230E+02 GRAM
Detector name    : GAM18                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:04.12  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.56*	12	691	1.05	92.13	89	6	5.69E-04	370.8	
2	3	72.58	70	509	0.96	144.14	142	16	3.23E-03	47.2	5.30E-01
3	3	74.63	651	769	1.00	148.24	142	16	3.01E-02	7.8	
4	3	76.96*	1058	777	1.06	152.89	142	16	4.90E-02	5.4	
5	3	83.88*	168	900	1.34	166.73	163	29	7.76E-03	33.7	1.95E+00
6	3	87.13	518	857	1.35	173.21	163	29	2.40E-02	10.6	
7	3	89.84	423	807	1.34	178.63	163	29	1.96E-02	12.9	
8	3	92.57*	505	760	1.37	184.09	163	29	2.34E-02	12.6	
9	0	105.04	121	818	1.35	209.01	206	8	5.61E-03	41.8	
10	0	108.94	72	736	0.85	216.81	214	7	3.34E-03	63.5	
11	0	128.71	118	894	0.89	256.32	253	8	5.47E-03	44.8	
12	0	140.05*	74	612	1.43	279.00	277	6	3.40E-03	59.2	
13	0	144.21*	264	1003	1.75	287.31	283	11	1.22E-02	25.1	
14	0	154.06	105	835	0.89	307.00	303	8	4.84E-03	49.0	
15	0	185.82*	607	937	1.23	370.48	366	10	2.81E-02	11.1	
16	0	198.87*	89	582	1.51	396.58	394	7	4.13E-03	50.6	
17	0	209.46	267	800	1.18	417.74	413	9	1.24E-02	20.1	
18	3	238.50*	3316	530	1.14	475.78	468	21	1.54E-01	2.2	1.92E+00
19	3	241.47	792	728	1.71	481.73	468	21	3.67E-02	8.1	
20	0	270.03*	291	760	1.63	538.82	533	13	1.35E-02	21.2	
21	0	277.44	146	509	1.03	553.64	549	9	6.76E-03	29.1	
22	2	295.10*	1075	405	1.17	588.93	584	19	4.98E-02	4.6	9.20E-01
23	2	299.91*	191	467	1.45	598.54	584	19	8.84E-03	23.2	
24	0	327.93	150	533	0.93	654.56	650	10	6.96E-03	29.8	
25	0	338.40*	748	591	1.34	675.49	670	13	3.46E-02	8.2	
26	0	351.79*	1943	501	1.39	702.27	697	12	9.00E-02	3.3	
27	0	409.07	94	397	1.06	816.78	812	10	4.34E-03	41.1	
28	0	462.47	278	365	1.29	923.55	917	13	1.29E-02	15.3	
29	0	510.61*	278	510	2.34	1019.79	1011	19	1.29E-02	25.4	
30	0	557.04	58	279	3.41	1112.64	1108	12	2.67E-03	59.4	
31	0	571.24	38	276	2.49	1141.01	1133	11	1.74E-03	87.4	
32	0	583.01*	1072	406	1.46	1164.55	1159	14	4.97E-02	5.4	
33	0	609.11*	1511	354	1.72	1216.75	1210	14	7.00E-02	3.9	
34	0	661.39	570	326	1.43	1321.28	1315	14	2.64E-02	7.9	
35	0	694.97	19	188	1.71	1388.44	1387	8	8.88E-04	125.1	
36	0	727.13	303	240	1.71	1452.75	1446	14	1.40E-02	12.3	
37	0	755.10	56	204	1.45	1508.69	1502	12	2.60E-03	53.2	
38	0	767.93	100	248	2.47	1534.35	1529	11	4.61E-03	32.2	

Sample ID : G198530005 Acquisition date : 8-DEC-2007 09:47:54

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	771.70	60	128	2.15	1541.88	1539	8	2.77E-03	35.7	
40	0	785.93	59	199	2.71	1570.34	1564	12	2.75E-03	49.4	
41	0	795.50	179	221	1.31	1589.48	1581	16	8.31E-03	20.1	
42	0	806.40	85	301	3.83	1611.28	1604	23	3.95E-03	54.2	
43	0	823.96	45	120	4.58	1646.40	1640	12	2.08E-03	50.9	
44	0	830.25	51	156	1.77	1658.98	1653	12	2.35E-03	51.3	
45	2	836.03	97	143	2.28	1670.53	1666	23	4.48E-03	25.0	1.27E+00
46	2	839.87	73	204	2.28	1678.21	1666	23	3.37E-03	44.0	
47	0	860.93	179	253	1.75	1720.34	1712	18	8.26E-03	22.5	
48	0	911.05*	901	203	2.04	1820.58	1813	18	4.17E-02	5.2	
49	0	933.81	107	161	1.78	1866.09	1858	15	4.94E-03	27.7	
50	0	952.21	24	82	0.95	1902.89	1899	9	1.11E-03	71.5	
51	4	964.59	220	161	2.90	1927.66	1917	26	1.02E-02	16.4	1.69E+00
52	4	968.92*	500	125	1.92	1936.32	1917	26	2.31E-02	6.9	
53	0	988.46	45	88	2.96	1975.42	1969	11	2.07E-03	43.3	
54	0	1002.58*	108	145	4.95	2003.65	1995	18	5.01E-03	30.2	
55	0	1063.56*	33	99	4.10	2125.62	2120	12	1.55E-03	77.3	
56	0	1078.46	73	89	2.59	2155.42	2148	14	3.39E-03	29.9	
57	0	1094.78	35	142	1.55	2188.07	2179	15	1.60E-03	77.1	
58	0	1120.43*	254	232	2.03	2239.39	2231	19	1.18E-02	16.4	
59	0	1154.21	39	134	2.29	2306.97	2303	13	1.82E-03	62.7	
60	0	1237.42*	128	135	2.47	2473.43	2465	15	5.95E-03	23.2	
61	0	1377.42	121	102	2.79	2753.52	2744	17	5.61E-03	21.1	
62	0	1409.19	19	88	1.95	2817.09	2809	12	9.01E-04	99.7	
63	0	1443.72	39	103	6.22	2886.19	2873	22	1.81E-03	68.3	
64	0	1460.52*	1336	119	2.15	2919.79	2908	21	6.18E-02	3.5	
65	0	1497.24	30	85	2.79	2993.29	2983	18	1.39E-03	74.6	
66	0	1502.09	25	29	1.61	3002.99	3000	8	1.17E-03	41.3	
67	0	1509.67*	10	64	1.09	3018.15	3013	10	4.59E-04	198.8	
68	3	1568.85	29	23	2.62	3136.57	3133	18	1.34E-03	32.2	2.04E+00
69	3	1573.66	29	26	2.27	3146.21	3133	18	1.36E-03	37.0	
70	0	1590.50	140	132	7.16	3179.91	3167	29	6.49E-03	26.4	
71	0	1631.96	39	64	4.87	3262.86	3255	17	1.79E-03	49.9	
72	3	1729.68	83	24	2.76	3458.44	3444	22	3.82E-03	17.8	2.70E+00
73	3	1731.70	13	8	2.47	3462.49	3444	22	6.24E-04	64.0	
74	0	1742.29	12	28	1.32	3483.67	3479	10	5.35E-04	90.2	
75	0	1764.42*	291	68	2.21	3527.96	3517	19	1.35E-02	9.7	
76	0	1847.43	25	59	0.61	3694.12	3687	13	1.16E-03	66.3	
77	0	1892.69	11	46	2.29	3784.72	3774	14	5.07E-04	138.1	
78	0	1917.87	10	87	1.29	3835.12	3813	27	4.80E-04	253.2	
79	0	1977.87	17	30	4.34	3955.22	3946	17	8.01E-04	76.1	

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

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530005       *
* Acquisition date :  8-DEC-2007 09:47:54 Detector SN#    :                 *
* Detector ID      : GAM18                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:04.12     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530005           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.4723E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-OCT-2007 17:37:50 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	5.684E+00	5.835E-01	1.820E-01	0.000E+00
RH-101	1.459E-02	1.448E-02	2.041E-02	0.000E+00
CS-137	1.608E-01	2.748E-02	2.130E-02	0.000E+00
EU-155	6.424E-02	5.290E-02	6.855E-02	0.000E+00
TL-208	2.772E-01	3.431E-02	1.973E-02	0.000E+00
BI-211	4.388E-01	4.427E-01	5.521E-01	0.000E+00
BI-212	6.594E-01	1.676E-01	1.479E-01	0.000E+00
PB-212	9.700E-01	6.650E-02	3.309E-02	0.000E+00
BI-214	7.385E-01	7.474E-02	3.961E-02	0.000E+00
PB-214	8.172E-01	6.727E-02	4.012E-02	0.000E+00
RA-223	2.882E-01	1.207E-01	1.055E-01	0.000E+00
AC-228	1.077E+00	1.534E-01	6.979E-02	0.000E+00
PA-234M	4.311E+00	2.575E+00	2.125E+00	0.000E+00
U-235	2.494E-01	1.235E-01	1.241E-01	0.000E+00
NP-237	5.502E-01	1.276E-01	1.433E-01	0.000E+00
AM-243	1.658E-01	3.008E-02	3.552E-02	0.000E+00
CM-243	5.815E-02	4.788E-02	6.167E-02	0.000E+00
AM-246	9.378E-02	5.541E-02	6.255E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	1.791E-03	1.263E-02	2.130E-02	0.000E+00	NOT IDENT.
SB-125	-1.460E-02	2.954E-02	5.155E-02	0.000E+00	NOT IDENT.
PO-209	8.220E-01	2.245E+00	3.941E+00	0.000E+00	NOT IDENT.
PA-233	7.029E-03	2.205E-02	3.866E-02	0.000E+00	NOT IDENT.
TH-234	0.000E+00	3.008E-01	4.285E-01	0.000E+00	FAIL ABUN
NP-236	3.856E-02	2.476E-02	4.119E-02	0.000E+00	NOT IDENT.
NP-239	-2.813E-02	7.680E-02	1.357E-01	0.000E+00	NOT IDENT.
AM-241	-3.249E-02	6.904E-02	1.256E-01	0.000E+00	NOT IDENT.
CF-249	6.422E-03	1.370E-02	2.369E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:36:39.94

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530005.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:47:54.
Sample ID        : G198530005           Sample quantity  : 1.47230E+02 GRAM
Detector name    : GAM18                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:04.12  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	1336	10.66*	1.874E+00	5.684E+00	5.684E+00	10.47
RH-101	198.00	89	73.00*	7.356E+00	1.411E-02	1.459E-02	101.31
CS-137	661.66	570	85.10*	3.552E+00	1.602E-01	1.608E-01	17.43
EU-155	105.31	121	21.20*	7.737E+00	6.284E-02	6.424E-02	84.02
TL-208	277.36	146	6.31	6.170E+00	3.189E-01	3.189E-01	58.46
	510.77	278	22.60	4.259E+00	2.458E-01	2.458E-01	51.24
	583.19	1072	84.50*	3.891E+00	2.772E-01	2.772E-01	12.63
	763.13	------	1.81	3.183E+00	------	Line Not Found	------
	860.56	179	12.42	2.888E+00	4.230E-01	4.230E-01	45.96
BI-211	831.80	51	3.30*	2.975E+00	4.388E-01	4.388E-01	102.96
BI-212	727.33	303	11.80*	3.306E+00	6.594E-01	6.594E-01	25.94
	785.37	59	1.10	3.109E+00	1.476E+00	1.476E+00	99.18
	1620.50	------	1.49	1.751E+00	------	Line Not Found	------
PB-212	74.81	651	10.40	4.891E+00	1.087E+00	1.087E+00	18.52
	77.11	1058	17.50	5.226E+00	9.833E-01	9.833E-01	14.71
	87.30	518	7.81	6.457E+00	8.735E-01	8.735E-01	23.67
	238.63	3316	43.30*	6.709E+00	9.700E-01	9.700E-01	7.00
	300.09	191	3.28	5.901E+00	8.380E-01	8.380E-01	46.78
BI-214	609.31	1511	46.10*	3.772E+00	7.385E-01	7.385E-01	10.33
	768.36	100	4.94	3.167E+00	5.410E-01	5.410E-01	64.98
	806.17	85	1.22	3.046E+00	1.950E+00	1.950E+00	108.86
	934.06	107	3.03	2.699E+00	1.109E+00	1.109E+00	56.22
	1120.29	254	15.10	2.313E+00	6.178E-01	6.178E-01	33.48
	1155.19	39	1.63	2.255E+00	9.083E-01	9.084E-01	125.44
	1238.11	128	5.79	2.129E+00	8.860E-01	8.860E-01	46.90
	1280.96	------	1.43	2.070E+00	------	Line Not Found	------
	1377.67	121	4.00	1.956E+00	1.316E+00	1.316E+00	43.04
	1401.50	------	1.27	1.931E+00	------	Line Not Found	------
	1407.98	19	2.15	1.923E+00	4.002E-01	4.002E-01	199.63
	1509.23	10	2.11	1.831E+00	2.180E-01	2.180E-01	397.71
	1729.60	83	2.92	1.691E+00	1.421E+00	1.421E+00	36.16
	1764.49	291	15.40	1.676E+00	9.597E-01	9.597E-01	20.43

Sample ID : G198530005 Acquisition date : 8-DEC-2007 09:47:54

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	651	6.44	4.891E+00	1.755E+00	1.756E+00	18.52
	77.11	1058	10.80	5.226E+00	1.593E+00	1.593E+00	14.71
	87.30	518	4.84	6.457E+00	1.409E+00	1.410E+00	23.67
	242.00	792	7.43	6.665E+00	1.360E+00	1.360E+00	17.06
	295.22	1075	19.30	5.957E+00	7.949E-01	7.950E-01	10.63
	351.93	1943	37.60*	5.375E+00	8.172E-01	8.172E-01	8.40
RA-223	269.46	291	13.70*	6.265E+00	2.882E-01	2.882E-01	42.74
AC-228	129.07	118	2.42	8.240E+00	5.038E-01	5.038E-01	89.84
	209.25	267	3.89	7.175E+00	8.138E-01	8.138E-01	40.52
	270.25	291	3.46	6.265E+00	1.141E+00	1.141E+00	42.74
	338.32	748	11.27	5.500E+00	1.026E+00	1.026E+00	17.10
	409.46	94	1.92	4.906E+00	8.457E-01	8.457E-01	82.37
	463.00	278	4.40	4.543E+00	1.184E+00	1.184E+00	31.18
	794.95	179	4.25	3.079E+00	1.165E+00	1.165E+00	41.12
	911.20	901	25.80*	2.755E+00	1.077E+00	1.077E+00	14.54
	964.77	220	4.99	2.626E+00	1.427E+00	1.427E+00	34.18
	968.97	500	15.80	2.616E+00	1.028E+00	1.028E+00	16.62
	1588.20	------	3.22	1.772E+00	------	Line Not Found	------
PA-234M	1001.03	108	0.84*	2.541E+00	4.311E+00	4.311E+00	60.94
U-235	143.76	264	10.96*	8.193E+00	2.494E-01	2.494E-01	50.51
NP-237	86.48	518	12.40*	6.457E+00	5.502E-01	5.502E-01	23.67
AM-243	74.66	651	68.20*	4.891E+00	1.658E-01	1.658E-01	18.52
CM-243	103.76	121	23.00*	7.737E+00	5.793E-02	5.815E-02	84.02
AM-246	1078.86	73	27.80*	2.389E+00	9.378E-02	9.378E-02	60.29

Flag: "*" = Keyline

Sample ID : G198530005 Acquisition date : 8-DEC-2007 09:47:54

Total number of lines in spectrum 79
Number of unidentified lines 34
Number of lines tentatively identified by NID 45 56.96%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.684E+00	5.684E+00	0.595E+00	10.47	
RH-101	1.04E+08S	1.03	1.411E-02	1.459E-02	1.478E-02	101.31	
CS-137	9.47E+08S	1.00	1.602E-01	1.608E-01	0.280E-01	17.43	
EU-155	1.57E+08S	1.02	6.284E-02	6.424E-02	5.398E-02	84.02	
TL-208	4.43E+17S	1.00	2.772E-01	2.772E-01	0.350E-01	12.63	
BI-211	2.22E+16S	1.00	4.388E-01	4.388E-01	4.517E-01	102.96	
BI-212	4.43E+17S	1.00	6.594E-01	6.594E-01	1.710E-01	25.94	
PB-212	4.43E+17S	1.00	9.700E-01	9.700E-01	0.679E-01	7.00	
BI-214	5.05E+10S	1.00	7.385E-01	7.385E-01	0.763E-01	10.33	
PB-214	5.05E+10S	1.00	8.172E-01	8.172E-01	0.686E-01	8.40	
RA-223	1.04E+12S	1.00	2.882E-01	2.882E-01	1.232E-01	42.74	
AC-228	4.43E+17S	1.00	1.077E+00	1.077E+00	0.157E+00	14.54	
PA-234M	1.41E+17S	1.00	4.311E+00	4.311E+00	2.627E+00	60.94	
U-235	2.22E+16S	1.00	2.494E-01	2.494E-01	1.260E-01	50.51	
NP-237	6.75E+13S	1.00	5.502E-01	5.502E-01	1.302E-01	23.67	
AM-243	2.33E+11S	1.00	1.658E-01	1.658E-01	0.307E-01	18.52	
CM-243	8.99E+08S	1.00	5.793E-02	5.815E-02	4.886E-02	84.02	
AM-246	2.18E+11S	1.00	9.378E-02	9.378E-02	5.654E-02	60.29	
			---	---			
	Total Activity :		1.662E+01	1.662E+01			

Grand Total Activity : 1.662E+01 1.662E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530005 Acquisition date : 8-DEC-2007 09:47:54

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.56	12	691	1.05	92.13	89	6	5.69E-04	****	6.54E-01	
3	72.58	70	509	0.96	144.14	142	16	3.23E-03	94.4	4.58E+00	
3	83.88	168	900	1.34	166.73	163	29	7.76E-03	67.3	6.11E+00	
3	89.84	423	807	1.34	178.63	163	29	1.96E-02	25.9	6.72E+00	
3	92.57	505	760	1.37	184.09	163	29	2.34E-02	25.2	6.96E+00	T
0	108.94	72	736	0.85	216.81	214	7	3.34E-03	****	7.89E+00	
0	140.05	74	612	1.43	279.00	277	6	3.40E-03	****	8.22E+00	
0	154.06	105	835	0.89	307.00	303	8	4.84E-03	98.0	8.09E+00	
0	185.82	607	937	1.23	370.48	366	10	2.81E-02	22.3	7.58E+00	
0	327.93	150	533	0.93	654.56	650	10	6.96E-03	59.7	5.60E+00	
0	557.04	58	279	3.41	1112.64	1108	12	2.67E-03	****	4.02E+00	
0	571.24	38	276	2.49	1141.01	1133	11	1.74E-03	****	3.95E+00	
0	694.97	19	188	1.71	1388.44	1387	8	8.88E-04	****	3.42E+00	
0	755.10	56	204	1.45	1508.69	1502	12	2.60E-03	****	3.21E+00	
0	771.70	60	128	2.15	1541.88	1539	8	2.77E-03	71.4	3.15E+00	
0	823.96	45	120	4.58	1646.40	1640	12	2.08E-03	****	2.99E+00	
2	836.03	97	143	2.28	1670.53	1666	23	4.48E-03	49.9	2.96E+00	
2	839.87	73	204	2.28	1678.21	1666	23	3.37E-03	88.0	2.95E+00	
0	952.21	24	82	0.95	1902.89	1899	9	1.11E-03	****	2.65E+00	
0	988.46	45	88	2.96	1975.42	1969	11	2.07E-03	86.7	2.57E+00	
0	1063.56	33	99	4.10	2125.62	2120	12	1.55E-03	****	2.42E+00	
0	1094.78	35	142	1.55	2188.07	2179	15	1.60E-03	****	2.36E+00	
0	1443.72	39	103	6.22	2886.19	2873	22	1.81E-03	****	1.89E+00	
0	1497.24	30	85	2.79	2993.29	2983	18	1.39E-03	****	1.84E+00	
0	1502.09	25	29	1.61	3002.99	3000	8	1.17E-03	82.7	1.84E+00	
3	1568.85	29	23	2.62	3136.57	3133	18	1.34E-03	64.3	1.79E+00	
3	1573.66	29	26	2.27	3146.21	3133	18	1.36E-03	74.1	1.78E+00	
0	1590.50	140	132	7.16	3179.91	3167	29	6.49E-03	52.9	1.77E+00	
0	1631.96	39	64	4.87	3262.86	3255	17	1.79E-03	99.8	1.74E+00	
3	1731.70	13	8	2.47	3462.49	3444	22	6.24E-04	****	1.69E+00	
0	1742.29	12	28	1.32	3483.67	3479	10	5.35E-04	****	1.69E+00	
0	1847.43	25	59	0.61	3694.12	3687	13	1.16E-03	****	1.65E+00	
0	1892.69	11	46	2.29	3784.72	3774	14	5.07E-04	****	1.63E+00	
0	1917.87	10	87	1.29	3835.12	3813	27	4.80E-04	****	1.63E+00	
0	1977.87	17	30	4.34	3955.22	3946	17	8.01E-04	****	1.62E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530005            *
* Acquisition date :  8-DEC-2007 09:47:54 Detector SN#    :                 *
* Detector ID      : GAM18                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:04.12     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530005           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.4723E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-OCT-2007 17:37:50 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	LC (pCi/GRAM)	TPU
K-40	5.684E+00	5.835E-01	9.105E-02	5.835E-01
RH-101	1.459E-02	1.448E-02	1.021E-02	1.448E-02
CS-137	1.608E-01	2.748E-02	1.066E-02	2.748E-02
EU-155	6.424E-02	5.290E-02	3.430E-02	5.290E-02
TL-208	2.772E-01	3.431E-02	9.869E-03	3.431E-02
BI-211	4.388E-01	4.427E-01	2.762E-01	4.427E-01
BI-212	6.594E-01	1.676E-01	7.400E-02	1.676E-01
PB-212	9.700E-01	6.650E-02	1.655E-02	6.650E-02
BI-214	7.385E-01	7.474E-02	1.982E-02	7.474E-02
PB-214	8.172E-01	6.727E-02	2.007E-02	6.727E-02
RA-223	2.882E-01	1.207E-01	5.277E-02	1.207E-01
AC-228	1.077E+00	1.534E-01	3.492E-02	1.534E-01
PA-234M	4.311E+00	2.575E+00	1.063E+00	2.575E+00
U-235	2.494E-01	1.235E-01	6.208E-02	1.235E-01
NP-237	5.502E-01	1.276E-01	7.169E-02	1.276E-01
AM-243	1.658E-01	3.008E-02	1.777E-02	3.008E-02
CM-243	5.815E-02	4.788E-02	3.085E-02	4.788E-02
AM-246	9.378E-02	5.541E-02	3.130E-02	5.541E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.791E-03	1.263E-02	1.066E-02	1.263E-02	NOT IDENT.
SB-125	-1.460E-02	2.954E-02	2.579E-02	2.954E-02	NOT IDENT.
PO-209	8.220E-01	2.245E+00	1.972E+00	2.245E+00	NOT IDENT.
PA-233	7.029E-03	2.205E-02	1.934E-02	2.205E-02	NOT IDENT.
TH-234	1.140E+00	3.008E-01	2.144E-01	3.008E-01	FAIL ABUN
NP-236	3.856E-02	2.476E-02	2.061E-02	2.476E-02	NOT IDENT.
NP-239	-2.813E-02	7.680E-02	6.787E-02	7.680E-02	NOT IDENT.
AM-241	-3.249E-02	6.904E-02	6.281E-02	6.904E-02	NOT IDENT.
CF-249	6.422E-03	1.370E-02	1.185E-02	1.370E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	690.0153
63.29	751.1036
74.66	776.0571
74.81	776.3584
74.81	776.3584
77.11	780.9833
77.11	780.9833
86.48	716.1888
87.30	717.5681
87.30	717.5681
92.58	726.3115
98.44	618.8193
103.76	658.9068
105.31	679.9913
129.07	722.4496
143.76	705.6689
198.00	650.2344
209.25	652.2725
228.18	607.2322
238.63	536.4745
242.00	538.4889
269.46	480.0338
270.25	480.4165
277.36	490.7476
295.22	471.6227
300.09	479.1267
312.17	416.8750
338.32	369.2721
351.93	388.5358
387.59	347.8093
409.46	326.8358
427.87	319.3620
463.00	291.7220
510.77	296.8939
583.19	254.5209
609.31	287.6084
661.66	250.5352
727.33	203.5672
763.13	193.3629
768.36	208.4341
785.37	193.9038
794.95	170.4854
806.17	187.6859
831.80	180.3008
860.56	168.1522
896.60	152.2332
911.20	152.1129
934.06	142.6761
964.77	129.4648
968.97	129.6594
1001.03	128.1406
1078.86	107.4861
1120.29	135.4220
1155.19	115.8500
1173.23	130.2621
1238.11	138.8253
1280.96	98.3826
1332.51	98.8566
1377.67	92.6111
1401.50	69.4728
1407.98	100.8697
1460.80	83.5681
1509.23	89.7817
1588.20	76.0620
1620.50	67.4410
1729.60	58.6406
1764.49	54.8655

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530005

Total Uranium Activity	1.1541E-01	ug/g
Total Uranium Counting Unc.	5.7124E-02	ug/g
Total Uranium Tpu	5.7124E-08	ug/g
Total Uranium Mda	2.8725E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:37:16.00

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530006.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:48:33.
Sample ID        : G198530006           Sample quantity  : 1.56810E+02 GRAM
Detector name    : GAM19                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.39  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.64*	17	633	1.83	92.93	89	8	7.75E-04	289.8	
2	2	63.44*	107	504	1.39	126.48	123	14	4.94E-03	39.2	8.98E-01
3	2	66.45*	91	799	1.51	132.50	123	14	4.22E-03	60.0	
4	3	74.84*	600	1037	1.43	149.28	142	17	2.78E-02	11.1	9.16E-01
5	3	77.16*	899	797	1.11	153.90	142	17	4.16E-02	6.4	
6	2	87.19	410	814	1.28	173.95	164	27	1.90E-02	12.8	2.24E+00
7	2	89.89	290	832	1.45	179.34	164	27	1.34E-02	19.6	
8	2	92.81*	459	730	1.51	185.18	164	27	2.13E-02	14.1	
9	0	105.18	85	552	1.39	209.89	208	7	3.92E-03	47.1	
10	0	129.60	41	757	0.64	258.69	254	8	1.89E-03	118.1	
11	0	144.25*	46	825	1.62	287.97	283	10	2.15E-03	122.6	
12	0	153.82	127	706	1.15	307.09	303	9	5.86E-03	38.8	
13	0	185.74*	531	943	1.33	370.89	365	13	2.46E-02	13.3	
14	0	209.01	197	727	1.56	417.39	412	11	9.11E-03	27.5	
15	4	238.36*	2211	508	1.29	476.03	470	19	1.02E-01	2.9	1.37E+00
16	4	241.40	611	540	1.66	482.11	470	19	2.83E-02	9.6	
17	0	269.85	169	461	1.36	538.97	534	10	7.84E-03	24.9	
18	0	277.28	81	371	0.61	553.81	550	8	3.75E-03	42.7	
19	0	294.83	883	453	1.34	588.89	584	10	4.09E-02	5.6	
20	0	299.61	143	322	1.50	598.45	595	8	6.60E-03	23.4	
21	0	328.60	79	605	1.38	656.39	648	15	3.66E-03	68.9	
22	0	337.74*	439	523	1.52	674.65	667	14	2.03E-02	12.4	
23	0	351.41*	1501	465	1.57	701.98	696	14	6.95E-02	4.1	
24	0	408.86	49	230	1.01	816.80	813	8	2.26E-03	56.1	
25	0	452.27	14	195	1.32	903.57	897	8	6.65E-04	171.9	
26	0	462.14	134	243	1.40	923.29	919	10	6.20E-03	23.5	
27	0	510.47*	250	371	2.12	1019.91	1012	19	1.16E-02	23.4	
28	1	534.69	35	172	1.78	1068.31	1057	32	1.64E-03	73.4	1.93E+00
29	1	541.70	40	167	1.79	1082.32	1057	32	1.86E-03	64.6	
30	0	564.23	293	246	3.55	1127.35	1120	15	1.35E-02	13.1	
31	0	576.10	16	139	1.00	1151.09	1146	9	7.61E-04	131.6	
32	0	582.60*	632	235	1.50	1164.07	1159	13	2.92E-02	6.6	
33	0	608.68	1170	221	1.55	1216.21	1210	13	5.42E-02	3.9	
34	0	621.46	51	206	5.51	1241.77	1234	15	2.38E-03	62.4	
35	0	661.35	415	271	1.60	1321.51	1314	17	1.92E-02	10.4	
36	0	692.90	63	102	1.88	1384.57	1380	11	2.92E-03	33.7	
37	0	726.53	191	144	1.46	1451.81	1447	12	8.84E-03	14.5	
38	0	755.50	27	85	2.13	1509.73	1505	8	1.25E-03	63.6	

Sample ID : G198530006 Acquisition date : 8-DEC-2007 09:48:33

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	768.69	172	196	1.94	1536.09	1528	19	7.97E-03	21.1	
40	0	781.72	18	50	1.39	1562.14	1559	6	8.11E-04	68.1	
41	0	785.47	62	108	2.14	1569.64	1565	11	2.89E-03	34.5	
42	0	793.75	89	108	1.61	1586.19	1580	12	4.12E-03	25.6	
43	0	807.35	27	97	2.39	1613.39	1607	10	1.25E-03	72.4	
44	0	830.75	17	123	5.05	1660.18	1649	14	7.93E-04	140.7	
45	0	841.68	202	242	13.09	1682.03	1666	33	9.36E-03	24.7	
46	0	855.75	42	80	1.38	1710.15	1702	12	1.95E-03	45.3	
47	0	859.80	117	59	1.67	1718.26	1714	10	5.42E-03	15.3	
48	0	910.38*	498	136	1.64	1819.39	1811	17	2.31E-02	7.3	
49	0	933.13	74	99	3.87	1864.87	1858	14	3.43E-03	30.6	
50	4	963.61	113	85	2.67	1925.81	1919	22	5.21E-03	21.5	1.35E+00
51	4	968.16	305	82	1.89	1934.90	1919	22	1.41E-02	8.1	
52	0	1076.93	19	54	1.12	2152.41	2149	8	8.63E-04	72.2	
53	0	1111.11*	6	95	2.78	2220.75	2210	13	2.75E-04	350.1	
54	0	1119.45	283	74	2.06	2237.43	2232	15	1.31E-02	8.8	
55	0	1154.97	22	88	0.97	2308.48	2301	11	1.04E-03	83.9	
56	0	1237.70	138	70	2.12	2473.91	2467	19	6.38E-03	17.0	
57	5	1299.32	14	9	1.27	2597.15	2595	10	6.43E-04	38.1	1.76E+00
58	5	1301.59	26	8	1.36	2601.69	2595	10	1.21E-03	27.2	
59	0	1328.73	19	18	1.05	2655.97	2652	7	8.56E-04	44.1	
60	0	1363.97	28	47	4.42	2726.46	2718	14	1.28E-03	56.7	
61	0	1377.12*	76	66	1.48	2752.75	2745	15	3.52E-03	27.3	
62	0	1385.16	62	46	6.72	2768.84	2760	22	2.89E-03	31.2	
63	0	1406.81	64	27	1.98	2812.13	2806	11	2.96E-03	20.2	
64	0	1421.69	22	11	1.49	2841.90	2838	8	1.00E-03	34.9	
65	0	1459.64*	684	82	1.97	2917.80	2910	19	3.17E-02	5.1	
66	0	1542.61	29	19	2.16	3083.77	3078	10	1.36E-03	33.6	
67	0	1586.71	32	37	2.77	3171.99	3167	10	1.49E-03	39.6	
68	0	1591.32	29	29	1.51	3181.21	3177	9	1.32E-03	38.9	
69	0	1630.19	44	31	4.93	3258.97	3252	15	2.05E-03	30.9	
70	1	1725.68	35	20	2.09	3450.00	3445	17	1.64E-03	29.4	5.28E+00
71	1	1728.47	68	10	2.30	3455.58	3445	17	3.13E-03	17.6	
72	0	1735.00	20	15	5.45	3468.65	3461	15	9.26E-04	47.8	
73	0	1763.11*	176	36	1.28	3524.89	3518	13	8.16E-03	11.1	
74	0	1810.98	28	27	6.99	3620.65	3607	22	1.31E-03	50.7	
75	0	1857.30	8	53	0.45	3713.33	3702	23	3.88E-04	226.0	
76	0	1871.19	17	14	3.50	3741.12	3735	14	7.87E-04	52.6	
77	0	1887.02*	23	12	4.67	3772.79	3765	16	1.06E-03	49.0	
78	0	1936.38	20	26	3.23	3871.56	3863	16	9.28E-04	62.7	
79	0	2010.66	23	34	4.85	4020.19	4005	23	1.07E-03	69.0	
80	0	2029.80*	2	16	0.95	4058.49	4049	12	7.69E-05	559.0	

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]G198530006       *
* Acquisition date :  8-DEC-2007 09:48:33 Detector SN#    :                 *
* Detector ID      : GAM19                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.39     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530006           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5681E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  6-MAR-2007 21:45:12 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	4.306E+00	5.036E-01	2.110E-01	0.000E+00
CS-137	1.662E-01	3.628E-02	2.341E-02	0.000E+00
EU-155	4.728E-02	4.377E-02	7.457E-02	0.000E+00
TL-208	2.282E-01	3.393E-02	2.234E-02	0.000E+00
BI-211	2.141E-01	5.909E-01	6.583E-01	0.000E+00
BI-212	5.945E-01	1.765E-01	1.703E-01	0.000E+00
PB-212	7.922E-01	6.673E-02	3.841E-02	0.000E+00
BI-214	8.037E-01	8.615E-02	4.462E-02	0.000E+00
PB-214	8.215E-01	8.209E-02	4.640E-02	0.000E+00
RA-223	2.093E-01	1.030E-01	1.220E-01	0.000E+00
AC-228	8.640E-01	1.513E-01	8.525E-02	0.000E+00
TH-234	1.046E+00	2.971E-01	3.080E-01	0.000E+00
U-235	4.968E-02	1.194E-01	1.374E-01	0.000E+00
NP-237	4.291E-01	1.115E-01	1.421E-01	0.000E+00
AM-243	1.387E-01	3.128E-02	3.376E-02	0.000E+00
CM-243	4.280E-02	3.962E-02	6.582E-02	0.000E+00
AM-246	3.479E-02	4.932E-02	8.953E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	-7.719E-03	1.387E-02	2.289E-02	0.000E+00	NOT IDENT.
RH-101	2.314E-03	1.451E-02	2.445E-02	0.000E+00	NOT IDENT.
SB-125	1.585E-02	3.610E-02	6.542E-02	0.000E+00	NOT IDENT.
PO-209	-2.748E+00	3.430E+00	4.611E+00	0.000E+00	NOT IDENT.
PA-233	1.014E-02	2.627E-02	4.583E-02	0.000E+00	NOT IDENT.
PA-234M	1.376E+00	1.787E+00	2.945E+00	0.000E+00	NOT IDENT.
NP-236	1.700E-02	2.512E-02	4.178E-02	0.000E+00	NOT IDENT.
NP-239	4.437E-04	9.016E-02	1.581E-01	0.000E+00	NOT IDENT.
AM-241	5.707E-02	5.748E-02	9.834E-02	0.000E+00	NOT IDENT.
CF-249	-5.899E-04	1.516E-02	2.713E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:37:17.12

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530006.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:48:33.
Sample ID        : G198530006           Sample quantity  : 1.56810E+02 GRAM
Detector name    : GAM19                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.39  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	684	10.66*	1.190E+00	4.306E+00	4.306E+00	11.93
CS-137	661.66	415	85.10*	2.353E+00	1.656E-01	1.662E-01	22.28
EU-155	105.31	85	21.20*	6.897E+00	4.625E-02	4.728E-02	94.46
TL-208	277.36	81	6.31	4.620E+00	2.215E-01	2.215E-01	85.69
	510.77	250	22.60	2.906E+00	3.035E-01	3.035E-01	47.32
	583.19	632	84.50*	2.613E+00	2.282E-01	2.282E-01	15.17
	763.13	------	1.81	2.083E+00	------	Line Not Found	------
	860.56	117	12.42	1.877E+00	4.008E-01	4.008E-01	32.19
BI-211	831.80	17	3.30*	1.934E+00	2.141E-01	2.141E-01	281.62
BI-212	727.33	191	11.80*	2.173E+00	5.945E-01	5.945E-01	30.29
	785.37	62	1.10	2.031E+00	2.230E+00	2.230E+00	69.69
	1620.50	------	1.49	1.102E+00	------	Line Not Found	------
PB-212	74.81	600	10.40	5.065E+00	9.095E-01	9.095E-01	23.02
	77.11	899	17.50	5.312E+00	7.716E-01	7.716E-01	14.38
	87.30	410	7.81	6.154E+00	6.813E-01	6.813E-01	26.53
	238.63	2211	43.30*	5.144E+00	7.922E-01	7.922E-01	8.59
	300.09	143	3.28	4.366E+00	7.949E-01	7.949E-01	47.19
BI-214	609.31	1170	46.10*	2.521E+00	8.036E-01	8.037E-01	10.94
	768.36	172	4.94	2.070E+00	1.344E+00	1.344E+00	43.11
	806.17	27	1.22	1.983E+00	8.886E-01	8.886E-01	145.07
	934.06	74	3.03	1.746E+00	1.119E+00	1.119E+00	62.09
	1120.29	283	15.10	1.486E+00	1.008E+00	1.008E+00	19.07
	1155.19	22	1.63	1.445E+00	7.577E-01	7.578E-01	167.85
	1238.11	138	5.79	1.361E+00	1.394E+00	1.395E+00	34.50
	1280.96	------	1.43	1.322E+00	------	Line Not Found	------
	1377.67	76	4.00	1.246E+00	1.219E+00	1.219E+00	55.05
	1401.50	------	1.27	1.228E+00	------	Line Not Found	------
	1407.98	64	2.15	1.224E+00	1.938E+00	1.938E+00	40.86
	1509.23	------	2.11	1.160E+00	------	Line Not Found	------
	1729.60	68	2.92	1.058E+00	1.744E+00	1.744E+00	35.67
	1764.49	176	15.40	1.045E+00	8.736E-01	8.737E-01	22.88
PB-214	74.81	600	6.44	5.065E+00	1.469E+00	1.469E+00	23.02

Sample ID : G198530006 Acquisition date : 8-DEC-2007 09:48:33

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	899	10.80	5.312E+00	1.250E+00	1.250E+00	14.38
	87.30	410	4.84	6.154E+00	1.099E+00	1.099E+00	26.53
	242.00	611	7.43	5.099E+00	1.288E+00	1.288E+00	20.12
	295.22	883	19.30	4.418E+00	8.260E-01	8.261E-01	12.91
	351.93	1501	37.60*	3.877E+00	8.215E-01	8.215E-01	10.20
RA-223	269.46	169	13.70*	4.712E+00	2.093E-01	2.093E-01	50.24
AC-228	129.07	41	2.42	6.980E+00	1.927E-01	1.927E-01	236.30
	209.25	197	3.89	5.617E+00	7.189E-01	7.189E-01	55.32
	270.25	169	3.46	4.712E+00	8.287E-01	8.287E-01	50.24
	338.32	439	11.27	3.995E+00	7.781E-01	7.781E-01	25.61
	409.46	49	1.92	3.456E+00	5.862E-01	5.862E-01	112.28
	463.00	134	4.40	3.143E+00	7.728E-01	7.728E-01	47.38
	794.95	89	4.25	2.013E+00	8.309E-01	8.309E-01	52.12
	911.20	498	25.80*	1.784E+00	8.640E-01	8.640E-01	17.87
	964.77	113	4.99	1.697E+00	1.061E+00	1.061E+00	44.10
	968.97	305	15.80	1.690E+00	9.114E-01	9.114E-01	18.85
	1588.20	32	3.22	1.119E+00	7.137E-01	7.137E-01	79.43
TH-234	63.29	107	4.80	3.574E+00	4.965E-01	4.965E-01	78.74
	92.58	459	5.41*	6.479E+00	1.046E+00	1.046E+00	28.99
U-235	143.76	46	10.96*	6.797E+00	4.968E-02	4.968E-02	245.21
NP-237	86.48	410	12.40*	6.154E+00	4.291E-01	4.291E-01	26.53
AM-243	74.66	600	68.20*	5.065E+00	1.387E-01	1.387E-01	23.02
CM-243	103.76	85	23.00*	6.897E+00	4.263E-02	4.280E-02	94.46
AM-246	1078.86	19	27.80*	1.537E+00	3.479E-02	3.479E-02	144.65

Flag: "*" = Keyline

Sample ID : G198530006 Acquisition date : 8-DEC-2007 09:48:33

Total number of lines in spectrum 80
Number of unidentified lines 36
Number of lines tentatively identified by NID 44 55.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.306E+00	4.306E+00	0.514E+00	11.93	
CS-137	9.47E+08S	1.00	1.656E-01	1.662E-01	0.370E-01	22.28	
EU-155	1.57E+08S	1.02	4.625E-02	4.728E-02	4.466E-02	94.46	
TL-208	4.43E+17S	1.00	2.282E-01	2.282E-01	0.346E-01	15.17	
BI-211	2.22E+16S	1.00	2.141E-01	2.141E-01	6.030E-01	281.62	
BI-212	4.43E+17S	1.00	5.945E-01	5.945E-01	1.801E-01	30.29	
PB-212	4.43E+17S	1.00	7.922E-01	7.922E-01	0.681E-01	8.59	
BI-214	5.05E+10S	1.00	8.036E-01	8.037E-01	0.879E-01	10.94	
PB-214	5.05E+10S	1.00	8.215E-01	8.215E-01	0.838E-01	10.20	
RA-223	1.04E+12S	1.00	2.093E-01	2.093E-01	1.051E-01	50.24	
AC-228	4.43E+17S	1.00	8.640E-01	8.640E-01	1.544E-01	17.87	
TH-234	1.41E+17S	1.00	1.046E+00	1.046E+00	0.303E+00	28.99	
U-235	2.22E+16S	1.00	4.968E-02	4.968E-02	12.18E-02	245.21	
NP-237	6.75E+13S	1.00	4.291E-01	4.291E-01	1.138E-01	26.53	
AM-243	2.33E+11S	1.00	1.387E-01	1.387E-01	0.319E-01	23.02	
CM-243	8.99E+08S	1.00	4.263E-02	4.280E-02	4.043E-02	94.46	
AM-246	2.18E+11S	1.00	3.479E-02	3.479E-02	5.032E-02	144.65	
		Total Activity :	1.079E+01	1.079E+01			

Grand Total Activity : 1.079E+01 1.079E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530006 Acquisition date : 8-DEC-2007 09:48:33

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.64	17	633	1.83	92.93	89	8	7.75E-04	****	1.10E+00	
2	66.45	91	799	1.51	132.50	123	14	4.22E-03	****	4.01E+00	
2	89.89	290	832	1.45	179.34	164	27	1.34E-02	39.2	6.32E+00	
0	153.82	127	706	1.15	307.09	303	9	5.86E-03	77.5	6.64E+00	
0	185.74	531	943	1.33	370.89	365	13	2.46E-02	26.5	6.04E+00	
0	328.60	79	605	1.38	656.39	648	15	3.66E-03	****	4.08E+00	
0	452.27	14	195	1.32	903.57	897	8	6.65E-04	****	3.20E+00	
1	534.69	35	172	1.78	1068.31	1057	32	1.64E-03	****	2.80E+00	
1	541.70	40	167	1.79	1082.32	1057	32	1.86E-03	****	2.77E+00	
0	564.23	293	246	3.55	1127.35	1120	15	1.35E-02	26.2	2.68E+00	
0	576.10	16	139	1.00	1151.09	1146	9	7.61E-04	****	2.64E+00	
0	621.46	51	206	5.51	1241.77	1234	15	2.38E-03	****	2.48E+00	
0	692.90	63	102	1.88	1384.57	1380	11	2.92E-03	67.4	2.26E+00	
0	755.50	27	85	2.13	1509.73	1505	8	1.25E-03	****	2.10E+00	
0	781.72	18	50	1.39	1562.14	1559	6	8.11E-04	****	2.04E+00	
0	841.68	202	242	13.09	1682.03	1666	33	9.36E-03	49.3	1.91E+00	
0	855.75	42	80	1.38	1710.15	1702	12	1.95E-03	90.6	1.88E+00	
0	1111.11	6	95	2.78	2220.75	2210	13	2.75E-04	****	1.50E+00	
5	1299.32	14	9	1.27	2597.15	2595	10	6.43E-04	76.2	1.31E+00	
5	1301.59	26	8	1.36	2601.69	2595	10	1.21E-03	54.3	1.30E+00	
0	1328.73	19	18	1.05	2655.97	2652	7	8.56E-04	88.2	1.28E+00	
0	1363.97	28	47	4.42	2726.46	2718	14	1.28E-03	****	1.26E+00	
0	1385.16	62	46	6.72	2768.84	2760	22	2.89E-03	62.4	1.24E+00	
0	1421.69	22	11	1.49	2841.90	2838	8	1.00E-03	69.8	1.21E+00	
0	1542.61	29	19	2.16	3083.77	3078	10	1.36E-03	67.3	1.14E+00	
0	1591.32	29	29	1.51	3181.21	3177	9	1.32E-03	77.8	1.12E+00	
0	1630.19	44	31	4.93	3258.97	3252	15	2.05E-03	61.9	1.10E+00	
1	1725.68	35	20	2.09	3450.00	3445	17	1.64E-03	58.8	1.06E+00	
0	1735.00	20	15	5.45	3468.65	3461	15	9.26E-04	95.5	1.06E+00	
0	1810.98	28	27	6.99	3620.65	3607	22	1.31E-03	****	1.03E+00	
0	1857.30	8	53	0.45	3713.33	3702	23	3.88E-04	****	1.02E+00	
0	1871.19	17	14	3.50	3741.12	3735	14	7.87E-04	****	1.01E+00	
0	1887.02	23	12	4.67	3772.79	3765	16	1.06E-03	98.0	1.01E+00	
0	1936.38	20	26	3.23	3871.56	3863	16	9.28E-04	****	9.97E-01	
0	2010.66	23	34	4.85	4020.19	4005	23	1.07E-03	****	9.82E-01	
0	2029.80	2	16	0.95	4058.49	4049	12	7.69E-05	****	9.78E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530006            *
* Acquisition date :  8-DEC-2007 09:48:33 Detector SN#    :                 *
* Detector ID      : GAM19                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.39     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530006           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5681E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  6-MAR-2007 21:45:12 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.306E+00	5.036E-01	1.056E-01	5.036E-01
CS-137	1.662E-01	3.628E-02	1.171E-02	3.628E-02
EU-155	4.728E-02	4.377E-02	3.730E-02	4.377E-02
TL-208	2.282E-01	3.393E-02	1.118E-02	3.393E-02
BI-211	2.141E-01	5.909E-01	3.293E-01	5.909E-01
BI-212	5.945E-01	1.765E-01	8.521E-02	1.765E-01
PB-212	7.922E-01	6.673E-02	1.922E-02	6.673E-02
BI-214	8.037E-01	8.615E-02	2.232E-02	8.615E-02
PB-214	8.215E-01	8.209E-02	2.321E-02	8.209E-02
RA-223	2.093E-01	1.030E-01	6.103E-02	1.030E-01
AC-228	8.640E-01	1.513E-01	4.265E-02	1.513E-01
TH-234	1.046E+00	2.971E-01	1.541E-01	2.971E-01
U-235	4.968E-02	1.194E-01	6.873E-02	1.194E-01
NP-237	4.291E-01	1.115E-01	7.110E-02	1.115E-01
AM-243	1.387E-01	3.128E-02	1.689E-02	3.128E-02
CM-243	4.280E-02	3.962E-02	3.293E-02	3.962E-02
AM-246	3.479E-02	4.932E-02	4.479E-02	4.932E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-7.719E-03	1.387E-02	1.145E-02	1.387E-02	NOT IDENT.
RH-101	2.314E-03	1.451E-02	1.223E-02	1.451E-02	NOT IDENT.
SB-125	1.585E-02	3.610E-02	3.273E-02	3.610E-02	NOT IDENT.
PO-209	-2.748E+00	3.430E+00	2.307E+00	3.430E+00	NOT IDENT.
PA-233	1.014E-02	2.627E-02	2.293E-02	2.627E-02	NOT IDENT.
PA-234M	1.376E+00	1.787E+00	1.473E+00	1.787E+00	NOT IDENT.
NP-236	1.700E-02	2.512E-02	2.090E-02	2.512E-02	NOT IDENT.
NP-239	4.437E-04	9.016E-02	7.910E-02	9.016E-02	NOT IDENT.
AM-241	5.707E-02	5.748E-02	4.920E-02	5.748E-02	NOT IDENT.
CF-249	-5.899E-04	1.516E-02	1.358E-02	1.516E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	591.7480
63.29	658.5616
74.66	821.4684
74.81	821.6115
74.81	821.6115
77.11	823.7836
77.11	823.7836
86.48	710.1382
87.30	710.7541
87.30	710.7541
92.58	714.6650
98.44	623.5394
103.76	663.5388
105.31	705.1730
129.07	703.3222
143.76	660.4586
198.00	612.1007
209.25	576.4887
228.18	523.5195
238.63	472.0987
242.00	473.0037
269.46	403.9358
270.25	404.3235
277.36	418.7309
295.22	370.6941
300.09	364.5084
312.17	347.0771
338.32	301.2980
351.93	300.9317
387.59	277.0508
409.46	282.3244
427.87	241.3585
463.00	195.9322
510.77	189.0232
583.19	164.6322
609.31	182.2449
661.66	148.6975
727.33	130.5137
763.13	145.6396
768.36	119.7954
785.37	115.0945
794.95	115.3765
806.17	112.5511
831.80	121.7439
860.56	97.7248
896.60	116.1290
911.20	106.8166
934.06	86.7695
964.77	101.5689
968.97	96.5628
1001.03	81.6485
1078.86	102.3170
1120.29	73.3535
1155.19	71.4263
1173.23	85.5249
1238.11	80.8110
1280.96	66.9055
1332.51	70.4590
1377.67	35.5078
1401.50	50.9326
1407.98	62.8840
1460.80	51.0104
1509.23	44.3563
1588.20	36.7471
1620.50	31.3335
1729.60	0.0000
1764.49	41.3153

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530006

Total Uranium Activity	2.2985E-02	ug/g
Total Uranium Counting Unc.	5.5236E-02	ug/g
Total Uranium Tpu	5.5236E-08	ug/g
Total Uranium Mda	3.1802E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:38:06.59

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530007.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:49:14.
Sample ID        : G198530007           Sample quantity  : 1.56950E+02 GRAM
Detector name    : GAM20                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:01:35.55  0.4%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	47.43*	54	965	1.42	94.84	89	10	2.51E-03	116.3	
2	0	63.32*	18	1064	0.89	126.57	123	8	8.47E-04	332.7	
3	7	73.20*	16	724	1.11	146.30	144	14	7.26E-04	279.3	4.80E+00
4	7	74.96*	945	1000	1.21	149.82	144	14	4.38E-02	6.6	
5	7	77.19*	1349	967	1.10	154.28	144	14	6.25E-02	5.0	
6	3	84.47*	214	897	1.52	168.82	165	27	9.93E-03	28.3	2.35E+00
7	3	87.28*	573	845	1.20	174.44	165	27	2.65E-02	11.1	
8	3	90.02*	433	908	1.36	179.90	165	27	2.01E-02	13.5	
9	3	92.87*	664	949	1.45	185.59	165	27	3.07E-02	10.6	
10	0	99.06	154	947	1.82	197.97	194	9	7.13E-03	36.9	
11	0	105.50	156	820	1.41	210.84	208	8	7.22E-03	32.7	
12	0	128.72	150	741	1.10	257.21	254	7	6.97E-03	31.1	
13	0	143.41*	29	885	1.43	286.57	284	8	1.35E-03	187.0	
14	0	153.78	93	909	0.87	307.27	303	9	4.28E-03	59.6	
15	0	185.98*	508	1071	1.30	371.61	367	11	2.35E-02	14.6	
16	0	209.32	283	698	1.36	418.24	414	9	1.31E-02	17.9	
17	2	238.55*	2855	576	1.15	476.64	472	15	1.32E-01	2.4	2.27E+00
18	2	241.56	840	560	1.58	482.65	472	15	3.89E-02	7.0	
19	0	258.10	27	432	1.01	515.71	514	7	1.27E-03	127.7	
20	0	269.99	348	638	1.55	539.46	534	12	1.61E-02	15.4	
21	0	277.42	78	486	1.37	554.30	550	8	3.61E-03	50.4	
22	0	295.13	1291	498	1.24	589.68	585	10	5.98E-02	4.3	
23	0	300.08	205	610	1.16	599.58	595	12	9.49E-03	25.1	
24	0	327.60*	179	542	1.23	654.57	649	13	8.31E-03	28.5	
25	0	338.34	422	580	1.15	676.04	670	11	1.96E-02	12.1	
26	0	351.87*	2150	584	1.21	703.06	697	13	9.95E-02	3.2	
27	0	389.13	52	234	1.00	777.53	775	7	2.43E-03	50.2	
28	0	401.44	32	257	1.44	802.14	799	7	1.50E-03	83.4	
29	0	409.50	90	294	1.07	818.25	814	9	4.16E-03	36.0	
30	0	462.83	177	229	2.13	924.84	920	10	8.19E-03	17.7	
31	0	488.75	47	266	3.15	976.65	969	13	2.19E-03	73.3	
32	0	510.81*	246	453	1.94	1020.73	1013	16	1.14E-02	24.7	
33	0	562.58	60	182	2.18	1124.23	1120	10	2.78E-03	43.8	
34	0	583.20*	797	238	1.32	1165.44	1160	12	3.69E-02	5.5	
35	0	609.24*	1604	225	1.37	1217.52	1212	14	7.43E-02	3.2	
36	1	661.62	434	139	1.52	1322.23	1315	20	2.01E-02	6.9	1.05E+00
37	1	665.43	43	159	1.73	1329.86	1315	20	2.00E-03	56.9	
38	0	699.72	18	106	0.66	1398.42	1397	6	8.44E-04	91.3	

Sample ID : G198530007 Acquisition date : 8-DEC-2007 09:49:14

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	727.48	185	215	1.45	1453.92	1447	15	8.55E-03	19.0	
40	0	732.91	49	120	1.83	1464.78	1461	11	2.25E-03	45.8	
41	0	768.23	165	138	1.38	1535.42	1529	12	7.65E-03	16.2	
42	0	772.83	35	124	0.62	1544.61	1540	9	1.62E-03	59.6	
43	0	785.63	91	141	2.02	1570.22	1565	13	4.20E-03	28.9	
44	0	794.78	153	123	1.52	1588.50	1583	12	7.07E-03	16.6	
45	0	803.11*	6	143	5.17	1605.17	1594	14	2.62E-04	476.0	
46	0	806.03	45	110	1.46	1611.01	1608	10	2.08E-03	45.8	
47	0	860.70	79	137	1.40	1720.36	1716	10	3.68E-03	29.8	
48	0	911.10	679	157	1.55	1821.15	1816	13	3.15E-02	5.4	
49	0	934.34	87	87	1.44	1867.64	1863	11	4.04E-03	23.1	
50	2	964.66	116	114	2.07	1928.30	1919	26	5.35E-03	20.9	7.34E-01
51	2	968.95*	350	95	1.65	1936.87	1919	26	1.62E-02	8.0	
52	0	1001.95*	44	107	1.70	2002.90	1997	15	2.03E-03	58.7	
53	0	1111.45	28	77	1.50	2221.98	2214	11	1.31E-03	63.0	
54	0	1120.46	334	124	1.61	2240.00	2233	13	1.55E-02	8.8	
55	0	1134.10	22	55	1.32	2267.30	2261	8	1.04E-03	61.4	
56	0	1171.56	49	122	6.69	2342.26	2332	19	2.26E-03	56.3	
57	0	1238.35	137	80	1.66	2475.92	2470	11	6.36E-03	15.2	
58	0	1246.40	24	70	3.48	2492.02	2487	12	1.12E-03	72.0	
59	0	1265.39	56	151	10.87	2530.03	2512	29	2.59E-03	64.7	
60	0	1281.65	57	67	0.97	2562.58	2559	11	2.66E-03	30.8	
61	0	1340.13	71	73	9.72	2679.63	2666	29	3.28E-03	36.5	
62	0	1377.57	83	59	1.28	2754.57	2748	13	3.86E-03	21.9	
63	0	1409.03	57	60	2.32	2817.57	2811	15	2.63E-03	33.2	
64	0	1460.82*	1102	57	1.86	2921.25	2912	19	5.10E-02	3.5	
65	0	1496.46	15	30	1.58	2992.61	2988	8	7.16E-04	66.3	
66	0	1502.12	31	27	1.49	3003.93	2998	11	1.43E-03	38.4	
67	0	1510.05	50	63	1.93	3019.81	3012	17	2.30E-03	39.4	
68	0	1573.90	9	30	1.26	3147.66	3142	10	4.02E-04	126.2	
69	0	1588.48	68	25	1.88	3176.86	3171	11	3.16E-03	18.6	
70	0	1593.79	60	17	4.29	3187.50	3182	14	2.76E-03	20.6	
71	0	1601.37	21	32	4.34	3202.67	3195	15	9.82E-04	60.7	
72	0	1621.46	40	56	1.86	3242.90	3235	18	1.84E-03	47.7	
73	0	1630.41	33	36	2.82	3260.82	3255	12	1.53E-03	40.1	
74	0	1662.25	16	44	1.57	3324.59	3317	14	7.59E-04	92.8	
75	0	1717.62	26	20	1.03	3435.49	3425	21	1.22E-03	47.4	
76	0	1729.50	67	27	2.15	3459.29	3454	13	3.10E-03	20.0	
77	0	1764.51*	283	20	2.15	3529.40	3522	16	1.31E-02	7.3	
78	0	1831.18	13	12	0.79	3662.97	3659	10	6.00E-04	61.0	
79	0	1849.10	43	37	0.79	3698.87	3690	18	2.01E-03	37.3	
80	0	1895.42	33	10	3.89	3791.66	3784	15	1.53E-03	28.0	
81	0	1920.53	23	5	1.60	3841.98	3836	12	1.05E-03	30.0	
82	0	1962.46	22	0	3.24	3926.00	3919	13	1.02E-03	21.3	
83	0	1972.51	16	12	4.17	3946.13	3940	12	7.41E-04	50.0	
84	0	2030.18	16	12	0.70	4061.69	4053	16	7.54E-04	53.5	

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]G198530007       *
* Acquisition date :  8-DEC-2007 09:49:14 Detector SN#    :                 *
* Detector ID      : GAM20                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:01:35.55     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530007           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5695E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-SEP-2007 16:22:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	6.406E+00	6.892E-01	1.860E-01	0.000E+00
CS-137	1.580E-01	2.372E-02	2.147E-02	0.000E+00
EU-155	7.749E-02	5.011E-02	6.933E-02	0.000E+00
TL-208	2.616E-01	3.271E-02	2.000E-02	0.000E+00
BI-212	5.247E-01	1.991E-01	1.679E-01	0.000E+00
PB-212	9.403E-01	7.004E-02	3.887E-02	0.000E+00
BI-214	1.001E+00	9.016E-02	4.171E-02	0.000E+00
PB-214	1.071E+00	8.936E-02	4.562E-02	0.000E+00
RA-223	3.945E-01	1.215E-01	1.204E-01	0.000E+00
AC-228	1.081E+00	1.511E-01	7.880E-02	0.000E+00
PA-234M	2.333E+00	2.692E+00	2.347E+00	0.000E+00
TH-234	1.313E+00	3.051E-01	2.972E-01	0.000E+00
U-235	2.872E-02	1.053E-01	1.391E-01	0.000E+00
NP-236	4.231E-02	3.081E-02	3.562E-02	0.000E+00
NP-237	5.113E-01	1.259E-01	1.347E-01	0.000E+00
AM-243	1.770E-01	2.976E-02	3.001E-02	0.000E+00
CM-243	7.015E-02	4.536E-02	5.996E-02	0.000E+00
CF-249	1.603E-02	1.581E-02	2.640E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	0.000E+00	2.843E-02	2.414E-02	0.000E+00	FAIL ABUN
RH-101	-1.470E-03	1.450E-02	2.451E-02	0.000E+00	NOT IDENT.
SB-125	5.456E-03	3.660E-02	6.326E-02	0.000E+00	NOT IDENT.
PO-209	7.114E-01	2.626E+00	4.572E+00	0.000E+00	NOT IDENT.
BI-211	-3.049E-01	3.751E-01	6.134E-01	0.000E+00	NOT IDENT.
PA-233	6.315E-03	2.396E-02	4.249E-02	0.000E+00	NOT IDENT.
NP-239	4.398E-02	8.620E-02	1.568E-01	0.000E+00	NOT IDENT.
AM-241	1.630E-02	4.773E-02	7.722E-02	0.000E+00	NOT IDENT.
AM-246	-1.586E-02	4.943E-02	8.132E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:38:09.41

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530007.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:49:14.
Sample ID        : G198530007           Sample quantity  : 1.56950E+02 GRAM
Detector name    : GAM20                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:01:35.55  0.4%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	1102	10.66*	1.286E+00	6.406E+00	6.406E+00	10.98
CS-137	661.66	434	85.10*	2.583E+00	1.574E-01	1.580E-01	15.32
EU-155	105.31	156	21.20*	7.740E+00	7.581E-02	7.749E-02	65.99
TL-208	277.36	78	6.31	5.044E+00	1.955E-01	1.955E-01	100.89
	510.77	246	22.60	3.201E+00	2.711E-01	2.711E-01	49.83
	583.19	797	84.50*	2.873E+00	2.616E-01	2.616E-01	12.76
	763.13	------	1.81	2.279E+00	------	Line Not Found	------
	860.56	79	12.42	2.046E+00	2.493E-01	2.493E-01	60.26
BI-212	727.33	185	11.80*	2.378E+00	5.247E-01	5.247E-01	38.72
	785.37	91	1.10	2.221E+00	2.959E+00	2.959E+00	58.36
	1620.50	40	1.49	1.195E+00	1.779E+00	1.779E+00	95.74
PB-212	74.81	945	10.40	6.241E+00	1.161E+00	1.161E+00	17.15
	77.11	1349	17.50	6.461E+00	9.515E-01	9.515E-01	14.85
	87.30	573	7.81	7.198E+00	8.119E-01	8.119E-01	25.13
	238.63	2855	43.30*	5.591E+00	9.403E-01	9.403E-01	7.60
	300.09	205	3.28	4.773E+00	1.044E+00	1.044E+00	50.53
BI-214	609.31	1604	46.10*	2.770E+00	1.001E+00	1.001E+00	9.19
	768.36	165	4.94	2.266E+00	1.177E+00	1.177E+00	33.39
	806.17	45	1.22	2.170E+00	1.353E+00	1.353E+00	91.98
	934.06	87	3.03	1.898E+00	1.211E+00	1.211E+00	47.18
	1120.29	334	15.10	1.609E+00	1.097E+00	1.097E+00	18.66
	1155.19	------	1.63	1.566E+00	------	Line Not Found	------
	1238.11	137	5.79	1.473E+00	1.284E+00	1.284E+00	31.16
	1280.96	57	1.43	1.430E+00	2.241E+00	2.241E+00	62.04
	1377.67	83	4.00	1.347E+00	1.234E+00	1.234E+00	44.57
	1401.50	------	1.27	1.329E+00	------	Line Not Found	------
	1407.98	57	2.15	1.323E+00	1.594E+00	1.594E+00	66.91
	1509.23	50	2.11	1.255E+00	1.498E+00	1.498E+00	79.16
	1729.60	67	2.92	1.149E+00	1.590E+00	1.590E+00	40.52
	1764.49	283	15.40	1.136E+00	1.290E+00	1.290E+00	15.99
PB-214	74.81	945	6.44	6.241E+00	1.875E+00	1.875E+00	17.15
	77.11	1349	10.80	6.461E+00	1.542E+00	1.542E+00	14.85

Sample ID : G198530007 Acquisition date : 8-DEC-2007 09:49:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	573	4.84	7.198E+00	1.310E+00	1.310E+00	25.13
	242.00	840	7.43	5.545E+00	1.625E+00	1.625E+00	15.25
	295.22	1291	19.30	4.830E+00	1.104E+00	1.104E+00	10.50
	351.93	2150	37.60*	4.256E+00	1.071E+00	1.071E+00	8.51
RA-223	269.46	348	13.70*	5.140E+00	3.945E-01	3.945E-01	31.44
AC-228	129.07	150	2.42	7.649E+00	6.480E-01	6.480E-01	62.49
	209.25	283	3.89	6.085E+00	9.543E-01	9.543E-01	36.18
	270.25	348	3.46	5.140E+00	1.562E+00	1.562E+00	31.44
	338.32	422	11.27	4.379E+00	6.824E-01	6.824E-01	24.80
	409.46	90	1.92	3.801E+00	9.806E-01	9.806E-01	72.10
	463.00	177	4.40	3.460E+00	9.258E-01	9.258E-01	35.85
	794.95	153	4.25	2.198E+00	1.304E+00	1.304E+00	34.27
	911.20	679	25.80*	1.942E+00	1.081E+00	1.081E+00	14.27
	964.77	116	4.99	1.843E+00	1.002E+00	1.002E+00	42.74
	968.97	350	15.80	1.836E+00	9.609E-01	9.609E-01	18.19
	1588.20	68	3.22	1.211E+00	1.395E+00	1.395E+00	37.99
PA-234M	1001.03	44	0.84*	1.781E+00	2.333E+00	2.333E+00	117.72
TH-234	63.29	18	4.80	4.731E+00	6.424E-02	6.424E-02	665.53
	92.58	664	5.41*	7.454E+00	1.313E+00	1.313E+00	23.72
U-235	143.76	29	10.96*	7.405E+00	2.872E-02	2.872E-02	374.11
NP-236	98.44	154	38.00*	7.637E+00	4.231E-02	4.231E-02	74.31
NP-237	86.48	573	12.40*	7.198E+00	5.113E-01	5.113E-01	25.13
AM-243	74.66	945	68.20*	6.241E+00	1.770E-01	1.770E-01	17.15
CM-243	103.76	156	23.00*	7.740E+00	6.988E-02	7.015E-02	65.99
CF-249	387.59	52	66.00*	3.950E+00	1.603E-02	1.603E-02	100.61

Flag: "*" = Keyline

Sample ID : G198530007 Acquisition date : 8-DEC-2007 09:49:14

Total number of lines in spectrum 84
Number of unidentified lines 36
Number of lines tentatively identified by NID 48 57.14%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	6.406E+00	6.406E+00	0.703E+00	10.98	
CS-137	9.47E+08S	1.00	1.574E-01	1.580E-01	0.242E-01	15.32	
EU-155	1.57E+08S	1.02	7.581E-02	7.749E-02	5.113E-02	65.99	
TL-208	4.43E+17S	1.00	2.616E-01	2.616E-01	0.334E-01	12.76	
BI-212	4.43E+17S	1.00	5.247E-01	5.247E-01	2.032E-01	38.72	
PB-212	4.43E+17S	1.00	9.403E-01	9.403E-01	0.715E-01	7.60	
BI-214	5.05E+10S	1.00	1.001E+00	1.001E+00	0.092E+00	9.19	
PB-214	5.05E+10S	1.00	1.071E+00	1.071E+00	0.091E+00	8.51	
RA-223	1.04E+12S	1.00	3.945E-01	3.945E-01	1.240E-01	31.44	
AC-228	4.43E+17S	1.00	1.081E+00	1.081E+00	0.154E+00	14.27	
PA-234M	1.41E+17S	1.00	2.333E+00	2.333E+00	2.747E+00	117.72	
TH-234	1.41E+17S	1.00	1.313E+00	1.313E+00	0.311E+00	23.72	
U-235	2.22E+16S	1.00	2.872E-02	2.872E-02	10.75E-02	374.11	
NP-236	4.89E+12S	1.00	4.231E-02	4.231E-02	3.144E-02	74.31	
NP-237	6.75E+13S	1.00	5.113E-01	5.113E-01	1.285E-01	25.13	
AM-243	2.33E+11S	1.00	1.770E-01	1.770E-01	0.304E-01	17.15	
CM-243	8.99E+08S	1.00	6.988E-02	7.015E-02	4.629E-02	65.99	
CF-249	1.11E+10S	1.00	1.603E-02	1.603E-02	1.613E-02	100.61	
			---	---			
	Total Activity :		1.641E+01	1.641E+01			

Grand Total Activity : 1.641E+01 1.641E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530007 Acquisition date : 8-DEC-2007 09:49:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	47.43	54	965	1.42	94.84	89	10	2.51E-03	****	1.97E+00	
7	73.20	16	724	1.11	146.30	144	14	7.26E-04	****	6.05E+00	
3	84.47	214	897	1.52	168.82	165	27	9.93E-03	56.5	7.03E+00	
3	90.02	433	908	1.36	179.90	165	27	2.01E-02	27.0	7.34E+00	
0	153.78	93	909	0.87	307.27	303	9	4.28E-03	****	7.20E+00	
0	185.98	508	1071	1.30	371.61	367	11	2.35E-02	29.3	6.53E+00	
0	258.10	27	432	1.01	515.71	514	7	1.27E-03	****	5.30E+00	
0	327.60	179	542	1.23	654.57	649	13	8.31E-03	57.1	4.48E+00	
0	401.44	32	257	1.44	802.14	799	7	1.50E-03	****	3.86E+00	
0	488.75	47	266	3.15	976.65	969	13	2.19E-03	****	3.32E+00	
0	562.58	60	182	2.18	1124.23	1120	10	2.78E-03	87.5	2.96E+00	
1	665.43	43	159	1.73	1329.86	1315	20	2.00E-03	****	2.57E+00	
0	699.72	18	106	0.66	1398.42	1397	6	8.44E-04	****	2.46E+00	
0	732.91	49	120	1.83	1464.78	1461	11	2.25E-03	91.5	2.36E+00	
0	772.83	35	124	0.62	1544.61	1540	9	1.62E-03	****	2.25E+00	
0	803.11	6	143	5.17	1605.17	1594	14	2.62E-04	****	2.18E+00	
0	1111.45	28	77	1.50	2221.98	2214	11	1.31E-03	****	1.62E+00	
0	1134.10	22	55	1.32	2267.30	2261	8	1.04E-03	****	1.59E+00	
0	1171.56	49	122	6.69	2342.26	2332	19	2.26E-03	****	1.55E+00	T
0	1246.40	24	70	3.48	2492.02	2487	12	1.12E-03	****	1.46E+00	
0	1265.39	56	151	10.87	2530.03	2512	29	2.59E-03	****	1.45E+00	
0	1340.13	71	73	9.72	2679.63	2666	29	3.28E-03	73.0	1.38E+00	
0	1496.46	15	30	1.58	2992.61	2988	8	7.16E-04	****	1.26E+00	
0	1502.12	31	27	1.49	3003.93	2998	11	1.43E-03	76.8	1.26E+00	
0	1573.90	9	30	1.26	3147.66	3142	10	4.02E-04	****	1.22E+00	
0	1593.79	60	17	4.29	3187.50	3182	14	2.76E-03	41.1	1.21E+00	
0	1601.37	21	32	4.34	3202.67	3195	15	9.82E-04	****	1.20E+00	
0	1630.41	33	36	2.82	3260.82	3255	12	1.53E-03	80.3	1.19E+00	
0	1662.25	16	44	1.57	3324.59	3317	14	7.59E-04	****	1.18E+00	
0	1717.62	26	20	1.03	3435.49	3425	21	1.22E-03	94.8	1.15E+00	
0	1831.18	13	12	0.79	3662.97	3659	10	6.00E-04	****	1.12E+00	
0	1849.10	43	37	0.79	3698.87	3690	18	2.01E-03	74.6	1.11E+00	
0	1895.42	33	10	3.89	3791.66	3784	15	1.53E-03	56.0	1.10E+00	
0	1920.53	23	5	1.60	3841.98	3836	12	1.05E-03	60.0	1.09E+00	
0	1962.46	22	0	3.24	3926.00	3919	13	1.02E-03	42.6	1.08E+00	
0	1972.51	16	12	4.17	3946.13	3940	12	7.41E-04	****	1.08E+00	
0	2030.18	16	12	0.70	4061.69	4053	16	7.54E-04	****	1.07E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530007            *
* Acquisition date :  8-DEC-2007 09:49:14 Detector SN#    :                 *
* Detector ID      : GAM20                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:01:35.55     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530007           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5695E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  7-SEP-2007 16:22:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	6.406E+00	6.892E-01	9.308E-02	6.892E-01
CS-137	1.580E-01	2.372E-02	1.074E-02	2.372E-02
EU-155	7.749E-02	5.011E-02	3.468E-02	5.011E-02
TL-208	2.616E-01	3.271E-02	1.000E-02	3.271E-02
BI-212	5.247E-01	1.991E-01	8.400E-02	1.991E-01
PB-212	9.403E-01	7.004E-02	1.945E-02	7.004E-02
BI-214	1.001E+00	9.016E-02	2.087E-02	9.016E-02
PB-214	1.071E+00	8.936E-02	2.282E-02	8.936E-02
RA-223	3.945E-01	1.215E-01	6.021E-02	1.215E-01
AC-228	1.081E+00	1.511E-01	3.942E-02	1.511E-01
PA-234M	2.333E+00	2.692E+00	1.174E+00	2.692E+00
TH-234	1.313E+00	3.051E-01	1.487E-01	3.051E-01
U-235	2.872E-02	1.053E-01	6.960E-02	1.053E-01
NP-236	4.231E-02	3.081E-02	1.782E-02	3.081E-02
NP-237	5.113E-01	1.259E-01	6.737E-02	1.259E-01
AM-243	1.770E-01	2.976E-02	1.502E-02	2.976E-02
CM-243	7.015E-02	4.536E-02	3.000E-02	4.536E-02
CF-249	1.603E-02	1.581E-02	1.321E-02	1.581E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	2.574E-02	2.843E-02	1.208E-02	2.843E-02	FAIL ABUN
RH-101	-1.470E-03	1.450E-02	1.226E-02	1.450E-02	NOT IDENT.
SB-125	5.456E-03	3.660E-02	3.165E-02	3.660E-02	NOT IDENT.
PO-209	7.114E-01	2.626E+00	2.287E+00	2.626E+00	NOT IDENT.
BI-211	-3.049E-01	3.751E-01	3.069E-01	3.751E-01	NOT IDENT.
PA-233	6.315E-03	2.396E-02	2.126E-02	2.396E-02	NOT IDENT.
NP-239	4.398E-02	8.620E-02	7.843E-02	8.620E-02	NOT IDENT.
AM-241	1.630E-02	4.773E-02	3.863E-02	4.773E-02	NOT IDENT.
AM-246	-1.586E-02	4.943E-02	4.068E-02	4.943E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	754.5716
63.29	850.9229
74.66	985.2527
74.81	985.4505
74.81	985.4505
77.11	948.3109
77.11	948.3109
86.48	876.2142
87.30	877.0942
87.30	877.0942
92.58	882.6549
98.44	658.1259
103.76	697.0678
105.31	767.7231
129.07	789.9546
143.76	801.6895
198.00	729.9760
209.25	686.0038
228.18	574.4340
238.63	572.5209
242.00	484.9022
269.46	468.8741
270.25	469.0892
277.36	465.0549
295.22	427.7238
300.09	383.4021
312.17	365.9154
338.32	397.9395
351.93	351.6502
387.59	315.9412
409.46	316.3409
427.87	288.6660
463.00	249.3355
510.77	213.6568
583.19	159.9305
609.31	192.9230
661.66	151.0039
727.33	152.5195
763.13	126.5627
768.36	107.2527
785.37	110.7185
794.95	121.1714
806.17	118.2686
831.80	152.8570
860.56	115.0365
896.60	116.1315
911.20	108.4603
934.06	122.3438
964.77	103.7617
968.97	103.8678
1001.03	86.3668
1078.86	108.6932
1120.29	99.0486
1155.19	89.0710
1173.23	93.3656
1238.11	81.8958
1280.96	78.6691
1332.51	76.2891
1377.67	60.7815
1401.50	43.6770
1407.98	77.3839
1460.80	46.5257
1509.23	53.6325
1588.20	51.5903
1620.50	45.3875
1729.60	35.7642
1764.49	29.9670

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530007

Total Uranium Activity	1.3290E-02	ug/g
Total Uranium Counting Unc.	4.8724E-02	ug/g
Total Uranium Tpu	4.8724E-08	ug/g
Total Uranium Mda	3.2203E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:39:24.19

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530008.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:49:55.
Sample ID        : G198530008           Sample quantity  : 1.54210E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:44.70  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	47.01*	113	561	1.91	93.12	89	8	5.24E-03	39.5	
2	0	50.29	21	434	1.04	99.67	96	6	9.87E-04	155.7	
3	0	53.42	38	561	1.07	105.93	103	7	1.76E-03	104.6	
4	0	63.36	232	773	1.50	125.78	122	8	1.07E-02	21.7	
5	7	75.02	957	918	1.21	149.05	144	16	4.43E-02	6.2	1.10E+00
6	7	77.26*	1617	1034	1.29	153.53	144	16	7.48E-02	4.5	
7	1	84.14	226	731	1.55	167.28	164	28	1.05E-02	20.6	2.80E+00
8	1	87.37	706	920	1.56	173.72	164	28	3.27E-02	8.6	
9	1	90.08	435	799	1.36	179.13	164	28	2.02E-02	12.6	
10	1	92.91*	480	780	1.38	184.79	164	28	2.22E-02	11.9	
11	0	105.42	160	823	1.86	209.78	205	10	7.43E-03	34.4	
12	0	129.00	127	801	1.53	256.87	253	9	5.86E-03	41.2	
13	0	143.34	83	610	1.31	285.52	283	7	3.86E-03	50.3	
14	0	186.01*	498	759	1.45	370.75	365	11	2.31E-02	12.2	
15	0	209.26	247	579	1.57	417.18	412	10	1.15E-02	19.3	
16	4	238.57*	2291	419	1.41	475.74	467	25	1.06E-01	2.8	1.41E+00
17	4	241.58	717	631	2.31	481.75	467	25	3.32E-02	10.7	
18	0	270.38	193	469	0.87	539.29	534	11	8.95E-03	22.9	
19	0	277.71	138	338	2.19	553.93	549	10	6.39E-03	26.4	
20	0	288.21	45	415	2.28	574.91	568	11	2.07E-03	89.7	
21	0	295.16	726	494	1.49	588.79	583	12	3.36E-02	7.2	
22	0	300.19	130	437	1.61	598.85	595	12	6.03E-03	33.5	
23	0	328.11	113	305	2.18	654.64	650	10	5.23E-03	30.5	
24	0	338.24	402	374	1.65	674.86	670	11	1.86E-02	10.5	
25	0	351.86*	1239	351	1.53	702.09	696	12	5.74E-02	4.3	
26	0	359.66	31	250	3.30	717.68	712	10	1.46E-03	96.1	
27	0	392.28	51	211	1.69	782.85	777	10	2.34E-03	56.4	
28	4	395.88	70	121	1.85	790.05	787	12	3.23E-03	29.1	2.31E+00
29	4	398.80	40	138	1.14	795.89	787	12	1.85E-03	50.1	
30	0	401.08	41	210	0.81	800.44	799	8	1.91E-03	62.3	
31	0	462.70	89	261	1.16	923.58	919	12	4.10E-03	38.0	
32	0	510.64*	246	233	2.28	1019.39	1012	15	1.14E-02	18.0	
33	0	552.14	36	79	1.56	1102.33	1099	7	1.69E-03	43.6	
34	0	565.89	127	251	2.45	1129.82	1124	14	5.89E-03	27.8	
35	0	582.97*	618	209	1.64	1163.96	1156	17	2.86E-02	6.9	
36	0	609.05*	762	237	1.77	1216.09	1208	17	3.53E-02	6.2	
37	0	615.08	40	122	2.24	1228.15	1224	13	1.85E-03	59.4	
38	0	629.14	40	64	1.55	1256.26	1253	7	1.86E-03	36.6	

Sample ID : G198530008 Acquisition date : 8-DEC-2007 09:49:55

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	651.40	15	113	0.56	1300.75	1293	11	6.80E-04	146.1	
40	0	661.34	325	211	1.89	1320.64	1311	20	1.51E-02	12.2	
41	0	726.73	92	124	1.08	1451.36	1446	11	4.26E-03	25.6	
42	0	735.14*	4	79	1.26	1468.19	1464	8	1.82E-04	420.4	
43	0	756.90	29	131	4.08	1511.69	1505	14	1.33E-03	86.8	
44	0	766.92	44	175	1.12	1531.73	1528	14	2.04E-03	65.0	
45	0	785.65	23	94	1.86	1569.18	1562	10	1.07E-03	81.6	
46	0	794.18	62	99	1.64	1586.25	1580	12	2.88E-03	34.4	
47	0	860.64	76	76	1.60	1719.14	1712	13	3.51E-03	26.6	
48	0	910.84	385	88	1.60	1819.56	1812	16	1.78E-02	7.5	
49	0	921.30	41	124	8.59	1840.48	1828	24	1.91E-03	73.7	
50	1	964.36	73	95	2.15	1926.60	1920	21	3.36E-03	29.6	1.69E+00
51	1	968.70	214	75	1.78	1935.29	1920	21	9.89E-03	10.4	
52	0	1069.63	20	94	5.31	2137.20	2124	18	9.17E-04	117.3	
53	0	1120.39	141	84	1.98	2238.76	2231	15	6.52E-03	16.6	
54	0	1156.27	22	73	3.26	2310.55	2303	13	1.01E-03	84.5	
55	0	1238.12	51	71	1.91	2474.33	2468	12	2.35E-03	36.3	
56	0	1351.38	37	34	5.23	2701.03	2693	17	1.71E-03	39.7	
57	0	1389.70	14	33	4.24	2777.75	2770	12	6.66E-04	84.0	
58	0	1460.45	429	53	1.95	2919.37	2911	19	1.99E-02	6.3	
59	0	1561.93	12	30	4.75	3122.56	3111	17	5.51E-04	109.0	
60	0	1593.44	42	107	6.40	3185.66	3165	27	1.93E-03	71.2	
61	0	1606.92	24	2	1.05	3212.67	3208	11	1.10E-03	24.4	
62	0	1613.48	12	19	3.91	3225.79	3218	13	5.52E-04	81.5	
63	0	1619.89	35	10	3.85	3238.63	3233	13	1.62E-03	25.1	
64	0	1719.37	10	22	0.58	3437.88	3430	12	4.77E-04	98.9	
65	0	1728.63	59	11	2.64	3456.42	3448	15	2.74E-03	17.9	
66	0	1749.25*	12	7	4.86	3497.74	3491	14	5.62E-04	67.5	
67	0	1763.91*	112	16	2.09	3527.10	3521	15	5.19E-03	13.8	
68	0	1829.72	19	5	0.69	3658.94	3653	11	8.72E-04	33.2	
69	0	1847.03	21	21	1.63	3693.61	3687	12	9.71E-04	48.9	
70	0	1871.96	10	16	1.33	3743.56	3739	8	4.84E-04	72.8	
71	0	1883.74	7	14	1.40	3767.16	3760	11	3.14E-04	113.0	
72	0	2027.98	9	7	0.97	4056.19	4052	8	4.11E-04	63.7	

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]G198530008       *
* Acquisition date :  8-DEC-2007 09:49:55 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:44.70     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530008           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5421E+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	4.394E+00	5.921E-01	3.274E-01	0.000E+00
CS-137	1.897E-01	4.796E-02	3.269E-02	0.000E+00
EU-155	7.717E-02	5.237E-02	6.712E-02	0.000E+00
TL-208	3.166E-01	4.860E-02	3.014E-02	0.000E+00
BI-212	4.253E-01	2.162E-01	2.493E-01	0.000E+00
PB-212	9.116E-01	7.441E-02	4.373E-02	0.000E+00
BI-214	7.487E-01	1.068E-01	5.754E-02	0.000E+00
PB-214	8.342E-01	8.231E-02	5.790E-02	0.000E+00
RA-223	2.739E-01	1.236E-01	1.402E-01	0.000E+00
AC-228	1.024E+00	1.645E-01	1.169E-01	0.000E+00
TH-234	8.539E-01	2.086E-01	2.689E-01	0.000E+00
U-235	8.810E-02	8.706E-02	1.557E-01	0.000E+00
NP-237	5.411E-01	9.956E-02	1.157E-01	0.000E+00
AM-243	1.317E-01	1.828E-02	2.242E-02	0.000E+00
CM-243	6.986E-02	4.741E-02	6.178E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	1.341E-02	2.015E-02	3.595E-02	0.000E+00	NOT IDENT.
RH-101	5.263E-03	1.427E-02	2.618E-02	0.000E+00	NOT IDENT.
SB-125	2.037E-02	4.715E-02	8.347E-02	0.000E+00	NOT IDENT.
PO-209	2.109E+00	3.474E+00	6.264E+00	0.000E+00	NOT IDENT.
BI-211	-7.064E-02	5.232E-01	8.994E-01	0.000E+00	NOT IDENT.
PA-233	-2.674E-03	2.900E-02	5.121E-02	0.000E+00	NOT IDENT.
PA-234M	1.663E+00	2.363E+00	4.240E+00	0.000E+00	NOT IDENT.
NP-236	1.999E-02	2.334E-02	3.736E-02	0.000E+00	NOT IDENT.
NP-239	-4.760E-02	1.077E-01	1.750E-01	0.000E+00	NOT IDENT.
AM-241	2.226E-02	2.313E-02	3.812E-02	0.000E+00	NOT IDENT.
AM-246	-1.769E-02	7.086E-02	1.180E-01	0.000E+00	NOT IDENT.
CF-249	1.076E-02	2.206E-02	3.437E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:39:25.66

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530008.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:49:55.
Sample ID        : G198530008           Sample quantity  : 1.54210E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:44.70  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	429	10.66*	7.436E-01	4.394E+00	4.394E+00	13.75
CS-137	661.66	325	85.10*	1.642E+00	1.890E-01	1.897E-01	25.80
EU-155	105.31	160	21.20*	8.136E+00	7.550E-02	7.717E-02	69.25
TL-208	277.36	138	6.31	4.075E+00	4.357E-01	4.357E-01	53.13
	510.77	246	22.60	2.160E+00	4.085E-01	4.085E-01	36.64
	583.19	618	84.50*	1.876E+00	3.166E-01	3.166E-01	15.67
	763.13	------	1.81	1.415E+00	------	Line Not Found	------
	860.56	76	12.42	1.251E+00	3.956E-01	3.956E-01	53.64
BI-212	727.33	92	11.80*	1.488E+00	4.253E-01	4.253E-01	51.88
	785.37	23	1.10	1.373E+00	1.240E+00	1.240E+00	163.36
	1620.50	35	1.49	6.725E-01	2.830E+00	2.830E+00	50.44
PB-212	74.81	957	10.40	8.644E+00	8.634E-01	8.634E-01	14.16
	77.11	1617	17.50	8.639E+00	8.676E-01	8.676E-01	11.40
	87.30	706	7.81	8.536E+00	8.590E-01	8.590E-01	18.78
	238.63	2291	43.30*	4.709E+00	9.116E-01	9.116E-01	8.33
	300.09	130	3.28	3.772E+00	8.542E-01	8.542E-01	67.12
BI-214	609.31	762	46.10*	1.791E+00	7.486E-01	7.487E-01	14.56
	768.36	44	4.94	1.408E+00	5.139E-01	5.139E-01	130.22
	806.17	------	1.22	1.337E+00	------	Line Not Found	------
	934.06	------	3.03	1.152E+00	------	Line Not Found	------
	1120.29	141	15.10	9.619E-01	7.864E-01	7.864E-01	33.79
	1155.19	22	1.63	9.326E-01	1.162E+00	1.162E+00	169.03
	1238.11	51	5.79	8.725E-01	8.140E-01	8.140E-01	72.76
	1280.96	------	1.43	8.442E-01	------	Line Not Found	------
	1377.67	------	4.00	7.867E-01	------	Line Not Found	------
	1401.50	------	1.27	7.738E-01	------	Line Not Found	------
	1407.98	------	2.15	7.704E-01	------	Line Not Found	------
	1509.23	------	2.11	7.203E-01	------	Line Not Found	------
	1729.60	59	2.92	6.311E-01	2.601E+00	2.601E+00	36.30
	1764.49	112	15.40	6.187E-01	9.549E-01	9.549E-01	28.09
PB-214	74.81	957	6.44	8.644E+00	1.394E+00	1.394E+00	14.16
	77.11	1617	10.80	8.639E+00	1.406E+00	1.406E+00	11.40

Sample ID : G198530008 Acquisition date : 8-DEC-2007 09:49:55

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	706	4.84	8.536E+00	1.386E+00	1.386E+00	18.78
	242.00	717	7.43	4.655E+00	1.683E+00	1.683E+00	22.25
	295.22	726	19.30	3.836E+00	7.951E-01	7.952E-01	15.25
	351.93	1239	37.60*	3.206E+00	8.341E-01	8.342E-01	10.07
RA-223	269.46	193	13.70*	4.182E+00	2.739E-01	2.739E-01	46.04
AC-228	129.07	127	2.42	7.447E+00	5.702E-01	5.702E-01	82.91
	209.25	247	3.89	5.293E+00	9.748E-01	9.748E-01	39.12
	270.25	193	3.46	4.182E+00	1.084E+00	1.084E+00	46.04
	338.32	402	11.27	3.340E+00	8.668E-01	8.668E-01	21.72
	409.46	------	1.92	2.733E+00	------ Line Not Found		------
	463.00	89	4.40	2.400E+00	6.811E-01	6.811E-01	76.17
	794.95	62	4.25	1.358E+00	8.735E-01	8.735E-01	69.32
	911.20	385	25.80*	1.181E+00	1.024E+00	1.024E+00	16.40
	964.77	73	4.99	1.116E+00	1.058E+00	1.058E+00	59.62
	968.97	214	15.80	1.111E+00	9.876E-01	9.876E-01	21.75
	1588.20	------	3.22	6.855E-01	------ Line Not Found		------
TH-234	63.29	232	4.80	8.516E+00	4.606E-01	4.606E-01	43.96
	92.58	480	5.41*	8.435E+00	8.539E-01	8.539E-01	24.93
U-235	143.76	83	10.96*	7.012E+00	8.810E-02	8.810E-02	100.83
NP-237	86.48	706	12.40*	8.536E+00	5.411E-01	5.411E-01	18.78
AM-243	74.66	957	68.20*	8.644E+00	1.317E-01	1.317E-01	14.16
CM-243	103.76	160	23.00*	8.136E+00	6.959E-02	6.986E-02	69.25

Flag: "*" = Keyline

Sample ID : G198530008 Acquisition date : 8-DEC-2007 09:49:55

Total number of lines in spectrum 72
Number of unidentified lines 35
Number of lines tentatively identified by NID 37 51.39%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.394E+00	4.394E+00	0.604E+00	13.75	
CS-137	9.47E+08S	1.00	1.890E-01	1.897E-01	0.489E-01	25.80	
EU-155	1.57E+08S	1.02	7.550E-02	7.717E-02	5.344E-02	69.25	
TL-208	4.43E+17S	1.00	3.166E-01	3.166E-01	0.496E-01	15.67	
BI-212	4.43E+17S	1.00	4.253E-01	4.253E-01	2.206E-01	51.88	
PB-212	4.43E+17S	1.00	9.116E-01	9.116E-01	0.759E-01	8.33	
BI-214	5.05E+10S	1.00	7.486E-01	7.487E-01	1.090E-01	14.56	
PB-214	5.05E+10S	1.00	8.341E-01	8.342E-01	0.840E-01	10.07	
RA-223	1.04E+12S	1.00	2.739E-01	2.739E-01	1.261E-01	46.04	
AC-228	4.43E+17S	1.00	1.024E+00	1.024E+00	0.168E+00	16.40	
TH-234	1.41E+17S	1.00	8.539E-01	8.539E-01	2.129E-01	24.93	
U-235	2.22E+16S	1.00	8.810E-02	8.810E-02	8.883E-02	100.83	
NP-237	6.75E+13S	1.00	5.411E-01	5.411E-01	1.016E-01	18.78	
AM-243	2.33E+11S	1.00	1.317E-01	1.317E-01	0.186E-01	14.16	
CM-243	8.99E+08S	1.00	6.959E-02	6.986E-02	4.838E-02	69.25	
			---	---			
		Total Activity :	1.088E+01	1.088E+01			

Grand Total Activity : 1.088E+01 1.088E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530008 Acquisition date : 8-DEC-2007 09:49:55

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	47.01	113	561	1.91	93.12	89	8	5.24E-03	79.0	7.69E+00	
0	50.29	21	434	1.04	99.67	96	6	9.87E-04	****	7.94E+00	
0	53.42	38	561	1.07	105.93	103	7	1.76E-03	****	8.13E+00	
1	84.14	226	731	1.55	167.28	164	28	1.05E-02	41.3	8.58E+00	
1	90.08	435	799	1.36	179.13	164	28	2.02E-02	25.2	8.49E+00	
0	186.01	498	759	1.45	370.75	365	11	2.31E-02	24.4	5.83E+00	
0	288.21	45	415	2.28	574.91	568	11	2.07E-03	****	3.93E+00	
0	328.11	113	305	2.18	654.64	650	10	5.23E-03	61.0	3.45E+00	
0	359.66	31	250	3.30	717.68	712	10	1.46E-03	****	3.13E+00	
0	392.28	51	211	1.69	782.85	777	10	2.34E-03	****	2.86E+00	
4	395.88	70	121	1.85	790.05	787	12	3.23E-03	58.3	2.83E+00	
4	398.80	40	138	1.14	795.89	787	12	1.85E-03	****	2.81E+00	
0	401.08	41	210	0.81	800.44	799	8	1.91E-03	****	2.79E+00	
0	552.14	36	79	1.56	1102.33	1099	7	1.69E-03	87.2	1.99E+00	
0	565.89	127	251	2.45	1129.82	1124	14	5.89E-03	55.5	1.94E+00	
0	615.08	40	122	2.24	1228.15	1224	13	1.85E-03	****	1.77E+00	
0	629.14	40	64	1.55	1256.26	1253	7	1.86E-03	73.3	1.73E+00	
0	651.40	15	113	0.56	1300.75	1293	11	6.80E-04	****	1.67E+00	
0	735.14	4	79	1.26	1468.19	1464	8	1.82E-04	****	1.47E+00	
0	756.90	29	131	4.08	1511.69	1505	14	1.33E-03	****	1.43E+00	
0	921.30	41	124	8.59	1840.48	1828	24	1.91E-03	****	1.17E+00	
0	1069.63	20	94	5.31	2137.20	2124	18	9.17E-04	****	1.01E+00	
0	1351.38	37	34	5.23	2701.03	2693	17	1.71E-03	79.4	8.02E-01	
0	1389.70	14	33	4.24	2777.75	2770	12	6.66E-04	****	7.80E-01	
0	1561.93	12	30	4.75	3122.56	3111	17	5.51E-04	****	6.97E-01	
0	1593.44	42	107	6.40	3185.66	3165	27	1.93E-03	****	6.83E-01	
0	1606.92	24	2	1.05	3212.67	3208	11	1.10E-03	48.7	6.78E-01	
0	1613.48	12	19	3.91	3225.79	3218	13	5.52E-04	****	6.75E-01	
0	1719.37	10	22	0.58	3437.88	3430	12	4.77E-04	****	6.34E-01	
0	1749.25	12	7	4.86	3497.74	3491	14	5.62E-04	****	6.24E-01	
0	1829.72	19	5	0.69	3658.94	3653	11	8.72E-04	66.4	5.97E-01	
0	1847.03	21	21	1.63	3693.61	3687	12	9.71E-04	97.7	5.91E-01	
0	1871.96	10	16	1.33	3743.56	3739	8	4.84E-04	****	5.83E-01	
0	1883.74	7	14	1.40	3767.16	3760	11	3.14E-04	****	5.80E-01	
0	2027.98	9	7	0.97	4056.19	4052	8	4.11E-04	****	5.38E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530008            *
* Acquisition date :  8-DEC-2007 09:49:55 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:44.70     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530008           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5421E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.394E+00	5.921E-01	1.638E-01	5.921E-01
CS-137	1.897E-01	4.796E-02	1.636E-02	4.796E-02
EU-155	7.717E-02	5.237E-02	3.358E-02	5.237E-02
TL-208	3.166E-01	4.860E-02	1.508E-02	4.860E-02
BI-212	4.253E-01	2.162E-01	1.247E-01	2.162E-01
PB-212	9.116E-01	7.441E-02	2.188E-02	7.441E-02
BI-214	7.487E-01	1.068E-01	2.879E-02	1.068E-01
PB-214	8.342E-01	8.231E-02	2.897E-02	8.231E-02
RA-223	2.739E-01	1.236E-01	7.015E-02	1.236E-01
AC-228	1.024E+00	1.645E-01	5.850E-02	1.645E-01
TH-234	8.539E-01	2.086E-01	1.345E-01	2.086E-01
U-235	8.810E-02	8.706E-02	7.791E-02	8.706E-02
NP-237	5.411E-01	9.956E-02	5.788E-02	9.956E-02
AM-243	1.317E-01	1.828E-02	1.122E-02	1.828E-02
CM-243	6.986E-02	4.741E-02	3.091E-02	4.741E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.341E-02	2.015E-02	1.799E-02	2.015E-02	NOT IDENT.
RH-101	5.263E-03	1.427E-02	1.310E-02	1.427E-02	NOT IDENT.
SB-125	2.037E-02	4.715E-02	4.176E-02	4.715E-02	NOT IDENT.
PO-209	2.109E+00	3.474E+00	3.134E+00	3.474E+00	NOT IDENT.
BI-211	-7.064E-02	5.232E-01	4.500E-01	5.232E-01	NOT IDENT.
PA-233	-2.674E-03	2.900E-02	2.562E-02	2.900E-02	NOT IDENT.
PA-234M	1.663E+00	2.363E+00	2.121E+00	2.363E+00	NOT IDENT.
NP-236	1.999E-02	2.334E-02	1.869E-02	2.334E-02	NOT IDENT.
NP-239	-4.760E-02	1.077E-01	8.754E-02	1.077E-01	NOT IDENT.
AM-241	2.226E-02	2.313E-02	1.907E-02	2.313E-02	NOT IDENT.
AM-246	-1.769E-02	7.086E-02	5.905E-02	7.086E-02	NOT IDENT.
CF-249	1.076E-02	2.206E-02	1.719E-02	2.206E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	693.0029
63.29	899.1165
74.66	1036.3534
74.81	1036.5195
74.81	1036.5195
77.11	1039.0649
77.11	1039.0649
86.48	898.5933
87.30	899.3211
87.30	899.3211
92.58	903.9211
98.44	759.6839
103.76	808.1405
105.31	774.3074
129.07	789.6839
143.76	874.1096
198.00	628.8936
209.25	563.1551
228.18	561.0776
238.63	499.1598
242.00	500.0542
269.46	410.6342
270.25	423.0456
277.36	388.5699
295.22	378.5457
300.09	393.9950
312.17	331.6133
338.32	340.3929
351.93	311.8378
387.59	252.4231
409.46	286.1247
427.87	232.7304
463.00	210.7612
510.77	189.9196
583.19	150.0189
609.31	148.6384
661.66	137.0532
727.33	127.2980
763.13	79.3413
768.36	117.2768
785.37	108.2689
794.95	107.7058
806.17	108.8163
831.80	102.7572
860.56	62.9786
896.60	69.2016
911.20	85.4897
934.06	89.4263
964.77	77.1573
968.97	83.1660
1001.03	80.7330
1078.86	78.9648
1120.29	75.5176
1155.19	73.9600
1173.23	56.6852
1238.11	65.6968
1280.96	58.8369
1332.51	48.7552
1377.67	40.5791
1401.50	65.3933
1407.98	47.2191
1460.80	46.5343
1509.23	45.7957
1588.20	37.8320
1620.50	39.9111
1729.60	21.9565
1764.49	22.3045

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530008

Total Uranium Activity	4.0763E-02	ug/g
Total Uranium Counting Unc.	4.0281E-02	ug/g
Total Uranium Tpu	4.0281E-08	ug/g
Total Uranium Mda	3.6049E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:40:02.59

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530009.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:50:46.
Sample ID        : G198530009           Sample quantity  : 1.65870E+02 GRAM
Detector name    : GAM22                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.83  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.05*	72	829	1.43	91.55	88	8	3.32E-03	76.2	
2	0	53.00*	34	695	1.32	105.45	103	7	1.56E-03	141.6	
3	0	62.93*	260	2023	2.05	125.30	120	16	1.20E-02	40.9	
4	3	74.57*	809	1212	1.29	148.57	143	15	3.75E-02	9.1	1.97E+00
5	3	76.89*	1274	896	1.04	153.21	143	15	5.90E-02	5.0	
6	2	84.06*	194	980	1.43	167.55	164	29	8.96E-03	29.4	3.82E+00
7	2	87.04	589	1065	1.29	173.50	164	29	2.73E-02	10.4	
8	2	89.81*	371	896	1.23	179.04	164	29	1.72E-02	15.0	
9	2	92.48*	587	967	1.38	184.36	164	29	2.72E-02	11.9	
10	0	112.28*	59	710	1.39	223.96	222	6	2.74E-03	78.1	
11	0	115.14	84	835	0.96	229.67	227	7	3.89E-03	58.1	
12	0	128.91	243	1140	1.57	257.20	252	10	1.13E-02	26.8	
13	0	139.65*	110	976	2.84	278.68	274	9	5.09E-03	54.8	
14	0	143.79*	117	1026	1.10	286.95	283	9	5.40E-03	54.4	
15	0	153.40	70	1055	1.08	306.15	303	9	3.22E-03	84.8	
16	0	163.02	79	1056	0.89	325.38	320	10	3.66E-03	78.1	
17	0	185.74*	733	1510	1.43	370.82	363	15	3.40E-02	12.9	
18	0	208.86	267	863	1.79	417.04	413	9	1.24E-02	20.7	
19	4	238.31*	3314	601	1.27	475.91	468	20	1.53E-01	2.3	2.38E+00
20	4	241.45	955	770	1.80	482.18	468	20	4.42E-02	7.3	
21	0	269.71*	293	741	1.79	538.68	533	12	1.36E-02	20.1	
22	0	276.89*	158	554	2.25	553.03	549	9	7.30E-03	29.9	
23	0	294.84*	1470	681	1.36	588.93	583	12	6.81E-02	4.5	
24	0	299.97	260	659	1.66	599.18	595	12	1.20E-02	20.7	
25	0	327.94	91	681	1.22	655.10	649	11	4.23E-03	56.2	
26	0	338.00*	653	622	1.52	675.22	669	12	3.02E-02	9.2	
27	0	351.43*	2454	696	1.37	702.08	694	16	1.14E-01	3.2	
28	0	374.37	57	302	0.66	747.92	745	8	2.63E-03	54.4	
29	0	409.22	147	358	1.33	817.61	813	10	6.79E-03	25.6	
30	0	462.68*	198	493	1.71	924.51	919	16	9.15E-03	27.4	
31	0	484.26	45	255	2.42	967.65	962	9	2.08E-03	66.0	
32	0	510.62*	298	516	2.47	1020.37	1012	19	1.38E-02	24.5	
33	0	561.80	69	239	1.13	1122.71	1119	10	3.21E-03	43.1	
34	0	582.56*	1195	337	1.62	1164.21	1155	17	5.53E-02	4.8	
35	0	597.51	71	357	1.93	1194.12	1189	14	3.30E-03	57.3	
36	0	608.79*	1938	433	1.74	1216.68	1210	14	8.97E-02	3.4	
37	3	661.09	651	228	1.75	1321.26	1314	23	3.02E-02	5.9	1.15E+00
38	3	665.20	121	296	2.70	1329.47	1314	23	5.62E-03	38.4	

Sample ID : G198530009 Acquisition date : 8-DEC-2007 09:50:46

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	691.34	91	300	6.34	1381.75	1373	16	4.23E-03	43.6	
40	0	726.48	290	291	1.80	1452.02	1445	14	1.34E-02	13.8	
41	3	767.56*	151	173	1.82	1534.17	1530	19	6.97E-03	20.8	7.54E-01
42	3	771.81	67	210	2.55	1542.68	1530	19	3.09E-03	49.1	
43	0	794.10	174	252	2.18	1587.26	1579	19	8.05E-03	23.2	
44	0	833.64	28	177	2.03	1666.34	1665	10	1.28E-03	91.0	
45	0	859.96	169	173	1.85	1718.98	1713	13	7.84E-03	17.8	
46	0	910.47*	830	238	2.23	1820.00	1813	19	3.84E-02	5.9	
47	3	933.41	60	112	1.76	1865.89	1862	19	2.76E-03	33.3	9.93E-01
48	3	938.48	42	92	3.04	1876.03	1862	19	1.95E-03	47.9	
49	1	964.17	178	187	2.53	1927.42	1920	22	8.23E-03	20.0	1.17E+00
50	1	968.06*	475	173	2.17	1935.19	1920	22	2.20E-02	7.7	
51	1	999.69*	56	103	2.56	1998.47	1992	38	2.59E-03	47.7	2.78E+00
52	1	1002.96	43	116	2.33	2005.00	1992	38	1.97E-03	58.5	
53	0	1119.24	483	188	1.84	2237.61	2228	18	2.24E-02	8.1	
54	0	1155.10	54	112	3.35	2309.33	2302	13	2.51E-03	42.7	
55	0	1172.05	33	100	2.52	2343.25	2336	11	1.52E-03	62.1	
56	0	1237.27	219	125	3.20	2473.72	2467	16	1.01E-02	13.5	
57	0	1280.73	69	106	2.06	2560.66	2554	18	3.18E-03	36.9	
58	0	1377.03	118	122	1.63	2753.32	2744	17	5.46E-03	23.4	
59	0	1407.10	64	71	3.49	2813.49	2808	13	2.94E-03	31.0	
60	0	1459.67*	1025	91	2.70	2918.67	2907	26	4.74E-02	4.2	
61	0	1496.58	32	97	5.48	2992.53	2985	18	1.47E-03	74.1	
62	0	1508.05	100	72	4.04	3015.48	3006	17	4.63E-03	21.9	
63	5	1584.82	19	35	1.83	3169.08	3166	23	8.68E-04	57.5	4.27E+00
64	5	1587.77	105	81	2.75	3175.00	3166	23	4.86E-03	21.8	
65	0	1631.46	39	62	2.31	3262.41	3254	14	1.81E-03	45.8	
66	0	1637.39	18	46	1.84	3274.28	3267	11	8.44E-04	76.1	
67	0	1662.91	20	59	3.24	3325.35	3317	12	9.32E-04	82.6	
68	0	1728.82	96	66	1.99	3457.25	3449	16	4.46E-03	21.6	
69	0	1763.23*	433	41	2.69	3526.10	3517	20	2.01E-02	6.5	
70	0	1832.30	8	33	1.28	3664.34	3656	13	3.61E-04	155.1	
71	0	1845.93	120	70	3.38	3691.62	3678	31	5.54E-03	22.6	
72	0	1934.24	30	17	3.66	3868.37	3859	15	1.37E-03	36.7	

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]G198530009       *
* Acquisition date :  8-DEC-2007 09:50:46 Detector SN#    :                 *
* Detector ID      : GAM22                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.83     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530009           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.6587E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 22-FEB-2007 17:43:25 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.631E+00	3.666E-01	1.685E-01	0.000E+00
CS-137	1.510E-01	2.186E-02	1.821E-02	0.000E+00
TL-208	2.528E-01	3.064E-02	1.750E-02	0.000E+00
BI-211	1.995E-01	3.563E-01	5.122E-01	0.000E+00
BI-212	5.213E-01	1.482E-01	1.330E-01	0.000E+00
PB-212	7.931E-01	5.858E-02	3.203E-02	0.000E+00
BI-214	7.764E-01	8.055E-02	3.541E-02	0.000E+00
PB-214	8.398E-01	7.079E-02	3.610E-02	0.000E+00
RA-223	2.370E-01	9.420E-02	9.886E-02	0.000E+00
AC-228	8.238E-01	1.246E-01	6.450E-02	0.000E+00
PA-234M	1.852E+00	1.738E+00	2.006E+00	0.000E+00
TH-234	9.458E-01	2.342E-01	2.650E-01	0.000E+00
U-235	8.872E-02	9.478E-02	1.157E-01	0.000E+00
NP-237	4.329E-01	9.570E-02	1.209E-01	0.000E+00
AM-243	1.288E-01	2.501E-02	2.700E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	1.065E-02	1.297E-02	2.005E-02	0.000E+00	FAIL ABUN
RH-101	-4.455E-03	1.348E-02	2.060E-02	0.000E+00	NOT IDENT.
SB-125	1.507E-02	2.866E-02	5.072E-02	0.000E+00	NOT IDENT.
EU-155	-1.118E-02	3.304E-02	6.143E-02	0.000E+00	NOT IDENT.
PO-209	-1.183E+00	2.179E+00	3.693E+00	0.000E+00	NOT IDENT.
PA-233	7.893E-03	2.058E-02	3.733E-02	0.000E+00	NOT IDENT.
NP-236	1.913E-02	2.183E-02	3.518E-02	0.000E+00	NOT IDENT.
NP-239	-2.934E-03	7.683E-02	1.343E-01	0.000E+00	NOT IDENT.
AM-241	1.001E-03	4.204E-02	6.817E-02	0.000E+00	NOT IDENT.
CM-243	-1.031E-02	2.973E-02	5.533E-02	0.000E+00	NOT IDENT.
AM-246	4.442E-02	3.711E-02	6.710E-02	0.000E+00	NOT IDENT.
CF-249	5.804E-03	1.194E-02	2.131E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:40:04.82

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530009.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:50:46.
Sample ID        : G198530009           Sample quantity  : 1.65870E+02 GRAM
Detector name    : GAM22                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.83  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	1025	10.66*	1.997E+00	3.631E+00	3.631E+00	10.30
CS-137	661.66	651	85.10*	3.837E+00	1.505E-01	1.510E-01	14.77
TL-208	277.36	158	6.31	6.715E+00	2.805E-01	2.805E-01	60.01
	510.77	298	22.60	4.633E+00	2.147E-01	2.147E-01	49.43
	583.19	1195	84.50*	4.221E+00	2.528E-01	2.528E-01	12.37
	763.13	------	1.81	3.420E+00	------	Line Not Found	------
	860.56	169	12.42	3.093E+00	3.324E-01	3.324E-01	37.02
BI-211	831.80	28	3.30*	3.176E+00	1.995E-01	1.995E-01	182.21
BI-212	727.33	290	11.80*	3.561E+00	5.213E-01	5.213E-01	29.02
	785.37	------	1.10	3.340E+00	------	Line Not Found	------
	1620.50	------	1.49	1.873E+00	------	Line Not Found	------
PB-212	74.81	809	10.40	6.949E+00	8.447E-01	8.447E-01	19.81
	77.11	1274	17.50	7.254E+00	7.569E-01	7.569E-01	12.76
	87.30	589	7.81	8.279E+00	6.873E-01	6.873E-01	22.56
	238.63	3314	43.30*	7.280E+00	7.931E-01	7.931E-01	7.54
	300.09	260	3.28	6.422E+00	9.318E-01	9.318E-01	41.87
BI-214	609.31	1938	46.10*	4.086E+00	7.763E-01	7.764E-01	10.59
	768.36	151	4.94	3.404E+00	6.755E-01	6.756E-01	42.66
	806.17	------	1.22	3.268E+00	------	Line Not Found	------
	934.06	60	3.03	2.882E+00	5.147E-01	5.147E-01	67.31
	1120.29	483	15.10	2.462E+00	9.808E-01	9.808E-01	17.68
	1155.19	54	1.63	2.397E+00	1.046E+00	1.046E+00	85.68
	1238.11	219	5.79	2.263E+00	1.258E+00	1.258E+00	27.70
	1280.96	69	1.43	2.201E+00	1.644E+00	1.644E+00	74.06
	1377.67	118	4.00	2.082E+00	1.069E+00	1.069E+00	47.23
	1401.50	------	1.27	2.055E+00	------	Line Not Found	------
	1407.98	64	2.15	2.049E+00	1.088E+00	1.088E+00	62.32
	1509.23	100	2.11	1.954E+00	1.831E+00	1.831E+00	44.13
	1729.60	96	2.92	1.816E+00	1.372E+00	1.372E+00	43.58
	1764.49	433	15.40	1.801E+00	1.178E+00	1.178E+00	14.15
PB-214	74.81	809	6.44	6.949E+00	1.364E+00	1.364E+00	19.81
	77.11	1274	10.80	7.254E+00	1.226E+00	1.227E+00	12.76

Sample ID : G198530009 Acquisition date : 8-DEC-2007 09:50:46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	589	4.84	8.279E+00	1.109E+00	1.109E+00	22.56
	242.00	955	7.43	7.230E+00	1.342E+00	1.342E+00	15.87
	295.22	1470	19.30	6.485E+00	8.862E-01	8.862E-01	10.87
	351.93	2454	37.60*	5.864E+00	8.398E-01	8.398E-01	8.60
RA-223	269.46	293	13.70*	6.813E+00	2.370E-01	2.370E-01	40.56
AC-228	129.07	243	2.42	9.240E+00	8.198E-01	8.198E-01	53.93
	209.25	267	3.89	7.787E+00	6.657E-01	6.657E-01	41.80
	270.25	293	3.46	6.813E+00	9.384E-01	9.384E-01	40.56
	338.32	653	11.27	5.999E+00	7.288E-01	7.288E-01	19.30
	409.46	147	1.92	5.350E+00	1.076E+00	1.076E+00	51.46
	463.00	198	4.40	4.948E+00	6.850E-01	6.850E-01	55.24
	794.95	174	4.25	3.309E+00	9.326E-01	9.326E-01	47.29
	911.20	830	25.80*	2.945E+00	8.238E-01	8.238E-01	15.44
	964.77	178	4.99	2.802E+00	9.588E-01	9.588E-01	41.03
	968.97	475	15.80	2.792E+00	8.117E-01	8.117E-01	17.95
	1588.20	105	3.22	1.894E+00	1.299E+00	1.299E+00	44.04
PA-234M	1001.03	56	0.84*	2.715E+00	1.852E+00	1.852E+00	95.75
TH-234	63.29	260	4.80	5.009E+00	8.162E-01	8.162E-01	82.24
	92.58	587	5.41*	8.648E+00	9.458E-01	9.458E-01	25.27
U-235	143.76	117	10.96*	9.044E+00	8.872E-02	8.872E-02	109.01
NP-237	86.48	589	12.40*	8.279E+00	4.329E-01	4.329E-01	22.56
AM-243	74.66	809	68.20*	6.949E+00	1.288E-01	1.288E-01	19.81

Flag: "*" = Keyline

Sample ID : G198530009 Acquisition date : 8-DEC-2007 09:50:46

Total number of lines in spectrum	72	
Number of unidentified lines	28	
Number of lines tentatively identified by NID	44	61.11%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	3.631E+00	3.631E+00	0.374E+00	10.30	
CS-137	9.47E+08S	1.00	1.505E-01	1.510E-01	0.223E-01	14.77	
TL-208	4.43E+17S	1.00	2.528E-01	2.528E-01	0.313E-01	12.37	
BI-211	2.22E+16S	1.00	1.995E-01	1.995E-01	3.636E-01	182.21	
BI-212	4.43E+17S	1.00	5.213E-01	5.213E-01	1.513E-01	29.02	
PB-212	4.43E+17S	1.00	7.931E-01	7.931E-01	0.598E-01	7.54	
BI-214	5.05E+10S	1.00	7.763E-01	7.764E-01	0.822E-01	10.59	
PB-214	5.05E+10S	1.00	8.398E-01	8.398E-01	0.722E-01	8.60	
RA-223	1.04E+12S	1.00	2.370E-01	2.370E-01	0.961E-01	40.56	
AC-228	4.43E+17S	1.00	8.238E-01	8.238E-01	1.272E-01	15.44	
PA-234M	1.41E+17S	1.00	1.852E+00	1.852E+00	1.774E+00	95.75	
TH-234	1.41E+17S	1.00	9.458E-01	9.458E-01	2.390E-01	25.27	
U-235	2.22E+16S	1.00	8.872E-02	8.872E-02	9.671E-02	109.01	
NP-237	6.75E+13S	1.00	4.329E-01	4.329E-01	0.977E-01	22.56	
AM-243	2.33E+11S	1.00	1.288E-01	1.288E-01	0.255E-01	19.81	
			---	---			
		Total Activity :	1.167E+01	1.167E+01			

Grand Total Activity : 1.167E+01 1.167E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530009 Acquisition date : 8-DEC-2007 09:50:46

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.05	72	829	1.43	91.55	88	8	3.32E-03	****	1.61E+00	
0	53.00	34	695	1.32	105.45	103	7	1.56E-03	****	2.97E+00	
2	84.06	194	980	1.43	167.55	164	29	8.96E-03	58.7	8.03E+00	
2	89.81	371	896	1.23	179.04	164	29	1.72E-02	30.1	8.48E+00	
0	112.28	59	710	1.39	223.96	222	6	2.74E-03	****	9.25E+00	
0	115.14	84	835	0.96	229.67	227	7	3.89E-03	****	9.28E+00	
0	139.65	110	976	2.84	278.68	274	9	5.09E-03	****	9.11E+00	
0	153.40	70	1055	1.08	306.15	303	9	3.22E-03	****	8.87E+00	
0	163.02	79	1056	0.89	325.38	320	10	3.66E-03	****	8.69E+00	
0	185.74	733	1510	1.43	370.82	363	15	3.40E-02	25.8	8.23E+00	
0	327.94	91	681	1.22	655.10	649	11	4.23E-03	****	6.10E+00	
0	374.37	57	302	0.66	747.92	745	8	2.63E-03	****	5.65E+00	
0	484.26	45	255	2.42	967.65	962	9	2.08E-03	****	4.80E+00	
0	561.80	69	239	1.13	1122.71	1119	10	3.21E-03	86.2	4.33E+00	
0	597.51	71	357	1.93	1194.12	1189	14	3.30E-03	****	4.14E+00	
3	665.20	121	296	2.70	1329.47	1314	23	5.62E-03	76.7	3.82E+00	
0	691.34	91	300	6.34	1381.75	1373	16	4.23E-03	87.2	3.70E+00	
3	771.81	67	210	2.55	1542.68	1530	19	3.09E-03	98.3	3.39E+00	
3	938.48	42	92	3.04	1876.03	1862	19	1.95E-03	95.9	2.87E+00	
1	1002.96	43	116	2.33	2005.00	1992	38	1.97E-03	****	2.71E+00	
0	1172.05	33	100	2.52	2343.25	2336	11	1.52E-03	****	2.37E+00	T
0	1496.58	32	97	5.48	2992.53	2985	18	1.47E-03	****	1.96E+00	
5	1584.82	19	35	1.83	3169.08	3166	23	8.68E-04	****	1.90E+00	
0	1631.46	39	62	2.31	3262.41	3254	14	1.81E-03	91.5	1.87E+00	
0	1637.39	18	46	1.84	3274.28	3267	11	8.44E-04	****	1.86E+00	
0	1662.91	20	59	3.24	3325.35	3317	12	9.32E-04	****	1.85E+00	
0	1832.30	8	33	1.28	3664.34	3656	13	3.61E-04	****	1.78E+00	
0	1845.93	120	70	3.38	3691.62	3678	31	5.54E-03	45.2	1.77E+00	
0	1934.24	30	17	3.66	3868.37	3859	15	1.37E-03	73.4	1.76E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530009            *
* Acquisition date :  8-DEC-2007 09:50:46 Detector SN#    :                 *
* Detector ID      : GAM22                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.83     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530009           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.6587E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 22-FEB-2007 17:43:25 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	LC (pCi/GRAM)	TPU
K-40	3.631E+00	3.666E-01	8.431E-02	3.666E-01
CS-137	1.510E-01	2.186E-02	9.111E-03	2.186E-02
TL-208	2.528E-01	3.064E-02	8.753E-03	3.064E-02
BI-211	1.995E-01	3.563E-01	2.562E-01	3.563E-01
BI-212	5.213E-01	1.482E-01	6.654E-02	1.482E-01
PB-212	7.931E-01	5.858E-02	1.603E-02	5.858E-02
BI-214	7.764E-01	8.055E-02	1.771E-02	8.055E-02
PB-214	8.398E-01	7.079E-02	1.806E-02	7.079E-02
RA-223	2.370E-01	9.420E-02	4.946E-02	9.420E-02
AC-228	8.238E-01	1.246E-01	3.227E-02	1.246E-01
PA-234M	1.852E+00	1.738E+00	1.004E+00	1.738E+00
TH-234	9.458E-01	2.342E-01	1.326E-01	2.342E-01
U-235	8.872E-02	9.478E-02	5.786E-02	9.478E-02
NP-237	4.329E-01	9.570E-02	6.048E-02	9.570E-02
AM-243	1.288E-01	2.501E-02	1.351E-02	2.501E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.065E-02	1.297E-02	1.003E-02	1.297E-02	FAIL ABUN
RH-101	-4.455E-03	1.348E-02	1.030E-02	1.348E-02	NOT IDENT.
SB-125	1.507E-02	2.866E-02	2.538E-02	2.866E-02	NOT IDENT.
EU-155	-1.118E-02	3.304E-02	3.073E-02	3.304E-02	NOT IDENT.
PO-209	-1.183E+00	2.179E+00	1.848E+00	2.179E+00	NOT IDENT.
PA-233	7.893E-03	2.058E-02	1.868E-02	2.058E-02	NOT IDENT.
NP-236	1.913E-02	2.183E-02	1.760E-02	2.183E-02	NOT IDENT.
NP-239	-2.934E-03	7.683E-02	6.718E-02	7.683E-02	NOT IDENT.
AM-241	1.001E-03	4.204E-02	3.411E-02	4.204E-02	NOT IDENT.
CM-243	-1.031E-02	2.973E-02	2.768E-02	2.973E-02	NOT IDENT.
AM-246	4.442E-02	3.711E-02	3.357E-02	3.711E-02	NOT IDENT.
CF-249	5.804E-03	1.194E-02	1.066E-02	1.194E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	735.5817
63.29	862.1272
74.66	1090.8215
74.81	1091.2406
74.81	1091.2406
77.11	1097.6469
77.11	1097.6469
86.48	1019.9542
87.30	1021.8925
87.30	1021.8925
92.58	1034.1744
98.44	840.1093
103.76	929.7994
105.31	946.6280
129.07	945.2599
143.76	905.3342
198.00	887.1423
209.25	892.0641
228.18	822.1341
238.63	722.2161
242.00	632.7045
269.46	608.8203
270.25	609.3076
277.36	620.9222
295.22	561.1933
300.09	557.3619
312.17	564.8311
338.32	492.2651
351.93	459.1014
387.59	413.4088
409.46	461.0278
427.87	389.6194
463.00	379.4481
510.77	324.0241
583.19	291.0736
609.31	333.3925
661.66	264.6108
727.33	236.6443
763.13	287.8133
768.36	295.7720
785.37	217.2491
794.95	220.8280
806.17	203.4716
831.80	221.4885
860.56	169.2861
896.60	227.9323
911.20	184.7115
934.06	189.4601
964.77	174.5739
968.97	152.1174
1001.03	161.8390
1078.86	133.3189
1120.29	138.2185
1155.19	152.3380
1173.23	129.4128
1238.11	162.4982
1280.96	123.8014
1332.51	114.1829
1377.67	128.8496
1401.50	119.1476
1407.98	147.0993
1460.80	102.0685
1509.23	79.2177
1588.20	109.3966
1620.50	85.9564
1729.60	59.6624
1764.49	65.2643

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530009

Total Uranium Activity	4.1049E-02	ug/g
Total Uranium Counting Unc.	4.3853E-02	ug/g
Total Uranium Tpu	4.3853E-08	ug/g
Total Uranium Mda	2.6773E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:41:00.50

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530010.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:51:43.
Sample ID        : G198530010           Sample quantity  : 1.15450E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:14.26  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.67*	19	480	1.01	93.29	90	7	8.76E-04	219.9	
2	0	63.31*	91	558	0.92	126.57	123	7	4.21E-03	48.4	
3	3	74.85	512	497	0.83	149.65	144	14	2.37E-02	7.8	1.68E+00
4	3	77.12	767	474	0.91	154.20	144	14	3.55E-02	5.6	
5	5	87.26	365	585	1.13	174.47	165	27	1.69E-02	12.1	3.41E+00
6	5	89.95	214	568	1.22	179.86	165	27	9.92E-03	19.8	
7	5	92.80*	399	625	1.36	185.55	165	27	1.85E-02	14.0	
8	0	106.19	73	687	2.29	212.34	208	9	3.37E-03	66.3	
9	0	128.98	63	541	0.79	257.92	255	7	2.90E-03	62.8	
10	0	143.73*	130	620	1.25	287.44	283	9	6.02E-03	37.5	
11	0	185.92*	327	607	1.27	371.82	367	10	1.51E-02	17.3	
12	0	209.43	182	552	0.98	418.86	415	9	8.41E-03	24.4	
13	5	238.61*	1874	351	1.00	477.23	472	18	8.68E-02	3.0	2.12E+00
14	5	241.59	523	481	1.64	483.19	472	18	2.42E-02	10.7	
15	0	270.17	181	473	1.45	540.35	535	11	8.40E-03	24.4	
16	0	276.90	87	463	1.41	553.82	550	10	4.01E-03	47.7	
17	5	295.21*	608	309	1.27	590.44	586	19	2.81E-02	6.8	2.16E+00
18	5	300.14	156	302	1.78	600.31	586	19	7.22E-03	22.2	
19	0	327.49	109	420	1.12	655.02	650	12	5.05E-03	38.8	
20	0	338.00	380	343	1.30	676.05	670	11	1.76E-02	10.8	
21	0	351.77*	826	470	1.17	703.59	698	13	3.82E-02	6.6	
22	0	408.74	35	333	0.56	817.55	812	12	1.61E-03	106.4	
23	0	462.77	101	275	1.53	925.64	918	13	4.67E-03	35.4	
24	0	510.73*	144	369	1.88	1021.59	1013	18	6.69E-03	39.0	
25	0	583.17*	551	204	1.39	1166.52	1161	12	2.55E-02	7.4	
26	0	609.19*	646	220	1.39	1218.57	1212	12	2.99E-02	6.3	
27	0	653.18	43	90	1.38	1306.57	1303	8	1.97E-03	42.3	
28	0	661.40	129	126	1.54	1323.03	1318	9	5.98E-03	18.0	
29	4	703.70	29	58	1.74	1407.66	1405	14	1.35E-03	39.5	1.53E+00
30	4	707.26	28	101	1.96	1414.79	1405	14	1.30E-03	65.3	
31	0	722.05*	38	136	3.49	1444.37	1438	13	1.75E-03	77.3	
32	2	727.27	119	112	1.97	1454.80	1450	44	5.52E-03	18.3	1.52E+00
33	2	745.01	32	62	1.98	1490.31	1450	44	1.47E-03	51.4	
34	0	767.35	96	145	3.03	1535.01	1530	12	4.44E-03	27.1	
35	0	774.16	38	117	0.52	1548.62	1542	12	1.74E-03	61.0	
36	0	785.40	60	114	0.98	1571.12	1565	11	2.79E-03	36.8	
37	0	794.61	90	87	1.23	1589.54	1585	10	4.19E-03	22.0	
38	0	860.98	29	156	1.65	1722.34	1714	12	1.34E-03	88.1	

Sample ID : G198530010 Acquisition date : 8-DEC-2007 09:51:43

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	910.97*	355	110	1.62	1822.37	1816	13	1.64E-02	8.6	
40	4	931.24	23	36	1.59	1862.92	1860	24	1.05E-03	46.0	1.39E+00
41	4	933.96	41	72	1.96	1868.36	1860	24	1.91E-03	45.8	
42	6	964.26*	95	70	2.82	1928.99	1923	21	4.38E-03	22.7	1.25E+00
43	6	968.69	207	57	1.90	1937.87	1923	21	9.58E-03	10.1	
44	0	1119.97	190	84	1.14	2240.56	2233	16	8.78E-03	13.0	
45	0	1238.15	33	52	1.06	2477.06	2473	8	1.51E-03	42.7	
46	0	1271.36	22	37	0.91	2543.52	2537	12	1.01E-03	60.6	
47	0	1377.35	41	39	1.24	2755.64	2748	13	1.90E-03	35.1	
48	6	1407.86	46	12	3.71	2816.70	2811	34	2.13E-03	21.3	1.20E+00
49	6	1417.18	26	20	3.72	2835.35	2811	34	1.18E-03	50.2	
50	0	1460.19	516	42	2.11	2921.42	2911	21	2.39E-02	5.4	
51	0	1613.53	11	28	0.91	3228.31	3216	15	5.13E-04	111.1	
52	0	1630.82	22	18	4.13	3262.92	3254	15	9.99E-04	48.7	
53	0	1730.10	33	26	2.27	3461.63	3454	15	1.53E-03	37.9	
54	1	1763.79*	79	10	2.52	3529.07	3519	32	3.64E-03	18.9	2.04E+00
55	1	1769.83*	8	14	2.53	3541.16	3519	32	3.77E-04	164.0	
56	0	1791.65*	2	0	1.94	3584.83	3581	8	1.12E-04	264.8	
57	0	1797.11	22	3	3.46	3595.75	3589	13	1.01E-03	27.4	
58	3	1888.39	20	19	2.59	3778.47	3772	16	9.06E-04	52.5	3.34E+00
59	3	1890.45	14	20	3.14	3782.58	3772	16	6.33E-04	62.2	
60	0	2001.62	9	14	4.74	4005.11	3994	14	4.17E-04	94.3	

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]G198530010       *
* Acquisition date :  8-DEC-2007 09:51:43 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:14.26     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530010           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.1545E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 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	5.057E+00	6.420E-01	2.648E-01	0.000E+00
CS-137	7.847E-02	2.802E-02	3.556E-02	0.000E+00
EU-155	6.006E-02	7.814E-02	8.157E-02	0.000E+00
TL-208	3.017E-01	4.702E-02	3.190E-02	0.000E+00
BI-212	5.660E-01	2.065E-01	2.586E-01	0.000E+00
PB-212	9.840E-01	7.945E-02	4.558E-02	0.000E+00
BI-214	6.730E-01	9.172E-02	6.762E-02	0.000E+00
PB-214	6.746E-01	9.436E-02	6.305E-02	0.000E+00
RA-223	3.307E-01	1.591E-01	1.515E-01	0.000E+00
AC-228	9.448E-01	1.758E-01	1.155E-01	0.000E+00
TH-234	1.388E+00	3.920E-01	3.469E-01	0.000E+00
U-235	2.012E-01	1.484E-01	1.529E-01	0.000E+00
NP-237	5.938E-01	1.471E-01	1.623E-01	0.000E+00
AM-243	1.961E-01	3.279E-02	4.034E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	
CO-60	-7.143E-03		1.934E-02	3.155E-02	0.000E+00 NOT IDENT.
RH-101	-4.756E-03		1.633E-02	2.720E-02	0.000E+00 NOT IDENT.
SB-125	2.240E-02		5.103E-02	8.789E-02	0.000E+00 NOT IDENT.
PO-209	-3.284E-01		4.112E+00	6.774E+00	0.000E+00 NOT IDENT.
BI-211	1.682E-02		6.289E-01	1.052E+00	0.000E+00 NOT IDENT.
PA-233	2.060E-02		3.370E-02	5.983E-02	0.000E+00 NOT IDENT.
PA-234M	1.570E+00		2.818E+00	4.364E+00	0.000E+00 NOT IDENT.
NP-236	0.000E+00		2.781E-02	4.982E-02	0.000E+00 NOT IDENT.
NP-239	1.108E-03		1.156E-01	1.923E-01	0.000E+00 NOT IDENT.
AM-241	-2.692E-03		8.605E-02	1.316E-01	0.000E+00 NOT IDENT.
CM-243	1.190E-02		4.614E-02	7.429E-02	0.000E+00 NOT IDENT.
AM-246	2.048E-02		6.445E-02	1.123E-01	0.000E+00 NOT IDENT.
CF-249	-4.217E-03		2.233E-02	3.773E-02	0.000E+00 NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:41:01.63

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530010.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 8-DEC-2007 09:51:43.
Sample ID        : G198530010           Sample quantity  : 1.15450E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:14.26  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	516	10.66*	1.037E+00	5.057E+00	5.057E+00	12.96
CS-137	661.66	129	85.10*	2.103E+00	7.819E-02	7.847E-02	36.44
EU-155	105.31	73	21.20*	6.328E+00	5.875E-02	6.006E-02	132.77
TL-208	277.36	87	6.31	4.259E+00	3.490E-01	3.490E-01	95.49
	510.77	144	22.60	2.615E+00	2.650E-01	2.650E-01	78.25
	583.19	551	84.50*	2.341E+00	3.017E-01	3.017E-01	15.90
	763.13	------	1.81	1.854E+00	------	Line Not Found	------
	860.56	29	12.42	1.663E+00	1.522E-01	1.522E-01	176.40
BI-212	727.33	119	11.80*	1.935E+00	5.660E-01	5.660E-01	37.23
	785.37	60	1.10	1.807E+00	3.286E+00	3.286E+00	73.90
	1620.50	------	1.49	9.597E-01	------	Line Not Found	------
PB-212	74.81	512	10.40	4.153E+00	1.286E+00	1.286E+00	17.07
	77.11	767	17.50	4.414E+00	1.076E+00	1.076E+00	13.33
	87.30	365	7.81	5.374E+00	9.427E-01	9.427E-01	25.29
	238.63	1874	43.30*	4.767E+00	9.840E-01	9.840E-01	8.24
	300.09	156	3.28	4.000E+00	1.289E+00	1.289E+00	44.77
BI-214	609.31	646	46.10*	2.256E+00	6.729E-01	6.730E-01	13.91
	768.36	96	4.94	1.845E+00	1.139E+00	1.140E+00	54.57
	806.17	------	1.22	1.765E+00	------	Line Not Found	------
	934.06	41	3.03	1.544E+00	9.543E-01	9.544E-01	91.96
	1120.29	190	15.10	1.306E+00	1.042E+00	1.042E+00	26.79
	1155.19	------	1.63	1.270E+00	------	Line Not Found	------
	1238.11	33	5.79	1.193E+00	5.107E-01	5.108E-01	85.57
	1280.96	------	1.43	1.158E+00	------	Line Not Found	------
	1377.67	41	4.00	1.088E+00	1.020E+00	1.020E+00	70.58
	1401.50	------	1.27	1.073E+00	------	Line Not Found	------
	1407.98	46	2.15	1.069E+00	2.169E+00	2.169E+00	43.22
	1509.23	------	2.11	1.011E+00	------	Line Not Found	------
	1729.60	33	2.92	9.195E-01	1.336E+00	1.336E+00	76.10
	1764.49	79	15.40	9.089E-01	6.082E-01	6.083E-01	38.36
PB-214	74.81	512	6.44	4.153E+00	2.076E+00	2.077E+00	17.07
	77.11	767	10.80	4.414E+00	1.744E+00	1.744E+00	13.33

Sample ID : G198530010 Acquisition date : 8-DEC-2007 09:51:43

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	365	4.84	5.374E+00	1.521E+00	1.521E+00	25.29
	242.00	523	7.43	4.723E+00	1.614E+00	1.614E+00	22.05
	295.22	608	19.30	4.052E+00	8.419E-01	8.420E-01	14.89
	351.93	826	37.60*	3.530E+00	6.745E-01	6.746E-01	14.27
RA-223	269.46	181	13.70*	4.340E+00	3.307E-01	3.307E-01	49.10
AC-228	129.07	63	2.42	6.530E+00	4.291E-01	4.291E-01	125.80
	209.25	182	3.89	5.233E+00	9.676E-01	9.676E-01	49.13
	270.25	181	3.46	4.340E+00	1.309E+00	1.309E+00	49.10
	338.32	380	11.27	3.644E+00	1.002E+00	1.002E+00	22.21
	409.46	35	1.92	3.132E+00	6.264E-01	6.264E-01	212.78
	463.00	101	4.40	2.834E+00	8.767E-01	8.767E-01	70.96
	794.95	90	4.25	1.788E+00	1.289E+00	1.289E+00	44.57
	911.20	355	25.80*	1.579E+00	9.448E-01	9.448E-01	18.98
	964.77	95	4.99	1.499E+00	1.370E+00	1.370E+00	46.10
	968.97	207	15.80	1.493E+00	9.510E-01	9.510E-01	21.51
	1588.20	------	3.22	9.734E-01	------	Line Not Found	------
TH-234	63.29	91	4.80	2.629E+00	7.800E-01	7.800E-01	97.09
	92.58	399	5.41*	5.757E+00	1.388E+00	1.388E+00	28.82
U-235	143.76	130	10.96*	6.390E+00	2.012E-01	2.012E-01	75.28
NP-237	86.48	365	12.40*	5.374E+00	5.938E-01	5.938E-01	25.29
AM-243	74.66	512	68.20*	4.153E+00	1.961E-01	1.961E-01	17.07

Flag: "*" = Keyline

Sample ID : G198530010 Acquisition date : 8-DEC-2007 09:51:43

Total number of lines in spectrum 60
Number of unidentified lines 21
Number of lines tentatively identified by NID 39 65.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.057E+00	5.057E+00	0.655E+00	12.96	
CS-137	9.47E+08S	1.00	7.819E-02	7.847E-02	2.859E-02	36.44	
EU-155	1.57E+08S	1.02	5.875E-02	6.006E-02	7.974E-02	132.77	
TL-208	4.43E+17S	1.00	3.017E-01	3.017E-01	0.480E-01	15.90	
BI-212	4.43E+17S	1.00	5.660E-01	5.660E-01	2.107E-01	37.23	
PB-212	4.43E+17S	1.00	9.840E-01	9.840E-01	0.811E-01	8.24	
BI-214	5.05E+10S	1.00	6.729E-01	6.730E-01	0.936E-01	13.91	
PB-214	5.05E+10S	1.00	6.745E-01	6.746E-01	0.963E-01	14.27	
RA-223	1.04E+12S	1.00	3.307E-01	3.307E-01	1.623E-01	49.10	
AC-228	4.43E+17S	1.00	9.448E-01	9.448E-01	1.794E-01	18.98	
TH-234	1.41E+17S	1.00	1.388E+00	1.388E+00	0.400E+00	28.82	
U-235	2.22E+16S	1.00	2.012E-01	2.012E-01	1.514E-01	75.28	
NP-237	6.75E+13S	1.00	5.938E-01	5.938E-01	1.501E-01	25.29	
AM-243	2.33E+11S	1.00	1.961E-01	1.961E-01	0.335E-01	17.07	
			---	---			
	Total Activity :		1.205E+01	1.205E+01			

Grand Total Activity : 1.205E+01 1.205E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530010 Acquisition date : 8-DEC-2007 09:51:43

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.67	19	480	1.01	93.29	90	7	8.76E-04	****	5.96E-01	
5	89.95	214	568	1.22	179.86	165	27	9.92E-03	39.6	5.57E+00	
0	185.92	327	607	1.27	371.82	367	10	1.51E-02	34.5	5.66E+00	
0	327.49	109	420	1.12	655.02	650	12	5.05E-03	77.6	3.74E+00	
0	653.18	43	90	1.38	1306.57	1303	8	1.97E-03	84.7	2.13E+00	
4	703.70	29	58	1.74	1407.66	1405	14	1.35E-03	78.9	1.99E+00	
4	707.26	28	101	1.96	1414.79	1405	14	1.30E-03	****	1.98E+00	
0	722.05	38	136	3.49	1444.37	1438	13	1.75E-03	****	1.95E+00	
2	745.01	32	62	1.98	1490.31	1450	44	1.47E-03	****	1.89E+00	
0	774.16	38	117	0.52	1548.62	1542	12	1.74E-03	****	1.83E+00	
4	931.24	23	36	1.59	1862.92	1860	24	1.05E-03	91.9	1.55E+00	
0	1271.36	22	37	0.91	2543.52	2537	12	1.01E-03	****	1.17E+00	
6	1417.18	26	20	3.72	2835.35	2811	34	1.18E-03	****	1.06E+00	
0	1613.53	11	28	0.91	3228.31	3216	15	5.13E-04	****	9.63E-01	
0	1630.82	22	18	4.13	3262.92	3254	15	9.99E-04	97.4	9.55E-01	
1	1769.83	8	14	2.53	3541.16	3519	32	3.77E-04	****	9.07E-01	
0	1791.65	2	0	1.94	3584.83	3581	8	1.12E-04	****	9.01E-01	
0	1797.11	22	3	3.46	3595.75	3589	13	1.01E-03	54.7	8.99E-01	
3	1888.39	20	19	2.59	3778.47	3772	16	9.06E-04	****	8.77E-01	
3	1890.45	14	20	3.14	3782.58	3772	16	6.33E-04	****	8.76E-01	
0	2001.62	9	14	4.74	4005.11	3994	14	4.17E-04	****	8.56E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530010            *
* Acquisition date :  8-DEC-2007 09:51:43 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:14.26     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530010           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.1545E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	5.057E+00	6.420E-01	1.325E-01	6.420E-01
CS-137	7.847E-02	2.802E-02	1.779E-02	2.802E-02
EU-155	6.006E-02	7.814E-02	4.081E-02	7.814E-02
TL-208	3.017E-01	4.702E-02	1.596E-02	4.702E-02
BI-212	5.660E-01	2.065E-01	1.294E-01	2.065E-01
PB-212	9.840E-01	7.945E-02	2.280E-02	7.945E-02
BI-214	6.730E-01	9.172E-02	3.383E-02	9.172E-02
PB-214	6.746E-01	9.436E-02	3.155E-02	9.436E-02
RA-223	3.307E-01	1.591E-01	7.581E-02	1.591E-01
AC-228	9.448E-01	1.758E-01	5.777E-02	1.758E-01
TH-234	1.388E+00	3.920E-01	1.735E-01	3.920E-01
U-235	2.012E-01	1.484E-01	7.648E-02	1.484E-01
NP-237	5.938E-01	1.471E-01	8.122E-02	1.471E-01
AM-243	1.961E-01	3.279E-02	2.018E-02	3.279E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-7.143E-03	1.934E-02	1.579E-02	1.934E-02	NOT IDENT.
RH-101	-4.756E-03	1.633E-02	1.361E-02	1.633E-02	NOT IDENT.
SB-125	2.240E-02	5.103E-02	4.397E-02	5.103E-02	NOT IDENT.
PO-209	-3.284E-01	4.112E+00	3.389E+00	4.112E+00	NOT IDENT.
BI-211	1.682E-02	6.289E-01	5.263E-01	6.289E-01	NOT IDENT.
PA-233	2.060E-02	3.370E-02	2.993E-02	3.370E-02	NOT IDENT.
PA-234M	1.570E+00	2.818E+00	2.183E+00	2.818E+00	NOT IDENT.
NP-236	5.302E-02	2.781E-02	2.493E-02	2.781E-02	NOT IDENT.
NP-239	1.108E-03	1.156E-01	9.620E-02	1.156E-01	NOT IDENT.
AM-241	-2.692E-03	8.605E-02	6.582E-02	8.605E-02	NOT IDENT.
CM-243	1.190E-02	4.614E-02	3.717E-02	4.614E-02	NOT IDENT.
AM-246	2.048E-02	6.445E-02	5.621E-02	6.445E-02	NOT IDENT.
CF-249	-4.217E-03	2.233E-02	1.888E-02	2.233E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	369.6674
63.29	416.4072
74.66	483.6664
74.81	483.8977
74.81	483.8977
77.11	487.4167
77.11	487.4167
86.48	429.6318
87.30	430.6363
87.30	430.6363
92.58	437.0003
98.44	382.0763
103.76	411.7510
105.31	428.7432
129.07	441.4361
143.76	434.6446
198.00	432.6411
209.25	419.5934
228.18	396.8213
238.63	338.9861
242.00	340.4630
269.46	312.8806
270.25	313.1729
277.36	343.7285
295.22	316.4915
300.09	318.1653
312.17	280.5027
338.32	257.2339
351.93	270.0561
387.59	264.2928
409.46	204.6704
427.87	205.7525
463.00	187.5898
510.77	188.7765
583.19	155.1616
609.31	192.8105
661.66	156.9254
727.33	136.4795
763.13	114.1268
768.36	129.3398
785.37	103.6512
794.95	102.7794
806.17	127.6304
831.80	138.3618
860.56	100.3530
896.60	104.3826
911.20	86.9909
934.06	78.1774
964.77	86.7402
968.97	70.5939
1001.03	75.8798
1078.86	63.2024
1120.29	61.2630
1155.19	65.8750
1173.23	67.2509
1238.11	73.6628
1280.96	55.4901
1332.51	47.1399
1377.67	42.7249
1401.50	39.4330
1407.98	39.8060
1460.80	34.0169
1509.23	39.8500
1588.20	55.5985
1620.50	25.1237
1729.60	24.3870
1764.49	28.5206

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530010

Total Uranium Activity	9.3083E-02	ug/g
Total Uranium Counting Unc.	6.8673E-02	ug/g
Total Uranium Tpu	6.8673E-08	ug/g
Total Uranium Mda	3.5386E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:41:36.11

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530011.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 9-DEC-2007 14:38:51.
Sample ID        : G198530011           Sample quantity  : 1.20560E+02 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:40:11.45  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.11*	468	2488	1.01	93.01	87	11	7.79E-03	27.8	
2	3	49.94	152	1298	1.04	100.65	98	13	2.53E-03	38.5	1.52E+00
3	3	53.00	326	1984	1.45	106.78	98	13	5.43E-03	25.3	
4	0	62.77*	660	3425	1.20	126.30	121	11	1.10E-02	19.9	
5	2	74.54*	3082	2550	1.15	149.84	144	21	5.14E-02	3.6	3.56E+00
6	2	76.83*	4733	2014	1.07	154.41	144	21	7.89E-02	2.5	
7	2	79.39	272	2801	1.51	159.52	144	21	4.54E-03	40.8	
8	5	83.86*	737	1780	1.40	168.46	165	29	1.23E-02	12.3	3.02E+00
9	5	86.94*	1753	1990	1.24	174.61	165	29	2.92E-02	5.4	
10	5	89.65	1084	1904	1.14	180.03	165	29	1.81E-02	7.4	
11	5	92.52*	1667	2081	1.38	185.76	165	29	2.78E-02	6.8	
12	0	98.67	293	2461	2.07	198.05	194	10	4.89E-03	32.2	
13	0	105.21	395	2038	1.66	211.13	207	9	6.58E-03	21.2	
14	0	109.39	314	1867	1.63	219.49	216	8	5.23E-03	24.5	
15	0	114.80	127	1688	1.11	230.30	228	7	2.11E-03	54.6	
16	0	129.05	361	2034	1.03	258.78	255	8	6.02E-03	22.3	
17	0	144.12*	106	1842	1.25	288.91	285	8	1.76E-03	84.5	
18	0	154.09	201	1921	1.21	308.82	304	9	3.35E-03	40.0	
19	0	185.73*	1216	2171	1.37	372.06	367	11	2.03E-02	9.9	
20	0	190.31	48	1545	1.30	381.21	379	8	7.96E-04	143.3	
21	2	205.40	221	1904	1.77	411.39	406	18	3.68E-03	38.3	2.65E+00
22	2	209.25	784	1399	1.58	419.07	406	18	1.31E-02	9.5	
23	3	238.50*	6359	992	1.19	477.52	469	21	1.06E-01	1.7	5.28E+00
24	3	241.50	1820	1415	1.86	483.53	469	21	3.03E-02	5.7	
25	0	256.47	64	791	1.08	513.44	510	6	1.07E-03	70.6	
26	0	270.08	714	1564	1.64	540.65	534	14	1.19E-02	12.3	
27	0	277.54	218	1115	1.45	555.56	551	9	3.64E-03	28.5	
28	0	295.10*	1974	1027	1.27	590.64	586	9	3.29E-02	4.4	
29	0	300.01	392	980	1.16	600.47	597	9	6.54E-03	15.2	
30	0	327.81	311	841	1.49	656.02	652	8	5.18E-03	17.1	
31	0	333.14	88	885	0.82	666.67	662	9	1.46E-03	62.3	
32	0	338.24*	1271	1219	1.27	676.86	671	13	2.12E-02	6.9	
33	0	351.79*	3334	1281	1.25	703.94	697	14	5.56E-02	3.3	
34	1	405.04	106	430	1.74	810.34	807	18	1.76E-03	32.5	7.15E-01
35	1	409.26	220	822	1.87	818.77	807	18	3.66E-03	26.1	
36	0	462.90	402	696	1.83	925.96	921	11	6.69E-03	13.7	
37	0	486.95	165	631	1.69	974.01	968	12	2.75E-03	31.4	
38	0	510.75*	830	966	1.98	1021.57	1013	20	1.38E-02	13.5	

Sample ID : G198530011 Acquisition date : 9-DEC-2007 14:38:51

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	583.05	1802	697	1.51	1166.03	1157	15	3.00E-02	4.0	
40	0	609.22*	2359	613	1.53	1218.32	1212	14	3.93E-02	3.4	
41	0	661.54	1817	460	1.57	1322.86	1317	11	3.03E-02	3.3	
42	0	727.31	405	443	1.59	1454.24	1449	12	6.75E-03	11.6	
43	0	755.17	50	290	0.63	1509.90	1506	9	8.28E-04	63.3	
44	0	767.86	229	427	1.29	1535.25	1529	12	3.82E-03	19.2	
45	0	771.79	56	289	1.54	1543.09	1540	9	9.37E-04	56.5	
46	0	778.09	71	326	1.32	1555.68	1549	12	1.19E-03	52.0	
47	0	786.24	116	380	1.54	1571.97	1564	13	1.93E-03	36.2	
48	0	794.85	193	294	1.71	1589.16	1584	11	3.22E-03	18.7	
49	0	835.30	61	259	1.53	1669.97	1667	9	1.01E-03	49.3	
50	0	860.65	288	324	1.31	1720.59	1714	14	4.81E-03	14.5	
51	0	911.00*	1243	369	1.60	1821.17	1812	18	2.07E-02	4.9	
52	0	933.21	104	301	1.34	1865.53	1860	13	1.74E-03	35.5	
53	0	951.48	86	185	3.82	1902.04	1898	12	1.43E-03	33.5	
54	3	964.54	223	281	1.90	1928.11	1921	22	3.72E-03	15.4	6.63E-01
55	3	968.82	766	239	1.75	1936.66	1921	22	1.28E-02	5.4	
56	0	1001.28	105	224	1.50	2001.50	1996	12	1.75E-03	30.2	
57	0	1009.83	24	210	0.67	2018.58	2016	11	3.95E-04	120.1	
58	0	1033.22	23	167	1.12	2065.29	2059	9	3.83E-04	103.8	
59	0	1120.29*	463	212	1.70	2239.17	2232	13	7.72E-03	9.0	
60	0	1206.93	49	182	1.50	2412.18	2407	10	8.12E-04	54.0	
61	2	1238.12	232	281	2.77	2474.47	2462	34	3.86E-03	17.8	2.29E+00
62	2	1245.12	72	220	2.53	2488.46	2462	34	1.20E-03	47.9	
63	2	1247.43	36	100	1.86	2493.07	2462	34	6.01E-04	50.2	
64	0	1280.92	80	190	1.85	2559.93	2555	14	1.34E-03	38.1	
65	0	1378.12	169	184	1.90	2754.01	2745	18	2.81E-03	20.4	
66	0	1402.51	53	147	1.17	2802.72	2793	16	8.78E-04	53.5	
67	0	1408.50*	67	104	1.53	2814.68	2809	13	1.11E-03	43.3	
68	0	1460.80*	2165	196	2.15	2919.08	2907	23	3.61E-02	2.8	
69	0	1510.19	89	123	4.47	3017.70	3010	15	1.48E-03	29.3	
70	0	1558.48	14	61	1.16	3114.09	3107	9	2.35E-04	105.5	
71	1	1588.24	126	109	2.73	3173.50	3166	21	2.09E-03	20.0	2.04E+00
72	1	1592.25	58	91	2.57	3181.50	3166	21	9.64E-04	35.4	
73	0	1631.50	29	70	1.57	3259.87	3255	9	4.80E-04	57.2	
74	0	1673.76	23	72	3.80	3344.21	3334	15	3.90E-04	74.8	
75	0	1730.19	109	78	1.93	3456.86	3449	15	1.82E-03	19.5	
76	0	1742.65*	4	64	3.32	3481.72	3474	14	7.00E-05	531.1	
77	0	1764.85*	403	109	2.61	3526.03	3514	23	6.72E-03	9.5	
78	0	1792.19	25	86	3.75	3580.60	3567	19	4.21E-04	89.9	
79	0	1847.86	74	61	3.45	3691.71	3684	15	1.24E-03	25.5	

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

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530011       *
* Acquisition date :  9-DEC-2007 14:38:51 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 16:40:11.45     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530011           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2056E+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    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	7.769E+00	7.423E-01	2.045E-01	0.000E+00
CS-137	4.240E-01	4.350E-02	2.488E-02	0.000E+00
EU-155	1.034E-01	4.405E-02	5.369E-02	0.000E+00
TL-208	3.780E-01	3.966E-02	2.218E-02	0.000E+00
BI-212	7.370E-01	1.783E-01	1.740E-01	0.000E+00
PB-212	1.228E+00	1.096E-01	3.327E-02	0.000E+00
BI-214	9.427E-01	9.415E-02	4.518E-02	0.000E+00
PB-214	1.012E+00	8.574E-02	4.195E-02	0.000E+00
RA-223	4.787E-01	1.202E-01	1.081E-01	0.000E+00
AC-228	1.252E+00	1.655E-01	8.451E-02	0.000E+00
PA-234M	3.508E+00	2.097E+00	2.546E+00	0.000E+00
TH-234	1.619E+00	2.577E-01	2.133E-01	0.000E+00
U-235	5.905E-02	9.803E-02	1.148E-01	0.000E+00
NP-236	4.119E-02	2.623E-02	2.882E-02	0.000E+00
NP-237	7.344E-01	9.973E-02	9.149E-02	0.000E+00
AM-243	2.303E-01	2.460E-02	1.827E-02	0.000E+00
CM-243	9.357E-02	3.986E-02	4.888E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-5.971E-03	1.497E-02	2.492E-02	0.000E+00	NOT IDENT.
RH-101	2.128E-03	1.728E-02	2.114E-02	0.000E+00	NOT IDENT.
SB-125	1.325E-02	3.632E-02	6.184E-02	0.000E+00	NOT IDENT.
PO-209	2.575E+00	2.854E+00	4.903E+00	0.000E+00	NOT IDENT.
BI-211	1.011E-01	4.474E-01	6.512E-01	0.000E+00	NOT IDENT.
PA-233	2.446E-03	2.314E-02	3.999E-02	0.000E+00	NOT IDENT.
NP-239	-7.085E-02	8.302E-02	1.354E-01	0.000E+00	NOT IDENT.
AM-241	0.000E+00	1.948E-02	3.153E-02	0.000E+00	NOT IDENT.
AM-246	7.645E-02	4.938E-02	8.872E-02	0.000E+00	NOT IDENT.
CF-249	1.800E-02	1.530E-02	2.668E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:41:37.17

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530011.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 9-DEC-2007 14:38:51.
Sample ID        : G198530011           Sample quantity  : 1.20560E+02 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:40:11.45  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	2165	10.66*	9.769E-01	7.769E+00	7.769E+00	9.75
CS-137	661.66	1817	85.10*	1.888E+00	4.225E-01	4.240E-01	10.47
EU-155	105.31	395	21.20*	6.886E+00	1.011E-01	1.034E-01	43.47
TL-208	277.36	218	6.31	3.979E+00	3.246E-01	3.246E-01	57.28
	510.77	830	22.60	2.368E+00	5.793E-01	5.793E-01	27.80
	583.19	1802	84.50*	2.108E+00	3.780E-01	3.780E-01	10.70
	763.13	------	1.81	1.670E+00	------	Line Not Found	------
	860.56	288	12.42	1.508E+00	5.755E-01	5.755E-01	30.43
BI-212	727.33	405	11.80*	1.740E+00	7.370E-01	7.370E-01	24.69
	785.37	116	1.10	1.628E+00	2.411E+00	2.411E+00	73.02
	1620.50	------	1.49	8.967E-01	------	Line Not Found	------
PB-212	74.81	3082	10.40	7.333E+00	1.510E+00	1.510E+00	10.90
	77.11	4733	17.50	7.313E+00	1.382E+00	1.382E+00	9.62
	87.30	1753	7.81	7.192E+00	1.166E+00	1.166E+00	13.86
	238.63	6359	43.30*	4.468E+00	1.228E+00	1.228E+00	9.10
	300.09	392	3.28	3.739E+00	1.195E+00	1.195E+00	31.13
BI-214	609.31	2359	46.10*	2.029E+00	9.426E-01	9.427E-01	10.19
	768.36	229	4.94	1.661E+00	1.044E+00	1.045E+00	39.34
	806.17	------	1.22	1.594E+00	------	Line Not Found	------
	934.06	104	3.03	1.409E+00	9.142E-01	9.142E-01	71.59
	1120.29	463	15.10	1.212E+00	9.454E-01	9.455E-01	19.08
	1155.19	------	1.63	1.183E+00	------	Line Not Found	------
	1238.11	232	5.79	1.118E+00	1.337E+00	1.337E+00	36.23
	1280.96	80	1.43	1.087E+00	1.925E+00	1.925E+00	76.56
	1377.67	169	4.00	1.024E+00	1.538E+00	1.538E+00	41.60
	1401.50	53	1.27	1.010E+00	1.534E+00	1.534E+00	107.22
	1407.98	67	2.15	1.006E+00	1.151E+00	1.151E+00	87.06
	1509.23	89	2.11	9.506E-01	1.654E+00	1.654E+00	59.08
	1729.60	109	2.92	8.487E-01	1.644E+00	1.644E+00	39.62
	1764.49	403	15.40	8.345E-01	1.172E+00	1.172E+00	19.98
PB-214	74.81	3082	6.44	7.333E+00	2.439E+00	2.439E+00	10.90
	77.11	4733	10.80	7.313E+00	2.239E+00	2.239E+00	9.62

Sample ID : G198530011 Acquisition date : 9-DEC-2007 14:38:51

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	1753	4.84	7.192E+00	1.881E+00	1.882E+00	13.86
	242.00	1820	7.43	4.427E+00	2.068E+00	2.068E+00	14.09
	295.22	1974	19.30	3.789E+00	1.009E+00	1.009E+00	10.86
	351.93	3334	37.60*	3.275E+00	1.012E+00	1.012E+00	8.65
RA-223	269.46	714	13.70*	4.065E+00	4.787E-01	4.787E-01	25.61
AC-228	129.07	361	2.42	6.409E+00	8.698E-01	8.698E-01	45.73
	209.25	784	3.89	4.903E+00	1.535E+00	1.535E+00	21.16
	270.25	714	3.46	4.065E+00	1.895E+00	1.895E+00	25.61
	338.32	1271	11.27	3.386E+00	1.244E+00	1.244E+00	14.96
	409.46	220	1.92	2.876E+00	1.487E+00	1.487E+00	52.44
	463.00	402	4.40	2.582E+00	1.321E+00	1.321E+00	28.04
	794.95	193	4.25	1.613E+00	1.052E+00	1.052E+00	38.36
	911.20	1243	25.80*	1.438E+00	1.252E+00	1.252E+00	13.49
	964.77	223	4.99	1.371E+00	1.217E+00	1.217E+00	32.00
	968.97	766	15.80	1.366E+00	1.325E+00	1.325E+00	13.81
	1588.20	126	3.22	9.118E-01	1.598E+00	1.598E+00	40.61
PA-234M	1001.03	105	0.84*	1.329E+00	3.508E+00	3.508E+00	61.00
TH-234	63.29	660	4.80	7.386E+00	6.951E-01	6.951E-01	40.45
	92.58	1667	5.41*	7.108E+00	1.619E+00	1.619E+00	16.24
U-235	143.76	106	10.96*	6.100E+00	5.905E-02	5.905E-02	169.38
NP-236	98.44	293	38.00*	7.005E+00	4.119E-02	4.119E-02	64.98
NP-237	86.48	1753	12.40*	7.192E+00	7.344E-01	7.344E-01	13.86
AM-243	74.66	3082	68.20*	7.333E+00	2.303E-01	2.303E-01	10.90
CM-243	103.76	395	23.00*	6.886E+00	9.320E-02	9.357E-02	43.47

Flag: "*" = Keyline

Sample ID : G198530011 Acquisition date : 9-DEC-2007 14:38:51

Total number of lines in spectrum 79
Number of unidentified lines 34
Number of lines tentatively identified by NID 45 56.96%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	7.769E+00	7.769E+00	0.757E+00	9.75	
CS-137	9.47E+08S	1.00	4.225E-01	4.240E-01	0.444E-01	10.47	
EU-155	1.57E+08S	1.02	1.011E-01	1.034E-01	0.450E-01	43.47	
TL-208	4.43E+17S	1.00	3.780E-01	3.780E-01	0.405E-01	10.70	
BI-212	4.43E+17S	1.00	7.370E-01	7.370E-01	1.819E-01	24.69	
PB-212	4.43E+17S	1.00	1.228E+00	1.228E+00	0.112E+00	9.10	
BI-214	5.05E+10S	1.00	9.426E-01	9.427E-01	0.961E-01	10.19	
PB-214	5.05E+10S	1.00	1.012E+00	1.012E+00	0.087E+00	8.65	
RA-223	1.04E+12S	1.00	4.787E-01	4.787E-01	1.226E-01	25.61	
AC-228	4.43E+17S	1.00	1.252E+00	1.252E+00	0.169E+00	13.49	
PA-234M	1.41E+17S	1.00	3.508E+00	3.508E+00	2.140E+00	61.00	
TH-234	1.41E+17S	1.00	1.619E+00	1.619E+00	0.263E+00	16.24	
U-235	2.22E+16S	1.00	5.905E-02	5.905E-02	10.00E-02	169.38	
NP-236	4.89E+12S	1.00	4.119E-02	4.119E-02	2.676E-02	64.98	
NP-237	6.75E+13S	1.00	7.344E-01	7.344E-01	1.018E-01	13.86	
AM-243	2.33E+11S	1.00	2.303E-01	2.303E-01	0.251E-01	10.90	
CM-243	8.99E+08S	1.00	9.320E-02	9.357E-02	4.067E-02	43.47	
			---	---			
	Total Activity :		2.061E+01	2.061E+01			

Grand Total Activity : 2.061E+01 2.061E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530011 Acquisition date : 9-DEC-2007 14:38:51

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.11	468	2488	1.01	93.01	87	11	7.79E-03	55.6	7.28E+00	
3	49.94	152	1298	1.04	100.65	98	13	2.53E-03	76.9	7.33E+00	
3	53.00	326	1984	1.45	106.78	98	13	5.43E-03	50.6	7.35E+00	
2	79.39	272	2801	1.51	159.52	144	21	4.54E-03	81.6	7.29E+00	
5	83.86	737	1780	1.40	168.46	165	29	1.23E-02	24.5	7.23E+00	
5	89.65	1084	1904	1.14	180.03	165	29	1.81E-02	14.8	7.15E+00	
0	109.39	314	1867	1.63	219.49	216	8	5.23E-03	48.9	6.81E+00	
0	114.80	127	1688	1.11	230.30	228	7	2.11E-03	****	6.70E+00	
0	154.09	201	1921	1.21	308.82	304	9	3.35E-03	79.9	5.90E+00	
0	185.73	1216	2171	1.37	372.06	367	11	2.03E-02	19.9	5.30E+00	
0	190.31	48	1545	1.30	381.21	379	8	7.96E-04	****	5.22E+00	
2	205.40	221	1904	1.77	411.39	406	18	3.68E-03	76.5	4.96E+00	
0	256.47	64	791	1.08	513.44	510	6	1.07E-03	****	4.23E+00	
0	327.81	311	841	1.49	656.02	652	8	5.18E-03	34.3	3.48E+00	
0	333.14	88	885	0.82	666.67	662	9	1.46E-03	****	3.43E+00	
1	405.04	106	430	1.74	810.34	807	18	1.76E-03	65.1	2.90E+00	
0	486.95	165	631	1.69	974.01	968	12	2.75E-03	62.9	2.47E+00	
0	755.17	50	290	0.63	1509.90	1506	9	8.28E-04	****	1.68E+00	
0	771.79	56	289	1.54	1543.09	1540	9	9.37E-04	****	1.65E+00	
0	778.09	71	326	1.32	1555.68	1549	12	1.19E-03	****	1.64E+00	
0	835.30	61	259	1.53	1669.97	1667	9	1.01E-03	98.6	1.55E+00	
0	951.48	86	185	3.82	1902.04	1898	12	1.43E-03	67.0	1.39E+00	
0	1009.83	24	210	0.67	2018.58	2016	11	3.95E-04	****	1.32E+00	
0	1033.22	23	167	1.12	2065.29	2059	9	3.83E-04	****	1.30E+00	
0	1206.93	49	182	1.50	2412.18	2407	10	8.12E-04	****	1.14E+00	
2	1245.12	72	220	2.53	2488.46	2462	34	1.20E-03	95.9	1.11E+00	
2	1247.43	36	100	1.86	2493.07	2462	34	6.01E-04	****	1.11E+00	
0	1558.48	14	61	1.16	3114.09	3107	9	2.35E-04	****	9.26E-01	
1	1592.25	58	91	2.57	3181.50	3166	21	9.64E-04	70.7	9.10E-01	
0	1631.50	29	70	1.57	3259.87	3255	9	4.80E-04	****	8.92E-01	
0	1673.76	23	72	3.80	3344.21	3334	15	3.90E-04	****	8.73E-01	
0	1742.65	4	64	3.32	3481.72	3474	14	7.00E-05	****	8.44E-01	
0	1792.19	25	86	3.75	3580.60	3567	19	4.21E-04	****	8.24E-01	
0	1847.86	74	61	3.45	3691.71	3684	15	1.24E-03	51.0	8.02E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530011            *
* Acquisition date :  9-DEC-2007 14:38:51 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 16:40:11.45     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530011           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2056E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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	LC (pCi/GRAM)	TPU
K-40	7.769E+00	7.423E-01	1.023E-01	7.423E-01
CS-137	4.240E-01	4.350E-02	1.245E-02	4.350E-02
EU-155	1.034E-01	4.405E-02	2.686E-02	4.405E-02
TL-208	3.780E-01	3.966E-02	1.110E-02	3.966E-02
BI-212	7.370E-01	1.783E-01	8.703E-02	1.783E-01
PB-212	1.228E+00	1.096E-01	1.665E-02	1.096E-01
BI-214	9.427E-01	9.415E-02	2.260E-02	9.415E-02
PB-214	1.012E+00	8.574E-02	2.099E-02	8.574E-02
RA-223	4.787E-01	1.202E-01	5.410E-02	1.202E-01
AC-228	1.252E+00	1.655E-01	4.228E-02	1.655E-01
PA-234M	3.508E+00	2.097E+00	1.274E+00	2.097E+00
TH-234	1.619E+00	2.577E-01	1.067E-01	2.577E-01
U-235	5.905E-02	9.803E-02	5.744E-02	9.803E-02
NP-236	4.119E-02	2.623E-02	1.442E-02	2.623E-02
NP-237	7.344E-01	9.973E-02	4.577E-02	9.973E-02
AM-243	2.303E-01	2.460E-02	9.139E-03	2.460E-02
CM-243	9.357E-02	3.986E-02	2.446E-02	3.986E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-5.971E-03	1.497E-02	1.247E-02	1.497E-02	NOT IDENT.
RH-101	2.128E-03	1.728E-02	1.057E-02	1.728E-02	NOT IDENT.
SB-125	1.325E-02	3.632E-02	3.094E-02	3.632E-02	NOT IDENT.
PO-209	2.575E+00	2.854E+00	2.453E+00	2.854E+00	NOT IDENT.
BI-211	1.011E-01	4.474E-01	3.258E-01	4.474E-01	NOT IDENT.
PA-233	2.446E-03	2.314E-02	2.001E-02	2.314E-02	NOT IDENT.
NP-239	-7.085E-02	8.302E-02	6.774E-02	8.302E-02	NOT IDENT.
AM-241	3.592E-02	1.948E-02	1.577E-02	1.948E-02	NOT IDENT.
AM-246	7.645E-02	4.938E-02	4.438E-02	4.938E-02	NOT IDENT.
CF-249	1.800E-02	1.530E-02	1.335E-02	1.530E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	1898.2568
63.29	2294.9343
74.66	2587.1980
74.81	2587.9233
74.81	2587.9233
77.11	2598.9551
77.11	2598.9551
86.48	2074.6580
87.30	2077.5481
87.30	2077.5481
92.58	2095.8103
98.44	1838.0469
103.76	1872.5526
105.31	1834.0870
129.07	2011.6737
143.76	1858.5768
198.00	1657.0850
209.25	1614.5864
228.18	1531.9893
238.63	1318.9396
242.00	1322.7383
269.46	1163.1508
270.25	1163.8792
277.36	1102.7863
295.22	1060.6807
300.09	1115.0037
312.17	991.2135
338.32	900.1926
351.93	857.2387
387.59	811.3240
409.46	839.1998
427.87	745.2756
463.00	738.7440
510.77	574.4556
583.19	507.7790
609.31	581.4421
661.66	517.7319
727.33	417.2699
763.13	382.0313
768.36	502.3696
785.37	358.3511
794.95	369.2923
806.17	394.9854
831.80	351.1541
860.56	349.8434
896.60	322.7338
911.20	323.1826
934.06	325.0509
964.77	299.8602
968.97	277.4244
1001.03	266.5627
1078.86	243.0088
1120.29	248.3818
1155.19	280.7262
1173.23	286.8797
1238.11	278.8493
1280.96	232.6680
1332.51	199.8676
1377.67	161.3568
1401.50	126.7721
1407.98	132.3184
1460.80	150.9189
1509.23	166.3205
1588.20	142.2441
1620.50	105.7745
1729.60	73.5175
1764.49	82.6485

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530011

Total Uranium Activity	2.7324E-02	ug/g
Total Uranium Counting Unc.	4.5356E-02	ug/g
Total Uranium Tpu	4.5356E-08	ug/g
Total Uranium Mda	2.6576E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:42:11.37

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530012.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 9-DEC-2007 14:39:19.
Sample ID        : G198530012           Sample quantity  : 1.26310E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:40:19.43  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.55*	334	2536	0.95	92.54	89	8	5.57E-03	37.7	
2	0	53.22*	48	2516	0.76	105.90	103	7	7.96E-04	222.7	
3	0	63.34*	576	3989	0.87	126.16	122	9	9.60E-03	27.9	
4	3	74.88	2587	3015	0.85	149.26	144	13	4.31E-02	3.6	3.36E+01
5	3	77.15*	3858	3382	0.81	153.81	144	13	6.43E-02	3.0	
6	4	84.16*	561	2076	1.17	167.84	165	27	9.35E-03	17.5	9.31E+00
7	4	87.28	1795	2803	1.11	174.09	165	27	2.99E-02	5.4	
8	4	89.93	1132	2341	1.01	179.38	165	27	1.89E-02	7.4	
9	4	92.69*	1783	2607	1.15	184.92	165	27	2.97E-02	8.2	
10	0	99.04*	319	2523	1.91	197.63	194	8	5.32E-03	33.8	
11	0	105.48	391	2469	1.30	210.52	206	8	6.52E-03	22.6	
12	0	108.46	127	1652	0.95	216.48	215	5	2.12E-03	48.6	
13	0	115.25	95	1603	0.69	230.06	229	5	1.59E-03	64.1	
14	0	128.89	458	2125	1.01	257.37	254	7	7.64E-03	17.3	
15	0	143.81*	216	2699	1.06	287.25	283	9	3.59E-03	53.6	
16	0	154.19	281	2005	1.52	308.03	305	7	4.68E-03	27.2	
17	0	185.76*	1192	2623	1.14	371.21	367	10	1.99E-02	11.4	
18	0	205.12*	65	1897	1.83	409.96	407	8	1.08E-03	142.7	
19	0	209.39	630	2384	1.12	418.50	414	10	1.05E-02	15.1	
20	6	238.58*	6841	1428	1.02	476.93	472	17	1.14E-01	1.7	2.62E+00
21	6	241.53	1539	1992	1.63	482.84	472	17	2.56E-02	6.8	
22	0	270.36	479	1608	1.57	540.55	536	9	7.98E-03	15.8	
23	0	277.36	232	1384	1.08	554.55	551	8	3.87E-03	28.5	
24	0	288.09	45	904	1.22	576.03	574	6	7.43E-04	107.6	
25	0	295.09*	1935	1505	1.11	590.04	586	10	3.22E-02	5.2	
26	0	299.90	435	1253	1.32	599.67	596	8	7.25E-03	14.9	
27	0	327.81	386	1240	1.25	655.54	652	9	6.43E-03	17.2	
28	0	338.22*	1235	1276	1.02	676.36	672	9	2.06E-02	8.0	
29	3	351.79*	3132	857	1.22	703.53	699	17	5.22E-02	2.8	1.85E+00
30	3	355.79*	136	1033	1.53	711.54	699	17	2.27E-03	56.5	
31	0	387.02	101	901	1.03	774.03	771	8	1.68E-03	52.5	
32	0	409.39	234	995	2.02	818.80	814	9	3.90E-03	25.2	
33	0	451.72	27	904	1.27	903.54	901	9	4.47E-04	203.1	
34	0	462.68*	364	1019	1.35	925.46	919	12	6.06E-03	20.2	
35	0	501.24	18	500	0.85	1002.63	1001	6	3.05E-04	190.9	
36	0	510.71*	535	1467	2.07	1021.59	1013	18	8.92E-03	25.8	
37	0	561.72	77	713	1.96	1123.67	1121	9	1.29E-03	63.2	
38	0	582.86*	2062	949	1.47	1165.98	1158	14	3.44E-02	4.4	

Sample ID : G198530012 Acquisition date : 9-DEC-2007 14:39:19

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	609.01*	2406	1036	1.40	1218.31	1211	15	4.01E-02	4.0	
40	0	661.43	746	724	1.67	1323.20	1317	12	1.24E-02	8.1	
41	0	665.78	36	554	1.35	1331.92	1328	8	6.01E-04	114.0	
42	0	677.69	54	459	1.25	1355.73	1353	8	8.93E-04	70.6	
43	0	727.10	525	946	1.66	1454.60	1446	17	8.76E-03	14.1	
44	0	756.22	94	533	2.74	1512.87	1507	11	1.57E-03	49.0	
45	0	762.18	66	397	1.93	1524.80	1522	8	1.10E-03	53.6	
46	0	767.70	273	618	1.29	1535.86	1530	12	4.54E-03	19.3	
47	0	772.36	143	366	1.75	1545.17	1542	8	2.38E-03	24.8	
48	0	785.92*	115	509	1.70	1572.30	1567	10	1.91E-03	45.9	
49	0	794.70	328	556	1.44	1589.87	1583	13	5.46E-03	15.9	
50	3	830.26	63	575	2.36	1661.03	1655	20	1.05E-03	74.7	3.02E+00
51	3	835.20	134	402	1.87	1670.91	1655	20	2.23E-03	28.5	
52	0	840.13	158	408	3.46	1680.77	1676	10	2.63E-03	25.4	
53	0	860.06	279	527	1.74	1720.67	1716	12	4.65E-03	17.5	
54	0	904.39	54	359	1.57	1809.35	1805	9	8.96E-04	65.2	
55	0	910.77*	1506	559	1.68	1822.12	1814	16	2.51E-02	5.2	
56	0	933.60	132	252	1.91	1867.79	1864	8	2.21E-03	22.5	
57	1	964.38	286	337	1.76	1929.38	1925	19	4.77E-03	13.0	1.42E+00
58	1	968.61*	824	372	1.73	1937.85	1925	19	1.37E-02	7.7	
59	0	1000.78*	58	371	1.77	2002.19	1996	11	9.70E-04	88.9	
60	0	1080.16	11	283	0.54	2161.02	2157	9	1.77E-04	289.0	
61	0	1120.00*	513	450	2.07	2240.71	2234	14	8.55E-03	12.0	
62	0	1153.93	183	361	6.27	2308.59	2301	16	3.05E-03	24.3	
63	0	1202.45	70	323	3.61	2405.66	2400	13	1.17E-03	53.8	
64	0	1220.12	64	236	0.97	2440.99	2437	9	1.07E-03	45.1	
65	0	1237.73*	194	387	1.91	2476.22	2470	14	3.23E-03	25.3	
66	0	1376.65	125	375	1.99	2754.10	2745	19	2.09E-03	38.3	
67	0	1382.92	27	214	3.83	2766.65	2763	13	4.55E-04	111.5	
68	0	1406.87	115	168	2.03	2814.56	2809	13	1.92E-03	25.3	
69	0	1460.04*	2158	396	2.28	2920.91	2909	24	3.60E-02	3.6	
70	0	1494.56	53	142	0.73	2989.94	2986	10	8.82E-04	44.1	
71	0	1508.28	105	124	1.86	3017.38	3011	13	1.75E-03	23.9	
72	3	1587.24	202	94	3.06	3175.31	3169	23	3.36E-03	12.0	1.07E+00
73	3	1591.81	88	132	3.06	3184.45	3169	23	1.47E-03	32.6	
74	0	1619.34	69	196	3.43	3239.50	3233	15	1.15E-03	45.7	
75	0	1630.04	82	143	2.91	3260.90	3253	14	1.36E-03	33.1	
76	0	1673.24	11	103	0.61	3347.31	3337	12	1.78E-04	193.8	
77	0	1687.90	49	128	3.88	3376.62	3368	16	8.23E-04	53.1	
78	0	1728.96	109	119	1.91	3458.72	3451	15	1.82E-03	23.8	
79	2	1758.99	40	88	2.90	3518.77	3513	24	6.65E-04	44.1	1.25E+00
80	2	1763.76	463	79	2.36	3528.33	3513	24	7.72E-03	6.3	
81	0	1799.66	15	69	1.59	3600.11	3593	11	2.47E-04	111.4	
82	0	1847.57	59	107	2.59	3695.91	3686	16	9.84E-04	41.4	
83	0	1905.71	34	32	2.46	3812.18	3809	8	5.67E-04	33.5	
84	0	2001.67	13	34	1.27	4004.04	3996	11	2.15E-04	93.6	

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]G198530012       *
* Acquisition date :  9-DEC-2007 14:39:19 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 16:40:19.43     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530012           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2631E+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)	
K-40	6.806E+00	6.072E-01	2.189E-01	0.000E+00
CS-137	1.521E-01	2.696E-02	2.220E-02	0.000E+00
EU-155	9.215E-02	4.155E-02	4.719E-02	0.000E+00
TL-208	3.773E-01	4.197E-02	2.288E-02	0.000E+00
BI-211	4.035E-01	5.914E-01	6.878E-01	0.000E+00
BI-212	8.358E-01	2.398E-01	1.824E-01	0.000E+00
PB-212	1.168E+00	8.642E-02	3.189E-02	0.000E+00
BI-214	8.388E-01	9.034E-02	4.393E-02	0.000E+00
PB-214	8.326E-01	6.239E-02	4.021E-02	0.000E+00
RA-223	2.831E-01	8.921E-02	9.944E-02	0.000E+00
AC-228	1.331E+00	1.570E-01	8.504E-02	0.000E+00
PA-234M	1.712E+00	2.983E+00	2.740E+00	0.000E+00
TH-234	1.563E+00	2.807E-01	2.064E-01	0.000E+00
U-235	1.076E-01	1.135E-01	1.007E-01	0.000E+00
NP-236	4.037E-02	2.694E-02	2.522E-02	0.000E+00
NP-237	6.799E-01	8.892E-02	8.838E-02	0.000E+00
AM-243	1.758E-01	1.840E-02	1.646E-02	0.000E+00
CM-243	8.338E-02	3.760E-02	4.233E-02	0.000E+00
AM-246	1.005E-02	5.696E-02	8.899E-02	0.000E+00
CF-249	1.652E-02	1.703E-02	2.390E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	9.982E-03	1.556E-02	2.666E-02	0.000E+00	NOT IDENT.
RH-101	-9.363E-03	1.435E-02	1.844E-02	0.000E+00	NOT IDENT.
SB-125	-1.181E-02	3.394E-02	5.691E-02	0.000E+00	NOT IDENT.
PO-209	4.428E-01	2.932E+00	4.862E+00	0.000E+00	NOT IDENT.
PA-233	1.996E-03	2.153E-02	3.766E-02	0.000E+00	NOT IDENT.
NP-239	-2.328E-02	7.209E-02	1.199E-01	0.000E+00	NOT IDENT.
AM-241	1.346E-03	1.791E-02	2.801E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:42:12.37

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530012.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 9-DEC-2007 14:39:19.
Sample ID        : G198530012           Sample quantity  : 1.26310E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:40:19.43  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	2158	10.66*	1.061E+00	6.806E+00	6.806E+00	9.10
CS-137	661.66	746	85.10*	2.064E+00	1.516E-01	1.521E-01	18.08
EU-155	105.31	391	21.20*	7.305E+00	9.010E-02	9.215E-02	46.01
TL-208	277.36	232	6.31	4.315E+00	3.043E-01	3.043E-01	57.23
	510.77	535	22.60	2.591E+00	3.260E-01	3.260E-01	51.93
	583.19	2062	84.50*	2.307E+00	3.773E-01	3.773E-01	11.35
	763.13	66	1.81	1.823E+00	7.118E-01	7.118E-01	107.49
	860.56	279	12.42	1.643E+00	4.874E-01	4.874E-01	35.69
BI-211	831.80	63	3.30*	1.693E+00	4.035E-01	4.035E-01	149.54
BI-212	727.33	525	11.80*	1.900E+00	8.358E-01	8.358E-01	29.28
	785.37	115	1.10	1.775E+00	2.095E+00	2.095E+00	92.05
	1620.50	69	1.49	9.777E-01	1.690E+00	1.690E+00	91.59
PB-212	74.81	2587	10.40	7.694E+00	1.153E+00	1.153E+00	10.68
	77.11	3858	17.50	7.684E+00	1.023E+00	1.023E+00	9.88
	87.30	1795	7.81	7.592E+00	1.080E+00	1.080E+00	13.35
	238.63	6841	43.30*	4.824E+00	1.168E+00	1.168E+00	7.55
	300.09	435	3.28	4.060E+00	1.164E+00	1.164E+00	30.22
BI-214	609.31	2406	46.10*	2.219E+00	8.387E-01	8.388E-01	10.99
	768.36	273	4.94	1.812E+00	1.086E+00	1.086E+00	39.22
	806.17	------	1.22	1.737E+00	------	Line Not Found	------
	934.06	132	3.03	1.532E+00	1.018E+00	1.018E+00	45.42
	1120.29	513	15.10	1.315E+00	9.210E-01	9.210E-01	24.66
	1155.19	183	1.63	1.283E+00	3.125E+00	3.125E+00	48.94
	1238.11	194	5.79	1.211E+00	9.855E-01	9.856E-01	50.87
	1280.96	------	1.43	1.178E+00	------	Line Not Found	------
	1377.67	125	4.00	1.112E+00	1.004E+00	1.004E+00	76.86
	1401.50	------	1.27	1.096E+00	------	Line Not Found	------
	1407.98	115	2.15	1.093E+00	1.744E+00	1.744E+00	50.83
	1509.23	105	2.11	1.034E+00	1.719E+00	1.719E+00	48.09
	1729.60	109	2.92	9.289E-01	1.438E+00	1.438E+00	47.95
	1764.49	463	15.40	9.146E-01	1.173E+00	1.173E+00	13.76
PB-214	74.81	2587	6.44	7.694E+00	1.862E+00	1.862E+00	10.68

Sample ID : G198530012 Acquisition date : 9-DEC-2007 14:39:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	3858	10.80	7.684E+00	1.658E+00	1.658E+00	9.88
	87.30	1795	4.84	7.592E+00	1.742E+00	1.742E+00	13.35
	242.00	1539	7.43	4.782E+00	1.545E+00	1.545E+00	15.16
	295.22	1935	19.30	4.113E+00	8.694E-01	8.694E-01	11.64
	351.93	3132	37.60*	3.568E+00	8.326E-01	8.326E-01	7.65
RA-223	269.46	479	13.70*	4.400E+00	2.831E-01	2.831E-01	32.15
AC-228	129.07	458	2.42	6.835E+00	9.879E-01	9.879E-01	35.97
	209.25	630	3.89	5.275E+00	1.095E+00	1.095E+00	31.04
	270.25	479	3.46	4.400E+00	1.121E+00	1.121E+00	32.15
	338.32	1235	11.27	3.686E+00	1.060E+00	1.060E+00	16.85
	409.46	234	1.92	3.140E+00	1.385E+00	1.385E+00	50.70
	463.00	364	4.40	2.825E+00	1.044E+00	1.044E+00	40.91
	794.95	328	4.25	1.758E+00	1.563E+00	1.563E+00	32.55
	911.20	1506	25.80*	1.564E+00	1.331E+00	1.331E+00	12.04
	964.77	286	4.99	1.490E+00	1.372E+00	1.372E+00	26.70
	968.97	824	15.80	1.485E+00	1.253E+00	1.253E+00	16.63
	1588.20	202	3.22	9.932E-01	2.247E+00	2.247E+00	24.71
PA-234M	1001.03	58	0.84*	1.444E+00	1.712E+00	1.712E+00	177.87
TH-234	63.29	576	4.80	7.666E+00	5.580E-01	5.580E-01	56.32
	92.58	1783	5.41*	7.520E+00	1.563E+00	1.563E+00	18.33
U-235	143.76	216	10.96*	6.521E+00	1.076E-01	1.076E-01	107.62
NP-236	98.44	319	38.00*	7.419E+00	4.037E-02	4.037E-02	68.09
NP-237	86.48	1795	12.40*	7.592E+00	6.799E-01	6.799E-01	13.35
AM-243	74.66	2587	68.20*	7.694E+00	1.758E-01	1.758E-01	10.68
CM-243	103.76	391	23.00*	7.305E+00	8.305E-02	8.338E-02	46.01
AM-246	1078.86	11	27.80*	1.355E+00	1.005E-02	1.005E-02	578.09
CF-249	387.59	101	66.00*	3.293E+00	1.652E-02	1.652E-02	105.21

Flag: "*" = Keyline

Sample ID : G198530012 Acquisition date : 9-DEC-2007 14:39:19

Total number of lines in spectrum	84	
Number of unidentified lines	35	
Number of lines tentatively identified by NID	49	58.33%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	6.806E+00	6.806E+00	0.620E+00	9.10	
CS-137	9.47E+08S	1.00	1.516E-01	1.521E-01	0.275E-01	18.08	
EU-155	1.57E+08S	1.02	9.010E-02	9.215E-02	4.240E-02	46.01	
TL-208	4.43E+17S	1.00	3.773E-01	3.773E-01	0.428E-01	11.35	
BI-211	2.22E+16S	1.00	4.035E-01	4.035E-01	6.034E-01	149.54	
BI-212	4.43E+17S	1.00	8.358E-01	8.358E-01	2.447E-01	29.28	
PB-212	4.43E+17S	1.00	1.168E+00	1.168E+00	0.088E+00	7.55	
BI-214	5.05E+10S	1.00	8.387E-01	8.388E-01	0.922E-01	10.99	
PB-214	5.05E+10S	1.00	8.326E-01	8.326E-01	0.637E-01	7.65	
RA-223	1.04E+12S	1.00	2.831E-01	2.831E-01	0.910E-01	32.15	
AC-228	4.43E+17S	1.00	1.331E+00	1.331E+00	0.160E+00	12.04	
PA-234M	1.41E+17S	1.00	1.712E+00	1.712E+00	3.044E+00	177.87	
TH-234	1.41E+17S	1.00	1.563E+00	1.563E+00	0.286E+00	18.33	
U-235	2.22E+16S	1.00	1.076E-01	1.076E-01	1.158E-01	107.62	
NP-236	4.89E+12S	1.00	4.037E-02	4.037E-02	2.749E-02	68.09	
NP-237	6.75E+13S	1.00	6.799E-01	6.799E-01	0.907E-01	13.35	
AM-243	2.33E+11S	1.00	1.758E-01	1.758E-01	0.188E-01	10.68	
CM-243	8.99E+08S	1.00	8.305E-02	8.338E-02	3.837E-02	46.01	
AM-246	2.18E+11S	1.00	1.005E-02	1.005E-02	5.812E-02	578.09	
CF-249	1.11E+10S	1.00	1.652E-02	1.652E-02	1.738E-02	105.21	
			---	---			
		Total Activity :	1.751E+01	1.751E+01			

Grand Total Activity : 1.751E+01 1.751E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530012 Acquisition date : 9-DEC-2007 14:39:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.55	334	2536	0.95	92.54	89	8	5.57E-03	75.4	7.26E+00	
0	53.22	48	2516	0.76	105.90	103	7	7.96E-04	****	7.49E+00	
4	84.16	561	2076	1.17	167.84	165	27	9.35E-03	35.1	7.63E+00	
4	89.93	1132	2341	1.01	179.38	165	27	1.89E-02	14.8	7.56E+00	
0	108.46	127	1652	0.95	216.48	215	5	2.12E-03	97.2	7.25E+00	
0	115.25	95	1603	0.69	230.06	229	5	1.59E-03	****	7.12E+00	
0	154.19	281	2005	1.52	308.03	305	7	4.68E-03	54.3	6.31E+00	
0	185.76	1192	2623	1.14	371.21	367	10	1.99E-02	22.7	5.69E+00	
0	205.12	65	1897	1.83	409.96	407	8	1.08E-03	****	5.35E+00	
0	288.09	45	904	1.22	576.03	574	6	7.43E-04	****	4.19E+00	
0	327.81	386	1240	1.25	655.54	652	9	6.43E-03	34.4	3.78E+00	
3	355.79	136	1033	1.53	711.54	699	17	2.27E-03	****	3.53E+00	
0	451.72	27	904	1.27	903.54	901	9	4.47E-04	****	2.88E+00	
0	501.24	18	500	0.85	1002.63	1001	6	3.05E-04	****	2.63E+00	
0	561.72	77	713	1.96	1123.67	1121	9	1.29E-03	****	2.38E+00	
0	665.78	36	554	1.35	1331.92	1328	8	6.01E-04	****	2.05E+00	
0	677.69	54	459	1.25	1355.73	1353	8	8.93E-04	****	2.02E+00	
0	756.22	94	533	2.74	1512.87	1507	11	1.57E-03	98.0	1.84E+00	
0	772.36	143	366	1.75	1545.17	1542	8	2.38E-03	49.6	1.80E+00	
3	835.20	134	402	1.87	1670.91	1655	20	2.23E-03	57.0	1.68E+00	
0	840.13	158	408	3.46	1680.77	1676	10	2.63E-03	50.7	1.68E+00	
0	904.39	54	359	1.57	1809.35	1805	9	8.96E-04	****	1.57E+00	
0	1202.45	70	323	3.61	2405.66	2400	13	1.17E-03	****	1.24E+00	
0	1220.12	64	236	0.97	2440.99	2437	9	1.07E-03	90.1	1.23E+00	
0	1382.92	27	214	3.83	2766.65	2763	13	4.55E-04	****	1.11E+00	
0	1494.56	53	142	0.73	2989.94	2986	10	8.82E-04	88.2	1.04E+00	
3	1591.81	88	132	3.06	3184.45	3169	23	1.47E-03	65.2	9.91E-01	
0	1630.04	82	143	2.91	3260.90	3253	14	1.36E-03	66.1	9.73E-01	
0	1673.24	11	103	0.61	3347.31	3337	12	1.78E-04	****	9.53E-01	
0	1687.90	49	128	3.88	3376.62	3368	16	8.23E-04	****	9.46E-01	
2	1758.99	40	88	2.90	3518.77	3513	24	6.65E-04	88.1	9.17E-01	
0	1799.66	15	69	1.59	3600.11	3593	11	2.47E-04	****	9.00E-01	
0	1847.57	59	107	2.59	3695.91	3686	16	9.84E-04	82.8	8.82E-01	
0	1905.71	34	32	2.46	3812.18	3809	8	5.67E-04	67.1	8.61E-01	
0	2001.67	13	34	1.27	4004.04	3996	11	2.15E-04	****	8.29E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530012            *
* Acquisition date :  9-DEC-2007 14:39:19 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 16:40:19.43     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530012           Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2631E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	6.806E+00	6.072E-01	1.095E-01	6.072E-01
CS-137	1.521E-01	2.696E-02	1.111E-02	2.696E-02
EU-155	9.215E-02	4.155E-02	2.361E-02	4.155E-02
TL-208	3.773E-01	4.197E-02	1.145E-02	4.197E-02
BI-211	4.035E-01	5.914E-01	3.441E-01	5.914E-01
BI-212	8.358E-01	2.398E-01	9.123E-02	2.398E-01
PB-212	1.168E+00	8.642E-02	1.595E-02	8.642E-02
BI-214	8.388E-01	9.034E-02	2.198E-02	9.034E-02
PB-214	8.326E-01	6.239E-02	2.012E-02	6.239E-02
RA-223	2.831E-01	8.921E-02	4.975E-02	8.921E-02
AC-228	1.331E+00	1.570E-01	4.255E-02	1.570E-01
PA-234M	1.712E+00	2.983E+00	1.371E+00	2.983E+00
TH-234	1.563E+00	2.807E-01	1.033E-01	2.807E-01
U-235	1.076E-01	1.135E-01	5.038E-02	1.135E-01
NP-236	4.037E-02	2.694E-02	1.262E-02	2.694E-02
NP-237	6.799E-01	8.892E-02	4.421E-02	8.892E-02
AM-243	1.758E-01	1.840E-02	8.237E-03	1.840E-02
CM-243	8.338E-02	3.760E-02	2.118E-02	3.760E-02
AM-246	1.005E-02	5.696E-02	4.452E-02	5.696E-02
CF-249	1.652E-02	1.703E-02	1.196E-02	1.703E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	9.982E-03	1.556E-02	1.334E-02	1.556E-02	NOT IDENT.
RH-101	-9.363E-03	1.435E-02	9.223E-03	1.435E-02	NOT IDENT.
SB-125	-1.181E-02	3.394E-02	2.847E-02	3.394E-02	NOT IDENT.
PO-209	4.428E-01	2.932E+00	2.432E+00	2.932E+00	NOT IDENT.
PA-233	1.996E-03	2.153E-02	1.884E-02	2.153E-02	NOT IDENT.
NP-239	-2.328E-02	7.209E-02	5.998E-02	7.209E-02	NOT IDENT.
AM-241	1.346E-03	1.791E-02	1.401E-02	1.791E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	1937.5354
63.29	2108.1414
74.66	2494.3306
74.81	2495.6011
74.81	2495.6011
77.11	2515.0518
77.11	2515.0518
86.48	2328.2651
87.30	2334.0854
87.30	2334.0854
92.58	2370.9529
98.44	1706.9904
103.76	1707.0840
105.31	1724.2802
129.07	1777.1716
143.76	1763.3657
198.00	1683.7183
209.25	1498.7037
228.18	1456.4774
238.63	1531.0822
242.00	1538.0997
269.46	1250.7299
270.25	1253.0220
277.36	1229.0364
295.22	1194.6276
300.09	1259.9990
312.17	1128.3402
338.32	1092.9449
351.93	1014.8884
387.59	941.4214
409.46	886.4664
427.87	878.4402
463.00	773.3596
510.77	725.0815
583.19	704.0322
609.31	715.6385
661.66	536.3306
727.33	595.4135
763.13	496.3094
768.36	505.8748
785.37	500.7872
794.95	498.6147
806.17	535.3199
831.80	526.9587
860.56	499.4545
896.60	460.3901
911.20	422.3486
934.06	455.7873
964.77	467.2722
968.97	471.4346
1001.03	397.4091
1078.86	406.0487
1120.29	395.1138
1155.19	398.2805
1173.23	359.8193
1238.11	349.0293
1280.96	304.3813
1332.51	303.9572
1377.67	281.5368
1401.50	242.5505
1407.98	175.6840
1460.80	222.8925
1509.23	219.6289
1588.20	172.5403
1620.50	212.2639
1729.60	137.6497
1764.49	118.9724

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530012

Total Uranium Activity	4.9787E-02	ug/g
Total Uranium Counting Unc.	5.2511E-02	ug/g
Total Uranium Tpu	5.2511E-08	ug/g
Total Uranium Mda	2.3312E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:42:45.00

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471362.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 9-DEC-2007 14:39:51.
Sample ID        : G1201471362          Sample quantity  : 1.70000E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:41:51.18  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	65.67	25	574	3.23	130.39	128	9	4.18E-04	174.1	
2	0	74.75	84	476	1.26	148.52	145	7	1.40E-03	44.6	
3	0	77.31*	9	484	1.76	153.63	152	8	1.47E-04	649.7	
4	0	155.05	51	564	1.80	308.89	307	9	8.53E-04	84.7	
5	0	167.34	67	668	1.30	333.45	330	11	1.12E-03	75.6	
6	0	238.62*	27	454	1.71	475.84	472	9	4.44E-04	223.0	
7	0	242.04	62	396	1.05	482.67	480	8	1.04E-03	56.8	
8	0	278.46	42	334	1.41	555.43	552	8	6.96E-04	77.4	
9	0	482.05	49	134	1.95	962.24	959	8	8.22E-04	43.1	
10	0	510.73*	17	377	2.76	1019.58	1010	23	2.82E-04	500.6	
11	0	566.46	41	142	1.88	1130.97	1126	8	6.85E-04	52.6	
12	0	576.67	32	122	0.84	1151.37	1147	8	5.31E-04	62.9	
13	0	583.12*	8	211	1.81	1164.26	1159	13	1.36E-04	467.9	
14	0	693.33	32	111	0.72	1384.59	1381	8	5.28E-04	60.1	
15	0	833.77	32	72	1.95	1665.40	1661	8	5.34E-04	49.5	
16	0	847.38*	13	124	1.68	1692.63	1684	15	2.09E-04	244.8	
17	0	991.70	15	90	1.04	1981.30	1972	12	2.52E-04	128.2	
18	0	1000.78	31	78	3.38	1999.46	1994	11	5.16E-04	57.8	
19	0	1102.90	23	111	5.08	2203.76	2193	17	3.83E-04	106.8	
20	0	1170.46	23	62	0.94	2338.95	2334	10	3.81E-04	67.9	
21	0	1237.60	35	64	6.40	2473.30	2463	16	5.84E-04	53.7	
22	0	1270.53	20	43	0.76	2539.21	2534	10	3.32E-04	66.6	
23	0	1494.97	28	71	2.73	2988.48	2978	19	4.70E-04	74.1	
24	9	1558.35	11	5	0.97	3115.40	3114	13	1.77E-04	35.8	2.62E+00
25	9	1561.57*	11	28	3.15	3121.85	3114	13	1.90E-04	136.3	
26	0	1633.68	46	28	5.85	3266.25	3259	15	7.68E-04	29.7	
27	0	1786.82	21	56	4.33	3572.99	3564	17	3.44E-04	85.4	
28	0	1826.19	41	56	7.42	3651.87	3642	21	6.87E-04	48.5	
29	0	1891.23	24	33	0.78	3782.16	3775	13	4.05E-04	54.2	
30	1	1895.64	24	8	2.31	3791.00	3789	24	3.99E-04	20.0	8.32E+00
31	1	1898.63	49	28	2.31	3797.00	3789	24	8.10E-04	25.7	
32	1	1902.13	24	28	2.31	3804.00	3789	24	4.06E-04	52.1	

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]G1201471362      *
* Acquisition date :  9-DEC-2007 14:39:51 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 16:41:51.18     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471362          Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.7000E+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)	
TL-208	1.364E-03	1.251E-02	1.075E-02	0.000E+00
BI-211	1.992E-01	1.939E-01	3.459E-01	0.000E+00
PB-212	3.459E-03	1.512E-02	1.423E-02	0.000E+00
PA-234M	9.084E-01	1.031E+00	1.363E+00	0.000E+00
AM-243	3.767E-03	3.302E-03	5.743E-03	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
K-40	-6.315E-02		1.557E-01	1.550E-01	0.000E+00	NOT IDENT.
CO-60	-1.267E-03		9.047E-03	1.297E-02	0.000E+00	NOT IDENT.
RH-101	2.694E-03		7.073E-03	8.191E-03	0.000E+00	NOT IDENT.
SB-125	6.830E-03		1.513E-02	2.715E-02	0.000E+00	NOT IDENT.
CS-137	-2.642E-03		6.299E-03	1.096E-02	0.000E+00	NOT IDENT.
EU-155	7.993E-03		9.891E-03	1.836E-02	0.000E+00	NOT IDENT.
PO-209	1.526E+00		1.420E+00	2.622E+00	0.000E+00	NOT IDENT.
BI-212	-6.783E-03		4.889E-02	8.579E-02	0.000E+00	NOT IDENT.
BI-214	-4.737E-04		2.457E-02	2.632E-02	0.000E+00	FAIL ABUN
PB-214	-6.673E-03		2.033E-02	2.296E-02	0.000E+00	FAIL ABUN
RA-223	3.621E-02		2.568E-02	4.861E-02	0.000E+00	NOT IDENT.
AC-228	2.813E-02		2.513E-02	4.659E-02	0.000E+00	NOT IDENT.
PA-233	1.613E-03		1.029E-02	1.860E-02	0.000E+00	NOT IDENT.
TH-234	-1.868E-02		6.137E-02	7.370E-02	0.000E+00	NOT IDENT.
U-235	-7.525E-03		2.413E-02	4.258E-02	0.000E+00	NOT IDENT.
NP-236	4.845E-03		5.336E-03	9.966E-03	0.000E+00	NOT IDENT.
NP-237	1.605E-02		1.641E-02	3.088E-02	0.000E+00	NOT IDENT.
NP-239	1.188E-02		2.975E-02	5.520E-02	0.000E+00	NOT IDENT.
AM-241	3.195E-03		5.623E-03	1.066E-02	0.000E+00	NOT IDENT.
CM-243	-2.576E-03		9.164E-03	1.647E-02	0.000E+00	NOT IDENT.
AM-246	1.084E-03		2.542E-02	4.365E-02	0.000E+00	NOT IDENT.
CF-249	-3.138E-03		6.475E-03	1.124E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:42:45.88

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471362.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 9-DEC-2007 14:39:51.
Sample ID        : G1201471362          Sample quantity  : 1.70000E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:41:51.18  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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
TL-208	277.36	42	6.31	4.064E+00	4.314E-02	4.314E-02	154.87
	510.77	17	22.60	2.160E+00	9.174E-03	9.174E-03	1001.32
	583.19	8	84.50*	1.875E+00	1.364E-03	1.364E-03	935.90
	763.13	------	1.81	1.415E+00	------	Line Not Found	------
	860.56	------	12.42	1.251E+00	------	Line Not Found	------
BI-211	831.80	32	3.30*	1.292E+00	1.992E-01	1.992E-01	99.33
PB-212	74.81	84	10.40	8.644E+00	2.471E-02	2.471E-02	89.42
	77.11	9	17.50	8.639E+00	1.551E-03	1.551E-03	1299.48
	87.30	------	7.81	8.537E+00	------	Line Not Found	------
	238.63	27	43.30*	4.708E+00	3.459E-03	3.459E-03	446.03
	300.09	------	3.28	3.773E+00	------	Line Not Found	------
PA-234M	1001.03	31	0.84*	1.075E+00	9.084E-01	9.084E-01	115.86
AM-243	74.66	84	68.20*	8.644E+00	3.767E-03	3.767E-03	89.42

Flag: "*" = Keyline

Sample ID : G1201471362 Acquisition date : 9-DEC-2007 14:39:51

Total number of lines in spectrum 32
Number of unidentified lines 22
Number of lines tentatively identified by NID 10 31.25%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TL-208	4.43E+17S	1.00	1.364E-03	1.364E-03	12.77E-03	935.90	
BI-211	2.22E+16S	1.00	1.992E-01	1.992E-01	1.979E-01	99.33	
PB-212	4.43E+17S	1.00	3.459E-03	3.459E-03	15.43E-03	446.03	
PA-234M	1.41E+17S	1.00	9.084E-01	9.084E-01	10.53E-01	115.86	
AM-243	2.33E+11S	1.00	3.767E-03	3.767E-03	3.369E-03	89.42	
			---	---			
		Total Activity :	1.116E+00	1.116E+00			

Grand Total Activity : 1.116E+00 1.116E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471362 Acquisition date : 9-DEC-2007 14:39:51

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	65.67	25	574	3.23	130.39	128	9	4.18E-04	****	8.57E+00	
0	155.05	51	564	1.80	308.89	307	9	8.53E-04	****	6.67E+00	
0	167.34	67	668	1.30	333.45	330	11	1.12E-03	****	6.32E+00	
0	242.04	62	396	1.05	482.67	480	8	1.04E-03	****	4.65E+00	T
0	482.05	49	134	1.95	962.24	959	8	8.22E-04	86.2	2.30E+00	
0	566.46	41	142	1.88	1130.97	1126	8	6.85E-04	****	1.93E+00	
0	576.67	32	122	0.84	1151.37	1147	8	5.31E-04	****	1.90E+00	
0	693.33	32	111	0.72	1384.59	1381	8	5.28E-04	****	1.56E+00	
0	847.38	13	124	1.68	1692.63	1684	15	2.09E-04	****	1.27E+00	
0	991.70	15	90	1.04	1981.30	1972	12	2.52E-04	****	1.08E+00	
0	1102.90	23	111	5.08	2203.76	2193	17	3.83E-04	****	9.77E-01	
0	1170.46	23	62	0.94	2338.95	2334	10	3.81E-04	****	9.22E-01	
0	1237.60	35	64	6.40	2473.30	2463	16	5.84E-04	****	8.73E-01	T
0	1270.53	20	43	0.76	2539.21	2534	10	3.32E-04	****	8.51E-01	
0	1494.97	28	71	2.73	2988.48	2978	19	4.70E-04	****	7.27E-01	
9	1558.35	11	5	0.97	3115.40	3114	13	1.77E-04	71.5	6.98E-01	
9	1561.57	11	28	3.15	3121.85	3114	13	1.90E-04	****	6.97E-01	
0	1633.68	46	28	5.85	3266.25	3259	15	7.68E-04	59.3	6.67E-01	
0	1786.82	21	56	4.33	3572.99	3564	17	3.44E-04	****	6.11E-01	
0	1826.19	41	56	7.42	3651.87	3642	21	6.87E-04	97.1	5.98E-01	
0	1891.23	24	33	0.78	3782.16	3775	13	4.05E-04	****	5.77E-01	
1	1895.64	24	8	2.31	3791.00	3789	24	3.99E-04	40.0	5.76E-01	
1	1898.63	49	28	2.31	3797.00	3789	24	8.10E-04	51.4	5.75E-01	
1	1902.13	24	28	2.31	3804.00	3789	24	4.06E-04	****	5.74E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471362          *
* Acquisition date :  9-DEC-2007 14:39:51 Detector SN#    :                *
* Detector ID      : GAM21                Sensitivity     : 3.000          *
* Geometry         : CAN                  Energy tolerance: 2.000          *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 16:41:51.18     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471362          Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.7000E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* 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	LC (pCi/GRAM)	TPU
TL-208	1.364E-03	1.251E-02	5.378E-03	1.251E-02
BI-211	1.992E-01	1.939E-01	1.730E-01	1.939E-01
PB-212	3.459E-03	1.512E-02	7.118E-03	1.512E-02
PA-234M	9.084E-01	1.031E+00	6.817E-01	1.031E+00
AM-243	3.767E-03	3.302E-03	2.873E-03	3.302E-03

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU
K-40	-6.315E-02	1.557E-01	7.755E-02	1.557E-01 NOT IDENT.
CO-60	-1.267E-03	9.047E-03	6.488E-03	9.047E-03 NOT IDENT.
RH-101	2.694E-03	7.073E-03	4.098E-03	7.073E-03 NOT IDENT.
SB-125	6.830E-03	1.513E-02	1.358E-02	1.513E-02 NOT IDENT.
CS-137	-2.642E-03	6.299E-03	5.484E-03	6.299E-03 NOT IDENT.
EU-155	7.993E-03	9.891E-03	9.184E-03	9.891E-03 NOT IDENT.
PO-209	1.526E+00	1.420E+00	1.312E+00	1.420E+00 NOT IDENT.
BI-212	-6.783E-03	4.889E-02	4.292E-02	4.889E-02 NOT IDENT.
BI-214	-4.737E-04	2.457E-02	1.317E-02	2.457E-02 FAIL ABUN
PB-214	-6.673E-03	2.033E-02	1.149E-02	2.033E-02 FAIL ABUN
RA-223	3.621E-02	2.568E-02	2.432E-02	2.568E-02 NOT IDENT.
AC-228	2.813E-02	2.513E-02	2.331E-02	2.513E-02 NOT IDENT.
PA-233	1.613E-03	1.029E-02	9.307E-03	1.029E-02 NOT IDENT.
TH-234	-1.868E-02	6.137E-02	3.687E-02	6.137E-02 NOT IDENT.
U-235	-7.525E-03	2.413E-02	2.130E-02	2.413E-02 NOT IDENT.
NP-236	4.845E-03	5.336E-03	4.986E-03	5.336E-03 NOT IDENT.
NP-237	1.605E-02	1.641E-02	1.545E-02	1.641E-02 NOT IDENT.
NP-239	1.188E-02	2.975E-02	2.762E-02	2.975E-02 NOT IDENT.
AM-241	3.195E-03	5.623E-03	5.336E-03	5.623E-03 NOT IDENT.
CM-243	-2.576E-03	9.164E-03	8.242E-03	9.164E-03 NOT IDENT.
AM-246	1.084E-03	2.542E-02	2.184E-02	2.542E-02 NOT IDENT.
CF-249	-3.138E-03	6.475E-03	5.621E-03	6.475E-03 NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	507.2007
63.29	568.8204
74.66	609.6689
74.81	586.3141
74.81	586.3141
77.11	558.3662
77.11	558.3662
86.48	510.7570
87.30	531.3206
87.30	531.3206
92.58	497.7962
98.44	478.0178
103.76	538.4731
105.31	488.5254
129.07	567.5165
143.76	611.6543
198.00	523.7706
209.25	541.1859
228.18	458.8076
238.63	479.6589
242.00	523.0560
269.46	370.0502
270.25	420.0619
277.36	341.6528
295.22	423.1946
300.09	438.7450
312.17	384.4367
338.32	369.0888
351.93	336.3867
387.59	293.8205
409.46	266.7782
427.87	239.9071
463.00	228.4111
510.77	199.4155
583.19	175.0820
609.31	192.5048
661.66	156.3694
727.33	143.2103
763.13	153.0154
768.36	153.2164
785.37	124.4143
794.95	136.1281
806.17	142.2248
831.80	134.9974
860.56	99.5780
896.60	103.3151
911.20	92.8933
934.06	97.2880
964.77	114.7468
968.97	112.8682
1001.03	94.6869
1078.86	91.1133
1120.29	100.0098
1155.19	87.3138
1173.23	93.6410
1238.11	82.2327
1280.96	99.8126
1332.51	83.7318
1377.67	84.3618
1401.50	79.3296
1407.98	67.6091
1460.80	57.3563
1509.23	64.4878
1588.20	69.9893
1620.50	60.8170
1729.60	75.2796
1764.49	57.2159

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471362

Total Uranium Activity	-3.4818E-03	ug/g
Total Uranium Counting Unc.	1.1166E-02	ug/g
Total Uranium Tpu	1.1166E-08	ug/g
Total Uranium Mda	9.8560E-03	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:43:17.05

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471363.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 9-DEC-2007 14:40:16.
Sample ID        : G1201471363          Sample quantity  : 1.23590E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:40:39.88  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	53.87	125	1046	1.16	107.69	106	5	2.09E-03	39.9	
2	0	63.19*	265	1775	0.92	126.32	123	7	4.42E-03	34.9	
3	2	73.04	168	1859	0.97	146.04	143	24	2.80E-03	41.1	5.28E+00
4	2	74.86	1695	1836	0.98	149.68	143	24	2.82E-02	4.6	
5	2	77.11*	2556	1498	0.88	154.18	143	24	4.26E-02	3.6	
6	2	81.04	71	1470	0.89	162.04	143	24	1.19E-03	81.5	
7	4	84.34*	311	1380	1.10	168.63	166	12	5.18E-03	25.3	1.65E+00
8	4	87.15	1068	1757	1.04	174.26	166	12	1.78E-02	6.9	
9	6	89.95	611	884	0.83	179.86	178	16	1.02E-02	7.3	3.05E+00
10	6	92.81*	1228	1821	1.25	185.57	178	16	2.05E-02	8.4	
11	2	97.70	144	906	1.04	195.36	193	9	2.41E-03	30.3	3.88E+00
12	2	99.34	199	1380	1.05	198.64	193	9	3.32E-03	30.7	
13	0	105.58	358	2038	1.79	211.11	207	9	5.97E-03	23.3	
14	0	114.65*	3	1388	0.99	229.27	229	6	5.75E-05	*****	
15	0	129.07	278	1942	0.95	258.10	255	8	4.63E-03	28.1	
16	0	143.64*	2	1642	1.01	287.25	285	7	3.33E-05	*****	
17	0	154.39	299	1690	0.99	308.75	305	8	4.98E-03	24.6	
18	0	163.16	143	1442	1.13	326.29	324	7	2.39E-03	44.7	
19	0	185.97*	880	2027	1.12	371.92	368	10	1.47E-02	12.4	
20	0	195.58	98	1132	1.33	391.14	389	6	1.64E-03	55.0	
21	0	209.40	549	1778	1.09	418.79	415	9	9.15E-03	14.5	
22	5	236.44	189	1150	1.45	472.87	470	20	3.15E-03	34.3	6.34E+00
23	5	238.63*	6425	891	0.98	477.26	470	20	1.07E-01	1.6	
24	5	241.59	1659	1369	1.80	483.18	470	20	2.77E-02	6.0	
25	0	258.38	118	889	1.06	516.77	514	7	1.96E-03	43.1	
26	0	269.89	531	1664	1.49	539.78	534	12	8.86E-03	15.9	
27	0	277.43	247	1028	1.18	554.88	551	8	4.12E-03	23.3	
28	0	295.20*	1680	1049	1.14	590.42	586	9	2.80E-02	5.3	
29	0	299.97	306	1232	1.02	599.97	596	10	5.10E-03	22.2	
30	0	328.07	402	1191	1.35	656.17	652	11	6.71E-03	17.3	
31	0	332.38	65	752	1.42	664.80	662	7	1.08E-03	70.9	
32	0	338.22	1255	1085	1.17	676.48	671	10	2.09E-02	5.7	
33	0	351.85*	3133	1142	1.10	703.75	697	12	5.22E-02	3.1	
34	0	409.23	52	840	0.98	818.53	815	9	8.62E-04	102.5	
35	0	433.71*	72	587	2.84	867.51	864	9	1.21E-03	80.5	
36	0	439.68*	35	631	1.37	879.45	876	9	5.86E-04	165.7	
37	0	462.90	386	690	1.44	925.90	921	11	6.43E-03	14.1	
38	0	510.65*	590	1132	1.89	1021.42	1013	17	9.84E-03	19.5	

Sample ID : G1201471363 Acquisition date : 9-DEC-2007 14:40:16

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	562.25	77	461	0.65	1124.65	1121	9	1.28E-03	51.8	
40	0	569.58*	51	825	1.35	1139.32	1131	15	8.53E-04	191.9	
41	0	583.05*	1861	663	1.32	1166.27	1160	12	3.10E-02	4.3	
42	0	609.14*	2101	497	1.35	1218.46	1212	11	3.50E-02	3.5	
43	0	661.29*	85	351	2.06	1322.82	1319	8	1.41E-03	48.8	
44	0	664.83	82	425	1.87	1329.90	1328	10	1.37E-03	48.5	
45	0	726.62	474	693	1.84	1453.51	1444	16	7.91E-03	13.2	
46	0	755.00	33	260	1.37	1510.29	1508	7	5.56E-04	82.5	
47	0	767.78	211	429	1.95	1535.86	1530	11	3.51E-03	20.3	
48	0	772.11	67	449	4.11	1544.53	1541	12	1.11E-03	64.7	
49	0	785.50	87	326	1.47	1571.32	1568	9	1.45E-03	38.7	
50	0	794.55	296	377	1.56	1589.42	1583	12	4.93E-03	14.4	
51	0	835.10	100	396	1.72	1670.57	1666	11	1.66E-03	39.8	
52	0	860.29	230	356	1.71	1720.95	1715	13	3.83E-03	18.2	
53	0	880.88	42	251	0.75	1762.17	1758	9	7.04E-04	69.3	
54	0	891.06	97	566	6.92	1782.53	1767	23	1.62E-03	64.5	
55	0	910.86*	1292	428	1.66	1822.15	1813	16	2.15E-02	4.9	
56	0	933.79	138	283	1.94	1868.02	1861	13	2.31E-03	26.5	
57	0	951.49	33	175	1.30	1903.45	1900	8	5.47E-04	72.3	
58	1	964.27	264	252	1.99	1929.01	1920	25	4.40E-03	13.8	2.28E+00
59	1	968.67	771	210	1.69	1937.82	1920	25	1.29E-02	5.0	
60	0	1000.97*	2	325	1.92	2002.45	1997	15	3.37E-05	*****	
61	0	1092.77	67	194	3.80	2186.14	2179	13	1.11E-03	44.9	
62	0	1120.03	447	276	1.77	2240.69	2234	14	7.45E-03	9.2	
63	0	1154.35	82	169	2.15	2309.36	2304	10	1.36E-03	31.9	
64	0	1163.77	16	212	1.01	2328.21	2320	12	2.64E-04	186.5	
65	0	1217.12	23	117	1.40	2434.99	2433	7	3.88E-04	79.4	
66	0	1237.33	198	228	1.84	2475.42	2468	14	3.31E-03	17.6	
67	0	1377.45	119	120	2.01	2755.84	2749	12	1.98E-03	20.6	
68	0	1395.77	30	314	11.67	2792.49	2765	30	4.97E-04	176.4	
69	0	1401.76	31	93	1.14	2804.49	2799	9	5.14E-04	59.5	
70	0	1408.40	92	161	2.35	2817.78	2809	18	1.54E-03	34.2	
71	0	1460.34*	1960	249	2.21	2921.72	2911	23	3.27E-02	3.2	
72	0	1497.18	28	128	0.85	2995.46	2988	14	4.66E-04	88.3	
73	0	1508.98	68	87	1.98	3019.06	3013	11	1.14E-03	29.2	
74	0	1543.56	36	57	1.88	3088.27	3084	9	5.95E-04	42.9	
75	0	1564.52	18	75	1.39	3130.23	3122	13	3.01E-04	101.6	
76	0	1587.54	81	130	2.32	3176.29	3171	12	1.35E-03	30.2	
77	0	1593.20	91	82	3.52	3187.63	3182	13	1.52E-03	23.7	
78	4	1620.67	50	63	2.12	3242.60	3238	15	8.36E-04	31.1	3.21E+00
79	4	1623.77	23	44	1.91	3248.81	3238	15	3.76E-04	62.6	
80	0	1720.51	17	49	3.50	3442.44	3434	13	2.78E-04	89.7	
81	3	1724.44	23	27	2.48	3450.31	3446	36	3.86E-04	46.7	1.59E+00
82	3	1729.51	117	58	3.03	3460.45	3446	36	1.94E-03	18.5	
83	0	1751.56	11	55	0.58	3504.58	3495	12	1.91E-04	134.6	
84	2	1764.06	436	49	2.78	3529.60	3521	33	7.27E-03	6.2	1.45E+00
85	2	1769.74*	99	65	2.62	3540.97	3521	33	1.65E-03	35.4	
86	0	1848.11	84	87	5.72	3697.83	3689	19	1.40E-03	29.2	

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]G1201471363      *
* Acquisition date :  9-DEC-2007 14:40:16 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 16:40:39.88     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471363          Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2359E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	6.459E+00	6.063E-01	1.743E-01	0.000E+00
CS-137	1.731E-02	1.657E-02	1.969E-02	0.000E+00
EU-155	9.984E-02	4.619E-02	4.734E-02	0.000E+00
TL-208	3.428E-01	3.468E-02	1.874E-02	0.000E+00
BI-212	7.565E-01	2.019E-01	1.405E-01	0.000E+00
PB-212	1.134E+00	7.253E-02	2.696E-02	0.000E+00
BI-214	7.361E-01	6.550E-02	3.590E-02	0.000E+00
PB-214	8.604E-01	6.903E-02	3.579E-02	0.000E+00
RA-223	3.254E-01	1.033E-01	8.952E-02	0.000E+00
AC-228	1.155E+00	1.437E-01	7.422E-02	0.000E+00
PA-234M	6.060E-02	2.860E+00	2.229E+00	0.000E+00
TH-234	1.436E+00	2.586E-01	2.075E-01	0.000E+00
U-235	1.039E-03	9.677E-02	9.100E-02	0.000E+00
NP-236	2.301E-02	1.376E-02	2.689E-02	0.000E+00
NP-237	5.852E-01	8.980E-02	1.048E-01	0.000E+00
AM-243	2.180E-01	2.495E-02	2.452E-02	0.000E+00
CM-243	9.034E-02	4.180E-02	4.321E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-1.619E-03	1.242E-02	2.089E-02	0.000E+00	NOT IDENT.
RH-101	-4.639E-03	1.459E-02	1.604E-02	0.000E+00	NOT IDENT.
SB-125	1.086E-02	3.054E-02	5.069E-02	0.000E+00	NOT IDENT.
PO-209	2.613E+00	2.669E+00	4.047E+00	0.000E+00	NOT IDENT.
BI-211	6.826E-02	3.963E-01	5.802E-01	0.000E+00	NOT IDENT.
PA-233	-1.892E-02	1.899E-02	3.246E-02	0.000E+00	NOT IDENT.
NP-239	-2.633E-02	6.705E-02	1.115E-01	0.000E+00	NOT IDENT.
AM-241	6.550E-03	4.995E-02	7.784E-02	0.000E+00	NOT IDENT.
AM-246	3.033E-02	4.083E-02	7.180E-02	0.000E+00	NOT IDENT.
CF-249	8.973E-03	1.292E-02	2.254E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:43:18.04

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471363.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 9-DEC-2007 14:40:16.
Sample ID        : G1201471363          Sample quantity  : 1.23590E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 16:40:00.00        Elapsed real time: 0 16:40:39.88  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	1960	10.66*	1.037E+00	6.459E+00	6.459E+00	9.58
CS-137	661.66	85	85.10*	2.103E+00	1.725E-02	1.731E-02	97.69
EU-155	105.31	358	21.20*	6.311E+00	9.762E-02	9.984E-02	47.21
TL-208	277.36	247	6.31	4.253E+00	3.362E-01	3.362E-01	47.05
	510.77	590	22.60	2.615E+00	3.640E-01	3.640E-01	39.34
	583.19	1861	84.50*	2.342E+00	3.428E-01	3.428E-01	10.32
	763.13	------	1.81	1.854E+00	------	Line Not Found	------
	860.56	230	12.42	1.664E+00	4.052E-01	4.052E-01	37.30
BI-212	727.33	474	11.80*	1.937E+00	7.565E-01	7.565E-01	27.23
	785.37	87	1.10	1.807E+00	1.599E+00	1.599E+00	77.80
	1620.50	50	1.49	9.596E-01	1.278E+00	1.278E+00	62.50
PB-212	74.81	1695	10.40	4.154E+00	1.430E+00	1.430E+00	11.68
	77.11	2556	17.50	4.413E+00	1.206E+00	1.206E+00	10.06
	87.30	1068	7.81	5.366E+00	9.292E-01	9.292E-01	15.66
	238.63	6425	43.30*	4.767E+00	1.134E+00	1.134E+00	6.52
	300.09	306	3.28	4.002E+00	8.504E-01	8.504E-01	44.71
BI-214	609.31	2101	46.10*	2.256E+00	7.360E-01	7.361E-01	9.08
	768.36	211	4.94	1.844E+00	8.435E-01	8.435E-01	41.12
	806.17	------	1.22	1.765E+00	------	Line Not Found	------
	934.06	138	3.03	1.544E+00	1.078E+00	1.078E+00	53.50
	1120.29	447	15.10	1.306E+00	8.261E-01	8.262E-01	19.50
	1155.19	82	1.63	1.271E+00	1.435E+00	1.436E+00	64.01
	1238.11	198	5.79	1.194E+00	1.046E+00	1.046E+00	35.79
	1280.96	------	1.43	1.158E+00	------	Line Not Found	------
	1377.67	119	4.00	1.088E+00	9.972E-01	9.973E-01	41.73
	1401.50	31	1.27	1.072E+00	8.248E-01	8.249E-01	119.27
	1407.98	92	2.15	1.068E+00	1.467E+00	1.467E+00	68.86
	1509.23	68	2.11	1.011E+00	1.164E+00	1.164E+00	58.91
	1729.60	117	2.92	9.196E-01	1.583E+00	1.583E+00	37.46
	1764.49	436	15.40	9.089E-01	1.136E+00	1.136E+00	13.89
PB-214	74.81	1695	6.44	4.154E+00	2.309E+00	2.309E+00	11.68
	77.11	2556	10.80	4.413E+00	1.955E+00	1.955E+00	10.06

Sample ID : G1201471363 Acquisition date : 9-DEC-2007 14:40:16

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	1068	4.84	5.366E+00	1.499E+00	1.499E+00	15.66
	242.00	1659	7.43	4.723E+00	1.723E+00	1.723E+00	13.26
	295.22	1680	19.30	4.053E+00	7.827E-01	7.827E-01	12.20
	351.93	3133	37.60*	3.530E+00	8.604E-01	8.604E-01	8.19
RA-223	269.46	531	13.70*	4.344E+00	3.254E-01	3.254E-01	32.40
AC-228	129.07	278	2.42	6.529E+00	6.407E-01	6.407E-01	56.62
	209.25	549	3.89	5.234E+00	9.828E-01	9.828E-01	29.49
	270.25	531	3.46	4.344E+00	1.289E+00	1.289E+00	32.40
	338.32	1255	11.27	3.642E+00	1.114E+00	1.114E+00	12.61
	409.46	52	1.92	3.129E+00	3.137E-01	3.137E-01	205.09
	463.00	386	4.40	2.833E+00	1.128E+00	1.128E+00	28.72
	794.95	296	4.25	1.788E+00	1.419E+00	1.419E+00	29.60
	911.20	1292	25.80*	1.580E+00	1.155E+00	1.155E+00	12.69
	964.77	264	4.99	1.499E+00	1.286E+00	1.286E+00	28.64
	968.97	771	15.80	1.493E+00	1.191E+00	1.191E+00	12.66
	1588.20	81	3.22	9.737E-01	9.407E-01	9.407E-01	60.83
PA-234M	1001.03	2	0.84*	1.448E+00	6.060E-02	6.060E-02	4814.98
TH-234	63.29	265	4.80	2.613E+00	7.702E-01	7.702E-01	70.25
	92.58	1228	5.41*	5.758E+00	1.436E+00	1.436E+00	18.37
U-235	143.76	2	10.96*	6.391E+00	1.039E-03	1.039E-03	9499.92
NP-236	98.44	144	38.00*	6.019E+00	2.301E-02	2.301E-02	61.00
NP-237	86.48	1068	12.40*	5.366E+00	5.852E-01	5.852E-01	15.66
AM-243	74.66	1695	68.20*	4.154E+00	2.180E-01	2.180E-01	11.68
CM-243	103.76	358	23.00*	6.311E+00	8.998E-02	9.034E-02	47.21

Flag: "*" = Keyline

Sample ID : G1201471363 Acquisition date : 9-DEC-2007 14:40:16

Total number of lines in spectrum 86
Number of unidentified lines 40
Number of lines tentatively identified by NID 46 53.49%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	6.459E+00	6.459E+00	0.619E+00	9.58	
CS-137	9.47E+08S	1.00	1.725E-02	1.731E-02	1.691E-02	97.69	
EU-155	1.57E+08S	1.02	9.762E-02	9.984E-02	4.714E-02	47.21	
TL-208	4.43E+17S	1.00	3.428E-01	3.428E-01	0.354E-01	10.32	
BI-212	4.43E+17S	1.00	7.565E-01	7.565E-01	2.060E-01	27.23	
PB-212	4.43E+17S	1.00	1.134E+00	1.134E+00	0.074E+00	6.52	
BI-214	5.05E+10S	1.00	7.360E-01	7.361E-01	0.668E-01	9.08	
PB-214	5.05E+10S	1.00	8.604E-01	8.604E-01	0.704E-01	8.19	
RA-223	1.04E+12S	1.00	3.254E-01	3.254E-01	1.054E-01	32.40	
AC-228	4.43E+17S	1.00	1.155E+00	1.155E+00	0.147E+00	12.69	
PA-234M	1.41E+17S	1.00	6.060E-02	6.060E-02	291.8E-02	4814.98	
TH-234	1.41E+17S	1.00	1.436E+00	1.436E+00	0.264E+00	18.37	
U-235	2.22E+16S	1.00	1.039E-03	1.039E-03	98.75E-03	9499.92	
NP-236	4.89E+12S	1.00	2.301E-02	2.301E-02	1.404E-02	61.00	
NP-237	6.75E+13S	1.00	5.852E-01	5.852E-01	0.916E-01	15.66	
AM-243	2.33E+11S	1.00	2.180E-01	2.180E-01	0.255E-01	11.68	
CM-243	8.99E+08S	1.00	8.998E-02	9.034E-02	4.265E-02	47.21	
			---	---			
	Total Activity :		1.430E+01	1.430E+01			

Grand Total Activity : 1.430E+01 1.430E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471363 Acquisition date : 9-DEC-2007 14:40:16

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	53.87	125	1046	1.16	107.69	106	5	2.09E-03	79.8	1.35E+00	
2	73.04	168	1859	0.97	146.04	143	24	2.80E-03	82.3	3.93E+00	
2	81.04	71	1470	0.89	162.04	143	24	1.19E-03	****	4.83E+00	
4	84.34	311	1380	1.10	168.63	166	12	5.18E-03	50.6	5.13E+00	
6	89.95	611	884	0.83	179.86	178	16	1.02E-02	14.6	5.57E+00	
2	99.34	199	1380	1.05	198.64	193	9	3.32E-03	61.4	6.09E+00	
0	114.65	3	1388	0.99	229.27	229	6	5.75E-05	****	6.49E+00	
0	154.39	299	1690	0.99	308.75	305	8	4.98E-03	49.2	6.23E+00	
0	163.16	143	1442	1.13	326.29	324	7	2.39E-03	89.4	6.08E+00	
0	185.97	880	2027	1.12	371.92	368	10	1.47E-02	24.7	5.65E+00	
0	195.58	98	1132	1.33	391.14	389	6	1.64E-03	****	5.48E+00	
5	236.44	189	1150	1.45	472.87	470	20	3.15E-03	68.6	4.80E+00	
0	258.38	118	889	1.06	516.77	514	7	1.96E-03	86.3	4.49E+00	
0	328.07	402	1191	1.35	656.17	652	11	6.71E-03	34.7	3.73E+00	
0	332.38	65	752	1.42	664.80	662	7	1.08E-03	****	3.69E+00	
0	433.71	72	587	2.84	867.51	864	9	1.21E-03	****	2.99E+00	
0	439.68	35	631	1.37	879.45	876	9	5.86E-04	****	2.95E+00	
0	562.25	77	461	0.65	1124.65	1121	9	1.28E-03	****	2.41E+00	
0	569.58	51	825	1.35	1139.32	1131	15	8.53E-04	****	2.39E+00	
0	664.83	82	425	1.87	1329.90	1328	10	1.37E-03	97.0	2.09E+00	
0	755.00	33	260	1.37	1510.29	1508	7	5.56E-04	****	1.87E+00	
0	772.11	67	449	4.11	1544.53	1541	12	1.11E-03	****	1.83E+00	
0	835.10	100	396	1.72	1670.57	1666	11	1.66E-03	79.5	1.71E+00	
0	880.88	42	251	0.75	1762.17	1758	9	7.04E-04	****	1.63E+00	
0	891.06	97	566	6.92	1782.53	1767	23	1.62E-03	****	1.61E+00	
0	951.49	33	175	1.30	1903.45	1900	8	5.47E-04	****	1.52E+00	
0	1092.77	67	194	3.80	2186.14	2179	13	1.11E-03	89.8	1.34E+00	
0	1163.77	16	212	1.01	2328.21	2320	12	2.64E-04	****	1.26E+00	
0	1217.12	23	117	1.40	2434.99	2433	7	3.88E-04	****	1.21E+00	
0	1395.77	30	314	11.67	2792.49	2765	30	4.97E-04	****	1.08E+00	
0	1497.18	28	128	0.85	2995.46	2988	14	4.66E-04	****	1.02E+00	
0	1543.56	36	57	1.88	3088.27	3084	9	5.95E-04	85.8	9.94E-01	
0	1564.52	18	75	1.39	3130.23	3122	13	3.01E-04	****	9.84E-01	
0	1593.20	91	82	3.52	3187.63	3182	13	1.52E-03	47.5	9.71E-01	
4	1623.77	23	44	1.91	3248.81	3238	15	3.76E-04	****	9.58E-01	
0	1720.51	17	49	3.50	3442.44	3434	13	2.78E-04	****	9.23E-01	
3	1724.44	23	27	2.48	3450.31	3446	36	3.86E-04	93.3	9.21E-01	
0	1751.56	11	55	0.58	3504.58	3495	12	1.91E-04	****	9.13E-01	
2	1769.74	99	65	2.62	3540.97	3521	33	1.65E-03	70.9	9.07E-01	
0	1848.11	84	87	5.72	3697.83	3689	19	1.40E-03	58.5	8.86E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471363          *
* Acquisition date :  9-DEC-2007 14:40:16 Detector SN#    :                *
* Detector ID      : GAM23                Sensitivity     : 3.000          *
* Geometry         : CAN                  Energy tolerance: 2.000          *
* Elapsed live time:    0 16:40:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 16:40:39.88     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471363          Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.2359E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	6.459E+00	6.063E-01	8.722E-02	6.063E-01
CS-137	1.731E-02	1.657E-02	9.850E-03	1.657E-02
EU-155	9.984E-02	4.619E-02	2.369E-02	4.619E-02
TL-208	3.428E-01	3.468E-02	9.374E-03	3.468E-02
BI-212	7.565E-01	2.019E-01	7.030E-02	2.019E-01
PB-212	1.134E+00	7.253E-02	1.349E-02	7.253E-02
BI-214	7.361E-01	6.550E-02	1.796E-02	6.550E-02
PB-214	8.604E-01	6.903E-02	1.790E-02	6.903E-02
RA-223	3.254E-01	1.033E-01	4.479E-02	1.033E-01
AC-228	1.155E+00	1.437E-01	3.713E-02	1.437E-01
PA-234M	6.060E-02	2.860E+00	1.115E+00	2.860E+00
TH-234	1.436E+00	2.586E-01	1.038E-01	2.586E-01
U-235	1.039E-03	9.677E-02	4.553E-02	9.677E-02
NP-236	2.301E-02	1.376E-02	1.345E-02	1.376E-02
NP-237	5.852E-01	8.980E-02	5.241E-02	8.980E-02
AM-243	2.180E-01	2.495E-02	1.227E-02	2.495E-02
CM-243	9.034E-02	4.180E-02	2.162E-02	4.180E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-1.619E-03	1.242E-02	1.045E-02	1.242E-02	NOT IDENT.
RH-101	-4.639E-03	1.459E-02	8.027E-03	1.459E-02	NOT IDENT.
SB-125	1.086E-02	3.054E-02	2.536E-02	3.054E-02	NOT IDENT.
PO-209	2.613E+00	2.669E+00	2.024E+00	2.669E+00	NOT IDENT.
BI-211	6.826E-02	3.963E-01	2.903E-01	3.963E-01	NOT IDENT.
PA-233	-1.892E-02	1.899E-02	1.624E-02	1.899E-02	NOT IDENT.
NP-239	-2.633E-02	6.705E-02	5.579E-02	6.705E-02	NOT IDENT.
AM-241	6.550E-03	4.995E-02	3.894E-02	4.995E-02	NOT IDENT.
AM-246	3.033E-02	4.083E-02	3.592E-02	4.083E-02	NOT IDENT.
CF-249	8.973E-03	1.292E-02	1.127E-02	1.292E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	1093.6635
63.29	1171.0723
74.66	1538.6813
74.81	1539.4172
74.81	1539.4172
77.11	1550.6123
77.11	1550.6123
86.48	1542.6544
87.30	1546.2615
87.30	1546.2615
92.58	1349.3342
98.44	1243.3053
103.76	1248.4080
105.31	1245.7323
129.07	1364.2698
143.76	1332.6548
198.00	1234.9172
209.25	1219.2764
228.18	1198.1372
238.63	1029.1840
242.00	1033.6678
269.46	949.0327
270.25	949.9191
277.36	929.8148
295.22	910.0690
300.09	930.6559
312.17	868.7415
338.32	836.3208
351.93	757.2901
387.59	742.1655
409.46	728.2689
427.87	621.2919
463.00	554.4780
510.77	537.3694
583.19	467.7334
609.31	475.1729
661.66	420.5602
727.33	352.5720
763.13	337.4185
768.36	353.1973
785.37	347.0643
794.95	381.2244
806.17	379.8523
831.80	360.4240
860.56	352.9658
896.60	265.3498
911.20	315.0767
934.06	237.3879
964.77	247.2097
968.97	247.6216
1001.03	254.0323
1078.86	220.7366
1120.29	216.3351
1155.19	213.1250
1173.23	232.9414
1238.11	226.9609
1280.96	194.7199
1332.51	154.7418
1377.67	149.5371
1401.50	125.4688
1407.98	125.7031
1460.80	129.6895
1509.23	119.5499
1588.20	145.1216
1620.50	104.7437
1729.60	61.4553
1764.49	82.6113

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471363

Total Uranium Activity	4.8095E-04	ug/g
Total Uranium Counting Unc.	4.4776E-02	ug/g
Total Uranium Tpu	4.4776E-08	ug/g
Total Uranium Mda	2.1066E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:43:49.75

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471364.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 10-DEC-2007 08:38:06
Sample ID        : G1201471364          Sample quantity  : 1.55440E+02 GRAM
Detector name    : GAM01                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:02.03  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.59	2494	957	1.39	119.23	114	10	6.93E-01	3.1	
2	1	74.62	172	907	1.63	149.30	144	15	4.77E-02	34.1	2.21E+00
3	1	77.33	276	818	1.50	154.73	144	15	7.68E-02	19.9	
4	0	88.12	4632	1190	1.27	176.31	170	13	1.29E+00	2.1	
5	0	122.08	1653	591	1.34	244.25	238	11	4.59E-01	3.8	
6	0	136.46	166	400	1.31	273.01	269	9	4.60E-02	23.1	
7	0	165.85	845	425	1.45	331.82	326	12	2.35E-01	6.0	
8	0	170.20	36	291	1.46	340.51	338	8	1.01E-02	82.3	
9	0	185.82*	97	293	1.96	371.75	368	8	2.69E-02	32.8	
10	0	227.05	45	199	0.66	454.23	452	6	1.24E-02	52.2	
11	3	238.72*	503	350	1.59	477.59	470	19	1.40E-01	8.3	1.21E+00
12	3	241.86*	136	304	1.65	483.87	470	19	3.78E-02	27.9	
13	0	295.02	66	365	1.24	590.22	583	13	1.84E-02	60.6	
14	0	338.39	87	268	1.79	676.97	673	10	2.42E-02	36.7	
15	0	348.24	34	262	2.32	696.69	687	12	9.55E-03	96.8	
16	0	351.74*	253	176	1.25	703.69	699	10	7.03E-02	11.7	
17	0	391.95	454	186	1.38	784.12	779	12	1.26E-01	7.7	
18	0	510.70*	107	232	4.18	1021.67	1014	18	2.96E-02	35.8	
19	0	572.63	16	194	5.85	1145.56	1136	14	4.52E-03	183.8	
20	0	583.58*	163	105	1.90	1167.46	1162	12	4.53E-02	14.9	
21	0	609.62*	146	144	1.86	1219.54	1214	12	4.06E-02	18.7	
22	0	661.75*	2162	224	1.64	1323.81	1316	16	6.01E-01	2.7	
23	0	697.26	42	109	4.24	1394.86	1389	11	1.18E-02	50.7	
24	3	794.90	61	144	2.64	1590.15	1581	20	1.70E-02	45.2	2.71E+00
25	3	798.87	18	45	1.45	1598.10	1581	20	4.97E-03	59.2	
26	0	808.11	32	76	1.33	1616.57	1612	9	8.88E-03	52.3	
27	0	898.24*	380	176	1.68	1796.85	1789	14	1.05E-01	9.0	
28	0	912.65*	83	218	6.61	1825.67	1817	19	2.32E-02	44.3	
29	0	962.84*	50	343	8.93	1926.08	1907	27	1.38E-02	104.9	
30	0	968.94*	57	122	0.65	1938.27	1934	11	1.59E-02	40.3	
31	0	1166.99	26	76	2.39	2334.39	2325	14	7.09E-03	75.5	
32	0	1173.51	2161	79	1.91	2347.43	2340	16	6.00E-01	2.3	
33	0	1332.80	1947	34	2.11	2666.00	2657	20	5.41E-01	2.4	
34	0	1377.66	28	7	1.75	2755.71	2748	14	7.78E-03	27.5	
35	0	1425.66	21	3	1.90	2851.72	2845	14	5.80E-03	28.8	
36	0	1461.35*	26	13	0.64	2923.09	2916	14	7.22E-03	38.4	
37	0	1514.24	4	15	0.58	3028.88	3020	10	1.11E-03	187.9	
38	4	1576.40	9	4	1.69	3153.17	3151	12	2.41E-03	36.5	1.20E+00

Sample ID : G1201471364 Acquisition date : 10-DEC-2007 08:38:06

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	4	1579.31	18	2	2.05	3159.01	3151	12	5.05E-03	29.6	
40	0	1617.60	12	5	1.51	3235.58	3230	10	3.45E-03	43.8	
41	0	1631.94	4	7	0.64	3264.24	3257	9	1.24E-03	114.9	
42	0	1637.28	22	4	3.68	3274.92	3266	17	6.10E-03	30.3	
43	0	1654.61	21	8	4.88	3309.58	3302	16	5.70E-03	38.1	
44	0	1663.14	10	9	1.88	3326.65	3320	10	2.79E-03	66.0	
45	0	1715.82	15	8	5.76	3431.99	3423	16	4.07E-03	50.6	
46	0	1734.22	6	7	3.51	3468.78	3460	12	1.66E-03	106.1	
47	0	1764.54*	25	4	4.61	3529.41	3520	17	6.89E-03	29.7	
48	0	1836.62	232	12	2.06	3673.55	3665	16	6.43E-02	7.4	

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]G1201471364      *
* Acquisition date : 10-DEC-2007 08:38:06 Detector SN#    :                 *
* Detector ID      : GAM01                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 01:00:02.03     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471364          Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5544E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-MAR-2007 03:44:30 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	1.125E+00	8.486E-01	7.440E-01	0.000E+00
CO-60	8.336E+00	6.560E-01	1.671E-01	0.000E+00
CS-137	5.813E+00	5.279E-01	1.566E-01	0.000E+00
TL-208	3.952E-01	1.187E-01	1.537E-01	0.000E+00
PO-209	2.434E+02	4.889E+01	3.785E+01	0.000E+00
PB-212	1.154E+00	2.034E-01	2.096E-01	0.000E+00
PB-214	9.058E-01	2.157E-01	2.541E-01	0.000E+00
AC-228	9.887E-01	8.643E-01	7.173E-01	0.000E+00
NP-237	3.057E+01	2.824E+00	1.096E+00	0.000E+00
NP-239	3.981E-01	4.081E-01	8.548E-01	0.000E+00
AM-241	1.276E+01	1.332E+00	7.485E-01	0.000E+00
AM-243	2.601E-01	1.749E-01	2.262E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
RH-101	-5.381E-04	6.593E-02	1.182E-01	0.000E+00	NOT IDENT.
SB-125	-1.403E-01	2.284E-01	3.803E-01	0.000E+00	NOT IDENT.
EU-155	-2.648E-02	2.126E-01	3.928E-01	0.000E+00	NOT IDENT.
BI-211	8.385E-01	2.551E+00	4.474E+00	0.000E+00	NOT IDENT.
BI-212	6.431E-01	7.313E-01	1.325E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	2.515E-01	3.817E-01	0.000E+00	FAIL ABUN
RA-223	-7.919E-03	3.796E-01	6.705E-01	0.000E+00	NOT IDENT.
PA-233	-7.036E-02	1.418E-01	2.428E-01	0.000E+00	NOT IDENT.
PA-234M	-6.084E+00	1.250E+01	2.051E+01	0.000E+00	NOT IDENT.
TH-234	1.716E+00	1.083E+00	1.867E+00	0.000E+00	NOT IDENT.
U-235	2.632E-01	3.733E-01	6.969E-01	0.000E+00	NOT IDENT.
NP-236	-1.418E-01	1.244E-01	2.231E-01	0.000E+00	NOT IDENT.
CM-243	-8.375E-02	1.981E-01	3.630E-01	0.000E+00	NOT IDENT.
AM-246	3.907E-02	3.894E-01	6.605E-01	0.000E+00	NOT IDENT.
CF-249	1.341E-02	1.101E-01	1.657E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 10:43:50.64

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471364.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 10-DEC-2007 08:38:06
Sample ID        : G1201471364          Sample quantity  : 1.55440E+02 GRAM
Detector name    : GAM01                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:02.03  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707060               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	1460.80	26	10.66*	1.047E+00	1.125E+00	1.125E+00	76.94
CO-60	1173.23	2161	100.00*	1.257E+00	8.305E+00	8.336E+00	8.03
	1332.51	1947	100.00	1.126E+00	8.347E+00	8.379E+00	7.42
CS-137	661.66	2162	85.10*	2.113E+00	5.809E+00	5.813E+00	9.27
TL-208	277.36	------	6.31	4.337E+00	------	Line Not Found	------
	510.77	107	22.60	2.642E+00	8.625E-01	8.625E-01	71.97
	583.19	163	84.50*	2.358E+00	3.952E-01	3.952E-01	30.66
	763.13	------	1.81	1.860E+00	------	Line Not Found	------
	860.56	------	12.42	1.667E+00	------	Line Not Found	------
PO-209	896.60	380	0.47*	1.603E+00	2.434E+02	2.434E+02	20.50
PB-212	74.81	172	10.40	4.677E+00	1.706E+00	1.706E+00	68.63
	77.11	276	17.50	4.976E+00	1.533E+00	1.533E+00	40.49
	87.30	4632	7.81	5.902E+00	4.853E+01	4.853E+01	9.43
	238.63	503	43.30*	4.863E+00	1.154E+00	1.154E+00	17.99
	300.09	------	3.28	4.077E+00	------	Line Not Found	------
PB-214	74.81	172	6.44	4.677E+00	2.754E+00	2.754E+00	68.63
	77.11	276	10.80	4.976E+00	2.485E+00	2.485E+00	40.49
	87.30	4632	4.84	5.902E+00	7.832E+01	7.832E+01	9.43
	242.00	136	7.43	4.816E+00	1.837E+00	1.837E+00	56.13
	295.22	66	19.30	4.132E+00	4.016E-01	4.016E-01	121.35
	351.93	253	37.60*	3.591E+00	9.058E-01	9.058E-01	24.30
AC-228	129.07	------	2.42	6.750E+00	------	Line Not Found	------
	209.25	------	3.89	5.348E+00	------	Line Not Found	------
	270.25	------	3.46	4.425E+00	------	Line Not Found	------
	338.32	87	11.27	3.705E+00	1.009E+00	1.009E+00	73.68
	409.46	------	1.92	3.174E+00	------	Line Not Found	------
	463.00	------	4.40	2.868E+00	------	Line Not Found	------
	794.95	61	4.25	1.792E+00	3.878E+00	3.878E+00	90.76
	911.20	83	25.80*	1.580E+00	9.887E-01	9.887E-01	89.20
	964.77	50	4.99	1.504E+00	3.201E+00	3.201E+00	209.96
	968.97	57	15.80	1.495E+00	1.171E+00	1.171E+00	81.09
	1588.20	------	3.22	9.858E-01	------	Line Not Found	------

Sample ID : G1201471364 Acquisition date : 10-DEC-2007 08:38:06

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
NP-237	86.48	4632	12.40*	5.902E+00	3.057E+01	3.057E+01	9.43
NP-239	228.18	45	10.76*	5.046E+00	3.981E-01	3.981E-01	104.59
AM-241	59.54	2494	35.90*	2.630E+00	1.276E+01	1.276E+01	10.65
AM-243	74.66	172	68.20*	4.677E+00	2.601E-01	2.601E-01	68.63

Flag: "*" = Keyline

Sample ID : G1201471364 Acquisition date : 10-DEC-2007 08:38:06

Total number of lines in spectrum 48
Number of unidentified lines 23
Number of lines tentatively identified by NID 25 52.08%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	1.125E+00	1.125E+00	0.866E+00	76.94	
CO-60	1.66E+08S	1.00	8.305E+00	8.336E+00	0.669E+00	8.03	
CS-137	9.47E+08S	1.00	5.809E+00	5.813E+00	0.539E+00	9.27	
TL-208	4.43E+17S	1.00	3.952E-01	3.952E-01	1.211E-01	30.66	
PO-209	3.22E+09S	1.00	2.434E+02	2.434E+02	0.499E+02	20.50	
PB-212	4.43E+17S	1.00	1.154E+00	1.154E+00	0.208E+00	17.99	
PB-214	5.05E+10S	1.00	9.058E-01	9.058E-01	2.201E-01	24.30	
AC-228	4.43E+17S	1.00	9.887E-01	9.887E-01	8.820E-01	89.20	
NP-237	6.75E+13S	1.00	3.057E+01	3.057E+01	0.288E+01	9.43	
NP-239	2.33E+11S	1.00	3.981E-01	3.981E-01	4.164E-01	104.59	
AM-241	1.36E+10S	1.00	1.276E+01	1.276E+01	0.136E+01	10.65	
AM-243	2.33E+11S	1.00	2.601E-01	2.601E-01	1.785E-01	68.63	
			---	---			
		Total Activity :	3.060E+02	3.061E+02			

Grand Total Activity : 3.060E+02 3.061E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471364 Acquisition date : 10-DEC-2007 08:38:06

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	122.08	1653	591	1.34	244.25	238	11	4.59E-01	7.5	6.79E+00	
0	136.46	166	400	1.31	273.01	269	9	4.60E-02	46.3	6.67E+00	
0	165.85	845	425	1.45	331.82	326	12	2.35E-01	12.0	6.17E+00	
0	170.20	36	291	1.46	340.51	338	8	1.01E-02	****	6.09E+00	
0	185.82	97	293	1.96	371.75	368	8	2.69E-02	65.5	5.78E+00	
0	348.24	34	262	2.32	696.69	687	12	9.55E-03	****	3.62E+00	
0	391.95	454	186	1.38	784.12	779	12	1.26E-01	15.4	3.29E+00	
0	572.63	16	194	5.85	1145.56	1136	14	4.52E-03	****	2.40E+00	
0	609.62	146	144	1.86	1219.54	1214	12	4.06E-02	37.4	2.27E+00	T
0	697.26	42	109	4.24	1394.86	1389	11	1.18E-02	****	2.02E+00	
3	798.87	18	45	1.45	1598.10	1581	20	4.97E-03	****	1.78E+00	
0	808.11	32	76	1.33	1616.57	1612	9	8.88E-03	****	1.77E+00	T
0	1166.99	26	76	2.39	2334.39	2325	14	7.09E-03	****	1.26E+00	
0	1377.66	28	7	1.75	2755.71	2748	14	7.78E-03	55.1	1.10E+00	T
0	1425.66	21	3	1.90	2851.72	2845	14	5.80E-03	57.7	1.07E+00	
0	1514.24	4	15	0.58	3028.88	3020	10	1.11E-03	****	1.02E+00	
4	1576.40	9	4	1.69	3153.17	3151	12	2.41E-03	72.9	9.91E-01	
4	1579.31	18	2	2.05	3159.01	3151	12	5.05E-03	59.2	9.90E-01	
0	1617.60	12	5	1.51	3235.58	3230	10	3.45E-03	87.5	9.74E-01	
0	1631.94	4	7	0.64	3264.24	3257	9	1.24E-03	****	9.68E-01	
0	1637.28	22	4	3.68	3274.92	3266	17	6.10E-03	60.5	9.66E-01	
0	1654.61	21	8	4.88	3309.58	3302	16	5.70E-03	76.1	9.60E-01	
0	1663.14	10	9	1.88	3326.65	3320	10	2.79E-03	****	9.57E-01	
0	1715.82	15	8	5.76	3431.99	3423	16	4.07E-03	****	9.39E-01	
0	1734.22	6	7	3.51	3468.78	3460	12	1.66E-03	****	9.33E-01	
0	1764.54	25	4	4.61	3529.41	3520	17	6.89E-03	59.4	9.25E-01	T
0	1836.62	232	12	2.06	3673.55	3665	16	6.43E-02	14.8	9.06E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471364           *
* Acquisition date : 10-DEC-2007 08:38:06 Detector SN#    :                 *
* Detector ID      : GAM01                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 01:00:02.03     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471364          Analyst initials: MJH1            *
* Batch Number     : 707060               Sample Quantity : 1.5544E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  7-MAR-2007 03:44:30 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	1.125E+00	8.486E-01	3.722E-01	8.486E-01
CO-60	8.336E+00	6.560E-01	8.360E-02	6.560E-01
CS-137	5.813E+00	5.279E-01	7.836E-02	5.279E-01
TL-208	3.952E-01	1.187E-01	7.689E-02	1.187E-01
PO-209	2.434E+02	4.889E+01	1.894E+01	4.889E+01
PB-212	1.154E+00	2.034E-01	1.048E-01	2.034E-01
PB-214	9.058E-01	2.157E-01	1.271E-01	2.157E-01
AC-228	9.887E-01	8.643E-01	3.588E-01	8.643E-01
NP-237	3.057E+01	2.824E+00	5.484E-01	2.824E+00
NP-239	3.981E-01	4.081E-01	4.277E-01	4.081E-01
AM-241	1.276E+01	1.332E+00	3.745E-01	1.332E+00
AM-243	2.601E-01	1.749E-01	1.132E-01	1.749E-01

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
RH-101	-5.381E-04	6.593E-02	5.913E-02	6.593E-02	NOT IDENT.
SB-125	-1.403E-01	2.284E-01	1.903E-01	2.284E-01	NOT IDENT.
EU-155	-2.648E-02	2.126E-01	1.965E-01	2.126E-01	NOT IDENT.
BI-211	8.385E-01	2.551E+00	2.238E+00	2.551E+00	NOT IDENT.
BI-212	6.431E-01	7.313E-01	6.629E-01	7.313E-01	NOT IDENT.
BI-214	6.743E-01	2.515E-01	1.910E-01	2.515E-01	FAIL ABUN
RA-223	-7.919E-03	3.796E-01	3.354E-01	3.796E-01	NOT IDENT.
PA-233	-7.036E-02	1.418E-01	1.215E-01	1.418E-01	NOT IDENT.
PA-234M	-6.084E+00	1.250E+01	1.026E+01	1.250E+01	NOT IDENT.
TH-234	1.716E+00	1.083E+00	9.343E-01	1.083E+00	NOT IDENT.
U-235	2.632E-01	3.733E-01	3.486E-01	3.733E-01	NOT IDENT.
NP-236	-1.418E-01	1.244E-01	1.116E-01	1.244E-01	NOT IDENT.
CM-243	-8.375E-02	1.981E-01	1.816E-01	1.981E-01	NOT IDENT.
AM-246	3.907E-02	3.894E-01	3.304E-01	3.894E-01	NOT IDENT.
CF-249	1.341E-02	1.101E-01	8.289E-02	1.101E-01	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	819.0036
63.29	750.9638
74.66	870.0999
74.81	870.2315
74.81	870.2315
77.11	906.0474
77.11	906.0474
86.48	1039.9030
87.30	875.1031
87.30	875.1031
92.58	511.6930
98.44	575.4254
103.76	540.6329
105.31	522.1560
129.07	423.0606
143.76	394.5908
198.00	392.5241
209.25	429.1986
228.18	377.2413
238.63	344.5072
242.00	296.6909
269.46	296.2753
270.25	275.2128
277.36	278.1387
295.22	300.7689
300.09	269.0552
312.17	268.0634
338.32	275.7084
351.93	212.2565
387.59	232.8020
409.46	231.4605
427.87	242.6272
463.00	233.5763
510.77	173.7383
583.19	173.8765
609.31	149.4719
661.66	147.7431
727.33	142.4059
763.13	150.5222
768.36	137.9037
785.37	145.0464
794.95	137.7670
806.17	120.9466
831.80	111.9385
860.56	167.9683
896.60	154.6481
911.20	162.6758
934.06	186.9465
964.77	166.5286
968.97	155.2062
1001.03	134.6021
1078.86	115.5994
1120.29	105.8919
1155.19	76.7227
1173.23	84.2959
1238.11	35.6721
1280.96	28.9295
1332.51	39.5244
1377.67	23.2217
1401.50	24.7350
1407.98	29.5209
1460.80	13.4395
1509.23	20.3049
1588.20	28.3598
1620.50	20.6301
1729.60	10.4692
1764.49	12.0201

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471364

Total Uranium Activity	1.2179E-01	ug/g
Total Uranium Counting Unc.	1.7271E-01	ug/g
Total Uranium Tpu	1.7271E-07	ug/g
Total Uranium Mda	1.6132E-01	ug/g

Radiochemistry Batch Checklist, Rev 6

Batch# 707062 Product: γ-S Date: 12/13/07

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 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. Instument 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: [illegible] 12/13/07

Secondary Review Performed By: [illegible] 12/13/07

SCAN
12/5 – 12/14

Gamma Spec Que Sheet

11/30/2007

Batch #:707062 Analyst: MJH1 First Client DueDate:12/14/2007 Internal Due Date: 12/05/2007

Gamma Spike Isotope: Mixed Gamma Spike Code: N/A Expiration Date: N/A Vol: N/A Nominal Concentration: N/A Co-60 8.555

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 12/3/08 Vol: 1.0 ml Nominal Concentration: Cs-137 6.105 Am-241 15.96

Initials: MR Prep Date: 11/30/07 Witness: N/A ✓

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
198530013-1	SB-CZ-SS-2085-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	123.69	13	
198530014-1	SB-CZ-SS-2086-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	150.92	21	
198530015-1	SB-CZ-SS-2087-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	148.26	1	
198530016-1	SB-CZ-SS-2088-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	135.64	2	
198530017-1	SB-CZ-SS-2089-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	145.00	11	
198530018-1	SB-CZ-SS-2090-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	173.42	5	
198530019-1	SB-CZ-SS-2091-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	168.67	6	
198530020-1	SB-CZ-SS-2092-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	152.39	7	
198530021-1	SB-CZ-SS-2093-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	190.81	1	
198530022-1	SB-CZ-SS-2094-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	132.20	2	
198530023-1	SB-CZ-SS-2095-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	113.04	5	
198530024-1	SB-CZ-SS-2096-BD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	117.95	6	
198530025-1	SB-CZ-SS-RA1-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	120.70	7	
198530026-1	SB-CZ-SS-RA2-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	105.27	11	
198530027-1	SB-CZ-SS-RA3-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	101.15	13	
198530028-1	SB-CZ-SS-RA4-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	113.12	21	
198530029-1	SB-CZ-SS-RA5	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	106.95	23	
198530030-1	SB-CZ-SS-RA6-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	116.01	22	
198530031-1	SB-CZ-SS-RA7-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	104.54	12	
198530032-1	SB-CZ-SS-RA8-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	113.20	20	
1201471369-1	MB for batch 707062	MB		.08 pCi/g	QC ACCOUNT	SOIL	11/30/07	190.00	3	
1201471370-1	SB-CZ-SS-2085-BD(198530013DUP	DUP		.08 pCi/g	QC ACCOUNT	SOIL	12-OCT-07 00:00:00	123.31	16	
1201471371-1	LCS for batch 707062	LCS		.08 pCi/g	QC ACCOUNT	SOIL	11/30/07	155.44	17	
							✓	✓	✓	

12/10/07

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: 12/13/07

12/13/07

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
707062	198530013	SAMPLE	10-DEC-07				
707062	198530014	SAMPLE	10-DEC-07				
707062	198530015	SAMPLE	10-DEC-07				
707062	198530016	SAMPLE	10-DEC-07				
707062	198530017	SAMPLE	10-DEC-07				
707062	198530018	SAMPLE	10-DEC-07				
707062	198530019	SAMPLE	10-DEC-07				
707062	198530020	SAMPLE	10-DEC-07				
707062	198530021	SAMPLE	11-DEC-07				
707062	198530022	SAMPLE	11-DEC-07				
707062	198530023	SAMPLE	11-DEC-07				
707062	198530024	SAMPLE	11-DEC-07				
707062	198530025	SAMPLE	11-DEC-07				
707062	198530026	SAMPLE	11-DEC-07				
707062	198530027	SAMPLE	11-DEC-07				
707062	198530028	SAMPLE	11-DEC-07				
707062	198530029	SAMPLE	11-DEC-07				
707062	198530030	SAMPLE	11-DEC-07				
707062	198530031	SAMPLE	11-DEC-07				
707062	198530032	SAMPLE	11-DEC-07				
707062	1201471369	MB	11-DEC-07				
707062	1201471370	DUP	11-DEC-07				
707062	1201471371	LCS	11-DEC-07	Antimony-125	-0.09527	0.3242	0.200
				Potassium-40	0.7382	1.451	1.00
				Uranium-235	-0.1193	0.5585	0.500

Gamma Review Report based on Result > MDA for Batch:707062

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
198530013	12-OCT-07 00:00	10-DEC-07 18:34	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.412	0.1898	pCi/g	0.1243	0.800	910.8	1	1.808	IDENTIFIED	6.13	☐	
Americium-243 INT	0.1846	0.02255	pCi/g	0.02306	Y	74.91	1	0.7902	IDENTIFIED	4.826	☑ UI	
Bismuth-212 ✓	1.193	0.2795	pCi/g	0.2541	0.500	727.1	1	1.311	IDENTIFIED	11.3	☐	
Bismuth-214 ✓	0.7091	0.08929	pCi/g	0.05987	0.200	609	1	1.475	IDENTIFIED	5.224	☐	
Curium-243 INT	0.09728	0.05278	pCi/g	0.059	Y	105.5	2	1.505	IDENTIFIED	27.32	☑ UI	
Europium-155 INT	0.1076	0.05835	pCi/g	0.06517	0.500	105.5	2	1.505	IDENTIFIED	27.32	☑ UI	
Lead-212 ✓	1.164	0.1009	pCi/g	0.0485	0.100	238.5	1	0.9893	IDENTIFIED	2.886	☐	
Lead-214 ✓	0.7206	0.07499	pCi/g	0.06492	0.100	351.8	1	1.294	IDENTIFIED	4.615	☐	
Neptunium-237 INT	0.6482	0.1111	pCi/g	0.1203	Y	87.3	1	1.232	IDENTIFIED	7.795	☑ UI	
Potassium-40 ✓	4.992	0.5894	pCi/g	0.3091	1.00	1460	1	2.359	IDENTIFIED	5.344	☐	
Radium-223 INT	0.4814	0.1303	pCi/g	0.139	Y	270.1	1	1.729	IDENTIFIED	13.51	☑ UI	
Thallium-208 ✓	0.383	0.04621	pCi/g	0.03235	0.080	583	1	1.533	IDENTIFIED	4.999	☐	
Thorium-234 ✓	1.39	0.3361	pCi/g	0.281	0.500	92.72	1	1.146	IDENTIFIED	11.64	☐	

*** = 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
198530014	12-OCT-07 00:00	10-DEC-07 18:35	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.158	0.1581	pCi/g	0.1092	0.800	911.2	1	1.867	IDENTIFIED	6.094	☐	
Americium-243 INT	0.1934	0.02329	pCi/g	0.02035	Y	74.95	1	1.716	IDENTIFIED	5.076	☑ UI	
Bismuth-212 ✓	0.7877	0.2165	pCi/g	0.219	0.500	727.2	1	1.927	IDENTIFIED	13.44	☐	
Bismuth-214 ✓	0.8767	0.09916	pCi/g	0.04825	0.200	609.2	1	1.669	IDENTIFIED	4.348	☐	
Cesium-137 ✓	0.03443	0.02167	pCi/g	0.0277	0.100	661.6	1	1.656	IDENTIFIED	31.85	☐	
Curium-243 INT	0.05573	0.03847	pCi/g	0.04971	Y	105.1	2	2.094	IDENTIFIED	34.98	☑ UI	
Europium-155 INT	0.06161	0.04253	pCi/g	0.05902	0.500	105.1	2	2.094	IDENTIFIED	34.98	☑ UI	
Gross Gamma	5.416	1.101	pCi/g	1.619	N		0				☐	
Lead-212 ✓	1.154	0.08277	pCi/g	0.03746	0.100	238.6	1	1.388	IDENTIFIED	2.002	☐	
Lead-214 ✓	0.8841	0.07667	pCi/g	0.04928	0.100	351.9	1	1.507	IDENTIFIED	3.585	☐	
Neptunium-236 INT	0.03041	0.02277	pCi/g	0.03006	Y	99.29	1	2.305	IDENTIFIED	38	☑ UI	
Neptunium-237 INT	0.6634	0.1006	pCi/g	0.1039	Y	87.31	1	1.748	IDENTIFIED	6.804	☑ UI	
Potassium-40 ✓	5.711	0.6052	pCi/g	0.2883	1.00	1461	1	2.148	IDENTIFIED	4.647	☐	
Radium-223 INT	0.3633	0.1216	pCi/g	0.1239	Y	269.9	1	2.415	IDENTIFIED	16.86	☑ UI	
Thallium-208 ✓	0.3395	0.04427	pCi/g	0.02753	0.080	583.1	1	1.732	IDENTIFIED	5.566	☐	
Thorium-234 ✓	1.353	0.2466	pCi/g	0.2415	0.500	93.1	1	1.895	IDENTIFIED	8.491	☐	

*** = 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
198530015	12-OCT-07 00:00	10-DEC-07 19:34	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.005	0.1539	pCi/g	0.09005	0.800	911.3	1	1.963	IDENTIFIED	6.142	☐	
Americium-243 INT	0.193	0.03379	pCi/g	0.03564	Y	74.62	1	1.627	IDENTIFIED	8.006	☑ UI	
Bismuth-212 ✓	0.6625	0.2561	pCi/g	0.1886	0.500	727.8	1	1.818	IDENTIFIED	19.29	☐	
Bismuth-214 ✓	0.8961	0.09254	pCi/g	0.04572	0.200	609.4	1	1.522	IDENTIFIED	3.8	☐	
Cesium-137 ✓	0.1458	0.03881	pCi/g	0.02441	0.100	661.8	1	1.691	IDENTIFIED	13.04	☐	
Curium-243 INT	0.07299	0.05286	pCi/g	0.06993	Y	104.9	2	2.481	IDENTIFIED	36.79	☑ UI	
Europium-155 INT	0.08069	0.05844	pCi/g	0.07338	0.500	104.9	2	2.481	IDENTIFIED	36.79	☑ UI	
Lead-212 ✓	0.9628	0.08	pCi/g	0.04224	0.100	238.7	1	1.42	IDENTIFIED	2.47	☐	
Lead-214 ✓	0.9361	0.08779	pCi/g	0.04856	0.100	352	1	1.464	IDENTIFIED	3.604	☐	
Neptunium-237 INT	0.4551	0.1023	pCi/g	0.1543	Y	87.25	1	1.24	IDENTIFIED	10.68	☑ UI	
Potassium-40 ✓	4.982	0.5168	pCi/g	0.2176	1.00	1461	1	2.096	IDENTIFIED	4.423	☐	

Protactinium-234m ~~NVP~~	**3.244**	2.891	pCi/g	**2.735**	Y	1000	1	1.196	IDENTIFIED	45.25	☑ UI	
Radium-223 INT	**0.3294**	0.1197	pCi/g	**0.1249**	Y	270.2	1	1.674	IDENTIFIED	18.22	☑ UI	
Thallium-208	**0.3154**	0.04135	pCi/g	**0.02378**	**0.080**	583.3	1	1.45	IDENTIFIED	5.655	☐	
Thorium-234	**1.009**	0.2862	pCi/g	**0.332**	**0.500**	92.82	1	1.418	IDENTIFIED	13.93	☐	
Uranium-235 NVP	**0.1744**	0.1006	pCi/g	**0.1466**	**0.500**	143.9	1	1.722	IDENTIFIED	29.26	☑ UI	

*** = 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
198530016	12-OCT-07 00:00	10-DEC-07 19:34	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	**1.369**	0.1676	pCi/g	**0.08543**	**0.800**	911	1	1.855	IDENTIFIED	4.889	☐	
Americium-243 INT	**0.2252**	0.03778	pCi/g	**0.03388**	Y	74.82	1	1.097	IDENTIFIED	7.491	☑ UI	
Bismuth-212	**0.918**	0.1941	pCi/g	**0.1793**	**0.500**	727.2	1	1.391	IDENTIFIED	10.27	☐	
Bismuth-214	**0.8374**	0.08456	pCi/g	**0.04339**	**0.200**	609.2	1	1.468	IDENTIFIED	4.178	☐	
Curium-243 INT	**0.1053**	0.05579	pCi/g	**0.06121**	Y	105.5	2	2.043	IDENTIFIED	26.8	☑ UI	
Europium-155 INT	**0.1165**	0.06168	pCi/g	**0.06903**	**0.500**	105.5	2	2.043	IDENTIFIED	26.8	☑ UI	
Lead-212	**1.242**	0.08883	pCi/g	**0.03744**	**0.100**	238.6	1	1.08	IDENTIFIED	1.943	☐	
Lead-214	**0.843**	0.07514	pCi/g	**0.04773**	**0.100**	351.9	1	1.24	IDENTIFIED	3.461	☐	
Neptunium-237 INT	**0.6863**	0.1248	pCi/g	**0.137**	Y	87.22	1	1.162	IDENTIFIED	8.213	☑ UI	
Potassium-40	**5.45**	0.5472	pCi/g	**0.1993**	**1.00**	1460	1	2.131	IDENTIFIED	3.923	☐	
Radium-223 INT	**0.2912**	0.1195	pCi/g	**0.1125**	Y	270.5	1	1.407	IDENTIFIED	20.67	☑ UI	
Thallium-208	**0.3787**	0.04239	pCi/g	**0.0219**	**0.080**	583.1	1	1.437	IDENTIFIED	4.876	☐	
Thorium-234	**1.605**	0.3397	pCi/g	**0.2917**	**0.500**	92.67	1	1.26	IDENTIFIED	10.02	☐	

*** = 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
198530017	12-OCT-07 00:00	10-DEC-07 19:35	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	**1.073**	0.1338	pCi/g	**0.07101**	**0.800**	911.3	1	1.383	IDENTIFIED	4.606	☐	
Americium-243 INT	**0.165**	0.02072	pCi/g	**0.0235**	Y	74.76	1	0.8809	IDENTIFIED	5.495	☑ UI	
Bismuth-212	**0.5553**	0.1528	pCi/g	**0.1443**	**0.500**	727.1	1	1.557	IDENTIFIED	13.45	☐	
Bismuth-214	**0.7342**	0.08152	pCi/g	**0.03646**	**0.200**	609.2	1	1.359	IDENTIFIED	4.418	☐	
Cesium-137	**0.04834**	0.01856	pCi/g	**0.0172**	**0.100**	661.6	1	1.082	IDENTIFIED	19.21	☐	
Lead-212	**1.026**	0.07064	pCi/g	**0.03003**	**0.100**	238.6	1	0.9509	IDENTIFIED	1.927	☐	
Lead-214	**0.883**	0.07204	pCi/g	**0.03416**	**0.100**	351.9	1	1.148	IDENTIFIED	3.118	☐	
Neptunium-236 INT	**0.03026**	0.02522	pCi/g	**0.02853**	Y	99.38	1	1.163	IDENTIFIED	42.38	☑ UI	
Neptunium-237 INT	**0.6017**	0.1062	pCi/g	**0.0954**	Y	87.15	1	1.283	IDENTIFIED	8.221	☑ UI	
Potassium-40	**6.444**	0.5957	pCi/g	**0.167**	**1.00**	1461	1	1.962	IDENTIFIED	3.15	☐	
Protactinium-234m	**3.062**	2.234	pCi/g	**2.016**	Y	1001	1	1.546	IDENTIFIED	37.01	☐	
Radium-223 INT	**0.2599**	0.1102	pCi/g	**0.0886**	Y	270.1	1	1.356	IDENTIFIED	21.41	☑ UI	
Thallium-208	**0.2801**	0.03348	pCi/g	**0.01786**	**0.080**	583.2	1	1.427	IDENTIFIED	5.052	☐	
Thorium-234	**1.264**	0.2461	pCi/g	**0.2105**	**0.500**	92.68	1	1.271	IDENTIFIED	9.292	☐	
Uranium-235 NVP	**0.1062**	0.08998	pCi/g	**0.1007**	**0.500**	143.6	1	1.751	IDENTIFIED	43.15	☑ UI	

*** = 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
198530018	12-OCT-07 00:00	10-DEC-07 19:52	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	**0.8921**	0.1355	pCi/g	**0.0822**	**0.800**	911.2	1	1.737	IDENTIFIED	6.232	☐	
Americium-243 INT	**0.1354**	0.01925	pCi/g	**0.02072**	Y	74.66	1	1.102	IDENTIFIED	6.006	☑ UI	
Bismuth-212	**0.559**	0.1836	pCi/g	**0.1881**	**0.500**	727.4	1	1.613	IDENTIFIED	16.2	☐	
Bismuth-214	**0.9073**	0.09075	pCi/g	**0.04481**	**0.200**	609.4	1	1.526	IDENTIFIED	3.459	☐	
Lead-212	**0.8713**	0.08273	pCi/g	**0.0389**	**0.100**	238.6	1	1.153	IDENTIFIED	2.392	☐	
Lead-214	**0.9824**	0.08375	pCi/g	**0.04848**	**0.100**	351.9	1	1.268	IDENTIFIED	3.333	☐	
Neptunium-237 INT	**0.4385**	0.08519	pCi/g	**0.1084**	Y	87.05	1	1.22	IDENTIFIED	8.895	☑ UI	
Potassium-40	**4.71**	0.5364	pCi/g	**0.2283**	**1.00**	1461	1	1.809	IDENTIFIED	4.24	☐	

Radium-223 INT	**0.2539**	0.1154	pCi/g	**0.1206**	**Y**	270.6	1	1.621	IDENTIFIED	22.93	☑ UI
Thallium-208 ✓	**0.3162**	0.03742	pCi/g	**0.02373**	**0.080**	583.3	1	1.421	IDENTIFIED	4.857	☐
Thorium-234 ✓	**1.114**	0.2166	pCi/g	**0.2525**	**0.500**	92.63	1	1.243	IDENTIFIED	8.853	☐

*** = 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
198530019	12-OCT-07 00:00	10-DEC-07 19:53	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.099**	0.1558	pCi/g	**0.09015**	**0.800**	910.8	1	1.793	IDENTIFIED	5.152	☐	
Americium-243 INT	**0.1348**	0.02633	pCi/g	**0.03301**	**Y**	74.42	1	0.9735	IDENTIFIED	9.07	☑ UI	
Bismuth-212 ✓	**0.6035**	0.1477	pCi/g	**0.1714**	**0.500**	726.9	1	1.306	IDENTIFIED	11.89	☐	
Bismuth-214 ✓	**0.8479**	0.09043	pCi/g	**0.0428**	**0.200**	608.9	1	1.344	IDENTIFIED	4.282	☐	
Cesium-137 NVP	**0.02709**	0.01734	pCi/g	**0.02439**	**0.100**	661.1	1	1.725	IDENTIFIED	32.49	☑ UI	
Lead-212 ✓	**1**	0.07487	pCi/g	**0.03908**	**0.100**	238.3	1	1.061	IDENTIFIED	2.201	☐	
Lead-214 ✓	**0.9839**	0.08665	pCi/g	**0.04379**	**0.100**	351.6	1	1.142	IDENTIFIED	3.227	☐	
Neptunium-237 INT	**0.5715**	0.1247	pCi/g	**0.1345**	**Y**	86.84	1	1.267	IDENTIFIED	10.23	☑ UI	
Potassium-40 ✓	**6.652**	0.6198	pCi/g	**0.2194**	**1.00**	1460	1	2.038	IDENTIFIED	3.515	☐	
Radium-223 INT	**0.3829**	0.1068	pCi/g	**0.1203**	**Y**	269.9	1	1.479	IDENTIFIED	13.88	☑ UI	
Thallium-208 ✓	**0.2825**	0.03441	pCi/g	**0.0246**	**0.080**	582.8	1	1.35	IDENTIFIED	5.239	☐	
Thorium-234 ✓	**1.135**	0.2896	pCi/g	**0.2898**	**0.500**	92.39	1	1.348	IDENTIFIED	12.34	☐	
Uranium-235 NVP	**0.1812**	0.1199	pCi/g	**0.1301**	**0.500**	143.8	1	1.292	IDENTIFIED	33.64	☑ UJ	

*** = 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
198530020	12-OCT-07 00:00	10-DEC-07 19:53	59.8	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.116**	0.1371	pCi/g	**0.07732**	**0.800**	911.6	1	1.668	IDENTIFIED	5.267	☐	
Americium-243 INT	**0.162**	0.02274	pCi/g	**0.02359**	**Y**	74.95	1	1.188	IDENTIFIED	6.3	☑ UI	
Bismuth-212 ✓	**0.5379**	0.194	pCi/g	**0.1649**	**0.500**	727.6	1	1.665	IDENTIFIED	18.03	☐	
Bismuth-214 ✓	**0.8593**	0.0812	pCi/g	**0.0423**	**0.200**	609.6	1	1.331	IDENTIFIED	3.366	☐	
Cesium-137 ✓	**0.03683**	0.01828	pCi/g	**0.02292**	**0.100**	662	1	1.381	IDENTIFIED	25.06	☐	
Lead-212 ✓	**1.033**	0.07456	pCi/g	**0.0344**	**0.100**	238.8	1	1.111	IDENTIFIED	2.151	☐	
Lead-214 ✓	**0.8988**	0.07686	pCi/g	**0.03838**	**0.100**	352.2	1	1.258	IDENTIFIED	3.342	☐	
Neptunium-236 INT	**0.04993**	0.02704	pCi/g	**0.03174**	**Y**	99.06	1	1.99	IDENTIFIED	27.39	☑ UI	
Neptunium-237 INT	**0.5984**	0.09503	pCi/g	**0.1111**	**Y**	87.37	1	1.249	IDENTIFIED	7.09	☑ UI	
Potassium-40 ✓	**5.376**	0.509	pCi/g	**0.189**	**1.00**	1461	1	2.119	IDENTIFIED	3.992	☐	
Radium-223 INT	**0.4289**	0.1037	pCi/g	**0.1047**	**Y**	270.5	1	1.614	IDENTIFIED	11.95	☑ UI	
Thallium-208 ✓	**0.3419**	0.03762	pCi/g	**0.02093**	**0.080**	583.4	1	1.473	IDENTIFIED	4.507	☐	
Thorium-234 ✓	**1.298**	0.2535	pCi/g	**0.2491**	**0.500**	92.91	1	1.345	IDENTIFIED	9.208	☐	

*** = 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
198530021	12-OCT-07 00:00	11-DEC-07 05:33	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.7688**	0.1233	pCi/g	**0.07915**	**0.800**	911.3	1	1.543	IDENTIFIED	6.606	☐	
Americium-243 INT	**0.09687**	0.02828	pCi/g	**0.03391**	**Y**	74.62	1	1.627	IDENTIFIED	14.36	☑ UI	
Bismuth-212 ✓	**0.5015**	0.1698	pCi/g	**0.1733**	**0.500**	727.3	1	1.373	IDENTIFIED	16.78	☐	
Bismuth-214 ✓	**0.664**	0.07271	pCi/g	**0.04709**	**0.200**	609.5	1	1.598	IDENTIFIED	4.229	☐	
Lead-212 ✓	**0.7233**	0.06353	pCi/g	**0.03985**	**0.100**	238.7	1	1.369	IDENTIFIED	2.865	☐	
Lead-214 ✓	**0.7916**	0.07718	pCi/g	**0.04567**	**0.100**	352	1	1.572	IDENTIFIED	3.852	☐	
Neptunium-237 INT	**0.4056**	0.1189	pCi/g	**0.147**	**Y**	87.32	1	1.647	IDENTIFIED	14.35	☑ UI	
Potassium-40 ✓	**3.212**	0.3868	pCi/g	**0.2016**	**1.00**	1461	1	2.018	IDENTIFIED	5.413	☐	
Protactinium-234m ✓	**3.602**	1.94	pCi/g	**2.53**	**Y**	1001	1	2.01	IDENTIFIED	27.11	☐	
Radium-223 INT	**0.2418**	0.1232	pCi/g	**0.1279**	**Y**	269.8	1	1.962	IDENTIFIED	25.77	☑ UI	
Thallium-208 ✓	**0.2457**	0.03383	pCi/g	**0.02227**	**0.080**	583.3	1	1.635	IDENTIFIED	6.05	☐	
Thorium-234 ✓	**0.9624**	0.2589	pCi/g	**0.3197**	**0.500**	92.81	1	1.555	IDENTIFIED	13.15	☐	

*** = 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
198530022	12-OCT-07 00:00	11-DEC-07 05:34	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.056	0.204	pCi/g	0.1084	0.800	911.2	1	1.793	IDENTIFIED	9.059		
Americium-243 INT	0.1628	0.04412	pCi/g	0.04568	Y	74.69	1	1.097	IDENTIFIED	13.19	✓ uI	
Bismuth-212 ✓	0.7222	0.2345	pCi/g	0.2276	0.500	727.1	1	1.757	IDENTIFIED	16.23		
Bismuth-214 ✓	0.7244	0.08736	pCi/g	0.05964	0.200	609.2	1	1.428	IDENTIFIED	5.364		
Cesium-137 ✓	0.07454	0.03103	pCi/g	0.03141	0.100	661.6	1	1.731	IDENTIFIED	21.01		
Lead-212 ✓	0.9794	0.08369	pCi/g	0.04678	0.100	238.6	1	1.121	IDENTIFIED	3.076		
Lead-214 ✓	0.7485	0.08151	pCi/g	0.05537	0.100	351.9	1	1.255	IDENTIFIED	4.708		
Neptunium-237 INT	0.5805	0.1643	pCi/g	0.1866	Y	87.19	1	1.367	IDENTIFIED	13.78	✓ uI	
Potassium-40 ✓	4.497	0.6242	pCi/g	0.2578	1.00	1460	1	2.112	IDENTIFIED	6.269		
Radium-223 INT	0.3146	0.1355	pCi/g	0.1528	Y	270.3	1	1.274	IDENTIFIED	21.72	✓ uI	
Thallium-208 ✓	0.2697	0.04462	pCi/g	0.02896	0.080	583.1	1	1.518	IDENTIFIED	7.9		
Thorium-234 ✓	1.421	0.4143	pCi/g	0.3973	0.500	92.63	1	1.275	IDENTIFIED	14.32		

*** = 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
198530023	12-OCT-07 00:00	11-DEC-07 05:35	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.372	0.2597	pCi/g	0.1825	0.800	911.6	1	1.771	IDENTIFIED	8.495		
Americium-243 INT	0.2298	0.03569	pCi/g	0.03591	Y	74.63	1	1.101	IDENTIFIED	6.798	✓ uI	
Bismuth-212 ✓	1.011	0.3695	pCi/g	0.356	0.500	727.7	1	1.779	IDENTIFIED	18.14		
Bismuth-214 ✓	1.029	0.143	pCi/g	0.08548	0.200	609.3	1	1.485	IDENTIFIED	6.021		
Cesium-137 ✓	0.0598	0.04028	pCi/g	0.05229	0.100	661.8	1	1.566	IDENTIFIED	34.13		
Curium-243 INT	0.1387	0.08756	pCi/g	0.09866	Y	105	2	1.451	IDENTIFIED	31.88	✓ uI	
Europium-155 INT	0.1533	0.09682	pCi/g	0.1125	0.500	105	2	1.451	IDENTIFIED	31.88	✓ uI	
Gross Gamma	6.779	1.532	pCi/g	2.939	N		0					
Lead-212 ✓	1.359	0.1355	pCi/g	0.0652	0.100	238.6	1	1.188	IDENTIFIED	2.856		
Lead-214 ✓	1.03	0.1232	pCi/g	0.0811	0.100	351.9	1	1.259	IDENTIFIED	5.424		
Neptunium-237 INT	0.7273	0.1577	pCi/g	0.1814	Y	87.12	1	1.157	IDENTIFIED	10.16	✓ uI	
Potassium-40 ✓	7.884	0.9742	pCi/g	0.489	1.00	1461	1	2.142	IDENTIFIED	4.894		
Radium-223 INT	0.5754	0.2123	pCi/g	0.2075	Y	270.2	1	1.453	IDENTIFIED	18.51	✓ uI	
Thallium-208 ✓	0.3919	0.05457	pCi/g	0.04449	0.080	583.2	1	1.505	IDENTIFIED	6.133		
Thorium-234 ✓	1.898	0.422	pCi/g	0.423	0.500	92.63	1	1.397	IDENTIFIED	10.42		

*** = 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
198530024	12-OCT-07 00:00	11-DEC-07 05:36	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.443	0.2359	pCi/g	0.1282	0.800	910.8	1	1.564	IDENTIFIED	6.621		
Americium-243 INT	0.2128	0.04044	pCi/g	0.0451	Y	74.44	1	1.075	IDENTIFIED	8.771	✓ uI	
Bismuth-212 ✓	0.9877	0.278	pCi/g	0.25	0.500	726.6	1	1.968	IDENTIFIED	13.85		
Bismuth-214 ✓	0.836	0.1105	pCi/g	0.0645	0.200	609	1	1.483	IDENTIFIED	5.85		
Lead-212 ✓	1.336	0.1067	pCi/g	0.05317	0.100	238.3	1	1.091	IDENTIFIED	2.614		
Lead-214 ✓	1.03	0.1018	pCi/g	0.06319	0.100	351.6	1	1.181	IDENTIFIED	3.953		
Neptunium-237 INT	0.7913	0.1816	pCi/g	0.196	Y	86.88	1	1.302	IDENTIFIED	10.85	✓ uI	
Potassium-40 ✓	7.657	0.8347	pCi/g	0.3242	1.00	1460	1	2.089	IDENTIFIED	4.549		
Protactinium-234m ↑PW	3.953	3.606	pCi/g	3.322	Y	999.4	1	5.041	IDENTIFIED	46.32	✓ UI	Data rejected due to high peak-width.
Radium-223 INT	0.3889	0.1785	pCi/g	0.1779	Y	269.7	1	1.047	IDENTIFIED	23.2	✓ uI	
Thallium-208 ✓	0.3836	0.05571	pCi/g	0.03321	0.080	583	1	1.527	IDENTIFIED	6.612		
Thorium-234 ✓	1.768	0.4592	pCi/g	0.4228	0.500	92.39	1	1.429	IDENTIFIED	12.59		

*** = 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
198530025	12-OCT-07 00:00	11-DEC-07 05:37	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.476**	0.1892	pCi/g	**0.1133**	**0.800**	911.5	1	1.717	IDENTIFIED	5.589	☐	
Americium-243 INT	**0.3003**	0.03458	pCi/g	**0.03439**	**Y**	74.93	1	1.067	IDENTIFIED	4.79	☑ UI	
Bismuth-212 ✓	**1.02**	0.2251	pCi/g	**0.2289**	**0.500**	727.6	1	1.429	IDENTIFIED	10.66	☐	
Bismuth-214 ✓	**1.164**	0.1155	pCi/g	**0.05651**	**0.200**	609.5	1	1.525	IDENTIFIED	3.702	☐	
Lead-212 ✓	**1.452**	0.1051	pCi/g	**0.04586**	**0.100**	238.8	1	1.079	IDENTIFIED	2.171	☐	
Lead-214 ✓	**1.179**	0.1084	pCi/g	**0.05933**	**0.100**	352.1	1	1.219	IDENTIFIED	3.757	☐	
Neptunium-236 INT	**0.0573**	0.0394	pCi/g	**0.04344**	**Y**	99.43	1	1.092	IDENTIFIED	34.89	☑ UI	
Neptunium-237 INT	**0.8642**	0.1448	pCi/g	**0.155**	**Y**	87.38	1	1.18	IDENTIFIED	7.592	☑ UI	
Potassium-40 ✓	**7.145**	0.7099	pCi/g	**0.2735**	**1.00**	1461	1	1.908	IDENTIFIED	4.277	☐	
Radium-223 INT	**0.5372**	0.1592	pCi/g	**0.1469**	**Y**	270.5	1	1.132	IDENTIFIED	14.8	☑ UI	
Thallium-208 ✓	**0.4542**	0.05127	pCi/g	**0.03064**	**0.080**	583.4	1	1.45	IDENTIFIED	4.686	☐	
Thorium-234 ✓	**1.844**	0.3484	pCi/g	**0.3479**	**0.500**	92.89	1	1.23	IDENTIFIED	8.854	☐	

*** = 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
198530026	12-OCT-07 00:00	11-DEC-07 05:38	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.707**	0.2126	pCi/g	**0.1115**	**0.800**	911.3	1	1.6	IDENTIFIED	4.599	☐	
Americium-243 INT	**0.25**	0.03427	pCi/g	**0.03789**	**Y**	74.79	1	0.8157	IDENTIFIED	6.169	☑ UI	
Bismuth-212 ✓	**0.9514**	0.2134	pCi/g	**0.2261**	**0.500**	727.3	1	1.536	IDENTIFIED	10.72	☐	
Bismuth-214 ✓	**1.169**	0.1196	pCi/g	**0.05882**	**0.200**	609.3	1	1.325	IDENTIFIED	3.828	☐	
Cesium-137 ✓	**0.05087**	0.02556	pCi/g	**0.02854**	**0.100**	661.6	1	0.9587	IDENTIFIED	25.36	☐	
Curium-243 INT	**0.08214**	0.06141	pCi/g	**0.06543**	**Y**	104.9	2	1.72	IDENTIFIED	38.01	☑ UI	
Europium-155 INT	**0.09082**	0.0679	pCi/g	**0.07591**	**0.500**	104.9	2	1.72	IDENTIFIED	38.01	☑ UI	
Lead-212 ✓	**1.521**	0.1077	pCi/g	**0.04364**	**0.100**	238.6	1	0.9697	IDENTIFIED	2.102	☐	
Lead-214 ✓	**1.309**	0.1009	pCi/g	**0.05414**	**0.100**	351.9	1	1.075	IDENTIFIED	2.807	☐	
Neptunium-237 INT	**0.9821**	0.1599	pCi/g	**0.1486**	**Y**	87.15	1	1.217	IDENTIFIED	7.448	☑ UI	
Potassium-40 ✓	**6.684**	0.7394	pCi/g	**0.2758**	**1.00**	1461	1	1.722	IDENTIFIED	4.418	☐	
Radium-223 INT	**0.5112**	0.1712	pCi/g	**0.1371**	**Y**	270.2	1	1.133	IDENTIFIED	16.82	☑ UI	
Thallium-208 ✓	**0.4067**	0.05438	pCi/g	**0.02908**	**0.080**	583.2	1	1.281	IDENTIFIED	5.905	☐	
Thorium-234 ✓	**1.901**	0.3637	pCi/g	**0.3282**	**0.500**	92.68	1	1.247	IDENTIFIED	9.107	☐	

*** = 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
198530027	12-OCT-07 00:00	11-DEC-07 05:39	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.348**	0.2666	pCi/g	**0.1712**	**0.800**	910.7	1	1.922	IDENTIFIED	9.614	☐	
Americium-243 INT	**0.2376**	0.03075	pCi/g	**0.03375**	**Y**	74.92	1	0.8606	IDENTIFIED	5.294	☑ UI	
Bismuth-212 ✓	**0.7785**	0.3415	pCi/g	**0.3504**	**0.500**	726.8	1	2.145	IDENTIFIED	22.04	☐	
Bismuth-214 ✓	**1.087**	0.1439	pCi/g	**0.0892**	**0.200**	609	1	1.478	IDENTIFIED	5.623	☐	
Cesium-137 ✓	**0.1696**	0.04417	pCi/g	**0.0445**	**0.100**	661.3	1	1.559	IDENTIFIED	12.66	☐	
Lead-212 ✓	**1.179**	0.1044	pCi/g	**0.06003**	**0.100**	238.6	1	1.01	IDENTIFIED	3.033	☐	
Lead-214 ✓	**1.115**	0.1163	pCi/g	**0.09324**	**0.100**	351.8	1	1.193	IDENTIFIED	4.628	☐	
Neptunium-237 INT	**0.8311**	0.154	pCi/g	**0.1737**	**Y**	87.26	1	1.164	IDENTIFIED	8.581	☑ UI	
Potassium-40 ✓	**4.585**	0.6885	pCi/g	**0.3685**	**1.00**	1460	1	2.233	IDENTIFIED	7.139	☐	
Radium-223 INT	**0.4923**	0.2003	pCi/g	**0.186**	**Y**	270	1	1.347	IDENTIFIED	20.56	☑ UI	
Thallium-208 ✓	**0.325**	0.06556	pCi/g	**0.04513**	**0.080**	582.9	1	1.368	IDENTIFIED	9.644	☐	
Thorium-234 ✓	**1.862**	0.4626	pCi/g	**0.4059**	**0.500**	92.71	1	1.105	IDENTIFIED	12	☐	

*** = 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
198530028	12-OCT-07 00:00	11-DEC-07 05:39	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.9269**	0.1759	pCi/g	**0.1376**	**0.800**	911.1	1	1.928	IDENTIFIED	9.076	☐	
Americium-243 INT	**0.1955**	0.02673	pCi/g	**0.02455**	**Y**	74.95	1	1.535	IDENTIFIED	6.055	☑ UI	
Bismuth-212 ✓	**0.5909**	0.2815	pCi/g	**0.2588**	**0.500**	727.2	1	1.254	IDENTIFIED	23.97	☐	

Bismuth-214 ✓	**0.8705**	0.115	pCi/g	**0.07143**	**0.200**	609.2	1	1.579	IDENTIFIED	5.57	☐
Lead-212 ✓	**0.8583**	0.07771	pCi/g	**0.04851**	**0.100**	238.6	1	1.455	IDENTIFIED	3.458	☐
Lead-214 ✓	**0.928**	0.1046	pCi/g	**0.06607**	**0.100**	351.8	1	1.472	IDENTIFIED	5.131	☐
Neptunium-236 INT	**0.04672**	0.03518	pCi/g	**0.03763**	**Y**	99.29	1	0.6019	IDENTIFIED	38.22	☑ UI
Neptunium-237 INT	**0.4787**	0.1045	pCi/g	**0.1264**	**Y**	87.28	1	1.32	IDENTIFIED	10.51	☑ UI
Potassium-40 ✓	**2.15**	0.5164	pCi/g	**0.3173**	**1.00**	1461	1	1.44	IDENTIFIED	11.94	☐
Radium-223 INT	**0.3174**	0.1639	pCi/g	**0.1546**	**Y**	269.7	1	1.127	IDENTIFIED	26.21	☑ UI
Thallium-208 ✓	**0.2886**	0.05316	pCi/g	**0.03384**	**0.080**	583.1	1	1.51	IDENTIFIED	8.661	☐
Thorium-234 ✓	**1.377**	0.2994	pCi/g	**0.2942**	**0.500**	92.99	1	1.723	IDENTIFIED	10.42	☐

*** = 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
198530029	12-OCT-07 00:00	11-DEC-07 05:40	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.928**	0.1998	pCi/g	**0.121**	**0.800**	911	1	1.616	IDENTIFIED	10.23	☐	
Americium-243 INT	**0.2137**	0.0373	pCi/g	**0.0409**	**Y**	74.93	1	0.9238	IDENTIFIED	8.172	☑ UI	
Bismuth-214 ✓	**0.8027**	0.09989	pCi/g	**0.06607**	**0.200**	609.2	1	1.363	IDENTIFIED	5.654	☐	
Cesium-137 ✓	**0.03872**	0.02917	pCi/g	**0.03319**	**0.100**	661.4	1	1.726	IDENTIFIED	38.32	☐	
Lead-212 ✓	**0.8696**	0.07404	pCi/g	**0.04881**	**0.100**	238.6	1	1.025	IDENTIFIED	3.305	☐	
Lead-214 ✓	**0.9043**	0.09707	pCi/g	**0.06266**	**0.100**	351.9	1	1.178	IDENTIFIED	4.767	☐	
Neptunium-237 INT	**0.5797**	0.1449	pCi/g	**0.1791**	**Y**	87.15	1	1.015	IDENTIFIED	12.2	☑ UI	
Neptunium-239 N VP	**0.1886**	0.1465	pCi/g	**0.1832**	**2.00**	229.8	1	1.628	IDENTIFIED	39.53	☑ UI	
Potassium-40 ✓	**2.81**	0.4847	pCi/g	**0.2939**	**1.00**	1460	1	2.345	IDENTIFIED	8.047	☐	
Radium-223 INT	**0.3826**	0.2109	pCi/g	**0.1581**	**Y**	270.3	1	1.791	IDENTIFIED	27.97	☑ UI	
Thallium-208 ✓	**0.2331**	0.04654	pCi/g	**0.03397**	**0.080**	583.1	1	1.198	IDENTIFIED	9.78	☐	
Thorium-234 ✓	**1.113**	0.3783	pCi/g	**0.342**	**0.500**	92.81	1	1.247	IDENTIFIED	16.96	☐	

*** = 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
198530030	12-OCT-07 00:00	11-DEC-07 05:50	60.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.9876**	0.1578	pCi/g	**0.09034**	**0.800**	910.7	1	2.093	IDENTIFIED	6.47	☐	
Americium-243 INT	**0.1985**	0.03188	pCi/g	**0.03471**	**Y**	74.63	1	1.129	IDENTIFIED	7.189	☑ UI	
Bismuth-212 ✓	**0.3078**	0.2125	pCi/g	**0.1789**	**0.500**	726.6	1	1.676	IDENTIFIED	34.92	☐	
Bismuth-214 ✓	**0.8831**	0.1009	pCi/g	**0.04632**	**0.200**	608.9	1	1.697	IDENTIFIED	4.203	☐	
Cesium-137 ✓	**0.04175**	0.02187	pCi/g	**0.02402**	**0.100**	661.4	1	2.098	IDENTIFIED	26.36	☐	
Lead-212 ✓	**0.9726**	0.07432	pCi/g	**0.03866**	**0.100**	238.4	1	1.288	IDENTIFIED	2.501	☐	
Lead-214 ✓	**0.9982**	0.08381	pCi/g	**0.04693**	**0.100**	351.6	1	1.444	IDENTIFIED	3.178	☐	
Neptunium-237 INT	**0.6453**	0.124	pCi/g	**0.1487**	**Y**	86.94	1	1.166	IDENTIFIED	8.787	☑ UI	
Potassium-40 ✓	**3.491**	0.3991	pCi/g	**0.2386**	**1.00**	1460	1	2.485	IDENTIFIED	5.04	☐	
Protactinium-234m ✓	**4.335**	3.334	pCi/g	**2.411**	**Y**	1001	1	1.571	IDENTIFIED	38.98	☐	
Radium-223 INT	**0.3452**	0.1212	pCi/g	**0.1265**	**Y**	269.8	1	1.934	IDENTIFIED	17.66	☑ UI	
Thallium-208 ✓	**0.2673**	0.03793	pCi/g	**0.02357**	**0.080**	582.8	1	1.585	IDENTIFIED	6.119	☐	
Thorium-234 ✓	**1.24**	0.3294	pCi/g	**0.3263**	**0.500**	92.47	1	1.269	IDENTIFIED	12.9	☐	

*** = 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
198530031	12-OCT-07 00:00	11-DEC-07 06:58	60.3	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.975**	0.182	pCi/g	**0.11**	**0.800**	910.7	1	1.617	IDENTIFIED	7.975	☐	
Americium-243 INT	**0.23**	0.0404	pCi/g	**0.04791**	**Y**	74.84	1	1.069	IDENTIFIED	8.198	☑ UI	
Bismuth-212 ✓	**0.4082**	0.2242	pCi/g	**0.2651**	**0.500**	727	1	1.122	IDENTIFIED	27.63	☐	
Bismuth-214 ✓	**0.9933**	0.1286	pCi/g	**0.06558**	**0.200**	608.9	1	1.365	IDENTIFIED	5.186	☐	
Cesium-137 ✓	**0.04352**	0.03031	pCi/g	**0.03072**	**0.100**	661.1	1	1.999	IDENTIFIED	35.26	☐	
Lead-212 ✓	**0.9796**	0.08725	pCi/g	**0.05383**	**0.100**	238.5	1	1.193	IDENTIFIED	3.345	☐	
Lead-214 ✓	**1.018**	0.1195	pCi/g	**0.0697**	**0.100**	351.7	1	1.279	IDENTIFIED	5.218	☐	

Neptunium-236 LA	**0.0601**	0.03759	pCi/g	**0.05806**	Y	143.8	1	2.223	NOT_IDENTI	273.4	☑ UI	Data rejected due to low abundance.
Neptunium-237 INT	**0.7888**	0.1892	pCi/g	**0.1807**	Y	87.22	1	1.517	IDENTIFIED	11.57	☑ UI	
Potassium-40 ✓	**2.855**	0.5452	pCi/g	**0.3029**	**1.00**	1460	1	2.128	IDENTIFIED	9.253	☐	
Protactinium-234m NVP	**5.576**	4.157	pCi/g	**3.492**	Y	1002	1	0.5969	IDENTIFIED	37.75	☑ UI	
Radium-223 INT	**0.3153**	0.1853	pCi/g	**0.1722**	Y	270.4	1	1.623	IDENTIFIED	29.83	☑ UI	
Thallium-208 ✓	**0.2546**	0.04572	pCi/g	**0.03448**	**0.080**	583	1	1.427	IDENTIFIED	8.277	☐	
Thorium-234 ✓	**1.361**	0.4745	pCi/g	**0.3913**	**0.500**	92.71	1	1.484	IDENTIFIED	17.37	☐	

*** = 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
198530032	12-OCT-07 00:00	11-DEC-07 06:58	60.3	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.016**	0.1552	pCi/g	**0.09**	**0.800**	911.6	1	1.617	IDENTIFIED	6.226	☐	
Americium-243 INT	**0.2154**	0.03748	pCi/g	**0.03311**	Y	74.98	1	1.112	IDENTIFIED	7.02	☑ UI	
Bismuth-212 ✓	**0.5298**	0.1986	pCi/g	**0.2005**	**0.500**	727.8	1	1.191	IDENTIFIED	18.75	☐	
Bismuth-214 ✓	**0.719**	0.09014	pCi/g	**0.05361**	**0.200**	609.6	1	1.403	IDENTIFIED	5.51	☐	
Lead-212 ✓	**0.961**	0.07661	pCi/g	**0.04333**	**0.100**	238.6	1	1.166	IDENTIFIED	2.838	☐	
Lead-214 ✓	**0.9393**	0.09744	pCi/g	**0.04851**	**0.100**	352	1	1.346	IDENTIFIED	4.508	☐	
Neptunium-236 INT	**0.05967**	0.03944	pCi/g	**0.04201**	Y	99.3	1	2.174	IDENTIFIED	33.39	☑ UI	
Neptunium-237 INT	**0.5327**	0.1338	pCi/g	**0.15**	Y	87.34	1	1.208	IDENTIFIED	11.38	☑ UI	
Potassium-40 ✓	**2.415**	0.4109	pCi/g	**0.2571**	**1.00**	1461	1	2.023	IDENTIFIED	7.594	☐	
Radium-223 INT	**0.2305**	0.1485	pCi/g	**0.138**	Y	270.1	1	1.21	IDENTIFIED	32.72	☑ UI	
Thallium-208 ✓	**0.2814**	0.04254	pCi/g	**0.02616**	**0.080**	583.2	1	1.376	IDENTIFIED	7.035	☐	
Thorium-234 ✓	**1.302**	0.3542	pCi/g	**0.3315**	**0.500**	92.8	1	1.345	IDENTIFIED	12.8	☐	

*** = 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
1201471369		11-DEC-07 07:15	0	MB	LOAD	1		GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201471370	12-OCT-07 00:00	11-DEC-07 08:51	60.4	DUP	LOAD	1		SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.202**	0.2062	pCi/g	**0.11**	**0.800**	911.1	1	1.509	IDENTIFIED	7.701	☐	
Americium-243 INT	**0.2341**	0.03769	pCi/g	**0.04277**	Y	74.85	1	1.184	IDENTIFIED	7.514	☑ UI	
Bismuth-212 ✓	**0.7017**	0.255	pCi/g	**0.2613**	**0.500**	727	1	1.638	IDENTIFIED	18.04	☐	
Bismuth-214 ✓	**0.7578**	0.106	pCi/g	**0.06338**	**0.200**	609.3	1	1.469	IDENTIFIED	6.008	☐	
Lead-212 ✓	**1.277**	0.09595	pCi/g	**0.05198**	**0.100**	238.7	1	1.175	IDENTIFIED	2.617	☐	
Lead-214 ✓	**0.8205**	0.0975	pCi/g	**0.06151**	**0.100**	352	1	1.401	IDENTIFIED	5.472	☐	
Neptunium-237 INT	**0.7312**	0.1569	pCi/g	**0.1747**	Y	87.27	1	1.349	IDENTIFIED	10.31	☑ UI	
Potassium-40 ✓	**4.335**	0.659	pCi/g	**0.2726**	**1.00**	1460	1	2.147	IDENTIFIED	7.137	☐	
Protactinium-234m ↑UNC	**4.038**	4.275	pCi/g	**3.717**	Y	1001	1	2.419	IDENTIFIED	53.88	☑ UI	
Radium-223 INT	**0.4763**	0.1625	pCi/g	**0.1591**	Y	270.1	1	1.687	IDENTIFIED	17.18	☑ UI	
Thallium-208 ✓	**0.3512**	0.05117	pCi/g	**0.03129**	**0.080**	583.1	1	1.284	IDENTIFIED	6.466	☐	
Thorium-234 ✓	**1.504**	0.3914	pCi/g	**0.3839**	**0.500**	92.81	1	1.497	IDENTIFIED	12.78	☐	
Uranium-235 NVP	**0.228**	0.1527	pCi/g	**0.1794**	**0.500**	144.2	1	2.762	IDENTIFIED	34.03	☑ UI	

*** = 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
1201471371		11-DEC-07 08:52	0	LCS	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	**1.31**	0.7152	pCi/g	**0.6862**	**0.800**	911.6	1	1.21	IDENTIFIED	27.65	☐	
Americium-241	**12.92**	0.8763	pCi/g	**0.2947**	**0.200**	59.55	1	0.7758	IDENTIFIED	1.366	☐	
Bismuth-212	**1.405**	1.197	pCi/g	**1.187**	**0.500**	728.4	1	4.983	IDENTIFIED	43.34	☐	
Bismuth-214	**0.6082**	0.2362	pCi/g	**0.3779**	**0.200**	609.3	1	1.176	FAIL_ABUND	19.49	☐	
Cesium-137	**5.712**	0.5123	pCi/g	**0.1497**	**0.100**	661.6	1	1.372	IDENTIFIED	2.713	☐	
Cobalt-60	**8.38**	0.6346	pCi/g	**0.1457**	**0.100**	1173	1	1.725	IDENTIFIED	2.516	☐	

Gross Gamma	**40.75**	5.947	pCi/g	**7.198**	**N**		0				☐
Lead-212	**0.7911**	0.2094	pCi/g	**0.1975**	**0.100**	238.6	1	0.9971	IDENTIFIED	12.9	☐
Lead-214	**0.6745**	0.2649	pCi/g	**0.24**	**0.100**	351.8	1	0.9739	IDENTIFIED	19.77	☐
Neptunium-237	**0.6599**	0.5076	pCi/g	**0.6276**	**Y**	86.09	1	1.212	IDENTIFIED	39.1	☐
Polonium-209	**266.5**	52.29	pCi/g	**38.39**	**Y**	897.9	1	1.548	IDENTIFIED	9.436	☐
Thallium-208	**0.2737**	0.1155	pCi/g	**0.1318**	**0.080**	583.1	1	1.563	IDENTIFIED	21.25	☐
Thorium-234	**1.743**	1.128	pCi/g	**1.065**	**0.500**	92.85	1	1.217	IDENTIFIED	32.82	☐

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

GEL QUALS

Batch ID: 707062

Report run on: December 13, 2007 11:32 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530013-1 10-DEC-2007 18:34	Americium-243	UI	UI	UI	Data rejected due to interference.		.1846			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.09728			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.1076		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6482			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4814			
198530014-1 10-DEC-2007 18:35	Americium-243	UI	UI	UI	Data rejected due to interference.		.1934			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.05573			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.06161		.5	.5
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.03041			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6634			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3633			
198530015-1 10-DEC-2007 19:34	Americium-243	UI	UI	UI	Data rejected due to interference.		.193			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.07299			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.08069		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.4551			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3294			
	Uranium-235	UI	UI	UI	Data rejected due to no valid peak.		.1744		.5	.5
198530016-1 10-DEC-2007 19:34	Americium-243	UI	UI	UI	Data rejected due to interference.		.2252			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.1053			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.1165		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6863			

GEL QUALS

Batch ID: 707062

Report run on: December 13, 2007 11:32 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530016-1 10-DEC-2007 19:34	Radium-223	UI	UI	UI	Data rejected due to interference.		.2912			
198530017-1 10-DEC-2007 19:35	Americium-243	UI	UI	UI	Data rejected due to interference.		.165			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.03026			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6017			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2599			
	Uranium-235	UI	UI	UI	Data rejected due to no valid peak.		.1062		.5	.5
198530018-1 10-DEC-2007 19:52	Americium-243	UI	UI	UI	Data rejected due to interference.		.1354			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.4385			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2539			
198530019-1 10-DEC-2007 19:53	Americium-243	UI	UI	UI	Data rejected due to interference.		.1348			
	Cesium-137	UI	UI	UI	Data rejected due to no valid peak.		.02709		.1	.1
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5715			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3829			
	Uranium 235				Data rejected due to no valid peak		0.1812			
198530020-1 10-DEC-2007 19:53	Americium-243	UI	UI	UI	Data rejected due to interference.		.162			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.04993			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5984			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4289			
198530021-1 11-DEC-2007 05:33	Americium-243	UI	UI	UI	Data rejected due to interference.		.09687			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.4056			

GEL QUALS

Batch ID: 707062

Report run on: December 13, 2007 11:32 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530021-1 11-DEC-2007 05:33	Radium-223	UI	UI	UI	Data rejected due to interference.		.2418			
198530022-1 11-DEC-2007 05:34	Americium-243	UI	UI	UI	Data rejected due to interference.		.1628			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5805			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3146			
198530023-1 11-DEC-2007 05:35	Americium-243	UI	UI	UI	Data rejected due to interference.		.2298			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.1387			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.1533		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7273			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.5754			
198530024-1 11-DEC-2007 05:36	Americium-243	UI	UI	UI	Data rejected due to interference.		.2128			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7913			
	Protactinium-234m	UI	UI	UI	Data rejected due to high peak-width.		3.953			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3889			
198530025-1 11-DEC-2007 05:37	Americium-243	UI	UI	UI	Data rejected due to interference.		.3003			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.0573			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.8642			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.5372			
198530026-1 11-DEC-2007 05:38	Americium-243	UI	UI	UI	Data rejected due to interference.		.25			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.08214			

GEL QUALS

Batch ID: 707062

Report run on: December 13, 2007 11:32 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530026-1 11-DEC-2007 05:38	Europium-155	UI	UI	UI	Data rejected due to interference.		.09082		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.9821			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.5112			
198530027-1 11-DEC-2007 05:39	Americium-243	UI	UI	UI	Data rejected due to interference.		.2376			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.8311			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4923			
198530028-1 11-DEC-2007 05:39	Americium-243	UI	UI	UI	Data rejected due to interference.		.1955			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.04672			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.4787			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3174			
198530029-1 11-DEC-2007 05:40	Americium-243	UI	UI	UI	Data rejected due to interference.		.2137			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5797			
	Neptunium-239	UI	UI	UI	Data rejected due to no valid peak.		.1886		2	2
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3826			
198530030-1 11-DEC-2007 05:50	Americium-243	UI	UI	UI	Data rejected due to interference.		.1985			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6453			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3452			
198530031-1 11-DEC-2007 06:58	Americium-243	UI	UI	UI	Data rejected due to interference.		.23			
	Neptunium-236	UI	UI	UI	Data rejected due to low abundance.		.0601			

GEL QUALS

Batch ID: 707062

Report run on: December 13, 2007 11:32 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530031-1 11-DEC-2007 06:58	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7888			
	Protactinium-234m	UI	UI	UI	Data rejected due to no valid peak.		5.576			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3153			
198530032-1 11-DEC-2007 06:58	Americium-243	UI	UI	UI	Data rejected due to interference.		.2154			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.05967			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5327			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2305			
1201471370-1 DUP 11-DEC-2007 08:51	Americium-243	UI	UI	UI	Data rejected due to interference.		.2341			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7312			
	Protactinium-234m	UI	UI	UI	Data rejected due to a high counting uncertainty.		4.038			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4763			
	Uranium-235	UI	UI	UI	Data rejected due to no valid peak.		.228		.5	.5

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:45:25.82

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530013.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 18:34:14
Sample ID        : G198530013           Sample quantity  : 1.23690E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:08.80  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	53.44*	22	1193	0.83	106.34	103	7	7.33E-04	303.0	
2	0	63.39*	184	2162	0.92	126.27	122	10	6.12E-03	58.4	
3	0	66.45	70	1508	1.42	132.39	131	7	2.34E-03	92.7	
4	2	74.91	1330	1269	0.79	149.31	145	13	4.43E-02	4.8	7.15E-01
5	2	77.17*	2165	1151	0.91	153.85	145	13	7.22E-02	3.5	
6	4	84.19*	248	945	1.22	167.90	165	28	8.27E-03	24.1	4.63E+00
7	4	87.30	838	1276	1.23	174.13	165	28	2.79E-02	7.8	
8	4	89.96	592	1054	1.01	179.45	165	28	1.97E-02	9.7	
9	4	92.72*	777	1148	1.15	184.97	165	28	2.59E-02	11.6	
10	4	95.15	107	937	0.95	189.83	165	28	3.56E-03	50.2	
11	0	105.53	223	1165	1.51	210.61	207	8	7.45E-03	27.3	
12	0	108.48	57	977	1.32	216.52	215	6	1.91E-03	86.9	
13	0	112.82*	0	1149	0.62	225.20	222	7	1.09E-05	*****	
14	0	115.27	80	758	0.79	230.11	228	5	2.67E-03	52.9	
15	0	129.00	168	1232	0.98	257.59	254	8	5.61E-03	37.0	
16	0	143.96*	116	1140	1.01	287.55	284	8	3.88E-03	59.2	
17	0	154.02	171	879	1.57	307.68	305	7	5.72E-03	29.7	
18	0	185.81*	448	1142	1.05	371.31	367	9	1.49E-02	18.1	
19	0	198.46*	106	1345	2.39	396.64	391	12	3.53E-03	74.5	
20	3	209.22	345	775	1.22	418.18	408	15	1.15E-02	14.5	1.85E+00
21	0	238.53*	3338	1373	0.99	476.84	471	10	1.11E-01	2.9	
22	0	241.45	471	834	1.57	482.69	481	7	1.57E-02	11.5	
23	4	270.09	399	704	1.73	540.00	535	12	1.33E-02	13.5	2.07E+00
24	4	272.07	57	344	0.90	543.98	535	12	1.90E-03	54.9	
25	2	275.36	59	438	0.96	550.55	548	12	1.98E-03	58.0	1.66E+00
26	2	277.29	208	529	1.15	554.41	548	12	6.95E-03	19.7	
27	0	295.13*	799	757	1.22	590.13	586	10	2.66E-02	8.1	
28	0	300.00	197	629	0.99	599.86	596	8	6.56E-03	23.2	
29	0	327.93	188	657	0.99	655.77	651	10	6.27E-03	26.5	
30	0	338.07*	675	723	1.20	676.08	670	11	2.25E-02	10.0	
31	0	351.83*	1327	565	1.29	703.60	699	9	4.42E-02	4.6	
32	0	409.35	96	413	1.28	818.74	815	8	3.20E-03	38.1	
33	0	423.34	71	490	3.03	846.73	841	11	2.37E-03	61.7	
34	0	462.93*	158	474	1.79	925.96	920	11	5.25E-03	29.9	
35	0	510.74*	223	721	1.65	1021.65	1013	17	7.44E-03	37.5	
36	0	562.11	19	356	1.79	1124.46	1123	9	6.17E-04	185.2	
37	0	572.66*	18	235	1.32	1145.57	1143	7	5.93E-04	192.0	
38	0	582.96*	1025	310	1.53	1166.17	1162	10	3.42E-02	5.0	

Sample ID : G198530013 Acquisition date : 10-DEC-2007 18:34:14

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	609.00*	996	330	1.48	1218.28	1213	10	3.32E-02	5.2	
40	0	661.42	68	250	1.75	1323.19	1319	8	2.27E-03	42.0	
41	0	711.67	36	180	1.54	1423.74	1421	7	1.22E-03	63.0	
42	0	721.82	34	201	0.91	1444.05	1440	8	1.15E-03	74.2	
43	0	727.14	367	302	1.31	1454.68	1448	14	1.22E-02	11.3	
44	0	767.25	156	289	0.97	1534.94	1528	13	5.21E-03	23.8	
45	0	771.75	53	184	1.59	1543.96	1541	8	1.77E-03	46.1	
46	0	784.91*	47	208	1.37	1570.29	1567	9	1.58E-03	64.9	
47	0	794.68	101	283	1.38	1589.83	1583	11	3.37E-03	33.7	
48	0	835.59	47	190	0.83	1671.70	1668	8	1.57E-03	52.6	
49	0	839.32	51	175	2.78	1679.17	1676	8	1.71E-03	45.0	
50	0	859.93	109	282	1.44	1720.40	1714	12	3.62E-03	32.4	
51	0	873.88	25	195	2.75	1748.30	1745	10	8.33E-04	106.4	
52	0	910.80*	782	226	1.81	1822.18	1816	14	2.61E-02	6.1	
53	0	923.25	35	172	0.92	1847.09	1842	10	1.17E-03	71.8	
54	0	933.72	95	131	1.23	1868.03	1864	11	3.17E-03	25.7	
55	0	958.21	41	89	1.72	1917.04	1914	7	1.36E-03	41.7	
56	2	964.35	192	156	2.27	1929.32	1921	23	6.39E-03	16.3	2.38E+00
57	2	968.53*	493	136	2.08	1937.69	1921	23	1.64E-02	8.2	
58	0	992.40	30	99	1.36	1985.45	1982	7	1.01E-03	57.2	
59	0	999.97*	41	171	1.15	2000.58	1994	12	1.36E-03	79.5	
60	0	1093.52	38	123	1.00	2187.74	2185	9	1.25E-03	55.2	
61	0	1119.82*	204	216	1.62	2240.36	2234	15	6.80E-03	19.3	
62	0	1206.70	19	127	0.55	2414.15	2409	11	6.36E-04	116.4	
63	0	1237.30*	75	199	1.94	2475.37	2469	16	2.48E-03	46.7	
64	0	1377.85	52	111	1.65	2756.51	2749	14	1.74E-03	45.7	
65	0	1407.24	32	118	1.85	2815.30	2809	15	1.08E-03	74.6	
66	0	1459.95*	775	126	2.36	2920.73	2911	17	2.58E-02	5.3	
67	0	1509.03	27	72	0.88	3018.89	3013	10	8.91E-04	62.7	
68	0	1543.13	31	65	2.57	3087.08	3079	12	1.04E-03	55.2	
69	0	1588.67	44	108	2.16	3178.16	3166	15	1.45E-03	54.3	
70	0	1592.55	35	63	1.53	3185.93	3181	10	1.15E-03	46.7	
71	0	1622.99	82	93	8.14	3246.81	3236	21	2.74E-03	32.1	
72	0	1631.54	27	91	1.77	3263.91	3256	14	8.86E-04	78.6	
73	0	1728.65	54	66	1.17	3458.11	3450	20	1.80E-03	39.1	
74	0	1763.70	202	46	2.49	3528.19	3522	14	6.74E-03	10.0	
75	0	1775.92	22	22	1.43	3552.64	3547	11	7.33E-04	46.5	
76	0	1848.28	23	35	0.80	3697.33	3692	11	7.69E-04	55.5	
77	0	1997.13	21	30	5.17	3994.96	3987	17	6.99E-04	63.5	
78	0	2032.91	8	27	4.93	4066.51	4056	14	2.80E-04	130.8	

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]G198530013       *
* Acquisition date : 10-DEC-2007 18:34:14 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:08.80     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530013           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.2369E+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    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	4.992E+00	5.894E-01	3.091E-01	0.000E+00
RH-101	2.004E-02	2.930E-02	2.500E-02	0.000E+00
CS-137	2.840E-02	2.350E-02	3.683E-02	0.000E+00
EU-155	1.076E-01	5.835E-02	6.517E-02	0.000E+00
TL-208	3.830E-01	4.621E-02	3.235E-02	0.000E+00
BI-212	1.193E+00	2.795E-01	2.541E-01	0.000E+00
PB-212	1.164E+00	1.009E-01	4.850E-02	0.000E+00
BI-214	7.091E-01	8.929E-02	5.987E-02	0.000E+00
PB-214	7.206E-01	7.499E-02	6.492E-02	0.000E+00
RA-223	4.814E-01	1.303E-01	1.390E-01	0.000E+00
AC-228	1.412E+00	1.898E-01	1.243E-01	0.000E+00
PA-234M	2.452E+00	3.822E+00	3.603E+00	0.000E+00
TH-234	1.390E+00	3.361E-01	2.810E-01	0.000E+00
U-235	1.185E-01	1.380E-01	1.443E-01	0.000E+00
NP-237	6.482E-01	1.111E-01	1.203E-01	0.000E+00
AM-243	1.846E-01	2.255E-02	2.306E-02	0.000E+00
CM-243	9.728E-02	5.278E-02	5.900E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-6.164E-03	2.214E-02	3.650E-02	0.000E+00	NOT IDENT.
SB-125	3.433E-02	5.343E-02	8.137E-02	0.000E+00	NOT IDENT.
PO-209	2.039E-01	4.263E+00	7.039E+00	0.000E+00	NOT IDENT.
BI-211	3.687E-02	6.827E-01	9.820E-01	0.000E+00	NOT IDENT.
PA-233	-2.558E-02	2.894E-02	4.900E-02	0.000E+00	NOT IDENT.
NP-236	1.789E-02	2.735E-02	3.882E-02	0.000E+00	NOT IDENT.
NP-239	2.523E-02	1.033E-01	1.736E-01	0.000E+00	NOT IDENT.
AM-241	1.381E-03	2.509E-02	3.907E-02	0.000E+00	NOT IDENT.
AM-246	-4.270E-02	7.359E-02	1.207E-01	0.000E+00	NOT IDENT.
CF-249	-5.302E-03	1.960E-02	3.311E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:45:26.79

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530013.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 18:34:14
Sample ID        : G198530013           Sample quantity  : 1.23690E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:08.80  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	775	10.66*	1.061E+00	4.992E+00	4.992E+00	12.05
RH-101	198.00	106	73.00*	5.461E+00	1.936E-02	2.004E-02	149.22
CS-137	661.66	68	85.10*	2.064E+00	2.829E-02	2.840E-02	84.44
EU-155	105.31	223	21.20*	7.304E+00	1.051E-01	1.076E-01	55.36
TL-208	277.36	208	6.31	4.316E+00	5.574E-01	5.574E-01	39.83
	510.77	223	22.60	2.591E+00	2.778E-01	2.778E-01	75.34
	583.19	1025	84.50*	2.306E+00	3.830E-01	3.830E-01	12.31
	763.13	------	1.81	1.821E+00	------	Line Not Found	------
	860.56	109	12.42	1.643E+00	3.878E-01	3.878E-01	65.09
BI-212	727.33	367	11.80*	1.900E+00	1.193E+00	1.193E+00	23.89
	785.37	47	1.10	1.777E+00	1.761E+00	1.761E+00	130.04
	1620.50	------	1.49	9.772E-01	------	Line Not Found	------
PB-212	74.81	1330	10.40	7.694E+00	1.210E+00	1.210E+00	12.47
	77.11	2165	17.50	7.684E+00	1.172E+00	1.172E+00	10.50
	87.30	838	7.81	7.592E+00	1.029E+00	1.029E+00	17.49
	238.63	3338	43.30*	4.824E+00	1.164E+00	1.164E+00	8.85
	300.09	197	3.28	4.059E+00	1.077E+00	1.077E+00	46.68
BI-214	609.31	996	46.10*	2.219E+00	7.090E-01	7.091E-01	12.85
	768.36	156	4.94	1.813E+00	1.272E+00	1.272E+00	48.18
	806.17	------	1.22	1.737E+00	------	Line Not Found	------
	934.06	95	3.03	1.531E+00	1.491E+00	1.491E+00	51.78
	1120.29	204	15.10	1.315E+00	7.485E-01	7.485E-01	38.99
	1155.19	------	1.63	1.282E+00	------	Line Not Found	------
	1238.11	75	5.79	1.212E+00	7.736E-01	7.736E-01	93.47
	1280.96	------	1.43	1.178E+00	------	Line Not Found	------
	1377.67	52	4.00	1.111E+00	8.542E-01	8.543E-01	91.55
	1401.50	------	1.27	1.096E+00	------	Line Not Found	------
	1407.98	32	2.15	1.092E+00	1.006E+00	1.006E+00	149.29
	1509.23	27	2.11	1.034E+00	8.923E-01	8.924E-01	125.44
	1729.60	54	2.92	9.290E-01	1.450E+00	1.450E+00	78.35
	1764.49	202	15.40	9.146E-01	1.045E+00	1.045E+00	20.75
PB-214	74.81	1330	6.44	7.694E+00	1.954E+00	1.955E+00	12.47

Sample ID : G198530013 Acquisition date : 10-DEC-2007 18:34:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	2165	10.80	7.684E+00	1.900E+00	1.900E+00	10.50
	87.30	838	4.84	7.592E+00	1.661E+00	1.661E+00	17.49
	242.00	471	7.43	4.783E+00	9.653E-01	9.654E-01	23.89
	295.22	799	19.30	4.112E+00	7.332E-01	7.332E-01	17.01
	351.93	1327	37.60*	3.568E+00	7.206E-01	7.206E-01	10.62
RA-223	269.46	399	13.70*	4.403E+00	4.814E-01	4.814E-01	27.61
AC-228	129.07	168	2.42	6.833E+00	7.413E-01	7.413E-01	74.56
	209.25	345	3.89	5.278E+00	1.225E+00	1.225E+00	29.94
	270.25	399	3.46	4.403E+00	1.906E+00	1.906E+00	27.61
	338.32	675	11.27	3.687E+00	1.183E+00	1.183E+00	20.62
	409.46	96	1.92	3.140E+00	1.162E+00	1.162E+00	76.36
	463.00	158	4.40	2.823E+00	9.243E-01	9.243E-01	60.04
	794.95	101	4.25	1.759E+00	9.859E-01	9.859E-01	67.81
	911.20	782	25.80*	1.564E+00	1.412E+00	1.412E+00	13.71
	964.77	192	4.99	1.490E+00	1.879E+00	1.879E+00	33.07
	968.97	493	15.80	1.485E+00	1.530E+00	1.530E+00	17.46
	1588.20	44	3.22	9.925E-01	9.931E-01	9.931E-01	108.74
PA-234M	1001.03	41	0.84*	1.445E+00	2.452E+00	2.452E+00	159.06
TH-234	63.29	184	4.80	7.666E+00	3.636E-01	3.636E-01	117.06
	92.58	777	5.41*	7.519E+00	1.390E+00	1.390E+00	24.67
U-235	143.76	116	10.96*	6.518E+00	1.185E-01	1.185E-01	118.77
NP-237	86.48	838	12.40*	7.592E+00	6.482E-01	6.482E-01	17.49
AM-243	74.66	1330	68.20*	7.694E+00	1.845E-01	1.846E-01	12.47
CM-243	103.76	223	23.00*	7.304E+00	9.690E-02	9.728E-02	55.36

Flag: "*" = Keyline

Sample ID : G198530013 Acquisition date : 10-DEC-2007 18:34:14

Total number of lines in spectrum 78
Number of unidentified lines 35
Number of lines tentatively identified by NID 43 55.13%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.992E+00	4.992E+00	0.601E+00	12.05	
RH-101	1.04E+08S	1.04	1.936E-02	2.004E-02	2.990E-02	149.22	
CS-137	9.47E+08S	1.00	2.829E-02	2.840E-02	2.398E-02	84.44	
EU-155	1.57E+08S	1.02	1.051E-01	1.076E-01	0.595E-01	55.36	
TL-208	4.43E+17S	1.00	3.830E-01	3.830E-01	0.472E-01	12.31	
BI-212	4.43E+17S	1.00	1.193E+00	1.193E+00	0.285E+00	23.89	
PB-212	4.43E+17S	1.00	1.164E+00	1.164E+00	0.103E+00	8.85	
BI-214	5.05E+10S	1.00	7.090E-01	7.091E-01	0.911E-01	12.85	
PB-214	5.05E+10S	1.00	7.206E-01	7.206E-01	0.765E-01	10.62	
RA-223	1.04E+12S	1.00	4.814E-01	4.814E-01	1.329E-01	27.61	
AC-228	4.43E+17S	1.00	1.412E+00	1.412E+00	0.194E+00	13.71	
PA-234M	1.41E+17S	1.00	2.452E+00	2.452E+00	3.900E+00	159.06	
TH-234	1.41E+17S	1.00	1.390E+00	1.390E+00	0.343E+00	24.67	
U-235	2.22E+16S	1.00	1.185E-01	1.185E-01	1.408E-01	118.77	
NP-237	6.75E+13S	1.00	6.482E-01	6.482E-01	1.134E-01	17.49	
AM-243	2.33E+11S	1.00	1.845E-01	1.846E-01	0.230E-01	12.47	
CM-243	8.99E+08S	1.00	9.690E-02	9.728E-02	5.386E-02	55.36	
			---	---			
	Total Activity :		1.610E+01	1.610E+01			

Grand Total Activity : 1.610E+01 1.610E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530013 Acquisition date : 10-DEC-2007 18:34:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	53.44	22	1193	0.83	106.34	103	7	7.33E-04	****	7.49E+00	
0	66.45	70	1508	1.42	132.39	131	7	2.34E-03	****	7.69E+00	
4	84.19	248	945	1.22	167.90	165	28	8.27E-03	48.3	7.63E+00	
4	89.96	592	1054	1.01	179.45	165	28	1.97E-02	19.4	7.56E+00	
4	95.15	107	937	0.95	189.83	165	28	3.56E-03	****	7.48E+00	
0	108.48	57	977	1.32	216.52	215	6	1.91E-03	****	7.25E+00	
0	115.27	80	758	0.79	230.11	228	5	2.67E-03	****	7.12E+00	
0	154.02	171	879	1.57	307.68	305	7	5.72E-03	59.4	6.31E+00	
0	185.81	448	1142	1.05	371.31	367	9	1.49E-02	36.2	5.69E+00	
4	272.07	57	344	0.90	543.98	535	12	1.90E-03	****	4.38E+00	
2	275.36	59	438	0.96	550.55	548	12	1.98E-03	****	4.34E+00	
0	327.93	188	657	0.99	655.77	651	10	6.27E-03	53.0	3.78E+00	
0	423.34	71	490	3.03	846.73	841	11	2.37E-03	****	3.05E+00	
0	562.11	19	356	1.79	1124.46	1123	9	6.17E-04	****	2.38E+00	
0	572.66	18	235	1.32	1145.57	1143	7	5.93E-04	****	2.34E+00	
0	711.67	36	180	1.54	1423.74	1421	7	1.22E-03	****	1.94E+00	
0	721.82	34	201	0.91	1444.05	1440	8	1.15E-03	****	1.91E+00	
0	771.75	53	184	1.59	1543.96	1541	8	1.77E-03	92.3	1.80E+00	
0	835.59	47	190	0.83	1671.70	1668	8	1.57E-03	****	1.68E+00	
0	839.32	51	175	2.78	1679.17	1676	8	1.71E-03	90.0	1.68E+00	
0	873.88	25	195	2.75	1748.30	1745	10	8.33E-04	****	1.62E+00	
0	923.25	35	172	0.92	1847.09	1842	10	1.17E-03	****	1.55E+00	
0	958.21	41	89	1.72	1917.04	1914	7	1.36E-03	83.4	1.50E+00	
0	992.40	30	99	1.36	1985.45	1982	7	1.01E-03	****	1.45E+00	
0	1093.52	38	123	1.00	2187.74	2185	9	1.25E-03	****	1.34E+00	
0	1206.70	19	127	0.55	2414.15	2409	11	6.36E-04	****	1.24E+00	
0	1543.13	31	65	2.57	3087.08	3079	12	1.04E-03	****	1.02E+00	
0	1592.55	35	63	1.53	3185.93	3181	10	1.15E-03	93.4	9.91E-01	
0	1622.99	82	93	8.14	3246.81	3236	21	2.74E-03	64.2	9.76E-01	
0	1631.54	27	91	1.77	3263.91	3256	14	8.86E-04	****	9.72E-01	
0	1775.92	22	22	1.43	3552.64	3547	11	7.33E-04	92.9	9.10E-01	
0	1848.28	23	35	0.80	3697.33	3692	11	7.69E-04	****	8.82E-01	
0	1997.13	21	30	5.17	3994.96	3987	17	6.99E-04	****	8.31E-01	
0	2032.91	8	27	4.93	4066.51	4056	14	2.80E-04	****	8.19E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530013            *
* Acquisition date : 10-DEC-2007 18:34:14 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:08.80     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530013           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.2369E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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	LC (pCi/GRAM)	TPU
K-40	4.992E+00	5.894E-01	1.546E-01	5.894E-01
RH-101	2.004E-02	2.930E-02	1.251E-02	2.930E-02
CS-137	2.840E-02	2.350E-02	1.842E-02	2.350E-02
EU-155	1.076E-01	5.835E-02	3.260E-02	5.835E-02
TL-208	3.830E-01	4.621E-02	1.618E-02	4.621E-02
BI-212	1.193E+00	2.795E-01	1.271E-01	2.795E-01
PB-212	1.164E+00	1.009E-01	2.427E-02	1.009E-01
BI-214	7.091E-01	8.929E-02	2.995E-02	8.929E-02
PB-214	7.206E-01	7.499E-02	3.248E-02	7.499E-02
RA-223	4.814E-01	1.303E-01	6.954E-02	1.303E-01
AC-228	1.412E+00	1.898E-01	6.219E-02	1.898E-01
PA-234M	2.452E+00	3.822E+00	1.803E+00	3.822E+00
TH-234	1.390E+00	3.361E-01	1.406E-01	3.361E-01
U-235	1.185E-01	1.380E-01	7.219E-02	1.380E-01
NP-237	6.482E-01	1.111E-01	6.019E-02	1.111E-01
AM-243	1.846E-01	2.255E-02	1.154E-02	2.255E-02
CM-243	9.728E-02	5.278E-02	2.952E-02	5.278E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-6.164E-03	2.214E-02	1.826E-02	2.214E-02	NOT IDENT.
SB-125	3.433E-02	5.343E-02	4.071E-02	5.343E-02	NOT IDENT.
PO-209	2.039E-01	4.263E+00	3.522E+00	4.263E+00	NOT IDENT.
BI-211	3.687E-02	6.827E-01	4.913E-01	6.827E-01	NOT IDENT.
PA-233	-2.558E-02	2.894E-02	2.451E-02	2.894E-02	NOT IDENT.
NP-236	1.789E-02	2.735E-02	1.942E-02	2.735E-02	NOT IDENT.
NP-239	2.523E-02	1.033E-01	8.683E-02	1.033E-01	NOT IDENT.
AM-241	1.381E-03	2.509E-02	1.955E-02	2.509E-02	NOT IDENT.
AM-246	-4.270E-02	7.359E-02	6.036E-02	7.359E-02	NOT IDENT.
CF-249	-5.302E-03	1.960E-02	1.657E-02	1.960E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	911.4216
63.29	974.7195
74.66	1182.8660
74.81	1183.4684
74.81	1183.4684
77.11	1192.6924
77.11	1192.6924
86.48	1042.7952
87.30	1045.4021
87.30	1045.4021
92.58	1061.9144
98.44	815.6490
103.76	801.0231
105.31	793.6741
129.07	861.8297
143.76	873.9318
198.00	770.2798
209.25	794.7424
228.18	699.7351
238.63	854.0036
242.00	818.6108
269.46	589.2453
270.25	589.8242
277.36	559.1891
295.22	571.0261
300.09	566.8527
312.17	517.1947
338.32	567.0309
351.93	637.4313
387.59	451.1604
409.46	456.9309
427.87	377.1270
463.00	389.8843
510.77	371.9502
583.19	338.5307
609.31	319.8472
661.66	354.9533
727.33	277.9944
763.13	271.1511
768.36	216.8035
785.37	271.7369
794.95	240.5903
806.17	289.2200
831.80	255.4951
860.56	257.0986
896.60	234.5797
911.20	216.9527
934.06	185.6567
964.77	175.6804
968.97	185.6677
1001.03	165.1783
1078.86	201.4799
1120.29	209.5300
1155.19	169.7021
1173.23	188.0412
1238.11	170.3595
1280.96	135.8657
1332.51	113.4488
1377.67	123.6809
1401.50	103.2479
1407.98	124.7849
1460.80	106.6836
1509.23	86.8862
1588.20	186.3435
1620.50	100.9124
1729.60	78.6570
1764.49	64.8940

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530013

Total Uranium Activity	5.4853E-02	ug/g
Total Uranium Counting Unc.	6.3846E-02	ug/g
Total Uranium Tpu	6.3846E-08	ug/g
Total Uranium Mda	3.3402E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:46:04.61

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530014.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 18:35:06
Sample ID        : G198530014           Sample quantity  : 1.50920E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 09:00:00.00        Elapsed real time: 0 09:01:01.08  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.62	180	1089	1.30	92.34	88	9	5.55E-03	34.0	
2	0	63.70	311	1921	0.92	126.46	120	11	9.59E-03	27.9	
3	3	74.95	2063	2171	1.72	148.92	142	17	6.37E-02	5.1	5.89E+00
4	3	77.23*	3052	1697	1.35	153.46	142	17	9.42E-02	3.3	
5	3	84.37	381	1725	1.44	167.72	160	32	1.18E-02	19.6	3.08E+00
6	3	87.31	1270	1787	1.75	173.61	160	32	3.92E-02	6.8	
7	3	89.95	692	1462	1.44	178.87	160	32	2.14E-02	11.2	
8	3	93.10*	1116	1656	1.90	185.17	160	32	3.45E-02	8.5	
9	0	99.29	173	1282	2.31	197.52	193	9	5.35E-03	38.0	
10	0	105.09	188	1278	2.09	209.11	205	9	5.81E-03	35.0	
11	0	129.11	145	1449	1.42	257.09	253	9	4.46E-03	48.1	
12	0	143.42	29	1199	0.76	285.67	283	8	8.96E-04	207.2	
13	0	155.76	32	1316	0.79	310.33	303	9	9.86E-04	205.4	
14	0	186.14*	667	1529	1.39	371.00	366	12	2.06E-02	13.1	
15	0	209.36	518	1027	1.58	417.38	412	11	1.60E-02	12.8	
16	3	238.57*	4258	741	1.39	475.73	470	20	1.31E-01	2.0	1.25E+00
17	3	241.53	1007	1021	2.10	481.66	470	20	3.11E-02	9.8	
18	0	269.90	377	867	2.42	538.34	533	13	1.16E-02	16.9	
19	0	277.12	36	665	0.87	552.76	550	9	1.11E-03	130.7	
20	0	288.26	52	426	1.42	575.02	572	7	1.61E-03	67.1	
21	2	295.15*	1136	595	1.51	588.77	582	22	3.51E-02	5.3	1.25E+00
22	2	300.08	254	560	1.56	598.62	582	22	7.83E-03	18.1	
23	0	328.18	303	494	1.58	654.78	650	11	9.36E-03	15.3	
24	0	338.43	851	794	1.52	675.24	668	16	2.63E-02	8.2	
25	0	351.89*	1928	588	1.51	702.14	696	12	5.95E-02	3.6	
26	0	371.80	77	406	1.01	741.93	737	11	2.38E-03	51.9	
27	0	410.11	151	400	3.50	818.47	813	12	4.66E-03	27.8	
28	0	445.72*	30	339	1.29	889.65	884	11	9.35E-04	127.6	
29	0	463.06	146	396	1.25	924.30	918	11	4.50E-03	27.7	
30	0	510.71*	350	406	2.10	1019.53	1012	17	1.08E-02	18.1	
31	0	567.41	373	397	2.04	1132.87	1126	17	1.15E-02	13.3	
32	0	583.09*	973	362	1.73	1164.20	1159	15	3.00E-02	5.6	
33	0	609.17*	1309	329	1.67	1216.33	1210	15	4.04E-02	4.3	
34	0	661.56	87	194	1.66	1321.07	1317	10	2.68E-03	31.8	
35	0	668.86	45	223	5.36	1335.67	1328	13	1.39E-03	69.9	
36	0	716.60	3	154	0.43	1431.11	1426	8	1.06E-04	633.2	
37	0	727.24	250	203	1.93	1452.40	1447	13	7.72E-03	13.4	
38	0	754.59	19	157	1.22	1507.08	1504	9	5.91E-04	119.8	

Sample ID : G198530014 Acquisition date : 10-DEC-2007 18:35:06

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	768.05	74	208	2.61	1533.99	1529	11	2.27E-03	39.8	
40	0	772.23*	18	129	0.96	1542.35	1540	8	5.70E-04	144.5	
41	0	784.14	21	149	2.84	1566.17	1563	10	6.35E-04	112.9	
42	0	794.70	147	205	1.52	1587.27	1582	14	4.54E-03	22.3	
43	0	806.64	40	128	2.23	1611.16	1604	12	1.23E-03	58.9	
44	0	860.23	150	147	1.70	1718.33	1712	13	4.64E-03	18.5	
45	0	911.18	638	185	1.87	1820.23	1812	15	1.97E-02	6.1	
46	0	934.51	64	172	2.34	1866.90	1857	16	1.98E-03	47.3	
47	1	964.60	151	113	2.18	1927.09	1919	27	4.65E-03	16.8	2.39E+00
48	1	968.76	439	105	2.18	1935.40	1919	27	1.35E-02	6.9	
49	0	1064.00	51	152	3.54	2125.94	2117	17	1.56E-03	57.7	
50	0	1120.47*	252	160	1.35	2238.92	2231	16	7.76E-03	14.2	
51	0	1238.42	109	120	1.93	2474.94	2469	15	3.36E-03	23.9	
52	4	1373.36	23	33	1.91	2745.03	2742	24	7.05E-04	38.2	2.85E+00
53	4	1377.87*	81	86	2.94	2754.05	2742	24	2.51E-03	30.9	
54	0	1410.70	33	121	1.16	2819.77	2808	22	1.02E-03	86.7	
55	0	1417.05	25	21	0.76	2832.49	2829	10	7.76E-04	39.0	
56	0	1460.56*	819	79	2.15	2919.59	2909	20	2.53E-02	4.6	
57	0	1509.08	30	32	1.63	3016.73	3013	8	9.26E-04	37.4	
58	0	1571.75	9	20	0.64	3142.22	3137	8	2.77E-04	95.1	
59	1	1587.90	43	77	2.43	3174.58	3168	22	1.33E-03	41.9	2.20E+00
60	1	1592.92	51	47	2.23	3184.63	3168	22	1.58E-03	30.9	
61	0	1622.97	8	55	1.60	3244.80	3237	13	2.61E-04	188.2	
62	0	1630.42	28	41	1.80	3259.73	3255	11	8.72E-04	47.8	
63	0	1729.72	81	28	1.61	3458.61	3450	17	2.51E-03	18.9	
64	0	1764.24	171	32	2.93	3527.75	3521	13	5.26E-03	10.3	
65	0	1823.43	17	29	3.49	3646.32	3638	15	5.24E-04	74.2	

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]G198530014       *
* Acquisition date : 10-DEC-2007 18:35:06 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 09:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 09:01:01.08     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530014           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.5092E+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	5.711E+00	6.052E-01	2.883E-01	0.000E+00
CS-137	3.443E-02	2.167E-02	2.770E-02	0.000E+00
EU-155	6.161E-02	4.253E-02	5.902E-02	0.000E+00
TL-208	3.395E-01	4.427E-02	2.753E-02	0.000E+00
BI-212	7.877E-01	2.165E-01	2.190E-01	0.000E+00
PB-212	1.154E+00	8.277E-02	3.746E-02	0.000E+00
BI-214	8.767E-01	9.916E-02	4.825E-02	0.000E+00
PB-214	8.841E-01	7.667E-02	4.928E-02	0.000E+00
RA-223	3.633E-01	1.216E-01	1.239E-01	0.000E+00
AC-228	1.158E+00	1.581E-01	1.092E-01	0.000E+00
TH-234	1.353E+00	2.466E-01	2.415E-01	0.000E+00
U-235	2.088E-02	8.480E-02	1.289E-01	0.000E+00
NP-236	3.041E-02	2.277E-02	3.006E-02	0.000E+00
NP-237	6.634E-01	1.006E-01	1.039E-01	0.000E+00
AM-243	1.934E-01	2.329E-02	2.035E-02	0.000E+00
CM-243	5.573E-02	3.847E-02	4.971E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	1.028E-02	1.979E-02	3.441E-02	0.000E+00	NOT IDENT.
RH-101	-2.933E-03	1.422E-02	2.290E-02	0.000E+00	NOT IDENT.
SB-125	1.012E-03	3.987E-02	6.913E-02	0.000E+00	NOT IDENT.
PO-209	1.902E+00	3.193E+00	5.679E+00	0.000E+00	NOT IDENT.
BI-211	-1.314E-01	4.490E-01	7.651E-01	0.000E+00	NOT IDENT.
PA-233	-2.460E-03	2.455E-02	4.323E-02	0.000E+00	NOT IDENT.
PA-234M	5.667E-01	1.935E+00	3.362E+00	0.000E+00	NOT IDENT.
NP-239	5.406E-02	8.328E-02	1.518E-01	0.000E+00	NOT IDENT.
AM-241	2.011E-02	2.086E-02	3.393E-02	0.000E+00	NOT IDENT.
AM-246	4.864E-02	6.211E-02	1.104E-01	0.000E+00	NOT IDENT.
CF-249	2.483E-02	1.674E-02	3.052E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:46:06.59

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530014.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 18:35:06
Sample ID        : G198530014           Sample quantity  : 1.50920E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 09:00:00.00        Elapsed real time: 0 09:01:01.08  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	819	10.66*	7.435E-01	5.711E+00	5.711E+00	10.81
CS-137	661.66	87	85.10*	1.642E+00	3.430E-02	3.443E-02	64.22
EU-155	105.31	188	21.20*	8.145E+00	6.022E-02	6.161E-02	70.44
TL-208	277.36	36	6.31	4.083E+00	7.727E-02	7.727E-02	261.37
	510.77	350	22.60	2.160E+00	3.962E-01	3.962E-01	36.85
	583.19	973	84.50*	1.876E+00	3.395E-01	3.395E-01	13.31
	763.13	------	1.81	1.415E+00	------	Line Not Found	------
	860.56	150	12.42	1.252E+00	5.347E-01	5.347E-01	37.65
BI-212	727.33	250	11.80*	1.487E+00	7.877E-01	7.877E-01	28.05
	785.37	21	1.10	1.376E+00	7.512E-01	7.512E-01	225.84
	1620.50	------	1.49	6.722E-01	------	Line Not Found	------
PB-212	74.81	2063	10.40	8.644E+00	1.269E+00	1.269E+00	12.29
	77.11	3052	17.50	8.639E+00	1.116E+00	1.116E+00	9.56
	87.30	1270	7.81	8.537E+00	1.053E+00	1.053E+00	15.47
	238.63	4258	43.30*	4.709E+00	1.154E+00	1.154E+00	7.32
	300.09	254	3.28	3.773E+00	1.133E+00	1.133E+00	36.54
BI-214	609.31	1309	46.10*	1.791E+00	8.766E-01	8.767E-01	11.54
	768.36	74	4.94	1.405E+00	5.855E-01	5.855E-01	79.99
	806.17	40	1.22	1.336E+00	1.356E+00	1.356E+00	118.05
	934.06	64	3.03	1.151E+00	1.018E+00	1.019E+00	94.82
	1120.29	252	15.10	9.618E-01	9.573E-01	9.574E-01	29.03
	1155.19	------	1.63	9.335E-01	------	Line Not Found	------
	1238.11	109	5.79	8.723E-01	1.193E+00	1.193E+00	48.12
	1280.96	------	1.43	8.442E-01	------	Line Not Found	------
	1377.67	81	4.00	7.866E-01	1.430E+00	1.430E+00	62.08
	1401.50	------	1.27	7.738E-01	------	Line Not Found	------
	1407.98	------	2.15	7.704E-01	------	Line Not Found	------
	1509.23	30	2.11	7.204E-01	1.091E+00	1.091E+00	75.04
	1729.60	81	2.92	6.307E-01	2.439E+00	2.439E+00	38.18
	1764.49	171	15.40	6.186E-01	9.894E-01	9.895E-01	21.37
PB-214	74.81	2063	6.44	8.644E+00	2.049E+00	2.049E+00	12.29
	77.11	3052	10.80	8.639E+00	1.808E+00	1.808E+00	9.56

Sample ID : G198530014 Acquisition date : 10-DEC-2007 18:35:06

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	1270	4.84	8.537E+00	1.700E+00	1.700E+00	15.47
	242.00	1007	7.43	4.656E+00	1.609E+00	1.609E+00	20.45
	295.22	1136	19.30	3.836E+00	8.483E-01	8.483E-01	11.89
	351.93	1928	37.60*	3.205E+00	8.840E-01	8.841E-01	8.85
RA-223	269.46	377	13.70*	4.190E+00	3.633E-01	3.633E-01	34.14
AC-228	129.07	145	2.42	7.443E+00	4.438E-01	4.438E-01	96.64
	209.25	518	3.89	5.291E+00	1.392E+00	1.392E+00	26.41
	270.25	377	3.46	4.190E+00	1.438E+00	1.438E+00	34.14
	338.32	851	11.27	3.338E+00	1.251E+00	1.251E+00	17.14
	409.46	151	1.92	2.729E+00	1.594E+00	1.594E+00	55.86
	463.00	146	4.40	2.398E+00	7.637E-01	7.637E-01	55.72
	794.95	147	4.25	1.357E+00	1.410E+00	1.410E+00	45.22
	911.20	638	25.80*	1.181E+00	1.158E+00	1.158E+00	13.94
	964.77	151	4.99	1.115E+00	1.498E+00	1.498E+00	34.29
	968.97	439	15.80	1.111E+00	1.382E+00	1.382E+00	15.26
	1588.20	43	3.22	6.857E-01	1.079E+00	1.079E+00	84.06
TH-234	63.29	311	4.80	8.524E+00	4.197E-01	4.197E-01	56.16
	92.58	1116	5.41*	8.431E+00	1.353E+00	1.353E+00	18.60
U-235	143.76	29	10.96*	7.010E+00	2.088E-02	2.088E-02	414.45
NP-236	98.44	173	38.00*	8.293E+00	3.041E-02	3.041E-02	76.40
NP-237	86.48	1270	12.40*	8.537E+00	6.634E-01	6.634E-01	15.47
AM-243	74.66	2063	68.20*	8.644E+00	1.934E-01	1.934E-01	12.29
CM-243	103.76	188	23.00*	8.145E+00	5.551E-02	5.573E-02	70.44

Flag: "*" = Keyline

Sample ID : G198530014 Acquisition date : 10-DEC-2007 18:35:06

Total number of lines in spectrum 65
Number of unidentified lines 23
Number of lines tentatively identified by NID 42 64.62%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.711E+00	5.711E+00	0.618E+00	10.81	
CS-137	9.47E+08S	1.00	3.430E-02	3.443E-02	2.211E-02	64.22	
EU-155	1.57E+08S	1.02	6.022E-02	6.161E-02	4.340E-02	70.44	
TL-208	4.43E+17S	1.00	3.395E-01	3.395E-01	0.452E-01	13.31	
BI-212	4.43E+17S	1.00	7.877E-01	7.877E-01	2.209E-01	28.05	
PB-212	4.43E+17S	1.00	1.154E+00	1.154E+00	0.084E+00	7.32	
BI-214	5.05E+10S	1.00	8.766E-01	8.767E-01	1.012E-01	11.54	
PB-214	5.05E+10S	1.00	8.840E-01	8.841E-01	0.782E-01	8.85	
RA-223	1.04E+12S	1.00	3.633E-01	3.633E-01	1.240E-01	34.14	
AC-228	4.43E+17S	1.00	1.158E+00	1.158E+00	0.161E+00	13.94	
TH-234	1.41E+17S	1.00	1.353E+00	1.353E+00	0.252E+00	18.60	
U-235	2.22E+16S	1.00	2.088E-02	2.088E-02	8.653E-02	414.45	
NP-236	4.89E+12S	1.00	3.041E-02	3.041E-02	2.323E-02	76.40	
NP-237	6.75E+13S	1.00	6.634E-01	6.634E-01	1.026E-01	15.47	
AM-243	2.33E+11S	1.00	1.934E-01	1.934E-01	0.238E-01	12.29	
CM-243	8.99E+08S	1.00	5.551E-02	5.573E-02	3.925E-02	70.44	
			---	---			
	Total Activity :		1.369E+01	1.369E+01			

Grand Total Activity : 1.369E+01 1.369E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530014 Acquisition date : 10-DEC-2007 18:35:06

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.62	180	1089	1.30	92.34	88	9	5.55E-03	68.0	7.66E+00	
3	84.37	381	1725	1.44	167.72	160	32	1.18E-02	39.2	8.58E+00	
3	89.95	692	1462	1.44	178.87	160	32	2.14E-02	22.5	8.49E+00	
0	155.76	32	1316	0.79	310.33	303	9	9.86E-04	****	6.65E+00	
0	186.14	667	1529	1.39	371.00	366	12	2.06E-02	26.2	5.83E+00	
0	288.26	52	426	1.42	575.02	572	7	1.61E-03	****	3.93E+00	
0	328.18	303	494	1.58	654.78	650	11	9.36E-03	30.6	3.45E+00	
0	371.80	77	406	1.01	741.93	737	11	2.38E-03	****	3.03E+00	
0	445.72	30	339	1.29	889.65	884	11	9.35E-04	****	2.50E+00	
0	567.41	373	397	2.04	1132.87	1126	17	1.15E-02	26.5	1.93E+00	
0	668.86	45	223	5.36	1335.67	1328	13	1.39E-03	****	1.62E+00	
0	716.60	3	154	0.43	1431.11	1426	8	1.06E-04	****	1.51E+00	
0	754.59	19	157	1.22	1507.08	1504	9	5.91E-04	****	1.43E+00	
0	772.23	18	129	0.96	1542.35	1540	8	5.70E-04	****	1.40E+00	
0	1064.00	51	152	3.54	2125.94	2117	17	1.56E-03	****	1.01E+00	
4	1373.36	23	33	1.91	2745.03	2742	24	7.05E-04	76.5	7.89E-01	
0	1410.70	33	121	1.16	2819.77	2808	22	1.02E-03	****	7.69E-01	
0	1417.05	25	21	0.76	2832.49	2829	10	7.76E-04	78.0	7.66E-01	
0	1571.75	9	20	0.64	3142.22	3137	8	2.77E-04	****	6.93E-01	
1	1592.92	51	47	2.23	3184.63	3168	22	1.58E-03	61.9	6.84E-01	
0	1622.97	8	55	1.60	3244.80	3237	13	2.61E-04	****	6.71E-01	
0	1630.42	28	41	1.80	3259.73	3255	11	8.72E-04	95.7	6.68E-01	
0	1823.43	17	29	3.49	3646.32	3638	15	5.24E-04	****	5.99E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530014            *
* Acquisition date : 10-DEC-2007 18:35:06 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 09:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 09:01:01.08     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530014           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.5092E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	5.711E+00	6.052E-01	1.442E-01	6.052E-01
CS-137	3.443E-02	2.167E-02	1.386E-02	2.167E-02
EU-155	6.161E-02	4.253E-02	2.953E-02	4.253E-02
TL-208	3.395E-01	4.427E-02	1.377E-02	4.427E-02
BI-212	7.877E-01	2.165E-01	1.095E-01	2.165E-01
PB-212	1.154E+00	8.277E-02	1.874E-02	8.277E-02
BI-214	8.767E-01	9.916E-02	2.414E-02	9.916E-02
PB-214	8.841E-01	7.667E-02	2.465E-02	7.667E-02
RA-223	3.633E-01	1.216E-01	6.199E-02	1.216E-01
AC-228	1.158E+00	1.581E-01	5.466E-02	1.581E-01
TH-234	1.353E+00	2.466E-01	1.208E-01	2.466E-01
U-235	2.088E-02	8.480E-02	6.449E-02	8.480E-02
NP-236	3.041E-02	2.277E-02	1.504E-02	2.277E-02
NP-237	6.634E-01	1.006E-01	5.198E-02	1.006E-01
AM-243	1.934E-01	2.329E-02	1.018E-02	2.329E-02
CM-243	5.573E-02	3.847E-02	2.487E-02	3.847E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.028E-02	1.979E-02	1.722E-02	1.979E-02	NOT IDENT.
RH-101	-2.933E-03	1.422E-02	1.146E-02	1.422E-02	NOT IDENT.
SB-125	1.012E-03	3.987E-02	3.458E-02	3.987E-02	NOT IDENT.
PO-209	1.902E+00	3.193E+00	2.841E+00	3.193E+00	NOT IDENT.
BI-211	-1.314E-01	4.490E-01	3.828E-01	4.490E-01	NOT IDENT.
PA-233	-2.460E-03	2.455E-02	2.163E-02	2.455E-02	NOT IDENT.
PA-234M	5.667E-01	1.935E+00	1.682E+00	1.935E+00	NOT IDENT.
NP-239	5.406E-02	8.328E-02	7.595E-02	8.328E-02	NOT IDENT.
AM-241	2.011E-02	2.086E-02	1.697E-02	2.086E-02	NOT IDENT.
AM-246	4.864E-02	6.211E-02	5.522E-02	6.211E-02	NOT IDENT.
CF-249	2.483E-02	1.674E-02	1.527E-02	1.674E-02	NOT IDENT.

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                 2040 SAVAGE ROAD                          *
*                              CHARLESTON ,SC 29417                         *
*                        GAMMA SPECTROSCOPY BACKGROUND REPORT               *
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ENERGY	MDA COUNTS
59.54	1227.9813
63.29	1527.4646
74.66	1857.4802
74.81	1857.7781
74.81	1857.7781
77.11	1862.3402
77.11	1862.3402
86.48	1576.7769
87.30	1578.0541
87.30	1578.0541
92.58	1586.1257
98.44	1178.9677
103.76	1137.2552
105.31	1299.0370
129.07	1316.5063
143.76	1301.1555
198.00	1077.9716
209.25	983.9742
228.18	820.9747
238.63	794.5038
242.00	795.9274
269.46	695.5750
270.25	695.8408
277.36	635.1855
295.22	626.0563
300.09	598.2887
312.17	511.6041
338.32	530.3796
351.93	489.6517
387.59	388.7316
409.46	436.1450
427.87	371.1384
463.00	325.3128
510.77	282.7691
583.19	270.8974
609.31	226.2203
661.66	212.8727
727.33	212.4754
763.13	185.1297
768.36	220.5020
785.37	159.5542
794.95	159.9268
806.17	147.9520
831.80	165.1798
860.56	134.2438
896.60	129.6312
911.20	161.3409
934.06	122.8383
964.77	128.5956
968.97	128.7093
1001.03	125.5847
1078.86	113.3854
1120.29	133.6865
1155.19	131.4844
1173.23	124.7074
1238.11	107.2600
1280.96	105.0659
1332.51	96.4505
1377.67	89.7012
1401.50	86.3743
1407.98	86.4661
1460.80	77.9180
1509.23	66.3570
1588.20	82.2847
1620.50	49.8889
1729.60	35.7095
1764.49	44.6090

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530014

Total Uranium Activity	9.6609E-03	ug/g
Total Uranium Counting Unc.	3.9239E-02	ug/g
Total Uranium Tpu	3.9239E-08	ug/g
Total Uranium Mda	2.9839E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:46:42.65

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530015.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:34:36
Sample ID        : G198530015           Sample quantity  : 1.48260E+02 GRAM
Detector name    : GAM01                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:04.24  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.40*	140	1196	1.34	126.84	123	9	4.66E-03	50.0	
2	1	74.62	1013	1552	1.63	149.30	143	18	3.38E-02	8.0	1.13E+01
3	1	77.32	1690	1426	1.63	154.70	143	18	5.63E-02	5.1	
4	2	84.22	218	1063	1.46	168.50	165	27	7.27E-03	25.2	2.56E+00
5	2	87.25	543	1030	1.24	174.57	165	27	1.81E-02	10.7	
6	2	89.90	417	1139	1.38	179.87	165	27	1.39E-02	15.1	
7	2	92.82*	555	1236	1.42	185.71	165	27	1.85E-02	13.9	
8	0	98.84	149	1245	1.54	197.75	194	10	4.97E-03	45.0	
9	0	104.89	182	1234	2.48	209.85	205	10	6.08E-03	36.8	
10	0	108.94	127	1028	1.37	217.96	215	8	4.24E-03	44.5	
11	0	129.37	185	1199	1.53	258.83	255	9	6.16E-03	34.5	
12	0	143.85	207	1060	1.72	287.80	284	9	6.89E-03	29.3	
13	0	153.48	161	960	2.08	307.07	304	8	5.35E-03	34.3	
14	0	185.97*	742	1469	1.49	372.06	365	14	2.47E-02	12.3	
15	0	209.43	330	1022	1.84	418.99	415	10	1.10E-02	19.0	
16	3	238.69*	3337	760	1.42	477.52	470	39	1.11E-01	2.5	1.43E+00
17	3	241.76*	881	820	1.87	483.66	470	39	2.94E-02	8.8	
18	0	270.18	329	817	1.67	540.53	535	12	1.10E-02	18.2	
19	0	277.70	70	699	2.31	555.57	551	10	2.34E-03	71.7	
20	0	287.08	47	581	0.90	574.33	571	9	1.55E-03	94.6	
21	2	295.24*	1179	473	1.41	590.65	585	20	3.93E-02	5.0	1.65E+00
22	2	299.95	198	575	1.49	600.07	585	20	6.60E-03	22.3	
23	0	328.26*	70	560	1.08	656.71	652	9	2.33E-03	69.1	
24	0	338.35	731	863	1.63	676.90	669	17	2.44E-02	9.9	
25	0	352.00*	2079	650	1.46	704.21	697	15	6.93E-02	3.6	
26	0	359.19	70	486	3.84	718.59	712	12	2.32E-03	64.4	
27	0	409.55	83	343	0.92	819.33	816	8	2.78E-03	40.1	
28	0	463.21	237	405	1.49	926.68	921	14	7.89E-03	19.2	
29	0	511.17*	261	591	2.17	1022.61	1013	21	8.71E-03	28.9	
30	0	583.27*	1035	412	1.45	1166.84	1159	16	3.45E-02	5.7	
31	0	609.35*	1544	307	1.52	1219.01	1211	17	5.15E-02	3.8	
32	0	634.60	85	196	5.82	1269.51	1263	14	2.83E-03	36.6	
33	0	641.85	79	257	4.93	1284.02	1277	16	2.62E-03	46.9	
34	0	661.84*	430	414	1.69	1324.00	1315	19	1.43E-02	13.0	
35	0	727.77	250	370	1.82	1455.87	1448	18	8.32E-03	19.3	
36	0	768.24	153	195	0.92	1536.83	1530	12	5.10E-03	20.0	
37	0	772.01	27	144	1.83	1544.38	1542	8	9.01E-04	78.9	
38	0	781.14	79	142	1.18	1562.63	1557	12	2.64E-03	32.0	

Sample ID : G198530015 Acquisition date : 10-DEC-2007 19:34:36

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	786.05	99	118	2.11	1572.46	1568	9	3.29E-03	22.3	
40	0	794.64	198	167	2.13	1589.63	1582	17	6.61E-03	16.5	
41	0	827.76	43	225	4.91	1655.88	1648	18	1.42E-03	84.2	
42	0	834.25	19	187	3.87	1668.86	1666	11	6.45E-04	138.0	
43	0	860.61	120	113	1.25	1721.59	1717	10	4.01E-03	18.9	
44	0	881.71	19	131	3.32	1763.79	1758	11	6.25E-04	122.6	
45	0	894.29	28	95	0.72	1788.95	1784	9	9.28E-04	66.8	
46	0	903.99	17	150	1.50	1808.36	1804	10	5.51E-04	140.8	
47	0	911.31*	675	196	1.96	1823.00	1816	14	2.25E-02	6.1	
48	0	934.72	78	121	1.29	1869.81	1864	13	2.61E-03	31.0	
49	3	964.72	151	138	2.06	1929.82	1919	27	5.04E-03	17.1	1.37E+00
50	3	969.14*	402	116	1.95	1938.67	1919	27	1.34E-02	8.0	
51	0	1000.11	65	153	1.20	2000.60	1992	17	2.17E-03	45.2	
52	0	1113.37	17	64	0.63	2227.13	2219	10	5.59E-04	95.4	
53	0	1120.40*	397	110	1.97	2241.20	2234	16	1.32E-02	8.1	
54	2	1153.28	33	76	2.58	2306.96	2302	28	1.09E-03	48.4	3.05E+00
55	2	1155.80	65	98	2.13	2312.00	2302	28	2.18E-03	32.9	
56	2	1162.80	41	42	2.13	2326.00	2302	28	1.37E-03	30.3	
57	0	1208.54	27	99	1.51	2417.49	2412	12	9.13E-04	75.1	
58	0	1238.55	167	152	2.37	2477.51	2469	19	5.57E-03	19.3	
59	0	1247.47	14	84	0.61	2495.35	2487	10	4.52E-04	130.0	
60	0	1260.88	94	210	10.83	2522.16	2498	35	3.12E-03	49.4	
61	7	1277.44	37	46	2.32	2555.29	2551	19	1.24E-03	34.2	1.09E+01
62	7	1280.75	62	102	2.63	2561.91	2551	19	2.05E-03	39.0	
63	0	1378.65	120	87	2.41	2757.71	2748	17	4.01E-03	20.1	
64	0	1401.72	32	52	1.58	2803.84	2798	12	1.08E-03	47.5	
65	0	1414.05	63	175	14.71	2828.50	2812	34	2.11E-03	66.3	
66	0	1434.79	29	138	11.44	2869.98	2847	28	9.51E-04	118.7	
67	0	1460.94*	915	91	2.10	2922.27	2913	20	3.05E-02	4.4	
68	0	1510.13	27	52	2.05	3020.64	3015	9	9.07E-04	52.1	
69	0	1564.92	29	48	3.82	3130.21	3120	19	9.50E-04	60.9	
70	1	1588.54	77	45	2.51	3177.46	3157	39	2.55E-03	22.9	2.21E+00
71	1	1592.75	42	45	2.51	3185.87	3157	39	1.39E-03	42.1	
72	0	1621.34	48	43	1.17	3243.04	3234	19	1.60E-03	35.8	
73	0	1631.99	29	55	2.65	3264.35	3255	13	9.72E-04	53.4	
74	0	1730.28	61	56	1.56	3460.91	3452	15	2.03E-03	29.7	
75	0	1764.86*	261	30	2.47	3530.06	3521	17	8.69E-03	8.9	
76	0	1828.34	14	32	1.39	3657.00	3649	13	4.70E-04	87.3	
77	6	1847.39	56	17	2.83	3695.08	3690	17	1.88E-03	19.5	7.89E-01
78	6	1851.55	12	6	1.63	3703.41	3690	17	4.03E-04	45.7	

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

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530015       *
* Acquisition date : 10-DEC-2007 19:34:36 Detector SN#    :                 *
* Detector ID      : GAM01                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:04.24     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530015           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.4826E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-MAR-2007 03:44:30 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	4.982E+00	5.168E-01	2.176E-01	0.000E+00
CS-137	1.458E-01	3.881E-02	2.441E-02	0.000E+00
EU-155	8.069E-02	5.844E-02	7.338E-02	0.000E+00
TL-208	3.154E-01	4.135E-02	2.378E-02	0.000E+00
BI-212	6.625E-01	2.561E-01	1.886E-01	0.000E+00
PB-212	9.628E-01	8.000E-02	4.224E-02	0.000E+00
BI-214	8.961E-01	9.254E-02	4.572E-02	0.000E+00
PB-214	9.361E-01	8.779E-02	4.856E-02	0.000E+00
RA-223	3.294E-01	1.197E-01	1.249E-01	0.000E+00
AC-228	1.005E+00	1.539E-01	9.005E-02	0.000E+00
PA-234M	3.244E+00	2.891E+00	2.735E+00	0.000E+00
TH-234	1.009E+00	2.862E-01	3.320E-01	0.000E+00
U-235	1.744E-01	1.006E-01	1.466E-01	0.000E+00
NP-236	3.699E-02	3.275E-02	4.147E-02	0.000E+00
NP-237	4.551E-01	1.023E-01	1.543E-01	0.000E+00
AM-243	1.930E-01	3.379E-02	3.564E-02	0.000E+00
CM-243	7.299E-02	5.286E-02	6.993E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	1.446E-02	1.575E-02	2.776E-02	0.000E+00	NOT IDENT.
RH-101	-6.356E-03	1.602E-02	2.519E-02	0.000E+00	NOT IDENT.
SB-125	1.057E-02	3.815E-02	6.583E-02	0.000E+00	NOT IDENT.
PO-209	2.936E+00	3.886E+00	5.070E+00	0.000E+00	NOT IDENT.
BI-211	2.602E-01	7.012E-01	6.820E-01	0.000E+00	NOT IDENT.
PA-233	2.165E-03	2.651E-02	4.625E-02	0.000E+00	NOT IDENT.
NP-239	3.179E-02	9.426E-02	1.681E-01	0.000E+00	NOT IDENT.
AM-241	1.310E-02	6.834E-02	1.067E-01	0.000E+00	NOT IDENT.
AM-246	5.900E-02	5.062E-02	9.085E-02	0.000E+00	NOT IDENT.
CF-249	4.048E-03	1.709E-02	2.960E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:46:43.62

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530015.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:34:36
Sample ID        : G198530015           Sample quantity  : 1.48260E+02 GRAM
Detector name    : GAM01                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:04.24  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	915	10.66*	1.047E+00	4.982E+00	4.982E+00	10.59
CS-137	661.66	430	85.10*	2.112E+00	1.453E-01	1.458E-01	27.16
EU-155	105.31	182	21.20*	6.630E+00	7.887E-02	8.069E-02	73.90
TL-208	277.36	70	6.31	4.333E+00	1.561E-01	1.561E-01	143.63
	510.77	261	22.60	2.640E+00	2.662E-01	2.662E-01	58.24
	583.19	1035	84.50*	2.359E+00	3.154E-01	3.154E-01	13.38
	763.13	------	1.81	1.860E+00	------	Line Not Found	------
	860.56	120	12.42	1.667E+00	3.530E-01	3.530E-01	38.86
BI-212	727.33	250	11.80*	1.941E+00	6.625E-01	6.625E-01	39.45
	785.37	99	1.10	1.811E+00	3.011E+00	3.011E+00	45.49
	1620.50	48	1.49	9.724E-01	2.010E+00	2.010E+00	71.80
PB-212	74.81	1013	10.40	4.677E+00	1.266E+00	1.266E+00	17.86
	77.11	1690	17.50	4.975E+00	1.180E+00	1.180E+00	12.89
	87.30	543	7.81	5.843E+00	7.226E-01	7.226E-01	22.93
	238.63	3337	43.30*	4.864E+00	9.628E-01	9.628E-01	8.48
	300.09	198	3.28	4.079E+00	8.989E-01	8.989E-01	45.17
BI-214	609.31	1544	46.10*	2.271E+00	8.960E-01	8.961E-01	10.54
	768.36	153	4.94	1.849E+00	1.018E+00	1.018E+00	40.85
	806.17	------	1.22	1.770E+00	------	Line Not Found	------
	934.06	78	3.03	1.545E+00	1.016E+00	1.016E+00	62.75
	1120.29	397	15.10	1.310E+00	1.220E+00	1.220E+00	17.73
	1155.19	65	1.63	1.274E+00	1.911E+00	1.911E+00	66.19
	1238.11	167	5.79	1.199E+00	1.462E+00	1.462E+00	39.14
	1280.96	62	1.43	1.165E+00	2.248E+00	2.248E+00	78.13
	1377.67	120	4.00	1.096E+00	1.667E+00	1.667E+00	40.69
	1401.50	32	1.27	1.081E+00	1.435E+00	1.435E+00	95.12
	1407.98	------	2.15	1.077E+00	------	Line Not Found	------
	1509.23	27	2.11	1.021E+00	7.670E-01	7.670E-01	104.27
	1729.60	61	2.92	9.347E-01	1.356E+00	1.356E+00	59.74
	1764.49	261	15.40	9.246E-01	1.112E+00	1.112E+00	18.80
PB-214	74.81	1013	6.44	4.677E+00	2.044E+00	2.044E+00	17.86
	77.11	1690	10.80	4.975E+00	1.912E+00	1.912E+00	12.89

Sample ID : G198530015 Acquisition date : 10-DEC-2007 19:34:36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	543	4.84	5.843E+00	1.166E+00	1.166E+00	22.93
	242.00	881	7.43	4.818E+00	1.496E+00	1.496E+00	18.95
	295.22	1179	19.30	4.130E+00	8.990E-01	8.991E-01	12.02
	351.93	2079	37.60*	3.589E+00	9.360E-01	9.361E-01	9.57
RA-223	269.46	329	13.70*	4.426E+00	3.294E-01	3.294E-01	37.08
AC-228	129.07	185	2.42	6.747E+00	6.875E-01	6.875E-01	69.36
	209.25	330	3.89	5.344E+00	9.654E-01	9.654E-01	38.52
	270.25	329	3.46	4.426E+00	1.304E+00	1.304E+00	37.08
	338.32	731	11.27	3.705E+00	1.064E+00	1.064E+00	20.87
	409.46	83	1.92	3.174E+00	8.311E-01	8.311E-01	80.45
	463.00	237	4.40	2.867E+00	1.141E+00	1.141E+00	38.87
	794.95	198	4.25	1.793E+00	1.582E+00	1.582E+00	34.13
	911.20	675	25.80*	1.582E+00	1.005E+00	1.005E+00	15.62
	964.77	151	4.99	1.501E+00	1.227E+00	1.227E+00	35.34
	968.97	402	15.80	1.495E+00	1.035E+00	1.035E+00	18.45
	1588.20	77	3.22	9.857E-01	1.467E+00	1.467E+00	46.09
PA-234M	1001.03	65	0.84*	1.452E+00	3.244E+00	3.244E+00	90.93
TH-234	63.29	140	4.80	3.192E+00	5.542E-01	5.542E-01	100.36
	92.58	555	5.41*	6.184E+00	1.009E+00	1.009E+00	28.94
U-235	143.76	207	10.96*	6.568E+00	1.744E-01	1.744E-01	58.86
NP-236	98.44	149	38.00*	6.451E+00	3.699E-02	3.699E-02	90.33
NP-237	86.48	543	12.40*	5.843E+00	4.551E-01	4.551E-01	22.93
AM-243	74.66	1013	68.20*	4.677E+00	1.930E-01	1.930E-01	17.86
CM-243	103.76	182	23.00*	6.630E+00	7.270E-02	7.299E-02	73.90

Flag: "*" = Keyline

Sample ID : G198530015 Acquisition date : 10-DEC-2007 19:34:36

Total number of lines in spectrum 78
Number of unidentified lines 32
Number of lines tentatively identified by NID 46 58.97%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.982E+00	4.982E+00	0.527E+00	10.59	
CS-137	9.47E+08S	1.00	1.453E-01	1.458E-01	0.396E-01	27.16	
EU-155	1.57E+08S	1.02	7.887E-02	8.069E-02	5.964E-02	73.90	
TL-208	4.43E+17S	1.00	3.154E-01	3.154E-01	0.422E-01	13.38	
BI-212	4.43E+17S	1.00	6.625E-01	6.625E-01	2.613E-01	39.45	
PB-212	4.43E+17S	1.00	9.628E-01	9.628E-01	0.816E-01	8.48	
BI-214	5.05E+10S	1.00	8.960E-01	8.961E-01	0.944E-01	10.54	
PB-214	5.05E+10S	1.00	9.360E-01	9.361E-01	0.896E-01	9.57	
RA-223	1.04E+12S	1.00	3.294E-01	3.294E-01	1.221E-01	37.08	
AC-228	4.43E+17S	1.00	1.005E+00	1.005E+00	0.157E+00	15.62	
PA-234M	1.41E+17S	1.00	3.244E+00	3.244E+00	2.950E+00	90.93	
TH-234	1.41E+17S	1.00	1.009E+00	1.009E+00	0.292E+00	28.94	
U-235	2.22E+16S	1.00	1.744E-01	1.744E-01	1.027E-01	58.86	
NP-236	4.89E+12S	1.00	3.699E-02	3.699E-02	3.342E-02	90.33	
NP-237	6.75E+13S	1.00	4.551E-01	4.551E-01	1.044E-01	22.93	
AM-243	2.33E+11S	1.00	1.930E-01	1.930E-01	0.345E-01	17.86	
CM-243	8.99E+08S	1.00	7.270E-02	7.299E-02	5.394E-02	73.90	
			---	---			
	Total Activity :		1.550E+01	1.550E+01			

Grand Total Activity : 1.550E+01 1.550E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530015 Acquisition date : 10-DEC-2007 19:34:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	84.22	218	1063	1.46	168.50	165	27	7.27E-03	50.3	5.61E+00	
2	89.90	417	1139	1.38	179.87	165	27	1.39E-02	30.2	6.02E+00	
0	108.94	127	1028	1.37	217.96	215	8	4.24E-03	88.9	6.71E+00	
0	153.48	161	960	2.08	307.07	304	8	5.35E-03	68.6	6.41E+00	
0	185.97	742	1469	1.49	372.06	365	14	2.47E-02	24.6	5.78E+00	
0	287.08	47	581	0.90	574.33	571	9	1.55E-03	****	4.22E+00	
0	328.26	70	560	1.08	656.71	652	9	2.33E-03	****	3.80E+00	
0	359.19	70	486	3.84	718.59	712	12	2.32E-03	****	3.53E+00	
0	634.60	85	196	5.82	1269.51	1263	14	2.83E-03	73.2	2.19E+00	
0	641.85	79	257	4.93	1284.02	1277	16	2.62E-03	93.9	2.17E+00	
0	772.01	27	144	1.83	1544.38	1542	8	9.01E-04	****	1.84E+00	
0	781.14	79	142	1.18	1562.63	1557	12	2.64E-03	64.1	1.82E+00	
0	827.76	43	225	4.91	1655.88	1648	18	1.42E-03	****	1.73E+00	
0	834.25	19	187	3.87	1668.86	1666	11	6.45E-04	****	1.72E+00	
0	881.71	19	131	3.32	1763.79	1758	11	6.25E-04	****	1.63E+00	
0	894.29	28	95	0.72	1788.95	1784	9	9.28E-04	****	1.61E+00	
0	903.99	17	150	1.50	1808.36	1804	10	5.51E-04	****	1.59E+00	
0	1113.37	17	64	0.63	2227.13	2219	10	5.59E-04	****	1.32E+00	
2	1153.28	33	76	2.58	2306.96	2302	28	1.09E-03	96.9	1.28E+00	
2	1162.80	41	42	2.13	2326.00	2302	28	1.37E-03	60.5	1.27E+00	
0	1208.54	27	99	1.51	2417.49	2412	12	9.13E-04	****	1.22E+00	
0	1247.47	14	84	0.61	2495.35	2487	10	4.52E-04	****	1.19E+00	
0	1260.88	94	210	10.83	2522.16	2498	35	3.12E-03	98.9	1.18E+00	
7	1277.44	37	46	2.32	2555.29	2551	19	1.24E-03	68.4	1.17E+00	
0	1414.05	63	175	14.71	2828.50	2812	34	2.11E-03	****	1.07E+00	
0	1434.79	29	138	11.44	2869.98	2847	28	9.51E-04	****	1.06E+00	
0	1564.92	29	48	3.82	3130.21	3120	19	9.50E-04	****	9.96E-01	
1	1592.75	42	45	2.51	3185.87	3157	39	1.39E-03	84.3	9.84E-01	
0	1631.99	29	55	2.65	3264.35	3255	13	9.72E-04	****	9.68E-01	
0	1828.34	14	32	1.39	3657.00	3649	13	4.70E-04	****	9.08E-01	
6	1847.39	56	17	2.83	3695.08	3690	17	1.88E-03	38.9	9.04E-01	
6	1851.55	12	6	1.63	3703.41	3690	17	4.03E-04	91.4	9.03E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530015            *
* Acquisition date : 10-DEC-2007 19:34:36 Detector SN#    :                 *
* Detector ID      : GAM01                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:04.24     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530015           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.4826E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  7-MAR-2007 03:44:30 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	LC (pCi/GRAM)	TPU
K-40	4.982E+00	5.168E-01	1.089E-01	5.168E-01
CS-137	1.458E-01	3.881E-02	1.221E-02	3.881E-02
EU-155	8.069E-02	5.844E-02	3.671E-02	5.844E-02
TL-208	3.154E-01	4.135E-02	1.190E-02	4.135E-02
BI-212	6.625E-01	2.561E-01	9.438E-02	2.561E-01
PB-212	9.628E-01	8.000E-02	2.113E-02	8.000E-02
BI-214	8.961E-01	9.254E-02	2.288E-02	9.254E-02
PB-214	9.361E-01	8.779E-02	2.429E-02	8.779E-02
RA-223	3.294E-01	1.197E-01	6.248E-02	1.197E-01
AC-228	1.005E+00	1.539E-01	4.505E-02	1.539E-01
PA-234M	3.244E+00	2.891E+00	1.368E+00	2.891E+00
TH-234	1.009E+00	2.862E-01	1.661E-01	2.862E-01
U-235	1.744E-01	1.006E-01	7.337E-02	1.006E-01
NP-236	3.699E-02	3.275E-02	2.075E-02	3.275E-02
NP-237	4.551E-01	1.023E-01	7.717E-02	1.023E-01
AM-243	1.930E-01	3.379E-02	1.783E-02	3.379E-02
CM-243	7.299E-02	5.286E-02	3.499E-02	5.286E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.446E-02	1.575E-02	1.389E-02	1.575E-02	NOT IDENT.
RH-101	-6.356E-03	1.602E-02	1.260E-02	1.602E-02	NOT IDENT.
SB-125	1.057E-02	3.815E-02	3.293E-02	3.815E-02	NOT IDENT.
PO-209	2.936E+00	3.886E+00	2.536E+00	3.886E+00	NOT IDENT.
BI-211	2.602E-01	7.012E-01	3.412E-01	7.012E-01	NOT IDENT.
PA-233	2.165E-03	2.651E-02	2.314E-02	2.651E-02	NOT IDENT.
NP-239	3.179E-02	9.426E-02	8.410E-02	9.426E-02	NOT IDENT.
AM-241	1.310E-02	6.834E-02	5.336E-02	6.834E-02	NOT IDENT.
AM-246	5.900E-02	5.062E-02	4.545E-02	5.062E-02	NOT IDENT.
CF-249	4.048E-03	1.709E-02	1.481E-02	1.709E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	1053.5662
63.29	1218.3423
74.66	1393.9355
74.81	1394.1464
74.81	1394.1464
77.11	1397.3422
77.11	1397.3422
86.48	1327.5675
87.30	1328.5690
87.30	1328.5690
92.58	1334.9167
98.44	1120.8997
103.76	1221.6664
105.31	1113.6893
129.07	1201.3060
143.76	1235.4451
198.00	1094.0151
209.25	1036.3337
228.18	907.5518
238.63	897.5058
242.00	899.0231
269.46	656.7101
270.25	702.3135
277.36	689.0255
295.22	610.7139
300.09	592.6025
312.17	565.9117
338.32	545.0720
351.93	495.8450
387.59	473.0114
409.46	437.3217
427.87	371.4558
463.00	330.2660
510.77	312.5452
583.19	265.7789
609.31	271.5090
661.66	227.3709
727.33	223.3626
763.13	200.6963
768.36	189.1250
785.37	156.6501
794.95	162.1848
806.17	173.8963
831.80	155.9143
860.56	159.9219
896.60	139.8783
911.20	163.1841
934.06	133.0954
964.77	156.2490
968.97	156.3820
1001.03	134.8979
1078.86	106.1412
1120.29	123.6048
1155.19	132.1335
1173.23	113.3108
1238.11	103.7734
1280.96	89.5882
1332.51	85.6362
1377.67	90.0432
1401.50	63.2645
1407.98	66.6602
1460.80	72.9570
1509.23	66.7162
1588.20	47.9182
1620.50	58.0700
1729.60	54.0911
1764.49	31.0519

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530015

Total Uranium Activity	8.0709E-02	ug/g
Total Uranium Counting Unc.	4.6558E-02	ug/g
Total Uranium Tpu	4.6558E-08	ug/g
Total Uranium Mda	3.3947E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:47:21.69

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530016.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:34:59
Sample ID        : G198530016           Sample quantity  : 1.35640E+02 GRAM
Detector name    : GAM02                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:08.95  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	53.39	39	634	0.47	106.34	104	5	1.32E-03	97.0	
2	0	63.26*	117	1465	0.99	126.05	121	10	3.92E-03	68.1	
3	2	74.82*	959	1086	1.10	149.16	142	23	3.20E-02	7.5	2.52E+00
4	2	77.13*	1459	880	0.99	153.78	142	23	4.86E-02	4.5	
5	2	79.44	105	984	1.11	158.38	142	23	3.49E-03	54.5	
6	3	84.12*	363	947	1.24	167.74	164	29	1.21E-02	16.7	2.05E+00
7	3	87.22	692	920	1.16	173.94	164	29	2.31E-02	8.2	
8	3	90.00	541	890	1.23	179.48	164	29	1.80E-02	10.2	
9	3	92.67*	756	973	1.26	184.82	164	29	2.52E-02	10.0	
10	3	94.44*	150	942	1.27	188.37	164	29	5.00E-03	45.9	
11	0	105.54	231	1110	2.04	210.55	206	9	7.71E-03	26.8	
12	0	129.00	168	1062	0.97	257.43	254	8	5.59E-03	34.5	
13	0	143.33*	105	1147	1.14	286.04	282	9	3.49E-03	64.5	
14	0	154.16	146	921	1.08	307.68	304	8	4.88E-03	37.0	
15	0	185.82*	496	1219	1.34	370.96	366	11	1.65E-02	16.5	
16	3	205.98	119	857	1.51	411.25	407	16	3.97E-03	45.2	1.47E+00
17	3	209.32	389	655	1.24	417.92	407	16	1.30E-02	12.0	
18	0	224.22	92	619	1.89	447.68	445	8	3.05E-03	48.3	
19	6	236.43	85	677	1.44	472.09	469	27	2.85E-03	55.8	2.81E+00
20	6	238.62*	3935	527	1.08	476.46	469	27	1.31E-01	1.9	
21	6	241.44*	852	732	1.73	482.10	469	27	2.84E-02	9.0	
22	0	270.47	266	734	1.41	540.11	535	11	8.88E-03	20.7	
23	0	277.45	227	859	1.37	554.06	547	14	7.58E-03	28.1	
24	0	295.13*	1063	747	1.18	589.38	582	13	3.54E-02	6.4	
25	0	299.86	211	605	1.25	598.83	595	10	7.04E-03	22.8	
26	0	328.13	182	394	0.98	655.34	652	7	6.07E-03	19.6	
27	5	338.29	765	379	1.26	675.63	671	20	2.55E-02	5.7	1.36E+00
28	5	341.29	106	553	2.10	681.63	671	20	3.53E-03	54.1	
29	0	351.86*	1734	450	1.24	702.75	698	9	5.78E-02	3.5	
30	0	386.19	35	296	1.10	771.34	769	7	1.15E-03	84.1	
31	0	409.60	89	254	0.88	818.13	815	7	2.98E-03	31.4	
32	0	453.17	68	328	4.07	905.20	900	11	2.27E-03	52.9	
33	0	462.90	256	319	1.78	924.64	918	13	8.53E-03	15.7	
34	0	478.11	52	165	1.75	955.03	952	7	1.72E-03	43.7	
35	0	510.73*	321	451	1.66	1020.23	1012	17	1.07E-02	20.3	
36	0	521.32	94	386	5.63	1041.38	1035	17	3.15E-03	48.6	
37	0	562.01	28	296	1.62	1122.69	1121	10	9.21E-04	117.9	
38	0	583.06*	1171	281	1.44	1164.77	1159	14	3.90E-02	4.9	

Sample ID : G198530016 Acquisition date : 10-DEC-2007 19:34:59

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	609.17*	1361	315	1.47	1216.95	1209	16	4.54E-02	4.2	
40	0	661.35	56	191	1.33	1321.22	1316	9	1.88E-03	46.1	
41	0	665.94	76	250	3.24	1330.39	1325	12	2.54E-03	42.9	
42	0	684.64	44	145	1.32	1367.77	1365	8	1.45E-03	50.8	
43	0	727.21	327	200	1.39	1452.84	1448	12	1.09E-02	10.3	
44	2	767.97*	65	183	2.02	1534.30	1528	23	2.17E-03	46.9	2.47E+00
45	2	772.18*	54	162	2.03	1542.70	1528	23	1.80E-03	52.8	
46	0	785.45	67	127	1.36	1569.23	1566	9	2.22E-03	32.8	
47	0	794.60	165	175	1.65	1587.52	1580	14	5.50E-03	18.7	
48	0	802.54	33	124	1.28	1603.38	1599	9	1.12E-03	62.3	
49	0	816.70	22	81	1.62	1631.68	1630	8	7.39E-04	73.2	
50	0	835.48	82	130	2.32	1669.22	1663	11	2.73E-03	29.3	
51	0	840.18	65	139	1.82	1678.61	1673	13	2.18E-03	39.3	
52	0	860.10	152	135	1.78	1718.42	1711	13	5.08E-03	17.7	
53	0	900.65	20	130	0.63	1799.46	1792	12	6.76E-04	115.3	
54	0	911.04	869	184	1.85	1820.23	1814	16	2.90E-02	4.9	
55	0	934.28	91	93	1.64	1866.68	1861	11	3.02E-03	23.2	
56	1	964.42	169	119	1.80	1926.91	1922	22	5.64E-03	14.0	2.28E+00
57	1	968.65*	481	99	1.86	1935.36	1922	22	1.60E-02	6.5	
58	0	1000.70*	33	117	1.23	1999.43	1993	13	1.11E-03	83.2	
59	0	1080.56	35	141	4.47	2159.04	2146	20	1.17E-03	85.4	
60	0	1119.82	320	106	1.64	2237.51	2229	15	1.07E-02	8.9	
61	0	1237.94	89	143	1.52	2473.59	2465	14	2.96E-03	30.6	
62	0	1279.94	48	61	1.03	2557.54	2552	11	1.61E-03	34.4	
63	0	1377.89	73	82	2.66	2753.31	2748	15	2.42E-03	30.5	
64	0	1408.12	29	66	2.51	2813.73	2807	10	9.52E-04	54.1	
65	0	1460.40*	932	56	2.13	2918.25	2909	17	3.11E-02	3.9	
66	0	1494.83	53	24	5.85	2987.06	2979	16	1.77E-03	24.8	
67	4	1500.60	30	11	1.85	2998.59	2995	14	1.00E-03	25.6	1.40E+00
68	4	1502.81	27	20	2.12	3003.00	2995	14	8.96E-04	41.6	
69	0	1510.31	80	57	4.92	3017.99	3009	19	2.66E-03	25.3	
70	0	1517.09	24	17	1.50	3031.55	3028	8	7.90E-04	38.0	
71	2	1588.15	78	59	2.61	3173.59	3166	31	2.59E-03	25.1	3.94E+00
72	2	1592.17	40	40	1.95	3181.62	3166	31	1.34E-03	37.1	
73	2	1595.57	40	44	2.38	3188.43	3166	31	1.34E-03	40.1	
74	0	1631.59	34	72	3.37	3260.43	3246	19	1.14E-03	61.5	
75	0	1729.77	51	49	1.63	3456.68	3449	14	1.71E-03	32.2	
76	0	1736.05	9	24	1.81	3469.24	3462	9	2.95E-04	106.2	
77	0	1764.20*	220	30	2.76	3525.50	3517	17	7.33E-03	10.3	
78	0	1847.12	40	19	1.19	3691.26	3686	11	1.34E-03	26.4	
79	0	1860.73	17	50	6.86	3718.47	3698	25	5.67E-04	114.6	
80	0	1875.85	7	21	0.48	3748.70	3742	9	2.18E-04	135.7	
81	0	1955.96	12	22	2.46	3908.85	3901	11	4.02E-04	80.6	

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]G198530016       *
* Acquisition date : 10-DEC-2007 19:34:59 Detector SN#    :                 *
* Detector ID      : GAM02                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:08.95     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530016           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.3564E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 22-OCT-2007 15:13:16 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	5.450E+00	5.472E-01	1.993E-01	0.000E+00
CS-137	2.028E-02	1.835E-02	2.349E-02	0.000E+00
EU-155	1.165E-01	6.168E-02	6.903E-02	0.000E+00
TL-208	3.787E-01	4.239E-02	2.190E-02	0.000E+00
BI-212	9.180E-01	1.941E-01	1.793E-01	0.000E+00
PB-212	1.242E+00	8.883E-02	3.744E-02	0.000E+00
BI-214	8.374E-01	8.456E-02	4.339E-02	0.000E+00
PB-214	8.430E-01	7.514E-02	4.773E-02	0.000E+00
RA-223	2.912E-01	1.195E-01	1.125E-01	0.000E+00
AC-228	1.369E+00	1.676E-01	8.543E-02	0.000E+00
PA-234M	1.757E+00	2.866E+00	2.665E+00	0.000E+00
TH-234	1.605E+00	3.397E-01	2.917E-01	0.000E+00
U-235	9.798E-02	1.240E-01	1.297E-01	0.000E+00
NP-237	6.863E-01	1.248E-01	1.370E-01	0.000E+00
AM-243	2.252E-01	3.778E-02	3.388E-02	0.000E+00
CM-243	1.053E-01	5.579E-02	6.121E-02	0.000E+00
AM-246	6.031E-02	1.011E-01	8.635E-02	0.000E+00
CF-249	1.027E-02	1.694E-02	2.656E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-7.862E-03	1.541E-02	2.536E-02	0.000E+00	NOT IDENT.
RH-101	9.189E-03	1.479E-02	2.301E-02	0.000E+00	NOT IDENT.
SB-125	6.397E-03	3.717E-02	6.375E-02	0.000E+00	NOT IDENT.
PO-209	1.006E+00	3.117E+00	4.635E+00	0.000E+00	NOT IDENT.
BI-211	3.778E-01	4.610E-01	7.144E-01	0.000E+00	NOT IDENT.
PA-233	-1.049E-02	2.337E-02	4.031E-02	0.000E+00	NOT IDENT.
NP-236	2.701E-02	2.836E-02	4.158E-02	0.000E+00	NOT IDENT.
NP-239	-5.810E-02	1.007E-01	1.459E-01	0.000E+00	NOT IDENT.
AM-241	6.268E-03	7.105E-02	1.183E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:47:22.72

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530016.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:34:59
Sample ID        : G198530016           Sample quantity  : 1.35640E+02 GRAM
Detector name    : GAM02                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:08.95  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	932	10.66*	1.065E+00	5.450E+00	5.450E+00	10.25
CS-137	661.66	56	85.10*	2.182E+00	2.020E-02	2.028E-02	92.36
EU-155	105.31	231	21.20*	6.362E+00	1.138E-01	1.165E-01	54.04
TL-208	277.36	227	6.31	4.353E+00	5.498E-01	5.498E-01	56.65
	510.77	321	22.60	2.710E+00	3.483E-01	3.483E-01	41.00
	583.19	1171	84.50*	2.430E+00	3.787E-01	3.787E-01	11.42
	763.13	------	1.81	1.923E+00	------	Line Not Found	------
	860.56	152	12.42	1.724E+00	4.731E-01	4.731E-01	36.26
BI-212	727.33	327	11.80*	2.008E+00	9.180E-01	9.180E-01	21.58
	785.37	67	1.10	1.873E+00	2.148E+00	2.148E+00	65.97
	1620.50	------	1.49	9.857E-01	------	Line Not Found	------
PB-212	74.81	959	10.40	4.148E+00	1.477E+00	1.477E+00	17.12
	77.11	1459	17.50	4.420E+00	1.253E+00	1.253E+00	12.18
	87.30	692	7.81	5.397E+00	1.090E+00	1.090E+00	18.55
	238.63	3935	43.30*	4.862E+00	1.242E+00	1.242E+00	7.30
	300.09	211	3.28	4.106E+00	1.042E+00	1.042E+00	46.10
BI-214	609.31	1361	46.10*	2.342E+00	8.373E-01	8.374E-01	10.30
	768.36	65	4.94	1.912E+00	4.588E-01	4.588E-01	94.11
	806.17	------	1.22	1.829E+00	------	Line Not Found	------
	934.06	91	3.03	1.596E+00	1.243E+00	1.243E+00	46.99
	1120.29	320	15.10	1.346E+00	1.047E+00	1.047E+00	18.88
	1155.19	------	1.63	1.308E+00	------	Line Not Found	------
	1238.11	89	5.79	1.228E+00	8.285E-01	8.285E-01	61.41
	1280.96	48	1.43	1.192E+00	1.879E+00	1.879E+00	69.13
	1377.67	73	4.00	1.118E+00	1.081E+00	1.081E+00	61.38
	1401.50	------	1.27	1.102E+00	------	Line Not Found	------
	1407.98	29	2.15	1.097E+00	8.039E-01	8.040E-01	108.41
	1509.23	80	2.11	1.038E+00	2.417E+00	2.417E+00	51.11
	1729.60	51	2.92	9.454E-01	1.231E+00	1.231E+00	64.72
	1764.49	220	15.40	9.348E-01	1.014E+00	1.015E+00	21.46
PB-214	74.81	959	6.44	4.148E+00	2.385E+00	2.385E+00	17.12
	77.11	1459	10.80	4.420E+00	2.031E+00	2.031E+00	12.18

Sample ID : G198530016 Acquisition date : 10-DEC-2007 19:34:59

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	692	4.84	5.397E+00	1.758E+00	1.758E+00	18.55
	242.00	852	7.43	4.821E+00	1.580E+00	1.580E+00	19.09
	295.22	1063	19.30	4.156E+00	8.803E-01	8.804E-01	14.46
	351.93	1734	37.60*	3.634E+00	8.429E-01	8.430E-01	9.10
RA-223	269.46	266	13.70*	4.436E+00	2.912E-01	2.912E-01	41.89
AC-228	129.07	168	2.42	6.597E+00	6.972E-01	6.972E-01	69.34
	209.25	389	3.89	5.325E+00	1.248E+00	1.248E+00	24.67
	270.25	266	3.46	4.436E+00	1.153E+00	1.153E+00	41.89
	338.32	765	11.27	3.746E+00	1.204E+00	1.204E+00	12.92
	409.46	89	1.92	3.230E+00	9.583E-01	9.583E-01	62.91
	463.00	256	4.40	2.933E+00	1.317E+00	1.317E+00	31.94
	794.95	165	4.25	1.854E+00	1.392E+00	1.392E+00	38.07
	911.20	869	25.80*	1.634E+00	1.369E+00	1.369E+00	12.49
	964.77	169	4.99	1.549E+00	1.454E+00	1.454E+00	29.05
	968.97	481	15.80	1.543E+00	1.312E+00	1.312E+00	14.94
	1588.20	78	3.22	9.997E-01	1.602E+00	1.602E+00	50.70
PA-234M	1001.03	33	0.84*	1.496E+00	1.757E+00	1.757E+00	166.47
TH-234	63.29	117	4.80	2.596E+00	6.264E-01	6.264E-01	136.45
	92.58	756	5.41*	5.784E+00	1.605E+00	1.605E+00	21.59
U-235	143.76	105	10.96*	6.468E+00	9.798E-02	9.798E-02	129.19
NP-237	86.48	692	12.40*	5.397E+00	6.863E-01	6.863E-01	18.55
AM-243	74.66	959	68.20*	4.148E+00	2.252E-01	2.252E-01	17.12
CM-243	103.76	231	23.00*	6.362E+00	1.049E-01	1.053E-01	54.04
AM-246	1078.86	35	27.80*	1.392E+00	6.031E-02	6.031E-02	170.98
CF-249	387.59	35	66.00*	3.382E+00	1.027E-02	1.027E-02	168.26

Flag: "*" = Keyline

Sample ID : G198530016 Acquisition date : 10-DEC-2007 19:34:59

Total number of lines in spectrum 81
Number of unidentified lines 36
Number of lines tentatively identified by NID 45 55.56%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.450E+00	5.450E+00	0.558E+00	10.25	
CS-137	9.47E+08S	1.00	2.020E-02	2.028E-02	1.873E-02	92.36	
EU-155	1.57E+08S	1.02	1.138E-01	1.165E-01	0.629E-01	54.04	
TL-208	4.43E+17S	1.00	3.787E-01	3.787E-01	0.433E-01	11.42	
BI-212	4.43E+17S	1.00	9.180E-01	9.180E-01	1.981E-01	21.58	
PB-212	4.43E+17S	1.00	1.242E+00	1.242E+00	0.091E+00	7.30	
BI-214	5.05E+10S	1.00	8.373E-01	8.374E-01	0.863E-01	10.30	
PB-214	5.05E+10S	1.00	8.429E-01	8.430E-01	0.767E-01	9.10	
RA-223	1.04E+12S	1.00	2.912E-01	2.912E-01	1.220E-01	41.89	
AC-228	4.43E+17S	1.00	1.369E+00	1.369E+00	0.171E+00	12.49	
PA-234M	1.41E+17S	1.00	1.757E+00	1.757E+00	2.924E+00	166.47	
TH-234	1.41E+17S	1.00	1.605E+00	1.605E+00	0.347E+00	21.59	
U-235	2.22E+16S	1.00	9.798E-02	9.798E-02	12.66E-02	129.19	
NP-237	6.75E+13S	1.00	6.863E-01	6.863E-01	1.273E-01	18.55	
AM-243	2.33E+11S	1.00	2.252E-01	2.252E-01	0.386E-01	17.12	
CM-243	8.99E+08S	1.00	1.049E-01	1.053E-01	0.569E-01	54.04	
AM-246	2.18E+11S	1.00	6.031E-02	6.031E-02	10.31E-02	170.98	
CF-249	1.11E+10S	1.00	1.027E-02	1.027E-02	1.729E-02	168.26	
			---	---			
		Total Activity :	1.601E+01	1.601E+01			

Grand Total Activity : 1.601E+01 1.601E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530016 Acquisition date : 10-DEC-2007 19:34:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	53.39	39	634	0.47	106.34	104	5	1.32E-03	****	1.26E+00	
2	79.44	105	984	1.11	158.38	142	23	3.49E-03	****	4.67E+00	
3	84.12	363	947	1.24	167.74	164	29	1.21E-02	33.4	5.13E+00	
3	90.00	541	890	1.23	179.48	164	29	1.80E-02	20.4	5.61E+00	
3	94.44	150	942	1.27	188.37	164	29	5.00E-03	91.8	5.89E+00	
0	154.16	146	921	1.08	307.68	304	8	4.88E-03	74.1	6.31E+00	
0	185.82	496	1219	1.34	370.96	366	11	1.65E-02	33.1	5.74E+00	
3	205.98	119	857	1.51	411.25	407	16	3.97E-03	90.4	5.38E+00	
0	224.22	92	619	1.89	447.68	445	8	3.05E-03	96.6	5.08E+00	
6	236.43	85	677	1.44	472.09	469	27	2.85E-03	****	4.89E+00	
0	328.13	182	394	0.98	655.34	652	7	6.07E-03	39.3	3.83E+00	
5	341.29	106	553	2.10	681.63	671	20	3.53E-03	****	3.72E+00	
0	453.17	68	328	4.07	905.20	900	11	2.27E-03	****	2.98E+00	
0	478.11	52	165	1.75	955.03	952	7	1.72E-03	87.5	2.86E+00	
0	521.32	94	386	5.63	1041.38	1035	17	3.15E-03	97.2	2.67E+00	
0	562.01	28	296	1.62	1122.69	1121	10	9.21E-04	****	2.51E+00	
0	665.94	76	250	3.24	1330.39	1325	12	2.54E-03	85.9	2.17E+00	
0	684.64	44	145	1.32	1367.77	1365	8	1.45E-03	****	2.12E+00	
2	772.18	54	162	2.03	1542.70	1528	23	1.80E-03	****	1.90E+00	
0	802.54	33	124	1.28	1603.38	1599	9	1.12E-03	****	1.84E+00	
0	816.70	22	81	1.62	1631.68	1630	8	7.39E-04	****	1.81E+00	
0	835.48	82	130	2.32	1669.22	1663	11	2.73E-03	58.6	1.77E+00	
0	840.18	65	139	1.82	1678.61	1673	13	2.18E-03	78.5	1.76E+00	
0	900.65	20	130	0.63	1799.46	1792	12	6.76E-04	****	1.65E+00	
0	1494.83	53	24	5.85	2987.06	2979	16	1.77E-03	49.6	1.05E+00	
4	1500.60	30	11	1.85	2998.59	2995	14	1.00E-03	51.3	1.04E+00	
4	1502.81	27	20	2.12	3003.00	2995	14	8.96E-04	83.2	1.04E+00	
0	1517.09	24	17	1.50	3031.55	3028	8	7.90E-04	75.9	1.03E+00	
2	1592.17	40	40	1.95	3181.62	3166	31	1.34E-03	74.3	9.98E-01	
2	1595.57	40	44	2.38	3188.43	3166	31	1.34E-03	80.2	9.96E-01	
0	1631.59	34	72	3.37	3260.43	3246	19	1.14E-03	****	9.81E-01	
0	1736.05	9	24	1.81	3469.24	3462	9	2.95E-04	****	9.43E-01	
0	1847.12	40	19	1.19	3691.26	3686	11	1.34E-03	52.8	9.13E-01	
0	1860.73	17	50	6.86	3718.47	3698	25	5.67E-04	****	9.10E-01	
0	1875.85	7	21	0.48	3748.70	3742	9	2.18E-04	****	9.06E-01	
0	1955.96	12	22	2.46	3908.85	3901	11	4.02E-04	****	8.92E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530016            *
* Acquisition date : 10-DEC-2007 19:34:59 Detector SN#    :                 *
* Detector ID      : GAM02                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:08.95     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530016           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.3564E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 22-OCT-2007 15:13:16 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	5.450E+00	5.472E-01	9.968E-02	5.472E-01
CS-137	2.028E-02	1.835E-02	1.175E-02	1.835E-02
EU-155	1.165E-01	6.168E-02	3.453E-02	6.168E-02
TL-208	3.787E-01	4.239E-02	1.096E-02	4.239E-02
BI-212	9.180E-01	1.941E-01	8.970E-02	1.941E-01
PB-212	1.242E+00	8.883E-02	1.873E-02	8.883E-02
BI-214	8.374E-01	8.456E-02	2.171E-02	8.456E-02
PB-214	8.430E-01	7.514E-02	2.388E-02	7.514E-02
RA-223	2.912E-01	1.195E-01	5.628E-02	1.195E-01
AC-228	1.369E+00	1.676E-01	4.274E-02	1.676E-01
PA-234M	1.757E+00	2.866E+00	1.333E+00	2.866E+00
TH-234	1.605E+00	3.397E-01	1.459E-01	3.397E-01
U-235	9.798E-02	1.240E-01	6.490E-02	1.240E-01
NP-237	6.863E-01	1.248E-01	6.854E-02	1.248E-01
AM-243	2.252E-01	3.778E-02	1.695E-02	3.778E-02
CM-243	1.053E-01	5.579E-02	3.063E-02	5.579E-02
AM-246	6.031E-02	1.011E-01	4.320E-02	1.011E-01
CF-249	1.027E-02	1.694E-02	1.329E-02	1.694E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-7.862E-03	1.541E-02	1.269E-02	1.541E-02	NOT IDENT.
RH-101	9.189E-03	1.479E-02	1.151E-02	1.479E-02	NOT IDENT.
SB-125	6.397E-03	3.717E-02	3.189E-02	3.717E-02	NOT IDENT.
PO-209	1.006E+00	3.117E+00	2.319E+00	3.117E+00	NOT IDENT.
BI-211	3.778E-01	4.610E-01	3.574E-01	4.610E-01	NOT IDENT.
PA-233	-1.049E-02	2.337E-02	2.017E-02	2.337E-02	NOT IDENT.
NP-236	2.701E-02	2.836E-02	2.080E-02	2.836E-02	NOT IDENT.
NP-239	-5.810E-02	1.007E-01	7.301E-02	1.007E-01	NOT IDENT.
AM-241	6.268E-03	7.105E-02	5.921E-02	7.105E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
*****************************************************************************
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ENERGY	MDA COUNTS
59.54	711.2950
63.29	815.7585
74.66	851.7350
74.81	852.0650
74.81	852.0650
77.11	857.0496
77.11	857.0496
86.48	773.1672
87.30	774.6312
87.30	774.6312
92.58	783.9047
98.44	720.6790
103.76	740.2961
105.31	782.4236
129.07	804.8078
143.76	808.2052
198.00	689.9880
209.25	668.9378
228.18	651.9874
238.63	605.7300
242.00	607.9772
269.46	460.3645
270.25	456.3457
277.36	465.4674
295.22	434.5469
300.09	427.4907
312.17	402.3457
338.32	434.9410
351.93	420.3881
387.59	346.5065
409.46	338.3776
427.87	313.6580
463.00	257.1804
510.77	241.9460
583.19	203.6048
609.31	221.3470
661.66	191.0107
727.33	183.2254
763.13	176.8262
768.36	177.5618
785.37	161.6836
794.95	140.0181
806.17	154.6104
831.80	145.9450
860.56	145.8960
896.60	121.5277
911.20	132.8278
934.06	123.2460
964.77	122.4571
968.97	122.6420
1001.03	115.2513
1078.86	115.4877
1120.29	117.4420
1155.19	119.2723
1173.23	120.9005
1238.11	106.4839
1280.96	90.6834
1332.51	66.8191
1377.67	93.1012
1401.50	61.8677
1407.98	85.7288
1460.80	53.3906
1509.23	44.4985
1588.20	52.9019
1620.50	60.3689
1729.60	26.7480
1764.49	37.5364

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530016

Total Uranium Activity	4.5335E-02	ug/g
Total Uranium Counting Unc.	5.7397E-02	ug/g
Total Uranium Tpu	5.7397E-08	ug/g
Total Uranium Mda	3.0027E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:47:57.55

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530017.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:35:20
Sample ID        : G198530017           Sample quantity  : 1.45000E+02 GRAM
Detector name    : GAM11                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:05.14  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.30*	88	1005	0.91	92.06	89	8	2.92E-03	71.4	
2	0	52.98	62	741	1.03	105.43	103	6	2.06E-03	70.8	
3	0	57.00	40	813	0.96	113.48	112	6	1.35E-03	113.3	
4	0	63.14*	127	1318	0.83	125.76	122	8	4.22E-03	55.0	
5	3	74.76*	1103	981	0.88	149.03	144	20	3.68E-02	5.5	2.38E+00
6	3	77.02*	1771	895	0.86	153.56	144	20	5.90E-02	3.7	
7	3	80.83	90	981	0.95	161.18	144	20	3.01E-03	57.9	
8	5	84.20*	317	1257	1.39	167.93	164	29	1.06E-02	21.4	3.08E+00
9	5	87.15*	852	1211	1.28	173.84	164	29	2.84E-02	8.2	
10	5	89.86	513	878	1.08	179.26	164	29	1.71E-02	10.2	
11	5	92.68*	811	1119	1.27	184.89	164	29	2.70E-02	9.3	
12	0	99.38*	140	965	1.16	198.32	195	8	4.68E-03	42.4	
13	0	105.38	85	1048	0.83	210.32	207	8	2.84E-03	66.6	
14	0	122.72	42	831	1.08	245.03	241	7	1.38E-03	116.2	
15	0	128.92	293	980	1.12	257.44	254	8	9.76E-03	19.4	
16	0	139.86*	31	611	0.60	279.35	278	5	1.03E-03	131.2	
17	0	143.63*	139	963	1.75	286.88	283	8	4.64E-03	43.1	
18	0	154.27	127	817	1.08	308.19	306	7	4.23E-03	38.4	
19	0	163.13	103	820	2.04	325.93	322	8	3.44E-03	49.1	
20	0	185.83*	582	875	1.17	371.36	367	8	1.94E-02	11.0	
21	0	209.17	396	787	0.81	418.07	414	9	1.32E-02	13.7	
22	0	215.51	49	627	0.86	430.77	429	7	1.64E-03	85.5	
23	8	238.57*	4003	594	0.95	476.93	472	16	1.33E-01	1.9	5.68E+00
24	8	241.61	999	762	1.63	483.02	472	16	3.33E-02	7.1	
25	0	270.05*	294	814	1.36	539.95	533	13	9.81E-03	21.4	
26	0	277.45	139	588	1.01	554.76	551	9	4.63E-03	32.6	
27	1	295.17*	1330	382	1.16	590.23	585	19	4.43E-02	4.0	3.70E+00
28	1	300.01	276	379	1.24	599.90	585	19	9.20E-03	13.2	
29	0	314.21	80	505	1.77	628.34	624	10	2.67E-03	53.6	
30	0	327.96	249	673	1.17	655.85	650	13	8.30E-03	22.4	
31	0	338.25	780	485	1.08	676.45	672	10	2.60E-02	6.4	
32	0	351.86*	2256	549	1.15	703.68	697	13	7.52E-02	3.1	
33	2	409.40	155	300	1.32	818.85	815	13	5.16E-03	21.0	4.33E+00
34	2	411.47	46	277	1.23	823.00	815	13	1.55E-03	62.9	
35	0	462.92*	239	251	1.44	925.97	921	9	7.98E-03	14.2	
36	0	477.70	77	179	2.37	955.57	952	8	2.55E-03	32.3	
37	0	510.77*	386	530	1.88	1021.74	1014	18	1.29E-02	18.6	
38	0	583.23*	1075	296	1.43	1166.76	1161	13	3.58E-02	5.1	

Sample ID : G198530017 Acquisition date : 10-DEC-2007 19:35:20

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	609.24*	1481	493	1.36	1218.82	1211	16	4.94E-02	4.4	
40	0	661.61	167	228	1.08	1323.64	1318	11	5.57E-03	19.2	
41	0	665.87	70	188	1.58	1332.16	1328	9	2.34E-03	37.0	
42	0	727.10	246	229	1.56	1454.70	1450	11	8.20E-03	13.5	
43	0	748.77	10	127	0.52	1498.06	1495	8	3.31E-04	198.8	
44	0	755.96	55	110	1.98	1512.46	1509	7	1.82E-03	34.9	
45	0	768.30	168	150	1.45	1537.14	1532	10	5.60E-03	15.8	
46	0	771.82	64	131	1.89	1544.20	1542	8	2.12E-03	33.2	
47	0	785.85	54	151	1.66	1572.28	1568	9	1.79E-03	43.7	
48	0	795.14	137	171	1.40	1590.87	1585	12	4.55E-03	21.0	
49	0	834.31	14	217	0.76	1669.26	1668	10	4.60E-04	200.9	
50	0	860.46*	145	133	1.33	1721.59	1715	11	4.83E-03	19.8	
51	0	904.36	35	61	0.97	1809.43	1807	6	1.16E-03	39.5	
52	0	911.33*	849	141	1.38	1823.39	1818	11	2.83E-02	4.6	
53	0	934.59	68	143	1.68	1869.93	1864	11	2.28E-03	36.3	
54	2	964.88	150	149	1.92	1930.53	1922	24	5.01E-03	19.1	1.31E+00
55	2	969.05	462	126	1.47	1938.89	1922	24	1.54E-02	6.4	
56	0	1000.74*	72	119	1.55	2002.30	1995	14	2.42E-03	37.0	
57	0	1056.97	27	172	4.36	2114.81	2098	18	9.06E-04	115.6	
58	0	1075.59	28	99	3.22	2152.07	2146	12	9.22E-04	74.4	
59	0	1093.97	29	123	1.39	2188.86	2183	12	9.60E-04	79.2	
60	0	1120.68*	369	153	1.57	2242.30	2235	15	1.23E-02	9.4	
61	0	1238.47	124	145	2.11	2478.00	2471	13	4.12E-03	22.1	
62	0	1280.89	42	63	0.76	2562.87	2557	11	1.39E-03	40.1	
63	0	1377.67	107	88	1.93	2756.52	2748	16	3.57E-03	21.8	
64	0	1408.15	60	49	4.66	2817.50	2812	12	2.01E-03	26.4	
65	0	1460.96*	1400	78	1.96	2923.15	2914	17	4.67E-02	3.1	
66	0	1512.34	91	109	5.01	3025.95	3011	30	3.04E-03	35.4	
67	0	1537.23	34	30	2.41	3075.77	3069	13	1.15E-03	36.6	
68	7	1561.50	9	4	1.01	3124.32	3123	12	3.08E-04	38.2	2.22E+00
69	7	1564.67	25	10	2.26	3130.66	3123	12	8.42E-04	29.9	
70	0	1588.11	64	51	1.69	3177.56	3171	12	2.13E-03	25.6	
71	0	1593.97	43	55	2.85	3189.28	3183	14	1.43E-03	39.9	
72	0	1631.27	53	34	1.21	3263.90	3257	13	1.76E-03	27.0	
73	0	1638.46	34	31	4.35	3278.28	3270	14	1.14E-03	38.7	
74	0	1729.89	67	39	1.92	3461.20	3454	12	2.23E-03	22.3	
75	0	1764.66	310	34	1.68	3530.76	3524	16	1.03E-02	7.0	
76	0	1777.87	14	22	1.48	3557.18	3550	10	4.64E-04	69.0	
77	0	1836.67	33	60	8.43	3674.82	3662	24	1.10E-03	64.5	
78	0	1885.79	15	8	1.82	3773.07	3769	8	5.00E-04	41.6	
79	0	1938.06	44	49	9.90	3877.64	3862	28	1.47E-03	47.4	

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]G198530017       *
* Acquisition date : 10-DEC-2007 19:35:20 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:05.14     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530017           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.4500E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-OCT-2007 15:05:44 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	6.444E+00	5.957E-01	1.670E-01	0.000E+00
CS-137	4.834E-02	1.856E-02	1.720E-02	0.000E+00
EU-155	3.318E-02	4.337E-02	5.357E-02	0.000E+00
TL-208	2.801E-01	3.348E-02	1.786E-02	0.000E+00
BI-212	5.553E-01	1.528E-01	1.443E-01	0.000E+00
PB-212	1.026E+00	7.064E-02	3.003E-02	0.000E+00
BI-214	7.342E-01	8.152E-02	3.646E-02	0.000E+00
PB-214	8.830E-01	7.204E-02	3.416E-02	0.000E+00
RA-223	2.599E-01	1.102E-01	8.860E-02	0.000E+00
AC-228	1.073E+00	1.338E-01	7.101E-02	0.000E+00
PA-234M	3.062E+00	2.234E+00	2.016E+00	0.000E+00
TH-234	1.264E+00	2.461E-01	2.105E-01	0.000E+00
U-235	1.062E-01	8.998E-02	1.007E-01	0.000E+00
NP-236	3.026E-02	2.522E-02	2.853E-02	0.000E+00
NP-237	6.017E-01	1.062E-01	9.540E-02	0.000E+00
AM-243	1.650E-01	2.072E-02	2.350E-02	0.000E+00
CM-243	3.001E-02	3.923E-02	4.447E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-5.096E-03	1.174E-02	1.920E-02	0.000E+00	NOT IDENT.
RH-101	1.189E-03	1.120E-02	1.799E-02	0.000E+00	NOT IDENT.
SB-125	1.800E-02	2.772E-02	5.009E-02	0.000E+00	NOT IDENT.
PO-209	-9.107E-01	2.726E+00	3.793E+00	0.000E+00	NOT IDENT.
BI-211	2.753E-01	3.591E-01	5.762E-01	0.000E+00	NOT IDENT.
PA-233	-8.412E-03	2.146E-02	3.148E-02	0.000E+00	NOT IDENT.
NP-239	5.988E-02	6.831E-02	1.213E-01	0.000E+00	NOT IDENT.
AM-241	-2.795E-02	4.234E-02	5.648E-02	0.000E+00	NOT IDENT.
AM-246	-8.461E-03	4.461E-02	6.461E-02	0.000E+00	NOT IDENT.
CF-249	7.505E-03	1.183E-02	2.151E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:47:58.79

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530017.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:35:20
Sample ID        : G198530017           Sample quantity  : 1.45000E+02 GRAM
Detector name    : GAM11                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:05.14  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	1400	10.66*	1.266E+00	6.444E+00	6.444E+00	9.43
CS-137	661.66	167	85.10*	2.533E+00	4.816E-02	4.834E-02	39.17
EU-155	105.31	85	21.20*	7.699E+00	3.243E-02	3.318E-02	133.37
TL-208	277.36	139	6.31	5.035E+00	2.717E-01	2.717E-01	65.43
	510.77	386	22.60	3.148E+00	3.370E-01	3.370E-01	37.70
	583.19	1075	84.50*	2.820E+00	2.801E-01	2.801E-01	12.20
	763.13	------	1.81	2.235E+00	------	Line Not Found	------
	860.56	145	12.42	2.007E+00	3.610E-01	3.610E-01	40.58
BI-212	727.33	246	11.80*	2.332E+00	5.553E-01	5.553E-01	28.08
	785.37	54	1.10	2.177E+00	1.391E+00	1.391E+00	87.84
	1620.50	------	1.49	1.176E+00	------	Line Not Found	------
PB-212	74.81	1103	10.40	6.093E+00	1.082E+00	1.082E+00	12.82
	77.11	1771	17.50	6.323E+00	9.943E-01	9.943E-01	9.97
	87.30	852	7.81	7.096E+00	9.553E-01	9.553E-01	18.01
	238.63	4003	43.30*	5.600E+00	1.026E+00	1.026E+00	7.03
	300.09	276	3.28	4.757E+00	1.100E+00	1.100E+00	26.98
BI-214	609.31	1481	46.10*	2.718E+00	7.342E-01	7.342E-01	11.33
	768.36	168	4.94	2.221E+00	9.504E-01	9.505E-01	32.57
	806.17	------	1.22	2.128E+00	------	Line Not Found	------
	934.06	68	3.03	1.862E+00	7.539E-01	7.539E-01	73.20
	1120.29	369	15.10	1.582E+00	9.596E-01	9.597E-01	19.80
	1155.19	------	1.63	1.540E+00	------	Line Not Found	------
	1238.11	124	5.79	1.449E+00	9.155E-01	9.156E-01	44.54
	1280.96	42	1.43	1.408E+00	1.283E+00	1.284E+00	80.55
	1377.67	107	4.00	1.326E+00	1.254E+00	1.255E+00	44.25
	1401.50	------	1.27	1.308E+00	------	Line Not Found	------
	1407.98	60	2.15	1.303E+00	1.338E+00	1.338E+00	53.20
	1509.23	------	2.11	1.236E+00	------	Line Not Found	------
	1729.60	67	2.92	1.128E+00	1.261E+00	1.261E+00	45.11
	1764.49	310	15.40	1.115E+00	1.121E+00	1.121E+00	15.30
PB-214	74.81	1103	6.44	6.093E+00	1.747E+00	1.747E+00	12.82
	77.11	1771	10.80	6.323E+00	1.611E+00	1.611E+00	9.97

Sample ID : G198530017 Acquisition date : 10-DEC-2007 19:35:20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	852	4.84	7.096E+00	1.541E+00	1.542E+00	18.01
	242.00	999	7.43	5.551E+00	1.505E+00	1.505E+00	15.43
	295.22	1330	19.30	4.814E+00	8.894E-01	8.894E-01	10.10
	351.93	2256	37.60*	4.222E+00	8.830E-01	8.830E-01	8.32
RA-223	269.46	294	13.70*	5.134E+00	2.599E-01	2.599E-01	43.25
AC-228	129.07	293	2.42	7.656E+00	9.820E-01	9.820E-01	39.29
	209.25	396	3.89	6.110E+00	1.034E+00	1.034E+00	27.99
	270.25	294	3.46	5.134E+00	1.029E+00	1.029E+00	43.25
	338.32	780	11.27	4.350E+00	9.883E-01	9.883E-01	13.95
	409.46	155	1.92	3.757E+00	1.332E+00	1.332E+00	42.34
	463.00	239	4.40	3.409E+00	9.913E-01	9.913E-01	29.03
	794.95	137	4.25	2.154E+00	9.270E-01	9.270E-01	42.78
	911.20	849	25.80*	1.905E+00	1.073E+00	1.073E+00	12.72
	964.77	150	4.99	1.809E+00	1.033E+00	1.033E+00	39.05
	968.97	462	15.80	1.802E+00	1.007E+00	1.007E+00	15.16
	1588.20	64	3.22	1.192E+00	1.037E+00	1.037E+00	51.57
PA-234M	1001.03	72	0.84*	1.751E+00	3.062E+00	3.062E+00	74.44
TH-234	63.29	127	4.80	4.571E+00	3.583E-01	3.583E-01	110.11
	92.58	811	5.41*	7.369E+00	1.264E+00	1.264E+00	19.87
U-235	143.76	139	10.96*	7.425E+00	1.062E-01	1.062E-01	86.46
NP-236	98.44	140	38.00*	7.588E+00	3.026E-02	3.026E-02	85.02
NP-237	86.48	852	12.40*	7.096E+00	6.017E-01	6.017E-01	18.01
AM-243	74.66	1103	68.20*	6.093E+00	1.650E-01	1.650E-01	12.82
CM-243	103.76	85	23.00*	7.699E+00	2.989E-02	3.001E-02	133.37

Flag: "*" = Keyline

Sample ID : G198530017 Acquisition date : 10-DEC-2007 19:35:20

Total number of lines in spectrum 79
Number of unidentified lines 36
Number of lines tentatively identified by NID 43 54.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	6.444E+00	6.444E+00	0.608E+00	9.43	
CS-137	9.47E+08S	1.00	4.816E-02	4.834E-02	1.894E-02	39.17	
EU-155	1.57E+08S	1.02	3.243E-02	3.318E-02	4.426E-02	133.37	
TL-208	4.43E+17S	1.00	2.801E-01	2.801E-01	0.342E-01	12.20	
BI-212	4.43E+17S	1.00	5.553E-01	5.553E-01	1.559E-01	28.08	
PB-212	4.43E+17S	1.00	1.026E+00	1.026E+00	0.072E+00	7.03	
BI-214	5.05E+10S	1.00	7.342E-01	7.342E-01	0.832E-01	11.33	
PB-214	5.05E+10S	1.00	8.830E-01	8.830E-01	0.735E-01	8.32	
RA-223	1.04E+12S	1.00	2.599E-01	2.599E-01	1.124E-01	43.25	
AC-228	4.43E+17S	1.00	1.073E+00	1.073E+00	0.137E+00	12.72	
PA-234M	1.41E+17S	1.00	3.062E+00	3.062E+00	2.279E+00	74.44	
TH-234	1.41E+17S	1.00	1.264E+00	1.264E+00	0.251E+00	19.87	
U-235	2.22E+16S	1.00	1.062E-01	1.062E-01	0.918E-01	86.46	
NP-236	4.89E+12S	1.00	3.026E-02	3.026E-02	2.573E-02	85.02	
NP-237	6.75E+13S	1.00	6.017E-01	6.017E-01	1.084E-01	18.01	
AM-243	2.33E+11S	1.00	1.650E-01	1.650E-01	0.211E-01	12.82	
CM-243	8.99E+08S	1.00	2.989E-02	3.001E-02	4.003E-02	133.37	
			---	---			
	Total Activity :		1.659E+01	1.660E+01			

Grand Total Activity : 1.659E+01 1.660E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530017 Acquisition date : 10-DEC-2007 19:35:20

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.30	88	1005	0.91	92.06	89	8	2.92E-03	****	1.71E+00	
0	52.98	62	741	1.03	105.43	103	6	2.06E-03	****	2.86E+00	
0	57.00	40	813	0.96	113.48	112	6	1.35E-03	****	3.56E+00	
3	80.83	90	981	0.95	161.18	144	20	3.01E-03	****	6.66E+00	
5	84.20	317	1257	1.39	167.93	164	29	1.06E-02	42.7	6.91E+00	
5	89.86	513	878	1.08	179.26	164	29	1.71E-02	20.5	7.24E+00	
0	122.72	42	831	1.08	245.03	241	7	1.38E-03	****	7.72E+00	
0	139.86	31	611	0.60	279.35	278	5	1.03E-03	****	7.49E+00	
0	154.27	127	817	1.08	308.19	306	7	4.23E-03	76.9	7.22E+00	
0	163.13	103	820	2.04	325.93	322	8	3.44E-03	98.2	7.04E+00	
0	185.83	582	875	1.17	371.36	367	8	1.94E-02	22.0	6.57E+00	
0	215.51	49	627	0.86	430.77	429	7	1.64E-03	****	5.99E+00	
0	314.21	80	505	1.77	628.34	624	10	2.67E-03	****	4.60E+00	
0	327.96	249	673	1.17	655.85	650	13	8.30E-03	44.8	4.45E+00	
2	411.47	46	277	1.23	823.00	815	13	1.55E-03	****	3.74E+00	
0	477.70	77	179	2.37	955.57	952	8	2.55E-03	64.6	3.32E+00	
0	665.87	70	188	1.58	1332.16	1328	9	2.34E-03	74.1	2.52E+00	
0	748.77	10	127	0.52	1498.06	1495	8	3.31E-04	****	2.27E+00	
0	755.96	55	110	1.98	1512.46	1509	7	1.82E-03	69.9	2.25E+00	
0	771.82	64	131	1.89	1544.20	1542	8	2.12E-03	66.4	2.21E+00	
0	834.31	14	217	0.76	1669.26	1668	10	4.60E-04	****	2.06E+00	
0	904.36	35	61	0.97	1809.43	1807	6	1.16E-03	78.9	1.92E+00	
0	1056.97	27	172	4.36	2114.81	2098	18	9.06E-04	****	1.67E+00	
0	1075.59	28	99	3.22	2152.07	2146	12	9.22E-04	****	1.64E+00	
0	1093.97	29	123	1.39	2188.86	2183	12	9.60E-04	****	1.62E+00	
0	1512.34	91	109	5.01	3025.95	3011	30	3.04E-03	70.7	1.23E+00	
0	1537.23	34	30	2.41	3075.77	3069	13	1.15E-03	73.2	1.22E+00	
7	1561.50	9	4	1.01	3124.32	3123	12	3.08E-04	76.5	1.21E+00	
7	1564.67	25	10	2.26	3130.66	3123	12	8.42E-04	59.7	1.20E+00	
0	1593.97	43	55	2.85	3189.28	3183	14	1.43E-03	79.8	1.19E+00	
0	1631.27	53	34	1.21	3263.90	3257	13	1.76E-03	54.0	1.17E+00	
0	1638.46	34	31	4.35	3278.28	3270	14	1.14E-03	77.4	1.17E+00	
0	1777.87	14	22	1.48	3557.18	3550	10	4.64E-04	****	1.11E+00	
0	1836.67	33	60	8.43	3674.82	3662	24	1.10E-03	****	1.09E+00	
0	1885.79	15	8	1.82	3773.07	3769	8	5.00E-04	83.3	1.08E+00	
0	1938.06	44	49	9.90	3877.64	3862	28	1.47E-03	94.7	1.06E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530017            *
* Acquisition date : 10-DEC-2007 19:35:20 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:05.14     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530017           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.4500E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  2-OCT-2007 15:05:44 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	LC (pCi/GRAM)	TPU
K-40	6.444E+00	5.957E-01	8.357E-02	5.957E-01
CS-137	4.834E-02	1.856E-02	8.606E-03	1.856E-02
EU-155	3.318E-02	4.337E-02	2.680E-02	4.337E-02
TL-208	2.801E-01	3.348E-02	8.937E-03	3.348E-02
BI-212	5.553E-01	1.528E-01	7.220E-02	1.528E-01
PB-212	1.026E+00	7.064E-02	1.502E-02	7.064E-02
BI-214	7.342E-01	8.152E-02	1.824E-02	8.152E-02
PB-214	8.830E-01	7.204E-02	1.709E-02	7.204E-02
RA-223	2.599E-01	1.102E-01	4.432E-02	1.102E-01
AC-228	1.073E+00	1.338E-01	3.552E-02	1.338E-01
PA-234M	3.062E+00	2.234E+00	1.008E+00	2.234E+00
TH-234	1.264E+00	2.461E-01	1.053E-01	2.461E-01
U-235	1.062E-01	8.998E-02	5.040E-02	8.998E-02
NP-236	3.026E-02	2.522E-02	1.427E-02	2.522E-02
NP-237	6.017E-01	1.062E-01	4.773E-02	1.062E-01
AM-243	1.650E-01	2.072E-02	1.176E-02	2.072E-02
CM-243	3.001E-02	3.923E-02	2.225E-02	3.923E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-5.096E-03	1.174E-02	9.608E-03	1.174E-02	NOT IDENT.
RH-101	1.189E-03	1.120E-02	9.001E-03	1.120E-02	NOT IDENT.
SB-125	1.800E-02	2.772E-02	2.506E-02	2.772E-02	NOT IDENT.
PO-209	-9.107E-01	2.726E+00	1.898E+00	2.726E+00	NOT IDENT.
BI-211	2.753E-01	3.591E-01	2.883E-01	3.591E-01	NOT IDENT.
PA-233	-8.412E-03	2.146E-02	1.575E-02	2.146E-02	NOT IDENT.
NP-239	5.988E-02	6.831E-02	6.070E-02	6.831E-02	NOT IDENT.
AM-241	-2.795E-02	4.234E-02	2.826E-02	4.234E-02	NOT IDENT.
AM-246	-8.461E-03	4.461E-02	3.233E-02	4.461E-02	NOT IDENT.
CF-249	7.505E-03	1.183E-02	1.076E-02	1.183E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	738.9567
63.29	812.6809
74.66	988.3578
74.81	988.6915
74.81	988.6915
77.11	993.8337
77.11	993.8337
86.48	728.8143
87.30	730.0434
87.30	730.0434
92.58	737.8378
98.44	707.2363
103.76	644.4397
105.31	770.1219
129.07	744.4877
143.76	717.7030
198.00	649.3560
209.25	547.7119
228.18	558.9482
238.63	578.8629
242.00	580.8167
269.46	427.6352
270.25	427.9509
277.36	458.4744
295.22	421.7392
300.09	423.4969
312.17	372.3131
338.32	378.4087
351.93	326.5968
387.59	314.2383
409.46	318.0469
427.87	272.4623
463.00	215.1868
510.77	217.7487
583.19	205.9330
609.31	237.5455
661.66	155.8430
727.33	180.9039
763.13	141.5859
768.36	106.4150
785.37	162.9490
794.95	135.5637
806.17	135.9369
831.80	148.4994
860.56	134.7930
896.60	136.8794
911.20	141.3376
934.06	129.2603
964.77	104.8787
968.97	105.0291
1001.03	102.2890
1078.86	107.1484
1120.29	119.1801
1155.19	104.2221
1173.23	107.8167
1238.11	107.7172
1280.96	96.0486
1332.51	91.3330
1377.67	66.6046
1401.50	55.8343
1407.98	67.1071
1460.80	60.2959
1509.23	53.5938
1588.20	50.7964
1620.50	43.5798
1729.60	43.2148
1764.49	37.1063

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530017

Total Uranium Activity	4.9133E-02	ug/g
Total Uranium Counting Unc.	4.1633E-02	ug/g
Total Uranium Tpu	4.1633E-08	ug/g
Total Uranium Mda	2.3321E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:48:31.07

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530018.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:52:46
Sample ID        : G198530018           Sample quantity  : 1.73420E+02 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 08:00:00.00        Elapsed real time: 0 08:00:05.75  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.17*	123	1412	1.06	93.11	87	12	4.26E-03	72.6	
2	0	53.02	121	905	1.40	106.81	103	8	4.20E-03	44.0	
3	5	63.04*	267	878	0.98	126.85	123	15	9.29E-03	21.9	7.73E-01
4	5	66.36*	120	1348	1.86	133.49	123	15	4.17E-03	57.8	
5	3	74.66*	1251	1274	1.10	150.07	145	14	4.34E-02	6.0	5.47E-01
6	3	76.92*	2199	1082	1.05	154.58	145	14	7.64E-02	3.6	
7	2	83.84*	227	1199	1.19	168.41	165	28	7.89E-03	28.1	6.99E+00
8	2	85.13*	26	1336	1.26	171.00	165	28	9.04E-04	272.8	
9	2	87.05*	722	1120	1.22	174.83	165	28	2.51E-02	8.9	
10	2	89.72	524	1189	1.25	180.16	165	28	1.82E-02	12.5	
11	2	92.63*	792	960	1.24	185.99	165	28	2.75E-02	8.9	
12	0	122.08*	93	971	2.42	244.85	242	8	3.24E-03	63.8	
13	0	129.24	178	1079	1.17	259.16	255	8	6.18E-03	32.9	
14	0	143.52*	44	884	1.37	287.70	285	7	1.54E-03	124.2	
15	0	154.00	263	1535	1.80	308.64	302	13	9.14E-03	31.3	
16	0	186.08*	491	1312	1.32	372.76	367	11	1.71E-02	16.7	
17	0	209.35	259	772	1.10	419.28	416	8	9.00E-03	19.6	
18	3	238.63*	3114	653	1.15	477.78	473	17	1.08E-01	2.4	4.99E+00
19	3	241.71	1026	829	1.87	483.94	473	17	3.56E-02	7.8	
20	0	270.63	261	827	1.62	541.74	535	12	9.06E-03	22.9	
21	0	277.55	89	592	1.10	555.57	551	9	3.11E-03	50.1	
22	0	295.14*	1376	711	1.40	590.74	585	12	4.78E-02	5.0	
23	0	300.29	182	663	1.05	601.03	597	10	6.33E-03	27.4	
24	0	327.56	138	504	1.22	655.52	651	10	4.81E-03	31.4	
25	0	338.30*	568	573	1.12	676.99	672	11	1.97E-02	9.7	
26	0	351.89*	2235	602	1.27	704.15	697	13	7.76E-02	3.3	
27	0	409.19	111	550	5.25	818.63	810	14	3.85E-03	46.0	
28	0	414.43	88	458	4.44	829.12	824	13	3.06E-03	51.2	
29	0	463.16	165	368	1.19	926.48	919	12	5.71E-03	24.6	
30	0	510.87*	370	480	2.21	1021.81	1013	18	1.28E-02	18.6	
31	0	583.27	1041	318	1.42	1166.47	1159	15	3.61E-02	4.9	
32	0	609.38*	1568	249	1.53	1218.63	1212	12	5.44E-02	3.5	
33	0	661.80	80	186	1.83	1323.37	1319	9	2.77E-03	33.0	
34	0	665.15	50	178	1.21	1330.07	1327	9	1.74E-03	49.7	
35	0	683.85	42	191	0.69	1367.42	1363	11	1.46E-03	65.4	
36	0	693.14	32	167	1.39	1385.97	1382	8	1.11E-03	72.4	
37	0	721.59	25	250	0.62	1442.82	1432	13	8.76E-04	130.8	
38	0	727.39	212	229	1.61	1454.39	1449	13	7.36E-03	16.2	

Sample ID : G198530018 Acquisition date : 10-DEC-2007 19:52:46

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	768.06	156	205	1.35	1535.65	1530	12	5.41E-03	20.0	
40	0	786.09	66	116	2.07	1571.66	1568	8	2.29E-03	31.2	
41	0	795.23	121	161	1.60	1589.92	1585	11	4.19E-03	22.4	
42	0	835.15	39	174	1.28	1669.66	1665	10	1.36E-03	65.2	
43	0	839.59	51	138	1.87	1678.52	1675	10	1.76E-03	45.8	
44	0	861.29	136	168	1.87	1721.89	1715	14	4.73E-03	22.1	
45	0	903.86	55	98	3.59	1806.92	1801	11	1.91E-03	37.6	
46	0	911.22*	611	136	1.74	1821.61	1812	17	2.12E-02	6.2	
47	0	934.25*	27	166	2.02	1867.60	1860	13	9.50E-04	113.1	
48	0	946.58	64	154	5.84	1892.25	1885	17	2.21E-03	46.4	
49	3	964.73	127	137	2.20	1928.49	1921	24	4.42E-03	20.2	9.68E-01
50	3	969.25	441	97	1.95	1937.52	1921	24	1.53E-02	6.7	
51	1	1103.68	94	119	2.21	2206.00	2197	27	3.27E-03	23.9	1.07E+01
52	1	1106.68	42	107	2.22	2212.00	2197	27	1.44E-03	54.7	
53	0	1120.63*	339	105	1.79	2239.84	2234	12	1.18E-02	8.6	
54	0	1156.86	64	140	1.29	2312.20	2304	16	2.21E-03	43.4	
55	1	1233.15	41	142	2.52	2464.54	2453	29	1.42E-03	65.8	1.94E+00
56	1	1238.11	119	141	2.31	2474.46	2453	29	4.12E-03	23.0	
57	0	1282.74	94	107	6.88	2563.57	2556	19	3.27E-03	28.5	
58	0	1378.85	93	83	2.04	2755.47	2748	17	3.24E-03	24.8	
59	0	1408.97*	33	87	2.50	2815.61	2808	16	1.13E-03	72.5	
60	0	1451.58	16	105	6.66	2900.68	2881	21	5.47E-04	164.7	
61	0	1461.38*	906	93	1.81	2920.24	2910	18	3.15E-02	4.2	
62	0	1553.75	42	68	8.26	3104.65	3094	21	1.46E-03	51.3	
63	1	1621.08	74	30	2.74	3239.06	3234	33	2.57E-03	15.8	2.11E+00
64	1	1630.69	71	25	2.75	3258.24	3234	33	2.46E-03	21.7	
65	0	1729.83	74	41	2.57	3456.13	3444	20	2.58E-03	23.9	
66	0	1765.13*	309	24	2.10	3526.58	3517	19	1.07E-02	7.5	
67	0	1772.18	10	32	0.61	3540.66	3535	14	3.40E-04	125.9	
68	0	1783.00	23	16	4.75	3562.27	3555	13	7.97E-04	41.8	
69	1	1848.77	52	34	2.86	3693.52	3685	24	1.82E-03	28.1	4.23E+00
70	1	1851.51	39	16	2.60	3699.00	3685	24	1.37E-03	35.7	
71	0	1956.77*	6	30	5.65	3909.07	3897	25	2.07E-04	302.1	

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]G198530018       *
* Acquisition date : 10-DEC-2007 19:52:46 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:00:05.75     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530018           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.7342E+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)	
K-40	4.710E+00	5.364E-01	2.283E-01	0.000E+00
CS-137	2.694E-02	1.756E-02	2.809E-02	0.000E+00
TL-208	3.162E-01	3.742E-02	2.373E-02	0.000E+00
BI-212	5.590E-01	1.836E-01	1.881E-01	0.000E+00
PB-212	8.713E-01	8.273E-02	3.890E-02	0.000E+00
BI-214	9.073E-01	9.075E-02	4.481E-02	0.000E+00
PB-214	9.824E-01	8.375E-02	4.848E-02	0.000E+00
RA-223	2.539E-01	1.154E-01	1.206E-01	0.000E+00
AC-228	8.921E-01	1.355E-01	8.220E-02	0.000E+00
TH-234	1.114E+00	2.166E-01	2.525E-01	0.000E+00
U-235	3.578E-02	8.714E-02	1.356E-01	0.000E+00
NP-237	4.385E-01	8.519E-02	1.084E-01	0.000E+00
AM-243	1.354E-01	1.925E-02	2.072E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	4.951E-03		1.506E-02	2.653E-02	0.000E+00	NOT IDENT.
RH-101	8.423E-03		1.577E-02	2.447E-02	0.000E+00	NOT IDENT.
SB-125	-4.006E-02		3.680E-02	6.212E-02	0.000E+00	NOT IDENT.
EU-155	3.725E-02		3.568E-02	6.773E-02	0.000E+00	NOT IDENT.
PO-209	-7.655E-01		3.388E+00	4.879E+00	0.000E+00	NOT IDENT.
BI-211	1.026E-01		4.971E-01	7.468E-01	0.000E+00	NOT IDENT.
PA-233	-9.019E-03		2.430E-02	4.358E-02	0.000E+00	NOT IDENT.
PA-234M	5.281E-01		1.701E+00	2.932E+00	0.000E+00	NOT IDENT.
NP-236	2.359E-02		2.100E-02	3.558E-02	0.000E+00	NOT IDENT.
NP-239	-2.825E-02		9.032E-02	1.577E-01	0.000E+00	NOT IDENT.
AM-241	1.409E-02		1.962E-02	3.420E-02	0.000E+00	NOT IDENT.
CM-243	-1.276E-02		3.185E-02	5.905E-02	0.000E+00	NOT IDENT.
AM-246	5.214E-02		5.055E-02	9.295E-02	0.000E+00	NOT IDENT.
CF-249	8.064E-03		1.622E-02	2.932E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:48:32.01

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530018.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:52:46
Sample ID        : G198530018           Sample quantity  : 1.73420E+02 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 08:00:00.00        Elapsed real time: 0 08:00:05.75  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	906	10.66*	9.765E-01	4.710E+00	4.710E+00	11.62
CS-137	661.66	80	85.10*	1.888E+00	2.684E-02	2.694E-02	66.50
TL-208	277.36	89	6.31	3.979E+00	1.928E-01	1.928E-01	100.50
	510.77	370	22.60	2.368E+00	3.742E-01	3.742E-01	37.64
	583.19	1041	84.50*	2.107E+00	3.162E-01	3.162E-01	12.08
	763.13	------	1.81	1.670E+00	------	Line Not Found	------
	860.56	136	12.42	1.507E+00	3.936E-01	3.936E-01	45.12
BI-212	727.33	212	11.80*	1.740E+00	5.590E-01	5.590E-01	33.51
	785.37	66	1.10	1.628E+00	1.989E+00	1.989E+00	63.04
	1620.50	74	1.49	8.964E-01	2.998E+00	2.998E+00	32.36
PB-212	74.81	1251	10.40	7.332E+00	8.878E-01	8.878E-01	14.51
	77.11	2199	17.50	7.312E+00	9.300E-01	9.300E-01	10.88
	87.30	722	7.81	7.191E+00	6.962E-01	6.962E-01	19.82
	238.63	3114	43.30*	4.466E+00	8.713E-01	8.713E-01	9.69
	300.09	182	3.28	3.736E+00	8.046E-01	8.046E-01	55.25
BI-214	609.31	1568	46.10*	2.028E+00	9.073E-01	9.073E-01	10.21
	768.36	156	4.94	1.661E+00	1.028E+00	1.028E+00	40.98
	806.17	------	1.22	1.594E+00	------	Line Not Found	------
	934.06	27	3.03	1.408E+00	3.471E-01	3.471E-01	226.41
	1120.29	339	15.10	1.212E+00	1.002E+00	1.002E+00	18.42
	1155.19	64	1.63	1.181E+00	1.790E+00	1.790E+00	87.00
	1238.11	119	5.79	1.118E+00	9.926E-01	9.927E-01	46.55
	1280.96	94	1.43	1.086E+00	3.277E+00	3.277E+00	57.55
	1377.67	93	4.00	1.024E+00	1.234E+00	1.234E+00	50.33
	1401.50	------	1.27	1.011E+00	------	Line Not Found	------
	1407.98	33	2.15	1.006E+00	8.132E-01	8.133E-01	145.24
	1509.23	------	2.11	9.511E-01	------	Line Not Found	------
	1729.60	74	2.92	8.488E-01	1.624E+00	1.624E+00	48.16
	1764.49	309	15.40	8.344E-01	1.301E+00	1.301E+00	16.27
PB-214	74.81	1251	6.44	7.332E+00	1.434E+00	1.434E+00	14.51
	77.11	2199	10.80	7.312E+00	1.507E+00	1.507E+00	10.88
	87.30	722	4.84	7.191E+00	1.123E+00	1.123E+00	19.82

Sample ID : G198530018 Acquisition date : 10-DEC-2007 19:52:46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	1026	7.43	4.424E+00	1.690E+00	1.690E+00	17.72
	295.22	1376	19.30	3.789E+00	1.019E+00	1.019E+00	11.85
	351.93	2235	37.60*	3.274E+00	9.823E-01	9.824E-01	8.70
RA-223	269.46	261	13.70*	4.059E+00	2.539E-01	2.539E-01	46.38
AC-228	129.07	178	2.42	6.406E+00	6.215E-01	6.215E-01	66.53
	209.25	259	3.89	4.901E+00	7.356E-01	7.356E-01	40.41
	270.25	261	3.46	4.059E+00	1.005E+00	1.005E+00	46.38
	338.32	568	11.27	3.385E+00	8.054E-01	8.054E-01	20.18
	409.46	111	1.92	2.876E+00	1.085E+00	1.085E+00	92.14
	463.00	165	4.40	2.581E+00	7.842E-01	7.842E-01	49.54
	794.95	121	4.25	1.612E+00	9.529E-01	9.529E-01	45.61
	911.20	611	25.80*	1.438E+00	8.921E-01	8.921E-01	15.49
	964.77	127	4.99	1.371E+00	1.006E+00	1.006E+00	41.28
	968.97	441	15.80	1.366E+00	1.105E+00	1.105E+00	15.89
	1588.20	------	3.22	9.118E-01	------	Line Not Found	------
TH-234	63.29	267	4.80	7.386E+00	4.082E-01	4.082E-01	44.50
	92.58	792	5.41*	7.106E+00	1.114E+00	1.114E+00	19.84
U-235	143.76	44	10.96*	6.112E+00	3.578E-02	3.578E-02	248.52
NP-237	86.48	722	12.40*	7.191E+00	4.385E-01	4.385E-01	19.82
AM-243	74.66	1251	68.20*	7.332E+00	1.354E-01	1.354E-01	14.51

Flag: "*" = Keyline

Sample ID : G198530018 Acquisition date : 10-DEC-2007 19:52:46

Total number of lines in spectrum 71
Number of unidentified lines 30
Number of lines tentatively identified by NID 41 57.75%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.710E+00	4.710E+00	0.547E+00	11.62	
CS-137	9.47E+08S	1.00	2.684E-02	2.694E-02	1.792E-02	66.50	
TL-208	4.43E+17S	1.00	3.162E-01	3.162E-01	0.382E-01	12.08	
BI-212	4.43E+17S	1.00	5.590E-01	5.590E-01	1.873E-01	33.51	
PB-212	4.43E+17S	1.00	8.713E-01	8.713E-01	0.844E-01	9.69	
BI-214	5.05E+10S	1.00	9.073E-01	9.073E-01	0.926E-01	10.21	
PB-214	5.05E+10S	1.00	9.823E-01	9.824E-01	0.855E-01	8.70	
RA-223	1.04E+12S	1.00	2.539E-01	2.539E-01	1.178E-01	46.38	
AC-228	4.43E+17S	1.00	8.921E-01	8.921E-01	1.382E-01	15.49	
TH-234	1.41E+17S	1.00	1.114E+00	1.114E+00	0.221E+00	19.84	
U-235	2.22E+16S	1.00	3.578E-02	3.578E-02	8.892E-02	248.52	
NP-237	6.75E+13S	1.00	4.385E-01	4.385E-01	0.869E-01	19.82	
AM-243	2.33E+11S	1.00	1.354E-01	1.354E-01	0.196E-01	14.51	
			---	---			
	Total Activity :		1.124E+01	1.124E+01			

Grand Total Activity : 1.124E+01 1.124E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530018 Acquisition date : 10-DEC-2007 19:52:46

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.17	123	1412	1.06	93.11	87	12	4.26E-03	****	7.29E+00	
0	53.02	121	905	1.40	106.81	103	8	4.20E-03	87.9	7.35E+00	
5	66.36	120	1348	1.86	133.49	123	15	4.17E-03	****	7.38E+00	
2	83.84	227	1199	1.19	168.41	165	28	7.89E-03	56.2	7.23E+00	
2	85.13	26	1336	1.26	171.00	165	28	9.04E-04	****	7.22E+00	
2	89.72	524	1189	1.25	180.16	165	28	1.82E-02	25.1	7.15E+00	
0	122.08	93	971	2.42	244.85	242	8	3.24E-03	****	6.55E+00	
0	154.00	263	1535	1.80	308.64	302	13	9.14E-03	62.6	5.90E+00	
0	186.08	491	1312	1.32	372.76	367	11	1.71E-02	33.4	5.29E+00	
0	327.56	138	504	1.22	655.52	651	10	4.81E-03	62.8	3.48E+00	
0	414.43	88	458	4.44	829.12	824	13	3.06E-03	****	2.84E+00	
0	665.15	50	178	1.21	1330.07	1327	9	1.74E-03	99.4	1.88E+00	
0	683.85	42	191	0.69	1367.42	1363	11	1.46E-03	****	1.83E+00	
0	693.14	32	167	1.39	1385.97	1382	8	1.11E-03	****	1.81E+00	
0	721.59	25	250	0.62	1442.82	1432	13	8.76E-04	****	1.75E+00	
0	835.15	39	174	1.28	1669.66	1665	10	1.36E-03	****	1.55E+00	
0	839.59	51	138	1.87	1678.52	1675	10	1.76E-03	91.6	1.54E+00	
0	903.86	55	98	3.59	1806.92	1801	11	1.91E-03	75.1	1.45E+00	
0	946.58	64	154	5.84	1892.25	1885	17	2.21E-03	92.7	1.39E+00	
1	1103.68	94	119	2.21	2206.00	2197	27	3.27E-03	47.7	1.23E+00	
1	1106.68	42	107	2.22	2212.00	2197	27	1.44E-03	****	1.22E+00	
1	1233.15	41	142	2.52	2464.54	2453	29	1.42E-03	****	1.12E+00	
0	1451.58	16	105	6.66	2900.68	2881	21	5.47E-04	****	9.82E-01	
0	1553.75	42	68	8.26	3104.65	3094	21	1.46E-03	****	9.29E-01	
1	1630.69	71	25	2.75	3258.24	3234	33	2.46E-03	43.5	8.92E-01	
0	1772.18	10	32	0.61	3540.66	3535	14	3.40E-04	****	8.32E-01	
0	1783.00	23	16	4.75	3562.27	3555	13	7.97E-04	83.5	8.27E-01	
1	1848.77	52	34	2.86	3693.52	3685	24	1.82E-03	56.2	8.02E-01	
1	1851.51	39	16	2.60	3699.00	3685	24	1.37E-03	71.3	8.01E-01	
0	1956.77	6	30	5.65	3909.07	3897	25	2.07E-04	****	7.63E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530018            *
* Acquisition date : 10-DEC-2007 19:52:46 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:00:05.75     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530018           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.7342E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.710E+00	5.364E-01	1.142E-01	5.364E-01
CS-137	2.694E-02	1.756E-02	1.405E-02	1.756E-02
TL-208	3.162E-01	3.742E-02	1.187E-02	3.742E-02
BI-212	5.590E-01	1.836E-01	9.409E-02	1.836E-01
PB-212	8.713E-01	8.273E-02	1.946E-02	8.273E-02
BI-214	9.073E-01	9.075E-02	2.242E-02	9.075E-02
PB-214	9.824E-01	8.375E-02	2.426E-02	8.375E-02
RA-223	2.539E-01	1.154E-01	6.033E-02	1.154E-01
AC-228	8.921E-01	1.355E-01	4.113E-02	1.355E-01
TH-234	1.114E+00	2.166E-01	1.263E-01	2.166E-01
U-235	3.578E-02	8.714E-02	6.782E-02	8.714E-02
NP-237	4.385E-01	8.519E-02	5.425E-02	8.519E-02
AM-243	1.354E-01	1.925E-02	1.037E-02	1.925E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	4.951E-03	1.506E-02	1.327E-02	1.506E-02	NOT IDENT.
RH-101	8.423E-03	1.577E-02	1.224E-02	1.577E-02	NOT IDENT.
SB-125	-4.006E-02	3.680E-02	3.108E-02	3.680E-02	NOT IDENT.
EU-155	3.725E-02	3.568E-02	3.389E-02	3.568E-02	NOT IDENT.
PO-209	-7.655E-01	3.388E+00	2.441E+00	3.388E+00	NOT IDENT.
BI-211	1.026E-01	4.971E-01	3.736E-01	4.971E-01	NOT IDENT.
PA-233	-9.019E-03	2.430E-02	2.180E-02	2.430E-02	NOT IDENT.
PA-234M	5.281E-01	1.701E+00	1.467E+00	1.701E+00	NOT IDENT.
NP-236	2.359E-02	2.100E-02	1.780E-02	2.100E-02	NOT IDENT.
NP-239	-2.825E-02	9.032E-02	7.888E-02	9.032E-02	NOT IDENT.
AM-241	1.409E-02	1.962E-02	1.711E-02	1.962E-02	NOT IDENT.
CM-243	-1.276E-02	3.185E-02	2.954E-02	3.185E-02	NOT IDENT.
AM-246	5.214E-02	5.055E-02	4.650E-02	5.055E-02	NOT IDENT.
CF-249	8.064E-03	1.622E-02	1.467E-02	1.622E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	954.8721
63.29	1152.4424
74.66	1357.0579
74.81	1357.4384
74.81	1357.4384
77.11	1342.5952
77.11	1342.5952
86.48	1194.1566
87.30	1195.8201
87.30	1195.8201
92.58	1206.3315
98.44	1037.3213
103.76	1164.5179
105.31	1105.9039
129.07	1102.9487
143.76	1082.5466
198.00	906.8300
209.25	882.5820
228.18	855.4539
238.63	768.2529
242.00	770.4656
269.46	619.3182
270.25	619.7061
277.36	617.9640
295.22	579.1253
300.09	625.4128
312.17	535.2744
338.32	504.1078
351.93	495.8826
387.59	446.8306
409.46	361.1102
427.87	398.8509
463.00	326.5842
510.77	304.9446
583.19	257.3276
609.31	253.6034
661.66	293.6594
727.33	217.9622
763.13	202.9541
768.36	216.2980
785.37	200.5697
794.95	193.1992
806.17	205.0691
831.80	206.1502
860.56	172.8638
896.60	174.9009
911.20	138.0586
934.06	133.6320
964.77	148.8668
968.97	149.0548
1001.03	149.4041
1078.86	123.3882
1120.29	145.7428
1155.19	126.1826
1173.23	128.4680
1238.11	145.3158
1280.96	128.4883
1332.51	110.4796
1377.67	87.0211
1401.50	74.9919
1407.98	119.8018
1460.80	86.8301
1509.23	84.5963
1588.20	107.2139
1620.50	69.1808
1729.60	32.4623
1764.49	44.4209

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530018

Total Uranium Activity	1.6555E-02	ug/g
Total Uranium Counting Unc.	4.0319E-02	ug/g
Total Uranium Tpu	4.0319E-08	ug/g
Total Uranium Mda	3.1381E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:49:05.23

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530019.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:53:09
Sample ID        : G198530019           Sample quantity  : 1.68670E+02 GRAM
Detector name    : GAM06                Detector geometry: CAN
Elapsed live time: 0 08:00:00.00        Elapsed real time: 0 08:00:04.24  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.46*	117	1066	0.98	124.95	122	7	4.07E-03	52.1	
2	0	65.76*	17	793	1.09	131.56	130	5	5.87E-04	276.6	
3	3	74.42*	681	1144	0.97	148.85	145	15	2.36E-02	9.1	2.38E+00
4	3	76.72*	1348	992	0.96	153.45	145	15	4.68E-02	4.8	
5	5	83.75*	310	1334	1.34	167.50	163	28	1.08E-02	21.8	2.57E+00
6	5	86.84	661	1299	1.27	173.68	163	28	2.29E-02	10.2	
7	5	89.45	464	1271	1.34	178.88	163	28	1.61E-02	14.3	
8	5	92.39*	608	1239	1.35	184.76	163	28	2.11E-02	12.3	
9	0	98.81*	92	1115	0.58	197.59	194	8	3.18E-03	66.8	
10	0	104.94	106	845	0.94	209.83	207	6	3.67E-03	44.6	
11	0	115.40	133	1108	1.05	230.73	226	8	4.61E-03	44.7	
12	0	128.44*	197	1249	1.60	256.80	253	9	6.86E-03	34.3	
13	0	143.77	210	1367	1.29	287.42	283	10	7.30E-03	33.6	
14	0	154.04	44	1015	1.16	307.94	304	7	1.54E-03	120.0	
15	0	163.74	87	909	1.31	327.32	324	7	3.03E-03	58.6	
16	0	180.52	108	837	0.60	360.86	358	7	3.73E-03	45.6	
17	4	185.59*	701	947	1.37	370.98	365	12	2.44E-02	9.6	4.39E-01
18	0	197.16	72	827	1.49	394.11	392	7	2.49E-03	67.4	
19	0	208.87	269	895	1.13	417.50	414	8	9.33E-03	20.2	
20	6	238.29*	3423	602	1.06	476.28	470	19	1.19E-01	2.2	1.63E+00
21	6	241.36	995	892	1.62	482.43	470	19	3.46E-02	6.8	
22	0	269.94	379	681	1.48	539.55	535	10	1.31E-02	13.9	
23	0	276.86	150	540	1.22	553.37	550	8	5.22E-03	28.1	
24	0	294.91*	1192	739	1.23	589.43	585	10	4.14E-02	5.6	
25	0	299.72	234	519	1.15	599.05	595	8	8.13E-03	18.1	
26	0	327.66	124	549	1.03	654.88	651	9	4.30E-03	35.3	
27	0	337.97*	656	505	1.27	675.48	671	9	2.28E-02	7.8	
28	0	351.57*	2189	597	1.14	702.66	696	12	7.60E-02	3.2	
29	0	366.83	43	306	1.18	733.16	729	7	1.50E-03	69.2	
30	0	410.02	136	425	1.18	819.48	813	11	4.72E-03	30.7	
31	0	462.37	227	324	1.57	924.10	919	11	7.89E-03	16.7	
32	0	487.55	72	292	2.72	974.43	969	11	2.51E-03	47.4	
33	0	510.51*	344	472	1.91	1020.31	1012	18	1.20E-02	19.5	
34	0	549.50	36	225	1.64	1098.25	1094	9	1.25E-03	76.9	
35	0	582.84*	945	337	1.35	1164.88	1160	11	3.28E-02	5.2	
36	0	608.93*	1491	428	1.34	1217.04	1209	16	5.18E-02	4.3	
37	0	617.40	20	223	0.50	1233.96	1229	9	7.00E-04	135.9	
38	0	661.08	82	191	1.73	1321.27	1316	9	2.83E-03	32.5	

Sample ID : G198530019 Acquisition date : 10-DEC-2007 19:53:09

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	665.50	60	203	2.34	1330.11	1326	10	2.08E-03	47.3	
40	0	681.11	52	328	4.21	1361.31	1355	17	1.82E-03	80.6	
41	0	726.88	233	164	1.31	1452.80	1448	9	8.08E-03	11.9	
42	0	741.56	52	154	2.78	1482.15	1478	10	1.82E-03	46.3	
43	0	754.38	69	111	1.88	1507.77	1504	8	2.41E-03	28.9	
44	1	767.94	151	184	1.67	1534.88	1520	27	5.26E-03	18.7	1.08E+00
45	1	771.67	68	164	1.72	1542.34	1520	27	2.36E-03	39.2	
46	0	785.01*	25	156	1.21	1569.02	1565	10	8.69E-04	119.1	
47	0	794.59	123	233	1.98	1588.15	1579	15	4.28E-03	28.4	
48	0	860.03	143	190	1.55	1718.98	1712	15	4.98E-03	22.6	
49	0	910.81*	753	140	1.79	1820.50	1815	13	2.62E-02	5.2	
50	0	934.36	96	166	1.62	1867.59	1860	16	3.32E-03	32.0	
51	1	964.39	178	107	1.98	1927.64	1922	25	6.19E-03	14.0	9.29E-01
52	1	968.61*	415	96	1.92	1936.07	1922	25	1.44E-02	7.2	
53	0	1001.18*	23	88	1.04	2001.19	1996	8	7.95E-04	92.8	
54	0	1109.90*	22	136	5.30	2218.57	2208	14	7.50E-04	123.6	
55	0	1119.80*	297	169	1.62	2238.37	2232	13	1.03E-02	11.5	
56	0	1237.86	108	125	1.17	2474.44	2469	14	3.76E-03	24.2	
57	0	1282.85	31	116	4.52	2564.42	2555	15	1.09E-03	76.0	
58	0	1367.82	14	56	0.74	2734.36	2729	9	4.77E-04	104.6	
59	1	1377.44	100	63	2.23	2753.59	2745	30	3.47E-03	19.4	1.87E+00
60	1	1384.94	42	44	2.24	2768.59	2745	30	1.45E-03	39.9	
61	1	1401.06	35	77	2.25	2800.83	2790	40	1.21E-03	52.0	1.92E+00
62	1	1407.56	85	68	2.25	2813.84	2790	40	2.96E-03	22.4	
63	0	1460.28*	1224	86	2.04	2919.27	2912	16	4.25E-02	3.5	
64	0	1496.31	30	39	0.88	2991.34	2985	12	1.05E-03	45.2	
65	0	1508.88	109	66	5.79	3016.48	3007	22	3.78E-03	21.3	
66	3	1587.75	71	44	2.52	3174.24	3169	28	2.45E-03	21.4	1.40E+00
67	3	1591.41	34	56	2.35	3181.57	3169	28	1.19E-03	52.4	
68	0	1638.22	28	35	1.64	3275.19	3269	11	9.65E-04	45.7	
69	0	1674.74	11	29	3.72	3348.25	3338	13	3.82E-04	105.5	
70	0	1729.28	82	35	2.01	3457.36	3447	17	2.86E-03	19.6	
71	0	1764.32*	278	50	2.45	3527.47	3518	21	9.64E-03	9.7	
72	0	1833.52	21	31	3.42	3665.90	3660	15	7.31E-04	61.0	
73	0	1969.54	31	30	6.06	3938.04	3923	21	1.07E-03	48.9	

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]G198530019       *
* Acquisition date : 10-DEC-2007 19:53:09 Detector SN#    :                 *
* Detector ID      : GAM06                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:00:04.24     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530019           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.6867E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 20-FEB-2007 10:58:43 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	6.652E+00	6.198E-01	2.194E-01	0.000E+00
RH-101	1.131E-02	1.496E-02	2.293E-02	0.000E+00
CS-137	2.709E-02	1.734E-02	2.439E-02	0.000E+00
EU-155	4.778E-02	4.194E-02	6.917E-02	0.000E+00
TL-208	2.825E-01	3.441E-02	2.460E-02	0.000E+00
BI-212	6.035E-01	1.477E-01	1.714E-01	0.000E+00
PB-212	1.000E+00	7.487E-02	3.908E-02	0.000E+00
BI-214	8.479E-01	9.043E-02	4.280E-02	0.000E+00
PB-214	9.839E-01	8.665E-02	4.379E-02	0.000E+00
RA-223	3.829E-01	1.068E-01	1.203E-01	0.000E+00
AC-228	1.099E+00	1.558E-01	9.015E-02	0.000E+00
PA-234M	1.121E+00	2.042E+00	2.575E+00	0.000E+00
TH-234	1.135E+00	2.896E-01	2.898E-01	0.000E+00
U-235	1.812E-01	1.199E-01	1.301E-01	0.000E+00
NP-236	2.321E-02	3.046E-02	3.815E-02	0.000E+00
NP-237	5.715E-01	1.247E-01	1.345E-01	0.000E+00
AM-243	1.348E-01	2.633E-02	3.301E-02	0.000E+00
CM-243	4.322E-02	3.793E-02	6.272E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-1.967E-02	1.728E-02	2.503E-02	0.000E+00	NOT IDENT.
SB-125	5.344E-03	3.554E-02	6.228E-02	0.000E+00	NOT IDENT.
PO-209	2.537E+00	2.805E+00	4.998E+00	0.000E+00	NOT IDENT.
BI-211	-4.862E-01	4.078E-01	6.522E-01	0.000E+00	NOT IDENT.
PA-233	-7.692E-03	2.436E-02	4.333E-02	0.000E+00	NOT IDENT.
NP-239	5.688E-02	8.446E-02	1.584E-01	0.000E+00	NOT IDENT.
AM-241	5.516E-02	5.945E-02	1.044E-01	0.000E+00	NOT IDENT.
AM-246	2.144E-02	4.693E-02	8.409E-02	0.000E+00	NOT IDENT.
CF-249	1.695E-02	1.546E-02	2.819E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:49:06.28

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530019.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:53:09
Sample ID        : G198530019           Sample quantity  : 1.68670E+02 GRAM
Detector name    : GAM06                Detector geometry: CAN
Elapsed live time: 0 08:00:00.00        Elapsed real time: 0 08:00:04.24  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	1224	10.66*	9.605E-01	6.652E+00	6.652E+00	9.51
RH-101	198.00	72	73.00*	5.005E+00	1.093E-02	1.131E-02	135.01
CS-137	661.66	82	85.10*	1.978E+00	2.699E-02	2.709E-02	65.32
EU-155	105.31	106	21.20*	5.940E+00	4.670E-02	4.778E-02	89.56
TL-208	277.36	150	6.31	3.942E+00	3.361E-01	3.361E-01	56.61
	510.77	344	22.60	2.457E+00	3.449E-01	3.449E-01	39.56
	583.19	945	84.50*	2.203E+00	2.825E-01	2.825E-01	12.43
	763.13	------	1.81	1.741E+00	------	Line Not Found	------
	860.56	143	12.42	1.560E+00	4.120E-01	4.120E-01	46.20
BI-212	727.33	233	11.80*	1.819E+00	6.035E-01	6.035E-01	24.98
	785.37	25	1.10	1.696E+00	7.463E-01	7.463E-01	238.37
	1620.50	------	1.49	8.878E-01	------	Line Not Found	------
PB-212	74.81	681	10.40	4.120E+00	8.841E-01	8.841E-01	19.93
	77.11	1348	17.50	4.357E+00	9.841E-01	9.841E-01	12.75
	87.30	661	7.81	5.189E+00	9.073E-01	9.073E-01	22.27
	238.63	3423	43.30*	4.398E+00	1.000E+00	1.000E+00	7.64
	300.09	234	3.28	3.715E+00	1.069E+00	1.069E+00	36.82
BI-214	609.31	1491	46.10*	2.123E+00	8.479E-01	8.479E-01	10.88
	768.36	151	4.94	1.731E+00	9.858E-01	9.859E-01	38.32
	806.17	------	1.22	1.656E+00	------	Line Not Found	------
	934.06	96	3.03	1.443E+00	1.216E+00	1.216E+00	64.71
	1120.29	297	15.10	1.216E+00	8.994E-01	8.995E-01	24.10
	1155.19	------	1.63	1.181E+00	------	Line Not Found	------
	1238.11	108	5.79	1.108E+00	9.393E-01	9.393E-01	48.79
	1280.96	31	1.43	1.073E+00	1.138E+00	1.138E+00	152.13
	1377.67	100	4.00	1.008E+00	1.377E+00	1.378E+00	39.27
	1401.50	35	1.27	9.939E-01	1.537E+00	1.537E+00	104.28
	1407.98	85	2.15	9.900E-01	2.230E+00	2.230E+00	45.32
	1509.23	109	2.11	9.358E-01	3.071E+00	3.071E+00	43.04
	1729.60	82	2.92	8.510E-01	1.844E+00	1.844E+00	39.74
	1764.49	278	15.40	8.411E-01	1.192E+00	1.193E+00	20.35
PB-214	74.81	681	6.44	4.120E+00	1.428E+00	1.428E+00	19.93

Sample ID : G198530019 Acquisition date : 10-DEC-2007 19:53:09

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1348	10.80	4.357E+00	1.595E+00	1.595E+00	12.75
	87.30	661	4.84	5.189E+00	1.464E+00	1.464E+00	22.27
	242.00	995	7.43	4.358E+00	1.710E+00	1.711E+00	14.94
	295.22	1192	19.30	3.761E+00	9.139E-01	9.140E-01	12.86
	351.93	2189	37.60*	3.292E+00	9.838E-01	9.839E-01	8.99
RA-223	269.46	379	13.70*	4.016E+00	3.829E-01	3.829E-01	28.47
AC-228	129.07	197	2.42	6.055E+00	7.498E-01	7.498E-01	68.94
	209.25	269	3.89	4.819E+00	7.977E-01	7.977E-01	40.88
	270.25	379	3.46	4.016E+00	1.516E+00	1.516E+00	28.47
	338.32	656	11.27	3.393E+00	9.542E-01	9.542E-01	16.78
	409.46	136	1.92	2.924E+00	1.347E+00	1.347E+00	61.67
	463.00	227	4.40	2.661E+00	1.080E+00	1.080E+00	33.96
	794.95	123	4.25	1.678E+00	9.622E-01	9.622E-01	57.48
	911.20	753	25.80*	1.478E+00	1.099E+00	1.099E+00	14.47
	964.77	178	4.99	1.401E+00	1.419E+00	1.419E+00	29.52
	968.97	415	15.80	1.395E+00	1.048E+00	1.048E+00	17.31
	1588.20	71	3.22	9.007E-01	1.356E+00	1.356E+00	43.29
PA-234M	1001.03	23	0.84*	1.352E+00	1.121E+00	1.121E+00	185.78
TH-234	63.29	117	4.80	2.654E+00	5.120E-01	5.120E-01	104.53
	92.58	608	5.41*	5.508E+00	1.135E+00	1.135E+00	26.03
U-235	143.76	210	10.96*	5.890E+00	1.812E-01	1.812E-01	67.53
NP-236	98.44	92	38.00*	5.774E+00	2.321E-02	2.321E-02	133.91
NP-237	86.48	661	12.40*	5.189E+00	5.715E-01	5.715E-01	22.27
AM-243	74.66	681	68.20*	4.120E+00	1.348E-01	1.348E-01	19.93
CM-243	103.76	106	23.00*	5.940E+00	4.305E-02	4.322E-02	89.56

Flag: "*" = Keyline

Sample ID : G198530019 Acquisition date : 10-DEC-2007 19:53:09

Total number of lines in spectrum 73
Number of unidentified lines 27
Number of lines tentatively identified by NID 46 63.01%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	6.652E+00	6.652E+00	0.632E+00	9.51	
RH-101	1.04E+08S	1.04	1.093E-02	1.131E-02	1.527E-02	135.01	
CS-137	9.47E+08S	1.00	2.699E-02	2.709E-02	1.770E-02	65.32	
EU-155	1.57E+08S	1.02	4.670E-02	4.778E-02	4.279E-02	89.56	
TL-208	4.43E+17S	1.00	2.825E-01	2.825E-01	0.351E-01	12.43	
BI-212	4.43E+17S	1.00	6.035E-01	6.035E-01	1.508E-01	24.98	
PB-212	4.43E+17S	1.00	1.000E+00	1.000E+00	0.764E-01	7.64	
BI-214	5.05E+10S	1.00	8.479E-01	8.479E-01	0.923E-01	10.88	
PB-214	5.05E+10S	1.00	9.838E-01	9.839E-01	0.884E-01	8.99	
RA-223	1.04E+12S	1.00	3.829E-01	3.829E-01	1.090E-01	28.47	
AC-228	4.43E+17S	1.00	1.099E+00	1.099E+00	0.159E+00	14.47	
PA-234M	1.41E+17S	1.00	1.121E+00	1.121E+00	2.083E+00	185.78	
TH-234	1.41E+17S	1.00	1.135E+00	1.135E+00	0.296E+00	26.03	
U-235	2.22E+16S	1.00	1.812E-01	1.812E-01	1.224E-01	67.53	
NP-236	4.89E+12S	1.00	2.321E-02	2.321E-02	3.109E-02	133.91	
NP-237	6.75E+13S	1.00	5.715E-01	5.715E-01	1.273E-01	22.27	
AM-243	2.33E+11S	1.00	1.348E-01	1.348E-01	0.269E-01	19.93	
CM-243	8.99E+08S	1.00	4.305E-02	4.322E-02	3.871E-02	89.56	
			---	---			
	Total Activity :		1.515E+01	1.515E+01			

Grand Total Activity : 1.515E+01 1.515E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530019 Acquisition date : 10-DEC-2007 19:53:09

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	65.76	17	793	1.09	131.56	130	5	5.87E-04	****	3.09E+00	
5	83.75	310	1334	1.34	167.50	163	28	1.08E-02	43.6	4.97E+00	
5	89.45	464	1271	1.34	178.88	163	28	1.61E-02	28.6	5.35E+00	
0	115.40	133	1108	1.05	230.73	226	8	4.61E-03	89.4	6.07E+00	
0	154.04	44	1015	1.16	307.94	304	7	1.54E-03	****	5.73E+00	
0	163.74	87	909	1.31	327.32	324	7	3.03E-03	****	5.57E+00	
0	180.52	108	837	0.60	360.86	358	7	3.73E-03	91.3	5.28E+00	
4	185.59	701	947	1.37	370.98	365	12	2.44E-02	19.3	5.20E+00	
0	327.66	124	549	1.03	654.88	651	9	4.30E-03	70.5	3.47E+00	
0	366.83	43	306	1.18	733.16	729	7	1.50E-03	****	3.19E+00	
0	487.55	72	292	2.72	974.43	969	11	2.51E-03	94.9	2.55E+00	
0	549.50	36	225	1.64	1098.25	1094	9	1.25E-03	****	2.31E+00	
0	617.40	20	223	0.50	1233.96	1229	9	7.00E-04	****	2.10E+00	
0	665.50	60	203	2.34	1330.11	1326	10	2.08E-03	94.6	1.97E+00	
0	681.11	52	328	4.21	1361.31	1355	17	1.82E-03	****	1.93E+00	
0	741.56	52	154	2.78	1482.15	1478	10	1.82E-03	92.7	1.79E+00	
0	754.38	69	111	1.88	1507.77	1504	8	2.41E-03	57.9	1.76E+00	
1	771.67	68	164	1.72	1542.34	1520	27	2.36E-03	78.3	1.72E+00	
0	1109.90	22	136	5.30	2218.57	2208	14	7.50E-04	****	1.23E+00	
0	1367.82	14	56	0.74	2734.36	2729	9	4.77E-04	****	1.01E+00	
1	1384.94	42	44	2.24	2768.59	2745	30	1.45E-03	79.8	1.00E+00	
0	1496.31	30	39	0.88	2991.34	2985	12	1.05E-03	90.4	9.42E-01	
3	1591.41	34	56	2.35	3181.57	3169	28	1.19E-03	****	8.99E-01	
0	1638.22	28	35	1.64	3275.19	3269	11	9.65E-04	91.4	8.81E-01	
0	1674.74	11	29	3.72	3348.25	3338	13	3.82E-04	****	8.68E-01	
0	1833.52	21	31	3.42	3665.90	3660	15	7.31E-04	****	8.24E-01	
0	1969.54	31	30	6.06	3938.04	3923	21	1.07E-03	97.8	7.99E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530019            *
* Acquisition date : 10-DEC-2007 19:53:09 Detector SN#    :                 *
* Detector ID      : GAM06                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:00:04.24     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530019           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.6867E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 20-FEB-2007 10:58:43 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	LC (pCi/GRAM)	TPU
K-40	6.652E+00	6.198E-01	1.098E-01	6.198E-01
RH-101	1.131E-02	1.496E-02	1.147E-02	1.496E-02
CS-137	2.709E-02	1.734E-02	1.220E-02	1.734E-02
EU-155	4.778E-02	4.194E-02	3.461E-02	4.194E-02
TL-208	2.825E-01	3.441E-02	1.231E-02	3.441E-02
BI-212	6.035E-01	1.477E-01	8.576E-02	1.477E-01
PB-212	1.000E+00	7.487E-02	1.955E-02	7.487E-02
BI-214	8.479E-01	9.043E-02	2.141E-02	9.043E-02
PB-214	9.839E-01	8.665E-02	2.191E-02	8.665E-02
RA-223	3.829E-01	1.068E-01	6.020E-02	1.068E-01
AC-228	1.099E+00	1.558E-01	4.510E-02	1.558E-01
PA-234M	1.121E+00	2.042E+00	1.288E+00	2.042E+00
TH-234	1.135E+00	2.896E-01	1.450E-01	2.896E-01
U-235	1.812E-01	1.199E-01	6.511E-02	1.199E-01
NP-236	2.321E-02	3.046E-02	1.908E-02	3.046E-02
NP-237	5.715E-01	1.247E-01	6.731E-02	1.247E-01
AM-243	1.348E-01	2.633E-02	1.651E-02	2.633E-02
CM-243	4.322E-02	3.793E-02	3.138E-02	3.793E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-1.967E-02	1.728E-02	1.252E-02	1.728E-02	NOT IDENT.
SB-125	5.344E-03	3.554E-02	3.116E-02	3.554E-02	NOT IDENT.
PO-209	2.537E+00	2.805E+00	2.501E+00	2.805E+00	NOT IDENT.
BI-211	-4.862E-01	4.078E-01	3.263E-01	4.078E-01	NOT IDENT.
PA-233	-7.692E-03	2.436E-02	2.168E-02	2.436E-02	NOT IDENT.
NP-239	5.688E-02	8.446E-02	7.925E-02	8.446E-02	NOT IDENT.
AM-241	5.516E-02	5.945E-02	5.225E-02	5.945E-02	NOT IDENT.
AM-246	2.144E-02	4.693E-02	4.207E-02	4.693E-02	NOT IDENT.
CF-249	1.695E-02	1.546E-02	1.410E-02	1.546E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	778.0612
63.29	912.2487
74.66	1054.7600
74.81	1055.1161
74.81	1055.1161
77.11	1060.5135
77.11	1060.5135
86.48	906.6923
87.30	908.1988
87.30	908.1988
92.58	917.7416
98.44	858.1920
103.76	891.1025
105.31	897.6719
129.07	913.3979
143.76	887.7998
198.00	835.0703
209.25	777.1873
228.18	722.5637
238.63	716.5114
242.00	718.9039
269.46	574.0344
270.25	574.4533
277.36	553.4794
295.22	589.8443
300.09	480.9263
312.17	497.8445
338.32	454.4066
351.93	389.6219
387.59	369.7338
409.46	379.4217
427.87	333.0740
463.00	293.1341
510.77	281.9497
583.19	287.1511
609.31	240.8255
661.66	230.7773
727.33	188.0100
763.13	178.7518
768.36	179.1299
785.37	176.0406
794.95	161.0276
806.17	171.6053
831.80	214.5508
860.56	150.1312
896.60	142.5905
911.20	166.6822
934.06	120.9205
964.77	114.6151
968.97	114.7755
1001.03	121.4605
1078.86	110.2649
1120.29	128.1270
1155.19	135.7193
1173.23	129.6991
1238.11	130.0993
1280.96	114.7775
1332.51	90.2490
1377.67	57.8118
1401.50	77.5369
1407.98	77.6606
1460.80	73.4759
1509.23	64.8911
1588.20	69.2476
1620.50	42.9167
1729.60	42.8149
1764.49	42.6458

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530019

Total Uranium Activity	8.3853E-02	ug/g
Total Uranium Counting Unc.	5.5494E-02	ug/g
Total Uranium Tpu	5.5494E-08	ug/g
Total Uranium Mda	3.0127E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:49:43.25

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530020.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:53:30
Sample ID        : G198530020           Sample quantity  : 1.52390E+02 GRAM
Detector name    : GAM07                Detector geometry: CAN
Elapsed live time: 0 08:00:00.00        Elapsed real time: 0 08:00:55.07  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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*	110	1042	0.91	92.91	89	8	3.83E-03	58.7	
2	0	63.66*	197	1423	1.14	126.82	123	9	6.82E-03	38.0	
3	2	74.95*	1158	1351	1.19	149.40	143	15	4.02E-02	6.3	2.97E+00
4	2	77.25*	1775	1125	1.00	154.00	143	15	6.16E-02	4.1	
5	3	84.31*	333	1064	1.14	168.11	165	27	1.16E-02	18.3	2.46E+00
6	3	87.37	859	1054	1.25	174.23	165	27	2.98E-02	7.1	
7	3	90.08	510	892	1.06	179.64	165	27	1.77E-02	10.4	
8	3	92.91*	831	1172	1.34	185.30	165	27	2.89E-02	9.2	
9	0	99.06	228	1129	1.99	197.60	194	9	7.91E-03	27.4	
10	0	105.36*	120	1178	2.11	210.20	206	9	4.16E-03	55.2	
11	0	129.01	249	1157	1.32	257.48	254	9	8.65E-03	25.4	
12	0	140.47	155	950	2.31	280.39	277	8	5.39E-03	35.3	
13	0	144.40*	138	1015	1.01	288.26	285	9	4.80E-03	45.5	
14	0	154.36	138	825	1.09	308.17	305	7	4.80E-03	35.5	
15	0	186.07*	735	1117	1.26	371.56	367	10	2.55E-02	10.0	
16	0	209.55	325	870	1.09	418.52	414	9	1.13E-02	17.3	
17	0	216.48	62	634	1.23	432.38	430	7	2.14E-03	69.2	
18	4	238.84*	3772	694	1.11	477.08	472	17	1.31E-01	2.2	5.10E+00
19	4	241.80	1028	785	1.74	483.01	472	17	3.57E-02	7.2	
20	0	270.54	454	662	1.61	540.47	536	11	1.58E-02	12.0	
21	0	277.40	191	590	1.01	554.17	550	9	6.61E-03	24.1	
22	0	295.45*	1274	528	1.25	590.27	586	10	4.42E-02	4.7	
23	0	300.26	307	493	1.18	599.90	596	9	1.06E-02	14.2	
24	0	303.25	21	451	1.50	605.86	605	8	7.39E-04	174.3	
25	0	327.98*	155	503	1.26	655.32	651	9	5.38E-03	29.0	
26	0	338.44*	713	525	1.40	676.24	671	10	2.48E-02	7.5	
27	0	352.16*	2141	571	1.26	703.66	697	13	7.44E-02	3.3	
28	0	409.83	107	406	1.02	818.98	814	10	3.70E-03	36.7	
29	0	463.40	302	420	1.46	926.09	919	15	1.05E-02	15.8	
30	0	498.00	52	166	1.34	995.26	992	7	1.82E-03	43.6	
31	0	511.07*	308	522	1.80	1021.41	1013	18	1.07E-02	22.7	
32	0	562.26	26	240	0.96	1123.76	1121	9	9.11E-04	107.6	
33	0	583.44*	1217	324	1.47	1166.10	1160	13	4.23E-02	4.5	
34	0	609.59*	1608	252	1.33	1218.40	1214	11	5.58E-02	3.4	
35	0	634.10	30	319	3.32	1267.41	1263	16	1.04E-03	135.3	
36	0	661.96*	118	173	1.38	1323.12	1319	9	4.10E-03	25.1	
37	0	665.42*	19	161	1.03	1330.03	1327	8	6.62E-04	137.3	
38	0	727.56	221	303	1.66	1454.27	1449	14	7.68E-03	18.0	

Sample ID : G198530020 Acquisition date : 10-DEC-2007 19:53:30

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	2	768.70*	128	156	1.58	1536.55	1531	17	4.45E-03	22.2	4.28E-01
40	2	772.20	38	143	1.98	1543.54	1531	17	1.33E-03	56.3	
41	0	786.46	75	170	2.20	1572.07	1567	10	2.60E-03	34.8	
42	0	795.36	134	174	1.98	1589.85	1584	12	4.67E-03	21.4	
43	0	806.23	40	115	1.68	1611.58	1609	8	1.39E-03	49.4	
44	0	835.89	25	160	0.75	1670.90	1663	11	8.84E-04	98.1	
45	0	839.66	40	168	2.55	1678.44	1675	10	1.39E-03	62.3	
46	0	860.62*	131	209	1.64	1720.36	1713	16	4.53E-03	28.8	
47	0	901.65	2	157	3.05	1802.40	1801	11	6.92E-05	*****	
48	0	911.60*	821	173	1.67	1822.28	1816	15	2.85E-02	5.3	
49	0	934.54	136	192	2.39	1868.15	1855	20	4.72E-03	26.3	
50	1	965.06*	135	164	1.68	1929.18	1924	22	4.70E-03	20.3	1.41E+00
51	1	969.32	457	132	1.61	1937.70	1924	22	1.59E-02	6.7	
52	0	1001.76	29	135	0.96	2002.58	1995	12	1.01E-03	82.0	
53	0	1012.54	15	78	1.34	2024.13	2023	8	5.17E-04	105.0	
54	0	1094.97	83	82	1.52	2188.97	2183	14	2.89E-03	25.4	
55	0	1120.87*	331	147	1.95	2240.75	2233	19	1.15E-02	10.8	
56	0	1156.19	51	104	1.41	2311.38	2306	12	1.76E-03	42.9	
57	0	1238.23	174	71	2.14	2475.44	2470	13	6.05E-03	12.4	
58	0	1282.20	89	129	3.36	2563.37	2553	19	3.09E-03	32.8	
59	0	1336.82	15	40	1.47	2672.59	2669	8	5.04E-04	80.1	
60	0	1378.02*	84	73	2.36	2754.97	2750	12	2.91E-03	25.3	
61	0	1404.67	19	104	3.80	2808.26	2795	16	6.60E-04	122.2	
62	0	1410.20	38	90	1.93	2819.32	2811	18	1.33E-03	61.5	
63	0	1461.24*	1085	100	2.12	2921.40	2911	22	3.77E-02	4.0	
64	0	1496.65	43	38	0.98	2992.20	2986	13	1.49E-03	33.6	
65	0	1503.60	10	35	0.86	3006.10	2999	10	3.30E-04	121.0	
66	0	1510.24	24	71	2.02	3019.38	3012	11	8.37E-04	70.8	
67	2	1588.47	63	60	2.02	3175.83	3170	21	2.18E-03	27.4	1.70E+00
68	2	1592.98	40	52	2.38	3184.85	3170	21	1.37E-03	40.7	
69	0	1631.65	67	42	0.98	3262.18	3256	15	2.32E-03	25.0	
70	0	1665.63	95	16	7.03	3330.12	3319	25	3.31E-03	15.9	
71	1	1677.21	23	8	2.35	3353.28	3351	27	7.98E-04	19.5	7.61E+00
72	1	1684.57*	28	18	2.14	3368.00	3351	27	9.72E-04	44.5	
73	1	1687.07*	15	10	2.14	3373.00	3351	27	5.19E-04	67.0	
74	3	1730.19	96	21	2.87	3459.24	3452	30	3.35E-03	14.7	1.71E+00
75	3	1737.29	24	10	2.38	3473.43	3452	30	8.36E-04	42.8	
76	2	1765.06*	257	36	2.63	3528.96	3520	25	8.93E-03	9.1	3.35E+00
77	2	1770.64	30	25	2.39	3540.13	3520	25	1.03E-03	32.5	
78	0	1848.10	53	23	2.00	3695.03	3687	15	1.82E-03	24.0	
79	0	1876.72	11	31	3.38	3752.28	3741	16	3.95E-04	114.6	
80	0	1970.81	9	26	3.83	3940.44	3929	13	3.12E-04	121.5	

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]G198530020       *
* Acquisition date : 10-DEC-2007 19:53:30 Detector SN#    :                 *
* Detector ID      : GAM07                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:00:55.07     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530020           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.5239E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 31-OCT-2007 13:07:28 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	5.376E+00	5.090E-01	1.890E-01	0.000E+00
CS-137	3.683E-02	1.828E-02	2.292E-02	0.000E+00
EU-155	4.793E-02	5.195E-02	5.962E-02	0.000E+00
TL-208	3.419E-01	3.762E-02	2.093E-02	0.000E+00
BI-212	5.379E-01	1.940E-01	1.649E-01	0.000E+00
PB-212	1.033E+00	7.456E-02	3.440E-02	0.000E+00
BI-214	8.593E-01	8.120E-02	4.230E-02	0.000E+00
PB-214	8.988E-01	7.686E-02	3.838E-02	0.000E+00
RA-223	4.289E-01	1.037E-01	1.047E-01	0.000E+00
AC-228	1.116E+00	1.371E-01	7.732E-02	0.000E+00
PA-234M	1.321E+00	2.126E+00	2.218E+00	0.000E+00
TH-234	1.298E+00	2.535E-01	2.491E-01	0.000E+00
U-235	1.118E-01	1.001E-01	1.126E-01	0.000E+00
NP-236	4.993E-02	2.704E-02	3.174E-02	0.000E+00
NP-237	5.984E-01	9.503E-02	1.111E-01	0.000E+00
AM-243	1.620E-01	2.274E-02	2.359E-02	0.000E+00
CM-243	4.335E-02	4.699E-02	5.378E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-1.109E-02	2.004E-02	2.348E-02	0.000E+00	NOT IDENT.
RH-101	-4.123E-03	1.284E-02	2.083E-02	0.000E+00	NOT IDENT.
SB-125	1.332E-02	3.242E-02	5.663E-02	0.000E+00	NOT IDENT.
PO-209	3.145E-01	2.790E+00	4.313E+00	0.000E+00	NOT IDENT.
BI-211	1.005E-01	3.786E-01	5.707E-01	0.000E+00	NOT IDENT.
PA-233	2.254E-03	2.143E-02	3.799E-02	0.000E+00	NOT IDENT.
NP-239	-4.357E-02	7.602E-02	1.357E-01	0.000E+00	NOT IDENT.
AM-241	1.867E-02	3.187E-02	5.378E-02	0.000E+00	NOT IDENT.
AM-246	5.508E-02	4.724E-02	8.700E-02	0.000E+00	NOT IDENT.
CF-249	-4.531E-03	1.539E-02	2.361E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:49:44.29

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530020.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 10-DEC-2007 19:53:30
Sample ID        : G198530020           Sample quantity  : 1.52390E+02 GRAM
Detector name    : GAM07                Detector geometry: CAN
Elapsed live time: 0 08:00:00.00        Elapsed real time: 0 08:00:55.07  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	1085	10.66*	1.166E+00	5.376E+00	5.376E+00	9.66
CS-137	661.66	118	85.10*	2.329E+00	3.669E-02	3.683E-02	50.65
EU-155	105.31	120	21.20*	7.434E+00	4.685E-02	4.793E-02	110.60
TL-208	277.36	191	6.31	4.669E+00	3.982E-01	3.982E-01	48.58
	510.77	308	22.60	2.899E+00	2.892E-01	2.892E-01	45.89
	583.19	1217	84.50*	2.595E+00	3.419E-01	3.419E-01	11.23
	763.13	------	1.81	2.057E+00	------	Line Not Found	------
	860.56	131	12.42	1.849E+00	3.502E-01	3.502E-01	57.96
BI-212	727.33	221	11.80*	2.145E+00	5.379E-01	5.379E-01	36.80
	785.37	75	1.10	2.003E+00	2.096E+00	2.096E+00	70.04
	1620.50	------	1.49	1.077E+00	------	Line Not Found	------
PB-212	74.81	1158	10.40	6.453E+00	1.062E+00	1.062E+00	14.32
	77.11	1775	17.50	6.619E+00	9.437E-01	9.437E-01	10.75
	87.30	859	7.81	7.133E+00	9.500E-01	9.500E-01	16.21
	238.63	3772	43.30*	5.194E+00	1.033E+00	1.033E+00	7.37
	300.09	307	3.28	4.404E+00	1.307E+00	1.307E+00	29.10
BI-214	609.31	1608	46.10*	2.500E+00	8.592E-01	8.593E-01	9.64
	768.36	128	4.94	2.044E+00	7.812E-01	7.813E-01	44.97
	806.17	40	1.22	1.959E+00	1.031E+00	1.031E+00	99.06
	934.06	136	3.03	1.717E+00	1.608E+00	1.608E+00	53.05
	1120.29	331	15.10	1.460E+00	9.257E-01	9.258E-01	22.42
	1155.19	51	1.63	1.421E+00	1.345E+00	1.345E+00	85.90
	1238.11	174	5.79	1.338E+00	1.386E+00	1.386E+00	25.36
	1280.96	89	1.43	1.299E+00	2.949E+00	2.950E+00	65.76
	1377.67	84	4.00	1.222E+00	1.054E+00	1.054E+00	50.91
	1401.50	------	1.27	1.206E+00	------	Line Not Found	------
	1407.98	------	2.15	1.201E+00	------	Line Not Found	------
	1509.23	24	2.11	1.136E+00	6.196E-01	6.197E-01	141.73
	1729.60	96	2.92	1.029E+00	1.977E+00	1.977E+00	30.02
	1764.49	257	15.40	1.016E+00	1.013E+00	1.013E+00	18.98
PB-214	74.81	1158	6.44	6.453E+00	1.716E+00	1.716E+00	14.32
	77.11	1775	10.80	6.619E+00	1.529E+00	1.529E+00	10.75

Sample ID : G198530020 Acquisition date : 10-DEC-2007 19:53:30

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	859	4.84	7.133E+00	1.533E+00	1.533E+00	16.21
	242.00	1028	7.43	5.150E+00	1.654E+00	1.654E+00	15.65
	295.22	1274	19.30	4.457E+00	9.117E-01	9.118E-01	11.20
	351.93	2141	37.60*	3.902E+00	8.988E-01	8.988E-01	8.73
RA-223	269.46	454	13.70*	4.754E+00	4.289E-01	4.289E-01	24.68
AC-228	129.07	249	2.42	7.227E+00	8.771E-01	8.771E-01	51.20
	209.25	325	3.89	5.671E+00	9.067E-01	9.067E-01	35.14
	270.25	454	3.46	4.754E+00	1.698E+00	1.698E+00	24.68
	338.32	713	11.27	4.023E+00	9.689E-01	9.689E-01	16.12
	409.46	107	1.92	3.466E+00	9.866E-01	9.866E-01	73.61
	463.00	302	4.40	3.140E+00	1.348E+00	1.348E+00	32.20
	794.95	134	4.25	1.983E+00	9.820E-01	9.820E-01	43.47
	911.20	821	25.80*	1.756E+00	1.116E+00	1.116E+00	12.53
	964.77	135	4.99	1.668E+00	1.002E+00	1.002E+00	41.18
	968.97	457	15.80	1.662E+00	1.072E+00	1.072E+00	14.94
	1588.20	63	3.22	1.093E+00	1.097E+00	1.097E+00	54.99
PA-234M	1001.03	29	0.84*	1.614E+00	1.321E+00	1.321E+00	164.15
TH-234	63.29	197	4.80	5.319E+00	4.741E-01	4.741E-01	76.21
	92.58	831	5.41*	7.293E+00	1.298E+00	1.298E+00	19.94
U-235	143.76	138	10.96*	6.949E+00	1.118E-01	1.118E-01	91.28
NP-236	98.44	228	38.00*	7.395E+00	4.993E-02	4.993E-02	55.27
NP-237	86.48	859	12.40*	7.133E+00	5.984E-01	5.984E-01	16.21
AM-243	74.66	1158	68.20*	6.453E+00	1.620E-01	1.620E-01	14.32
CM-243	103.76	120	23.00*	7.434E+00	4.318E-02	4.335E-02	110.60

Flag: "*" = Keyline

Sample ID : G198530020 Acquisition date : 10-DEC-2007 19:53:30

Total number of lines in spectrum 80
Number of unidentified lines 35
Number of lines tentatively identified by NID 45 56.25%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.376E+00	5.376E+00	0.519E+00	9.66	
CS-137	9.47E+08S	1.00	3.669E-02	3.683E-02	1.865E-02	50.65	
EU-155	1.57E+08S	1.02	4.685E-02	4.793E-02	5.301E-02	110.60	
TL-208	4.43E+17S	1.00	3.419E-01	3.419E-01	0.384E-01	11.23	
BI-212	4.43E+17S	1.00	5.379E-01	5.379E-01	1.979E-01	36.80	
PB-212	4.43E+17S	1.00	1.033E+00	1.033E+00	0.076E+00	7.37	
BI-214	5.05E+10S	1.00	8.592E-01	8.593E-01	0.829E-01	9.64	
PB-214	5.05E+10S	1.00	8.988E-01	8.988E-01	0.784E-01	8.73	
RA-223	1.04E+12S	1.00	4.289E-01	4.289E-01	1.058E-01	24.68	
AC-228	4.43E+17S	1.00	1.116E+00	1.116E+00	0.140E+00	12.53	
PA-234M	1.41E+17S	1.00	1.321E+00	1.321E+00	2.169E+00	164.15	
TH-234	1.41E+17S	1.00	1.298E+00	1.298E+00	0.259E+00	19.94	
U-235	2.22E+16S	1.00	1.118E-01	1.118E-01	1.021E-01	91.28	
NP-236	4.89E+12S	1.00	4.993E-02	4.993E-02	2.760E-02	55.27	
NP-237	6.75E+13S	1.00	5.984E-01	5.984E-01	0.970E-01	16.21	
AM-243	2.33E+11S	1.00	1.620E-01	1.620E-01	0.232E-01	14.32	
CM-243	8.99E+08S	1.00	4.318E-02	4.335E-02	4.795E-02	110.60	
			---	---			
	Total Activity :		1.426E+01	1.426E+01			

Grand Total Activity : 1.426E+01 1.426E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530020 Acquisition date : 10-DEC-2007 19:53:30

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.70	110	1042	0.91	92.91	89	8	3.83E-03	****	2.63E+00	
3	84.31	333	1064	1.14	168.11	165	27	1.16E-02	36.6	7.01E+00	
3	90.08	510	892	1.06	179.64	165	27	1.77E-02	20.8	7.22E+00	
0	140.47	155	950	2.31	280.39	277	8	5.39E-03	70.6	7.02E+00	
0	154.36	138	825	1.09	308.17	305	7	4.80E-03	70.9	6.75E+00	
0	186.07	735	1117	1.26	371.56	367	10	2.55E-02	20.0	6.11E+00	
0	216.48	62	634	1.23	432.38	430	7	2.14E-03	****	5.55E+00	
0	303.25	21	451	1.50	605.86	605	8	7.39E-04	****	4.37E+00	
0	327.98	155	503	1.26	655.32	651	9	5.38E-03	57.9	4.12E+00	
0	498.00	52	166	1.34	995.26	992	7	1.82E-03	87.2	2.96E+00	
0	562.26	26	240	0.96	1123.76	1121	9	9.11E-04	****	2.68E+00	
0	634.10	30	319	3.32	1267.41	1263	16	1.04E-03	****	2.42E+00	
0	665.42	19	161	1.03	1330.03	1327	8	6.62E-04	****	2.32E+00	
2	772.20	38	143	1.98	1543.54	1531	17	1.33E-03	****	2.04E+00	
0	835.89	25	160	0.75	1670.90	1663	11	8.84E-04	****	1.90E+00	
0	839.66	40	168	2.55	1678.44	1675	10	1.39E-03	****	1.89E+00	
0	901.65	2	157	3.05	1802.40	1801	11	6.92E-05	****	1.77E+00	
0	1012.54	15	78	1.34	2024.13	2023	8	5.17E-04	****	1.60E+00	
0	1094.97	83	82	1.52	2188.97	2183	14	2.89E-03	50.8	1.49E+00	
0	1336.82	15	40	1.47	2672.59	2669	8	5.04E-04	****	1.25E+00	
0	1404.67	19	104	3.80	2808.26	2795	16	6.60E-04	****	1.20E+00	
0	1410.20	38	90	1.93	2819.32	2811	18	1.33E-03	****	1.20E+00	
0	1496.65	43	38	0.98	2992.20	2986	13	1.49E-03	67.2	1.14E+00	
0	1503.60	10	35	0.86	3006.10	2999	10	3.30E-04	****	1.14E+00	
2	1592.98	40	52	2.38	3184.85	3170	21	1.37E-03	81.3	1.09E+00	
0	1631.65	67	42	0.98	3262.18	3256	15	2.32E-03	49.9	1.07E+00	
0	1665.63	95	16	7.03	3330.12	3319	25	3.31E-03	31.7	1.06E+00	
1	1677.21	23	8	2.35	3353.28	3351	27	7.98E-04	38.9	1.05E+00	
1	1684.57	28	18	2.14	3368.00	3351	27	9.72E-04	88.9	1.05E+00	
1	1687.07	15	10	2.14	3373.00	3351	27	5.19E-04	****	1.05E+00	
3	1737.29	24	10	2.38	3473.43	3452	30	8.36E-04	85.6	1.03E+00	
2	1770.64	30	25	2.39	3540.13	3520	25	1.03E-03	64.9	1.01E+00	
0	1848.10	53	23	2.00	3695.03	3687	15	1.82E-03	48.1	9.87E-01	
0	1876.72	11	31	3.38	3752.28	3741	16	3.95E-04	****	9.78E-01	
0	1970.81	9	26	3.83	3940.44	3929	13	3.12E-04	****	9.51E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530020            *
* Acquisition date : 10-DEC-2007 19:53:30 Detector SN#    :                 *
* Detector ID      : GAM07                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:00:55.07     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530020           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.5239E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 31-OCT-2007 13:07:28 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	5.376E+00	5.090E-01	9.454E-02	5.090E-01
CS-137	3.683E-02	1.828E-02	1.147E-02	1.828E-02
EU-155	4.793E-02	5.195E-02	2.983E-02	5.195E-02
TL-208	3.419E-01	3.762E-02	1.047E-02	3.762E-02
BI-212	5.379E-01	1.940E-01	8.248E-02	1.940E-01
PB-212	1.033E+00	7.456E-02	1.721E-02	7.456E-02
BI-214	8.593E-01	8.120E-02	2.116E-02	8.120E-02
PB-214	8.988E-01	7.686E-02	1.920E-02	7.686E-02
RA-223	4.289E-01	1.037E-01	5.237E-02	1.037E-01
AC-228	1.116E+00	1.371E-01	3.868E-02	1.371E-01
PA-234M	1.321E+00	2.126E+00	1.110E+00	2.126E+00
TH-234	1.298E+00	2.535E-01	1.246E-01	2.535E-01
U-235	1.118E-01	1.001E-01	5.634E-02	1.001E-01
NP-236	4.993E-02	2.704E-02	1.588E-02	2.704E-02
NP-237	5.984E-01	9.503E-02	5.557E-02	9.503E-02
AM-243	1.620E-01	2.274E-02	1.180E-02	2.274E-02
CM-243	4.335E-02	4.699E-02	2.691E-02	4.699E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-1.109E-02	2.004E-02	1.175E-02	2.004E-02	NOT IDENT.
RH-101	-4.123E-03	1.284E-02	1.042E-02	1.284E-02	NOT IDENT.
SB-125	1.332E-02	3.242E-02	2.833E-02	3.242E-02	NOT IDENT.
PO-209	3.145E-01	2.790E+00	2.158E+00	2.790E+00	NOT IDENT.
BI-211	1.005E-01	3.786E-01	2.855E-01	3.786E-01	NOT IDENT.
PA-233	2.254E-03	2.143E-02	1.901E-02	2.143E-02	NOT IDENT.
NP-239	-4.357E-02	7.602E-02	6.790E-02	7.602E-02	NOT IDENT.
AM-241	1.867E-02	3.187E-02	2.691E-02	3.187E-02	NOT IDENT.
AM-246	5.508E-02	4.724E-02	4.353E-02	4.724E-02	NOT IDENT.
CF-249	-4.531E-03	1.539E-02	1.181E-02	1.539E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	814.1411
63.29	975.3925
74.66	1107.8389
74.81	1108.1862
74.81	1108.1862
77.11	1113.4224
77.11	1113.4224
86.48	997.1729
87.30	998.7094
87.30	998.7094
92.58	1008.4238
98.44	832.5028
103.76	880.7963
105.31	887.2503
129.07	860.4955
143.76	788.3461
198.00	793.8113
209.25	741.2712
228.18	709.6085
238.63	655.7175
242.00	657.7651
269.46	514.8894
270.25	489.6163
277.36	489.2813
295.22	485.6085
300.09	408.8361
312.17	430.3810
338.32	449.8427
351.93	354.0695
387.59	357.5185
409.46	368.8510
427.87	310.3436
463.00	261.4756
510.77	247.2518
583.19	241.1510
609.31	272.8037
661.66	236.1641
727.33	201.7118
763.13	161.3272
768.36	196.9808
785.37	174.4421
794.95	151.5051
806.17	152.1350
831.80	139.9165
860.56	133.4218
896.60	148.1064
911.20	143.8270
934.06	121.9460
964.77	148.1544
968.97	149.0687
1001.03	106.5246
1078.86	120.1400
1120.29	116.9027
1155.19	105.2305
1173.23	116.7389
1238.11	115.8789
1280.96	104.4704
1332.51	71.2061
1377.67	95.9883
1401.50	75.8460
1407.98	78.5522
1460.80	66.2642
1509.23	77.2919
1588.20	75.4834
1620.50	50.6641
1729.60	35.6117
1764.49	40.9784

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530020

Total Uranium Activity	5.1751E-02	ug/g
Total Uranium Counting Unc.	4.6294E-02	ug/g
Total Uranium Tpu	4.6294E-08	ug/g
Total Uranium Mda	2.6068E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:50:18.78

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530021.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:33:36
Sample ID        : G198530021           Sample quantity  : 1.90810E+02 GRAM
Detector name    : GAM01                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.05  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.16*	129	818	1.10	126.36	123	9	5.98E-03	44.0	
2	1	74.62	471	1139	1.63	149.30	144	17	2.18E-02	14.4	7.11E+00
3	1	77.32	934	1087	1.63	154.70	144	17	4.32E-02	7.6	
4	1	84.07	132	1009	1.57	168.20	162	32	6.12E-03	42.8	2.08E+00
5	1	87.32	448	1060	1.65	174.70	162	32	2.08E-02	14.4	
6	1	90.02	235	910	1.47	180.11	162	32	1.09E-02	25.0	
7	1	92.81*	491	866	1.56	185.70	162	32	2.27E-02	13.2	
8	0	105.90	56	1054	1.27	211.88	205	11	2.59E-03	113.0	
9	0	129.67	180	1064	1.05	259.43	254	11	8.35E-03	35.8	
10	0	144.31	48	923	1.05	288.71	284	9	2.22E-03	114.9	
11	0	155.26*	57	955	1.17	310.62	306	10	2.62E-03	107.4	
12	0	185.99*	388	989	1.27	372.10	367	11	1.80E-02	17.6	
13	0	210.33	92	989	0.78	420.80	413	11	4.26E-03	67.0	
14	3	238.69*	2323	538	1.37	477.53	471	24	1.08E-01	2.9	1.03E+00
15	3	241.70*	697	604	1.89	483.55	471	24	3.22E-02	9.7	
16	0	269.77	224	690	1.96	539.71	533	14	1.04E-02	25.8	
17	0	277.04	132	577	0.93	554.25	549	12	6.13E-03	37.2	
18	3	295.24*	1009	327	1.45	590.66	584	27	4.67E-02	5.0	9.87E-01
19	3	300.16	219	354	1.59	600.50	584	27	1.01E-02	17.6	
20	3	303.46	55	316	1.54	607.09	584	27	2.56E-03	61.1	
21	0	328.08*	93	461	1.69	656.34	651	12	4.29E-03	50.7	
22	0	331.67	35	295	1.61	663.54	662	8	1.62E-03	86.3	
23	0	338.55	488	539	1.48	677.31	671	14	2.26E-02	11.1	
24	0	352.02*	1629	432	1.57	704.24	698	15	7.54E-02	3.9	
25	0	463.89	240	301	1.93	928.04	921	16	1.11E-02	17.5	
26	0	491.79	33	279	4.25	983.85	978	15	1.54E-03	110.8	
27	0	511.09*	39	399	2.13	1022.45	1015	15	1.82E-03	137.9	
28	8	534.02	21	64	1.65	1068.33	1066	14	9.94E-04	54.9	2.07E+00
29	8	537.54	34	144	2.06	1075.36	1066	14	1.58E-03	69.7	
30	0	561.84	39	234	5.80	1123.96	1118	15	1.81E-03	86.3	
31	0	583.34*	747	233	1.63	1166.97	1160	15	3.46E-02	6.1	
32	0	609.46*	1060	195	1.60	1219.22	1213	12	4.91E-02	4.2	
33	0	666.18	6	207	0.81	1332.68	1325	12	2.62E-04	512.4	
34	0	727.31	175	162	1.37	1454.97	1448	13	8.11E-03	16.8	
35	0	755.90	60	109	1.54	1512.15	1506	11	2.80E-03	35.9	
36	0	768.00	97	135	1.86	1536.35	1530	12	4.49E-03	26.0	
37	0	787.30	15	149	1.00	1574.95	1566	11	7.14E-04	156.0	
38	0	794.76	134	119	1.83	1589.87	1581	17	6.21E-03	20.5	

Sample ID : G198530021 Acquisition date : 11-DEC-2007 05:33:36

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	860.69	127	101	2.47	1721.75	1715	13	5.89E-03	18.5	
40	0	879.29	25	66	3.10	1758.96	1754	9	1.18E-03	60.0	
41	0	882.84	28	58	0.73	1766.06	1762	9	1.31E-03	52.2	
42	0	911.33*	478	102	1.54	1823.04	1816	13	2.21E-02	6.6	
43	0	917.78*	11	56	2.18	1835.95	1830	9	4.89E-04	146.1	
44	0	933.99	72	67	2.23	1868.36	1863	10	3.31E-03	24.5	
45	0	940.64	59	106	1.60	1881.66	1874	17	2.74E-03	42.0	
46	2	964.71	114	105	2.47	1929.81	1922	28	5.26E-03	21.6	1.54E+00
47	2	969.08*	262	72	2.05	1938.54	1922	28	1.21E-02	9.8	
48	0	989.24	56	69	5.92	1978.87	1972	15	2.60E-03	35.2	
49	0	1000.70	67	62	2.01	2001.79	1996	13	3.10E-03	27.1	
50	0	1044.64	43	39	3.16	2089.67	2084	13	1.99E-03	33.6	
51	0	1074.13	20	108	5.22	2148.66	2136	16	9.41E-04	116.4	
52	0	1079.02	24	53	0.87	2158.44	2152	11	1.12E-03	62.5	
53	0	1120.77*	226	109	1.80	2241.94	2236	16	1.04E-02	12.9	
54	0	1156.52	55	56	2.29	2313.44	2308	12	2.55E-03	31.0	
55	0	1208.59	40	36	1.28	2417.59	2414	10	1.86E-03	31.9	
56	0	1238.85	111	78	2.04	2478.10	2471	16	5.15E-03	20.3	
57	0	1276.75	24	49	2.61	2553.90	2543	15	1.13E-03	65.6	
58	0	1282.09	48	30	4.30	2564.59	2559	12	2.21E-03	27.9	
59	0	1289.40	38	47	5.94	2579.20	2571	17	1.77E-03	44.0	
60	0	1303.18	24	28	1.47	2606.77	2602	9	1.11E-03	45.2	
61	0	1309.45	34	38	4.58	2619.30	2612	15	1.59E-03	42.5	
62	0	1379.06	74	59	1.98	2758.52	2750	17	3.44E-03	26.4	
63	0	1402.30	26	33	1.64	2805.00	2798	11	1.21E-03	46.7	
64	0	1408.07*	36	48	2.95	2816.53	2809	16	1.65E-03	49.8	
65	0	1461.21*	546	36	2.02	2922.81	2915	18	2.53E-02	5.4	
66	0	1472.49	29	31	4.76	2945.37	2936	16	1.32E-03	48.1	
67	0	1561.79	32	66	8.32	3123.97	3106	29	1.49E-03	74.2	
68	0	1584.29	8	39	0.66	3168.96	3159	11	3.85E-04	152.3	
69	1	1588.43	48	29	2.51	3177.23	3169	25	2.24E-03	28.5	2.16E+00
70	1	1592.31	47	20	2.28	3185.00	3169	25	2.16E-03	27.5	
71	0	1631.18	32	23	1.95	3262.73	3257	13	1.47E-03	35.8	
72	1	1637.82	20	29	2.30	3276.00	3271	16	9.27E-04	49.1	3.83E+00
73	1	1640.82	24	20	2.30	3282.00	3271	16	1.13E-03	41.2	
74	0	1662.19	25	24	1.93	3324.74	3316	14	1.13E-03	47.4	
75	0	1708.03	20	8	4.42	3416.41	3411	12	9.05E-04	37.9	
76	0	1729.69	69	15	3.35	3459.72	3451	15	3.19E-03	17.2	
77	0	1765.06*	215	14	2.02	3530.46	3522	19	9.97E-03	9.0	
78	0	1797.06	9	5	0.83	3594.44	3589	10	4.17E-04	57.2	
79	0	1832.76	12	43	4.61	3665.84	3646	25	5.40E-04	155.4	
80	0	1848.41	45	17	1.18	3697.13	3688	17	2.08E-03	25.7	
81	0	1871.43	14	20	1.84	3743.16	3738	13	6.30E-04	72.5	
82	0	1944.06	25	21	4.57	3888.39	3878	21	1.15E-03	50.2	
83	0	1981.10	9	6	0.66	3962.46	3957	9	3.97E-04	64.1	
84	0	2011.85*	1	6	0.57	4023.96	4020	9	3.32E-05	*****	
85	0	2018.16	13	8	4.11	4036.58	4028	16	6.02E-04	56.0	

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]G198530021       *
* Acquisition date : 11-DEC-2007 05:33:36 Detector SN#    :                 *
* Detector ID      : GAM01                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.05     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530021           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.9081E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-MAR-2007 03:44:30 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.212E+00	3.868E-01	2.016E-01	0.000E+00
EU-155	2.664E-02	5.900E-02	7.420E-02	0.000E+00
TL-208	2.457E-01	3.383E-02	2.227E-02	0.000E+00
BI-212	5.015E-01	1.698E-01	1.733E-01	0.000E+00
PB-212	7.233E-01	6.353E-02	3.985E-02	0.000E+00
BI-214	6.640E-01	7.271E-02	4.709E-02	0.000E+00
PB-214	7.916E-01	7.718E-02	4.567E-02	0.000E+00
RA-223	2.418E-01	1.232E-01	1.279E-01	0.000E+00
AC-228	7.688E-01	1.233E-01	7.915E-02	0.000E+00
PA-234M	3.602E+00	1.940E+00	2.530E+00	0.000E+00
TH-234	9.624E-01	2.589E-01	3.197E-01	0.000E+00
U-235	4.381E-02	9.869E-02	1.448E-01	0.000E+00
NP-237	4.056E-01	1.189E-01	1.470E-01	0.000E+00
AM-243	9.687E-02	2.828E-02	3.391E-02	0.000E+00
AM-246	4.207E-02	5.166E-02	8.091E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	6.671E-03		1.307E-02	2.311E-02	0.000E+00	NOT IDENT.
RH-101	-9.352E-03		1.424E-02	2.401E-02	0.000E+00	NOT IDENT.
SB-125	2.048E-02		3.639E-02	6.580E-02	0.000E+00	NOT IDENT.
CS-137	4.738E-03		1.789E-02	2.521E-02	0.000E+00	NOT IDENT.
PO-209	2.166E+00		2.519E+00	4.616E+00	0.000E+00	NOT IDENT.
BI-211	2.875E-03		3.552E-01	6.227E-01	0.000E+00	NOT IDENT.
PA-233	4.832E-03		2.406E-02	4.384E-02	0.000E+00	NOT IDENT.
NP-236	2.248E-02		2.785E-02	4.273E-02	0.000E+00	NOT IDENT.
NP-239	6.489E-02		8.762E-02	1.650E-01	0.000E+00	NOT IDENT.
AM-241	1.298E-02		6.096E-02	1.014E-01	0.000E+00	NOT IDENT.
CM-243	-6.764E-03		4.056E-02	6.822E-02	0.000E+00	NOT IDENT.
CF-249	-3.868E-04		1.526E-02	2.714E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:50:19.86

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530021.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:33:36
Sample ID        : G198530021           Sample quantity  : 1.90810E+02 GRAM
Detector name    : GAM01                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.05  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	546	10.66*	1.047E+00	3.212E+00	3.212E+00	12.29
EU-155	105.31	56	21.20*	6.652E+00	2.603E-02	2.664E-02	226.05
TL-208	277.36	132	6.31	4.341E+00	3.170E-01	3.170E-01	74.74
	510.77	39	22.60	2.640E+00	4.326E-02	4.326E-02	275.80
	583.19	747	84.50*	2.358E+00	2.457E-01	2.457E-01	14.05
	763.13	------	1.81	1.860E+00	------	Line Not Found	------
	860.56	127	12.42	1.667E+00	4.028E-01	4.028E-01	38.24
BI-212	727.33	175	11.80*	1.942E+00	5.015E-01	5.015E-01	34.55
	785.37	15	1.10	1.808E+00	5.088E-01	5.088E-01	312.21
	1620.50	------	1.49	9.727E-01	------	Line Not Found	------
PB-212	74.81	471	10.40	4.677E+00	6.352E-01	6.352E-01	29.79
	77.11	934	17.50	4.975E+00	7.036E-01	7.036E-01	17.23
	87.30	448	7.81	5.847E+00	6.440E-01	6.440E-01	29.90
	238.63	2323	43.30*	4.864E+00	7.233E-01	7.233E-01	8.96
	300.09	219	3.28	4.076E+00	1.074E+00	1.074E+00	35.92
BI-214	609.31	1060	46.10*	2.271E+00	6.640E-01	6.640E-01	11.17
	768.36	97	4.94	1.849E+00	6.969E-01	6.970E-01	52.70
	806.17	------	1.22	1.770E+00	------	Line Not Found	------
	934.06	72	3.03	1.546E+00	1.002E+00	1.002E+00	49.94
	1120.29	226	15.10	1.309E+00	7.484E-01	7.484E-01	26.87
	1155.19	55	1.63	1.273E+00	1.739E+00	1.739E+00	62.36
	1238.11	111	5.79	1.198E+00	1.052E+00	1.052E+00	41.00
	1280.96	48	1.43	1.164E+00	1.881E+00	1.881E+00	56.08
	1377.67	74	4.00	1.095E+00	1.113E+00	1.113E+00	53.14
	1401.50	26	1.27	1.081E+00	1.252E+00	1.252E+00	93.55
	1407.98	36	2.15	1.077E+00	1.009E+00	1.009E+00	99.85
	1509.23	------	2.11	1.022E+00	------	Line Not Found	------
	1729.60	69	2.92	9.349E-01	1.658E+00	1.658E+00	34.81
	1764.49	215	15.40	9.245E-01	9.920E-01	9.920E-01	18.82
PB-214	74.81	471	6.44	4.677E+00	1.026E+00	1.026E+00	29.79
	77.11	934	10.80	4.975E+00	1.140E+00	1.140E+00	17.23
	87.30	448	4.84	5.847E+00	1.039E+00	1.039E+00	29.90

Sample ID : G198530021 Acquisition date : 11-DEC-2007 05:33:36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	697	7.43	4.818E+00	1.276E+00	1.276E+00	20.56
	295.22	1009	19.30	4.130E+00	8.303E-01	8.304E-01	12.03
	351.93	1629	37.60*	3.589E+00	7.916E-01	7.916E-01	9.95
RA-223	269.46	224	13.70*	4.431E+00	2.418E-01	2.418E-01	51.99
AC-228	129.07	180	2.42	6.745E+00	7.249E-01	7.249E-01	71.86
	209.25	92	3.89	5.328E+00	2.913E-01	2.913E-01	134.26
	270.25	224	3.46	4.431E+00	9.575E-01	9.575E-01	51.99
	338.32	488	11.27	3.704E+00	7.664E-01	7.664E-01	23.18
	409.46	------	1.92	3.174E+00	------	Line Not Found	------
	463.00	240	4.40	2.863E+00	1.247E+00	1.247E+00	35.57
	794.95	134	4.25	1.793E+00	1.155E+00	1.155E+00	41.98
	911.20	478	25.80*	1.582E+00	7.688E-01	7.688E-01	16.36
	964.77	114	4.99	1.501E+00	9.946E-01	9.946E-01	44.12
	968.97	262	15.80	1.495E+00	7.275E-01	7.275E-01	21.61
	1588.20	48	3.22	9.857E-01	9.994E-01	9.994E-01	57.21
PA-234M	1001.03	67	0.84*	1.451E+00	3.602E+00	3.602E+00	54.94
TH-234	63.29	129	4.80	3.157E+00	5.594E-01	5.594E-01	88.40
	92.58	491	5.41*	6.183E+00	9.624E-01	9.624E-01	27.45
U-235	143.76	48	10.96*	6.561E+00	4.381E-02	4.381E-02	229.87
NP-237	86.48	448	12.40*	5.847E+00	4.056E-01	4.056E-01	29.90
AM-243	74.66	471	68.20*	4.677E+00	9.687E-02	9.687E-02	29.79
AM-246	1078.86	24	27.80*	1.355E+00	4.206E-02	4.207E-02	125.30

Flag: "*" = Keyline

Sample ID : G198530021 Acquisition date : 11-DEC-2007 05:33:36

Total number of lines in spectrum 85
Number of unidentified lines 42
Number of lines tentatively identified by NID 43 50.59%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	3.212E+00	3.212E+00	0.395E+00	12.29	
EU-155	1.57E+08S	1.02	2.603E-02	2.664E-02	6.021E-02	226.05	
TL-208	4.43E+17S	1.00	2.457E-01	2.457E-01	0.345E-01	14.05	
BI-212	4.43E+17S	1.00	5.015E-01	5.015E-01	1.733E-01	34.55	
PB-212	4.43E+17S	1.00	7.233E-01	7.233E-01	0.648E-01	8.96	
BI-214	5.05E+10S	1.00	6.640E-01	6.640E-01	0.742E-01	11.17	
PB-214	5.05E+10S	1.00	7.916E-01	7.916E-01	0.788E-01	9.95	
RA-223	1.04E+12S	1.00	2.418E-01	2.418E-01	1.257E-01	51.99	
AC-228	4.43E+17S	1.00	7.688E-01	7.688E-01	1.258E-01	16.36	
PA-234M	1.41E+17S	1.00	3.602E+00	3.602E+00	1.979E+00	54.94	
TH-234	1.41E+17S	1.00	9.624E-01	9.624E-01	2.642E-01	27.45	
U-235	2.22E+16S	1.00	4.381E-02	4.381E-02	10.07E-02	229.87	
NP-237	6.75E+13S	1.00	4.056E-01	4.056E-01	1.213E-01	29.90	
AM-243	2.33E+11S	1.00	9.687E-02	9.687E-02	2.885E-02	29.79	
AM-246	2.18E+11S	1.00	4.206E-02	4.207E-02	5.271E-02	125.30	
			---	---			
		Total Activity :	1.233E+01	1.233E+01			

Grand Total Activity : 1.233E+01 1.233E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530021 Acquisition date : 11-DEC-2007 05:33:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	84.07	132	1009	1.57	168.20	162	32	6.12E-03	85.6	5.60E+00	
1	90.02	235	910	1.47	180.11	162	32	1.09E-02	50.1	6.02E+00	
0	155.26	57	955	1.17	310.62	306	10	2.62E-03	****	6.37E+00	
0	185.99	388	989	1.27	372.10	367	11	1.80E-02	35.2	5.78E+00	
3	303.46	55	316	1.54	607.09	584	27	2.56E-03	****	4.04E+00	
0	328.08	93	461	1.69	656.34	651	12	4.29E-03	****	3.80E+00	
0	331.67	35	295	1.61	663.54	662	8	1.62E-03	****	3.77E+00	
0	491.79	33	279	4.25	983.85	978	15	1.54E-03	****	2.73E+00	
8	534.02	21	64	1.65	1068.33	1066	14	9.94E-04	****	2.54E+00	
8	537.54	34	144	2.06	1075.36	1066	14	1.58E-03	****	2.53E+00	
0	561.84	39	234	5.80	1123.96	1118	15	1.81E-03	****	2.44E+00	
0	666.18	6	207	0.81	1332.68	1325	12	2.62E-04	****	2.10E+00	
0	755.90	60	109	1.54	1512.15	1506	11	2.80E-03	71.9	1.88E+00	
0	879.29	25	66	3.10	1758.96	1754	9	1.18E-03	****	1.63E+00	
0	882.84	28	58	0.73	1766.06	1762	9	1.31E-03	****	1.63E+00	
0	917.78	11	56	2.18	1835.95	1830	9	4.89E-04	****	1.57E+00	
0	940.64	59	106	1.60	1881.66	1874	17	2.74E-03	83.9	1.54E+00	
0	989.24	56	69	5.92	1978.87	1972	15	2.60E-03	70.4	1.47E+00	
0	1044.64	43	39	3.16	2089.67	2084	13	1.99E-03	67.2	1.40E+00	
0	1074.13	20	108	5.22	2148.66	2136	16	9.41E-04	****	1.36E+00	
0	1208.59	40	36	1.28	2417.59	2414	10	1.86E-03	63.7	1.22E+00	
0	1276.75	24	49	2.61	2553.90	2543	15	1.13E-03	****	1.17E+00	
0	1289.40	38	47	5.94	2579.20	2571	17	1.77E-03	88.0	1.16E+00	
0	1303.18	24	28	1.47	2606.77	2602	9	1.11E-03	90.5	1.15E+00	
0	1309.45	34	38	4.58	2619.30	2612	15	1.59E-03	85.1	1.14E+00	
0	1472.49	29	31	4.76	2945.37	2936	16	1.32E-03	96.2	1.04E+00	
0	1561.79	32	66	8.32	3123.97	3106	29	1.49E-03	****	9.97E-01	
0	1584.29	8	39	0.66	3168.96	3159	11	3.85E-04	****	9.87E-01	
1	1592.31	47	20	2.28	3185.00	3169	25	2.16E-03	55.0	9.84E-01	
0	1631.18	32	23	1.95	3262.73	3257	13	1.47E-03	71.5	9.69E-01	
1	1637.82	20	29	2.30	3276.00	3271	16	9.27E-04	98.1	9.66E-01	
1	1640.82	24	20	2.30	3282.00	3271	16	1.13E-03	82.4	9.65E-01	
0	1662.19	25	24	1.93	3324.74	3316	14	1.13E-03	94.7	9.57E-01	
0	1708.03	20	8	4.42	3416.41	3411	12	9.05E-04	75.9	9.42E-01	
0	1797.06	9	5	0.83	3594.44	3589	10	4.17E-04	****	9.16E-01	
0	1832.76	12	43	4.61	3665.84	3646	25	5.40E-04	****	9.07E-01	
0	1848.41	45	17	1.18	3697.13	3688	17	2.08E-03	51.5	9.04E-01	
0	1871.43	14	20	1.84	3743.16	3738	13	6.30E-04	****	8.99E-01	
0	1944.06	25	21	4.57	3888.39	3878	21	1.15E-03	****	8.85E-01	
0	1981.10	9	6	0.66	3962.46	3957	9	3.97E-04	****	8.80E-01	
0	2011.85	1	6	0.57	4023.96	4020	9	3.32E-05	****	8.75E-01	
0	2018.16	13	8	4.11	4036.58	4028	16	6.02E-04	****	8.75E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530021            *
* Acquisition date : 11-DEC-2007 05:33:36 Detector SN#    :                 *
* Detector ID      : GAM01                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.05     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530021           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.9081E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  7-MAR-2007 03:44:30 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	3.212E+00	3.868E-01	1.009E-01	3.868E-01
EU-155	2.664E-02	5.900E-02	3.712E-02	5.900E-02
TL-208	2.457E-01	3.383E-02	1.114E-02	3.383E-02
BI-212	5.015E-01	1.698E-01	8.669E-02	1.698E-01
PB-212	7.233E-01	6.353E-02	1.994E-02	6.353E-02
BI-214	6.640E-01	7.271E-02	2.356E-02	7.271E-02
PB-214	7.916E-01	7.718E-02	2.285E-02	7.718E-02
RA-223	2.418E-01	1.232E-01	6.396E-02	1.232E-01
AC-228	7.688E-01	1.233E-01	3.960E-02	1.233E-01
PA-234M	3.602E+00	1.940E+00	1.266E+00	1.940E+00
TH-234	9.624E-01	2.589E-01	1.599E-01	2.589E-01
U-235	4.381E-02	9.869E-02	7.243E-02	9.869E-02
NP-237	4.056E-01	1.189E-01	7.354E-02	1.189E-01
AM-243	9.687E-02	2.828E-02	1.696E-02	2.828E-02
AM-246	4.207E-02	5.166E-02	4.048E-02	5.166E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	6.671E-03	1.307E-02	1.156E-02	1.307E-02	NOT IDENT.
RH-101	-9.352E-03	1.424E-02	1.201E-02	1.424E-02	NOT IDENT.
SB-125	2.048E-02	3.639E-02	3.292E-02	3.639E-02	NOT IDENT.
CS-137	4.738E-03	1.789E-02	1.261E-02	1.789E-02	NOT IDENT.
PO-209	2.166E+00	2.519E+00	2.310E+00	2.519E+00	NOT IDENT.
BI-211	2.875E-03	3.552E-01	3.115E-01	3.552E-01	NOT IDENT.
PA-233	4.832E-03	2.406E-02	2.193E-02	2.406E-02	NOT IDENT.
NP-236	2.248E-02	2.785E-02	2.138E-02	2.785E-02	NOT IDENT.
NP-239	6.489E-02	8.762E-02	8.254E-02	8.762E-02	NOT IDENT.
AM-241	1.298E-02	6.096E-02	5.075E-02	6.096E-02	NOT IDENT.
CM-243	-6.764E-03	4.056E-02	3.413E-02	4.056E-02	NOT IDENT.
CF-249	-3.868E-04	1.526E-02	1.358E-02	1.526E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	718.1023
63.29	834.5261
74.66	962.4371
74.81	962.5826
74.81	962.5826
77.11	964.7891
77.11	964.7891
86.48	923.1608
87.30	923.8573
87.30	923.8573
92.58	949.6420
98.44	830.4642
103.76	910.1718
105.31	876.3457
129.07	963.2764
143.76	934.8044
198.00	804.4800
209.25	762.5852
228.18	655.7284
238.63	629.4454
242.00	630.5096
269.46	544.1792
270.25	544.3770
277.36	472.4746
295.22	412.9200
300.09	413.8000
312.17	396.4463
338.32	446.4399
351.93	349.7012
387.59	329.0974
409.46	303.9919
427.87	282.3494
463.00	244.4403
510.77	239.0051
583.19	188.7687
609.31	233.6681
661.66	162.8190
727.33	153.8318
763.13	136.9457
768.36	202.6339
785.37	126.5859
794.95	110.6101
806.17	124.2116
831.80	122.9324
860.56	98.5682
896.60	95.2794
911.20	103.7058
934.06	117.3341
964.77	94.5718
968.97	94.6523
1001.03	95.2568
1078.86	93.6805
1120.29	76.2422
1155.19	76.7227
1173.23	69.4830
1238.11	90.8018
1280.96	91.4546
1332.51	67.7561
1377.67	59.7129
1401.50	58.2700
1407.98	58.3276
1460.80	52.4139
1509.23	41.5768
1588.20	32.5159
1620.50	28.4892
1729.60	31.4077
1764.49	22.0368

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530021

Total Uranium Activity	2.0271E-02	ug/g
Total Uranium Counting Unc.	4.5665E-02	ug/g
Total Uranium Tpu	4.5665E-08	ug/g
Total Uranium Mda	3.3512E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:50:54.90

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530022.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:34:17
Sample ID        : G198530022           Sample quantity  : 1.32200E+02 GRAM
Detector name    : GAM02                Detector geometry: CAN
Elapsed live time: 0 04:37:20.48        Elapsed real time: 0 04:37:25.19  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	45.46	65	577	1.28	90.49	88	9	3.93E-03	67.3	
2	0	63.07*	82	679	0.89	125.69	121	10	4.90E-03	66.0	
3	2	74.69*	374	597	1.10	148.90	143	16	2.24E-02	13.2	1.88E+00
4	2	77.08*	665	412	0.89	153.68	143	16	4.00E-02	6.3	
5	4	84.01*	105	422	1.36	167.51	164	28	6.32E-03	34.9	3.60E+00
6	4	87.19	316	530	1.37	173.87	164	28	1.90E-02	13.8	
7	4	89.88	257	504	1.38	179.26	164	28	1.54E-02	16.8	
8	4	92.63*	362	462	1.28	184.75	164	28	2.17E-02	14.3	
9	4	98.39*	52	320	1.40	196.25	193	10	3.13E-03	63.2	3.20E-01
10	4	100.02*	47	302	1.05	199.51	193	10	2.84E-03	70.4	
11	0	105.35	58	447	1.34	210.15	208	7	3.49E-03	61.6	
12	0	128.84	126	488	0.78	257.10	254	8	7.59E-03	31.5	
13	0	143.84*	31	479	1.26	287.08	284	8	1.88E-03	132.2	
14	0	158.86	69	375	0.98	317.08	314	8	4.12E-03	50.8	
15	0	185.80*	239	665	1.36	370.92	365	12	1.43E-02	25.0	
16	0	208.75	141	434	1.05	416.79	413	9	8.48E-03	27.8	
17	6	238.58*	1679	293	1.12	476.38	472	17	1.01E-01	3.1	3.97E+00
18	6	241.63*	415	393	1.97	482.47	472	17	2.49E-02	13.4	
19	0	270.28	156	282	1.27	539.73	535	10	9.36E-03	21.7	
20	0	277.27	106	313	1.59	553.69	550	12	6.38E-03	35.2	
21	0	282.07	34	140	1.35	563.29	561	6	2.05E-03	57.1	
22	2	295.22*	566	183	1.26	589.57	582	28	3.40E-02	6.2	1.72E+00
23	2	300.21	121	195	1.52	599.53	582	28	7.26E-03	23.6	
24	0	328.18	166	236	1.62	655.44	649	13	1.00E-02	20.6	
25	0	338.23	362	247	1.09	675.51	671	11	2.17E-02	9.9	
26	0	351.85*	832	173	1.25	702.73	699	9	5.00E-02	4.7	
27	0	358.00	22	122	0.97	715.01	711	7	1.34E-03	84.9	
28	0	361.18	28	149	1.73	721.37	719	8	1.70E-03	76.7	
29	0	405.55	48	206	1.89	810.04	802	12	2.87E-03	62.0	
30	0	409.35	53	128	2.34	817.63	814	8	3.16E-03	39.8	
31	0	422.70	21	175	2.19	844.31	838	11	1.25E-03	126.0	
32	0	447.13	5	163	0.54	893.13	891	10	3.14E-04	458.5	
33	0	463.11	121	165	1.13	925.05	919	12	7.25E-03	23.2	
34	0	510.81*	172	222	1.90	1020.38	1013	17	1.03E-02	25.8	
35	0	562.69	26	74	1.88	1124.05	1120	8	1.56E-03	61.3	
36	0	583.09*	451	127	1.52	1164.83	1158	13	2.71E-02	7.9	
37	0	609.19*	636	112	1.43	1216.99	1212	11	3.82E-02	5.4	
38	0	661.59	112	111	1.73	1321.71	1316	12	6.74E-03	21.0	

Sample ID : G198530022 Acquisition date : 11-DEC-2007 05:34:17

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	727.12	139	93	1.76	1452.67	1447	12	8.37E-03	16.2	
40	0	742.93	28	101	2.74	1484.25	1477	12	1.70E-03	74.7	
41	1	768.15*	58	62	1.84	1534.67	1529	22	3.51E-03	32.9	1.34E+00
42	1	772.49	27	57	1.84	1543.33	1529	22	1.64E-03	59.7	
43	0	785.66	56	66	2.50	1569.66	1565	11	3.37E-03	31.1	
44	0	795.08	54	74	1.11	1588.48	1581	12	3.24E-03	34.8	
45	0	840.63	21	93	1.49	1679.50	1673	13	1.27E-03	95.8	
46	0	860.54	78	68	1.29	1719.29	1712	13	4.68E-03	24.6	
47	0	911.20	362	127	1.79	1820.55	1813	18	2.18E-02	9.1	
48	0	934.00	41	51	1.51	1866.12	1862	10	2.45E-03	36.6	
49	2	964.23	49	68	2.19	1926.54	1920	24	2.95E-03	36.6	6.12E-01
50	2	968.76*	197	50	1.89	1935.60	1920	24	1.18E-02	10.5	
51	0	1001.23*	17	50	1.55	2000.49	1993	14	1.03E-03	107.7	
52	0	1077.88	16	28	1.18	2153.67	2149	10	9.42E-04	67.7	
53	0	1091.87	26	64	1.06	2181.64	2173	17	1.57E-03	72.8	
54	0	1120.39	125	48	1.74	2238.63	2233	14	7.53E-03	14.8	
55	0	1187.77	16	18	1.36	2373.31	2370	6	9.62E-04	48.8	
56	0	1208.25	21	43	0.77	2414.25	2410	10	1.25E-03	64.1	
57	0	1241.27	2	43	2.21	2480.24	2475	8	1.49E-04	536.1	
58	0	1377.05	59	42	3.07	2751.63	2742	21	3.55E-03	30.4	
59	0	1408.09	52	18	2.40	2813.68	2806	14	3.15E-03	21.8	
60	0	1412.75	17	7	1.83	2822.99	2819	9	1.02E-03	37.0	
61	0	1423.83	24	23	0.99	2845.15	2836	15	1.41E-03	48.6	
62	0	1460.41*	416	34	2.11	2918.25	2908	22	2.50E-02	6.3	
63	1	1587.57	35	10	2.38	3172.43	3168	23	2.13E-03	22.4	1.19E+00
64	1	1592.64	24	10	2.38	3182.57	3168	23	1.46E-03	40.2	
65	0	1598.82	15	6	1.69	3194.92	3191	8	8.90E-04	38.8	
66	0	1618.43	18	18	4.88	3234.11	3223	18	1.08E-03	60.1	
67	0	1676.59	7	5	3.68	3350.37	3346	9	4.28E-04	73.2	
68	0	1718.80	8	11	3.27	3434.75	3428	11	4.81E-04	87.7	
69	0	1764.30*	112	24	2.00	3525.71	3515	19	6.74E-03	15.4	
70	0	1770.77	4	5	1.00	3538.63	3533	7	2.37E-04	108.1	
71	0	1832.23	12	13	4.57	3661.49	3652	13	7.10E-04	69.4	
72	0	2004.59	17	14	1.27	4006.06	3998	14	1.02E-03	52.6	

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]G198530022       *
* Acquisition date : 11-DEC-2007 05:34:17 Detector SN#    :                 *
* Detector ID      : GAM02                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:37:20.48     Abundance limit : 75.000          *
* Elapsed real time:    0 04:37:25.19     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530022           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.3220E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 22-OCT-2007 15:13:16 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	4.497E+00	6.242E-01	2.578E-01	0.000E+00
CS-137	7.454E-02	3.103E-02	3.141E-02	0.000E+00
EU-155	5.413E-02	6.544E-02	8.296E-02	0.000E+00
TL-208	2.697E-01	4.462E-02	2.896E-02	0.000E+00
BI-212	7.222E-01	2.345E-01	2.276E-01	0.000E+00
PB-212	9.794E-01	8.369E-02	4.678E-02	0.000E+00
BI-214	7.244E-01	8.736E-02	5.964E-02	0.000E+00
PB-214	7.485E-01	8.151E-02	5.537E-02	0.000E+00
RA-223	3.146E-01	1.355E-01	1.528E-01	0.000E+00
AC-228	1.056E+00	2.040E-01	1.084E-01	0.000E+00
PA-234M	1.673E+00	3.532E+00	3.362E+00	0.000E+00
TH-234	1.421E+00	4.143E-01	3.973E-01	0.000E+00
U-235	5.440E-02	1.410E-01	1.677E-01	0.000E+00
NP-236	2.760E-02	3.424E-02	4.477E-02	0.000E+00
NP-237	5.805E-01	1.643E-01	1.866E-01	0.000E+00
AM-243	1.628E-01	4.412E-02	4.568E-02	0.000E+00
CM-243	4.896E-02	5.919E-02	7.600E-02	0.000E+00
AM-246	4.967E-02	6.600E-02	1.098E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	1.931E-02	1.891E-02	3.510E-02	0.000E+00	NOT IDENT.
RH-101	4.208E-03	1.895E-02	3.043E-02	0.000E+00	NOT IDENT.
SB-125	2.751E-02	5.565E-02	8.584E-02	0.000E+00	NOT IDENT.
PO-209	2.839E+00	3.518E+00	6.284E+00	0.000E+00	NOT IDENT.
BI-211	2.599E-02	5.363E-01	9.064E-01	0.000E+00	NOT IDENT.
PA-233	1.961E-02	3.126E-02	5.613E-02	0.000E+00	NOT IDENT.
NP-239	6.734E-02	1.164E-01	1.987E-01	0.000E+00	NOT IDENT.
AM-241	-2.569E-02	9.374E-02	1.529E-01	0.000E+00	NOT IDENT.
CF-249	-1.057E-03	1.978E-02	3.380E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:50:55.97

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530022.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:34:17
Sample ID        : G198530022           Sample quantity  : 1.32200E+02 GRAM
Detector name    : GAM02                Detector geometry: CAN
Elapsed live time: 0 04:37:20.48        Elapsed real time: 0 04:37:25.19  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	416	10.66*	1.065E+00	4.497E+00	4.497E+00	14.16
CS-137	661.66	112	85.10*	2.182E+00	7.426E-02	7.454E-02	42.48
EU-155	105.31	58	21.20*	6.356E+00	5.290E-02	5.413E-02	123.36
TL-208	277.36	106	6.31	4.355E+00	4.743E-01	4.743E-01	70.65
	510.77	172	22.60	2.710E+00	3.445E-01	3.445E-01	51.91
	583.19	451	84.50*	2.430E+00	2.697E-01	2.697E-01	16.88
	763.13	------	1.81	1.923E+00	------	Line Not Found	------
	860.56	78	12.42	1.723E+00	4.476E-01	4.476E-01	49.78
BI-212	727.33	139	11.80*	2.008E+00	7.222E-01	7.222E-01	33.14
	785.37	56	1.10	1.873E+00	3.340E+00	3.340E+00	62.62
	1620.50	------	1.49	9.857E-01	------	Line Not Found	------
PB-212	74.81	374	10.40	4.132E+00	1.068E+00	1.068E+00	27.65
	77.11	665	17.50	4.414E+00	1.058E+00	1.058E+00	15.08
	87.30	316	7.81	5.394E+00	9.217E-01	9.217E-01	28.88
	238.63	1679	43.30*	4.863E+00	9.794E-01	9.794E-01	8.72
	300.09	121	3.28	4.102E+00	1.102E+00	1.102E+00	47.57
BI-214	609.31	636	46.10*	2.342E+00	7.244E-01	7.244E-01	12.31
	768.36	58	4.94	1.911E+00	7.609E-01	7.610E-01	66.12
	806.17	------	1.22	1.829E+00	------	Line Not Found	------
	934.06	41	3.03	1.596E+00	1.037E+00	1.037E+00	73.63
	1120.29	125	15.10	1.346E+00	7.577E-01	7.577E-01	30.24
	1155.19	------	1.63	1.308E+00	------	Line Not Found	------
	1238.11	------	5.79	1.228E+00	------	Line Not Found	------
	1280.96	------	1.43	1.191E+00	------	Line Not Found	------
	1377.67	59	4.00	1.118E+00	1.621E+00	1.621E+00	61.14
	1401.50	------	1.27	1.102E+00	------	Line Not Found	------
	1407.98	52	2.15	1.097E+00	2.732E+00	2.732E+00	44.16
	1509.23	------	2.11	1.038E+00	------	Line Not Found	------
	1729.60	------	2.92	9.455E-01	------	Line Not Found	------
	1764.49	112	15.40	9.348E-01	9.576E-01	9.577E-01	31.40
PB-214	74.81	374	6.44	4.132E+00	1.724E+00	1.724E+00	27.65
	77.11	665	10.80	4.414E+00	1.715E+00	1.715E+00	15.08

Sample ID : G198530022 Acquisition date : 11-DEC-2007 05:34:17

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	316	4.84	5.394E+00	1.487E+00	1.487E+00	28.88
	242.00	415	7.43	4.819E+00	1.424E+00	1.424E+00	27.60
	295.22	566	19.30	4.155E+00	8.673E-01	8.674E-01	14.12
	351.93	832	37.60*	3.634E+00	7.485E-01	7.485E-01	11.11
RA-223	269.46	156	13.70*	4.439E+00	3.146E-01	3.146E-01	43.96
AC-228	129.07	126	2.42	6.597E+00	9.725E-01	9.725E-01	63.23
	209.25	141	3.89	5.335E+00	8.358E-01	8.358E-01	55.92
	270.25	156	3.46	4.439E+00	1.246E+00	1.246E+00	43.96
	338.32	362	11.27	3.746E+00	1.053E+00	1.053E+00	20.73
	409.46	53	1.92	3.232E+00	1.041E+00	1.041E+00	79.70
	463.00	121	4.40	2.932E+00	1.150E+00	1.150E+00	46.62
	794.95	54	4.25	1.853E+00	8.413E-01	8.413E-01	70.06
	911.20	362	25.80*	1.633E+00	1.056E+00	1.056E+00	19.71
	964.77	49	4.99	1.549E+00	7.812E-01	7.812E-01	73.58
	968.97	197	15.80	1.542E+00	9.911E-01	9.911E-01	22.23
	1588.20	35	3.22	9.999E-01	1.353E+00	1.353E+00	45.23
PA-234M	1001.03	17	0.84*	1.495E+00	1.673E+00	1.673E+00	215.45
TH-234	63.29	82	4.80	2.570E+00	8.126E-01	8.126E-01	132.32
	92.58	362	5.41*	5.782E+00	1.421E+00	1.421E+00	29.74
U-235	143.76	31	10.96*	6.461E+00	5.440E-02	5.440E-02	264.46
NP-236	98.44	52	38.00*	6.094E+00	2.760E-02	2.760E-02	126.60
NP-237	86.48	316	12.40*	5.394E+00	5.805E-01	5.805E-01	28.88
AM-243	74.66	374	68.20*	4.132E+00	1.628E-01	1.628E-01	27.65
CM-243	103.76	58	23.00*	6.356E+00	4.876E-02	4.896E-02	123.36
AM-246	1078.86	16	27.80*	1.395E+00	4.967E-02	4.967E-02	135.58

Flag: "*" = Keyline

Sample ID : G198530022 Acquisition date : 11-DEC-2007 05:34:17

Total number of lines in spectrum 72
Number of unidentified lines 31
Number of lines tentatively identified by NID 41 56.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.497E+00	4.497E+00	0.637E+00	14.16	
CS-137	9.47E+08S	1.00	7.426E-02	7.454E-02	3.166E-02	42.48	
EU-155	1.57E+08S	1.02	5.290E-02	5.413E-02	6.678E-02	123.36	
TL-208	4.43E+17S	1.00	2.697E-01	2.697E-01	0.455E-01	16.88	
BI-212	4.43E+17S	1.00	7.222E-01	7.222E-01	2.393E-01	33.14	
PB-212	4.43E+17S	1.00	9.794E-01	9.794E-01	0.854E-01	8.72	
BI-214	5.05E+10S	1.00	7.244E-01	7.244E-01	0.891E-01	12.31	
PB-214	5.05E+10S	1.00	7.485E-01	7.485E-01	0.832E-01	11.11	
RA-223	1.04E+12S	1.00	3.146E-01	3.146E-01	1.383E-01	43.96	
AC-228	4.43E+17S	1.00	1.056E+00	1.056E+00	0.208E+00	19.71	
PA-234M	1.41E+17S	1.00	1.673E+00	1.673E+00	3.604E+00	215.45	
TH-234	1.41E+17S	1.00	1.421E+00	1.421E+00	0.423E+00	29.74	
U-235	2.22E+16S	1.00	5.440E-02	5.440E-02	14.39E-02	264.46	
NP-236	4.89E+12S	1.00	2.760E-02	2.760E-02	3.494E-02	126.60	
NP-237	6.75E+13S	1.00	5.805E-01	5.805E-01	1.676E-01	28.88	
AM-243	2.33E+11S	1.00	1.628E-01	1.628E-01	0.450E-01	27.65	
CM-243	8.99E+08S	1.00	4.876E-02	4.896E-02	6.039E-02	123.36	
AM-246	2.18E+11S	1.00	4.967E-02	4.967E-02	6.734E-02	135.58	
			---	---			
	Total Activity :		1.346E+01	1.346E+01			

Grand Total Activity : 1.346E+01 1.346E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530022 Acquisition date : 11-DEC-2007 05:34:17

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	45.46	65	577	1.28	90.49	88	9	3.93E-03	****	4.73E-01	
4	84.01	105	422	1.36	167.51	164	28	6.32E-03	69.8	5.12E+00	
4	89.88	257	504	1.38	179.26	164	28	1.54E-02	33.6	5.60E+00	
4	100.02	47	302	1.05	199.51	193	10	2.84E-03	****	6.17E+00	
0	158.86	69	375	0.98	317.08	314	8	4.12E-03	****	6.23E+00	
0	185.80	239	665	1.36	370.92	365	12	1.43E-02	49.9	5.74E+00	
0	282.07	34	140	1.35	563.29	561	6	2.05E-03	****	4.30E+00	
0	328.18	166	236	1.62	655.44	649	13	1.00E-02	41.2	3.83E+00	
0	358.00	22	122	0.97	715.01	711	7	1.34E-03	****	3.59E+00	
0	361.18	28	149	1.73	721.37	719	8	1.70E-03	****	3.56E+00	
0	405.55	48	206	1.89	810.04	802	12	2.87E-03	****	3.26E+00	
0	422.70	21	175	2.19	844.31	838	11	1.25E-03	****	3.15E+00	
0	447.13	5	163	0.54	893.13	891	10	3.14E-04	****	3.02E+00	
0	562.69	26	74	1.88	1124.05	1120	8	1.56E-03	****	2.50E+00	
0	742.93	28	101	2.74	1484.25	1477	12	1.70E-03	****	1.97E+00	
1	772.49	27	57	1.84	1543.33	1529	22	1.64E-03	****	1.90E+00	
0	840.63	21	93	1.49	1679.50	1673	13	1.27E-03	****	1.76E+00	
0	1091.87	26	64	1.06	2181.64	2173	17	1.57E-03	****	1.38E+00	
0	1187.77	16	18	1.36	2373.31	2370	6	9.62E-04	97.6	1.27E+00	
0	1208.25	21	43	0.77	2414.25	2410	10	1.25E-03	****	1.26E+00	
0	1241.27	2	43	2.21	2480.24	2475	8	1.49E-04	****	1.22E+00	
0	1412.75	17	7	1.83	2822.99	2819	9	1.02E-03	74.0	1.09E+00	
0	1423.83	24	23	0.99	2845.15	2836	15	1.41E-03	97.2	1.09E+00	
1	1592.64	24	10	2.38	3182.57	3168	23	1.46E-03	80.4	9.98E-01	
0	1598.82	15	6	1.69	3194.92	3191	8	8.90E-04	77.6	9.95E-01	
0	1618.43	18	18	4.88	3234.11	3223	18	1.08E-03	****	9.87E-01	
0	1676.59	7	5	3.68	3350.37	3346	9	4.28E-04	****	9.64E-01	
0	1718.80	8	11	3.27	3434.75	3428	11	4.81E-04	****	9.49E-01	
0	1770.77	4	5	1.00	3538.63	3533	7	2.37E-04	****	9.33E-01	
0	1832.23	12	13	4.57	3661.49	3652	13	7.10E-04	****	9.16E-01	
0	2004.59	17	14	1.27	4006.06	3998	14	1.02E-03	****	8.85E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530022            *
* Acquisition date : 11-DEC-2007 05:34:17 Detector SN#    :                 *
* Detector ID      : GAM02                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:37:20.48     Abundance limit : 75.000          *
* Elapsed real time:    0 04:37:25.19     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530022           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.3220E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 22-OCT-2007 15:13:16 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.497E+00	6.242E-01	1.290E-01	6.242E-01
CS-137	7.454E-02	3.103E-02	1.571E-02	3.103E-02
EU-155	5.413E-02	6.544E-02	4.150E-02	6.544E-02
TL-208	2.697E-01	4.462E-02	1.449E-02	4.462E-02
BI-212	7.222E-01	2.345E-01	1.139E-01	2.345E-01
PB-212	9.794E-01	8.369E-02	2.341E-02	8.369E-02
BI-214	7.244E-01	8.736E-02	2.984E-02	8.736E-02
PB-214	7.485E-01	8.151E-02	2.770E-02	8.151E-02
RA-223	3.146E-01	1.355E-01	7.643E-02	1.355E-01
AC-228	1.056E+00	2.040E-01	5.422E-02	2.040E-01
PA-234M	1.673E+00	3.532E+00	1.682E+00	3.532E+00
TH-234	1.421E+00	4.143E-01	1.988E-01	4.143E-01
U-235	5.440E-02	1.410E-01	8.390E-02	1.410E-01
NP-236	2.760E-02	3.424E-02	2.240E-02	3.424E-02
NP-237	5.805E-01	1.643E-01	9.336E-02	1.643E-01
AM-243	1.628E-01	4.412E-02	2.286E-02	4.412E-02
CM-243	4.896E-02	5.919E-02	3.802E-02	5.919E-02
AM-246	4.967E-02	6.600E-02	5.492E-02	6.600E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.931E-02	1.891E-02	1.756E-02	1.891E-02	NOT IDENT.
RH-101	4.208E-03	1.895E-02	1.523E-02	1.895E-02	NOT IDENT.
SB-125	2.751E-02	5.565E-02	4.295E-02	5.565E-02	NOT IDENT.
PO-209	2.839E+00	3.518E+00	3.144E+00	3.518E+00	NOT IDENT.
BI-211	2.599E-02	5.363E-01	4.535E-01	5.363E-01	NOT IDENT.
PA-233	1.961E-02	3.126E-02	2.808E-02	3.126E-02	NOT IDENT.
NP-239	6.734E-02	1.164E-01	9.943E-02	1.164E-01	NOT IDENT.
AM-241	-2.569E-02	9.374E-02	7.651E-02	9.374E-02	NOT IDENT.
CF-249	-1.057E-03	1.978E-02	1.691E-02	1.978E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	369.9777
63.29	371.4380
74.66	457.3377
74.81	457.5150
74.81	457.5150
77.11	460.1914
77.11	460.1914
86.48	423.6341
87.30	424.4362
87.30	424.4362
92.58	429.5174
98.44	300.0436
103.76	336.7621
105.31	333.4522
129.07	399.8667
143.76	398.3817
198.00	368.5930
209.25	376.0638
228.18	300.6483
238.63	278.5474
242.00	279.5808
269.46	249.9122
270.25	249.5641
277.36	245.9907
295.22	183.5586
300.09	184.3930
312.17	191.1855
338.32	168.3329
351.93	166.4458
387.59	166.9789
409.46	156.3325
427.87	151.7230
463.00	118.4524
510.77	141.8683
583.19	104.5538
609.31	122.7639
661.66	100.2806
727.33	86.6873
763.13	80.0723
768.36	89.2825
785.37	95.9996
794.95	60.8774
806.17	84.6110
831.80	83.4462
860.56	59.0531
896.60	53.8949
911.20	62.6947
934.06	76.0910
964.77	60.6867
968.97	60.7783
1001.03	53.7840
1078.86	54.7259
1120.29	54.2354
1155.19	51.9412
1173.23	39.6554
1238.11	77.7501
1280.96	39.9235
1332.51	37.4592
1377.67	38.9386
1401.50	35.3530
1407.98	37.1836
1460.80	26.1719
1509.23	20.1303
1588.20	37.0159
1620.50	21.2107
1729.60	21.0163
1764.49	25.2649

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530022

Total Uranium Activity	2.5169E-02	ug/g
Total Uranium Counting Unc.	6.5231E-02	ug/g
Total Uranium Tpu	6.5231E-08	ug/g
Total Uranium Mda	3.8823E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:51:28.98

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530023.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:35:03
Sample ID        : G198530023           Sample quantity  : 1.13040E+02 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 04:35:34.30        Elapsed real time: 0 04:35:37.40  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.06*	102	727	1.00	92.90	87	12	6.17E-03	61.9	
2	0	52.68	42	290	1.06	106.12	105	5	2.56E-03	62.2	
3	0	63.09*	209	846	0.85	126.93	122	10	1.26E-02	28.5	
4	3	74.63*	795	635	1.10	150.01	142	19	4.81E-02	6.8	2.42E+00
5	3	76.93*	1352	612	1.22	154.60	142	19	8.18E-02	4.4	
6	4	84.29*	174	883	1.80	169.31	161	32	1.05E-02	35.0	1.84E+00
7	4	87.12*	448	539	1.16	174.96	161	32	2.71E-02	10.2	
8	4	89.70	309	509	1.21	180.13	161	32	1.87E-02	13.5	
9	4	92.63*	505	548	1.40	185.98	161	32	3.05E-02	10.4	
10	0	99.33	61	549	1.55	199.38	196	8	3.68E-03	68.1	
11	0	105.01	151	620	1.45	210.74	206	10	9.15E-03	31.9	
12	0	114.84	54	499	1.29	230.38	228	8	3.26E-03	73.2	
13	0	129.13	91	471	1.46	258.93	255	8	5.50E-03	42.7	
14	0	143.36*	48	453	1.55	287.39	285	8	2.90E-03	83.4	
15	0	185.96*	249	466	1.20	372.53	368	9	1.51E-02	19.1	
16	0	209.31	203	537	1.34	419.20	413	11	1.23E-02	23.3	
17	4	238.60*	1817	220	1.19	477.74	469	21	1.10E-01	2.9	1.98E+00
18	4	241.61	475	322	1.88	483.75	469	21	2.87E-02	11.3	
19	0	270.23	222	339	1.45	540.94	535	13	1.34E-02	18.5	
20	0	277.77	72	312	1.06	556.01	551	10	4.33E-03	47.9	
21	0	295.24*	551	324	1.09	590.92	585	12	3.33E-02	8.2	
22	0	300.45	184	343	1.65	601.33	597	13	1.11E-02	22.1	
23	1	327.74	120	292	1.77	655.89	650	21	7.24E-03	29.0	2.21E+00
24	1	332.75	64	245	1.78	665.89	650	21	3.84E-03	44.3	
25	0	338.40*	293	339	1.22	677.17	671	12	1.77E-02	14.3	
26	0	351.94*	877	274	1.26	704.24	699	12	5.30E-02	5.4	
27	0	410.62	93	230	2.82	821.50	814	13	5.65E-03	35.2	
28	0	462.79	180	162	1.79	925.75	919	14	1.09E-02	16.7	
29	0	510.98*	232	291	2.33	1022.04	1012	21	1.40E-02	22.7	
30	0	553.74	54	108	2.95	1107.48	1101	12	3.26E-03	41.2	
31	0	583.24	483	112	1.51	1166.40	1161	10	2.92E-02	6.1	
32	0	609.33*	665	176	1.48	1218.54	1212	14	4.02E-02	6.0	
33	0	661.83	66	111	1.57	1323.42	1316	12	4.00E-03	34.1	
34	0	727.69	144	113	1.78	1455.00	1449	15	8.68E-03	18.1	
35	0	768.41	81	83	1.24	1536.35	1531	11	4.89E-03	24.5	
36	1	785.56	68	80	2.21	1570.60	1561	41	4.08E-03	28.0	3.04E+00
37	1	789.26	32	66	2.01	1578.00	1561	41	1.94E-03	53.1	
38	1	794.97	106	59	2.21	1589.40	1561	41	6.42E-03	18.2	

Sample ID : G198530023 Acquisition date : 11-DEC-2007 05:35:03

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	860.67	67	68	1.33	1720.64	1715	11	4.04E-03	27.0	
40	0	911.61*	352	86	1.77	1822.40	1812	19	2.13E-02	8.5	
41	0	935.85*	8	74	0.60	1870.80	1865	12	4.71E-04	253.3	
42	0	963.15*	5	108	0.73	1925.33	1925	10	3.24E-04	381.0	
43	0	969.29	203	47	1.97	1937.60	1934	9	1.23E-02	9.3	
44	0	1100.46	20	30	1.36	2199.57	2194	10	1.19E-03	58.0	
45	0	1112.69	13	62	3.35	2223.99	2213	12	8.10E-04	121.3	
46	0	1120.95*	158	82	1.50	2240.50	2234	16	9.53E-03	15.7	
47	0	1152.79	38	61	7.86	2304.07	2293	19	2.29E-03	52.4	
48	0	1207.92	34	68	0.90	2414.17	2404	16	2.07E-03	56.4	
49	0	1238.71	45	54	1.30	2475.66	2471	11	2.73E-03	35.1	
50	0	1370.04	23	58	6.07	2737.89	2723	23	1.36E-03	90.1	
51	0	1418.44	32	8	2.72	2834.51	2827	15	1.91E-03	26.0	
52	0	1451.92	30	33	4.66	2901.37	2894	16	1.79E-03	46.6	
53	0	1461.35*	568	32	2.14	2920.19	2913	18	3.43E-02	4.9	
54	5	1588.31	32	39	3.99	3173.63	3162	34	1.93E-03	55.5	1.45E+00
55	5	1592.64	19	12	1.46	3182.28	3162	34	1.15E-03	44.1	
56	5	1595.00	24	18	2.48	3187.00	3162	34	1.45E-03	50.3	
57	0	1621.79	26	19	1.94	3240.48	3234	15	1.55E-03	42.0	
58	0	1696.68	7	15	0.72	3389.96	3377	15	4.40E-04	121.6	
59	0	1705.11	9	11	2.35	3406.80	3402	12	5.70E-04	72.7	
60	0	1729.93	35	18	2.88	3456.34	3447	18	2.12E-03	33.1	
61	0	1765.37*	93	25	1.80	3527.07	3517	16	5.63E-03	17.1	
62	0	1848.50	29	10	2.94	3692.99	3681	18	1.76E-03	30.7	
63	0	1881.99	8	4	0.53	3759.83	3755	10	5.04E-04	59.4	
64	0	1902.39	13	2	1.44	3800.54	3796	10	7.82E-04	35.6	
65	0	1939.25	12	13	3.68	3874.09	3866	13	7.08E-04	75.4	

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]G198530023       *
* Acquisition date : 11-DEC-2007 05:35:03 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:35:34.30     Abundance limit : 75.000          *
* Elapsed real time:    0 04:35:37.40     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530023           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1304E+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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	7.884E+00	9.742E-01	4.890E-01	0.000E+00
CS-137	5.980E-02	4.028E-02	5.229E-02	0.000E+00
EU-155	1.533E-01	9.682E-02	1.125E-01	0.000E+00
TL-208	3.919E-01	5.457E-02	4.449E-02	0.000E+00
BI-212	1.011E+00	3.695E-01	3.560E-01	0.000E+00
PB-212	1.359E+00	1.355E-01	6.520E-02	0.000E+00
BI-214	1.029E+00	1.430E-01	8.548E-02	0.000E+00
PB-214	1.030E+00	1.232E-01	8.110E-02	0.000E+00
RA-223	5.754E-01	2.123E-01	2.075E-01	0.000E+00
AC-228	1.372E+00	2.597E-01	1.825E-01	0.000E+00
TH-234	1.898E+00	4.220E-01	4.230E-01	0.000E+00
U-235	1.033E-01	1.693E-01	2.337E-01	0.000E+00
NP-236	3.308E-02	4.425E-02	6.101E-02	0.000E+00
NP-237	7.273E-01	1.577E-01	1.814E-01	0.000E+00
AM-243	2.298E-01	3.569E-02	3.591E-02	0.000E+00
CM-243	1.387E-01	8.756E-02	9.866E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-4.438E-03	2.904E-02	4.839E-02	0.000E+00	NOT IDENT.
RH-101	1.342E-02	2.808E-02	4.302E-02	0.000E+00	NOT IDENT.
SB-125	-6.503E-03	7.122E-02	1.188E-01	0.000E+00	NOT IDENT.
PO-209	1.635E+00	5.720E+00	9.691E+00	0.000E+00	NOT IDENT.
BI-211	-4.370E-01	8.466E-01	1.364E+00	0.000E+00	NOT IDENT.
PA-233	-2.292E-02	4.595E-02	7.697E-02	0.000E+00	NOT IDENT.
PA-234M	5.078E-03	3.304E+00	5.435E+00	0.000E+00	NOT IDENT.
NP-239	6.388E-02	1.629E-01	2.724E-01	0.000E+00	NOT IDENT.
AM-241	2.810E-02	3.919E-02	6.252E-02	0.000E+00	NOT IDENT.
AM-246	5.557E-02	9.577E-02	1.699E-01	0.000E+00	NOT IDENT.
CF-249	4.138E-02	3.047E-02	5.444E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:51:29.88

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530023.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:35:03
Sample ID        : G198530023           Sample quantity  : 1.13040E+02 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 04:35:34.30        Elapsed real time: 0 04:35:37.40  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	568	10.66*	9.766E-01	7.884E+00	7.884E+00	12.61
CS-137	661.66	66	85.10*	1.888E+00	5.957E-02	5.980E-02	68.74
EU-155	105.31	151	21.20*	6.890E+00	1.498E-01	1.533E-01	64.44
TL-208	277.36	72	6.31	3.977E+00	4.128E-01	4.128E-01	96.03
	510.77	232	22.60	2.367E+00	6.264E-01	6.264E-01	45.86
	583.19	483	84.50*	2.108E+00	3.919E-01	3.919E-01	14.21
	763.13	------	1.81	1.670E+00	------	Line Not Found	------
	860.56	67	12.42	1.508E+00	5.156E-01	5.156E-01	54.69
BI-212	727.33	144	11.80*	1.739E+00	1.011E+00	1.011E+00	37.28
	785.37	68	1.10	1.629E+00	5.450E+00	5.450E+00	56.71
	1620.50	26	1.49	8.961E-01	2.770E+00	2.770E+00	84.27
PB-212	74.81	795	10.40	7.333E+00	1.507E+00	1.507E+00	15.84
	77.11	1352	17.50	7.312E+00	1.528E+00	1.528E+00	12.05
	87.30	448	7.81	7.190E+00	1.155E+00	1.155E+00	22.12
	238.63	1817	43.30*	4.467E+00	1.359E+00	1.359E+00	10.18
	300.09	184	3.28	3.734E+00	2.168E+00	2.168E+00	44.64
BI-214	609.31	665	46.10*	2.028E+00	1.029E+00	1.029E+00	14.19
	768.36	81	4.94	1.660E+00	1.425E+00	1.426E+00	49.70
	806.17	------	1.22	1.594E+00	------	Line Not Found	------
	934.06	8	3.03	1.406E+00	2.643E-01	2.643E-01	506.70
	1120.29	158	15.10	1.212E+00	1.245E+00	1.245E+00	32.08
	1155.19	------	1.63	1.183E+00	------	Line Not Found	------
	1238.11	45	5.79	1.117E+00	1.009E+00	1.009E+00	70.42
	1280.96	------	1.43	1.087E+00	------	Line Not Found	------
	1377.67	------	4.00	1.025E+00	------	Line Not Found	------
	1401.50	------	1.27	1.011E+00	------	Line Not Found	------
	1407.98	------	2.15	1.007E+00	------	Line Not Found	------
	1509.23	------	2.11	9.511E-01	------	Line Not Found	------
	1729.60	35	2.92	8.488E-01	2.042E+00	2.042E+00	66.47
	1764.49	93	15.40	8.343E-01	1.048E+00	1.048E+00	34.74
PB-214	74.81	795	6.44	7.333E+00	2.434E+00	2.434E+00	15.84
	77.11	1352	10.80	7.312E+00	2.475E+00	2.476E+00	12.05

Sample ID : G198530023 Acquisition date : 11-DEC-2007 05:35:03

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	448	4.84	7.190E+00	1.863E+00	1.863E+00	22.12
	242.00	475	7.43	4.426E+00	2.089E+00	2.089E+00	24.04
	295.22	551	19.30	3.788E+00	1.090E+00	1.090E+00	17.58
	351.93	877	37.60*	3.274E+00	1.030E+00	1.030E+00	12.20
RA-223	269.46	222	13.70*	4.064E+00	5.754E-01	5.754E-01	37.65
AC-228	129.07	91	2.42	6.408E+00	8.477E-01	8.477E-01	85.98
	209.25	203	3.89	4.902E+00	1.538E+00	1.538E+00	47.53
	270.25	222	3.46	4.064E+00	2.278E+00	2.278E+00	37.65
	338.32	293	11.27	3.384E+00	1.110E+00	1.110E+00	29.19
	409.46	93	1.92	2.867E+00	2.455E+00	2.455E+00	70.61
	463.00	180	4.40	2.583E+00	2.297E+00	2.297E+00	33.83
	794.95	106	4.25	1.613E+00	2.238E+00	2.238E+00	37.48
	911.20	352	25.80*	1.437E+00	1.372E+00	1.372E+00	19.32
	964.77	5	4.99	1.373E+00	1.132E-01	1.132E-01	762.02
	968.97	203	15.80	1.366E+00	1.362E+00	1.362E+00	20.47
	1588.20	32	3.22	9.118E-01	1.572E+00	1.572E+00	111.30
TH-234	63.29	209	4.80	7.386E+00	8.525E-01	8.525E-01	57.56
	92.58	505	5.41*	7.106E+00	1.898E+00	1.898E+00	22.68
U-235	143.76	48	10.96*	6.115E+00	1.033E-01	1.033E-01	167.14
NP-236	98.44	61	38.00*	6.993E+00	3.308E-02	3.308E-02	136.52
NP-237	86.48	448	12.40*	7.190E+00	7.273E-01	7.273E-01	22.12
AM-243	74.66	795	68.20*	7.333E+00	2.298E-01	2.298E-01	15.84
CM-243	103.76	151	23.00*	6.890E+00	1.381E-01	1.387E-01	64.44

Flag: "*" = Keyline

Sample ID : G198530023 Acquisition date : 11-DEC-2007 05:35:03

Total number of lines in spectrum	65	
Number of unidentified lines	25	
Number of lines tentatively identified by NID	40	61.54%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	7.884E+00	7.884E+00	0.994E+00	12.61	
CS-137	9.47E+08S	1.00	5.957E-02	5.980E-02	4.111E-02	68.74	
EU-155	1.57E+08S	1.02	1.498E-01	1.533E-01	0.988E-01	64.44	
TL-208	4.43E+17S	1.00	3.919E-01	3.919E-01	0.557E-01	14.21	
BI-212	4.43E+17S	1.00	1.011E+00	1.011E+00	0.377E+00	37.28	
PB-212	4.43E+17S	1.00	1.359E+00	1.359E+00	0.138E+00	10.18	
BI-214	5.05E+10S	1.00	1.029E+00	1.029E+00	0.146E+00	14.19	
PB-214	5.05E+10S	1.00	1.030E+00	1.030E+00	0.126E+00	12.20	
RA-223	1.04E+12S	1.00	5.754E-01	5.754E-01	2.166E-01	37.65	
AC-228	4.43E+17S	1.00	1.372E+00	1.372E+00	0.265E+00	19.32	
TH-234	1.41E+17S	1.00	1.898E+00	1.898E+00	0.431E+00	22.68	
U-235	2.22E+16S	1.00	1.033E-01	1.033E-01	1.727E-01	167.14	
NP-236	4.89E+12S	1.00	3.308E-02	3.308E-02	4.516E-02	136.52	
NP-237	6.75E+13S	1.00	7.273E-01	7.273E-01	1.609E-01	22.12	
AM-243	2.33E+11S	1.00	2.298E-01	2.298E-01	0.364E-01	15.84	
CM-243	8.99E+08S	1.00	1.381E-01	1.387E-01	0.894E-01	64.44	
			---	---			
	Total Activity :		1.799E+01	1.800E+01			

Grand Total Activity : 1.799E+01 1.800E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530023 Acquisition date : 11-DEC-2007 05:35:03

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.06	102	727	1.00	92.90	87	12	6.17E-03	****	7.28E+00	
0	52.68	42	290	1.06	106.12	105	5	2.56E-03	****	7.35E+00	
4	84.29	174	883	1.80	169.31	161	32	1.05E-02	70.0	7.23E+00	
4	89.70	309	509	1.21	180.13	161	32	1.87E-02	27.1	7.15E+00	
0	114.84	54	499	1.29	230.38	228	8	3.26E-03	****	6.70E+00	
0	185.96	249	466	1.20	372.53	368	9	1.51E-02	38.1	5.30E+00	
1	327.74	120	292	1.77	655.89	650	21	7.24E-03	58.0	3.48E+00	
1	332.75	64	245	1.78	665.89	650	21	3.84E-03	88.6	3.43E+00	
0	553.74	54	108	2.95	1107.48	1101	12	3.26E-03	82.4	2.21E+00	
1	789.26	32	66	2.01	1578.00	1561	41	1.94E-03	****	1.62E+00	
0	1100.46	20	30	1.36	2199.57	2194	10	1.19E-03	****	1.23E+00	
0	1112.69	13	62	3.35	2223.99	2213	12	8.10E-04	****	1.22E+00	
0	1152.79	38	61	7.86	2304.07	2293	19	2.29E-03	****	1.18E+00	
0	1207.92	34	68	0.90	2414.17	2404	16	2.07E-03	****	1.14E+00	
0	1370.04	23	58	6.07	2737.89	2723	23	1.36E-03	****	1.03E+00	
0	1418.44	32	8	2.72	2834.51	2827	15	1.91E-03	52.0	1.00E+00	
0	1451.92	30	33	4.66	2901.37	2894	16	1.79E-03	93.3	9.82E-01	
5	1592.64	19	12	1.46	3182.28	3162	34	1.15E-03	88.2	9.10E-01	
5	1595.00	24	18	2.48	3187.00	3162	34	1.45E-03	****	9.09E-01	
0	1696.68	7	15	0.72	3389.96	3377	15	4.40E-04	****	8.63E-01	
0	1705.11	9	11	2.35	3406.80	3402	12	5.70E-04	****	8.59E-01	
0	1848.50	29	10	2.94	3692.99	3681	18	1.76E-03	61.3	8.02E-01	
0	1881.99	8	4	0.53	3759.83	3755	10	5.04E-04	****	7.89E-01	
0	1902.39	13	2	1.44	3800.54	3796	10	7.82E-04	71.3	7.82E-01	
0	1939.25	12	13	3.68	3874.09	3866	13	7.08E-04	****	7.69E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530023            *
* Acquisition date : 11-DEC-2007 05:35:03 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:35:34.30     Abundance limit : 75.000          *
* Elapsed real time:    0 04:35:37.40     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530023           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1304E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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	LC (pCi/GRAM)	TPU
K-40	7.884E+00	9.742E-01	2.447E-01	9.742E-01
CS-137	5.980E-02	4.028E-02	2.616E-02	4.028E-02
EU-155	1.533E-01	9.682E-02	5.628E-02	9.682E-02
TL-208	3.919E-01	5.457E-02	2.226E-02	5.457E-02
BI-212	1.011E+00	3.695E-01	1.781E-01	3.695E-01
PB-212	1.359E+00	1.355E-01	3.262E-02	1.355E-01
BI-214	1.029E+00	1.430E-01	4.277E-02	1.430E-01
PB-214	1.030E+00	1.232E-01	4.057E-02	1.232E-01
RA-223	5.754E-01	2.123E-01	1.038E-01	2.123E-01
AC-228	1.372E+00	2.597E-01	9.131E-02	2.597E-01
TH-234	1.898E+00	4.220E-01	2.116E-01	4.220E-01
U-235	1.033E-01	1.693E-01	1.169E-01	1.693E-01
NP-236	3.308E-02	4.425E-02	3.052E-02	4.425E-02
NP-237	7.273E-01	1.577E-01	9.075E-02	1.577E-01
AM-243	2.298E-01	3.569E-02	1.796E-02	3.569E-02
CM-243	1.387E-01	8.756E-02	4.936E-02	8.756E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-4.438E-03	2.904E-02	2.421E-02	2.904E-02	NOT IDENT.
RH-101	1.342E-02	2.808E-02	2.152E-02	2.808E-02	NOT IDENT.
SB-125	-6.503E-03	7.122E-02	5.945E-02	7.122E-02	NOT IDENT.
PO-209	1.635E+00	5.720E+00	4.848E+00	5.720E+00	NOT IDENT.
BI-211	-4.370E-01	8.466E-01	6.823E-01	8.466E-01	NOT IDENT.
PA-233	-2.292E-02	4.595E-02	3.851E-02	4.595E-02	NOT IDENT.
PA-234M	5.078E-03	3.304E+00	2.719E+00	3.304E+00	NOT IDENT.
NP-239	6.388E-02	1.629E-01	1.363E-01	1.629E-01	NOT IDENT.
AM-241	2.810E-02	3.919E-02	3.128E-02	3.919E-02	NOT IDENT.
AM-246	5.557E-02	9.577E-02	8.498E-02	9.577E-02	NOT IDENT.
CF-249	4.138E-02	3.047E-02	2.724E-02	3.047E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	528.4104
63.29	599.7404
74.66	683.8018
74.81	683.9935
74.81	683.9935
77.11	686.9092
77.11	686.9092
86.48	557.3990
87.30	558.1755
87.30	558.1755
92.58	563.0820
98.44	562.5888
103.76	520.5852
105.31	549.0579
129.07	501.1573
143.76	524.8711
198.00	439.2797
209.25	418.7593
228.18	373.4923
238.63	343.9534
242.00	344.9441
269.46	290.4984
270.25	290.6803
277.36	291.1263
295.22	253.3673
300.09	255.8507
312.17	273.3723
338.32	233.5635
351.93	217.0100
387.59	198.8145
409.46	201.4079
427.87	196.3416
463.00	181.2804
510.77	162.1361
583.19	137.9202
609.31	140.4449
661.66	154.2122
727.33	117.8174
763.13	102.3298
768.36	139.5471
785.37	108.3076
794.95	108.6746
806.17	94.5541
831.80	123.3116
860.56	109.0688
896.60	89.5326
911.20	101.4521
934.06	81.2627
964.77	65.6229
968.97	120.4606
1001.03	81.6886
1078.86	64.0488
1120.29	66.6797
1155.19	84.1217
1173.23	71.4784
1238.11	74.6217
1280.96	76.3984
1332.51	55.2398
1377.67	40.8466
1401.50	51.0149
1407.98	40.5299
1460.80	57.8867
1509.23	43.8647
1588.20	43.5225
1620.50	48.6135
1729.60	20.0502
1764.49	29.0444

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530023

Total Uranium Activity	4.7812E-02	ug/g
Total Uranium Counting Unc.	7.8314E-02	ug/g
Total Uranium Tpu	7.8314E-08	ug/g
Total Uranium Mda	5.4106E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:52:02.90

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530024.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:36:08
Sample ID        : G198530024           Sample quantity  : 1.17950E+02 GRAM
Detector name    : GAM06                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:02.73  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	45.74*	54	722	2.58	91.55	88	8	2.51E-03	92.4	
2	0	62.73*	30	617	0.69	125.51	123	6	1.39E-03	148.0	
3	3	74.44*	564	653	1.07	148.89	143	18	2.61E-02	8.8	1.66E+00
4	3	76.70*	982	648	1.07	153.41	143	18	4.55E-02	5.5	
5	4	86.88	480	746	1.30	173.76	163	29	2.22E-02	10.9	5.10E+00
6	4	89.55	228	630	1.12	179.09	163	29	1.06E-02	19.6	
7	4	92.39*	497	781	1.43	184.76	163	29	2.30E-02	12.6	
8	0	98.69*	58	747	1.46	197.34	192	9	2.68E-03	88.8	
9	0	104.96	75	385	1.34	209.87	208	5	3.47E-03	40.8	
10	0	108.28*	19	473	0.98	216.51	214	6	8.84E-04	215.4	
11	0	115.00	67	531	1.46	229.93	227	7	3.08E-03	58.8	
12	0	128.63*	155	673	1.41	257.18	254	8	7.20E-03	31.5	
13	0	143.57	89	722	1.01	287.03	283	9	4.11E-03	55.6	
14	0	152.92	62	646	0.79	305.71	303	8	2.86E-03	72.7	
15	0	185.45*	446	726	1.32	370.71	365	11	2.07E-02	13.7	
16	0	204.40	65	524	0.92	408.57	405	8	3.00E-03	62.4	
17	0	208.92	209	632	1.11	417.60	414	9	9.67E-03	22.7	
18	4	238.29*	2399	397	1.09	476.28	469	25	1.11E-01	2.6	1.56E+00
19	4	241.19	535	566	1.79	482.09	469	25	2.47E-02	11.5	
20	0	269.74	202	530	1.05	539.14	533	11	9.34E-03	23.2	
21	0	276.73	106	322	1.23	553.10	550	8	4.92E-03	30.8	
22	0	287.70	32	381	1.26	575.03	572	9	1.47E-03	113.1	
23	0	294.79*	690	490	1.24	589.19	582	13	3.19E-02	8.1	
24	0	299.87	221	353	1.23	599.36	595	10	1.02E-02	17.4	
25	0	327.65	87	259	0.78	654.87	651	7	4.03E-03	32.5	
26	0	337.97*	434	315	1.22	675.50	672	9	2.01E-02	9.3	
27	0	351.57*	1202	248	1.18	702.66	698	9	5.57E-02	4.0	
28	0	366.61	89	371	3.95	732.72	725	14	4.11E-03	47.4	
29	0	408.57	98	248	1.95	816.58	811	11	4.51E-03	32.8	
30	0	462.44	100	225	1.51	924.25	920	11	4.64E-03	30.7	
31	0	510.40*	237	290	1.87	1020.11	1013	16	1.10E-02	21.8	
32	0	582.96*	673	246	1.53	1165.13	1158	15	3.12E-02	6.6	
33	0	609.04*	771	219	1.48	1217.25	1211	14	3.57E-02	5.8	
34	0	625.87	18	104	1.14	1250.89	1248	8	8.33E-04	100.9	
35	0	726.60	200	133	1.97	1452.25	1445	13	9.25E-03	13.8	
36	0	743.45	10	97	0.68	1485.92	1478	9	4.82E-04	174.5	
37	0	768.02	82	132	1.88	1535.05	1531	10	3.81E-03	28.2	
38	0	772.16	31	61	0.57	1543.33	1540	6	1.44E-03	43.8	

Sample ID : G198530024 Acquisition date : 11-DEC-2007 05:36:08

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	794.85	73	139	1.78	1588.67	1582	13	3.38E-03	35.4	
40	0	804.92	54	96	4.60	1608.81	1601	15	2.50E-03	42.1	
41	0	839.61	44	68	2.53	1678.16	1674	10	2.04E-03	38.4	
42	0	845.18	35	116	4.89	1689.30	1683	14	1.61E-03	67.6	
43	0	860.24	95	87	1.72	1719.40	1713	12	4.39E-03	22.2	
44	0	910.80*	519	114	1.56	1820.49	1813	16	2.40E-02	6.6	
45	0	934.39	67	106	6.33	1867.64	1859	20	3.10E-03	39.5	
46	3	964.17	98	56	2.40	1927.19	1920	23	4.55E-03	21.1	8.95E-01
47	3	968.63*	281	61	1.84	1936.10	1920	23	1.30E-02	8.5	
48	0	999.41*	42	57	5.04	1997.66	1991	14	1.96E-03	46.3	
49	0	1065.47	22	29	1.62	2129.73	2126	7	1.03E-03	45.4	
50	0	1120.11*	176	125	1.70	2238.98	2230	18	8.15E-03	17.5	
51	0	1146.09	31	32	1.30	2290.94	2285	10	1.43E-03	38.9	
52	0	1222.09	27	55	1.34	2442.91	2435	11	1.27E-03	56.8	
53	0	1237.69	100	45	2.58	2474.11	2469	10	4.63E-03	16.2	
54	0	1344.27*	8	30	1.42	2687.25	2681	10	3.61E-04	173.4	
55	0	1408.36	38	25	3.88	2815.44	2810	12	1.75E-03	31.7	
56	0	1440.18	18	30	3.45	2879.08	2871	12	8.33E-04	65.3	
57	0	1460.32*	739	46	2.09	2919.36	2911	19	3.42E-02	4.5	
58	0	1512.45	31	53	0.90	3023.63	3014	20	1.44E-03	61.1	
59	0	1529.67	26	36	4.19	3058.08	3045	18	1.18E-03	58.6	
60	7	1579.05	16	18	2.66	3156.84	3153	14	7.49E-04	46.3	3.36E+00
61	7	1582.48	20	7	1.57	3163.69	3153	14	9.40E-04	35.0	
62	0	1588.26	32	21	1.38	3175.27	3171	8	1.49E-03	30.7	
63	0	1631.33	28	13	0.70	3261.41	3253	14	1.28E-03	34.3	
64	0	1638.34	25	27	6.70	3275.43	3266	18	1.17E-03	52.0	
65	0	1728.65	61	9	1.21	3456.09	3446	19	2.81E-03	17.7	
66	0	1753.27	26	17	9.02	3505.35	3494	23	1.19E-03	46.3	
67	0	1764.29*	129	13	2.65	3527.39	3521	13	5.98E-03	12.5	
68	0	1827.00	9	14	0.68	3652.86	3644	10	4.19E-04	86.0	
69	0	1846.42	44	11	2.37	3691.71	3683	15	2.04E-03	22.3	
70	0	1911.42	14	21	2.43	3821.75	3809	16	6.64E-04	79.8	
71	0	1960.07	12	25	1.28	3919.09	3909	21	5.44E-04	112.6	
72	0	1987.93	6	8	1.35	3974.83	3970	8	2.78E-04	91.3	
73	0	1991.06	13	2	1.15	3981.10	3977	8	6.06E-04	33.3	
74	0	2016.48	22	24	3.23	4031.97	4017	21	1.03E-03	60.9	

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]G198530024       *
* Acquisition date : 11-DEC-2007 05:36:08 Detector SN#    :                 *
* Detector ID      : GAM06                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:02.73     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530024           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1795E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 20-FEB-2007 10:58:43 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	7.657E+00	8.347E-01	3.242E-01	0.000E+00
EU-155	6.465E-02	5.194E-02	9.134E-02	0.000E+00
TL-208	3.836E-01	5.571E-02	3.321E-02	0.000E+00
BI-212	9.877E-01	2.780E-01	2.500E-01	0.000E+00
PB-212	1.336E+00	1.067E-01	5.317E-02	0.000E+00
BI-214	8.360E-01	1.105E-01	6.450E-02	0.000E+00
PB-214	1.030E+00	1.018E-01	6.319E-02	0.000E+00
RA-223	3.889E-01	1.785E-01	1.779E-01	0.000E+00
AC-228	1.443E+00	2.359E-01	1.282E-01	0.000E+00
PA-234M	3.953E+00	3.606E+00	3.322E+00	0.000E+00
TH-234	1.768E+00	4.592E-01	4.228E-01	0.000E+00
U-235	1.458E-01	1.590E-01	1.845E-01	0.000E+00
NP-236	2.802E-02	4.884E-02	5.338E-02	0.000E+00
NP-237	7.913E-01	1.816E-01	1.960E-01	0.000E+00
AM-243	2.128E-01	4.044E-02	4.510E-02	0.000E+00
CM-243	5.847E-02	4.697E-02	8.762E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-3.395E-02	2.722E-02	3.897E-02	0.000E+00	NOT IDENT.
RH-101	1.164E-02	1.875E-02	3.362E-02	0.000E+00	NOT IDENT.
SB-125	2.900E-02	5.135E-02	8.819E-02	0.000E+00	NOT IDENT.
CS-137	-3.998E-03	2.187E-02	3.689E-02	0.000E+00	NOT IDENT.
PO-209	1.684E+00	4.225E+00	7.201E+00	0.000E+00	NOT IDENT.
BI-211	5.201E-03	6.162E-01	1.030E+00	0.000E+00	NOT IDENT.
PA-233	-3.543E-02	3.680E-02	6.044E-02	0.000E+00	NOT IDENT.
NP-239	-7.257E-02	1.220E-01	2.093E-01	0.000E+00	NOT IDENT.
AM-241	3.536E-02	9.146E-02	1.467E-01	0.000E+00	NOT IDENT.
AM-246	-1.147E-02	7.137E-02	1.203E-01	0.000E+00	NOT IDENT.
CF-249	2.613E-02	2.348E-02	4.135E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:52:03.87

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530024.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:36:08
Sample ID        : G198530024           Sample quantity  : 1.17950E+02 GRAM
Detector name    : GAM06                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:02.73  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	739	10.66*	9.604E-01	7.657E+00	7.657E+00	11.12
EU-155	105.31	75	21.20*	5.941E+00	6.318E-02	6.465E-02	81.97
TL-208	277.36	106	6.31	3.943E+00	4.532E-01	4.532E-01	61.93
	510.77	237	22.60	2.458E+00	4.532E-01	4.532E-01	44.07
	583.19	673	84.50*	2.202E+00	3.836E-01	3.836E-01	14.82
	763.13	------	1.81	1.741E+00	------	Line Not Found	------
	860.56	95	12.42	1.559E+00	5.200E-01	5.200E-01	45.38
BI-212	727.33	200	11.80*	1.819E+00	9.877E-01	9.877E-01	28.72
	785.37	------	1.10	1.696E+00	------	Line Not Found	------
	1620.50	------	1.49	8.878E-01	------	Line Not Found	------
PB-212	74.81	564	10.40	4.122E+00	1.395E+00	1.395E+00	19.39
	77.11	982	17.50	4.354E+00	1.367E+00	1.367E+00	13.78
	87.30	480	7.81	5.192E+00	1.256E+00	1.256E+00	23.42
	238.63	2399	43.30*	4.398E+00	1.336E+00	1.336E+00	8.14
	300.09	221	3.28	3.714E+00	1.923E+00	1.923E+00	35.29
BI-214	609.31	771	46.10*	2.122E+00	8.360E-01	8.360E-01	13.49
	768.36	82	4.94	1.731E+00	1.022E+00	1.022E+00	56.96
	806.17	54	1.22	1.658E+00	2.830E+00	2.830E+00	84.61
	934.06	67	3.03	1.443E+00	1.624E+00	1.624E+00	79.55
	1120.29	176	15.10	1.216E+00	1.017E+00	1.017E+00	35.85
	1155.19	------	1.63	1.181E+00	------	Line Not Found	------
	1238.11	100	5.79	1.108E+00	1.654E+00	1.654E+00	33.10
	1280.96	------	1.43	1.075E+00	------	Line Not Found	------
	1377.67	------	4.00	1.008E+00	------	Line Not Found	------
	1401.50	------	1.27	9.936E-01	------	Line Not Found	------
	1407.98	38	2.15	9.895E-01	1.885E+00	1.885E+00	63.80
	1509.23	------	2.11	9.357E-01	------	Line Not Found	------
	1729.60	61	2.92	8.512E-01	2.588E+00	2.588E+00	35.90
	1764.49	129	15.40	8.411E-01	1.059E+00	1.059E+00	25.77
PB-214	74.81	564	6.44	4.122E+00	2.253E+00	2.254E+00	19.39
	77.11	982	10.80	4.354E+00	2.215E+00	2.215E+00	13.78
	87.30	480	4.84	5.192E+00	2.027E+00	2.027E+00	23.42

Sample ID : G198530024 Acquisition date : 11-DEC-2007 05:36:08

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	535	7.43	4.360E+00	1.751E+00	1.751E+00	23.87
	295.22	690	19.30	3.762E+00	1.008E+00	1.008E+00	17.48
	351.93	1202	37.60*	3.292E+00	1.030E+00	1.030E+00	10.08
RA-223	269.46	202	13.70*	4.018E+00	3.889E-01	3.889E-01	46.83
AC-228	129.07	155	2.42	6.054E+00	1.126E+00	1.126E+00	63.23
	209.25	209	3.89	4.818E+00	1.182E+00	1.182E+00	45.87
	270.25	202	3.46	4.018E+00	1.540E+00	1.540E+00	46.83
	338.32	434	11.27	3.393E+00	1.205E+00	1.205E+00	19.57
	409.46	98	1.92	2.932E+00	1.837E+00	1.837E+00	65.97
	463.00	100	4.40	2.660E+00	9.087E-01	9.087E-01	61.65
	794.95	73	4.25	1.677E+00	1.086E+00	1.086E+00	71.25
	911.20	519	25.80*	1.478E+00	1.443E+00	1.443E+00	16.69
	964.77	98	4.99	1.401E+00	1.491E+00	1.491E+00	43.21
	968.97	281	15.80	1.395E+00	1.350E+00	1.350E+00	19.49
	1588.20	32	3.22	9.005E-01	1.176E+00	1.176E+00	61.63
PA-234M	1001.03	42	0.84*	1.354E+00	3.953E+00	3.953E+00	93.10
TH-234	63.29	30	4.80	2.691E+00	2.468E-01	2.468E-01	296.13
	92.58	497	5.41*	5.509E+00	1.768E+00	1.768E+00	26.50
U-235	143.76	89	10.96*	5.892E+00	1.458E-01	1.458E-01	111.29
NP-236	98.44	58	38.00*	5.770E+00	2.802E-02	2.802E-02	177.85
NP-237	86.48	480	12.40*	5.192E+00	7.913E-01	7.913E-01	23.42
AM-243	74.66	564	68.20*	4.122E+00	2.128E-01	2.128E-01	19.39
CM-243	103.76	75	23.00*	5.941E+00	5.824E-02	5.847E-02	81.97

Flag: "*" = Keyline

Sample ID : G198530024 Acquisition date : 11-DEC-2007 05:36:08

Total number of lines in spectrum	74	
Number of unidentified lines	34	
Number of lines tentatively identified by NID	40	54.05%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	7.657E+00	7.657E+00	0.852E+00	11.12	
EU-155	1.57E+08S	1.02	6.318E-02	6.465E-02	5.300E-02	81.97	
TL-208	4.43E+17S	1.00	3.836E-01	3.836E-01	0.568E-01	14.82	
BI-212	4.43E+17S	1.00	9.877E-01	9.877E-01	2.837E-01	28.72	
PB-212	4.43E+17S	1.00	1.336E+00	1.336E+00	0.109E+00	8.14	
BI-214	5.05E+10S	1.00	8.360E-01	8.360E-01	1.128E-01	13.49	
PB-214	5.05E+10S	1.00	1.030E+00	1.030E+00	0.104E+00	10.08	
RA-223	1.04E+12S	1.00	3.889E-01	3.889E-01	1.821E-01	46.83	
AC-228	4.43E+17S	1.00	1.443E+00	1.443E+00	0.241E+00	16.69	
PA-234M	1.41E+17S	1.00	3.953E+00	3.953E+00	3.680E+00	93.10	
TH-234	1.41E+17S	1.00	1.768E+00	1.768E+00	0.469E+00	26.50	
U-235	2.22E+16S	1.00	1.458E-01	1.458E-01	1.622E-01	111.29	
NP-236	4.89E+12S	1.00	2.802E-02	2.802E-02	4.984E-02	177.85	
NP-237	6.75E+13S	1.00	7.913E-01	7.913E-01	1.853E-01	23.42	
AM-243	2.33E+11S	1.00	2.128E-01	2.128E-01	0.413E-01	19.39	
CM-243	8.99E+08S	1.00	5.824E-02	5.847E-02	4.793E-02	81.97	
			---	---			
	Total Activity :		2.108E+01	2.108E+01			

Grand Total Activity : 2.108E+01 2.108E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530024 Acquisition date : 11-DEC-2007 05:36:08

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	45.74	54	722	2.58	91.55	88	8	2.51E-03	****	6.28E-01	
4	89.55	228	630	1.12	179.09	163	29	1.06E-02	39.2	5.36E+00	
0	108.28	19	473	0.98	216.51	214	6	8.84E-04	****	6.00E+00	
0	115.00	67	531	1.46	229.93	227	7	3.08E-03	****	6.07E+00	
0	152.92	62	646	0.79	305.71	303	8	2.86E-03	****	5.75E+00	
0	185.45	446	726	1.32	370.71	365	11	2.07E-02	27.5	5.20E+00	
0	204.40	65	524	0.92	408.57	405	8	3.00E-03	****	4.89E+00	
0	287.70	32	381	1.26	575.03	572	9	1.47E-03	****	3.83E+00	
0	327.65	87	259	0.78	654.87	651	7	4.03E-03	65.0	3.47E+00	
0	366.61	89	371	3.95	732.72	725	14	4.11E-03	94.8	3.19E+00	
0	625.87	18	104	1.14	1250.89	1248	8	8.33E-04	****	2.07E+00	
0	743.45	10	97	0.68	1485.92	1478	9	4.82E-04	****	1.78E+00	
0	772.16	31	61	0.57	1543.33	1540	6	1.44E-03	87.6	1.72E+00	
0	839.61	44	68	2.53	1678.16	1674	10	2.04E-03	76.9	1.59E+00	
0	845.18	35	116	4.89	1689.30	1683	14	1.61E-03	****	1.58E+00	
0	1065.47	22	29	1.62	2129.73	2126	7	1.03E-03	90.8	1.27E+00	
0	1146.09	31	32	1.30	2290.94	2285	10	1.43E-03	77.7	1.19E+00	
0	1222.09	27	55	1.34	2442.91	2435	11	1.27E-03	****	1.12E+00	
0	1344.27	8	30	1.42	2687.25	2681	10	3.61E-04	****	1.03E+00	
0	1440.18	18	30	3.45	2879.08	2871	12	8.33E-04	****	9.71E-01	
0	1512.45	31	53	0.90	3023.63	3014	20	1.44E-03	****	9.34E-01	
0	1529.67	26	36	4.19	3058.08	3045	18	1.18E-03	****	9.26E-01	
7	1579.05	16	18	2.66	3156.84	3153	14	7.49E-04	92.5	9.04E-01	
7	1582.48	20	7	1.57	3163.69	3153	14	9.40E-04	70.0	9.03E-01	
0	1631.33	28	13	0.70	3261.41	3253	14	1.28E-03	68.5	8.84E-01	
0	1638.34	25	27	6.70	3275.43	3266	18	1.17E-03	****	8.81E-01	
0	1753.27	26	17	9.02	3505.35	3494	23	1.19E-03	92.7	8.44E-01	
0	1827.00	9	14	0.68	3652.86	3644	10	4.19E-04	****	8.25E-01	
0	1846.42	44	11	2.37	3691.71	3683	15	2.04E-03	44.7	8.21E-01	
0	1911.42	14	21	2.43	3821.75	3809	16	6.64E-04	****	8.08E-01	
0	1960.07	12	25	1.28	3919.09	3909	21	5.44E-04	****	8.00E-01	
0	1987.93	6	8	1.35	3974.83	3970	8	2.78E-04	****	7.96E-01	
0	1991.06	13	2	1.15	3981.10	3977	8	6.06E-04	66.5	7.96E-01	
0	2016.48	22	24	3.23	4031.97	4017	21	1.03E-03	****	7.93E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530024            *
* Acquisition date : 11-DEC-2007 05:36:08 Detector SN#    :                 *
* Detector ID      : GAM06                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:02.73     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530024           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1795E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 20-FEB-2007 10:58:43 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	7.657E+00	8.347E-01	1.622E-01	8.347E-01
EU-155	6.465E-02	5.194E-02	4.570E-02	5.194E-02
TL-208	3.836E-01	5.571E-02	1.662E-02	5.571E-02
BI-212	9.877E-01	2.780E-01	1.251E-01	2.780E-01
PB-212	1.336E+00	1.067E-01	2.660E-02	1.067E-01
BI-214	8.360E-01	1.105E-01	3.227E-02	1.105E-01
PB-214	1.030E+00	1.018E-01	3.161E-02	1.018E-01
RA-223	3.889E-01	1.785E-01	8.902E-02	1.785E-01
AC-228	1.443E+00	2.359E-01	6.412E-02	2.359E-01
PA-234M	3.953E+00	3.606E+00	1.662E+00	3.606E+00
TH-234	1.768E+00	4.592E-01	2.115E-01	4.592E-01
U-235	1.458E-01	1.590E-01	9.230E-02	1.590E-01
NP-236	2.802E-02	4.884E-02	2.671E-02	4.884E-02
NP-237	7.913E-01	1.816E-01	9.806E-02	1.816E-01
AM-243	2.128E-01	4.044E-02	2.256E-02	4.044E-02
CM-243	5.847E-02	4.697E-02	4.383E-02	4.697E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-3.395E-02	2.722E-02	1.950E-02	2.722E-02	NOT IDENT.
RH-101	1.164E-02	1.875E-02	1.682E-02	1.875E-02	NOT IDENT.
SB-125	2.900E-02	5.135E-02	4.412E-02	5.135E-02	NOT IDENT.
CS-137	-3.998E-03	2.187E-02	1.846E-02	2.187E-02	NOT IDENT.
PO-209	1.684E+00	4.225E+00	3.603E+00	4.225E+00	NOT IDENT.
BI-211	5.201E-03	6.162E-01	5.151E-01	6.162E-01	NOT IDENT.
PA-233	-3.543E-02	3.680E-02	3.024E-02	3.680E-02	NOT IDENT.
NP-239	-7.257E-02	1.220E-01	1.047E-01	1.220E-01	NOT IDENT.
AM-241	3.536E-02	9.146E-02	7.341E-02	9.146E-02	NOT IDENT.
AM-246	-1.147E-02	7.137E-02	6.017E-02	7.137E-02	NOT IDENT.
CF-249	2.613E-02	2.348E-02	2.069E-02	2.348E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	520.1018
63.29	651.8073
74.66	630.5421
74.81	630.7550
74.81	630.7550
77.11	633.9816
77.11	633.9816
86.48	613.0308
87.30	614.0494
87.30	614.0494
92.58	620.5014
98.44	532.8279
103.76	550.2967
105.31	494.9492
129.07	573.4050
143.76	557.7344
198.00	515.5728
209.25	521.9068
228.18	447.6458
238.63	406.6933
242.00	408.0513
269.46	383.0033
270.25	387.2380
277.36	332.0876
295.22	334.9638
300.09	290.7207
312.17	328.9679
338.32	300.9447
351.93	244.8477
387.59	229.2762
409.46	223.0413
427.87	182.4482
463.00	190.7974
510.77	179.4225
583.19	154.6911
609.31	161.3844
661.66	161.5441
727.33	117.0939
763.13	115.4857
768.36	125.7935
785.37	107.3975
794.95	104.7527
806.17	120.8728
831.80	121.7163
860.56	97.3073
896.60	94.0041
911.20	97.6736
934.06	77.0467
964.77	87.5832
968.97	87.7058
1001.03	58.3594
1078.86	76.6248
1120.29	81.3634
1155.19	85.0635
1173.23	97.0341
1238.11	83.1462
1280.96	71.2412
1332.51	48.1328
1377.67	60.8545
1401.50	34.9791
1407.98	58.2455
1460.80	45.5343
1509.23	34.0903
1588.20	62.3229
1620.50	36.4792
1729.60	16.4673
1764.49	18.0922

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530024

Total Uranium Activity	6.7442E-02	ug/g
Total Uranium Counting Unc.	7.3552E-02	ug/g
Total Uranium Tpu	7.3552E-08	ug/g
Total Uranium Mda	4.2708E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:52:36.83

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530025.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:37:14
Sample ID        : G198530025           Sample quantity  : 1.20700E+02 GRAM
Detector name    : GAM07                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:41.33  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.28*	106	1021	1.09	92.07	87	10	4.92E-03	61.3	
2	0	53.31	63	636	1.25	106.13	104	6	2.92E-03	64.2	
3	0	63.16*	285	1379	0.94	125.83	120	11	1.32E-02	27.0	
4	3	74.93*	1275	872	1.07	149.36	142	19	5.90E-02	4.8	3.24E+00
5	3	77.24*	1881	839	1.05	153.98	142	19	8.71E-02	3.5	
6	3	84.36*	242	988	1.10	168.21	163	29	1.12E-02	22.4	5.05E+00
7	3	87.38	737	902	1.18	174.24	163	29	3.41E-02	7.6	
8	3	89.97	471	825	1.12	179.42	163	29	2.18E-02	11.3	
9	3	92.89*	702	732	1.23	185.26	163	29	3.25E-02	8.9	
10	0	99.43	155	856	1.09	198.35	194	9	7.19E-03	34.9	
11	0	105.72*	98	800	1.56	210.91	207	8	4.52E-03	53.5	
12	0	112.66	69	568	1.11	224.80	223	6	3.18E-03	56.1	
13	0	126.03	69	542	1.60	251.53	249	6	3.20E-03	54.6	
14	0	129.09	140	688	0.81	257.64	255	7	6.48E-03	32.1	
15	0	143.87*	63	669	0.81	287.20	284	7	2.91E-03	74.7	
16	0	154.49	70	872	1.07	308.42	304	9	3.24E-03	77.3	
17	0	162.92*	64	700	1.41	325.29	322	9	2.95E-03	80.1	
18	0	186.16*	582	861	1.35	371.76	367	11	2.69E-02	11.2	
19	0	209.45	266	687	1.18	418.32	414	9	1.23E-02	18.8	
20	4	238.83*	3150	376	1.08	477.06	469	24	1.46E-01	2.2	2.75E+00
21	4	241.83	670	556	1.59	483.06	469	24	3.10E-02	9.2	
22	0	255.90	14	466	1.25	511.20	507	9	6.66E-04	271.1	
23	0	258.93	57	257	1.39	517.26	515	6	2.62E-03	46.9	
24	0	270.49	338	539	1.13	540.37	535	12	1.56E-02	14.8	
25	0	277.97	114	453	0.98	555.31	550	9	5.30E-03	34.9	
26	0	288.23	64	304	1.43	575.83	573	7	2.96E-03	46.9	
27	1	295.41*	1010	319	1.16	590.20	586	20	4.68E-02	4.6	1.02E+00
28	1	300.33	226	355	1.41	600.02	586	20	1.04E-02	15.9	
29	0	328.34*	169	464	1.15	656.03	651	11	7.82E-03	26.8	
30	0	338.43*	594	479	1.28	676.21	671	12	2.75E-02	8.7	
31	0	352.08*	1669	454	1.22	703.50	697	13	7.73E-02	3.8	
32	0	384.65*	8	247	1.14	768.63	763	8	3.91E-04	350.7	
33	0	409.63	126	247	1.13	818.58	814	9	5.81E-03	24.4	
34	0	414.95	54	325	4.57	829.20	823	13	2.50E-03	70.2	
35	0	463.25	170	186	1.26	925.78	922	8	7.86E-03	15.9	
36	0	511.01*	323	300	1.95	1021.27	1014	15	1.50E-02	16.5	
37	0	562.80	41	190	0.59	1124.84	1119	10	1.88E-03	66.4	
38	0	583.41*	961	211	1.45	1166.05	1162	12	4.45E-02	4.7	

Sample ID : G198530025 Acquisition date : 11-DEC-2007 05:37:14

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	609.55*	1294	193	1.53	1218.31	1213	12	5.99E-02	3.7	
40	0	620.78	22	145	1.30	1240.76	1236	9	9.97E-04	103.9	
41	0	661.78*	61	148	1.83	1322.76	1319	9	2.82E-03	41.7	
42	0	702.59	34	121	1.86	1404.36	1402	8	1.59E-03	57.6	
43	0	727.56	249	130	1.43	1454.29	1449	10	1.15E-02	10.7	
44	1	768.36*	74	151	1.83	1535.86	1529	20	3.41E-03	37.5	2.17E+00
45	1	772.76	47	115	1.84	1544.67	1529	20	2.16E-03	44.3	
46	0	785.84	65	102	1.25	1570.82	1567	9	3.03E-03	30.3	
47	0	796.28	143	201	2.05	1591.70	1584	19	6.63E-03	25.3	
48	0	805.77	47	130	3.36	1610.66	1603	13	2.17E-03	52.2	
49	0	835.55	47	141	1.78	1670.21	1665	11	2.18E-03	51.0	
50	0	861.00*	125	103	1.74	1721.10	1716	13	5.77E-03	21.3	
51	0	911.54*	645	119	1.72	1822.17	1815	14	2.99E-02	5.6	
52	0	934.23	74	83	1.17	1867.54	1862	12	3.45E-03	26.9	
53	0	940.33	33	143	4.53	1879.73	1873	17	1.51E-03	85.4	
54	3	965.00*	121	83	1.75	1929.07	1922	33	5.61E-03	17.8	1.10E+00
55	3	969.27	425	84	1.78	1937.61	1922	33	1.97E-02	6.4	
56	0	1001.41	38	74	0.97	2001.87	1996	10	1.78E-03	45.1	
57	0	1067.30	56	147	8.63	2133.63	2120	23	2.61E-03	57.9	
58	0	1120.59*	273	112	1.84	2240.19	2232	18	1.26E-02	11.3	
59	0	1156.39	69	95	1.05	2311.78	2305	17	3.20E-03	34.3	
60	0	1207.76	13	63	0.83	2414.51	2409	8	5.98E-04	110.5	
61	0	1238.45	124	82	2.70	2475.87	2469	14	5.76E-03	18.0	
62	0	1293.24	26	67	1.40	2585.45	2579	13	1.20E-03	68.7	
63	0	1322.62	37	73	6.07	2644.20	2635	18	1.69E-03	58.3	
64	0	1377.62*	75	77	2.41	2754.18	2745	19	3.46E-03	31.5	
65	0	1408.44	61	32	0.98	2815.81	2809	14	2.84E-03	23.2	
66	0	1461.21*	857	72	1.91	2921.33	2912	18	3.97E-02	4.3	
67	0	1509.98	51	30	1.44	3018.86	3013	14	2.38E-03	26.9	
68	0	1575.68	15	16	4.73	3150.24	3141	13	6.85E-04	61.9	
69	0	1585.16	14	33	2.33	3169.20	3161	11	6.67E-04	83.6	
70	0	1588.54	63	23	1.75	3175.96	3172	9	2.90E-03	18.7	
71	0	1593.17	28	34	1.81	3185.23	3181	9	1.29E-03	42.2	
72	0	1600.39	9	30	0.79	3199.67	3194	10	4.17E-04	118.6	
73	3	1630.26	30	34	2.82	3259.40	3232	48	1.41E-03	47.0	2.34E+00
74	3	1634.27	22	28	2.33	3267.42	3232	48	1.03E-03	54.2	
75	0	1699.77	22	12	3.97	3398.40	3391	12	1.04E-03	37.3	
76	0	1729.57	66	30	2.50	3458.00	3450	15	3.08E-03	21.7	
77	1	1764.88*	203	9	2.22	3528.61	3521	24	9.40E-03	8.9	1.74E+00
78	1	1771.36	18	8	2.39	3541.56	3521	24	8.47E-04	30.9	
79	0	1785.35	17	10	3.21	3569.54	3564	12	7.95E-04	42.8	
80	0	1848.23	37	29	1.74	3695.30	3687	13	1.69E-03	34.7	

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]G198530025       *
* Acquisition date : 11-DEC-2007 05:37:14 Detector SN#    :                 *
* Detector ID      : GAM07                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:41.33     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530025           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.2070E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 31-OCT-2007 13:07:28 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	7.145E+00	7.099E-01	2.735E-01	0.000E+00
CS-137	3.200E-02	2.627E-02	3.334E-02	0.000E+00
EU-155	6.571E-02	6.904E-02	8.274E-02	0.000E+00
TL-208	4.542E-01	5.127E-02	3.064E-02	0.000E+00
BI-212	1.020E+00	2.251E-01	2.289E-01	0.000E+00
PB-212	1.452E+00	1.051E-01	4.586E-02	0.000E+00
BI-214	1.164E+00	1.155E-01	5.651E-02	0.000E+00
PB-214	1.179E+00	1.084E-01	5.933E-02	0.000E+00
RA-223	5.372E-01	1.592E-01	1.469E-01	0.000E+00
AC-228	1.476E+00	1.892E-01	1.133E-01	0.000E+00
PA-234M	2.934E+00	2.600E+00	3.338E+00	0.000E+00
TH-234	1.844E+00	3.484E-01	3.479E-01	0.000E+00
U-235	8.540E-02	1.252E-01	1.682E-01	0.000E+00
NP-236	5.730E-02	3.940E-02	4.344E-02	0.000E+00
NP-237	8.642E-01	1.448E-01	1.550E-01	0.000E+00
AM-243	3.003E-01	3.458E-02	3.439E-02	0.000E+00
CM-243	5.943E-02	6.244E-02	7.195E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	-3.125E-02	2.802E-02	3.375E-02	0.000E+00	NOT IDENT.
RH-101	1.593E-02	1.774E-02	2.932E-02	0.000E+00	NOT IDENT.
SB-125	5.125E-02	4.782E-02	8.375E-02	0.000E+00	NOT IDENT.
PO-209	3.063E+00	3.861E+00	6.738E+00	0.000E+00	NOT IDENT.
BI-211	5.438E-01	5.744E-01	9.017E-01	0.000E+00	NOT IDENT.
PA-233	1.995E-02	3.110E-02	5.452E-02	0.000E+00	NOT IDENT.
NP-239	-2.855E-02	1.105E-01	1.919E-01	0.000E+00	NOT IDENT.
AM-241	3.939E-02	4.984E-02	8.051E-02	0.000E+00	NOT IDENT.
AM-246	1.535E-02	6.274E-02	1.093E-01	0.000E+00	NOT IDENT.
CF-249	-5.688E-03	2.496E-02	3.432E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:52:37.82

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530025.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:37:14
Sample ID        : G198530025           Sample quantity  : 1.20700E+02 GRAM
Detector name    : GAM07                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:41.33  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	857	10.66*	1.166E+00	7.145E+00	7.145E+00	10.14
CS-137	661.66	61	85.10*	2.330E+00	3.188E-02	3.200E-02	83.75
EU-155	105.31	98	21.20*	7.434E+00	6.422E-02	6.571E-02	107.20
TL-208	277.36	114	6.31	4.662E+00	4.031E-01	4.031E-01	69.99
	510.77	323	22.60	2.899E+00	5.116E-01	5.116E-01	33.62
	583.19	961	84.50*	2.595E+00	4.542E-01	4.542E-01	11.52
	763.13	------	1.81	2.057E+00	------	Line Not Found	------
	860.56	125	12.42	1.848E+00	5.632E-01	5.632E-01	43.22
BI-212	727.33	249	11.80*	2.145E+00	1.020E+00	1.020E+00	22.53
	785.37	65	1.10	2.004E+00	3.079E+00	3.079E+00	61.12
	1620.50	------	1.49	1.077E+00	------	Line Not Found	------
PB-212	74.81	1275	10.40	6.452E+00	1.969E+00	1.969E+00	11.75
	77.11	1881	17.50	6.618E+00	1.684E+00	1.684E+00	9.94
	87.30	737	7.81	7.133E+00	1.372E+00	1.372E+00	17.09
	238.63	3150	43.30*	5.194E+00	1.452E+00	1.452E+00	7.39
	300.09	226	3.28	4.403E+00	1.619E+00	1.619E+00	32.46
BI-214	609.31	1294	46.10*	2.500E+00	1.164E+00	1.164E+00	10.12
	768.36	74	4.94	2.045E+00	7.562E-01	7.562E-01	75.33
	806.17	47	1.22	1.960E+00	2.033E+00	2.033E+00	104.66
	934.06	74	3.03	1.718E+00	1.483E+00	1.483E+00	54.14
	1120.29	273	15.10	1.460E+00	1.281E+00	1.282E+00	23.26
	1155.19	69	1.63	1.420E+00	3.095E+00	3.095E+00	68.79
	1238.11	124	5.79	1.338E+00	1.665E+00	1.665E+00	36.34
	1280.96	------	1.43	1.300E+00	------	Line Not Found	------
	1377.67	75	4.00	1.223E+00	1.584E+00	1.584E+00	63.13
	1401.50	------	1.27	1.206E+00	------	Line Not Found	------
	1407.98	61	2.15	1.201E+00	2.465E+00	2.465E+00	46.76
	1509.23	51	2.11	1.136E+00	2.222E+00	2.222E+00	54.12
	1729.60	66	2.92	1.029E+00	2.291E+00	2.291E+00	43.84
	1764.49	203	15.40	1.016E+00	1.346E+00	1.346E+00	18.61
PB-214	74.81	1275	6.44	6.452E+00	3.180E+00	3.180E+00	11.75
	77.11	1881	10.80	6.618E+00	2.728E+00	2.728E+00	9.94

Sample ID : G198530025 Acquisition date : 11-DEC-2007 05:37:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	737	4.84	7.133E+00	2.214E+00	2.214E+00	17.09
	242.00	670	7.43	5.149E+00	1.814E+00	1.814E+00	19.44
	295.22	1010	19.30	4.457E+00	1.218E+00	1.218E+00	11.01
	351.93	1669	37.60*	3.903E+00	1.179E+00	1.179E+00	9.38
RA-223	269.46	338	13.70*	4.755E+00	5.372E-01	5.372E-01	30.24
AC-228	129.07	140	2.42	7.226E+00	8.298E-01	8.298E-01	64.61
	209.25	266	3.89	5.673E+00	1.251E+00	1.251E+00	38.01
	270.25	338	3.46	4.755E+00	2.127E+00	2.127E+00	30.24
	338.32	594	11.27	4.023E+00	1.357E+00	1.357E+00	18.40
	409.46	126	1.92	3.467E+00	1.955E+00	1.955E+00	48.99
	463.00	170	4.40	3.141E+00	1.273E+00	1.273E+00	32.38
	794.95	143	4.25	1.981E+00	1.762E+00	1.762E+00	51.16
	911.20	645	25.80*	1.756E+00	1.476E+00	1.476E+00	13.08
	964.77	121	4.99	1.668E+00	1.509E+00	1.509E+00	36.19
	968.97	425	15.80	1.662E+00	1.679E+00	1.679E+00	14.38
	1588.20	63	3.22	1.093E+00	1.842E+00	1.842E+00	37.79
PA-234M	1001.03	38	0.84*	1.614E+00	2.934E+00	2.934E+00	90.45
TH-234	63.29	285	4.80	5.256E+00	1.173E+00	1.173E+00	54.29
	92.58	702	5.41*	7.293E+00	1.844E+00	1.844E+00	19.28
U-235	143.76	63	10.96*	6.959E+00	8.540E-02	8.540E-02	149.61
NP-236	98.44	155	38.00*	7.399E+00	5.730E-02	5.730E-02	70.17
NP-237	86.48	737	12.40*	7.133E+00	8.642E-01	8.642E-01	17.09
AM-243	74.66	1275	68.20*	6.452E+00	3.003E-01	3.003E-01	11.75
CM-243	103.76	98	23.00*	7.434E+00	5.919E-02	5.943E-02	107.20

Flag: "*" = Keyline

Sample ID : G198530025 Acquisition date : 11-DEC-2007 05:37:14

Total number of lines in spectrum 80
Number of unidentified lines 35
Number of lines tentatively identified by NID 45 56.25%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	7.145E+00	7.145E+00	0.724E+00	10.14	
CS-137	9.47E+08S	1.00	3.188E-02	3.200E-02	2.680E-02	83.75	
EU-155	1.57E+08S	1.02	6.422E-02	6.571E-02	7.045E-02	107.20	
TL-208	4.43E+17S	1.00	4.542E-01	4.542E-01	0.523E-01	11.52	
BI-212	4.43E+17S	1.00	1.020E+00	1.020E+00	0.230E+00	22.53	
PB-212	4.43E+17S	1.00	1.452E+00	1.452E+00	0.107E+00	7.39	
BI-214	5.05E+10S	1.00	1.164E+00	1.164E+00	0.118E+00	10.12	
PB-214	5.05E+10S	1.00	1.179E+00	1.179E+00	0.111E+00	9.38	
RA-223	1.04E+12S	1.00	5.372E-01	5.372E-01	1.624E-01	30.24	
AC-228	4.43E+17S	1.00	1.476E+00	1.476E+00	0.193E+00	13.08	
PA-234M	1.41E+17S	1.00	2.934E+00	2.934E+00	2.653E+00	90.45	
TH-234	1.41E+17S	1.00	1.844E+00	1.844E+00	0.356E+00	19.28	
U-235	2.22E+16S	1.00	8.540E-02	8.540E-02	12.78E-02	149.61	
NP-236	4.89E+12S	1.00	5.730E-02	5.730E-02	4.021E-02	70.17	
NP-237	6.75E+13S	1.00	8.642E-01	8.642E-01	1.477E-01	17.09	
AM-243	2.33E+11S	1.00	3.003E-01	3.003E-01	0.353E-01	11.75	
CM-243	8.99E+08S	1.00	5.919E-02	5.943E-02	6.371E-02	107.20	
			---	---			
	Total Activity :		2.067E+01	2.067E+01			

Grand Total Activity : 2.067E+01 2.067E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530025 Acquisition date : 11-DEC-2007 05:37:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.28	106	1021	1.09	92.07	87	10	4.92E-03	****	2.56E+00	
0	53.31	63	636	1.25	106.13	104	6	2.92E-03	****	3.79E+00	
3	84.36	242	988	1.10	168.21	163	29	1.12E-02	44.9	7.01E+00	
3	89.97	471	825	1.12	179.42	163	29	2.18E-02	22.6	7.22E+00	
0	112.66	69	568	1.11	224.80	223	6	3.18E-03	****	7.42E+00	
0	126.03	69	542	1.60	251.53	249	6	3.20E-03	****	7.27E+00	
0	154.49	70	872	1.07	308.42	304	9	3.24E-03	****	6.75E+00	
0	162.92	64	700	1.41	325.29	322	9	2.95E-03	****	6.57E+00	
0	186.16	582	861	1.35	371.76	367	11	2.69E-02	22.5	6.10E+00	
0	255.90	14	466	1.25	511.20	507	9	6.66E-04	****	4.95E+00	
0	258.93	57	257	1.39	517.26	515	6	2.62E-03	93.8	4.91E+00	
0	288.23	64	304	1.43	575.83	573	7	2.96E-03	93.7	4.54E+00	
0	328.34	169	464	1.15	656.03	651	11	7.82E-03	53.6	4.12E+00	
0	384.65	8	247	1.14	768.63	763	8	3.91E-04	****	3.64E+00	
0	414.95	54	325	4.57	829.20	823	13	2.50E-03	****	3.43E+00	
0	562.80	41	190	0.59	1124.84	1119	10	1.88E-03	****	2.67E+00	
0	620.78	22	145	1.30	1240.76	1236	9	9.97E-04	****	2.46E+00	
0	702.59	34	121	1.86	1404.36	1402	8	1.59E-03	****	2.21E+00	
1	772.76	47	115	1.84	1544.67	1529	20	2.16E-03	88.6	2.03E+00	
0	835.55	47	141	1.78	1670.21	1665	11	2.18E-03	****	1.90E+00	
0	940.33	33	143	4.53	1879.73	1873	17	1.51E-03	****	1.71E+00	
0	1067.30	56	147	8.63	2133.63	2120	23	2.61E-03	****	1.52E+00	
0	1207.76	13	63	0.83	2414.51	2409	8	5.98E-04	****	1.37E+00	
0	1293.24	26	67	1.40	2585.45	2579	13	1.20E-03	****	1.29E+00	
0	1322.62	37	73	6.07	2644.20	2635	18	1.69E-03	****	1.26E+00	
0	1575.68	15	16	4.73	3150.24	3141	13	6.85E-04	****	1.10E+00	
0	1585.16	14	33	2.33	3169.20	3161	11	6.67E-04	****	1.09E+00	
0	1593.17	28	34	1.81	3185.23	3181	9	1.29E-03	84.4	1.09E+00	
0	1600.39	9	30	0.79	3199.67	3194	10	4.17E-04	****	1.09E+00	
3	1630.26	30	34	2.82	3259.40	3232	48	1.41E-03	93.9	1.07E+00	
3	1634.27	22	28	2.33	3267.42	3232	48	1.03E-03	****	1.07E+00	
0	1699.77	22	12	3.97	3398.40	3391	12	1.04E-03	74.7	1.04E+00	
1	1771.36	18	8	2.39	3541.56	3521	24	8.47E-04	61.8	1.01E+00	
0	1785.35	17	10	3.21	3569.54	3564	12	7.95E-04	85.6	1.01E+00	
0	1848.23	37	29	1.74	3695.30	3687	13	1.69E-03	69.5	9.87E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530025            *
* Acquisition date : 11-DEC-2007 05:37:14 Detector SN#    :                 *
* Detector ID      : GAM07                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:41.33     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530025           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.2070E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 31-OCT-2007 13:07:28 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	LC (pCi/GRAM)	TPU
K-40	7.145E+00	7.099E-01	1.368E-01	7.099E-01
CS-137	3.200E-02	2.627E-02	1.668E-02	2.627E-02
EU-155	6.571E-02	6.904E-02	4.140E-02	6.904E-02
TL-208	4.542E-01	5.127E-02	1.533E-02	5.127E-02
BI-212	1.020E+00	2.251E-01	1.145E-01	2.251E-01
PB-212	1.452E+00	1.051E-01	2.294E-02	1.051E-01
BI-214	1.164E+00	1.155E-01	2.827E-02	1.155E-01
PB-214	1.179E+00	1.084E-01	2.968E-02	1.084E-01
RA-223	5.372E-01	1.592E-01	7.348E-02	1.592E-01
AC-228	1.476E+00	1.892E-01	5.668E-02	1.892E-01
PA-234M	2.934E+00	2.600E+00	1.670E+00	2.600E+00
TH-234	1.844E+00	3.484E-01	1.741E-01	3.484E-01
U-235	8.540E-02	1.252E-01	8.414E-02	1.252E-01
NP-236	5.730E-02	3.940E-02	2.174E-02	3.940E-02
NP-237	8.642E-01	1.448E-01	7.755E-02	1.448E-01
AM-243	3.003E-01	3.458E-02	1.721E-02	3.458E-02
CM-243	5.943E-02	6.244E-02	3.599E-02	6.244E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-3.125E-02	2.802E-02	1.689E-02	2.802E-02	NOT IDENT.
RH-101	1.593E-02	1.774E-02	1.467E-02	1.774E-02	NOT IDENT.
SB-125	5.125E-02	4.782E-02	4.190E-02	4.782E-02	NOT IDENT.
PO-209	3.063E+00	3.861E+00	3.371E+00	3.861E+00	NOT IDENT.
BI-211	5.438E-01	5.744E-01	4.511E-01	5.744E-01	NOT IDENT.
PA-233	1.995E-02	3.110E-02	2.728E-02	3.110E-02	NOT IDENT.
NP-239	-2.855E-02	1.105E-01	9.603E-02	1.105E-01	NOT IDENT.
AM-241	3.939E-02	4.984E-02	4.028E-02	4.984E-02	NOT IDENT.
AM-246	1.535E-02	6.274E-02	5.467E-02	6.274E-02	NOT IDENT.
CF-249	-5.688E-03	2.496E-02	1.717E-02	2.496E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	693.5276
63.29	795.7657
74.66	915.9719
74.81	916.2590
74.81	916.2590
77.11	920.5883
77.11	920.5883
86.48	752.4399
87.30	753.5993
87.30	753.5993
92.58	760.9296
98.44	602.6326
103.76	608.0942
105.31	658.8907
129.07	633.9636
143.76	673.0325
198.00	512.6513
209.25	557.2996
228.18	522.1475
238.63	440.5314
242.00	441.9070
269.46	381.8817
270.25	382.1395
277.36	389.8960
295.22	351.0189
300.09	352.3777
312.17	305.5901
338.32	318.5968
351.93	316.6393
387.59	281.8696
409.46	262.2940
427.87	222.1295
463.00	221.3320
510.77	184.8819
583.19	190.9497
609.31	179.5828
661.66	183.8250
727.33	142.6742
763.13	126.4007
768.36	156.9847
785.37	125.7996
794.95	109.4204
806.17	113.2561
831.80	104.0842
860.56	115.4943
896.60	111.0050
911.20	112.6060
934.06	100.7380
964.77	94.2477
968.97	94.3744
1001.03	87.7474
1078.86	84.0980
1120.29	84.1699
1155.19	67.9951
1173.23	110.0952
1238.11	90.7718
1280.96	81.0378
1332.51	58.2595
1377.67	50.9938
1401.50	41.3705
1407.98	55.3894
1460.80	49.9530
1509.23	61.8335
1588.20	81.7737
1620.50	29.5540
1729.60	38.8491
1764.49	33.5278

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530025

Total Uranium Activity	3.9513E-02	ug/g
Total Uranium Counting Unc.	5.7934E-02	ug/g
Total Uranium Tpu	5.7934E-08	ug/g
Total Uranium Mda	3.8932E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:53:11.29

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530026.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:38:13
Sample ID        : G198530026           Sample quantity  : 1.05270E+02 GRAM
Detector name    : GAM11                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.71  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.49*	61	763	0.88	92.44	89	8	2.81E-03	87.1	
2	0	63.14*	175	970	0.74	125.77	122	8	8.09E-03	33.9	
3	3	74.79*	875	847	0.82	149.10	145	20	4.05E-02	6.2	1.03E+00
4	3	77.05*	1606	734	0.83	153.61	145	20	7.43E-02	3.7	
5	6	84.08*	357	739	1.44	167.69	164	27	1.65E-02	14.5	2.96E+00
6	6	87.15*	727	720	1.22	173.83	164	27	3.37E-02	7.4	
7	6	89.74	399	602	1.02	179.03	164	27	1.85E-02	11.0	
8	6	92.68*	638	684	1.25	184.89	164	27	2.95E-02	9.1	
9	0	99.45*	87	807	1.11	198.46	193	9	4.05E-03	62.6	
10	0	104.93	122	673	1.72	209.42	206	8	5.64E-03	38.0	
11	0	108.46*	64	603	1.62	216.48	214	7	2.94E-03	68.2	
12	0	112.75	73	495	0.69	225.07	222	6	3.38E-03	49.6	
13	0	124.59	31	573	0.73	248.78	247	7	1.43E-03	129.7	
14	0	129.02	195	649	1.19	257.64	254	8	9.00E-03	23.8	
15	0	139.98*	121	679	2.13	279.58	275	9	5.59E-03	41.2	
16	0	143.81*	51	648	0.81	287.26	284	8	2.38E-03	93.1	
17	0	154.00	64	618	0.85	307.64	304	7	2.94E-03	66.0	
18	0	185.81*	501	705	1.15	371.32	367	10	2.32E-02	11.8	
19	0	209.43	295	614	1.12	418.60	414	10	1.37E-02	16.7	
20	6	236.41	92	290	1.56	472.61	470	21	4.26E-03	28.4	4.89E+00
21	6	238.57*	3102	325	0.97	476.92	470	21	1.44E-01	2.1	
22	6	241.43	839	548	1.90	482.65	470	21	3.88E-02	8.7	
23	0	270.19*	302	541	1.13	540.21	535	12	1.40E-02	16.8	
24	0	276.98	88	396	0.87	553.82	551	8	4.08E-03	40.4	
25	0	295.18*	967	426	1.05	590.23	586	10	4.48E-02	5.4	
26	0	300.16	189	365	0.84	600.21	596	9	8.77E-03	19.6	
27	0	327.91	188	416	1.01	655.75	651	11	8.73E-03	22.2	
28	4	338.26	642	232	1.11	676.46	671	14	2.97E-02	5.6	8.65E-01
29	4	340.82	39	217	1.23	681.60	671	14	1.80E-03	69.6	
30	2	351.87*	1748	197	1.07	703.71	698	14	8.09E-02	2.8	8.80E-01
31	2	353.97	39	202	1.43	707.92	698	14	1.81E-03	78.9	
32	0	409.32	100	236	0.84	818.69	815	9	4.65E-03	29.2	
33	0	452.28	109	346	6.90	904.67	894	19	5.04E-03	42.1	
34	0	463.33*	95	290	1.25	926.79	920	11	4.39E-03	37.2	
35	0	477.68	4	180	0.81	955.51	952	7	1.70E-04	609.3	
36	0	510.83*	253	403	1.65	1021.87	1015	14	1.17E-02	22.2	
37	0	559.73	148	319	7.73	1119.73	1110	22	6.85E-03	31.8	
38	0	583.19*	816	262	1.28	1166.70	1160	14	3.78E-02	5.9	

Sample ID : G198530026 Acquisition date : 11-DEC-2007 05:38:13

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	609.32*	1232	211	1.33	1218.99	1214	11	5.71E-02	3.8	
40	0	651.63*	5	160	3.15	1303.67	1297	11	2.41E-04	514.7	
41	0	661.58	92	142	0.96	1323.58	1321	9	4.25E-03	25.4	
42	0	682.55	46	94	2.36	1365.55	1362	8	2.12E-03	39.6	
43	1	727.30	220	116	1.54	1455.09	1450	17	1.02E-02	10.7	1.59E+00
44	1	731.60	33	57	1.60	1463.71	1450	17	1.51E-03	43.0	
45	0	768.38	99	120	1.25	1537.30	1533	8	4.59E-03	21.7	
46	0	786.13	62	71	2.19	1572.83	1569	8	2.87E-03	26.8	
47	0	794.93	100	111	1.60	1590.45	1586	10	4.63E-03	22.2	
48	0	831.17	43	99	3.36	1662.96	1658	12	1.97E-03	49.3	
49	5	835.92	72	44	2.00	1672.47	1669	17	3.34E-03	18.2	1.62E+00
50	5	840.16	75	73	2.09	1680.97	1669	17	3.46E-03	23.3	
51	0	860.45*	97	129	1.00	1721.56	1716	12	4.51E-03	27.5	
52	2	911.35*	706	73	1.60	1823.41	1815	23	3.27E-02	4.6	1.60E+00
53	2	916.81	27	33	1.89	1834.34	1815	23	1.26E-03	44.7	
54	1	929.79	25	26	1.73	1860.31	1858	16	1.15E-03	35.9	2.37E+00
55	1	933.97	52	78	1.73	1868.69	1858	16	2.40E-03	36.0	
56	3	964.58	95	114	2.11	1929.93	1924	21	4.41E-03	25.2	9.53E-01
57	3	969.06	388	73	1.56	1938.91	1924	21	1.80E-02	6.4	
58	0	1001.41*	23	74	0.66	2003.64	1999	9	1.05E-03	80.2	
59	0	1120.65*	260	142	2.07	2242.25	2234	17	1.20E-02	12.6	
60	0	1155.40	73	63	2.02	2311.78	2306	14	3.38E-03	25.9	
61	0	1188.33	19	75	1.68	2377.67	2370	12	8.83E-04	95.0	
62	0	1238.15	131	66	1.98	2477.35	2471	12	6.07E-03	15.2	
63	0	1274.72	13	27	0.87	2550.53	2547	6	6.15E-04	67.6	
64	0	1377.96	48	46	1.73	2757.09	2752	9	2.21E-03	27.7	
65	0	1401.36	43	53	1.27	2803.91	2798	14	1.98E-03	39.1	
66	0	1408.59	36	52	0.66	2818.38	2811	11	1.66E-03	42.4	
67	0	1460.87*	759	59	1.72	2922.99	2916	16	3.52E-02	4.4	
68	0	1496.24	32	42	0.89	2993.75	2986	13	1.46E-03	46.0	
69	0	1509.33	19	46	1.63	3019.93	3014	12	8.93E-04	73.3	
70	2	1588.44	76	19	2.07	3178.21	3173	28	3.50E-03	15.7	1.46E+00
71	2	1592.75	37	23	2.28	3186.83	3173	28	1.70E-03	36.2	
72	0	1621.23	36	43	1.33	3243.81	3238	14	1.65E-03	42.3	
73	0	1630.96	20	18	1.85	3263.27	3259	8	9.11E-04	43.7	
74	0	1729.83	62	27	0.92	3461.07	3455	15	2.85E-03	22.3	
75	0	1764.77	287	4	2.03	3530.97	3522	18	1.33E-02	6.2	
76	0	1847.83*	52	26	1.85	3697.14	3689	15	2.40E-03	27.3	
77	0	1876.75	18	9	1.31	3755.00	3751	10	8.50E-04	39.3	
78	0	1887.42	18	11	0.79	3776.33	3770	11	8.33E-04	42.8	
79	0	1995.50	30	23	3.59	3992.55	3978	22	1.41E-03	43.3	

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]G198530026       *
* Acquisition date : 11-DEC-2007 05:38:13 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.71     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530026           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0527E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-OCT-2007 15:05:44 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	6.684E+00	7.394E-01	2.758E-01	0.000E+00
CS-137	5.087E-02	2.556E-02	2.854E-02	0.000E+00
EU-155	9.082E-02	6.790E-02	7.591E-02	0.000E+00
TL-208	4.067E-01	5.438E-02	2.908E-02	0.000E+00
BI-211	7.395E-01	7.171E-01	8.243E-01	0.000E+00
BI-212	9.514E-01	2.134E-01	2.261E-01	0.000E+00
PB-212	1.521E+00	1.077E-01	4.364E-02	0.000E+00
BI-214	1.169E+00	1.196E-01	5.882E-02	0.000E+00
PB-214	1.309E+00	1.009E-01	5.414E-02	0.000E+00
RA-223	5.112E-01	1.712E-01	1.371E-01	0.000E+00
AC-228	1.707E+00	2.126E-01	1.115E-01	0.000E+00
PA-234M	1.839E+00	2.895E+00	3.347E+00	0.000E+00
TH-234	1.901E+00	3.637E-01	3.282E-01	0.000E+00
U-235	7.511E-02	1.371E-01	1.484E-01	0.000E+00
NP-236	3.602E-02	4.428E-02	4.244E-02	0.000E+00
NP-237	9.821E-01	1.599E-01	1.486E-01	0.000E+00
AM-243	2.500E-01	3.427E-02	3.789E-02	0.000E+00
CM-243	8.214E-02	6.141E-02	6.543E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-2.169E-03	2.041E-02	3.362E-02	0.000E+00	NOT IDENT.
RH-101	-1.114E-02	1.717E-02	2.622E-02	0.000E+00	NOT IDENT.
SB-125	-1.861E-02	4.373E-02	7.304E-02	0.000E+00	NOT IDENT.
PO-209	-4.313E+00	4.057E+00	5.337E+00	0.000E+00	NOT IDENT.
PA-233	-2.342E-02	3.124E-02	4.880E-02	0.000E+00	NOT IDENT.
NP-239	2.128E-02	1.041E-01	1.738E-01	0.000E+00	NOT IDENT.
AM-241	2.817E-02	6.124E-02	9.219E-02	0.000E+00	NOT IDENT.
AM-246	5.462E-02	6.500E-02	1.154E-01	0.000E+00	NOT IDENT.
CF-249	3.515E-02	1.935E-02	3.551E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:53:12.34

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530026.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:38:13
Sample ID        : G198530026           Sample quantity  : 1.05270E+02 GRAM
Detector name    : GAM11                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.71  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	759	10.66*	1.267E+00	6.684E+00	6.684E+00	11.29
CS-137	661.66	92	85.10*	2.533E+00	5.067E-02	5.087E-02	51.28
EU-155	105.31	122	21.20*	7.693E+00	8.875E-02	9.082E-02	76.29
TL-208	277.36	88	6.31	5.041E+00	3.296E-01	3.296E-01	80.97
	510.77	253	22.60	3.148E+00	4.233E-01	4.233E-01	44.85
	583.19	816	84.50*	2.820E+00	4.067E-01	4.067E-01	13.64
	763.13	------	1.81	2.235E+00	------	Line Not Found	------
	860.56	97	12.42	2.007E+00	4.645E-01	4.645E-01	55.59
BI-211	831.80	43	3.30*	2.070E+00	7.395E-01	7.395E-01	98.95
BI-212	727.33	220	11.80*	2.332E+00	9.514E-01	9.514E-01	22.89
	785.37	62	1.10	2.176E+00	3.082E+00	3.082E+00	54.26
	1620.50	36	1.49	1.175E+00	2.414E+00	2.414E+00	84.82
PB-212	74.81	875	10.40	6.097E+00	1.639E+00	1.639E+00	13.99
	77.11	1606	17.50	6.325E+00	1.725E+00	1.725E+00	10.01
	87.30	727	7.81	7.096E+00	1.559E+00	1.559E+00	16.61
	238.63	3102	43.30*	5.600E+00	1.521E+00	1.521E+00	7.23
	300.09	189	3.28	4.755E+00	1.444E+00	1.444E+00	39.66
BI-214	609.31	1232	46.10*	2.718E+00	1.169E+00	1.169E+00	10.44
	768.36	99	4.94	2.221E+00	1.073E+00	1.073E+00	44.21
	806.17	------	1.22	2.128E+00	------	Line Not Found	------
	934.06	52	3.03	1.864E+00	1.091E+00	1.091E+00	72.42
	1120.29	260	15.10	1.582E+00	1.292E+00	1.292E+00	25.91
	1155.19	73	1.63	1.540E+00	3.458E+00	3.458E+00	52.04
	1238.11	131	5.79	1.450E+00	1.856E+00	1.856E+00	30.92
	1280.96	------	1.43	1.408E+00	------	Line Not Found	------
	1377.67	48	4.00	1.326E+00	1.071E+00	1.071E+00	55.83
	1401.50	43	1.27	1.308E+00	3.062E+00	3.062E+00	78.49
	1407.98	36	2.15	1.303E+00	1.522E+00	1.522E+00	85.18
	1509.23	19	2.11	1.236E+00	8.790E-01	8.791E-01	146.83
	1729.60	62	2.92	1.128E+00	2.220E+00	2.220E+00	44.95
	1764.49	287	15.40	1.115E+00	1.983E+00	1.984E+00	13.75
PB-214	74.81	875	6.44	6.097E+00	2.647E+00	2.648E+00	13.99

Sample ID : G198530026 Acquisition date : 11-DEC-2007 05:38:13

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1606	10.80	6.325E+00	2.794E+00	2.795E+00	10.01
	87.30	727	4.84	7.096E+00	2.516E+00	2.516E+00	16.61
	242.00	839	7.43	5.554E+00	2.417E+00	2.417E+00	18.32
	295.22	967	19.30	4.814E+00	1.237E+00	1.238E+00	12.41
	351.93	1748	37.60*	4.222E+00	1.309E+00	1.309E+00	7.87
RA-223	269.46	302	13.70*	5.132E+00	5.112E-01	5.112E-01	34.18
AC-228	129.07	195	2.42	7.654E+00	1.248E+00	1.248E+00	47.99
	209.25	295	3.89	6.105E+00	1.479E+00	1.479E+00	33.92
	270.25	302	3.46	5.132E+00	2.024E+00	2.024E+00	34.18
	338.32	642	11.27	4.350E+00	1.555E+00	1.555E+00	12.54
	409.46	100	1.92	3.758E+00	1.655E+00	1.655E+00	58.71
	463.00	95	4.40	3.407E+00	7.522E-01	7.522E-01	74.53
	794.95	100	4.25	2.155E+00	1.299E+00	1.299E+00	45.12
	911.20	706	25.80*	1.905E+00	1.707E+00	1.707E+00	12.71
	964.77	95	4.99	1.810E+00	1.253E+00	1.253E+00	51.14
	968.97	388	15.80	1.802E+00	1.620E+00	1.620E+00	15.29
	1588.20	76	3.22	1.192E+00	2.342E+00	2.342E+00	32.10
PA-234M	1001.03	23	0.84*	1.750E+00	1.839E+00	1.839E+00	160.62
TH-234	63.29	175	4.80	4.572E+00	9.464E-01	9.464E-01	68.17
	92.58	638	5.41*	7.369E+00	1.901E+00	1.901E+00	19.52
U-235	143.76	51	10.96*	7.422E+00	7.511E-02	7.511E-02	186.33
NP-236	98.44	87	38.00*	7.590E+00	3.602E-02	3.602E-02	125.42
NP-237	86.48	727	12.40*	7.096E+00	9.821E-01	9.821E-01	16.61
AM-243	74.66	875	68.20*	6.097E+00	2.500E-01	2.500E-01	13.99
CM-243	103.76	122	23.00*	7.693E+00	8.181E-02	8.214E-02	76.29

Flag: "*" = Keyline

Sample ID : G198530026 Acquisition date : 11-DEC-2007 05:38:13

Total number of lines in spectrum 79
Number of unidentified lines 32
Number of lines tentatively identified by NID 47 59.49%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	6.684E+00	6.684E+00	0.754E+00	11.29	
CS-137	9.47E+08S	1.00	5.067E-02	5.087E-02	2.609E-02	51.28	
EU-155	1.57E+08S	1.02	8.875E-02	9.082E-02	6.928E-02	76.29	
TL-208	4.43E+17S	1.00	4.067E-01	4.067E-01	0.555E-01	13.64	
BI-211	2.22E+16S	1.00	7.395E-01	7.395E-01	7.318E-01	98.95	
BI-212	4.43E+17S	1.00	9.514E-01	9.514E-01	2.177E-01	22.89	
PB-212	4.43E+17S	1.00	1.521E+00	1.521E+00	0.110E+00	7.23	
BI-214	5.05E+10S	1.00	1.169E+00	1.169E+00	0.122E+00	10.44	
PB-214	5.05E+10S	1.00	1.309E+00	1.309E+00	0.103E+00	7.87	
RA-223	1.04E+12S	1.00	5.112E-01	5.112E-01	1.747E-01	34.18	
AC-228	4.43E+17S	1.00	1.707E+00	1.707E+00	0.217E+00	12.71	
PA-234M	1.41E+17S	1.00	1.839E+00	1.839E+00	2.954E+00	160.62	
TH-234	1.41E+17S	1.00	1.901E+00	1.901E+00	0.371E+00	19.52	
U-235	2.22E+16S	1.00	7.511E-02	7.511E-02	13.99E-02	186.33	
NP-236	4.89E+12S	1.00	3.602E-02	3.602E-02	4.518E-02	125.42	
NP-237	6.75E+13S	1.00	9.821E-01	9.821E-01	1.631E-01	16.61	
AM-243	2.33E+11S	1.00	2.500E-01	2.500E-01	0.350E-01	13.99	
CM-243	8.99E+08S	1.00	8.181E-02	8.214E-02	6.266E-02	76.29	
			---	---			
		Total Activity :	2.030E+01	2.031E+01			

Grand Total Activity : 2.030E+01 2.031E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530026 Acquisition date : 11-DEC-2007 05:38:13

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.49	61	763	0.88	92.44	89	8	2.81E-03	****	1.74E+00	
6	84.08	357	739	1.44	167.69	164	27	1.65E-02	29.1	6.90E+00	
6	89.74	399	602	1.02	179.03	164	27	1.85E-02	22.0	7.24E+00	
0	108.46	64	603	1.62	216.48	214	7	2.94E-03	****	7.73E+00	
0	112.75	73	495	0.69	225.07	222	6	3.38E-03	99.2	7.75E+00	
0	124.59	31	573	0.73	248.78	247	7	1.43E-03	****	7.70E+00	
0	139.98	121	679	2.13	279.58	275	9	5.59E-03	82.4	7.49E+00	
0	154.00	64	618	0.85	307.64	304	7	2.94E-03	****	7.22E+00	
0	185.81	501	705	1.15	371.32	367	10	2.32E-02	23.6	6.57E+00	
6	236.41	92	290	1.56	472.61	470	21	4.26E-03	56.8	5.63E+00	
0	327.91	188	416	1.01	655.75	651	11	8.73E-03	44.3	4.45E+00	
4	340.82	39	217	1.23	681.60	671	14	1.80E-03	****	4.33E+00	
2	353.97	39	202	1.43	707.92	698	14	1.81E-03	****	4.20E+00	
0	452.28	109	346	6.90	904.67	894	19	5.04E-03	84.2	3.47E+00	
0	477.68	4	180	0.81	955.51	952	7	1.70E-04	****	3.32E+00	
0	559.73	148	319	7.73	1119.73	1110	22	6.85E-03	63.7	2.92E+00	
0	651.63	5	160	3.15	1303.67	1297	11	2.41E-04	****	2.57E+00	
0	682.55	46	94	2.36	1365.55	1362	8	2.12E-03	79.1	2.46E+00	
1	731.60	33	57	1.60	1463.71	1450	17	1.51E-03	86.1	2.32E+00	
5	835.92	72	44	2.00	1672.47	1669	17	3.34E-03	36.4	2.06E+00	
5	840.16	75	73	2.09	1680.97	1669	17	3.46E-03	46.6	2.05E+00	
2	916.81	27	33	1.89	1834.34	1815	23	1.26E-03	89.5	1.90E+00	
1	929.79	25	26	1.73	1860.31	1858	16	1.15E-03	71.7	1.87E+00	
0	1188.33	19	75	1.68	2377.67	2370	12	8.83E-04	****	1.50E+00	
0	1274.72	13	27	0.87	2550.53	2547	6	6.15E-04	****	1.41E+00	
0	1496.24	32	42	0.89	2993.75	2986	13	1.46E-03	91.9	1.24E+00	
2	1592.75	37	23	2.28	3186.83	3173	28	1.70E-03	72.3	1.19E+00	
0	1630.96	20	18	1.85	3263.27	3259	8	9.11E-04	87.4	1.17E+00	
0	1847.83	52	26	1.85	3697.14	3689	15	2.40E-03	54.6	1.09E+00	
0	1876.75	18	9	1.31	3755.00	3751	10	8.50E-04	78.5	1.08E+00	
0	1887.42	18	11	0.79	3776.33	3770	11	8.33E-04	85.5	1.08E+00	
0	1995.50	30	23	3.59	3992.55	3978	22	1.41E-03	86.6	1.05E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530026            *
* Acquisition date : 11-DEC-2007 05:38:13 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.71     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530026           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0527E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  2-OCT-2007 15:05:44 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	6.684E+00	7.394E-01	1.380E-01	7.394E-01
CS-137	5.087E-02	2.556E-02	1.428E-02	2.556E-02
EU-155	9.082E-02	6.790E-02	3.798E-02	6.790E-02
TL-208	4.067E-01	5.438E-02	1.455E-02	5.438E-02
BI-211	7.395E-01	7.171E-01	4.124E-01	7.171E-01
BI-212	9.514E-01	2.134E-01	1.131E-01	2.134E-01
PB-212	1.521E+00	1.077E-01	2.183E-02	1.077E-01
BI-214	1.169E+00	1.196E-01	2.943E-02	1.196E-01
PB-214	1.309E+00	1.009E-01	2.709E-02	1.009E-01
RA-223	5.112E-01	1.712E-01	6.857E-02	1.712E-01
AC-228	1.707E+00	2.126E-01	5.576E-02	2.126E-01
PA-234M	1.839E+00	2.895E+00	1.675E+00	2.895E+00
TH-234	1.901E+00	3.637E-01	1.642E-01	3.637E-01
U-235	7.511E-02	1.371E-01	7.425E-02	1.371E-01
NP-236	3.602E-02	4.428E-02	2.123E-02	4.428E-02
NP-237	9.821E-01	1.599E-01	7.433E-02	1.599E-01
AM-243	2.500E-01	3.427E-02	1.896E-02	3.427E-02
CM-243	8.214E-02	6.141E-02	3.273E-02	6.141E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-2.169E-03	2.041E-02	1.682E-02	2.041E-02	NOT IDENT.
RH-101	-1.114E-02	1.717E-02	1.312E-02	1.717E-02	NOT IDENT.
SB-125	-1.861E-02	4.373E-02	3.654E-02	4.373E-02	NOT IDENT.
PO-209	-4.313E+00	4.057E+00	2.670E+00	4.057E+00	NOT IDENT.
PA-233	-2.342E-02	3.124E-02	2.441E-02	3.124E-02	NOT IDENT.
NP-239	2.128E-02	1.041E-01	8.695E-02	1.041E-01	NOT IDENT.
AM-241	2.817E-02	6.124E-02	4.612E-02	6.124E-02	NOT IDENT.
AM-246	5.462E-02	6.500E-02	5.771E-02	6.500E-02	NOT IDENT.
CF-249	3.515E-02	1.935E-02	1.776E-02	1.935E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
*****************************************************************************
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ENERGY	MDA COUNTS
59.54	526.7810
63.29	629.2120
74.66	796.0013
74.81	796.2701
74.81	796.2701
77.11	800.4115
77.11	800.4115
86.48	545.3124
87.30	546.2320
87.30	546.2320
92.58	552.0639
98.44	480.7080
103.76	427.8363
105.31	473.9211
129.07	517.0313
143.76	472.7385
198.00	457.8267
209.25	414.9333
228.18	368.3977
238.63	364.8655
242.00	366.0970
269.46	304.1941
270.25	304.4187
277.36	313.0503
295.22	292.6238
300.09	256.4760
312.17	282.5233
338.32	261.0319
351.93	241.6285
387.59	199.8047
409.46	219.4063
427.87	204.3468
463.00	199.3530
510.77	193.2275
583.19	158.0179
609.31	178.6755
661.66	123.6580
727.33	127.5046
763.13	143.3558
768.36	155.1886
785.37	119.4215
794.95	101.9529
806.17	109.8298
831.80	104.5557
860.56	77.1996
896.60	100.5645
911.20	99.2171
934.06	95.9231
964.77	87.7167
968.97	87.8425
1001.03	80.0942
1078.86	70.2234
1120.29	77.1166
1155.19	70.8306
1173.23	85.4396
1238.11	69.3947
1280.96	57.6292
1332.51	75.4028
1377.67	46.1935
1401.50	45.0277
1407.98	57.7266
1460.80	46.0441
1509.23	46.2016
1588.20	51.6027
1620.50	45.4746
1729.60	27.1478
1764.49	13.6707

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530026

Total Uranium Activity	3.4752E-02	ug/g
Total Uranium Counting Unc.	6.3459E-02	ug/g
Total Uranium Tpu	6.3459E-08	ug/g
Total Uranium Mda	3.4357E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:53:44.66

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530027.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:39:05
Sample ID        : G198530027           Sample quantity  : 1.01150E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:06.33  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.73*	78	791	0.88	92.92	89	7	3.61E-03	76.1	
2	0	53.22*	107	930	0.84	105.89	102	8	4.96E-03	55.3	
3	0	63.43*	195	1207	0.98	126.34	122	8	9.01E-03	40.0	
4	2	73.08	60	973	0.97	145.66	143	18	2.78E-03	85.7	2.67E+00
5	2	74.92	1008	822	0.86	149.34	143	18	4.67E-02	5.3	
6	2	77.16*	1437	840	0.91	153.82	143	18	6.65E-02	4.3	
7	5	84.23*	201	795	1.27	167.97	165	28	9.30E-03	26.2	3.79E+00
8	5	87.26	633	877	1.16	174.04	165	28	2.93E-02	8.6	
9	5	89.93	400	597	0.89	179.39	165	28	1.85E-02	10.4	
10	5	92.71*	612	758	1.10	184.94	165	28	2.84E-02	12.0	
11	0	98.68*	105	825	2.47	196.89	193	8	4.86E-03	53.0	
12	0	105.37	83	761	1.78	210.28	207	7	3.86E-03	55.9	
13	1	112.75*	28	510	0.85	225.06	221	7	1.31E-03	158.7	3.92E+00
14	0	129.51	100	714	1.24	258.61	255	7	4.65E-03	45.2	
15	0	144.01*	20	834	0.72	287.63	284	8	9.19E-04	284.4	
16	0	153.42	134	678	1.21	306.47	303	8	6.21E-03	34.7	
17	0	163.43*	24	613	0.86	326.51	323	7	1.10E-03	199.7	
18	0	185.85*	437	815	1.08	371.40	367	10	2.02E-02	15.7	
19	0	198.08*	31	550	1.11	395.87	393	7	1.42E-03	144.2	
20	0	205.19*	4	518	0.87	410.10	407	7	1.90E-04	*****	
21	0	209.07	202	663	1.29	417.86	414	9	9.33E-03	24.1	
22	5	238.58*	1990	434	1.01	476.94	472	21	9.22E-02	3.0	1.23E+00
23	5	241.67	600	625	1.66	483.11	472	21	2.78E-02	9.8	
24	0	270.03	240	586	1.35	539.88	534	11	1.11E-02	20.6	
25	0	277.48	156	465	2.04	554.80	550	9	7.21E-03	26.3	
26	1	293.16*	12	131	1.09	586.19	585	11	5.47E-04	209.2	1.66E+00
27	1	295.12*	730	328	1.11	590.10	585	11	3.38E-02	6.2	
28	0	299.86	109	422	0.99	599.59	596	8	5.04E-03	34.0	
29	0	327.84	145	507	1.38	655.60	650	11	6.70E-03	31.3	
30	0	338.08*	350	421	1.22	676.10	672	9	1.62E-02	13.8	
31	0	351.78*	1209	455	1.19	703.51	698	10	5.60E-02	4.6	
32	0	427.91	28	222	1.26	855.88	853	7	1.28E-03	92.0	
33	0	462.57*	72	300	1.11	925.25	920	10	3.36E-03	49.2	
34	0	510.35*	58	576	2.38	1020.87	1014	20	2.71E-03	122.9	
35	0	582.86*	512	384	1.37	1165.98	1161	13	2.37E-02	9.6	
36	0	609.04*	899	316	1.48	1218.36	1212	13	4.16E-02	5.6	
37	0	661.28	240	195	1.56	1322.90	1318	10	1.11E-02	12.7	
38	0	665.47	45	150	1.98	1331.28	1327	8	2.09E-03	49.9	

Sample ID : G198530027 Acquisition date : 11-DEC-2007 05:39:05

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	726.75	141	206	2.14	1453.92	1447	12	6.53E-03	22.0	
40	0	768.31	59	212	1.30	1537.08	1531	9	2.72E-03	46.8	
41	0	795.84	110	244	3.23	1592.15	1582	18	5.09E-03	34.8	
42	0	839.54	55	139	1.96	1679.59	1675	10	2.57E-03	42.3	
43	0	860.47	125	206	2.20	1721.48	1713	15	5.80E-03	26.5	
44	0	893.17	22	96	0.99	1786.91	1784	8	1.02E-03	80.0	
45	0	910.72*	440	201	1.92	1822.02	1815	18	2.04E-02	9.6	
46	0	934.30	93	175	2.10	1869.19	1860	19	4.30E-03	35.8	
47	1	964.38	88	128	2.07	1929.38	1921	26	4.07E-03	29.3	2.08E+00
48	1	968.68*	256	147	2.07	1937.97	1921	26	1.18E-02	13.1	
49	0	1001.43*	32	125	2.01	2003.50	1997	13	1.47E-03	86.4	
50	0	1047.57	31	72	0.78	2095.81	2090	9	1.44E-03	52.5	
51	4	1074.40	26	81	1.95	2149.50	2146	12	1.19E-03	62.6	4.81E+00
52	4	1076.80	28	73	1.57	2154.29	2146	12	1.28E-03	52.8	
53	0	1120.60*	210	180	1.78	2241.92	2232	20	9.71E-03	18.3	
54	0	1155.29	87	296	8.04	2311.30	2288	37	4.02E-03	64.3	
55	0	1179.64	31	65	2.87	2360.02	2355	10	1.41E-03	52.6	
56	0	1240.40	57	195	5.79	2481.56	2467	21	2.65E-03	63.1	
57	0	1378.57	34	136	1.50	2757.95	2749	18	1.56E-03	82.6	
58	0	1407.78	22	78	0.75	2816.38	2807	13	1.01E-03	86.6	
59	0	1460.11*	419	68	2.23	2921.05	2913	15	1.94E-02	7.1	
60	0	1466.99	28	81	1.85	2934.80	2928	16	1.28E-03	74.7	
61	0	1509.03	27	63	1.88	3018.88	3011	11	1.26E-03	58.7	
62	0	1544.12	28	40	1.85	3089.06	3084	10	1.32E-03	45.6	
63	0	1592.75	14	66	1.01	3186.33	3179	12	6.42E-04	124.0	
64	0	1631.05	27	64	1.39	3262.92	3252	17	1.26E-03	69.8	
65	6	1697.09	23	18	2.36	3395.00	3385	21	1.09E-03	44.7	1.24E+00
66	6	1700.67	11	10	2.08	3402.15	3385	21	5.08E-04	51.8	
67	0	1763.82	163	72	1.65	3528.43	3519	18	7.55E-03	14.5	
68	0	1786.00	14	21	2.94	3572.80	3566	12	6.69E-04	68.5	
69	0	1890.54	29	28	6.30	3781.83	3771	22	1.36E-03	49.3	

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]G198530027       *
* Acquisition date : 11-DEC-2007 05:39:05 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:06.33     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530027           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0115E+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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	4.585E+00	6.885E-01	3.685E-01	0.000E+00
RH-101	9.847E-03	2.784E-02	3.420E-02	0.000E+00
SB-125	3.965E-02	7.150E-02	1.068E-01	0.000E+00
CS-137	1.696E-01	4.417E-02	4.450E-02	0.000E+00
EU-155	6.814E-02	7.484E-02	9.201E-02	0.000E+00
TL-208	3.250E-01	6.556E-02	4.513E-02	0.000E+00
BI-212	7.785E-01	3.415E-01	3.504E-01	0.000E+00
PB-212	1.179E+00	1.044E-01	6.003E-02	0.000E+00
BI-214	1.087E+00	1.439E-01	8.920E-02	0.000E+00
PB-214	1.115E+00	1.163E-01	9.324E-02	0.000E+00
RA-223	4.923E-01	2.003E-01	1.860E-01	0.000E+00
AC-228	1.348E+00	2.666E-01	1.712E-01	0.000E+00
PA-234M	3.235E+00	5.480E+00	5.538E+00	0.000E+00
TH-234	1.862E+00	4.626E-01	4.059E-01	0.000E+00
U-235	3.437E-02	1.916E-01	1.945E-01	0.000E+00
NP-236	4.599E-02	4.795E-02	4.982E-02	0.000E+00
NP-237	8.311E-01	1.540E-01	1.737E-01	0.000E+00
AM-243	2.376E-01	3.075E-02	3.375E-02	0.000E+00
CM-243	6.163E-02	6.769E-02	8.391E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	2.891E-02	3.534E-02	5.395E-02	0.000E+00	NOT IDENT.
PO-209	2.811E-01	6.959E+00	9.785E+00	0.000E+00	NOT IDENT.
BI-211	-2.401E-01	8.502E-01	1.373E+00	0.000E+00	NOT IDENT.
PA-233	-2.275E-02	4.154E-02	6.928E-02	0.000E+00	NOT IDENT.
NP-239	1.150E-02	1.429E-01	2.331E-01	0.000E+00	NOT IDENT.
AM-241	-5.696E-03	3.690E-02	5.483E-02	0.000E+00	NOT IDENT.
AM-246	4.027E-02	1.296E-01	1.909E-01	0.000E+00	NOT IDENT.
CF-249	2.029E-02	2.801E-02	4.805E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:53:45.62

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530027.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:39:05
Sample ID        : G198530027           Sample quantity  : 1.01150E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:06.33  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	419	10.66*	1.061E+00	4.585E+00	4.585E+00	15.32
RH-101	198.00	31	73.00*	5.468E+00	9.511E-03	9.847E-03	288.50
SB-125	427.87	28	29.80*	3.022E+00	3.802E-02	3.965E-02	184.00
CS-137	661.66	240	85.10*	2.064E+00	1.690E-01	1.696E-01	26.57
EU-155	105.31	83	21.20*	7.307E+00	6.659E-02	6.814E-02	112.08
TL-208	277.36	156	6.31	4.314E+00	7.078E-01	7.078E-01	52.90
	510.77	58	22.60	2.593E+00	1.235E-01	1.235E-01	245.95
	583.19	512	84.50*	2.307E+00	3.250E-01	3.250E-01	20.58
	763.13	------	1.81	1.821E+00	------	Line Not Found	------
	860.56	125	12.42	1.642E+00	7.603E-01	7.603E-01	53.44
BI-212	727.33	141	11.80*	1.901E+00	7.785E-01	7.785E-01	44.76
	785.37	------	1.10	1.777E+00	------	Line Not Found	------
	1620.50	------	1.49	9.772E-01	------	Line Not Found	------
PB-212	74.81	1008	10.40	7.694E+00	1.558E+00	1.558E+00	13.21
	77.11	1437	17.50	7.684E+00	1.322E+00	1.322E+00	11.62
	87.30	633	7.81	7.592E+00	1.320E+00	1.320E+00	18.90
	238.63	1990	43.30*	4.824E+00	1.179E+00	1.179E+00	9.04
	300.09	109	3.28	4.061E+00	1.011E+00	1.011E+00	68.24
BI-214	609.31	899	46.10*	2.219E+00	1.087E+00	1.087E+00	13.51
	768.36	59	4.94	1.811E+00	8.131E-01	8.132E-01	93.89
	806.17	------	1.22	1.737E+00	------	Line Not Found	------
	934.06	93	3.03	1.531E+00	2.476E+00	2.476E+00	71.82
	1120.29	210	15.10	1.314E+00	1.307E+00	1.307E+00	37.14
	1155.19	87	1.63	1.282E+00	5.148E+00	5.148E+00	128.64
	1238.11	------	5.79	1.211E+00	------	Line Not Found	------
	1280.96	------	1.43	1.178E+00	------	Line Not Found	------
	1377.67	34	4.00	1.111E+00	9.396E-01	9.396E-01	165.37
	1401.50	------	1.27	1.096E+00	------	Line Not Found	------
	1407.98	22	2.15	1.092E+00	1.144E+00	1.144E+00	173.22
	1509.23	27	2.11	1.034E+00	1.547E+00	1.547E+00	117.53
	1729.60	------	2.92	9.286E-01	------	Line Not Found	------
	1764.49	163	15.40	9.146E-01	1.432E+00	1.432E+00	29.55

Sample ID : G198530027 Acquisition date : 11-DEC-2007 05:39:05

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	1008	6.44	7.694E+00	2.516E+00	2.516E+00	13.21
	77.11	1437	10.80	7.684E+00	2.142E+00	2.142E+00	11.62
	87.30	633	4.84	7.592E+00	2.129E+00	2.130E+00	18.90
	242.00	600	7.43	4.780E+00	2.088E+00	2.089E+00	20.70
	295.22	730	19.30	4.112E+00	1.138E+00	1.138E+00	13.47
	351.93	1209	37.60*	3.568E+00	1.115E+00	1.115E+00	10.64
RA-223	269.46	240	13.70*	4.404E+00	4.923E-01	4.923E-01	41.51
AC-228	129.07	100	2.42	6.822E+00	7.525E-01	7.525E-01	90.98
	209.25	202	3.89	5.281E+00	1.214E+00	1.214E+00	48.76
	270.25	240	3.46	4.404E+00	1.949E+00	1.949E+00	41.51
	338.32	350	11.27	3.687E+00	1.042E+00	1.042E+00	28.05
	409.46	------	1.92	3.139E+00	------	Line Not Found	------
	463.00	72	4.40	2.825E+00	7.213E-01	7.213E-01	98.63
	794.95	110	4.25	1.756E+00	1.822E+00	1.822E+00	70.06
	911.20	440	25.80*	1.564E+00	1.348E+00	1.348E+00	20.19
	964.77	88	4.99	1.490E+00	1.463E+00	1.463E+00	58.98
	968.97	256	15.80	1.484E+00	1.349E+00	1.349E+00	26.82
	1588.20	------	3.22	9.927E-01	------	Line Not Found	------
PA-234M	1001.03	32	0.84*	1.443E+00	3.235E+00	3.235E+00	172.84
TH-234	63.29	195	4.80	7.667E+00	6.542E-01	6.542E-01	80.40
	92.58	612	5.41*	7.519E+00	1.862E+00	1.862E+00	25.35
U-235	143.76	20	10.96*	6.517E+00	3.437E-02	3.437E-02	568.94
NP-236	98.44	105	38.00*	7.426E+00	4.599E-02	4.599E-02	106.39
NP-237	86.48	633	12.40*	7.592E+00	8.311E-01	8.311E-01	18.90
AM-243	74.66	1008	68.20*	7.694E+00	2.376E-01	2.376E-01	13.21
CM-243	103.76	83	23.00*	7.307E+00	6.138E-02	6.163E-02	112.08

Flag: "*" = Keyline

Sample ID : G198530027 Acquisition date : 11-DEC-2007 05:39:05

Total number of lines in spectrum 69
Number of unidentified lines 28
Number of lines tentatively identified by NID 41 59.42%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.585E+00	4.585E+00	0.703E+00	15.32	
RH-101	1.04E+08S	1.04	9.511E-03	9.847E-03	28.41E-03	288.50	
SB-125	8.62E+07S	1.04	3.802E-02	3.965E-02	7.296E-02	184.00	
CS-137	9.47E+08S	1.00	1.690E-01	1.696E-01	0.451E-01	26.57	
EU-155	1.57E+08S	1.02	6.659E-02	6.814E-02	7.637E-02	112.08	
TL-208	4.43E+17S	1.00	3.250E-01	3.250E-01	0.669E-01	20.58	
BI-212	4.43E+17S	1.00	7.785E-01	7.785E-01	3.485E-01	44.76	
PB-212	4.43E+17S	1.00	1.179E+00	1.179E+00	0.107E+00	9.04	
BI-214	5.05E+10S	1.00	1.087E+00	1.087E+00	0.147E+00	13.51	
PB-214	5.05E+10S	1.00	1.115E+00	1.115E+00	0.119E+00	10.64	
RA-223	1.04E+12S	1.00	4.923E-01	4.923E-01	2.044E-01	41.51	
AC-228	4.43E+17S	1.00	1.348E+00	1.348E+00	0.272E+00	20.19	
PA-234M	1.41E+17S	1.00	3.235E+00	3.235E+00	5.592E+00	172.84	
TH-234	1.41E+17S	1.00	1.862E+00	1.862E+00	0.472E+00	25.35	
U-235	2.22E+16S	1.00	3.437E-02	3.437E-02	19.55E-02	568.94	
NP-236	4.89E+12S	1.00	4.599E-02	4.599E-02	4.893E-02	106.39	
NP-237	6.75E+13S	1.00	8.311E-01	8.311E-01	1.571E-01	18.90	
AM-243	2.33E+11S	1.00	2.376E-01	2.376E-01	0.314E-01	13.21	
CM-243	8.99E+08S	1.00	6.138E-02	6.163E-02	6.907E-02	112.08	
			---	---			
	Total Activity :		1.750E+01	1.750E+01			

Grand Total Activity : 1.750E+01 1.750E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530027 Acquisition date : 11-DEC-2007 05:39:05

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.73	78	791	0.88	92.92	89	7	3.61E-03	****	7.27E+00	
0	53.22	107	930	0.84	105.89	102	8	4.96E-03	****	7.49E+00	
2	73.08	60	973	0.97	145.66	143	18	2.78E-03	****	7.70E+00	
5	84.23	201	795	1.27	167.97	165	28	9.30E-03	52.3	7.63E+00	
5	89.93	400	597	0.89	179.39	165	28	1.85E-02	20.8	7.56E+00	
1	112.75	28	510	0.85	225.06	221	7	1.31E-03	****	7.17E+00	
0	153.42	134	678	1.21	306.47	303	8	6.21E-03	69.5	6.32E+00	
0	163.43	24	613	0.86	326.51	323	7	1.10E-03	****	6.12E+00	
0	185.85	437	815	1.08	371.40	367	10	2.02E-02	31.4	5.69E+00	
0	205.19	4	518	0.87	410.10	407	7	1.90E-04	****	5.35E+00	
1	293.16	12	131	1.09	586.19	585	11	5.47E-04	****	4.13E+00	
0	327.84	145	507	1.38	655.60	650	11	6.70E-03	62.6	3.78E+00	
0	665.47	45	150	1.98	1331.28	1327	8	2.09E-03	99.7	2.05E+00	
0	839.54	55	139	1.96	1679.59	1675	10	2.57E-03	84.6	1.68E+00	
0	893.17	22	96	0.99	1786.91	1784	8	1.02E-03	****	1.59E+00	
0	1047.57	31	72	0.78	2095.81	2090	9	1.44E-03	****	1.39E+00	
4	1074.40	26	81	1.95	2149.50	2146	12	1.19E-03	****	1.36E+00	
4	1076.80	28	73	1.57	2154.29	2146	12	1.28E-03	****	1.36E+00	
0	1179.64	31	65	2.87	2360.02	2355	10	1.41E-03	****	1.26E+00	
0	1240.40	57	195	5.79	2481.56	2467	21	2.65E-03	****	1.21E+00	
0	1466.99	28	81	1.85	2934.80	2928	16	1.28E-03	****	1.06E+00	
0	1544.12	28	40	1.85	3089.06	3084	10	1.32E-03	91.2	1.01E+00	
0	1592.75	14	66	1.01	3186.33	3179	12	6.42E-04	****	9.90E-01	
0	1631.05	27	64	1.39	3262.92	3252	17	1.26E-03	****	9.72E-01	
6	1697.09	23	18	2.36	3395.00	3385	21	1.09E-03	89.4	9.42E-01	
6	1700.67	11	10	2.08	3402.15	3385	21	5.08E-04	****	9.41E-01	
0	1786.00	14	21	2.94	3572.80	3566	12	6.69E-04	****	9.06E-01	
0	1890.54	29	28	6.30	3781.83	3771	22	1.36E-03	98.5	8.67E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530027            *
* Acquisition date : 11-DEC-2007 05:39:05 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:06.33     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530027           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0115E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.585E+00	6.885E-01	1.844E-01	6.885E-01
RH-101	9.847E-03	2.784E-02	1.711E-02	2.784E-02
SB-125	3.965E-02	7.150E-02	5.344E-02	7.150E-02
CS-137	1.696E-01	4.417E-02	2.226E-02	4.417E-02
EU-155	6.814E-02	7.484E-02	4.603E-02	7.484E-02
TL-208	3.250E-01	6.556E-02	2.258E-02	6.556E-02
BI-212	7.785E-01	3.415E-01	1.753E-01	3.415E-01
PB-212	1.179E+00	1.044E-01	3.003E-02	1.044E-01
BI-214	1.087E+00	1.439E-01	4.463E-02	1.439E-01
PB-214	1.115E+00	1.163E-01	4.665E-02	1.163E-01
RA-223	4.923E-01	2.003E-01	9.306E-02	2.003E-01
AC-228	1.348E+00	2.666E-01	8.566E-02	2.666E-01
PA-234M	3.235E+00	5.480E+00	2.771E+00	5.480E+00
TH-234	1.862E+00	4.626E-01	2.031E-01	4.626E-01
U-235	3.437E-02	1.916E-01	9.729E-02	1.916E-01
NP-236	4.599E-02	4.795E-02	2.492E-02	4.795E-02
NP-237	8.311E-01	1.540E-01	8.689E-02	1.540E-01
AM-243	2.376E-01	3.075E-02	1.689E-02	3.075E-02
CM-243	6.163E-02	6.769E-02	4.198E-02	6.769E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	2.891E-02	3.534E-02	2.699E-02	3.534E-02	NOT IDENT.
PO-209	2.811E-01	6.959E+00	4.895E+00	6.959E+00	NOT IDENT.
BI-211	-2.401E-01	8.502E-01	6.870E-01	8.502E-01	NOT IDENT.
PA-233	-2.275E-02	4.154E-02	3.466E-02	4.154E-02	NOT IDENT.
NP-239	1.150E-02	1.429E-01	1.166E-01	1.429E-01	NOT IDENT.
AM-241	-5.696E-03	3.690E-02	2.743E-02	3.690E-02	NOT IDENT.
AM-246	4.027E-02	1.296E-01	9.549E-02	1.296E-01	NOT IDENT.
CF-249	2.029E-02	2.801E-02	2.404E-02	2.801E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	689.6830
63.29	701.9377
74.66	946.2927
74.81	946.7748
74.81	946.7748
77.11	954.1539
77.11	954.1539
86.48	809.1957
87.30	811.2186
87.30	811.2186
92.58	824.0319
98.44	597.7076
103.76	601.0983
105.31	586.7250
129.07	587.6965
143.76	585.2048
198.00	527.7645
209.25	489.2395
228.18	468.3531
238.63	477.4708
242.00	479.6592
269.46	384.2134
270.25	384.5909
277.36	378.0963
295.22	370.9479
300.09	456.7129
312.17	364.6409
338.32	371.9646
351.93	476.1348
387.59	295.7607
409.46	307.6873
427.87	259.5863
463.00	254.6532
510.77	256.8228
583.19	236.2274
609.31	254.3022
661.66	185.2778
727.33	188.6992
763.13	197.3568
768.36	218.5241
785.37	190.5282
794.95	160.0449
806.17	181.9456
831.80	190.5568
860.56	168.2827
896.60	160.7712
911.20	146.1673
934.06	144.8123
964.77	129.7456
968.97	129.9674
1001.03	138.3300
1078.86	146.5819
1120.29	114.7426
1155.19	109.0942
1173.23	108.0329
1238.11	123.6145
1280.96	101.1094
1332.51	85.6217
1377.67	86.4836
1401.50	95.0536
1407.98	82.0953
1460.80	53.3418
1509.23	86.1621
1588.20	87.9955
1620.50	75.7809
1729.60	49.0329
1764.49	43.2627

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530027

Total Uranium Activity	1.5901E-02	ug/g
Total Uranium Counting Unc.	8.8656E-02	ug/g
Total Uranium Tpu	8.8656E-08	ug/g
Total Uranium Mda	4.5014E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:54:17.83

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530028.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:39:50
Sample ID        : G198530028           Sample quantity  : 1.13120E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:39.57  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.46	149	522	1.68	92.02	88	9	6.89E-03	28.8	
2	0	52.78	49	505	1.73	104.65	102	8	2.25E-03	80.9	
3	0	57.94	51	586	1.53	114.96	113	8	2.36E-03	82.8	
4	0	63.48	272	918	1.14	126.02	120	11	1.26E-02	22.4	
5	5	74.95	1042	839	1.53	148.92	142	18	4.82E-02	6.1	1.55E+00
6	5	77.27*	1482	691	1.32	153.56	142	18	6.86E-02	4.4	
7	2	84.13	149	768	1.53	167.24	162	31	6.88E-03	32.6	2.81E+00
8	2	87.28	458	631	1.32	173.54	162	31	2.12E-02	10.5	
9	2	89.90	317	663	1.51	178.79	162	31	1.47E-02	16.6	
10	2	92.99*	568	663	1.72	184.94	162	31	2.63E-02	10.4	
11	0	99.29	133	654	0.60	197.54	193	11	6.16E-03	38.2	
12	0	105.01	68	509	1.34	208.96	206	9	3.13E-03	61.1	
13	0	129.02	81	488	1.28	256.91	254	8	3.75E-03	48.5	
14	0	138.55	33	488	2.23	275.95	272	8	1.54E-03	115.8	
15	0	143.63	47	437	0.96	286.09	283	7	2.18E-03	75.0	
16	0	186.28*	312	701	1.69	371.28	366	13	1.44E-02	19.5	
17	0	209.76	48	591	1.82	418.19	411	11	2.24E-03	98.6	
18	3	238.58*	1582	328	1.45	475.75	470	18	7.32E-02	3.5	2.93E+00
19	3	241.71	485	363	2.10	482.02	470	18	2.25E-02	10.0	
20	0	269.71	165	402	1.13	537.94	532	13	7.63E-03	26.2	
21	4	274.76	42	101	1.05	548.04	546	15	1.93E-03	37.4	2.04E+00
22	4	277.90	123	386	2.35	554.31	546	15	5.71E-03	34.9	
23	0	295.22*	577	375	1.40	588.92	583	12	2.67E-02	8.5	
24	0	300.33	103	273	0.81	599.13	595	10	4.79E-03	31.6	
25	0	327.82	91	261	0.69	654.05	650	11	4.19E-03	36.3	
26	0	338.50	303	305	1.33	675.38	669	12	1.40E-02	12.9	
27	0	351.83*	1011	304	1.47	702.03	694	15	4.68E-02	5.1	
28	0	383.18	22	193	0.64	764.67	760	11	1.03E-03	123.3	
29	0	444.01*	36	77	2.41	886.22	882	8	1.67E-03	52.7	
30	0	463.25	83	217	2.79	924.68	916	15	3.84E-03	40.3	
31	0	510.82*	181	179	2.75	1019.76	1011	20	8.37E-03	25.1	
32	0	567.51	152	139	3.74	1133.07	1126	14	7.02E-03	18.4	
33	0	583.10*	414	162	1.51	1164.22	1157	15	1.91E-02	8.7	
34	0	597.93	34	80	1.12	1193.87	1190	9	1.55E-03	51.7	
35	0	609.18*	650	123	1.58	1216.35	1210	12	3.01E-02	5.6	
36	0	693.09	33	62	1.44	1384.12	1381	9	1.54E-03	46.2	
37	0	727.17	94	94	1.25	1452.26	1446	13	4.34E-03	24.0	
38	0	768.33	99	123	2.10	1534.55	1529	18	4.56E-03	27.8	

Sample ID : G198530028 Acquisition date : 11-DEC-2007 05:39:50

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	1	784.87	50	62	2.09	1567.62	1560	18	2.32E-03	35.8	3.37E+00
40	1	787.87	42	29	2.09	1573.62	1560	18	1.93E-03	31.2	
41	0	794.48	85	49	1.60	1586.84	1581	13	3.93E-03	20.1	
42	0	822.80	31	39	1.35	1643.48	1638	11	1.41E-03	43.4	
43	0	834.78	25	118	6.28	1667.43	1655	18	1.16E-03	102.9	
44	0	846.31*	10	24	0.56	1690.49	1686	7	4.48E-04	116.3	
45	0	911.14	255	58	1.93	1820.14	1814	16	1.18E-02	9.1	
46	1	964.36	41	55	2.18	1926.60	1918	30	1.89E-03	39.8	1.40E+00
47	1	968.76	146	47	2.18	1935.40	1918	30	6.75E-03	13.3	
48	0	1053.66	24	39	0.56	2105.25	2099	12	1.12E-03	55.5	
49	0	1057.89	11	25	0.92	2113.71	2110	7	5.20E-04	79.1	
50	0	1066.05	16	45	0.84	2130.03	2126	10	7.41E-04	82.3	
51	0	1097.91	29	64	8.14	2193.78	2179	23	1.36E-03	75.1	
52	0	1120.19*	128	67	1.70	2238.36	2230	15	5.92E-03	18.4	
53	0	1131.53	10	23	1.60	2261.05	2255	8	4.59E-04	90.8	
54	0	1155.82	18	45	1.70	2309.65	2304	10	8.55E-04	71.7	
55	0	1238.71	62	49	2.08	2475.52	2470	15	2.85E-03	27.8	
56	0	1378.49*	56	28	2.32	2755.30	2746	19	2.61E-03	28.0	
57	0	1385.91	16	17	0.80	2770.15	2764	12	7.31E-04	59.1	
58	0	1408.94	24	36	0.58	2816.25	2809	16	1.10E-03	60.3	
59	0	1426.49	15	29	1.70	2851.39	2842	13	6.95E-04	78.5	
60	0	1460.57*	154	25	1.44	2919.62	2912	14	7.13E-03	11.9	
61	1	1591.99	45	37	2.43	3182.77	3167	57	2.09E-03	30.2	3.94E+00
62	1	1600.10	22	17	2.21	3199.00	3167	57	1.02E-03	49.6	
63	1	1603.10*	20	12	2.22	3205.00	3167	57	9.33E-04	64.6	
64	0	1683.71	22	15	1.47	3366.45	3360	14	1.03E-03	41.5	
65	0	1764.06	110	20	1.86	3527.38	3521	13	5.07E-03	12.7	
66	0	1811.61	11	13	1.08	3622.65	3617	10	5.17E-04	73.7	
67	0	1901.40	22	22	3.41	3802.55	3792	22	1.02E-03	58.4	
68	0	1909.06	10	9	1.55	3817.90	3814	9	4.63E-04	62.6	
69	0	1916.52	12	17	0.51	3832.83	3823	17	5.56E-04	83.9	
70	0	1953.43	8	14	0.65	3906.79	3896	12	3.92E-04	96.6	
71	0	2007.04	22	9	2.09	4014.22	4003	17	1.01E-03	37.5	
72	0	2020.51	22	0	5.95	4041.23	4033	16	1.02E-03	21.3	

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]G198530028       *
* Acquisition date : 11-DEC-2007 05:39:50 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:39.57     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530028           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1312E+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	2.150E+00	5.164E-01	3.173E-01	0.000E+00
EU-155	4.434E-02	5.325E-02	7.546E-02	0.000E+00
TL-208	2.886E-01	5.316E-02	3.384E-02	0.000E+00
BI-212	5.909E-01	2.815E-01	2.588E-01	0.000E+00
PB-212	8.583E-01	7.771E-02	4.851E-02	0.000E+00
BI-214	8.705E-01	1.150E-01	7.143E-02	0.000E+00
PB-214	9.280E-01	1.046E-01	6.607E-02	0.000E+00
RA-223	3.174E-01	1.639E-01	1.546E-01	0.000E+00
AC-228	9.269E-01	1.759E-01	1.376E-01	0.000E+00
TH-234	1.377E+00	2.994E-01	2.942E-01	0.000E+00
U-235	6.771E-02	9.974E-02	1.621E-01	0.000E+00
NP-236	4.672E-02	3.518E-02	3.763E-02	0.000E+00
NP-237	4.787E-01	1.045E-01	1.264E-01	0.000E+00
AM-241	1.886E-02	3.065E-02	4.449E-02	0.000E+00
AM-243	1.955E-01	2.673E-02	2.455E-02	0.000E+00
CM-243	4.010E-02	4.816E-02	6.409E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	7.364E-03	2.675E-02	4.551E-02	0.000E+00	NOT IDENT.
RH-101	1.234E-04	1.893E-02	2.938E-02	0.000E+00	NOT IDENT.
SB-125	-6.405E-03	5.621E-02	9.373E-02	0.000E+00	NOT IDENT.
CS-137	4.163E-03	2.519E-02	4.363E-02	0.000E+00	NOT IDENT.
PO-209	-2.102E+00	4.482E+00	7.264E+00	0.000E+00	NOT IDENT.
BI-211	-7.184E-03	6.561E-01	1.111E+00	0.000E+00	NOT IDENT.
PA-233	-1.034E-02	3.582E-02	6.022E-02	0.000E+00	NOT IDENT.
PA-234M	8.537E-01	2.804E+00	4.819E+00	0.000E+00	NOT IDENT.
NP-239	3.183E-02	1.085E-01	1.889E-01	0.000E+00	NOT IDENT.
AM-246	7.298E-02	7.975E-02	1.443E-01	0.000E+00	NOT IDENT.
CF-249	5.868E-03	2.665E-02	3.947E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:54:18.90

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530028.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:39:50
Sample ID        : G198530028           Sample quantity  : 1.13120E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:39.57  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	154	10.66*	7.435E-01	2.150E+00	2.150E+00	24.51
EU-155	105.31	68	21.20*	8.147E+00	4.333E-02	4.434E-02	122.55
TL-208	277.36	123	6.31	4.072E+00	5.309E-01	5.309E-01	70.05
	510.77	181	22.60	2.159E+00	4.100E-01	4.100E-01	50.52
	583.19	414	84.50*	1.876E+00	2.886E-01	2.886E-01	18.79
	763.13	------	1.81	1.415E+00	------	Line Not Found	------
	860.56	------	12.42	1.251E+00	------	Line Not Found	------
BI-212	727.33	94	11.80*	1.487E+00	5.909E-01	5.909E-01	48.60
	785.37	50	1.10	1.374E+00	3.671E+00	3.671E+00	71.95
	1620.50	------	1.49	6.722E-01	------	Line Not Found	------
PB-212	74.81	1042	10.40	8.644E+00	1.282E+00	1.282E+00	13.95
	77.11	1482	17.50	8.639E+00	1.084E+00	1.084E+00	11.21
	87.30	458	7.81	8.537E+00	7.601E-01	7.601E-01	22.27
	238.63	1582	43.30*	4.709E+00	8.583E-01	8.583E-01	9.24
	300.09	103	3.28	3.770E+00	9.249E-01	9.249E-01	63.48
BI-214	609.31	650	46.10*	1.791E+00	8.705E-01	8.705E-01	13.48
	768.36	99	4.94	1.405E+00	1.570E+00	1.570E+00	56.10
	806.17	------	1.22	1.337E+00	------	Line Not Found	------
	934.06	------	3.03	1.152E+00	------	Line Not Found	------
	1120.29	128	15.10	9.620E-01	9.742E-01	9.742E-01	37.17
	1155.19	18	1.63	9.330E-01	1.344E+00	1.344E+00	143.51
	1238.11	62	5.79	8.721E-01	1.349E+00	1.350E+00	55.92
	1280.96	------	1.43	8.442E-01	------	Line Not Found	------
	1377.67	56	4.00	7.863E-01	1.982E+00	1.982E+00	56.30
	1401.50	------	1.27	7.738E-01	------	Line Not Found	------
	1407.98	24	2.15	7.699E-01	1.582E+00	1.582E+00	120.78
	1509.23	------	2.11	7.203E-01	------	Line Not Found	------
	1729.60	------	2.92	6.308E-01	------	Line Not Found	------
	1764.49	110	15.40	6.186E-01	1.271E+00	1.271E+00	25.96
PB-214	74.81	1042	6.44	8.644E+00	2.070E+00	2.071E+00	13.95
	77.11	1482	10.80	8.639E+00	1.757E+00	1.757E+00	11.21
	87.30	458	4.84	8.537E+00	1.226E+00	1.227E+00	22.27

Sample ID : G198530028 Acquisition date : 11-DEC-2007 05:39:50

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	485	7.43	4.652E+00	1.552E+00	1.552E+00	20.82
	295.22	577	19.30	3.835E+00	8.630E-01	8.630E-01	17.71
	351.93	1011	37.60*	3.206E+00	9.279E-01	9.280E-01	11.50
RA-223	269.46	165	13.70*	4.193E+00	3.174E-01	3.174E-01	52.70
AC-228	129.07	81	2.42	7.446E+00	4.972E-01	4.972E-01	97.45
	209.25	48	3.89	5.282E+00	2.600E-01	2.600E-01	197.22
	270.25	165	3.46	4.193E+00	1.257E+00	1.257E+00	52.70
	338.32	303	11.27	3.337E+00	8.909E-01	8.909E-01	26.32
	409.46	------	1.92	2.733E+00	------	Line Not Found	------
	463.00	83	4.40	2.397E+00	8.691E-01	8.691E-01	80.83
	794.95	85	4.25	1.357E+00	1.628E+00	1.628E+00	41.02
	911.20	255	25.80*	1.181E+00	9.269E-01	9.269E-01	19.37
	964.77	41	4.99	1.116E+00	8.094E-01	8.094E-01	79.82
	968.97	146	15.80	1.111E+00	9.188E-01	9.188E-01	27.39
	1588.20	------	3.22	6.855E-01	------	Line Not Found	------
TH-234	63.29	272	4.80	8.519E+00	7.366E-01	7.366E-01	45.23
	92.58	568	5.41*	8.433E+00	1.377E+00	1.377E+00	22.18
U-235	143.76	47	10.96*	7.004E+00	6.771E-02	6.771E-02	150.30
NP-236	98.44	133	38.00*	8.292E+00	4.672E-02	4.672E-02	76.83
NP-237	86.48	458	12.40*	8.537E+00	4.787E-01	4.787E-01	22.27
AM-241	59.54	51	35.90*	8.344E+00	1.885E-02	1.886E-02	165.83
AM-243	74.66	1042	68.20*	8.644E+00	1.955E-01	1.955E-01	13.95
CM-243	103.76	68	23.00*	8.147E+00	3.994E-02	4.010E-02	122.55

Flag: "*" = Keyline

Sample ID : G198530028 Acquisition date : 11-DEC-2007 05:39:50

Total number of lines in spectrum 72
Number of unidentified lines 35
Number of lines tentatively identified by NID 37 51.39%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.150E+00	2.150E+00	0.527E+00	24.51	
EU-155	1.57E+08S	1.02	4.333E-02	4.434E-02	5.434E-02	122.55	
TL-208	4.43E+17S	1.00	2.886E-01	2.886E-01	0.542E-01	18.79	
BI-212	4.43E+17S	1.00	5.909E-01	5.909E-01	2.872E-01	48.60	
PB-212	4.43E+17S	1.00	8.583E-01	8.583E-01	0.793E-01	9.24	
BI-214	5.05E+10S	1.00	8.705E-01	8.705E-01	1.173E-01	13.48	
PB-214	5.05E+10S	1.00	9.279E-01	9.280E-01	1.067E-01	11.50	
RA-223	1.04E+12S	1.00	3.174E-01	3.174E-01	1.673E-01	52.70	
AC-228	4.43E+17S	1.00	9.269E-01	9.269E-01	1.795E-01	19.37	
TH-234	1.41E+17S	1.00	1.377E+00	1.377E+00	0.305E+00	22.18	
U-235	2.22E+16S	1.00	6.771E-02	6.771E-02	10.18E-02	150.30	
NP-236	4.89E+12S	1.00	4.672E-02	4.672E-02	3.589E-02	76.83	
NP-237	6.75E+13S	1.00	4.787E-01	4.787E-01	1.066E-01	22.27	
AM-241	1.36E+10S	1.00	1.885E-02	1.886E-02	3.127E-02	165.83	
AM-243	2.33E+11S	1.00	1.955E-01	1.955E-01	0.273E-01	13.95	
CM-243	8.99E+08S	1.00	3.994E-02	4.010E-02	4.914E-02	122.55	
			---	---			
	Total Activity :		9.199E+00	9.200E+00			

Grand Total Activity : 9.199E+00 9.200E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530028 Acquisition date : 11-DEC-2007 05:39:50

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.46	149	522	1.68	92.02	88	9	6.89E-03	57.6	7.64E+00	
0	52.78	49	505	1.73	104.65	102	8	2.25E-03	****	8.09E+00	
2	84.13	149	768	1.53	167.24	162	31	6.88E-03	65.3	8.58E+00	
2	89.90	317	663	1.51	178.79	162	31	1.47E-02	33.2	8.49E+00	
0	138.55	33	488	2.23	275.95	272	8	1.54E-03	****	7.16E+00	
0	186.28	312	701	1.69	371.28	366	13	1.44E-02	39.1	5.83E+00	
4	274.76	42	101	1.05	548.04	546	15	1.93E-03	74.9	4.12E+00	
0	327.82	91	261	0.69	654.05	650	11	4.19E-03	72.6	3.45E+00	
0	383.18	22	193	0.64	764.67	760	11	1.03E-03	****	2.93E+00	
0	444.01	36	77	2.41	886.22	882	8	1.67E-03	****	2.51E+00	
0	567.51	152	139	3.74	1133.07	1126	14	7.02E-03	36.9	1.93E+00	
0	597.93	34	80	1.12	1193.87	1190	9	1.55E-03	****	1.83E+00	
0	693.09	33	62	1.44	1384.12	1381	9	1.54E-03	92.4	1.56E+00	
1	787.87	42	29	2.09	1573.62	1560	18	1.93E-03	62.4	1.37E+00	
0	822.80	31	39	1.35	1643.48	1638	11	1.41E-03	86.7	1.31E+00	
0	834.78	25	118	6.28	1667.43	1655	18	1.16E-03	****	1.29E+00	
0	846.31	10	24	0.56	1690.49	1686	7	4.48E-04	****	1.27E+00	
0	1053.66	24	39	0.56	2105.25	2099	12	1.12E-03	****	1.02E+00	
0	1057.89	11	25	0.92	2113.71	2110	7	5.20E-04	****	1.02E+00	
0	1066.05	16	45	0.84	2130.03	2126	10	7.41E-04	****	1.01E+00	
0	1097.91	29	64	8.14	2193.78	2179	23	1.36E-03	****	9.81E-01	
0	1131.53	10	23	1.60	2261.05	2255	8	4.59E-04	****	9.53E-01	
0	1385.91	16	17	0.80	2770.15	2764	12	7.31E-04	****	7.82E-01	
0	1426.49	15	29	1.70	2851.39	2842	13	6.95E-04	****	7.61E-01	
1	1591.99	45	37	2.43	3182.77	3167	57	2.09E-03	60.5	6.84E-01	
1	1600.10	22	17	2.21	3199.00	3167	57	1.02E-03	99.3	6.81E-01	
1	1603.10	20	12	2.22	3205.00	3167	57	9.33E-04	****	6.79E-01	
0	1683.71	22	15	1.47	3366.45	3360	14	1.03E-03	83.1	6.48E-01	
0	1811.61	11	13	1.08	3622.65	3617	10	5.17E-04	****	6.03E-01	
0	1901.40	22	22	3.41	3802.55	3792	22	1.02E-03	****	5.74E-01	
0	1909.06	10	9	1.55	3817.90	3814	9	4.63E-04	****	5.72E-01	
0	1916.52	12	17	0.51	3832.83	3823	17	5.56E-04	****	5.70E-01	
0	1953.43	8	14	0.65	3906.79	3896	12	3.92E-04	****	5.59E-01	
0	2007.04	22	9	2.09	4014.22	4003	17	1.01E-03	74.9	5.44E-01	
0	2020.51	22	0	5.95	4041.23	4033	16	1.02E-03	42.6	5.40E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530028            *
* Acquisition date : 11-DEC-2007 05:39:50 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:39.57     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530028           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1312E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.150E+00	5.164E-01	1.587E-01	5.164E-01
EU-155	4.434E-02	5.325E-02	3.775E-02	5.325E-02
TL-208	2.886E-01	5.316E-02	1.693E-02	5.316E-02
BI-212	5.909E-01	2.815E-01	1.295E-01	2.815E-01
PB-212	8.583E-01	7.771E-02	2.427E-02	7.771E-02
BI-214	8.705E-01	1.150E-01	3.573E-02	1.150E-01
PB-214	9.280E-01	1.046E-01	3.305E-02	1.046E-01
RA-223	3.174E-01	1.639E-01	7.732E-02	1.639E-01
AC-228	9.269E-01	1.759E-01	6.884E-02	1.759E-01
TH-234	1.377E+00	2.994E-01	1.472E-01	2.994E-01
U-235	6.771E-02	9.974E-02	8.108E-02	9.974E-02
NP-236	4.672E-02	3.518E-02	1.883E-02	3.518E-02
NP-237	4.787E-01	1.045E-01	6.326E-02	1.045E-01
AM-241	1.886E-02	3.065E-02	2.226E-02	3.065E-02
AM-243	1.955E-01	2.673E-02	1.228E-02	2.673E-02
CM-243	4.010E-02	4.816E-02	3.206E-02	4.816E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	7.364E-03	2.675E-02	2.277E-02	2.675E-02	NOT IDENT.
RH-101	1.234E-04	1.893E-02	1.470E-02	1.893E-02	NOT IDENT.
SB-125	-6.405E-03	5.621E-02	4.689E-02	5.621E-02	NOT IDENT.
CS-137	4.163E-03	2.519E-02	2.183E-02	2.519E-02	NOT IDENT.
PO-209	-2.102E+00	4.482E+00	3.634E+00	4.482E+00	NOT IDENT.
BI-211	-7.184E-03	6.561E-01	5.559E-01	6.561E-01	NOT IDENT.
PA-233	-1.034E-02	3.582E-02	3.013E-02	3.582E-02	NOT IDENT.
PA-234M	8.537E-01	2.804E+00	2.411E+00	2.804E+00	NOT IDENT.
NP-239	3.183E-02	1.085E-01	9.451E-02	1.085E-01	NOT IDENT.
AM-246	7.298E-02	7.975E-02	7.219E-02	7.975E-02	NOT IDENT.
CF-249	5.868E-03	2.665E-02	1.975E-02	2.665E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	650.2047
63.29	752.3642
74.66	759.2946
74.81	759.4163
74.81	759.4163
77.11	761.2813
77.11	761.2813
86.48	652.7517
87.30	653.2805
87.30	653.2805
92.58	656.6219
98.44	514.4586
103.76	525.5498
105.31	590.1129
129.07	554.3185
143.76	566.4290
198.00	468.4427
209.25	445.5732
228.18	351.8463
238.63	361.3955
242.00	362.0430
269.46	292.3972
270.25	292.5089
277.36	287.1167
295.22	312.2193
300.09	304.8192
312.17	276.8336
338.32	255.2946
351.93	235.8688
387.59	201.9385
409.46	209.7569
427.87	186.5944
463.00	137.0467
510.77	135.0539
583.19	107.9272
609.31	130.5117
661.66	133.3739
727.33	77.6892
763.13	92.2950
768.36	96.4696
785.37	81.0434
794.95	79.9634
806.17	73.4987
831.80	85.4709
860.56	67.6744
896.60	74.0750
911.20	66.4920
934.06	72.7203
964.77	46.4922
968.97	46.5334
1001.03	64.7858
1078.86	42.5195
1120.29	78.7249
1155.19	38.0072
1173.23	57.7158
1238.11	67.9314
1280.96	36.7731
1332.51	52.9948
1377.67	36.6127
1401.50	44.1060
1407.98	40.4735
1460.80	24.1175
1509.23	38.3188
1588.20	34.9946
1620.50	31.3587
1729.60	34.7444
1764.49	33.9417

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530028

Total Uranium Activity	3.1331E-02	ug/g
Total Uranium Counting Unc.	4.6148E-02	ug/g
Total Uranium Tpu	4.6148E-08	ug/g
Total Uranium Mda	3.7514E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:54:51.76

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530029.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:40:48
Sample ID        : G198530029           Sample quantity  : 1.06950E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:13.19  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	56.82	68	384	1.24	113.59	111	6	3.14E-03	47.1	
2	0	63.25*	77	612	0.98	126.44	122	8	3.57E-03	63.7	
3	2	74.93	518	516	0.92	149.80	144	16	2.40E-02	8.2	1.82E+00
4	2	77.12*	824	493	0.95	154.19	144	16	3.82E-02	6.0	
5	2	84.35*	43	506	1.01	168.65	166	12	2.00E-03	95.7	1.58E+00
6	2	87.15	330	500	1.01	174.26	166	12	1.53E-02	12.2	
7	4	89.84	182	324	1.02	179.64	178	18	8.42E-03	15.8	2.04E+00
8	4	92.81*	296	544	1.25	185.57	178	18	1.37E-02	17.0	
9	0	128.82	76	593	1.02	257.61	255	8	3.54E-03	56.2	
10	0	154.71	79	498	1.92	309.39	305	8	3.65E-03	50.4	
11	0	185.83*	292	652	1.10	371.64	367	10	1.35E-02	19.2	
12	0	205.60	61	386	0.70	411.18	408	7	2.81E-03	55.6	
13	0	209.47	221	525	1.01	418.93	415	10	1.02E-02	20.5	
14	0	229.82	85	348	1.63	459.64	456	8	3.94E-03	39.5	
15	3	238.62*	1534	276	1.03	477.25	471	19	7.10E-02	3.3	2.58E+00
16	3	241.75	423	364	1.49	483.50	471	19	1.96E-02	10.0	
17	0	270.28	194	583	1.79	540.57	534	15	9.00E-03	28.0	
18	0	277.32	63	414	1.51	554.65	551	10	2.94E-03	61.5	
19	0	295.17*	588	453	1.11	590.36	584	12	2.72E-02	9.0	
20	0	300.12	127	349	1.33	600.27	596	10	5.89E-03	28.9	
21	0	314.01	34	214	1.08	628.05	625	7	1.58E-03	73.3	
22	0	327.69	52	305	1.11	655.42	652	8	2.42E-03	59.4	
23	0	338.18	297	363	1.14	676.40	671	10	1.38E-02	13.3	
24	0	351.90*	1026	324	1.18	703.85	698	10	4.75E-02	4.8	
25	0	462.88	96	128	1.62	925.87	922	8	4.42E-03	23.0	
26	0	488.88	33	96	0.60	977.87	975	6	1.54E-03	50.0	
27	0	491.55	27	128	1.25	983.21	981	8	1.27E-03	73.6	
28	0	510.94*	208	296	1.82	1022.01	1015	17	9.62E-03	26.0	
29	0	583.12*	394	216	1.20	1166.40	1161	11	1.83E-02	9.8	
30	0	609.18*	714	184	1.36	1218.55	1213	11	3.30E-02	5.7	
31	0	614.49*	2	155	3.64	1229.18	1225	11	9.35E-05	*****	
32	1	661.43*	59	111	1.73	1323.09	1318	18	2.73E-03	38.3	2.16E+00
33	1	664.23	37	92	1.73	1328.69	1318	18	1.73E-03	56.3	
34	0	727.06	52	158	0.97	1454.39	1453	10	2.42E-03	48.0	
35	0	767.63	101	124	2.21	1535.56	1530	12	4.68E-03	24.1	
36	0	786.38	12	104	1.22	1573.07	1567	9	5.72E-04	153.4	
37	3	791.67	28	45	1.49	1583.66	1581	14	1.28E-03	41.5	1.37E+00
38	3	794.90	40	96	1.83	1590.13	1581	14	1.87E-03	45.6	

Sample ID : G198530029 Acquisition date : 11-DEC-2007 05:40:48

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	806.08	43	78	1.50	1612.50	1609	9	1.99E-03	39.8	
40	0	860.25	79	111	1.84	1720.89	1715	12	3.65E-03	29.0	
41	0	884.33	21	36	1.20	1769.06	1766	6	9.55E-04	51.1	
42	0	910.99*	323	128	1.62	1822.40	1815	17	1.50E-02	10.2	
43	1	964.08	65	57	1.99	1928.64	1919	27	3.03E-03	27.0	2.42E+00
44	1	968.74	219	52	1.99	1937.96	1919	27	1.01E-02	9.6	
45	0	999.24*	18	70	3.00	1999.00	1992	14	8.46E-04	117.2	
46	0	1034.17	24	16	1.10	2068.87	2066	6	1.12E-03	33.1	
47	0	1120.14	162	71	2.10	2240.90	2234	16	7.51E-03	14.1	
48	0	1184.61	17	76	2.71	2369.93	2357	16	7.79E-04	118.4	
49	0	1237.24	89	54	1.60	2475.25	2467	16	4.10E-03	21.6	
50	3	1280.76	24	31	2.68	2562.34	2551	28	1.10E-03	57.2	9.91E-01
51	3	1284.76	28	23	2.69	2570.33	2551	28	1.29E-03	50.4	
52	0	1333.96	31	69	3.39	2668.80	2659	21	1.45E-03	68.3	
53	0	1377.87	49	50	1.81	2756.67	2749	18	2.26E-03	36.7	
54	0	1422.04	17	30	3.47	2845.07	2833	15	7.91E-04	73.9	
55	0	1460.16*	266	24	2.35	2921.36	2911	19	1.23E-02	8.0	
56	0	1598.65	23	68	7.91	3198.53	3178	27	1.06E-03	105.8	
57	0	1630.63	22	20	2.49	3262.53	3255	13	9.95E-04	47.5	
58	0	1729.79	52	13	2.11	3461.01	3454	13	2.41E-03	19.9	
59	0	1749.93	10	9	0.61	3501.32	3497	9	4.56E-04	67.6	
60	2	1764.03	152	2	2.74	3529.54	3521	30	7.06E-03	8.8	5.84E-01
61	2	1769.74*	38	7	2.78	3540.96	3521	30	1.77E-03	38.5	
62	0	1786.85	11	33	0.53	3575.22	3563	19	5.29E-04	124.3	
63	0	1880.08	6	14	0.70	3761.83	3753	11	2.93E-04	120.2	
64	0	1919.36	14	4	0.67	3840.46	3834	13	6.25E-04	38.9	
65	0	2026.03	10	10	4.37	4053.97	4045	14	4.62E-04	75.5	
66	0	2031.73	10	2	1.97	4065.40	4060	10	4.48E-04	44.2	

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

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530029       *
* Acquisition date : 11-DEC-2007 05:40:48 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:13.19     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530029           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0695E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.810E+00	4.847E-01	2.939E-01	0.000E+00
CS-137	3.872E-02	2.917E-02	3.319E-02	0.000E+00
TL-208	2.331E-01	4.654E-02	3.397E-02	0.000E+00
BI-212	2.678E-01	2.523E-01	2.968E-01	0.000E+00
PB-212	8.696E-01	7.404E-02	4.881E-02	0.000E+00
BI-214	8.027E-01	9.989E-02	6.607E-02	0.000E+00
PB-214	9.043E-01	9.707E-02	6.266E-02	0.000E+00
RA-223	3.826E-01	2.109E-01	1.581E-01	0.000E+00
AC-228	9.280E-01	1.998E-01	1.210E-01	0.000E+00
PA-233	2.676E-02	3.848E-02	6.177E-02	0.000E+00
PA-234M	1.754E+00	4.033E+00	4.263E+00	0.000E+00
TH-234	1.113E+00	3.783E-01	3.420E-01	0.000E+00
NP-237	5.797E-01	1.449E-01	1.791E-01	0.000E+00
NP-239	1.886E-01	1.465E-01	1.832E-01	0.000E+00
AM-243	2.137E-01	3.730E-02	4.090E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	3.247E-03	2.245E-02	3.547E-02	0.000E+00	FAIL ABUN
RH-101	-1.068E-02	2.067E-02	2.819E-02	0.000E+00	NOT IDENT.
SB-125	-3.603E-02	5.324E-02	8.611E-02	0.000E+00	NOT IDENT.
EU-155	2.682E-02	4.818E-02	8.549E-02	0.000E+00	NOT IDENT.
PO-209	2.405E+00	4.215E+00	7.236E+00	0.000E+00	NOT IDENT.
BI-211	-9.152E-02	6.334E-01	1.043E+00	0.000E+00	NOT IDENT.
U-235	-6.750E-02	1.222E-01	1.642E-01	0.000E+00	NOT IDENT.
NP-236	-5.542E-03	2.999E-02	4.699E-02	0.000E+00	NOT IDENT.
AM-241	1.937E-02	9.896E-02	1.325E-01	0.000E+00	NOT IDENT.
CM-243	3.769E-03	4.397E-02	7.703E-02	0.000E+00	NOT IDENT.
AM-246	-2.791E-02	6.669E-02	1.088E-01	0.000E+00	NOT IDENT.
CF-249	1.814E-02	2.251E-02	3.939E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:54:52.71

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530029.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:40:48
Sample ID        : G198530029           Sample quantity  : 1.06950E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:13.19  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	266	10.66*	1.038E+00	2.810E+00	2.810E+00	17.60
CS-137	661.66	59	85.10*	2.103E+00	3.858E-02	3.872E-02	76.86
TL-208	277.36	63	6.31	4.254E+00	2.765E-01	2.765E-01	123.10
	510.77	208	22.60	2.614E+00	4.115E-01	4.115E-01	52.30
	583.19	394	84.50*	2.341E+00	2.331E-01	2.331E-01	20.37
	763.13	------	1.81	1.854E+00	------	Line Not Found	------
	860.56	79	12.42	1.664E+00	4.457E-01	4.457E-01	58.58
BI-212	727.33	52	11.80*	1.936E+00	2.678E-01	2.678E-01	96.14
	785.37	12	1.10	1.805E+00	7.279E-01	7.279E-01	306.83
	1620.50	------	1.49	9.597E-01	------	Line Not Found	------
PB-212	74.81	518	10.40	4.162E+00	1.401E+00	1.401E+00	17.82
	77.11	824	17.50	4.413E+00	1.248E+00	1.248E+00	13.99
	87.30	330	7.81	5.366E+00	9.205E-01	9.205E-01	25.50
	238.63	1534	43.30*	4.767E+00	8.696E-01	8.696E-01	8.69
	300.09	127	3.28	4.001E+00	1.134E+00	1.134E+00	58.09
BI-214	609.31	714	46.10*	2.256E+00	8.026E-01	8.027E-01	12.70
	768.36	101	4.94	1.845E+00	1.298E+00	1.299E+00	48.68
	806.17	43	1.22	1.765E+00	2.339E+00	2.339E+00	79.86
	934.06	------	3.03	1.544E+00	------	Line Not Found	------
	1120.29	162	15.10	1.306E+00	9.620E-01	9.620E-01	28.84
	1155.19	------	1.63	1.270E+00	------	Line Not Found	------
	1238.11	89	5.79	1.194E+00	1.499E+00	1.499E+00	43.72
	1280.96	24	1.43	1.158E+00	1.681E+00	1.681E+00	114.52
	1377.67	49	4.00	1.088E+00	1.312E+00	1.312E+00	73.85
	1401.50	------	1.27	1.073E+00	------	Line Not Found	------
	1407.98	------	2.15	1.069E+00	------	Line Not Found	------
	1509.23	------	2.11	1.011E+00	------	Line Not Found	------
	1729.60	52	2.92	9.196E-01	2.268E+00	2.268E+00	40.30
	1764.49	152	15.40	9.089E-01	1.274E+00	1.275E+00	18.57
PB-214	74.81	518	6.44	4.162E+00	2.263E+00	2.263E+00	17.82
	77.11	824	10.80	4.413E+00	2.023E+00	2.023E+00	13.99
	87.30	330	4.84	5.366E+00	1.485E+00	1.485E+00	25.50

Sample ID : G198530029 Acquisition date : 11-DEC-2007 05:40:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	423	7.43	4.721E+00	1.412E+00	1.412E+00	20.81
	295.22	588	19.30	4.053E+00	8.797E-01	8.798E-01	18.98
	351.93	1026	37.60*	3.529E+00	9.043E-01	9.043E-01	10.95
RA-223	269.46	194	13.70*	4.339E+00	3.826E-01	3.826E-01	56.25
AC-228	129.07	76	2.42	6.530E+00	5.660E-01	5.660E-01	112.69
	209.25	221	3.89	5.233E+00	1.269E+00	1.269E+00	41.40
	270.25	194	3.46	4.339E+00	1.515E+00	1.515E+00	56.25
	338.32	297	11.27	3.642E+00	8.476E-01	8.476E-01	27.19
	409.46	------	1.92	3.128E+00	------	Line Not Found	------
	463.00	96	4.40	2.833E+00	8.965E-01	8.965E-01	46.35
	794.95	40	4.25	1.788E+00	6.219E-01	6.219E-01	91.52
	911.20	323	25.80*	1.579E+00	9.280E-01	9.280E-01	21.97
	964.77	65	4.99	1.499E+00	1.024E+00	1.024E+00	54.51
	968.97	219	15.80	1.493E+00	1.084E+00	1.084E+00	20.62
	1588.20	------	3.22	9.734E-01	------	Line Not Found	------
PA-233	312.17	34	38.60*	3.861E+00	2.676E-02	2.676E-02	146.74
PA-234M	1001.03	18	0.84*	1.451E+00	1.754E+00	1.754E+00	234.59
TH-234	63.29	77	4.80	2.621E+00	7.165E-01	7.165E-01	127.64
	92.58	296	5.41*	5.758E+00	1.113E+00	1.113E+00	34.67
NP-237	86.48	330	12.40*	5.366E+00	5.797E-01	5.797E-01	25.50
NP-239	228.18	85	10.76*	4.900E+00	1.886E-01	1.886E-01	79.26
AM-243	74.66	518	68.20*	4.162E+00	2.137E-01	2.137E-01	17.82

Flag: "*" = Keyline

Sample ID : G198530029 Acquisition date : 11-DEC-2007 05:40:48

Total number of lines in spectrum 66
Number of unidentified lines 26
Number of lines tentatively identified by NID 40 60.61%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.810E+00	2.810E+00	0.495E+00	17.60	
CS-137	9.47E+08S	1.00	3.858E-02	3.872E-02	2.976E-02	76.86	
TL-208	4.43E+17S	1.00	2.331E-01	2.331E-01	0.475E-01	20.37	
BI-212	4.43E+17S	1.00	2.678E-01	2.678E-01	2.575E-01	96.14	
PB-212	4.43E+17S	1.00	8.696E-01	8.696E-01	0.755E-01	8.69	
BI-214	5.05E+10S	1.00	8.026E-01	8.027E-01	1.019E-01	12.70	
PB-214	5.05E+10S	1.00	9.043E-01	9.043E-01	0.991E-01	10.95	
RA-223	1.04E+12S	1.00	3.826E-01	3.826E-01	2.152E-01	56.25	
AC-228	4.43E+17S	1.00	9.280E-01	9.280E-01	2.039E-01	21.97	
PA-233	6.75E+13S	1.00	2.676E-02	2.676E-02	3.927E-02	146.74	
PA-234M	1.41E+17S	1.00	1.754E+00	1.754E+00	4.115E+00	234.59	
TH-234	1.41E+17S	1.00	1.113E+00	1.113E+00	0.386E+00	34.67	
NP-237	6.75E+13S	1.00	5.797E-01	5.797E-01	1.478E-01	25.50	
NP-239	2.33E+11S	1.00	1.886E-01	1.886E-01	1.495E-01	79.26	
AM-243	2.33E+11S	1.00	2.137E-01	2.137E-01	0.381E-01	17.82	
		Total Activity :	1.111E+01	1.111E+01			

Grand Total Activity : 1.111E+01 1.111E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530029 Acquisition date : 11-DEC-2007 05:40:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	56.82	68	384	1.24	113.59	111	6	3.14E-03	94.2	1.73E+00	
2	84.35	43	506	1.01	168.65	166	12	2.00E-03	****	5.13E+00	
4	89.84	182	324	1.02	179.64	178	18	8.42E-03	31.5	5.56E+00	
0	154.71	79	498	1.92	309.39	305	8	3.65E-03	****	6.22E+00	
0	185.83	292	652	1.10	371.64	367	10	1.35E-02	38.5	5.66E+00	
0	205.60	61	386	0.70	411.18	408	7	2.81E-03	****	5.30E+00	
0	327.69	52	305	1.11	655.42	652	8	2.42E-03	****	3.73E+00	
0	488.88	33	96	0.60	977.87	975	6	1.54E-03	99.9	2.71E+00	
0	491.55	27	128	1.25	983.21	981	8	1.27E-03	****	2.70E+00	
0	614.49	2	155	3.64	1229.18	1225	11	9.35E-05	****	2.24E+00	
1	664.23	37	92	1.73	1328.69	1318	18	1.73E-03	****	2.09E+00	
3	791.67	28	45	1.49	1583.66	1581	14	1.28E-03	83.0	1.79E+00	
0	884.33	21	36	1.20	1769.06	1766	6	9.55E-04	****	1.62E+00	
0	1034.17	24	16	1.10	2068.87	2066	6	1.12E-03	66.3	1.41E+00	
0	1184.61	17	76	2.71	2369.93	2357	16	7.79E-04	****	1.24E+00	
3	1284.76	28	23	2.69	2570.33	2551	28	1.29E-03	****	1.16E+00	
0	1333.96	31	69	3.39	2668.80	2659	21	1.45E-03	****	1.12E+00	T
0	1422.04	17	30	3.47	2845.07	2833	15	7.91E-04	****	1.06E+00	
0	1598.65	23	68	7.91	3198.53	3178	27	1.06E-03	****	9.69E-01	
0	1630.63	22	20	2.49	3262.53	3255	13	9.95E-04	95.0	9.56E-01	
0	1749.93	10	9	0.61	3501.32	3497	9	4.56E-04	****	9.13E-01	
2	1769.74	38	7	2.78	3540.96	3521	30	1.77E-03	77.0	9.07E-01	
0	1786.85	11	33	0.53	3575.22	3563	19	5.29E-04	****	9.02E-01	
0	1880.08	6	14	0.70	3761.83	3753	11	2.93E-04	****	8.79E-01	
0	1919.36	14	4	0.67	3840.46	3834	13	6.25E-04	77.8	8.70E-01	
0	2026.03	10	10	4.37	4053.97	4045	14	4.62E-04	****	8.53E-01	
0	2031.73	10	2	1.97	4065.40	4060	10	4.48E-04	88.4	8.52E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530029           *
* Acquisition date : 11-DEC-2007 05:40:48 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:13.19     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530029           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0695E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 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	LC (pCi/GRAM)	TPU
K-40	2.810E+00	4.847E-01	1.470E-01	4.847E-01
CS-137	3.872E-02	2.917E-02	1.661E-02	2.917E-02
TL-208	2.331E-01	4.654E-02	1.699E-02	4.654E-02
BI-212	2.678E-01	2.523E-01	1.485E-01	2.523E-01
PB-212	8.696E-01	7.404E-02	2.442E-02	7.404E-02
BI-214	8.027E-01	9.989E-02	3.305E-02	9.989E-02
PB-214	9.043E-01	9.707E-02	3.135E-02	9.707E-02
RA-223	3.826E-01	2.109E-01	7.911E-02	2.109E-01
AC-228	9.280E-01	1.998E-01	6.054E-02	1.998E-01
PA-233	2.676E-02	3.848E-02	3.090E-02	3.848E-02
PA-234M	1.754E+00	4.033E+00	2.133E+00	4.033E+00
TH-234	1.113E+00	3.783E-01	1.711E-01	3.783E-01
NP-237	5.797E-01	1.449E-01	8.960E-02	1.449E-01
NP-239	1.886E-01	1.465E-01	9.165E-02	1.465E-01
AM-243	2.137E-01	3.730E-02	2.046E-02	3.730E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	3.247E-03	2.245E-02	1.774E-02	2.245E-02	FAIL ABUN
RH-101	-1.068E-02	2.067E-02	1.410E-02	2.067E-02	NOT IDENT.
SB-125	-3.603E-02	5.324E-02	4.308E-02	5.324E-02	NOT IDENT.
EU-155	2.682E-02	4.818E-02	4.277E-02	4.818E-02	NOT IDENT.
PO-209	2.405E+00	4.215E+00	3.620E+00	4.215E+00	NOT IDENT.
BI-211	-9.152E-02	6.334E-01	5.217E-01	6.334E-01	NOT IDENT.
U-235	-6.750E-02	1.222E-01	8.213E-02	1.222E-01	NOT IDENT.
NP-236	-5.542E-03	2.999E-02	2.351E-02	2.999E-02	NOT IDENT.
AM-241	1.937E-02	9.896E-02	6.631E-02	9.896E-02	NOT IDENT.
CM-243	3.769E-03	4.397E-02	3.854E-02	4.397E-02	NOT IDENT.
AM-246	-2.791E-02	6.669E-02	5.445E-02	6.669E-02	NOT IDENT.
CF-249	1.814E-02	2.251E-02	1.971E-02	2.251E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	317.5152
63.29	369.7509
74.66	438.8151
74.81	439.0250
74.81	439.0250
77.11	442.2177
77.11	442.2177
86.48	461.0376
87.30	462.1156
87.30	462.1156
92.58	374.3891
98.44	398.4287
103.76	399.9115
105.31	383.8440
129.07	407.0505
143.76	409.7531
198.00	401.1381
209.25	344.3228
228.18	315.7031
238.63	340.0975
242.00	341.5792
269.46	297.8716
270.25	298.1498
277.36	306.2097
295.22	281.0088
300.09	252.3813
312.17	287.5834
338.32	292.6501
351.93	232.6637
387.59	209.6788
409.46	205.6639
427.87	212.8126
463.00	192.7718
510.77	150.1631
583.19	152.9128
609.31	159.9139
661.66	118.6357
727.33	155.9766
763.13	129.0129
768.36	139.2891
785.37	108.1093
794.95	112.5200
806.17	123.5786
831.80	122.9883
860.56	98.6228
896.60	85.4040
911.20	82.7474
934.06	72.8228
964.77	78.0662
968.97	78.1963
1001.03	91.6423
1078.86	66.0323
1120.29	61.2630
1155.19	55.2188
1173.23	61.0781
1238.11	56.3136
1280.96	51.4545
1332.51	56.3629
1377.67	47.7688
1401.50	61.6888
1407.98	40.8535
1460.80	36.1430
1509.23	36.6189
1588.20	49.4733
1620.50	31.0352
1729.60	16.5832
1764.49	27.5371

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530029

Total Uranium Activity	-3.1231E-02	ug/g
Total Uranium Counting Unc.	5.6563E-02	ug/g
Total Uranium Tpu	5.6563E-08	ug/g
Total Uranium Mda	3.8003E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:55:25.35

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530030.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:50:53
Sample ID        : G198530030           Sample quantity  : 1.16010E+02 GRAM
Detector name    : GAM22                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.48  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.26*	97	694	0.98	91.97	89	8	4.49E-03	53.8	
2	0	63.11*	117	1648	1.40	125.65	120	13	5.40E-03	76.3	
3	2	74.63*	873	959	1.13	148.69	143	14	4.04E-02	7.2	1.73E+00
4	2	76.87*	1348	813	1.08	153.18	143	14	6.24E-02	4.7	
5	6	84.01*	138	1037	1.34	167.45	163	29	6.38E-03	43.2	3.06E+00
6	6	86.94	614	862	1.17	173.30	163	29	2.84E-02	8.8	
7	6	89.76	341	939	1.31	178.94	163	29	1.58E-02	16.8	
8	6	92.47*	538	876	1.27	184.34	163	29	2.49E-02	12.9	
9	0	104.82	111	784	1.59	209.05	206	8	5.16E-03	44.4	
10	0	112.79*	17	732	0.81	224.97	222	7	7.84E-04	284.0	
11	0	128.64	113	826	1.03	256.67	253	8	5.22E-03	45.1	
12	0	153.77	85	886	0.71	306.90	303	9	3.92E-03	64.4	
13	0	185.73*	434	963	1.31	370.80	366	11	2.01E-02	16.9	
14	0	197.85*	32	735	1.50	395.01	391	9	1.50E-03	173.0	
15	1	204.99	84	809	1.59	409.29	404	20	3.89E-03	62.3	1.88E+00
16	1	208.99	362	712	1.60	417.29	404	20	1.68E-02	15.1	
17	3	238.37*	2842	481	1.29	476.03	467	23	1.32E-01	2.5	3.25E+00
18	3	241.48	853	642	2.01	482.24	467	23	3.95E-02	8.8	
19	0	269.79	299	620	1.93	538.84	533	12	1.38E-02	17.7	
20	0	277.16	71	450	0.99	553.58	550	8	3.30E-03	52.9	
21	0	294.91*	1179	509	1.37	589.06	583	11	5.46E-02	4.9	
22	0	299.68	163	366	1.05	598.60	595	8	7.52E-03	21.9	
23	0	327.64	176	491	1.51	654.50	650	12	8.14E-03	26.3	
24	0	338.15*	669	581	1.49	675.52	670	14	3.10E-02	8.9	
25	0	351.58*	2040	459	1.44	702.38	697	12	9.44E-02	3.2	
26	0	363.69	64	234	1.71	726.58	723	8	2.95E-03	43.4	
27	0	408.87	67	427	1.56	816.90	810	12	3.12E-03	62.6	
28	0	462.52	260	309	1.55	924.18	918	13	1.20E-02	15.3	
29	0	477.34	60	214	1.41	953.82	951	8	2.76E-03	44.4	
30	0	487.16	42	314	1.05	973.45	964	13	1.97E-03	87.8	
31	4	502.30	104	224	2.72	1003.72	998	35	4.84E-03	30.9	2.69E+00
32	4	510.50*	255	314	2.74	1020.12	998	35	1.18E-02	24.0	
33	0	533.83	43	133	1.26	1066.77	1063	7	1.99E-03	47.0	
34	0	562.07	18	134	1.27	1123.24	1121	6	8.28E-04	102.6	
35	0	582.78*	884	354	1.59	1164.65	1158	15	4.09E-02	6.1	
36	0	608.91*	1542	424	1.70	1216.91	1208	18	7.14E-02	4.2	
37	1	661.38	126	237	2.10	1321.84	1316	21	5.83E-03	26.4	1.01E+00
38	1	665.48	57	213	2.24	1330.03	1316	21	2.62E-03	57.8	

Sample ID : G198530030 Acquisition date : 11-DEC-2007 05:50:53

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	726.60*	120	215	1.68	1452.26	1447	12	5.55E-03	34.9	
40	0	749.50	38	224	3.85	1498.05	1489	16	1.77E-03	89.8	
41	0	754.93	62	165	1.35	1508.92	1504	13	2.89E-03	44.0	
42	3	763.17	53	254	2.83	1525.41	1517	24	2.46E-03	71.1	1.94E+00
43	3	767.78	133	187	2.33	1534.62	1517	24	6.16E-03	22.3	
44	0	772.54	69	126	2.39	1544.14	1540	10	3.17E-03	32.9	
45	0	785.13	55	197	4.27	1569.32	1563	13	2.56E-03	54.2	
46	0	794.60	110	199	1.31	1588.25	1581	15	5.11E-03	29.4	
47	0	804.52*	7	220	4.64	1608.09	1598	18	3.41E-04	526.8	
48	0	860.09*	85	168	2.27	1719.25	1714	12	3.95E-03	38.6	
49	0	910.66*	696	182	2.09	1820.39	1812	17	3.22E-02	6.5	
50	0	933.18	93	140	2.67	1865.43	1857	16	4.30E-03	30.3	
51	2	964.20	158	202	2.79	1927.47	1917	28	7.31E-03	23.6	8.91E-01
52	2	968.44*	397	128	1.87	1935.96	1917	28	1.84E-02	8.5	
53	0	1001.20*	92	140	1.57	2001.48	1992	17	4.24E-03	39.0	
54	0	1094.41	45	96	4.06	2187.94	2181	15	2.10E-03	49.6	
55	0	1110.42	36	72	2.95	2219.97	2215	10	1.69E-03	46.6	
56	0	1119.66*	280	186	2.75	2238.43	2230	17	1.29E-02	13.5	
57	1	1237.66*	147	69	2.77	2474.50	2448	37	6.80E-03	18.4	2.43E+00
58	1	1240.80	36	19	2.26	2480.77	2448	37	1.66E-03	34.0	
59	0	1315.59	10	71	2.70	2630.41	2621	11	4.84E-04	159.4	
60	0	1377.57	67	116	2.35	2754.41	2746	14	3.12E-03	36.0	
61	0	1401.10	51	50	2.74	2801.48	2792	14	2.37E-03	32.2	
62	0	1407.74	50	48	2.95	2814.77	2808	14	2.29E-03	33.1	
63	0	1459.83*	689	60	2.48	2918.99	2909	20	3.19E-02	5.0	
64	0	1511.20	34	114	3.92	3021.78	3009	17	1.58E-03	73.9	
65	1	1527.30	28	49	2.71	3054.00	3043	57	1.30E-03	66.0	2.30E+00
66	1	1533.30	30	59	2.72	3066.00	3043	57	1.41E-03	60.0	
67	0	1577.13	13	68	7.71	3153.70	3142	19	6.16E-04	149.8	
68	0	1587.71	62	89	2.56	3174.88	3166	15	2.87E-03	35.7	
69	0	1619.86	44	64	2.39	3239.20	3232	14	2.04E-03	41.2	
70	0	1624.73	12	32	0.72	3248.96	3245	9	5.32E-04	92.8	
71	0	1730.06	108	80	0.93	3459.74	3447	26	4.99E-03	25.2	
72	0	1763.57	359	45	3.29	3526.79	3517	20	1.66E-02	7.0	
73	0	1817.15	11	38	1.04	3634.03	3625	12	5.00E-04	119.3	
74	0	1838.13	22	28	0.73	3676.00	3668	14	1.02E-03	55.3	

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]G198530030       *
* Acquisition date : 11-DEC-2007 05:50:53 Detector SN#    :                 *
* Detector ID      : GAM22                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.48     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530030           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1601E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 22-FEB-2007 17:43:25 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	3.491E+00	3.991E-01	2.386E-01	0.000E+00
RH-101	6.181E-03	2.096E-02	2.466E-02	0.000E+00
CS-137	4.175E-02	2.187E-02	2.402E-02	0.000E+00
EU-155	6.349E-02	5.541E-02	7.534E-02	0.000E+00
TL-208	2.673E-01	3.793E-02	2.357E-02	0.000E+00
BI-212	3.078E-01	2.125E-01	1.789E-01	0.000E+00
PB-212	9.726E-01	7.432E-02	3.866E-02	0.000E+00
BI-214	8.831E-01	1.009E-01	4.632E-02	0.000E+00
PB-214	9.982E-01	8.381E-02	4.693E-02	0.000E+00
RA-223	3.452E-01	1.212E-01	1.265E-01	0.000E+00
AC-228	9.876E-01	1.578E-01	9.034E-02	0.000E+00
PA-234M	4.335E+00	3.334E+00	2.411E+00	0.000E+00
TH-234	1.240E+00	3.294E-01	3.263E-01	0.000E+00
NP-237	6.453E-01	1.240E-01	1.487E-01	0.000E+00
AM-243	1.985E-01	3.188E-02	3.471E-02	0.000E+00
CM-243	5.742E-02	5.011E-02	6.417E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-8.812E-03	1.590E-02	2.537E-02	0.000E+00	NOT IDENT.
SB-125	1.160E-03	3.860E-02	6.442E-02	0.000E+00	NOT IDENT.
PO-209	4.888E-01	2.985E+00	5.101E+00	0.000E+00	NOT IDENT.
BI-211	-4.083E-01	4.317E-01	7.036E-01	0.000E+00	NOT IDENT.
PA-233	-1.199E-02	2.615E-02	4.407E-02	0.000E+00	NOT IDENT.
U-235	-2.856E-02	9.672E-02	1.508E-01	0.000E+00	NOT IDENT.
NP-236	6.341E-03	2.986E-02	4.207E-02	0.000E+00	NOT IDENT.
NP-239	5.380E-02	1.087E-01	1.634E-01	0.000E+00	NOT IDENT.
AM-241	1.678E-02	5.875E-02	8.886E-02	0.000E+00	NOT IDENT.
AM-246	2.146E-02	5.192E-02	8.850E-02	0.000E+00	NOT IDENT.
CF-249	1.568E-02	1.604E-02	2.788E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:55:26.32

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530030.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 05:50:53
Sample ID        : G198530030           Sample quantity  : 1.16010E+02 GRAM
Detector name    : GAM22                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:00:03.48  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	689	10.66*	1.997E+00	3.491E+00	3.491E+00	11.67
RH-101	198.00	32	73.00*	7.995E+00	5.970E-03	6.181E-03	345.97
CS-137	661.66	126	85.10*	3.836E+00	4.159E-02	4.175E-02	53.45
EU-155	105.31	111	21.20*	9.134E+00	6.205E-02	6.349E-02	89.05
TL-208	277.36	71	6.31	6.711E+00	1.814E-01	1.814E-01	105.88
	510.77	255	22.60	4.633E+00	2.625E-01	2.625E-01	48.41
	583.19	884	84.50*	4.220E+00	2.673E-01	2.673E-01	14.48
	763.13	53	1.81	3.420E+00	9.245E-01	9.245E-01	142.48
	860.56	85	12.42	3.093E+00	2.398E-01	2.398E-01	77.79
BI-212	727.33	120	11.80*	3.560E+00	3.078E-01	3.078E-01	70.44
	785.37	55	1.10	3.341E+00	1.620E+00	1.620E+00	108.89
	1620.50	44	1.49	1.873E+00	1.700E+00	1.700E+00	82.59
PB-212	74.81	873	10.40	6.957E+00	1.302E+00	1.302E+00	16.39
	77.11	1348	17.50	7.251E+00	1.146E+00	1.146E+00	12.25
	87.30	614	7.81	8.271E+00	1.025E+00	1.025E+00	19.61
	238.63	2842	43.30*	7.279E+00	9.726E-01	9.726E-01	7.80
	300.09	163	3.28	6.426E+00	8.317E-01	8.317E-01	44.24
BI-214	609.31	1542	46.10*	4.085E+00	8.830E-01	8.831E-01	11.66
	768.36	133	4.94	3.403E+00	8.539E-01	8.539E-01	45.53
	806.17	7	1.22	3.273E+00	1.988E-01	1.989E-01	1053.61
	934.06	93	3.03	2.883E+00	1.147E+00	1.148E+00	61.38
	1120.29	280	15.10	2.461E+00	8.116E-01	8.117E-01	27.92
	1155.19	------	1.63	2.397E+00	------	Line Not Found	------
	1238.11	147	5.79	2.263E+00	1.209E+00	1.209E+00	37.24
	1280.96	------	1.43	2.201E+00	------	Line Not Found	------
	1377.67	67	4.00	2.081E+00	8.734E-01	8.734E-01	72.14
	1401.50	51	1.27	2.055E+00	2.116E+00	2.116E+00	64.74
	1407.98	50	2.15	2.048E+00	1.214E+00	1.214E+00	66.51
	1509.23	34	2.11	1.952E+00	8.937E-01	8.937E-01	147.90
	1729.60	108	2.92	1.815E+00	2.193E+00	2.193E+00	50.72
	1764.49	359	15.40	1.801E+00	1.397E+00	1.397E+00	15.06
PB-214	74.81	873	6.44	6.957E+00	2.102E+00	2.103E+00	16.39

Sample ID : G198530030 Acquisition date : 11-DEC-2007 05:50:53

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1348	10.80	7.251E+00	1.857E+00	1.857E+00	12.25
	87.30	614	4.84	8.271E+00	1.653E+00	1.653E+00	19.61
	242.00	853	7.43	7.230E+00	1.713E+00	1.713E+00	18.66
	295.22	1179	19.30	6.484E+00	1.016E+00	1.016E+00	11.51
	351.93	2040	37.60*	5.862E+00	9.981E-01	9.982E-01	8.57
RA-223	269.46	299	13.70*	6.811E+00	3.452E-01	3.452E-01	35.83
AC-228	129.07	113	2.42	9.242E+00	5.438E-01	5.438E-01	90.51
	209.25	362	3.89	7.785E+00	1.291E+00	1.291E+00	30.74
	270.25	299	3.46	6.811E+00	1.367E+00	1.367E+00	35.83
	338.32	669	11.27	5.997E+00	1.068E+00	1.068E+00	18.76
	409.46	67	1.92	5.352E+00	7.080E-01	7.080E-01	125.24
	463.00	260	4.40	4.949E+00	1.287E+00	1.287E+00	31.26
	794.95	110	4.25	3.308E+00	8.476E-01	8.476E-01	59.55
	911.20	696	25.80*	2.945E+00	9.876E-01	9.876E-01	16.30
	964.77	158	4.99	2.802E+00	1.217E+00	1.217E+00	48.20
	968.97	397	15.80	2.791E+00	9.712E-01	9.712E-01	19.37
	1588.20	62	3.22	1.894E+00	1.096E+00	1.096E+00	71.58
PA-234M	1001.03	92	0.84*	2.712E+00	4.335E+00	4.335E+00	78.48
TH-234	63.29	117	4.80	5.044E+00	5.195E-01	5.195E-01	152.73
	92.58	538	5.41*	8.647E+00	1.240E+00	1.240E+00	27.10
NP-237	86.48	614	12.40*	8.271E+00	6.453E-01	6.453E-01	19.61
AM-243	74.66	873	68.20*	6.957E+00	1.985E-01	1.985E-01	16.39
CM-243	103.76	111	23.00*	9.134E+00	5.719E-02	5.742E-02	89.05

Flag: "*" = Keyline

Sample ID : G198530030 Acquisition date : 11-DEC-2007 05:50:53

Total number of lines in spectrum	74	
Number of unidentified lines	28	
Number of lines tentatively identified by NID	46	62.16%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	3.491E+00	3.491E+00	0.407E+00	11.67	
RH-101	1.04E+08S	1.04	5.970E-03	6.181E-03	21.38E-03	345.97	
CS-137	9.47E+08S	1.00	4.159E-02	4.175E-02	2.232E-02	53.45	
EU-155	1.57E+08S	1.02	6.205E-02	6.349E-02	5.654E-02	89.05	
TL-208	4.43E+17S	1.00	2.673E-01	2.673E-01	0.387E-01	14.48	
BI-212	4.43E+17S	1.00	3.078E-01	3.078E-01	2.168E-01	70.44	
PB-212	4.43E+17S	1.00	9.726E-01	9.726E-01	0.758E-01	7.80	
BI-214	5.05E+10S	1.00	8.830E-01	8.831E-01	1.029E-01	11.66	
PB-214	5.05E+10S	1.00	9.981E-01	9.982E-01	0.855E-01	8.57	
RA-223	1.04E+12S	1.00	3.452E-01	3.452E-01	1.237E-01	35.83	
AC-228	4.43E+17S	1.00	9.876E-01	9.876E-01	1.610E-01	16.30	
PA-234M	1.41E+17S	1.00	4.335E+00	4.335E+00	3.402E+00	78.48	
TH-234	1.41E+17S	1.00	1.240E+00	1.240E+00	0.336E+00	27.10	
NP-237	6.75E+13S	1.00	6.453E-01	6.453E-01	1.265E-01	19.61	
AM-243	2.33E+11S	1.00	1.985E-01	1.985E-01	0.325E-01	16.39	
CM-243	8.99E+08S	1.00	5.719E-02	5.742E-02	5.113E-02	89.05	
			---	---			
		Total Activity :	1.484E+01	1.484E+01			

Grand Total Activity : 1.484E+01 1.484E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530030 Acquisition date : 11-DEC-2007 05:50:53

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.26	97	694	0.98	91.97	89	8	4.49E-03	****	1.65E+00	
6	84.01	138	1037	1.34	167.45	163	29	6.38E-03	86.5	8.02E+00	
6	89.76	341	939	1.31	178.94	163	29	1.58E-02	33.6	8.48E+00	
0	112.79	17	732	0.81	224.97	222	7	7.84E-04	****	9.26E+00	
0	153.77	85	886	0.71	306.90	303	9	3.92E-03	****	8.87E+00	
0	185.73	434	963	1.31	370.80	366	11	2.01E-02	33.9	8.23E+00	
1	204.99	84	809	1.59	409.29	404	20	3.89E-03	****	7.86E+00	
0	327.64	176	491	1.51	654.50	650	12	8.14E-03	52.7	6.11E+00	
0	363.69	64	234	1.71	726.58	723	8	2.95E-03	86.8	5.75E+00	
0	477.34	60	214	1.41	953.82	951	8	2.76E-03	88.8	4.85E+00	
0	487.16	42	314	1.05	973.45	964	13	1.97E-03	****	4.78E+00	
4	502.30	104	224	2.72	1003.72	998	35	4.84E-03	61.9	4.68E+00	
0	533.83	43	133	1.26	1066.77	1063	7	1.99E-03	94.0	4.49E+00	
0	562.07	18	134	1.27	1123.24	1121	6	8.28E-04	****	4.33E+00	
1	665.48	57	213	2.24	1330.03	1316	21	2.62E-03	****	3.82E+00	
0	749.50	38	224	3.85	1498.05	1489	16	1.77E-03	****	3.47E+00	
0	754.93	62	165	1.35	1508.92	1504	13	2.89E-03	88.1	3.45E+00	
0	772.54	69	126	2.39	1544.14	1540	10	3.17E-03	65.7	3.39E+00	
0	1094.41	45	96	4.06	2187.94	2181	15	2.10E-03	99.2	2.51E+00	
0	1110.42	36	72	2.95	2219.97	2215	10	1.69E-03	93.3	2.48E+00	
1	1240.80	36	19	2.26	2480.77	2448	37	1.66E-03	68.0	2.26E+00	
0	1315.59	10	71	2.70	2630.41	2621	11	4.84E-04	****	2.16E+00	
1	1527.30	28	49	2.71	3054.00	3043	57	1.30E-03	****	1.94E+00	
1	1533.30	30	59	2.72	3066.00	3043	57	1.41E-03	****	1.93E+00	
0	1577.13	13	68	7.71	3153.70	3142	19	6.16E-04	****	1.90E+00	
0	1624.73	12	32	0.72	3248.96	3245	9	5.32E-04	****	1.87E+00	
0	1817.15	11	38	1.04	3634.03	3625	12	5.00E-04	****	1.78E+00	
0	1838.13	22	28	0.73	3676.00	3668	14	1.02E-03	****	1.78E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530030            *
* Acquisition date : 11-DEC-2007 05:50:53 Detector SN#    :                 *
* Detector ID      : GAM22                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:00:03.48     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530030           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1601E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 22-FEB-2007 17:43:25 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	3.491E+00	3.991E-01	1.194E-01	3.991E-01
RH-101	6.181E-03	2.096E-02	1.234E-02	2.096E-02
CS-137	4.175E-02	2.187E-02	1.202E-02	2.187E-02
EU-155	6.349E-02	5.541E-02	3.769E-02	5.541E-02
TL-208	2.673E-01	3.793E-02	1.179E-02	3.793E-02
BI-212	3.078E-01	2.125E-01	8.951E-02	2.125E-01
PB-212	9.726E-01	7.432E-02	1.934E-02	7.432E-02
BI-214	8.831E-01	1.009E-01	2.318E-02	1.009E-01
PB-214	9.982E-01	8.381E-02	2.348E-02	8.381E-02
RA-223	3.452E-01	1.212E-01	6.331E-02	1.212E-01
AC-228	9.876E-01	1.578E-01	4.520E-02	1.578E-01
PA-234M	4.335E+00	3.334E+00	1.206E+00	3.334E+00
TH-234	1.240E+00	3.294E-01	1.632E-01	3.294E-01
NP-237	6.453E-01	1.240E-01	7.437E-02	1.240E-01
AM-243	1.985E-01	3.188E-02	1.736E-02	3.188E-02
CM-243	5.742E-02	5.011E-02	3.210E-02	5.011E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-8.812E-03	1.590E-02	1.269E-02	1.590E-02	NOT IDENT.
SB-125	1.160E-03	3.860E-02	3.223E-02	3.860E-02	NOT IDENT.
PO-209	4.888E-01	2.985E+00	2.552E+00	2.985E+00	NOT IDENT.
BI-211	-4.083E-01	4.317E-01	3.520E-01	4.317E-01	NOT IDENT.
PA-233	-1.199E-02	2.615E-02	2.205E-02	2.615E-02	NOT IDENT.
U-235	-2.856E-02	9.672E-02	7.546E-02	9.672E-02	NOT IDENT.
NP-236	6.341E-03	2.986E-02	2.105E-02	2.986E-02	NOT IDENT.
NP-239	5.380E-02	1.087E-01	8.175E-02	1.087E-01	NOT IDENT.
AM-241	1.678E-02	5.875E-02	4.446E-02	5.875E-02	NOT IDENT.
AM-246	2.146E-02	5.192E-02	4.428E-02	5.192E-02	NOT IDENT.
CF-249	1.568E-02	1.604E-02	1.395E-02	1.604E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	694.1638
63.29	802.9397
74.66	1025.1649
74.81	1025.5587
74.81	1025.5587
77.11	961.4552
77.11	961.4552
86.48	872.3409
87.30	873.9988
87.30	873.9988
92.58	884.5032
98.44	711.5360
103.76	681.0526
105.31	774.3454
129.07	802.6960
143.76	808.0505
198.00	742.9376
209.25	672.3117
228.18	611.8725
238.63	572.7299
242.00	574.8572
269.46	540.4960
270.25	540.9286
277.36	513.6152
295.22	472.1655
300.09	479.1077
312.17	469.8852
338.32	450.9677
351.93	415.9980
387.59	350.5212
409.46	335.2930
427.87	356.7088
463.00	309.8644
510.77	278.2686
583.19	277.4448
609.31	299.1225
661.66	240.2788
727.33	222.7504
763.13	248.6488
768.36	89.4619
785.37	203.4096
794.95	164.3514
806.17	142.8630
831.80	255.9423
860.56	177.3474
896.60	196.1949
911.20	186.6456
934.06	170.6848
964.77	175.5602
968.97	175.8241
1001.03	119.8807
1078.86	141.5231
1120.29	140.0372
1155.19	132.3765
1173.23	156.3518
1238.11	124.3865
1280.96	108.7502
1332.51	113.2152
1377.67	130.5908
1401.50	70.9629
1407.98	87.7550
1460.80	103.1803
1509.23	73.8165
1588.20	99.0762
1620.50	64.6983
1729.60	58.7153
1764.49	46.3720

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530030

Total Uranium Activity	-1.3214E-02	ug/g
Total Uranium Counting Unc.	4.4751E-02	ug/g
Total Uranium Tpu	4.4751E-08	ug/g
Total Uranium Mda	3.4917E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:56:00.51

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530031.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 06:58:13
Sample ID        : G198530031           Sample quantity  : 1.04540E+02 GRAM
Detector name    : GAM12                Detector geometry: CAN
Elapsed live time: 0 05:19:45.70        Elapsed real time: 0 05:19:48.17  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	53.62	91	478	1.80	106.47	103	8	4.73E-03	43.0	
2	0	63.23*	132	565	0.89	125.68	122	8	6.86E-03	36.0	
3	3	74.84*	542	516	1.07	148.91	142	22	2.83E-02	8.2	2.49E+00
4	3	77.18	875	536	1.12	153.59	142	22	4.56E-02	5.7	
5	3	84.24*	169	450	1.51	167.73	164	28	8.82E-03	24.1	2.22E+00
6	3	87.22	414	558	1.52	173.68	164	28	2.16E-02	11.6	
7	3	89.81	311	539	1.52	178.88	164	28	1.62E-02	15.5	
8	3	92.71*	328	514	1.48	184.68	164	28	1.71E-02	17.4	
9	0	128.64	47	421	0.93	256.57	254	7	2.43E-03	74.3	
10	0	143.84*	15	481	2.22	286.97	285	8	7.87E-04	273.4	
11	0	173.41	81	444	1.87	346.14	342	9	4.20E-03	48.5	
12	0	185.71*	257	632	1.34	370.75	366	11	1.34E-02	22.1	
13	0	209.46	129	595	1.32	418.27	414	12	6.73E-03	38.7	
14	2	238.53*	1558	285	1.19	476.42	470	18	8.12E-02	3.3	2.73E+00
15	2	241.55	423	409	1.60	482.46	470	18	2.20E-02	10.7	
16	0	258.20	64	378	2.40	515.78	510	12	3.32E-03	62.6	
17	0	270.36*	145	401	1.62	540.09	534	11	7.58E-03	29.8	
18	0	277.39	47	293	0.99	554.17	550	8	2.43E-03	66.0	
19	0	295.11*	771	276	1.11	589.61	585	11	4.02E-02	5.8	
20	0	299.88	87	215	1.44	599.16	596	8	4.52E-03	31.2	
21	0	318.67	36	179	1.54	636.74	634	7	1.88E-03	63.8	
22	0	327.98	82	332	1.15	655.38	650	12	4.29E-03	45.5	
23	0	338.14	279	307	1.24	675.69	670	11	1.45E-02	13.6	
24	0	351.74*	1061	400	1.28	702.92	696	14	5.53E-02	5.2	
25	0	401.22	46	145	1.30	801.89	799	8	2.42E-03	47.2	
26	0	462.20	114	150	2.87	923.88	919	10	5.96E-03	22.1	
27	0	510.68*	107	287	2.18	1020.86	1014	16	5.59E-03	46.1	
28	0	583.00*	399	140	1.43	1165.51	1160	11	2.08E-02	8.3	
29	0	608.90*	819	161	1.37	1217.32	1210	14	4.27E-02	5.2	
30	0	654.59	24	148	4.41	1308.70	1297	15	1.23E-03	114.6	
31	0	661.12*	62	88	2.00	1321.76	1317	10	3.21E-03	35.3	
32	0	665.18	31	75	1.57	1329.89	1326	8	1.63E-03	51.0	
33	0	669.81	27	85	1.34	1339.14	1334	9	1.40E-03	64.9	
34	0	727.02	74	107	1.12	1453.56	1451	9	3.86E-03	27.6	
35	0	768.64	122	145	1.53	1536.81	1528	18	6.38E-03	24.7	
36	0	784.35	53	92	1.02	1568.23	1562	13	2.75E-03	39.8	
37	0	796.13	63	89	1.82	1591.80	1585	15	3.29E-03	35.5	
38	0	802.20*	8	47	1.13	1603.93	1600	8	4.14E-04	200.5	

Sample ID : G198530031 Acquisition date : 11-DEC-2007 06:58:13

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	834.69	32	68	1.51	1668.90	1665	9	1.64E-03	50.3	
40	0	852.38	23	56	0.61	1704.27	1700	9	1.21E-03	62.0	
41	0	861.03	43	129	0.70	1721.57	1713	18	2.25E-03	62.9	
42	0	875.49	17	35	1.17	1750.51	1746	7	8.99E-04	61.7	
43	0	895.91	14	68	1.71	1791.33	1787	9	7.09E-04	111.2	
44	0	910.73*	317	45	1.62	1820.98	1815	12	1.65E-02	8.0	
45	0	934.11	47	69	2.55	1867.73	1860	12	2.47E-03	37.9	
46	2	963.86	71	59	2.16	1927.22	1918	28	3.68E-03	26.7	1.61E+00
47	2	968.55	161	50	1.77	1936.60	1918	28	8.38E-03	12.0	
48	0	1001.79*	54	51	0.60	2003.06	1994	17	2.83E-03	37.8	
49	0	1063.04	56	34	4.49	2125.55	2117	16	2.91E-03	27.4	
50	0	1120.10*	177	82	1.31	2239.63	2233	15	9.23E-03	14.3	
51	0	1157.63	34	116	2.27	2314.68	2304	24	1.78E-03	84.6	
52	0	1238.11	72	51	1.31	2475.59	2470	13	3.75E-03	23.7	
53	0	1377.54	105	21	6.84	2754.35	2744	22	5.48E-03	15.0	
54	0	1401.39	36	41	5.77	2802.04	2793	18	1.89E-03	44.5	
55	0	1407.46	27	32	2.04	2814.18	2810	11	1.41E-03	44.0	
56	0	1437.03	7	18	1.50	2873.29	2867	9	3.65E-04	115.6	
57	0	1451.22	22	22	5.30	2901.65	2893	15	1.15E-03	51.3	
58	0	1460.03*	256	39	2.13	2919.27	2911	18	1.33E-02	9.3	
59	0	1508.63	61	27	1.99	3016.42	3009	14	3.18E-03	22.4	
60	0	1562.57	13	36	5.28	3124.25	3110	16	6.81E-04	106.4	
61	0	1580.32	11	18	0.97	3159.73	3154	9	5.72E-04	81.2	
62	1	1587.16	29	30	2.25	3173.41	3167	21	1.51E-03	41.4	8.05E-01
63	1	1592.07	26	10	2.25	3183.21	3167	21	1.37E-03	34.9	
64	0	1661.03	25	12	2.40	3321.05	3316	10	1.29E-03	33.4	
65	0	1729.07	49	23	1.79	3457.05	3447	20	2.54E-03	28.8	
66	0	1763.84*	153	27	2.44	3526.54	3518	21	7.96E-03	12.8	
67	0	1802.69	10	12	0.66	3604.20	3597	12	5.21E-04	76.2	
68	0	1810.82	11	15	4.90	3620.45	3611	15	5.73E-04	82.4	
69	0	1836.81	17	7	3.15	3672.38	3666	14	8.93E-04	40.7	
70	0	1846.81	31	22	1.26	3692.37	3684	15	1.60E-03	38.1	
71	0	1869.76	10	28	0.76	3738.25	3730	18	5.05E-04	130.4	

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]G198530031       *
* Acquisition date : 11-DEC-2007 06:58:13 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 05:19:45.70     Abundance limit : 75.000          *
* Elapsed real time:    0 05:19:48.17     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530031           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0454E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-FEB-2007 15:01:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.855E+00	5.452E-01	3.029E-01	0.000E+00
CS-137	4.352E-02	3.031E-02	3.072E-02	0.000E+00
TL-208	2.546E-01	4.572E-02	3.448E-02	0.000E+00
PO-209	2.263E+00	4.940E+00	6.271E+00	0.000E+00
BI-212	4.082E-01	2.242E-01	2.651E-01	0.000E+00
PB-212	9.796E-01	8.725E-02	5.383E-02	0.000E+00
BI-214	9.933E-01	1.286E-01	6.558E-02	0.000E+00
PB-214	1.018E+00	1.195E-01	6.970E-02	0.000E+00
RA-223	3.153E-01	1.853E-01	1.722E-01	0.000E+00
AC-228	9.750E-01	1.820E-01	1.100E-01	0.000E+00
PA-234M	5.576E+00	4.157E+00	3.492E+00	0.000E+00
TH-234	1.361E+00	4.745E-01	3.913E-01	0.000E+00
U-235	2.876E-02	1.541E-01	1.932E-01	0.000E+00
NP-237	7.888E-01	1.892E-01	1.807E-01	0.000E+00
AM-243	2.300E-01	4.040E-02	4.791E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	6.515E-03		2.106E-02	3.658E-02	0.000E+00	NOT IDENT.
RH-101	-6.674E-03		2.014E-02	3.236E-02	0.000E+00	NOT IDENT.
SB-125	3.536E-02		5.506E-02	9.301E-02	0.000E+00	NOT IDENT.
EU-155	6.054E-02		5.848E-02	1.046E-01	0.000E+00	NOT IDENT.
BI-211	6.828E-01		6.516E-01	1.033E+00	0.000E+00	NOT IDENT.
PA-233	-5.107E-03		3.760E-02	6.206E-02	0.000E+00	NOT IDENT.
NP-236	0.000E+00		3.759E-02	5.806E-02	0.000E+00	NOT IDENT.
NP-239	1.067E-02		1.262E-01	2.135E-01	0.000E+00	NOT IDENT.
AM-241	-2.146E-02		9.580E-02	1.396E-01	0.000E+00	NOT IDENT.
CM-243	-2.037E-02		5.661E-02	9.050E-02	0.000E+00	NOT IDENT.
AM-246	-8.552E-03		6.491E-02	1.092E-01	0.000E+00	NOT IDENT.
CF-249	1.310E-02		2.408E-02	4.058E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:56:01.45

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530031.CNF;2
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 06:58:13
Sample ID        : G198530031           Sample quantity  : 1.04540E+02 GRAM
Detector name    : GAM12                Detector geometry: CAN
Elapsed live time: 0 05:19:45.70        Elapsed real time: 0 05:19:48.17  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	256	10.66*	1.134E+00	2.855E+00	2.855E+00	19.49
CS-137	661.66	62	85.10*	2.249E+00	4.335E-02	4.352E-02	71.08
TL-208	277.36	47	6.31	4.453E+00	2.232E-01	2.232E-01	132.19
	510.77	107	22.60	2.787E+00	2.294E-01	2.294E-01	92.42
	583.19	399	84.50*	2.500E+00	2.546E-01	2.546E-01	18.32
	763.13	------	1.81	1.987E+00	------	Line Not Found	------
	860.56	43	12.42	1.787E+00	2.623E-01	2.623E-01	126.32
PO-209	896.60	14	0.47*	1.725E+00	2.261E+00	2.263E+00	222.74
BI-212	727.33	74	11.80*	2.073E+00	4.082E-01	4.082E-01	56.05
	785.37	53	1.10	1.940E+00	3.335E+00	3.335E+00	80.11
	1620.50	------	1.49	1.052E+00	------	Line Not Found	------
PB-212	74.81	542	10.40	4.659E+00	1.508E+00	1.508E+00	17.92
	77.11	875	17.50	4.894E+00	1.376E+00	1.376E+00	13.63
	87.30	414	7.81	5.698E+00	1.252E+00	1.252E+00	24.47
	238.63	1558	43.30*	4.951E+00	9.796E-01	9.796E-01	9.09
	300.09	87	3.28	4.207E+00	8.459E-01	8.459E-01	62.68
BI-214	609.31	819	46.10*	2.411E+00	9.933E-01	9.933E-01	13.21
	768.36	122	4.94	1.975E+00	1.692E+00	1.692E+00	50.34
	806.17	------	1.22	1.894E+00	------	Line Not Found	------
	934.06	47	3.03	1.662E+00	1.270E+00	1.270E+00	76.44
	1120.29	177	15.10	1.414E+00	1.117E+00	1.117E+00	29.47
	1155.19	------	1.63	1.377E+00	------	Line Not Found	------
	1238.11	72	5.79	1.297E+00	1.292E+00	1.292E+00	47.88
	1280.96	------	1.43	1.260E+00	------	Line Not Found	------
	1377.67	105	4.00	1.187E+00	2.982E+00	2.982E+00	30.53
	1401.50	36	1.27	1.171E+00	3.280E+00	3.280E+00	89.19
	1407.98	27	2.15	1.167E+00	1.455E+00	1.455E+00	88.26
	1509.23	61	2.11	1.106E+00	3.521E+00	3.521E+00	45.13
	1729.60	49	2.92	1.009E+00	2.228E+00	2.228E+00	57.90
	1764.49	153	15.40	9.975E-01	1.339E+00	1.339E+00	26.19
PB-214	74.81	542	6.44	4.659E+00	2.436E+00	2.436E+00	17.92
	77.11	875	10.80	4.894E+00	2.230E+00	2.230E+00	13.63

Sample ID : G198530031 Acquisition date : 11-DEC-2007 06:58:13

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	414	4.84	5.698E+00	2.021E+00	2.021E+00	24.47
	242.00	423	7.43	4.908E+00	1.561E+00	1.561E+00	22.32
	295.22	771	19.30	4.257E+00	1.265E+00	1.265E+00	13.14
	351.93	1061	37.60*	3.734E+00	1.018E+00	1.018E+00	11.98
RA-223	269.46	145	13.70*	4.536E+00	3.153E-01	3.153E-01	59.98
AC-228	129.07	47	2.42	6.596E+00	3.935E-01	3.935E-01	148.78
	209.25	129	3.89	5.389E+00	8.295E-01	8.295E-01	77.68
	270.25	145	3.46	4.536E+00	1.248E+00	1.248E+00	59.98
	338.32	279	11.27	3.847E+00	8.672E-01	8.672E-01	27.78
	409.46	------	1.92	3.322E+00	------	Line Not Found	------
	463.00	114	4.40	3.019E+00	1.160E+00	1.160E+00	44.66
	794.95	63	4.25	1.915E+00	1.047E+00	1.047E+00	71.70
	911.20	317	25.80*	1.700E+00	9.750E-01	9.750E-01	19.04
	964.77	71	4.99	1.616E+00	1.181E+00	1.181E+00	54.28
	968.97	161	15.80	1.609E+00	8.526E-01	8.526E-01	25.82
	1588.20	29	3.22	1.067E+00	1.140E+00	1.140E+00	83.01
PA-234M	1001.03	54	0.84*	1.561E+00	5.576E+00	5.576E+00	76.07
TH-234	63.29	132	4.80	3.248E+00	1.138E+00	1.138E+00	72.35
	92.58	328	5.41*	6.010E+00	1.361E+00	1.361E+00	35.57
U-235	143.76	15	10.96*	6.455E+00	2.876E-02	2.876E-02	546.83
NP-237	86.48	414	12.40*	5.698E+00	7.888E-01	7.888E-01	24.47
AM-243	74.66	542	68.20*	4.659E+00	2.300E-01	2.300E-01	17.92

Flag: "*" = Keyline

Sample ID : G198530031 Acquisition date : 11-DEC-2007 06:58:13

Total number of lines in spectrum 71
Number of unidentified lines 29
Number of lines tentatively identified by NID 42 59.15%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.855E+00	2.855E+00	0.556E+00	19.49	
CS-137	9.47E+08S	1.00	4.335E-02	4.352E-02	3.093E-02	71.08	
TL-208	4.43E+17S	1.00	2.546E-01	2.546E-01	0.467E-01	18.32	
PO-209	3.22E+09S	1.00	2.261E+00	2.263E+00	5.041E+00	222.74	
BI-212	4.43E+17S	1.00	4.082E-01	4.082E-01	2.288E-01	56.05	
PB-212	4.43E+17S	1.00	9.796E-01	9.796E-01	0.890E-01	9.09	
BI-214	5.05E+10S	1.00	9.933E-01	9.933E-01	1.312E-01	13.21	
PB-214	5.05E+10S	1.00	1.018E+00	1.018E+00	0.122E+00	11.98	
RA-223	1.04E+12S	1.00	3.153E-01	3.153E-01	1.891E-01	59.98	
AC-228	4.43E+17S	1.00	9.750E-01	9.750E-01	1.857E-01	19.04	
PA-234M	1.41E+17S	1.00	5.576E+00	5.576E+00	4.241E+00	76.07	
TH-234	1.41E+17S	1.00	1.361E+00	1.361E+00	0.484E+00	35.57	
U-235	2.22E+16S	1.00	2.876E-02	2.876E-02	15.73E-02	546.83	
NP-237	6.75E+13S	1.00	7.888E-01	7.888E-01	1.930E-01	24.47	
AM-243	2.33E+11S	1.00	2.300E-01	2.300E-01	0.412E-01	17.92	
			---	---			
		Total Activity :	1.809E+01	1.809E+01			

Grand Total Activity : 1.809E+01 1.809E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530031 Acquisition date : 11-DEC-2007 06:58:13

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	53.62	91	478	1.80	106.47	103	8	4.73E-03	86.0	1.91E+00	
3	84.24	169	450	1.51	167.73	164	28	8.82E-03	48.2	5.49E+00	
3	89.81	311	539	1.52	178.88	164	28	1.62E-02	30.9	5.86E+00	
0	173.41	81	444	1.87	346.14	342	9	4.20E-03	97.1	6.00E+00	
0	185.71	257	632	1.34	370.75	366	11	1.34E-02	44.2	5.78E+00	
0	258.20	64	378	2.40	515.78	510	12	3.32E-03	****	4.69E+00	
0	318.67	36	179	1.54	636.74	634	7	1.88E-03	****	4.02E+00	
0	327.98	82	332	1.15	655.38	650	12	4.29E-03	91.0	3.94E+00	
0	401.22	46	145	1.30	801.89	799	8	2.42E-03	94.4	3.37E+00	
0	654.59	24	148	4.41	1308.70	1297	15	1.23E-03	****	2.27E+00	
0	665.18	31	75	1.57	1329.89	1326	8	1.63E-03	****	2.24E+00	
0	669.81	27	85	1.34	1339.14	1334	9	1.40E-03	****	2.22E+00	
0	802.20	8	47	1.13	1603.93	1600	8	4.14E-04	****	1.90E+00	
0	834.69	32	68	1.51	1668.90	1665	9	1.64E-03	****	1.84E+00	
0	852.38	23	56	0.61	1704.27	1700	9	1.21E-03	****	1.80E+00	
0	875.49	17	35	1.17	1750.51	1746	7	8.99E-04	****	1.76E+00	
0	1063.04	56	34	4.49	2125.55	2117	16	2.91E-03	54.7	1.48E+00	
0	1157.63	34	116	2.27	2314.68	2304	24	1.78E-03	****	1.37E+00	
0	1437.03	7	18	1.50	2873.29	2867	9	3.65E-04	****	1.15E+00	
0	1451.22	22	22	5.30	2901.65	2893	15	1.15E-03	****	1.14E+00	
0	1562.57	13	36	5.28	3124.25	3110	16	6.81E-04	****	1.08E+00	
0	1580.32	11	18	0.97	3159.73	3154	9	5.72E-04	****	1.07E+00	
1	1592.07	26	10	2.25	3183.21	3167	21	1.37E-03	69.8	1.06E+00	
0	1661.03	25	12	2.40	3321.05	3316	10	1.29E-03	66.7	1.03E+00	
0	1802.69	10	12	0.66	3604.20	3597	12	5.21E-04	****	9.85E-01	
0	1810.82	11	15	4.90	3620.45	3611	15	5.73E-04	****	9.83E-01	
0	1836.81	17	7	3.15	3672.38	3666	14	8.93E-04	81.3	9.76E-01	
0	1846.81	31	22	1.26	3692.37	3684	15	1.60E-03	76.1	9.73E-01	
0	1869.76	10	28	0.76	3738.25	3730	18	5.05E-04	****	9.67E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530031            *
* Acquisition date : 11-DEC-2007 06:58:13 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 05:19:45.70     Abundance limit : 75.000          *
* Elapsed real time:    0 05:19:48.17     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530031           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.0454E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  1-FEB-2007 15:01:06 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	LC (pCi/GRAM)	TPU
K-40	2.855E+00	5.452E-01	1.515E-01	5.452E-01
CS-137	4.352E-02	3.031E-02	1.537E-02	3.031E-02
TL-208	2.546E-01	4.572E-02	1.725E-02	4.572E-02
PO-209	2.263E+00	4.940E+00	3.138E+00	4.940E+00
BI-212	4.082E-01	2.242E-01	1.326E-01	2.242E-01
PB-212	9.796E-01	8.725E-02	2.693E-02	8.725E-02
BI-214	9.933E-01	1.286E-01	3.281E-02	1.286E-01
PB-214	1.018E+00	1.195E-01	3.487E-02	1.195E-01
RA-223	3.153E-01	1.853E-01	8.617E-02	1.853E-01
AC-228	9.750E-01	1.820E-01	5.504E-02	1.820E-01
PA-234M	5.576E+00	4.157E+00	1.747E+00	4.157E+00
TH-234	1.361E+00	4.745E-01	1.958E-01	4.745E-01
U-235	2.876E-02	1.541E-01	9.666E-02	1.541E-01
NP-237	7.888E-01	1.892E-01	9.041E-02	1.892E-01
AM-243	2.300E-01	4.040E-02	2.397E-02	4.040E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	6.515E-03	2.106E-02	1.830E-02	2.106E-02	NOT IDENT.
RH-101	-6.674E-03	2.014E-02	1.619E-02	2.014E-02	NOT IDENT.
SB-125	3.536E-02	5.506E-02	4.653E-02	5.506E-02	NOT IDENT.
EU-155	6.054E-02	5.848E-02	5.232E-02	5.848E-02	NOT IDENT.
BI-211	6.828E-01	6.516E-01	5.167E-01	6.516E-01	NOT IDENT.
PA-233	-5.107E-03	3.760E-02	3.105E-02	3.760E-02	NOT IDENT.
NP-236	6.010E-02	3.759E-02	2.905E-02	3.759E-02	NOT IDENT.
NP-239	1.067E-02	1.262E-01	1.068E-01	1.262E-01	NOT IDENT.
AM-241	-2.146E-02	9.580E-02	6.983E-02	9.580E-02	NOT IDENT.
CM-243	-2.037E-02	5.661E-02	4.528E-02	5.661E-02	NOT IDENT.
AM-246	-8.552E-03	6.491E-02	5.463E-02	6.491E-02	NOT IDENT.
CF-249	1.310E-02	2.408E-02	2.030E-02	2.408E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	486.6346
63.29	510.1379
74.66	577.7994
74.81	577.9332
74.81	577.9332
77.11	579.9541
77.11	579.9541
86.48	403.3203
87.30	403.7813
87.30	403.7813
92.58	406.7071
98.44	373.3876
103.76	467.4224
105.31	431.8282
129.07	448.3879
143.76	472.5531
198.00	410.2226
209.25	433.3586
228.18	344.3069
238.63	338.0498
242.00	338.8745
269.46	292.7219
270.25	292.8806
277.36	286.1153
295.22	242.2449
300.09	247.9431
312.17	249.7852
338.32	260.0012
351.93	243.9030
387.59	197.6017
409.46	180.0582
427.87	161.7571
463.00	151.6973
510.77	150.9543
583.19	135.8832
609.31	135.9747
661.66	87.8445
727.33	107.8102
763.13	107.7240
768.36	95.0901
785.37	77.9731
794.95	83.3056
806.17	76.7706
831.80	70.4921
860.56	91.3223
896.60	66.2269
911.20	59.8140
934.06	67.2747
964.77	70.6938
968.97	70.7728
1001.03	54.0698
1078.86	53.3059
1120.29	60.3424
1155.19	53.3540
1173.23	54.5166
1238.11	51.5061
1280.96	43.3246
1332.51	46.7207
1377.67	48.1407
1401.50	30.4629
1407.98	38.9745
1460.80	34.6258
1509.23	34.5661
1588.20	31.9198
1620.50	24.6973
1729.60	22.0254
1764.49	23.2103

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530031

Total Uranium Activity	1.3309E-02	ug/g
Total Uranium Counting Unc.	7.1322E-02	ug/g
Total Uranium Tpu	7.1322E-08	ug/g
Total Uranium Mda	4.4725E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:56:35.20

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530032.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 06:58:52
Sample ID        : G198530032           Sample quantity  : 1.13200E+02 GRAM
Detector name    : GAM20                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:01:31.84  0.4%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.44*	102	804	0.97	126.81	123	8	4.71E-03	53.9	
2	1	73.16*	99	738	1.24	146.22	143	16	4.57E-03	52.1	1.84E+00
3	1	74.98*	830	717	1.11	149.86	143	16	3.84E-02	7.0	
4	1	77.16*	1279	687	1.15	154.23	143	16	5.92E-02	4.8	
5	3	84.23*	187	802	1.26	168.33	164	28	8.64E-03	28.8	1.14E+00
6	3	87.34*	430	669	1.21	174.55	164	28	1.99E-02	11.4	
7	3	90.01	274	545	1.00	179.89	164	28	1.27E-02	14.9	
8	3	92.80*	475	686	1.34	185.46	164	28	2.20E-02	12.8	
9	0	99.30*	157	671	2.17	198.45	194	10	7.26E-03	33.4	
10	0	129.21	136	484	1.39	258.19	255	7	6.28E-03	28.2	
11	0	158.56	64	406	1.74	316.82	314	7	2.94E-03	54.0	
12	0	165.96	58	438	1.23	331.61	329	7	2.68E-03	61.3	
13	0	185.82*	474	835	1.27	371.28	364	14	2.19E-02	15.0	
14	0	209.21	122	653	1.03	418.01	412	10	5.65E-03	40.2	
15	0	228.08	57	415	1.54	455.73	453	8	2.62E-03	63.7	
16	4	238.64*	2104	354	1.17	476.82	469	19	9.74E-02	2.8	1.11E+00
17	4	241.61	599	438	1.69	482.75	469	19	2.77E-02	8.8	
18	0	259.03	53	370	0.80	517.55	514	9	2.47E-03	66.2	
19	0	270.12	147	541	1.21	539.72	534	12	6.80E-03	32.7	
20	0	277.92	80	403	1.79	555.30	551	10	3.72E-03	48.1	
21	0	295.34*	683	540	1.21	590.11	583	13	3.16E-02	8.4	
22	0	300.10	106	304	1.07	599.62	596	8	4.90E-03	30.2	
23	0	315.88	36	369	2.30	631.16	631	12	1.65E-03	108.9	
24	0	328.84	94	389	1.13	657.05	651	11	4.35E-03	42.1	
25	0	338.70	472	443	1.16	676.75	670	14	2.19E-02	10.6	
26	0	351.98*	1359	412	1.35	703.29	695	16	6.29E-02	4.5	
27	0	409.67	63	305	1.67	818.59	812	12	2.93E-03	56.7	
28	0	455.75	23	153	0.67	910.69	906	8	1.08E-03	96.2	
29	0	463.00	128	168	1.79	925.17	921	9	5.92E-03	20.3	
30	0	477.63	112	162	1.63	954.43	949	10	5.19E-03	23.3	
31	0	510.97*	202	324	2.01	1021.06	1014	18	9.36E-03	27.1	
32	0	558.63	37	188	3.52	1116.34	1107	14	1.70E-03	80.9	
33	0	562.95*	21	118	1.17	1124.98	1121	9	9.64E-04	108.6	
34	0	583.22*	618	233	1.38	1165.50	1157	14	2.86E-02	7.0	
35	0	609.63*	830	226	1.40	1218.30	1210	14	3.84E-02	5.5	
36	0	628.76	14	123	1.36	1256.54	1254	9	6.67E-04	140.7	
37	0	662.36	29	106	1.26	1323.72	1320	8	1.35E-03	63.7	
38	0	666.32	30	93	1.50	1331.63	1328	9	1.40E-03	61.1	

Sample ID : G198530032 Acquisition date : 11-DEC-2007 06:58:52

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	5	713.93	25	34	1.25	1426.82	1425	11	1.14E-03	39.0	9.31E-01
40	5	716.63	23	62	1.42	1432.24	1425	11	1.08E-03	59.2	
41	0	727.78*	134	101	1.19	1454.52	1449	11	6.22E-03	18.7	
42	0	745.27	32	74	1.46	1489.49	1484	9	1.46E-03	52.8	
43	0	768.78	129	173	1.77	1536.51	1529	18	5.99E-03	25.3	
44	1	782.08	35	52	1.80	1563.11	1559	26	1.63E-03	39.8	1.90E+00
45	1	786.56	52	57	1.80	1572.07	1559	26	2.42E-03	33.1	
46	1	790.52	46	47	1.64	1580.00	1559	26	2.14E-03	32.3	
47	0	795.19	97	75	1.90	1589.33	1585	11	4.50E-03	19.7	
48	0	807.67	46	142	1.92	1614.28	1606	16	2.11E-03	60.5	
49	0	861.11*	46	92	1.30	1721.17	1716	11	2.11E-03	45.9	
50	0	911.55*	460	65	1.62	1822.06	1816	14	2.13E-02	6.2	
51	0	934.78	50	69	1.98	1868.53	1862	11	2.33E-03	34.9	
52	0	948.64	9	57	1.27	1896.26	1889	9	4.31E-04	150.9	
53	0	964.99	90	60	2.36	1928.96	1923	11	4.14E-03	19.9	
54	0	969.46	281	62	1.79	1937.89	1933	10	1.30E-02	8.0	
55	0	1002.56*	3	72	1.01	2004.11	1997	11	1.29E-04	697.3	
56	0	1089.21	43	82	9.02	2177.47	2165	22	1.98E-03	56.1	
57	0	1096.50	24	58	3.64	2192.06	2186	11	1.13E-03	63.4	
58	0	1121.15*	157	107	1.20	2241.38	2234	13	7.27E-03	16.5	
59	0	1238.54	81	62	1.90	2476.29	2467	16	3.74E-03	24.8	
60	0	1254.34	14	41	1.57	2507.93	2501	9	6.25E-04	89.2	
61	0	1285.22	37	75	6.33	2569.72	2559	17	1.71E-03	57.6	
62	0	1378.48	40	37	1.31	2756.40	2752	9	1.85E-03	31.5	
63	0	1409.04	31	49	2.28	2817.59	2809	14	1.44E-03	51.0	
64	0	1461.40*	300	30	2.02	2922.39	2915	15	1.39E-02	7.6	
65	0	1511.26*	15	49	1.55	3022.23	3013	13	6.98E-04	106.7	
66	0	1551.27	16	18	3.38	3102.34	3094	12	7.41E-04	58.6	
67	0	1662.03	29	26	0.69	3324.16	3317	17	1.32E-03	44.7	
68	0	1721.12	15	5	1.82	3442.49	3439	8	6.71E-04	38.4	
69	0	1730.51	46	18	0.85	3461.30	3453	15	2.12E-03	25.3	
70	0	1765.29*	178	27	1.75	3530.98	3524	16	8.24E-03	10.9	
71	0	1791.57*	8	2	0.73	3583.61	3579	9	3.92E-04	77.7	
72	0	1872.05	13	15	2.33	3744.85	3735	15	6.02E-04	70.6	
73	0	1878.98	16	20	4.80	3758.72	3749	19	7.60E-04	68.4	
74	0	1946.51	14	6	3.26	3894.02	3887	12	6.57E-04	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]G198530032       *
* Acquisition date : 11-DEC-2007 06:58:52 Detector SN#    :                 *
* Detector ID      : GAM20                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:01:31.84     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530032           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1320E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-SEP-2007 16:22:08 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	2.415E+00	4.109E-01	2.571E-01	0.000E+00
CS-137	1.477E-02	1.848E-02	2.590E-02	0.000E+00
TL-208	2.814E-01	4.254E-02	2.616E-02	0.000E+00
BI-212	5.298E-01	1.986E-01	2.005E-01	0.000E+00
PB-212	9.610E-01	7.661E-02	4.333E-02	0.000E+00
BI-214	7.190E-01	9.014E-02	5.361E-02	0.000E+00
PB-214	9.393E-01	9.744E-02	4.851E-02	0.000E+00
RA-223	2.305E-01	1.485E-01	1.380E-01	0.000E+00
AC-228	1.016E+00	1.552E-01	9.000E-02	0.000E+00
PA-234M	2.059E-01	2.814E+00	2.666E+00	0.000E+00
TH-234	1.302E+00	3.542E-01	3.315E-01	0.000E+00
NP-236	5.967E-02	3.944E-02	4.201E-02	0.000E+00
NP-237	5.327E-01	1.338E-01	1.500E-01	0.000E+00
NP-239	1.009E-01	1.262E-01	1.834E-01	0.000E+00
AM-243	2.154E-01	3.748E-02	3.311E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	5.118E-03	1.607E-02	2.716E-02	0.000E+00	NOT IDENT.
RH-101	-5.086E-03	1.653E-02	2.571E-02	0.000E+00	NOT IDENT.
SB-125	-1.549E-02	4.098E-02	6.643E-02	0.000E+00	NOT IDENT.
EU-155	1.621E-02	4.580E-02	7.897E-02	0.000E+00	NOT IDENT.
PO-209	3.144E-01	3.117E+00	5.253E+00	0.000E+00	NOT IDENT.
BI-211	-3.102E-01	4.365E-01	6.954E-01	0.000E+00	NOT IDENT.
PA-233	6.921E-03	3.081E-02	4.854E-02	0.000E+00	NOT IDENT.
U-235	-6.052E-02	1.037E-01	1.608E-01	0.000E+00	NOT IDENT.
AM-241	4.022E-02	5.785E-02	8.839E-02	0.000E+00	NOT IDENT.
CM-243	3.118E-02	4.405E-02	7.040E-02	0.000E+00	NOT IDENT.
AM-246	2.373E-02	5.804E-02	9.089E-02	0.000E+00	NOT IDENT.
CF-249	5.709E-03	1.820E-02	3.072E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:56:36.81

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530032.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 06:58:52
Sample ID        : G198530032           Sample quantity  : 1.13200E+02 GRAM
Detector name    : GAM20                Detector geometry: CAN
Elapsed live time: 0 06:00:00.00        Elapsed real time: 0 06:01:31.84  0.4%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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	1460.80	300	10.66*	1.286E+00	2.415E+00	2.415E+00	17.36
CS-137	661.66	29	85.10*	2.580E+00	1.472E-02	1.477E-02	127.61
TL-208	277.36	80	6.31	5.038E+00	2.797E-01	2.797E-01	96.37
	510.77	202	22.60	3.200E+00	3.089E-01	3.089E-01	54.56
	583.19	618	84.50*	2.873E+00	2.814E-01	2.814E-01	15.42
	763.13	------	1.81	2.279E+00	------	Line Not Found	------
	860.56	46	12.42	2.045E+00	1.985E-01	1.985E-01	92.32
BI-212	727.33	134	11.80*	2.377E+00	5.298E-01	5.298E-01	38.25
	785.37	52	1.10	2.219E+00	2.366E+00	2.366E+00	66.80
	1620.50	------	1.49	1.195E+00	------	Line Not Found	------
PB-212	74.81	830	10.40	6.244E+00	1.413E+00	1.413E+00	17.75
	77.11	1279	17.50	6.458E+00	1.251E+00	1.251E+00	14.55
	87.30	430	7.81	7.201E+00	8.457E-01	8.457E-01	25.63
	238.63	2104	43.30*	5.590E+00	9.610E-01	9.610E-01	8.13
	300.09	106	3.28	4.773E+00	7.471E-01	7.471E-01	60.73
BI-214	609.31	830	46.10*	2.769E+00	7.190E-01	7.190E-01	12.79
	768.36	129	4.94	2.264E+00	1.279E+00	1.280E+00	51.19
	806.17	46	1.22	2.167E+00	1.909E+00	1.910E+00	121.37
	934.06	50	3.03	1.897E+00	9.673E-01	9.674E-01	70.37
	1120.29	157	15.10	1.608E+00	7.144E-01	7.144E-01	33.62
	1155.19	------	1.63	1.566E+00	------	Line Not Found	------
	1238.11	81	5.79	1.473E+00	1.046E+00	1.046E+00	49.95
	1280.96	------	1.43	1.431E+00	------	Line Not Found	------
	1377.67	40	4.00	1.346E+00	8.189E-01	8.190E-01	63.61
	1401.50	------	1.27	1.329E+00	------	Line Not Found	------
	1407.98	31	2.15	1.323E+00	1.209E+00	1.209E+00	102.35
	1509.23	------	2.11	1.256E+00	------	Line Not Found	------
	1729.60	46	2.92	1.149E+00	1.509E+00	1.509E+00	51.09
	1764.49	178	15.40	1.136E+00	1.124E+00	1.124E+00	22.71
PB-214	74.81	830	6.44	6.244E+00	2.281E+00	2.281E+00	17.75
	77.11	1279	10.80	6.458E+00	2.026E+00	2.027E+00	14.55
	87.30	430	4.84	7.201E+00	1.365E+00	1.365E+00	25.63

Sample ID : G198530032 Acquisition date : 11-DEC-2007 06:58:52

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	599	7.43	5.544E+00	1.607E+00	1.607E+00	18.59
	295.22	683	19.30	4.827E+00	8.109E-01	8.109E-01	17.80
	351.93	1359	37.60*	4.255E+00	9.392E-01	9.393E-01	10.59
RA-223	269.46	147	13.70*	5.138E+00	2.305E-01	2.305E-01	65.73
AC-228	129.07	136	2.42	7.643E+00	8.109E-01	8.109E-01	56.70
	209.25	122	3.89	6.087E+00	5.702E-01	5.702E-01	80.52
	270.25	147	3.46	5.138E+00	9.128E-01	9.128E-01	65.73
	338.32	472	11.27	4.376E+00	1.058E+00	1.058E+00	21.87
	409.46	63	1.92	3.800E+00	9.582E-01	9.582E-01	113.51
	463.00	128	4.40	3.459E+00	9.292E-01	9.292E-01	41.00
	794.95	97	4.25	2.197E+00	1.151E+00	1.151E+00	40.36
	911.20	460	25.80*	1.941E+00	1.016E+00	1.016E+00	15.59
	964.77	90	4.99	1.843E+00	1.076E+00	1.076E+00	40.70
	968.97	281	15.80	1.835E+00	1.071E+00	1.071E+00	18.15
	1588.20	------	3.22	1.211E+00	------	Line Not Found	------
PA-234M	1001.03	3	0.84*	1.780E+00	2.059E-01	2.059E-01	1394.56
TH-234	63.29	102	4.80	4.750E+00	4.929E-01	4.929E-01	108.35
	92.58	475	5.41*	7.451E+00	1.302E+00	1.302E+00	27.77
NP-236	98.44	157	38.00*	7.643E+00	5.967E-02	5.967E-02	67.45
NP-237	86.48	430	12.40*	7.201E+00	5.327E-01	5.327E-01	25.63
NP-239	228.18	57	10.76*	5.759E+00	1.009E-01	1.009E-01	127.55
AM-243	74.66	830	68.20*	6.244E+00	2.154E-01	2.154E-01	17.75

Flag: "*" = Keyline

Sample ID : G198530032 Acquisition date : 11-DEC-2007 06:58:52

Total number of lines in spectrum	74	
Number of unidentified lines	33	
Number of lines tentatively identified by NID	41	55.41%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.415E+00	2.415E+00	0.419E+00	17.36	
CS-137	9.47E+08S	1.00	1.472E-02	1.477E-02	1.885E-02	127.61	
TL-208	4.43E+17S	1.00	2.814E-01	2.814E-01	0.434E-01	15.42	
BI-212	4.43E+17S	1.00	5.298E-01	5.298E-01	2.026E-01	38.25	
PB-212	4.43E+17S	1.00	9.610E-01	9.610E-01	0.782E-01	8.13	
BI-214	5.05E+10S	1.00	7.190E-01	7.190E-01	0.920E-01	12.79	
PB-214	5.05E+10S	1.00	9.392E-01	9.393E-01	0.994E-01	10.59	
RA-223	1.04E+12S	1.00	2.305E-01	2.305E-01	1.515E-01	65.73	
AC-228	4.43E+17S	1.00	1.016E+00	1.016E+00	0.158E+00	15.59	
PA-234M	1.41E+17S	1.00	2.059E-01	2.059E-01	28.72E-01	1394.56	
TH-234	1.41E+17S	1.00	1.302E+00	1.302E+00	0.361E+00	27.77	
NP-236	4.89E+12S	1.00	5.967E-02	5.967E-02	4.025E-02	67.45	
NP-237	6.75E+13S	1.00	5.327E-01	5.327E-01	1.365E-01	25.63	
NP-239	2.33E+11S	1.00	1.009E-01	1.009E-01	1.288E-01	127.55	
AM-243	2.33E+11S	1.00	2.154E-01	2.154E-01	0.382E-01	17.75	
		Total Activity :	9.523E+00	9.523E+00			
		Grand Total Activity :	9.523E+00	9.523E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530032 Acquisition date : 11-DEC-2007 06:58:52

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	73.16	99	738	1.24	146.22	143	16	4.57E-03	****	6.05E+00	
3	84.23	187	802	1.26	168.33	164	28	8.64E-03	57.5	7.02E+00	
3	90.01	274	545	1.00	179.89	164	28	1.27E-02	29.7	7.34E+00	
0	158.56	64	406	1.74	316.82	314	7	2.94E-03	****	7.10E+00	
0	165.96	58	438	1.23	331.61	329	7	2.68E-03	****	6.95E+00	
0	185.82	474	835	1.27	371.28	364	14	2.19E-02	30.0	6.54E+00	
0	259.03	53	370	0.80	517.55	514	9	2.47E-03	****	5.29E+00	
0	315.88	36	369	2.30	631.16	631	12	1.65E-03	****	4.60E+00	
0	328.84	94	389	1.13	657.05	651	11	4.35E-03	84.2	4.47E+00	
0	455.75	23	153	0.67	910.69	906	8	1.08E-03	****	3.50E+00	
0	477.63	112	162	1.63	954.43	949	10	5.19E-03	46.6	3.38E+00	
0	558.63	37	188	3.52	1116.34	1107	14	1.70E-03	****	2.98E+00	
0	562.95	21	118	1.17	1124.98	1121	9	9.64E-04	****	2.96E+00	
0	628.76	14	123	1.36	1256.54	1254	9	6.67E-04	****	2.70E+00	
0	666.32	30	93	1.50	1331.63	1328	9	1.40E-03	****	2.57E+00	
5	713.93	25	34	1.25	1426.82	1425	11	1.14E-03	78.1	2.42E+00	
5	716.63	23	62	1.42	1432.24	1425	11	1.08E-03	****	2.41E+00	
0	745.27	32	74	1.46	1489.49	1484	9	1.46E-03	****	2.33E+00	
1	782.08	35	52	1.80	1563.11	1559	26	1.63E-03	79.6	2.23E+00	
1	790.52	46	47	1.64	1580.00	1559	26	2.14E-03	64.6	2.21E+00	
0	948.64	9	57	1.27	1896.26	1889	9	4.31E-04	****	1.87E+00	
0	1089.21	43	82	9.02	2177.47	2165	22	1.98E-03	****	1.65E+00	
0	1096.50	24	58	3.64	2192.06	2186	11	1.13E-03	****	1.64E+00	
0	1254.34	14	41	1.57	2507.93	2501	9	6.25E-04	****	1.46E+00	
0	1285.22	37	75	6.33	2569.72	2559	17	1.71E-03	****	1.43E+00	
0	1511.26	15	49	1.55	3022.23	3013	13	6.98E-04	****	1.25E+00	
0	1551.27	16	18	3.38	3102.34	3094	12	7.41E-04	****	1.23E+00	
0	1662.03	29	26	0.69	3324.16	3317	17	1.32E-03	89.4	1.18E+00	
0	1721.12	15	5	1.82	3442.49	3439	8	6.71E-04	76.8	1.15E+00	
0	1791.57	8	2	0.73	3583.61	3579	9	3.92E-04	****	1.13E+00	
0	1872.05	13	15	2.33	3744.85	3735	15	6.02E-04	****	1.10E+00	
0	1878.98	16	20	4.80	3758.72	3749	19	7.60E-04	****	1.10E+00	
0	1946.51	14	6	3.26	3894.02	3887	12	6.57E-04	86.8	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530032            *
* Acquisition date : 11-DEC-2007 06:58:52 Detector SN#    :                 *
* Detector ID      : GAM20                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 06:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 06:01:31.84     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530032           Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.1320E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  7-SEP-2007 16:22:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.415E+00	4.109E-01	1.286E-01	4.109E-01
CS-137	1.477E-02	1.848E-02	1.296E-02	1.848E-02
TL-208	2.814E-01	4.254E-02	1.309E-02	4.254E-02
BI-212	5.298E-01	1.986E-01	1.003E-01	1.986E-01
PB-212	9.610E-01	7.661E-02	2.168E-02	7.661E-02
BI-214	7.190E-01	9.014E-02	2.682E-02	9.014E-02
PB-214	9.393E-01	9.744E-02	2.427E-02	9.744E-02
RA-223	2.305E-01	1.485E-01	6.904E-02	1.485E-01
AC-228	1.016E+00	1.552E-01	4.503E-02	1.552E-01
PA-234M	2.059E-01	2.814E+00	1.334E+00	2.814E+00
TH-234	1.302E+00	3.542E-01	1.659E-01	3.542E-01
NP-236	5.967E-02	3.944E-02	2.102E-02	3.944E-02
NP-237	5.327E-01	1.338E-01	7.506E-02	1.338E-01
NP-239	1.009E-01	1.262E-01	9.174E-02	1.262E-01
AM-243	2.154E-01	3.748E-02	1.656E-02	3.748E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	5.118E-03	1.607E-02	1.359E-02	1.607E-02	NOT IDENT.
RH-101	-5.086E-03	1.653E-02	1.286E-02	1.653E-02	NOT IDENT.
SB-125	-1.549E-02	4.098E-02	3.323E-02	4.098E-02	NOT IDENT.
EU-155	1.621E-02	4.580E-02	3.951E-02	4.580E-02	NOT IDENT.
PO-209	3.144E-01	3.117E+00	2.628E+00	3.117E+00	NOT IDENT.
BI-211	-3.102E-01	4.365E-01	3.479E-01	4.365E-01	NOT IDENT.
PA-233	6.921E-03	3.081E-02	2.428E-02	3.081E-02	NOT IDENT.
U-235	-6.052E-02	1.037E-01	8.045E-02	1.037E-01	NOT IDENT.
AM-241	4.022E-02	5.785E-02	4.422E-02	5.785E-02	NOT IDENT.
CM-243	3.118E-02	4.405E-02	3.522E-02	4.405E-02	NOT IDENT.
AM-246	2.373E-02	5.804E-02	4.547E-02	5.804E-02	NOT IDENT.
CF-249	5.709E-03	1.820E-02	1.537E-02	1.820E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	562.6192
63.29	665.6502
74.66	713.5754
74.81	713.7187
74.81	713.7187
77.11	715.8984
77.11	715.8984
86.48	644.1136
87.30	644.7605
87.30	644.7605
92.58	648.8483
98.44	539.7328
103.76	515.6200
105.31	561.4063
129.07	576.0647
143.76	573.0258
198.00	443.5056
209.25	466.6745
228.18	477.2371
238.63	407.1260
242.00	408.0083
269.46	351.1567
270.25	351.3179
277.36	354.4039
295.22	319.1727
300.09	302.1728
312.17	269.8370
338.32	274.6197
351.93	224.3465
387.59	227.1889
409.46	225.1918
427.87	196.7686
463.00	179.9781
510.77	158.8443
583.19	151.6582
609.31	176.2278
661.66	121.1177
727.33	119.4469
763.13	85.9978
768.36	103.3526
785.37	71.8527
794.95	44.2112
806.17	79.8313
831.80	108.1910
860.56	83.3598
896.60	86.8461
911.20	77.0372
934.06	73.4063
964.77	73.6263
968.97	70.2736
1001.03	60.4567
1078.86	57.2863
1120.29	71.3576
1155.19	67.6081
1173.23	57.0966
1238.11	60.0569
1280.96	61.3619
1332.51	42.6477
1377.67	42.0795
1401.50	37.0349
1407.98	47.9619
1460.80	47.4752
1509.23	44.3289
1588.20	56.3055
1620.50	34.1626
1729.60	19.8690
1764.49	35.9604

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530032

Total Uranium Activity	-2.8001E-02	ug/g
Total Uranium Counting Unc.	4.7983E-02	ug/g
Total Uranium Tpu	4.7983E-08	ug/g
Total Uranium Mda	3.7225E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:57:12.09

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471369.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 11-DEC-2007 07:15:31
Sample ID        : G1201471369          Sample quantity  : 1.90000E+02 GRAM
Detector name    : GAM03                Detector geometry: CAN
Elapsed live time: 0 02:56:18.50        Elapsed real time: 0 02:56:19.48  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	121.17	43	162	1.81	242.10	235	24	4.03E-03	60.9	2.17E+00
2	3	127.29	38	141	1.83	254.32	235	24	3.55E-03	57.6	
3	0	167.43	36	123	2.31	334.51	329	10	3.40E-03	60.3	
4	0	185.76*	41	165	1.44	371.14	364	12	3.90E-03	74.7	
5	0	238.24*	61	126	1.54	475.98	470	11	5.76E-03	43.1	
6	0	247.23	21	64	0.87	493.95	490	7	1.94E-03	68.6	
7	0	294.75*	5	85	1.25	588.89	584	10	4.42E-04	420.0	
8	0	330.91	19	32	1.37	661.15	658	6	1.78E-03	52.7	
9	0	351.73*	38	102	1.40	702.77	696	15	3.61E-03	65.4	
10	0	489.33	13	38	1.12	977.77	970	9	1.19E-03	94.6	
11	0	511.33*	14	57	3.11	1021.75	1014	19	1.29E-03	195.1	
12	0	527.83	26	54	3.78	1054.72	1045	15	2.48E-03	64.9	
13	0	583.29*	11	55	2.39	1165.60	1154	17	1.01E-03	186.2	
14	0	609.58*	24	58	1.52	1218.15	1210	13	2.24E-03	79.3	
15	10	636.20	16	22	3.98	1271.38	1267	15	1.49E-03	52.2	3.78E+00
16	10	639.01	20	14	2.11	1277.00	1267	15	1.93E-03	44.1	
17	0	758.73	18	23	2.11	1516.37	1504	18	1.73E-03	65.2	
18	0	804.29	31	22	3.58	1607.48	1600	17	2.97E-03	38.1	
19	0	841.43	9	32	0.89	1681.75	1670	13	8.28E-04	138.3	
20	0	911.47*	19	27	0.62	1821.83	1816	17	1.80E-03	73.6	
21	0	941.43	8	21	0.53	1881.75	1872	14	7.56E-04	126.6	
22	0	1021.38	10	8	1.53	2041.67	2035	11	9.37E-04	64.3	
23	0	1121.60	10	12	1.50	2242.17	2237	8	9.17E-04	72.9	
24	0	1149.46	8	29	8.88	2297.92	2280	23	7.75E-04	173.4	
25	0	1174.50	4	2	0.95	2348.02	2343	8	3.94E-04	75.9	
26	0	1238.56	17	9	1.81	2476.20	2470	12	1.63E-03	42.2	
27	0	1256.33	5	6	1.07	2511.77	2505	9	4.98E-04	97.1	
28	0	1313.94	5	14	4.10	2627.04	2615	16	4.43E-04	194.5	
29	0	1456.27	8	6	0.75	2911.93	2905	11	7.09E-04	70.7	
30	0	1603.55	12	3	3.47	3206.77	3200	13	1.11E-03	43.2	
31	4	1762.47	15	7	2.99	3525.00	3516	18	1.45E-03	52.3	1.24E+00
32	4	1765.47	11	5	1.96	3531.00	3516	18	1.00E-03	35.9	

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]G1201471369      *
* Acquisition date : 11-DEC-2007 07:15:31 Detector SN#    :                 *
* Detector ID      : GAM03                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 02:56:18.50     Abundance limit : 75.000          *
* Elapsed real time:    0 02:56:19.48     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471369          Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.9000E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 28-MAR-2007 19:01:41 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)	
TL-208	6.690E-03	2.442E-02	2.424E-02	0.000E+00
BI-214	2.832E-02	4.404E-02	4.219E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
K-40	-8.383E-02		1.917E-01	2.464E-01	0.000E+00	NOT IDENT.
CO-60	4.171E-03		6.211E-03	1.983E-02	0.000E+00	FAIL ABUN
RH-101	-1.307E-03		1.167E-02	1.951E-02	0.000E+00	NOT IDENT.
SB-125	3.214E-03		3.061E-02	5.647E-02	0.000E+00	NOT IDENT.
CS-137	9.205E-03		1.296E-02	2.422E-02	0.000E+00	NOT IDENT.
EU-155	-1.347E-02		3.114E-02	5.758E-02	0.000E+00	NOT IDENT.
PO-209	-4.020E-01		2.764E+00	4.732E+00	0.000E+00	NOT IDENT.
BI-211	1.225E-01		3.639E-01	5.816E-01	0.000E+00	NOT IDENT.
BI-212	4.053E-02		9.029E-02	1.690E-01	0.000E+00	NOT IDENT.
PB-212	3.780E-02		3.204E-02	4.572E-02	0.000E+00	FAIL ABUN
PB-214	3.607E-02		4.633E-02	5.609E-02	0.000E+00	FAIL ABUN
RA-223	-1.130E-02		5.717E-02	1.035E-01	0.000E+00	NOT IDENT.
AC-228	5.834E-02		8.437E-02	1.096E-01	0.000E+00	FAIL ABUN
PA-233	1.688E-02		2.114E-02	4.052E-02	0.000E+00	NOT IDENT.
PA-234M	1.299E+00		1.503E+00	2.864E+00	0.000E+00	NOT IDENT.
TH-234	-1.068E-01		2.154E-01	3.862E-01	0.000E+00	NOT IDENT.
U-235	3.060E-02		7.033E-02	1.227E-01	0.000E+00	NOT IDENT.
NP-236	-2.970E-02		2.111E-02	3.226E-02	0.000E+00	NOT IDENT.
NP-237	-4.813E-02		6.983E-02	1.220E-01	0.000E+00	NOT IDENT.
NP-239	-3.677E-02		7.020E-02	1.267E-01	0.000E+00	NOT IDENT.
AM-241	-3.398E-02		4.327E-02	8.205E-02	0.000E+00	NOT IDENT.
AM-243	-3.812E-04		1.465E-02	2.694E-02	0.000E+00	NOT IDENT.
CM-243	-1.399E-02		2.890E-02	5.336E-02	0.000E+00	NOT IDENT.
AM-246	9.666E-03		4.532E-02	8.191E-02	0.000E+00	NOT IDENT.
CF-249	-4.999E-03		1.467E-02	2.516E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:57:12.91

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471369.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 11-DEC-2007 07:15:31
Sample ID        : G1201471369          Sample quantity  : 1.90000E+02 GRAM
Detector name    : GAM03                Detector geometry: CAN
Elapsed live time: 0 02:56:18.50        Elapsed real time: 0 02:56:19.48  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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
TL-208	277.36	------	6.31	4.504E+00	------	Line Not Found	------
	510.77	14	22.60	2.826E+00	2.872E-02	2.872E-02	390.35
	583.19	11	84.50*	2.534E+00	6.690E-03	6.690E-03	372.51
	763.13	------	1.81	2.003E+00	------	Line Not Found	------
	860.56	------	12.42	1.795E+00	------	Line Not Found	------
BI-214	609.31	24	46.10*	2.441E+00	2.832E-02	2.832E-02	158.69
	768.36	------	4.94	1.991E+00	------	Line Not Found	------
	806.17	31	1.22	1.910E+00	1.814E+00	1.814E+00	76.74
	934.06	------	3.03	1.664E+00	------	Line Not Found	------
	1120.29	10	15.10	1.406E+00	6.147E-02	6.147E-02	145.96
	1155.19	------	1.63	1.369E+00	------	Line Not Found	------
	1238.11	17	5.79	1.287E+00	3.115E-01	3.115E-01	84.58
	1280.96	------	1.43	1.251E+00	------	Line Not Found	------
	1377.67	------	4.00	1.178E+00	------	Line Not Found	------
	1401.50	------	1.27	1.162E+00	------	Line Not Found	------
	1407.98	------	2.15	1.158E+00	------	Line Not Found	------
	1509.23	------	2.11	1.100E+00	------	Line Not Found	------
	1729.60	------	2.92	1.013E+00	------	Line Not Found	------
	1764.49	11	15.40	1.003E+00	9.239E-02	9.239E-02	72.03

Flag: "*" = Keyline

Sample ID : G1201471369 Acquisition date : 11-DEC-2007 07:15:31

Total number of lines in spectrum 32
Number of unidentified lines 19
Number of lines tentatively identified by NID 13 40.63%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TL-208	4.43E+17S	1.00	6.690E-03	6.690E-03	24.92E-03	372.51	
BI-214	5.05E+10S	1.00	2.832E-02	2.832E-02	4.494E-02	158.69	
		Total Activity :	3.501E-02	3.501E-02			
		Grand Total Activity :	3.501E-02	3.501E-02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471369 Acquisition date : 11-DEC-2007 07:15:31

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	121.17	43	162	1.81	242.10	235	24	4.03E-03	****	6.79E+00	
3	127.29	38	141	1.83	254.32	235	24	3.55E-03	****	6.77E+00	T
0	167.43	36	123	2.31	334.51	329	10	3.40E-03	****	6.20E+00	
0	185.76	41	165	1.44	371.14	364	12	3.90E-03	****	5.87E+00	
0	238.24	61	126	1.54	475.98	470	11	5.76E-03	86.3	5.01E+00	T
0	247.23	21	64	0.87	493.95	490	7	1.94E-03	****	4.88E+00	
0	294.75	5	85	1.25	588.89	584	10	4.42E-04	****	4.31E+00	T
0	330.91	19	32	1.37	661.15	658	6	1.78E-03	****	3.96E+00	
0	351.73	38	102	1.40	702.77	696	15	3.61E-03	****	3.78E+00	T
0	489.33	13	38	1.12	977.77	970	9	1.19E-03	****	2.93E+00	
0	527.83	26	54	3.78	1054.72	1045	15	2.48E-03	****	2.75E+00	
10	636.20	16	22	3.98	1271.38	1267	15	1.49E-03	****	2.35E+00	
10	639.01	20	14	2.11	1277.00	1267	15	1.93E-03	88.1	2.34E+00	
0	758.73	18	23	2.11	1516.37	1504	18	1.73E-03	****	2.01E+00	
0	841.43	9	32	0.89	1681.75	1670	13	8.28E-04	****	1.83E+00	
0	911.47	19	27	0.62	1821.83	1816	17	1.80E-03	****	1.70E+00	T
0	941.43	8	21	0.53	1881.75	1872	14	7.56E-04	****	1.65E+00	
0	1021.38	10	8	1.53	2041.67	2035	11	9.37E-04	****	1.53E+00	
0	1149.46	8	29	8.88	2297.92	2280	23	7.75E-04	****	1.38E+00	
0	1174.50	4	2	0.95	2348.02	2343	8	3.94E-04	****	1.35E+00	T
0	1256.33	5	6	1.07	2511.77	2505	9	4.98E-04	****	1.27E+00	
0	1313.94	5	14	4.10	2627.04	2615	16	4.43E-04	****	1.22E+00	
0	1456.27	8	6	0.75	2911.93	2905	11	7.09E-04	****	1.13E+00	
0	1603.55	12	3	3.47	3206.77	3200	13	1.11E-03	86.4	1.06E+00	
4	1762.47	15	7	2.99	3525.00	3516	18	1.45E-03	****	1.00E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471369          *
* Acquisition date : 11-DEC-2007 07:15:31 Detector SN#    :                *
* Detector ID      : GAM03                Sensitivity     : 3.000          *
* Geometry         : CAN                  Energy tolerance: 2.000          *
* Elapsed live time:    0 02:56:18.50     Abundance limit : 75.000         *
* Elapsed real time:    0 02:56:19.48     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471369          Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.9000E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 28-MAR-2007 19:01:41 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	LC (pCi/GRAM)	TPU
TL-208	6.690E-03	2.442E-02	1.213E-02	2.442E-02
BI-214	2.832E-02	4.404E-02	2.111E-02	4.404E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
K-40	-8.383E-02	1.917E-01	1.233E-01	1.917E-01	NOT IDENT.
CO-60	4.171E-03	6.211E-03	9.921E-03	6.211E-03	FAIL ABUN
RH-101	-1.307E-03	1.167E-02	9.762E-03	1.167E-02	NOT IDENT.
SB-125	3.214E-03	3.061E-02	2.825E-02	3.061E-02	NOT IDENT.
CS-137	9.205E-03	1.296E-02	1.212E-02	1.296E-02	NOT IDENT.
EU-155	-1.347E-02	3.114E-02	2.881E-02	3.114E-02	NOT IDENT.
PO-209	-4.020E-01	2.764E+00	2.367E+00	2.764E+00	NOT IDENT.
BI-211	1.225E-01	3.639E-01	2.910E-01	3.639E-01	NOT IDENT.
BI-212	4.053E-02	9.029E-02	8.454E-02	9.029E-02	NOT IDENT.
PB-212	3.780E-02	3.204E-02	2.287E-02	3.204E-02	FAIL ABUN
PB-214	3.607E-02	4.633E-02	2.806E-02	4.633E-02	FAIL ABUN
RA-223	-1.130E-02	5.717E-02	5.180E-02	5.717E-02	NOT IDENT.
AC-228	5.834E-02	8.437E-02	5.485E-02	8.437E-02	FAIL ABUN
PA-233	1.688E-02	2.114E-02	2.027E-02	2.114E-02	NOT IDENT.
PA-234M	1.299E+00	1.503E+00	1.433E+00	1.503E+00	NOT IDENT.
TH-234	-1.068E-01	2.154E-01	1.932E-01	2.154E-01	NOT IDENT.
U-235	3.060E-02	7.033E-02	6.139E-02	7.033E-02	NOT IDENT.
NP-236	-2.970E-02	2.111E-02	1.614E-02	2.111E-02	NOT IDENT.
NP-237	-4.813E-02	6.983E-02	6.103E-02	6.983E-02	NOT IDENT.
NP-239	-3.677E-02	7.020E-02	6.338E-02	7.020E-02	NOT IDENT.
AM-241	-3.398E-02	4.327E-02	4.105E-02	4.327E-02	NOT IDENT.
AM-243	-3.812E-04	1.465E-02	1.348E-02	1.465E-02	NOT IDENT.
CM-243	-1.399E-02	2.890E-02	2.669E-02	2.890E-02	NOT IDENT.
AM-246	9.666E-03	4.532E-02	4.098E-02	4.532E-02	NOT IDENT.
CF-249	-4.999E-03	1.467E-02	1.259E-02	1.467E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	147.0305
63.29	138.6766
74.66	143.7498
74.81	145.6579
74.81	145.6579
77.11	150.2042
77.11	150.2042
86.48	167.7822
87.30	162.3562
87.30	162.3562
92.58	165.1820
98.44	157.4194
103.76	147.2352
105.31	144.7057
129.07	143.9761
143.76	129.2024
198.00	126.8587
209.25	138.7564
228.18	120.0369
238.63	124.2697
242.00	105.5272
269.46	96.6614
270.25	104.6323
277.36	91.4340
295.22	102.7278
300.09	94.7222
312.17	70.7755
338.32	106.9493
351.93	82.6836
387.59	83.8681
409.46	65.4632
427.87	63.4989
463.00	47.7804
510.77	50.1826
583.19	61.4734
609.31	51.6320
661.66	37.3021
727.33	32.9529
763.13	31.7946
768.36	30.6674
785.37	31.8519
794.95	29.8461
806.17	32.3681
831.80	24.0967
860.56	27.8501
896.60	37.3065
911.20	31.9329
934.06	30.4104
964.77	32.0347
968.97	23.8026
1001.03	20.9274
1078.86	23.4825
1120.29	23.7892
1155.19	22.2267
1173.23	22.2391
1238.11	20.6911
1280.96	22.9340
1332.51	20.2228
1377.67	28.6494
1401.50	16.4717
1407.98	18.5614
1460.80	16.7183
1509.23	20.0872
1588.20	15.3164
1620.50	16.3936
1729.60	14.8140
1764.49	8.9541

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471369

Total Uranium Activity	1.4157E-02	ug/g
Total Uranium Counting Unc.	3.2541E-02	ug/g
Total Uranium Tpu	3.2541E-08	ug/g
Total Uranium Mda	2.8407E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:57:44.65

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471370.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 08:51:08
Sample ID        : G1201471370          Sample quantity  : 1.23310E+02 GRAM
Detector name    : GAM16                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.72  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.44*	45	535	1.19	93.10	89	9	3.11E-03	99.5	
2	0	57.44	37	289	0.52	115.10	114	5	2.55E-03	71.2	
3	0	63.27*	116	700	0.79	126.75	122	10	8.03E-03	46.2	
4	2	74.85*	643	530	1.18	149.90	142	19	4.46E-02	7.5	3.93E+00
5	2	77.20*	971	533	1.37	154.62	142	19	6.75E-02	5.7	
6	3	80.95	69	182	1.17	162.12	161	34	4.82E-03	27.3	2.28E+00
7	3	84.15*	164	533	1.54	168.52	161	34	1.14E-02	27.5	
8	3	87.27*	427	458	1.35	174.75	161	34	2.96E-02	10.3	
9	3	90.06	313	498	1.52	180.34	161	34	2.17E-02	14.7	
10	3	92.81*	399	481	1.50	185.83	161	34	2.77E-02	12.8	
11	0	105.73	70	278	1.49	211.66	209	6	4.85E-03	39.8	
12	0	115.43	4	463	0.65	231.08	228	8	2.61E-04	995.6	
13	0	128.74	58	487	1.54	257.68	255	8	4.05E-03	66.6	
14	0	140.09	57	369	1.51	280.39	276	8	3.99E-03	59.6	
15	0	144.19*	125	442	2.76	288.58	284	10	8.66E-03	34.0	
16	0	154.63	107	464	1.32	309.48	305	10	7.45E-03	38.7	
17	0	163.98	52	372	0.71	328.16	324	8	3.58E-03	66.5	
18	0	185.75*	311	580	1.22	371.71	366	13	2.16E-02	17.8	
19	0	209.42	203	468	1.04	419.05	414	11	1.41E-02	21.9	
20	3	238.67*	2100	232	1.17	477.56	469	21	1.46E-01	2.6	1.79E+00
21	3	241.47	473	375	1.95	483.16	469	21	3.29E-02	13.3	
22	0	270.10	227	326	1.69	540.42	535	12	1.58E-02	17.2	
23	0	277.56	91	249	0.82	555.34	551	9	6.31E-03	33.0	
24	0	295.08*	543	312	1.37	590.39	583	14	3.77E-02	8.4	
25	0	299.97	146	149	1.45	600.16	597	7	1.01E-02	16.1	
26	0	307.22	17	262	0.58	614.67	609	10	1.20E-03	177.4	
27	0	327.92	99	222	1.21	656.06	653	10	6.90E-03	29.5	
28	0	338.22	395	293	1.38	676.66	670	13	2.75E-02	10.2	
29	0	351.97*	884	271	1.40	704.17	697	14	6.14E-02	5.5	
30	0	395.18	47	158	0.85	790.61	787	9	3.23E-03	50.8	
31	0	409.77	76	244	1.74	819.79	812	14	5.28E-03	45.4	
32	0	462.85	110	189	1.79	925.97	921	13	7.60E-03	27.6	
33	0	511.00*	183	179	1.96	1022.28	1015	17	1.27E-02	22.8	
34	0	583.10*	568	163	1.28	1166.52	1160	13	3.94E-02	6.5	
35	0	609.34*	644	152	1.47	1219.00	1211	16	4.47E-02	6.0	
36	0	664.42	94	153	4.66	1329.21	1318	22	6.50E-03	35.3	
37	0	718.81	13	75	1.53	1438.02	1436	8	8.78E-04	121.6	
38	0	727.00*	131	99	1.64	1454.39	1449	11	9.11E-03	18.0	

Sample ID : G1201471370 Acquisition date : 11-DEC-2007 08:51:08

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	768.03	67	170	3.81	1536.50	1530	19	4.67E-03	47.7	
40	0	786.32	62	67	4.64	1573.08	1568	12	4.27E-03	29.8	
41	0	794.60	57	53	1.14	1589.65	1585	9	3.94E-03	26.8	
42	0	831.12	25	63	0.63	1662.71	1655	12	1.73E-03	66.6	
43	0	861.15	81	70	1.38	1722.80	1715	14	5.62E-03	25.0	
44	0	911.08*	402	101	1.51	1822.69	1817	15	2.79E-02	7.7	
45	0	933.74	38	43	1.86	1868.04	1863	11	2.62E-03	37.7	
46	0	941.13	30	22	1.35	1882.83	1877	10	2.08E-03	34.8	
47	1	964.32	76	55	2.12	1929.23	1923	36	5.27E-03	23.2	1.64E+00
48	1	968.73*	252	44	1.99	1938.06	1923	36	1.75E-02	9.0	
49	0	1001.01*	40	71	2.42	2002.64	1992	17	2.81E-03	53.9	
50	0	1060.70	9	57	0.84	2122.09	2113	11	6.44E-04	161.7	
51	0	1089.61	19	47	1.52	2179.94	2174	11	1.31E-03	73.9	
52	0	1097.03	52	80	8.61	2194.78	2184	24	3.62E-03	47.0	
53	0	1119.82*	151	64	1.70	2240.38	2232	16	1.05E-02	14.9	
54	0	1155.06	65	44	8.70	2310.90	2303	20	4.51E-03	28.2	
55	0	1245.73	48	136	7.99	2492.35	2468	34	3.35E-03	77.9	
56	0	1282.03	39	43	1.00	2565.00	2555	19	2.73E-03	42.9	
57	1	1308.01	18	36	2.08	2617.00	2610	17	1.27E-03	70.9	3.56E+00
58	1	1310.51	21	20	2.09	2622.00	2610	17	1.46E-03	44.1	
59	0	1377.65*	46	15	1.74	2756.36	2751	12	3.19E-03	24.0	
60	0	1401.38	22	23	2.09	2803.86	2799	11	1.55E-03	45.9	
61	0	1407.73	28	28	2.50	2816.58	2810	11	1.91E-03	41.6	
62	0	1460.32*	398	56	2.15	2921.84	2912	22	2.76E-02	7.1	
63	0	1495.69	20	16	1.59	2992.62	2985	13	1.38E-03	47.4	
64	0	1548.77	19	10	1.01	3098.86	3094	12	1.29E-03	43.5	
65	4	1583.76	14	1	2.10	3168.90	3167	14	1.00E-03	27.8	1.56E+00
66	4	1587.50	45	5	1.90	3176.38	3167	14	3.11E-03	17.4	
67	0	1592.01	31	23	1.62	3185.41	3181	11	2.17E-03	34.3	
68	0	1605.11	8	19	0.71	3211.64	3205	11	5.76E-04	107.8	
69	0	1649.21	18	8	3.44	3299.91	3292	15	1.22E-03	41.6	
70	0	1654.98	15	2	0.58	3311.46	3307	11	1.04E-03	33.2	
71	0	1660.89	15	10	2.06	3323.29	3318	12	1.05E-03	47.8	
72	0	1729.09	27	9	2.72	3459.81	3449	17	1.84E-03	31.8	
73	0	1764.36*	114	18	2.10	3530.41	3522	18	7.93E-03	13.5	
74	1	1801.89	12	3	2.50	3605.55	3602	19	8.58E-04	28.1	1.44E+00
75	1	1805.38	16	4	2.50	3612.55	3602	19	1.11E-03	44.2	
76	0	1837.89	18	6	3.73	3677.62	3671	13	1.27E-03	36.7	
77	0	1899.78	11	10	3.01	3801.52	3792	14	7.31E-04	72.2	
78	0	1987.93	11	10	1.80	3978.00	3971	11	7.46E-04	66.7	
79	0	2003.79	11	7	0.52	4009.75	4000	13	7.72E-04	56.3	

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]G1201471370      *
* Acquisition date : 11-DEC-2007 08:51:08 Detector SN#    :                 *
* Detector ID      : GAM16                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.72     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471370          Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.2331E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-OCT-2007 14:23:01 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	4.335E+00	6.590E-01	2.726E-01	0.000E+00
EU-155	6.564E-02	5.145E-02	9.481E-02	0.000E+00
TL-208	3.512E-01	5.117E-02	3.129E-02	0.000E+00
BI-211	5.376E-01	7.038E-01	1.012E+00	0.000E+00
BI-212	7.017E-01	2.550E-01	2.613E-01	0.000E+00
PB-212	1.277E+00	9.595E-02	5.198E-02	0.000E+00
BI-214	7.578E-01	1.060E-01	6.338E-02	0.000E+00
PB-214	8.205E-01	9.750E-02	6.151E-02	0.000E+00
RA-223	4.763E-01	1.625E-01	1.591E-01	0.000E+00
AC-228	1.202E+00	2.062E-01	1.100E-01	0.000E+00
PA-234M	4.038E+00	4.275E+00	3.717E+00	0.000E+00
TH-234	1.504E+00	3.914E-01	3.839E-01	0.000E+00
U-235	2.280E-01	1.527E-01	1.794E-01	0.000E+00
NP-237	7.312E-01	1.569E-01	1.747E-01	0.000E+00
AM-243	2.341E-01	3.769E-02	4.277E-02	0.000E+00
CM-243	5.936E-02	4.653E-02	9.309E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	2.067E-02	2.151E-02	3.896E-02	0.000E+00	NOT IDENT.
RH-101	5.813E-03	2.051E-02	3.346E-02	0.000E+00	NOT IDENT.
SB-125	-1.383E-02	4.970E-02	8.394E-02	0.000E+00	NOT IDENT.
CS-137	9.538E-03	2.084E-02	3.577E-02	0.000E+00	NOT IDENT.
PO-209	1.267E+00	3.796E+00	6.648E+00	0.000E+00	NOT IDENT.
PA-233	-8.900E-03	3.984E-02	5.974E-02	0.000E+00	NOT IDENT.
NP-236	-5.943E-03	3.657E-02	5.414E-02	0.000E+00	NOT IDENT.
NP-239	5.091E-02	1.287E-01	2.194E-01	0.000E+00	NOT IDENT.
AM-241	2.027E-02	9.633E-02	1.116E-01	0.000E+00	NOT IDENT.
AM-246	2.143E-02	6.861E-02	1.188E-01	0.000E+00	NOT IDENT.
CF-249	1.255E-02	2.023E-02	3.598E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:57:45.58

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471370.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 11-DEC-2007 08:51:08
Sample ID        : G1201471370          Sample quantity  : 1.23310E+02 GRAM
Detector name    : GAM16                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.72  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	398	10.66*	1.310E+00	4.335E+00	4.335E+00	15.51
EU-155	105.31	70	21.20*	7.824E+00	6.414E-02	6.564E-02	79.98
TL-208	277.36	91	6.31	5.198E+00	4.219E-01	4.219E-01	66.29
	510.77	183	22.60	3.250E+00	3.787E-01	3.787E-01	46.11
	583.19	568	84.50*	2.914E+00	3.512E-01	3.512E-01	14.87
	763.13	------	1.81	2.311E+00	------	Line Not Found	------
	860.56	81	12.42	2.075E+00	4.775E-01	4.775E-01	50.69
BI-211	831.80	25	3.30*	2.142E+00	5.376E-01	5.376E-01	133.57
BI-212	727.33	131	11.80*	2.412E+00	7.017E-01	7.017E-01	37.08
	785.37	62	1.10	2.251E+00	3.783E+00	3.783E+00	60.20
	1620.50	------	1.49	1.212E+00	------	Line Not Found	------
PB-212	74.81	643	10.40	6.127E+00	1.535E+00	1.535E+00	16.43
	77.11	971	17.50	6.371E+00	1.326E+00	1.326E+00	13.21
	87.30	427	7.81	7.167E+00	1.161E+00	1.161E+00	21.90
	238.63	2100	43.30*	5.778E+00	1.277E+00	1.277E+00	7.66
	300.09	146	3.28	4.913E+00	1.379E+00	1.379E+00	32.73
BI-214	609.31	644	46.10*	2.808E+00	7.578E-01	7.578E-01	14.27
	768.36	67	4.94	2.298E+00	9.009E-01	9.010E-01	95.76
	806.17	------	1.22	2.201E+00	------	Line Not Found	------
	934.06	38	3.03	1.930E+00	9.809E-01	9.810E-01	75.87
	1120.29	151	15.10	1.640E+00	9.254E-01	9.254E-01	30.46
	1155.19	65	1.63	1.595E+00	3.799E+00	3.799E+00	56.59
	1238.11	------	5.79	1.502E+00	------	Line Not Found	------
	1280.96	39	1.43	1.457E+00	2.876E+00	2.876E+00	85.95
	1377.67	46	4.00	1.372E+00	1.272E+00	1.273E+00	48.44
	1401.50	22	1.27	1.353E+00	1.981E+00	1.981E+00	92.04
	1407.98	28	2.15	1.349E+00	1.444E+00	1.444E+00	83.34
	1509.23	------	2.11	1.277E+00	------	Line Not Found	------
	1729.60	27	2.92	1.161E+00	1.190E+00	1.190E+00	63.92
	1764.49	114	15.40	1.146E+00	9.842E-01	9.843E-01	27.52
PB-214	74.81	643	6.44	6.127E+00	2.479E+00	2.479E+00	16.43
	77.11	971	10.80	6.371E+00	2.149E+00	2.149E+00	13.21

Sample ID : G1201471370 Acquisition date : 11-DEC-2007 08:51:08

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	427	4.84	7.167E+00	1.873E+00	1.873E+00	21.90
	242.00	473	7.43	5.732E+00	1.692E+00	1.692E+00	27.17
	295.22	543	19.30	4.973E+00	8.615E-01	8.616E-01	17.62
	351.93	884	37.60*	4.360E+00	8.205E-01	8.205E-01	12.12
RA-223	269.46	227	13.70*	5.301E+00	4.763E-01	4.763E-01	34.81
AC-228	129.07	58	2.42	7.824E+00	4.690E-01	4.690E-01	133.32
	209.25	203	3.89	6.295E+00	1.262E+00	1.262E+00	44.12
	270.25	227	3.46	5.301E+00	1.886E+00	1.886E+00	34.81
	338.32	395	11.27	4.493E+00	1.188E+00	1.188E+00	21.15
	409.46	76	1.92	3.877E+00	1.554E+00	1.554E+00	90.91
	463.00	110	4.40	3.521E+00	1.076E+00	1.076E+00	55.42
	794.95	57	4.25	2.230E+00	9.120E-01	9.120E-01	54.27
	911.20	402	25.80*	1.973E+00	1.202E+00	1.202E+00	17.51
	964.77	76	4.99	1.875E+00	1.235E+00	1.235E+00	47.01
	968.97	252	15.80	1.867E+00	1.301E+00	1.301E+00	19.65
	1588.20	45	3.22	1.230E+00	1.724E+00	1.724E+00	35.38
PA-234M	1001.03	40	0.84*	1.813E+00	4.038E+00	4.038E+00	108.02
TH-234	63.29	116	4.80	4.591E+00	7.991E-01	7.991E-01	92.53
	92.58	399	5.41*	7.457E+00	1.504E+00	1.504E+00	26.56
U-235	143.76	125	10.96*	7.598E+00	2.280E-01	2.280E-01	68.33
NP-237	86.48	427	12.40*	7.167E+00	7.312E-01	7.312E-01	21.90
AM-243	74.66	643	68.20*	6.127E+00	2.341E-01	2.341E-01	16.43
CM-243	103.76	70	23.00*	7.824E+00	5.912E-02	5.936E-02	79.98

Flag: "*" = Keyline

Sample ID : G1201471370 Acquisition date : 11-DEC-2007 08:51:08

Total number of lines in spectrum 79
Number of unidentified lines 36
Number of lines tentatively identified by NID 43 54.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.335E+00	4.335E+00	0.672E+00	15.51	
EU-155	1.57E+08S	1.02	6.414E-02	6.564E-02	5.250E-02	79.98	
TL-208	4.43E+17S	1.00	3.512E-01	3.512E-01	0.522E-01	14.87	
BI-211	2.22E+16S	1.00	5.376E-01	5.376E-01	7.181E-01	133.57	
BI-212	4.43E+17S	1.00	7.017E-01	7.017E-01	2.602E-01	37.08	
PB-212	4.43E+17S	1.00	1.277E+00	1.277E+00	0.098E+00	7.66	
BI-214	5.05E+10S	1.00	7.578E-01	7.578E-01	1.081E-01	14.27	
PB-214	5.05E+10S	1.00	8.205E-01	8.205E-01	0.995E-01	12.12	
RA-223	1.04E+12S	1.00	4.763E-01	4.763E-01	1.658E-01	34.81	
AC-228	4.43E+17S	1.00	1.202E+00	1.202E+00	0.210E+00	17.51	
PA-234M	1.41E+17S	1.00	4.038E+00	4.038E+00	4.362E+00	108.02	
TH-234	1.41E+17S	1.00	1.504E+00	1.504E+00	0.399E+00	26.56	
U-235	2.22E+16S	1.00	2.280E-01	2.280E-01	1.558E-01	68.33	
NP-237	6.75E+13S	1.00	7.312E-01	7.312E-01	1.601E-01	21.90	
AM-243	2.33E+11S	1.00	2.341E-01	2.341E-01	0.385E-01	16.43	
CM-243	8.99E+08S	1.00	5.912E-02	5.936E-02	4.748E-02	79.98	
			---	---			
		Total Activity :	1.732E+01	1.732E+01			

Grand Total Activity : 1.732E+01 1.732E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471370 Acquisition date : 11-DEC-2007 08:51:08

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.44	45	535	1.19	93.10	89	9	3.11E-03	****	1.74E+00	
0	57.44	37	289	0.52	115.10	114	5	2.55E-03	****	3.63E+00	
3	80.95	69	182	1.17	162.12	161	34	4.82E-03	54.7	6.71E+00	
3	84.15	164	533	1.54	168.52	161	34	1.14E-02	55.0	6.96E+00	
3	90.06	313	498	1.52	180.34	161	34	2.17E-02	29.4	7.32E+00	
0	115.43	4	463	0.65	231.08	228	8	2.61E-04	****	7.90E+00	
0	140.09	57	369	1.51	280.39	276	8	3.99E-03	****	7.67E+00	
0	154.63	107	464	1.32	309.48	305	10	7.45E-03	77.4	7.40E+00	
0	163.98	52	372	0.71	328.16	324	8	3.58E-03	****	7.21E+00	
0	185.75	311	580	1.22	371.71	366	13	2.16E-02	35.7	6.76E+00	
0	307.22	17	262	0.58	614.67	609	10	1.20E-03	****	4.83E+00	
0	327.92	99	222	1.21	656.06	653	10	6.90E-03	59.0	4.60E+00	
0	395.18	47	158	0.85	790.61	787	9	3.23E-03	****	3.99E+00	
0	664.42	94	153	4.66	1329.21	1318	22	6.50E-03	70.7	2.61E+00	
0	718.81	13	75	1.53	1438.02	1436	8	8.78E-04	****	2.44E+00	
0	941.13	30	22	1.35	1882.83	1877	10	2.08E-03	69.6	1.92E+00	
0	1060.70	9	57	0.84	2122.09	2113	11	6.44E-04	****	1.72E+00	
0	1089.61	19	47	1.52	2179.94	2174	11	1.31E-03	****	1.68E+00	
0	1097.03	52	80	8.61	2194.78	2184	24	3.62E-03	94.1	1.67E+00	
0	1245.73	48	136	7.99	2492.35	2468	34	3.35E-03	****	1.49E+00	
1	1308.01	18	36	2.08	2617.00	2610	17	1.27E-03	****	1.43E+00	
1	1310.51	21	20	2.09	2622.00	2610	17	1.46E-03	88.3	1.43E+00	
0	1495.69	20	16	1.59	2992.62	2985	13	1.38E-03	94.8	1.29E+00	
0	1548.77	19	10	1.01	3098.86	3094	12	1.29E-03	86.9	1.25E+00	
4	1583.76	14	1	2.10	3168.90	3167	14	1.00E-03	55.6	1.23E+00	
0	1592.01	31	23	1.62	3185.41	3181	11	2.17E-03	68.6	1.23E+00	
0	1605.11	8	19	0.71	3211.64	3205	11	5.76E-04	****	1.22E+00	
0	1649.21	18	8	3.44	3299.91	3292	15	1.22E-03	83.3	1.20E+00	
0	1654.98	15	2	0.58	3311.46	3307	11	1.04E-03	66.5	1.19E+00	
0	1660.89	15	10	2.06	3323.29	3318	12	1.05E-03	95.5	1.19E+00	
1	1801.89	12	3	2.50	3605.55	3602	19	8.58E-04	56.2	1.13E+00	
1	1805.38	16	4	2.50	3612.55	3602	19	1.11E-03	88.3	1.13E+00	
0	1837.89	18	6	3.73	3677.62	3671	13	1.27E-03	73.4	1.12E+00	
0	1899.78	11	10	3.01	3801.52	3792	14	7.31E-04	****	1.10E+00	
0	1987.93	11	10	1.80	3978.00	3971	11	7.46E-04	****	1.08E+00	
0	2003.79	11	7	0.52	4009.75	4000	13	7.72E-04	****	1.07E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471370           *
* Acquisition date : 11-DEC-2007 08:51:08 Detector SN#    :                 *
* Detector ID      : GAM16                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.72     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471370          Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.2331E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  1-OCT-2007 14:23:01 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	LC (pCi/GRAM)	TPU
K-40	4.335E+00	6.590E-01	1.364E-01	6.590E-01
EU-155	6.564E-02	5.145E-02	4.743E-02	5.145E-02
TL-208	3.512E-01	5.117E-02	1.565E-02	5.117E-02
BI-211	5.376E-01	7.038E-01	5.061E-01	7.038E-01
BI-212	7.017E-01	2.550E-01	1.307E-01	2.550E-01
PB-212	1.277E+00	9.595E-02	2.600E-02	9.595E-02
BI-214	7.578E-01	1.060E-01	3.171E-02	1.060E-01
PB-214	8.205E-01	9.750E-02	3.078E-02	9.750E-02
RA-223	4.763E-01	1.625E-01	7.959E-02	1.625E-01
AC-228	1.202E+00	2.062E-01	5.502E-02	2.062E-01
PA-234M	4.038E+00	4.275E+00	1.860E+00	4.275E+00
TH-234	1.504E+00	3.914E-01	1.921E-01	3.914E-01
U-235	2.280E-01	1.527E-01	8.974E-02	1.527E-01
NP-237	7.312E-01	1.569E-01	8.741E-02	1.569E-01
AM-243	2.341E-01	3.769E-02	2.140E-02	3.769E-02
CM-243	5.936E-02	4.653E-02	4.657E-02	4.653E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	2.067E-02	2.151E-02	1.949E-02	2.151E-02	NOT IDENT.
RH-101	5.813E-03	2.051E-02	1.674E-02	2.051E-02	NOT IDENT.
SB-125	-1.383E-02	4.970E-02	4.200E-02	4.970E-02	NOT IDENT.
CS-137	9.538E-03	2.084E-02	1.789E-02	2.084E-02	NOT IDENT.
PO-209	1.267E+00	3.796E+00	3.326E+00	3.796E+00	NOT IDENT.
PA-233	-8.900E-03	3.984E-02	2.989E-02	3.984E-02	NOT IDENT.
NP-236	-5.943E-03	3.657E-02	2.709E-02	3.657E-02	NOT IDENT.
NP-239	5.091E-02	1.287E-01	1.098E-01	1.287E-01	NOT IDENT.
AM-241	2.027E-02	9.633E-02	5.584E-02	9.633E-02	NOT IDENT.
AM-246	2.143E-02	6.861E-02	5.943E-02	6.861E-02	NOT IDENT.
CF-249	1.255E-02	2.023E-02	1.800E-02	2.023E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	450.6866
63.29	536.1211
74.66	587.7547
74.81	587.8758
74.81	587.8758
77.11	589.7230
77.11	589.7230
86.48	441.9808
87.30	442.4361
87.30	442.4361
92.58	445.3224
98.44	454.6585
103.76	515.4039
105.31	440.3863
129.07	471.5978
143.76	420.9286
198.00	385.0112
209.25	389.2898
228.18	355.2717
238.63	322.6594
242.00	323.3794
269.46	256.3077
270.25	256.4335
277.36	237.7765
295.22	253.0618
300.09	259.8468
312.17	243.2585
338.32	205.7523
351.93	195.9579
387.59	156.5047
409.46	189.9371
427.87	166.2553
463.00	141.1741
510.77	130.8736
583.19	115.8746
609.31	131.5740
661.66	109.4802
727.33	108.5352
763.13	82.2876
768.36	89.0071
785.37	113.5898
794.95	92.6207
806.17	99.9888
831.80	100.7139
860.56	71.4371
896.60	69.2826
911.20	61.9267
934.06	70.4390
964.77	72.4380
968.97	72.5128
1001.03	63.4822
1078.86	55.5853
1120.29	50.0997
1155.19	49.4765
1173.23	50.6856
1238.11	54.4686
1280.96	45.6185
1332.51	35.6145
1377.67	47.5507
1401.50	25.4746
1407.98	47.3680
1460.80	28.9764
1509.23	33.5619
1588.20	13.1724
1620.50	32.1667
1729.60	18.5417
1764.49	20.3401

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471370

Total Uranium Activity	1.0551E-01	ug/g
Total Uranium Counting Unc.	7.0652E-02	ug/g
Total Uranium Tpu	7.0652E-08	ug/g
Total Uranium Mda	4.1522E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:58:14.69

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471371.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 11-DEC-2007 08:52:18
Sample ID        : G1201471371          Sample quantity  : 1.55440E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:04.96  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	8	49.30	196	636	1.24	99.08	96	13	5.43E-02	21.4	1.11E+00
2	8	51.37*	196	1722	1.80	103.22	96	13	5.45E-02	41.6	
3	3	58.05	128	963	1.14	116.57	114	12	3.55E-02	36.4	1.43E+00
4	3	59.55	6657	690	0.78	119.57	114	12	1.85E+00	1.4	
5	0	63.28*	46	490	0.70	127.03	125	6	1.29E-02	79.5	
6	0	67.06	124	893	2.30	134.58	131	9	3.45E-02	44.2	
7	2	74.79*	101	630	0.79	150.03	147	11	2.80E-02	37.9	2.75E+00
8	2	77.15*	270	586	0.86	154.74	147	11	7.51E-02	15.0	
9	6	84.19*	204	750	1.61	168.81	165	18	5.68E-02	23.0	5.29E+00
10	6	86.09*	119	635	1.21	172.60	165	18	3.31E-02	39.1	
11	6	88.04*	5743	357	0.85	176.49	165	18	1.60E+00	1.4	
12	6	89.74	98	320	1.01	179.88	165	18	2.73E-02	64.1	
13	0	92.85*	136	490	1.22	186.10	183	10	3.78E-02	32.8	
14	0	122.07*	1760	442	1.00	244.51	241	10	4.89E-01	3.3	
15	0	136.56	261	274	1.15	273.45	271	8	7.25E-02	12.6	
16	0	165.91	718	344	0.82	332.10	328	9	1.99E-01	6.0	
17	0	185.91*	76	302	1.48	372.06	367	10	2.12E-02	45.3	
18	0	238.57*	314	370	1.00	477.29	472	10	8.72E-02	12.9	
19	0	295.13*	93	223	1.07	590.32	587	9	2.60E-02	30.8	
20	0	329.48	126	299	8.24	658.96	649	19	3.50E-02	34.1	
21	0	338.38*	72	192	1.42	676.75	671	10	1.99E-02	38.5	
22	0	351.78*	169	247	0.97	703.53	699	11	4.68E-02	19.8	
23	0	391.57	323	199	1.22	783.06	778	11	8.98E-02	10.1	
24	0	423.51	51	175	0.93	846.88	841	11	1.41E-02	52.5	
25	0	463.41	37	155	2.69	926.61	922	9	1.03E-02	63.0	
26	0	492.99	50	190	4.23	985.74	980	14	1.38E-02	60.5	
27	0	503.14	43	86	1.84	1006.02	1003	8	1.20E-02	40.0	
28	0	510.91*	96	176	1.93	1021.55	1015	14	2.67E-02	32.3	
29	0	569.74	50	87	0.76	1139.12	1134	10	1.39E-02	37.6	
30	3	583.13*	97	102	1.56	1165.88	1161	15	2.68E-02	21.2	2.07E+00
31	3	586.06	31	64	1.62	1171.75	1161	15	8.53E-03	53.2	
32	0	591.97	34	76	1.88	1183.55	1179	8	9.45E-03	48.3	
33	0	609.26*	112	100	1.18	1218.12	1213	10	3.12E-02	19.5	
34	0	645.20	26	52	0.84	1289.95	1287	6	7.34E-03	47.1	
35	0	661.58*	1800	137	1.37	1322.69	1317	13	5.00E-01	2.7	
36	0	728.38	56	120	4.98	1456.21	1450	14	1.56E-02	43.3	
37	0	747.06	21	94	0.91	1493.54	1486	11	5.96E-03	90.8	
38	0	810.98	16	75	1.41	1621.29	1615	10	4.44E-03	106.6	

Sample ID : G1201471371 Acquisition date : 11-DEC-2007 08:52:18

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	877.25	30	98	1.90	1753.77	1751	9	8.39E-03	61.6	
40	0	897.90	350	151	1.55	1795.05	1787	16	9.73E-02	9.4	
41	0	911.60*	93	125	1.21	1822.44	1815	14	2.59E-02	27.7	
42	0	942.27	21	82	1.29	1883.74	1879	8	5.87E-03	77.3	
43	0	964.13	35	107	1.52	1927.43	1922	11	9.78E-03	60.4	
44	0	970.02*	83	117	3.27	1939.20	1932	17	2.30E-02	31.8	
45	0	1119.97*	61	60	1.85	2238.97	2234	11	1.70E-02	28.0	
46	0	1173.00	1848	61	1.73	2344.99	2335	17	5.13E-01	2.5	
47	0	1285.38	12	17	0.58	2569.65	2564	11	3.19E-03	74.5	
48	0	1301.94	7	8	0.76	2602.77	2599	6	2.05E-03	69.5	
49	0	1332.28	1632	34	1.83	2663.42	2656	17	4.53E-01	2.6	
50	0	1365.81	20	16	4.45	2730.47	2716	20	5.64E-03	51.9	
51	0	1421.15	13	11	0.81	2841.10	2835	12	3.61E-03	59.6	
52	0	1764.61*	22	6	1.56	3527.88	3521	12	6.25E-03	32.0	
53	0	1835.82	203	10	1.80	3670.28	3662	18	5.65E-02	7.8	

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]G1201471371      *
* Acquisition date : 11-DEC-2007 08:52:18 Detector SN#    :                 *
* Detector ID      : GAM17                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 01:00:04.96     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471371          Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.5544E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 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-60	8.380E+00	6.346E-01	1.457E-01	0.000E+00
CS-137	5.712E+00	5.123E-01	1.497E-01	0.000E+00
TL-208	2.737E-01	1.155E-01	1.318E-01	0.000E+00
PO-209	2.665E+02	5.229E+01	3.839E+01	0.000E+00
BI-212	1.405E+00	1.197E+00	1.187E+00	0.000E+00
PB-212	7.911E-01	2.094E-01	1.975E-01	0.000E+00
PB-214	6.745E-01	2.649E-01	2.400E-01	0.000E+00
AC-228	1.310E+00	7.152E-01	6.862E-01	0.000E+00
TH-234	1.743E+00	1.128E+00	1.065E+00	0.000E+00
NP-237	6.599E-01	5.076E-01	6.276E-01	0.000E+00
AM-241	1.292E+01	8.763E-01	2.947E-01	0.000E+00
AM-243	1.006E-01	7.506E-02	1.295E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
K-40	7.382E-01	7.536E-01	1.451E+00	0.000E+00	NOT IDENT.
RH-101	4.155E-02	5.623E-02	1.019E-01	0.000E+00	NOT IDENT.
SB-125	-9.527E-02	2.176E-01	3.242E-01	0.000E+00	NOT IDENT.
EU-155	8.613E-02	1.643E-01	3.072E-01	0.000E+00	NOT IDENT.
BI-211	1.661E+00	2.724E+00	4.936E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	2.362E-01	3.779E-01	0.000E+00	FAIL ABUN
RA-223	1.560E-01	3.466E-01	6.061E-01	0.000E+00	NOT IDENT.
PA-233	-3.916E-02	1.185E-01	2.110E-01	0.000E+00	NOT IDENT.
PA-234M	-2.747E+00	1.311E+01	2.220E+01	0.000E+00	NOT IDENT.
U-235	-1.193E-01	3.167E-01	5.585E-01	0.000E+00	NOT IDENT.
NP-236	1.070E-01	9.691E-02	1.687E-01	0.000E+00	NOT IDENT.
NP-239	-1.041E-02	4.183E-01	7.238E-01	0.000E+00	NOT IDENT.
CM-243	6.615E-02	1.495E-01	2.791E-01	0.000E+00	NOT IDENT.
AM-246	1.669E-01	3.992E-01	6.974E-01	0.000E+00	NOT IDENT.
CF-249	-3.269E-02	9.443E-02	1.437E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 15:58:15.46

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471371.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 11-DEC-2007 08:52:18
Sample ID        : G1201471371          Sample quantity  : 1.55440E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:04.96  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707062               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-60	1173.23	1848	100.00*	1.069E+00	8.346E+00	8.380E+00	7.73
	1332.51	1632	100.00	9.616E-01	8.197E+00	8.231E+00	7.43
CS-137	661.66	1800	85.10*	1.790E+00	5.708E+00	5.712E+00	9.15
TL-208	277.36	------	6.31	3.932E+00	------	Line Not Found	------
	510.77	96	22.60	2.282E+00	9.008E-01	9.008E-01	64.98
	583.19	97	84.50*	2.015E+00	2.737E-01	2.737E-01	43.06
	763.13	------	1.81	1.568E+00	------	Line Not Found	------
	860.56	------	12.42	1.404E+00	------	Line Not Found	------
PO-209	896.60	350	0.47*	1.351E+00	2.664E+02	2.665E+02	20.02
BI-212	727.33	56	11.80*	1.637E+00	1.405E+00	1.405E+00	86.99
	785.37	------	1.10	1.527E+00	------	Line Not Found	------
	1620.50	------	1.49	8.223E-01	------	Line Not Found	------
PB-212	74.81	101	10.40	7.087E+00	6.595E-01	6.595E-01	76.16
	77.11	270	17.50	7.087E+00	1.052E+00	1.052E+00	30.61
	87.30	5743	7.81	7.025E+00	5.055E+01	5.055E+01	7.33
	238.63	314	43.30*	4.425E+00	7.911E-01	7.911E-01	27.00
	300.09	------	3.28	3.684E+00	------	Line Not Found	------
PB-214	74.81	101	6.44	7.087E+00	1.065E+00	1.065E+00	76.16
	77.11	270	10.80	7.087E+00	1.705E+00	1.705E+00	30.61
	87.30	5743	4.84	7.025E+00	8.157E+01	8.157E+01	7.33
	242.00	------	7.43	4.378E+00	------	Line Not Found	------
	295.22	93	19.30	3.736E+00	6.260E-01	6.260E-01	62.06
	351.93	169	37.60*	3.212E+00	6.745E-01	6.745E-01	40.08
AC-228	129.07	------	2.42	6.357E+00	------	Line Not Found	------
	209.25	------	3.89	4.865E+00	------	Line Not Found	------
	270.25	------	3.46	4.016E+00	------	Line Not Found	------
	338.32	72	11.27	3.324E+00	9.222E-01	9.222E-01	77.32
	409.46	------	1.92	2.802E+00	------	Line Not Found	------
	463.00	37	4.40	2.499E+00	1.623E+00	1.623E+00	126.08
	794.95	------	4.25	1.510E+00	------	Line Not Found	------
	911.20	93	25.80*	1.333E+00	1.310E+00	1.310E+00	55.71
	964.77	35	4.99	1.268E+00	2.688E+00	2.688E+00	120.94

Sample ID : G1201471371 Acquisition date : 11-DEC-2007 08:52:18

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	968.97	83	15.80	1.261E+00	2.003E+00	2.003E+00	64.00
	1588.20	------	3.22	8.353E-01	------	Line Not Found	------
TH-234	63.29	46	4.80	7.000E+00	6.660E-01	6.660E-01	159.22
	92.58	136	5.41*	6.974E+00	1.743E+00	1.743E+00	66.03
NP-237	86.48	119	12.40*	7.042E+00	6.599E-01	6.599E-01	78.49
AM-241	59.54	6657	35.90*	6.932E+00	1.292E+01	1.292E+01	6.92
AM-243	74.66	101	68.20*	7.087E+00	1.006E-01	1.006E-01	76.16

Flag: "*" = Keyline

Sample ID : G1201471371 Acquisition date : 11-DEC-2007 08:52:18

Total number of lines in spectrum 53
Number of unidentified lines 28
Number of lines tentatively identified by NID 25 47.17%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	1.66E+08S	1.00	8.346E+00	8.380E+00	0.648E+00	7.73	
CS-137	9.47E+08S	1.00	5.708E+00	5.712E+00	0.523E+00	9.15	
TL-208	4.43E+17S	1.00	2.737E-01	2.737E-01	1.179E-01	43.06	
PO-209	3.22E+09S	1.00	2.664E+02	2.665E+02	0.534E+02	20.02	
BI-212	4.43E+17S	1.00	1.405E+00	1.405E+00	1.222E+00	86.99	
PB-212	4.43E+17S	1.00	7.911E-01	7.911E-01	2.136E-01	27.00	
PB-214	5.05E+10S	1.00	6.745E-01	6.745E-01	2.703E-01	40.08	
AC-228	4.43E+17S	1.00	1.310E+00	1.310E+00	0.730E+00	55.71	
TH-234	1.41E+17S	1.00	1.743E+00	1.743E+00	1.151E+00	66.03	
NP-237	6.75E+13S	1.00	6.599E-01	6.599E-01	5.180E-01	78.49	
AM-241	1.36E+10S	1.00	1.292E+01	1.292E+01	0.089E+01	6.92	
AM-243	2.33E+11S	1.00	1.006E-01	1.006E-01	0.766E-01	76.16	
			---	---			
		Total Activity :	3.004E+02	3.005E+02			

Grand Total Activity : 3.004E+02 3.005E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471371 Acquisition date : 11-DEC-2007 08:52:18

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
8	49.30	196	636	1.24	99.08	96	13	5.43E-02	42.7	6.61E+00	
8	51.37	196	1722	1.80	103.22	96	13	5.45E-02	83.2	6.69E+00	
3	58.05	128	963	1.14	116.57	114	12	3.55E-02	72.8	6.90E+00	
0	67.06	124	893	2.30	134.58	131	9	3.45E-02	88.4	7.05E+00	
6	84.19	204	750	1.61	168.81	165	18	5.68E-02	46.1	7.06E+00	
6	89.74	98	320	1.01	179.88	165	18	2.73E-02	****	7.01E+00	
0	122.07	1760	442	1.00	244.51	241	10	4.89E-01	6.6	6.49E+00	
0	136.56	261	274	1.15	273.45	271	8	7.25E-02	25.2	6.21E+00	
0	165.91	718	344	0.82	332.10	328	9	1.99E-01	12.0	5.63E+00	
0	185.91	76	302	1.48	372.06	367	10	2.12E-02	90.6	5.26E+00	
0	329.48	126	299	8.24	658.96	649	19	3.50E-02	68.3	3.40E+00	
0	391.57	323	199	1.22	783.06	778	11	8.98E-02	20.2	2.92E+00	
0	423.51	51	175	0.93	846.88	841	11	1.41E-02	****	2.72E+00	
0	492.99	50	190	4.23	985.74	980	14	1.38E-02	****	2.36E+00	
0	503.14	43	86	1.84	1006.02	1003	8	1.20E-02	80.1	2.31E+00	
0	569.74	50	87	0.76	1139.12	1134	10	1.39E-02	75.2	2.06E+00	
3	586.06	31	64	1.62	1171.75	1161	15	8.53E-03	****	2.01E+00	
0	591.97	34	76	1.88	1183.55	1179	8	9.45E-03	96.6	1.99E+00	
0	609.26	112	100	1.18	1218.12	1213	10	3.12E-02	39.0	1.93E+00	T
0	645.20	26	52	0.84	1289.95	1287	6	7.34E-03	94.1	1.83E+00	
0	747.06	21	94	0.91	1493.54	1486	11	5.96E-03	****	1.60E+00	
0	810.98	16	75	1.41	1621.29	1615	10	4.44E-03	****	1.48E+00	
0	877.25	30	98	1.90	1753.77	1751	9	8.39E-03	****	1.38E+00	
0	942.27	21	82	1.29	1883.74	1879	8	5.87E-03	****	1.29E+00	
0	1119.97	61	60	1.85	2238.97	2234	11	1.70E-02	56.1	1.11E+00	T
0	1285.38	12	17	0.58	2569.65	2564	11	3.19E-03	****	9.90E-01	
0	1301.94	7	8	0.76	2602.77	2599	6	2.05E-03	****	9.80E-01	
0	1365.81	20	16	4.45	2730.47	2716	20	5.64E-03	****	9.42E-01	
0	1421.15	13	11	0.81	2841.10	2835	12	3.61E-03	****	9.12E-01	
0	1764.61	22	6	1.56	3527.88	3521	12	6.25E-03	64.0	7.70E-01	T
0	1835.82	203	10	1.80	3670.28	3662	18	5.65E-02	15.7	7.47E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471371           *
* Acquisition date : 11-DEC-2007 08:52:18 Detector SN#    :                 *
* Detector ID      : GAM17                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 01:00:04.96     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471371          Analyst initials: MJH1            *
* Batch Number     : 707062               Sample Quantity : 1.5544E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
CO-60	8.380E+00	6.346E-01	7.291E-02	6.346E-01
CS-137	5.712E+00	5.123E-01	7.489E-02	5.123E-01
TL-208	2.737E-01	1.155E-01	6.595E-02	1.155E-01
PO-209	2.665E+02	5.229E+01	1.921E+01	5.229E+01
BI-212	1.405E+00	1.197E+00	5.936E-01	1.197E+00
PB-212	7.911E-01	2.094E-01	9.879E-02	2.094E-01
PB-214	6.745E-01	2.649E-01	1.201E-01	2.649E-01
AC-228	1.310E+00	7.152E-01	3.433E-01	7.152E-01
TH-234	1.743E+00	1.128E+00	5.328E-01	1.128E+00
NP-237	6.599E-01	5.076E-01	3.140E-01	5.076E-01
AM-241	1.292E+01	8.763E-01	1.475E-01	8.763E-01
AM-243	1.006E-01	7.506E-02	6.477E-02	7.506E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
K-40	7.382E-01	7.536E-01	7.258E-01	7.536E-01	NOT IDENT.
RH-101	4.155E-02	5.623E-02	5.100E-02	5.623E-02	NOT IDENT.
SB-125	-9.527E-02	2.176E-01	1.622E-01	2.176E-01	NOT IDENT.
EU-155	8.613E-02	1.643E-01	1.537E-01	1.643E-01	NOT IDENT.
BI-211	1.661E+00	2.724E+00	2.470E+00	2.724E+00	NOT IDENT.
BI-214	6.082E-01	2.362E-01	1.891E-01	2.362E-01	FAIL ABUN
RA-223	1.560E-01	3.466E-01	3.032E-01	3.466E-01	NOT IDENT.
PA-233	-3.916E-02	1.185E-01	1.056E-01	1.185E-01	NOT IDENT.
PA-234M	-2.747E+00	1.311E+01	1.111E+01	1.311E+01	NOT IDENT.
U-235	-1.193E-01	3.167E-01	2.794E-01	3.167E-01	NOT IDENT.
NP-236	1.070E-01	9.691E-02	8.440E-02	9.691E-02	NOT IDENT.
NP-239	-1.041E-02	4.183E-01	3.621E-01	4.183E-01	NOT IDENT.
CM-243	6.615E-02	1.495E-01	1.396E-01	1.495E-01	NOT IDENT.
AM-246	1.669E-01	3.992E-01	3.489E-01	3.992E-01	NOT IDENT.
CF-249	-3.269E-02	9.443E-02	7.189E-02	9.443E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	887.5817
63.29	451.8800
74.66	653.3215
74.81	653.5364
74.81	653.5364
77.11	656.8225
77.11	656.8225
86.48	504.3430
87.30	505.1678
87.30	505.1678
92.58	272.4817
98.44	269.8896
103.76	298.3677
105.31	299.1804
129.07	243.2893
143.76	244.5634
198.00	205.9766
209.25	225.9194
228.18	224.8892
238.63	252.9879
242.00	234.1659
269.46	180.8924
270.25	181.0202
277.36	187.9651
295.22	173.1868
300.09	146.2092
312.17	162.1698
338.32	149.4363
351.93	151.4853
387.59	154.5913
409.46	174.9323
427.87	136.9414
463.00	150.0553
510.77	105.1870
583.19	93.3308
609.31	99.6847
661.66	96.8489
727.33	98.7280
763.13	114.8865
768.36	102.2333
785.37	112.1938
794.95	96.7916
806.17	91.9138
831.80	88.7171
860.56	111.6013
896.60	113.0467
911.20	105.8545
934.06	109.6238
964.77	49.4458
968.97	99.0283
1001.03	101.0666
1078.86	84.0660
1120.29	80.9555
1155.19	57.6614
1173.23	46.3654
1238.11	27.8916
1280.96	18.0835
1332.51	19.7912
1377.67	12.0463
1401.50	17.7089
1407.98	16.8032
1460.80	19.8524
1509.23	22.9434
1588.20	21.4056
1620.50	19.5964
1729.60	15.0354
1764.49	8.6523

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471371

Total Uranium Activity	-5.5197E-02	ug/g
Total Uranium Counting Unc.	1.4654E-01	ug/g
Total Uranium Tpu	1.4654E-07	ug/g
Total Uranium Mda	1.2929E-01	ug/g

Radiochemistry Batch Checklist, Rev 6

Batch# 707073 Product: Y-S Date: 12/7/07

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 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. Instument 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.		✓	Case narrative
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: K Oster 12/7/07

Secondary Review Performed By: S. Eulane 12/13/07

SCAN
12/5 - 12/14

Gamma Spec Que Sheet

11/30/2007

Batch #:707073 **Analyst:** MJH1 **First Client DueDate:**12/14/2007 **Internal Due Date:** 12/05/2007

Gamma Spike Isotope: Mixed Gamma **Spike Code:** NA **Expiration Date:** NA **Vol:** NA **Nominal Concentration:** NA

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/3/08 **Vol:** 1.0 ml **Nominal Concentration:** Cs-137 6.105 Co-60 8.535 Am-241 15.96

Initials: MR **Prep Date:** 11/30/07 **Witness:** —

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
198530033-1	SB-CZ-SS-RA9-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	100.87	17	
198530034-1	SB-CZ-SS-RA10-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	112.86	19	
198530035-1	SB-CZ-SS-RA11-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	95.12	13	
198530036-1	SB-CZ-SS-RA12-ST	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	106.34	18	
198530037-1	SB-CZ-SS-RA1-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	99.89	21	
198530038-1	SB-CZ-SS-RA2-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	121.11	23	
198530039-1	SB-CZ-SS-RA3-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	99.97	5	
198530040-1	SB-CZ-SS-RA4-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	110.50	6	
198530041-1	SB-CZ-SS-RA5-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	100.15	7	
198530042-1	SB-CZ-SS-RA6-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	116.88	11	
198530043-1	SB-CZ-SS-RA7-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	97.78	12	
198530044-1	SB-CZ-SS-RA8-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	108.22	13	
198530045-1	SB-CZ-SS-RA9-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	95.36	14	
198530046-1	SB-CZ-SS-RA10-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	96.79	16	
198530047-1	SB-CZ-SS-RA11-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	113.34	17	
198530048-1	SB-CZ-SS-RA12-SD	SAMPLE		.08 pCi/g	SCAN001	SOIL	12-OCT-07 00:00:00	104.28	18	
1201471384-1	MB for batch 707073	MB		.08 pCi/g	QC ACCOUNT	SOIL	11/30/07	120.50	19	
1201471385-1	SB-CZ-SS-RA9-ST(198530033DUP	DUP		.08 pCi/g	QC ACCOUNT	SOIL	12-OCT-07 00:00:00	99.49	20	
1201471386-1	LCS for batch 707073	LCS		.08 pCi/g	QC ACCOUNT	SOIL	11/30/07	155.44	21	

12/7/07

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: 12/7/07 S. Eulam 12/13/07

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
707073	198530033	SAMPLE	04-DEC-07				
707073	198530034	SAMPLE	04-DEC-07				
707073	198530035	SAMPLE	04-DEC-07				
707073	198530036	SAMPLE	04-DEC-07				
707073	198530037	SAMPLE	04-DEC-07				
707073	198530038	SAMPLE	04-DEC-07				
707073	198530039	SAMPLE	05-DEC-07				
707073	198530040	SAMPLE	05-DEC-07				
707073	198530041	SAMPLE	05-DEC-07				
707073	198530042	SAMPLE	05-DEC-07				
707073	198530043	SAMPLE	05-DEC-07				
707073	198530044	SAMPLE	05-DEC-07				
707073	198530045	SAMPLE	05-DEC-07				
707073	198530046	SAMPLE	05-DEC-07				
707073	198530047	SAMPLE	05-DEC-07				
707073	198530048	SAMPLE	05-DEC-07	Americium-241	0.1737	0.2109	0.200
707073	1201471384	MB	05-DEC-07				
707073	1201471385	DUP	05-DEC-07				
707073	1201471386	LCS	05-DEC-07	Actinium-228	0.8713	1.002	0.800
				Antimony-125	0.04627	0.4322	0.200
				Bismuth-212	0.9333	1.424	0.500
				Potassium-40	0.4409	1.62	1.00
				Thorium-234	1.042	1.357	0.500
				Uranium-235	-0.05861	0.6384	0.500

GEL QUALS

Batch ID: 707073

Report run on: December 7, 2007 1:01 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530033-1 04-DEC-2007 12:53	Americium-243	UI	UI	UI	Data rejected due to interference.		.1833			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.7455			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3595			
198530034-1 04-DEC-2007 12:54	Americium-243	UI	UI	UI	Data rejected due to interference.		.1619			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.3109			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2626			
198530035-1 04-DEC-2007 16:16	Americium-243	UI	UI	UI	Data rejected due to interference.		.2009			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.07958			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.08781		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5739			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4336			
198530036-1 04-DEC-2007 16:17	Americium-243	UI	UI	UI	Data rejected due to interference.		.1563			
	Neptunium-236	UI	UI	UI	Data rejected due to low abundance.		.04317			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5571			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2367			
198530037-1 04-DEC-2007 16:17	Americium-241	UI	UI	UI	Data rejected due to low abundance.		.07901		.2	.2
	Americium-243	UI	UI	UI	Data rejected due to interference.		.363			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.1259			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.1389		.5	.5
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.05489			

GEL QUALS

Batch ID: 707073

Report run on: December 7, 2007 1:01 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530037-1 04-DEC-2007 16:17	Neptunium-237	UI	UI	UI	Data rejected due to interference.		1.108			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4358			
198530038-1 04-DEC-2007 16:18	Americium-243	UI	UI	UI	Data rejected due to interference.		.292			
	Californium-249	UI	UI	UI	Data rejected due to interference.		.04024			
	Cesium-137	UI	UI	UI	Data rejected due to no valid peak.		.03821		.1	.1
	Curium-243	UI	UI	UI	Data rejected due to interference.		.07182			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.07925		.5	.5
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.05134			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.9602			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4868			
198530039-1 05-DEC-2007 05:54	Americium-243	UI	UI	UI	Data rejected due to interference.		.3549			
	Curium-243	UI	UI	UI	Data rejected due to interference.		.187			
	Europium-155	UI	UI	UI	Data rejected due to interference.		.2064		.5	.5
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		1.101			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.5286			
198530040-1 05-DEC-2007 05:54	Americium-243	UI	UI	UI	Data rejected due to interference.		.1746			
	Cesium-137	UI	UI	UI	Data rejected due to no valid peak.		.04318		.1	.1
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.07026			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5003			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2711			

GEL QUALS

Batch ID: 707073

Report run on: December 7, 2007 1:01 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530041-1 05-DEC-2007 05:55	Americium-243	UI	UI	UI	Data rejected due to interference.		.1885			
	Cesium-137	UI	UI	UI	Data rejected due to no valid peak.		.0527		.1	.1
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5697			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3619			
198530042-1 05-DEC-2007 05:56	Americium-243	UI	UI	UI	Data rejected due to interference.		.1711			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.4135			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3118			
198530043-1 05-DEC-2007 05:57	Americium-243	UI	UI	UI	Data rejected due to interference.		.1539			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.8973			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.2772			
198530044-1 05-DEC-2007 05:57	Americium-243	UI	UI	UI	Data rejected due to interference.		.197			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5174			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.4269			
198530045-1 05-DEC-2007 05:58	Americium-243	UI	UI	UI	Data rejected due to interference.		.2381			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.8361			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3226			
198530046-1 05-DEC-2007 05:59	Americium-243	UI	UI	UI	Data rejected due to interference.		.1866			
	Bismuth-211	UI	UI	UI	Data rejected due to high peak-width.		.8309			
	Cesium-137	UI	UI	UI	Data rejected due to no valid peak.		.05915		.1	.1

GEL QUALS

Batch ID: 707073

Report run on: December 7, 2007 1:01 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
198530046-1 05-DEC-2007 05:59	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6922			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3089			
198530047-1 05-DEC-2007 05:59	Americium-243	UI	UI	UI	Data rejected due to interference.		.1918			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.6483			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3535			
198530048-1 05-DEC-2007 06:00	Americium-243	UI	UI	UI	Data rejected due to interference.		.3062			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.872			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.468			
1201471384-1 MB 05-DEC-2007 06:01	Americium-243	UI	UI	UI	Data rejected due to high peak-width.		.02861			
1201471385-1 DUP 05-DEC-2007 06:03	Americium-243	UI	UI	UI	Data rejected due to interference.		.1918			
	Neptunium-236	UI	UI	UI	Data rejected due to interference.		.07015			
	Neptunium-237	UI	UI	UI	Data rejected due to interference.		.5732			
	Radium-223	UI	UI	UI	Data rejected due to interference.		.3517			

Gamma Review Report based on Result > MDA for Batch:707073

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
198530033	12-OCT-07 00:00	04-DEC-07 12:53	53.5	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	0.7665	0.2792	pCi/g	0.2201	0.800	911	1	1.432	IDENTIFIED	18.28	☐	
Americium-243 INT	0.1833	0.03671	pCi/g	0.04043	Y	74.84	1	0.9431	IDENTIFIED	9.694	☑ UI	
Bismuth-212 ✓	1.007	0.4713	pCi/g	0.4618	0.500	727.4	1	1.549	IDENTIFIED	23.59	☐	
Bismuth-214 ✓	0.8068	0.1596	pCi/g	0.1016	0.200	609.2	1	1.305	IDENTIFIED	9.442	☐	
Lead-212 ✓	0.9398	0.1122	pCi/g	0.07243	0.100	238.6	1	0.9944	IDENTIFIED	4.611	☐	
Lead-214 ✓	0.8647	0.1239	pCi/g	0.1015	0.100	351.8	1	1.081	IDENTIFIED	6.535	☐	
Neptunium-237 INT	0.7455	0.1807	pCi/g	0.1886	Y	87.22	1	1.216	IDENTIFIED	11.9	☑ UI	
Potassium-40 ✓	2.675	0.6749	pCi/g	0.5846	1.00	1460	1	1.322	IDENTIFIED	12.58	☐	
Radium-223 INT	0.3595	0.2369	pCi/g	0.2147	Y	270.5	1	2.29	IDENTIFIED	33.39	☑ UI	
Thallium-208 ✓	0.2419	0.06047	pCi/g	0.05238	0.080	583	1	1.459	IDENTIFIED	12.27	☐	
Thorium-234 ✓	1.734	0.5098	pCi/g	0.4387	0.500	92.67	1	1.229	IDENTIFIED	14.57	☐	

*** = 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
198530034	12-OCT-07 00:00	04-DEC-07 12:54	53.5	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	0.7301	0.1952	pCi/g	0.1532	0.800	910.5	1	1.591	IDENTIFIED	12.6	☐	
Americium-243 INT	0.1619	0.04666	pCi/g	0.05497	Y	74.77	1	1.377	IDENTIFIED	14.35	☑ UI	
Bismuth-212 ✓	0.6477	0.2508	pCi/g	0.2795	0.500	726.7	1	1.33	IDENTIFIED	19.26	☐	
Bismuth-214 ✓	0.6754	0.1185	pCi/g	0.0785	0.200	608.9	1	1.565	IDENTIFIED	8.104	☐	
Lead-212 ✓	0.6568	0.08031	pCi/g	0.0613	0.100	238.4	1	1.302	IDENTIFIED	5.387	☐	
Lead-214 ✓	0.6538	0.09524	pCi/g	0.07695	0.100	351.5	1	1.373	IDENTIFIED	6.797	☐	
Neptunium-237 INT	0.3109	0.179	pCi/g	0.2406	Y	87.19	1	1.306	IDENTIFIED	29.17	☑ UI	
Potassium-40 ✓	2.36	0.4523	pCi/g	0.3968	1.00	1460	1	2.437	IDENTIFIED	9.27	☐	
Radium-223 INT	0.2626	0.1967	pCi/g	0.1902	Y	269.5	1	1.116	IDENTIFIED	38.09	☑ UI	
Thallium-208 ✓	0.218	0.04911	pCi/g	0.0335	0.080	582.9	1	1.483	IDENTIFIED	10.88	☐	
Thorium-234 ✓	1.136	0.6412	pCi/g	0.4709	0.500	92.47	1	1.406	IDENTIFIED	28.61	☐	

*** = 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
198530035	12-OCT-07 00:00	04-DEC-07 16:16	53.7	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.028	0.2114	pCi/g	0.1499	0.800	910.7	1	1.941	IDENTIFIED	10.03	☐	
Americium-243 INT	0.2009	0.02762	pCi/g	0.02656	Y	74.86	1	0.9016	IDENTIFIED	5.799	☑ UI	
Bismuth-212 ✓	0.7069	0.317	pCi/g	0.3181	0.500	727.1	1	1.183	IDENTIFIED	22.54	☐	
Bismuth-214 ✓	0.8284	0.1275	pCi/g	0.07822	0.200	609.1	1	1.535	IDENTIFIED	6.902	☐	
Curium-243 INT	0.07958	0.06408	pCi/g	0.07064	Y	105.3	2	0.9633	IDENTIFIED	40.84	☑ UI	
Europium-155 INT	0.08781	0.07071	pCi/g	0.07585	0.500	105.3	2	0.9633	IDENTIFIED	40.84	☑	
Lead-212 ✓	0.9487	0.08627	pCi/g	0.05003	0.100	238.6	1	1.023	IDENTIFIED	3.208	☑ UI	
Lead-214 ✓	0.869	0.09979	pCi/g	0.07563	0.100	351.8	1	1.189	IDENTIFIED	5.238	☐	
Neptunium-237 INT	0.5739	0.1166	pCi/g	0.1394	Y	87.24	1	1.05	IDENTIFIED	9.578	☑ UI	
Potassium-40 ✓	3.225	0.6048	pCi/g	0.353	1.00	1460	1	1.972	IDENTIFIED	9.153	☐	
Radium-223 INT	0.4336	0.1561	pCi/g	0.1663	Y	270.4	1	1.102	IDENTIFIED	18.15	☑ UI	
Thallium-208 ✓	0.2505	0.0538	pCi/g	0.03915	0.080	583.1	1	1.299	IDENTIFIED	10.35	☐	
Thorium-234 ✓	1.564	0.4394	pCi/g	0.3259	0.500	92.64	1	*1.091	IDENTIFIED	13.74	☐	

*** = 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
198530036	12-OCT-07 00:00	04-DEC-07 16:17	53.7	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.7733**	0.1285	pCi/g	**0.0753**	**0.800**	911.4	1	1.633	IDENTIFIED	6.802	☐	
Americium-243 INT	**0.1563**	0.03096	pCi/g	**0.03631**	**Y**	74.71	1	0.8809	IDENTIFIED	8.829	☑ U±	
Bismuth-212 ✓	**0.539**	0.1415	pCi/g	**0.1562**	**0.500**	727.4	1	1.895	IDENTIFIED	12.75	☐	
Bismuth-214 ✓	**0.7474**	0.07608	pCi/g	**0.04149**	**0.200**	609.5	1	1.759	IDENTIFIED	3.892	☐	
Lead-212 ✓	**0.805**	0.05999	pCi/g	**0.03275**	**0.100**	238.6	1	1.2	IDENTIFIED	2.683	☐	
Lead-214 ✓	**0.836**	0.07324	pCi/g	**0.04091**	**0.100**	351.9	1	1.327	IDENTIFIED	3.682	☐	
Neptunium-236 LA	**0.04317**	0.02505	pCi/g	**0.03936**	**Y**	143.5	1	0.9668	NOT_IDENTI	107.2	☑ UI	Data rejected due to low abundance.
Neptunium-237 INT	**0.5571**	0.1237	pCi/g	**0.1387**	**Y**	87.1	1	1.119	IDENTIFIED	10.06	☑ U±	
Potassium-40 ✓	**2.571**	0.3785	pCi/g	**0.177**	**1.00**	1461	1	2.16	IDENTIFIED	6.429	☐	
Radium-223 INT	**0.2367**	0.09902	pCi/g	**0.102**	**Y**	270.3	1	1.313	IDENTIFIED	21.18	☑ U±	
Thallium-208 ✓	**0.2339**	0.03174	pCi/g	**0.01979**	**0.080**	583.4	1	1.538	IDENTIFIED	6.081	☐	
Thorium-234 ✓	**1.331**	0.3376	pCi/g	**0.2939**	**0.500**	92.56	1	1.314	IDENTIFIED	12.04	☐	

*** = 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
198530037	12-OCT-07 00:00	04-DEC-07 16:17	53.7	SAMPLE	LOAD	1	SCAN	SCAN00101!GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**2.08**	0.2612	pCi/g	**0.1359**	**0.800**	910.9	1	1.87	IDENTIFIED	5.442	☐	
Americium-241 LA	**0.07901**	0.03356	pCi/g	**0.0515**	**0.200**	87.25	2	1.4	NOT_IDENTI	5.379	☑ UI	Data rejected due to low abundance.
Americium-243 INT	**0.363**	0.03866	pCi/g	**0.02877**	**Y**	74.96	1	1.441	IDENTIFIED	4.188	☑ UI	
Bismuth-212 ✓	**1.419**	0.356	pCi/g	**0.3207**	**0.500**	727.1	1	2.178	IDENTIFIED	12.15	☐	
Bismuth-214 ✓	**1.067**	0.13	pCi/g	**0.0781**	**0.200**	609	1	1.928	IDENTIFIED	4.928	☐	
Curium-243 INT	**0.1259**	0.05913	pCi/g	**0.06966**	**Y**	105.4	2	2.024	IDENTIFIED	23.61	☑ UI	
Europium-155 INT	**0.1389**	0.06525	pCi/g	**0.08553**	**0.500**	105.4	2	2.024	IDENTIFIED	23.61	☑ U±	
Lead-212 ✓	**2.028**	0.1426	pCi/g	**0.05362**	**0.100**	238.6	1	1.398	IDENTIFIED	1.868	☐	
Lead-214 ✓	**1.134**	0.1135	pCi/g	**0.07232**	**0.100**	351.9	1	1.49	IDENTIFIED	4.398	☐	
Neptunium-236 INT	**0.05489**	0.0376	pCi/g	**0.04303**	**Y**	99.37	1	1.441	IDENTIFIED	34.73	☑ UI	
Neptunium-237 INT	**1.108**	0.1415	pCi/g	**0.1373**	**Y**	87.25	2	1.4	IDENTIFIED	5.379	☑ U±	
Potassium-40 ✓	**8.072**	0.8858	pCi/g	**0.4047**	**1.00**	1461	1	2.152	IDENTIFIED	4.87	☐	
Radium-223 INT	**0.4358**	0.1815	pCi/g	**0.1771**	**Y**	270.3	1	1.632	IDENTIFIED	21.08	☑ U±	
Thallium-208 ✓	**0.7196**	0.08093	pCi/g	**0.03815**	**0.080**	582.9	1	1.527	IDENTIFIED	4.432	☐	
Thorium-234 ✓	**2.588**	0.3913	pCi/g	**0.3196**	**0.500**	93.17	1	1.866	IDENTIFIED	6.721	☐	

*** = 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
198530038	12-OCT-07 00:00	04-DEC-07 16:18	53.7	SAMPLE	LOAD	1	SCAN	SCAN00101!GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.744**	0.2053	pCi/g	**0.1132**	**0.800**	911.1	1	1.53	IDENTIFIED	4.479	☐	
Americium-243 INT	**0.292**	0.03596	pCi/g	**0.03777**	**Y**	74.83	1	0.865	IDENTIFIED	5.188	☑ UI	
Bismuth-212 ✓	**1.428**	0.2517	pCi/g	**0.2362**	**0.500**	727.4	1	1.362	IDENTIFIED	8.388	☐	
Bismuth-214 ✓	**0.9611**	0.1009	pCi/g	**0.05975**	**0.200**	609.2	1	1.425	IDENTIFIED	4.512	☐	
Californium-249 INT	**0.04024**	0.03761	pCi/g	**0.03267**	**Y**	387.9	1	2.319	IDENTIFIED	47.63	☑ UI	
Cesium-137 NVP	**0.03821**	0.02512	pCi/g	**0.03112**	**0.100**	661.9	1	1.603	IDENTIFIED	33.41	☑ UI	
Curium-243 INT	**0.07182**	0.05974	pCi/g	**0.06838**	**Y**	105.1	2	1.075	IDENTIFIED	42.29	☑ UI	
Europium-155 INT	**0.07925**	0.06592	pCi/g	**0.0731**	**0.500**	105.1	2	1.075	IDENTIFIED	42.29	☑ U±	
Lead-212 ✓	**1.698**	0.1112	pCi/g	**0.04511**	**0.100**	238.7	1	0.9769	IDENTIFIED	1.792	☐	
Lead-214 ✓	**1.061**	0.09514	pCi/g	**0.05421**	**0.100**	351.9	1	1.073	IDENTIFIED	3.697	☐	
Neptunium-236 INT	**0.05134**	0.03757	pCi/g	**0.04304**	**Y**	99.05	1	0.6238	IDENTIFIED	37.16	☑ UI	
Neptunium-237 INT	**0.9602**	0.1514	pCi/g	**0.1583**	**Y**	87.24	1	1.148	IDENTIFIED	7.138	☑ U±	
Potassium-40 ✓	**5.578**	0.6596	pCi/g	**0.2861**	**1.00**	1461	1	2.243	IDENTIFIED	4.865	☐	
Radium-223 INT	**0.4868**	0.1479	pCi/g	**0.1365**	**Y**	270.5	1	1.173	IDENTIFIED	15.22	☑ UI	
Thallium-208 ✓	**0.5065**	0.05253	pCi/g	**0.03006**	**0.080**	583.2	1	1.305	IDENTIFIED	4.457	☐	
Thorium-234 ✓	**2.288**	0.3909	pCi/g	**0.3382**	**0.500**	92.91	1	1.412	IDENTIFIED	7.936	☐	

*** = 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
198530039	12-OCT-07 00:00	05-DEC-07 05:54	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101IGEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.923	0.3248	pCi/g	0.2256	0.800	911.4	1	1.83	IDENTIFIED	7.285	☐	
Americium-243 INT	0.3549	0.04903	pCi/g	0.04551	Y	74.7	1	1.192	IDENTIFIED	5.754	☑ UI	
Bismuth-212 ✓	1.213	0.3675	pCi/g	0.5226	0.500	727.4	1	1.851	IDENTIFIED	14.86	☐	
Bismuth-214 ✓	1.168	0.18	pCi/g	0.1058	0.200	609.5	1	1.507	IDENTIFIED	6.91	☐	
Curium-243 INT	0.187	0.09628	pCi/g	0.1137	Y	105.5	2	2.259	IDENTIFIED	25.84	☑ UI	
Europium-155 INT	0.2064	0.1063	pCi/g	0.1341	0.500	105.5	2	2.259	IDENTIFIED	25.84	☑ UI	
Gross Gamma	8.449	1.798	pCi/g	3.45	N		0				☐	
Lead-212 ✓	2.028	0.196	pCi/g	0.0798	0.100	238.7	1	1.223	IDENTIFIED	2.568	☐	
Lead-214 ✓	1.318	0.1627	pCi/g	0.1097	0.100	352.1	1	1.434	IDENTIFIED	5.648	☐	
Neptunium-237 INT	1.101	0.2053	pCi/g	0.2383	Y	87.12	1	1.174	IDENTIFIED	8.451	☑ UI	
Potassium-40 ✓	4.784	0.8561	pCi/g	0.541	1.00	1461	1	2.205	IDENTIFIED	8.221	☐	
Radium-223 INT	0.5286	0.3154	pCi/g	0.2531	Y	270.8	1	1.332	IDENTIFIED	30.25	☑ UI	
Thallium-208 ✓	0.6188	0.07661	pCi/g	0.05384	0.080	583.3	1	1.357	IDENTIFIED	5.199	☐	
Thorium-234 ✓	2.917	0.618	pCi/g	0.556	0.500	92.85	1	1.696	IDENTIFIED	9.841	☐	

*** = 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
198530040	12-OCT-07 00:00	05-DEC-07 05:54	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101IGEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	0.8979	0.2276	pCi/g	0.1397	0.800	911	1	1.528	IDENTIFIED	11.9	☐	
Americium-243 INT	0.1746	0.03996	pCi/g	0.05487	Y	74.43	1	0.8297	IDENTIFIED	10.92	☑ UI	
Bismuth-212 ✓	0.4282	0.2368	pCi/g	0.2884	0.500	727.2	1	1.777	IDENTIFIED	27.95	☐	
Bismuth-214 ✓	0.7634	0.1268	pCi/g	0.07553	0.200	609.2	1	1.318	IDENTIFIED	7.782	☐	
Cesium-137 NVP	0.04318	0.03535	pCi/g	0.0396	0.100	661.2	1	1.638	IDENTIFIED	41.64	☑ UI	
Lead-212 ✓	0.9143	0.09285	pCi/g	0.06122	0.100	238.3	1	1.277	IDENTIFIED	4.135	☐	
Lead-214 ✓	0.8767	0.1251	pCi/g	0.07512	0.100	351.7	1	1.255	IDENTIFIED	6.575	☐	
Neptunium-236 INT	0.07026	0.05368	pCi/g	0.05723	Y	98.2	1	1.723	IDENTIFIED	38.79	☑ UI	
Neptunium-237 INT	0.5003	0.1935	pCi/g	0.2383	Y	86.8	1	1.093	IDENTIFIED	19.24	☑ UI	
Potassium-40 ✓	1.664	0.5639	pCi/g	0.3825	1.00	1460	1	2.257	IDENTIFIED	16.99	☐	
Radium-223 INT	0.2711	0.2049	pCi/g	0.2082	Y	269.7	1	1.893	IDENTIFIED	38.42	☑ UI	
Thallium-208 ✓	0.2115	0.0546	pCi/g	0.03861	0.080	583	1	1.344	IDENTIFIED	12.74	☐	
Thorium-234 ✓	1.706	0.5559	pCi/g	0.4341	0.500	92.54	1	1.498	IDENTIFIED	16.11	☐	

*** = 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
198530041	12-OCT-07 00:00	05-DEC-07 05:55	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101IGEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.036	0.2053	pCi/g	0.1342	0.800	911.7	1	1.455	IDENTIFIED	9.519	☐	
Americium-243 INT	0.1885	0.03752	pCi/g	0.04092	Y	74.96	1	0.9936	IDENTIFIED	9.571	☑ UI	
Bismuth-212 ✓	0.6035	0.3137	pCi/g	0.3033	0.500	727.6	1	1.821	IDENTIFIED	26.26	☐	
Bismuth-214 ✓	0.873	0.122	pCi/g	0.07479	0.200	609.7	1	1.275	IDENTIFIED	6.241	☐	
Cesium-137 NVP	0.0527	0.03424	pCi/g	0.04265	0.100	662	1	2.334	IDENTIFIED	32.95	☑ UI	
Lead-212 ✓	1.022	0.09651	pCi/g	0.06024	0.100	238.9	1	1.111	IDENTIFIED	3.778	☐	
Lead-214 ✓	1.026	0.1111	pCi/g	0.07422	0.100	352.2	1	1.251	IDENTIFIED	4.766	☐	
Neptunium-237 INT	0.5697	0.1788	pCi/g	0.1857	Y	87.39	1	1.302	IDENTIFIED	15.52	☑ UI	
Potassium-40 ✓	2.962	0.6484	pCi/g	0.3898	1.00	1462	1	2.381	IDENTIFIED	10.83	☐	
Radium-223 INT	0.3619	0.1989	pCi/g	0.1826	Y	270.4	1	2.334	IDENTIFIED	27.87	☑ UI	
Thallium-208 ✓	0.2843	0.05644	pCi/g	0.04158	0.080	583.4	1	1.471	IDENTIFIED	9.56	☐	
Thorium-234 ✓	1.257	0.4239	pCi/g	0.417	0.500	92.95	1	1.366	IDENTIFIED	16.77	☐	

*** = 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
198530042	12-OCT-07 00:00	05-DEC-07 05:56	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	0.9744	0.1682	pCi/g	0.09762	0.800	911.2	1	1.401	IDENTIFIED	7.637	☐	
Americium-243 INT	0.1711	0.03144	pCi/g	0.03285	Y	74.88	1	0.9853	IDENTIFIED	8.772	☑ UI	
Bismuth-212 ✓	0.5572	0.2418	pCi/g	0.2148	0.500	727.5	1	1.087	IDENTIFIED	21.78	☐	
Bismuth-214 ✓	0.7075	0.1076	pCi/g	0.05844	0.200	609.3	1	1.434	IDENTIFIED	6.899	☐	
Lead-212 ✓	0.8391	0.07381	pCi/g	0.04365	0.100	238.6	1	0.9617	IDENTIFIED	3.392	☐	
Lead-214 ✓	0.6974	0.09032	pCi/g	0.05855	0.100	351.9	1	1.096	IDENTIFIED	6.006	☐	
Neptunium-237 INT	0.4135	0.1463	pCi/g	0.1464	Y	87.34	1	1.153	IDENTIFIED	17.67	☑ UI	
Potassium-40 ✓	2.131	0.4644	pCi/g	0.2308	1.00	1461	1	1.376	IDENTIFIED	10.55	☐	
Radium-223 INT	0.3118	0.1151	pCi/g	0.1297	Y	270.2	1	1.333	IDENTIFIED	18.59	☑ UI	
Thallium-208 ✓	0.306	0.04462	pCi/g	0.02918	0.080	583.3	1	1.322	IDENTIFIED	6.609	☐	
Thorium-234 ✓	1.31	0.343	pCi/g	0.3233	0.500	92.64	1	1.136	IDENTIFIED	12.89	☐	

*** = 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
198530043	12-OCT-07 00:00	05-DEC-07 05:57	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	0.9293	0.2076	pCi/g	0.1391	0.800	910.7	1	2.103	IDENTIFIED	10.14	☐	
Americium-243 INT	0.1539	0.0461	pCi/g	0.0623	Y	74.87	1	1.062	IDENTIFIED	14.85	☑ UI	
Bismuth-212 ✓	0.5736	0.3341	pCi/g	0.3112	0.500	727.3	1	1.733	IDENTIFIED	29.35	☐	
Bismuth-214 ✓	0.9009	0.1312	pCi/g	0.07955	0.200	609	1	1.432	IDENTIFIED	6.198	☐	
Gross Gamma	5.166	1.407	pCi/g	2.846	N		0				☐	
Lead-212 ✓	0.9125	0.09524	pCi/g	0.06979	0.100	238.5	1	1.099	IDENTIFIED	4.347	☐	
Lead-214 ✓	0.9595	0.1172	pCi/g	0.08326	0.100	351.7	1	1.396	IDENTIFIED	5.498	☐	
Neptunium-237 INT	0.8973	0.2476	pCi/g	0.2502	Y	87.23	1	1.657	IDENTIFIED	13.5	☑ UI	
Potassium-40 ✓	2.667	0.6379	pCi/g	0.3656	1.00	1460	1	2.152	IDENTIFIED	11.81	☐	
Radium-223 INT	0.2772	0.1695	pCi/g	0.2113	Y	270.2	1	1.361	IDENTIFIED	31.04	☑ UI	
Thallium-208 ✓	0.3219	0.06093	pCi/g	0.04216	0.080	582.6	1	1.552	IDENTIFIED	8.824	☐	
Thorium-234 ✓	1.597	0.5631	pCi/g	0.5419	0.500	92.72	1	1.419	IDENTIFIED	17.57	☐	

*** = 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
198530044	12-OCT-07 00:00	05-DEC-07 05:57	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.225	0.2518	pCi/g	0.2058	0.800	910.9	1	1.418	IDENTIFIED	10.02	☐	
Americium-243 INT	0.197	0.03555	pCi/g	0.03633	Y	74.88	1	0.9511	IDENTIFIED	8.321	☑ UI	
Bismuth-212 ✓	0.9189	0.5269	pCi/g	0.3941	0.500	727.9	1	1.837	IDENTIFIED	29	☐	
Bismuth-214 ✓	0.6817	0.1299	pCi/g	0.1002	0.200	609.2	1	1.265	IDENTIFIED	8.97	☐	
Gross Gamma	5.051	1.561	pCi/g	3.038	N		0				☐	
Lead-212 ✓	1.006	0.1023	pCi/g	0.06908	0.100	238.6	1	1.028	IDENTIFIED	3.96	☐	
Lead-214 ✓	0.7943	0.1183	pCi/g	0.1008	0.100	351.7	1	1.211	IDENTIFIED	7.13	☐	
Neptunium-237 INT	0.5174	0.1473	pCi/g	0.1684	Y	87.03	1	1.269	IDENTIFIED	13.98	☑ UI	
Potassium-40 ✓	2.389	0.636	pCi/g	0.5224	1.00	1461	1	1.956	IDENTIFIED	13.3	☐	
Radium-223 INT	0.4269	0.2232	pCi/g	0.2073	Y	270.2	1	1.209	IDENTIFIED	26.52	☑ UI	
Thallium-208 ✓	0.3174	0.06847	pCi/g	0.05001	0.080	583	1	1.492	IDENTIFIED	10.4	☐	
Thorium-234 ✓	1.399	0.5061	pCi/g	0.4076	0.500	92.71	1	1.162	IDENTIFIED	18	☐	

*** = 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
198530045	12-OCT-07 00:00	05-DEC-07 05:58	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.135	0.2263	pCi/g	0.1355	0.800	911.2	1	1.532	IDENTIFIED	9.16	☐	
Americium-243 INT	0.2381	0.05381	pCi/g	0.04664	Y	74.81	1	1.678	IDENTIFIED	10.92	☑ UI	

Bismuth-212 ✓	**0.7341**	0.2968	pCi/g	**0.3056**	**0.500**	727	1	2.156	IDENTIFIED	20.22	☐	
Bismuth-214 ✓	**0.8401**	0.1314	pCi/g	**0.07631**	**0.200**	609.2	1	1.62	IDENTIFIED	7.069	☐	
Gross Gamma	**5.484**	1.396	pCi/g	**2.784**	**N**		0				☐	
Lead-212 ✓	**0.9825**	0.09564	pCi/g	**0.06294**	**0.100**	238.5	1	1.297	IDENTIFIED	3.867	☐	
Lead-214 ✓	**0.9333**	0.1285	pCi/g	**0.07849**	**0.100**	351.7	1	1.456	IDENTIFIED	6.359	☐	
Neptunium-237 INT	**0.8361**	0.2019	pCi/g	**0.2097**	**Y**	87.31	1	1.633	IDENTIFIED	11.6	☑ UI	
Potassium-40 ✓	**2.829**	0.5336	pCi/g	**0.3457**	**1.00**	1461	1	1.83	IDENTIFIED	9.211	☐	
Radium-223 INT	**0.3226**	0.1961	pCi/g	**0.1964**	**Y**	270.5	1	1.795	IDENTIFIED	30.85	☑ UI	
Thallium-208 ✓	**0.3081**	0.05199	pCi/g	**0.03245**	**0.080**	583	1	1.686	IDENTIFIED	7.821	☐	
Thorium-234 ✓	**1.972**	0.4926	pCi/g	**0.4634**	**0.500**	92.81	1	1.729	IDENTIFIED	12.1	☐	

*** = 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
198530046	12-OCT-07 00:00	05-DEC-07 05:59	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.9427**	0.1643	pCi/g	**0.136**	**0.800**	911	1	1.673	IDENTIFIED	7.858	☐	
Americium-243 INT	**0.1866**	0.04132	pCi/g	**0.04879**	**Y**	74.84	1	1.11	IDENTIFIED	10.8	☑ UI	
Bismuth-211 ↑PW	**0.8309**	0.8015	pCi/g	**0.5983**	**Y**	830.5	1	3.548	IDENTIFIED	49.02	☑ UI	Data rejected due to high peak-width.
Bismuth-212 ✓	**0.7236**	0.2603	pCi/g	**0.2719**	**0.500**	727.3	1	1.077	IDENTIFIED	17.85	☐	
Bismuth-214 ✓	**0.754**	0.1126	pCi/g	**0.07021**	**0.200**	609.2	1	1.242	IDENTIFIED	6.574	☐	
Cesium-137 NVP	**0.05915**	0.04397	pCi/g	**0.03865**	**0.100**	662.9	1	1.703	IDENTIFIED	37.69	☑ UI	
Lead-212 ✓	**0.8377**	0.07935	pCi/g	**0.05815**	**0.100**	238.6	1	1.053	IDENTIFIED	3.939	☐	
Lead-214 ✓	**0.8657**	0.1076	pCi/g	**0.07008**	**0.100**	351.8	1	1.136	IDENTIFIED	5.781	☐	
Neptunium-237 INT	**0.6922**	0.1799	pCi/g	**0.2007**	**Y**	87.21	1	1.503	IDENTIFIED	12.73	☑ UI	
Potassium-40 ✓	**2.971**	0.6663	pCi/g	**0.363**	**1.00**	1461	1	2.077	IDENTIFIED	11.03	☐	
Radium-223 INT	**0.3089**	0.1685	pCi/g	**0.1662**	**Y**	270.3	1	1.061	IDENTIFIED	27.7	☑ UI	
Thallium-208 ✓	**0.2506**	0.05141	pCi/g	**0.03542**	**0.080**	583	1	1.297	IDENTIFIED	9.805	☐	
Thorium-234 ✓	**1.687**	0.4268	pCi/g	**0.4414**	**0.500**	92.68	1	1.371	IDENTIFIED	12.39	☐	

*** = 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
198530047	12-OCT-07 00:00	05-DEC-07 05:59	54.2	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**0.8407**	0.2326	pCi/g	**0.1708**	**0.800**	911.3	1	1.787	IDENTIFIED	13.72	☐	
Americium-243 INT	**0.1918**	0.03047	pCi/g	**0.03128**	**Y**	75.12	1	1.078	IDENTIFIED	7.427	☑ UI	
Bismuth-212 ✓	**0.3771**	0.3382	pCi/g	**0.3458**	**0.500**	727.3	1	1.158	IDENTIFIED	45.61	☐	
Bismuth-214 ✓	**0.8428**	0.1272	pCi/g	**0.0833**	**0.200**	609.5	1	1.394	IDENTIFIED	6.83	☐	
Lead-212 ✓	**0.9034**	0.09781	pCi/g	**0.05458**	**0.100**	238.8	1	0.9986	IDENTIFIED	3.83	☐	
Lead-214 ✓	**0.829**	0.109	pCi/g	**0.07442**	**0.100**	352	1	1.16	IDENTIFIED	5.851	☐	
Neptunium-237 INT	**0.6483**	0.1338	pCi/g	**0.1589**	**Y**	87.38	1	1.02	IDENTIFIED	9.971	☑ UI	
Potassium-40 ✓	**2.877**	0.5829	pCi/g	**0.3995**	**1.00**	1461	1	1.452	IDENTIFIED	9.972	☐	
Radium-223 INT	**0.3535**	0.1498	pCi/g	**0.171**	**Y**	270.6	1	1.27	IDENTIFIED	21.27	☑ UI	
Thallium-208 ✓	**0.2745**	0.06727	pCi/g	**0.04385**	**0.080**	583.4	1	1.502	IDENTIFIED	12.01	☐	
Thorium-234 ✓	**1.216**	0.3955	pCi/g	**0.3587**	**0.500**	92.82	1	1.124	IDENTIFIED	16.19	☐	

*** = 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
198530048	12-OCT-07 00:00	05-DEC-07 06:00	54.3	SAMPLE	LOAD	1	SCAN	SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.36**	0.2129	pCi/g	**0.1247**	**0.800**	911.4	1	1.673	IDENTIFIED	6.182	☐	
Americium-243 INT	**0.3062**	0.05833	pCi/g	**0.06048**	**Y**	74.65	1	1.164	IDENTIFIED	8.384	☑ UI	
Bismuth-212 ✓	**0.7291**	0.3734	pCi/g	**0.2568**	**0.500**	728	1	1.871	IDENTIFIED	25.81	☐	
Bismuth-214 ✓	**1.142**	0.1274	pCi/g	**0.06615**	**0.200**	609.5	1	1.636	IDENTIFIED	4.535	☐	
Cesium-137 ✓	**0.05486**	0.0279	pCi/g	**0.03499**	**0.100**	662	1	2.186	IDENTIFIED	25.68	☐	

Lead-212 ✓	**1.446**	0.1056	pCi/g	**0.05591**	**0.100**	238.6	1	1.187	IDENTIFIED	2.575	☐
Lead-214 ✓	**1.227**	0.1153	pCi/g	**0.06602**	**0.100**	352	1	1.179	IDENTIFIED	4.068	☐
Neptunium-237 INT	**0.872**	0.2307	pCi/g	**0.227**	**Y**	87.09	1	1.282	IDENTIFIED	12.45	☑ UI
Potassium-40 ✓	**6.62**	0.7487	pCi/g	**0.3168**	**1.00**	1461	1	2.176	IDENTIFIED	4.266	☐
Radium-223 INT	**0.468**	0.1948	pCi/g	**0.1714**	**Y**	270.1	1	1.523	IDENTIFIED	21.07	☑ UI
Thallium-208 ✓	**0.3951**	0.0545	pCi/g	**0.03283**	**0.080**	583.2	1	1.619	IDENTIFIED	6.212	☐
Thorium-234 ✓	**1.899**	0.5286	pCi/g	**0.481**	**0.500**	92.67	1	1.4	IDENTIFIED	13.39	☐

*** = 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
1201471384		05-DEC-07 06:01	0	MB	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Americium-243 NPW	**0.02861**	0.02313	pCi/g	**0.02811**	**Y**	76.62	1	3.303	IDENTIFIED	41.13	☑ UI	Data rejected due to high peak-width.

*** = 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
1201471385	12-OCT-07 00:00	05-DEC-07 06:03	54.3	DUP	LOAD	1		SCAN00101|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.029**	0.1871	pCi/g	**0.1035**	**0.800**	911.3	1	1.179	IDENTIFIED	8.005	☐	
Americium-243 INT	**0.1918**	0.04066	pCi/g	**0.04482**	**Y**	74.93	1	1.016	IDENTIFIED	9.351	☑ UI	
Bismuth-212 ✓	**0.9545**	0.2509	pCi/g	**0.2456**	**0.500**	727.3	1	1.361	IDENTIFIED	12.87	☐	
Bismuth-214 ✓	**0.8255**	0.1111	pCi/g	**0.05987**	**0.200**	609.3	1	1.461	IDENTIFIED	6.049	☐	
Lead-212 ✓	**0.9934**	0.08995	pCi/g	**0.0559**	**0.100**	238.6	1	1.086	IDENTIFIED	3.585	☐	
Lead-214 ✓	**0.9188**	0.1065	pCi/g	**0.06845**	**0.100**	351.8	1	1.169	IDENTIFIED	5.222	☐	
Neptunium-236 INT	**0.07015**	0.04971	pCi/g	**0.05552**	**Y**	99.22	1	1.544	IDENTIFIED	35.84	☑ UI	
Neptunium-237 INT	**0.5732**	0.1987	pCi/g	**0.1962**	**Y**	87.32	1	1.316	IDENTIFIED	16.67	☑ UI	
Potassium-40 ✓	**2.665**	0.6031	pCi/g	**0.2763**	**1.00**	1461	1	1.955	IDENTIFIED	10.75	☐	
Radium-223 INT	**0.3517**	0.1867	pCi/g	**0.1778**	**Y**	269.9	1	1.548	IDENTIFIED	26.91	☑ UI	
Thallium-208 ✓	**0.276**	0.04785	pCi/g	**0.03406**	**0.080**	583.2	1	1.418	IDENTIFIED	8.262	☐	
Thorium-234 ✓	**1.317**	0.4281	pCi/g	**0.4338**	**0.500**	92.83	1	1.39	IDENTIFIED	15.69	☐	

*** = 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
1201471386		05-DEC-07 06:04	0	LCS	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Americium-241	**13.64**	0.9826	pCi/g	**0.296**	**0.200**	59.71	1	1.326	IDENTIFIED	1.523	☐	
Americium-243	**0.1788**	0.07453	pCi/g	**0.1435**	**Y**	75.06	1	1.336	IDENTIFIED	20.98	☐	
Bismuth-214	**0.9262**	0.3229	pCi/g	**0.4459**	**0.200**	609.2	1	1.757	FAIL_ABUND	17.38	☐	
Cesium-137	**6.159**	0.5991	pCi/g	**0.163**	**0.100**	661.5	1	1.741	IDENTIFIED	2.816	☐	
Cobalt-60	**8.308**	0.627	pCi/g	**0.1969**	**0.100**	1173	1	1.976	IDENTIFIED	2.701	☐	
Gross Gamma	**40.51**	5.162	pCi/g	**9.886**	**N**		0				☐	
Lead-212	**1.047**	0.1989	pCi/g	**0.2165**	**0.100**	238.5	1	1.598	IDENTIFIED	9.194	☐	
Lead-214	**0.695**	0.2476	pCi/g	**0.3013**	**0.100**	352.1	1	1.481	IDENTIFIED	17.99	☐	
Neptunium-237	**32.35**	2.583	pCi/g	**0.7027**	**Y**	88.07	1	1.379	IDENTIFIED	1.719	☐	
Polonium-209	**243.7**	53.6	pCi/g	**46.47**	**Y**	897.9	1	1.709	IDENTIFIED	10.7	☐	
Thallium-208	**0.3352**	0.1603	pCi/g	**0.231**	**0.080**	583.6	1	1.833	FAIL_ABUND	24.13	☐	

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

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:38:54.27

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530033.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 12:53:35.
Sample ID        : G198530033           Sample quantity  : 1.00870E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00        Elapsed real time: 0 03:00:03.87  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.49*	9	266	0.94	93.47	90	8	8.05E-04	382.5	
2	0	63.31*	60	461	0.77	127.09	123	9	5.58E-03	72.8	
3	2	72.78	49	307	0.93	146.02	143	16	4.51E-03	57.8	3.01E+00
4	2	74.84*	357	303	0.94	150.13	143	16	3.31E-02	9.7	
5	2	77.10*	612	247	0.90	154.64	143	16	5.67E-02	5.8	
6	0	80.24	71	265	2.60	160.91	159	6	6.55E-03	38.5	
7	3	84.44*	61	274	1.21	169.31	166	28	5.66E-03	48.9	3.06E+00
8	3	87.22	262	264	1.22	174.87	166	28	2.43E-02	11.9	
9	3	89.85	150	181	0.92	180.11	166	28	1.39E-02	15.6	
10	3	92.67*	264	236	1.23	185.74	166	28	2.44E-02	14.6	
11	0	108.19	27	252	1.04	216.77	215	7	2.49E-03	99.3	
12	0	128.95	89	241	0.94	258.24	254	9	8.25E-03	33.2	
13	0	143.42*	21	248	1.34	287.17	283	8	1.94E-03	140.3	
14	1	183.88	31	126	1.06	368.00	365	12	2.89E-03	61.9	5.93E-01
15	1	185.83*	130	155	1.16	371.90	365	12	1.20E-02	21.9	
16	0	205.05*	17	167	0.80	410.31	407	8	1.57E-03	143.6	
17	0	209.22	101	160	0.82	418.64	415	8	9.34E-03	24.0	
18	5	238.63*	726	113	0.99	477.41	472	19	6.72E-02	4.6	2.08E+00
19	5	241.70	255	139	1.81	483.54	472	19	2.37E-02	14.0	
20	0	270.54	80	166	2.29	541.18	536	11	7.37E-03	33.4	
21	0	277.71	37	112	1.78	555.51	553	7	3.42E-03	50.4	
22	0	295.29*	221	194	1.15	590.63	585	11	2.05E-02	14.7	
23	0	300.04	66	120	1.06	600.14	596	9	6.13E-03	32.4	
24	0	327.48	25	105	0.62	654.97	653	8	2.29E-03	73.8	
25	0	338.29*	87	149	1.07	676.57	672	9	8.09E-03	28.8	
26	0	351.81*	421	91	1.08	703.59	699	8	3.90E-02	6.5	
27	0	464.31	90	89	3.67	928.43	921	15	8.33E-03	25.6	
28	0	480.42	29	56	1.97	960.61	958	8	2.65E-03	48.5	
29	0	496.50	55	50	3.62	992.75	987	12	5.08E-03	29.3	
30	0	503.61	53	35	3.13	1006.96	1002	10	4.94E-03	24.8	
31	0	511.03*	64	89	2.58	1021.80	1015	15	5.95E-03	45.0	
32	0	583.04*	166	50	1.46	1165.72	1161	10	1.54E-02	12.3	
33	0	609.21*	290	94	1.30	1218.00	1212	14	2.68E-02	9.4	
34	0	681.02	30	60	1.73	1361.53	1353	15	2.76E-03	59.5	
35	0	727.43*	79	59	1.55	1454.29	1449	12	7.27E-03	23.6	
36	0	768.18	43	84	2.40	1535.76	1527	19	3.94E-03	54.3	
37	0	785.36	28	41	3.27	1570.09	1564	11	2.59E-03	48.3	
38	0	795.19	30	38	0.99	1589.74	1585	9	2.80E-03	41.8	

Sample ID : G198530033 Acquisition date : 4-DEC-2007 12:53:35

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	803.43*	22	34	1.77	1606.21	1600	10	2.07E-03	60.1	
40	0	861.04	24	50	1.21	1721.36	1715	11	2.26E-03	59.4	
41	0	911.02*	106	57	1.43	1821.27	1817	12	9.85E-03	18.3	
42	0	935.00	32	36	3.02	1869.21	1862	11	2.98E-03	40.0	
43	3	964.18*	37	25	2.20	1927.54	1921	21	3.47E-03	38.6	1.64E+00
44	3	968.72*	90	32	1.84	1936.61	1921	21	8.30E-03	16.3	
45	0	994.02	14	24	1.61	1987.19	1979	11	1.27E-03	74.8	
46	0	1120.09*	76	18	1.80	2239.22	2234	12	7.03E-03	17.7	
47	0	1235.06	9	15	1.42	2469.05	2464	8	8.49E-04	81.6	
48	0	1238.21	24	14	2.18	2475.36	2471	9	2.18E-03	34.9	
49	0	1281.73	12	12	1.40	2562.37	2555	10	1.11E-03	61.8	
50	0	1331.41	32	3	2.93	2661.68	2656	12	2.95E-03	20.8	
51	0	1352.99	16	6	5.33	2704.83	2698	13	1.44E-03	42.2	
52	0	1460.45*	103	11	1.32	2919.68	2913	14	9.50E-03	12.6	
53	0	1501.06	5	8	1.22	3000.89	2996	8	4.20E-04	118.7	
54	0	1509.76	6	11	3.37	3018.29	3013	9	5.72E-04	105.3	
55	0	1630.70	9	11	1.40	3260.11	3256	9	8.45E-04	73.8	
56	0	1661.60	8	3	0.55	3321.90	3318	7	7.32E-04	52.3	
57	0	1764.03*	46	7	2.07	3526.73	3521	13	4.24E-03	19.8	
58	0	1776.25	12	2	1.51	3551.16	3546	10	1.08E-03	38.4	
59	0	1847.50	11	0	1.44	3693.64	3688	10	1.02E-03	30.2	
60	0	1874.56	10	3	2.68	3747.76	3741	12	9.33E-04	46.5	

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]G198530033       *
* Acquisition date :  4-DEC-2007 12:53:35 Detector SN#    :                 *
* Detector ID      : GAM17                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 03:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 03:00:03.87     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530033           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0087E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.675E+00	6.749E-01	5.846E-01	0.000E+00
TL-208	2.419E-01	6.047E-02	5.238E-02	0.000E+00
BI-212	1.007E+00	4.713E-01	4.618E-01	0.000E+00
PB-212	9.398E-01	1.122E-01	7.243E-02	0.000E+00
BI-214	8.068E-01	1.596E-01	1.016E-01	0.000E+00
PB-214	8.647E-01	1.239E-01	1.015E-01	0.000E+00
RA-223	3.595E-01	2.369E-01	2.147E-01	0.000E+00
AC-228	7.665E-01	2.792E-01	2.201E-01	0.000E+00
TH-234	1.734E+00	5.098E-01	4.387E-01	0.000E+00
U-235	7.828E-02	2.153E-01	2.413E-01	0.000E+00
NP-237	7.455E-01	1.807E-01	1.886E-01	0.000E+00
AM-243	1.833E-01	3.671E-02	4.043E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	2.078E-02		3.348E-02	5.964E-02	0.000E+00	FAIL ABUN
RH-101	4.199E-03		2.640E-02	4.172E-02	0.000E+00	NOT IDENT.
SB-125	-6.021E-03		8.631E-02	1.444E-01	0.000E+00	NOT IDENT.
CS-137	1.790E-02		4.186E-02	6.583E-02	0.000E+00	NOT IDENT.
EU-155	5.104E-02		7.427E-02	1.180E-01	0.000E+00	NOT IDENT.
PO-209	1.171E+00		6.802E+00	1.164E+01	0.000E+00	NOT IDENT.
BI-211	1.387E-01		9.885E-01	1.693E+00	0.000E+00	NOT IDENT.
PA-233	-1.077E-02		5.016E-02	8.494E-02	0.000E+00	NOT IDENT.
PA-234M	-4.871E+00		4.755E+00	6.753E+00	0.000E+00	NOT IDENT.
NP-236	-3.567E-03		4.415E-02	6.491E-02	0.000E+00	NOT IDENT.
NP-239	-6.860E-02		1.635E-01	2.589E-01	0.000E+00	NOT IDENT.
AM-241	2.830E-02		4.279E-02	6.967E-02	0.000E+00	NOT IDENT.
CM-243	-1.794E-02		6.107E-02	1.025E-01	0.000E+00	NOT IDENT.
AM-246	-3.064E-02		1.204E-01	1.926E-01	0.000E+00	NOT IDENT.
CF-249	5.602E-02		3.323E-02	6.231E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:38:55.95

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530033.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 12:53:35.
Sample ID        : G198530033           Sample quantity  : 1.00870E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00        Elapsed real time: 0 03:00:03.87  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	103	10.66*	8.926E-01	2.675E+00	2.675E+00	25.74
TL-208	277.36	37	6.31	3.928E+00	3.702E-01	3.702E-01	101.18
	510.77	64	22.60	2.281E+00	3.091E-01	3.091E-01	90.17
	583.19	166	84.50*	2.015E+00	2.419E-01	2.419E-01	25.51
	763.13	------	1.81	1.568E+00	------	Line Not Found	------
	860.56	24	12.42	1.404E+00	3.475E-01	3.475E-01	118.93
BI-212	727.33	79	11.80*	1.639E+00	1.007E+00	1.007E+00	47.74
	785.37	28	1.10	1.527E+00	4.132E+00	4.132E+00	96.85
	1620.50	------	1.49	8.223E-01	------	Line Not Found	------
PB-212	74.81	357	10.40	7.088E+00	1.202E+00	1.202E+00	20.44
	77.11	612	17.50	7.087E+00	1.224E+00	1.224E+00	13.37
	87.30	262	7.81	7.033E+00	1.184E+00	1.184E+00	24.73
	238.63	726	43.30*	4.424E+00	9.398E-01	9.398E-01	12.18
	300.09	66	3.28	3.685E+00	1.359E+00	1.359E+00	65.17
BI-214	609.31	290	46.10*	1.934E+00	8.067E-01	8.068E-01	20.18
	768.36	43	4.94	1.558E+00	1.370E+00	1.370E+00	108.87
	806.17	------	1.22	1.490E+00	------	Line Not Found	------
	934.06	32	3.03	1.303E+00	2.025E+00	2.025E+00	80.31
	1120.29	76	15.10	1.112E+00	1.122E+00	1.122E+00	35.87
	1155.19	------	1.63	1.083E+00	------	Line Not Found	------
	1238.11	24	5.79	1.022E+00	9.855E-01	9.855E-01	70.09
	1280.96	12	1.43	9.928E-01	2.101E+00	2.101E+00	123.79
	1377.67	------	4.00	9.356E-01	------	Line Not Found	------
	1401.50	------	1.27	9.227E-01	------	Line Not Found	------
	1407.98	------	2.15	9.193E-01	------	Line Not Found	------
	1509.23	6	2.11	8.693E-01	8.354E-01	8.355E-01	210.70
	1729.60	------	2.92	7.820E-01	------	Line Not Found	------
	1764.49	46	15.40	7.703E-01	9.573E-01	9.574E-01	40.06
PB-214	74.81	357	6.44	7.088E+00	1.941E+00	1.941E+00	20.44
	77.11	612	10.80	7.087E+00	1.984E+00	1.984E+00	13.37
	87.30	262	4.84	7.033E+00	1.910E+00	1.910E+00	24.73
	242.00	255	7.43	4.382E+00	1.947E+00	1.947E+00	29.18

Sample ID : G198530033 Acquisition date : 4-DEC-2007 12:53:35

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.22	221	19.30	3.734E+00	7.612E-01	7.613E-01	30.30
	351.93	421	37.60*	3.212E+00	8.647E-01	8.647E-01	14.63
RA-223	269.46	80	13.70*	4.012E+00	3.595E-01	3.595E-01	67.24
AC-228	129.07	89	2.42	6.360E+00	1.436E+00	1.436E+00	67.19
	209.25	101	3.89	4.866E+00	1.322E+00	1.322E+00	48.63
	270.25	80	3.46	4.012E+00	1.423E+00	1.423E+00	67.24
	338.32	87	11.27	3.324E+00	5.785E-01	5.785E-01	57.97
	409.46	------	1.92	2.802E+00	------	Line Not Found	------
	463.00	90	4.40	2.495E+00	2.034E+00	2.034E+00	51.56
	794.95	30	4.25	1.509E+00	1.168E+00	1.168E+00	83.83
	911.20	106	25.80*	1.334E+00	7.665E-01	7.665E-01	37.17
	964.77	37	4.99	1.268E+00	1.468E+00	1.468E+00	77.41
	968.97	90	15.80	1.263E+00	1.115E+00	1.115E+00	33.35
	1588.20	------	3.22	8.353E-01	------	Line Not Found	------
TH-234	63.29	60	4.80	7.001E+00	4.452E-01	4.452E-01	145.68
	92.58	264	5.41*	6.976E+00	1.734E+00	1.734E+00	30.01
U-235	143.76	21	10.96*	6.072E+00	7.828E-02	7.828E-02	280.66
NP-237	86.48	262	12.40*	7.033E+00	7.455E-01	7.455E-01	24.73
AM-243	74.66	357	68.20*	7.088E+00	1.833E-01	1.833E-01	20.44

Flag: "*" = Keyline

Sample ID : G198530033 Acquisition date : 4-DEC-2007 12:53:35

Total number of lines in spectrum 60
Number of unidentified lines 24
Number of lines tentatively identified by NID 36 60.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.675E+00	2.675E+00	0.689E+00	25.74	
TL-208	4.43E+17S	1.00	2.419E-01	2.419E-01	0.617E-01	25.51	
BI-212	4.43E+17S	1.00	1.007E+00	1.007E+00	0.481E+00	47.74	
PB-212	4.43E+17S	1.00	9.398E-01	9.398E-01	1.145E-01	12.18	
BI-214	5.05E+10S	1.00	8.067E-01	8.068E-01	1.628E-01	20.18	
PB-214	5.05E+10S	1.00	8.647E-01	8.647E-01	1.265E-01	14.63	
RA-223	1.04E+12S	1.00	3.595E-01	3.595E-01	2.417E-01	67.24	
AC-228	4.43E+17S	1.00	7.665E-01	7.665E-01	2.849E-01	37.17	
TH-234	1.41E+17S	1.00	1.734E+00	1.734E+00	0.520E+00	30.01	
U-235	2.22E+16S	1.00	7.828E-02	7.828E-02	21.97E-02	280.66	
NP-237	6.75E+13S	1.00	7.455E-01	7.455E-01	1.844E-01	24.73	
AM-243	2.33E+11S	1.00	1.833E-01	1.833E-01	0.375E-01	20.44	
			---	---			
		Total Activity :	1.040E+01	1.040E+01			

Grand Total Activity : 1.040E+01 1.040E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530033 Acquisition date : 4-DEC-2007 12:53:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.49	9	266	0.94	93.47	90	8	8.05E-04	****	6.47E+00	
2	72.78	49	307	0.93	146.02	143	16	4.51E-03	****	7.08E+00	
0	80.24	71	265	2.60	160.91	159	6	6.55E-03	76.9	7.08E+00	
3	84.44	61	274	1.21	169.31	166	28	5.66E-03	97.7	7.06E+00	
3	89.85	150	181	0.92	180.11	166	28	1.39E-02	31.3	7.01E+00	
0	108.19	27	252	1.04	216.77	215	7	2.49E-03	****	6.75E+00	
1	183.88	31	126	1.06	368.00	365	12	2.89E-03	****	5.30E+00	
1	185.83	130	155	1.16	371.90	365	12	1.20E-02	43.9	5.26E+00	
0	205.05	17	167	0.80	410.31	407	8	1.57E-03	****	4.93E+00	
0	327.48	25	105	0.62	654.97	653	8	2.29E-03	****	3.42E+00	
0	480.42	29	56	1.97	960.61	958	8	2.65E-03	97.0	2.42E+00	
0	496.50	55	50	3.62	992.75	987	12	5.08E-03	58.6	2.34E+00	
0	503.61	53	35	3.13	1006.96	1002	10	4.94E-03	49.7	2.31E+00	
0	681.02	30	60	1.73	1361.53	1353	15	2.76E-03	****	1.74E+00	
0	803.43	22	34	1.77	1606.21	1600	10	2.07E-03	****	1.50E+00	
0	994.02	14	24	1.61	1987.19	1979	11	1.27E-03	****	1.23E+00	
0	1235.06	9	15	1.42	2469.05	2464	8	8.49E-04	****	1.02E+00	
0	1331.41	32	3	2.93	2661.68	2656	12	2.95E-03	41.6	9.62E-01	T
0	1352.99	16	6	5.33	2704.83	2698	13	1.44E-03	84.5	9.50E-01	
0	1501.06	5	8	1.22	3000.89	2996	8	4.20E-04	****	8.73E-01	
0	1630.70	9	11	1.40	3260.11	3256	9	8.45E-04	****	8.18E-01	
0	1661.60	8	3	0.55	3321.90	3318	7	7.32E-04	****	8.06E-01	
0	1776.25	12	2	1.51	3551.16	3546	10	1.08E-03	76.8	7.66E-01	
0	1847.50	11	0	1.44	3693.64	3688	10	1.02E-03	60.3	7.44E-01	
0	1874.56	10	3	2.68	3747.76	3741	12	9.33E-04	93.1	7.36E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530033           *
* Acquisition date :  4-DEC-2007 12:53:35 Detector SN#    :                *
* Detector ID      : GAM17                Sensitivity     : 3.000          *
* Geometry         : CAN                  Energy tolerance: 2.000          *
* Elapsed live time:    0 03:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 03:00:03.87     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530033           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0087E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 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	LC (pCi/GRAM)	TPU
K-40	2.675E+00	6.749E-01	2.925E-01	6.749E-01
TL-208	2.419E-01	6.047E-02	2.621E-02	6.047E-02
BI-212	1.007E+00	4.713E-01	2.310E-01	4.713E-01
PB-212	9.398E-01	1.122E-01	3.624E-02	1.122E-01
BI-214	8.068E-01	1.596E-01	5.081E-02	1.596E-01
PB-214	8.647E-01	1.239E-01	5.079E-02	1.239E-01
RA-223	3.595E-01	2.369E-01	1.074E-01	2.369E-01
AC-228	7.665E-01	2.792E-01	1.101E-01	2.792E-01
TH-234	1.734E+00	5.098E-01	2.195E-01	5.098E-01
U-235	7.828E-02	2.153E-01	1.207E-01	2.153E-01
NP-237	7.455E-01	1.807E-01	9.437E-02	1.807E-01
AM-243	1.833E-01	3.671E-02	2.023E-02	3.671E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU
CO-60	2.078E-02	3.348E-02	2.984E-02	3.348E-02 FAIL ABUN
RH-101	4.199E-03	2.640E-02	2.087E-02	2.640E-02 NOT IDENT.
SB-125	-6.021E-03	8.631E-02	7.225E-02	8.631E-02 NOT IDENT.
CS-137	1.790E-02	4.186E-02	3.293E-02	4.186E-02 NOT IDENT.
EU-155	5.104E-02	7.427E-02	5.906E-02	7.427E-02 NOT IDENT.
PO-209	1.171E+00	6.802E+00	5.821E+00	6.802E+00 NOT IDENT.
BI-211	1.387E-01	9.885E-01	8.469E-01	9.885E-01 NOT IDENT.
PA-233	-1.077E-02	5.016E-02	4.250E-02	5.016E-02 NOT IDENT.
PA-234M	-4.871E+00	4.755E+00	3.378E+00	4.755E+00 NOT IDENT.
NP-236	-3.567E-03	4.415E-02	3.248E-02	4.415E-02 NOT IDENT.
NP-239	-6.860E-02	1.635E-01	1.295E-01	1.635E-01 NOT IDENT.
AM-241	2.830E-02	4.279E-02	3.486E-02	4.279E-02 NOT IDENT.
CM-243	-1.794E-02	6.107E-02	5.126E-02	6.107E-02 NOT IDENT.
AM-246	-3.064E-02	1.204E-01	9.634E-02	1.204E-01 NOT IDENT.
CF-249	5.602E-02	3.323E-02	3.117E-02	3.323E-02 NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	196.8116
63.29	257.1042
74.66	286.6615
74.81	286.7558
74.81	286.7558
77.11	288.1976
77.11	288.1976
86.48	203.6507
87.30	203.9838
87.30	203.9838
92.58	206.0902
98.44	204.1652
103.76	204.2454
105.31	179.7914
129.07	162.8469
143.76	193.9468
198.00	137.3177
209.25	115.6751
228.18	136.2629
238.63	145.5240
242.00	146.0027
269.46	106.0006
270.25	106.0755
277.36	121.8292
295.22	121.5842
300.09	102.2045
312.17	109.3078
338.32	114.2979
351.93	113.7987
387.59	67.2548
409.46	83.6215
427.87	96.2869
463.00	68.5683
510.77	67.6931
583.19	60.4529
609.31	62.3029
661.66	55.0278
727.33	60.6860
763.13	56.6773
768.36	43.2880
785.37	44.8157
794.95	51.1879
806.17	42.0623
831.80	47.1899
860.56	47.6929
896.60	38.6484
911.20	43.7014
934.06	37.1938
964.77	41.5345
968.97	41.2618
1001.03	40.0264
1078.86	32.8063
1120.29	38.4020
1155.19	28.3065
1173.23	21.0752
1238.11	25.0309
1280.96	16.2751
1332.51	18.3252
1377.67	26.8724
1401.50	27.0294
1407.98	21.4708
1460.80	23.6338
1509.23	19.1195
1588.20	18.4867
1620.50	8.8184
1729.60	8.0189
1764.49	15.5742

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530033

Total Uranium Activity	3.6221E-02	ug/g
Total Uranium Counting Unc.	9.9626E-02	ug/g
Total Uranium Tpu	9.9626E-08	ug/g
Total Uranium Mda	5.5868E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:39:34.13

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530034.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 12:54:04.
Sample ID        : G198530034           Sample quantity  : 1.12860E+02 GRAM
Detector name    : GAM19                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00        Elapsed real time: 0 03:00:01.33  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.53*	60	442	1.20	126.68	120	13	5.60E-03	75.2	
2	1	74.77*	252	341	1.38	149.13	145	17	2.33E-02	14.4	1.34E+00
3	1	77.15*	394	322	1.28	153.89	145	17	3.65E-02	9.9	
4	1	84.09*	53	284	1.40	167.75	164	14	4.92E-03	59.1	6.28E-01
5	1	87.19	107	296	1.31	173.94	164	14	9.91E-03	29.2	
6	0	92.47*	179	463	1.41	184.50	178	14	1.66E-02	28.6	
7	0	128.89	37	214	0.72	257.27	253	8	3.42E-03	70.8	
8	0	154.05	70	233	0.93	307.56	303	10	6.47E-03	42.6	
9	0	185.69*	180	274	1.15	370.78	366	11	1.66E-02	20.3	
10	0	209.50	31	192	0.74	418.36	415	8	2.91E-03	79.7	
11	3	238.39*	660	156	1.30	476.10	471	17	6.11E-02	5.4	1.19E+00
12	3	241.40	168	184	1.91	482.11	471	17	1.56E-02	22.5	
13	0	249.35	13	121	0.99	498.00	496	8	1.25E-03	142.7	
14	0	269.52	77	181	1.12	538.32	531	13	7.08E-03	38.1	
15	0	277.54	10	188	0.63	554.34	548	11	9.64E-04	257.8	
16	0	294.85	237	171	1.17	588.93	584	11	2.19E-02	12.5	
17	0	299.34	43	177	1.29	597.90	595	11	3.99E-03	61.5	
18	0	327.15*	29	115	2.35	653.49	650	9	2.71E-03	72.2	
19	0	338.59*	174	205	1.51	676.34	667	16	1.61E-02	20.4	
20	0	351.55*	430	96	1.37	702.25	697	11	3.98E-02	6.8	
21	0	462.75	49	71	1.20	924.52	918	11	4.51E-03	36.5	
22	0	486.99	34	58	2.05	972.96	969	10	3.16E-03	45.1	
23	0	510.31*	43	169	2.48	1019.57	1010	21	4.01E-03	88.7	
24	0	565.21	77	109	1.49	1129.32	1121	15	7.15E-03	31.6	
25	0	582.91*	217	80	1.48	1164.70	1159	11	2.01E-02	10.9	
26	0	608.89	354	89	1.56	1216.64	1208	17	3.28E-02	8.1	
27	0	692.04	16	68	2.94	1382.85	1372	13	1.44E-03	112.4	
28	0	720.08	44	57	6.73	1438.92	1429	18	4.10E-03	43.1	
29	0	726.66	75	34	1.33	1452.06	1447	12	6.93E-03	19.3	
30	0	769.95	12	81	0.72	1538.61	1530	12	1.12E-03	149.8	
31	0	794.84	37	26	1.18	1588.37	1582	12	3.47E-03	32.0	
32	0	835.01	29	24	4.12	1668.69	1662	12	2.69E-03	38.6	
33	0	859.66	36	33	2.55	1717.97	1713	12	3.29E-03	36.5	
34	0	910.47*	152	41	1.59	1819.55	1812	14	1.40E-02	12.6	
35	0	933.82	32	22	2.70	1866.26	1860	11	2.97E-03	33.3	
36	0	964.63	15	24	2.04	1927.86	1921	10	1.40E-03	66.6	
37	0	968.20	78	18	1.32	1934.98	1931	8	7.21E-03	14.8	
38	0	1082.53	16	7	1.56	2163.61	2158	10	1.44E-03	41.5	

Sample ID : G198530034 Acquisition date : 4-DEC-2007 12:54:04

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1119.74	72	21	2.17	2238.02	2231	14	6.67E-03	17.9	
40	0	1177.99	18	27	3.80	2354.51	2341	17	1.66E-03	73.0	
41	0	1227.07	23	36	9.88	2452.65	2438	24	2.14E-03	71.8	
42	0	1383.65	28	16	0.76	2765.81	2758	16	2.56E-03	37.6	
43	0	1459.73*	135	0	2.44	2917.98	2910	16	1.25E-02	9.3	
44	0	1476.34	6	10	1.73	2951.21	2945	8	5.79E-04	96.0	
45	0	1478.92	19	6	3.48	2956.37	2952	11	1.74E-03	33.6	
46	0	1501.15	24	0	0.79	3000.83	2994	15	2.22E-03	20.4	
47	0	1527.36	8	14	3.75	3053.27	3046	13	7.41E-04	100.2	
48	0	1587.44	27	11	3.13	3173.46	3164	14	2.45E-03	32.6	
49	0	1630.73	6	13	1.40	3260.04	3253	10	5.85E-04	112.2	
50	0	1649.84	25	0	4.00	3298.28	3291	14	2.31E-03	20.0	
51	0	1727.85	28	7	1.66	3454.35	3447	15	2.63E-03	28.0	
52	0	1763.41*	50	16	1.42	3525.49	3519	13	4.59E-03	23.6	
53	0	1860.48	20	0	3.39	3719.70	3714	13	1.85E-03	22.4	
54	0	2019.99	5	6	0.99	4038.87	4034	8	5.01E-04	88.7	

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]G198530034       *
* Acquisition date :  4-DEC-2007 12:54:04 Detector SN#    :                 *
* Detector ID      : GAM19                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 03:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 03:00:01.33     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530034           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1286E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  6-MAR-2007 21:45:12 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	2.360E+00	4.523E-01	3.968E-01	0.000E+00
TL-208	2.180E-01	4.911E-02	3.350E-02	0.000E+00
BI-212	6.477E-01	2.508E-01	2.795E-01	0.000E+00
PB-212	6.568E-01	8.031E-02	6.130E-02	0.000E+00
BI-214	6.754E-01	1.185E-01	7.850E-02	0.000E+00
PB-214	6.538E-01	9.524E-02	7.695E-02	0.000E+00
RA-223	2.626E-01	1.967E-01	1.902E-01	0.000E+00
AC-228	7.301E-01	1.952E-01	1.532E-01	0.000E+00
TH-234	1.136E+00	6.412E-01	4.709E-01	0.000E+00
NP-237	3.109E-01	1.790E-01	2.406E-01	0.000E+00
AM-243	1.619E-01	4.666E-02	5.497E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	6.638E-03		2.875E-02	4.358E-02	0.000E+00	NOT IDENT.
RH-101	-4.957E-03		2.325E-02	3.738E-02	0.000E+00	NOT IDENT.
SB-125	-1.416E-02		5.681E-02	9.565E-02	0.000E+00	NOT IDENT.
CS-137	6.299E-03		2.463E-02	4.220E-02	0.000E+00	NOT IDENT.
EU-155	5.769E-03		6.356E-02	1.097E-01	0.000E+00	NOT IDENT.
PO-209	-3.143E+00		5.288E+00	7.324E+00	0.000E+00	NOT IDENT.
BI-211	-2.675E-01		6.808E-01	9.024E-01	0.000E+00	NOT IDENT.
PA-233	-3.150E-02		4.319E-02	6.746E-02	0.000E+00	NOT IDENT.
PA-234M	2.303E+00		3.135E+00	5.442E+00	0.000E+00	NOT IDENT.
U-235	-1.149E-01		1.330E-01	2.083E-01	0.000E+00	NOT IDENT.
NP-236	1.956E-02		4.271E-02	6.517E-02	0.000E+00	NOT IDENT.
NP-239	8.529E-02		1.478E-01	2.542E-01	0.000E+00	NOT IDENT.
AM-241	4.299E-03		8.809E-02	1.362E-01	0.000E+00	NOT IDENT.
CM-243	-7.320E-03		5.787E-02	9.897E-02	0.000E+00	NOT IDENT.
AM-246	1.499E-02		8.735E-02	1.322E-01	0.000E+00	NOT IDENT.
CF-249	2.442E-02		2.360E-02	4.345E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:39:35.15

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530034.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 12:54:04.
Sample ID        : G198530034           Sample quantity  : 1.12860E+02 GRAM
Detector name    : GAM19                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00        Elapsed real time: 0 03:00:01.33  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	135	10.66*	1.190E+00	2.360E+00	2.360E+00	19.56
TL-208	277.36	10	6.31	4.617E+00	7.920E-02	7.920E-02	515.66
	510.77	43	22.60	2.907E+00	1.460E-01	1.460E-01	177.51
	583.19	217	84.50*	2.612E+00	2.180E-01	2.180E-01	22.99
	763.13	------	1.81	2.083E+00	------	Line Not Found	------
	860.56	36	12.42	1.877E+00	3.379E-01	3.379E-01	73.67
BI-212	727.33	75	11.80*	2.172E+00	6.477E-01	6.477E-01	39.51
	785.37	------	1.10	2.031E+00	------	Line Not Found	------
	1620.50	------	1.49	1.102E+00	------	Line Not Found	------
PB-212	74.81	252	10.40	5.057E+00	1.062E+00	1.062E+00	29.41
	77.11	394	17.50	5.312E+00	9.399E-01	9.399E-01	20.73
	87.30	107	7.81	6.154E+00	4.935E-01	4.935E-01	58.74
	238.63	660	43.30*	5.143E+00	6.568E-01	6.568E-01	12.48
	300.09	43	3.28	4.369E+00	6.674E-01	6.674E-01	123.18
BI-214	609.31	354	46.10*	2.520E+00	6.753E-01	6.754E-01	17.91
	768.36	12	4.94	2.067E+00	2.623E-01	2.623E-01	299.65
	806.17	------	1.22	1.986E+00	------	Line Not Found	------
	934.06	32	3.03	1.745E+00	1.347E+00	1.347E+00	67.42
	1120.29	72	15.10	1.485E+00	7.119E-01	7.119E-01	36.56
	1155.19	------	1.63	1.445E+00	------	Line Not Found	------
	1238.11	------	5.79	1.361E+00	------	Line Not Found	------
	1280.96	------	1.43	1.322E+00	------	Line Not Found	------
	1377.67	------	4.00	1.245E+00	------	Line Not Found	------
	1401.50	------	1.27	1.228E+00	------	Line Not Found	------
	1407.98	------	2.15	1.224E+00	------	Line Not Found	------
	1509.23	------	2.11	1.160E+00	------	Line Not Found	------
	1729.60	28	2.92	1.058E+00	2.036E+00	2.037E+00	56.32
	1764.49	50	15.40	1.045E+00	6.830E-01	6.830E-01	47.53
PB-214	74.81	252	6.44	5.057E+00	1.714E+00	1.714E+00	29.41
	77.11	394	10.80	5.312E+00	1.523E+00	1.523E+00	20.73
	87.30	107	4.84	6.154E+00	7.964E-01	7.965E-01	58.74
	242.00	168	7.43	5.099E+00	9.851E-01	9.852E-01	45.38

Sample ID : G198530034 Acquisition date : 4-DEC-2007 12:54:04

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.22	237	19.30	4.418E+00	6.150E-01	6.151E-01	25.81
	351.93	430	37.60*	3.876E+00	6.538E-01	6.538E-01	14.86
RA-223	269.46	77	13.70*	4.716E+00	2.626E-01	2.626E-01	76.45
AC-228	129.07	37	2.42	6.986E+00	4.841E-01	4.841E-01	141.73
	209.25	31	3.89	5.609E+00	3.194E-01	3.194E-01	159.48
	270.25	77	3.46	4.716E+00	1.040E+00	1.040E+00	76.45
	338.32	174	11.27	3.987E+00	8.584E-01	8.584E-01	41.27
	409.46	------	1.92	3.452E+00	------	Line Not Found	------
	463.00	49	4.40	3.140E+00	7.821E-01	7.821E-01	73.30
	794.95	37	4.25	2.010E+00	9.724E-01	9.724E-01	64.75
	911.20	152	25.80*	1.784E+00	7.301E-01	7.301E-01	27.28
	964.77	15	4.99	1.695E+00	3.966E-01	3.966E-01	133.55
	968.97	78	15.80	1.689E+00	6.470E-01	6.470E-01	31.06
	1588.20	27	3.22	1.118E+00	1.633E+00	1.633E+00	65.51
TH-234	63.29	60	4.80	3.588E+00	7.782E-01	7.782E-01	150.60
	92.58	179	5.41*	6.462E+00	1.136E+00	1.136E+00	57.60
NP-237	86.48	107	12.40*	6.154E+00	3.109E-01	3.109E-01	58.74
AM-243	74.66	252	68.20*	5.057E+00	1.619E-01	1.619E-01	29.41

Flag: "*" = Keyline

Sample ID : G198530034 Acquisition date : 4-DEC-2007 12:54:04

Total number of lines in spectrum	54	
Number of unidentified lines	22	
Number of lines tentatively identified by NID	32	59.26%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.360E+00	2.360E+00	0.462E+00	19.56	
TL-208	4.43E+17S	1.00	2.180E-01	2.180E-01	0.501E-01	22.99	
BI-212	4.43E+17S	1.00	6.477E-01	6.477E-01	2.559E-01	39.51	
PB-212	4.43E+17S	1.00	6.568E-01	6.568E-01	0.819E-01	12.48	
BI-214	5.05E+10S	1.00	6.753E-01	6.754E-01	1.210E-01	17.91	
PB-214	5.05E+10S	1.00	6.538E-01	6.538E-01	0.972E-01	14.86	
RA-223	1.04E+12S	1.00	2.626E-01	2.626E-01	2.007E-01	76.45	
AC-228	4.43E+17S	1.00	7.301E-01	7.301E-01	1.992E-01	27.28	
TH-234	1.41E+17S	1.00	1.136E+00	1.136E+00	0.654E+00	57.60	
NP-237	6.75E+13S	1.00	3.109E-01	3.109E-01	1.826E-01	58.74	
AM-243	2.33E+11S	1.00	1.619E-01	1.619E-01	0.476E-01	29.41	
			---	---			
		Total Activity :	7.813E+00	7.813E+00			
		Grand Total Activity :	7.813E+00	7.813E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530034 Acquisition date : 4-DEC-2007 12:54:04

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	84.09	53	284	1.40	167.75	164	14	4.92E-03	****	5.93E+00	
0	154.05	70	233	0.93	307.56	303	10	6.47E-03	85.2	6.63E+00	
0	185.69	180	274	1.15	370.78	366	11	1.66E-02	40.7	6.04E+00	
0	249.35	13	121	0.99	498.00	496	8	1.25E-03	****	4.98E+00	
0	327.15	29	115	2.35	653.49	650	9	2.71E-03	****	4.09E+00	
0	486.99	34	58	2.05	972.96	969	10	3.16E-03	90.1	3.02E+00	
0	565.21	77	109	1.49	1129.32	1121	15	7.15E-03	63.1	2.68E+00	
0	692.04	16	68	2.94	1382.85	1372	13	1.44E-03	****	2.26E+00	
0	720.08	44	57	6.73	1438.92	1429	18	4.10E-03	86.2	2.19E+00	
0	835.01	29	24	4.12	1668.69	1662	12	2.69E-03	77.1	1.93E+00	
0	1082.53	16	7	1.56	2163.61	2158	10	1.44E-03	82.9	1.53E+00	
0	1177.99	18	27	3.80	2354.51	2341	17	1.66E-03	****	1.42E+00	
0	1227.07	23	36	9.88	2452.65	2438	24	2.14E-03	****	1.37E+00	
0	1383.65	28	16	0.76	2765.81	2758	16	2.56E-03	75.3	1.24E+00	
0	1476.34	6	10	1.73	2951.21	2945	8	5.79E-04	****	1.18E+00	
0	1478.92	19	6	3.48	2956.37	2952	11	1.74E-03	67.2	1.18E+00	
0	1501.15	24	0	0.79	3000.83	2994	15	2.22E-03	40.8	1.16E+00	
0	1527.36	8	14	3.75	3053.27	3046	13	7.41E-04	****	1.15E+00	
0	1630.73	6	13	1.40	3260.04	3253	10	5.85E-04	****	1.10E+00	
0	1649.84	25	0	4.00	3298.28	3291	14	2.31E-03	40.0	1.09E+00	
0	1860.48	20	0	3.39	3719.70	3714	13	1.85E-03	44.7	1.02E+00	
0	2019.99	5	6	0.99	4038.87	4034	8	5.01E-04	****	9.80E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530034            *
* Acquisition date :  4-DEC-2007 12:54:04 Detector SN#    :                 *
* Detector ID      : GAM19                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 03:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 03:00:01.33     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530034           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1286E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  6-MAR-2007 21:45:12 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.360E+00	4.523E-01	1.985E-01	4.523E-01
TL-208	2.180E-01	4.911E-02	1.676E-02	4.911E-02
BI-212	6.477E-01	2.508E-01	1.399E-01	2.508E-01
PB-212	6.568E-01	8.031E-02	3.067E-02	8.031E-02
BI-214	6.754E-01	1.185E-01	3.927E-02	1.185E-01
PB-214	6.538E-01	9.524E-02	3.850E-02	9.524E-02
RA-223	2.626E-01	1.967E-01	9.517E-02	1.967E-01
AC-228	7.301E-01	1.952E-01	7.664E-02	1.952E-01
TH-234	1.136E+00	6.412E-01	2.356E-01	6.412E-01
NP-237	3.109E-01	1.790E-01	1.204E-01	1.790E-01
AM-243	1.619E-01	4.666E-02	2.750E-02	4.666E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	6.638E-03	2.875E-02	2.181E-02	2.875E-02	NOT IDENT.
RH-101	-4.957E-03	2.325E-02	1.870E-02	2.325E-02	NOT IDENT.
SB-125	-1.416E-02	5.681E-02	4.786E-02	5.681E-02	NOT IDENT.
CS-137	6.299E-03	2.463E-02	2.111E-02	2.463E-02	NOT IDENT.
EU-155	5.769E-03	6.356E-02	5.490E-02	6.356E-02	NOT IDENT.
PO-209	-3.143E+00	5.288E+00	3.664E+00	5.288E+00	NOT IDENT.
BI-211	-2.675E-01	6.808E-01	4.515E-01	6.808E-01	NOT IDENT.
PA-233	-3.150E-02	4.319E-02	3.375E-02	4.319E-02	NOT IDENT.
PA-234M	2.303E+00	3.135E+00	2.723E+00	3.135E+00	NOT IDENT.
U-235	-1.149E-01	1.330E-01	1.042E-01	1.330E-01	NOT IDENT.
NP-236	1.956E-02	4.271E-02	3.260E-02	4.271E-02	NOT IDENT.
NP-239	8.529E-02	1.478E-01	1.272E-01	1.478E-01	NOT IDENT.
AM-241	4.299E-03	8.809E-02	6.813E-02	8.809E-02	NOT IDENT.
CM-243	-7.320E-03	5.787E-02	4.951E-02	5.787E-02	NOT IDENT.
AM-246	1.499E-02	8.735E-02	6.616E-02	8.735E-02	NOT IDENT.
CF-249	2.442E-02	2.360E-02	2.174E-02	2.360E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	189.3594
63.29	243.4300
74.66	322.8094
74.81	322.8657
74.81	322.8657
77.11	323.7192
77.11	323.7192
86.48	300.3452
87.30	290.4156
87.30	290.4156
92.58	245.9063
98.44	216.4352
103.76	225.3235
105.31	220.7921
129.07	205.0363
143.76	236.2371
198.00	216.2199
209.25	196.7215
228.18	171.3143
238.63	171.2830
242.00	135.5730
269.46	139.3633
270.25	161.2065
277.36	149.7810
295.22	134.1560
300.09	116.7842
312.17	135.7161
338.32	122.5212
351.93	116.3240
387.59	72.7143
409.46	90.0838
427.87	84.1948
463.00	63.2039
510.77	73.2947
583.19	51.0360
609.31	77.6782
661.66	60.6929
727.33	48.0840
763.13	57.2156
768.36	42.7097
785.37	30.3431
794.95	36.7107
806.17	43.1271
831.80	38.8169
860.56	44.4204
896.60	38.7097
911.20	46.7547
934.06	34.3463
964.77	16.3821
968.97	25.5072
1001.03	33.9438
1078.86	27.1779
1120.29	22.5703
1155.19	24.6204
1173.23	30.9519
1238.11	27.8990
1280.96	33.9376
1332.51	25.4435
1377.67	20.2902
1401.50	29.7107
1407.98	21.8111
1460.80	24.0049
1509.23	18.1458
1588.20	31.4975
1620.50	14.3612
1729.60	10.7239
1764.49	19.7595

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530034

Total Uranium Activity	-5.3180E-02	ug/g
Total Uranium Counting Unc.	6.1516E-02	ug/g
Total Uranium Tpu	6.1516E-08	ug/g
Total Uranium Mda	4.8224E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:40:11.27

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530035.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:16:49.
Sample ID        : G198530035           Sample quantity  : 9.51200E+01 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:08.23  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.57*	145	1112	0.97	92.59	89	8	4.82E-03	50.9	
2	0	53.55*	22	1049	0.80	106.57	103	7	7.24E-04	302.7	
3	0	63.37*	376	1426	0.84	126.22	122	8	1.25E-02	23.9	
4	0	69.69	40	1238	0.81	138.87	136	6	1.33E-03	140.0	
5	3	72.76*	9	1067	0.82	145.01	143	15	3.00E-04	615.0	2.49E+00
6	3	74.86*	1113	1031	0.90	149.22	143	15	3.71E-02	5.8	
7	3	77.12*	1782	1169	0.96	153.74	143	15	5.94E-02	4.3	
8	4	84.23*	107	905	0.82	167.97	165	26	3.58E-03	52.8	5.03E+00
9	4	87.24	571	1036	1.05	174.00	165	26	1.90E-02	9.6	
10	4	89.96	401	977	0.94	179.44	165	26	1.34E-02	13.3	
11	4	92.64*	672	1021	1.09	184.80	165	26	2.24E-02	13.7	
12	0	98.75*	43	1115	1.23	197.04	194	8	1.43E-03	153.6	
13	0	105.27	141	1047	0.96	210.08	206	8	4.69E-03	40.8	
14	0	108.49	61	958	1.21	216.54	214	7	2.04E-03	84.6	
15	0	121.84	231	1345	2.40	243.27	237	12	7.71E-03	32.4	
16	0	129.15	171	904	0.77	257.89	254	7	5.71E-03	30.1	
17	0	140.14*	36	655	1.16	279.90	278	6	1.21E-03	142.5	
18	0	143.65*	27	963	1.13	286.92	283	8	9.07E-04	240.9	
19	0	153.87	86	699	1.56	307.38	305	6	2.85E-03	50.1	
20	0	162.97*	40	793	1.32	325.59	322	7	1.34E-03	145.4	
21	0	185.69*	481	1260	1.07	371.08	365	12	1.60E-02	18.3	
22	3	205.40*	12	503	1.09	410.52	408	15	3.91E-04	379.3	1.53E+00
23	3	209.30	267	733	1.38	418.33	408	15	8.91E-03	18.7	
24	5	236.30	191	371	1.82	472.38	470	19	6.37E-03	16.5	5.43E+00
25	5	238.58*	2092	452	1.02	476.93	470	19	6.97E-02	3.2	
26	5	241.30	585	841	1.83	482.39	470	19	1.95E-02	12.6	
27	0	270.43	276	631	1.10	540.68	536	10	9.20E-03	18.1	
28	0	277.54	66	560	1.07	554.92	551	8	2.19E-03	63.7	
29	0	289.61	34	440	1.26	579.07	578	7	1.12E-03	105.0	
30	0	295.11*	759	643	1.16	590.09	586	10	2.53E-02	7.7	
31	0	299.39	65	564	0.69	598.65	596	8	2.18E-03	64.0	
32	0	327.65	192	578	1.47	655.22	651	10	6.39E-03	24.5	
33	0	338.19*	417	635	1.08	676.32	672	10	1.39E-02	13.4	
34	0	351.81*	1231	658	1.19	703.57	698	11	4.10E-02	5.2	
35	0	462.66*	96	359	1.62	925.42	921	9	3.19E-03	42.6	
36	0	510.90*	318	663	2.19	1021.97	1015	19	1.06E-02	25.1	
37	0	583.06*	515	376	1.30	1166.37	1161	11	1.72E-02	10.4	
38	0	609.05*	895	506	1.53	1218.39	1211	15	2.98E-02	6.9	

Sample ID : G198530035 Acquisition date : 4-DEC-2007 16:16:49

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	654.29	34	197	0.70	1308.91	1305	8	1.13E-03	73.6	
40	0	661.79	55	320	0.96	1323.92	1318	10	1.85E-03	62.0	
41	0	719.93	43	242	3.36	1440.26	1435	10	1.42E-03	70.2	
42	0	727.07	167	311	1.18	1454.56	1449	12	5.58E-03	22.5	
43	0	742.56*	36	284	3.99	1485.55	1481	13	1.21E-03	105.5	
44	0	767.89	77	234	1.25	1536.24	1532	10	2.56E-03	38.9	
45	0	784.99	59	310	1.03	1570.44	1564	13	1.97E-03	62.6	
46	0	794.29	127	241	2.10	1589.06	1583	13	4.22E-03	26.8	
47	3	802.74*	47	255	2.33	1605.97	1599	16	1.57E-03	84.3	7.54E-01
48	3	805.55	49	121	1.28	1611.59	1599	16	1.64E-03	37.2	
49	0	835.81	55	245	4.03	1672.13	1664	13	1.84E-03	60.0	
50	0	860.14	114	179	1.67	1720.82	1716	10	3.81E-03	23.8	
51	0	904.05	52	140	2.91	1808.68	1804	10	1.75E-03	44.6	
52	0	910.75*	438	238	1.94	1822.07	1815	14	1.46E-02	10.0	
53	0	936.21	26	215	3.40	1873.02	1863	13	8.74E-04	117.4	
54	1	964.50	63	139	2.07	1929.62	1925	24	2.09E-03	34.0	1.72E+00
55	1	968.69*	260	185	2.07	1938.00	1925	24	8.68E-03	13.7	
56	0	1068.92	25	121	0.74	2138.52	2133	10	8.44E-04	84.0	
57	0	1090.83	26	62	1.15	2182.35	2180	6	8.62E-04	52.6	
58	0	1119.66*	206	180	1.85	2240.04	2233	15	6.88E-03	17.5	
59	0	1132.31	9	152	5.10	2265.33	2258	13	2.97E-04	273.1	
60	0	1137.87	45	114	1.46	2276.47	2271	12	1.50E-03	49.7	
61	0	1237.31	107	166	1.87	2475.39	2469	15	3.56E-03	28.2	
62	0	1259.26	42	219	6.79	2519.29	2510	21	1.42E-03	88.7	
63	0	1377.43	79	74	1.38	2755.67	2749	14	2.64E-03	25.6	
64	0	1414.37	37	61	4.16	2829.55	2822	13	1.24E-03	48.8	
65	0	1460.22*	385	111	1.97	2921.25	2911	21	1.28E-02	9.2	
66	0	1500.29	45	55	1.98	3001.40	2997	12	1.50E-03	35.9	
67	0	1509.94	47	103	0.91	3020.71	3012	18	1.56E-03	52.9	
68	0	1591.18	40	109	5.68	3183.18	3168	19	1.32E-03	65.3	
69	0	1729.12	54	56	3.63	3459.04	3451	15	1.82E-03	32.9	
70	0	1764.59*	148	112	2.75	3529.98	3517	26	4.93E-03	23.9	
71	0	1847.08	23	46	1.28	3694.93	3687	13	7.50E-04	65.3	
72	0	1872.96	9	34	1.56	3746.69	3744	11	3.01E-04	141.6	
73	0	1936.63	14	34	0.88	3874.00	3867	12	4.64E-04	89.7	
74	0	1950.36	20	45	4.58	3901.44	3885	20	6.72E-04	84.5	
75	0	1957.79	17	17	3.24	3916.31	3909	12	5.76E-04	54.2	
76	0	1962.00	11	14	1.51	3924.71	3920	9	3.50E-04	70.2	
77	3	1997.15	36	19	2.53	3995.00	3984	20	1.20E-03	30.2	2.13E+00
78	3	2000.27	15	3	1.85	4001.23	3984	20	4.99E-04	30.5	
79	0	2005.74	17	23	5.86	4012.18	4003	15	5.50E-04	67.3	

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]G198530035       *
* Acquisition date :  4-DEC-2007 16:16:49 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:08.23     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530035           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.5120E+01 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    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.225E+00	6.048E-01	3.530E-01	0.000E+00
CS-137	3.000E-02	3.654E-02	4.262E-02	0.000E+00
EU-155	8.781E-02	7.071E-02	7.585E-02	0.000E+00
TL-208	2.505E-01	5.380E-02	3.915E-02	0.000E+00
BI-212	7.069E-01	3.170E-01	3.181E-01	0.000E+00
PB-212	9.487E-01	8.627E-02	5.003E-02	0.000E+00
BI-214	8.284E-01	1.275E-01	7.822E-02	0.000E+00
PB-214	8.690E-01	9.979E-02	7.563E-02	0.000E+00
RA-223	4.336E-01	1.561E-01	1.663E-01	0.000E+00
AC-228	1.028E+00	2.114E-01	1.499E-01	0.000E+00
TH-234	1.564E+00	4.394E-01	3.259E-01	0.000E+00
U-235	3.603E-02	1.701E-01	1.676E-01	0.000E+00
NP-236	1.442E-02	4.342E-02	4.127E-02	0.000E+00
NP-237	5.739E-01	1.166E-01	1.394E-01	0.000E+00
AM-243	2.009E-01	2.762E-02	2.656E-02	0.000E+00
CM-243	7.958E-02	6.408E-02	7.064E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	2.787E-03	2.655E-02	4.417E-02	0.000E+00	NOT IDENT.
RH-101	-1.164E-02	2.153E-02	3.022E-02	0.000E+00	NOT IDENT.
SB-125	3.941E-02	5.744E-02	9.686E-02	0.000E+00	NOT IDENT.
PO-209	-3.074E+00	5.458E+00	8.333E+00	0.000E+00	NOT IDENT.
BI-211	-3.795E-01	8.469E-01	1.156E+00	0.000E+00	NOT IDENT.
PA-233	-2.096E-02	3.699E-02	6.145E-02	0.000E+00	NOT IDENT.
PA-234M	-6.305E-01	3.918E+00	5.396E+00	0.000E+00	NOT IDENT.
NP-239	-6.335E-02	1.179E-01	1.868E-01	0.000E+00	NOT IDENT.
AM-241	5.621E-04	3.060E-02	4.525E-02	0.000E+00	NOT IDENT.
AM-246	6.537E-02	8.711E-02	1.510E-01	0.000E+00	NOT IDENT.
CF-249	-2.942E-02	2.997E-02	4.121E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:40:12.37

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530035.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:16:49.
Sample ID        : G198530035           Sample quantity  : 9.51200E+01 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:08.23  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	385	10.66*	1.061E+00	3.225E+00	3.225E+00	19.13
CS-137	661.66	55	85.10*	2.063E+00	2.989E-02	3.000E-02	124.31
EU-155	105.31	141	21.20*	7.309E+00	8.603E-02	8.781E-02	82.16
TL-208	277.36	66	6.31	4.313E+00	2.281E-01	2.281E-01	127.60
	510.77	318	22.60	2.590E+00	5.139E-01	5.139E-01	50.70
	583.19	515	84.50*	2.306E+00	2.505E-01	2.505E-01	21.92
	763.13	------	1.81	1.821E+00	------	Line Not Found	------
	860.56	114	12.42	1.643E+00	5.312E-01	5.312E-01	48.10
BI-212	727.33	167	11.80*	1.900E+00	7.069E-01	7.069E-01	45.75
	785.37	59	1.10	1.777E+00	2.865E+00	2.865E+00	125.49
	1620.50	------	1.49	9.772E-01	------	Line Not Found	------
PB-212	74.81	1113	10.40	7.694E+00	1.317E+00	1.317E+00	14.03
	77.11	1782	17.50	7.684E+00	1.255E+00	1.255E+00	11.61
	87.30	571	7.81	7.593E+00	9.112E-01	9.112E-01	20.73
	238.63	2092	43.30*	4.824E+00	9.487E-01	9.487E-01	9.28
	300.09	65	3.28	4.066E+00	4.639E-01	4.639E-01	128.17
BI-214	609.31	895	46.10*	2.219E+00	8.283E-01	8.284E-01	15.70
	768.36	77	4.94	1.812E+00	8.136E-01	8.137E-01	78.07
	806.17	49	1.22	1.738E+00	2.191E+00	2.191E+00	74.80
	934.06	------	3.03	1.531E+00	------	Line Not Found	------
	1120.29	206	15.10	1.315E+00	9.840E-01	9.840E-01	35.47
	1155.19	------	1.63	1.282E+00	------	Line Not Found	------
	1238.11	107	5.79	1.212E+00	1.440E+00	1.440E+00	56.68
	1280.96	------	1.43	1.178E+00	------	Line Not Found	------
	1377.67	79	4.00	1.111E+00	1.688E+00	1.688E+00	51.42
	1401.50	------	1.27	1.096E+00	------	Line Not Found	------
	1407.98	------	2.15	1.092E+00	------	Line Not Found	------
	1509.23	47	2.11	1.033E+00	2.038E+00	2.039E+00	105.94
	1729.60	54	2.92	9.288E-01	1.902E+00	1.903E+00	66.01
	1764.49	148	15.40	9.143E-01	9.947E-01	9.948E-01	48.07
PB-214	74.81	1113	6.44	7.694E+00	2.127E+00	2.128E+00	14.03
	77.11	1782	10.80	7.684E+00	2.034E+00	2.034E+00	11.61

Sample ID : G198530035 Acquisition date : 4-DEC-2007 16:16:49

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	571	4.84	7.593E+00	1.470E+00	1.470E+00	20.73
	242.00	585	7.43	4.785E+00	1.558E+00	1.558E+00	25.97
	295.22	759	19.30	4.112E+00	9.052E-01	9.053E-01	16.37
	351.93	1231	37.60*	3.568E+00	8.689E-01	8.690E-01	11.72
RA-223	269.46	276	13.70*	4.399E+00	4.336E-01	4.336E-01	36.74
AC-228	129.07	171	2.42	6.830E+00	9.811E-01	9.811E-01	61.05
	209.25	267	3.89	5.277E+00	1.233E+00	1.233E+00	38.14
	270.25	276	3.46	4.399E+00	1.717E+00	1.717E+00	36.74
	338.32	417	11.27	3.686E+00	9.504E-01	9.504E-01	27.33
	409.46	------	1.92	3.139E+00	------	Line Not Found	------
	463.00	96	4.40	2.825E+00	7.303E-01	7.303E-01	85.43
	794.95	127	4.25	1.759E+00	1.605E+00	1.605E+00	54.01
	911.20	438	25.80*	1.564E+00	1.028E+00	1.028E+00	20.98
	964.77	63	4.99	1.490E+00	7.988E-01	7.988E-01	68.31
	968.97	260	15.80	1.484E+00	1.051E+00	1.051E+00	28.10
	1588.20	------	3.22	9.927E-01	------	Line Not Found	------
TH-234	63.29	376	4.80	7.666E+00	9.680E-01	9.680E-01	48.42
	92.58	672	5.41*	7.520E+00	1.564E+00	1.564E+00	28.67
U-235	143.76	27	10.96*	6.524E+00	3.603E-02	3.603E-02	481.83
NP-236	98.44	43	38.00*	7.424E+00	1.442E-02	1.442E-02	307.32
NP-237	86.48	571	12.40*	7.593E+00	5.739E-01	5.739E-01	20.73
AM-243	74.66	1113	68.20*	7.694E+00	2.009E-01	2.009E-01	14.03
CM-243	103.76	141	23.00*	7.309E+00	7.930E-02	7.958E-02	82.16

Flag: "*" = Keyline

Sample ID : G198530035 Acquisition date : 4-DEC-2007 16:16:49

Total number of lines in spectrum 79
Number of unidentified lines 40
Number of lines tentatively identified by NID 39 49.37%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	3.225E+00	3.225E+00	0.617E+00	19.13	
CS-137	9.47E+08S	1.00	2.989E-02	3.000E-02	3.729E-02	124.31	
EU-155	1.57E+08S	1.02	8.603E-02	8.781E-02	7.215E-02	82.16	
TL-208	4.43E+17S	1.00	2.505E-01	2.505E-01	0.549E-01	21.92	
BI-212	4.43E+17S	1.00	7.069E-01	7.069E-01	3.234E-01	45.75	
PB-212	4.43E+17S	1.00	9.487E-01	9.487E-01	0.880E-01	9.28	
BI-214	5.05E+10S	1.00	8.283E-01	8.284E-01	1.301E-01	15.70	
PB-214	5.05E+10S	1.00	8.689E-01	8.690E-01	1.018E-01	11.72	
RA-223	1.04E+12S	1.00	4.336E-01	4.336E-01	1.593E-01	36.74	
AC-228	4.43E+17S	1.00	1.028E+00	1.028E+00	0.216E+00	20.98	
TH-234	1.41E+17S	1.00	1.564E+00	1.564E+00	0.448E+00	28.67	
U-235	2.22E+16S	1.00	3.603E-02	3.603E-02	17.36E-02	481.83	
NP-236	4.89E+12S	1.00	1.442E-02	1.442E-02	4.430E-02	307.32	
NP-237	6.75E+13S	1.00	5.739E-01	5.739E-01	1.190E-01	20.73	
AM-243	2.33E+11S	1.00	2.009E-01	2.009E-01	0.282E-01	14.03	
CM-243	8.99E+08S	1.00	7.930E-02	7.958E-02	6.538E-02	82.16	
			---	---			
	Total Activity :		1.088E+01	1.088E+01			

Grand Total Activity : 1.088E+01 1.088E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530035 Acquisition date : 4-DEC-2007 16:16:49

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.57	145	1112	0.97	92.59	89	8	4.82E-03	****	7.26E+00	
0	53.55	22	1049	0.80	106.57	103	7	7.24E-04	****	7.50E+00	
0	69.69	40	1238	0.81	138.87	136	6	1.33E-03	****	7.70E+00	
3	72.76	9	1067	0.82	145.01	143	15	3.00E-04	****	7.70E+00	
4	84.23	107	905	0.82	167.97	165	26	3.58E-03	****	7.63E+00	
4	89.96	401	977	0.94	179.44	165	26	1.34E-02	26.6	7.56E+00	
0	108.49	61	958	1.21	216.54	214	7	2.04E-03	****	7.25E+00	
0	121.84	231	1345	2.40	243.27	237	12	7.71E-03	64.9	6.98E+00	
0	140.14	36	655	1.16	279.90	278	6	1.21E-03	****	6.60E+00	
0	153.87	86	699	1.56	307.38	305	6	2.85E-03	****	6.31E+00	
0	162.97	40	793	1.32	325.59	322	7	1.34E-03	****	6.13E+00	
0	185.69	481	1260	1.07	371.08	365	12	1.60E-02	36.6	5.69E+00	
3	205.40	12	503	1.09	410.52	408	15	3.91E-04	****	5.34E+00	
5	236.30	191	371	1.82	472.38	470	19	6.37E-03	33.0	4.86E+00	
0	289.61	34	440	1.26	579.07	578	7	1.12E-03	****	4.17E+00	
0	327.65	192	578	1.47	655.22	651	10	6.39E-03	49.0	3.78E+00	
0	654.29	34	197	0.70	1308.91	1305	8	1.13E-03	****	2.08E+00	
0	719.93	43	242	3.36	1440.26	1435	10	1.42E-03	****	1.92E+00	
0	742.56	36	284	3.99	1485.55	1481	13	1.21E-03	****	1.87E+00	
3	802.74	47	255	2.33	1605.97	1599	16	1.57E-03	****	1.74E+00	
0	835.81	55	245	4.03	1672.13	1664	13	1.84E-03	****	1.68E+00	
0	904.05	52	140	2.91	1808.68	1804	10	1.75E-03	89.3	1.57E+00	
0	936.21	26	215	3.40	1873.02	1863	13	8.74E-04	****	1.53E+00	
0	1068.92	25	121	0.74	2138.52	2133	10	8.44E-04	****	1.37E+00	
0	1090.83	26	62	1.15	2182.35	2180	6	8.62E-04	****	1.34E+00	
0	1132.31	9	152	5.10	2265.33	2258	13	2.97E-04	****	1.30E+00	
0	1137.87	45	114	1.46	2276.47	2271	12	1.50E-03	99.5	1.30E+00	
0	1259.26	42	219	6.79	2519.29	2510	21	1.42E-03	****	1.19E+00	
0	1414.37	37	61	4.16	2829.55	2822	13	1.24E-03	97.5	1.09E+00	
0	1500.29	45	55	1.98	3001.40	2997	12	1.50E-03	71.7	1.04E+00	
0	1591.18	40	109	5.68	3183.18	3168	19	1.32E-03	****	9.91E-01	
0	1847.08	23	46	1.28	3694.93	3687	13	7.50E-04	****	8.82E-01	
0	1872.96	9	34	1.56	3746.69	3744	11	3.01E-04	****	8.73E-01	
0	1936.63	14	34	0.88	3874.00	3867	12	4.64E-04	****	8.51E-01	
0	1950.36	20	45	4.58	3901.44	3885	20	6.72E-04	****	8.46E-01	
0	1957.79	17	17	3.24	3916.31	3909	12	5.76E-04	****	8.43E-01	
0	1962.00	11	14	1.51	3924.71	3920	9	3.50E-04	****	8.42E-01	
3	1997.15	36	19	2.53	3995.00	3984	20	1.20E-03	60.5	8.31E-01	
3	2000.27	15	3	1.85	4001.23	3984	20	4.99E-04	60.9	8.30E-01	
0	2005.74	17	23	5.86	4012.18	4003	15	5.50E-04	****	8.28E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530035            *
* Acquisition date :  4-DEC-2007 16:16:49 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:08.23     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530035           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.5120E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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	LC (pCi/GRAM)	TPU
K-40	3.225E+00	6.048E-01	1.766E-01	6.048E-01
CS-137	3.000E-02	3.654E-02	2.132E-02	3.654E-02
EU-155	8.781E-02	7.071E-02	3.795E-02	7.071E-02
TL-208	2.505E-01	5.380E-02	1.959E-02	5.380E-02
BI-212	7.069E-01	3.170E-01	1.591E-01	3.170E-01
PB-212	9.487E-01	8.627E-02	2.503E-02	8.627E-02
BI-214	8.284E-01	1.275E-01	3.913E-02	1.275E-01
PB-214	8.690E-01	9.979E-02	3.784E-02	9.979E-02
RA-223	4.336E-01	1.561E-01	8.321E-02	1.561E-01
AC-228	1.028E+00	2.114E-01	7.498E-02	2.114E-01
TH-234	1.564E+00	4.394E-01	1.631E-01	4.394E-01
U-235	3.603E-02	1.701E-01	8.384E-02	1.701E-01
NP-236	1.442E-02	4.342E-02	2.065E-02	4.342E-02
NP-237	5.739E-01	1.166E-01	6.975E-02	1.166E-01
AM-243	2.009E-01	2.762E-02	1.329E-02	2.762E-02
CM-243	7.958E-02	6.408E-02	3.534E-02	6.408E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	2.787E-03	2.655E-02	2.210E-02	2.655E-02	NOT IDENT.
RH-101	-1.164E-02	2.153E-02	1.512E-02	2.153E-02	NOT IDENT.
SB-125	3.941E-02	5.744E-02	4.846E-02	5.744E-02	NOT IDENT.
PO-209	-3.074E+00	5.458E+00	4.169E+00	5.458E+00	NOT IDENT.
BI-211	-3.795E-01	8.469E-01	5.785E-01	8.469E-01	NOT IDENT.
PA-233	-2.096E-02	3.699E-02	3.074E-02	3.699E-02	NOT IDENT.
PA-234M	-6.305E-01	3.918E+00	2.700E+00	3.918E+00	NOT IDENT.
NP-239	-6.335E-02	1.179E-01	9.348E-02	1.179E-01	NOT IDENT.
AM-241	5.621E-04	3.060E-02	2.264E-02	3.060E-02	NOT IDENT.
AM-246	6.537E-02	8.711E-02	7.553E-02	8.711E-02	NOT IDENT.
CF-249	-2.942E-02	2.997E-02	2.062E-02	2.997E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	802.8461
63.29	873.0569
74.66	1020.7020
74.81	1021.2220
74.81	1021.2220
77.11	1029.1814
77.11	1029.1814
86.48	907.5092
87.30	909.7778
87.30	909.7778
92.58	924.1479
98.44	713.4210
103.76	741.4429
105.31	696.6251
129.07	778.7448
143.76	754.2748
198.00	707.2472
209.25	656.6681
228.18	562.2472
238.63	573.8723
242.00	576.5026
269.46	531.1707
270.25	525.4894
277.36	509.4914
295.22	522.1019
300.09	530.1394
312.17	491.1489
338.32	477.1474
351.93	540.8860
387.59	449.1553
409.46	380.2646
427.87	335.3856
463.00	348.6527
510.77	316.6005
583.19	305.9796
609.31	336.5486
661.66	292.5439
727.33	267.3239
763.13	224.8151
768.36	257.0670
785.37	235.2971
794.95	184.8013
806.17	271.6915
831.80	241.3009
860.56	215.7471
896.60	226.5412
911.20	192.2632
934.06	190.2982
964.77	179.5754
968.97	179.8824
1001.03	166.9500
1078.86	144.4758
1120.29	168.6218
1155.19	158.5907
1173.23	154.4987
1238.11	164.1269
1280.96	134.8125
1332.51	124.1515
1377.67	99.2702
1401.50	138.6003
1407.98	116.5754
1460.80	83.8228
1509.23	98.6641
1588.20	94.6507
1620.50	82.5195
1729.60	85.8076
1764.49	61.8038

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530035

Total Uranium Activity	1.6671E-02	ug/g
Total Uranium Counting Unc.	7.8721E-02	ug/g
Total Uranium Tpu	7.8721E-08	ug/g
Total Uranium Mda	3.8794E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:40:48.54

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530036.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:17:14.
Sample ID        : G198530036           Sample quantity  : 1.06340E+02 GRAM
Detector name    : GAM18                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:04.69  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.08*	59	1126	1.09	125.15	122	8	1.98E-03	112.3	
2	3	74.71*	617	819	0.88	148.39	144	13	2.06E-02	8.8	1.19E+00
3	3	77.03*	1064	879	1.00	153.02	144	13	3.55E-02	5.9	
4	4	84.17*	256	1151	1.47	167.29	163	29	8.54E-03	26.6	3.47E+00
5	4	87.10	526	839	1.12	173.15	163	29	1.75E-02	10.1	
6	4	89.74	444	789	1.23	178.44	163	29	1.48E-02	11.7	
7	4	92.56*	591	832	1.31	184.08	163	29	1.97E-02	12.0	
8	0	128.39	190	1078	1.69	255.69	251	10	6.32E-03	33.1	
9	0	143.51*	48	706	0.97	285.92	283	7	1.59E-03	107.2	
10	0	154.14	177	755	1.19	307.16	303	8	5.90E-03	27.9	
11	0	163.91*	75	765	1.75	326.68	323	8	2.51E-03	71.6	
12	0	185.97*	467	1160	1.30	370.79	366	11	1.56E-02	16.6	
13	0	198.65*	57	681	1.45	396.12	392	8	1.90E-03	92.3	
14	0	209.12	298	788	1.03	417.05	413	9	9.92E-03	18.0	
15	5	238.63*	2760	542	1.20	476.05	469	19	9.20E-02	2.7	1.91E+00
16	5	241.56	781	774	1.79	481.91	469	19	2.60E-02	8.8	
17	0	270.35*	240	544	1.31	539.45	535	9	7.99E-03	21.2	
18	0	277.23	91	511	0.94	553.20	550	8	3.02E-03	44.4	
19	1	295.27*	1036	397	1.29	589.27	582	21	3.45E-02	5.1	2.12E+00
20	1	300.04*	229	409	1.37	598.80	582	21	7.62E-03	18.4	
21	0	328.15	122	621	1.56	655.01	650	12	4.05E-03	42.1	
22	0	332.52	64	330	1.29	663.73	661	7	2.15E-03	48.3	
23	0	338.21*	524	678	1.13	675.11	668	13	1.75E-02	12.4	
24	0	351.89*	1994	640	1.33	702.46	695	14	6.65E-02	3.7	
25	0	409.51	102	351	1.58	817.66	813	9	3.39E-03	34.8	
26	0	463.00	214	334	1.04	924.60	919	11	7.15E-03	17.8	
27	0	477.32	89	262	2.49	953.23	949	9	2.96E-03	34.5	
28	0	511.20*	135	599	2.19	1020.98	1012	18	4.48E-03	60.0	
29	0	583.44*	907	332	1.54	1165.42	1160	12	3.02E-02	6.1	
30	0	609.49*	1533	363	1.76	1217.51	1210	13	5.11E-02	3.9	
31	0	727.41	248	201	1.89	1453.32	1448	11	8.27E-03	12.8	
32	0	736.47	71	329	7.94	1471.43	1460	20	2.36E-03	64.1	
33	0	768.28	162	217	1.84	1535.04	1529	11	5.40E-03	19.4	
34	0	786.19	73	138	2.13	1570.87	1567	9	2.42E-03	31.5	
35	0	795.43	78	198	2.15	1589.33	1583	11	2.60E-03	36.7	
36	0	835.57	25	145	1.41	1669.62	1667	7	8.50E-04	80.5	
37	0	861.19	218	241	1.87	1720.86	1712	19	7.26E-03	18.4	
38	0	911.41*	649	210	1.63	1821.30	1815	15	2.16E-02	6.8	

Sample ID : G198530036 Acquisition date : 4-DEC-2007 16:17:14

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	934.86	115	119	2.68	1868.20	1863	12	3.84E-03	21.3	
40	7	965.24	98	89	2.01	1928.97	1926	20	3.28E-03	17.5	2.66E+00
41	7	969.47*	384	143	2.16	1937.43	1926	20	1.28E-02	9.5	
42	0	1001.34*	14	153	1.41	2001.16	1997	11	4.74E-04	210.1	
43	3	1109.24	37	97	2.08	2217.00	2212	16	1.25E-03	50.0	2.38E+00
44	3	1112.27	46	62	2.46	2223.07	2212	16	1.53E-03	36.7	
45	1	1116.45	59	76	2.29	2231.42	2227	19	1.95E-03	31.6	1.81E+00
46	1	1120.70*	383	90	2.10	2239.92	2227	19	1.28E-02	7.8	
47	0	1154.31	31	159	4.49	2307.15	2297	15	1.02E-03	92.1	
48	0	1238.73	154	151	1.26	2476.04	2467	17	5.12E-03	20.1	
49	0	1378.47	89	135	1.70	2755.63	2748	14	2.96E-03	29.8	
50	0	1409.22	27	95	1.09	2817.16	2811	11	9.12E-04	71.1	
51	0	1427.73	38	59	4.82	2854.19	2848	12	1.27E-03	43.7	
52	0	1461.44*	606	110	2.16	2921.65	2912	22	2.02E-02	6.4	
53	0	1503.26	14	58	0.77	3005.33	2999	9	4.69E-04	101.5	
54	3	1514.74	37	57	3.08	3028.30	3015	19	1.23E-03	48.0	1.65E+00
55	0	1535.45	14	51	0.83	3069.73	3061	10	4.71E-04	90.9	
56	0	1574.27	60	83	8.47	3147.42	3136	22	2.01E-03	40.5	
57	0	1590.91	117	123	6.43	3180.73	3167	27	3.89E-03	28.5	
58	0	1644.95	13	55	3.30	3288.87	3279	14	4.30E-04	125.8	
59	0	1730.68	81	70	1.38	3460.44	3453	16	2.70E-03	25.9	
60	0	1765.20*	339	56	2.62	3529.54	3519	22	1.13E-02	8.9	
61	0	1841.08	38	33	5.80	3681.41	3674	15	1.25E-03	37.5	
62	0	1849.27	50	93	2.27	3697.80	3689	22	1.65E-03	50.6	
63	1	1958.78	27	29	2.56	3917.00	3912	17	9.00E-04	33.9	8.05E+00
64	1	1961.78	42	21	2.57	3923.00	3912	17	1.40E-03	29.2	

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]G198530036       *
* Acquisition date :  4-DEC-2007 16:17:14 Detector SN#    :                 *
* Detector ID      : GAM18                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:04.69     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530036           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0634E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-OCT-2007 17:37:50 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	2.571E+00	3.785E-01	1.770E-01	0.000E+00
RH-101	9.289E-03	1.682E-02	1.947E-02	0.000E+00
TL-208	2.339E-01	3.174E-02	1.979E-02	0.000E+00
BI-212	5.390E-01	1.415E-01	1.562E-01	0.000E+00
PB-212	8.050E-01	5.999E-02	3.275E-02	0.000E+00
BI-214	7.474E-01	7.608E-02	4.149E-02	0.000E+00
PB-214	8.360E-01	7.324E-02	4.091E-02	0.000E+00
RA-223	2.367E-01	9.902E-02	1.020E-01	0.000E+00
AC-228	7.733E-01	1.285E-01	7.530E-02	0.000E+00
PA-234M	5.635E-01	2.321E+00	2.218E+00	0.000E+00
TH-234	1.331E+00	3.376E-01	2.939E-01	0.000E+00
U-235	4.507E-02	9.477E-02	1.199E-01	0.000E+00
NP-237	5.571E-01	1.237E-01	1.387E-01	0.000E+00
AM-243	1.563E-01	3.096E-02	3.631E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	-1.914E-03		1.250E-02	2.036E-02	0.000E+00	NOT IDENT.
SB-125	-2.411E-03		3.086E-02	5.283E-02	0.000E+00	NOT IDENT.
CS-137	5.840E-03		1.321E-02	2.227E-02	0.000E+00	NOT IDENT.
EU-155	4.146E-02		3.999E-02	6.834E-02	0.000E+00	NOT IDENT.
PO-209	2.938E+00		2.350E+00	4.178E+00	0.000E+00	NOT IDENT.
BI-211	1.893E-01		3.811E-01	5.763E-01	0.000E+00	NOT IDENT.
PA-233	8.668E-05		2.201E-02	3.667E-02	0.000E+00	NOT IDENT.
NP-236	0.000E+00		2.505E-02	3.936E-02	0.000E+00	NOT IDENT.
NP-239	-2.106E-02		7.620E-02	1.289E-01	0.000E+00	NOT IDENT.
AM-241	4.329E-02		7.994E-02	1.255E-01	0.000E+00	NOT IDENT.
CM-243	2.421E-02		3.586E-02	6.090E-02	0.000E+00	NOT IDENT.
AM-246	2.284E-02		4.099E-02	7.018E-02	0.000E+00	NOT IDENT.
CF-249	1.361E-02		1.393E-02	2.361E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:40:49.63

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530036.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:17:14.
Sample ID        : G198530036           Sample quantity  : 1.06340E+02 GRAM
Detector name    : GAM18                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:04.69  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	606	10.66*	1.873E+00	2.571E+00	2.571E+00	15.02
RH-101	198.00	57	73.00*	7.360E+00	9.006E-03	9.289E-03	184.75
TL-208	277.36	91	6.31	6.173E+00	1.973E-01	1.973E-01	88.97
	510.77	135	22.60	4.256E+00	1.185E-01	1.185E-01	120.10
	583.19	907	84.50*	3.889E+00	2.339E-01	2.339E-01	13.85
	763.13	------	1.81	3.183E+00	------	Line Not Found	------
	860.56	218	12.42	2.887E+00	5.146E-01	5.146E-01	38.13
BI-212	727.33	248	11.80*	3.305E+00	5.390E-01	5.390E-01	26.78
	785.37	73	1.10	3.109E+00	1.802E+00	1.802E+00	63.62
	1620.50	------	1.49	1.751E+00	------	Line Not Found	------
PB-212	74.81	617	10.40	4.902E+00	1.025E+00	1.025E+00	20.21
	77.11	1064	17.50	5.235E+00	9.839E-01	9.839E-01	15.41
	87.30	526	7.81	6.454E+00	8.845E-01	8.845E-01	22.65
	238.63	2760	43.30*	6.707E+00	8.050E-01	8.050E-01	7.60
	300.09	229	3.28	5.900E+00	1.001E+00	1.001E+00	37.18
BI-214	609.31	1533	46.10*	3.770E+00	7.473E-01	7.474E-01	10.39
	768.36	162	4.94	3.166E+00	8.771E-01	8.772E-01	39.70
	806.17	------	1.22	3.047E+00	------	Line Not Found	------
	934.06	115	3.03	2.696E+00	1.196E+00	1.196E+00	43.71
	1120.29	383	15.10	2.312E+00	9.289E-01	9.289E-01	16.94
	1155.19	31	1.63	2.255E+00	7.053E-01	7.053E-01	184.33
	1238.11	154	5.79	2.127E+00	1.056E+00	1.056E+00	40.77
	1280.96	------	1.43	2.070E+00	------	Line Not Found	------
	1377.67	89	4.00	1.955E+00	9.623E-01	9.624E-01	60.18
	1401.50	------	1.27	1.931E+00	------	Line Not Found	------
	1407.98	27	2.15	1.923E+00	5.609E-01	5.609E-01	142.51
	1509.23	------	2.11	1.832E+00	------	Line Not Found	------
	1729.60	81	2.92	1.691E+00	1.390E+00	1.390E+00	52.13
	1764.49	339	15.40	1.676E+00	1.114E+00	1.114E+00	18.93
PB-214	74.81	617	6.44	4.902E+00	1.655E+00	1.655E+00	20.21
	77.11	1064	10.80	5.235E+00	1.594E+00	1.594E+00	15.41
	87.30	526	4.84	6.454E+00	1.427E+00	1.427E+00	22.65

Sample ID : G198530036 Acquisition date : 4-DEC-2007 16:17:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	781	7.43	6.663E+00	1.337E+00	1.337E+00	18.46
	295.22	1036	19.30	5.955E+00	7.640E-01	7.640E-01	11.52
	351.93	1994	37.60*	5.374E+00	8.359E-01	8.360E-01	8.94
RA-223	269.46	240	13.70*	6.261E+00	2.367E-01	2.367E-01	42.68
AC-228	129.07	190	2.42	8.239E+00	8.056E-01	8.056E-01	66.54
	209.25	298	3.89	7.181E+00	9.026E-01	9.026E-01	36.43
	270.25	240	3.46	6.261E+00	9.373E-01	9.373E-01	42.68
	338.32	524	11.27	5.501E+00	7.166E-01	7.166E-01	25.40
	409.46	102	1.92	4.903E+00	9.149E-01	9.149E-01	69.68
	463.00	214	4.40	4.539E+00	9.097E-01	9.097E-01	36.09
	794.95	78	4.25	3.080E+00	5.049E-01	5.049E-01	73.99
	911.20	649	25.80*	2.754E+00	7.733E-01	7.733E-01	16.95
	964.77	98	4.99	2.624E+00	6.367E-01	6.367E-01	36.20
	968.97	384	15.80	2.615E+00	7.884E-01	7.884E-01	21.14
	1588.20	------	3.22	1.772E+00	------ Line Not Found		------
PA-234M	1001.03	14	0.84*	2.544E+00	5.635E-01	5.635E-01	420.23
TH-234	63.29	59	4.80	3.025E+00	3.459E-01	3.459E-01	224.77
	92.58	591	5.41*	6.957E+00	1.331E+00	1.331E+00	25.88
U-235	143.76	48	10.96*	8.198E+00	4.507E-02	4.507E-02	214.56
NP-237	86.48	526	12.40*	6.454E+00	5.571E-01	5.571E-01	22.65
AM-243	74.66	617	68.20*	4.902E+00	1.563E-01	1.563E-01	20.21

Flag: "*" = Keyline

Sample ID : G198530036 Acquisition date : 4-DEC-2007 16:17:14

Total number of lines in spectrum 64
Number of unidentified lines 24
Number of lines tentatively identified by NID 40 62.50%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.571E+00	2.571E+00	0.386E+00	15.02	
RH-101	1.04E+08S	1.03	9.006E-03	9.289E-03	17.16E-03	184.75	
TL-208	4.43E+17S	1.00	2.339E-01	2.339E-01	0.324E-01	13.85	
BI-212	4.43E+17S	1.00	5.390E-01	5.390E-01	1.443E-01	26.78	
PB-212	4.43E+17S	1.00	8.050E-01	8.050E-01	0.612E-01	7.60	
BI-214	5.05E+10S	1.00	7.473E-01	7.474E-01	0.776E-01	10.39	
PB-214	5.05E+10S	1.00	8.359E-01	8.360E-01	0.747E-01	8.94	
RA-223	1.04E+12S	1.00	2.367E-01	2.367E-01	1.010E-01	42.68	
AC-228	4.43E+17S	1.00	7.733E-01	7.733E-01	1.311E-01	16.95	
PA-234M	1.41E+17S	1.00	5.635E-01	5.635E-01	23.68E-01	420.23	
TH-234	1.41E+17S	1.00	1.331E+00	1.331E+00	0.345E+00	25.88	
U-235	2.22E+16S	1.00	4.507E-02	4.507E-02	9.671E-02	214.56	
NP-237	6.75E+13S	1.00	5.571E-01	5.571E-01	1.262E-01	22.65	
AM-243	2.33E+11S	1.00	1.563E-01	1.563E-01	0.316E-01	20.21	
			---	---			
	Total Activity :		9.404E+00	9.405E+00			

Grand Total Activity : 9.404E+00 9.405E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530036 Acquisition date : 4-DEC-2007 16:17:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	84.17	256	1151	1.47	167.29	163	29	8.54E-03	53.1	6.14E+00	
4	89.74	444	789	1.23	178.44	163	29	1.48E-02	23.4	6.71E+00	
0	154.14	177	755	1.19	307.16	303	8	5.90E-03	55.8	8.09E+00	
0	163.91	75	765	1.75	326.68	323	8	2.51E-03	****	7.95E+00	
0	185.97	467	1160	1.30	370.79	366	11	1.56E-02	33.3	7.58E+00	
0	328.15	122	621	1.56	655.01	650	12	4.05E-03	84.1	5.60E+00	
0	332.52	64	330	1.29	663.73	661	7	2.15E-03	96.6	5.56E+00	
0	477.32	89	262	2.49	953.23	949	9	2.96E-03	68.9	4.45E+00	
0	736.47	71	329	7.94	1471.43	1460	20	2.36E-03	****	3.27E+00	
0	835.57	25	145	1.41	1669.62	1667	7	8.50E-04	****	2.96E+00	
3	1109.24	37	97	2.08	2217.00	2212	16	1.25E-03	99.9	2.33E+00	
3	1112.27	46	62	2.46	2223.07	2212	16	1.53E-03	73.4	2.33E+00	
1	1116.45	59	76	2.29	2231.42	2227	19	1.95E-03	63.3	2.32E+00	
0	1427.73	38	59	4.82	2854.19	2848	12	1.27E-03	87.5	1.90E+00	
0	1503.26	14	58	0.77	3005.33	2999	9	4.69E-04	****	1.84E+00	
3	1514.74	37	57	3.08	3028.30	3015	19	1.23E-03	96.0	1.83E+00	
0	1535.45	14	51	0.83	3069.73	3061	10	4.71E-04	****	1.81E+00	
0	1574.27	60	83	8.47	3147.42	3136	22	2.01E-03	80.9	1.78E+00	
0	1590.91	117	123	6.43	3180.73	3167	27	3.89E-03	57.0	1.77E+00	
0	1644.95	13	55	3.30	3288.87	3279	14	4.30E-04	****	1.74E+00	
0	1841.08	38	33	5.80	3681.41	3674	15	1.25E-03	74.9	1.65E+00	
0	1849.27	50	93	2.27	3697.80	3689	22	1.65E-03	****	1.65E+00	
1	1958.78	27	29	2.56	3917.00	3912	17	9.00E-04	67.8	1.62E+00	
1	1961.78	42	21	2.57	3923.00	3912	17	1.40E-03	58.3	1.62E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530036            *
* Acquisition date :  4-DEC-2007 16:17:14 Detector SN#    :                 *
* Detector ID      : GAM18                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:04.69     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530036           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0634E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  1-OCT-2007 17:37:50 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.571E+00	3.785E-01	8.856E-02	3.785E-01
RH-101	9.289E-03	1.682E-02	9.742E-03	1.682E-02
TL-208	2.339E-01	3.174E-02	9.901E-03	3.174E-02
BI-212	5.390E-01	1.415E-01	7.816E-02	1.415E-01
PB-212	8.050E-01	5.999E-02	1.638E-02	5.999E-02
BI-214	7.474E-01	7.608E-02	2.076E-02	7.608E-02
PB-214	8.360E-01	7.324E-02	2.047E-02	7.324E-02
RA-223	2.367E-01	9.902E-02	5.101E-02	9.902E-02
AC-228	7.733E-01	1.285E-01	3.767E-02	1.285E-01
PA-234M	5.635E-01	2.321E+00	1.110E+00	2.321E+00
TH-234	1.331E+00	3.376E-01	1.471E-01	3.376E-01
U-235	4.507E-02	9.477E-02	5.999E-02	9.477E-02
NP-237	5.571E-01	1.237E-01	6.940E-02	1.237E-01
AM-243	1.563E-01	3.096E-02	1.816E-02	3.096E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-1.914E-03	1.250E-02	1.018E-02	1.250E-02	NOT IDENT.
SB-125	-2.411E-03	3.086E-02	2.643E-02	3.086E-02	NOT IDENT.
CS-137	5.840E-03	1.321E-02	1.114E-02	1.321E-02	NOT IDENT.
EU-155	4.146E-02	3.999E-02	3.419E-02	3.999E-02	NOT IDENT.
PO-209	2.938E+00	2.350E+00	2.090E+00	2.350E+00	NOT IDENT.
BI-211	1.893E-01	3.811E-01	2.883E-01	3.811E-01	NOT IDENT.
PA-233	8.668E-05	2.201E-02	1.834E-02	2.201E-02	NOT IDENT.
NP-236	4.317E-02	2.505E-02	1.969E-02	2.505E-02	NOT IDENT.
NP-239	-2.106E-02	7.620E-02	6.447E-02	7.620E-02	NOT IDENT.
AM-241	4.329E-02	7.994E-02	6.278E-02	7.994E-02	NOT IDENT.
CM-243	2.421E-02	3.586E-02	3.047E-02	3.586E-02	NOT IDENT.
AM-246	2.284E-02	4.099E-02	3.511E-02	4.099E-02	NOT IDENT.
CF-249	1.361E-02	1.393E-02	1.181E-02	1.393E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
*****************************************************************************
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ENERGY	MDA COUNTS
59.54	711.6666
63.29	816.7896
74.66	928.3214
74.81	928.6819
74.81	928.6819
77.11	934.2142
77.11	934.2142
86.48	764.7440
87.30	766.2167
87.30	766.2167
92.58	775.5529
98.44	629.7305
103.76	677.8228
105.31	688.4253
129.07	735.6853
143.76	738.4645
198.00	659.0413
209.25	711.8238
228.18	598.6662
238.63	578.8531
242.00	581.0266
269.46	492.0916
270.25	517.9846
277.36	525.7191
295.22	470.6018
300.09	487.3309
312.17	427.2451
338.32	444.8243
351.93	438.9810
387.59	347.8093
409.46	350.1812
427.87	341.1987
463.00	313.1584
510.77	288.2465
583.19	273.5598
609.31	336.3900
661.66	270.3692
727.33	240.5468
763.13	249.9124
768.36	241.3447
785.37	199.8482
794.95	175.6974
806.17	188.6151
831.80	185.1303
860.56	189.0524
896.60	149.3427
911.20	186.0234
934.06	157.4743
964.77	176.1964
968.97	173.2091
1001.03	146.1604
1078.86	123.3447
1120.29	132.1480
1155.19	135.4091
1173.23	133.4392
1238.11	129.5703
1280.96	134.9247
1332.51	123.5707
1377.67	114.5010
1401.50	76.8154
1407.98	129.9667
1460.80	81.6018
1509.23	130.0286
1588.20	94.3169
1620.50	72.5502
1729.60	75.1333
1764.49	54.8655

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530036

Total Uranium Activity	2.0855E-02	ug/g
Total Uranium Counting Unc.	4.3851E-02	ug/g
Total Uranium Tpu	4.3851E-08	ug/g
Total Uranium Mda	2.7758E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:41:24.61

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530037.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:17:38.
Sample ID        : G198530037           Sample quantity  : 9.98900E+01 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:59.16  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.15*	174	1097	1.13	91.40	88	9	5.81E-03	36.7	
2	0	63.26	423	1511	1.38	125.58	122	9	1.41E-02	17.2	
3	4	74.96	2373	1811	1.44	148.94	143	22	7.91E-02	4.2	1.80E+00
4	4	77.22*	3592	1479	1.37	153.46	143	22	1.20E-01	2.8	
5	4	80.69	165	1485	1.44	160.39	143	22	5.49E-03	45.4	
6	4	84.46	550	1371	1.79	167.91	164	28	1.83E-02	12.8	1.40E+00
7	4	87.25	1301	1170	1.40	173.48	164	28	4.34E-02	5.4	
8	4	89.96	845	1233	1.46	178.90	164	28	2.82E-02	8.6	
9	4	93.17*	1309	1420	1.87	185.31	164	28	4.36E-02	6.7	
10	0	99.37	192	1211	1.44	197.69	193	10	6.39E-03	34.7	
11	0	105.42	260	1088	2.02	209.77	206	9	8.68E-03	23.6	
12	0	114.91	100	965	1.67	228.72	225	8	3.34E-03	54.7	
13	0	129.19	355	1331	1.78	257.26	252	11	1.18E-02	20.6	
14	0	144.27	28	919	0.51	287.37	283	7	9.27E-04	181.6	
15	0	154.58	161	1075	1.23	307.97	304	9	5.37E-03	37.6	
16	0	186.00*	696	1286	1.59	370.72	365	13	2.32E-02	11.9	
17	0	209.29	550	1205	1.59	417.24	411	14	1.83E-02	14.1	
18	0	216.84	58	572	1.07	432.32	429	7	1.92E-03	70.3	
19	3	238.55*	4584	525	1.40	475.71	467	22	1.53E-01	1.9	1.70E+00
20	3	241.47	901	767	2.10	481.54	467	22	3.00E-02	10.2	
21	0	270.28	277	782	1.63	539.08	533	12	9.23E-03	21.1	
22	0	277.57	176	563	1.48	553.64	549	10	5.87E-03	26.3	
23	0	288.08	59	486	1.20	574.64	571	9	1.97E-03	68.6	
24	2	295.18	1141	473	1.70	588.83	581	25	3.80E-02	4.6	1.40E+00
25	2	300.11	387	544	1.96	598.68	581	25	1.29E-02	13.3	
26	0	327.96	184	458	1.16	654.33	650	9	6.14E-03	22.2	
27	0	338.29	748	615	1.51	674.97	670	11	2.49E-02	7.4	
28	0	351.90*	1516	563	1.49	702.16	695	14	5.05E-02	4.4	
29	0	357.10*	13	293	1.29	712.56	709	8	4.31E-04	254.9	
30	0	409.45	154	380	2.74	817.16	812	11	5.12E-03	25.8	
31	0	444.50	96	504	7.72	887.21	876	20	3.22E-03	58.0	
32	0	450.85	60	204	1.82	899.90	897	8	2.00E-03	43.2	
33	0	462.78	284	405	1.91	923.73	916	17	9.47E-03	17.3	
34	0	487.62	34	205	1.11	973.38	968	8	1.12E-03	75.6	
35	0	498.99	26	270	4.29	996.11	989	13	8.82E-04	129.4	
36	0	510.63*	361	451	2.29	1019.37	1011	17	1.20E-02	17.0	
37	0	561.83	35	286	1.40	1121.70	1114	13	1.15E-03	102.3	
38	0	566.61	314	287	2.65	1131.27	1126	12	1.05E-02	12.1	

Sample ID : G198530037 Acquisition date : 4-DEC-2007 16:17:38

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	582.86*	1265	314	1.53	1163.74	1155	17	4.22E-02	4.4	
40	0	608.98*	976	246	1.93	1215.96	1210	12	3.25E-02	4.9	
41	0	727.09	276	189	2.18	1452.10	1445	14	9.21E-03	12.2	
42	0	767.48	91	184	3.00	1532.84	1527	12	3.04E-03	31.4	
43	0	772.04	33	135	1.30	1541.97	1539	9	1.09E-03	66.7	
44	1	781.87	69	106	2.09	1561.62	1557	17	2.30E-03	28.1	1.71E+00
45	1	785.37	53	124	2.09	1568.62	1557	17	1.75E-03	44.4	
46	0	794.55	78	157	1.76	1586.99	1582	12	2.61E-03	33.8	
47	0	835.60	57	119	2.69	1669.07	1663	11	1.90E-03	39.7	
48	0	860.86	79	213	1.97	1719.60	1710	16	2.62E-03	43.2	
49	0	904.34	36	104	0.87	1806.56	1802	11	1.20E-03	58.1	
50	0	910.88	703	146	1.87	1819.63	1813	17	2.34E-02	5.4	
51	0	934.45*	31	146	1.95	1866.77	1856	15	1.04E-03	101.0	
52	3	964.47	121	121	1.96	1926.82	1921	31	4.04E-03	20.7	1.17E+00
53	3	968.73	391	113	1.91	1935.35	1921	31	1.30E-02	7.3	
54	0	1120.49	259	146	2.08	2238.95	2231	19	8.64E-03	12.9	
55	0	1170.11	22	52	3.34	2338.24	2333	10	7.31E-04	65.3	
56	0	1237.70	96	124	3.21	2473.50	2464	15	3.20E-03	27.2	
57	0	1275.14	41	61	5.23	2548.42	2541	14	1.37E-03	43.6	
58	0	1378.84	72	58	1.47	2755.99	2748	16	2.41E-03	28.3	
59	0	1460.57	709	78	2.15	2919.61	2912	19	2.36E-02	4.9	
60	0	1510.44	43	49	2.06	3019.47	3010	18	1.43E-03	41.4	
61	0	1587.80	41	58	1.60	3174.36	3169	11	1.35E-03	39.5	
62	0	1593.33	51	51	2.03	3185.45	3179	15	1.70E-03	35.5	
63	0	1621.66	58	55	1.21	3242.18	3232	20	1.94E-03	33.8	
64	0	1683.98	93	133	21.76	3366.99	3334	60	3.10E-03	51.0	
65	0	1730.14	40	33	2.75	3459.45	3452	15	1.32E-03	36.8	
66	1	1743.40	25	16	2.26	3486.00	3483	16	8.40E-04	26.4	4.47E+00
67	1	1745.89*	16	29	2.26	3491.00	3483	16	5.47E-04	86.4	
68	0	1758.28	11	20	0.86	3515.81	3510	9	3.57E-04	86.9	
69	2	1760.37	23	4	2.27	3520.00	3518	22	7.67E-04	19.9	1.83E+00
70	2	1763.67	163	16	2.74	3526.61	3518	22	5.42E-03	9.9	
71	0	1773.23	21	30	1.41	3545.76	3539	15	7.00E-04	60.9	
72	0	1847.98	25	39	2.26	3695.51	3686	11	8.39E-04	51.8	
73	0	1952.16	8	24	1.16	3904.25	3895	12	2.67E-04	127.5	
74	0	2034.82	9	19	2.19	4069.91	4063	10	2.93E-04	100.5	

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]G198530037       *
* Acquisition date :  4-DEC-2007 16:17:38 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:59.16     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530037           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.9890E+01 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	8.072E+00	8.858E-01	4.047E-01	0.000E+00
EU-155	1.389E-01	6.525E-02	8.553E-02	0.000E+00
TL-208	7.196E-01	8.093E-02	3.815E-02	0.000E+00
BI-212	1.419E+00	3.560E-01	3.207E-01	0.000E+00
PB-212	2.028E+00	1.426E-01	5.362E-02	0.000E+00
BI-214	1.067E+00	1.300E-01	7.810E-02	0.000E+00
PB-214	1.134E+00	1.135E-01	7.232E-02	0.000E+00
RA-223	4.358E-01	1.815E-01	1.771E-01	0.000E+00
AC-228	2.080E+00	2.612E-01	1.359E-01	0.000E+00
TH-234	2.588E+00	3.913E-01	3.196E-01	0.000E+00
U-235	3.277E-02	1.167E-01	1.809E-01	0.000E+00
NP-236	5.489E-02	3.760E-02	4.303E-02	0.000E+00
NP-237	1.108E+00	1.415E-01	1.373E-01	0.000E+00
AM-243	3.630E-01	3.866E-02	2.877E-02	0.000E+00
CM-243	1.259E-01	5.913E-02	6.966E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	-4.497E-03		3.275E-02	4.566E-02	0.000E+00	NOT IDENT.
RH-101	6.151E-03		1.898E-02	3.257E-02	0.000E+00	NOT IDENT.
SB-125	4.180E-02		6.218E-02	1.056E-01	0.000E+00	NOT IDENT.
CS-137	-5.850E-04		2.545E-02	4.325E-02	0.000E+00	NOT IDENT.
PO-209	-2.152E+00		5.537E+00	8.622E+00	0.000E+00	NOT IDENT.
BI-211	6.587E-01		8.074E-01	1.243E+00	0.000E+00	NOT IDENT.
PA-233	-1.349E-03		3.817E-02	6.401E-02	0.000E+00	NOT IDENT.
PA-234M	2.047E+00		3.069E+00	5.317E+00	0.000E+00	NOT IDENT.
NP-239	-4.788E-02		1.473E-01	2.200E-01	0.000E+00	NOT IDENT.
AM-241	0.000E+00		3.356E-02	5.150E-02	0.000E+00	NOT IDENT.
AM-246	1.092E-01		9.272E-02	1.654E-01	0.000E+00	NOT IDENT.
CF-249	-8.050E-03		2.663E-02	4.387E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:41:25.72

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530037.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:17:38.
Sample ID        : G198530037           Sample quantity  : 9.98900E+01 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:59.16  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	709	10.66*	7.435E-01	8.072E+00	8.072E+00	11.20
EU-155	105.31	260	21.20*	8.136E+00	1.361E-01	1.389E-01	47.92
TL-208	277.36	176	6.31	4.077E+00	6.173E-01	6.173E-01	52.95
	510.77	361	22.60	2.160E+00	6.676E-01	6.676E-01	34.54
	583.19	1265	84.50*	1.876E+00	7.196E-01	7.196E-01	11.48
	763.13	------	1.81	1.415E+00	------	Line Not Found	------
	860.56	79	12.42	1.251E+00	4.567E-01	4.567E-01	86.75
BI-212	727.33	276	11.80*	1.487E+00	1.419E+00	1.419E+00	25.60
	785.37	53	1.10	1.374E+00	3.140E+00	3.140E+00	89.07
	1620.50	58	1.49	6.718E-01	5.252E+00	5.252E+00	67.83
PB-212	74.81	2373	10.40	8.644E+00	2.380E+00	2.380E+00	10.87
	77.11	3592	17.50	8.639E+00	2.143E+00	2.143E+00	8.96
	87.30	1301	7.81	8.538E+00	1.760E+00	1.760E+00	13.03
	238.63	4584	43.30*	4.709E+00	2.028E+00	2.028E+00	7.18
	300.09	387	3.28	3.773E+00	2.819E+00	2.819E+00	27.02
BI-214	609.31	976	46.10*	1.791E+00	1.067E+00	1.067E+00	12.44
	768.36	91	4.94	1.407E+00	1.185E+00	1.186E+00	63.35
	806.17	------	1.22	1.337E+00	------	Line Not Found	------
	934.06	31	3.03	1.151E+00	8.069E-01	8.070E-01	202.10
	1120.29	259	15.10	9.618E-01	1.610E+00	1.610E+00	26.55
	1155.19	------	1.63	9.335E-01	------	Line Not Found	------
	1238.11	96	5.79	8.728E-01	1.713E+00	1.713E+00	54.77
	1280.96	------	1.43	8.442E-01	------	Line Not Found	------
	1377.67	72	4.00	7.861E-01	2.070E+00	2.070E+00	56.93
	1401.50	------	1.27	7.738E-01	------	Line Not Found	------
	1407.98	------	2.15	7.704E-01	------	Line Not Found	------
	1509.23	43	2.11	7.197E-01	2.547E+00	2.547E+00	82.93
	1729.60	40	2.92	6.306E-01	1.943E+00	1.943E+00	73.90
	1764.49	163	15.40	6.188E-01	1.538E+00	1.538E+00	20.64
PB-214	74.81	2373	6.44	8.644E+00	3.844E+00	3.844E+00	10.87
	77.11	3592	10.80	8.639E+00	3.472E+00	3.472E+00	8.96
	87.30	1301	4.84	8.538E+00	2.840E+00	2.840E+00	13.03

Sample ID : G198530037 Acquisition date : 4-DEC-2007 16:17:38

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	901	7.43	4.657E+00	2.349E+00	2.349E+00	21.36
	295.22	1141	19.30	3.836E+00	1.390E+00	1.390E+00	10.60
	351.93	1516	37.60*	3.205E+00	1.134E+00	1.134E+00	10.21
RA-223	269.46	277	13.70*	4.184E+00	4.358E-01	4.358E-01	42.50
AC-228	129.07	355	2.42	7.441E+00	1.776E+00	1.776E+00	42.21
	209.25	550	3.89	5.292E+00	2.410E+00	2.410E+00	28.90
	270.25	277	3.46	4.184E+00	1.725E+00	1.725E+00	42.50
	338.32	748	11.27	3.339E+00	1.792E+00	1.792E+00	15.67
	409.46	154	1.92	2.733E+00	2.641E+00	2.641E+00	51.96
	463.00	284	4.40	2.399E+00	2.426E+00	2.426E+00	35.03
	794.95	78	4.25	1.357E+00	1.226E+00	1.226E+00	68.09
	911.20	703	25.80*	1.181E+00	2.080E+00	2.080E+00	12.81
	964.77	121	4.99	1.116E+00	1.962E+00	1.962E+00	41.97
	968.97	391	15.80	1.111E+00	2.012E+00	2.012E+00	15.96
	1588.20	41	3.22	6.857E-01	1.660E+00	1.660E+00	79.23
TH-234	63.29	423	4.80	8.514E+00	9.346E-01	9.346E-01	35.10
	92.58	1309	5.41*	8.430E+00	2.588E+00	2.588E+00	15.43
U-235	143.76	28	10.96*	6.985E+00	3.277E-02	3.277E-02	363.35
NP-236	98.44	192	38.00*	8.291E+00	5.489E-02	5.489E-02	69.91
NP-237	86.48	1301	12.40*	8.538E+00	1.108E+00	1.108E+00	13.03
AM-243	74.66	2373	68.20*	8.644E+00	3.630E-01	3.630E-01	10.87
CM-243	103.76	260	23.00*	8.136E+00	1.255E-01	1.259E-01	47.92

Flag: "*" = Keyline

Sample ID : G198530037 Acquisition date : 4-DEC-2007 16:17:38

Total number of lines in spectrum	74	
Number of unidentified lines	33	
Number of lines tentatively identified by NID	41	55.41%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	8.072E+00	8.072E+00	0.904E+00	11.20	
EU-155	1.57E+08S	1.02	1.361E-01	1.389E-01	0.666E-01	47.92	
TL-208	4.43E+17S	1.00	7.196E-01	7.196E-01	0.826E-01	11.48	
BI-212	4.43E+17S	1.00	1.419E+00	1.419E+00	0.363E+00	25.60	
PB-212	4.43E+17S	1.00	2.028E+00	2.028E+00	0.145E+00	7.18	
BI-214	5.05E+10S	1.00	1.067E+00	1.067E+00	0.133E+00	12.44	
PB-214	5.05E+10S	1.00	1.134E+00	1.134E+00	0.116E+00	10.21	
RA-223	1.04E+12S	1.00	4.358E-01	4.358E-01	1.852E-01	42.50	
AC-228	4.43E+17S	1.00	2.080E+00	2.080E+00	0.266E+00	12.81	
TH-234	1.41E+17S	1.00	2.588E+00	2.588E+00	0.399E+00	15.43	
U-235	2.22E+16S	1.00	3.277E-02	3.277E-02	11.91E-02	363.35	
NP-236	4.89E+12S	1.00	5.489E-02	5.489E-02	3.837E-02	69.91	
NP-237	6.75E+13S	1.00	1.108E+00	1.108E+00	0.144E+00	13.03	
AM-243	2.33E+11S	1.00	3.630E-01	3.630E-01	0.395E-01	10.87	
CM-243	8.99E+08S	1.00	1.255E-01	1.259E-01	0.603E-01	47.92	
			---	---			
	Total Activity :		2.136E+01	2.137E+01			

Grand Total Activity : 2.136E+01 2.137E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530037 Acquisition date : 4-DEC-2007 16:17:38

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.15	174	1097	1.13	91.40	88	9	5.81E-03	73.3	7.62E+00	
4	80.69	165	1485	1.44	160.39	143	22	5.49E-03	90.7	8.62E+00	
4	84.46	550	1371	1.79	167.91	164	28	1.83E-02	25.6	8.58E+00	
4	89.96	845	1233	1.46	178.90	164	28	2.82E-02	17.3	8.49E+00	
0	114.91	100	965	1.67	228.72	225	8	3.34E-03	****	7.87E+00	
0	154.58	161	1075	1.23	307.97	304	9	5.37E-03	75.3	6.68E+00	
0	186.00	696	1286	1.59	370.72	365	13	2.32E-02	23.7	5.83E+00	
0	216.84	58	572	1.07	432.32	429	7	1.92E-03	****	5.13E+00	
0	288.08	59	486	1.20	574.64	571	9	1.97E-03	****	3.93E+00	
0	327.96	184	458	1.16	654.33	650	9	6.14E-03	44.4	3.45E+00	
0	357.10	13	293	1.29	712.56	709	8	4.31E-04	****	3.16E+00	
0	444.50	96	504	7.72	887.21	876	20	3.22E-03	****	2.50E+00	
0	450.85	60	204	1.82	899.90	897	8	2.00E-03	86.4	2.47E+00	
0	487.62	34	205	1.11	973.38	968	8	1.12E-03	****	2.27E+00	
0	498.99	26	270	4.29	996.11	989	13	8.82E-04	****	2.21E+00	
0	561.83	35	286	1.40	1121.70	1114	13	1.15E-03	****	1.95E+00	
0	566.61	314	287	2.65	1131.27	1126	12	1.05E-02	24.3	1.93E+00	
0	772.04	33	135	1.30	1541.97	1539	9	1.09E-03	****	1.40E+00	
1	781.87	69	106	2.09	1561.62	1557	17	2.30E-03	56.3	1.38E+00	
0	835.60	57	119	2.69	1669.07	1663	11	1.90E-03	79.3	1.29E+00	
0	904.34	36	104	0.87	1806.56	1802	11	1.20E-03	****	1.19E+00	
0	1170.11	22	52	3.34	2338.24	2333	10	7.31E-04	****	9.22E-01	
0	1275.14	41	61	5.23	2548.42	2541	14	1.37E-03	87.3	8.48E-01	
0	1593.33	51	51	2.03	3185.45	3179	15	1.70E-03	71.0	6.83E-01	
0	1683.98	93	133	21.76	3366.99	3334	60	3.10E-03	****	6.48E-01	
1	1743.40	25	16	2.26	3486.00	3483	16	8.40E-04	52.8	6.26E-01	
1	1745.89	16	29	2.26	3491.00	3483	16	5.47E-04	****	6.25E-01	
0	1758.28	11	20	0.86	3515.81	3510	9	3.57E-04	****	6.21E-01	
2	1760.37	23	4	2.27	3520.00	3518	22	7.67E-04	39.8	6.20E-01	
0	1773.23	21	30	1.41	3545.76	3539	15	7.00E-04	****	6.15E-01	
0	1847.98	25	39	2.26	3695.51	3686	11	8.39E-04	****	5.91E-01	
0	1952.16	8	24	1.16	3904.25	3895	12	2.67E-04	****	5.59E-01	
0	2034.82	9	19	2.19	4069.91	4063	10	2.93E-04	****	5.36E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530037            *
* Acquisition date :  4-DEC-2007 16:17:38 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:59.16     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530037           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.9890E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	8.072E+00	8.858E-01	2.025E-01	8.858E-01
EU-155	1.389E-01	6.525E-02	4.279E-02	6.525E-02
TL-208	7.196E-01	8.093E-02	1.909E-02	8.093E-02
BI-212	1.419E+00	3.560E-01	1.604E-01	3.560E-01
PB-212	2.028E+00	1.426E-01	2.683E-02	1.426E-01
BI-214	1.067E+00	1.300E-01	3.907E-02	1.300E-01
PB-214	1.134E+00	1.135E-01	3.618E-02	1.135E-01
RA-223	4.358E-01	1.815E-01	8.859E-02	1.815E-01
AC-228	2.080E+00	2.612E-01	6.797E-02	2.612E-01
TH-234	2.588E+00	3.913E-01	1.599E-01	3.913E-01
U-235	3.277E-02	1.167E-01	9.049E-02	1.167E-01
NP-236	5.489E-02	3.760E-02	2.153E-02	3.760E-02
NP-237	1.108E+00	1.415E-01	6.868E-02	1.415E-01
AM-243	3.630E-01	3.866E-02	1.440E-02	3.866E-02
CM-243	1.259E-01	5.913E-02	3.485E-02	5.913E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU
CO-60	-4.497E-03	3.275E-02	2.284E-02	3.275E-02 NOT IDENT.
RH-101	6.151E-03	1.898E-02	1.629E-02	1.898E-02 NOT IDENT.
SB-125	4.180E-02	6.218E-02	5.284E-02	6.218E-02 NOT IDENT.
CS-137	-5.850E-04	2.545E-02	2.164E-02	2.545E-02 NOT IDENT.
PO-209	-2.152E+00	5.537E+00	4.313E+00	5.537E+00 NOT IDENT.
BI-211	6.587E-01	8.074E-01	6.220E-01	8.074E-01 NOT IDENT.
PA-233	-1.349E-03	3.817E-02	3.202E-02	3.817E-02 NOT IDENT.
PA-234M	2.047E+00	3.069E+00	2.660E+00	3.069E+00 NOT IDENT.
NP-239	-4.788E-02	1.473E-01	1.101E-01	1.473E-01 NOT IDENT.
AM-241	7.901E-02	3.356E-02	2.577E-02	3.356E-02 NOT IDENT.
AM-246	1.092E-01	9.272E-02	8.273E-02	9.272E-02 NOT IDENT.
CF-249	-8.050E-03	2.663E-02	2.195E-02	2.663E-02 NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	1109.4631
63.29	1492.3268
74.66	1639.7413
74.81	1640.0043
74.81	1640.0043
77.11	1644.0316
77.11	1644.0316
86.48	1208.0145
87.30	1208.9930
87.30	1208.9930
92.58	1215.1769
98.44	1054.6401
103.76	973.5594
105.31	1193.4542
129.07	1074.5420
143.76	1100.9777
198.00	909.2215
209.25	846.7954
228.18	794.7035
238.63	685.0473
242.00	686.2747
269.46	594.3811
270.25	594.6082
277.36	564.2084
295.22	509.5807
300.09	510.7343
312.17	462.6935
338.32	487.8305
351.93	436.2412
387.59	421.0417
409.46	412.3861
427.87	325.0024
463.00	294.8580
510.77	279.6038
583.19	210.4581
609.31	239.2715
661.66	209.7190
727.33	182.5229
763.13	173.2555
768.36	187.2645
785.37	125.3640
794.95	152.3112
806.17	159.4063
831.80	131.7048
860.56	143.0829
896.60	149.7094
911.20	98.8999
934.06	111.1862
964.77	110.7900
968.97	110.8880
1001.03	112.6276
1078.86	88.0762
1120.29	109.1943
1155.19	114.0216
1173.23	102.4750
1238.11	100.1094
1280.96	75.6475
1332.51	83.7318
1377.67	64.0723
1401.50	77.1855
1407.98	76.1944
1460.80	59.5207
1509.23	58.8801
1588.20	77.7921
1620.50	49.4138
1729.60	43.4305
1764.49	20.3650

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530037

Total Uranium Activity	1.5161E-02	ug/g
Total Uranium Counting Unc.	5.3986E-02	ug/g
Total Uranium Tpu	5.3986E-08	ug/g
Total Uranium Mda	4.1868E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:41:59.83

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530038.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:18:00.
Sample ID        : G198530038           Sample quantity  : 1.21110E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:20.52  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.24*	68	1054	0.74	92.42	89	8	2.26E-03	92.3	
2	0	63.35*	259	1334	0.96	126.64	122	9	8.63E-03	27.7	
3	3	74.83	1111	1034	0.86	149.61	145	14	3.70E-02	5.2	1.85E+00
4	3	77.12	1854	964	0.82	154.19	145	14	6.18E-02	3.4	
5	7	84.34	425	1064	1.57	168.63	165	27	1.42E-02	13.5	2.05E+00
6	7	87.24	860	1050	1.15	174.43	165	27	2.87E-02	7.1	
7	7	89.86	563	888	0.96	179.67	165	27	1.88E-02	9.4	
8	7	92.91*	959	1166	1.41	185.77	165	27	3.20E-02	7.9	
9	0	99.05	159	1121	0.62	198.06	194	8	5.32E-03	37.2	
10	0	105.14	139	1115	1.07	210.25	207	8	4.65E-03	42.3	
11	0	108.96	98	982	1.02	217.87	215	7	3.26E-03	54.2	
12	0	115.22	92	1107	1.09	230.40	227	8	3.06E-03	63.9	
13	0	129.03	269	800	0.80	258.02	255	6	8.97E-03	17.7	
14	0	145.20*	61	1326	2.27	290.38	284	9	2.02E-03	114.8	
15	0	153.44	132	1174	0.88	306.85	303	9	4.40E-03	47.6	
16	0	185.99*	596	1223	1.33	371.97	367	10	1.99E-02	13.2	
17	0	209.29	428	859	1.01	418.57	415	8	1.43E-02	12.8	
18	6	238.65*	4710	676	0.98	477.30	473	18	1.57E-01	1.8	1.91E+00
19	6	241.58	1036	857	1.69	483.16	473	18	3.45E-02	7.8	
20	0	258.96	66	442	0.77	517.94	516	6	2.20E-03	51.9	
21	0	270.47	389	827	1.17	540.95	535	11	1.30E-02	15.2	
22	0	277.41	146	609	1.02	554.84	552	8	4.88E-03	30.4	
23	3	295.23*	1175	377	1.06	590.48	586	19	3.92E-02	4.3	1.29E+00
24	3	300.06	367	430	1.22	600.15	586	19	1.22E-02	10.7	
25	0	328.06	262	579	1.09	656.16	652	9	8.73E-03	17.7	
26	0	338.33	892	784	1.09	676.70	671	11	2.97E-02	6.9	
27	0	351.91*	1892	672	1.07	703.87	698	12	6.31E-02	3.7	
28	0	387.92*	117	615	2.32	775.90	771	13	3.89E-03	47.6	
29	0	394.82	61	378	1.52	789.71	786	8	2.02E-03	57.3	
30	0	409.47	141	401	1.11	819.02	815	9	4.68E-03	27.0	
31	0	434.21*	85	344	3.42	868.51	864	10	2.85E-03	47.5	
32	0	452.80*	47	481	1.85	905.70	900	13	1.58E-03	101.1	
33	0	463.01	317	331	1.37	926.13	922	10	1.06E-02	12.1	
34	0	510.87*	502	683	1.71	1021.87	1013	19	1.67E-02	15.6	
35	0	562.62	69	265	1.88	1125.39	1122	9	2.29E-03	44.2	
36	0	569.83*	4	410	1.36	1139.83	1134	14	1.21E-04	*****	
37	0	583.15*	1347	412	1.30	1166.48	1159	13	4.49E-02	4.5	
38	0	609.24*	1344	438	1.43	1218.68	1211	15	4.48E-02	4.5	

Sample ID : G198530038 Acquisition date : 4-DEC-2007 16:18:00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	642.87	26	195	0.99	1285.95	1283	8	8.74E-04	94.4	
40	2	661.87	92	249	1.60	1323.97	1318	20	3.05E-03	33.4	2.04E+00
41	2	665.71	48	287	1.90	1331.65	1318	20	1.61E-03	69.2	
42	0	727.40	438	217	1.36	1455.08	1450	13	1.46E-02	8.4	
43	0	768.16	79	257	1.42	1536.63	1533	9	2.63E-03	38.3	
44	0	785.86	57	202	1.59	1572.04	1568	9	1.90E-03	47.0	
45	0	794.93	179	208	2.17	1590.19	1584	12	5.98E-03	17.8	
46	0	825.86	9	180	1.28	1652.07	1646	10	2.86E-04	296.3	
47	0	830.48	28	121	2.27	1661.32	1658	8	9.36E-04	70.2	
48	0	835.46	58	208	0.70	1671.27	1667	11	1.92E-03	50.1	
49	0	860.99	143	269	1.64	1722.36	1714	13	4.78E-03	25.1	
50	0	879.86	36	174	0.53	1760.12	1755	12	1.19E-03	76.3	
51	0	892.86	27	132	1.08	1786.14	1782	9	9.02E-04	79.0	
52	0	903.25	56	164	4.58	1806.93	1800	13	1.87E-03	49.2	
53	0	911.15*	955	159	1.53	1822.72	1816	13	3.18E-02	4.5	
54	0	934.58	87	162	1.13	1869.62	1863	13	2.89E-03	32.1	
55	2	964.66*	149	163	1.90	1929.79	1924	21	4.96E-03	18.7	8.69E-01
56	2	968.88	586	135	1.96	1938.24	1924	21	1.95E-02	5.8	
57	0	1033.15	8	135	4.15	2066.84	2060	11	2.69E-04	280.8	
58	0	1063.64*	35	164	1.75	2127.85	2121	17	1.17E-03	141.2	
59	0	1120.21	240	153	1.87	2241.04	2235	13	7.99E-03	12.4	
60	0	1238.23	157	103	1.68	2477.22	2470	16	5.23E-03	16.6	
61	0	1345.87	23	54	3.64	2692.64	2686	10	7.64E-04	58.0	
62	0	1371.22	14	55	0.85	2743.36	2736	12	4.59E-04	110.3	
63	0	1378.33	93	121	1.20	2757.59	2747	22	3.10E-03	31.9	
64	0	1409.05	59	79	1.12	2819.08	2813	16	1.95E-03	35.3	
65	0	1428.99	18	47	1.13	2858.97	2856	10	6.02E-04	73.8	
66	0	1460.72*	829	104	2.24	2922.48	2915	15	2.76E-02	4.9	
67	0	1509.93	27	53	2.48	3020.96	3013	12	8.85E-04	58.6	
68	0	1541.99	19	57	4.66	3085.13	3076	14	6.40E-04	85.9	
69	0	1580.34	24	61	0.88	3161.89	3153	13	8.02E-04	70.3	
70	3	1588.59	106	56	2.78	3178.39	3168	27	3.53E-03	19.5	3.79E+00
71	3	1591.73	53	47	2.52	3184.69	3168	27	1.78E-03	35.4	
72	0	1630.14	63	33	1.60	3261.55	3255	13	2.11E-03	22.4	
73	0	1640.85	18	58	5.65	3283.00	3273	16	5.85E-04	101.4	
74	0	1669.98	19	25	0.65	3341.29	3336	11	6.32E-04	55.8	
75	0	1685.93	18	45	3.03	3373.22	3365	18	6.00E-04	90.5	
76	0	1696.81	15	49	5.85	3394.99	3386	19	5.10E-04	111.3	
77	0	1730.20	62	36	1.95	3461.83	3456	14	2.05E-03	24.8	
78	1	1764.32*	225	35	2.52	3530.13	3522	28	7.50E-03	10.1	1.90E+00
79	0	1898.00	28	59	9.92	3797.69	3781	23	9.30E-04	76.1	
80	0	2021.97	9	18	0.64	4045.85	4040	10	2.98E-04	98.3	

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]G198530038       *
* Acquisition date :  4-DEC-2007 16:18:00 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:20.52     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530038           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.2111E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	5.578E+00	6.596E-01	2.861E-01	0.000E+00
CS-137	3.821E-02	2.512E-02	3.112E-02	0.000E+00
EU-155	7.925E-02	6.592E-02	7.310E-02	0.000E+00
TL-208	5.065E-01	5.253E-02	3.006E-02	0.000E+00
BI-211	3.684E-01	5.078E-01	8.789E-01	0.000E+00
BI-212	1.428E+00	2.517E-01	2.362E-01	0.000E+00
PB-212	1.698E+00	1.112E-01	4.511E-02	0.000E+00
BI-214	9.611E-01	1.009E-01	5.975E-02	0.000E+00
PB-214	1.061E+00	9.514E-02	5.421E-02	0.000E+00
RA-223	4.868E-01	1.479E-01	1.365E-01	0.000E+00
AC-228	1.744E+00	2.053E-01	1.132E-01	0.000E+00
TH-234	2.288E+00	3.909E-01	3.382E-01	0.000E+00
U-235	6.451E-02	1.452E-01	1.422E-01	0.000E+00
NP-236	5.134E-02	3.757E-02	4.304E-02	0.000E+00
NP-237	9.602E-01	1.514E-01	1.583E-01	0.000E+00
AM-243	2.920E-01	3.596E-02	3.777E-02	0.000E+00
CM-243	7.182E-02	5.974E-02	6.838E-02	0.000E+00
CF-249	4.024E-02	3.761E-02	3.267E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	1.407E-02	1.784E-02	3.158E-02	0.000E+00	NOT IDENT.
RH-101	9.658E-03	1.487E-02	2.562E-02	0.000E+00	NOT IDENT.
SB-125	4.470E-03	4.651E-02	7.650E-02	0.000E+00	NOT IDENT.
PO-209	-1.269E+00	6.460E+00	5.954E+00	0.000E+00	NOT IDENT.
PA-233	-5.093E-03	2.964E-02	5.152E-02	0.000E+00	NOT IDENT.
PA-234M	1.330E-03	2.545E+00	3.687E+00	0.000E+00	NOT IDENT.
NP-239	-3.844E-02	1.029E-01	1.702E-01	0.000E+00	NOT IDENT.
AM-241	-2.660E-02	8.028E-02	1.226E-01	0.000E+00	NOT IDENT.
AM-246	7.665E-02	5.921E-02	1.082E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:42:00.99

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530038.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 4-DEC-2007 16:18:00.
Sample ID        : G198530038           Sample quantity  : 1.21110E+02 GRAM
Detector name    : GAM23                Detector geometry: CAN
Elapsed live time: 0 08:20:00.00        Elapsed real time: 0 08:20:20.52  0.1%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	829	10.66*	1.037E+00	5.578E+00	5.578E+00	12.06
CS-137	661.66	92	85.10*	2.101E+00	3.808E-02	3.821E-02	67.08
EU-155	105.31	139	21.20*	6.299E+00	7.764E-02	7.925E-02	84.87
TL-208	277.36	146	6.31	4.253E+00	4.056E-01	4.056E-01	61.10
	510.77	502	22.60	2.614E+00	6.317E-01	6.317E-01	31.66
	583.19	1347	84.50*	2.341E+00	5.065E-01	5.065E-01	10.58
	763.13	------	1.81	1.854E+00	------	Line Not Found	------
	860.56	143	12.42	1.663E+00	5.161E-01	5.161E-01	50.69
BI-211	831.80	28	3.30*	1.718E+00	3.684E-01	3.684E-01	140.64
BI-212	727.33	438	11.80*	1.935E+00	1.428E+00	1.428E+00	17.99
	785.37	57	1.10	1.806E+00	2.136E+00	2.136E+00	94.33
	1620.50	------	1.49	9.597E-01	------	Line Not Found	------
PB-212	74.81	1111	10.40	4.150E+00	1.915E+00	1.915E+00	12.57
	77.11	1854	17.50	4.414E+00	1.786E+00	1.786E+00	9.89
	87.30	860	7.81	5.372E+00	1.525E+00	1.525E+00	16.09
	238.63	4710	43.30*	4.766E+00	1.698E+00	1.698E+00	6.68
	300.09	367	3.28	4.001E+00	2.083E+00	2.083E+00	22.24
BI-214	609.31	1344	46.10*	2.256E+00	9.610E-01	9.611E-01	10.72
	768.36	79	4.94	1.843E+00	6.448E-01	6.448E-01	76.87
	806.17	------	1.22	1.765E+00	------	Line Not Found	------
	934.06	87	3.03	1.543E+00	1.382E+00	1.382E+00	64.68
	1120.29	240	15.10	1.306E+00	9.039E-01	9.040E-01	25.67
	1155.19	------	1.63	1.270E+00	------	Line Not Found	------
	1238.11	157	5.79	1.193E+00	1.688E+00	1.688E+00	33.76
	1280.96	------	1.43	1.158E+00	------	Line Not Found	------
	1377.67	93	4.00	1.088E+00	1.590E+00	1.590E+00	64.19
	1401.50	------	1.27	1.073E+00	------	Line Not Found	------
	1407.98	59	2.15	1.068E+00	1.897E+00	1.897E+00	70.87
	1509.23	27	2.11	1.011E+00	9.261E-01	9.262E-01	117.40
	1729.60	62	2.92	9.194E-01	1.704E+00	1.704E+00	50.02
	1764.49	225	15.40	9.088E-01	1.196E+00	1.196E+00	21.20
PB-214	74.81	1111	6.44	4.150E+00	3.092E+00	3.092E+00	12.57

Sample ID : G198530038 Acquisition date : 4-DEC-2007 16:18:00

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1854	10.80	4.414E+00	2.894E+00	2.894E+00	9.89
	87.30	860	4.84	5.372E+00	2.460E+00	2.460E+00	16.09
	242.00	1036	7.43	4.724E+00	2.195E+00	2.195E+00	16.52
	295.22	1175	19.30	4.052E+00	1.118E+00	1.118E+00	10.40
	351.93	1892	37.60*	3.529E+00	1.061E+00	1.061E+00	9.15
RA-223	269.46	389	13.70*	4.337E+00	4.868E-01	4.868E-01	31.00
AC-228	129.07	269	2.42	6.529E+00	1.267E+00	1.267E+00	36.03
	209.25	428	3.89	5.236E+00	1.562E+00	1.562E+00	26.23
	270.25	389	3.46	4.337E+00	1.928E+00	1.928E+00	31.00
	338.32	892	11.27	3.641E+00	1.617E+00	1.617E+00	14.95
	409.46	141	1.92	3.128E+00	1.740E+00	1.740E+00	54.28
	463.00	317	4.40	2.833E+00	1.893E+00	1.893E+00	24.70
	794.95	179	4.25	1.788E+00	1.757E+00	1.757E+00	36.25
	911.20	955	25.80*	1.579E+00	1.744E+00	1.744E+00	12.01
	964.77	149	4.99	1.498E+00	1.481E+00	1.481E+00	38.11
	968.97	586	15.80	1.492E+00	1.848E+00	1.848E+00	13.96
	1588.20	106	3.22	9.732E-01	2.517E+00	2.517E+00	39.52
TH-234	63.29	259	4.80	2.635E+00	1.523E+00	1.523E+00	55.95
	92.58	959	5.41*	5.763E+00	2.288E+00	2.288E+00	17.43
U-235	143.76	61	10.96*	6.370E+00	6.451E-02	6.451E-02	229.62
NP-236	98.44	159	38.00*	6.080E+00	5.134E-02	5.134E-02	74.66
NP-237	86.48	860	12.40*	5.372E+00	9.602E-01	9.602E-01	16.09
AM-243	74.66	1111	68.20*	4.150E+00	2.920E-01	2.920E-01	12.57
CM-243	103.76	139	23.00*	6.299E+00	7.157E-02	7.182E-02	84.87
CF-249	387.59	117	66.00*	3.266E+00	4.023E-02	4.024E-02	95.38

Flag: "*" = Keyline

Sample ID : G198530038 Acquisition date : 4-DEC-2007 16:18:00

Total number of lines in spectrum	80	
Number of unidentified lines	36	
Number of lines tentatively identified by NID	44	55.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	5.578E+00	5.578E+00	0.673E+00	12.06	
CS-137	9.47E+08S	1.00	3.808E-02	3.821E-02	2.563E-02	67.08	
EU-155	1.57E+08S	1.02	7.764E-02	7.925E-02	6.726E-02	84.87	
TL-208	4.43E+17S	1.00	5.065E-01	5.065E-01	0.536E-01	10.58	
BI-211	2.22E+16S	1.00	3.684E-01	3.684E-01	5.181E-01	140.64	
BI-212	4.43E+17S	1.00	1.428E+00	1.428E+00	0.257E+00	17.99	
PB-212	4.43E+17S	1.00	1.698E+00	1.698E+00	0.113E+00	6.68	
BI-214	5.05E+10S	1.00	9.610E-01	9.611E-01	1.030E-01	10.72	
PB-214	5.05E+10S	1.00	1.061E+00	1.061E+00	0.097E+00	9.15	
RA-223	1.04E+12S	1.00	4.868E-01	4.868E-01	1.509E-01	31.00	
AC-228	4.43E+17S	1.00	1.744E+00	1.744E+00	0.209E+00	12.01	
TH-234	1.41E+17S	1.00	2.288E+00	2.288E+00	0.399E+00	17.43	
U-235	2.22E+16S	1.00	6.451E-02	6.451E-02	14.81E-02	229.62	
NP-236	4.89E+12S	1.00	5.134E-02	5.134E-02	3.833E-02	74.66	
NP-237	6.75E+13S	1.00	9.602E-01	9.602E-01	1.545E-01	16.09	
AM-243	2.33E+11S	1.00	2.920E-01	2.920E-01	0.367E-01	12.57	
CM-243	8.99E+08S	1.00	7.157E-02	7.182E-02	6.095E-02	84.87	
CF-249	1.11E+10S	1.00	4.023E-02	4.024E-02	3.838E-02	95.38	
			---	---			
		Total Activity :	1.772E+01	1.772E+01			

Grand Total Activity : 1.772E+01 1.772E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530038 Acquisition date : 4-DEC-2007 16:18:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.24	68	1054	0.74	92.42	89	8	2.26E-03	****	5.60E-01	
7	84.34	425	1064	1.57	168.63	165	27	1.42E-02	27.0	5.13E+00	
7	89.86	563	888	0.96	179.67	165	27	1.88E-02	18.8	5.57E+00	
0	108.96	98	982	1.02	217.87	215	7	3.26E-03	****	6.39E+00	
0	115.22	92	1107	1.09	230.40	227	8	3.06E-03	****	6.50E+00	
0	153.44	132	1174	0.88	306.85	303	9	4.40E-03	95.1	6.24E+00	
0	185.99	596	1223	1.33	371.97	367	10	1.99E-02	26.4	5.65E+00	
0	258.96	66	442	0.77	517.94	516	6	2.20E-03	****	4.48E+00	
0	328.06	262	579	1.09	656.16	652	9	8.73E-03	35.4	3.73E+00	
0	394.82	61	378	1.52	789.71	786	8	2.02E-03	****	3.22E+00	
0	434.21	85	344	3.42	868.51	864	10	2.85E-03	95.1	2.98E+00	
0	452.80	47	481	1.85	905.70	900	13	1.58E-03	****	2.88E+00	
0	562.62	69	265	1.88	1125.39	1122	9	2.29E-03	88.4	2.41E+00	
0	569.83	4	410	1.36	1139.83	1134	14	1.21E-04	****	2.39E+00	
0	642.87	26	195	0.99	1285.95	1283	8	8.74E-04	****	2.15E+00	
2	665.71	48	287	1.90	1331.65	1318	20	1.61E-03	****	2.09E+00	
0	825.86	9	180	1.28	1652.07	1646	10	2.86E-04	****	1.73E+00	
0	835.46	58	208	0.70	1671.27	1667	11	1.92E-03	****	1.71E+00	
0	879.86	36	174	0.53	1760.12	1755	12	1.19E-03	****	1.63E+00	
0	892.86	27	132	1.08	1786.14	1782	9	9.02E-04	****	1.61E+00	
0	903.25	56	164	4.58	1806.93	1800	13	1.87E-03	98.4	1.59E+00	
0	1033.15	8	135	4.15	2066.84	2060	11	2.69E-04	****	1.41E+00	
0	1063.64	35	164	1.75	2127.85	2121	17	1.17E-03	****	1.37E+00	
0	1345.87	23	54	3.64	2692.64	2686	10	7.64E-04	****	1.11E+00	
0	1371.22	14	55	0.85	2743.36	2736	12	4.59E-04	****	1.09E+00	
0	1428.99	18	47	1.13	2858.97	2856	10	6.02E-04	****	1.06E+00	
0	1541.99	19	57	4.66	3085.13	3076	14	6.40E-04	****	9.95E-01	
0	1580.34	24	61	0.88	3161.89	3153	13	8.02E-04	****	9.77E-01	
3	1591.73	53	47	2.52	3184.69	3168	27	1.78E-03	70.9	9.72E-01	
0	1630.14	63	33	1.60	3261.55	3255	13	2.11E-03	44.9	9.56E-01	
0	1640.85	18	58	5.65	3283.00	3273	16	5.85E-04	****	9.51E-01	
0	1669.98	19	25	0.65	3341.29	3336	11	6.32E-04	****	9.40E-01	
0	1685.93	18	45	3.03	3373.22	3365	18	6.00E-04	****	9.35E-01	
0	1696.81	15	49	5.85	3394.99	3386	19	5.10E-04	****	9.31E-01	
0	1898.00	28	59	9.92	3797.69	3781	23	9.30E-04	****	8.75E-01	
0	2021.97	9	18	0.64	4045.85	4040	10	2.98E-04	****	8.53E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530038            *
* Acquisition date :  4-DEC-2007 16:18:00 Detector SN#    :                 *
* Detector ID      : GAM23                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 08:20:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 08:20:20.52     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530038           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.2111E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-MAY-2007 16:30:26 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	5.578E+00	6.596E-01	1.431E-01	6.596E-01
CS-137	3.821E-02	2.512E-02	1.557E-02	2.512E-02
EU-155	7.925E-02	6.592E-02	3.657E-02	6.592E-02
TL-208	5.065E-01	5.253E-02	1.504E-02	5.253E-02
BI-211	3.684E-01	5.078E-01	4.397E-01	5.078E-01
BI-212	1.428E+00	2.517E-01	1.181E-01	2.517E-01
PB-212	1.698E+00	1.112E-01	2.257E-02	1.112E-01
BI-214	9.611E-01	1.009E-01	2.989E-02	1.009E-01
PB-214	1.061E+00	9.514E-02	2.712E-02	9.514E-02
RA-223	4.868E-01	1.479E-01	6.828E-02	1.479E-01
AC-228	1.744E+00	2.053E-01	5.663E-02	2.053E-01
TH-234	2.288E+00	3.909E-01	1.692E-01	3.909E-01
U-235	6.451E-02	1.452E-01	7.113E-02	1.452E-01
NP-236	5.134E-02	3.757E-02	2.153E-02	3.757E-02
NP-237	9.602E-01	1.514E-01	7.921E-02	1.514E-01
AM-243	2.920E-01	3.596E-02	1.890E-02	3.596E-02
CM-243	7.182E-02	5.974E-02	3.421E-02	5.974E-02
CF-249	4.024E-02	3.761E-02	1.634E-02	3.761E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.407E-02	1.784E-02	1.580E-02	1.784E-02	NOT IDENT.
RH-101	9.658E-03	1.487E-02	1.282E-02	1.487E-02	NOT IDENT.
SB-125	4.470E-03	4.651E-02	3.827E-02	4.651E-02	NOT IDENT.
PO-209	-1.269E+00	6.460E+00	2.979E+00	6.460E+00	NOT IDENT.
PA-233	-5.093E-03	2.964E-02	2.578E-02	2.964E-02	NOT IDENT.
PA-234M	1.330E-03	2.545E+00	1.845E+00	2.545E+00	NOT IDENT.
NP-239	-3.844E-02	1.029E-01	8.514E-02	1.029E-01	NOT IDENT.
AM-241	-2.660E-02	8.028E-02	6.133E-02	8.028E-02	NOT IDENT.
AM-246	7.665E-02	5.921E-02	5.414E-02	5.921E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	691.7842
63.29	703.3432
74.66	883.6912
74.81	884.1138
74.81	884.1138
77.11	890.5433
77.11	890.5433
86.48	852.2286
87.30	854.2213
87.30	854.2213
92.58	866.8450
98.44	770.3820
103.76	756.4116
105.31	721.0281
129.07	792.7263
143.76	785.9982
198.00	725.6189
209.25	704.6606
228.18	679.6387
238.63	695.7551
242.00	698.7863
269.46	532.2434
270.25	532.7405
277.36	611.7203
295.22	513.5186
300.09	516.2344
312.17	491.1068
338.32	526.5839
351.93	419.2479
387.59	403.1035
409.46	383.5086
427.87	352.7186
463.00	322.3227
510.77	297.1085
583.19	290.0847
609.31	317.0865
661.66	253.2777
727.33	239.8140
763.13	218.3296
768.36	276.5883
785.37	206.6337
794.95	185.4061
806.17	193.4714
831.80	204.9805
860.56	164.3713
896.60	179.2429
911.20	176.3687
934.06	143.5037
964.77	156.1324
968.97	156.3926
1001.03	142.9619
1078.86	99.0485
1120.29	120.6116
1155.19	105.5938
1173.23	102.3383
1238.11	120.4486
1280.96	94.8376
1332.51	103.5028
1377.67	96.1310
1401.50	86.2598
1407.98	102.3583
1460.80	83.9793
1509.23	80.7770
1588.20	45.4421
1620.50	54.3115
1729.60	59.7482
1764.49	33.4379

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530038

Total Uranium Activity	2.9850E-02	ug/g
Total Uranium Counting Unc.	6.7173E-02	ug/g
Total Uranium Tpu	6.7173E-08	ug/g
Total Uranium Mda	3.2910E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:42:35.12

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530039.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:54:10.
Sample ID        : G198530039           Sample quantity  : 9.99700E+01 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:02.83  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	46.39*	86	353	1.14	93.56	89	10	5.99E-03	52.4	2.09E+00
2	0	50.21	50	328	1.31	101.19	99	6	3.49E-03	58.6	
3	0	53.28*	69	383	1.93	107.32	104	7	4.79E-03	51.0	
4	0	63.28*	192	956	1.03	127.33	121	12	1.33E-02	34.2	
5	2	74.70*	945	660	1.19	150.14	143	16	6.56E-02	5.8	2.35E+00
6	2	77.02*	1498	565	1.04	154.78	143	16	1.04E-01	3.7	
7	3	84.24*	268	549	1.67	169.21	165	29	1.86E-02	16.5	1.28E+00
8	3	87.12*	523	459	1.17	174.98	165	29	3.63E-02	8.5	
9	3	89.76	401	496	1.26	180.26	165	29	2.78E-02	11.4	
10	3	92.85*	597	582	1.70	186.44	165	29	4.15E-02	9.8	
11	0	99.57*	86	517	1.09	199.86	195	9	5.94E-03	51.2	
12	0	105.48	157	458	2.26	211.67	207	9	1.09E-02	25.8	
13	0	129.12	176	508	1.24	258.92	255	9	1.22E-02	24.2	
14	0	136.08	24	386	0.95	272.83	270	7	1.68E-03	135.5	
15	0	149.55	26	439	1.32	299.76	293	8	1.80E-03	141.8	
16	0	154.17	68	417	1.08	308.99	306	8	4.71E-03	53.5	
17	0	186.10*	335	609	1.18	372.80	366	14	2.33E-02	17.2	
18	0	209.30	116	410	1.12	419.18	415	9	8.08E-03	32.6	
19	2	238.71*	2088	219	1.22	477.94	469	21	1.45E-01	2.6	1.30E+00
20	2	241.61	464	290	1.74	483.74	469	21	3.22E-02	10.0	
21	0	270.82	156	439	1.33	542.12	535	15	1.09E-02	30.2	
22	0	277.99	107	360	1.32	556.46	550	13	7.46E-03	37.7	
23	0	285.82	33	256	0.57	572.09	566	10	2.32E-03	91.6	
24	0	288.80	59	150	1.03	578.05	575	8	4.12E-03	38.0	
25	0	295.38	539	246	1.41	591.20	586	11	3.74E-02	7.1	
26	0	299.90	84	258	1.25	600.25	597	9	5.82E-03	36.1	
27	0	328.27	86	230	1.08	656.94	653	9	5.94E-03	33.7	
28	0	338.59*	338	290	1.24	677.56	672	12	2.35E-02	12.2	
29	0	352.08*	864	281	1.43	704.52	697	16	6.00E-02	5.6	
30	0	463.20	125	90	1.48	926.56	922	9	8.70E-03	16.3	
31	0	510.85*	166	228	1.77	1021.77	1014	18	1.15E-02	26.7	
32	3	583.34*	587	93	1.36	1166.62	1158	27	4.08E-02	5.2	1.31E+00
33	3	589.04	40	99	1.86	1178.00	1158	27	2.76E-03	55.3	
34	0	609.53*	582	157	1.51	1218.93	1212	14	4.04E-02	6.9	
35	3	727.45	133	83	1.85	1454.51	1450	19	9.21E-03	14.9	1.57E+00
36	3	732.09	39	54	2.62	1463.79	1450	19	2.74E-03	43.6	
37	0	768.29*	67	80	1.55	1536.11	1530	11	4.67E-03	29.9	
38	0	786.58	31	85	1.87	1572.65	1566	11	2.15E-03	60.4	

Sample ID : G198530039 Acquisition date : 5-DEC-2007 05:54:10

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	795.46	83	72	0.95	1590.38	1582	16	5.78E-03	25.3	
40	0	860.56	108	76	1.51	1720.41	1713	16	7.47E-03	20.5	
41	0	911.41*	380	74	1.83	1821.99	1814	14	2.64E-02	7.3	
42	1	965.03	120	59	2.34	1929.08	1920	32	8.32E-03	16.1	2.02E+00
43	1	969.32	293	46	2.17	1937.65	1920	32	2.04E-02	7.6	
44	0	1013.53	37	51	0.68	2025.95	2017	17	2.55E-03	47.5	
45	0	1120.67*	141	51	2.20	2239.92	2231	17	9.78E-03	15.2	
46	0	1158.38	26	92	2.58	2315.23	2301	25	1.78E-03	100.6	
47	0	1239.05	74	60	1.13	2476.33	2466	19	5.12E-03	28.1	
48	0	1401.68	17	5	1.16	2801.05	2797	9	1.18E-03	36.0	
49	0	1408.23	40	24	3.27	2814.14	2808	15	2.75E-03	30.7	
50	0	1461.33*	265	31	2.20	2920.14	2912	16	1.84E-02	8.2	
51	0	1480.32	21	56	3.62	2958.06	2939	27	1.48E-03	103.8	
52	0	1509.76	20	15	1.55	3016.82	3012	10	1.39E-03	42.6	
53	4	1588.56	48	15	3.63	3174.14	3163	28	3.36E-03	27.8	6.26E-01
54	4	1593.97	29	12	2.82	3184.94	3163	28	2.04E-03	30.3	
55	0	1602.94	16	36	4.78	3202.85	3191	20	1.09E-03	95.8	
56	0	1623.45	12	41	2.62	3243.79	3231	18	8.54E-04	124.8	
57	0	1681.62*	8	12	2.36	3359.91	3351	16	5.28E-04	122.8	
58	0	1741.58	8	13	1.49	3479.59	3469	12	5.49E-04	102.8	
59	0	1765.21*	72	16	2.28	3526.75	3520	13	5.02E-03	17.9	
60	0	1778.95	13	13	0.93	3554.18	3543	17	9.25E-04	67.2	
61	0	1819.52	9	20	4.83	3635.15	3624	16	6.38E-04	113.6	
62	0	1824.01	11	3	0.68	3644.11	3640	8	7.34E-04	44.4	
63	0	1847.68	27	3	2.52	3691.35	3686	10	1.91E-03	21.9	
64	0	1989.05*	17	4	5.55	3973.48	3965	15	1.17E-03	43.1	
65	0	1994.25	4	6	0.59	3983.86	3979	8	3.02E-04	107.8	

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]G198530039       *
* Acquisition date :  5-DEC-2007 05:54:10 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:02.83     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530039           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.9970E+01 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)	
K-40	4.784E+00	8.561E-01	5.410E-01	0.000E+00
EU-155	2.064E-01	1.063E-01	1.341E-01	0.000E+00
TL-208	6.188E-01	7.661E-02	5.384E-02	0.000E+00
BI-212	1.213E+00	3.675E-01	5.226E-01	0.000E+00
PB-212	2.028E+00	1.960E-01	7.980E-02	0.000E+00
BI-214	1.168E+00	1.800E-01	1.058E-01	0.000E+00
PB-214	1.318E+00	1.627E-01	1.097E-01	0.000E+00
RA-223	5.286E-01	3.154E-01	2.531E-01	0.000E+00
AC-228	1.923E+00	3.248E-01	2.256E-01	0.000E+00
TH-234	2.917E+00	6.180E-01	5.560E-01	0.000E+00
NP-236	6.049E-02	6.089E-02	6.706E-02	0.000E+00
NP-237	1.101E+00	2.053E-01	2.383E-01	0.000E+00
AM-243	3.549E-01	4.903E-02	4.551E-02	0.000E+00
CM-243	1.870E-01	9.628E-02	1.137E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	-4.032E-03		3.562E-02	5.921E-02	0.000E+00	NOT IDENT.
RH-101	-2.090E-03		3.498E-02	5.176E-02	0.000E+00	NOT IDENT.
SB-125	1.103E-01		9.056E-02	1.589E-01	0.000E+00	NOT IDENT.
CS-137	-1.479E-02		3.660E-02	6.014E-02	0.000E+00	NOT IDENT.
PO-209	1.664E+00		6.694E+00	1.125E+01	0.000E+00	NOT IDENT.
BI-211	-1.102E-01		1.054E+00	1.734E+00	0.000E+00	NOT IDENT.
PA-233	-8.393E-02		5.469E-02	8.527E-02	0.000E+00	NOT IDENT.
PA-234M	1.305E+00		3.952E+00	6.641E+00	0.000E+00	NOT IDENT.
U-235	-8.887E-03		2.056E-01	2.907E-01	0.000E+00	NOT IDENT.
NP-239	5.987E-02		1.939E-01	3.187E-01	0.000E+00	NOT IDENT.
AM-241	4.045E-04		4.804E-02	7.301E-02	0.000E+00	NOT IDENT.
AM-246	-2.744E-02		1.139E-01	1.883E-01	0.000E+00	NOT IDENT.
CF-249	3.524E-02		3.730E-02	6.492E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:42:36.10

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530039.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:54:10.
Sample ID        : G198530039           Sample quantity  : 9.99700E+01 GRAM
Detector name    : GAM05                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:02.83  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	265	10.66*	9.766E-01	4.784E+00	4.784E+00	18.26
EU-155	105.31	157	21.20*	6.881E+00	2.022E-01	2.064E-01	52.53
TL-208	277.36	107	6.31	3.974E+00	8.044E-01	8.044E-01	75.65
	510.77	166	22.60	2.368E+00	5.834E-01	5.834E-01	53.77
	583.19	587	84.50*	2.107E+00	6.188E-01	6.188E-01	12.63
	763.13	------	1.81	1.670E+00	------	Line Not Found	------
	860.56	108	12.42	1.508E+00	1.078E+00	1.078E+00	42.09
BI-212	727.33	133	11.80*	1.740E+00	1.213E+00	1.213E+00	30.92
	785.37	31	1.10	1.627E+00	3.251E+00	3.251E+00	121.12
	1620.50	------	1.49	8.967E-01	------	Line Not Found	------
PB-212	74.81	945	10.40	7.332E+00	2.327E+00	2.327E+00	14.10
	77.11	1498	17.50	7.311E+00	2.198E+00	2.198E+00	11.12
	87.30	523	7.81	7.190E+00	1.747E+00	1.747E+00	19.03
	238.63	2088	43.30*	4.465E+00	2.028E+00	2.028E+00	9.86
	300.09	84	3.28	3.740E+00	1.283E+00	1.283E+00	72.41
BI-214	609.31	582	46.10*	2.028E+00	1.168E+00	1.168E+00	15.73
	768.36	67	4.94	1.660E+00	1.539E+00	1.539E+00	60.52
	806.17	------	1.22	1.594E+00	------	Line Not Found	------
	934.06	------	3.03	1.408E+00	------	Line Not Found	------
	1120.29	141	15.10	1.212E+00	1.445E+00	1.445E+00	31.04
	1155.19	------	1.63	1.183E+00	------	Line Not Found	------
	1238.11	74	5.79	1.117E+00	2.139E+00	2.139E+00	56.51
	1280.96	------	1.43	1.087E+00	------	Line Not Found	------
	1377.67	------	4.00	1.025E+00	------	Line Not Found	------
	1401.50	17	1.27	1.010E+00	2.481E+00	2.481E+00	72.40
	1407.98	40	2.15	1.007E+00	3.440E+00	3.441E+00	61.97
	1509.23	20	2.11	9.508E-01	1.872E+00	1.872E+00	85.50
	1729.60	------	2.92	8.489E-01	------	Line Not Found	------
	1764.49	72	15.40	8.343E-01	1.057E+00	1.057E+00	36.29
PB-214	74.81	945	6.44	7.332E+00	3.759E+00	3.759E+00	14.10
	77.11	1498	10.80	7.311E+00	3.562E+00	3.563E+00	11.12
	87.30	523	4.84	7.190E+00	2.820E+00	2.820E+00	19.03

Sample ID : G198530039 Acquisition date : 5-DEC-2007 05:54:10

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	464	7.43	4.426E+00	2.648E+00	2.648E+00	21.57
	295.22	539	19.30	3.786E+00	1.385E+00	1.385E+00	15.50
	351.93	864	37.60*	3.273E+00	1.318E+00	1.318E+00	12.60
RA-223	269.46	156	13.70*	4.057E+00	5.286E-01	5.286E-01	60.88
AC-228	129.07	176	2.42	6.408E+00	2.133E+00	2.133E+00	49.45
	209.25	116	3.89	4.902E+00	1.146E+00	1.146E+00	65.97
	270.25	156	3.46	4.057E+00	2.093E+00	2.093E+00	60.88
	338.32	338	11.27	3.383E+00	1.664E+00	1.664E+00	24.98
	409.46	------	1.92	2.874E+00	------	Line Not Found	------
	463.00	125	4.40	2.581E+00	2.071E+00	2.071E+00	33.12
	794.95	83	4.25	1.612E+00	2.283E+00	2.283E+00	51.32
	911.20	380	25.80*	1.437E+00	1.923E+00	1.923E+00	17.23
	964.77	120	4.99	1.371E+00	3.287E+00	3.287E+00	33.34
	968.97	293	15.80	1.366E+00	2.551E+00	2.551E+00	17.47
	1588.20	48	3.22	9.117E-01	3.097E+00	3.097E+00	56.16
TH-234	63.29	192	4.80	7.386E+00	1.016E+00	1.016E+00	68.87
	92.58	597	5.41*	7.103E+00	2.917E+00	2.917E+00	21.62
NP-236	98.44	86	38.00*	6.989E+00	6.049E-02	6.049E-02	102.72
NP-237	86.48	523	12.40*	7.190E+00	1.101E+00	1.101E+00	19.03
AM-243	74.66	945	68.20*	7.332E+00	3.549E-01	3.549E-01	14.10
CM-243	103.76	157	23.00*	6.881E+00	1.864E-01	1.870E-01	52.53

Flag: "*" = Keyline

Sample ID : G198530039 Acquisition date : 5-DEC-2007 05:54:10

Total number of lines in spectrum 65
Number of unidentified lines 28
Number of lines tentatively identified by NID 37 56.92%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	4.784E+00	4.784E+00	0.874E+00	18.26	
EU-155	1.57E+08S	1.02	2.022E-01	2.064E-01	1.084E-01	52.53	
TL-208	4.43E+17S	1.00	6.188E-01	6.188E-01	0.782E-01	12.63	
BI-212	4.43E+17S	1.00	1.213E+00	1.213E+00	0.375E+00	30.92	
PB-212	4.43E+17S	1.00	2.028E+00	2.028E+00	0.200E+00	9.86	
BI-214	5.05E+10S	1.00	1.168E+00	1.168E+00	0.184E+00	15.73	
PB-214	5.05E+10S	1.00	1.318E+00	1.318E+00	0.166E+00	12.60	
RA-223	1.04E+12S	1.00	5.286E-01	5.286E-01	3.218E-01	60.88	
AC-228	4.43E+17S	1.00	1.923E+00	1.923E+00	0.331E+00	17.23	
TH-234	1.41E+17S	1.00	2.917E+00	2.917E+00	0.631E+00	21.62	
NP-236	4.89E+12S	1.00	6.049E-02	6.049E-02	6.213E-02	102.72	
NP-237	6.75E+13S	1.00	1.101E+00	1.101E+00	0.209E+00	19.03	
AM-243	2.33E+11S	1.00	3.549E-01	3.549E-01	0.500E-01	14.10	
CM-243	8.99E+08S	1.00	1.864E-01	1.870E-01	0.982E-01	52.53	
			---	---			
	Total Activity :		1.840E+01	1.841E+01			

Grand Total Activity : 1.840E+01 1.841E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530039 Acquisition date : 5-DEC-2007 05:54:10

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	46.39	86	353	1.14	93.56	89	10	5.99E-03	****	7.29E+00	
0	50.21	50	328	1.31	101.19	99	6	3.49E-03	****	7.33E+00	
0	53.28	69	383	1.93	107.32	104	7	4.79E-03	****	7.35E+00	
3	84.24	268	549	1.67	169.21	165	29	1.86E-02	33.0	7.23E+00	
3	89.76	401	496	1.26	180.26	165	29	2.78E-02	22.7	7.15E+00	
0	136.08	24	386	0.95	272.83	270	7	1.68E-03	****	6.26E+00	
0	149.55	26	439	1.32	299.76	293	8	1.80E-03	****	5.99E+00	
0	154.17	68	417	1.08	308.99	306	8	4.71E-03	****	5.90E+00	
0	186.10	335	609	1.18	372.80	366	14	2.33E-02	34.4	5.29E+00	
0	285.82	33	256	0.57	572.09	566	10	2.32E-03	****	3.89E+00	
0	288.80	59	150	1.03	578.05	575	8	4.12E-03	76.1	3.86E+00	
0	328.27	86	230	1.08	656.94	653	9	5.94E-03	67.4	3.47E+00	
3	589.04	40	99	1.86	1178.00	1158	27	2.76E-03	****	2.09E+00	
3	732.09	39	54	2.62	1463.79	1450	19	2.74E-03	87.1	1.73E+00	
0	1013.53	37	51	0.68	2025.95	2017	17	2.55E-03	95.0	1.32E+00	
0	1158.38	26	92	2.58	2315.23	2301	25	1.78E-03	****	1.18E+00	
0	1480.32	21	56	3.62	2958.06	2939	27	1.48E-03	****	9.66E-01	
4	1593.97	29	12	2.82	3184.94	3163	28	2.04E-03	60.6	9.09E-01	
0	1602.94	16	36	4.78	3202.85	3191	20	1.09E-03	****	9.05E-01	
0	1623.45	12	41	2.62	3243.79	3231	18	8.54E-04	****	8.95E-01	
0	1681.62	8	12	2.36	3359.91	3351	16	5.28E-04	****	8.69E-01	
0	1741.58	8	13	1.49	3479.59	3469	12	5.49E-04	****	8.44E-01	
0	1778.95	13	13	0.93	3554.18	3543	17	9.25E-04	****	8.29E-01	
0	1819.52	9	20	4.83	3635.15	3624	16	6.38E-04	****	8.13E-01	
0	1824.01	11	3	0.68	3644.11	3640	8	7.34E-04	88.7	8.11E-01	
0	1847.68	27	3	2.52	3691.35	3686	10	1.91E-03	43.9	8.02E-01	
0	1989.05	17	4	5.55	3973.48	3965	15	1.17E-03	86.3	7.52E-01	
0	1994.25	4	6	0.59	3983.86	3979	8	3.02E-04	****	7.50E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530039            *
* Acquisition date :  5-DEC-2007 05:54:10 Detector SN#    :                 *
* Detector ID      : GAM05                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:02.83     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530039           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.9970E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	4.784E+00	8.561E-01	2.707E-01	8.561E-01
EU-155	2.064E-01	1.063E-01	6.709E-02	1.063E-01
TL-208	6.188E-01	7.661E-02	2.694E-02	7.661E-02
BI-212	1.213E+00	3.675E-01	2.615E-01	3.675E-01
PB-212	2.028E+00	1.960E-01	3.993E-02	1.960E-01
BI-214	1.168E+00	1.800E-01	5.294E-02	1.800E-01
PB-214	1.318E+00	1.627E-01	5.487E-02	1.627E-01
RA-223	5.286E-01	3.154E-01	1.266E-01	3.154E-01
AC-228	1.923E+00	3.248E-01	1.129E-01	3.248E-01
TH-234	2.917E+00	6.180E-01	2.782E-01	6.180E-01
NP-236	6.049E-02	6.089E-02	3.355E-02	6.089E-02
NP-237	1.101E+00	2.053E-01	1.192E-01	2.053E-01
AM-243	3.549E-01	4.903E-02	2.277E-02	4.903E-02
CM-243	1.870E-01	9.628E-02	5.688E-02	9.628E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-4.032E-03	3.562E-02	2.962E-02	3.562E-02	NOT IDENT.
RH-101	-2.090E-03	3.498E-02	2.589E-02	3.498E-02	NOT IDENT.
SB-125	1.103E-01	9.056E-02	7.950E-02	9.056E-02	NOT IDENT.
CS-137	-1.479E-02	3.660E-02	3.009E-02	3.660E-02	NOT IDENT.
PO-209	1.664E+00	6.694E+00	5.630E+00	6.694E+00	NOT IDENT.
BI-211	-1.102E-01	1.054E+00	8.676E-01	1.054E+00	NOT IDENT.
PA-233	-8.393E-02	5.469E-02	4.266E-02	5.469E-02	NOT IDENT.
PA-234M	1.305E+00	3.952E+00	3.323E+00	3.952E+00	NOT IDENT.
U-235	-8.887E-03	2.056E-01	1.454E-01	2.056E-01	NOT IDENT.
NP-239	5.987E-02	1.939E-01	1.595E-01	1.939E-01	NOT IDENT.
AM-241	4.045E-04	4.804E-02	3.653E-02	4.804E-02	NOT IDENT.
AM-246	-2.744E-02	1.139E-01	9.418E-02	1.139E-01	NOT IDENT.
CF-249	3.524E-02	3.730E-02	3.248E-02	3.730E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	491.0771
63.29	538.2286
74.66	680.8416
74.81	681.0325
74.81	681.0325
77.11	688.3960
77.11	688.3960
86.48	595.5667
87.30	596.3964
87.30	596.3964
92.58	601.6388
98.44	420.0149
103.76	427.3460
105.31	483.9720
129.07	465.9354
143.76	474.0242
198.00	397.9613
209.25	424.2549
228.18	315.3438
238.63	315.0650
242.00	315.9724
269.46	263.8790
270.25	264.0442
277.36	249.2041
295.22	243.1382
300.09	266.9060
312.17	250.4320
338.32	232.5903
351.93	241.5587
387.59	183.7528
409.46	202.4252
427.87	164.4746
463.00	160.3232
510.77	151.3986
583.19	122.1843
609.31	130.1456
661.66	135.8927
727.33	153.1626
763.13	114.2683
768.36	132.5698
785.37	86.4273
794.95	84.5247
806.17	88.8970
831.80	108.0250
860.56	75.1134
896.60	72.8754
911.20	93.2344
934.06	57.9373
964.77	52.1034
968.97	52.1692
1001.03	65.5658
1078.86	62.1650
1120.29	60.0117
1155.19	60.5676
1173.23	63.7510
1238.11	60.8756
1280.96	50.6016
1332.51	43.1875
1377.67	40.5929
1401.50	60.7078
1407.98	7.1523
1460.80	42.3813
1509.23	43.8647
1588.20	20.4343
1620.50	46.7438
1729.60	28.2025
1764.49	25.9478

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530039

Total Uranium Activity	-4.1118E-03	ug/g
Total Uranium Counting Unc.	9.5146E-02	ug/g
Total Uranium Tpu	9.5146E-08	ug/g
Total Uranium Mda	6.7284E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:43:10.13

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530040.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:54:59.
Sample ID        : G198530040           Sample quantity  : 1.10500E+02 GRAM
Detector name    : GAM06                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.52  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	52.56	74	333	2.29	105.19	102	8	5.13E-03	44.4	
2	0	62.63*	33	427	1.06	125.31	122	8	2.32E-03	118.8	
3	2	74.43	289	316	0.83	148.89	142	15	2.01E-02	10.9	1.37E+00
4	2	76.68	427	284	0.86	153.37	142	15	2.96E-02	7.7	
5	2	83.79	48	402	1.19	167.59	163	14	3.33E-03	70.0	1.40E+00
6	2	86.80*	189	371	1.09	173.58	163	14	1.32E-02	19.2	
7	0	89.61	176	218	0.99	179.21	177	5	1.22E-02	14.8	
8	0	92.54*	300	418	1.50	185.05	182	11	2.08E-02	16.1	
9	0	98.20	90	351	1.72	196.37	192	9	6.28E-03	38.8	
10	0	128.58	91	328	1.40	257.08	253	8	6.32E-03	36.0	
11	0	143.35*	10	254	1.35	286.58	285	6	6.62E-04	303.6	
12	2	185.51*	225	257	1.24	370.82	366	15	1.56E-02	15.3	5.70E-01
13	2	187.41	51	265	1.40	374.62	366	15	3.54E-03	66.8	
14	0	191.19	34	264	0.54	382.18	380	8	2.39E-03	83.2	
15	0	197.99*	25	311	1.57	395.76	392	9	1.77E-03	139.9	
16	0	208.70	92	304	0.93	417.17	413	9	6.42E-03	35.5	
17	3	238.29*	1025	196	1.28	476.29	470	21	7.12E-02	4.1	1.96E+00
18	3	241.38	293	238	1.63	482.46	470	21	2.04E-02	12.1	
19	0	259.44	18	173	0.57	518.57	515	7	1.28E-03	120.4	
20	0	269.73*	88	262	1.89	539.13	534	11	6.10E-03	38.4	
21	0	277.51	47	209	0.69	554.66	551	8	3.26E-03	55.9	
22	0	294.82*	351	191	1.14	589.26	585	10	2.44E-02	9.7	
23	0	299.83	95	218	1.39	599.27	595	10	6.61E-03	30.7	
24	0	327.61	41	116	0.85	654.79	652	6	2.85E-03	44.1	
25	0	338.07*	169	217	1.07	675.69	671	11	1.17E-02	19.1	
26	0	351.68*	639	216	1.25	702.89	696	14	4.44E-02	6.6	
27	0	367.38	23	88	2.21	734.27	732	7	1.58E-03	68.3	
28	0	386.55	33	122	1.06	772.58	768	9	2.29E-03	63.6	
29	0	462.75	48	162	1.48	924.86	919	13	3.34E-03	56.5	
30	0	474.34	25	83	2.97	948.02	942	10	1.73E-03	72.0	
31	0	503.94	7	108	0.73	1007.19	1002	9	4.60E-04	285.4	
32	0	510.68*	102	247	2.11	1020.65	1012	21	7.11E-03	45.6	
33	1	527.51	30	43	1.65	1054.30	1050	18	2.08E-03	44.6	2.33E+00
34	1	532.22	23	53	1.66	1063.70	1050	18	1.59E-03	58.9	
35	0	582.96*	232	119	1.34	1165.12	1159	14	1.61E-02	12.7	
36	0	609.17*	440	141	1.32	1217.52	1212	14	3.05E-02	7.8	
37	0	661.23	43	65	1.64	1321.57	1315	12	2.96E-03	41.6	
38	0	693.27*	5	83	4.32	1385.62	1378	13	3.80E-04	375.8	

Sample ID : G198530040 Acquisition date : 5-DEC-2007 05:54:59

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	698.48	19	74	0.72	1396.04	1391	11	1.34E-03	90.4	
40	0	727.21	54	53	1.78	1453.46	1449	9	3.76E-03	28.0	
41	0	767.82	57	53	0.99	1534.65	1529	11	3.98E-03	27.8	
42	0	794.53	37	82	1.10	1588.04	1582	13	2.55E-03	53.3	
43	0	821.49	37	38	1.89	1641.95	1637	14	2.59E-03	37.6	
44	0	860.46	52	39	1.55	1719.85	1715	10	3.63E-03	26.5	
45	0	911.03*	202	63	1.53	1820.95	1814	16	1.40E-02	11.9	
46	0	934.81	15	35	1.97	1868.50	1863	9	1.02E-03	78.0	
47	3	964.17	50	37	2.40	1927.19	1918	25	3.46E-03	31.5	1.28E+00
48	3	968.56*	114	34	2.04	1935.97	1918	25	7.95E-03	14.9	
49	0	1032.78	20	20	2.74	2064.37	2060	10	1.36E-03	48.6	
50	0	1050.40	36	35	6.49	2099.60	2088	19	2.47E-03	44.6	
51	0	1120.18	70	55	1.19	2239.14	2234	12	4.84E-03	24.7	
52	0	1269.39	7	17	0.72	2537.50	2529	10	4.86E-04	117.6	
53	0	1313.04	13	9	0.82	2624.79	2617	13	9.22E-04	55.2	
54	0	1318.14	19	9	4.32	2635.00	2629	12	1.31E-03	39.4	
55	0	1382.78*	20	72	8.44	2764.27	2746	27	1.38E-03	124.0	
56	0	1421.54	8	18	3.49	2841.80	2832	12	5.29E-04	117.5	
57	0	1433.21	10	15	2.78	2865.14	2854	16	6.92E-04	94.7	
58	0	1460.06*	100	23	2.26	2918.84	2910	18	6.97E-03	17.0	
59	0	1543.15	13	29	4.79	3085.03	3068	20	9.29E-04	103.6	
60	0	1565.54	11	7	4.50	3129.82	3122	14	7.64E-04	59.3	
61	0	1591.40	19	9	0.78	3181.55	3178	8	1.35E-03	34.2	
62	0	1620.83	26	9	1.49	3240.42	3233	14	1.77E-03	33.2	
63	0	1630.10	20	14	1.08	3258.95	3251	15	1.38E-03	47.7	
64	0	1725.43	12	0	1.24	3449.67	3446	8	8.33E-04	28.9	
65	0	1730.01	31	9	3.61	3458.83	3453	12	2.15E-03	26.4	
66	0	1764.08*	64	36	2.00	3526.97	3518	20	4.46E-03	26.9	
67	0	2010.50	17	4	3.30	4020.01	4012	15	1.21E-03	34.0	

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]G198530040       *
* Acquisition date :  5-DEC-2007 05:54:59 Detector SN#    :                 *
* Detector ID      : GAM06                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.52     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530040           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1050E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 20-FEB-2007 10:58:43 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	1.664E+00	5.639E-01	3.825E-01	0.000E+00
RH-101	1.223E-02	3.357E-02	3.689E-02	0.000E+00
CS-137	4.318E-02	3.535E-02	3.960E-02	0.000E+00
TL-208	2.115E-01	5.460E-02	3.861E-02	0.000E+00
BI-212	4.282E-01	2.368E-01	2.884E-01	0.000E+00
PB-212	9.143E-01	9.285E-02	6.122E-02	0.000E+00
BI-214	7.634E-01	1.268E-01	7.553E-02	0.000E+00
PB-214	8.767E-01	1.251E-01	7.512E-02	0.000E+00
RA-223	2.711E-01	2.049E-01	2.082E-01	0.000E+00
AC-228	8.979E-01	2.276E-01	1.397E-01	0.000E+00
TH-234	1.706E+00	5.559E-01	4.341E-01	0.000E+00
U-235	2.507E-02	1.492E-01	2.283E-01	0.000E+00
NP-236	7.026E-02	5.368E-02	5.723E-02	0.000E+00
NP-237	5.003E-01	1.935E-01	2.383E-01	0.000E+00
AM-243	1.746E-01	3.996E-02	5.487E-02	0.000E+00
CF-249	2.769E-02	3.456E-02	4.412E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	5.527E-03	2.743E-02	4.722E-02	0.000E+00	NOT IDENT.
SB-125	-7.201E-03	6.401E-02	1.054E-01	0.000E+00	NOT IDENT.
EU-155	6.252E-02	6.704E-02	1.173E-01	0.000E+00	NOT IDENT.
PO-209	-1.151E-02	5.070E+00	8.373E+00	0.000E+00	NOT IDENT.
BI-211	-3.835E-01	6.510E-01	1.017E+00	0.000E+00	NOT IDENT.
PA-233	6.077E-03	4.355E-02	7.449E-02	0.000E+00	NOT IDENT.
PA-234M	3.412E+00	3.312E+00	5.195E+00	0.000E+00	NOT IDENT.
NP-239	1.042E-03	1.466E-01	2.543E-01	0.000E+00	NOT IDENT.
AM-241	7.660E-02	1.073E-01	1.734E-01	0.000E+00	NOT IDENT.
CM-243	2.324E-02	5.803E-02	9.984E-02	0.000E+00	NOT IDENT.
AM-246	6.418E-02	8.133E-02	1.493E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:43:11.20

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530040.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:54:59.
Sample ID        : G198530040           Sample quantity  : 1.10500E+02 GRAM
Detector name    : GAM06                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.52  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	100	10.66*	9.606E-01	1.664E+00	1.664E+00	34.57
RH-101	198.00	25	73.00*	4.992E+00	1.186E-02	1.223E-02	279.95
CS-137	661.66	43	85.10*	1.977E+00	4.303E-02	4.318E-02	83.55
TL-208	277.36	47	6.31	3.935E+00	3.209E-01	3.209E-01	112.00
	510.77	102	22.60	2.457E+00	3.133E-01	3.133E-01	91.47
	583.19	232	84.50*	2.202E+00	2.115E-01	2.115E-01	26.35
	763.13	------	1.81	1.741E+00	------	Line Not Found	------
	860.56	52	12.42	1.559E+00	4.582E-01	4.582E-01	53.79
BI-212	727.33	54	11.80*	1.818E+00	4.282E-01	4.282E-01	56.43
	785.37	------	1.10	1.696E+00	------	Line Not Found	------
	1620.50	26	1.49	8.877E-01	3.278E+00	3.278E+00	66.66
PB-212	74.81	289	10.40	4.122E+00	1.145E+00	1.145E+00	23.35
	77.11	427	17.50	4.352E+00	9.512E-01	9.512E-01	17.56
	87.30	189	7.81	5.186E+00	7.944E-01	7.944E-01	39.46
	238.63	1025	43.30*	4.398E+00	9.143E-01	9.143E-01	10.36
	300.09	95	3.28	3.714E+00	1.328E+00	1.328E+00	61.81
BI-214	609.31	440	46.10*	2.122E+00	7.634E-01	7.634E-01	16.95
	768.36	57	4.94	1.731E+00	1.139E+00	1.139E+00	56.16
	806.17	------	1.22	1.656E+00	------	Line Not Found	------
	934.06	15	3.03	1.442E+00	5.706E-01	5.706E-01	156.25
	1120.29	70	15.10	1.216E+00	6.450E-01	6.450E-01	49.91
	1155.19	------	1.63	1.181E+00	------	Line Not Found	------
	1238.11	------	5.79	1.108E+00	------	Line Not Found	------
	1280.96	------	1.43	1.075E+00	------	Line Not Found	------
	1377.67	------	4.00	1.008E+00	------	Line Not Found	------
	1401.50	------	1.27	9.936E-01	------	Line Not Found	------
	1407.98	------	2.15	9.898E-01	------	Line Not Found	------
	1509.23	------	2.11	9.357E-01	------	Line Not Found	------
	1729.60	31	2.92	8.508E-01	2.117E+00	2.117E+00	53.22
	1764.49	64	15.40	8.411E-01	8.430E-01	8.431E-01	54.06
PB-214	74.81	289	6.44	4.122E+00	1.849E+00	1.849E+00	23.35
	77.11	427	10.80	4.352E+00	1.541E+00	1.541E+00	17.56

Sample ID : G198530040 Acquisition date : 5-DEC-2007 05:54:59

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	189	4.84	5.186E+00	1.282E+00	1.282E+00	39.46
	242.00	293	7.43	4.357E+00	1.537E+00	1.538E+00	24.94
	295.22	351	19.30	3.761E+00	8.212E-01	8.212E-01	20.42
	351.93	639	37.60*	3.292E+00	8.767E-01	8.767E-01	14.56
RA-223	269.46	88	13.70*	4.019E+00	2.711E-01	2.711E-01	77.10
AC-228	129.07	91	2.42	6.054E+00	1.055E+00	1.055E+00	72.31
	209.25	92	3.89	4.822E+00	8.375E-01	8.375E-01	71.31
	270.25	88	3.46	4.019E+00	1.074E+00	1.074E+00	77.10
	338.32	169	11.27	3.392E+00	7.512E-01	7.512E-01	38.74
	409.46	------	1.92	2.927E+00	------	Line Not Found	------
	463.00	48	4.40	2.659E+00	6.984E-01	6.984E-01	113.13
	794.95	37	4.25	1.678E+00	8.744E-01	8.744E-01	106.98
	911.20	202	25.80*	1.478E+00	8.979E-01	8.979E-01	25.87
	964.77	50	4.99	1.401E+00	1.212E+00	1.212E+00	63.73
	968.97	114	15.80	1.395E+00	8.821E-01	8.821E-01	31.28
	1588.20	------	3.22	9.005E-01	------	Line Not Found	------
TH-234	63.29	33	4.80	2.677E+00	4.406E-01	4.406E-01	237.78
	92.58	300	5.41*	5.516E+00	1.706E+00	1.706E+00	33.26
U-235	143.76	10	10.96*	5.896E+00	2.507E-02	2.507E-02	607.20
NP-236	98.44	90	38.00*	5.753E+00	7.026E-02	7.026E-02	77.95
NP-237	86.48	189	12.40*	5.186E+00	5.003E-01	5.003E-01	39.46
AM-243	74.66	289	68.20*	4.122E+00	1.746E-01	1.746E-01	23.35
CF-249	387.59	33	66.00*	3.061E+00	2.768E-02	2.769E-02	127.33

Flag: "*" = Keyline

Sample ID : G198530040 Acquisition date : 5-DEC-2007 05:54:59

Total number of lines in spectrum 67
Number of unidentified lines 30
Number of lines tentatively identified by NID 37 55.22%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	1.664E+00	1.664E+00	0.575E+00	34.57	
RH-101	1.04E+08S	1.03	1.186E-02	1.223E-02	3.425E-02	279.95	
CS-137	9.47E+08S	1.00	4.303E-02	4.318E-02	3.607E-02	83.55	
TL-208	4.43E+17S	1.00	2.115E-01	2.115E-01	0.557E-01	26.35	
BI-212	4.43E+17S	1.00	4.282E-01	4.282E-01	2.416E-01	56.43	
PB-212	4.43E+17S	1.00	9.143E-01	9.143E-01	0.947E-01	10.36	
BI-214	5.05E+10S	1.00	7.634E-01	7.634E-01	1.294E-01	16.95	
PB-214	5.05E+10S	1.00	8.767E-01	8.767E-01	1.277E-01	14.56	
RA-223	1.04E+12S	1.00	2.711E-01	2.711E-01	2.091E-01	77.10	
AC-228	4.43E+17S	1.00	8.979E-01	8.979E-01	2.323E-01	25.87	
TH-234	1.41E+17S	1.00	1.706E+00	1.706E+00	0.567E+00	33.26	
U-235	2.22E+16S	1.00	2.507E-02	2.507E-02	15.22E-02	607.20	
NP-236	4.89E+12S	1.00	7.026E-02	7.026E-02	5.477E-02	77.95	
NP-237	6.75E+13S	1.00	5.003E-01	5.003E-01	1.974E-01	39.46	
AM-243	2.33E+11S	1.00	1.746E-01	1.746E-01	0.408E-01	23.35	
CF-249	1.11E+10S	1.00	2.768E-02	2.769E-02	3.526E-02	127.33	
		Total Activity :	8.586E+00	8.586E+00			
		Grand Total Activity :	8.586E+00	8.586E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530040 Acquisition date : 5-DEC-2007 05:54:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	52.56	74	333	2.29	105.19	102	8	5.13E-03	88.8	1.35E+00	
2	83.79	48	402	1.19	167.59	163	14	3.33E-03	****	4.97E+00	
0	89.61	176	218	0.99	179.21	177	5	1.22E-02	29.5	5.36E+00	
2	185.51	225	257	1.24	370.82	366	15	1.56E-02	30.5	5.20E+00	
2	187.41	51	265	1.40	374.62	366	15	3.54E-03	****	5.17E+00	
0	191.19	34	264	0.54	382.18	380	8	2.39E-03	****	5.10E+00	
0	259.44	18	173	0.57	518.57	515	7	1.28E-03	****	4.14E+00	
0	327.61	41	116	0.85	654.79	652	6	2.85E-03	88.3	3.47E+00	
0	367.38	23	88	2.21	734.27	732	7	1.58E-03	****	3.18E+00	
0	474.34	25	83	2.97	948.02	942	10	1.73E-03	****	2.61E+00	
0	503.94	7	108	0.73	1007.19	1002	9	4.60E-04	****	2.48E+00	
1	527.51	30	43	1.65	1054.30	1050	18	2.08E-03	89.1	2.39E+00	
1	532.22	23	53	1.66	1063.70	1050	18	1.59E-03	****	2.38E+00	
0	693.27	5	83	4.32	1385.62	1378	13	3.80E-04	****	1.90E+00	
0	698.48	19	74	0.72	1396.04	1391	11	1.34E-03	****	1.88E+00	
0	821.49	37	38	1.89	1641.95	1637	14	2.59E-03	75.2	1.63E+00	
0	1032.78	20	20	2.74	2064.37	2060	10	1.36E-03	97.2	1.31E+00	
0	1050.40	36	35	6.49	2099.60	2088	19	2.47E-03	89.2	1.29E+00	
0	1269.39	7	17	0.72	2537.50	2529	10	4.86E-04	****	1.08E+00	
0	1313.04	13	9	0.82	2624.79	2617	13	9.22E-04	****	1.05E+00	
0	1318.14	19	9	4.32	2635.00	2629	12	1.31E-03	78.7	1.05E+00	
0	1382.78	20	72	8.44	2764.27	2746	27	1.38E-03	****	1.00E+00	
0	1421.54	8	18	3.49	2841.80	2832	12	5.29E-04	****	9.82E-01	
0	1433.21	10	15	2.78	2865.14	2854	16	6.92E-04	****	9.75E-01	
0	1543.15	13	29	4.79	3085.03	3068	20	9.29E-04	****	9.20E-01	
0	1565.54	11	7	4.50	3129.82	3122	14	7.64E-04	****	9.10E-01	
0	1591.40	19	9	0.78	3181.55	3178	8	1.35E-03	68.4	8.99E-01	
0	1630.10	20	14	1.08	3258.95	3251	15	1.38E-03	95.4	8.84E-01	
0	1725.43	12	0	1.24	3449.67	3446	8	8.33E-04	57.7	8.52E-01	
0	2010.50	17	4	3.30	4020.01	4012	15	1.21E-03	68.0	7.94E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530040            *
* Acquisition date :  5-DEC-2007 05:54:59 Detector SN#    :                 *
* Detector ID      : GAM06                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.52     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530040           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1050E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 20-FEB-2007 10:58:43 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	1.664E+00	5.639E-01	1.914E-01	5.639E-01
RH-101	1.223E-02	3.357E-02	1.846E-02	3.357E-02
CS-137	4.318E-02	3.535E-02	1.981E-02	3.535E-02
TL-208	2.115E-01	5.460E-02	1.932E-02	5.460E-02
BI-212	4.282E-01	2.368E-01	1.443E-01	2.368E-01
PB-212	9.143E-01	9.285E-02	3.063E-02	9.285E-02
BI-214	7.634E-01	1.268E-01	3.779E-02	1.268E-01
PB-214	8.767E-01	1.251E-01	3.758E-02	1.251E-01
RA-223	2.711E-01	2.049E-01	1.042E-01	2.049E-01
AC-228	8.979E-01	2.276E-01	6.991E-02	2.276E-01
TH-234	1.706E+00	5.559E-01	2.172E-01	5.559E-01
U-235	2.507E-02	1.492E-01	1.142E-01	1.492E-01
NP-236	7.026E-02	5.368E-02	2.863E-02	5.368E-02
NP-237	5.003E-01	1.935E-01	1.192E-01	1.935E-01
AM-243	1.746E-01	3.996E-02	2.745E-02	3.996E-02
CF-249	2.769E-02	3.456E-02	2.207E-02	3.456E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	5.527E-03	2.743E-02	2.362E-02	2.743E-02	NOT IDENT.
SB-125	-7.201E-03	6.401E-02	5.273E-02	6.401E-02	NOT IDENT.
EU-155	6.252E-02	6.704E-02	5.870E-02	6.704E-02	NOT IDENT.
PO-209	-1.151E-02	5.070E+00	4.189E+00	5.070E+00	NOT IDENT.
BI-211	-3.835E-01	6.510E-01	5.087E-01	6.510E-01	NOT IDENT.
PA-233	6.077E-03	4.355E-02	3.727E-02	4.355E-02	NOT IDENT.
PA-234M	3.412E+00	3.312E+00	2.599E+00	3.312E+00	NOT IDENT.
NP-239	1.042E-03	1.466E-01	1.272E-01	1.466E-01	NOT IDENT.
AM-241	7.660E-02	1.073E-01	8.673E-02	1.073E-01	NOT IDENT.
CM-243	2.324E-02	5.803E-02	4.995E-02	5.803E-02	NOT IDENT.
AM-246	6.418E-02	8.133E-02	7.468E-02	8.133E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	269.1143
63.29	351.0092
74.66	373.1190
74.81	373.2449
74.81	373.2449
77.11	338.8021
77.11	338.8021
86.48	361.8859
87.30	300.0919
87.30	300.0919
92.58	261.2111
98.44	244.4026
103.76	266.7176
105.31	281.8034
129.07	276.5773
143.76	339.8694
198.00	266.9774
209.25	246.7712
228.18	242.3618
238.63	213.8567
242.00	214.5708
269.46	207.9698
270.25	208.1216
277.36	200.9206
295.22	180.1874
300.09	177.8345
312.17	164.9720
338.32	159.4409
351.93	136.9214
387.59	125.5855
409.46	122.6308
427.87	119.8642
463.00	96.4828
510.77	101.6356
583.19	82.4402
609.31	87.2602
661.66	70.5153
727.33	61.3506
763.13	58.5797
768.36	88.8940
785.37	61.8042
794.95	60.0040
806.17	53.1159
831.80	58.7952
860.56	58.3844
896.60	55.9800
911.20	45.6518
934.06	47.0841
964.77	47.5761
968.97	47.6427
1001.03	25.1675
1078.86	30.8368
1120.29	41.6278
1155.19	37.2750
1173.23	43.2330
1238.11	31.3021
1280.96	34.6311
1332.51	37.1024
1377.67	29.4130
1401.50	31.6269
1407.98	29.6337
1460.80	24.8369
1509.23	27.2124
1588.20	32.8736
1620.50	20.6000
1729.60	18.1140
1764.49	20.8491

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530040

Total Uranium Activity	1.1599E-02	ug/g
Total Uranium Counting Unc.	6.9022E-02	ug/g
Total Uranium Tpu	6.9022E-08	ug/g
Total Uranium Mda	5.2842E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:43:45.97

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530041.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:55:37.
Sample ID        : G198530041           Sample quantity  : 1.00150E+02 GRAM
Detector name    : GAM07                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:28.67  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.58*	88	385	0.98	92.67	88	9	6.11E-03	45.8	
2	0	57.02	48	282	1.46	113.55	111	6	3.36E-03	56.7	
3	0	62.96*	80	516	1.03	125.42	123	8	5.55E-03	54.7	
4	0	66.79	52	400	1.45	133.09	130	6	3.62E-03	62.1	
5	4	73.07*	22	382	1.11	145.64	143	17	1.55E-03	145.9	1.60E+00
6	4	74.96*	443	447	0.99	149.41	143	17	3.07E-02	9.6	
7	4	77.25*	870	489	1.10	153.98	143	17	6.04E-02	5.7	
8	3	84.09	164	461	1.34	167.67	164	27	1.14E-02	23.5	1.30E+00
9	3	87.39*	269	449	1.30	174.26	164	27	1.87E-02	15.5	
10	3	90.15*	201	436	1.29	179.78	164	27	1.39E-02	20.1	
11	3	92.95*	265	424	1.37	185.38	164	27	1.84E-02	16.8	
12	0	105.68	37	213	1.10	210.84	209	5	2.54E-03	62.3	
13	0	129.21	64	308	1.10	257.89	255	7	4.45E-03	47.0	
14	0	143.64*	65	384	0.94	286.74	284	9	4.49E-03	58.8	
15	0	150.19	30	282	1.33	299.83	297	7	2.08E-03	94.6	
16	0	186.05*	190	425	1.16	371.53	367	10	1.32E-02	23.1	
17	0	209.70	192	384	1.21	418.82	413	13	1.33E-02	22.3	
18	5	238.87*	1226	215	1.11	477.15	470	20	8.52E-02	3.8	1.31E+00
19	5	242.00	391	296	1.99	483.41	470	20	2.72E-02	13.6	
20	0	270.44	126	276	2.33	540.27	534	12	8.74E-03	27.9	
21	0	277.29	75	198	1.57	553.97	550	9	5.17E-03	36.0	
22	0	295.46*	403	221	1.17	590.28	586	9	2.80E-02	8.8	
23	0	300.79*	61	364	1.89	600.95	596	16	4.21E-03	74.3	
24	0	328.58*	83	233	2.42	656.52	652	12	5.74E-03	40.7	
25	0	338.43	245	289	1.54	676.20	669	16	1.70E-02	16.8	
26	0	352.17*	803	163	1.25	703.68	698	10	5.58E-02	4.8	
27	0	409.91	101	320	4.68	819.14	803	24	7.04E-03	47.9	
28	0	462.97	83	122	1.50	925.22	919	12	5.76E-03	28.9	
29	0	471.12	23	101	4.02	941.52	937	9	1.63E-03	79.9	
30	0	510.81*	62	211	2.22	1020.88	1014	19	4.30E-03	70.3	
31	0	583.44*	333	140	1.47	1166.11	1161	13	2.31E-02	9.6	
32	0	609.71*	537	118	1.28	1218.64	1213	12	3.73E-02	6.2	
33	0	661.97	56	79	2.33	1323.12	1318	10	3.86E-03	32.9	
34	0	670.52	45	53	2.83	1340.24	1336	10	3.10E-03	34.3	
35	0	727.65*	82	75	1.82	1454.46	1448	12	5.66E-03	26.3	
36	0	768.40*	47	99	1.31	1535.95	1529	14	3.27E-03	48.0	
37	0	787.19	20	71	0.89	1573.51	1568	11	1.41E-03	83.4	
38	0	795.18	91	39	1.89	1589.49	1583	14	6.32E-03	17.9	

Sample ID : G198530041 Acquisition date : 5-DEC-2007 05:55:37

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	1	803.10*	12	39	1.86	1605.34	1601	15	8.52E-04	117.7	2.07E+00
40	1	805.77	30	46	1.86	1610.66	1601	15	2.07E-03	50.2	
41	0	823.48	11	54	0.93	1646.09	1639	11	7.59E-04	134.5	
42	1	860.61*	32	41	1.90	1720.32	1714	17	2.25E-03	48.5	1.23E+00
43	1	864.06	20	31	1.69	1727.22	1714	17	1.36E-03	53.3	
44	0	869.19	14	53	0.54	1737.49	1731	11	9.66E-04	104.3	
45	0	911.68*	250	60	1.46	1822.45	1815	15	1.74E-02	9.5	
46	0	934.89	19	56	0.83	1868.87	1863	10	1.35E-03	74.9	
47	0	965.28	56	52	1.53	1929.63	1923	11	3.87E-03	28.5	
48	0	969.59	145	30	1.62	1938.26	1934	11	1.01E-02	11.2	
49	0	1064.80	17	29	0.96	2128.64	2119	13	1.21E-03	68.0	
50	0	1079.61	29	14	1.41	2158.25	2154	10	2.01E-03	31.1	
51	0	1091.11	68	67	16.74	2181.25	2164	38	4.75E-03	40.5	
52	0	1121.69	124	71	1.03	2242.39	2233	19	8.58E-03	19.1	
53	0	1238.55	57	54	1.10	2476.08	2470	14	3.98E-03	29.9	
54	0	1285.37	74	40	11.27	2569.71	2555	28	5.15E-03	27.3	
55	0	1355.46	21	19	4.08	2709.86	2702	14	1.44E-03	51.5	
56	0	1378.49	43	38	1.26	2755.91	2749	15	2.97E-03	34.9	
57	0	1411.41	21	26	0.98	2821.74	2814	15	1.46E-03	65.1	
58	0	1461.56*	196	41	2.38	2922.04	2915	15	1.36E-02	10.8	
59	0	1500.17	22	68	2.77	2999.24	2984	30	1.50E-03	112.7	
60	0	1510.40	21	14	0.99	3019.71	3015	9	1.46E-03	39.8	
61	0	1522.58	12	10	0.64	3044.05	3039	9	8.18E-04	61.5	
62	0	1589.59	16	40	1.85	3178.07	3170	14	1.09E-03	91.1	
63	0	1594.04	29	12	1.34	3186.97	3183	12	2.01E-03	30.3	
64	0	1622.66	12	10	1.47	3244.20	3238	11	8.11E-04	61.9	
65	0	1708.78	8	9	0.86	3416.43	3407	13	5.33E-04	90.9	
66	0	1731.23	21	19	1.93	3461.31	3456	12	1.47E-03	48.1	
67	0	1757.20	14	8	2.29	3513.26	3507	15	1.00E-03	49.1	
68	0	1765.39*	119	12	2.36	3529.64	3522	16	8.25E-03	12.1	
69	0	1848.56*	8	20	1.59	3695.96	3687	13	5.41E-04	130.5	
70	0	1865.58	4	10	1.34	3730.00	3724	10	2.78E-04	156.1	
71	0	1873.82	18	2	2.19	3746.48	3741	10	1.23E-03	28.9	
72	0	1933.90	20	9	3.92	3866.62	3860	12	1.39E-03	37.4	

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]G198530041       *
* Acquisition date :  5-DEC-2007 05:55:37 Detector SN#    :                 *
* Detector ID      : GAM07                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:28.67     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530041           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0015E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 31-OCT-2007 13:07:28 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	2.962E+00	6.484E-01	3.898E-01	0.000E+00
CS-137	5.270E-02	3.424E-02	4.265E-02	0.000E+00
EU-155	4.433E-02	5.420E-02	9.461E-02	0.000E+00
TL-208	2.843E-01	5.644E-02	4.158E-02	0.000E+00
BI-212	6.035E-01	3.137E-01	3.033E-01	0.000E+00
PB-212	1.022E+00	9.651E-02	6.024E-02	0.000E+00
BI-214	8.730E-01	1.220E-01	7.479E-02	0.000E+00
PB-214	1.026E+00	1.111E-01	7.422E-02	0.000E+00
RA-223	3.619E-01	1.989E-01	1.826E-01	0.000E+00
AC-228	1.036E+00	2.053E-01	1.342E-01	0.000E+00
TH-234	1.257E+00	4.239E-01	4.170E-01	0.000E+00
U-235	1.589E-01	1.834E-01	1.949E-01	0.000E+00
NP-237	5.697E-01	1.788E-01	1.857E-01	0.000E+00
AM-243	1.885E-01	3.752E-02	4.092E-02	0.000E+00
CM-243	4.017E-02	4.911E-02	9.205E-02	0.000E+00
AM-246	1.290E-01	7.892E-02	1.322E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	9.896E-03	2.296E-02	4.046E-02	0.000E+00	NOT IDENT.
RH-101	2.800E-03	2.201E-02	3.599E-02	0.000E+00	NOT IDENT.
SB-125	-1.988E-02	5.892E-02	9.456E-02	0.000E+00	NOT IDENT.
PO-209	-1.076E+00	4.301E+00	6.890E+00	0.000E+00	NOT IDENT.
BI-211	-1.525E-01	6.266E-01	1.014E+00	0.000E+00	NOT IDENT.
PA-233	-1.194E-02	4.208E-02	6.954E-02	0.000E+00	NOT IDENT.
PA-234M	-1.080E+00	3.408E+00	4.876E+00	0.000E+00	NOT IDENT.
NP-236	-3.138E-03	3.517E-02	5.541E-02	0.000E+00	NOT IDENT.
NP-239	5.518E-02	1.379E-01	2.394E-01	0.000E+00	NOT IDENT.
AM-241	-6.544E-03	7.565E-02	9.056E-02	0.000E+00	NOT IDENT.
CF-249	2.605E-03	2.542E-02	4.231E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:43:47.01

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530041.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:55:37.
Sample ID        : G198530041           Sample quantity  : 1.00150E+02 GRAM
Detector name    : GAM07                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:28.67  0.2%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	196	10.66*	1.166E+00	2.962E+00	2.962E+00	22.34
CS-137	661.66	56	85.10*	2.329E+00	5.252E-02	5.270E-02	66.30
EU-155	105.31	37	21.20*	7.434E+00	4.342E-02	4.433E-02	124.77
TL-208	277.36	75	6.31	4.670E+00	4.739E-01	4.739E-01	72.20
	510.77	62	22.60	2.900E+00	1.772E-01	1.772E-01	140.70
	583.19	333	84.50*	2.595E+00	2.843E-01	2.843E-01	20.26
	763.13	------	1.81	2.057E+00	------	Line Not Found	------
	860.56	32	12.42	1.849E+00	2.645E-01	2.645E-01	97.18
BI-212	727.33	82	11.80*	2.145E+00	6.035E-01	6.035E-01	53.03
	785.37	20	1.10	2.001E+00	1.732E+00	1.732E+00	166.91
	1620.50	------	1.49	1.077E+00	------	Line Not Found	------
PB-212	74.81	443	10.40	6.454E+00	1.236E+00	1.236E+00	20.31
	77.11	870	17.50	6.619E+00	1.408E+00	1.408E+00	13.35
	87.30	269	7.81	7.134E+00	9.046E-01	9.046E-01	32.02
	238.63	1226	43.30*	5.193E+00	1.022E+00	1.022E+00	9.64
	300.09	61	3.28	4.398E+00	7.878E-01	7.878E-01	148.75
BI-214	609.31	537	46.10*	2.500E+00	8.730E-01	8.730E-01	14.27
	768.36	47	4.94	2.044E+00	8.726E-01	8.727E-01	96.21
	806.17	30	1.22	1.960E+00	2.340E+00	2.340E+00	100.65
	934.06	19	3.03	1.717E+00	7.009E-01	7.010E-01	150.02
	1120.29	124	15.10	1.459E+00	1.051E+00	1.051E+00	38.62
	1155.19	------	1.63	1.422E+00	------	Line Not Found	------
	1238.11	57	5.79	1.338E+00	1.388E+00	1.388E+00	60.09
	1280.96	------	1.43	1.300E+00	------	Line Not Found	------
	1377.67	43	4.00	1.222E+00	1.637E+00	1.637E+00	69.94
	1401.50	------	1.27	1.206E+00	------	Line Not Found	------
	1407.98	------	2.15	1.201E+00	------	Line Not Found	------
	1509.23	21	2.11	1.136E+00	1.648E+00	1.648E+00	79.85
	1729.60	21	2.92	1.029E+00	1.317E+00	1.317E+00	96.36
	1764.49	119	15.40	1.015E+00	1.424E+00	1.424E+00	24.93
PB-214	74.81	443	6.44	6.454E+00	1.996E+00	1.996E+00	20.31
	77.11	870	10.80	6.619E+00	2.281E+00	2.281E+00	13.35

Sample ID : G198530041 Acquisition date : 5-DEC-2007 05:55:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	269	4.84	7.134E+00	1.460E+00	1.460E+00	32.02
	242.00	391	7.43	5.147E+00	1.917E+00	1.917E+00	27.76
	295.22	403	19.30	4.457E+00	8.770E-01	8.771E-01	18.57
	351.93	803	37.60*	3.902E+00	1.025E+00	1.026E+00	11.06
RA-223	269.46	126	13.70*	4.756E+00	3.619E-01	3.619E-01	56.08
AC-228	129.07	64	2.42	7.224E+00	6.869E-01	6.869E-01	94.29
	209.25	192	3.89	5.669E+00	1.628E+00	1.628E+00	44.95
	270.25	126	3.46	4.756E+00	1.433E+00	1.433E+00	56.08
	338.32	245	11.27	4.023E+00	1.011E+00	1.011E+00	34.08
	409.46	101	1.92	3.465E+00	2.857E+00	2.857E+00	96.04
	463.00	83	4.40	3.143E+00	1.124E+00	1.124E+00	58.06
	794.95	91	4.25	1.983E+00	2.024E+00	2.024E+00	36.47
	911.20	250	25.80*	1.756E+00	1.036E+00	1.036E+00	20.21
	964.77	56	4.99	1.668E+00	1.253E+00	1.253E+00	57.38
	968.97	145	15.80	1.661E+00	1.035E+00	1.035E+00	23.44
	1588.20	16	3.22	1.093E+00	8.333E-01	8.333E-01	182.25
TH-234	63.29	80	4.80	5.230E+00	5.967E-01	5.967E-01	109.58
	92.58	265	5.41*	7.294E+00	1.257E+00	1.257E+00	34.41
U-235	143.76	65	10.96*	6.964E+00	1.589E-01	1.589E-01	117.72
NP-237	86.48	269	12.40*	7.134E+00	5.697E-01	5.697E-01	32.02
AM-243	74.66	443	68.20*	6.454E+00	1.885E-01	1.885E-01	20.31
CM-243	103.76	37	23.00*	7.434E+00	4.002E-02	4.017E-02	124.77
AM-246	1078.86	29	27.80*	1.509E+00	1.290E-01	1.290E-01	62.42

Flag: "*" = Keyline

Sample ID : G198530041 Acquisition date : 5-DEC-2007 05:55:37

Total number of lines in spectrum 72
Number of unidentified lines 30
Number of lines tentatively identified by NID 42 58.33%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.962E+00	2.962E+00	0.662E+00	22.34	
CS-137	9.47E+08S	1.00	5.252E-02	5.270E-02	3.494E-02	66.30	
EU-155	1.57E+08S	1.02	4.342E-02	4.433E-02	5.531E-02	124.77	
TL-208	4.43E+17S	1.00	2.843E-01	2.843E-01	0.576E-01	20.26	
BI-212	4.43E+17S	1.00	6.035E-01	6.035E-01	3.201E-01	53.03	
PB-212	4.43E+17S	1.00	1.022E+00	1.022E+00	0.098E+00	9.64	
BI-214	5.05E+10S	1.00	8.730E-01	8.730E-01	1.245E-01	14.27	
PB-214	5.05E+10S	1.00	1.025E+00	1.026E+00	0.113E+00	11.06	
RA-223	1.04E+12S	1.00	3.619E-01	3.619E-01	2.030E-01	56.08	
AC-228	4.43E+17S	1.00	1.036E+00	1.036E+00	0.209E+00	20.21	
TH-234	1.41E+17S	1.00	1.257E+00	1.257E+00	0.433E+00	34.41	
U-235	2.22E+16S	1.00	1.589E-01	1.589E-01	1.871E-01	117.72	
NP-237	6.75E+13S	1.00	5.697E-01	5.697E-01	1.824E-01	32.02	
AM-243	2.33E+11S	1.00	1.885E-01	1.885E-01	0.383E-01	20.31	
CM-243	8.99E+08S	1.00	4.002E-02	4.017E-02	5.012E-02	124.77	
AM-246	2.18E+11S	1.00	1.290E-01	1.290E-01	0.805E-01	62.42	
		Total Activity :	1.061E+01	1.061E+01			
		Grand Total Activity :	1.061E+01	1.061E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530041 Acquisition date : 5-DEC-2007 05:55:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.58	88	385	0.98	92.67	88	9	6.11E-03	91.6	2.61E+00	
0	57.02	48	282	1.46	113.55	111	6	3.36E-03	****	4.39E+00	
0	66.79	52	400	1.45	133.09	130	6	3.62E-03	****	5.69E+00	
4	73.07	22	382	1.11	145.64	143	17	1.55E-03	****	6.30E+00	
3	84.09	164	461	1.34	167.67	164	27	1.14E-02	47.1	7.00E+00	
3	90.15	201	436	1.29	179.78	164	27	1.39E-02	40.2	7.22E+00	
0	150.19	30	282	1.33	299.83	297	7	2.08E-03	****	6.83E+00	
0	186.05	190	425	1.16	371.53	367	10	1.32E-02	46.1	6.11E+00	
0	328.58	83	233	2.42	656.52	652	12	5.74E-03	81.3	4.11E+00	
0	471.12	23	101	4.02	941.52	937	9	1.63E-03	****	3.10E+00	
0	670.52	45	53	2.83	1340.24	1336	10	3.10E-03	68.7	2.30E+00	
1	803.10	12	39	1.86	1605.34	1601	15	8.52E-04	****	1.97E+00	
0	823.48	11	54	0.93	1646.09	1639	11	7.59E-04	****	1.92E+00	
1	864.06	20	31	1.69	1727.22	1714	17	1.36E-03	****	1.84E+00	
0	869.19	14	53	0.54	1737.49	1731	11	9.66E-04	****	1.83E+00	
0	1064.80	17	29	0.96	2128.64	2119	13	1.21E-03	****	1.53E+00	
0	1091.11	68	67	16.74	2181.25	2164	38	4.75E-03	81.0	1.50E+00	
0	1285.37	74	40	11.27	2569.71	2555	28	5.15E-03	54.5	1.30E+00	
0	1355.46	21	19	4.08	2709.86	2702	14	1.44E-03	****	1.24E+00	
0	1411.41	21	26	0.98	2821.74	2814	15	1.46E-03	****	1.20E+00	
0	1500.17	22	68	2.77	2999.24	2984	30	1.50E-03	****	1.14E+00	
0	1522.58	12	10	0.64	3044.05	3039	9	8.18E-04	****	1.13E+00	
0	1594.04	29	12	1.34	3186.97	3183	12	2.01E-03	60.5	1.09E+00	
0	1622.66	12	10	1.47	3244.20	3238	11	8.11E-04	****	1.08E+00	
0	1708.78	8	9	0.86	3416.43	3407	13	5.33E-04	****	1.04E+00	
0	1757.20	14	8	2.29	3513.26	3507	15	1.00E-03	98.3	1.02E+00	
0	1848.56	8	20	1.59	3695.96	3687	13	5.41E-04	****	9.86E-01	
0	1865.58	4	10	1.34	3730.00	3724	10	2.78E-04	****	9.81E-01	
0	1873.82	18	2	2.19	3746.48	3741	10	1.23E-03	57.9	9.79E-01	
0	1933.90	20	9	3.92	3866.62	3860	12	1.39E-03	74.8	9.61E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530041            *
* Acquisition date :  5-DEC-2007 05:55:37 Detector SN#    :                 *
* Detector ID      : GAM07                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:28.67     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530041           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0015E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 31-OCT-2007 13:07:28 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.962E+00	6.484E-01	1.950E-01	6.484E-01
CS-137	5.270E-02	3.424E-02	2.134E-02	3.424E-02
EU-155	4.433E-02	5.420E-02	4.733E-02	5.420E-02
TL-208	2.843E-01	5.644E-02	2.080E-02	5.644E-02
BI-212	6.035E-01	3.137E-01	1.517E-01	3.137E-01
PB-212	1.022E+00	9.651E-02	3.014E-02	9.651E-02
BI-214	8.730E-01	1.220E-01	3.742E-02	1.220E-01
PB-214	1.026E+00	1.111E-01	3.713E-02	1.111E-01
RA-223	3.619E-01	1.989E-01	9.135E-02	1.989E-01
AC-228	1.036E+00	2.053E-01	6.716E-02	2.053E-01
TH-234	1.257E+00	4.239E-01	2.086E-01	4.239E-01
U-235	1.589E-01	1.834E-01	9.752E-02	1.834E-01
NP-237	5.697E-01	1.788E-01	9.288E-02	1.788E-01
AM-243	1.885E-01	3.752E-02	2.047E-02	3.752E-02
CM-243	4.017E-02	4.911E-02	4.605E-02	4.911E-02
AM-246	1.290E-01	7.892E-02	6.613E-02	7.892E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	9.896E-03	2.296E-02	2.024E-02	2.296E-02	NOT IDENT.
RH-101	2.800E-03	2.201E-02	1.801E-02	2.201E-02	NOT IDENT.
SB-125	-1.988E-02	5.892E-02	4.731E-02	5.892E-02	NOT IDENT.
PO-209	-1.076E+00	4.301E+00	3.447E+00	4.301E+00	NOT IDENT.
BI-211	-1.525E-01	6.266E-01	5.071E-01	6.266E-01	NOT IDENT.
PA-233	-1.194E-02	4.208E-02	3.479E-02	4.208E-02	NOT IDENT.
PA-234M	-1.080E+00	3.408E+00	2.439E+00	3.408E+00	NOT IDENT.
NP-236	-3.138E-03	3.517E-02	2.772E-02	3.517E-02	NOT IDENT.
NP-239	5.518E-02	1.379E-01	1.198E-01	1.379E-01	NOT IDENT.
AM-241	-6.544E-03	7.565E-02	4.531E-02	7.565E-02	NOT IDENT.
CF-249	2.605E-03	2.542E-02	2.117E-02	2.542E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	321.6360
63.29	398.3657
74.66	424.7211
74.81	424.8542
74.81	424.8542
77.11	426.8616
77.11	426.8616
86.48	352.6587
87.30	353.2021
87.30	353.2021
92.58	356.6377
98.44	324.3033
103.76	324.4214
105.31	281.7831
129.07	304.2156
143.76	292.7192
198.00	271.4037
209.25	245.8938
228.18	235.9265
238.63	243.8161
242.00	244.5775
269.46	188.9067
270.25	189.0342
277.36	179.6580
295.22	183.0729
300.09	155.7471
312.17	185.7123
338.32	171.3209
351.93	157.8138
387.59	132.6445
409.46	142.9166
427.87	120.0987
463.00	107.4111
510.77	93.5547
583.19	110.8740
609.31	99.1447
661.66	94.7848
727.33	78.7168
763.13	46.5687
768.36	80.9921
785.37	70.4478
794.95	54.2893
806.17	42.2597
831.80	59.3792
860.56	62.0566
896.60	49.2192
911.20	49.4624
934.06	46.6576
964.77	57.1198
968.97	48.2596
1001.03	53.0817
1078.86	41.1908
1120.29	46.7611
1155.19	37.7751
1173.23	34.1675
1238.11	41.3853
1280.96	38.0780
1332.51	29.6692
1377.67	37.7097
1401.50	29.6175
1407.98	44.8870
1460.80	31.4573
1509.23	30.0334
1588.20	37.7417
1620.50	16.2849
1729.60	18.4996
1764.49	13.0386

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530041

Total Uranium Activity	7.3539E-02	ug/g
Total Uranium Counting Unc.	8.4841E-02	ug/g
Total Uranium Tpu	8.4841E-08	ug/g
Total Uranium Mda	4.5123E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:44:21.55

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530042.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:56:20.
Sample ID        : G198530042           Sample quantity  : 1.16880E+02 GRAM
Detector name    : GAM11                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.98  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	42.86	65	321	1.46	85.17	83	7	4.52E-03	47.1	
2	0	46.63*	25	333	0.85	92.72	89	7	1.71E-03	136.5	
3	0	63.12*	137	383	1.19	125.73	122	7	9.52E-03	27.6	
4	3	72.97*	77	327	1.12	145.44	143	15	5.34E-03	39.0	1.44E+00
5	3	74.88*	444	375	0.99	149.28	143	15	3.08E-02	8.8	
6	3	77.13*	757	339	0.93	153.77	143	15	5.26E-02	5.6	
7	3	87.34*	227	397	1.15	174.21	163	30	1.58E-02	17.7	3.89E+00
8	3	89.97	199	306	0.97	179.47	163	30	1.38E-02	15.8	
9	3	92.64*	325	318	1.14	184.83	163	30	2.26E-02	12.9	
10	0	128.93	84	322	1.01	257.46	254	8	5.81E-03	38.8	
11	0	143.91*	32	314	0.93	287.46	284	7	2.23E-03	100.9	
12	0	185.76*	361	390	1.31	371.22	365	13	2.51E-02	13.4	
13	0	209.23	96	350	0.97	418.20	413	9	6.64E-03	36.8	
14	5	238.61*	1267	169	0.96	477.00	473	16	8.80E-02	3.4	1.84E+00
15	5	241.66	380	227	1.73	483.10	473	16	2.64E-02	10.5	
16	0	266.96	15	147	0.91	533.76	528	7	1.01E-03	140.2	
17	2	270.21	137	169	1.33	540.25	536	23	9.48E-03	18.6	1.12E+00
18	2	277.34	86	162	1.34	554.53	536	23	5.97E-03	27.9	
19	0	295.16*	387	257	1.02	590.19	586	10	2.69E-02	9.7	
20	0	300.27	69	159	0.73	600.42	597	7	4.76E-03	33.5	
21	0	328.27	46	161	1.29	656.48	651	8	3.18E-03	50.3	
22	0	338.35*	245	173	1.17	676.66	672	9	1.70E-02	12.0	
23	0	351.89*	689	238	1.10	703.75	699	11	4.79E-02	6.0	
24	0	371.47	24	82	1.28	742.94	741	6	1.65E-03	63.6	
25	0	405.95	25	74	0.93	811.96	810	6	1.71E-03	59.0	
26	0	409.50	55	86	0.96	819.06	815	8	3.82E-03	32.4	
27	0	440.15	18	91	1.29	880.41	878	7	1.25E-03	91.6	
28	0	463.00	56	159	0.97	926.14	920	12	3.90E-03	46.8	
29	0	496.27*	22	84	1.26	992.72	987	10	1.54E-03	85.2	
30	0	510.86*	165	191	1.95	1021.92	1015	18	1.14E-02	25.2	
31	0	583.31*	454	90	1.32	1166.92	1162	13	3.15E-02	6.6	
32	0	609.33*	552	168	1.43	1219.01	1211	16	3.83E-02	6.9	
33	0	665.93	43	175	7.24	1332.27	1317	21	2.99E-03	80.0	
34	0	727.55	95	85	1.09	1455.59	1450	12	6.63E-03	21.8	
35	0	740.42	16	47	1.38	1481.35	1478	8	1.11E-03	77.5	
36	0	768.02	83	66	1.06	1536.60	1531	11	5.78E-03	21.8	
37	0	785.71	34	44	1.63	1571.99	1568	9	2.34E-03	39.8	
38	0	795.75	33	71	1.29	1592.09	1585	11	2.30E-03	52.4	

Sample ID : G198530042 Acquisition date : 5-DEC-2007 05:56:20

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	836.71	20	57	1.03	1674.06	1668	10	1.36E-03	75.7	
40	0	860.78	47	52	1.29	1722.22	1717	12	3.29E-03	33.5	
41	0	894.65	13	30	1.41	1790.01	1784	10	8.87E-04	87.3	
42	0	911.22*	298	44	1.40	1823.16	1817	14	2.07E-02	7.6	
43	0	933.86	32	77	2.57	1868.48	1860	18	2.22E-03	66.7	
44	1	964.77	27	48	1.75	1930.32	1926	34	1.86E-03	45.0	1.12E+00
45	1	969.25*	152	45	1.75	1939.28	1926	34	1.05E-02	12.5	
46	1	976.26	22	27	1.75	1953.32	1926	34	1.54E-03	61.9	
47	0	1078.27	17	24	1.14	2157.44	2152	10	1.20E-03	59.1	
48	0	1120.49	144	34	1.89	2241.93	2235	16	9.98E-03	12.5	
49	0	1187.37	18	26	0.59	2375.75	2366	13	1.24E-03	63.4	
50	0	1238.44	30	38	1.69	2477.93	2473	10	2.10E-03	42.0	
51	0	1328.66	15	14	0.74	2658.45	2654	10	1.06E-03	53.6	
52	6	1371.81	23	3	3.16	2744.80	2742	23	1.61E-03	18.9	2.34E+00
53	6	1377.72	45	8	2.61	2756.61	2742	23	3.14E-03	22.3	
54	6	1380.43	24	3	2.17	2762.04	2742	23	1.67E-03	19.2	
55	0	1410.36	63	56	12.60	2821.93	2805	34	4.36E-03	39.8	
56	0	1431.80	6	21	1.29	2864.82	2858	9	4.50E-04	131.4	
57	0	1460.90*	179	23	1.38	2923.05	2916	15	1.24E-02	10.5	
58	0	1591.76	30	38	6.35	3184.86	3174	18	2.06E-03	53.5	
59	0	1619.63	29	8	6.43	3240.60	3232	16	2.01E-03	28.6	
60	0	1630.46	33	0	1.80	3262.27	3255	15	2.29E-03	17.4	
61	0	1662.32	13	8	1.55	3326.01	3321	10	9.29E-04	50.7	
62	0	1689.33	13	2	1.40	3380.04	3376	7	9.12E-04	32.4	
63	0	1714.22	9	1	1.29	3429.84	3427	6	6.04E-04	40.2	
64	0	1723.46	6	4	1.24	3448.33	3443	8	4.17E-04	70.7	
65	0	1729.85	43	4	3.19	3461.12	3454	16	2.96E-03	18.6	
66	0	1764.63*	123	8	1.77	3530.69	3522	18	8.57E-03	11.4	
67	0	1791.54	9	6	0.74	3584.53	3577	11	5.90E-04	63.5	
68	0	1835.07	5	8	0.53	3671.61	3664	10	3.79E-04	112.9	
69	0	1846.83	11	26	2.84	3695.14	3688	13	7.44E-04	102.9	
70	0	1853.42	7	4	1.28	3708.33	3705	7	4.99E-04	57.6	
71	0	1955.17	4	10	3.30	3911.86	3906	9	2.93E-04	138.9	
72	0	1957.74	1	2	0.39	3917.00	3914	4	6.94E-05	264.6	
73	0	1969.64	6	10	0.91	3940.82	3930	13	3.82E-04	124.2	

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]G198530042       *
* Acquisition date :  5-DEC-2007 05:56:20 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.98     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530042           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1688E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-OCT-2007 15:05:44 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.131E+00	4.644E-01	2.308E-01	0.000E+00
TL-208	3.060E-01	4.462E-02	2.918E-02	0.000E+00
PO-209	2.254E+00	3.862E+00	6.327E+00	0.000E+00
BI-212	5.572E-01	2.418E-01	2.148E-01	0.000E+00
PB-212	8.391E-01	7.381E-02	4.365E-02	0.000E+00
BI-214	7.075E-01	1.076E-01	5.844E-02	0.000E+00
PB-214	6.974E-01	9.032E-02	5.855E-02	0.000E+00
RA-223	3.118E-01	1.151E-01	1.297E-01	0.000E+00
AC-228	9.744E-01	1.682E-01	9.762E-02	0.000E+00
TH-234	1.310E+00	3.430E-01	3.233E-01	0.000E+00
U-235	6.339E-02	1.253E-01	1.562E-01	0.000E+00
NP-237	4.135E-01	1.463E-01	1.464E-01	0.000E+00
AM-243	1.711E-01	3.144E-02	3.285E-02	0.000E+00
AM-246	6.076E-02	7.048E-02	9.656E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	2.160E-03	1.601E-02	2.718E-02	0.000E+00	NOT IDENT.
RH-101	1.519E-02	1.523E-02	2.698E-02	0.000E+00	NOT IDENT.
SB-125	6.482E-03	3.984E-02	6.939E-02	0.000E+00	NOT IDENT.
CS-137	1.574E-02	1.947E-02	3.427E-02	0.000E+00	NOT IDENT.
EU-155	1.437E-02	4.521E-02	8.068E-02	0.000E+00	NOT IDENT.
BI-211	-1.468E-01	5.353E-01	7.739E-01	0.000E+00	NOT IDENT.
PA-233	5.052E-03	2.916E-02	4.841E-02	0.000E+00	NOT IDENT.
PA-234M	-5.215E-01	2.359E+00	3.757E+00	0.000E+00	NOT IDENT.
NP-236	1.524E-02	2.858E-02	4.482E-02	0.000E+00	NOT IDENT.
NP-239	-8.633E-02	1.023E-01	1.641E-01	0.000E+00	NOT IDENT.
AM-241	-3.461E-02	5.866E-02	8.521E-02	0.000E+00	NOT IDENT.
CM-243	2.340E-02	4.026E-02	7.261E-02	0.000E+00	NOT IDENT.
CF-249	1.285E-02	1.882E-02	3.391E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:44:22.56

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530042.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:56:20.
Sample ID        : G198530042           Sample quantity  : 1.16880E+02 GRAM
Detector name    : GAM11                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.98  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	179	10.66*	1.266E+00	2.131E+00	2.131E+00	22.24
TL-208	277.36	86	6.31	5.037E+00	4.342E-01	4.342E-01	56.04
	510.77	165	22.60	3.148E+00	3.717E-01	3.717E-01	50.82
	583.19	454	84.50*	2.820E+00	3.060E-01	3.060E-01	14.88
	763.13	------	1.81	2.235E+00	------	Line Not Found	------
	860.56	47	12.42	2.006E+00	3.053E-01	3.053E-01	67.58
PO-209	896.60	13	0.47*	1.938E+00	2.251E+00	2.254E+00	174.84
BI-212	727.33	95	11.80*	2.331E+00	5.572E-01	5.572E-01	44.29
	785.37	34	1.10	2.177E+00	2.256E+00	2.256E+00	80.00
	1620.50	29	1.49	1.176E+00	2.658E+00	2.658E+00	57.67
PB-212	74.81	444	10.40	6.107E+00	1.122E+00	1.122E+00	18.74
	77.11	757	17.50	6.332E+00	1.097E+00	1.097E+00	12.99
	87.30	227	7.81	7.107E+00	6.566E-01	6.566E-01	36.11
	238.63	1267	43.30*	5.599E+00	8.391E-01	8.391E-01	8.98
	300.09	69	3.28	4.754E+00	7.055E-01	7.055E-01	67.36
BI-214	609.31	552	46.10*	2.718E+00	7.075E-01	7.075E-01	15.51
	768.36	83	4.94	2.222E+00	1.218E+00	1.218E+00	44.45
	806.17	------	1.22	2.128E+00	------	Line Not Found	------
	934.06	32	3.03	1.864E+00	9.081E-01	9.082E-01	133.60
	1120.29	144	15.10	1.582E+00	9.665E-01	9.666E-01	25.72
	1155.19	------	1.63	1.540E+00	------	Line Not Found	------
	1238.11	30	5.79	1.449E+00	5.788E-01	5.789E-01	84.30
	1280.96	------	1.43	1.408E+00	------	Line Not Found	------
	1377.67	45	4.00	1.326E+00	1.370E+00	1.370E+00	45.20
	1401.50	------	1.27	1.308E+00	------	Line Not Found	------
	1407.98	------	2.15	1.303E+00	------	Line Not Found	------
	1509.23	------	2.11	1.236E+00	------	Line Not Found	------
	1729.60	43	2.92	1.128E+00	2.079E+00	2.079E+00	37.75
	1764.49	123	15.40	1.115E+00	1.154E+00	1.154E+00	23.53
PB-214	74.81	444	6.44	6.107E+00	1.812E+00	1.812E+00	18.74
	77.11	757	10.80	6.332E+00	1.777E+00	1.777E+00	12.99
	87.30	227	4.84	7.107E+00	1.059E+00	1.060E+00	36.11

Sample ID : G198530042 Acquisition date : 5-DEC-2007 05:56:20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	380	7.43	5.551E+00	1.478E+00	1.478E+00	21.90
	295.22	387	19.30	4.814E+00	6.689E-01	6.690E-01	20.36
	351.93	689	37.60*	4.222E+00	6.973E-01	6.974E-01	13.22
RA-223	269.46	137	13.70*	5.132E+00	3.118E-01	3.118E-01	37.67
AC-228	129.07	84	2.42	7.655E+00	7.251E-01	7.251E-01	77.82
	209.25	96	3.89	6.108E+00	6.457E-01	6.457E-01	73.80
	270.25	137	3.46	5.132E+00	1.235E+00	1.235E+00	37.67
	338.32	245	11.27	4.349E+00	8.015E-01	8.015E-01	24.71
	409.46	55	1.92	3.756E+00	1.225E+00	1.225E+00	64.93
	463.00	56	4.40	3.409E+00	6.015E-01	6.015E-01	93.82
	794.95	33	4.25	2.153E+00	5.805E-01	5.805E-01	105.17
	911.20	298	25.80*	1.906E+00	9.744E-01	9.744E-01	17.62
	964.77	27	4.99	1.810E+00	4.773E-01	4.773E-01	90.41
	968.97	152	15.80	1.802E+00	8.555E-01	8.555E-01	26.38
	1588.20	------	3.22	1.192E+00	------	Line Not Found	------
TH-234	63.29	137	4.80	4.569E+00	1.003E+00	1.003E+00	55.66
	92.58	325	5.41*	7.368E+00	1.310E+00	1.310E+00	26.72
U-235	143.76	32	10.96*	7.420E+00	6.339E-02	6.339E-02	201.78
NP-237	86.48	227	12.40*	7.107E+00	4.135E-01	4.135E-01	36.11
AM-243	74.66	444	68.20*	6.107E+00	1.711E-01	1.711E-01	18.74
AM-246	1078.86	17	27.80*	1.637E+00	6.076E-02	6.076E-02	118.36

Flag: "*" = Keyline

Sample ID : G198530042 Acquisition date : 5-DEC-2007 05:56:20

Total number of lines in spectrum 73
Number of unidentified lines 34
Number of lines tentatively identified by NID 39 53.42%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.131E+00	2.131E+00	0.474E+00	22.24	
TL-208	4.43E+17S	1.00	3.060E-01	3.060E-01	0.455E-01	14.88	
PO-209	3.22E+09S	1.00	2.251E+00	2.254E+00	3.940E+00	174.84	
BI-212	4.43E+17S	1.00	5.572E-01	5.572E-01	2.468E-01	44.29	
PB-212	4.43E+17S	1.00	8.391E-01	8.391E-01	0.753E-01	8.98	
BI-214	5.05E+10S	1.00	7.075E-01	7.075E-01	1.098E-01	15.51	
PB-214	5.05E+10S	1.00	6.973E-01	6.974E-01	0.922E-01	13.22	
RA-223	1.04E+12S	1.00	3.118E-01	3.118E-01	1.175E-01	37.67	
AC-228	4.43E+17S	1.00	9.744E-01	9.744E-01	1.716E-01	17.62	
TH-234	1.41E+17S	1.00	1.310E+00	1.310E+00	0.350E+00	26.72	
U-235	2.22E+16S	1.00	6.339E-02	6.339E-02	12.79E-02	201.78	
NP-237	6.75E+13S	1.00	4.135E-01	4.135E-01	1.493E-01	36.11	
AM-243	2.33E+11S	1.00	1.711E-01	1.711E-01	0.321E-01	18.74	
AM-246	2.18E+11S	1.00	6.076E-02	6.076E-02	7.191E-02	118.36	
			---	---			
	Total Activity :		1.079E+01	1.080E+01			

Grand Total Activity : 1.079E+01 1.080E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530042 Acquisition date : 5-DEC-2007 05:56:20

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	42.86	65	321	1.46	85.17	83	7	4.52E-03	94.3	1.19E+00	
0	46.63	25	333	0.85	92.72	89	7	1.71E-03	****	1.77E+00	
3	72.97	77	327	1.12	145.44	143	15	5.34E-03	77.9	5.90E+00	
3	89.97	199	306	0.97	179.47	163	30	1.38E-02	31.6	7.25E+00	
0	185.76	361	390	1.31	371.22	365	13	2.51E-02	26.8	6.57E+00	
0	266.96	15	147	0.91	533.76	528	7	1.01E-03	****	5.18E+00	
0	328.27	46	161	1.29	656.48	651	8	3.18E-03	****	4.45E+00	
0	371.47	24	82	1.28	742.94	741	6	1.65E-03	****	4.05E+00	
0	405.95	25	74	0.93	811.96	810	6	1.71E-03	****	3.78E+00	
0	440.15	18	91	1.29	880.41	878	7	1.25E-03	****	3.55E+00	
0	496.27	22	84	1.26	992.72	987	10	1.54E-03	****	3.22E+00	
0	665.93	43	175	7.24	1332.27	1317	21	2.99E-03	****	2.52E+00	
0	740.42	16	47	1.38	1481.35	1478	8	1.11E-03	****	2.30E+00	
0	836.71	20	57	1.03	1674.06	1668	10	1.36E-03	****	2.06E+00	
1	976.26	22	27	1.75	1953.32	1926	34	1.54E-03	****	1.79E+00	
0	1187.37	18	26	0.59	2375.75	2366	13	1.24E-03	****	1.50E+00	
0	1328.66	15	14	0.74	2658.45	2654	10	1.06E-03	****	1.37E+00	
6	1371.81	23	3	3.16	2744.80	2742	23	1.61E-03	37.7	1.33E+00	
6	1380.43	24	3	2.17	2762.04	2742	23	1.67E-03	38.3	1.32E+00	
0	1410.36	63	56	12.60	2821.93	2805	34	4.36E-03	79.6	1.30E+00	
0	1431.80	6	21	1.29	2864.82	2858	9	4.50E-04	****	1.29E+00	
0	1591.76	30	38	6.35	3184.86	3174	18	2.06E-03	****	1.19E+00	
0	1630.46	33	0	1.80	3262.27	3255	15	2.29E-03	34.8	1.17E+00	
0	1662.32	13	8	1.55	3326.01	3321	10	9.29E-04	****	1.16E+00	
0	1689.33	13	2	1.40	3380.04	3376	7	9.12E-04	64.7	1.14E+00	
0	1714.22	9	1	1.29	3429.84	3427	6	6.04E-04	80.5	1.13E+00	
0	1723.46	6	4	1.24	3448.33	3443	8	4.17E-04	****	1.13E+00	
0	1791.54	9	6	0.74	3584.53	3577	11	5.90E-04	****	1.11E+00	
0	1835.07	5	8	0.53	3671.61	3664	10	3.79E-04	****	1.09E+00	
0	1846.83	11	26	2.84	3695.14	3688	13	7.44E-04	****	1.09E+00	
0	1853.42	7	4	1.28	3708.33	3705	7	4.99E-04	****	1.09E+00	
0	1955.17	4	10	3.30	3911.86	3906	9	2.93E-04	****	1.06E+00	
0	1957.74	1	2	0.39	3917.00	3914	4	6.94E-05	****	1.06E+00	
0	1969.64	6	10	0.91	3940.82	3930	13	3.82E-04	****	1.06E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530042            *
* Acquisition date :  5-DEC-2007 05:56:20 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.98     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530042           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1688E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  2-OCT-2007 15:05:44 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.131E+00	4.644E-01	1.155E-01	4.644E-01
TL-208	3.060E-01	4.462E-02	1.460E-02	4.462E-02
PO-209	2.254E+00	3.862E+00	3.165E+00	3.862E+00
BI-212	5.572E-01	2.418E-01	1.074E-01	2.418E-01
PB-212	8.391E-01	7.381E-02	2.184E-02	7.381E-02
BI-214	7.075E-01	1.076E-01	2.924E-02	1.076E-01
PB-214	6.974E-01	9.032E-02	2.929E-02	9.032E-02
RA-223	3.118E-01	1.151E-01	6.488E-02	1.151E-01
AC-228	9.744E-01	1.682E-01	4.884E-02	1.682E-01
TH-234	1.310E+00	3.430E-01	1.617E-01	3.430E-01
U-235	6.339E-02	1.253E-01	7.815E-02	1.253E-01
NP-237	4.135E-01	1.463E-01	7.325E-02	1.463E-01
AM-243	1.711E-01	3.144E-02	1.644E-02	3.144E-02
AM-246	6.076E-02	7.048E-02	4.831E-02	7.048E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	2.160E-03	1.601E-02	1.360E-02	1.601E-02	NOT IDENT.
RH-101	1.519E-02	1.523E-02	1.350E-02	1.523E-02	NOT IDENT.
SB-125	6.482E-03	3.984E-02	3.472E-02	3.984E-02	NOT IDENT.
CS-137	1.574E-02	1.947E-02	1.715E-02	1.947E-02	NOT IDENT.
EU-155	1.437E-02	4.521E-02	4.036E-02	4.521E-02	NOT IDENT.
BI-211	-1.468E-01	5.353E-01	3.872E-01	5.353E-01	NOT IDENT.
PA-233	5.052E-03	2.916E-02	2.422E-02	2.916E-02	NOT IDENT.
PA-234M	-5.215E-01	2.359E+00	1.879E+00	2.359E+00	NOT IDENT.
NP-236	1.524E-02	2.858E-02	2.243E-02	2.858E-02	NOT IDENT.
NP-239	-8.633E-02	1.023E-01	8.211E-02	1.023E-01	NOT IDENT.
AM-241	-3.461E-02	5.866E-02	4.263E-02	5.866E-02	NOT IDENT.
CM-243	2.340E-02	4.026E-02	3.633E-02	4.026E-02	NOT IDENT.
CF-249	1.285E-02	1.882E-02	1.697E-02	1.882E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	282.9009
63.29	323.4306
74.66	315.5320
74.81	315.6386
74.81	315.6386
77.11	317.2802
77.11	317.2802
86.48	279.5808
87.30	280.0523
87.30	280.0523
92.58	283.0423
98.44	237.9611
103.76	253.3006
105.31	270.1710
129.07	246.6057
143.76	277.9129
198.00	209.9653
209.25	260.3706
228.18	213.8401
238.63	194.7376
242.00	195.3949
269.46	145.4841
270.25	158.8271
277.36	159.8555
295.22	184.3699
300.09	186.8369
312.17	124.6763
338.32	149.7868
351.93	151.3497
387.59	114.4336
409.46	97.3500
427.87	87.7105
463.00	90.6150
510.77	79.4489
583.19	85.6355
609.31	95.0182
661.66	75.1688
727.33	62.1176
763.13	60.1740
768.36	74.4905
785.37	60.2688
794.95	63.8606
806.17	69.3188
831.80	56.0661
860.56	48.7093
896.60	58.9730
911.20	41.1845
934.06	33.0227
964.77	41.9515
968.97	42.0116
1001.03	40.5296
1078.86	34.6172
1120.29	33.0499
1155.19	35.4153
1173.23	27.4627
1238.11	40.3939
1280.96	36.6731
1332.51	33.6304
1377.67	18.2625
1401.50	30.6188
1407.98	25.9770
1460.80	17.5406
1509.23	22.1768
1588.20	30.6391
1620.50	12.9927
1729.60	11.6348
1764.49	19.5296

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530042

Total Uranium Activity	2.9329E-02	ug/g
Total Uranium Counting Unc.	5.7997E-02	ug/g
Total Uranium Tpu	5.7997E-08	ug/g
Total Uranium Mda	3.6159E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:44:56.67

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530043.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:57:03.
Sample ID        : G198530043           Sample quantity  : 9.77800E+01 GRAM
Detector name    : GAM12                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.80  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.27*	64	374	0.61	91.75	88	8	4.46E-03	56.7	
2	0	63.64*	52	477	0.86	126.52	123	8	3.63E-03	80.0	
3	5	74.87*	255	428	1.06	148.99	145	14	1.77E-02	14.9	2.59E+00
4	5	77.12	539	397	1.01	153.49	145	14	3.75E-02	7.4	
5	4	84.40*	137	359	1.66	168.05	164	31	9.50E-03	27.4	1.89E+00
6	4	87.23	330	447	1.66	173.70	164	31	2.29E-02	13.5	
7	4	89.90	203	312	1.14	179.04	164	31	1.41E-02	16.3	
8	4	92.72*	271	399	1.42	184.70	164	31	1.88E-02	17.6	
9	0	104.89	66	343	2.22	209.05	206	8	4.58E-03	49.9	
10	0	112.37	39	228	1.10	224.00	222	5	2.67E-03	60.9	
11	0	114.99	85	207	1.63	229.25	227	6	5.88E-03	29.5	
12	0	128.74	102	332	1.55	256.75	253	8	7.08E-03	32.5	
13	0	143.87*	38	266	1.24	287.03	284	7	2.64E-03	80.0	
14	0	171.67	32	452	0.66	342.65	337	12	2.22E-03	134.0	
15	0	185.75*	206	393	1.32	370.82	366	10	1.43E-02	21.2	
16	0	209.29	63	372	1.31	417.92	413	10	4.36E-03	58.9	
17	0	216.39	37	180	1.10	432.12	428	7	2.59E-03	62.4	
18	4	238.54*	1019	294	1.10	476.44	472	17	7.08E-02	4.3	9.44E-01
19	4	241.47	226	332	1.55	482.31	472	17	1.57E-02	17.1	
20	0	270.21	90	211	1.36	539.80	535	9	6.24E-03	31.0	
21	0	295.16*	443	209	1.33	589.72	585	10	3.08E-02	8.1	
22	0	299.70	76	157	1.80	598.80	595	8	5.26E-03	30.8	
23	0	327.97	22	233	0.92	655.35	650	10	1.52E-03	131.8	
24	0	338.10	188	271	1.21	675.62	671	10	1.30E-02	18.0	
25	0	351.71*	702	182	1.40	702.85	697	11	4.87E-02	5.5	
26	0	364.92	40	107	1.89	729.27	725	8	2.77E-03	49.3	
27	0	383.14	18	100	1.32	765.72	762	6	1.23E-03	92.8	
28	0	462.68*	94	136	1.76	924.84	917	14	6.52E-03	29.9	
29	0	486.00	38	116	4.17	971.48	963	12	2.62E-03	59.6	
30	0	510.82*	120	227	2.20	1021.14	1012	21	8.34E-03	38.9	
31	0	562.66	65	93	3.39	1124.83	1118	14	4.54E-03	33.8	
32	0	582.62*	354	109	1.55	1164.75	1156	15	2.46E-02	8.8	
33	0	608.98*	522	95	1.43	1217.48	1212	12	3.62E-02	6.2	
34	0	727.31	73	91	1.73	1454.14	1447	13	5.07E-03	29.3	
35	0	756.21	46	74	3.81	1511.96	1505	17	3.21E-03	44.7	
36	0	767.50	62	91	2.40	1534.53	1527	13	4.32E-03	34.1	
37	0	786.04	51	60	1.55	1571.61	1567	13	3.55E-03	33.9	
38	0	794.57	60	47	2.22	1588.67	1583	11	4.15E-03	25.7	

Sample ID : G198530043 Acquisition date : 5-DEC-2007 05:57:03

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	861.36	14	77	1.36	1722.25	1715	11	1.00E-03	123.3	
40	0	910.68*	212	51	2.10	1820.87	1815	12	1.47E-02	10.1	
41	0	934.23	25	60	0.94	1867.97	1861	13	1.72E-03	68.1	
42	0	964.02	34	48	2.57	1927.55	1923	9	2.39E-03	39.9	
43	0	968.90	155	40	1.93	1937.29	1932	15	1.08E-02	12.8	
44	0	999.83*	22	28	3.35	1999.15	1994	11	1.53E-03	62.3	
45	0	1033.12	32	20	1.12	2065.73	2061	11	2.25E-03	31.6	
46	0	1120.19*	68	49	1.97	2239.81	2232	14	4.72E-03	27.6	
47	0	1148.57	13	33	0.67	2296.56	2287	13	8.68E-04	98.2	
48	0	1198.56	25	18	0.98	2396.52	2391	13	1.71E-03	41.8	
49	0	1237.30	68	39	2.18	2473.97	2468	15	4.70E-03	23.3	
50	0	1315.49	13	14	0.70	2630.30	2626	8	8.94E-04	57.6	
51	0	1377.48	19	39	1.56	2754.24	2748	12	1.35E-03	68.2	
52	0	1408.64	32	25	0.98	2816.54	2808	19	2.25E-03	40.3	
53	0	1433.16	19	20	3.82	2865.56	2859	12	1.33E-03	52.7	
54	0	1460.00*	168	32	2.15	2919.20	2913	18	1.17E-02	11.8	
55	0	1508.34	33	23	1.91	3015.84	3010	13	2.29E-03	34.6	
56	5	1618.48	17	11	2.06	3236.00	3231	14	1.15E-03	45.0	7.12E-01
57	5	1620.92	14	5	2.03	3240.88	3231	14	9.45E-04	46.5	
58	0	1630.19	17	19	1.66	3259.42	3252	13	1.18E-03	58.6	
59	0	1642.29	10	11	0.67	3283.59	3276	12	6.85E-04	76.6	
60	0	1728.26	24	15	0.91	3455.44	3448	15	1.64E-03	41.3	
61	0	1762.93	116	14	2.64	3524.72	3514	18	8.05E-03	11.9	
62	0	1824.23	14	6	0.64	3647.24	3640	12	9.83E-04	43.6	
63	0	1968.54	15	11	0.84	3935.65	3926	15	1.06E-03	54.3	

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]G198530043       *
* Acquisition date :  5-DEC-2007 05:57:03 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.80     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530043           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.7780E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-FEB-2007 15:01:06 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	2.667E+00	6.379E-01	3.656E-01	0.000E+00
EU-155	9.471E-02	9.293E-02	1.229E-01	0.000E+00
TL-208	3.219E-01	6.093E-02	4.216E-02	0.000E+00
BI-212	5.736E-01	3.341E-01	3.112E-01	0.000E+00
PB-212	9.125E-01	9.524E-02	6.979E-02	0.000E+00
BI-214	9.009E-01	1.312E-01	7.955E-02	0.000E+00
PB-214	9.595E-01	1.172E-01	8.326E-02	0.000E+00
RA-223	2.772E-01	1.695E-01	2.113E-01	0.000E+00
AC-228	9.293E-01	2.076E-01	1.391E-01	0.000E+00
PA-234M	3.211E+00	3.933E+00	5.278E+00	0.000E+00
TH-234	1.597E+00	5.631E-01	5.419E-01	0.000E+00
U-235	1.033E-01	1.620E-01	2.185E-01	0.000E+00
NP-237	8.973E-01	2.476E-01	2.502E-01	0.000E+00
AM-243	1.539E-01	4.610E-02	6.230E-02	0.000E+00
CM-243	8.581E-02	8.421E-02	1.020E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
CO-60	-2.506E-03	2.856E-02	4.782E-02	0.000E+00	NOT IDENT.
RH-101	-2.976E-03	2.547E-02	4.009E-02	0.000E+00	NOT IDENT.
SB-125	-1.158E-02	6.626E-02	1.062E-01	0.000E+00	NOT IDENT.
CS-137	1.064E-02	2.790E-02	4.787E-02	0.000E+00	NOT IDENT.
PO-209	-1.653E+00	5.325E+00	8.492E+00	0.000E+00	NOT IDENT.
BI-211	1.295E-01	7.602E-01	1.272E+00	0.000E+00	NOT IDENT.
PA-233	-7.722E-03	4.588E-02	7.498E-02	0.000E+00	NOT IDENT.
NP-236	2.140E-02	4.781E-02	6.987E-02	0.000E+00	NOT IDENT.
NP-239	1.217E-01	1.575E-01	2.717E-01	0.000E+00	NOT IDENT.
AM-241	7.802E-03	1.138E-01	1.660E-01	0.000E+00	NOT IDENT.
AM-246	5.240E-02	8.729E-02	1.563E-01	0.000E+00	NOT IDENT.
CF-249	-6.592E-03	3.155E-02	4.675E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:44:57.73

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530043.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:57:03.
Sample ID        : G198530043           Sample quantity  : 9.77800E+01 GRAM
Detector name    : GAM12                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.80  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	168	10.66*	1.134E+00	2.667E+00	2.667E+00	24.40
EU-155	105.31	66	21.20*	6.438E+00	9.276E-02	9.471E-02	100.13
TL-208	277.36	------	6.31	4.454E+00	------	Line Not Found	------
	510.77	120	22.60	2.786E+00	3.661E-01	3.661E-01	78.12
	583.19	354	84.50*	2.501E+00	3.219E-01	3.219E-01	19.32
	763.13	------	1.81	1.987E+00	------	Line Not Found	------
	860.56	14	12.42	1.786E+00	1.251E-01	1.251E-01	246.79
BI-212	727.33	73	11.80*	2.072E+00	5.736E-01	5.736E-01	59.44
	785.37	51	1.10	1.936E+00	4.608E+00	4.608E+00	68.59
	1620.50	14	1.49	1.052E+00	1.667E+00	1.667E+00	93.16
PB-212	74.81	255	10.40	4.663E+00	1.009E+00	1.009E+00	30.57
	77.11	539	17.50	4.889E+00	1.210E+00	1.210E+00	16.60
	87.30	330	7.81	5.699E+00	1.425E+00	1.425E+00	28.15
	238.63	1019	43.30*	4.950E+00	9.125E-01	9.125E-01	10.65
	300.09	76	3.28	4.209E+00	1.054E+00	1.054E+00	61.90
BI-214	609.31	522	46.10*	2.411E+00	9.009E-01	9.009E-01	14.85
	768.36	62	4.94	1.977E+00	1.222E+00	1.222E+00	68.81
	806.17	------	1.22	1.894E+00	------	Line Not Found	------
	934.06	25	3.03	1.661E+00	9.467E-01	9.468E-01	136.52
	1120.29	68	15.10	1.414E+00	6.112E-01	6.112E-01	55.64
	1155.19	------	1.63	1.377E+00	------	Line Not Found	------
	1238.11	68	5.79	1.297E+00	1.728E+00	1.728E+00	46.94
	1280.96	------	1.43	1.260E+00	------	Line Not Found	------
	1377.67	19	4.00	1.187E+00	7.845E-01	7.846E-01	136.48
	1401.50	------	1.27	1.171E+00	------	Line Not Found	------
	1407.98	32	2.15	1.166E+00	2.477E+00	2.477E+00	80.79
	1509.23	33	2.11	1.107E+00	2.705E+00	2.706E+00	69.54
	1729.60	24	2.92	1.010E+00	1.540E+00	1.540E+00	82.73
	1764.49	116	15.40	9.978E-01	1.447E+00	1.447E+00	24.53
PB-214	74.81	255	6.44	4.663E+00	1.629E+00	1.630E+00	30.57
	77.11	539	10.80	4.889E+00	1.961E+00	1.961E+00	16.60
	87.30	330	4.84	5.699E+00	2.299E+00	2.299E+00	28.15

Sample ID : G198530043 Acquisition date : 5-DEC-2007 05:57:03

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	226	7.43	4.909E+00	1.190E+00	1.190E+00	34.71
	295.22	443	19.30	4.257E+00	1.036E+00	1.036E+00	17.35
	351.93	702	37.60*	3.734E+00	9.594E-01	9.595E-01	12.47
RA-223	269.46	90	13.70*	4.538E+00	2.772E-01	2.772E-01	62.39
AC-228	129.07	102	2.42	6.596E+00	1.227E+00	1.227E+00	65.31
	209.25	63	3.89	5.392E+00	5.740E-01	5.740E-01	118.01
	270.25	90	3.46	4.538E+00	1.098E+00	1.098E+00	62.39
	338.32	188	11.27	3.847E+00	8.312E-01	8.312E-01	36.46
	409.46	------	1.92	3.322E+00	------	Line Not Found	------
	463.00	94	4.40	3.017E+00	1.358E+00	1.358E+00	60.08
	794.95	60	4.25	1.918E+00	1.409E+00	1.409E+00	52.26
	911.20	212	25.80*	1.700E+00	9.293E-01	9.293E-01	22.80
	964.77	34	4.99	1.616E+00	8.191E-01	8.191E-01	80.37
	968.97	155	15.80	1.608E+00	1.170E+00	1.170E+00	27.35
	1588.20	------	3.22	1.066E+00	------	Line Not Found	------
PA-234M	1001.03	22	0.84*	1.564E+00	3.211E+00	3.211E+00	124.97
TH-234	63.29	52	4.80	3.304E+00	6.318E-01	6.318E-01	160.15
	92.58	271	5.41*	6.010E+00	1.597E+00	1.597E+00	35.97
U-235	143.76	38	10.96*	6.455E+00	1.033E-01	1.033E-01	160.03
NP-237	86.48	330	12.40*	5.699E+00	8.973E-01	8.973E-01	28.15
AM-243	74.66	255	68.20*	4.663E+00	1.539E-01	1.539E-01	30.57
CM-243	103.76	66	23.00*	6.438E+00	8.550E-02	8.581E-02	100.13

Flag: "*" = Keyline

Sample ID : G198530043 Acquisition date : 5-DEC-2007 05:57:03

Total number of lines in spectrum 63
Number of unidentified lines 24
Number of lines tentatively identified by NID 39 61.90%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.667E+00	2.667E+00	0.651E+00	24.40	
EU-155	1.57E+08S	1.02	9.276E-02	9.471E-02	9.483E-02	100.13	
TL-208	4.43E+17S	1.00	3.219E-01	3.219E-01	0.622E-01	19.32	
BI-212	4.43E+17S	1.00	5.736E-01	5.736E-01	3.410E-01	59.44	
PB-212	4.43E+17S	1.00	9.125E-01	9.125E-01	0.972E-01	10.65	
BI-214	5.05E+10S	1.00	9.009E-01	9.009E-01	1.338E-01	14.85	
PB-214	5.05E+10S	1.00	9.594E-01	9.595E-01	1.196E-01	12.47	
RA-223	1.04E+12S	1.00	2.772E-01	2.772E-01	1.730E-01	62.39	
AC-228	4.43E+17S	1.00	9.293E-01	9.293E-01	2.119E-01	22.80	
PA-234M	1.41E+17S	1.00	3.211E+00	3.211E+00	4.013E+00	124.97	
TH-234	1.41E+17S	1.00	1.597E+00	1.597E+00	0.575E+00	35.97	
U-235	2.22E+16S	1.00	1.033E-01	1.033E-01	1.653E-01	160.03	
NP-237	6.75E+13S	1.00	8.973E-01	8.973E-01	2.526E-01	28.15	
AM-243	2.33E+11S	1.00	1.539E-01	1.539E-01	0.470E-01	30.57	
CM-243	8.99E+08S	1.00	8.550E-02	8.581E-02	8.593E-02	100.13	
			---	---			
		Total Activity :	1.368E+01	1.369E+01			

Grand Total Activity : 1.368E+01 1.369E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530043 Acquisition date : 5-DEC-2007 05:57:03

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.27	64	374	0.61	91.75	88	8	4.46E-03	****	9.78E-01	
4	84.40	137	359	1.66	168.05	164	31	9.50E-03	54.9	5.51E+00	
4	89.90	203	312	1.14	179.04	164	31	1.41E-02	32.6	5.86E+00	
0	112.37	39	228	1.10	224.00	222	5	2.67E-03	****	6.56E+00	
0	114.99	85	207	1.63	229.25	227	6	5.88E-03	58.9	6.59E+00	
0	171.67	32	452	0.66	342.65	337	12	2.22E-03	****	6.03E+00	
0	185.75	206	393	1.32	370.82	366	10	1.43E-02	42.4	5.78E+00	
0	216.39	37	180	1.10	432.12	428	7	2.59E-03	****	5.28E+00	
0	327.97	22	233	0.92	655.35	650	10	1.52E-03	****	3.94E+00	
0	364.92	40	107	1.89	729.27	725	8	2.77E-03	98.6	3.63E+00	
0	383.14	18	100	1.32	765.72	762	6	1.23E-03	****	3.50E+00	
0	486.00	38	116	4.17	971.48	963	12	2.62E-03	****	2.90E+00	
0	562.66	65	93	3.39	1124.83	1118	14	4.54E-03	67.6	2.57E+00	
0	756.21	46	74	3.81	1511.96	1505	17	3.21E-03	89.5	2.00E+00	
0	1033.12	32	20	1.12	2065.73	2061	11	2.25E-03	63.3	1.52E+00	
0	1148.57	13	33	0.67	2296.56	2287	13	8.68E-04	****	1.38E+00	
0	1198.56	25	18	0.98	2396.52	2391	13	1.71E-03	83.6	1.33E+00	
0	1315.49	13	14	0.70	2630.30	2626	8	8.94E-04	****	1.23E+00	
0	1433.16	19	20	3.82	2865.56	2859	12	1.33E-03	****	1.15E+00	
5	1618.48	17	11	2.06	3236.00	3231	14	1.15E-03	90.1	1.05E+00	
0	1630.19	17	19	1.66	3259.42	3252	13	1.18E-03	****	1.05E+00	
0	1642.29	10	11	0.67	3283.59	3276	12	6.85E-04	****	1.04E+00	
0	1824.23	14	6	0.64	3647.24	3640	12	9.83E-04	87.1	9.79E-01	
0	1968.54	15	11	0.84	3935.65	3926	15	1.06E-03	****	9.45E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530043            *
* Acquisition date :  5-DEC-2007 05:57:03 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.80     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530043           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.7780E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  1-FEB-2007 15:01:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.667E+00	6.379E-01	1.829E-01	6.379E-01
EU-155	9.471E-02	9.293E-02	6.148E-02	9.293E-02
TL-208	3.219E-01	6.093E-02	2.109E-02	6.093E-02
BI-212	5.736E-01	3.341E-01	1.557E-01	3.341E-01
PB-212	9.125E-01	9.524E-02	3.492E-02	9.524E-02
BI-214	9.009E-01	1.312E-01	3.980E-02	1.312E-01
PB-214	9.595E-01	1.172E-01	4.165E-02	1.172E-01
RA-223	2.772E-01	1.695E-01	1.057E-01	1.695E-01
AC-228	9.293E-01	2.076E-01	6.961E-02	2.076E-01
PA-234M	3.211E+00	3.933E+00	2.640E+00	3.933E+00
TH-234	1.597E+00	5.631E-01	2.711E-01	5.631E-01
U-235	1.033E-01	1.620E-01	1.093E-01	1.620E-01
NP-237	8.973E-01	2.476E-01	1.252E-01	2.476E-01
AM-243	1.539E-01	4.610E-02	3.117E-02	4.610E-02
CM-243	8.581E-02	8.421E-02	5.104E-02	8.421E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU
CO-60	-2.506E-03	2.856E-02	2.392E-02	2.856E-02 NOT IDENT.
RH-101	-2.976E-03	2.547E-02	2.006E-02	2.547E-02 NOT IDENT.
SB-125	-1.158E-02	6.626E-02	5.312E-02	6.626E-02 NOT IDENT.
CS-137	1.064E-02	2.790E-02	2.395E-02	2.790E-02 NOT IDENT.
PO-209	-1.653E+00	5.325E+00	4.249E+00	5.325E+00 NOT IDENT.
BI-211	1.295E-01	7.602E-01	6.363E-01	7.602E-01 NOT IDENT.
PA-233	-7.722E-03	4.588E-02	3.751E-02	4.588E-02 NOT IDENT.
NP-236	2.140E-02	4.781E-02	3.496E-02	4.781E-02 NOT IDENT.
NP-239	1.217E-01	1.575E-01	1.359E-01	1.575E-01 NOT IDENT.
AM-241	7.802E-03	1.138E-01	8.306E-02	1.138E-01 NOT IDENT.
AM-246	5.240E-02	8.729E-02	7.818E-02	8.729E-02 NOT IDENT.
CF-249	-6.592E-03	3.155E-02	2.339E-02	3.155E-02 NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
59.54	332.6155
63.29	402.3933
74.66	492.6972
74.81	492.8113
74.81	492.8113
77.11	494.5345
77.11	494.5345
86.48	389.6484
87.30	390.0938
87.30	390.0938
92.58	392.9204
98.44	323.0237
103.76	284.9994
105.31	343.3604
129.07	308.2892
143.76	303.5751
198.00	293.9768
209.25	311.2039
228.18	247.9010
238.63	284.5170
242.00	285.2111
269.46	220.4023
270.25	179.9848
277.36	197.5315
295.22	186.2155
300.09	196.7015
312.17	184.2166
338.32	218.7815
351.93	173.8208
387.59	153.4490
409.46	149.3165
427.87	127.4114
463.00	102.7336
510.77	110.4543
583.19	101.1224
609.31	99.5871
661.66	95.6529
727.33	73.8699
763.13	70.6938
768.36	74.1838
785.37	74.5830
794.95	56.1038
806.17	71.6526
831.80	72.2114
860.56	58.2613
896.60	67.2781
911.20	47.4994
934.06	59.4850
964.77	64.2671
968.97	41.1054
1001.03	61.2791
1078.86	40.4390
1120.29	30.2375
1155.19	42.6832
1173.23	53.5767
1238.11	47.6908
1280.96	37.5480
1332.51	27.2537
1377.67	28.6318
1401.50	16.9238
1407.98	33.6085
1460.80	24.9705
1509.23	32.8378
1588.20	36.8306
1620.50	32.9297
1729.60	19.7779
1764.49	16.2773

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530043

Total Uranium Activity	4.7795E-02	ug/g
Total Uranium Counting Unc.	7.4955E-02	ug/g
Total Uranium Tpu	7.4955E-08	ug/g
Total Uranium Mda	5.0578E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:45:32.63

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530044.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:57:45.
Sample ID        : G198530044           Sample quantity  : 1.08220E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:04.01  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.58*	122	504	0.98	92.60	89	8	8.48E-03	38.4	
2	0	53.75*	38	603	1.11	106.97	103	8	2.65E-03	123.1	
3	0	63.38*	33	884	0.92	126.24	122	9	2.31E-03	191.0	
4	2	74.88*	596	665	0.95	149.26	144	15	4.14E-02	8.3	1.07E+00
5	2	77.12*	867	556	0.80	153.75	144	15	6.02E-02	5.7	
6	0	84.10*	154	559	1.49	167.71	165	7	1.07E-02	29.3	
7	0	87.03	281	512	1.27	173.59	172	6	1.95E-02	14.0	
8	4	89.94	236	318	0.97	179.41	177	13	1.64E-02	12.3	1.02E+00
9	4	92.71*	328	560	1.16	184.96	177	13	2.28E-02	18.0	
10	0	98.71*	69	511	1.28	196.97	194	8	4.78E-03	62.2	
11	0	105.32	84	511	1.91	210.19	207	8	5.81E-03	48.0	
12	0	128.82	101	487	0.89	257.23	254	8	7.02E-03	39.0	
13	0	185.82*	249	632	1.09	371.32	366	11	1.73E-02	23.1	
14	2	205.45*	59	328	1.31	410.62	407	16	4.07E-03	61.3	9.13E-01
15	2	209.25	175	335	1.31	418.22	407	16	1.22E-02	19.7	
16	5	238.61*	1212	316	1.03	476.99	472	17	8.41E-02	4.0	1.28E+00
17	5	241.55	286	440	1.70	482.89	472	17	1.98E-02	16.9	
18	0	270.24	148	373	1.21	540.31	535	11	1.03E-02	26.5	
19	0	276.74	60	286	1.47	553.32	550	8	4.18E-03	50.3	
20	0	295.03*	377	281	1.07	589.92	584	10	2.62E-02	10.2	
21	4	299.93	107	171	1.00	599.73	597	12	7.40E-03	21.5	1.32E+00
22	4	302.53*	14	216	1.44	604.93	597	12	9.79E-04	194.8	
23	0	327.78	99	289	1.29	655.47	652	10	6.90E-03	33.5	
24	0	338.01*	245	324	1.19	675.95	670	11	1.70E-02	16.2	
25	0	351.74*	614	314	1.21	703.43	698	11	4.27E-02	7.1	
26	0	409.52	25	222	0.87	819.07	815	9	1.74E-03	109.2	
27	0	424.74	46	116	1.87	849.54	847	7	3.19E-03	41.9	
28	0	462.93*	48	196	1.30	925.96	921	10	3.37E-03	59.5	
29	0	511.00*	176	257	2.19	1022.16	1015	16	1.22E-02	26.5	
30	0	530.24	28	107	1.27	1060.67	1058	7	1.94E-03	64.1	
31	0	583.05*	357	181	1.49	1166.36	1161	13	2.48E-02	10.4	
32	0	609.18*	402	187	1.26	1218.64	1213	12	2.79E-02	9.0	
33	0	665.48	34	75	1.25	1331.30	1328	7	2.36E-03	46.4	
34	0	702.39*	10	133	1.94	1405.18	1398	10	6.70E-04	247.7	
35	0	727.93	119	198	1.84	1456.27	1449	17	8.24E-03	29.0	
36	0	785.72	42	71	1.59	1571.91	1568	9	2.90E-03	40.1	
37	0	795.72	38	164	0.98	1591.93	1584	14	2.64E-03	73.3	
38	0	804.35*	61	151	5.58	1609.20	1602	18	4.21E-03	51.2	

Sample ID : G198530044 Acquisition date : 5-DEC-2007 05:57:45

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	862.43	52	134	0.69	1725.40	1717	16	3.62E-03	51.9	
40	0	910.89*	285	98	1.42	1822.36	1816	13	1.98E-02	10.0	
41	0	934.29	117	97	2.14	1869.18	1859	22	8.14E-03	23.5	
42	4	964.11	93	97	2.75	1928.83	1919	24	6.47E-03	27.2	1.15E+00
43	4	968.80*	168	47	1.72	1938.21	1919	24	1.17E-02	12.2	
44	0	1001.51*	20	70	2.30	2003.65	1997	11	1.36E-03	99.7	
45	0	1063.55*	25	61	1.50	2127.78	2121	12	1.77E-03	72.8	
46	0	1120.08*	107	65	1.43	2240.88	2233	13	7.44E-03	19.7	
47	0	1155.35	18	39	1.94	2311.42	2306	8	1.27E-03	65.0	
48	0	1237.19	65	51	2.90	2475.14	2470	13	4.50E-03	25.6	
49	0	1354.92	16	28	0.71	2710.63	2706	10	1.11E-03	66.3	
50	0	1367.74	16	65	8.24	2736.30	2718	20	1.10E-03	127.0	
51	0	1373.49	13	64	3.29	2747.79	2738	14	9.33E-04	128.3	
52	0	1460.73*	156	56	1.96	2922.28	2916	12	1.08E-02	13.3	
53	0	1486.24	14	19	0.98	2973.30	2968	9	9.99E-04	61.6	
54	1	1509.31	30	21	2.48	3019.45	3014	23	2.08E-03	35.5	1.06E+00
55	1	1513.36	35	25	2.48	3027.55	3014	23	2.42E-03	39.0	
56	0	1558.33	11	28	2.79	3117.49	3110	11	7.75E-04	96.0	
57	0	1675.53	13	18	1.33	3351.87	3346	11	9.12E-04	69.8	
58	0	1692.40*	10	19	1.12	3385.62	3379	13	7.14E-04	128.9	
59	0	1731.43	17	52	0.99	3463.67	3449	25	1.17E-03	116.4	
60	0	1763.80*	90	32	2.19	3528.40	3521	19	6.22E-03	20.0	
61	0	1868.94	6	11	1.36	3738.65	3732	9	3.94E-04	121.3	
62	0	1963.10	6	4	0.50	3926.91	3921	9	3.96E-04	78.7	

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]G198530044       *
* Acquisition date :  5-DEC-2007 05:57:45 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:04.01     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530044           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0822E+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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.389E+00	6.360E-01	5.224E-01	0.000E+00
EU-155	9.561E-02	9.029E-02	1.046E-01	0.000E+00
TL-208	3.174E-01	6.847E-02	5.001E-02	0.000E+00
BI-212	9.189E-01	5.269E-01	3.941E-01	0.000E+00
PB-212	1.006E+00	1.023E-01	6.908E-02	0.000E+00
BI-214	6.817E-01	1.299E-01	1.002E-01	0.000E+00
PB-214	7.943E-01	1.183E-01	1.008E-01	0.000E+00
RA-223	4.269E-01	2.232E-01	2.073E-01	0.000E+00
AC-228	1.225E+00	2.518E-01	2.058E-01	0.000E+00
PA-234M	2.796E+00	5.468E+00	6.786E+00	0.000E+00
TH-234	1.399E+00	5.061E-01	4.076E-01	0.000E+00
NP-236	4.233E-02	5.171E-02	5.529E-02	0.000E+00
NP-237	5.174E-01	1.473E-01	1.684E-01	0.000E+00
AM-243	1.970E-01	3.555E-02	3.633E-02	0.000E+00
CM-243	8.663E-02	8.181E-02	8.857E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	3.363E-02		3.233E-02	5.821E-02	0.000E+00	NOT IDENT.
RH-101	1.071E-02		2.461E-02	3.904E-02	0.000E+00	NOT IDENT.
SB-125	2.169E-02		8.301E-02	1.233E-01	0.000E+00	NOT IDENT.
CS-137	3.100E-02		3.779E-02	5.877E-02	0.000E+00	NOT IDENT.
PO-209	-5.496E-01		6.853E+00	1.113E+01	0.000E+00	NOT IDENT.
BI-211	5.305E-01		9.341E-01	1.596E+00	0.000E+00	NOT IDENT.
PA-233	3.204E-02		4.470E-02	7.904E-02	0.000E+00	NOT IDENT.
U-235	-6.987E-02		1.587E-01	2.439E-01	0.000E+00	NOT IDENT.
NP-239	3.702E-02		1.550E-01	2.568E-01	0.000E+00	NOT IDENT.
AM-241	1.020E-03		4.101E-02	6.213E-02	0.000E+00	NOT IDENT.
AM-246	1.245E-01		1.215E-01	2.180E-01	0.000E+00	NOT IDENT.
CF-249	-1.365E-02		3.449E-02	5.296E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:45:33.75

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530044.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:57:45.
Sample ID        : G198530044           Sample quantity  : 1.08220E+02 GRAM
Detector name    : GAM13                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:04.01  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	156	10.66*	1.061E+00	2.389E+00	2.389E+00	27.17
EU-155	105.31	84	21.20*	7.308E+00	9.365E-02	9.561E-02	96.37
TL-208	277.36	60	6.31	4.322E+00	3.824E-01	3.824E-01	100.69
	510.77	176	22.60	2.590E+00	5.215E-01	5.215E-01	53.35
	583.19	357	84.50*	2.306E+00	3.174E-01	3.174E-01	22.01
	763.13	------	1.81	1.821E+00	------	Line Not Found	------
	860.56	52	12.42	1.639E+00	4.439E-01	4.439E-01	103.93
BI-212	727.33	119	11.80*	1.898E+00	9.189E-01	9.189E-01	58.51
	785.37	42	1.10	1.776E+00	3.708E+00	3.708E+00	80.46
	1620.50	------	1.49	9.772E-01	------	Line Not Found	------
PB-212	74.81	596	10.40	7.694E+00	1.292E+00	1.292E+00	18.42
	77.11	867	17.50	7.684E+00	1.118E+00	1.118E+00	13.79
	87.30	281	7.81	7.595E+00	8.216E-01	8.216E-01	29.05
	238.63	1212	43.30*	4.823E+00	1.006E+00	1.006E+00	10.38
	300.09	107	3.28	4.060E+00	1.387E+00	1.387E+00	43.38
BI-214	609.31	402	46.10*	2.219E+00	6.817E-01	6.817E-01	19.44
	768.36	------	4.94	1.811E+00	------	Line Not Found	------
	806.17	61	1.22	1.740E+00	4.954E+00	4.954E+00	102.67
	934.06	117	3.03	1.531E+00	4.386E+00	4.386E+00	47.37
	1120.29	107	15.10	1.315E+00	9.354E-01	9.354E-01	39.78
	1155.19	18	1.63	1.282E+00	1.518E+00	1.518E+00	130.03
	1238.11	65	5.79	1.212E+00	1.602E+00	1.602E+00	51.42
	1280.96	------	1.43	1.178E+00	------	Line Not Found	------
	1377.67	------	4.00	1.111E+00	------	Line Not Found	------
	1401.50	------	1.27	1.096E+00	------	Line Not Found	------
	1407.98	------	2.15	1.092E+00	------	Line Not Found	------
	1509.23	30	2.11	1.033E+00	2.382E+00	2.383E+00	71.18
	1729.60	17	2.92	9.279E-01	1.074E+00	1.074E+00	232.83
	1764.49	90	15.40	9.146E-01	1.102E+00	1.102E+00	40.32
PB-214	74.81	596	6.44	7.694E+00	2.086E+00	2.086E+00	18.42
	77.11	867	10.80	7.684E+00	1.811E+00	1.811E+00	13.79
	87.30	281	4.84	7.595E+00	1.326E+00	1.326E+00	29.05

Sample ID : G198530044 Acquisition date : 5-DEC-2007 05:57:45

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	242.00	286	7.43	4.781E+00	1.394E+00	1.394E+00	34.50
	295.22	377	19.30	4.113E+00	8.244E-01	8.244E-01	21.02
	351.93	614	37.60*	3.568E+00	7.943E-01	7.943E-01	15.20
RA-223	269.46	148	13.70*	4.401E+00	4.269E-01	4.269E-01	53.35
AC-228	129.07	101	2.42	6.837E+00	1.059E+00	1.059E+00	78.67
	209.25	175	3.89	5.278E+00	1.480E+00	1.480E+00	40.03
	270.25	148	3.46	4.401E+00	1.690E+00	1.690E+00	53.35
	338.32	245	11.27	3.687E+00	1.022E+00	1.022E+00	32.91
	409.46	25	1.92	3.139E+00	7.211E-01	7.211E-01	218.41
	463.00	48	4.40	2.823E+00	6.771E-01	6.771E-01	119.09
	794.95	38	4.25	1.756E+00	8.838E-01	8.838E-01	146.80
	911.20	285	25.80*	1.564E+00	1.226E+00	1.225E+00	20.97
	964.77	93	4.99	1.490E+00	2.172E+00	2.172E+00	54.69
	968.97	168	15.80	1.484E+00	1.241E+00	1.241E+00	25.18
	1588.20	------	3.22	9.927E-01	------	Line Not Found	------
PA-234M	1001.03	20	0.84*	1.443E+00	2.796E+00	2.796E+00	199.57
TH-234	63.29	33	4.80	7.666E+00	1.568E-01	1.568E-01	382.08
	92.58	328	5.41*	7.519E+00	1.399E+00	1.399E+00	36.91
NP-236	98.44	69	38.00*	7.425E+00	4.233E-02	4.233E-02	124.67
NP-237	86.48	281	12.40*	7.595E+00	5.174E-01	5.174E-01	29.05
AM-243	74.66	596	68.20*	7.694E+00	1.969E-01	1.970E-01	18.42
CM-243	103.76	84	23.00*	7.308E+00	8.632E-02	8.663E-02	96.37

Flag: "*" = Keyline

Sample ID : G198530044 Acquisition date : 5-DEC-2007 05:57:45

Total number of lines in spectrum 62
Number of unidentified lines 23
Number of lines tentatively identified by NID 39 62.90%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.389E+00	2.389E+00	0.649E+00	27.17	
EU-155	1.57E+08S	1.02	9.365E-02	9.561E-02	9.213E-02	96.37	
TL-208	4.43E+17S	1.00	3.174E-01	3.174E-01	0.699E-01	22.01	
BI-212	4.43E+17S	1.00	9.189E-01	9.189E-01	5.377E-01	58.51	
PB-212	4.43E+17S	1.00	1.006E+00	1.006E+00	0.104E+00	10.38	
BI-214	5.05E+10S	1.00	6.817E-01	6.817E-01	1.325E-01	19.44	
PB-214	5.05E+10S	1.00	7.943E-01	7.943E-01	1.207E-01	15.20	
RA-223	1.04E+12S	1.00	4.269E-01	4.269E-01	2.277E-01	53.35	
AC-228	4.43E+17S	1.00	1.226E+00	1.225E+00	0.257E+00	20.97	
PA-234M	1.41E+17S	1.00	2.796E+00	2.796E+00	5.579E+00	199.57	
TH-234	1.41E+17S	1.00	1.399E+00	1.399E+00	0.516E+00	36.91	
NP-236	4.89E+12S	1.00	4.233E-02	4.233E-02	5.277E-02	124.67	
NP-237	6.75E+13S	1.00	5.174E-01	5.174E-01	1.503E-01	29.05	
AM-243	2.33E+11S	1.00	1.969E-01	1.970E-01	0.363E-01	18.42	
CM-243	8.99E+08S	1.00	8.632E-02	8.663E-02	8.348E-02	96.37	
			---	---			
		Total Activity :	1.289E+01	1.289E+01			

Grand Total Activity : 1.289E+01 1.289E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530044 Acquisition date : 5-DEC-2007 05:57:45

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.58	122	504	0.98	92.60	89	8	8.48E-03	76.8	7.26E+00	
0	53.75	38	603	1.11	106.97	103	8	2.65E-03	****	7.50E+00	
0	84.10	154	559	1.49	167.71	165	7	1.07E-02	58.7	7.63E+00	
4	89.94	236	318	0.97	179.41	177	13	1.64E-02	24.7	7.56E+00	
0	185.82	249	632	1.09	371.32	366	11	1.73E-02	46.2	5.69E+00	
2	205.45	59	328	1.31	410.62	407	16	4.07E-03	****	5.34E+00	
4	302.53	14	216	1.44	604.93	597	12	9.79E-04	****	4.03E+00	
0	327.78	99	289	1.29	655.47	652	10	6.90E-03	66.9	3.78E+00	
0	424.74	46	116	1.87	849.54	847	7	3.19E-03	83.8	3.04E+00	
0	530.24	28	107	1.27	1060.67	1058	7	1.94E-03	****	2.51E+00	
0	665.48	34	75	1.25	1331.30	1328	7	2.36E-03	92.8	2.05E+00	
0	702.39	10	133	1.94	1405.18	1398	10	6.70E-04	****	1.96E+00	
0	1063.55	25	61	1.50	2127.78	2121	12	1.77E-03	****	1.37E+00	
0	1354.92	16	28	0.71	2710.63	2706	10	1.11E-03	****	1.13E+00	
0	1367.74	16	65	8.24	2736.30	2718	20	1.10E-03	****	1.12E+00	
0	1373.49	13	64	3.29	2747.79	2738	14	9.33E-04	****	1.11E+00	
0	1486.24	14	19	0.98	2973.30	2968	9	9.99E-04	****	1.05E+00	
1	1513.36	35	25	2.48	3027.55	3014	23	2.42E-03	77.9	1.03E+00	
0	1558.33	11	28	2.79	3117.49	3110	11	7.75E-04	****	1.01E+00	
0	1675.53	13	18	1.33	3351.87	3346	11	9.12E-04	****	9.52E-01	
0	1692.40	10	19	1.12	3385.62	3379	13	7.14E-04	****	9.45E-01	
0	1868.94	6	11	1.36	3738.65	3732	9	3.94E-04	****	8.74E-01	
0	1963.10	6	4	0.50	3926.91	3921	9	3.96E-04	****	8.42E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530044            *
* Acquisition date :  5-DEC-2007 05:57:45 Detector SN#    :                 *
* Detector ID      : GAM13                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:04.01     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530044           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0822E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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	LC (pCi/GRAM)	TPU
K-40	2.389E+00	6.360E-01	2.614E-01	6.360E-01
EU-155	9.561E-02	9.029E-02	5.234E-02	9.029E-02
TL-208	3.174E-01	6.847E-02	2.502E-02	6.847E-02
BI-212	9.189E-01	5.269E-01	1.971E-01	5.269E-01
PB-212	1.006E+00	1.023E-01	3.456E-02	1.023E-01
BI-214	6.817E-01	1.299E-01	5.014E-02	1.299E-01
PB-214	7.943E-01	1.183E-01	5.043E-02	1.183E-01
RA-223	4.269E-01	2.232E-01	1.037E-01	2.232E-01
AC-228	1.225E+00	2.518E-01	1.030E-01	2.518E-01
PA-234M	2.796E+00	5.468E+00	3.395E+00	5.468E+00
TH-234	1.399E+00	5.061E-01	2.039E-01	5.061E-01
NP-236	4.233E-02	5.171E-02	2.766E-02	5.171E-02
NP-237	5.174E-01	1.473E-01	8.424E-02	1.473E-01
AM-243	1.970E-01	3.555E-02	1.818E-02	3.555E-02
CM-243	8.663E-02	8.181E-02	4.431E-02	8.181E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	3.363E-02	3.233E-02	2.912E-02	3.233E-02	NOT IDENT.
RH-101	1.071E-02	2.461E-02	1.953E-02	2.461E-02	NOT IDENT.
SB-125	2.169E-02	8.301E-02	6.170E-02	8.301E-02	NOT IDENT.
CS-137	3.100E-02	3.779E-02	2.940E-02	3.779E-02	NOT IDENT.
PO-209	-5.496E-01	6.853E+00	5.569E+00	6.853E+00	NOT IDENT.
BI-211	5.305E-01	9.341E-01	7.984E-01	9.341E-01	NOT IDENT.
PA-233	3.204E-02	4.470E-02	3.954E-02	4.470E-02	NOT IDENT.
U-235	-6.987E-02	1.587E-01	1.220E-01	1.587E-01	NOT IDENT.
NP-239	3.702E-02	1.550E-01	1.285E-01	1.550E-01	NOT IDENT.
AM-241	1.020E-03	4.101E-02	3.108E-02	4.101E-02	NOT IDENT.
AM-246	1.245E-01	1.215E-01	1.090E-01	1.215E-01	NOT IDENT.
CF-249	-1.365E-02	3.449E-02	2.650E-02	3.449E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	429.7138
63.29	467.9585
74.66	544.7249
74.81	545.0024
74.81	545.0024
77.11	549.2501
77.11	549.2501
86.48	378.1288
87.30	411.9272
87.30	411.9272
92.58	413.2995
98.44	366.2808
103.76	333.6493
105.31	379.3328
129.07	381.1578
143.76	392.3973
198.00	293.7960
209.25	342.4677
228.18	276.0936
238.63	316.4236
242.00	317.8739
269.46	239.0268
270.25	239.2616
277.36	278.8795
295.22	248.2722
300.09	249.6501
312.17	191.6225
338.32	248.6139
351.93	279.1670
387.59	200.5157
409.46	201.3767
427.87	164.4739
463.00	178.3854
510.77	167.1562
583.19	146.0146
609.31	161.6568
661.66	131.6448
727.33	120.2957
763.13	155.4828
768.36	147.6328
785.37	129.1011
794.95	120.8763
806.17	112.1823
831.80	105.3917
860.56	100.6820
896.60	108.5205
911.20	106.6378
934.06	80.7607
964.77	91.1980
968.97	72.6526
1001.03	104.9400
1078.86	77.6435
1120.29	82.1016
1155.19	80.8105
1173.23	56.9206
1238.11	73.0112
1280.96	55.8208
1332.51	59.9352
1377.67	66.7226
1401.50	64.6177
1407.98	60.0469
1460.80	54.2943
1509.23	45.6152
1588.20	45.3534
1620.50	34.7974
1729.60	23.4949
1764.49	28.8418

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530044

Total Uranium Activity	-3.2327E-02	ug/g
Total Uranium Counting Unc.	7.3436E-02	ug/g
Total Uranium Tpu	7.3436E-08	ug/g
Total Uranium Mda	5.6466E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:46:08.46

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530045.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:58:23.
Sample ID        : G198530045           Sample quantity  : 9.53600E+01 GRAM
Detector name    : GAM14                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.76  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.69*	49	345	1.07	93.35	90	8	3.41E-03	74.1	
2	0	63.66*	146	701	1.33	127.29	123	12	1.02E-02	38.3	
3	2	74.81*	528	611	1.68	149.58	142	19	3.67E-02	10.9	2.31E+00
4	2	77.15*	694	425	1.19	154.25	142	19	4.82E-02	6.7	
5	3	84.25*	161	300	1.72	168.45	165	28	1.12E-02	19.2	1.49E+00
6	3	87.31	389	463	1.63	174.57	165	28	2.70E-02	11.6	
7	3	89.94	185	306	1.18	179.82	165	28	1.29E-02	18.1	
8	3	92.81*	415	403	1.73	185.57	165	28	2.88E-02	12.1	
9	0	109.25	57	323	0.95	218.43	216	8	3.93E-03	56.5	
10	0	128.66	144	401	1.17	257.25	252	11	1.00E-02	28.1	
11	0	143.87*	8	312	0.71	287.66	285	7	5.28E-04	434.3	
12	0	185.65*	292	432	1.34	371.18	364	13	2.03E-02	17.1	
13	0	208.95	137	372	0.71	417.77	414	11	9.50E-03	28.4	
14	2	238.47*	1220	229	1.30	476.80	468	21	8.48E-02	3.9	8.16E-01
15	2	241.46	333	255	1.88	482.79	468	21	2.31E-02	14.3	
16	0	270.48	116	287	1.80	540.81	536	12	8.04E-03	30.8	
17	0	295.05*	450	251	1.48	589.93	585	12	3.13E-02	8.7	
18	0	300.47*	96	322	1.46	600.78	596	14	6.64E-03	41.9	
19	0	328.26	130	173	1.13	656.35	652	11	9.06E-03	21.3	
20	0	337.82	249	250	1.64	675.46	669	13	1.73E-02	14.6	
21	0	351.67*	754	303	1.46	703.15	696	15	5.23E-02	6.4	
22	0	409.07	38	139	0.81	817.94	814	10	2.67E-03	59.7	
23	0	412.18	7	96	0.86	824.16	824	6	5.16E-04	209.7	
24	0	463.18	92	127	1.33	926.15	919	12	6.37E-03	26.9	
25	0	510.39*	125	233	2.73	1020.57	1014	22	8.69E-03	37.0	
26	0	568.87*	94	207	1.71	1137.54	1129	17	6.54E-03	39.2	
27	0	583.04*	370	87	1.69	1165.88	1160	14	2.57E-02	7.8	
28	0	609.19*	530	148	1.62	1218.17	1210	17	3.68E-02	7.1	
29	0	664.51	37	140	2.73	1328.83	1315	16	2.55E-03	74.0	
30	0	726.96	101	75	2.16	1453.74	1447	13	7.03E-03	20.2	
31	0	787.44	20	77	0.57	1574.73	1568	13	1.41E-03	93.4	
32	0	794.88	54	57	0.75	1589.61	1584	11	3.75E-03	30.4	
33	0	807.17	52	69	6.28	1614.19	1605	20	3.62E-03	41.6	
34	0	860.37	72	39	4.12	1720.62	1714	13	5.02E-03	21.3	
35	0	881.53	19	39	0.75	1762.94	1757	10	1.29E-03	67.7	
36	0	904.90	12	39	1.54	1809.71	1806	10	8.25E-04	101.3	
37	0	911.20*	278	66	1.53	1822.31	1816	15	1.93E-02	9.2	
38	0	954.45	23	18	1.63	1908.83	1901	12	1.60E-03	42.2	

Sample ID : G198530045 Acquisition date : 5-DEC-2007 05:58:23

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	1	964.62*	74	34	2.11	1929.18	1919	27	5.13E-03	21.6	3.00E+00
40	1	968.98*	141	31	1.91	1937.90	1919	27	9.79E-03	12.9	
41	0	1014.08*	24	51	7.81	2028.13	2019	20	1.65E-03	79.2	
42	0	1040.04	19	33	4.05	2080.07	2072	12	1.34E-03	63.8	
43	0	1064.49	29	17	3.38	2129.00	2124	10	2.00E-03	32.9	
44	0	1120.43*	160	22	1.74	2240.92	2234	15	1.11E-02	10.5	
45	0	1239.30	35	68	2.76	2478.77	2469	19	2.41E-03	58.9	
46	0	1279.55	47	27	6.82	2559.33	2549	21	3.29E-03	30.7	
47	0	1312.22	11	15	0.91	2624.71	2620	8	7.48E-04	70.7	
48	0	1377.30	55	13	2.39	2754.95	2748	13	3.84E-03	19.0	
49	0	1402.00	25	7	3.20	2804.38	2800	12	1.71E-03	28.8	
50	0	1410.23	42	25	7.67	2820.86	2811	20	2.93E-03	32.9	
51	0	1451.33	14	21	7.78	2903.11	2891	18	9.63E-04	84.1	
52	0	1460.78*	188	15	1.83	2922.03	2914	15	1.31E-02	9.2	
53	0	1495.60	15	11	2.51	2991.73	2985	11	1.05E-03	49.7	
54	0	1587.93	24	16	1.15	3176.53	3172	9	1.67E-03	36.0	
55	0	1661.83*	16	18	5.32	3324.45	3315	15	1.09E-03	70.1	
56	0	1673.77	16	7	4.10	3348.35	3341	13	1.08E-03	42.4	
57	0	1729.80	40	8	3.03	3460.51	3454	15	2.74E-03	21.9	
58	0	1764.29	126	14	2.61	3529.56	3522	14	8.78E-03	10.9	
59	0	1791.19	9	6	0.67	3583.41	3575	11	5.90E-04	63.5	
60	0	1848.36	19	10	0.79	3697.87	3692	11	1.30E-03	41.1	
61	0	1891.86*	3	9	0.87	3784.96	3777	9	2.03E-04	206.0	
62	0	2010.72	9	7	0.88	4022.94	4016	14	6.12E-04	72.2	

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]G198530045       *
* Acquisition date :  5-DEC-2007 05:58:23 Detector SN#    :                 *
* Detector ID      : GAM14                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.76     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530045           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.5360E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-MAR-2007 18:40:51 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	2.829E+00	5.336E-01	3.457E-01	0.000E+00
TL-208	3.081E-01	5.199E-02	3.245E-02	0.000E+00
BI-212	7.341E-01	2.968E-01	3.056E-01	0.000E+00
PB-212	9.825E-01	9.564E-02	6.294E-02	0.000E+00
BI-214	8.401E-01	1.314E-01	7.631E-02	0.000E+00
PB-214	9.333E-01	1.285E-01	7.849E-02	0.000E+00
RA-223	3.226E-01	1.961E-01	1.964E-01	0.000E+00
AC-228	1.135E+00	2.263E-01	1.355E-01	0.000E+00
TH-234	1.972E+00	4.926E-01	4.634E-01	0.000E+00
U-235	1.804E-02	1.536E-01	2.140E-01	0.000E+00
NP-237	8.361E-01	2.019E-01	2.097E-01	0.000E+00
AM-243	2.381E-01	5.381E-02	4.664E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	-1.589E-02		2.343E-02	3.588E-02	0.000E+00	NOT IDENT.
RH-101	-1.881E-02		2.722E-02	3.835E-02	0.000E+00	NOT IDENT.
SB-125	-2.369E-03		6.539E-02	1.083E-01	0.000E+00	NOT IDENT.
CS-137	1.843E-02		2.860E-02	4.857E-02	0.000E+00	NOT IDENT.
EU-155	8.072E-02		7.535E-02	1.131E-01	0.000E+00	NOT IDENT.
PO-209	5.646E-01		5.289E+00	8.471E+00	0.000E+00	NOT IDENT.
BI-211	4.307E-02		7.061E-01	1.199E+00	0.000E+00	NOT IDENT.
PA-233	2.066E-02		4.258E-02	7.308E-02	0.000E+00	NOT IDENT.
PA-234M	2.487E+00		2.928E+00	5.243E+00	0.000E+00	NOT IDENT.
NP-236	2.962E-02		4.108E-02	6.087E-02	0.000E+00	NOT IDENT.
NP-239	-9.674E-02		1.466E-01	2.419E-01	0.000E+00	NOT IDENT.
AM-241	-2.539E-02		8.680E-02	1.239E-01	0.000E+00	NOT IDENT.
CM-243	6.698E-02		6.241E-02	1.024E-01	0.000E+00	NOT IDENT.
AM-246	1.258E-02		8.326E-02	1.411E-01	0.000E+00	NOT IDENT.
CF-249	6.618E-03		2.675E-02	4.516E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:46:09.52

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530045.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:58:23.
Sample ID        : G198530045           Sample quantity  : 9.53600E+01 GRAM
Detector name    : GAM14                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.76  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	188	10.66*	1.230E+00	2.829E+00	2.829E+00	19.24
TL-208	277.36	------	6.31	5.062E+00	------	Line Not Found	------
	510.77	125	22.60	3.131E+00	3.480E-01	3.480E-01	74.38
	583.19	370	84.50*	2.796E+00	3.081E-01	3.081E-01	17.22
	763.13	------	1.81	2.201E+00	------	Line Not Found	------
	860.56	72	12.42	1.971E+00	5.813E-01	5.813E-01	43.54
BI-212	727.33	101	11.80*	2.300E+00	7.341E-01	7.341E-01	41.25
	785.37	------	1.10	2.144E+00	------	Line Not Found	------
	1620.50	------	1.49	1.140E+00	------	Line Not Found	------
PB-212	74.81	528	10.40	6.400E+00	1.562E+00	1.562E+00	23.06
	77.11	694	17.50	6.635E+00	1.176E+00	1.176E+00	15.35
	87.30	389	7.81	7.394E+00	1.327E+00	1.327E+00	24.65
	238.63	1220	43.30*	5.646E+00	9.825E-01	9.825E-01	9.93
	300.09	96	3.28	4.769E+00	1.204E+00	1.204E+00	84.12
BI-214	609.31	530	46.10*	2.691E+00	8.400E-01	8.401E-01	15.96
	768.36	------	4.94	2.187E+00	------	Line Not Found	------
	806.17	52	1.22	2.091E+00	4.026E+00	4.026E+00	83.63
	934.06	------	3.03	1.826E+00	------	Line Not Found	------
	1120.29	160	15.10	1.544E+00	1.353E+00	1.353E+00	22.14
	1155.19	------	1.63	1.502E+00	------	Line Not Found	------
	1238.11	35	5.79	1.411E+00	8.368E-01	8.368E-01	118.04
	1280.96	47	1.43	1.372E+00	4.754E+00	4.755E+00	61.70
	1377.67	55	4.00	1.289E+00	2.109E+00	2.110E+00	38.39
	1401.50	25	1.27	1.271E+00	3.000E+00	3.000E+00	57.77
	1407.98	------	2.15	1.266E+00	------	Line Not Found	------
	1509.23	------	2.11	1.199E+00	------	Line Not Found	------
	1729.60	40	2.92	1.093E+00	2.435E+00	2.436E+00	44.25
	1764.49	126	15.40	1.081E+00	1.496E+00	1.496E+00	22.46
PB-214	74.81	528	6.44	6.400E+00	2.522E+00	2.522E+00	23.06
	77.11	694	10.80	6.635E+00	1.906E+00	1.906E+00	15.35
	87.30	389	4.84	7.394E+00	2.142E+00	2.142E+00	24.65
	242.00	333	7.43	5.597E+00	1.575E+00	1.575E+00	29.24

Sample ID : G198530045 Acquisition date : 5-DEC-2007 05:58:23

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.22	450	19.30	4.835E+00	9.495E-01	9.496E-01	18.50
	351.93	754	37.60*	4.228E+00	9.333E-01	9.333E-01	14.05
RA-223	269.46	116	13.70*	5.157E+00	3.226E-01	3.226E-01	62.01
AC-228	129.07	144	2.42	7.841E+00	1.495E+00	1.495E+00	56.63
	209.25	137	3.89	6.179E+00	1.121E+00	1.121E+00	57.20
	270.25	116	3.46	5.157E+00	1.277E+00	1.277E+00	62.01
	338.32	249	11.27	4.361E+00	9.967E-01	9.967E-01	29.73
	409.46	38	1.92	3.753E+00	1.050E+00	1.050E+00	119.56
	463.00	92	4.40	3.393E+00	1.209E+00	1.209E+00	54.06
	794.95	54	4.25	2.120E+00	1.179E+00	1.179E+00	61.43
	911.20	278	25.80*	1.869E+00	1.135E+00	1.135E+00	20.34
	964.77	74	4.99	1.773E+00	1.643E+00	1.643E+00	44.01
	968.97	141	15.80	1.765E+00	9.951E-01	9.951E-01	27.15
	1588.20	24	3.22	1.156E+00	1.275E+00	1.275E+00	72.26
TH-234	63.29	146	4.80	4.930E+00	1.217E+00	1.217E+00	76.98
	92.58	415	5.41*	7.651E+00	1.972E+00	1.972E+00	25.49
U-235	143.76	8	10.96*	7.570E+00	1.804E-02	1.804E-02	868.64
NP-237	86.48	389	12.40*	7.394E+00	8.361E-01	8.361E-01	24.65
AM-243	74.66	528	68.20*	6.400E+00	2.381E-01	2.381E-01	23.06

Flag: "*" = Keyline

Sample ID : G198530045 Acquisition date : 5-DEC-2007 05:58:23

Total number of lines in spectrum 62
Number of unidentified lines 26
Number of lines tentatively identified by NID 36 58.06%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.829E+00	2.829E+00	0.544E+00	19.24	
TL-208	4.43E+17S	1.00	3.081E-01	3.081E-01	0.530E-01	17.22	
BI-212	4.43E+17S	1.00	7.341E-01	7.341E-01	3.028E-01	41.25	
PB-212	4.43E+17S	1.00	9.825E-01	9.825E-01	0.976E-01	9.93	
BI-214	5.05E+10S	1.00	8.400E-01	8.401E-01	1.340E-01	15.96	
PB-214	5.05E+10S	1.00	9.333E-01	9.333E-01	1.311E-01	14.05	
RA-223	1.04E+12S	1.00	3.226E-01	3.226E-01	2.001E-01	62.01	
AC-228	4.43E+17S	1.00	1.135E+00	1.135E+00	0.231E+00	20.34	
TH-234	1.41E+17S	1.00	1.972E+00	1.972E+00	0.503E+00	25.49	
U-235	2.22E+16S	1.00	1.804E-02	1.804E-02	15.67E-02	868.64	
NP-237	6.75E+13S	1.00	8.361E-01	8.361E-01	2.061E-01	24.65	
AM-243	2.33E+11S	1.00	2.381E-01	2.381E-01	0.549E-01	23.06	
			---	---			
		Total Activity :	1.115E+01	1.115E+01			

Grand Total Activity : 1.115E+01 1.115E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530045 Acquisition date : 5-DEC-2007 05:58:23

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.69	49	345	1.07	93.35	90	8	3.41E-03	****	1.92E+00	
3	84.25	161	300	1.72	168.45	165	28	1.12E-02	38.5	7.21E+00	
3	89.94	185	306	1.18	179.82	165	28	1.29E-02	36.3	7.53E+00	
0	109.25	57	323	0.95	218.43	216	8	3.93E-03	****	7.97E+00	
0	185.65	292	432	1.34	371.18	364	13	2.03E-02	34.2	6.66E+00	
0	328.26	130	173	1.13	656.35	652	11	9.06E-03	42.6	4.46E+00	
0	412.18	7	96	0.86	824.16	824	6	5.16E-04	****	3.73E+00	
0	568.87	94	207	1.71	1137.54	1129	17	6.54E-03	78.4	2.86E+00	
0	664.51	37	140	2.73	1328.83	1315	16	2.55E-03	****	2.49E+00	
0	787.44	20	77	0.57	1574.73	1568	13	1.41E-03	****	2.14E+00	
0	881.53	19	39	0.75	1762.94	1757	10	1.29E-03	****	1.93E+00	
0	904.90	12	39	1.54	1809.71	1806	10	8.25E-04	****	1.88E+00	
0	954.45	23	18	1.63	1908.83	1901	12	1.60E-03	84.4	1.79E+00	
0	1014.08	24	51	7.81	2028.13	2019	20	1.65E-03	****	1.69E+00	
0	1040.04	19	33	4.05	2080.07	2072	12	1.34E-03	****	1.65E+00	
0	1064.49	29	17	3.38	2129.00	2124	10	2.00E-03	65.8	1.62E+00	
0	1312.22	11	15	0.91	2624.71	2620	8	7.48E-04	****	1.34E+00	
0	1410.23	42	25	7.67	2820.86	2811	20	2.93E-03	65.7	1.26E+00	
0	1451.33	14	21	7.78	2903.11	2891	18	9.63E-04	****	1.24E+00	
0	1495.60	15	11	2.51	2991.73	2985	11	1.05E-03	99.5	1.21E+00	
0	1661.83	16	18	5.32	3324.45	3315	15	1.09E-03	****	1.12E+00	
0	1673.77	16	7	4.10	3348.35	3341	13	1.08E-03	84.7	1.12E+00	
0	1791.19	9	6	0.67	3583.41	3575	11	5.90E-04	****	1.07E+00	
0	1848.36	19	10	0.79	3697.87	3692	11	1.30E-03	82.3	1.05E+00	
0	1891.86	3	9	0.87	3784.96	3777	9	2.03E-04	****	1.04E+00	
0	2010.72	9	7	0.88	4022.94	4016	14	6.12E-04	****	1.02E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530045            *
* Acquisition date :  5-DEC-2007 05:58:23 Detector SN#    :                 *
* Detector ID      : GAM14                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.76     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530045           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.5360E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  7-MAR-2007 18:40:51 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	2.829E+00	5.336E-01	1.729E-01	5.336E-01
TL-208	3.081E-01	5.199E-02	1.623E-02	5.199E-02
BI-212	7.341E-01	2.968E-01	1.529E-01	2.968E-01
PB-212	9.825E-01	9.564E-02	3.149E-02	9.564E-02
BI-214	8.401E-01	1.314E-01	3.818E-02	1.314E-01
PB-214	9.333E-01	1.285E-01	3.927E-02	1.285E-01
RA-223	3.226E-01	1.961E-01	9.825E-02	1.961E-01
AC-228	1.135E+00	2.263E-01	6.778E-02	2.263E-01
TH-234	1.972E+00	4.926E-01	2.318E-01	4.926E-01
U-235	1.804E-02	1.536E-01	1.071E-01	1.536E-01
NP-237	8.361E-01	2.019E-01	1.049E-01	2.019E-01
AM-243	2.381E-01	5.381E-02	2.334E-02	5.381E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-1.589E-02	2.343E-02	1.795E-02	2.343E-02	NOT IDENT.
RH-101	-1.881E-02	2.722E-02	1.919E-02	2.722E-02	NOT IDENT.
SB-125	-2.369E-03	6.539E-02	5.420E-02	6.539E-02	NOT IDENT.
CS-137	1.843E-02	2.860E-02	2.430E-02	2.860E-02	NOT IDENT.
EU-155	8.072E-02	7.535E-02	5.660E-02	7.535E-02	NOT IDENT.
PO-209	5.646E-01	5.289E+00	4.238E+00	5.289E+00	NOT IDENT.
BI-211	4.307E-02	7.061E-01	5.997E-01	7.061E-01	NOT IDENT.
PA-233	2.066E-02	4.258E-02	3.656E-02	4.258E-02	NOT IDENT.
PA-234M	2.487E+00	2.928E+00	2.623E+00	2.928E+00	NOT IDENT.
NP-236	2.962E-02	4.108E-02	3.045E-02	4.108E-02	NOT IDENT.
NP-239	-9.674E-02	1.466E-01	1.210E-01	1.466E-01	NOT IDENT.
AM-241	-2.539E-02	8.680E-02	6.199E-02	8.680E-02	NOT IDENT.
CM-243	6.698E-02	6.241E-02	5.123E-02	6.241E-02	NOT IDENT.
AM-246	1.258E-02	8.326E-02	7.059E-02	8.326E-02	NOT IDENT.
CF-249	6.618E-03	2.675E-02	2.260E-02	2.675E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	453.6932
63.29	422.6775
74.66	501.2988
74.81	501.3724
74.81	501.3724
77.11	502.4977
77.11	502.4977
86.48	443.8177
87.30	444.1461
87.30	444.1461
92.58	446.2259
98.44	353.6711
103.76	358.6445
105.31	355.6757
129.07	377.6013
143.76	383.6625
198.00	344.4843
209.25	349.3421
228.18	310.3201
238.63	287.8096
242.00	257.2878
269.46	235.5286
270.25	240.3263
277.36	220.1654
295.22	244.5978
300.09	133.6956
312.17	189.0931
338.32	185.2947
351.93	189.2116
387.59	157.1639
409.46	137.8082
427.87	155.3992
463.00	136.9396
510.77	99.8809
583.19	71.5112
609.31	109.0980
661.66	109.5379
727.33	83.6857
763.13	110.0854
768.36	84.4999
785.37	74.2932
794.95	71.4632
806.17	65.7767
831.80	77.3329
860.56	41.7884
896.60	58.5728
911.20	51.9821
934.06	46.6493
964.77	37.3583
968.97	37.3901
1001.03	51.1313
1078.86	45.0323
1120.29	48.3321
1155.19	42.6763
1173.23	44.8004
1238.11	50.3296
1280.96	38.5211
1332.51	38.8411
1377.67	31.7637
1401.50	21.2536
1407.98	0.0000
1460.80	25.0176
1509.23	27.2949
1588.20	35.0343
1620.50	21.3281
1729.60	17.3145
1764.49	22.8286

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530045

Total Uranium Activity	8.3487E-03	ug/g
Total Uranium Counting Unc.	7.1070E-02	ug/g
Total Uranium Tpu	7.1070E-08	ug/g
Total Uranium Mda	4.9536E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:46:43.99

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530046.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:59:04.
Sample ID        : G198530046           Sample quantity  : 9.67900E+01 GRAM
Detector name    : GAM16                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.37  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.57*	63	438	1.14	93.36	89	11	4.39E-03	69.3	
2	0	63.53*	73	465	0.97	127.28	123	8	5.08E-03	57.2	
3	6	74.84*	402	477	1.11	149.88	146	13	2.79E-02	10.8	1.59E+00
4	6	77.09*	562	353	0.93	154.39	146	13	3.90E-02	7.5	
5	3	84.16*	88	348	1.42	168.53	165	29	6.09E-03	38.5	2.35E+00
6	3	87.21	317	418	1.50	174.63	165	29	2.20E-02	12.7	
7	3	89.97	196	300	1.15	180.14	165	29	1.36E-02	16.7	
8	3	92.68*	351	316	1.37	185.58	165	29	2.44E-02	12.4	
9	0	128.29	102	292	1.84	256.79	253	8	7.09E-03	30.6	
10	0	143.88*	28	225	1.68	287.97	285	7	1.97E-03	107.1	
11	0	170.24	46	165	1.43	340.68	338	6	3.23E-03	46.4	
12	0	185.87*	245	311	1.43	371.94	367	10	1.70E-02	17.0	
13	0	205.31	28	335	0.68	410.83	405	10	1.92E-03	125.4	
14	0	209.45	126	297	1.12	419.11	415	10	8.77E-03	27.2	
15	0	221.01	13	329	3.40	442.22	434	11	9.30E-04	264.1	
16	4	238.63*	1081	191	1.05	477.48	473	16	7.51E-02	3.9	1.16E+00
17	4	241.68*	318	235	1.50	483.57	473	16	2.21E-02	11.6	
18	0	270.32	116	244	1.06	540.85	536	11	8.03E-03	27.7	
19	0	277.27	126	250	1.51	554.75	548	14	8.77E-03	28.2	
20	0	295.29	489	264	1.30	590.79	585	12	3.40E-02	8.1	
21	0	300.00	91	122	1.10	600.21	597	7	6.35E-03	22.6	
22	0	327.64	64	216	1.44	655.52	651	11	4.45E-03	46.1	
23	0	338.32	190	239	1.30	676.86	671	11	1.32E-02	17.4	
24	0	351.77*	732	214	1.14	703.77	697	14	5.08E-02	5.8	
25	0	409.62	39	76	1.65	819.48	816	7	2.71E-03	40.8	
26	0	433.77	13	127	0.96	867.79	863	11	8.69E-04	177.8	
27	0	462.85	92	80	1.04	925.96	922	8	6.38E-03	19.9	
28	0	510.99*	96	191	2.10	1022.27	1015	17	6.64E-03	43.4	
29	0	557.46*	21	92	1.35	1115.22	1111	12	1.42E-03	103.0	
30	0	567.28*	44	108	4.39	1134.87	1127	16	3.05E-03	57.9	
31	0	582.98*	318	119	1.30	1166.28	1159	14	2.21E-02	9.8	
32	0	609.25*	503	123	1.24	1218.83	1213	12	3.50E-02	6.6	
33	0	630.94	18	50	1.10	1262.23	1258	8	1.24E-03	76.1	
34	0	662.89	68	117	1.70	1326.14	1320	16	4.69E-03	37.7	
35	0	705.48	36	126	5.27	1411.35	1402	17	2.49E-03	73.8	
36	0	727.28	106	57	1.08	1454.96	1449	14	7.37E-03	17.9	
37	4	761.31	29	45	2.68	1523.05	1516	34	2.04E-03	53.4	2.14E+00
38	4	765.79	43	30	1.83	1532.00	1516	34	3.00E-03	33.1	

Sample ID : G198530046 Acquisition date : 5-DEC-2007 05:59:04

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	4	768.29	60	27	1.83	1537.00	1516	34	4.17E-03	24.0	
40	0	794.41	53	57	1.56	1589.28	1583	11	3.66E-03	31.1	
41	0	805.91	15	61	0.51	1612.27	1607	9	1.05E-03	97.3	
42	0	830.51	30	43	3.55	1661.49	1655	13	2.11E-03	49.0	
43	0	835.50*	9	51	1.74	1671.48	1668	9	6.34E-04	184.9	
44	0	861.27	41	89	0.96	1723.04	1713	17	2.84E-03	55.1	
45	2	910.98*	247	28	1.67	1822.51	1814	20	1.72E-02	7.9	1.01E+00
46	2	915.09	24	12	2.31	1830.73	1814	20	1.64E-03	30.8	
47	0	967.99	151	96	1.57	1936.58	1928	16	1.05E-02	16.6	
48	0	1001.23*	32	31	2.23	2003.08	1998	12	2.23E-03	43.7	
49	1	1043.17	16	11	1.77	2087.00	2085	14	1.14E-03	33.8	3.22E+00
50	1	1045.97	23	30	2.17	2092.61	2085	14	1.62E-03	52.0	
51	0	1120.10*	107	33	2.15	2240.95	2235	13	7.45E-03	16.8	
52	0	1239.01	46	58	1.92	2478.92	2470	20	3.19E-03	43.7	
53	0	1273.66	16	8	1.32	2548.25	2545	10	1.09E-03	41.5	
54	0	1333.43	28	20	3.82	2667.86	2660	15	1.95E-03	41.0	
55	0	1355.82	37	4	4.35	2712.67	2706	14	2.59E-03	19.5	
56	0	1377.86	40	23	1.57	2756.80	2752	11	2.75E-03	28.9	
57	0	1460.74*	214	42	2.08	2922.68	2912	22	1.49E-02	11.0	
58	0	1588.20	15	26	1.42	3177.80	3170	12	1.02E-03	75.5	
59	0	1621.46	13	16	2.20	3244.37	3235	13	8.94E-04	70.2	
60	0	1629.67	18	14	3.21	3260.80	3255	13	1.28E-03	46.9	
61	0	1729.29*	27	13	1.03	3460.22	3455	12	1.85E-03	34.8	
62	0	1764.48*	69	16	2.99	3530.65	3524	14	4.77E-03	19.9	
63	0	1812.90	5	15	4.44	3627.60	3614	15	3.47E-04	174.6	
64	0	1938.80	9	15	1.87	3879.63	3872	12	6.32E-04	91.2	

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]G198530046       *
* Acquisition date :  5-DEC-2007 05:59:04 Detector SN#    :                 *
* Detector ID      : GAM16                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.37     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530046           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.6790E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-OCT-2007 14:23:01 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	2.971E+00	6.663E-01	3.630E-01	0.000E+00
CS-137	5.915E-02	4.397E-02	3.865E-02	0.000E+00
TL-208	2.506E-01	5.141E-02	3.542E-02	0.000E+00
BI-211	8.309E-01	8.015E-01	5.983E-01	0.000E+00
BI-212	7.236E-01	2.603E-01	2.719E-01	0.000E+00
PB-212	8.377E-01	7.935E-02	5.815E-02	0.000E+00
BI-214	7.540E-01	1.126E-01	7.021E-02	0.000E+00
PB-214	8.657E-01	1.076E-01	7.008E-02	0.000E+00
RA-223	3.089E-01	1.685E-01	1.662E-01	0.000E+00
AC-228	9.427E-01	1.643E-01	1.360E-01	0.000E+00
PA-234M	4.082E+00	3.512E+00	4.740E+00	0.000E+00
TH-234	1.687E+00	4.268E-01	4.414E-01	0.000E+00
U-235	6.589E-02	1.383E-01	1.976E-01	0.000E+00
NP-237	6.922E-01	1.799E-01	2.007E-01	0.000E+00
AM-243	1.866E-01	4.132E-02	4.879E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	-8.842E-04		2.429E-02	4.008E-02	0.000E+00	FAIL ABUN
RH-101	-8.620E-03		2.335E-02	3.445E-02	0.000E+00	NOT IDENT.
SB-125	6.065E-02		6.311E-02	9.914E-02	0.000E+00	NOT IDENT.
EU-155	-8.852E-03		6.228E-02	1.037E-01	0.000E+00	NOT IDENT.
PO-209	2.456E+00		4.420E+00	7.778E+00	0.000E+00	NOT IDENT.
PA-233	1.516E-02		3.836E-02	6.641E-02	0.000E+00	NOT IDENT.
NP-236	3.069E-02		3.830E-02	5.865E-02	0.000E+00	NOT IDENT.
NP-239	4.548E-02		1.386E-01	2.290E-01	0.000E+00	NOT IDENT.
AM-241	-1.891E-02		8.568E-02	1.270E-01	0.000E+00	NOT IDENT.
CM-243	3.729E-03		5.574E-02	9.358E-02	0.000E+00	NOT IDENT.
AM-246	2.173E-02		7.833E-02	1.340E-01	0.000E+00	NOT IDENT.
CF-249	-7.426E-03		2.408E-02	3.982E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:46:45.07

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530046.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:59:04.
Sample ID        : G198530046           Sample quantity  : 9.67900E+01 GRAM
Detector name    : GAM16                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.37  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	214	10.66*	1.309E+00	2.971E+00	2.971E+00	22.89
CS-137	661.66	68	85.10*	2.613E+00	5.895E-02	5.915E-02	75.85
TL-208	277.36	126	6.31	5.202E+00	7.459E-01	7.459E-01	56.72
	510.77	96	22.60	3.250E+00	2.524E-01	2.524E-01	87.09
	583.19	318	84.50*	2.914E+00	2.506E-01	2.506E-01	20.94
	763.13	29	1.81	2.316E+00	1.359E+00	1.359E+00	107.07
	860.56	41	12.42	2.075E+00	3.082E-01	3.082E-01	110.53
BI-211	831.80	30	3.30*	2.144E+00	8.309E-01	8.309E-01	98.42
BI-212	727.33	106	11.80*	2.411E+00	7.236E-01	7.236E-01	36.71
	785.37	------	1.10	2.253E+00	------	Line Not Found	------
	1620.50	13	1.49	1.212E+00	1.383E+00	1.383E+00	140.59
PB-212	74.81	402	10.40	6.126E+00	1.224E+00	1.224E+00	22.60
	77.11	562	17.50	6.360E+00	9.791E-01	9.791E-01	16.36
	87.30	317	7.81	7.164E+00	1.099E+00	1.099E+00	26.52
	238.63	1081	43.30*	5.779E+00	8.377E-01	8.377E-01	9.67
	300.09	91	3.28	4.913E+00	1.100E+00	1.100E+00	45.56
BI-214	609.31	503	46.10*	2.808E+00	7.540E-01	7.540E-01	15.24
	768.36	60	4.94	2.297E+00	1.026E+00	1.026E+00	48.69
	806.17	15	1.22	2.202E+00	1.095E+00	1.095E+00	194.72
	934.06	------	3.03	1.929E+00	------	Line Not Found	------
	1120.29	107	15.10	1.639E+00	8.407E-01	8.408E-01	34.23
	1155.19	------	1.63	1.595E+00	------	Line Not Found	------
	1238.11	46	5.79	1.501E+00	1.026E+00	1.026E+00	87.63
	1280.96	------	1.43	1.458E+00	------	Line Not Found	------
	1377.67	40	4.00	1.372E+00	1.401E+00	1.401E+00	58.07
	1401.50	------	1.27	1.353E+00	------	Line Not Found	------
	1407.98	------	2.15	1.348E+00	------	Line Not Found	------
	1509.23	------	2.11	1.277E+00	------	Line Not Found	------
	1729.60	27	2.92	1.161E+00	1.524E+00	1.524E+00	69.92
	1764.49	69	15.40	1.146E+00	7.551E-01	7.551E-01	40.25
PB-214	74.81	402	6.44	6.126E+00	1.976E+00	1.976E+00	22.60
	77.11	562	10.80	6.360E+00	1.586E+00	1.587E+00	16.36

Sample ID : G198530046 Acquisition date : 5-DEC-2007 05:59:04

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	317	4.84	7.164E+00	1.773E+00	1.773E+00	26.52
	242.00	318	7.43	5.729E+00	1.450E+00	1.450E+00	23.94
	295.22	489	19.30	4.970E+00	9.895E-01	9.895E-01	17.01
	351.93	732	37.60*	4.362E+00	8.657E-01	8.657E-01	12.69
RA-223	269.46	116	13.70*	5.298E+00	3.089E-01	3.089E-01	55.67
AC-228	129.07	102	2.42	7.829E+00	1.045E+00	1.045E+00	61.49
	209.25	126	3.89	6.294E+00	1.001E+00	1.001E+00	54.65
	270.25	116	3.46	5.298E+00	1.223E+00	1.223E+00	55.67
	338.32	190	11.27	4.492E+00	7.263E-01	7.263E-01	35.17
	409.46	39	1.92	3.878E+00	1.016E+00	1.016E+00	81.68
	463.00	92	4.40	3.521E+00	1.150E+00	1.150E+00	40.31
	794.95	53	4.25	2.230E+00	1.077E+00	1.077E+00	62.86
	911.20	247	25.80*	1.973E+00	9.427E-01	9.427E-01	17.79
	964.77	------	4.99	1.874E+00	------	Line Not Found	------
	968.97	151	15.80	1.868E+00	9.931E-01	9.931E-01	34.15
	1588.20	15	3.22	1.230E+00	7.161E-01	7.161E-01	151.20
PA-234M	1001.03	32	0.84*	1.812E+00	4.082E+00	4.082E+00	87.79
TH-234	63.29	73	4.80	4.632E+00	6.383E-01	6.383E-01	114.60
	92.58	351	5.41*	7.451E+00	1.687E+00	1.687E+00	25.82
U-235	143.76	28	10.96*	7.603E+00	6.589E-02	6.589E-02	214.24
NP-237	86.48	317	12.40*	7.164E+00	6.922E-01	6.922E-01	26.52
AM-243	74.66	402	68.20*	6.126E+00	1.866E-01	1.866E-01	22.60

Flag: "*" = Keyline

Sample ID : G198530046 Acquisition date : 5-DEC-2007 05:59:04

Total number of lines in spectrum 64
Number of unidentified lines 23
Number of lines tentatively identified by NID 41 64.06%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.971E+00	2.971E+00	0.680E+00	22.89	
CS-137	9.47E+08S	1.00	5.895E-02	5.915E-02	4.487E-02	75.85	
TL-208	4.43E+17S	1.00	2.506E-01	2.506E-01	0.525E-01	20.94	
BI-211	2.22E+16S	1.00	8.309E-01	8.309E-01	8.178E-01	98.42	
BI-212	4.43E+17S	1.00	7.236E-01	7.236E-01	2.656E-01	36.71	
PB-212	4.43E+17S	1.00	8.377E-01	8.377E-01	0.810E-01	9.67	
BI-214	5.05E+10S	1.00	7.540E-01	7.540E-01	1.149E-01	15.24	
PB-214	5.05E+10S	1.00	8.657E-01	8.657E-01	1.098E-01	12.69	
RA-223	1.04E+12S	1.00	3.089E-01	3.089E-01	1.720E-01	55.67	
AC-228	4.43E+17S	1.00	9.427E-01	9.427E-01	1.677E-01	17.79	
PA-234M	1.41E+17S	1.00	4.082E+00	4.082E+00	3.584E+00	87.79	
TH-234	1.41E+17S	1.00	1.687E+00	1.687E+00	0.436E+00	25.82	
U-235	2.22E+16S	1.00	6.589E-02	6.589E-02	14.11E-02	214.24	
NP-237	6.75E+13S	1.00	6.922E-01	6.922E-01	1.835E-01	26.52	
AM-243	2.33E+11S	1.00	1.866E-01	1.866E-01	0.422E-01	22.60	
			---	---			
	Total Activity :		1.526E+01	1.526E+01			

Grand Total Activity : 1.526E+01 1.526E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530046 Acquisition date : 5-DEC-2007 05:59:04

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.57	63	438	1.14	93.36	89	11	4.39E-03	****	1.76E+00	
3	84.16	88	348	1.42	168.53	165	29	6.09E-03	77.1	6.96E+00	
3	89.97	196	300	1.15	180.14	165	29	1.36E-02	33.3	7.32E+00	
0	170.24	46	165	1.43	340.68	338	6	3.23E-03	92.9	7.08E+00	
0	185.87	245	311	1.43	371.94	367	10	1.70E-02	34.1	6.76E+00	
0	205.31	28	335	0.68	410.83	405	10	1.92E-03	****	6.37E+00	
0	221.01	13	329	3.40	442.22	434	11	9.30E-04	****	6.08E+00	
0	327.64	64	216	1.44	655.52	651	11	4.45E-03	92.1	4.60E+00	
0	433.77	13	127	0.96	867.79	863	11	8.69E-04	****	3.71E+00	
0	557.46	21	92	1.35	1115.22	1111	12	1.42E-03	****	3.03E+00	
0	567.28	44	108	4.39	1134.87	1127	16	3.05E-03	****	2.98E+00	
0	630.94	18	50	1.10	1262.23	1258	8	1.24E-03	****	2.73E+00	
0	705.48	36	126	5.27	1411.35	1402	17	2.49E-03	****	2.48E+00	
4	765.79	43	30	1.83	1532.00	1516	34	3.00E-03	66.1	2.30E+00	
0	835.50	9	51	1.74	1671.48	1668	9	6.34E-04	****	2.13E+00	
2	915.09	24	12	2.31	1830.73	1814	20	1.64E-03	61.5	1.97E+00	
1	1043.17	16	11	1.77	2087.00	2085	14	1.14E-03	67.7	1.75E+00	
1	1045.97	23	30	2.17	2092.61	2085	14	1.62E-03	****	1.74E+00	
0	1273.66	16	8	1.32	2548.25	2545	10	1.09E-03	83.0	1.47E+00	
0	1333.43	28	20	3.82	2667.86	2660	15	1.95E-03	82.1	1.41E+00	T
0	1355.82	37	4	4.35	2712.67	2706	14	2.59E-03	39.1	1.39E+00	
0	1629.67	18	14	3.21	3260.80	3255	13	1.28E-03	93.8	1.21E+00	
0	1812.90	5	15	4.44	3627.60	3614	15	3.47E-04	****	1.13E+00	
0	1938.80	9	15	1.87	3879.63	3872	12	6.32E-04	****	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530046            *
* Acquisition date :  5-DEC-2007 05:59:04 Detector SN#    :                 *
* Detector ID      : GAM16                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.37     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530046           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.6790E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  1-OCT-2007 14:23:01 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	LC (pCi/GRAM)	TPU
K-40	2.971E+00	6.663E-01	1.816E-01	6.663E-01
CS-137	5.915E-02	4.397E-02	1.934E-02	4.397E-02
TL-208	2.506E-01	5.141E-02	1.772E-02	5.141E-02
BI-211	8.309E-01	8.015E-01	2.993E-01	8.015E-01
BI-212	7.236E-01	2.603E-01	1.360E-01	2.603E-01
PB-212	8.377E-01	7.935E-02	2.909E-02	7.935E-02
BI-214	7.540E-01	1.126E-01	3.513E-02	1.126E-01
PB-214	8.657E-01	1.076E-01	3.506E-02	1.076E-01
RA-223	3.089E-01	1.685E-01	8.315E-02	1.685E-01
AC-228	9.427E-01	1.643E-01	6.803E-02	1.643E-01
PA-234M	4.082E+00	3.512E+00	2.372E+00	3.512E+00
TH-234	1.687E+00	4.268E-01	2.208E-01	4.268E-01
U-235	6.589E-02	1.383E-01	9.886E-02	1.383E-01
NP-237	6.922E-01	1.799E-01	1.004E-01	1.799E-01
AM-243	1.866E-01	4.132E-02	2.441E-02	4.132E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-8.842E-04	2.429E-02	2.005E-02	2.429E-02	FAIL ABUN
RH-101	-8.620E-03	2.335E-02	1.723E-02	2.335E-02	NOT IDENT.
SB-125	6.065E-02	6.311E-02	4.960E-02	6.311E-02	NOT IDENT.
EU-155	-8.852E-03	6.228E-02	5.189E-02	6.228E-02	NOT IDENT.
PO-209	2.456E+00	4.420E+00	3.891E+00	4.420E+00	NOT IDENT.
PA-233	1.516E-02	3.836E-02	3.323E-02	3.836E-02	NOT IDENT.
NP-236	3.069E-02	3.830E-02	2.934E-02	3.830E-02	NOT IDENT.
NP-239	4.548E-02	1.386E-01	1.146E-01	1.386E-01	NOT IDENT.
AM-241	-1.891E-02	8.568E-02	6.355E-02	8.568E-02	NOT IDENT.
CM-243	3.729E-03	5.574E-02	4.682E-02	5.574E-02	NOT IDENT.
AM-246	2.173E-02	7.833E-02	6.702E-02	7.833E-02	NOT IDENT.
CF-249	-7.426E-03	2.408E-02	1.992E-02	2.408E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	425.5664
63.29	457.0299
74.66	514.6631
74.81	514.7691
74.81	514.7691
77.11	516.3866
77.11	516.3866
86.48	391.3372
87.30	391.7403
87.30	391.7403
92.58	394.2959
98.44	317.6381
103.76	344.6470
105.31	360.9402
129.07	378.0826
143.76	338.5376
198.00	292.2246
209.25	292.5050
228.18	253.9212
238.63	264.4929
242.00	235.8250
269.46	182.6612
270.25	198.8759
277.36	196.1335
295.22	189.4175
300.09	205.1422
312.17	172.5758
338.32	190.8562
351.93	165.0172
387.59	151.7332
409.46	129.1958
427.87	108.5683
463.00	131.3018
510.77	120.8064
583.19	95.1827
609.31	103.3796
661.66	92.1193
727.33	74.8893
763.13	64.7329
768.36	64.8323
785.37	69.2726
794.95	66.4453
806.17	68.5108
831.80	22.3809
860.56	57.3377
896.60	55.0464
911.20	60.0212
934.06	47.9177
964.77	43.0489
968.97	48.0656
1001.03	65.2920
1078.86	44.6667
1120.29	42.0837
1155.19	48.4668
1173.23	48.6582
1238.11	29.8036
1280.96	55.9863
1332.51	34.5670
1377.67	29.5871
1401.50	38.2119
1407.98	40.3843
1460.80	32.1960
1509.23	27.0660
1588.20	39.5171
1620.50	26.4902
1729.60	21.1905
1764.49	18.4029

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530046

Total Uranium Activity	3.0485E-02	ug/g
Total Uranium Counting Unc.	6.4004E-02	ug/g
Total Uranium Tpu	6.4004E-08	ug/g
Total Uranium Mda	4.5741E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:47:19.13

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530047.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:59:42.
Sample ID        : G198530047           Sample quantity  : 1.13340E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:05.32  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.71*	8	397	0.92	93.91	89	9	5.43E-04	539.0	
2	0	53.65*	83	310	1.13	107.78	105	7	5.78E-03	39.4	
3	0	63.35*	137	607	0.81	127.15	123	9	9.50E-03	37.6	
4	2	72.96*	25	295	1.07	146.37	144	22	1.71E-03	109.0	1.42E+01
5	2	75.12*	560	420	1.08	150.67	144	22	3.89E-02	7.4	
6	2	77.24*	820	318	0.85	154.92	144	22	5.69E-02	5.1	
7	2	79.27*	17	350	1.04	158.98	144	22	1.20E-03	206.3	
8	2	81.29	82	282	1.09	163.02	144	22	5.68E-03	33.2	
9	5	84.22*	128	330	1.39	168.86	166	13	8.90E-03	26.2	4.00E-01
10	5	87.38	341	325	1.02	175.18	166	13	2.37E-02	10.0	
11	0	89.93	100	370	0.91	180.27	178	6	6.96E-03	31.9	
12	3	92.82*	277	333	1.12	186.04	183	10	1.92E-02	16.2	3.24E+00
13	0	99.40*	53	384	0.97	199.20	196	9	3.70E-03	71.3	
14	0	105.07	62	363	1.86	210.52	207	8	4.30E-03	54.7	
15	0	129.26	50	293	1.05	258.86	256	7	3.44E-03	58.8	
16	0	144.30*	37	336	1.01	288.91	285	8	2.54E-03	95.3	
17	0	185.85*	213	479	1.28	371.95	367	12	1.48E-02	23.4	
18	3	205.18*	4	309	1.44	410.57	406	23	2.98E-04	767.5	4.20E+00
19	3	208.76	65	287	1.45	417.72	406	23	4.49E-03	50.3	
20	7	238.76*	1045	148	1.00	477.68	470	22	7.25E-02	3.8	1.36E+00
21	7	241.83	302	212	1.58	483.80	470	22	2.10E-02	11.3	
22	1	270.57	117	186	1.27	541.23	537	16	8.15E-03	21.3	3.33E+00
23	1	273.57	39	144	1.27	547.23	537	16	2.74E-03	59.0	
24	0	277.73	63	153	0.97	555.56	553	8	4.41E-03	35.6	
25	0	287.21	36	153	0.83	574.49	571	8	2.53E-03	61.2	
26	0	290.44	21	129	1.00	580.94	579	6	1.48E-03	86.5	
27	0	295.32*	311	238	1.10	590.71	586	10	2.16E-02	11.6	
28	0	300.09	58	148	0.87	600.23	597	8	4.06E-03	38.6	
29	0	327.70	66	195	1.36	655.40	650	10	4.60E-03	40.4	
30	0	338.45*	172	161	1.49	676.90	673	8	1.19E-02	16.0	
31	0	352.03*	604	157	1.16	704.04	699	10	4.20E-02	5.9	
32	0	409.53	33	98	0.94	818.94	817	6	2.26E-03	51.1	
33	0	462.56	56	124	1.06	924.92	920	11	3.89E-03	40.7	
34	0	510.87*	60	198	1.95	1021.46	1014	17	4.14E-03	67.6	
35	0	583.45*	282	158	1.50	1166.52	1158	15	1.96E-02	12.0	
36	0	609.48*	454	101	1.39	1218.56	1213	13	3.15E-02	6.8	
37	0	662.27*	36	120	1.31	1324.06	1317	12	2.49E-03	67.6	
38	0	727.32*	44	98	1.16	1454.07	1450	9	3.06E-03	45.6	

Sample ID : G198530047 Acquisition date : 5-DEC-2007 05:59:42

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	740.77	81	119	7.23	1480.96	1469	22	5.64E-03	36.3	
40	0	768.24	61	77	1.57	1535.87	1530	11	4.27E-03	30.4	
41	0	772.57	30	37	0.74	1544.53	1541	8	2.06E-03	40.8	
42	0	789.18	7	89	4.06	1577.74	1571	10	4.75E-04	276.7	
43	0	795.04	30	59	1.51	1589.44	1584	10	2.06E-03	52.1	
44	0	860.22	60	37	1.97	1719.72	1715	11	4.17E-03	23.3	
45	0	911.35*	175	72	1.79	1821.93	1816	14	1.21E-02	13.7	
46	0	936.96	26	68	5.67	1873.12	1865	15	1.77E-03	74.4	
47	1	965.08	34	38	1.81	1929.33	1925	25	2.36E-03	35.2	1.17E+00
48	1	969.08*	110	34	1.73	1937.33	1925	25	7.64E-03	14.7	
49	0	1120.77*	84	48	2.07	2240.56	2234	16	5.83E-03	23.1	
50	0	1238.27	49	42	2.30	2475.47	2468	13	3.42E-03	30.7	
51	0	1355.82	13	28	3.01	2710.49	2703	11	9.13E-04	82.1	
52	0	1395.92	21	18	1.02	2790.67	2783	11	1.44E-03	46.1	
53	0	1460.94*	165	18	1.45	2920.66	2913	14	1.15E-02	10.0	
54	4	1563.28	10	0	1.55	3125.30	3123	15	7.08E-04	31.9	1.08E+00
55	4	1567.05	22	4	2.84	3132.84	3123	15	1.53E-03	24.3	
56	3	1588.14	39	17	2.59	3175.01	3168	22	2.72E-03	25.2	1.03E+00
57	3	1592.98	22	7	2.60	3184.69	3168	22	1.55E-03	33.9	
58	0	1661.26	9	10	0.69	3321.22	3315	10	6.25E-04	73.7	
59	0	1764.48*	98	5	1.92	3527.63	3520	17	6.78E-03	11.8	
60	0	1847.67	16	3	2.59	3693.98	3689	11	1.11E-03	32.2	
61	0	1978.13	10	2	0.87	3954.88	3951	8	7.12E-04	39.0	

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]G198530047       *
* Acquisition date :  5-DEC-2007 05:59:42 Detector SN#    :                 *
* Detector ID      : GAM17                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:05.32     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530047           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1334E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.877E+00	5.829E-01	3.995E-01	0.000E+00
CS-137	3.923E-02	5.204E-02	4.620E-02	0.000E+00
EU-155	7.257E-02	7.801E-02	9.069E-02	0.000E+00
TL-208	2.745E-01	6.727E-02	4.385E-02	0.000E+00
BI-212	3.771E-01	3.382E-01	3.458E-01	0.000E+00
PB-212	9.034E-01	9.781E-02	5.458E-02	0.000E+00
BI-214	8.428E-01	1.272E-01	8.330E-02	0.000E+00
PB-214	8.290E-01	1.090E-01	7.442E-02	0.000E+00
RA-223	3.535E-01	1.498E-01	1.710E-01	0.000E+00
AC-228	8.407E-01	2.326E-01	1.708E-01	0.000E+00
TH-234	1.216E+00	3.955E-01	3.587E-01	0.000E+00
U-235	9.130E-02	1.707E-01	1.936E-01	0.000E+00
NP-236	3.370E-02	4.713E-02	4.722E-02	0.000E+00
NP-237	6.483E-01	1.338E-01	1.589E-01	0.000E+00
AM-243	1.918E-01	3.047E-02	3.128E-02	0.000E+00
CM-243	6.576E-02	7.069E-02	7.821E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error	MDA (pCi/GRAM)		Ided
CO-60	-6.913E-03	2.843E-02	4.564E-02	0.000E+00	NOT IDENT.
RH-101	-1.567E-02	2.236E-02	3.369E-02	0.000E+00	NOT IDENT.
SB-125	-1.786E-03	6.419E-02	1.089E-01	0.000E+00	NOT IDENT.
PO-209	2.157E+00	5.737E+00	1.001E+01	0.000E+00	NOT IDENT.
BI-211	-6.635E-01	7.574E-01	1.190E+00	0.000E+00	NOT IDENT.
PA-233	3.556E-03	3.912E-02	6.834E-02	0.000E+00	NOT IDENT.
PA-234M	-1.693E+00	4.026E+00	6.079E+00	0.000E+00	NOT IDENT.
NP-239	-3.556E-02	1.293E-01	2.104E-01	0.000E+00	NOT IDENT.
AM-241	6.311E-03	3.497E-02	5.663E-02	0.000E+00	NOT IDENT.
AM-246	1.264E-02	9.280E-02	1.567E-01	0.000E+00	NOT IDENT.
CF-249	3.234E-03	2.694E-02	4.645E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:47:20.17

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530047.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 05:59:42.
Sample ID        : G198530047           Sample quantity  : 1.13340E+02 GRAM
Detector name    : GAM17                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:05.32  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	165	10.66*	8.924E-01	2.877E+00	2.877E+00	20.67
CS-137	661.66	36	85.10*	1.788E+00	3.909E-02	3.923E-02	135.37
EU-155	105.31	62	21.20*	6.799E+00	7.108E-02	7.257E-02	109.69
TL-208	277.36	63	6.31	3.928E+00	4.242E-01	4.242E-01	71.71
	510.77	60	22.60	2.282E+00	1.915E-01	1.915E-01	135.40
	583.19	282	84.50*	2.014E+00	2.745E-01	2.745E-01	25.00
	763.13	------	1.81	1.568E+00	------	Line Not Found	------
	860.56	60	12.42	1.405E+00	5.704E-01	5.704E-01	47.02
BI-212	727.33	44	11.80*	1.639E+00	3.771E-01	3.771E-01	91.51
	785.37	------	1.10	1.527E+00	------	Line Not Found	------
	1620.50	------	1.49	8.223E-01	------	Line Not Found	------
PB-212	74.81	560	10.40	7.088E+00	1.258E+00	1.258E+00	16.21
	77.11	820	17.50	7.087E+00	1.095E+00	1.095E+00	12.02
	87.30	341	7.81	7.031E+00	1.029E+00	1.029E+00	21.05
	238.63	1045	43.30*	4.422E+00	9.034E-01	9.034E-01	11.05
	300.09	58	3.28	3.684E+00	8.015E-01	8.015E-01	77.59
BI-214	609.31	454	46.10*	1.933E+00	8.427E-01	8.428E-01	15.40
	768.36	61	4.94	1.558E+00	1.323E+00	1.323E+00	61.27
	806.17	------	1.22	1.490E+00	------	Line Not Found	------
	934.06	------	3.03	1.304E+00	------	Line Not Found	------
	1120.29	84	15.10	1.112E+00	8.277E-01	8.278E-01	46.68
	1155.19	------	1.63	1.083E+00	------	Line Not Found	------
	1238.11	49	5.79	1.022E+00	1.377E+00	1.377E+00	61.70
	1280.96	------	1.43	9.933E-01	------	Line Not Found	------
	1377.67	------	4.00	9.356E-01	------	Line Not Found	------
	1401.50	------	1.27	9.227E-01	------	Line Not Found	------
	1407.98	------	2.15	9.193E-01	------	Line Not Found	------
	1509.23	------	2.11	8.695E-01	------	Line Not Found	------
	1729.60	------	2.92	7.820E-01	------	Line Not Found	------
	1764.49	98	15.40	7.701E-01	1.363E+00	1.363E+00	24.28
PB-214	74.81	560	6.44	7.088E+00	2.031E+00	2.031E+00	16.21
	77.11	820	10.80	7.087E+00	1.774E+00	1.774E+00	12.02

Sample ID : G198530047 Acquisition date : 5-DEC-2007 05:59:42

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	341	4.84	7.031E+00	1.661E+00	1.661E+00	21.05
	242.00	302	7.43	4.380E+00	1.538E+00	1.538E+00	23.94
	295.22	311	19.30	3.734E+00	7.154E-01	7.154E-01	24.44
	351.93	604	37.60*	3.210E+00	8.289E-01	8.290E-01	13.42
RA-223	269.46	117	13.70*	4.012E+00	3.535E-01	3.535E-01	43.25
AC-228	129.07	50	2.42	6.354E+00	5.331E-01	5.331E-01	118.02
	209.25	65	3.89	4.873E+00	5.648E-01	5.648E-01	100.94
	270.25	117	3.46	4.012E+00	1.400E+00	1.400E+00	43.25
	338.32	172	11.27	3.323E+00	7.591E-01	7.591E-01	32.75
	409.46	33	1.92	2.801E+00	1.004E+00	1.004E+00	102.32
	463.00	56	4.40	2.504E+00	8.419E-01	8.419E-01	81.69
	794.95	30	4.25	1.510E+00	7.659E-01	7.659E-01	104.44
	911.20	175	25.80*	1.334E+00	8.407E-01	8.407E-01	28.23
	964.77	34	4.99	1.267E+00	8.888E-01	8.888E-01	70.76
	968.97	110	15.80	1.262E+00	9.132E-01	9.132E-01	30.06
	1588.20	39	3.22	8.353E-01	2.416E+00	2.416E+00	50.77
TH-234	63.29	137	4.80	7.001E+00	6.742E-01	6.742E-01	75.56
	92.58	277	5.41*	6.974E+00	1.216E+00	1.216E+00	33.17
U-235	143.76	37	10.96*	6.054E+00	9.130E-02	9.130E-02	190.77
NP-236	98.44	53	38.00*	6.887E+00	3.370E-02	3.370E-02	142.72
NP-237	86.48	341	12.40*	7.031E+00	6.483E-01	6.483E-01	21.05
AM-243	74.66	560	68.20*	7.088E+00	1.918E-01	1.918E-01	16.21
CM-243	103.76	62	23.00*	6.799E+00	6.552E-02	6.576E-02	109.69

Flag: "*" = Keyline

Sample ID : G198530047 Acquisition date : 5-DEC-2007 05:59:42

Total number of lines in spectrum 61
Number of unidentified lines 25
Number of lines tentatively identified by NID 36 59.02%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.877E+00	2.877E+00	0.595E+00	20.67	
CS-137	9.47E+08S	1.00	3.909E-02	3.923E-02	5.310E-02	135.37	
EU-155	1.57E+08S	1.02	7.108E-02	7.257E-02	7.960E-02	109.69	
TL-208	4.43E+17S	1.00	2.745E-01	2.745E-01	0.686E-01	25.00	
BI-212	4.43E+17S	1.00	3.771E-01	3.771E-01	3.451E-01	91.51	
PB-212	4.43E+17S	1.00	9.034E-01	9.034E-01	0.998E-01	11.05	
BI-214	5.05E+10S	1.00	8.427E-01	8.428E-01	1.298E-01	15.40	
PB-214	5.05E+10S	1.00	8.289E-01	8.290E-01	1.112E-01	13.42	
RA-223	1.04E+12S	1.00	3.535E-01	3.535E-01	1.529E-01	43.25	
AC-228	4.43E+17S	1.00	8.407E-01	8.407E-01	2.374E-01	28.23	
TH-234	1.41E+17S	1.00	1.216E+00	1.216E+00	0.404E+00	33.17	
U-235	2.22E+16S	1.00	9.130E-02	9.130E-02	17.42E-02	190.77	
NP-236	4.89E+12S	1.00	3.370E-02	3.370E-02	4.809E-02	142.72	
NP-237	6.75E+13S	1.00	6.483E-01	6.483E-01	1.365E-01	21.05	
AM-243	2.33E+11S	1.00	1.918E-01	1.918E-01	0.311E-01	16.21	
CM-243	8.99E+08S	1.00	6.552E-02	6.576E-02	7.213E-02	109.69	
			---	---			
	Total Activity :		9.655E+00	9.657E+00			

Grand Total Activity : 9.655E+00 9.657E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530047 Acquisition date : 5-DEC-2007 05:59:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	46.71	8	397	0.92	93.91	89	9	5.43E-04	****	6.49E+00	
0	53.65	83	310	1.13	107.78	105	7	5.78E-03	78.8	6.77E+00	
2	72.96	25	295	1.07	146.37	144	22	1.71E-03	****	7.08E+00	
2	79.27	17	350	1.04	158.98	144	22	1.20E-03	****	7.08E+00	
2	81.29	82	282	1.09	163.02	144	22	5.68E-03	66.3	7.07E+00	
5	84.22	128	330	1.39	168.86	166	13	8.90E-03	52.5	7.06E+00	
0	89.93	100	370	0.91	180.27	178	6	6.96E-03	63.8	7.01E+00	
0	185.85	213	479	1.28	371.95	367	12	1.48E-02	46.7	5.26E+00	
3	205.18	4	309	1.44	410.57	406	23	2.98E-04	****	4.93E+00	
1	273.57	39	144	1.27	547.23	537	16	2.74E-03	****	3.98E+00	
0	287.21	36	153	0.83	574.49	571	8	2.53E-03	****	3.82E+00	
0	290.44	21	129	1.00	580.94	579	6	1.48E-03	****	3.79E+00	
0	327.70	66	195	1.36	655.40	650	10	4.60E-03	80.8	3.42E+00	
0	740.77	81	119	7.23	1480.96	1469	22	5.64E-03	72.5	1.61E+00	
0	772.57	30	37	0.74	1544.53	1541	8	2.06E-03	81.6	1.55E+00	
0	789.18	7	89	4.06	1577.74	1571	10	4.75E-04	****	1.52E+00	
0	936.96	26	68	5.67	1873.12	1865	15	1.77E-03	****	1.30E+00	
0	1355.82	13	28	3.01	2710.49	2703	11	9.13E-04	****	9.48E-01	
0	1395.92	21	18	1.02	2790.67	2783	11	1.44E-03	92.3	9.26E-01	
4	1563.28	10	0	1.55	3125.30	3123	15	7.08E-04	63.8	8.46E-01	
4	1567.05	22	4	2.84	3132.84	3123	15	1.53E-03	48.5	8.44E-01	
3	1592.98	22	7	2.60	3184.69	3168	22	1.55E-03	67.9	8.33E-01	
0	1661.26	9	10	0.69	3321.22	3315	10	6.25E-04	****	8.07E-01	
0	1847.67	16	3	2.59	3693.98	3689	11	1.11E-03	64.3	7.44E-01	
0	1978.13	10	2	0.87	3954.88	3951	8	7.12E-04	78.0	7.07E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530047            *
* Acquisition date :  5-DEC-2007 05:59:42 Detector SN#    :                 *
* Detector ID      : GAM17                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:05.32     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530047           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.1334E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  5-FEB-2007 16:40:35 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	LC (pCi/GRAM)	TPU
K-40	2.877E+00	5.829E-01	1.999E-01	5.829E-01
CS-137	3.923E-02	5.204E-02	2.312E-02	5.204E-02
EU-155	7.257E-02	7.801E-02	4.537E-02	7.801E-02
TL-208	2.745E-01	6.727E-02	2.194E-02	6.727E-02
BI-212	3.771E-01	3.382E-01	1.730E-01	3.382E-01
PB-212	9.034E-01	9.781E-02	2.731E-02	9.781E-02
BI-214	8.428E-01	1.272E-01	4.167E-02	1.272E-01
PB-214	8.290E-01	1.090E-01	3.723E-02	1.090E-01
RA-223	3.535E-01	1.498E-01	8.556E-02	1.498E-01
AC-228	8.407E-01	2.326E-01	8.543E-02	2.326E-01
TH-234	1.216E+00	3.955E-01	1.795E-01	3.955E-01
U-235	9.130E-02	1.707E-01	9.686E-02	1.707E-01
NP-236	3.370E-02	4.713E-02	2.362E-02	4.713E-02
NP-237	6.483E-01	1.338E-01	7.950E-02	1.338E-01
AM-243	1.918E-01	3.047E-02	1.565E-02	3.047E-02
CM-243	6.576E-02	7.069E-02	3.913E-02	7.069E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-6.913E-03	2.843E-02	2.283E-02	2.843E-02	NOT IDENT.
RH-101	-1.567E-02	2.236E-02	1.686E-02	2.236E-02	NOT IDENT.
SB-125	-1.786E-03	6.419E-02	5.450E-02	6.419E-02	NOT IDENT.
PO-209	2.157E+00	5.737E+00	5.006E+00	5.737E+00	NOT IDENT.
BI-211	-6.635E-01	7.574E-01	5.951E-01	7.574E-01	NOT IDENT.
PA-233	3.556E-03	3.912E-02	3.419E-02	3.912E-02	NOT IDENT.
PA-234M	-1.693E+00	4.026E+00	3.041E+00	4.026E+00	NOT IDENT.
NP-239	-3.556E-02	1.293E-01	1.053E-01	1.293E-01	NOT IDENT.
AM-241	6.311E-03	3.497E-02	2.833E-02	3.497E-02	NOT IDENT.
AM-246	1.264E-02	9.280E-02	7.841E-02	9.280E-02	NOT IDENT.
CF-249	3.234E-03	2.694E-02	2.324E-02	2.694E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	310.0104
63.29	327.2234
74.66	369.3266
74.81	369.4482
74.81	369.4482
77.11	371.3058
77.11	371.3058
86.48	311.6266
87.30	312.1362
87.30	312.1362
92.58	297.3785
98.44	248.9137
103.76	242.8356
105.31	266.1478
129.07	274.6815
143.76	270.6235
198.00	239.2332
209.25	213.9718
228.18	187.2231
238.63	180.2259
242.00	180.8187
269.46	146.9031
270.25	140.0889
277.36	100.9442
295.22	190.8589
300.09	141.9507
312.17	143.3545
338.32	147.2157
351.93	133.9352
387.59	131.6678
409.46	122.0681
427.87	118.6566
463.00	107.3243
510.77	102.1233
583.19	93.3308
609.31	92.3802
661.66	82.5417
727.33	75.1782
763.13	61.2728
768.36	59.8663
785.37	71.0870
794.95	62.0459
806.17	57.9524
831.80	73.6163
860.56	60.0930
896.60	59.9051
911.20	58.2686
934.06	55.4644
964.77	57.6868
968.97	52.4850
1001.03	54.0356
1078.86	39.9826
1120.29	47.7430
1155.19	39.8388
1173.23	43.2042
1238.11	44.6981
1280.96	23.8702
1332.51	32.9854
1377.67	30.5790
1401.50	32.1556
1407.98	31.7394
1460.80	24.5792
1509.23	23.8993
1588.20	22.3786
1620.50	14.6973
1729.60	16.0378
1764.49	17.1605

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530047

Total Uranium Activity	4.2244E-02	ug/g
Total Uranium Counting Unc.	7.8977E-02	ug/g
Total Uranium Tpu	7.8977E-08	ug/g
Total Uranium Mda	4.4818E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:47:54.81

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530048.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 06:00:15.
Sample ID        : G198530048           Sample quantity  : 1.04280E+02 GRAM
Detector name    : GAM18                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:02.73  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	54.59*	81	468	1.09	108.17	105	7	5.62E-03	48.1	
2	2	63.09*	75	541	1.15	125.17	122	12	5.23E-03	57.4	2.56E+00
3	2	64.71*	4	554	1.16	128.40	122	12	2.81E-04	*****	
4	2	74.65	568	612	1.16	148.28	145	14	3.94E-02	8.4	1.09E+00
5	2	77.02*	892	523	1.01	153.01	145	14	6.20E-02	5.5	
6	5	83.66*	144	834	1.62	166.29	160	30	9.98E-03	39.6	1.24E+00
7	5	87.09	388	650	1.28	173.15	160	30	2.69E-02	12.5	
8	5	89.77	237	556	1.15	178.49	160	30	1.65E-02	18.0	
9	5	92.67*	398	619	1.40	184.29	160	30	2.76E-02	13.4	
10	0	112.41	47	328	1.02	223.75	222	5	3.26E-03	59.4	
11	0	129.24	155	501	0.73	257.39	254	8	1.08E-02	26.3	
12	0	153.88	68	454	1.34	306.65	304	7	4.69E-03	53.7	
13	0	185.82*	347	593	1.22	370.47	365	10	2.41E-02	15.2	
14	0	192.56	44	364	1.19	383.96	381	7	3.06E-03	72.9	
15	0	198.41*	50	443	1.72	395.66	392	8	3.50E-03	78.2	
16	0	209.28	194	499	1.39	417.37	412	10	1.35E-02	22.6	
17	4	238.64*	2333	336	1.19	476.07	468	20	1.62E-01	2.6	2.33E+00
18	4	241.67	614	458	1.68	482.13	468	20	4.26E-02	9.0	
19	0	258.19	34	319	1.44	515.16	513	8	2.33E-03	93.8	
20	0	270.05*	223	436	1.52	538.87	532	13	1.55E-02	21.1	
21	0	277.56	79	466	1.38	553.88	550	11	5.49E-03	54.3	
22	0	287.16	13	405	2.81	573.06	570	11	8.68E-04	312.7	
23	0	295.27*	941	357	1.29	589.28	583	12	6.53E-02	5.3	
24	2	300.35*	213	189	1.66	599.43	595	25	1.48E-02	13.8	2.74E+00
25	2	303.42	64	216	1.66	605.57	595	25	4.43E-03	47.3	
26	0	327.70	158	353	1.30	654.10	648	12	1.10E-02	25.2	
27	0	331.78	42	223	1.87	662.26	659	8	2.93E-03	63.0	
28	0	338.36*	484	292	1.35	675.41	671	10	3.36E-02	8.5	
29	0	351.97*	1377	380	1.18	702.63	696	13	9.56E-02	4.1	
30	0	409.69	104	215	0.80	818.02	813	10	7.19E-03	28.4	
31	0	462.80	216	181	1.39	924.21	917	12	1.50E-02	14.2	
32	0	480.75	31	204	1.24	960.09	954	11	2.13E-03	92.9	
33	0	487.35	81	164	1.29	973.28	968	11	5.60E-03	33.2	
34	0	511.32*	193	306	2.27	1021.21	1013	19	1.34E-02	28.2	
35	0	570.75*	20	80	0.93	1140.04	1137	6	1.42E-03	92.4	
36	0	583.24*	722	223	1.62	1165.02	1156	15	5.01E-02	6.2	
37	0	609.48*	1103	237	1.64	1217.50	1209	17	7.66E-02	4.5	
38	0	661.99	92	132	2.19	1322.49	1318	10	6.37E-03	25.7	

Sample ID : G198530048 Acquisition date : 5-DEC-2007 06:00:15

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	727.98	158	261	1.87	1454.45	1444	19	1.10E-02	25.8	
40	0	756.80	31	149	2.44	1512.09	1505	12	2.14E-03	82.6	
41	0	768.43	94	166	1.80	1535.35	1528	13	6.55E-03	29.9	
42	0	785.44	40	100	1.68	1569.36	1565	9	2.81E-03	47.1	
43	0	795.02	108	143	1.32	1588.51	1584	14	7.52E-03	24.9	
44	4	837.14	51	163	2.76	1672.75	1657	36	3.54E-03	60.1	1.91E+00
45	4	843.89	47	94	2.77	1686.25	1657	36	3.24E-03	50.0	
46	0	860.42	134	174	2.58	1719.31	1705	20	9.28E-03	25.7	
47	0	911.44*	537	105	1.67	1821.36	1814	14	3.73E-02	6.2	
48	0	934.52	75	74	1.58	1867.53	1863	12	5.19E-03	25.6	
49	3	965.13	142	61	2.63	1928.75	1922	23	9.88E-03	16.6	7.54E-01
50	3	969.25*	378	63	2.02	1936.99	1922	23	2.63E-02	7.2	
51	0	988.21	30	35	1.41	1974.90	1971	8	2.05E-03	39.6	
52	0	1120.73*	217	91	2.09	2239.98	2233	15	1.51E-02	12.1	
53	0	1156.49	42	76	2.38	2311.53	2304	13	2.94E-03	46.1	
54	0	1239.43	51	116	2.02	2477.46	2470	13	3.55E-03	45.7	
55	0	1260.32	29	32	0.91	2519.25	2515	10	2.00E-03	41.3	
56	0	1286.33	83	141	15.77	2571.29	2552	37	5.73E-03	48.3	
57	0	1298.79	11	41	0.91	2596.21	2591	9	7.67E-04	108.4	
58	0	1377.76	90	50	1.43	2754.20	2748	14	6.25E-03	19.6	
59	0	1408.89	39	67	2.23	2816.50	2807	16	2.72E-03	49.6	
60	0	1461.18*	734	32	2.18	2921.13	2910	19	5.10E-02	4.3	
61	0	1489.06*	22	13	2.70	2976.90	2972	10	1.50E-03	54.9	
62	1	1497.39	47	18	2.55	2993.57	2987	43	3.27E-03	22.1	2.25E+00
63	1	1502.60	29	16	2.32	3004.00	2987	43	2.01E-03	36.3	
64	1	1508.17	30	11	2.09	3015.16	2987	43	2.06E-03	37.7	
65	1	1514.09	42	3	2.33	3027.00	2987	43	2.90E-03	16.3	
66	0	1589.21	37	50	3.04	3177.32	3172	13	2.57E-03	42.4	
67	0	1622.42	11	36	1.50	3243.78	3237	11	7.40E-04	116.1	
68	0	1641.01	41	38	4.64	3280.98	3270	22	2.84E-03	41.7	
69	0	1731.85	62	54	7.79	3462.79	3454	27	4.31E-03	35.4	
70	0	1748.28	10	15	4.82	3495.66	3486	15	6.79E-04	92.2	
71	0	1765.29*	238	19	2.05	3529.70	3520	20	1.65E-02	8.6	
72	0	1777.10	10	8	1.39	3553.36	3548	8	7.02E-04	57.7	
73	0	1794.43	11	13	1.99	3588.03	3579	13	7.93E-04	71.3	
74	5	1846.78	24	14	2.47	3692.81	3689	20	1.69E-03	31.6	2.57E+00
75	5	1849.37	31	30	2.51	3698.00	3689	20	2.16E-03	44.2	
76	0	1983.31	9	21	0.49	3966.10	3958	12	6.40E-04	104.6	
77	0	1993.53	15	13	0.62	3986.57	3976	17	1.08E-03	58.6	

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]G198530048       *
* Acquisition date :  5-DEC-2007 06:00:15 Detector SN#    :                 *
* Detector ID      : GAM18                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:02.73     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530048           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0428E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-OCT-2007 17:37:50 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	6.620E+00	7.487E-01	3.168E-01	0.000E+00
RH-101	1.742E-02	2.671E-02	3.436E-02	0.000E+00
CS-137	5.486E-02	2.790E-02	3.499E-02	0.000E+00
TL-208	3.951E-01	5.450E-02	3.283E-02	0.000E+00
BI-212	7.291E-01	3.734E-01	2.568E-01	0.000E+00
PB-212	1.446E+00	1.056E-01	5.591E-02	0.000E+00
BI-214	1.142E+00	1.274E-01	6.615E-02	0.000E+00
PB-214	1.227E+00	1.153E-01	6.602E-02	0.000E+00
RA-223	4.680E-01	1.948E-01	1.714E-01	0.000E+00
AC-228	1.360E+00	2.129E-01	1.247E-01	0.000E+00
TH-234	1.899E+00	5.286E-01	4.810E-01	0.000E+00
NP-237	8.720E-01	2.307E-01	2.270E-01	0.000E+00
AM-243	3.062E-01	5.833E-02	6.048E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	-6.184E-03		2.196E-02	3.529E-02	0.000E+00	NOT IDENT.
SB-125	2.186E-02		5.313E-02	9.264E-02	0.000E+00	NOT IDENT.
EU-155	-2.352E-02		6.749E-02	1.109E-01	0.000E+00	NOT IDENT.
PO-209	1.406E+00		3.944E+00	6.791E+00	0.000E+00	NOT IDENT.
BI-211	3.478E-01		6.333E-01	9.690E-01	0.000E+00	NOT IDENT.
PA-233	-1.661E-02		4.070E-02	5.763E-02	0.000E+00	NOT IDENT.
PA-234M	2.909E+00		2.909E+00	4.685E+00	0.000E+00	NOT IDENT.
U-235	2.970E-02		1.328E-01	2.097E-01	0.000E+00	NOT IDENT.
NP-236	1.185E-02		3.822E-02	6.446E-02	0.000E+00	NOT IDENT.
NP-239	5.920E-02		1.289E-01	2.225E-01	0.000E+00	NOT IDENT.
AM-241	1.737E-01		1.309E-01	2.109E-01	0.000E+00	NOT IDENT.
CM-243	2.466E-03		6.055E-02	1.009E-01	0.000E+00	NOT IDENT.
AM-246	-3.297E-03		6.663E-02	1.099E-01	0.000E+00	NOT IDENT.
CF-249	3.638E-03		2.400E-02	3.948E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:47:56.12

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G198530048.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 06:00:15.
Sample ID        : G198530048           Sample quantity  : 1.04280E+02 GRAM
Detector name    : GAM18                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:02.73  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	734	10.66*	1.873E+00	6.620E+00	6.620E+00	11.54
RH-101	198.00	50	73.00*	7.364E+00	1.688E-02	1.742E-02	156.43
CS-137	661.66	92	85.10*	3.550E+00	5.467E-02	5.486E-02	51.89
TL-208	277.36	79	6.31	6.169E+00	3.653E-01	3.653E-01	108.68
	510.77	193	22.60	4.255E+00	3.617E-01	3.617E-01	56.81
	583.19	722	84.50*	3.890E+00	3.951E-01	3.951E-01	14.08
	763.13	------	1.81	3.183E+00	------	Line Not Found	------
	860.56	134	12.42	2.889E+00	6.700E-01	6.700E-01	52.42
BI-212	727.33	158	11.80*	3.303E+00	7.291E-01	7.291E-01	52.25
	785.37	40	1.10	3.111E+00	2.126E+00	2.126E+00	94.64
	1620.50	11	1.49	1.750E+00	7.350E-01	7.350E-01	232.33
PB-212	74.81	568	10.40	4.894E+00	2.008E+00	2.008E+00	19.44
	77.11	892	17.50	5.234E+00	1.754E+00	1.754E+00	14.76
	87.30	388	7.81	6.454E+00	1.385E+00	1.385E+00	26.99
	238.63	2333	43.30*	6.707E+00	1.446E+00	1.446E+00	7.45
	300.09	213	3.28	5.896E+00	1.980E+00	1.980E+00	28.00
BI-214	609.31	1103	46.10*	3.770E+00	1.142E+00	1.142E+00	11.38
	768.36	94	4.94	3.166E+00	1.086E+00	1.086E+00	60.51
	806.17	------	1.22	3.047E+00	------	Line Not Found	------
	934.06	75	3.03	2.697E+00	1.646E+00	1.646E+00	52.07
	1120.29	217	15.10	2.312E+00	1.118E+00	1.118E+00	25.15
	1155.19	42	1.63	2.252E+00	2.079E+00	2.079E+00	92.40
	1238.11	51	5.79	2.126E+00	7.485E-01	7.485E-01	91.62
	1280.96	------	1.43	2.070E+00	------	Line Not Found	------
	1377.67	90	4.00	1.956E+00	2.069E+00	2.069E+00	40.06
	1401.50	------	1.27	1.931E+00	------	Line Not Found	------
	1407.98	39	2.15	1.923E+00	1.706E+00	1.706E+00	99.56
	1509.23	30	2.11	1.832E+00	1.382E+00	1.382E+00	75.76
	1729.60	------	2.92	1.691E+00	------	Line Not Found	------
	1764.49	238	15.40	1.676E+00	1.657E+00	1.657E+00	18.42
PB-214	74.81	568	6.44	4.894E+00	3.242E+00	3.243E+00	19.44
	77.11	892	10.80	5.234E+00	2.841E+00	2.842E+00	14.76

Sample ID : G198530048 Acquisition date : 5-DEC-2007 06:00:15

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	388	4.84	6.454E+00	2.234E+00	2.234E+00	26.99
	242.00	614	7.43	6.662E+00	2.232E+00	2.232E+00	18.75
	295.22	941	19.30	5.955E+00	1.474E+00	1.474E+00	11.89
	351.93	1377	37.60*	5.373E+00	1.227E+00	1.227E+00	9.58
RA-223	269.46	223	13.70*	6.265E+00	4.680E-01	4.680E-01	42.48
AC-228	129.07	155	2.42	8.242E+00	1.399E+00	1.399E+00	52.99
	209.25	194	3.89	7.178E+00	1.253E+00	1.253E+00	45.60
	270.25	223	3.46	6.265E+00	1.853E+00	1.853E+00	42.48
	338.32	484	11.27	5.500E+00	1.406E+00	1.406E+00	17.81
	409.46	104	1.92	4.901E+00	1.981E+00	1.981E+00	56.94
	463.00	216	4.40	4.541E+00	1.944E+00	1.944E+00	28.89
	794.95	108	4.25	3.081E+00	1.489E+00	1.489E+00	50.64
	911.20	537	25.80*	2.754E+00	1.360E+00	1.360E+00	15.98
	964.77	142	4.99	2.624E+00	1.956E+00	1.956E+00	34.41
	968.97	378	15.80	2.615E+00	1.647E+00	1.647E+00	17.10
	1588.20	37	3.22	1.772E+00	1.166E+00	1.166E+00	85.08
TH-234	63.29	75	4.80	3.027E+00	9.332E-01	9.332E-01	115.21
	92.58	398	5.41*	6.966E+00	1.899E+00	1.899E+00	28.41
NP-237	86.48	388	12.40*	6.454E+00	8.720E-01	8.720E-01	26.99
AM-243	74.66	568	68.20*	4.894E+00	3.062E-01	3.062E-01	19.44

Flag: "*" = Keyline

Sample ID : G198530048 Acquisition date : 5-DEC-2007 06:00:15

Total number of lines in spectrum 77
Number of unidentified lines 36
Number of lines tentatively identified by NID 41 53.25%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	6.620E+00	6.620E+00	0.764E+00	11.54	
RH-101	1.04E+08S	1.03	1.688E-02	1.742E-02	2.725E-02	156.43	
CS-137	9.47E+08S	1.00	5.467E-02	5.486E-02	2.847E-02	51.89	
TL-208	4.43E+17S	1.00	3.951E-01	3.951E-01	0.556E-01	14.08	
BI-212	4.43E+17S	1.00	7.291E-01	7.291E-01	3.810E-01	52.25	
PB-212	4.43E+17S	1.00	1.446E+00	1.446E+00	0.108E+00	7.45	
BI-214	5.05E+10S	1.00	1.142E+00	1.142E+00	0.130E+00	11.38	
PB-214	5.05E+10S	1.00	1.227E+00	1.227E+00	0.118E+00	9.58	
RA-223	1.04E+12S	1.00	4.680E-01	4.680E-01	1.988E-01	42.48	
AC-228	4.43E+17S	1.00	1.360E+00	1.360E+00	0.217E+00	15.98	
TH-234	1.41E+17S	1.00	1.899E+00	1.899E+00	0.539E+00	28.41	
NP-237	6.75E+13S	1.00	8.720E-01	8.720E-01	2.354E-01	26.99	
AM-243	2.33E+11S	1.00	3.062E-01	3.062E-01	0.595E-01	19.44	
			---	---			
		Total Activity :	1.654E+01	1.654E+01			

Grand Total Activity : 1.654E+01 1.654E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G198530048 Acquisition date : 5-DEC-2007 06:00:15

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	54.59	81	468	1.09	108.17	105	7	5.62E-03	96.1	1.65E+00	
2	64.71	4	554	1.16	128.40	122	12	2.81E-04	****	3.30E+00	
5	83.66	144	834	1.62	166.29	160	30	9.98E-03	79.1	6.08E+00	
5	89.77	237	556	1.15	178.49	160	30	1.65E-02	35.9	6.71E+00	
0	112.41	47	328	1.02	223.75	222	5	3.26E-03	****	8.00E+00	
0	153.88	68	454	1.34	306.65	304	7	4.69E-03	****	8.09E+00	
0	185.82	347	593	1.22	370.47	365	10	2.41E-02	30.4	7.58E+00	
0	192.56	44	364	1.19	383.96	381	7	3.06E-03	****	7.47E+00	
0	258.19	34	319	1.44	515.16	513	8	2.33E-03	****	6.42E+00	
0	287.16	13	405	2.81	573.06	570	11	8.68E-04	****	6.05E+00	
2	303.42	64	216	1.66	605.57	595	25	4.43E-03	94.6	5.86E+00	
0	327.70	158	353	1.30	654.10	648	12	1.10E-02	50.4	5.60E+00	
0	331.78	42	223	1.87	662.26	659	8	2.93E-03	****	5.56E+00	
0	480.75	31	204	1.24	960.09	954	11	2.13E-03	****	4.43E+00	
0	487.35	81	164	1.29	973.28	968	11	5.60E-03	66.3	4.39E+00	
0	570.75	20	80	0.93	1140.04	1137	6	1.42E-03	****	3.95E+00	
0	756.80	31	149	2.44	1512.09	1505	12	2.14E-03	****	3.20E+00	
4	837.14	51	163	2.76	1672.75	1657	36	3.54E-03	****	2.95E+00	
4	843.89	47	94	2.77	1686.25	1657	36	3.24E-03	****	2.94E+00	
0	988.21	30	35	1.41	1974.90	1971	8	2.05E-03	79.2	2.57E+00	
0	1260.32	29	32	0.91	2519.25	2515	10	2.00E-03	82.7	2.10E+00	
0	1286.33	83	141	15.77	2571.29	2552	37	5.73E-03	96.7	2.06E+00	
0	1298.79	11	41	0.91	2596.21	2591	9	7.67E-04	****	2.05E+00	
0	1489.06	22	13	2.70	2976.90	2972	10	1.50E-03	****	1.85E+00	
1	1497.39	47	18	2.55	2993.57	2987	43	3.27E-03	44.2	1.84E+00	
1	1502.60	29	16	2.32	3004.00	2987	43	2.01E-03	72.6	1.84E+00	
1	1514.09	42	3	2.33	3027.00	2987	43	2.90E-03	32.5	1.83E+00	
0	1641.01	41	38	4.64	3280.98	3270	22	2.84E-03	83.4	1.74E+00	
0	1731.85	62	54	7.79	3462.79	3454	27	4.31E-03	70.7	1.69E+00	
0	1748.28	10	15	4.82	3495.66	3486	15	6.79E-04	****	1.68E+00	
0	1777.10	10	8	1.39	3553.36	3548	8	7.02E-04	****	1.67E+00	
0	1794.43	11	13	1.99	3588.03	3579	13	7.93E-04	****	1.66E+00	
5	1846.78	24	14	2.47	3692.81	3689	20	1.69E-03	63.3	1.65E+00	
5	1849.37	31	30	2.51	3698.00	3689	20	2.16E-03	88.3	1.64E+00	
0	1983.31	9	21	0.49	3966.10	3958	12	6.40E-04	****	1.61E+00	
0	1993.53	15	13	0.62	3986.57	3976	17	1.08E-03	****	1.61E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G198530048           *
* Acquisition date :  5-DEC-2007 06:00:15 Detector SN#    :                *
* Detector ID      : GAM18                Sensitivity     : 3.000          *
* Geometry         : CAN                  Energy tolerance: 2.000          *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 04:00:02.73     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G198530048           Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.0428E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  1-OCT-2007 17:37:50 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
K-40	6.620E+00	7.487E-01	1.585E-01	7.487E-01
RH-101	1.742E-02	2.671E-02	1.719E-02	2.671E-02
CS-137	5.486E-02	2.790E-02	1.751E-02	2.790E-02
TL-208	3.951E-01	5.450E-02	1.643E-02	5.450E-02
BI-212	7.291E-01	3.734E-01	1.285E-01	3.734E-01
PB-212	1.446E+00	1.056E-01	2.797E-02	1.056E-01
BI-214	1.142E+00	1.274E-01	3.310E-02	1.274E-01
PB-214	1.227E+00	1.153E-01	3.303E-02	1.153E-01
RA-223	4.680E-01	1.948E-01	8.576E-02	1.948E-01
AC-228	1.360E+00	2.129E-01	6.241E-02	2.129E-01
TH-234	1.899E+00	5.286E-01	2.406E-01	5.286E-01
NP-237	8.720E-01	2.307E-01	1.136E-01	2.307E-01
AM-243	3.062E-01	5.833E-02	3.026E-02	5.833E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	-6.184E-03	2.196E-02	1.766E-02	2.196E-02	NOT IDENT.
SB-125	2.186E-02	5.313E-02	4.635E-02	5.313E-02	NOT IDENT.
EU-155	-2.352E-02	6.749E-02	5.548E-02	6.749E-02	NOT IDENT.
PO-209	1.406E+00	3.944E+00	3.397E+00	3.944E+00	NOT IDENT.
BI-211	3.478E-01	6.333E-01	4.848E-01	6.333E-01	NOT IDENT.
PA-233	-1.661E-02	4.070E-02	2.883E-02	4.070E-02	NOT IDENT.
PA-234M	2.909E+00	2.909E+00	2.344E+00	2.909E+00	NOT IDENT.
U-235	2.970E-02	1.328E-01	1.049E-01	1.328E-01	NOT IDENT.
NP-236	1.185E-02	3.822E-02	3.225E-02	3.822E-02	NOT IDENT.
NP-239	5.920E-02	1.289E-01	1.113E-01	1.289E-01	NOT IDENT.
AM-241	1.737E-01	1.309E-01	1.055E-01	1.309E-01	NOT IDENT.
CM-243	2.466E-03	6.055E-02	5.049E-02	6.055E-02	NOT IDENT.
AM-246	-3.297E-03	6.663E-02	5.499E-02	6.663E-02	NOT IDENT.
CF-249	3.638E-03	2.400E-02	1.975E-02	2.400E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	392.5463
63.29	466.4649
74.66	574.6752
74.81	574.8983
74.81	574.8983
77.11	578.3231
77.11	578.3231
86.48	456.7221
87.30	457.6017
87.30	457.6017
92.58	463.1774
98.44	443.7209
103.76	443.4748
105.31	471.2498
129.07	455.5293
143.76	453.4828
198.00	456.8521
209.25	417.7894
228.18	360.7226
238.63	375.6285
242.00	377.0389
269.46	309.5479
270.25	309.7946
277.36	340.3128
295.22	283.1097
300.09	242.8450
312.17	255.5174
338.32	250.4259
351.93	254.3729
387.59	242.9144
409.46	225.5975
427.87	213.8179
463.00	153.7831
510.77	187.3602
583.19	167.3425
609.31	190.0452
661.66	159.7162
727.33	144.3281
763.13	127.6925
768.36	179.1802
785.37	134.4601
794.95	133.1602
806.17	110.5674
831.80	111.0782
860.56	117.2587
896.60	104.0581
911.20	113.3580
934.06	102.1907
964.77	88.9453
968.97	89.0790
1001.03	98.1077
1078.86	78.1183
1120.29	90.6285
1155.19	84.8564
1173.23	93.1956
1238.11	103.6563
1280.96	67.0459
1332.51	71.2908
1377.67	51.9584
1401.50	54.2227
1407.98	64.0135
1460.80	58.0061
1509.23	35.9901
1588.20	65.6669
1620.50	49.0480
1729.60	31.1528
1764.49	29.5430

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G198530048

Total Uranium Activity	1.3742E-02	ug/g
Total Uranium Counting Unc.	6.1461E-02	ug/g
Total Uranium Tpu	6.1461E-08	ug/g
Total Uranium Mda	4.8545E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:48:29.06

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471384.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 5-DEC-2007 06:01:07.
Sample ID        : G1201471384          Sample quantity  : 1.20000E+02 GRAM
Detector name    : GAM19                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.32  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	70.67	21	116	0.91	140.93	139	7	1.45E-03	87.7	
2	0	76.62*	66	156	3.30	152.82	147	11	4.55E-03	41.1	
3	0	102.88	24	168	0.96	205.30	200	11	1.70E-03	104.3	
4	0	185.39*	7	201	1.11	370.18	364	12	4.54E-04	488.9	
5	0	237.76*	12	121	1.44	474.85	471	9	8.43E-04	206.3	
6	0	301.54	23	66	2.28	602.30	600	7	1.60E-03	61.8	
7	0	403.74	32	73	1.30	806.57	801	12	2.24E-03	55.5	
8	2	433.80	26	37	1.89	866.66	845	30	1.84E-03	54.6	1.54E+00
9	2	436.34	28	16	1.27	871.73	845	30	1.97E-03	32.5	
10	0	510.51*	39	111	2.33	1019.98	1011	17	2.71E-03	88.2	
11	0	609.21	24	42	1.31	1217.27	1214	8	1.69E-03	50.4	
12	0	670.62*	35	52	4.50	1340.04	1331	19	2.46E-03	54.2	
13	0	679.05	14	16	0.86	1356.88	1352	8	9.54E-04	57.3	
14	0	766.55	33	36	4.87	1531.81	1520	18	2.30E-03	45.8	
15	0	915.25	22	58	4.44	1829.11	1813	22	1.54E-03	91.6	
16	0	958.57	16	17	0.92	1915.74	1909	12	1.10E-03	58.9	
17	0	962.12	15	1	1.35	1922.84	1920	7	1.02E-03	29.8	
18	0	1092.43	15	60	11.34	2183.40	2157	30	1.04E-03	152.8	
19	0	1155.26	12	10	0.66	2309.04	2304	8	8.62E-04	52.2	
20	0	1202.66	20	8	3.57	2403.83	2398	11	1.39E-03	35.5	
21	0	1252.47	8	10	0.95	2503.45	2500	9	5.48E-04	78.4	
22	0	1273.11	12	6	0.90	2544.73	2542	7	8.41E-04	45.4	
23	0	1433.99	6	14	0.67	2866.50	2858	14	4.17E-04	138.4	
24	0	1459.79*	18	4	1.54	2918.10	2913	9	1.27E-03	44.4	
25	0	1544.39	11	13	0.90	3087.33	3079	12	7.62E-04	75.7	
26	0	1571.80	17	13	0.63	3142.17	3131	18	1.17E-03	56.8	
27	0	1578.56	10	6	1.05	3155.68	3152	8	6.73E-04	54.6	
28	0	1586.45	15	21	7.87	3171.47	3160	21	1.04E-03	80.6	
29	0	1621.67	14	12	6.22	3241.93	3232	17	9.47E-04	65.7	
30	0	1647.55	11	4	1.56	3293.69	3289	9	7.31E-04	47.6	
31	0	1678.42	12	10	0.74	3355.45	3350	11	8.40E-04	59.8	
32	0	1704.73	12	11	2.25	3408.08	3396	14	8.14E-04	66.0	
33	0	1806.89	7	4	0.69	3612.47	3607	10	4.86E-04	69.3	
34	0	1851.99	16	6	2.37	3702.72	3696	12	1.11E-03	39.5	
35	0	1869.92	8	6	1.26	3738.58	3733	12	5.61E-04	70.1	

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]G1201471384      *
* Acquisition date :  5-DEC-2007 06:01:07 Detector SN#    :                 *
* Detector ID      : GAM19                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.32     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471384          Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.2000E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  6-MAR-2007 21:45:12 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	2.255E-01	1.966E-01	2.597E-01	0.000E+00
PB-212	8.513E-03	3.443E-02	4.158E-02	0.000E+00
AM-243	2.861E-02	2.313E-02	2.811E-02	0.000E+00
CM-243	2.434E-02	4.981E-02	5.083E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	1.427E-02		1.526E-02	2.891E-02	0.000E+00	NOT IDENT.
RH-101	7.456E-03		1.354E-02	2.162E-02	0.000E+00	NOT IDENT.
SB-125	1.635E-02		3.552E-02	6.350E-02	0.000E+00	NOT IDENT.
CS-137	-5.396E-03		1.611E-02	2.454E-02	0.000E+00	NOT IDENT.
EU-155	-2.269E-02		3.788E-02	5.478E-02	0.000E+00	NOT IDENT.
TL-208	-8.114E-03		1.789E-02	2.711E-02	0.000E+00	FAIL ABUN
PO-209	3.284E-01		4.110E+00	5.821E+00	0.000E+00	NOT IDENT.
BI-211	7.039E-02		4.036E-01	6.844E-01	0.000E+00	NOT IDENT.
BI-212	-6.280E-02		1.138E-01	1.788E-01	0.000E+00	FAIL ABUN
BI-214	3.275E-02		3.243E-02	5.498E-02	0.000E+00	FAIL ABUN
PB-214	1.484E-03		3.502E-02	5.271E-02	0.000E+00	FAIL ABUN
RA-223	-1.054E-02		7.157E-02	1.183E-01	0.000E+00	NOT IDENT.
AC-228	2.796E-02		7.211E-02	1.053E-01	0.000E+00	FAIL ABUN
PA-233	3.492E-02		2.788E-02	5.018E-02	0.000E+00	NOT IDENT.
PA-234M	1.819E+00		2.095E+00	3.489E+00	0.000E+00	NOT IDENT.
TH-234	-3.213E-01		2.451E-01	3.764E-01	0.000E+00	NOT IDENT.
U-235	-4.996E-02		8.327E-02	1.237E-01	0.000E+00	NOT IDENT.
NP-236	-1.214E-02		2.481E-02	3.410E-02	0.000E+00	NOT IDENT.
NP-237	-1.449E-02		7.425E-02	1.286E-01	0.000E+00	NOT IDENT.
NP-239	-3.439E-02		8.704E-02	1.427E-01	0.000E+00	NOT IDENT.
AM-241	-5.359E-02		4.831E-02	8.003E-02	0.000E+00	NOT IDENT.
AM-246	-1.872E-02		5.236E-02	7.093E-02	0.000E+00	NOT IDENT.
CF-249	-3.823E-03		1.616E-02	2.755E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:48:29.87

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471384.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 5-DEC-2007 06:01:07.
Sample ID        : G1201471384          Sample quantity  : 1.20000E+02 GRAM
Detector name    : GAM19                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:00:01.32  0.0%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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	1460.80	18	10.66*	1.189E+00	2.255E-01	2.255E-01	89.00
PB-212	74.81	66	10.40	5.256E+00	1.876E-01	1.876E-01	82.51
	77.11	66	17.50	5.256E+00	1.115E-01	1.115E-01	82.51
	87.30	------	7.81	6.162E+00	------	Line Not Found	------
	238.63	12	43.30*	5.153E+00	8.513E-03	8.513E-03	412.69
	300.09	23	3.28	4.346E+00	2.527E-01	2.527E-01	123.69
AM-243	74.66	66	68.20*	5.256E+00	2.861E-02	2.861E-02	82.51
CM-243	103.76	24	23.00*	6.845E+00	2.433E-02	2.434E-02	208.79

Flag: "*" = Keyline

Sample ID : G1201471384 Acquisition date : 5-DEC-2007 06:01:07

Total number of lines in spectrum	35	
Number of unidentified lines	24	
Number of lines tentatively identified by NID	11	31.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.255E-01	2.255E-01	2.006E-01	89.00	
PB-212	4.43E+17S	1.00	8.513E-03	8.513E-03	35.13E-03	412.69	
AM-243	2.33E+11S	1.00	2.861E-02	2.861E-02	2.361E-02	82.51	
CM-243	8.99E+08S	1.00	2.433E-02	2.434E-02	5.083E-02	208.79	
			---	---			
	Total Activity :		2.869E-01	2.869E-01			
	Grand Total Activity :		2.869E-01	2.869E-01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471384 Acquisition date : 5-DEC-2007 06:01:07

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	70.67	21	116	0.91	140.93	139	7	1.45E-03	****	4.57E+00	
0	185.39	7	201	1.11	370.18	364	12	4.54E-04	****	6.05E+00	
0	403.74	32	73	1.30	806.57	801	12	2.24E-03	****	3.49E+00	
2	433.80	26	37	1.89	866.66	845	30	1.84E-03	****	3.30E+00	
2	436.34	28	16	1.27	871.73	845	30	1.97E-03	65.0	3.29E+00	
0	510.51	39	111	2.33	1019.98	1011	17	2.71E-03	****	2.91E+00	T
0	609.21	24	42	1.31	1217.27	1214	8	1.69E-03	****	2.52E+00	T
0	670.62	35	52	4.50	1340.04	1331	19	2.46E-03	****	2.33E+00	
0	679.05	14	16	0.86	1356.88	1352	8	9.54E-04	****	2.30E+00	
0	766.55	33	36	4.87	1531.81	1520	18	2.30E-03	91.6	2.07E+00	T
0	915.25	22	58	4.44	1829.11	1813	22	1.54E-03	****	1.78E+00	
0	958.57	16	17	0.92	1915.74	1909	12	1.10E-03	****	1.70E+00	
0	962.12	15	1	1.35	1922.84	1920	7	1.02E-03	59.6	1.70E+00	
0	1092.43	15	60	11.34	2183.40	2157	30	1.04E-03	****	1.52E+00	
0	1155.26	12	10	0.66	2309.04	2304	8	8.62E-04	****	1.45E+00	T
0	1202.66	20	8	3.57	2403.83	2398	11	1.39E-03	70.9	1.40E+00	
0	1252.47	8	10	0.95	2503.45	2500	9	5.48E-04	****	1.35E+00	
0	1273.11	12	6	0.90	2544.73	2542	7	8.41E-04	90.8	1.33E+00	
0	1433.99	6	14	0.67	2866.50	2858	14	4.17E-04	****	1.21E+00	
0	1544.39	11	13	0.90	3087.33	3079	12	7.62E-04	****	1.14E+00	
0	1571.80	17	13	0.63	3142.17	3131	18	1.17E-03	****	1.13E+00	
0	1578.56	10	6	1.05	3155.68	3152	8	6.73E-04	****	1.12E+00	
0	1586.45	15	21	7.87	3171.47	3160	21	1.04E-03	****	1.12E+00	T
0	1621.67	14	12	6.22	3241.93	3232	17	9.47E-04	****	1.10E+00	T
0	1647.55	11	4	1.56	3293.69	3289	9	7.31E-04	95.2	1.09E+00	
0	1678.42	12	10	0.74	3355.45	3350	11	8.40E-04	****	1.08E+00	
0	1704.73	12	11	2.25	3408.08	3396	14	8.14E-04	****	1.07E+00	
0	1806.89	7	4	0.69	3612.47	3607	10	4.86E-04	****	1.03E+00	
0	1851.99	16	6	2.37	3702.72	3696	12	1.11E-03	79.1	1.02E+00	
0	1869.92	8	6	1.26	3738.58	3733	12	5.61E-04	****	1.01E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471384           *
* Acquisition date :  5-DEC-2007 06:01:07 Detector SN#    :                 *
* Detector ID      : GAM19                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:00:01.32     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471384          Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.2000E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  6-MAR-2007 21:45:12 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	LC (pCi/GRAM)	TPU
K-40	2.255E-01	1.966E-01	1.299E-01	1.966E-01
PB-212	8.513E-03	3.443E-02	2.080E-02	3.443E-02
AM-243	2.861E-02	2.313E-02	1.406E-02	2.313E-02
CM-243	2.434E-02	4.981E-02	2.543E-02	4.981E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.427E-02	1.526E-02	1.447E-02	1.526E-02	NOT IDENT.
RH-101	7.456E-03	1.354E-02	1.081E-02	1.354E-02	NOT IDENT.
SB-125	1.635E-02	3.552E-02	3.177E-02	3.552E-02	NOT IDENT.
CS-137	-5.396E-03	1.611E-02	1.228E-02	1.611E-02	NOT IDENT.
EU-155	-2.269E-02	3.788E-02	2.741E-02	3.788E-02	NOT IDENT.
TL-208	-8.114E-03	1.789E-02	1.356E-02	1.789E-02	FAIL ABUN
PO-209	3.284E-01	4.110E+00	2.912E+00	4.110E+00	NOT IDENT.
BI-211	7.039E-02	4.036E-01	3.424E-01	4.036E-01	NOT IDENT.
BI-212	-6.280E-02	1.138E-01	8.945E-02	1.138E-01	FAIL ABUN
BI-214	3.275E-02	3.243E-02	2.750E-02	3.243E-02	FAIL ABUN
PB-214	1.484E-03	3.502E-02	2.637E-02	3.502E-02	FAIL ABUN
RA-223	-1.054E-02	7.157E-02	5.920E-02	7.157E-02	NOT IDENT.
AC-228	2.796E-02	7.211E-02	5.266E-02	7.211E-02	FAIL ABUN
PA-233	3.492E-02	2.788E-02	2.510E-02	2.788E-02	NOT IDENT.
PA-234M	1.819E+00	2.095E+00	1.745E+00	2.095E+00	NOT IDENT.
TH-234	-3.213E-01	2.451E-01	1.883E-01	2.451E-01	NOT IDENT.
U-235	-4.996E-02	8.327E-02	6.190E-02	8.327E-02	NOT IDENT.
NP-236	-1.214E-02	2.481E-02	1.706E-02	2.481E-02	NOT IDENT.
NP-237	-1.449E-02	7.425E-02	6.434E-02	7.425E-02	NOT IDENT.
NP-239	-3.439E-02	8.704E-02	7.141E-02	8.704E-02	NOT IDENT.
AM-241	-5.359E-02	4.831E-02	4.004E-02	4.831E-02	NOT IDENT.
AM-246	-1.872E-02	5.236E-02	3.549E-02	5.236E-02	NOT IDENT.
CF-249	-3.823E-03	1.616E-02	1.378E-02	1.616E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	166.4291
63.29	157.0216
74.66	165.8010
74.81	165.8298
74.81	165.8298
77.11	136.0377
77.11	136.0377
86.48	175.6256
87.30	172.9120
87.30	172.9120
92.58	160.4154
98.44	139.1369
103.76	114.9927
105.31	135.3932
129.07	150.9957
143.76	146.7686
198.00	118.0331
209.25	116.7705
228.18	133.0080
238.63	155.8675
242.00	139.0052
269.46	111.0551
270.25	108.9233
277.36	102.7695
295.22	100.3963
300.09	81.3951
312.17	86.7693
338.32	101.8007
351.93	88.8292
387.59	84.6800
409.46	77.3916
427.87	62.6784
463.00	62.5719
510.77	73.2947
583.19	61.2432
609.31	75.6864
661.66	51.8418
727.33	49.4578
763.13	32.2488
768.36	22.5702
785.37	34.5283
794.95	36.7107
806.17	46.2827
831.80	32.8179
860.56	41.5775
896.60	31.1828
911.20	31.2897
934.06	27.1155
964.77	23.6630
968.97	23.0779
1001.03	21.1002
1078.86	22.3818
1120.29	22.5703
1155.19	18.9388
1173.23	19.0055
1238.11	18.2787
1280.96	25.2108
1332.51	19.5719
1377.67	21.6992
1401.50	20.7975
1407.98	17.8455
1460.80	20.5756
1509.23	19.1539
1588.20	12.2490
1620.50	14.3612
1729.60	11.4686
1764.49	11.5264

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471384

Total Uranium Activity	-2.3115E-02	ug/g
Total Uranium Counting Unc.	3.8530E-02	ug/g
Total Uranium Tpu	3.8530E-08	ug/g
Total Uranium Mda	2.8642E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:49:00.75

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471385.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 06:03:41.
Sample ID        : G1201471385          Sample quantity  : 9.94900E+01 GRAM
Detector name    : GAM20                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:01:04.87  0.4%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.53*	76	538	1.07	126.99	123	9	5.29E-03	60.1	
2	1	74.93*	433	441	1.02	149.77	146	13	3.00E-02	9.4	1.51E+00
3	1	77.16*	687	401	1.03	154.23	146	13	4.77E-02	6.4	
4	2	84.18*	73	323	1.28	168.24	165	27	5.07E-03	50.9	1.46E+00
5	2	87.32*	271	416	1.32	174.52	165	27	1.88E-02	16.7	
6	2	90.02*	159	303	0.94	179.91	165	27	1.11E-02	19.7	
7	2	92.83*	282	391	1.39	185.52	165	27	1.96E-02	15.7	
8	0	99.22	108	396	1.54	198.29	194	10	7.50E-03	35.8	
9	0	108.79*	65	227	1.60	217.41	215	6	4.48E-03	41.1	
10	2	129.03	113	314	1.45	257.83	251	16	7.84E-03	30.4	1.71E+00
11	2	131.37	62	293	1.45	262.50	251	16	4.33E-03	54.2	
12	0	143.88*	42	260	1.57	287.49	285	7	2.89E-03	72.8	
13	0	153.84	63	306	2.00	307.39	304	8	4.39E-03	49.5	
14	0	185.81*	221	418	1.33	371.27	366	11	1.54E-02	21.5	
15	0	209.45	132	309	1.17	418.49	414	9	9.15E-03	25.6	
16	3	238.55*	1275	222	1.09	476.64	471	18	8.85E-02	3.6	1.88E+00
17	3	241.60	397	207	1.74	482.74	471	18	2.75E-02	10.1	
18	0	247.52	18	224	0.89	494.55	491	9	1.22E-03	155.8	
19	0	269.87	131	281	1.55	539.22	534	12	9.12E-03	26.9	
20	0	277.57	81	253	2.04	554.60	549	11	5.64E-03	39.7	
21	2	295.10	435	158	1.17	589.63	571	34	3.02E-02	6.8	1.45E+00
22	2	300.07	139	170	1.64	599.57	571	34	9.65E-03	21.3	
23	0	327.40*	29	193	1.06	654.17	652	8	2.03E-03	88.0	
24	0	338.19	220	226	1.14	675.74	670	11	1.53E-02	14.8	
25	0	351.84*	779	198	1.17	703.02	697	12	5.41E-02	5.2	
26	0	410.95	27	202	0.86	821.15	813	12	1.90E-03	106.2	
27	0	453.08	85	170	3.25	905.35	896	19	5.88E-03	38.6	
28	0	462.62	62	128	1.26	924.42	919	10	4.33E-03	36.1	
29	0	474.24	37	79	1.58	947.64	943	8	2.57E-03	45.5	
30	0	477.53	49	62	1.95	954.21	951	8	3.43E-03	30.8	
31	0	491.96	31	80	1.08	983.06	978	9	2.14E-03	56.0	
32	0	500.97	28	112	0.71	1001.07	993	12	1.95E-03	78.0	
33	0	510.90*	130	167	1.86	1020.93	1015	16	9.02E-03	31.3	
34	0	583.20*	355	109	1.42	1165.45	1161	11	2.47E-02	8.3	
35	0	609.29*	559	116	1.46	1217.62	1212	14	3.88E-02	6.0	
36	0	727.30	142	48	1.36	1453.57	1448	12	9.86E-03	12.9	
37	0	754.97	23	29	1.29	1508.90	1506	7	1.62E-03	43.7	
38	0	768.15	55	78	1.57	1535.26	1529	12	3.81E-03	34.9	

Sample ID : G1201471385 Acquisition date : 5-DEC-2007 06:03:41

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	795.03	57	63	1.58	1589.00	1583	11	3.95E-03	30.2	
40	0	860.93	64	61	1.54	1720.80	1716	14	4.43E-03	28.6	
41	0	911.27	273	46	1.18	1821.50	1815	14	1.90E-02	8.0	
42	0	934.25	31	45	2.15	1867.47	1860	13	2.14E-03	48.7	
43	1	964.63	50	33	1.89	1928.24	1921	23	3.49E-03	27.0	1.52E+00
44	1	969.08*	150	33	1.88	1937.13	1921	23	1.04E-02	12.0	
45	0	1029.55	14	28	1.25	2058.11	2052	10	1.01E-03	72.7	
46	0	1120.20	92	48	1.24	2239.49	2235	10	6.37E-03	17.5	
47	0	1202.19	38	38	6.89	2403.54	2393	20	2.67E-03	43.2	
48	0	1238.90	61	44	1.90	2477.01	2471	16	4.27E-03	28.8	
49	0	1380.20	70	45	8.24	2759.84	2748	34	4.89E-03	31.0	
50	0	1394.98*	3	13	0.52	2789.42	2783	10	2.14E-04	254.9	
51	0	1407.18	23	18	0.69	2813.85	2807	12	1.60E-03	42.4	
52	0	1461.13*	194	37	1.96	2921.86	2913	17	1.35E-02	10.8	
53	0	1496.30	32	8	3.57	2992.27	2984	15	2.19E-03	26.0	
54	0	1510.14	21	13	1.78	3019.99	3016	11	1.46E-03	40.3	
55	0	1580.40	18	12	4.29	3160.67	3153	12	1.25E-03	45.1	
56	0	1589.15	32	17	2.17	3178.20	3170	13	2.24E-03	31.3	
57	4	1620.82	15	16	2.15	3241.61	3235	15	1.05E-03	63.6	1.18E+00
58	4	1623.62	8	9	1.42	3247.23	3235	15	5.41E-04	63.2	
59	0	1631.96	12	21	1.34	3263.93	3257	12	8.06E-04	84.4	
60	0	1661.33	8	6	1.46	3322.75	3319	6	5.56E-04	59.9	
61	0	1730.28	23	12	2.51	3460.85	3451	15	1.62E-03	37.6	
62	0	1764.32*	108	17	2.12	3529.04	3522	19	7.53E-03	13.5	
63	0	1917.98	9	3	4.49	3836.86	3830	13	6.37E-04	51.8	

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]G1201471385      *
* Acquisition date :  5-DEC-2007 06:03:41 Detector SN#    :                 *
* Detector ID      : GAM20                Sensitivity     : 3.000           *
* Geometry         : CAN                  Energy tolerance: 2.000           *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 04:01:04.87     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471385          Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.9490E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-SEP-2007 16:22:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.665E+00	6.031E-01	2.763E-01	0.000E+00
TL-208	2.760E-01	4.785E-02	3.406E-02	0.000E+00
BI-212	9.545E-01	2.509E-01	2.456E-01	0.000E+00
PB-212	9.934E-01	8.995E-02	5.590E-02	0.000E+00
BI-214	8.255E-01	1.111E-01	5.987E-02	0.000E+00
PB-214	9.188E-01	1.065E-01	6.845E-02	0.000E+00
RA-223	3.517E-01	1.867E-01	1.778E-01	0.000E+00
AC-228	1.029E+00	1.871E-01	1.035E-01	0.000E+00
TH-234	1.317E+00	4.281E-01	4.338E-01	0.000E+00
U-235	9.676E-02	1.382E-01	1.980E-01	0.000E+00
NP-236	7.015E-02	4.971E-02	5.552E-02	0.000E+00
NP-237	5.732E-01	1.987E-01	1.962E-01	0.000E+00
AM-243	1.918E-01	4.066E-02	4.482E-02	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
CO-60	1.713E-02		2.401E-02	4.206E-02	0.000E+00	NOT IDENT.
RH-101	-1.141E-02		2.190E-02	3.395E-02	0.000E+00	NOT IDENT.
SB-125	3.471E-02		5.872E-02	9.947E-02	0.000E+00	NOT IDENT.
CS-137	-9.939E-03		2.250E-02	3.681E-02	0.000E+00	NOT IDENT.
EU-155	6.501E-02		6.798E-02	1.019E-01	0.000E+00	NOT IDENT.
PO-209	2.634E+00		3.800E+00	6.737E+00	0.000E+00	NOT IDENT.
BI-211	-2.696E-01		6.340E-01	1.020E+00	0.000E+00	NOT IDENT.
PA-233	1.139E-02		3.745E-02	6.318E-02	0.000E+00	NOT IDENT.
PA-234M	-1.337E+00		3.004E+00	4.324E+00	0.000E+00	NOT IDENT.
NP-239	-1.242E-02		1.332E-01	2.231E-01	0.000E+00	NOT IDENT.
AM-241	1.751E-02		7.624E-02	1.122E-01	0.000E+00	NOT IDENT.
CM-243	4.043E-02		6.094E-02	9.013E-02	0.000E+00	NOT IDENT.
AM-246	-2.511E-02		7.271E-02	1.145E-01	0.000E+00	NOT IDENT.
CF-249	2.306E-02		2.562E-02	4.417E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:49:01.59

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471385.CNF;1
Sample date      : 12-OCT-2007 00:00:00 Acquisition date : 5-DEC-2007 06:03:41.
Sample ID        : G1201471385          Sample quantity  : 9.94900E+01 GRAM
Detector name    : GAM20                Detector geometry: CAN
Elapsed live time: 0 04:00:00.00        Elapsed real time: 0 04:01:04.87  0.4%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.80	194	10.66*	1.286E+00	2.665E+00	2.665E+00	23.09
TL-208	277.36	81	6.31	5.042E+00	4.812E-01	4.812E-01	79.61
	510.77	130	22.60	3.200E+00	3.389E-01	3.389E-01	62.81
	583.19	355	84.50*	2.873E+00	2.760E-01	2.760E-01	17.69
	763.13	------	1.81	2.279E+00	------	Line Not Found	------
	860.56	64	12.42	2.045E+00	4.737E-01	4.737E-01	57.97
BI-212	727.33	142	11.80*	2.378E+00	9.545E-01	9.545E-01	26.82
	785.37	------	1.10	2.222E+00	------	Line Not Found	------
	1620.50	15	1.49	1.195E+00	1.596E+00	1.596E+00	127.42
PB-212	74.81	433	10.40	6.239E+00	1.258E+00	1.258E+00	21.63
	77.11	687	17.50	6.458E+00	1.147E+00	1.147E+00	16.92
	87.30	271	7.81	7.200E+00	9.100E-01	9.100E-01	35.37
	238.63	1275	43.30*	5.591E+00	9.934E-01	9.934E-01	9.24
	300.09	139	3.28	4.773E+00	1.674E+00	1.674E+00	43.03
BI-214	609.31	559	46.10*	2.770E+00	8.255E-01	8.255E-01	13.73
	768.36	55	4.94	2.266E+00	9.240E-01	9.240E-01	70.34
	806.17	------	1.22	2.170E+00	------	Line Not Found	------
	934.06	31	3.03	1.898E+00	1.009E+00	1.009E+00	97.74
	1120.29	92	15.10	1.609E+00	7.124E-01	7.124E-01	35.64
	1155.19	------	1.63	1.566E+00	------	Line Not Found	------
	1238.11	61	5.79	1.472E+00	1.361E+00	1.361E+00	57.92
	1280.96	------	1.43	1.431E+00	------	Line Not Found	------
	1377.67	------	4.00	1.347E+00	------	Line Not Found	------
	1401.50	------	1.27	1.329E+00	------	Line Not Found	------
	1407.98	23	2.15	1.324E+00	1.524E+00	1.524E+00	85.19
	1509.23	21	2.11	1.255E+00	1.499E+00	1.499E+00	80.95
	1729.60	23	2.92	1.149E+00	1.314E+00	1.314E+00	75.55
	1764.49	108	15.40	1.136E+00	1.169E+00	1.169E+00	27.81
PB-214	74.81	433	6.44	6.239E+00	2.032E+00	2.032E+00	21.63
	77.11	687	10.80	6.458E+00	1.859E+00	1.859E+00	16.92
	87.30	271	4.84	7.200E+00	1.468E+00	1.469E+00	35.37
	242.00	397	7.43	5.544E+00	1.816E+00	1.816E+00	21.01

Sample ID : G1201471385 Acquisition date : 5-DEC-2007 06:03:41

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.22	435	19.30	4.830E+00	8.811E-01	8.812E-01	14.84
	351.93	779	37.60*	4.256E+00	9.187E-01	9.188E-01	11.83
RA-223	269.46	131	13.70*	5.142E+00	3.517E-01	3.517E-01	54.17
AC-228	129.07	113	2.42	7.645E+00	1.151E+00	1.151E+00	61.10
	209.25	132	3.89	6.082E+00	1.050E+00	1.050E+00	51.44
	270.25	131	3.46	5.142E+00	1.393E+00	1.393E+00	54.17
	338.32	220	11.27	4.380E+00	8.422E-01	8.422E-01	30.18
	409.46	27	1.92	3.791E+00	7.079E-01	7.079E-01	212.40
	463.00	62	4.40	3.461E+00	7.730E-01	7.730E-01	72.49
	794.95	57	4.25	2.197E+00	1.148E+00	1.148E+00	60.92
	911.20	273	25.80*	1.942E+00	1.029E+00	1.029E+00	18.56
	964.77	50	4.99	1.843E+00	1.032E+00	1.032E+00	54.75
	968.97	150	15.80	1.836E+00	9.767E-01	9.767E-01	25.61
	1588.20	32	3.22	1.211E+00	1.560E+00	1.560E+00	63.07
TH-234	63.29	76	4.80	4.765E+00	6.280E-01	6.280E-01	120.67
	92.58	282	5.41*	7.452E+00	1.317E+00	1.317E+00	33.16
U-235	143.76	42	10.96*	7.396E+00	9.676E-02	9.676E-02	145.78
NP-236	98.44	108	38.00*	7.641E+00	7.015E-02	7.015E-02	72.31
NP-237	86.48	271	12.40*	7.200E+00	5.732E-01	5.732E-01	35.37
AM-243	74.66	433	68.20*	6.239E+00	1.918E-01	1.918E-01	21.63

Flag: "*" = Keyline

Sample ID : G1201471385 Acquisition date : 5-DEC-2007 06:03:41

Total number of lines in spectrum 63
Number of unidentified lines 24
Number of lines tentatively identified by NID 39 61.90%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	4.03E+16S	1.00	2.665E+00	2.665E+00	0.615E+00	23.09	
TL-208	4.43E+17S	1.00	2.760E-01	2.760E-01	0.488E-01	17.69	
BI-212	4.43E+17S	1.00	9.545E-01	9.545E-01	2.560E-01	26.82	
PB-212	4.43E+17S	1.00	9.934E-01	9.934E-01	0.918E-01	9.24	
BI-214	5.05E+10S	1.00	8.255E-01	8.255E-01	1.133E-01	13.73	
PB-214	5.05E+10S	1.00	9.187E-01	9.188E-01	1.087E-01	11.83	
RA-223	1.04E+12S	1.00	3.517E-01	3.517E-01	1.905E-01	54.17	
AC-228	4.43E+17S	1.00	1.029E+00	1.029E+00	0.191E+00	18.56	
TH-234	1.41E+17S	1.00	1.317E+00	1.317E+00	0.437E+00	33.16	
U-235	2.22E+16S	1.00	9.676E-02	9.676E-02	14.11E-02	145.78	
NP-236	4.89E+12S	1.00	7.015E-02	7.015E-02	5.072E-02	72.31	
NP-237	6.75E+13S	1.00	5.732E-01	5.732E-01	2.028E-01	35.37	
AM-243	2.33E+11S	1.00	1.918E-01	1.918E-01	0.415E-01	21.63	
			---	---			
		Total Activity :	1.026E+01	1.026E+01			

Grand Total Activity : 1.026E+01 1.026E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471385 Acquisition date : 5-DEC-2007 06:03:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	84.18	73	323	1.28	168.24	165	27	5.07E-03	****	7.01E+00	
2	90.02	159	303	0.94	179.91	165	27	1.11E-02	39.5	7.34E+00	
0	108.79	65	227	1.60	217.41	215	6	4.48E-03	82.1	7.76E+00	
2	131.37	62	293	1.45	262.50	251	16	4.33E-03	****	7.61E+00	
0	153.84	63	306	2.00	307.39	304	8	4.39E-03	99.0	7.20E+00	
0	185.81	221	418	1.33	371.27	366	11	1.54E-02	43.0	6.54E+00	
0	247.52	18	224	0.89	494.55	491	9	1.22E-03	****	5.45E+00	
0	327.40	29	193	1.06	654.17	652	8	2.03E-03	****	4.48E+00	
0	453.08	85	170	3.25	905.35	896	19	5.88E-03	77.2	3.52E+00	
0	474.24	37	79	1.58	947.64	943	8	2.57E-03	91.0	3.39E+00	
0	477.53	49	62	1.95	954.21	951	8	3.43E-03	61.5	3.38E+00	
0	491.96	31	80	1.08	983.06	978	9	2.14E-03	****	3.30E+00	
0	500.97	28	112	0.71	1001.07	993	12	1.95E-03	****	3.25E+00	
0	754.97	23	29	1.29	1508.90	1506	7	1.62E-03	87.4	2.30E+00	
0	1029.55	14	28	1.25	2058.11	2052	10	1.01E-03	****	1.74E+00	
0	1202.19	38	38	6.89	2403.54	2393	20	2.67E-03	86.4	1.51E+00	
0	1380.20	70	45	8.24	2759.84	2748	34	4.89E-03	61.9	1.34E+00	
0	1394.98	3	13	0.52	2789.42	2783	10	2.14E-04	****	1.33E+00	
0	1496.30	32	8	3.57	2992.27	2984	15	2.19E-03	52.0	1.26E+00	
0	1580.40	18	12	4.29	3160.67	3153	12	1.25E-03	90.3	1.22E+00	
4	1623.62	8	9	1.42	3247.23	3235	15	5.41E-04	****	1.19E+00	
0	1631.96	12	21	1.34	3263.93	3257	12	8.06E-04	****	1.19E+00	
0	1661.33	8	6	1.46	3322.75	3319	6	5.56E-04	****	1.18E+00	
0	1917.98	9	3	4.49	3836.86	3830	13	6.37E-04	****	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471385          *
* Acquisition date :  5-DEC-2007 06:03:41 Detector SN#    :                *
* Detector ID      : GAM20                Sensitivity     : 3.000          *
* Geometry         : CAN                  Energy tolerance: 2.000          *
* Elapsed live time:    0 04:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 04:01:04.87     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 12-OCT-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471385          Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 9.9490E+01 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME :  7-SEP-2007 16:22:08 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	LC (pCi/GRAM)	TPU
K-40	2.665E+00	6.031E-01	1.382E-01	6.031E-01
TL-208	2.760E-01	4.785E-02	1.704E-02	4.785E-02
BI-212	9.545E-01	2.509E-01	1.228E-01	2.509E-01
PB-212	9.934E-01	8.995E-02	2.797E-02	8.995E-02
BI-214	8.255E-01	1.111E-01	2.995E-02	1.111E-01
PB-214	9.188E-01	1.065E-01	3.425E-02	1.065E-01
RA-223	3.517E-01	1.867E-01	8.897E-02	1.867E-01
AC-228	1.029E+00	1.871E-01	5.177E-02	1.871E-01
TH-234	1.317E+00	4.281E-01	2.170E-01	4.281E-01
U-235	9.676E-02	1.382E-01	9.903E-02	1.382E-01
NP-236	7.015E-02	4.971E-02	2.777E-02	4.971E-02
NP-237	5.732E-01	1.987E-01	9.818E-02	1.987E-01
AM-243	1.918E-01	4.066E-02	2.242E-02	4.066E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
CO-60	1.713E-02	2.401E-02	2.104E-02	2.401E-02	NOT IDENT.
RH-101	-1.141E-02	2.190E-02	1.698E-02	2.190E-02	NOT IDENT.
SB-125	3.471E-02	5.872E-02	4.976E-02	5.872E-02	NOT IDENT.
CS-137	-9.939E-03	2.250E-02	1.842E-02	2.250E-02	NOT IDENT.
EU-155	6.501E-02	6.798E-02	5.097E-02	6.798E-02	NOT IDENT.
PO-209	2.634E+00	3.800E+00	3.371E+00	3.800E+00	NOT IDENT.
BI-211	-2.696E-01	6.340E-01	5.101E-01	6.340E-01	NOT IDENT.
PA-233	1.139E-02	3.745E-02	3.161E-02	3.745E-02	NOT IDENT.
PA-234M	-1.337E+00	3.004E+00	2.163E+00	3.004E+00	NOT IDENT.
NP-239	-1.242E-02	1.332E-01	1.116E-01	1.332E-01	NOT IDENT.
AM-241	1.751E-02	7.624E-02	5.612E-02	7.624E-02	NOT IDENT.
CM-243	4.043E-02	6.094E-02	4.509E-02	6.094E-02	NOT IDENT.
AM-246	-2.511E-02	7.271E-02	5.730E-02	7.271E-02	NOT IDENT.
CF-249	2.306E-02	2.562E-02	2.210E-02	2.562E-02	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	344.1906
63.29	413.8125
74.66	470.0805
74.81	470.1749
74.81	470.1749
77.11	471.6108
77.11	471.6108
86.48	395.5324
87.30	395.9297
87.30	395.9297
92.58	398.4398
98.44	337.7683
103.76	294.2397
105.31	294.7383
129.07	291.1778
143.76	337.0740
198.00	300.7463
209.25	301.2660
228.18	254.6560
238.63	240.0999
242.00	240.6203
269.46	206.3616
270.25	206.4563
277.36	217.6365
295.22	192.3947
300.09	192.9195
312.17	157.4049
338.32	174.0985
351.93	157.5643
387.59	143.3201
409.46	140.4768
427.87	125.4130
463.00	124.6677
510.77	105.1505
583.19	90.0758
609.31	76.9837
661.66	97.2088
727.33	62.6133
763.13	55.1684
768.36	78.0020
785.37	75.4453
794.95	72.0479
806.17	72.9323
831.80	76.4285
860.56	45.0143
896.60	38.3739
911.20	35.4777
934.06	37.7227
964.77	40.0664
968.97	40.1073
1001.03	49.7473
1078.86	43.2662
1120.29	54.3170
1155.19	45.0721
1173.23	39.8599
1238.11	38.2180
1280.96	28.4520
1332.51	25.0323
1377.67	46.4878
1401.50	15.7801
1407.98	17.7338
1460.80	18.9901
1509.23	22.9854
1588.20	25.4169
1620.50	24.4019
1729.60	16.8886
1764.49	6.9923

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471385

Total Uranium Activity	4.4771E-02	ug/g
Total Uranium Counting Unc.	6.3961E-02	ug/g
Total Uranium Tpu	6.3961E-08	ug/g
Total Uranium Mda	4.5823E-02	ug/g

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:49:32.53

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471386.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 5-DEC-2007 06:04:35.
Sample ID        : G1201471386          Sample quantity  : 1.55440E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:09.43  0.3%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	49.77	104	1346	1.30	98.63	95	8	2.90E-02	61.4	
2	0	59.71	8528	2007	1.33	118.48	111	13	2.37E+00	1.5	
3	7	75.06	218	753	1.34	149.15	146	14	6.06E-02	21.0	4.84E-01
4	7	77.27*	400	970	1.35	153.56	146	14	1.11E-01	14.7	
5	0	88.07	7080	1595	1.38	175.13	168	15	1.97E+00	1.7	
6	0	122.14	2170	773	1.43	243.17	235	14	6.03E-01	3.5	
7	0	136.75	160	603	1.08	272.35	266	12	4.45E-02	31.7	
8	0	165.75	886	533	1.35	330.27	324	14	2.46E-01	6.4	
9	0	201.62	16	317	1.34	401.92	401	8	4.46E-03	193.0	
10	2	238.55*	442	335	1.60	475.70	468	21	1.23E-01	9.2	5.14E-01
11	2	241.65	141	346	1.91	481.88	468	21	3.92E-02	29.6	
12	0	295.77	158	262	1.86	590.02	584	12	4.39E-02	22.1	
13	0	299.87	46	178	0.65	598.20	596	8	1.27E-02	52.4	
14	0	338.20	115	304	2.05	674.80	668	15	3.19E-02	34.3	
15	0	352.10*	173	225	1.48	702.57	697	10	4.81E-02	18.0	
16	0	391.70	403	270	1.40	781.69	774	16	1.12E-01	10.5	
17	0	468.85	41	113	0.73	935.87	933	8	1.15E-02	46.9	
18	0	562.14	30	94	1.86	1122.33	1119	9	8.30E-03	61.0	
19	0	569.46	39	161	4.45	1136.95	1130	14	1.08E-02	72.1	
20	0	583.61*	110	144	1.83	1165.25	1159	12	3.05E-02	24.1	
21	0	609.24*	158	123	1.76	1216.48	1210	15	4.40E-02	17.4	
22	0	661.46	1781	138	1.74	1320.87	1314	17	4.95E-01	2.8	
23	0	676.39	15	181	4.56	1350.72	1340	18	4.20E-03	209.7	
24	0	729.19	34	63	1.94	1456.28	1453	8	9.39E-03	44.4	
25	0	795.38	16	63	1.63	1588.65	1584	8	4.31E-03	92.6	
26	0	897.94	284	138	1.71	1793.74	1788	14	7.89E-02	10.7	
27	0	911.40	55	136	1.32	1820.67	1814	13	1.53E-02	45.8	
28	0	1001.92	28	82	3.36	2001.73	1996	12	7.90E-03	66.1	
29	0	1027.93	28	92	0.70	2053.77	2045	14	7.72E-03	76.4	
30	0	1172.99	1579	48	1.98	2344.00	2336	16	4.39E-01	2.7	
31	0	1210.56	26	50	6.67	2419.18	2405	22	7.28E-03	74.2	
32	0	1274.17	10	9	1.34	2546.49	2542	8	2.81E-03	61.8	
33	0	1332.23	1429	22	2.04	2662.71	2653	21	3.97E-01	2.8	
34	0	1361.45	7	10	0.95	2721.19	2714	9	1.99E-03	91.0	
35	0	1487.98	12	0	0.83	2974.50	2970	9	3.33E-03	28.9	
36	0	1494.59	11	6	3.42	2987.73	2981	12	3.06E-03	53.8	
37	0	1612.88	11	20	1.47	3224.60	3217	11	2.96E-03	89.9	
38	0	1729.06	9	8	0.88	3457.28	3446	16	2.50E-03	77.8	

Sample ID : G1201471386 Acquisition date : 5-DEC-2007 06:04:35

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1764.44*	28	6	0.92	3528.15	3521	15	7.71E-03	29.1	
40	0	1835.22	175	4	2.75	3669.94	3660	17	4.87E-02	8.0	
41	0	2036.22	6	3	0.56	4072.71	4065	12	1.71E-03	68.8	

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]G1201471386      *
* Acquisition date :  5-DEC-2007 06:04:35 Detector SN#    :                 *
* Detector ID      : GAM21                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 01:00:09.43     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471386          Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.5544E+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)	
CO-60	8.308E+00	6.270E-01	1.969E-01	0.000E+00
CS-137	6.159E+00	5.991E-01	1.630E-01	0.000E+00
PO-209	2.437E+02	5.360E+01	4.647E+01	0.000E+00
BI-212	9.333E-01	8.148E-01	1.424E+00	0.000E+00
PB-212	1.047E+00	1.989E-01	2.165E-01	0.000E+00
PB-214	6.950E-01	2.476E-01	3.013E-01	0.000E+00
PA-234M	1.522E+01	1.974E+01	2.672E+01	0.000E+00
NP-237	3.235E+01	2.583E+00	7.027E-01	0.000E+00
AM-241	1.364E+01	9.826E-01	2.960E-01	0.000E+00
AM-243	1.788E-01	7.453E-02	1.435E-01	0.000E+00

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
K-40	4.409E-01		9.183E-01	1.620E+00	0.000E+00	NOT IDENT.
RH-101	4.417E-02		7.202E-02	1.174E-01	0.000E+00	NOT IDENT.
SB-125	4.627E-02		2.463E-01	4.322E-01	0.000E+00	NOT IDENT.
EU-155	2.552E-03		1.834E-01	3.263E-01	0.000E+00	NOT IDENT.
TL-208	0.000E+00		1.603E-01	2.310E-01	0.000E+00	FAIL ABUN
BI-211	5.686E-01		3.095E+00	5.438E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00		3.229E-01	4.459E-01	0.000E+00	FAIL ABUN
RA-223	2.328E-01		3.790E-01	6.946E-01	0.000E+00	NOT IDENT.
AC-228	8.713E-01		7.850E-01	1.002E+00	0.000E+00	FAIL ABUN
PA-233	1.457E-01		1.471E-01	2.718E-01	0.000E+00	NOT IDENT.
TH-234	1.042E+00		8.272E-01	1.357E+00	0.000E+00	NOT IDENT.
U-235	-5.861E-02		3.667E-01	6.384E-01	0.000E+00	NOT IDENT.
NP-236	2.756E-02		9.929E-02	1.787E-01	0.000E+00	NOT IDENT.
NP-239	-1.528E-01		4.744E-01	8.440E-01	0.000E+00	NOT IDENT.
CM-243	6.232E-03		1.670E-01	2.976E-01	0.000E+00	NOT IDENT.
AM-246	1.214E-01		5.024E-01	8.682E-01	0.000E+00	NOT IDENT.
CF-249	5.618E-02		1.181E-01	1.846E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 12-DEC-2007 09:49:33.35

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201471386.CNF;1
Sample date      : 30-NOV-2007 00:00:00 Acquisition date : 5-DEC-2007 06:04:35.
Sample ID        : G1201471386          Sample quantity  : 1.55440E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00        Elapsed real time: 0 01:00:09.43  0.3%
Energy tolerance : 2.00000 keV          Analyst Initials : MJH1
Abundance limit  : 75.00000             Sensitivity      : 3.00000
Batch ID         : 707073               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-60	1173.23	1579	100.00*	9.197E-01	8.293E+00	8.308E+00	7.70
	1332.51	1429	100.00	8.127E-01	8.494E+00	8.510E+00	7.71
CS-137	661.66	1781	85.10*	1.642E+00	6.157E+00	6.159E+00	9.93
PO-209	896.60	284	0.47*	1.198E+00	2.436E+02	2.437E+02	22.45
BI-212	727.33	34	11.80*	1.483E+00	9.333E-01	9.333E-01	89.08
	785.37	------	1.10	1.374E+00	------	Line Not Found	------
	1620.50	------	1.49	6.722E-01	------	Line Not Found	------
PB-212	74.81	218	10.40	8.644E+00	1.173E+00	1.173E+00	42.53
	77.11	400	17.50	8.639E+00	1.277E+00	1.277E+00	30.16
	87.30	7080	7.81	8.524E+00	5.137E+01	5.137E+01	8.15
	238.63	442	43.30*	4.709E+00	1.047E+00	1.047E+00	19.38
	300.09	46	3.28	3.776E+00	1.780E+00	1.780E+00	104.92
PB-214	74.81	218	6.44	8.644E+00	1.894E+00	1.894E+00	42.53
	77.11	400	10.80	8.639E+00	2.069E+00	2.069E+00	30.16
	87.30	7080	4.84	8.524E+00	8.289E+01	8.289E+01	8.15
	242.00	141	7.43	4.654E+00	1.973E+00	1.973E+00	59.43
	295.22	158	19.30	3.828E+00	1.032E+00	1.032E+00	44.56
	351.93	173	37.60*	3.203E+00	6.950E-01	6.950E-01	36.35
PA-234M	1001.03	28	0.84*	1.074E+00	1.522E+01	1.522E+01	132.34
NP-237	86.48	7080	12.40*	8.524E+00	3.235E+01	3.235E+01	8.15
AM-241	59.54	8528	35.90*	8.410E+00	1.364E+01	1.364E+01	7.35
AM-243	74.66	218	68.20*	8.644E+00	1.788E-01	1.788E-01	42.53

Flag: "*" = Keyline

Sample ID : G1201471386 Acquisition date : 5-DEC-2007 06:04:35

Total number of lines in spectrum 41
Number of unidentified lines 19
Number of lines tentatively identified by NID 22 53.66%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	1.66E+08S	1.00	8.293E+00	8.308E+00	0.640E+00	7.70	
CS-137	9.47E+08S	1.00	6.157E+00	6.159E+00	0.611E+00	9.93	
PO-209	3.22E+09S	1.00	2.436E+02	2.437E+02	0.547E+02	22.45	
BI-212	4.43E+17S	1.00	9.333E-01	9.333E-01	8.314E-01	89.08	
PB-212	4.43E+17S	1.00	1.047E+00	1.047E+00	0.203E+00	19.38	
PB-214	5.05E+10S	1.00	6.950E-01	6.950E-01	2.527E-01	36.35	
PA-234M	1.41E+17S	1.00	1.522E+01	1.522E+01	2.014E+01	132.34	
NP-237	6.75E+13S	1.00	3.235E+01	3.235E+01	0.264E+01	8.15	
AM-241	1.36E+10S	1.00	1.364E+01	1.364E+01	0.100E+01	7.35	
AM-243	2.33E+11S	1.00	1.788E-01	1.788E-01	0.760E-01	42.53	
			---	---			
		Total Activity :	3.222E+02	3.222E+02			
		Grand Total Activity :	3.222E+02	3.222E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201471386 Acquisition date : 5-DEC-2007 06:04:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	49.77	104	1346	1.30	98.63	95	8	2.90E-02	****	7.90E+00	
0	122.14	2170	773	1.43	243.17	235	14	6.03E-01	6.9	7.65E+00	
0	136.75	160	603	1.08	272.35	266	12	4.45E-02	63.5	7.21E+00	
0	165.75	886	533	1.35	330.27	324	14	2.46E-01	12.9	6.37E+00	
0	201.62	16	317	1.34	401.92	401	8	4.46E-03	****	5.46E+00	
0	338.20	115	304	2.05	674.80	668	15	3.19E-02	68.7	3.34E+00	T
0	391.70	403	270	1.40	781.69	774	16	1.12E-01	20.9	2.86E+00	
0	468.85	41	113	0.73	935.87	933	8	1.15E-02	93.8	2.37E+00	
0	562.14	30	94	1.86	1122.33	1119	9	8.30E-03	****	1.95E+00	
0	569.46	39	161	4.45	1136.95	1130	14	1.08E-02	****	1.92E+00	
0	583.61	110	144	1.83	1165.25	1159	12	3.05E-02	48.3	1.87E+00	T
0	609.24	158	123	1.76	1216.48	1210	15	4.40E-02	34.8	1.79E+00	T
0	676.39	15	181	4.56	1350.72	1340	18	4.20E-03	****	1.60E+00	
0	795.38	16	63	1.63	1588.65	1584	8	4.31E-03	****	1.36E+00	T
0	911.40	55	136	1.32	1820.67	1814	13	1.53E-02	91.7	1.18E+00	T
0	1027.93	28	92	0.70	2053.77	2045	14	7.72E-03	****	1.05E+00	
0	1210.56	26	50	6.67	2419.18	2405	22	7.28E-03	****	8.92E-01	
0	1274.17	10	9	1.34	2546.49	2542	8	2.81E-03	****	8.49E-01	
0	1361.45	7	10	0.95	2721.19	2714	9	1.99E-03	****	7.96E-01	
0	1487.98	12	0	0.83	2974.50	2970	9	3.33E-03	57.7	7.30E-01	
0	1494.59	11	6	3.42	2987.73	2981	12	3.06E-03	****	7.27E-01	
0	1612.88	11	20	1.47	3224.60	3217	11	2.96E-03	****	6.75E-01	
0	1729.06	9	8	0.88	3457.28	3446	16	2.50E-03	****	6.31E-01	T
0	1764.44	28	6	0.92	3528.15	3521	15	7.71E-03	58.2	6.19E-01	T
0	1835.22	175	4	2.75	3669.94	3660	17	4.87E-02	16.0	5.95E-01	
0	2036.22	6	3	0.56	4072.71	4065	12	1.71E-03	****	5.36E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201471386           *
* Acquisition date :  5-DEC-2007 06:04:35 Detector SN#    :                 *
* Detector ID      : GAM21                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 01:00:09.43     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-NOV-2007 00:00:00 Nuclide Library :                 *
* Sample ID        : G1201471386          Analyst initials: MJH1            *
* Batch Number     : 707073               Sample Quantity : 1.5544E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* 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    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	LC (pCi/GRAM)	TPU
CO-60	8.308E+00	6.270E-01	9.851E-02	6.270E-01
CS-137	6.159E+00	5.991E-01	8.153E-02	5.991E-01
PO-209	2.437E+02	5.360E+01	2.325E+01	5.360E+01
BI-212	9.333E-01	8.148E-01	7.127E-01	8.148E-01
PB-212	1.047E+00	1.989E-01	1.083E-01	1.989E-01
PB-214	6.950E-01	2.476E-01	1.508E-01	2.476E-01
PA-234M	1.522E+01	1.974E+01	1.337E+01	1.974E+01
NP-237	3.235E+01	2.583E+00	3.516E-01	2.583E+00
AM-241	1.364E+01	9.826E-01	1.481E-01	9.826E-01
AM-243	1.788E-01	7.453E-02	7.180E-02	7.453E-02

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

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	LC (pCi/GRAM)	TPU	
K-40	4.409E-01	9.183E-01	8.105E-01	9.183E-01	NOT IDENT.
RH-101	4.417E-02	7.202E-02	5.875E-02	7.202E-02	NOT IDENT.
SB-125	4.627E-02	2.463E-01	2.162E-01	2.463E-01	NOT IDENT.
EU-155	2.552E-03	1.834E-01	1.633E-01	1.834E-01	NOT IDENT.
TL-208	3.352E-01	1.603E-01	1.156E-01	1.603E-01	FAIL ABUN
BI-211	5.686E-01	3.095E+00	2.720E+00	3.095E+00	NOT IDENT.
BI-214	9.262E-01	3.229E-01	2.231E-01	3.229E-01	FAIL ABUN
RA-223	2.328E-01	3.790E-01	3.475E-01	3.790E-01	NOT IDENT.
AC-228	8.713E-01	7.850E-01	5.012E-01	7.850E-01	FAIL ABUN
PA-233	1.457E-01	1.471E-01	1.360E-01	1.471E-01	NOT IDENT.
TH-234	1.042E+00	8.272E-01	6.788E-01	8.272E-01	NOT IDENT.
U-235	-5.861E-02	3.667E-01	3.194E-01	3.667E-01	NOT IDENT.
NP-236	2.756E-02	9.929E-02	8.941E-02	9.929E-02	NOT IDENT.
NP-239	-1.528E-01	4.744E-01	4.223E-01	4.744E-01	NOT IDENT.
CM-243	6.232E-03	1.670E-01	1.489E-01	1.670E-01	NOT IDENT.
AM-246	1.214E-01	5.024E-01	4.344E-01	5.024E-01	NOT IDENT.
CF-249	5.618E-02	1.181E-01	9.236E-02	1.181E-01	NOT IDENT.

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

ENERGY	MDA COUNTS
59.54	1315.8413
63.29	1003.7034
74.66	1194.2141
74.81	1194.4056
74.81	1194.4056
77.11	1088.3943
77.11	1088.3943
86.48	932.5024
87.30	933.2578
87.30	933.2578
92.58	542.3527
98.44	520.8893
103.76	528.7806
105.31	534.8976
129.07	453.1334
143.76	422.5975
198.00	356.5575
209.25	352.7455
228.18	365.9202
238.63	344.4108
242.00	345.0279
269.46	255.9673
270.25	263.7375
277.36	209.8037
295.22	211.9209
300.09	254.5564
312.17	217.1627
338.32	223.6302
351.93	237.8593
387.59	203.6213
409.46	205.6839
427.87	196.8469
463.00	190.7752
510.77	143.4948
583.19	130.5920
609.31	127.2489
661.66	96.5811
727.33	117.1356
763.13	110.5111
768.36	111.6021
785.37	103.5203
794.95	101.8581
806.17	108.8163
831.80	96.9951
860.56	124.7142
896.60	130.3274
911.20	121.2502
934.06	128.7346
964.77	190.9150
968.97	151.4810
1001.03	111.0613
1078.86	104.2741
1120.29	93.8867
1155.19	68.8239
1173.23	62.8690
1238.11	28.1558
1280.96	22.6942
1332.51	22.2578
1377.67	19.2217
1401.50	24.6565
1407.98	19.3169
1460.80	24.8905
1509.23	12.1499
1588.20	27.4282
1620.50	22.1729
1729.60	5.0669
1764.49	7.7581

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201471386

Total Uranium Activity	-2.7119E-02	ug/g
Total Uranium Counting Unc.	1.6969E-01	ug/g
Total Uranium Tpu	1.6969E-07	ug/g
Total Uranium Mda	1.4777E-01	ug/g

CONTINUING CALIBRATION DATA

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 4-DEC-2007 08:17:22
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.86

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6479E+05+/-3.5006E+04]	9.0431E+05	1.13	
*DECAY CORRECTED ACTIVITY CS-137 [2.9304E+04+/-484.4]	2.9058E+04	-0.51	
*DECAY CORRECTED ACTIVITY CO-60 [4.1342E+04+/-965.4]	4.2700E+04	1.41	
*DECAY CORRECTED ACTIVITY AM-241 [5.9711E+04+/-158.0]	5.9529E+04	-1.15	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7569E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3233E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6649E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8084E+01	
*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 CD-109	7.0540E-01	1.1577E+00	9.2581E-01	
*PEAK FWHM CS-137	1.3206E+00	1.6654E+00	1.4587E+00	
*PEAK FWHM CO-60	1.7476E+00	2.2429E+00	2.0216E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1871E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9622E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.3839E-01	

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

Approved by: _____ Approval Date: 12 / 4 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1

Sample ID : Calib Check
Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00
Acquisition date : 4-DEC-2007 08:28:58
Elapsed live time: 0 00:05:00.00
Elapsed real time: 0 00:05:05.54

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6112E+05+/-3.2007E+04]	7.9536E+05	-2.05	Investigate
*DECAY CORRECTED ACTIVITY CS-137 [2.8529E+04+/-528.8]	2.8536E+04	0.01	
*DECAY CORRECTED ACTIVITY CO-60 [4.0368E+04+/-919.5]	4.0802E+04	0.47	
*DECAY CORRECTED ACTIVITY AM-241 [6.0478E+04+/-244.4]	6.0677E+04	0.81	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7646E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3227E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6635E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8022E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6159E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3323E+03	
*PEAK FWHM CD-109	7.4630E-01	1.0839E+00	1.0109E+00	
*PEAK FWHM CS-137	1.2763E+00	1.4672E+00	1.3298E+00	
*PEAK FWHM CO-60	1.6103E+00	2.0503E+00	1.8624E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1952E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9525E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.9650E-01	

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

Approved by: LL Approval Date: 12 / 4 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 4-DEC-2007 04:38:34
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.42

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.5822E+05+/-4.0658E+04]	7.7971E+05	-1.93	
*DECAY CORRECTED ACTIVITY CS-137 [2.9515E+04+/-560.4]	2.7947E+04	-2.80	Investigate
*DECAY CORRECTED ACTIVITY CO-60 [4.2624E+04+/-1105]	4.1237E+04	-1.26	
*DECAY CORRECTED ACTIVITY AM-241 [6.7240E+04+/-843.9]	6.7018E+04	-0.26	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7480E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3224E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6651E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7922E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6194E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3332E+03	
*PEAK FWHM CD-109	8.6960E-01	1.2382E+00	1.2293E+00	
*PEAK FWHM CS-137	1.5272E+00	1.7253E+00	1.6942E+00	
*PEAK FWHM CO-60	1.9510E+00	2.4159E+00	2.2761E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1783E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9419E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1099E+00	

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

Approved by: LL Approval Date: 12 / 4 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM19_CAN.QAF;1

Sample ID : Calib Check
Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00
Acquisition date : 4-DEC-2007 08:29:08
Elapsed live time: 0 00:05:00.00
Elapsed real time: 0 00:05:02.32

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2558E+05+/-2.3590E+04]	8.3488E+05	0.39	
*DECAY CORRECTED ACTIVITY CS-137 [2.5787E+04+/-427.7]	2.6213E+04	1.00	
*DECAY CORRECTED ACTIVITY CO-60 [3.9967E+04+/-792.7]	4.0098E+04	0.17	
*DECAY CORRECTED ACTIVITY AM-241 [6.8219E+04+/-1021]	6.7936E+04	-0.28	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7571E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3211E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6618E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8074E+01	
*PEAK ENERGY CS-137	6.5964E+02	6.6364E+02	6.6114E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3317E+03	
*PEAK FWHM CD-109	1.1583E+00	1.4038E+00	1.2381E+00	
*PEAK FWHM CS-137	1.5052E+00	1.7317E+00	1.5890E+00	
*PEAK FWHM CO-60	1.7723E+00	2.1545E+00	1.9052E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1893E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9655E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.2013E+00	

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

Approved by: LL Approval Date: 12 / 4 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 4-DEC-2007 08:36:12
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:04.42

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2199E+05+/-1.6962E+04]	8.0905E+05	-0.76	
*DECAY CORRECTED ACTIVITY CS-137 [2.6347E+04+/-617.7]	2.6351E+04	0.01	
*DECAY CORRECTED ACTIVITY CO-60 [4.0298E+04+/-1103]	4.1369E+04	0.97	
*DECAY CORRECTED ACTIVITY AM-241 [6.5691E+04+/-1662]	6.3929E+04	-1.06	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7504E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3209E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6629E+03	
*PEAK ENERGY CD-109	8.6000E+01	9.0000E+01	8.8028E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6147E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3323E+03	
*PEAK FWHM CD-109	1.2623E+00	1.5019E+00	1.3768E+00	
*PEAK FWHM CS-137	1.5605E+00	1.8906E+00	1.6452E+00	
*PEAK FWHM CO-60	1.8533E+00	2.3397E+00	2.0842E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1850E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9718E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.3789E+00	

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

Approved by: LL Approval Date: 12 / 4 / 07

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 : 4-DEC-2007 04:38:45
Elapsed live time: 0 00:05:00.00
Elapsed real time: 0 00:05:03.13

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7105E+05+/-2.4257E+04]	7.5266E+05	-0.76	
*DECAY CORRECTED ACTIVITY CS-137 [2.5576E+04+/-422.4]	2.6083E+04	1.20	
*DECAY CORRECTED ACTIVITY CO-60 [4.0337E+04+/-833.8]	4.0978E+04	0.77	
*DECAY CORRECTED ACTIVITY AM-241 [6.4151E+04+/-269.2]	6.3846E+04	-1.13	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7604E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3230E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6648E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8040E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6140E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3320E+03	
*PEAK FWHM CD-109	6.9450E-01	9.5230E-01	7.7231E-01	
*PEAK FWHM CS-137	1.3260E+00	1.5802E+00	1.4748E+00	
*PEAK FWHM CO-60	1.7823E+00	2.2419E+00	2.0479E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1904E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9544E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.1112E-01	

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

Approved by: _____ Approval Date: 12 / 4 / 07

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 : 5-DEC-2007 04:45:18
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:04.19

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [9.4102E+05+/-1.5120E+04]	9.1996E+05	-1.39	
*DECAY CORRECTED ACTIVITY CS-137 [2.7324E+04+/-449.6]	2.6938E+04	-0.86	
*DECAY CORRECTED ACTIVITY CO-60 [4.1154E+04+/-757.2]	4.1031E+04	-0.16	
*DECAY CORRECTED ACTIVITY AM-241 [6.9063E+04+/-487.0]	6.8422E+04	-1.32	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7650E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3235E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6642E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7886E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6188E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3331E+03	
*PEAK FWHM CD-109	1.0354E+00	1.2686E+00	1.1588E+00	
*PEAK FWHM CS-137	1.4355E+00	1.7081E+00	1.5755E+00	
*PEAK FWHM CO-60	1.7629E+00	2.2581E+00	1.9495E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1938E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9308E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1232E+00	

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

Approved by: _____ Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM06_2LMB.QÀF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2005 12:00:00 Acquisition date : 5-DEC-2007 04:45:35
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:01.23

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.1697E+05+/-3.2175E+04]	8.2138E+05	0.14	
*DECAY CORRECTED ACTIVITY CS-137 [2.4416E+04+/-658.7]	2.4428E+04	0.02	
*DECAY CORRECTED ACTIVITY CO-60 [3.9594E+04+/-984.4]	3.9534E+04	-0.06	
*DECAY CORRECTED ACTIVITY AM-241 [6.6529E+04+/-776.6]	6.7532E+04	1.29	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7515E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3219E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6631E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7581E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6137E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	8.8210E-01	1.1228E+00	1.0799E+00	
*PEAK FWHM CS-137	1.2904E+00	1.6432E+00	1.5098E+00	
*PEAK FWHM CO-60	1.6812E+00	2.2061E+00	1.9329E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1806E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9004E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.6856E-01	

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

Approved by: LL Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2003 12:00:00 Acquisition date : 5-DEC-2007 04:45:47
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.09

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.6229E+05+/-4.6983E+04]	7.4104E+05	-0.45	
*DECAY CORRECTED ACTIVITY CS-137 [2.5347E+04+/-581.1]	2.6379E+04	1.78	
*DECAY CORRECTED ACTIVITY CO-60 [4.0193E+04+/-817.5]	4.0247E+04	0.07	
*DECAY CORRECTED ACTIVITY AM-241 [5.9499E+04+/-1996]	5.8065E+04	-0.72	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7563E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3232E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6652E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8070E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6199E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3331E+03	
*PEAK FWHM CD-109	8.8960E-01	1.2630E+00	1.0123E+00	
*PEAK FWHM CS-137	1.3220E+00	1.6316E+00	1.5802E+00	
*PEAK FWHM CO-60	1.7106E+00	2.2639E+00	1.9952E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1866E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9577E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0300E+00	

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

Approved by: LL Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2003 12:00:00 Acquisition date : 5-DEC-2007 05:23:29
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:01.58

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7161E+05+/-5.4538E+04]	7.9884E+05	0.50	
*DECAY CORRECTED ACTIVITY CS-137 [2.5461E+04+/-453.1]	2.5463E+04	0.00	
*DECAY CORRECTED ACTIVITY CO-60 [4.0000E+04+/-942.5]	3.7441E+04	-2.72	Investigate
*DECAY CORRECTED ACTIVITY AM-241 [5.9045E+04+/-1432]	5.7365E+04	-1.17	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7563E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3239E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6666E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8046E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6175E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3327E+03	
*PEAK FWHM CD-109	8.6980E-01	1.0978E+00	1.0062E+00	
*PEAK FWHM CS-137	1.2287E+00	1.4696E+00	1.3861E+00	
*PEAK FWHM CO-60	1.5668E+00	1.9957E+00	1.7248E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1854E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9526E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.5221E-01	

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

Approved by: _____ Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2005 12:00:00 Acquisition date : 5-DEC-2007 05:00:48
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.85

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.4539E+05+/-1.7760E+04]	8.4197E+05	-0.19	
*DECAY CORRECTED ACTIVITY CS-137 [2.5327E+04+/-358.0]	2.5863E+04	1.50	
*DECAY CORRECTED ACTIVITY CO-60 [4.0022E+04+/-687.6]	4.0650E+04	0.91	
*DECAY CORRECTED ACTIVITY AM-241 [6.6116E+04+/-1398]	6.7545E+04	1.02	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7527E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3223E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6634E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8013E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6139E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3320E+03	
*PEAK FWHM CD-109	9.8950E-01	1.3215E+00	1.2132E+00	
*PEAK FWHM CS-137	1.3969E+00	1.7625E+00	1.6272E+00	
*PEAK FWHM CO-60	1.8061E+00	2.2486E+00	2.0891E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1821E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9493E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.2060E+00	

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

Approved by: LL Approval Date: 12/5/07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 5-DEC-2007 05:00:56
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.87

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6479E+05+/-3.5006E+04]	8.3740E+05	-0.78	
*DECAY CORRECTED ACTIVITY CS-137 [2.9304E+04+/-484.4]	2.9305E+04	0.00	
*DECAY CORRECTED ACTIVITY CO-60 [4.1342E+04+/-965.4]	4.2334E+04	1.03	
*DECAY CORRECTED ACTIVITY AM-241 [6.0133E+04+/-854.1]	6.1399E+04	1.48	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7560E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3234E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6653E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8040E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6153E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3323E+03	
*PEAK FWHM CD-109	7.0540E-01	1.1577E+00	9.8637E-01	
*PEAK FWHM CS-137	1.3206E+00	1.6654E+00	1.4402E+00	
*PEAK FWHM CO-60	1.7476E+00	2.2429E+00	2.0662E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1861E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9571E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.4959E-01	

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

Approved by: U Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1

Sample ID : Calib Check
Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00
Acquisition date : 5-DEC-2007 04:46:00
Elapsed live time: 0 00:05:00.00
Elapsed real time: 0 00:05:01.33

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.1190E+05+/-3.9665E+04]	8.2771E+05	0.40	
*DECAY CORRECTED ACTIVITY CS-137 [2.5426E+04+/-564.0]	2.5277E+04	-0.26	
*DECAY CORRECTED ACTIVITY CO-60 [4.0446E+04+/-915.4]	3.8750E+04	-1.85	
*DECAY CORRECTED ACTIVITY AM-241 [6.6493E+04+/-2939]	6.2938E+04	-1.21	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7616E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3229E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6654E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8106E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6154E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3326E+03	
*PEAK FWHM CD-109	1.0337E+00	1.5254E+00	1.1646E+00	
*PEAK FWHM CS-137	1.4334E+00	1.8319E+00	1.4976E+00	
*PEAK FWHM CO-60	1.6848E+00	2.2203E+00	1.9947E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1904E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9538E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.2175E+00	

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

Approved by: U Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 5-DEC-2007 04:46:09
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.25

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2559E+05+/-2.2938E+04]	8.2156E+05	-0.18	
*DECAY CORRECTED ACTIVITY CS-137 [2.6207E+04+/-512.6]	2.5816E+04	-0.76	
*DECAY CORRECTED ACTIVITY CO-60 [4.0485E+04+/-767.5]	3.9564E+04	-1.20	
*DECAY CORRECTED ACTIVITY AM-241 [6.6587E+04+/-2220]	6.7890E+04	0.59	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7611E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3237E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6659E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7951E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6166E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3324E+03	
*PEAK FWHM CD-109	8.8540E-01	1.2058E+00	9.2481E-01	
*PEAK FWHM CS-137	1.3237E+00	1.6479E+00	1.3125E+00	Below
*PEAK FWHM CO-60	1.7177E+00	2.1263E+00	1.9533E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1900E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9392E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.8042E-01	

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

Approved by: _____ Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 5-DEC-2007 05:11:35
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:05.60

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6112E+05+/-3.2007E+04]	8.5615E+05	-0.16	
*DECAY CORRECTED ACTIVITY CS-137 [2.8529E+04+/-528.8]	2.9289E+04	1.44	
*DECAY CORRECTED ACTIVITY CO-60 [4.0368E+04+/-919.5]	4.1225E+04	0.93	
*DECAY CORRECTED ACTIVITY AM-241 [6.0503E+04+/-205.5]	6.0577E+04	0.36	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7633E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3224E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6631E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7956E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6145E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3321E+03	
*PEAK FWHM CD-109	7.4630E-01	1.0839E+00	9.6634E-01	
*PEAK FWHM CS-137	1.2763E+00	1.4672E+00	1.3542E+00	
*PEAK FWHM CO-60	1.6103E+00	2.0503E+00	1.8153E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1935E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9438E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.6154E-01	

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

Approved by: LL Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 5-DEC-2007 05:21:12
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.40

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.5822E+05+/-4.0658E+04]	8.6120E+05	0.07	
*DECAY CORRECTED ACTIVITY CS-137 [2.9515E+04+/-560.4]	2.8703E+04	-1.45	
*DECAY CORRECTED ACTIVITY CO-60 [4.2624E+04+/-1105]	4.0730E+04	-1.72	
*DECAY CORRECTED ACTIVITY AM-241 [6.6461E+04+/-1704]	6.4123E+04	-1.37	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7452E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3220E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6646E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7784E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6176E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3330E+03	
*PEAK FWHM CD-109	8.6960E-01	1.2382E+00	1.0594E+00	
*PEAK FWHM CS-137	1.5272E+00	1.7253E+00	1.6265E+00	
*PEAK FWHM CO-60	1.9510E+00	2.4159E+00	2.2153E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1764E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9321E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0397E+00	

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

Approved by: LL Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM19_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 5-DEC-2007 05:01:12
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.32

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2558E+05+/-2.3590E+04]	7.7884E+05	-1.98	
*DECAY CORRECTED ACTIVITY CS-137 [2.5787E+04+/-427.7]	2.6348E+04	1.31	
*DECAY CORRECTED ACTIVITY CO-60 [3.9967E+04+/-792.7]	4.0239E+04	0.34	
*DECAY CORRECTED ACTIVITY AM-241 [6.8933E+04+/-1654]	7.1075E+04	1.30	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7569E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3211E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6618E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8060E+01	
*PEAK ENERGY CS-137	6.5964E+02	6.6364E+02	6.6113E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3317E+03	
*PEAK FWHM CD-109	1.1583E+00	1.4038E+00	1.1503E+00	Below
*PEAK FWHM CS-137	1.5052E+00	1.7317E+00	1.6519E+00	
*PEAK FWHM CO-60	1.7723E+00	2.1545E+00	1.9832E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1879E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9588E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.2620E+00	

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

Approved by: LL Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 5-DEC-2007 05:15:26
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.35

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.4629E+05+/-8.2185E+04]	7.3085E+05	-1.40	
*DECAY CORRECTED ACTIVITY CS-137 [2.8541E+04+/-525.1]	2.8581E+04	0.08	
*DECAY CORRECTED ACTIVITY CO-60 [4.0826E+04+/-992.7]	4.0478E+04	-0.35	
*DECAY CORRECTED ACTIVITY AM-241 [6.2451E+04+/-1091]	6.3646E+04	1.10	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7626E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3224E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6649E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8196E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6170E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3328E+03	
*PEAK FWHM CD-109	7.7050E-01	1.3272E+00	8.2091E-01	
*PEAK FWHM CS-137	1.2848E+00	1.6116E+00	1.4612E+00	
*PEAK FWHM CO-60	1.5484E+00	2.0686E+00	1.6362E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1917E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9613E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0514E+00	

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

Approved by: _____ Approval Date: 12 / 5 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 5-DEC-2007 05:11:48
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:04.48

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2199E+05+/-1.6962E+04]	8.1920E+05	-0.16	
*DECAY CORRECTED ACTIVITY CS-137 [2.6347E+04+/-617.7]	2.6478E+04	0.21	
*DECAY CORRECTED ACTIVITY CO-60 [4.0298E+04+/-1103]	4.0872E+04	0.52	
*DECAY CORRECTED ACTIVITY AM-241 [6.5314E+04+/-1552]	6.4185E+04	-0.73	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7516E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3211E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6631E+03	
*PEAK ENERGY CD-109	8.6000E+01	9.0000E+01	8.8090E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6157E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3324E+03	
*PEAK FWHM CD-109	1.2623E+00	1.5019E+00	1.3922E+00	
*PEAK FWHM CS-137	1.5605E+00	1.8906E+00	1.6160E+00	
*PEAK FWHM CO-60	1.8533E+00	2.3397E+00	2.1694E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1861E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9771E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.3457E+00	

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

Approved by: _____ Approval Date: 12 / 5 / 07

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 : 7-DEC-2007 04:58:09
Elapsed live time: 0 00:05:00.00
Elapsed real time: 0 00:05:03.02

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7105E+05+/-2.4257E+04]	7.2191E+05	-2.03	Investigate
*DECAY CORRECTED ACTIVITY CS-137 [2.5576E+04+/-422.4]	2.4802E+04	-1.83	
*DECAY CORRECTED ACTIVITY CO-60 [4.0337E+04+/-833.8]	4.0034E+04	-0.36	
*DECAY CORRECTED ACTIVITY AM-241 [6.3410E+04+/-2076]	5.9862E+04	-1.71	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7584E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3233E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6653E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7943E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6154E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	6.9450E-01	9.5230E-01	7.4720E-01	
*PEAK FWHM CS-137	1.3260E+00	1.5802E+00	1.4005E+00	
*PEAK FWHM CO-60	1.7823E+00	2.2419E+00	1.8839E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1895E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9501E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.1859E-01	

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

Approved by: LL Approval Date: 12 / 7 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 8-DEC-2007 07:38:21
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.85

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6479E+05+/-3.5006E+04]	8.4458E+05	-0.58	
*DECAY CORRECTED ACTIVITY CS-137 [2.9304E+04+/-484.4]	2.9776E+04	0.97	
*DECAY CORRECTED ACTIVITY CO-60 [4.1342E+04+/-965.4]	4.2396E+04	1.09	
*DECAY CORRECTED ACTIVITY AM-241 [6.0277E+04+/-637.4]	6.0525E+04	0.39	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7559E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3231E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6646E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8033E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6139E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3319E+03	
*PEAK FWHM CD-109	7.0540E-01	1.1577E+00	1.0156E+00	
*PEAK FWHM CS-137	1.3206E+00	1.6654E+00	1.4654E+00	
*PEAK FWHM CO-60	1.7476E+00	2.2429E+00	1.9394E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1864E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9586E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.5767E-01	

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

Approved by: LL Approval Date: 12/8/07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 8-DEC-2007 07:38:30
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:01.33

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.1190E+05+/-3.9665E+04]	8.0514E+05	-0.17	
*DECAY CORRECTED ACTIVITY CS-137 [2.5426E+04+/-564.0]	2.5882E+04	0.81	
*DECAY CORRECTED ACTIVITY CO-60 [4.0446E+04+/-915.4]	4.1162E+04	0.78	
*DECAY CORRECTED ACTIVITY AM-241 [6.6628E+04+/-2235]	6.8409E+04	0.80	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7607E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3227E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6650E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8059E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6146E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3323E+03	
*PEAK FWHM CD-109	1.0337E+00	1.5254E+00	1.2707E+00	
*PEAK FWHM CS-137	1.4334E+00	1.8319E+00	1.6220E+00	
*PEAK FWHM CO-60	1.6848E+00	2.2203E+00	1.8810E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1916E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9598E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.3915E+00	

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

Approved by: LL Approval Date: 12 / 8 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 8-DEC-2007 07:50:38
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.24

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2559E+05+/-2.2938E+04]	8.2368E+05	-0.08	
*DECAY CORRECTED ACTIVITY CS-137 [2.6207E+04+/-512.6]	2.5986E+04	-0.43	
*DECAY CORRECTED ACTIVITY CO-60 [4.0485E+04+/-767.5]	3.8901E+04	-2.06	Investigate
*DECAY CORRECTED ACTIVITY AM-241 [6.6460E+04+/-1886]	6.7313E+04	0.45	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7612E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3234E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6653E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7954E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6151E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3321E+03	
*PEAK FWHM CD-109	8.8540E-01	1.2058E+00	9.6597E-01	
*PEAK FWHM CS-137	1.3237E+00	1.6479E+00	1.4851E+00	
*PEAK FWHM CO-60	1.7177E+00	2.1263E+00	1.8866E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1900E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9392E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.5321E-01	

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

Approved by: LL Approval Date: 12 / 8 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 8-DEC-2007 07:50:48
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:05.56

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6112E+05+/-3.2007E+04]	8.8246E+05	0.67	
*DECAY CORRECTED ACTIVITY CS-137 [2.8529E+04+/-528.8]	2.8793E+04	0.50	
*DECAY CORRECTED ACTIVITY CO-60 [4.0368E+04+/-919.5]	3.9837E+04	-0.58	
*DECAY CORRECTED ACTIVITY AM-241 [6.0718E+04+/-701.4]	6.0163E+04	-0.79	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7622E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3223E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6629E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7900E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6141E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3320E+03	
*PEAK FWHM CD-109	7.4630E-01	1.0839E+00	8.9266E-01	
*PEAK FWHM CS-137	1.2763E+00	1.4672E+00	1.3605E+00	
*PEAK FWHM CO-60	1.6103E+00	2.0503E+00	1.7080E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1937E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9452E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.1554E-01	

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

Approved by: LL Approval Date: 12/ 8/ 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 8-DEC-2007 09:24:25
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.45

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.5822E+05+/-4.0658E+04]	8.8792E+05	0.73	
*DECAY CORRECTED ACTIVITY CS-137 [2.9515E+04+/-560.4]	2.9660E+04	0.26	
*DECAY CORRECTED ACTIVITY CO-60 [4.2624E+04+/-1105]	4.0592E+04	-1.84	
*DECAY CORRECTED ACTIVITY AM-241 [6.6616E+04+/-1246]	6.7395E+04	0.62	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7444E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3213E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6631E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7742E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6141E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	8.6960E-01	1.2382E+00	1.1197E+00	
*PEAK FWHM CS-137	1.5272E+00	1.7253E+00	1.6410E+00	
*PEAK FWHM CO-60	1.9510E+00	2.4159E+00	2.2638E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1751E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9256E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1174E+00	

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

Approved by: LL Approval Date: 12 / 8 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM19_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 8-DEC-2007 09:14:59
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.33

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2558E+05+/-2.3590E+04]	8.2497E+05	-0.03	
*DECAY CORRECTED ACTIVITY CS-137 [2.5787E+04+/-427.7]	2.4672E+04	-2.61	Investigate
*DECAY CORRECTED ACTIVITY CO-60 [3.9967E+04+/-792.7]	4.0262E+04	0.37	
*DECAY CORRECTED ACTIVITY AM-241 [6.9889E+04+/-2434]	7.3698E+04	1.56	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7560E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3209E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6614E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8016E+01	
*PEAK ENERGY CS-137	6.5964E+02	6.6364E+02	6.6103E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3314E+03	
*PEAK FWHM CD-109	1.1583E+00	1.4038E+00	1.2503E+00	
*PEAK FWHM CS-137	1.5052E+00	1.7317E+00	1.5977E+00	
*PEAK FWHM CO-60	1.7723E+00	2.1545E+00	1.9312E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1872E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9551E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.2480E+00	

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

Approved by: _____ Approval Date: 12 / 8 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 8-DEC-2007 09:15:08
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.21

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.4629E+05+/-8.2185E+04]	8.3782E+05	-0.10	
*DECAY CORRECTED ACTIVITY CS-137 [2.8541E+04+/-525.1]	2.7877E+04	-1.26	
*DECAY CORRECTED ACTIVITY CO-60 [4.0826E+04+/-992.7]	4.1271E+04	0.45	
*DECAY CORRECTED ACTIVITY AM-241 [6.2384E+04+/-1695]	6.1251E+04	-0.67	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7618E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3223E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6647E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8157E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6165E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3327E+03	
*PEAK FWHM CD-109	7.7050E-01	1.3272E+00	1.2328E+00	
*PEAK FWHM CS-137	1.2848E+00	1.6116E+00	1.5012E+00	
*PEAK FWHM CO-60	1.5484E+00	2.0686E+00	1.7340E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1931E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9682E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0662E+00	

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

Approved by: U Approval Date: 12 / 8 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 8-DEC-2007 09:27:49
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:04.34

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2199E+05+/-1.6962E+04]	7.8870E+05	-1.96	
*DECAY CORRECTED ACTIVITY CS-137 [2.6347E+04+/-617.7]	2.5742E+04	-0.98	
*DECAY CORRECTED ACTIVITY CO-60 [4.0298E+04+/-1103]	3.8626E+04	-1.52	
*DECAY CORRECTED ACTIVITY AM-241 [6.5360E+04+/-1444]	6.3964E+04	-0.97	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7525E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3210E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6627E+03	
*PEAK ENERGY CD-109	8.6000E+01	9.0000E+01	8.8133E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6152E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3323E+03	
*PEAK FWHM CD-109	1.2623E+00	1.5019E+00	1.4071E+00	
*PEAK FWHM CS-137	1.5605E+00	1.8906E+00	1.8073E+00	
*PEAK FWHM CO-60	1.8533E+00	2.3397E+00	2.1511E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1858E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9760E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.3634E+00	

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

Approved by: LL Approval Date: 12 / 8 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2003 12:00:00 Acquisition date : 8-DEC-2007 07:38:50
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.33

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [6.7938E+05+/-2.3458E+05]	7.4506E+05	0.28	
*DECAY CORRECTED ACTIVITY CS-137 [2.6310E+04+/-489.1]	2.5159E+04	-2.35	Investigate
*DECAY CORRECTED ACTIVITY CO-60 [3.8670E+04+/-3834]	3.9606E+04	0.24	
*DECAY CORRECTED ACTIVITY AM-241 [6.0493E+04+/-1057]	6.1173E+04	0.64	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.7600E+02	1.7485E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3212E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6622E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7719E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6105E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3315E+03	
*PEAK FWHM CD-109	1.0000E+00	1.5000E+00	1.0171E+00	
*PEAK FWHM CS-137	1.5000E+00	2.0000E+00	1.7819E+00	
*PEAK FWHM CO-60	2.0000E+00	3.0000E+00	2.6080E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1781E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9180E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1286E+00	

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

Approved by: LC Approval Date: 12/8/07

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 : 8-DEC-2007 07:50:58
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.11

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7105E+05+/-2.4257E+04]	7.9413E+05	0.95	
*DECAY CORRECTED ACTIVITY CS-137 [2.5576E+04+/-422.4]	2.5326E+04	-0.59	
*DECAY CORRECTED ACTIVITY CO-60 [4.0337E+04+/-833.8]	3.9510E+04	-0.99	
*DECAY CORRECTED ACTIVITY AM-241 [6.3522E+04+/-1919]	6.4194E+04	0.35	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7597E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3233E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6653E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8005E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6152E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	6.9450E-01	9.5230E-01	8.7470E-01	
*PEAK FWHM CS-137	1.3260E+00	1.5802E+00	1.4149E+00	
*PEAK FWHM CO-60	1.7823E+00	2.2419E+00	1.9854E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1891E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9479E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	7.4638E-01	

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

Approved by: LL Approval Date: 12/8/07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2005 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 9-DEC-2007 13:27:23
Elapsed real time: 0 00:05:04.25

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [9.4102E+05+/-1.5120E+04]	9.3963E+05	-0.09	
*DECAY CORRECTED ACTIVITY CS-137 [2.7324E+04+/-449.6]	2.6789E+04	-1.19	
*DECAY CORRECTED ACTIVITY CO-60 [4.1154E+04+/-757.2]	4.0813E+04	-0.45	
*DECAY CORRECTED ACTIVITY AM-241 [6.8986E+04+/-466.8]	6.9598E+04	1.31	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7640E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3227E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6624E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7836E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6146E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	1.0354E+00	1.2686E+00	1.1550E+00	
*PEAK FWHM CS-137	1.4355E+00	1.7081E+00	1.5521E+00	
*PEAK FWHM CO-60	1.7629E+00	2.2581E+00	2.0998E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1926E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9245E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1216E+00	

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

Approved by: MGH Approval Date: 12 / 9 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2002 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 9-DEC-2007 13:27:47
Elapsed real time: 0 00:05:03.83

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6479E+05+/-3.5006E+04]	8.8009E+05	0.44	
*DECAY CORRECTED ACTIVITY CS-137 [2.9304E+04+/-484.4]	2.8785E+04	-1.07	
*DECAY CORRECTED ACTIVITY CO-60 [4.1342E+04+/-965.4]	4.1451E+04	0.11	
*DECAY CORRECTED ACTIVITY AM-241 [6.0243E+04+/-597.9]	6.0005E+04	-0.40	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7571E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3229E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6642E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8095E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6129E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3317E+03	
*PEAK FWHM CD-109	7.0540E-01	1.1577E+00	9.8080E-01	
*PEAK FWHM CS-137	1.3206E+00	1.6654E+00	1.4648E+00	
*PEAK FWHM CO-60	1.7476E+00	2.2429E+00	2.0954E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1867E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9602E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.4167E-01	

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

Approved by: MGH Approval Date: 12 / 9 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2004 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 9-DEC-2007 14:14:40
Elapsed real time: 0 00:05:04.50

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2199E+05+/-1.6962E+04]	8.3422E+05	0.72	
*DECAY CORRECTED ACTIVITY CS-137 [2.6347E+04+/-617.7]	2.6182E+04	-0.27	
*DECAY CORRECTED ACTIVITY CO-60 [4.0298E+04+/-1103]	4.0295E+04	0.00	
*DECAY CORRECTED ACTIVITY AM-241 [6.5369E+04+/-1337]	6.5433E+04	0.05	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7523E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3209E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6626E+03	
*PEAK ENERGY CD-109	8.6000E+01	9.0000E+01	8.8126E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6147E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	1.2623E+00	1.5019E+00	1.4092E+00	
*PEAK FWHM CS-137	1.5605E+00	1.8906E+00	1.7841E+00	
*PEAK FWHM CO-60	1.8533E+00	2.3397E+00	2.0523E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1853E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9734E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.3437E+00	

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

Approved by: MGH Approval Date: 12 / 9 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2003 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 9-DEC-2007 13:47:35
Elapsed real time: 0 00:05:03.16

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7105E+05+/-2.4257E+04]	8.0735E+05	1.50	
*DECAY CORRECTED ACTIVITY CS-137 [2.5576E+04+/-422.4]	2.4937E+04	-1.51	
*DECAY CORRECTED ACTIVITY CO-60 [4.0337E+04+/-833.8]	4.0702E+04	0.44	
*DECAY CORRECTED ACTIVITY AM-241 [6.3321E+04+/-1865]	6.1917E+04	-0.75	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7599E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3229E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6645E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8017E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6132E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3318E+03	
*PEAK FWHM CD-109	6.9450E-01	9.5230E-01	8.5891E-01	
*PEAK FWHM CS-137	1.3260E+00	1.5802E+00	1.4721E+00	
*PEAK FWHM CO-60	1.7823E+00	2.2419E+00	1.9187E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1897E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9511E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.2428E-01	

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

Approved by: _____ Approval Date: 12 / 9 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_2LMB.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2002 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 08:21:39
Elapsed real time: 0 00:05:01.00

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6676E+05+/-1.0074E+05]	1.0269E+06	1.59	
*DECAY CORRECTED ACTIVITY CS-137 [2.8570E+04+/-644.2]	2.8793E+04	0.35	
*DECAY CORRECTED ACTIVITY CO-60 [4.0735E+04+/-1358]	4.0119E+04	-0.45	
*DECAY CORRECTED ACTIVITY AM-241 [6.2639E+04+/-2498]	6.6480E+04	1.54	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7548E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3240E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6661E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7709E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6183E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3328E+03	
*PEAK FWHM CD-109	9.2990E-01	1.7963E+00	1.2425E+00	
*PEAK FWHM CS-137	1.4326E+00	1.9580E+00	1.5851E+00	
*PEAK FWHM CO-60	1.8050E+00	2.2573E+00	1.7924E+00	Below ✓
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1897E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9460E+01	
*PEAK FWHM AM-241	5.0000E-01	1.7500E+00	1.2471E+00	

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

Approved by: MR Approval Date: 12/10/07

✓ Not a lockout condition

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2004 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 08:21:46
Elapsed real time: 0 00:05:02.56

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.9829E+05+/-2.1783E+04]	8.1246E+05	0.65	
*DECAY CORRECTED ACTIVITY CS-137 [2.5417E+04+/-441.8]	2.4961E+04	-1.03	
*DECAY CORRECTED ACTIVITY CO-60 [4.0155E+04+/-741.6]	4.0072E+04	-0.11	
*DECAY CORRECTED ACTIVITY AM-241 [6.6673E+04+/-1229]	6.5775E+04	-0.73	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7541E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3214E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6617E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7957E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6142E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3320E+03	
*PEAK FWHM CD-109	8.6870E-01	1.1641E+00	1.1027E+00	
*PEAK FWHM CS-137	1.3890E+00	1.5958E+00	1.4557E+00	
*PEAK FWHM CO-60	1.7960E+00	2.2545E+00	2.0740E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1855E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9504E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.3995E-01	

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

Approved by: MR Approval Date: 12/10/07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2005 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 08:22:03
Elapsed real time: 0 00:05:04.25

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [9.4102E+05+/-1.5120E+04]	9.5385E+05	0.85	
*DECAY CORRECTED ACTIVITY CS-137 [2.7324E+04+/-449.6]	2.7710E+04	0.86	
*DECAY CORRECTED ACTIVITY CO-60 [4.1154E+04+/-757.2]	4.0189E+04	-1.27	
*DECAY CORRECTED ACTIVITY AM-241 [6.9030E+04+/-457.0]	6.9390E+04	0.79	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7623E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3228E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6630E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7748E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6152E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3325E+03	
*PEAK FWHM CD-109	1.0354E+00	1.2686E+00	1.1241E+00	
*PEAK FWHM CS-137	1.4355E+00	1.7081E+00	1.6313E+00	
*PEAK FWHM CO-60	1.7629E+00	2.2581E+00	1.9104E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1915E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9193E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1130E+00	

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

Approved by: MR Approval Date: 12/10/07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM06_2LMB.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2005 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 08:22:11
Elapsed real time: 0 00:05:01.23

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.1697E+05+/-3.2175E+04]	8.5321E+05	1.13	
*DECAY CORRECTED ACTIVITY CS-137 [2.4416E+04+/-658.7]	2.4313E+04	-0.16	
*DECAY CORRECTED ACTIVITY CO-60 [3.9594E+04+/-984.4]	4.0871E+04	1.30	
*DECAY CORRECTED ACTIVITY AM-241 [6.7905E+04+/-2998]	6.6850E+04	-0.35	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7515E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3218E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6630E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7580E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6136E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3321E+03	
*PEAK FWHM CD-109	8.8210E-01	1.1228E+00	1.0231E+00	
*PEAK FWHM CS-137	1.2904E+00	1.6432E+00	1.3885E+00	
*PEAK FWHM CO-60	1.6812E+00	2.2061E+00	1.9013E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1808E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9017E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.8844E-01	

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

Approved by: MR Approval Date: 12/ 10/ 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_2LMB.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2003 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 08:22:19
Elapsed real time: 0 00:05:02.00

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.6229E+05+/-4.6983E+04]	7.4523E+05	-0.36	
*DECAY CORRECTED ACTIVITY CS-137 [2.5347E+04+/-581.1]	2.4901E+04	-0.77	
*DECAY CORRECTED ACTIVITY CO-60 [4.0193E+04+/-817.5]	3.9716E+04	-0.58	
*DECAY CORRECTED ACTIVITY AM-241 [5.9416E+04+/-1579]	5.8294E+04	-0.71	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7564E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3227E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6642E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8078E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6175E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3326E+03	
*PEAK FWHM CD-109	8.8960E-01	1.2630E+00	1.0991E+00	
*PEAK FWHM CS-137	1.3220E+00	1.6316E+00	1.4343E+00	
*PEAK FWHM CO-60	1.7106E+00	2.2639E+00	1.9508E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1869E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9594E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.8716E-01	

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

Approved by: MR Approval Date: 12 / 10 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2003 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 08:32:38
Elapsed real time: 0 00:05:01.59

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7161E+05+/-5.4538E+04]	8.7891E+05	1.97	
*DECAY CORRECTED ACTIVITY CS-137 [2.5461E+04+/-453.1]	2.5665E+04	0.45	
*DECAY CORRECTED ACTIVITY CO-60 [4.0000E+04+/-942.5]	4.0656E+04	0.70	
*DECAY CORRECTED ACTIVITY AM-241 [6.1084E+04+/-2201]	6.2044E+04	0.44	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7535E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3237E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6663E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7908E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6164E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3326E+03	
*PEAK FWHM CD-109	8.6980E-01	1.0978E+00	8.8707E-01	
*PEAK FWHM CS-137	1.2287E+00	1.4696E+00	1.3191E+00	
*PEAK FWHM CO-60	1.5668E+00	1.9957E+00	1.6883E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1823E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9372E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.8258E-01	

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

Approved by: MR Approval Date: 12 / 10 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2002 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 08:48:51
Elapsed real time: 0 00:05:03.88

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6479E+05+/-3.5006E+04]	8.7141E+05	0.19	
*DECAY CORRECTED ACTIVITY CS-137 [2.9304E+04+/-484.4]	3.0263E+04	1.98	
*DECAY CORRECTED ACTIVITY CO-60 [4.1342E+04+/-965.4]	4.3082E+04	1.80	
*DECAY CORRECTED ACTIVITY AM-241 [6.0296E+04+/-580.7]	6.0712E+04	0.72	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7573E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3230E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6644E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8104E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6134E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3318E+03	
*PEAK FWHM CD-109	7.0540E-01	1.1577E+00	9.5302E-01	
*PEAK FWHM CS-137	1.3206E+00	1.6654E+00	1.5339E+00	
*PEAK FWHM CO-60	1.7476E+00	2.2429E+00	1.8126E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1866E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9597E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.5027E-01	

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

Approved by: MR Approval Date: 12 / 10 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2004 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 10-DEC-2007 09:05:31
Elapsed real time: 0 00:05:04.40

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2199E+05+/-1.6962E+04]	8.3383E+05	0.70	
*DECAY CORRECTED ACTIVITY CS-137 [2.6347E+04+/-617.7]	2.5940E+04	-0.66	
*DECAY CORRECTED ACTIVITY CO-60 [4.0298E+04+/-1103]	4.0317E+04	0.02	
*DECAY CORRECTED ACTIVITY AM-241 [6.5239E+04+/-1310]	6.4199E+04	-0.79	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7522E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3209E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6627E+03	
*PEAK ENERGY CD-109	8.6000E+01	9.0000E+01	8.8120E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6149E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3323E+03	
*PEAK FWHM CD-109	1.2623E+00	1.5019E+00	1.4105E+00	
*PEAK FWHM CS-137	1.5605E+00	1.8906E+00	1.6337E+00	
*PEAK FWHM CO-60	1.8533E+00	2.3397E+00	2.1077E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1863E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9781E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.3565E+00	

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

Approved by: MR Approval Date: 12 / 10 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_2LMB.QAF;1

Sample ID : Calib Check
Sample date : 1-APR-2002 12:00:00
Elapsed live time: 0 00:05:00.00

Sample quantity : 1.00 EACH
Acquisition date : 11-DEC-2007 04:38:34
Elapsed real time: 0 00:05:00.99

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6676E+05+/-1.0074E+05]	8.4899E+05	-0.18	
*DECAY CORRECTED ACTIVITY CS-137 [2.8570E+04+/-644.2]	2.7657E+04	-1.42	
*DECAY CORRECTED ACTIVITY CO-60 [4.0735E+04+/-1358]	4.2189E+04	1.07	
*DECAY CORRECTED ACTIVITY AM-241 [6.2720E+04+/-2409]	6.3688E+04	0.40	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7632E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3238E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6660E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8124E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6176E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3328E+03	
*PEAK FWHM CD-109	9.2990E-01	1.7963E+00	1.2888E+00	
*PEAK FWHM CS-137	1.4326E+00	1.9580E+00	1.7609E+00	
*PEAK FWHM CO-60	1.8050E+00	2.2573E+00	2.0382E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1918E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9566E+01	
*PEAK FWHM AM-241	5.0000E-01	1.7500E+00	1.3240E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 11-DEC-2007 04:38:50
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.57

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.9829E+05+/-2.1783E+04]	7.9062E+05	-0.35	
*DECAY CORRECTED ACTIVITY CS-137 [2.5417E+04+/-441.8]	2.5967E+04	1.25	
*DECAY CORRECTED ACTIVITY CO-60 [4.0155E+04+/-741.6]	4.1661E+04	2.03	Investigate
*DECAY CORRECTED ACTIVITY AM-241 [6.6624E+04+/-1169]	6.6178E+04	-0.38	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7560E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3215E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6620E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8053E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6150E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	8.6870E-01	1.1641E+00	1.0807E+00	
*PEAK FWHM CS-137	1.3890E+00	1.5958E+00	1.4463E+00	
*PEAK FWHM CO-60	1.7960E+00	2.2545E+00	1.9606E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1864E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9547E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.2266E-01	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM03_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 11-DEC-2007 07:07:00
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:00.82

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6960E+05+/-1.0766E+05]	7.5291E+05	-1.08	
*DECAY CORRECTED ACTIVITY CS-137 [2.8269E+04+/-721.5]	2.7233E+04	-1.44	
*DECAY CORRECTED ACTIVITY CO-60 [4.1409E+04+/-1231]	4.0064E+04	-1.09	
*DECAY CORRECTED ACTIVITY AM-241 [6.3613E+04+/-1893]	6.4767E+04	0.61	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7589E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3219E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6641E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8033E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6149E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3324E+03	
*PEAK FWHM CD-109	8.3610E-01	1.8524E+00	1.3529E+00	
*PEAK FWHM CS-137	1.5869E+00	2.1036E+00	1.9036E+00	
*PEAK FWHM CO-60	2.1075E+00	3.0714E+00	3.0086E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1917E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9637E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.4234E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

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 : 11-DEC-2007 04:39:04
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:04.24

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [9.4102E+05+/-1.5120E+04]	9.3764E+05	-0.22	
*DECAY CORRECTED ACTIVITY CS-137 [2.7324E+04+/-449.6]	2.7964E+04	1.42	
*DECAY CORRECTED ACTIVITY CO-60 [4.1154E+04+/-757.2]	4.1374E+04	0.29	
*DECAY CORRECTED ACTIVITY AM-241 [6.8978E+04+/-462.1]	6.8502E+04	-1.03	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7647E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3233E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6639E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7867E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6178E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3330E+03	
*PEAK FWHM CD-109	1.0354E+00	1.2686E+00	1.1474E+00	
*PEAK FWHM CS-137	1.4355E+00	1.7081E+00	1.6023E+00	
*PEAK FWHM CO-60	1.7629E+00	2.2581E+00	1.9758E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1932E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9278E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1349E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM06_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2005 12:00:00 Acquisition date : 11-DEC-2007 04:39:14
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:01.23

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.1697E+05+/-3.2175E+04]	8.1297E+05	-0.12	
*DECAY CORRECTED ACTIVITY CS-137 [2.4416E+04+/-658.7]	2.4293E+04	-0.19	
*DECAY CORRECTED ACTIVITY CO-60 [3.9594E+04+/-984.4]	3.9716E+04	0.12	
*DECAY CORRECTED ACTIVITY AM-241 [6.7937E+04+/-2828]	6.8229E+04	0.10	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7506E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3219E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6627E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7533E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6137E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3320E+03	
*PEAK FWHM CD-109	8.8210E-01	1.1228E+00	1.0020E+00	
*PEAK FWHM CS-137	1.2904E+00	1.6432E+00	1.5577E+00	
*PEAK FWHM CO-60	1.6812E+00	2.2061E+00	2.0548E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1804E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.8994E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.8748E-01	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2003 12:00:00 Acquisition date : 11-DEC-2007 04:39:25
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.02

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.6229E+05+/-4.6983E+04]	8.0323E+05	0.87	
*DECAY CORRECTED ACTIVITY CS-137 [2.5347E+04+/-581.1]	2.5887E+04	0.93	
*DECAY CORRECTED ACTIVITY CO-60 [4.0193E+04+/-817.5]	3.9978E+04	-0.26	
*DECAY CORRECTED ACTIVITY AM-241 [5.9533E+04+/-1534]	6.0586E+04	0.69	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7580E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3230E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6645E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8156E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6190E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3328E+03	
*PEAK FWHM CD-109	8.8960E-01	1.2630E+00	1.0720E+00	
*PEAK FWHM CS-137	1.3220E+00	1.6316E+00	1.5434E+00	
*PEAK FWHM CO-60	1.7106E+00	2.2639E+00	1.7706E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1876E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9630E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0007E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2003 12:00:00 Acquisition date : 11-DEC-2007 04:52:46
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:01.58

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7161E+05+/-5.4538E+04]	8.1074E+05	0.72	
*DECAY CORRECTED ACTIVITY CS-137 [2.5461E+04+/-453.1]	2.5455E+04	-0.01	
*DECAY CORRECTED ACTIVITY CO-60 [4.0000E+04+/-942.5]	3.9342E+04	-0.70	
*DECAY CORRECTED ACTIVITY AM-241 [6.0688E+04+/-2424]	5.7125E+04	-1.47	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7548E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3238E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6665E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7973E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6169E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3327E+03	
*PEAK FWHM CD-109	8.6980E-01	1.0978E+00	9.6832E-01	
*PEAK FWHM CS-137	1.2287E+00	1.4696E+00	1.2903E+00	
*PEAK FWHM CO-60	1.5668E+00	1.9957E+00	1.7461E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1841E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9462E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	8.0423E-01	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2005 12:00:00 Acquisition date : 11-DEC-2007 06:47:49
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.84

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.4539E+05+/-1.7760E+04]	8.4499E+05	-0.02	
*DECAY CORRECTED ACTIVITY CS-137 [2.5327E+04+/-358.0]	2.5175E+04	-0.43	
*DECAY CORRECTED ACTIVITY CO-60 [4.0022E+04+/-687.6]	4.0186E+04	0.24	
*DECAY CORRECTED ACTIVITY AM-241 [6.5829E+04+/-1729]	6.3273E+04	-1.48	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7536E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3223E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6632E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8056E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6138E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3319E+03	
*PEAK FWHM CD-109	9.8950E-01	1.3215E+00	1.1050E+00	
*PEAK FWHM CS-137	1.3969E+00	1.7625E+00	1.5323E+00	
*PEAK FWHM CO-60	1.8061E+00	2.2486E+00	1.8541E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1841E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9594E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0184E+00	

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

Approved by: U Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 11-DEC-2007 04:40:01
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.83

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6479E+05+/-3.5006E+04]	9.0229E+05	1.07	
*DECAY CORRECTED ACTIVITY CS-137 [2.9304E+04+/-484.4]	2.9829E+04	1.08	
*DECAY CORRECTED ACTIVITY CO-60 [4.1342E+04+/-965.4]	4.0502E+04	-0.87	
*DECAY CORRECTED ACTIVITY AM-241 [6.0284E+04+/-548.8]	6.0177E+04	-0.19	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7567E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3230E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6643E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8074E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6130E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3318E+03	
*PEAK FWHM CD-109	7.0540E-01	1.1577E+00	1.0200E+00	
*PEAK FWHM CS-137	1.3206E+00	1.6654E+00	1.5182E+00	
*PEAK FWHM CO-60	1.7476E+00	2.2429E+00	2.1371E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1867E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9599E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.3714E-01	

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

Approved by: U Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 11-DEC-2007 08:39:03
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.25

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2559E+05+/-2.2938E+04]	7.9301E+05	-1.42	
*DECAY CORRECTED ACTIVITY CS-137 [2.6207E+04+/-512.6]	2.6319E+04	0.22	
*DECAY CORRECTED ACTIVITY CO-60 [4.0485E+04+/-767.5]	3.9116E+04	-1.78	
*DECAY CORRECTED ACTIVITY AM-241 [6.6780E+04+/-2096]	6.7842E+04	0.51	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7617E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3235E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6654E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7978E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6155E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	8.8540E-01	1.2058E+00	1.0330E+00	
*PEAK FWHM CS-137	1.3237E+00	1.6479E+00	1.4292E+00	
*PEAK FWHM CO-60	1.7177E+00	2.1263E+00	1.8294E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1907E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9428E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0300E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 11-DEC-2007 08:39:14
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:05.62

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.6112E+05+/-3.2007E+04]	8.2780E+05	-1.04	
*DECAY CORRECTED ACTIVITY CS-137 [2.8529E+04+/-528.8]	2.8017E+04	-0.97	
*DECAY CORRECTED ACTIVITY CO-60 [4.0368E+04+/-919.5]	4.1100E+04	0.80	
*DECAY CORRECTED ACTIVITY AM-241 [6.0841E+04+/-699.3]	6.1941E+04	1.57	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7633E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3225E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6633E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7956E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6149E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3322E+03	
*PEAK FWHM CD-109	7.4630E-01	1.0839E+00	9.2234E-01	
*PEAK FWHM CS-137	1.2763E+00	1.4672E+00	1.3147E+00	
*PEAK FWHM CO-60	1.6103E+00	2.0503E+00	2.0382E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1940E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9464E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	9.8246E-01	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_2LMB.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2002 12:00:00 Acquisition date : 11-DEC-2007 06:48:14
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.31

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.4629E+05+/-8.2185E+04]	7.0319E+05	-1.74	
*DECAY CORRECTED ACTIVITY CS-137 [2.8541E+04+/-525.1]	2.7963E+04	-1.10	
*DECAY CORRECTED ACTIVITY CO-60 [4.0826E+04+/-992.7]	4.0134E+04	-0.70	
*DECAY CORRECTED ACTIVITY AM-241 [6.2537E+04+/-1926]	5.9235E+04	-1.71	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7613E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3228E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6658E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8130E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6190E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3332E+03	
*PEAK FWHM CD-109	7.7050E-01	1.3272E+00	1.0473E+00	
*PEAK FWHM CS-137	1.2848E+00	1.6116E+00	1.4886E+00	
*PEAK FWHM CO-60	1.5484E+00	2.0686E+00	1.7301E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1933E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9694E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.0131E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2004 12:00:00 Acquisition date : 11-DEC-2007 04:53:23
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:04.51

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [8.2199E+05+/-1.6962E+04]	8.1888E+05	-0.18	
*DECAY CORRECTED ACTIVITY CS-137 [2.6347E+04+/-617.7]	2.6503E+04	0.25	
*DECAY CORRECTED ACTIVITY CO-60 [4.0298E+04+/-1103]	4.2048E+04	1.59	
*DECAY CORRECTED ACTIVITY AM-241 [6.5346E+04+/-1280]	6.6303E+04	0.75	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7521E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3211E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6630E+03	
*PEAK ENERGY CD-109	8.6000E+01	9.0000E+01	8.8111E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6155E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3324E+03	
*PEAK FWHM CD-109	1.2623E+00	1.5019E+00	1.3946E+00	
*PEAK FWHM CS-137	1.5605E+00	1.8906E+00	1.7031E+00	
*PEAK FWHM CO-60	1.8533E+00	2.3397E+00	2.2022E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1845E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9694E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.3408E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1

Sample ID : Calib Check Sample quantity : 1.00 EACH
Sample date : 1-APR-2003 12:00:00 Acquisition date : 11-DEC-2007 05:43:20
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:02.39

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [6.7938E+05+/-2.3458E+05]	7.5268E+05	0.31	
*DECAY CORRECTED ACTIVITY CS-137 [2.6310E+04+/-489.1]	2.6076E+04	-0.48	
*DECAY CORRECTED ACTIVITY CO-60 [3.8670E+04+/-3834]	4.0480E+04	0.47	
*DECAY CORRECTED ACTIVITY AM-241 [6.0610E+04+/-1384]	5.8852E+04	-1.27	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.7600E+02	1.7487E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3213E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6625E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.7728E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6112E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3316E+03	
*PEAK FWHM CD-109	1.0000E+00	1.5000E+00	1.0840E+00	
*PEAK FWHM CS-137	1.5000E+00	2.0000E+00	1.8085E+00	
*PEAK FWHM CO-60	2.0000E+00	3.0000E+00	2.6256E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1805E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9302E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	1.1013E+00	

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

Approved by: LL Approval Date: 12 / 11 / 07

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 : 11-DEC-2007 04:40:14
Elapsed live time: 0 00:05:00.00 Elapsed real time: 0 00:05:03.13

Out-of-range Test: N-SIGMA

Parameter Description [Mean+/-Stdev]	Value	Deviation	Flag
*DECAY CORRECTED ACTIVITY CD-109 [7.7105E+05+/-2.4257E+04]	7.7175E+05	0.03	
*DECAY CORRECTED ACTIVITY CS-137 [2.5576E+04+/-422.4]	2.6257E+04	1.61	
*DECAY CORRECTED ACTIVITY CO-60 [4.0337E+04+/-833.8]	4.1623E+04	1.54	
*DECAY CORRECTED ACTIVITY AM-241 [6.3573E+04+/-1754]	6.3943E+04	0.21	

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*PEAK CENTROID CD-109	1.7200E+02	1.8000E+02	1.7602E+02	
*PEAK CENTROID CS-137	1.3190E+03	1.3270E+03	1.3231E+03	
*PEAK CENTROID CO-60	2.6610E+03	2.6690E+03	2.6650E+03	
*PEAK ENERGY CD-109	8.6030E+01	9.0030E+01	8.8033E+01	
*PEAK ENERGY CS-137	6.5966E+02	6.6366E+02	6.6143E+02	
*PEAK ENERGY CO-60	1.3305E+03	1.3345E+03	1.3320E+03	
*PEAK FWHM CD-109	6.9450E-01	9.5230E-01	7.5953E-01	
*PEAK FWHM CS-137	1.3260E+00	1.5802E+00	1.3564E+00	
*PEAK FWHM CO-60	1.7823E+00	2.2419E+00	2.1440E+00	
*PEAK CENTROID AM-241	1.1500E+02	1.2300E+02	1.1893E+02	
*PEAK ENERGY AM-241	5.7500E+01	6.1500E+01	5.9490E+01	
*PEAK FWHM AM-241	5.0000E-01	2.0000E+00	7.4142E-01	

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

Approved by: LC Approval Date: 12 / 11 / 07

RUNLOGS

Instrument Run Log

ID	Sample Type	Analyst	Instrument	Dil	Run Date	Batch Id	Status	Geometry	Cal Date
198528041	SAMPLE	MJH1	GAM23		07-DEC-2007 16:27	707060	**DONE**	CAN	23-MAY-2007
198528042	SAMPLE	MJH1	GAM01		08-DEC-2007 09:30	707060	**DONE**	CAN	07-MAR-2007
198528043	SAMPLE	MJH1	GAM02		08-DEC-2007 09:31	707060	**DONE**	CAN	23-OCT-2007
198528044	SAMPLE	MJH1	GAM05		08-DEC-2007 09:32	707060	**DONE**	CAN	31-MAY-2007
198528045	SAMPLE	MJH1	GAM06		08-DEC-2007 09:33	707060	**DONE**	CAN	21-FEB-2007
198528046	SAMPLE	MJH1	GAM07		08-DEC-2007 09:34	707060	**DONE**	CAN	30-OCT-2007
198528047	SAMPLE	MJH1	GAM11		08-DEC-2007 09:34	707060	**DONE**	CAN	02-OCT-2007
198528048	SAMPLE	MJH1	GAM12		08-DEC-2007 09:35	707060	**DONE**	CAN	22-FEB-2007
198530001	SAMPLE	MJH1	GAM13		08-DEC-2007 09:36	707060	**DONE**	CAN	03-JUL-2007
198530002	SAMPLE	MJH1	GAM14		08-DEC-2007 09:37	707060	**DONE**	CAN	07-MAR-2007
198530003	SAMPLE	MJH1	GAM16		08-DEC-2007 09:38	707060	**DONE**	CAN	02-OCT-2007
198530004	SAMPLE	MJH1	GAM17		08-DEC-2007 09:38	707060	**DONE**	CAN	07-FEB-2007
198530005	SAMPLE	MJH1	GAM18		08-DEC-2007 09:47	707060	**DONE**	CAN	02-OCT-2007
198530006	SAMPLE	MJH1	GAM19		08-DEC-2007 09:48	707060	**DONE**	CAN	07-MAR-2007
198530007	SAMPLE	MJH1	GAM20		08-DEC-2007 09:49	707060	**DONE**	CAN	10-SEP-2007
198530008	SAMPLE	MJH1	GAM21		08-DEC-2007 09:49	707060	**DONE**	CAN	03-JUL-2007
198530009	SAMPLE	MJH1	GAM22		08-DEC-2007 09:50	707060	**DONE**	CAN	06-MAR-2007
198530010	SAMPLE	MJH1	GAM23		08-DEC-2007 09:51	707060	**DONE**	CAN	23-MAY-2007
198530011	SAMPLE	MJH1	GAM05		09-DEC-2007 14:38	707060	**DONE**	CAN	31-MAY-2007
198530012	SAMPLE	MJH1	GAM13		09-DEC-2007 14:39	707060	**DONE**	CAN	03-JUL-2007
1201471362	MB	MJH1	GAM21		09-DEC-2007 14:39	707060	**DONE**	CAN	03-JUL-2007
1201471363	DUP	MJH1	GAM23		09-DEC-2007 14:40	707060	**DONE**	CAN	23-MAY-2007
1201471364	LCS	MJH1	GAM01		10-DEC-2007 08:38	707060	**DONE**	CAN	07-MAR-2007

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Instrument Run Log

ID	Sample Type	Analyst	Instrument	Dil	Run Date	Batch Id	Status	Geometry	Cal Date
198530013	SAMPLE	MJH1	GAM13		10-DEC-2007 18:34	707062	**DONE**	CAN	03-JUL-2007
198530014	SAMPLE	MJH1	GAM21		10-DEC-2007 18:35	707062	**DONE**	CAN	03-JUL-2007
198530015	SAMPLE	MJH1	GAM01		10-DEC-2007 19:34	707062	**DONE**	CAN	07-MAR-2007
198530016	SAMPLE	MJH1	GAM02		10-DEC-2007 19:34	707062	**DONE**	CAN	23-OCT-2007
198530017	SAMPLE	MJH1	GAM11		10-DEC-2007 19:35	707062	**DONE**	CAN	02-OCT-2007
198530018	SAMPLE	MJH1	GAM05		10-DEC-2007 19:52	707062	**DONE**	CAN	31-MAY-2007
198530019	SAMPLE	MJH1	GAM06		10-DEC-2007 19:53	707062	**DONE**	CAN	21-FEB-2007
198530020	SAMPLE	MJH1	GAM07		10-DEC-2007 19:53	707062	**DONE**	CAN	30-OCT-2007
198530021	SAMPLE	MJH1	GAM01		11-DEC-2007 05:33	707062	**DONE**	CAN	07-MAR-2007
198530022	SAMPLE	MJH1	GAM02		11-DEC-2007 05:34	707062	**DONE**	CAN	23-OCT-2007
198530023	SAMPLE	MJH1	GAM05		11-DEC-2007 05:35	707062	**DONE**	CAN	31-MAY-2007
198530024	SAMPLE	MJH1	GAM06		11-DEC-2007 05:36	707062	**DONE**	CAN	21-FEB-2007
198530025	SAMPLE	MJH1	GAM07		11-DEC-2007 05:37	707062	**DONE**	CAN	30-OCT-2007
198530026	SAMPLE	MJH1	GAM11		11-DEC-2007 05:38	707062	**DONE**	CAN	02-OCT-2007
198530027	SAMPLE	MJH1	GAM13		11-DEC-2007 05:39	707062	**DONE**	CAN	03-JUL-2007
198530028	SAMPLE	MJH1	GAM21		11-DEC-2007 05:39	707062	**DONE**	CAN	03-JUL-2007
198530029	SAMPLE	MJH1	GAM23		11-DEC-2007 05:40	707062	**DONE**	CAN	23-MAY-2007
198530030	SAMPLE	MJH1	GAM22		11-DEC-2007 05:50	707062	**DONE**	CAN	06-MAR-2007
198530031	SAMPLE	MJH1	GAM12		11-DEC-2007 06:58	707062	**DONE**	CAN	22-FEB-2007
198530032	SAMPLE	MJH1	GAM20		11-DEC-2007 06:58	707062	**DONE**	CAN	10-SEP-2007
1201471369	MB	MJH1	GAM03		11-DEC-2007 07:15	707062	**DONE**	CAN	29-MAR-2007
1201471370	DUP	MJH1	GAM16		11-DEC-2007 08:51	707062	**DONE**	CAN	02-OCT-2007
1201471371	LCS	MJH1	GAM17		11-DEC-2007 08:52	707062	**DONE**	CAN	07-FEB-2007

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Instrument Run Log

ID	Sample Type	Analyst	Instrument	Dil	Run Date	Batch Id	Status	Geometry	Cal Date
198530033	SAMPLE	MJH1	GAM17		04-DEC-2007 12:53	707073	**DONE**	CAN	07-FEB-2007
198530034	SAMPLE	MJH1	GAM19		04-DEC-2007 12:54	707073	**DONE**	CAN	07-MAR-2007
198530035	SAMPLE	MJH1	GAM13		04-DEC-2007 16:16	707073	**DONE**	CAN	03-JUL-2007
198530036	SAMPLE	MJH1	GAM18		04-DEC-2007 16:17	707073	**DONE**	CAN	02-OCT-2007
198530037	SAMPLE	MJH1	GAM21		04-DEC-2007 16:17	707073	**DONE**	CAN	03-JUL-2007
198530038	SAMPLE	MJH1	GAM23		04-DEC-2007 16:18	707073	**DONE**	CAN	23-MAY-2007
198530039	SAMPLE	MJH1	GAM05		05-DEC-2007 05:54	707073	**DONE**	CAN	31-MAY-2007
198530040	SAMPLE	MJH1	GAM06		05-DEC-2007 05:54	707073	**DONE**	CAN	21-FEB-2007
198530041	SAMPLE	MJH1	GAM07		05-DEC-2007 05:55	707073	**DONE**	CAN	30-OCT-2007
198530042	SAMPLE	MJH1	GAM11		05-DEC-2007 05:56	707073	**DONE**	CAN	02-OCT-2007
198530043	SAMPLE	MJH1	GAM12		05-DEC-2007 05:57	707073	**DONE**	CAN	22-FEB-2007
198530044	SAMPLE	MJH1	GAM13		05-DEC-2007 05:57	707073	**DONE**	CAN	03-JUL-2007
198530045	SAMPLE	MJH1	GAM14		05-DEC-2007 05:58	707073	**DONE**	CAN	07-MAR-2007
198530046	SAMPLE	MJH1	GAM16		05-DEC-2007 05:59	707073	**DONE**	CAN	02-OCT-2007
198530047	SAMPLE	MJH1	GAM17		05-DEC-2007 05:59	707073	**DONE**	CAN	07-FEB-2007
198530048	SAMPLE	MJH1	GAM18		05-DEC-2007 06:00	707073	**DONE**	CAN	02-OCT-2007
1201471384	MB	MJH1	GAM19		05-DEC-2007 06:01	707073	**DONE**	CAN	07-MAR-2007
1201471385	DUP	MJH1	GAM20		05-DEC-2007 06:03	707073	**DONE**	CAN	10-SEP-2007
1201471386	LCS	MJH1	GAM21		05-DEC-2007 06:04	707073	**DONE**	CAN	03-JUL-2007

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GEL Laboratories LLC

Analytical Report For 711054

for

SC&A, Inc.

Project Manager : Cynthia White

Project Name : Cabrera-Schofield CZ

December 11, 2007

GPL

Laboratories

GPL Laboratories, LLLP Certifies that the test results meet all requirements of the NELAC Standards unless otherwise noted.

Reviewed by, Project Manager	Approved by, Laboratory Director

7210A Corporate CT Frederick, MD 21703 Phone (301) 694-5310 Fax: (301) 620-0731
www.gplab.com

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2085-BA
GPL ID: 711054-001-001-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 00:29
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	41.1	8.4	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2086-BA
GPL ID: 711054-002-002-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 00:46
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	38.1	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2087-BA
GPL ID: 711054-003-003-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 00:57
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	43.3	8.1	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2088-BA
GPL ID: 711054-004-004-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:00
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	116	8.4	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2089-BA
GPL ID: 711054-005-005-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:04
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	37.8	8.5	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2090-BA
GPL ID: 711054-006-006-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:07
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	54.0	8.2	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2091-BA
GPL ID: 711054-007-007-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:11
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	26.2	7.9	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2092-BA
GPL ID: 711054-008-008-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:14
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	37.3	8.5	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2093-BA
GPL ID: 711054-009-009-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:18
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	19.2	8	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2094-BA
GPL ID: 711054-010-010-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:21
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	50.4	8.6	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2095-BA
GPL ID: 711054-011-011-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:25
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	43.3	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2096-BA
GPL ID: 711054-012-012-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:28
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	26.0	8.2	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA1-SD
GPL ID: 711054-013-013-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:39
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	22.2	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA2-SD
GPL ID: 711054-014-014-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:42
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	22.3	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA3-SD
GPL ID: 711054-015-015-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:46
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	21.1	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA4-SD
GPL ID: 711054-016-016-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:49
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	10.5	8.2	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA5-SD
GPL ID: 711054-017-017-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:53
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.8	8	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA6-SD
GPL ID: 711054-018-018-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:56
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	13.7	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA7-SD
GPL ID: 711054-019-019-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 01:59
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.9	8.1	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA8-SD
GPL ID: 711054-020-020-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101657

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 02:03
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	13.9	7.9	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA9-SD
GPL ID: 711054-021-021-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 02:20
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	13.6	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA10-SD
GPL ID: 711054-022-022-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 02:38
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.3	7.9	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA11-SD
GPL ID: 711054-023-023-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 02:41
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.7	8.5	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA12-SD
GPL ID: 711054-024-024-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 02:45
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	18.2	8.1	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA1-ST
GPL ID: 711054-025-025-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 02:48
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	18.5	8.5	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA2-ST
GPL ID: 711054-026-026-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 02:52
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	16.1	8.2	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA3-ST
GPL ID: 711054-027-027-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:02
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	15.6	8	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA4-ST
GPL ID: 711054-028-028-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:06
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.0	8.4	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA5-ST
GPL ID: 711054-029-029-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:09
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.2	8.6	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA6-ST
GPL ID: 711054-030-030-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:12
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	14.5	8.1	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA7-ST
GPL ID: 711054-031-031-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:16
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.6	7.9	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA8-ST
GPL ID: 711054-032-032-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:19
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	14.0	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA9-ST
GPL ID: 711054-033-033-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:23
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	14.3	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA10-ST
GPL ID: 711054-034-034-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:26
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	9.7	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA11-ST
GPL ID: 711054-035-035-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:30
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	13.6	8.1	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-RA12-ST
GPL ID: 711054-036-036-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:33
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	12.8	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2085-BD
GPL ID: 711054-037-037-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:44
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	19.3	8.2	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2086-BD
GPL ID: 711054-038-038-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:47
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	17.3	8.5	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2087-BD
GPL ID: 711054-039-039-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:51
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	51.9	8.1	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2088-BD
GPL ID: 711054-040-040-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101659

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 03:54
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	22.5	8.6	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2089-BD
GPL ID: 711054-041-041-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:05
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	24.2	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2090-BD
GPL ID: 711054-042-042-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:29
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	16.3	8.2	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2091-BD
GPL ID: 711054-043-043-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:33
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	16.5	8.5	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2092-BD
GPL ID: 711054-044-044-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:36
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	22.2	8.3	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2093-BD
GPL ID: 711054-045-045-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:40
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	10.0	8.5	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2094-BD
GPL ID: 711054-046-046-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:43
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	49.5	8.1	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2095-SD
GPL ID: 711054-047-047-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:47
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	14.6	8	mg/kg	D	10

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: SB-CZ-SS-2096-SD
GPL ID: 711054-048-048-1/1
Matrix: SOIL
Date Collected: 10/12/2007
Date Received: 11/12/2007

Prep Method: SW3050B
Prep Date: 11/15/2007
Prep Time: 12:00
Prep Batch: 101660

Analytical Method: SW6010C
Date Analyzed: 12/11/2007
Time Analyzed: 04:50
Analysis Batch: 108664

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	19.3	8.1	mg/kg	D	10

GPL LABORATORIES, LLP
ANALYTICAL RESULTS

Project Name : Cabrera-Schofield CZ

Date Printed December 11, 2007

GPL ID	Client ID
711054-001-001-1/1	SB-CZ-SS-2085-BA
711054-037-037-1/1	SB-CZ-SS-2085-BD
711054-002-002-1/1	SB-CZ-SS-2086-BA
711054-038-038-1/1	SB-CZ-SS-2086-BD
711054-003-003-1/1	SB-CZ-SS-2087-BA
711054-039-039-1/1	SB-CZ-SS-2087-BD
711054-004-004-1/1	SB-CZ-SS-2088-BA
711054-040-040-1/1	SB-CZ-SS-2088-BD
711054-005-005-1/1	SB-CZ-SS-2089-BA
711054-041-041-1/1	SB-CZ-SS-2089-BD
711054-006-006-1/1	SB-CZ-SS-2090-BA
711054-042-042-1/1	SB-CZ-SS-2090-BD
711054-007-007-1/1	SB-CZ-SS-2091-BA
711054-043-043-1/1	SB-CZ-SS-2091-BD
711054-008-008-1/1	SB-CZ-SS-2092-BA
711054-044-044-1/1	SB-CZ-SS-2092-BD
711054-009-009-1/1	SB-CZ-SS-2093-BA
711054-045-045-1/1	SB-CZ-SS-2093-BD
711054-010-010-1/1	SB-CZ-SS-2094-BA
711054-046-046-1/1	SB-CZ-SS-2094-BD
711054-011-011-1/1	SB-CZ-SS-2095-BA
711054-047-047-1/1	SB-CZ-SS-2095-SD
711054-012-012-1/1	SB-CZ-SS-2096-BA
711054-048-048-1/1	SB-CZ-SS-2096-SD
711054-013-013-1/1	SB-CZ-SS-RA1-SD
711054-025-025-1/1	SB-CZ-SS-RA1-ST
711054-022-022-1/1	SB-CZ-SS-RA10-SD
711054-034-034-1/1	SB-CZ-SS-RA10-ST
711054-023-023-1/1	SB-CZ-SS-RA11-SD
711054-035-035-1/1	SB-CZ-SS-RA11-ST
711054-024-024-1/1	SB-CZ-SS-RA12-SD
711054-036-036-1/1	SB-CZ-SS-RA12-ST
711054-014-014-1/1	SB-CZ-SS-RA2-SD
711054-026-026-1/1	SB-CZ-SS-RA2-ST
711054-015-015-1/1	SB-CZ-SS-RA3-SD
711054-027-027-1/1	SB-CZ-SS-RA3-ST
711054-016-016-1/1	SB-CZ-SS-RA4-SD
711054-028-028-1/1	SB-CZ-SS-RA4-ST
711054-017-017-1/1	SB-CZ-SS-RA5-SD
711054-029-029-1/1	SB-CZ-SS-RA5-ST
711054-018-018-1/1	SB-CZ-SS-RA6-SD
711054-030-030-1/1	SB-CZ-SS-RA6-ST
711054-019-019-1/1	SB-CZ-SS-RA7-SD
711054-031-031-1/1	SB-CZ-SS-RA7-ST
711054-020-020-1/1	SB-CZ-SS-RA8-SD
711054-032-032-1/1	SB-CZ-SS-RA8-ST
711054-021-021-1/1	SB-CZ-SS-RA9-SD

GPL LABORATORIES, LLP
ANALYTICAL RESULTS

Project Name : Cabrera-Schofield CZ

Date Printed December 11, 2007

GPL ID	Client ID
711054-033-033-1/1	SB-CZ-SS-RA9-ST

TRACE METALS

GPL Laboratories

USEPA - CLP

COVER PAGE

Lab Name: GPL LABORATORIES, LLLP Contract:

Lab Code: Case No.: NRAS No.: SDG No.: 711054

SOW No.: SW846

EPA Sample No.	Lab Sample ID
SB-CZ-SS-2085-BA	S 711054-001-001-1/1
SB-CZ-SS-2085-BA MS	SP711054-001-001-1/1
SB-CZ-SS-2085-BA MSD	SD711054-001-001-1/1
SB-CZ-SS-2085-BD	S 711054-037-037-1/1
SB-CZ-SS-2086-BA	S 711054-002-002-1/1
SB-CZ-SS-2086-BD	S 711054-038-038-1/1
SB-CZ-SS-2087-BA	S 711054-003-003-1/1
SB-CZ-SS-2087-BD	S 711054-039-039-1/1
SB-CZ-SS-2088-BA	S 711054-004-004-1/1
SB-CZ-SS-2088-BD	S 711054-040-040-1/1
SB-CZ-SS-2089-BA	S 711054-005-005-1/1
SB-CZ-SS-2089-BD	S 711054-041-041-1/1
SB-CZ-SS-2089-BD MS	SP711054-041-041-1/1
SB-CZ-SS-2089-BD MSD	SD711054-041-041-1/1
SB-CZ-SS-2090-BA	S 711054-006-006-1/1
SB-CZ-SS-2090-BD	S 711054-042-042-1/1
SB-CZ-SS-2091-BA	S 711054-007-007-1/1
SB-CZ-SS-2091-BD	S 711054-043-043-1/1
SB-CZ-SS-2092-BA	S 711054-008-008-1/1
SB-CZ-SS-2092-BD	S 711054-044-044-1/1
SB-CZ-SS-2093-BA	S 711054-009-009-1/1
SB-CZ-SS-2093-BD	S 711054-045-045-1/1
SB-CZ-SS-2094-BA	S 711054-010-010-1/1
SB-CZ-SS-2094-BD	S 711054-046-046-1/1
SB-CZ-SS-2095-BA	S 711054-011-011-1/1
SB-CZ-SS-2095-SD	S 711054-047-047-1/1
SB-CZ-SS-2096-BA	S 711054-012-012-1/1
SB-CZ-SS-2096-SD	S 711054-048-048-1/1
SB-CZ-SS-RA10-SD	S 711054-022-022-1/1
SB-CZ-SS-RA10-ST	S 711054-034-034-1/1
SB-CZ-SS-RA11-SD	S 711054-023-023-1/1
SB-CZ-SS-RA11-ST	S 711054-035-035-1/1
SB-CZ-SS-RA12-SD	S 711054-024-024-1/1
SB-CZ-SS-RA12-ST	S 711054-036-036-1/1
SB-CZ-SS-RA1-SD	S 711054-013-013-1/1

EPA Sample No.	Lab Sample ID
SB-CZ-SS-RA1-ST	S 711054-025-025-1/1
SB-CZ-SS-RA2-SD	S 711054-014-014-1/1
SB-CZ-SS-RA2-ST	S 711054-026-026-1/1
SB-CZ-SS-RA3-SD	S 711054-015-015-1/1
SB-CZ-SS-RA3-ST	S 711054-027-027-1/1
SB-CZ-SS-RA4-SD	S 711054-016-016-1/1
SB-CZ-SS-RA4-ST	S 711054-028-028-1/1
SB-CZ-SS-RA5-SD	S 711054-017-017-1/1
SB-CZ-SS-RA5-ST	S 711054-029-029-1/1
SB-CZ-SS-RA6-SD	S 711054-018-018-1/1
SB-CZ-SS-RA6-ST	S 711054-030-030-1/1
SB-CZ-SS-RA7-SD	S 711054-019-019-1/1
SB-CZ-SS-RA7-ST	S 711054-031-031-1/1
SB-CZ-SS-RA8-SD	S 711054-020-020-1/1
SB-CZ-SS-RA8-ST	S 711054-032-032-1/1
SB-CZ-SS-RA9-SD	S 711054-021-021-1/1
SB-CZ-SS-RA9-SD MS	SP711054-021-021-1/1
SB-CZ-SS-RA9-SD MSD	SD711054-021-021-1/1
SB-CZ-SS-RA9-ST	S 711054-033-033-1/1

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
if yes, were raw data generated before application of background corrections?	(Yes/No)	NO	YES

Comments:

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as referred by the following signature.

Signature: [illegible] Name: Richard Tarver

Date: 12/11/2007 Title: Asst Lab Director

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-001-001-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2085-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.84	8.4	41.1	D	10	12/11/07 0:29

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-002-002-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2086-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	38.1	D	10	12/11/07 0:46

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-003-003-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2087-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	43.3	D	10	12/11/07 0:57

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-004-004-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2088-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.84	8.4	116	D	10	12/11/07 1:00

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-005-005-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2089-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.85	8.5	37.8	D	10	12/11/07 1:04

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-006-006-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2090-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.82	8.2	54.0	D	10	12/11/07 1:07

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-007-007-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2091-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.79	7.9	26.2	D	10	12/11/07 1:11

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-008-008-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2092-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.85	8.5	37.3	D	10	12/11/07 1:14

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-009-009-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2093-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.80	8.0	19.2	D	10	12/11/07 1:18

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-010-010-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2094-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.86	8.6	50.4	D	10	12/11/07 1:21

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-011-011-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2095-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	43.3	D	10	12/11/07 1:25

U = The analyte concentration was less than the MDL
J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-012-012-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2096-BA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.82	8.2	26.0	D	10	12/11/07 1:28

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-013-013-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA1-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	22.2	D	10	12/11/07 1:39

U = The analyte concentration was less than the MDL
J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-014-014-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA2-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	22.3	D	10	12/11/07 1:42

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-015-015-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA3-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	21.1	D	10	12/11/07 1:46

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-016-016-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA4-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.82	8.2	10.5	D	10	12/11/07 1:49

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-017-017-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA5-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.80	8.0	12.8	D	10	12/11/07 1:53

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-018-018-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA6-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	13.7	D	10	12/11/07 1:56

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-019-019-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA7-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	12.9	D	10	12/11/07 1:59

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-020-020-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA8-SD	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.79	7.9	13.9	D	10	12/11/07 2:03

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-021-021-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA9-SD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	13.6	D	10	12/11/07 2:20

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-022-022-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA10-SD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.79	7.9	12.3	D	10	12/11/07 2:38

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-023-023-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA11-SD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.85	8.5	12.7	D	10	12/11/07 2:41

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-024-024-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA12-SD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	18.2	D	10	12/11/07 2:45

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-025-025-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA1-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.85	8.5	18.5	D	10	12/11/07 2:48

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-026-026-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA2-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.82	8.2	16.1	D	10	12/11/07 2:52

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-027-027-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA3-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.80	8.0	15.6	D	10	12/11/07 3:02

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-028-028-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA4-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.84	8.4	12.0	D	10	12/11/07 3:06

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-029-029-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA5-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.86	8.6	12.2	D	10	12/11/07 3:09

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-030-030-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA6-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	14.5	D	10	12/11/07 3:12

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-031-031-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA7-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.79	7.9	12.6	D	10	12/11/07 3:16

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-032-032-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA8-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	14.0	D	10	12/11/07 3:19

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-033-033-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA9-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	14.3	D	10	12/11/07 3:23

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-034-034-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA10-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	9.7	D	10	12/11/07 3:26

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-035-035-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA11-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	13.6	D	10	12/11/07 3:30

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-036-036-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-RA12-ST	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	12.8	D	10	12/11/07 3:33

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-037-037-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2085-BD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.82	8.2	19.3	D	10	12/11/07 3:44

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-038-038-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2086-BD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.85	8.5	17.3	D	10	12/11/07 3:47

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-039-039-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2087-BD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	51.9	D	10	12/11/07 3:51

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-040-040-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2088-BD	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.86	8.6	22.5	D	10	12/11/07 3:54

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-041-041-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2089-BD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	24.2	D	10	12/11/07 4:05

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-042-042-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2090-BD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.82	8.2	16.3	D	10	12/11/07 4:29

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-043-043-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2091-BD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.85	8.5	16.5	D	10	12/11/07 4:33

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

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Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-044-044-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2092-BD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.83	8.3	22.2	D	10	12/11/07 4:36

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-045-045-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2093-BD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.85	8.5	10.0	D	10	12/11/07 4:40

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-046-046-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2094-BD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	49.5	D	10	12/11/07 4:43

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-047-047-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2095-SD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.80	8.0	14.6	D	10	12/11/07 4:47

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

URIT Version 4.6.0

GPL Laboratories, LLLP

Sample Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	S 711054-048-048-1/1	Percent Moisture:	0.0
Client Sample ID:	SB-CZ-SS-2096-SD	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.81	8.1	19.3	D	10	12/11/07 4:50

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

GPL Laboratories, LLLP

Preparation Blank Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	BLK101657	Percent Moisture:	0.0
Client Sample ID:	NA	Prep Batch:	101657
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.10	1.0	0.10	U	1	12/11/07 0:22

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

URIT Version 4.6.0

GPL Laboratories, LLLP

Preparation Blank Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	BLK101659	Percent Moisture:	0.0
Client Sample ID:	NA	Prep Batch:	101659
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.10	1.0	0.10	U	1	12/11/07 2:06

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

URIT Version 4.6.0

GPL Laboratories, LLLP

Preparation Blank Results

Project:	711054	Matrix:	Soil
Lab Sample ID:	BLK101660	Percent Moisture:	0.0
Client Sample ID:	NA	Prep Batch:	101660
Analysis Method:	6010 ICP Analysis	Reporting Units:	mg/kg

Analyte	WL/ Mass	Method Detection Limit	Reporting Limit	Reported Result	Q	Dilution Factor	Analysis Date/Time
Lead	220.353	0.10	1.0	0.10	U	1	12/11/07 3:58

U = The analyte concentration was less than the MDL

J = Reported value was less than the CRQL but greater than or equal to the MDL

URIT Version 4.6.0

GPL Laboratories, LLLP

Initial Calibration Verification

Project:	711054	Instrument:	iTEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:	AB.ST.	Standard ID:	

Analyte	True	ICV 12/10/2007 4:00:49 PM							
		Found	%R	Found	%R	Found	%R	Found	%R
Lead	400.0	426.15	107						

GPL Laboratories, LLLP

Continuing Calibration Verification

Project: 711054

Units: ug/L

Standard Source:

Instrument: iTEVA-Soil

Data File Name: 071210.txt

Standard ID:

Analyte	True	CCV1 12/10/2007 4:07:40 PM		CCV2 12/10/2007 4:32:43 PM		CCV3 12/10/2007 5:13:50 PM		CCV4 12/10/2007 5:55:14 PM	
		Found	%R	Found	%R	Found	%R	Found	%R
Lead	500.0	490.73	98	495.92	99	490.97	98	497.73	100

GPL Laboratories, LLLP

Continuing Calibration Verification

Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	True	CCV5 12/10/2007 6:37:02 PM		CCV6 12/10/2007 7:18:26 PM		CCV7 12/10/2007 7:59:40 PM		CCV8 12/10/2007 8:41:08 PM	
		Found	%R	Found	%R	Found	%R	Found	%R
Lead	500.0	491.98	98	501.87	100	495.06	99	497.36	99

GPL Laboratories, LLLP

Continuing Calibration Verification

Project: 711054

Units: ug/L

Standard Source:

Instrument: iTEVA-Soil

Data File Name: 071210.txt

Standard ID:

Analyte	True	CCV9 12/10/2007 9:22:32 PM		CCV10 12/10/2007 10:04:42 PM		CCV11 12/10/2007 10:46:12 PM		CCV12 12/10/2007 11:27:36 PM	
		Found	%R	Found	%R	Found	%R	Found	%R
Lead	500.0	503.46	101	502.09	100	515.53	103	515.94	103

GPL Laboratories, LLLP

Continuing Calibration Verification

Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	True	CCV13 12/11/2007 12:08:47 AM		CCV14 12/11/2007 12:50:24 AM		CCV15 12/11/2007 1:32:11 AM		CCV16 12/11/2007 2:13:57 AM	
		Found	%R	Found	%R	Found	%R	Found	%R
Lead	500.0	516.17	103	516.75	103	514.87	103	511.88	102

GPL Laboratories, LLLP

Continuing Calibration Verification

Project:	711054	Instrument:	iTEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	True	CCV17 12/11/2007 2:55:29 AM		CCV18 12/11/2007 3:37:13 AM		CCV19 12/11/2007 4:19:01 AM		CCV20 12/11/2007 5:08:31 AM	
		Found	%R	Found	%R	Found	%R	Found	%R
Lead	500.0	513.86	103	512.85	103	512.10	102	503.77	101

GPL Laboratories, LLLP

Low Level Check Standard

Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	True	PQL 12/10/2007 4:14:39 PM							
		Found	%R	Found	%R	Found	%R	Found	%R
Lead	10.0	9.66	97						

GPL Laboratories, LLLP

Initial Calibration Blanks

Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	RL	ICB 12/10/2007 4:04:17 PM							
		Found	Flag	Found	Flag	Found	Flag	Found	Flag
Lead	10.00	1.00	U						

GPL Laboratories, LLLP

Continuing Calibration Blanks

Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	RL	CCB1 12/10/2007 4:11:16 PM		CCB2 12/10/2007 4:36:19 PM		CCB3 12/10/2007 5:17:26 PM		CCB4 12/10/2007 5:58:50 PM	
		Found	Flag	Found	Flag	Found	Flag	Found	Flag
Lead	10.00	1.00	U	1.00	U	1.00	U	1.00	U

GPL Laboratories, LLLP

Continuing Calibration Blanks

Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	RL	CCB5 12/10/2007 6:40:39 PM		CCB6 12/10/2007 7:22:02 PM		CCB7 12/10/2007 8:03:16 PM		CCB8 12/10/2007 8:44:45 PM	
		Found	Flag	Found	Flag	Found	Flag	Found	Flag
Lead	10.00	1.00	U	1.00	U	1.00	U	1.00	U

GPL Laboratories, LLLP

Continuing Calibration Blanks

Project:	711054	Instrument:	iTEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	RL	CCB9 12/10/2007 9:26:09 PM		CCB10 12/10/2007 10:08:19 PM		CCB11 12/10/2007 10:49:50 PM		CCB12 12/10/2007 11:31:14 PM	
		Found	Flag	Found	Flag	Found	Flag	Found	Flag
Lead	10.00	1.00	U	1.00	U	1.00	U	1.00	U

GPL Laboratories, LLLP

Continuing Calibration Blanks

Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	RL	CCB13 12/11/2007 12:12:24 AM		CCB14 12/11/2007 12:54:02 AM		CCB15 12/11/2007 1:35:49 AM		CCB16 12/11/2007 2:17:34 AM	
		Found	Flag	Found	Flag	Found	Flag	Found	Flag
Lead	10.00	1.00	U	1.00	U	1.00	U	1.00	U

GPL Laboratories, LLLP

Continuing Calibration Blanks

Project:	711054	Instrument:	iTEVA-Soil
Units:	ug/L	Data File Name:	071210.txt
Standard Source:		Standard ID:	

Analyte	RL	CCB17 12/11/2007 2:59:07 AM		CCB18 12/11/2007 3:40:50 AM		CCB19 12/11/2007 4:22:38 AM		CCB20 12/11/2007 5:12:08 AM	
		Found	Flag	Found	Flag	Found	Flag	Found	Flag
Lead	10.00	1.00	U	1.00	U	1.00	U	1.00	U

GPL Laboratories, LLLP

Interference Check Standards

Project:	711054	Instrument:	iTEVA
Units:	ug/L	Data File Name:	071210.txt
Standard Source:	H.P./AB.ST.	Standard ID:	

Analyte	RL	True		Initial Found				Final Found			
		Sol. A	Sol. B		%R	ICSAB 12/10/07 16:21	%R		%R		%R
Lead	10		50.0	-.9A		53.970	107				

[illegible] 12/10/07

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Matrix Spike Recovery

Client ID:	SB-CZ-SS-2085-BA MS	Lab Sample ID:	SP711054-001-001-1/1
Project:	711054	Instrument:	ITEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 00:33	Sample Result 12/11/07 00:29	Spike Added	%R
Lead	123.28	41.05	83.33	99

GPL Laboratories, LLLP

Matrix Spike Recovery

Client ID:	SB-CZ-SS-RA9-SD MS	Lab Sample ID:	SP711054-021-021-1/1
Project:	711054	Instrument:	iTEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 02:24	Sample Result 12/11/07 02:20	Spike Added	%R
Lead	97.89	13.64	80.65	104

GPL Laboratories, LLLP

Matrix Spike Recovery

Client ID:	SB-CZ-SS-2089-BD MS	Lab Sample ID:	SP711054-041-041-1/1
Project:	711054	Instrument:	ITEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 04:08		Sample Result 12/11/07 04:05		Spike Added	%R
Lead	110.99		24.23		81.30	107

GPL Laboratories, LLLP

Matrix Spike Duplicate Recovery

Client ID:	SB-CZ-SS-2085-BA MSD	Lab Sample ID:	SD711054-001-001-1/1
Project:	711054	Instrument:	ITEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 00:36	Sample Result 12/11/07 00:29	Spike Added	%R
Lead	124.34	41.05	81.30	102

GPL Laboratories, LLLP

Matrix Spike Duplicate Recovery

Client ID:	SB-CZ-SS-RA9-SD MSD	Lab Sample ID:	SD711054-021-021-1/1
Project:	711054	Instrument:	ITEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 02:27	Sample Result 12/11/07 02:20	Spike Added	%R
Lead	93.96	13.64	78.74	102

GPL Laboratories, LLLP

Matrix Spike Duplicate Recovery

Client ID:	SB-CZ-SS-2089-BD MSD	Lab Sample ID:	SD711054-041-041-1/1
Project:	711054	Instrument:	iTEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 04:12	Sample Result 12/11/07 04:05	Spike Added	%R
Lead	108.15	24.23	79.37	106

GPL Laboratories, LLLP

Duplicates

Client ID:	SB-CZ-SS-2085-BA MSD	Lab Sample ID:	SD711054-001-001-1/1
Project:	711054	Instrument:	iTEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt

Analyte	Original Sample Results	Duplicate Sample Results	RPD	Control Limit	Q
Lead	123.28	124.34	1	20	D

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Duplicates

Client ID:	SB-CZ-SS-2089-BD MSD	Lab Sample ID:	SD711054-041-041-1/1
Project:	711054	Instrument:	iTEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt

Analyte	Original Sample Results	Duplicate Sample Results	RPD	Control Limit	Q
Lead	110.99	108.15	3	20	D

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Duplicates

Client ID:	SB-CZ-SS-RA9-SD MSD	Lab Sample ID:	SD711054-021-021-1/1
Project:	711054	Instrument:	iTEVA-Soil
Units:	mg/kg	Data File Name:	071210.txt

Analyte	Original Sample Results	Duplicate Sample Results	RPD	Control Limit	Q
Lead	97.89	93.96	4	20	D

GPL Laboratories, LLLP

Laboratory Control Sample

Project:	711054	Lab Sample ID:	BKS101657
Units:	mg/kg	Instrument:	ITEVA-Soil
		Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 00:26	Spike Added	%R
Lead	100.40	100.00	100

GPL Laboratories, LLLP

Laboratory Control Sample

Project:	711054	Lab Sample ID:	BKS101659
Units:	mg/kg	Instrument:	ITEVA-Soil
		Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 02:10	Spike Added	%R
Lead	102.24	100.00	102

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Laboratory Control Sample

Project:	711054	Lab Sample ID:	BKS101660
Units:	mg/kg	Instrument:	ITEVA-Soil
		Data File Name:	071210.txt
Standard Source:	H.P.	Standard ID:	

Analyte	Spiked Sample Result 12/11/07 04:01	Spike Added	%R
Lead	101.46	100.00	101

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Serial Dilutions

Client ID:	SB-CZ-SS-2085-BA	Lab Sample ID:	SE711054-001-001-1/1
Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt

Analyte	Sample Result 12/11/07 00:29		Serial Dilution Result 12/11/07 00:43		Percent Difference	Flag
Lead	48.85		54.29		11	

GPL Laboratories, LLLP

Serial Dilutions

Client ID:	SB-CZ-SS-2089-BD	Lab Sample ID:	SE711054-041-041-1/1
Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt

Analyte	Sample Result 12/11/07 04:05		Serial Dilution Result 12/11/07 04:26		Percent Difference	Flag
Lead	29.32		26.16	J	11	

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Serial Dilutions

Client ID:	SB-CZ-SS-RA9-SD	Lab Sample ID:	SE711054-021-021-1/1
Project:	711054	Instrument:	ITEVA-Soil
Units:	ug/L	Data File Name:	071210.txt

Analyte	Sample Result 12/11/07 02:20		Serial Dilution Result 12/11/07 02:34		Percent Difference	Flag
Lead	16.36		11.34	J	31	

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Detection Limits

Project: 711054 Instrument: iTEVA

Units: ug/L

Analyte	Wavelength/Mass	Reporting Limit	Method Detection Limit	Date of MDL
Lead	220.353	10.0	1.0	11/14/07

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☐	4	Fe	-0.000015	0.000000	No
			Mn	0.000084	0.000000	No
			Cu	0.000068	0.000000	No
			Ti	-0.000115	0.000000	No
Al 396.152 { 85}	☐	5	Mo	0.051689	0.000000	No
			Fe	-0.000009	0.000000	No
			Cu	0.007323	0.000000	No
			Ca	0.000144	0.000000	No
			Na	0.000079	0.000000	No
As 193.759 {474}	☐	8	Al	-0.000182	0.000000	No
			V	-0.004848	0.000000	No
			Fe	-0.000159	0.000000	No
			Mo	-0.000304	0.000000	No
			Ca	-0.000010	0.000000	No
			Cr	0.001489	0.000000	No
			Ti	-0.000159	0.000000	No
			Zn	-0.000199	0.000000	No
B 208.959 {461}	☐	8	Mo	0.040678	0.000000	No
			Zn	0.000094	0.000000	No
			Mn	0.000290	0.000000	No
			Fe	-0.000008	0.000000	No
			Cu	-0.000516	0.000000	No
			Cr	0.001056	0.000000	No
			Co	0.000360	0.000000	No
			Ti	0.000557	0.000000	No
Ba 455.403 { 74}	☐	2	Fe	-0.000008	0.000000	No
			Al	0.000003	0.000000	No
Be 313.042 {108}	☐	3	Ti	-0.000402	0.000000	No
			Mo	-0.000038	0.000000	No
			V	0.000959	0.000000	No
Ca 317.933 {106}	☐	1	Na	0.000256	0.000000	No
Cd 226.502 {449}	☐	1	Fe	0.000054	0.000000	No
Co 228.616 {447}	☐	4	Mo	-0.001136	0.000000	No
			Ti	0.001995	0.000000	No
			Fe	-0.000002	0.000000	No
			Mn	0.000069	0.000000	No
Cr 267.716 {126}	☒	6	Fe	-0.000006	0.000000	No
			Mn	0.000116	0.000000	No
			Al	0.000005	0.000000	No
			Cu	0.000075	0.000000	No
			Ca	0.000001	0.000000	No
			Co	0.000063	0.000000	No
Cu 219.958 {453}	☒	13	Al	0.000568	0.000000	No
			Ca	-0.000227	0.000000	No
			Na	-0.000238	0.000000	No
			Mg	-0.000439	0.000000	No
			B	-0.003834	0.000000	No
			Cr	-0.007088	0.000000	No
			Co	-0.011022	0.000000	No
			Mn	-0.004165	0.000000	No
			Mo	-0.011425	0.000000	No
			Ti	-0.011681	0.000000	No
			V	-0.010122	0.000000	No
			Zn	-0.011796	0.000000	No
			Fe	-0.000223	0.000000	No
Cu 221.810 {452}	☒	13	Al	-0.000147	0.000000	No
			Ca	-0.000148	0.000000	No
			Na	-0.000148	0.000000	No
			Mg	-0.000277	0.000000	No
			B	0.014899	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Cr	0.020542	0.000000	No
			Co	-0.005233	0.000000	No
			Mn	0.002165	0.000000	No
			Mo	-0.010463	0.000000	No
			Ti	-0.007247	0.000000	No
			V	-0.007106	0.000000	No
			Zn	-0.007367	0.000000	No
			Fe	-0.001067	0.000000	No
Cu 327.396 {103}	☒	13	Al	-0.000143	0.000000	No
			Ca	-0.000123	0.000000	No
			Na	-0.000138	0.000000	No
			Mg	-0.000249	0.000000	No
			B	0.012714	0.000000	No
			Cr	0.000995	0.000000	No
			Co	-0.006974	0.000000	No
			Mn	0.001006	0.000000	No
			Mo	-0.007649	0.000000	No
			Ti	-0.008111	0.000000	No
			V	-0.005533	0.000000	No
			Zn	-0.007110	0.000000	No
			Fe	-0.000017	0.000000	No
Fe 259.940 {130}	☒	5	Na	-0.000014	0.000000	No
			Mn	-0.001399	0.000000	No
			Mo	-0.000705	0.000000	No
			V	-0.000340	0.000000	No
			Zn	0.000310	0.000000	No
K 766.490 (44)	☒	13	Cu	0.003618	0.000000	No
			Mg	0.000031	0.000000	No
			Fe	-0.000501	0.000000	No
			Mn	0.008244	0.000000	No
			Mo	-0.008795	0.000000	No
			Al	0.000271	0.000000	No
			B	0.008494	0.000000	No
			Co	0.005627	0.000000	No
			Ti	0.005118	0.000000	No
			V	-0.004687	0.000000	No
			Zn	0.002340	0.000000	No
			Cr	0.004371	0.000000	No
			Na	0.000003	0.000000	No
Mg 280.270 {120}	☒	11	Ca	-0.000042	0.000000	No
			Na	0.000045	0.000000	No
			B	-0.001335	0.000000	No
			Cr	-0.001430	0.000000	No
			Co	-0.001417	0.000000	No
			Mn	-0.001523	0.000000	No
			Mo	-0.001745	0.000000	No
			Ti	-0.001522	0.000000	No
			V	-0.000962	0.000000	No
			Zn	-0.001715	0.000000	No
			Fe	-0.000034	0.000000	No
Mg 285.213 {118}	☒	11	Ca	-0.000042	0.000000	No
			Na	0.000044	0.000000	No
			B	-0.001799	0.000000	No
			Cr	-0.001797	0.000000	No
			Co	-0.001949	0.000000	No
			Mn	-0.001953	0.000000	No
			Mo	-0.002286	0.000000	No
			Ti	-0.002038	0.000000	No
			V	-0.002423	0.000000	No
			Zn	-0.002295	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Fe	-0.000527	0.000000	No
Mn 257.610 {131}	☒	5	Mg	0.000024	0.000000	No
			Fe	-0.000014	0.000000	No
			Al	-0.000002	0.000000	No
			Cr	-0.000058	0.000000	No
			V	-0.000028	0.000000	No
Mo 202.030 {467}	☒	8	Fe	-0.000006	0.000000	No
			Mn	-0.000090	0.000000	No
			Al	-0.000001	0.000000	No
			Mg	-0.000002	0.000000	No
			Cr	0.000043	0.000000	No
			Ti	0.000030	0.000000	No
			V	-0.000131	0.000000	No
			Zn	-0.000254	0.000000	No
Na 589.592 { 57}	☒	4	Mg	0.000593	0.000000	No
			Cr	0.010584	0.000000	No
			Zn	0.005397	0.000000	No
			Fe	-0.000012	0.000000	No
Ni 231.604 {445}	☒	8	Fe	-0.000062	0.000000	No
			Mo	0.001560	0.000000	No
			Al	0.000002	0.000000	No
			Mg	0.000003	0.000000	No
			Cr	-0.000055	0.000000	No
			Co	0.000472	0.000000	No
			Mn	0.000095	0.000000	No
			Zn	0.000064	0.000000	No
Pb 220.353 {453}	☒	10	Al	0.000241	0.000000	No
			Cu	0.002348	0.000000	No
			Mg	0.000008	0.000000	No
			Mo	-0.001992	0.000000	No
			Fe	0.000027	0.000000	No
			Mn	0.000149	0.000000	No
			Cr	0.000109	0.000000	No
			Ca	-0.000013	0.000000	No
			Na	-0.000002	0.000000	No
			Zn	0.000108	0.000000	No
Sb 206.833 {463}	☒	9	Cr	0.017119	0.000000	No
			V	-0.001556	0.000000	No
			Fe	0.000034	0.000000	No
			Mn	0.000000	0.000000	No
			Mo	-0.005080	0.000000	No
			Ca	0.000003	0.000000	No
			Co	0.000139	0.000000	No
			Ti	0.000447	0.000000	No
			Zn	0.000099	0.000000	No
Se 196.090 {472}	☒	14	Al	0.000005	0.000000	No
			Mn	0.000837	0.000000	No
			Fe	-0.000160	0.000000	No
			Co	-0.000157	0.000000	No
			Cu	0.000107	0.000000	No
			Mg	-0.000003	0.000000	No
			Cr	-0.000048	0.000000	No
			Mo	-0.000060	0.000000	No
			Ca	-0.000007	0.000000	No
			Na	-0.000006	0.000000	No
			B	-0.000110	0.000000	No
			Ti	-0.000067	0.000000	No
			V	-0.000070	0.000000	No
			Zn	-0.000068	0.000000	No
Si 251.611 {134}	☒	10	Ca	0.000006	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Na	0.000049	0.000000	No
			Mg	0.000036	0.000000	No
			B	-0.000732	0.000000	No
			Mn	0.000830	0.000000	No
			Mo	0.009831	0.000000	No
			Ti	0.006504	0.000000	No
			V	0.000256	0.000000	No
			Zn	0.000733	0.000000	No
			Fe	-0.000083	0.000000	No
Sn 189.989 {477}	☒	6	Fe	0.000006	0.000000	No
			Ca	-0.000003	0.000000	No
			Na	0.000003	0.000000	No
			Mg	0.000004	0.000000	No
			Ti	-0.001478	0.000000	No
			Zn	0.000107	0.000000	No
Sr 407.771 { 83}	☒	1	Ca	0.000009	0.000000	No
Sr 421.552 { 80}	☒	None				
Te 214.281 {457}	☒	11	Mo	0.000341	0.000000	No
			Ti	0.002474	0.000000	No
			V	-0.171245	0.000000	No
			Zn	-0.002905	0.000000	No
			Fe	-0.000278	0.000000	No
			Al	-0.000014	0.000000	No
			Mg	0.000003	0.000000	No
			Ca	0.000007	0.000000	No
			Na	0.000003	0.000000	No
			B	0.000321	0.000000	No
			Mn	-0.000102	0.000000	No
Ti 334.941 {101}	☒	5	Fe	-0.000000	0.000000	No
			Mn	0.000000	0.000000	No
			Mg	-0.000004	0.000000	No
			Cr	0.000161	0.000000	No
			Ca	0.000004	0.000000	No
Tl 190.856 {477}	☒	10	Co	0.005004	0.000000	No
			Mo	-0.007135	0.000000	No
			Ti	-0.001460	0.000000	No
			V	-0.020145	0.000000	No
			Mn	0.001894	0.000000	No
			Fe	-0.000038	0.000000	No
			Cu	-0.000070	0.000000	No
			Cr	0.000181	0.000000	No
			Ca	0.000003	0.000000	No
			Zn	-0.000050	0.000000	No
V 292.402 {115}	☒	8	Cr	-0.003158	0.000000	No
			Mo	-0.008495	0.000000	No
			Ti	0.000800	0.000000	No
			Fe	0.000008	0.000000	No
			Mn	-0.000485	0.000000	No
			Cu	0.000072	0.000000	No
			Mg	-0.000002	0.000000	No
			Zn	0.000078	0.000000	No
Y 224.306 {450}*	☒	None				
Y 377.433 { 89}*	☒	None				
Y 377.433 { 89}2*	☒	None				
Zn 213.856 {458}	☒	12	Fe	0.000080	0.000000	No
			Mn	0.000094	0.000000	No
			Mg	0.000036	0.000000	No
			Cu	0.000365	0.000000	No
			Ca	0.000003	0.000000	No
			Na	0.000002	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				B	0.000128	0.000000	No
				Cr	0.000161	0.000000	No
				Co	0.000113	0.000000	No
				Mo	-0.000118	0.000000	No
				Ti	-0.000755	0.000000	No
				V	0.000129	0.000000	No
	Zr 343.823 { 98}	☒	1	Fe	0.000031	0.000000	No

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Linear Dynamic Ranges

Project: 711054 Instrument: iTEVA-Soil

Units: ug/L

Analyte	Wavelength/Mass	Linear Dynamic Range	Date of LDR
Lead	220.353	22000	11/14/07

GPL Laboratories, LLLP

Preparation Log

Project: 711054 Instrument: ITEVA-Soil

Prep Method: Batch Number: 101657

Lab Sample ID	Client ID	Preparation Date	Initial Weight (grams)	Final Volume (ml)
BLK101657	BLK101657	11/15/2007	1.00	100
BKS101657	BKS101657	11/15/2007	1.00	100
S 711054-001-001-1/1	SB-CZ-SS-2085-BA	11/15/2007	1.19	100
SP711054-001-001-1/1	SB-CZ-SS-2085-BA MS	11/15/2007	1.20	100
S 711054-002-002-1/1	SB-CZ-SS-2086-BA	11/15/2007	1.20	100
S 711054-003-003-1/1	SB-CZ-SS-2087-BA	11/15/2007	1.23	100
S 711054-004-004-1/1	SB-CZ-SS-2088-BA	11/15/2007	1.19	100
S 711054-005-005-1/1	SB-CZ-SS-2089-BA	11/15/2007	1.18	100
S 711054-006-006-1/1	SB-CZ-SS-2090-BA	11/15/2007	1.22	100
S 711054-007-007-1/1	SB-CZ-SS-2091-BA	11/15/2007	1.26	100
S 711054-008-008-1/1	SB-CZ-SS-2092-BA	11/15/2007	1.17	100
S 711054-009-009-1/1	SB-CZ-SS-2093-BA	11/15/2007	1.25	100
S 711054-010-010-1/1	SB-CZ-SS-2094-BA	11/15/2007	1.16	100
S 711054-011-011-1/1	SB-CZ-SS-2095-BA	11/15/2007	1.20	100
S 711054-012-012-1/1	SB-CZ-SS-2096-BA	11/15/2007	1.22	100
S 711054-013-013-1/1	SB-CZ-SS-RA1-SD	11/15/2007	1.21	100
S 711054-014-014-1/1	SB-CZ-SS-RA2-SD	11/15/2007	1.20	100
S 711054-015-015-1/1	SB-CZ-SS-RA3-SD	11/15/2007	1.21	100
S 711054-016-016-1/1	SB-CZ-SS-RA4-SD	11/15/2007	1.22	100
S 711054-017-017-1/1	SB-CZ-SS-RA5-SD	11/15/2007	1.25	100
S 711054-018-018-1/1	SB-CZ-SS-RA6-SD	11/15/2007	1.21	100
S 711054-019-019-1/1	SB-CZ-SS-RA7-SD	11/15/2007	1.24	100
S 711054-020-020-1/1	SB-CZ-SS-RA8-SD	11/15/2007	1.26	100
SD711054-001-001-1/1	SB-CZ-SS-2085-BA MSD	11/15/2007	1.23	100

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Preparation Log

Project: 711054 Instrument: iTEVA-Soil

Prep Method: Batch Number: 101659

Lab Sample ID	Client ID	Preparation Date	Initial Weight (grams)	Final Volume (ml)
BLK101659	BLK101659	11/15/2007	1.00	100
BKS101659	BKS101659	11/15/2007	1.00	100
S 711054-037-037-1/1	SB-CZ-SS-2085-BD	11/15/2007	1.22	100
S 711054-038-038-1/1	SB-CZ-SS-2086-BD	11/15/2007	1.18	100
S 711054-039-039-1/1	SB-CZ-SS-2087-BD	11/15/2007	1.23	100
S 711054-040-040-1/1	SB-CZ-SS-2088-BD	11/15/2007	1.16	100
S 711054-022-022-1/1	SB-CZ-SS-RA10-SD	11/15/2007	1.26	100
S 711054-034-034-1/1	SB-CZ-SS-RA10-ST	11/15/2007	1.20	100
S 711054-023-023-1/1	SB-CZ-SS-RA11-SD	11/15/2007	1.18	100
S 711054-035-035-1/1	SB-CZ-SS-RA11-ST	11/15/2007	1.23	100
S 711054-024-024-1/1	SB-CZ-SS-RA12-SD	11/15/2007	1.23	100
S 711054-036-036-1/1	SB-CZ-SS-RA12-ST	11/15/2007	1.21	100
S 711054-025-025-1/1	SB-CZ-SS-RA1-ST	11/15/2007	1.18	100
S 711054-026-026-1/1	SB-CZ-SS-RA2-ST	11/15/2007	1.22	100
S 711054-027-027-1/1	SB-CZ-SS-RA3-ST	11/15/2007	1.25	100
S 711054-028-028-1/1	SB-CZ-SS-RA4-ST	11/15/2007	1.19	100
S 711054-029-029-1/1	SB-CZ-SS-RA5-ST	11/15/2007	1.16	100
S 711054-030-030-1/1	SB-CZ-SS-RA6-ST	11/15/2007	1.24	100
S 711054-031-031-1/1	SB-CZ-SS-RA7-ST	11/15/2007	1.27	100
S 711054-032-032-1/1	SB-CZ-SS-RA8-ST	11/15/2007	1.20	100
S 711054-021-021-1/1	SB-CZ-SS-RA9-SD	11/15/2007	1.20	100
SP711054-021-021-1/1	SB-CZ-SS-RA9-SD MS	11/15/2007	1.24	100
S 711054-033-033-1/1	SB-CZ-SS-RA9-ST	11/15/2007	1.21	100
SD711054-021-021-1/1	SB-CZ-SS-RA9-SD MSD	11/15/2007	1.27	100

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Preparation Log

Project: 711054 Instrument: iTEVA-Soil

Prep Method: Batch Number: 101660

Lab Sample ID	Client ID	Preparation Date	Initial Weight (grams)	Final Volume (ml)
BLK101660	BLK101660	11/15/2007	1.00	100
BKS101660	BKS101660	11/15/2007	1.00	100
S 711054-041-041-1/1	SB-CZ-SS-2089-BD	11/15/2007	1.21	100
SP711054-041-041-1/1	SB-CZ-SS-2089-BD MS	11/15/2007	1.23	100
S 711054-042-042-1/1	SB-CZ-SS-2090-BD	11/15/2007	1.22	100
S 711054-043-043-1/1	SB-CZ-SS-2091-BD	11/15/2007	1.18	100
S 711054-044-044-1/1	SB-CZ-SS-2092-BD	11/15/2007	1.21	100
S 711054-045-045-1/1	SB-CZ-SS-2093-BD	11/15/2007	1.17	100
S 711054-046-046-1/1	SB-CZ-SS-2094-BD	11/15/2007	1.23	100
S 711054-047-047-1/1	SB-CZ-SS-2095-SD	11/15/2007	1.25	100
S 711054-048-048-1/1	SB-CZ-SS-2096-SD	11/15/2007	1.24	100
SD711054-041-041-1/1	SB-CZ-SS-2089-BD MSD	11/15/2007	1.26	100

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Analysis Run Log

Project: 711054

Instrument: ITEVA-Soil

Data File Name: 071210.txt

Sample Name	Client ID	Analysis Date	Analysis Time
STD0		12/10/07	3:29 PM
STD1		12/10/07	3:33 PM
STD2		12/10/07	3:36 PM
STD3		12/10/07	3:39 PM
STD4		12/10/07	3:43 PM
STD5		12/10/07	3:46 PM
STD6		12/10/07	3:50 PM
ICV		12/10/07	4:00 PM
ICB		12/10/07	4:04 PM
CCV1		12/10/07	4:07 PM
CCB1		12/10/07	4:11 PM
PQL		12/10/07	4:14 PM
ICSA		12/10/07	4:18 PM
ICSAB		12/10/07	4:21 PM
CCV2		12/10/07	4:32 PM
CCB2		12/10/07	4:36 PM
CCV3		12/10/07	5:13 PM
CCB3		12/10/07	5:17 PM
CCV4		12/10/07	5:55 PM
CCB4		12/10/07	5:58 PM
CCV5		12/10/07	6:37 PM
CCB5		12/10/07	6:40 PM
CCV6		12/10/07	7:18 PM
CCB6		12/10/07	7:22 PM
CCV7		12/10/07	7:59 PM
CCB7		12/10/07	8:03 PM
CCV8		12/10/07	8:41 PM
CCB8		12/10/07	8:44 PM
CCV9		12/10/07	9:22 PM
CCB9		12/10/07	9:26 PM
CCV10		12/10/07	10:04 PM
CCB10		12/10/07	10:08 PM
CCV11		12/10/07	10:46 PM
CCB11		12/10/07	10:49 PM
CCV12		12/10/07	11:27 PM
CCB12		12/10/07	11:31 PM
CCV13		12/11/07	12:08 AM
CCB13		12/11/07	12:12 AM
BLK101657	BLK101657	12/11/07	12:22 AM

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Analysis Run Log

Project: 711054

Instrument: ITEVA-Soil

Data File Name: 071210.txt

Sample Name	Client ID	Analysis Date	Analysis Time
BKS101657	BKS101657	12/11/07	12:26 AM
S 711054-001-001-1/1	SB-CZ-SS-2085-BA	12/11/07	12:29 AM
SP711054-001-001-1/1	SB-CZ-SS-2085-BA MS	12/11/07	12:33 AM
SD711054-001-001-1/1	SB-CZ-SS-2085-BA MSD	12/11/07	12:36 AM
SE711054-001-001-1/1	SB-CZ-SS-2085-BA	12/11/07	12:43 AM
S 711054-002-002-1/1	SB-CZ-SS-2086-BA	12/11/07	12:46 AM
CCV14		12/11/07	12:50 AM
CCB14		12/11/07	12:54 AM
S 711054-003-003-1/1	SB-CZ-SS-2087-BA	12/11/07	12:57 AM
S 711054-004-004-1/1	SB-CZ-SS-2088-BA	12/11/07	1:00 AM
S 711054-005-005-1/1	SB-CZ-SS-2089-BA	12/11/07	1:04 AM
S 711054-006-006-1/1	SB-CZ-SS-2090-BA	12/11/07	1:07 AM
S 711054-007-007-1/1	SB-CZ-SS-2091-BA	12/11/07	1:11 AM
S 711054-008-008-1/1	SB-CZ-SS-2092-BA	12/11/07	1:14 AM
S 711054-009-009-1/1	SB-CZ-SS-2093-BA	12/11/07	1:18 AM
S 711054-010-010-1/1	SB-CZ-SS-2094-BA	12/11/07	1:21 AM
S 711054-011-011-1/1	SB-CZ-SS-2095-BA	12/11/07	1:25 AM
S 711054-012-012-1/1	SB-CZ-SS-2096-BA	12/11/07	1:28 AM
CCV15		12/11/07	1:32 AM
CCB15		12/11/07	1:35 AM
S 711054-013-013-1/1	SB-CZ-SS-RA1-SD	12/11/07	1:39 AM
S 711054-014-014-1/1	SB-CZ-SS-RA2-SD	12/11/07	1:42 AM
S 711054-015-015-1/1	SB-CZ-SS-RA3-SD	12/11/07	1:46 AM
S 711054-016-016-1/1	SB-CZ-SS-RA4-SD	12/11/07	1:49 AM
S 711054-017-017-1/1	SB-CZ-SS-RA5-SD	12/11/07	1:53 AM
S 711054-018-018-1/1	SB-CZ-SS-RA6-SD	12/11/07	1:56 AM
S 711054-019-019-1/1	SB-CZ-SS-RA7-SD	12/11/07	1:59 AM
S 711054-020-020-1/1	SB-CZ-SS-RA8-SD	12/11/07	2:03 AM
BLK101659	BLK101659	12/11/07	2:06 AM
BKS101659	BKS101659	12/11/07	2:10 AM
CCV16		12/11/07	2:13 AM
CCB16		12/11/07	2:17 AM
S 711054-021-021-1/1	SB-CZ-SS-RA9-SD	12/11/07	2:20 AM
SP711054-021-021-1/1	SB-CZ-SS-RA9-SD MS	12/11/07	2:24 AM
SD711054-021-021-1/1	SB-CZ-SS-RA9-SD MSD	12/11/07	2:27 AM
SE711054-021-021-1/1	SB-CZ-SS-RA9-SD	12/11/07	2:34 AM
S 711054-022-022-1/1	SB-CZ-SS-RA10-SD	12/11/07	2:38 AM
S 711054-023-023-1/1	SB-CZ-SS-RA11-SD	12/11/07	2:41 AM
S 711054-024-024-1/1	SB-CZ-SS-RA12-SD	12/11/07	2:45 AM

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Analysis Run Log

Project: 711054

Instrument: iTEVA-Soil

Data File Name: 071210.txt

Sample Name	Client ID	Analysis Date	Analysis Time
S 711054-025-025-1/1	SB-CZ-SS-RA1-ST	12/11/07	2:48 AM
S 711054-026-026-1/1	SB-CZ-SS-RA2-ST	12/11/07	2:52 AM
CCV17		12/11/07	2:55 AM
CCB17		12/11/07	2:59 AM
S 711054-027-027-1/1	SB-CZ-SS-RA3-ST	12/11/07	3:02 AM
S 711054-028-028-1/1	SB-CZ-SS-RA4-ST	12/11/07	3:06 AM
S 711054-029-029-1/1	SB-CZ-SS-RA5-ST	12/11/07	3:09 AM
S 711054-030-030-1/1	SB-CZ-SS-RA6-ST	12/11/07	3:12 AM
S 711054-031-031-1/1	SB-CZ-SS-RA7-ST	12/11/07	3:16 AM
S 711054-032-032-1/1	SB-CZ-SS-RA8-ST	12/11/07	3:19 AM
S 711054-033-033-1/1	SB-CZ-SS-RA9-ST	12/11/07	3:23 AM
S 711054-034-034-1/1	SB-CZ-SS-RA10-ST	12/11/07	3:26 AM
S 711054-035-035-1/1	SB-CZ-SS-RA11-ST	12/11/07	3:30 AM
S 711054-036-036-1/1	SB-CZ-SS-RA12-ST	12/11/07	3:33 AM
CCV18		12/11/07	3:37 AM
CCB18		12/11/07	3:40 AM
S 711054-037-037-1/1	SB-CZ-SS-2085-BD	12/11/07	3:44 AM
S 711054-038-038-1/1	SB-CZ-SS-2086-BD	12/11/07	3:47 AM
S 711054-039-039-1/1	SB-CZ-SS-2087-BD	12/11/07	3:51 AM
S 711054-040-040-1/1	SB-CZ-SS-2088-BD	12/11/07	3:54 AM
BLK101660	BLK101660	12/11/07	3:58 AM
BKS101660	BKS101660	12/11/07	4:01 AM
S 711054-041-041-1/1	SB-CZ-SS-2089-BD	12/11/07	4:05 AM
SP711054-041-041-1/1	SB-CZ-SS-2089-BD MS	12/11/07	4:08 AM
SD711054-041-041-1/1	SB-CZ-SS-2089-BD MSD	12/11/07	4:12 AM
CCV19		12/11/07	4:19 AM
CCB19		12/11/07	4:22 AM
SE711054-041-041-1/1	SB-CZ-SS-2089-BD	12/11/07	4:26 AM
S 711054-042-042-1/1	SB-CZ-SS-2090-BD	12/11/07	4:29 AM
S 711054-043-043-1/1	SB-CZ-SS-2091-BD	12/11/07	4:33 AM
S 711054-044-044-1/1	SB-CZ-SS-2092-BD	12/11/07	4:36 AM
S 711054-045-045-1/1	SB-CZ-SS-2093-BD	12/11/07	4:40 AM
S 711054-046-046-1/1	SB-CZ-SS-2094-BD	12/11/07	4:43 AM
S 711054-047-047-1/1	SB-CZ-SS-2095-SD	12/11/07	4:47 AM
S 711054-048-048-1/1	SB-CZ-SS-2096-SD	12/11/07	4:50 AM
CCV20		12/11/07	5:01 AM
CCB20		12/11/07	5:05 AM

GPL Laboratories, LLLP

ICP ANALYSIS LOG

Analytical Batch No: 07/210

Instrument ID: ICAP 6500 (20072904) Inst. Method: Nebulizer:

Workorder	Project/SDG #	Prep. Seq.	Batch #	Matrix S/W/E	Prep. Date	Method	Comments / Dilution
711020	SC&A, Inc		088/091	S	11/09/07	6010C	
711053	SC&A, Inc		101	S	11/13/07	6010C	BLK → S13 Need to be Re-Run
711053	SC&A, Inc		102	S	11/13/07	6010C	
711016	Shaw E&I, Inc		102	S	11/13/07	6010B	
711054	SC&A, Inc		108	S	11/15/07	6010C	
711054	SC&A, Inc		109	S	11/15/07	6010C	
711054	SC&A, Inc		110	S	11/15/07	6010C	

12/11/07

Source Solution Numbers

Stds.	Number	Stds.	Number
S0	G-P-129-116-10	ICV	42173
S1	42105	CCV	42200
S2	42106	ICSA	42304
S3	42109	ICSAB	42305
S4	42110	Low Ck	42234
S5	42111	LR	42008
S6	42112	IS	42235

Post Digestion Spikes

Spike 9.9 mls of sample with 0.1 mls of 41513

Samples:

PS 711020-001-001-1/1
PS 711020-021-021-1/1
PS 711053-001-001-1/1
PS 711053-021-021-1/1
PS 711016-001-005-1/1
PS 711054-001-001-1/1
PS 711054-021-021-1/1
PS 711054-041-041-1/1

Analyst: Date: 12/11/07 Reviewed: Date:

Supersedes GP_M_199

Sample Name: STD0 Acquired: 12/10/2007 15:29:50 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00001	.00022	-.00002	.00024	.00078	-.00012	.00450
Stddev	.00001	.00001	.00001	.00002	.00002	.00000	.00012
%RSD	50.430	4.5403	56.484	6.3660	2.3402	3.6927	2.5810
#1	-.00002	.00023	-.00002	.00023	.00079	-.00012	.00442
#2	-.00001	.00021	-.00001	.00025	.00077	-.00012	.00458

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00004	-.00004	.00001	.0001	.0001	.0000	.00017
Stddev	.00001	.00002	.00000	.0000	.0000	.000	.00003
%RSD	33.216	58.600	19.096	4.215	32.11	78.81	17.266
#1	.00003	-.00005	.00001	.0001	.0001	.0000	.00019
#2	.00005	-.00002	.00001	.0001	.0002	.0000	.00015

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00449	.0056	.0005	.00001	.00004	.00332	.00003
Stddev	.00002	.0007	.0001	.00000	.00001	.00064	.00001
%RSD	.37450	13.02	22.39	10.435	18.559	19.241	17.638
#1	-.00448	.0051	.0004	.00001	.00005	.00287	.00003
#2	-.00450	.0062	.0006	.00001	.00004	.00377	.00003

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00017	.00004	.00002	.00008	.00002	.00113	.00002
Stddev	.00001	.00001	.00000	.00000	.00002	.00005	.00001
%RSD	6.4156	13.826	24.649	.18280	101.24	4.3544	24.561
#1	-.00016	.00004	.00002	.00007	.00001	.00110	.00002
#2	-.00018	.00005	.00002	.00008	.00003	.00117	.00003

Sample Name: STD0 Acquired: 12/10/2007 15:29:50 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00001	-.00003	.00004	.00043
Stddev	.00000	.00001	.00000	.00001
%RSD	3.6774	21.916	1.9629	2.2315
#1	-.00001	-.00002	.00004	.00042
#2	-.00001	-.00003	.00004	.00043

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48161.	26523.	645480.
Stddev	115.	734.	5058.
%RSD	.23846	2.7678	.78362
#1	48080.	27042.	641900.
#2	48243.	26004.	649050.

Sample Name: STD1 Acquired: 12/10/2007 15:33:11 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Cd	Co
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00856	.36341	.00331	.01600	.20923	.02835	.12163	.04742
Stddev	.00005	.01027	.00001	.00009	.00074	.00012	.00009	.00000
%RSD	.53301	2.8262	.20385	.59380	.35535	.44049	.07328	.00246
#1	.00853	.35615	.00330	.01607	.20870	.02826	.12157	.04742
#2	.00859	.37067	.00331	.01593	.20975	.02844	.12169	.04742

Elem	Cr	Cu2199	Cu2218	Cu3273	Fe	Mn	Mo	Ni
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00625	.0066	.0096	.0024	.43459	.03751	.02633	.02561
Stddev	.00003	.0000	.0001	.0001	.01085	.00014	.00003	.00001
%RSD	.49837	.3009	.7788	5.273	2.4977	.37714	.11977	.03714
#1	.00623	.0066	.0096	.0023	.42692	.03741	.02630	.02562
#2	.00627	.0066	.0097	.0025	.44227	.03761	.02635	.02561

Elem	Pb	Sb	Se	Si	Sn	Sr	Te	Ti
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00961	.00456	.00299	.00221	.00934	.44480	.00351	.02294
Stddev	.00003	.00006	.00002	.00001	.00003	.00139	.00004	.00006
%RSD	.33952	1.4126	.62136	.65947	.29120	.31246	1.0619	.26250
#1	.00959	.00460	.00300	.00220	.00936	.44381	.00353	.02290
#2	.00963	.00451	.00298	.00222	.00933	.44578	.00348	.02299

Elem	Tl	V	Zn
Units	Cts/S	Cts/S	Cts/S
Avg	.00393	.00908	.07768
Stddev	.00007	.00004	.00005
%RSD	1.7032	.45004	.06609
#1	.00389	.00905	.07764
#2	.00398	.00911	.07772

Sample Name: STD1 Acquired: 12/10/2007 15:33:11 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48217.	26604.	642320.
Stddev	17.	421.	994.
%RSD	.03553	1.5826	.15471
#1	48229.	26902.	643020.
#2	48205.	26306.	641620.

Sample Name: STD2 Acquired: 12/10/2007 15:36:27 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Cd	Co
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02116	.93129	.00814	.03915	.51326	.07019	.29760	.11707
Stddev	.00003	.01658	.00006	.00003	.00096	.00014	.00049	.00026
%RSD	.14028	1.7800	.73587	.08134	.18681	.20217	.16377	.22403
#1	.02118	.94301	.00818	.03917	.51394	.07029	.29795	.11726
#2	.02113	.91957	.00810	.03912	.51259	.07009	.29726	.11688

Elem	Cr	Cu2199	Cu2218	Cu3273	Fe	Mn	Mo	Ni
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01522	.0162	.0234	.0061	1.1089	.09320	.06495	.06353
Stddev	.00004	.0000	.0000	.0001	.0183	.00023	.00018	.00003
%RSD	.24313	.0459	.1488	1.651	1.6539	.24424	.27609	.05039
#1	.01525	.0162	.0235	.0060	1.1219	.09336	.06508	.06356
#2	.01520	.0162	.0234	.0061	1.0959	.09304	.06483	.06351

Elem	Pb	Sb	Se	Si	Sn	Sr	Te	Ti
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02392	.01128	.00717	.00529	.02305	1.0828	.00860	.05695
Stddev	.00008	.00003	.00001	.00001	.00003	.0031	.00003	.00009
%RSD	.32434	.26627	.14962	.24734	.15165	.28722	.38959	.15248
#1	.02398	.01130	.00717	.00530	.02308	1.0806	.00862	.05701
#2	.02387	.01126	.00716	.00528	.02303	1.0850	.00858	.05689

Elem	Tl	V	Zn
Units	Cts/S	Cts/S	Cts/S
Avg	.00969	.02223	.18851
Stddev	.00004	.00005	.00032
%RSD	.37330	.22777	.16880
#1	.00966	.02226	.18873
#2	.00971	.02219	.18828

Sample Name: STD2 Acquired: 12/10/2007 15:36:27 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48151.	25895.	646480.
Stddev	10.	506.	1951.
%RSD	.02063	1.9532	.30185
#1	48144.	25537.	645100.
#2	48158.	26252.	647860.

Sample Name: STD3 Acquired: 12/10/2007 15:39:59 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Cd	Co
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04266	1.8380	.01609	.07687	1.0308	.14215	.59224	.23217
Stddev	.00003	.0056	.00007	.00008	.0018	.00007	.00052	.00037
%RSD	.07431	.30369	.44022	.10350	.17845	.04596	.08781	.16049
#1	.04268	1.8420	.01604	.07682	1.0295	.14220	.59187	.23191
#2	.04264	1.8341	.01614	.07693	1.0321	.14210	.59260	.23243

Elem	Cr	Cu2199	Cu2218	Cu3273	Fe	Mn	Mo	Ni
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03084	.0320	.0464	.0119	2.1799	.18706	.12902	.12529
Stddev	.00002	.0001	.0001	.0000	.0133	.00024	.00011	.00014
%RSD	.05968	.3225	.2019	.1483	.60957	.12695	.08252	.10827
#1	.03085	.0320	.0463	.0119	2.1893	.18723	.12894	.12519
#2	.03082	.0321	.0464	.0119	2.1706	.18689	.12909	.12538

Elem	Pb	Sb	Se	Si	Sn	Sr	Te	Ti
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04750	.02237	.01419	.01045	.04572	2.1390	.01701	.11482
Stddev	.00009	.00002	.00005	.00002	.00002	.0001	.00007	.00003
%RSD	.18374	.06937	.36924	.20896	.04863	.00710	.39951	.02703
#1	.04744	.02236	.01423	.01047	.04571	2.1391	.01696	.11484
#2	.04757	.02238	.01416	.01044	.04574	2.1389	.01706	.11480

Elem	Tl	V	Zn
Units	Cts/S	Cts/S	Cts/S
Avg	.01927	.04475	.37494
Stddev	.00005	.00002	.00026
%RSD	.26277	.03724	.06864
#1	.01930	.04476	.37475
#2	.01923	.04474	.37512

Sample Name: STD3 Acquired: 12/10/2007 15:39:59 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48243.	25907.	640170.
Stddev	16.	123.	457.
%RSD	.03293	.47660	.07144
#1	48255.	25820.	639850.
#2	48232.	25994.	640490.

Sample Name: STD4 Acquired: 12/10/2007 15:43:31 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ca	K	Mg2802	Mg2852	Na
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.8525	.06800	24.71	2.531	1.7818
Stddev	.0163	.00092	.14	.026	.0131
%RSD	.88075	1.3459	.5479	1.020	.73229
#1	1.8409	.06735	24.81	2.513	1.7726
#2	1.8640	.06865	24.62	2.550	1.7910

Int. Std.	Y_3774
Units	Cts/S
Avg	25507.
Stddev	57.
%RSD	.22286
#1	25548.
#2	25467.

Sample Name: STD5 Acquired: 12/10/2007 15:46:59 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ca	K	Mg2802	Mg2852	Na
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.5402	.13879	56.94	5.946	4.3650
Stddev	.2014	.00480	1.46	.252	.1986
%RSD	4.4368	3.4553	2.569	4.233	4.5491
#1	4.3978	.13540	55.91	5.768	4.2246
#2	4.6827	.14218	57.98	6.124	4.5054

Int. Std.	Y_3774
Units	Cts/S
Avg	25809.
Stddev	950.
%RSD	3.6794
#1	26480.
#2	25137.

Sample Name: STD6 Acquired: 12/10/2007 15:50:28 Type: Cal
Method: TRACEPB Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ca	K	Mg2802	Mg2852	Na
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.3884	.37228	105.5	11.32	8.8800
Stddev	.1205	.00383	2.0	.16	.1074
%RSD	1.2836	1.0278	1.934	1.410	1.2092
#1	9.4736	.37499	106.9	11.43	8.9559
#2	9.3032	.36958	104.0	11.21	8.8041

Int. Std.	Y_3774
Units	Cts/S
Avg	24868.
Stddev	277.
%RSD	1.1156
#1	24672.
#2	25064.

Sample Name: ICV Acquired: 12/10/2007 16:00:49 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	407.60	5291.8	439.53	432.65	423.17	42.116	5489.6
Stddev	.44	56.5	.90	.85	.73	.096	97.9
%RSD	.10832	1.0671	.20556	.19552	.17273	.22834	1.7835
#1	407.29	5331.7	438.89	433.25	422.65	42.048	5558.8
#2	407.91	5251.8	440.17	432.06	423.69	42.184	5420.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	42.431	438.67	412.11	F 440.3	377.9	407.3	5227.3
Stddev	.120	.03	1.57	1.6	.8	.6	84.1
%RSD	.28386	.00758	.38001	.3702	.1990	.1579	1.6084
#1	42.517	438.69	411.00	441.4	378.4	406.9	5286.8
#2	42.346	438.65	413.21	439.1	377.4	407.8	5167.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				400.0			
Range				10.00%			

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5215.7	5457.	F 5952.	417.80	412.37	10457.	428.76
Stddev	68.4	83.	83.	.18	.56	148.	.79
%RSD	1.3122	1.517	1.392	.04223	.13481	1.4196	.18444
#1	5264.1	5515.	6010.	417.67	412.76	10562.	429.31
#2	5167.3	5398.	5893.	417.92	411.97	10352.	428.20
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			5000.				
Range			10.00%				

Sample Name: ICV Acquired: 12/10/2007 16:00:49 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	426.15	414.04	426.75	F 98.473	421.24	413.67	F 8.3499
Stddev	.10	1.84	2.40	.363	1.00	.67	1.1076
%RSD	.02312	.44440	.56287	.36858	.23737	.16308	13.265
#1	426.08	415.34	428.45	98.217	421.95	414.15	9.1331
#2	426.22	412.74	425.05	98.730	420.53	413.19	7.5668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value				400.00			400.00
Range				-10.000%			-10.000%

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	418.54	411.19	420.15	431.93
Stddev	.82	.97	1.00	.04
%RSD	.19694	.23672	.23864	.01005
#1	417.96	410.50	419.44	431.96
#2	419.12	411.88	420.86	431.89
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47897.	25355.	636490.
Stddev	113.	298.	1472.
%RSD	.23500	1.1754	.23134
#1	47818.	25144.	637530.
#2	47977.	25565.	635450.

Sample Name: ICB Acquired: 12/10/2007 16:04:17 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.05802	-4.6194	.30794	.10055	-.05389	.00009	1.6366	-.05243
Stddev	.18916	7.7598	.52224	.08040	.00326	.00271	4.4449	.09208
%RSD	326.05	167.98	169.59	79.959	6.0443	3113.5	271.59	175.62
#1	-.07574	-10.106	-.06134	.15740	-.05158	.00200	4.7797	.01268
#2	.19178	.8676	.67723	.04370	-.05619	-.00183	-1.5064	-.11754
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.13371	-.19908	-.1029	-.2099	F 5.467	-3.4576	-44.292	-1.272
Stddev	.28147	.18518	.5843	.6305	4.924	.3439	49.755	1.764
%RSD	210.51	93.015	567.7	300.3	90.07	9.9464	112.33	138.6
#1	-.33274	-.06814	.3102	-.6558	8.949	-3.2144	-79.474	-.0252
#2	.06532	-.33002	-.5161	.2359	1.985	-3.7008	-9.1101	-2.520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit					3.000			
Low Limit					-3.000			

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.443	-.05179	.11899	-42.638	-.22085	.09152	-1.6308	.11712
Stddev	.100	.05334	.03790	18.542	.07920	.43022	2.8489	2.4867
%RSD	4.090	103.00	31.849	43.486	35.859	470.08	174.69	2123.1
#1	-2.514	-.01407	.14579	-29.527	-.27685	-.21269	.38366	1.8755
#2	-2.373	-.08951	.09219	-55.749	-.16485	.39573	-3.6453	-1.6412
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 12/10/2007 16:04:17 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.36517	-.45259	-.03028	.10207	-.07483	1.6758	-.19459	-.17304
Stddev	.05538	.92452	.00178	1.0450	.07815	.8216	.03483	.05213
%RSD	15.166	204.28	5.8675	1023.8	104.45	49.027	17.899	30.124
#1	-.40433	.20115	-.03154	-.63684	-.13009	1.0948	-.21922	-.13618
#2	-.32601	-1.1063	-.02903	.84097	-.01956	2.2568	-.16996	-.20990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48325.	25629.	638100.
Stddev	22.	30.	367.
%RSD	.04610	.11900	.05746
#1	48309.	25608.	638360.
#2	48341.	25651.	637840.

Sample Name: CCV Acquired: 12/10/2007 16:07:40 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	509.65	48968.	507.57	507.56	489.88	50.033	97077.
Stddev	5.69	2530.	1.57	.75	6.95	.618	5070.
%RSD	1.1166	5.1674	.30961	.14761	1.4194	1.2347	5.2231
#1	513.68	47179.	506.45	508.09	494.80	50.470	93492.
#2	505.63	50757.	508.68	507.03	484.96	49.597	100660.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	492.94	491.59	498.09	F 591.1	546.9	F 557.2	47736.
Stddev	1.23	1.42	5.68	5.0	4.8	.4	2579.
%RSD	.25036	.28790	1.1401	.8512	.8754	.0641	5.4024
#1	493.82	492.59	502.10	587.5	543.5	557.5	45912.
#2	492.07	490.59	494.07	594.7	550.2	557.0	49559.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass
Value				500.0		500.0	
Range				10.00%		10.00%	

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23513.	97500.	100500.	495.78	501.63	97271.	492.52
Stddev	1094.	4890.	5135.	4.96	.96	5245.	.63
%RSD	4.6518	5.015	5.108	.99984	.19153	5.3918	.12768
#1	22740.	94040.	96890.	499.29	502.31	93563.	492.96
#2	24286.	101000.	104100.	492.28	500.95	100980.	492.07
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 16:07:40 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	490.73	509.10	501.44	516.53	494.97	497.21	499.29
Stddev	1.62	2.36	.33	6.69	.31	6.88	3.23
%RSD	.33030	.46445	.06662	1.2950	.06331	1.3839	.64742
#1	491.88	510.78	501.67	521.26	494.75	502.08	501.57
#2	489.58	507.43	501.20	511.80	495.19	492.34	497.00
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	511.02	489.61	503.55	F 595.79
Stddev	5.41	.09	5.76	2.17
%RSD	1.0592	.01874	1.1430	.36404
#1	514.85	489.55	507.62	597.33
#2	507.20	489.68	499.48	594.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46689.	26410.	621400.
Stddev	178.	1303.	6551.
%RSD	.38123	4.9345	1.0543
#1	46563.	27332.	616760.
#2	46815.	25489.	626030.

Sample Name: CCB Acquired: 12/10/2007 16:11:16 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.39134	-5.3403	.62286	.16247	-.05358	-.00410	2.9558	.00200
Stddev	.20955	19.110	.61994	.53399	.03007	.00081	3.7444	.00322
%RSD	53.546	357.84	99.532	328.67	56.116	19.764	126.68	161.31
#1	-.53952	-18.853	1.0612	.54005	-.03232	-.00468	5.6035	-.00028
#2	-.24317	8.1724	.18449	-.21511	-.07484	-.00353	.30813	.00428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.22696	-.16760	.9866	.0233	-2.441	.17347	30.285	.2929
Stddev	.06753	.19884	.0183	.1600	2.191	5.6307	4.795	.3397
%RSD	29.753	118.64	1.854	687.2	89.75	3246.0	15.832	116.0
#1	-.27471	-.30820	.9996	.1364	-3.989	-3.8081	33.676	.5331
#2	-.17921	-.02700	.9737	-.0899	-.8917	4.1550	26.895	.0527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.741	-.04870	.33336	55.902	-.04244	-.04543	-.29830	1.0154
Stddev	1.000	.04550	.03760	17.844	.17104	.33974	.58635	1.1537
%RSD	57.43	93.429	11.279	31.921	402.99	747.76	196.56	113.62
#1	-2.448	-.08087	.30677	68.519	-.16339	.19480	-.71291	.19960
#2	-1.034	-.01653	.35994	43.284	.07850	-.28567	.11631	1.8311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/10/2007 16:11:16 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.34308	-.08210	-.04300	-.33235	-.11317	.55457	-.27557	-.18590
Stddev	.43167	.20019	.01011	2.5384	.00773	2.1282	.25287	.00228
%RSD	125.82	243.84	23.504	763.76	6.8312	383.75	91.761	1.2289
#1	-.03784	.05946	-.03586	-2.1272	-.10770	2.0594	-.45438	-.18428
#2	-.64832	-.22365	-.05015	1.4625	-.11863	-.95027	-.09677	-.18751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47761.	25312.	639000.
Stddev	723.	534.	3228.
%RSD	1.5133	2.1089	.50511
#1	47250.	24935.	636720.
#2	48272.	25690.	641280.

Sample Name: PQL Acquired: 12/10/2007 16:14:39 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.7204	190.34	20.939	15.731	4.9553	1.9627	1028.4	6.1524
Stddev	.2465	5.36	.209	.356	.0251	.0021	10.1	.0463
%RSD	5.2227	2.8165	.99673	2.2629	.50664	.10794	.97768	.75229
#1	4.5460	194.13	21.087	15.983	4.9731	1.9612	1035.5	6.1196
#2	4.8947	186.55	20.791	15.479	4.9376	1.9642	1021.3	6.1851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.1302	4.7948	F 10.02	F 12.91	5.903	152.09	212.15	F 257.7
Stddev	.2024	.0772	.37	.67	2.979	3.62	94.38	3.5
%RSD	3.9458	1.6099	3.681	5.210	50.46	2.3821	44.486	1.359
#1	4.9871	4.7402	10.28	12.44	8.009	154.66	278.89	260.1
#2	5.2733	4.8494	9.762	13.39	3.796	149.53	145.42	255.2
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value			5.000	5.000				5.000
Range			20.00%	20.00%				20.00%

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 276.3	4.9509	4.8527	2598.0	9.8397	9.6595	19.232	21.027
Stddev	3.4	.0133	.2203	47.0	.2469	.5778	.882	1.259
%RSD	1.220	.26782	4.5396	1.8083	2.5088	5.9822	4.5885	5.9860
#1	278.7	4.9415	5.0085	2631.2	10.014	10.068	18.608	21.918
#2	273.9	4.9603	4.6970	2564.7	9.6651	9.2509	19.856	20.137
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	5.000							
Range	20.00%							

Sample Name: PQL Acquired: 12/10/2007 16:14:39 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	55.557	25.767	4.9275	1.1410	24.868	30.709	9.6388	21.990
Stddev	.074	.258	.0024	2.1121	.043	.190	.1478	.086
%RSD	.13246	.99990	.04814	185.11	.17367	.61725	1.5337	.39001
#1	55.505	25.585	4.9258	2.6345	24.837	30.843	9.7433	21.930
#2	55.609	25.949	4.9291	-.35248	24.898	30.574	9.5342	22.051
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48294.	25831.	649240.
Stddev	9.	181.	212.
%RSD	.01781	.70055	.03258
#1	48300.	25704.	649090.
#2	48288.	25959.	649390.

Sample Name: ICSA Acquired: 12/10/2007 16:18:00 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 209.51	497320.	F 103.71	F 915.70	F 496.64	F 490.23
Stddev	.44	2483.	7.09	1.56	3.78	3.08
%RSD	.20940	.49919	6.8409	.17013	.76085	.62914
#1	209.82	499070.	108.72	916.80	499.31	492.41
#2	209.20	495560.	98.689	914.59	493.97	488.05
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
High Limit	3.0000		20.000	15.000	5.0000	2.0000
Low Limit	-3.0000		-20.000	-15.000	-5.0000	-2.0000

Elem	Ca	Cd	Co	Cr	Cu2199	Cu2218
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	450630.	F 916.58	F 454.82	F 478.54	F 328.7	F 756.5
Stddev	3697.	.59	.80	.01	.0	2.4
%RSD	.82041	.06466	.17492	.00284	.0124	.3172
#1	453250.	917.00	455.38	478.55	328.7	758.2
#2	448020.	916.16	454.25	478.53	328.6	754.8
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
High Limit		6.0000	5.0000	5.0000	3.000	3.000
Low Limit		-6.0000	-5.0000	-5.0000	-3.000	-3.000

Elem	Cu3273	Fe	K	Mg2802	Mg2852	Mn
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 712.0	188040.	F 4838.4	F 235600.	F 225700.	F 486.90
Stddev	9.1	740.	61.7	304.	299.	1.74
%RSD	1.276	.39360	1.2762	.1288	.1324	.35654
#1	718.5	188560.	4882.1	235400.	225900.	488.13
#2	705.6	187510.	4794.8	235800.	225500.	485.67
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
High Limit	3.000		250.00	3.000	3.000	5.0000
Low Limit	-3.000		-250.00	-3.000	-3.000	-5.0000

Sample Name: ICSA Acquired: 12/10/2007 16:18:00 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 893.92	F 10196.	F 916.97	F 53.970	F 592.44	F 49.835
Stddev	.22	5.	1.19	2.723	5.30	1.259
%RSD	.02515	.04692	.13015	5.0450	.89392	2.5260
#1	894.08	10193.	917.81	52.045	596.19	48.945
#2	893.76	10199.	916.13	55.895	588.70	50.725
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
High Limit	5.0000	2500.0	10.000	6.0000	20.000	20.000
Low Limit	-5.0000	-2500.0	-10.000	-6.0000	-20.000	-20.000

Elem	Si	Sn	Sr	Te	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1186.7	F 870.64	F 499.05	201.39	F 922.44	F 94.913
Stddev	1.1	2.02	3.45	1.40	1.14	.523
%RSD	.08900	.23184	.69113	.69492	.12382	.55067
#1	1187.4	872.07	501.48	200.40	923.25	95.282
#2	1186.0	869.21	496.61	202.38	921.63	94.543
Check ?	Chk Fail	Chk Fail	Chk Fail	None	Chk Fail	Chk Fail
High Limit	50.000	25.000	5.0000		25.000	30.000
Low Limit	-50.000	-25.000	-5.0000		-25.000	-30.000

Elem	V	Zn
Units	ppb	ppb
Avg	F 489.83	F 1037.9
Stddev	.45	.8
%RSD	.09198	.07481
#1	490.15	1038.5
#2	489.52	1037.4
Check ?	Chk Fail	Chk Fail
High Limit	10.000	20.000
Low Limit	-10.000	-20.000

Sample Name: ICSA Acquired: 12/10/2007 16:18:00 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45358.	25270.	595390.
Stddev	123.	7.	1012.
%RSD	.27125	.02833	.16999
#1	45445.	25265.	594680.
#2	45271.	25275.	596110.

Sample Name: ICSAB Acquired: 12/10/2007 16:21:55 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F -.02719	F 35.222	F 1.3800	F .88724	F -.03159	F .02869	F 33.638
Stddev	.01919	29.995	2.2746	.27049	.01374	.01743	26.111
%RSD	70.575	85.161	164.83	30.487	43.493	60.746	77.623
#1	-.01362	56.432	-.22838	1.0785	-.04131	.01637	52.102
#2	-.04076	14.012	2.9884	.69598	-.02187	.04101	15.175
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	200.00	500000.	100.00	1000.0	500.00	500.00	500000.
Range	-20.000%	-20.000%	-20.000%	-20.000%	-20.000%	-20.000%	-20.000%

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F .00245	F -.23085	F -.16733	F .1447	F -.2338	F -5.155	F 11.992
Stddev	.01633	.10162	.06068	1.101	.3551	3.100	7.829
%RSD	666.71	44.022	36.264	761.1	151.9	60.14	65.283
#1	.01400	-.15899	-.21024	-.6341	.0174	-2.963	17.528
#2	-.00910	-.30271	-.12442	.9235	-.4849	-7.347	6.4562
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	1000.0	500.00	500.00	200.0	200.0	200.0	200000.
Range	-20.000%	-20.000%	-20.000%	-20.00%	-20.00%	-20.00%	-20.000%

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F -128.58	F 17.61	F 17.06	F -.04284	F .40303	F -103.63	F -.21215
Stddev	41.53	13.06	16.23	.00826	.45268	9.44	.14853
%RSD	32.297	74.16	95.14	19.276	112.32	9.1076	70.013
#1	-99.214	26.84	28.53	-.03700	.72312	-110.30	-.10712
#2	-157.94	8.374	5.583	-.04868	.08293	-96.955	-.31717
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	5000.0	250000.	250000.	500.00	1000.0	10000.	1000.0
Range	-20.000%	-20.00%	-20.00%	-20.000%	-20.000%	-20.000%	-20.000%

Sample Name: ICSAB Acquired: 12/10/2007 16:21:55 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F -.94007	F .06758	F -1.9087	F .26613	F .09913	F -.03459	F 1.3752
Stddev	.58685	1.3439	.3804	.65175	.00918	.00356	1.6662
%RSD	62.426	1988.7	19.928	244.90	9.2560	10.285	121.16
#1	-.52510	-.88271	-1.6397	-.19473	.10562	-.03711	2.5534
#2	-1.3550	1.0179	-2.1776	.72699	.09265	-.03208	.19702
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	50.000	600.00	50.000	1000.0	1000.0	500.00	200.00
Range	-20.000%	-20.000%	-20.000%	-20.000%	-20.000%	-20.000%	-20.000%

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	F .06603	F .30863	F -.12317	F -.37428
Stddev	.07328	.85480	.03706	.09283
%RSD	110.97	276.97	30.086	24.802
#1	.01422	-.29581	-.14937	-.30864
#2	.11785	.91306	-.09697	-.43992
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	1000.0	100.00	500.00	1000.0
Range	-20.000%	-20.000%	-20.000%	-20.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48143.	25280.	635450.
Stddev	189.	522.	830.
%RSD	.39328	2.0661	.13068
#1	48009.	24910.	634860.
#2	48277.	25649.	636040.

Sample Name: LR Acquired: 12/10/2007 16:25:20 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1029.0	-62.305	2054.5	5062.8	^F *****	488.12	49.381
Stddev	8.7	13.205	.5	10.7	-----	4.90	2.879
%RSD	.84700	21.193	.02582	.21064	-----	1.0044	5.8309
#1	1022.8	-52.968	2054.9	5070.3	^ -----	484.65	51.417
#2	1035.1	-71.642	2054.2	5055.2	^ -----	491.58	47.345
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None
Value					10000.		
Range					-10.000%		

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2045.5	10143.	10322.	F 11070.	F 9972.	F 10320.	482320.
Stddev	5.3	28.	112.	22.	11.	31.	9310.
%RSD	.26010	.27856	1.0803	.1988	.1077	.3012	1.9302
#1	2049.2	10163.	10243.	11080.	9979.	10340.	475740.
#2	2041.7	10123.	10401.	11050.	9964.	10300.	488910.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass
Value				1000.	1000.	1000.	
Range				10.00%	10.00%	10.00%	

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-191.88	F 159.5	F 190.7	9764.2	10084.	-186.72	7667.6
Stddev	79.10	2.2	1.6	14.9	29.	1.68	27.4
%RSD	41.224	1.404	.8189	.15308	.28466	.89788	.35732
#1	-135.95	161.1	189.6	9753.6	10105.	-187.90	7687.0
#2	-247.82	157.9	191.8	9774.8	10064.	-185.53	7648.3
Check ?	None	Chk Fail	Chk Fail	Chk Pass	Chk Pass	None	Chk Pass
Value		1000.	1000.				
Range		-10.00%	-10.00%				

Sample Name: LR Acquired: 12/10/2007 16:25:20 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	20248.	5128.6	2029.5	10860.	10151.	1971.3	253.31
Stddev	32.	15.1	.3	131.	19.	27.1	21.99
%RSD	.15950	.29427	.01417	1.2060	.18952	1.3742	8.6799
#1	20271.	5139.3	2029.7	10767.	10165.	1952.1	237.76
#2	20226.	5117.9	2029.3	10952.	10138.	1990.4	268.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9915.2	2039.7	10331.	10046.
Stddev	5.6	4.1	82.	25.
%RSD	.05598	.20065	.78916	.24647
#1	9911.3	2042.6	10274.	10063.
#2	9919.2	2036.8	10389.	10028.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46453.	25689.	627660.
Stddev	139.	295.	5100.
%RSD	.29837	1.1467	.81254
#1	46355.	25898.	631270.
#2	46551.	25481.	624060.

Sample Name: CCV Acquired: 12/10/2007 16:32:43 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	509.64	49655.	513.76	513.21	489.57	50.381	97996.
Stddev	2.07	2205.	.76	.37	1.09	.212	4208.
%RSD	.40606	4.4413	.14808	.07265	.22282	.42115	4.2945
#1	508.18	48095.	514.30	513.47	488.80	50.231	95020.
#2	511.10	51214.	513.22	512.94	490.34	50.531	100970.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	498.97	495.56	502.52	F 595.0	F 553.4	F 552.3	48044.
Stddev	1.30	1.41	1.79	4.9	4.3	4.8	2126.
%RSD	.25964	.28542	.35698	.8283	.7741	.8683	4.4257
#1	499.89	496.56	501.25	591.6	550.4	548.9	46541.
#2	498.06	494.56	503.79	598.5	556.5	555.7	49548.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass
Value				500.0	500.0	500.0	
Range				10.00%	10.00%	10.00%	

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23745.	98180.	101900.	496.99	508.10	98295.	494.24
Stddev	982.	3957.	4543.	1.44	1.92	3990.	.57
%RSD	4.1377	4.030	4.456	.28964	.37747	4.0587	.11583
#1	23050.	95380.	98730.	495.98	509.46	95474.	494.65
#2	24439.	101000.	105200.	498.01	506.75	101120.	493.84
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 16:32:43 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	495.92	509.42	507.08	517.87	500.68	495.17	502.72
Stddev	.59	1.00	3.31	2.12	.22	1.58	1.34
%RSD	.11956	.19653	.65190	.41031	.04416	.31965	.26718
#1	496.34	508.72	504.74	516.37	500.83	496.29	501.77
#2	495.50	510.13	509.42	519.38	500.52	494.05	503.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	512.47	495.62	505.96	F 602.89
Stddev	1.69	.43	1.84	.71
%RSD	.32981	.08575	.36268	.11816
#1	511.27	495.92	504.66	603.39
#2	513.67	495.32	507.26	602.38
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46024.	25378.	612090.
Stddev	157.	950.	1199.
%RSD	.34037	3.7436	.19589
#1	45913.	26050.	612940.
#2	46134.	24707.	611240.

Sample Name: CCB Acquired: 12/10/2007 16:36:19 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.49236	-10.548	.66526	1.7376	.03138	.00712	8.7232	-.01720
Stddev	.09204	18.521	1.2966	.1475	.02628	.00943	1.2972	.00452
%RSD	18.694	175.59	194.90	8.4900	83.757	132.37	14.870	26.293
#1	-.42728	2.5487	1.5821	1.6333	.04997	.01379	7.8059	-.02040
#2	-.55744	-23.644	-.25156	1.8419	.01280	.00046	9.6404	-.01400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.04842	-.18858	.1236	.8331	F 5.586	12.703	-26.400	F 3.948
Stddev	.07714	.00841	.8238	.4120	13.85	1.718	72.467	2.479
%RSD	159.31	4.4601	666.2	49.46	247.9	13.523	274.49	62.79
#1	.00612	-.18263	-.4589	.5418	-4.207	13.918	-77.642	5.701
#2	-.10297	-.19453	.7061	1.124	15.38	11.489	24.841	2.195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 4.005	-.00601	.77609	3.9850	.01482	.13251	.73282	.08296
Stddev	3.636	.00075	.17842	27.524	.36147	.02374	.06143	1.5141
%RSD	90.79	12.537	22.990	690.69	2439.7	17.914	8.3834	1825.2
#1	6.576	-.00654	.64993	23.447	.27042	.11572	.68938	-.98770
#2	1.434	-.00548	.90225	-15.477	-.24078	.14930	.77626	1.1536
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 16:36:19 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.29195	.34399	-.02333	-.52759	.01954	.72868	-.20606	-.16473
Stddev	.20754	.21059	.01128	.82940	.08867	.71419	.40272	.07160
%RSD	71.088	61.220	48.364	157.20	453.71	98.011	195.44	43.466
#1	-.14520	.19508	-.01535	-1.1141	-.04315	1.2337	.07871	-.11410
#2	-.43871	.49291	-.03131	.05888	.08224	.22367	-.49083	-.21536
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47782.	25111.	634360.
Stddev	2.	70.	976.
%RSD	.00394	.27996	.15392
#1	47784.	25061.	635050.
#2	47781.	25161.	633670.

Sample Name: IDL 1 Acquired: 12/10/2007 16:39:43 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.15344	-4.1391	.35905	1.0938	.11534	.00294	65.398	.12074
Stddev	.70353	12.317	1.1121	.2229	.02730	.00789	6.323	.00044
%RSD	458.50	297.58	309.72	20.379	23.669	268.35	9.6682	.36439
#1	.34403	4.5702	-.42729	.93615	.09603	-.00264	69.868	.12042
#2	-.65092	-12.848	1.1454	1.2514	.13464	.00852	60.927	.12105

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.13945	-.29338	2.992	2.230	-2.396	8.5464	60.264	3.780
Stddev	.23179	.02087	1.205	.208	4.423	3.0099	65.220	.278
%RSD	166.21	7.1123	40.26	9.343	184.6	35.218	108.22	7.345
#1	.02445	-.27863	2.140	2.082	-5.523	6.4181	106.38	3.976
#2	-.30336	-.30814	3.844	2.377	.7316	10.675	14.146	3.583

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.132	.21497	.40651	125.54	.09926	-.56021	1.0170	-1.3216
Stddev	.693	.02744	.01825	6.04	.31400	.42936	.2657	.1667
%RSD	32.51	12.766	4.4901	4.8106	316.33	76.642	26.132	12.615
#1	2.622	.23438	.39360	121.27	-.12277	-.86382	.82905	-1.4395
#2	1.642	.19557	.41942	129.81	.32129	-.25661	1.2049	-1.2037

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.66343	1.0674	.07927	1.0039	.10808	.41825	-.12028	4.0796
Stddev	.50397	.3005	.00570	2.7771	.02896	.58499	.06378	.0516
%RSD	75.964	28.151	7.1970	276.63	26.795	139.87	53.024	1.2642
#1	.30707	1.2798	.07523	2.9676	.08760	.83191	-.07518	4.0431
#2	1.0198	.85489	.08330	-.95981	.12856	.00460	-.16538	4.1161

Sample Name: IDL 1 Acquired: 12/10/2007 16:39:43 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47786.	25567.	631240.
Stddev	109.	540.	2046.
%RSD	.22848	2.1110	.32405
#1	47709.	25949.	632680.
#2	47863.	25186.	629790.

Sample Name: IDL 2 Acquired: 12/10/2007 16:43:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.14708	-21.697	1.1859	.31291	-.06154	-.00263	-10.538	-.01927
Stddev	.10190	4.815	.4791	.25047	.00090	.00187	5.407	.08584
%RSD	69.283	22.192	40.401	80.045	1.4654	71.046	51.312	445.59
#1	-.07502	-18.293	1.5247	.49002	-.06090	-.00131	-6.7143	-.07997
#2	-.21913	-25.102	.84710	.13580	-.06217	-.00395	-14.361	.04144

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.20611	-.03155	-1.002	.0686	9.516	-1.3483	-73.761	-5.158
Stddev	.15455	.13659	.689	.0096	7.786	2.9223	67.217	.049
%RSD	74.985	432.90	68.76	14.01	81.81	216.74	91.128	.9505
#1	-.09683	.06503	-1.490	.0618	15.02	.71806	-26.232	-5.124
#2	-.31540	-.12814	-.5149	.0754	4.011	-3.4146	-121.29	-5.193

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-6.722	-.02672	.31878	-47.841	-.38487	-.67277	-1.3415	-2.2377
Stddev	2.363	.00199	.21664	11.351	.19662	1.1631	.1633	.3789
%RSD	35.15	7.4289	67.960	23.727	51.086	172.88	12.176	16.933
#1	-5.051	-.02532	.16559	-55.867	-.52390	-1.4952	-1.4570	-1.9697
#2	-8.393	-.02812	.47197	-39.814	-.24584	.14967	-1.2260	-2.5056

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.18501	.21825	-.06027	-1.4566	.02313	-.15999	-.04576	.22617
Stddev	.68021	.34615	.00048	1.2734	.10201	.30239	.01307	.02839
%RSD	367.65	158.60	.79788	87.419	441.09	189.00	28.568	12.554
#1	.66600	-.02652	-.05993	-.55622	-.04900	.05383	-.05500	.24625
#2	-.29597	.46302	-.06062	-2.3571	.09526	-.37381	-.03652	.20610

Sample Name: IDL 2 Acquired: 12/10/2007 16:43:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47923.	25458.	635090.
Stddev	55.	307.	152.
%RSD	.11478	1.2062	.02395
#1	47884.	25675.	635200.
#2	47962.	25241.	634980.

Sample Name: IDL 3 Acquired: 12/10/2007 16:46:30 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.29336	-3.6215	1.6864	-.11694	-.03970	.00383	-8.8349	-.00298
Stddev	.01127	13.959	.0079	.45969	.01217	.00615	3.2335	.01987
%RSD	3.8417	385.45	.46657	393.10	30.660	160.58	36.600	665.92
#1	-.28539	6.2489	1.6809	.20811	-.04831	.00817	-6.5484	.01106
#2	-.30133	-13.492	1.6920	-.44199	-.03110	-.00052	-11.121	-.01703

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.32653	-.03431	-1.071	.0113	1.094	1.4291	-47.075	-3.164
Stddev	.07546	.15550	.740	.0650	4.002	4.4601	30.924	2.723
%RSD	23.111	453.22	69.09	573.8	365.8	312.09	65.692	86.04
#1	-.37989	-.14427	-.5479	-.0347	-1.736	-1.7247	-25.208	-1.239
#2	-.27317	.07565	-1.595	.0573	3.924	4.5829	-68.942	-5.090

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-5.358	-.09650	-.01969	-80.141	-.18137	-.97214	-1.0450	-1.5637
Stddev	3.568	.00216	.09148	4.894	.23360	.11515	.3155	1.0997
%RSD	66.59	2.2410	464.50	6.1072	128.80	11.845	30.196	70.325
#1	-2.835	-.09498	.04499	-76.681	-.01619	-.89071	-.82186	-.78611
#2	-7.880	-.09803	-.08438	-83.602	-.34655	-1.0536	-1.2681	-2.3413

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.36267	.62389	-.05876	-.42493	-.01513	.63093	-.24337	.17286
Stddev	.19570	.45059	.00205	.69226	.07014	.29995	.27296	.01259
%RSD	53.961	72.222	3.4873	162.91	463.56	47.541	112.16	7.2807
#1	-.22429	.94251	-.05731	-.91443	.03447	.41883	-.05036	.18176
#2	-.50105	.30528	-.06021	.06458	-.06473	.84302	-.43639	.16396

Sample Name: IDL 3 Acquired: 12/10/2007 16:46:30 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47931.	26214.	634100.
Stddev	34.	1675.	99.
%RSD	.07155	6.3903	.01559
#1	47906.	27399.	634030.
#2	47955.	25030.	634170.

Sample Name: IDL 4 Acquired: 12/10/2007 16:49:53 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.39255	-33.716	1.1411	-.13385	-.08343	-.00693	-11.670	-.00422
Stddev	.49714	3.173	1.5804	.23369	.00290	.00484	1.639	.09472
%RSD	126.64	9.4106	138.49	174.59	3.4815	69.767	14.044	2242.1
#1	-.04102	-35.960	2.2586	-.29909	-.08549	-.00351	-10.511	-.07120
#2	-.74409	-31.473	.02366	.03139	-.08138	-.01035	-12.829	.06275

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.25678	.12836	-.5361	-.1349	6.975	-6.5370	-98.731	-6.528
Stddev	.16319	.20410	1.292	.0741	1.585	3.0763	4.922	.645
%RSD	63.552	159.01	241.0	54.95	22.72	47.059	4.9854	9.877
#1	-.37217	-.01596	.3776	-.0825	5.855	-8.7123	-102.21	-6.072
#2	-.14139	.27268	-1.450	-.1873	8.096	-4.3618	-95.250	-6.983

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-9.598	-.10327	-.04590	-72.595	-.44453	.40026	-1.2439	-2.1083
Stddev	1.248	.04433	.05402	4.419	.17103	.36203	1.0143	1.1787
%RSD	13.01	42.927	117.69	6.0876	38.475	90.451	81.545	55.909
#1	-10.48	-.07192	-.08410	-69.470	-.56547	.14426	-1.9611	-2.9418
#2	-8.715	-.13461	-.00770	-75.720	-.32359	.65625	-.52664	-1.2748

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.54711	.25853	-.07844	-.23543	-.03007	.44609	-.20622	.12910
Stddev	.14738	.54244	.01624	.55074	.05589	1.3723	.00130	.04467
%RSD	26.938	209.81	20.704	233.93	185.87	307.62	.62974	34.598
#1	.44289	-.12503	-.08992	-.62486	.00945	-.52424	-.20530	.09752
#2	.65132	.64210	-.06695	.15401	-.06959	1.4164	-.20714	.16068

Sample Name: IDL 4 Acquired: 12/10/2007 16:49:53 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47681.	24966.	631370.
Stddev	51.	384.	2787.
%RSD	.10639	1.5377	.44138
#1	47645.	24694.	633340.
#2	47717.	25237.	629400.

Sample Name: IDL 5 Acquired: 12/10/2007 16:53:17 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.54322	-18.258	-.44582	-.43155	-.06963	-.00590	-15.706	-.06188
Stddev	.38936	4.632	1.5878	.19577	.01491	.00025	1.711	.04470
%RSD	71.677	25.369	356.14	45.364	21.419	4.2995	10.892	72.233
#1	-.81854	-14.983	.67689	-.56997	-.08017	-.00572	-16.915	-.03028
#2	-.26790	-21.533	-1.5685	-.29312	-.05908	-.00608	-14.496	-.09349

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.13067	-.16710	-.8697	-.7321	5.963	-4.2029	-97.973	-8.437
Stddev	.01388	.02451	.3065	.0021	6.846	4.5636	31.167	.061
%RSD	10.625	14.666	35.24	.2838	114.8	108.58	31.812	.7202
#1	-.14049	-.14977	-.6530	-.7336	10.80	-.97600	-120.01	-8.480
#2	-.12085	-.18443	-1.086	-.7307	1.122	-7.4299	-75.935	-8.394

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-9.995	-.07174	-.00307	-75.627	-.16675	-.69185	-.36360	.25275
Stddev	.111	.05560	.04706	5.053	.08805	1.7885	1.0891	.03958
%RSD	1.109	77.504	1531.8	6.6808	52.808	258.51	299.52	15.659
#1	-9.917	-.11106	-.03635	-72.054	-.10448	-1.9565	-1.1337	.28074
#2	-10.07	-.03243	.03021	-79.200	-.22901	.57283	.40649	.22476

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.65129	-.11940	-.07368	-.34695	-.11985	-.51825	-.12910	.21581
Stddev	.65415	.11290	.01212	1.8010	.01233	.47826	.00753	.17336
%RSD	100.44	94.556	16.446	519.10	10.287	92.284	5.8309	80.330
#1	-1.1138	-.19922	-.06511	.92655	-.12857	-.18007	-.13442	.09322
#2	-.18874	-.03957	-.08225	-1.6204	-.11113	-.85644	-.12377	.33839

Sample Name: IDL 5 Acquired: 12/10/2007 16:53:17 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47552.	25325.	632070.
Stddev	57.	79.	4824.
%RSD	.12086	.31235	.76313
#1	47512.	25381.	628660.
#2	47593.	25269.	635480.

Sample Name: IDL 6 Acquired: 12/10/2007 16:56:40 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.19956	-18.659	2.3789	-.39550	-.05977	-.00469	-14.704	-.03632
Stddev	.16340	4.526	.3194	.13704	.00442	.00553	2.070	.05032
%RSD	81.878	24.257	13.427	34.649	7.4018	117.81	14.077	138.55
#1	-.08402	-15.459	2.1530	-.29860	-.06290	-.00860	-13.240	-.07190
#2	-.31510	-21.860	2.6047	-.49240	-.05664	-.00078	-16.167	-.00074

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.19039	-.11295	-.1768	-.4802	11.47	-4.1827	-94.944	-7.296
Stddev	.18832	.17267	1.924	.1178	1.78	2.1392	4.215	.190
%RSD	98.913	152.88	1088.	24.53	15.48	51.144	4.4399	2.600
#1	-.32356	-.23504	1.184	-.5635	10.21	-2.6701	-91.963	-7.430
#2	-.05723	.00915	-1.537	-.3969	12.73	-5.6954	-97.925	-7.162

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-9.852	-.04638	-.00809	-83.087	-.17838	-.17432	.49116	.13649
Stddev	1.523	.00965	.07555	19.879	.26552	.46494	.39768	2.4793
%RSD	15.46	20.812	933.35	23.925	148.85	266.72	80.968	1816.4
#1	-8.775	-.05321	-.06152	-69.030	-.36613	.15444	.77237	1.8896
#2	-10.93	-.03956	.04533	-97.143	.00937	-.50309	.20996	-1.6166

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.74675	.09612	-.07269	-.18100	-.08789	.59213	-.20768	.30799
Stddev	.11937	.00968	.00438	.53630	.00894	.77281	.06885	.02624
%RSD	15.985	10.069	6.0303	296.30	10.176	130.51	33.154	8.5209
#1	-.66234	.08927	-.07579	-.56022	-.08157	.04567	-.15899	.32655
#2	-.83115	.10296	-.06959	.19822	-.09422	1.1386	-.25637	.28944

Sample Name: IDL 6 Acquired: 12/10/2007 16:56:40 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47807.	25614.	634660.
Stddev	6.	828.	895.
%RSD	.01331	3.2343	.14098
#1	47811.	26199.	634030.
#2	47802.	25028.	635300.

Sample Name: IDL 7 Acquired: 12/10/2007 17:00:03 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.08181	-20.902	1.8477	-.82403	-.08712	-.00101	-14.747	-.06461
Stddev	.14739	7.819	1.1482	.45000	.02248	.00590	1.941	.10955
%RSD	180.16	37.408	62.142	54.610	25.799	585.89	13.159	169.56
#1	-.18603	-15.373	2.6596	-.50583	-.10301	-.00518	-16.119	.01285
#2	.02241	-26.431	1.0358	-1.1422	-.07123	.00316	-13.375	-.14207

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.18715	-.29752	-1.595	.4334	5.498	-5.9540	-127.65	-8.087
Stddev	.00293	.03807	.077	.4126	1.435	2.5322	21.04	.078
%RSD	1.5680	12.796	4.828	95.19	26.10	42.529	16.487	.9638
#1	-.18923	-.27060	-1.650	.7252	6.512	-4.1635	-142.53	-8.032
#2	-.18508	-.32444	-1.541	.1417	4.483	-7.7445	-112.77	-8.142

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-11.39	-.06871	-.15717	-76.691	-.13166	-1.0658	-.40044	-1.6434
Stddev	.08	.01016	.12179	6.485	.16087	.1981	1.5248	1.0903
%RSD	.7423	14.789	77.489	8.4564	122.18	18.590	380.79	66.346
#1	-11.33	-.07590	-.24329	-81.277	-.24541	-1.2059	.67777	-.87241
#2	-11.45	-.06153	-.07105	-72.105	-.01791	-.92567	-1.4786	-2.4143

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.7496	-.18704	-.06903	-.60604	-.09760	-1.1963	-.00416	.24977
Stddev	.6539	.55494	.00526	.85900	.03178	.0880	.04970	.26286
%RSD	37.374	296.70	7.6143	141.74	32.561	7.3579	1193.5	105.24
#1	1.2872	.20536	-.06531	-1.2134	-.07513	-1.2586	.03098	.06390
#2	2.2120	-.57944	-.07275	.00137	-.12007	-1.1341	-.03931	.43564

Sample Name: IDL 7 Acquired: 12/10/2007 17:00:03 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47803.	25112.	631680.
Stddev	48.	58.	712.
%RSD	.10047	.23073	.11272
#1	47837.	25153.	631180.
#2	47769.	25071.	632190.

Sample Name: CCV Acquired: 12/10/2007 17:13:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	509.70	50191.	503.34	507.39	495.48	50.238	99401.
Stddev	.35	787.	.13	.30	7.57	.119	1893.
%RSD	.06775	1.5675	.02610	.05894	1.5284	.23619	1.9047
#1	509.94	50748.	503.24	507.60	500.84	50.322	100740.
#2	509.45	49635.	503.43	507.18	490.13	50.154	98062.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	493.86	492.46	500.88	F 592.1	F 552.9	546.2	48858.
Stddev	.12	1.10	.24	1.2	3.6	4.9	941.
%RSD	.02492	.22266	.04826	.1963	.6508	.8882	1.9262
#1	493.77	493.23	501.05	591.2	555.4	542.8	49524.
#2	493.94	491.68	500.71	592.9	550.3	549.7	48193.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24128.	99330.	102900.	500.03	503.04	100490.	493.46
Stddev	352.	1236.	1715.	2.50	1.15	2368.	.21
%RSD	1.4602	1.244	1.667	.49927	.22819	2.3564	.04310
#1	24377.	100200.	104100.	501.80	503.85	102170.	493.31
#2	23878.	98450.	101600.	498.27	502.23	98817.	493.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 17:13:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	490.97	503.70	500.43	517.30	496.23	498.10	499.24
Stddev	2.45	.34	.78	.19	.55	3.48	2.29
%RSD	.49840	.06707	.15599	.03618	.10994	.69895	.45874
#1	489.24	503.94	500.98	517.17	495.85	500.56	497.62
#2	492.70	503.46	499.88	517.44	496.62	495.63	500.86
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	511.48	491.99	506.39	F 596.11
Stddev	2.21	1.75	1.65	.23
%RSD	.43304	.35492	.32636	.03862
#1	513.04	490.75	507.56	596.27
#2	509.91	493.22	505.22	595.94
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46188.	24654.	610750.
Stddev	130.	285.	1340.
%RSD	.28152	1.1550	.21940
#1	46280.	24452.	609800.
#2	46096.	24855.	611700.

Sample Name: CCB Acquired: 12/10/2007 17:17:26 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.09657	2.3080	1.1565	.84203	.05187	.00326	17.368	-.00261
Stddev	.31962	3.9165	.2559	.38519	.01559	.00222	1.676	.07377
%RSD	330.97	169.69	22.128	45.745	30.056	68.020	9.6470	2824.2
#1	-.32258	-.46133	1.3374	1.1144	.06289	.00169	18.552	.04955
#2	.12943	5.0774	.97554	.56967	.04084	.00483	16.183	-.05478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.11282	-.02933	-.7553	.1595	-.9938	17.048	15.267	F 11.40
Stddev	.34607	.20129	.5953	.3760	16.46	1.949	70.647	.77
%RSD	306.75	686.40	78.82	235.7	1656.	11.434	462.73	6.764
#1	-.35753	.11301	-1.176	.4253	10.65	18.426	65.222	11.94
#2	.13189	-.17166	-.3344	-.1064	-12.63	15.669	-34.687	10.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit								3.000
Low Limit								-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 10.95	.12364	.18658	43.406	-.02915	-.06485	-.91840	-.09307
Stddev	1.09	.00034	.01434	13.978	.40186	.34518	.03894	1.7074
%RSD	9.960	.27747	7.6852	32.203	1378.4	532.24	4.2397	1834.6
#1	11.73	.12388	.19672	53.290	-.31331	.17923	-.94593	1.1142
#2	10.18	.12340	.17644	33.522	.25500	-.30893	-.89087	-1.3004
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 17:17:26 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.40730	-.24990	.06021	-.30475	.71211	.43806	-.05724	-.18404
Stddev	.38569	.37003	.00597	.36806	.02254	.51818	.19368	.02101
%RSD	94.694	148.07	9.9116	120.78	3.1652	118.29	338.37	11.416
#1	-.68003	-.51155	.06443	-.56501	.72805	.80447	.07971	-.16918
#2	-.13458	.01175	.05599	-.04449	.69617	.07165	-.19419	-.19889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48349.	25026.	639170.
Stddev	626.	108.	6019.
%RSD	1.2951	.43129	.94171
#1	47907.	25102.	634910.
#2	48792.	24949.	643430.

Sample Name: CCV Acquired: 12/10/2007 17:55:14 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	506.02	49835.	510.10	509.31	489.94	49.978	98303.
Stddev	.22	2190.	.87	.46	.60	.057	4358.
%RSD	.04256	4.3946	.16970	.09065	.12253	.11323	4.4334
#1	506.17	48286.	509.49	508.98	490.37	50.018	95222.
#2	505.87	51384.	510.71	509.63	489.52	49.937	101380.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	498.79	497.66	498.25	F 597.9	F 555.7	540.5	48264.
Stddev	.64	1.00	.73	1.6	3.7	6.2	2123.
%RSD	.12767	.20108	.14715	.2719	.6621	1.149	4.3981
#1	499.24	498.37	498.77	596.7	553.1	536.1	46763.
#2	498.34	496.95	497.74	599.0	558.3	544.9	49765.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23899.	98260.	102200.	499.08	507.25	99365.	498.95
Stddev	996.	3282.	4337.	.86	.73	3803.	.51
%RSD	4.1660	3.341	4.245	.17261	.14417	3.8274	.10309
#1	23195.	95940.	99080.	499.69	507.77	96676.	499.31
#2	24603.	100600.	105200.	498.47	506.73	102050.	498.59
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 17:55:14 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	497.73	510.60	506.20	515.69	502.64	495.36	498.55
Stddev	.64	2.57	2.06	.15	.28	.61	2.16
%RSD	.12791	.50371	.40612	.02836	.05603	.12376	.43408
#1	498.18	508.78	504.74	515.79	502.84	495.79	497.02
#2	497.28	512.41	507.65	515.59	502.44	494.92	500.08
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	513.64	494.45	504.50	F 600.29
Stddev	.40	.42	.61	1.03
%RSD	.07731	.08506	.12046	.17127
#1	513.92	494.74	504.93	601.01
#2	513.36	494.15	504.07	599.56
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45507.	24491.	610370.
Stddev	35.	848.	556.
%RSD	.07758	3.4611	.09116
#1	45532.	25090.	609980.
#2	45482.	23891.	610770.

Sample Name: CCB Acquired: 12/10/2007 17:58:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.09039	13.202	.37060	-.30633	.01582	.00289	7.2712	-.00755
Stddev	.01218	7.497	.82663	.17563	.02323	.00580	2.6748	.03321
%RSD	13.471	56.788	223.05	57.334	146.85	200.87	36.786	440.12
#1	-.09900	7.9007	-.21392	-.18214	-.00061	-.00121	5.3798	-.03103
#2	-.08178	18.503	.95511	-.43052	.03225	.00698	9.1625	.01594
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.04116	-.25632	.4005	.2285	F 4.547	3.7291	3.6237	F 5.628
Stddev	.19623	.01416	1.702	.0744	3.684	4.3771	48.166	1.607
%RSD	476.75	5.5230	424.9	32.54	81.02	117.38	1329.2	28.55
#1	.09759	-.26634	1.604	.1759	7.152	6.8242	37.682	6.764
#2	-.17991	-.24631	-.8028	.2811	1.942	.63403	-30.435	4.492
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 3.975	.00862	.04886	25.675	.07995	-.74398	-.76291	.71331
Stddev	.967	.05896	.43798	2.007	.28904	.29482	.97966	.21167
%RSD	24.32	684.37	896.44	7.8154	361.50	39.628	128.41	29.674
#1	4.658	-.03308	.35856	24.256	-.12443	-.53551	-1.4556	.56364
#2	3.291	.05031	-.26084	27.093	.28434	-.95245	-.07018	.86298
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 17:58:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.23413	-.20341	.02530	.95039	.47842	1.3288	.05309	-.22876
Stddev	.15794	.65280	.03443	.90428	.55708	.6535	.27597	.04624
%RSD	67.456	320.92	136.08	95.148	116.44	49.180	519.83	20.215
#1	-.34581	-.66501	.00096	1.5898	.08451	1.7909	-.14205	-.19606
#2	-.12245	.25818	.04964	.31097	.87234	.86670	.24823	-.26146
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47328.	24256.	617990.
Stddev	60.	183.	3337.
%RSD	.12672	.75277	.53993
#1	47370.	24385.	620350.
#2	47285.	24127.	615630.

Sample Name: CCV Acquired: 12/10/2007 18:37:02 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	502.07	48301.	501.62	501.91	489.63	49.557	96041.
Stddev	2.38	2961.	3.61	1.59	.83	.287	5684.
%RSD	.47364	6.1296	.71897	.31673	.17004	.57918	5.9186
#1	500.39	46208.	504.17	503.04	489.04	49.354	92021.
#2	503.75	50395.	499.07	500.79	490.22	49.760	100060.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	493.19	492.52	492.78	F 590.1	549.5	528.6	47204.
Stddev	1.52	1.41	2.45	4.1	5.5	7.0	2938.
%RSD	.30887	.28628	.49802	.6887	1.007	1.319	6.2239
#1	494.27	493.52	491.04	587.2	545.6	523.7	45127.
#2	492.11	491.52	494.51	592.9	553.5	533.6	49282.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				500.0			
Range				10.00%			

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23226.	96500.	98970.	498.22	501.24	98697.	492.58
Stddev	1340.	5439.	5871.	1.95	1.06	5759.	.98
%RSD	5.7707	5.636	5.932	.39094	.21237	5.8352	.19836
#1	22279.	92660.	94820.	496.84	502.00	94625.	493.27
#2	24174.	100300.	103100.	499.60	500.49	102770.	491.89
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 18:37:02 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	491.98	503.59	497.51	510.26	496.70	496.58	494.67
Stddev	2.83	2.31	1.62	1.46	1.00	3.40	3.82
%RSD	.57618	.45786	.32497	.28702	.20190	.68457	.77215
#1	493.99	505.22	496.37	509.23	497.41	494.18	497.37
#2	489.98	501.96	498.66	511.30	495.99	498.99	491.97
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	504.21	490.80	502.42	F 592.53
Stddev	2.60	3.87	1.95	2.69
%RSD	.51503	.78794	.38733	.45348
#1	502.37	493.53	501.04	594.44
#2	506.04	488.06	503.80	590.63
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45741.	24692.	610590.
Stddev	36.	1235.	2845.
%RSD	.07778	5.0031	.46600
#1	45716.	25565.	612600.
#2	45767.	23818.	608580.

Sample Name: CCB Acquired: 12/10/2007 18:40:39 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.18968	-12.214	-.13942	-.46282	.06495	-.00118	14.823	-.05718
Stddev	.12307	2.134	.27735	.33458	.04908	.00327	.231	.06085
%RSD	64.882	17.471	198.92	72.292	75.572	277.45	1.5610	106.42
#1	-.27670	-10.705	.05669	-.69940	.03024	.00114	14.659	-.01415
#2	-.10266	-13.723	-.33554	-.22623	.09965	-.00350	14.987	-.10020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.01861	-.18899	-.5145	.2281	F -6.956	14.982	-9.4337	F 8.814
Stddev	.31769	.00073	.8923	.2153	1.948	1.426	2.0703	1.398
%RSD	1706.7	.38850	173.4	94.38	28.01	9.5193	21.946	15.86
#1	-.24326	-.18951	-1.145	.0759	-5.578	15.991	-7.9698	7.825
#2	.20603	-.18847	.1164	.3804	-8.333	13.974	-10.898	9.802
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 6.258	.50553	.19905	1.8376	-.29263	.01217	.49389	.47710
Stddev	.716	.33474	.14143	19.326	.07394	1.5311	1.3560	.38521
%RSD	11.45	66.216	71.053	1051.7	25.266	12583.	274.55	80.739
#1	5.751	.26883	.29906	-11.828	-.34491	1.0948	1.4527	.20472
#2	6.764	.74223	.09905	15.503	-.24035	-1.0705	-.46494	.74948
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 18:40:39 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.32846	.24825	.05608	-.24644	1.4011	.53731	.07091	-.08121
Stddev	.31733	.25935	.03684	1.6718	.7007	2.4061	.00977	.04632
%RSD	96.610	104.47	65.702	678.36	50.008	447.81	13.776	57.033
#1	-.10408	.43164	.03003	-1.4286	.90568	-1.1641	.06401	-.04846
#2	-.55285	.06486	.08213	.93569	1.8966	2.2387	.07782	-.11396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46913.	24218.	624110.
Stddev	116.	210.	2689.
%RSD	.24689	.86657	.43088
#1	46995.	24367.	622210.
#2	46831.	24070.	626020.

Sample Name: CCV Acquired: 12/10/2007 19:18:26 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	493.88	48052.	512.73	508.14	489.23	49.065	97049.
Stddev	5.09	2052.	4.54	.11	2.39	.398	3799.
%RSD	1.0297	4.2694	.88472	.02161	.48951	.81131	3.9147
#1	490.28	46602.	509.52	508.06	487.53	48.784	94363.
#2	497.47	49503.	515.94	508.21	490.92	49.347	99735.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	503.20	496.55	490.89	F 588.8	F 557.0	F 553.1	47922.
Stddev	.02	.20	5.09	3.9	5.5	14.7	1942.
%RSD	.00310	.04095	1.0372	.6622	.9911	2.665	4.0516
#1	503.18	496.41	487.29	586.0	553.1	542.7	46549.
#2	503.21	496.70	494.49	591.5	560.9	563.5	49295.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass
Value				500.0	500.0	500.0	
Range				10.00%	10.00%	10.00%	

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23380.	93530.	97860.	486.15	508.85	98918.	488.90
Stddev	953.	3106.	4061.	3.49	.27	3774.	.11
%RSD	4.0743	3.321	4.150	.71734	.05253	3.8157	.02191
#1	22707.	91330.	94990.	483.68	508.66	96249.	488.82
#2	24054.	95720.	100700.	488.61	509.04	101590.	488.98
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 19:18:26 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	501.87	508.48	511.38	502.39	503.59	486.73	503.34
Stddev	.80	.84	1.84	3.72	1.45	1.19	.31
%RSD	.16000	.16467	.36013	.73970	.28808	.24355	.06094
#1	501.31	507.89	510.08	499.76	502.56	485.89	503.12
#2	502.44	509.07	512.69	505.01	504.62	487.57	503.56
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	486.68	501.95	496.06	F 609.56
Stddev	4.43	.54	3.96	.38
%RSD	.91108	.10736	.79864	.06275
#1	483.54	502.33	493.26	609.83
#2	489.81	501.57	498.86	609.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45899.	25269.	625220.
Stddev	15.	860.	2599.
%RSD	.03291	3.4029	.41561
#1	45888.	25877.	627060.
#2	45910.	24661.	623390.

Sample Name: CCB Acquired: 12/10/2007 19:22:02 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.06088	-13.008	.05596	.04828	.04969	.01178	23.717	.08065
Stddev	.15854	42.269	1.3785	.88705	.01613	.00167	4.841	.02635
%RSD	260.43	324.95	2463.4	1837.2	32.453	14.138	20.412	32.673
#1	.17298	-42.897	1.0307	.67552	.03829	.01296	27.140	.09929
#2	-.05123	16.881	-.91882	-.57896	.06110	.01060	20.294	.06202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.09620	-.06970	.3545	.1557	-2.897	24.680	38.625	F 17.46
Stddev	.03191	.05892	.9286	1.025	12.49	.541	57.869	.87
%RSD	33.175	84.533	262.0	658.5	431.1	2.1932	149.82	4.970
#1	-.11876	-.11137	-.3021	.8805	-11.73	25.063	79.544	18.07
#2	-.07363	-.02804	1.011	-.5692	5.934	24.297	-2.2951	16.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit								3.000
Low Limit								-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 16.47	.19581	.10078	14.460	-.06247	-.72666	-2.1539	-.70502
Stddev	1.08	.01639	.11935	1.381	.43332	.18134	1.3191	.15305
%RSD	6.579	8.3727	118.43	9.5532	693.60	24.955	61.244	21.709
#1	17.24	.20741	.01639	13.483	-.36888	-.59843	-1.2211	-.59679
#2	15.71	.18422	.18518	15.436	.24393	-.85488	-3.0867	-.81324
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 19:22:02 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.06653	-.32129	.07123	.28338	.91305	-.09949	.26205	-.10516
Stddev	.08796	.20428	.02511	.41032	.03445	.93025	.23800	.06445
%RSD	132.21	63.582	35.257	144.79	3.7734	934.99	90.823	61.283
#1	.12872	-.17684	.05347	-.00676	.88868	.55829	.09376	-.05959
#2	.00433	-.46574	.08899	.57352	.93741	-.75728	.43034	-.15074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46884.	24442.	632900.
Stddev	8.	63.	4079.
%RSD	.01632	.25633	.64441
#1	46879.	24486.	630020.
#2	46890.	24398.	635780.

Sample Name: CCV Acquired: 12/10/2007 19:59:40 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	500.94	50406.	510.51	508.43	489.18	49.663	99862.
Stddev	4.69	292.	1.16	.77	6.83	.444	595.
%RSD	.93716	.57856	.22704	.15155	1.3968	.89308	.59552
#1	497.62	50200.	509.69	508.98	484.35	49.349	99441.
#2	504.26	50612.	511.33	507.89	494.02	49.976	100280.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	499.58	495.20	497.33	F 592.9	F 557.3	532.2	49134.
Stddev	.55	.43	4.38	1.2	1.1	3.4	297.
%RSD	.10932	.08634	.88056	.1948	.1951	.6311	.60497
#1	499.97	495.51	494.24	593.8	556.5	534.6	48923.
#2	499.20	494.90	500.43	592.1	558.0	529.8	49344.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24187.	97790.	102600.	491.88	507.41	101650.	491.19
Stddev	92.	716.	495.	4.43	.79	721.	1.17
%RSD	.38179	.7323	.4820	.90006	.15592	.70950	.23726
#1	24121.	97280.	102300.	488.75	507.97	101140.	492.01
#2	24252.	98290.	103000.	495.01	506.85	102160.	490.36
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 19:59:40 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	495.06	508.26	508.57	508.86	502.75	495.83	502.33
Stddev	.03	2.10	2.31	4.75	.26	6.14	2.15
%RSD	.00576	.41333	.45336	.93325	.05144	1.2378	.42814
#1	495.04	509.74	510.20	505.51	502.57	491.49	500.81
#2	495.08	506.77	506.94	512.22	502.93	500.17	503.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	499.96	499.27	500.86	F 604.11
Stddev	4.39	.95	4.09	.48
%RSD	.87838	.19049	.81726	.07976
#1	496.85	498.60	497.96	604.45
#2	503.06	499.94	503.75	603.77
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45893.	24059.	616840.
Stddev	98.	164.	5591.
%RSD	.21281	.68236	.90645
#1	45824.	24176.	620800.
#2	45962.	23943.	612890.

Sample Name: CCB Acquired: 12/10/2007 20:03:16 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.11303	8.1699	.99517	-.57948	.10305	.01897	26.282	.09314
Stddev	.07885	8.3804	.84099	.05680	.02918	.00190	10.540	.02596
%RSD	69.757	102.58	84.507	9.8011	28.314	10.004	40.103	27.870
#1	-.16878	14.096	1.5898	-.61964	.08242	.01762	18.829	.11149
#2	-.05728	2.2440	.40051	-.53932	.12368	.02031	33.734	.07478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.04531	-.07841	-.9515	.3585	-.2961	38.620	4.6957	F 19.86
Stddev	.08702	.18483	.5674	.8809	7.127	.034	40.605	.22
%RSD	192.03	235.73	59.63	245.7	2407.	.08696	864.72	1.131
#1	-.10684	-.20910	-.5503	.9814	-5.336	38.596	33.408	19.70
#2	.01622	.05229	-1.353	-.2644	4.744	38.644	-24.016	20.02
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit								3.000
Low Limit								-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 19.20	.23199	.05594	26.006	-.09019	-1.2432	-1.4743	.70295
Stddev	1.19	.02235	.05057	3.022	.02442	1.0053	.5595	2.9430
%RSD	6.210	9.6337	90.387	11.619	27.072	80.869	37.954	418.67
#1	20.04	.21618	.09170	23.869	-.07293	-1.9540	-1.8700	-1.3781
#2	18.36	.24779	.02019	28.143	-.10746	-.53228	-1.0786	2.7840
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 20:03:16 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.19207	-.07281	.09253	.44645	1.7525	.59089	.20953	-.07025
Stddev	1.1087	.33445	.00294	.52731	.1613	.62876	.19450	.01092
%RSD	577.24	459.37	3.1783	118.11	9.2032	106.41	92.829	15.541
#1	-.97604	.16369	.09045	.81932	1.6384	.14629	.07199	-.07797
#2	.59190	-.30930	.09461	.07359	1.8665	1.0355	.34706	-.06253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47336.	25389.	641140.
Stddev	54.	878.	3530.
%RSD	.11469	3.4563	.55057
#1	47297.	26009.	638640.
#2	47374.	24768.	643640.

Sample Name: CCV Acquired: 12/10/2007 20:41:08 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	501.01	50795.	512.53	508.80	485.48	49.772	100500.
Stddev	2.45	14.	2.93	.39	3.11	.225	10.
%RSD	.48847	.02751	.57227	.07656	.63968	.45157	.00956
#1	499.28	50805.	510.46	508.52	483.29	49.613	100490.
#2	502.74	50786.	514.61	509.07	487.68	49.931	100510.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	500.92	495.19	500.13	F 593.3	F 558.0	537.3	49391.
Stddev	1.66	1.45	.73	.3	.6	1.3	55.
%RSD	.33063	.29189	.14508	.0481	.1075	.2369	.11192
#1	499.75	494.17	499.61	593.5	558.4	536.4	49352.
#2	502.09	496.22	500.64	593.1	557.5	538.2	49430.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24438.	98010.	103200.	489.84	509.73	102080.	491.22
Stddev	166.	122.	43.	2.23	2.05	89.	.59
%RSD	.68126	.1246	.0420	.45469	.40126	.08705	.12078
#1	24320.	98100.	103200.	488.26	508.29	102010.	490.81
#2	24556.	97920.	103100.	491.41	511.18	102140.	491.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 20:41:08 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	497.36	504.21	505.01	509.34	503.72	489.65	498.66
Stddev	2.92	1.12	1.13	.58	1.70	.68	2.33
%RSD	.58616	.22157	.22327	.11400	.33670	.13887	.46630
#1	495.29	503.42	504.21	508.93	502.52	490.14	497.02
#2	499.42	505.00	505.81	509.75	504.92	489.17	500.31
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	499.25	499.38	500.43	F 606.41
Stddev	2.33	3.23	1.74	2.74
%RSD	.46669	.64675	.34702	.45155
#1	497.60	497.10	499.20	604.47
#2	500.90	501.66	501.66	608.35
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46398.	23933.	625600.
Stddev	66.	82.	3411.
%RSD	.14119	.34463	.54515
#1	46444.	23874.	628010.
#2	46352.	23991.	623190.

Sample Name: CCB Acquired: 12/10/2007 20:44:45 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.00859	12.819	.43058	-.90495	.02975	.00138	25.399	.06672
Stddev	.51821	3.378	1.3760	.13971	.02428	.00051	4.743	.13517
%RSD	6033.2	26.350	319.58	15.439	81.622	36.898	18.674	202.61
#1	.35784	10.430	1.4036	-1.0037	.04692	.00174	22.045	-.02886
#2	-.37502	15.207	-.54242	-.80616	.01258	.00102	28.753	.16230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.13234	-.17744	.5445	.3445	F 3.887	25.417	-21.241	F 21.60
Stddev	.12397	.15714	.1325	1.062	.003	3.752	3.488	3.39
%RSD	93.672	88.560	24.33	308.2	.0780	14.763	16.420	15.71
#1	-.22000	-.28856	.6381	1.095	3.889	28.070	-23.707	24.00
#2	-.04468	-.06633	.4508	-.4063	3.884	22.763	-18.774	19.20
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 25.07	.19752	-.08098	37.893	-.26470	-.66173	-.34289	-2.8903
Stddev	.94	.04932	.02715	1.879	.13898	1.7269	2.1467	.8232
%RSD	3.749	24.972	33.533	4.9580	52.503	260.97	626.06	28.481
#1	25.74	.23239	-.10018	36.564	-.16643	-1.8828	1.1750	-2.3082
#2	24.41	.16264	-.06178	39.221	-.36297	.55939	-1.8608	-3.4724
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 20:44:45 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.57723	-.18861	.04858	.20461	.81234	-.19639	.09634	-.07834
Stddev	.05856	.04768	.01187	.74462	.07363	.44839	.13090	.02828
%RSD	10.145	25.278	24.438	363.93	9.0640	228.31	135.87	36.097
#1	-.61864	-.15489	.05697	.73113	.76027	.12067	.18890	-.05834
#2	-.53582	-.22232	.04018	-.32192	.86440	-.51345	.00378	-.09833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48140.	24316.	644310.
Stddev	231.	178.	350.
%RSD	.47932	.73104	.05425
#1	47976.	24442.	644070.
#2	48303.	24191.	644560.

Sample Name: CCV Acquired: 12/10/2007 21:22:32 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**503.96**	**49517.**	**516.28**	**512.29**	**490.83**	**49.973**	**98080.**
Stddev	.43	1765.	1.17	.36	2.43	.024	3545.
%RSD	.08505	3.5650	.22720	.06976	.49444	.04747	3.6139
#1	503.66	48269.	515.45	512.04	492.55	49.990	95574.
#2	504.26	50765.	517.11	512.54	489.12	49.956	100590.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**504.57**	**497.43**	**503.11**	F **590.0**	F **557.4**	**538.1**	**48240.**
Stddev	.63	.62	.01	1.9	5.3	1.5	1840.
%RSD	.12576	.12451	.00146	.3166	.9544	.2858	3.8132
#1	504.12	497.00	503.12	588.6	553.6	537.0	46939.
#2	505.02	497.87	503.11	591.3	561.1	539.2	49541.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24051.**	**95240.**	**100800.**	**488.99**	**512.39**	**99771.**	**491.43**
Stddev	769.	3166.	3545.	.79	.79	4121.	1.09
%RSD	3.1993	3.324	3.518	.16175	.15477	4.1300	.22090
#1	23507.	93000.	98260.	489.55	511.83	96858.	490.66
#2	24595.	97480.	103300.	488.43	512.95	102680.	492.20
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 21:22:32 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	503.46	509.33	507.98	509.47	506.57	492.58	503.52
Stddev	.96	3.46	.79	1.33	.21	.72	.99
%RSD	.19046	.67958	.15582	.26129	.04156	.14531	.19618
#1	504.14	506.89	507.42	510.41	506.42	492.08	504.22
#2	502.79	511.78	508.54	508.53	506.72	493.09	502.82
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	498.45	503.69	501.37	F 611.70
Stddev	.43	1.73	.05	.23
%RSD	.08600	.34292	.00926	.03809
#1	498.76	504.91	501.40	611.54
#2	498.15	502.47	501.34	611.87
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45555.	24322.	616620.
Stddev	12.	820.	1972.
%RSD	.02626	3.3702	.31979
#1	45564.	24902.	615230.
#2	45547.	23743.	618020.

Sample Name: CCB Acquired: 12/10/2007 21:26:09 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	sF 8.7994	k -4.7505	s -5.0648	sF -34.755	sF -29.444	sF 16.101
Stddev	13.050	4.0820	6.6422	47.899	41.525	22.729
%RSD	148.31	85.927	131.14	137.82	141.03	141.17
#1	k -.42833	k -7.6369	s -.36808	s -.8851	k -.0815	k .02867
#2	s 18.027	k -1.8641	s -9.7615	s -68.625	s -58.807	s 32.173
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit	3.0000			15.000	15.000	2.0000
Low Limit	-3.0000			-15.000	-15.000	-2.0000

Elem	Ca	Cd	Co	Cr	Cu2199	Cu2218
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	16.996	s .12177	s 3.8454	s 1.3185	sF -45.67	sF -31.00
Stddev	.061	.25916	5.8204	2.1895	64.76	45.39
%RSD	.35721	212.84	151.36	166.06	141.8	146.4
#1	16.953	s -.06149	s -.27030	k -.22971	s .1209	s 1.089
#2	17.039	s .30502	s 7.9611	s 2.8668	s -91.46	s -63.10
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit					3.000	3.000
Low Limit					-3.000	-3.000

Elem	Cu3273	Fe	K	Mg2802	Mg2852	Mn
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	sF -52.42	k 23.865	k 7.9512	kF 10.28	kF 7.967	s -4.2511
Stddev	72.72	4.056	66.232	1.12	.600	6.1474
%RSD	138.7	16.997	832.99	10.92	7.531	144.61
#1	s -1.000	k 26.733	k -38.882	k 11.08	k 8.391	k .09581
#2	s -103.8	k 20.997	k 54.785	k 9.489	k 7.542	s -8.5979
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit	3.000			3.000	3.000	
Low Limit	-3.000			-3.000	-3.000	

Sample Name: CCB Acquired: 12/10/2007 21:26:09 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -3.1969	k 6.7358	s -1.7553	sF 57.970	sF -28.989	sF -8.8528
Stddev	4.0559	16.255	2.4098	85.298	38.070	16.352
%RSD	126.87	241.32	137.29	147.14	131.32	184.71
#1	s -.32897	k -4.7579	s -.05131	s -2.3448	s -2.0702	s 2.7100
#2	s -6.0648	k 18.230	s -3.4593	s 118.28	s -55.909	s -20.416
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit				3.0000	20.000	5.0000
Low Limit				-3.0000	-20.000	-5.0000

Elem	Si	Sn	Sr	Te	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	sF -451.05	s -5.3352	sF -23.018	sF -43.694	sF -62.287	sF 10.508
Stddev	635.24	6.6460	32.438	61.245	89.039	15.544
%RSD	140.84	124.57	140.92	140.17	142.95	147.92
#1	k -1.864	s -.63578	-.0811	s -.3870	k .6734	s -.48318
#2	s -900.23	s -10.035	s -45.955	s -87.000	s -125.25	s 21.499
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
High Limit	10.000		5.0000	10.000	20.000	10.000
Low Limit	-10.000		-5.0000	-10.000	-20.000	-10.000

Elem	V	Zn
Units	ppb	ppb
Avg	sF -20.229	s -.25991
Stddev	28.352	1.2045
%RSD	140.16	463.43
#1	k -.1811	s -1.1116
#2	s -40.277	s .59178
Check ?	Chk Fail	Chk Pass
High Limit	10.000	
Low Limit	-10.000	

Sample Name: CCB Acquired: 12/10/2007 21:26:09 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	^ *****	24264.	^ *****
Stddev	-----	74.	-----
%RSD	-----	.30595	-----
#1	^ -----	24316.	639520.
#2	^ -----	24211.	^ -----

Sample Name: ICSA Acquired: 12/10/2007 21:57:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.04397	498440.	8.8474	5.5479	1.9116	-.04200	453130.
Stddev	.11700	489.	2.5553	.8967	.0211	.00010	1518.
%RSD	266.12	.09807	28.882	16.164	1.1031	.23394	.33502
#1	-.12670	498100.	7.0405	4.9138	1.8967	-.04207	452060.
#2	.03877	498790.	10.654	6.1820	1.9265	-.04193	454200.

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.54363	-.03258	.29221	-179.7	285.1	198.1	189950.
Stddev	.03502	.12102	.12796	1.4	1.0	20.0	13.
%RSD	6.4417	371.46	43.789	.7645	.3475	10.09	.00695
#1	.51887	-.11815	.20173	-180.6	285.8	183.9	189960.
#2	.56839	.05299	.38269	-178.7	284.4	212.2	189940.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-199.90	217900.	218900.	1.4911	.50153	-224.55	-2.8940
Stddev	38.10	2141.	802.	.1211	.37023	.76	.0567
%RSD	19.060	.9822	.3666	8.1181	73.821	.33823	1.9604
#1	-172.96	216400.	218300.	1.5767	.76332	-224.01	-2.9341
#2	-226.84	219400.	219400.	1.4055	.23974	-225.08	-2.8539

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	12.633	-.95370	.44388	.30305	-.43373	.44077	15.313
Stddev	.467	2.9428	1.7130	.43052	.27429	.00156	.429
%RSD	3.6934	308.56	385.92	142.07	63.240	.35291	2.7995
#1	12.963	-3.0346	1.6551	-.00138	-.23978	.43967	15.010
#2	12.303	1.1272	-.76739	.60747	-.62768	.44187	15.616

Sample Name: ICSA Acquired: 12/10/2007 21:57:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	5.3592	4.2155	-1.0500	.39593
Stddev	.0760	2.1647	.0138	.03783
%RSD	1.4175	51.351	1.3138	9.5548
#1	5.4129	2.6848	-1.0403	.36918
#2	5.3055	5.7461	-1.0598	.42268

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	44453.	23725.	591180.
Stddev	83.	100.	1854.
%RSD	.18560	.42317	.31358
#1	44511.	23796.	592500.
#2	44394.	23654.	589870.

Sample Name: ICSAB Acquired: 12/10/2007 22:00:47 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**208.87**	**499110.**	**111.92**	**928.54**	**496.10**	**495.80**	**453300.**
Stddev	3.93	4521.	6.12	.63	15.11	6.80	5324.
%RSD	1.8828	.90584	5.4697	.06771	3.0461	1.3717	1.1745
#1	211.65	495910.	107.59	928.10	506.78	500.61	449540.
#2	206.09	502310.	116.25	928.98	485.41	490.99	457070.

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**949.45**	**461.08**	**491.46**	**333.0**	**771.5**	**682.3**	**188230.**
Stddev	.56	.06	9.15	2.9	3.1	3.9	1001.
%RSD	.05929	.01230	1.8623	.8775	.4038	.5771	.53189
#1	949.84	461.04	497.93	335.0	769.3	679.5	187520.
#2	949.05	461.12	484.99	330.9	773.7	685.1	188940.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**4831.0**	**227900.**	**227000.**	**480.95**	**919.54**	**10192.**	**914.52**
Stddev	65.3	2020.	433.	9.89	.19	10.	.01
%RSD	1.3524	.8864	.1906	2.0569	.02116	.10022	.00125
#1	4784.8	226500.	226600.	487.94	919.68	10185.	914.51
#2	4877.2	229400.	227300.	473.95	919.41	10199.	914.53

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**59.790**	**591.15**	**50.913**	**1178.1**	**896.09**	**495.84**	**206.24**
Stddev	1.740	1.53	.726	24.6	.74	10.14	4.75
%RSD	2.9101	.25964	1.4266	2.0886	.08305	2.0445	2.3040
#1	58.560	592.23	50.399	1195.5	895.56	503.00	209.60
#2	61.020	590.06	51.426	1160.7	896.61	488.67	202.88

Sample Name: ICSAB Acquired: 12/10/2007 22:00:47 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	900.88	99.007	491.41	1081.0
Stddev	15.93	2.079	8.98	.4
%RSD	1.7681	2.1000	1.8275	.03710
#1	912.14	100.48	497.76	1081.3
#2	889.61	97.537	485.06	1080.7

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	44377.	23471.	588420.
Stddev	10.	115.	9988.
%RSD	.02231	.49069	1.6974
#1	44384.	23553.	581360.
#2	44370.	23390.	595490.

Sample Name: CCV Acquired: 12/10/2007 22:04:42 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**503.87**	**51512.**	**518.84**	**513.92**	**488.91**	**50.054**	**101740.**
Stddev	.11	897.	1.45	1.81	1.62	.009	1842.
%RSD	.02117	1.7404	.27923	.35299	.33172	.01830	1.8109
#1	503.94	52146.	519.86	512.64	490.05	50.047	103040.
#2	503.79	50878.	517.81	515.21	487.76	50.060	100430.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**506.19**	**496.05**	**504.30**	F **592.7**	F **561.6**	**546.1**	**50044.**
Stddev	1.51	1.44	.13	1.1	.1	5.5	895.
%RSD	.29808	.29094	.02636	.1893	.0106	1.001	1.7885
#1	505.12	495.03	504.20	593.5	561.6	542.3	50677.
#2	507.26	497.07	504.39	591.9	561.7	550.0	49411.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24853.**	**98730.**	**104000.**	**487.94**	**513.31**	**103990.**	**488.65**
Stddev	363.	1767.	1875.	.33	2.30	1674.	1.41
%RSD	1.4595	1.790	1.802	.06849	.44717	1.6092	.28765
#1	25110.	99980.	105400.	488.17	511.69	105180.	487.66
#2	24597.	97480.	102700.	487.70	514.93	102810.	489.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 22:04:42 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	502.09	508.17	508.93	509.70	508.65	490.14	508.36
Stddev	.33	.82	2.25	.97	1.18	2.43	.42
%RSD	.06628	.16062	.44147	.19084	.23220	.49600	.08300
#1	501.86	507.60	507.35	509.02	507.81	491.86	508.06
#2	502.33	508.75	510.52	510.39	509.48	488.42	508.66
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	496.94	505.93	501.30	F 614.86
Stddev	.37	3.60	.25	1.71
%RSD	.07407	.71078	.05018	.27733
#1	496.68	503.39	501.12	613.66
#2	497.20	508.47	501.48	616.07
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45758.	23384.	618140.
Stddev	65.	316.	798.
%RSD	.14204	1.3527	.12906
#1	45804.	23160.	617580.
#2	45713.	23607.	618700.

Sample Name: CCB Acquired: 12/10/2007 22:08:19 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	k .11058	s 47.340	s .26348	s .04070	k -.21049	k -.20757	s 60.146
Stddev	.08487	13.629	.48474	.05644	.26307	.13601	16.381
%RSD	76.751	28.790	183.97	138.68	124.98	65.526	27.236
#1	k .05057	s 37.702	s .60625	s .08061	k -.02446	k -.30375	s 48.562
#2	k .17059	s 56.977	s -.07928	s .00079	k -.39651	k -.11139	s 71.729
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -.09026	s -.17422	k -.25029	s -1.583	s .1794	s .2803	s 12.799
Stddev	.10298	.02403	.18350	2.266	.9196	1.969	7.243
%RSD	114.09	13.791	73.313	143.2	512.7	702.5	56.589
#1	s -.01745	s -.19120	k -.12054	s -3.185	s -.4709	s -1.112	s 7.6775
#2	s -.16308	s -.15723	k -.38005	s .0197	s .8296	s 1.673	s 17.920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -171.93	sF 10.02	sF 10.15	k -.08856	s -.07261	s -164.04	s -.33389
Stddev	106.07	4.30	5.66	.03098	.18265	16.63	.27630
%RSD	61.693	42.97	55.71	34.982	251.56	10.136	82.751
#1	s -96.930	s 6.975	s 6.152	k -.11046	s -.20176	s -152.29	s -.13852
#2	s -246.94	s 13.06	s 14.15	k -.06665	s .05655	s -175.80	s -.52926
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		3.000	3.000				
Low Limit		-3.000	-3.000				

Sample Name: CCB Acquired: 12/10/2007 22:08:19 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -1.3302	s -1.1414	s -.74524	k -2.3049	s .06496	k -.08850	s .31643
Stddev	.2653	.4214	.19830	2.6332	.25194	.20885	.85672
%RSD	19.947	36.920	26.609	114.24	387.87	236.00	270.75
#1	s -1.1426	s -1.4394	s -.88546	k -.44298	s -.11319	k .05918	s -.28936
#2	s -1.5178	s -.84344	s -.60502	k -4.1669	s .24310	k -.23618	s .92222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	k .34957	s -1.0589	k -.39988	s -1.1935
Stddev	.13706	.2151	.12304	.0017
%RSD	39.208	20.313	30.769	.14034
#1	k .44649	s -1.2110	k -.31288	s -1.1947
#2	k .25266	s -.90677	k -.48688	s -1.1924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	^ *****	^ *****	1024800.
Stddev	-----	-----	466220.
%RSD	-----	-----	45.493
#1	^ -----	^ -----	695150.
#2	^ -----	^ -----	1354500.

Sample Name: CCV Acquired: 12/10/2007 22:46:12 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	515.07	50948.	526.94	524.86	497.72	50.925	100430.
Stddev	.99	1964.	1.24	.18	2.02	.150	3410.
%RSD	.19178	3.8538	.23603	.03357	.40524	.29526	3.3958
#1	514.37	49560.	526.06	524.98	499.15	50.819	98016.
#2	515.77	52337.	527.82	524.73	496.29	51.031	102840.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	516.87	507.80	514.81	F 604.3	F 571.1	541.8	49254.
Stddev	1.38	.61	2.64	4.9	3.3	1.4	1665.
%RSD	.26786	.11941	.51251	.8176	.5836	.2591	3.3801
#1	517.84	508.23	512.95	600.8	568.7	540.8	48077.
#2	515.89	507.37	516.68	607.8	573.4	542.8	50431.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24836.	96760.	102700.	494.49	524.92	102260.	498.58
Stddev	827.	2441.	3655.	.93	1.16	3163.	1.71
%RSD	3.3306	2.523	3.560	.18843	.22040	3.0928	.34222
#1	24251.	95040.	100100.	493.83	525.73	100030.	499.79
#2	25421.	98490.	105300.	495.15	524.10	104500.	497.38
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 22:46:12 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	515.53	520.43	524.58	521.82	517.61	497.51	517.57
Stddev	.96	2.48	3.07	.51	.28	2.33	.62
%RSD	.18606	.47731	.58524	.09833	.05324	.46749	.11947
#1	516.21	522.19	526.75	521.46	517.81	495.87	518.01
#2	514.86	518.68	522.41	522.19	517.42	499.16	517.13
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	504.58	515.87	509.78	F 629.65
Stddev	.73	2.75	1.47	1.77
%RSD	.14387	.53289	.28763	.28189
#1	504.06	517.82	508.74	630.91
#2	505.09	513.93	510.82	628.40
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45459.	24028.	617740.
Stddev	30.	622.	1256.
%RSD	.06633	2.5869	.20334
#1	45437.	24467.	618630.
#2	45480.	23588.	616860.

Sample Name: CCB Acquired: 12/10/2007 22:49:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.27254	9.2615	1.5429	-.12754	.00704	.02164	12.353	.00427
Stddev	.09061	.0805	1.9795	.39862	.01532	.00314	8.605	.06186
%RSD	33.245	.86948	128.30	312.55	217.66	14.494	69.661	1447.7
#1	-.33661	9.2045	.14317	-.40940	-.00379	.01942	18.437	.04802
#2	-.20847	9.3184	2.9426	.15433	.01787	.02386	6.2681	-.03947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.14468	-.09824	-.1431	-.2622	F 3.703	15.451	27.555	F 8.782
Stddev	.15999	.18530	.3162	.5375	2.554	3.103	9.245	4.162
%RSD	110.59	188.62	220.9	205.0	68.98	20.082	33.553	47.39
#1	-.25781	.03279	.0805	-.6423	5.509	17.645	34.093	11.73
#2	-.03154	-.22927	-.3667	.1178	1.897	13.257	21.018	5.839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 9.273	.05321	.13518	7.3381	-.35396	-.20426	-.59888	-.67263
Stddev	8.072	.01803	.12550	6.5294	.21177	1.0349	.31908	1.2560
%RSD	87.05	33.882	92.837	88.979	59.829	506.65	53.280	186.73
#1	14.98	.06596	.04644	2.7211	-.20421	.52752	-.37325	-1.5607
#2	3.565	.04046	.22392	11.955	-.50370	-.93605	-.82450	.21548
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/10/2007 22:49:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.29225	.00007	.01645	-.37569	.43153	.07781	-.11861	-.25880
Stddev	.37638	.58729	.00696	1.6845	.00305	1.1422	.01629	.07539
%RSD	128.78	791980.	42.307	448.38	.70617	1467.8	13.735	29.131
#1	-.55839	-.41520	.02137	.81543	.43368	-.72983	-.10709	-.31211
#2	-.02612	.41535	.01153	-1.5668	.42937	.88545	-.13013	-.20549
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47525.	23931.	639870.
Stddev	80.	356.	3255.
%RSD	.16920	1.4886	.50874
#1	47468.	23679.	637570.
#2	47582.	24183.	642170.

Sample Name: CCV Acquired: 12/10/2007 23:27:36 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	515.93	52370.	533.41	529.30	499.34	50.973	103470.
Stddev	1.11	929.	4.36	.07	.89	.077	1542.
%RSD	.21457	1.7741	.81679	.01316	.17767	.15156	1.4901
#1	516.72	53027.	536.49	529.35	498.71	51.028	104560.
#2	515.15	51713.	530.33	529.25	499.97	50.919	102380.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	519.66	508.57	515.11	F 608.2	F 577.6	541.6	50986.
Stddev	1.14	.44	.25	.4	.6	6.3	702.
%RSD	.21987	.08719	.04778	.0706	.1115	1.154	1.3761
#1	518.86	508.89	515.29	608.5	578.1	546.0	51482.
#2	520.47	508.26	514.94	607.9	577.2	537.2	50490.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	25484.	97990.	105300.	494.05	527.85	105890.	498.55
Stddev	377.	852.	1833.	.54	.75	1080.	.59
%RSD	1.4804	.8699	1.740	.10993	.14218	1.0196	.11810
#1	25751.	98590.	106600.	494.44	527.32	106650.	498.14
#2	25217.	97390.	104000.	493.67	528.38	105120.	498.97
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/10/2007 23:27:36 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	515.94	520.54	528.37	523.41	522.26	501.15	522.88
Stddev	1.38	.92	1.52	1.51	2.44	1.60	2.07
%RSD	.26755	.17680	.28756	.28827	.46724	.31912	.39668
#1	514.96	519.89	527.29	524.47	520.54	502.29	524.34
#2	516.91	521.19	529.44	522.34	523.99	500.02	521.41
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	502.12	519.00	509.99	F 635.99
Stddev	1.35	3.94	.50	1.86
%RSD	.26807	.75880	.09887	.29209
#1	503.07	516.21	510.34	634.67
#2	501.17	521.78	509.63	637.30
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45011.	23230.	613220.
Stddev	195.	223.	1354.
%RSD	.43325	.95802	.22087
#1	45149.	23072.	612260.
#2	44873.	23387.	614180.

Sample Name: CCB Acquired: 12/10/2007 23:31:14 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.12366	1.4336	1.2486	-.80993	-.01166	.02471	4.5651	.04016
Stddev	.07969	17.726	.0677	.58560	.01794	.00305	3.0323	.09519
%RSD	64.442	1236.4	5.4216	72.303	153.79	12.329	66.423	237.05
#1	-.18001	-11.100	1.2965	-.39585	-.02435	.02256	6.7092	.10746
#2	-.06731	13.968	1.2008	-1.2240	.00102	.02687	2.4209	-.02715
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.15531	-.12697	-1.185	-.2855	F 3.482	20.256	-44.350	F 4.448
Stddev	.04289	.37491	.429	.6667	6.472	1.135	40.706	.524
%RSD	27.617	295.29	36.19	233.5	185.9	5.6026	91.783	11.79
#1	-.12498	-.39207	-.8816	.1859	8.059	19.453	-73.133	4.819
#2	-.18563	.13814	-1.488	-.7569	-1.095	21.058	-15.567	4.077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.766	.03394	.20779	-1.5019	-.00802	-.13783	-.68769	-.99456
Stddev	.698	.03359	.27756	9.5016	.06432	.29997	.84477	1.9994
%RSD	25.23	98.952	133.57	632.63	802.31	217.63	122.84	201.04
#1	2.272	.01019	.01153	-8.2205	-.05350	.07428	-.09034	.41926
#2	3.259	.05769	.40406	5.2167	.03747	-.34994	-1.2850	-2.4084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/10/2007 23:31:14 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.08145	.18991	-.01538	.49276	.66395	-.93915	-.06157	-.23630
Stddev	.27381	.68684	.01076	.19900	.27811	.88359	.29321	.07605
%RSD	336.18	361.67	69.935	40.385	41.888	94.084	476.25	32.186
#1	-.11216	-.29576	-.02298	.35204	.46729	-.31436	-.26890	-.18252
#2	.27506	.67558	-.00777	.63347	.86061	-1.5639	.14576	-.29008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46699.	23860.	632400.
Stddev	70.	119.	4344.
%RSD	.14904	.50057	.68693
#1	46650.	23944.	635470.
#2	46748.	23776.	629330.

Sample Name: CCV Acquired: 12/11/2007 0:08:47 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**497.23**	**51098.**	**531.27**	**519.24**	**489.00**	**50.304**	**101510.**
Stddev	.55	504.	2.02	1.07	3.78	.013	771.
%RSD	.10979	.98552	.37960	.20599	.77221	.02549	.75906
#1	497.62	50741.	532.70	518.48	491.67	50.313	100970.
#2	496.85	51454.	529.84	519.99	486.33	50.295	102060.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**520.36**	**506.20**	**509.80**	**F 602.7**	**F 572.7**	**541.0**	**49951.**
Stddev	.76	.66	.49	.4	.8	3.1	288.
%RSD	.14537	.13064	.09646	.0587	.1476	.5794	.57577
#1	520.89	506.67	510.15	603.0	572.1	538.7	49748.
#2	519.82	505.74	509.45	602.5	573.3	543.2	50154.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**25054.**	**96080.**	**102200.**	**483.89**	**526.79**	**103670.**	**493.14**
Stddev	165.	423.	1079.	1.27	1.65	704.	.85
%RSD	.65813	.4400	1.055	.26309	.31310	.67899	.17296
#1	24937.	95780.	101500.	484.79	527.95	103170.	493.74
#2	25170.	96380.	103000.	482.99	525.62	104160.	492.53
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 0:08:47 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**516.17**	**513.41**	**519.92**	**500.43**	**520.46**	**489.70**	**516.68**
Stddev	.78	2.47	1.75	.13	.89	1.35	1.81
%RSD	.15030	.48178	.33616	.02678	.17124	.27474	.34950
#1	516.72	511.66	521.16	500.34	521.09	488.75	515.41
#2	515.62	515.16	518.69	500.53	519.83	490.65	517.96
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**488.03**	**517.94**	**502.34**	F **631.80**
Stddev	1.05	1.94	.88	.65
%RSD	.21611	.37434	.17435	.10249
#1	488.77	516.57	502.95	632.26
#2	487.28	519.32	501.72	631.34
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45294.	23688.	623430.
Stddev	77.	180.	1240.
%RSD	.16898	.76085	.19895
#1	45240.	23816.	624300.
#2	45348.	23561.	622550.

Sample Name: CCB Acquired: 12/11/2007 0:12:24 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.16753	-15.640	.23217	-.68405	.02392	.00334	17.670	.02814
Stddev	.08844	15.771	.85039	.14591	.01002	.00508	4.313	.03131
%RSD	52.790	100.83	366.28	21.330	41.872	152.09	24.407	111.24
#1	-.23007	-4.4886	-.36915	-.58088	.01684	.00694	20.720	.00601
#2	-.10499	-26.792	.83349	-.78723	.03101	-.00025	14.620	.05028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.15465	.10499	-.6991	1.100	F -4.006	18.300	-32.603	F 12.42
Stddev	.14285	.05165	.8728	.602	12.26	.724	32.234	2.74
%RSD	92.370	49.198	124.8	54.70	306.1	3.9581	98.871	22.04
#1	.05364	.14151	-.0819	1.526	4.665	17.788	-9.8095	14.36
#2	.25566	.06847	-1.316	.6748	-12.68	18.812	-55.396	10.48
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 11.33	.05706	.30126	15.942	-.15509	.00765	1.2958	-1.0872
Stddev	2.57	.00518	.08798	31.912	.25815	.55383	.0100	2.5909
%RSD	22.68	9.0754	29.206	200.17	166.45	7239.2	.77090	238.31
#1	13.14	.06073	.23905	38.508	-.33763	.39927	1.3028	.74484
#2	9.510	.05340	.36348	-6.6229	.02745	-.38397	1.2887	-2.9192
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/11/2007 0:12:24 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.74522	.08230	.02313	.18080	.44546	.64008	.14663	-.13298
Stddev	.07750	.09247	.00413	1.5481	.15289	.03530	.31666	.10296
%RSD	10.400	112.35	17.871	856.29	34.320	5.5152	215.95	77.424
#1	-.69042	.01692	.02606	1.2755	.33736	.61512	.37054	-.06018
#2	-.80002	.14769	.02021	-.91391	.55357	.66504	-.07728	-.20579
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46787.	23791.	634280.
Stddev	101.	26.	1887.
%RSD	.21586	.10844	.29752
#1	46716.	23773.	635620.
#2	46859.	23810.	632950.

Sample Name: BLK 108 Acquired: 12/11/2007 0:22:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.22077	-19.917	-.09865	.40551	-.02652	.01974	40.980	-.20949
Stddev	.10463	4.081	3.1620	.27201	.03726	.00395	5.207	.04497
%RSD	47.391	20.491	3205.2	67.079	140.51	19.990	12.707	21.468
#1	-.14679	-17.031	-2.3346	.21317	-.00017	.02253	37.298	-.17769
#2	-.29476	-22.803	2.1373	.59785	-.05286	.01695	44.662	-.24129

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.28818	1.5828	.5264	-.0200	2.604	.72526	-41.748	-5.654
Stddev	.02310	.0972	.5716	.1242	3.434	.21505	13.838	.105
%RSD	8.0169	6.1420	108.6	620.6	131.9	29.652	33.147	1.857
#1	-.30451	1.6516	.1221	-.1078	5.032	.57319	-31.963	-5.729
#2	-.27184	1.5141	.9306	.0678	.1753	.87733	-51.533	-5.580

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-9.464	.00872	-.22454	-116.02	-.08280	-1.0858	-.22942	2.2173
Stddev	3.247	.00998	.17979	7.98	.36249	.4074	.49974	.4518
%RSD	34.30	114.42	80.072	6.8788	437.77	37.524	217.83	20.375
#1	-7.168	.01578	-.35167	-110.37	.17352	-.79768	.12395	2.5368
#2	-11.76	.00167	-.09741	-121.66	-.33912	-1.3739	-.58279	1.8979

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.4689	29.327	-.00575	.55994	.60555	-2.7296	-.13672	5.9536
Stddev	.6107	.553	.00151	.33897	.12065	.9458	.23949	.0609
%RSD	8.1772	1.8872	26.265	60.537	19.924	34.648	175.17	1.0222
#1	7.9007	29.718	-.00468	.32025	.69086	-3.3984	.03262	5.9106
#2	7.0370	28.936	-.00682	.79963	.52024	-2.0609	-.30607	5.9967

Sample Name: BLK 108 Acquired: 12/11/2007 0:22:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46015.	24040.	627330.
Stddev	129.	836.	6948.
%RSD	.27976	3.4787	1.1076
#1	45924.	24631.	622420.
#2	46106.	23449.	632240.

Sample Name: BKS 108 Acquired: 12/11/2007 0:26:02 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**97.417**	**10177.**	**95.032**	**939.95**	**974.64**	**48.684**	**10476.**	**102.30**
Stddev	.384	98.	.991	3.41	6.76	.089	95.	.09
%RSD	.39430	.96336	1.0429	.36246	.69310	.18306	.90623	.08970
#1	97.688	10108.	94.331	937.54	979.41	48.747	10409.	102.23
#2	97.145	10247.	95.733	942.36	969.86	48.621	10543.	102.36

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**496.64**	**506.65**	**547.3**	**892.8**	**471.3**	**9996.8**	**10242.**	**10160.**
Stddev	.85	1.53	5.0	1.1	3.4	84.6	100.	102.
%RSD	.17156	.30123	.9107	.1244	.7149	.84648	.97176	.9995
#1	496.04	507.72	543.8	892.0	468.9	9937.0	10172.	10090.
#2	497.24	505.57	550.8	893.6	473.7	10057.	10313.	10230.

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11150.**	**972.21**	**523.12**	**10321.**	**498.57**	**1004.0**	**96.913**	**98.466**
Stddev	112.	.81	1.75	132.	.90	3.1	1.270	1.742
%RSD	1.005	.08323	.33369	1.2780	.18003	.30862	1.3100	1.7696
#1	11070.	972.78	521.89	10227.	497.93	1001.8	97.811	99.699
#2	11230.	971.64	524.36	10414.	499.20	1006.2	96.015	97.234

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**7895.7**	**542.73**	**973.30**	**380.26**	**1958.3**	**100.05**	**502.98**	**1023.5**
Stddev	25.3	.44	2.44	1.80	2.1	.52	1.14	3.5
%RSD	.32014	.08046	.25085	.47266	.10859	.52321	.22713	.34274
#1	7913.6	542.43	971.57	378.99	1959.8	100.42	503.79	1021.0
#2	7877.9	543.04	975.02	381.53	1956.8	99.682	502.18	1026.0

Sample Name: BKS 108 Acquired: 12/11/2007 0:26:02 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46646.	23778.	638180.
Stddev	13.	266.	1057.
%RSD	.02885	1.1197	.16557
#1	46637.	23966.	637440.
#2	46656.	23589.	638930.

Sample Name: S 711054-001-001-1/1 Acquired: 12/11/2007 0:29:39 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.0683**	**22783.**	**17.996**	**-5.8497**	**35.351**	**2.4838**	**1225.8**
Stddev	.2155	15.	.655	.5926	.172	.0878	15.1
%RSD	20.172	.06511	3.6411	10.130	.48681	3.5338	1.2301
#1	1.2206	22772.	18.460	-6.2688	35.230	2.5459	1236.5
#2	.91589	22793.	17.533	-5.4307	35.473	2.4218	1215.2

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2150**	**19.626**	**454.80**	**333.0**	**327.7**	**199.7**	**277710.**
Stddev	.0259	.190	.61	.5	.1	5.3	676.
%RSD	2.1331	.96873	.13502	.1372	.0403	2.630	.24329
#1	1.2333	19.492	454.37	333.3	327.6	203.4	278190.
#2	1.1967	19.761	455.24	332.7	327.8	196.0	277230.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**377.32**	**1367.**	**1527.**	**470.90**	**4.7371**	**-68.034**	**56.911**
Stddev	85.95	3.	7.	2.38	.2377	5.027	.009
%RSD	22.780	.2176	.4513	.50582	5.0172	7.3893	.01516
#1	316.54	1365.	1522.	469.22	4.5691	-71.589	56.917
#2	438.09	1370.	1532.	472.59	4.9052	-64.479	56.905

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**48.850**	**2.4622**	**3.9550**	**461.44**	**6.9771**	**35.018**	**28.085**
Stddev	1.330	2.1390	.0049	6.66	.6047	.219	2.811
%RSD	2.7216	86.875	.12254	1.4436	8.6674	.62456	10.009
#1	49.790	3.9747	3.9515	456.73	7.4048	34.863	30.072
#2	47.910	.94966	3.9584	466.15	6.5495	35.173	26.097

Sample Name: S 711054-001-001-1/1 Acquired: 12/11/2007 0:29:39 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	14477.	1.9936	695.37	148.09
Stddev	83.	1.3594	2.50	.32
%RSD	.57472	68.187	.35948	.21683
#1	14418.	1.0324	693.60	147.86
#2	14536.	2.9548	697.14	148.32

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47290.	23697.	641660.
Stddev	66.	235.	2026.
%RSD	.13942	.99084	.31577
#1	47337.	23863.	643100.
#2	47243.	23531.	640230.

Sample Name: SP711054-001-001-1/1 Acquired: 12/11/2007 0:33:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.089**	**26101.**	**29.320**	**88.633**	**147.22**	**5.9353**	**2290.5**
Stddev	.246	408.	1.392	.070	.71	.0285	36.0
%RSD	2.2170	1.5622	4.7478	.07867	.47906	.48060	1.5734
#1	10.915	26390.	30.304	88.683	147.72	5.9554	2316.0
#2	11.263	25813.	28.335	88.584	146.72	5.9151	2265.0

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**10.921**	**70.300**	**496.11**	**404.7**	**409.1**	**257.3**	**279190.**
Stddev	.135	.181	2.43	5.5	5.8	13.7	4107.
%RSD	1.2405	.25736	.49069	1.364	1.411	5.316	1.4709
#1	10.825	70.173	497.83	408.6	413.2	267.0	282100.
#2	11.016	70.428	494.38	400.8	405.0	247.7	276290.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1654.3**	**2606.**	**2917.**	**600.59**	**46.314**	**1024.7**	**111.24**
Stddev	18.7	39.	47.	2.49	.580	2.9	.54
%RSD	1.1329	1.484	1.609	.41523	1.2533	.27882	.48094
#1	1667.6	2633.	2950.	602.36	46.725	1026.7	111.62
#2	1641.1	2579.	2884.	598.83	45.904	1022.6	110.86

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**147.94**	**6.1827**	**11.496**	**822.63**	**56.451**	**147.03**	**67.372**
Stddev	2.43	.8158	.868	4.74	.578	.59	.579
%RSD	1.6459	13.194	7.5476	.57624	1.0236	.40048	.85996
#1	146.22	6.7596	10.882	825.98	56.860	147.44	66.962
#2	149.66	5.6059	12.109	819.28	56.043	146.61	67.781

Sample Name: SP711054-001-001-1/1 Acquired: 12/11/2007 0:33:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	15909.	15.156	770.05	254.30
Stddev	190.	.473	3.08	.58
%RSD	1.1969	3.1209	.39982	.22865
#1	16044.	14.821	772.23	254.71
#2	15775.	15.490	767.87	253.89

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47354.	23329.	634310.
Stddev	164.	269.	1948.
%RSD	.34707	1.1548	.30707
#1	47238.	23139.	632930.
#2	47470.	23520.	635690.

Sample Name: SD711054-001-001-1/1 Acquired: 12/11/2007 0:36:32 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.288**	**26767.**	**25.652**	**88.685**	**150.40**	**5.9391**	**2255.8**
Stddev	.330	283.	2.888	.085	.50	.0853	26.3
%RSD	2.9209	1.0588	11.260	.09539	.33122	1.4364	1.1639
#1	11.055	26567.	23.610	88.625	150.05	5.9995	2237.2
#2	11.521	26968.	27.695	88.745	150.75	5.8788	2274.3

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.860**	**72.355**	**545.19**	**418.6**	**414.9**	**264.7**	**291720.**
Stddev	.179	.065	.08	1.0	5.3	5.5	4848.
%RSD	1.5080	.09018	.01558	.2437	1.280	2.087	1.6618
#1	11.987	72.308	545.25	417.9	411.1	268.6	288290.
#2	11.734	72.401	545.13	419.3	418.6	260.8	295150.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1560.9**	**2537.**	**2838.**	**621.67**	**45.685**	**952.48**	**114.57**
Stddev	8.4	35.	36.	.87	.003	6.55	.01
%RSD	.53835	1.388	1.277	.14027	.00719	.68755	.00495
#1	1554.9	2512.	2813.	621.05	45.682	957.11	114.58
#2	1566.8	2562.	2864.	622.28	45.687	947.85	114.57

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**152.94**	**6.0088**	**11.821**	**738.48**	**55.907**	**149.61**	**65.407**
Stddev	.45	.2416	1.437	.31	.481	.15	1.997
%RSD	.29129	4.0211	12.159	.04236	.86095	.10153	3.0530
#1	153.25	5.8379	10.805	738.70	56.247	149.51	63.995
#2	152.62	6.1796	12.837	738.25	55.567	149.72	66.819

Sample Name: SD711054-001-001-1/1 Acquired: 12/11/2007 0:36:32 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	16408.	14.049	822.02	267.08
Stddev	35.	.102	.38	.68
%RSD	.21346	.72864	.04615	.25537
#1	16433.	13.977	821.75	266.60
#2	16384.	14.122	822.29	267.57

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47252.	24289.	637000.
Stddev	44.	234.	2845.
%RSD	.09366	.96239	.44669
#1	47283.	24454.	639010.
#2	47220.	24124.	634990.

Sample Name: PS711054-001-001-1/1 Acquired: 12/11/2007 0:39:57 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**47.384**	**22859.**	**108.87**	**72.773**	**58.330**	**9.7494**	**6764.1**
Stddev	.029	25.	1.27	.025	.336	.0374	4.2
%RSD	.06140	.10946	1.1637	.03377	.57605	.38407	.06137
#1	47.364	22877.	109.77	72.756	58.567	9.7759	6767.1
#2	47.405	22841.	107.97	72.791	58.092	9.7229	6761.2

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24.203**	**53.026**	**464.32**	**360.5**	**641.2**	**226.8**	**272780.**
Stddev	.048	.076	3.10	.8	.6	3.8	171.
%RSD	.19968	.14256	.66723	.2084	.0958	1.678	.06285
#1	24.169	52.972	466.52	360.0	640.8	229.4	272660.
#2	24.237	53.079	462.13	361.0	641.6	224.1	272910.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**5982.5**	**6675.**	**7365.**	**550.85**	**38.694**	**5618.2**	**98.849**
Stddev	60.8	8.	9.	3.87	.140	43.3	.132
%RSD	1.0158	.1261	.1169	.70259	.36115	.77051	.13335
#1	6025.5	6669.	7371.	553.58	38.595	5587.5	98.756
#2	5939.5	6681.	7358.	548.11	38.793	5648.8	98.942

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**137.83**	**92.404**	**80.617**	**5782.9**	**118.43**	**57.087**	**568.26**
Stddev	1.99	.394	2.106	55.5	.68	.381	2.61
%RSD	1.4450	.42587	2.6120	.95902	.57233	.66708	.45921
#1	136.42	92.126	82.106	5822.1	117.95	57.356	570.11
#2	139.24	92.682	79.128	5743.7	118.91	56.817	566.42

Sample Name: PS711054-001-001-1/1 Acquired: 12/11/2007 0:39:57 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**14101.**	**114.98**	**707.45**	**238.56**
Stddev	8.	2.00	4.68	.60
%RSD	.05881	1.7371	.66144	.25055
#1	14095.	113.57	710.75	238.14
#2	14107.	116.39	704.14	238.98

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47265.	24492.	640280.
Stddev	165.	105.	3071.
%RSD	.34956	.42829	.47955
#1	47382.	24417.	638110.
#2	47149.	24566.	642450.

Sample Name: SE711054-001-001-1/1 Acquired: 12/11/2007 0:43:22 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.04783**	**4672.8**	**4.7461**	**-1.9316**	**7.4996**	^ *****	**251.89**	**.24036**
Stddev	.17511	39.8	1.9595	.0714	.0381	-----	2.34	.03580
%RSD	366.10	.85215	41.287	3.6972	.50849	-----	.92824	14.895
#1	-.07599	4644.6	3.3605	-1.9821	7.4726	^ -----	250.24	.26567
#2	.17165	4700.9	6.1317	-1.8811	7.5266	^ -----	253.54	.21504

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**4.2750**	**97.275**	**71.51**	**72.77**	**38.68**	**59901.**	**37.605**	**276.9**
Stddev	.0602	.891	.38	.16	10.61	926.	66.708	4.8
%RSD	1.4094	.91640	.5280	.2176	27.44	1.5456	177.39	1.732
#1	4.3176	96.645	71.77	72.88	31.17	59246.	-9.5646	273.5
#2	4.2323	97.906	71.24	72.65	46.18	60555.	84.775	280.3

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**309.3**	**99.084**	**.83208**	**-127.16**	**10.923**	**10.858**	**.31522**	**-1.5363**
Stddev	5.1	.031	.18914	15.25	.280	.063	.17505	.8980
%RSD	1.649	.03097	22.731	11.997	2.5618	.58108	55.532	58.453
#1	305.7	99.062	.96582	-116.37	11.121	10.903	.19144	-2.1713
#2	312.9	99.105	.69834	-137.95	10.725	10.813	.43900	-.90132

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**101.38**	**1.2826**	**7.3097**	**6.9841**	**3105.3**	**.86245**	**148.22**	**33.692**
Stddev	.46	.1112	.0422	2.6302	18.5	.09260	.44	.047
%RSD	.45646	8.6667	.57783	37.659	.59580	10.737	.29361	.13905
#1	101.71	1.3612	7.2799	5.1243	3118.4	.92793	147.92	33.659
#2	101.05	1.2040	7.3396	8.8440	3092.2	.79698	148.53	33.725

Sample Name: SE711054-001-001-1/1 Acquired: 12/11/2007 0:43:22 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47094.	24264.	641830.
Stddev	83.	230.	409.
%RSD	.17615	.94699	.06380
#1	47153.	24426.	642120.
#2	47035.	24101.	641540.

Sample Name: S 711054-002-002-1/1 Acquired: 12/11/2007 0:46:58 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.6697**	**28162.**	**18.931**	**-4.9605**	**65.143**	**2.1031**	**1690.4**
Stddev	.2099	2394.	4.364	.2222	2.452	.0021	141.4
%RSD	12.569	8.4994	23.053	4.4800	3.7635	.09814	8.3644
#1	1.5213	26469.	15.845	-5.1177	63.410	2.1017	1590.5
#2	1.8181	29854.	22.017	-4.8034	66.877	2.1046	1790.4

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4582**	**28.886**	**492.41**	**336.7**	**345.1**	**219.2**	**240740.**
Stddev	1.1426	.773	18.46	9.1	26.2	10.1	20007.
%RSD	78.355	2.6754	3.7493	2.707	7.579	4.591	8.3106
#1	2.2661	29.433	479.36	330.2	326.6	212.1	226590.
#2	.65027	28.340	505.47	343.1	363.6	226.3	254890.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**626.83**	**1893.**	**2137.**	**856.80**	**3.6107**	**-86.366**	**88.750**
Stddev	53.67	165.	178.	31.48	.0089	7.730	1.438
%RSD	8.5624	8.689	8.327	3.6743	.24801	8.9500	1.6207
#1	588.88	1777.	2011.	834.53	3.6044	-80.901	87.732
#2	664.79	2010.	2263.	879.06	3.6170	-91.832	89.767

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**45.691**	**3.8357**	**2.7889**	**488.79**	**5.9662**	**57.771**	**27.077**
Stddev	1.597	2.4516	2.1738	18.54	1.3327	2.086	8.669
%RSD	3.4946	63.914	77.943	3.7928	22.338	3.6101	32.017
#1	46.820	5.5693	1.2518	475.68	5.0239	56.296	20.947
#2	44.562	2.1022	4.3260	501.90	6.9086	59.246	33.207

Sample Name: S 711054-002-002-1/1 Acquired: 12/11/2007 0:46:58 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	12693.	2.9761	621.80	221.92
Stddev	504.	3.6836	23.28	1.91
%RSD	3.9677	123.77	3.7436	.86141
#1	12337.	.37139	605.34	223.27
#2	13049.	5.5807	638.26	220.57

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46742.	24076.	659190.
Stddev	184.	1737.	26337.
%RSD	.39331	7.2166	3.9953
#1	46612.	25305.	677820.
#2	46872.	22847.	640570.

Sample Name: CCV Acquired: 12/11/2007 0:50:24 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**497.82**	**50178.**	**535.91**	**521.22**	**488.72**	**50.314**	**99916.**
Stddev	2.28	975.	.65	.43	.25	.281	2253.
%RSD	.45835	1.9426	.12191	.08339	.05065	.55921	2.2550
#1	496.20	49488.	536.37	521.53	488.55	50.115	98323.
#2	499.43	50867.	535.45	520.92	488.90	50.513	101510.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**521.92**	**506.74**	**510.19**	**F 599.3**	**F 571.5**	**540.6**	**49295.**
Stddev	.26	.42	3.06	1.4	2.6	6.0	1132.
%RSD	.05050	.08294	.60008	.2390	.4518	1.113	2.2965
#1	522.10	507.04	508.02	600.3	569.7	544.9	48495.
#2	521.73	506.45	512.35	598.3	573.4	536.4	50096.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24726.**	**94270.**	**100400.**	**485.18**	**528.42**	**102840.**	**494.25**
Stddev	412.	2128.	2031.	1.13	.78	2755.	.78
%RSD	1.6666	2.257	2.023	.23343	.14855	2.6789	.15775
#1	24435.	92770.	98970.	484.38	528.97	100890.	494.80
#2	25018.	95780.	101800.	485.98	527.86	104780.	493.70
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 0:50:24 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**516.75**	**513.40**	**521.84**	**502.03**	**521.19**	**491.43**	**516.83**
Stddev	.64	1.12	6.92	1.10	.69	.97	.37
%RSD	.12320	.21875	1.3261	.21870	.13163	.19704	.07084
#1	517.20	514.19	516.95	501.26	520.70	490.74	516.57
#2	516.30	512.60	526.74	502.81	521.67	492.11	517.09
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**489.60**	**520.98**	**503.36**	F **633.99**
Stddev	2.68	.04	1.96	.97
%RSD	.54752	.00738	.38846	.15248
#1	487.70	520.95	501.98	634.68
#2	491.49	521.00	504.74	633.31
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45479.	23963.	626340.
Stddev	48.	598.	2945.
%RSD	.10595	2.4944	.47025
#1	45445.	24386.	628420.
#2	45513.	23540.	624260.

Sample Name: CCB Acquired: 12/11/2007 0:54:02 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.20334	-20.294	1.2526	-.51085	.05720	.00044	7.9618	.00058
Stddev	.31750	10.194	.8117	.50084	.03449	.00082	1.6148	.06170
%RSD	156.14	50.233	64.807	98.041	60.289	184.14	20.282	10662.
#1	-.42784	-13.085	.67858	-.86499	.03282	.00102	9.1037	.04421
#2	.02117	-27.502	1.8266	-.15670	.08159	-.00013	6.8200	-.04305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.09952	.08984	-.8951	-.1572	1.723	16.196	12.414	F 6.143
Stddev	.06481	.14293	.3109	.8869	5.625	4.075	65.206	1.266
%RSD	65.120	159.09	34.73	564.2	326.4	25.164	525.25	20.61
#1	-.14534	-.01122	-1.115	-.7843	-2.254	19.078	58.522	7.038
#2	-.05369	.19091	-.6753	.4699	5.701	13.314	-33.693	5.247
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit								3.000
Low Limit								-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 3.670	.08000	.25114	18.493	-.37611	-.11812	-.32589	.39536
Stddev	3.135	.04038	.03907	2.909	.44086	.48630	.15454	1.1499
%RSD	85.43	50.478	15.557	15.728	117.22	411.68	47.422	290.86
#1	5.887	.05145	.27877	16.437	-.68784	-.46199	-.43517	1.2085
#2	1.453	.10856	.22352	20.550	-.06437	.22574	-.21661	-.41777
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/11/2007 0:54:02 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.16360	.03383	.01960	1.3662	.88753	-.38876	.04985	-.04530
Stddev	1.0919	.17311	.02537	.6633	.25813	1.7347	.12135	.04214
%RSD	667.44	511.63	129.43	48.552	29.084	446.21	243.42	93.004
#1	-.60849	-.08857	.00166	.89716	.70500	-1.6154	.13566	-.01551
#2	.93568	.15624	.03754	1.8352	1.0701	.83785	-.03595	-.07510
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47093.	23675.	635970.
Stddev	24.	95.	2400.
%RSD	.05139	.40018	.37731
#1	47076.	23608.	634270.
#2	47110.	23742.	637660.

Sample Name: S 711054-003-003-1/1 Acquired: 12/11/2007 0:57:27 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2262**	**33570.**	**21.643**	**-4.7081**	**58.450**	**2.3273**	**1585.6**
Stddev	.0694	525.	.712	.4797	.270	.0299	31.0
%RSD	5.6626	1.5625	3.2907	10.188	.46238	1.2855	1.9521
#1	1.2753	33941.	21.140	-5.0473	58.641	2.3485	1607.5
#2	1.1771	33199.	22.147	-4.3689	58.259	2.3062	1563.7

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.6525**	**23.805**	**442.50**	**324.4**	**348.2**	**206.2**	**261830.**
Stddev	.2454	.202	2.58	2.2	3.2	.4	3941.
%RSD	14.848	.84971	.58230	.6776	.9211	.2038	1.5051
#1	1.4790	23.948	444.32	325.9	350.5	206.5	264620.
#2	1.8260	23.662	440.68	322.8	345.9	205.9	259050.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**708.35**	**1841.**	**2062.**	**672.74**	**4.8439**	**-25.226**	**86.393**
Stddev	51.92	34.	35.	3.67	.0680	8.941	.145
%RSD	7.3294	1.823	1.696	.54542	1.4042	35.445	.16769
#1	671.64	1864.	2087.	675.34	4.8920	-18.904	86.496
#2	745.06	1817.	2037.	670.15	4.7958	-31.549	86.291

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**53.212**	**3.1243**	**6.4664**	**626.93**	**6.9307**	**63.727**	**28.117**
Stddev	1.606	.5754	3.4682	3.21	.0916	.426	.814
%RSD	3.0191	18.417	53.635	.51250	1.3224	.66841	2.8934
#1	52.076	2.7175	4.0140	629.20	6.9955	64.028	28.693
#2	54.348	3.5312	8.9188	624.66	6.8659	63.425	27.542

Sample Name: S 711054-003-003-1/1 Acquired: 12/11/2007 0:57:27 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**13190.**	**2.1296**	**614.30**	**177.24**
Stddev	9.	.9122	2.64	.54
%RSD	.06776	42.836	.43024	.30567
#1	13196.	2.7746	616.16	176.86
#2	13184.	1.4846	612.43	177.62

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46958.	23797.	640690.
Stddev	16.	408.	4274.
%RSD	.03474	1.7145	.66710
#1	46970.	23508.	637670.
#2	46947.	24085.	643720.

Sample Name: S 711054-004-004-1/1 Acquired: 12/11/2007 1:00:54 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4602**	**43882.**	**20.297**	**-4.2727**	**52.219**	**2.2876**	**1856.6**
Stddev	.2693	365.	.845	.3566	.383	.0021	9.7
%RSD	18.444	.83239	4.1622	8.3465	.73422	.09025	.51998
#1	1.6506	44140.	19.699	-4.0206	52.490	2.2861	1863.5
#2	1.2698	43623.	20.894	-4.5249	51.948	2.2891	1849.8

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3199**	**24.348**	**439.20**	**333.3**	**364.9**	**223.4**	**254470.**
Stddev	.0722	.107	2.26	1.1	3.5	5.6	2491.
%RSD	5.4661	.43842	.51524	.3354	.9577	2.496	.97896
#1	1.2689	24.273	440.80	332.5	367.4	227.3	256230.
#2	1.3709	24.424	437.60	334.1	362.4	219.5	252710.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**732.38**	**2121.**	**2381.**	**680.51**	**4.7550**	**-53.594**	**97.208**
Stddev	23.97	12.	25.	2.34	.3314	14.565	.016
%RSD	3.2724	.5627	1.050	.34337	6.9697	27.176	.01673
#1	749.33	2129.	2399.	682.16	4.5207	-43.295	97.220
#2	715.43	2112.	2364.	678.86	4.9894	-63.893	97.197

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**137.45**	**2.5742**	**5.3216**	**752.17**	**6.8983**	**60.180**	**29.676**
Stddev	.10	.3172	.4482	3.33	.0420	.366	1.045
%RSD	.07329	12.321	8.4221	.44276	.60956	.60848	3.5213
#1	137.37	2.3499	5.6385	754.53	6.9280	60.439	30.415
#2	137.52	2.7985	5.0047	749.82	6.8685	59.921	28.937

Sample Name: S 711054-004-004-1/1 Acquired: 12/11/2007 1:00:54 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	13637.	2.0637	607.56	169.52
Stddev	40.	.6793	2.75	.12
%RSD	.28966	32.915	.45262	.07371
#1	13665.	2.5440	609.50	169.60
#2	13609.	1.5834	605.61	169.43

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47041.	23594.	637110.
Stddev	138.	121.	744.
%RSD	.29310	.51075	.11678
#1	46943.	23508.	636590.
#2	47138.	23679.	637640.

Sample Name: S 711054-005-005-1/1 Acquired: 12/11/2007 1:04:21 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.5050**	**30156.**	**20.739**	**-5.0021**	**66.097**	**2.4882**	**2332.9**
Stddev	.1784	306.	1.826	.3045	.088	.0914	10.3
%RSD	11.855	1.0132	8.8037	6.0871	.13255	3.6712	.43971
#1	1.6312	30372.	22.030	-5.2174	66.035	2.4236	2340.2
#2	1.3788	29940.	19.448	-4.7868	66.159	2.5528	2325.7

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3244**	**25.631**	**445.91**	**333.7**	**341.5**	**214.4**	**252650.**
Stddev	.0650	.064	2.16	.9	1.1	2.3	1716.
%RSD	4.9092	.25138	.48445	.2693	.3128	1.073	.67907
#1	1.2785	25.586	444.38	333.1	342.3	212.8	253870.
#2	1.3704	25.677	447.44	334.3	340.8	216.1	251440.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**662.75**	**2130.**	**2372.**	**704.76**	**4.2095**	**-86.243**	**85.816**
Stddev	38.15	21.	26.	1.97	.0384	17.567	.283
%RSD	5.7565	.9911	1.076	.27991	.91225	20.370	.32937
#1	635.77	2144.	2390.	703.36	4.2367	-98.665	86.016
#2	689.72	2115.	2354.	706.15	4.1824	-73.820	85.616

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**44.567**	**4.7507**	**3.2776**	**551.57**	**6.6682**	**80.064**	**26.206**
Stddev	1.448	1.4854	1.4521	.15	.6234	.192	.243
%RSD	3.2485	31.267	44.304	.02678	9.3483	.24027	.92614
#1	43.543	3.7004	2.2508	551.47	6.2274	79.928	26.378
#2	45.590	5.8011	4.3044	551.68	7.1090	80.200	26.035

Sample Name: S 711054-005-005-1/1 Acquired: 12/11/2007 1:04:21 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**13526.**	**3.3175**	**605.50**	**180.12**
Stddev	21.	2.3971	1.63	.32
%RSD	.15315	72.256	.26958	.17671
#1	13540.	1.6225	604.34	179.89
#2	13511.	5.0126	606.65	180.34

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47161.	23681.	640870.
Stddev	52.	62.	2366.
%RSD	.11094	.26330	.36920
#1	47198.	23637.	642540.
#2	47124.	23725.	639200.

Sample Name: S 711054-006-006-1/1 Acquired: 12/11/2007 1:07:49 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.85919**	**22052.**	**15.260**	**-6.8232**	**68.782**	**2.8800**	**1835.4**
Stddev	.38292	524.	1.240	.1884	.617	.0473	37.9
%RSD	44.567	2.3746	8.1264	2.7608	.89640	1.6429	2.0677
#1	.58843	21682.	14.383	-6.6900	68.346	2.8466	1808.5
#2	1.1300	22422.	16.137	-6.9564	69.218	2.9135	1862.2

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.9471**	**35.546**	**522.70**	**383.5**	**359.0**	**243.0**	**245360.**
Stddev	.5667	.896	3.57	2.1	9.3	6.8	5733.
%RSD	29.105	2.5211	.68223	.5487	2.576	2.789	2.3364
#1	2.3479	36.179	520.17	385.0	352.5	238.2	241310.
#2	1.5464	34.912	525.22	382.0	365.6	247.8	249410.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**572.83**	**2611.**	**2925.**	**826.45**	**4.0230**	**-83.193**	**106.85**
Stddev	24.61	61.	64.	7.42	.0617	6.819	1.31
%RSD	4.2967	2.338	2.196	.89730	1.5340	8.1966	1.2299
#1	590.23	2568.	2880.	821.20	3.9794	-78.371	107.78
#2	555.42	2654.	2971.	831.69	4.0666	-88.014	105.92

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**65.835**	**4.0346**	**4.5642**	**465.56**	**6.5384**	**57.034**	**25.439**
Stddev	1.478	.4630	2.5704	10.02	1.3641	.600	7.255
%RSD	2.2453	11.475	56.317	2.1528	20.862	1.0526	28.517
#1	66.880	3.7072	6.3817	458.47	5.5738	56.609	20.309
#2	64.790	4.3619	2.7466	472.65	7.5029	57.458	30.569

Sample Name: S 711054-006-006-1/1 Acquired: 12/11/2007 1:07:49 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	15338.	1.6517	691.32	218.01
Stddev	2.	2.5308	5.27	4.37
%RSD	.01031	153.22	.76247	2.0047
#1	15339.	-.13782	687.59	221.10
#2	15337.	3.4413	695.05	214.92

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46272.	23898.	640440.
Stddev	885.	415.	2754.
%RSD	1.9124	1.7357	.43004
#1	45647.	24191.	642390.
#2	46898.	23605.	638490.

Sample Name: S 711054-007-007-1/1 Acquired: 12/11/2007 1:11:16 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.51650**	**24860.**	**17.057**	**-6.2469**	**89.161**	**2.5558**	**1660.3**
Stddev	.13431	1096.	3.051	.4364	.081	.0127	74.2
%RSD	26.005	4.4085	17.884	6.9856	.09087	.49572	4.4698
#1	.61148	24085.	14.900	-5.9384	89.219	2.5469	1607.8
#2	.42153	25635.	19.215	-6.5555	89.104	2.5648	1712.8

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.7200**	**34.198**	**513.11**	**369.1**	**343.5**	**239.4**	**223000.**
Stddev	.5549	.207	.22	3.1	12.0	5.5	10651.
%RSD	32.259	.60664	.04330	.8328	3.492	2.296	4.7762
#1	2.1124	34.345	513.27	367.0	335.0	235.5	215470.
#2	1.3277	34.051	512.96	371.3	352.0	243.3	230540.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**652.88**	**2178.**	**2448.**	**1068.7**	**3.5600**	**-80.021**	**104.07**
Stddev	41.02	100.	111.	.1	.2618	4.371	1.54
%RSD	6.2827	4.581	4.528	.00482	7.3544	5.4621	1.4759
#1	681.88	2107.	2370.	1068.7	3.3749	-83.112	102.98
#2	623.87	2248.	2527.	1068.6	3.7452	-76.931	105.15

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**33.062**	**1.7443**	**.36217**	**456.92**	**6.1531**	**86.630**	**22.312**
Stddev	.818	.3403	.23927	.27	.0902	.200	3.456
%RSD	2.4742	19.507	66.066	.05919	1.4655	.23030	15.491
#1	33.641	1.9849	.19298	457.11	6.2169	86.771	19.868
#2	32.484	1.5037	.53136	456.73	6.0894	86.488	24.756

Sample Name: S 711054-007-007-1/1 Acquired: 12/11/2007 1:11:16 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	13789.	.77503	646.16	239.96
Stddev	26.	1.0252	.80	1.19
%RSD	.18876	132.28	.12345	.49427
#1	13807.	.05011	646.72	240.80
#2	13771.	1.5000	645.59	239.13

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47028.	24351.	639360.
Stddev	53.	967.	1584.
%RSD	.11305	3.9705	.24771
#1	46991.	25035.	638240.
#2	47066.	23668.	640480.

Sample Name: S 711054-008-008-1/1 Acquired: 12/11/2007 1:14:44 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.92860**	**23002.**	**18.185**	**-6.7429**	**43.339**	**2.8163**	**1696.1**
Stddev	.38789	902.	2.715	.3482	.092	.0137	58.9
%RSD	41.771	3.9234	14.927	5.1644	.21227	.48573	3.4703
#1	.65432	23640.	20.105	-6.9891	43.405	2.8066	1737.7
#2	1.2029	22364.	16.266	-6.4966	43.274	2.8260	1654.5

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.78548**	**24.849**	**444.66**	**337.1**	**330.3**	**206.2**	**264070.**
Stddev	.37533	.509	1.92	.7	9.6	2.4	8777.
%RSD	47.783	2.0475	.43245	.1936	2.909	1.168	3.3237
#1	.52008	25.208	446.02	337.5	337.1	204.5	270280.
#2	1.0509	24.489	443.30	336.6	323.5	207.9	257860.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**324.77**	**1975.**	**2206.**	**641.24**	**4.1617**	**-94.293**	**79.965**
Stddev	44.66	69.	77.	1.82	.1237	10.161	.280
%RSD	13.751	3.489	3.496	.28315	2.9716	10.776	.35037
#1	356.35	2023.	2261.	642.53	4.2492	-87.108	80.163
#2	293.19	1926.	2152.	639.96	4.0743	-101.48	79.767

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**43.663**	**1.9530**	**4.3168**	**489.68**	**5.9003**	**48.846**	**28.246**
Stddev	.782	1.8080	1.8209	.47	.2954	.058	.875
%RSD	1.7911	92.575	42.181	.09676	5.0059	.11903	3.0975
#1	43.110	.67454	5.6044	489.35	6.1092	48.887	28.865
#2	44.216	3.2314	3.0293	490.02	5.6915	48.805	27.628

Sample Name: S 711054-008-008-1/1 Acquired: 12/11/2007 1:14:44 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	14442.	2.7899	651.97	164.64
Stddev	23.	1.9478	2.92	.40
%RSD	.15618	69.816	.44722	.24443
#1	14426.	4.1672	654.03	164.35
#2	14458.	1.4126	649.91	164.92

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47133.	23257.	629040.
Stddev	2.	601.	976.
%RSD	.00369	2.5851	.15511
#1	47135.	22832.	628350.
#2	47132.	23682.	629730.

Sample Name: S 711054-009-009-1/1 Acquired: 12/11/2007 1:18:11 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.55932	17696.	15.475	-7.3973	37.626	2.9513	1107.6
Stddev	.24071	98.	.750	.1144	.101	.0478	2.5
%RSD	43.037	.55606	4.8454	1.5463	.26822	1.6205	.22679
#1	.38911	17627.	14.945	-7.4782	37.697	2.9851	1105.9
#2	.72953	17766.	16.005	-7.3164	37.554	2.9174	1109.4

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.3055	30.341	465.50	369.7	341.1	222.6	245930.
Stddev	.0132	.015	.32	.3	1.4	6.1	1535.
%RSD	1.0104	.04950	.06814	.0831	.4208	2.744	.62418
#1	1.2962	30.351	465.73	369.5	340.1	226.9	244840.
#2	1.3149	30.330	465.28	370.0	342.1	218.3	247010.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	353.12	2176.	2423.	669.45	4.1719	-110.92	91.913
Stddev	5.59	9.	15.	.52	.2159	17.75	.010
%RSD	1.5841	.4244	.6233	.07781	5.1744	16.007	.01115
#1	357.08	2169.	2412.	669.08	4.0193	-123.47	91.906
#2	349.17	2182.	2433.	669.82	4.3246	-98.364	91.920

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23.938	-.20702	2.1328	529.51	6.4226	39.486	27.721
Stddev	1.049	1.3248	1.2381	.40	.4248	.039	1.711
%RSD	4.3836	639.93	58.050	.07642	6.6137	.09773	6.1720
#1	24.680	-1.1438	1.2573	529.79	6.1222	39.514	26.512
#2	23.196	.72976	3.0082	529.22	6.7230	39.459	28.931

Sample Name: S 711054-009-009-1/1 Acquired: 12/11/2007 1:18:11 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	15796.	2.5473	709.71	191.28
Stddev	11.	.4407	.16	.10
%RSD	.06793	17.299	.02291	.05213
#1	15803.	2.2357	709.60	191.35
#2	15788.	2.8589	709.83	191.21

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46994.	23570.	631930.
Stddev	2.	266.	129.
%RSD	.00358	1.1305	.02035
#1	46995.	23759.	632020.
#2	46993.	23382.	631840.

Sample Name: S 711054-010-010-1/1 Acquired: 12/11/2007 1:21:39 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2067**	**66888.**	**19.305**	**-3.8389**	**60.185**	**1.8891**	**898.99**
Stddev	.2101	1095.	1.790	.2477	.634	.0800	16.08
%RSD	17.407	1.6374	9.2725	6.4518	1.0535	4.2361	1.7884
#1	1.0582	67663.	20.571	-3.6638	60.634	1.9457	910.35
#2	1.3553	66114.	18.039	-4.0141	59.737	1.8325	887.62

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2859**	**20.088**	**373.92**	**259.1**	**317.3**	**196.0**	**217630.**
Stddev	.2027	.183	4.66	.4	4.1	8.3	3112.
%RSD	15.759	.90927	1.2464	.1441	1.277	4.244	1.4297
#1	1.1426	19.958	377.21	259.3	320.1	201.9	219830.
#2	1.4292	20.217	370.62	258.8	314.4	190.1	215430.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**649.53**	**1318.**	**1473.**	**945.29**	**3.7304**	**-51.757**	**94.211**
Stddev	9.98	20.	20.	9.94	.0209	4.228	.227
%RSD	1.5363	1.520	1.336	1.0516	.56014	8.1685	.24085
#1	642.47	1332.	1487.	952.32	3.7452	-48.767	94.372
#2	656.58	1303.	1459.	938.26	3.7156	-54.746	94.051

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**58.427**	**1.3040**	**6.5750**	**627.65**	**13.513**	**79.448**	**21.886**
Stddev	.238	1.1842	2.1086	11.35	.049	.840	1.369
%RSD	.40783	90.815	32.070	1.8076	.36382	1.0568	6.2552
#1	58.259	.46662	8.0660	635.67	13.479	80.042	22.854
#2	58.596	2.1414	5.0840	619.63	13.548	78.855	20.918

Sample Name: S 711054-010-010-1/1 Acquired: 12/11/2007 1:21:39 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	10428.	1.7534	470.53	135.31
Stddev	27.	.5363	4.92	.44
%RSD	.25514	30.589	1.0448	.32255
#1	10447.	2.1327	474.01	135.01
#2	10409.	1.3741	467.05	135.62

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47368.	23391.	640130.
Stddev	59.	366.	7427.
%RSD	.12516	1.5638	1.1602
#1	47410.	23132.	634880.
#2	47326.	23650.	645380.

Sample Name: S 711054-011-011-1/1 Acquired: 12/11/2007 1:25:07 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3344**	**42143.**	**20.013**	**.51133**	**187.29**	**1.4964**	**6941.3**
Stddev	.0107	143.	.558	1.4602	3.23	.0469	10.9
%RSD	.80322	.33950	2.7905	285.56	1.7251	3.1344	.15752
#1	1.3268	42244.	20.408	-.52115	189.58	1.4632	6949.1
#2	1.3419	42042.	19.618	1.5438	185.01	1.5295	6933.6

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.77088**	**71.845**	**416.93**	**383.0**	**375.8**	**274.4**	**205430.**
Stddev	.03716	.362	6.91	2.3	.7	3.1	593.
%RSD	4.8209	.50339	1.6563	.6065	.1849	1.113	.28853
#1	.74460	71.589	421.81	384.6	376.3	276.6	205850.
#2	.79716	72.100	412.05	381.3	375.3	272.3	205010.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1486.7**	**1963.**	**2186.**	**5615.1**	**3.4279**	**-52.891**	**120.67**
Stddev	42.1	4.	20.	95.4	.0919	17.522	.40
%RSD	2.8318	.1983	.8923	1.6989	2.6822	33.129	.33153
#1	1516.5	1966.	2199.	5682.6	3.3629	-65.281	120.95
#2	1457.0	1960.	2172.	5547.7	3.4929	-40.501	120.39

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**51.971**	**2.4434**	**2.7482**	**634.07**	**5.3032**	**97.269**	**23.767**
Stddev	.287	.9333	1.0870	16.40	.3910	1.722	2.163
%RSD	.55221	38.198	39.551	2.5867	7.3736	1.7702	9.1017
#1	52.174	1.7834	3.5168	645.67	5.0267	98.486	25.296
#2	51.768	3.1033	1.9796	622.47	5.5797	96.051	22.237

Sample Name: S 711054-011-011-1/1 Acquired: 12/11/2007 1:25:07 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**9173.9**	**2.1192**	**481.11**	**201.40**
Stddev	173.2	.3944	7.91	.41
%RSD	1.8876	18.611	1.6441	.20414
#1	9296.4	2.3981	486.70	201.69
#2	9051.5	1.8403	475.52	201.11

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47485.	24223.	645850.
Stddev	96.	35.	6977.
%RSD	.20225	.14520	1.0803
#1	47417.	24198.	640910.
#2	47553.	24247.	650780.

Sample Name: S 711054-012-012-1/1 Acquired: 12/11/2007 1:28:40 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.6922	44921.	23.900	-4.2246	150.97	1.6266	2350.8
Stddev	.1494	2544.	4.107	.4761	.56	.0169	137.2
%RSD	8.8302	5.6639	17.185	11.270	.37054	1.0357	5.8368
#1	1.5865	43122.	20.996	-4.5612	151.37	1.6385	2253.7
#2	1.7979	46720.	26.804	-3.8879	150.58	1.6146	2447.8

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.0377	132.19	393.81	392.9	384.4	251.8	240040.
Stddev	.7637	.56	.26	1.1	14.7	6.3	13652.
%RSD	73.595	.42576	.06579	.2758	3.823	2.487	5.6873
#1	1.5777	131.79	393.99	392.1	374.0	256.3	230390.
#2	.49769	132.59	393.63	393.7	394.7	247.4	249700.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1194.8	1674.	1878.	7525.0	4.1695	-69.607	108.11
Stddev	22.4	91.	99.	83.8	.3512	12.722	1.32
%RSD	1.8718	5.440	5.262	1.1137	8.4235	18.277	1.2178
#1	1179.0	1610.	1808.	7584.2	3.9212	-60.611	107.18
#2	1210.7	1738.	1948.	7465.7	4.4179	-78.603	109.04

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	31.712	1.1356	1.8650	588.04	5.8943	48.421	26.703
Stddev	1.347	.6371	2.3199	2.49	.0166	.200	4.026
%RSD	4.2472	56.106	124.40	.42298	.28153	.41202	15.077
#1	32.665	1.5861	.22453	589.80	5.8826	48.562	23.856
#2	30.760	.68507	3.5054	586.28	5.9061	48.279	29.549

Sample Name: S 711054-012-012-1/1 Acquired: 12/11/2007 1:28:40 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	10211.	4.2980	549.98	212.27
Stddev	49.	.4436	1.64	1.18
%RSD	.48045	10.321	.29772	.55580
#1	10246.	4.6116	551.14	213.10
#2	10177.	3.9843	548.82	211.43

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47077.	23553.	643810.
Stddev	55.	1428.	1043.
%RSD	.11785	6.0628	.16196
#1	47117.	24562.	643070.
#2	47038.	22543.	644540.

Sample Name: CCV Acquired: 12/11/2007 1:32:11 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**500.10**	**50313.**	**533.77**	**519.39**	**495.40**	**50.574**	**99705.**
Stddev	.39	1727.	2.02	.03	.27	.041	3210.
%RSD	.07797	3.4327	.37766	.00624	.05539	.08050	3.2193
#1	499.83	49091.	532.34	519.36	495.60	50.602	97435.
#2	500.38	51534.	535.19	519.41	495.21	50.545	101970.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**520.08**	**504.74**	**513.61**	**F 596.5**	**F 571.4**	**542.5**	**49194.**
Stddev	1.05	.24	.20	3.5	3.6	3.0	1541.
%RSD	.20160	.04692	.03957	.5792	.6284	.5494	3.1317
#1	519.34	504.57	513.76	594.0	568.9	540.4	48104.
#2	520.82	504.91	513.47	598.9	574.0	544.6	50283.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24777.**	**93700.**	**100400.**	**487.50**	**525.95**	**102250.**	**491.56**
Stddev	813.	2997.	3436.	1.35	.32	3253.	.80
%RSD	3.2796	3.199	3.422	.27680	.06016	3.1819	.16324
#1	24202.	91580.	97980.	488.45	525.72	99945.	492.13
#2	25351.	95820.	102800.	486.54	526.17	104550.	491.00
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 1:32:11 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**514.87**	**512.37**	**520.88**	**504.86**	**518.69**	**491.53**	**517.20**
Stddev	.65	1.41	3.40	.70	.62	2.57	1.58
%RSD	.12527	.27464	.65287	.13958	.11955	.52191	.30499
#1	515.33	513.36	518.48	505.36	518.25	493.35	516.09
#2	514.42	511.37	523.29	504.36	519.13	489.72	518.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**492.58**	**517.14**	**505.70**	F **632.56**
Stddev	.98	.02	1.47	.78
%RSD	.19898	.00431	.29045	.12340
#1	493.27	517.16	506.74	632.01
#2	491.88	517.12	504.66	633.12
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45686.	24215.	624140.
Stddev	167.	756.	1276.
%RSD	.36571	3.1219	.20438
#1	45804.	24749.	623240.
#2	45568.	23680.	625050.

Sample Name: CCB Acquired: 12/11/2007 1:35:49 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04558	2.7833	.00591	-.68510	.03229	.01131	11.306	.09914
Stddev	.51546	8.4781	.60329	.42736	.01359	.00204	1.056	.00644
%RSD	1131.0	304.60	10213.	62.379	42.078	18.033	9.3357	6.4926
#1	-.31891	-3.2116	.43250	-.38291	.02268	.01275	10.560	.10370
#2	.41006	8.7782	-.42068	-.98728	.04190	.00987	12.053	.09459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.10712	.02428	-.2055	-.4341	1.958	34.497	-4.8804	F 11.74
Stddev	.10297	.26464	.0730	.1551	.448	2.732	16.326	.74
%RSD	96.121	1090.0	35.55	35.73	22.88	7.9182	334.52	6.311
#1	-.03431	-.16285	-.2571	-.5438	2.274	36.429	-16.424	12.27
#2	-.17993	.21141	-.1538	-.3244	1.641	32.566	6.6635	11.22
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit								3.000
Low Limit								-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 11.97	.33773	.10965	24.078	-.00198	-1.7927	.75426	-.44496
Stddev	.36	.04397	.40781	8.778	.08713	.1305	.02712	.53137
%RSD	3.048	13.020	371.91	36.457	4408.2	7.2776	3.5959	119.42
#1	12.23	.30664	.39802	30.284	-.06359	-1.7004	.77344	-.82070
#2	11.71	.36883	-.17871	17.871	.05963	-1.8849	.73509	-.06922
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/11/2007 1:35:49 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.12758	.07359	.01844	.56421	1.0188	1.2971	-.04954	-.19072
Stddev	.85107	.05901	.00552	.66038	.2357	.3645	.02254	.01364
%RSD	667.08	80.190	29.907	117.04	23.136	28.102	45.497	7.1512
#1	.47421	.11531	.01454	1.0312	.85212	1.0394	-.06547	-.20037
#2	-.72938	.03186	.02234	.09725	1.1855	1.5549	-.03360	-.18108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46820.	24090.	641310.
Stddev	46.	585.	945.
%RSD	.09800	2.4264	.14738
#1	46853.	24504.	641980.
#2	46788.	23677.	640640.

Sample Name: S 711054-013-013-1/1 Acquired: 12/11/2007 1:39:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.6879**	**57526.**	**38.927**	**-3.8007**	**16.544**	**.99570**	**741.81**
Stddev	.0642	955.	2.823	.0932	.177	.11590	8.10
%RSD	3.8042	1.6594	7.2523	2.4526	1.0727	11.640	1.0920
#1	1.7333	58201.	40.923	-3.8666	16.670	1.0777	747.54
#2	1.6425	56851.	36.931	-3.7348	16.419	.91374	736.09

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2733**	**8.5628**	**626.29**	**247.2**	**324.2**	**180.5**	**293050.**
Stddev	.1358	.0186	.48	.4	6.8	1.6	5211.
%RSD	10.669	.21757	.07614	.1807	2.103	.9115	1.7783
#1	1.1772	8.5497	626.63	246.9	329.0	181.7	296730.
#2	1.3693	8.5760	625.95	247.6	319.4	179.4	289360.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**608.07**	**408.4**	**467.2**	**434.65**	**6.9366**	**-12.711**	**31.465**
Stddev	12.12	8.1	6.9	3.26	.1725	34.720	.634
%RSD	1.9924	1.974	1.479	.74968	2.4869	273.15	2.0144
#1	616.64	414.1	472.1	436.95	6.8147	11.840	31.913
#2	599.50	402.7	462.3	432.34	7.0586	-37.262	31.017

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**26.916**	**2.3360**	**20.365**	**678.52**	**9.6426**	**6.5024**	**36.573**
Stddev	.520	.2280	.700	7.44	.3386	.0628	1.986
%RSD	1.9333	9.7610	3.4359	1.0964	3.5118	.96605	5.4300
#1	26.548	2.4972	19.870	683.78	9.4032	6.5468	37.978
#2	27.284	2.1748	20.859	673.26	9.8821	6.4579	35.169

Sample Name: S 711054-013-013-1/1 Acquired: 12/11/2007 1:39:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	8903.9	4.2684	743.74	85.620
Stddev	8.1	.4571	3.23	.160
%RSD	.09115	10.709	.43473	.18636
#1	8898.1	3.9452	746.02	85.507
#2	8909.6	4.5917	741.45	85.733

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46750.	23460.	635300.
Stddev	15.	258.	747.
%RSD	.03283	1.0976	.11760
#1	46739.	23278.	634770.
#2	46760.	23642.	635830.

Sample Name: S 711054-014-014-1/1 Acquired: 12/11/2007 1:42:41 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.1793**	**62807.**	**31.362**	**-4.4432**	**15.033**	**1.2032**	**1595.9**
Stddev	.0810	1030.	.788	.1475	.055	.0134	25.1
%RSD	6.8704	1.6396	2.5118	3.3200	.36759	1.1148	1.5756
#1	1.1220	62079.	31.919	-4.3389	15.073	1.2126	1578.1
#2	1.2366	63535.	30.805	-4.5475	14.994	1.1937	1613.7

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3348**	**10.114**	**571.69**	**226.0**	**288.7**	**167.7**	**242600.**
Stddev	.2725	.144	1.33	1.2	3.7	1.8	3861.
%RSD	20.416	1.4269	.23322	.5401	1.276	1.093	1.5917
#1	1.5276	10.012	572.63	225.1	286.1	166.4	239870.
#2	1.1421	10.216	570.75	226.8	291.3	169.0	245330.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**443.68**	**506.5**	**571.0**	**430.53**	**4.9180**	**-33.367**	**35.243**
Stddev	28.27	9.2	12.3	1.37	.1259	30.347	.441
%RSD	6.3712	1.822	2.160	.31838	2.5594	90.948	1.2516
#1	423.69	500.0	562.3	431.50	4.8290	-54.826	34.931
#2	463.66	513.0	579.7	429.56	5.0070	-11.909	35.555

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**26.758**	**4.4248**	**14.338**	**568.17**	**8.0138**	**9.8583**	**26.990**
Stddev	1.211	1.0732	1.213	2.04	.8271	.1156	.005
%RSD	4.5249	24.255	8.4574	.35967	10.320	1.1728	.01713
#1	25.901	3.6659	13.480	569.61	8.5986	9.9400	26.993
#2	27.614	5.1837	15.195	566.72	7.4290	9.7765	26.986

Sample Name: S 711054-014-014-1/1 Acquired: 12/11/2007 1:42:41 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	8787.7	3.5767	639.22	90.870
Stddev	3.0	.5233	2.12	.322
%RSD	.03410	14.631	.33192	.35413
#1	8785.6	3.9467	640.72	91.098
#2	8789.8	3.2066	637.72	90.642

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47025.	23945.	640520.
Stddev	45.	119.	3206.
%RSD	.09673	.49627	.50053
#1	47058.	24029.	638250.
#2	46993.	23861.	642780.

Sample Name: S 711054-015-015-1/1 Acquired: 12/11/2007 1:46:08 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.7112**	**55323.**	**29.626**	**-5.0986**	**13.155**	**1.4252**	**287.19**
Stddev	.1615	236.	1.694	.6682	.000	.1915	4.68
%RSD	9.4397	.42692	5.7187	13.105	.00266	13.438	1.6299
#1	1.5970	55490.	30.824	-4.6262	13.155	1.5606	290.50
#2	1.8254	55156.	28.428	-5.5711	13.155	1.2898	283.88

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2170**	**9.9422**	**620.35**	**259.6**	**313.1**	**179.3**	**271080.**
Stddev	.1669	.2761	1.48	2.5	.2	1.7	1247.
%RSD	13.711	2.7767	.23840	.9665	.0763	.9690	.45981
#1	1.0990	10.137	619.31	261.4	313.3	180.6	271960.
#2	1.3349	9.7470	621.40	257.8	313.0	178.1	270200.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**259.37**	**553.9**	**624.7**	**381.62**	**5.1369**	**-81.310**	**36.246**
Stddev	17.15	2.9	.0	.98	.0642	2.350	.369
%RSD	6.6121	.5183	.0047	.25732	1.2498	2.8905	1.0170
#1	247.25	556.0	624.6	380.93	5.1823	-79.648	36.507
#2	271.50	551.9	624.7	382.32	5.0915	-82.972	35.986

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**25.497**	**4.2868**	**17.712**	**643.07**	**8.5462**	**4.5538**	**31.353**
Stddev	1.908	.6401	.575	1.82	.3457	.0022	2.290
%RSD	7.4851	14.931	3.2460	.28229	4.0449	.04835	7.3046
#1	24.147	3.8342	18.118	641.78	8.3018	4.5523	32.973
#2	26.846	4.7394	17.305	644.35	8.7907	4.5554	29.734

Sample Name: S 711054-015-015-1/1 Acquired: 12/11/2007 1:46:08 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	10821.	3.5670	746.58	67.796
Stddev	35.	.7146	2.32	.072
%RSD	.31998	20.033	.31017	.10563
#1	10797.	4.0723	744.94	67.745
#2	10846.	3.0617	748.22	67.846

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46930.	23574.	636900.
Stddev	90.	172.	971.
%RSD	.19228	.73099	.15248
#1	46866.	23452.	637590.
#2	46994.	23696.	636210.

Sample Name: S 711054-016-016-1/1 Acquired: 12/11/2007 1:49:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.1954	66345.	19.610	-5.4463	10.052	1.5938	372.56
Stddev	.1718	187.	.402	.2299	.049	.0413	5.37
%RSD	14.372	.28220	2.0489	4.2219	.48374	2.5917	1.4415
#1	1.3169	66478.	19.894	-5.2837	10.086	1.5646	368.76
#2	1.0739	66213.	19.326	-5.6089	10.017	1.6230	376.36

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.45980	17.451	521.23	274.2	323.2	219.7	186900.
Stddev	.14631	.274	.85	.8	1.2	10.4	187.
%RSD	31.820	1.5721	.16304	.2838	.3579	4.748	.09979
#1	.56326	17.257	521.83	274.8	324.0	227.1	186770.
#2	.35634	17.645	520.63	273.7	322.4	212.3	187030.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	128.06	836.6	930.3	376.82	1.8912	-80.062	60.115
Stddev	27.26	.4	1.7	2.52	.0923	1.879	.228
%RSD	21.289	.0501	.1781	.66984	4.8782	2.3469	.37849
#1	147.34	836.3	929.1	378.60	1.9565	-78.734	60.276
#2	108.78	836.9	931.5	375.03	1.8260	-81.391	59.954

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	12.755	1.0268	9.8983	600.33	5.9732	4.5996	24.814
Stddev	.079	.3938	.8495	5.43	.1353	.0563	1.222
%RSD	.62117	38.348	8.5819	.90382	2.2646	1.2245	4.9256
#1	12.699	.74839	10.499	604.17	6.0689	4.6395	25.678
#2	12.811	1.3053	9.2976	596.49	5.8776	4.5598	23.950

Sample Name: S 711054-016-016-1/1 Acquired: 12/11/2007 1:49:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	10012.	2.7772	540.08	92.384
Stddev	130.	.8652	2.47	.461
%RSD	1.3024	31.152	.45700	.49846
#1	10104.	3.3890	541.82	92.710
#2	9920.0	2.1655	538.33	92.059

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47197.	23669.	634080.
Stddev	52.	31.	928.
%RSD	.11061	.13060	.14640
#1	47161.	23691.	633420.
#2	47234.	23647.	634730.

Sample Name: S 711054-017-017-1/1 Acquired: 12/11/2007 1:53:04 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4077**	**61289.**	**19.222**	**-5.6759**	**11.433**	**1.5457**	**435.34**
Stddev	.2957	1700.	.887	.0174	.230	.0933	10.21
%RSD	21.001	2.7739	4.6151	.30627	2.0080	6.0328	2.3441
#1	1.6168	62491.	19.849	-5.6882	11.595	1.6116	442.56
#2	1.1987	60087.	18.595	-5.6636	11.271	1.4797	428.12

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.20637**	**16.660**	**503.97**	**270.7**	**320.8**	**210.7**	**204180.**
Stddev	.23958	.368	9.36	2.6	7.4	9.5	4583.
%RSD	116.09	2.2117	1.8571	.9445	2.296	4.508	2.2447
#1	.03696	16.400	510.59	272.5	326.0	217.4	207420.
#2	.37578	16.921	497.36	268.9	315.6	204.0	200940.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**183.81**	**862.1**	**963.3**	**371.46**	**1.7154**	**-93.921**	**55.740**
Stddev	57.11	21.8	24.3	6.39	.2948	23.427	.354
%RSD	31.071	2.533	2.518	1.7191	17.186	24.943	.63429
#1	143.43	877.5	980.4	375.97	1.9238	-110.49	55.990
#2	224.19	846.6	946.1	366.94	1.5069	-77.356	55.490

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**16.039**	**.04650**	**10.460**	**579.33**	**6.5371**	**4.8676**	**26.651**
Stddev	.634	1.2177	3.839	11.71	.4576	.0968	2.249
%RSD	3.9553	2618.6	36.701	2.0212	6.9999	1.9886	8.4373
#1	15.590	-.81451	13.175	587.61	6.2136	4.9360	28.241
#2	16.487	.90751	7.7458	571.05	6.8607	4.7991	25.061

Sample Name: S 711054-017-017-1/1 Acquired: 12/11/2007 1:53:04 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9719.3	3.2203	532.60	82.505
Stddev	192.6	.0302	8.43	.600
%RSD	1.9815	.93856	1.5823	.72762
#1	9855.5	3.2417	538.56	82.081
#2	9583.1	3.1989	526.64	82.930
Int. Std.	Y_2243	Y_3774	Y_3774-2	
Units	Cts/S	Cts/S	Cts/S	
Avg	47103.	23159.	637060.	
Stddev	114.	408.	2319.	
%RSD	.24261	1.7630	.36398	
#1	47022.	22870.	635420.	
#2	47184.	23448.	638700.	

Sample Name: S 711054-018-018-1/1 Acquired: 12/11/2007 1:56:32 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.97340	65080.	20.244	-5.6739	11.263	1.4715	1107.3
Stddev	.53977	1058.	3.949	.3241	.304	.0664	10.8
%RSD	55.452	1.6256	19.507	5.7123	2.6961	4.5107	.97950
#1	1.3551	65828.	17.451	-5.4447	11.477	1.5185	1115.0
#2	.59173	64331.	23.036	-5.9031	11.048	1.4246	1099.6

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.06620	16.515	499.25	270.1	326.6	222.0	200140.
Stddev	.04418	.270	11.59	4.8	5.7	1.7	2695.
%RSD	66.742	1.6350	2.3218	1.779	1.746	.7745	1.3468
#1	-.09745	16.324	507.44	273.5	330.6	223.2	202050.
#2	-.03496	16.706	491.05	266.7	322.5	220.8	198240.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	67.357	864.7	964.0	377.93	2.4405	-75.229	55.313
Stddev	46.480	16.3	16.7	9.48	.1106	15.471	.202
%RSD	69.005	1.879	1.734	2.5080	4.5334	20.565	.36609
#1	100.22	876.2	975.8	384.63	2.5187	-86.168	55.456
#2	34.491	853.2	952.2	371.22	2.3623	-64.289	55.170

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	16.612	.37687	13.021	636.79	6.1105	7.1151	26.538
Stddev	.118	1.6458	.419	16.56	.8299	.1905	.476
%RSD	.71051	436.71	3.2206	2.5998	13.582	2.6767	1.7946
#1	16.695	-.78690	13.318	648.50	6.6973	7.2498	26.874
#2	16.528	1.5406	12.725	625.09	5.5237	6.9805	26.201

Sample Name: S 711054-018-018-1/1 Acquired: 12/11/2007 1:56:32 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9785.4	3.4837	533.19	84.062
Stddev	265.9	3.3220	13.62	.771
%RSD	2.7178	95.360	2.5550	.91745
#1	9973.4	5.8327	542.82	84.607
#2	9597.3	1.1347	523.55	83.517

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47473.	23356.	635040.
Stddev	123.	156.	7106.
%RSD	.25812	.66733	1.1190
#1	47386.	23246.	630010.
#2	47559.	23466.	640060.

Sample Name: S 711054-019-019-1/1 Acquired: 12/11/2007 1:59:59 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3569**	**64457.**	**14.611**	**-5.4695**	**10.572**	**1.4727**	**968.13**
Stddev	.2999	1721.	.840	.1063	.028	.0349	23.79
%RSD	22.101	2.6703	5.7503	1.9440	.26936	2.3697	2.4568
#1	1.5689	65674.	14.017	-5.5446	10.592	1.4480	984.95
#2	1.1448	63240.	15.205	-5.3943	10.552	1.4973	951.31

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.58580**	**17.338**	**497.97**	**260.6**	**304.9**	**206.5**	**184910.**
Stddev	.20880	.099	1.18	.6	4.6	5.3	3938.
%RSD	35.644	.57167	.23704	.2466	1.524	2.583	2.1297
#1	.43815	17.408	498.80	261.0	308.2	210.3	187690.
#2	.73344	17.268	497.13	260.1	301.6	202.7	182120.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**89.296**	**854.0**	**949.8**	**382.92**	**1.5342**	**-87.730**	**58.556**
Stddev	42.777	22.7	18.2	1.42	.0274	10.176	.354
%RSD	47.905	2.661	1.921	.36971	1.7862	11.599	.60492
#1	119.54	870.1	962.7	383.92	1.5536	-80.535	58.306
#2	59.048	837.9	936.9	381.92	1.5149	-94.925	58.807

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**16.004**	**.13755**	**7.7479**	**581.69**	**5.4208**	**6.7032**	**21.106**
Stddev	.064	.01523	.2048	2.92	.5360	.0346	.312
%RSD	.40191	11.072	2.6438	.50134	9.8887	.51626	1.4805
#1	15.958	.12678	7.6031	583.75	5.7998	6.7277	20.885
#2	16.049	.14832	7.8928	579.63	5.0417	6.6788	21.327

Sample Name: S 711054-019-019-1/1 Acquired: 12/11/2007 1:59:59 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**9367.9**	**3.1888**	**509.54**	**85.567**
Stddev	36.8	.4532	1.45	.610
%RSD	.39334	14.213	.28456	.71238
#1	9393.9	2.8684	510.57	85.136
#2	9341.8	3.5093	508.52	85.998

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47346.	23483.	634480.
Stddev	119.	342.	2412.
%RSD	.25039	1.4559	.38012
#1	47430.	23241.	632780.
#2	47262.	23724.	636190.

Sample Name: S 711054-020-020-1/1 Acquired: 12/11/2007 2:03:27 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.2342	73102.	20.165	-5.9277	11.235	1.5928	1177.7
Stddev	.1520	1304.	.692	.7598	.138	.0129	25.3
%RSD	12.313	1.7839	3.4324	12.817	1.2269	.80884	2.1442
#1	1.3416	74024.	19.676	-6.4650	11.332	1.6019	1195.5
#2	1.1267	72180.	20.655	-5.3905	11.137	1.5837	1159.8

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.27889	15.923	532.39	258.9	320.4	209.8	199580.
Stddev	.18841	.089	5.66	1.4	5.2	1.5	3522.
%RSD	67.559	.55812	1.0636	.5318	1.618	.6933	1.7645
#1	.14566	15.860	536.39	259.9	324.0	208.8	202070.
#2	.41212	15.986	528.38	258.0	316.7	210.8	197090.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	189.81	837.8	934.8	412.68	2.2177	-94.372	57.214
Stddev	71.79	12.1	14.1	4.72	.0001	12.958	.181
%RSD	37.823	1.440	1.510	1.1443	.00361	13.731	.31596
#1	139.05	846.3	944.8	416.01	2.2178	-85.209	57.086
#2	240.58	829.2	924.8	409.34	2.2177	-103.53	57.342

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	17.462	3.2983	11.565	637.51	6.1483	7.3303	26.365
Stddev	1.051	1.3470	.360	9.77	.3404	.1025	.078
%RSD	6.0197	40.837	3.1106	1.5318	5.5361	1.3988	.29735
#1	16.719	2.3459	11.311	644.42	6.3890	7.4028	26.421
#2	18.205	4.2508	11.820	630.61	5.9077	7.2578	26.310

Sample Name: S 711054-020-020-1/1 Acquired: 12/11/2007 2:03:27 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9727.1	2.3027	548.05	89.247
Stddev	102.8	1.4468	5.57	.067
%RSD	1.0574	62.829	1.0166	.07475
#1	9799.9	3.3257	551.99	89.200
#2	9654.4	1.2797	544.11	89.295

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47504.	23376.	642680.
Stddev	53.	207.	362.
%RSD	.11053	.88360	.05632
#1	47466.	23230.	642420.
#2	47541.	23522.	642940.

Sample Name: BLK 109 Acquired: 12/11/2007 2:06:54 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.05983	-9.0641	-3.3375	.29737	.06986	.02008	111.03	-.15098
Stddev	.15334	19.431	.8357	.18377	.00094	.00575	6.38	.06064
%RSD	256.27	214.38	25.038	61.797	1.3488	28.620	5.7472	40.167
#1	-.16826	4.6759	-2.7466	.42732	.06920	.02414	106.51	-.10810
#2	.04859	-22.804	-3.9284	.16743	.07053	.01601	115.54	-.19386

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.37372	1.4959	1.943	1.406	7.069	32.896	-151.53	-2.866
Stddev	.03841	.0379	.016	.316	2.209	6.397	111.16	.262
%RSD	10.279	2.5300	.8302	22.47	31.25	19.445	73.360	9.122
#1	-.34655	1.5227	1.954	1.182	8.631	37.419	-230.13	-3.051
#2	-.40088	1.4691	1.931	1.629	5.507	28.373	-72.924	-2.682

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-3.852	.24059	-.00779	-158.59	1.6919	-1.2610	-.81127	3.1070
Stddev	3.432	.03048	.10075	20.58	.4225	.3874	1.4028	1.6995
%RSD	89.10	12.668	1293.6	12.977	24.969	30.719	172.91	54.700
#1	-6.279	.21904	.06345	-144.04	1.9907	-.98709	-1.8032	1.9052
#2	-1.425	.26214	-.07903	-173.14	1.3932	-1.5349	.18063	4.3087

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.8948	29.193	.08890	-2.3307	1.7857	-2.7688	-.14795	19.132
Stddev	.2337	.443	.01004	.4783	.0528	.2984	.08387	.002
%RSD	2.6274	1.5172	11.297	20.523	2.9562	10.777	56.687	.01108
#1	8.7295	28.880	.09600	-2.6689	1.8230	-2.9798	-.08864	19.130
#2	9.0600	29.506	.08180	-1.9925	1.7484	-2.5578	-.20725	19.133

Sample Name: BLK 109 Acquired: 12/11/2007 2:06:54 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46351.	23445.	635650.
Stddev	187.	271.	5725.
%RSD	.40253	1.1573	.90056
#1	46219.	23637.	631600.
#2	46483.	23253.	639700.

Sample Name: BKS 109 Acquired: 12/11/2007 2:10:21 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**98.243**	**9378.9**	**98.391**	**954.12**	**1002.7**	**49.045**	**9748.5**	**104.27**
Stddev	.106	830.7	.203	.75	4.7	.162	842.2	.06
%RSD	.10803	8.8571	.20655	.07844	.46643	.33052	8.6395	.05334
#1	98.318	8791.5	98.247	954.65	999.44	48.931	9153.0	104.23
#2	98.168	9966.3	98.535	953.59	1006.1	49.160	10344.	104.31

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**504.58**	**511.76**	**553.3**	**925.4**	**475.8**	**9425.3**	**9558.2**	**9383.**
Stddev	.36	2.28	1.4	.9	8.5	828.1	800.3	827.
%RSD	.07200	.44564	.2442	.0940	1.783	8.7859	8.3728	8.812
#1	504.83	510.15	554.3	926.0	469.8	8839.8	8992.3	8798.
#2	504.32	513.38	552.4	924.7	481.8	10011.	10124.	9967.

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**10240.**	**978.28**	**527.00**	**9730.3**	**501.15**	**1022.4**	**97.426**	**101.46**
Stddev	885.	2.36	.17	825.4	1.20	1.6	3.373	.65
%RSD	8.642	.24153	.03214	8.4828	.23936	.15436	3.4626	.64019
#1	9614.	976.61	527.12	9146.6	502.00	1023.5	95.041	101.92
#2	10870.	979.95	526.88	10314.	500.30	1021.3	99.812	101.00

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**8388.2**	**547.31**	**976.30**	**385.84**	**1919.8**	**102.92**	**507.16**	**1035.9**
Stddev	1.9	.54	1.36	.50	.0	.19	1.96	1.2
%RSD	.02283	.09806	.13976	.13007	.00184	.18114	.38578	.11647
#1	8389.6	547.68	975.33	386.20	1919.8	102.79	505.77	1036.7
#2	8386.9	546.93	977.26	385.49	1919.8	103.05	508.54	1035.0

Sample Name: BKS 109 Acquired: 12/11/2007 2:10:21 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46719.	25288.	640530.
Stddev	106.	1664.	1254.
%RSD	.22660	6.5823	.19573
#1	46644.	26465.	641420.
#2	46794.	24111.	639640.

Sample Name: CCV Acquired: 12/11/2007 2:13:57 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	497.29	50283.	527.64	516.32	494.21	49.997	100140.
Stddev	2.30	189.	1.56	.32	1.98	.182	842.
%RSD	.46166	.37563	.29629	.06161	.40059	.36347	.84120
#1	495.67	50149.	528.75	516.54	495.61	49.868	99546.
#2	498.92	50416.	526.54	516.09	492.81	50.125	100740.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	514.78	501.69	506.27	F 594.1	F 567.8	525.8	49425.
Stddev	.29	.51	2.42	.8	1.1	3.5	384.
%RSD	.05655	.10158	.47739	.1363	.2023	.6602	.77660
#1	514.99	502.05	504.56	594.7	567.0	528.3	49153.
#2	514.58	501.33	507.98	593.6	568.7	523.4	49696.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24803.	93810.	100200.	485.52	521.43	103840.	488.99
Stddev	177.	269.	670.	.49	.01	1207.	.54
%RSD	.71486	.2865	.6687	.10087	.00171	1.1623	.10986
#1	24678.	93620.	99770.	485.17	521.42	102980.	489.37
#2	24928.	94000.	100700.	485.86	521.43	104690.	488.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 2:13:57 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**511.88**	**509.04**	**516.61**	**503.83**	**514.30**	**491.04**	**511.25**
Stddev	.20	2.76	.43	2.88	.37	3.13	1.44
%RSD	.03928	.54296	.08330	.57176	.07221	.63697	.28240
#1	511.73	510.99	516.91	501.80	514.56	488.83	512.27
#2	512.02	507.09	516.30	505.87	514.03	493.25	510.23
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**486.45**	**514.13**	**501.71**	**F 626.10**
Stddev	1.72	1.33	1.62	.07
%RSD	.35414	.25821	.32306	.01184
#1	485.23	515.07	500.57	626.15
#2	487.67	513.19	502.86	626.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46714.	24011.	639640.
Stddev	48.	112.	1634.
%RSD	.10270	.46622	.25544
#1	46680.	24091.	640790.
#2	46748.	23932.	638480.

Sample Name: CCB Acquired: 12/11/2007 2:17:34 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.20390	3.9743	2.4326	.28506	.09013	.01527	24.213	.05998
Stddev	.03962	1.4530	.2959	.02524	.00517	.00271	.133	.02025
%RSD	19.433	36.559	12.162	8.8528	5.7349	17.755	.54887	33.770
#1	.17588	2.9469	2.6418	.30290	.09378	.01719	24.307	.07430
#2	.23192	5.0017	2.2234	.26721	.08647	.01335	24.119	.04566
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04460	-.16978	-.0664	.0150	F 5.168	29.547	-26.639	F 15.18
Stddev	.04323	.31599	1.086	.4389	5.345	.171	22.342	.36
%RSD	96.935	186.11	1635.	2929.	103.4	.57949	83.869	2.373
#1	.07517	-.39322	.7013	-.2954	1.388	29.668	-42.437	15.44
#2	.01403	.05365	-.8341	.3254	8.948	29.426	-10.841	14.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit					3.000			3.000
Low Limit					-3.000			-3.000

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 13.36	.20296	.03113	23.068	.10711	-.26825	-.83667	-.89579
Stddev	.30	.06486	.08168	17.455	.24689	1.5959	1.4015	.22529
%RSD	2.282	31.958	262.39	75.665	230.50	594.94	167.51	25.150
#1	13.14	.24883	-.02663	35.411	-.06747	.86024	.15433	-1.0551
#2	13.57	.15710	.08889	10.726	.28169	-1.3967	-1.8277	-.73648
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	3.000							
Low Limit	-3.000							

Sample Name: CCB Acquired: 12/11/2007 2:17:34 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.64288	.03916	.08283	-.24908	1.0782	.42516	.09428	-.10970
Stddev	.46753	.34944	.00603	.90454	.2164	.00587	.03152	.01640
%RSD	72.725	892.40	7.2822	363.15	20.067	1.3800	33.427	14.946
#1	-.31228	-.20794	.08710	.39052	1.2312	.42931	.07200	-.09810
#2	-.97347	.28625	.07857	-.88868	.92519	.42101	.11657	-.12129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48184.	24585.	653560.
Stddev	25.	668.	561.
%RSD	.05113	2.7179	.08578
#1	48167.	25058.	653160.
#2	48202.	24113.	653950.

Sample Name: S 711054-021-021-1/1 Acquired: 12/11/2007 2:20:59 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.6340**	**61763.**	**19.964**	**-4.3140**	**10.299**	**1.2896**	**483.79**
Stddev	.5157	224.	1.540	.0633	.031	.1286	.73
%RSD	31.560	.36195	7.7146	1.4669	.29750	9.9679	.15156
#1	1.9987	61605.	21.054	-4.2693	10.277	1.3805	484.31
#2	1.2694	61922.	18.875	-4.3588	10.321	1.1987	483.28

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.73073**	**16.561**	**469.73**	**241.2**	**293.4**	**186.5**	**176780.**
Stddev	.09663	.004	4.38	.2	.0	8.1	633.
%RSD	13.224	.02407	.93210	.1035	.0164	4.368	.35833
#1	.79906	16.564	466.63	241.0	293.4	192.3	176330.
#2	.66240	16.558	472.82	241.3	293.4	180.8	177230.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**224.98**	**711.1**	**799.1**	**350.35**	**2.1134**	**-8.2834**	**54.826**
Stddev	14.07	4.2	.1	2.03	.2050	15.920	.718
%RSD	6.2529	.5903	.0089	.57798	9.6982	192.19	1.3099
#1	234.93	708.2	799.0	348.92	2.2583	-19.540	54.318
#2	215.03	714.1	799.1	351.78	1.9685	2.9736	55.334

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**16.364**	**3.0110**	**10.927**	**581.43**	**5.1905**	**4.5793**	**21.762**
Stddev	.784	.5053	.417	.75	.2003	.0189	1.104
%RSD	4.7896	16.782	3.8117	.12901	3.8580	.41330	5.0734
#1	16.919	3.3683	10.633	580.90	5.0489	4.5659	20.981
#2	15.810	2.6537	11.222	581.96	5.3321	4.5927	22.542

Sample Name: S 711054-021-021-1/1 Acquired: 12/11/2007 2:20:59 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor:. 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	8634.5	1.3609	489.29	83.907
Stddev	1.5	1.8917	3.43	.067
%RSD	.01725	139.01	.70101	.08002
#1	8633.4	2.6985	486.86	83.859
#2	8635.5	.02322	491.71	83.954

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47807.	24070.	651770.
Stddev	100.	80.	5659.
%RSD	.20832	.33317	.86823
#1	47877.	24126.	655780.
#2	47736.	24013.	647770.

Sample Name: SP711054-021-021-1/1 Acquired: 12/11/2007 2:24:27 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.685**	**93945.**	**25.507**	**89.549**	**115.36**	**4.8017**	**1569.5**
Stddev	.084	546.	2.115	.785	.83	.0038	11.0
%RSD	.71566	.58072	8.2921	.87612	.71923	.08000	.70374
#1	11.744	93559.	24.011	90.103	115.95	4.7990	1561.7
#2	11.626	94331.	27.002	88.994	114.77	4.8045	1577.3

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.240**	**68.194**	**582.54**	**301.5**	**400.7**	**269.3**	**197960.**
Stddev	.160	.322	3.21	.2	1.9	.1	1064.
%RSD	1.4252	.47283	.55046	.0814	.4640	.0332	.53758
#1	11.354	67.966	584.80	301.7	399.4	269.4	197210.
#2	11.127	68.422	580.27	301.4	402.0	269.3	198710.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1372.6**	**1789.**	**2006.**	**484.47**	**37.087**	**1047.2**	**130.31**
Stddev	28.0	14.	8.	3.54	.188	27.4	.10
%RSD	2.0434	.7861	.4124	.73118	.50682	2.6173	.07815
#1	1352.8	1779.	2001.	486.98	36.954	1027.9	130.24
#2	1392.5	1798.	2012.	481.97	37.220	1066.6	130.39

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**121.38**	**7.2283**	**20.285**	**1112.2**	**55.317**	**108.44**	**55.695**
Stddev	.09	1.5312	1.788	10.4	.716	.82	.996
%RSD	.07160	21.183	8.8130	.93554	1.2951	.75779	1.7874
#1	121.32	8.3111	19.021	1119.6	54.811	109.02	56.399
#2	121.44	6.1456	21.549	1104.9	55.824	107.86	54.991

Sample Name: SP711054-021-021-1/1 Acquired: 12/11/2007 2:24:27 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9591.6	12.686	592.38	202.70
Stddev	5.2	1.281	4.93	.12
%RSD	.05380	10.095	.83203	.05798
#1	9595.3	13.592	595.86	202.61
#2	9588.0	11.781	588.89	202.78
Int. Std.	Y_2243	Y_3774	Y_3774-2	
Units	Cts/S	Cts/S	Cts/S	
Avg	47923.	24044.	654190.	
Stddev	43.	172.	3768.	
%RSD	.08957	.71645	.57601	
#1	47953.	24166.	651520.	
#2	47892.	23922.	656850.	

Sample Name: SD711054-021-021-1/1 Acquired: 12/11/2007 2:27:53 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.531**	**94987.**	**26.497**	**88.427**	**115.00**	**4.7927**	**1548.1**
Stddev	.120	1115.	.140	.500	.16	.0131	16.2
%RSD	1.0411	1.1734	.53011	.56599	.14044	.27346	1.0464
#1	11.446	94199.	26.398	88.781	115.11	4.8019	1536.6
#2	11.616	95775.	26.596	88.073	114.89	4.7834	1559.6

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.168**	**67.141**	**597.47**	**301.5**	**375.9**	**266.6**	**198880.**
Stddev	.207	.045	.49	1.6	3.2	1.3	3036.
%RSD	1.8494	.06650	.08232	.5184	.8485	.4910	1.5264
#1	11.314	67.109	597.12	302.6	373.6	265.6	196740.
#2	11.022	67.172	597.82	300.4	378.2	267.5	201030.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1403.3**	**1782.**	**1988.**	**489.66**	**35.903**	**1008.9**	**129.27**
Stddev	1.2	21.	24.	.38	.050	30.7	.09
%RSD	.08320	1.176	1.192	.07803	.13851	3.0391	.07096
#1	1404.1	1768.	1971.	489.93	35.868	987.19	129.20
#2	1402.5	1797.	2005.	489.39	35.938	1030.5	129.33

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**119.33**	**7.4324**	**16.533**	**726.52**	**54.534**	**108.47**	**56.439**
Stddev	.67	.9229	2.729	.88	.061	.02	.212
%RSD	.55991	12.418	16.504	.12058	.11115	.02297	.37498
#1	119.81	8.0850	14.604	727.14	54.491	108.49	56.589
#2	118.86	6.7798	18.462	725.90	54.577	108.45	56.289

Sample Name: SD711054-021-021-1/1 Acquired: 12/11/2007 2:27:53 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9585.5	13.974	602.73	201.01
Stddev	27.4	1.908	.15	.04
%RSD	.28547	13.657	.02412	.02109
#1	9604.9	15.324	602.63	201.04
#2	9566.2	12.625	602.83	200.98

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47742.	23844.	642480.
Stddev	11.	203.	1748.
%RSD	.02313	.85031	.27212
#1	47734.	23988.	643710.
#2	47750.	23701.	641240.

Sample Name: PS711054-021-021-1/1 Acquired: 12/11/2007 2:31:18 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**47.677**	**64752.**	**105.04**	**72.944**	**33.261**	**10.516**	**6295.9**
Stddev	.266	1995.	1.11	.377	.117	.015	198.3
%RSD	.55755	3.0805	1.0531	.51696	.35187	.14523	3.1491
#1	47.865	66162.	105.82	73.210	33.178	10.505	6436.1
#2	47.489	63341.	104.26	72.677	33.343	10.527	6155.7

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**23.049**	**48.798**	**496.27**	**279.1**	**612.4**	**222.1**	**182210.**
Stddev	.294	.201	.31	1.0	7.1	11.1	5844.
%RSD	1.2755	.41237	.06328	.3741	1.160	4.992	3.2073
#1	22.841	48.940	496.50	278.3	617.4	230.0	186340.
#2	23.257	48.655	496.05	279.8	607.4	214.3	178070.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**6055.6**	**6355.**	**7053.**	**443.44**	**35.905**	**5757.6**	**98.930**
Stddev	90.1	180.	184.	.66	.387	161.8	.791
%RSD	1.4887	2.830	2.607	.14846	1.0785	2.8110	.79943
#1	6119.3	6483.	7183.	442.97	36.179	5872.0	99.489
#2	5991.8	6228.	6923.	443.90	35.632	5643.1	98.371

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**104.93**	**90.094**	**88.394**	**5962.0**	**116.93**	**27.236**	**552.15**
Stddev	1.49	.733	3.014	10.1	.09	.042	3.22
%RSD	1.4204	.81329	3.4099	.16966	.07319	.15500	.58361
#1	105.98	90.612	86.263	5969.1	116.99	27.207	554.43
#2	103.88	89.576	90.525	5954.8	116.87	27.266	549.88

Sample Name: PS711054-021-021-1/1 Acquired: 12/11/2007 2:31:18 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	8861.3	115.11	518.38	172.52
Stddev	59.8	.30	1.07	.60
%RSD	.67533	.26363	.20595	.34648
#1	8818.9	115.33	517.62	172.10
#2	8903.6	114.90	519.13	172.95

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47405.	23016.	636850.
Stddev	121.	646.	1837.
%RSD	.25594	2.8082	.28844
#1	47319.	22559.	638150.
#2	47490.	23473.	635560.

Sample Name: SE711054-021-021-1/1 Acquired: 12/11/2007 2:34:43 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.02071**	**13253.**	**3.5658**	**-2.0526**	**2.1764**	**-.06353**	**94.682**	**-.03598**
Stddev	.26269	88.	.2952	.2088	.0085	.00693	2.802	.03327
%RSD	1268.3	.66775	8.2795	10.174	.39192	10.904	2.9598	92.473
#1	-.20646	13190.	3.3570	-1.9050	2.1704	-.06843	96.664	-.01245
#2	.16504	13315.	3.7745	-2.2003	2.1825	-.05863	92.700	-.05951

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**3.3204**	**101.96**	**52.94**	**62.99**	**37.55**	**37997.**	**-81.543**	**145.1**
Stddev	.0333	.07	1.53	.18	8.24	304.	7.960	.2
%RSD	1.0029	.07213	2.898	.2846	21.95	.80037	9.7612	.1198
#1	3.2968	102.01	51.85	62.87	31.72	37782.	-75.915	145.0
#2	3.3439	101.91	54.02	63.12	43.38	38212.	-87.172	145.2

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**159.8**	**75.983**	**.14118**	**-131.55**	**11.637**	**2.2674**	**-.66753**	**2.3789**
Stddev	1.9	.425	.04547	38.16	.137	.0493	1.4343	.6365
%RSD	1.182	.55939	32.205	29.004	1.1803	2.1726	214.87	26.756
#1	158.4	75.683	.17334	-158.53	11.540	2.2326	.34669	2.8289
#2	161.1	76.284	.10903	-104.57	11.735	2.3023	-1.6818	1.9288

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**129.29**	**.94279**	**.93606**	**5.0451**	**1944.8**	**.19636**	**106.38**	**19.191**
Stddev	.07	.00608	.00536	2.0935	4.4	1.2901	.36	.036
%RSD	.05394	.64445	.57211	41.496	.22808	657.04	.33858	.18836
#1	129.34	.94709	.93228	3.5648	1941.7	1.1086	106.13	19.165
#2	129.24	.93850	.93985	6.5255	1948.0	-.71592	106.64	19.216

Sample Name: SE711054-021-021-1/1 Acquired: 12/11/2007 2:34:43 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48100.	23833.	643040.
Stddev	152.	78.	2911.
%RSD	.31532	.32543	.45273
#1	47993.	23888.	645100.
#2	48207.	23778.	640980.

Sample Name: S 711054-022-022-1/1 Acquired: 12/11/2007 2:38:09 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4754**	**66318.**	**14.937**	**-5.3177**	**10.896**	**1.5690**	**679.94**
Stddev	.3829	531.	1.464	.0281	.053	.0925	4.89
%RSD	25.952	.80007	9.8029	.52760	.49001	5.8958	.71859
#1	1.7462	66693.	13.902	-5.2979	10.858	1.6344	683.40
#2	1.2047	65942.	15.973	-5.3375	10.934	1.5036	676.49

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.53700**	**18.397**	**501.46**	**276.7**	**330.3**	**212.6**	**190130.**
Stddev	.01893	.117	3.66	4.0	.1	2.8	806.
%RSD	3.5254	.63816	.72961	1.456	.0159	1.319	.42408
#1	.55039	18.480	498.87	273.9	330.3	210.6	190700.
#2	.52362	18.314	504.05	279.6	330.3	214.6	189560.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**83.032**	**905.6**	**1010.**	**388.70**	**1.8273**	**-54.652**	**59.755**
Stddev	19.579	8.4	14.	1.17	.1131	13.993	.278
%RSD	23.581	.9271	1.436	.30099	6.1892	25.604	.46585
#1	69.187	911.5	1020.	387.87	1.9073	-64.546	59.559
#2	96.877	899.6	999.3	389.52	1.7473	-44.757	59.952

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**15.547**	**2.3384**	**9.6719**	**708.99**	**6.1633**	**5.6164**	**22.223**
Stddev	.911	2.4467	.2436	5.20	.4143	.0293	2.423
%RSD	5.8623	104.63	2.5187	.73395	6.7216	.52232	10.903
#1	14.903	.60835	9.4997	705.31	5.8704	5.5957	23.936
#2	16.192	4.0684	9.8442	712.67	6.4563	5.6372	20.510

Sample Name: S 711054-022-022-1/1 Acquired: 12/11/2007 2:38:09 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9859.1	2.0668	512.52	88.484
Stddev	35.3	.0249	2.61	.151
%RSD	.35768	1.2027	.50935	.17063
#1	9834.1	2.0844	510.68	88.377
#2	9884.0	2.0493	514.37	88.591

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47975.	23493.	646370.
Stddev	34.	220.	2140.
%RSD	.07061	.93718	.33102
#1	47999.	23337.	647890.
#2	47951.	23649.	644860.

Sample Name: S 711054-023-023-1/1 Acquired: 12/11/2007 2:41:37 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.1376**	**52846.**	**16.727**	**-5.4609**	**10.539**	**1.4644**	**560.98**
Stddev	.7427	94.	1.289	.1228	.084	.0868	1.24
%RSD	65.286	.17855	7.7060	2.2479	.79407	5.9285	.22096
#1	.61244	52780.	17.638	-5.3741	10.480	1.4031	561.85
#2	1.6628	52913.	15.815	-5.5477	10.598	1.5258	560.10

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.77303**	**18.496**	**491.02**	**264.0**	**300.9**	**194.8**	**187050.**
Stddev	.13184	.156	2.01	.5	.1	5.7	135.
%RSD	17.055	.84096	.40963	.1807	.0413	2.925	.07226
#1	.67980	18.386	489.59	264.3	300.9	198.8	187150.
#2	.86625	18.606	492.44	263.6	300.8	190.7	186960.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**115.56**	**872.3**	**970.2**	**377.74**	**2.0265**	**-72.963**	**52.494**
Stddev	14.67	1.8	4.6	2.68	.1384	4.728	.218
%RSD	12.697	.2010	.4715	.70944	6.8274	6.4800	.41452
#1	105.19	871.0	967.0	375.84	2.1244	-69.620	52.340
#2	125.94	873.5	973.4	379.63	1.9287	-76.306	52.648

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**14.936**	**2.0163**	**7.0496**	**528.20**	**5.6317**	**4.8831**	**22.648**
Stddev	1.965	1.4406	.6840	3.56	.0314	.0304	.345
%RSD	13.155	71.446	9.7023	.67483	.55700	.62248	1.5236
#1	13.547	.99766	6.5659	525.68	5.6538	4.8616	22.404
#2	16.326	3.0349	7.5332	530.72	5.6095	4.9046	22.892

Sample Name: S 711054-023-023-1/1 Acquired: 12/11/2007 2:41:37 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9553.3	2.3173	509.46	81.124
Stddev	14.8	.6732	2.97	.000
%RSD	.15516	29.052	.58314	.00036
#1	9542.8	1.8413	507.36	81.124
#2	9563.7	2.7934	511.57	81.124

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47865.	23920.	645720.
Stddev	46.	105.	1974.
%RSD	.09634	.44103	.30575
#1	47832.	23845.	647120.
#2	47897.	23994.	644330.

Sample Name: S 711054-024-024-1/1 Acquired: 12/11/2007 2:45:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.5538	43761.	23.369	-5.2186	13.844	1.1456	243.20
Stddev	.0478	507.	.323	.4781	.056	.1395	.16
%RSD	3.0775	1.1587	1.3821	9.1620	.40257	12.175	.06466
#1	1.5200	44119.	23.141	-4.8805	13.883	1.2442	243.09
#2	1.5876	43402.	23.598	-5.5567	13.804	1.0470	243.31

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.57955	11.494	464.43	231.5	280.2	162.3	226790.
Stddev	.09062	.024	3.26	2.0	2.2	2.0	2268.
%RSD	15.637	.21148	.70183	.8469	.7762	1.234	1.0001
#1	.51547	11.477	466.74	232.9	281.8	160.8	228400.
#2	.64363	11.512	462.13	230.1	278.7	163.7	225190.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	224.53	632.7	710.2	335.60	3.8881	-84.986	31.969
Stddev	26.70	9.4	5.5	1.45	.0527	8.575	.145
%RSD	11.892	1.483	.7791	.43334	1.3543	10.090	.45509
#1	243.41	639.4	714.1	336.63	3.8509	-91.050	32.072
#2	205.65	626.1	706.3	334.57	3.9254	-78.923	31.867

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	22.364	1.5724	10.125	526.52	7.4378	4.3863	29.824
Stddev	.725	1.1517	2.464	3.35	.1326	.0348	1.522
%RSD	3.2417	73.243	24.339	.63608	1.7828	.79224	5.1032
#1	22.876	.75803	11.868	528.89	7.3441	4.4109	30.900
#2	21.851	2.3867	8.3825	524.15	7.5316	4.3617	28.748

Sample Name: S 711054-024-024-1/1 Acquired: 12/11/2007 2:45:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**8906.4**	**2.0676**	**592.42**	**65.767**
Stddev	54.8	1.4488	3.49	.105
%RSD	.61493	70.071	.58978	.16013
#1	8945.1	3.0920	594.89	65.842
#2	8867.7	1.0432	589.95	65.693

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47720.	24135.	650380.
Stddev	108.	201.	788.
%RSD	.22618	.83348	.12110
#1	47644.	23993.	650930.
#2	47796.	24277.	649820.

Sample Name: S 711054-025-025-1/1 Acquired: 12/11/2007 2:48:35 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.3196	45172.	22.074	-3.4212	14.318	^ *****	2694.6
Stddev	.1588	724.	1.172	.1597	.119	-----	41.1
%RSD	12.036	1.6038	5.3099	4.6669	.83198	-----	1.5267
#1	1.4319	44659.	21.245	-3.3083	14.403	.80094	2665.5
#2	1.2073	45684.	22.902	-3.5341	14.234	^ -----	2723.7

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.84154	11.226	455.24	217.9	268.3	158.9	203980.
Stddev	.17632	.255	4.88	1.1	3.7	3.6	3757.
%RSD	20.953	2.2737	1.0727	.4972	1.382	2.284	1.8418
#1	.96622	11.046	458.70	218.7	265.6	156.4	201320.
#2	.71686	11.407	451.79	217.2	270.9	161.5	206630.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	366.25	631.4	711.1	352.43	4.0098	-60.422	32.325
Stddev	13.29	7.2	14.0	4.00	.1702	23.588	.129
%RSD	3.6287	1.136	1.974	1.1349	4.2446	39.040	.39782
#1	375.65	626.3	701.2	355.26	3.8894	-43.742	32.234
#2	356.85	636.5	721.1	349.61	4.1301	-77.101	32.416

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	21.878	2.4894	9.5476	556.21	6.6156	12.868	26.998
Stddev	.151	.4585	.6619	5.75	.6211	.137	.681
%RSD	.69057	18.419	6.9327	1.0344	9.3878	1.0631	2.5213
#1	21.771	2.8136	10.016	560.28	7.0547	12.965	26.517
#2	21.985	2.1651	9.0795	552.15	6.1764	12.771	27.479

Sample Name: S 711054-025-025-1/1 Acquired: 12/11/2007 2:48:35 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**7600.4**	**2.2437**	**543.14**	**74.409**
Stddev	30.2	.0214	6.06	.579
%RSD	.39722	.95488	1.1158	.77798
#1	7621.7	2.2285	547.42	74.818
#2	7579.0	2.2588	538.85	74.000

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47440.	24252.	647570.
Stddev	77.	317.	1227.
%RSD	.16180	1.3077	.18948
#1	47494.	24476.	646700.
#2	47386.	24028.	648430.

Sample Name: S 711054-026-026-1/1 Acquired: 12/11/2007 2:52:04 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.5081**	**64220.**	**25.461**	**-3.9518**	**14.105**	**.94371**	**2374.3**
Stddev	.1157	3292.	.229	.0718	.115	.12337	125.4
%RSD	7.6700	5.1266	.89932	1.8181	.81312	13.073	5.2831
#1	1.5899	66548.	25.299	-4.0026	14.186	1.0309	2463.0
#2	1.4263	61892.	25.623	-3.9010	14.024	.85648	2285.6

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.48903**	**12.490**	**505.54**	**218.4**	**294.0**	**164.8**	**220930.**
Stddev	.55977	.033	.11	3.2	13.1	5.3	11409.
%RSD	114.46	.26447	.02205	1.452	4.466	3.191	5.1643
#1	.09322	12.467	505.47	220.7	303.3	161.1	229000.
#2	.88485	12.513	505.62	216.2	284.7	168.5	212860.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**394.24**	**811.5**	**910.0**	**473.35**	**3.9890**	**-67.033**	**39.495**
Stddev	20.42	39.1	41.5	2.32	.0659	2.398	.924
%RSD	5.1796	4.821	4.556	.48940	1.6517	3.5780	2.3389
#1	408.67	839.1	939.3	474.99	3.9424	-65.337	40.148
#2	379.80	783.8	880.7	471.72	4.0356	-68.729	38.842

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**19.610**	**3.2513**	**10.561**	**552.50**	**6.9837**	**12.287**	**29.211**
Stddev	1.511	1.5711	1.577	1.72	.7376	.055	2.210
%RSD	7.7042	48.323	14.933	.31190	10.562	.45029	7.5644
#1	18.541	4.3623	11.676	553.72	6.4622	12.326	30.774
#2	20.678	2.1404	9.4457	551.28	7.5053	12.248	27.649

Sample Name: S 711054-026-026-1/1 Acquired: 12/11/2007 2:52:04 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	7983.1	2.4173	532.15	93.901
Stddev	14.0	1.3487	.77	.830
%RSD	.17503	55.794	.14474	.88405
#1	7992.9	3.3710	532.70	93.314
#2	7973.2	1.4636	531.61	94.488

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47313.	23124.	650680.
Stddev	15.	828.	867.
%RSD	.03185	3.5820	.13320
#1	47323.	22539.	650070.
#2	47302.	23710.	651290.

Sample Name: CCV Acquired: 12/11/2007 2:55:29 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**501.29**	**49741.**	**526.56**	**517.37**	**492.26**	**50.659**	**98426.**
Stddev	2.92	1707.	1.85	.66	1.90	.105	3373.
%RSD	.58213	3.4312	.35126	.12838	.38682	.20783	3.4273
#1	503.35	48534.	525.25	517.84	493.61	50.734	96041.
#2	499.22	50947.	527.87	516.90	490.92	50.585	100810.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**519.12**	**504.55**	**514.74**	**F 595.7**	**F 566.7**	**523.6**	**48555.**
Stddev	.57	.68	.66	2.1	4.0	7.2	1804.
%RSD	.11039	.13474	.12809	.3575	.7077	1.382	3.7152
#1	518.71	504.07	515.21	594.2	563.9	518.5	47279.
#2	519.52	505.03	514.28	597.2	569.6	528.7	49830.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24608.**	**93780.**	**99110.**	**486.22**	**525.32**	**101620.**	**490.77**
Stddev	698.	3203.	3202.	3.43	.81	3345.	.47
%RSD	2.8378	3.416	3.231	.70620	.15360	3.2916	.09588
#1	24114.	91510.	96850.	488.64	524.75	99256.	491.10
#2	25101.	96040.	101400.	483.79	525.89	103990.	490.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 2:55:29 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**513.86**	**511.95**	**518.13**	**504.70**	**518.91**	**492.60**	**516.06**
Stddev	1.73	1.18	2.72	3.14	1.64	.82	1.73
%RSD	.33658	.23131	.52555	.62128	.31523	.16589	.33558
#1	512.64	511.12	516.20	506.92	517.75	493.18	514.84
#2	515.09	512.79	520.05	502.48	520.07	492.02	517.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**494.07**	**518.48**	**505.32**	F **631.14**
Stddev	1.69	.26	1.92	1.28
%RSD	.34128	.05011	.38081	.20234
#1	495.27	518.30	506.68	630.24
#2	492.88	518.67	503.96	632.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	45855.	24123.	626530.
Stddev	7.	734.	1936.
%RSD	.01604	3.0412	.30904
#1	45860.	24642.	625160.
#2	45850.	23604.	627900.

Sample Name: CCB Acquired: 12/11/2007 2:59:07 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	k .52445	k -3.7320	s .78519	s -.22844	k -.11916	k -.24763	k -12.806
Stddev	.32499	18.657	.59354	.90469	.31535	.16129	.650
%RSD	61.968	499.90	75.592	396.04	264.64	65.133	5.0763
#1	k .75425	k -16.924	s .36549	s .41127	k .10382	k -.36168	k -13.266
#2	.29464	9.4602	1.2049	-.86814	-.34215	-.13358	-12.346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -.10453	s -.31378	k -.18275	s -1.307	s 1.113	sF 5.550	k -.71044
Stddev	.02115	.09509	.07389	.208	1.615	4.496	2.1104
%RSD	20.232	30.304	40.434	15.94	145.2	81.02	297.05
#1	s -.11949	s -.38101	k -.13050	s -1.160	s 2.255	s 2.370	k .78183
#2	-.08958	-.24654	-.23500	-1.455	-.0296	8.729	-2.2027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						3.000	
Low Limit						-3.000	

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	k -40.042	kF -6.929	kF -9.880	k -.11105	s -.09510	k -113.51	s -.39331
Stddev	95.145	.129	.403	.02548	.03272	16.25	.10678
%RSD	237.62	1.866	4.077	22.940	34.405	14.312	27.149
#1	k 27.236	k -6.838	k -9.595	k -.12906	s -.07197	k -102.03	s -.31781
#2	-107.32	-7.021	-10.16	-.09304	-.11824	-125.00	-.46881
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		3.000	3.000				
Low Limit		-3.000	-3.000				

Sample Name: CCB Acquired: 12/11/2007 2:59:07 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -.82263	s -.16711	s .78982	k -2.8583	s -.05231	k -.01340	s 2.9213
Stddev	1.8996	1.1913	.77795	1.2898	.11571	.25288	3.1830
%RSD	230.92	712.86	98.496	45.125	221.22	1887.9	108.96
#1	s -2.1658	s .67524	s 1.3399	k -1.9463	s -.13413	k .16542	s 5.1720
#2	.52059	-1.0095	.23973	-3.7704	.02951	-.19221	.67062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	k .71285	s -.60348	k -.22108	s -1.1245
Stddev	.43133	.95283	.29186	.1245
%RSD	60.507	157.89	132.01	11.075
#1	k 1.0178	s -1.2772	k -.01471	s -1.0364
#2	.40786	.07027	-.42746	-1.2126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	^ *****	28154.	928210.
Stddev	-----	2046.	491460.
%RSD	-----	7.2677	52.947
#1	^ -----	29600.	580690.
#2	64528.	26707.	1275700.

Sample Name: S 711054-027-027-1/1 Acquired: 12/11/2007 3:02:33 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.4246	48090.	19.317	-4.6654	12.198	1.2006	546.97
Stddev	.0759	248.	3.507	.0974	.046	.0759	8.37
%RSD	5.3262	.51544	18.154	2.0867	.37891	6.3209	1.5309
#1	1.3710	48265.	21.797	-4.7343	12.165	1.2543	552.90
#2	1.4783	47914.	16.838	-4.5966	12.230	1.1470	541.05

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.63071	14.327	472.54	246.4	293.7	177.5	205430.
Stddev	.03802	.006	1.66	1.0	1.3	1.3	811.
%RSD	6.0277	.04113	.35091	.4168	.4370	.7501	.39483
#1	.60383	14.323	471.37	247.1	294.6	178.4	206010.
#2	.65759	14.331	473.71	245.6	292.8	176.6	204860.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	317.60	806.6	905.0	349.30	2.9474	-11.642	40.929
Stddev	8.04	4.3	.5	1.65	.3105	10.925	.351
%RSD	2.5325	.5374	.0606	.47362	10.533	93.842	.85646
#1	311.91	809.7	905.4	348.13	2.7279	-19.366	41.177
#2	323.29	803.5	904.7	350.47	3.1669	-3.9166	40.681

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	19.522	1.6371	10.674	604.26	5.9703	5.3607	25.532
Stddev	.057	1.5805	1.303	2.06	.1753	.0546	1.406
%RSD	.28983	96.544	12.209	.34084	2.9359	1.0182	5.5059
#1	19.482	2.7546	9.7524	602.80	6.0942	5.3221	24.538
#2	19.562	.51949	11.595	605.71	5.8464	5.3993	26.527

Sample Name: S 711054-027-027-1/1 Acquired: 12/11/2007 3:02:33 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9081.2	2.8659	542.15	73.662
Stddev	29.4	.2758	2.28	.207
%RSD	.32388	9.6222	.41985	.28158
#1	9060.4	3.0609	540.54	73.809
#2	9102.0	2.6709	543.76	73.515

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47436.	23651.	643000.
Stddev	92.	54.	2756.
%RSD	.19383	.22901	.42868
#1	47371.	23612.	644950.
#2	47501.	23689.	641050.

Sample Name: S 711054-028-028-1/1 Acquired: 12/11/2007 3:06:02 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4279**	**59249.**	**14.500**	**-5.3533**	**9.6526**	**1.3170**	**442.88**
Stddev	.0808	988.	1.551	.1265	.0040	.0254	6.38
%RSD	5.6582	1.6683	10.694	2.3623	.04150	1.9313	1.4403
#1	1.4851	59948.	15.596	-5.4427	9.6498	1.2990	447.39
#2	1.3708	58550.	13.403	-5.2639	9.6555	1.3350	438.37

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.39060**	**16.856**	**509.26**	**249.0**	**296.8**	**194.3**	**187090.**
Stddev	.11483	.147	1.75	.9	2.9	1.3	2641.
%RSD	29.399	.87138	.34321	.3772	.9871	.6554	1.4118
#1	.30940	16.960	508.02	248.3	298.9	195.2	188960.
#2	.47180	16.752	510.49	249.7	294.8	193.4	185220.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**97.716**	**750.6**	**838.0**	**353.76**	**1.7421**	**-41.277**	**53.006**
Stddev	25.462	12.1	6.6	.33	.1363	9.424	.131
%RSD	26.057	1.607	.7822	.09339	7.8214	22.830	.24788
#1	79.712	759.1	842.6	353.99	1.6457	-34.614	53.099
#2	115.72	742.1	833.4	353.52	1.8384	-47.940	52.913

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**14.230**	**.09520**	**9.1510**	**588.75**	**4.8715**	**4.5298**	**20.709**
Stddev	1.834	1.7000	.7575	3.65	.2219	.0091	.457
%RSD	12.889	1785.8	8.2782	.62077	4.5557	.20137	2.2061
#1	12.933	-1.1069	9.6866	591.33	5.0284	4.5233	20.386
#2	15.527	1.2973	8.6153	586.16	4.7146	4.5362	21.032

Sample Name: S 711054-028-028-1/1 Acquired: 12/11/2007 3:06:02 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	8778.3	1.3508	500.07	83.973
Stddev	91.0	1.5417	.31	.330
%RSD	1.0363	114.13	.06114	.39328
#1	8713.9	2.4410	499.85	84.206
#2	8842.6	.26069	500.28	83.739

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47751.	23311.	647240.
Stddev	49.	350.	2555.
%RSD	.10234	1.5026	.39481
#1	47716.	23064.	649040.
#2	47785.	23559.	645430.

Sample Name: S 711054-029-029-1/1 Acquired: 12/11/2007 3:09:30 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3537**	**54159.**	**17.361**	**-4.6520**	**10.004**	**1.4418**	**961.29**
Stddev	.3222	124.	2.762	.0502	.024	.0627	2.21
%RSD	23.798	.22878	15.907	1.0786	.24447	4.3507	.22971
#1	1.5815	54247.	15.408	-4.6875	10.021	1.4862	962.85
#2	1.1259	54071.	19.314	-4.6165	9.9864	1.3975	959.72

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.46753**	**16.349**	**483.18**	**256.7**	**297.5**	**195.1**	**184850.**
Stddev	.11375	.034	1.32	.0	.9	4.2	438.
%RSD	24.330	.20614	.27271	.0084	.3085	2.178	.23719
#1	.38709	16.325	484.11	256.7	296.8	198.1	185160.
#2	.54796	16.373	482.25	256.8	298.1	192.1	184540.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**154.32**	**856.6**	**952.6**	**351.59**	**1.8966**	**-51.389**	**51.043**
Stddev	14.85	1.2	5.1	1.32	.1310	1.847	.007
%RSD	9.6234	.1374	.5378	.37406	6.9058	3.5939	.01357
#1	143.82	857.5	949.0	352.52	1.8040	-52.695	51.039
#2	164.82	855.8	956.2	350.66	1.9892	-50.083	51.048

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**14.186**	**.29213**	**7.5124**	**588.84**	**5.4899**	**6.4329**	**22.919**
Stddev	1.454	.54783	2.0668	2.12	.5959	.0317	2.083
%RSD	10.248	187.53	27.512	.36061	10.854	.49227	9.0865
#1	13.158	-.09524	8.9738	590.34	5.9112	6.4553	24.391
#2	15.214	.67950	6.0509	587.33	5.0685	6.4105	21.446

Sample Name: S 711054-029-029-1/1 Acquired: 12/11/2007 3:09:30 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**9104.5**	**3.7803**	**490.86**	**77.335**
Stddev	5.5	.8335	.87	.246
%RSD	.06052	22.048	.17690	.31756
#1	9100.6	4.3697	491.48	77.508
#2	9108.3	3.1910	490.25	77.161

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47327.	23496.	642780.
Stddev	143.	42.	913.
%RSD	.30312	.17844	.14211
#1	47429.	23526.	643420.
#2	47226.	23466.	642130.

Sample Name: S 711054-030-030-1/1 Acquired: 12/11/2007 3:12:58 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2445**	**58643.**	**16.357**	**-5.1107**	**10.631**	**1.0469**	**2294.9**
Stddev	.0085	13.	.353	.0293	.026	.0052	8.4
%RSD	.67981	.02213	2.1605	.57353	.24475	.49931	.36803
#1	1.2505	58634.	16.607	-5.1314	10.613	1.0432	2289.0
#2	1.2385	58653.	16.107	-5.0900	10.650	1.0506	2300.9

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.45807**	**14.136**	**513.47**	**241.3**	**288.3**	**182.4**	**195500.**
Stddev	.12421	.044	.50	.2	2.3	4.1	1364.
%RSD	27.116	.31207	.09661	.0820	.8135	2.236	.69745
#1	.54589	14.167	513.12	241.4	286.6	185.3	194540.
#2	.37024	14.105	513.82	241.2	290.0	179.5	196470.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**152.10**	**808.4**	**900.5**	**368.45**	**2.2992**	**-31.474**	**47.240**
Stddev	15.90	.7	1.4	.34	.2461	12.441	.031
%RSD	10.454	.0806	.1574	.09329	10.706	39.526	.06565
#1	140.86	807.9	899.5	368.69	2.4732	-40.271	47.218
#2	163.35	808.8	901.5	368.20	2.1251	-22.677	47.262

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**17.992**	**3.1899**	**8.1314**	**558.92**	**6.0098**	**10.833**	**21.714**
Stddev	1.011	.3280	1.5066	1.72	.0211	.012	.288
%RSD	5.6185	10.284	18.528	.30727	.35181	.11374	1.3255
#1	17.277	2.9580	9.1968	557.70	6.0248	10.842	21.511
#2	18.706	3.4219	7.0661	560.13	5.9949	10.824	21.918

Sample Name: S 711054-030-030-1/1 Acquired: 12/11/2007 3:12:58 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	8554.2	3.1195	531.02	82.902
Stddev	8.7	1.2569	.03	.100
%RSD	.10190	40.291	.00481	.12047
#1	8548.0	2.2307	531.04	82.973
#2	8560.4	4.0082	531.00	82.831

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47752.	23536.	647000.
Stddev	67.	243.	412.
%RSD	.13964	1.0333	.06362
#1	47705.	23708.	647290.
#2	47800.	23364.	646710.

Sample Name: S 711054-031-031-1/1 Acquired: 12/11/2007 3:16:26 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4883**	**55976.**	**13.320**	**-5.4055**	**10.934**	**1.3836**	**606.83**
Stddev	.2207	822.	.105	.0229	.083	.0166	1.48
%RSD	14.829	1.4687	.78899	.42301	.75593	1.1985	.24471
#1	1.3323	55395.	13.245	-5.3893	10.993	1.3953	607.88
#2	1.6444	56558.	13.394	-5.4216	10.876	1.3719	605.78

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.65420**	**16.919**	**502.17**	**263.7**	**304.9**	**199.5**	**191960.**
Stddev	.20409	.053	3.85	2.4	3.0	.4	3030.
%RSD	31.197	.31577	.76750	.9035	.9838	.1765	1.5787
#1	.79852	16.882	504.89	265.4	302.8	199.3	189810.
#2	.50989	16.957	499.44	262.0	307.0	199.7	194100.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**119.09**	**907.4**	**1012.**	**369.64**	**1.7716**	**-78.994**	**56.495**
Stddev	35.68	15.2	11.	2.84	.1390	9.357	.865
%RSD	29.959	1.678	1.099	.76768	7.8467	11.845	1.5316
#1	144.32	896.6	1004.	371.65	1.6733	-72.377	55.883
#2	93.863	918.2	1020.	367.64	1.8699	-85.610	57.107

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**15.959**	**2.5744**	**8.7323**	**573.77**	**6.0898**	**5.2047**	**19.138**
Stddev	1.504	1.3823	1.7602	7.49	.4214	.0420	.117
%RSD	9.4262	53.695	20.157	1.3059	6.9205	.80788	.61067
#1	17.022	1.5970	7.4877	579.07	5.7918	5.2344	19.056
#2	14.895	3.5518	9.9769	568.48	6.3878	5.1750	19.221

Sample Name: S 711054-031-031-1/1 Acquired: 12/11/2007 3:16:26 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9370.8	2.6206	507.72	80.190
Stddev	20.6	.7723	4.30	.119
%RSD	.21991	29.469	.84695	.14847
#1	9385.4	2.0745	510.76	80.274
#2	9356.2	3.1667	504.68	80.105

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47540.	23662.	642420.
Stddev	17.	383.	2152.
%RSD	.03661	1.6171	.33492
#1	47552.	23933.	640900.
#2	47528.	23392.	643940.

Sample Name: S 711054-032-032-1/1 Acquired: 12/11/2007 3:19:54 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4178**	**71739.**	**17.443**	**-5.0826**	**9.9841**	**1.4225**	**2402.4**
Stddev	.4607	787.	.630	.2938	.0366	.0342	30.7
%RSD	32.497	1.0975	3.6108	5.7805	.36690	2.4054	1.2795
#1	1.0920	71182.	16.997	-4.8748	10.010	1.4467	2380.7
#2	1.7436	72296.	17.888	-5.2903	9.9582	1.3983	2424.1

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.23427**	**16.384**	**552.73**	**257.9**	**309.0**	**200.8**	**191790.**
Stddev	.13959	.002	2.42	.9	1.1	2.0	1928.
%RSD	59.584	.01311	.43867	.3328	.3634	1.007	1.0050
#1	.33297	16.386	554.45	258.5	308.2	199.3	190430.
#2	.13556	16.383	551.02	257.3	309.8	202.2	193160.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**153.29**	**953.3**	**1070.**	**411.82**	**1.6587**	**-87.571**	**52.711**
Stddev	15.78	12.1	8.	2.78	.0132	5.940	.097
%RSD	10.293	1.268	.7722	.67481	.79820	6.7831	.18308
#1	164.44	944.8	1064.	413.78	1.6494	-91.772	52.643
#2	142.13	961.9	1076.	409.85	1.6681	-83.371	52.779

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**16.826**	**2.1062**	**9.2581**	**617.32**	**5.2001**	**14.297**	**23.952**
Stddev	.636	1.2230	1.2703	7.15	.6977	.120	1.683
%RSD	3.7770	58.065	13.721	1.1576	13.418	.83762	7.0274
#1	16.376	2.9710	8.3599	622.38	4.7067	14.381	22.762
#2	17.275	1.2414	10.156	612.27	5.6934	14.212	25.142

Sample Name: S 711054-032-032-1/1 Acquired: 12/11/2007 3:19:54 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9450.3	2.7823	556.04	92.448
Stddev	35.3	.0467	3.00	.442
%RSD	.37363	1.6784	.54023	.47804
#1	9425.3	2.7493	558.16	92.760
#2	9475.3	2.8154	553.91	92.135

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47724.	23455.	642200.
Stddev	20.	262.	2077.
%RSD	.04179	1.1159	.32347
#1	47710.	23640.	643670.
#2	47738.	23270.	640730.

Sample Name: S 711054-033-033-1/1 Acquired: 12/11/2007 3:23:21 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4095**	**62617.**	**14.518**	**-5.3796**	**10.377**	**1.3612**	**995.15**
Stddev	.3512	1522.	.286	.3841	.057	.0348	33.19
%RSD	24.917	2.4302	1.9710	7.1406	.55000	2.5533	3.3351
#1	1.1612	61541.	14.315	-5.1079	10.336	1.3367	971.68
#2	1.6579	63693.	14.720	-5.6512	10.417	1.3858	1018.6

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.75896**	**16.502**	**516.26**	**268.5**	**317.5**	**207.0**	**187200.**
Stddev	.24114	.154	4.30	1.3	5.5	4.8	5074.
%RSD	31.773	.93076	.83277	.5010	1.744	2.297	2.7106
#1	.92947	16.611	513.22	267.5	313.6	203.6	183610.
#2	.58844	16.394	519.30	269.4	321.5	210.3	190790.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**117.30**	**782.5**	**872.1**	**385.61**	**1.9720**	**-62.143**	**52.954**
Stddev	13.97	22.9	19.8	2.41	.2369	11.531	.240
%RSD	11.912	2.923	2.272	.62499	12.011	18.556	.45389
#1	107.42	766.3	858.1	383.91	2.1395	-53.989	52.784
#2	127.18	798.6	886.1	387.31	1.8045	-70.297	53.123

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**17.253**	**.58070**	**9.6830**	**695.11**	**6.1077**	**6.8858**	**22.080**
Stddev	.622	2.5576	.7437	4.13	1.0070	.0518	3.199
%RSD	3.6051	440.43	7.6801	.59447	16.487	.75205	14.489
#1	17.692	-1.2278	9.1572	692.19	5.3957	6.8491	19.818
#2	16.813	2.3892	10.209	698.03	6.8198	6.9224	24.342

Sample Name: S 711054-033-033-1/1 Acquired: 12/11/2007 3:23:21 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9279.5	2.4677	525.78	88.180
Stddev	135.8	.4390	3.54	.416
%RSD	1.4630	17.788	.67376	.47224
#1	9183.5	2.1573	523.27	88.474
#2	9375.5	2.7781	528.28	87.886
Int. Std.	Y_2243	Y_3774	Y_3774-2	
Units	Cts/S	Cts/S	Cts/S	
Avg	47813.	23800.	645750.	
Stddev	42.	738.	5243.	
%RSD	.08848	3.1003	.81189	
#1	47783.	24322.	649460.	
#2	47843.	23279.	642050.	

Sample Name: S 711054-034-034-1/1 Acquired: 12/11/2007 3:26:49 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2740**	**65327.**	**15.091**	**-5.5731**	**10.536**	^ *****	**754.95**
Stddev	.2614	3236.	1.367	.0154	.104	-----	33.91
%RSD	20.517	4.9530	9.0567	.27603	.98640	-----	4.4915
#1	1.4588	67615.	16.058	-5.5622	10.609	1.2146	778.93
#2	1.0892	63039.	14.125	-5.5840	10.462	^ -----	730.98

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.03749**	**17.366**	**459.49**	**263.0**	**327.2**	**215.1**	**184580.**
Stddev	.57191	.185	.90	2.8	9.0	2.1	9399.
%RSD	1525.4	1.0647	.19530	1.070	2.750	.9745	5.0923
#1	-.36691	17.235	460.12	265.0	333.6	213.6	191230.
#2	.44190	17.497	458.85	261.0	320.8	216.5	177930.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**111.30**	**839.2**	**935.5**	**359.60**	**1.4036**	**-78.775**	**54.225**
Stddev	3.19	40.2	40.1	1.95	.6851	9.762	.323
%RSD	2.8678	4.787	4.289	.54342	48.809	12.392	.59556
#1	109.04	867.6	963.9	360.99	1.8880	-71.873	54.453
#2	113.56	810.7	907.1	358.22	.91915	-85.678	53.996

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.590**	**2.1059**	**10.804**	**693.81**	**5.3713**	**5.5260**	**21.447**
Stddev	2.087	.0312	.219	7.11	.1495	.0277	1.458
%RSD	18.008	1.4801	2.0315	1.0242	2.7837	.50082	6.7981
#1	10.114	2.0839	10.960	698.83	5.4771	5.5456	22.478
#2	13.066	2.1280	10.649	688.78	5.2656	5.5065	20.416

Sample Name: S 711054-034-034-1/1 Acquired: 12/11/2007 3:26:49 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**8920.6**	**2.0662**	**446.02**	**85.332**
Stddev	25.5	1.1317	1.76	1.286
%RSD	.28582	54.769	.39415	1.5072
#1	8938.7	2.8664	447.26	84.423
#2	8902.6	1.2660	444.77	86.241

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47850.	23504.	648940.
Stddev	77.	822.	278.
%RSD	.16126	3.4966	.04290
#1	47796.	22922.	649130.
#2	47905.	24085.	648740.

Sample Name: S 711054-035-035-1/1 Acquired: 12/11/2007 3:30:18 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.5056**	**54046.**	**15.258**	**-6.3254**	**10.777**	**1.6075**	**202.11**
Stddev	.0198	1513.	.577	.2802	.129	.0232	1.68
%RSD	1.3122	2.7998	3.7785	4.4296	1.2010	1.4435	.83184
#1	1.4916	52976.	14.850	-6.5235	10.869	1.5911	203.30
#2	1.5196	55116.	15.665	-6.1273	10.686	1.6239	200.93

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.75942**	**18.279**	**476.39**	**240.6**	**291.6**	**181.6**	**191140.**
Stddev	.27883	.423	7.07	1.3	4.0	17.0	5011.
%RSD	36.717	2.3129	1.4831	.5581	1.381	9.383	2.6217
#1	.95659	17.980	481.39	241.6	288.7	193.7	187600.
#2	.56226	18.578	471.40	239.7	294.4	169.6	194680.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**140.33**	**902.4**	**1006.**	**350.03**	**2.0816**	**-76.423**	**59.830**
Stddev	31.74	25.4	26.	5.09	.2904	9.899	.050
%RSD	22.616	2.817	2.618	1.4536	13.951	12.952	.08386
#1	162.77	884.4	987.4	353.63	1.8763	-69.424	59.794
#2	117.89	920.4	1025.	346.43	2.2870	-83.422	59.865

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**16.685**	**1.2969**	**9.4462**	**714.26**	**6.1964**	**3.9740**	**23.619**
Stddev	1.130	.8496	1.8562	13.71	.0215	.0679	.913
%RSD	6.7734	65.512	19.650	1.9198	.34707	1.7079	3.8640
#1	15.886	1.8976	8.1337	723.96	6.2116	4.0220	24.265
#2	17.484	.69611	10.759	704.57	6.1812	3.9260	22.974

Sample Name: S 711054-035-035-1/1 Acquired: 12/11/2007 3:30:18 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	10336.	3.7006	542.36	81.976
Stddev	103.	.3931	7.43	.502
%RSD	.99687	10.624	1.3690	.61211
#1	10409.	3.4226	547.61	82.330
#2	10263.	3.9786	537.11	81.621

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47627.	24314.	648410.
Stddev	136.	475.	2850.
%RSD	.28533	1.9530	.43957
#1	47531.	24650.	646390.
#2	47723.	23978.	650420.

Sample Name: S 711054-036-036-1/1 Acquired: 12/11/2007 3:33:47 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.8229**	**61500.**	**18.212**	**-6.8880**	**9.9063**	**1.7807**	**848.46**
Stddev	.3360	645.	2.061	.3988	.0377	.0594	7.15
%RSD	18.429	1.0485	11.315	5.7906	.38007	3.3337	.84217
#1	1.5854	61956.	16.755	-6.6059	9.9330	1.7387	853.51
#2	2.0605	61044.	19.669	-7.1700	9.8797	1.8227	843.40

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.97383**	**21.861**	**515.58**	**275.7**	**320.4**	**203.6**	**187770.**
Stddev	.23102	.318	2.49	.1	.7	1.9	2169.
%RSD	23.723	1.4567	.48373	.0492	.2267	.9346	1.1554
#1	.81047	22.087	517.35	275.6	320.9	204.9	189300.
#2	1.1372	21.636	513.82	275.8	319.9	202.3	186230.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**122.80**	**1122.**	**1258.**	**403.02**	**1.1743**	**-70.039**	**60.722**
Stddev	58.76	13.	14.	.29	.0263	3.462	.286
%RSD	47.846	1.116	1.109	.07293	2.2438	4.9427	.47158
#1	81.257	1131.	1268.	403.23	1.1557	-67.591	60.924
#2	164.35	1113.	1248.	402.81	1.1930	-72.487	60.519

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**15.434**	**2.5576**	**6.4425**	**644.66**	**5.8362**	**6.2863**	**22.992**
Stddev	.673	1.3326	1.4439	3.63	.3723	.0214	.716
%RSD	4.3585	52.102	22.412	.56350	6.3784	.34049	3.1154
#1	15.909	1.6153	5.4215	647.23	5.5730	6.3014	23.498
#2	14.958	3.4999	7.4635	642.09	6.0995	6.2712	22.485

Sample Name: S 711054-036-036-1/1 Acquired: 12/11/2007 3:33:47 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	11106.	3.7220	528.68	94.683
Stddev	98.	.9609	1.79	.362
%RSD	.88616	25.816	.33800	.38237
#1	11036.	3.0426	529.95	94.427
#2	11176.	4.4014	527.42	94.939

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47370.	23350.	644360.
Stddev	46.	247.	346.
%RSD	.09645	1.0598	.05373
#1	47338.	23175.	644600.
#2	47402.	23525.	644110.

Sample Name: CCV Acquired: 12/11/2007 3:37:13 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	499.04	50272.	527.43	515.93	489.20	50.492	99123.
Stddev	4.89	2113.	.11	1.12	4.06	.464	3757.
%RSD	.98058	4.2026	.02055	.21737	.82992	.91813	3.7905
#1	502.50	48779.	527.36	515.13	492.07	50.819	96467.
#2	495.58	51766.	527.51	516.72	486.33	50.164	101780.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	516.52	502.51	513.59	F 595.8	F 568.1	531.9	48864.
Stddev	.63	.28	4.71	2.6	2.3	1.8	1757.
%RSD	.12284	.05664	.91649	.4339	.3967	.3461	3.5960
#1	516.97	502.71	516.92	593.9	566.5	530.6	47622.
#2	516.07	502.31	510.27	597.6	569.7	533.2	50107.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24908.	93330.	100000.	483.65	523.20	101700.	488.22
Stddev	892.	3180.	4179.	4.71	.80	3212.	.70
%RSD	3.5809	3.408	4.178	.97317	.15317	3.1581	.14412
#1	24277.	91080.	97060.	486.98	523.76	99432.	487.72
#2	25539.	95580.	103000.	480.32	522.63	103970.	488.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 3:37:13 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**512.85**	**510.60**	**517.90**	**502.23**	**516.23**	**490.24**	**516.35**
Stddev	.68	1.07	2.60	5.64	.51	4.44	.47
%RSD	.13334	.20930	.50266	1.1238	.09857	.90654	.09126
#1	513.33	509.85	516.06	506.22	516.59	493.38	516.68
#2	512.36	511.36	519.74	498.24	515.87	487.09	516.01
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**490.87**	**516.96**	**503.04**	**F 628.59**
Stddev	4.66	.48	4.51	.74
%RSD	.94909	.09353	.89724	.11830
#1	494.17	516.62	506.23	629.11
#2	487.58	517.30	499.85	628.06
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46094.	23766.	628740.
Stddev	35.	769.	4436.
%RSD	.07670	3.2342	.70557
#1	46069.	24310.	625610.
#2	46119.	23223.	631880.

Sample Name: CCB Acquired: 12/11/2007 3:40:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	k .09720	k -9.0901	s -.12388	s -.78161	k .14802	k -.37190	k -11.256
Stddev	.69316	19.286	1.6558	1.4214	.12431	.08374	7.270
%RSD	713.15	212.17	1336.6	181.86	83.984	22.517	64.588
#1	k .58733	k -22.728	s -1.2947	s .22348	k .06012	k -.31268	k -6.1151
#2	k -.39294	k 4.5473	s 1.0469	s -1.7867	k .23592	k -.43111	k -16.396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s .01013	s -.10343	k -.56025	s -1.183	s .2010	sF -3.124	k -.69651
Stddev	.06542	.20270	.47656	1.356	1.995	7.238	4.8871
%RSD	645.58	195.98	85.062	114.6	992.5	231.7	701.66
#1	s .05639	s -.24676	k -.89723	s -.2243	s 1.611	s -8.242	k -4.1522
#2	s -.03612	s .03990	k -.22327	s -2.141	s -1.210	s 1.994	k 2.7592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						3.000	
Low Limit						-3.000	

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	k -201.54	k -1.463	kF -3.837	k -.07024	s -.06969	k -115.93	s -.06812
Stddev	86.00	2.416	.573	.01771	.10870	26.22	.03878
%RSD	42.674	165.2	14.92	25.212	155.97	22.615	56.920
#1	k -262.35	k .2457	k -3.432	k -.08277	s .00717	k -134.46	s -.09554
#2	k -140.72	k -3.171	k -4.242	k -.05772	s -.14656	k -97.388	s -.04070
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			3.000				
Low Limit			-3.000				

Sample Name: CCB Acquired: 12/11/2007 3:40:50 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -.60329	s -.95741	s .90078	k -1.1211	s -.08044	k .19752	s .62060
Stddev	1.7258	.32339	2.3364	1.4900	.77221	.11285	1.2135
%RSD	286.07	33.778	259.38	132.91	959.96	57.133	195.54
#1	s -1.8236	s -.72874	s 2.5529	k -2.1747	s .46559	.11772	s 1.4787
#2	s .61707	s -1.1861	s -.75133	k -.06749	s -.62647	k .27732	s -.23751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	k .57767	s -1.2219	k .15418	s -1.1786
Stddev	.07544	1.5439	.30022	.0181
%RSD	13.060	126.35	194.71	1.5403
#1	k .52432	s -2.3136	k -.05810	s -1.1657
#2	k .63101	s -.13020	k .36647	s -1.1914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	^ *****	22272.	645410.
Stddev	-----	4140.	73321.
%RSD	-----	18.590	11.360
#1	^ -----	19344.	697260.
#2	^ -----	25200.	593570.

Sample Name: S 711054-037-037-1/1 Acquired: 12/11/2007 3:44:16 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1:. Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.9413**	**38605.**	**25.109**	**-6.5587**	**26.753**	**2.2944**	**367.71**
Stddev	.0925	472.	.674	.5358	.090	.1128	4.23
%RSD	4.7622	1.2234	2.6854	8.1695	.33582	4.9163	1.1514
#1	1.8760	38271.	25.586	-6.1798	26.817	2.2146	364.72
#2	2.0067	38939.	24.632	-6.9375	26.690	2.3742	370.70

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.6246**	**12.237**	**536.10**	**315.6**	**348.6**	**185.2**	**344060.**
Stddev	.2669	.453	2.28	2.6	5.9	3.8	4990.
%RSD	16.426	3.6987	.42579	.8083	1.687	2.050	1.4502
#1	1.8133	12.557	537.71	313.8	344.4	187.9	340530.
#2	1.4359	11.917	534.48	317.4	352.7	182.5	347590.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**396.43**	**700.6**	**787.3**	**380.05**	**5.5837**	**-35.439**	**54.098**
Stddev	1.19	5.6	11.8	1.65	.3182	15.527	.907
%RSD	.30015	.7989	1.502	.43520	5.6996	43.814	1.6771
#1	397.27	696.6	778.9	381.22	5.3586	-24.460	53.457
#2	395.59	704.5	795.6	378.88	5.8087	-46.419	54.740

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**23.536**	**4.6368**	**9.3335**	**552.82**	**7.9826**	**18.376**	**36.161**
Stddev	.463	.5225	1.8458	.05	.4323	.071	.379
%RSD	1.9671	11.270	19.776	.00906	5.4155	.38422	1.0487
#1	23.863	5.0063	8.0283	552.86	8.2883	18.426	35.892
#2	23.208	4.2673	10.639	552.79	7.6769	18.326	36.429

Sample Name: S 711054-037-037-1/1 Acquired: 12/11/2007 3:44:16 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	14097.	4.6171	683.32	122.01
Stddev	11.	.9940	3.90	.51
%RSD	.07729	21.530	.57075	.42105
#1	14090.	5.3200	686.07	122.37
#2	14105.	3.9142	680.56	121.65

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47591.	23540.	640740.
Stddev	161.	268.	3631.
%RSD	.33834	1.1371	.56675
#1	47477.	23729.	638170.
#2	47705.	23351.	643310.

Sample Name: S 711054-038-038-1/1 Acquired: 12/11/2007 3:47:45 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3994**	**33582.**	**19.072**	**-5.9630**	**45.204**	**1.8327**	**1025.4**
Stddev	.2808	340.	1.133	.1078	.120	.1043	12.3
%RSD	20.067	1.0137	5.9418	1.8083	.26444	5.6933	1.2009
#1	1.2009	33342.	18.271	-5.8867	45.289	1.7589	1016.7
#2	1.5980	33823.	19.873	-6.0392	45.120	1.9065	1034.1

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.97613**	**17.876**	**483.84**	**281.5**	**299.8**	**181.4**	**241630.**
Stddev	.15205	.068	3.94	1.2	2.6	.3	2803.
%RSD	15.576	.37836	.81435	.4426	.8833	.1381	1.1601
#1	1.0836	17.924	486.62	280.6	297.9	181.5	239650.
#2	.86862	17.828	481.05	282.4	301.6	181.2	243620.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**597.47**	**1185.**	**1324.**	**554.81**	**3.2641**	**-74.448**	**76.870**
Stddev	16.26	10.	12.	3.09	.0867	11.500	.262
%RSD	2.7222	.8825	.9168	.55771	2.6574	15.447	.34080
#1	608.97	1177.	1315.	557.00	3.2027	-82.580	76.685
#2	585.97	1192.	1332.	552.62	3.3254	-66.317	77.056

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**20.456**	**2.5783**	**-.76169**	**478.57**	**5.9443**	**41.797**	**25.440**
Stddev	.157	.3238	.86314	2.79	1.0600	.232	.906
%RSD	.76528	12.559	113.32	.58376	17.832	.55408	3.5616
#1	20.567	2.8072	-.15136	480.55	6.6939	41.961	26.081
#2	20.346	2.3493	-1.3720	476.60	5.1948	41.634	24.799

Sample Name: S 711054-038-038-1/1 Acquired: 12/11/2007 3:47:45 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	11088.	3.4236	566.88	159.71
Stddev	99.	1.1165	3.48	.35
%RSD	.88960	32.612	.61462	.22018
#1	11157.	4.2131	569.34	159.96
#2	11018.	2.6341	564.41	159.46

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47493.	23681.	642890.
Stddev	22.	208.	2988.
%RSD	.04689	.87949	.46470
#1	47477.	23828.	640780.
#2	47509.	23534.	645000.

Sample Name: S 711054-039-039-1/1 Acquired: 12/11/2007 3:51:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3848**	**31742.**	**20.732**	**-5.7970**	**60.690**	**2.4845**	**1969.9**
Stddev	.0273	1025.	2.416	.5414	.457	.1181	58.4
%RSD	1.9732	3.2300	11.654	9.3388	.75271	4.7547	2.9657
#1	1.3655	32467.	22.441	-6.1798	61.013	2.5680	2011.2
#2	1.4041	31017.	19.024	-5.4142	60.367	2.4010	1928.6

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.78301**	**23.731**	**438.31**	**341.3**	**355.2**	**214.3**	**262650.**
Stddev	.42212	.148	2.34	3.2	8.9	9.4	7363.
%RSD	53.909	.62347	.53319	.9411	2.492	4.388	2.8035
#1	.48453	23.626	439.97	343.6	361.5	220.9	267850.
#2	1.0815	23.835	436.66	339.1	349.0	207.6	257440.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**633.19**	**2100.**	**2347.**	**699.31**	**4.9848**	**-54.768**	**84.974**
Stddev	67.16	65.	79.	4.69	.1129	36.851	.393
%RSD	10.606	3.104	3.361	.67045	2.2644	67.285	.46227
#1	680.68	2146.	2403.	702.63	5.0646	-80.825	85.251
#2	585.70	2054.	2291.	696.00	4.9049	-28.710	84.696

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**63.845**	**.42711**	**7.5973**	**594.68**	**6.6056**	**67.824**	**28.049**
Stddev	.524	2.9195	2.9680	6.60	.7898	.454	3.202
%RSD	.82132	683.54	39.066	1.1102	11.956	.66901	11.416
#1	63.474	-1.6373	9.6960	599.34	6.0471	68.145	30.313
#2	64.216	2.4915	5.4987	590.01	7.1640	67.503	25.784

Sample Name: S 711054-039-039-1/1 Acquired: 12/11/2007 3:51:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	13667.	4.3972	628.20	184.54
Stddev	138.	1.1292	4.97	.99
%RSD	1.0114	25.681	.79048	.53404
#1	13765.	5.1957	631.71	183.84
#2	13569.	3.5987	624.69	185.24

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47569.	22794.	638340.
Stddev	3.	400.	2641.
%RSD	.00654	1.7544	.41373
#1	47571.	22511.	636470.
#2	47567.	23077.	640210.

Sample Name: S 711054-040-040-1/1 Acquired: 12/11/2007 3:54:42 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.0410**	**49785.**	**21.032**	**-5.4578**	**34.956**	**2.3076**	**385.10**
Stddev	.5821	518.	2.633	.1196	.038	.0164	4.08
%RSD	55.924	1.0397	12.520	2.1919	.10742	.71111	1.0586
#1	.62932	49419.	19.170	-5.5424	34.929	2.2960	382.22
#2	1.4526	50151.	22.894	-5.3732	34.982	2.3192	387.98

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3769**	**16.796**	**423.94**	**280.8**	**321.2**	**180.4**	**254750.**
Stddev	.2208	.089	.20	.7	4.5	1.6	3486.
%RSD	16.038	.53016	.04683	.2423	1.416	.9070	1.3683
#1	1.5330	16.733	423.80	281.3	318.0	181.6	252290.
#2	1.2207	16.859	424.08	280.3	324.4	179.3	257210.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**515.00**	**1107.**	**1231.**	**532.21**	**4.1323**	**-113.23**	**90.797**
Stddev	29.88	13.	18.	.90	.0980	12.50	.423
%RSD	5.8014	1.129	1.439	.16997	2.3716	11.035	.46593
#1	536.13	1098.	1219.	531.57	4.2016	-122.07	91.096
#2	493.88	1116.	1244.	532.85	4.0630	-104.40	90.498

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**26.062**	**1.3910**	**5.6981**	**728.75**	**6.3592**	**32.874**	**24.669**
Stddev	.929	.7052	.9972	.61	.4038	.063	1.262
%RSD	3.5656	50.697	17.501	.08398	6.3502	.19076	5.1171
#1	26.719	1.8896	4.9930	728.32	6.0737	32.918	23.776
#2	25.405	.89233	6.4032	729.18	6.6448	32.829	25.561

Sample Name: S 711054-040-040-1/1 Acquired: 12/11/2007 3:54:42 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	12150.	3.2305	556.33	131.36
Stddev	16.	.1148	.56	.61
%RSD	.12886	3.5524	.10063	.46636
#1	12139.	3.1494	555.93	131.79
#2	12161.	3.3117	556.72	130.92

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47649.	23704.	642230.
Stddev	106.	362.	1063.
%RSD	.22222	1.5288	.16546
#1	47574.	23960.	642980.
#2	47724.	23448.	641480.

Sample Name: BLK 110 Acquired: 12/11/2007 3:58:10 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00220	-3.7888	-2.2958	-.63315	.03838	.01644	101.60	-.10863
Stddev	.12990	9.8942	.6646	.33326	.03361	.00501	2.62	.02849
%RSD	5905.9	261.15	28.948	52.635	87.581	30.481	2.5748	26.230
#1	-.08965	3.2075	-1.8259	-.86880	.06214	.01998	103.45	-.12877
#2	.09405	-10.785	-2.7657	-.39750	.01461	.01290	99.747	-.08848

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.31762	1.7185	.8369	1.367	3.503	30.910	-67.893	-.0057
Stddev	.25347	.0228	.5807	.233	13.86	4.452	41.657	.0307
%RSD	79.803	1.3293	69.39	17.04	395.5	14.403	61.357	539.8
#1	-.49686	1.7023	1.247	1.202	-6.294	27.762	-38.437	.0160
#2	-.13839	1.7346	.4262	1.531	13.30	34.058	-97.349	-.0274

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.006	.11474	.01383	-139.71	-.24183	-.81636	-1.0439	.69830
Stddev	3.992	.01874	.11114	15.17	.18042	.29294	.4563	2.9458
%RSD	199.0	16.331	803.51	10.859	74.606	35.883	43.708	421.85
#1	.8170	.12799	-.06476	-150.44	-.11425	-1.0235	-.72125	-1.3847
#2	-4.828	.10149	.09242	-128.98	-.36940	-.60922	-1.3665	2.7813

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10.525	28.220	.14866	-.57978	2.3797	-4.3335	-.15826	10.206
Stddev	.222	.635	.00051	1.8767	.1690	.2412	.02425	.022
%RSD	2.1084	2.2505	.34272	323.69	7.0999	5.5663	15.322	.21759
#1	10.682	28.669	.14830	-1.9068	2.4992	-4.1629	-.17540	10.221
#2	10.368	27.771	.14902	.74725	2.2602	-4.5040	-.14111	10.190

Sample Name: BLK 110 Acquired: 12/11/2007 3:58:10 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46620.	22741.	630740.
Stddev	70.	79.	5936.
%RSD	.14997	.34672	.94112
#1	46669.	22685.	626540.
#2	46570.	22796.	634940.

Sample Name: BKS 110 Acquired: 12/11/2007 4:01:37 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**100.77**	**9868.8**	**98.719**	**948.98**	**1007.6**	**50.100**	**10003.**	**103.31**
Stddev	.73	526.0	1.997	2.74	22.2	.315	496.	.30
%RSD	.72647	5.3302	2.0233	.28898	2.2021	.62923	4.9592	.29387
#1	100.25	9496.8	100.13	950.92	991.88	49.877	9652.3	103.52
#2	101.29	10241.	97.306	947.04	1023.3	50.322	10354.	103.09

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**502.49**	**521.22**	**555.8**	**932.5**	**467.0**	**9634.8**	**9955.4**	**9820.**
Stddev	1.05	2.98	.2	.7	12.1	455.6	489.2	485.
%RSD	.20979	.57102	.0392	.0717	2.593	4.7284	4.9142	4.940
#1	503.24	519.12	555.6	933.0	458.4	9312.7	9609.5	9477.
#2	501.75	523.33	555.9	932.1	475.5	9956.9	10301.	10160.

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**10720.**	**1002.2**	**523.59**	**10023.**	**505.22**	**1014.6**	**97.530**	**99.706**
Stddev	542.	3.7	2.29	473.	1.79	2.4	1.705	1.641
%RSD	5.056	.37154	.43821	4.7221	.35358	.23400	1.7478	1.6462
#1	10330.	999.60	525.21	9688.5	506.48	1016.3	96.324	100.87
#2	11100.	1004.9	521.97	10358.	503.96	1012.9	98.735	98.545

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**8692.7**	**543.89**	**999.98**	**384.50**	**1996.3**	**101.07**	**517.66**	**1020.8**
Stddev	56.1	1.51	6.67	.52	10.8	1.03	1.97	1.6
%RSD	.64502	.27680	.66741	.13457	.53911	1.0167	.38096	.15333
#1	8653.1	544.96	995.26	384.87	1988.6	101.80	516.27	1021.9
#2	8732.4	542.83	1004.7	384.13	2003.9	100.35	519.06	1019.7

Sample Name: BKS 110 Acquired: 12/11/2007 4:01:37 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47224.	23956.	632910.
Stddev	162.	1000.	462.
%RSD	.34281	4.1749	.07303
#1	47110.	24663.	633240.
#2	47339.	23249.	632590.

Sample Name: S 711054-041-041-1/1 Acquired: 12/11/2007 4:05:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.88283	37732.	20.596	-4.7125	58.353	2.2040	1312.3
Stddev	.14598	360.	.752	.0163	.393	.0076	18.7
%RSD	16.535	.95423	3.6524	.34578	.67432	.34282	1.4247
#1	.98605	37478.	21.128	-4.7010	58.631	2.2093	1299.0
#2	.77961	37987.	20.064	-4.7240	58.075	2.1987	1325.5

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.97755	20.889	459.83	305.5	332.1	194.9	267870.
Stddev	.37398	.366	4.30	3.8	1.5	2.2	2849.
%RSD	38.256	1.7545	.93448	1.239	.4536	1.106	1.0636
#1	1.2420	20.630	462.87	308.1	331.1	193.4	265850.
#2	.71311	21.148	456.79	302.8	333.2	196.5	269880.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	680.23	1539.	1716.	569.76	4.3412	-73.764	82.738
Stddev	18.29	15.	15.	4.80	.0522	6.175	.943
%RSD	2.6886	.9504	.8852	.84272	1.2017	8.3710	1.1393
#1	667.29	1529.	1705.	573.16	4.3043	-78.130	83.405
#2	693.16	1550.	1727.	566.37	4.3781	-69.398	82.072

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	29.322	1.6972	4.9080	534.33	7.2850	64.032	31.974
Stddev	.242	.7676	1.7352	4.77	.2349	.566	2.479
%RSD	.82371	45.224	35.354	.89194	3.2245	.88402	7.7548
#1	29.493	2.2400	3.6810	537.70	7.4511	64.433	30.220
#2	29.152	1.1545	6.1349	530.96	7.1189	63.632	33.727

Sample Name: S 711054-041-041-1/1 Acquired: 12/11/2007 4:05:14 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	12924.	2.2923	599.96	149.62
Stddev	304.	1.4775	5.48	1.86
%RSD	2.3510	64.452	.91345	1.2439
#1	13139.	1.2476	603.83	150.93
#2	12710.	3.3371	596.08	148.30

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48342.	24168.	658020.
Stddev	323.	154.	3894.
%RSD	.66772	.63651	.59179
#1	48114.	24277.	655260.
#2	48570.	24060.	660770.

Sample Name: SP711054-041-041-1/1 Acquired: 12/11/2007 4:08:42 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.285**	**47059.**	**31.242**	**89.360**	**186.68**	**5.3489**	**2385.8**
Stddev	.041	117.	.642	.317	2.77	.0303	20.5
%RSD	.36623	.24855	2.0540	.35438	1.4849	.56677	.85731
#1	11.314	47142.	31.696	89.584	188.64	5.3703	2400.3
#2	11.255	46976.	30.788	89.136	184.72	5.3274	2371.3

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**12.016**	**73.956**	**508.84**	**364.6**	**393.7**	**256.7**	**270230.**
Stddev	.037	.327	3.81	1.5	3.0	7.2	940.
%RSD	.30434	.44266	.74896	.4115	.7745	2.803	.34779
#1	11.990	73.725	511.54	365.7	395.9	261.8	270890.
#2	12.042	74.188	506.15	363.6	391.6	251.6	269560.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1934.1**	**2672.**	**2982.**	**667.27**	**44.845**	**1021.9**	**152.28**
Stddev	51.1	7.	20.	9.09	.093	18.3	.89
%RSD	2.6416	.2576	.6629	1.3615	.20793	1.7871	.58643
#1	1970.2	2677.	2996.	673.70	44.911	1009.0	151.65
#2	1898.0	2667.	2968.	660.85	44.779	1034.8	152.91

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**136.52**	**6.1975**	**11.294**	**631.87**	**56.485**	**208.39**	**67.356**
Stddev	1.25	2.0519	.771	5.05	.274	2.71	3.110
%RSD	.91227	33.108	6.8264	.79959	.48489	1.2989	4.6169
#1	137.40	4.7466	11.839	635.44	56.292	210.30	69.555
#2	135.64	7.6484	10.749	628.29	56.679	206.47	65.157

Sample Name: SP711054-041-041-1/1 Acquired: 12/11/2007 4:08:42 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	13248.	14.409	652.44	266.16
Stddev	201.	2.216	7.97	.32
%RSD	1.5186	15.379	1.2214	.12053
#1	13391.	15.976	658.07	266.39
#2	13106.	12.842	646.80	265.94

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47756.	23883.	653690.
Stddev	70.	52.	7023.
%RSD	.14715	.21737	1.0743
#1	47806.	23920.	648720.
#2	47707.	23847.	658650.

Sample Name: SD711054-041-041-1/1 Acquired: 12/11/2007 4:12:09 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.741**	**49111.**	**32.419**	**88.919**	**191.81**	**5.4348**	**2468.0**
Stddev	.040	1032.	2.388	1.053	1.13	.0314	68.4
%RSD	.34277	2.1009	7.3668	1.1844	.58947	.57734	2.7698
#1	11.769	49841.	34.108	89.664	191.01	5.4127	2516.3
#2	11.713	48382.	30.730	88.175	192.61	5.4570	2419.7

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.753**	**74.699**	**527.64**	**374.4**	**410.3**	**254.8**	**285580.**
Stddev	.535	.034	2.23	.9	3.8	10.5	5508.
%RSD	4.5523	.04578	.42211	.2476	.9289	4.117	1.9286
#1	11.374	74.675	526.06	373.7	413.0	262.3	289470.
#2	12.131	74.723	529.21	375.0	407.6	247.4	281680.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1955.5**	**2774.**	**3099.**	**691.52**	**44.826**	**1039.3**	**155.47**
Stddev	64.8	64.	69.	3.46	.359	19.6	.01
%RSD	3.3138	2.317	2.238	.49999	.80179	1.8866	.00912
#1	2001.3	2820.	3148.	689.07	44.572	1053.2	155.48
#2	1909.7	2729.	3050.	693.96	45.080	1025.4	155.46

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**136.27**	**6.8966**	**15.975**	**671.13**	**56.282**	**214.04**	**67.416**
Stddev	1.20	1.6732	1.004	2.48	.243	1.11	.562
%RSD	.88313	24.262	6.2847	.36925	.43229	.51973	.83418
#1	135.42	8.0797	16.685	669.37	56.110	213.25	67.814
#2	137.12	5.7134	15.265	672.88	56.454	214.82	67.019

Sample Name: SD711054-041-041-1/1 Acquired: 12/11/2007 4:12:09 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	13674.	12.535	678.05	269.62
Stddev	97.	.909	2.98	1.26
%RSD	.70983	7.2487	.44013	.46851
#1	13606.	13.178	675.94	268.73
#2	13743.	11.893	680.16	270.51

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47916.	23403.	648930.
Stddev	11.	199.	4390.
%RSD	.02387	.84905	.67655
#1	47924.	23263.	652040.
#2	47907.	23544.	645830.

Sample Name: PS711054-041-041-1/1 Acquired: 12/11/2007 4:15:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**48.890**	**37855.**	**113.77**	**73.692**	**80.533**	**10.374**	**6961.2**
Stddev	.925	794.	.69	.679	.391	.002	135.7
%RSD	1.8912	2.0984	.60986	.92195	.48569	.01842	1.9496
#1	48.236	37293.	113.28	74.173	80.257	10.373	6865.2
#2	49.544	38416.	114.26	73.212	80.810	10.376	7057.1

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24.885**	**55.147**	**476.76**	**338.0**	**643.2**	**216.9**	**262690.**
Stddev	.339	.177	2.77	.4	5.0	3.4	5848.
%RSD	1.3605	.32054	.58176	.1092	.7813	1.555	2.2263
#1	25.125	55.022	474.80	337.7	639.6	219.3	258550.
#2	24.646	55.272	478.72	338.2	646.7	214.6	266820.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**6446.3**	**6924.**	**7699.**	**644.27**	**39.217**	**5734.5**	**126.95**
Stddev	123.9	150.	166.	3.86	.403	147.5	.39
%RSD	1.9226	2.161	2.157	.59843	1.0267	2.5716	.30373
#1	6358.7	6818.	7582.	641.54	38.933	5630.2	126.68
#2	6534.0	7030.	7816.	646.99	39.502	5838.8	127.22

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**121.29**	**92.541**	**81.874**	**5939.2**	**122.01**	**85.669**	**575.83**
Stddev	.74	2.329	1.351	45.0	.89	.564	1.70
%RSD	.60901	2.5170	1.6507	.75850	.72614	.65861	.29531
#1	121.81	90.894	80.918	5907.3	122.64	85.270	574.62
#2	120.77	94.188	82.830	5971.1	121.38	86.068	577.03

Sample Name: PS711054-041-041-1/1 Acquired: 12/11/2007 4:15:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	12605.	116.72	612.30	243.40
Stddev	65.	2.03	3.73	.49
%RSD	.51752	1.7390	.60957	.20113
#1	12651.	115.29	609.66	243.75
#2	12559.	118.16	614.94	243.06

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47539.	23735.	641100.
Stddev	16.	583.	3119.
%RSD	.03463	2.4565	.48647
#1	47527.	24147.	643300.
#2	47551.	23323.	638890.

Sample Name: CCV Acquired: 12/11/2007 4:19:01 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**503.22**	**50161.**	**529.23**	**517.90**	**494.89**	**50.632**	**98871.**
Stddev	.72	1745.	2.08	.75	.94	.087	3347.
%RSD	.14358	3.4793	.39250	.14453	.19094	.17103	3.3854
#1	502.71	48927.	527.76	518.43	495.55	50.570	96504.
#2	503.73	51395.	530.70	517.37	494.22	50.693	101240.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**515.87**	**503.58**	**513.30**	F **597.0**	F **567.5**	**522.6**	**48725.**
Stddev	1.14	1.08	.88	.6	3.6	4.2	1714.
%RSD	.22027	.21467	.17226	.1083	.6309	.7961	3.5172
#1	516.67	504.35	512.67	597.5	565.0	525.5	47513.
#2	515.07	502.82	513.93	596.6	570.0	519.6	49937.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**24898.**	**94170.**	**99800.**	**488.56**	**523.30**	**102440.**	**492.61**
Stddev	876.	2492.	3405.	2.11	.37	3514.	1.68
%RSD	3.5198	2.647	3.412	.43267	.07070	3.4303	.34156
#1	24278.	92410.	97400.	487.07	523.56	99954.	493.80
#2	25517.	95930.	102200.	490.06	523.04	104920.	491.42
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 4:19:01 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**512.10**	**511.84**	**517.51**	**510.21**	**514.95**	**493.02**	**512.19**
Stddev	2.43	1.65	.57	1.19	1.62	4.09	.59
%RSD	.47431	.32208	.10991	.23323	.31494	.82885	.11484
#1	513.81	510.67	517.91	509.36	516.09	490.13	512.61
#2	510.38	513.01	517.11	511.05	513.80	495.91	511.77
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**497.48**	**514.75**	**505.80**	F **626.62**
Stddev	.92	.93	2.00	1.77
%RSD	.18472	.18082	.39476	.28208
#1	496.83	514.09	504.39	627.87
#2	498.13	515.41	507.21	625.37
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46199.	23816.	628940.
Stddev	19.	737.	2510.
%RSD	.04027	3.0937	.39910
#1	46213.	24338.	630720.
#2	46186.	23295.	627170.

Sample Name: CCB Acquired: 12/11/2007 4:22:38 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	k -.02045	s -9.8069	s -.12744	s .02301	k -.06962	k -.25404	s 5.4889
Stddev	.32225	18.162	2.5765	.32932	.53318	.26591	13.577
%RSD	1575.6	185.20	2021.8	1431.3	765.82	104.67	247.36
#1	k .20741	s 3.0358	s -1.9493	s .25587	k -.44663	k -.06601	s -4.1116
#2	k -.24832	s -22.650	k 1.6944	k -.20985	k .30739	k -.44207	s 15.089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -.03727	s -.27437	k -.33863	s -1.049	s .2052	sF 5.862	s 9.4021
Stddev	.06041	.13744	.06331	.274	.3104	3.918	3.0055
%RSD	162.08	50.095	18.697	26.08	151.3	66.84	31.967
#1	s .00544	s -.17718	k -.38340	s -1.243	s .4247	s 8.633	s 7.2769
#2	k -.07998	k -.37155	k -.29386	k -.8558	k -.0143	k 3.092	s 11.527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						3.000	
Low Limit						-3.000	

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -66.354	sF -4.501	sF -7.774	k -.08126	s .01613	s -104.73	s -.51692
Stddev	109.69	.377	.452	.00217	.20349	3.42	.22759
%RSD	165.32	8.371	5.809	2.6668	1261.6	3.2641	44.027
#1	s 11.212	s -4.768	s -7.455	k -.07973	s .16002	s -102.31	s -.67785
#2	s -143.92	s -4.235	s -8.094	k -.08279	k -.12776	s -107.14	k -.35599
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		3.000	3.000				
Low Limit		-3.000	-3.000				

Sample Name: CCB Acquired: 12/11/2007 4:22:38 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	s -.98214	s .49683	s .80193	k -1.7641	s .38032	k .01849	s .84786
Stddev	1.1716	1.2010	.13685	4.3913	.14166	.42883	1.9773
%RSD	119.29	241.74	17.065	248.92	37.249	2319.1	233.21
#1	s -1.8106	s 1.3461	s .70517	k -4.8692	s .28015	k -.28474	s 2.2460
#2	k -.15372	k -.35244	k .89870	k 1.3409	k .48049	k .32172	k -.55028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	k .65039	s -.38973	k -.01039	s -1.1941
Stddev	.43013	.05441	.39042	.0517
%RSD	66.134	13.962	3758.2	4.3256
#1	k .34624	s -.35126	k -.28646	s -1.1576
#2	k .95454	k -.42821	k .26568	k -1.2307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	^ *****	^ *****	1032900.
Stddev	-----	-----	784930.
%RSD	-----	-----	75.990
#1	^ -----	^ -----	1588000.
#2	65473.	^ -----	477920.

Sample Name: SE711054-041-041-1/1 Acquired: 12/11/2007 4:26:04 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.26922	8206.6	5.4356	-1.5460	12.243	^ *****	279.66	.01306
Stddev	.12446	116.2	.2727	.3962	.007	-----	8.59	.09281
%RSD	46.229	1.4157	5.0166	25.626	.05557	-----	3.0731	710.67
#1	.18121	8288.7	5.2428	-1.2659	12.248	^ -----	285.73	-.05257
#2	.35722	8124.4	5.6284	-1.8261	12.238	^ -----	273.58	.07869

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.4259	98.906	68.91	73.14	44.42	59031.	161.94	330.4
Stddev	.1232	.120	1.82	2.07	4.77	997.	8.94	3.2
%RSD	2.7840	.12150	2.648	2.831	10.73	1.6881	5.5223	.9642
#1	4.3388	98.991	70.20	74.60	41.05	59735.	168.27	332.7
#2	4.5130	98.821	67.62	71.68	47.79	58326.	155.62	328.2

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	361.0	120.31	.72774	-51.023	17.348	5.2322	-.08529	1.0482
Stddev	1.7	.27	.37733	1.962	.329	.6969	1.2726	.9045
%RSD	.4697	.22855	51.849	3.8446	1.8984	13.319	1492.2	86.292
#1	362.2	120.50	.99455	-49.636	17.581	4.7395	-.98517	1.6878
#2	359.8	120.11	.46093	-52.410	17.115	5.7250	.81460	.40861

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	114.29	1.6896	13.486	6.3047	2865.9	-.76833	127.99	33.916
Stddev	1.12	.6788	.037	2.3766	19.9	.88932	.20	.111
%RSD	.98106	40.175	.27548	37.696	.69317	115.75	.15592	.32801
#1	115.08	2.1696	13.512	4.6242	2880.0	-.13949	128.13	33.838
#2	113.50	1.2096	13.459	7.9853	2851.9	-1.3972	127.85	33.995

Sample Name: SE711054-041-041-1/1 Acquired: 12/11/2007 4:26:04 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	48525.	23333.	651500.
Stddev	93.	371.	1032.
%RSD	.19208	1.5899	.15840
#1	48591.	23071.	650770.
#2	48459.	23595.	652230.

Sample Name: S 711054-042-042-1/1 Acquired: 12/11/2007 4:29:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.79194	20434.	12.623	-7.2149	51.442	2.6338	754.08
Stddev	.07126	88.	1.668	.1858	.138	.0264	5.08
%RSD	8.9986	.42834	13.217	2.5756	.26839	1.0039	.67428
#1	.84233	20372.	11.444	-7.3463	51.345	2.6151	750.49
#2	.74154	20496.	13.803	-7.0835	51.540	2.6525	757.68

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.2893	32.455	534.85	362.9	331.1	219.0	242910.
Stddev	.0183	.673	3.24	1.5	3.2	6.0	1646.
%RSD	1.4229	2.0738	.60648	.4183	.9628	2.744	.67776
#1	1.3022	32.931	532.55	361.9	328.9	214.7	241740.
#2	1.2763	31.980	537.14	364.0	333.4	223.2	244070.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	288.32	2100.	2339.	681.97	3.4751	-72.866	104.02
Stddev	7.18	7.	13.	4.10	.1175	7.870	.03
%RSD	2.4887	.3548	.5372	.60086	3.3816	10.800	.02640
#1	283.25	2095.	2330.	679.07	3.3920	-67.301	104.04
#2	293.39	2105.	2347.	684.87	3.5582	-78.431	104.00

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	19.887	3.5299	1.8560	368.80	6.0485	39.243	25.123
Stddev	.441	.8867	.1723	.03	.1585	.227	.782
%RSD	2.2171	25.118	9.2850	.00723	2.6206	.57733	3.1140
#1	19.575	2.9030	1.7341	368.78	6.1606	39.083	24.570
#2	20.198	4.1569	1.9778	368.82	5.9364	39.403	25.677

Sample Name: S 711054-042-042-1/1 Acquired: 12/11/2007 4:29:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	14865.	3.3052	680.73	194.28
Stddev	183.	.0892	3.84	.43
%RSD	1.2343	2.6989	.56382	.22264
#1	14736.	3.3683	678.02	193.97
#2	14995.	3.2421	683.45	194.58

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47549.	23601.	644470.
Stddev	102.	117.	3368.
%RSD	.21390	.49591	.52257
#1	47621.	23684.	646850.
#2	47477.	23518.	642090.

Sample Name: S 711054-043-043-1/1 Acquired: 12/11/2007 4:33:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.76823	24704.	18.413	-6.8244	67.401	2.5821	625.56
Stddev	.04834	588.	1.272	.6442	1.329	.0326	16.12
%RSD	6.2919	2.3789	6.9089	9.4395	1.9711	1.2632	2.5763
#1	.73405	24288.	19.312	-6.3689	68.340	2.6051	614.17
#2	.80241	25119.	17.513	-7.2799	66.461	2.5590	636.96

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.64287	29.106	499.68	333.4	323.3	206.9	224660.
Stddev	.22054	.105	8.35	1.7	4.6	6.6	5105.
%RSD	34.306	.36189	1.6707	.4956	1.437	3.174	2.2724
#1	.79881	29.180	505.59	334.6	320.0	202.3	221050.
#2	.48692	29.031	493.78	332.2	326.6	211.6	228270.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	480.17	1872.	2078.	818.68	3.7752	-96.748	93.955
Stddev	143.34	42.	47.	16.73	.1460	5.853	.241
%RSD	29.851	2.256	2.247	2.0437	3.8665	6.0495	.25695
#1	378.81	1842.	2045.	830.51	3.8784	-100.89	94.125
#2	581.52	1902.	2111.	806.85	3.6719	-92.609	93.784

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	19.449	1.8786	3.6594	415.99	6.8889	63.572	29.227
Stddev	.264	3.0759	.0011	7.60	.2709	1.293	1.801
%RSD	1.3564	163.73	.02941	1.8269	3.9329	2.0332	6.1611
#1	19.636	4.0536	3.6586	421.37	6.6973	64.486	30.500
#2	19.263	-.29634	3.6601	410.62	7.0805	62.658	27.954

Sample Name: S 711054-043-043-1/1 Acquired: 12/11/2007 4:33:06 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**13288.**	**3.2988**	**625.14**	**200.01**
Stddev	101.	2.5539	12.28	1.74
%RSD	.75728	77.418	1.9649	.86927
#1	13360.	1.4930	633.82	201.24
#2	13217.	5.1047	616.45	198.78

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47633.	23548.	642260.
Stddev	43.	427.	3787.
%RSD	.08955	1.8126	.58961
#1	47603.	23850.	639580.
#2	47664.	23246.	644940.

Sample Name: S 711054-044-044-1/1 Acquired: 12/11/2007 4:36:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.2362**	**27925.**	**22.441**	**-7.0893**	**37.648**	**2.5386**	**665.45**
Stddev	.0760	904.	.468	.4295	.406	.0803	22.54
%RSD	6.1510	3.2373	2.0871	6.0588	1.0773	3.1613	3.3875
#1	1.2900	27286.	22.772	-7.3930	37.935	2.5953	649.51
#2	1.1824	28564.	22.110	-6.7856	37.361	2.4818	681.39

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.3848**	**22.448**	**482.46**	**325.5**	**333.9**	**193.1**	**293700.**
Stddev	.6321	.321	6.49	2.2	7.2	5.4	9013.
%RSD	45.646	1.4302	1.3450	.6609	2.157	2.777	3.0686
#1	1.8318	22.221	487.05	327.1	328.8	196.9	287330.
#2	.93786	22.675	477.87	324.0	339.0	189.3	300070.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**361.50**	**1432.**	**1608.**	**560.65**	**4.3431**	**-96.389**	**75.580**
Stddev	41.53	44.	48.	7.17	.2525	19.343	.218
%RSD	11.489	3.077	2.992	1.2789	5.8131	20.067	.28844
#1	390.87	1401.	1574.	565.72	4.1646	-110.07	75.426
#2	332.14	1463.	1642.	555.58	4.5216	-82.711	75.735

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**26.885**	**2.8210**	**4.9314**	**405.19**	**7.6726**	**33.337**	**31.971**
Stddev	.209	1.3039	.2288	3.99	.7064	.426	.511
%RSD	.77674	46.223	4.6393	.98589	9.2062	1.2772	1.5989
#1	27.033	3.7430	5.0932	408.02	8.1720	33.639	31.609
#2	26.738	1.8990	4.7697	402.37	7.1731	33.036	32.332

Sample Name: S 711054-044-044-1/1 Acquired: 12/11/2007 4:36:36 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	13986.	5.1614	649.82	154.47
Stddev	250.	1.5227	9.04	1.40
%RSD	1.7858	29.502	1.3908	.90430
#1	14162.	6.2381	656.21	155.45
#2	13809.	4.0847	643.43	153.48

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47391.	23837.	644550.
Stddev	209.	783.	4374.
%RSD	.44178	3.2867	.67863
#1	47243.	24391.	641450.
#2	47539.	23283.	647640.

Sample Name: S 711054-045-045-1/1 Acquired: 12/11/2007 4:40:05 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.0582**	**14340.**	**15.545**	**-8.5128**	**20.547**	**2.6716**	**208.74**
Stddev	.3409	202.	.570	.0077	.026	.1654	6.94
%RSD	32.220	1.4067	3.6664	.09047	.12679	6.1924	3.3250
#1	1.2993	14197.	15.948	-8.5074	20.565	2.7886	203.83
#2	.81709	14482.	15.142	-8.5183	20.529	2.5546	213.65

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4433**	**32.446**	**438.69**	**340.6**	**319.6**	**204.4**	**229070.**
Stddev	.2485	.059	1.12	.2	5.0	2.8	3215.
%RSD	17.218	.18121	.25610	.0487	1.573	1.359	1.4036
#1	1.6190	32.488	439.49	340.5	316.0	202.4	226790.
#2	1.2676	32.405	437.90	340.8	323.1	206.3	231340.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**103.02**	**1853.**	**2075.**	**603.90**	**3.4229**	**-92.146**	**87.764**
Stddev	42.22	20.	16.	2.10	.1391	3.215	.592
%RSD	40.978	1.077	.7888	.34695	4.0640	3.4887	.67483
#1	73.171	1839.	2063.	605.38	3.3245	-89.873	88.183
#2	132.87	1867.	2087.	602.42	3.5212	-94.419	87.345

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**11.757**	**3.1024**	**1.4579**	**368.99**	**6.9634**	**18.601**	**26.054**
Stddev	.755	.3697	2.9465	1.92	.0706	.082	2.286
%RSD	6.4237	11.916	202.11	.52022	1.0132	.44094	8.7744
#1	11.223	3.3638	-.62561	370.34	7.0133	18.659	24.438
#2	12.291	2.8410	3.5414	367.63	6.9135	18.543	27.671

Sample Name: S 711054-045-045-1/1 Acquired: 12/11/2007 4:40:05 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	14586.	4.0812	658.66	183.93
Stddev	83.	.6850	2.12	.05
%RSD	.56750	16.785	.32222	.02965
#1	14528.	3.5968	660.16	183.89
#2	14645.	4.5656	657.16	183.97

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47250.	23860.	646500.
Stddev	52.	255.	1707.
%RSD	.10938	1.0681	.26398
#1	47214.	24040.	645300.
#2	47287.	23679.	647710.

Sample Name: S 711054-046-046-1/1 Acquired: 12/11/2007 4:43:34 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.4339	59403.	20.837	-4.4425	54.575	1.7513	1384.0
Stddev	.1065	737.	3.144	.4844	.928	.0586	9.7
%RSD	7.4292	1.2406	15.091	10.905	1.7008	3.3439	.69779
#1	1.3586	59924.	23.060	-4.1000	55.231	1.7927	1390.9
#2	1.5093	58882.	18.613	-4.7851	53.919	1.7099	1377.2

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.5643	19.545	373.45	276.7	334.0	193.3	236070.
Stddev	.1034	.089	4.55	2.1	4.2	6.0	2765.
%RSD	6.6114	.45376	1.2173	.7564	1.257	3.108	1.1714
#1	1.4911	19.482	376.66	278.2	337.0	189.1	238030.
#2	1.6374	19.608	370.23	275.2	331.0	197.6	234120.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	697.09	1157.	1303.	775.65	3.9246	-38.310	84.808
Stddev	24.40	13.	15.	12.84	.0083	18.642	.676
%RSD	3.5008	1.159	1.128	1.6554	.21281	48.662	.79699
#1	679.83	1167.	1313.	784.73	3.9305	-25.128	85.286
#2	714.35	1148.	1292.	766.58	3.9187	-51.492	84.330

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	60.869	2.6843	8.2798	552.65	17.578	71.367	30.801
Stddev	.707	.2438	1.4974	10.01	.641	1.273	3.230
%RSD	1.1614	9.0822	18.085	1.8103	3.6494	1.7845	10.486
#1	61.369	2.5119	9.3387	559.72	18.032	72.267	33.084
#2	60.369	2.8567	7.2210	545.58	17.125	70.466	28.517

Sample Name: S 711054-046-046-1/1 Acquired: 12/11/2007 4:43:34 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	10697.	2.4123	499.65	130.17
Stddev	136.	.1461	7.05	.14
%RSD	1.2680	6.0549	1.4109	.11130
#1	10793.	2.3090	504.63	130.27
#2	10601.	2.5156	494.66	130.07

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47381.	23589.	646270.
Stddev	130.	153.	8304.
%RSD	.27422	.64753	1.2848
#1	47289.	23481.	640400.
#2	47472.	23697.	652140.

Sample Name: S 711054-047-047-1/1 Acquired: 12/11/2007 4:47:03 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.5295**	**40817.**	**20.376**	**-3.4018**	**51.556**	**1.3661**	**810.98**
Stddev	.0701	39.	.263	.0665	.215	.0567	.66
%RSD	4.5859	.09577	1.2916	1.9561	.41755	4.1477	.08116
#1	1.5790	40789.	20.562	-3.3548	51.708	1.3261	810.51
#2	1.4799	40845.	20.189	-3.4489	51.403	1.4062	811.44

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.0266**	**39.746**	**463.51**	**324.3**	**346.9**	**220.7**	**231290.**
Stddev	.1865	.138	1.00	3.1	.2	1.2	217.
%RSD	18.163	.34797	.21581	.9692	.0678	.5403	.09402
#1	1.1585	39.844	464.22	326.5	346.7	221.6	231440.
#2	.89477	39.648	462.80	322.1	347.1	219.9	231130.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1003.1**	**1144.**	**1283.**	**2178.3**	**2.7953**	**-80.860**	**101.82**
Stddev	82.6	.	5.	6.1	.0088	19.924	.32
%RSD	8.2352	.0227	.4069	.28231	.31302	24.640	.31350
#1	944.70	1144.	1287.	2182.7	2.8014	-94.948	102.05
#2	1061.5	1144.	1280.	2174.0	2.7891	-66.771	101.60

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**18.293**	**2.8576**	**2.9122**	**539.51**	**6.0991**	**17.560**	**26.576**
Stddev	1.668	.2321	.1133	.62	1.0034	.063	2.118
%RSD	9.1158	8.1225	3.8902	.11581	16.452	.36023	7.9685
#1	17.114	2.6935	2.9923	539.96	6.8086	17.605	28.073
#2	19.473	3.0218	2.8321	539.07	5.3895	17.516	25.079

Sample Name: S 711054-047-047-1/1 Acquired: 12/11/2007 4:47:03 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	9053.5	2.2834	521.67	189.21
Stddev	52.8	.9937	1.50	.08
%RSD	.58371	43.519	.28780	.04279
#1	9090.8	2.9860	522.73	189.27
#2	9016.1	1.5807	520.61	189.16

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47411.	23587.	647960.
Stddev	32.	111.	1393.
%RSD	.06800	.46873	.21497
#1	47388.	23509.	646970.
#2	47434.	23665.	648940.

Sample Name: S 711054-048-048-1/1 Acquired: 12/11/2007 4:50:31 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.6013**	**42274.**	**23.275**	**-5.4862**	**78.669**	**1.6258**	**404.58**
Stddev	.0916	708.	4.501	.2531	.488	.1723	1.36
%RSD	5.7192	1.6738	19.338	4.6133	.62031	10.598	.33676
#1	1.6661	41774.	20.092	-5.3072	78.324	1.5039	403.62
#2	1.5366	42774.	26.457	-5.6652	79.014	1.7476	405.54

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.4579**	**142.03**	**407.25**	**351.3**	**356.4**	**230.6**	**240540.**
Stddev	.0756	.10	1.37	2.0	3.0	7.3	2688.
%RSD	5.1882	.06969	.33755	.5743	.8458	3.179	1.1175
#1	1.5114	142.10	406.28	349.8	354.3	235.8	238640.
#2	1.4044	141.96	408.22	352.7	358.6	225.4	242440.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**705.76**	**1118.**	**1257.**	**4579.4**	**3.8789**	**-85.904**	**93.878**
Stddev	23.08	18.	22.	19.5	.1287	19.827	.128
%RSD	3.2695	1.575	1.735	.42545	3.3184	23.080	.13684
#1	689.45	1106.	1241.	4593.2	3.7879	-99.924	93.969
#2	722.08	1130.	1272.	4565.7	3.9700	-71.885	93.787

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**23.888**	**2.0091**	**2.2110**	**581.03**	**5.7134**	**16.434**	**24.929**
Stddev	.820	1.5773	2.2101	3.77	.2934	.069	.480
%RSD	3.4321	78.505	99.962	.64934	5.1352	.42248	1.9236
#1	24.468	.89384	.64818	578.37	5.9209	16.385	25.268
#2	23.309	3.1244	3.7738	583.70	5.5060	16.483	24.590

Sample Name: S 711054-048-048-1/1 Acquired: 12/11/2007 4:50:31 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	10248.	2.0192	562.31	201.82
Stddev	71.	.2121	2.27	.00
%RSD	.68984	10.505	.40404	.00029
#1	10198.	2.1692	560.70	201.82
#2	10298.	1.8692	563.91	201.82

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	47306.	23702.	641280.
Stddev	77.	286.	2537.
%RSD	.16183	1.2072	.39558
#1	47361.	23904.	643070.
#2	47252.	23500.	639490.

Sample Name: ICSA Acquired: 12/11/2007 4:54:05 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.09310	494000.	5.3596	5.5357	1.8209	-.05504	449480.
Stddev	.38274	12067.	1.4191	.1847	.0161	.00345	2722.
%RSD	411.09	2.4427	26.478	3.3367	.88281	6.2598	.60560
#1	-.17754	485470.	6.3630	5.4051	1.8322	-.05261	447560.
#2	.36374	502540.	4.3561	5.6663	1.8095	-.05748	451410.

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.1808	-.28900	.27286	-184.4	279.9	186.4	186130.
Stddev	.3924	.37275	.01812	2.2	9.5	6.6	4419.
%RSD	33.235	128.98	6.6421	1.171	3.379	3.558	2.3743
#1	1.4582	-.02542	.26005	-182.9	273.2	191.1	183010.
#2	.90327	-.55258	.28568	-186.0	286.5	181.7	189260.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-191.73	213200.	213900.	1.4148	.46904	-198.72	-3.6363
Stddev	35.99	6020.	5205.	.1369	.08363	4.47	.1303
%RSD	18.772	2.823	2.433	9.6740	17.829	2.2517	3.5843
#1	-166.28	209000.	210200.	1.5116	.40991	-195.56	-3.7285
#2	-217.17	217500.	217600.	1.3180	.52817	-201.89	-3.5441

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	15.952	1.3115	1.5948	-.45451	-.21661	.42568	14.803
Stddev	3.490	.7888	4.0105	.19654	1.2707	.02461	.678
%RSD	21.878	60.141	251.48	43.242	586.62	5.7813	4.5780
#1	18.420	.75377	-1.2411	-.31554	-1.1151	.44309	14.323
#2	13.484	1.8692	4.4306	-.59349	.68189	.40828	15.282

Sample Name: ICSA Acquired: 12/11/2007 4:54:05 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	3.1366	5.3358	-1.3109	2.1978
Stddev	.2959	2.9890	.1795	.6106
%RSD	9.4330	56.017	13.694	27.784
#1	3.3458	3.2223	-1.1840	2.6295
#2	2.9273	7.4494	-1.4378	1.7660

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	44921.	23334.	604240.
Stddev	3.	535.	371.
%RSD	.00655	2.2943	.06144
#1	44923.	23713.	603980.
#2	44919.	22955.	604510.

Sample Name: ICSAB Acquired: 12/11/2007 4:57:35 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**207.14**	**503470.**	**113.59**	**933.40**	**490.64**	**497.00**	**456940.**
Stddev	.82	996.	.55	.88	.45	2.80	3031.
%RSD	.39345	.19784	.48752	.09425	.09115	.56298	.66339
#1	207.72	504170.	113.20	934.02	490.96	498.98	454800.
#2	206.57	502760.	113.98	932.78	490.33	495.02	459080.

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**966.70**	**465.37**	**494.67**	**330.6**	**782.1**	**653.7**	**188260.**
Stddev	1.81	1.15	.47	.5	.3	.4	548.
%RSD	.18764	.24667	.09560	.1649	.0381	.0576	.29094
#1	967.99	466.18	495.00	330.9	782.3	653.9	188650.
#2	965.42	464.56	494.33	330.2	781.8	653.4	187880.

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**4966.4**	**227300.**	**224200.**	**475.61**	**935.65**	**10349.**	**913.51**
Stddev	.8	147.	72.	.66	2.01	79.	2.06
%RSD	.01685	.0647	.0322	.13820	.21449	.76693	.22588
#1	4965.8	227400.	224200.	476.08	937.07	10405.	914.97
#2	4967.0	227200.	224300.	475.15	934.23	10293.	912.05

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**60.951**	**595.72**	**52.430**	**1161.2**	**911.60**	**487.67**	**210.43**
Stddev	.018	2.09	2.067	.7	1.56	4.96	1.16
%RSD	.02947	.35016	3.9422	.05946	.17094	1.0166	.55165
#1	60.964	597.20	53.891	1161.7	912.70	491.17	209.61
#2	60.938	594.25	50.968	1160.7	910.49	484.16	211.25

Sample Name: ICSAB Acquired: 12/11/2007 4:57:35 Type: Unk
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	**889.73**	**97.938**	**490.57**	**1104.1**
Stddev	2.22	.438	.60	1.6
%RSD	.24902	.44744	.12318	.14601
#1	891.30	98.248	491.00	1105.3
#2	888.17	97.628	490.14	1103.0

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	44678.	22718.	601190.
Stddev	41.	86.	1342.
%RSD	.09271	.37979	.22317
#1	44708.	22779.	600240.
#2	44649.	22657.	602130.

Sample Name: CCV Acquired: 12/11/2007 5:01:30 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	kF **34.894**	k **50683.**	sF **-.10151**	sF **-.12822**	kF **3761.6**	kF **1.0888**
Stddev	49.049	3080.	.18730	.94334	5320.2	1.6540
%RSD	140.57	6.0778	184.52	735.75	141.44	151.91
#1	k 69.577	k 48505.	s .03094	s .53883	k 7523.5	k 2.2583
#2	k .21080	k 52861.	s -.23395	s -.79526	k -.363	k -.08078
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	500.00		500.00	500.00	500.00	50.000
Range	-10.000%		-10.000%	-10.000%	10.000%	-10.000%

Elem	Ca	Cd	Co	Cr	Cu2199	Cu2218
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	k **99124.**	sF **-.11353**	sF **-.08015**	kF **41.859**	sF **-1.055**	sF **-.5141**
Stddev	5905.	.01920	.20818	59.367	1.330	.9822
%RSD	5.9568	16.911	259.73	141.83	126.0	191.0
#1	k 94949.	s -.12710	s -.22736	k 83.838	s -.1150	s .1804
#2	k 103300.	s -.09995	s .06705	k -.11983	s -1.995	s -1.209
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value		500.00	500.00	500.00	500.0	500.0
Range		-10.000%	-10.000%	-10.000%	-10.00%	-10.00%

Elem	Cu3273	Fe	K	Mg2802	Mg2852	Mn
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	sF **310.4**	k **48665.**	k **25066.**	k **96190.**	k **100500.**	kF **39.645**
Stddev	80.5	2951.	1402.	4747.	5992.	56.073
%RSD	25.94	6.0645	5.5924	4.934	5.961	141.44
#1	s 367.4	k 46578.	k 24075.	k 92840.	k 96280.	k 79.295
#2	s 253.5	k 50752.	k 26057.	k 99550.	k 104800.	k -.00434
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	500.0					500.00
Range	-10.00%					-10.000%

Sample Name: CCV Acquired: 12/11/2007 5:08:31 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**500.85**	**51690.**	**521.73**	**514.20**	**488.36**	**50.131**	**100490.**
Stddev	.44	754.	.99	1.68	2.30	.036	1314.
%RSD	.08732	1.4582	.18904	.32713	.47139	.07270	1.3075
#1	500.54	52223.	521.04	515.39	489.98	50.157	101420.
#2	501.16	51157.	522.43	513.01	486.73	50.106	99557.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd	Co	Cr	Cu2199	Cu2218	Cu3273	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**507.81**	**499.63**	**505.88**	F **597.0**	F **563.6**	**524.4**	**49318.**
Stddev	1.09	1.80	.87	4.3	4.9	1.7	615.
%RSD	.21423	.36102	.17252	.7267	.8771	.3214	1.2478
#1	508.58	500.91	506.50	600.1	567.1	525.6	49753.
#2	507.04	498.36	505.26	593.9	560.1	523.2	48883.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value				500.0	500.0		
Range				10.00%	10.00%		

Elem	K	Mg2802	Mg2852	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**25462.**	**97550.**	**102400.**	**487.28**	**518.15**	**104710.**	**491.57**
Stddev	248.	4135.	1417.	.54	.41	788.	1.32
%RSD	.97485	4.239	1.384	.11088	.07943	.75219	.26804
#1	25638.	100500.	103400.	487.66	518.44	105270.	492.51
#2	25287.	94630.	101400.	486.89	517.86	104160.	490.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/11/2007 5:08:31 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Pb	Sb	Se	Si	Sn	Sr	Te
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	503.77	508.38	510.51	507.60	508.46	490.06	512.30
Stddev	2.71	1.45	4.14	2.13	.76	.25	5.51
%RSD	.53839	.28584	.81026	.42026	.14906	.05012	1.0760
#1	501.85	509.41	513.44	506.09	507.92	489.89	516.20
#2	505.69	507.35	507.59	509.11	508.99	490.23	508.40
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb
Avg	498.02	506.78	502.37	F 618.61
Stddev	.40	1.29	.10	.41
%RSD	.08083	.25484	.02021	.06590
#1	497.73	505.86	502.44	618.90
#2	498.30	507.69	502.30	618.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				500.00
Range				10.000%

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	46928.	23215.	635890.
Stddev	111.	528.	916.
%RSD	.23757	2.2747	.14407
#1	46849.	22842.	635240.
#2	47007.	23589.	636540.

Sample Name: CCB Acquired: 12/11/2007 5:12:08 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag	Al	As	B	Ba	Be	Ca	Cd
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.32580	-6.9043	.26581	-.68938	.11199	.01504	1.5863	.03477
Stddev	.16160	7.7769	.51765	.47148	.00192	.00218	1.5898	.12259
%RSD	49.600	112.64	194.74	68.393	1.7169	14.516	100.22	352.57
#1	-.44007	-1.4052	-.10022	-.35599	.11335	.01350	2.7104	-.05191
#2	-.21154	-12.403	.63185	-1.0228	.11063	.01659	.46214	.12145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co	Cr	Cu2199	Cu2218	Cu3273	Fe	K	Mg2802
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.24157	-.31957	-.6568	.4507	-1.270	13.174	2.3339	.7478
Stddev	.12886	.12457	.2994	.5905	1.130	1.804	56.867	.5227
%RSD	53.343	38.981	45.58	131.0	89.00	13.694	2436.6	69.89
#1	.33270	-.23148	-.8685	.0331	-2.069	14.450	-37.877	.3782
#2	.15045	-.40765	-.4451	.8682	-.4707	11.899	42.545	1.117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mg2852	Mn	Mo	Na	Ni	Pb	Sb	Se
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.8970	.13520	.51108	-1.8229	-.01624	.19762	-.10786	.85856
Stddev	3.079	.02825	.03862	.0866	.01689	.18925	.12427	.36487
%RSD	343.2	20.897	7.5575	4.7514	103.99	95.763	115.21	42.497
#1	-3.074	.15518	.53839	-1.7616	-.02819	.06380	-.19573	1.1166
#2	1.280	.11522	.48377	-1.8841	-.00430	.33144	-.01999	.60056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/11/2007 5:12:08 Type: QC
Method: TRACEPB Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si	Sn	Sr	Te	Ti	Tl	V	Zn
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.46969	.12441	-.03175	-1.1962	.22887	.68046	-.02579	-.17677
Stddev	.55922	.48187	.00340	.7738	.17213	.86044	.12173	.03803
%RSD	119.06	387.32	10.704	64.689	75.207	126.45	471.92	21.516
#1	.07427	.46514	-.02935	-.64902	.35058	1.2889	.06028	-.14988
#2	.86512	-.21632	-.03416	-1.7433	.10716	.07204	-.11187	-.20366
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3774	Y_3774-2
Units	Cts/S	Cts/S	Cts/S
Avg	49197.	24345.	657950.
Stddev	68.	314.	1807.
%RSD	.13889	1.2882	.27464
#1	49148.	24567.	656670.
#2	49245.	24123.	659230.

Metals Preparation & Sample Description Log

Prep: 200.7 / 3005A / 3020A / 3050B / 3010A/ ILC03.1 / ILM04.1 / ILM05.3 / ILM05.4

Batch No.: 202-108

Date: 11-15-2007

Analyst: D-S-S Comments: MGN BLOCK DIGESTION (SOIL)

Reviewed by: AB Date: 12/13/07 Spike Witness: HM Pep. Seq: 101657

GPL Work Order No.	Sample	Frac	Size mL (g)	Final Vol. (mL)	Matrix S, W Other	Color Before	Color After	Clarity Before or Soil Texture	Clarity After Clear, Cloudy, Opaque	Soil Artifacts or Water pH
						R, Bl, Y, G, O, V, W, Colorless, Br, Grey, Bk.				
1 BLK	108		1.00	100	S				clear	—
2 BKS	108		1.00							—
3 711054	001	001 1/1	1.19		SOIL	Brown	Yellow	Medium		—
4	MS		1.20							
5	MSD		1.23							
6	002	002 1/1	1.20							
7	003	003 1/1	1.23							
8	004	004 1/1	1.19							
9	005	005 1/1	1.18							
10	006	006 1/1	1.22							
11	007	007 1/1	1.26							
12	008	008 1/1	1.17							
13	009	009 1/1	1.25							
14	010	010 1/1	1.16							
15	011	011 1/1	1.20							
16	012	012 1/1	1.22							
17	013	013 1/1	1.21							
18	014	014 1/1	1.20							
19	015	015 1/1	1.21							
20	016	016 1/1	1.22							
21	017	017 1/1	1.25							
22	018	018 1/1	1.21							
23	019	019 1/1	1.24							
24	020	020 1/1	1.26						D.S.S - 11/15/2007	

LCS ID/ Amt. Added (ml .g): 0.2 ml (41862 41863, 41864)

Spiking ID / Amt. Added (ml) 0.2 ml (41862 41863 41864)

10 ml 1:1 HNO_3, 10 ml HNO_3 conc, 7 ml H_2O_2, 10 ml HCl conc

Temperature C: 94°C

HNO3(1+1) ID: GP-057-164-07

HNO3(conc) ID: GP-129-11-08

HCl(conc) ID: GP-129-11-06

HCl(1+1) ID: —

Peroxide ID: GP-129-10-12

Metals Preparation & Sample Description Log

Prep: 200.7 / 3005A / 3020A / (3050B) / 3010A/ ILC03.1 / ILM04.1 / ILM05.3 / ILM05.4

Date: 11-15-2007 Batch No.: 202-109

Analyst: D.S.S. Comments: MED BLOCK DIGESTION (SOIL)

Reviewed by: AB Date: 11/13/07 Spike Witness: MM Pep. Seq: 1D1659

	GPL Work Order No.	Sample	Frac	Size mL (g)	Final Vol. (mL)	Matrix S, W Other	Color Before R, Bl, Y, G, O, V, W, Colorless, Br, Grey, Bk.	Color After	Clarity Before or Soil Texture	Clarity After Clear, Cloudy, Opaque	Soil Artifacts or Water pH
1	BLK	109		1.08	100	S				Clear	—
2	BKS	109		1.08							—
3	711054	021	021-1/1	1.20		SOIL	Brown	Yellow	Medium		—
4		MS		1.24							
5		MSD	↓	1.27							
6		022	022-1/1	1.26							
7		023	023-1/1	1.18							
8		024	024-1/1	1.23							
9		025	025-1/1	1.18							
10		026	026-1/1	1.22							
11		027	027-1/1	1.25							
12		028	028-1/1	1.19							
13		029	029-1/1	1.16							
14		030	030-1/1	1.24							
15		031	031-1/1	1.27							
16		032	032-1/1	1.20							
17		033	033-1/1	1.21							
18		034	034-1/1	1.20							
19		035	035-1/1	1.23							
20		036	036-1/1	1.21							
21		037	037-1/1	1.22							
22		038	038-1/1	1.18							
23		039	039-1/1	1.23							
24	↓	040	040-1/1	1.16	↓	↓	↓	↓	D.S. 11-15-2007	↓	↓

LCS ID/ Amt. Added (ml ,g) : 0.2 ml (41862, 41863, 41864)	HNO3(1+1) ID: GP-017-164-
Spiking ID / Amt. Added (ml) : 0.2 ml (41862, 41863, 41864)	HNO3(conc) ID: GP-129-11-08
10 ml 1:1 HNO3, 10 ml HNO3 CHC, 7 ml H2O, 10 ml HCL CHC	HCl(conc) ID: GP-129-11-06
Temperature C: 94°C	HCl(1+1) ID: —
	Peroxide ID: GP-129-10-12

Metals Preparation & Sample Description Log

Prep: 200.7 / 3005A / 3020A / 3050B / 3010A/ ILC03.1 / ILM04.1 / ILM05.3 / ILM05.4

Date: 11-15-2007 Batch No.: 202 -110

Analyst: D.S.S Comments: MOD BLOCK DIGESTION (SOIL)

Reviewed by: AB Date: 12/13/07 Spike Witness: MM Pep. Seq: 101660

	GPL Work Order No.	Sample	Frac	Size mL (g)	Final Vol. (mL)	Matrix S, W Other	Color Before (R, Bl, Y, G, O, V, W, Colorless, Br, Grey, Bk.)	Color After	Clarity Before or Soil Texture	Clarity After Clear, Cloudy, Opaque	Soil Artifacts or Water pH
1	BLK	110		1.00	100	S				clear	—
2	BKS	110		1.00	↓					↓	—
3	711054	041	041 ½	1.21		SOIL	Brown	Yellow	Medium		—
4		MS	↓	1.23		↓	↓	↓	↓		↓
5		MSD	✓	1.26							
6		042	042 ½	1.22							
7		043	043 ½	1.18							
8		044	044 ½	1.21							
9		045	045 ½	1.17							
10		046	046 ½	1.23							
11		047	047 ½	1.25							
12	✓	048	048 ½	1.24	✓	✓	✓	✓	✓	✓	✓
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											

D.S.S - 11-15-2007

LCS ID/ Amt. Added (ml,g): 0.2 ml (411862 411863 411864)	HNO3(1+1) ID: GP-057-1660
Spiking ID / Amt. Added (ml): 0.2 ml (411862 411863 411864)	HNO3(conc) ID: GP-129-11-08
10 ml 1:1 HNO3, 10 ml HNO3 CHC, 7 ml H2O2, 10 ml HCL CHC	HCl(conc) ID: GP-129-11-06
Temperature C: 91.9 C	HCl(1+1) ID: —
	Peroxide ID: GP-129-10-12